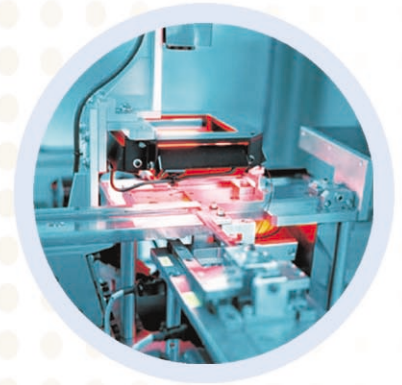


'2013' Semiconductor Product Guide



- Bipolar Junction Transistor
- Diode
- MOSFET
- IGBT
- Power Module
- Intergrated Circuit

KEC















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PNP Transistor(V_{CEO} : -12V ~ -65V)

V _{CEO}	I _C	TFSM	TFSV	TFS6	VSM	ESM	TESV	TES6	USM	USV	US6	TSM	TSV	TS6	SOT-23
		(Unit: mm)													
															
		■ (0.6 X0.8)	■ (1.0X0.8)	■ (1.0X0.8)	■ (1.2 X0.8)	■ (1.60X0.85)	■ (1.6 X1.2)	■ (1.6 X1.2)	■ (2.0X1.25)	■ (2.0X1.25)	■ (2.0X1.25)	■ (2.9X1.6)	■ (2.9X1.6)	■ (2.9X1.6)	■ (2.93X1.3)
-12V	-500mA				KTA2012V	KTA2012E		KTX213E				KTX321U KTX213U KTX215U			
	-1.5A								KTA1532U						
-20V	-200mA				KTA2013V										
	-1A											KTA1531T	KTX311T		
	-1.5A											KTA1532T	KTX312T		
	-3A											KTA1535T			
	-5A											KTA1536T			
	-10A														
-25V	-1A														
	-1.5A														MPS8550S
-30V	-100mA														
	-500mA								KTA2015						KTA1505S KTC9012S MMBTA63
	-800mA														KTA1298 KTC8550S
	-1.5A											KTA1541T			
	-2A											KTA1544T			
	-3A											KTA1542T			
-40V	-200mA							2N2906E							KN3906S 2N3906S
	-600mA														KN4403S
-45V	-100mA								BC857W						BC857 BC860
	-200mA														
	-500mA								BC807W						
	-800mA														BC807 BCW68
-50V	-150mA	KTA2014F			KTA2014V	KTA2014E		KTX102E KTA701E	KTA2014	KTX302U	KTA701U KTA711U KTA712U				KTA1504S KTC9015S
	-200mA												KTB1234T		
	-500mA														
	-1A												KTA1551T		
	-2A														
	-3A												KTA1552T		
-60V	-600mA					KTN2907AE			KTN2907AU						KN2907AS KTN2907AS
	-1A														
	-3A														
	-5A														
-65V	-100mA														BC856

PNP Transistor(V_{CEO} : -12V ~ -65V)

SOT-89	SOT-223	DKPAK	TO-92	TO-92L	IPAK(1)	TO-126	TO-220IS	TO-3P(H)IS	TO-3P(N)
 (4.7X2.5)	 (6.8X1.8)	 (6.6X6.1)							
KTA1001									
		KTA1242D		KTA1241		KTA1709			
		KTA1834D							
			KTB598						
			KTA1283						
			BC558						
			KTA1270						
KTA1664			KTA1271						
KTA1663									
			KTA1282	KTA1273					
			KTB1772			KTA1705 KTB772	KTA1658		
			KN3905						
			KN4402 KN4403						
			BC557						
			KTA539						
			BC327						
			KTA1266	KTA1266L KTA1267L					
			KTA200						
KTA1666		KTA1718D		KTA1281		KTA1715			
KTB1124				KTB985					
			KN2907A KTN2907A						
KTA1668			MPS751						
		KTA1040D					KTA1046 KTB1366 KTB1424		
		KTA1385D				KTB1151			
			BC556						

PNP Transistor(V_{CEO} : -80V~ -600V)

V _{CEO}	I _C	TFSM	TFSV	TFS6	VSM	ESM	TESV	TES6	USM	USV	US6	TSM	TSV	TS6	SOT-23	SOT-89	
		 ■ (0.6 X0.8)	 ■ (1.0X0.8)	 ■ (1.0X0.8)	 ■ (1.2 X0.8)	 ■ (1.60X0.85)	 ■ (1.6 X1.2)	 ■ (1.6 X1.2)	 ■ (2.0X1.25)	 ■ (2.0X1.25)	 ■ (2.0X1.25)	 ■ (2.9X1.6)	 ■ (2.9X1.6)	 ■ (2.9X1.6)	 ■ (2.93X1.3)	 ■ (4.7X2.5)	
-80V	-400mA															KTA1662	
	-500mA															MMBTA56	
	-1A															KTB1260	
	-4A																
	-7A																
-100V	-1A														KTA1520S KTA1571S		
	-2A																
	-3A																
	-5A																
	-6A																
	-25A																
-120V	-100mA																
	-800mA																KTA1661
	-1A																
	-1.2A																
	-5A																
	-8A																
	-10A																
-140V	-10A																
	-12A																
-150V	-50mA																KTA1660
	-500mA																
	-600mA															2N5401S	
	-10A																
-160V	-1A																
	-1.5A																
-180V	-1.5A																
	-2A																
-230V	-1A																
	-15A																
-250V	-50mA																
-300V	-50mA																
	-100mA											KTA1073T					
	-500mA														MMBTA92		
-400V	-100mA																KTA1759
	-500mA																
	-2A																
-600V	-1A																

PNP Transistor($V_{CEO} : -80V \sim -600V$)















SOT-223	DPAK	TO-92	TO-92L	IPAK(1)	TO-126	TO-220IS	TO-3P(H)IS	TO-3P(N)
 (6.5X3.5)	 (6.6X6.1)							
			KTA1274					
						KTB1368		
			KTA1572			KTB1370		
	MJD117		KTB2234					
						TIP32CF		
	KTA1042D					KTA1049 KTB1367		
						TIP42CF		
								TIP36C TIP36CA
			KTA1023					
	KTA1045D				KTB631K			
					KTA1704			
						KTB1423		
								KTB688A
							KTB778	KTB688B
								KTA1695
								KTB817
			KTA1024					
					KTA1360			
		2N5401C						
								KTB2530
	KTA1225D		KTA1275					
					KTA1700	KTA1659		
						KTA1659A		
						KTB1369		
						KTA1837		
								KTA1962A
		BF423						
		BF421						
					KTA1381			
			KTA1277		KTA1703			
	KTA1862D							
	KTA1807D			KTA1807L				

Note) : TO-3P(N)-E PKG

NPN Transistor ($V_{CE0} : 3V \sim 30V$)

V _{CE0}	I _C	TFSM	TFSV	TFS6	VSM	ESM	TESV	TES6	USM	USV	US6	TSM	TSV	TS6	SOT-23
		 (0.6 X0.8)	 (1.0X0.8)	 (1.0X0.8)	 (1.2 X0.8)	 (1.60X0.85)	 (1.6 X1.2)	 (1.6 X1.2)	 (2.0X1.25)	 (2.0X1.25)	 (2.0X1.25)	 (2.9X1.6)	 (2.9X1.6)	 (2.9X1.6)	 (2.93X1.3)
10V	40mA														
	65mA														
11V	50mA				KTC3730V										
12V	100mA	KTC3770F			KTC3770V				KTC3770U			KTC3770T			KTC3770S
	500mA					KTC4072E		KTC802E KTX212E KTX214E			KTX412U KTX212U KTX214U				
15V	50mA								KTC4082		KTC813U				KTC3882
20V	200mA														
	300mA										KTC814U			KTC812T	KTC2875 KTD1304
	1A											KTC3531T	KTX411T		
	1.5A											KTC3532T	KTX412T		
	3A											KTC3535T			
	5A														
25V	50mA														
	1A														
	1.5A														MPS8050S
30V	20mA					KTC4080E			KTC4080						KTC3880S KTC9018S
	100mA														BC848
	400mA														MMBTA517
	500mA								KTC4076				KTC611T	KTC811T	KTC3876S KTC9013S MMBTA13
	600mA														KTN2222S
	800mA														KTC3265 KTC8050S
	1.5A												KTC3541T		
	2A												KTC3544T		
3A												KTC3542T			
5A												KTC3543T			

NPN Transistor (V_{CE0} : 40V ~ 100V)

V_{CE0}	I_C	TFSM	TFSV	TFS6	VSM	ESM	TESV	TES6	USM	USV	US6	TSM	TSV	TS6	SOT-23
		(Unit: mm)													
															
		■ (0.6 X0.8)	■ (1.0X0.8)	■ (1.0X0.8)	■ (1.2 X0.8)	■ (1.60X0.85)	■ (1.6 X1.2)	■ (1.6 X1.2)	■ (2.0X1.25)	■ (2.0X1.25)	■ (2.0X1.25)	■ (2.9X1.6)	■ (2.9X1.6)	■ (2.9X1.6)	■ (2.93X1.3)
40V	50mA								KTD1824						
	200mA				2N3904V			2N2904E							KN3904S 2N3904S
	600mA								KTN2222AU						KTN2222AS KN4401S KN2222AS
	2A														
45V	100mA								BC847W						BC847 BC850
	500mA														
	800mA														BC817
50V	150mA	KTC4075F	KTC601F		KTC4075V	KTC4075E	KTX401E KTC801E KTC811E KTC812E KTX102E	KTC4075	KTX402U	KTC801U KTC811U KTC812U					KTC3295 KTC3875S KTC9014S
	200mA											KTD1854T			
	1A											KTC3551T			
	2A														
	3A											KTC3552T			
60V	500mA														
	1A														
	3A														
	4A														
	5A														
65V	100mA													BC846	
80V	400mA														
	500mA														MMBTA06
	1A														
	3A														
	4A														
	5A														
	8A														
100V	1A														KTC3571S
	2A														
	3A														
	5A														
	6A														
	7A														
	25A														

NPN Transistor (V_{CE0} : 40V ~ 100V)



SOT-89	SOT-223	DPAK	TO-92	TO-92L	IPAK(1)	TO-126	TO-220IS	TO-3P(H)IS	TO-3P(N)
 (4.7X2.5)	 (6.5X3.5)	 (6.6X6.1)							
			KN3904 2N3904						
			KN2222A KN4401 KTN2222A						
						KTC3964			
			BC547						
			KTC200						
			BC337						
			KTC3112 KTC3198			KTC3114			
KTD1003				KTD1028					
KTC4379		KTC2815D		KTC3209		KTC2814			
KTD1624				KTD1347					
			MPSA27						
KTC4378 KTD2686			MPS651 KTC1008	KTD863					
		KTC2020D KTC2825D KTC2030D					KTC2026 KTD2058 KTD2424 KTC2036		
							KTC1003		
		KTC5103D				KTD1691			
			BC546						
KTC4374				KTC3227					
KTD1898				KTD1863 KTC1006					
							KTD2092		
							KTD1414 KTD2060 KTC2027		
							KTD2066		
							KTD1937		
KTC3573				KTC3572					
		MJD112		KTD2854	MJD112L				
							TIP31CF		
		KTC2022D					KTC2028 KTD1413 KTD2059		
							TIP41CF		
							KTD1415		
									TIP35C TIP35CA

Note) : TO-3P(N)-E PKG

NPN Transistor (V_{CEO} : 120V ~ 800V)

V _{CEO}	I _c	TFSM	TFSV	TFS6	VSM	ESM	TESV	TES6	USM	USV	US6	TSM	TSV	TS6	SOT-23	SOT-89
		 (0.6 X0.8)	 (1.0X0.8)	 (1.0X0.8)	 (1.2 X0.8)	 (1.60X0.85)	 (1.6 X1.2)	 (1.6 X1.2)	 (2.0X1.25)	 (2.0X1.25)	 (2.0X1.25)	 (2.9X1.6)	 (2.9X1.6)	 (2.9X1.6)	 (2.93X1.3)	 (4.7X2.5)
120V	800mA															KTC4373
	1A															
	1.2A															
	8A															
	10A															
140V	10A															
	12A															
150V	50mA															
	1A															
	10A															
160V	600mA														2N5551S	
	1A															KTC4380
	1.5A															
180V	1.5A															
	2A															
200V	100mA															
230V	1A															
	15A															
250V	50mA															
300V	50mA															
	100mA											KTC3207T				
	200mA															
	500mA														MMBTA42	
400V	300mA														MMBTA44	PXTA44
	1.5A															
	4A															
	5A															
	8A															
	12A															
500V	3A															
	5A															
530V	1.5A															
800V	3A															

NPN Transistor (V_{CE0} : 120V ~ 800V)

SOT-223	DPAK	TO-92	TO-92L	IPAK(1)	TO-126	TO-220IS	TO-220AB	TO-3P(H)IS	TO-3P(N)
 (6.5X3.5)	 (6.6X6.1)								
			KTC1027						
	KTC2025D				KTD600K				
					KTC2803				
									KTD718A
								KTD998	KTC5197 KTC718 KTC718B
									KTC4468
									KTD1047
			KTC3206		KTC3423				
									KTD1530
		2N5551 2N5551C							
			KTC3228						
	KTC2983D				KTC2800	KTC4370			
						KTC4370A			
						KTD2061			
			KTC3467						
						KTC4793			
									KTC5242A
		BF422							
		BF420							
			KTC3207		KTC3503	KTC3229			
					KTC4217				
		MPSA42							
PZTA44		MPSA44							
		KTC3003			MJE13003				
					MJE13004D				
						KTC4419	MJE13005D MJE5555		
						MJE13007F	MJE13007		
						MJE13009F	MJE13009		
						KTC4520F			
						KTC4521F			
		KTC3003HV			MJE13003HV				
						KTC5027F	KTC5027		

Note) : TO-3P(N)-E PKG

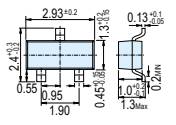
Bipolar Junction Transistor

General Purpose Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
				VCE O	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTA2014F	S	KTC4075F	L	-50	-150	50	70	400	-6	-2	-0.3	-100	-10	80	-	-10	-1	TFSM	
KTC4075F	L	KTA2014F	S	50	150	50	70	700	6	2	0.25	100	10	80	-	10	1		
KTA2012V	SZ	KTC4072V	LZ	-12	-500	100	270	680	-2	-10	-0.25	-200	-10	-	260	-2	-10	VSM	
KTA2013V	U	KTC4074V	T	-20	-200	100	120	400	-5	-2	-0.3	-100	-10	80	-	-10	-1		
KTA2014V	S	KTC4075V	L	-50	-150	100	70	400	-6	-2	-0.3	-100	-10	80	-	-10	-1		
KTC4075V	L	KTA2014V	S	50	150	100	70	700	6	2	0.25	100	10	80	-	10	1		
KTA2012E	SZ	KTC4072E	LZ	-12	-500	100	270	680	-2	-10	-0.25	-200	-10	-	260	-2	-10	ESM	
KTA2014E	S	KTC4075E	L	-50	-150	100	70	400	-6	-2	-0.3	-100	-10	80	-	-10	-1		
KTC4072E	LZ	KTA2012E	SZ	12	500	100	270	680	2	10	0.25	200	10	-	320	2	10		
KTC4075E	L	KTA2014E	S	50	150	100	70	700	6	2	0.25	100	10	80	-	10	1		
BC857W	3	BC847W	1	-45	-100	100	125	800	-5	-2	-0.3	-10	-0.5	-	150	-5	-10	USM	
BC807W	1	BC817W	2	-45	-500	100	100	630	-1	-100	-0.7	-500	-50	80	-	-5	-10		
BC847W	1	BC857W	3	45	100	100	110	800	5	2	0.25	10	0.5	-	300	5	10		
KTA2015	Z	KTC4076	W	-30	-500	100	70	240	-1	-100	-0.25	-100	-10	-	200	-6	-20		
KTA2014	S	KTC4075	L	-50	-150	100	70	400	-6	-2	-0.3	-100	-10	80	-	-10	-1		
KTC4076	W	KTA2015	Z	30	500	100	70	240	1	100	0.25	100	10	-	300	6	20		
KTC4075	L	KTA2014	S	50	150	100	70	700	6	2	0.25	100	10	80	-	10	1		
KTA1505S	AZ	KTC3876S	W	-30	-500	150	70	400	-1	-100	-0.25	-100	-10	-	200	-6	-20	SOT-23	
KTA1298	I	KTC3265	E	-30	-800	200	100	320	-1	-100	-0.4	-500	-20	-	120	-5	-10		
KTA1504S	AS	KTC3875S	AL	-50	-150	150	70	400	-6	-2	-0.3	-100	-10	80	-	-10	-1		
KTC3876S	W	KTA1505S	AZ	30	500	150	70	400	1	100	0.25	100	10	-	300	6	20		
KTC3265	E	KTA1298	I	30	800	200	100	320	1	100	0.5	500	20	-	120	5	10		
KTC3875S	AL	KTA1504S	AS	50	150	150	70	700	6	2	0.25	100	10	80	-	10	1		
KTC8050S	BK	KTC8550S	BL	30	800	350	100	300	1	50	0.5	500	20	-	120	5	10		
KTC8550S	BL	KTC8050S	BK	-30	-800	350	100	300	-1	-50	-0.5	-500	-50	-	120	-5	-10		
KTC9012S	BB	KTC9013S	BC	-30	-500	350	96	246	-1	-50	-0.25	-100	-10	150	-	-6	-20		
KTC9013S	BC	KTC9012S	BB	30	500	350	96	246	1	50	0.25	100	10	140	-	6	20		
KTC9014S	BD	KTC9015S	BE	50	150	350	100	1000	5	1	0.25	100	10	60	-	10	1		
KTC9015S	BE	KTC9014S	BD	-50	-150	350	100	600	-5	-1	-0.3	-100	-10	60	-	-10	-1		

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm, : hFE Grade

General Purpose Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
				VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
BC857	3	BC847	1	-45	-100	350	125	800	-5	-2	-0.3	-10	-0.5	-	150	-5	-10	SOT-23 	
BC860	4	BC850	2	-45	-100	350	125	475	-5	-2	-0.3	-10	-0.5	-	150	-5	-10		
BC807	5	BC817	6	-45	-800	350	100	630	-1	-100	-0.7	-500	-50	80	-	5	10		
BCW68	D	-	-	-45	-800	350	100	400	-1	-100	-0.3	-100	-10	100	-	-10	-80		
BC856	3	BC846	1	-65	-100	350	125	475	-5	-2	-0.3	-10	-0.5	-	150	-5	-10		
BC848	1	-	3	30	100	350	110	800	5	2	0.25	10	0.5	-	300	5	10		
BC847	1	BC857	3	45	100	350	110	800	5	2	0.25	10	0.5	-	300	5	10		
BC850	2	BC860	4	45	100	350	200	800	5	2	0.25	10	0.5	-	300	5	10		
BC817	6	BC807	5	45	800	350	100	630	1	100	0.7	500	50	100	-	5	10		
BC846	1	BC856	3	65	100	350	110	450	5	2	0.25	10	0.5	-	300	5	10		
MMBTA56	ANX	MMBTA06	ADX	-80	-500	350	100	-	-1	-10	-0.25	-100	-10	50	-	1	100		
MMBTA06	ADX	MMBTA56	ANX	80	500	350	100	-	1	10	0.25	100	10	100	-	2	10		
MPS8050S	BH	MPS8550S	BJ	25	1500	350	85	300	1	100	0.5	800	80	100	190	10	50		
MPS8550S	BJ	MPS8050S	BH	-25	-1500	350	85	300	-1	-100	-0.5	-800	-80	100	200	-10	-50		
KN3906S	ZAA	KN3904S	ZCA	-40	-200	350	60	-	-1	-0.1	-0.25	-10	-1	-	250	-20	-10		
KN4403S	ZWA	KN4401S	ZUA	-40	-600	350	30	-	-1	-0.1	-0.4	-150	-15	200	-	-10	-20		
KN2907AS	ZHA	KN2222AS	ZGA	-60	-600	350	75	-	-10	-0.1	-0.4	-150	-15	200	-	-20	-50		
KN3904S	ZCA	KN3906S	ZAA	40	200	350	40	-	1	0.1	0.2	10	1	-	300	20	10		
KN2222AS	ZGA	KN2907AS	ZHA	40	600	350	35	-	10	0.1	0.3	150	15	300	-	20	20		
KN4401S	ZUA	KN4403S	ZWA	40	600	350	20	-	1	0.1	0.4	150	15	250	-	10	20		

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm, : hFE Grade

General Purpose Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
				VCEO (V)	IC (A)	PC (W)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTA1664	R	KTC4376	P	-30	-0.8	1@	100	320	-1	-100	-0.7	-500	-20	-	120	-5	-10	SOT-89	
KTA1663	H	KTC4375	G	-30	-1.5	1@	100	320	-2	-500	-2	-1.5A	-30	-	120	-2	-500		
KTA1668	J	KTC4378	T	-60	-1	1@	60	200	-2	-50	-0.7	-500	-50	-	150	-10	-50		
KTA1662	F	KTC4374	E	-80	-0.4	1@	70	240	-2	-50	-0.4	-200	-20	-	120	-10	-10		
KTB1260	Q	KTD1898	Z	-80	-1	1@	70	400	-3	-100	-0.4	-500	-50	-	100	-5	-50		
KTC4376	P	KTA1664	R	30	0.8	1@	100	320	1	100	0.5	500	20	-	120	5	10		
KTC4375	G	KTA1663	H	30	1.5	1@	100	320	2	500	2	1.5A	30	-	120	2	500		
KTC4378	T	KTA1668	J	60	1	1@	100	320	2	50	0.5	500	50	-	150	10	50		
KTC4374	E	KTA1662	F	80	0.4	1@	70	240	2	50	0.4	200	20	-	100	10	10		
KTD1898	Z	KTB1260	Q	80	1	1@	70	400	3	500	0.4	500	20	-	100	10	50		
KTA1242D	-	-	-	-20	-5	1	100	320	-2	-500	-0.5	-3A	-75	-	170	-2	-500	DPAK	
KTA1040D	-	KTC2020D	-	-60	-3	1	100	300	-5	-500	-1.0	-2A	-200	-	30	-5	-500		
KTA1042D	-	KTC2022D	-	-100	-5	-	70	240	-5	-1000	-2.0	-4A	-400	-	30	-5	-1A		
KTA1045D	-	KTC2025D	-	-120	-1	1	100	320	-5	-50	-0.4	-500	-50	-	110	-10	-50		
KTA1225D	-	KTC2983D	-	-160	-1.5	1	70	240	-5	-100	-1.5	-500	-50	-	100	-10	-100		
KTC3072D	-	-	-	20	5	1	120	700	2	500	0.4	3A	60	-	100	6	50		
KTC5001D	-	KTA1834D	-	20	10	1	120	390	2	500	0.25	4A	50	-	150	5	1.5A		
KTC2020D	-	KTA1040D	-	60	3	1	100	300	5	500	1.0	2A	200	-	30	5	500		
KTC2825D	-	-	-	60	3	1	200	400	2	100	0.5	2A	100	-	150	10	50		
KTC2022D	-	KTA1042D	-	100	5	-	70	240	5	1000	2.0	4A	400	-	30	5	1A		
KTC2025D	-	KTA1045D	-	120	1	1	100	320	5	50	0.4	500	50	-	130	10	50		
KTC2030D	-	-	-	60	3A	1	150	250	5	500	1.0	2A	200	-	30	5	500		
KTC2983D	-	KTA1225D	-	160	1.5	1	70	240	5	-	1.5	500	50	-	100	10	100		

Note) @: Package Mounted on Ceramic Substrate (250mm² × 0.8t), : hFE Grade, : Ta=25 , : Tc=25

General Purpose Transistor

Type No.	Complementary	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
		VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
BC558	BC548	-30	-100	625	110	800	-5	-2	-0.65	-100	-5	-	150	-5	-10	TO-92	
BC557	BC547	-45	-100	625	110	800	-5	-2	-0.65	-100	-5	-	150	-5	-10		
BC327	BC337	-45	-800	625	100	630	-1	-100	-0.7	-500	-50	-	100	-5	-10		
BC556	BC546	-65	-100	625	110	450	-5	-2	-0.65	-100	-5	-	150	-5	-10		
BC548	BC558	30	100	625	110	800	5	2	0.6	100	5	-	150	5	10		
BC549	-	30	100	625	110	800	5	2	0.6	100	5	-	300	5	10		
BC547	BC557	45	100	625	110	800	5	2	0.6	100	5	-	150	5	10		
BC337	BC327	45	800	625	100	630	1	100	0.7	500	50	-	100	5	10		
BC546	BC556	65	100	625	110	450	5	2	0.6	100	5	-	150	5	10		
MPS751	MPS651	-60	-1A	625	60	200	-2	-50	-0.7	-500	-50	-	150	-10	-50		
MPS651	MPS751	60	1A	625	100	320	2	50	0.5	500	50	-	150	10	50		
KN4403	KN4401	-40	-600	625	30	-	-1	-0.1	-0.4	-150	-15	200	-	-10	-20		
KN2907A	KN2222A	-60	-600	625	75	-	-10	-0.1	-0.4	-150	-15	200	-	-20	-50		
KN3904	-	40	200	625	40	-	1	0.1	0.2	10	1	-	300	20	10		
KN2222A	KN2907A	40	600	625	35	-	10	0.1	0.3	150	15	300	-	20	20		
KN4401	KN4403	40	600	625	20	-	1	0.1	0.4	150	15	250	-	10	20		

BJT

General Purpose Transistor

Type No.	Complementary	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)		
		VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)				
KTA539	KTC815	-45	-200	625	70	240	-1	-50	-0.5	-150	-15	100	-	-10	-10	TO-92			
KTB598	KTD545	-25	-1A	625	70	400	-2	-50	-0.3	-500	-50	-	180	-10	-50				
KTA1270	KTC3202	-30	-500	625	70	240	-1	-100	-0.25	-100	-10	-	200	-6	-20				
KTA1271	KTC3203	-30	-800	625	100	320	-1	-100	-0.7	-500	-20	-	120	-5	-10				
KTA1282	KTC3210	-30	-2A	625	100	320	-2	-500	-2	-1.5A	-30	-	120	-2	-500				
KTB1772	-	-30	-3A	625	100	400	-2	-1A	-0.5	-2A	-200	-	80	-5	-100				
KTA1266	KTC3198	-50	-150	625	70	240	-6	-2	-0.3	-100	-10	80	-	-10	-1				
KTA200	KTC200	-50	-500	625	70	240	-2	-50	-0.25	-100	-10	-	200	-6	-20				
KTD545	KTB598	25	1A	625	70	400	2	50	0.3	500	50	-	180	10	50				
KTC3202	KTA1270	30	500	625	70	400	1	100	0.25	100	10	-	300	6	20				
KTC3203	KTA1271	30	800	625	100	320	1	100	0.5	500	20	-	120	5	10				
KTC3210	KTA1282	30	2A	625	100	320	2	500	2	1.5A	30	-	120	2	500				
KTC3211	KTA1283	25	1.5A	625	85	300	1	100	0.5	800	80	100	190	10	50				
KTC200	KTA200	45	500	625	70	240	2	50	0.25	100	10	-	300	6	20				
KTC815	KTA539	45	200	625	70	240	1	50	0.4	150	15	100	-	10	10				
KTC3198	KTA1266	50	150	625	70	700	6	2	0.25	100	10	80	-	10	1				
KTC1008	-	60	1A	625	100	320	2	50	0.5	500	50	-	150	10	50				
KTA1283	KTC3211	-25	-1.5A	625	85	300	-1	-100	-0.5	-800	-80	100	190	-10	-50				
KTA1273	KTC3205	-30	-2A	1W	100	320	-2	-500	-2	-1.5A	-30	-	120	-2	-500			TO-92L	
KTA1274	KTC3227	-80	-400	1W	70	240	-2	-50	-0.4	-200	-20	-	100	-10	-10				
KTA1572	KTC3572	-100	-1A	1W	150	450	-5	-500	-0.18	-500	-50	-	100	-10	-50				
KTC3205	KTA1273	30	2A	1W	100	320	2	500	2	1.5A	30	-	120	2	500				
KTD863	-	60	1A	1W	60	320	2	50	0.5	500	50	-	150	10	50				
KTC3227	KTA1274	80	400	1W	70	240	2	50	0.4	200	20	-	100	10	10				
KTD1863	-	80	1A	1W	70	400	3	500	0.4	500	20	-	100	10	50				
KTC3572	KTA1572	100	1A	1W	150	500	10	250	0.12	500	20	-	100	10	50				
KTC1027	KTA1023	120	800	1W	80	240	5	100	1	500	50	-	120	5	100				

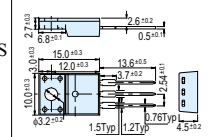
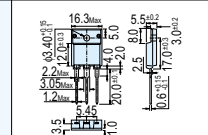
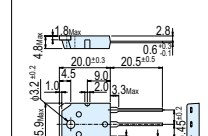
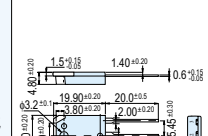
General Purpose Transistor

Type No.	Complementary	Max. Ratings				hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
		VCEO (V)	IC (A)	PC (W)	PC (W)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTA1834L	KTC5001L	-20	10	1	10	120	390	-2	-500	-0.25	-4A	-50	-	150	-5	-1.5A	IPAK(1)	
KTA1040L	KTC2020L	-60	-3	1	20	100	300	-5	-500	-1	-2A	-200	-	30	-5	-500		
KTA1042L	KTC2022L	-100	-5	-	20	70	240	5	1A	-2	-4A	-400	-	30	-5	-1A		
KTA1045L	KTC2025L	-120	-1	1	8	100	320	-5	-50	-0.4	-500	-50	-	130	-10	-50		
KTC5001L	KTA1834L	20	10	1	10	120	390	2	500	0.25	4A	50	-	150	5	1.5A		
KTC2983L	KTA1225L	160	1.5	1	10	70	240	5	100	1.5	500	50	-	100	10	100		
KTA1709	-	-20	-5	1.5		100	320	-2	-500	-0.5	-3A	-75	-	170	-2	-500	TO-126	
KTA1705	KTC2804	-30	-3	1.5	10	70	240	-2	-500	-0.8	-2A	-200	-	100	-2	-500		
KTB772	KTD882	-30	-3	1.5	10	100	400	-2	-1A	-0.5	-2A	-200	-	80	-5	-100		
KTB1151	KTD1691	-60	-5	1.5	20	160	400	-1	-2A	-0.3	-2A	-200	-	-	-	-		
KTB631K	KTD600K	-120	-1	1.5	8	100	320	-5	-50	-0.4	-500	-50	-	110	-10	-50		
KTA1704	KTC2803	-120	-1.2	1.5	20	100	320	-5	-50	-0.4	-500	-50	-	110	-10	-50		
KTA1700	KTC2800	-160	-1.5	1.5	10	70	240	-5	-100	-1.5	-500	-50	-	100	-10	-100		
KTA1360	KTC3423	-150	-0.5	1.5	-	70	240	-5	-10	-0.8	-10	-1	-	120	-30	-10		
KTA1381	KTC3503	-300	-0.1	1.5	7	60	200	-10	-10	-0.6	-20	-2	-	150	-30	-10		
KTA1703	-	-400	-0.5	1.5	10	60	200	-5	-100	-1	-100	-10	-	-	-	-		
KTD882	KTB772	30	3	1.5	10	100	400	2	1A	0.5	2A	200	-	90	5	100		
KTD1691	KTB1151	60	5	1.5	20	160	400	1	2A	0.3	2A	200	-	-	-	-		
KTD600K	KTB631K	120	1	1.5	8	100	320	5	50	0.4	500	50	-	130	10	50		
KTC2803	KTA1704	120	1.2	1.5	20	100	320	5	50	0.4	500	50	-	110	10	50		
KTC2800	KTA1700	160	1.5	1.5	10	70	240	5	100	1.5	500	50	-	100	10	100		
KTC3423	KTA1360	150	0.5	1.5	5	70	240	5	10	0.5	10	1	-	120	30	10		
KTC3503	KTA1381	300	0.1	1.5	7	60	200	10	10	0.6	20	2	-	150	30	10		
KTC4217	-	300	0.2	1.5	10	60	200	10	10	0.6	20	2	-	70	10	10		
KTA1658	KTC4369	-30	-3	-	15	70	240	-2	-500	-0.8	-2A	-200	-	100	-2	-500	TO-220IS	
KTA1046	KTC2026	-60	-3	2	25	100	300	-5	-500	-1	-2A	-200	-	30	-5	-500		
KTB1366	KTD2058	-60	-3	2	25	60	200	-5	-500	-1	-2A	-200	-	9	-5	-500		
KTB1368	KTD2060	-80	-4	-	25	40	240	-5	-500	-1.7	-3A	-300	-	9	-5	-500		
KTB1370	-	-80	-7	-	30	70	240	-1	-1A	-0.5	-4A	-400	-	10	-4	-1A		
KTA1049	KTC2028	-100	-5	-	30	70	240	-5	-1A	-2	-4A	-400	-	30	-5	-1A		
KTB1367	KTD2059	-100	-5	-	30	40	240	-5	-1A	-2	-4A	-400	-	5	-5	-1A		

Note) : Typ. : Ta=25 , : Tc=25

Bipolar Junction Transistor

General Purpose Transistor

Type No.	Complementary	Max. Ratings				hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
		VCEO (V)	IC (A)	PC (W)	PC (W)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTA1659	KTC4370	-160	-1.5	-	20	70	240	-5	-100	-1.5	-500	-50	-	100	-10	-100	TO-220IS	
KTA1659A	KTC4370A	-180	-1.5	-	20	70	240	-5	-100	-1.5	-500	-50	-	100	-10	-100		
KTB1369	KTD2061	-180	-2	-	20	70	240	-10	-400	-1	-500	-50	-	100	-10	-400		
KTA1837	KTC4793	-230	-1	2	20	100	320	-5	-100	-1.5	-500	-50	-	70	-10	-100		
KTC4369	KTA1658	30	3	-	15	70	240	2	500	0.8	2A	200	-	100	2	500		
KTC2026	KTA1046	60	3	2	25	100	300	5	500	1	2A	200	-	30	5	500		
KTD2058	KTB1366	60	3	2	25	60	200	5	500	1	2A	200	-	3	5	500		
KTD2060	KTB1368	80	4	-	25	40	240	5	500	1.5	3A	300	-	8	5	500		
KTC2027	-	80	4	-	25	40	240	5	500	1.5	3A	300	-	30	5	500		
KTC2028	KTA1049	100	5	-	30	70	240	5	1A	2	4A	400	-	30	5	1A		
KTD2059	KTB1367	100	5	-	30	40	240	5	1A	2	4A	400	-	12	5	1A		
KTC4370	KTA1659	160	1.5	-	20	70	240	5	100	1.5	500	50	-	100	10	100		
KTC4370A	KTA1659A	180	1.5	-	20	70	240	5	100	1.5	500	50	-	100	10	100		
KTD2061	KTB1369	180	2	-	20	70	240	10	400	1	500	50	-	100	10	400		
KTC1003	-	200	4	-	30	30	150	5	1A	1	4A	400	-	8	5	500		
KTC4793	KTA1837	230	1	2	20	100	320	5	100	1.5	500	50	-	70	10	100		
KTC3229	-	300	0.1	2	-	30	200	10	20	1	10	1	75	95	20	20		
TIP32CF	TIP31CF	-100	-3	2	25	10	50	-4	-3A	-1.2	-3A	-375	3	-	-10	-500		
TIP42CF	TIP41CF	-100	-6	2	25	15	75	-4	-3A	-1.5	-6A	-600	3	-	-10	-500		
TIP31CF	TIP32CF	100	3	2	25	10	50	4	3A	1.2	3A	375	3	-	10	500		
TIP41CF	TIP42CF	100	6	2	25	15	75	4	3A	1.5	6A	600	3	-	10	500		
KTB778	KTD998	-120	-10	-	80	55	160	-5	-1A	-2.5	-5A	-500	-	10	-5	-1A	TO-3P(H)IS	
KTD998	KTB778	120	10	-	80	55	160	5	1A	2.5	5A	500	-	12	5	1A		
TIP36C	TIP35C	-100	-25	-	125	55	160	-5	-1.5A	-1.8	-15A	-1.5A	3	-	-5	-1A	TO-3P(N)	
TIP35C	TIP36C	100	25	-	125	55	160	5	1.5A	1.8	15A	1.5A	3	-	5	1A		
KTB688A	KTD718A	-120	-8	-	80	55	160	-5	-1A	-2.5	-6A	-600	-	30	-5	-1A		
KTB688	KTD718	-120	-10	-	80	55	160	-5	-1A	-2.5	-5A	-500	-	10	-5	-1A		
KTA1695	KTC4468	-140	-10	-	100	55	-	-4	-3A	-0.5	-5A	-500	-	20	-12	-500		
KTB817	KTD1047	-140	-12	-	100	60	200	-5	-1A	-2.5	-5A	-500	-	15	-5	-1A		
KTA1962A	KTC5242A	-230	-15	-	130	55	160	-5	-1A	-3	-8A	-800	-	30	-5	-1A		
KTC5197	-	120	10	-	80	55	160	5	1A	2	6A	600	-	30	5	1A		
KTD718A	KTB688A	120	8	-	80	55	160	5	1A	2.5	6A	600	-	30	5	1A		
KTD718	KTB688	120	10	-	80	55	160	5	1A	2.5	5A	500	-	12	5	1A		
KTC4468	KTA1695	140	10	-	100	55	-	4	3A	0.5	5A	500	-	20	12	500		
KTD1047	KTB817	140	12	-	100	60	200	5	1A	2.5	5A	500	-	15	5	1A		
KTC5242A	KTA1962A	230	15	-	130	55	160	5	1A	3	8A	800	-	30	5	1A		
TIP36A	TIP35A	-100	-25	-	125	55	160	-5	-1.5A	-1.8	-15A	-1.5A	3	-	-5	-1A	TO-3P(N)-E	
TIP36CA	TIP35CA	-100	-25	-	125	55	160	-5	-1.5A	-1.8	-15A	-1.5A	3	-	-5	-1A		
TIP35A	TIP36A	100	25	-	125	55	160	5	1.5A	1.8	15A	1.5A	3	-	5	1A		
TIP35CA	TIP36CA	100	25	-	125	55	160	5	1.5A	1.8	15A	1.5A	3	-	5	1A		
KTB688B	KTD718B	-120	-10	-	80	55	160	-5	-1A	-2.5	-5A	-500	-	10	-5	-1A		
KTD718B	KTB688B	120	10	-	80	55	160	5	1A	2.5	5A	500	-	12	5	1A		

Note) : Ta=25 , : Tc=25 , : Vcbo

Complex General Purpose Transistor

BJT

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
			VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTC601E	L		50	150	200	120	400	6	2	0.25	100	10	80	-	10	1	TESV	
KTA701E	S		-50	-150	200	120	400	-6	-2	-0.3	-100	-10	80	-	-10	-1	TES6	
KTC801E	L		50	150	200	120	400	6	2	0.3	100	10	80	-	10	1		
KTC802E	LZ		12	500	200	270	680	2	10	0.25	200	10	-	320	2	10		
KTC811E	V		50	150	200	120	400	6	2	0.25	100	10	80	-	10	1		
KTC812E	W		50	150	200	120	400	6	2	0.25	100	10	80	-	10	1		
KTX101E	B		± 50	± 150	200	120	400	± 6	± 2	+0.25 -0.3	± 100	± 10	80	-	± 10	± 1		
KTX102E	D		± 50	± 150	200	120	400	± 6	± 2	-0.3 +0.25	± 100	± 10	80	-	± 10	± 1		

Note) : hFE Grade

Bipolar Junction Transistor

Complex General Purpose Transistor

Type No	Mark	Internal Circuit	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
			VCE O	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTA701U	S		-50	-150	200	120	400	-6	-2	-0.3	-100	-10	80	-	-10	-1	US6	
KTA711U	E		-50	-150	200	120	400	-6	-2	-0.3	-100	-10	80	-	-10	-1		
KTA712U	F		-50	-150	200	120	400	-6	-2	-0.3	-100	-10	80	-	-10	-1		
KTC801U	L		50	150	200	120	400	6	2	0.25	100	10	80	-	10	1		
KTC811U	V		50	150	200	120	400	6	2	0.3	100	10	80	-	10	1		
KTC812U	W		50	150	200	120	400	6	2	0.3	100	10	80	-	10	1		
KTC814U	H		20	300	200	350	1200	2	4	0.3	30	3	-	30	6	4		
KTC611T	L		30	500	900	70	240	1	100	0.25	100	10	-	300	6	20	TSV	
KTX111T	B		± 30	± 500	900	70	240	± 1	± 100	± 0.25	± 100	± 10	-	300	± 6	± 20	TS6	
KTC811T	L		30	500	900	70	240	1	100	0.25	100	10	-	300	6	20		

Note) : Package mounted on a ceramic board (600mm² × 0.8mm), : hFE Grade

High Voltage Transistor

BJT

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)					Package	Outline (Unit : mm)
				VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	Max.	VCE (V)	IC (mA)		
KTA1520S	KMH	-	-	-100	-1A	150	100	300	-5	-500	-0.2	-250	-25	50	-	-	-5	-500	SOT-23	
2N5401S	ZE	-	-	-150	-600	350	60	240	-5	-10	-0.2	-10	-1	100	-	300	-10	-10		
2N5551S	ZF	-	-	160	600	350	80	250	5	10	0.15	10	1	100	-	300	10	10		
MMBTA92	YV	MMBTA42	AAX	-300	-500	350	40	-	-10	-10	-0.5	-20	-2	50	-	-	-20	-10		
MMBTA42	AAX	MMBTA92	YV	300	500	350	40	-	10	10	0.5	20	2	50	-	-	20	10		
MMBTA44	APX	-	-	400	300	350	50	200	10	10	0.5	10	1	20	-	-	10	10		
KTA1073T	SX	KTC3207T	LX	-300	-100	900	50	150	-10	-20	-0.5	-20	-2	50	55	-	-10	-20	TSM	
KTC3207T	LX	KTA1073T	SX	300	100	900	50	150	10	20	1	10	1	50	-	-	10	20		
KTA1759	AA	-	-	-400	-100	@1W	50	300	-10	-10	-0.5	-20	-2	-	-	-	-	-	SOT-89	
KTC4373	C	KTA1661	D	120	800	@1W	80	240	5	100	1	500	50	-	120	-	5	100		
KTA1661	D	KTA4373z	C	-120	-800	@1W	80	240	-5	-100	-1	-500	-50	-	120	-5	-100			
KTA1660	B	-	A	-150	-50	@1W	70	240	-5	-10	-0.8	-10	-1	-	120	-30	-10			
KTC4380	G2	-	-	160	1000	@1W	160	320	5	200	1.5	500	50	-	100	-	5	200		
PXTA44	AP	-	-	400	300	@1W	50	200	10	10	0.5	10	1	-	-	-	-	-		
PZTA44	-	-	-	400	300	2W	50	200	10	10	0.5	10	1	-	-	-	-	-	SOT-223	

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm, @ : Mounted on Ceramic Substrate (250mm × 0.8t), : hFE Grade, : Package mounted on a ceramic board (600mm × 0.8mm).

Low Noise Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE			VCE(sat) (V)			NF (dB)				Package	Outline (Unit : mm)	
				VCEO (V)	IC (mA)	PC (mW)	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Max.	VCE (V)	IC (mA)	Rg (kΩ)			f (kHz)
KTC4666	T	-	-	50	150	100	3600	6	2	0.25	100	10	0.5	6	0.1	10	0.1	USM	
KTA1266L	-	-	-	-50	-150	625	700	-6	-2	-0.25	-100	-10	6	6	0.1	10	0.1	TO-92	

Note) : Min, : Typ, : hFE Grade

BJT

Audio Muting Transistor

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			hFE			VCE(sat) (V)			fT (MHz)		RON ()				Package	Outline (Unit : mm)		
			VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Typ.	VCE (V)	IC (mA)	Typ.	f (kHz)			IB (mA)	VIN (V)
KTC2875	M	-	20	300	150	350	1200	2	4	0.3	30	3	30	6	4	-	-	-	-	SOT-23	
KTD1304	MAX	-	20	300	200	200	800	2	4	0.25	100	10	60	10	1	0.6	1	1	0.3		
KTC814U	H		20	300	200	350	1200	2	4	0.3	30	3	30	6	4	-	-	-	-	US6	
KTC812T	M		20	300	900	350	1200	2	4	0.3	30	3	30	6	4	-	-	-	-	TS6	
KTC2874	-	-	20	300	625	200	1200	2	4	0.3	30	3	30	6	4	-	-	-	-	TO-92	
KTD1302	-	-	20	300	625	200	800	2	4	0.25	100	10	60	10	1	0.6	1	1	0.3		

Note) : Package mounted on a ceramic board (600mm² × 0.8mm), : hFE Grade

High hfe Transistor

Type No.	Mark	Max. Ratings			hFE					VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
		VCEO (V)	IC (mA)	PC (mW)	Min.	Typ.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTD1824	L	40	50	100	400	1000	2000	10	2	0.2	10	1	-	120	10	2	USM	
KTC3295	T	50	150	150	600	-	3600	6	2	0.25	100	10	100	250	10	10	SOT-23	
KTD1003	L	50	1A	@1W	800	1500	3200	5	300	0.3	500	5	150	250	10	500	SOT-89	
KTC3112	-	50	150	625	600	-	3600	6	2	0.25	100	10	100	250	10	10	TO-92	
KTD1028	-	50	1A	1W	800	1500	3200	5	300	0.3	500	5	150	250	10	500	TO-92L	
KTC3114	-	50	150	1.5W	600	-	3600	6	2	0.25	100	10	100	250	10	10	TO-126	
KTC3964	-	40	2A	1.5W	500	-	-	1	400	0.5	300	1	-	220	2	100		
KTD2092	-	80	3A	25W	500	-	1500	1	500	0.35	1A	10	-	140	5	1A	TO-220IS	
KTD2066	-	80	5A	30W	500	-	1500	1	1A	0.35	3A	30	-	130	5	1A		
KTD1937	-	80	10A	40W	500	-	1500	1	1A	0.35	5A	50	-	70	5	1A		

Note) @ : Mounted on Ceramic Substrate (250mm × 0.8t), : hFE Grade, : Tc=25

Strobo Flash Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)			Package	Outline (Unit : mm)
				VCEO (V)	IC (A)	@ PC (W)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (A)	IB (mA)	Typ.	VCE (V)	IC (mA)		
KTA1001	K	-	-	-20	-3	1	100	320	-2	-500	-0.5	-3	-75	170	-2	-500	SOT-89	
KTA1241	-	-	-	-20	-5	1W	100	320	-2	-500	-0.5	-3	-75	170	-2	-500	TO-92L	

Note) @ : Mounted on Ceramic Substrate (250mm x 0.8t), : hFE Grade

Switching Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)	ton (ns)	toff (ns)	td (ns)	tr (ns)	tstg (ns)	tf (ns)	Package	Outline (Unit : mm)
				VCEO (V)	IC (mA)	PC (mW)	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.									
				Min.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.						
2N3904V	ZC	-	ZA	40	200	100	300	1	10	0.2	10	1	300	-	-	35	35	200	50	VSM		
KTN2907AE	ZH	-	ZG	-60	-600	100	300	-10	-150	-0.4	-150	-15	200	45	100	10	40	80	30	ESM		
KTN2907AU	ZH	KTN2222AU	ZG	-60	-600	100	300	-10	-150	-0.4	-150	-15	200	45	100	10	40	80	30	USM		
KTN2222AU	ZG	KTN2907AU	ZH	40	600	100	300	10	150	0.4	150	15	250	-	-	10	25	225	60			
2N2904E	ZC	-	-	40	200	200	300	1	10	0.2	10	1	300	-	-	35	35	200	50	TES6		
2N2906E	ZA	-	-	-40	200	200	300	-1	-10	-0.25	-10	-1	250	-	-	35	35	225	75			
2N3906S	ZA	2N3904S	ZC	-40	-200	350	300	-1	-10	-0.25	-10	-1	250	-	-	35	35	225	75	SOT-23		
2N3904S	ZC	2N3906S	ZA	40	200	350	300	1	10	0.2	10	1	300	-	-	35	35	200	50			
KTN2907AS	ZH	KTN2222AS	ZG	-60	-600	350	300	-10	-150	-0.4	-150	-15	200	45	100	10	40	80	30			
KTN2222S	ZB	KTN2907S	ZDA	30	600	350	300	10	150	0.4	150	15	250	-	-	10	25	225	60			
KTN2222AS	ZG	KTN2907AS	ZH	40	600	350	300	10	150	0.3	150	15	300	-	-	10	25	225	60			
KTA1666	W	KTC4379	U	-50	-2A	@1W	240	-2	-500	-0.5	-1A	-50	120	100	-	-	-	1000	100	SOT-89		
KTB1124	X	KTD1624	Y	-50	-3A	@1W	400	-2	-100	-0.7	-2A	-100	150	70	-	-	-	450	35			
KTC4379	U	KTA1666	W	50	2A	@1W	240	2	500	0.5	1A	50	120	100	-	-	-	1000	100			
KTD1624	Y	KTB1124	X	50	3A	@1W	400	2	100	0.5	2A	100	150	70	-	-	-	650	35			
KTA1718D	-	KTC2815D	-	-50	-2A	10W	240	-2	-500	-0.5	-1	-50	100	100	-	-	-	1000	100	DPAK		
KTA1385D	-	KTC5103D	-	-60	-5A	15W	400	-1	-2A	-0.3	-2	-200	-	1000	-	-	-	2500	1000			
KTA1862D	-	-	-	-400	-2A	10W	180	-5	-100	-0.5	0.5	-100	18	200	-	-	-	1800	400			
KTA1807D	-	-	-	-600	-1A	20W	120	-5	-100	-1.0	-0.3	-60	28	500	-	-	-	5000	500			
KTC1815D	-	KTA1718D	-	50	2A	10W	240	2	500	0.5	1	50	100	100	-	-	-	1000	100			
KTC5103D	-	KTA1385D	-	60	5A	15W	400	1	2A	0.3	2	200	-	1000	-	-	-	2500	1000			

Note) : Typ, : Tc=25, : Package Mounted on 99.5% Alumina 10 x 8 x 0.6mm, @ : Mounted on Ceramic Substrate (250mm x 0.8t), : hFE Grade

Low Vce(sat) Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)			Package	Outline (Unit : mm)		
				VCEO (V)	IC (A)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Typ.	VCE (V)	IC (mA)				
KTA1532U	2A	-	-	-12	-1.5	200	270	680	-2	-200	-0.2	-500	-25	400	-2	-200	USM			
KTA1531T	SA	KTC3531T	HA	-20	-1	900	120	400	-2	-50	-0.3	-500	-50	180	-10	-50	TSM			
KTA1532T	SB	KTC3532T	HB	-20	-1.5	900	200	560	-2	-100	-0.18	-750	-15	210	-2	-300				
KTA1535T	SD	KTC3535T	HD	-20	-3	900	200	560	-2	-500	-0.165	-1.5A	-30	160	-2	-500				
KTA1536T	SE	-	HE	-20	-5	900	200	560	-2	-500	-0.30	-3A	-60	140	-2	-500				
KTA1542T	SH	KTC3542T	HH	-30	-3	900	200	560	-2	-500	-0.23	-1.5A	-30	380	-10	-500				
KTA1543T	SJ	KTC3543T	HJ	-30	-5	900	200	560	-2	-500	-0.21	-2.5A	-50	250	-10	-500				
KTA1544T	SN	KTC3544T	HN	-30	-2	900	200	560	-2	-100	-0.6	-1.5A	-75	150	-10	-50				
KTA1551T	SK	KTC3551T	HK	-50	-1	900	200	560	-2	-100	-0.43	-500	-10	420	-10	-300				
KTA1552T	SL	KTC3552T	HL	-50	-3	900	200	560	-2	-100	-0.2	-1A	-50	360	-10	-500				
KTC3531T	HA	KTA1531T	SA	20	1	900	120	400	2	50	0.3	500	50	180	10	50				
KTC3532T	HB	KTA1532T	SB	20	1.5	900	200	560	2	100	0.2	750	15	210	2	300				
KTC3535T	HD	KTA1535T	SD	20	3	900	200	560	2	500	0.15	1.5A	30	180	2	500				
KTC3542T	HH	KTA1542T	SH	30	3	900	200	560	2	500	0.18	1.5A	30	450	10	500				
KTC3543T	HJ	KTA1543T	SJ	30	5	900	200	560	2	500	0.165	2.5A	50	290	10	500				
KTC3544T	HN	KTA1544T	SN	30	2	900	200	560	2	100	0.4	1.5A	75	150	10	50				
KTC3551T	HK	KTA1551T	SK	50	1	900	200	560	2	100	0.19	500	10	420	10	300				
KTC3552T	HL	KTA1552T	SL	50	3	900	200	560	2	100	0.12	1A	50	380	10	500				
KTA1571S	KMA	KTC3571S	KMB	-100	-1	350	150	450	-5	-250	-0.12	-250	-25	100	-10	-50			SOT-23	
KTA1544S	SN	KTC3544S	HN	-30	-2	350	200	560	-2	-100	-0.6	-1.5A	-75	150	-10	-50				
KTC3571S	KMB	KTA1571S	KMA	100	1	350	150	500	10	250	0.12	500	50	100	10	50				
KTC3544S	HN	KTA1544S	SN	30	2	350	200	560	2	100	0.4	1.5A	75	150	10	50				
KTC3573	G5	-	-	100	1	500	200	500	10	250	0.18	500	50	100	10	50	SOT-89			

Note) : Package mounted on a ceramic board (600mm² × 0.8mm), : hFE Grade, : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm

Junction Field Effect Transistor

General Purpose Junction Field Effect Transistor

Type No.	Mark	Max. Ratings			I _{DSS} (mA)			GV (dB)					Package	Outline (Unit : mm)
		VGDO (V)	IG (mA)	PD (mW)	I _{DSS}	V _{DS} (V)	V _{GS} (V)	Typ.	V _{DD} (V)	C _g (pF)	R _L (kΩ)	f (kHz)		
KTK597TV	F	-20	10	100	150~350	5	0	-3	4.5	15	1	1	TVSM	
KTK597V	F	-20	10	100	150~350	5	0	-3	4.5	15	1	1	VSM	
KTK596S	F	-20	10	150	150~350	5	0	-3	4.5	15	1	1	SOT-23	

Note) : Inss Grade

RF Junction Field Effect Transistor

Type No.	Mark	Max. Ratings			yfs [mS]				IDSS[mA]				Ciss[pF]		Package	Outline (Unit: mm)
		VGDO (V)	IG (mA)	PC (mW)	Typ.	V _{DS} (V)	V _{GS} (V)	f (KHz)	Min.	Max.	V _{DS} (V)	V _{GS} (V)	Typ.	f (MHz)		
KTK951S	J	-22	10	150	30	5	0	1	12	40	5	0	9	1	SOT-23	

Note) : Inss Grade,

General Purpose Transistor + Switching Diode

Type No	Mark	Internal Circuit	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
			VCE O	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTX711T	T7		-80	-500	900	100	250	-1	-100	-0.25	-100	-10	100	-	-2	-10	TS6	
KTX811T	T8		80	500	900	100	250	1	-100	0.25	-100	-10	100	-	2	10		

Note) : Package mounted on a ceramic board (600mm² × 0.8mm)

General Purpose Transistor + BRT







Type No	Mark	Internal Circuit	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
			VCE O	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
KTX213U	BH		-12	-500	200	270	680	-2	-10	-0.25	-200	-10	-	260	-2	-10	US6	

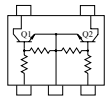
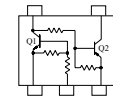
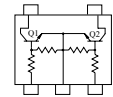
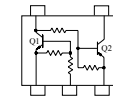
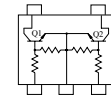
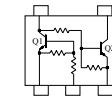
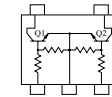
General Purpose Transistor + S-MOSFET

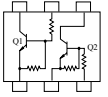
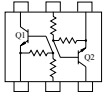
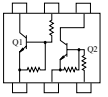
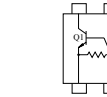
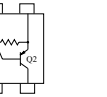
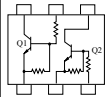
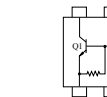
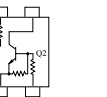
Type No.	Mark	Internal circuit (Top view)	Max. Ratings				IDSS (μA)			Vth (V)				RDS(ON) ()			Package	Outline (Unit: mm)
			VDS (V)	VGS S	ID (mA)	PD (mW)	Max.	VDS (V)	VGS (V)	Min.	Max.	VDS (V)	ID (mA)	Max.	VGS (V)	ID (mA)		
KTX421U	BS		30	±20	100	150	1	30	0	0.5	1.5	3	0.1	7	2.5	10	US6	
			V _{CEO} 12	-	I _C 500	-	-	-	-	-	-	-	-	-	V _{CEO} 0.25V	I _C 0.2A		
KTX321U	BR		30	±20	100	150	1	30	0	0.5	1.5	3	0.1	7	2.5	10	US6	
			V _{CEO} -12	-	I _C -500	-	-	-	-	-	-	-	-	-	V _{CE(sat)} -0.25V	I _C -0.2A		

Current Regulating Device

Type No.	Mark	Internal Circuit	Max. Ratings			Output Current (mA)			Voltage Drop (V)			Package	Outline (Unit : mm)
			VS (V)	IO (mA)	PD (mW)	Typ.	VS (V)	VOU (V)	Typ.	IO (mA)			
KCR401T	AC		40	65	900	10	10	8.6	0.8	10	TS6		
KCR402T	AA		40	65	900	20	10	8.6	0.8	20			
KCR405T	AB		40	65	900	50	10	8.6	0.8	50			

Electrical Characteristics			TFSM	VSM	ESM	USM		SOT-23		TO-92	
											
Polarity	R1 [kΩ]	R2 [kΩ]	±20V/±0.05A	±50V/±0.1A	±50V/±0.1A	±50V/±0.1A	±12V/±0.5A	±50V/±0.1A	±50V/±0.8A	±50V/±0.1A	±50V/±0.8A
NPN	1	1					KRC451		KRC241S		KRC241
	4.7	4.7	KRC151F	KRC401V	KRC401E	KRC401	KRC453	KRC101S	KRC243S	KRC101	KRC243
	10	10	KRC152F	KRC402V	KRC402E	KRC402	KRC454	KRC102S	KRC244S	KRC102	KRC244
	22	22	KRC153F	KRC403V	KRC403E	KRC403		KRC103S		KRC103	
	47	47	KRC154F	KRC404V	KRC404E	KRC404		KRC104S		KRC104	
	2.2	47	KRC155F	KRC405V	KRC405E	KRC405		KRC105S		KRC105	
	4.7	47	KRC156F	KRC406V	KRC406E	KRC406		KRC106S		KRC106	
	10	47	KRC157F	KRC407V	KRC407E	KRC407		KRC107S		KRC107	
	22	47	KRC158F	KRC408V	KRC408E	KRC408		KRC108S		KRC108	
	47	22	KRC159F	KRC409V	KRC409E	KRC409		KRC109S		KRC109	
	4.7	-	KRC160F	KRC410V	KRC410E	KRC410		KRC110S		KRC110	
	10	-	KRC161F	KRC411V	KRC411E	KRC411		KRC111S		KRC111	
	22	-	KRC163F	KRC413V	KRC413E	KRC413		KRC113S		KRC113	
	47	-	KRC164F	KRC414V	KRC414E	KRC414		KRC114S		KRC114	
	1	10		KRC416V	KRC416E	KRC416		KRC116S	KRC245S	KRC116	KRC245
	2.2	2.2		KRC417V	KRC417E	KRC417	KRC452	KRC117S	KRC242S	KRC117	KRC242
2.2	10		KRC418V	KRC418E	KRC418	KRC456	KRC118S	KRC246S	KRC118	KRC246	
4.7	10		KRC419V	KRC419E	KRC419		KRC119S		KRC119		
100	100		KRC422V	KRC422E	KRC422		KRC122S		KRC122		
PNP	1	1					KRA351		KRA221S		KRA221
	4.7	4.7	KRA151F	KRA301V	KRA301E	KRA301	KRA353	KRA101S	KRA223S	KRA101	KRA223
	10	10	KRA152F	KRA302V	KRA302E	KRA302	KRA245	KRA102S	KRA224S	KRA102	KRA224
	22	22	KRA153F	KRA303V	KRA303E	KRA303		KRA103S		KRA103	
	47	47	KRA154F	KRA304V	KRA304E	KRA304		KRA104S		KRA104	
	2.2	47	KRA155F	KRA305V	KRA305E	KRA305		KRA105S		KRA105	
	4.7	47	KRA156F	KRA306V	KRA306E	KRA306		KRA106S		KRA106	
	10	47	KRA157F	KRA307V	KRA307E	KRA307		KRA107S		KRA107	
	22	47	KRA158F	KRA308V	KRA308E	KRA308		KRA108S		KRA108	
	4.7	-	KRA160F	KRA310V	KRA310E	KRA310		KRA110S		KRA110	
	10	-	KRA161F	KRA311V	KRA311E	KRA311		KRA111S		KRA111	
	22	-	KRA163F	KRA313V	KRA313E	KRA313		KRA113S		KRA113	
	47	-	KRA164F	KRA314V	KRA314E	KRA314		KRA114S		KRA114	
	1	10		KRA316V	KRA316E	KRA316		KRA116S	KRA225S	KRA116	KRA225
	2.2	2.2		KRA317V	KRA317E	KRA317	KRA352	KRA117S	KRA222S	KRA117	KRA222
	2.2	10		KRA318V	KRA318E	KRA318	KRA356	KRA118S	KRA226S	KRA118	KRA226
4.7	10		KRA319V	KRA319E	KRA319		KRA119S		KRA119		
100	100		KRA322V	KRA322E	KRA322		KRA122S		KRA122		

Electrical Characteristics			TFSV		TESV		USV		TSV
									
Polarity	R1 [kΩ]	R2 [kΩ]	± 20V/ ± 0.05A		± 50V/ ± 0.1A		± 50V/ ± 0.1A		± 50V/ ± 0.8A
NPN + NPN	1	1							KRC641T
	4.7	4.7	KRC651F		KRC651E		KRC651U		KRC643T
	10	10	KRC652F		KRC652E		KRC652U		KRC644T
	22	22	KRC653F		KRC653E		KRC653U		
	47	47	KRC654F		KRC654E		KRC654U		
	2.2	47	KRC655F		KRC655E		KRC655U		
	4.7	47	KRC656F		KRC656E		KRC656U		
	10	47	KRC657F		KRC657E		KRC657U		
	22	47	KRC658F		KRC658E		KRC658U		
	4.7	-	KRC660F		KRC660E		KRC660U		
	10	-	KRC661F		KRC661E		KRC661U		
	22	-	KRC663F		KRC663E		KRC663U		
	47	-	KRC664F		KRC664E		KRC664U		
	1	10			KRC666E		KRC666U		KRC645T
	2.2	2.2			KRC667E		KRC667U		KRC642T
	2.2	10			KRC668E		KRC668U		KRC646T
4.7	10			KRC669E		KRC669U			
100	100			KRC672E		KRC672U			
NPN+PNP	NPN:10/10	PNP:10/10				KRX101E		KRX101U	
	NPN:47/47	PNP:10/47		KRX102F		KRX102E		KRX102U	
	NPN:22/22	PNP:22/22				KRX103E		KRX103U	
	NPN:47/47	PNP:4.7/10				KRX104E			
PNP + PNP	1	1							KRA521T
	4.7	4.7	KRA551F		KRA551E		KRA551U		KRA523T
	10	10	KRA552F		KRA552E		KRA552U		KRA524T
	22	22	KRA553F		KRA553E		KRA553U		
	47	47	KRA554F		KRA554E		KRA554U		
	2.2	47	KRA555F		KRA555E		KRA555U		
	4.7	47	KRA556F		KRA556E		KRA556U		
	10	47	KRA557F		KRA557E		KRA557U		
	22	47	KRA558F		KRA558E		KRA558U		
	4.7	-	KRA560F		KRA560E		KRA560U		
	10	-	KRA561F		KRA561E		KRA561U		
	22	-	KRA563F		KRA563E		KRA563U		
	47	-	KRA564F		KRA564E		KRA564U		
	1	10			KRA566E		KRA566U		KRA525T
	2.2	2.2			KRA567E		KRA567U		KRA522T
	2.2	10			KRA568E		KRA568U		KRA526T
4.7	10			KRA569E		KRA569U			
100	100			KRA572E		KRA572U			

Electrical Characteristics			TFS6		TES6		US6		TS6	
										
Polarity	R1 [kΩ]	R2 [kΩ]	± 20V/ ± 0.05A		± 50V/ ± 0.1A		± 50V/ ± 0.1A		± 50V/ ± 0.8A	± 50V/ ± 0.1A, -0.8A
NPN + NPN	1	1							KRC841T	
	4.7	4.7	KRC821F	KRC851F	KRC821E	KRC851E		KRC821U	KRC851U	KRC843T
	10	10	KRC822F	KRC852F	KRC822E	KRC852E		KRC822U	KRC852U	KRC844T
	22	22	KRC823F	KRC853F	KRC823E	KRC853E		KRC823U	KRC853U	
	47	47	KRC824F	KRC854F	KRC824E	KRC854E		KRC824U	KRC854U	
	2.2	47	KRC825F	KRC855F	KRC825E	KRC855E		KRC825U	KRC855U	
	4.7	47	KRC826F	KRC856F	KRC826E	KRC856E		KRC826U	KRC856U	
	10	47	KRC827F	KRC857F	KRC827E	KRC857E		KRC827U	KRC857U	
	22	47	KRC828F	KRC858F	KRC828E	KRC858E		KRC828U	KRC858U	
	4.7	-	KRC830F	KRC860F	KRC830E	KRC860E		KRC830U	KRC860U	
	10	-	KRC831F	KRC861F	KRC831E	KRC861E		KRC831U	KRC861U	
	22	-	KRC833F	KRC863F	KRC833E	KRC863E		KRC833U	KRC863U	
	47	-	KRC834F	KRC864F	KRC834E	KRC864E		KRC834U	KRC864U	
	1	10			KRC836E	KRC866E		KRC836U	KRC866U	KRC845T
	2.2	2.2			KRC837E	KRC867E		KRC837U	KRC867U	KRC842T
	2.2	10			KRC838E	KRC868E		KRC838U	KRC868U	KRC846T
4.7	10			KRC839E	KRC869E		KRC839U	KRC869U		
100	100			KRC842E	KRC872E		KRC842U	KRC872U		
NPN + PNP	NPN:10/10	PNP:10/10					KRX201E			KRX201U
	NPN:22/22	PNP:22/22					KRX202E			KRX202U
	NPN:47/47	PNP:47/47					KRX203E			KRX203U
	NPN:2.2/47	PNP:2.2/47					KRX204E			KRX204U
	NPN:10/47	PNP:10/47					KRX206E			
	NPN:10/10	PNP:10/47					KRX207E			KRX207U
	NPN:47/47	PNP:47/10					KRX208E			
	NPN:47/47	PNP:10/47					KRX209E			KRX209U
NPN:10/10	PNP:1/10					KRX210E				
PNP + PNP	1	1								KRA721T
	4.7	4.7	KRA721F	KRA751F	KRA721E	KRA751E		KRA721U	KRA751U	KRA723T
	10	10	KRA722F	KRA752F	KRA722E	KRA752E		KRA722U	KRA752U	KRA724T
	22	22	KRA723F	KRA753F	KRA723E	KRA753E		KRA723U	KRA753U	
	47	47	KRA724F	KRA754F	KRA724E	KRA754E		KRA724U	KRA754U	
	2.2	47	KRA725F	KRA755F	KRA725E	KRA755E		KRA725U	KRA755U	
	4.7	47	KRA726F	KRA756F	KRA726E	KRA756E		KRA726U	KRA756U	
	10	47	KRA727F	KRA757F	KRA727E	KRA757E		KRA727U	KRA757U	
	22	47	KRA728F	KRA758F	KRA728E	KRA758E		KRA728U	KRA758U	
	4.7	-	KRA730F	KRA760F	KRA730E	KRA760E		KRA730U	KRA760U	
	10	-	KRA731F	KRA761F	KRA731E	KRA761E		KRA731U	KRA761U	
	22	-	KRA733F	KRA763F	KRA733E	KRA763E		KRA733U	KRA763U	
	47	-	KRA734F	KRA764F	KRA734E	KRA764E		KRA734U	KRA764U	
	1	10			KRA736E	KRA766E		KRA736U	KRA766U	KRA725T
	2.2	2.2			KRA737E	KRA767E		KRA737U	KRA767U	KRA722T
	2.2	10			KRA738E	KRA768E		KRA738U	KRA768U	KRA726T
4.7	10			KRA739E	KRA769E		KRA739U	KRA769U		
100	100			KRA742E	KRA772E		KRA742U	KRA772U		

General Purpose BRT

Type No.				Max. Ratings			hFE				VCE(sat) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)		
NPN	Mark	PNP	Mark	VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)						
KRC401	NA	KRA301	PA	50	100	100	30	55	5	10	0.3	10	0.5	4.7	4.7	USM			
KRC402	NB	KRA302	PB	50	100	100	50	80	5	10	0.3	10	0.5	10	10				
KRC403	NC	KRA303	PC	50	100	100	70	120	5	10	0.3	10	0.5	22	22				
KRC404	ND	KRA304	PD	50	100	100	80	200	5	10	0.3	10	0.5	47	47				
KRC405	NE	KRA305	PE	50	100	100	80	200	5	10	0.3	10	0.5	2.2	47				
KRC406	NF	KRA306	PF	50	100	100	80	200	5	10	0.3	10	0.5	4.7	47				
KRC407	NH	KRA307	PH	50	100	100	80	150	5	10	0.3	10	0.5	10	47				
KRC408	NI	KRA308	PI	50	100	100	80	150	5	10	0.3	10	0.5	22	47				
KRC410	NK	KRA310	PK	50	100	100	120	-	5	1	0.3	10	0.5	4.7	-				
KRC411	NM	KRA311	PM	50	100	100	120	-	5	1	0.3	10	0.5	10	-				
KRC413	NO	KRA313	PO	50	100	100	120	-	5	1	0.5	10	0.5	22	-				
KRC414	NP	KRA314	PP	50	100	100	120	-	5	1	0.3	10	0.5	47	-				
KRC416	N2	KRA316	P2	50	100	100	33	-	5	5	0.3	10	0.5	1	10				
KRC417	N4	KRA317	P4	50	100	100	20	-	5	20	0.3	10	0.5	2.2	2.2				
KRC418	N5	KRA318	P5	50	100	100	33	-	5	10	0.3	10	0.5	2.2	10				
KRC419	N6	KRA319	P6	50	100	100	30	-	5	10	0.3	10	0.5	4.7	10				
KRC422	N9	KRA322	P9	50	100	100	62	-	5	5	0.3	5	0.25	100	100				
KRC101S	NA	KRA101S	PA	50	100	200	30	55	5	10	0.3	10	0.5	4.7	4.7			SOT-23	
KRC102S	NB	KRA102S	PB	50	100	200	50	80	5	10	0.3	10	0.5	10	10				
KRC103S	NC	KRA103S	PC	50	100	200	70	120	5	10	0.3	10	0.5	22	22				
KRC104S	ND	KRA104S	PD	50	100	200	80	200	5	10	0.3	10	0.5	47	47				
KRC105S	NE	KRA105S	PE	50	100	200	80	200	5	10	0.3	10	0.5	2.2	47				
KRC106S	NF	KRA106S	PF	50	100	200	80	200	5	10	0.3	10	0.5	4.7	47				
KRC107S	NH	KRA107S	PH	50	100	200	80	150	5	10	0.3	10	0.5	10	47				
KRC108S	NI	KRA108S	PI	50	100	200	80	150	5	10	0.3	10	0.5	22	47				
KRC110S	NK	KRA110S	PK	50	100	200	120	-	5	1	0.3	10	0.5	4.7	-				
KRC111S	NM	KRA111S	PM	50	100	200	120	-	5	1	0.3	10	0.5	10	-				
KRC113S	NO	KRA113S	PO	50	100	200	120	-	5	1	0.3	10	0.5	22	-				
KRC114S	NP	KRA114S	PP	50	100	200	120	-	5	1	0.3	10	0.5	47	-				
KRC116S	N2	KRA116S	P2	50	100	200	33	-	5	5	0.3	10	0.5	1	10				
KRC117S	N4	KRA117S	P4	50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2				
KRC118S	N5	KRA118S	P5	50	100	200	33	-	5	10	0.3	10	0.5	2.2	10				
KRC119S	N6	KRA119S	P6	50	100	200	30	-	5	10	0.3	10	0.5	4.7	10				
KRC122S	N9	KRA122S	P9	50	100	200	62	-	5	5	0.3	5	0.25	100	100				
KRC101	-	KRA101	-	50	100	625	30	55	5	10	0.3	10	0.5	4.7	4.7	TO-92			
KRC102	-	KRA102	-	50	100	625	50	80	5	10	0.3	10	0.5	10	10				
KRC103	-	KRA103	-	50	100	625	70	120	5	10	0.3	10	0.5	22	22				
KRC104	-	KRA104	-	50	100	625	80	200	5	10	0.3	10	0.5	47	47				
KRC105	-	KRA105	-	50	100	625	80	200	5	10	0.3	10	0.5	2.2	47				
KRC106	-	KRA106	-	50	100	625	80	200	5	10	0.3	10	0.5	4.7	47				
KRC107	-	KRA107	-	50	100	625	80	150	5	10	0.3	10	0.5	10	47				
KRC108	-	KRA108	-	50	100	625	80	150	5	10	0.3	10	0.5	22	47				
KRC110	-	KRA110	-	50	100	625	120	-	5	1	0.3	10	0.5	4.7	-				
KRC111	-	KRA111	-	50	100	625	120	-	5	1	0.3	10	0.5	10	-				
KRC113	-	KRA113	-	50	100	625	120	-	5	1	0.3	10	0.5	22	-				
KRC114	-	KRA114	-	50	100	625	120	-	5	1	0.3	10	0.5	47	-				
KRC116	-	KRA116	-	50	100	625	33	-	5	5	0.3	10	0.5	1	10				
KRC117	-	KRA117	-	50	100	625	20	-	5	20	0.3	10	0.5	2.2	2.2				
KRC118	-	KRA118	-	50	100	625	33	-	5	10	0.3	10	0.5	2.2	10				
KRC119	-	KRA119	-	50	100	625	30	-	5	10	0.3	10	0.5	4.7	10				
KRC122	-	KRA122	-	50	100	625	62	-	5	5	0.3	5	0.25	100	100				

General Purpose BJT

BJT

Type No.	Mark	Internal circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)
			VCEO (V)	IC (mA)	PD (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)				
KRA551F	HA		-20	-50	50	30	-	-5	-10	-0.15	-5	-0.25	4.7	4.7	TFSV	
KRA552F	HB		-20	-50	50	60	-	-5	-10	-0.15	-5	-0.25	10	10		
KRA553F	HC		-20	-50	50	100	-	-5	-10	-0.15	-5	-0.25	22	22		
KRA554F	HD		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	47	47		
KRA557F	HG		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	10	47		
KRA558F	HH		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	22	47		
KRA560F	HK		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	4.7	-		
KRA561F	HL		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	10	-		
KRA563F	HN		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	22	-		
KRA564F	HP		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	47	-		
KRC651F	JA		20	50	50	30	-	5	10	0.15	5	0.25	4.7	4.7		
KRC652F	JB		20	50	50	60	-	-5	10	0.15	5	0.25	10	10		
KRC653F	JC		20	50	50	100	-	-5	10	0.15	5	0.25	22	22		
KRC654F	JD		20	50	50	120	-	-5	10	0.15	5	0.25	47	47		
KRC657F	JG		20	50	50	120	-	-5	10	0.15	5	0.25	10	47		
KRC658F	JH		20	50	50	120	-	-5	10	0.15	5	0.25	22	47		
KRC660F	JK		20	50	50	300	-	-5	1	0.15	5	0.25	4.7	-		
KRC661F	JL		20	50	50	300	-	-5	1	0.15	5	0.25	10	-		
KRC663F	JN		20	50	50	300	-	-5	1	0.15	5	0.25	22	-		
KRC664F	JP		20	50	50	300	-	-5	1	0.15	5	0.25	47	-		
KRA751F	KA		-20	-50	50	30	-	-5	-10	-0.15	-5	-0.25	4.7	4.7		
KRA752F	KB		-20	-50	50	60	-	-5	-10	-0.15	-5	-0.25	10	10		
KRA753F	KC		-20	-50	50	100	-	-5	-10	-0.15	-5	-0.25	22	22		
KRA754F	KD		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	47	47		
KRA757F	KG		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	10	47		
KRA758F	KH		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	22	47		
KRA760F	KK		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	4.7	-		
KRA761F	KL		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	10	-		
KRA763F	KN		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	22	-		
KRA764F	KP		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	47	-		
KRC851F	LA		20	50	50	30	-	5	10	0.15	5	0.25	4.7	4.7		
KRC852F	LB		20	50	50	60	-	5	10	0.15	5	0.25	10	10		
KRC853F	LC		20	50	50	100	-	5	10	0.15	5	0.25	22	22		
KRC854F	LD		20	50	50	120	-	5	10	0.15	5	0.25	47	47		
KRC857F	LG		20	50	50	120	-	5	10	0.15	5	0.25	10	47		
KRC858F	LH		20	50	50	120	-	5	10	0.15	5	0.25	22	47		
KRC860F	LK		20	50	50	300	-	5	1	0.15	5	0.25	4.7	-		
KRC861F	LL		20	50	50	300	-	5	1	0.15	5	0.25	10	-		
KRC863F	LN		20	50	50	300	-	5	1	0.15	5	0.25	22	-		
KRC864F	LP		20	50	50	300	-	5	1	0.15	5	0.25	47	-		
KRA721F	MA		-20	-50	50	30	-	-5	-10	-0.15	-5	-0.25	4.7	4.7		
KRA722F	MB		-20	-50	50	60	-	-5	-10	-0.15	-5	-0.25	10	10		
KRA723F	MC		-20	-50	50	100	-	-5	-10	-0.15	-5	-0.25	22	22		
KRA724F	MD		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	47	47		
KRA727F	MG		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	10	47		
KRA728F	MH		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	22	47		
KRA730F	MK		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	4.7	-		
KRA731F	ML		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	10	-		
KRA733F	MN		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	22	-		
KRA734F	MP		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	47	-		
KRC821F	NA		20	50	50	30	-	5	10	0.15	5	0.25	4.7	4.7		
KRC822F	NB		20	50	50	60	-	5	10	0.15	5	0.25	10	10		
KRC823F	NC		20	50	50	100	-	5	10	0.15	5	0.25	22	22		
KRC824F	ND		20	50	50	120	-	5	10	0.15	5	0.25	47	47		
KRC827F	NG		20	50	50	120	-	5	10	0.15	5	0.25	10	47		
KRC828F	NH		20	50	50	120	-	5	10	0.15	5	0.25	22	47		
KRC830F	NK		20	50	50	300	-	5	1	0.15	5	0.25	4.7	-		
KRC831F	NL		20	50	50	300	-	5	1	0.15	5	0.25	10	-		
KRC833F	NN		20	50	50	300	-	5	1	0.15	5	0.25	22	-		
KRC834F	NP		20	50	50	300	-	5	1	0.15	5	0.25	47	-		
KRA751F	KA		-20	-50	50	30	-	-5	-10	-0.15	-5	-0.25	4.7	4.7		
KRA752F	KB		-20	-50	50	60	-	-5	-10	-0.15	-5	-0.25	10	10		
KRA753F	KC		-20	-50	50	100	-	-5	-10	-0.15	-5	-0.25	22	22		
KRA754F	KD		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	47	47		
KRA757F	KG		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	10	47		
KRA758F	KH		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	22	47		
KRA760F	KK		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	4.7	-		
KRA761F	KL		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	10	-		
KRA763F	KN		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	22	-		
KRA764F	KP		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	47	-		
KRC851F	LA		20	50	50	30	-	5	10	0.15	5	0.25	4.7	4.7		
KRC852F	LB		20	50	50	60	-	5	10	0.15	5	0.25	10	10		
KRC853F	LC		20	50	50	100	-	5	10	0.15	5	0.25	22	22		
KRC854F	LD		20	50	50	120	-	5	10	0.15	5	0.25	47	47		
KRC857F	LG		20	50	50	120	-	5	10	0.15	5	0.25	10	47		
KRC858F	LH		20	50	50	120	-	5	10	0.15	5	0.25	22	47		
KRC860F	LK		20	50	50	300	-	5	1	0.15	5	0.25	4.7	-		
KRC861F	LL		20	50	50	300	-	5	1	0.15	5	0.25	10	-		
KRC863F	LN		20	50	50	300	-	5	1	0.15	5	0.25	22	-		
KRC864F	LP		20	50	50	300	-	5	1	0.15	5	0.25	47	-		
KRA721F	MA		-20	-50	50	30	-	-5	-10	-0.15	-5	-0.25	4.7	4.7		
KRA722F	MB		-20	-50	50	60	-	-5	-10	-0.15	-5	-0.25	10	10		
KRA723F	MC		-20	-50	50	100	-	-5	-10	-0.15	-5	-0.25	22	22		
KRA724F	MD		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	47	47		
KRA727F	MG		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	10	47		
KRA728F	MH		-20	-50	50	120	-	-5	-10	-0.15	-5	-0.25	22	47		
KRA730F	MK		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	4.7	-		
KRA731F	ML		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	10	-		
KRA733F	MN		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	22	-		
KRA734F	MP		-20	-50	50	300	-	-5	-1	-0.15	-5	-0.25	47	-		
KRC821F	NA		20	50	50	30	-	5	10	0.15	5	0.25	4.7	4.7		
KRC822F	NB		20	50	50	60	-	5	10	0.15	5	0.25	10	10		
KRC823F	NC		20	50	50	100	-	5	10	0.15	5	0.25	22	22		
KRC824F	ND		20	50	50	120	-	5	10	0.15	5	0.25	47	47		
KRC827F	NG		20	50	50	120	-	5	10	0.15	5	0.25	10	47		
KRC828F	NH		20	50	50	120	-	5	10	0.15	5	0.25	22	47		
KRC830F	NK		20	50	50	300	-	5	1	0.15	5	0.25	4.7	-		
KRC831F	NL		20	50	50	300	-	5	1	0.15	5	0.25	10	-		
KRC833F	NN		20	50	50	300	-	5	1	0.15	5	0.25	22	-		
KRC834F	NP		20	50	50	300	-	5	1	0.15	5	0.25	47	-		

Note) Pd= Total Rating,

General Purpose BRT

Type No.	Mark	Internal circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)	
			VCEO (V)	IC (mA)	PD (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)					
KRA551E	PA		-50	-100	200	30	55	-5	-10	-0.3	-10	-0.5	4.7	4.7	TESV		
KRA552E	PB		-50	-100	200	50	80	-5	-10	-0.3	-10	-0.5	10	10			
KRA553E	PC		-50	-100	200	70	120	-5	-10	-0.3	-10	-0.5	22	22			
KRA554E	PD		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	47	47			
KRA555E	PE		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	2.2	47			
KRA556E	PF		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	4.7	47			
KRA557E	PH		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	10	47			
KRA558E	PI		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	22	47			
KRA560E	PK		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	4.7	-			
KRA561E	PM		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	10	-			
KRA562E	PN		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	100	-			
KRA563E	PO		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	22	-			
KRA564E	PP	-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	47	-				
KRA566E	P2		-50	-100	200	33	-	-5	-5	-0.3	-10	-0.5	1	10			
KRA567E	P4		-50	-100	200	20	-	-5	-20	-0.3	-10	-0.5	2.2	2.2			
KRA568E	P5		-50	-100	200	33	-	-5	-10	-0.3	-10	-0.5	2.2	10			
KRA569E	P6		-50	-100	200	30	-	-5	-10	-0.3	-10	-0.5	4.7	10			
KRA572E	P9		-50	-100	200	62	-	-5	-5	-0.3	-5	-0.25	100	100			
KRC651E	NA			50	100	200	30	55	5	10	0.3	10	0.5	4.7			4.7
KRC652E	NB			50	100	200	50	80	5	10	0.3	10	0.5	10			10
KRC653E	NC			50	100	200	70	120	5	10	0.3	10	0.5	22			22
KRC654E	ND	50		100	200	80	200	5	10	0.3	10	0.5	47	47			
KRC655E	NE	50		100	200	80	200	5	10	0.3	10	0.5	2.2	47			
KRC656E	NF	50		100	200	80	200	5	10	0.3	10	0.5	4.7	47			
KRC657E	NH	50		100	200	80	150	5	10	0.3	10	0.5	10	47			
KRC658E	NI	50		100	200	80	150	5	10	0.3	10	0.5	22	47			
KRC660E	NK		50	100	200	120	-	5	1	0.3	10	0.5	4.7	-			
KRC661E	NM		50	100	200	120	-	5	1	0.3	10	0.5	10	-			
KRC662E	NN		50	100	200	120	-	5	1	0.3	10	0.5	100	-			
KRC663E	NO		50	100	200	120	-	5	1	0.3	10	0.5	22	-			
KRC664E	NP	50	100	200	120	-	5	1	0.3	10	0.5	47	-				
KRC666E	N2		50	100	200	33	-	5	5	0.3	10	0.5	1	10			
KRC667E	N4		50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2			
KRC668E	N5		50	100	200	33	-	5	10	0.3	10	0.5	2.2	10			
KRC669E	N6		50	100	200	30	-	5	10	0.3	10	0.5	4.7	10			
KRC672E	N9		50	100	200	62	-	5	5	0.3	5	0.25	100	100			
KRA721E	JA			-50	-100	200	30	55	-5	-10	-0.3	-10	-0.5	4.7	4.7		
KRA722E	JB			-50	-100	200	50	80	-5	-10	-0.3	-10	-0.5	10	10		
KRA723E	JC			-50	-100	200	70	120	-5	-10	-0.3	-10	-0.5	22	22		
KRA724E	JD	-50		-100	200	80	200	-5	-10	-0.3	-10	-0.5	47	47			
KRA725E	JE	-50		-100	200	80	200	-5	-10	-0.3	-10	-0.5	2.2	47			
KRA726E	JF	-50		-100	200	80	200	-5	-10	-0.3	-10	-0.5	4.7	47			
KRA727E	JH	-50		-100	200	80	150	-5	-10	-0.3	-10	-0.5	10	47			
KRA728E	JI	-50		-100	200	80	150	-5	-10	-0.3	-10	-0.5	22	47			
KRA730E	JK		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	4.7	-			
KRA731E	JM		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	10	-			
KRA732E	JN		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	100	-			
KRA733E	JO		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	22	-			
KRA734E	JP	-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	47	-				
KRA736E	J2		-50	-100	200	33	-	-5	-5	-0.3	-10	-0.5	1	10			
KRA737E	J4		-50	-100	200	20	-	-5	-20	-0.3	-10	-0.5	2.2	2.2			
KRA738E	J5		-50	-100	200	33	-	-5	-10	-0.3	-10	-0.5	2.2	10			
KRA739E	J6		-50	-100	200	30	-	-5	-10	-0.3	-10	-0.5	4.7	10			
KRA742E	J9		-50	-100	200	62	-	-5	-5	-0.3	-5	-0.25	100	100			
KRC821E	YA			50	100	200	30	55	5	10	0.3	10	0.5	4.7	4.7		
KRC822E	YB			50	100	200	50	80	5	10	0.3	10	0.5	10	10		
KRC823E	YC			50	100	200	70	120	5	10	0.3	10	0.5	22	22		
KRC824E	YD	50		100	200	80	200	5	10	0.3	10	0.5	47	47			
KRC825E	YE	50		100	200	80	200	5	10	0.3	10	0.5	2.2	47			
KRC826E	YF	50		100	200	80	200	5	10	0.3	10	0.5	4.7	47			
KRC827E	YH	50		100	200	80	150	5	10	0.3	10	0.5	10	47			
KRC830E	YK	50		100	200	120	-	5	1	0.3	10	0.5	4.7	-			
KRC831E	YM	50	100	200	120	-	5	1	0.3	10	0.5	10	-				
KRC833E	YO	50	100	200	120	-	5	1	0.3	10	0.5	22	-				
KRC834E	YP	50	100	200	120	-	5	1	0.3	10	0.5	47	-				
KRC836E	Y2		50	100	200	33	-	5	5	0.3	10	0.5	1	10			
KRC837E	Y4		50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2			
KRC838E	Y5		50	100	200	33	-	5	10	0.3	10	0.5	2.2	10			
KRC839E	Y6		50	100	200	30	-	5	10	0.3	10	0.5	4.7	10			
KRC842E	Y9		50	100	200	62	-	5	5	0.3	5	0.25	100	100			

Note) PD= Total Rating.

General Purpose BRT

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)
			VCEO (V)	IC (mA)	PD (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)				
KRA751E	PA		-50	-100	200	30	55	-5	-10	-0.3	-10	-0.5	4.7	4.7	TES6	
KRA752E	PB		-50	-100	200	50	80	-5	-10	-0.3	-10	-0.5	10	10		
KRA753E	PC		-50	-100	200	70	120	-5	-10	-0.3	-10	-0.5	22	22		
KRA754E	PD		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	47	47		
KRA755E	PE		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	2.2	47		
KRA756E	PF		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	4.7	47		
KRA757E	PH		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	10	47		
KRA758E	PI		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	47	22		
KRA760E	PK			-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	4.7		
KRA761E	PM	-50		-100	200	120	-	-5	-1	-0.3	-10	-0.5	10	-		
KRA763E	PO	-50		-100	200	120	-	-5	-1	-0.3	-10	-0.5	22	-		
KRA764E	PP	-50		-100	200	120	-	-5	-1	-0.3	-10	-0.5	47	-		
KRA766E	P2		-50	-100	200	33	-	-5	-5	-0.3	-10	-0.5	1	10		
KRA767E	P4		-50	-100	200	20	-	-5	-20	-0.3	-10	-0.5	2.2	2.2		
KRA768E	P5		-50	-100	200	33	-	-5	-10	-0.3	-10	-0.5	2.2	10		
KRA769E	P6		-50	-100	200	30	-	-5	-10	-0.3	-10	-0.5	4.7	10		
KRA772E	P9		-50	-100	200	62	-	-5	-5	-0.3	-5	-0.25	100	100		
KRC851E	NA			50	100	200	30	55	5	10	0.3	10	0.5	4.7		
KRC852E	NB			50	100	200	50	80	5	10	0.3	10	0.5	10	10	
KRC853E	NC			50	100	200	70	120	5	10	0.3	10	0.5	22	22	
KRC854E	ND			50	100	200	80	200	5	10	0.3	10	0.5	47	47	
KRC855E	NE	50		100	200	80	200	5	10	0.3	10	0.5	2.2	47		
KRC856E	NF	50		100	200	80	200	5	10	0.3	10	0.5	4.7	47		
KRC857E	NH	50		100	200	80	150	5	10	0.3	10	0.5	10	47		
KRC858E	NI	50		100	200	80	150	5	10	0.3	10	0.5	22	47		
KRC860E	NK			50	100	200	120	-	5	1	0.3	10	0.5	4.7	-	
KRC861E	NM		50	100	200	120	-	5	1	0.3	10	0.5	10	-		
KRC863E	NO		50	100	200	120	-	5	1	0.3	10	0.5	22	-		
KRC864E	NP		50	100	200	120	-	5	1	0.3	10	0.5	47	-		
KRC866E	N2		50	100	200	33	-	5	5	0.3	10	0.5	1	10		
KRC867E	N4		50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2		
KRC868E	N5		50	100	200	33	-	5	10	0.3	10	0.5	2.2	10		
KRC869E	N6		50	100	200	30	-	5	10	0.3	10	0.5	4.7	10		
KRC872E	N9		50	100	200	62	-	5	5	0.3	5	0.25	100	100		
KRA551U	PA		-50	-100	200	30	55	-5	-10	-0.3	-10	-0.5	4.7	4.7		
KRA552U	PB		-50	-100	200	50	80	-5	-10	-0.3	-10	-0.5	10	10		
KRA553U	PC		-50	-100	200	70	120	-5	-10	-0.3	-10	-0.5	22	22		
KRA554U	PD		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	47	47		
KRA555U	PE		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	2.2	47		
KRA556U	PF		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	4.7	47		
KRA557U	PH		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	10	47		
KRA558U	PI		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	22	47		
KRA560U	PK			-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	4.7	-	
KRA561U	PM	-50		-100	200	120	-	-5	-1	-0.3	-10	-0.5	10	-		
KRA563U	PO	-50		-100	200	120	-	-5	-1	-0.3	-10	-0.5	22	-		
KRA564U	PP	-50		-100	200	120	-	-5	-1	-0.3	-10	-0.5	47	-		
KRA566U	P2		-50	-100	200	33	-	-5	-5	-0.3	-10	-0.5	1	10		
KRA567U	P4		-50	-100	200	20	-	-5	-20	-0.3	-10	-0.5	2.2	2.2		
KRA568U	P5		-50	-100	200	33	-	-5	-10	-0.3	-10	-0.5	2.2	10		
KRA569U	P6		-50	-100	200	30	-	-5	-10	-0.3	-10	-0.5	4.7	10		
KRA572U	P9		-50	-100	200	62	-	-5	-5	-0.3	-5	-0.25	100	100		

Note) Pd= Total Rating

Transistors with Built-in Bias Resistor

General Purpose BRT

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)
			VCEO (V)	IC (mA)	PD (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)				
KRC651U	NA		50	100	200	30	55	5	10	0.3	10	0.5	4.7	4.7	USV	
KRC652U	NB		50	100	200	50	80	5	10	0.3	10	0.5	10	10		
KRC653U	NC		50	100	200	70	120	5	10	0.3	10	0.5	22	22		
KRC654U	ND		50	100	200	80	200	5	10	0.3	10	0.5	47	47		
KRC655U	NE		50	100	200	80	200	5	10	0.3	10	0.5	2.2	47		
KRC656U	NF		50	100	200	80	200	5	10	0.3	10	0.5	4.7	47		
KRC657U	NH		50	100	200	80	150	5	10	0.3	10	0.5	10	47		
KRC658U	NI		50	100	200	80	150	5	10	0.3	10	0.5	22	47		
KRC660U	NK			50	100	200	120	-	5	1	0.3	10	0.5	4.7		
KRC661U	NM	50		100	200	120	-	5	1	0.3	10	0.5	10	-		
KRC663U	NO	50		100	200	120	-	5	1	0.3	10	0.5	22	-		
KRC664U	NP	50		100	200	120	-	5	1	0.3	10	0.5	47	-		
KRC666U	N2		50	100	200	33	-	5	5	0.3	10	0.5	1	10	USV	
KRC667U	N4		50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2		
KRC668U	N5		50	100	200	33	-	5	10	0.3	10	0.5	2.2	10		
KRC669U	N6		50	100	200	30	-	5	10	0.3	10	0.5	4.7	10		
KRC672U	N9		50	100	200	62	-	5	5	0.3	5	0.25	100	100		
KRA721U	JA			-50	-100	200	30	55	-5	-10	-0.3	-10	-0.5	4.7		
KRA722U	JB	-50		-100	200	50	80	-5	-10	-0.3	-10	-0.5	10	10		
KRA723U	JC	-50		-100	200	70	120	-5	-10	-0.3	-10	-0.5	22	22		
KRA724U	JD	-50		-100	200	80	200	-5	-10	-0.3	-10	-0.5	47	47		
KRA725U	JE	-50		-100	200	80	200	-5	-10	-0.3	-10	-0.5	2.2	47		
KRA726U	JF	-50		-100	200	80	200	-5	-10	-0.3	-10	-0.5	4.7	47		
KRA727U	JH	-50		-100	200	80	150	-5	-10	-0.3	-10	-0.5	10	47		
KRA728U	JI	-50		-100	200	80	150	-5	-10	-0.3	-10	-0.5	22	47		
KRA730U	JK		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	4.7	-	US6	
KRA731U	JM		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	10	-		
KRA733U	JO		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	22	-		
KRA734U	JP		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	47	-		
KRA736U	J2		-50	-100	200	33	-	-5	-5	-0.3	-10	-0.5	1	10	US6	
KRA737U	J4		-50	-100	200	20	-	-5	-20	-0.3	-10	-0.5	2.2	2.2		
KRA738U	J5		-50	-100	200	33	-	-5	-10	-0.3	-10	-0.5	2.2	10		
KRA739U	J6		-50	-100	200	30	-	-5	-10	-0.3	-10	-0.5	4.7	10		
KRA742U	J9		-50	-100	200	62	-	-5	-5	-0.3	-5	-0.25	100	100		
KRC821U	YA			50	100	200	30	55	5	10	0.3	10	0.5	4.7		
KRC822U	YB	50		100	200	50	80	5	10	0.3	10	0.5	10	10		
KRC823U	YC	50		100	200	70	120	5	10	0.3	10	0.5	22	22		
KRC824U	YD	50		100	200	80	200	5	10	0.3	10	0.5	47	47		
KRC825U	YE	50		100	200	80	200	5	10	0.3	10	0.5	2.2	47		
KRC826U	YF	50		100	200	80	200	5	10	0.3	10	0.5	4.7	47		
KRC827U	YH	50		100	200	80	150	5	10	0.3	10	0.5	10	47		
KRC828U	YI	50		100	200	80	150	5	10	0.3	10	0.5	22	47		
KRC830U	YK		50	100	200	120	-	5	1	0.3	10	0.5	4.7	-	US6	
KRC831U	YM		50	100	200	120	-	5	1	0.3	10	0.5	10	-		
KRC833U	YO		50	100	200	120	-	5	1	0.3	10	0.5	22	-		
KRC834U	YP		50	100	200	120	-	5	1	0.3	10	0.5	47	-		
KRC836U	Y2		50	100	200	33	-	5	5	0.3	10	0.5	1	10	US6	
KRC837U	Y4		50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2		
KRC838U	Y5		50	100	200	33	-	5	10	0.3	10	0.5	2.2	10		
KRC839U	Y6		50	100	200	30	-	5	10	0.3	10	0.5	4.7	10		
KRC842U	Y9		50	100	200	62	-	5	5	0.3	5	0.25	100	100		

Note) Pd= Total Rating

General Purpose BRT

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)
			VCEO (V)	IC (mA)	PD (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)				
KRA751U	PA		-50	-100	200	30	55	-5	-10	-0.3	-10	-0.5	4.7	4.7	US6	
KRA752U	PB		-50	-100	200	50	80	-5	-10	-0.3	-10	-0.5	10	10		
KRA753U	PC		-50	-100	200	70	120	-5	-10	-0.3	-10	-0.5	22	22		
KRA754U	PD		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	47	47		
KRA755U	PE		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	2.2	47		
KRA756U	PF		-50	-100	200	80	200	-5	-10	-0.3	-10	-0.5	4.7	47		
KRA757U	PH		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	10	47		
KRA758U	PI		-50	-100	200	80	150	-5	-10	-0.3	-10	-0.5	22	47		
KRA760U	PK		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	4.7	-		
KRA761U	PM		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	10	-		
KRA763U	PO		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	22	-		
KRA764U	PP		-50	-100	200	120	-	-5	-1	-0.3	-10	-0.5	47	-		
KRA766U	P2		-50	-100	200	33	-	-5	-5	-0.3	-10	-0.5	1	10		
KRA767U	P4		-50	-100	200	20	-	-5	-20	-0.3	-10	-0.5	2.2	2.2		
KRA768U	P5		-50	-100	200	33	-	-5	-10	-0.3	-10	-0.5	2.2	10		
KRA769U	P6		-50	-100	200	30	-	-5	-10	-0.3	-10	-0.5	4.7	10		
KRA772U	P9		-50	-100	200	62	-	-5	-5	-0.3	-5	-0.25	100	100		
KRC851U	NA		50	100	200	30	55	5	10	0.3	10	0.5	4.7	4.7		
KRC852U	NB		50	100	200	50	80	5	10	0.3	10	0.5	10	10		
KRC853U	NC		50	100	200	70	120	5	10	0.3	10	0.5	22	22		
KRC854U	ND		50	100	200	80	200	5	10	0.3	10	0.5	47	47		
KRC855U	NE		50	100	200	80	200	5	10	0.3	10	0.5	2.2	47		
KRC856U	NF		50	100	200	80	200	5	10	0.3	10	0.5	4.7	47		
KRC857U	NH		50	100	200	80	150	5	10	0.3	10	0.5	10	47		
KRC858U	NI		50	100	200	80	150	5	10	0.3	10	0.5	22	47		
KRC860U	NK		50	100	200	120	-	5	1	0.3	10	0.5	4.7	-		
KRC861U	NM		50	100	200	120	-	5	1	0.3	10	0.5	10	-		
KRC863U	NO		50	100	200	120	-	5	1	0.3	10	0.5	22	-		
KRC864U	NP		50	100	200	120	-	5	1	0.3	10	0.5	47	-		
KRC866U	N2		50	100	200	33	-	5	5	0.3	10	0.5	1	10		
KRC867U	N4		50	100	200	20	-	5	20	0.3	10	0.5	2.2	2.2		
KRC868U	N5		50	100	200	33	-	5	10	0.3	10	0.5	2.2	10		
KRC869U	N6		50	100	200	30	-	5	10	0.3	10	0.5	4.7	10		
KRC872U	N9		50	100	200	62	-	5	5	0.3	5	0.25	100	100		

Complex BRT

Type No.	Mark	Internal circuit (Top view)	Max. Ratings					hFE								VCE(sat) (V)						R1 (kΩ)		R2 (kΩ)		Package	Outline (Unit : mm)				
			VCEO (V)		IC (mA)		PD (mW)	Min.		Typ.		VCE (V)		IC (mA)		Max.		IC (mA)		IB (mA)		Q1	Q2	Q1	Q2						
			Q1	Q2	Q1	Q2		Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2										
KRX101E	BA		50	-50	100	-100	200	50	50	80	80	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	10	10	10	10	10	10	TESV	
KRX102E	BM		50	-50	100	-100	200	80	80	200	150	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	47	10	47	47	47	10	47	47		
KRX103E	BB		50	-50	100	-100	200	70	70	120	120	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	22	22	22	22	22	22	22	22		
KRX201E	BA		50	-50	100	-100	200	50	50	80	80	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	10	10	10	10	10	10	TES6	
KRX202E	BB		50	-50	100	-100	200	70	70	120	120	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	22	22	22	22	22	22	22	22		
KRX203E	BC		50	-50	100	-100	200	80	80	200	200	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	47	47	47	47	47	47	47	47		
KRX204E	BD		50	-50	100	-100	200	80	80	200	200	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	2.2	2.2	47	47	47	47	47	47		
KRX206E	BK		50	-50	100	-100	200	80	80	150	150	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	47	47	47	47	47	47		
KRX207E	BT		50	-50	100	-100	200	50	80	80	150	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	10	10	10	10	10	10		
KRX209E	BM		50	-50	100	-100	200	80	80	200	150	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	47	10	47	47	47	47	47	47		
KRX210E	MN		-30	50	-500	100	200	140	50	-	80	-5	5	-100	10	-0.3	0.3	-50	10	-2.5	0.5	1	10	10	10	10	10	10	10		
KRX101U	BA		50	-50	100	-100	200	50	50	80	80	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	10	10	10	10	10	10	USV	
KRX103U	BB		50	-50	100	-100	200	70	70	120	120	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	22	22	22	22	22	22	22	22		
KRX201U	BA		50	-50	100	-100	200	50	50	80	80	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	10	10	10	10	10	10	US6	
KRX202U	BB		50	-50	100	-100	200	70	70	120	120	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	22	22	22	22	22	22	22	22		
KRX203U	BC		50	-50	100	-100	200	80	80	200	200	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	47	47	47	47	47	47	47	47		
KRX204U	BD		50	-50	100	-100	200	80	80	200	200	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	2.2	2.2	47	47	47	47	47	47		
KRX207U	BT		50	-50	100	-100	200	50	80	80	150	5	-5	10	-10	0.3	-0.3	10	-10	0.5	-0.5	10	10	10	10	10	10	10	10		

Note) Pd= Total Rating

High Current BRT

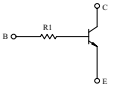
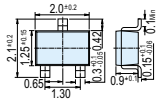
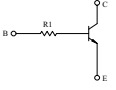
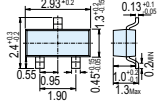
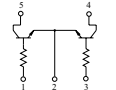
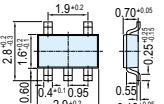
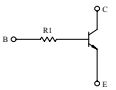
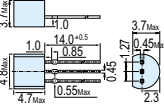
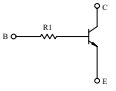
BJT

Type No.				Max. Ratings			GI			VO(ON) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)
NPN	Mark	PNP	Mark	VO (V)	IO (mA)	PD (mW)	Min.	VO (V)	IO (mA)	Max.	IO (mA)	II (mA)				
KRC241S	NQ	KRA221S	PQ	50	800	200	33	5	50	0.3	50	2.5	1	1	SOT-23	
KRC242S	NR	KRA222S	PR	50	800	200	39	5	50	0.3	50	2.5	2.2	2.2		
KRC243S	NS	KRA223S	PS	50	800	200	47	5	50	0.3	50	2.5	4.7	4.7		
KRC244S	NT	KRA224S	PT	50	800	200	56	5	50	0.3	50	2.5	10	10		
KRC245S	NU	KRA225S	PU	50	800	200	56	5	50	0.3	50	2.5	1	10		
KRC246S	NV	KRA226S	PV	50	800	200	56	5	50	0.3	50	2.5	2.2	10		
KRC451	CA	KRA351	AA	12	500	100	33	5	50	0.3	50	2.5	1	1	USM	
KRC452	CB	KRA352	AB	12	500	100	39	5	50	0.3	50	2.5	2.2	2.2		
KRC453	CC	KRA353	AC	12	500	100	47	5	50	0.3	50	2.5	4.7	4.7		
KRC454	CD	KRA354	AD	12	500	100	56	5	50	0.3	50	2.5	10	10		
KRC456	CF	KRA356	AF	12	500	100	56	5	50	0.3	50	2.5	1	10		
KRC457	CG	KRA357	AG	12	500	100	56	5	50	0.3	50	2.5	2.2	10		
KRC241	-	KRA221	-	50	800	625	33	5	50	0.3	50	2.5	1	1	TO-92	
KRC242	-	KRA222	-	50	800	625	39	5	50	0.3	50	2.5	2.2	2.2		
KRC243	-	KRA223	-	50	800	625	47	5	50	0.3	50	2.5	4.7	4.7		
KRC244	-	KRA224	-	50	800	625	56	5	50	0.3	50	2.5	10	10		
KRC245	-	KRA225	-	50	800	625	56	5	50	0.3	50	2.5	1	10		
KRC246	-	KRA226	-	50	800	625	56	5	50	0.3	50	2.5	2.2	10		

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			GI			VO(ON) (V)			R1 (kΩ)	R2 (kΩ)	Package	Outline (Unit : mm)		
			VO (V)	IO (mA)	PD (mW)	Min.	VO (V)	IO (mA)	Max.	IO (mA)	II (mA)						
KRA521T	PA		-50	-800	900	33	-5	-50	-0.3	-50	-2.5	1	1	TSV			
KRA522T	PB		-50	-800	900	39	-5	-50	-0.3	-50	-2.5	2.2	2.2				
KRA523T	PC		-50	-800	900	47	-5	-50	-0.3	-50	-2.5	4.7	4.7				
KRA524T	PD		-50	-800	900	56	-5	-50	-0.3	-50	-2.5	10	10				
KRA525T	PE		-50	-800	900	56	-5	-50	-0.3	-50	-2.5	1	10				
KRA526T	PF		-50	-800	900	56	-5	-50	-0.3	-50	-2.5	2.2	10				
KRC641T	NA		50	800	900	33	5	50	0.3	50	2.5	1	1			TS6	
KRC642T	NB		50	800	900	39	5	50	0.3	50	2.5	2.2	2.2				
KRC643T	NC		50	800	900	47	5	50	0.3	50	2.5	4.7	4.7				
KRC644T	ND		50	800	900	56	5	50	0.3	50	2.5	10	10				
KRC645T	NE		50	800	900	56	5	50	0.3	50	2.5	1	10				
KRC646T	NF		50	800	900	56	5	50	0.3	50	2.5	2.2	10				
KRA721T	PA		-50	-800	900	33	-5	-50	-0.3	-50	-2.5	1	1	TS6			
KRA722T	PB		-50	-800	900	39	-5	-50	-0.3	-50	-2.5	2.2	2.2				
KRA723T	PC		-50	-800	900	47	-5	-50	-0.3	-50	-2.5	4.7	4.7				
KRA724T	PD		-50	-800	900	56	-5	-50	-0.3	-50	-2.5	10	10				
KRA725T	PE		-50	-800	900	56	-5	-50	-0.3	-50	-2.5	1	10				
KRA726T	PF		-50	-800	900	56	-5	-50	-0.3	-50	-2.5	2.2	10				
KRC841T	NA		50	800	900	33	5	50	0.3	50	2.5	1	1			TS6	
KRC842T	NB		50	800	900	39	5	50	0.3	50	2.5	2.2	2.2				
KRC843T	NC		50	800	900	47	5	50	0.3	50	2.5	4.7	4.7				
KRC844T	ND		50	800	900	56	5	50	0.3	50	2.5	10	10				
KRC845T	NE		50	800	900	56	5	50	0.3	50	2.5	1	10				
KRC846T	NF		50	800	900	56	5	50	0.3	50	2.5	2.2	10				

Note) : Package Mounted on a Ceramic Board (600mm² × 0.8mm)

Audio Muting BRT

Type No.	Mark	Internal Circuit (Top view)	Max. Ratings			hFE				VCE(sat) (V)			R1	RON	Package	Outline (Unit : mm)
			VCEO (V)	IC (mA)	PD (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	(kΩ)	()		
													Typ.	Typ.		
KRC281U	MQ		20	300	100	200	1200	2	4	0.1	30	3	2.2	1	USM	
KRC283U	MS		20	300	100	200	1200	2	4	0.1	30	3	5.6	1		
KRC285U	MS		20	300	100	200	1200	2	4	0.1	30	3	10	1		
KRC231S	NW		15	600	200	200	800	5	50	0.08	50	2.5	2.2	0.6	SOT-23	
KRC232S	NY		15	600	200	200	800	5	50	0.08	50	2.5	5.6	0.6		
KRC281S	MQ		20	300	200	200	1200	2	4	0.1	30	3	2.2	1		
KRC283S	MS		20	300	200	200	1200	2	4	0.1	30	3	5.6	1		
KRC681T	MQ		20	300	900	200	1200	2	4	0.1	30	3	2.2	-	TSV	
KRC231	-		15	600	625	200	800	5	50	0.08	50	2.5	2.2	0.6	TO-92	
KRC232	-		15	600	625	200	800	5	50	0.08	50	2.5	5.6	0.6		
KRC281	-		20	300	625	200	1200	2	4	0.1	30	3	2.2	1		
KRC283	-		20	300	625	200	1200	2	4	0.1	30	3	5.6	1		

Note) : Package mounted on a ceramic board (600mm² × 0.8mm)

General Purpose Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
				VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
BC857W	3	BC847W	1	-45	-100	100	125	800	-5	-2	-0.3	-10	-0.5	-	150	-5	-10	USM	
BC847W	1	BC857W	3	45	100	100	110	800	5	2	0.25	10	0.5	-	300	5	10		
BC857	3	BC847	1	-45	-100	350	125	800	-5	-2	-0.3	-10	-0.5	-	150	-5	-10	SOT-23	
BC860	4	BC850	2	-45	-100	350	125	475	-5	-2	-0.3	-10	-0.5	-	150	-5	-10		
BC807	5	BC817	6	-45	-800	350	100	630	-1	-100	-0.7	-500	-50	80	-	5	10		
BC856	3	BC846	1	-65	-100	350	125	475	-5	-2	-0.3	-10	-0.5	-	150	-5	-10		
BC848	1	-	3	30	100	350	110	800	5	2	0.25	10	0.5	-	300	5	10		
BC847	1	BC857	3	45	100	350	110	800	5	2	0.25	10	0.5	-	300	5	10		
BC850	2	BC860	4	45	100	350	200	800	5	2	0.25	10	0.5	-	300	5	10		
BC817	6	BC807	5	45	800	350	100	630	1	100	0.7	500	50	100	-	5	10		
BC846	1	BC856	3	65	100	350	110	450	5	2	0.25	10	0.5	-	300	5	10		
MMBTA56	ANX	MMBTA06	ADX	-80	-500	350	100	-	-1	-10	-0.25	-100	-10	50	-	1	100		
MMBTA06	ADX	MMBTA56	ANX	80	500	350	100	-	1	10	0.25	100	10	100	-	2	10		
KN3906S	ZAA	KN3904S	ZCA	-40	-200	350	60	-	-1	-0.1	-0.25	-10	-1	-	250	-20	-10		
KN4403S	ZWA	KN4401S	ZUA	-40	-600	350	30	-	-1	-0.1	-0.4	-150	-15	200	-	-10	-20		
KN2907AS	ZHA	KN2222AS	ZGA	-60	-600	350	75	-	-10	-0.1	-0.4	-150	-15	200	-	-20	-50		
KN3904S	ZCA	KN3906S	ZAA	40	200	350	40	-	1	0.1	0.2	10	1	-	300	20	10		
KN2222AS	ZGA	KN2907AS	ZHA	40	600	350	35	-	10	0.1	0.3	150	15	300	-	20	20		
KN4401S	ZUA	KN4403S	ZWA	40	600	350	20	-	1	0.1	0.4	150	15	250	-	10	20		

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm, : hFE Grade

BJT

General Purpose Transistor

Type No.	Complementary	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
		VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
BC558	BC548	-30	-100	625	110	800	-5	-2	-0.65	-100	-5	-	150	-5	-10	TO-92	
BC327	BC337	-45	-800	625	100	630	-1	-100	-0.7	-500	-50	-	100	-5	-10		
BC556	BC546	-65	-100	625	110	450	-5	-2	-0.65	-100	-5	-	150	-5	-10		
BC548	BC558	30	100	625	110	800	5	2	0.6	100	5	-	150	5	10		
BC549	-	30	100	625	110	800	5	2	0.6	100	5	-	300	5	10		
BC547	BC557	45	100	625	110	800	5	2	0.6	100	5	-	150	5	10		
BC337	BC327	45	800	625	100	630	1	100	0.7	500	50	-	100	5	10		
BC546	BC556	65	100	625	110	450	5	2	0.6	100	5	-	150	5	10		
MPS751	MPS651	-60	-1A	625	60	200	-2	-50	-0.7	-500	-50	-	150	-10	-50		
MPS651	MPS751	60	1A	625	100	320	2	50	0.5	500	50	-	150	10	50		
KN4403	KN4401	-40	-600	625	30	-	-1	-0.1	-0.4	-150	-15	200	-	-10	-20		
KN2907A	KN2222A	-60	-600	625	75	-	-10	-0.1	-0.4	-150	-15	200	-	-20	-50		
KN3904	-	40	200	625	40	-	1	0.1	0.2	10	1	-	300	20	10		
KN2222A	KN2907A	40	600	625	35	-	10	0.1	0.3	150	15	300	-	20	20		
KN4401	KN4403	40	600	625	20	-	1	0.1	0.4	150	15	250	-	10	20		

General Purpose Transistor

Type No.	Complementary	Max. Ratings				hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
		VCEO (V)	IC (A)	PC (W)	PC (W)	Min.	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	VCE (V)	IC (mA)		
TIP36C	TIP35C	-100	-25	-	125	55	160	-5	-1.5A	-1.8	-15A	-1.5A	3	-	-5	-1A	TO-3P(N)	
TIP35C	TIP36C	100	25	-	125	55	160	5	1.5A	1.8	15A	1.5A	3	-	5	1A		

Note) : Ta=25 , : Tc=25

BJT

Darlington Transistor

Type No.	Mark	Complementary	Max. Ratings			hFE			VCE(sat) (V)			fT (MHz)			Package	Outline (Unit : mm)
			VCE (V)	IC (mA)	PC (mW)	Min.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)	Typ.	VCE (V)	IC (mA)		
MMBTA63	AGX	-	-30	-500	350	5000	-5	-10	-1.5	-100	-0.1	125	-5	-10	SOT-23	
MMBTA517	UA	-	30	400	350	30000	2	100	1	100	1	220	2	100		
MMBTA13	AIX	-	30	500	350	5000	5	10	1.5	100	0.1	125	5	10		
BC517	-	-	30	500	625	30,000	2	100	1	100	1	220	2	100	TO-92	
MJD112	-	MJD117	100	2A	20W	1000	3	2A	2	2A	8	25	10	750	DPAK	
MJD112L	-	MJD117L	100	2A	20W	1000	3	2A	2	2A	8	25	10	750	IPAK(1)	

Note) : VCEO, : Typ, : Tc=25

High Voltage Transistor

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (MHz)				Package	Outline (Unit : mm)
				VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	IB (mA)	Min.	Max.	VCE (V)	IC (mA)				
2N5401S	ZE	-	-	-150	-600	350	60	240	-5	-10	-0.2	-10	-1	100	300	-10	-10	SOT-23	
2N5551S	ZF	-	-	160	600	350	80	250	5	10	0.15	10	1	100	300	10	10		
MMBTA92	YV	MMBTA42	AAX	-300	-500	350	40	-	-10	-10	-0.5	-20	-2	50	-	-20	-10		
MMBTA42	AAX	MMBTA92	YV	300	500	350	40	-	10	10	0.5	20	2	50	-	20	10		
MMBTA44	APX	-	-	400	300	350	50	200	10	10	0.5	10	1	20	-	10	10		
PXTA44	AP	-	-	400	300	@1W	50	200	10	10	0.5	10	1	-	-	-	-	SOT-89	
BF423	-	BF422	-	-250	-50	625	50	-	-20	-25	-0.6	-30	-5	60	-	-10	-10	TO-92	
BF421	-	BF420	-	-300	-50	625	50	-	-20	-25	-0.6	-30	-5	60	-	-10	-10		
BF422	-	BF423	-	250	50	625	50	-	20	25	0.6	30	5	60	-	10	10		
BF420	-	BF421	-	300	50	625	50	-	20	25	0.6	30	5	60	-	10	10		
MPSA42	-	MPSA92	-	300	500	625	40	-	10	10	0.5	20	2	50	-	20	10		
MPSA92	-	MPSA42	-	-300	-500	625	40	-	-10	-10	-0.5	-20	-2	50	-	-20	-10		
MPSA44	-	-	-	400	300	625	50	200	10	10	0.5	10	1	-	-	-	-		
2N5401C	-	-	-	-150	-600	625	60	240	-5	-10	-0.2	-10	-1	100	300	-10	-10		
2N5551	-	-	-	160	600	625	80	250	5	10	0.15	10	1	100	300	10	10		

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm

RF/ VHF/ UHF Transistor

Type No.	Mark	Max. Ratings			hFE				VCE(sat) (V)			fT (GHz)				Cob (pF)		NF (dB)		Gpe (dB)	Package	Outline (Unit : mm)	
		VCEO (V)	IC (mA)	PC (mW)	Min.	Max.	VCE (V)	IC (mA)	IB (mA)	Max.	IC (mA)	IB (mA)	Min.	Typ.	Max.	VCE (V)	IC (mA)	Max.	VCB (V)				Max.
KTC9018S	BG	30	20	350	54	198	5	1	-	-	-	500	800	-	10	8	-	-	4.0	100	15	SOT-23	
KTC9018	-	30	20	625	40	198	5	1	-	-	-	500	800	-	10	8	-	-	4	100k	15	TO-92	

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm

Switching Transistor

BJT

Type No.	Mark	Complementary	Mark	Max. Ratings			hFE			VCE(sat) (V)			fT (MHz)	ton (ns)	toff (ns)	tr (ns)	tstg (ns)	tf (ns)	Package	Outline (Unit : mm)
				VCE O	IC (mA)	PC (mW)	Max.	VCE (V)	IC (mA)	Max.	IC (mA)	IB (mA)								
KTN2907AU	ZH	KTN2222AU	ZG	-60	-600	100	300	-10	-150	-0.4	-150	-15	200	45	100	40	80	30	USM	
KTN2222AU	ZG	KTN2907AU	ZH	40	600	100	300	10	150	0.4	150	15	250	-	-	25	225	60		
2N3906S	ZA	2N3904S	ZC	-40	-200	350	300	-1	-0.1	-0.25	-10	-1	250	-	-	35	225	75	SOT-23	
2N3904S	ZC	2N3906S	ZA	40	200	350	300	1	10	0.2	10	1	300	-	-	35	200	50		
KTN2907AS	ZH	KTN2222AS	ZG	-60	-600	350	300	-10	-150	-0.4	-150	-15	200	45	100	40	80	30		
KTN2222S	ZB	KTN2907S	ZDA	30	600	350	300	10	150	0.4	150	15	250	-	-	25	225	60		
KTN2222AS	ZG	KTN2907AS	ZH	40	600	350	300	10	150	0.3	150	15	300	-	-	25	225	60		
KN3904	-	-	-	40	200	625	300	1	10	0.2	10	1	300	-	-	35	200	50	TO-92	
KTN2907A	-	KTN2222A	-	-60	-600	625	300	-10	-150	-0.4	-150	-15	200	45	100	40	80	30	TO-92	
KTN2222A	-	KTN2907A	-	40	600	625	300	10	150	0.3	150	15	300	-	-	25	225	60		
MJE13003	-	-	-	400	1.5A	20W	38	2	500	0.5	500	100	4	-	1.1µs	4µs	-	700	TO-126	
MJE13003HV	-	-	-	530	1.5A	20W	50	10	400	0.8	500	100	4	1.1µs	-	4µs	-	700		
MJE13004D	-	-	-	400	4A	20W	40	5	2A	1.0	1A	200	-	-	-	2.9µs	200	-		
MJE13005DF	-	-	-	400	5A	30W	35	5	1A	0.5	1A	200	4	-	150	5µs	-	800	TO-220IS	
MJE13007F	-	-	-	400	8A	40W	50	5	2A	1	2A	400	4	-	1.6µs	3µs	-	700		
MJE13009F	-	-	-	400	12A	50W	28	5	5A	1	5A	1A	4	-	1.1µs	3µs	-	700		
KTC5027F	-	-	-	800	3A	40W	40	5	200	2	1.5A	300	15	-	500	3µs	-	300		
MJE13005D	-	-	-	400	5A	75W	35	5	1A	0.5	1A	200	4	-	150	5µs	-	800	TO-220AB	
MJE13007	-	-	-	400	8A	80W	50	5	2A	1	2A	400	4	-	1.6µs	3µs	-	700		
MJE13009	-	-	-	400	12A	100W	28	5	5A	1	5A	1A	4	-	1.1µs	3µs	-	700		
KTC5027	-	-	-	800	3A	50W	40	5	200	2	1.5A	300	15	-	500	3µs	-	300		
MJE5555	-	-	-	400	5A	75W	40	3	800	0.5	1A	200	-	-	200	2.5µs	-	300		

Note) : Package Mounted on 99.5% Alumina 10 × 8 × 0.6mm, : Typ, @ : Ta=25 , : Tc=25

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
2N2222A	Onsemi	KTN2222A	2SA1204	Toshiba	KTA1001	2SA1584	Rohm	KTA2017	2SB710	Panasonic	KTA1505S
2N2907A	Onsemi	KTN2907A	2SA1208	Sanyo	KTA1024	2SA1586	Toshiba	KTA2014	2SB719	Renesas	KTB1369
2N3904	Onsemi	2N3904	2SA1213	Toshiba	KTA1666	2SA1587	Toshiba	KTA2017	2SB720	Renesas	KTB1369
2N5551	Onsemi	2N5551	2SA1214	Toshiba	KTBI366	2SA1588	Toshiba	KTA2015	2SB725	Panasonic	KTA1266
2SA473	Toshiba	KTA1658	2SA1220	Renesas	KTA1704	2SA1589	Sanyo	KRA113S	2SB739	Renesas	KTA1273
2SA539	Renesas	KTA1266	2SA1222	Renesas	KTA1275	2SA1590	Sanyo	KRA113M	2SB746	Renesas	KTA1270
2SA562TM	Toshiba	KTA1270	2SA1225	Toshiba	KTA1225D	2SA1591	Sanyo	KRA106M	2SB761/A	Panasonic	KTA1046
2SA564A	Panasonic	KTA1266	2SA1225	Toshiba	KTA1225L	2SA1597	Sanyo	KRA106S	2SB762	Panasonic	KTBI368
2SA574	JRC	KTA1266	2SA1235	Renesas	KTA1504S	2SA1603	Renesas	KTA2014	2SB764	Sanyo	KTA1281
2SA608	Sanyo	KTA1266	2SA1241	Toshiba	KTA1718D	2SA1606	Sanyo	KTA1659A	2SB766	Panasonic	KTA1663
2SA671	Renesas	KTA1046	2SA1241	Toshiba	KTA1718L	2SA1608	Renesas	KTA2015	2SB767	Panasonic	KTA1662
2SA673	Renesas	KTA1270	2SA1242	Toshiba	KTA1242L	2SA1611	Renesas	KTA2014	2SB772	Sanyo	KTBI772
2SA683	Panasonic	KTA1273	2SA1242	Toshiba	KTA1242D	2SA1612	Renesas	KTA2017	2SB776	Sanyo	KTBI688
2SA684	Panasonic	KTA1281	2SA1244	Toshiba	KTA1385D	2SA1622	Sanyo	KTA2014	2SB783	Renesas	KTBI368
2SA715	Renesas	KTA1658	2SA1244	Toshiba	KTA1385L	2SA1625	Renesas	KTA1277	2SB789A	Panasonic	KTA1661
2SA719	Panasonic	KTA1270	2SA1246	Sanyo	KTIC3198	2SA1647	Renesas	KTA1042L	2SB798	Renesas	KTA1663
2SA733	Renesas	KTA1266	2SA1252	Sanyo	KTA1504S	2SA1653	Sanyo	KRA119S	2SB805	Renesas	KTA1661
2SA738	Renesas	KTA1658	2SA1264N	Toshiba	KTBI688	2SA1654	Sanyo	KRA119M	2SB807	Panasonic	KTA1660
2SA740	Toshiba	KTBI369	2SA1282A	Renesas	KTA1273	2SA1655	Sanyo	KRA101S	2SB808	Sanyo	KTA1021
2SA769	Sanken	KTBI368	2SA1284	Renesas	KTA1274	2SA1656	Sanyo	KRA101M	2SB810	Renesas	KTA1271
2SA771	Sanken	KTA1049	2SA1285	Renesas	KTA1024	2SA1676	Sanyo	KRA304	2SB814	Panasonic	KTA1517
2SA777	Panasonic	KTA1274	2SA1286	Renesas	KTA1273	2SA1677	Sanyo	KRA303	2SB815	Sanyo	KTA1298
2SA812	Renesas	KTA1504S	2SA1296	Toshiba	KTA1273	2SA1678	Sanyo	KRA302	2SB816	Sanyo	KTBI688
2SA813	Renesas	KTA1504S	2SA1304	Toshiba	KTBI369	2SA1689	Sanyo	BF421	2SB817	Sanyo	KTBI817
2SA817A	Toshiba	KTA1274	2SA1306	Toshiba	KTA1659A	2SA1694	Sanken	KTBI688	2SB834	Toshiba	KTA1046
2SA839	Toshiba	KTBI369	2SA1312	Toshiba	KTA1517	2SA1695	Sanken	KTA1695	2SB849	Renesas	KTBI688
2SA843	Panasonic	KTBI369	2SA1314	Toshiba	KTA1001	2SA1706	Sanyo	KTA1281	2SB856	Renesas	KTA1046
2SA844	Renesas	KTA1266	2SA1318	Sanyo	KTA1266	2SA1721	Toshiba	KTA1073T	2SB858	Renesas	KTBI368
2SA854	Rohm	KTA1270	2SA1335	Rohm	KTA1268	2SA1722	Sanyo	KRA318	2SB861	Renesas	KTBI369
2SA916	Renesas	KTA1024	2SA1338	Sanyo	KTA1505S	2SA1727	Rohm	KTA1703	2SB864	Renesas	KTA1266
2SA933	Rohm	KTA1266	2SA1341	Sanyo	KRA104S	2SA1742	Renesas	KTBI370	2SB874	Renesas	KTA1715
2SA934	Rohm	KTA1273	2SA1342	Sanyo	KRA103S	2SA1745	Sanyo	KTA2015	2SB887	Sanyo	KTBI2510
2SA935	Rohm	KTA1023	2SA1343	Sanyo	KRA109S	2SA1767	Panasonic	BF421	2SB890	Rohm	KTA200
2SA940	Toshiba	KTBI369	2SA1344	Sanyo	KRA102S	2SA1774	Rohm	KTA2014E	2SB892	Sanyo	KTA1281
2SA949	Toshiba	KTA1024	2SA1345	Sanyo	KRA104M	2SA1774H	Rohm	KTA2014E	2SB899	Renesas	KTA1046
2SA950	Toshiba	KTA1271	2SA1346	Sanyo	KRA103M	2SA1775	Rohm	KTA1703	2SB901	Renesas	KTBI368
2SA952	Renesas	KTA1271	2SA1347	Sanyo	KRA109M	2SA1788	Rohm	KTBI778	2SB920/L	Sanyo	KTA1049
2SA957	Sanken	KTBI369	2SA1348	Sanyo	KRA102M	2SA1797	Rohm	KTA1666	2SB940A	Panasonic	KTBI369
2SA958	Sanken	KTBI369	2SA1358	Toshiba	KTBI631K	2SA1832	Toshiba	KTA2014E	2SB941	Panasonic	KTA1046
2SA965	Toshiba	KTA1023	2SA1360	Toshiba	KTA1360	2SA1832F	Toshiba	KTA2014E	2SB942/A	Panasonic	KTBI368
2SA966	Toshiba	KTA1273	2SA1362	Toshiba	KTA1298	2SA1832FT	Toshiba	KTA2014V	2SB946	Panasonic	KTBI370
2SA968	Toshiba	KTA1659	2SA1363	Renesas	KTA1001	2SA1834	Rohm	KTA1834D	2SB956	Panasonic	KTA1663
2SA968A	Toshiba	KTA1659A	2SA1366	Rohm	KTA1505S	2SA1859A	Sanken	KTBI369	2SB965	Renesas	KTBI688
2SA970	Toshiba	KTA1268	2SA1368	Renesas	KTA1662	2SA1862	Rohm	KTA1862D	2SB966	Renesas	KTBI688
2SA973	Panasonic	KTA1266	2SA1381	Sanyo	KTA1381	2SA1868	Panasonic	KTA1277	2SB984	Renesas	KTA1275
2SA985A	Renesas	KTA1659A	2SA1384	Rohm	KTA1384D	2SA1900	Rohm	KTA1666	2SB1010	Rohm	KTA1273
2SA989	Renesas	KTA1266	2SA1385	Renesas	KTA1385D	2SA1924	Toshiba	KTA1703	2SB1015	Toshiba	KTA1046
2SA990	Renesas	KTA1266L	2SA1400	Renesas	KTA1277	2SA1952	Rohm	KTA1385D	2SB1016	Toshiba	KTA1049
2SA992	Renesas	KTA1268	2SA1408	Toshiba	KTA1700	2SA1962	Toshiba	KTA1962	2SB1017	Toshiba	KTBI368
2SA1011	Sanyo	KTA1659A	2SA1412-Z	NEC	KTA1862D	2SA1993E	Renesas	KTA1266	2SB1018	Toshiba	KTBI370
2SA1013	Toshiba	KTA1275	2SA1416	Sanyo	KTA1661	2SA2029	Rohm	KTA2014V	2SB1025	Renesas	KTA1661
2SA1015	Toshiba	KTA1266	2SA1470	Sanyo	KTBI370	2SA2030	Rohm	KTA2012V	2SB1030	Panasonic	KTA1271
2SA1016K	Sanyo	KTA1268	2SA1490	Sanken	KTBI688	2SB434	Toshiba	KTA1046	2SB1032K	Renesas	KTBI2510
2SA1019	Sanyo	KTA1024	2SA1492	Sanken	KTA1962	2SB507	Sanyo	KTA1046	2SB1033	Rohm	KTA1046
2SA1020	Toshiba	KTA1281	2SA1496	Sanyo	KRA111S	2SB512	Panasonic	KTA1046	2SB1053	Panasonic	KTA1504S
2SA1030	Renesas	KTA1266	2SA1497	Sanyo	KRA111M	2SB528	Renesas	KTBI369	2SB1063	Panasonic	KTA1049
2SA1032	Renesas	KTA1266L	2SA1498	Panasonic	KTA1703	2SB544	Sanyo	KTA1273	2SB1069	Panasonic	KTA1658
2SA1036K	Rohm	KTA1505S	2SA1502	Sanyo	KRA118S	2SB546	Renesas	KTBI369	2SB1085A	Rohm	KTA1659A
2SA1037K	Rohm	KTA1504S	2SA1503	Sanyo	KRA118M	2SB546A	Renesas	KTBI369	2SB1095	Renesas	KTA1049
2SA1037AK	Rohm	KTA1504S	2SA1507	Sanyo	KTA1700	2SB560	Sanyo	KTA1023	2SB1096	Renesas	KTBI369
2SA1038	Rohm	KTA1268	2SA1508	Sanyo	KRA114S	2SB561	Renesas	KTA1270	2SB1111	Renesas	KTA1715
2SA1049	Toshiba	KTA1268	2SA1509	Sanyo	KRA114M	2SB562	Renesas	KTA1273	2SB1114	Renesas	KTA1001
2SA1069	Renesas	KTA1049	2SA1510	Sanyo	KRA110S	2SB566	Renesas	KTBI368	2SB1119	Sanyo	KTA1664
2SA1111	Panasonic	KTA1659A	2SA1511	Sanyo	KRA110M	2SB568	Renesas	KTBI369	2SB1120	Sanyo	KTA1001
2SA1121	Renesas	KTA1505S	2SA1518	Sanyo	KRA224S	2SB595	Toshiba	KTA1049	2SB1123	Sanyo	KTA1666
2SA1127	Panasonic	KTA1266L	2SA1519	Sanyo	KRA223S	2SB596	Toshiba	KTBI368	2SB1123	Sanyo	KTA1666
2SA1145	Toshiba	KTA1024	2SA1520	Sanyo	KRA226S	2SB604	Panasonic	KTBI368	2SB1132	Rohm	KTA1664
2SA1151	Renesas	KTA1266	2SA1521	Sanyo	KRA222S	2SB624	Renesas	KTA1298	2SB1132	Rohm	KTA1664
2SA1156	Renesas	KTA1277	2SA1522	Sanyo	KRA224M	2SB628	Renesas	KTA1659A	2SB1142	Sanyo	KTA1715
2SA1156	Renesas	KTA1703	2SA1523	Sanyo	KRA223M	2SB631K	Sanyo	KTBI631K	2SB1151	Renesas	KTBI151
2SA1162	Toshiba	KTA1504S	2SA1524	Sanyo	KRA226M	2SB646A	Renesas	KTA1024	2SB1181	Rohm	KTA1045D
2SA1173	Renesas	KTA1660	2SA1525	Sanyo	KRA222M	2SB647/A	Renesas	KTA1023	2SB1182	Rohm	KTA1718D
2SA1179	Sanyo	KTA1504S	2SA1552	Sanyo	KTA1225D	2SB649/A	Renesas	KTA1700	2SB1184	Rohm	KTA1040D
2SA1182	Toshiba	KTA1505S	2SA1552	Sanyo	KTA1225L	2SB649A	Renesas	KTA1700	2SB1186A	Rohm	KTA1659A
2SA1184	Toshiba	KTA1659A	2SA1559	Rohm	KTA1270	2SB686	Toshiba	KTBI688	2SB1187	Rohm	KTA1046
2SA1191	Renesas	KTA1268	2SA1563	Sanyo	KRA107S	2SB688	Toshiba	KTBI688	2SB1188	Rohm	KTA1663
2SA1200	Toshiba	KTA1660	2SA1564	Sanyo	KRA107M	2SB698	Sanyo	KTA1271	2SB1189	Rohm	KTA1661
2SA1201	Toshiba	KTA1661	2SA1576	Rohm	KTA2014	2SB703	Renesas	KTBI368	2SB1197K	Rohm	KTA1298
2SA1202	Toshiba	KTA1662	2SA1577	Rohm	KTA2015	2SB708	Renesas	KTBI370	2SB1201	Sanyo	KTA1718L
2SA1203	Toshiba	KTA1663	2SA1579	Rohm	KTA2017	2SB709A	Panasonic	KTA1504S	2SB1201	Sanken	KTA1718D

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
2SB1202	Sanyo	KTA1040D	2SC2167	Sanken	KTD2061	2SC3400	Sanyo	KRC103M	2SC4363	Sanyo	KRC101M
2SB1202	Sanyo	KTA1040L	2SC2168	Sanken	KTD2061	2SC3401	Sanyo	KRC109M	2SC4397	Sanyo	KRC403
2SB1203	Sanyo	KTA1385D	2SC2229	Toshiba	KTC3206	2SC3402	Sanyo	KRC102M	2SC4398	Sanyo	KRC402
2SB1203	Sanyo	KTA1385L	2SC2233	Toshiba	KTD1003	2SC3421	Toshiba	KTD600K	2SC4400	Sanyo	KTC4080
2SB1205	Sanyo	KTA1242D	2SC2235	Toshiba	KTC1027	2SC3423	Toshiba	KTC3423	2SC4413	Sanyo	KTC4075
2SB1205	Sanyo	KTA1242L	2SC2236	Toshiba	KTC3205	2SC3440	Renesas	KTC3265	2SC4418	Sanken	KTC4419
2SB1212	Rohm	KTA1275	2SC2238	Toshiba	KTC4370A	2SC3444	Renesas	KTC4378	2SC4448	Toshiba	KTC1001
2SB1216	Sanyo	KTA1042D	2SC2239	Toshiba	KTD2061	2SC3446	Sanyo	KTC4520F	2SC4467	Sanken	KTD718
2SB1216	Sanyo	KTA1042L	2SC2274	Sanyo	KTC200	2SC3447	Sanyo	KTC4521F	2SC4467	Sanken	KTC5197
2SB1218	Panasonic	KTA1504S	2SC2275A	Renesas	KTC4370A	2SC3468	Sanyo	KTC3207	2SC4468	Sanken	KTC4468
2SB1218A	Panasonic	KTA2014	2SC2320/L	Renesas	KTC3198/L	2SC3503	Sanyo	KTC3503	2SC4497	Toshiba	KTC3207T
2SB1219	Panasonic	KTA2015	2SC2344	Sanyo	KTD2061	2SC3518	Renesas	KTC5103D	2SC4506	Rohm	KTC3229
2SB1220	Panasonic	KTA2017	2SC2383	Toshiba	KTC3228	2SC3518-Z	Renesas	KTC5103D	2SC4511	Sanken	KTC2028
2SB1234	Sanyo	KTB1234T	2SC2404	Panasonic	KTC3880S	2SC3570	Renesas	KTC4419	2SC4512	Sanken	KTC2028
2SB1237	Rohm	KTA1273	2SC2411K	Rohm	KTC3876S	2SC3621	Toshiba	KTC2800	2SC4533	Panasonic	KTC4520F
2SB1240	Rohm	KTA1281	2SC2412K	Rohm	KTC3875S	2SC3624	Toshiba	KTC3295	2SC4544	Toshiba	KTC3229
2SB1261	Renesas	KTA1040L	2SC2462	Renesas	KTC3875S	2SC3631	Renesas	KTC3631D	2SC4546	Sanken	MJE13007F
2SB1261-Z	Renesas	KTA1040D	2SC2480	Panasonic	KTC3882	2SC3691	Renesas	KTC2028	2SC4549	Renesas	KTC2028
2SB1274	Sanyo	KTA1046	2SC2482	Toshiba	KTC3207	2SC3830	Sanken	KTC4521F	2SC4553	Renesas	KTD1937
2SB1275	Rohm	KTA1225D	2SC2501	Shindengen	KTC4419	2SC3859	Sanyo	KRC111S	2SC4555	Sanyo	KTC4076
2SB1290	Rohm	KTB1370	2SC2517	Renesas	KTC2028	2SC3860	Sanyo	KRC111M	2SC4558	Sanken	KTD2066
2SB1293	Rohm	KTA1049	2SC2535	Toshiba	KTC4419	2SC3863	Sanyo	KRC118S	2SC4573	Rohm	KTD1414
2SB1294	Rohm	KTA1049	2SC2553	Toshiba	KTC4419	2SC3864	Sanyo	KRC118M	2SC4574	Rohm	KTD1414
2SB1315	Renesas	KTB688	2SC2610	Renesas	KTC3207	2SC388A	Toshiba	KTC3197	2SC4596	Rohm	KTC2028
2SB1316	Rohm	MJD117	2SC2613	Renesas	KTC4419	2SC3898	Sanyo	KRC114S	2SC4617	Rohm	KTC4075E
2SB1328	Rohm	KTA1700	2SC2618	Renesas	KTC3876S	2SC3899	Sanyo	KRC114M	2SC4617H	Rohm	KTC4075E
2SB1364	Renesas	KTA1663	2SC2620	Renesas	KTC3880S	2SC3900	Sanyo	KRC110S	2SC4620	Rohm	MPSA44
2SB1371	Panasonic	KTB688	2SC2655	Toshiba	KTC3209	2SC3901	Sanyo	KRC110M	2SC4662	Sanken	KTC4419
2SB1374	Rohm	KTA1281	2SC2688	Renesas	KTC4217	2SC3912	Sanyo	KRC244S	2SC4667	Toshiba	2N3904S
2SB1375	Toshiba	KTA1046	2SC2703	Toshiba	KTD863	2SC3913	Sanyo	KRC243S	2SC4672	Rohm	KTC4379
2SB1385	Renesas	KTA1385L	2SC2705	Toshiba	KTC3206	2SC3914	Sanyo	KRC246S	2SC4688	Toshiba	KTD718
2SB1409L	Renesas	KTA1225L	2SC2712	Toshiba	KTC3875S	2SC3915	Sanyo	KRC242S	2SC4689	Toshiba	KTD718
2SB1409S	Renesas	KTA1225D	2SC2714	Toshiba	KTC3880S	2SC3916	Sanyo	KRC244M	2SC4738	Toshiba	KTC4075E
2SB1412	Rohm	KTA1242D	2SC2732	Renesas	KTC3882	2SC3917	Sanyo	KRC243M	2SC4738F	Toshiba	KTC4075E
2SB1417	Panasonic	KTA1046	2SC2755	Renesas	KTC3880S	2SC3918	Sanyo	KRC246M	2SC4738FT	Toshiba	KTC4075V
2SB1421	Panasonic	KTB688	2SC2812	Sanyo	KTC3875S	2SC3919	Sanyo	KRC242M	2SC4833	Shindengen	KTC4419
2SB1455	Sanyo	KTA1049	2SC2859	Toshiba	KTC3876S	2SC3920	Sanyo	KTC2800	2SC4883/A	Sanken	KTD2061
2SB1475	Renesas	KTA2015	2SC2873	Toshiba	KTC4379	2SC3938	Panasonic	KTC4076	2SC4915	Toshiba	KTC4080E
2SB1530	Renesas	KTB1369	2SC2873	Toshiba	KTC4379	2SC3969	Rohm	KTC4520F	2SC4917	Toshiba	MJE13003
2SB1560	Sanken	KTB2510	2SC2878	Toshiba	KTC2874	2SC4002	Sanyo	MPSA44	2SC4944	Toshiba	KTC601U
2SB1561	Rohm	KTA1666	2SC2881	Toshiba	KTC4373	2SC4008	Rohm	KTD2060	2SC5001	Rohm	KTC5001D
2SB1565	Rohm	KTA1046	2SC2882	Toshiba	KTC4374	2SC4047	Sanyo	KRC107S	2SC5028	Toshiba	KTC2814
2SB1650	Rohm	KTA1700	2SC2883	Toshiba	KTC4375	2SC4048	Sanyo	KRC107M	2SC5101	Sanken	KTD718
2SB1725	Sanken	KTB1370	2SC2884	Toshiba	KTC4376	2SC4051	Shindengen	KTC4520F	2SC5103F5	Rohm	KTC5103D
2SB1859A	Sanken	KTB1369	2SC2983	Toshiba	KTC2983D	2SC4053	Shindengen	KTC4521F	2SC5113	Rohm	KTC4521F
2SB1891	Toshiba	KTA1715	2SC2983	Toshiba	KTC2983L	2SC4061K	Rohm	MMBTA42	2SC5197	Toshiba	KTC5197
2SC382TM	Toshiba	KTC3197	2SC3068	Sanyo	KTC3112	2SC4062	Renesas	KTD1937	2SC5248	Rohm	KTD2061
2SC536	Sanyo	KTC3198	2SC3072	Toshiba	KTC3072D	2SC4068	Panasonic	KTC4080	2SC5658	Rohm	KTC4075V
2SC789	Toshiba	KTD2060	2SC3072	Toshiba	KTC3072L	2SC4081	Rohm	KTC4075	2SC5663	Rohm	KTC4072V
2SC790	Toshiba	KTC2026	2SC3074	Toshiba	KTC5103L	2SC4082	Rohm	KTC4082	2SD57	Renesas	KTC2028
2SC945	Renesas	KTC3198	2SC3074	Toshiba	KTC5103D	2SC4097	Rohm	KTC4076	2SD58	Renesas	KTC2028
2SC1061	Renesas	KTC2026	2SC3112	Toshiba	KTC3112	2SC4099	Rohm	KTC4080	2SD78	Renesas	KTC2028
2SC1173	Toshiba	KTC4369	2SC3124	Toshiba	KTC3882	2SC4116	Toshiba	KTC4075	2SD122	Renesas	KTD2060
2SC1213	Renesas	KTC3202	2SC3134	Sanyo	KTC3875S	2SC4118	Toshiba	KTC4076	2SD141	Renesas	KTC2028
2SC1213A	Renesas	KTC200	2SC3142	Sanyo	KTC3880S	2SC4120	Sanyo	KRC113S	2SD142	Renesas	KTC2028
2SC1371	Panasonic	KTC3202	2SC3142A	Renesas	KTC3205	2SC4121	Sanyo	KRC113M	2SD143	Renesas	KTC2028
2SC1384	Renesas	KTC3209	2SC3181N	Toshiba	KTD718	2SC4129	Rohm	MJE13007F	2SD144	Renesas	KTC2028
2SC1398	Panasonic	KTC4369	2SC3187	Panasonic	KTC3207	2SC4129	Rohm	KTC4419	2SD150	Renesas	KTC2028
2SC1419	Renesas	KTC2026	2SC3225	Toshiba	KTC3209	2SC4133	Sanyo	KRC106M	2SD152	Renesas	KTD2060
2SC1505	Renesas	KTC3208	2SC3243	Renesas	KTD863	2SC4137	Rohm	KTC3114	2SD154	Renesas	KTD2060
2SC1569	Toshiba	KTC3208	2SC3246	Renesas	KTC3209	2SC4146	Sanyo	KRC106S	2SD155	Renesas	KTD2060
2SC1573	Panasonic	KTC3207	2SC3247	Renesas	KTD863	2SC4154	Renesas	KTC4075	2SD234	Toshiba	KTC2028
2SC1623	Renesas	KTC3875S	2SC3249	Renesas	KTC3207	2SC4155	Renesas	KTC4075	2SD235	Toshiba	KTC2028
2SC1685	Panasonic	KTC3198	2SC3252	Sanyo	KTC4369	2SC4177	Renesas	KTC4075	2SD254	Renesas	KTC2028
2SC1740	Rohm	KTC3198	2SC3258	Toshiba	KTC2028	2SC4178	Renesas	KTC4080	2SD255	Renesas	KTC2028
2SC1741	Rohm	KTC3202	2SC3266	Toshiba	KTC3205	2SC4181	Renesas	KTC4075	2SD256	Sanken	KTC2028
2SC1815	Toshiba	KTC3198	2SC3269	Rohm	KTC3207	2SC4182	Renesas	KTC4082	2SD288	Renesas	KTC2028
2SC1826	Sanken	KTD2026	2SC3295	Toshiba	KTC3295	2SC4207	Sanyo	KTC2983D	2SD289	Renesas	KTC2028
2SC1881	Renesas	KTD2424	2SC3296	Toshiba	KTD2061	2SC4207	Sanyo	KTC2983L	2SD313	Sanyo	KTC2028
2SC1905	Panasonic	KTC3208	2SC3297	Toshiba	KTC4369	2SC4211	Sanyo	KTC3875S	2SD314	Sanyo	KTC2028
2SC1913	Panasonic	KTD2061	2SC3298	Toshiba	KTC4370A	2SC4215	Toshiba	KTC4080	2SD315	Sanyo	KTD2060
2SC1921	Renesas	KTC3229	2SC3303	Toshiba	KTC2022D	2SC4216	Sanyo	KRC110M	2SD317/A	Panasonic	KTD2060
2SC1959	Toshiba	KTC3202	2SC3303	Toshiba	KTC2022L	2SC4217	Sanyo	KTC4217	2SD318/A	Panasonic	KTD2060
2SC1983	Sanken	KTD2092	2SC3326	Toshiba	KTD1304	2SC4251	Toshiba	KTC4082	2SD325	Sanyo	KTC4369
2SC2001	Renesas	KTC3203	2SC3331	Sanyo	KTC3198	2SC4258	Renesas	KTC4080	2SD359	Renesas	KTC2028
2SC2060	Rohm	KTD863	2SC3395	Sanyo	KRC104S	2SC4259	Renesas	KTC4080	2SD360	Renesas	KTC2028
2SC2073	Toshiba	KTD2061	2SC3396	Sanyo	KRC103S	2SC4270	Sanyo	KTC3882	2SD361	Renesas	KTC2028
2SC2075	Toshiba	Conserved/Discontinued	2SC3397	Sanyo	KRC109S	2SC4331	Renesas	KTC2022L	2SD365	Panasonic	KTC2028
2SC2078	Sanyo	Conserved/Discontinued	2SC3398	Sanyo	KRC102S	2SC4338	Renesas	MJD112L	2SD389	Panasonic	KTD2060
2SC2120	Toshiba	KTC3203	2SC3399	Sanyo	KRC104M	2SC4362	Sanyo	KRC101S	2SD390	Panasonic	KTD2060

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
2SD401A	Renesas	KTD2061	2SD1236	Sanyo	KTC2028	2SD2012	Toshiba	KTC2026	BD240/A	Onsemi	KTA1046
2SD415	Renesas	KTD600K	2SD1264/A	Panasonic	KTD2061	2SD2014	Sanken	KTD1414	BD240B	Onsemi	KTA1046
2SD418	Panasonic	KTD2499	2SD1268	Panasonic	KTD2060	2SD2022	Rohm	KTD2424	BD240C	Onsemi	KTA1049
2SD438	Sanyo	KTC1027	2SD1270	Panasonic	KTC2028	2SD2023	Rohm	KTC2026	BD241/A	Onsemi	KTC2026
2SD468	Renesas	KTC3205	2SD1273	Panasonic	KTD2092	2SD2027	Sanyo	KTC2026	BD241B	Onsemi	KTD2060
2SD471	Renesas	KTC3205	2SD1276	Panasonic	KTD1414	2SD2032	Rohm	KTD1414	BD241C	Onsemi	KTC2028
2SD475	Renesas	KTD2060	2SD1280	Panasonic	KTC4375	2SD2035	Rohm	KTD2060	BD242/A	Onsemi	KTC2026
2SD476	Renesas	KTD2060	2SD1288	Renesas	KTD718	2SD2051	Panasonic	KTD2424	BD242B	Onsemi	KTB1368
2SD477	Renesas	KTD2061	2SD1289	Renesas	KTD718	2SD2061	Rohm	KTC2026	BD242C	Onsemi	KTA1049
2SD478	Renesas	KTD2061	2SD1302	Panasonic	KTC3202	2SD2064	Panasonic	KTD718	BD677A	Fairchild	KTD1411
2SD488	Onsemi	KTD2060	2SD1328	Panasonic	KTC2875	2SD2092	Toshiba	KTD2092	BD809	Onsemi	KTC4512
2SD489	Onsemi	KTD2060	2SD1353	Toshiba	KTC2026	2SD2102	Renesas	KTD1414	BD810	Onsemi	KTA1726
2SD490	Onsemi	KTD2060	2SD1354	Toshiba	KTC2026	2SD2107	Renesas	KTD2060	BF420	Philips	BF420
2SD525	Toshiba	KTC2028	2SD1369	Toshiba	KTD2424	2SD2110	Renesas	KTD1414	BF421	Philips	BF421
2SD526	Toshiba	KTD2060	2SD1370	Toshiba	KTD1414	2SD2118	Rohm	KTC3072	BF422	Philips	BF422
2SD570	Panasonic	KTD2060	2SD1383K	Rohm	MMBTA63	2SD2118	Rohm	KTC3072D	BF423	Philips	BF423
2SD580	Toshiba	KTC2026	2SD1384	Rohm	KTC3205	2SD2123L	Renesas	KTC2983L	BN1A3Q	Renesas	KRA116M
2SD600K	Sanyo	KTD600K	2SD1406	Toshiba	KTC2026	2SD2123S	Renesas	KTC2983D	BN1A4M	Renesas	KRA102M
2SD601	Panasonic	KTC3875S	2SD1407	Toshiba	KTC2028	2SD2128	Renesas	KTD2424	BN1A4P	Renesas	KRA107M
2SD602	Panasonic	KTC3876S	2SD1408	Toshiba	KTD2060	2SD2129	Toshiba	KTD1413	BN1A4Z	Renesas	KRA111M
2SD633	Toshiba	KTD1415	2SD1414	Toshiba	KTD1414	2SD2156/A	Panasonic	KTD2092	BN1F4M	Renesas	KRA103M
2SD634	Toshiba	KTD1415	2SD1415	Toshiba	KTD1415	2SD2157/A	Panasonic	KTD1414	BN1F4N	Renesas	KRA108M
2SD635	Toshiba	KTD1415	2SD1436K	Renesas	KTD1510	2SD2158/A	Panasonic	KTD2092	BN1F4Z	Renesas	KRA113M
2SD667	Renesas	KTD1863	2SD1491	Renesas	KTC2814	2SD2164	Renesas	KTD2092	BN1L3M	Renesas	KRA101M
2SD667	Renesas	KTD1863	2SD1505	Rohm	KTC2026	2SD2188	Rohm	KTD2066	BN1L3N	Renesas	KRA119M
2SD669A	Renesas	KTC2800	2SD1562A	Rohm	KTC4370A	2SD2223	Sanyo	KTD1414	BN1L3Z	Renesas	KRA110M
2SD678A	Panasonic	KTD1415	2SD1582	Renesas	KTD1028	2SD2228	Renesas	KTC4076	BN1L4L	Renesas	KRA109M
2SD679A	Panasonic	KTD1415	2SD1585	Renesas	KTC2026	2SD2241	Toshiba	KTD1413	BN1L4M	Renesas	KRA104M
2SD686	Toshiba	KTD1414	2SD1586	Renesas	KTC2028	2SD2242	Panasonic	KTD1414	BN1L4Z	Renesas	KRA114M
2SD687	Toshiba	KTD2424	2SD1587	Renesas	KTD2061	2SD2257	Toshiba	KTD1413	BUV46	STM	KTC4520F
2SD691	Panasonic	KTD1415	2SD1615	Renesas	KTC4378	2SD2337	Renesas	KTD2061	BUX84	Onsemi	KTC4419
2SD718	Toshiba	KTD718	2SD1622	Sanyo	KTC4378	2SD2342	Renesas	KTD998	CPH3101	Sanyo	KTA1544T
2SD721	Sanken	KTD1415	2SD1623	Sanyo	KTC4379	2SD2343	Rohm	KTC4370A	CPH3105	Sanyo	KTA1552T
2SD722	Sanken	KTD1415	2SD1664	Rohm	KTC4375	2SD2351	Rohm	KTC4666	CPH3106	Sanyo	KTA1535T
2SD723	Renesas	KTD2060	2SD1682	Sanyo	KTC2814	2SD2389	Sanken	KTD1510	CPH3109	Sanyo	KTA1542T
2SD731	Panasonic	KTD718	2SD1691	Renesas	KTD1691	2SD2390	Sanken	KTD1510	CPH3110	Sanyo	KTA1543T
2SD734	Sanyo	KTC3208	2SD1733	Rohm	KTC2025D	2SD2566	Rohm	KTC2800	CPH3112	Sanyo	KTA1553T
2SD743/A	Renesas	KTC2028	2SD1758	Rohm	KTC3205	2SD3076	Toshiba	KTC2815D	CPH3114	Sanyo	KTA1532T
2SD759	Renesas	KTC4370A	2SD1758	Rohm	KTC2815D	2SD3518	Renesas	KTC5103L	CPH3115	Sanyo	KTA1541T
2SD760	Renesas	KTC4370A	2SD1760	Rohm	KTC2020L	BA1A3Q	Renesas	KRC116M	CPH3116	Sanyo	KTA1551T
2SD761	Sanyo	KTC4370A	2SD1760	Rohm	KTC2020D	BA1A4M	Renesas	KRC102M	CPH3201	Sanyo	KTC3544T
2SD768	Renesas	KTD1415	2SD1763A	Rohm	KTC4370A	BA1A4P	Renesas	KRC107M	CPH3205	Sanyo	KTC3552T
2SD795	Renesas	KTC2026	2SD1767	Rohm	KTC4373	BA1A4Z	Renesas	KRC111M	CPH3206	Sanyo	KTC3553T
2SD837	Panasonic	KTD1414	2SD1770	Panasonic	KTD2061	BA1F4M	Renesas	KRC103M	CPH3209	Sanyo	KTC3542T
2SD856/A	Panasonic	KTC2026	2SD1772	Panasonic	KTD2061	BA1F4N	Renesas	KRC108M	CPH3210	Sanyo	KTC3543T
2SD857/A	Panasonic	KTD2020	2SD1778	Rohm	KTD2060	BA1F4Z	Renesas	KRC113M	CPH3212	Sanyo	KTC3553T
2SD863	Sanyo	KTD863	2SD1781	Rohm	KTC3265	BA1L3M	Renesas	KRC101M	CPH3214	Sanyo	KTC3532T
2SD874	Panasonic	KTC4375	2SD1801	Sanyo	KTC2815D	BA1L3N	Renesas	KRC119M	CPH3215	Sanyo	KTC3541T
2SD874A	Panasonic	KTC4378	2SD1802	Sanyo	KTC2020D	BA1L3Z	Renesas	KRC110M	CPH3216	Sanyo	KTC3551T
2SD880	Toshiba	KTC2026	2SD1802	Sanyo	KTC2020D	BA1L4L	Renesas	KRC109M	CPH6701	Sanyo	KTX512T
2SD882	Sanyo	KTD882	2SD1802	Sanyo	KTC2020L	BA1L4M	Renesas	KRC104M	DTA113ZE	Rohm	KRA316E
2SD887	Panasonic	KTC2026	2SD1803	Sanyo	KTC5103D	BA1L4Z	Renesas	KRC114M	DTA113ZKA	Rohm	KRA116S
2SD896	Sanyo	KTD718	2SD1803	Sanyo	KTC5103D	BC115	STM	KTC1008	DTA113ZSA	Rohm	KRA116M
2SD968	Panasonic	KTC4373	2SD1803	Sanyo	KTC5103L	BC140	STM	KTC1008	DTA113ZUA	Rohm	KRA316
2SD972	Sanken	KTD1413	2SD1805	Sanyo	KTC3072D	BC211	STM	KTC1008	DTA114EE	Rohm	KRA302E
2SD999	Renesas	KTC4375	2SD1805	Sanyo	KTC3072L	BC337	STM	BC337	DTA114EK	Rohm	KRA102S
2SD1000	Renesas	KTC4378	2SD1816	Sanyo	KTC2022D	BC340	STM	KTC1008	DTA114EM	Rohm	KRA302V
2SD1001	Renesas	KTC4374	2SD1816	Sanyo	KTC2022L	BC341	STM	KTC1008	DTA114ES	Rohm	KRA102M
2SD1007	Renesas	KTC4374	2SD1819A	Panasonic	KTC4075	BC342	STM	KTC1008	DTA114EU	Rohm	KRA302
2SD1010	Panasonic	KTC3112	2SD1820	Panasonic	KTC4076	BC395	STM	KTC1008	DTA114TE	Rohm	KRA311E
2SD1029	Sanyo	KTD2060	2SD1851	Sanyo	KTD1854T	BC807	Onsemi	BC807	DTA114TK	Rohm	KRA111S
2SD1047	Sanyo	KTD1047	2SD1858	Rohm	KTD863	BC817	Onsemi	BC817	DTA114TM	Rohm	KRA311V
2SD1048	Sanyo	KTC3265	2SD1859	Rohm	KTD1863	BC846	Onsemi	BC846	DTA114TS	Rohm	KRA111M
2SD1052	Toshiba	KTC2026	2SD1863	Rohm	KTD1863	BC847	Onsemi	BC847	DTA114TU	Rohm	KRA311
2SD1060	Sanyo	KTC2028	2SD1896	Rohm	KTC2028	BC847WLT1	Onsemi	BC847W	DTA114WE	Rohm	KRA320E
2SD1110	Renesas	KTD718	2SD1897	Rohm	KTC2028	BC848	Onsemi	BC848	DTA114WKA	Rohm	KRA120S
2SD1131	Renesas	KTD2060	2SD1898	Rohm	KTD1898	BC850	Onsemi	BC850	DTA114WSA	Rohm	KRA120M
2SD1132	Renesas	KTD2060	2SD1898	Rohm	KTD1898	BC856	Onsemi	BC856	DTA114WUA	Rohm	KRA320
2SD1133	Renesas	KTD2060	2SD1899	Renesas	KTC2020L	BC857	Onsemi	BC857	DTA114YE	Rohm	KRA307E
2SD1134	Renesas	KTD2060	2SD1899-Z	Renesas	KTC2020D	BC857WLT1	Onsemi	BC857W	DTA114YK	Rohm	KRA107S
2SD1135	Renesas	KTD2060	2SD1913	Sanyo	KTC2026	BC860	Onsemi	BC860	DTA114YM	Rohm	KRA307V
2SD1136	Renesas	KTD2060	2SD1918	Rohm	KTC2983D	BCW60A/B/D	Onsemi	KTC3875S	DTA114YS	Rohm	KRA107M
2SD1138	Renesas	KTD2061	2SD1932	Rohm	KTD1414	BCW61A/B/D	Onsemi	KTA1504S	DTA114YU	Rohm	KRA307
2SD1177	Renesas	KTC2814	2SD1933	Rohm	KTD1414	BCW68	Onsemi	BCW68	DTA115EE	Rohm	KRA322E
2SD1190	Sanyo	KTD1414	2SD1944	Rohm	KTD2092	BCX52	Onsemi	KTA1666	DTA115EKA	Rohm	KRA122S
2SD1195	Sanyo	KTD1413	2SD1972	Panasonic	KTC2026	BCX70G/H/J/K	Onsemi	KTC3875S	DTA115ESA	Rohm	KRA122M
2SD1197	Sanyo	KTD1510	2SD1977	Renesas	KTD718	BCX71G/H/J/K	Onsemi	KTA1504S	DTA115EUA	Rohm	KRA322
2SD1207	Sanyo	KTC3209	2SD1980	Rohm	MJD112	BD239/A	Onsemi	KTC2026	DTA115TE	Rohm	KRA312E
2SD1207S	Sanyo	KTC3209	2SD1990	Panasonic	KTD2060	BD239B	Onsemi	KTD2060	DTA115TH	Rohm	KRA312E
2SD1218	Panasonic	KTD1414	2SD2004	Rohm	KTC2800	BD239C	Onsemi	KTC2028	DTA115TK	Rohm	KRA112S

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
DTA115TM	Rohm	KRA312V	DTB143EK	Rohm	KRA223S	DTC143ZK	Rohm	KRC106S	EMZ1	Rohm	KTX101E
DTA115TS	Rohm	KRA112M	DTB143ES	Rohm	KRA223M	DTC143ZM	Rohm	KRC406V	FA1A3Q	Renesas	KRC116S
DTA115TU	Rohm	KRA312	DTC113ZE	Rohm	KRC416E	DTC143ZS	Rohm	KRC106M	FA1A4M	Renesas	KRC102S
DTA123EE	Rohm	KRA317E	DTC113ZKA	Rohm	KRC116S	DTC143ZU	Rohm	KRC406	FA1A4P	Renesas	KRC107S
DTA123EKA	Rohm	KRA117S	DTC113ZSA	Rohm	KRC116M	DTC144EE	Rohm	KRC404E	FA1A4Z	Renesas	KRC111S
DTA123EM	Rohm	KRA317V	DTC113ZUA	Rohm	KRC416	DTC144EK	Rohm	KRC104S	FA1F4M	Renesas	KRC103S
DTA123ESA	Rohm	KRA117M	DTC114EE	Rohm	KRC402E	DTC144EM	Rohm	KRC404V	FA1F4N	Renesas	KRC108S
DTA123EUA	Rohm	KRA317	DTC114EK	Rohm	KRC102S	DTC144ES	Rohm	KRC104M	FA1F4Z	Renesas	KRC113S
DTA123JE	Rohm	KRA305E	DTC114EM	Rohm	KRC402V	DTC144EU	Rohm	KRC404	FA1L3M	Renesas	KRC101S
DTA123JK	Rohm	KRA105S	DTC114ES	Rohm	KRC102M	DTC144TE	Rohm	KRC414E	FA1L3N	Renesas	KRC119S
DTA123JM	Rohm	KRA305V	DTC114EU	Rohm	KRC402	DTC144TK	Rohm	KRC114S	FA1L3Z	Renesas	KRC110S
DTA123JS	Rohm	KRA105M	DTC114TE	Rohm	KRC411E	DTC144TM	Rohm	KRC414V	FA1L4L	Renesas	KRC109S
DTA123JU	Rohm	KRA305	DTC114TK	Rohm	KRC111S	DTC144TS	Rohm	KRC114M	FA1L4M	Renesas	KRC104S
DTA123YE	Rohm	KRA318E	DTC114TM	Rohm	KRC411V	DTC144TU	Rohm	KRC414	FA1L4Z	Renesas	KRC114S
DTA123YKA	Rohm	KRA118S	DTC114TS	Rohm	KRC111M	DTC144VKA	Rohm	KRC121S	FMMT618	Zetex	KTC3534T
DTA123YSA	Rohm	KRA118M	DTC114TU	Rohm	KRC411	DTC144VSA	Rohm	KRC121M	FMMT718	Zetex	KTA1532T
DTA123YUA	Rohm	KRA318	DTC114WE	Rohm	KRC420E	DTC144VUA	Rohm	KRC421	FN1A3Q	Renesas	KRA116S
DTA124EE	Rohm	KRA303E	DTC114WKA	Rohm	KRC120S	DTC144WE	Rohm	KRC409E	FN1A4M	Renesas	KRA102S
DTA124EK	Rohm	KRA103S	DTC114WSA	Rohm	KRC120M	DTC144WK	Rohm	KRC109S	FN1A4P	Renesas	KRA107S
DTA124EM	Rohm	KRA303V	DTC114WUA	Rohm	KRC420	DTC144WS	Rohm	KRC109M	FN1A4Z	Renesas	KRA111S
DTA124ES	Rohm	KRA103M	DTC114YE	Rohm	KRC407E	DTC144WU	Rohm	KRC409	FN1F4M	Renesas	KRA103S
DTA124EU	Rohm	KRA303	DTC114YK	Rohm	KRC107S	DTC155EM	Rohm	KRC422V	FN1F4N	Renesas	KRA108S
DTA124TE	Rohm	KRA313E	DTC114YM	Rohm	KRC407V	DTC314TK	Rohm	KRC233S	FN1F4Z	Renesas	KRA113S
DTA124TH	Rohm	KRA313E	DTC114YS	Rohm	KRC107M	DTC323TK	Rohm	KRC233M	FN1L3M	Renesas	KRA101S
DTA124TK	Rohm	KRA113S	DTC114YU	Rohm	KRC407	DTC323TK	Rohm	KRC231S	FN1L3N	Renesas	KRA119S
DTA124TM	Rohm	KRA313V	DTC115EE	Rohm	KRC422E	DTC323TS	Rohm	KRC231M	FN1L3Z	Renesas	KRA110S
DTA124TS	Rohm	KRA113M	DTC115EKA	Rohm	KRC122S	DTD113EK	Rohm	KRC241S	FN1L4L	Renesas	KRA109S
DTA124TU	Rohm	KRA313	DTC115ESA	Rohm	KRC122M	DTD113ES	Rohm	KRC241M	FN1L4M	Renesas	KRA104S
DTA124XE	Rohm	KRA308E	DTC115EUA	Rohm	KRC422	DTD113ZK	Rohm	KRC245S	FN1L4Z	Renesas	KRA114S
DTA124XK	Rohm	KRA108S	DTC115TH	Rohm	KRC412E	DTD113ZS	Rohm	KRC245M	GA1A3Q	Renesas	KRC416
DTA124XM	Rohm	KRA308V	DTC115TK	Rohm	KRC112S	DTD114EK	Rohm	KRC244S	GA1A4M	Renesas	KRC402
DTA124XS	Rohm	KRA108M	DTC115TM	Rohm	KRC412V	DTD114ES	Rohm	KRC244M	GA1A4P	Renesas	KRC407
DTA124XU	Rohm	KRA308	DTC115TS	Rohm	KRC112M	DTD123EK	Rohm	KRC242S	GA1A4Z	Renesas	KRC411
DTA143EE	Rohm	KRA301E	DTC115TU	Rohm	KRC412	DTD123ES	Rohm	KRC242M	GA1F4M	Renesas	KRC403
DTA143EK	Rohm	KRA101S	DTC123EE	Rohm	KRC417E	DTD123YK	Rohm	KRC246S	GA1F4N	Renesas	KRC408
DTA143EM	Rohm	KRA301V	DTC123EKA	Rohm	KRC117S	DTD123YS	Rohm	KRC246M	GA1F4Z	Renesas	KRC413
DTA143ES	Rohm	KRA101M	DTC123EM	Rohm	KRC417V	DTD143EK	Rohm	KRC243S	GA1L3M	Renesas	KRC401
DTA143EU	Rohm	KRA301	DTC123ESA	Rohm	KRC117M	DTD143ES	Rohm	KRC243M	GA1L3N	Renesas	KRC419
DTA143TE	Rohm	KRA310E	DTC123EUA	Rohm	KRC417	EMA2	Rohm	KRA554E	GA1L3Z	Renesas	KRC410
DTA143TK	Rohm	KRA110S	DTC123JE	Rohm	KRC405E	EMA3	Rohm	KRA560E	GA1L4L	Renesas	KRC409
DTA143TM	Rohm	KRA310V	DTC123JK	Rohm	KRC105S	EMA4	Rohm	KRA561E	GA1L4M	Renesas	KRC404
DTA143TS	Rohm	KRA110M	DTC123JM	Rohm	KRC405V	EMA5	Rohm	KRA555E	GA1L4Z	Renesas	KRC414
DTA143XE	Rohm	KRA319E	DTC123JS	Rohm	KRC105M	EMA6	Rohm	KRA564E	GN1A3Q	Renesas	KRA316
DTA143XKA	Rohm	KRA119S	DTC123JU	Rohm	KRC405	EMA7	Rohm	KRA569E	GN1A4M	Renesas	KRA302
DTA143XM	Rohm	KRA319V	DTC123YE	Rohm	KRC418E	EMA8	Rohm	KRA557E	GN1A4P	Renesas	KRA307
DTA143XSA	Rohm	KRA119M	DTC123YKA	Rohm	KRC118S	EMA11	Rohm	KRA556E	GN1A4Z	Renesas	KRA311
DTA143XUA	Rohm	KRA319	DTC123YSA	Rohm	KRC118M	EMB2	Rohm	KRA754E	GN1F4M	Renesas	KRA303
DTA143ZE	Rohm	KRA306E	DTC123YUA	Rohm	KRC418	EMB3	Rohm	KRA760E	GN1F4N	Renesas	KRA308
DTA143ZK	Rohm	KRA106S	DTC124EE	Rohm	KRC403E	EMB4	Rohm	KRA761E	GN1F4Z	Renesas	KRA313
DTA143ZM	Rohm	KRA306V	DTC124EK	Rohm	KRC103S	EMB6	Rohm	KRA724E	GN1L3M	Renesas	KRA301
DTA143ZS	Rohm	KRA106M	DTC124EM	Rohm	KRC403V	EMB9	Rohm	KRA757E	GN1L3N	Renesas	KRA319
DTA143ZU	Rohm	KRA306	DTC124ES	Rohm	KRC103M	EMB10	Rohm	KRA755E	GN1L3Z	Renesas	KRA310
DTA144EE	Rohm	KRA304E	DTC124EU	Rohm	KRC403	EMB11	Rohm	KRA752E	GN1L4L	Renesas	KRA309
DTA144EK	Rohm	KRA104S	DTC124TE	Rohm	KRC413E	EMD2	Rohm	KRX202E	GN1L4M	Renesas	KRA304
DTA144EM	Rohm	KRA304V	DTC124TH	Rohm	KRC413E	EMD3	Rohm	KRX201E	GN1L4Z	Renesas	KRA314
DTA144ES	Rohm	KRA104M	DTC124TK	Rohm	KRC113S	EMD12	Rohm	KRX203E	HN1A01FE	Toshiba	KTA701E
DTA144EU	Rohm	KRA304	DTC124TM	Rohm	KRC413V	EMG1	Rohm	KRC653E	HN1A01FU	Toshiba	KTA701U
DTA144TE	Rohm	KRA314E	DTC124TS	Rohm	KRC113M	EMG2	Rohm	KRC654E	HN1B04FE	Toshiba	KTX101E
DTA144TK	Rohm	KRA114S	DTC124TU	Rohm	KRC413	EMG3	Rohm	KRC660E	HN1B04FU	Toshiba	KTX101U
DTA144TM	Rohm	KRA314V	DTC124XE	Rohm	KRC408E	EMG4	Rohm	KRC661E	HN1C01FE	Toshiba	KTC801E
DTA144TS	Rohm	KRA114M	DTC124XK	Rohm	KRC108S	EMG5	Rohm	KRC657E	HN1C01FU	Toshiba	KTC801U
DTA144TU	Rohm	KRA314	DTC124XM	Rohm	KRC408V	EMG6	Rohm	KRC664E	HN1C03F	Toshiba	KTC812T
DTA144VKA	Rohm	KRA121S	DTC124XS	Rohm	KRC108M	EMG8	Rohm	KRC656E	HN2A01FU	Toshiba	KTA711U
DTA144VSA	Rohm	KRA121M	DTC124XU	Rohm	KRC408	EMG9	Rohm	KRC652E	HN2C01FE	Toshiba	KTC811E
DTA144VUA	Rohm	KRA321	DTC143EE	Rohm	KRC401E	EMG11	Rohm	KRC655E	HN2C01FU	Toshiba	KTC811U
DTA144WE	Rohm	KRA309E	DTC143EK	Rohm	KRC101S	EMH1	Rohm	KRC853E	IMX9	Rohm	KTC812T
DTA144WK	Rohm	KRA109S	DTC143EM	Rohm	KRC401V	EMH2	Rohm	KRC854E	IMZ4	Rohm	KTX111T
DTA144WS	Rohm	KRA109M	DTC143ES	Rohm	KRC101M	EMH3	Rohm	KRC860E	MJD112	Onsemi	MJD112
DTA144WU	Rohm	KRA309	DTC143EU	Rohm	KRC401	EMH4	Rohm	KRC861E	MJD112-1	Onsemi	MJD112L
DTA155EM	Rohm	KRA322V	DTC143TE	Rohm	KRC410E	EMH6	Rohm	KRC824E	MJD117	Onsemi	MJD117
DTB113EK	Rohm	KRA221S	DTC143TK	Rohm	KRC110S	EMH9	Rohm	KRC857E	MJD117-1	Onsemi	MJD117L
DTB113ES	Rohm	KRA221M	DTC143TM	Rohm	KRC410V	EMH10	Rohm	KRC855E	MJD41C-1	Onsemi	KTC2022L
DTB113ZK	Rohm	KRA225S	DTC143TS	Rohm	KRC110M	EMH11	Rohm	KRC852E	MJE127	Onsemi	KTD1413
DTB113ZS	Rohm	KRA225M	DTC143TU	Rohm	KRC410	EMT1	Rohm	KTA701E	MJE127	Onsemi	KTB1423
DTB114EK	Rohm	KRA224S	DTC143XE	Rohm	KRC419E	EMT18	Rohm	KTA702E	MJE800T	Onsemi	KTD1414
DTB114ES	Rohm	KRA224M	DTC143XKA	Rohm	KRC119S	EMX1	Rohm	KTC801E	MJE6107	Onsemi	KTB1368
DTB123EK	Rohm	KRA222S	DTC143XM	Rohm	KRC419V	EMX2	Rohm	KTC811E	MJE13003	Mospec	MJE13003
DTB123ES	Rohm	KRA222M	DTC143XSA	Rohm	KRC119M	EMX3	Rohm	KTC812E	MJE13003	Onsemi	MJE13003
DTB123YK	Rohm	KRA226S	DTC143XUA	Rohm	KRC419	EMX18	Rohm	KTC802E	MJE13003	STM	MJE13003
DTB123YS	Rohm	KRA226M	DTC143ZE	Rohm	KRC406E	EMY1	Rohm	KTX201E	MJE13004	Onsemi	KTC4419

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
MJE13005	Mospec	MJE13005F	PDTC124EK	NXP	KRC103S	RN1301	Toshiba	KRC401	RN1907FE	Toshiba	KRC857E
MJE13005	Onsemi	MJE13005F	PDTC124ES	NXP	KRC103M	RN1302	Toshiba	KRC402	RN1908	Toshiba	KRC858U
MJE13005	STM	MJE13005F	PDTC124EU	NXP	KRC403	RN1303	Toshiba	KRC403	RN1908FE	Toshiba	KRC858E
MJE13007	Onsemi	MJE13007F	PDTC143EK	NXP	KRC101S	RN1304	Toshiba	KRC404	RN1909	Toshiba	KRC859U
MJE16002	Onsemi	KTC4419	PDTC143ES	NXP	KRC101M	RN1305	Toshiba	KRC405	RN1909FE	Toshiba	KRC859E
MJE16004	Onsemi	KTC4419	PDTC143EU	NXP	KRC401	RN1306	Toshiba	KRC406	RN1910	Toshiba	KRC860U
MMBA811C5	Onsemi	KTA1504S	PDTC144EK	NXP	KRC104S	RN1307	Toshiba	KRC407	RN1910FE	Toshiba	KRC860E
MMBA811C6	Onsemi	KTA1504S	PDTC144ES	NXP	KRC104M	RN1308	Toshiba	KRC408	RN1911	Toshiba	KRC861U
MMBA811C7	Onsemi	KTA1504S	PDTC144EU	NXP	KRC404	RN1309	Toshiba	KRC409	RN1911FE	Toshiba	KRC861E
MMBA811C8	Onsemi	KTA1504S	PDTD114EK	NXP	KRC244S	RN1310	Toshiba	KRC410	RN1961	Toshiba	KRC821U
MMBA812M5	Onsemi	KTA1504S	PDTD114ES	NXP	KRC244M	RN1311	Toshiba	KRC411	RN1961FE	Toshiba	KRC821E
MMBA812M6	Onsemi	KTA1504S	RN1101	Toshiba	KRC401E	RN1312	Toshiba	KRC413	RN1962	Toshiba	KRC822U
MMBA812M7	Onsemi	KTA1504S	RN1101F	Toshiba	KRC401E	RN1313	Toshiba	KRC414	RN1962FE	Toshiba	KRC822E
MMBC1009F1	Onsemi	KTC3875S	RN1101FT	Toshiba	KRC401V	RN1314	Toshiba	KRC416	RN1963	Toshiba	KRC823U
MMBC1009F2	Onsemi	KTC3875S	RN1102	Toshiba	KRC402E	RN1315	Toshiba	KRC418	RN1963FE	Toshiba	KRC823E
MMBC1009F3	Onsemi	KTC3875S	RN1102F	Toshiba	KRC402E	RN1316	Toshiba	KRC419	RN1964	Toshiba	KRC824U
MMBC1009F4	Onsemi	KTC3875S	RN1102FT	Toshiba	KRC402V	RN1317	Toshiba	KRC420	RN1964FE	Toshiba	KRC824E
MMBC1009F5	Onsemi	KTC3875S	RN1103	Toshiba	KRC403E	RN1318	Toshiba	KRC421	RN1965	Toshiba	KRC825U
MMBC1321Q2	Onsemi	KTC3882	RN1103F	Toshiba	KRC403E	RN1401	Toshiba	KRC101S	RN1965FE	Toshiba	KRC825E
MMBC1321Q3	Onsemi	KTC3882	RN1103FT	Toshiba	KRC403V	RN1402	Toshiba	KRC102S	RN1966	Toshiba	KRC826U
MMBC1321Q4	Onsemi	KTC3882	RN1104	Toshiba	KRC404E	RN1403	Toshiba	KRC103S	RN1966FE	Toshiba	KRC826E
MMBC1321Q5	Onsemi	KTC3882	RN1104F	Toshiba	KRC404E	RN1404	Toshiba	KRC104S	RN1967	Toshiba	KRC827U
MMBC1622D6	Onsemi	KTC3875S	RN1104FT	Toshiba	KRC404V	RN1405	Toshiba	KRC105S	RN1967FE	Toshiba	KRC827E
MMBC1622D7	Onsemi	KTC3875S	RN1105	Toshiba	KRC405E	RN1406	Toshiba	KRC106S	RN1968	Toshiba	KRC828U
MMBC1622D8	Onsemi	KTC3875S	RN1105F	Toshiba	KRC405E	RN1407	Toshiba	KRC107S	RN1968FE	Toshiba	KRC828E
MMBC1623L3	Onsemi	KTC3875S	RN1105FT	Toshiba	KRC405V	RN1408	Toshiba	KRC108S	RN1969	Toshiba	KRC829U
MMBC1623L4	Onsemi	KTC3875S	RN1106	Toshiba	KRC406E	RN1409	Toshiba	KRC109S	RN1969FE	Toshiba	KRC829E
MMBC1623L5	Onsemi	KTC3875S	RN1106F	Toshiba	KRC406E	RN1410	Toshiba	KRC110S	RN1970	Toshiba	KRC830U
MMBC1623L6	Onsemi	KTC3875S	RN1106FT	Toshiba	KRC406V	RN1411	Toshiba	KRC111S	RN1970FE	Toshiba	KRC830E
MMBC1623L7	Onsemi	KTC3875S	RN1107	Toshiba	KRC407E	RN1412	Toshiba	KRC113S	RN1971	Toshiba	KRC831U
MMBT2222/A	Onsemi	KTN2222S/AS	RN1107F	Toshiba	KRC407E	RN1413	Toshiba	KRC114S	RN1971FE	Toshiba	KRC831E
MMBT2907A	Onsemi	KTN2907AS	RN1107FT	Toshiba	KRC407V	RN1414	Toshiba	KRC116S	RN1973	Toshiba	KRC834U
MMBT2907AWP1	Onsemi	KTN2907AU	RN1108	Toshiba	KRC408E	RN1415	Toshiba	KRC118S	RN2101	Toshiba	KRA301E
MMBT3904	Onsemi	2N3904S	RN1108F	Toshiba	KRC408E	RN1416	Toshiba	KRC119S	RN2101F	Toshiba	KRA301E
MMBT3906	Onsemi	2N3906S	RN1108FT	Toshiba	KRC408V	RN1417	Toshiba	KRC120S	RN2101FT	Toshiba	KRA301V
MMBT4124	Onsemi	KTC3876S	RN1109	Toshiba	KRC409E	RN1418	Toshiba	KRC121S	RN2102	Toshiba	KRA302E
MMBT4126	Onsemi	KTA1505S	RN1109F	Toshiba	KRC409E	RN1421	Toshiba	KRC241S	RN2102F	Toshiba	KRA302E
MMBT4401	Onsemi	KTN2222AS	RN1109FT	Toshiba	KRC409V	RN1422	Toshiba	KRC242S	RN2102FT	Toshiba	KRA302V
MMBT4403	Onsemi	KTN2907AS	RN1110	Toshiba	KRC410E	RN1423	Toshiba	KRC243S	RN2103	Toshiba	KRA303E
MMBT5087	Onsemi	KTA1504S	RN1110F	Toshiba	KRC410E	RN1424	Toshiba	KRC244S	RN2103F	Toshiba	KRA303E
MMBT5088	Onsemi	KTC3875S	RN1110FT	Toshiba	KRC410V	RN1426	Toshiba	KRC245S	RN2103FT	Toshiba	KRA303V
MMBT5089	Onsemi	KTC3295	RN1111	Toshiba	KRC411E	RN1427	Toshiba	KRC246S	RN2104	Toshiba	KRA304E
MMBTA13	Onsemi	MMBTA517	RN1111F	Toshiba	KRC411E	RN1441	Toshiba	KRC232S	RN2104F	Toshiba	KRA304E
MMBTA14	Onsemi	MMBTA517	RN1111FT	Toshiba	KRC411V	RN1442	Toshiba	KRC233S	RN2104FT	Toshiba	KRA304V
MMBTA20	Onsemi	KTN2222AS	RN1112	Toshiba	KRC413E	RN1444	Toshiba	KRC231S	RN2105	Toshiba	KRA305E
MMBTA42	Onsemi	MMBTA42	RN1112F	Toshiba	KRC413E	RN1544	Toshiba	KRC681T	RN2105F	Toshiba	KRA305E
MMBTA55	Onsemi	MMBTA92	RN1112FT	Toshiba	KRC413V	RN1701	Toshiba	KRC651U	RN2105FT	Toshiba	KRA305V
MMBTA56	Onsemi	MMBTA92	RN1113	Toshiba	KRC414E	RN1702	Toshiba	KRC652U	RN2106	Toshiba	KRA306E
MMBTA63	Onsemi	MMBTA63	RN1113F	Toshiba	KRC414E	RN1702JE	Toshiba	KRC651E	RN2106F	Toshiba	KRA306E
MMBTA92	Onsemi	MMBTA92	RN1113FT	Toshiba	KRC414V	RN1703	Toshiba	KRC653U	RN2106FT	Toshiba	KRA306V
MPS2222A	Onsemi	KTN2222A	RN1114	Toshiba	KRC416E	RN1703JE	Toshiba	KRC652E	RN2107	Toshiba	KRA307E
MPS2907A	Onsemi	KTN2907A	RN1114FT	Toshiba	KRC416V	RN1704	Toshiba	KRC654U	RN2107F	Toshiba	KRA307E
MPSA12	Onsemi	BC517	RN1115	Toshiba	KRC418E	RN1704JE	Toshiba	KRC653E	RN2107FT	Toshiba	KRA307V
MPSA20	Onsemi	2N3904	RN1115FT	Toshiba	KRC418V	RN1705	Toshiba	KRC655U	RN2108	Toshiba	KRA308E
MPSA42	Onsemi	MPSA42	RN1116	Toshiba	KRC419E	RN1705JE	Toshiba	KRC654E	RN2108F	Toshiba	KRA308E
MPSA44	Onsemi	MPSA44	RN1116FT	Toshiba	KRC419V	RN1706	Toshiba	KRC656U	RN2108FT	Toshiba	KRA308V
MPS-U01/A	Onsemi	KTD1351	RN1117	Toshiba	KRC420E	RN1706JE	Toshiba	KRC655E	RN2109	Toshiba	KRA309E
PDTA114EK	NXP	KRA102S	RN1117FT	Toshiba	KRC420V	RN1707	Toshiba	KRC657U	RN2109F	Toshiba	KRA309E
PDTA114ES	NXP	KRA102M	RN1118	Toshiba	KRC421E	RN1707JE	Toshiba	KRC656E	RN2109FT	Toshiba	KRA309V
PDTA114EU	NXP	KRA302	RN1118FT	Toshiba	KRC421V	RN1708	Toshiba	KRC658U	RN2110	Toshiba	KRA310E
PDTA114TK	NXP	KRA111S	RN1201	Toshiba	KRC101M	RN1708JE	Toshiba	KRC657E	RN2110F	Toshiba	KRA310E
PDTA114TS	NXP	KRA111M	RN1202	Toshiba	KRC102M	RN1709	Toshiba	KRC659U	RN2110FT	Toshiba	KRA310V
PDTA114TU	NXP	KRA311	RN1203	Toshiba	KRC103M	RN1709JE	Toshiba	KRC658E	RN2111	Toshiba	KRA311E
PDTA124EK	NXP	KRA103S	RN1204	Toshiba	KRC104M	RN1710	Toshiba	KRC660U	RN2111F	Toshiba	KRA311E
PDTA124ES	NXP	KRA103M	RN1205	Toshiba	KRC105M	RN1710JE	Toshiba	KRC659E	RN2111FT	Toshiba	KRA311V
PDTA124EU	NXP	KRA303	RN1206	Toshiba	KRC106M	RN1711	Toshiba	KRC661U	RN2112	Toshiba	KRA313E
PDTA143EK	NXP	KRA101S	RN1207	Toshiba	KRC107M	RN1711JE	Toshiba	KRC660E	RN2112F	Toshiba	KRA313E
PDTA143ES	NXP	KRA101M	RN1208	Toshiba	KRC108M	RN1901	Toshiba	KRC851U	RN2112FT	Toshiba	KRA313V
PDTA143EU	NXP	KRA301	RN1209	Toshiba	KRC109M	RN1901FE	Toshiba	KRC851E	RN2113	Toshiba	KRA314E
PDTA144EK	NXP	KRA104S	RN1210	Toshiba	KRC101M	RN1902	Toshiba	KRC852U	RN2113F	Toshiba	KRA314E
PDTA144ES	NXP	KRA104M	RN1211	Toshiba	KRC111M	RN1902FE	Toshiba	KRC852E	RN2113FT	Toshiba	KRA314V
PDTA144EU	NXP	KRA304	RN1221	Toshiba	KRC241M	RN1903	Toshiba	KRC853U	RN2114	Toshiba	KRA316E
PDTB114EK	NXP	KRA224S	RN1222	Toshiba	KRC242M	RN1903FE	Toshiba	KRC853E	RN2114FT	Toshiba	KRA316V
PDTB114ES	NXP	KRA224M	RN1223	Toshiba	KRC243M	RN1904	Toshiba	KRC854U	RN2115	Toshiba	KRA318E
PDTB114EK	NXP	KRC102S	RN1224	Toshiba	KRC244M	RN1904FE	Toshiba	KRC854E	RN2115FT	Toshiba	KRA318V
PDTC114ES	NXP	KRC102M	RN1226	Toshiba	KRC245M	RN1905	Toshiba	KRC855U	RN2116	Toshiba	KRA319E
PDTC114EU	NXP	KRC402	RN1227	Toshiba	KRC246M	RN1905FE	Toshiba	KRC855E	RN2116FT	Toshiba	KRA319V
PDTC114TK	NXP	KRC111S	RN1241	Toshiba	KRC232M	RN1906	Toshiba	KRC856U	RN2117	Toshiba	KRA320E
PDTC114TS	NXP	KRC111M	RN1242	Toshiba	KRC233M	RN1906FE	Toshiba	KRC856E	RN2117FT	Toshiba	KRA320V
PDTC114TU	NXP	KRC411	RN1244	Toshiba	KRC231M	RN1907	Toshiba	KRC857U	RN2118	Toshiba	KRA321E

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
RN2118FT	Toshiba	KRA321V	RN2711	Toshiba	KRA561U	TIP31C	Onsemi	TIP31CF	UN221F	Panasonic	KRC119S
RN2201	Toshiba	KRA101M	RN2711JE	Toshiba	KRA561E	TIP31C	STM	TIP31CF	UN221H	Panasonic	KRC118S
RN2202	Toshiba	KRA102M	RN2901	Toshiba	KRA751U	TIP32C	Mospec	TIP32CF	UN221L	Panasonic	KRC101S
RN2203	Toshiba	KRA103M	RN2901FE	Toshiba	KRA751E	TIP32C	Onsemi	TIP32CF	UN221M	Panasonic	KRC105S
RN2204	Toshiba	KRA104M	RN2902	Toshiba	KRA752U	TIP32C	STM	TIP32CF	UN221N	Panasonic	KRC106S
RN2205	Toshiba	KRA105M	RN2902FE	Toshiba	KRA752E	TIP35C	Mospec	TIP35C	UN411E	Panasonic	KRA109M
RN2206	Toshiba	KRA106M	RN2903	Toshiba	KRA753U	TIP35C	Onsemi	TIP35C	UN411L	Panasonic	KRA101M
RN2207	Toshiba	KRA107M	RN2903FE	Toshiba	KRA753E	TIP35C	STM	TIP35C	UN421E	Panasonic	KRA109M
RN2208	Toshiba	KRA108M	RN2904	Toshiba	KRA754U	TIP36C	Mospec	TIP36C	UN421F	Panasonic	KRC119M
RN2209	Toshiba	KRA109M	RN2904FE	Toshiba	KRA754E	TIP36C	Onsemi	TIP36C	UN421H	Panasonic	KRC118M
RN2210	Toshiba	KRA110M	RN2905	Toshiba	KRA755U	TIP36C	STM	TIP36C	UN421L	Panasonic	KRC101M
RN2211	Toshiba	KRA111M	RN2905FE	Toshiba	KRA755E	TIP41C	Mospec	TIP41CF	UN421M	Panasonic	KRC105M
RN2221	Toshiba	KRA221M	RN2906	Toshiba	KRA756U	TIP41C	Onsemi	TIP41CF	UN421N	Panasonic	KRC106M
RN2222	Toshiba	KRA222M	RN2906FE	Toshiba	KRA756E	TIP41C	STM	TIP41CF	UN511E	Panasonic	KRA309
RN2223	Toshiba	KRA223M	RN2907	Toshiba	KRA757U	TIP42C	Mospec	TIP42CF	UN511F	Panasonic	KRA319
RN2224	Toshiba	KRA224M	RN2907FE	Toshiba	KRA757E	TIP42C	Onsemi	TIP42CF	UN511H	Panasonic	KRA318
RN2226	Toshiba	KRA225M	RN2908	Toshiba	KRA758U	TIP42C	STM	TIP42CF	UN511L	Panasonic	KRA301
RN2227	Toshiba	KRA226M	RN2908FE	Toshiba	KRA758E	TIP122	Onsemi	KTD1413	UN511M	Panasonic	KRA305
RN2301	Toshiba	KRA301	RN2909	Toshiba	KRA759U	TIP127	Onsemi	KTB1423	UN511N	Panasonic	KRA306
RN2302	Toshiba	KRA302	RN2909FE	Toshiba	KRA759E	UMA1N	Rohm	KRA553U	UN511T	Panasonic	KRA308
RN2303	Toshiba	KRA303	RN2910	Toshiba	KRA760U	UMA2N	Rohm	KRA554U	UN521E	Panasonic	KRC409
RN2304	Toshiba	KRA304	RN2910FE	Toshiba	KRA760E	UMA3N	Rohm	KRA560U	UN521F	Panasonic	KRC419
RN2305	Toshiba	KRA305	RN2911	Toshiba	KRA761U	UMA4N	Rohm	KRA561U	UN521H	Panasonic	KRC418
RN2306	Toshiba	KRA306	RN2911FE	Toshiba	KRA761E	UMA5N	Rohm	KRA555U	UN521L	Panasonic	KRC401
RN2307	Toshiba	KRA307	RN2961	Toshiba	KRA721U	UMA6N	Rohm	KRA564U	UN521M	Panasonic	KRC405
RN2308	Toshiba	KRA308	RN2961FE	Toshiba	KRA721E	UMA7N	Rohm	KRA569U	UN521N	Panasonic	KRC406
RN2309	Toshiba	KRA309	RN2962	Toshiba	KRA722U	UMA8N	Rohm	KRA557U	UN521T	Panasonic	KRC408
RN2310	Toshiba	KRA310	RN2962FE	Toshiba	KRA722E	UMA9N	Rohm	KRA552U	UN2110	Panasonic	KRA114S
RN2311	Toshiba	KRA311	RN2963	Toshiba	KRA723U	UMA10N	Rohm	KRA566U	UN2111	Panasonic	KRA102S
RN2312	Toshiba	KRA313	RN2963FE	Toshiba	KRA723E	UMA11N	Rohm	KRA556U	UN2112	Panasonic	KRA103S
RN2313	Toshiba	KRA314	RN2964	Toshiba	KRA724U	UMB1N	Rohm	KRA753U	UN2113	Panasonic	KRA104S
RN2314	Toshiba	KRA316	RN2964FE	Toshiba	KRA724E	UMB2N	Rohm	KRA754U	UN2114	Panasonic	KRA107S
RN2315	Toshiba	KRA318	RN2965	Toshiba	KRA725U	UMB3N	Rohm	KRA760U	UN2115	Panasonic	KRA111S
RN2316	Toshiba	KRA319	RN2965FE	Toshiba	KRA725E	UMB4N	Rohm	KRA761U	UN2116	Panasonic	KRA110S
RN2317	Toshiba	KRA320	RN2966	Toshiba	KRA726U	UMB6N	Rohm	KRA724U	UN2117	Panasonic	KRA113S
RN2318	Toshiba	KRA321	RN2966FE	Toshiba	KRA726E	UMB8N	Rohm	KRA731U	UN2121	Panasonic	KRA222S
RN2401	Toshiba	KRA101S	RN2967	Toshiba	KRA727U	UMB9N	Rohm	KRA757U	UN2122	Panasonic	KRA223S
RN2402	Toshiba	KRA102S	RN2967FE	Toshiba	KRA727E	UMB10N	Rohm	KRA755U	UN2123	Panasonic	KRA224S
RN2403	Toshiba	KRA103S	RN2968	Toshiba	KRA728U	UMB11N	Rohm	KRA752U	UN2124	Panasonic	KRA226S
RN2404	Toshiba	KRA104S	RN2968FE	Toshiba	KRA728E	UMC1N	Rohm	KRX103U	UN2210	Panasonic	KRC114S
RN2405	Toshiba	KRA105S	RN2969	Toshiba	KRA729U	UMC3N	Rohm	KRX101U	UN2211	Panasonic	KRC102S
RN2406	Toshiba	KRA106S	RN2969FE	Toshiba	KRA729E	UMC4N	Rohm	KRX102U	UN2212	Panasonic	KRC103S
RN2407	Toshiba	KRA107S	RN2970	Toshiba	KRA730U	UMG1N	Rohm	KRC653U	UN2213	Panasonic	KRC104S
RN2408	Toshiba	KRA108S	RN2970FE	Toshiba	KRA730E	UMG2N	Rohm	KRC654U	UN2214	Panasonic	KRC107S
RN2409	Toshiba	KRA109S	RN2971	Toshiba	KRA731U	UMG3N	Rohm	KRC660U	UN2215	Panasonic	KRC111S
RN2410	Toshiba	KRA110S	RN2971FE	Toshiba	KRA731E	UMG4N	Rohm	KRC661U	UN2216	Panasonic	KRC110S
RN2411	Toshiba	KRA111S	RN47A2JE	Toshiba	KRX103E	UMG5N	Rohm	KRC657U	UN2217	Panasonic	KRC113S
RN2412	Toshiba	KRA113S	RN47A3JE	Toshiba	KRX101E	UMG6N	Rohm	KRC664U	UN2221	Panasonic	KRC242S
RN2413	Toshiba	KRA114S	RN47A4JE	Toshiba	KRX102E	UMG8N	Rohm	KRC669U	UN2222	Panasonic	KRC243S
RN2414	Toshiba	KRA116S	RN47A5JE	Toshiba	KRX104E	UMG9N	Rohm	KRC652U	UN2223	Panasonic	KRC244S
RN2415	Toshiba	KRA118S	RN4982FE	Toshiba	KRX201E	UMG10N	Rohm	KRC666U	UN2224	Panasonic	KRC246S
RN2416	Toshiba	KRA119S	RN4983FE	Toshiba	KRX202E	UMG11N	Rohm	KRC655U	UN4110	Panasonic	KRA114M
RN2417	Toshiba	KRA120S	RN4984FE	Toshiba	KRX203E	UMH1N	Rohm	KRC853U	UN4111	Panasonic	KRA102M
RN2418	Toshiba	KRA121S	RN4985FE	Toshiba	KRX204E	UMH2N	Rohm	KRC854U	UN4112	Panasonic	KRA103M
RN2421	Toshiba	KRA221S	RT1N140C	Renesas	KRC111S	UMH3N	Rohm	KRC860U	UN4113	Panasonic	KRA104M
RN2422	Toshiba	KRA222S	RT1N140S	Renesas	KRC111M	UMH4N	Rohm	KRC861U	UN4114	Panasonic	KRA107M
RN2423	Toshiba	KRA223S	RT1N141C	Renesas	KRC102S	UMH5N	Rohm	KRC823U	UN4115	Panasonic	KRA111M
RN2424	Toshiba	KRA224S	RT1N141S	Renesas	KRC102M	UMH6N	Rohm	KRC824U	UN4116	Panasonic	KRA110M
RN2426	Toshiba	KRA225S	RT1N144C	Renesas	KRC107S	UMH7N	Rohm	KRC830U	UN4117	Panasonic	KRA113M
RN2427	Toshiba	KRA226S	RT1N144S	Renesas	KRC107M	UMH8N	Rohm	KRC831U	UN4117	Panasonic	KRA113M
RN2701	Toshiba	KRA551U	RT1N241C	Renesas	KRC103S	UMH9N	Rohm	KRC857U	UN4121	Panasonic	KRA222M
RN2701JE	Toshiba	KRA551E	RT1N241S	Renesas	KRC103M	UMH10N	Rohm	KRC855U	UN4122	Panasonic	KRA223M
RN2702	Toshiba	KRA552U	RT1N430C	Renesas	KRC110S	UMH11N	Rohm	KRC852U	UN4123	Panasonic	KRA224M
RN2702JE	Toshiba	KRA552E	RT1N430S	Renesas	KRC110M	UMH14N	Rohm	KRC834U	UN4124	Panasonic	KRA226M
RN2703	Toshiba	KRA553U	RT1N441C	Renesas	KRC104S	UMT1N	Rohm	KTA701U	UN4210	Panasonic	KRC114M
RN2703JE	Toshiba	KRA553E	RT1N441S	Renesas	KRC104M	UMT2N	Rohm	KTA711U	UN4211	Panasonic	KRC102M
RN2704	Toshiba	KRA554U	RT1P140C	Renesas	KRA111S	UMT2222A	Rohm	KTN2222A	UN4212	Panasonic	KRC103M
RN2704JE	Toshiba	KRA554E	RT1P140S	Renesas	KRA111M	UMT2907A	Rohm	KTN2907A	UN4213	Panasonic	KRC104M
RN2705	Toshiba	KRA555U	RT1P141C	Renesas	KRA102S	UMW1N	Rohm	KTC601U	UN4214	Panasonic	KRC107M
RN2705JE	Toshiba	KRA555E	RT1P141S	Renesas	KRA102M	UMX1N	Rohm	KTC801U	UN4215	Panasonic	KRC111M
RN2706	Toshiba	KRA556U	RT1P144C	Renesas	KRA107S	UMX2N	Rohm	KTC811U	UN4216	Panasonic	KRC110M
RN2706JE	Toshiba	KRA556E	RT1P144S	Renesas	KRA107M	UMX3N	Rohm	KTC813U	UN4217	Panasonic	KRC113M
RN2707	Toshiba	KRA557U	RT1P241C	Renesas	KRA103S	UMZ1N	Rohm	KTX101U	UN4221	Panasonic	KRA242M
RN2707JE	Toshiba	KRA557E	RT1P241S	Renesas	KRA103M	UN211E	Panasonic	KRA109S	UN4222	Panasonic	KRA243M
RN2708	Toshiba	KRA558U	RT1P430C	Renesas	KRA110S	UN211F	Panasonic	KRA119S	UN4223	Panasonic	KRA244M
RN2708JE	Toshiba	KRA558E	RT1P430S	Renesas	KRA110M	UN211H	Panasonic	KRA118S	UN4224	Panasonic	KRA246M
RN2709	Toshiba	KRA559U	RT1P441S	Renesas	KRA104M	UN211L	Panasonic	KRA101S	UN5110	Panasonic	KRA314
RN2709JE	Toshiba	KRA559E	S2Z79	Toshiba	KTA1536T	UN211M	Panasonic	KRA105S	UN5111	Panasonic	KRA302
RN2710	Toshiba	KRA560U	S3C92	Toshiba	KTC3532T	UN211N	Panasonic	KRA106S	UN5112	Panasonic	KRA303
RN2710JE	Toshiba	KRA560E	TIP31C	Mospec	TIP31CF	UN221E	Panasonic	KRC109S	UN5113	Panasonic	KRA304


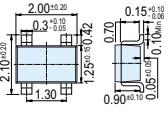

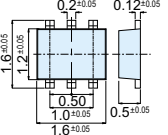

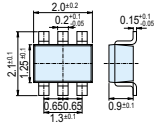
Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
UN5114	Panasonic	KRA307									
UN5115	Panasonic	KRA311									
UN5116	Panasonic	KRA310									
UN5117	Panasonic	KRA313									
UN5210	Panasonic	KRC414									
UN5211	Panasonic	KRC402									
UN5212	Panasonic	KRC403									
UN5213	Panasonic	KRC404									
UN5214	Panasonic	KRC407									
UN5215	Panasonic	KRC411									
UN5216	Panasonic	KRC410									
UN5217	Panasonic	KRC413									
XP05501	Panasonic	KTC812U									
XP06111	Panasonic	KRA722U									
XP06112	Panasonic	KRA723U									
XP06113	Panasonic	KRA724U									
XP06114	Panasonic	KRA727U									
XP06115	Panasonic	KRA731U									
XP06116	Panasonic	KRA730U									
XP06210	Panasonic	KRC834U									
XP06211	Panasonic	KRC822U									
XP06212	Panasonic	KRC823U									
XP06213	Panasonic	KRC824U									
XP06214	Panasonic	KRC827U									
XP06215	Panasonic	KRC831U									
XP06216	Panasonic	KRC830U									
XP06401	Panasonic	KTA711U									
XP06501	Panasonic	KTC811U									

Small Signal Switching Diode

Type No.	Mark	Max. Ratings							VF1 (V)		VF2 (V)		VF3 (V)			IR (μA)		CT (pF)			trr (ns)		Package	Outline (Unit : mm)
		VRM (V)	VR (V)	IFM (mA)	IO (mA)	IFSM (A)	PD (mW)	Typ.	IF (mA)	Typ.	IF (mA)	Typ.	Max.	IF (mA)	Max.	VR (V)	Max.	VR (V)	f (MHz)	Max.	IF (mA)			
KDS160F		4	85	80	300	100	2	100	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10	TFSC	
KDS160V		UF	85	80	300	100	2	100	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10	VSC	
KDS160E		UF	85	80	300	100	2	150	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10	ESC	
KDS135		JA	300	250	300	100	2	200	-	-	-	-	1	1.2	100	0.2	250	3	0	1	100	30	USC	
KDS160		UF	85	80	300	100	2	200	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS4148U		UH	100	75	450	150	2	-	0.6	1	0.72	10	0.9	1.2	100	0.5	75	2	0	1	4	10		
KDS120V		A3	85	80	300	100	2	100	0.61	1	0.74	10	0.92	1.2	100	0.5	80	4	0	1	4	10	VSM	
KDS121V		B3	85	80	300	100	2	100	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS123V		OS	80	80	300	100	2	100	-	-	-	-	-	1.2	100	0.1	80	3.5	6	1	-	-		
KDS221V		DS	20	20	200	100	0.3	100	-	-	-	-	-	1.0	10	0.1	15	-	-	-	-	-		
KDS120E		A3	85	80	300	100	2	100	0.61	1	0.74	10	0.92	1.2	100	0.5	80	4	0	1	4	10	ESM	
KDS121E		B3	85	80	300	100	2	100	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS123E		US	80	80	300	100	2	100	-	-	-	-	-	1.2	100	0.1	80	3.5	6	1	-	-		
KDS221E		DS	20	20	200	100	0.3	100	-	-	-	-	-	1.0	10	0.1	15	-	-	-	-	-		
KDS120		A3	85	80	300	100	2	100	0.61	1	0.74	10	0.92	1.2	100	0.5	80	4	0	1	4	10	USM	
KDS121		B3	85	80	300	100	2	100	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS122		US	80	80	300	100	2	100	-	-	-	-	-	1.2	100	0.1	80	3.5	6	1	-	-		
KDS123U		DS	20	20	200	100	0.3	100	-	-	-	-	-	1.0	10	0.1	15	-	-	-	-	-		
BAS23W		JE	300	250	200	-	2	200	-	-	-	-	-	1.25	150	0.2	250	3	0	1	100	30		
KDS123S		US	80	80	300	100	2	150	-	-	-	-	-	1.2	100	0.1	80	3.5	6	1	-	-	SOT-23	
KDS135S		JA	300	250	300	100	2	150	-	-	-	-	1	1.2	100	0.2	250	3	0	1	100	30		
KDS181		A3	85	80	300	100	2	150	0.61	1	0.74	10	0.92	1.2	100	0.5	80	4	0	1	4	10		
KDS184		B3	85	80	300	100	2	150	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS187		D3	85	80	300	100	2	150	0.61	1	0.74	10	0.92	1.2	100	0.5	80	4	0	1	4	10		
KDS193		F3	85	80	300	100	2	150	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS196		G3	85	80	300	100	2	150	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
KDS226		C3	85	80	300	100	2	150	0.6	1	0.72	10	0.9	1.2	100	0.5	80	3	0	1	4	10		
BAV23C		U4	250	200	625	225	9	250	1.0	100	1.25	200	-	-	-	0.1	200	2	0	1	50	10		
BAV23S		JK	250	200	625	225	9	250	1.0	100	1.25	200	-	-	-	0.1	200	2	0	1	50	10		
BAV23A		JD	250	200	625	225	9	250	1.0	100	1.25	200	-	-	-	0.1	200	2	0	1	50	10		
BAV23		JC	250	200	625	225	9	250	1.0	100	1.25	200	-	-	-	0.1	200	2	0	1	50	10		
BAV99		H8	85	80	-	250	2	225	0.6	1	0.72	10	-	1.25	150	0.5	80	3	0	1	4	10		
BAV70		H7	85	80	250	-	2	300	0.6	1	0.7	10	-	1.25	150	0.5	80	3	0	1	4	10		
BAW56		H6	85	80	250	-	2	300	0.6	1	0.7	10	-	1.25	150	0.5	80	4	0	1	4	10		

Diode

Small Signal Switching Diode

Type No.	Mark	Max. Ratings						VF1 (V)		VF2 (V)		VF3 (V)			IR (μ A)		CT (pF)			trr (ns)		Package	Outline (Unit : mm)	
		VRM (V)	VR (V)	IFM (mA)	IO (mA)	IFSM (A)	PD (mW)	Typ.	IF (mA)	Typ.	IF (mA)	Typ.	Max.	IF (mA)	Max.	VR (V)	Max.	VR (V)	f (MHz)	Max.	IF (mA)			
KDS165U		HA	85	80	300	100	2	200	1	0.6	0.7	10	0.9	1.2	100	0.5	80	0.9	0	1	4	10	USQ	
KDS127E		US	80	80	300	100	2	200	-	-	-	-	-	1.2	100	0.1	80	3.5	6	1	-	-	TES6	
KDS127U		S7	80	80	300	100	2	200	-	-	-	-	-	1.2	100	0.1	80	3.5	6	1	-	-	US6	

Note) : Typ.


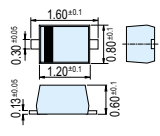

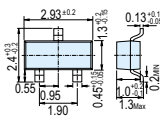
Small Signal Band Switch Diode

Type No.	Mark	Max. Ratings		VF (V)		IR (μ A)		VR (V)		CT (pF)				rS ()				Package	Outline (Unit : mm)	
		VR (V)	IF (mA)	Max	IF (mA)	Max.	VR (V)	Min.	IR (μ A)	Typ.	Max.	VR (V)	f (MHz)	Typ.	Max.	IF (mA)	f (MHz)			
KDS114E		UD	35	100	0.85	2	0.1	15	35	1	0.7	1.2	6	1	0.5	0.9	2	100	ESC	
KDS114		UD	35	100	0.85	2	0.1	15	35	1	0.7	1.2	6	1	0.5	0.9	2	100	USC	
KDS112E		BF	30	50	0.85	2	0.1	15	30	1	0.8	1.2	6	1	0.6	0.9	2	100	ESM	
KDS112		BF	30	50	0.85	2	0.1	15	30	1	0.8	1.2	6	1	0.6	0.9	2	100	USM	
KDS115		R3	30	50	0.85	2	0.1	15	30	1	0.8	1.2	6	1	0.6	0.9	100	-		

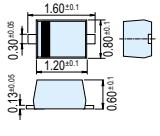

PIN Diode

Type No.	Mark	Max. Ratings		VF (V)		VR (V)		CT (pF)			rs ()			Package	Outline (Unit : mm)
		VR (V)	IF (mA)	Max.	IF (mA)	Min.	IR (μA)	Max.	VR (V)	f (MHz)	Typ.	IF (mA)	f (MHz)		
KDV143EL		-	30	100	Max. 0.9	2	-	-	Max. 0.43	1	1	Max. 1.8	2	100	ELP-2
KDV144EL		-	30	100	Max. 1.0	10	-	-	Max. 0.3	1	1	Max. 1.3	10	100	
KDV146EL		-	30	100	Max. 1.1	10	-	-	Max. 0.3	1	1	Max. 1.0	10	100	
KDV143F		Y	30	100	Max. 0.9	2	-	-	Max. 0.43	1	1	Max. 1.8	2	100	TFSC
KDV144F		A1	30	100	Max. 1.0	10	-	-	Max. 0.3	1	1	Max. 1.3	10	100	
KDV142V		PA	30	100	Max. 1.0	10	-	-	Max. 0.35	1	1	Max. 1.3	10	100	VSC
KDV175E		UE	50	50	0.95	50	50	10	0.25	50	1	7	10	100	ESC
KDV142E		EF	30	100	Max. 1.0	10	-	-	Max. 0.35	1	1	Max. 1.3	10	100	
KDV175		UE	50	50	0.95	50	50	10	0.25	50	1	7	10	100	USC
KDV173		M3	50	50	0.95	50	50	10	0.25	50	1	7	10	100	SOT-23
KDV804S		-	50	50	Max. 1.03	150	50	15	-	-	-	Max. 1.3	10	100	
KDV176U		P1	50	50	0.95	50	50	10	0.25	50	1	7	10	100	USQ
KDP621UL		P1	30	100	1	10	-	-	0.35	1	1	Max. 1.3	10	100	ULP-12
KDP626UL					0.9	2	-	-	0.43			Max. 1.8	2	100	
		P6	30	100	1	10	-	-	0.35	1	1	Max. 1.3	10	100	

FM Tuning (Varactor Diode)


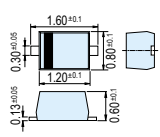

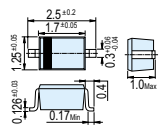

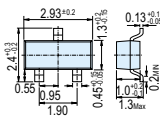
Type No.	Mark	Max. Ratings VR (V)	VR (V)		CA (pF)				CB (pF)				CA / CB		rS ()				Package	Outline (Unit : mm : Max.)	
			Min.	IR (μA)	Min.	Max.	VR (V)	f (MHz)	Min.	Max.	VR (V)	f (MHz)	Min.	Max.	Typ.	Max.	f (MHz)	C (pF)			
KDV202E		FA	6	-	-	28.2	33.5	0.1	1	7.2	11.2	2.3	1	2.5	-	0.35	0.6	100	30	ESC	
KDV804KS		T3	15	15	10	42	47.5	2	1	24	28.8	8	1	1.74	1.85	0.3	0.4	100	38	SOT-23	










TV Tuning (Varactor Diode)

Type No.	Mark	Max. Ratings VR (V)	CA (pF)				CB (pF)				CA / CB		rS ()				Package	Outline (Unit : mm)
			Min.	Max.	VR (V)	f (MHz)	Min.	Max.	VR (V)	f (MHz)	Min.	Max.	Max.	VR (V)	f (MHz)			
KDV212E		VY	15	21	17.5	0.5	1	2.8	2.5	7.5	1	6.3	-	-	0.8	470	ESC	
KDV214E		UZ	32	14.15	15.75	2	1	1.96	2.25	25	1	6.3	-	0.57	5	470		
KDV215E		TA	30	14.16	16.25	2	1	2.11	2.43	25	1	5.9	7.15	0.55	5	470		
KDV216E		V3	32	19.0	21.0	1	1	1.8	2.2	28	1	9.2	-	0.7	5	470		
KDV269E		UR	34	29	34	2	1	2.5	2.9	25	1	11	-	0.75	5	470		
KDV270E		V4	32	39.0	43.0	1	1	2.3	2.6	28	1	15.7	-	0.85	5	470		
KDV301E		VQ	32	39.5	47.4	2	1	2.6	3.03	25	1	14.5	-	1.1	5	470		
KDV302E		V5	32	56.0	62.0	1	1	2.45	2.8	28	1	21.6	-	1.15	5	470		

Diode

VCO for UHF Band (Varactor Diode)

Type No.	Mark	Max. Ratings VR (V)	VR (V)		CA (pF)				CB (pF)				CA / CB		rS ()			Package	Outline (Unit : mm)	
			Min.	IR (μA)	Min.	Max.	VR (V)	f (MHz)	Min.	Max.	VR (V)	f (MHz)	Min.	Max.	Max.	VR (V)	f (MHz)			
KDV154E		UA	20	20	1	13.9	16.1	2	1	4.5	6	10	1	2.5	-	0.6	5	470	ESC	
KDV273E		U5	10	10	1	15	17	1	1	7.3	8.7	4	1	1.8	-	0.5	1	470		
KDV350E		UK	15	15	1	15	17.5	1	1	5.3	6.3	4	1	2.8	-	0.5	1	470		
KDV154		UA	20	20	1	13.9	16.1	2	1	4.5	6	10	1	2.5	-	0.6	5	470	USC	
KDV153		H3	20	20	1	14.16	16.25	2	1	4.5	6	10	1	2.5	-	0.6	5	470	SOT-23	
KDV251S		Q3	12	12	10	23	38	1.6	1	11	19	5	1	1.7	2.2	0.6	1	50		

ZENER VOLTAGE	ELP-2	TFSC	VSC	ESC	USC	SOT23	USF	SMF	SMA
									
	0.6*0.3mm	0.8*0.6mm	1.0*0.6mm	1.2*0.8mm	1.7*1.25mm	2.93*1.3mm	1.9*1.3mm	2.6*1.6mm	4.5*2.6mm
	$P_D=0.1W$	$P_D=0.1W$	$P_D=0.1W$	$P_D=0.1W$	$P_D=0.15W$	$P_D=0.2W$	$P_D=0.5W$	$P_D=1W$	$P_D=1W$
2.0V				KDZ2.0EV	KDZ2.0V	Z02W2.0V			
2.2V				KDZ2.2EV	KDZ2.2V	Z02W2.2V			
2.4V				KDZ2.4EV	KDZ2.4V	Z02W2.4V			
2.7V				KDZ2.7EV	KDZ2.7V	Z02W2.7V			
3.0V				KDZ3.0EV	KDZ3.0V	Z02W3.0V			
3.3V				KDZ3.3EV	KDZ3.3V	Z02W3.3V			
3.6V				KDZ3.6EV	KDZ3.6V	Z02W3.6V			
3.9V				KDZ3.9EV	KDZ3.9V	Z02W3.9V			
4.3V		KDZ4.3FV	KDZ4.3VV	KDZ4.3EV	KDZ4.3V	Z02W4.3V	USFZ4.3V	SMFZ4.3V	SMAZ4.3V
4.7V		KDZ4.7FV	KDZ4.7VV	KDZ4.7EV	KDZ4.7V	Z02W4.7V	USFZ4.7V	SMFZ4.7V	SMAZ4.7V
5.1V	KDZ5.1EL	KDZ5.1FV	KDZ5.1VV	KDZ5.1EV	KDZ5.1V	Z02W5.1V	USFZ5.1V	SMFZ5.1V	SMAZ5.1V
5.6V	KDZ5.6EL	KDZ5.6FV	KDZ5.6VV	KDZ5.6EV	KDZ5.6V	Z02W5.6V	USFZ5.6V	SMFZ5.6V	SMAZ5.6V
6.2V		KDZ6.2FV	KDZ6.2VV	KDZ6.2EV	KDZ6.2V	Z02W6.2V	USFZ6.2V	SMFZ6.2V	SMAZ6.2V
6.8V		KDZ6.8FV	KDZ6.8VV	KDZ6.8EV	KDZ6.8V	Z02W6.8V	USFZ6.8V	SMFZ6.8V	SMAZ6.8V
7.5V	KDZ7.5EL	KDZ7.5FV	KDZ7.5VV	KDZ7.5EV	KDZ7.5V	Z02W7.5V	USFZ7.5V	SMFZ7.5V	SMAZ7.5V
8.2V		KDZ8.2FV	KDZ8.2VV	KDZ8.2EV	KDZ8.2V	Z02W8.2V	USFZ8.2V	SMFZ8.2V	SMAZ8.2V
9.1V		KDZ9.1FV	KDZ9.1VV	KDZ9.1EV	KDZ9.1V	Z02W9.1V	USFZ9.1V	SMFZ9.1V	SMAZ9.1V
10V		KDZ10FV	KDZ10VV	KDZ10EV	KDZ10V	Z02W10V	USFZ10V	SMFZ10V	SMAZ10V
11V		KDZ11FV	KDZ11VV	KDZ11EV	KDZ11V	Z02W11V	USFZ11V	SMFZ11V	SMAZ11V
12V		KDZ12FV	KDZ12VV	KDZ12EV	KDZ12V	Z02W12V	USFZ12V	SMFZ12V	SMAZ12V
13V		KDZ13FV	KDZ13VV	KDZ13EV	KDZ13V	Z02W13V	USFZ13V	SMFZ13V	SMAZ13V
15V		KDZ15FV	KDZ15VV	KDZ15EV	KDZ15V	Z02W15V	USFZ15V	SMFZ15V	SMAZ15V
16V		KDZ16FV	KDZ16VV	KDZ16EV	KDZ16V	Z02W16V	USFZ16V	SMFZ16V	SMAZ16V
18V		KDZ18FV	KDZ18VV	KDZ18EV	KDZ18V	Z02W18V	USFZ18V	SMFZ18V	SMAZ18V
20V		KDZ20FV	KDZ20VV	KDZ20EV	KDZ20V	Z02W20V	USFZ20V	SMFZ20V	SMAZ20V
22V		KDZ22FV	KDZ22VV	KDZ22EV	KDZ22V	Z02W22V	USFZ22V	SMFZ22V	SMAZ22V
24V		KDZ24FV	KDZ24VV	KDZ24EV	KDZ24V	Z02W24V	USFZ24V	SMFZ24V	SMAZ24V
27V		KDZ27FV	KDZ27VV	KDZ27EV	KDZ27V	Z02W27V	USFZ27V	SMFZ27V	SMAZ27V
30V		KDZ30FV	KDZ30VV	KDZ30EV	KDZ30V	Z02W30V	USFZ30V	SMFZ30V	SMAZ30V
33V		KDZ33FV	KDZ33VV	KDZ33EV	KDZ33V	Z02W33V	USFZ33V	SMFZ33V	SMAZ33V
36V		KDZ36FV	KDZ36VV	KDZ36EV	KDZ36V	Z02W36V	USFZ36V	SMFZ36V	SMAZ36V
100V					KDZ100VW	Z02W100V			
110V					KDZ110VW				

100mW Zener Diode

Type No.	Grade	Mark	Pd (mW)	Vz (V)			Zz (Ω)		Zzk (Ω)		Ir (μA)		Package	Package Outline (Unit : mm)
				Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Vr (V)		
KDZ4.3FV	-	4F	100	4.00	4.50	5.0	130	5	1000	0.5	5	1	TFSC	
	Y	4P		4.17	4.43		130	5	1000		5	1		
KDZ4.7FV	-	5F		4.40	4.90		130	5	1000		5	1		
	Y	5P		4.55	4.75		130	5	1000		5	1		
KDZ5.1FV	-	6F		4.80	5.40		70	5	1000		1	1.5		
	Y	6P		4.98	5.20		70	5	1000		1	1.5		
KDZ5.6FV	-	8		5.30	6.00		40	5	900		1	2.5		
	Y	8P		5.49	5.73		40	5	900		1	2.5		
KDZ6.2FV	-	9F		5.80	6.60		30	5	500		1	3		
	Y	9P		6.06	6.33		30	5	500		1	3		
KDZ6.8FV	-	BF		6.40	7.20		25	5	150		0.5	5		
	Y	BP		6.65	6.93		25	5	150		0.5	5		
KDZ7.5FV	-	PF		7.00	7.90		23	5	120		0.5	6		
	Y	PP		7.28	7.60		23	5	120		0.5	6		
KDZ8.2FV	-	DF		7.70	8.70		20	5	120		0.5	6.5		
	Y	DP		8.02	8.3		20	5	120		0.5	6.5		
KDZ9.1FV	-	EF		8.50	9.60		18	5	120		0.5	7		
	Y	EP		8.85	9.23		18	5	120		0.5	7		
KDZ10FV	-	UF		9.40	10.60		15	5	120		0.5	8		
	Y	UP		9.77	10.21		15	5	120		0.5	8		
KDZ11FV	-	GF	10.40	11.60	15	5	120	0.5	8.5					
	Y	GP	10.76	11.22	15	5	120	0.5	8.5					
KDZ12FV	-	HF	11.40	12.60	15	5	110	0.5	9					
	Y	HP	11.74	12.24	15	5	110	0.5	9					
KDZ13FV	-	JF	12.40	14.10	15	5	110	0.5	10					
	Y	JP	12.91	13.49	15	5	110	0.5	10					
KDZ15FV	-	KF	13.80	15.60	15	5	110	0.5	11					
	Y	KP	14.34	14.98	15	5	110	0.5	11					
KDZ16FV	-	9	15.30	17.10	18	5	150	0.5	12					
	Y	91	15.85	16.51	18	5	150	0.5	12					
KDZ18FV	-	LF	16.80	19.10	20	5	150	0.5	13					
	Y	LP	17.56	18.35	20	5	150	0.5	13					
KDZ20FV	-	MF	18.80	21.20	25	5	200	0.5	15					
	Y	MP	19.52	20.39	25	5	200	0.5	15					
KDZ22FV	-	NF	20.80	23.30	30	5	200	0.5	17					
	Y	NP	21.54	22.47	30	5	200	0.5	17					
KDZ24FV	-	QF	22.80	25.60	40	5	200	0.5	19					
	Y	QP	23.72	24.78	40	5	200	0.5	19					
KDZ27FV	-	RF	25.10	28.90	150	2.0	150	0.1	21					
	Y	RP	26.19	27.53	150	2.0	150	0.1	21					
KDZ30FV	-	SF	28.00	32.00	200	2.0	200	0.1	23					
	Y	SP	29.19	30.69	200	2.0	200	0.1	23					
KDZ33FV	-	AF	31.00	35.00	250	2.0	250	0.1	25					
	Y	AP	32.15	33.79	250	2.0	250	0.1	25					
KDZ36FV	-	TF	34.00	38.00	300	2.0	300	0.1	27					
	Y	TP	35.07	36.87	300	2.0	300	0.1	27					

Note) : Mounted on a glass epoxy circuit board of 20 × 20mm, pad dimension of 4 × 4mm.

100mW Zener Diode

Type No.	Grade	Mark	Pd (mW)	Vz (V)			Zz (Ω)		Zzk (Ω)		Ir (μA)		Package	Package Outline (Unit : mm)
				Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Vr (V)		
KDZ4.3VV	-	ZJ	100	4.00	4.50	5.0	130	5	1000	0.5	5	1	VSC	
	Y	JY		4.17	4.43		130	5	1000		5	1		
KDZ4.7VV	-	ZK		4.40	4.90		130	5	1000		5	1		
	Y	KY		4.55	4.75		130	5	1000		5	1		
KDZ5.1VV	-	ZL		4.80	5.40		70	5	1000		1	1.5		
	Y	LY		4.98	5.20		70	5	1000		1	1.5		
KDZ5.6VV	-	ZM		5.30	6.00		40	5	900		1	2.5		
	Y	MY		5.49	5.73		40	5	900		1	2.5		
KDZ6.2VV	-	ZN		5.80	6.60		30	5	500		1	3		
	Y	NY		6.06	6.33		30	5	500		1	3		
KDZ6.8VV	-	ZP		6.40	7.20		25	5	150		0.5	5		
	Y	PY		6.65	6.93		25	5	150		0.5	5		
KDZ7.5VV	-	ZQ		7.00	7.90		23	5	120		0.5	6		
	Y	QY		7.28	7.60		23	5	120		0.5	6		
KDZ8.2VV	-	ZR		7.70	8.70		20	5	120		0.5	6.5		
	Y	RY		8.02	8.3		20	5	120		0.5	6.5		
KDZ9.1VV	-	ZS		8.50	9.60		18	5	120		0.5	7		
	Y	SY		8.85	9.23		18	5	120		0.5	7		
KDZ10VV	-	10		9.40	10.60		15	5	120		0.5	8		
	Y	0Y		9.77	10.21		15	5	120		0.5	8		
KDZ11VV	-	11		10.40	11.60		15	5	120		0.5	8.5		
	Y	1Y		10.76	11.22		15	5	120		0.5	8.5		
KDZ12VV	-	12		11.40	12.60		15	5	110		0.5	9		
	Y	2Y		11.74	12.24		15	5	110		0.5	9		
KDZ13VV	-	13		12.40	14.10		15	5	110		0.5	10		
	Y	3Y		12.91	13.49		15	5	110		0.5	10		
KDZ15VV	-	15		13.80	15.60		15	5	110		0.5	11		
	Y	5Y		14.34	14.98		15	5	110		0.5	11		
KDZ16VV	-	16	15.30	17.10	18	5	150	0.5	12					
	Y	6Y	15.85	16.51	18	5	150	0.5	12					
KDZ18VV	-	18	16.80	19.10	20	5	150	0.5	13					
	Y	8Y	17.56	18.35	20	5	150	0.5	13					
KDZ20VV	-	20	18.80	21.20	25	5	200	0.5	15					
	Y	4Y	19.52	20.39	25	5	200	0.5	15					
KDZ22VV	-	22	20.80	23.30	30	5	200	0.5	17					
	Y	7Y	21.54	22.47	30	5	200	0.5	17					
KDZ24VV	-	24	22.80	25.60	40	5	200	0.5	19					
	Y	9Y	23.72	24.78	40	5	200	0.5	19					
KDZ27VV	-	27	25.10	28.90	150	2.0	150	0.1	21					
	Y	TY	26.19	27.53	150	2.0	150	0.1	21					
KDZ30VV	-	30	28.00	32.00	200	2.0	200	0.1	23					
	Y	UY	29.19	30.69	200	2.0	200	0.1	23					
KDZ33VV	-	33	31.00	35.00	250	2.0	250	0.1	25					
	Y	VY	32.15	33.79	250	2.0	250	0.1	25					
KDZ36VV	-	36	34.00	38.00	300	2.0	300	0.1	27					
	Y	WY	35.07	36.87	300	2.0	300	0.1	27					

Note) : Mounted on a glass epoxy circuit board of 20 × 20mm, pad dimension of 4 × 4mm.

Diode

150mW Zener Diode

Type No.	Grade	Mark	Max. Ratings	Vz (V)			Zz ()		ZZK ()		IR (μA)		Package	Outline (Unit : mm)
				PD(mW)	Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.		
KDZ2.0EV	-	2A	150	1.85	2.15	5	100	5	1000	0.5	120	1.0	ESC	
	Y	2A .		1.95	2.15									
KDZ2.2EV	-	2B		2.05	2.38	5	100	5	1000	0.5	120	1.0		
	Y	2B .		2.16	2.38									
KDZ2.4EV	-	2C		2.28	2.60	5	100	5	1000	0.5	120	1.0		
	Y	2C .		2.40	2.60									
KDZ2.7EV	-	2D		2.50	2.90	5	110	5	1000	0.5	120	1.0		
	Y	2D .		2.65	2.90									
KDZ3.0EV	-	30		2.80	3.20	5	120	5	1000	0.5	50	1.0		
	Y	30 .		2.95	3.20									
KDZ3.3EV	-	33		3.10	3.50	5	130	5	1000	0.5	20	1.0		
	Y	33 .		3.25	3.50									
KDZ3.6EV	-	36		3.40	3.80	5	130	5	1000	0.5	10	1.0		
	Y	36 .		3.60	3.845									
KDZ3.9EV	-	39		3.70	4.10	5	130	5	1000	0.5	10	1.0		
	Y	39 .		3.890	4.160									
KDZ4.3EV	-	43		4.00	4.50	5	130	5	1000	0.5	5	1.0		
	Y	43 .		4.170	4.430									
KDZ4.7EV	-	47		4.40	4.90	5	120	5	1000	0.5	5	1.0		
	Y	47 .		4.550	4.750									
KDZ5.1EV	-	51		4.80	5.40	5	70	5	1000	0.5	1	1.5		
	Y	51 .		4.980	5.200									
KDZ5.6EV	-	56		5.30	6.00	5	40	5	900	0.5	1	2.5		
	Y	56 .		5.490	5.730									
KDZ6.2EV	-	62		5.80	6.60	5	30	5	500	0.5	1	3.0		
	Y	62 .		6.060	6.330									
KDZ6.8EV	-	68		6.40	7.20	5	25	5	150	0.5	0.5	5.0		
	Y	68 .		6.650	6.930									
KDZ7.5EV	-	75		7.00	7.90	5	23	5	120	0.5	0.5	6.0		
	Y	75 .		7.280	7.600									
KDZ8.2EV	-	82		7.70	8.70	5	20	5	120	0.5	0.5	6.5		
	Y	82 .		8.020	8.360									
KDZ9.1EV	-	91		8.50	9.60	5	18	5	120	0.5	0.5	7.0		
	Y	91 .		8.850	9.230									
KDZ10EV	-	10		9.40	10.60	5	15	5	120	0.5	0.5	8.0		
	Y	10 .		9.770	10.210									
KDZ11EV	-	11		10.40	11.60	5	15	5	120	0.5	0.5	8.5		
	Y	11 .		10.760	11.220									
KDZ12EV	-	12		11.40	12.60	5	15	5	110	0.5	0.5	9.0		
	Y	12 .		11.740	12.240									
KDZ13EV	-	13		12.40	14.10	5	15	5	110	0.5	0.5	10		
	Y	13 .		12.910	13.490									
KDZ15EV	-	15		13.80	15.60	5	15	5	110	0.5	0.5	11		
	Y	15 .		14.340	14.980									
KDZ16EV	-	16		15.30	17.10	5	18	5	150	0.5	0.5	12		
	Y	16 .		15.850	16.510									
KDZ18EV	-	18		16.80	19.10	5	20	5	150	0.5	0.5	14		
	Y	18 .		17.560	18.350									
KDZ20EV	-	20	18.80	21.20	5	25	5	200	0.5	0.5	15			
	Y	20 .	19.520	20.390										
KDZ22EV	-	22	20.80	23.30	5	30	5	200	0.5	0.5	17			
	Y	22 .	21.540	22.470										
KDZ24EV	-	24	22.80	25.60	5	40	5	200	0.5	0.5	19			
	Y	24 .	23.720	24.780										
KDZ27EV	-	27	25.10	28.90	2	150	2	150	0.5	0.1	21			
	Y	27 .	26.19	27.53										
KDZ30EV	-	A2	28.00	32.00	2	200	2	200	0.5	0.1	23			
	Y	A2 .	29.19	30.69										
KDZ33EV	-	A3	31.00	35.00	2	250	2	250	0.5	0.1	25			
	Y	A3 .	32.15	33.79										
KDZ36EV	-	A4	34.00	38.00	2	300	2	300	0.5	0.1	27			
	Y	A4 .	35.07	36.87										

Note) : Mounted on a glass epoxy circuit board of 20 × 20mm, pad dimension of 4 × 4mm.

200mW Zener Diode

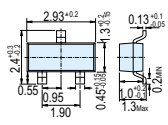
Type No.	Grade	Mark	Max. Ratings		Vz (V)		Zz ()		Zzk ()		Ir (μA)		Package	Outline (Unit : mm)
			Pd (mW)	Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Vr (V)		
KDZ2.0V	-	2A	200	1.85	2.15	5	100	5	1000	0.5	120	1.0	USC	
	Y	2A .		1.95	2.15									
KDZ2.2V	-	2B		2.05	2.38	5	100	5	1000	0.5	120	1.0		
	Y	2B .		2.16	2.38									
KDZ2.4V	-	2C		2.28	2.60	5	100	5	1000	0.5	120	1.0		
	Y	2C .		2.40	2.60									
KDZ2.7V	-	2D		2.50	2.90	5	110	5	1000	0.5	120	1.0		
	Y	2D .		2.65	2.90									
KDZ3.0V	-	30		2.80	3.20	5	120	5	1000	0.5	50	1.0		
	Y	30 .		2.95	3.20									
KDZ3.3V	-	33		3.10	3.50	5	130	5	1000	0.5	20	1.0		
	Y	33 .		3.25	3.50									
KDZ3.6V	-	36		3.40	3.80	5	130	5	1000	0.5	10	1.0		
	Y	36 .		3.60	3.845									
KDZ3.9V	-	39		3.70	4.10	5	130	5	1000	0.5	10	1.0		
	Y	39 .		3.890	4.160									
KDZ4.3V	-	43		4.00	4.50	5	130	5	1000	0.5	5	1.0		
	Y	43 .		4.170	4.430									
KDZ4.7V	-	47		4.40	4.90	5	120	5	1000	0.5	5	1.0		
	Y	47 .		4.550	4.750									
KDZ5.1V	-	51		4.80	5.40	5	70	5	1000	0.5	1	1.5		
	Y	51 .		4.980	5.200									
KDZ5.6V	-	56		5.30	6.00	5	40	5	900	0.5	1	2.5		
	Y	56 .		5.490	5.730									
KDZ6.2V	-	62		5.80	6.60	5	30	5	500	0.5	1	3.0		
	Y	62 .		6.060	6.330									
KDZ6.8V	-	68		6.40	7.20	5	25	5	150	0.5	0.5	5.0		
	Y	68 .		6.650	6.930									
KDZ7.5V	-	75		7.00	7.90	5	23	5	120	0.5	0.5	6.0		
	Y	75 .		7.280	7.600									
KDZ8.2V	-	82		7.70	8.70	5	20	5	120	0.5	0.5	6.5		
	Y	82 .		8.020	8.360									
KDZ9.1V	-	91		8.50	9.60	5	18	5	120	0.5	0.5	7.0		
	Y	91 .		8.850	9.230									
KDZ10V	-	10		9.40	10.60	5	15	5	120	0.5	0.5	8.0		
	Y	10 .		9.770	10.210									
KDZ11V	-	11		10.40	11.60	5	15	5	120	0.5	0.5	8.5		
	Y	11 .		10.760	11.220									
KDZ12V	-	12		11.40	12.60	5	15	5	110	0.5	0.5	9.0		
	Y	12 .		11.740	12.240									
KDZ13V	-	13	12.40	14.10	5	15	5	110	0.5	0.5	10			
	Y	13 .	12.910	13.490										
KDZ15V	-	15	13.80	15.60	5	15	5	110	0.5	0.5	11			
	Y	15 .	14.340	14.980										
KDZ16V	-	16	15.30	17.10	5	18	5	150	0.5	0.5	12			
	Y	16 .	15.850	16.510										
KDZ18V	-	18	16.80	19.10	5	20	5	150	0.5	0.5	14			
	Y	18 .	17.560	18.350										
KDZ20V	-	20	18.80	21.20	5	25	5	200	0.5	0.5	15			
	Y	20 .	19.520	20.390										
KDZ22V	-	22	20.80	23.30	5	30	5	200	0.5	0.5	17			
	Y	22 .	21.540	22.470										
KDZ24V	-	24	22.80	25.60	5	40	5	200	0.5	0.5	19			
	Y	24 .	23.720	24.780										
KDZ27V	-	A1	26.19	27.53	2	150	2	150	0.5	0.1	21			
KDZ30V	-	A2	29.19	30.69	2	200	2	200	0.5	0.1	23			
KDZ33V	-	A3	32.15	33.79	2	250	2	250	0.5	0.1	25			
KDZ36V	-	A4	35.07	36.87	2	300	2	300	0.5	0.1	27			
KDZ100V	-	AQ	95	105	1	700	1	-	-	0.2	76			
USCZ5.6V	-	ZM	5.32	5.88	10	-	-	-	-	1.5	4			

Note) : Mounted on a glass epoxy circuit board of 20 × 20mm, pad dimension of 4 × 4mm.

200mW Zener Diode

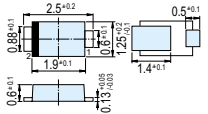
Type No.	Grade	Mark	Max. Ratings PD (mW)	VZ (V)			ZZ ()		ZZK ()		IR (μ A)		Package	Outline (Unit : mm)
				Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Vr (V)		
Z02W2.0V	-	2A	200	1.85	2.15	5	100	5	1000	0.5	120	1	SOT-23	
	X	2AX		1.85	2.05	5	100	5	1000	0.5	120	1		
	Z	2AZ		1.95	2.15	5	100	5	1000	0.5	120	1		
Z02W2.2V	-	2B		2.05	2.38	5	100	5	1000	0.5	120	1		
	X	2BX		2.05	2.26	5	100	5	1000	0.5	120	1		
	Z	2BZ		2.16	2.38	5	100	5	1000	0.5	120	1		
Z02W2.4V	-	2C		2.28	2.6	5	100	5	1000	0.5	120	1		
	X	2CX		2.28	2.5	5	100	5	1000	0.5	120	1		
	Z	2CZ		2.4	2.6	5	100	5	1000	0.5	120	1		
Z02W2.7V	-	2D		2.5	2.9	5	110	5	1000	0.5	120	1		
	X	2DX		2.5	2.75	5	110	5	1000	0.5	120	1		
	Z	2DZ		2.65	2.9	5	110	5	1000	0.5	120	1		
Z02W3.0V	-	30		2.8	3.2	5	120	5	1000	0.5	50	1		
	X	30X		2.8	3.05	5	120	5	1000	0.5	50	1		
	Z	30Z		2.95	3.2	5	120	5	1000	0.5	50	1		
Z02W3.3V	-	33		3.1	3.5	5	130	5	1000	0.5	20	1		
	X	33X		3.1	3.35	5	130	5	1000	0.5	20	1		
	Z	33Z		3.25	3.5	5	130	5	1000	0.5	20	1		
Z02W3.6V	-	36		3.4	3.8	5	130	5	1000	0.5	10	1		
	X	36X		3.4	3.65	5	130	5	1000	0.5	10	1		
	Z	36Z		3.55	3.8	5	130	5	1000	0.5	10	1		
Z02W3.9V	-	39		3.7	4.1	5	130	5	1000	0.5	10	1		
	X	39X		3.7	3.97	5	130	5	1000	0.5	10	1		
	Z	39Z		3.87	4.1	5	130	5	1000	0.5	10	1		
Z02W4.3V	-	4.3		4	4.5	5	130	5	1000	0.5	5	1		
	Y	4.3Y		4.13	4.35	5	130	5	1000	0.5	5	1		
Z02W4.7V	-	4.7		4.4	4.9	5	120	5	1000	0.5	5	1		
	Y	4.7Y		4.53	4.76	5	120	5	1000	0.5	5	1		
Z02W5.1V	-	5.1		4.8	5.4	5	70	5	1000	0.5	1	1.5		
	Y	5.1Y		4.97	5.24	5	70	5	1000	0.5	1	1.5		
Z02W5.6V	-	5.6		5.3	6	5	40	5	900	0.5	1	2.5		
	Y	5.6Y		5.43	5.81	5	40	5	900	0.5	1	2.5		
Z02W6.2V	-	6.2		5.8	6.6	5	30	5	500	0.5	1	3		
	Y	6.2Y		6	6.39	5	30	5	500	0.5	1	3		
Z02W6.8V	-	6.8		6.4	7.2	5	25	5	150	0.5	0.5	5		
	Y	6.8Y		6.6	7.02	5	25	5	150	0.5	0.5	5		
Z02W7.5V	-	7.5		7	7.9	5	23	5	120	0.5	0.5	6		
	Y	7.5Y		7.23	7.66	5	23	5	120	0.5	0.5	6		
Z02W8.2V	-	8.2		7.7	8.7	5	20	5	120	0.5	0.5	6.5		
	Y	8.2Y		7.96	8.43	5	20	5	120	0.5	0.5	6.5		
Z02W9.1V	-	9.1		8.5	9.6	5	18	5	120	0.5	0.5	7		
	Y	9.1Y		8.8	9.3	5	18	5	120	0.5	0.5	7		
Z02W10V	-	10	9.4	10.6	5	15	5	120	0.5	0.5	8			
	Y	10Y	9.73	10.26	5	15	5	120	0.5	0.5	8			
Z02W11V	-	11	10.4	11.6	5	15	5	120	0.5	0.5	8.5			
	Y	11Y	10.73	11.26	5	15	5	120	0.5	0.5	8.5			
Z02W12V	-	12	11.4	12.6	5	15	5	110	0.5	0.5	9			
	Y	12Y	11.73	12.26	5	15	5	110	0.5	0.5	9			
Z02W13V	-	13	12.4	14.1	5	15	5	110	0.5	0.5	10			
	Y	13Y	12.88	13.57	5	15	5	110	0.5	0.5	10			
Z02W15V	-	15	13.8	15.6	5	15	5	110	0.5	0.5	11			
	Y	15Y	14.33	15.11	5	15	5	110	0.5	0.5	11			
Z02W16V	-	16	15.3	17.1	5	18	5	150	0.5	0.5	12			
	Y	16Y	15.8	16.6	5	18	5	150	0.5	0.5	12			
Z02W18V	-	18	16.8	19.1	5	20	5	150	0.5	0.5	14			
	Y	18Y	17.46	18.43	5	20	5	150	0.5	0.5	14			
Z02W20V	-	20	18.8	21.2	5	25	5	200	0.5	0.5	15			
	Y	20Y	19.48	20.46	5	25	5	200	0.5	0.5	15			
Z02W22V	-	22	20.8	23.3	5	30	5	200	0.5	0.5	17			
	Y	22Y	21.48	22.56	5	30	5	200	0.5	0.5	17			
Z02W24V	-	24	22.8	25.6	5	40	5	200	0.5	0.5	19			
	Y	24Y	23.61	24.92	5	40	5	200	0.5	0.5	19			
Z02W27V	-	27A	26.19	27.53	2	150	2	150	0.5	0.1	21			
Z02W30V	-	30A	29.19	30.69	2	200	2	200	0.5	0.1	23			
Z02W33V	-	33A	32.15	33.79	2	250	2	250	0.5	0.1	25			
Z02W36V	-	36A	35.07	36.87	2	300	2	300	0.5	0.1	27			

300mW Zener Diode

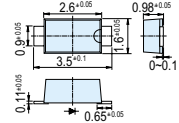
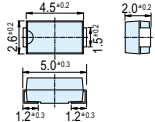
Type No.	Mark	PD (mW)	VZ			ZZ ()		ZZK ()		IR (μ A)		Package	Outline (Unit : mm)
			Min.	Max.	IZ(mA)	Max.	IZ(mA)	Max.	IZ(mA)	Max.	VR(V)		
BZX84C2V0	2AH	300	1.85	2.15	5	100	5	1000	0.5	120	1.0	SOT-23	
BZX84C2V2	2BH		2.05	2.38	5	100	5	1000	0.5	120	1.0		
BZX84C2V4	2CH		2.28	2.60	5	100	5	1000	0.5	120	1.0		
BZX84C2V7	2DH		2.50	2.90	5	100	5	1000	0.5	120	1.0		
BZX84C3V0	30H		2.80	3.20	5	120	5	1000	0.5	50	1.0		
BZX84C3V3	33H		3.10	3.50	5	130	5	1000	0.5	20	1.0		
BZX84C3V6	36H		3.40	3.80	5	130	5	1000	0.5	10	1.0		
BZX84C3V9	39H		3.70	4.10	5	130	5	1000	0.5	10	1.0		
BZX84C4V3	4.3H		4.13	4.35	5	130	5	1000	0.5	5	1.0		
BZX84C4V7	4.7H		4.53	4.76	5	120	5	1000	0.5	5	1.0		
BZX84C5V1	5.1H		4.97	5.24	5	70	5	1000	0.5	1	1.5		
BZX84C5V6	5.6H		5.43	5.81	5	40	5	900	0.5	1	2.5		
BZX84C6V2	6.2H		6.00	6.39	5	30	5	500	0.5	1	3.0		
BZX84C6V8	6.8H		6.60	7.02	5	25	5	150	0.5	0.5	5.0		
BZX84C7V5	7.5H		7.23	7.66	5	23	5	120	0.5	0.5	6.0		
BZX84C8V2	8.2H		7.96	8.43	5	20	5	120	0.5	0.5	6.5		
BZX84C9V1	9.1H		8.80	9.30	5	18	5	120	0.5	0.5	7.0		
BZX84C10	10H		9.73	10.26	5	15	5	120	0.5	0.5	8.0		
BZX84C11	11H		10.73	11.26	5	15	5	120	0.5	0.5	8.5		
BZX84C12	12H		11.73	12.26	5	15	5	110	0.5	0.5	9.0		
BZX84C13	13H		12.88	13.57	5	15	5	110	0.5	0.5	10		
BZX84C15	15H		14.33	15.11	5	15	5	110	0.5	0.5	11		
BZX84C16	16H		15.80	16.60	5	18	5	150	0.5	0.5	12		
BZX84C18	18H		17.46	18.43	5	20	5	150	0.5	0.5	14		
BZX84C20	20H		19.48	20.46	5	25	5	200	0.5	0.5	15		
BZX84C22	22H		21.48	22.56	5	30	5	200	0.5	0.5	17		
BZX84C24	24H		23.61	24.92	5	40	5	200	0.5	0.5	19		
BZX84C27	27B		26.19	27.53	2	150	2	150	0.5	0.1	21		
BZX84C30	30B		29.19	30.69	2	200	2	200	0.5	0.1	23		
BZX84C33	33B		32.15	33.79	2	250	2	250	0.5	0.1	25		
BZX84C36	36B	35.01	36.87	2	300	2	300	0.5	0.1	27			

Note) : Package Mounted on 99.5% alumina 10 × 8 × 0.6mm.

500mW Zener Diode

Type No.	Mark	PD (mW)	VZ			IR(μ A)		Package	Outline (Unit : mm)
			Min.	Max.	IZ(mA)	Max.	VR(V)		
USFZ4.3V	43	500	3.9	4.8	10	10	1.0		
USFZ4.7V	47	500	4.3	5.2	10	10	1.0		
USFZ5.1V	51	500	4.6	5.6	10	10	1.5		
USFZ5.6V	56	500	5.1	6.1	10	10	2.5		
USFZ6.2V	62	500	5.6	6.8	10	10	3.0		
USFZ6.8V	68	500	6.2	7.4	10	10	3.5		
USFZ7.5V	75	500	6.8	8.3	10	10	4.5		
USFZ8.2V	82	500	7.4	9.0	10	10	4.9		
USFZ9.1V	91	500	8.2	10.0	10	10	5.5		
USFZ10V	10	500	9.0	11.0	10	10	6.0		
USFZ11V	11	500	9.9	12.1	10	10	7.0		
USFZ12V	12	500	10.8	13.2	10	10	8.0		
USFZ13V	13	500	11.7	14.3	10	10	9.0		
USFZ15V	15	500	13.5	16.5	10	10	10.0		
USFZ16V	16	500	14.4	17.6	10	10	11.0		
USFZ18V	18	500	16.2	19.8	10	10	12.0		
USFZ20V	20	500	18.0	22.0	10	10	14.0		
USFZ22V	22	500	19.8	24.2	10	10	15.0		
USFZ24V	24	500	21.6	26.4	10	10	16.0		
USFZ27V	27	500	24.3	29.7	10	10	19.0		
USFZ30V	30	500	27.0	33.0	10	10	21.0		
USFZ33V	33	500	29.7	36.3	10	10	23.0		
USFZ36V	36	500	32.4	39.6	10	10	25.0		

1W Zener Diode

Type No.	Mark	PD (W)	VZ			IR(μA)		Package	Outline (Unit : mm)
			Min.	Max.	IZ(mA)	Max.	VR(V)		
SMFZ4.3V	ZZJ	1	4.3	4.8	40	20	1.0		
SMFZ4.7V	ZZK	1	4.7	5.2	40	20	1.0		
SMFZ5.1V	ZZL	1	5.1	5.7	40	20	1.0		
SMFZ5.6V	ZZM	1	5.6	6.3	40	20	1.5		
SMFZ6.2V	ZZN	1	6.2	7.0	40	20	3.0		
SMFZ6.8V	ZZP	1	6.8	7.7	40	20	3.5		
SMFZ7.5V	ZZQ	1	7.5	8.4	40	20	4.0		
SMFZ8.2V	ZZR	1	8.2	9.3	40	20	5.0		
SMFZ9.1V	ZZS	1	9.1	10.2	40	20	6.0		
SMFZ10V	Z10	1	10.0	11.2	40	10	7.0		
SMFZ11V	Z11	1	11.0	12.3	20	10	8.0		
SMFZ12V	Z12	1	12.0	13.5	20	10	9.0		
SMFZ13V	Z13	1	13.3	15.0	20	10	10.0		
SMFZ15V	Z15	1	14.7	16.5	20	10	11.0		
SMFZ16V	Z16	1	16.2	18.3	20	10	12.0		
SMFZ18V	Z18	1	18.0	20.3	20	10	13.0		
SMFZ20V	Z20	1	20.0	22.4	20	10	15.0		
SMFZ22V	Z22	1	22.0	24.5	10	10	17.0		
SMFZ24V	Z24	1	24.0	27.6	10	10	19.0		
SMFZ27V	Z27	1	27.0	30.8	10	10	21.0		
SMFZ30V	Z30	1	30.0	34.0	10	10	23.0		
SMFZ33V	Z33	1	33.0	37.0	10	10	25.0		
SMFZ36V	Z36	1	36.0	40.0	10	10	27.0		
SMAZ4.3V	ZZJ	1	4.3	4.8	40	20	1.0		
SMAZ4.7V	ZZK	1	4.7	5.2	40	20	1.0		
SMAZ5.1V	ZZL	1	5.1	5.7	40	20	1.0		
SMAZ5.6V	ZZM	1	5.6	6.3	40	20	1.5		
SMAZ6.2V	ZZN	1	6.2	7.0	40	20	3.0		
SMAZ6.8V	ZZP	1	6.8	7.7	40	20	3.5		
SMAZ7.5V	ZZQ	1	7.5	8.4	40	20	4.0		
SMAZ8.2V	ZZR	1	8.2	9.3	40	20	5.0		
SMAZ9.1V	ZZS	1	9.1	10.2	40	20	6.0		
SMAZ10V	Z10	1	10.0	11.2	40	10	7.0		
SMAZ11V	Z11	1	11.0	12.3	20	10	8.0		
SMAZ12V	Z12	1	12.0	13.5	20	10	9.0		
SMAZ13V	Z13	1	13.3	15.0	20	10	10.0		
SMAZ15V	Z15	1	14.7	16.5	20	10	11.0		
SMAZ16V	Z16	1	16.2	18.3	20	10	12.0		
SMAZ18V	Z18	1	18.0	20.3	20	10	13.0		
SMAZ20V	Z20	1	20.0	22.4	20	10	15.0		
SMAZ22V	Z22	1	22.0	24.5	10	10	17.0		
SMAZ24V	Z24	1	24.0	27.6	10	10	19.0		
SMAZ27V	Z27	1	27.0	30.8	10	10	21.0		
SMAZ30V	Z30	1	30.0	34.0	10	10	23.0		
SMAZ33V	Z33	1	33.0	37.0	10	10	25.0		
SMAZ36V	Z36	1	36.0	40.0	10	10	27.0		

Diode

Low Capacitance Zener Diode

Type No.	Mark	P _D (mW)	V _Z (V)			Z _Z (Ω)		Z _{ZK} (Ω)		I _R (μA)		C _T (pF)			Package	Outline (Unit : mm)
			Min.	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	V _R (V)	Max.	V _R (V)	f (MHz)		
KDZ6.8CE	ZP	150	6.65	6.93	5.0	40	5.0	60	0.5	0.5	3.5	17	0.5	1	ESC	

High Voltage Zener Diode

Type No.	Mark	P _D (mW)	V _Z (V)			Z _Z (Ω)		Z _{ZK} (Ω)		I _R (μA)		Package	Outline (Unit : mm)
			Min.	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	V _R (V)		
KDZ100VW	AW	200	95.0	105.0	1	700	1	-	-	0.2	76	USC	
Z02W100V	10A	200	95.0	105.0	1	700	1	-	-	0.2	76	SOT-23	

Note) : Mounted on a glass epoxy circuit board of 20 × 20mm, pad dimension of 4 × 4mm.

Note) : Bi-directional Zener Diode.

Small Signal Schottky Barrier Diode

Type No.	Mark	Max. Ratings						VF (V)		IR (μ A)		CT (pF)			Package	Outline (Unit : mm)	
		VRM (V)	VR (V)	IFM (mA)	IO (mA)	IFSM (A)	PD (mW)	Max.	IF (mA)	Max.	VR (V)	Max.	VR (V)	f (MHz)			
KDR720EL		R	-	30	-	100	0.5	-	0.37	10	7	10	-	-	-	ELP-2	
KDR730EL		SB	-	30	-	100	0.5	-	0.46	10	0.3	10	-	-			
KDR530UL		R	-	30	-	100	0.5	-	0.5	500	0.5	30	30	1	1	ULP-2	
KDR720UL		SB	-	30	-	100	1	-	0.35	10	10	10	-	-			
KDR552F		7	-	25	-	50	0.2	-	0.38	5	0.45	20	2.8	1	1	TFSC	
KDR720F		R	-	30	-	100	1	-	0.35	10	10	10	-	-	-		
KDR730F		Q	-	30	-	100	0.5	-	0.45	10	0.5	10	-	-	-		
KDR720V		SB	-	30	-	100	1	-	0.35	10	10	10	-	-	-	VSC	
KDR730V		SA	-	30	-	100	0.5	-	0.45	10	0.5	10	-	-	-		
KDR367E		US	15	10	200	100	1	150	0.5	100	20	10	40	0	1	ESC	
KDR377E		UV	40	40	150	30	0.2	150	0.55	30	20	40	6 (Typ)	1	1		
KDR720E		UB	-	30	-	200	1	150	0.50	200	30	10	-	-	-		
KDR728E		UT	30	30	150	30	0.2	150	0.55	30	300	30	6.5 (Typ)	1	1		
KDR730E		EB	-	30	-	200	1	150	0.6	200	1	10	-	-	-		
KDR357		UL	45	40	200	100	1	200	0.55	100	5	40	30	0	1	USC	
KDR367		US	15	10	200	100	1	200	0.5	100	20	10	40	0	1		
KDR377		UV	40	40	150	30	0.2	200	0.55	30	20	40	8 (Typ)	1	1		
KDR412		U3	40	20	-	500	3	-	0.5	500	30	10	20	10	1		
KDR729		UM	30	30	300	200	1	200	0.55	200	50	30	50 (Typ)	0	1		
KDR331V		UW	15	10	100	50	1	100	0.5	50	20	10	40	0	1	VSM	
KDR411		U3	40	20	-	500	3	-	0.5	500	30	10	20(Typ)	10	1	USM	
KDR731		UX	-	30	-	70	2	-	0.55	70	5	15	5 (Typ)	10	1		

Note) : Mounted on a glass epoxy circuit board of 20 × 20mm.

Schottky Barrier Diode

Small Signal Schottky Barrier Diode

Type No.	Mark	Max. Ratings						VF (V)		IR (μA)		CT (pF)			Package	Outline (Unit : mm)	
		V _{RM} (V)	V _R (V)	I _{FM} (mA)	I _O (mA)	I _{FSM} (A)	P _D (mW)	Max.	I _F (mA)	Max.	V _R (V)	Max.	V _R (V)	f (MHz)			
BAT54		L4	-	30	-	200	0.6	200	0.8	100	2	25	10	1	1		
KDR105S		DL	-	50	-	100	2	-	0.55	100	10	25	7.7 (Typ)	10	1		
KDR411S		U3	40	20	-	500	3	-	0.5	500	30	10	20 (Typ)	10	1		
BAT54C		L43	-	30	-	200	0.6	200	0.8	100	2	25	10	1	1		
BAT54A		L42	-	30	-	200	0.6	200	0.8	100	2	25	10	1	1		
BAT54S		L44	-	30	-	200	0.6	200	0.8	100	2	25	10	1	1		
KDR731S		UX	-	30	-	70	2	-	0.55	70	5	15	5 (Typ)	10	1		
KDR400S		DJ	40	40	-	500	3	-	0.55	500	50	25	25 (Typ)	10	1		
KDR505S		DM	50	50	-	500	5	-	0.55	500	20	25	22 (Typ)	10	1		
KDR701S		DK	30	30	-	700	5	-	0.55	700	80	30	190	0	1		
KDR720S		MG	30	30	-	200	1	-	0.55	200	50	30	30 (Typ)	0	1		
KDR721S		MK	30	30	-	200	1	-	0.55	200	50	30	13 (Typ)	10	1		
KDR521T		T2	-	20	-	1A	3	-	0.45	1000	200	20	-	-	-		TSM
KDR531T		T3	-	30	-	1A	10	-	0.47	1000	500	15	35 (Typ)	10	1		













Power Schottky Barrier Diode

Type No.	Mark	Max. Ratings			V _{FM} (V)		IRRM (mA)		Package	Outline (Unit : mm)	
		V _{RRM} (V)	I _O (A)	I _{FSM} (A) (60Hz)	Max.	I _{FM} (A)	Max.	V _R (A)			
USFB13		A3	30	1	5	0.47	1	0.2	30	USF	
USFB13A		BA	30	1	22	0.52	1	0.05	30		
USFB13L		BB	30	1	22	0.39 (Typ)	1	1.0	30		
USFB14		SA	40	1	5	0.55	0.7	0.05	40		
USFB053		53	30	0.5	5	0.39	0.5	0.2	30		
SMFB13		B13	30	1	22	0.42	1	1.0	30	SMF	
SMFB13L		13L	30	1	22	0.36	1	1.0	30		
SMFB16		S16	60	1	30	0.55	1	0.05	60		
SMFB23L		23L	30	1.5	33	0.36	1.5	1.0	30		
SMFB23		B23	30	2	33	0.42	2	1.0	30		
SMFB14		B14	40	1	22	0.50	1	1.0	40		
SMAB13		B13	30	1	40	0.42	1	1.0	30	SMA	
SMAB33		B33	30	3	70	0.45	3	2.0	30		
SMAB33L		B33L	30	3	70	0.36	3	2.0	30		
SMAB14		B14	40	1	40	0.5	1	1.0	40		
SMAB34		B34	40	3	70	0.52	3	2.0	40		
SMAB16		B16	60	1	30	0.58	1	1.0	60		
SMAB36		B36	60	3	70	0.6	1	2.0	60		
SMAB110		B110	100	1	30	0.8	1	1.0	100		
SMAB210	B210	100	2	50	0.8	2	1.0	100			
SMAB34A		B34A	40	3	70	0.52	3	2.0	40	SMA(1)	
SMBB24		B24	40	2	50	0.5	2.0	0.5	40	SMB	
SMBB26		B26	60	2	50	0.7	2.0	0.5	60		
SMBB34		B34	40	3	50	0.5	3.0	0.5	40		
SMBB36		B36	60	3	50	0.7	3.0	0.5	60		
SMCB34		B34	40	3	100	0.5	3.0	0.5	40	SMC	
SMCB36		B36	60	3	100	0.7	3.0	0.5	60		

Power Schottky Barrier Diode

Type No.	Max. Ratings	VFM (V)		IRRM (mA) (VRRM=Rated)		trr (ns)			Rth (j-c) (/W)	Package	Outline (Unit : mm)	
		VRM (V)	IO (A)	IFSM (A)	Max. (TC=25)	IFM (A)	Max.	Max.	IFM (A)			di/dt (A/μs)
MBRD5U100D		100	5	90	0.8	5	0.05	-	-	-	5	
MBRD5U200D		200	5	90	0.9	5	0.05	-	-	-	5	
MBRD6U60CT		60	6	45	0.65	3	0.05	35	1	-30	6	
MBRD10U60CT		60	10	45	0.75	5	0.05	35	1	-30	6	
MBRD10U100CT		100	10	45	0.85	5	0.05	35	1	-30	6	
MBRD10U200CT		200	10	45	0.95	5	0.05	35	1	-30	6	
MBR20100CT		100	20	100	0.85	10	0.15	35	1	-30	1.5	
MBR20200CT		200	20	120	0.95	5	0.15	35	1	-30	1.7	
MBRF10U45CTA		45	10	100	0.7	5	0.1	35	1	-30	4.5	
MBRF10U60CTA		60	10	100	0.75	5	0.05	35	1	-30	4.5	
MBRF10U100CTA		100	10	100	0.85	5	0.05	35	1	-30	4.5	
MBRF10U150CTA		150	10	130	0.9	5	0.05	35	1	-30	4.5	
MBRF10U200CTA		200	10	100	0.95	5	0.05	35	1	-30	4.5	
MBRF15U45CTA		45	15	150	0.7	7.5	0.1	35	1	-30	4.0	
MBRF20U45CTA		45	20	250	0.7	10	0.1	35	1	-30	4.0	
MBRF20U60CTA		60	20	250	0.75	10	0.05	35	1	-30	3.5	
MBRF20U100CTA		100	20	100	0.85	10	0.05	-	-	-	3.5	
MBRF20U150CTA		150	20	180	0.9	10	0.05	35	1	-30	3.5	
MBRF20U200CTA		200	20	120	0.95	10	0.05	35	1	-30	3.5	
MBRF30U45CTA		45	30	350	0.7	15	0.1	35	1	-30	3.5	
MBRF30U60CTA		60	30	350	0.75	15	0.05	35	1	-30	3.0	
MBRF30U100CTA		100	30	350	0.85	15	0.05	35	1	-30	3.0	
MBRF30L100CT		100	30	350	0.85	30	1	-	-	-	2.5	
MBRF5100			100	5	100	0.85	5	0.15	35	1	-30	
B10A45VI	45		10	150	0.58	10	0.5	35	1	-20	3	
B5A60VI	50		5	100	0.55	5	0.5	35	1	-20	4.5	
MBRP30U200CT		200	30	300	0.95	15	0.05	35	0.5	-	3.0	









Diode

Electrical Characteristics		Single or Dual Type											
		ELP-2		TFSC		ULP-2		VSC		ESC		VSM	ESM
													
VRWM[V]	PPK[W]	0.6*0.3mm		0.8*0.6mm		1.0*0.6mm		1.0*0.6mm		1.2*0.8mm		1.2*0.8	1.6*0.85
3	50	PG03ESEL2			PG03DBTFC		PG03BBUL2		PG03DBVSC	PG03FSESC	PG03FBESC		
	80			PG03FSTFC				PG03FSVSC					
	350												
5	30		PG05DBEL2		PG05DBTFC				PG05DBVSC	PG05BSESC ^{LOW}			
	50	PG05ESEL2									PG05FBESC		
	80			PG05FSTFC				PG05FSVSC					
	100						PG05TBUL2A PG05TBUL2			PG05FSESC			
	125												PG05EAESM
	300												
	350					PG05FSU L2							
	**600												
	**1500					PG05GSU L2							
7	400												
12	300	PG12ESEL2											
	350												
	400												
	**400												
	**600												
	**1500												
15	350												
22	1500												
24	300												
	350												
	**600												
	**1500												

Note) LOW : Low Capacitance Device (5pF), ** = tp = 10/1000μs

Single or Dual Type											
USC		USM	SOT-23					SMA	SMB	SMC	
1.7*1.25mm		2.0*1.25mm	2.93*1.3mm					4.5*2.6mm	4.5*3.6mm	6.8*5.9mm	
		PG05BAUSM ^{LOW}									
					PG05EAS23						
							PG05BUS23 ^{LOW}				
PG05HSUSC	PG05GBUSC		PG05HAS23								
									PG05NSSMB		
										PG05NSSMC	
				PG712FBS23							
							PG12BUS23 ^{LOW}				
PG12GSUSC	PG12FBUSC		PG12GAS23		PG12GCS23						
				PG712FBS23							
								PG12MSSMA			
									PG12NSSMB		
										PG12NSSMC	
PG15GSUSC	PG15FBUSC										
								PG22KSSMA			
PG24FSUSC	PG24EBUSC		PG24FAS23								
									PG24NSSMB		
										PG24NSSMC	

Diode

Electrical Characteristics		Array Type								
		TFS6	TESV		TES6		US6	USV	TS6	
										
V _{RWM} [V]	P _{PK} [W]	1.0*1.0mm	2.9*1.6mm		1.6*1.2mm		2.0*2.1mm	2.0*2.1mm	2.9*1.6mm	
3	20				PG03CTXTE6					
5	25	PG05GXTF6								
	30									
	45						PG05AVUS6			
	100									
	150						PG05GXTE6A			
	200							PG05GBUSV		
	350								PG05HBTS6	
12	150					PG12FXTE6				
	350									
24	350								PG24FBTS6	

Note) ** = tp = 10/1000μs

General Purpose TVS

pe No.	Mark	Max. Ratings		VRWM	VBR (V)			VC (V)			Cj (pF)			Package	Outline (Unit : mm)
		PPK (W)	IPP (A)		Max.	Min.	It (mA)	Max.	IPP (A)	tP (μs)	Max.	VR (V)	f (MHz)		
PG03ESEL2		J	50	5	3.3	4.2	1	10	5	8/20	50	0	1	ELP-2	
PG05ESEL2		K	50	5	5	6	1	10	5	8/20	50	0	1		
PG12ESEL2		A	80	3	12	13.3	1	27	3	8/20u	50	0	1		
PG05DBEL2		6	30	-	5	5.8	1	15	2	8/20	25	0	1		
PG05FSUL2		5P	100	10	5	6	1	10	10	8/20	80	0	1	ULP-2	
PG05GSUL2		TA	200	16	5	6	1	12.5	16	8/20	160	0	1		
PG03FSTFC		D1	80	5	3.3	4.2	1	16	5	8/20	80	0	1	TFSC	
PG05FSTFC		E1	80	5	5	6	1	16	5	8/20	70	0	1		
PG03DBTFC		T	50	-	3.3	4.2	1	17	5	8/20	25	0	1		
PG05DBTFC		6	50	-	5	5.8	1	17	5	8/20	25	0	1		
PG03FSVSC		5B	80	5	3.3	4.2	1	16	5	8/20	80	0	1	VSC	
PG05FSVSC		5S	80	5	5	6	1	16	5	8/20	70	0	1		
PG03DBVSC		3B	50	-	3.3	4.2	1	17	5	8/20	25	0	1	VSC	
PG05DBVSC		5B	50	-	5	5.8	1	17	5	8/20	25	0	1		
PG03FSESC		3S	50	5	3.3	4	1	10.9	5	8/20	100	0	1	ESC	
PG05FSESC		5S	100	10	5	6	1	9.8	5	8/20	80	0	1		
PG05BSESC		D2	30	1.6	5	6.65	5	12	1	8/20	5	0	1		
PG03FBESC		3B	50	5	3.3	4.2	1	10.9	5	8/20	80	0	1		
PG05FBESC		5B	50	5	5	5.8	1	9.8	5	8/20	60	0	1		
PG05HSUSC		5H	350	24	5	6	1	14.5	24	8/20	350	0	1	USC	
PG12GSUSC		2G	350	15	12	13.3	1	25	15	8/20	150	0	1		
PG15GSUSC		SD	350	12	15	16.7	1	29	12	8/20	150	0	1		
PG24FSUSC		4F	350	8	24	26.7	1	45	8	8/20	88	0	1		
PG05GBUSC		5G	350	24	5	6	1	14.5	24	8/20	200	0	1		
PG12FBUSC		2F	350	15	12	13.3	1	25	15	8/20	100	0	1		
PG15FBUSC		BD	350	12	15	16.7	1	29	12	8/20	75	0	1		
PG24EBUSC		4E	350	8	24	26.7	1	45	8	8/20	50	0	1		
PG12MSSMA		T12	400	20.1	12	13.3	1	19.9	20.1	10/1000	-	-	-	SMA	
PG22KSSMA		22S	1500	42.3	22	24.4	1	35.5	42.3	8/20	1000	0	1		
PG05NSSMB		T05	600	65.2	5	6.4	1	9.2	-	10/1000	-	-	-	SMB	
PG12NSSMB		T12	600	30.2	12	13.3	1	19.9	30.2	10/1000	-	-	-		
PG24NSSMB		T24	600	15.4	24	26.7	1	38.9	15.4	10/1000	-	-	-		
PG05NSSMC		T05	1500	16.3	5	6.40	0	9.2	16.3	10/1000	-	-	-	SMC	
PG12NSSMC		T12	1500	75.4	12	13.3	1	19.9	75.4	10/1000	-	-	-		
PG24NSSMC		T24	1500	38.6	24	26.7	1	38.9	38.6	10/1000	-	-	-		

Diode

General Purpose TVS

Type No.	Mark	Max. Ratings		VRWM	VBR (V)			VC (V)			Cj (pF)			Package	Outline (Unit : mm)		
		PPK (W)	IPP (A)		Max.	Min.	It (mA)	Max.	IPP (A)	tP (μ s)	Max.	VR (V)	f (MHz)				
PG05EAESM		EA	60	6.7	5	6.46	5	17	5	8/20	40	0	1	ESM			
PG05BAUSM		BA	30	1.6	5	6.65	5	18	1.6	8/20	5	0	1	USM			
PG05HAS23		5HA	350	24	5	6	1	14.5	24	8/20	400	0	1	SOT-23			
PG12GAS23		12G	350	15	12	13.3	1	25	15	8/20	150	0	1				
PG24FAS23		24F	350	8	24	26.7	1	43.5	8	8/20	60	0	1				
PG12GCS23		12	350	15	12	13.3	1	25	15	8/20	120	0	1	SOT-23			
PG05BUS23		5BU	300	24	5	6	1	14.5	24	8/20	5	0	1				
PG12BUS23		12B	300	15	12	13.3	1	25	15	8/20	5	0	1				
PG05EAS23		AS	85	5	5	6.46	5	17	5	8/20	40	0	1				
PG712FBS23		712	400	17	7, 12	7.5, 13.3	1	12, 26	17	8/20	75	0	1	USV			
PG05GBUSV		5B	200	24	5	6	1	12.5	24	8/20	175	0	1				
PG05GXTE6			25	2	5	6	1	12	2	8/20	9	0	1			TFS6	
PG03GXTE6		3X	150	15	3.3	4.2	1	10.9	15	8/20	120	0	1			TES6	
PG05GXTE6		5X	150	10	5	6.3	1	14.5	10	8/20	100	0	1				
PG12FXTE6		2X	150	6	12	13.3	1	25	6	8/20	60	0	1				
PG05GXTE6A			25	2.5	5	6.4	1	10	1	8/20	19	0	1				
PG05HBTS6		5H	350	24	5	6.3	1	15	24	8/20	350	0	1	TS6			
PG24FBTS6		4F	350	8	24	27	1	44	8	8/20	75	0	1				

Low Cap TVS

Type No.	Mark	Max. Ratings		VRWM	VBR (V)			VC (V)			Cj (pF)			Package	Outline (Unit : mm)
		PPK (W)	IPP (A)		Max.	Min.	It (mA)	Max.	IPP (A)	tP (μ s)	Max.	VR (V)	f (MHz)		
PG05TBUL2		TK	100	4	5	7	1	25	4	8/20	0.5	0	1	ULP-2	
PG05TBUL2A		TS	100	4	5	7	1	25	4	8/20	0.6	0	1		
PG03BBUL2	-	-	40	5	3.3	-	-	8	5	8/20	5	0	1		
PG05AVUS6		LC	150	6	5	6	1	25	6	8/20u	1.25	0	1	US6	

Surface Mount Glass Passivated Rectifier Diode

Type No.	Mark	Max. Ratings			VFM (V)		IRRM (μ A)	trr (μ S)			Package	Outline (Unit : mm)	
		VRRM (V)	IO (A)	IFSM (A)	Max. (Ta=25)	IFA (A)		Max.	IF (mA)	IR (A)			
GN1G		E140	400	1	40	1.1	1	1	1.8	0.5	1	SMA(1)	

Ultra Fast Recovery Rectifier Diode

Type No.	Mark	Max. Ratings				VFM (V)		IRM (μ A)		trr (ns)			Package	Outline (Unit : mm)	
		VRM (V)	IO (A)	IFSM (A)	IFSM (A)	Max.	IFM (A)	Max.	VR (V)	Max.	IF (mA)	IR (mA)			
SMAU1G		U1G	400	1	-	33	1.3	1	5	400	35	500	1000	SMA(1)	
SMAU1J		U1J	600	1	-	33	1.7	1	5	600	35	500	1000		
U5A6CI		U5A6CI	600	5	-	100	1.7	5	30	600	35	1000	1000	TO-220IS(2P)	
U8A6CI		U8A6CI	600	8	-	100	1.8	8	30	600	35	1000	1000		
U10A6CI		U10A6CI	600	10	-	100	2	10	30	600	35	1000	1000		
U20A3CI		U20A3CI	300	20	50	60	0.98	20	20	300	50	500	1000		
U20A4CI		U20A4CI	430	20	-	100	1.6	20	10	400	30	500	1000	TO-220IS	
U10A3CIC	U10A3CIC	300	10	50	60	1.3	5	10	300	60	100	100			
U10A6CIC	U10A6CIC	600	10	-	100	1.7	5	30	600	35	1000	1000			
U20A3CIC	U20A3CIC	300	20	50	60	1.3	10	10	300	50	500	1000			
U20A4CIC	U20A4CIC	400	20	50	60	1.6	10	10	400	50	100	100			
U20A6CIC	U20A6CIC	600	20	-	100	2	10	30	600	35	1000	1000			
U20A3CID		U20A3CID	350	20	-	100	1.3	10	10	300	50	500	100	DPAK	
U10A6CDC	U10A6CDC	600	10	-	100	1.7	5	30	600	35	1000	1000			
U5A6CD	U5A6CD	600	5	-	100	1.3	5	30	600	35	1000	1000			
U8A6CD	U8A6CD	600	8	-	100	1.8	8	30	600	35	1000	1000			

Single-Phase Bridge Rectifier Diode

Type No.	Max. Ratings				Vf (V)		Ir (μ A)		Package	Outline (Unit: mm)
	Vrrm (V)	Ifsm (A)	If(av) (A)	Pt (A ² sec)	Max.	If (A)	Max.	Vr (V)		
MB6S	600	35.0	0.5	5.0	1.0	0.4	5.0	600	MBS	
KDB2100M	100	30	-	-	0.85	1	500	60		
KDB260M	60	30	-	-	0.7	1	500	60		
MB6M	600	35.0	0.5	5.0	1.0	0.4	5.0	600	MBM	
DF06	600	50	1	10	1.0	1.0	5.0	600	DF	
DF06S	600	50	1	10	1.1	1.0	5.0	600	DFS	
GBL2J	600	80	2	-	1.0	1.0	1.0	600	GBL (2S)	
KBJ4J	600	150	4	93	1.0	2.0	5.0	600	KBJ (3S)	
GBJ6J	600	170	6	120	1.0	3.0	5.0	600	GBJ (5S)	

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
02CZ2.0	Toshiba	Z02W2.0V	02DZ7.5	Toshiba	KDZ7.5V	DZD6.8	Sanyo	Z02W6.8V	MA3043	Panasonic	Z02W4.3V
02CZ2.2	Toshiba	Z02W2.2V	02DZ8.2	Toshiba	KDZ8.2V	DZD7.5	Sanyo	Z02W7.5V	MA3047	Panasonic	Z02W4.7V
02CZ2.4	Toshiba	Z02W2.4V	02DZ9.1	Toshiba	KDZ9.1V	DZD8.2	Sanyo	Z02W8.2V	MA3051	Panasonic	Z02W5.1V
02CZ2.7	Toshiba	Z02W2.7V	1S2836	NEC	KDS181	DZD9.1	Sanyo	Z02W9.1V	MA3056	Panasonic	Z02W5.6V
02CZ3.0	Toshiba	Z02W3.0V	1S2838	NEC	KDS184	DZD10	Sanyo	Z02W10V	MA3062	Panasonic	Z02W6.2V
02CZ3.3	Toshiba	Z02W3.3V	1SS123	NEC	KDS226	DZD11	Sanyo	Z02W11V	MA3068	Panasonic	Z02W6.8V
02CZ3.6	Toshiba	Z02W3.6V	1SS181	Toshiba	KDS181	DZD12	Sanyo	Z02W12V	MA3075	Panasonic	Z02W7.5V
02CZ3.9	Toshiba	Z02W3.9V	1SS184	Toshiba	KDS184	DZD13	Sanyo	Z02W13V	MA3082	Panasonic	Z02W8.2V
02CZ4.3	Toshiba	Z02W4.3V	1SS187	Toshiba	KDS187	DZD15	Sanyo	Z02W15V	MA3091	Panasonic	Z02W9.1V
02CZ4.7	Toshiba	Z02W4.7V	1SS193	Toshiba	KDS193	DZD16	Sanyo	Z02W16V	MA3100	Panasonic	Z02W10V
02CZ5.1	Toshiba	Z02W5.1V	1SS196	Toshiba	KDS196	DZD18	Sanyo	Z02W18V	MA3110	Panasonic	Z02W11V
02CZ5.6	Toshiba	Z02W5.6V	1SS220	NEC	KDS193	DZD20	Sanyo	Z02W20V	MA3120	Panasonic	Z02W12V
02CZ6.2	Toshiba	Z02W6.2V	1SS222	NEC	KDS187	DZD22	Sanyo	Z02W22V	MA3130	Panasonic	Z02W13V
02CZ6.8	Toshiba	Z02W6.8V	1SS226	Toshiba	KDS226	DZD24	Sanyo	Z02W24V	MA3150	Panasonic	Z02W15V
02CZ7.5	Toshiba	Z02W7.5V	1SS300	Toshiba	KDS120	HSM123	Renesas	KDS226	MA3160	Panasonic	Z02W16V
02CZ8.2	Toshiba	Z02W8.2V	1SS301	Toshiba	KDS121	HSM221	Renesas	KDS193	MA3180	Panasonic	Z02W18V
02CZ9.1	Toshiba	Z02W9.1V	1SS312	Toshiba	KDS112	HSM223	Renesas	KDS187	MA3200	Panasonic	Z02W20V
02CZ10	Toshiba	Z02W10V	1SS314	Toshiba	KDS114	HSM2836	Renesas	KDS181	MA3220	Panasonic	Z02W22V
02CZ11	Toshiba	Z02W11V	1SS318	Rohm	KDS114	HSM2838	Renesas	KDS184	MA3240	Panasonic	Z02W24V
02CZ12	Toshiba	Z02W12V	1SV149	Toshiba	KDV149	HZM5A	Renesas	Z02W4.3V	MMBZ5229B	Onsemi	Z02W4.3V
02CZ13	Toshiba	Z02W13V	1SV153	Toshiba	KDV153	HZM5B	Renesas	Z02W4.7V	MMBZ5230B	Onsemi	Z02W4.7V
02CZ15	Toshiba	Z02W15V	1SV172	Rohm	KDV173	HZM5C	Renesas	Z02W5.1V	MMBZ5231B	Onsemi	Z02W5.1V
02CZ16	Toshiba	Z02W16V	DA116	Rohm	KDS187	HZM6A	Renesas	Z02W5.6V	MMBZ5232B	Onsemi	Z02W5.6V
02CZ18	Toshiba	Z02W18V	DA119	Rohm	KDS196	HZM6C	Renesas	Z02W6.2V	MMBZ5234B	Onsemi	Z02W6.2V
02CZ20	Toshiba	Z02W20V	DA204K	Rohm	KDS226	HZM7A	Renesas	Z02W6.8V	MMBZ5235B	Onsemi	Z02W6.8V
02CZ22	Toshiba	Z02W22V	DAN202K	Rohm	KDS184	HZM7C	Renesas	Z02W7.5V	MMBZ5236B	Onsemi	Z02W7.5V
02CZ24	Toshiba	Z02W24V	DAN202U	Rohm	KDS121	HZM9A	Renesas	Z02W8.2V	MMBZ5237B	Onsemi	Z02W8.2V
02DZ2.0	Toshiba	KDZ2.0V	DAN209S	Rohm	KDS201	HZM9B	Renesas	Z02W9.1V	MMBZ5239B	Onsemi	Z02W9.1V
02DZ2.2	Toshiba	KDZ2.2V	DAP202K	Rohm	KDS181	HZM11A	Renesas	Z02W10V	MMBZ5240B	Onsemi	Z02W10V
02DZ2.4	Toshiba	KDZ2.4V	DAP202U	Rohm	KDS120	HZM11B	Renesas	Z02W11V	MMBZ5241B	Onsemi	Z02W11V
02DZ2.7	Toshiba	KDZ2.7V	DCA010	Sanyo	KDS181	HZM12A	Renesas	Z02W12V	MMBZ5242B	Onsemi	Z02W12V
02DZ3.0	Toshiba	KDZ3.0V	DCB010	Sanyo	KDS184	HZM12B	Renesas	Z02W13V	MMBZ5243B	Onsemi	Z02W13V
02DZ3.3	Toshiba	KDZ3.3V	DCC010	Sanyo	KDS226	HZM15	Renesas	Z02W15V	MMBZ5245B	Onsemi	Z02W15V
02DZ3.6	Toshiba	KDZ3.6V	DSA010	Sanyo	KDS187	HZM16	Renesas	Z02W16V	MMBZ5246B	Onsemi	Z02W16V
02DZ3.9	Toshiba	KDZ3.9V	DSB010	Sanyo	KDS193	HZM18	Renesas	Z02W18V	MMBZ5248B	Onsemi	Z02W18V
02DZ4.3	Toshiba	KDZ4.3V	DSD010	Sanyo	KDS196	HZM20	Renesas	Z02W20V	MMBZ5250B	Onsemi	Z02W20V
02DZ4.7	Toshiba	KDZ4.7V	DZD4.3	Sanyo	Z02W4.3V	HZM22	Renesas	Z02W22V	MMBZ5251B	Onsemi	Z02W22V
02DZ5.1	Toshiba	KDZ5.1V	DZD4.7	Sanyo	Z02W4.7V	HZM24	Renesas	Z02W24V	MMBZ5252B	Onsemi	Z02W24V
02DZ5.6	Toshiba	KDZ5.6V	DZD5.1	Sanyo	Z02W5.1V	MA151K	Panasonic	KDS193	SVC321SPA	Sanyo	KDV149
02DZ6.2	Toshiba	KDZ6.2V	DZD5.6	Sanyo	Z02W5.6V	MA151WA	Panasonic	KDS181			
02DZ6.8	Toshiba	KDZ6.8V	DZD6.2	Sanyo	Z02W6.2V	MA151WK	Panasonic	KDS184			

SBD

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
1SS357	Toshiba	KDR357	D1FH3	Shindengen	SMAB33	SB01-05CP	Sanyo	KDR105S	SS14	GS	SMAB14
1SS378	Toshiba	KDR378	MA729	Panasonic	KDR729	SFPA-53	Sanken	SMAB13	SS16	Fairchild	SMAB16
B130	Liteon	SMAB13	MBRA130LT3	Onsemi	SMAB13	SFPA-73	Sanken	SMAB33	SS16	GS	SMAB16
B130B	Liteon	SMAB13	MBRA140LT3	Onsemi	SMAB14	SFPB-54	Sanken	SMAB14	U1FWJ44L	Toshiba	SMAB13
B140	Liteon	SMAB14	RB053L-30	Rohm	SMAB33	SFPJ-53	Sanken	SMAB13	U1FWJ44M	Toshiba	SMAB13
B140B	Liteon	SMAB14	RB060L-40	Rohm	SMAB34	SFPJ-73	Sanken	SMAB33	U1FWJ44N	Toshiba	SMAB13
B160	Liteon	SMAB16	RB160L-40	Rohm	SMAB14	SPB-G34S	Sanken	SMAB34	U1GWJ44	Toshiba	SMAB14
B160B	Liteon	SMAB16	RB160L-60	Rohm	SMAB16	SS13	Fairchild	SMAB13			
B330A	Liteon	SMAB33	RB751S-40	Rohm	KDR377E	SS13	GS	SMAB13			
B340A	Liteon	SMAB34	SB007T03Q	Sanyo	KDR731	SS14	Fairchild	SMAB14			











FRD

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
10DL2CZ47A	Toshiba	U10A2CIC	ESAC25M-02N	Fuji	F1B2CAI	FMU-22S	Sanken	F1B2CCI	US1G	Liteon	SMAU1G
1SR56-400	Rohm	SMAU1G	FMG-22S	Sanken	U10A2CIC	FMX-22S	Sanken	U10A2CIC	US1G	GS	SMAU1G
D1FL40	Shindengen	SMAU1G	FML-22S	Sanken	U10A2CIC	SF10LC20U	Shindengen	U10A2CIC	US1J	Liteon	SMAU1J
ESAC25M-02C	Fuji	F1B2CCI	FMU-22R	Sanken	F1B2CAI	U1GU44	Toshiba	SMAU1G	US1J	GS	SMAU1J

TVS







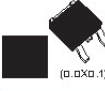




Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
PSD03	Semtech	PG03JSUSC	SMS05	Semtech	PG05HBTS6	SD12C	Semtech	PG12FBUSC	SMS24	Semtech	PG24FBTS6
SD05	Semtech	PG05HSUSC	PSMS05	Protek		PSD12C	Protek		PSMS24	Protek	
PSD05	Protek		MSQA6V1W5T2	Onsemi	PG05GBUSV	SM12	Semtech	SL24	Semtech	PG24BUS23	
SL05	Semtech	RSA6.1EN	Rohm	MMBZ15VALT1		Onsemi	PG12GAS23	PSOT24LC	Protek		
PSOT05LC	Protek	PG05BUS23	SM05	Semtech	MMBZ15VDA	GS	SD024C	Semtech	PG24EBUSC		
SD05C	Semtech	PG05GBUSC	PSOT05C	Protek	PG05HAS23	SDC15	Semtech	SM24	Semtech	PG24FAS23	
PSD05C	Protek		MMBZ6V8ALT1	Onsemi		MMBZ15VDT1	Onsemi	PG12GCS23	PSOT24C		Protek
SMF05	Semtech	SM05	Micro Semi	MMBZ15VDC	GS	SM24	Micro Semi				
PSMF05	Protek	PG05GBUSV	SL12	Semtech	PG12BUS23	SD12	Semtech	MMBZ27VDA	GS		
GMF05	Vishay	PSOT12LC	Protek	PSD12		Protek	PG12GSUSC				

$V_{DSS} : 7V \sim 40V$

V_{DSS} [V]	I_D [A]	VSM	ESM	TES6	USM	USQ	US6	TSQ	SOT-23	FLP-8	DKPAK(1)	
		(Unit: mm)										
		 ■ (1.2 X0.8)	 ■ (1.0 X0.8 X0.8)	 ■ (1.0 X1.2)	 ■ (2.0 X1.2 X0.2)	 ■ (2.0 X1.2 X0.2)	 ■ (2.0 X1.2 X0.2)	 ■ (2.0 X1.2 X0.2)	 ■ (2.0 X1.0 X0.5)	 ■ (0.8 X0.8 X0.5)	 ■ (0.8 X0.1)	
7	0.01					KTK920U		KTK920T	KTK919S			
						KTK921U		KTK921T				
						KTK920BU						
20	0.4	KML0D4NP20V										
	0.6			KML0D6NP20EA								
	3								KMA3D0N20SA			
	3.6								KMA3D6N20SA			
	6.5											
	7											
-20	-0.3	KML0D3P20V										
	-2.4								KMA2D4P20SA			
	-3.7								KMA3D7P20SA			
30	0.05		KTK5131E									
	0.1	KTK5132V	KTK5132E		KTK5132U				KTK5132S			
			KTK7132E									
	0.2								KTK5134S			
	4								KMB4D0N30SA			
	6									KMB6D0N30QB		
										KMB6D0N30QA		
	7									KMB7D0N30QA		
	14									KU2303Q		
	16									KU2307Q		
	17											
68										KU2303D		
79										KU2307D		
35	6									KMB6D0N35QB		
										KMB6D0N35QA		
-30	-0.05	KTJ6131E	KTJ6131E									
	-3								KMB3D0P30SA			
	-7.1									KMB7D1DE30QA		
	-8									KMB8D0P30QA		
	-10									KMB010P30QA		
	-14									KMB014P30QA		
40	3.5								KMB3D5N40SA			
	6									KMD6D0N40Q		
	7									KMB7D0N40QB		
	35											KMB035N40DC
												KMB035N40DB
	54											KMB054N40DB
											KMB054N40DC	
-40	-7.5										KMD7D5P40QA	

Note) * : Under development

V_{DSS} : 60V ~ 800V

V _{DSS} [V]	I _D [A]	ESM	USM	US6	SOT-23	SOT-223	FLP-8	DPAK(1)	TO-92	IPAK(1)	TO-220AB	TO-220IS(1)
		 (1.00X0.00)	 (2.0X1.20)	 (2.0X1.20)	 (2.93X1.3)	 (0.0X3.0)	 (0.00X3.90)	 (0.00X0.1)				
60	0.115				2N7002A							
	0.2								2N7000A			
	0.3	2N7002K	2N7002KU	2N7002KDU	2N7002KA							
	2				KMB2D0N60SA							
	4.5							KMB4D5DN60QA				
	8.2							KMB8D2N60QA				
	50										KF50N06P	
75	130										KU035N06P	
	170										KU024N06P	
											KU047N08P	
100	1.7					KU3600N10W						
	5							*KU360N10D				
	27							KU310N10D				
	34										KU310N10P	
	50											KU086N10F
	95											KU086N10P
	150											KU045N10P
200	1					KF4N20LW						
	3.6									KF4N20LI		
250	7.5							KF9N25D				
	9											KF9N25F
400	2					KF3N40W						
	2.2							KF3N40D		KF3N40I		
	4.3							*KF5N40D				
500 (525)	2.5							KF3N50DZ		KF3N50IZ		
	3							KF3N50DS				KF3N50FZ
	4.3							KF5N50DZ		KF5N50IZ		
								KF5N50DS				
								KF5N50S(525V)				
	5										KF5N50PZ	KF5N50FZA
												KF5N50FSA
												KF5N50F(525V)
	5.5							KF7N50D				
600	7										KF7N50P	KF7N50F
	9										KF9N50P	KF9N50F
	11										KF11N50P	KF11N50F
	13										KF13N50P	KF13N50F
	1							KF1N60D		KF1N60I		
	2							KF2N60D		KF2N60I		
	2.3							KF3N60D		KF3N60I		
	3											KF3N60F
	3.5							KF5N60D		KF5N60I		
	4.5										KF5N60P	KF5N60F
5.0							KF6N60D		KF6N60I			
650	6											KF6N60F
	7											KF7N60P
	8											KF8N60P
	10											KF10N60P
	12											KF12N60P
	3.6											KF4N65P
	4.2											KF4N65F
	5							KF5N65D				
	7										KF7N65P	KF7N65F
	680	7										
10												KF10N68F
12												*KF12N68F
800	2.7							KF3N80D		KF3N80I		
	3											KF3N80F
	4											*KF4N80F
	7											KF7N80F

Note) * : Under development

MOSFET

■ S - MOSFET

Type No.	Mark	Internal circuit (Top view)	Max. Ratings				I _{DSS} (μA)			V _{th} (V)				R _{DS(ON)} (Ω)			Package	Outline (Unit: mm)
			V _{DS} (V)	V _{GSS} (V)	I _D (mA)	P _D (mW)	Max.	V _{DS} (V)	V _{GSS} (V)	Min.	Max.	V _{DS} (V)	I _D (mA)	Max.	V _{GSS} (V)	I _D (mA)		
KTK5131E	KA		30	±20	50	100	1	30	0	0.5	1.5	3	0.1	40	2.5	10	ESM	VSM
KTK5132V	KB		30	±20	100	100	1	30	0	0.5	1.5	3	0.1	7	2.5	10	VSM	
KTK5132E	KB		30	±20	100	100	1	30	0	0.5	1.5	3	0.1	7	2.5	10	ESM	ESM
KTK7132E	AL		30	±20	100	200	1	30	0	0.5	1.5	3	0.1	7	2.5	10	ESM	
KTK5132U	KB		30	±20	100	200	1	30	0	0.5	1.5	3	0.1	7	2.5	10	USM	USM
KTK5132S	KB		30	±20	100	200	1	30	0	0.5	1.5	3	0.1	7	2.5	10	SOT-23	
KTK5134S	KD		30	±20	200	200	1	30	0	0.5	1.5	3	0.1	2	2.5	50	SOT-23	SOT-23
2N7002A	WB		60	±20	115	200	1	60	0	1	2.5	V _{GS}	0.25	7.5	5	50	SOT-23	
2N7000A	-		60	±20	200	400	1	48	0	0.8	3	V _{GS}	0.5	5.3	4.5	75	TO-92	TO-92
KTJ6131V	M1		-30	±20	-50	100	-1	-30	0	-0.5	-1.5	-3	-0.1	40	-2.5	-10	VSM	
KTJ6131E	EB	-30	±20	-50	100	-1	-30	0	-0.5	-1.5	-3	-0.1	40	-2.5	-10	ESM	ESM 	
2N7002KA (ESD Protected 2000V)	2P		60	±20	300	350	1	60	0	1.1	2.35	V _{GS}	0.25	2.7	5	50		SOT-23
2N7002K	Z1		60	±20	300	100	1	60	0	1.0	2.3	V _{GS}	0.25	2.4	10	250	ESM	ESM
2N7002KU	7K		60	±20	300	200	1	60	0	1.0	2.35	V _{GS}	0.25	1.8	10	500	USM	
2N7002KDU	DU		60	±20	300	200	1	60	0	1.0	2.35	V _{GS}	0.25	3.4	10	500	US6	US6

■ RF MOSFET

Type No.	Mark	Max. Ratings			S 21(ON) 2 (dB)			S 21(OFF) 2 (dB)			Package	Outline (Unit: mm)
		V _{DG} (V)	I _D (mA)	P _C (mW)	Max.	V _{SC} (V)	f (GHz)	Min.	V _{SC} (V)	f (GHz)		
KTK919S	M1	7	10	150	-3	0	≦ 0.86	-30	5	≦ 0.86	SOT-23	SOT-23
KTK920U	MA	7	10	200	-2	0	≦ 1	-30	5	≦ 1	USQ	
KTK921U	MC	7	10	200	-2.5	0	≦ 1	-30	3.3	≦ 1	USQ	USQ
KTK920BU	MB	7	10	200	-2	0	≦ 1	-30	5	≦ 1	USQ	
KTK920T	MA	7	10	900	-2	0	≦ 1	-30	5	≦ 1	TSQ	TSQ
KTK921T	MC	7	10	900	-2.5	0	≦ 1	-30	3.3	≦ 1	TSQ	

Low Voltage MOSFET

Type No.	Internal circuit (Top view)	Max. Ratings			V _{th} (V)				R _{DS(on)} (mΩ)				Q _g (nC)		Package	Outline (Unit: mm)
		BV _{DSS} (V)	I _D (A)	P _D (W)	Min.	Max.	V _{DS} (V)	I _D (A)	Typ.	Max.	V _{GS} (V)	I _D (A)	Typ.	V _{GS} (V)		
*KML0D4N20TV		20	0.4	0.15	0.45	1.0	V _{GS}	250μA	410	700	4.5	0.4	0.75	4.5	TVSM	
KML0D4N20V		20	0.4	0.15	0.45	1.0	V _{GS}	250μA	410	700	4.5 / 4.5	0.4	0.75	4.5	VSM	
KMA3D0N20SA		20	3	1.25	0.5	1.5	V _{GS}	250μA	50	60	4.5	2.5	4.7	4.5	SOT-23	
KMA3D6N20SA		20	3.6	1.25	0.6	1.5	V _{GS}	250μA	32	45	4.5	2.5	9.1	4.5	SOT-23	
*KML0D3P20TV		-20	-0.3	0.15	-0.45	-1.0	V _{GS}	-250μA	800	1200	-4.5	-0.5	1.5	-4.5	TVSM	
KML0D3P20V		-20	-0.3	0.15	-0.45	-1.0	V _{GS}	-250μA	800	1200	-4.5	-0.5	1.5	-4.5	VSM	
KMA2D4P20SA		-20	-2.4	1.25	-0.6	-1.5	V _{GS}	-250μA	83	100	-4.5	-2.4	4	-4.5	SOT-23	
KMA3D7P20SA		-20	-3.7	1.25	-0.40	-0.95	V _{GS}	-250μA	50	65	-4.5	-3.7	8	-5.0	SOT-23	
KML0D6NP20EA		20 / -20	0.60 / -0.39	0.28	0.45 / -0.45	1.0 / -1.0	V _{GS}	250μA / -250μA	410 / 800	700 / 1200	4.5 / 4.5	0.6 / -0.35	0.75 / 1.50	4.5 / -4.5	TES6	
KMB4D0N30SA		30	4	1.25	1.0	3.0	V _{GS}	250μA	38	47	10	3.5	6	10	SOT-23	
KU2303Q		30	14	2.5	1.0	3.0	V _{GS}	250μA	6.8	8.2	10	14	18.4	10	FLP-8	
KU2307Q		30	16	2.5	1.0	3.0	V _{GS}	250μA	5.3	6.3	10	16	24.6	10	FLP-8	
KU2303D		30	68	52	1.0	3.0	V _{GS}	250μA	5.7	6.8	10	30	18.4	10	DPAK(1)	
KU2307D		30	79	57	1.0	3.0	V _{GS}	250μA	4.5	5.4	10	30	24.6	10	DPAK(1)	
KMB6D0DN30QB		30	6	2	1.3	3.0	V _{GS}	250μA	24	28	10	6.0	7.0	10	FLP-8	
KMB6D0DN35QB		35	6	2	1.0	3.0	V _{GS}	250μA	24	28	10	6.0	7.0	10	FLP-8	
KMB3D0P30SA		-30	-3	1.25	-1.0	-3.0	V _{GS}	-250μA	64	80	-10	-3.0	10	-10	SOT-23	
KMB8D0P30QA		-30	-8	2.5	-1.0	-3.0	V _{GS}	-250μA	15	20	-10	-8.0	28.2	-10	FLP-8	
KMB010P30QA		-30	-10	2	-1.3	-2.5	V _{GS}	-250μA	12	20	-10	-10	44.6	-10	FLP-8	
KMB014P30QA		-30	-14	2.5	-1.4	-2.6	V _{GS}	-250μA	8.5	10	-10	-12	65.5	-10	FLP-8	
KMB7D1DP30QA		-30	-7.1	1.1	-1.0	-3.0	V _{GS}	-250μA	20	25	-10	-7.1	33	-10	FLP-8	
KMB7D0NP30QA		30 / -30	7.0 / -5.0	2.0	1.0 / -1.0	3.0 / -3.0	V _{GS}	250μA / -250μA	8 / 35	23.5 / 45.5	10 / -10	7.0 / 5.0	164 / 13	10 / -10	FLP-8	

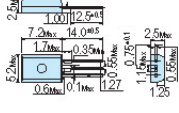
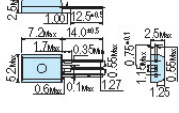
Note) * : Under development

Low Voltage MOSFET

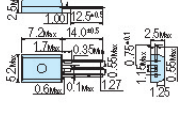
Type No.	Internal circuit (Top view)	Max. Ratings			V _{th} (V)				R _{DS(on)} (mΩ)				Q _g (nC)		Package	Outline (Unit: mm)
		BV _{DSS} (V)	I _D (A)	P _D (W)	Min.	Max.	V _{DS} (V)	I _D (A)	Typ.	Max.	V _{GS} (V)	I _D (A)	Typ.	V _{GS} (V)		
KMB3D5N40SA		40	3.5	1.25	1.0	3.0	V _{GS}	250μA	45	58	10	3.5	10	10	SOT-23	 SOT-23
KMB035N40DC		40	35	42	1.0	3.0	V _{GS}	250μA	14	17.5	10	18	12.2	10	DPAK(1)	
KMB035N40DB		40	35	43	1.7	3.0	V _{GS}	250μA	8.0	12	10	18	20.2	10	DPAK(1)	
KMB054N40DC		40	54	45	1.7	2.6	V _{GS}	250μA	6.5	8.5	10	14	25.4	10	DPAK(1)	
KMB054N40DB		40	54	45	1.0	3.0	V _{GS}	250μA	7.0	8.5	10	14	37	10	DPAK(1)	
KMD6D0DN40Q		40	6	2	1.0	2.5	V _{GS}	250μA	28	38	10	6.0	8.0	10	FLP-8	 SOT-223
KMB7D0DN40QB		40	7	2	1.0	2.5	V _{GS}	250μA	20	25	10	6.0	14	10	FLP-8	 FLP-8
KMD7D5P40QA		40	-7.5	2.0	-1.0	-3.0	V _{GS}	250μA	24	30	-10	-3.8	27	-10	FLP-8	 FLP-8
KMB2D0N60SA		60	2	1.25	1.5	3.0	V _{GS}	250μA	125	160	10	2	4.8	10	SOT-23	 DPAK(1)
KMB8D2N60QA		60	8.2	3.1	1.0	3.0	V _{GS}	250μA	16.3	22	10	8.2	47.6	10	FLP-8	
KMB4D5DN60QA		60	4.5	2	1.0	3.0	V _{GS}	250μA	46	56	10	4.5	85	10	FLP-8	
KU035N06P		60	160	167	2.0	4.0	V _{GS}	250μA	2.9	3.5	10	80	200	10	TO-220AB	
KU024N06P		60	200	192	2.0	4.0	V _{GS}	250μA	2.1	2.4	10	80	200	10	TO-220AB	
KU047N08P		75	130	167	2.0	4.0	V _{GS}	250μA	3.9	4.7	10	65	200	10	TO-220AB	
KU034N08P		75	170	192	2.0	4.0	V _{GS}	250μA	3.0	3.4	10	80	185	10	TO-220AB	
*KU3600N10W		100	1.7	2.0	2.0	4.0	V _{GS}	250μA	300	360	10	0.8	4.2	10	SOT-223	
*KU3600N10D		100	5	22.7	2.0	4.0	V _{GS}	250μA	300	360	10	0.8	4.2	10	DPAK(1)	
KU310N10D		100	27	52	2.0	4.0	V _{GS}	250μA	25	31	10	13.5	49	10	DPAK(1)	
KU310N10P		100	34	83	2.0	4.0	V _{GS}	250μA	25	31	10	13.5	49	10	TO-220AB	
KU086N10F		100	50	50	2.0	4.0	V _{GS}	250μA	7.3	8.6	10	47.5	200	10	TO-220IS(1)	
KU086N10P		100	95	167	2.0	4.0	V _{GS}	250μA	7.3	8.6	10	47.5	200	10	TO-220AB	
KU045N10P	100	150	192	2.0	4.0	V _{GS}	250μA	3.9	4.5	10	75	200	10	TO-220AB		
*KU110N15P	150	-	-	2.0	4.0	V _{GS}	250μA	-	11	10	-	-	-	TO-220AB		

Note) *: Under development

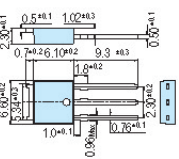
High Voltage MOSFET (FreshFET)

Type No.	Max. Ratings			R _{DS(ON)} (Ω)				Q _g (nC)		Package	Outline (Unit: mm)
	BV _{DSS} (V)	I _D (A)	P _D (W)	Typ.	Max.	V _{GS} (V)	I _D (A)	Typ.	V _{GS} (V)		
KF1N60L	600	1	-	8	10	10	0.5	4.0	10	TO-92L	
KF1N60D	600	1	28	8	10	10	0.5	4.0	10	DPAK(1)	
KF1N60I	600	1	28	8	10	10	0.5	4.0	10	IPAK(1)	
*KF2N60L	600	2.0	-	3.7	4.4	10	1	6.0	10	TO-92L	
KF2N60D	600	2.0	40.3	3.7	4.4	10	1	6.0	10	DPAK(1)	
KF2N60I	600	2.0	40.3	3.7	4.4	10	1	6.0	10	IPAK(1)	
KF2N60F	600	2	28.4	3.7	4.4	10	1	6.0	10	TO-220IS(1)	
KF3N60D	600	2.3	44.6	2.8	3.3	10	1.2	8.5	10	DPAK(1)	
KF3N60I	600	2.3	44.6	2.8	3.3	10	1.2	8.5	10	IPAK(1)	
KF3N60F	600	3	31	2.8	3.3	10	1.2	8.5	10	TO-220IS(1)	
*KF4N60F	600	4	-	2.1	2.5	10	2	-	10	TO-220IS(1)	
KF5N60D	600	3.5	59.5	1.7	2	10	2.5	11	10	DPAK(1)	
KF5N60I	600	3.5	59.5	1.7	2	10	2.5	11	10	IPAK(1)	
KF5N60P	600	4.5	83	1.7	2	10	2.5	11	10	TO-220AB	
KF5N60F	600	4.5	38	1.7	2	10	2.5	11	10	TO-220IS(1)	
KF6N60D	600	5.0	69.4	1.2	1.4	10	2.5	16	10	DPAK(1)	
KF6N60I	600	5.0	69.4	1.2	1.4	10	2.5	16	10	IPAK(1)	
KF6N60F	600	6	41.7	1.2	1.4	10	3	16	10	TO-220IS(1)	
KF7N60P	600	7	96	0.95	1.2	10	3.5	19	10	TO-220AB	
KF7N60F	600	7	44.6	0.95	1.2	10	3.5	19	10	TO-220IS(1)	
KF8N60P	600	8	154	0.85	1.05	10	4	24	10	TO-220AB	
KF8N60F	600	8	50	0.85	1.05	10	4	24	10	TO-220IS(1)	
KF10N60P	600	10	178	0.59	0.73	10	5	26	10	TO-220AB	
KF10N60F	600	10	46	0.59	0.73	10	5	26	10	TO-220IS(1)	
KF12N60P	600	12	215	0.51	0.6	10	6	36	10	TO-220AB	
KF12N60F	600	12	49.8	0.51	0.6	10	6	36	10	TO-220IS(1)	
KF4N65P	650	3.6	83.3	2.1	2.5	10	1.8	12	10	TO-220AB	
KF4N65F	650	3.6	37.9	2.1	2.5	10	1.8	12	10	TO-220IS(1)	
KF5N65D	650	4.4	69.4	1.5	1.75	10	2.1	14.5	10	DPAK(1)	
KF5N65I	650	4.4	69.4	1.5	1.75	10	2.1	14.5	10	IPAK(1)	
KF5N65F	650	5	41.7	1.5	1.75	10	2.5	14.5	10	TO-220IS(1)	
KF7N65P	650	7	160	1.0	1.2	10	3.5	24	10	TO-220AB	
KF7N65F	650	7	52	1.0	1.2	10	3.5	24	10	TO-220IS(1)	
KF7N68F	680	7	52	1.0	1.25	10	3.5	24	10	TO-220IS(1)	
KF10N68F	680	10	46	0.76	0.95	10	5	24	10	TO-220IS(1)	
*KF12N68F	680	12	49.8	-	0.71	10	6	-	10	TO-220IS(1)	
KF3N80D	800	2.7	69.4	3.4	4.2	10	1.3	12	10	DPAK(1)	
KF3N80I	800	2.7	69.4	3.4	4.2	10	1.3	12	10	IPAK(1)	
KF3N80F	800	3.0	32	3.4	4.2	10	1.5	12	10	TO-220IS(1)	
KF4N80F	800	4.0	43	2.2	2.6	10	2.0	17	10	TO-220IS(1)	
KF7N80F	800	7	44.6	1.2	1.45	10	3.5	45	10	TO-220IS(1)	

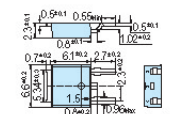
TO-92L



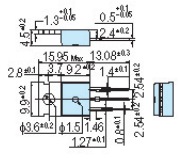
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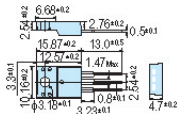
DPAK(1)



TO-220AB



TO-220IS(1)



Note) * : Under development

■ 1 in 1 IGBT Module.

Type No.	BV _{CES} (V)	I _C (A)		V _{CE(SAT)} (V)	I _{CP} (A)	IGBT Type	Package	Outline (Unit: mm)
		@Tc=25°C	@Tc=80°C					
GM400S17AL	1700	560	400	2.4	800	SPT/PT	GMS 01	

■ 2 in 1 IGBT Module

Type No.	BV _{CES} (V)	I _C (A)		V _{CE(SAT)} (V)	I _{CP} (A)	IGBT Type	Package	Outline (Unit: mm)
		@25°C	@80°C					
GM75HB06BL	600	100	75	1.8	150	Trench NPT	GMB 01	
GM100HB06BL	600	130	100	2.1	200			
GM150HB06CL	600	200	150	2.1	300			
GM200HB06CL	600	260	200	2.1	400			
GM75HB12BL	1200	100	75	1.9	150	SPT+	GMB 01	
GM100HB12BL	1200	130	100	1.9	200			
GM150HB12CL	1200	260	150	2.0	300			
GM200HB12CL	1200	340	200	1.9	400			
GM300HB12CL	1200	450	300	2.1	600			

■ 6 in 1, 7 in 1 IGBT Module

Type No.	Rectifier		Inverter				Brake Chopper		NTC	Package	Outline (Unit: mm)
	V _{RRM} (V)	I _{FAV} @80°C (A)	V _{CES} (V)	I _C @80°C (A)	V _{CE(SAT)} Typ(V)	I _F @125°C (A)	V _{CES} (V)	I _C @80°C (A)			
Six Pack	GM35TB12EL *	-	-	1200	35	1.9	35	-	-	○	
	GM10TB06EN *	-	-	600	10	1.9	10	-	-	○	
	GM15TB06EN *	-	-	600	15	2.1	15	-	-	○	
	GM30TB06EN*	-	-	600	30	2.1	30	-	-	○	
GM40TB06EN*	-	-	600	40	1.95	50	-	-	○		
Seven Pack	GM10RTCT06DTN*	1600	29	600	10	1.9	10	600	8	○	
	GM15RTCT06DTN*	1600	29	600	15	2.1	15	600	9.6	○	
	GM20RTCT06DTN*	1600	29	600	20	2.1	20	600	12	○	
	GM30RTCT06DTN*	1600	37	600	30	2.1	30	600	16	○	
	GM10RTCT12DTN*	1600	37	1200	10	2.4	10	1200	12	○	
GM15RTCT12DTN*	1600	37	1200	15	2.4	15	1200	12	○		

Note) * : Under development

■ 2 in 1 MOSFET Module

Type No.	V _{DSS} (V)	I _D (A)		R _{DS(on)} (mΩ)	MOSFET Type	Package	Outline (Unit: mm)
		@Tc=25°C	@Tc=80°C				
FMMT300	75	836	480	0.9	Trench	FMT02	
FMMT311	100	870	540	0.9			
FMMT312	150	860	480	0.9			
FM400HB1D5C(R)	150	650	450	2.0		FMB02	
FM400CD1D5C	150	650	450	2.3			
FM200HB1D5B	150	340	240	4.2		FMB01	
FM200CD1D5B	150	340	240	4.2			
FM200HBD75B	75	340	240	2.2			
FM200CDD75B	75	340	240	2.2			

■ 2 in 1 DIODE Module

Type No.	V _R (V)	I _{RM} (mA)	I _C (A)	V _F		Package	Outline (Unit: mm)
		@Tc=25°C		Typ (V)	@I _F (A)		
DM200CK02AS	200	0.5	200	0.9	100	DMB01	
DM200CK04F *	400	2.0	200	1.05	200	DMB02	
DM200CK06F *	600	8.0	200	1.5	200		

Industrial & General Purpose IC

OP Amp.

Type No.	Function	Operating Voltage(V)	Package	Outline (Unit : mm)
KIA358F	Dual OP Amp.	± 18 or 36	FLP-8	
LM358F		± 16 or 32		
KIA4558F	Dual Low Noise OP Amp.	± 18 or 36		
KIA324F	Quad OP Amp.	± 18 or 36	FLP-14	
KIA358P	Dual OP Amp.	± 18 or 36	DIP - 8	
KIA4558P	Dual Low Noise OP Amp.	± 18 or 36		
KIA324P	Quad OP Amp.	± 18 or 36	DIP-14	
KIA75S358F	Single OP Amp.	± 18 or 36	TSV	
KIA75S558F	Single Low Noise OP Amp.			

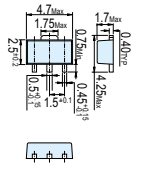
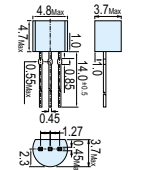
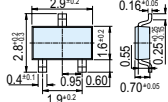
Comparator

Type No.	Function	Operating Voltage (V)	Package	Outline (Unit : mm)
KIA339F	Quad Voltage Comparator	± 18 or 36	FLP-14	
KIA339P	Quad Voltage Comparator	± 18 or 36	DIP-14	
KIA393F	Dual Voltage Comparator	± 18 or 36	FLP-8	
LM393F		± 16 or 32		
KIA393P	Dual Voltage Comparator	± 18 or 36	DIP-8	
KIA75S393F	Single Voltage Comparator	± 18 or 36	TSV	

Voltage Stabilizer

Type No.	Mark	Function	Voltage Reference Tolerance (%)	Operating Voltage (V)	Package	Outline (Unit : mm)
KIA431A	-	Shunt Regulator	1	2.5 36		
KIA2431AP	-	Shunt Regulator	1	1.24 16		
KIA431	-	Shunt Regulator	2.2	2.5 36		
KIA431BF	3C	Shunt Regulator	0.5	2.5 36	SOT-89	
KIA431AF	3B	Shunt Regulator	1	2.5 36		
KIA431F	3A	Shunt Regulator	2.2	2.5 36		
KIA431BM	43B	Shunt Regulator	0.5	2.5~36	SOT-23	
KIA431AM	43A	Shunt Regulator	1	2.5~36		
KIA2431BM	24C	Shunt Regulator	0.5	1.24~16		
KIA2431AM	24B	Shunt Regulator	1	1.24~16		

Voltage Detector (Active Low)

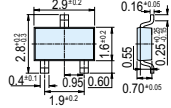
Type No.	Mark	Max. Ratings		Detecting Volts. V_S (V)			Low-Level Output Volts. Vol (V)	Hysteresis Volts. V_S (mV)			Circuit Current at on. I_{CCL} (μA)		Circuit Current at off. I_{CCH} (μA)		Package	Outline (Unit : mm)
		V_{CC} (V)	P_D (mW)	$(R_L=200, V_{OL} 0.4V)$			$R_L=200$ Max.	$R_L=200$			$V_{CC} = V_{SMIN} - 0.05V$		$V_{CC} = 5.25V$			
				Min.	Typ.	Max.		Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.		
KIA7019AF	6A	-0.3 +15.0	500	1.75	1.9	2.05	0.4	30	50	100	300	500	30	50	SOT-89	
KIA7021AF	6B	-0.3 +15.0	500	1.95	2.1	2.25	0.4	30	50	100	300	500	30	50		
KIA7023AF	6C	-0.3 +15.0	500	2.15	2.3	2.45	0.4	30	50	100	300	500	30	50		
KIA7025AF	6D	-0.3 +15.0	500	2.35	2.5	2.65	0.4	30	50	100	300	500	30	50		
KIA7027AF	6E	-0.3 +15.0	500	2.55	2.7	2.85	0.4	30	50	100	300	500	30	50		
KIA7029AF	6F	-0.3 +15.0	500	2.75	2.9	3.05	0.4	30	50	100	300	500	30	50		
KIA7031AF	6G	-0.3 +15.0	500	2.95	3.1	3.25	0.4	30	50	100	300	500	30	50		
KIA7032AF	6H	-0.3 +15.0	500	3.05	3.2	3.35	0.4	30	50	100	300	500	30	50		
KIA7033AF	6J	-0.3 +15.0	500	3.15	3.3	3.45	0.4	30	50	100	300	500	30	50		
KIA7034AF	6K	-0.3 +15.0	500	3.25	3.4	3.55	0.4	30	50	100	300	500	30	50		
KIA7035AF	6L	-0.3 +15.0	500	3.35	3.5	3.65	0.4	30	50	100	300	500	30	50		
KIA7036AF	6M	-0.3 +15.0	500	3.45	3.6	3.75	0.4	30	50	100	300	500	30	50		
KIA7039AF	6N	-0.3 +15.0	500	3.75	3.9	4.05	0.4	30	50	100	300	500	30	50		
KIA7042AF	6P	-0.3 +15.0	500	4.05	4.2	4.35	0.4	30	50	100	300	500	30	50		
KIA7045AF	6R	-0.3 +15.0	500	4.35	4.5	4.65	0.4	30	50	100	300	500	30	50		
KIA7019AP	-	-0.3 +15.0	400	1.75	1.9	2.05	0.4	30	50	100	300	500	30	50	TO-92	
KIA7021AP	-	-0.3 +15.0	400	1.95	2.1	2.25	0.4	30	50	100	300	500	30	50		
KIA7023AP	-	-0.3 +15.0	400	2.15	2.3	2.45	0.4	30	50	100	300	500	30	50		
KIA7025AP	-	-0.3 +15.0	400	2.35	2.5	2.65	0.4	30	50	100	300	500	30	50		
KIA7027AP	-	-0.3 +15.0	400	2.55	2.7	2.85	0.4	30	50	100	300	500	30	50		
KIA7029AP	-	-0.3 +15.0	400	2.75	2.9	3.05	0.4	30	50	100	300	500	30	50		
KIA7031AP	-	-0.3 +15.0	400	2.95	3.1	3.25	0.4	30	50	100	300	500	30	50		
KIA7032AP	-	-0.3 +15.0	400	3.05	3.2	3.35	0.4	30	50	100	300	500	30	50		
KIA7033AP	-	-0.3 +15.0	400	3.15	3.3	3.45	0.4	30	50	100	300	500	30	50		
KIA7034AP	-	-0.3 +15.0	400	3.25	3.4	3.55	0.4	30	50	100	300	500	30	50		
KIA7035AP	-	-0.3 +15.0	400	3.35	3.5	3.65	0.4	30	50	100	300	500	30	50		
KIA7036AP	-	-0.3 +15.0	400	3.45	3.6	3.75	0.4	30	50	100	300	500	30	50		
KIA7039AP	-	-0.3 +15.0	400	3.75	3.9	4.05	0.4	30	50	100	300	500	30	50		
KIA7042AP	-	-0.3 +15.0	400	4.05	4.2	4.35	0.4	30	50	100	300	500	30	50		
KIA7045AP	-	-0.3 +15.0	400	4.35	4.5	4.65	0.4	30	50	100	300	500	30	50		
KIA7019AT	6A	-0.3 +15.0	350	1.75	1.9	2.05	0.4	30	50	100	300	500	30	50	TSM	
KIA7021AT	6B	-0.3 +15.0	350	1.95	2.1	2.25	0.4	30	50	100	300	500	30	50		
KIA7023AT	6C	-0.3 +15.0	350	2.15	2.3	2.45	0.4	30	50	100	300	500	30	50		
KIA7025AT	6D	-0.3 +15.0	350	2.35	2.5	2.65	0.4	30	50	100	300	500	30	50		
KIA7027AT	6E	-0.3 +15.0	350	2.55	2.7	2.85	0.4	30	50	100	300	500	30	50		
KIA7029AT	6F	-0.3 +15.0	350	2.75	2.9	3.05	0.4	30	50	100	300	500	30	50		
KIA7031AT	6G	-0.3 +15.0	350	2.95	3.1	3.25	0.4	30	50	100	300	500	30	50		
KIA7032AT	6H	-0.3 +15.0	350	3.05	3.2	3.35	0.4	30	50	100	300	500	30	50		
KIA7033AT	6J	-0.3 +15.0	350	3.15	3.3	3.45	0.4	30	50	100	300	500	30	50		
KIA7034AT	6K	-0.3 +15.0	350	3.25	3.4	3.55	0.4	30	50	100	300	500	30	50		
KIA7035AT	6L	-0.3 +15.0	350	3.35	3.5	3.65	0.4	30	50	100	300	500	30	50		
KIA7036AT	6M	-0.3 +15.0	350	3.45	3.6	3.75	0.4	30	50	100	300	500	30	50		
KIA7039AT	6N	-0.3 +15.0	350	3.75	3.9	4.05	0.4	30	50	100	300	500	30	50		
KIA7042AT	6P	-0.3 +15.0	350	4.05	4.2	4.35	0.4	30	50	100	300	500	30	50		
KIA7045AT	6R	-0.3 +15.0	350	4.35	4.5	4.65	0.4	30	50	100	300	500	30	50		

150mA Small Package CMOS LDO Voltage Regulator (On/Off Controllable)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (%/V)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)	
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Tj=25)			V _{IN} (V)	Ta=25		I _{OUT} (mA)	I _{OUT} (mA)	I _{OUT} (mA)					
				Min.	Typ.	Max.		Max.	Min.				Max.				
KIC3213MF12	5.5	0.15	0.4	-20(mV)	1.2	+20(mV)	2.5	0.1(%)	V _O +1	5.5	10	1	150	0.5	150	UDFN10104	
KIC3213MF13	5.5	0.15	0.4	-20(mV)	1.3	+20(mV)	2.5	0.1(%)	V _O +1	5.5	10	1	150	0.5	150		
KIC3213MF14	5.5	0.15	0.4	-20(mV)	1.4	+20(mV)	2.5	0.1(%)	V _O +1	5.5	10	1	150	0.5	150		
KIC3213MF15	5.5	0.15	0.4	-20(mV)	1.5	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.38	150		
KIC3213MF16	5.5	0.15	0.4	-20(mV)	1.6	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.38	150		
KIC3213MF17	5.5	0.15	0.4	-20(mV)	1.7	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.34	150		
KIC3213MF18	5.5	0.15	0.4	-20(mV)	1.8	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.34	150		
KIC3213MF19	5.5	0.15	0.4	-20(mV)	1.9	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.34	150		
KIC3213MF20	5.5	0.15	0.4	-20(mV)	2.0	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
KIC3213MF21	5.5	0.15	0.4	-20(mV)	2.1	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
KIC3213MF22	5.5	0.15	0.4	-20(mV)	2.2	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
KIC3213MF23	5.5	0.15	0.4	-20(mV)	2.3	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
KIC3213MF24	5.5	0.15	0.4	-20(mV)	2.4	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
KIC3213MF25	5.5	0.15	0.4	-20(mV)	2.5	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.22	150		
KIC3213MF26	5.5	0.15	0.4	-20(mV)	2.6	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.22	150		
KIC3213MF27	5.5	0.15	0.4	-20(mV)	2.7	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.22	150		
KIC3213MF28	5.5	0.15	0.4	-20(mV)	2.8	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
KIC3213MF29	5.5	0.15	0.4	-20(mV)	2.9	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
KIC3213MF30	5.5	0.15	0.4	-20(mV)	3.0	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
KIC3213MF31	5.5	0.15	0.4	-20(mV)	3.1	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
KIC3213MF32	5.5	0.15	0.4	-20(mV)	3.2	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
KIC3213MF33	5.5	0.15	0.4	-20(mV)	3.3	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
*KIC3213T12	5.5	0.15	0.4	-20(mV)	1.2	+20(mV)	2.5	0.1(%)	V _O +1	5.5	10	1	150	0.5	150	TSV	
*KIC3213T13	5.5	0.15	0.4	-20(mV)	1.3	+20(mV)	2.5	0.1(%)	V _O +1	5.5	10	1	150	0.5	150		
*KIC3213T14	5.5	0.15	0.4	-20(mV)	1.4	+20(mV)	2.5	0.1(%)	V _O +1	5.5	10	1	150	0.5	150		
*KIC3213T15	5.5	0.15	0.4	-20(mV)	1.5	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.38	150		
*KIC3213T16	5.5	0.15	0.4	-20(mV)	1.6	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.38	150		
*KIC3213T17	5.5	0.15	0.4	-20(mV)	1.7	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.34	150		
*KIC3213T18	5.5	0.15	0.4	-20(mV)	1.8	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.34	150		
*KIC3213T19	5.5	0.15	0.4	-20(mV)	1.9	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.34	150		
*KIC3213T20	5.5	0.15	0.4	-20(mV)	2.0	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
*KIC3213T21	5.5	0.15	0.4	-20(mV)	2.1	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
*KIC3213T22	5.5	0.15	0.4	-20(mV)	2.2	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
*KIC3213T23	5.5	0.15	0.4	-20(mV)	2.3	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
*KIC3213T24	5.5	0.15	0.4	-20(mV)	2.4	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.28	150		
*KIC3213T25	5.5	0.15	0.4	-20(mV)	2.5	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.22	150		
*KIC3213T26	5.5	0.15	0.4	-20(mV)	2.6	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.22	150		
*KIC3213T27	5.5	0.15	0.4	-20(mV)	2.7	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.22	150		
*KIC3213T28	5.5	0.15	0.4	-20(mV)	2.8	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
*KIC3213T29	5.5	0.15	0.4	-20(mV)	2.9	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
*KIC3213T30	5.5	0.15	0.4	-20(mV)	3.0	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
*KIC3213T31	5.5	0.15	0.4	-20(mV)	3.1	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
*KIC3213T32	5.5	0.15	0.4	-20(mV)	3.2	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		
*KIC3213T33	5.5	0.15	0.4	-20(mV)	3.3	+20(mV)	V _O +1	0.1(%)	V _O +1	5.5	10	1	150	0.21	150		

Note) *:Under development

400mA CMOS Low Dropout Voltage Regulator (Positive)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (%/V)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (T _a =25)	(T _j =25)			V _{IN} (V)	T _a =25		T _a =25		I _{OUT} (mA)	I _{OUT} (mA)			
				Min.	Typ.	Max.		Max.	Min.	Max.	Typ.					
KIC3201T-12	12	0.4	0.9	-2(%)	1.2	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.8	200	TSM 
KIC3201T-13	12	0.4	0.9	-2(%)	1.3	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.8	200	
KIC3201T-14	12	0.4	0.9	-2(%)	1.4	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.8	200	
KIC3201T-15	12	0.4	0.9	-2(%)	1.5	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.8	200	
KIC3201T-16	12	0.4	0.9	-2(%)	1.6	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.8	200	
KIC3201T-17	12	0.4	0.9	-2(%)	1.7	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.8	200	
KIC3201T-18	12	0.4	0.9	-2(%)	1.8	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-19	12	0.4	0.9	-2(%)	1.9	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-20	12	0.4	0.9	-2(%)	2.0	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-21	12	0.4	0.9	-2(%)	2.1	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-22	12	0.4	0.9	-2(%)	2.2	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-23	12	0.4	0.9	-2(%)	2.3	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-24	12	0.4	0.9	-2(%)	2.4	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.4	200	
KIC3201T-25	12	0.4	0.9	-2(%)	2.5	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.32	200	
KIC3201T-26	12	0.4	0.9	-2(%)	2.6	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.32	200	
KIC3201T-27	12	0.4	0.9	-2(%)	2.7	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.32	200	
KIC3201T-28	12	0.4	0.9	-2(%)	2.8	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.32	200	
KIC3201T-29	12	0.4	0.9	-2(%)	2.9	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.32	200	
KIC3201T-30	12	0.4	0.9	-2(%)	3.0	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-31	12	0.4	0.9	-2(%)	3.1	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-32	12	0.4	0.9	-2(%)	3.2	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-33	12	0.4	0.9	-2(%)	3.3	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-34	12	0.4	0.9	-2(%)	3.4	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-35	12	0.4	0.9	-2(%)	3.5	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-36	12	0.4	0.9	-2(%)	3.6	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-37	12	0.4	0.9	-2(%)	3.7	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-38	12	0.4	0.9	-2(%)	3.8	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-39	12	0.4	0.9	-2(%)	3.9	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-40	12	0.4	0.9	-2(%)	4.0	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-41	12	0.4	0.9	-2(%)	4.1	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-42	12	0.4	0.9	-2(%)	4.2	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-43	12	0.4	0.9	-2(%)	4.3	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-44	12	0.4	0.9	-2(%)	4.4	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-45	12	0.4	0.9	-2(%)	4.5	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-46	12	0.4	0.9	-2(%)	4.6	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-47	12	0.4	0.9	-2(%)	4.7	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-48	12	0.4	0.9	-2(%)	4.8	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-49	12	0.4	0.9	-2(%)	4.9	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.3	200	
KIC3201T-50	12	0.4	0.9	-2(%)	5.0	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-51	12	0.4	0.9	-2(%)	5.1	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-52	12	0.4	0.9	-2(%)	5.2	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-53	12	0.4	0.9	-2(%)	5.3	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-54	12	0.4	0.9	-2(%)	5.4	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-55	12	0.4	0.9	-2(%)	5.5	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-56	12	0.4	0.9	-2(%)	5.6	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-57	12	0.4	0.9	-2(%)	5.7	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-58	12	0.4	0.9	-2(%)	5.8	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-59	12	0.4	0.9	-2(%)	5.9	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	
KIC3201T-60	12	0.4	0.9	-2(%)	6.0	+2(%)	V _O +1	0.3	V _O +1	8	40	1	200	0.2	200	

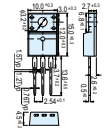
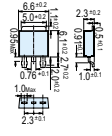
0.15A 3-Terminal Voltage Regulator (Positive)

Type No.	Mark	Max. Ratings			V _{OUT} (V)				Reg. Line (mV)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)
		V _{IN} (V)	I _O (A)	P _D (mW) (Ta=25)	(Tj=25)			(Ta=25)	V _{IN} (V)		(Ta=25)	I _{OUT} (mA)		(Ta=25)	I _{OUT} (mA)			
		Min.	Typ.	Max.	Max.	Min.	Max.	Max.	Min.	Max.	Max.	Min.	Max.	Typ.	Max.			
KIA78L05F	8A	35	0.15	500	4.75	5	5.25	10	150	7	20	60	1	100	1.7	40		
KIA78L06F	8B	35	0.15	500	5.7	6	6.3	11	150	8.1	21	70	1	100	1.7	40		
KIA78L08F	8D	35	0.15	500	7.6	8	8.4	14	175	10.5	23	80	1	100	1.7	40		
KIA78L09F	8E	35	0.15	500	8.55	9	9.45	15	200	11.4	24	90	1	100	1.7	40		
KIA78L10F	8F	35	0.15	500	9.5	10	10.5	16	230	12.5	25	90	1	100	1.7	40		
KIA78L12F	8G	35	0.15	500	11.4	12	12.6	19	250	14.5	27	100	1	100	1.7	40		
KIA78L15F	8I	35	0.15	500	14.25	15	15.75	23	300	17.5	30	150	1	100	1.7	40		
KIA78L18F	8J	40	0.15	500	7.1	18	18.9	27	325	21.4	33	170	1	100	1.7	40		
KIA78L20F	8K	40	0.15	500	19	20	21	29	330	23.5	35	180	1	100	1.7	40		
KIA78L24F	8L	40	0.15	500	22.8	24	25.2	33	350	27.5	38	200	1	100	1.7	40		
KIA78S05P	-	35	0.15	600	4.8	5	5.2	10	150	7	20	60	1	100	1.7	40		
KIA78S06P	-	35	0.15	600	5.76	6	6.24	11	150	8.1	21	70	1	100	1.7	40		
KIA78S08P	-	35	0.15	600	7.7	8	8.3	14	175	10.5	23	80	1	100	1.7	40		
KIA78S09P	-	35	0.15	600	8.64	9	9.36	15	200	11.4	24	90	1	100	1.7	40		
KIA78S10P	-	35	0.15	600	9.6	10	10.4	16	230	12.5	25	90	1	100	1.7	40		
KIA78S12P	-	35	0.15	600	11.5	12	12.5	19	250	14.5	27	100	1	100	1.7	40		
KIA78S15P	-	35	0.15	600	14.4	15	15.6	23	300	17.5	30	150	1	100	1.7	40		
KIA78S18P	-	40	0.15	600	17.3	18	18.7	27	325	21.4	33	170	1	100	1.7	40		
KIA78S20P	-	40	0.15	600	19.2	20	20.8	29	330	23.5	35	180	1	100	1.7	40		
KIA78S24P	-	40	0.15	600	23	24	25	33	350	27.5	38	200	1	100	1.7	40		
KIA78L05BP	-	35	0.15	800	4.8	5	5.2	10	150	7	20	60	1	100	1.7	40		
KIA78L06BP	-	35	0.15	800	5.76	6	6.24	11	150	8.1	21	70	1	100	1.7	40		
KIA78L08BP	-	35	0.15	800	7.7	8	8.3	14	175	10.5	23	80	1	100	1.7	40		
KIA78L09BP	-	35	0.15	800	8.64	9	9.36	15	200	11.4	24	90	1	100	1.7	40		
KIA78L10BP	-	35	0.15	800	9.6	10	10.4	16	230	12.5	25	90	1	100	1.7	40		
KIA78L12BP	-	35	0.15	800	11.5	12	12.5	19	250	14.5	27	100	1	100	1.7	40		
KIA78L15BP	-	35	0.15	800	14.4	15	15.6	23	300	17.5	30	150	1	100	1.7	40		
KIA78L18BP	-	40	0.15	800	17.3	18	18.7	27	325	21.4	33	170	1	100	1.7	40		
KIA78L20BP	-	40	0.15	800	19.2	20	20.8	29	330	23.5	35	180	1	100	1.7	40		
KIA78L24BP	-	40	0.15	800	23	24	25	33	350	27.5	38	200	1	100	1.7	40		

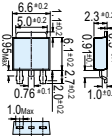
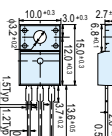
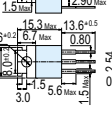
0.25A 3-Terminal Low Dropout Voltage Regulator (Positive)

Type No.	Max. Ratings			V _{OUT} (V)				Reg. Line (mV)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Ta=-40 85)			V _{IN} (V)	(Ta=25)	V _{IN} (V)		(Ta=25)	I _{OUT} (mA)		(Ta=25)	I _{OUT} (mA)		
	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Max.	Max.	Min.	Max.	Max.	Min.	Max.	Typ.		
KIA78DL05F	29	0.25	12	4.5	5	5.5	5.35	26	30	6	26	50	10	200	0.15	50	
KIA78DL06F	29	0.25	12	5.4	6	6.6	6.35	26	36	7	26	60	10	200	0.15	50	
KIA78DL08F	29	0.25	12	7.2	8	8.8	8.35	26	45	9	26	80	10	200	0.15	50	
KIA78DL09F	29	0.25	12	8.1	9	9.9	9.35	26	50	10	26	90	10	200	0.15	50	
KIA78DL10F	29	0.25	12	9	10	11	10.35	26	60	11	26	100	10	200	0.15	50	
KIA78DL12F	29	0.25	12	10.8	12	13.2	12.35	26	70	13	26	120	10	200	0.15	50	
KIA78DL15F	29	0.25	12	13.5	15	16.5	15.35	26	80	16	26	150	10	200	0.15	50	
KIA78DL05PI	29	0.25	20	4.5	5	5.5	5.35	26	30	6	26	50	10	200	0.15	50	
KIA78DL06PI	29	0.25	20	5.4	6	6.6	6.35	26	36	7	26	60	10	200	0.15	50	
KIA78DL08PI	29	0.25	20	7.2	8	8.8	8.35	26	45	9	26	80	10	200	0.15	50	
KIA78DL09PI	29	0.25	20	8.1	9	9.9	9.35	26	50	10	26	90	10	200	0.15	50	
KIA78DL10PI	29	0.25	20	9	10	11	10.35	26	60	11	26	100	10	200	0.15	50	
KIA78DL12PI	29	0.25	20	10.8	12	13.2	12.35	26	70	13	26	120	10	200	0.15	50	
KIA78DL15PI	29	0.25	20	13.5	15	16.5	15.35	26	80	16	26	150	10	200	0.15	50	

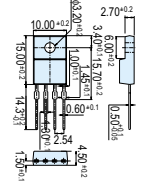
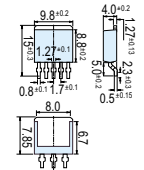
0.5A 3-Terminal Voltage Regulator (Positive)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (mV)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Tj=25)			V _{IN} (V)	(Ta=25)		(Ta=25)		I _{OUT} (mA)	(Ta=25)	I _{OUT} (mA)		
				Min.	Typ.	Max.		Max.	Min.	Max.	Max.					
KIA78M05PI	35	0.5	20.8	4.8	5	5.2	10	100	7.2	25	100	5	500	2	500	
KIA78M08PI	35	0.5	20.8	7.7	8	8.3	14	100	10.5	25	100	5	500	2	500	
KIA78M12PI	35	0.5	20.8	11.5	12	12.5	19	100	14.5	30	240	5	500	2	500	
KIA78M15PI	35	0.5	20.8	14.4	15	15.6	23	100	17.5	30	300	5	500	2	500	
KIA78M05F	35	0.5	12	4.8	5	5.2	10	100	7.2	25	100	5	500	2	500	
KIA78M08F	35	0.5	12	7.7	8	8.3	14	100	10.5	25	100	5	500	2	500	
KIA78M12F	35	0.5	12	11.5	12	12.5	19	100	14.5	30	240	5	500	2	500	
KIA78M15F	35	0.5	12	14.4	15	15.6	23	100	17.5	30	300	5	500	2	500	

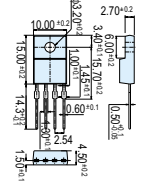
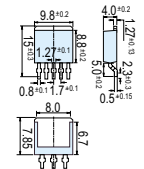
1A 3-Terminal Voltage Regulator (Positive)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (mV)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Tj=25)			V _{IN} (V)	(Ta=25)		(Ta=25)		I _{OUT} (mA)	(Ta=25)	I _{OUT} (A)		
				Min.	Typ.	Max.		Max.	Min.	Max.	Max.					
KIA7805AF	35	1	12	4.8	5	5.2	10	100	7	25	100	5	1.4	2	1	
KIA7806AF	35	1	12	5.75	6	6.25	11	120	8	25	120	5	1.4	2	1	
KIA7807AF	35	1	12	6.72	7	7.28	12	140	9	25	140	5	1.4	2	1	
KIA7808AF	35	1	12	7.7	8	8.3	14	160	10.5	25	160	5	1.4	2	1	
KIA7809AF	35	1	12	8.64	9	9.36	15	180	11.5	26	180	5	1.4	2	1	
KIA7810AF	35	1	12	9.6	10	10.4	16	200	12.5	27	200	5	1.4	2	1	
KIA7812AF	35	1	12	11.5	12	12.5	19	240	14.5	30	240	5	1.4	2	1	
KIA7815AF	35	1	12	14.4	15	15.6	23	300	17.5	30	300	5	1.4	2	1	
KIA7818AF	40	1	12	17.3	18	18.7	27	360	21	33	360	5	1.4	2	1	
KIA7820AF	40	1	12	19.2	20	20.8	29	400	23	35	400	5	1.4	2	1	
KIA7824AF	40	1	12	23	24	25	33	480	27	38	480	5	1.4	2	1	
KIA7805API	35	1	20.8	4.8	5	5.2	10	100	7	25	100	5	1.4	2	1	
KIA7806API	35	1	20.8	5.75	6	6.25	11	120	8	25	120	5	1.4	2	1	
KIA7807API	35	1	20.8	6.72	7	7.28	12	140	9	25	140	5	1.4	2	1	
KIA7808API	35	1	20.8	7.7	8	8.3	14	160	10.5	25	160	5	1.4	2	1	
KIA7809API	35	1	20.8	8.64	9	9.36	15	180	11.5	26	180	5	1.4	2	1	
KIA7810API	35	1	20.8	9.6	10	10.4	16	200	12.5	27	200	5	1.4	2	1	
KIA7812API	35	1	20.8	11.5	12	12.5	19	240	14.5	30	240	5	1.4	2	1	
KIA7815API	35	1	20.8	14.4	15	15.6	23	300	17.5	30	300	5	1.4	2	1	
KIA7818API	40	1	20.8	17.3	18	18.7	27	360	21	33	360	5	1.4	2	1	
KIA7820API	40	1	20.8	19.2	20	20.8	29	400	23	35	400	5	1.4	2	1	
KIA7824API	40	1	20.8	23	24	25	33	480	27	38	480	5	1.4	2	1	
KIA7805AP	35	1	20.8	4.8	5	5.2	10	100	7	25	100	5	1.4	2	1	
KIA7806AP	35	1	20.8	5.75	6	6.25	11	120	8	25	120	5	1.4	2	1	
KIA7807AP	35	1	20.8	6.72	7	7.28	12	140	9	25	140	5	1.4	2	1	
KIA7808AP	35	1	20.8	7.7	8	8.3	14	160	10.5	25	160	5	1.4	2	1	
KIA7809AP	35	1	20.8	8.64	9	9.36	15	180	11.5	26	180	5	1.4	2	1	
KIA7810AP	35	1	20.8	9.6	10	10.4	16	200	12.5	27	200	5	1.4	2	1	
KIA7812AP	35	1	20.8	11.5	12	12.5	19	240	14.5	30	240	5	1.4	2	1	
KIA7815AP	35	1	20.8	14.4	15	15.6	23	300	17.5	30	300	5	1.4	2	1	
KIA7818AP	40	1	20.8	17.3	18	18.7	27	360	21	33	360	5	1.4	2	1	
KIA7820AP	40	1	20.8	19.2	20	20.8	29	400	23	35	400	5	1.4	2	1	
KIA7824AP	40	1	20.8	23	24	25	33	480	27	38	480	5	1.4	2	1	

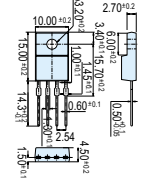
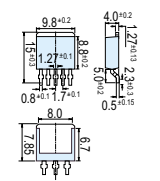
2A 4/5- Terminal Low Dropout Voltage Regulator (Low Supply Current & On/Off Controllable) (Positive)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (%)			Reg. Load (%)			I _{Q(OFF)} (μA)		Package	Outline (Unit : mm)	
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Ta=25)			V _{IN} (V)	(Ta=25)	V _{IN} (V)		(Ta=25)	I _{OUT}		(Ta=25)			V _{IN} (V)
				Min.	Typ.	Max.			Max.	Min.		Max.	Max.				
KIA278R000PI	10	2	15	1.22	1.25	1.28	2.35	1	Vo+1	8.5	2	5	2	5	2.8	TO-220IS-4	
KIA278R015PI	10	2	15	1.45	1.5	1.55	2.35	1	2.5	5.5	2	5	2	5	3.8		
KIA278R018PI	10	2	15	1.75	1.8	1.85	2.35	1	2.5	5.5	2	5	2	5	3.8		
KIA278R025PI	10	2	15	2.438	2.5	2.562	4.5	1	3	6.5	2	5	2	5	4.5		
KIA278R033PI	10	2	15	3.218	3.3	3.382	5.3	1	3.8	7	2	5	2	5	5.3		
KIA278R050PI	10	2	15	4.88	5	5.12	7	1	5.5	7	2	5	2	5	7		
KIA278R000FP	10	2	35	1.225	1.25	1.275	2.35	1	Vo+1	8.5	2	5	2	5	2.8	D2PAK-5	
KIA278R015FP	10	2	35	1.45	1.5	1.55	2.35	1	2.5	5.5	2	5	2	5	3.8		
KIA278R018FP	10	2	35	1.75	1.8	1.85	2.35	1	2.5	5.5	2	5	2	5	3.8		
KIA278R025FP	10	2	35	2.438	2.5	2.562	4.5	1	3	6.5	2	5	2	5	4.5		
KIA278R033FP	10	2	35	3.218	3.3	3.382	5.3	1	3.8	7	2	5	2	5	5.3		
KIA278R050FP	10	2	35	4.88	5	5.12	7	1	5.5	7	2	5	2	5	7		

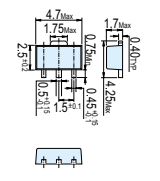
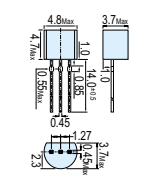
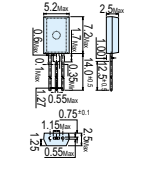
3A 4/5-Terminal Low Dropout Voltage Regulator (Low Supply Current & On/Off Controllable) (Positive)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (%)			Reg. Load (%)			I _{Q(OFF)} (μA)		Package	Outline (Unit : mm)	
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Ta=25)			V _{IN} (V)	(Ta=25)	V _{IN} (V)		(Ta=25)	I _{OUT}		(Ta=25)			V _{IN} (V)
				Min.	Typ.	Max.			Max.	Min.		Max.	Max.				
KIA378R000PI	7	3	15	1.22	1.25	1.28	2.35	1	Vo+1	6	2	5	3	5	2.8	TO-220IS-4	
KIA378R015PI	7	3	15	1.45	1.5	1.55	2.35	0.1	2.5	5.5	1	5	3.5	5	3.8		
KIA378R018PI	7	3	15	1.75	1.8	1.85	2.35	0.1	2.5	5.5	1	5	3.5	5	3.8		
KIA378R025PI	7	3	15	2.438	2.5	2.562	4.5	0.1	3	6.5	1	5	3.5	5	4.5		
KIA378R033PI	7	3	15	3.218	3.3	3.382	5.3	0.1	3.8	7	1	5	3.5	5	5.3		
KIA378R050PI	7	3	15	4.88	5	5.12	7	0.1	5.5	7	1	5	3.5	5	7		
KIA378R000FP	7	3	35	1.225	1.25	1.275	2.35	1	Vo+1	6	2	5	3	5	2.8	D2PAK-5	
KIA378R015FP	7	3	35	1.45	1.5	1.55	2.35	0.1	2.5	5.5	1	5	3.5	5	3.8		
KIA378R018FP	7	3	35	1.75	1.8	1.85	2.35	0.1	2.5	5.5	1	5	3.5	5	3.8		
KIA378R025FP	7	3	35	2.438	2.5	2.562	4.5	0.1	3	6.5	1	5	3.5	5	4.5		
KIA378R033FP	7	3	35	3.218	3.3	3.382	5.3	0.1	3.8	7	1	5	3.5	5	5.3		
KIA378R050FP	7	3	35	4.88	5	5.12	7	0.1	5.5	7	1	5	3.5	5	7		

5A 4/5-Terminal Low Dropout Voltage Regulator (Low Supply Current & On/Off Controllable) (Positive)

Type No.	Max. Ratings			V _{OUT} (V)				Reg. Line (%)			Reg. Load (%)			I _{Q(OFF)} (μA)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (T _a =25)	(T _a =25)			V _{IN} (V)	(T _a =25)	V _{IN} (V)		(T _a =25)	I _{OUT}		(T _a =25)	V _{IN} (V)		
				Min.	Typ.	Max.		Max.	Min.	Max.	Max.	Min.(mA)	Max.(A)	Typ.			
KIA578R000PI	16	5	15	1.22	1.25	1.28	2.35	1	Vo+1	7	2	5	5	5	2.8	TO-220IS-4	
KIA578R015PI	16	5	15	1.45	1.5	1.55	2.35	1	2.5	5.5	2	5	5	5	3.8		
KIA578R018PI	16	5	15	1.75	1.8	1.85	2.35	1	2.5	5.5	2	5	5	5	3.8		
KIA578R025PI	16	5	15	2.438	2.5	2.562	4.5	1	3	6.5	2	5	5	5	4.5		
KIA578R033PI	16	5	15	3.218	3.3	3.382	5.3	1	3.8	7	2	5	5	5	5.3		
KIA578R050PI	16	5	15	4.88	5	5.12	7	1	5.5	7	2	5	5	5	7		
KIA578R000FP	16	5	35	1.22	1.25	1.28	2.35	1	Vo+1	7	2	5	5	5	2.8	D2PAK-5	
KIA578R015FP	16	5	35	1.45	1.5	1.55	2.35	1	2.5	5.5	2	5	5	5	3.8		
KIA578R018FP	16	5	35	1.75	1.8	1.85	2.35	1	2.5	5.5	2	5	5	5	3.8		
KIA578R025FP	16	5	35	2.438	2.5	2.562	4.5	1	3	6.5	2	5	5	5	4.5		
KIA578R033FP	16	5	35	3.218	3.3	3.382	5.3	1	3.8	7	2	5	5	5	5.3		
KIA578R050FP	16	5	35	4.88	5	5.12	7	1	5.5	7	2	5	5	5	7		

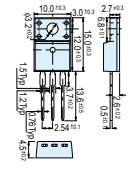
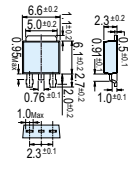
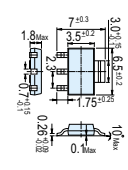
0.15A 3-Terminal Voltage Regulator (Negative)

Type No.	Mark	Max. Ratings			V _{OUT} (V)				Reg. Line (mV)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit : mm)
		V _{IN} (V)	I _O (A)	P _D (W) (T _a =25)	(T _a =25)			V _{IN} (V)	(T _a =25)	V _{IN} (V)		(T _a =25)	I _{OUT} (mA)		(T _a =25)	I _{OUT} (mA)		
					Min.	Typ.	Max.		Max.	Min.	Max.	Max.	Min.	Max.	Typ.			
KIA79L05F	9A	-35	0.15	500	-5.2	-5	-4.8	-10	150	-20	-7	60	1	100	1.7	40	SOT-89	
KIA79L06F	9B	-35	0.15	500	-6.24	-6	-5.76	-11	150	-21	-8.1	70	1	100	1.7	40		
KIA79L08F	9C	-35	0.15	500	-8.3	-8	-7.7	-14	175	-23	-10.5	80	1	100	1.7	40		
KIA79L09F	9D	-35	0.15	500	-9.36	-9	-8.64	-15	200	-24	-11.4	90	1	100	1.7	40		
KIA79L10F	9E	-35	0.15	500	-10.4	-10	-9.6	-16	230	-25	-12.5	90	1	100	1.7	40		
KIA79L12F	9F	-35	0.15	500	-12.5	-12	-11.5	-19	250	-27	-14.5	100	1	100	1.7	40		
KIA79S05P	-	-35	0.15	600	-5.2	-5	-4.8	-10	150	-20	-7	60	1	100	1.7	40	TO-92	
KIA79S06P	-	-35	0.15	600	-6.24	-6	-5.76	-11	150	-21	-8.1	70	1	100	1.7	40		
KIA79S08P	-	-35	0.15	600	-8.3	-8	-7.7	-14	175	-23	-10.5	80	1	100	1.7	40		
KIA79S09P	-	-35	0.15	600	-9.36	-9	-8.64	-15	200	-24	-11.4	90	1	100	1.7	40		
KIA79S10P	-	-35	0.15	600	-10.4	-10	-9.6	-16	230	-25	-12.5	90	1	100	1.7	40		
KIA79S12P	-	-35	0.15	600	-12.5	-12	-11.5	-19	250	-27	-14.5	100	1	100	1.7	40		
KIA79L05BP	-	-35	0.15	800	-5.2	-5	-4.8	-10	150	-20	-7	60	1	100	1.7	40	TO-92L	
KIA79L06BP	-	-35	0.15	800	-6.24	-6	-5.76	-11	150	-21	-8.1	70	1	100	1.7	40		
KIA79L08BP	-	-35	0.15	800	-8.3	-8	-7.7	-14	175	-23	-10.5	80	1	100	1.7	40		
KIA79L09BP	-	-35	0.15	800	-9.36	-9	-8.64	-15	200	-24	-11.4	90	1	100	1.7	40		
KIA79L10BP	-	-35	0.15	800	-10.4	-10	-9.6	-16	230	-25	-12.5	90	1	100	1.7	40		
KIA79L12BP	-	-35	0.15	800	-12.5	-12	-11.5	-19	250	-27	-14.5	100	1	100	1.7	40		

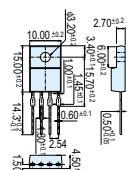
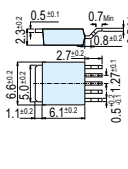
1A 3-Terminal Voltage Regulator (Negative)

Type No.	Max. Ratings			V _{OUT} (V)			Reg. Line (mV)			Reg. Load (mV)			V _{DROP} (V)		Package	Outline (Unit: mm)
	V _{IN} (V)	I _O (A)	P _D (W) (Ta=25)	(Ta=25)			V _{IN} (V)	(Ta=25)		(Ta=25)		I _{OUT} (mA)	I _{OUT} (A)			
				Min.	Typ.	Max.		Max.	Min.	Max.	Typ.			I _{OUT} (A)		
KIA7905F	-35	1	12	-5.2	-5	-4.8	-10	50	-12	-8	100	5	1.5	2	1	
KIA7906F	-35	1	12	-6.25	-6	-5.75	-11	60	-13	-9	120	5	1.5	2	1	
KIA7907F	-35	1	12	-7.28	-7.0	-6.72	-12	70	-15	-10	140	5	1.5	2	1	
KIA7908F	-35	1	12	-8.3	-8	-7.7	-14	80	-17	-11	160	5	1.5	2	1	
KIA7909F	-35	1	12	-9.3	-9	-8.7	-15	90	-19	-13	150	5	1.5	2	1	
KIA7910F	-35	1	12	-10.4	-10	-9.6	-16	100	-20	-14	180	5	1.5	2	1	
KIA7912F	-35	1	12	-12.5	-12	-11.5	-18	120	-22	-16	240	5	1.5	2	1	
KIA7915F	-35	1	12	-15.6	-15	-14.4	-23	150	-26	-20	300	5	1.5	2	1	
KIA7918F	-40	1	12	-18.7	-18	-17.3	-27	180	-30	-24	360	5	1.5	2	1	
KIA7920F	-40	1	12	-20.8	-20	-19.2	-30	180	-32	-26	360	5	1.5	2	1	
KIA7924F	-40	1	12	-25	-24	-23	-33	240	-36	-30	480	5	1.5	2	1	
KIA7905PI	-35	1	20.8	-5.2	-5	-4.8	-10	50	-12	-8	100	5	1.5	2	1	
KIA7906PI	-35	1	20.8	-6.25	-6	-5.75	-11	60	-13	-9	120	5	1.5	2	1	
KIA7907PI	-35	1	12	-6.25	-6	-5.75	-11	60	-13	-9	120	5	1.5	2	1	
KIA7908PI	-35	1	20.8	-8.3	-8	-7.7	-14	80	-17	-11	160	5	1.5	2	1	
KIA7909PI	-35	1	20.8	-9.3	-9	-8.7	-15	90	-19	-13	150	5	1.5	2	1	
KIA7910PI	-35	1	20.8	-10.4	-10	-9.6	-16	100	-20	-14	180	5	1.5	2	1	
KIA7912PI	-35	1	20.8	-12.5	-12	-11.5	-18	120	-22	-16	240	5	1.5	2	1	
KIA7915PI	-35	1	20.8	-15.6	-15	-14.4	-23	150	-26	-20	300	5	1.5	2	1	
KIA7918PI	-40	1	20.8	-18.7	-18	-17.3	-27	180	-30	-24	360	5	1.5	2	1	
KIA7920PI	-40	1	20.8	-20.8	-20	-19.2	-30	180	-32	-26	360	5	1.5	2	1	
KIA7924PI	-40	1	20.8	-25	-24	-23	-33	240	-36	-30	480	5	1.5	2	1	
KIA7905P	-35	1	20.8	-5.2	-5	-4.8	-10	50	-12	-8	100	5	1.5	2	1	
KIA7906P	-35	1	20.8	-6.25	-6	-5.75	-11	60	-13	-9	120	5	1.5	2	1	
KIA7907P	-35	1	12	-6.25	-6	-5.75	-11	60	-13	-9	120	5	1.5	2	1	
KIA7908P	-35	1	20.8	-8.3	-8	-7.7	-14	80	-17	-11	160	5	1.5	2	1	
KIA7909P	-35	1	20.8	-9.3	-9	-8.7	-15	90	-19	-13	150	5	1.5	2	1	
KIA7910P	-35	1	20.8	-10.4	-10	-9.6	-16	100	-20	-14	180	5	1.5	2	1	
KIA7912P	-35	1	20.8	-12.5	-12	-11.5	-18	120	-22	-16	240	5	1.5	2	1	
KIA7915P	-35	1	20.8	-15.6	-15	-14.4	-23	150	-26	-20	300	5	1.5	2	1	
KIA7918P	-40	1	20.8	-18.7	-18	-17.3	-27	180	-30	-24	360	5	1.5	2	1	
KIA7920P	-40	1	20.8	-20.8	-20	-19.2	-30	180	-32	-26	360	5	1.5	2	1	
KIA7924P	-40	1	20.8	-25	-24	-23	-33	240	-36	-30	480	5	1.5	2	1	

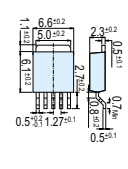
1A 3-Terminal Low Dropout Voltage Regulator (Quasi-LDO Type)

Type No.	Max. Ratings			V _{OUT} (V)				Reg. Line (mV)			Reg. Load (%)			V _{DROP} (V)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (I _a =25)	(T _a =25)			V _{IN} (V)	(T _a =25)	V _{IN} (V)		(T _a =25)	I _{OUT}		(T _a =25)	V _{IN} (V)		
				Min.	Typ.	Max.			Max.	Min.		Max.	Min.(mA)				
KIA1117BPI00	10	1	20.8	1.225	1.25	1.275	2.75	10	2.75	10	0.5	10	1	1.1	0.95V _O	TO-220IS	
KIA1117BPI12	10	1	20.8	1.176	1.2	1.224	2.7	10	2.7	10	1	10	1	1.1	0.95V _O		
KIA1117BPI15	10	1	20.8	1.47	1.5	1.53	3	10	3	10	0.5	10	1	1.1	0.95V _O		
KIA1117BPI18	10	1	20.8	1.764	1.8	1.836	3.3	10	3.3	10	0.5	10	1	1.1	0.95V _O		
KIA1117BPI25	10	1	20.8	2.45	2.5	2.55	4	10	4	10	0.5	10	1	1.1	0.95V _O		
KIA1117BPI33	10	1	20.8	3.234	3.3	3.366	4.8	10	4.8	10	0.5	10	1	1.1	0.95V _O		
KIA1117BPI50	10	1	20.8	4.9	5	5.1	6.5	10	6.5	10	0.5	10	1	1.1	0.95V _O		
KIA1117BF00	10	1	13	1.225	1.25	1.275	2.75	10	2.75	10	1	10	1	1.1	0.95V _O	DPAK	
KIA1117BF12	10	1	13	1.176	1.2	1.224	2.7	10	2.7	10	1	10	1	1.1	0.95V _O		
KIA1117BF15	10	1	13	1.47	1.5	1.53	3	10	3	10	1	10	1	1.1	0.95V _O		
KIA1117BF18	10	1	13	1.764	1.8	1.836	3.3	10	3.3	10	1	10	1	1.1	0.95V _O		
KIA1117BF25	10	1	13	2.45	2.5	2.55	4	10	4	10	1	10	1	1.1	0.95V _O		
KIA1117BF33	10	1	13	3.234	3.3	3.366	4.8	10	4.8	10	1	10	1	1.1	0.95V _O		
KIA1117BF50	10	1	13	4.9	5	5.1	6.5	10	6.5	10	1	10	1	1.1	0.95V _O		
KIA1117BS00	10	1	8.3	1.225	1.25	1.275	2.75	10	2.75	10	1	10	1	1.1	0.95V _O	SOT-223	
KIA1117BS12	10	1	8.3	1.176	1.2	1.224	2.7	10	2.7	10	1	10	1	1.1	0.95V _O		
KIA1117BS15	10	1	8.3	1.47	1.5	1.53	3	10	3	10	1	10	1	1.1	0.95V _O		
KIA1117BS18	10	1	8.3	1.764	1.8	1.836	3.3	10	3.3	10	1	10	1	1.1	0.95V _O		
KIA1117BS25	10	1	8.3	2.45	2.5	2.55	4	10	4	10	1	10	1	1.1	0.95V _O		
KIA1117BS33	10	1	8.3	3.234	3.3	3.366	4.8	10	4.8	10	1	10	1	1.1	0.95V _O		
KIA1117BS50	10	1	8.3	4.9	5	5.1	6.5	10	6.5	10	1	10	1	1.1	0.95V _O		

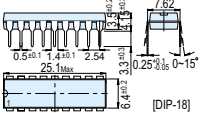
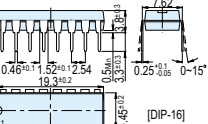
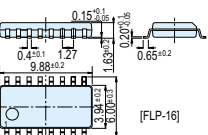
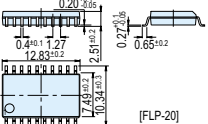
1A 4-Terminal Low Dropout Voltage Regulator (Low Supply Current & On/Off Controllable) (Positive)

Type No.	Max. Ratings			V _{OUT} (V)				Reg. Line (mV)			Reg. Load (mV)			I _{Q(OFF)} (μA)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (I _a =25)	(T _a =25)			V _{IN} (V)	(T _a =25)	V _{IN} (V)		(T _a =25)	I _{OUT}		(T _a =25)	V _{IN} (V)		
				Min.	Typ.	Max.			Max.	Min.		Max.	Min.(mA)				
KIA78R000ZPI	15	1	1.5	1.22	1.25	1.28	2.5	12.5	3.5	8.5	25	5	1	2	3.5	TO-220IS-4	
KIA78R015ZPI	15	1	1.5	1.45	1.5	1.55	2.5	15	2.5	6.5	30	5	1	2	2.5		
KIA78R018ZPI	15	1	1.5	1.75	1.8	1.85	2.8	18	2.5	7	36	5	1	2	2.8		
KIA78R025ZPI	15	1	1.5	2.438	2.5	2.562	3.5	25	3.5	8.5	50	5	1	2	3.5		
KIA78R033ZPI	15	1	1.5	3.221	3.3	3.379	4.3	33	4	9	66	5	1	2	4.3		
KIA78R050ZPI	15	1	1.5	4.88	5	5.12	6	50	6	10	100	5	1	2	6		
KIA78R000ZF	15	1	1.5	1.22	1.25	1.28	2.5	12.5	3.5	8.5	25	5	1	2	3.5	DPAK-5	
KIA78R015ZF	15	1	1.5	1.45	1.5	1.55	2.5	15	2.5	6.5	30	5	1	2	2.5		
KIA78R018ZF	15	1	1.5	1.75	1.8	1.85	2.8	18	2.5	7	36	5	1	2	2.8		
KIA78R025ZF	15	1	1.5	2.438	2.5	2.562	3.5	25	3.5	8.5	50	5	1	2	3.5		
KIA78R033ZF	15	1	1.5	3.221	3.3	3.379	4.3	33	4	9	66	5	1	2	4.3		
KIA78R050ZF	15	1	1.5	4.88	5	5.12	6	50	6	10	100	5	1	2	6		

1A 5-Terminal Low Dropout Voltage Regulator (Low Supply Current & On/Off Controllable) (Positive)

Type No.	Max. Ratings			V _{OUT} (V)				Reg. Line (mV)			Reg. Load (mV)			I _{Q(OFF)} (μA)		Package	Outline (Unit : mm)
	V _{IN} (V)	I _O (A)	P _D (W) (I _a =25)	(T _a =25)			V _{IN} (V)	(T _a =25)	V _{IN} (V)		(T _a =25)	I _{OUT}		(T _a =25)	V _{IN} (V)		
				Min.	Typ.	Max.			Max.	Min.		Max.	Min.(mA)				
KIA78R000F	16	1	1.3	1.225	1.25	1.275	2.8	20	2.8	12	20	5	1	-	-	DPAK-5	
KIA78R015F	16	1	1.3	1.45	1.5	1.55	3.8	20	2.8	12	20	5	1	5	3.8		
KIA78R018F	16	1	1.3	1.75	1.8	1.85	3.8	20	2.8	12	20	5	1	5	3.8		
KIA78R025F	16	1	1.3	2.438	2.5	2.562	4.5	20	3.5	12	20	5	1	5	4.5		
KIA78R033F	16	1	1.3	3.218	3.3	3.382	5.3	20	4.3	12	20	5	1	5	5.3		
KIA78R050F	16	1	1.3	4.88	5	5.12	7	20	6	12	20	5	1	5	7		

Transistor Array & Interface Driver IC

Type No.	Function	Unit	Clamp Diode	V _{OUT} (V)	I _{OUT} (mA)	System V _{CC} (V)	Package	Outline (Unit : mm)
KID65001AF	Darlington Driver	7		50	500	Free	FLP-16	
KID65002AF	Darlington Driver	7		50	500	14 25		
KID65003AF	Darlington Driver	7		50	500	5		
KID65004AF	Darlington Driver	7		50	500	6 15		
KID65001AP	Darlington Driver	7		50	500	Free	DIP-16	
KID65002AP	Darlington Driver	7		50	500	14 25		
KID65003AP	Darlington Driver	7		50	500	5		
KID65004AP	Darlington Driver	7		50	500	6 15		
KID65083AF	Darlington Driver	8		50	500	5	FLP-20	
KID65084AF	Darlington Driver	8		50	500	6 15		
KID65083AP	Darlington Driver	8		50	500	5	DIP-18	
KID65084AP	Darlington Driver	8		50	500	6 15		
KID65501F	Single Driver (Common Emitter)	7		35	200	Free	FLP-16	
KID65502F	Single Driver (Common Emitter)	7		35	200	14 25		
KID65503F	Single Driver (Common Emitter)	7		35	200	5		
KID65504F	Single Driver (Common Emitter)	7		35	200	6 15		
KID65505F	Single Driver (Common Collector)	7		35	200	Free		
KID65506F	Single Driver (Common Collector)	7		35	200	5		
KID65507F	Single Driver (Isolated)	5		35	200	Free		
KID65501P	Single Driver (Common Emitter)	7		35	200	Free	DIP-16	
KID65502P	Single Driver (Common Emitter)	7		35	200	14 25		
KID65503P	Single Driver (Common Emitter)	7		35	200	5		
KID65504P	Single Driver (Common Emitter)	7		35	200	6 15		
KID65505P	Single Driver (Common Collector)	7		35	200	Free		
KID65506P	Single Driver (Common Collector)	7		35	200	5		
KID65507P	Single Driver (Isolated)	5		35	200	Free		
KID65783AF	High Voltage Source Driver	8		50	500	5	FLP-20	
KID65783AP	High Voltage Source Driver	8		50	500	5	DIP-18	

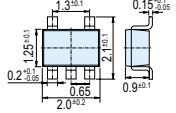
Telecommunication IC

Type No.	Function	Operating Voltage(V)	Package	Outline (Unit : mm : Max.)
KIA6419F	55mW AF Power Amplifier	2~16	FLP-8	

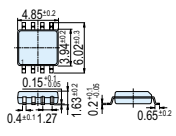
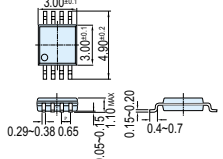
Power Supply Controller

Type No.	Function	Operating Voltage(V)	Package	Outline (Unit : mm)
KIA494AF	Voltage Mode PWM Controller	7.0 40	FLP-16	
KIA494AP	Voltage Mode PWM Controller	7.0 40	DIP-16	
KIA3562F	DCM PFC	12 27	FLP-8	
KIC3521F	Buck Mode LED Driver	8 / 10 < Floating power supply >	FLP-8	

Logic LMOS IC

Type No.	Mark	Max. Ratings					Function	Package	Outline (Unit : mm)
		Supply Voltage V _{CC} (V)	DC Input Voltage V _{IN} (V)	DC Output Voltage V _{OUT} (V)	DC Output Current I _{OUT} (mA)	Power Dissipation P _D (mW)			
KIC7S04FU	SR	-0.5 7	-0.5 V _{CC} +0.5	-0.5 V _{CC} +0.5	± 12.5	200	Inverter Gate	USV 	
KIC7S08FU	ST	-0.5 7	-0.5 V _{CC} +0.5	-0.5 V _{CC} +0.5	± 12.5	200	2 Input AND Gate		
KIC7S14FU	SU	-0.5 7	-0.5 V _{CC} +0.5	-0.5 V _{CC} +0.5	± 12.5	200	Schmitt Trigger Inverter		
KIC7S32FU	SV	-0.5 7	-0.5 V _{CC} +0.5	-0.5 V _{CC} +0.5	± 12.5	200	2 Input OR Gate		
KIC7S66FU	SW	-0.5 10	-0.5 V _{CC} +0.5	-0.5 V _{CC} +0.5	± 12.5	200	Analog Switch		
KIC7SZ04FU	TC	-0.5 6	-0.5 6	-0.5 6	± 50	200	Inverter Gate		
KIC7SZ32FU	TG	-0.5 6	-0.5 6	-0.5 6	± 50	200	2 Input OR Gate		
KIC7SZ125FU	TK	-0.5 6	-0.5 6	-0.5 6	± 50	200	3-State Buffer		

USB Power Switch IC

Type No.	Function	Operating Voltage(V)	Output Current	Package	Outline (Unit : mm)
KIC6981F	USB Power Switch (1-CH, Active High)	2.7 ~ 5.5	1.5A	FLP-8	
*KIC6971F	USB Power Switch (2-CH, Active High)	2.7 ~ 5.5	1.5A		
*KIC6981MF	USB Power Switch (1-CH, Active High)	2.7 ~ 5.5	1.5A	MSOP-8	
*KIC6971MF	USB Power Switch (2-CH, Active High)	2.7 ~ 5.5	1.5A		

Note) * : Under development

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
Voltage Regulator			BA7824CP	Rohm	KIA7824API	PC78L05~15J	NEC	KIA78L05~15F
78L05A	ESTEK	KIA78S05P	BA7824FP	Rohm	KIA7824AF	PC78M05~24A	NEC	KIA78M05~24PI
78RM33D	Fairchild	KIA78D33F	BA78M05CP	Rohm	KIA78M05PI	PQ**DZ1*	Sharp	KIA78R**F
A278R33PIC	A/I	KIA278R33PI	BA78M05FP	Rohm	KIA78M05F	PQ**RF11	Sharp	KIA78R05 15PI
A7805~24	NEC	KIA7805~24API	BA78M08CP	Rohm	KIA78M08PI	PQ**RF21	Sharp	KIA278R**PI
A78R05PIC	NEC	KIA78R05PI	BA78M08FP	Rohm	KIA78M08F	PQ**TZ*1	Sharp	KIA78R**F
AN7805~24	Panasonic	KIA7805~24API	BA78M12CP	Rohm	KIA78M12PI	PQ*RF33	Sharp	KIA378R**PI
AN78L05~24	Panasonic	KIA78S05~24P	BA78M12FP	Rohm	KIA78M12F	PQ018EZ01Z	Sharp	KIA78R018F
AS7809DTRE1	BCD	KIA7809AF	BA78M15CP	Rohm	KIA78M15PI	PQ025EZ01ZPH	Sharp	KIA78R025F
AS78L05RTR-E1	BCD	KIA78L05F	BA78M15FP	Rohm	KIA78M15F	PQ050RDC1S2F	Sharp	KIA78R05PI
AS78L15RTR-E1	BCD	KIA78L05F	BAJ0CC0FP	Rohm	KIA78D10F	PQ05RD21	Sharp	KIA278R05PI
AZ2940D-2.5TRE1	BCD	KIA78D025F	BAJ0CC0T	Rohm	KIA78D10PI	PQ2TZ15UJ00H	Sharp	KIA78R025F
AZ7805D-E1	BCD	KIA7805AF	BAJ0CC0T 10V	Rohm	KIA78D10PI	PQ30RV21	Sharp	KIA278R00PI
AZ7808D-E1	BCD	KIA7808AF	BAJ2CC0FP	Rohm	KIA78D12F	PQ30RV31	Sharp	KIA378R00PI
AZ7809D-E1	BCD	KIA7809AF	BAJ2CC0T	Rohm	KIA78D12PI	PQ30RV31J00H	Sharp	KIA378R00PI
BA**BC0FP/T	Rohm	KIA78D**F/PI	BAJ2CC0WFP	Rohm	KIA78R12F	PQ3RD13	Sharp	KIA78R33API
BA**SFP	Rohm	KIA78R**F	BAJ5CC0FP	Rohm	KIA78D15F	PQ3RD23	Sharp	KIA278R33PI
BA00CC0WFP	Rohm	KIA78R**F	BAJ5CC0T	Rohm	KIA78D15PI	PQ3RF23	Sharp	KIA278R33PI
BA033~15FP	Rohm	KIA78D33~15F	BD3931FP-FE2	Rohm	KIA78D05F	SC156615M25TRT	Semtech	KIA378R025FP
BA033CC0FP	Rohm	KIA78D33F	KA278R**	Fairchild	KIA278R**PI	SI-3010KM-TLS	Sanken	KIA78R00F
BA033CC0T	Rohm	KIA78D33PI	KA278R12CTU	Fairchild	KIA278R12PI	SI-3050KM-TLS	Allegro	KIA78R05F
BA033FP	Rohm	KIA78D33F	KA278R12CYDTU	Fairchild	KIA278R12PI	SI-3120KM-TLS	Allegro	KIA78R12F
BA033T	Rohm	KIA78D33PI	KA378R**	Fairchild	KIA378R**PI	TA58L12S(Q)	Toshiba	KIA78DL12PI
BA05CC0FP	Rohm	KIA78D05F	KA7812	Fairchild	KIA7812API	TA7805~24S/SB	Toshiba	KIA7805~24API
BA05FP	Rohm	KIA78D05F	KA78R**	Fairchild	KIA78R**PI	TA78DL05~15S	Toshiba	KIA78DL05~15PI
BA05T	Rohm	KIA78D05PI	ICTL78M05CDT	STM	KIA78M05F	TA78DLxxF	Toshiba	KIA78DLxxF
BA06CC0FP	Rohm	KIA78D06F	L4911BDT-TR	STM	KIA78D05F	TA78L005~24AP/F	Toshiba	KIA78L05~24BP/F
BA08CC0FP	Rohm	KIA78D08F	L7805ABD2T-TR	STM	KIA78D05F	TA78L05~24S	Toshiba	KIA78S05~24P
BA08CC0T	Rohm	KIA78D08PI	L7805ACV	STM	KIA7805API	TA78L05S(F)	Toshiba	KIA78S05P
BA09CC0FP	Rohm	KIA78D09F	L7812ACV	STM	KIA7812API	TA78L10F	Toshiba	KIA78L10F
BA09CC0T	Rohm	KIA78D09PI	L78L05ACU-TR	STM	KIA78L05F	TA78L15F(@,F)	Toshiba	KIA78L15F
BA09T	Rohm	KIA78D09PI	L78L08ACUTR	STM	KIA78L08F	TA78L24F(@,F)	Toshiba	KIA78L24F
BA12FP	Rohm	KIA78D12F	L78L09ACUTR	STM	KIA78L09F	TA78M05~24S/SB	Toshiba	KIA78M05~24PI
BA15BC0FP	Rohm	KIA78D015F	L78L15ABUTR	STM	KIA78L15F	TA78xxF	Toshiba	KIA78xxAF
BA178**FP/T	Rohm	KIA78**AF/API	L78L15ACU	STM	KIA78L15F	TA79005~24S/SB	Toshiba	KIA7905~24PI
BA17805FP-E2	Rohm	KIA7805AF	L78M05ABDT	STM	KIA78M05F	TA79L05~24P/F	Toshiba	KIA79L05~24BP/F
BA17805T-F	Rohm	KIA7805API	L78M05CDT	STM	KIA78M05F	UPC2405AHF-AZ	NEC	KIA7805API
BA178M**FP/T	Rohm	KIA78M**F/PI	L78M15ABV	STM	KIA78M15PI	UPC24M05AHF-AZ	NEC	KIA78M05PI
BA178M05FP	Rohm	KIA78M05F	LF50ABDT	STM	KIA78D05F	UPC24M12AHF-AZ	NEC	KIA78M12PI
BA178M05T/FP	Rohm	KIA78M05PI/F	LF50ABV	STM	KIA78D05PI	UPC2918T	NEC	KIA78D018F
BA178M12FP	Rohm	KIA78M12F	LF60ABDT	STM	KIA78D06F	UPC2933T-AZ	NEC	KIA78D033F
BA178M15T/FP	Rohm	KIA78M15PI/F	LF60ABV	STM	KIA78D06PI	UPC3533AHF	NEC	KIA78D33PI
BA18BC0FP	Rohm	KIA78D018F	L78M00T	Sanyo	KIA78M00PI	UPC7808AHF-AZ	NEC	KIA7808API
BA18BC0FP-E2	Rohm	KIA78D018F	LM2940T-5.0	NSC	KIA78D05PI	UPC7815AHF-AZ	NEC	KIA7815API
BA25BC0FP	Rohm	KIA78D025F	LM340	ON Semi	KIA7812API	UPC78L05T-E1-AZ	NEC	KIA78L05F
BA25BC0FP-E2	Rohm	KIA78D025F	LM78L05ACZ	Fairchild	KIA78S05P	UPC79M05HF-AZ	NEC	KIA78M05PI
BA33BC0FP	Rohm	KIA78D033F	LM78L12	Fairchild	KIA78L12P	CMOS LDO Regulator		
BA33BC0FP-E2	Rohm	KIA78D033F	LM78L15ACZ/D75Z	N/S	KIA78S15P	RP103K121D	Ricoh	KIC3213MF12
BA50BC0FP-E2	Rohm	KIA78D05F	LM7905	Fairchild	KIA7905PI	RP103K181D	Ricoh	KIC3213MF18
BA50BC0T	Rohm	KIA78D05PI	LM7905CT	Fairchild	KIA7905PI	RP103K251D	Ricoh	KIC3213MF25
BA60BC0T	Rohm	KIA78D06PI	MC7805	Fairchild	KIA7805API	RP103K281D	Ricoh	KIC3213MF28
BA7805CP	Rohm	KIA7805API	MC7805~24CT	ON Semi	KIA7805~24API	RP103K331D	Ricoh	KIC3213MF33
BA7805FP	Rohm	KIA7805AF	MC7805ACTG	ON Semi	KIA7805API	S-1172B10	Seiko	KIC3241S10
BA7806CP	Rohm	KIA7806API	MC7805BDTRKG	ON Semi	KIA7805AF	S-1172B12	Seiko	KIC3241S12
BA7806FP	Rohm	KIA7806AF	MC7805CTG	ON Semi	KIA7805API	S-1172B15	Seiko	KIC3241S15
BA7807CP	Rohm	KIA7807API	MC7812CTG	ON Semi	KIA7812API	S-1172B18	Seiko	KIC3241S18
BA7807FP	Rohm	KIA7807AF	MC78L05~24AC/C	ON Semi	KIA78S05~24P	S-1172B25	Seiko	KIC3241S25
BA7808CP	Rohm	KIA7808API	MC78L05ACPRAG	ON Semi	KIA78S05P	S-1172B33	Seiko	KIC3241S33
BA7808FP	Rohm	KIA7808AF	MC78L24ACPG	ON Semi	KIA78S24P	Quasi LDO		
BA7809CP	Rohm	KIA7809API	MC78M05BDTRKG	ON Semi	KIA78M05F	A1117-1.8	A/I	KIA1117BS18
BA7809FP	Rohm	KIA7809AF	MC78M05BTG	ON Semi	KIA78M05PI	A1117-2.5	A/I	KIA1117BS25
BA7810CP	Rohm	KIA7810API	MC78M05CDTRKG	ON Semi	KIA78M05F	A1117-3.3	A/I	KIA1117BS33
BA7810FP	Rohm	KIA7810AF	MC78M12BDTRKG	ON Semi	KIA78M05PI	AP1117EL-13	Diodes Inc	KIA1117BS00
BA7812CP	Rohm	KIA7812API	MC7905BT	ON Semi	KIA7905PI	AZ1117BH-1.8TR-E1	BCD	KIA1117BS18
BA7812FP	Rohm	KIA7812AF	MC7905CT	ON Semi	KIA7905PI	AZ1117BH-ADJTR-E1	BCD	KIA1117BS00
BA7815CP	Rohm	KIA7818API	MIC39100CT-2.5LE	MICREL	KIA78D025F	AZ1117D-1.5E	BCD	KIA1117BF15
BA7815FP	Rohm	KIA7815AF	NJM2386DL3-05	NJRC	KIA78R05F	Voltage Detector		
BA7818CP	Rohm	KIA7818API	NJM2386DL3-12	NJRC	KIA78R12F	M51944	Renesas	KIA7442P/F
BA7818FP	Rohm	KIA7818AF	NJM2386DL3-33	NJRC	KIA78R33F	M51943	Renesas	KIA7042AP/AF
BA7820CP	Rohm	KIA7820API	NJM78xxDLA	NJRC	KIA78xxAF	MN1280	Panasonic	KIA7019~45AP/AF
BA7820FP	Rohm	KIA7820AF	PC78050~24A	NEC	KIA7805~24API	PST523	Mitsumi	KIA7019~45AP/AF

Integrated Circuit

Type No.	Maker	KEC	Type No.	Maker	KEC	Type No.	Maker	KEC
Voltage Stabilizer			NCV2903DR2G	ON Semi	KIA393F	NJM2125F(Te1)	NJRC	KIA75S58F
A431	NEC	KIA431/F/A/AF	NJM2901N	NJRC	KIA339P	NJM2130	NJRC	KIA75S58F
AN1431T	Panasonic	KIA431	NJM2903D	NJRC	KIA393P	TA75S58F	Toshiba	KIA75S58F
AS431AN	BCD	KIA431BM	NJM2903D/M	JRC	KIA393P/F	TS931	STM	KIA75S58F
AS431LAN/AMI	Alpha	KIA431BP/BF	NJM2903M	NJRC	KIA393F	AF Power Amplifier		
FAN431LZX	Fairchild	KIA431B	PC339C/G	NEC	KIA393P/F	KA8602F	Fairchild	KIA6419F
HA17431P/UA	Renesas	KIA431/F	PC393C/G	NEC	KIA393P/F	MC34119D	ON Semi	KIA6419F
KA431AZTA	Fairchild	KIA431A	TA75339P	Toshiba	KIA339P	Transistors Array		
KA431LZ	Fairchild	KIA431B	TA75393P	Toshiba	KIA393P	LB1211	Sanyo	KID65501P
L5431	Sanyo	KIA431	UPC339C-A	NEC	KIA339P	LB1212	Sanyo	KID65502P
LM336	N/S	KIA431/F/A/AF	UPC339G2-A	NEC	KIA339F	LB1213/M	Sanyo	KID65503P/F
MM1431AT	ON Semi	KIA431A	UPC393C-A	NEC	KIA393P	LB1214	Sanyo	KID65504P
NJM1431AU	NJRC	KIA431F	UPC393G2-A	NEC	KIA393F	LB1215	Sanyo	KID65505P
NJM431L/U	JRC	KIA431/F/A/AF	Single Voltage Comparator			LB1216	Sanyo	KID65506P
PC1093J/T	NEC	KIA431/F/A/AF	LM397MF/NOBP	N/S	KIA75S393F	LB1217	Sanyo	KID65507P
RC431AM/AT	Fairchild	KIA2431AT/AP	LM7219	N/S	KIA75S393F	LB1231	Sanyo	KID65001AP
SL431A-AT	AUK	KIA431A	NJM2406F	NJRC	KIA75S393F	LB1232	Sanyo	KID65002AP
SN431A	AUK	KIA431A	TA75S393F	Toshiba	KIA75S393F	LB1233	Sanyo	KID65003AP
TA76431AS	Toshiba	KIA431A	TA75S393F	Toshiba	KIA75S393F	LB1234	Sanyo	KID65004AP
TA76431S	Toshiba	KIA431	TS391	STM	KIA75S393F	M54523P	Renesas	KID65003AP
TA76431S/F	Toshiba	KIA431/F	OP Amp			M54563P	Renesas	KID65783AP
TA76432FC/S	Toshiba	KIA2431AT/AP	AN1324	Panasonic	KIA324P/F	M54585FP-DB0J	MITSUBISHI	KID65083AF
TL431	ON Semi	KIA431/F/A/AF	AN4558/S	Panasonic	KIA4558P/F	MC1413BDR2G	ON Semi	KID65001AF
TL431	TI	KIA431/F/A/AF	BA10324/F	Rohm	KIA324P/F	MC1413BDR2G	ON Semi	KID65003AF
TL431ACLPRAG	ON Semi	KIA431A	BA10324AFV	Rohm	KIA324F	MC1413PG	ON Semi	KID65003AP
TL431ACZT	STM	KIA431A	BA10358F/N	Rohm	KIA358P/F	PAC2981C	NEC	KID65783AP
TL431AIDBZR	TI	KIA431AM	BA10358F	Rohm	KIA358F	TD62001~4P/AP	Toshiba	KID65001~4AP
TL431AILPRAG	ON Semi	KIA431A	BA4558F/N	Rohm	KIA4558P/F	TD62001AFG(S,EL)	Toshiba	KID65001AF
TL431AILPRPG	ON Semi	KIA431A	LA6324N/NM	Sanyo	KIA324P/F	TD62001APG(5,J,S)	Toshiba	KID65001AP
TL431B	TI	KIA431B	LA6358N/NM	Sanyo	KIA358P/F	TD62003AFG(S,EL)	Toshiba	KID65003AF
TL431CLP	Fairchild	KIA431	LA6458D/M	Sanyo	KIA4558P/F	TD62003APG(5,J,S)	Toshiba	KID65003AP
TL431CZ	STM	KIA431	LM124	Philips	KIA324P	TD62083AP/AF	Toshiba	KID65083AP/AF
TL431IZT	STM	KIA431	LM224DR2G	ON Semi	KIA324F	TD62084AP/AF	Toshiba	KID65084AP/AF
TL431K	SECOS	KIA431A	LM258D	TI	KIA358F	TD62501~7P	Toshiba	KID65501~7P
TLV431A	ON Semi	KIA2431AT/AP	LM258DT	STM	KIA358F	TD62503F	Toshiba	KID65503F
TLV431ACDBVR	TI	KIA2431AT	LM2902	Philips	KIA324P	TD62504FG	Toshiba	KID65504F
TLV431DBV	TI	KIA2431AT	LM2902DR2G	ON Semi	KIA324F	TD62783AP/AF	Toshiba	KID65783AP/AF
TS2431AILT	STM	KIA431AM	LM2904D	STM	KIA358F	UDN2981A	Sprague	KID65783AP
TS432HILT	STM	KIA2431AS	LM2904DR2	ON Semi	KIA358F	ULN2001~4A	ON Semi	KID65001~4AP
UPC1093J-1	NEC	KIA431	LM2904DT	Rohm	KIA358F	ULN2002A	STM	KID65002AP
UPC1093T-AZ	NEC	KIA431F	LM324N	ON Semi	KIA324P/F	ULN2003A	TI	KID65003AP
Comparator			LM324A	Philips	KIA324P	ULN2003AD	TI	KID65003AF
AN1393/S	Panasonic	KIA393P/F	LM324D	ON Semi	KIA324F	ULN2003AFW	Toshiba	KID65003AF
AN6912/S	Panasonic	KIA339P/F	LM324PWR	N/S	KIA324F	ULN2003AN	TI	KID65003AP
BA10339F	Rohm	KIA339P/F	UPC358G2-E1-A	NEC	KIA358F	ULN2003D1013TR	STM	KID65003AF
BA10339F-E2	Rohm	KIA339F	UPC4558C-A	NEC	KIA4558P	ULN2004ADR	TI	KID65004AF
BA10393F/N	Rohm	KIA393P/F	LM358	ON Semi	KIA358P/F	ULN2004D1013TR	TI	KID65004AF
BA10393F	Rohm	KIA393F	LM358A	STM	KIA358F	ULN2803/4	ON Semi	KID65083/84AP
BA2903FV-E2	Rohm	KIA339F	LM358ADR2G	ON Semi	KIA358F	ULQ2004ADR	TI	KID65004AF
KA393	Fairchild	KIA393P	LM358AMX	N/S	KIA358F	Logic MOS		
LA6339/M	Sanyo	KIA339P/F	LM358MX	Fairchild	KIA358F	74LVC1G08GW	Philips	KIC7S08FU
LA6393D/M	Sanyo	KIA393P/F	LM358NGG	ON Semi	KIA358P	M74VHC1GU04DTTIG	ON Semi	KIC7S204FU
LA6393M-E	Sanyo	KIA393F	MC33078DR2G	ON Semi	KIA358F	MC74HC1G04DFT2G	ON Semi	KIC7S04FU
LM239D	STM	KIA339F	MC33272ADR2G	ON Semi	KIA358F	NC7SZ125P5X_NL	Fairchild	KIC7SZ125FU
LM239DT	STM	KIA339F	MC33274ADR2G	ON Semi	KIA324F	SN74AHC1G04DCKR	TI	KIC7S04FU
LM2901D	ON Semi	KIA339F	MC4558C	ON Semi	KIA4558P/F	SN74AHCT1G**	TI	KIC7S**FU
LM2901M	Fairchild	KIA339F	NJM2902D	JRC	KIA324P/F	TC7S**FU	Toshiba	KIC7S**FU
LM2903D	ON Semi	KIA393F	NJM2904D	NJRC	KIA358P	TC7S04F	Toshiba	KIC7S04FU
LM2903MX T/R	NSC	KIA393F	NJM2904M	NJRC	KIA358F	TC7S04FU	Toshiba	KIC7S04FU
LM339	Philips	KIA393P	NJM324D	NJRC	KIA324P	TC7S08FU	Toshiba	KIC7S08FU
LM339/N	N/S	KIA339P/F	NJM4558D	NJRC	KIA4558P	TC7S08FU(TE85R)	Toshiba	KIC7S08FU
LM339D	ON Semi	KIA339F	NJM4558D/S/M	JRC	KIA4558P/F	TC7S14FU	Toshiba	KIC7S14FU
LM339MX	N/S	KIA339F	NJM4558M	NJRC	KIA4558F	TC7S32FU	Toshiba	KIC7S32FU
LM393	ON Semi	KIA393F	NJM4580D-D	JRC	KIA358P	TC7S66FU	Toshiba	KIC7S66FU
LM393	Philips	KIA393P	PC324C	NEC	KIA324P/F	TC7SZ125FU	Toshiba	KIC7SZ125FU
LM393/N	N/S	KIA393P/F	PC4558C/G	NEC	KIA4558P/F	TC7SZ125FU(TE85L,F)	Toshiba	KIC7SZ125FU
LM393DR2G	ON Semi	KIA339F	S4580	AUK	KIA358F	TC7SZ32FU	Toshiba	KIC7SZ32FU
LM393DT	STM	KIA393F	TA75558P	Toshiba	KIA4558P/F	TC7SZ32FU(TE85L,F)	Toshiba	KIC7SZ32FU
LM393N	N/S	KIA393P	TL074IDR	TI	KIA324F	White LED Driver		
LM393N	ON Semi	KIA393P	Single Low Noise OP AMP			LM2733	N/S	KAB3405T
MJM2901D/M	JRC	KIA339P/F	NJM2125	NJRC	KIA75S358F	LT1937	Linear	KIB3402F

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