



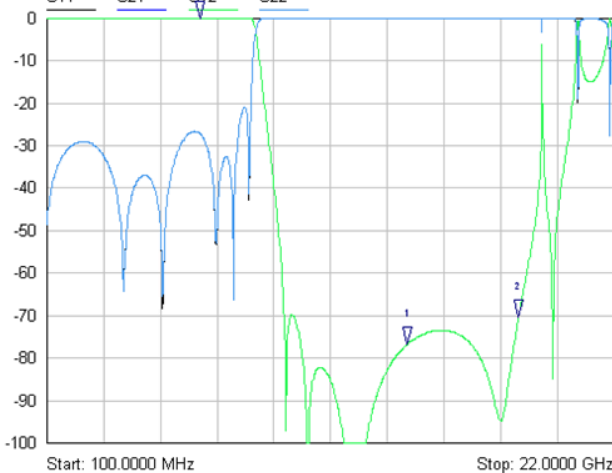
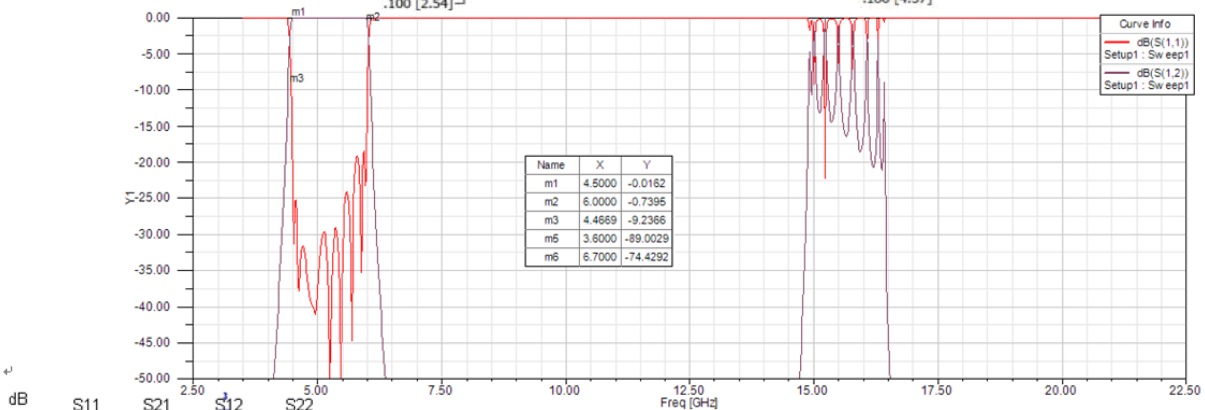
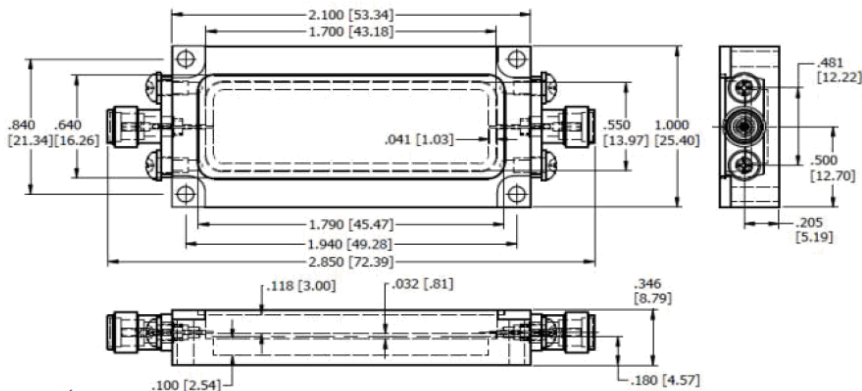
2012
RF & MICROWAVE



Broadband Bandpass Filter



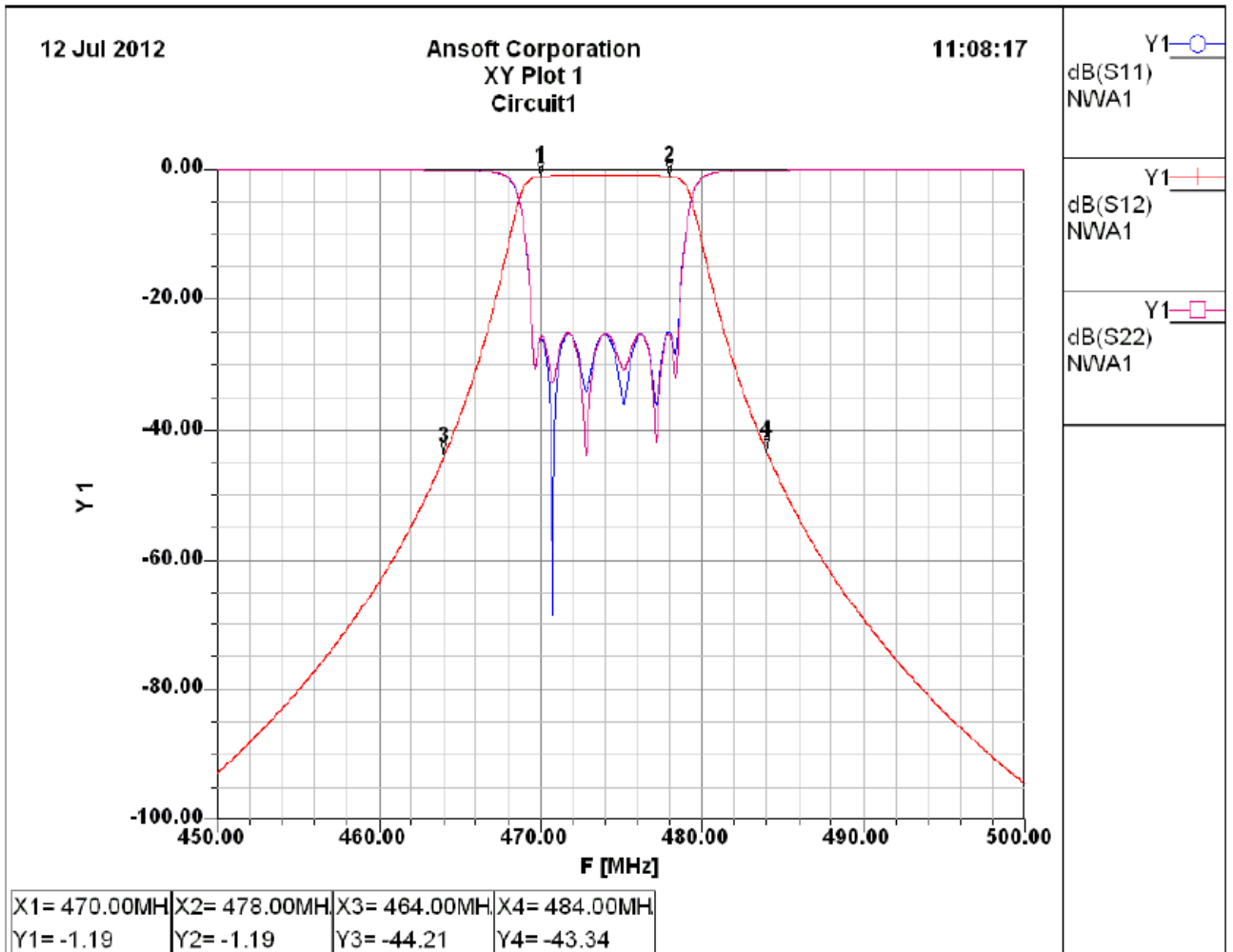
• Pass Band Frequency Range	4.5~6.0GHz
• Pass Band Insertion Loss	≤ 1.0(dB)
• Stop Band Frequency Range	DC~3.6GHz, 6.7~15GHz
• Stop Band Loss	≥ 70 (dB)
• VSWR	≤ 1.4
• Package Type	SMA female*2
• Impedance	50±1Ω @ I/O
• Size, connector	Figure 1
• Mounting Holes	Figure 1
• Power Handling	1W
• Operating Temperatures	-55~+85°C
• Flatness	less than +/- 1 dB



Mkr	Trace	X-Axis	Value
1	S21	14.0000 GHz	-76.80 dB
2	S21	18.3000 GHz	-70.40 dB
3	S21	6.0000 GHz	-0.02 dB

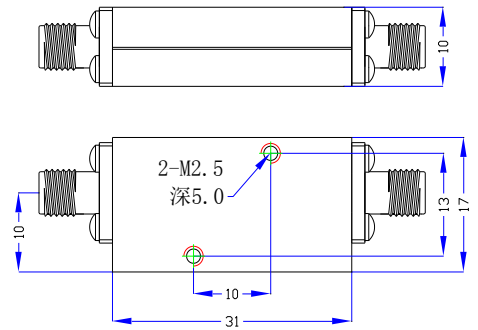
• Frequency	470MHz~478MHz
• Insertion loss	< 1.2dB
• Return loss	> 19dB
• Rejection	300MHz~463MHz±1M Hz ≥ 40dB
	484MHz±1MHz~600M Hz ≥ 40dB
• Impedance	50Ω
• Connector	SMA-F
• POWER	100W
• SIZE	216*41*98

• Frequency	470MHz~478MHz
• Insertion loss	< 1.4dB
• Return loss	> 18dB
• Rejection	300MHz~463MHz±1MH z ≥ 40dB
	484MHz±1MHz~600MH z ≥ 40dB
• Impedance	50Ω
• Connector	SMA-F
• POWER	40W
• SIZE	196*35*98



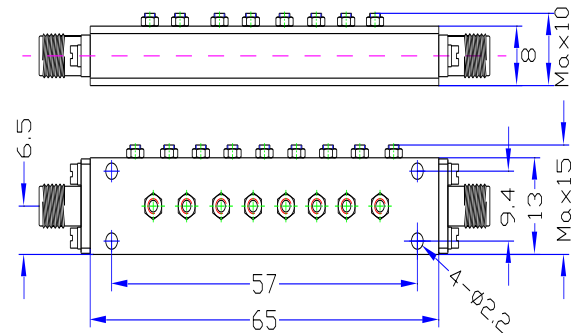
Stripline Filters

• Model	TA0223-HS
• Frequency Range	3~18GHz
• Insertion Loss	≤1.5dB (Type≤1.0dB)
• VSWR	≤2.0:1
• Rejection	≥22dB @ 2.5GHz ≥65dB @ DC~2GHz
• Power	10 W
• Surface Finish	Guide Oxygen or Black Paint
• Port Connectors	SMA-Female
• Configuration	As Below



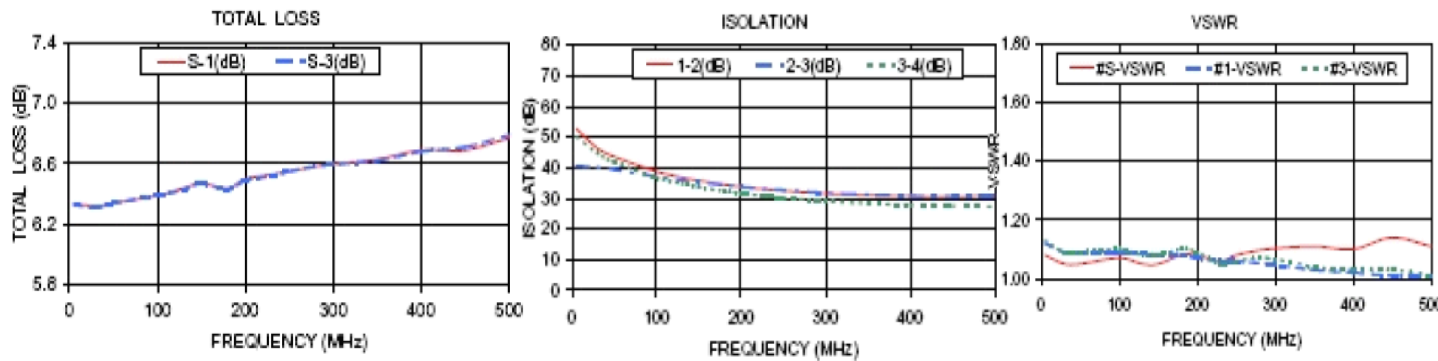
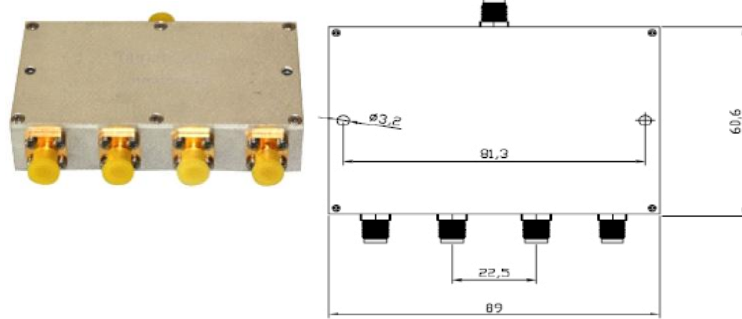
Comb Filters

• Model	TA0345-S09
• 1dB Pass Band Frequency	15.8~17.4GHz (F0=16.6GHz)
• Insertion Loss @ Center Frequency	≤1.0dB @ 16.6GHz
• VSWR	≤1.7:1
• Rejection	≥80dB @ 14GHz ≥50dB @ 20GHz
• Port Connectors	SMA-Female
• Operating Temperature	-40°C ~ +80°C
• Surface Finish	The Original Silver Colour
• Configuration	As Below (Size Unit: mm)



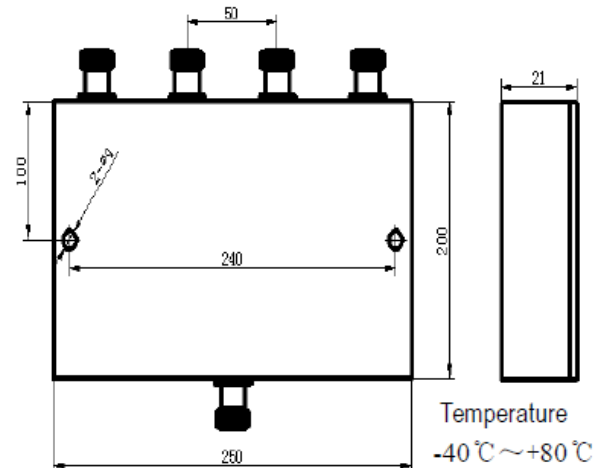
❖ 4-way 10W Power Splitter

• Frequency	50-200MHz
• Insertion Loss Max.	0.4-1.5dB
• Isolation Min.	≥ 20 dB
• Phase Unbalance (Degree) Max.	6.0
• Amplitude Unbalance Max.	0.4dB
• VSWR Max.	1.14:1
• Power handling Max. (watt)	10W
• Connectors	SMA/N/BNC
• Impedance	50 Ohm



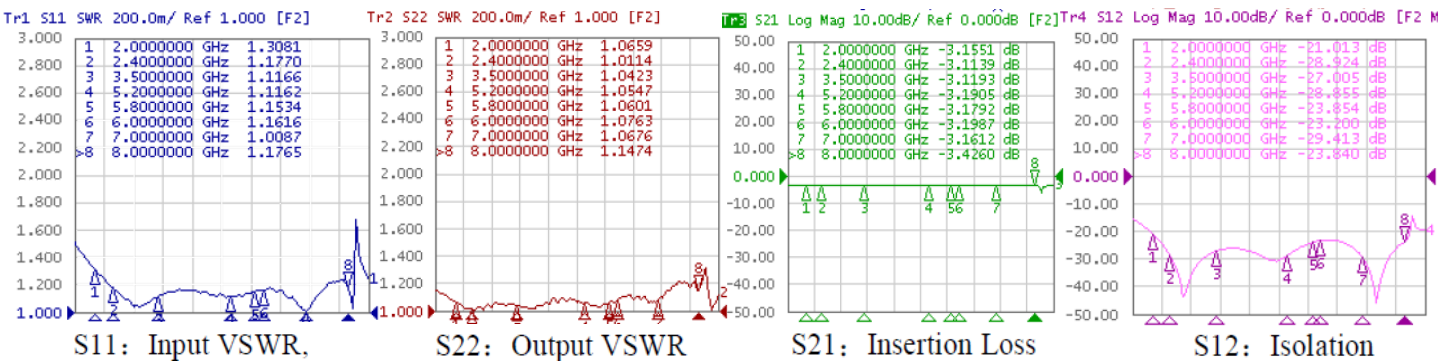
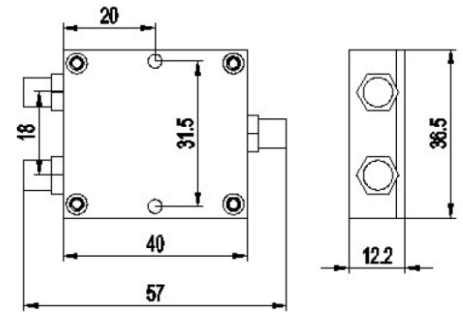
❖ 4-way 50W Power Splitter

• Frequency	50-200MHz
• Bandwidth	150MHz
• (Typ.)	6.0dB
• VSWR	1.5
• Isolation	≥ 18 dB
• Amplitude Unbalance Max.	0.5dB
• Power	50W
• Dimension	250mm X 200mm X 21mm



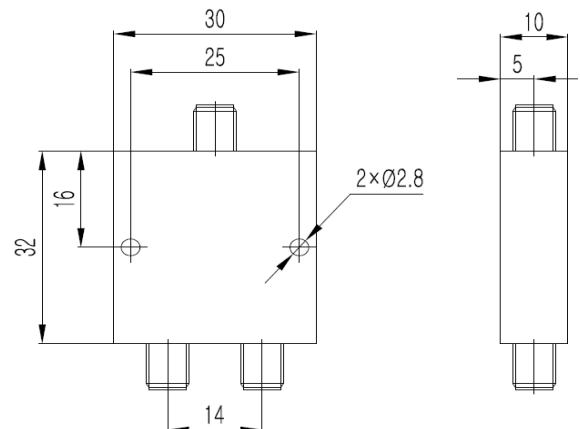
❖ 2-way 2-8G Power splitter

• Frequency Range (GHz)	2-8
• Insertion loss (dB)	≤ 3.8
• Isolation (dB)	≥ 20
• VSWR	≤ 1.3 (2-6G) ≤ 1.4 (6-8G)
• Amplitude Balance (dB)	≤ 0.3
• Phase Balance (°)	≤ 5
• Impedance (Ω)	50
• Connectors	SMA
• Power Rating (W)	10
• Temperature (°C)	-30~+70
• Size (mm)	40 X 36.5 X 12.2
• Weight (Kg)	0.10



❖ 2-way 5.1-5.8G Power splitter

• Model	5.1/5.8-2S
• Frequency Range (GHz)	5.1 ~ 5.8
• Insertion Loss (dB)	≤ 0.5
• Isolation (dB)	≥ 20
• Amplitude Unbalance (dB)	≤ ±0.2
• Phase Unbalance (Deg)	≤ ±2
• VSWR	≤ 1.3:1
• Power Handling (Watt)	Forward Power: 10 (CW) Reverse Power: ≤ 1 (CW)
• Impedance	50Ω
• Port Connectors	SMA – Female
• Outline Drawing	As Below



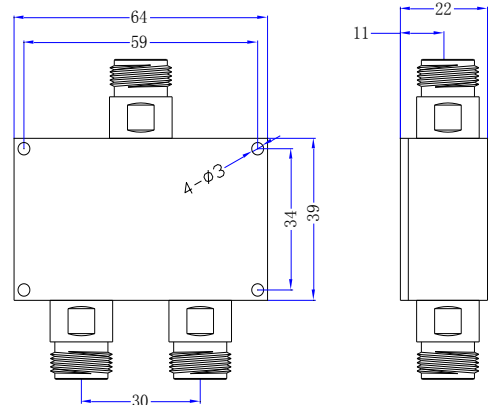


• Frequency(MHz)	350-1000MHz		
• Product Name	350-1000MHz, 2/3/4 way, 200 watts, RF Cavity Power Splitter/Divider		
• Insertion Loss(dB)	≤ 3.2	≤ 5.4	≤ 6.5
• VSWR	≤ 1.25:1		
• Power Capacity(W)	200		
• Impedance(ohm)	50		
• RF Connector	N-female or DIN(7/16)-female		
• Application	Indoor		
• Operating Temperature(deg)	-35~+60		
• Color	Black-plated or Silvery-white Plated		
• Material	Aluminum		
• Relative Humidity	5%-95%		

• Frequency(MHz)	350-2700MHz		
• Product Name	350-2700MHz, 2/3/4 way, 200 watts, RF Cavity Power Splitter/Divider		
• Insertion Loss(dB)	≤ 3.2	≤ 5.4	≤ 6.5
• VSWR	≤ 1.25:1		
• Power Capacity(W)	200		
• Impedance(ohm)	50		
• RF Connector	N-female or DIN(7/16)-female		
• Application	Indoor		
• Operating Temperature(deg)	-35~+60		
• Color	Black-plated or Silvery-white Plated		
• Material	Aluminum		
• Relative Humidity	5%-95%		

❖ 2 Way 400-800MHz Power splitter

- Way : 2
- Frequency Range : 400 ~ 800MHz
- Insertion Loss : ≤0.4dB
- Isolation : ≤20dB
- VSWR : ≤1.30:1
- Impedance : 50 Ohms
- Power Handling : CW: 10W
- Surface Finish : Gush Arenaceous Guide Oxygen
- Connectors : N-Female
- Configuration : As Below (Size Unit: mm)

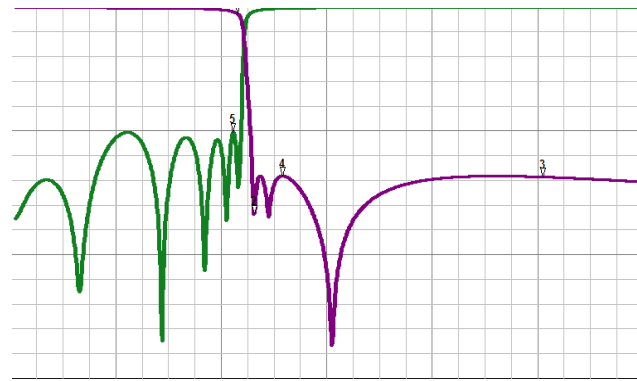
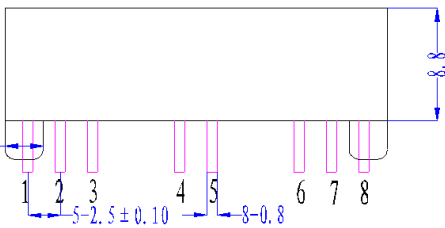
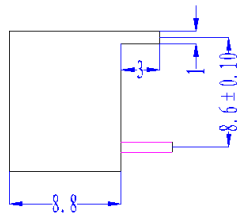
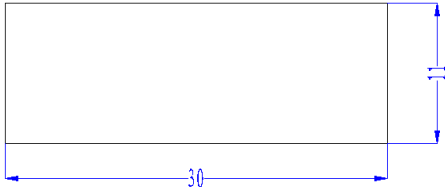


A. 47-431Mhz Specification

1. Operating Frequency Range : 47-431MHz
2. Insertion Loss : ≤ 3.2 dB
3. Return Loss : ≥ 15 dB
4. Rejection : ≥ 60 dB@463-1010 MHz
5. Impedance : 75Ω
6. Connector : 0.8mm pin
7. Temperature range : $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

. Dimension

Unit : mm Tolerance ± 0.3 mm



47-431Mhz Simulation Curve

- | | | |
|---|--|---|
| M1
Freq=431Mhz
dB (S21) =-2.59 | M3
Freq=1010Mhz
dB (S21) =-68.5 | M5
Freq=423Mhz
dB (S11) =-20.1 |
| M2
Freq=463Mhz
dB (S21) =-83.2 | M4
Freq=517Mhz
dB (S21) =-68.1 | |

PIN no.	Description
1	Ground
2	RF In/Out
3	Ground
4	Ground

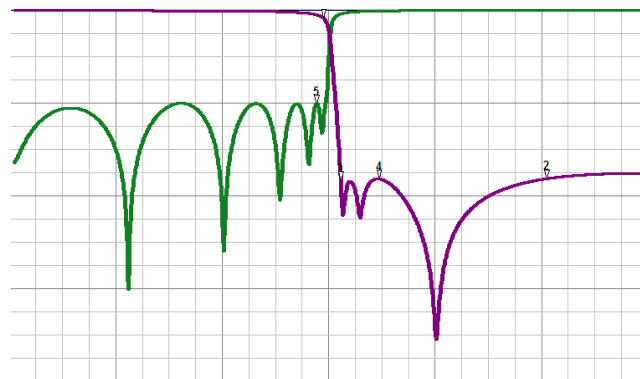
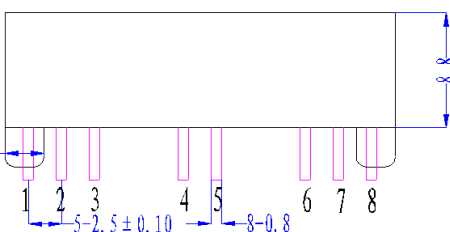
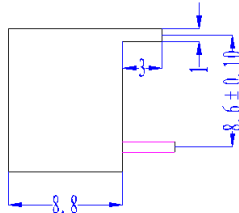
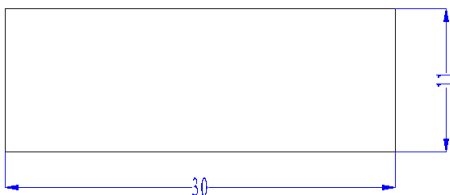
PIN no.	Description
5	Ground
6	Ground
7	RF In/Out
8	Ground

B. 47-591Mhz Specification

1. Operating Frequency Range : 47-591MHz
2. Insertion Loss : ≤ 4.5 dB
3. Return Loss : ≥ 15 dB
4. Rejection : ≥ 60 dB@623-1010 MHz
5. Impedance : 75Ω
6. Connector : 0.8mm pin
7. Temperature range : $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

. Dimension

Unit : mm Tolerance: ± 0.3 mm



47-591Mhz Simulation Curve

- | | | |
|---|--|---|
| M1
Freq=591Mhz
dB (S21) =-3.30 | M3
Freq=1010Mhz
dB (S21) =-68.0 | M5
Freq=578Mhz
dB (S11) =-20.1 |
| M2
Freq=623Mhz
dB (S21) =-68.7 | M4
Freq=695Mhz
dB (S21) =-68.1 | |

PIN no.	Description
1	Ground
2	RF In/Out
3	Ground
4	Ground

PIN no.	Description
5	Ground
6	Ground
7	RF In/Out
8	Ground



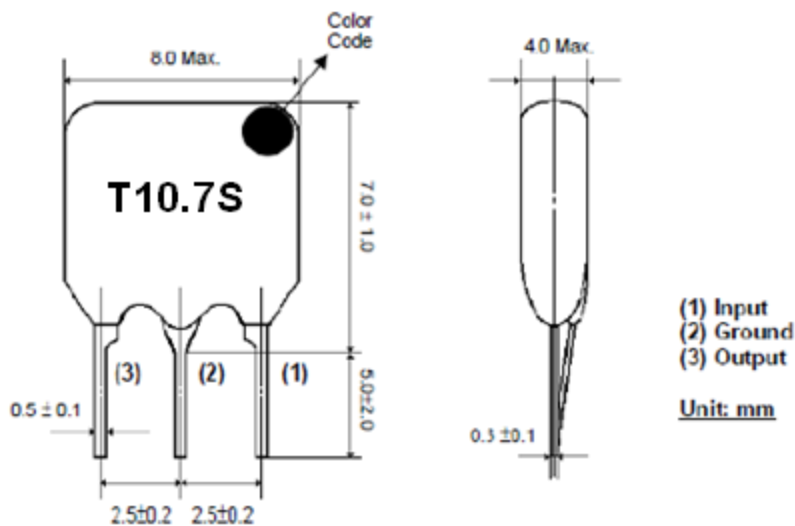
FEATURES

1. Low Cost
2. FM Use
3. Low Profile
4. Excellent Temperature Stability
5. High Durability

■ TT10.7 Series TT10.7 Series Filter

GENERIC SPECIFICATION

Part Number	3dB Band Width.(KHz)	20dB Band Width (KHz)	Insert Loss (dB max)	Spurious Attenuation (9-12MHz) (dBmin)
TT10.7M Series of ceramic filter for FM receiver				
TT10.7MA5	280±50	650	6	-30
TT10.7MS2	230±50	600	6	-40
TT10.7MS3	180±50	520	7	-40
TT10.7MJ	150±50	400	10	-38
TT10.7MA10 Series of Ceramic Filter (Low-Loss Type)				
TT10.7MA5A10	280±50	590	2.5±2.0	-30
TT10.7MS2A10	230±50	520	3.0±2.0	-35
TT10.7MS3A10	180±50	470	3.5±1.5	-35
TT10.7MJA10	150±50	360	4.5±2.0	-35
Wide/Narrow Band-width Type TT10.7M Series of Ceramic Filter				
TT10.7MA19	350min	950	3.0±2.0	-20
TT10.7MA20	330±50	680	4.0±2.0	-30
TT10.7MHY	110±30	350	7.0±2.0	-30
TT10.7MFP	20min	95	6.0max	-24





FEATURES

1. Low Cost
2. FM Use
3. Chip Type
4. Excellent Temperature Stability
5. High Durability

■ TTCA10.7 Series TTCV10.7 Series Filter

Part Number	3dB Band Width.(KHz)	20dB Band Width (KHz) max	Insert Loss (dB) max	Spurious Attenuation (9-12MHz) (dB) min
TTCA10.7MA5	280±50	650	6.0	30
TTCA10.7MS2	230±50	600	6.0	30
TTCA10.7MA5	280±50	590	3.0±2.0	35
TTCA10.7MS2	230±50	510	3.5±2.0	35
TTCA10.7MS3	180±40	470	4.0±2.0	35



■ TT U/W TTM U/W Series Filter

FEATURES

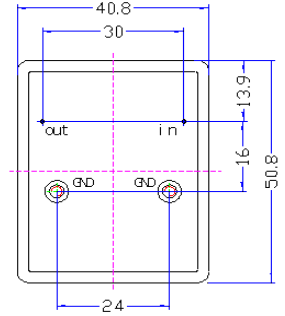
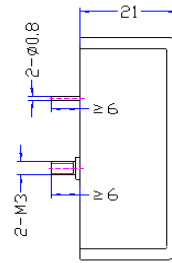
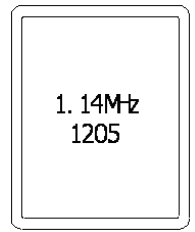
1. Low Cost
2. Communication Use
3. Low Profile
4. Excellent Temperature Stability
5. High Durability

GENERIC SPECIFICATION

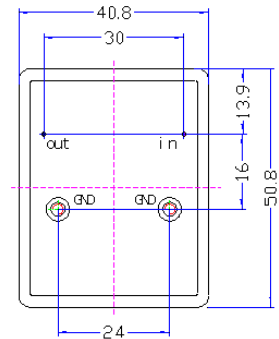
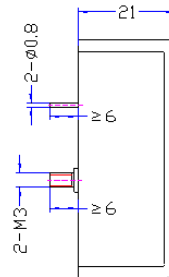
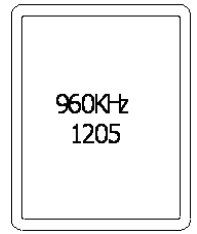
Part Number	Center Freq (KHz)	Insertion Loss (dB)max	Pass Band Ripple (dB)max	6dB Band Width (KHz)min	40dB Band Width (KHZ)max (TT455 U)	50dB Band Width (KHZ)max (TT455 W)	Stop Band Attenuation fo±100KHz (dB)min		Input/ Output Impedance (Ω)	
							TT455 U	TT455 W		
TT455BU/W	TTM455BU/W	455±2.0	4.0	2	±15	±30	±30	28	40	1500
TT455CU/W	TTM455CU/W	455±2.0	4	2	±12.5	±24	±24	28	40	1500
TT455DU/W	TTM455DU/W	455±1.5	4	2	±10	±20	±20	28	40	1500
TT455EU/W	TTM455EU/W	455±1.5	6	2	±7.5	±15	±15	28	40	1500
TT455FU/W	TTM455FU/W	455±1.5	6	2	±6	±12.5	±12.5	28	40	2000
TT455GU/W	TTM455GU/W	455±1.5	6	2	±4.5	±10	±10	28	40	2000
TT455HU/W	TTM455HU/W	455±1.0	6	2	±3	±9	±9	28	40	2000
TT455IU/W	TTM455IU/W	455±1.0	6	2	±2	±7.5	±7.5	28	40	2000
TT455HTU/W	TTM455HTU/W	455±1.0	6	2	±3	±9	±9	35	60	2000

Crystal Filters

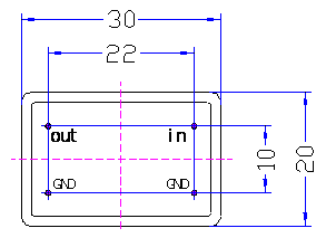
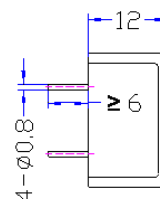
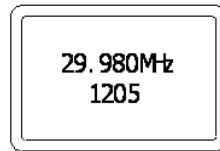
Parameters	
• Center Frequency (F_0)	1.14MHz
• Pass band (3dB Bandwidth)	3.0dB@ $F_0 \pm 1.5$ KHz Minimum
• Stop band (50dB Bandwidth)	50dB@ $F_0 \pm 4.0$ KHz Maximum
• Pass Band Insertion Loss	≤ 6.0 dB
• Pass Band Ripple	1.0dB Maximum
• Attenuation	50dB Minimum
• Operating Temperature Range	-10°C to +60°C
• Impedance	Input 10K Ohms; Output 10K Ohms
• Configuration	As Below (Size: 50.8×40.8×21mm)



Parameters	
• Center Frequency (F_0)	960KHz
• Pass band (3dB Bandwidth)	3.0dB@ $F_0 \pm 1.5$ KHz Minimum
• Stop band (45dB Bandwidth)	45dB@ $F_0 \pm 4.0$ KHz Maximum
• Pass Band Insertion Loss	≤ 6.0 dB
• Pass Band Ripple	1.0dB Maximum
• Attenuation	50dB Minimum
• Operating Temperature Range	-10°C to +60°C
• Impedance	Input 2.2K Ohms; Output 2.2K Ohms
• Configuration	As Below (Size: 50.8×40.8×21mm)



Parameters	
• Center Frequency (F_0)	29.980MHz
• Pass band (3dB Bandwidth)	3.0dB@ $F_0 \pm 70$ KHz Minimum
• Stop band (40dB Bandwidth)	40dB@ $F_0 \pm 160$ KHz Maximum
• Pass Band Insertion Loss	≤ 5.0 dB
• Pass Band Ripple	3.0dB Maximum
• Operating Temperature Range	-10°C to +60°C
• Impedance	Input 500 Ohms; Output 50 Ohms//22pf
• Configuration	As Below (Size: 30×20×12mm)



7mm TYPE 7P High Frequency

7mm TYPE 7P High Frequency with Internal Capacitor

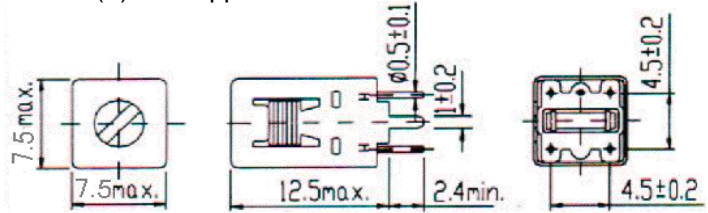
Frequency Range: 2-20MHz

Inductance Range: 1-82uH

Temperature Coefficient of: Inductor TC (L) 220±220ppm/°C

With Internal Capacitor TC (F) 0±250ppm/°C

Internal Capacitance Values: 5-100pF



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 7P High Frequency

TOKO Part Number	Inductance Range (uH)	Q (min.)	Test Frequency (MHz)
A119ANS-18970Z	4.7±10%	105	7.96
A119ANS-18971Z	5.6±10%	105	7.96
A119ANS-18972Z	6.8±10%	110	7.96
A119ANS-18973Z	8.2±10%	110	7.96
A119ANS-18974Z	10.0±10%	110	7.96
A119ANS-18975Z	12.0±10%	80	2.52
A119ANS-18976Z	15.0±10%	85	2.52
A119ANS-18977Z	18.0±10%	90	2.52
A119ANS-18978Z	22.0±10%	90	2.52
A119ANS-18979Z	27.0±10%	90	2.52
A119ANS-18980Z	33.0±10%	90	2.52
A119ANS-18981Z	39.0±10%	90	2.52
A119ANS-18982Z	47.0±10%	85	2.52
A119ANS-18983Z	56.0±10%	85	2.52
A119ANS-18984Z	68.0±10%	85	2.52
A119ANS-18985Z	82.0±10%	85	2.52

TYPE 7P High Frequency with Internal Capacitor

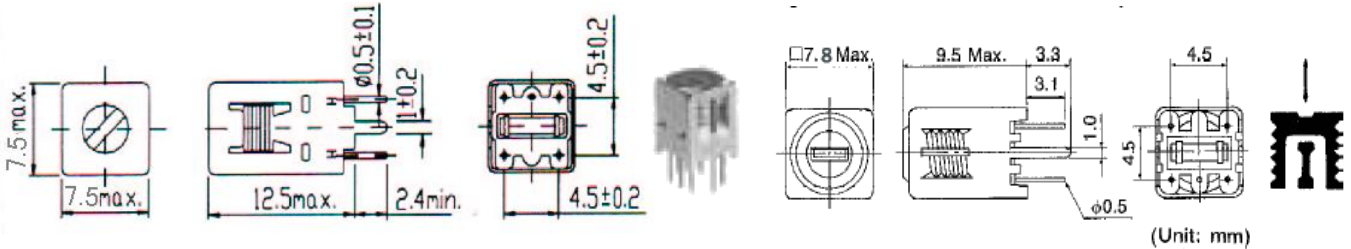
TOKO Part Number	Turns Ratio:			Tuning Capacitance(pF)	Q	Test Frequency (MHz)
	1-3/2-3	1-3/4-6	Others			
119AC-470033NO	14:3	14:3		47+5(ext)	100±20%	10.7
119AC-470052NO	14:5	14:2		47+5(ext)	110±20%	10.7
119AC-470072NO	14:7	14:2		47+5(ext)	110±20%	10.7
119AC-470073NO	14:7	14:3		47+5(ext)	110±20%	10.7
119AC-470084LO				47+3(ext)	90±20%	10.7
119AC-470112NO	14:11	14:2		47+5(ext)	120±20%	10.7
119AC-750111MO			2-3/4-6 11:1	75+5(ext)	100±20%	10.7
119AC-750112MO			2-3/4-6 11:2	75+5(ext)	100±20%	10.7
119FC-560061NO	12:6	12:1		56+0(ext)	120±20%	10.7
119FC-820051NO	10:5	10:1		82+0(ext)	110±20%	10.7
119LC-470033NO	14:3	14:3		47+5(ext)	65±20%	10.7
119LC-470053NO	14:5	14:3		47+5(ext)	70±20%	10.7
119LC-470073NO	14:7	14:3		47+5(ext)	70±20%	10.7

7mm TYPE 7PA

Frequency Range: 10-200kHz
Inductance Range: 1-25mH
Temperature Coefficient: TC(L) 250ppm/°C max
Internal Capacitance Values: 10~6800pF

7mm TYPE 7PLA

Frequency Range: 10-200kHz
Inductance Range: 1-15mH
Temperature Coefficient: TC (L) 750±250ppm/°C
Internal Capacitance Values: 10-6800pF



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 7PA

TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
126ANS-T1094Z	1.0±6%	60	252
126ANS-T1095Z	1.2±6%	60	252
126ANS-T1096Z	1.5±6%	60	252
126ANS-T1097Z	1.8±6%	60	252
126ANS-T1098Z	2.2±6%	60	252
126ANS-T1099Z	2.7±6%	60	252
126ANS-T1100Z	3.3±6%	60	252
126ANS-T1101Z	3.9±6%	60	252
126ANS-T1102Z	4.7±6%	60	252
126ANS-T1103Z	5.6±6%	60	252
126ANS-T1104Z	6.8±6%	60	252
126ANS-T1105Z	8.2±6%	60	252
126ANS-T1106Z	10.0±6%	60	79.6
126ANS-T1107Z	12.0±6%	60	79.6
126ANS-T1108Z	15.0±6%	60	79.6
126ANS-T1109Z	18.0±6%	60	79.6
126ANS-T1110Z	22.0±6%	60	79.6

TYPE 7PLA

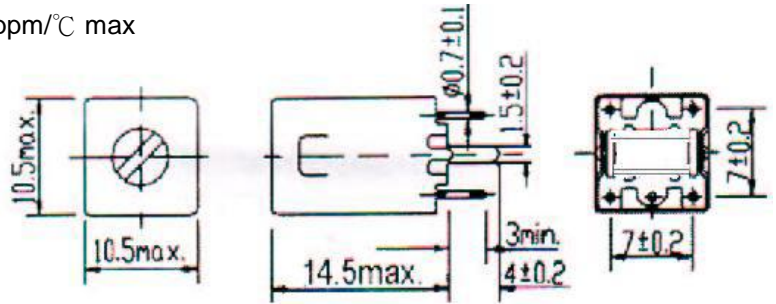
TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
284XNS-1111Z	2.7±6%	80	252
284XNS-1158Z	3.3±6%	70	252
284XNS-1356Z	3.9±4%	70	252
284XNS-1357Z	4.7±3%	80	252
284XNS-1015Z	6.8±6%	70	252
284XNS-1132Z	8.2±5%	70	252
284XNS-1394Z	10.0±5%	50	252
284XNS-1016Z	12.0±6%	50	79.6
284XNS-1017Z	15.0±6%	50	79.6

10mm TYPE 10PA

Frequency Range: 10-200kHz

Inductance Range: 1-56mH

Temperature Coefficient: TC (L) $220 \pm 220 \text{ ppm}/^\circ\text{C}$ max



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 10PA

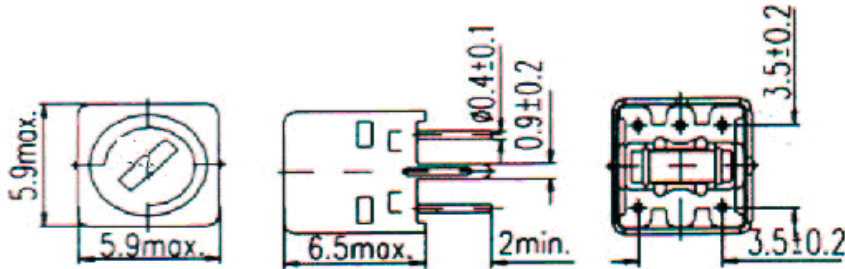
TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
CLNS-T1018Z	1.0±10%	80	252
CLNS-T1019Z	1.2±10%	80	252
CLNS-T1020Z	1.5±10%	80	252
CLNS-T1021Z	1.8±10%	80	252
CLNS-T1022Z	2.2±10%	80	252
CLNS-T1023Z	2.7±10%	80	252
CLNS-T1024Z	3.3±10%	80	252
CLNS-T1025Z	3.9±10%	80	252
CLNS-T1026Z	4.7±10%	80	252
CLNS-T1027Z	5.6±10%	80	252
CLNS-T1028Z	6.8±10%	80	252
CLNS-T1029Z	8.2±10%	80	252
CLNS-T1030Z	10.0±10%	70	79.6
CLNS-T1031Z	12.0±10%	70	79.6
CLNS-T1032Z	15.0±10%	70	79.6
CLNS-T1033Z	18.0±10%	70	79.6
CLNS-T1034Z	22.0±10%	70	79.6
CLNS-T1035Z	27.0±10%	70	79.6
CLNS-T1036Z	33.0±10%	70	79.6
CLNS-T1037Z	39.0±10%	70	79.6
CLNS-T1038Z	47.0±10%	70	79.6
CLNS-T1039Z	56.0±10%	70	79.6

5mm TYPE 5P, 5PG, 5PA, 5PAG

Frequency Range: 5P, 5PG 0.2~2.0MHz, 5PA, 5PAG 0.1-1MHz
 5P, 5PG High Frequency 1-15MHz

Inductance Range: 5P, 5PG 30-680uH
 5P, 5PG High Frequency 1-40UH
 5PA, 5PAG 100uH-4.5mH

Temperature Coefficient: TC (L) of 5P, 5PG $850 \pm 350 \text{ppm}/^\circ\text{C}$
 5PA, 5PAG $750 \pm 450 \text{ppm}/^\circ\text{C}$ and
 5P, 5PG High Frequency $220 \pm 220 \text{ppm}/^\circ\text{C}$.
 With Internal Capacitor TC (F) of 5P, 5PG or 5P, 5PG
 High Frequency $0 \pm 250 \text{ppm}/^\circ\text{C}$



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 5P

TOKO Part Number	Inductance Range (uH)	Q (min.)	Test Frequency (MHz)
5PNR-3509Z	47.0±5%	40	2.52
5PNR-3510Z	56.0±5%	40	2.52
5PNR-3511Z	68.0±5%	40	2.52
5PNR-3512Z	82.0±5%	40	2.52
5PNR-3513Z	100.0±5%	40	0.796
5PNR-3514Z	120.0±5%	40	0.796
5PNR-3515Z	150.0±5%	40	0.796
5PNR-3516Z	180.0±5%	40	0.796
5PNR-3517Z	220.0±5%	40	0.796
5PNR-3518Z	270.0±5%	40	0.796
5PNR-3519Z	330.0±5%	40	0.796
5PNR-3520Z	470.0±5%	40	0.796
5PNR-3537Z	560.0±5%	40	0.796
5PNR-3538Z	680.0±5%	40	0.796

TYPE 5PA

TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
451AN-0002Z	0.8±5%	65	796
451AN-0001Z	1.0±6%	50	252
451AN-0042Z	2.0±7%	40	252
451AN-0041Z	3.0±8%	50	252

TYPE 5P High Frequency

TOKO Part Number	Inductance Range (uH)	Q (min.)	Test Frequency (MHz)
332PN-3489Z	1.0±5%	55	7.96
332PN-3490Z	1.2±5%	55	7.96
332PN-3491Z	1.5±5%	55	7.96
332PN-3492Z	1.8±5%	55	7.96
332PN-3493Z	2.2±5%	55	7.96
332PN-3494Z	2.7±5%	55	7.96
332PN-3495Z	3.3±5%	55	7.96
332PN-3496Z	3.9±5%	55	7.96
332PN-3497Z	4.7±5%	55	7.96
332PN-3498Z	5.6±5%	55	7.96
332PN-3499Z	6.8±5%	55	7.96
332PN-3500Z	8.2±5%	55	7.96
332PN-3501Z	10.0±5%	55	2.52
332PN-3502Z	12.0±5%	55	2.52
332PN-3503Z	15.0±5%	55	2.52
332PN-3504Z	18.0±5%	55	2.52
332PN-3505Z	22.0±5%	55	2.52
332PN-3506Z	27.0±5%	55	2.52
332PN-3507Z	33.0±5%	55	2.52
332PN-3508Z	39.0±5%	55	2.52

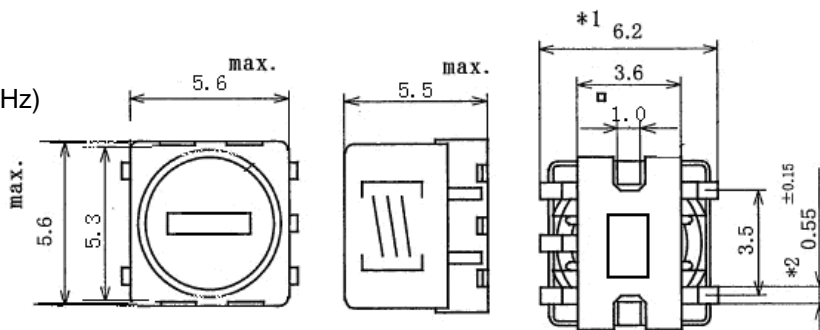
TYPE FSDV

For Reflow Soldering

Frequency Range: 0.2~15MHz

Inductance Range: 1uH~7mH

Q Approx: 60 (at 455kHz and 10.7MHz)



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

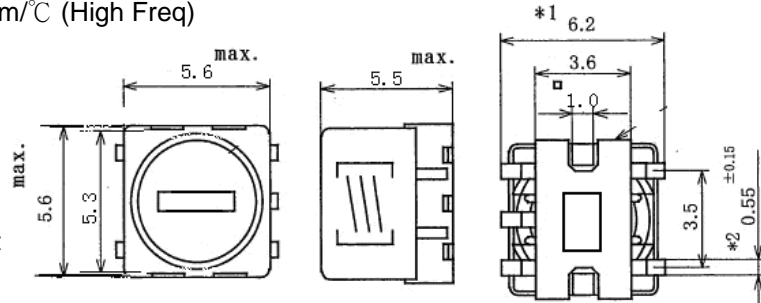
TYPE FSDV

TOKO Part Number	Inductance L (uH)	Q Min.	Test Frequency (MHz)	Inductance Adjustable Range ±(%)
836BN-0075Z	1.8	40	7.96	3
836BN-0076Z	2.0	40	7.96	3
836BN-0077Z	2.2	40	7.96	3
836BN-0078Z	2.4	40	7.96	6
836BN-0079Z	2.7	55	7.96	3
836BN-0080Z	3.0	55	7.96	3
836BN-0081Z	3.3	55	7.96	3
836BN-0082Z	3.6	55	7.96	4
836BN-0083Z	3.9	55	7.96	4
836BN-0084Z	4.3	55	7.96	4
836BN-0085Z	4.7	60	7.96	4
836BN-0086Z	5.1	60	7.96	4
836BN-0087Z	6.6	60	7.96	4
836BN-0088Z	6.2	60	7.96	4
836BN-0089Z	6.8	60	7.96	4
836BN-0090Z	7.5	65	7.96	4
836BN-0091Z	8.2	65	7.96	4
836BN-0092Z	9.1	65	7.96	4
836BN-0093Z	10	50	2.52	5
836BN-0094Z	11	50	2.52	5
836BN-0095Z	12	50	2.52	5
836BN-0096Z	13	50	2.52	5
836BN-0097Z	15	50	2.52	5
836BN-0098Z	16	50	2.52	5
836BN-0099Z	18	50	2.52	5
836BN-0100Z	20	50	2.52	5
836BN-0101Z	22	50	2.52	5
836BN-0102Z	24	55	2.52	6
836BN-0103Z	27	55	2.52	6
836BN-0104Z	30	55	2.52	6
836BN-0105Z	33	55	2.52	6
836BN-0106Z	36	55	2.52	6
836BN-0107Z	39	55	2.52	6
836BN-0108Z	43	55	2.52	6
836BN-0109Z	47	55	2.52	6
836BN-0110Z	51	55	2.52	6
836BN-0111Z	56	55	2.52	6
836BN-0112Z	62	55	2.52	6
836BN-0113Z	68	35	2.52	6
836BN-0114Z	75	35	2.52	6
836BN-0115Z	82	35	2.52	6
836BN-0116Z	91	35	2.52	6
836BN-0117Z	100	45	0.796	6
836BN-0118Z	110	45	0.796	6
836BN-0119Z	120	45	0.796	6
836BN-0120Z	130	45	0.796	6
836BN-0121Z	150	45	0.796	6

TOKO Part Number	Inductance L (uH)	Q Min.	Test Frequency (MHz)	Inductance Adjustable Range ±(%)
836AN-0122Z	160	45	0.796	6
836AN-0123Z	180	45	0.796	6
836AN-0124Z	200	45	0.796	6
836AN-0125Z	220	45	0.796	6
836AN-0126Z	240	45	0.796	6
836AN-0127Z	270	45	0.796	6
836AN-0128Z	300	45	0.796	6
836AN-0129Z	330	45	0.796	6
836AN-0130Z	360	45	0.796	6
836AN-0131Z	390	45	0.796	6
836AN-0132Z	430	45	0.796	6
836AN-0133Z	470	45	0.796	6
836AN-0134Z	510	45	0.796	6
836AN-0135Z	560	45	0.796	6
836AN-0136Z	620	40	0.796	6
836AN-0137Z	680	40	0.796	6
836AN-0138Z	750	40	0.796	6
836AN-0139Z	820	40	0.796	6
836AN-0140Z	910	40	0.796	6
836AN-0141Z	1000	40	0.252	6
836AN-0142Z	1100	20	0.252	6
836AN-0143Z	1200	20	0.252	6
836AN-0144Z	1300	20	0.252	6
836EN-0145Z	1500	25	0.252	6
836EN-0196Z	1600	25	0.252	6
836EN-0197Z	1800	30	0.252	6
836EN-0198Z	2000	30	0.252	6
836EN-0149Z	2200	30	0.252	6
836EN-0199Z	2400	30	0.252	6
836EN-0200Z	2700	30	0.252	6
836EN-0201Z	3000	30	0.252	6
836EN-0202Z	3300	30	0.252	6
836EN-0154Z	3600	30	0.252	6
836EN-0203Z	3900	30	0.252	6
836EN-0204Z	4300	30	0.252	6
836EN-0205Z	4700	30	0.252	6
836EN-0206Z	5100	30	0.252	6
836EN-0159Z	5600	30	0.252	6
836EN-0207Z	6200	30	0.252	6
836EN-0208Z	6800	30	0.252	6

Technical Specification

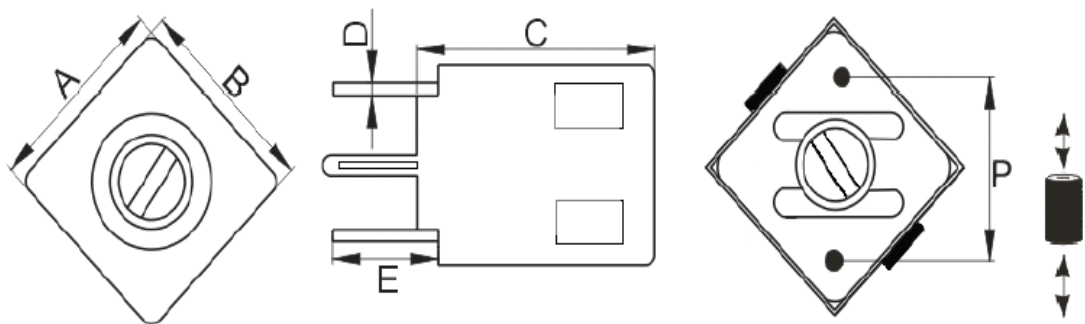
Frequency Range :	0.1MHz-2MHz 0.1MHz-15MHz (High Freq)
Inductance Range :	1uH-1400uH
Operating Temperature :	-10°C to +60°C
Unloaded Q :	30/65 (ref)
Inductance Variable Range :	Lo±3 to 5% (ref)
Temperature Coefficient :	TC(L) 80 ± 120ppm/°C TC(L) 140 ± 120ppm/°C (High Freq) TC(L) -40 ± 120ppm/°C TC(L) -80 ± 120ppm/°C (High Freq)
Quantity per Reel :	1000pcs



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 5CCD

TOKO Ref	Inductance	Tol.	Qu	TestFreq of L (MHz)	Notes
614BN-9018Z	1.8uH	±3%	45	7.96	H.F.r
614BN-9021B	2uH	±3%	45	7.96	H.F.r
614BN-9022Z	2.2uH	±3%	45	7.96	H.F.r
614BN-9024IB	2.4uH	±3%	50	7.96	H.F.r
614BN-9027IB	2.7uH	±3%	50	7.96	H.F.r
614BN-9030Z	3.0uH	±3%	50	7.96	H.F.r
614BN-9033Z	3.3uH	±3%	55	7.96	H.F.r
614BN-9036IB	3.6uH	±4%	55	7.96	H.F.r
614BN-9039Z	3.9uH	±4%	55	7.96	H.F.r
614BN-9043Z	4.3uH	±4%	55	7.96	H.F.r
614BN-9047Z	4.7uH	±4%	55	7.96	H.F.r
614BN-90511B	5.1uH	±4%	65	7.96	H.F.r
614BN-9056Z	5.6uH	±4%	65	7.96	H.F.r
614BN-9062Z	6.2uH	±4%	65	7.96	H.F.r
614BN-9068Z	6.8uH	±4%	65	7.96	H.F.r
614BN-9075Z	7.5uH	±4%	65	7.96	H.F.r
614BN-9082Z	8.2uH	±4%	65	7.96	H.F.r
614BN-9091Z	9.1uH	±4%	45	7.96	H.F.r
614BN-9100Z	10uH	±5%	45	2.52	H.F.r
614BN-9110Z	11uH	±5%	45	2.52	H.F.r
614BN-9120Z	12uH	±5%	45	2.52	H.F.r
614BN-9130Z	13uH	±5%	45	2.52	H.F.r
614BN-9150Z	15uH	±5%	45	2.52	H.F.r
614BN-9160Z	16uH	±5%	45	2.52	H.F.r
614BN-9180Z	18uH	±5%	45	2.52	H.F.r
614BN-9200Z	20uH	±5%	45	2.52	H.F.r
614BN-9220Z	22uH	±5%	45	2.52	H.F.r
614BN-9240Z	24uH	±5%	45	2.52	H.F.r
614BN-9270Z	27uH	±5%	45	2.52	H.F.r
614BN-9300Z	30uH	±5%	45	2.52	H.F.r
614BN-9330Z	33uH	±5%	45	2.52	H.F.r
614BN-9360Z	36uH	±5%	45	2.52	H.F.r
614BN-9390Z	39uH	±5%	45	2.52	H.F.r
614BN-9430Z	43uH	±5%	45	2.52	H.F.r
614BN-9470Z	47uH	±5%	45	2.52	H.F.r
614BN-9510Z	51uH	±5%	45	2.52	H.F.r
614BN-9560Z	56uH	±5%	45	2.52	H.F.r
614BN-9620Z	62uH	±5%	45	2.52	H.F.r
614BN-9680Z	68uH	±5%	30	2.52	H.F.r
614BN-9750Z	75uH	±5%	30	2.52	H.F.r
614BN-9820Z	82uH	±5%	30	2.52	H.F.r
614BN-9910Z	91uH	±5%	30	2.52	H.F.r
614BN-9100Z	100uH	±5%	45	0.796	H.F.r



A	B	C	d	E	P
8.1Max	8.1Max	11.7Max	0.5±0.1	5.0±1.0	6.2±0.5

Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

Unshielded

Part number	Color	Turns	No core L nom(nH)	L min (nH)	L nom (nH)	L max (nH)	Q min @ L nom	No core SRF min (MHz)	DCR max (mOhm)	Irms
150-01J08L	Brown	1 ^{1/2}	44.5	46.0	49.0	52.0	88 @ 50 MHz	2000	8.0	11.0
150-02J08L	Red	2 ^{1/2}	58.5	62.0	70.0	78.0	100 @ 50 MHz	1300	9.0	10.5
150-03J08L	Orange	3 ^{1/2}	77.5	82.0	98.0	114	108 @ 50 MHz	1000	10.5	9.8
150-04J08L	Yellow	4 ^{1/2}	94.5	108	130	154	114 @ 50 MHz	780	11.6	9.3
150-05J08L	Green	5 ^{1/2}	116	137	165	193	114 @ 50 MHz	650	13.2	8.7
150-06J08L	Blue	6 ^{1/2}	138	176	205	234	112 @ 50 MHz	550	14.7	8.2
150-07J08L	Violet	7 ^{1/2}	156	222	245	268	108 @ 50 MHz	510	16.0	7.9
146-01J08L	Brown	1 ^{1/2}	45.0	47.0	50.0	53.0	90 @ 50 MHz	1300	8.0	11.0
146-02J08L	Red	2 ^{1/2}	65.0	68.0	78.0	88.0	100 @ 50 MHz	780	9.0	10.5
146-03J08L	Orange	3 ^{1/2}	86.0	90.0	108	126	100 @ 50 MHz	560	10.5	9.8
146-04J08L	Yellow	4 ^{1/2}	111	117	146	175	94 @ 50 MHz	475	11.6	9.3
146-05J08L	Green	5 ^{1/2}	140	148	190	232	88 @ 50 MHz	430	13.0	8.8
146-06J08L	Blue	6 ^{1/2}	167	188	240	292	78 @ 50 MHz	390	14.5	8.3
146-07J08L	Violet	7 ^{1/2}	198	231	292	350	72 @ 50 MHz	350	15.6	8.0
146-08J08L	Gray	8 ^{1/2}	228	272	342	412	68 @ 50 MHz	330	18.0	7.5
146-09J08L	White	9 ^{1/2}	264	330	405	480	66 @ 40 MHz	320	19.4	7.2
146-10J08L	Black	10 ^{1/2}	292	390	465	540	60 @ 40 MHz	290	21.0	6.8

Shielded

Part number	Color	Turns	No core L nom(nH)	L min (nH)	L nom (nH)	L max (nH)	Q min @ L nom	No core SRF min (MHz)	DCR max (mOhm)	Irms
150-01J08SL	Brown	1 ^{1/2}	42.5	43.5	44.5	44.5	72 @ 50 MHz	1900	8.0	11.0
150-02J08SL	Red	2 ^{1/2}	54.0	56.0	60.0	64.0	80 @ 50 MHz	1450	9.0	10.5
150-03J08SL	Orange	3 ^{1/2}	68.0	71.0	76.0	81.0	84 @ 50 MHz	1100	10.5	9.8
150-04J08SL	Yellow	4 ^{1/2}	82.5	86.0	95.0	104	85 @ 50 MHz	900	11.6	9.3
150-05J08SL	Green	5 ^{1/2}	95.5	107	115	123	84 @ 50 MHz	750	13.2	8.7
150-06J08SL	Blue	6 ^{1/2}	109	125	134	143	82 @ 50 MHz	620	14.7	8.2
150-07J08SL	Violet	7 ^{1/2}	123	150	156	162	80 @ 50 MHz	560	16.0	7.9
146-01J08SL	Brown	1 ^{1/2}	44.0	45.0	46.0	47.0	76 @ 50 MHz	1550	8.0	11.0
146-02J08SL	Red	2 ^{1/2}	59.0	62.0	65.0	68.0	78 @ 50 MHz	850	9.0	10.5
146-03J08SL	Orange	3 ^{1/2}	75.0	80.0	85.0	90.0	78 @ 50 MHz	660	10.5	9.8
146-04J08SL	Yellow	4 ^{1/2}	95.0	100	110	120	78 @ 50 MHz	570	11.6	9.3
146-05J08SL	Green	5 ^{1/2}	115	120	135	150	76 @ 50 MHz	510	13.0	8.8
146-06J08SL	Blue	6 ^{1/2}	136	142	163	184	72 @ 50 MHz	470	14.5	8.3
146-07J08SL	Violet	7 ^{1/2}	155	172	194	216	68 @ 50 MHz	430	15.6	8.0
146-08J08SL	Gray	8 ^{1/2}	176	200	224	248	66 @ 50 MHz	400	18.0	7.5
146-09J08SL	White	9 ^{1/2}	202	234	260	284	60 @ 50 MHz	360	19.4	7.2
146-10J08SL	Black	10 ^{1/2}	224	260	288	315	56 @ 50 MHz	330	21.0	6.8

Variable Coils for Surface Mounting

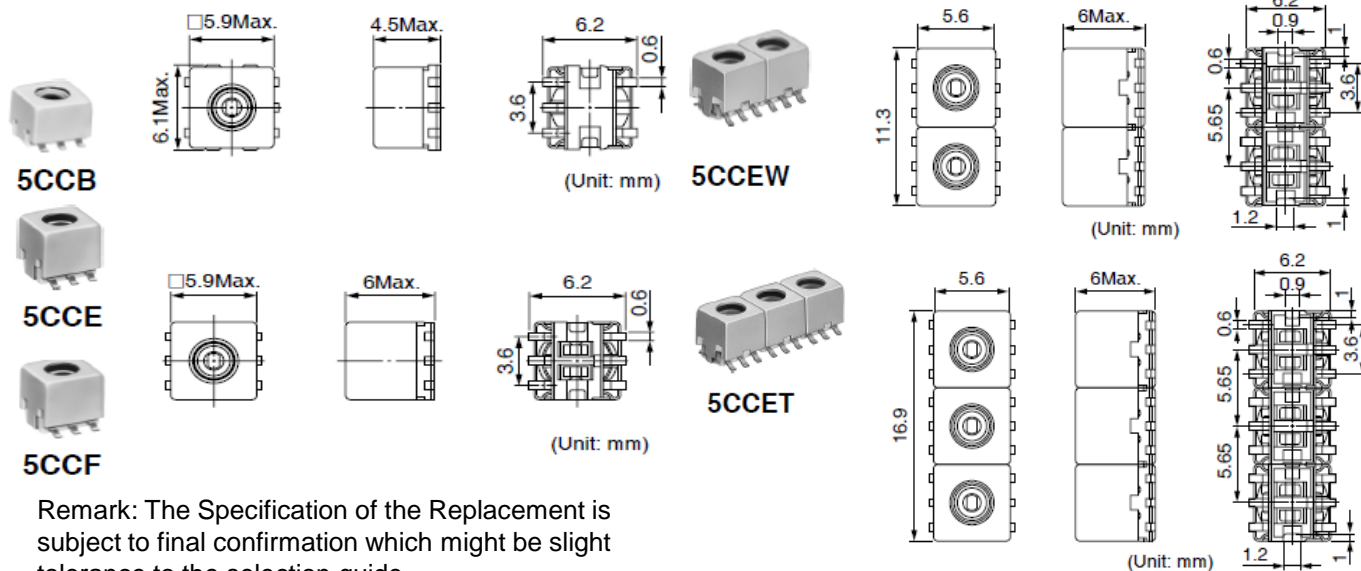
TYPE 5CCB,5CCE,5CCF,5CCEW,5CCET

For Reflow Soldering

	5CCB	5CCE	5CCF
Frequency Range:	10~150MHz	10~150MHz	10~15MHz
Inductance Range:	0.03~10uH	0.05~2.7uH	0.03~30uH
Q Approx:	50 (at 100MHz)	70 (at 100MHz)	50 (at 100MHz)

5CCEW/5CCET

Frequency Range:	10~200MHz
Q Approx:	60 (at 100MHz)
Input/Output Impedance:	50Ω (Standard)



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

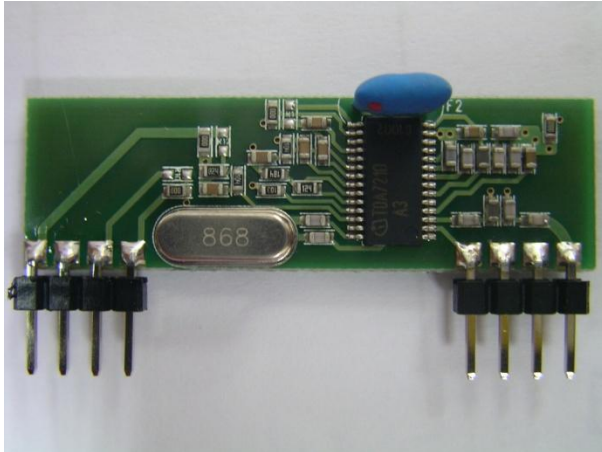
TYPE 5CCE

TOKO Part Number	Inductance L (nH) & Adjustable Range ± (%)	Q	Test Frequency (MHz)	DC Resistance (Ω) Max. (Ref. only)	Self-resonant Frequency (MHz) Min. (Ref. only)
A638AN-0150Z	68±5%	60±20%	100	0.15	580
A638AN-0151Z	82±5%	63±20%	100	0.29	580
A638AN-0152Z	100±5%	65±20%	100	0.18	580
A638AN-0153Z	120±5%	68±20%	100	0.20	580
A638AN-0154Z	150±5%	63±20%	100	0.29	487
A638AN-0155Z	180±5%	73±20%	100	0.22	443
A638AN-0156Z	220±5%	60±20%	100	0.36	354
A638AN-0157Z	270±5%	72±20%	80	0.26	270
A638AN-0158Z	330±5%	75±20%	80	0.55	273
A638AN-0159Z	390±5%	68±20%	80	0.46	230
A638AN-0160Z	470±5%	67±20%	60	0.48	207
A638AN-0161Z	560±5%	68±20%	60	0.52	180
A638AN-0162Z	680±5%	50±20%	30	0.67	170
A638AN-0163Z	820±5%	48±20%	30	0.73	155
A638AN-0164Z	1000±5%	50±20%	30	1.04	136
A638AN-0165Z	1200±5%	48±20%	30	1.12	113
A638AN-0166Z	1500±5%	48±20%	30	1.26	110
A638AN-0167Z	1800±5%	47±20%	30	0.36	105
A638AN-0168Z	2200±5%	47±20%	30	2.00	100

RX MODULE

MODELNO:RXA22-868 MHz

- ✓ Ideal for 868MHz Remote Keyless-Entry Receives
- ✓ Phase-Locked loop Feature
- ✓ High sensitivity typically exceeds -110dB



General Descriptions

The RXA22 is a miniature receiver module that receives On-off keyed (OOK) modulation signal and demodulated to digital signal for the next decoder stage. Local Oscillator is made of PLL structure. The result is excellent performance in a simple-to-use.

The RXA22 is designed specifically for unlicensed remote-control and wireless security receiver operating at 868MHz in the USA under FCC Part 15 regulation

Applications

- Home security systems
- Car Alarm systems
- Remote gate controls
- Sensor reporting

Specification

PARAMETER	DESCRIPTION	VALUE		
		MIN	TYP	MAX
• SENSITIVITY	Vcc=5.0V, TA=27°C BER=3/100, 1Kbps	868MHz -107dB	-110dB	
• MODULATION			ASK	
• POWER SUPPLY		4.75V	5V	5.25V
• SUPPLY CURRENT			4.6mA	5.5mA
• DATA RATE			1Kbps	4Kbps
• OPERATING TEMPERATURE		-40°C		+85°C

RX MODULE

MODELNO:RXA27L-xxxMHz

- ✓ The Module's Frequency is From UHF ASK 280~433.92MHz.
- ✓ High sensitivity Passive Design.
- ✓ 4800 B/S Baseboard Data Rate.
- ✓ Simple To Apply With Low External Parts Count.
- ✓ Low Supply Voltage : Vcc = 5 Vdc
- ✓ ASK Data Shaping Comparator Included.



General Descriptions

The RXA27 is a miniature receiver module that receives On-off keyed (OOK) modulation signal and demodulated to digital signal for the next decoder stage. Local Oscillator is made of L/C structure. The result is excellent performance in a simple-to-use.

The RXA27 is designed specifically for licensed remote-control and wireless security receiver operating at 315/434MHz in the USA under FCC Part 15 regulation

Applications

- Home security systems
- Car Alarm systems
- Remote gate controls
- Sensor reporting

Specification

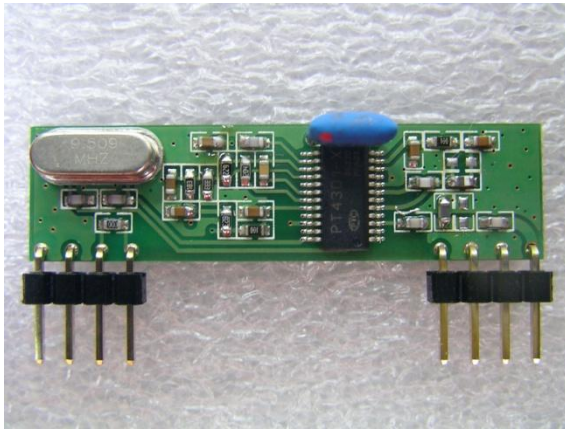
PARAMETER	DESCRIPTION	VALUE			
		MIN	TYP	MAX	UNIT
• Operating Radio Frequency		280~433.92			MHz
• Sensitivity	Vcc5.0,AT25C BER=3/100		-107		dBm
• Modulation			ASK		
• Power Supply		4.75	5	5.25	V
• Supply Current			4		mA
• Data Rate			1		Kbps
• Operating Temperature		-20		+50	°C
• Storage Temperature		-20		+50	
• RF Bandwidth-3dB			3		MHz

RX MODULE

MODELNO:RXA30-315

- ✓ The Module's Frequency is From UHF ASK 315 MHz.
- ✓ High sensitivity Passive Design.
- ✓ MAX 10K B/S Data Rate.
- ✓ Simple To Apply With Low External Parts Count.
- ✓ Wide range Supply Voltage : $V_{cc} = 2.4 \sim 5$ Vdc
- ✓ ASK Data Shaping Comparator Included.

General Descriptions



The RXA30 is a miniature receiver module that receives On-off keyed (OOK) modulation signal and demodulated to digital signal for the next decoder stage. Local Oscillator is made of PLL structure. The result is excellent performance in a simple-to-use.

The RXA30 is designed specifically for unlicensed remote-control and wireless security receiver operating at 315MHz in the USA under FCC Part 15 regulation

Applications

- Home security systems
- Car Alarm systems
- Remote gate controls
- Sensor reporting

Specification

PARAMETER	DESCRIPTION	VALUE			
		MIN	TYP	MAX	UNIT
• Operating Radio Frequency		315			MHz
• Sensitivity	$V_{cc}5.0, AT25C BER=1e-3$		-112		dBm
• Modulation			ASK		
• Power Supply		2.4	5	5.5	V
• Supply Current			5.5	6	mA
• Data Rate			2.5k		
• Operating Temperature		-40		+85	°C
• Storage Temperature		-40		+125	°C
• RF Bandwidth			280		KHz

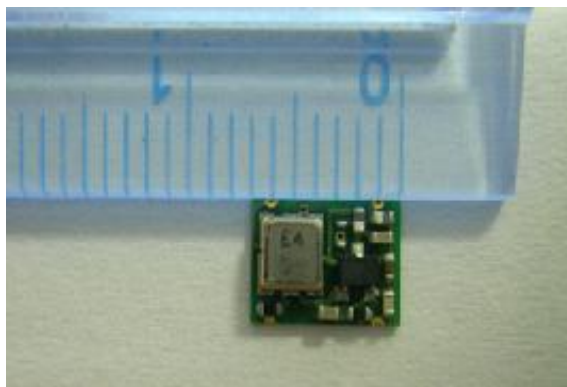
General Descriptions

Radio transmitter module with SAW Resonator and External Antenna.

The TXA1-434-S75 is an hybrid circuit that allows to realize a complete radio transmitter adding a coding circuit

Applications

- ✓ Home security systems
- ✓ Car alarm
- ✓ Remote gate control
- ✓ Sensor reporting



Specification

PARAMETER	TEMP	CONDITION	LIMIT			UNIT
			min.	typ.	max.	
• Current Consumption	23+-3deg.C	Vcc=12 VDC, DATA=3V	-	-	13.5	mA
• TX Frequency	23+-3 °C	-	-	433.92	-	MHz
• Frequency Tolerance	23+-3deg.C			+/-75		KHz
• Output Power	23+-3deg.C	Vcc=12 VDC, DATA=3V	7	10	-	dBm
• DATA Rate	23+-3deg.C	-	-	1	3	KHz
• MODULATION	23+-3deg.C	DATA=3 VDC or 0 VDC	-	ASK	-	-