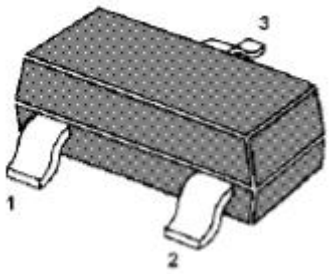
Kingtronics®

MMBTSC945

NPN Silicon Epitaxial Planar Transistors

For switching and AF amplifier applications

The transistor is subdivided into four groups O, Y, P and L, according to its DC current gain. As complementary type the PHP transistor MMBTSA733 is recommended.



1.Base 2.Emitter 3.Collector

SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_s	- 55 to + 150	℃

Characteristics at T_a = 25℃

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT
DC Current Gain at V_{CE} = 6 V, I_C = 1 mA	Current Gain Group O	h_{FE}	70	-	140	-
	Y		120		240	
	P		200		400	
	L		350		700	
Collector Base Cutoff Current at V_{CB} = 40 V		I_{CBO}	-	-	0.1	µA
Emitter Base Cutoff Current at V_{EB} = 3 V		I_{EBO}	-	-	0.1	µA
Collector Base Breakdown Voltage at I_C = 100 µA		$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at I_C = 10 mA		$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at I_E = 10 µA		$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = 100 mA, I_B = 10 mA		$V_{CE(sat)}$	-	-	0.3	V
Gain Bandwidth Product at V_{CE} = 6 V, I_C = 10 mA		f_T	-	300	-	MHz
Output Capacitance at V_{CB} = 6 V, f = 1 MHz		C_{OB}	-	2.5	-	pF

RATINGS AND CHARACTERISTIC CURVES MMBTSC945

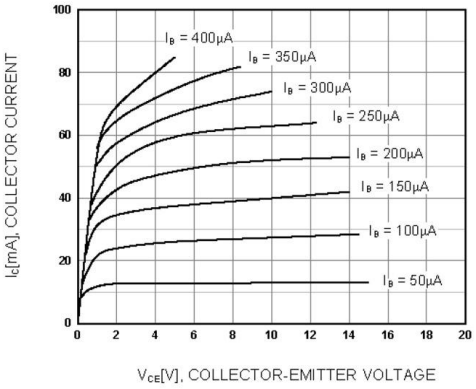


Figure 1. Static Characteristic

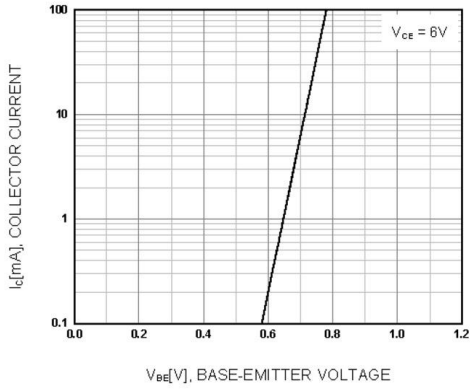


Figure 2. Transfer Characteristic

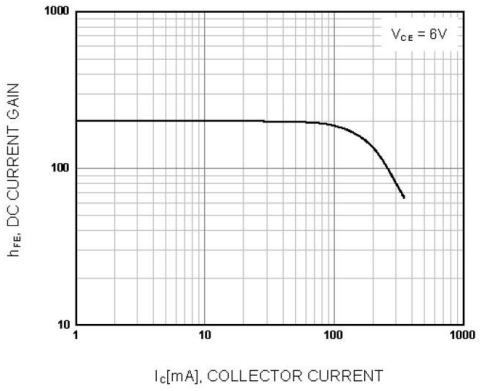


Figure 3. DC current Gain

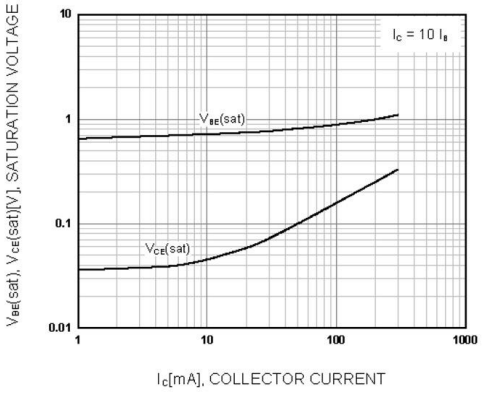


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

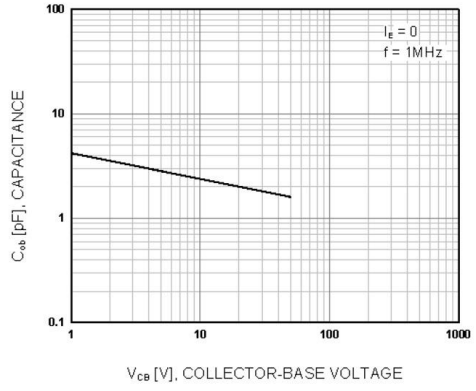


Figure 5. Output Capacitance

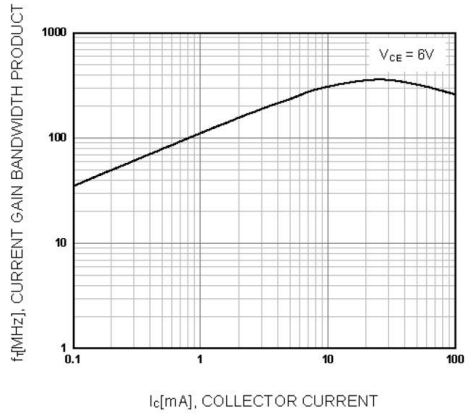


Figure 6. Current Gain Bandwidth Product

Note: Specifications are subject to change without notice.