

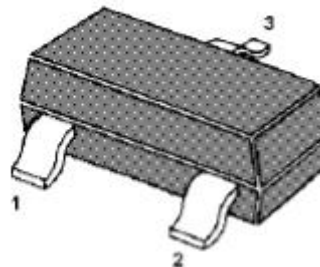
Kingtronics®

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 ($T_a = 25^\circ\text{C}$)

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CB0}	60	V
Collector Emitter Voltage	V_{CE0}	50	V
Emitter Base Voltage	V_{EB0}	5	V
Collector Current	I_c	150	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

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

Kingtronics® International Company

Website: www.kingtronics.com

Email: info@kingtronics.com

Tel: (852) 8106 7033

Fax: (852) 8106 7099

RATINGS AND CHARACTERISTIC CURVES MMBTSC945

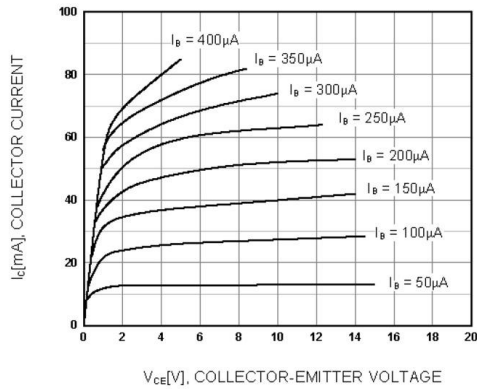


Figure 1. Static Characteristic

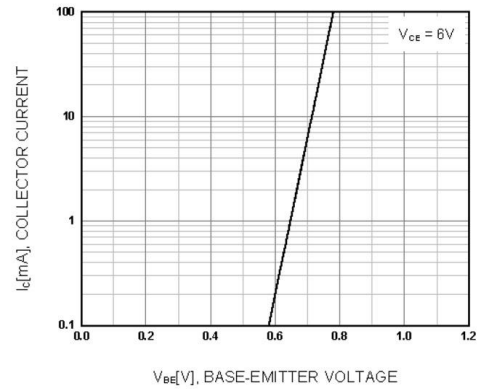


Figure 2. Transfer Characteristic

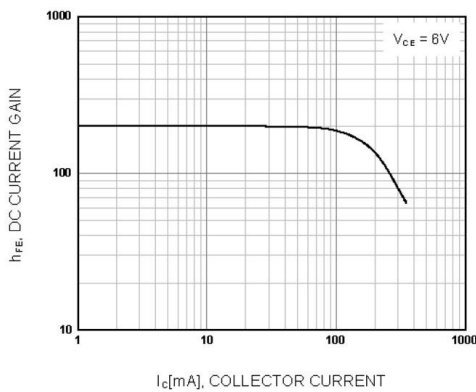


Figure 3. DC current Gain

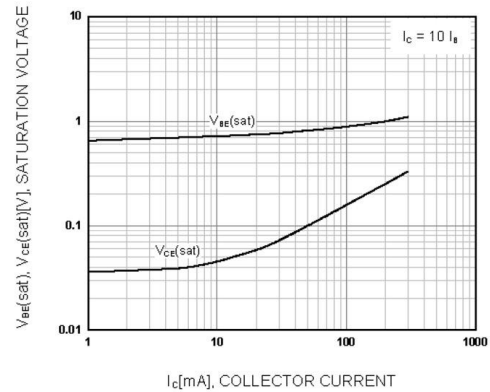


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

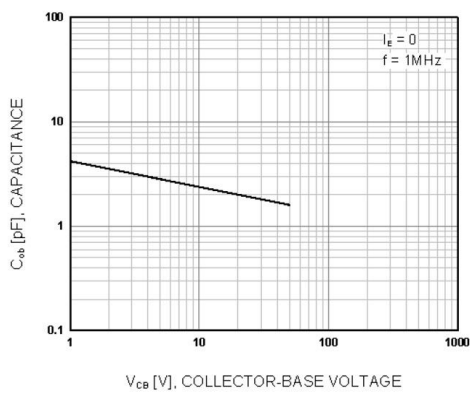


Figure 5. Output Capacitance

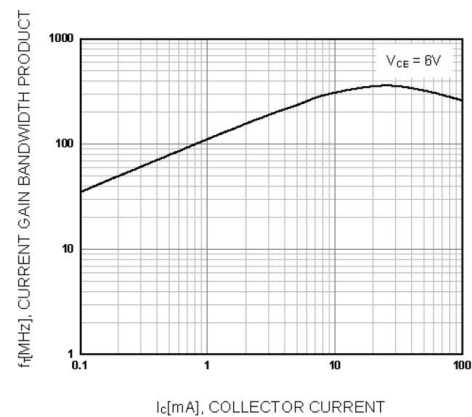


Figure 6. Current Gain Bandwidth Product

Note: Specifications are subject to change without notice.