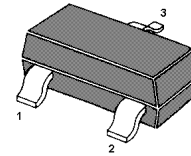


MMBTSC1623

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications

The transistor is subdivided into four groups,
O, Y, G and L, according to its DC current gain



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_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 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 V, I _C = 1 mA Current Gain Group	O	h _{FE}	90	-	180	-
	Y	h _{FE}	135	-	270	-
	G	h _{FE}	200	-	400	-
	L	h _{FE}	300	-	600	-
Collector Base Breakdown Voltage at I _C = 100 μA	V _{(BR)CBO}	60	-	-	V	
Collector Emitter Breakdown Voltage at I _C = 1 mA	V _{(BR)CEO}	50	-	-	V	
Emitter Base Breakdown Voltage at I _E = 10 μA	V _{(BR)EBO}	5	-	-	V	
Collector Cutoff Current at V _{CB} = 60 V	I _{CBO}	-	-	0.1	μA	
Emitter Cutoff Current at V _{EB} = 5 V	I _{EBO}	-	-	0.1	μA	
Collector Saturation Voltage at I _C = 100 mA, I _B = 10 mA	V _{CE(sat)}	-	-	0.3	V	
Base Saturation Voltage at I _C = 100 mA, I _B = 10 mA	V _{BE(sat)}	-	-	1	V	
Gain Bandwidth Product at V _{CE} = 6 V, I _C = 10 mA	f _T	-	250	-	MHz	
Output Capacitance at V _{CB} = 6 V, f = 1 MHz	C _{OB}	-	3	-	pF	

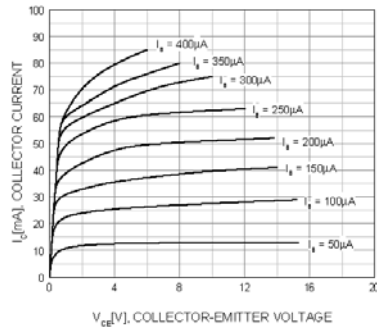


Figure 1. Static Characteristic

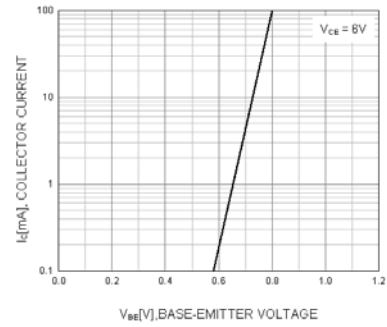


Figure 2. Transfer Characteristic

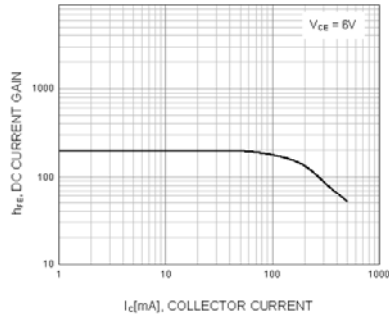


Figure 3. DC current Gain

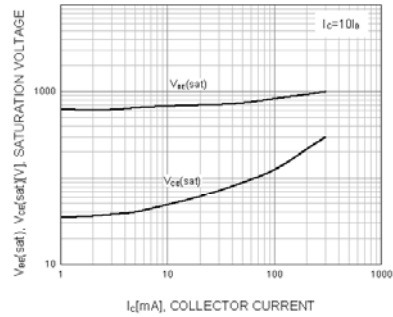


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

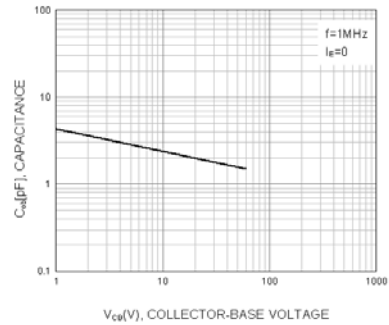


Figure 5. Output Capacitance

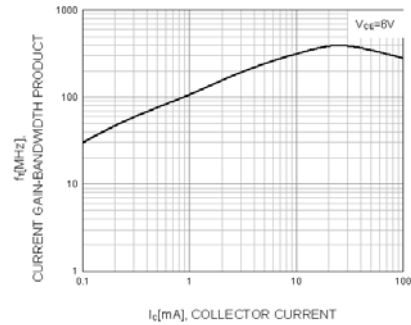


Figure 6. Current Gain Bandwidth Product