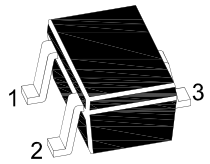
MMBTSC4617E

NPN Silicon Epitaxial Planar Transistor



1.Base 2.Emitter 3.Collector
SOT-523 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	150	mA
Power Dissipation	P_{tot}	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 6 V, I_C = 1 mA	Current Gain Group Q	h_{FE}	120	-	270	-
	R	h_{FE}	180	-	390	-
	S	h_{FE}	270	-	560	-
Collector Base Cutoff Current at V_{CB} = 60 V		I_{CBO}	-	-	0.1	µA
Emitter Base Cutoff Current at V_{EB} = 7 V		I_{EBO}	-	-	0.1	µA
Collector Base Breakdown Voltage at I_C = 50 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 = 50 µA		$V_{(BR)EBO}$	7	-	-	V
Collector Emitter Saturation Voltage at I_C = 50 mA, I_B = 5 mA		$V_{CE(sat)}$	-	-	0.4	V
Transition Frequency at V_{CE} = 12 V, $-I_E$ = 2 mA, f = 100 MHz		f_T	-	180	-	MHz
Collector Output Capacitance at V_{CB} = 12 V, f = 1 MHz		C_{ob}	-	-	3.5	pF

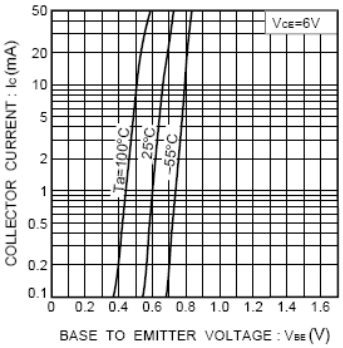


Fig.1 Grounded emitter propagation characteristics

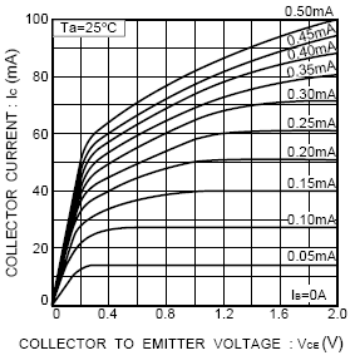


Fig.2 Grounded emitter output characteristics (I)

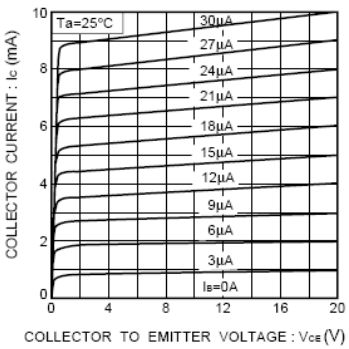


Fig.3 Grounded emitter output characteristics (II)

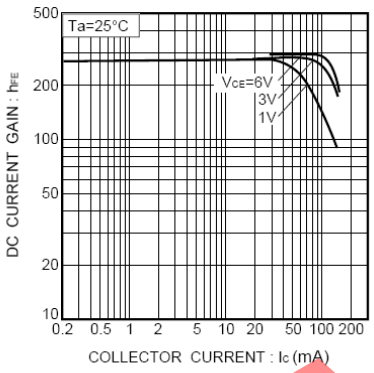


Fig.4 DC current gain vs. collector current (I)

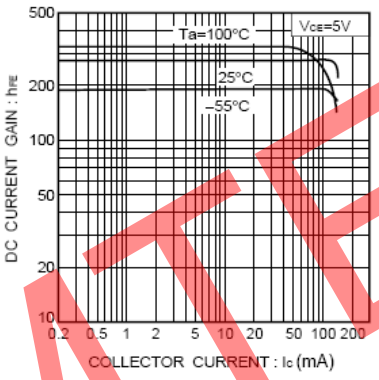


Fig.5 DC current gain vs. collector current (II)

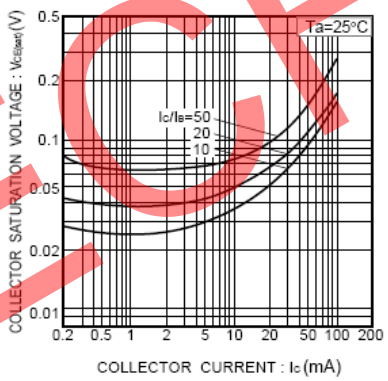


Fig. 6 Collector-emitter saturation voltage vs. collector current

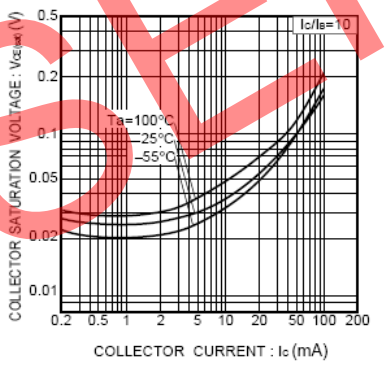


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

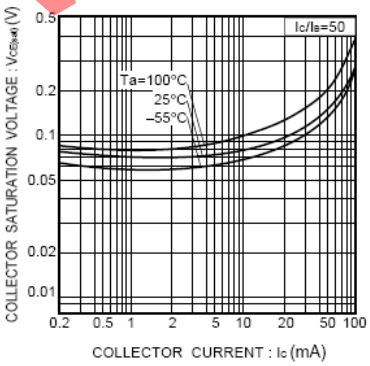


Fig.8 Collector-emitter saturation voltage vs. collector current (II)