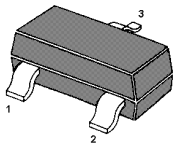
MMBT491

NPN Silicon Epitaxial Planar Transistor



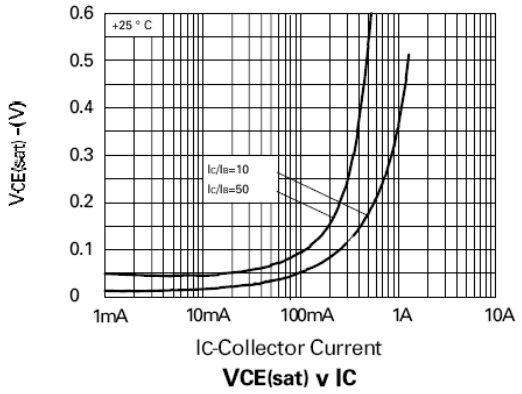
1.BASE 2.EMITTER 3.COLLECTOR
SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

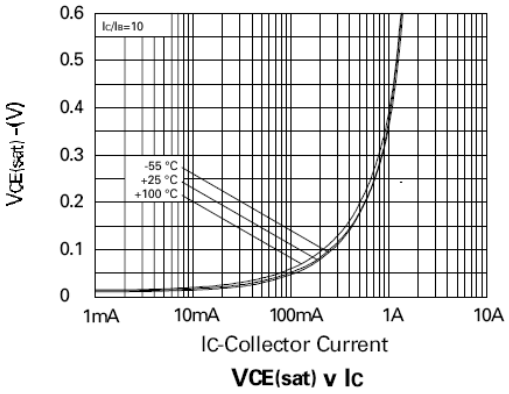
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Peak Pulse Current	I_{CM}	2	A
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

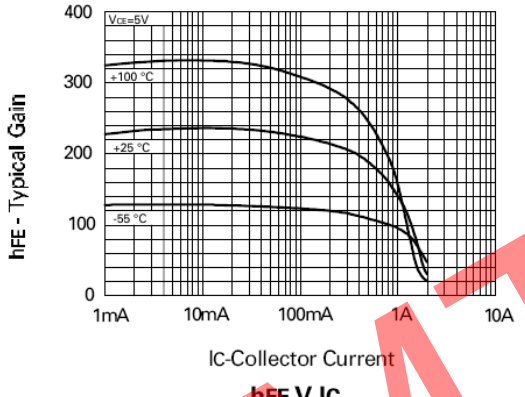
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 1 mA at V_{CE} = 5 V, I_C = 500 mA at V_{CE} = 5 V, I_C = 1 A at V_{CE} = 5 V, I_C = 2 A	 h_{FE} h_{FE} h_{FE} h_{FE}	 100 100 80 30	 - 300 - -	 - - - -
Collector Base Cutoff Current at V_{CB} = 60 V	I_{CBO}	-	100	nA
Collector Emitter Cutoff Current at V_{CE} = 60 V	I_{CES}	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 4 V	I_{EBO}	-	100	nA
Collector Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA at I_C = 1 A, I_B = 100 mA	V_{CEsat}	 -	 0.25 0.5	V
Base Emitter Saturation Voltage at I_C = 1 A, I_B = 100 mA	V_{BEsat}	-	1.1	V
Base Emitter Voltage at V_{CE} = 5 V, I_C = 1 A	$V_{BE(on)}$	-	1	V
Transition Frequency at V_{CE} = 10 V, I_C = 50 mA, f = 100 MHz	f_T	150	-	MHz
Collector Output Capacitance at V_{CB} = 10 V, f = 1 MHz	C_{ob}	-	10	pF



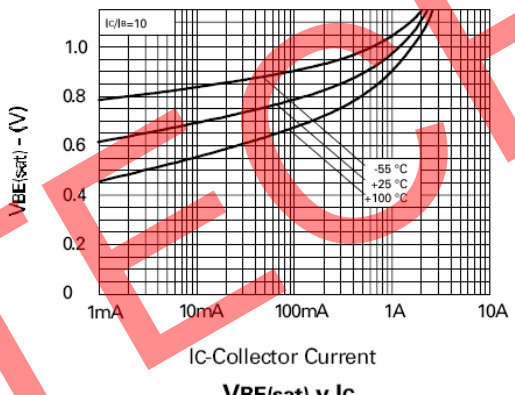
VCE(sat) v IC



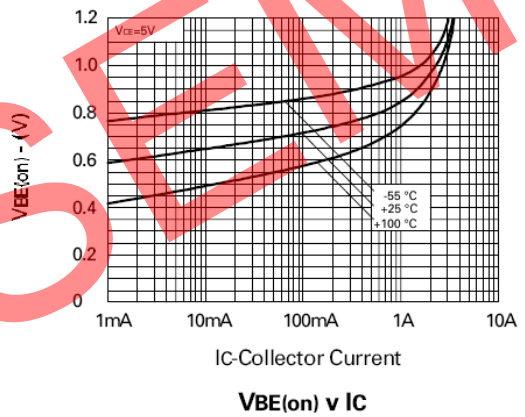
VCE(sat) v Ic



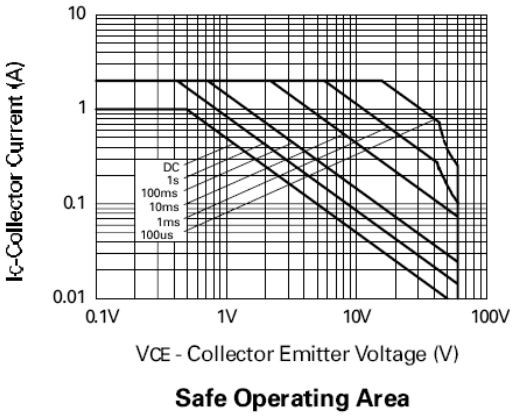
hFE V IC



VBE(sat) v Ic



VBE(on) v IC



Safe Operating Area