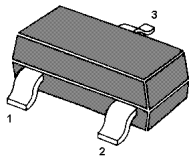
MMBTSC6571

NPN Silicon Epitaxial Planar Transistor

for general amplifier applications.



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

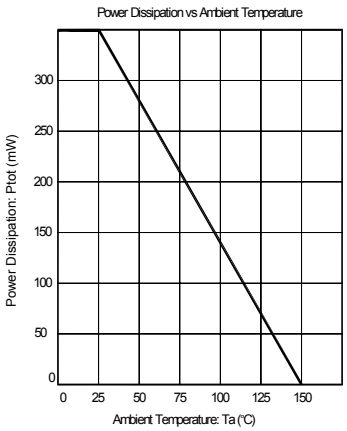
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	100	mA
Peak Collector Current	I_{CP}	200	mA
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

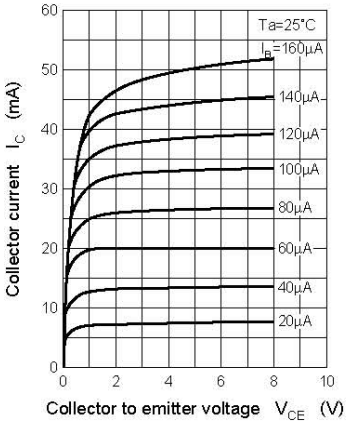
Characteristics at T_a = 25 °C

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain							
at V_{CE} = 10 V, I_C = 2 mA	Current Gain Group	Q	h_{FE}	160	-	260	-
		R	h_{FE}	210	-	340	-
		S	h_{FE}	290	-	460	-
at V_{CE} = 2 V, I_C = 100 mA			h_{FE}	90	-	-	-
Collector Base Cutoff Current at V_{CB} = 60 V			I_{CBO}	-	-	10	nA
Collector Emitter Cutoff Current at V_{CE} = 50 V			I_{CEO}	-	-	100	µA
Emitter Base Cutoff Current at V_{EB} = 5 V			I_{EBO}	-	-	10	nA
Collector Base Breakdown Voltage at I_C = 10 µA			$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at I_C = 2 mA			$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at I_E = 10 µA			$V_{(BR)EBO}$	7	-	-	V
Collector Emitter Saturation Voltage at I_C = 100 mA, I_B = 10 mA			$V_{CE(sat)}$	-	-	0.3	V
Transistion frequency at V_{CB} = 10 V, $-I_E$ = 2 mA, f = 200 MHz			f_T	-	150	-	MHz
Collector Output Capacitance at V_{CB} = 10 V, f = 1 MHz			C_{ob}	-	3.5	-	pF

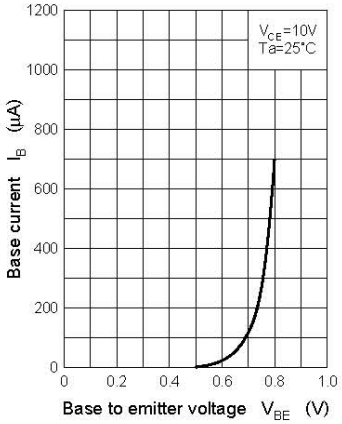
Power Dissipation vs Ambient Temperature



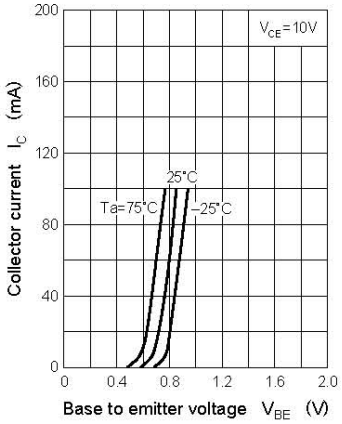
I_C — V_{CE}



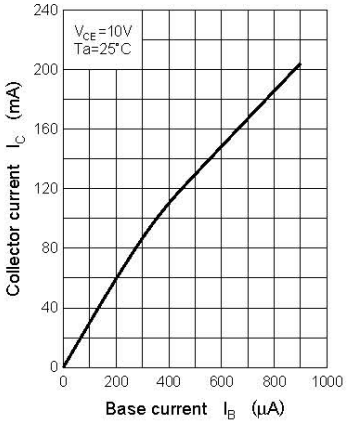
I_B — V_{BE}



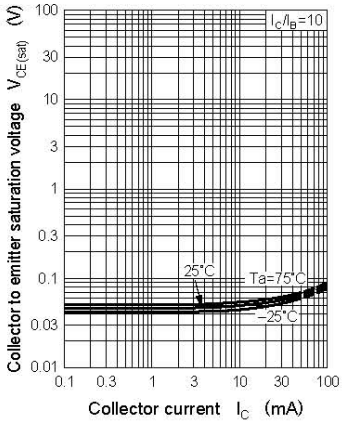
I_C — V_{BE}



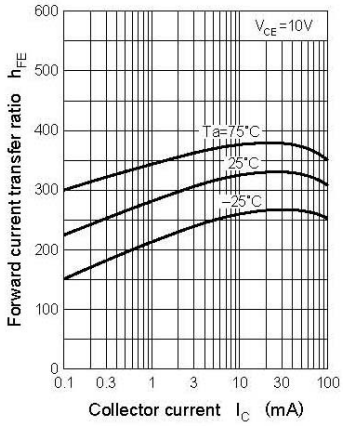
I_C — I_B



$V_{CE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E