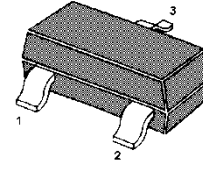


MMBTSB1198

PNP Silicon Epitaxial Planar Transistor

Low frequency transistor

The transistor is subdivided into two groups Q and R, according to its DC current gain.



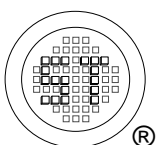
1.BASE 2.EMITTER 3.COLLECTOR
TO-236 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	80	V
Collector Emitter Voltage	$-V_{CEO}$	80	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	0.5	A
Collector 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 $-V_{CE} = 3\text{ V}$, $-I_C = 100\text{ mA}$	Q h_{FE}	120	-	270	-
	R h_{FE}	180	-	390	-
Collector Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	0.5	μA
Emitter Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	0.5	μA
Collector-Base Breakdown Voltage at $-I_C = 50\text{ }\mu\text{A}$	$-V_{CBO}$	80	-	-	V
Emitter-Base Breakdown Voltage at $-I_E = 50\text{ }\mu\text{A}$	$-V_{EBO}$	5	-	-	V
Collector-Emitter Breakdown Voltage at $-I_C = 2\text{ mA}$	$-V_{CEO}$	80	-	-	V
Collector-Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	11	-	pF
Transition Frequency at $-V_{CE} = 10\text{ V}$, $I_E = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	180	-	MHz



SEMTECH ELECTRONICS LTD.



Electrical characteristic curves

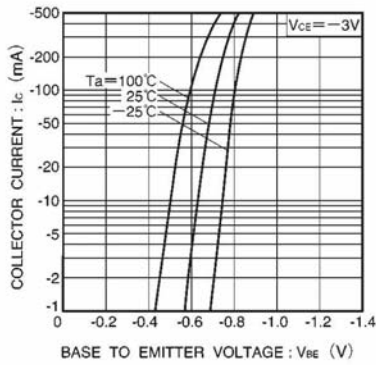


Fig.1 Grounded emitter propagation characteristics

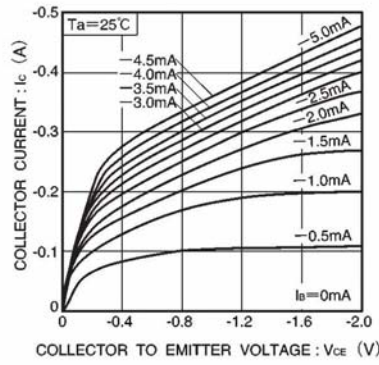


Fig.2 Grounded emitter output characteristics

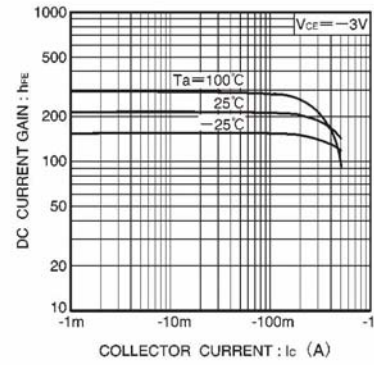


Fig.3 DC current gain vs. collector current

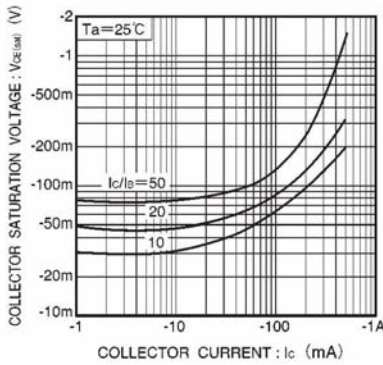


Fig.4 Collector-emitter saturation voltage vs. collector current (I)

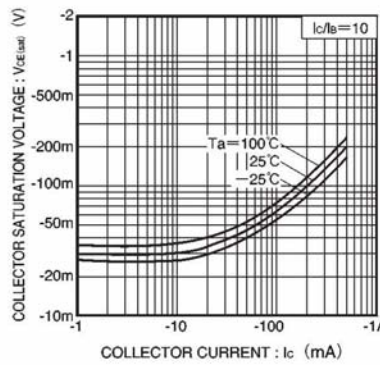


Fig.5 Collector-emitter saturation voltage vs. collector current (II)

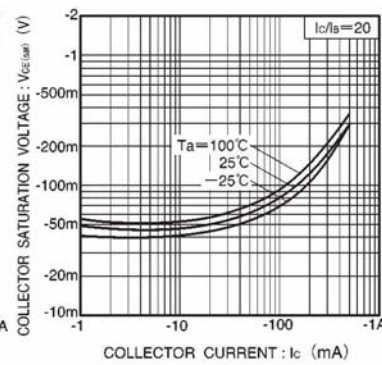
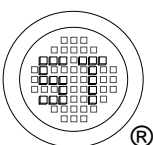


Fig.6 Collector-emitter saturation voltage vs. collector current (III)



SEMTECH ELECTRONICS LTD.



ISO/TS 16949:2009 Certificate No. 190713000 | ISO14001:2004 Certificate No. 7116 | ISO 9001:2006 Certificate No. 50713410 | BS-OHSAS 18001:2007 Certificate No. 7116 | IECQ QC 080000 Certificate No. PIC-HPM-1485-1