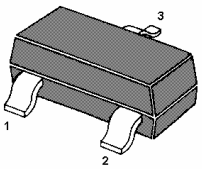
MMBTSB1197

PNP Silicon Epitaxial Planar Transistor

Low frequency transistor

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

SOT-23



1.BASE 2.EMITTER 3.COLLECTOR

SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	40	V
Collector Emitter Voltage	$-V_{CEO}$	32	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	800	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-55 to +150	°C

Characteristics at T_a =25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 3 V, $-I_C$ = 100 mA	Q R	h_{FE} h_{FE}	120 180	270 390	- -
Collector Cutoff Current at $-V_{CB}$ = 20 V		$-I_{CBO}$	-	0.5	µA
Emitter Cutoff Current at $-V_{EB}$ = 4 V		$-I_{EBO}$	-	0.5	µA
Collector Base Breakdown Voltage at $-I_C$ = 50 µA		$-V_{(BR)CBO}$	40	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA		$-V_{(BR)CEO}$	32	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 50 µA		$-V_{(BR)EBO}$	5	-	V
Collector Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 50 mA		$-V_{CE(sat)}$	-	0.5	V
Output Capacitance at $-V_{CB}$ = 10 V, I_E = 0 A, f = 1 MHz		C_{ob}	-	30	pF
Transition Frequency at $-V_{CE}$ = 5 V, I_E = 50 mA, f = 100 MHz		f_T	50	-	MHz

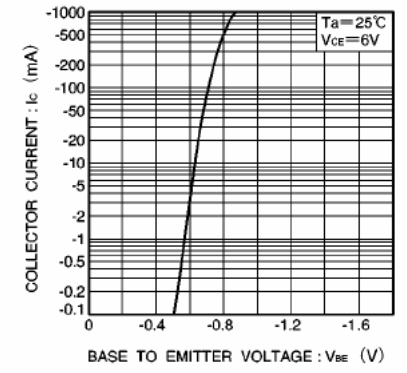


Fig.1 Grounded emitter propagation characteristics

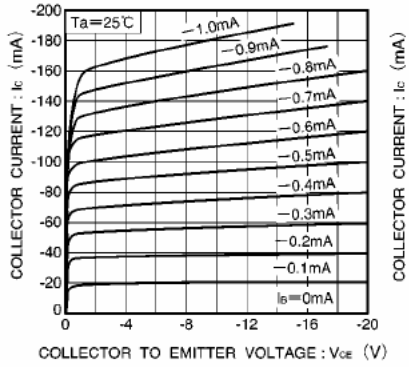


Fig.2 Grounded emitter output characteristics (Ⅰ)

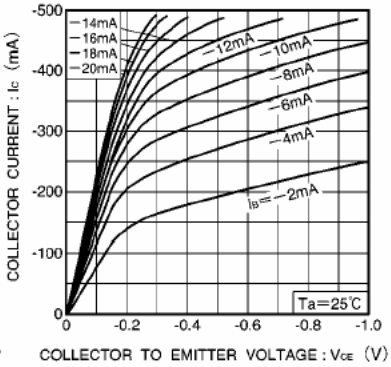


Fig.3 Grounded emitter output characteristics (Ⅱ)

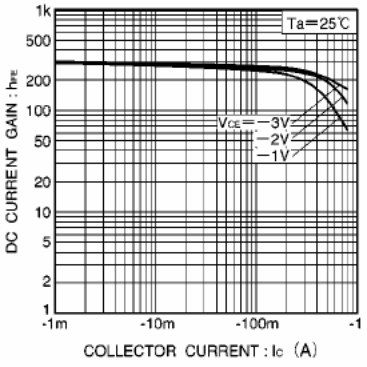


Fig.4 DC current gain vs. collector current

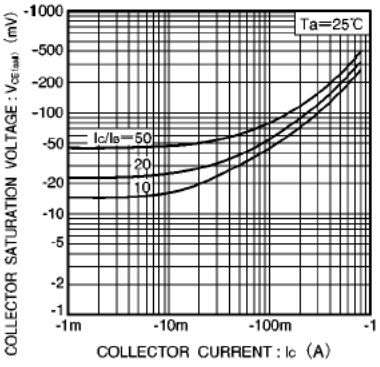


Fig.5 Collector-emitter saturation voltage vs. collector current

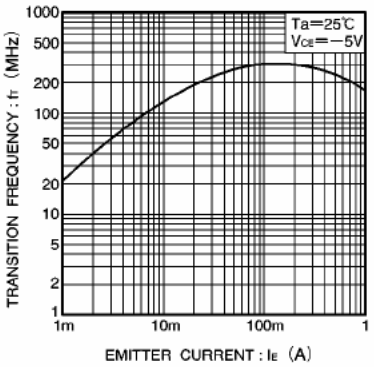


Fig.6 Gain bandwidth product vs. emitter current

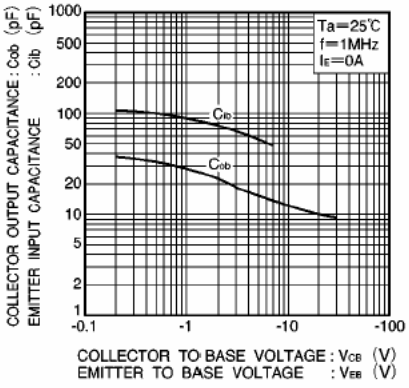


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage