



SOT-23 Plastic-Encapsulate Transistors

2SB1197 TRANSISTOR (PNP)

FEATURES

- Low $V_{CE(sat)}$, $V_{CE(sat)} < -0.5V$ ($I_C / I_B = -0.5A / -50mA$)
- $I_C = -0.8A$.
- Complements the 2SD1781.

MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector- Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.8	A
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55-150	$^\circ C$

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -20V, I_E = 0$			-0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-0.5	μA
DC current gain	h_{FE}	$V_{CE} = -3V, I_C = -100mA$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-0.5	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -50mA, f = 100MHz$	50	200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		12	30	pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	AHP	AHQ	AHR

TYPICAL CHARACTERISTICS

2SB1197

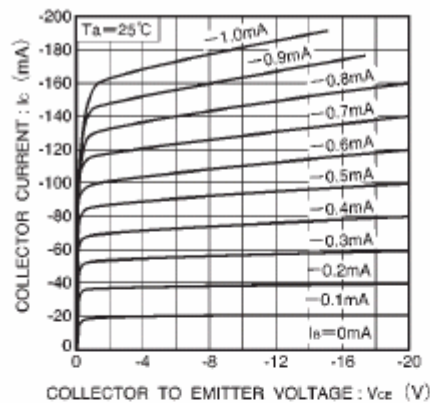


Fig.2 Grounded emitter output characteristics (I)

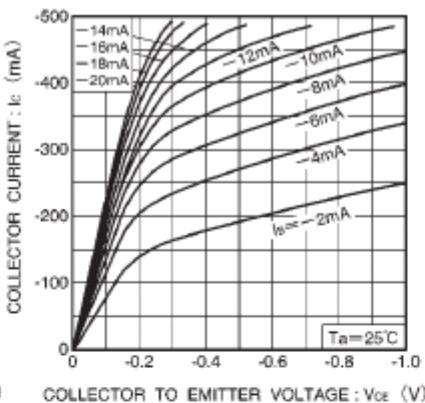


Fig.3 Grounded emitter output characteristics (II)

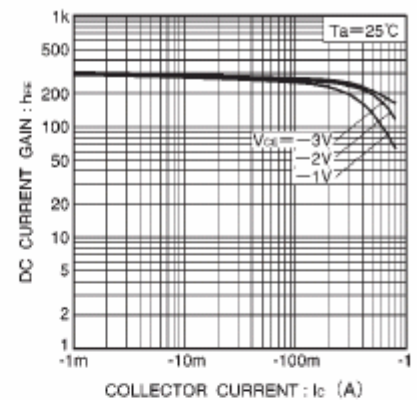


Fig.4 DC current gain vs. collector current

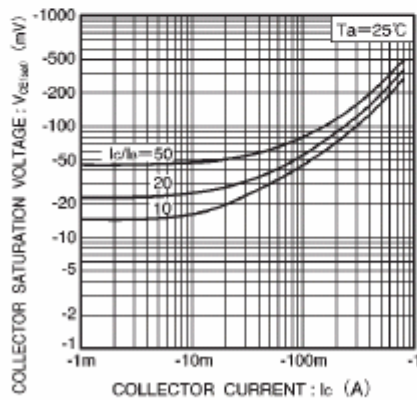


Fig.5 Collector-emitter saturation voltage vs. collector current

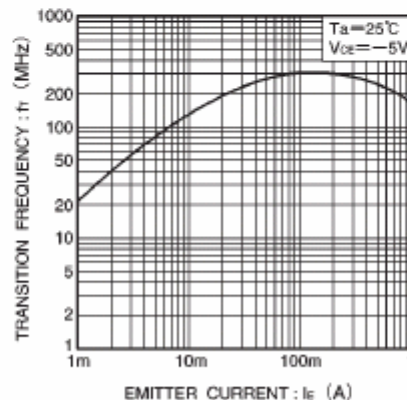


Fig.6 Gain bandwidth product vs. emitter current

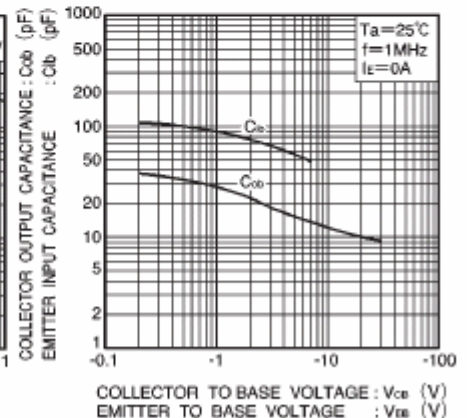


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

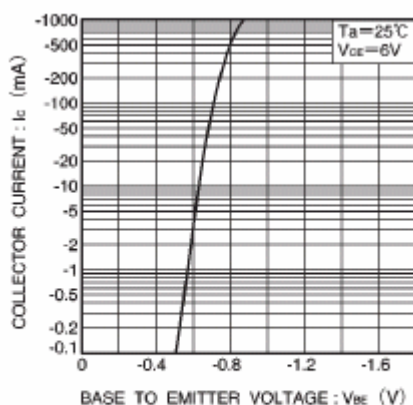


Fig.1 Grounded emitter propagation characteristics