

## 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	$^{\circ}C$

### 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	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4V, I_C = 0$			-0.5	$\mu A$
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

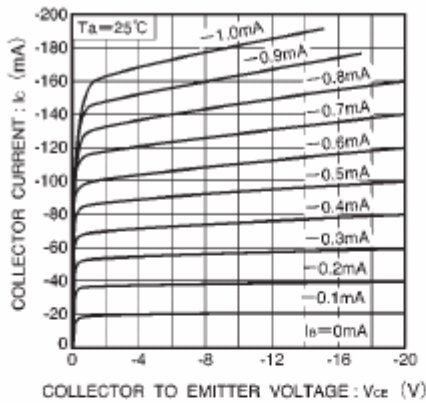


Fig.2 Grounded emitter output characteristics ( I )

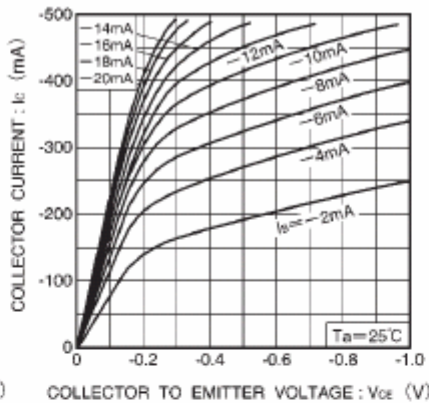


Fig.3 Grounded emitter output characteristics ( II )

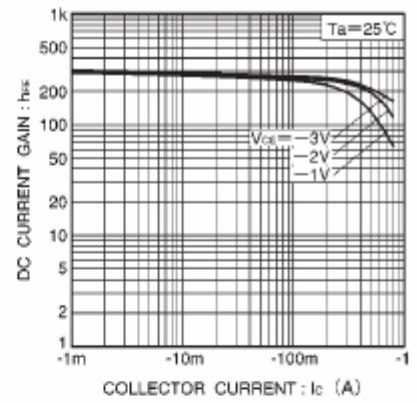


Fig.4 DC current gain vs. collector current

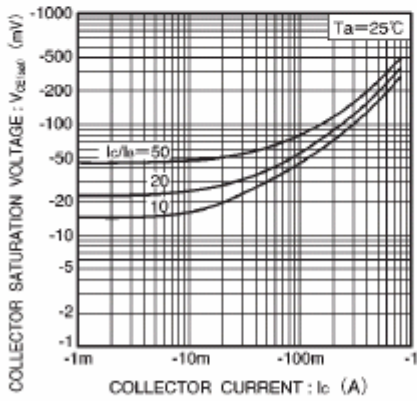


Fig.5 Collector-emitter saturation voltage vs. collector current

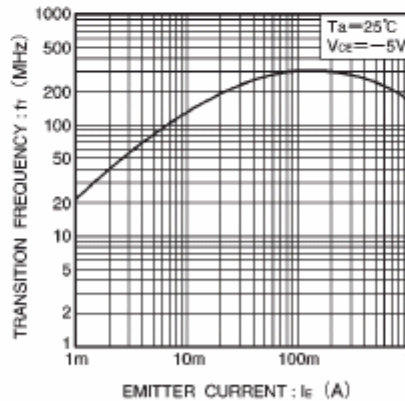


Fig.6 Gain bandwidth product vs. emitter current

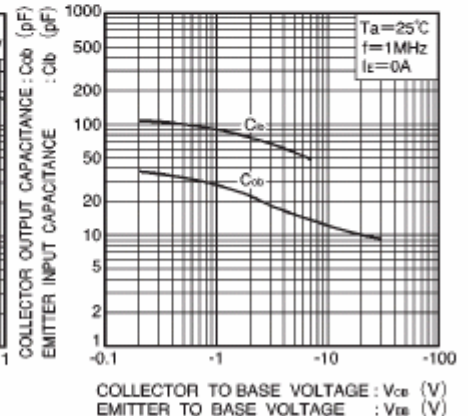


Fig.7 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

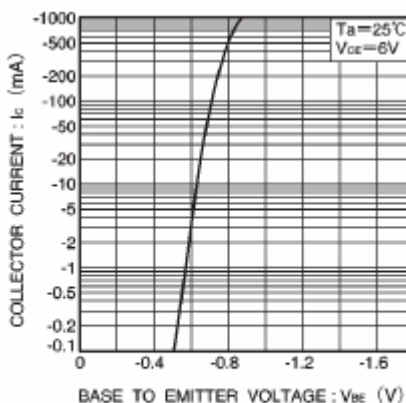


Fig.1 Grounded emitter propagation characteristics