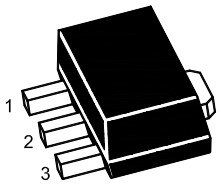
2SB1188U

PNP Silicon Epitaxial Planar Transistor

Medium power transistor



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

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 - DC Collector Current - Pulse [1]	$-I_C$ $-I_{CP}$	2 3 [1]	A A
Collector Power Dissipation	P_C	0.5 2 [2]	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{Stg}	- 55 to + 150	℃

[1] Single pulse, P_W = 100 ms.

[2] When mounted on a 40 x 40 x 0.7 mm ceramic board.

Characteristics at T_a = 25℃

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 3 V, $-I_C$ = 500 mA	Current Gain Group	P Q R	h_{FE} h_{FE} h_{FE}	82 120 180	- - -	180 270 390	- - -
Collector Cutoff Current at $-V_{CB}$ = 20 V			$-I_{CBO}$	-	-	1	µA
Emitter Cutoff Current at $-V_{EB}$ = 4 V			$-I_{EBO}$	-	-	1	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 Emitter Saturation Voltage at $-I_C$ = 2 A, $-I_B$ = 200 mA			$-V_{CE(sat)}$	-	-	0.8	V
Transition Frequency at $-V_{CE}$ = 5 V, I_E = 0.5 A, f = 100 MHz			f_T	-	100	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, I_E = 0, f = 1 MHz			C_{ob}	-	50	-	pF

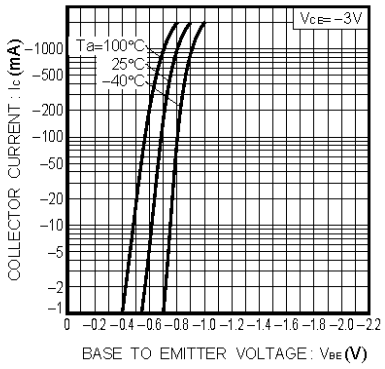


Fig.1 Grounded emitter propagation characteristics

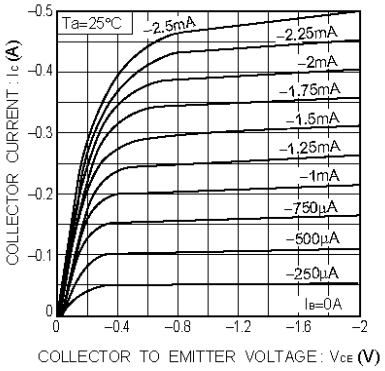


Fig.2 Grounded emitter output characteristics

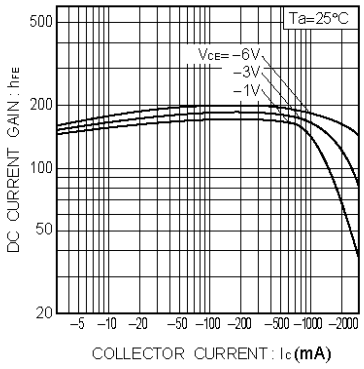


Fig.3 DC current gain vs. collector curren (Ⅰ)

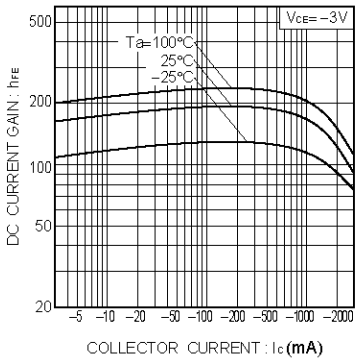


Fig.4 DC current gain vs. collector current (Ⅱ)

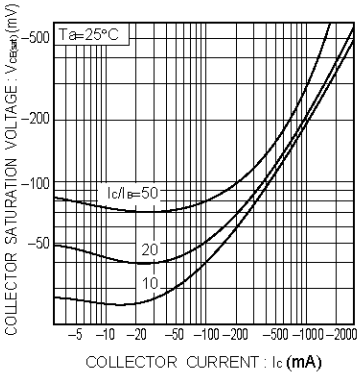


Fig.5 Collector-emitter saturation voltage vs. collector current (Ⅰ)

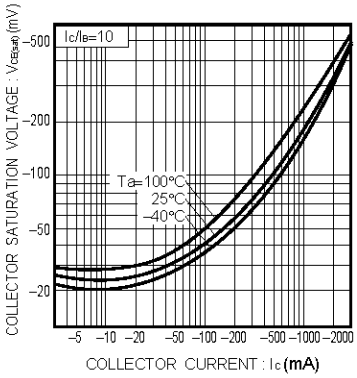


Fig.6 Collector-emitter saturation voltage vs. collector current (Ⅱ)

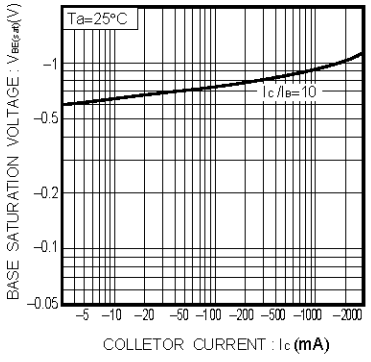


Fig.7 Base-emitter saturation voltage vs. collector current

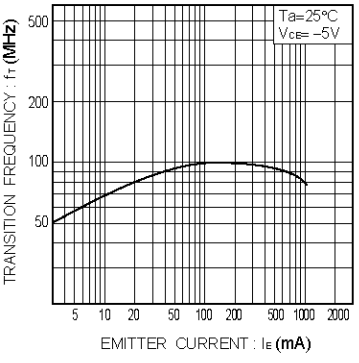


Fig.8 Gain bandwidth product vs. emitter current

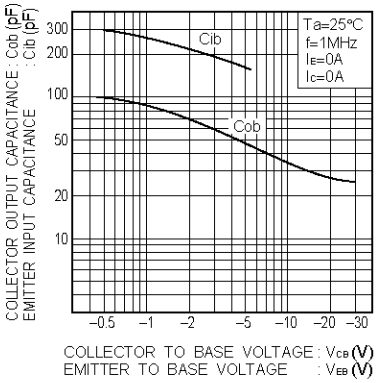
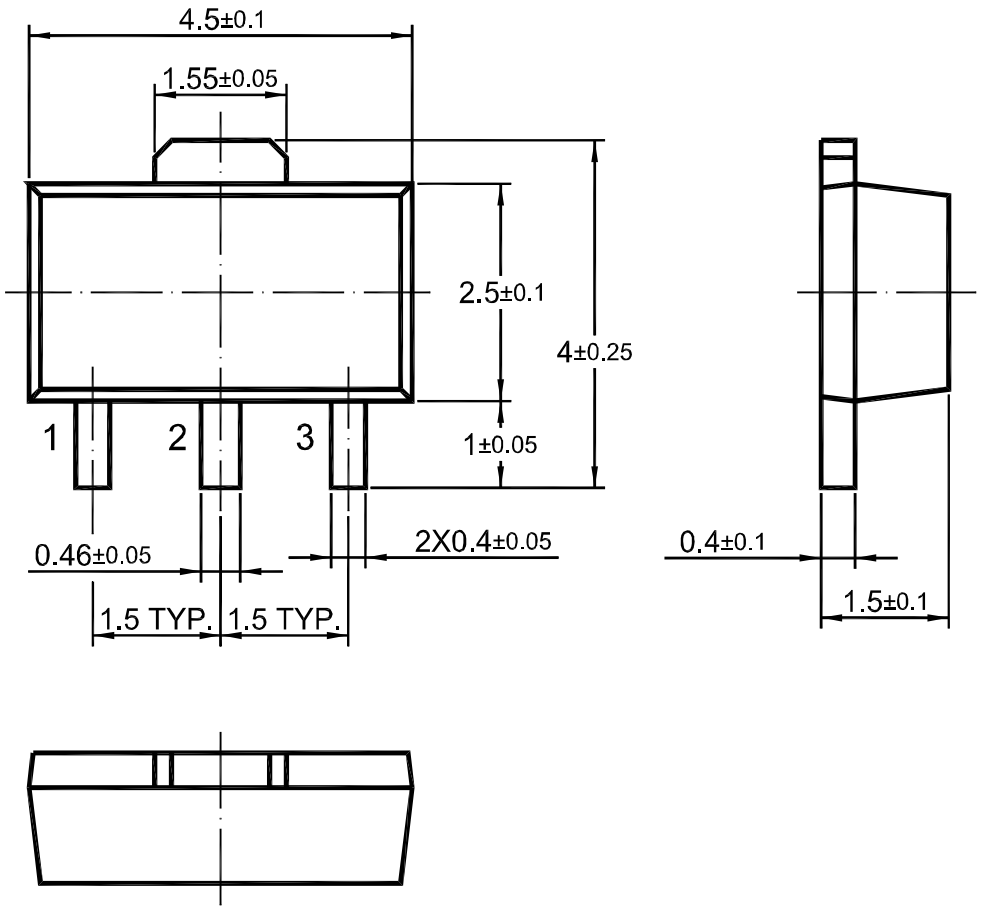


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

SOT-89 PACKAGE OUTLINE



Dimensions in mm