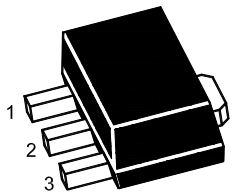
BCV48

PNP Silicon Epitaxial Power Transistor

- Darlington Transistor
- for high gain amplification



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

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	100	V
Collector Emitter Voltage	$-V_{CEO}$	100	V
Emitter Base Voltage	$-V_{EBO}$	10	V
Collector Current (DC) Collector Current (Pulse)	$-I_C$	2 3 [1)]	A
Total Power Dissipation	P_{tot}	0.5 1 [2)]	W
Junction Temperature	T_j	125	℃
Storage Junction Temperature Range	T_{stg}	- 55 to + 150	℃

[1)] Single pulse: P_W = 100 ms
[2)] When mounted on a 250 mm^2 x 0.8 t ceramic substrate.

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 2 V, $-I_C$ = 1 A	h_{FE}	1000	-	10000	-
Collector Base Cutoff Current at $-V_{CB}$ = 100 V	$-I_{CBO}$	-	-	10	µA
Emitter Base Cutoff Current at $-V_{EB}$ = 7 V	$-I_{EBO}$	-	-	3	mA
Collector Base Breakdown Voltage at $-I_C$ = 50 µA	$-V_{(BR)CBO}$	100	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 5 mA	$-V_{(BR)CEO}$	100	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 5 mA	$-V_{(BR)EBO}$	10	-	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 1 A, $-I_B$ = 1 mA	$-V_{CE(sat)}$	-	-	1.5	V
Current Gain Bandwidth Product at $-V_{CE}$ = 5 V, I_E = 100 mA, f = 30 MHz	f_T	-	50	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{ob}	-	35	-	pF

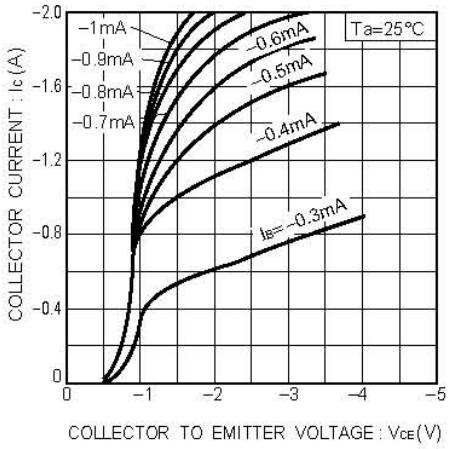


Fig.1 Grounded emitter output characteristics

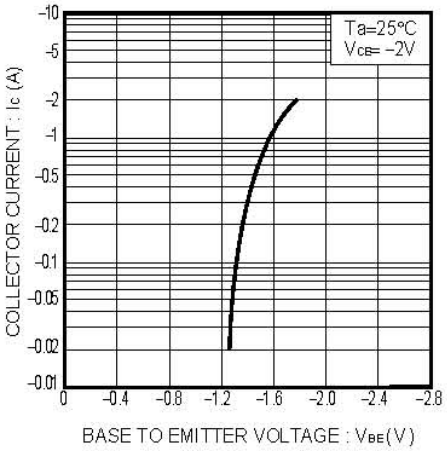


Fig.2 Grounded emitter propagation characteristics

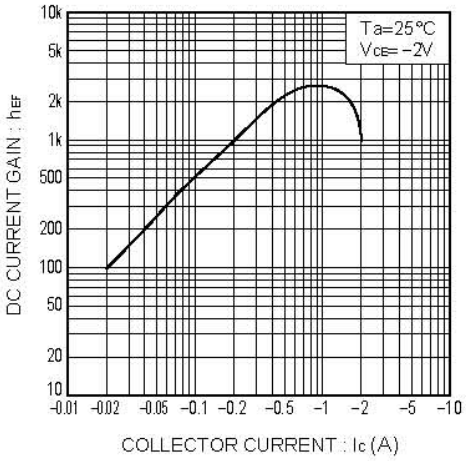


Fig.3 DC current gain vs. collector current

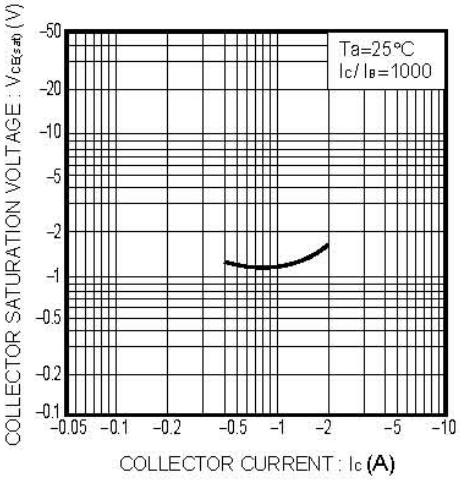
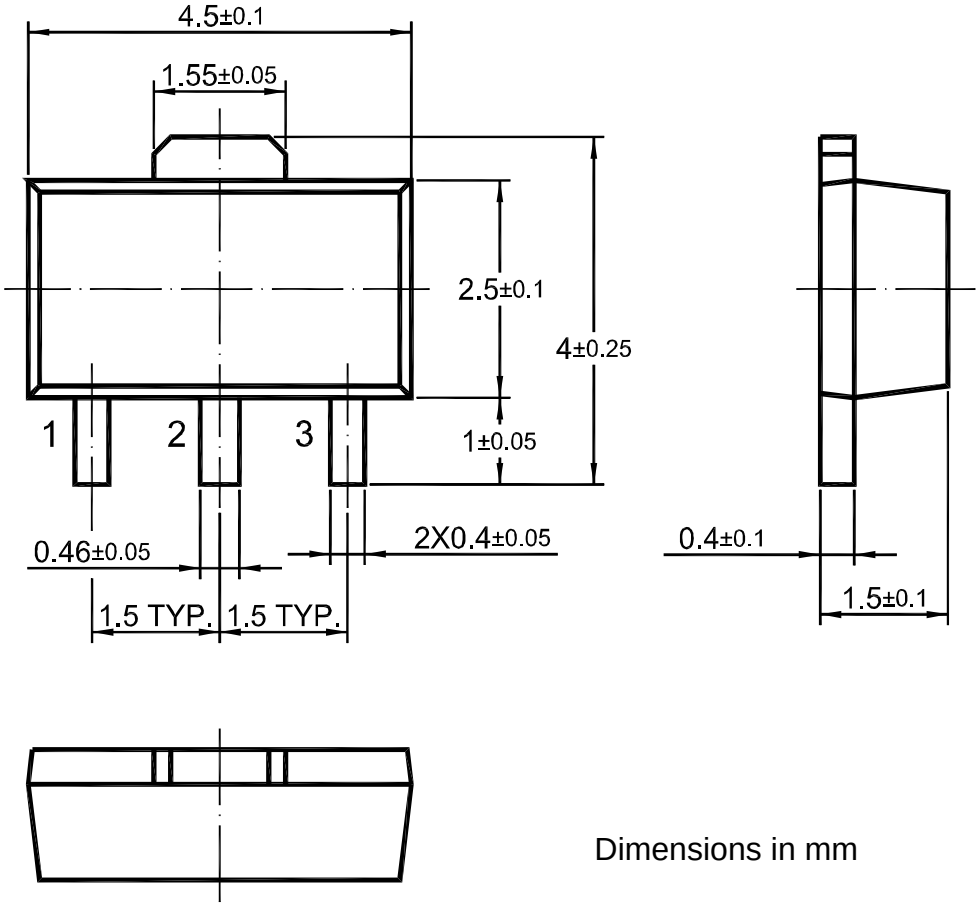


Fig.4 Collector-emitter saturation voltage vs. collector current

SOT-89 PACKAGE OUTLINE



Dimensions in mm