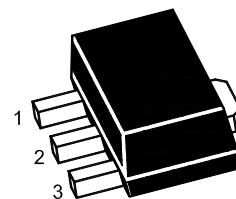




PNP Silicon Epitaxial Planar Transistor



1.Base 2.Collector 3.Emitter

SOT-89-3L

Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	20	V
Collector Emitter Voltage	$-V_{CEO}$	20	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current - DC	$-I_C$	3	A
Collector Current - Pulse ¹⁾	$-I_{CP}$	5	A
Total Power Dissipation	P_{tot}	0.5	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^{\circ}\text{C}$

¹⁾ Single pulse, PW = 10 ms.

Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 100\text{ mA}$ Current Gain Group Q R	h_{FE}	120	-	270	-
	h_{FE}	180	-	390	-
Collector Base Breakdown Voltage at $-I_C = 50\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	20	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	20	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 50\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	-	V
Collector Cutoff Current at $-V_{CB} = 20\text{ V}$	$-I_{CBO}$	-	-	0.1	μA
Emitter Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	0.1	μA
Collector Emitter Saturation Voltage at $-I_C = 2\text{ A}$, $-I_B = 100\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Transition Frequency at $-V_{CE} = 2\text{ V}$, $-I_E = 0.5\text{ A}$, $f = 100\text{ MHz}$	f_T	-	240	-	MHz
Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	35	-	pF

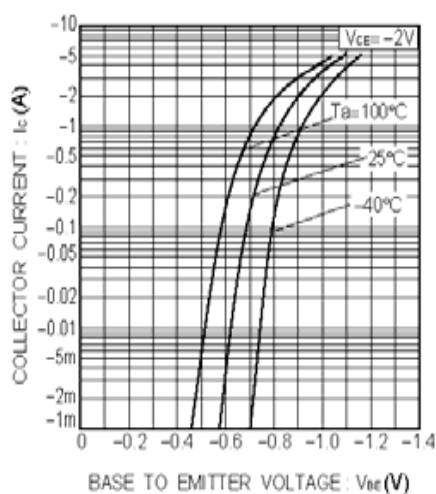


Fig.1 Grounded emitter propagation characteristics

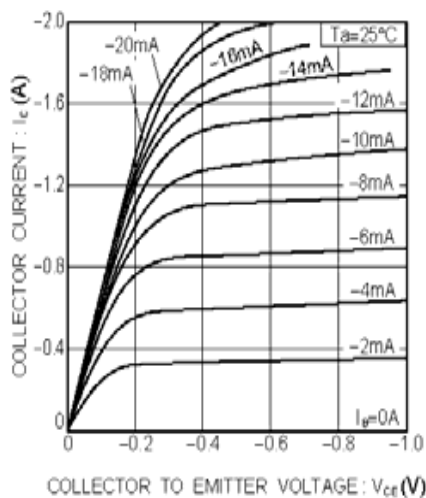


Fig.2 Grounded emitter output characteristics (I)

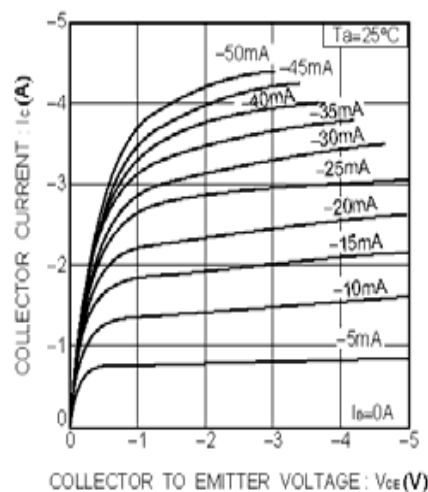


Fig.3 Grounded emitter output characteristics (II)

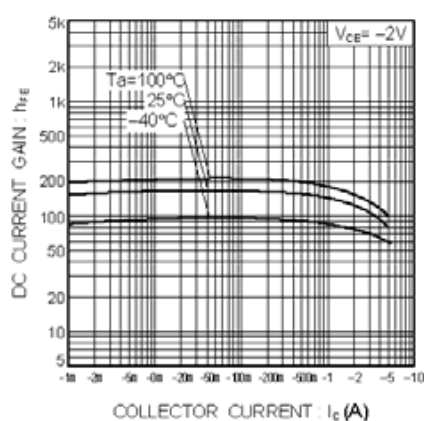


Fig.4 DC current gain vs. collector current

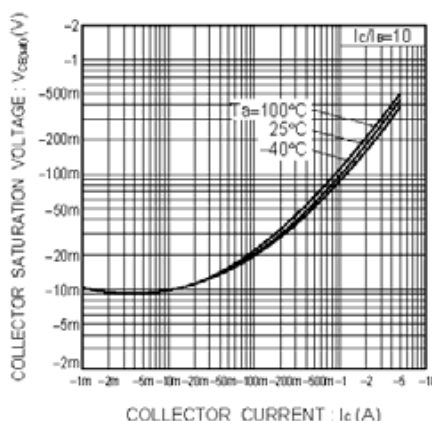


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

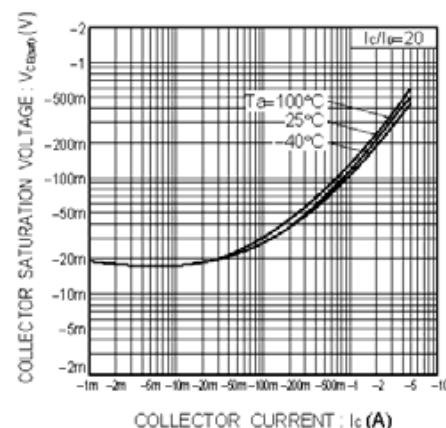


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

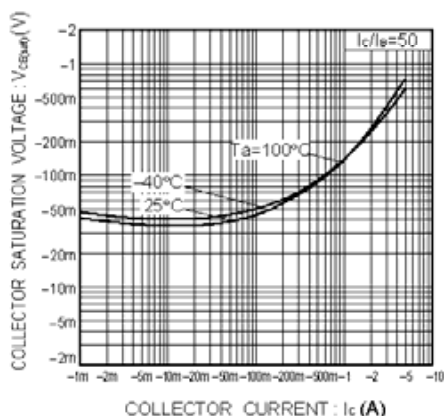


Fig.7 Collector-emitter saturation voltage vs. collector current (III)

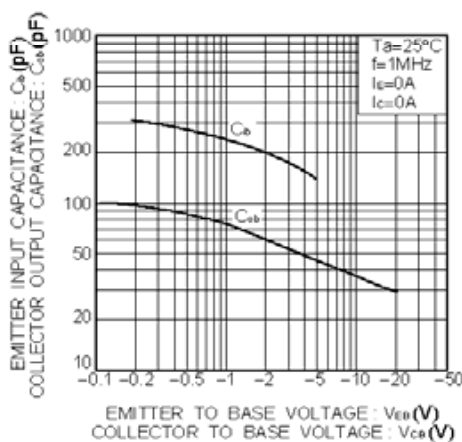


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

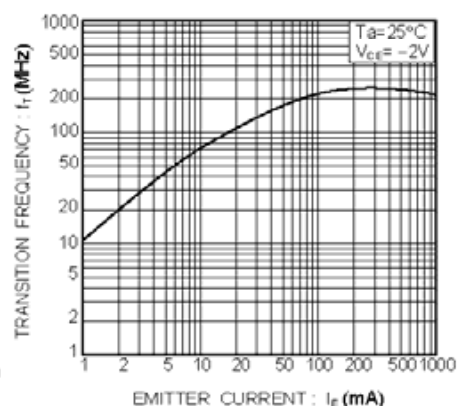
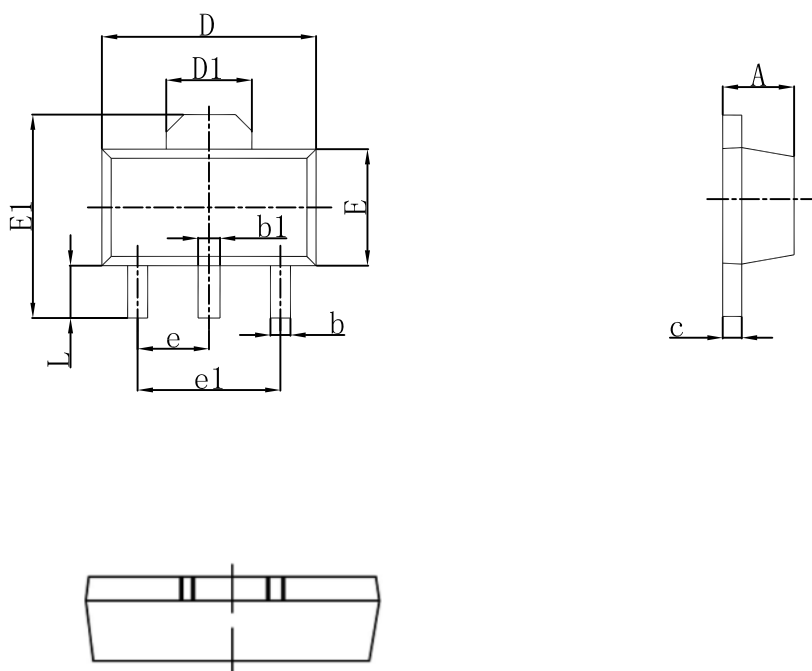


Fig.9 Emitter input capacitance vs. emitter base voltage



SOT-89-3L Outlines Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047