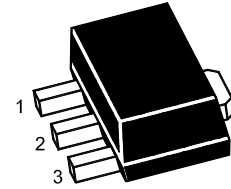


NPN Silicon Epitaxial Planar Transistors

for general purpose, high voltage amplifier applications.



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

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	180	V
Collector Emitter Voltage	V_{CEO}	160	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	80	-	-
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	80	250	-
at $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$	h_{FE}	30	-	-
Collector Base Cutoff Current at $V_{CB} = 120\text{ V}$	I_{CBO}	-	50	nA
Emitter Base Cutoff Current at $V_{EB} = 4\text{ V}$	I_{EBO}	-	50	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	180	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	160	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$	$V_{CE(sat)}$	-	0.15	V
at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$		-	0.2	
Base Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$	$V_{BE(sat)}$	-	1	V
at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$		-	1	
Gain Bandwidth Product at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	300	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	6	pF

Fig.1 $P_{tot} - T_a$

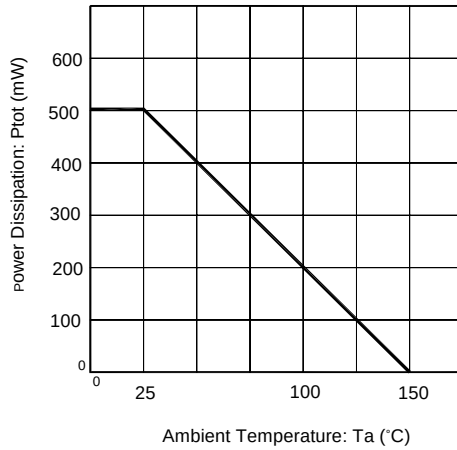


Fig. 2 $I_C - V_{BE}$

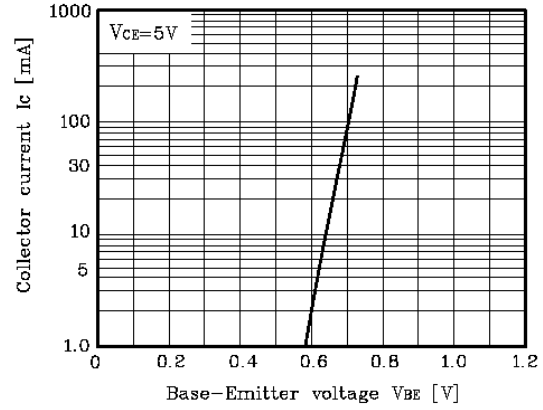


Fig. 3 $f_T - I_C$

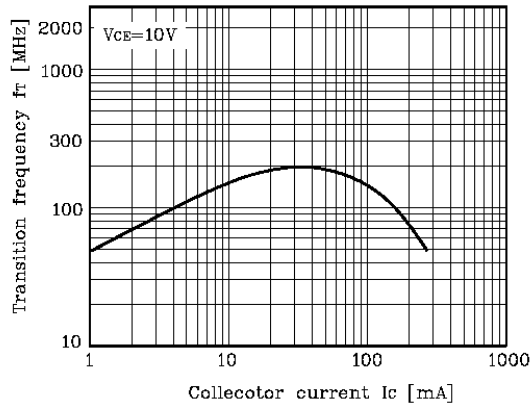


Fig. 4 $V_{CE(sat)}, V_{BE(sat)} - I_C$

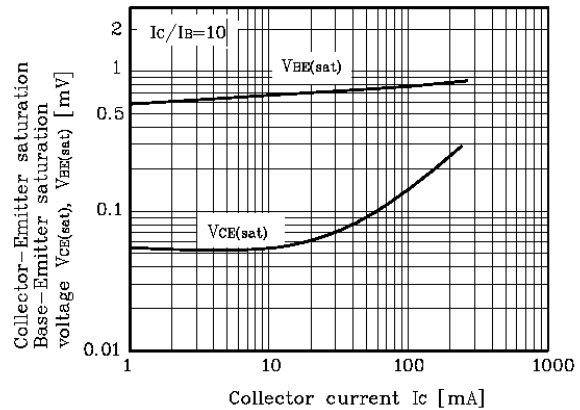
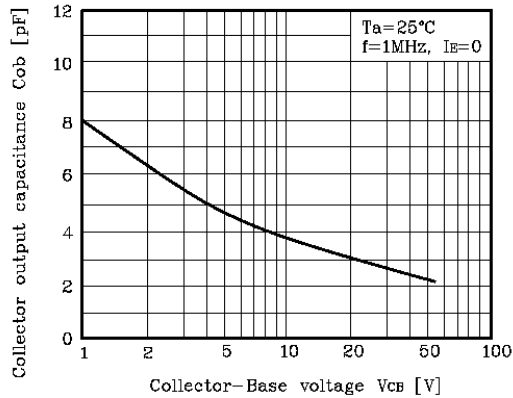
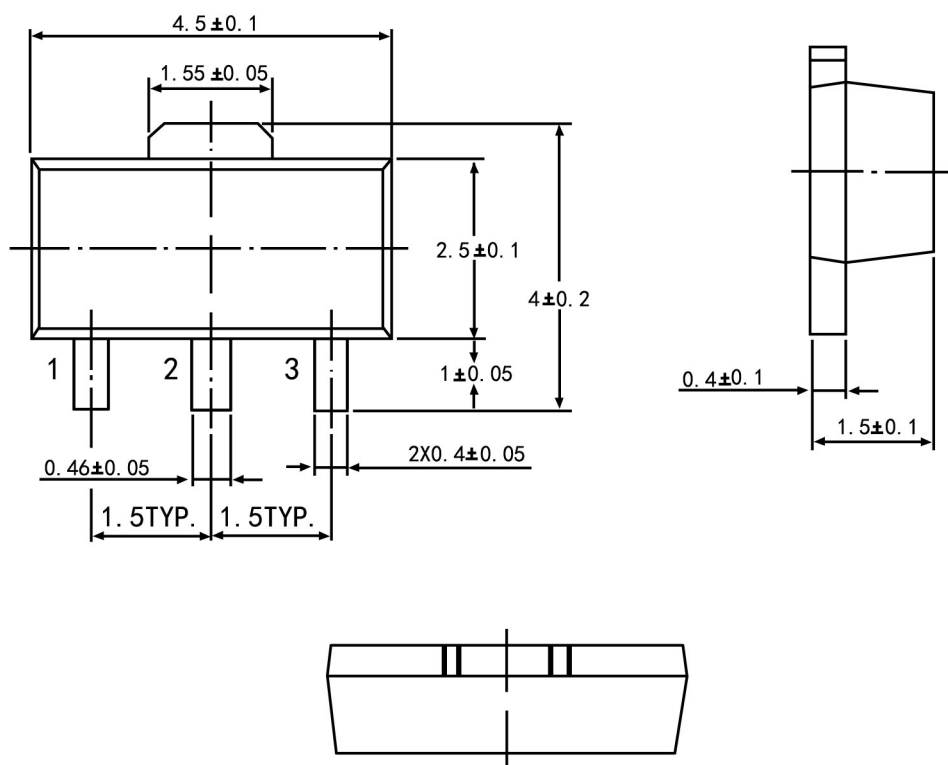


Fig. 5 $C_{ob} - V_{CB}$



SOT-89 PACKAGE OUTLINE



Symbol	Dimension in Millimeters	
	Min	Max
A	1.40	1.60
B	0.44	0.62
B1	0.35	0.54
C	0.35	0.44
D	4.40	4.60
D1	1.62	1.83
E	2.29	2.60
e	1.50 Typ	
H	3.94	4.25
H1	2.63	2.93
L	0.89	1.20
All Dimensions In mm		