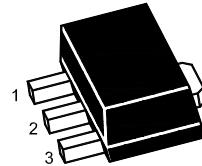


NPN Silicon Epitaxial Planar Transistor

for general purpose applications



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

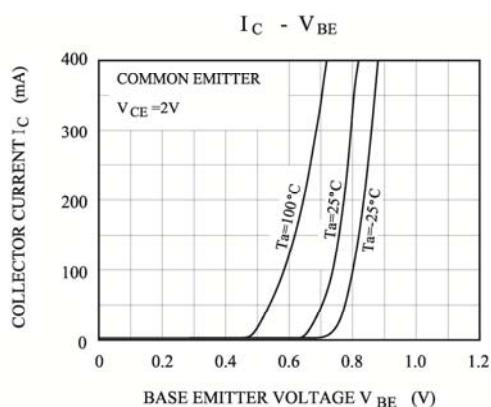
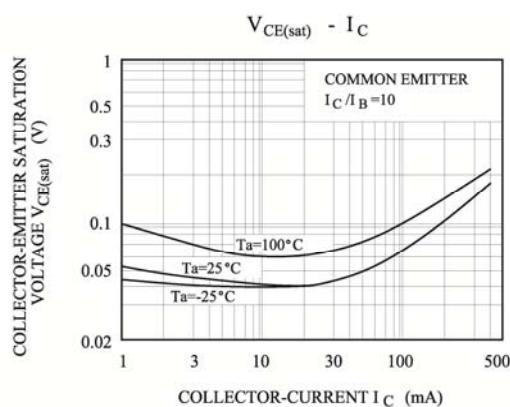
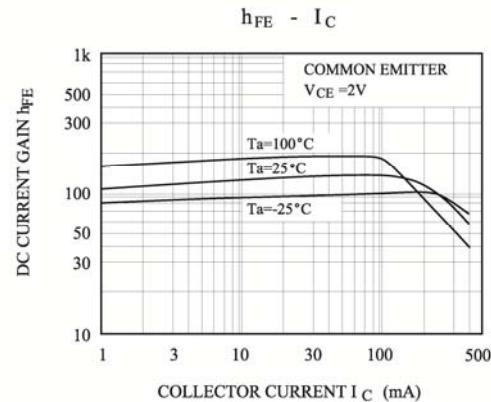
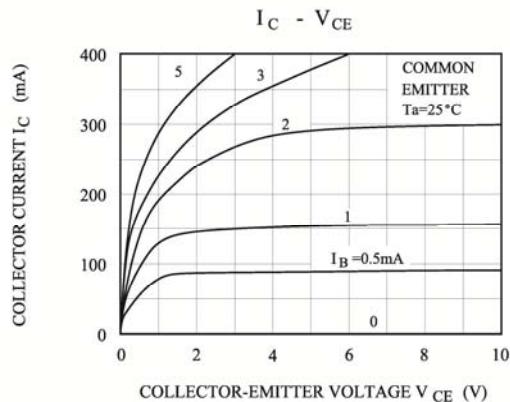
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

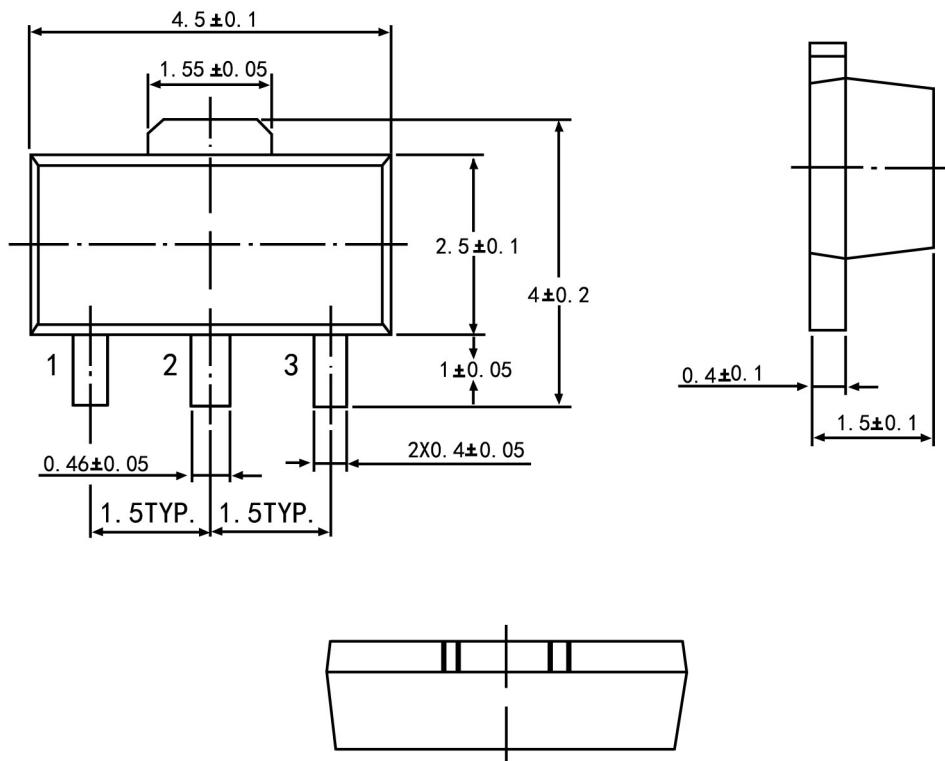
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	400	mA
Base Current	I_B	80	mA
Total Power Dissipation	P_{tot}	0.5 1 ¹⁾	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ When mounted on a 250 mm² x 0.8 t ceramic substrate.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2 \text{ V}$, $I_C = 50 \text{ mA}$	h_{FE}	70	-	140	-
	h_{FE}	120	-	240	-
	h_{FE}	50	-	-	-
Collector Base Cutoff Current at $V_{CB} = 80 \text{ V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5 \text{ V}$	I_{EBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C = 10 \text{ mA}$	$V_{(BR)CEO}$	80	-	-	V
Collector Emitter Saturation Voltage at $I_C = 200 \text{ mA}$, $I_B = 20 \text{ mA}$	$V_{CE(sat)}$	-	-	0.4	V
Base Emitter Voltage at $V_{CE} = 2 \text{ V}$, $I_C = 5 \text{ mA}$	$V_{BE(on)}$	0.55	-	0.8	V
Transition Frequency at $V_{CE} = 10 \text{ V}$, $I_C = 10 \text{ mA}$	f_T	-	100	-	MHz
Collector Output Capacitance at $V_{CB} = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_{ob}	-	10	-	pF



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		