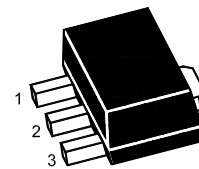


### NPN Silicon Epitaxial Planar Transistor



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

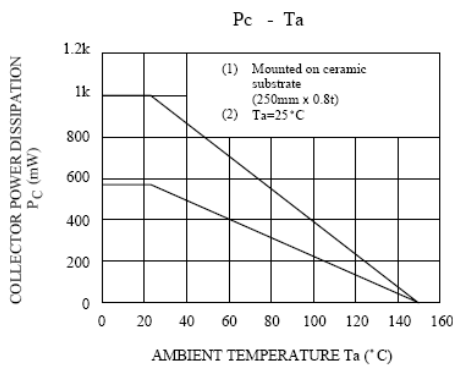
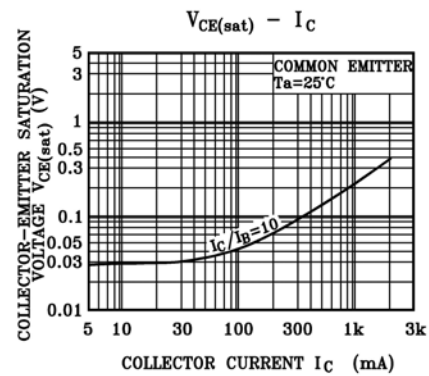
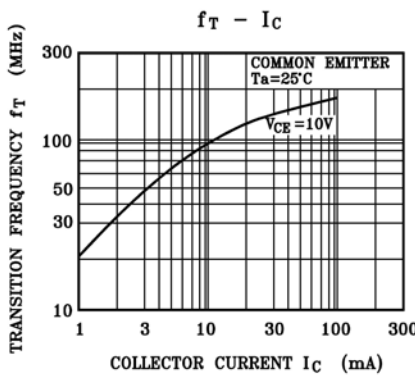
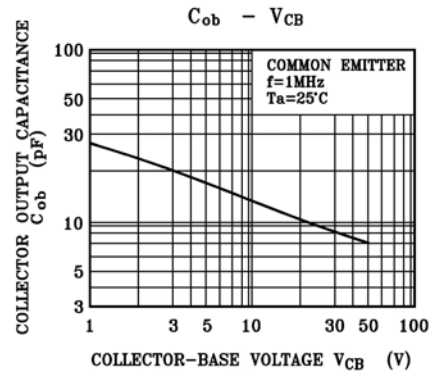
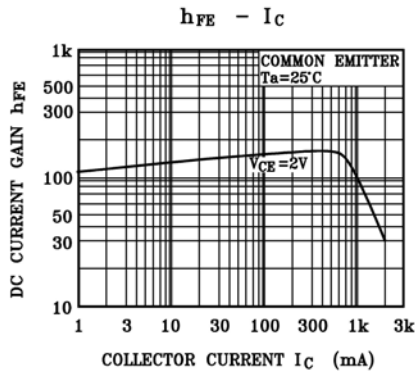
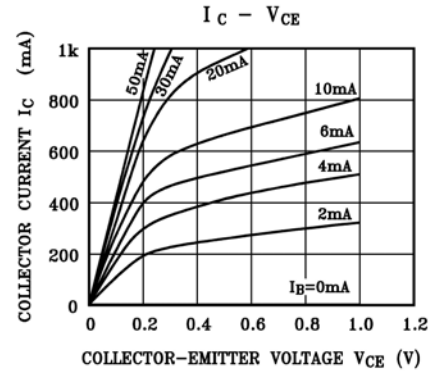
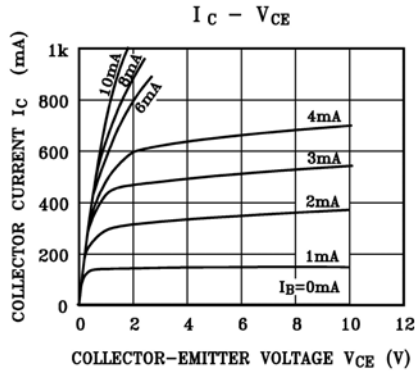
#### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	80	V
Collector Emitter Voltage	$V_{CEO}$	60	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	1	A
Peak Collector Current	$I_{CP}$	2	A
Total Power Dissipation	$P_{tot}$	0.5 1 <sup>1)</sup>	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

<sup>1)</sup> When mounted on a 250 mm<sup>2</sup> X 0.8 t ceramic substrate.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$ , $I_C = 50\text{ mA}$  at $V_{CE} = 2\text{ V}$ , $I_C = 1\text{ A}$  Current Gain Group Y G	$h_{FE}$	100	-	200	-
	$h_{FE}$	160	-	320	-
	$h_{FE}$	30	-	-	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$	$I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 4\text{ V}$	$I_{EBO}$	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	60	-	-	V
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{BE(sat)}$	-	-	1.2	V
Transition Frequency at $V_{CE} = 10\text{ V}$ , $I_C = 50\text{ mA}$	$f_T$	-	150	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	12	-	pF





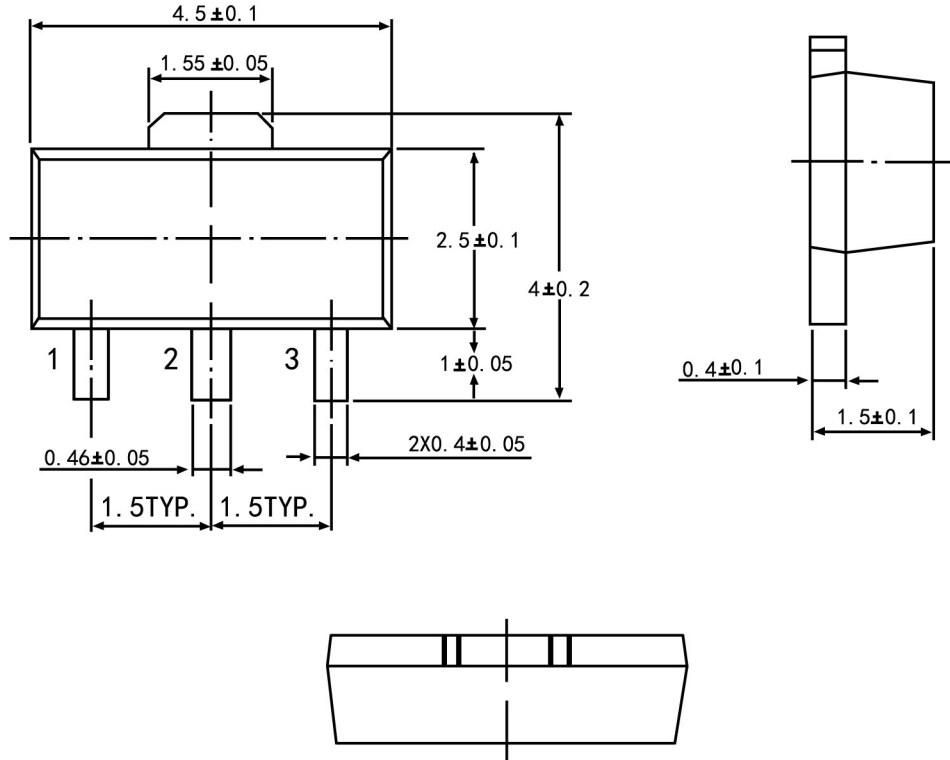
CHINA BASE  
INTERNATIONAL

# SOT-89 2SC4378U



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## 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