

/ Descriptions

SOT-89	NPN	Silicon NPN transistor in a SOT-89 Plastic Package.
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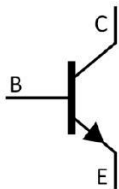
/ Features

High f_T , high V_{CEO} , small flat package, complementary pair with 2SA1201.

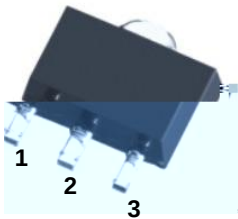
/ Applications

Power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1	Base	PIN 2	Collector	PIN 3	Emitter
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/ Marking

h _{FE} Classifications	O	Y
Symbol		
h _{FE} Range	80 160	120 240
Marking	HCO **	HCY **

/ Absolute Maximum Ratings(Ta=25 –)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	120	V
Collector to Emitter Voltage	V_{CEO}	120	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current-Continuous	I_C	800	mA
Collector Base-Continuous	I_B	160	mA
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation*	$*P_C$	1.0	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

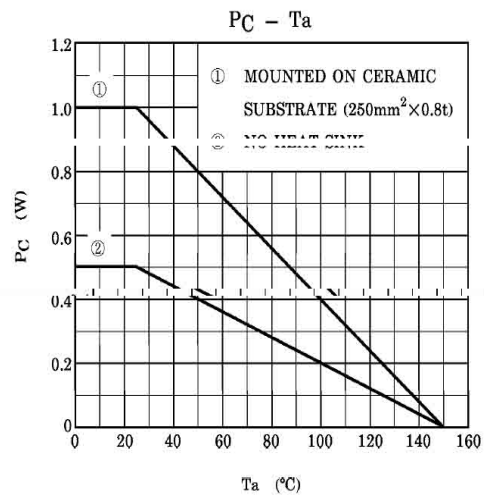
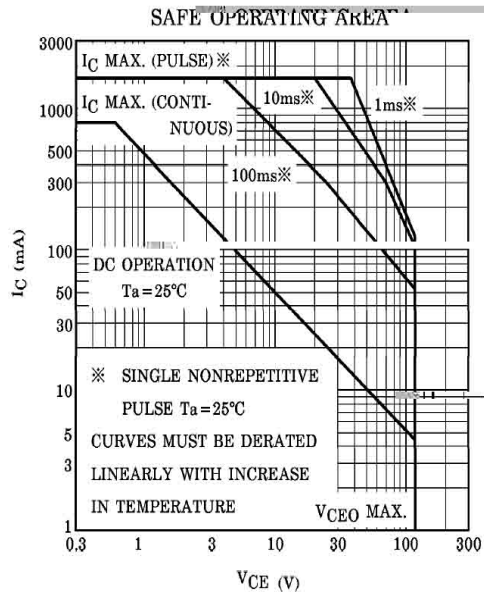
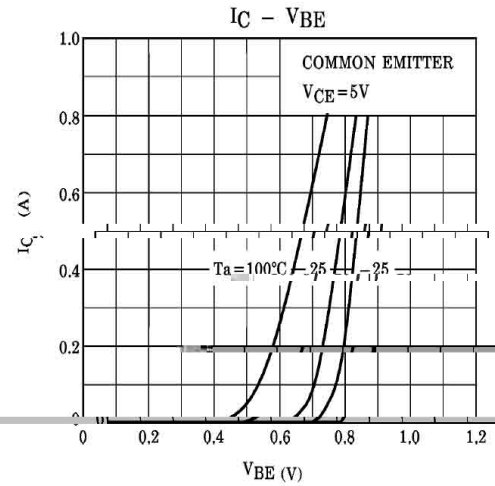
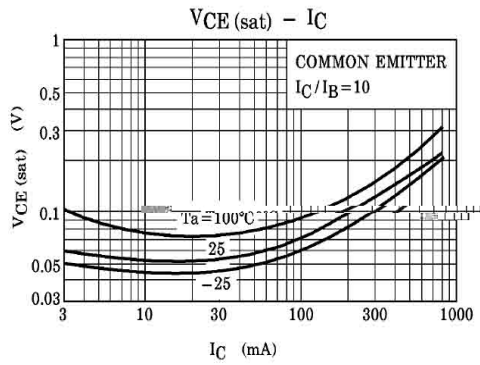
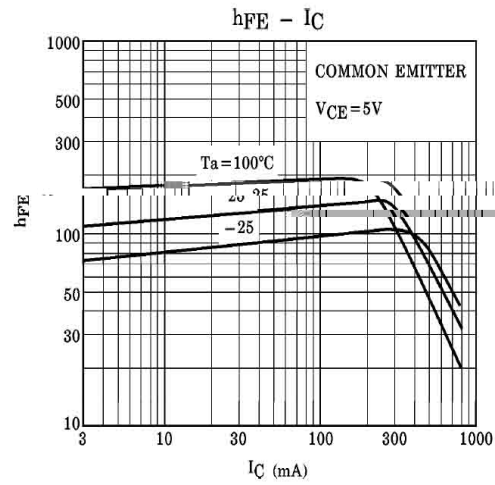
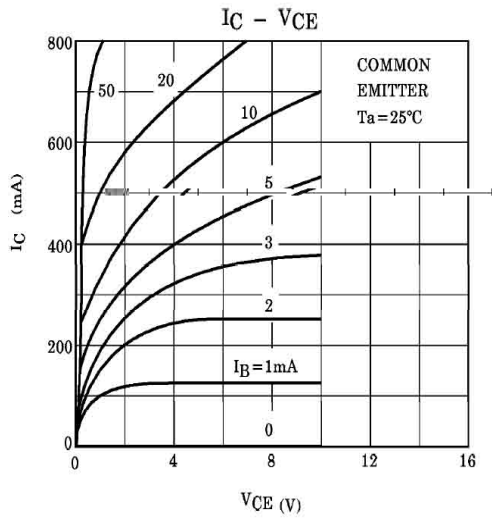
*Mounted on ceramic substrate(250mm²×0.8t)

* 250mm²×0.8t

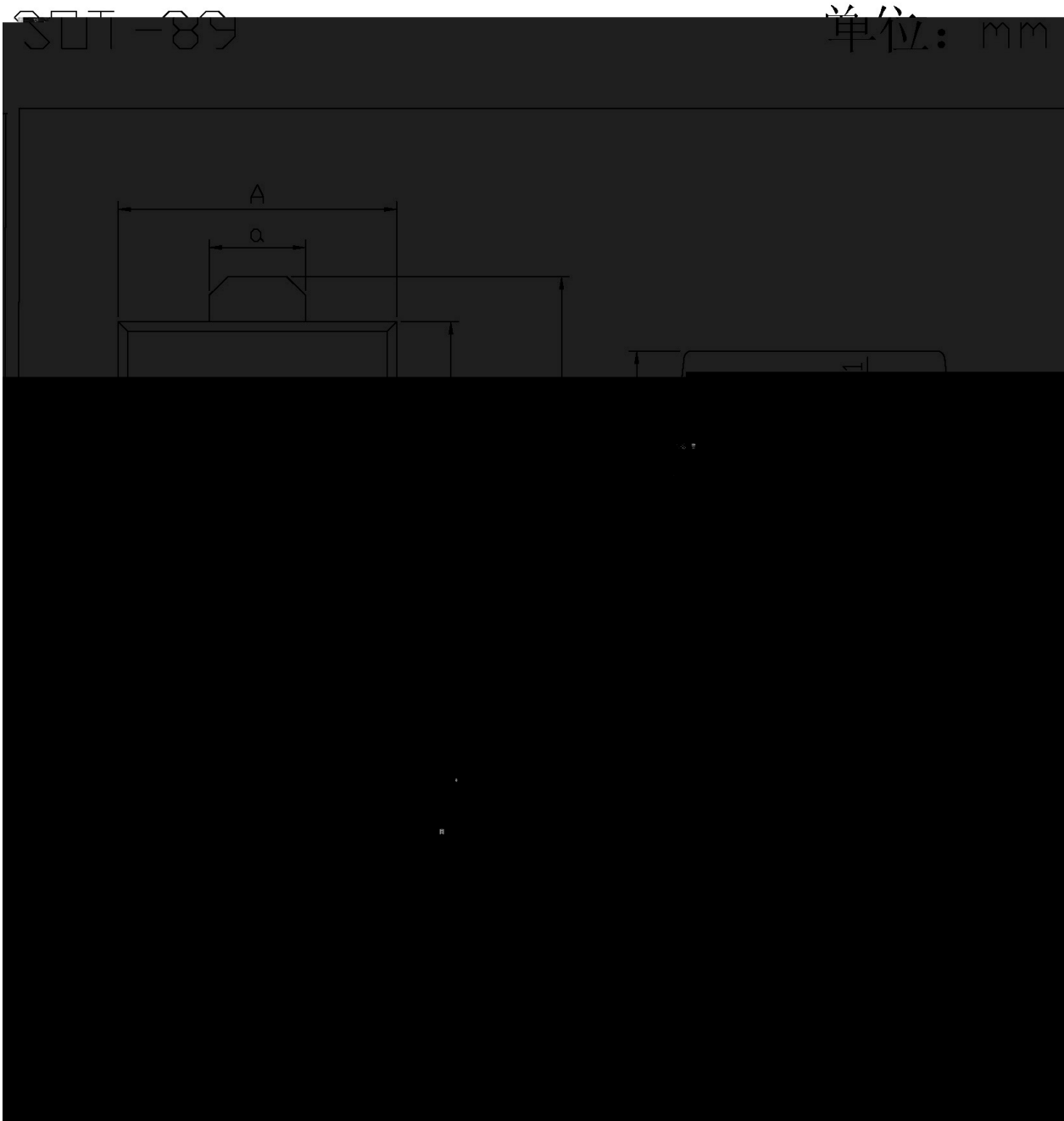
/ Electrical Characteristics(Ta=25 –)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	120			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_C=1.0mA$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=120V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=100mA$	80		240	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			1.0	V
Emitter to Base Saturation Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=500mA$			1.0	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=100mA$		120		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$			30	pF

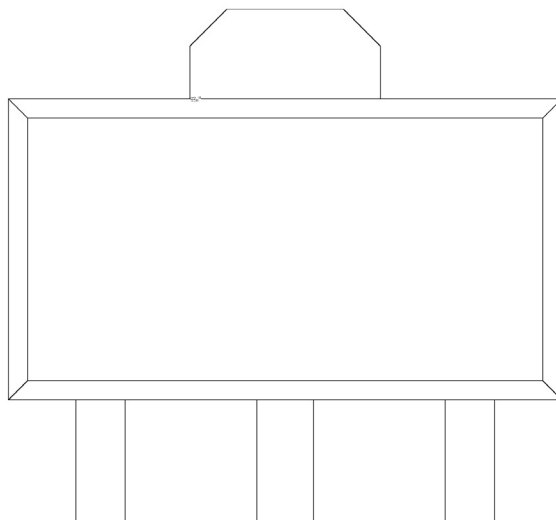
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



H

C

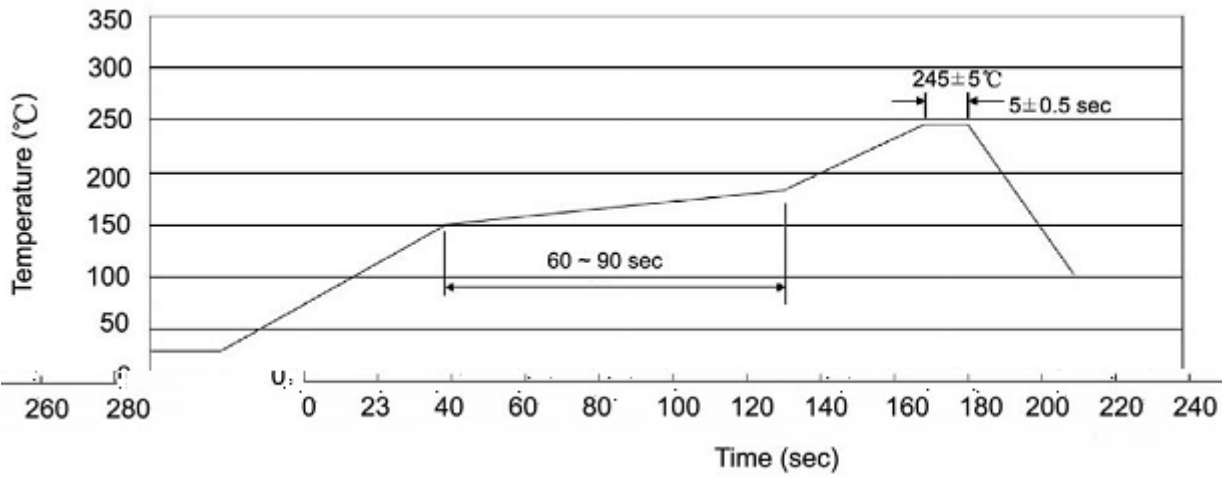
O

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Note:

H: Company Code.

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Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5

10±1 sec.

Temp.:260±5℃

Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱

/ Notices