

/ Descriptions

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

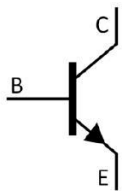
/ Features

2SA1213
Low collector saturation voltage, High speed switching time, small flat package, Complementary to 2SA1213.

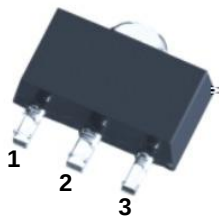
/ Applications

Power amplifier and switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	O	Y
h_{FE} Range	70 140	120 240
Marking	HMO	HMY

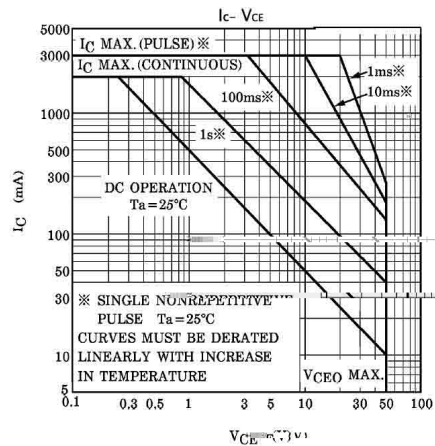
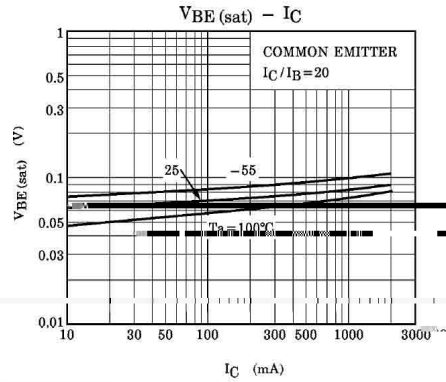
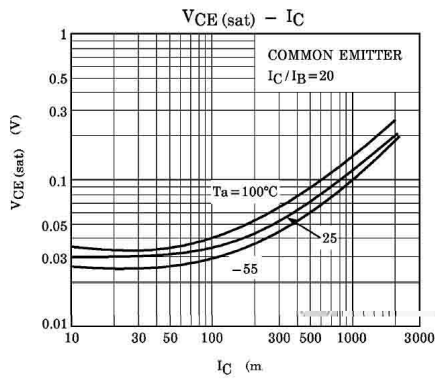
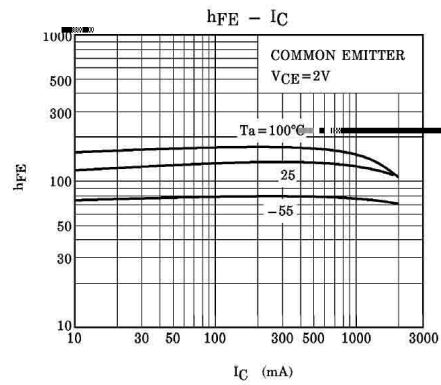
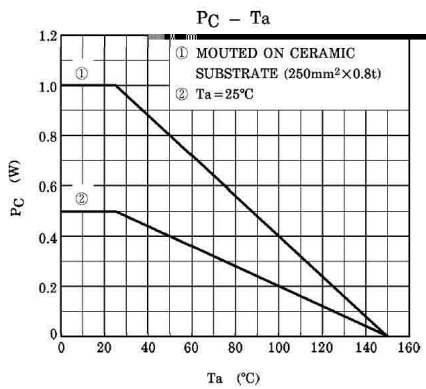
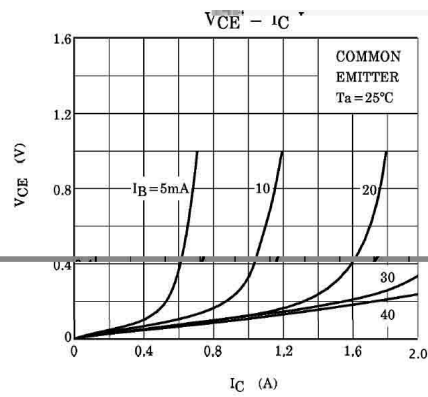
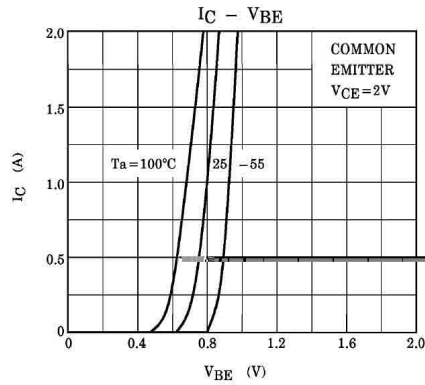
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current-Continuous	I_C	2.0	A
Collector Base-Continuous	I_B	0.4	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation*	* $P_C(T_a=25^\circ\text{C})$	1000	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

*BR2SC2873 mounted on ceramic substrate(250mm²×0.8t)

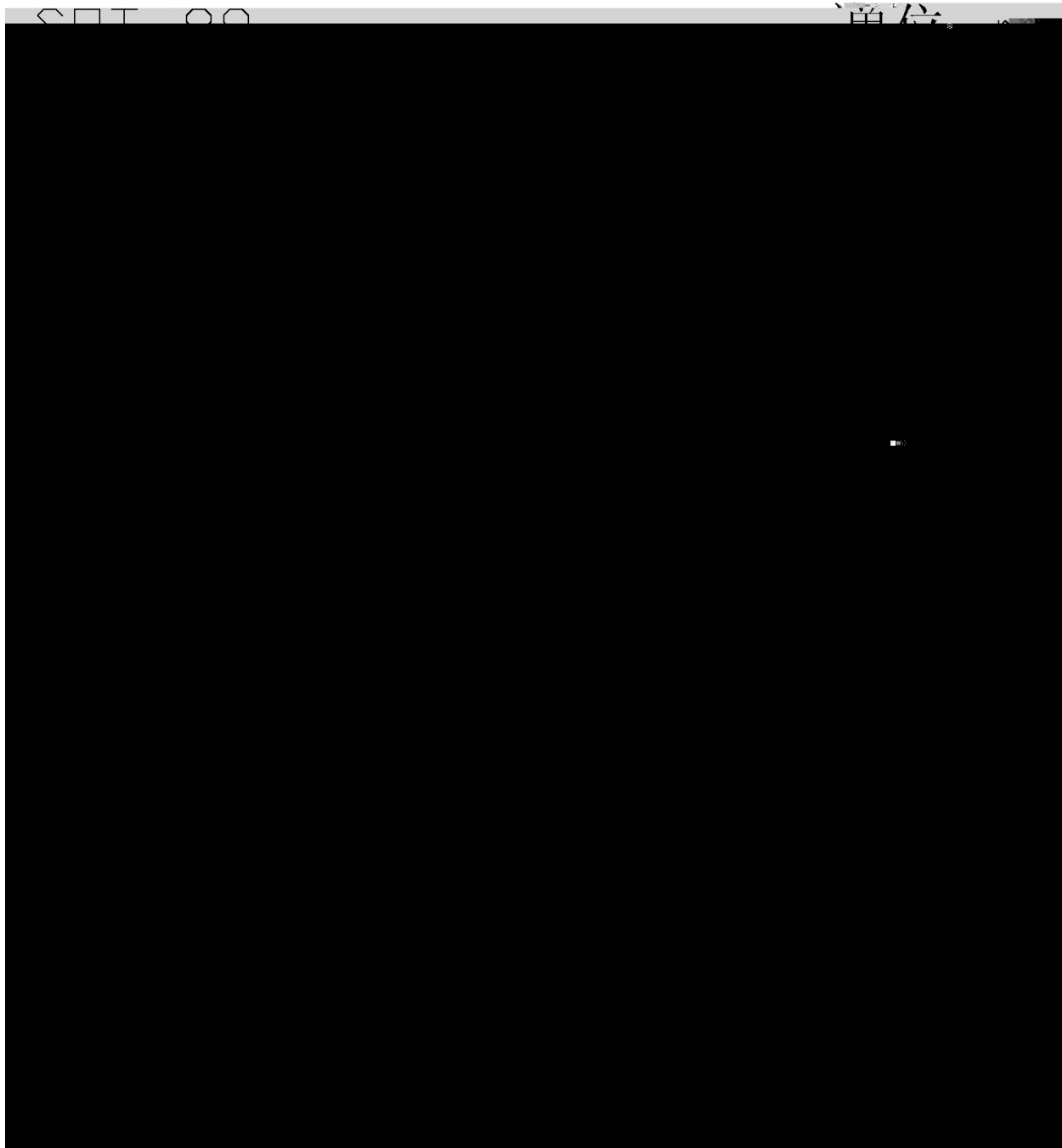
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=50V$ $I_E=0$			0.1	A
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	A
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	50			V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=500mA$	70		240	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=2.0A$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.0A$ $I_B=0.05A$			0.5	V
Emitter to Base Saturation Voltage	V_{BE}	$I_C=1.0A$ $I_B=0.05A$			1.2	V
Transition Frequency	f_T	$V_{CE}=2.0V$ $I_C=500mA$		120		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1MHz$		30		pF
Turn-OnTime	t_{on}			0.1		S

B 2 $V_{CC}=30V$
 $I_{B1}=-I_{B2}=0.05A$

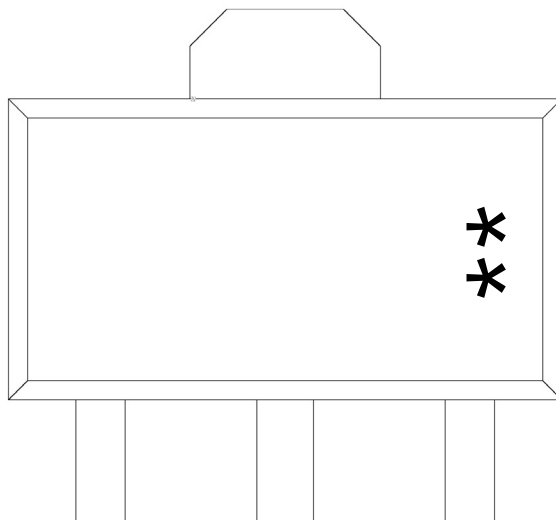
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



H

M

O

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Note:

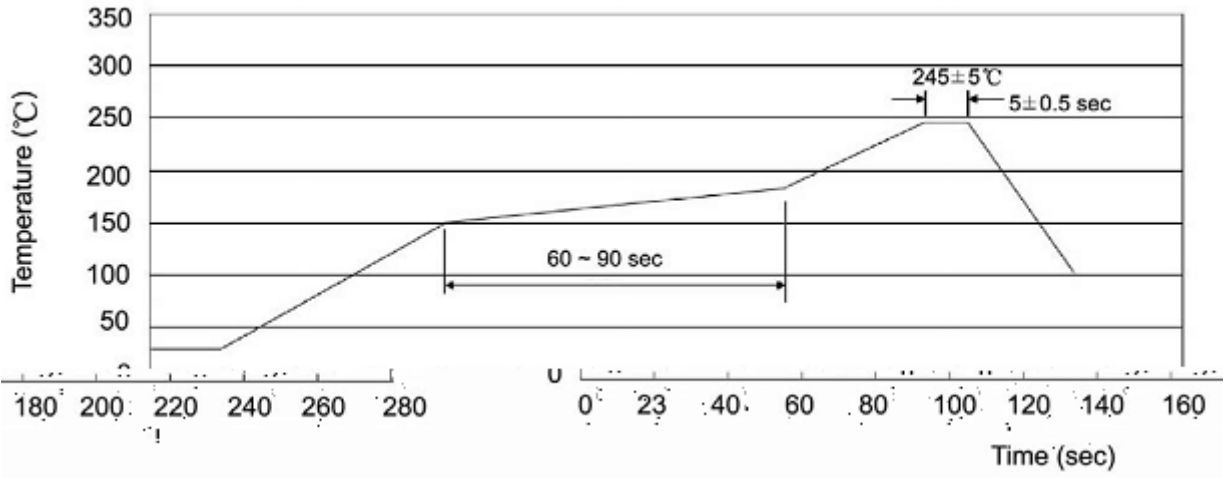
H: Company Code.

M: Product Type.

O h_{FE} Classifications Symbol

**: Lot No. Code, code change with Lot No.

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Note:

- 1

25 150

60 90sec;
- 2

245±5

5±0.5sec;
- 3

2 10 /sec.
- 1.Preheating:25~150

, Time:60~90sec.
- 2.Peak Temp.:245±5

, Duration:5±0.5sec.
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	Units					Dimension (unit mm ³)		

/ Notices