2SA1213

Rev.E Mar.-2016

ˇYت / Descriptions

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

ə È / Features

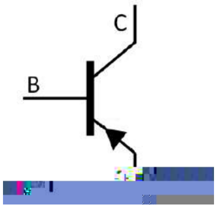
, 2SC2873

Low collector saturation voltage, High speed switching time, small flat package, Complementary to 2SC2873.

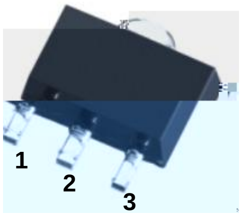
٧ ڍ / Applications

Power amplifier and switching applications.

ךּק ؚ ᾶ ؏ ع / Equivalent Circuit



ẫ ג ư / Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

ŧ ʜ ڋ / Marking

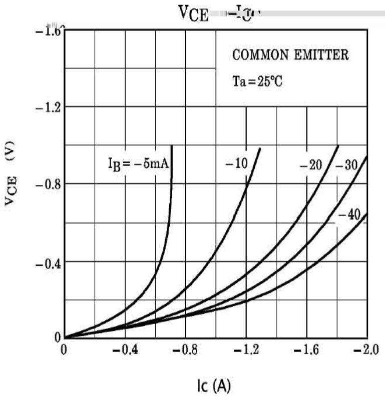
h_{FE} Classifications Symbol	O	Y
h_{FE} Range	70 140	120 240
Marking	HNO ⁑	HNY ⁑

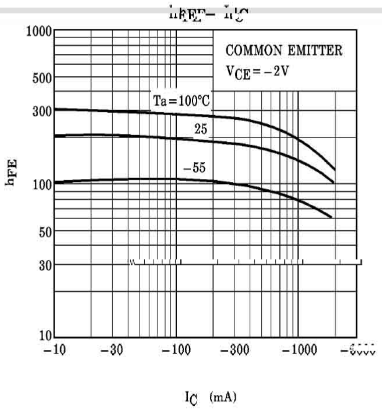
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-50	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current-Continuous	I_C	-2.0	A
Collector Base-Continuous	I_B	-0.4	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation*	*P_C(Ta=25)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

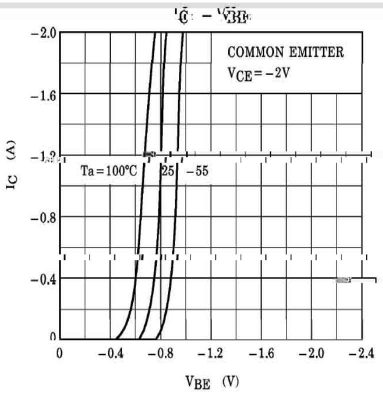
*BR2SA1213 mounted on ceramic substrate(250mm^2×0.8t).

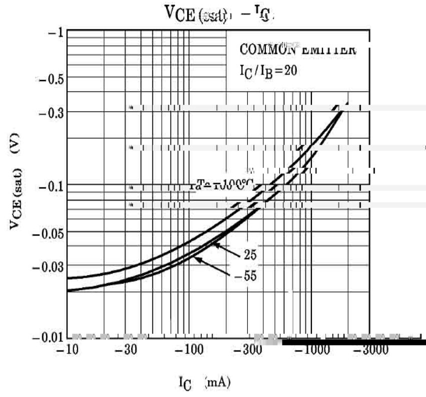
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	V_{CB}=-50V I_E=0			-0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=-5.0V I_C=0			-0.1	μA
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=-10mA I_B=0	-50			V
DC Current Gain	$h_{FE(1)}$	V_{CE}=-2.0V I_C=-500mA	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
Collector to Base Saturation Voltage	$V_{BE(sat)}$	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		40		pF
Turu-On Time	t_{on}	-I_{B1}=I_{B2}=0.05A V_{CC}=-30V		0.1		μS
Storage Time	t_{stg}			1.0		
Fall Time	t_f			0.1		

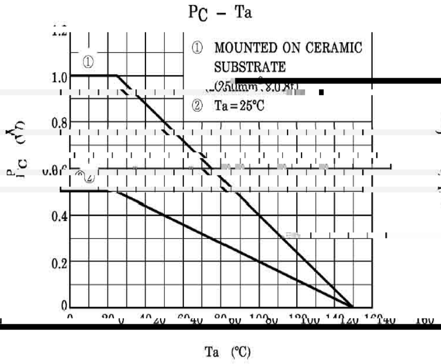
/ Electrical Characteristic Curve

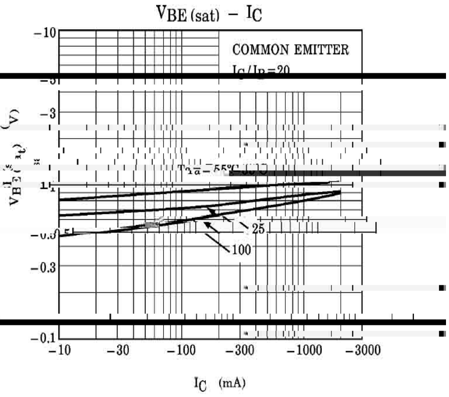

VCE – IC

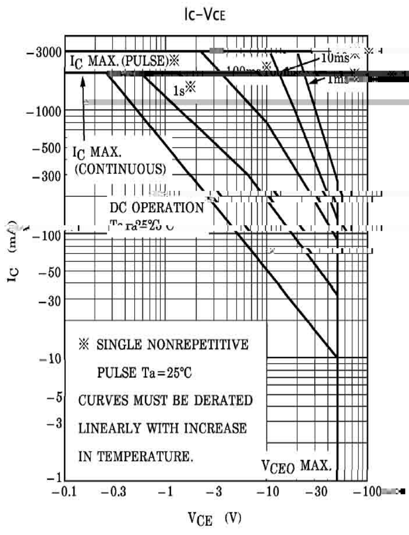

hFE – IC


IC – VBE

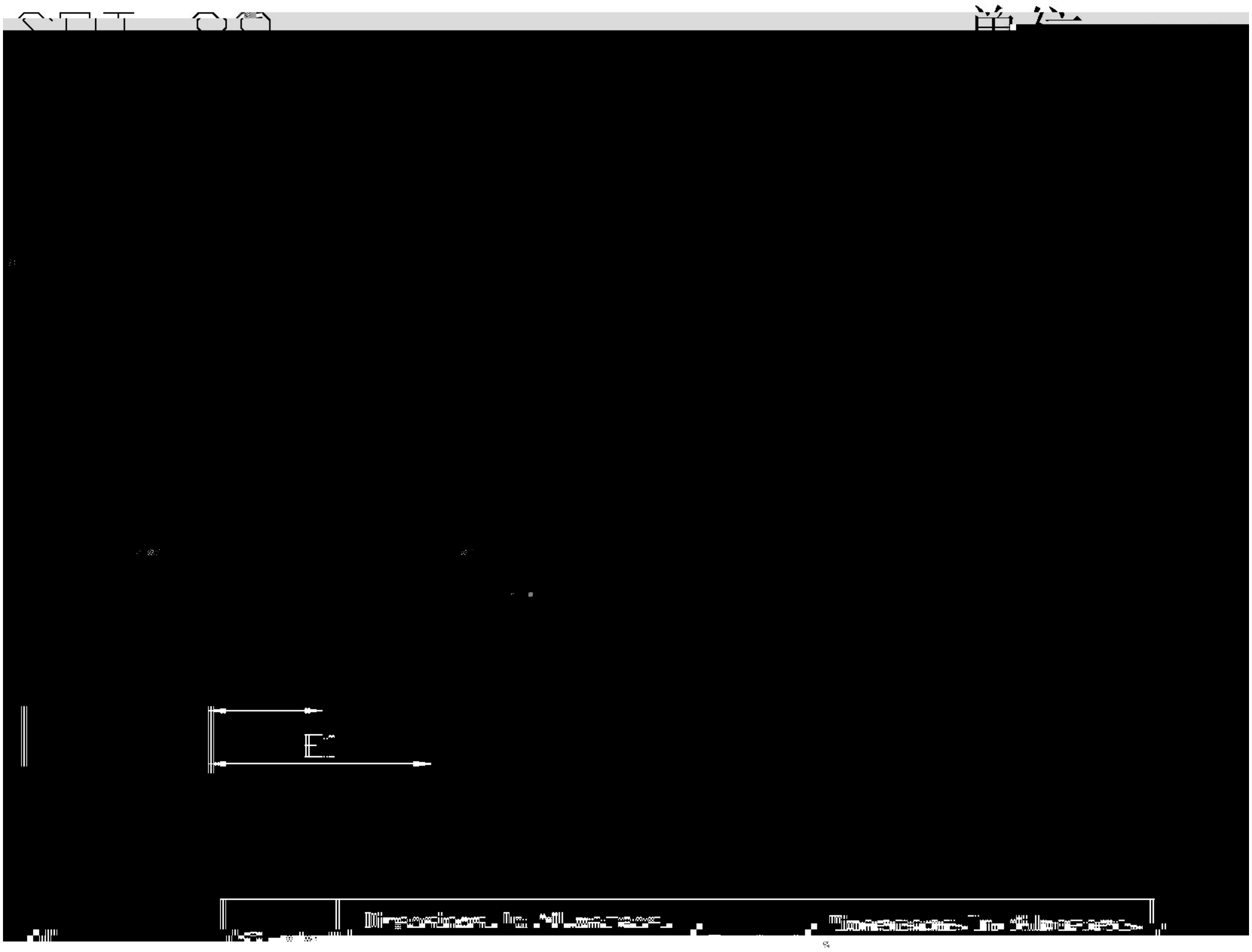

VCE(sat) – IC


PC – Ta

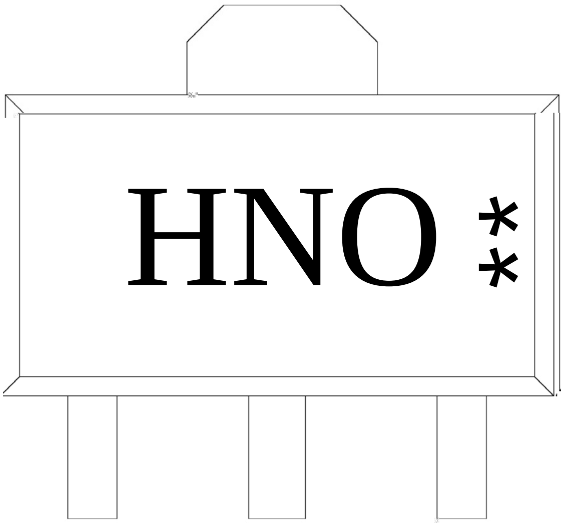

VBE(sat) – IC


Ic-Vce

ᵁ ẺỒḼ ʆ / Package Dimensions



ł˛ ʟ῎Ω / Marking Instructions



H

N

O hFE

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Note:

H:	Company Code.
N:	Product Type.
O:	h_{FE} Classifications Symbol
**:	Lot No. Code, code change with Lot No.

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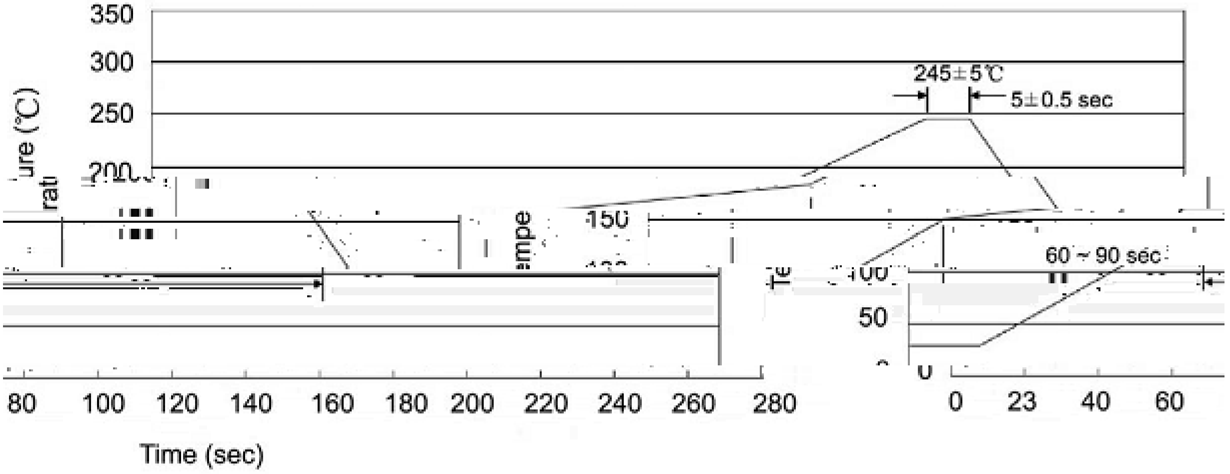

Note:

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.

⅃ ΰ զ ⁼̄ ˋY Ţ / Resistance to Soldering Heat Test Conditions

260±5 10±1 sec.

Temp.:260±5 Time:10±1 sec

ʚ ⱶ ⋞— / Packaging SPEC.

/ REEL

Package Type	Units	Dimens-6.4cf40968]FJ2	T