

/ Descriptions

SOT-89

NPN

Silicon NPN transistor in a SOT-89 Plastic Package.

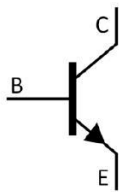
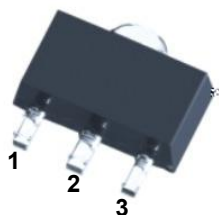
/ Features

2SB649TA

Complementary pair with 2SB649TA.

/ Applications

Low frequency power amplifier.

/ Equivalent Circuit**/ Pinning**

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	B	C	D
h_{FE} Range	60~120	100~200	160~320
Marking	H669B	H669C	H669D

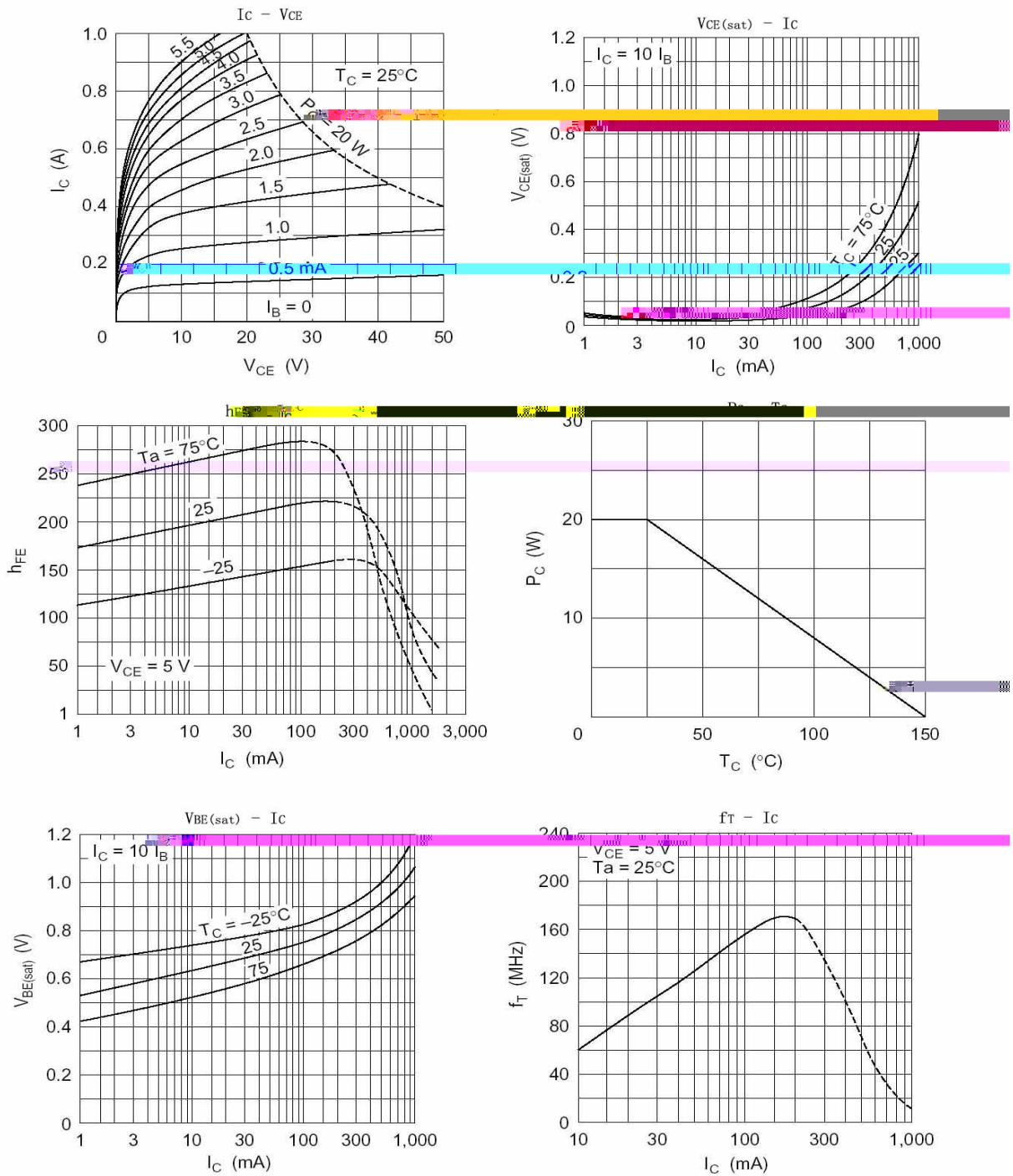
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current-Continuous	I_C	1.5	A
Collector Current-Continuous (Pluse)	I_{CP}	3.0	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	20	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=1.0mA$ $I_E=0$	180			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $R_{BE}=\infty$	160			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=1.0mA$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=160V$ $I_E=0$			10	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=150mA$	60		320	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=500mA$	30			
Base to Emitter Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=150mA$			1.5	V
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			1.0	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=150mA$		140		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		14		pF

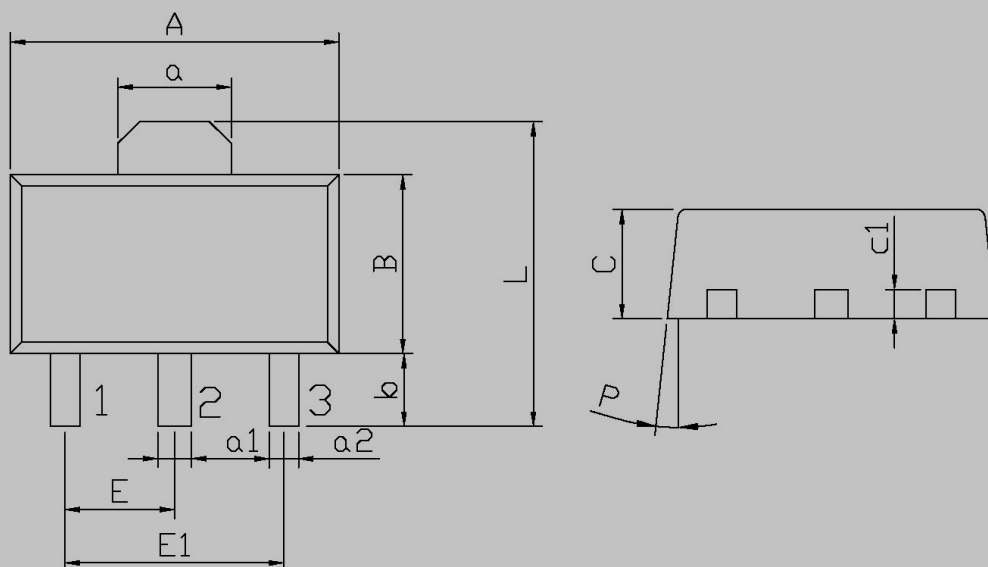
/ Electrical Characteristic Curve



/ **Package Dimensions**

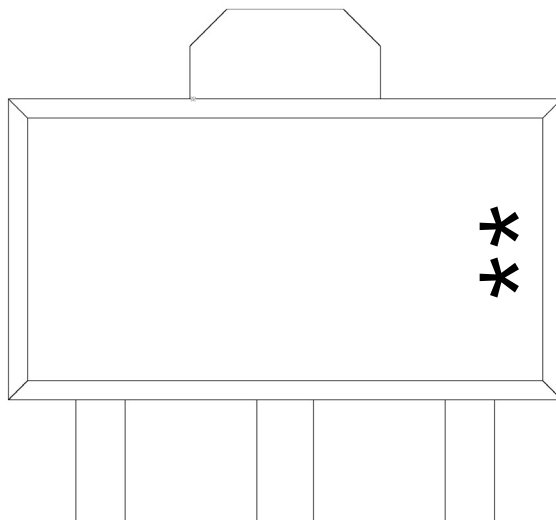
SOT-89

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min.	Max		Min.	Max
A	4.4	4.7	a1	0.36	0.56
B	2.35	2.65	a2	0.30	0.50

/ **Marking Instructions**



H

669

B h_{FE}

**

Note:

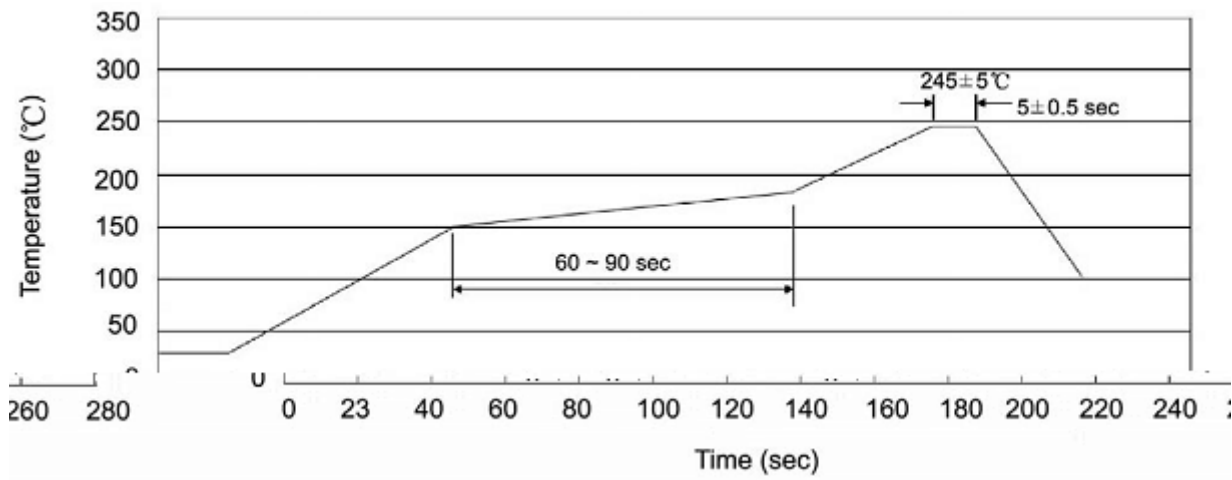
H: Company Code.

669: Product Type.

B h_{FE} Classifications Symbol

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

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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)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-89	1,000	7	7,000	8	56,000	7" x12	180×120×180	385×257×392

/ Notices