

/ Descriptions

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

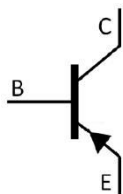
/ Features

， 2SD1767
Low $V_{CE(sat)}$, complements the 2SD1767.

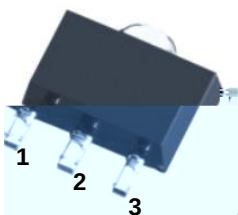
/ Applications

Medium power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	P	Q	R
h_{FE} Range	82~180	120~270	180~390
Marking	HBDP	HBDQ	HBDR

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-0.7	A
Collector Power Dissipation	P_C	0.5	W
Collector Power Dissipation*	* P_C	2	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

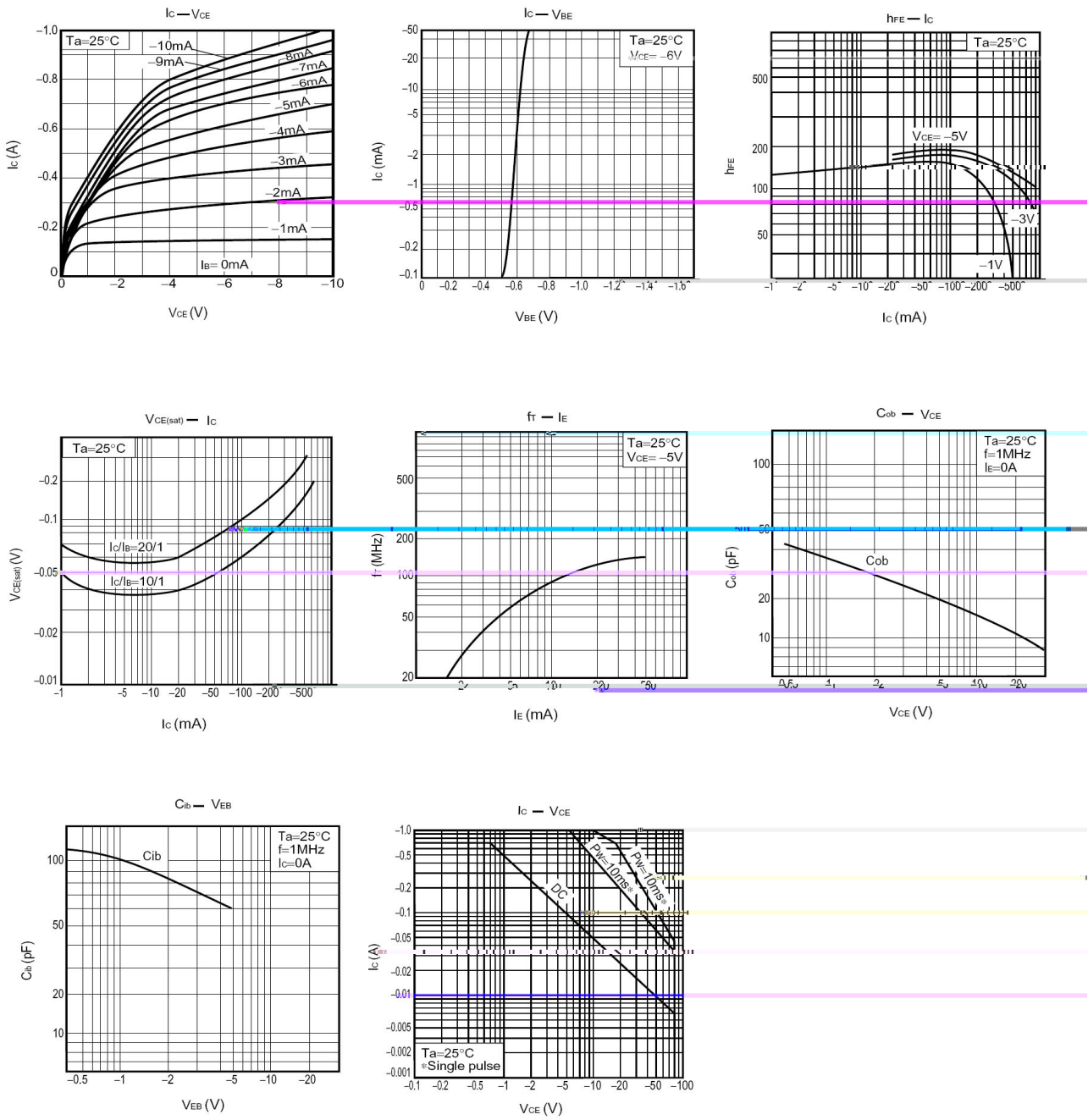
*:mounted on 40×40×0.7mm ceramic board.

*: 40×40×0.7m

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-50\mu A$ $I_E=0$	-80			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-2mA$ $I_B=0$	-80			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-50\mu A$ $I_C=0$	-5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-50V$ $I_E=0$			-0.5	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=-4V$ $I_C=0$			-0.5	μA
DC Current Gain	h_{FE}	$V_{CE}=-3V$ $I_C=-0.1A$	82		390	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		-0.2	-0.4	V
Transition Frequency	f_T	$V_{CE}=-10V$ $f=100MHz$ $I_E=50Ma$		100		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10V$ $f=1MHz$ $I_E=0$		14	20	pF

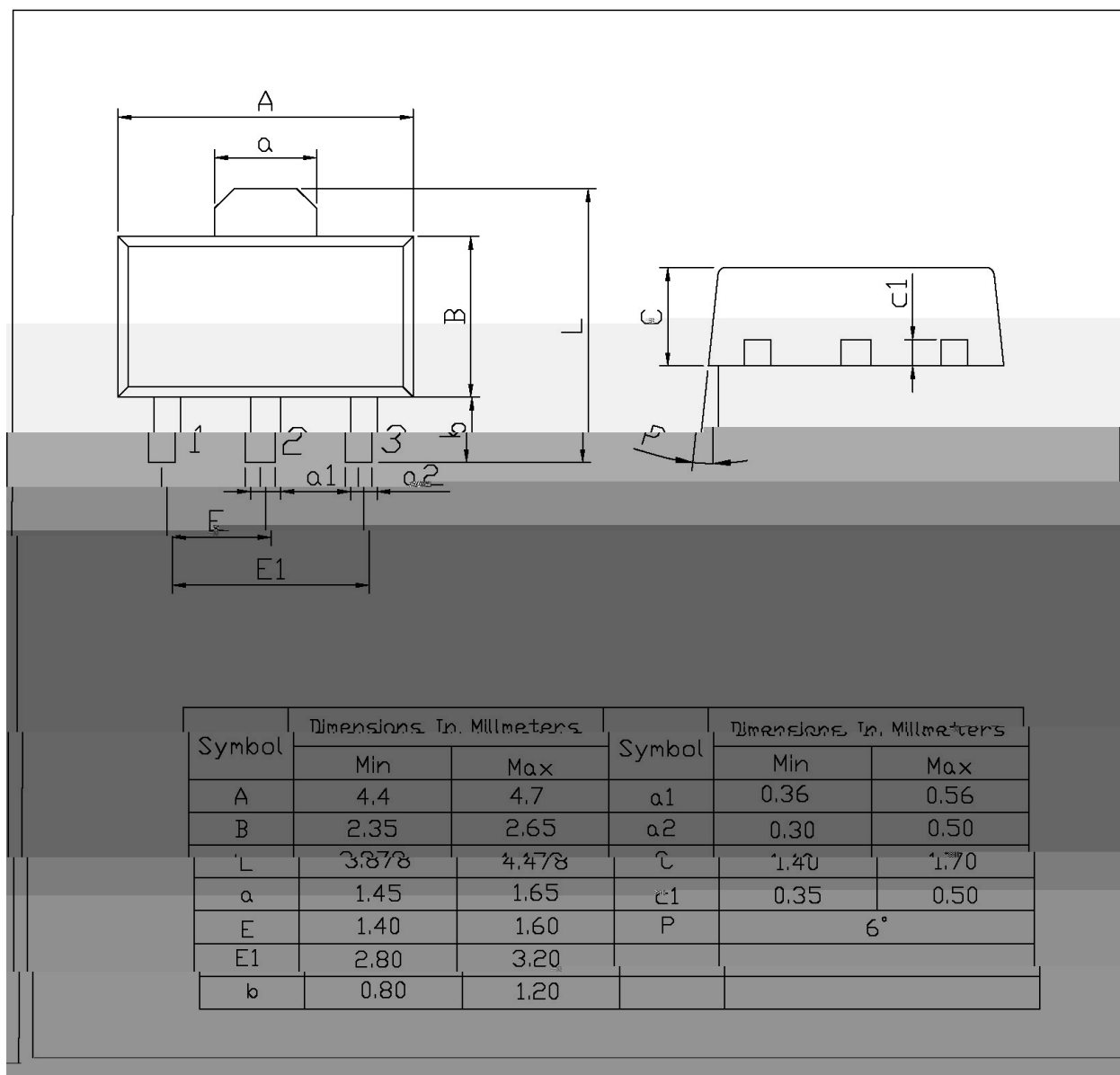
/ Electrical Characteristic Curve



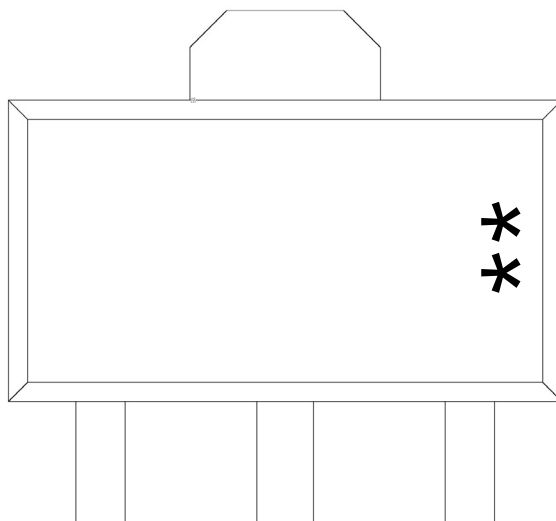
/ Package Dimensions

SOT-89

单位: mm



/ Marking Instructions



H

BD

P h_{FE}

**

Note:

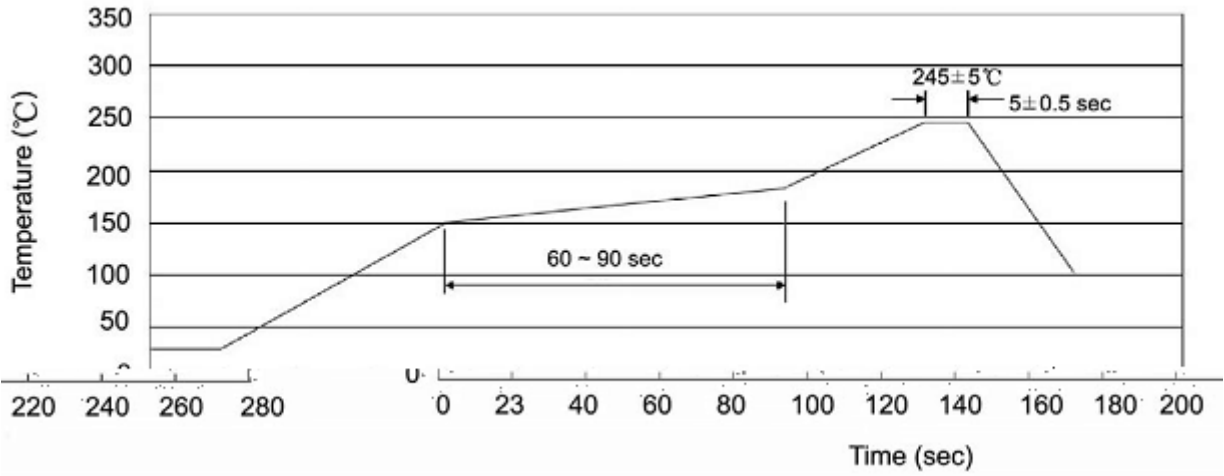
H: Company Code.

BD: Product Type.

P h_{FE} Classifications Symbol

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

() /



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