

### / Descriptions

Silicon PNP transistor in a SOT-89 Plastic Package.

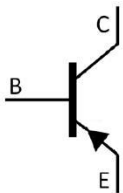
### / Features

Low  $V_{CE(sat)}$ , complements the 2SD1664.

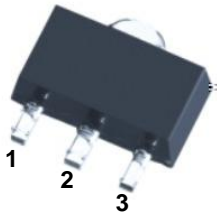
### / Applications

Medium power amplifier applications.

### / Equivalent Circuit



### / Pinning



PIN1 Base      PIN 2 Collector      PIN 3 Emitter

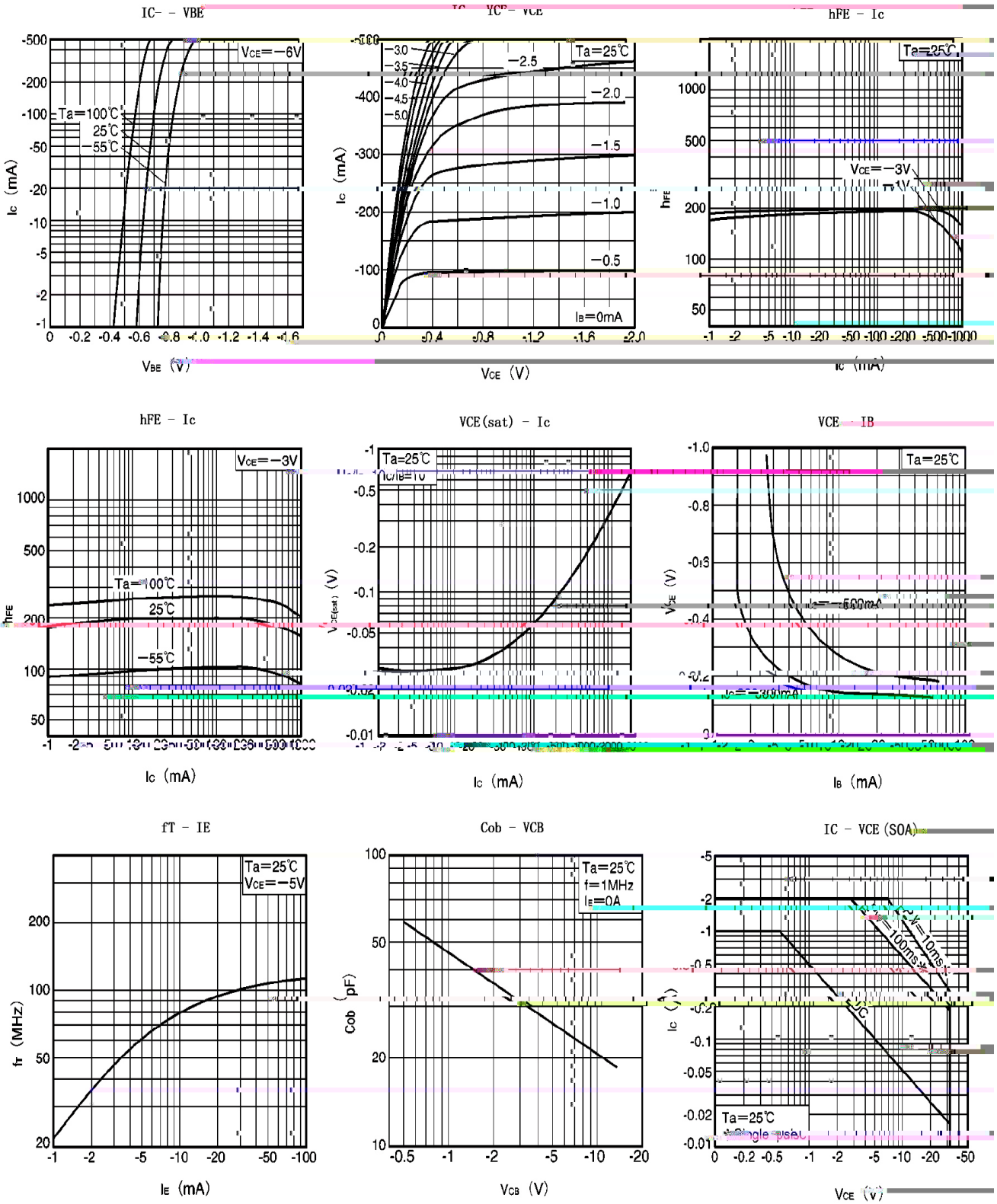
### / Marking

$h_{FE}$ Classifications Symbol	P	Q	R
$h_{FE}$ Range	82 180	120 270	180 390
Marking	HBAP**	HBAQ**	HBAR**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-40	V
Collector to Emitter Voltage	$V_{CEO}$	-32	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current-Continuous	$I_C$	-1.0	A
Collector Current-Continuous(Pulse)	$I_{CP}$	-2.0	A
Collector Power Dissipation	$P_C$	500	mW
Collector Power Dissipation	$P_C(T_c=25^\circ C)$	2.0	W
Junction Temperature	$T_j$	150	



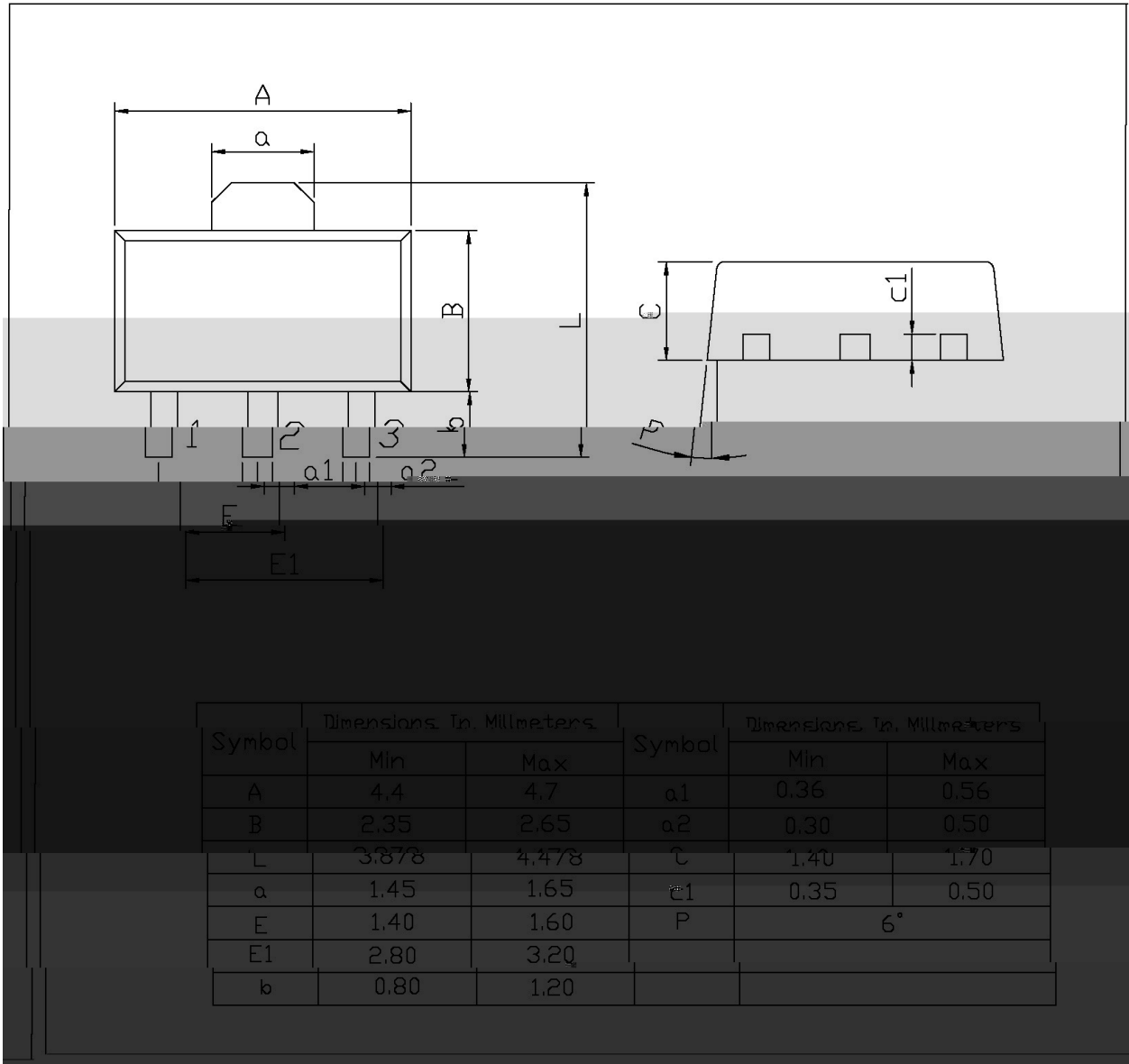
/ Electrical Characteristic Curve



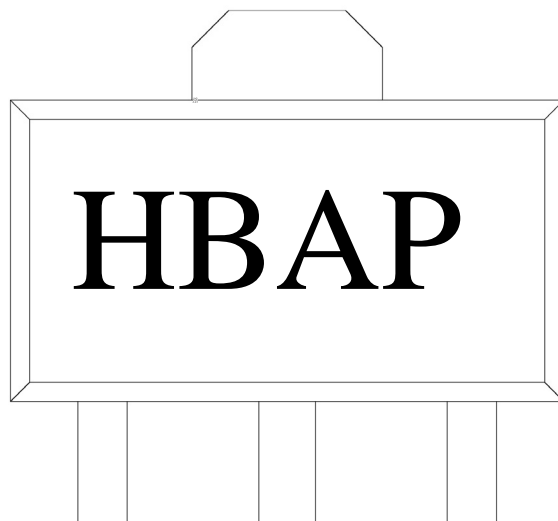
/ Package Dimensions

SOT-89

单位: mm



/ Marking Instructions



Note:

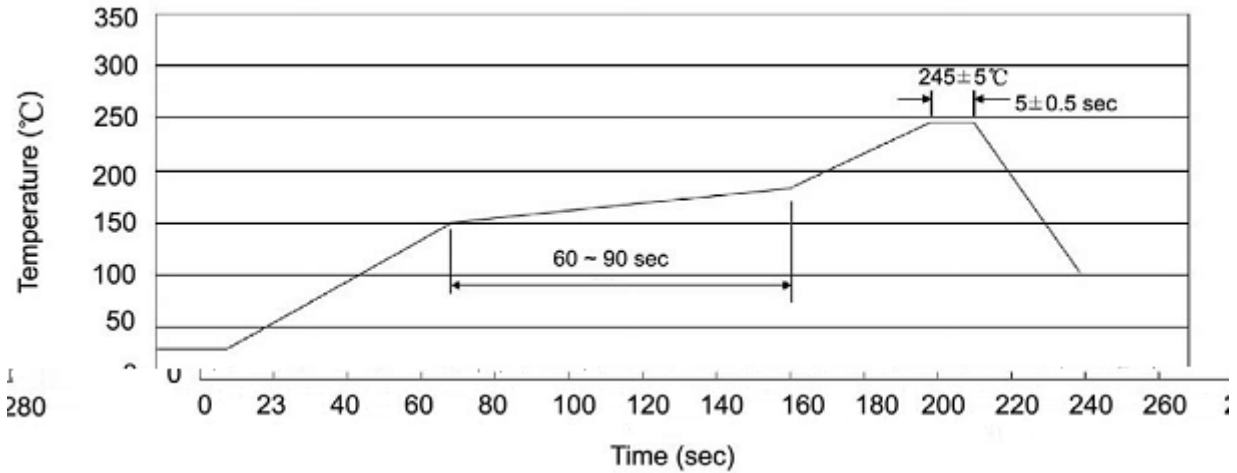
H: Company Code.

BA: 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	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-89	1,000	7	7,000	8	56,000	7 ×12	180×120×180	385×257×392