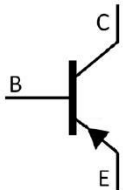


SOT-89          PNP          Silicon PNP transistor in a SOT-89 Plastic Package.

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

Medium power amplifier applications.



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

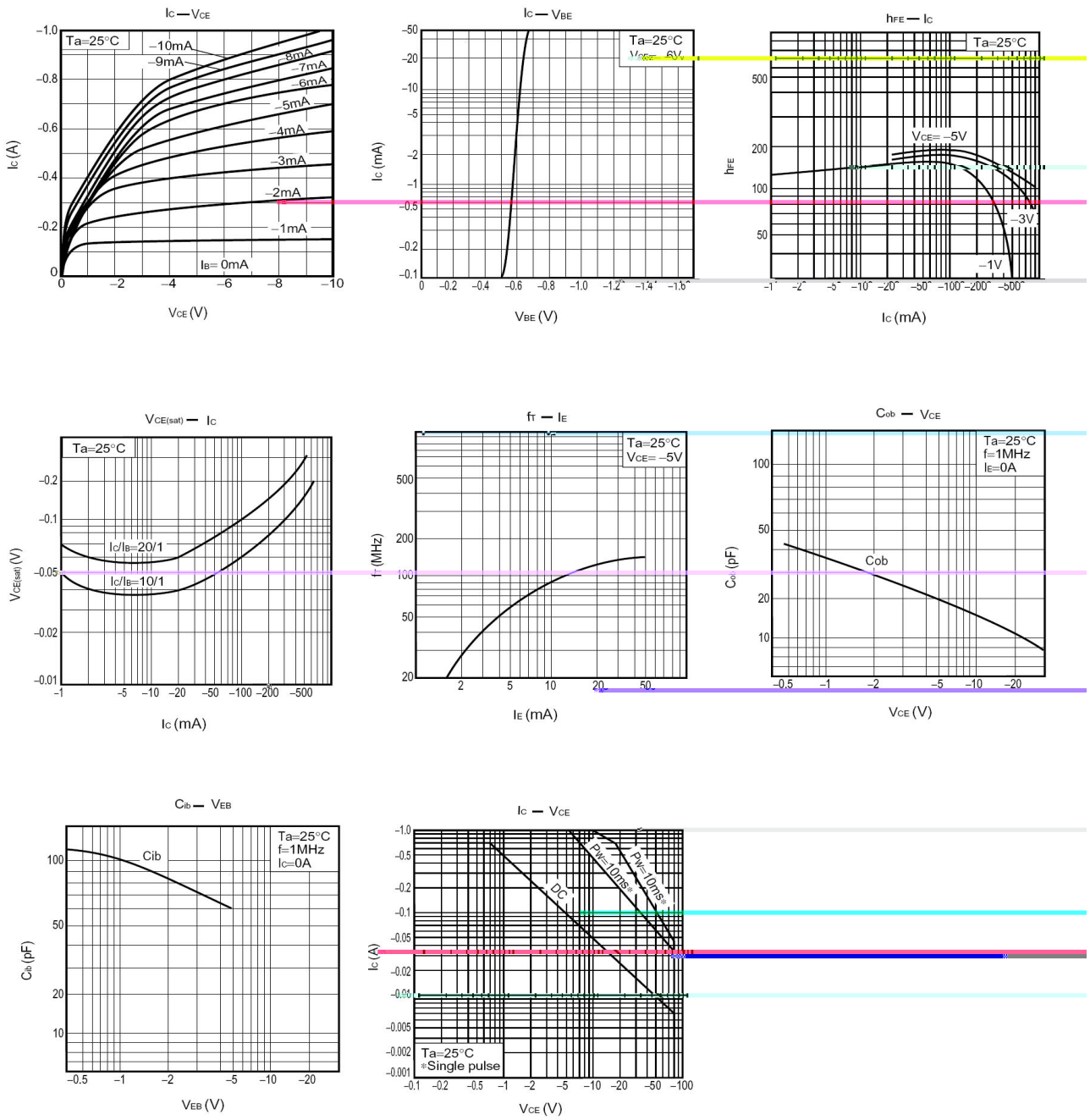
$h_{FE}$ Classifications Symbol	P	Q	R
$h_{FE}$ Range	82~180	120~270	180~390
Marking	HBDP	HBDQ	HBDR

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.

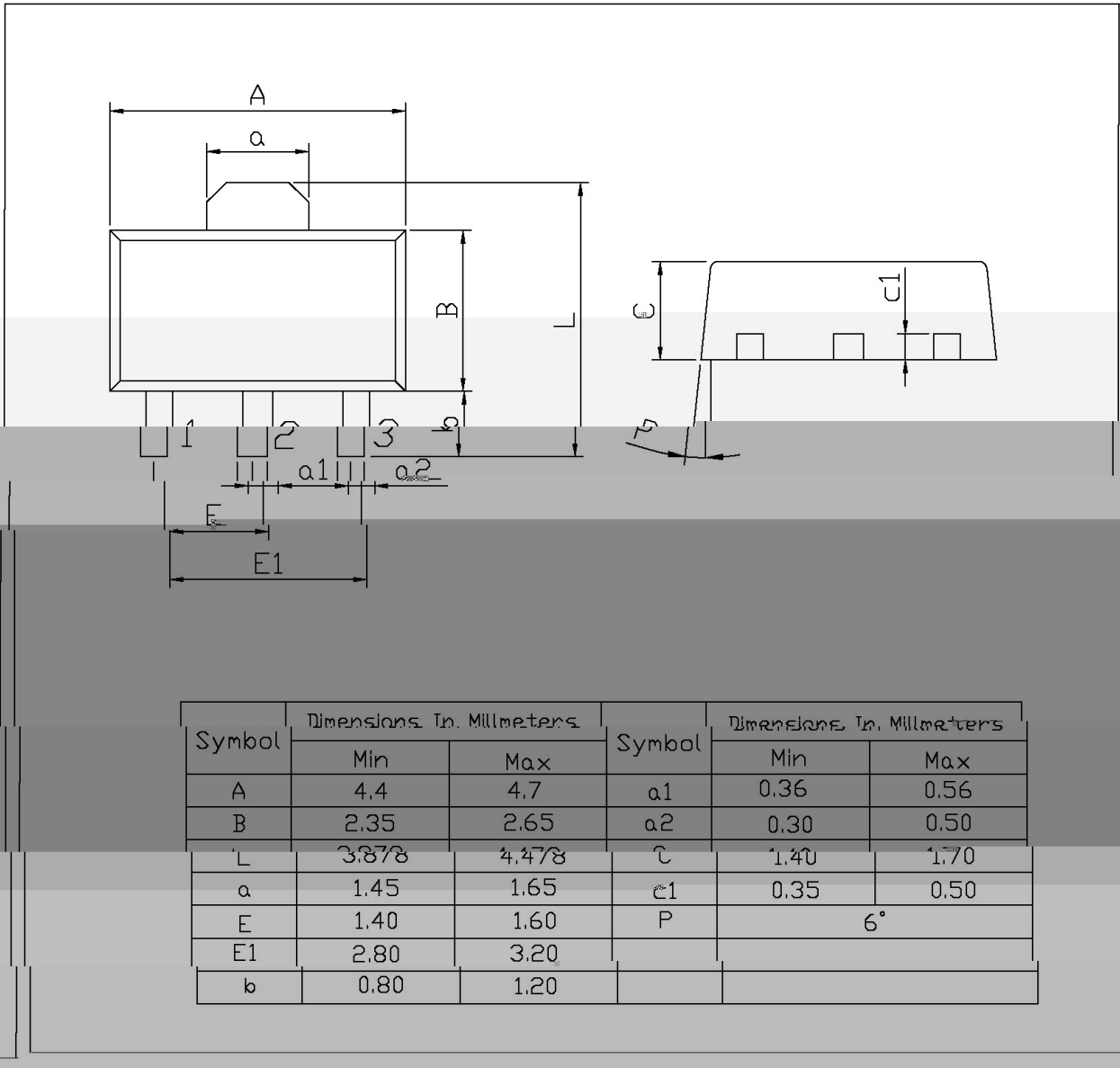
\*: 40× 40× 0.7m

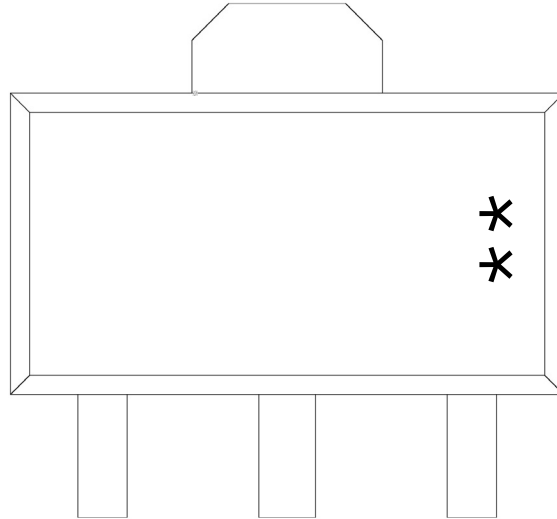
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=-50\mu A$ $I_E=0$	-80			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-2mA$ $I_B=0$	-80			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-50\mu A$ $I_C=0$	-5			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-50V$ $I_E=0$			-0.5	$\mu A$
Emitter Base Cut-Off Current	$I_{EBO}$	$V_{EB}=-4V$ $I_C=0$			-0.5	$\mu A$
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



SOT-89

单位: mm





H

BD

P             $h_{FE}$

\*\*

Note:

H:            Company Code.

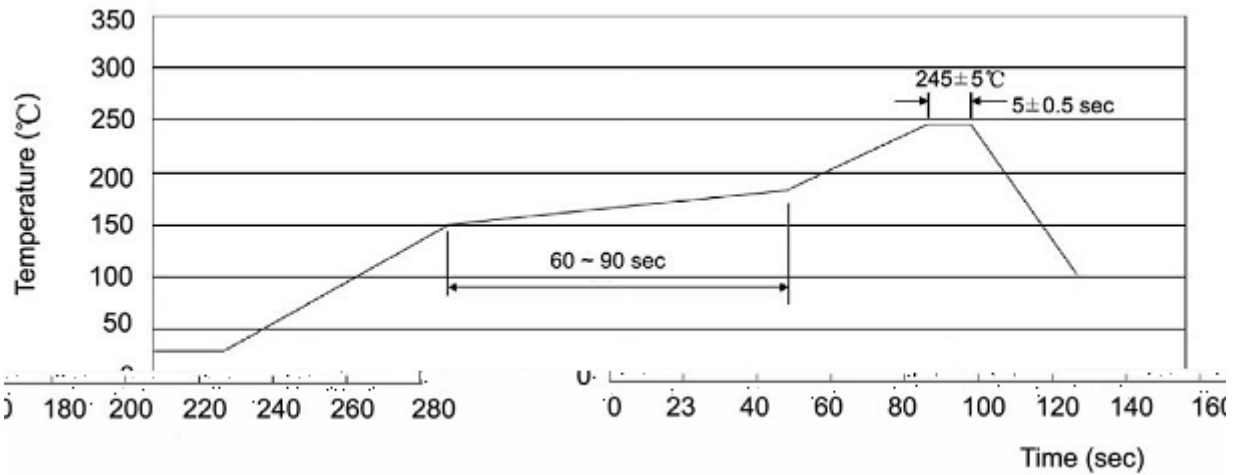
BD:          Product Type.

P             $h_{FE}$  Classifications Symbol

\*\*:

Lot No. Code, code change with Lot No.

## K\ d g\ i Xk i \ ' Gif ] \ d ] fi @ ' l \ ] f n ' J f d \ i e ^ Z G Y \$ = i \ \ z



Note:

- |   |       |     |       |        |  |
|---|-------|-----|-------|--------|--|
| 1 | 25    | 150 | 60    | 90sec; | 1. Preheating: 25~150 , Time: 60~90sec.    |
| 2 | 245±5 |     | 5±0.5 | sec;   | 2. Peak Temp.: 245±5 , Duration: 5±0.5sec. |
| 3 |       | 2   | 10    | /sec.  | 3. Cooling Speed: 2~10 /sec.               |

260±5

10±1 sec.

Temp.: 260±5

Time: 10±1 sec

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	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" ×12	180×120×180	385×257×392