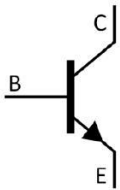


Silicon NPN transistor in a SOT-89 Plastic Package.

High current, Low saturation voltage.

Driver stages of audio and video amplifiers.



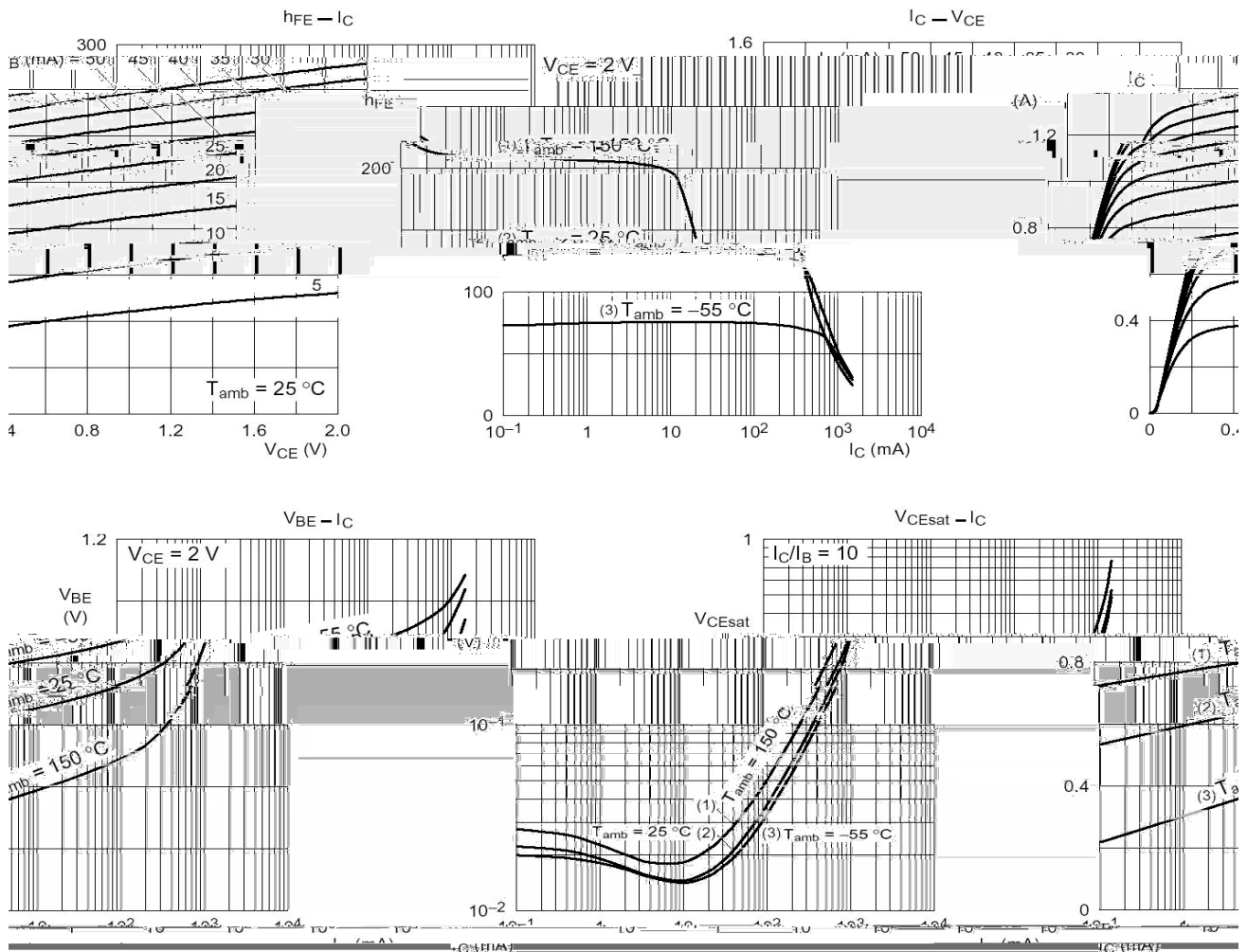
PIN1 Base      PIN 2 Collector      PIN 3 Emitter

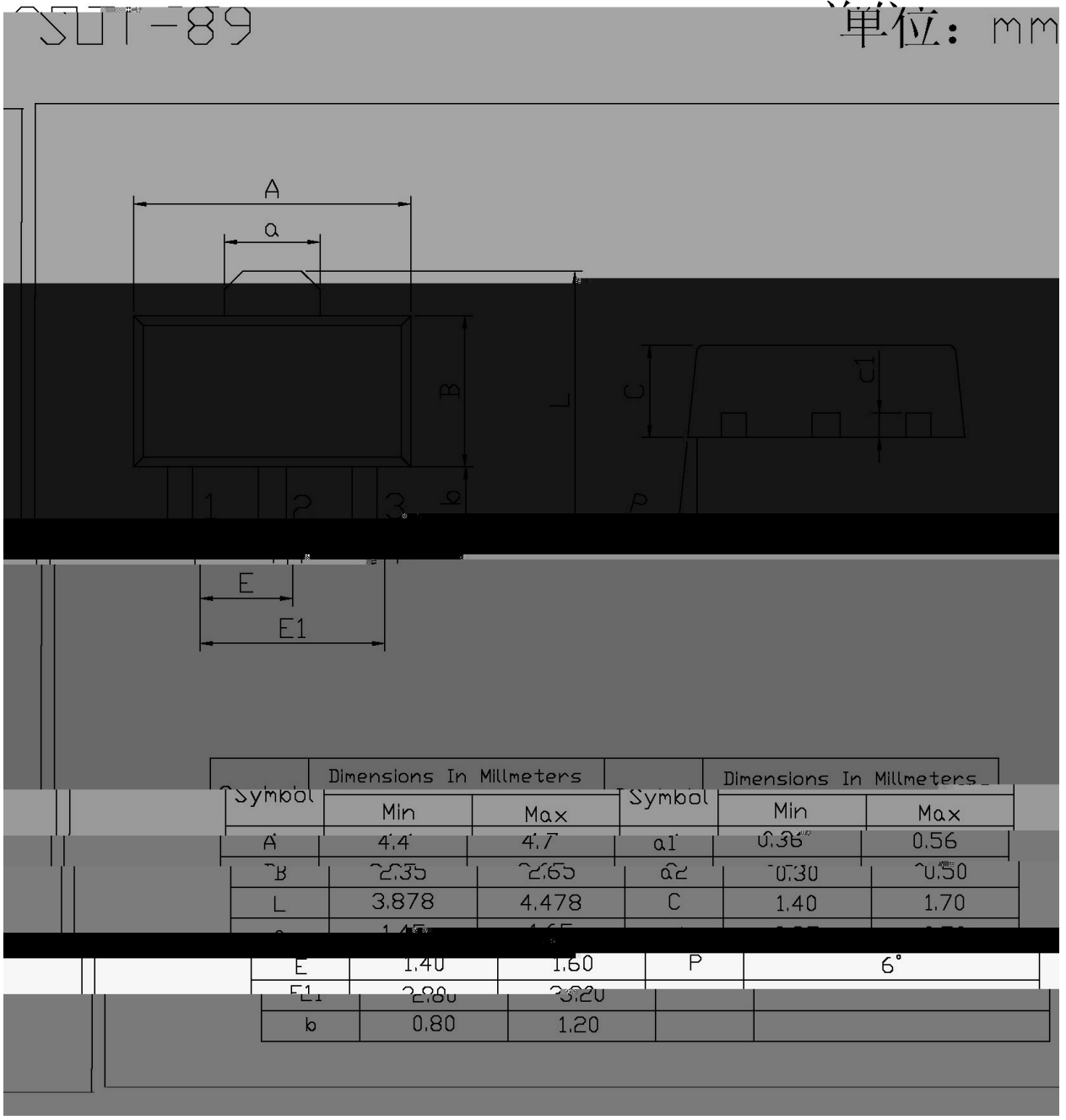
$h_{FE(1)}$ Classifications	10	16
$h_{FE(1)}$ Range	63~160	100~250
Marking	HBC *	HBD *

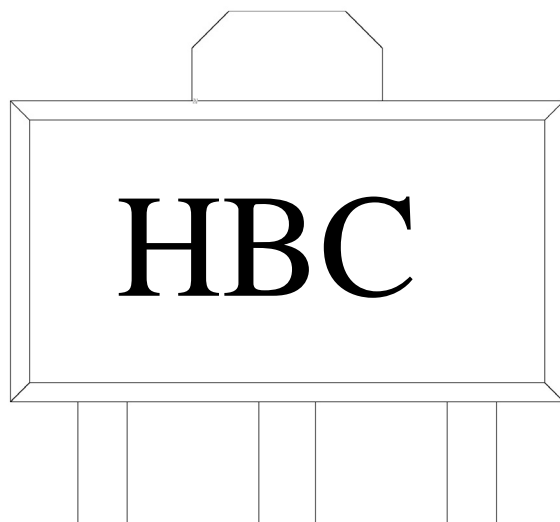
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	45	V
Collector to Emitter Voltage	$V_{CEO}$	45	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current-Continuous	$I_C$	1.0	A
Peak Collector Current	$I_{CM}$	1.5	A
Peak Base Current	$I_{BM}$	0.2	A
Collector Power Dissipation	$P_C$	0.5	W
	* $P_C$	1.3	W
Storage Temperature Range	$T_{stg}$	-55~150	

\*:Device mounted on a printed-circuit board, single side copper, mounting pad for collector 6cm<sup>2</sup>.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO(1)}$	$V_{Cb}=30V$ $I_E=0$			0.1	A
	$I_{CBO(2)}$	$V_{Cb}=30V$ $I_E=0$ $T_j=125$			10	A
Emitter Base Cut-Off Current	$I_{EBO}$	$V_{EB}=5V$ $I_C=0$			0.1	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2V$ $I_C=150mA$	63		250	
	$h_{FE(2)}$	$V_{CE}=2V$ $I_C=5mA$	63			
	$h_{FE(3)}$	$V_{CE}=2V$ $I_C=500mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			0.5	V
Base to Emitter Voltage	$V_{BE}$	$I_C=500mA$ $V_{CE}=2V$			1	V
Transition Frequency	$f_T$	$I_C=10mA$ $V_{CE}=5V$ $f=100MHz$		130		MHz
DC Current Gain Ratio Of The Complementary Pairs	$\frac{h_{FE1}}{h_{FE2}}$	$ I_C =150mA$ $ V_{CE} =2V$		1.3	1.6	







H  
BC

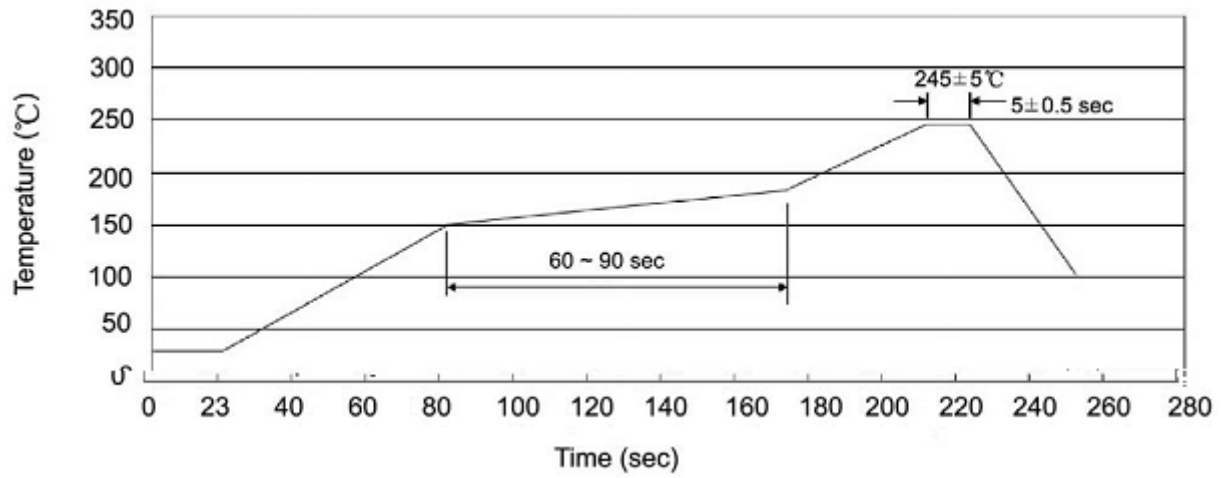
Note:

H: Company Code.

BC: Product Type.

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

## K\d g\iXk i\`Gif]`d`]fi @ `l \]fn `Jf d \i`e^ZGY\$=i\`z



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.            |

260 5	10 1 sec.	Temp.:260±5	Time:10±1 sec
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/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱	盒	箱	
						"		