

/ Descriptions

Silicon NPN transistor in a SOT-89 Plastic Package.

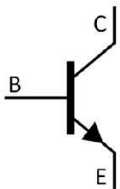
/ Features

Low $V_{CE(sat)}$, high performance.

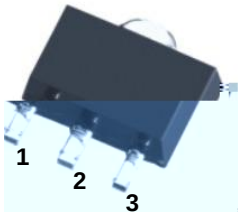
/ Applications

Audio frequency output amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	P	Q	R	S
h_{FE} Range	180 270	230 380	340 600	560 1000
Marking	H65P	H65Q	H65R	H65S

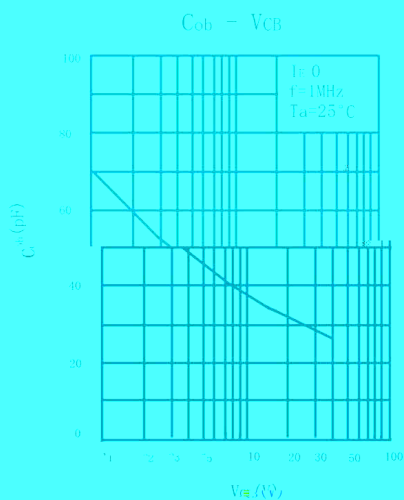
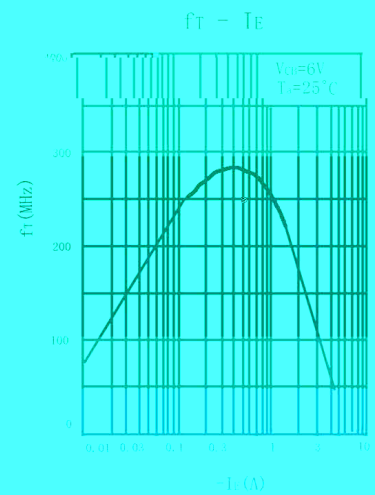
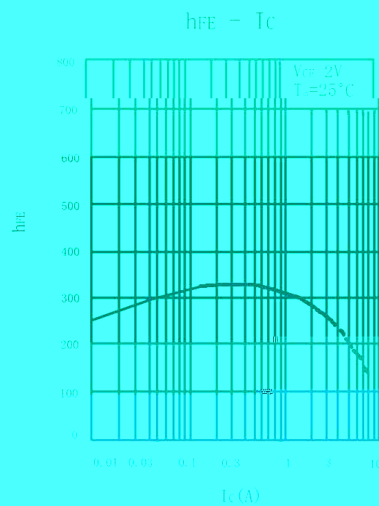
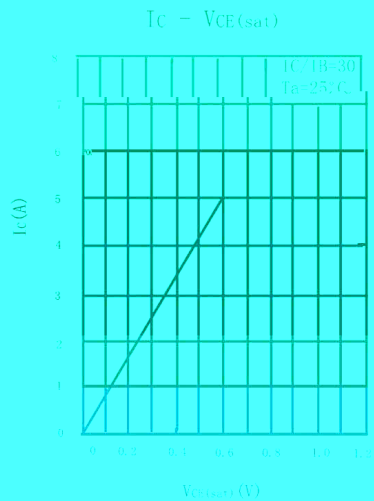
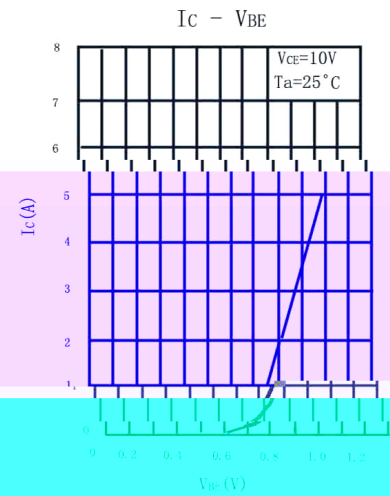
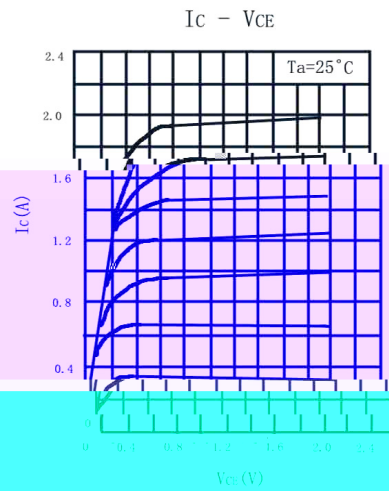
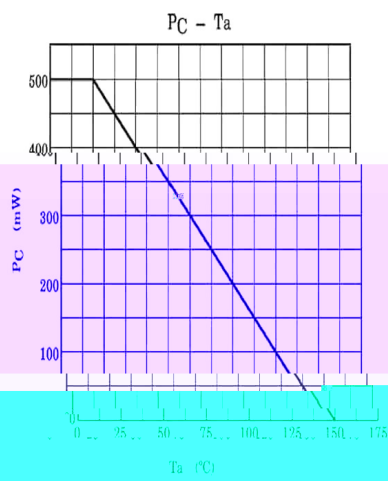
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current-Continuous	I_C	5.0	A
Collector Current -Continuous(Pluse)	I_{CP}	8.0	A
Collector Power Dissipation	P_C	500	mW
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 Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $I_B=0$	20			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=10V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=7.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=0.5A$	180		1000	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=2.0A$	150			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0A$ $I_B=0.1A$			1.0	V
Transition Frequency	f_T	$V_{CE}=6.0V$ $I_C=50mA$		150		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=20V$ $I_E=0$ $f=1.0MHz$			50	pF

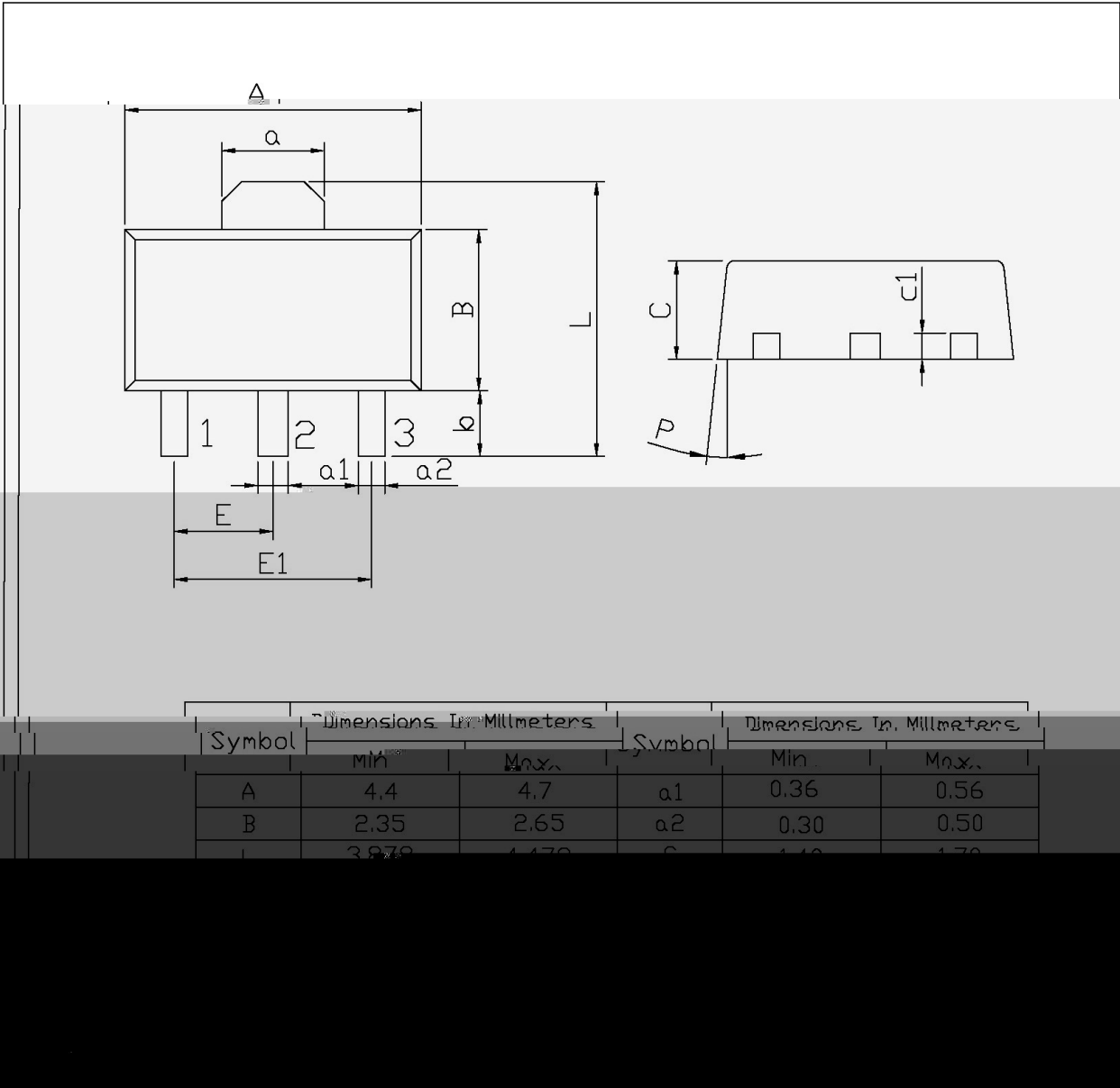
/ Electrical Characteristic Curve



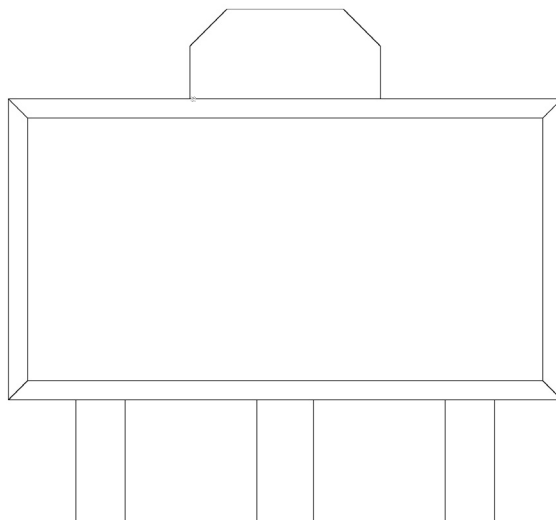
/ Package Dimensions

SOT-89

单位: mm



/ Marking Instructions



H

65

P h_{FE}

Note:

H: Company Code.

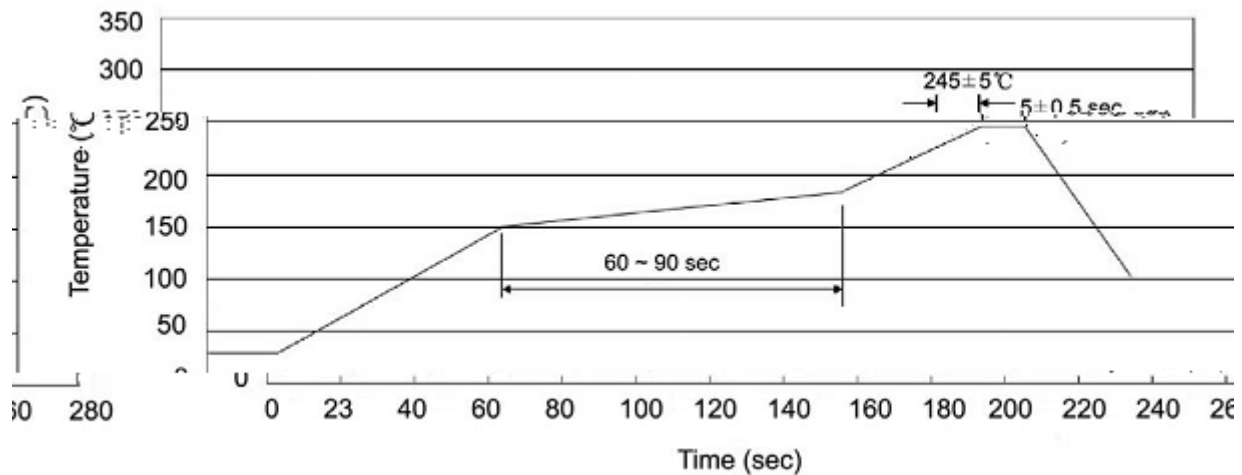
65: Product Type.

P h_{FE} Classifications Symbol

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Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



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)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱

/ Notices