

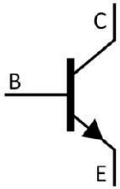
Rev. F Aug.-2018

Silicon NPN transistor in a SOT-89 Plastic Package.

I_C mA

This device is for use as a medium power amplifier and switch requiring collector currents up to 600 mA.

General purpose amplifier.



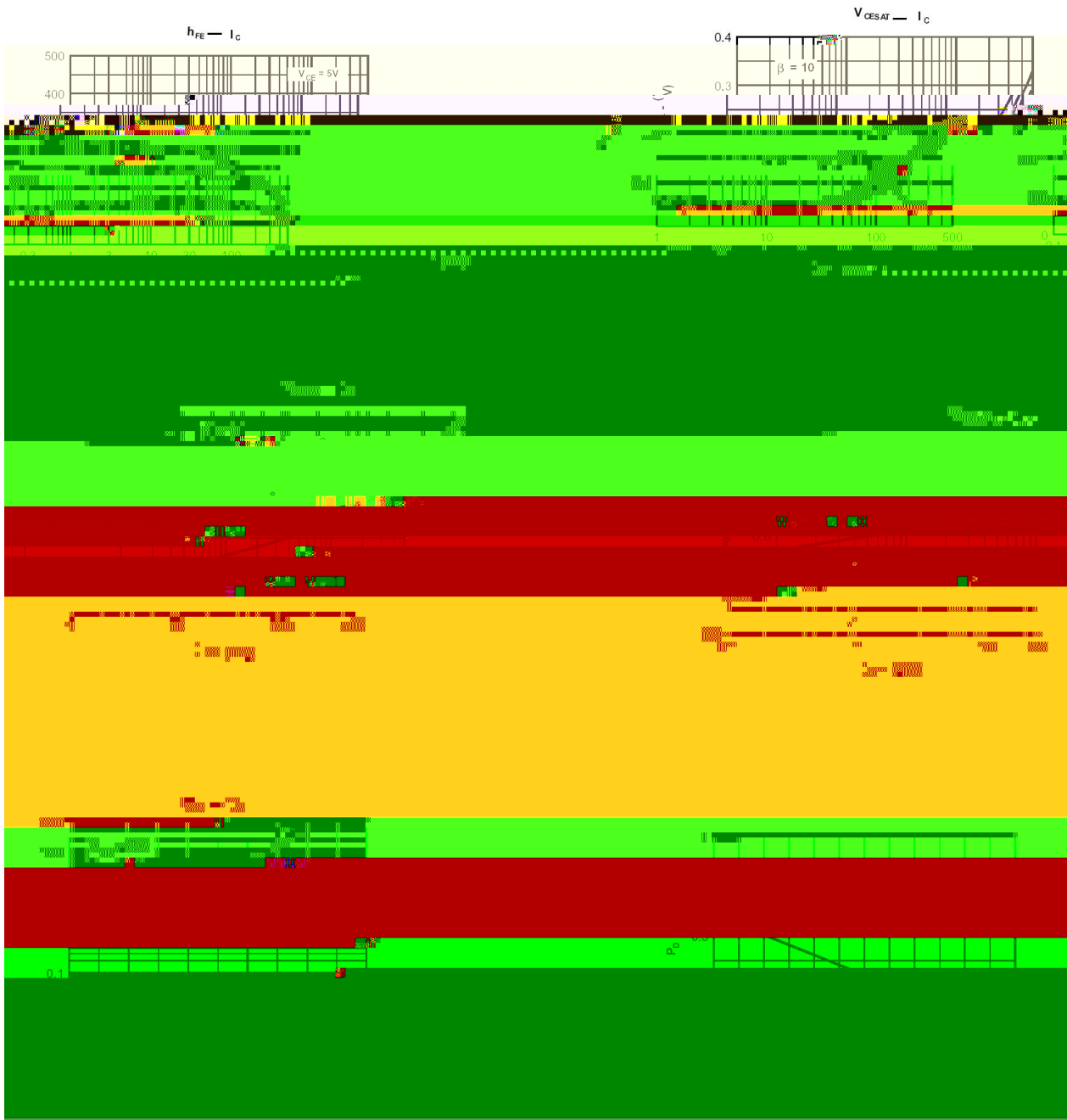
PIN1 Base PIN 2 Collector PIN 3 Emitter

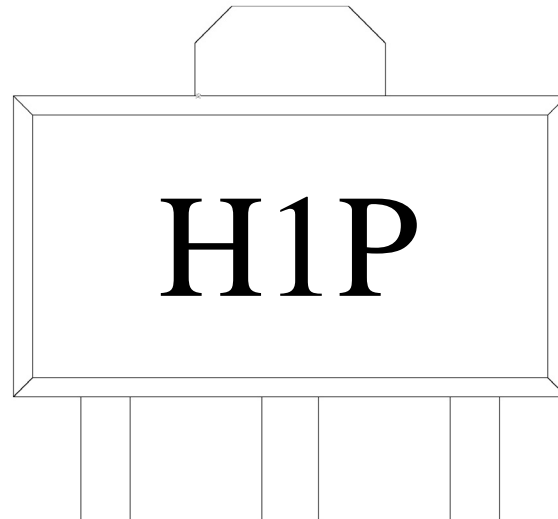
h_{FE} Range	100 300
Marking	H1P*

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	75	V
Collector to Emitter Voltage	V_{CEO}	40	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	600	mA
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$ $I_E=0$	75			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	40			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$ $I_E=0$			0.01	μA
Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=150mA^*$	100		300	
Collector to Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C=150mA$ $I_B=15mA$			0.3	V
	$V_{CE(sat) (2)}$	$I_C=500mA$ $I_B=50mA$			1.0	V
Emitter to Base Saturation Voltage	$V_{BE(sat) (1)}$	$I_C=150mA$ $I_B=15mA$	0.6		1.2	V
	$V_{BE(sat) (2)}$	$I_C=500mA$ $I_B=50mA$			2.0	V
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$			8.0	pF
Transition Frequency	f_T	$I_C=20mA$ $V_{CE}=20V$ $f=100MHz$	300			MHz
Turn-On Time	t_{on}	$V_{CC}=30V$ $V_{BE}=-0.5V$ $I_C=150mA$ $I_{B1}=15mA$			35	ns
Turn-Off Time	t_{off}	$V_{CC}=30V$ $I_C=150mA$ $I_{B1}=I_{B2}=15mA$			285	ns

*Pulse Test: Pulse Width 300 μ s, Duty Cycle 2.0%





H

1P

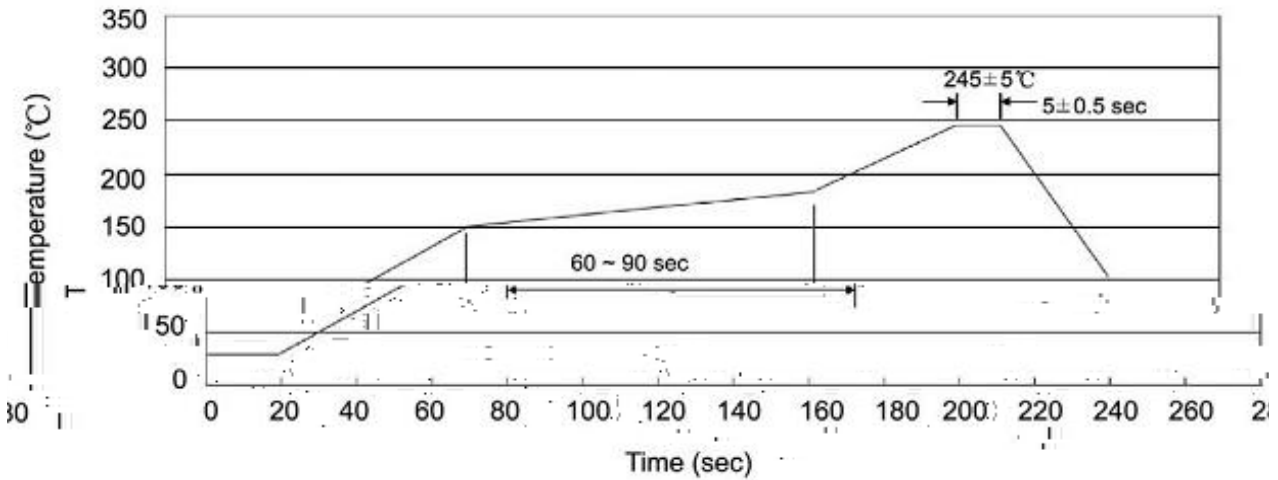
Note:

H: Company Code.

1P: Product Type.

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

K\ d g\ iXk i\ 'Gif]`Δ]fi @ ' l \]fn Jf d \i`e^ ŽGY\$=i\ \ž



Note:

- | | | | | | |
|---|-----|-----|----|----------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , 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°C

Time:10±1 sec

/ 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 ×12	180×120×180	385×257×392