

/ Descriptions

TO-92 PNP Silicon PNP transistor in a TO-92 Plastic Package.

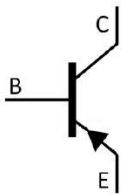
/ Features

Low current, Low voltage. HF Product.

/ Applications

General purpose amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Collector PIN 2 Base PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

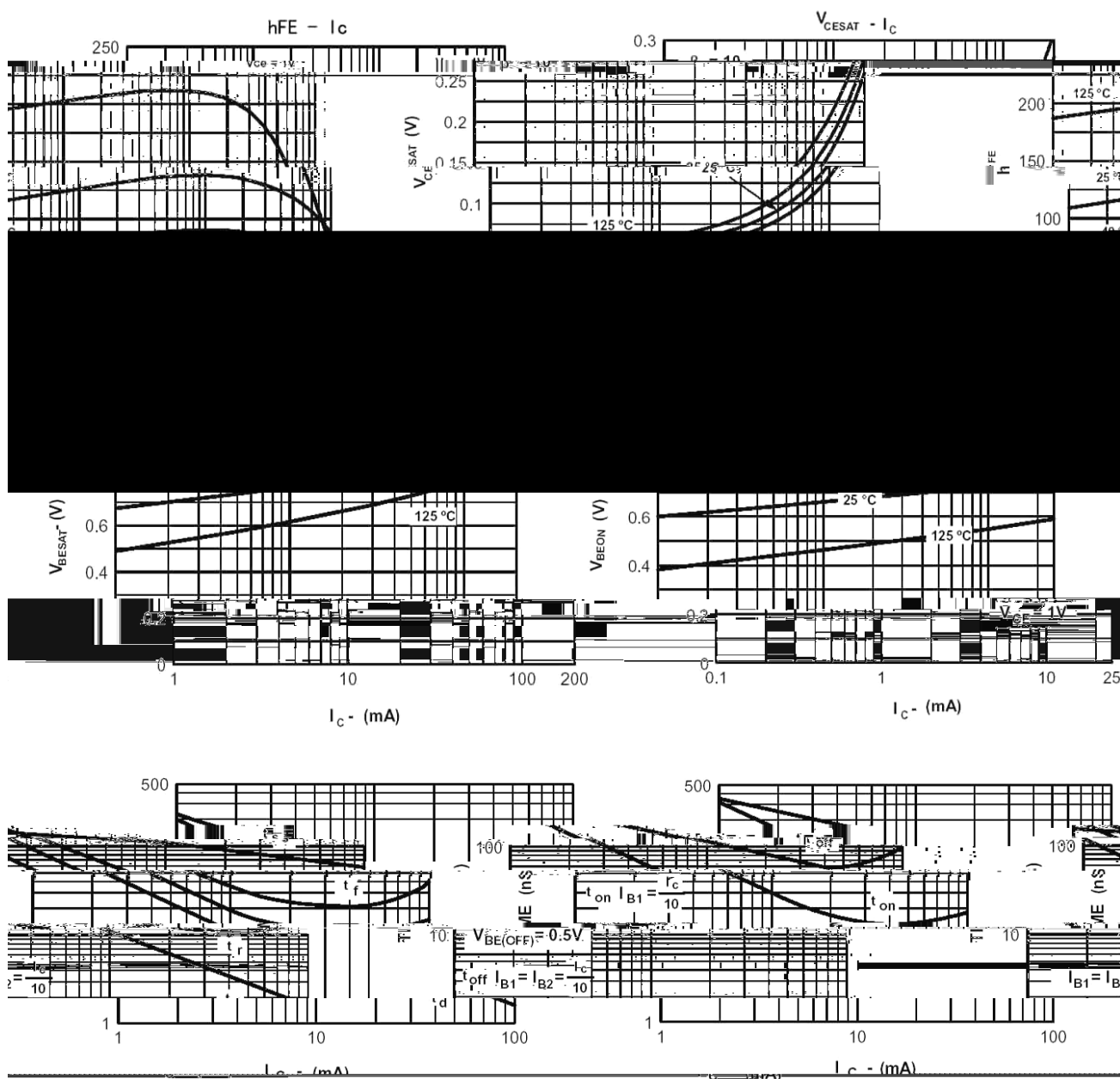
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-40	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	625	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 Base Breakdown Voltage	V_{CBO}	$I_C=-10\mu A$ $I_E=0$	-40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $I_B=0$	-40			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-10\mu A$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-40V$ $I_E=0$			-0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0V$ $I_C=0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-1.0V$ $I_C=-10mA$	100		300	
	$h_{FE(2)}$	$V_{CE}=-1.0V$ $I_C=-100mA$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-50mA$ $I_B=-5.0mA$			-0.4	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-50mA$ $I_B=-5.0mA$			-0.95	V
Current Gain Bandwidth Product	f_T	$I_C=-10mA$ $f=100MHz$ $V_{CE}=-20V$	250			MHz
Output Capacitance	C_{ob}	$V_{CB}=-5.0V$ $I_E=0$ $f=100KHz$			4.5	pF
Turn On Time	T_{on}	$V_{CC}=-3.0V$ $I_C=-10mA$ $V_{BE}=-0.5V$ $I_{B1}=-1.0mA$			0.07	μs
Turn Off Time	T_{off}	$V_{CC}=-3.0V$ $I_C=-10mA$ $I_{B1}=-I_{B2}=-1.0mA$			0.3	μs

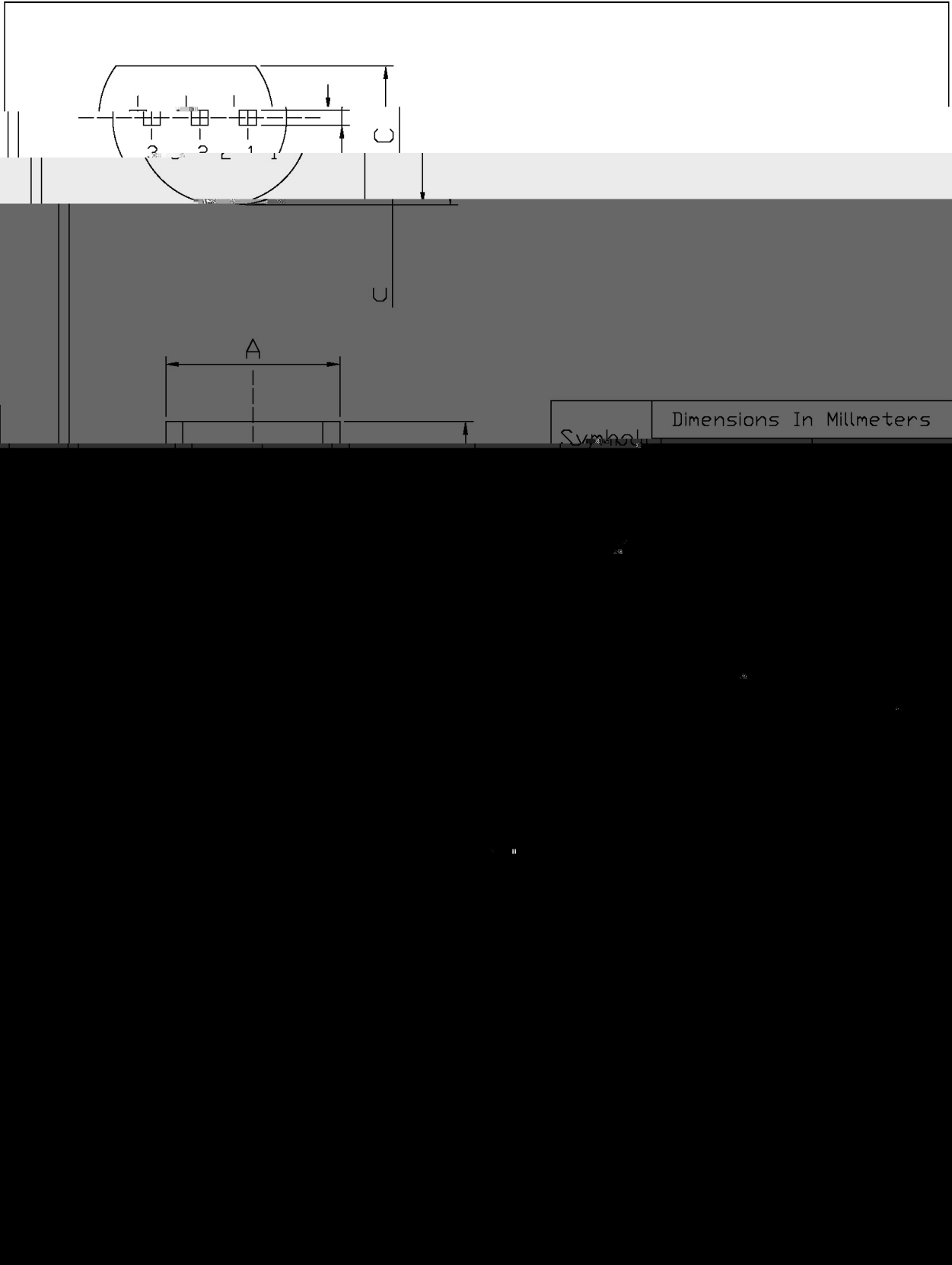
/ Electrical Characteristic Curve

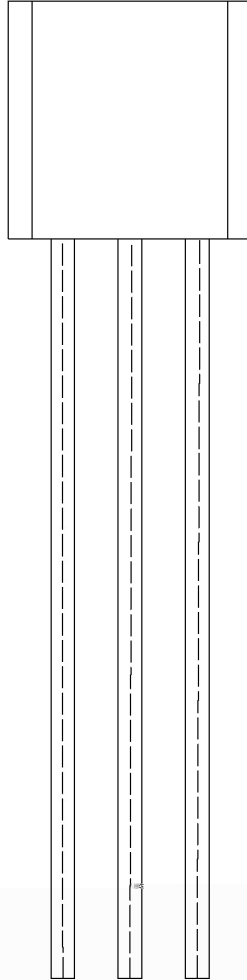


/ Package Dimensions

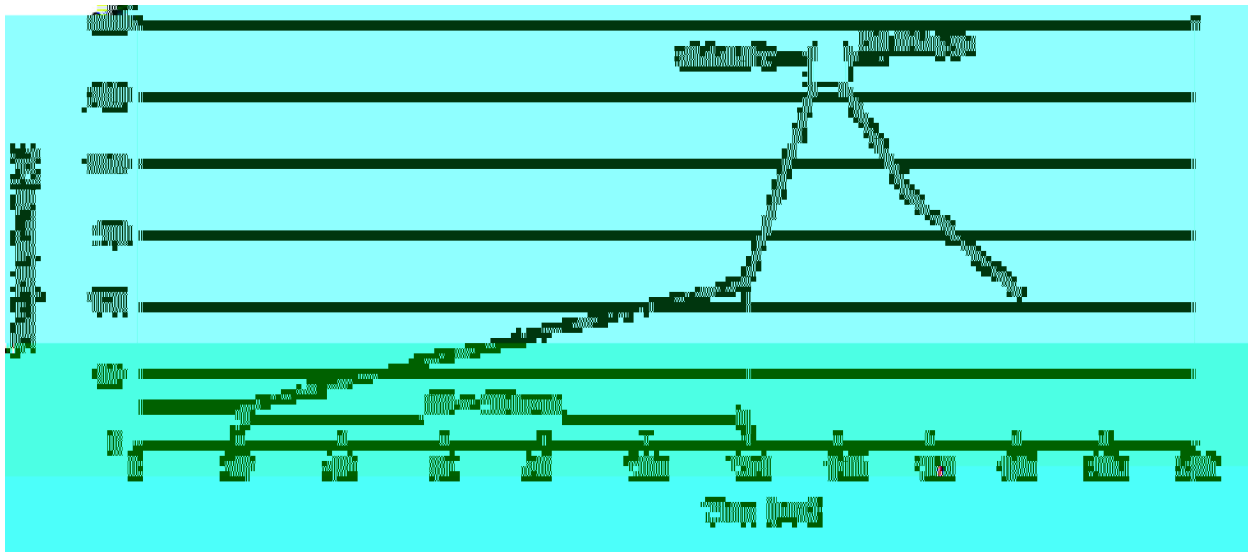
TO-92

Unit: mm





() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. | |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	只袋	袋盒	只盒	盒箱	只箱	袋	盒	箱

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	只纸带	纸带盒	纸带层盒	盒箱	只箱	盒	箱	

小箱 ,
大箱