

/ Descriptions

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

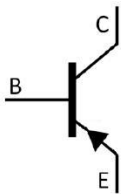
/ Features

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.

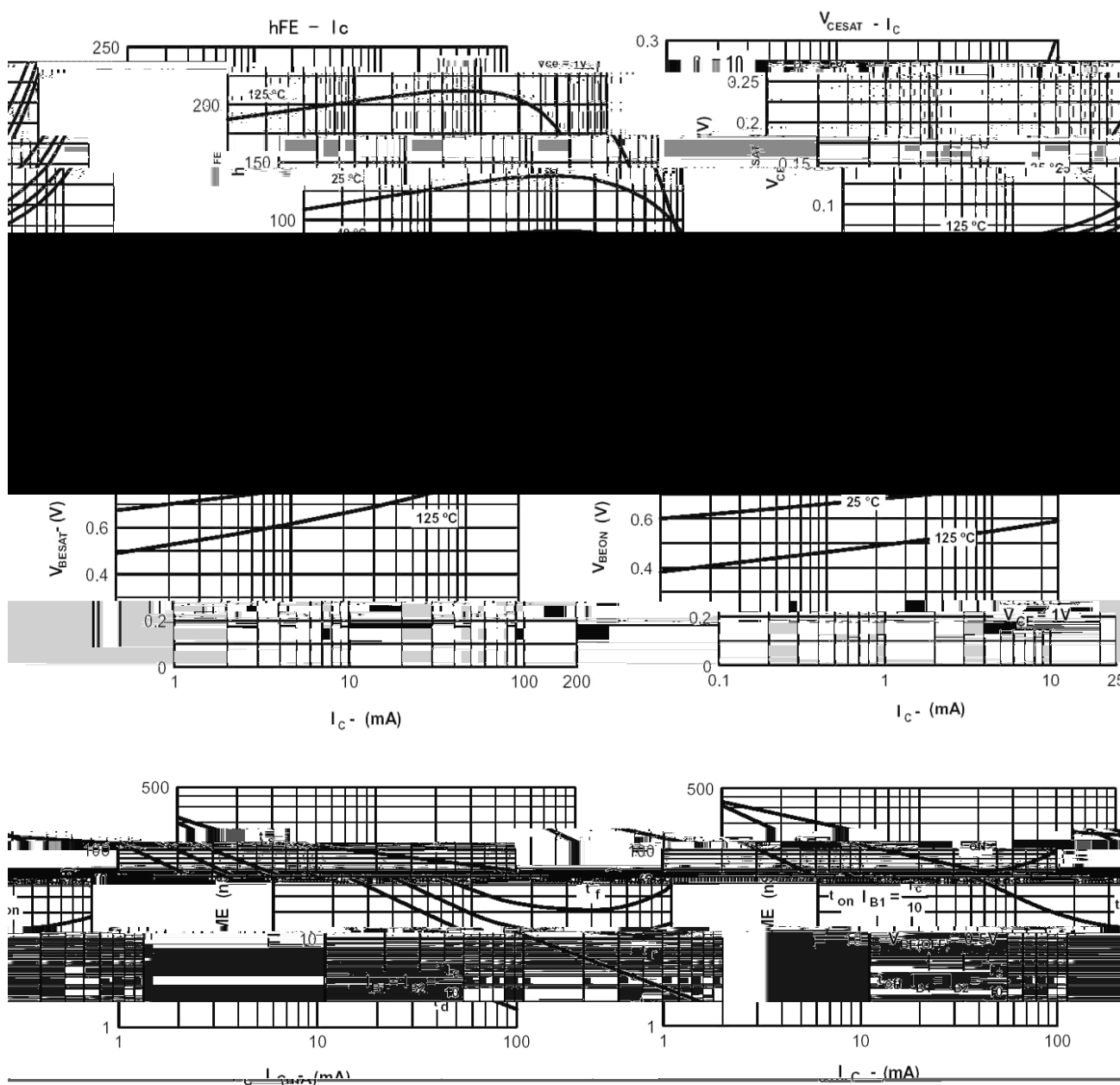
/ Absolute Maximum Ratings(Ta=25)

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

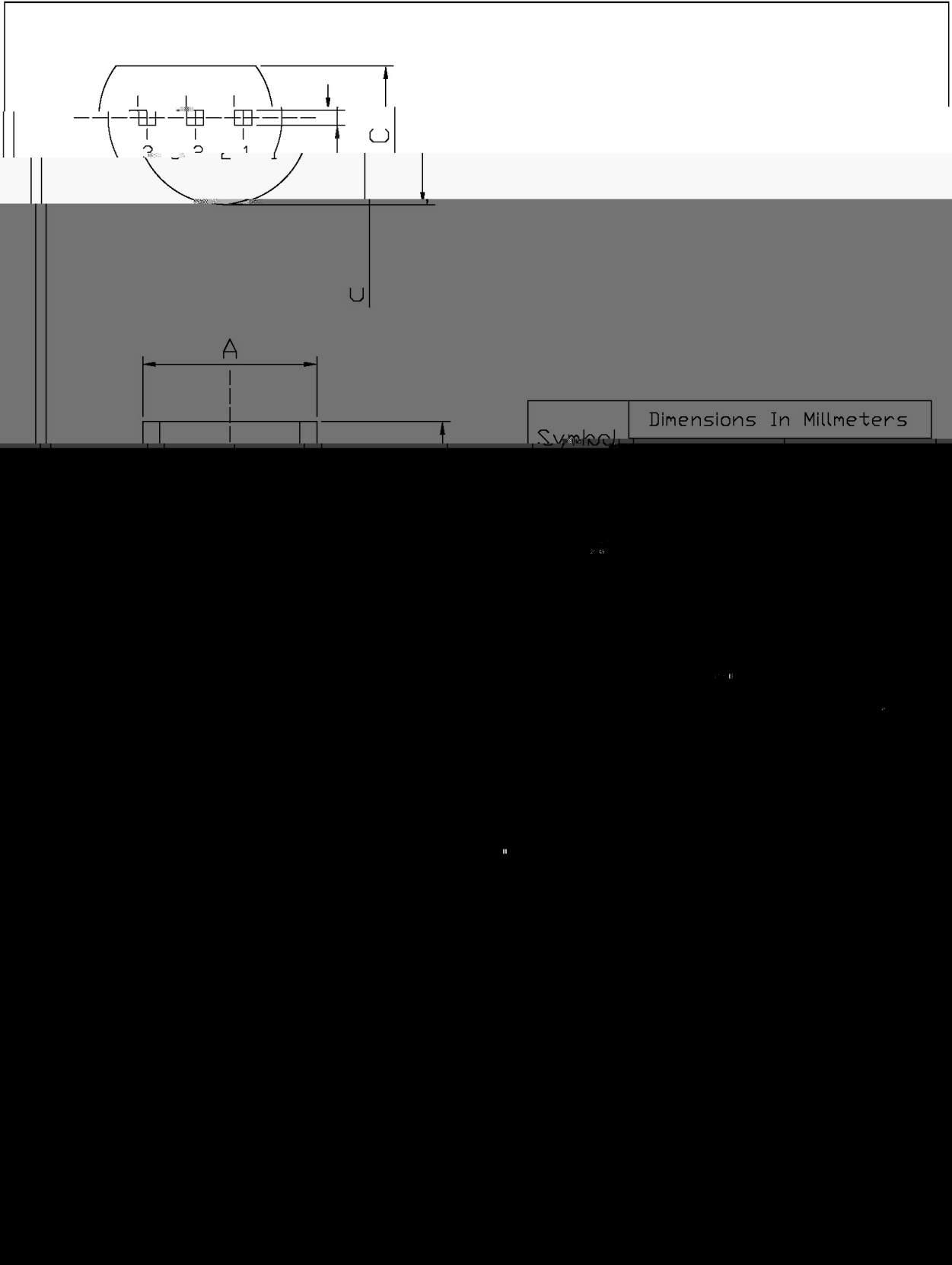
/ Electrical Characteristic Curve

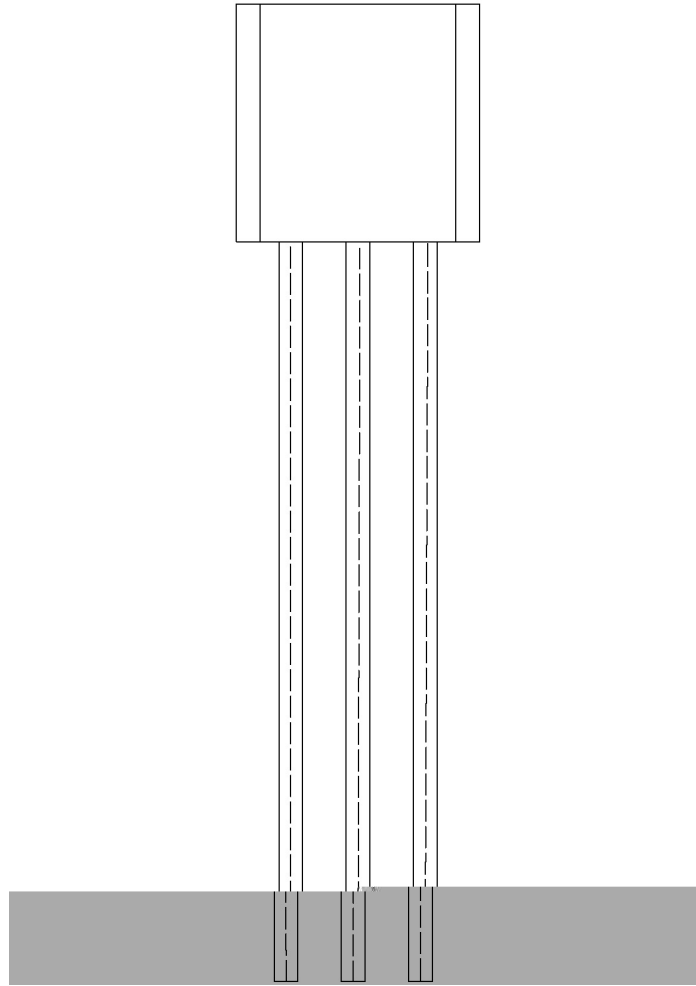


/ Package Dimensions

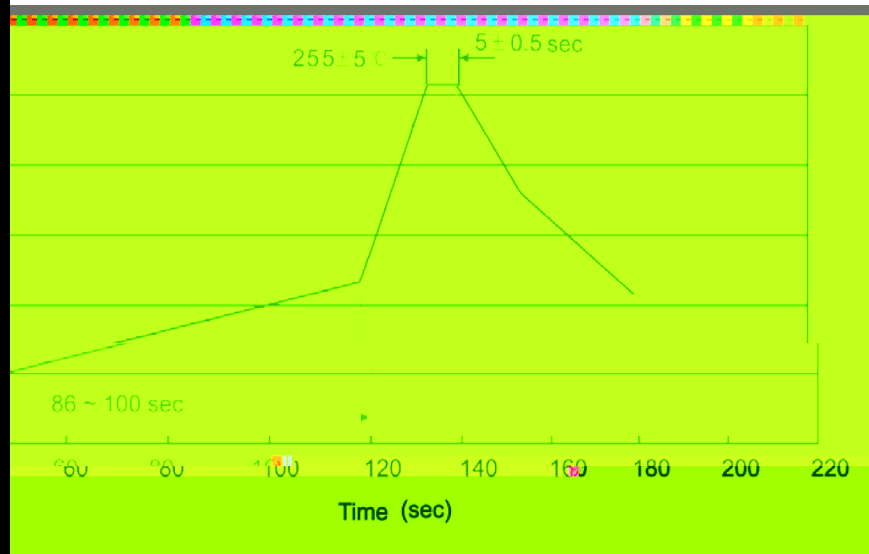
TO-92

Unit: mm





Temperature Profile for Dip Soldering(Pb-Free)



Note:

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

Preheating to Soldering Heat Test Conditions

Time: 60±1 sec. Temp.:270±5 Time:10±1 sec

Units 包装数量			Dimension 包装尺寸 (unit: mm3)		
Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
10,000	5	50,000	135×190	237×172×102	560×245×195
10,000	10	100,000	135×190	237×172×102	560×245×375

Units 包装数量			Dimension 包装尺寸 (unit: mm3)	
Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268