

/ Descriptions

Silicon NPN transistor in a TO-92 Plastic Package.

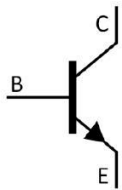
/ Features

High transition frequency, low saturation voltage, high speed switching time.

/ Applications

Ultra high speed switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

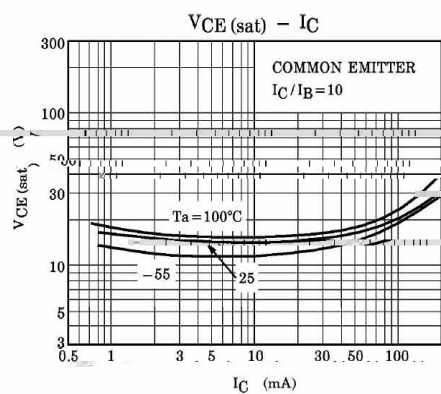
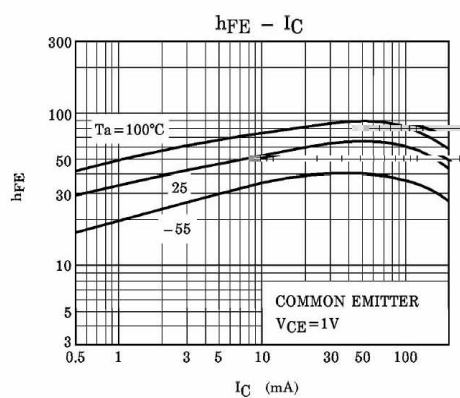
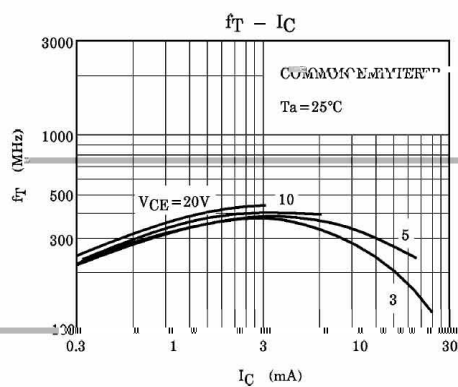
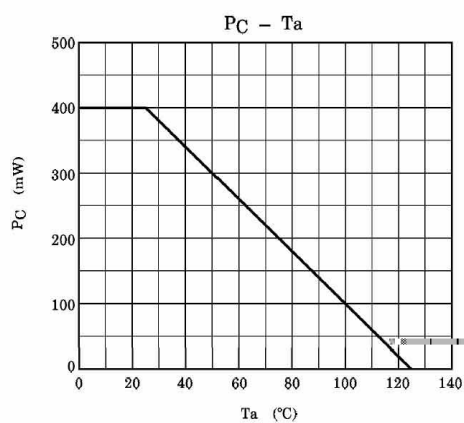
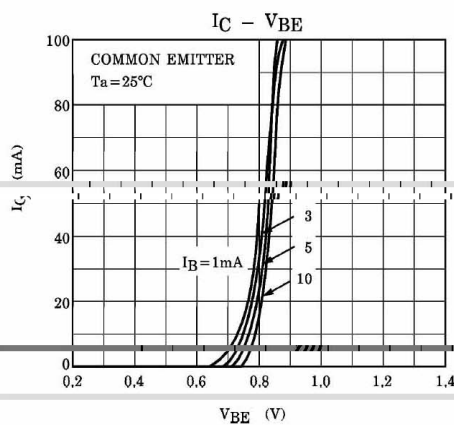
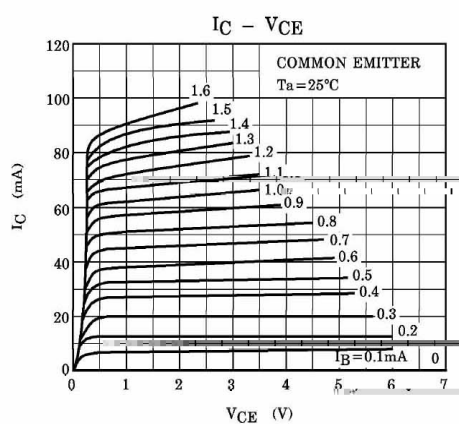
/ hFE Classifications & Marking

h_{FE} Classifications Symbol	R	O	Y
h_{FE} Range	40~80	70~140	120~240

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	15	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	200	mA
Base Current – Continuous	I_B	40	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=40V$ $I_E=0$			0.1	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=10mA$	40		240	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=100mA$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20mA$ $I_B=1.0mA$			0.3	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=20mA$ $I_B=1.0mA$			1.0	V

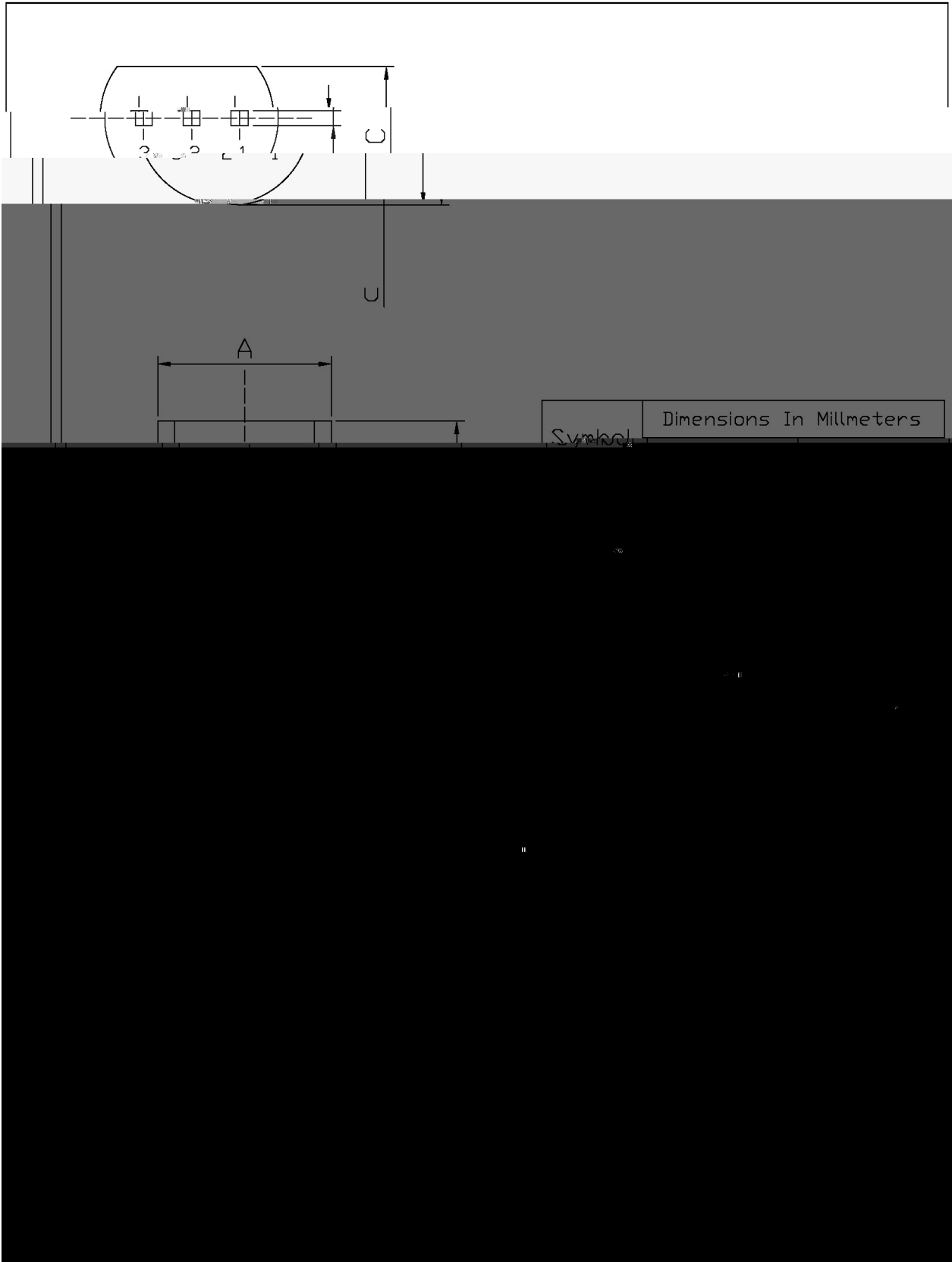
/ Electrical Characteristic Curve



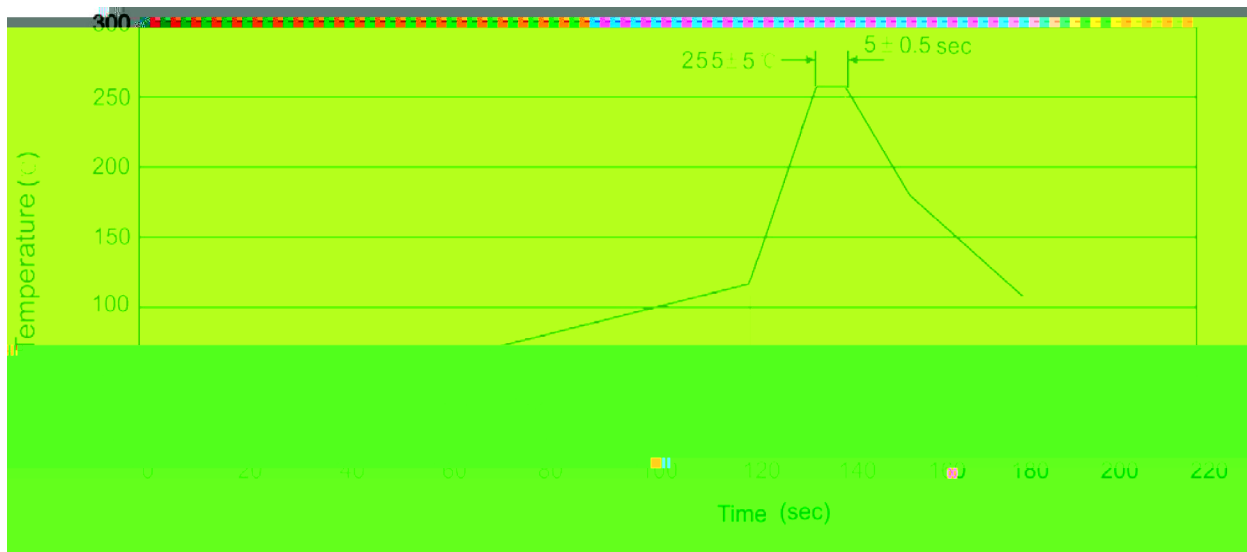
/ Package Dimensions

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

/ Notices