

/ Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

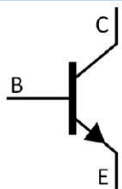
/ Features

High f_T .

/ Applications

Suitable for RF amplifier in FM/AM radios.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	B	C	D
h_{FE} Range	40 110	65 160	100 260
Marking	HUB	HUC	HUD

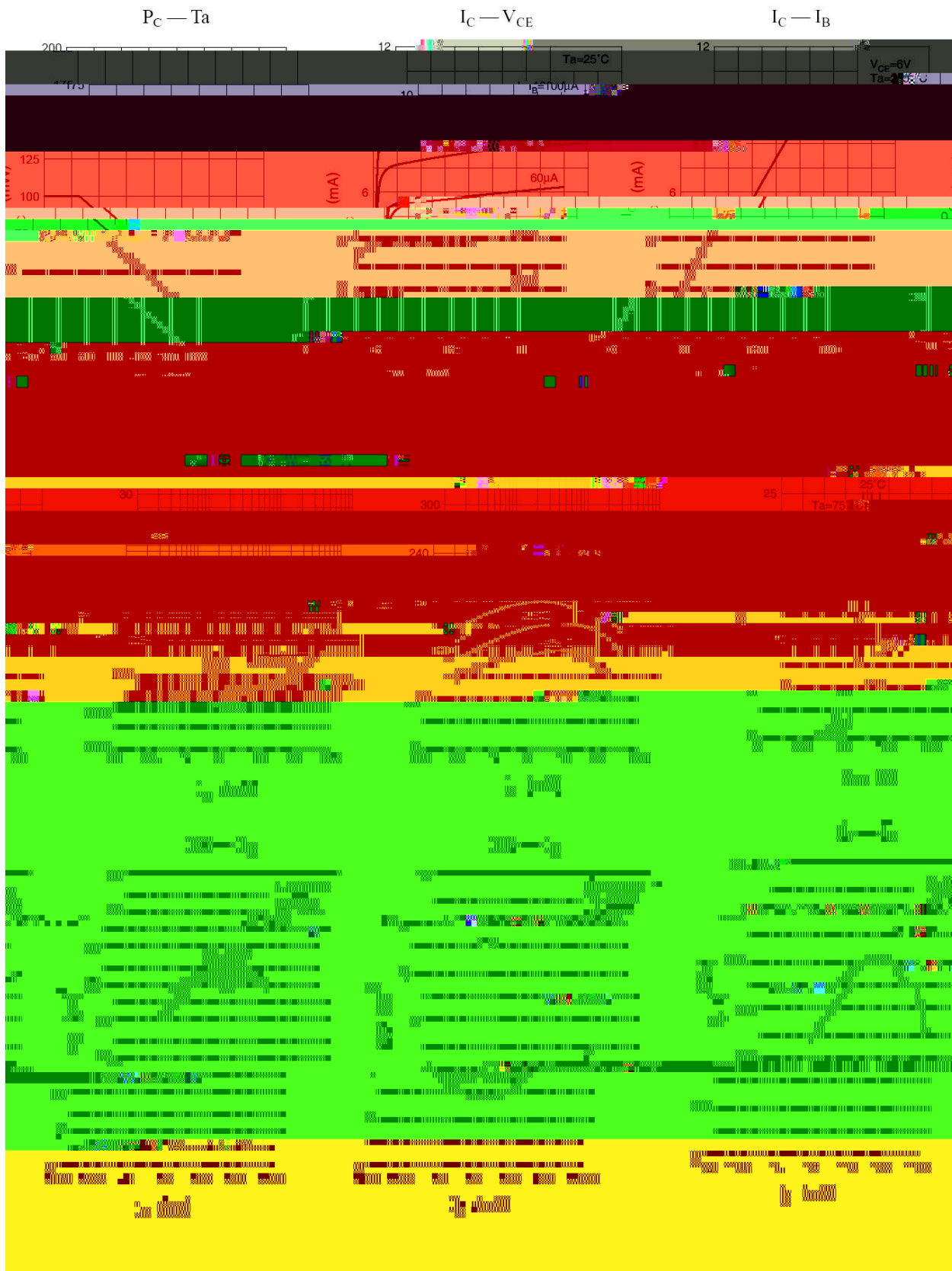
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	15	mA
Collector Power Dissipation	P_C	100	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- Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$	30			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$	3.0			V
DC Current Gain	h_{FE}	$V_{CE}=6.0V$ $I_C=1.0mA$	40		260	
Transition Frequency	f_T	$V_{CB}=6.0V$ $I_C=1.0mA$	450	650		MHz
Base to Emitter Voltage	V_{BE}	$V_{CB}=6.0V$ $I_C=1.0mA$		0.72		V
Common Emitter Reverse Transfer Capacitance	C_{re}	$V_{CB}=6.0V$ $I_C=1.0mA$ $f=10.7MHz$		0.8	1.0	PF
Power Gain	P_G	$V_{CB}=6.0V$ $I_C=1.0mA$ $f=100MHz$		24		dB
Noise Figure	NF	$V_{CB}=6.0V$ $I_C=1.0mA$ $f=100MHz$		3.3		dB

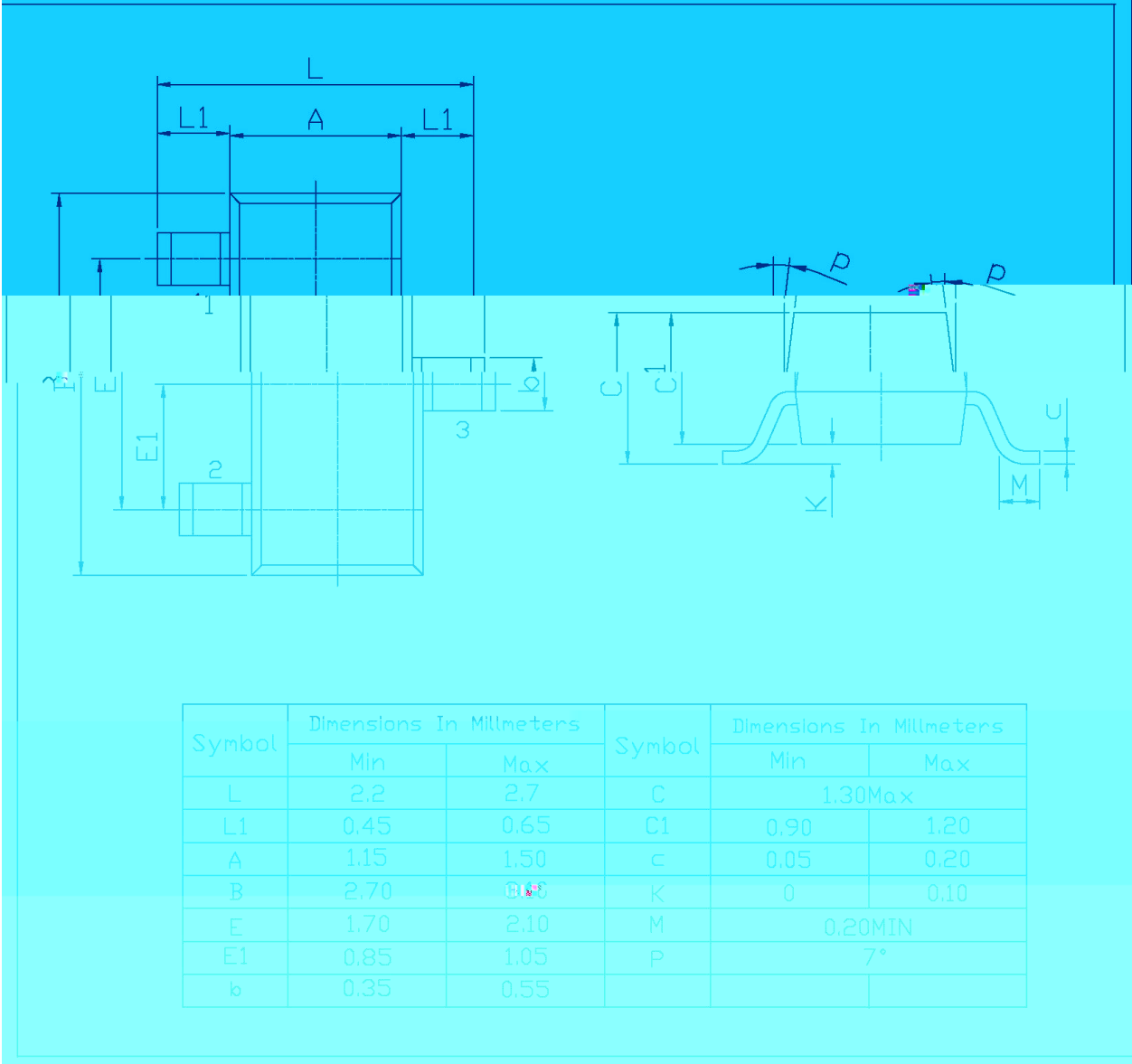
/ Electrical Characteristic Curve



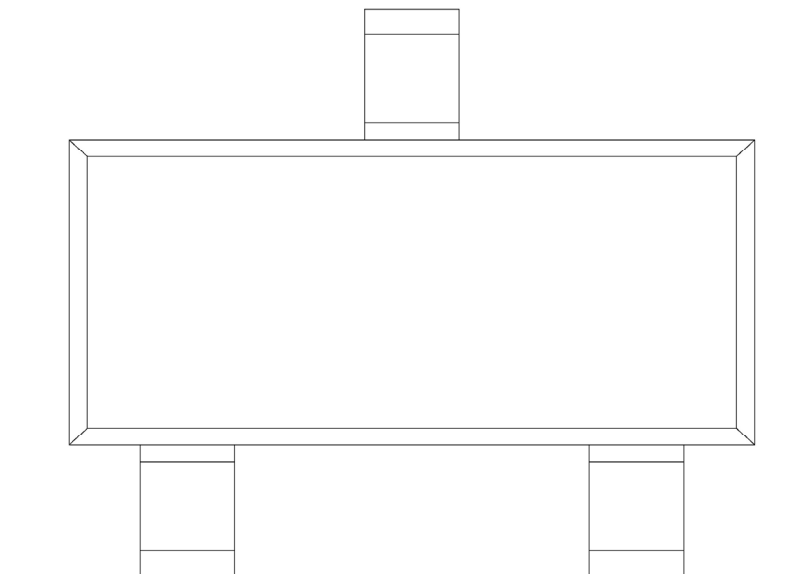
/ Package Dimensions

SOT-23

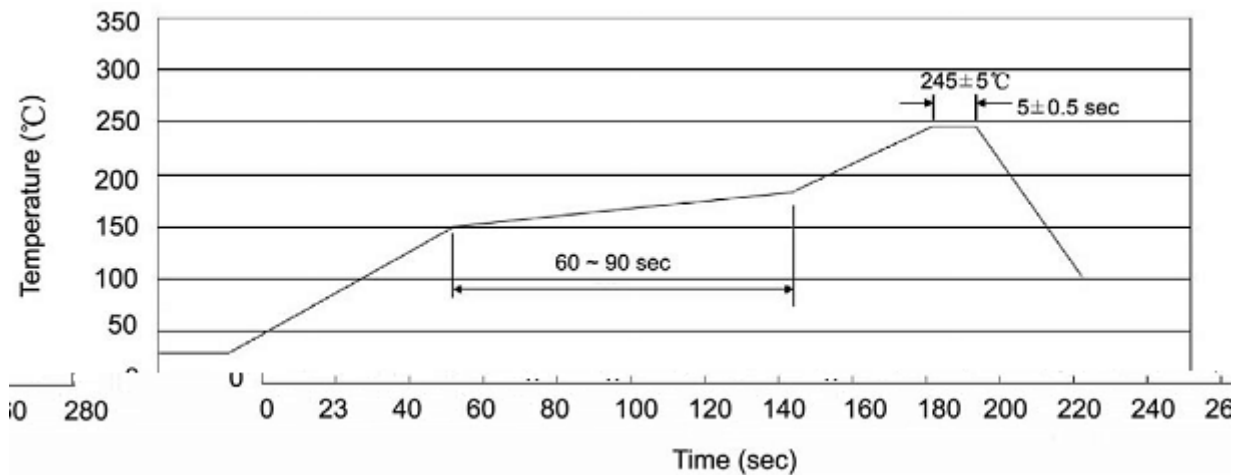
单位: mm



/ Marking Instructions



() / **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**