

/ Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

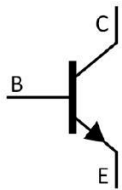
/ Features

High frequency.

/ Applications

High frequency amplifier.

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O	Y
h_{FE} Range	40-80	60-120	90-180
Marking	HH5R	HH5O	HH5Y

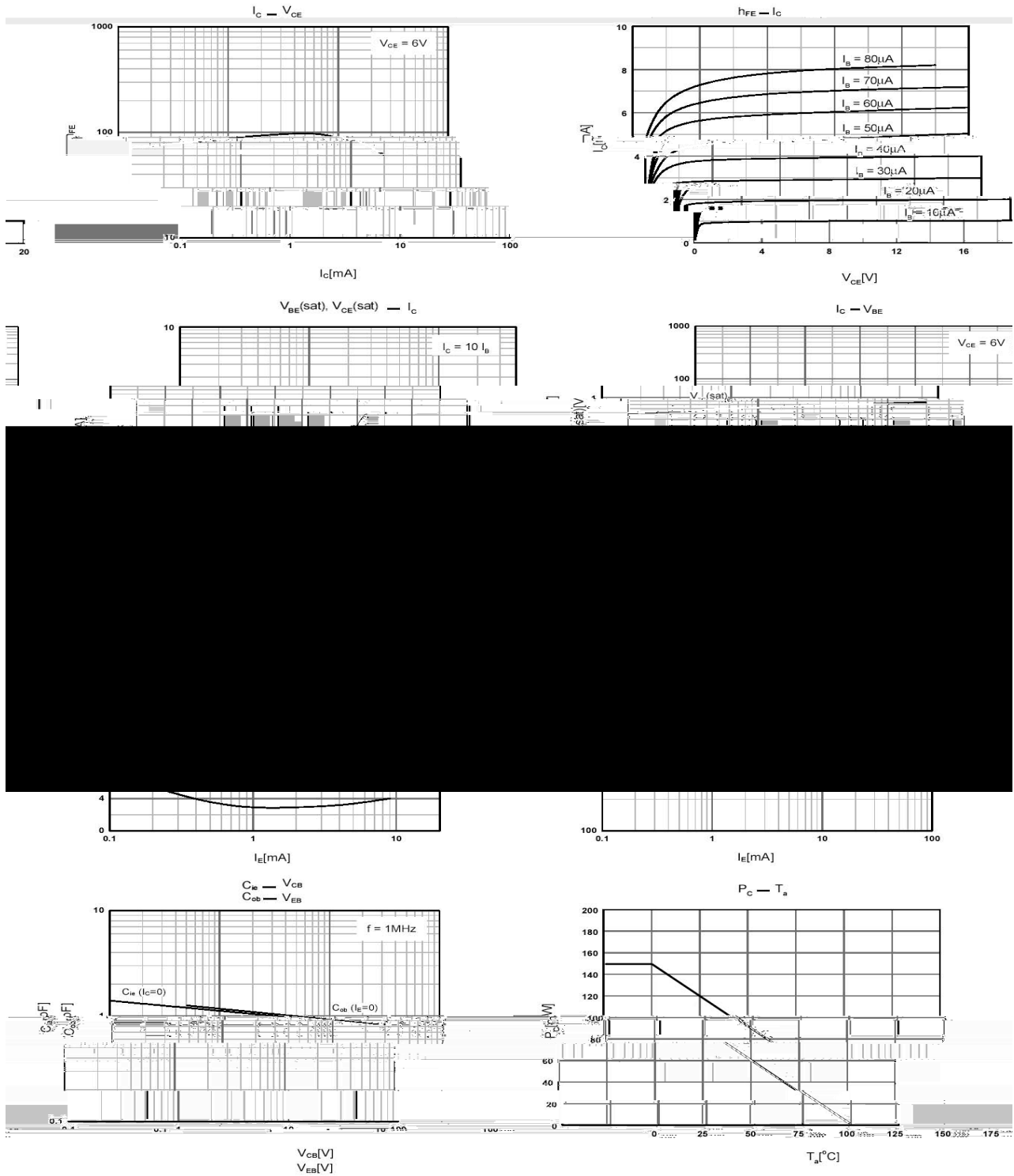
/ Absolute Maximum Ratings(Ta=25)

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}	4.0	V
Collector Current	I_C	20	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			0.1	A
DC Current Gain	h_{FE}	$V_{CE}=6.0V$ $I_C=1.0mA$	40	90	180	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=1.0mA$		0.1	0.3	V
Transition Frequency	f_T	$I_C=1.0mA$ $V_{CE}=6.0V$	400	600		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=6.0V$ $I_E=0$ $f=1.0MHz$		1.0		pF
Time Constant	$C_c, r_{bb'}$	$V_{CB}=6.0V$ $I_C=1.0mA$ $f=31.9MHz$		12		Ps
Noise Figure	NF	$V_{CE}=6.0V$ $I_C=1.0mA$ $f=100MHz$ $R_s=50$		3.0		dB

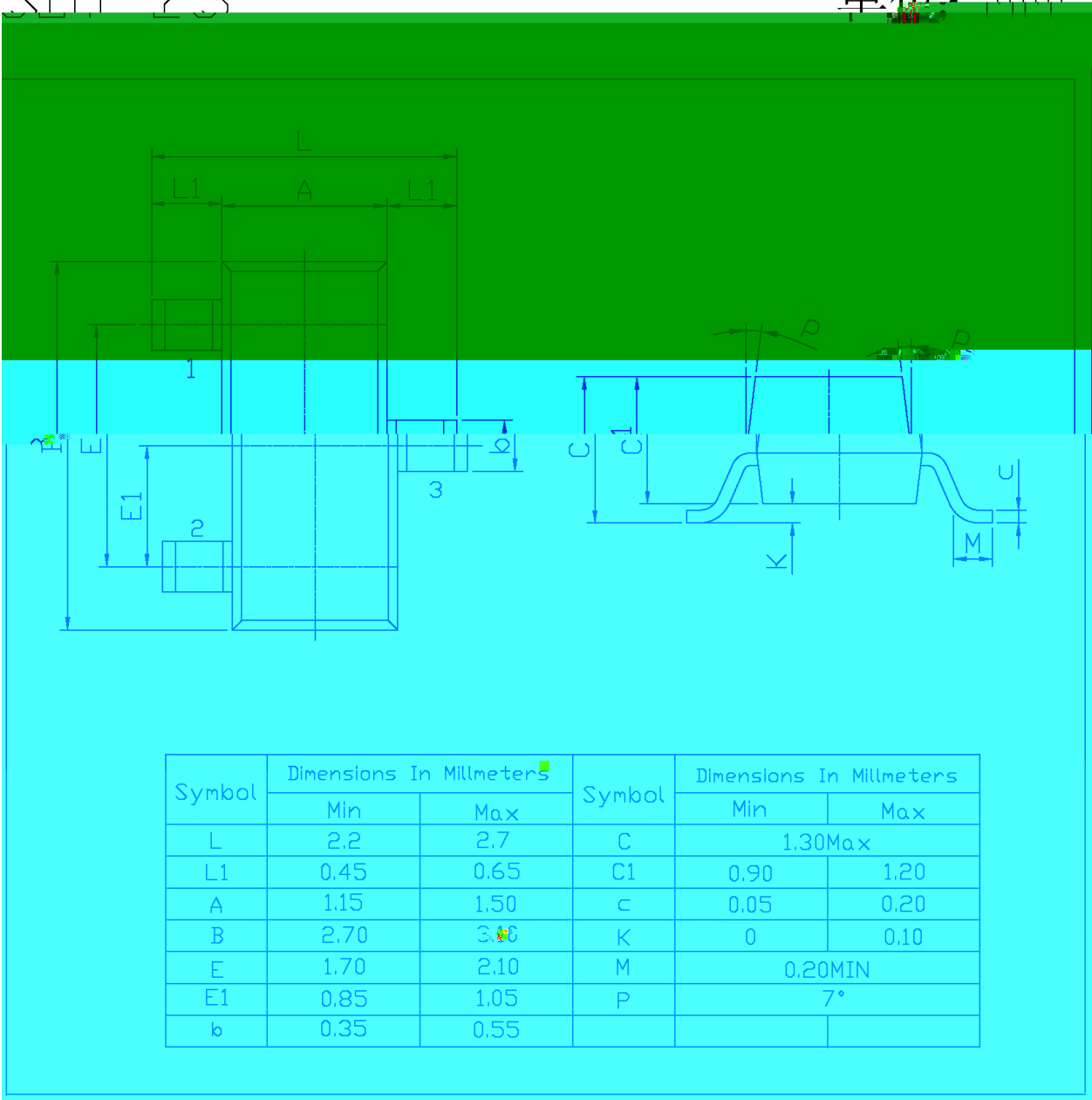
/ Electrical Characteristic Curve



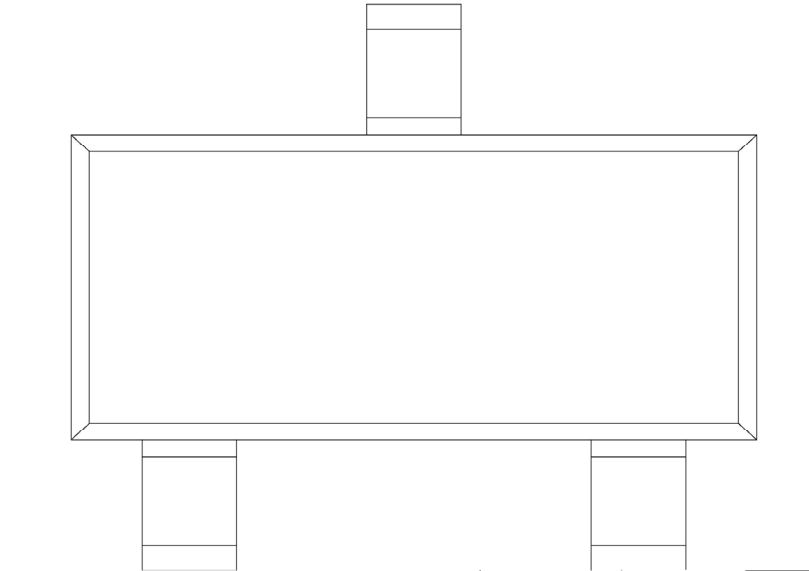
/ Package Dimensions

SOT-23

单位: mm



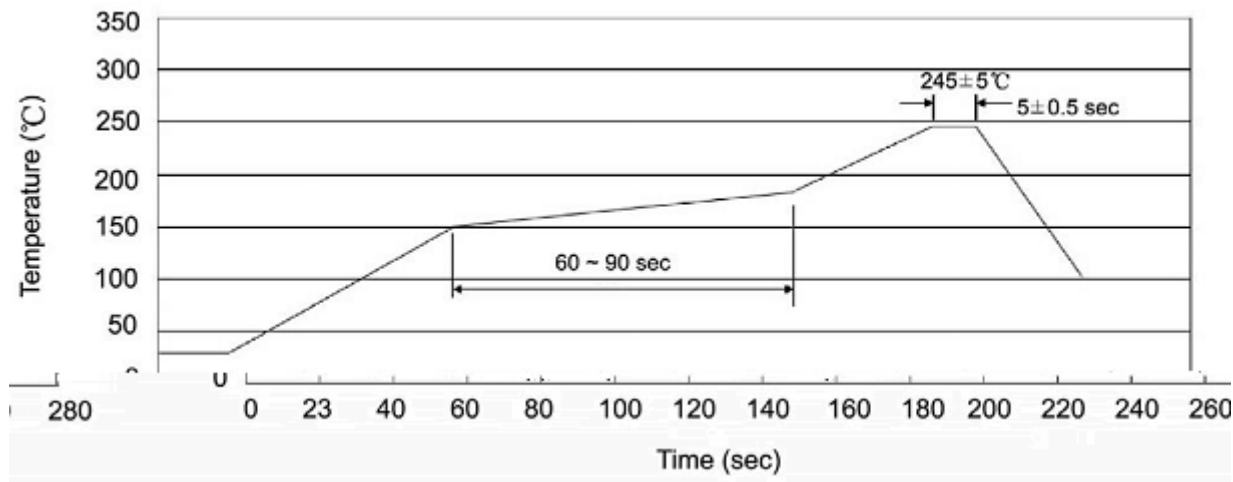
/ Marking Instructions



Note:

	Company Code
H5	Product Type Code
	hh

() / 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

Units 包装数量 Dimension 包装尺寸 (unit: mm