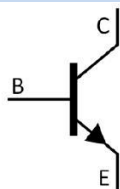


SOT-23 NPN Silicon NPN transistor in a SOT-23 Plastic Package.

High frequency.

UHF frequency converter, local oscillator, wide band amplifier.

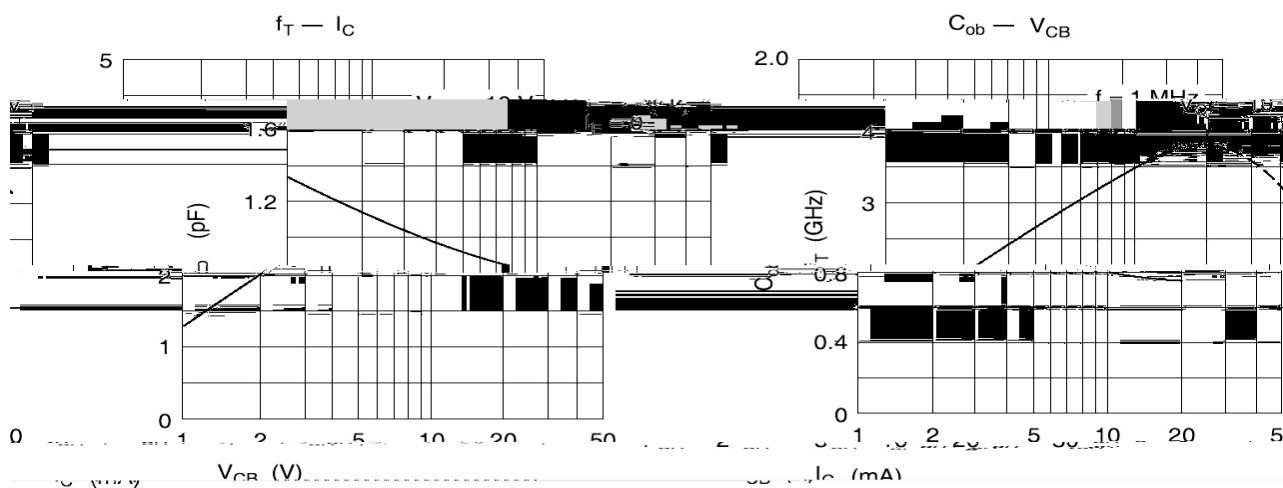
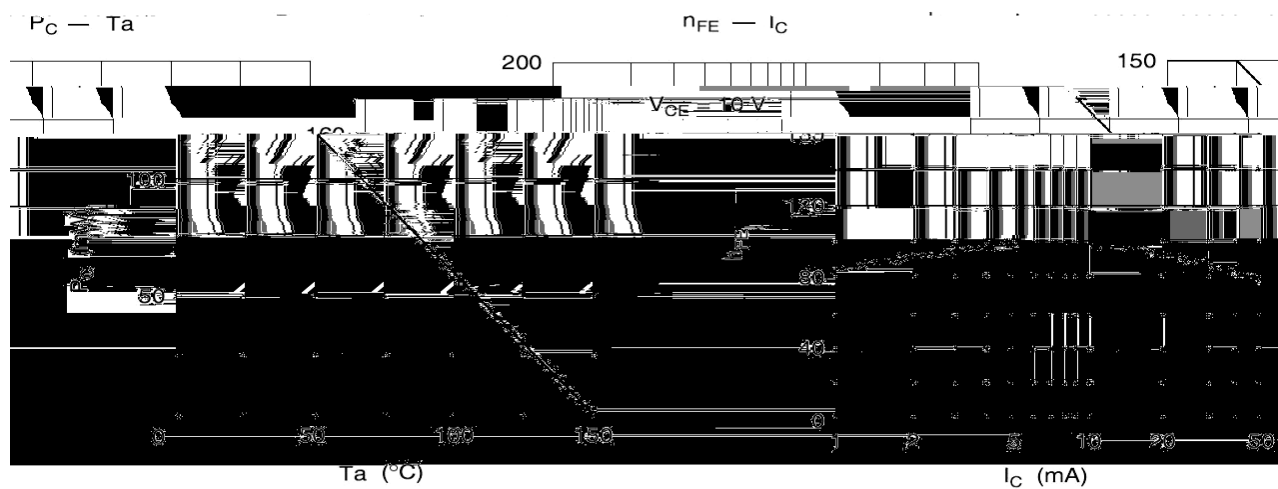


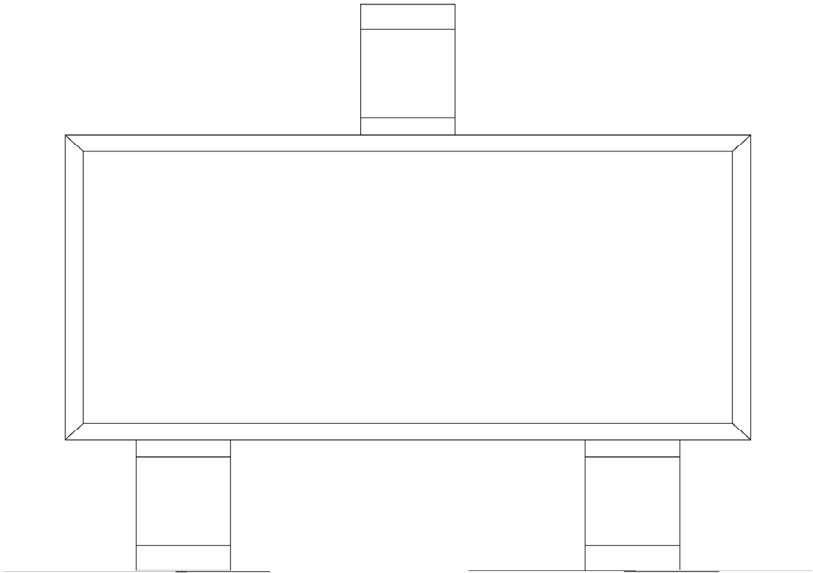
PIN1 Base PIN 2 Emitter PIN 3 Collector

h _{FE} Range	20 200
Marking	HGC

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	20	V
Collector to Emitter Voltage	V_{CEO}	11	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	50	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

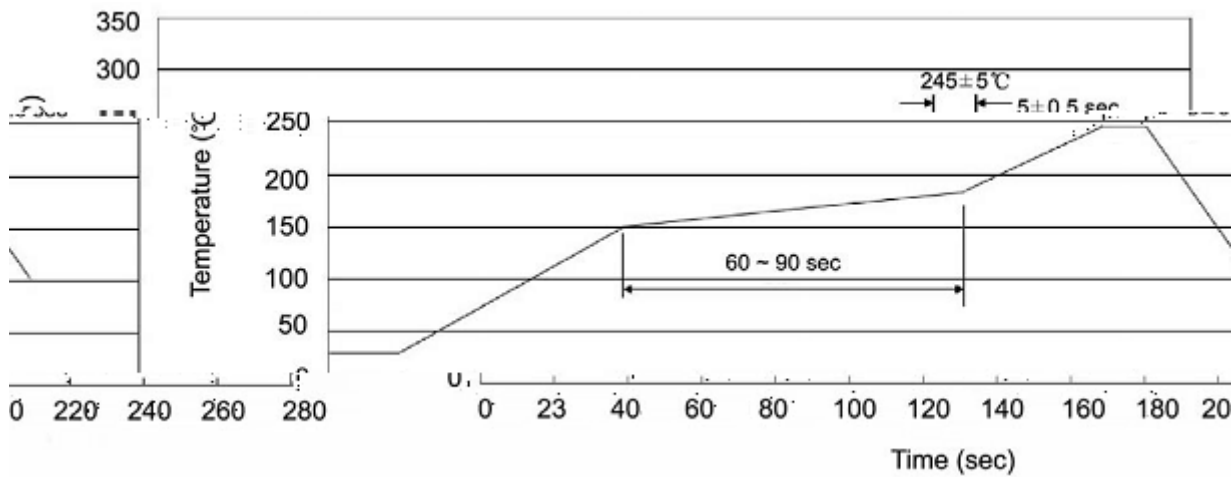
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$ $I_E=0$	20			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $R_{BE}=\infty$	11			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	3.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=10V$ $I_E=0$			0.5	μA
Emitter Cut-Off Current	I_{EBO}	$V_{CB}=2.0V$ $I_E=0$			0.5	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=5.0mA$	20	90	200	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=5.0mA$			0.7	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=10mA$	1400	3500		MHz
Collector output capacitance	C_{ob}	$V_{CE}=10V$ $I_E=0$ $f=1.0MHz$		0.9	1.5	pF
Conversion Gain	CG	$V_{CC}=6.0V$ $I_C=2.0mA$ $f=900MHz$ $f_{OSC}=930MHz(0dBm)$ $f_{out}=30MHz$		15		dB
Noise Figure	NF	$V_{CC}=6.0V$ $I_C=2.0mA$ $f=900MHz$ $f_{OSC}=930MHz(0dBm)$ $f_{out}=30MHz$		9.0		dB
The Output Clock Supply Voltage	V_{OSC}	$V_{CC}=6.0V$ $I_C=5.0mA$ $f=930MHz$		140		mV





H
GC
Note:
H Company Code
GC Product Type Code

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. |

260±5 10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ 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