

/ Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

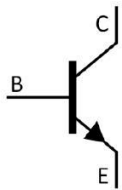
/ Features

High f_T , low C_C , $r_{b,b}$, low feedback capacitance.

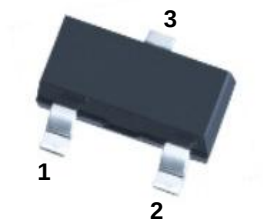
/ Applications

UHF oscillator and mixer.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	P	Q	R
h_{FE} Range	50~100	70~140	120~250
Marking	HT42	HT43	HT44

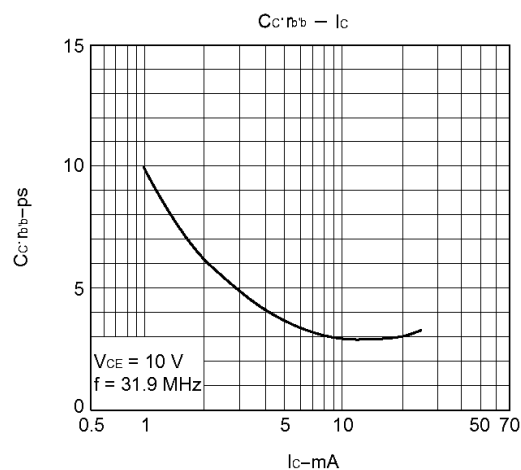
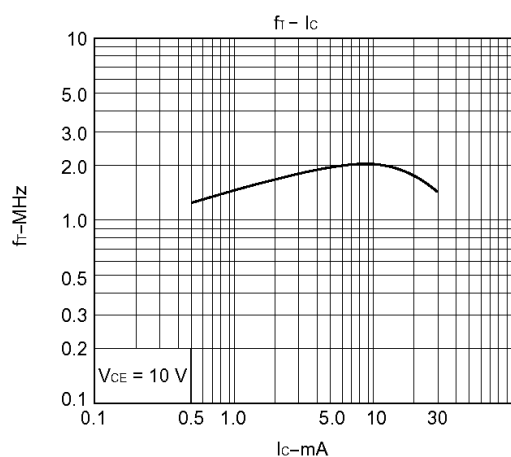
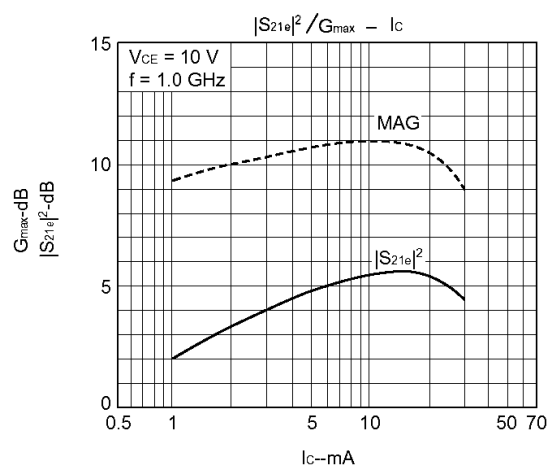
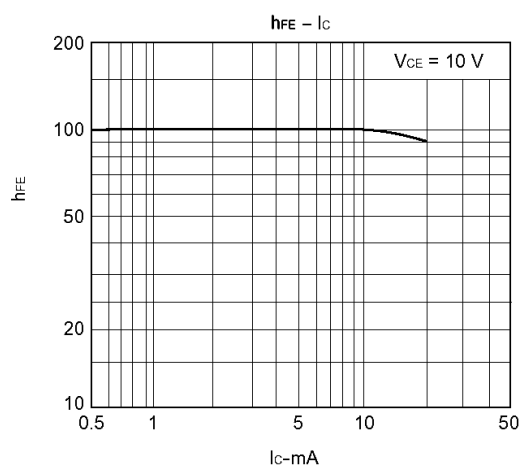
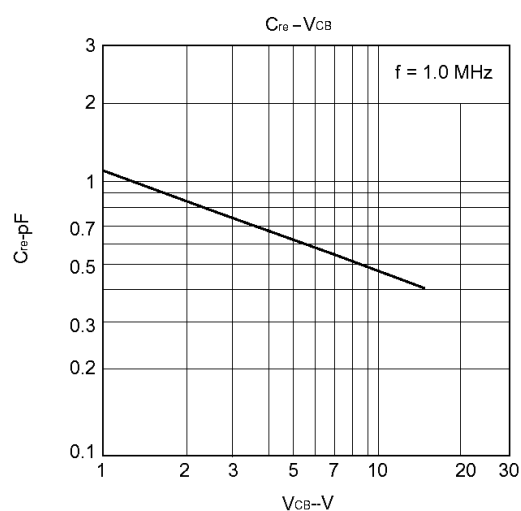
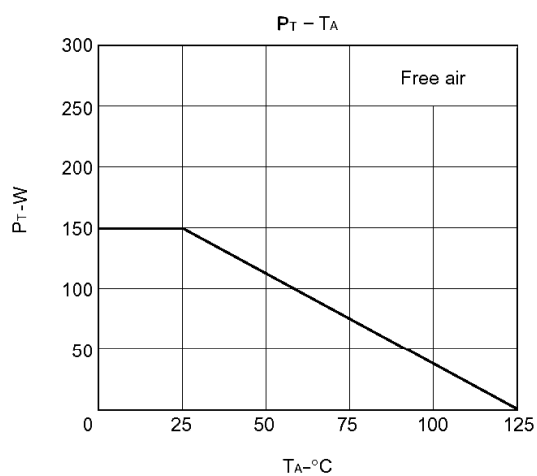
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	15	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	
Storage Temperature Range	T_{stg}	-55~150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=12V$ $I_E=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=5.0mA$	50	100	250	
Collector Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=1.0mA$			0.5	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_E=-5.0mA$	1.3	2.0		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		0.48	1.0	pF
Collector to Base Time Constant	$C_C \cdot r_{b,b}$	$V_{CE}=10V$ $I_E=5.0mA$ $f=31.9MHz$		4.0	10	pS

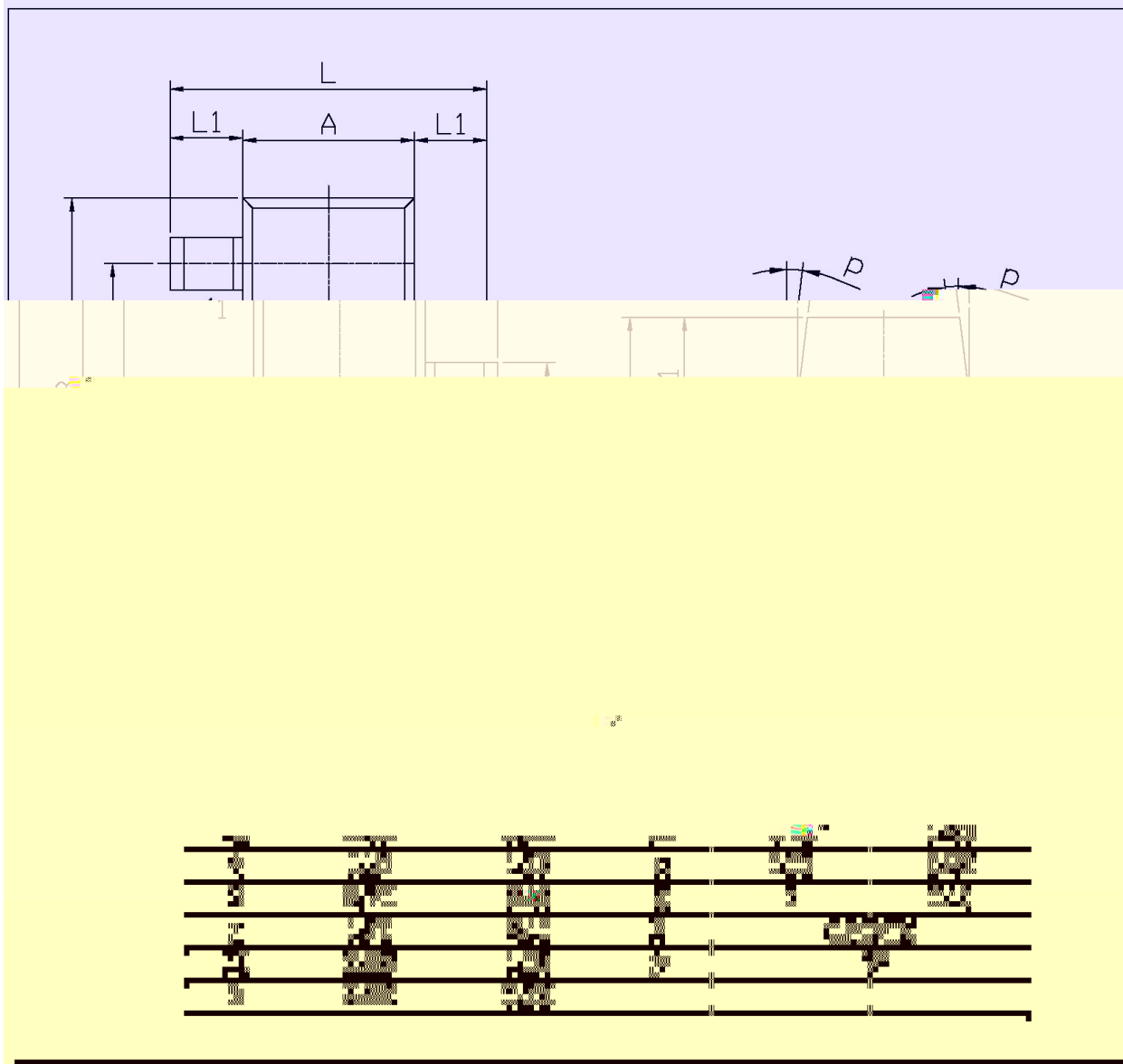
I Electrical Characteristic Curve



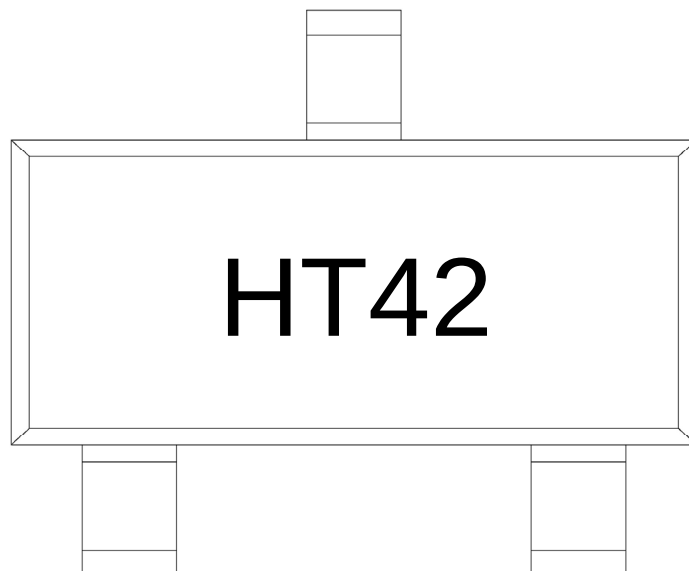
/ Package Dimensions

SOT-23

单位; mm



/ Marking Instructions

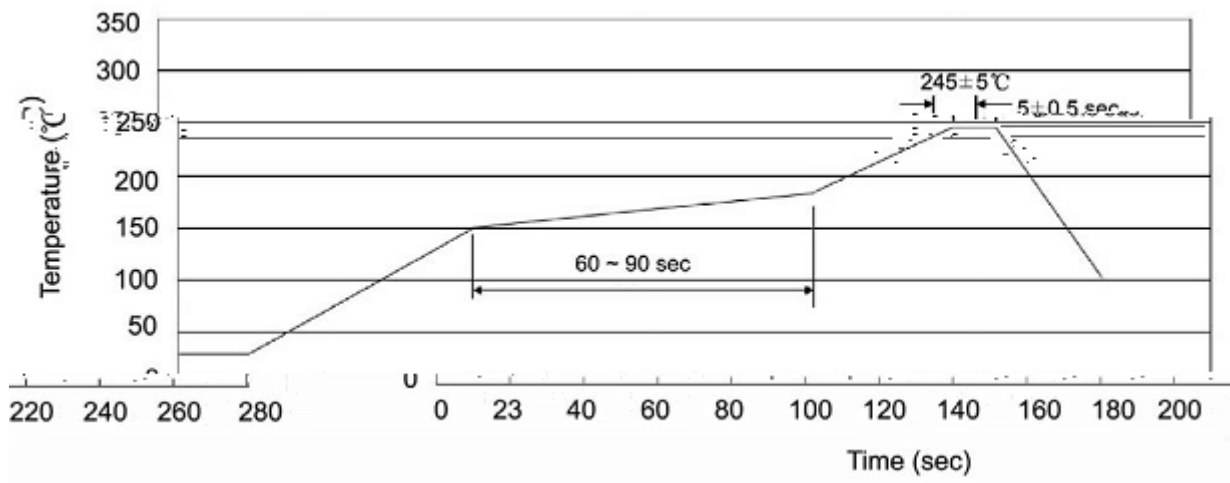


Note:

Company Code

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.

/ 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