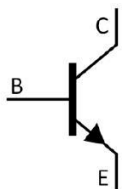


VRW-56 QSQ Silicon NPN transistor in a SOT-23 Plastic Package.

High f_T , low collector to base time constant, low output capacitance.

For use as UHF oscillator and a UHF mixer in a tuner of a TV receiver.



PIN1 Base PIN 2 Emitter PIN 3 Collector

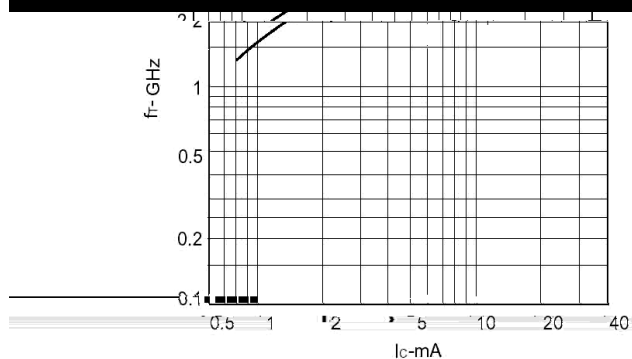
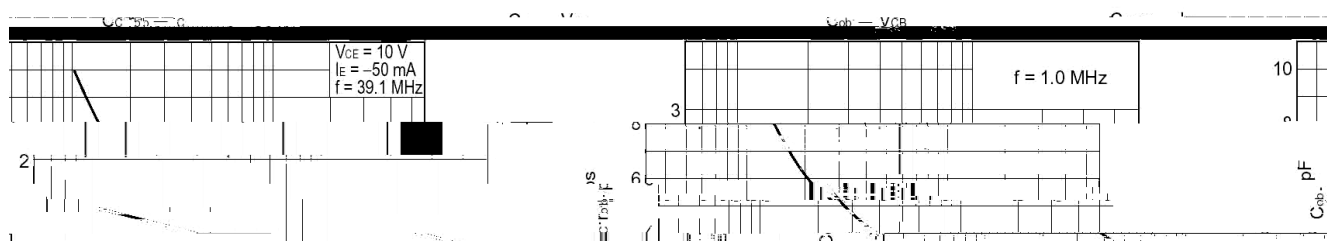
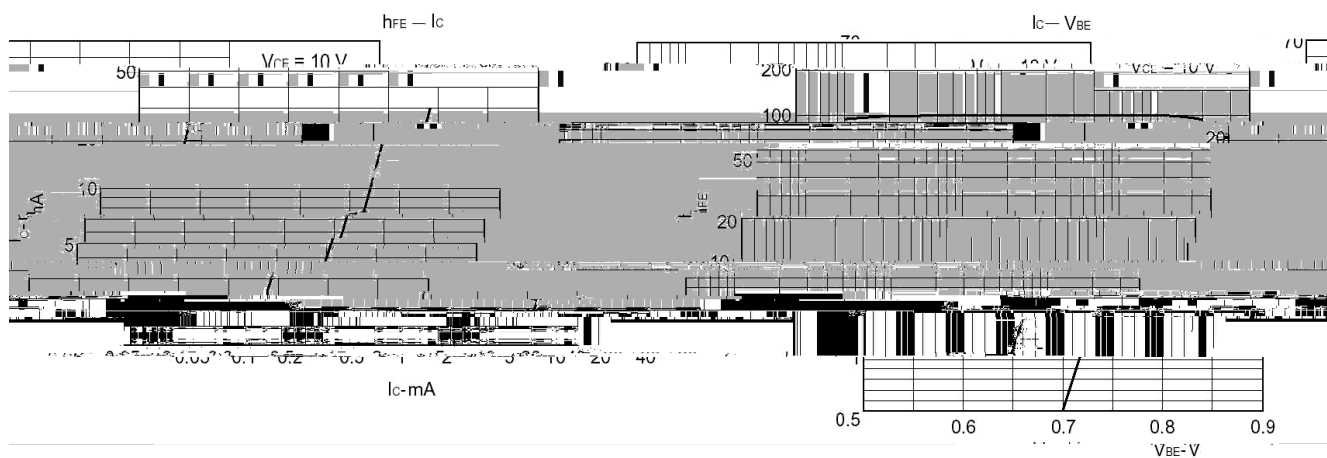
/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	P	Q	R
h_{FE} Range	40 80	60 120	100 200
Marking	HT62	HT63	HT64

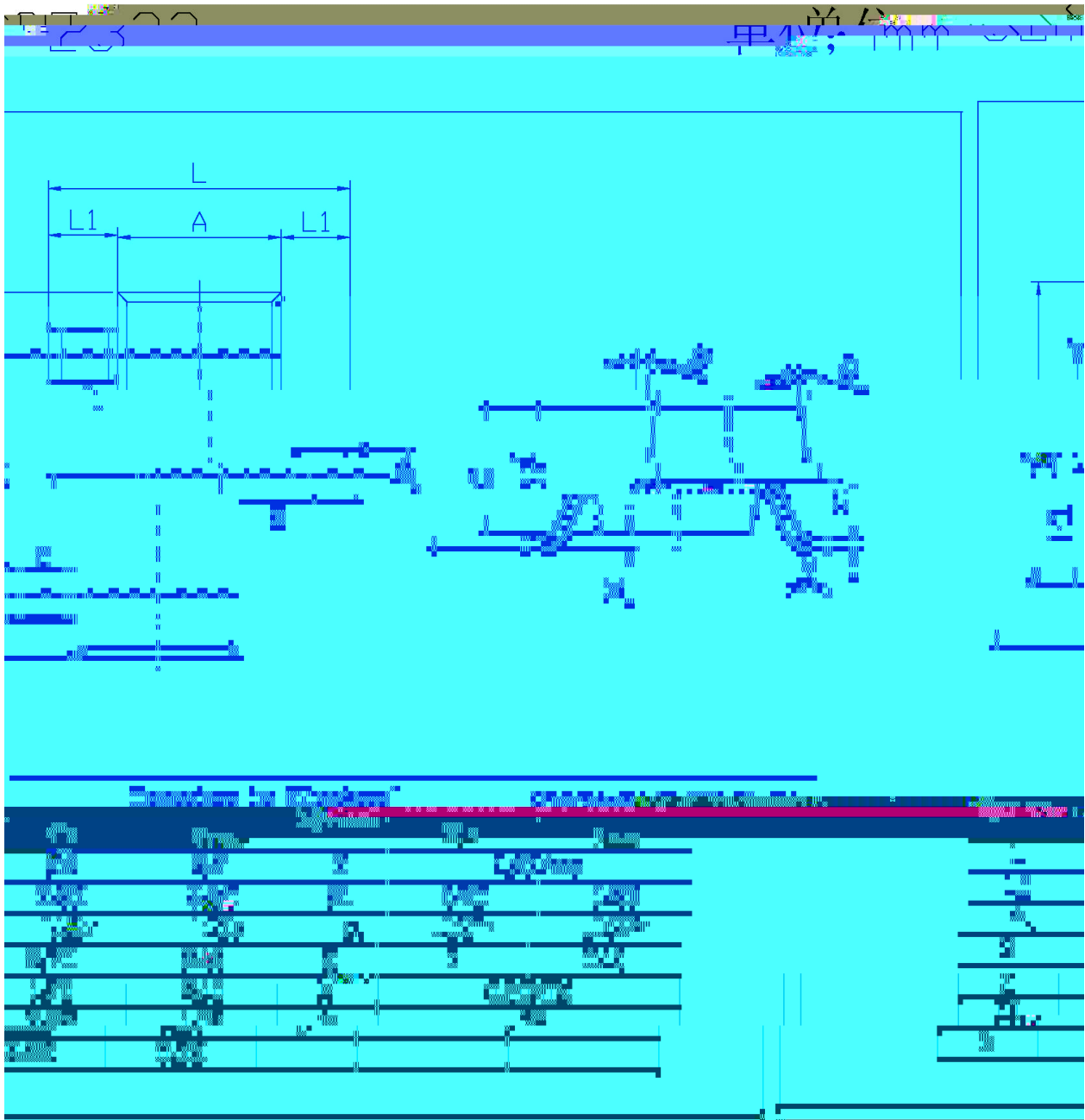
Parameter	N Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	25	V
Collector to Emitter Voltage	V_{CEO}	12	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	30	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	N Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=10V$ $I_E=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=10V$ $I_C=5.0mA$	40	100	200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=1.0mA$		0.09	0.5	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_E=-5.0mA$	2.5	4.0		GHz

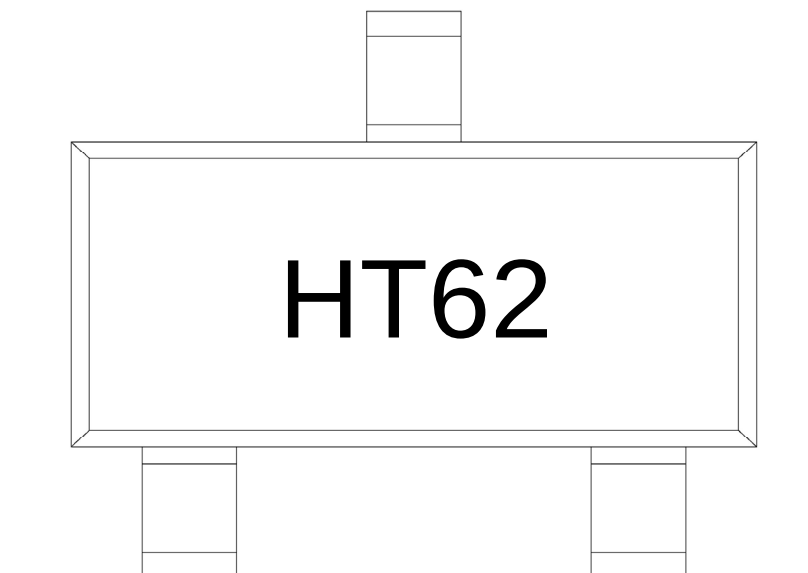
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



H H

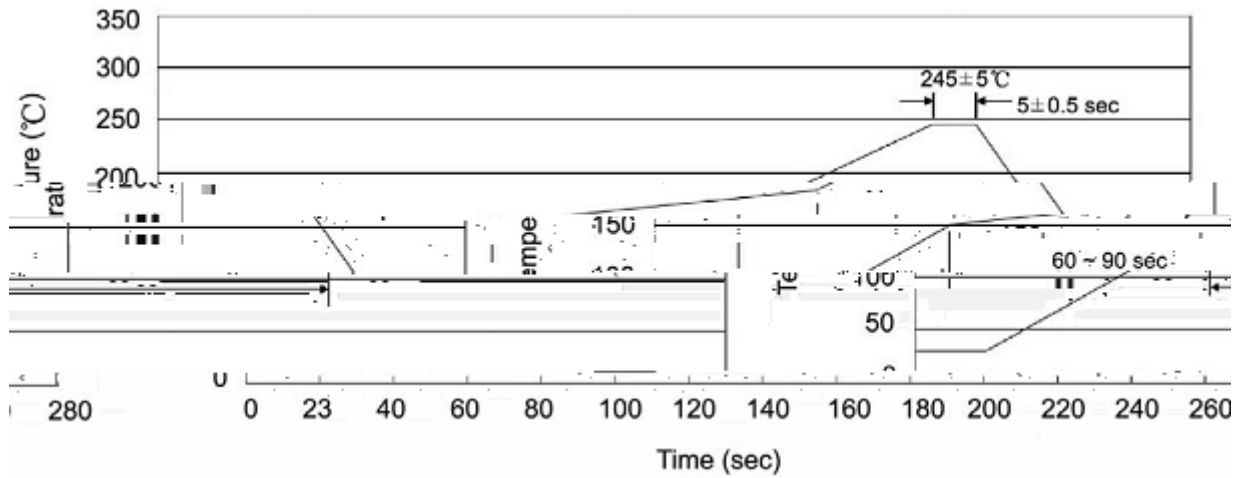
W65 N

Note:

H Company Code

W65 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. |