

/ Descriptions

WR0<5 SQS Silicon PNP transistor in a TO-92 Plastic Package.

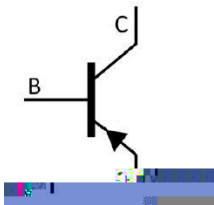
/ Features

Low Leakage current, Low collector saturation voltage.

/ Applications

General amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Collector PIN 2 Base PIN 3 Emitter

/ hFE Classifications & Marking

See Marking Instructions

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

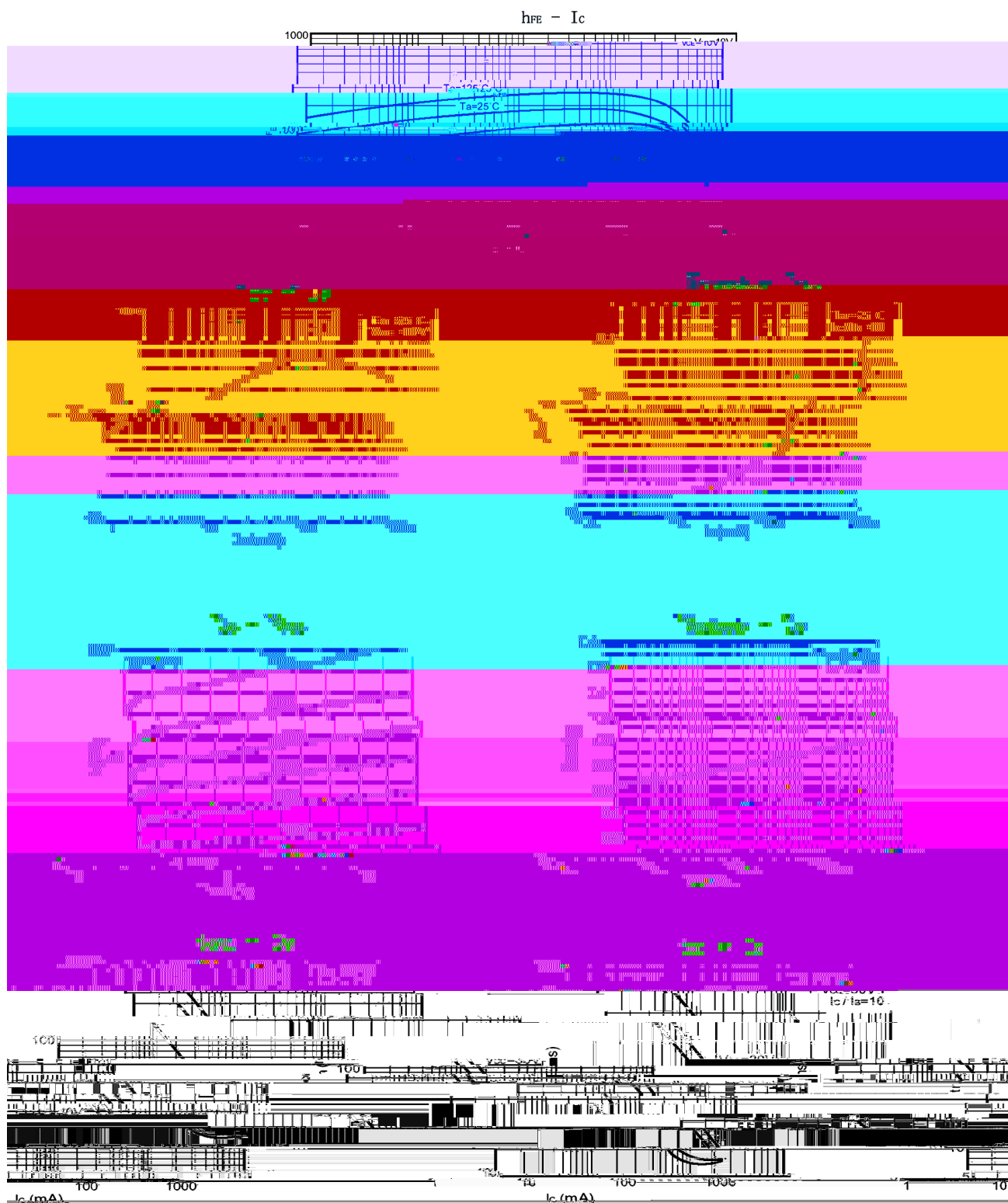
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-10\mu A$ $I_E=0$	-60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-10mA$ $I_B=0$	-60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-10\mu A$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-50V$ $I_E=0$			-0.1	μA
DC Current Gain	$h_{FE(1)*}$	$V_{CE}=-10V$ $I_C=-150mA$	100		300	
	$h_{FE(2)*}$	$V_{CE}=-10V$ $I_C=-500mA$	50			
	$h_{FE(3)}$	$V_{CE}=-10V$ $I_C=-10mA$	100			
	$h_{FE(4)}$	$V_{CE}=-10V$ $I_C=-1.0mA$	100			
	$h_{FE(5)}$	$V_{CE}=-10V$ $I_C=-0.1mA$	75			
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)*}$	$I_C=-150mA$ $I_B=-15mA$			-0.4	V
	$V_{CE(sat)(2)*}$	$I_C=-500mA$ $I_B=-50mA$			-1.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)(1)*}$	$I_C=-150mA$ $I_B=-15mA$			-1.3	V
	$V_{BE(sat)(2)*}$	$I_C=-500mA$ $I_B=-50mA$			-2.6	V
Transition Frequency	f_T	$V_{CE}=-20V$ $I_C=-50mA$ $f=100MHz$	200			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10V$ $I_E=0$ $f=0.1MHz$			30	pF
Turn-On Time	T_{on}	$V_{CC}=-30V$ $V_{BE(off)}=-1.5V$ $I_C=-150mA$ $I_{B1}=-15mA$			0.05	μs
Turn-Off Time	T_{off}	$V_{CC}=-30V$ $I_C=-150mA$ $I_{B1}=I_{B2}=-15mA$			0.1	μs

*Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$

- : 6330V/ 513 (

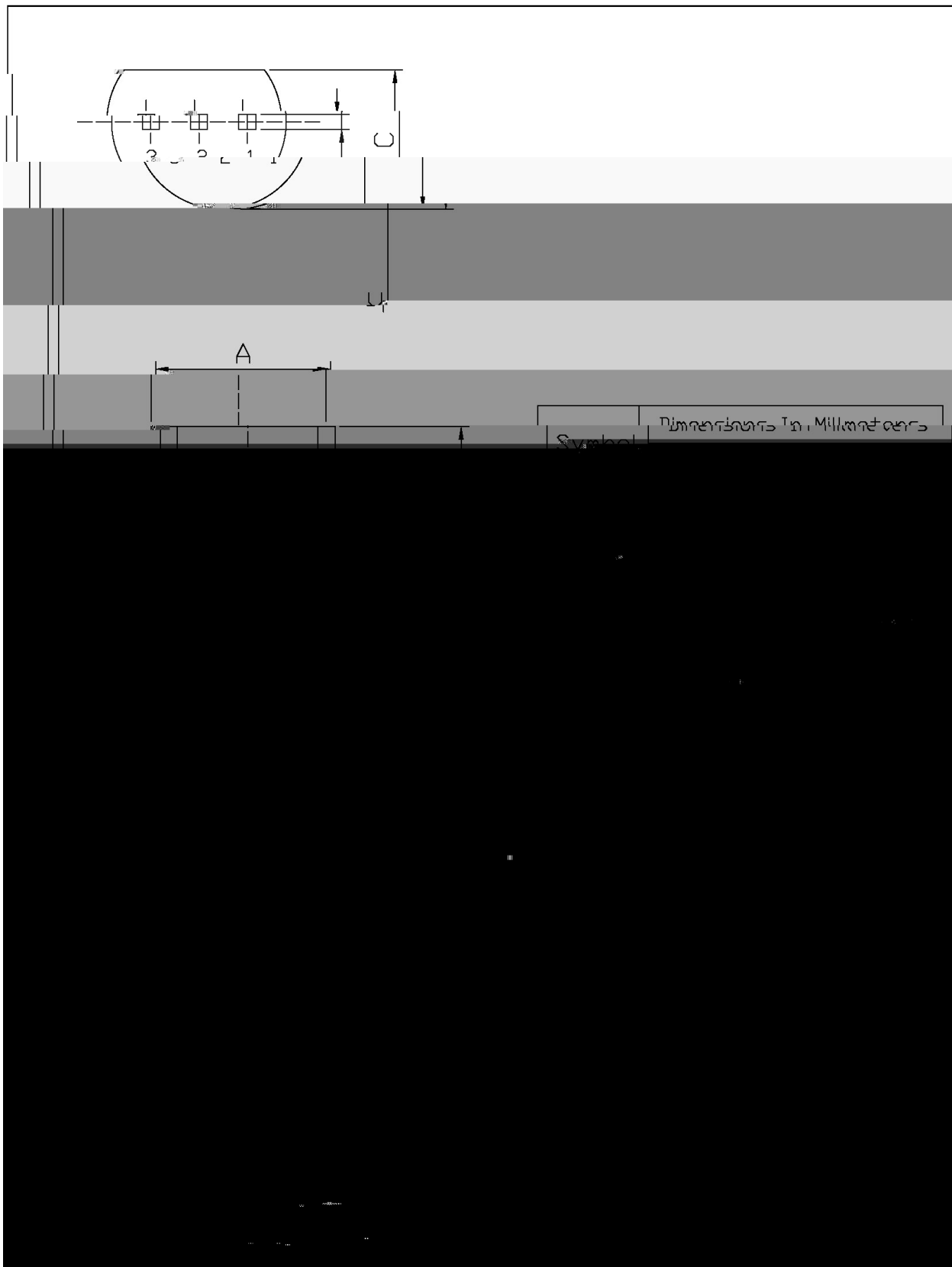
/ Electrical Characteristic Curve



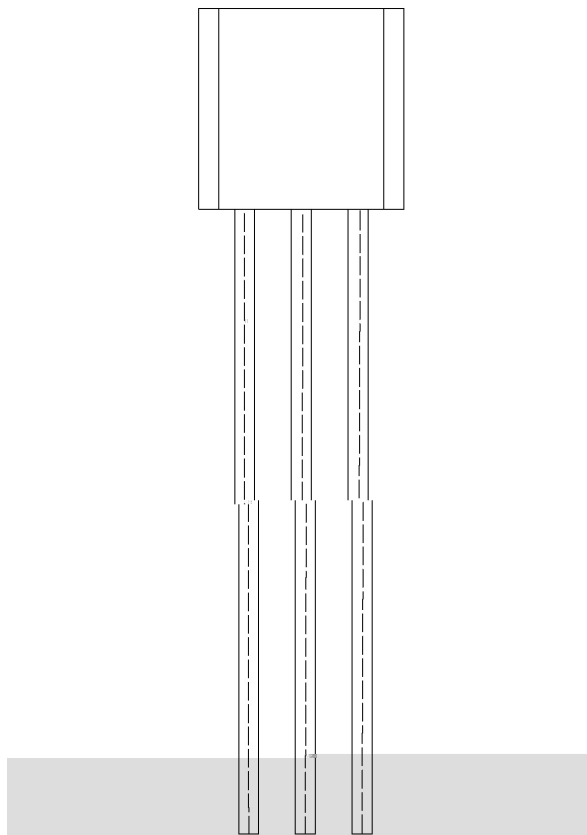
/ Package Dimensions

TO-92

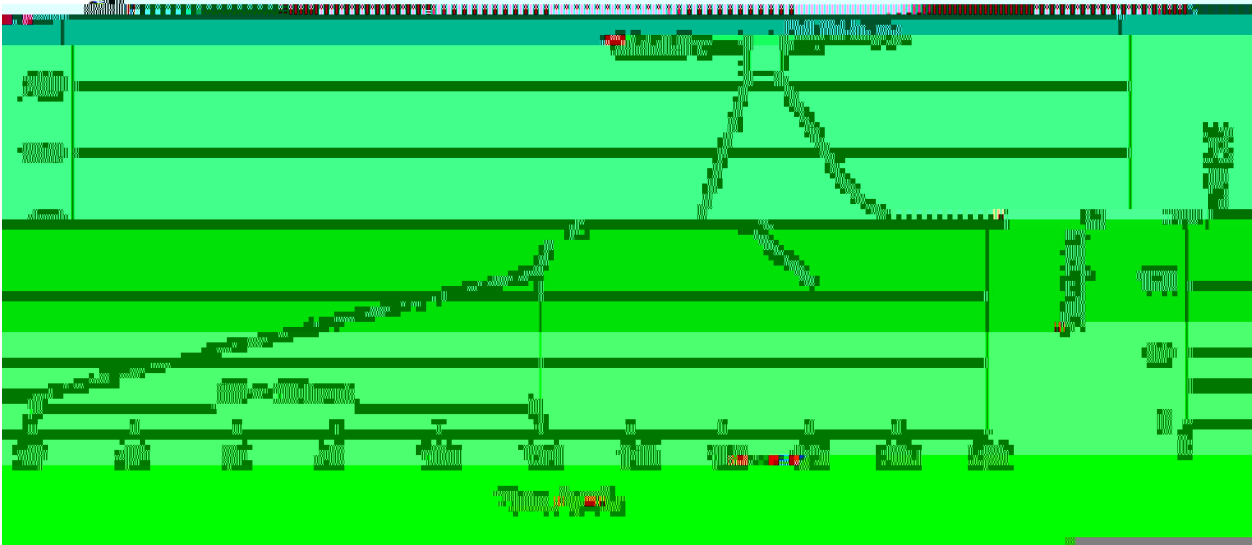
Unit: mm



/ Marking Instructions



() / Temperature Profile for Dip Soldering(Pb-Free)



- 1

25 150℃

60 90sec;

2

255 ± 5℃

5 ± 0.5sec;

3

2 10℃/sec.
- Note:

1.Preheating:25~150℃, Time:60~90sec.

2.Peak Temp.:255 ± 5℃, Duration:5 ± 0.5sec.

3. Cooling Speed: 2~10℃/sec.

/ Resistance to Soldering Heat Test Conditions

270 ± 5℃

10 ± 1 sec.

Temp:270±5

Time:10±1 sec

/ Packaging SPEC.

/ BULK

100% AP, 100% U31, Tt0.55 0.942.61101e7.2TT4 5sec.