2N2907A

Rev.E Mar.-2016

蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

/ Descriptions

WR0<5 ṂṂ Ŀ SQS Ӕ Ṁ ɥ s Ⅱ ꟸ Silicon PNP transistor in a TO-92 Plastic Package.

/ Features

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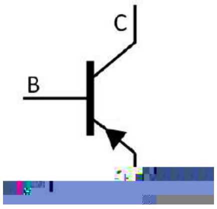
Low Leakage current, Low collector saturation voltage.

/ Applications

General amplifier.

/ Equivalent Circuit



/ Pinning

PIN1 χ Collector PIN 2 χ Base PIN 3 χ Emitter

/ hFE Classifications & Marking

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/ Absolute Maximum Ratings(Ta=25)

v ῼ Parameter	ч ᴺ Symbol	ῼӫ Rating	ᴅ ђ 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 Ḱ 150	

/ Electrical Characteristics(Ta=25)

v ῼ Parameter	ч ᴺ Symbol	╜ ꞉ἲ ƫ Test Conditions	ῳ ŋ ӫ Min	Ɛ ʓ ӫ Typ	ῳ ᶻ ӫ Max	ᴅ ђ Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=-10μA 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=-10μA 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≤300μs,duty cycle≤2.0%
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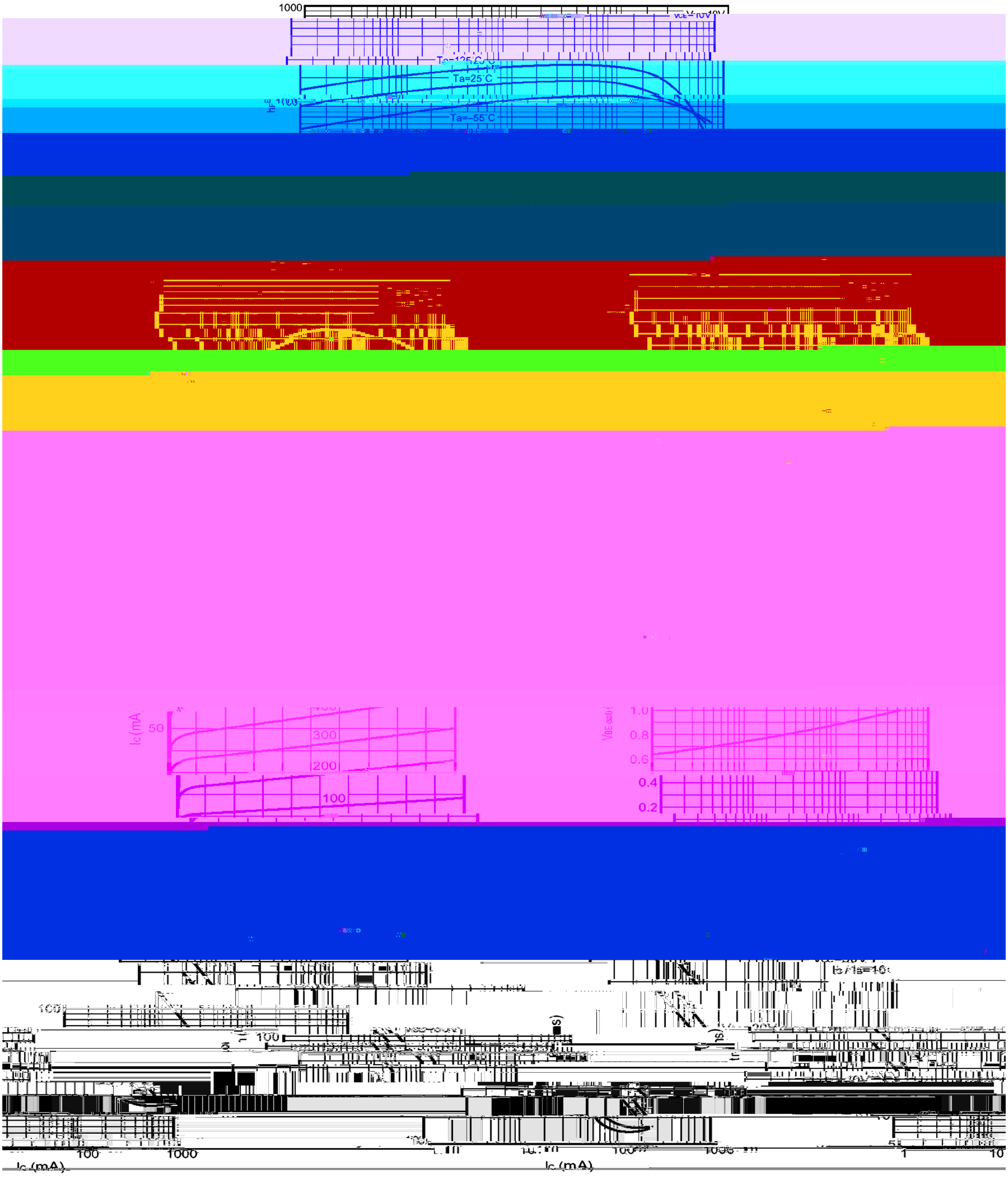
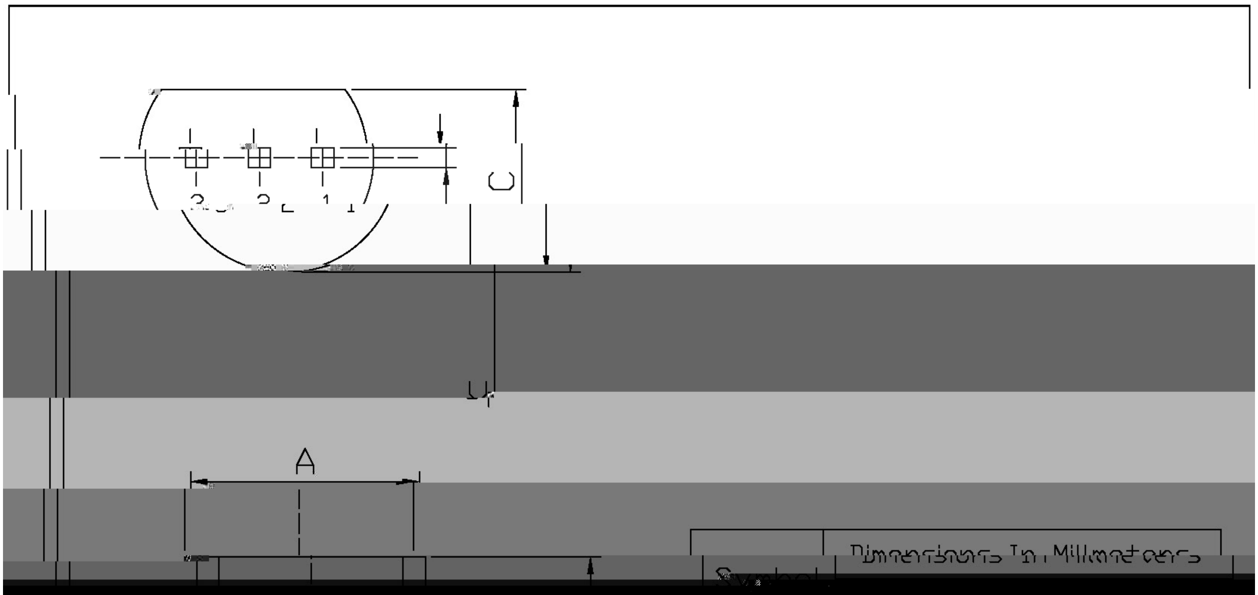
/ Electrical Characteristic Curve

hFE − Ic



/ Package Dimensions

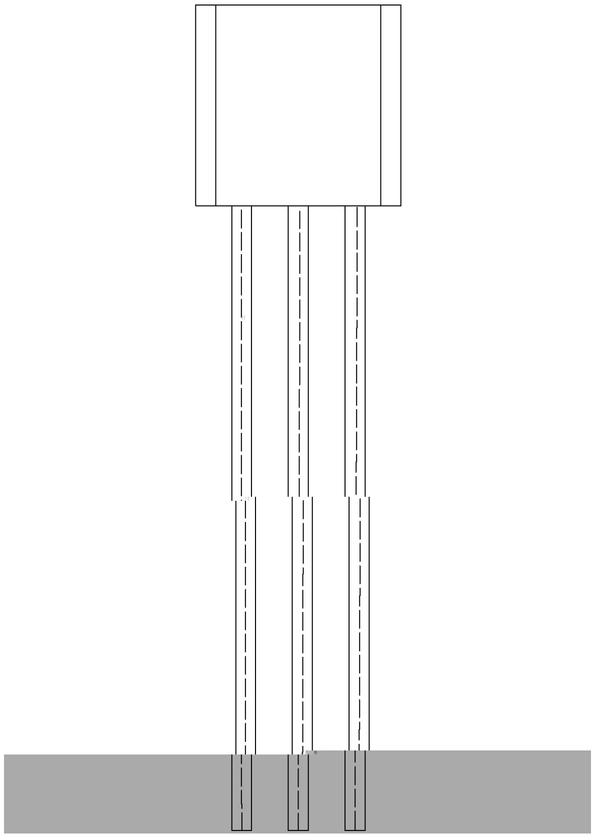
TO-92 Unit: mm



Dimensions In Millimeters

Symbol

/ Marking Instructions



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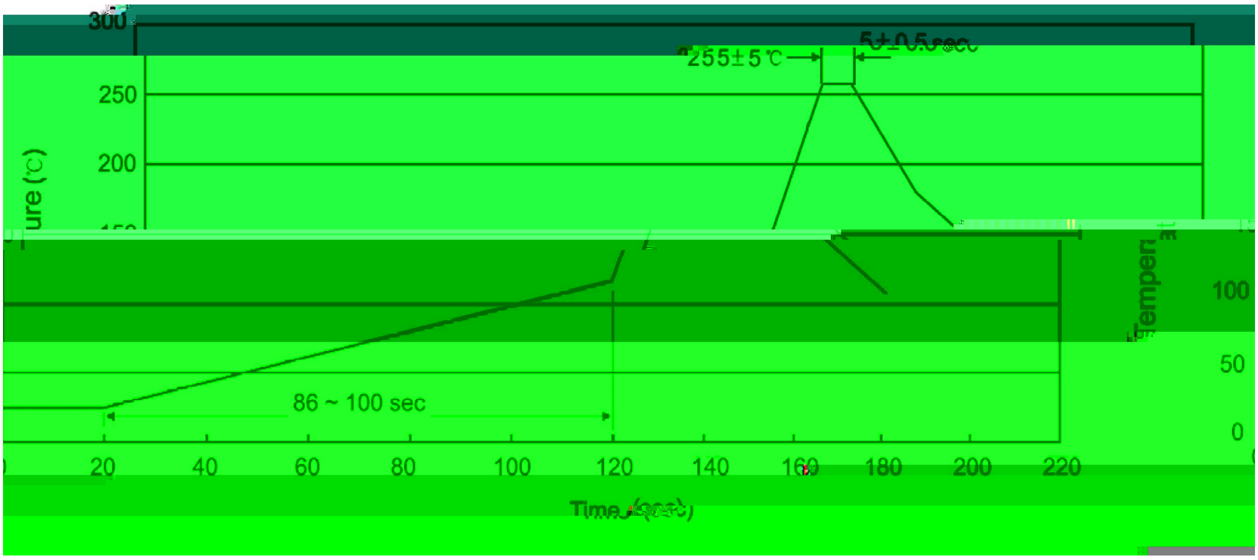
(   ) / Temperature Profile for Dip Soldering(Pb-Free)



ب ˝ χ	Note:
1 ỉ ♬ □ ẙ 25 Ḱ 150 ƚ ı `H ڗ 60 Ḱ 90sec;	1.Preheating:25~150 ƚ , Time:60~90sec.
2 Ś Ӫ □ ẙ 255 ° 5 ƚ ı `H ڗ ʽY ᅥ ᄍ 5 ° 0.5sec;	2.Peak Temp.:255 ° 5 ƚ , Duration:5 ° 0.5sec.
3 ì ˙ ˥ ˛ ɔ ه ẙ ᄍ 2 Ḱ 10 ƚ /sec.	3. Cooling Speed: 2~10 ƚ /sec.

/ Resistance to Soldering Heat Test Conditions

□ ẙ χ 270 ° 5 ƚ	`H ڗ χ 10 ° 1 sec.	Temp:270±5	Time:10±1 sec

/ Packaging SPEC.

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