

/ Descriptions

TO-92(R)

NPN

Silicon NPN transistor in a TO-92(R) Plastic Package.

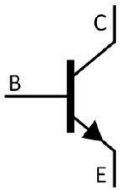
/ Features

High Voltage, Low Noise.

/ Applications

Low noise amplifier application.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Base PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	A	B	C
h_{FE} Range	110 220	200 450	420 800

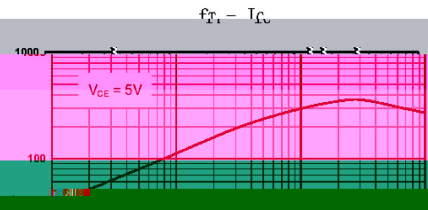
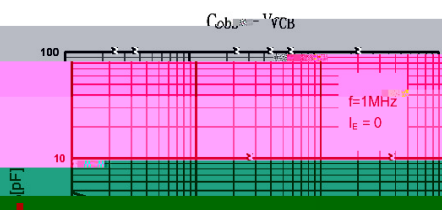
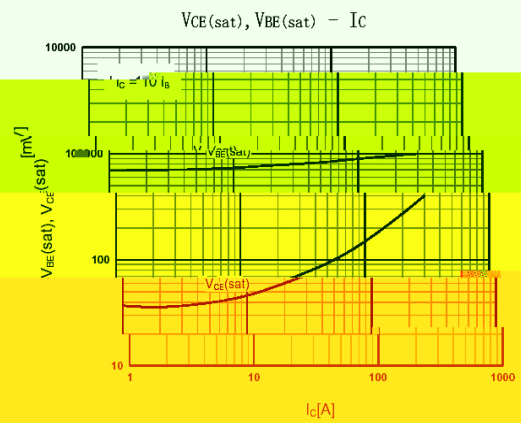
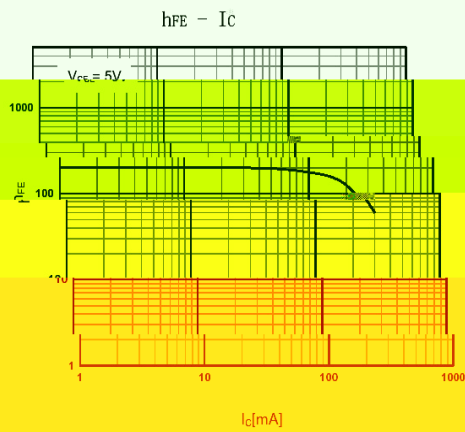
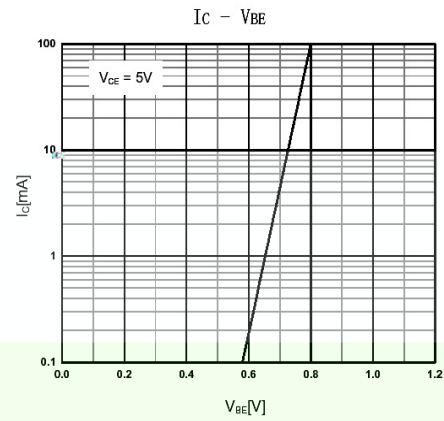
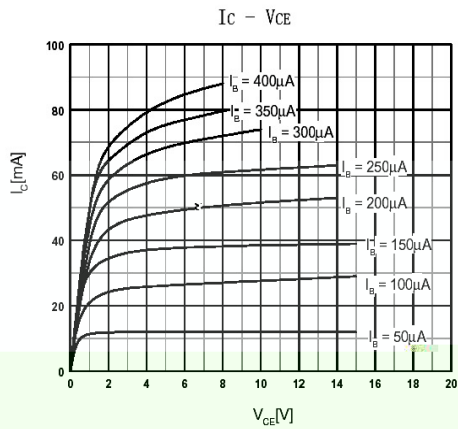
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	45	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	100	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

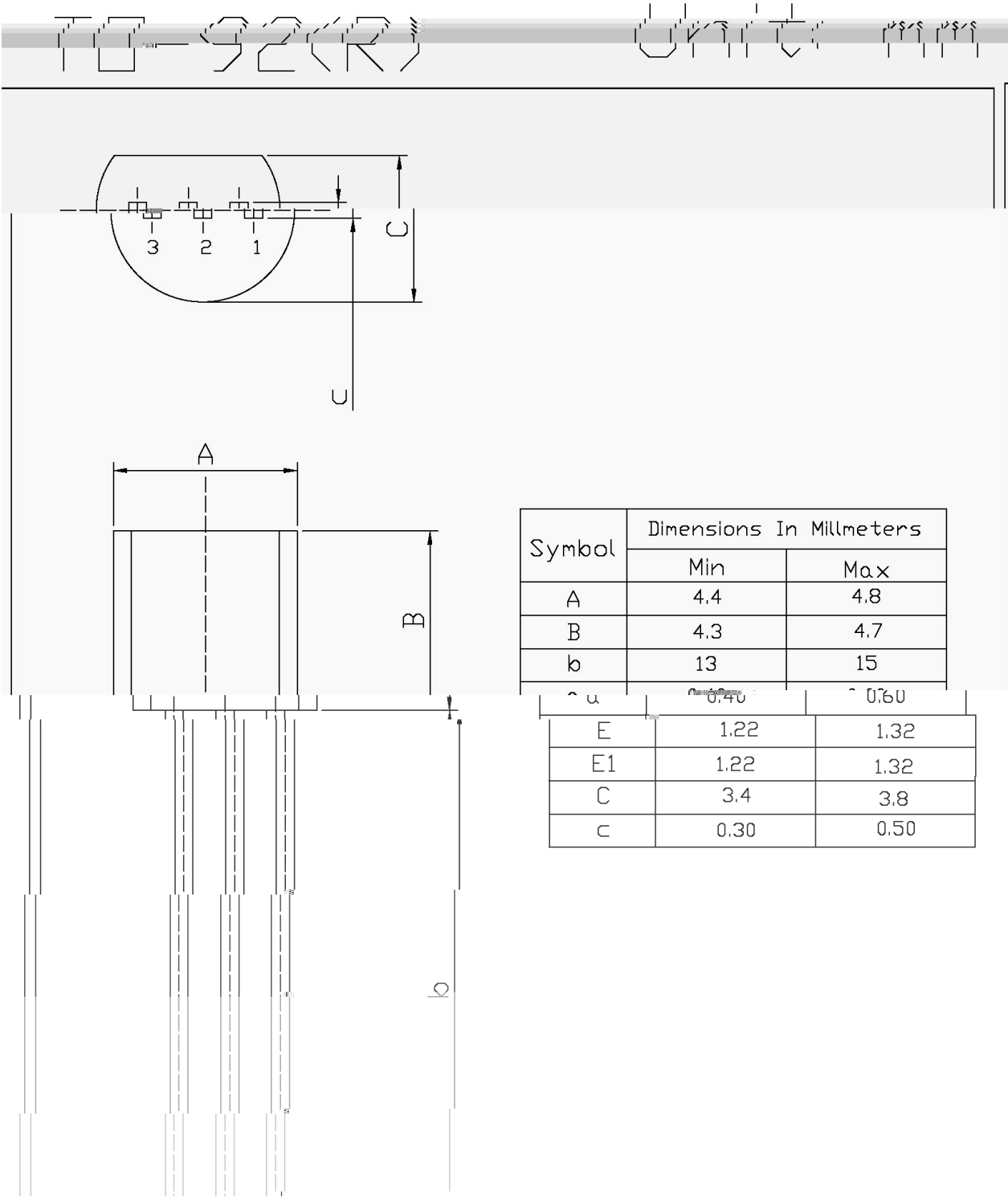
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	45			V
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$ $I_E=0$	50			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}	$V_{CB}=30V$ $I_E=0$			0.015	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=2.0mA$	110		800	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA$ $I_B=5.0mA$			0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA$ $I_B=5.0mA$		0.9		V
Base-Emitter Voltage	$V_{BE(on)}$	$V_{CE}=5.0V$ $I_C=2.0mA$	0.55		0.7	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5.0V$ $f=100MHz$ $I_E=10mA$		300		MHz
Transition Frequency	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$			4.5	pF
Noise Figure	NF	$V_{CE}=5.0V$ $R_g=10K\Omega$ $I_C=200\mu A$ $f=1.0KHz$			10	dB

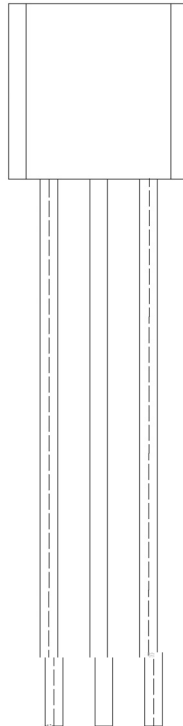
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions

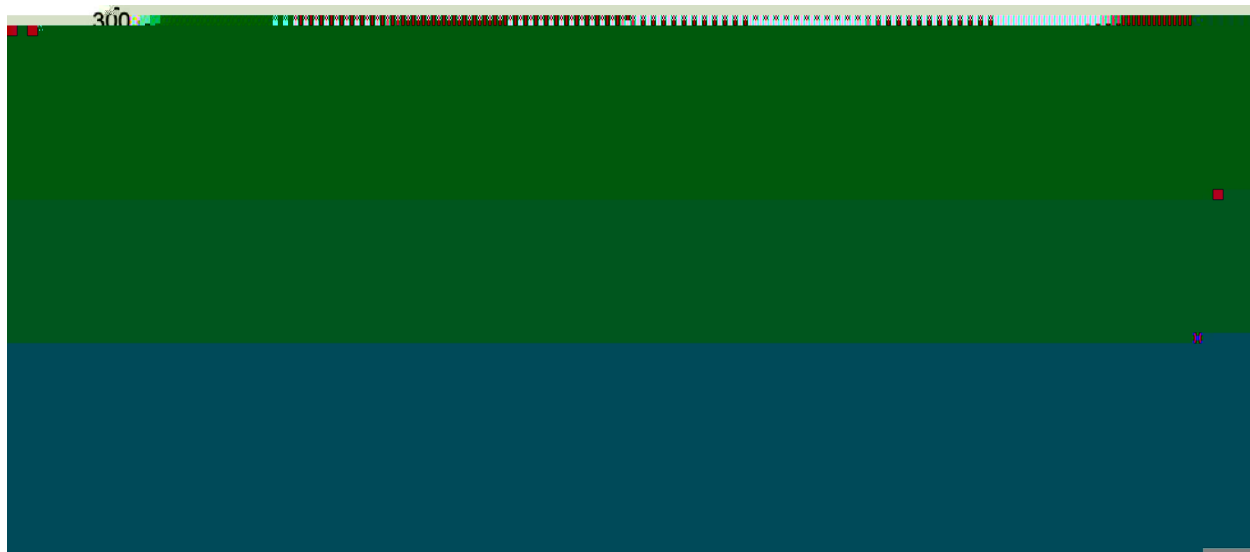


BR

BC550

B

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


Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. | |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec
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/ Packaging SPEC.
/ BULK

Package Type	Units					Dimension (unit mm3)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

/ AMMO

Package Type	Units			Dimension (unit mm3)
	Units/tape /	Tape/Inner Box /	Rows/Inner Box	