

BC558

Rev.E Mar.-2016

/ Descriptions

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

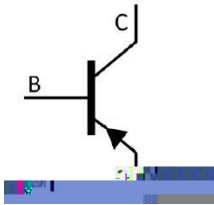
/ Features

High Voltage, Low Noise.

/ Applications

General purpose and switching application.

/ Equivalent Circuit



/ Pinning



1 2 3
PIN1 Emitter PIN 2 Base PIN 3 Collector

/ h_{FE} Classifications & Marking

| h_{FE} Classifications Symbol | A | B | C |
|------------------------------------|---------|---------|---------|
| h_{FE} Range | 125 250 | 220 475 | 420 800 |

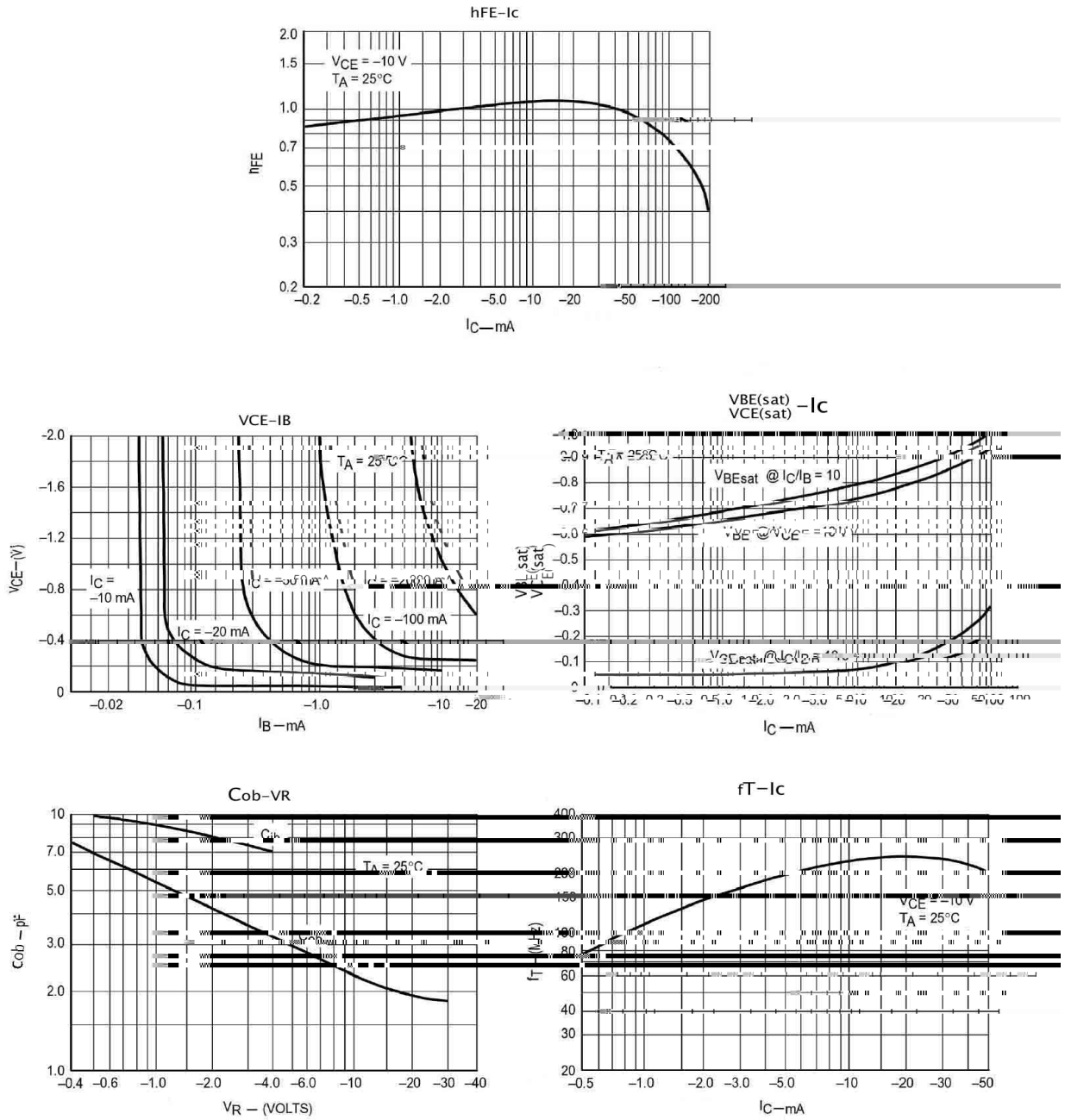
/ Absolute Maximum Ratings(Ta=25)

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage | V_{CBO} | -30 | V |
| Collector to Emitter Voltage | V_{CEO} | -30 | V |
| Emitter to Base Voltage | V_{EBO} | -5.0 | V |
| Collector Current - Continuous | I_C | -100 | mA |
| Emitter Current - Continuous | I_E | 100 | mA |
| Collector Power Dissipation | P_C | 625 | mW |
| Junction Temperature | T_j | 150 | |
| Storage Temperature Range | T_{stg} | -55 150 | |

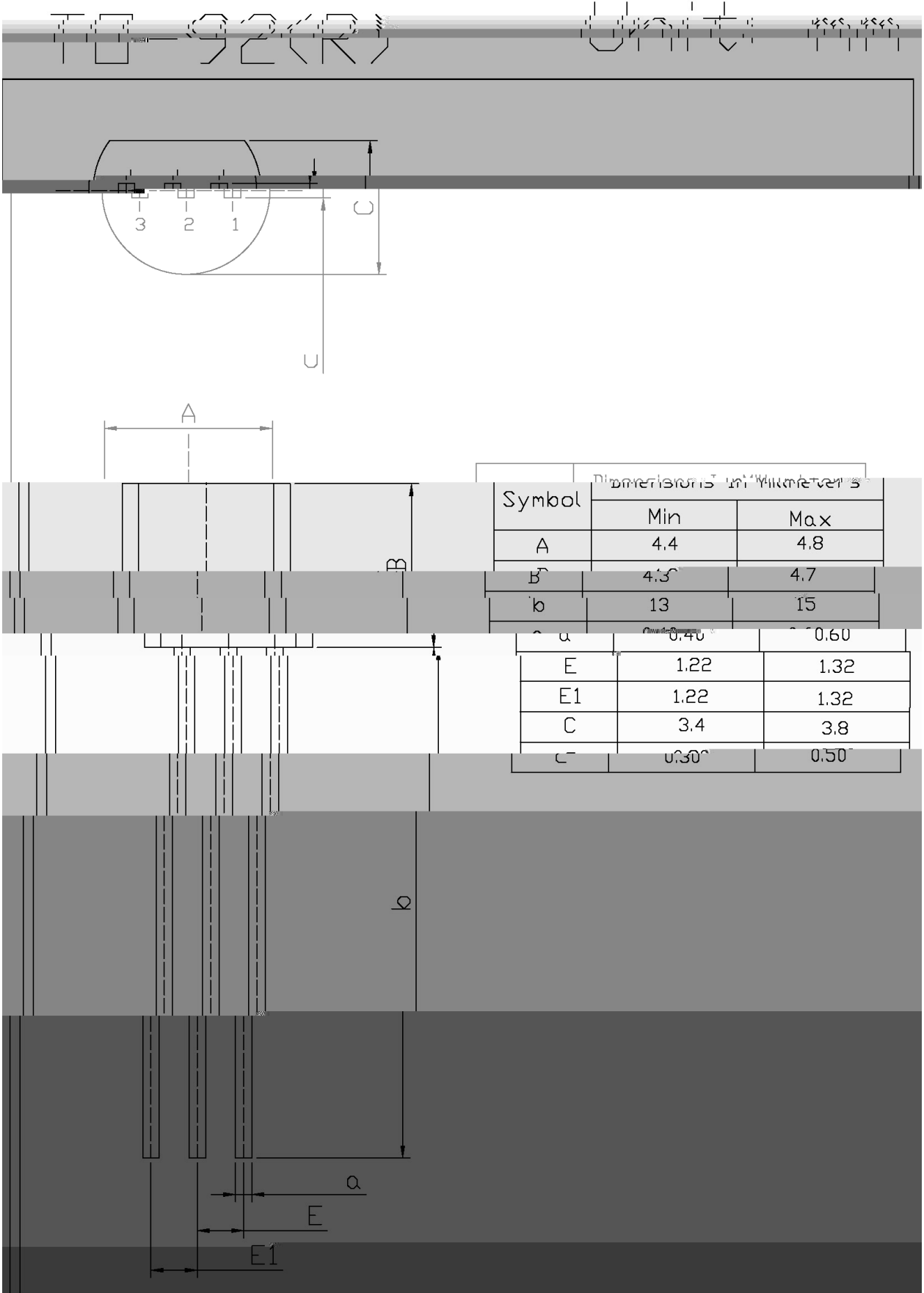
/ Electrical Characteristics(Ta=25)

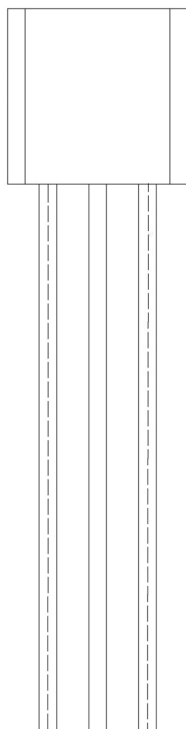
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|------|------|--------|------|
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-30V$ $I_E=0$ | | | -0.015 | A |
| DC Current Gain | h_{FE} | $V_{CE}=-5.0V$ $I_C=-2.0mA$ | 125 | | 800 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-100mA$ $I_B=-5.0mA$ | | | -0.65 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=-100mA$ $I_B=-5.0mA$ | | -0.9 | -1.1 | V |
| Base-Emitter Voltage | $V_{BE(1)}$ | $V_{CE}=-5.0V$ $I_C=-2.0mA$ | -0.6 | | -0.75 | V |
| | $V_{BE(2)}$ | $V_{CE}=-5.0V$ $I_C=-10mA$ | | | -0.8 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE}=-5.0V$ $I_C=-10mA$ $f=100MHz$ | | 150 | | MHz |
| Transition Frequency | C_{ob} | $V_{CB}=-10V$ $f=1.0MHz$ | | 4.5 | | pF |
| Noise Figure | NF | $V_{CE}=-6.0V$ $I_C=-0.1mA$ $R_g=10K$ $f=1.0KHz$ | | 1.0 | 10 | dB |

/ Electrical Characteristic Curve

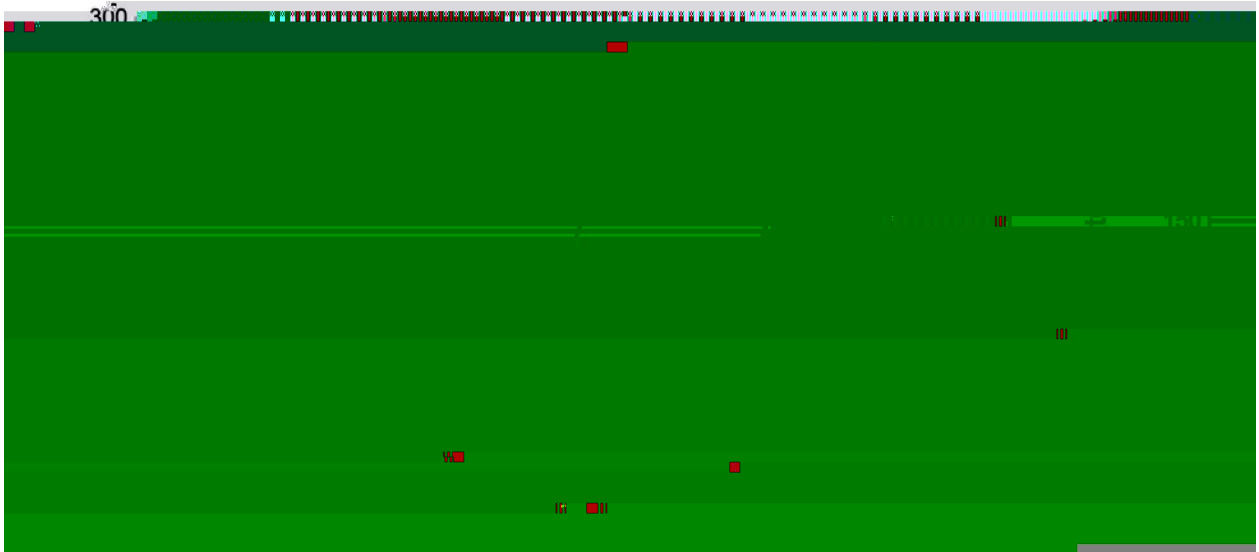


/ Package Dimensions





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



- | | | | | | | |
|---|-------|-----|-----------|--------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | Note: | 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

/ Packaging SPEC.

/ BULK

| Package Type | Units | | | | Dimension | | (unit mm ³) |
|--------------|-------|--|--|--|-----------|--|-------------------------|
| | | | | | | | |
| | | | | | | | |

/ AMMO

| Package Type | Units | | | | Dimension | | (unit mm ³) |
|--------------|-------|--|--|--|-----------|--|-------------------------|
| | | | | | | | |
| | | | | | | | |

/ Notices