

### / Descriptions

TO-92                      NPN                      Silicon NPN transistor in a TO-92 Plastic Package.

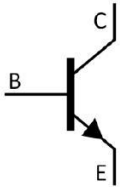
### / Features

$h_{FE}$ ,  
Low noise, high  $h_{FE}$ , high breakdown voltage.

### / Applications

Low noise audio amplifier application.

### / Equivalent Circuit



### / Pinning



PIN1    Base                      PIN 2    Collector                      PIN 3    Emitter

### / $h_{FE}$ Classifications & Marking

|                                    |         |         |         |
|------------------------------------|---------|---------|---------|
| $h_{FE}$ Classifications<br>Symbol | Y       | GR      | BL      |
| $h_{FE}$ Range                     | 120~240 | 200~400 | 350~700 |

| Parameter                      | Symbol    | Rating  | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage      | $V_{CBO}$ | 120     | V    |
| Collector to Emitter Voltage   | $V_{CEO}$ | 120     | 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 |      |

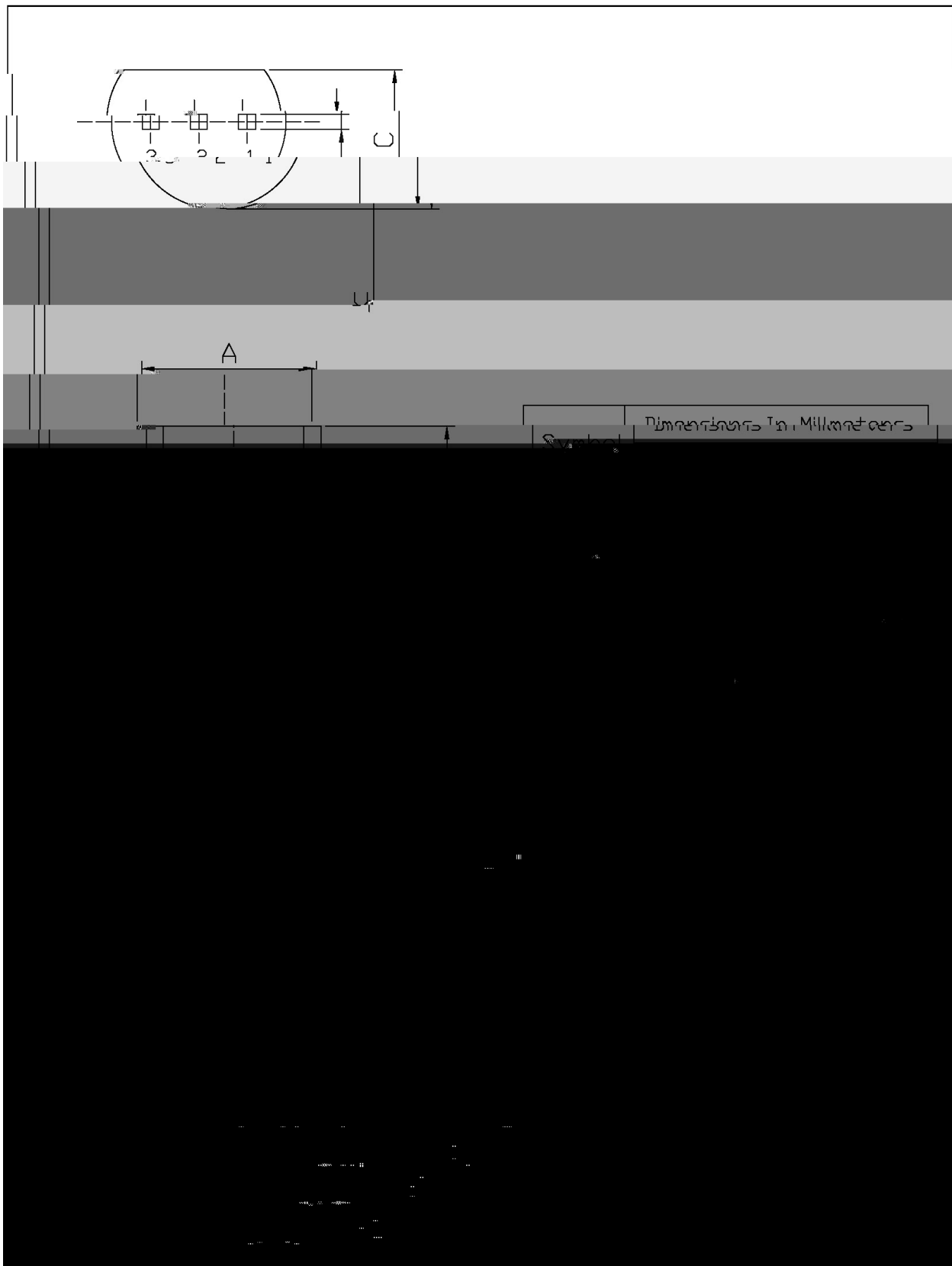
| Parameter                              | Symbol    | Test Conditions        | Min | Typ | Max | Unit |
|----------------------------------------|-----------|------------------------|-----|-----|-----|------|
| Collector to Base Breakdown Voltage    | $V_{CBO}$ | $I_C=1.0mA$ $I_B=0$    | 120 |     |     | V    |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | $I_C=100\mu A$ $I_E=0$ | 120 |     |     | V    |
| Emitter to Base Breakdown Voltage      | $V_{EBO}$ | $I_E=100\mu A$ $I_C=0$ | 5.0 |     |     | V    |
| Collector Cut-Off Current              | I         |                        |     |     |     |      |



/ Package Dimensions

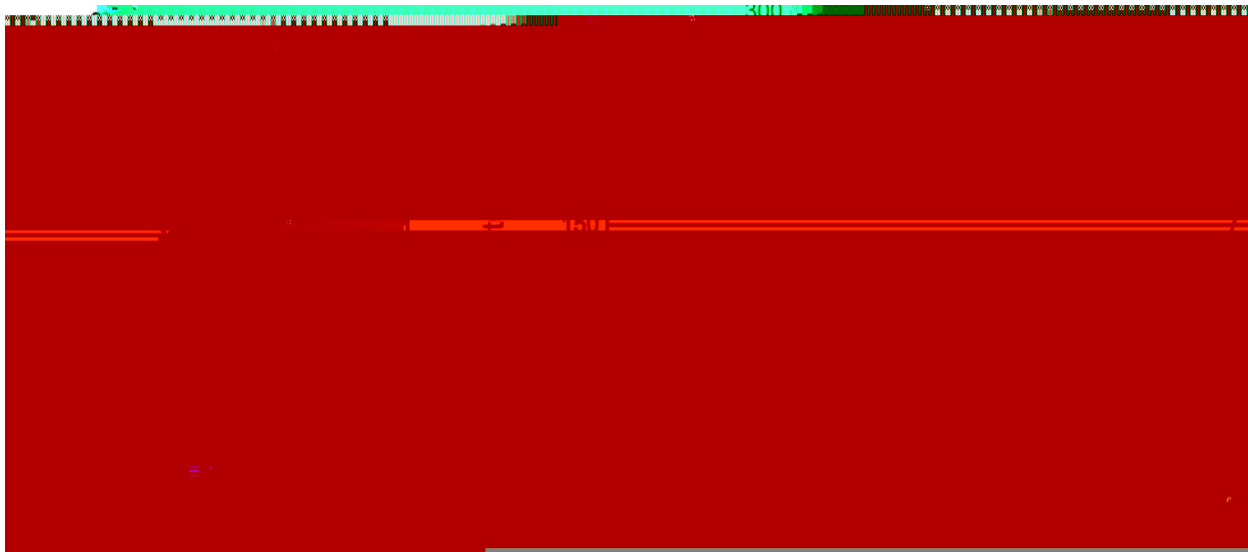
T0-92

Unit: mm





( ) / 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

/ Packaging SPEC.

/ BULK

| Package Type | Units |  |  |  |  | Dimension |  | (unit mm3) |
|--------------|-------|--|--|--|--|-----------|--|------------|
|              |       |  |  |  |  |           |  |            |
|              |       |  |  |  |  |           |  |            |
|              |       |  |  |  |  |           |  |            |

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