

## / Descriptions

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

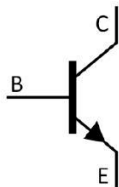
## / Features

High collector-Base voltage.

## / Applications

Color TV chroma output.

## / Equivalent Circuit



## / Pinning



PIN1   Base      PIN 2   Collector      PIN 3   Emitter

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

$h_{FE}$  ClassiH

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 300     | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 300     | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 7.0     | V    |
| Collector Current (DC)       | $I_C$     | 100     | mA   |
| Collector Power Dissipation  | $P_C$     | 1.0     | W    |
| Junction Temperature         | $T_j$     | 150     |      |
| Storage Temperature Range    | $T_{stg}$ | -55 150 |      |

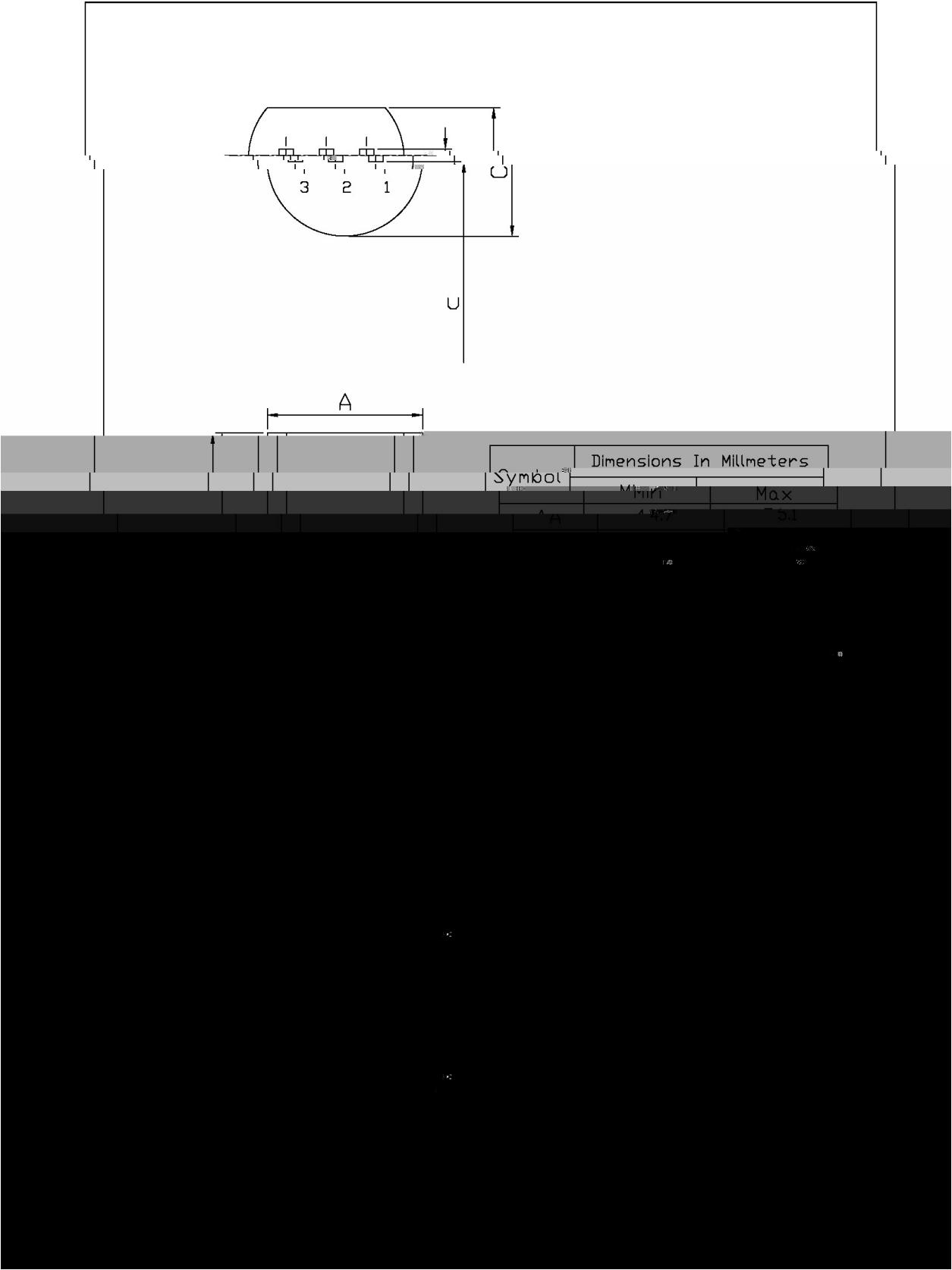
| Parameter                               | Symbol        | Test Conditions                       | Min | Typ | Max | Unit |
|-----------------------------------------|---------------|---------------------------------------|-----|-----|-----|------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$     | $I_C=100\text{ A}$ $I_E=0$            | 300 |     |     | V    |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=5.0\text{mA}$ $I_B=0$            | 300 |     |     | V    |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=-100\text{ A}$ $I_C=0$           | 7.0 |     |     | V    |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=200\text{V}$ $I_E=0$          |     |     | 0.1 | A    |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=10\text{V}$ $I_C=20\text{mA}$ | 40  |     | 240 |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=10\text{mA}$ $I$                 |     |     |     |      |

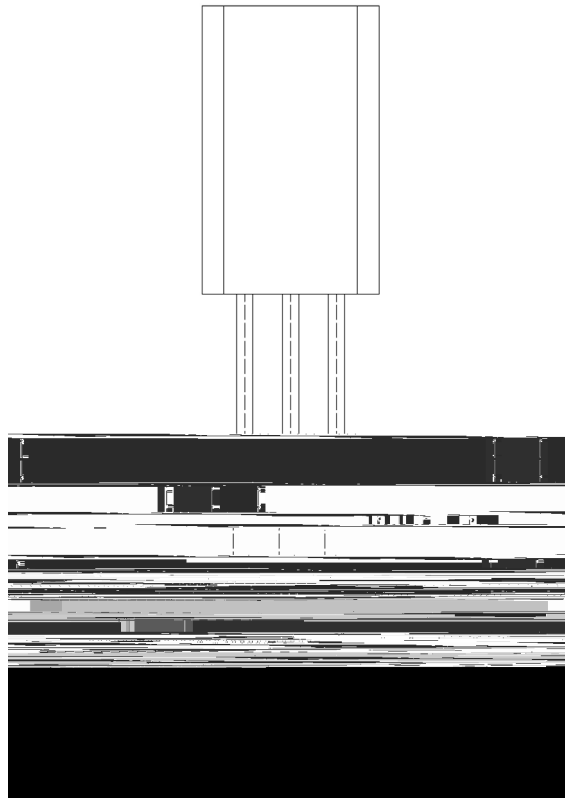
**/ Electrical Characteristic Curve**

/ Package Dimensions

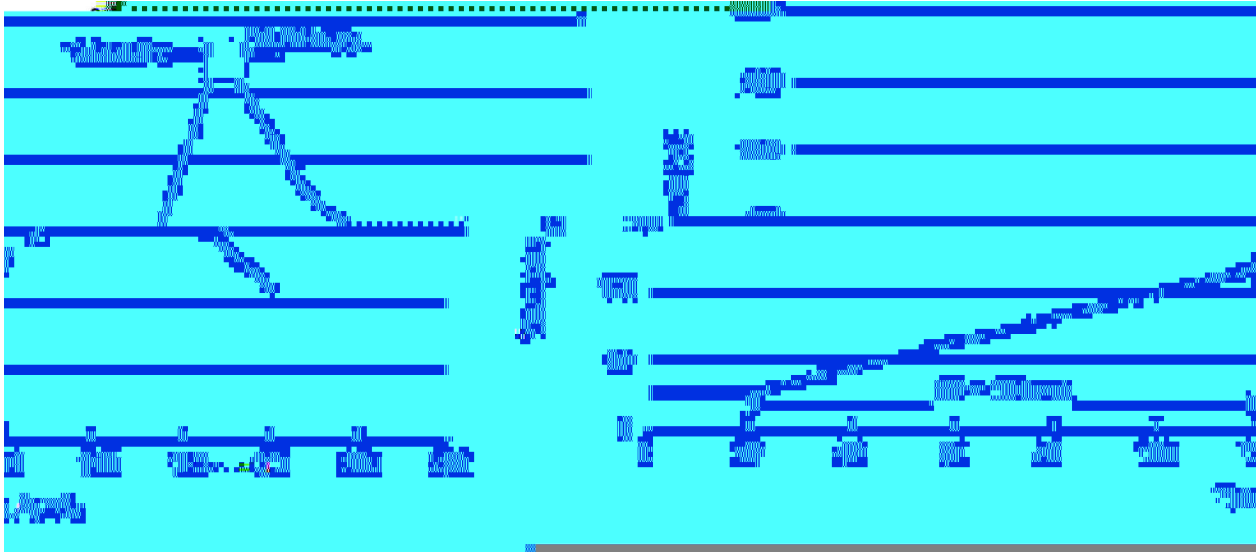
T0-92LM

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) |             |             |
|--------------|----------------|---------------------|----------------------|----------------------------|----------------------|----------------------|-------------|-------------|
|              | Units/Bag<br>/ | Bags/Inner Box<br>/ | Units/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Bag                  | Inner Box   | Outer Box   |
| TO-92LM      | 1,000          | 8                   | 8,000                | 5                          | 40,000               | 135×190              | 237×172×102 | 560×245×195 |

/ AMMO

| Package Type | Units           |                     |                     |                            |                      | Dimension (unit mm3) |                            |
|--------------|-----------------|---------------------|---------------------|----------------------------|----------------------|----------------------|----------------------------|
|              | Units/tape<br>/ | Tape/Inner Box<br>/ | Rows/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Inner Box            | Outer Box                  |
| TO-92LM      | 2,500           | 1                   | 100                 | 10                         | 25,000               | 328×230×42           | 480×346×235<br>547×407×268 |

/ Notices