

## Data Sheet

**Customer:**

**Product:** TO-263 SMD Power Resistors – STR35 Series

**Size:** 35W

**Issued Date:** 27-Feb-25

**Edition:** REV.A6



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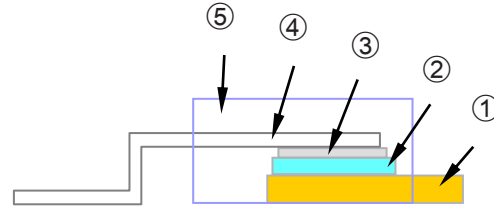
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|---------------------|-----------------|---------------------|------------------------|---------------------------|
| 27-Feb-25           | 27-Feb-25       | 27-Feb-25           |                        |                           |
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## TO-263 SMD Power Resistors – STR35 Series



### Construction



|                     |           |
|---------------------|-----------|
| ① Flange            | ④ Lead    |
| ② Alumina Substrate | ⑤ Molding |
| ③ Resistor Layer    |           |

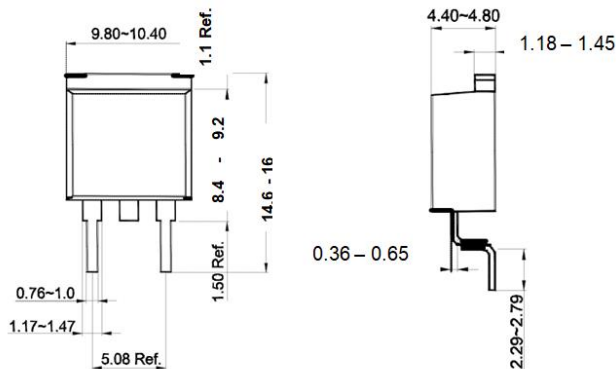
### Features

- 35 watts at 25°C case temperature heat sink mounted
- Molded case for protection and easy to mount
- Resistor is electrically isolated from metal tab

### Applications

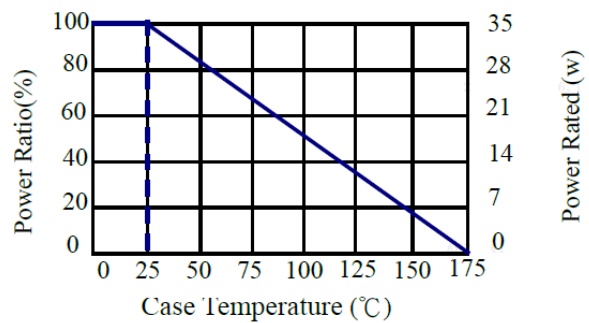
- Switching Power Supplies
- Snubbers Circuits
- Automated Machine Controller
- RF Power Amplifiers
- Low Energy Pulse Loading
- UPS
- Voltage Regulation

### Dimensions



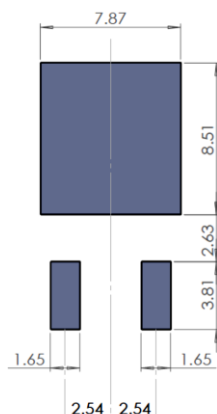
Unit:mm

### Derating Curve



Derating Curve Slope : 0.23W/°K · Thermal resistance : 4.28°K/W

### Recommended Pad Layout



## Part Numbering

| STR          | 35           | J                                       | D                         | D                                                           | 1001                                                             |
|--------------|--------------|-----------------------------------------|---------------------------|-------------------------------------------------------------|------------------------------------------------------------------|
| Product Type | Power        | Resistance Tolerance                    | Packaging Code            | TCR (PPM/°C)                                                | Resistance                                                       |
|              | 35: 35 Watts | D: ±0.5%<br>F: ±1%<br>J: ±5%<br>K: ±10% | T: Taping Reel<br>D: Tube | D: ±50<br>E: ±100<br>F: ±200<br>G: ±300<br>- : No Specified | R100: 0.1Ω<br>0100: 10Ω<br>4700: 470Ω<br>1001: 1KΩ<br>1002: 10KΩ |

## Electrical Characteristics Specifications

| Item<br><br>Type | Resistance Range |             |              |                      | TCR (PPM/°C)         |
|------------------|------------------|-------------|--------------|----------------------|----------------------|
|                  | ±0.5%            | ±1%         | ±5%          | ±10%                 |                      |
| STR35            | -                | -           | 0.05Ω - 0.1Ω |                      | No Specified         |
|                  | -                | ≥ 0.1Ω - 1Ω |              |                      | No Specified         |
|                  | -                | ≥ 1Ω - 5Ω   |              |                      | ±100<br>±200<br>±300 |
|                  | ≥ 10Ω - 100KΩ    |             |              | ±50<br>±100<br>±200  |                      |
|                  | ≥ 5Ω - 10Ω       |             |              | ±100<br>±200<br>±300 |                      |

- Operating Voltage: 350V
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩ min.
- Operating Temperature Range: -55°C to +175°C

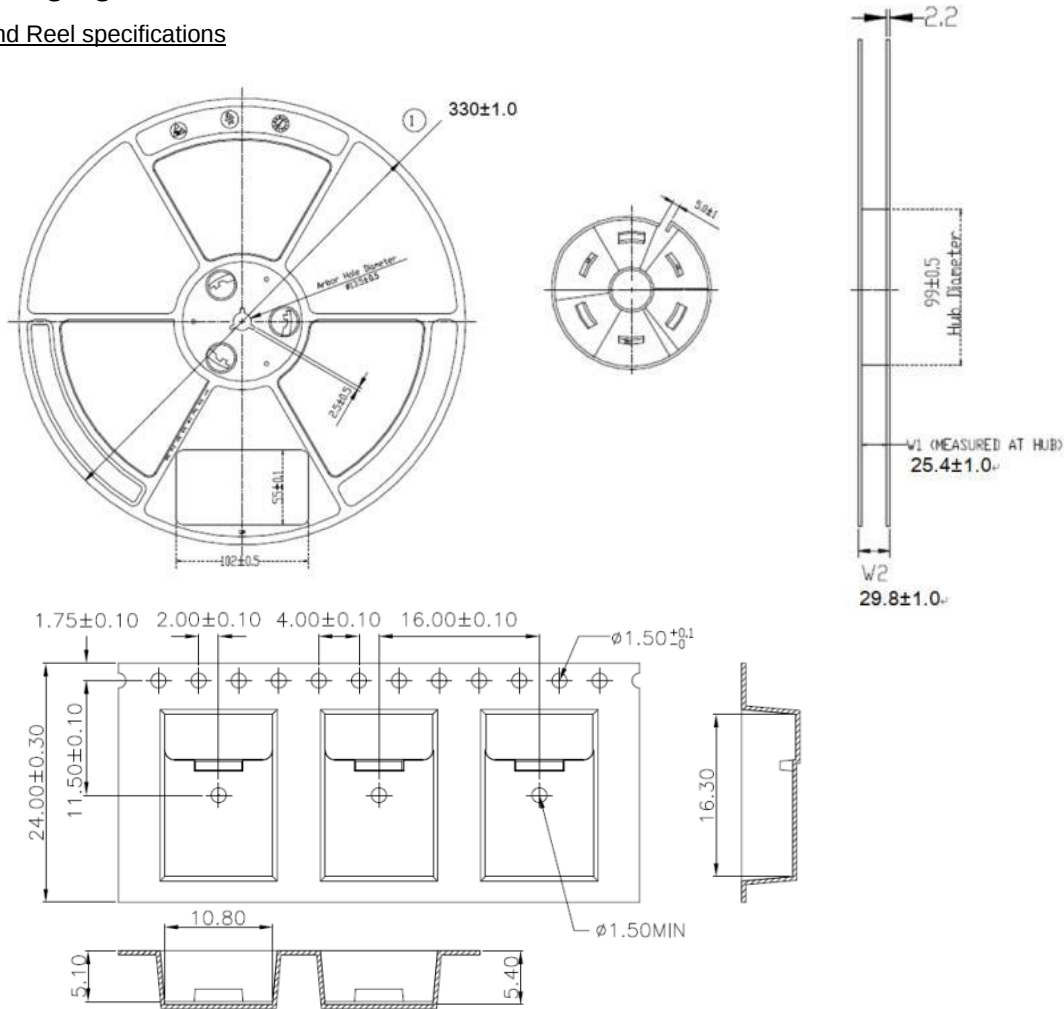
## Environmental Characteristics

| Item                                           | Requirement       | Test Method                                                                                                         |
|------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------|
| Temperature Coefficient of Resistance (T.C.R.) | As Spec.          | Referenced to 25°C, ΔR taken at +105°C                                                                              |
| Short Time Overload                            | ΔR±0.3%           | 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds |
| Load Life                                      | ΔR±1.0%           | 2,000 hours at rated power                                                                                          |
| Damp Heat with Load                            | ΔR±0.5%           | 40±2°C, 90~95% R.H., RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5 hr "OFF"                                           |
| Solderability                                  | 90% min. Coverage | 270±5°C for 3 seconds                                                                                               |
| Temperature Cycling                            | ΔR±0.3%           | -65°C~+150°C, 100 cycles                                                                                            |
| Terminal Strength                              | ΔR±0.2%           | (Pull Test)2.4N                                                                                                     |
| Vibration, High Frequency                      | ΔR±0.2%           | 20g peak                                                                                                            |
| Moisture Sensitivity Level                     | 1                 | -                                                                                                                   |

- Lead Material: Tinned Copper
- Without a Heat Sink, When in Free Air at 25°C, the STR35 is Rated for 2.5W
- The Case Temperature is to be used for the Definition of the Applied Power Limit
- The Case Temperature Measurement must be made with a Thermocouple Contacting the Center of the Component mounted on the Designed Heat Sink.
- Thermal Grease should be Applied Properly.

## ■ Packaging

## Tape and Reel specifications



| Type  | Packaging Quantity |
|-------|--------------------|
|       | Reel               |
| STR35 | 500 pcs            |

Tube Packaging Quantity

| Type  | Packaging Quantity |
|-------|--------------------|
|       | Tube               |
| STR35 | 50 pcs             |

**REVISION HISTORY**

| <b><u>REVISION</u></b> | <b><u>DATE</u></b> | <b><u>CHANGE NOTIFICATION</u></b> | <b><u>DESCRIPTION</u></b>                                                                                                                                                                                        |
|------------------------|--------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version A6             | Feb 27 ,2025       | -                                 | <ul style="list-style-type: none"><li>-Add Recommended Pad Layout</li><li>-Update Environmental Characteristics</li><li>-Change the operating temperature</li><li>-Change the Packaging specifications</li></ul> |