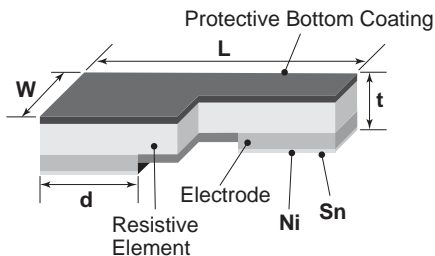




### features

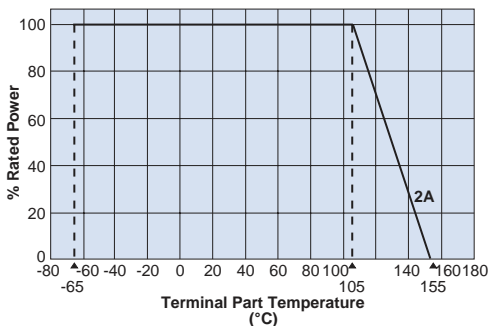
- SMD type of small size, metal plate low resistance resistor for current detection
- Low height suitable for use of small equipment such as mobile phone
- High reliability and performance with T.C.R  $\pm 100 \times 10^{-6}/K$
- Suitable for reflow soldering (Not suitable for flow soldering)
- Products meet EU RoHS requirements
- AEC-Q200 Tested 0805 (2A)

### dimensions and construction



| Size Code    | Resistance | Dimensions inches (mm)   |                          |                          |                          |
|--------------|------------|--------------------------|--------------------------|--------------------------|--------------------------|
|              |            | L                        | W                        | d                        | t                        |
| TLR2A (0805) | 2mΩ        | .079±.008<br>(2.00±0.20) | .049±.008<br>(1.25±0.20) | .024±.008<br>(0.60±0.20) | .012±.006<br>(0.30±0.15) |
|              | 3mΩ        |                          |                          | .024±.008<br>(0.60±0.20) | .010±.006<br>(0.25±0.15) |
|              | 4mΩ        |                          |                          | .018±.008<br>(0.45±0.20) |                          |
|              | 5mΩ        |                          |                          | .026±.008<br>(0.65±0.20) |                          |
|              | 6mΩ        |                          |                          | .022±.008<br>(0.55±0.20) | .012±.006<br>(0.30±0.15) |
|              | 7mΩ        |                          |                          | .020±.008<br>(0.50±0.20) |                          |
|              | 8mΩ        |                          |                          | .020±.008<br>(0.50±0.20) |                          |
|              | 9mΩ        |                          |                          | .018±.008<br>(0.45±0.20) | .016±.006<br>(0.26±0.15) |
|              | 10mΩ       |                          |                          | .014±.008<br>(0.35±0.20) |                          |

### Derating Curve



For resistors operated at an ambient temperature of 105°C or above, a power rating shall be derated in accordance with the above derating curve.

### ordering information

|            |              |                      |                              |   |                      |
|------------|--------------|----------------------|------------------------------|---|----------------------|
| <b>TLR</b> | <b>2A</b>    | <b>T</b>             | <b>TD</b>                    | <b>10L0</b>   | <b>J</b>             |
| Type       | Power Rating | Termination Material | Packaging                    | Nominal Resistance  | Resistance Tolerance |
| TLR        | 2A: 1W       | T: Sn                | TD: 7" 4mm pitch punch paper | ±1%: 4 digits<br>All values less than 0.1Ω (100m) are expressed in mΩ with "L" as decimal<br>Ex: 1mΩ = 1L00 | F: ±1%               |

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

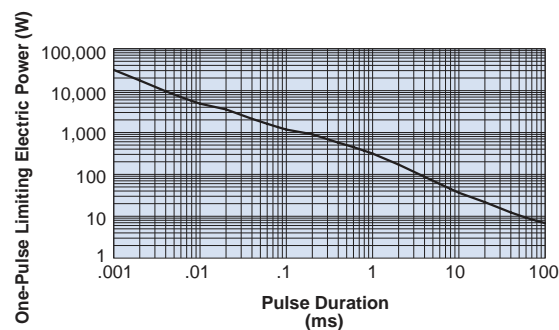
11/28/22

## applications and ratings

| Part Designation | Power Rating | T.C.R. (ppm/°C) Max. | Standard Resistance (Ω)             | Resistance Tolerance | Rated Terminal Part Temperature | Operating Temperature Range |
|------------------|--------------|----------------------|-------------------------------------|----------------------|---------------------------------|-----------------------------|
| TLR2A            | 1W           | ±100                 | 2m, 3m, 4m, 5m, 6m, 7m, 8m, 9m, 10m | F: ±1%               | 105°C                           | -65°C to +155°C             |

## environmental applications

### One-Pulse Limiting Electric Power



Please ask us about the resistance characteristic of continuous applied pulse.

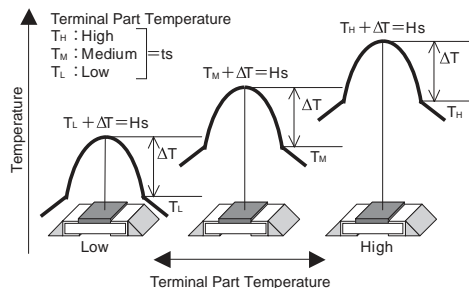
The pulse endurance values are not assured values, so be sure to check the products on actual equipment when you use them.

### Thermal Resistance

| Type  | Resistance (Ω) | Rth (°C/W) |
|-------|----------------|------------|
| TLR2A | 2m             | 26.1       |
|       | 10m            | 54.7       |

$$R_{th} = (H_s - t_s) / \text{Power}$$

Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions. Please refer to us before use.



The temperature of the resistor will increase the same  $\Delta T$  from the standard terminal part temperature regardless of the ambient temperature when the same power is applied. This is because there is hardly any heat dissipation from the resistor surface to the ambient air.

## Performance Characteristics

| Parameter  | Requirement $\Delta R \%$       |                                     | Test Method   |
|--|---------------------------------|-------------------------------------|---|
|  | Limit                           | Typical                             |   |
| Resistance   | Within regulated tolerance      | —                                   | 25°C  |
| T.C.R.   | Within specified T.C.R.         | —                                   | +25°C/+125°C  |
| Overload (Short time)                                    | ±1                              | ±0.05                               | Rated power x 2.5 for 5 seconds   |
| Resistance to Solder Heat                                | ±1                              | ±0.01                               | 260°C ± 5°C, 10 ~ 12 seconds  |
| Rapid Change of Temperature                              | ±1                              | ±0.2                                | -55°C (15 minutes), +150°C (15 minutes), 1000 cycles                      |
| Moisture Resistance                                      | ±1                              | ±0.3                                | 85°C, 85%RH, 1000 hours, 10% Bias   |
| Endurance at 105°C and Less of Terminal Part Temperature | ±1                              | ±0.4                                | Terminal part temperature: 105°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Low Temperature Exposure                                 | ±1                              | ±0.05                               | -65°C, 96 hours   |
| High Temperature Exposure                                | ±1 (2~4m, 7~10m)<br>±2 (5m, 6m) | ±0.5 (2~4m, 7~10m)<br>±0.8 (5m, 6m) | 155°C, 1000 hours   |

Note: Please contact factory for the TLRZ Performance Characteristics