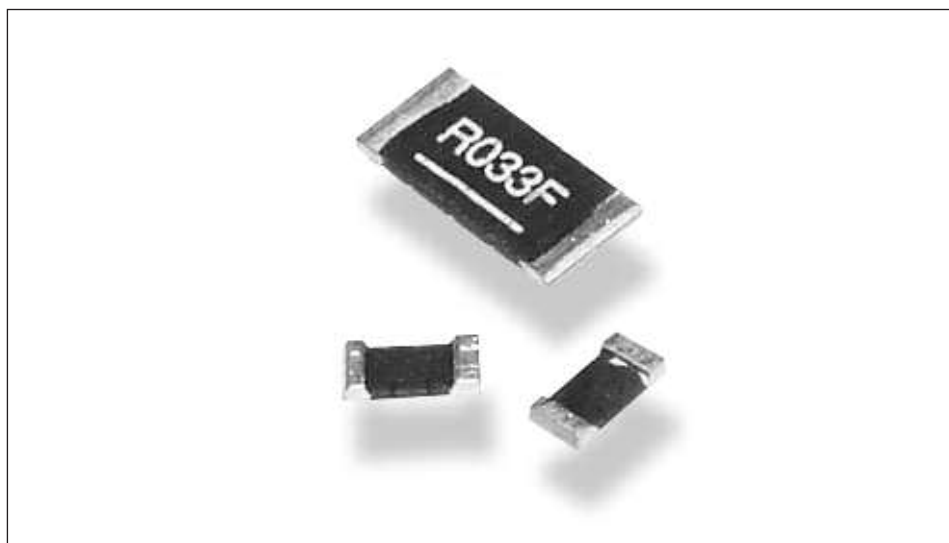


## Type TLR Series

### Key Features

- Up to 3 Watt at 80°C
- Supplied on Tape
- Ideal for Current Detection
- 12:06, 20:10 and 25:12 Packages Available

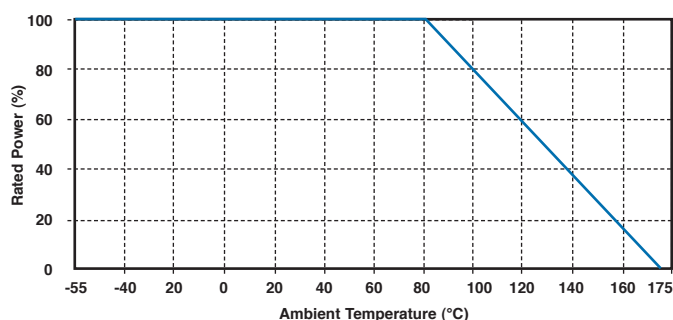


TE Connectivity (TE) is pleased to offer this unique High Power, metal chip resistor for current sensing positions. It has a special metal resistive element and suitable barrier layers beneath the solder to prolong terminal life. Following the developments by semiconductor manufacturers in the production of a range of IC's for battery charge management and low voltage power supplies, the TLR Series satisfies the demand for a low ohmic shunt resistor to act as a current sensor. It has particular applications in the automotive industry for sensing in EMU's.

### Characteristics - Electrical

|                                | 1206       | 2010            | 2512                        |
|--------------------------------|------------|-----------------|-----------------------------|
| <b>Resistance Value Range:</b> | R001 - R01 | R001 - R01      | R0005 - R015                |
| <b>Resistance Tolerance:</b>   |            | ±1% ±3% ±5%     |                             |
| <b>Power Rating:</b>           | 1.0 Watt   | 1.0 / 1.5 Watts | 1.0 / 2.0 / 2.5 / 3.0 Watts |
| <b>Operating Temperature:</b>  |            | -55°C to +170°C |                             |
| <b>Inductance:</b>             |            | See below chart |                             |
| <b>T.C.R.</b>                  |            | See below chart |                             |

### Power Derating Curve



## Type TLR Series

### Inductance Test



### Dimensions



| Type  | L   | W   | H   | D   | Reel Qty |
|-------|-----|-----|-----|-----|----------|
| TLR2B | 3.2 | 1.6 | 0.6 | 0.5 | 2000     |
| TLR2H | 5.1 | 2.5 | 0.6 | 0.5 | 2000     |
| TLR3A | 6.4 | 3.2 | 0.6 | 0.8 | 2000     |

N.B. Dimensions shown are reference only. For exact Dimensions please see relevant drawing.

### Standard Electrical Specifications

| Size | Power Rating (W) | Value Range (mΩ) | TCR (ppm/°C) | Resistance Tolerance (±%) |
|------|------------------|------------------|--------------|---------------------------|
| 1206 | 1.0              | 1.0 - 10         | 50           | 1,3,5                     |
| 2512 | 1.0              | 0.5 - 2.0        | 50           | 1,3,5                     |
|      |                  | 11 - 15          | 50           |                           |
|      |                  | 6.0 - 7.0        | 75           |                           |
|      |                  | 4.0 - 5.0        | 100          |                           |
|      |                  | 2.5 - 3.0, 10    | 150          |                           |

## Type TLR Series

### High Power Rating Electrical Specifications

| Size | Power Rating (W) | Value Range (mΩ) | TCR (ppm/°C) | Resistance Tolerance (±%) |
|------|------------------|------------------|--------------|---------------------------|
| 2010 | 1.5              | 1.0 - 10         | 50           | 1,3,5                     |
|      | 2.0              | 0.5 - 10         | 50           |                           |
|      | 2.5              | 4.0 - 6.0        | 50           |                           |
| 2512 | 3.0              | 0.5 - 0.75       | 100          | 1,3,5                     |
|      |                  | 1.0 - 3.0        | 50           |                           |

### Resistance codes example - 3 Marking

| Resistance | 0.5mΩ | 0.75mΩ |
|------------|-------|--------|
| Codes      | M50   | M75    |

### Resistance codes example - 4 Marking

| Resistance | 1mΩ  | 1.5mΩ | 2mΩ  | 7mΩ  | 10mΩ |
|------------|------|-------|------|------|------|
| Codes      | R001 | 1M50  | R002 | R007 | R010 |

### How to Order

| TLR                                           | 2B                                  | 10                                                       | D                                                                      | R022                                                                                      | J                             | TDG               |
|-----------------------------------------------|-------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------|-------------------|
| Common Part                                   | Dimensions                          | *Power Rating                                            | **TCR                                                                  | Resistance Code                                                                           | Tolerance                     | Packaging         |
| TLR - Ultra Low Ohm Metal Strip Chip Resistor | 2B - 1206<br>2H - 2010<br>3A - 2512 | 1.0 - 10<br>1.5 - 15<br>2.0 - 20<br>2.5 - 25<br>3.0 - 30 | D - ±50 PPM/°C<br>W - ±75 PPM/°C<br>E - ±100 PPM/°C<br>K - ±150 PPM/°C | R0005 - 0.0005Ω<br>R00075 - 0.00075Ω<br>R0015 - 0.0015Ω<br>R002 - 0.002Ω<br>R022 - 0.022Ω | J - ±5%<br>H - ±3%<br>F - ±1% | TDG - 2000 / Reel |

\* See above chart for Power rating availability per case size

\*\* See above chart for TCR availability per Ohmic Value

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