

Trimmable Chip Resistors

Type TCR Series

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Precious metal terminations are screen printed onto a ceramic base and fired. The resistive element is screen printed and fired and the passivation layer added. The pre-scribed tile is broken into strips, the end plating is fired on and the strips broken into individual components. Final termination is made by electroplating.

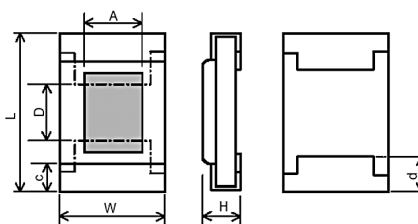
Key Features

- TCR chip resistors are suitable for most applications, including high frequency operation, owing to the short lead structure and low capacitance.
- The TCR series of chip resistors is designed to be used in circuits where variable resistors might otherwise be used.
- The resistance film and the coating have been specified to permit YAG laser trimming.
- Case sizes 0805 and 1206.

Characteristics - Electrical

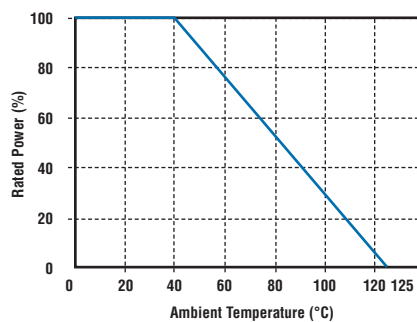
| | 0805 | | 1206 | |
|---|--------------|-------|-----------|-------|
| Rated Power @ 70°C (W): | 0.1 | | 0.125 | |
| Resistance Range (Ohms) | Min: 1 | 10 | 1 | 10 |
| | Max: 9.1 | 4M7 | 9.1 | 4M7 |
| Selection Series | E24 | | | |
| Tolerance (%): | ±15 or 0/-30 | | | |
| Code Letter: | L P | | | |
| Temperature Coefficient (ppm/°C): | -200/+500 | ± 200 | -200/+500 | ± 200 |
| Operating Temperature Range (°C): | -55 to +125 | | | |
| Climatic Category: | 55/125/56 | | | |
| Limiting Element Voltage (V): | 150 | | 200 | |
| Insulation Resistance Dry Min (M ohms): | 1000 | | | |

Dimensions



| Style | L | W | H | A | D | c | d |
|-------|------------|-------------|------------|------------|------------|------------|------------|
| 0805 | 2.0 ± 0.1 | 1.25 ± 0.10 | 0.55 ± 0.1 | 0.71 ± 0.1 | 0.66 ± 0.1 | 0.4 ± 0.2 | 0.4 ± 0.2 |
| 1206 | 3.2 ± 0.15 | 1.6 ± 0.15 | 0.55 ± 0.1 | 0.95 ± 0.1 | 1.30 ± 0.1 | 0.5 ± 0.25 | 0.5 ± 0.25 |

Power Derating Curve



Marking

TCR series resistors are not marked.

Mounting

The resistors are suitable for processing on automatic insertion equipment.

Storage

Unopened reels should be stored within a temperature range of +5 °C to +25 °C, separated from any dust, chemicals and solvent based materials. Non-adherence to this procedure could effect the solderability of this product.

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Performance Characteristics

The evaluation of the performance characteristics is carried out with reference to IEC specifications QC 400 000 and QC 400 600

| TEST REF | Long Term Tests \pm (5% + 0.1 ohm) |
|----------|--|
| 4.23 | Climatic sequence |
| 4.24 | Damp heat, steady state |
| 4.25.1 | Endurance at 70°C |
| 4.25.3 | Endurance at 125°C |
| TEST REF | Short Term Tests \pm (1% + 0.05 ohm) |
| 4.13 | Overload |
| 4.32 | Adhesion |
| 4.33 | Bond strength of end face plating |
| 4.19 | Rapid change of temperature |
| 4.18 | Resistance to soldering heat |

How to Order

Orders for these components should include the following information:-
Type, tolerance code letter and value e.g. **TCR0805L470K**.