

LR2512H

Metal Alloy Low-Resistance Resistor

- This specification is applicable to lead free and halogen free for LR2512H-3W
10.1mΩ~80.0mΩ metal alloy low-resistance resistor.



■ GENERAL SPECIFICATIONS

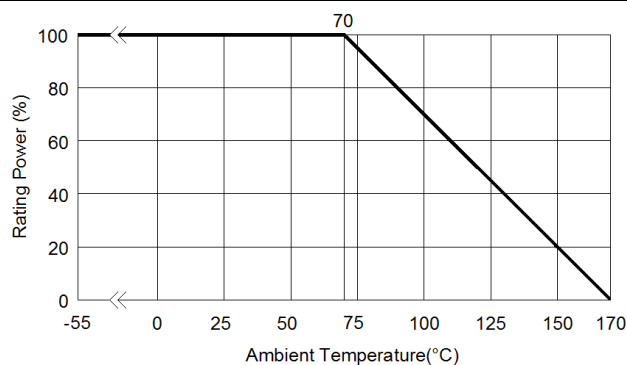
| Type | Rating Power | Rating Current | Overload Current | T.C.R. (ppm/°C) | Resistance Range (mΩ) | | Operating Temperature Range |
|-------|--------------|----------------|------------------|------------------------------------|-----------------------|-----------------|-----------------------------|
| | | | | | D (±0.5%) | F (±1%) | |
| | | | | | | G (±2%) | |
| | | | | | | J (±5%) | |
| 2512H | 2W | 12.91A | 28.87A | 12~18mΩ : ≤±50 76~200mΩ : ≤±100 | - | 12~18 76~200 | -55~170°C |
| | 3W | 17.3A | 38.54A | 10.1~80.0mΩ : ≤±50 | 10.1~50.0 | 10.1~80.0 | |

■ CHARACTERISTICS

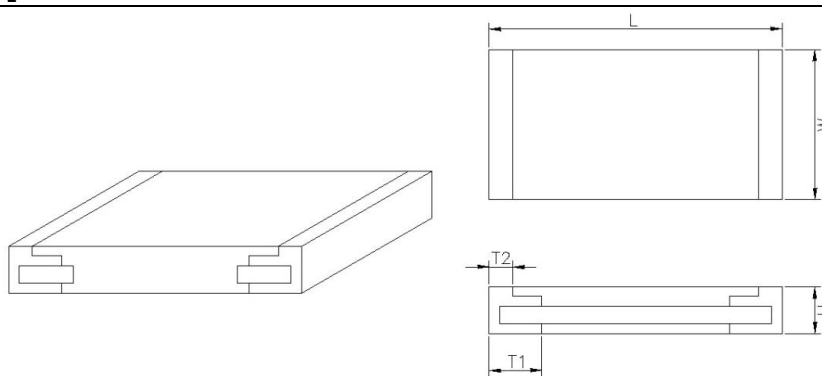
| | | |
|--|---|---|
| Temperature Coefficient of Resistance | Refer to Paragraph general specifications | JIS C 5201-1 4.8 Method; $TCR(ppm/°C) = \{(R2-R1)/R1(T2-T1)\} \times 10^6$ R1 : Resistance of room temp.(T1), R2 : Resistance of 150°C(T2) |
| Short Time Overload | $(\Delta R/R1) \leq \pm 0.5\%$ | JIS C 5201-1 4.13 Method; 5times rated power, 5seconds |
| Insulation Resistance | $\geq 10^9 \Omega$ | JIS C 5201-1 4.6 Method; DC100V _{DC} for 1minute |
| Dielectric Withstanding Voltage | No short or burned on the appearance | JIS C 5201-1 4.7 Method; Applied AC500V _{AC} for 1minute, Limit surge current maximum 50mA |
| Resistance to Solder Heat | $(\Delta R/R1) \leq \pm 0.5\%$ | JIS C 5201-1 4.18 Method; Solder temperature/immersion time : 260±5°C, 10±1seconds |
| Solderability | 95% coverage | JIS C 5201-1 4.17 Method; 245±5°C, 3±0.5 seconds |
| Resistance to solvent | $(\Delta R/R1) \leq \pm 0.5\%$ | JIS C 5201-1 4.29 Method : Immersion time : 60 seconds, @20°C~25°C |
| Low Temperature Exposure(Storage) | $(\Delta R/R1) \leq \pm 0.5\%$ | JIS C 5201-1 4.23.4 Method : 1,000hours, @-55°C |
| High Temperature Exposure(Storage) | $(\Delta R/R1) \leq \pm 1.0\%$ | JIS C 5201-1 4.23.2 Method : 1,000hours, +170°C |
| Temperature Cycling (Rapid Temp. Change) | $(\Delta R/R1) \leq \pm 0.5\%$ | JIS-C5201-1 4.19 Method : -55°C to +150°C, 1,000cycles, Dwell time : 30min maximum. |
| Moisture Resistance (Climatic Sequence) | $(\Delta R/R1) \leq \pm 0.5\%$ | Mil-STD-202, Method 106 |
| Bias Humidity | $(\Delta R/R1) \leq \pm 0.5\%$ | JIS C 5201-1 4.24 Method : +85°C, 85% RH, 10% Bias, 1.5 hours On, 0.5 hours Off. Extended Life Test : 1,000 hours. |
| Load Life | $(\Delta R/R1) \leq \pm 1.0\%$ | JIS C 5201-1 4.25 Method : Test temperature 70°C Rated working voltage 1.5hours On, 0.5hours Off. Extended Life Test : 1,000 hours |

* Remark: ΔR = (resistance after stress – resistance before stress); R1 means resistance before stress

DERATING CURVE

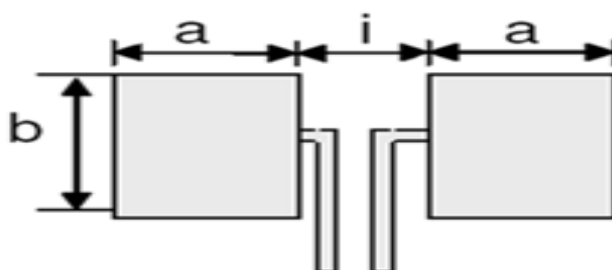


DIMENSIONS [mm]



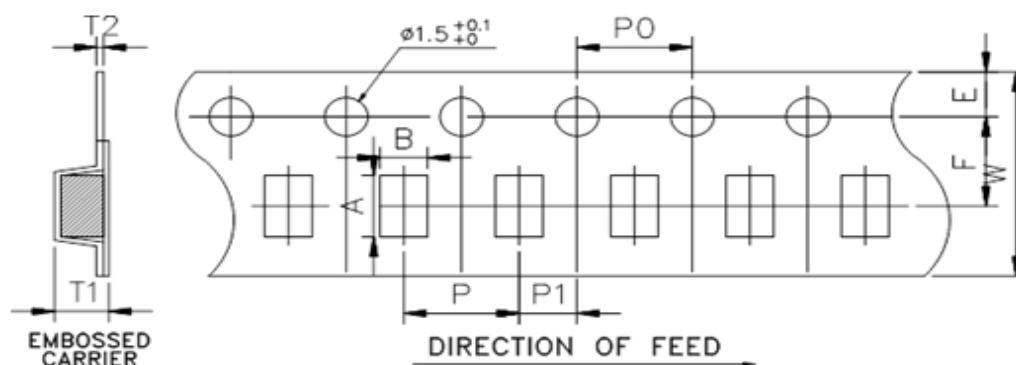
| Type | Rating Power | Resistance Range (mΩ) | Dimensions – in inches (millimeters) | | | | |
|---------|--------------|-----------------------|--------------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|
| | | | L | W | H | T1 | T2 |
| LR2512H | 2.0 | 12~18 | 0.246±0.010 (6.248±0.254) | 0.126±0.010 (3.202±0.254) | 0.039±0.010 (1.000±0.254) | 0.044±0.010 (1.118±0.254) | 0.0039~0.0394 (0.1~1.0) |
| | | 76~200 | | | | 0.034±0.010 (0.868±0.254) | |
| | 3.0 | 10.1~75.0 | | | | 0.044±0.010 (1.118±0.254) | |
| | | 75.1~80.0 | | | | 0.034±0.010 (0.868±0.254) | |

SOLDER PAD DIMENSIONS

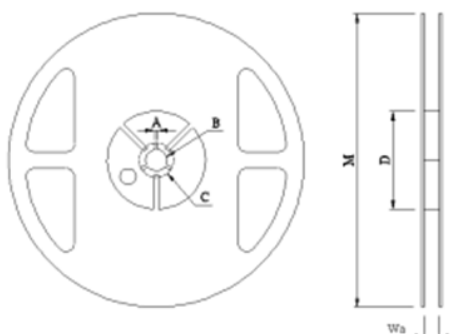


| MODEL | Maximum Power Rating (Watts) | Resistance Range (mΩ) | Dimensions - in millimeters | | |
|---------|------------------------------|-----------------------|-----------------------------|------|------|
| | | | a | b | i |
| LR2512H | 2.0 | 12~18 76~200 | 2.11 | 3.68 | 3.18 |
| | 3.0 | 10.1~80.0 | 2.19 | | 3.00 |

PACKAGING



| DIM | A | B | W | E | F | T1 | T2 | P | P0 | 10*P0 | P1 |
|----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|----------|----------|-----------|----------|
| MODEL | | | | | | | | | | | |
| LR 2512H | 6.75±0.10 | 3.55±0.10 | 12.0±0.30 | 1.75±0.10 | 5.5±0.10 | 1.60±0.10 | 0.20±0.10 | 4.0±0.10 | 4.0±0.10 | 40.0±0.20 | 2.0±0.10 |



| Reel Type / Tape | W | M | A | B | C | D |
|------------------------|------------|-----------|-----------|------------|------------|------------|
| 7" reel for 12 mm tape | 13.8 ± 0.5 | 178 ± 2.0 | 2.0 ± 0.5 | 13.5 ± 0.5 | 21.0 ± 0.5 | 80.0 ± 1.0 |

*Packaging Quantity

| MODEL | Tape width | Max. Packaging Quantity (pcs/reel) | | |
|---------|------------|------------------------------------|-----------|------------|
| | | Embossed Plastic Type | | |
| | | 4mm pitch | 8mm pitch | 12mm pitch |
| LR2512H | 12mm | 2,000pcs | -- | -- |

MARKING FORMAT

- All the products marking are 4 digits

a. "R" designated the decimal location in ohms.

Ex) For 25mΩ the product marking is R025;

b. "m" designated the decimal location in milliohms.

Ex) For 10.5mΩ the product marking is 10m5;



ODERING PROCEDURE EXAMPLE

| | | | | | |
|---------|---------------------|-------------|------------|-----------|--------------------|
| LR2512H | 2 | 3 | R001 | F | 2 |
| Model | Number of terminals | Rated Power | Resistance | Tolerance | Packing 2=2,000pcs |