



Low resistance chip resistors (short-side terminal)

RL series

Features

- Innovative structure that takes consideration of heat dissipation suppress the surface temperature enabling the small sizes reducing the influence of heat on surrounding components.

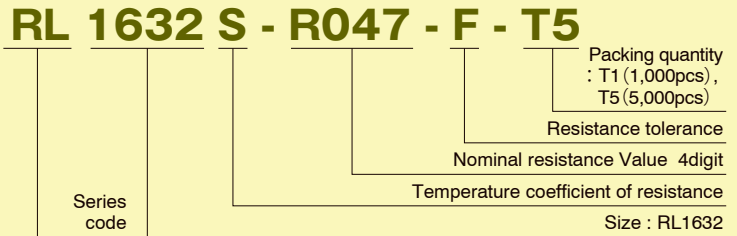
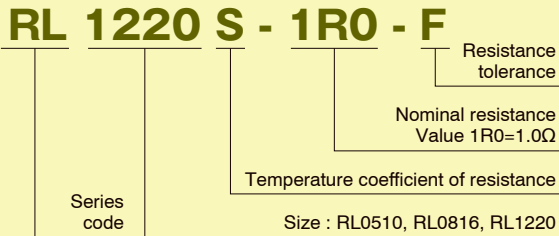
Applications

- PC power sources, inverters, automotive electronics, adapters, industrial machines



*1 : Except for RL0510, RL1632 and RL3264

Part numbering system



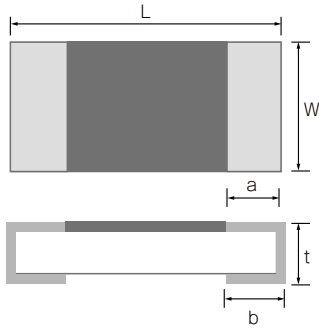
Electrical Specification

| Type | Power ratings | Temperature coefficient of resistance (ppm/°C) | Resistance range(Ω) Resistance tolerance | | | Maximum voltage | Resistance value series | Operating temperature | Packaging quantity |
|--------|---------------|--|--|----------------|---------|-----------------|-------------------------|-----------------------|--------------------|
| | | | ±1% (F) | ±2% (G) | ±5% (J) | | | | |
| RL0510 | 1/8W | 0 ~ +350(T) | 50m < R < 100m | | — | √(P · R) | E-24 | -55°C - 125°C | 10,000pcs |
| | 1/6W | 0 ~ +200(S) | 100m ≤ R ≤ 47 | | — | | | | |
| RL0816 | 1/4W | 0 ~ +200(S) | 20m ≤ R < 100m | | — | | | | |
| | | 0 ~ +350(T) | 20m ≤ R < 100m | | | | | | |
| | 1/5W | 0 ~ +100(R) | 100m ≤ R ≤ 6.8 | — | | | | | |
| | | 0 ~ +200(S) | 7.5 ≤ R ≤ 68 | | | | | | |
| RL1220 | 1/4W | 0 ~ +200(S) | 43m ≤ 91m | | — | | | | |
| | | 0 ~ +350(T) | 10m ≤ 91m | | | | | | |
| | 1/3W | 0 ~ +100(R) | 100m ≤ R ≤ 10 | | | | | | |
| | | 0 ~ +200(S) | 11 ≤ R ≤ 100 | | | | | | |
| RL1632 | 1/2W | 0 ~ +100(R) | 510m ≤ R ≤ 4.7 ^{*1} | 56m ≤ R ≤ 470m | | — | — | | |
| | | 0 ~ +200(S) | — | 33m ≤ R ≤ 51m | | — | | | |
| | | 0 ~ +350(T) | — | 27m ≤ R ≤ 30m | | 18m ≤ R ≤ 24m | | | |
| | | 0 ~ +500(T) | — | — | | 10m ≤ R ≤ 16m | | | |

*1 RL series with resistance tolerance 0.5% is also available. Please contact our sales office.

Current sensing surface mount resistors
RL series

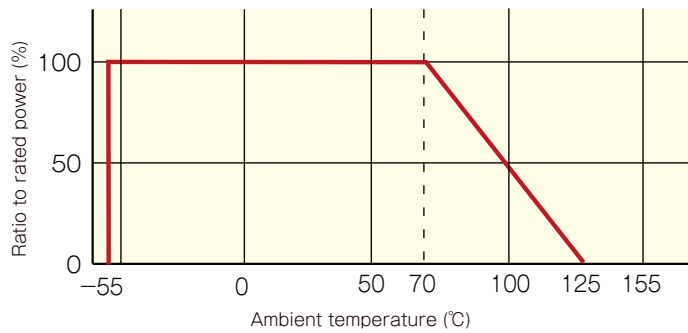
◆ Dimensions



| Type | Size (inch) | L | W | a | b | t |
|--------|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| RL0510 | $R \leq 0.2\Omega$ | 0402 | 1.00 ± 0.05 | 0.50 ± 0.05 | 0.15 ± 0.10 | 0.25 ± 0.10 |
| | $R > 0.2\Omega$ | | | | | 0.15 ± 0.10 |
| RL0816 | $R \leq 0.082\Omega$ | 0603 | 1.60 ± 0.20 | 0.80 ± 0.20 | 0.20 ± 0.15 | 0.25 ± 0.20 |
| | $R > 0.091\Omega$ | | | | | 0.20 ± 0.15 |
| RL1220 | $R \leq 0.068\Omega$ | 0805 | 2.00 ± 0.20 | 1.25 ± 0.20 | 0.40 ± 0.20 | 0.40 ± 0.20 |
| | $R > 0.075\Omega$ | | | | | 0.40 ± 0.10 |
| RL1632 | 1206 | 3.20 ± 0.20 | 1.60 ± 0.20 | — | 1.00 ± 0.15 | 0.50 ± 0.15 |

(unit : mm)

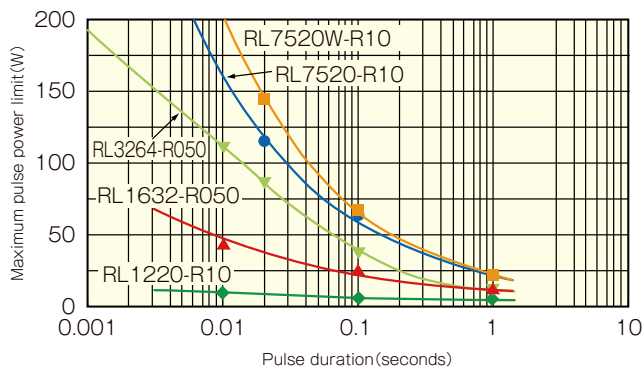
◆ Derating Curve



Current sensing surface mount resistors

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◆ Resistance to pulse power



Test procedure

Voltage pulse is applied to the test samples mounted on the test board.
 After each pulse, resistance drift is measured. Pulse voltage is increased until the drift exceeds +/-0.5%.
 The power at that voltage is defined as the maximum pulse power.