# Low resistance chip resistors
## (short-side terminal)

### ■RL series

Lead free *1 | Halogen free | RoHS Compliance

*1 : Except for RL0510, RL1632 and RL3264

### 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, adopters, industrial machines

## ◆Part numbering system

**RL 1220 S - 1R0 - F**

- Series code
- Size : RL0510, RL0816, RL1220
- Temperature coefficient of resistance
- Nominal resistance Value 1R0=1.0Ω
- Resistance tolerance

**RL 1632 S - R047 - F - T5**

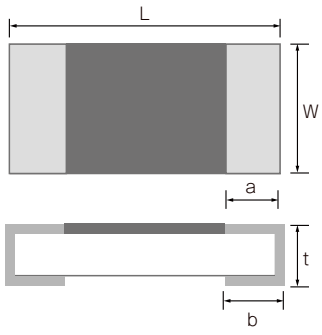
- Series code
- Size : RL1632
- Temperature coefficient of resistance
- Nominal resistance Value 4digit
- Resistance tolerance
- Packing quantity : T1 (1,000pcs), T5 (5,000pcs)

## ◆Electrical Specification

| Type | Power ratings | Temperature coefficient of resistance (ppm/°C) | Resistance range(Ω) Resistance tolerance ±1% (F) | ±2% (G) | ±5% (J) | Maximum voltage | Resistance value series | Operating temperature | Packaging quantity |
|---|---|---|---|---|---|---|---|---|---|
| RL0510 | 1/8W | 0～+350(T) | 50m≦R<100m | | | √(P・R) | E-24 | -55℃ ~ 125℃ | 10,000pcs |
| | 1/6W | 0～+200(S) | 100m≦R≦4.7 | | — | | | | |
| | | | 5.1≦R≦47 | | | | | | |
| RL0816 | 1/4W | 0～+200(S) | 20m≦R<100m | | | | | | 5,000pcs |
| | | 0～+350(T) | | | | | | | |
| | 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 | — | — | | | T1 T5 |
| | | 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.

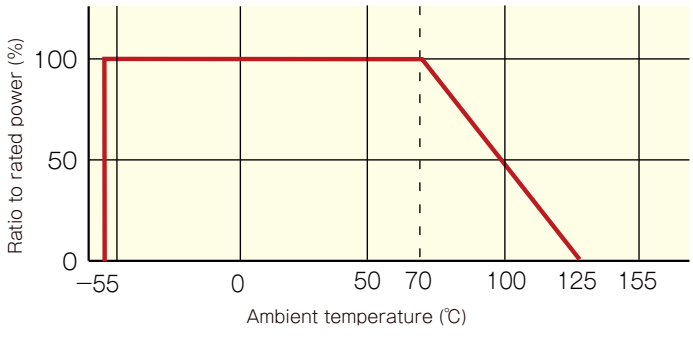
## ◆Dimensions



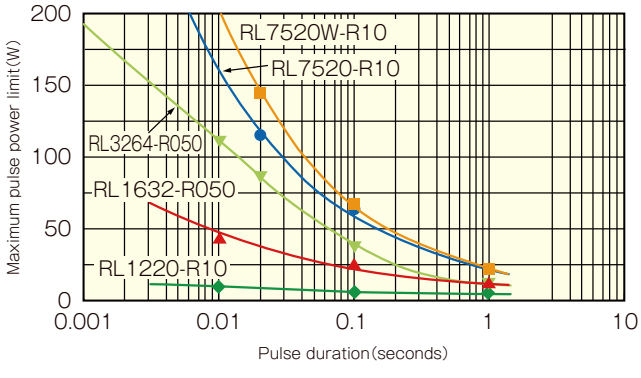

| Type | | Size (inch) | L | W | a | b | t |
|---|---|---|---|---|---|---|---|
| RL0510 | R≦0.2Ω | 0402 | 1.00±0.05 | 0.50±0.05 | 0.15±0.10 | 0.25±0.10 | 0.35+0.15/−0.10 |
| | R>0.2Ω | | | | | 0.15±0.10 | 0.35±0.10 |
| RL0816 | R≦0.082Ω | 0603 | 1.60±0.20 | 0.80±0.20 | 0.20±0.15 | 0.25±0.20 | 0.45+0.15/−0.10 |
| | R>0.091Ω | | | | | 0.20±0.15 | 0.45±0.10 |
| RL1220 | R≦0.068Ω | 0805 | 2.00±0.20 | 1.25±0.20 | 0.40±0.20 | 0.40±0.20 | 0.50±0.20 |
| | R>0.075Ω | | | | | | 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




## ◆Resistance to power pulse




### 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.