



# Low resistance chip resistors (long-side terminal)

## ■ PRL / RL series

### Features

- Innovative structure that takes consideration of heat dissipation suppresses the surface temperature enabling the small sizes, reduction of the influence on surrounding components, excellent temperature cycle resistance, low ESL and low noise.

### Applications

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



## ◆ Part numbering system

**PRL 1220 - R010 - D - T5** Packaging quantity: T5(5,000pcs)

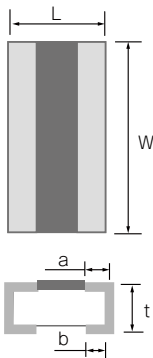
**RL 3720W T - R10 - F**

Series code	Resistance tolerance	Nominal resistance value	Resistance tolerance	Nominal resistance value	Temperature coefficient of resistance	Resistance tolerance
Size: PRL0816, PRL1220, PRL1632, PRL3264						Size: RL3720W, RL7520W

## ◆ 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
			±0.5% (D)	±1% (F)	±2% (G)	±5% (J)				
PRL0816	1/3W	±50	75m≤R≤100m	-	-	-	-	E-24	-40°C ~ 125°C	T5
		±100	43m≤R≤68m							
		0 ~ +200	33m≤R≤39m							
		0 ~ +350	18m≤R≤27m 10m≤R≤15m							
PRL1220	2/3W	±50	56m≤R≤100m	-	-	-	E-24 1m step (7m ~ 10m)	-40°C ~ 125°C	T5	
		±100	47m≤R≤51m							
		0 ~ +200	20m≤R≤43m							
		0 ~ +350	10m≤R≤18m							
PRL1632	1W	±50	56m≤R≤100m	-	-	-	E-24 1m step (5m ~ 10m)	-40°C ~ 125°C	T5	
		±100	20m≤R≤51m							
		0 ~ +200	10m≤R≤18m							
		0 ~ +350	5m≤R≤9m							
PRL3264	2W	±50	56m≤R≤100m	-	-	3m≤R≤4m	E-24 1m step (3m ~ 10m)	-40°C ~ 125°C	T5	
		±100	47m≤R≤51m							
		0 ~ +200	20m≤R≤43m							
		0 ~ +350	10m≤R≤18m							
RL3720W	1W	±50(Q)	100m≤R≤1	-	-	-	E-24 1m step (1m ~ 10m)	-55°C ~ 125°C	4,000pcs	
		±100(R)	5m≤R≤91m							
		0 ~ +200(S)	1m≤R≤4m							
		0 ~ +350(T)								
RL7520W	2W	±50(Q)	100m≤R≤470m	-	-	-	E-24 1m step (1m ~ 10m)	-55°C ~ 125°C	4,000pcs	
		±100(R)	10m≤R≤91m							
		0 ~ +200(S)	100m≤R≤470m							
		0 ~ +350(T)	10m≤R≤91m							
		0 ~ +420(T)	5m≤R≤9m							
		0 ~ +800(T)	1m≤R≤4m							

## ◆ Dimensions



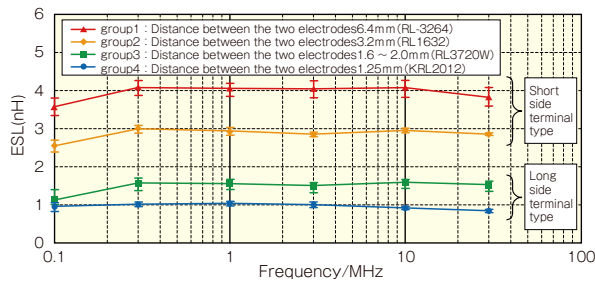
Type	Size (inch)	L	W	a	b	t
PRL0816	0603	0.80±0.20	1.60±0.20	—	0.20±0.10	0.40±0.10
PRL1220	0805	1.25±0.20	2.00±0.20	—	0.35±0.15	0.50±0.10
PRL1632	1206	1.60±0.20	3.20±0.20	—	0.45±0.15	0.50±0.10
PRL3264	2512	3.20±0.20	6.40±0.20	—	0.90±0.15	0.50±0.10
RL3720W	1508	2.00±0.20	3.75±0.30	0.40±0.20	0.40±0.20	0.50±0.20
RL7520W	3008	2.00±0.20	7.50±0.30	0.40±0.20	0.40±0.20	0.50±0.20

(unit : mm)

Current sensing surface mount resistors

PRL / RL series

## ◆ESL (Equivalent series inductance)



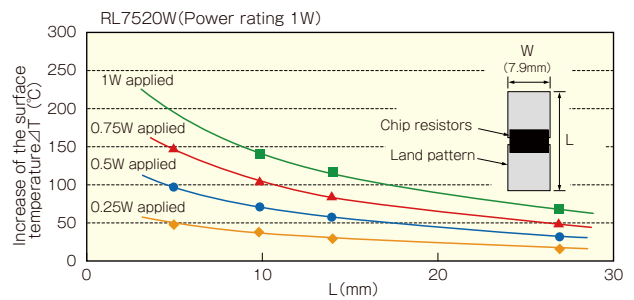
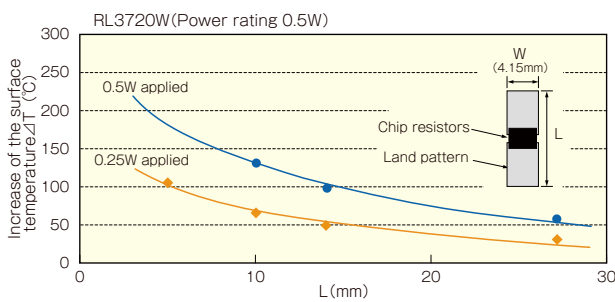
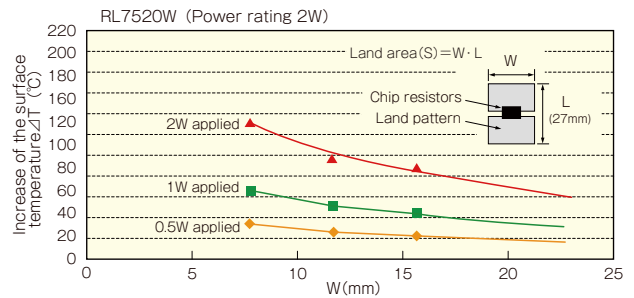
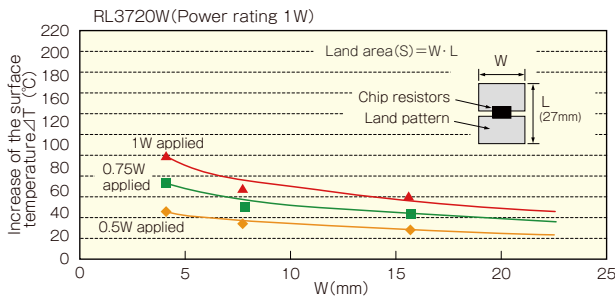
## ◆Surface temperature data

### ○ The high power type land pattern and surface temperature

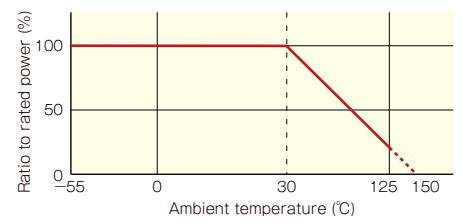
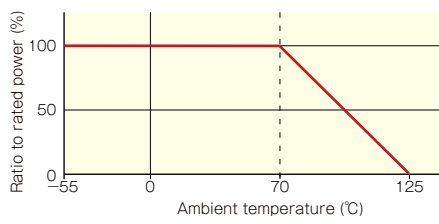
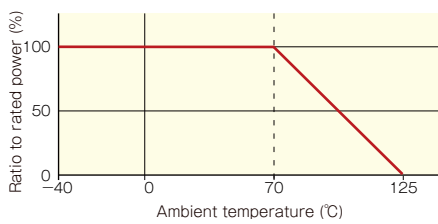
These high-power low resistance chip resistors are designed to dissipate heat efficiently through the land patterns on circuit boards. The actual temperature of the surface of the resistor is dependent upon the dimensions and the shape of the land patterns.

Current sensing surface mount resistors

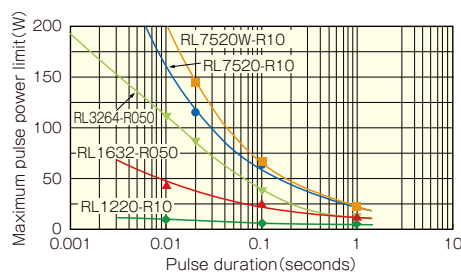
PRL / RL series



## ◆Derating Curve



## ◆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.