



# 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



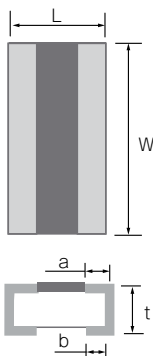
## ◆ Part numbering system

<b>PRL 1220 - R010 - D - T5</b>				<b>RL 3720W T - R10 - F</b>			
Series code	Size: PRL0816, PRL1220, PRL1632, PRL3264	Nominal resistance value	Resistance tolerance	Packaging quantity: T5(5,000pcs)	Series code	Temperature coefficient of resistance	Resistance tolerance
						Nominal resistance value	

## ◆ 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		-	-	√(P · R)	E-24	-40°C ~ 125°C	T5	
		±100	43m≤R≤68m								
		0 ~ +200	-	33m≤R≤39m							
		0 ~ +350	-	18m≤R≤27m							
PRL1220	2/3W	±50	56m≤R≤100m		-	-	√(P · R)	E-24	-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		-	-	√(P · R)	E-24	-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		-	-	√(P · R)	E-24	-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	-	-	√(P · R)	E-24	-55°C ~ 125°C	4,000pcs	
		±100(R)	-	5m≤R≤91m							
		0 ~ +200(S)	-	1m≤R≤4m							
		0 ~ +350(T)	-	1m≤R≤4m							
RL7520W	2W	±50(Q)	-	100m≤R≤470m	-	-	√(P · R)	E-24	-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



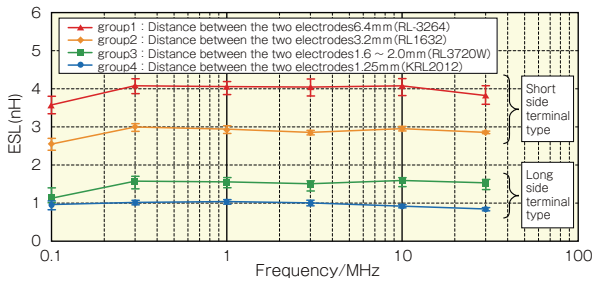
Type	Size (Inch)	L	W	a	b	t
PRL0816	0306	0.80±0.20	1.60±0.20	-	0.20±0.10	0.40±0.10
PRL1220	0508	1.25±0.20	2.00±0.20	-	0.35±0.15	0.50±0.10
PRL1632	0612	1.60±0.20	3.20±0.20	-	0.45±0.15	0.50±0.10
PRL3264	1225	3.20±0.20	6.40±0.20	-	0.90±0.15	0.50±0.10
RL3720W	0815	2.00±0.20	3.75±0.30	0.40±0.20	0.40±0.20	0.50±0.20
RL7520W	0830	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

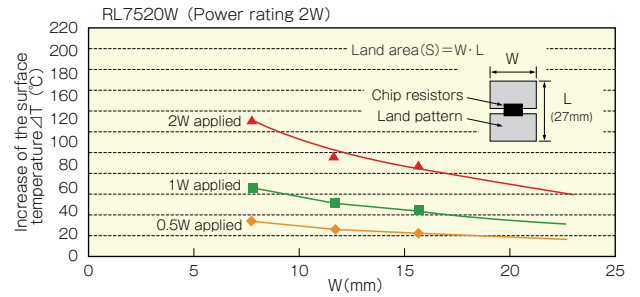
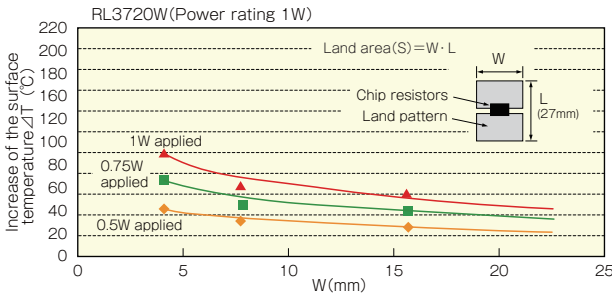
## ◆ESL (Equivalent series inductance)



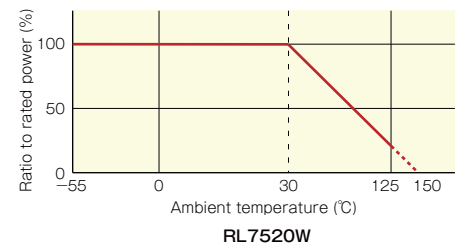
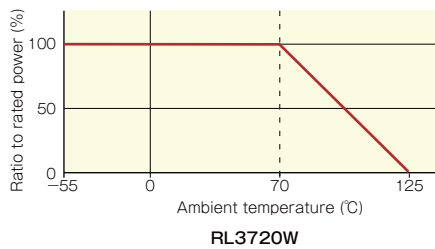
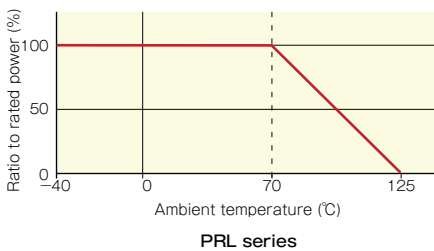
## ◆Surface temperature data

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

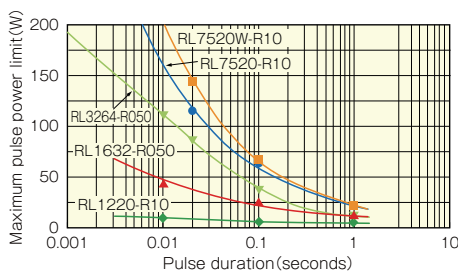
These high-power low resistance chip resistors are designed to dissipate heat efficiently through the land patterns on circuit boards. The actual temperature of the surface of the resistor is dependent upon the dimensions and the shape of the land patterns.



## ◆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.