



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

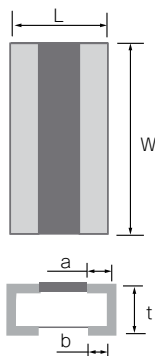
PRL 1220 - R010 - D - T5			
Series code	Size: PRL0816, PRL1220, PRL1632, PRL3264	Nominal resistance value	Resistance tolerance
			Packaging quantity: T5(5,000pcs)

RL 3720W T - R10 - F			
Series code	Size: RL3720W, RL7520W	Temperature coefficient of resistance	Resistance tolerance
		Nominal resistance value	

◆Electrical Specification

Type	Power ratings	Temperature coefficient of resistance	Resistance range(Ω) Resistance tolerance				Maximum voltage	Resistance value series	Operating temperature	Packaging quantity
		(ppm/°C)	±0.5% (D)	±1% (F)	±2% (G)	±5% (J)				
PRL0816	1/3W	±50	75m≤R≤100m		—	—	√(P · R)	E-24	-40℃ ~ 125℃	T5
		±100	43m≤R≤68m							
		0 ~ +200	—	33m≤R≤39m						
		0 ~ +350	—	18m≤R≤27m						
PRL1220	2/3W	±50	56m≤R≤100m		—	—		E-24 1m step (7m ~ 10m)		
		±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)		
		±100	20m≤R≤51m							
		0 ~ +200	—	10m≤R≤18m						
		0 ~ +350	—	5m≤R≤9m						
PRL3264	2W	±50	56m≤R≤100m		—	—		E-24 1m step (3m ~ 10m)		
		±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)				
		±100(R)	—							
		0 ~ +200(S)	—							
		0 ~ +350(T)	—	5m≤R≤91m						
RL7520W	2W	±50(Q)	—	100m≤R≤470m	—	E-24 1m step (1m ~ 10m)				
		±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						

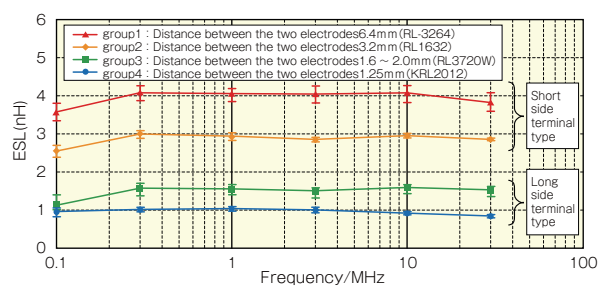
◆Dimensions



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)

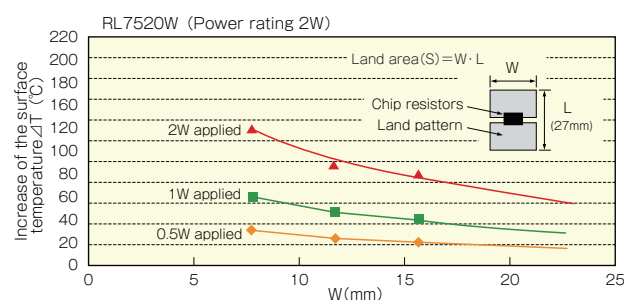
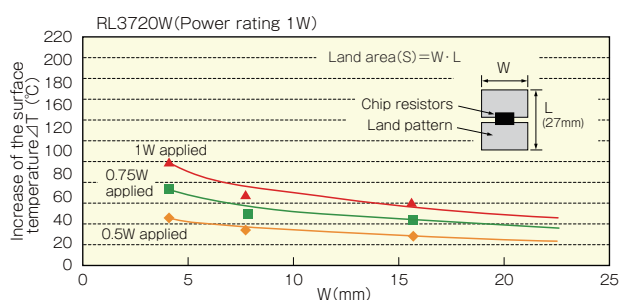
◆ESL (Equivalent series inductance)



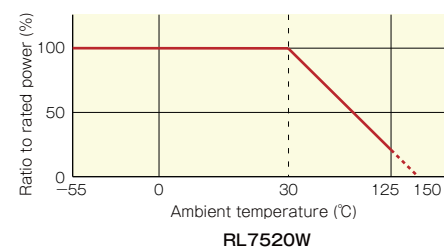
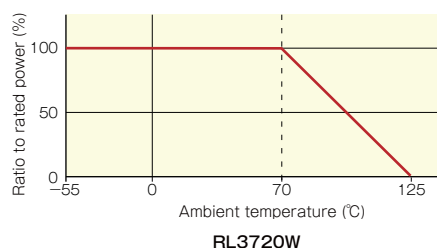
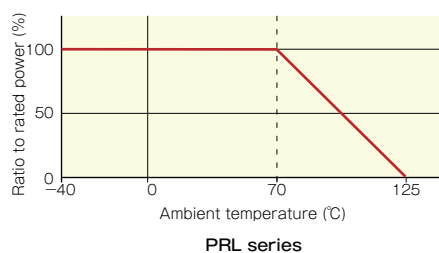
◆Surface temperature data

○ The high power type land pattern and surface temperature

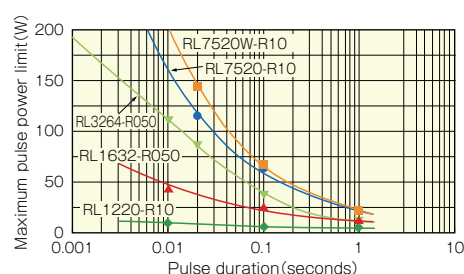
These high-power low resistance chip resistors are designed to dissipate heat efficiently through the land patterns on circuit boards. The actual temperature of the surface of the resistor is dependent upon the dimensions and the shape of the land patterns.



◆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 $\pm 0.5\%$.

The power at that voltage is defined as the maximum pulse power.