

Surface Mount Custom Milli-Ohm Resistor Type LR72 A/B/C

ISO 9001:2000
TS-16949

1. Features

- Superior thermal expansion cycling
- Inductance less than 10 nanohenries
- Flameproof
- Available Pb-free/RoHS compliant
- Lead flexible for thermal expansion
- Low termination stress ("J" leads)
- Shape provides cooler operation
- Custom values available

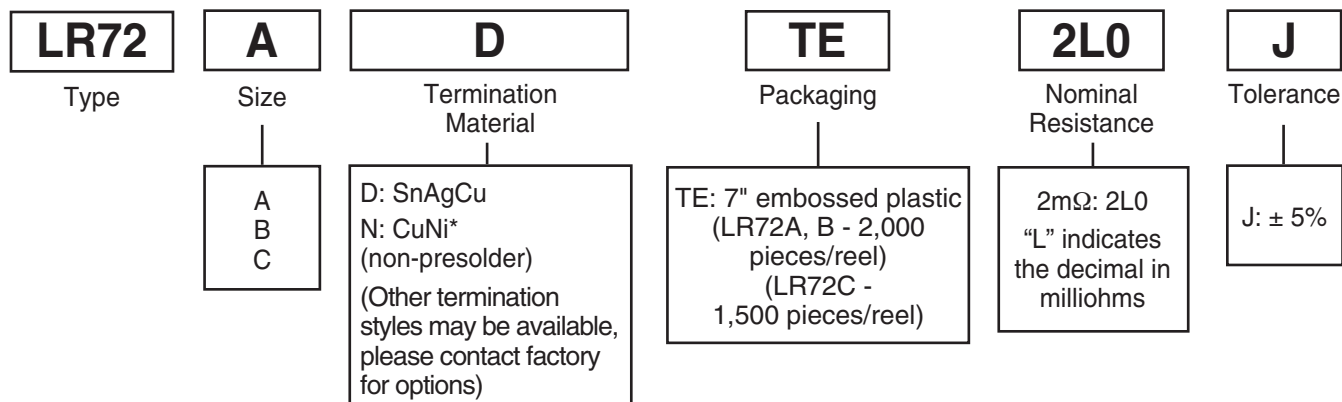
2. Applications

- Current sensing
- Low inductance
- AC applications (please contact factory)
- Feedback
- Surge & pulse

3. Type Designation

The type designation shall be in the following form:

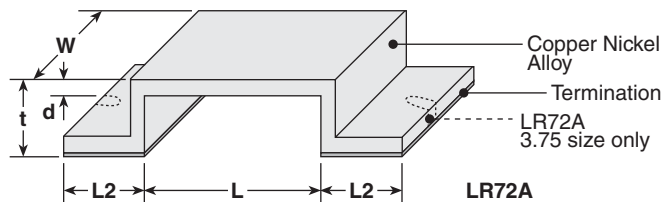
New Type



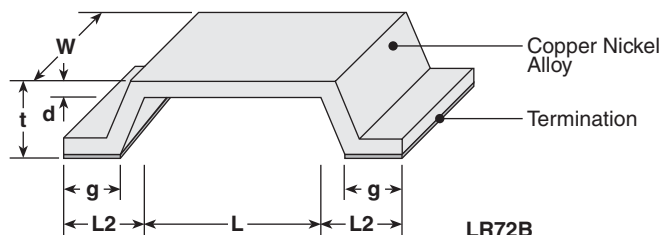
4. Standard Applications

Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Standard Resistance	Resistance Tolerance	Rated Ambient Temperature	Operating Temperature Range
LR72A	1/2W @ 25°C	±100	2mΩ ~ 8mΩ	J: ±5%	+70°C	-40°C to +180°C
LR72B	1/4W @ 25°C		3mΩ ~ 5mΩ			
LR72C	1W @ 70°C	±350	2mΩ, 3mΩ		+85°C	-40°C to +155°C

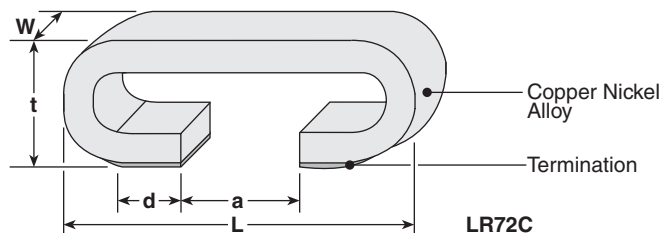
5. Dimensions



Size Code	Dimensions inches (mm)				
	L	L2 ^{+0.1} / _{-.02}	W	t	d
LR72A (8.00)	.39±.004 (10.0±0.1)	.079 (2.0)	.20±.008 (5.2±0.2)	.079 (2 Max.)	.006 (0.16)
LR72A (5.00)	.39±.004 (10.0±0.1)	.079 (2.0)	.20±.008 (5.2±0.2)	.079 (2 Max.)	.009 (0.22)
LR72A (3.75)	.39±.004 (10.0±0.1)	.079 (2.0)	.20±.008 (5.2±0.2)	.079 (2 Max.)	.013 (0.32)
LR72A (2.50)	.39±.004 (10.0±0.1)	.079 (2.0)	.20±.008 (5.2±0.2)	.079 (2 Max.)	.019 (0.47)



Size Code	Dimensions inches (mm)					
	L	L2 ^{+0.1} / _{-.02}	W	t	d	g
LR72B	.39±.004 (10.0±0.1)	.079 (2.0)	.118±.008 (3.0±0.2)	.079 (2 Max.)	.026 (0.66)	.043±.008 (1.1±0.2)



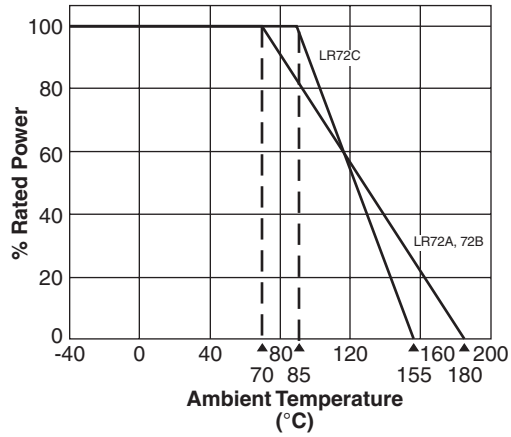
Size Code	Dimensions inches (mm)				
	L	W	t	a	d
LR72C	.44±.016 (11.2±0.4)	.126±.016 (3.2±0.4)	.137±.016 (3.5±0.4)	.189±.030 (4.8±.75)	.093±.010 (2.35±.25)

6. Characteristics

Item	Requirement	Test Methods (JIS C 5202)
Resistance	Within regulated tolerance	25°C
T.C.R.	Within specified T.C.R.	Room temperature/100°C up, LR72C: Room temperature/25°C ~ 200°C
Resistance to Soldering Heat	± 2.0%	350°C ±10°C, 3s; LR72C: 260°C ± 5°C, 10 seconds
Solderability	95% Coverage min.	235°C ±5°C, 5s
Moisture Resistance	±3%	40°C 90% ~ 95% RH, 1000h. No load
Moisture Resistance	±5%	Power rating X 1/10, 40°C, 90% ~ 95% RH. 1000h, 1.5h ON 0.5h OFF cycle
Load Life	±5% (A & B), ±3% (C)	Rating voltage, 1000h, 1.5h ON 0.5h OFF cycle

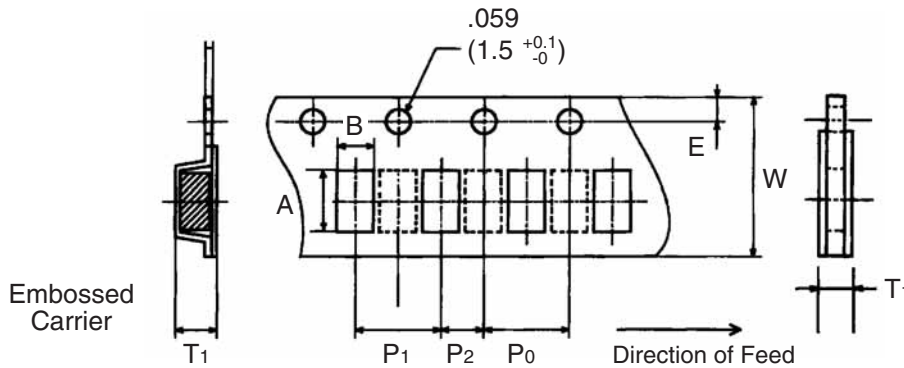
7. Derating Curve

For temperature in excess of 70°C, the load shall be derated in accordance with the following figure.



8. Packaging Specifications

8.1 Carrier Dimensions

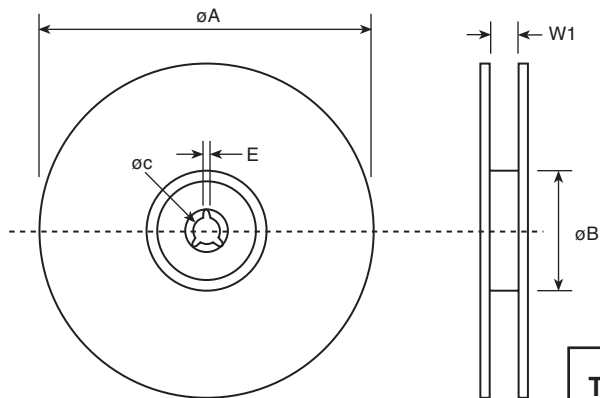


Dimensions in inches (mm)

Type	A	B	E	W	P0	P1	P2	T1
LR72A	.057 (1.45 ± 0.2)	.224 (5.7 ± 0.2)	.069 (1.75 ± 0.1)	.079 (2.0)	.157 (4.0 ± 0.1)	.315 (8.0 ± 0.1)	.079 (2.0)	.091 (2.3 ± 0.2)
LR72B	.057 (1.45 ± 0.2)	.134 (3.4 ± 0.2)	.069 (1.75 ± 0.1)	.079 (2.0)	.157 (4.0 ± 0.1)	.315 (8.0 ± 0.1)	.079 (2.0)	.098 (2.5 ± 0.2)
LR72C	.461 (11.7 ± 0.1)	.169 (4.3 ± 0.1)	.069 (1.75 ± 0.1)	.945 (24.0 ± 0.2)	.157 (4.0 ± 0.1)	.315 (8.0 ± 0.1)	.079 (2.0)	—

8. Packaging Specifications (continued)

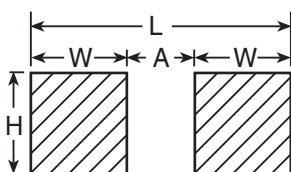
8.2 Reel Dimensions



Dimensions in inches (mm)

Type	A	B	C	E	W1
LR72A	10.0	3.15	.511	.079	1.0
LR72B	(255 ± ^{+0.0} _{-3.0})	(80 ± ^{+1.0} ₋₀)	(13.0 ± 0.2)	(2.0 ± 0.5)	(25.5 ± 2.0)
LR72C	12.99	3.94	.511	.079	1.0
	(330 ± 2.0)	(100 ± 2.0)	(13.0 ± 0.2)	(2.0 ± 0.5)	(25.5 ± 2.0)

9. Pad Dimensions



Dimensions in inches (mm)

	L	W	H	A
A	.622 (16.0)	.118 (3.0)	.236 (6.0)	.394 (10.0)
B	.622 (16.0)	.118 (3.0)	.150 (3.8)	.394 (10.0)
C	.369 (9.36)	.121 (3.07)	.142 (3.60)	.127 (3.22)