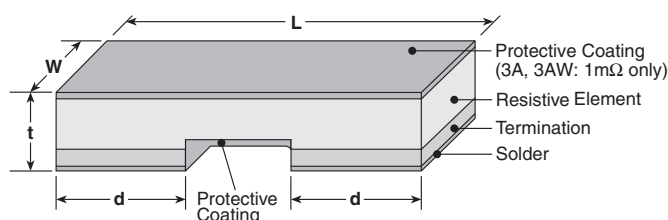


features

- Ultra-low TCR (+75ppm/°C) available
- Metal alloy: superior corrosion and heat resistance
- Applications include current sensing, voltage division and pulse applications
- Ultra low resistance (1mΩ - 20mΩ)
- Products with lead-free terminations meet EU RoHS and China RoHS requirements
- AEC-Q200 Qualified

dimensions and construction



Size Code	Resistance	Dimensions inches (mm)			
		L	W	d	t
TLR2B	2m, 3m, 4m, 5m, 6m, 7m, 8m, 9m, 10m, 11m, 12m, 13m, 15m, 16m, 18m, 20m	.126±.008 (3.20±0.20)	.063±.008 (1.60±0.20)	.020±.008 (0.50±0.20)	.024±.008 (0.60±0.20)
	1mΩ			.071±.008 (1.80±0.20)	.026±.008 (0.65±0.20)
TLR2H	2mΩ - 6mΩ	.200±.008 (5.00±0.20)	.100±.008 (2.50±0.20)	.060±.008 (1.50±0.20)	.024±.008 (0.60±0.20)
	7mΩ - 10mΩ			.020±.008 (0.50±0.20)	
TLR3A	1mΩ	.25±.01 (6.35±0.25)	.125±.01 (3.18±0.25)	.087±.01 (2.20±0.25)	.024±.01 (0.62±0.25)
	2mΩ			.047±.01 (1.20±0.25)	
	3mΩ			.073±.01 (1.85±0.25)	
	4mΩ			.047±.01 (1.20±0.25)	
TLR3AW	1mΩ - 4mΩ	.25±.01 (6.35±0.25)	.125±.01 (3.18±0.25)	.087±.01 (2.20±0.25)	.024±.01 (0.60±0.25)
	5mΩ - 8mΩ			.047±.01 (1.20±0.25)	
	9mΩ, 10mΩ			.030±.01 (0.77±0.25)	

ordering information

New Part #	TLR	3A	D	TE	2L00	F	75
Type							
Power Rating		2B: 0.5W 2H: 1W 3A: 1W 3AW: 2W					
Termination Material			D: SnAgCu				
Packaging				TE: 7" 8mm pitch embossed plastic (3A, 3AW) TE: 7" 4mm pitch embossed plastic (2H only) TD: 4mm pitch punched paper (2B only)			
Nominal Resistance					F: 4 digits Ex: 2L00: 2mΩ		
Tolerance						F: ±1%	
T.C.R.							75ppm/°C Nil: 100ppm/°C Nil: 150ppm/°C Nil: 200ppm/°C

For further information on packaging, please refer to Appendix A.

applications and ratings

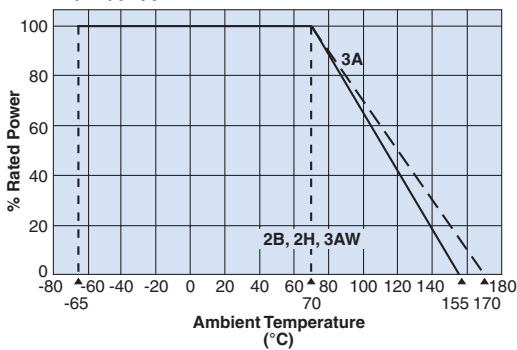
Part Designation	Power Rating @ 70°C	T.C.R. (ppm/°C) Max.**	Standard Resistance (Ω)	Resistance Tolerance	Rated Ambient Temperature	Terminal Temperature	Operating Temperature Range
TLR2B	1/2W (.5W)	±75	2m,3m,4m,5m,6m,7m,8m,9m,10m,11m,12m,13m,15m,16m,18m,20m	F: ±1%	+70°C	—	-65°C to +155°C
TLR2H	1W	±75	1m,2m,3m,4m,5m,6m,7m,8m,9m,10m	F: ±1%	+70°C	—	-65°C to +155°C
TLR3A	1W	±150	1m, 2m	F: ±1%	+70°C	—	-65°C to +170°C
		±200	3m, 4m				
TLR3AW	2W	±75	*3m,4m,5m 6m,7m,8m,9m,10m	F: ±1%	+70°C	—	-65°C to +155°C
		±150	1m, 2m***	F: ±1%			

* 1mΩ, 2mΩ: Please contact factory for availability ** Please contact factory for T.C.R.: ±50ppm/°C *** Contact factory for values less than 1mΩ

environmental applications

Derating Curve

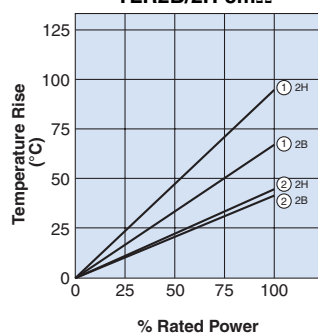
TLR2B/2H/3A/3AW



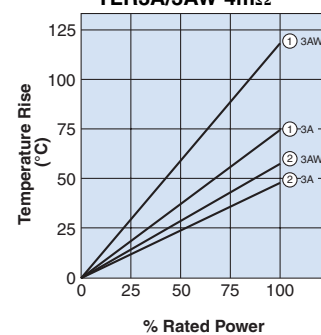
For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

Temperature Rise

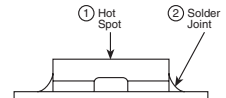
TLR2B/2H 8mΩ



TLR3A/3AW 4mΩ



Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.



Performance Characteristics

Parameter	Requirement Δ R ±%		Test Method
	Limit	Typical	
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+100°C
Resistance to Solder Heat	±0.5%	±0.3%	260°C ± 5°C, 10 ~ 12 seconds
Rapid Change of Temperature	±0.5%	±0.4%	-55°C (15 minutes), +150°C (15 minutes), 1000 cycles
Moisture Resistance	±0.5%	±0.1%	MIL-STD-202, Method 106, 0% power, 7a and 7b not required
Biased Humidity	±0.5%	±0.1%	85°C ± 2°C, 85% RH, 1000 hours, 10% bias
Endurance at 70°C	±1.0%	±0.3%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±1.0%	±0.6%	±155°C (2B, 2H, 3AW), ±170°C (3A), 1000 hours

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