

Melf Type Surface Mount Linear Positive Temperature Coefficient Resistors

ISO 9001:2000
TS-16949

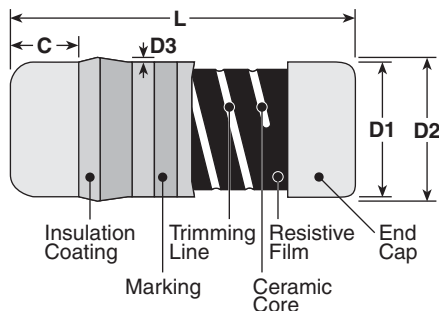
MLT Type

1. Features

- Twenty-five specifiable temperature coefficients
- Meets or exceeds EIAJ-8011, EIA-PDP-100
- Products with lead-free terminations meet RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC
- Standard resistance sizes
- Marking: Gray body color

2. Dimensions and Structure

Dimensions in inches (mm)

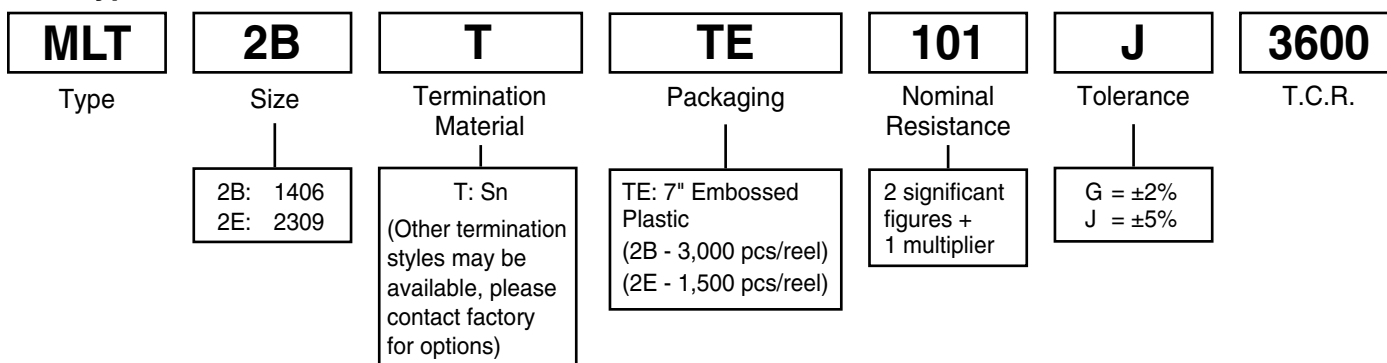


Type (Inch Size Code)	L	C (min.)	D1	D2 (max.)	D3 (max.)
2B (1406)	.138 (3.5 ± 0.2)	.02 (0.5)	.057 (1.45 ± 0.1)	.061 (1.55)	.004 (0.1)
2E (2309)	.232 (5.9 ± 0.2)	.02 (0.5)	.087 (2.2 ± 0.1)	.094 (2.4)	.006 (0.15)

3. Type Designation

The type designation shall be the following form:

New Type



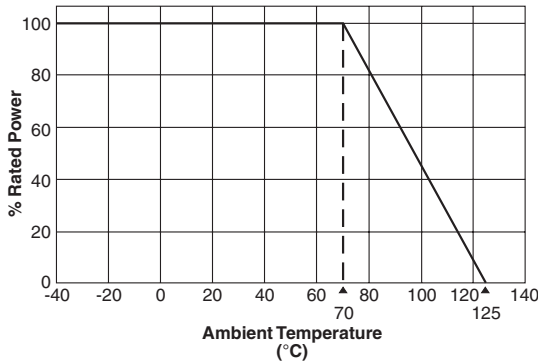
4. Applications and Ratings

Part Designation	T.C.R. (ppm/°C) Max.	T.C.R. Tolerance	Resistance Range 2B (0.125W)	Resistance Range 2E (0.25W)	Resistance Tolerance	Rated Ambient Temperature	Operating Temperature Range
MLT	150, 250, 350 450, 500	±100 ppm/°C	510Ω - 51KΩ	1KΩ - 100KΩ	G: ±2%	70°C	-40°C to +125°C
	600, 700	±150 ppm/°C	1KΩ - 43KΩ	2KΩ - 82KΩ	J: ±5%		
	800, 900		2KΩ - 43KΩ	3.9KΩ - 82KΩ			
	1000, 1200, 1400	±15%	3KΩ - 27KΩ	6.2KΩ - 51KΩ			
	1600, 1800		1KΩ - 10KΩ	3KΩ - 27KΩ			
	2000, 2200, 2400	±10%	820Ω - 9.1KΩ	1KΩ - 22KΩ			
	2600, 2800		820Ω - 6.2KΩ	1KΩ - 18KΩ			
	3000, 3300		10Ω - 5.1KΩ	10Ω - 7.5KΩ			
	3600*		10Ω - 5.1KΩ	10Ω - 7.5KΩ			
	3900*		10Ω - 3.3KΩ	10Ω - 6.2KΩ			
	4200*		10Ω - 680Ω	10Ω - 1.3KΩ			
	4500*		10Ω - 330Ω	10Ω - 680Ω			

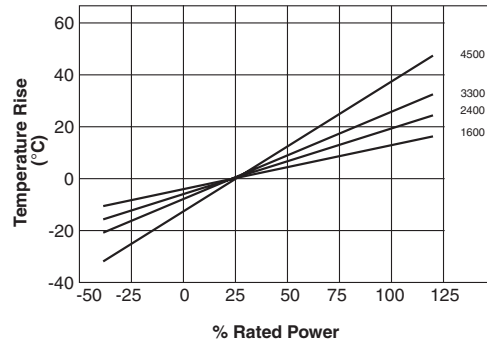
* .51Ω of 3600 ppm/°C to 4500 ppm/°C are 15% in T.C.R. Tolerance.

5. Environmental Application

Derating Curve



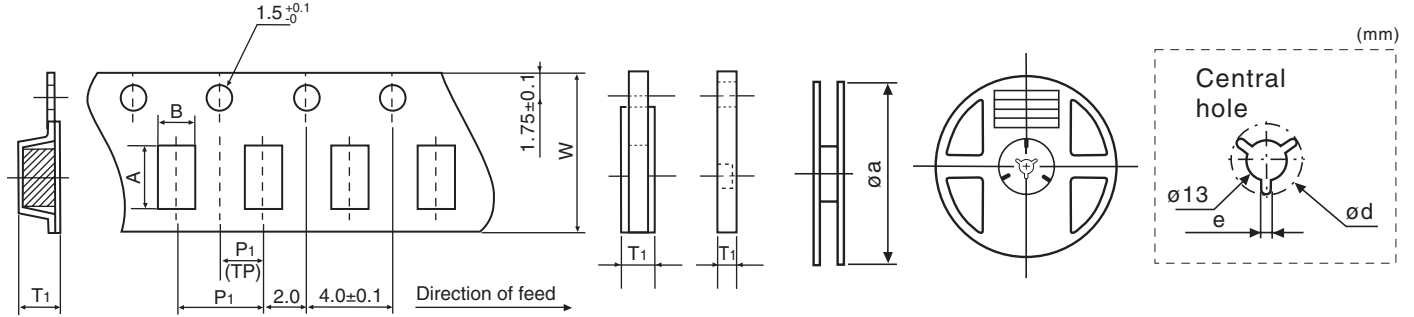
Temperature Characteristics of Resistance



6. Performance Characteristics

Parameter	Requirement $\Delta R \pm(\% + 0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	Room temperature, 50°C up
Overload	±1.0%	±0.75%	Rated power x 2.5 or max. overload voltage for 5 seconds, whichever is less
Resistance to Solder Heat	±1.0%	±0.75%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±1.0%	±0.75%	-55°C (30 minutes), +125°C (30 minutes), 5 cycles
Moisture Resistance	±3.0%	±2.0%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±3.0%	±2.0%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle

7. Taping Dimensions/Reel Dimensions



Dimensions in inches (mm)

Type	A	B	W	P1	T1	øa	ød	e
2B	.146 (3.7 ± 0.2)	.067 (1.7 ± 0.2)	.315 (8.0 ± 0.2)	.157 (4.0 ± 0.1)	.067 (1.7 ± 0.2)	7.01 (178)	.827 (21)	.079 (2)
2E	.244 (6.2 ± 0.2)	.094 (2.4 ± 0.2)	.472 (12.0 ± 0.1)	.157 (4.0 ± 0.1)	.102 (2.6 ± 0.2)	7.01 (178)	.827 (21)	.079 (2)