

ALUMINUM HOUSED CHASSIS MOUNT RESISTOR



TMC

TMC-5, TMC-10, TMC-25, TMC-50, TMC-100, TMC-250

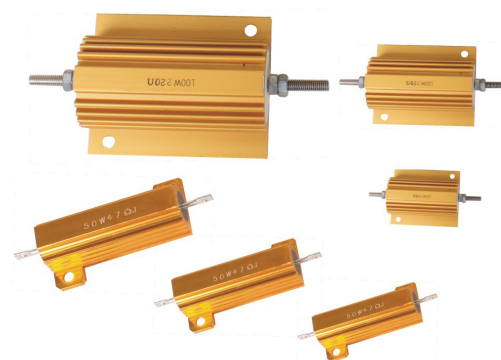
LEADFREE
RoHS Compliant

Features

- High power rating
- Small size and ultra-precision
- Standard winding & non-inductive winding type
- High stability, strong construction

General Specifications:

- Wattage Range: 6 styles to choose from ranging from 5 to 250 watts
- Resistance tolerance: 10%, 5%, 3%, 2%, 1%, 0.5%
- Operating Temperature: -55 to +275°C
- Dielectric strength: TMC-5, TMC-10, TMC-25: 1000V
TMC-50: 1500V
TMC-100, TMC-250: 2500V
- Temperature Coefficient: of resistance: Standard T.C.: ± 20 ppm to ± 250 ppm



ELECTRICAL SPECIFICATIONS						
Type		MIL Style	Wattage Rating (W)	Resistance Range (Ω)	Max Working (V)	Max Weight (g)
TMC-5W	Inductive	RE60	5	0.05 - 3K	120	3
TMCN-5W	Non-Inductive			0.1 - 1K	70	
TMC-10W	Inductive	RE65	10	0.02 - 6K	245	7
TMCN-10W	Non-Inductive			0.03 - 2.3K	180	
TMC-25W	Inductive	RE70	25	0.012 - 15K	500	15
TMCN-25W	Non-Inductive			0.02 - 5.5K	300	
TMC-50W	Inductive	RE75	50	0.01 - 40K	1300	33
TMCN-50W	Non-Inductive			0.02 - 12K	500	
TMC-100W	Inductive	RE77	100	0.4 - 50K	1900	450
TMCN-100W	Non-Inductive			0.12 - 25K	1340	
TMC-250W	Inductive	RE80	250	0.6 - 80K	2500	800
TMCN-250W	Non-Inductive			0.15 - 40K	1750	

Materials:

- Encapsulant: Silicone
- End caps: Stainless Steel
- Core: Ceramic steatite or alumina
- Housing: Aluminum with hard anodic coating
- Element: Copper-nickel alloy, nickel-chrome alloy, or manganese copper
- Standard terminals:
5-50W: Tinned terminals
100-250W: Threaded terminals

PART NUMBERING SYSTEM:

TMC - 50W 5% 100R - B1

Type	
TMC	Inductive
TMCN	Non-inductive

Wattage	Tolerance
5W	0.5%
10W	1%
25W	2%
50W	3%
100W	5%
250W	10%

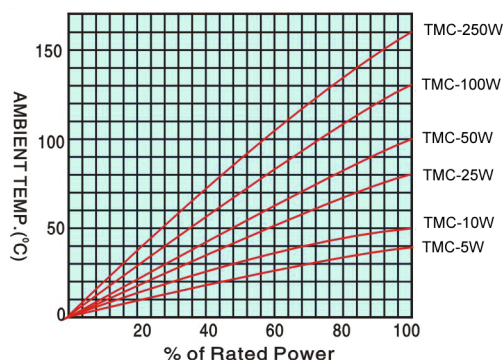
Body Type	
Code	Body Type
Nil	Body Type 1
B2	Body Type 3
B3	Body Type 3
B4	Body Type 4

RESISTANCE CODE						
Resistance Value						
Code	R10	1R5	10R	100R	1K	10K
Values	0.10 Ω	1.5 Ω	10 Ω	100 Ω	1K Ω	10K Ω

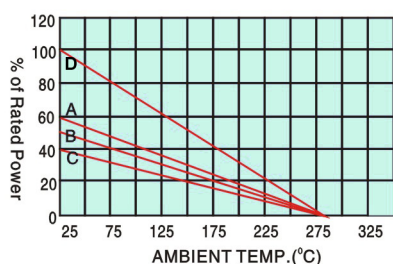
First two digits are significant figures and third digit is number of zeros.
Letter "R" indicates decimal values under 100 ohms.

TMC-5, TMC-10, TMC-25, TMC-50, TMC-100, TMC-250

Surface Temperature versus Powerload (on chassis)



Derating:



Derating is required for ambient temperature above 25°C.

Curve A for 5 & 10 Watts apply to operation of unmounted resistors.

Curve B for 25 Watts apply to operation of unmounted resistors.

Curve C for 50, 100 & 250 Watts apply to operation of unmounted resistors.

Curve D applies to all types when mounted to specified heat sink.

Performance:

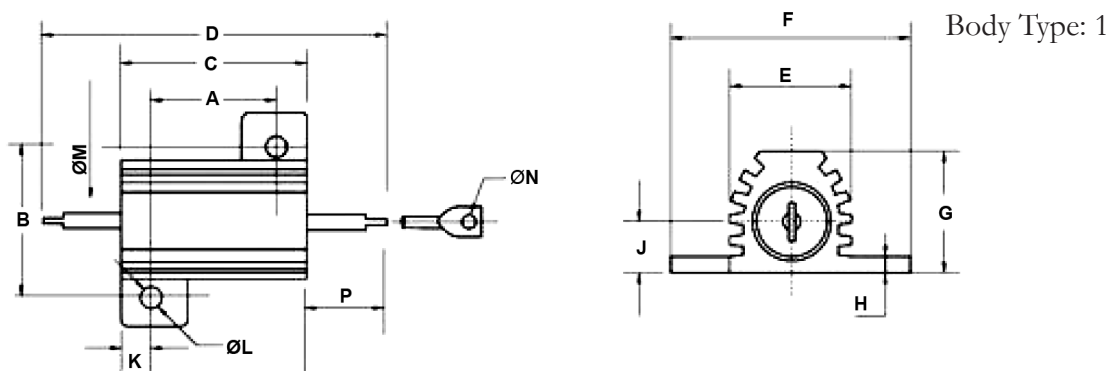
Parameters	Test Conditions	Specifications
Short Time Overload	5 x rated power for 5 sec	$\Delta R \pm (0.5 \times 0.05\Omega)$ Max
Moisture Resistance	MIL-STD-202, Method 106, 7b not applicable	$\Delta R \pm (0.5 \times 0.05\Omega)$ Max
Moisture Load Life	Temp. 40°C moisture 95: 1/10 x wattage fating (1.5Hr On - 0.5Hr Off) - Repeat 1000Hrs	$\Delta R \pm (0.5 \times 0.05\Omega)$ Max
Load Life	Load Rating (Chassis mounted) (1.5Hr On - 0.5Hr Off) - Repeat 1000Hrs	$\Delta R \pm (1.5 \times 0.05\Omega)$ Max
Vibration	10c/s - 50c/s - 10c/s (1 min) - 2Hr each of parallel and right angle	$\Delta R \pm (0.5 \times 0.05\Omega)$ Max
Heat Resistance	275°C 2Hr	$\Delta R \pm (0.5 \times 0.05\Omega)$ Max
Dielectric Strength	TMC-5W, TMC-10W, TMC-25W: 1000V TMC-50W: 1500V	$\Delta R \pm (0.5 \times 0.05\Omega)$ Max
Insulation Resistance	Under the same test conditions of dielectric strength, load DC5DCV and measure the insulation.	1000M Ω min
Terminal Strength	1- Pull test (30 sec min) TMC-5W: 1kg, TMC-10W: 2.3kg, TMC-25W, TMC-50W: 4.5kg	$\Delta R \pm (0.2 \times 0.05\Omega)$ Max



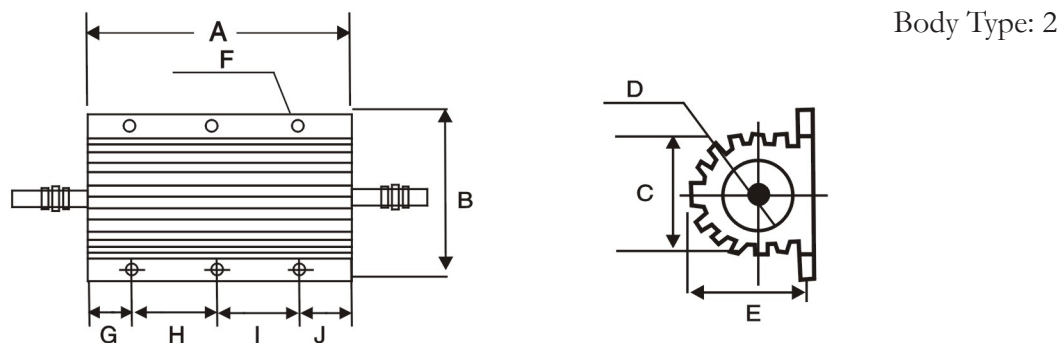
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Dimensions: Unit (mm)



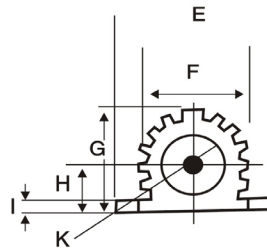
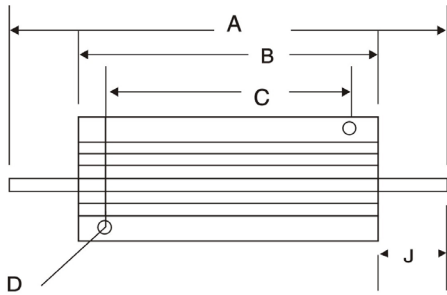
Type	Dimensions (mm)													
	A ±0.1	B ±0.1	C ±0.7	D ±1.5	E ±0.4	F ±0.1	G ±0.4	H ±0.2	J ±0.2	K ±0.2	L ±0.1	M ±0.2	N ±0.1	P ±1.5
TMC-5W TMCN-5W	11.2	12.5	16.4	37.2	9.5	16.5	8	1.5	3.8	2	2.4	1.4	1.6	10.5
TMC-10W TMCN-10W	13.4	16.8	20	41.5	10.5	22.5	10.5	1.9	5	3.3	3	2.5	1.6	10.7
TMC-25W TMCN-25W	18	19.6	28	49	13.5	27	14	2.2	6.4	5	3.2	2.6	2.0	10.5
TMC-50W TMCN-50W	39.7	21.5	49.99	70	15.2	29	15.5	2.2	6.8	4.98	3.2	2.7	2.16	11.3



Type	Dimensions (mm)									
	A ± 1	B ± 1	C ± 0.5	D ± 0.5	E ± 0.5	F	G	H	I	J
TMC-100W TMCN-100W	98	48	22	17	26	6	14	35	35	14
TMC-250W TMCN-250W	170	48	22	17	26	6	20	65	65	20

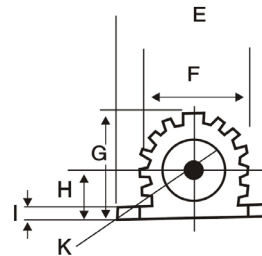
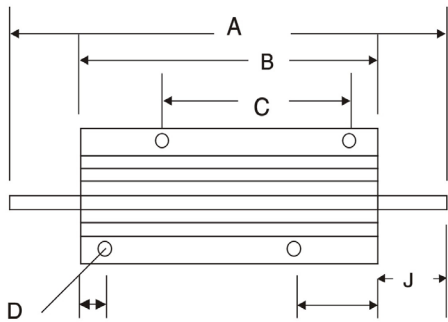
TMC-5, TMC-10, TMC-25, TMC-50, TMC-100, TMC-250

Body Type: 3



Type	Dimensions (mm)										
	A ± 2.5	B ± 1	C ± 0.5	D ± 0.5	E ± 0.5	F ± 0.5	G ± 1	H ± 0.5	I ± 0.5	J ± 1	K ± 1
TMC-100W TMCN-100W	122	90	75	5	71.5	45	44	20	4.4	16	M5
TMC-250W TMCN-250W	98.5	66	35	4.5	47	27	25	13	3.2	10.5	M4

Body Type: 4



Type	Dimensions (mm)										
	A ± 2.5	B ± 1	C ± 0.5	D ± 0.5	E ± 0.5	F ± 0.5	G ± 1	H ± 0.5	I ± 0.5	J ± 1	K ± 1
TMC-250W TMCN-250W	178	114	75	5	77	57	55.5	25	5	32	M6