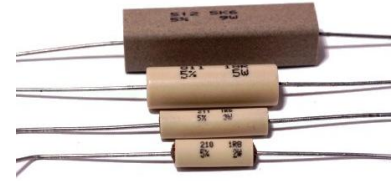


CERAMIC POWER WIREWOUND RESISTORS

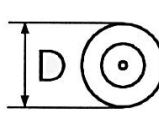
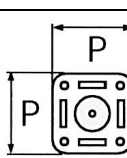


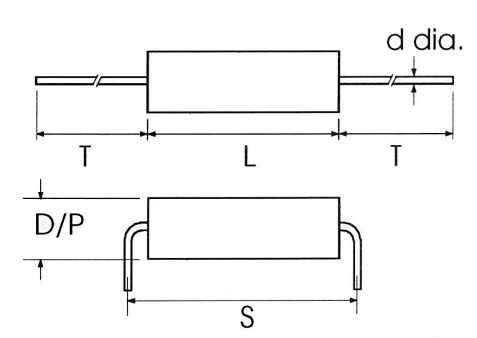
- Precise mechanical dimensions
- Fireproof construction
- Withstand strong pulse load
- Non-standard values are offered
- Circular and square profiles
- Mounting brackets are offered

Electrical Data

		210	211	810	811	511	512	513	514
Power rating at 70°C	Watt	2.0	3.0	4.0	5.0	6.0	9.0	11.0	17.0
Resistive range	Ohm	0.1-10K	0.1-18K	0.1-12K	0.1-22k	0.15-22K	0.33-27K	0.33-39K	1.0-68K
Limiting element voltage	Volt	1000	2000	1500	2500	2500	3500	4000	5000
Dielectric strength	Volt	2000		3000		4000			
TCR	ppm/°C	130							
Tolerance	%	Below 1 ohm :10 – 1 ohm and above : 5							
Values	Ohm	E12 preferred. Other values on request							
Insulation resistance	Ohm	100M		1G		100G			
Thermal impedance	°C/Watt	120	90	70	55	45	30	25	25
Operating temperature range	°C	-55 to 250							

Physical Data

Dimension (mm) and Weight (g)							Diameter / profile
Type	L Max	D Max	T Max	d Nom	S Nom	Wt Nom	
210	14.0	5.0	36.0	0.8	17.6	1.2	
211	20.0				22.9	1.4	
810	18.0	8.0			20.3	3.0	
811	25.0		27.9	3.6			
511	25.0	10.0	36.0	0.8	27.9	4.5	
512	38.0				40.6	4.8	
513	50.0				53.3	9.1	
514	75.0				78.7	12.5	



Mechanical tolerances: 0.20 mm

Construction

The wire element is cut to the correct length and calibrated to the correct resistance value and tolerance. Terminals and endcaps are clamped to the wire element. The resistive element is sealed in a special electric ceramic housing with an inorganic filling material for insulation and protection.

Terminations

Tinned copper wire.

Marking

The resistors are marked with manufacturing reference, type reference resistance value, tolerance and power rating.

The resistance value marking conforms to IEC 62.

Solvent resistance

Resistor and marking withstand all standard industrial cleaning fluids.

Flammability

The resistors will not burn or emit particle.

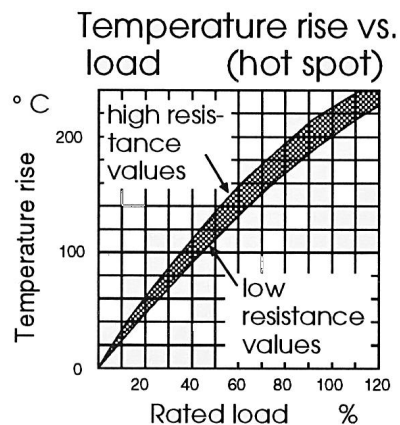
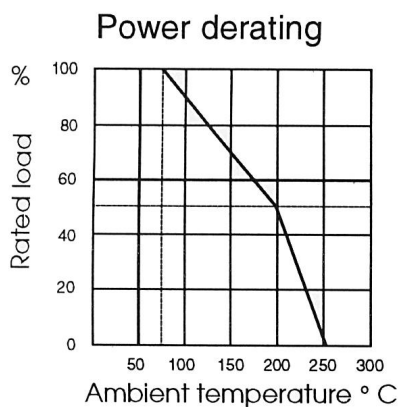
CERAMIC POWER CURRENT WIREWOUND RESISTORS

200/500/800 SERIES

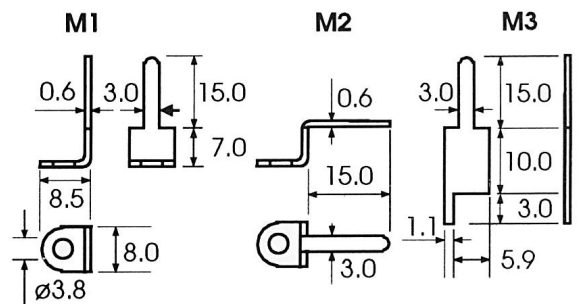
Performance Data

		Maximum	Typical	
Load life stability	$\Delta R\%$	5.0	3.0	1000 hours at 70°C at rated power
Long term stability	$\Delta R\%$	6.0	5.0	5000 hours at 250°C. no load
Derating from rated power		Zero at 250 °C		
Short time overload	$\Delta R\%$	2.0	1.0	10 times rated power for 5 seconds
Long term damp heat	$\Delta R\%$	3.0	2.0	40°C/93%RH/56 days
Temperature cycling	$\Delta R\%$	1.0	0.3	5 cycles -55°C to 155°C in 5 hours
Resistance to solder heat	$\Delta R\%$	0.3	0.2	260°C in 10 seconds
Vibration	$\Delta R\%$	0.5	0.2	20 G in 2 hours

Application Notes



Mounting brackets for the 500 series:



Packaging

The resistors are packed in cardboard boxes or on tape and reel.

Boxes

Type	Quantity per box
210, 211	100
513, 514, 810, 811	75
511, 512	50

Tape and reel

Type	Quantity per reel
210, 211	1000
511, 512, 513, 514, 810, 811	Consult factory

Ordering procedure

Specify type reference, resistance value and tolerance.

For tape and reel packing add T/R to the type number. For special versions a 3-digit number is attached to ordering code.

Example: 211 1R2 5% XXX

Type ————|
 Value, use IEC 62 code ————|
 Tolerance ————|
 Tape and reel or special ————|

The resistance value of this power resistor is 1.2 ohm.