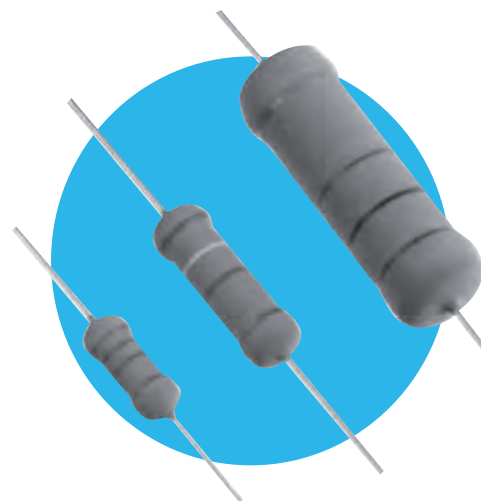


Flameproof Metal Oxide Resistors

WMO-S Series

- Cost effective
- Small size for power rating
- Good pulse handling capability
- Flameproof protection



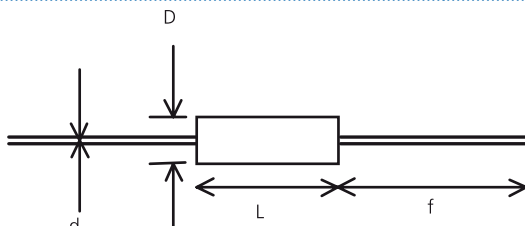
 All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Electrical Data

		WMO½S	WMO1S	WMO2S	WMO3S	WMO5S	WM07S
Power rating @70°C	watts	½	1	2	3	5	7
Resistance range	ohms	10R-100K	10R-120K	10R-150K		10R-180K	20R-150K
Limiting element voltage	volts	250	300	350		500	750
TCR (25 to 75°C)	ppm/°C	350					
Isolation Voltage	volts	250	350			500	750
Resistance tolerance	%	5					
Standard Values		E24					
Thermal Impedance	°C/watt	125	105	75	63	42	36
Ambient temperature range	°C	-55 to +155					

Physical Data

Dimensions (mm) and Weight (g)							
Type	L max.	D max.	f min.	d nom.	PCB mounting centres	Min. bend radius	Wt. nom.
WMO½S	7.5	3	22	0.6	12.7	0.6	0.22
WMO1S	10	4.5	21	0.7	15.2	1.05	0.42
WMO2S	12	5	20	0.7	17.8	1.05	0.63
WMO3S	16	5.5	25	0.8	20.3	1.2	1.0
WMO5S	26	8.5	29	0.8	30.5	1.2	3.7
WMO7S	32	8.5	35	0.8	38.1	1.2	4.5



General Note

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WMO-S Series

Construction

The resistive film is deposited onto a high purity ceramic rod. End caps are force fitted and termination wires are welded to the end caps. The element is adjusted to the required resistance value by a helical cut. Finally a cement protection is applied to the resistor body prior to marking with indelible ink.

Marking

WMO-S resistors are colour coded with four bands indicating value and tolerance in accordance with IEC62.

Solvent Resistance

The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.

Flammability

The resistor coating will not burn under any condition of applied temperature or component overload.

Performance Data

		Maximum
Load at Rated Power: 1000hrs @ 70°C	ΔR%	5
Short term (5s) overload	ΔR%	2 + 0.05Ω
Derating		See derating curve
Temperature cycling	ΔR%	2 + 0.05Ω
Moisture resistance	ΔR%	5
Resistance to solder heat	ΔR%	1
Insulation resistance	GΩ	>10

WMO-S Series Derating Curve

The graph illustrates the derating curve for the WMO-S Series resistors. The y-axis represents the percentage of rated power at 70 °C, ranging from 0 to 100. The x-axis represents the ambient temperature in degrees Celsius, ranging from 70 to 235. A solid line shows the derating from 100% power at 70 °C to 45% power at 155 °C. A dotted line extends from 45% power at 155 °C to 0% power at 235 °C.

Ambient temperature (°C)	% of Rated Power at 70 °C
70	100
155	45
235	0

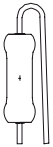
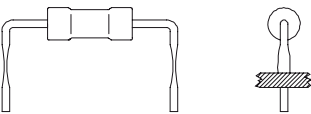
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WMO-S Series

Application Notes

- 1. If the resistors are to dissipate full rated power, it is recommended that the terminations should not be soldered closer than 4mm from the body.
- 2. Due to operating temperature limits imposed by some PCB materials, derating may be necessary. An estimate of the temperature rise to be expected can be calculated using the thermal impedance figures given under Electrical Data.
- 3. WMO-S resistors can also be supplied with hairpin, goalpost or lancet pre-formed leads. Consult Factory for details.

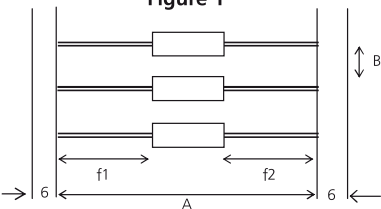
Hairpin	Goalpost	Lancet
		

Packaging

Our standard packaging for WMO-S is taped and boxed. The critical dimensions are shown in Figure 1. The component wires will not protrude beyond the outside edge of the tapes. Pre-formed resistors are supplied loose packed in plastic bags or boxes.

Dimensions mm	WMO½S	WMO1S	WMO2S	WMO3S	WMO5S	WMO7S
A	52	52	52	67	85	90
B	5	5	5	10	10	10

Figure 1



Body location $f1-f2 < 1.4mm$

Ordering Procedure

Specify type reference, value and tolerance as shown in this example of WMO3S at 1.5KΩ 5%:

WMO3S – 1K5J A1

Type

Value (use IEC 62 code)

Tolerance (use IEC 62 code)
J 5%

Packing Code

A5	Ammo Pack	WMO½S	5000 / Box
A1		WMO1S, WMO2S, WMO3S	1000 / Box
A05		WMO5S, WMO7S	500 / Box

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