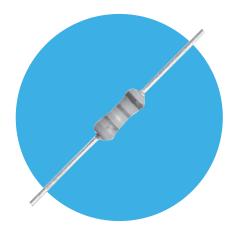
# **Resistors**

# **High Voltage Metal Film Resistors**

#### **MH Series**

- MH37 meets requirements of BSEN 60065 in value range 680K to 3M
- High working voltage to 3.5kV
- Small size
- High pulse load capability
- Robust cement coating
- Value up to 10M







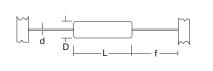
All Pb-free parts comply with EU Directive 2011/65/EU (RoHS2)

# **Electrical Data**

		MH25	MH37	
Power rating at 70°C max	watts	0.25	0.5	
Resistance range	ohms	100K - 10M	100K - 3M	
Limiting element voltage	volts dc or ac peak	1,600	3,500	
Isolation voltage	volts	700		
TCR	ppm/°C	100		
Resistance tolerance	%	1, 2, 5		
Standard values		E24 and E96 preferred		
Thermal impedance	°C/watt	140	112	
Ambient temperature range	°C	- 55 to 155		

# Physical Data

Dimensions (mm) and Weight (g)									
					PCB	Min			
					mounting	Bend			
Type	L max	D max	f min	d nom	centres	Radius	Wt.nom		
MH25	6.2	2.5	21.0	0.6	10.2	0.6	0.3		
MH37	9.0	3.7	19.6	0.8	12.7	1.2	0.5		



### Construction

Thin film material is sputtered on to high grade ceramic rods. Nickel plated steel caps are force fitted and the termination wires are welded to the caps. The value is obtained by a helical cut in the film and finally the resistor body is protected by a cement protection applied so that the terminations remain completely clear.

#### Marking

1% tolerance resistors are colour coded with 5 bands. 2% and 5% tolerance have 4. Band IEC 62 colours are used.

### **Terminations**

Material Solder-coated copper wire.

Strength The terminations satisfy the requirements of

IEC 68.2.21.

Solderability The terminations meet the requirements of

IEC 115-1, Clause 4.17.3.2

## Solvent resistance

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

#### General Note

#### **MH Series**



# Performance Data

		Maximum	Typical	
Load at rated voltage : 1000 hrs at 70°C	Δ R%	1.5	0.4	
Derating from rated power at 70°C		Zero at 155°C		
Overload	Δ R%	1.0	0.25	
56 days at DHSS	Δ R%	1.5	0.2	
Climatic	Δ R%	1.5	0.2	
Climatic category		55/155/56		
Temperature rapid change	Δ R%	0.5	0.05	
Resistance to solder heat	Δ R%	0.5	0.05	
Vibration and bump	Δ R%	0.5	0.05	
Voltage proof	volts	700 min		

#### **Application Notes**

To ensure reliable performance at high voltages care should be taken to avoid potential sources of ionic contamination contacting the resistor body, for example, flux applied by spraying, encapsulation materials or contaminants from the environment of use.

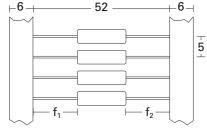
### **Packaging**

All MH series resistors are supplied tape packed ready for loading on automatic sequencing and insertion machines.

Component wires will not protrude beyond the outside edge of the tape.

Alternative packing available by request.

Lead Formed Resistors can also be supplied. Standard options of Lancet, Radial and Goal Post forming are shown in the Lead Form information sheet.



Body Location  $f_1 - f_2 \le 1.4 \text{ mm}$ 

# Ordering Procedure

Example: MH25 at 4.7 megohms and 1% tolerance in ammo pack box of 5000 pieces -

