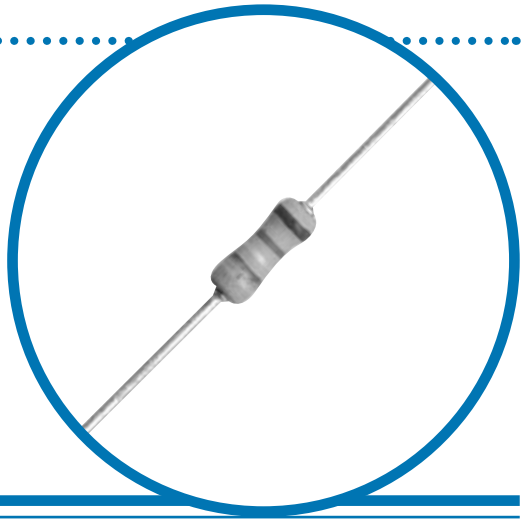
High Voltage Metal Film Resistors

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**



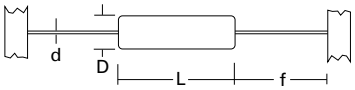
Electrical Data

		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)

Type	L max	D max	f min	d nom	PCB mounting centres	Min Bend 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.

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.

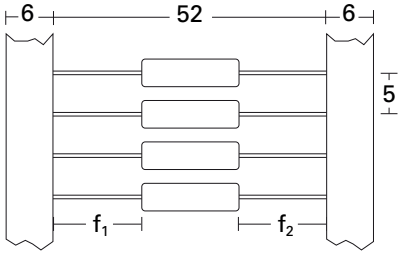
Packaging

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 $f_1 - f_2 \leq 1.4$ mm

Ordering Procedure

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

M H 2 5 – 4 M 7 F I

Type

Value (use IEC62 code)

Tolerance (use IEC62 code)

F	1%
G	2%
J	5%

Packing

I	Ammo	MH25	5000/box	Standard
		MH37	2500/box	

General Note

TT electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT electronics' own data and is considered accurate at time of going to print.