Resistors



High Voltage MELF Resistors

WRM-HV Series

- High limiting element voltage up to 1kV
- 1.2/50µs surge voltage to 6kV
- Tolerance down to ±0.1%
- TCR down to ±25ppm/°C



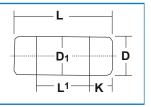
All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Electrical Data

		WRM0204HV	WRM0207HV		
Power rating at 70°C	watts	0.4	1		
Resistance range	ohms	340K -	340K – 3M4		
Limiting element voltage	volts	500	1000		
Maximum overload voltage	volts	1000	2000		
TCR	ppm/°C	25,	25, 50		
Resistance tolerance	%	≤1M0: 0.1, 0.25, 0.	≤1M0: 0.1, 0.25, 0.5, 1 >1M0: 0.5, 1		
Standard values		E24 8	E24 & E96		
Thermal impedance	°C /W	200	140		
Ambient temperature range	°C	-55 to	-55 to +155		
Insulation resistance	ohms	>1	>1010		
Voltage proof	volts	710	710 1420		

Physical Data

Dimensions (mm) and weight (g)						
Туре	L max	D max	D1 max	K min	L ¹ min	Weight
WRM 0204HV	3.7	1.55	1.55	0.7	1.5	0.02
WRM 0207HV	6.1	2.4	2.4	1.2	2.9	0.08



Construction

A metal film is deposited onto a high dissipation ceramic former to which tin plated terminating caps are fitted.

The resistor is adjusted to value by a helical cut in the film and the body is protected by a lacquer coating.

Marking

Resistance values are colour coded with three or four bands, indicating value and multiplier.

Terminations

Material

Solderability The pure tin finish produces ageing free contacts on which

low melting solders can be used. Dipped area shall be covered with a smooth and bright solder coating after 3 seconds immersion at 215°C.

Solvent Resistance

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

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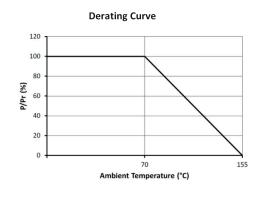
Performance Data

		Maximum (+0.05 Ω)
Short time overload: 5s at lesser of 6.25 x rated power or 2 x LEV	±ΔR%	0.15
Damp heat with load: 1000hrs 40±2°C/90-95%RH cyclic rated power	±ΔR%	1
High temperature exposure: 1000hrs at 155°C	±∆R%	1
Bending test: 2mm deflection for 60s	±∆R%	0.5
Resistance to soldering heat: 260±5°C for 10s	±∆R%	0.25
Temperature rapid change: 1000cycles-55/125°C	±∆R%	1
Endurance: 1000hrs rated power at 70°C	±∆R%	1
Solderability: 245±5°C for 3s		>95% coverage
Voltage proof: 1.42 x LEV		No breakdown or flashover

Pulse Performance

Limits for ΔR are $\pm 0.5\%$

Peak surge voltage	WRM0204HV	WRM0207HV		
1.2/50μs	4.5kV	6kV		
10/700μs	2.2kV	3kV		



Ordering Procedure

Example: WRM0204HVC-1M0FT3 (WRM0204HV, 50ppm/°C, 1 megohm ±1%, Pb-free)



1	2	3 4		5		
Туре	TCR	Value	Tolerance	Packing		cking
WRM0204HV	D = ±25ppm/°C	3/4 characters	B = ±0.1%	T3	0204	3000 / 7" reel
WRM0207HV	C = ±50ppm/°C	K = kilohms	$C = \pm 0.25\%$	T2	0207	2000 / 7" reel
		M = megohms	$D = \pm 0.5\%$			
			F = ±1%			

Mouser Electronics

Authorized Distributor

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TT Electronics:

WRM0207HVC-360KFT2 WRM0207HVC-560KFT2 WRM0204HVC-1M6FT3 WRM0204HVC-1M8FT3
WRM0207HVC-1M1FT2 WRM0204HVC-750KFT3 WRM0204HVC-2M2FT3 WRM0207HVC-3M3FT2 WRM0204HVC-680KFT3 WRM0207HVC-510KFT2 WRM0207HVC-1M0FT2 WRM0207HVC-1M2FT2 WRM0204HVC-620KFT3
WRM0204HVC-1M0FT3 WRM0204HVC-1M5FT3 WRM0204HVC-2M4FT3 WRM0207HVC-1M8FT2 WRM0204HVC-1M3FT3 WRM0207HVC-3M0FT2 WRM0207HVC-1M3FT2 WRM0204HVC-820KFT3 WRM0207HVC-2M2FT2
WRM0207HVC-390KFT2 WRM0207HVC-430KFT2 WRM0204HVC-360KFT3 WRM0207HVC-2M4FT2
WRM0204HVC-2M7FT3 WRM0207HVC-910KFT2 WRM0204HVC-390KFT3 WRM0207HVC-470KFT3
WRM0204HVC-510KFT3 WRM0207HVC-750KFT2 WRM0204HVC-910KFT3 WRM0207HVC-820KFT2
WRM0204HVC-1M2FT3 WRM0207HVC-680KFT2 WRM0204HVC-3M3FT3 WRM0204HVC-1M1FT3 WRM0207HVC-470KFT3
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WRM0207HVC-1M6FT2 WRM0207HVC-590KFT2 WRM0207HVC-2M0FT3 WRM0207HVC-430KFT3
WRM0207HVC-1M6FT2 WRM0207HVC-590KFT2 WRM0207HVC-2M0FT3 WRM0207HVC-1M5FT2 WRM0204HVC-430KFT3