Wirewound Resistor, Ultra Precision, Epoxy Molded, Axial Lead



FEATURES

- Resistance values up to 6 MΩ
- Resistance tolerances down to ± 0.01 %
- Temperature coefficients down to 2 ppm/°C
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING $P_{25\,°C}$ W	TOLERANCE ± %	RESISTANCE RANGE Ω	MAXIMUM WORKING VOLTAGE V
MR9352	0.750	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 6.0M	600
MR9353	0.500	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 3.8M	400
MR9354	0.330	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 2.5M	400
MR9355	0.250	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 1.2M	300
MR9356	0.200	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 1.0M	200
MR9357	1.000	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 6.0M	800
MR9358	1.500	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 6.0M	900
MR9359	2.000	0.01, 0.02, 0.05, 0.1, 0.25, 0.5, 1	10 to 6.0M	1000

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	MR93 RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 10 > 100 Ω; ± 20 for 10 Ω to 100 Ω
Terminal Strength	lb	4.5
Dielectric Withstanding Voltage	V_{AC}	750
Operating Temperature Range	°C	- 55 to 145
Maximum Working Voltage	V	$(P \times R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: MR9355500K00AAE66 (visit www.vishay.net SAP parts manual for all options)

M	R	9	3	5	5	5	0	0	K	0	0	A	A	E	6	6	

GLOBAL MODEL (6 digits)	VALUE (6 digits)	TOLERANCE (1 digit)	TC (1 digits)	PACKAGING CODE (3 digits)	SPECIAL (1 digits)
(See Standard Electrical Specifications Global Model column for options)	**R** = Decimal **K** = Thousand **M** = Million **15R000** = 15 Ω **1K5000** = 1.5 kΩ **1M0000** = 1 MΩ	**T** = ± 0.01 % **Q** = ± 0.02 % **A** = ± 0.05 % **B** = ± 0.1 % **C** = ± 0.25 % **D** = ± 0.5 % **F** = ± 1.0 %	**A** = Standard, 10, 20 (W) **B** = 3900 (Q) **C** = 4500 (M) **D** = 6000 (N) **G** = 5 **J** = 2	**E66** = Lead (Pb)-free bulk pack	(Dash Number) From **1** to **9** as applicable

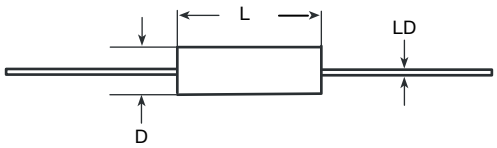
Historical Part Number example: MR9355W500K0A

MR9355	W = STANDARD	500 kΩ	0.05 %
HISTORICAL MODEL	TC	RESISTANCE VALUE	TOLERANCE

For technical questions, contact: ww2aresistors@vishay.com

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DIMENSIONS in inches [millimeters]



GLOBAL MODEL	DIMENSIONS in inches [millimeters]		
	L ± 0.025 [0.635]	D ± 0.005 [0.127]	LD ± 0.002 [0.051]
MR9352	1.000 [25.40]	0.375 [9.52]	0.032 [0.813]
MR9353	0.750 [19.05]	0.375 [9.52]	0.032 [0.813]
MR9354	0.750 [19.05]	0.250 [6.35]	0.032 [0.813]
MR9355	0.500 [12.70]	0.250 [6.35]	0.032 [0.813]
MR9356	0.375 [9.52]	0.250 [6.35]	0.032 [0.813]
MR9357	1.000 [25.40]	0.500 [12.70]	0.032 [0.813]
MR9358	1.500 [38.10]	0.500 [12.70]	0.032 [0.813]
MR9359	2.000 [50.80]	0.500 [12.70]	0.032 [0.813]

MATERIAL SPECIFICATIONS

Element: Nickel-chrome alloy, other materials available depending on TC requirements

Core: Molded epoxy

Encapsulant: Epoxy

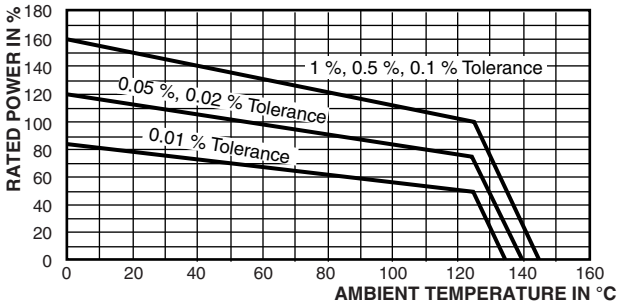
Standard Terminals: 100 % matte tinned copper

Part Marking: MILLS, model, value, tolerance, date code

Note

- Due to resistor size limitations some resistors will have minimal information marked on parts

DERATING



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Dielectric Withstanding Voltage	MIL-STD-202 Method 301, 750 V_{RMS}	± (0.01 %) ΔR
High Frequency Vibration	MIL-STD-202 Method 204, condition D, frequency varied 10 Hz to 2000 Hz, 20 *g* peak	± (0.01 %) ΔR
High Temperature Exposure	MIL-STD-202 Method 108, 2000 h at 145 °C	± (0.01 %) ΔR
Load Life	MIL-STD-202 Method 108, 2000 h at 125 °C at rated power, 1.5 h "ON", 0.5 h "OFF"	± (0.1 % + 0.01 Ω) ΔR
Low Temperature Storage	- 65 °C for 24 h	± (0.01 %) ΔR
Moisture Resistance	MIL-STD 202 Method 106	± (0.01 %) ΔR
Shock, Specified Pulse	MIL-STD-202 Method 213, condition I, 5 shocks in 3 directions	± (0.01 %) ΔR
Thermal Shock	MIL-STD-202 Method 107, condition B	± (0.05 %) ΔR
Short Time Overload	2 x rated power for 10 min	± (0.01 %) ΔR
Terminal Strength	MIL-STD-202 Method 211, conditions A and D, 4.5 lb	± (0.01 %) ΔR

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