Enamelled Wirewound Power Resistors Axial Leads



As a result of more than 50 years of experience and continuous improvements the RWM series of resistors features proven reliability in AC or DC applications.

The high quality of the RWM resides mainly in the use of a proprietary Vishay Sfernice enamel fired at high temperature and free from any compound liable to corrode the resistive wire.

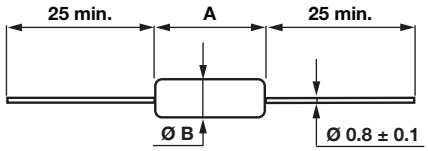
FEATURES

- High dissipation up to 30 W (25 °C)
- Fire proof
- Excellent endurance typical drift ± 1.5 % after 1000 h
- Conformal vitreous enamel
- All welded construction
- Low ohmic values 0.33 Ω available
- Termination: Sn/Ag/Cu
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

The performance of this series of professional resistors fully meets the requirements of the following specifications:
- NF C 83-210-001
- CECC 40201-001
- BS - CECC 40201-002

DIMENSIONS in millimeters



	RWM 6 x 34	RWM 8 x 34	RWM 8 x 45	RWM 10 x 45	RWM 10 x 64	RWM 10 x 65
A	33.7 ± 1	33.7 ± 1	45.8 ± 2	45.8 ± 2	63.8 ± 1	63.8 ± 1
Ø B	7.4 ± 1.5	7.4 ± 1.5	9.4 ± 1.5	9.4 ± 1.5	9.4 ± 1.5	9.4 ± 1.5
Weight in g	4	4	8	8	14	14

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER $P_{25\,°C}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %
RWM 6 x 34	0634	0.33 to 36K	8	500	1, 2, 5
RWM 8 x 34	0834	0.33 to 36K	11	650	1, 2, 5
RWM 8 x 45	0845	0.47 to 62K	11	650	1, 2, 5
RWM 10 x 45	1045	0.47 to 62K	25	800	1, 2, 5
RWM 10 x 64	1064	0.68 to 100K	25	800	1, 2, 5
RWM 10 x 65	1065	0.68 to 100K	30	800	1, 2, 5

For technical questions, contact: sferfixedresistors@vishay.com

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TECHNICAL SPECIFICATIONS

VISHAY SFERNICE SERIES AND STYLE		RWM 6 x 34	RWM 8 x 34	RWM 8 x 45	RWM 10 x 45	RWM 10 x 64	RWM 10 x 65
Power Rating	at +70 °C	7 W	9.5 W	9.5 W	21 W	21 W	25.8 W
	at +25 °C	8 W	11 W	11 W	25 W	25 W	30 W
	With Surface Temp. ≤ +450 °C	12 W	14 W	20 W	25 W	25 W	30 W
Ohmic Range in Relation to Tolerance ± 5 % E24 Series		0.33 Ω 36 kΩ	0.33 Ω 36 kΩ	0.47 Ω 62 kΩ	0.47 Ω 62 kΩ	0.68 Ω 100 kΩ	0.68 Ω 100 kΩ
Qualified Ohmic Range NF C 83-210		0.33 Ω 15 kΩ	-	0.47 Ω 33 kΩ	-	-	-
Limiting Element Voltage		500 V	650 V	650 V	800 V	800 V	800 V
Critical Resistance		31 kΩ	-	38 kΩ	25.6 kΩ	25.6 kΩ	21.3 kΩ

PERFORMANCE

CECC 40201 - EN 140-201			TYPICAL DRIFTS
TESTS	CONDITIONS	REQUIREMENTS	
Short Time Overload	10 P_r during 10 s 25 °C ambient	± (2 % + 0.1 Ω)	± (0.5 % + 0.05 Ω)
Temperature Cycling (5 cycles)	-55 °C +200 °C	± (1 % + 0.05 Ω)	± (0.5 % + 0.05 Ω)
Humidity (Steady State)	56 days 40 °C ambient - R.H. 95 %	± (5 % + 0.1 Ω)	± (0.5 % + 0.05 Ω)
Terminal Strength	Tensile test: 20 N 2 successive bending 2 full rotations of 180°	± (1 % + 0.05 Ω)	± (0.1 % + 0.05 Ω)
Load Life	1000 h at P_r 90'/30' cycle 25 °C ambient	± (5 % + 0.1 Ω)	± (1.5 % + 0.05 Ω)

OVERLOAD

Heavy overloads can be endured in the form of short pulses < 0.1 s. Particular requirements should be submitted to Vishay Sfernice, specifying peak voltage, cycle and environmental conditions.

RECOMMENDATIONS FOR USE

Since these components are high dissipation power resistors, customers are advised to use a high melting point solder.

For low ohmic values, the measurement becomes critical and the connecting wires resistance is to be included. The value is measured at 5 mm from the resistor body.

Group Mounting

In a still atmosphere, a distance between axes equal to five times the resistor's diameter is recommended.

Cabinet Mounting

- Unventilated box: Dissipation should be reduced (see dimensional drawing).
- Forced ventilation: If conditions are appropriate, dissipation may be doubled or even trebled.
- In any case: The surface temperature at the hottest point should not exceed 450 °C.

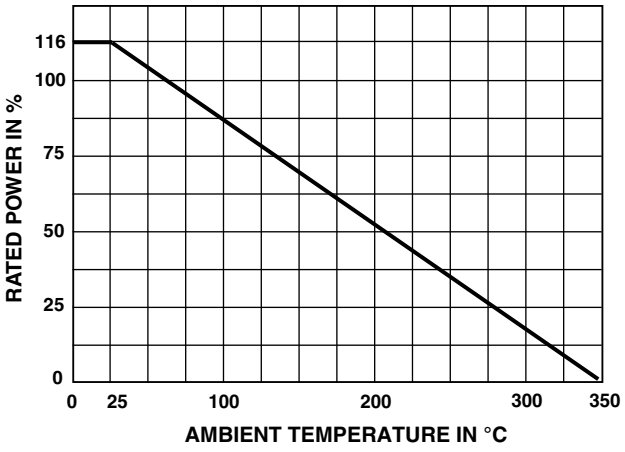
These aspects should be considered by the end user.

ELECTRICAL SPECIFICATIONS

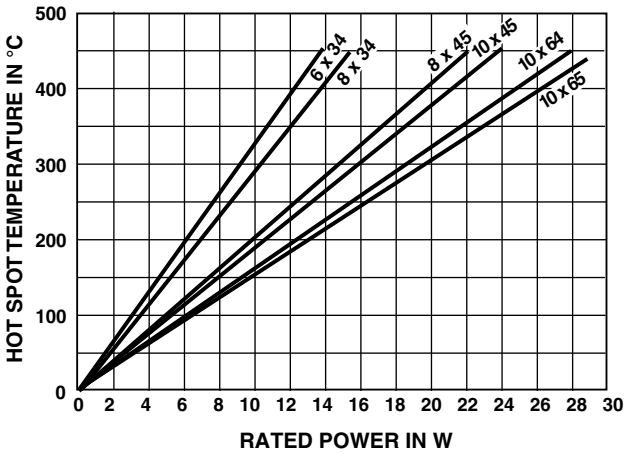
Tolerance	Standard	± 5 % (NI ± 10 %)
	On request	± 1 % and ± 2 % (NI ± 5 %)
Temperature Coefficient		+75 ppm/°C typical
Dielectric Withstanding Voltage NF EN140000		500 V_{RMS} - 1 min - 10 mA
Inductance		Non inductive (Ayrton-Perry) winding available

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POWER RATING



TYPICAL TEMPERATURE RISE



MARKING

Vishay Sfernice trademark, model and style if applicable, ohmic value, resistance tolerance, manufacturing date (year - month).

ORDERING INFORMATION

RWM	6 x 34		XXX	1U2	± 5 %	S09	e1
MODEL	STYLE	NI OPTIONAL	SPECIAL DESIGN	OHMIC VALUE	TOLERANCE	PACKAGING	LEAD (Pb)-FREE
		Non inductive winding	Method N° optional	Custom items are subject to extra charge and minimum order. Please see price list.			

GLOBAL PART NUMBER INFORMATION

R	W	M	0	6	3	4		1	R	2	0	J	S	0	9		E	1

GLOBAL MODEL	SIZE	OPTION	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL	LEAD (Pb)-FREE
RWM	d x L: **0634** **0834** **0845** **1045** **1064** **1065**	**Blank** or **N** (non inductive winding)	The first three digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. **48R7** = 48.7 Ω **1R20** = 1.2 Ω **1002** = 10 000 Ω **R330** = 0.33 Ω ...	**F** = 1 % **G** = 2 % **J** = 5 % **K** = 10 %	Size 0845, 1045, 1064, 1065: **B25** = box (50 pieces) Size 0634, 0834: **S09** = box (50 pieces)	As applicable. Ex: **AD5**	Sn(99), Ag(0.3), Cu(0.7): **E1**

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