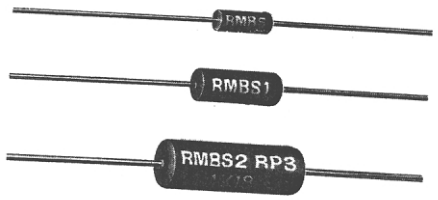
Moulded Precision Wirewound Resistors Axial Leads



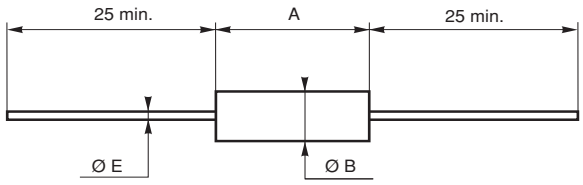
FEATURES

- 0.75 Watt to 3 Watt at 25°C
- NF C 83-210
- CECC 40201-005
- Low temperature coefficient
- Low ohmic values
- Excellent behavior against humidity
- Electrical insulation
- Mechanical strength
- Accurate sizes

High stability and low temperature coefficient are the main features of the precision wirewound resistors type RMB RMBS models just as maintenance parts. Their performances can be compared with those of the best film resistors but they have in addition a greater power rating. RMBS styles meet the more severe requirements of NF C 83-210 (all RMBS styles are approved) and characteristic U of MIL-R-26 E (approximate size of RW 70 and 79 resistors) specifications. The two models RMB and RMBS have a similar construction. RMBS are submitted, in addition to a process which further increases the stability. On request, non-inductive resistors are available under the reference RMB NI.

DIMENSIONS in millimeters

RMB, RMBS



SERIES AND STYLE	RMB 0.75 RMBS 0.5	RMB 1.5 RMBS 1	RMB 3 RMBS 2
A max.	7	10.2	16.2
Ø B max.	2.5	4	6.4
Ø E ± 0.1	0.6	0.6	0.8
Weight in g	0.3	0.7	1.5

TECHNICAL SPECIFICATIONS

VISHAY SFERNICE SERIES AND STYLE		RMB 0.75	RMB 1.5	RMB 3	RMBS 0.5	RMBS 1	RMBS 2
NF C 83-210		–	–	–	RP1	RP2	RP3
CECC 40201-005		–	–	–	A	B	C
Power Rating	at 25°C	0.75W	1.5W	3W	0.5W	1W	2W
	at 70°C	0.6W	1.2W	2.4W	0.4W	0.8W	1.6W
Ohmic Range in Relation to Tolerance	± 5% E24	0.1Ω 2kΩ	0.1Ω 6.81kΩ	0.051Ω 13kΩ	0.1Ω 2kΩ	0.1Ω 6.81kΩ	0.015Ω 13kΩ
	± 2% E48	0.1Ω 2kΩ	0.1Ω 6.81kΩ	0.08Ω 12.3kΩ	0.1Ω 2kΩ	0.1Ω 6.81kΩ	0.078Ω 12.4kΩ
	± 1% E96	0.1Ω 2kΩ	0.1Ω 6.81kΩ	0.1Ω 12.4kΩ	0.1Ω 2kΩ	0.1Ω 6.81kΩ	0.1Ω 12.4kΩ
	± 0.5% E96	0.4Ω 2kΩ	0.4Ω 6.81kΩ	0.3Ω 12.4kΩ	0.4Ω 2kΩ	0.4Ω 6.81kΩ	0.3Ω 12.4kΩ
	± 0.1%	Please consult VISHAY SFERNICE					
Qualified Ohmic Range NF C 83-210		–	–	–	1Ω 174Ω	1Ω 590Ω	1Ω 1.3kΩ
Limiting Element Voltage		not applicable	120V	200V	not applicable	120V	200V
Critical Resistance		out of nominal ohmic range					

Undergoes European Quality Insurance System (CECC)

PERFORMANCE					
TESTS	**CONDITIONS**	**REQUIREMENTS**		**TYPICAL VALUES AND DRIFTS**	
		MIL-R-26 E	**NF C 83-210**	**RMB**	**RMBS**
Dielectric W/s Voltage	$700V_{RMS}$	± (0.1% + 0.05Ω)	–	± (0.05% + 0.01Ω)	± (0.05% + 0.01Ω)
Short Time Overload	5Pn at 25°C/5s	± (0.2% + 0.05Ω)	± 0.25% + 0.05Ω	± (0.1% + 0.01Ω)	± (0.05% + 0.01Ω)
Climatic Sequence	NF C 83-210 – 55°C/+ 200°C 5 cycles	–	± 0.25% + 005Ω Insulation R >100MΩ	± (0.1% + 0.01Ω) $>10^4$MΩ	± (0.05% + 0.01Ω) $>10^4$MΩ
Humidity (Steady State)	NF C 83-210 56 days 95% R.H.	–	± 0.25% + 0.05Ω Insulation R > 100MΩ	± (0.1% + 0.01Ω) $>10^4$MΩ	± (0.05% + 0.01Ω) $>10^4$MΩ
Thermal Shock	Load at 100% P followed by cold temp. exposure at – 55°C	± (0.2% + 0.05Ω)	–	± (0.2% + 0.01Ω)	± (0.1% + 0.01Ω)
Vibration	MIL-STD-202 Method 204 - Test D: 20g 10/2000Hz	± (0.2% + 0.05Ω)	± 0.25% + 0.05Ω	± (0.01% + 0.01Ω)	± (0.01% + 0.01Ω)
Load Life	MIL-STD-202 Method 108 Pr 2000 h	± (0.5% + 0.05Ω)	± 0.25% + 0.05Ω 1000h at 25°C	± (1% + 0.01Ω)	± (0.15% + 0.01Ω)
Moisture Resistance	MIL-STD-202 Method 106	± (0.2% + 0.05Ω) Insulation resistance >100MΩ	–	± (0.1% + 0.01Ω) $>10^3$MΩ	± (0.05% + 0.01Ω) $>10^3$MΩ
High Temperature	1000h at + 200°C	± (0.5% + 0.05Ω)	± 0.5% + 0.05Ω Insulation R > 1GΩ	± 1%	± 0.3%
Shock	MIL-STD-202 100g Method 205 Test C	± (0.1% + 0.05Ω)	± 0.25% + 0.05Ω	± 0.05%	± 0.05%

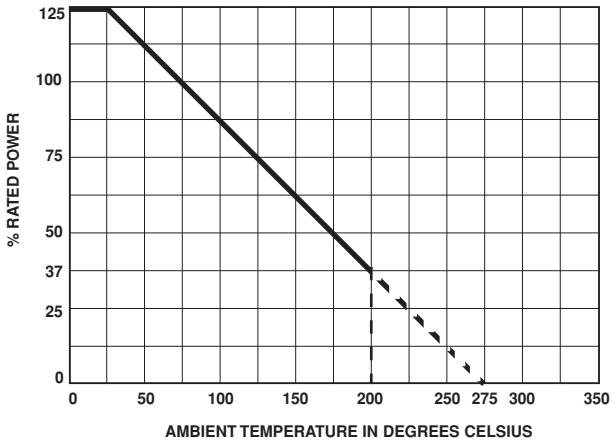
TEMPERATURE COEFFICIENT IN THE RANGE - 55° + 200°C		
OHMIC RANGE	**REQUIREMENTS** **NF C 83-210 MIL-R-26E**	**TYPICAL VALUES** **SFERNICE**
Rn < 1	≤ ±100ppm/°C	± 50ppm/°C
1 ≤ Rn < 10	≤ ± 50ppm/°C	
Rn ≥ 10	≤ ± 25ppm/°C	+ 0 to – 20ppm/°C

STABILITY AND POWER RATING

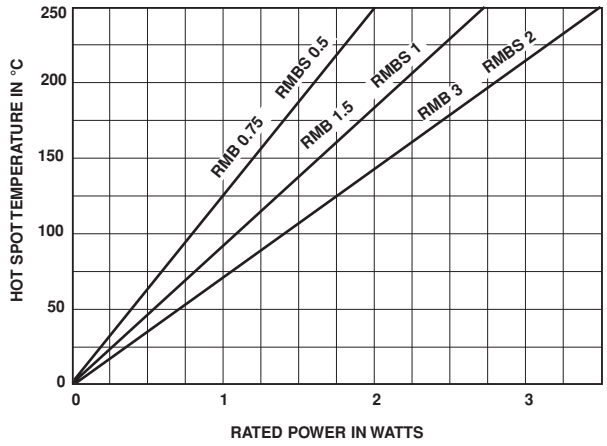
Stability changes slightly according to power rating and ambient temperature. This fact is specially important for users needing a life drift lower than the initial resistance tolerance. Typical drifts, after 2000h life test made under the 90'/30' conditions and at a 25°C ambient temperature are:

MODEL STYLE	RMBS 0.5	RMBS 1	RMBS 2	R % / R %	MODEL STYLE	RMB 0.75	RMB 1.5	RMB 3	R % / R %
Pn	0.5W	1W	2W	0.15%	P max.	1W	2W	3.5W	1%
1/2 Pn	0.25W	0.5W	1W	0.075%	Pn	0.75W	1.5W	3W	0.5%
					1/3 Pn	0.4W	0.75W	1.5W	0.3%

POWER RATING CHART



TEMPERATURE RISE



MARKING

SFERNICE trademark, model, style, CECC style (if applicable) nominal resistance (in Ω), tolerance (in %), manufacturing date.

ORDERING INFORMATION

RMB or RMBS	**3**	**NI**		**10kΩ**	**± 0.5%**	
MODEL	STYLE	NON INDUCTIVE WINDING	SPECIAL DESIGN	OHMIC VALUE	TOLERANCE	PACKAGING
		Optional	Method N° Optional	Custom items are subject to extra-charge and min. order. Please see price list.		Optional

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