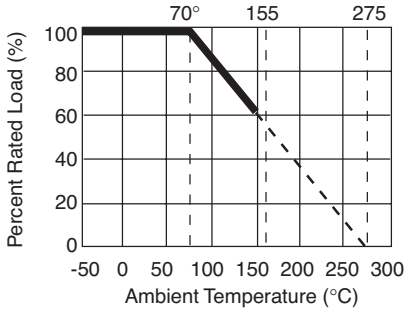
Cement Power Resistors (RoHS Compliant) PRM-RC Series

FEATURES

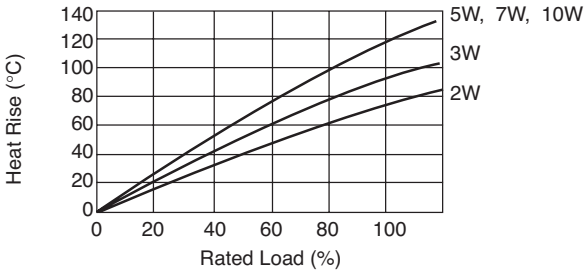
- 5% tolerance
- Exceptionally small, sturdy, and reliable
- Sealed with a special cement
- Excellent moisture resistance
- High temperature stability
- Ceramic flame retardant package
- Recommended wash method is alcohol

LEAD-FREE RoHS Compliant

DERATING CHART



HEAT RISE CHART

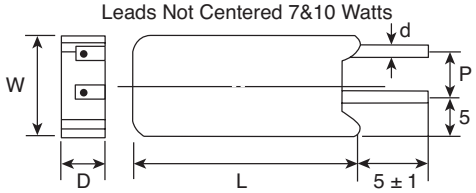


PART NUMBERING SYSTEM

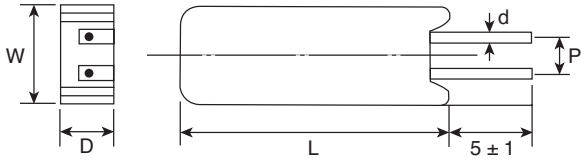
2	8	0	-	P	R	M	5	-	1	0	K	-	R	C
Prefix				Series			Watts		Value				Suffix (RoHS Compliant)	

SERIES, WATTAGE, VALUE RANGE, AND DIMENSIONS

Leads Not Centered 7&10 Watts



Leads Centered 5 Watts



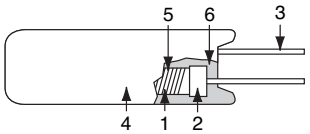
Series	Watts (W)	Leads	Value Ranges (Ω)		Dimensions (mm)				
			Wirewound	Power Film	W ±1	D ±1	L ±1	ød ±0.05	P ±1
PRM	**5**	**Centered**	0.1 ~ 47	48 ~ 100K	12.5	9	25	0.75	5
PRM	**7**	**Not Centered**	0.1 ~ 680	681 ~ 200K	12.5	9	38	0.75	5
PRM	**10**	**Not Centered**	0.1 ~ 910	911 ~ 200K	12.5	9	50	0.75	5

STANDARD STOCKED VALUES (Ω) All standard E-24 values not listed are available special order.

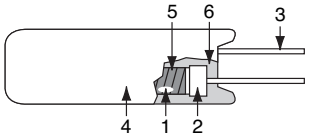
0.1	0.3	0.51	1.0	3.0	6.8	15	33	56	68	75	100	150	200	300	330	470	680	1K	2K	4.7K	10K
0.22	0.47	0.68	2.2	4.7	10	20	47														

CONSTRUCTION

No.	Subpart Name	Material	Material Generic Name
1	Body	Rod Type Ceramics	Al_2O_3, SiO_2
2	End Cap	Tin plated iron surface	Tin : 5%, Iron : 95%
3	Lead	Annealed copper wire (Electrosolder plated surface) Pb Free	Tin-Coated Copper wire
4	Ceramic Case	Ceramic	Al_2O_3, SiO_2
5	Resistance wire Resistance Film	Ni-Cr Alloy Metal Oxide Film	Ni-Cr Alloy Metal Oxide Film
6	Filling Materials	Quartz mixed sand	SiO2



Cement: Wire-wound



Cement: Power Film

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■ CHARACTERISTICS

<table>
<tr><th>Characteristics</th><th>Limits</th><th>Test Methods (JIS C 5201-1)</th></tr>
<tr><td>Temperature coefficient</td><td>± 350 PPM / °C Max.
<20Ω ± 400 PPM / °C</td><td>5.2 Natural resistance change per temp. degree centigrade.
$\frac{R_2-R_1}{R_1(t_2-t_1)} \times 10^6$ (PPM / °C)
R_1: Resistance value at room temperature (t_1)
R_2: Resistance value at room temp. plus 100 °C (t_2)</td></tr>
<tr><td>Dielectric withstanding voltage</td><td>No evidence of flashover, mechanical damage, arcing or insulation break down</td><td>5.7 Resistors shall be clamped in the trough of a 90° metallic V-block and shall be tested at AC potential respectively for 60 +10/ -0 secs.</td></tr>
<tr><td>Temperature cycling</td><td>Resistance change rate is ± (2% + 0.05Ω) Max. with no evidence of mechanical damage</td><td>7.4 Resistance change after continuous 5 cycles for duty shown below:
<table>
<tr><th>Step</th><th>Temperature</th><th>Time</th></tr>
<tr><td>1</td><td>-55 °C ± 3 °C</td><td>30 mins</td></tr>
<tr><td>2</td><td>Room temp.</td><td>10 ~ 15 mins</td></tr>
<tr><td>3</td><td>+155 °C ± 2 °C</td><td>30 mins</td></tr>
<tr><td>4</td><td>Room temp.</td><td>10 ~ 15 mins</td></tr>
</table></td></tr>
<tr><td>Short time overload</td><td>Resistance change rate is ± (5% + 0.05Ω) Max. with no evidence of mechanical damage</td><td>5.5 Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds</td></tr>
<tr><td>Load life in humidity</td><td><table><tr><th>Resistance value</th><th>Δ R/R</th></tr><tr><td>Wire-wound</td><td>± 5%</td></tr><tr><td>Power film: <100KΩ</td><td>± 5%</td></tr><tr><td>>100KΩ</td><td>± 10%</td></tr></table></td><td>7.9 Resistance change after 1,000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") in a humidity test chamber controlled at 40 °C ± 2 °C and 90 to 95 % relative humidity</td></tr>
<tr><td>Load life</td><td><table><tr><th>Resistance value</th><th>Δ R/R</th></tr><tr><td>Wire-wound</td><td>± 5%</td></tr><tr><td>Power film: <100KΩ</td><td>± 5%</td></tr><tr><td>>100KΩ</td><td>± 10%</td></tr></table></td><td>7.10 Permanent resistance change after 1,000 hours operating at RCWV with duty cycle of (1.5 hours “on”, 0.5 hour “off”) at 70 °C ±2 °C</td></tr>
<tr><td>Terminal strength</td><td>No evidence of mechanical damage</td><td>6.1 Direct load :
Resistance to a 2.5 kgs direct load for 10 secs. in the direction of the longitudinal axis of the terminal leads
Twist test :
Terminal leads shall be bent through 90 ° at a point of about 6mm from the body of the resistor and shall be rotated through 360° about the original axis of the bent terminal in alternating direction for a total of 3 rotations</td></tr>
<tr><td>Resistance to soldering heat</td><td>Resistance change rate is ± (1% + 0.05Ω) Max. with no evidence of mechanical damage</td><td>6.4 Permanent resistance change when leads immersed to 3.2 to 4.8 mm from the body in 350 °C ± 10 °C solder for 3 ± 0.5 secs.</td></tr>
<tr><td>Solderability</td><td>95 % coverage Min.</td><td>6.5 The area covered with a new , smooth clean , shiny and continuous surface free from concentrated pinholes.
Test temp. of solder : 245 °C ± 3 °C
Dwell time in solder : 2 ~ 3 seconds</td></tr>
</table>

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Данный компонент на территории Российской Федерации

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http://moschip.ru/get-element

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