

# Cement Fixed Resistor



## Specifications:

Type	: MCPRM
Rated Power	: 7W
Rated Ambient Temp.	: 70°C
Operating Temp. Range	: -55°C to +155°C
Resistance Tolerance	: ± 5%
Wire-wound Resistance Range	: 0.1Ω to 27Ω
Power Film Resistance Range	: 28Ω to 33KΩ

## Power Rating:

Resistors shall have a power rating based on continuous full load operation at an ambient temperature of 70°C

## Voltage Rating:

Resistors shall have a rated direct-current (DC) continuous working voltage or an approximate sine-wave root-mean-square (RMS) alternating-current (AC) continuous working voltage at commercial line frequency and waveform corresponding to the power rating, as determined from the following formula:

$$RCWV = \sqrt{P \times R}$$

Were : RCWV = Rated DC or RMS AC continuous working voltage at commercial-line frequency and waveform (volt)

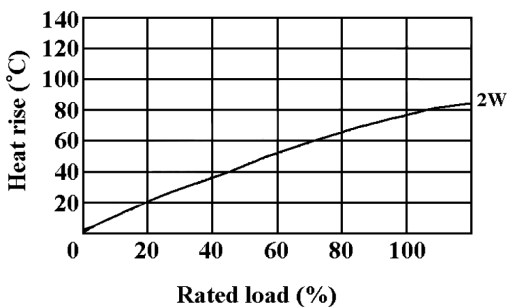
P = Power Rating (watt)

R = Nominal Resistance (ohm)

## Performance Specifications:

Temperature Coefficient	: <20Ω : ±400PPM/°C; ≥20 : ±350PPM/°C
Short-time overload	: Δ R/R ≤ ±(5% +0.05Ω), with no evidence of mechanical damage.
Dielectric withstanding voltage	: No evidence of flashover, mechanical damage, arcing or insulation breakdown.
Terminal Strength	: No evidence of mechanical damage.
Solderability	: Min. 95% coverage
Temperature cycling	: Δ R/R ≤ ±(2% +0.05Ω), with no evidence of mechanical damage.
Humidity (Steady State)	: Δ R/R ≤ ±(5% +0.05Ω), with no evidence of mechanical damage.
Load life in humidity	: For Wire-wound range, the Δ R/R is ±5% For power film range, <100kΩ, the Δ R/R is ±5% For power film range, ≥100kΩ, the Δ R/R is ±10%
Resistance to solderability heat	: Δ R/R ≤ ±(1% +0.05Ω) with no evidence of mechanical damage.

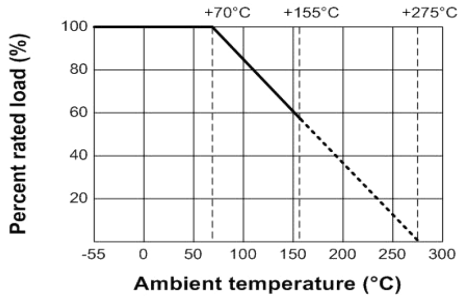
## Heat Rise Chart



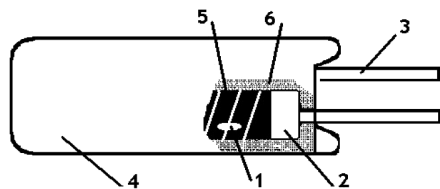
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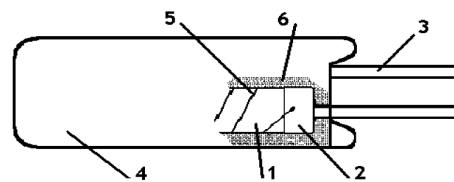
## Derating Curve



## Construction:



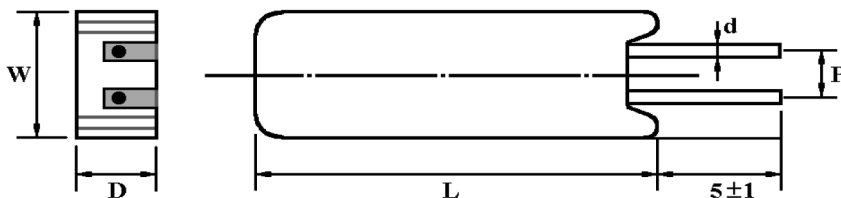
Cement: Power Film Type



Cement : Wire-wound Type

No.	Subpart Name	Material	Material Generic Name
1	Body	Rod Type Ceramics	Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub>
2	End Cap	Tin plated iron surface	Tin : 5%, Iron : 95%
3	Lead	Annealed copper wire	Tin-Plated Copper wire
4	Ceramic Case	Ceramic	Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub>
5	Resistance Wire Resistance Film	Cu-Ni Alloy / Ni-Cr Alloy Metal Oxide Film	Cu-Ni Alloy / Ni-Cr Alloy Metal Oxide Film
6	Filling Materials	Quartz mixed sand	SiO <sub>2</sub>

## Dimension :



Type	Rating Wattage	W ±1 (mm)	D ±1 (mm)	L ±1 (mm)	d ±0.05 (mm)	P ±1 (mm)
MCPRM	7W	12.5	9	38	0.75	5



# Cement Fixed Resistor



## Part Number

Description	Resistance (Ohms)	Part Number
Cement Fixed Resistors	0.27	MCPRM07WJW27KB00
	3	MCPRM07WJW30JB00
	0.3	MCPRM07WJW30KB00
	0.33	MCPRM07WJW33KB00
	0.39	MCPRM07WJW39KB00
	39	MCPRM07WJW390B00
	390	MCPRM07WJW391B00
	0.43	MCPRM07WJW43KB00
	43	MCPRM07WJW430B00
	430	MCPRM07WJW431B00
	0.47	MCPRM07WJW47KB00
	47	MCPRM07WJW470B00
	470	MCPRM07WJW471B00
	0.56	MCPRM07WJW56KB00
	56	MCPRM07WJW560B00
	560	MCPRM07WJW561B00
	0.68	MCPRM07WJW68KB00
	68	MCPRM07WJW680B00
	680	MCPRM07WJW681B00
	0.75	MCPRM07WJW75KB00
	75	MCPRM07WJW750B00
	0.82	MCPRM07WJW82KB00
82	MCPRM07WJW820B00	
1	MCPRM07WJW10JB00	
10	MCPRM07WJW100B00	

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