■ FEATURES

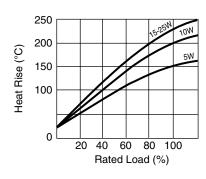
- Temperature Range: -55°C ~ +155°C
- 5% tolerance
- · Exceptionally small, sturdy, and reliable
- · Sealed with a special cement
- · Excellent moisture resistance
- · High temperature stability
- · Ceramic flame retardant package
- · Recommended wash method is alcohol



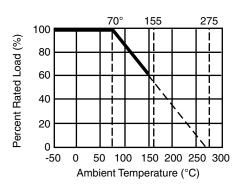




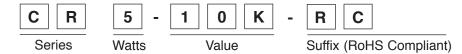
■ HEAT RISE CHART



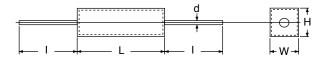
DERATING CURVE



■ PART NUMBERING SYSTEM



■ POWER RATING, RANGE OF VALUES, AND DIMENSIONS



Watts	Range o	of Values	Dimensions (mm)							
(W)	Wire Wound Metal Oxide		L ±1	W ±1	H ±1	I ±5	d ±0.05			
5	0.1 ~ 47	48 ~ 25K	22	10	9	35	0.75			
10	0.1 ~ 910	911 ~ 25K	49	10	9	35	0.75			
15	1 ~ 1K	N/A	49	12.5	11.5	35	0.75			
25	2 ~ 1.0K	N/A	64	14.5	13.5	35	0.75			

\blacksquare STANDARD STOCKED VALUES (Ω)

0.1	0.33	0.56	1.0	1.8	3.3	4.7	6.8	11	18	27	43	62	100	160	250	390	560	910	1.5K	2.4K	4.7K
0.15	0.39	0.62	1.1	2.0	3.6	5.0	7.5	12	20	30	47	68	110	180	270	430	620	1.0K	1.6K	2.7K	5.0K
0.2	0.43	0.68	1.2	2.2	3.9	5.1	8.2	13	22	33	50	75	120	200	300	470	680	1.1K	1.8K	3.0K	10K
0.22	0.47	0.75	1.3	2.4	4.0	5.6	9.1	15	24	36	51	82	130	220	330	500	750	1.2K	2.0K	3.3K	20K
0.27	0.5	0.82	1.5	2.7	4.3	6.2	10	16	25	39	56	91	150	240	360	510	820	1.3K	2.2K	3.9K	25K
0.3	0.51	0.91	1.6	3.0																	

*Other values available by special request

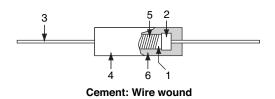


Cement Power Resistors (RoHS Compliant)

PW-RC Series

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	Tin-Coated Copper wire			
		(Electrosolder plated surface) Pb Free				
4	Ceramic Case	Ceramic	Al ₂ O ₃ , SiO ₂			
5	Resistance wire	Ni-Cr Alloy	Ni-Cr Alloy			
6	Filling Materials	Quartz mixed sand	SiO ₂			



■ CHARACTERISTICS

Characteristics	Limits		Test Methods (JIS C 5201-1)						
Temperature coefficient	± 350 PPM / °C Max <20Ω ± 400 PPM / °		5.2 Natural resistance change per temp. degree centigrade. R2-R1 x10° (PPM / °C) R1(t2-t1) R1: Resistance value at room temperature (t1) R2: Resistance value at room temp. plus 100 °C (t2)						
Dielectric	No evidence of flash	over,	5.7 Resistors shall be clamped in the trough						
withstanding	mechanical damage		of a 90° metalli	of a 90° metallic V-block and shall be tested at					
voltage	or insulation break d	own	AC potential respectively for 60 +10/ -0 secs.						
			7.4 Resistance	change after continuous	;				
				5 cycles for duty shown below:					
Temperature	Resistance change i		Step	Temperature	Time				
cycling	\pm (2% + 0.05Ω) Max		1	-55 °C ± 3 °C	30 mins				
	evidence of mechan	ical damage	2	Room temp.	10 ~ 15 mins				
			3 4	+155 °C ± 2 °C	30 mins				
				Room temp.	10 ~ 15 mins				
Short time overload	Resistance change \pm (5% + 0.05 Ω) Max evidence of mechan	. with no	5.5 Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds						
Load life in humidity	Resistance value Wire-wound	Δ R/R ± 5%	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						
Load life	Resistance value Wire-wound	Δ R/R ± 5%	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						
Terminal strength	No evidence of meci damage	nanical	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						
Resistance to soldering heat	Resistance change I ± (1% + 0.05ø) Max evidence of mechan	with no	6.4 Permanent resistance change when leads immersed to 3.2 to 4.8 mm from the body in 350 $^{\circ}$ C \pm 10 $^{\circ}$ C solder for 3 \pm 0.5 secs.						
Solderability	95 % coverage Min.		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						