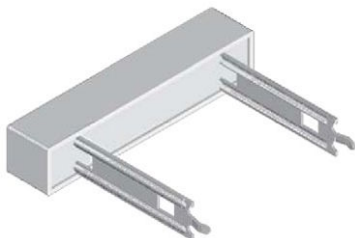




## Wirewound Resistors, Commercial Power, Radial Terminals



### FEATURES

- Direct mounting on printed circuit board
- Circuit board lock-in mounting tabs
- High performance for low cost
- Meets or exceeds requirements of EIA standard RS-344
- Special inorganic potting compound and ceramic case provide high thermal conductivity in a fireproof package
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

Please reference the Vishay Dale closest equivalent: CPR High Volume ([www.vishay.com/doc?30261](http://www.vishay.com/doc?30261)).

#### Note

- There may be slight differences between the PCR product and the CPR High Volume product.

### STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{40^\circ\text{C}}$ W	RESISTANCE RANGE $\Omega$	TOLERANCE $\pm \%$	WEIGHT (typical) g
PCR-05	PCR-5	5	0.1 to 1K	5, 10	6.6
PCR-07	PCR-7	7	0.1 to 1.429K	5, 10	9.4
PCR-10	PCR-10	10	0.1 to 2K	5, 10	10.0

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	PCR RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/ $^\circ\text{C}$	$\pm 300$ for 1.0 $\Omega$ and above; $\pm 600$ for less than 1.0 $\Omega$
Short Time Overload	-	5 x rated power for 5 s
Terminal Strength	lb	10 minimum
Dielectric Withstanding Voltage	$V_{AC}$	1000
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	$^\circ\text{C}$	-65 to +275

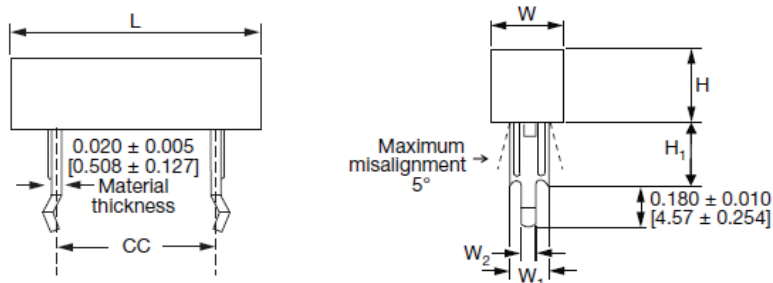
### GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: PCR-07270R0JE10 (Visit [www.vishay.net](http://www.vishay.net) SAP Parts Manual for all options)

P	C	R	-	0	7	2	7	0	R	0	J	E	1	0		
GLOBAL MODEL (6 digits)						VALUE (5 digits)			TOLERANCE (1 digit)			PACKAGING CODE (3 digits)			SPECIAL (up to 2 digits)	
PCR-05 PCR-07 PCR-10						R = Decimal K = Thousand 15R00 = 15 $\Omega$ 1K325 = 1.325 k $\Omega$			J = $\pm 5 \%$ K = $\pm 10 \%$			E10 = Lead (Pb)-free foam pack E14 = Lead (Pb)-free bulk pack (PCR-05 only)			(Dash Number) From 1 to 99 as applicable	

Historical Part Number example: PCR-7-270-5 %

PCR-7	270 $\Omega$	5 %
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE

**DIMENSIONS** in inches [millimeters]

GLOBAL MODEL	DIMENSIONS in inches [millimeters]						
	L ± 0.040 [1.02]	W ± 0.031 [0.787]	H ± 0.031 [0.787]	H <sub>1</sub> + 0.080 [2.03] - 0.040 [1.02]	W <sub>1</sub> ± 0.012 [0.305]	W <sub>2</sub> ± 0.008 [0.203]	CC ± 0.060 [1.52]
PCR-05	1.060 [26.92]	0.375 [9.53]	0.360 [9.14]	0.394 [10.01]	0.287 [7.29]	0.055 [1.40]	0.590 [14.99]
PCR-07	1.398 [35.51]	0.375 [9.53]	0.360 [9.14]	0.984 [24.99]	0.287 [7.29]	0.055 [1.40]	0.886 [22.50]
PCR-10	1.888 [47.96]	0.375 [9.53]	0.360 [9.14]	0.984 [24.99]	0.287 [7.29]	0.055 [1.40]	1.380 [35.05]

**MATERIAL SPECIFICATIONS**

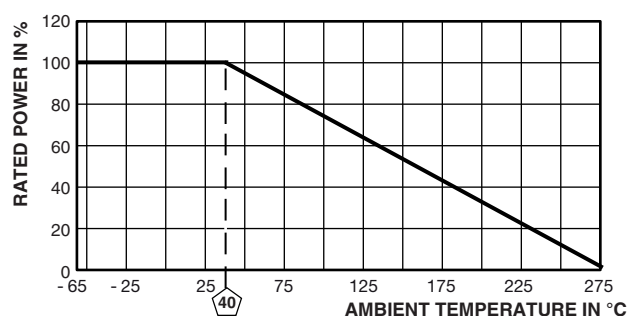
**Element:** copper-nickel alloy or nickel-chrome alloy, depending on resistance value

**Core:** woven fiberglass

**Body:** steatite ceramic case with inorganic potting compound

**Terminals:** 100 % tin

**Part Marking:** HEI, model, wattage, value, tolerance, date code

**DERATING**

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS (EIA RS-344)
Thermal Shock	-55 °C to +275 °C, 5 cycles, 30 min dwell time	± (5.0 % + 0.05 Ω) ΔR
Short Time Overload	5 x rated power for 5 s	± (4.0 % + 0.05 Ω) ΔR
Dielectric Withstanding Voltage	1000 V <sub>RMS</sub> for 1 min	± (2.0 % + 0.05 Ω) ΔR
Low Temperature Operation	-65 °C, full rated working voltage for 45 min	± (3.0 % + 0.05 Ω) ΔR
Humidity	75 °C, 90 % to 100 % RH, 240 h	± (5.0 % + 0.05 Ω) ΔR
Load Life	1000 h at rated power, +40 °C, 1.5 h "ON", 0.5 h "OFF"	± (10.0 % + 0.05 Ω) ΔR
Terminal Strength	10 pounds in axial direction for 30 s	± (2.0 % + 0.05 Ω) ΔR
Resistance to Solder Heat	Terminal immersed 3.5 s in molten solder at 1/8" to 3/16" from body	± (4.0 % + 0.05 Ω) ΔR



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