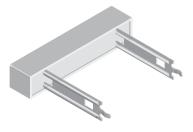


CPR High Volume

Vishay Dale

Wirewound/Metal Oxide Resistors, Commercial Power, Radial Terminals



FEATURES

- Direct mounting on printed circuit board
- Circuit board lock-in mounting tabs
- High performance for low cost
- Special inorganic potting compound and ceramic case provide high thermal conductivity in a fireproof package



- COMPLIANT HALOGEN FREE <u>GREEN</u> (5-2008)
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

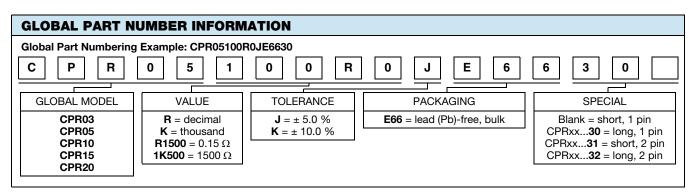
STANDARD ELECTRICAL SPECIFICATIONS							
POWER RATING P _{40 °C} W	$P_{40 \circ C}$ RANGE RANGE TOLERANCE			WEIGHT (typical) g			
3	0.1 to 100	-	5, 10	5.5			
5	0.1 to 100	110 to 33K	5, 10	6.5			
10	0.5 to 100	110 to 10K	5, 10	10			
15	1.0 to 100	110 to 10K	5, 10	20.3			
20	1.0 to 100	110 to 10K	5, 10	25.5			
	POWER RATING P40 °C W 3 5 10 15	$\begin{array}{c c} \textbf{POWER RATING} \\ \textbf{P}_{40 ^{\circ}\text{C}} \\ \textbf{W} \\ \hline \end{array} \\ \begin{array}{c} \textbf{RESISTANCE} \\ \textbf{RANGE} \\ \textbf{\Omega} \\ \textbf{WIREWOUND} \\ \hline \end{array} \\ \hline \textbf{3} \\ \textbf{0.1 to 100} \\ \hline \textbf{5} \\ \textbf{0.1 to 100} \\ \hline \textbf{10} \\ \textbf{0.5 to 100} \\ \hline \textbf{15} \\ \textbf{1.0 to 100} \\ \hline \end{array}$	POWER RATING RESISTANCE RANGE RESISTANCE RANGE RESISTANCE RANGE P40 °C W Ω Ω Ω 3 0.1 to 100 - 5 0.1 to 100 110 to 33K 10 0.5 to 100 110 to 10K 15 1.0 to 100 110 to 10K	$\begin{array}{c c c c c c c c c c c c c c c c c c c $			

Notes

• E24 decade values are available, although others may be available upon request

The CPR07 product series was recently terminated and is not recommended for new designs. Hence it was removed from the datasheet
 ⁽¹⁾ The xx is for the two digit "special" number as specified in Global Part Number Information section. Standard part number without the two digit "special" is 10.5 mm length (15 mm for CPR20), 1 pin terminals

TECHNICAL SPECIFICATIONS					
PARAMETER	UNIT	CPR HIGH VOLUME RESISTOR CHARACTERISTICS			
Temperature Coefficient	ppm/°C	± 400			
Short Time Overload	-	5 x rated power for 5 s			
Maximum Working Voltage	V	(P x R) ^{1/2}			
Terminal Strength	lb	10 minimum			
Operating Temperature Range	°C	-65 to +275 for wirewound, -65 to +225 for metal oxide			



Revision: 05-Feb-2020

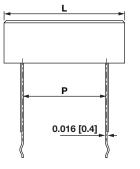
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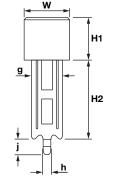
CPR High Volume

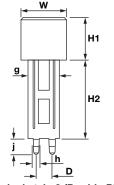
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DIMENSIONS in inches [millimeters]







Terminal style 1 (Single Pin)

___ <mark>__ D</mark> Terminal style 2 (Double Pin)

		DIMENSIONS in inches [millimeters]								
GLOBAL MODEL	TERMINAL STYLE	L ± 0.059 [1.5]	W ± 0.039 [1.0]	H1 ± 0.039 [1.0]	H2 ± 0.039 [1.0]	D ± 0.005 [0.13]	P ± 0.059 [1.5]	G ± 0.008 [0.2]	H ± 0.008 [0.2]	J ± 0.039 [1.0]
CPR03	1	0.944 [24]	0.354 [9.0]	0.354 [9.0]	0.413 [10.5]	-	0.492 [12.5]	0.197 [5.0]	0.059 [1.5]	0.193 [4.9]
CPR0330	1	0.944 [24]	0.354 [9.0]	0.354 [9.0]	0.984 [25.0]	-	0.492 [12.5]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR0331	2	0.944 [24]	0.354 [9.0]	0.354 [9.0]	0.472 [12.0]	0.197 [5.0]	0.492 [12.5]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR0332	2	0.944 [24]	0.354 [9.0]	0.354 [9.0]	0.984 [25.0]	0.197 [5.0]	0.492 [12.5]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR05	1	1.10 [28]	0.394 [10.0]	0.394 [10.0]	0.413 [10.5]	-	0.590 [15.0]	0.197 [5.0]	0.059 [1.5]	0.193 [4.9]
CPR0530	1	1.10 [28]	0.394 [10.0]	0.394 [10.0]	0.984 [25.0]	-	0.590 [15.0]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR0531	2	1.10 [28]	0.394 [10.0]	0.394 [10.0]	0.472 [12.0]	0.197 [5.0]	0.590 [15.0]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR0532	2	1.10 [28]	0.394 [10.0]	0.394 [10.0]	0.984 [25.0]	0.197 [5.0]	0.590 [15.0]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR10	1	1.89 [48]	0.394 [10.0]	0.394 [10.0]	0.413 [10.5]	-	1.26 [32.0]	0.197 [5.0]	0.059 [1.5]	0.193 [4.9]
CPR1030	1	1.89 [48]	0.394 [10.0]	0.394 [10.0]	0.984 [25.0]	-	1.26 [32.0]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR1031	2	1.89 [48]	0.394 [10.0]	0.394 [10.0]	0.472 [12.0]	0.197 [5.0]	1.26 [32.0]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR1032	2	1.89 [48]	0.394 [10.0]	0.394 [10.0]	0.984 [25.0]	0.197 [5.0]	1.26 [32.0]	0.287 [7.3]	0.059 [1.5]	0.193 [4.9]
CPR15	1	1.89 [48]	0.492 [12.5]	0.472 [12.0]	0.413 [10.5]	-	1.26 [32.0]	0.197 [5.0]	0.059 [1.5]	0.193 [4.9]
CPR1530	1	1.89 [48]	0.492 [12.5]	0.472 [12.0]	0.984 [25.0]	-	1.26 [32.0]	0.287 [7.3]	0.059 [1.5]	0.199 [5.1]
CPR1532	2	1.89 [48]	0.492 [12.5]	0.472	1.18 [30.0]	0.197 [5.0]	1.26 [32.0]	0.394 [10.0]	0.069 [1.75]	0.199 [5.1]
CPR20	1	2.461 [62.5]	0.492 [12.5]	0.492 [12.5]	0.591 [15.0]	-	1.65 [42.0]	0.394 [10.0]	0.106 [2.7]	0.193 [4.9]
CPR2030	1	2.461 [62.5]	0.492 [12.5]	0.492 [12.5]	0.984 [25.0]	-	1.65 [42.0]	0.394 [10.0]	0.106 [2.7]	0.193 [4.9]
CPR2032	2	2.461 [62.5]	0.492 [12.5]	0.492 [12.5]	1.18 [30.0]	0.197 [5.0]	1.65 [42.0]	0.394 [10.0]	0.069 [1.75]	0.199 [5.1]

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End of Life July 2020



CPR High Volume

Vishay Dale

MATERIAL SPECIFICATIONS

Element:

wirewound = copper-nickel alloy or nickel-chrome alloy, depending on resistance value;

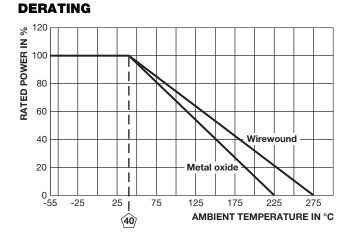
metal oxide = high temperature fired metal oxide film

Core: ceramic

Body: steatite ceramic case with cement potting compound

Terminals: tin plated steel

Part Marking: DALE, model, wattage, value, tolerance, date code



PERFORMANCE					
TEST	CONDITIONS OF TEST	TEST LIMITS			
Thermal Shock	-55 °C to +275 °C (+225 °C for metal oxide), 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 _{RMS} 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	5 pounds for 30 s; body twisted about axis, 3 x 360° rotations	\pm (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	\pm (4.0 % + 0.05 Ω) ΔR			



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