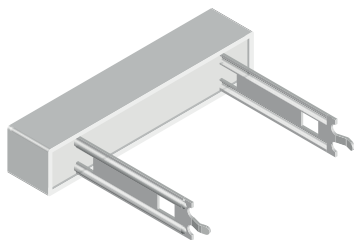




Wirewound Resistors, Commercial Power, Radial Terminals



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

Notes

- There may be slight differences between the CPR Special Terminals product and the CPR High Volume product.
- See the cross-reference file for a complete list of differences and part number crosses:
www.vishay.net/files/Cross-Reference%20Data-without%20PCN%20-%20%20PCN-DR-020-2015%20Rev%200.pdf.

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
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL ⁽¹⁾	POWER RATING $P_{40^{\circ}\text{C}}$ W	RESISTANCE RANGE Ω	TOLERANCE $\pm \%$	WEIGHT (typical) g
CPR03...xx	3	0.1 to 1K	5, 10	5.6
CPR05...xx	5	0.1 to 3.3K	5, 10	6.6
CPR07...xx	7	0.1 to 5.7K	5, 10	9.4
CPR10...xx	10	0.1 to 6.8K	5, 10	10.0
CPR15...xx	15	0.1 to 6.8K	5, 10	20.3
CPR20...xx	20	0.15 to 6.8K	5, 10	25.6

Note

(1) The xx is for the one or two digit "special" number as described in Global Part Number Information section.

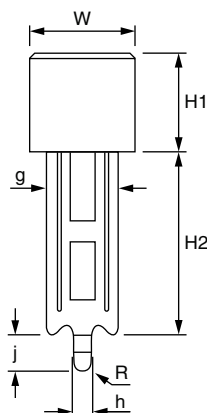
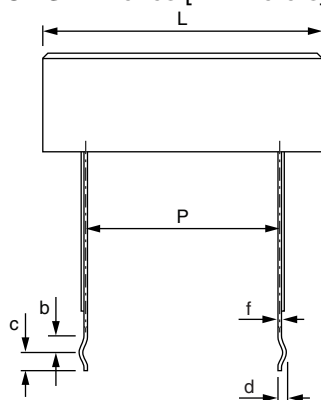
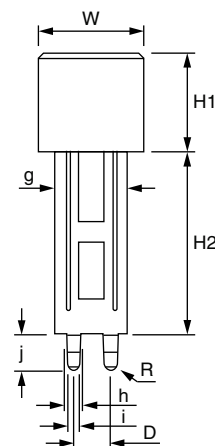
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CPR RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 300 1.0 Ω and above; ± 600 below 1.0 Ω
Short Time Overload	-	10 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	°C	-65 to +275

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: CPR0515R00JE5126

C	P	R	0	5	1	5	R	0	0	J	E	5	1	2	6	
GLOBAL MODEL			VALUE			TOLERANCE			PACKAGING			SPECIAL				
CPR03 CPR05 CPR07 CPR10 CPR15 CPR20			R = decimal K = thousand R1500 = 0.15 Ω 1K500 = 1500 Ω			H = $\pm 3.0 \%$ J = $\pm 5.0 \%$ K = $\pm 10.0 \%$			E51 = lead (Pb)-free, bulk			CPRxx...21 = 10 mm, 2 pin CPRxx...26 = 25 mm, 2 pin CPR05...20 = 25 mm, 1 pin CPR07...13 = 10 mm, 1 pin CPR10...13 = 10 mm, 1 pin CPR15...13 = 10 mm, 1 pin CPR20...3 = 10 mm, 1 pin				

**DIMENSIONS** in inches [millimeters]**TERMINAL STYLE 1**
(SINGLE PIN)**TERMINAL STYLE 2**
(DOUBLE PIN)

GLOBAL MODEL	TERMINAL STYLE	DIMENSIONS in inches [millimeters]						R
		L ± 0.040 [1.02]	W ± 0.031 [0.787]	H1 ± 0.031 [0.787]	H2 + 0.080 [2.03] - 0.040 [1.02]	D ± 0.005 [0.13]	P ± 0.060 [1.52]	
CPR03...21	2	0.906 [23.01]	0.375 [9.53]	0.375 [9.53]	0.394 [10.0]	0.197 [5.00]	0.500 [12.70]	0.03 [0.75] typ.
CPR03...26	2	0.906 [23.01]	0.375 [9.53]	0.375 [9.53]	0.984 [25.0]	0.197 [5.00]	0.500 [12.70]	
CPR05...20	1	1.060 [26.92]	0.375 [9.53]	0.360 [9.14]	0.984 [25.0]	-	0.590 [14.99]	
CPR05...21	2	1.060 [26.92]	0.375 [9.53]	0.360 [9.14]	0.394 [10.0]	0.197 [5.00]	0.590 [14.99]	
CPR05...26	2	1.060 [26.92]	0.375 [9.53]	0.360 [9.14]	0.984 [25.0]	0.197 [5.00]	0.590 [14.99]	
CPR07...13	1	1.398 [35.51]	0.375 [9.53]	0.360 [9.14]	0.394 [10.0]	-	0.886 [22.50]	
CPR07...21	2	1.398 [35.51]	0.375 [9.53]	0.360 [9.14]	0.394 [10.0]	0.197 [5.00]	0.886 [22.50]	
CPR07...26	2	1.398 [35.51]	0.375 [9.53]	0.360 [9.14]	0.984 [25.0]	0.197 [5.00]	0.886 [22.50]	
CPR10...13	1	1.888 [47.96]	0.375 [9.53]	0.360 [9.14]	0.394 [10.0]	-	1.380 [35.05]	
CPR10...21	2	1.888 [47.96]	0.375 [9.53]	0.360 [9.14]	0.394 [10.0]	0.197 [5.00]	1.380 [35.05]	
CPR10...26	2	1.888 [47.96]	0.375 [9.53]	0.360 [9.14]	0.984 [25.0]	0.197 [5.00]	1.380 [35.05]	
CPR15...13	1	1.888 [47.96]	0.500 [12.70]	0.500 [12.70]	0.394 + 0.080 - 0.130 [10.0 + 2.03 - 3.30]	-	1.280 [32.51]	
CPR15...21	2	1.888 [47.96]	0.500 [12.70]	0.500 [12.70]	0.394 + 0.080 - 0.130 [10.0 + 2.03 - 3.30]	0.197 [5.00]	1.280 [32.51]	
CPR15...26	2	1.888 [47.96]	0.500 [12.70]	0.500 [12.70]	1.181 [30.0]	0.197 [5.00]	1.280 [32.51]	
CPR20...3	1	2.498 [63.45]	0.500 [12.70]	0.500 [12.70]	0.300 + 0.080 - 0.130 [7.62 + 2.03 - 3.30]	-	1.870 [47.50]	
CPR20...21	2	2.498 [63.45]	0.500 [12.70]	0.500 [12.70]	0.300 + 0.080 - 0.130 [7.62 + 2.03 - 3.30]	0.197 [5.00]	1.870 [47.50]	
CPR20...26	2	2.498 [63.45]	0.500 [12.70]	0.500 [12.70]	1.181 [30.0]	0.197 [5.00]	1.870 [47.50]	

OTHER DIMENSIONS in inches [millimeters]

CPR05...20, CPRxx...13, CPR20...3		CPRxx...21, CPR03...26, CPR05...26, CPR07...26, CPR10...26		CPR15...26, CPR20...26	
b	0.09 ± 0.01 [2.3 \pm 0.25]	b	0.06 ± 0.01 [1.5 \pm 0.25]	b	0.06 ± 0.01 [1.5 \pm 0.25]
c	0.09 ± 0.01 [2.3 \pm 0.25]	c	0.06 ± 0.01 [1.5 \pm 0.25]	c	0.06 ± 0.01 [1.5 \pm 0.25]
d	0.053 ± 0.005 [1.35 \pm 0.127]	d	0.045 ± 0.005 [1.14 \pm 0.127]	d	0.045 ± 0.005 [1.14 \pm 0.127]
f	0.020 ± 0.001 [0.51 \pm 0.025]	f	0.020 ± 0.001 [0.50 \pm 0.025]	f	0.020 ± 0.001 [0.50 \pm 0.025]
g	0.287 ± 0.005 [7.30 \pm 0.127]	g	0.287 ± 0.005 [7.30 \pm 0.127]	g	0.394 ± 0.005 [10.0 \pm 0.127]
h	0.055 ± 0.005 [1.40 \pm 0.127]	h	0.078 ± 0.005 [2.0 \pm 0.127]	h	0.078 ± 0.005 [2.0 \pm 0.127]
j	0.18 ± 0.01 [4.5 \pm 0.25]	i	0.059 ± 0.005 [1.50 \pm 0.127]	i	0.059 ± 0.005 [1.50 \pm 0.127]
		j	0.197 ± 0.01 [5.0 \pm 0.25]	j	0.197 ± 0.01 [5.0 \pm 0.25]

**MATERIAL SPECIFICATIONS**

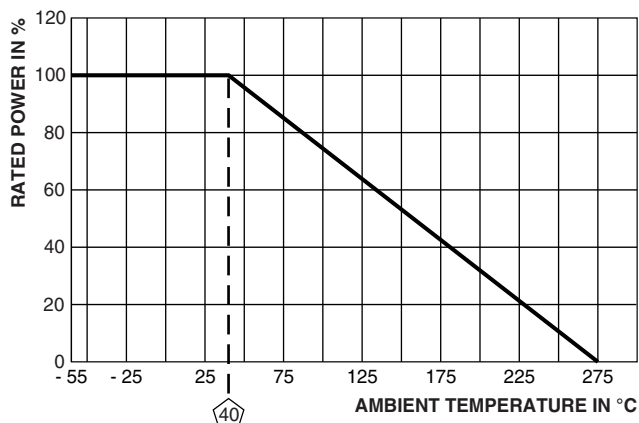
Element: copper-nickel alloy or nickel-chrome alloy, depending on resistance value

Core: woven fiberglass

Body: steatite ceramic case with inorganic potting compound

Terminals: tin plated CRS

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

DERATING

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	-25 °C to +155 °C, 5 cycles, 30 min dwell time	± (1.0 % + 0.05 Ω) ΔR
Short Time Overload	10 x rated power for 5 s	± (2.0 % + 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"	± (5.0 % + 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	± (1.0 % + 0.05 Ω) ΔR



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