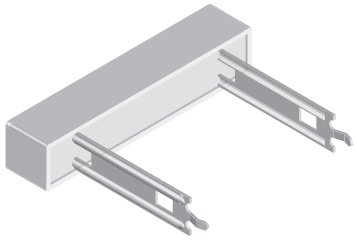
Wirewound Resistors, Commercial Power, Radial Terminals



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

Pb-free Available

RoHS* COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{40\,°C}$ W	RESISTANCE RANGE Ω ± 5 %, ± 10 %	WEIGHT (typical) g
CPR03	CPR-3	3	0.1 - 1K	5.6
CPR05	CPR-5	5	0.1 - 1K	6.6
CPR07	CPR-7	7	0.1 - 1.429K	9.4
CPR10	CPR-10	10	0.1 - 2K	10.0
CPR15	CPR-15	15	0.1 - 2K	20.3
CPR20	CPR-20	20	0.15 - 2.855K	25.6

TECHNICAL SPECIFICATIONS

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

Note

- Wirewound CPR resistors can reliably function as a fuse and as a resistor. Such components involve compromise between fusing and resistive functions; therefore, each design should be tailored to the application to ensure optimum performance. Contact factory by using the e-mail address at the bottom of this page for design assistance.

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CPR0515R00JE14 (preferred part number format)

C	P	R	0	5	1	5	R	0	0	J	E	1	4			

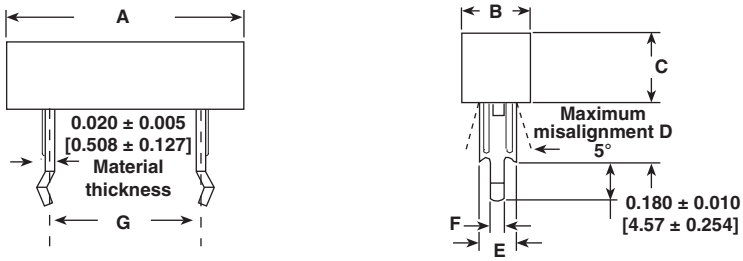
GLOBAL MODEL	VALUE	TOLERANCE	PACKAGING	SPECIAL
CPR03 **CPR05** **CPR07** **CPR10** **CPR15** **CPR20**	**R** = Decimal **K** = Thousand **R1500** = 0.15 Ω **1K500** = 1500 Ω	**H** = ± 3.0 % **J** = ± 5.0 % **K** = ± 10.0 %	**E14** = Lead (Pb)-free bulk **E31** = Lead (Pb)-free four layer bulk **E10** = Lead (Pb)-free foam pack **B14** = Tin/lead bulk **B31** = Tin/lead four layer bulk **F10** = Tin/lead foam pack	(Dash Number) (up to 3 digits) From **1 - 999** as applicable

Historical Part Number Example: CPR-5 15 Ω 5 % B14 (will continue to be accepted)

CPR-5	15 Ω	5 %	B14
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS in inches [millimeters]



GLOBAL MODEL	DIMENSIONS in inches [millimeters]						
	A ± 0.040 [1.02]	B ± 0.031 [0.787]	C ± 0.031 [0.787]	D + 0.080 [2.03] - 0.040 [1.02]	E ± 0.012 [0.305]	F ± 0.008 [0.203]	G ± 0.060 [1.52]
CPR03	0.906 [23.01]	0.375 [9.53]	0.375 [9.53]	0.394 [10.01]	0.287 [7.29]	0.055 [1.40]	0.500 [12.70]
CPR05	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]
CPR07	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]
CPR10	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]
CPR15	1.888 [47.96]	0.500 [12.70]	0.500 [12.70]	1.180 [29.97]	0.394 [10.01]	0.106 [2.69]	1.280 [32.51]
CPR20	2.498 [63.45]	0.500 [12.70]	0.500 [12.70]	1.180 [29.97]	0.394 [10.01]	0.106 [2.69]	1.870 [47.50]

MATERIAL SPECIFICATIONS

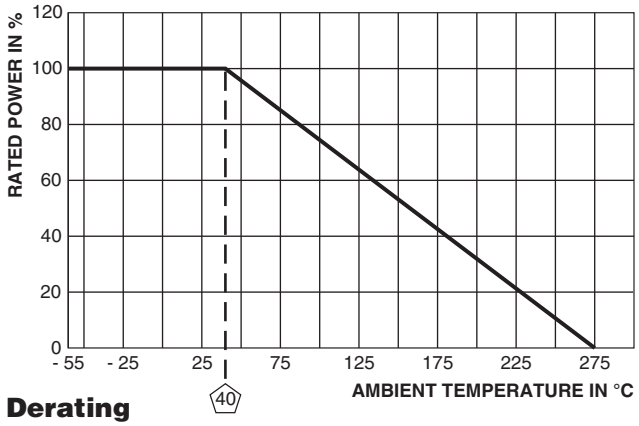
Element: Copper-nickel alloy or nickel-chrome alloy, depending on resistance value

Core: Woven fiberglass

Body: Steatite ceramic case with inorganic potting compound

Terminals: Tin/lead plated CRS (Lead (Pb)-free will be 100 % tin)

Part Marking: DALE, 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) Δ*R*
Short Time Overload	5 x rated power for 5 s	± (4.0 % + 0.05 Ω) Δ*R*
Dielectric Withstanding Voltage	1000 V_{rms} for 1 min	± (2.0 % + 0.05 Ω) Δ*R*
Low Temperature Operation	- 65 °C, full rated working voltage for 45 min	± (3.0 % + 0.05 Ω) Δ*R*
Humidity	75 °C, 90 % - 100 % RH, 240 h	± (5.0 % + 0.05 Ω) Δ*R*
Load Life	1000 h at rated power, + 40 °C, 1.5 h “ON”, 0.5 h “OFF”	± (10.0 % + 0.05 Ω) Δ*R*
Terminal Strength	10 pounds in axial direction for 30 s	± (2.0 % + 0.05 Ω) Δ*R*
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) Δ*R*

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