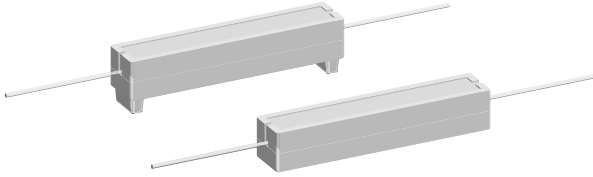


Wirewound Resistors, Commercial Power, Axial Lead, Low Value



FEATURES

- High power to size ratio
- Low inductance
- Ceramic cases are available with circuit board stand-offs (designated with a -3 model ending)
- Superior surge capability
- Extremely low resistance values
- Complete welded construction
- Special inorganic potting compound and ceramic case provide high thermal conductivity in a fireproof package



RoHS*
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{40^\circ\text{C}}$ W	RESISTANCE RANGE** Ω $\pm 5\%$ Standard***	WEIGHT (Typical) g
CPL03	CPL-3	3	0.01 - 0.10	3.4
CPL03...3	CPL-3-3	3	0.01 - 0.10	3.6
CPL05	CPL-5	5	0.01 - 0.10	4.8
CPL05...3	CPL-5-3	5	0.01 - 0.10	5.0
CPL07	CPL-7	7	0.01 - 0.10	6.8
CPL07...3	CPL-7-3	7	0.01 - 0.10	7.0
CPL10	CPL-10	10	0.01 - 0.10	9.5
CPL10...3	CPL-10-3	10	0.01 - 0.10	9.9
CPL15	CPL-15	15	0.01 - 0.10	16.8
CPL15...3	CPL-15-3	15	0.01 - 0.10	17.4

** Resistance is measured 3/8" [9.52 mm] from resistor body.

*** $\pm 1\%$ and $\pm 3\%$ available.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CPL RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/ $^\circ\text{C}$	± 300
Short Time Overload	-	5 x rated power for 5 seconds
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	$^\circ\text{C}$	- 65/+ 275
Terminal Strength	lb	10 minimum
Dielectric Withstanding Voltage	V _{AC}	1000

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CPL05R0500JB143 (preferred part numbering format)

C	P	L	0	5	R	0	5	0	0	J	B	1	4	3		
GLOBAL MODEL				VALUE			TOLERANCE			PACKAGING			SPECIAL			
CPL03 CPL05 CPL07 CPL10 CPL15				R = Decimal R1000 = 0.10 Ω			F = $\pm 1.0\%$ G = $\pm 2.0\%$ H = $\pm 3.0\%$ J = $\pm 5.0\%$ K = $\pm 10\%$			E14 = Lead (Pb)-free bulk E31 = Lead (Pb)-free four layer bulk E01 = Lead (Pb)-free skin pack B14 = Tin/lead bulk B31 = Tin/lead four layer bulk J01 = Tin/lead skin pack			Dash Number) (up to 3 digits) From 1-999 as applicable			

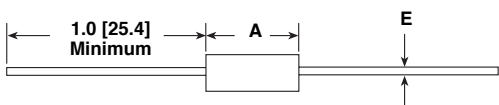
Historical Part Number example: CPL-5-3 0.05 Ω 5% B14 (will continue to be accepted)

CPL-5-3	0.05 Ω	5%	B14
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

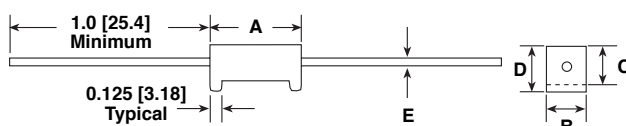
* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS

CPLxx



CPLxx...3



GLOBAL MODEL	DIMENSIONS in inches [millimeters]				
	± 0.031 [0.794] A	± 0.031 [0.794] B	± 0.031 [0.794] C	± 0.031 [0.794] D	± 0.001 [0.025] E
CPL03	0.875 [22.22]	0.313 [7.94]	0.313 [7.94]	—	0.032 [0.813]
CPL03...3	0.875 [22.22]	0.313 [7.94]	0.313 [7.94]	0.375 [9.52]	0.032 [0.813]
CPL05	0.875 [22.22]	0.375 [9.52]	0.344 [8.73]	—	0.032 [0.813]
CPL05...3	0.875 [22.22]	0.375 [9.52]	0.344 [8.73]	0.406 [10.32]	0.032 [0.813]
CPL07	1.391 [35.32]	0.375 [9.52]	0.344 [8.73]	—	0.032 [0.813]
CPL07...3	1.391 [35.32]	0.375 [9.52]	0.344 [8.73]	0.469 [11.91]	0.032 [0.813]
CPL10	1.875 [47.62]	0.375 [9.52]	0.344 [8.73]	—	0.032 [0.813]
CPL10...3	1.875 [47.62]	0.375 [9.52]	0.344 [8.73]	0.469 [11.91]	0.032 [0.813]
CPL15	1.875 [47.62]	0.500 [12.70]	0.500 [12.70]	—	0.032 [0.813]
CPL15...3	1.875 [47.62]	0.500 [12.70]	0.500 [12.70]	0.625 [15.87]	0.032 [0.813]

*Potting compound may extend outside of ceramic case up to 0.060 [1.52] maximum per side.

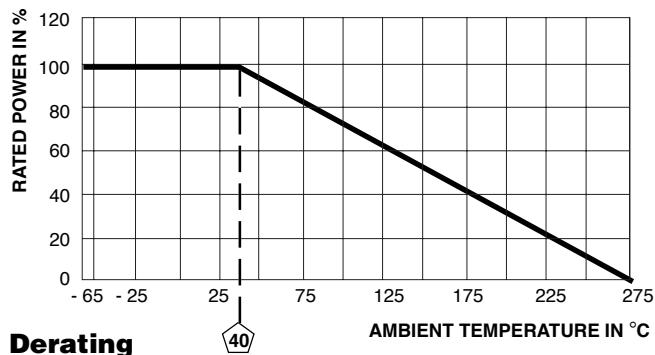
MATERIAL SPECIFICATIONS

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

Body: Steatite ceramic case with inorganic potting compound

Terminals: Tinned copper

Part Marking: DALE, Model, Wattage, Value, Tolerance, Date Code



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS (EIA RS-344)
Thermal Shock	- 55 °C to + 275 °C, 5 cycles, 30 minute dwell time	$\pm (5.0 \% + 0.05 \Omega) \Delta R$
Short Time Overload	5 x rated power for 5 seconds	$\pm (4.0 \% + 0.05 \Omega) \Delta R$
Dielectric Withstanding Voltage	1000 V _{rms} for one minute	$\pm (2.0 \% + 0.05 \Omega) \Delta R$
Low Temperature Operation	- 65 °C, full rated working voltage for 45 minutes	$\pm (3.0 \% + 0.05 \Omega) \Delta R$
Bias Humidity	75 °C, 90 % - 100 % RH, 240 hours	$\pm (5.0 \% + 0.05 \Omega) \Delta R$
Load Life	1000 hours at rated power, + 40 °C, 1.5 hours "ON", 0.5 hours "OFF"	$\pm (5.0 \% + 0.05 \Omega) \Delta R$
Terminal Strength	5 to 10 second 10 pound pull test, torsion test - 3 alternating directions, 360° each	$\pm (1.0 \% + 0.05 \Omega) \Delta R$
Resistance to Solder Heat	Terminal immersed 3.5 seconds in molten solder at 1/8" to 3/16" from body	$\pm (1.0 \% + 0.05 \Omega) \Delta R$



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