



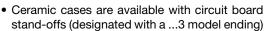
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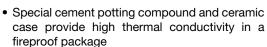
Wirewound/Metal Oxide Resistors, Commercial Power, Axial Lead



FEATURES

- High performance for low cost
- High power to size ratio





 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	POWER RATING P _{40 °C} W	RESISTANCE RANGE Ω WIREWOUND (1)	RESISTANCE RANGE Ω METAL OXIDE (1)	TOLERANCE ± %	WEIGHT (typical) g
CP0002	2	0.1 to 100	101 to 30K	5, 10	2.0
CP0003	3	0.1 to 100	101 to 33K	5, 10	3.4
CP0005	5	0.1 to 100	101 to 50K	5, 10	3.6
CP00053	5	0.1 to 100	101 to 50K	5, 10	4.8
CP0007	7	0.1 to 100	101 to 50K	5, 10	5.0
CP00073	7	0.1 to 100	101 to 50K	5, 10	6.8
CP0010	10	0.1 to 100	101 to 50K	5, 10	9.5
CP00103	10	0.1 to 100	101 to 50K	5, 10	9.9
CP0015	15	0.1 to 100	101 to 50K	5, 10	16.8
CP0020	20	0.1 to 100	101 to 50K	5, 10	22.8

TECHNICAL SPECIFICATIONS						
PARAMETER	UNIT	WIREWOUND CHARACTERISTICS	METAL OXIDE CHARACTERISTICS			
Temperature Coefficient	ppm/°C	± 400	± 400			
Short Time Overload	-	5 x rated power for 5 s	5 x rated power for 5 s			
Terminal Strength	lb	10 minimum	10 minimum			
Operating Temperature Range	°C	-65 to +275	-65 to +225			
Dielectric Withstanding Voltage	V _{AC}	1000	1000			
Maximum Working Voltage	V	(P x R) ^{1/2}	(P x R) ^{1/2}			

GLOBAL PART NUMBER INFORMATION					
Global Part Numbering I	Example: CP000515R	00JE663			
C P 0 0 5 1 5 R 0 0 J E 6 6 3					
GLOBAL MODEL	VALUE	TOLERANCE	PACKAGING	SPECIAL	
(See Standard Electrical Specifications Global Model column for options)	fications Global del column for $\mathbf{K} = \text{thousand}$ $\mathbf{R1500} = 0.15 \Omega$		E66 = lead (Pb)-free bulk pack	(Dash number) (Up to 3 digits) From 1 to 999 as applicable	

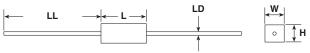


CP High Volume

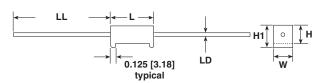
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DIMENSIONS in inches [millimeters]





CPxxxx...3



	DIMENSIONS in inches [millimeters]						
GLOBAL MODEL	L ⁽¹⁾ ± 0.060 [1.5]	W ± 0.040 [1.0]	H ± 0.040 [1.0]	H1 ± 0.060 [1.5]	LD ± 0.002 [0.05]	LL ± 0.120 [3.0]	
CP0002	0.71 [18]	0.276 [7]	0.276 [7]	-	0.0256 [0.65]	1.378 [35]	
CP0003	0.87 [22]	0.315 [8]	0.315 [8]	-	0.031 [0.8]	1.378 [35]	
CP0005	0.87 [22]	0.394 [10]	0.354 [9]	-	0.031 [0.8]	1.378 [35]	
CP00053	0.87 [22]	0.394 [10]	0.354 [9]	0.413 [10.5]	0.031 [0.8]	1.378 [35]	
CP0007	1.38 [35]	0.394 [10]	0.354 [9]	-	0.031 [0.8]	1.378 [35]	
CP00073	1.38 [35]	0.394 [10]	0.354 [9]	0.472 [12]	0.031 [0.8]	1.378 [35]	
CP0010	1.89 [48]	0.394 [10]	0.354 [9]	-	0.031 [0.8]	1.378 [35]	
CP00103	1.89 [48]	0.394 [10]	0.354 [9]	0.472 [12]	0.031 [0.8]	1.378 [35]	
CP0015	1.89 [48]	0.492 [12.5]	0.453 [11.5]	-	0.031 [0.8]	1.378 [35]	
CP0020	2.36 [60]	0.551 [14]	0.531 [13.5]	-	0.031 [0.8]	1.378 [35]	

Notes

MATERIAL SPECIFICATIONS

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

metal oxide = high temperature fired metal oxide film

Core: wirewound = ceramic metal oxide = ceramic

Body: steatite ceramic case with inorganic potting

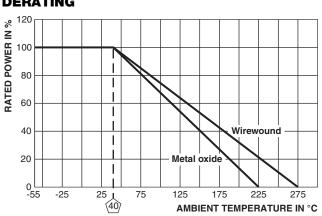
compound

End Caps: tin plated steel Terminals: tinned copper

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

code

DERATING



PERFORMANCE				
TEST	CONDITIONS OF TEST	TEST LIMITS (EIA-344)		
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 Storage	-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, + 25 °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	± (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		

⁽¹⁾ Potting compound may extend outside of ceramic case up to 0.060 [1.52] maximum per side



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