WCB/WCBF/NWCB Series

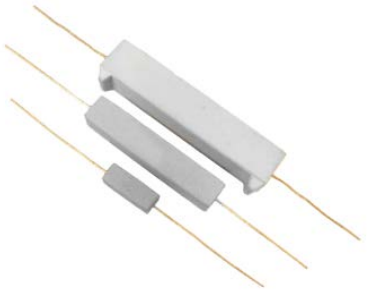
Welded Ceramic Housed Axial Leaded Wirewound Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

Features:

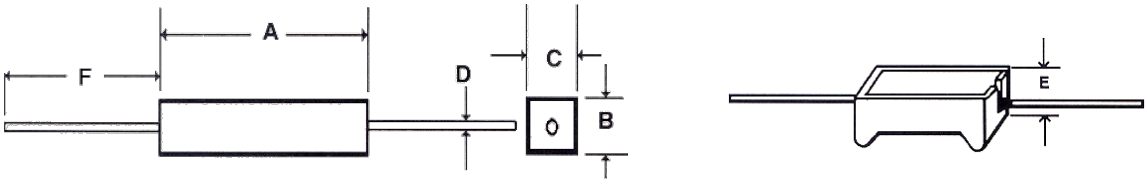
- Welded element on ceramic core
- Low noise, high reliability compared to fiberglass core wirewounds
- Fireproof power wirewound
- High thermal conductivity
- NWCB – Non-inductively Ayrton Perry winding
- Body standoffs available; add “F” after WCB
- RoHS compliant / lead-free



Electrical Specifications

Type / Code	Power Rating (Watts) @ 70ºC	TCR (ppm/ºC)	Ohmic Range(Ω) and Tolerance		
			0.5%	1%	5%
WCB5, WCBF5	5W	0.1Ω to 10Ω = ±50ppm/ºC >10Ω = ±20ppm/ºC	1 - 10K	0.1 - 10K	
WCB7, WCBF7	7W		1 - 15K	0.1 - 15K	
WCB10, WCBF10	10W		1 - 20K	0.1 - 20K	
WCB15, WCBF15	15W		1 - 20K	0.1 - 20K	
WCB20, WCBF20	20W		1 - 20K	0.1 - 20K	
WCB25, WCBF25	25W		1 - 20K	0.1 - 20K	
NWCB5	5W		-		0.1 - 4.7K
NWCB7	7W		-		0.1 - 7.5K
NWCB10	10W		-		0.1 - 10K
NWCB15	15W		-		0.1 - 10K
NWCB20	20W		-		0.1 - 10K
NWCB25	25W		-		0.1 - 10K

Mechanical Specifications



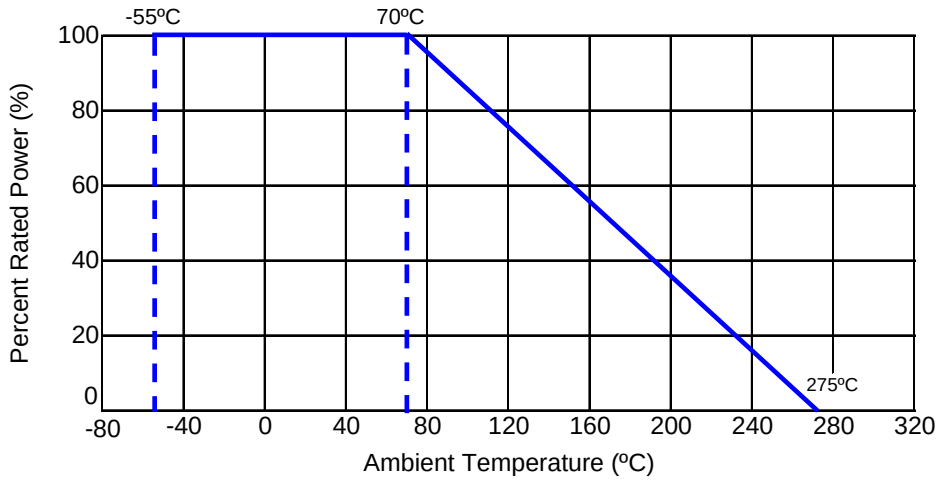
Type / Code	A Body Length	B Height	C Width	D Lead Diameter	E (WCBF only)	F Lead Length	Unit
WCB5, WCBF5, NWCB5	0.875 ± 0.039 22.23 ± 0.99	0.375 ± 0.039 9.53 ± 0.99	0.375 ± 0.039 9.53 ± 0.99	0.036 ± 0.002 0.91 ± 0.05	0.437 ± 0.039 11.10 ± 0.99	1.500 ± 0.250 38.10 ± 6.35	inches mm
WCB7, WCBF7, NWCB7	1.400 ± 0.039 35.56 ± 0.99	0.375 ± 0.039 9.53 ± 0.99	0.375 ± 0.039 9.53 ± 0.99	0.036 ± 0.002 0.91 ± 0.05	0.500 ± 0.039 12.70 ± 0.99	1.500 ± 0.250 38.10 ± 6.35	inches mm
WCB10, WCBF10, NWCB10	1.875 ± 0.039 47.63 ± 0.99	0.375 ± 0.039 9.53 ± 0.99	0.375 ± 0.039 9.53 ± 0.99	0.036 ± 0.002 0.91 ± 0.05	0.500 ± 0.039 12.70 ± 0.99	1.500 ± 0.250 38.10 ± 6.35	inches mm
WCB15, WCBF15, NWCB15	1.875 ± 0.039 47.63 ± 0.99	0.500 ± 0.039 12.70 ± 0.99	0.500 ± 0.039 12.70 ± 0.99	0.036 ± 0.002 0.91 ± 0.05	0.625 ± 0.039 15.88 ± 0.99	1.500 ± 0.250 38.10 ± 6.35	inches mm
WCB20, WCBF20, NWCB20	2.500 ± 0.039 63.50 ± 0.99	0.500 ± 0.039 12.70 ± 0.99	0.500 ± 0.039 12.70 ± 0.99	0.036 ± 0.002 0.91 ± 0.05	0.625 ± 0.039 15.88 ± 0.99	1.500 ± 0.250 38.10 ± 6.35	inches mm
WCB25, WCBF25, NWCB25	2.500 ± 0.039 63.50 ± 0.99	0.500 ± 0.039 12.70 ± 0.99	0.500 ± 0.039 12.70 ± 0.99	0.036 ± 0.002 0.91 ± 0.05	0.625 ± 0.039 15.88 ± 0.99	1.500 ± 0.250 38.10 ± 6.35	inches mm

Performance Characteristics

Test	Test Results
Moisture Resistance	± 5%
Thermal Shock	± 2%
Load Life @ 70°C - 1,000 hrs.	± 5%
Resistance to Soldering Heat	± 2%
Short Time Overload - 5xPn for 5sec	± 2%
Dielectric Withstanding Voltage	± 2%

Operating Temperature Range: -55°C to +275°C

Power Derating Curve:



How to Order

1	2	3	4	5	6	7	8	9	10
W	C	B	5	J	B	1	0	0	R

Product Series	
WCB	Standard
WCBF	With standoff
NWCB	Non-inductive

Code	Power
5	5W
7	7W
10	10W
15	15W
20	20W
25	25W

Tolerance	
Code	Tol
D	0.5%
F	1%
J	5%

Packaging			
Code	Description	Size	Quantity
B	Bulk	5	500
		7, 10	250
		15	200
		20	200
		25	200

Resistance Value
Four characters with the multiplier used as the decimal holder.
0.1 ohm = R100 33 ohm = 33R0 3.32 Kohm = 3K32