

# CB/MCB Series

Ceramic Housed with Axial Leads Power Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

## Features:

- Fireproof power resistor
- High thermal conductivity
- "M" in MCB stands for Metal Oxide element
- Standoffs may be available (CBF, MCBF). Contact factory for details.
- RoHS compliant, lead-free and halogen-free

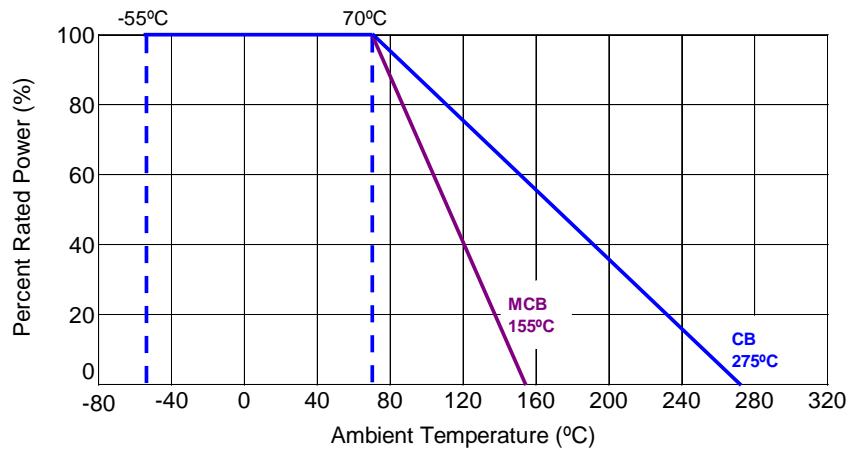


## Electrical Specifications

Type/Code	Power Rating (Watts) @ 70°C	Maximum Working Voltage (V)	Maximum Overload Voltage (V)	TCR (ppm/°C) <sup>(1)</sup>	Ohmic Range (Ω) and Tolerance
					5%, 10%
CB2	2W	250	500	± 800 ppm/°C	0.056 - 0.1
				± 500 ppm/°C	0.12 - 0.2
				± 200 ppm/°C	0.22 - 100
CB3	3W	300	600	± 800 ppm/°C	0.1
				± 500 ppm/°C	0.12 - 3
				± 200 ppm/°C	3.3 - 100
CB5	5W	350	700	± 800 ppm/°C	0.1 - 0.15
				± 500 ppm/°C	0.18 - 0.68
				± 200 ppm/°C	0.75 - 470
CB7	7W	500	1000	± 800 ppm/°C	0.39 - 0.51
				± 500 ppm/°C	0.56 - 0.82
				± 200 ppm/°C	0.91 - 470
CB10	10W	700	1400	± 800 ppm/°C	0.51 - 1
				± 500 ppm/°C	1.1 - 2.7
				± 200 ppm/°C	3 - 680
CB15	15W	700	1400	± 800 ppm/°C	0.56 - 1
				± 500 ppm/°C	1.3 - 3
				± 200 ppm/°C	3.6 - 820
MCB3	3W	300	600	± 200 ppm/°C	110 - 51K
MCB5	5W	350	700	± 200 ppm/°C	110 - 51K
MCB7	7W	500	1000	± 200 ppm/°C	510 - 51K
MCB10	10W	700	1400	± 200 ppm/°C	750 - 51K
MCB15	15W	700	1400	± 200 ppm/°C	910 - 51K

(1) Lower TCR may be available for certain values. Contact factory.

## Power Derating Curve:



Rev Date: 06/28/2018

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[www.seiselect.com](http://www.seiselect.com)  
[marketing@seiselect.com](mailto:marketing@seiselect.com)

This specification may be changed at any time without prior notice  
Please confirm technical specifications before you order and/or use.

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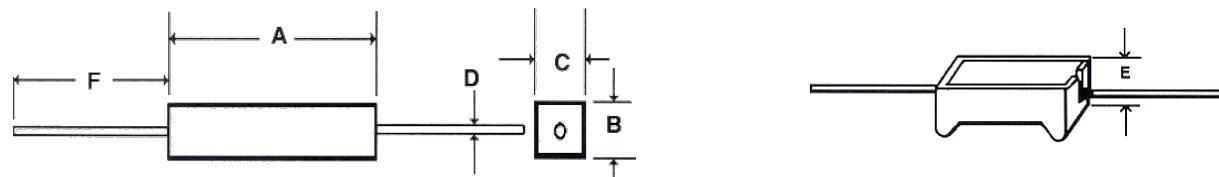
Resistive Product Solutions

## Performance Characteristics

Test	Test Specification
Moisture Resistance	$\pm 5\%$
Thermal Shock	$\pm 2\%$
Load Life @ 70°C - 1,000 hours	$\pm 5\%$
Resistance to Soldering Heat	$\pm 2\%$
Short Time Overload - 5xPn for 5 seconds	$\pm 2\%$
Dielectric Withstanding Voltage	$\pm 2\%$

Operating Temperature Range: -55°C to +155°C for MCB, -55°C to +275°C for CB

## Mechanical Specifications



Type/Code	A Body Length	B Height	C Width	D Lead Diameter	E (CBF, MCBF only)	F Lead Length	Unit
CB2	0.709 $\pm$ 0.047 18.00 $\pm$ 1.20	0.252 $\pm$ 0.047 6.40 $\pm$ 1.20	0.252 $\pm$ 0.047 6.40 $\pm$ 1.20	0.031 $\pm$ 0.004 0.80 $\pm$ 0.10	0.299 $\pm$ 0.039 7.60 $\pm$ 1.00	1.000 min. 25.40 min.	inches mm
CB3, MCB3	0.866 $\pm$ 0.047 22.00 $\pm$ 1.20	0.315 $\pm$ 0.047 8.00 $\pm$ 1.20	0.315 $\pm$ 0.047 8.00 $\pm$ 1.20	0.031 $\pm$ 0.004 0.80 $\pm$ 0.10	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	1.000 min. 25.40 min.	inches mm
CB5, MCB5	0.866 $\pm$ 0.047 22.00 $\pm$ 1.20	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.031 $\pm$ 0.004 0.80 $\pm$ 0.10	0.437 $\pm$ 0.039 11.10 $\pm$ 1.00	1.000 min. 25.40 min.	inches mm
CB7, MCB7	1.378 $\pm$ 0.059 35.00 $\pm$ 1.50	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.031 $\pm$ 0.004 0.80 $\pm$ 0.10	0.500 $\pm$ 0.039 12.70 $\pm$ 1.00	1.000 min. 25.40 min.	inches mm
CB10, MCB10	1.890 $\pm$ 0.059 48.00 $\pm$ 1.50	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.374 $\pm$ 0.039 9.50 $\pm$ 1.00	0.031 $\pm$ 0.004 0.80 $\pm$ 0.10	0.500 $\pm$ 0.039 12.70 $\pm$ 1.00	1.000 min. 25.40 min.	inches mm
CB15, MCB15	1.890 $\pm$ 0.059 48.00 $\pm$ 1.50	0.512 $\pm$ 0.047 13.00 $\pm$ 1.20	0.512 $\pm$ 0.047 13.00 $\pm$ 1.20	0.031 $\pm$ 0.004 0.80 $\pm$ 0.10	0.626 $\pm$ 0.039 15.90 $\pm$ 1.00	1.000 min. 25.40 min.	inches mm

## RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

## RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
CB	General Purpose Ceramic Housed with Axial Leads Wirewound Resistor	Axial	YES	100% Matte Sn	Jan-06	06/01
MCB	Ceramic Housed General Purpose Metal Oxide Element Resistor	Axial	YES	100% Matte Sn	Jan-06	06/01

### “Conflict Metals” Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the “conflict region” of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

### Compliance to “REACH”

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, “The Registration, Evaluation, Authorization and Restriction of Chemicals”, otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

### Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

### How to Order

1	2	3	4	5	6	7	8	9
C	B	2	J	B	1	0	0	R
<hr/>								
Product Series	Power Rating	Tolerance	Packaging			Resistance Value		
Code	Code	Code	Code	Description	Product Code	Quantity	Four characters with the multiplier used as the decimal holder.	
CB	2	J	CB2, CB5, MCB5	1500	"L" used as multiplier of $10^3$ for any value under 0.1 ohm			0.056 ohm = 56L0 0.1 ohm = R100 33 ohm = 33R0 3.32 Kohm = 3K32
MCB	3	K	CB3, CB7, CB10,	1000				
CBF	5		CB15, MCB3,					
MCBF	7		MCB7, MCB10,					
	10		MCB15					
	15		CBF15, MCBF15	912				