

EdgMOV™



NEW PRODUCT BRIEF

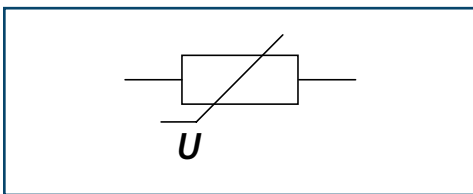
Bourns® EdgMOV™ Disc Varistors with Superior Nominal Surge Current Capabilities

INTRODUCTION

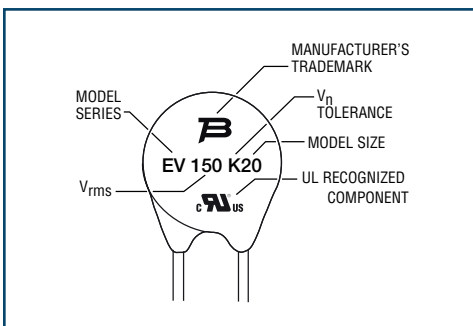
Disc varistors remain one of the most popular solutions for AC and DC overvoltage protection. Designers prefer to have components with the highest surge capability in the smallest case size possible. Bourns is pleased to announce its [EdgMOV™](#) disc varistor series with superior nominal surge current ratings allowing designers to choose smaller EdgMOV™ components compared to standard disc varistors.

The Bourns® EdgMOV™ disc varistors include four model sizes (7, 10, 14 and 20 mm) with nominal current capabilities of 1.5 kA, 3 kA, 5 kA and 8 kA respectively, for rated AC voltage between 150 V and 550 V.

VARISTOR SYMBOL



TYPICAL PART MARKING



APPLICATIONS

- White goods
- Smart Meters
- LED lighting
- Fire alarm systems
- Power supplies

FEATURES

- AC voltage ratings: 150 V to 550 V
- Model sizes available: 7, 10, 14, 20 mm
- Nominal surge ratings: 1.5, 3, 5 and 8 kA
- Operating temperature: -40 °C to +105 °C
- UL listed
- RoHS compliant*

BENEFITS

- Improved surge ratings
- Compact size
- Superiority over standard MOVs:

EdgMOV™ Technology vs. Standard MOVs

	Nominal Current Capacity 15 x I _n (A)			
Model Size	7 mm	10 mm	14 mm	20 mm
Standard MOVs	500	1500	3000	5000
EdgMOV™ Technology	1500	3000	5000	8000

HOW TO ORDER

Series Designator **EV 150 K 20 B L1 R10**

EV = EdgMOV™ Varistor Series

Max. Continuous Operating Voltage (V_{rms})

V_n Tolerance K = ±10 %

Disc Diameter

7 = 7 mm 14 = 14 mm
10 = 10 mm 20 = 20 mm

Packaging B = Bulk

Lead Style

L1 = Straight Leads (standard)
L2 = In-Line Leads (upon request)
L5 = Crimped Leads (upon request)

Special Lead Spacing

Blank = N/A (standard)
R75 = 7.5 mm
R10 = 10 mm

ADDITIONAL RESOURCES

- 3D and SPICE Models
- Overvoltage Protection Components for AC Power Lines
- EdgMOV™ YouTube video
- White Paper: EdgMOV Performance (covering Ruggedness and Failure Mode; in process)
- White Paper: Specifying Bourns Surge Protection Components for UL/IEC 62368-1 Compliance
- White Paper: Tips on Selecting the Right MOV Surge Suppressor
- White Paper: Varistor History and EdgMOV Design Improvements
- White Paper: What's the Difference? MOV / EdgMOV / TMOV® / GMOV® / IsoMOV™

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.



Bourns® EdgMOV™ Disc Varistors with Superior Nominal Surge Current Capabilities

ELECTRICAL CHARACTERISTICS

Model	V_{rms}	V_{dc}	V_n @1 mA	V_c max.	I_c (8/20 μ s)	I_n (8/20 μ s) 15 Times	I_{max} (8/20 μ s) 1 Time	C @1 kHz
	V	V	V	V	A	A	A	pF
EV150K7	150	200	240	395	25	1500	2500	280
EV150K10	150	200	240	395	50	3000	5000	510
EV150K14	150	200	240	395	100	5000	8000	900
EV150K20***	150	200	240	395	200	8000	12000	1600
EV175K7	175	225	270	455	25	1500	2500	250
EV175K10	175	225	270	455	50	3000	5000	440
EV175K14	175	225	270	455	100	5000	8000	800
EV175K20***	175	225	270	455	200	8000	12000	1400
EV230K7	230	300	360	595	25	1500	2500	190
EV230K10	230	300	360	595	50	3000	5000	350
EV230K14	230	300	360	595	100	5000	8000	650
EV230K20***	230	300	360	595	200	8000	12000	1200
EV250K7	250	320	390	650	25	1500	2500	180
EV250K10	250	320	390	650	50	3000	5000	320
EV250K14	250	320	390	650	100	5000	8000	580
EV250K20***	250	320	390	650	200	8000	12000	1000
EV275K7	275	350	430	710	25	1500	2500	160
EV275K10	275	350	430	710	50	3000	5000	300
EV275K14	275	350	430	710	100	5000	8000	530
EV275K20***	275	350	430	710	200	8000	12000	900
EV300K7	300	385	470	775	25	1000	2500	150
EV300K14	300	385	470	775	100	5000	8000	490
EV300K20***	300	385	470	775	200	8000	12000	850
EV320K7	320	420	510	840	25	1000	2500	140
EV320K14	320	420	510	840	100	5000	8000	460
EV320K20***	320	420	510	840	200	8000	12000	800
EV385K7	385	505	620	1025	25	1000	2500	130
EV385K14	385	505	620	1025	100	5000	8000	400
EV385K20***	385	505	620	1025	200	8000	12000	700
EV420K14	420	560	680	1120	100	5000	8000	350
EV420K20	420	560	680	1120	200	8000	12000	650
EV460K14	460	615	750	1240	100	5000	8000	330
EV460K20***	460	615	750	1240	200	8000	12000	550
EV510K14	510	670	820	1355	100	5000	8000	310
EV510K20*	510	670	820	1355	200	8000	12000	510
EV550K10	550	745	910	1500	50	3000	6000	170
EV550K14	550	745	910	1500	100	5000	10000	290
EV550K20***	550	745	910	1500	200	8000	15000	480

*** Although UL recognition information shows $I_n = 5$ kA due to UL 1449 nominal current selection of either 1,3,5,10 or 20 kA, EVxxxK20 models were tested and approved at 8 kA.

www.bourns.com

Americas: Tel +1-951 781-5500
Email americus@bourns.com

EMEA: Tel +36 88 885 877
Email eurocus@bourns.com



Asia-Pacific: Tel +886-2 256 241 17
Email asiacus@bourns.com

COPYRIGHT © 2022 - BOURNS, INC. - 08/22 - e/GDT2212
"Bourns" is a registered trademark of Bourns, Inc. in the U.S. and other countries.
"EdgMOV" is a trademark of Bourns, Inc.