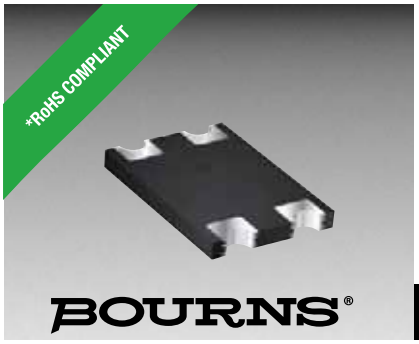


Features

- RoHS compliant*
- Low power loss and high efficiency
- High current capability
- Low profile package

Applications

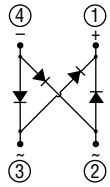
- AC operated products
- Computer monitors
- Set-top boxes
- Cable modems

CD-MBL2xxS(L) Series Surface Mount Bridge Rectifier Diode

General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers Bridge Rectifier Diodes for rectification applications in compact chip package 0.23 ″ x 0.20 ″ size format, which offers PCB real estate savings and are considerably smaller than standard parts. The Bridge Rectifier Diodes offer a forward current of 2 A with a choice of repetitive peak reverse voltages between 600 V and 1000 V.



Absolute Maximum Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD-						Unit
		MBL206S	MBL208S	MBL210S	MBL206SL	MBL208SL	MBL210SL	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	600	800	1000	V
Maximum Average Forward Rectified Current (T_A = 55 °C)	$I_{F(AV)}$	2.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50.0			60.0			A
Operating Temperature Range	T_J	-55 to +175						°C
Storage Temperature Range	T_{STG}	-55 to +175						°C

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD-MBL2xxS(L)					Unit
		Test Conditions		Min.	Typ.	Max.	
Instantaneous Forward Voltage	V_F	I_F = 2 A	CD-MBL2xxS		0.95	1.0	V
			CD-MBL2xxSL		0.94	0.96	
Repetitive Peak Reverse Current	I_{RRM}	$V_R = V_{RRM}$	T_A = +25 °C		0.08	5.0	µA
Junction Capacitance	C_J	V_R = 4 V, f = 1.0 MHz	CD-MBL2xxS		25		pF
			CD-MBL2xxSL		35		
Thermal Resistance, Junction to Air (1)	$R_{\Theta JA}$		CD-MBL2xxS		95		°C / W
			CD-MBL2xxSL		95		
Thermal Resistance, Junction to Lead (1)	$R_{\Theta JL}$		CD-MBL2xxS		15		°C / W
			CD-MBL2xxSL		15		

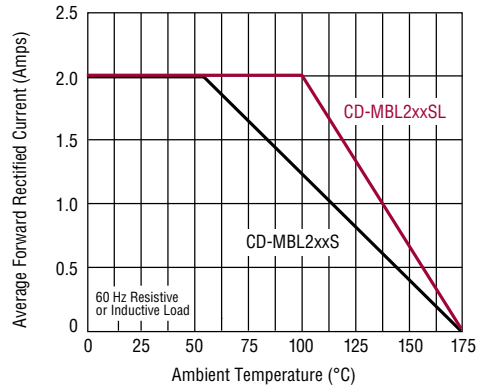
NOTE 1: Measured when mounted on PCB with 5.0 mm x 5.0 mm (0.2 " x 0.2 ") copper pad areas.

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

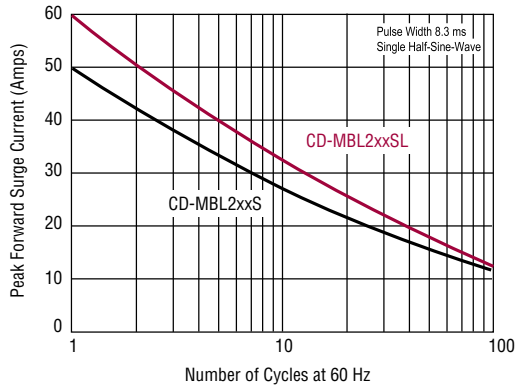
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.

Rating and Characteristic Curves

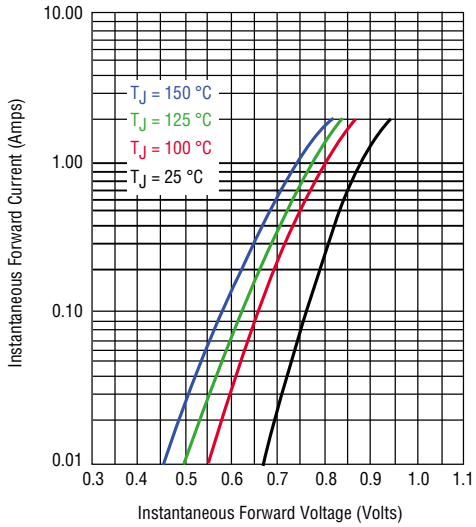
Forward Current Derating Curve



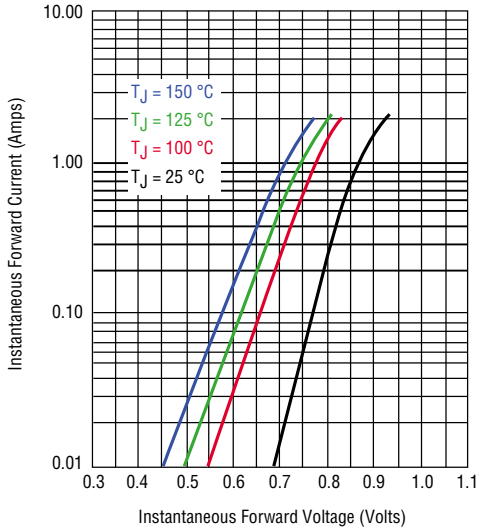
Maximum Non-Repetitive Peak Forward Surge Current



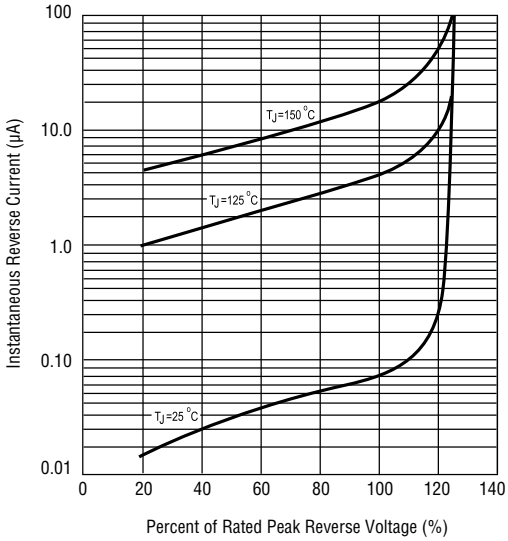
Forward Characteristics (CD2320-B2xxx)



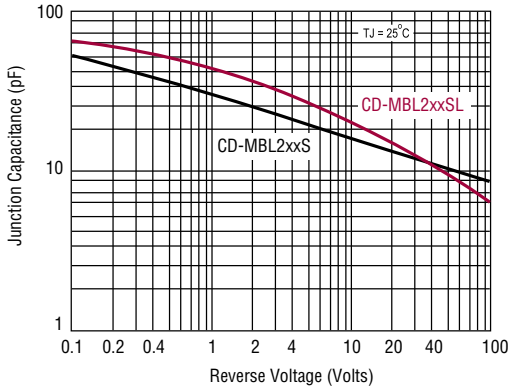
Forward Characteristics (CD-MBL2xxS(L))



Reverse Characteristics



Typical Junction Capacitance

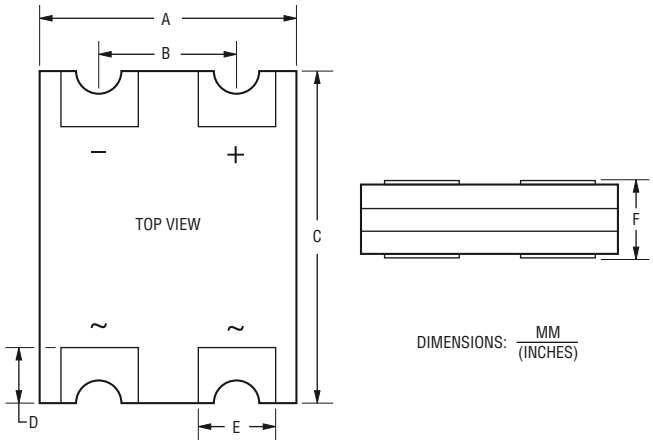


CD-MBL2xxS(L) Series Surface Mount Bridge Rectifier Diode

BOURNS®

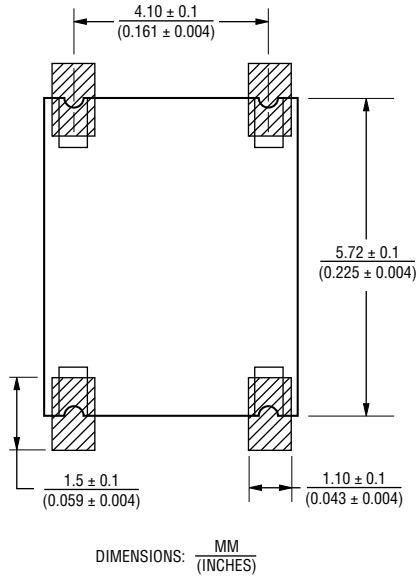
Product Dimensions

This is an RoHS2 compliant product, packaged with FRP substrate and is epoxy underfilled. The terminals are pure tin plated (lead free) and are solderable per MIL-STD-750, Method 2026. The package and dimensions are shown below.



Dimensions	
A	5.20 - 5.40 (0.205 - 0.213)
B	4.10 - 4.30 (0.161 - 0.169)
C	5.70 - 5.90 (0.224 - 0.232)
D	1.00 - 1.20 (0.039 - 0.047)
E	0.85 - 0.95 (0.033 - 0.037)
F	1.05 - 1.35 (0.0413 - 0.0531)

Recommended Footprint



How to Order

CD - MBL 2 06 SL

Common Code
Chip Diode

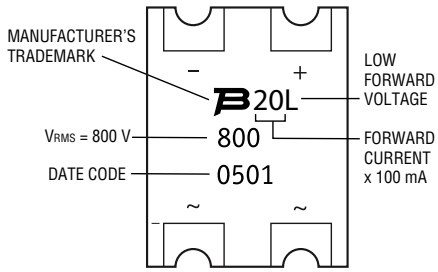
Model
MBL = MBL Bridge Series

Average Forward Current
2 = 2 A

Reverse Voltage
06 = 600 V
08 = 800 V
10 = 1000 V

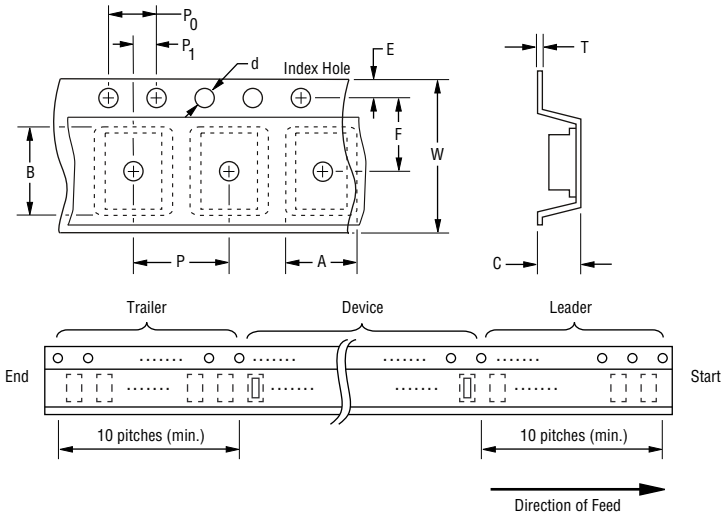
Forward Voltage Suffix
S = Standard Forward Voltage
SL = Low Forward Voltage

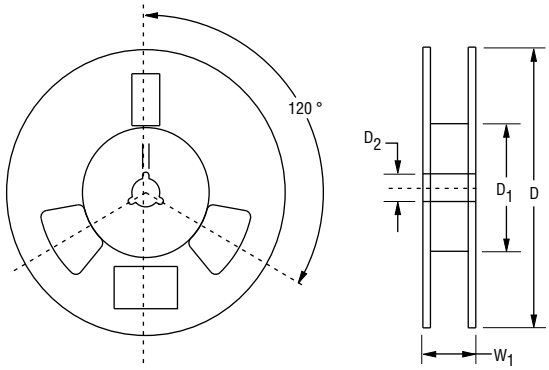
Typical Part Marking



Packaging Information

The surface mount product is packaged in a 12 mm x 8 mm tape and reel format per EIA-481 standard.





DIMENSIONS: MM / (INCHES)

Item	Symbol	CD-MBL2xxS(L)
Carrier Width	A	5.90 ± 0.10 (0.232 ± 0.004)
Carrier Length	B	6.50 ± 0.10 (0.256 ± 0.004)
Carrier Depth	C	1.50 ± 0.10 (0.059 ± 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	330 (12.992)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.20 (0.512 ± 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch Hole Pitch	P	8.00 ± 0.10 (0.315 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.05 (0.079 ± 0.002)
Overall Tape Thickness	T	0.20 ± 0.10 (0.008 ± 0.004)
Tape Width	W	12.00 ± 0.20 (0.472 ± 0.008)
Reel Width	W_1	18.7 (0.736) MAX.
Quantity per Reel	--	5,000

BOURNS®

Asia-Pacific:
Tel: +886-2 2562-4117
Email: asiacus@bourns.com

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

The Americas:
Tel: +1-951 781-5500
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