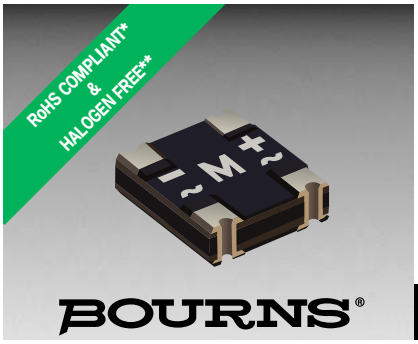


Features

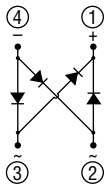
- 1000 V / 1 A rating
- Tiny DFN3538 package (3.5 x 3.8 mm)
- Low profile (1.15 mm)
- High thermal dissipation
- RoHS* and Halogen Free**

Applications

- USB wall sockets
- AC/DC power supplies
- Battery chargers
- Medical equipment (low/medium risk)***
- Industrial equipment

CD-MMBL110S Surface Mount Bridge Rectifier Diode

General Information



Manufacturers of consumer electronics, portable communication, medical and industrial equipment are challenging the semiconductor industry to develop innovated packaging technologies and component miniaturization.

Bourns® CD-MMBL110S Bridge Rectifier is housed in a tiny DFN3538 package (3.5 mm x 3.8 mm x 1.15 mm), minimizing PCB real estate and fitting into designs with height constraints. Besides the benefit of a compact footprint compared to a conventional gull-wing package, its flat no-leads package construction features superior coplanarity, improved solder joints, and virtually eliminates short circuit conditions during manufacturing.

Bourns® CD-MMBL110S Bridge Rectifier is rated at 1000 V / 1 A with enhanced thermal dissipation capability[1].

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

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

Parameter	Symbol	CD-MMBL110S	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum Average Forward Rectified Current (T_A = 55 °C)	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30	A
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

Parameter	Symbol	CD-MMBL110S				Unit
		Test Conditions		Min.	Typ.	Max.	
Instantaneous Forward Voltage	V_F	I_F = 0.4 A			0.9	1.0	V
		I_F = 1.0 A				1.1	
Repetitive Peak Reverse Current	I_{RRM}	$V_R = V_{RRM}$	T_A = +25 °C		0.08	5.0	μA
			T_A = +125 °C			100	μA
Junction Capacitance	C_J	V_R = 4 V, f = 1.0 MHz			9		pF
Thermal Resistance, Junction to Air[1]	$R_{\Theta JA}$				130		°C / W
Thermal Resistance, Junction to Case[1]	$R_{\Theta JC}$				40		°C / W

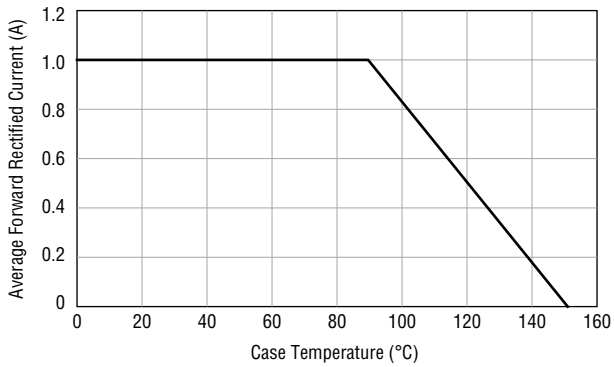
NOTE 1: Measured when mounted on PCB with 1.3 mm x 1.3 mm (0.05 inch x 0.05 inch) copper pad areas.

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

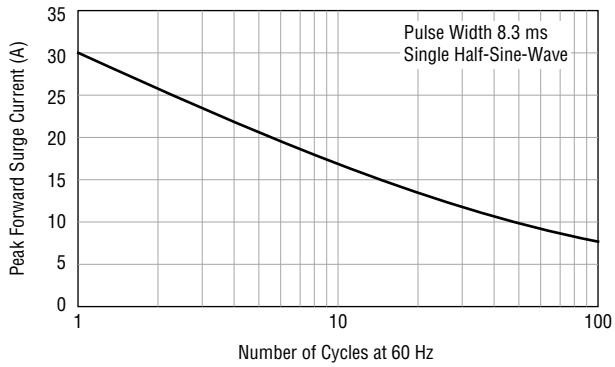
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
**Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.
***Bourns® products have not been designed for and are not intended for use in "lifesaving," "life-critical" or "life-sustaining" applications nor any other applications where failure or malfunction of the Bourns® product may result in personal injury or death. See Legal Disclaimer Notice www.bourns.com/docs/legal/disclaimer.pdf

Rating and Characteristic Curves

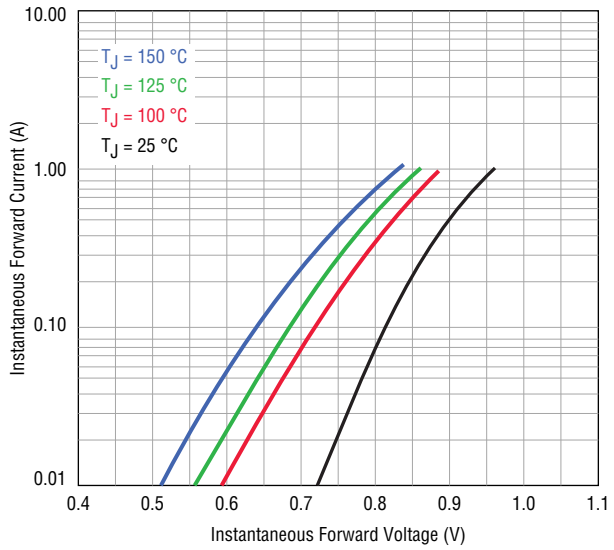
Forward Current Derating Curve



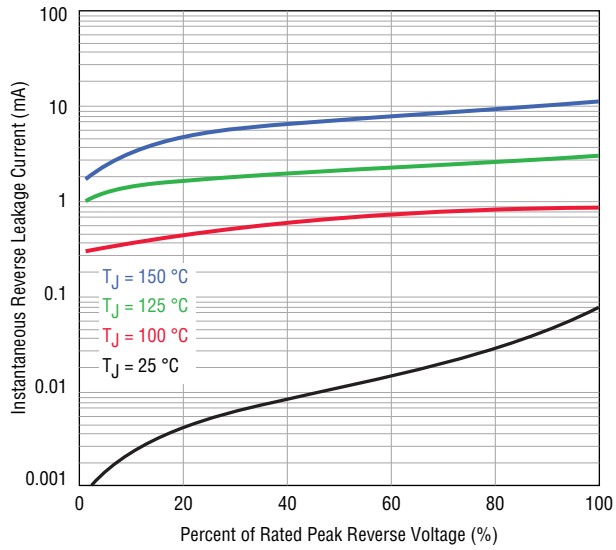
Maximum Non-Repetitive Peak Forward Surge Current



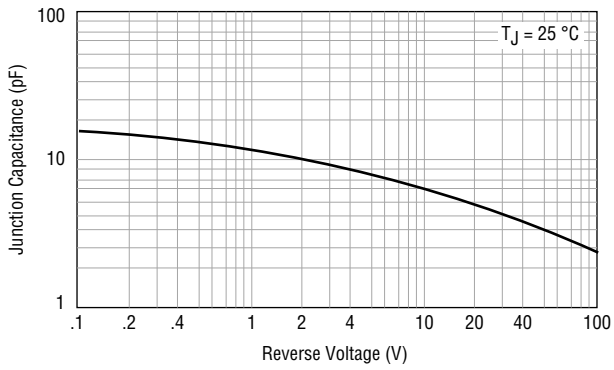
Forward Characteristics



Reverse Characteristics



Typical Junction Capacitance

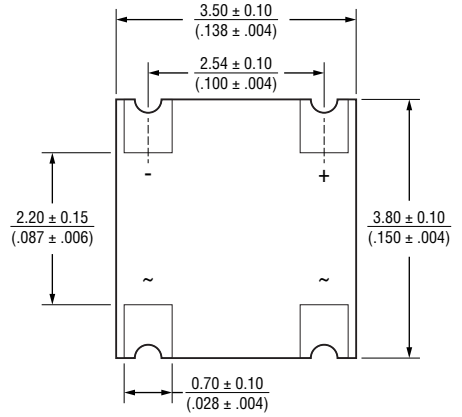


CD-MMBL110S Surface Mount Bridge Rectifier Diode

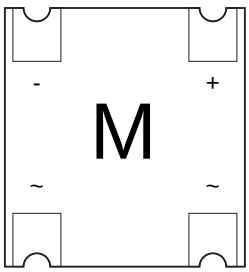
BOURNS®

Product Dimensions

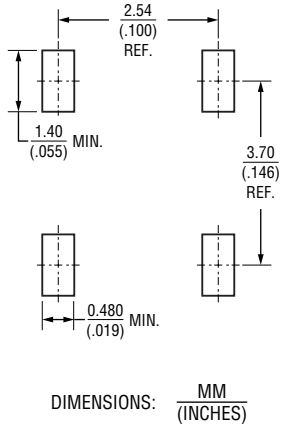
Package: DFN3538



Typical Part Marking



Recommended Footprint



How to Order

CD - MMBL1 10 S - H

Common Code
Chip Diode

Model
MMBL = MMBL Bridge Series

Average Forward Current
1 = 1 A

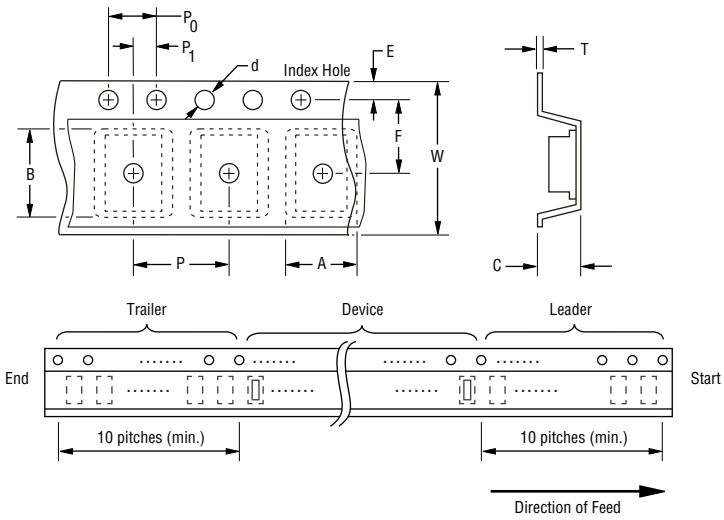
Reverse Voltage
10 = 1000 V

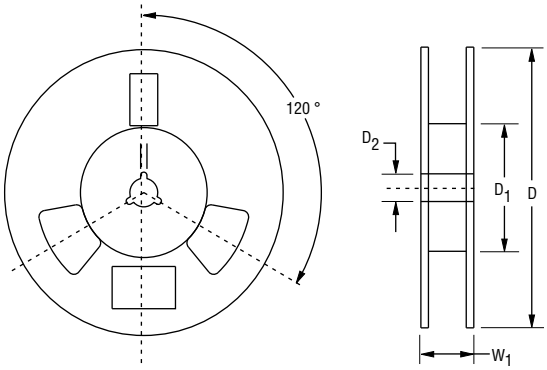
Forward Voltage Suffix
S = Standard Forward Voltage

Reel
(blank) = 13-inch Reel
-H = 7-inch Reel

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-MMBL110S	CD-MMBL110S-H
Carrier Width	A	5.90 ± 0.10 (0.232 ± 0.004)	3.78 ± 0.10 (0.149 ± 0.004)
Carrier Length	B	6.50 ± 0.10 (0.256 ± 0.004)	4.16 ± 0.10 (0.164 ± 0.004)
Carrier Depth	C	1.50 ± 0.10 (0.059 ± 0.004)	1.52 ± 0.10 (0.060 ± 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	330 (12.992)	178 ± 2.0 (7.008 ± 0.079)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.20 (0.512 ± 0.008)	13.0 ± 0.5 (0.512 ± 0.020)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	5.50 ± 0.05 (0.217 ± 0.002)	5.50 ± 0.05 (0.217 ± 0.002)
Punch Hole Pitch	P	8.00 ± 0.10 (0.315 ± 0.004)	8.00 ± 0.10 (0.315 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.05 (0.079 ± 0.002)	2.00 ± 0.05 (0.079 ± 0.002)
Overall Tape Thickness	T	0.20 ± 0.10 (0.008 ± 0.004)	0.23 ± 0.10 (0.009 ± 0.004)
Tape Width	W	12.00 ± 0.20 (0.472 ± 0.008)	12.0 ± 0.30 (0.472 ± 0.012)
Reel Width	W_1	18.7 (0.736) MAX.	18.7 (0.736) MAX.
Quantity per Reel	--	5,000	1,400

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10/21

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