

Product Summary

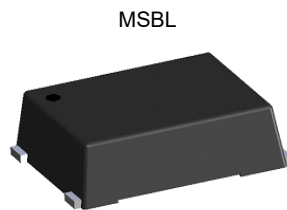
V_{RRM} (V)	$I_{F(AV)}$ (A)	V_F Max (V) @ $I_F = 2A$	I_R Max (μA)
800	4	0.9	5

Description

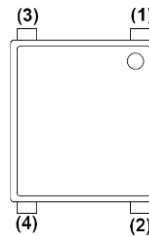
Suitable for AC to DC bridge full wave rectification for SMPS, LED lighting, adapters, battery chargers, home appliances, office equipment and telecommunication applications.

Mechanical Data

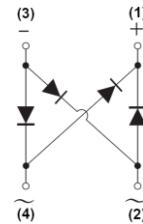
- Package: MSBL
- Package Material: Plastic Material, UL Flammability Classification 94V-0 (No Br, Sb, Cl)
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 ③
- Polarity Indicator: Symbol Molded on Body.
- Weight: 0.216 grams (Approximate)



Top View



Pin Diagram



Internal Schematic

Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
MSB40L08-13	MSBL	2500pcs	Tape & Reel

- Notes:
- EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 - See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 - Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 - For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



MB40L08 = Product Type Marking Code
 ☐☐☐ = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 5 = 2025)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	800	V
Maximum DC Blocking Voltage	V _{DC}	800	V
Maximum Average Rectified Output Current with Heatsink T _J = +150°C	I _{F(AV)}	4	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (T _J = +25°C)	I _{FSM}	100	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed on Rated Load (T _J = +25°C)	I _{FSM}	200	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	41.5	A ² s
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Electrical Characteristics

Characteristic	Test Conditions	Symbol	Typ	Max	Unit
Forward Voltage	I _F = 2A T _J = +25°C	V _F	0.84	0.9	V
Leakage Current	V _R = 800V T _J = +25°C T _J = +125°C	I _R	—	5 500	μA
Typical Total Junction Capacitance (Note 5)		C _T	53	—	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Without Heatsink)	R _{θJC}	9	°C/W
	R _{θJL}	10	
	R _{θJA}	76	
Typical Thermal Resistance (Note 6)	R _{θJC}	3	°C/W
	R _{θJL}	7.5	
	R _{θJA}	22	

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Device mounted on 24mm × 45mm × 1.9mm & Al plate.

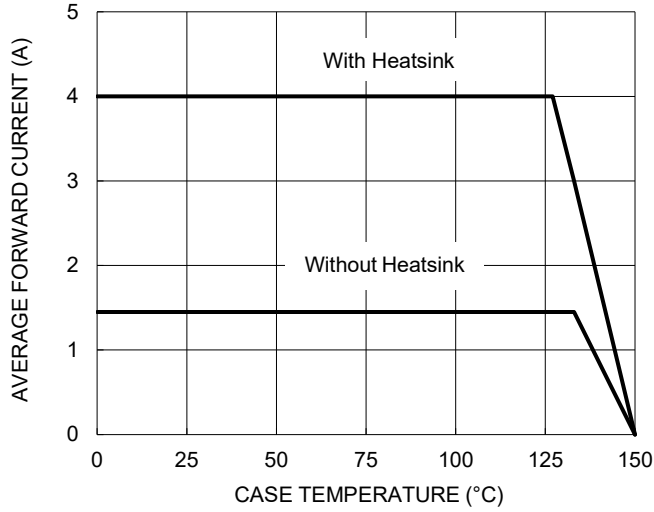


Figure 1. Forward Current Derating Curve

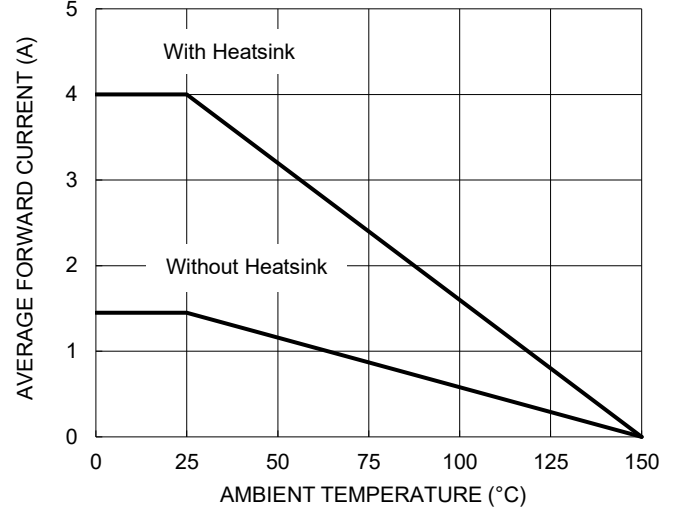


Figure 2. Forward Current Derating Curve

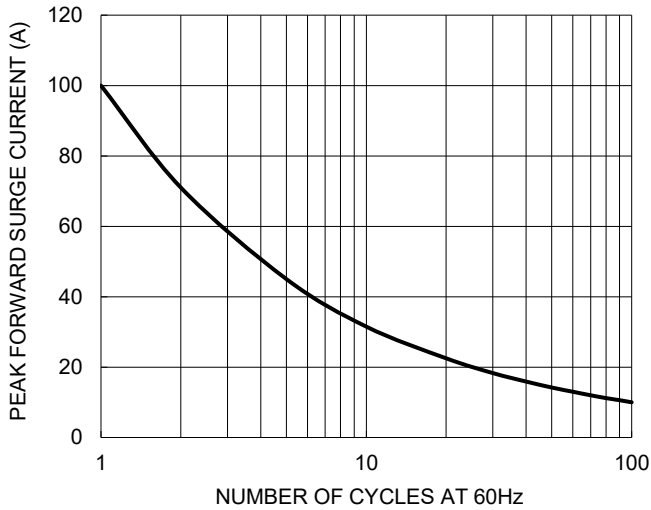


Figure 3. Maximum Non-Repetitive Surge Current

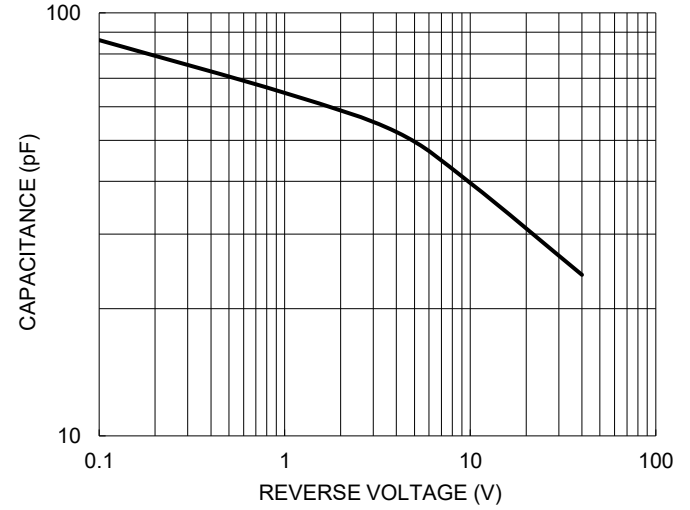


Figure 4. Typical Junction Capacitance

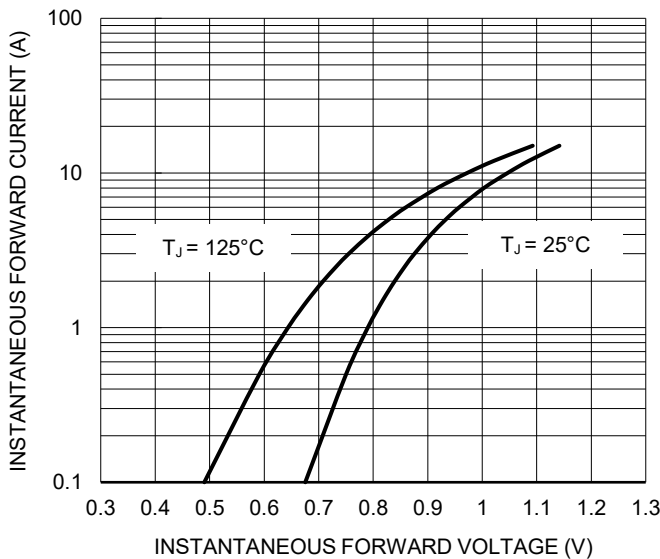


Figure 5. Typical Forward Characteristics

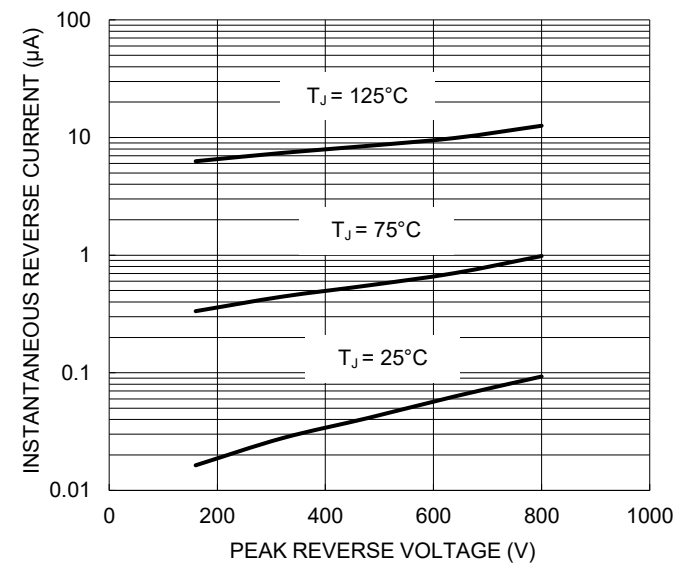
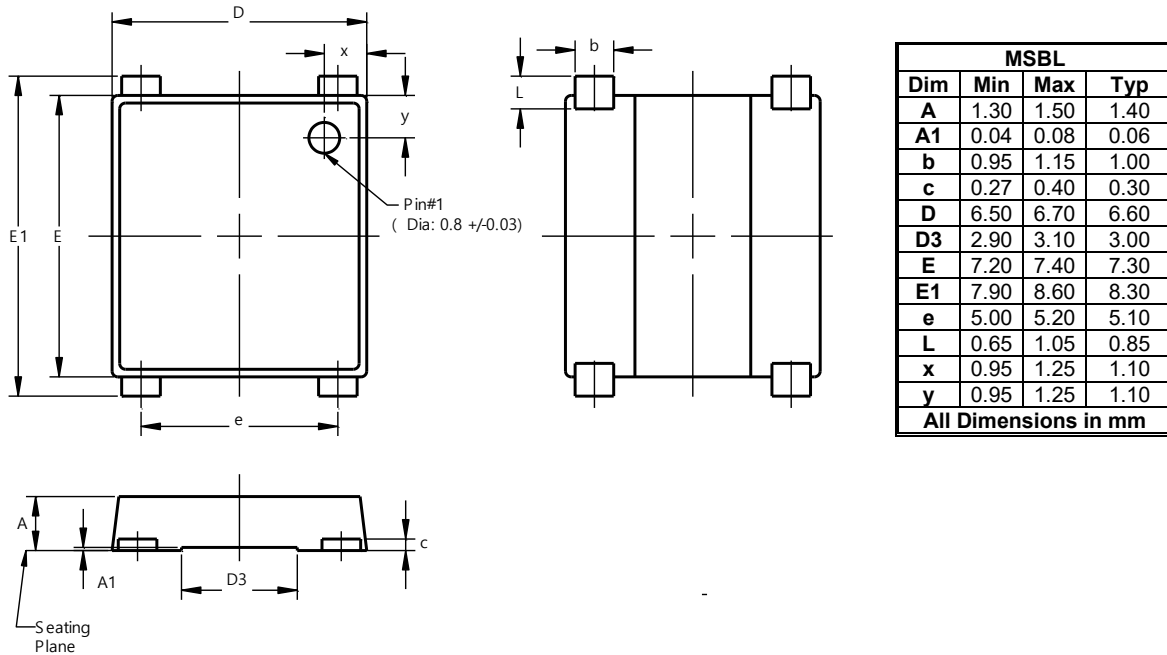


Figure 6. Typical Reverse Characteristics

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

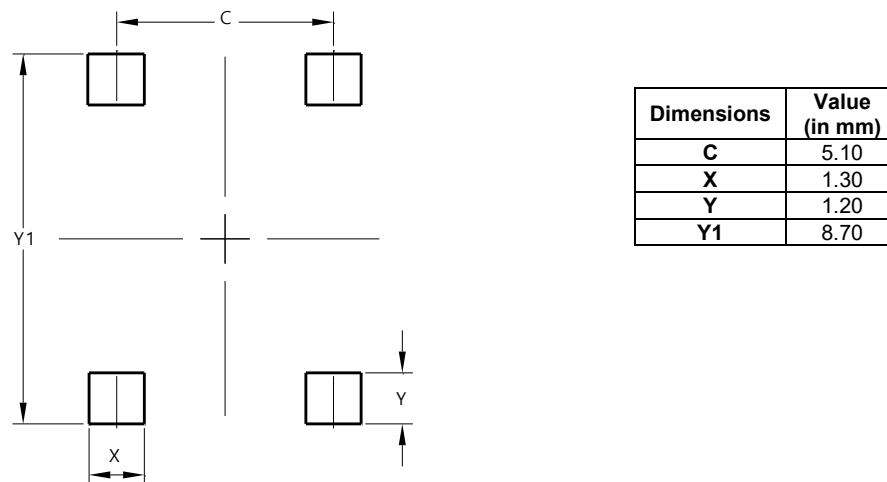
MSBL



Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

MSBL



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