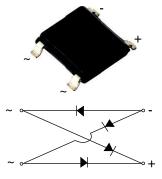


MBL104S, MBL106S, MBL108S, MBL110S

Vishay General Semiconductor

Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifier



Case Style (MBLS)

PRIMARY CHARACTERISTICS					
Package	MBLS				
I _{F(AV)}	1.0 A				
V _{RRM}	400 V, 600 V, 800 V, 1000 V				
I _{FSM}	30 A				
I _R	5 µA				
V_F at $I_F = 0.4$ A	0.95 V				
T _J max.	150 °C				
Diode variations	Quad				

FEATURES

- UL recognition file number E54214
- Low profile typical height of 1.4 mm
- Ideal for automated placement
- High surge current capability



COMPLIANT

HALOGEN

FREE

- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for power supply, lighting ballaster, battery charger, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA

Case: MBLS

Epoxy meets UL 94 V-0 flammability rating

Base P/N-M3 - halogen-free, RoHS-compliant, and commercial grade

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

M3 suffix, meets JESD 201 class 1A whisker test

Polarity: As marked on body

MAXIMUM RATINGS ($T_A = 25 \text{ °C}$ unless otherwise noted)								
PARAMETER	SYMBOL	MBL104S	MBL106S	MBL108S	MBL110S	UNIT		
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	800	1000	V		
Maximum RMS voltage	V _{RMS}	280	420	560	700	V		
Maximum DC blocking voltage	V _{DC}	400	600	800	1000	V		
Maximum average forward output rectified current (fig. 1, fig. 2)	I _{F(AV)} ⁽¹⁾	1.0				А		
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	30			А			
Rating for fusing (t < 8.3 ms)	l ² t	3.0			A ² s			
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to + 150				°C		

Note

Downloaded from Arrow.com.

⁽¹⁾ Device mounted on 0.47" x 0.47" (12 mm x 12 mm) copper pad areas, 1 oz. PCB



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	TEST CO	ONDITIONS	SYMBOL	OL MBL104S MBL106S MBL108		MBL108S	MBL110S	UNIT
Maximum instantaneous forward voltage drop per diode	I _F = 0.4 A	T _A = 25 °C	V _F ⁽¹⁾	0.95		V		
Maximum DC reverse current	Rated V _R	T _A = 25 °C	I _B ⁽²⁾	5			μA	
per diode		T _A = 125 °C	Γ _A = 125 °C		500			μΑ

Notes

⁽¹⁾ Pulse test: 300 µs pulse width, 1 % duty cycle

⁽²⁾ Pulse test: Pulse width \leq 40 ms

THERMAL CHARACTERISTICS ($T_A = 25$ °c unless otherwise noted)						
PARAMETER	SYMBOL	OL MBL104S MBL106S MBL108S MBL110S			UNIT	
Typical thermal resistance ⁽¹⁾	R _{θJA}		°C/W			
	R _{θJL}	25				0/10

Note

⁽¹⁾ Device mounted on 0.47" x 0.47" (12 mm x 12 mm) copper pad areas, 1 oz. PCB

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
MBL106S-M3/I	0.136	l	4000	13" diameter plastic tape and reel				

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

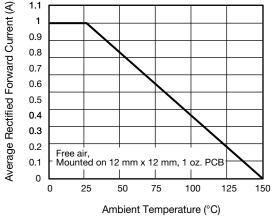
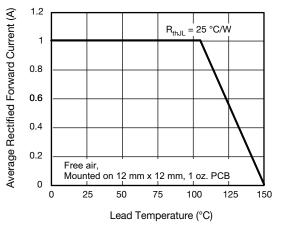
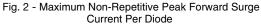


Fig. 1 - Derating Curve for Output Rectified Current





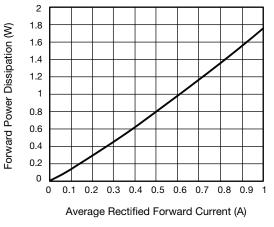
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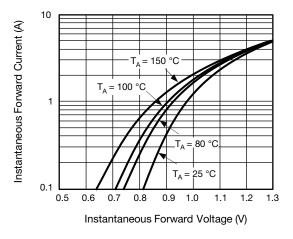
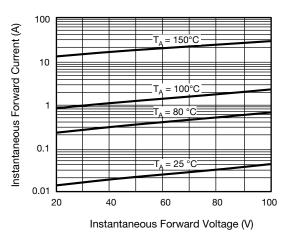
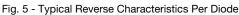
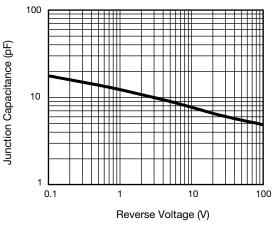


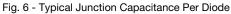
Fig. 4 - Typical Instantaneous Forward Characteristics Per Diode

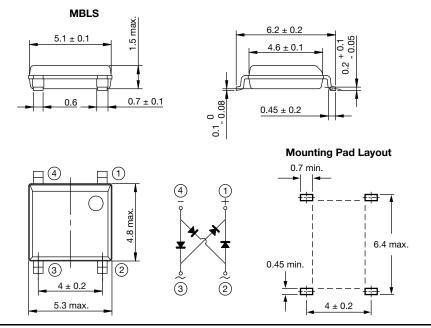
PACKAGE OUTLINE DIMENSIONS in millimeters











Revision: 12-Sep-13

3

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