

### ■ FEATURES

- UL recognition, file #E313149
- Ideal for automated placement
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### ■ TYPICAL APPLICATIONS

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

### ■ MECHANICAL DATA

- **Package:** MBLS  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■ MAXIMUM RATINGS (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Device marking code			MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Repetitive peak reverse voltage	VRRM	V	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, T <sub>a</sub> =40°C	On alumina substrate	I <sub>o</sub>	A	1.0				
	On glass-epoxy substrate			0.8				
Surge (non-repetitive) forward current @60Hz half sine wave, 1 cycle, T <sub>j</sub> =25°C	IFSM	A	35					
Current squared time @1ms ≤ t ≤ 8.3ms T <sub>j</sub> =25°C, rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	5.1					
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150					
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150					
Typical junction capacitance per element (at 4V <sub>R</sub> and 1MHz)	C <sub>j</sub>	pF	11					

### ■ ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =0.5A	1.00					
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM</sub>	μA	V <sub>RM</sub> =V <sub>RRM</sub>	5					

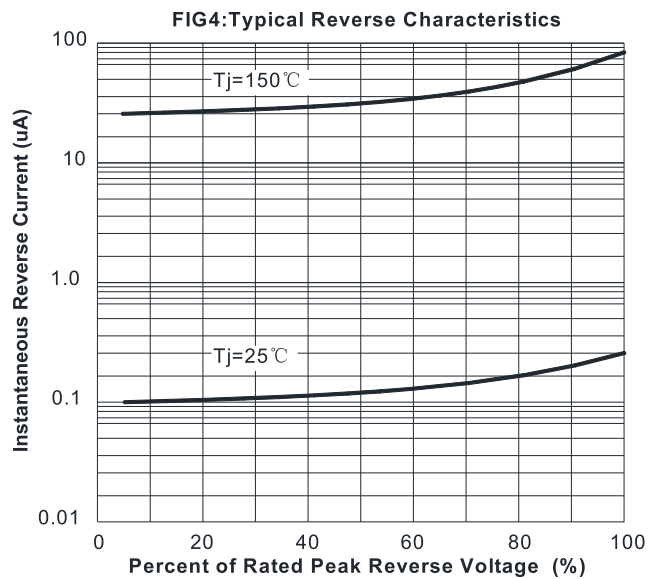
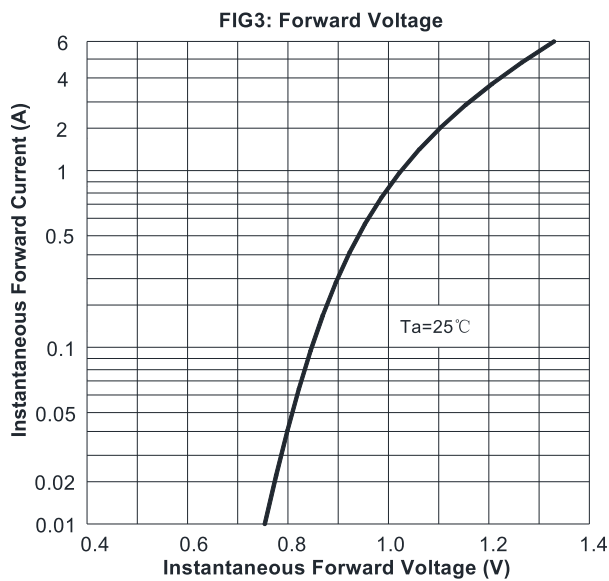
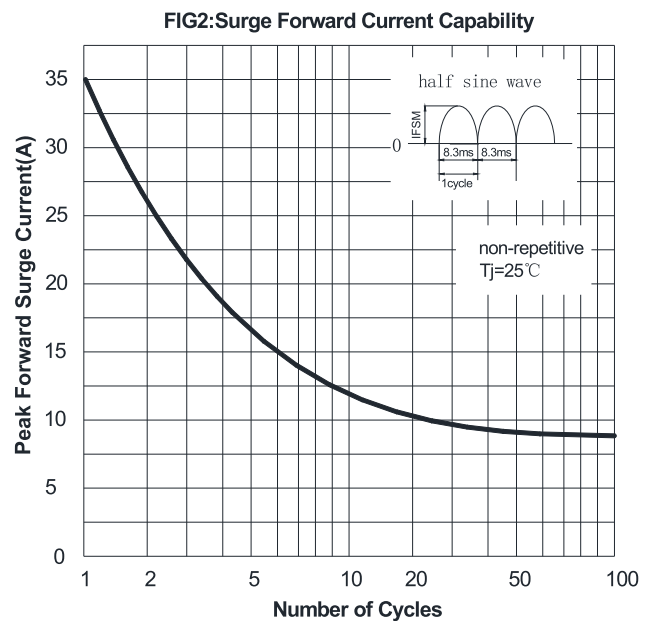
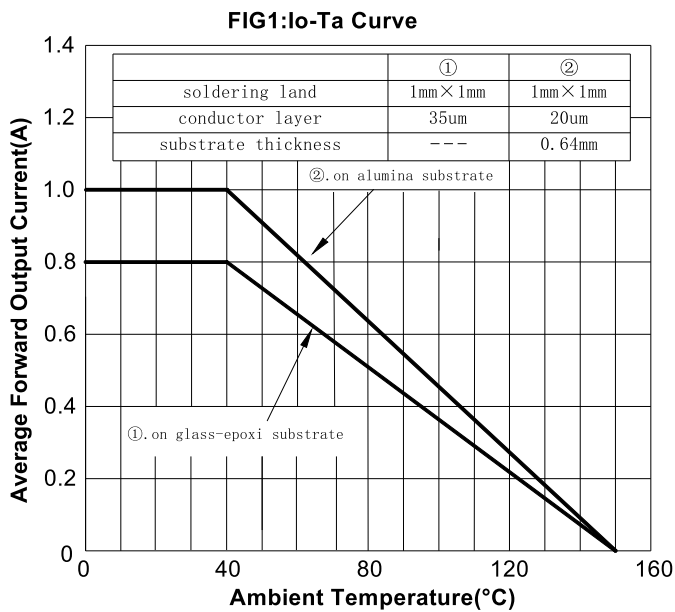
### ■ THERMAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA	
Thermal Resistance	Between junction and ambient, On alumina substrate	R <sub>θJ-A</sub>	°C/W	76.0					
	Between junction and ambient, On glass-epoxy substrate	R <sub>θJ-A</sub>		134.0					
	Between junction and lead	R <sub>θJ-L</sub>		20.0					

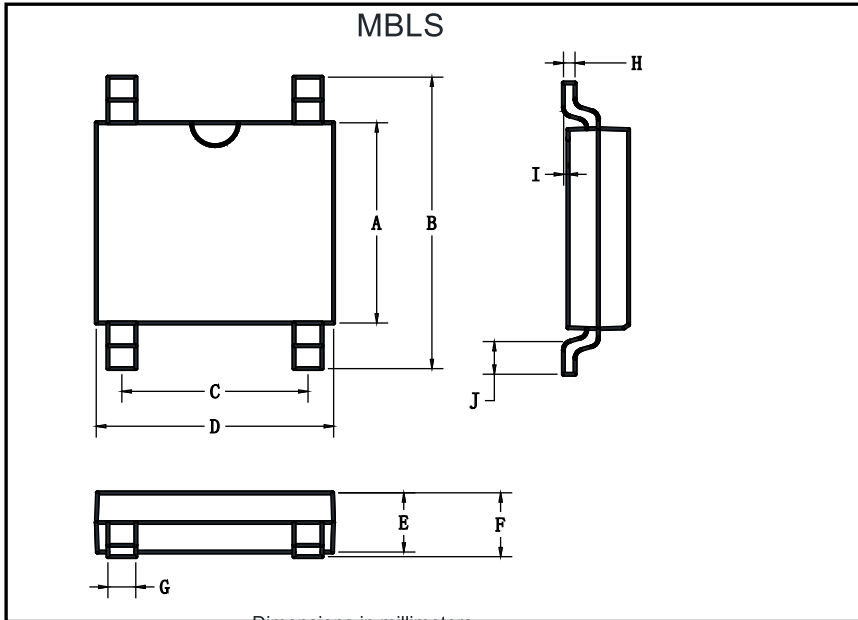
■ **PACKAGING INFORMATION**

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBL1SA-MBL10SA	F1	Approximate 0.083	4000	8000	64000	13' reel
MBL1SA-MBL10SA	F3	Approximate 0.083	5000	10000	8000	13' reel

■ **CHARACTERISTICS (TYPICAL)**

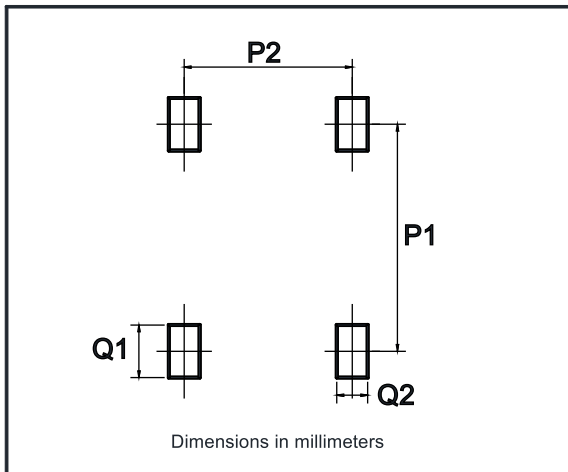


■ **OUTLINE DIMENSIONS**



MBLS		
Dim	Min	Max
A	3.60	4.00
B	6.40	7.00
C	2.20	2.60
D	4.50	4.90
E	1.30	1.50
F	1.40	1.60
G	0.56	0.84
H	0.15	0.35
I	0.20Max	
J	0.70	1.10

■ **SUGGESTED PAD LAYOUT**



Dim	Min
P1	6.00
P2	2.40
Q1	1.84
Q2	1.20