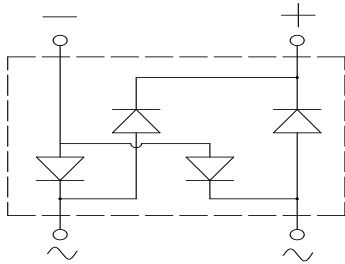
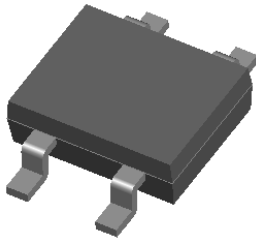


## Bridge Rectifiers



### 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:** MBL5  
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					

### ■ 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	IFM=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					



# MBL1SA THRU MBL10SA

## ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBL1SA	MBL2SA	MBL4SA	MBL6SA	MBL8SA	MBL10SA
Thermal Resistance	Between junction and ambient, On alumina substrate	R $\theta$ J-A	$^\circ\text{C}/\text{W}$	76.0					
	Between junction and ambient, On glass-epoxi substrate	R $\theta$ J-A		134.0					
	Between junction and lead	R $\theta$ J-L		20.0					

## ■ Ordering Information (Example)

PREFERRED 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

## ■ Characteristics(Typical)

FIG1:  $I_o$ - $T_a$  Curve

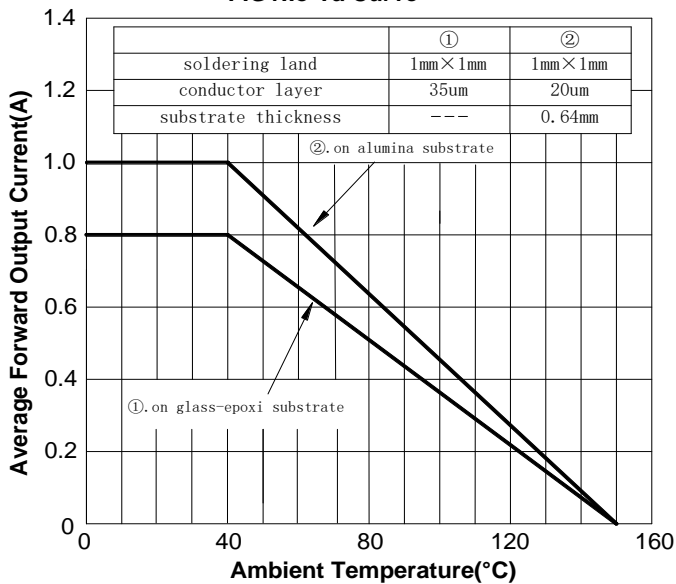


FIG2: Surge Forward Current Capability

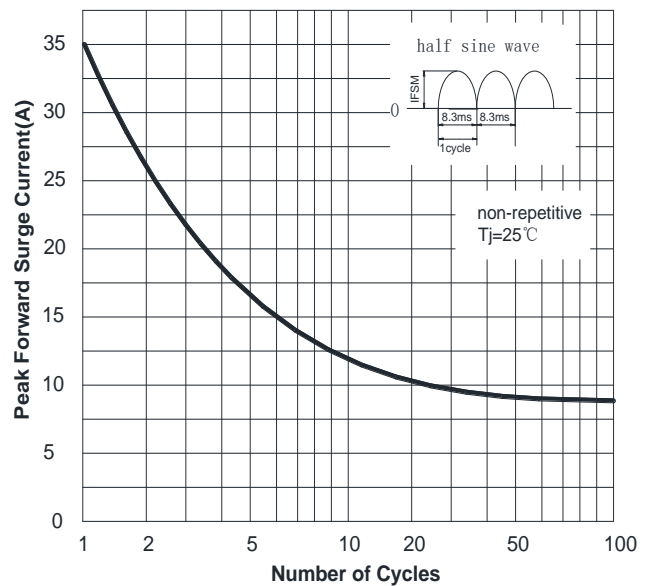


FIG3: Forward Voltage

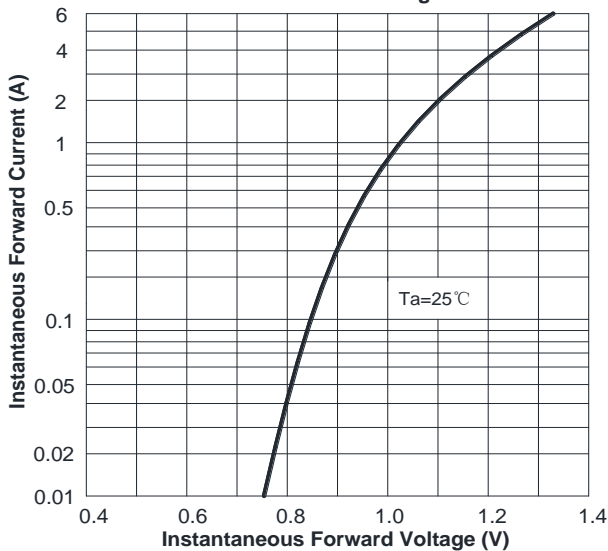
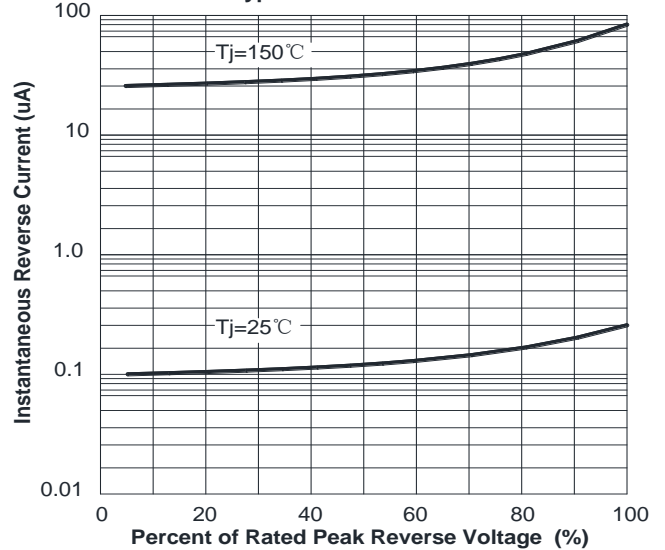


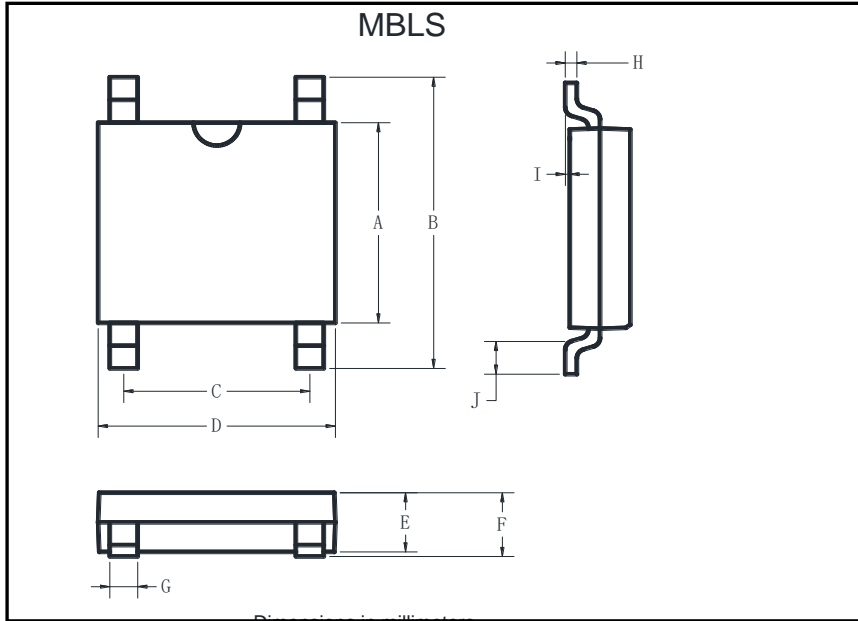
FIG4: Typical Reverse Characteristics





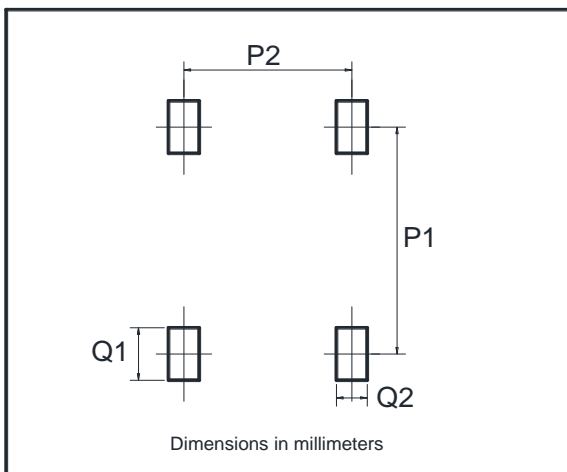
# MBL1SA THRU MBL10SA

## ■ 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



## MBL1SA THRU MBL10SA

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