

■ 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:** MBS
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_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MB1SA	MB2SA	MB4SA	MB6SA	MB8SA	MB10SA
Device marking code				MB1SA	MB2SA	MB4SA	MB6SA	MB8SA	MB10SA
Repetitive peak reverse voltage		VRRM	V	100	200	400	600	800	1000
RMS Bridge input Voltage		VRMS	V	70	140	280	420	560	700
DC Reverse Voltage		VDC	V	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, T _a =40°C	On alumina substrate	IO	A	1.0					
	On glass-epoxy substrate			0.8					
Surge(non-repetitive)forward current @60Hz half sine wave, 1 cycle, T _j =25°C		IFSM	A	35					
Current squared time @1ms≤t≤8.3ms T _j =25°C, rating of per diode		I ² t	A ² S	5.1					
Storage temperature		T _{stg}	°C	-55 ~+150					
Junction temperature		T _j	°C	-55 ~+150					
Typical junction capacitance per element (at 4V _R and 1MHz)		C _j	pF	11					

■ ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MB1SA	MB2SA	MB4SA	MB6SA	MB8SA	MB10SA
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =0.5A	1.00					
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	µA	V _{RM} =V _{RRM}	5					

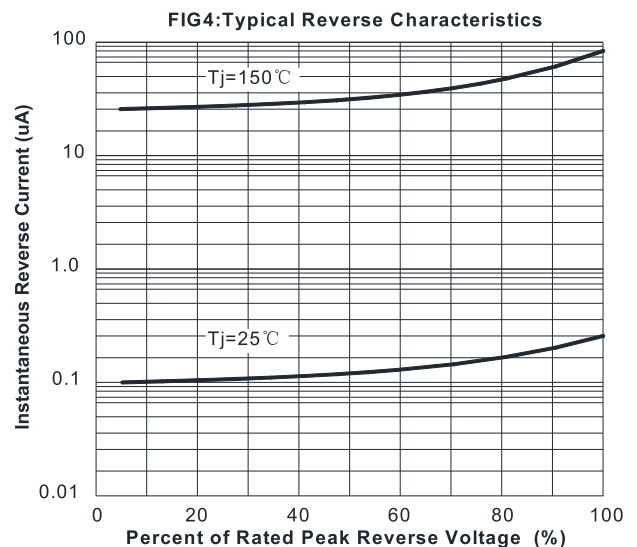
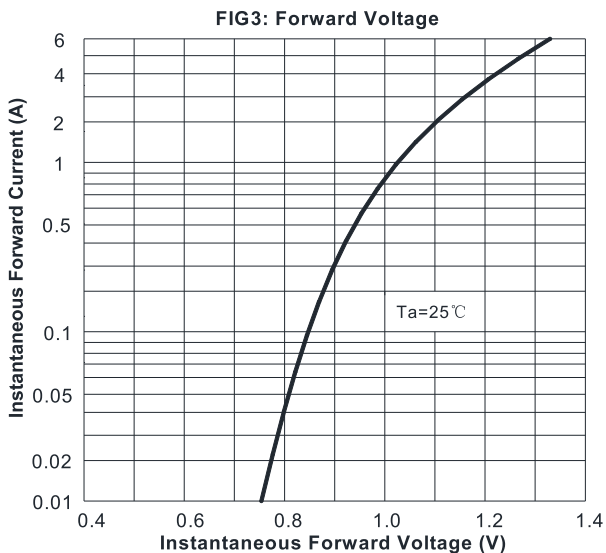
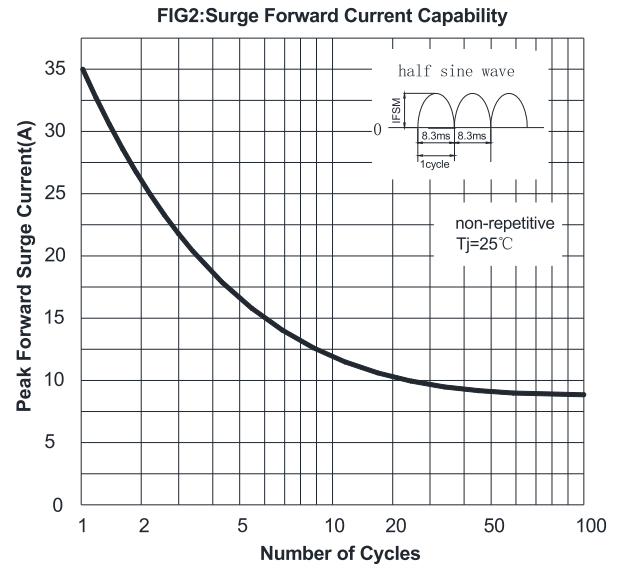
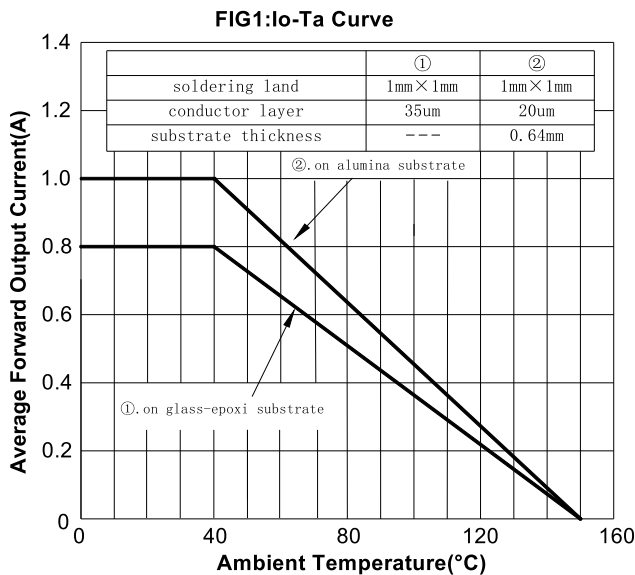
■ **THERMAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MB1SA	MB2SA	MB4SA	MB6SA	MB8SA	MB10SA
Thermal Resistance	Between junction and ambient, On alumina substrate	R θ J-A	°C/W	76.0					
	Between junction and ambient, On glass-epoxi substrate	R θ J-A		134.0					
	Between junction and lead	R θ J-L		20.0					

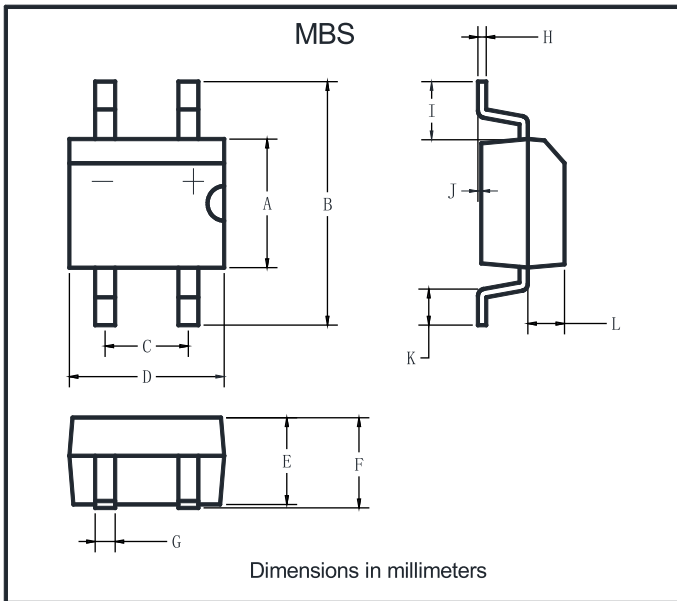
■ **PACKAGING INFORMATION**

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MB1SA-MB10SA	F1	Approximate 0.12	2500	5000	40000	13' reel
MB1SA-MB10SA	F2	Approximate 0.12	3000	6000	48000	13' reel

■ **CHARACTERISTICS (TYPICAL)**

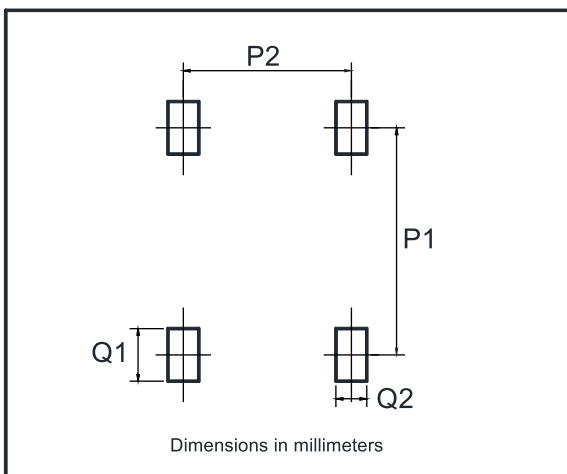


■ **OUTLINE DIMENSIONS**



MBS		
Dim	Min	Max
A	3.60	4.00
B	7.00 Max	
C	2.20	2.60
D	4.50	4.90
E	2.30	2.70
F	3.00 Max	
G	0.56	0.84
H	0.15	0.35
I	1.10	2.12
J	0.20 Max	
K	0.70	1.10
L	0.95	1.53

■ **SUGGESTED PAD LAYOUT**



Dim	Min
P1	6.00
P2	2.40
Q1	1.84
Q2	1.20