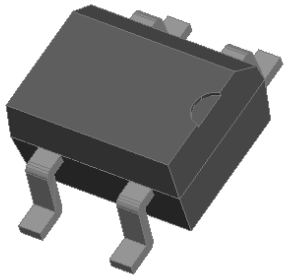
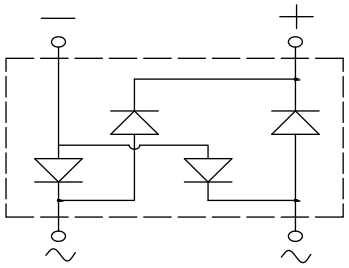
Bridge Rectifiers
MB1S Through MB10S

MBS





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 (Ta=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S
Device marking code				MB1S	MB2S	MB4S	MB6S	MB8S	MB10S
Repetitive peak reverse voltage		V_{RRM}	V	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, Ta=40℃	On alumina substrate	I_O	A	0.8					
	On glass-epoxi substrate			0.5					
Surge(non-repetitive)forward current @60Hz half sine wave, 1 cycle, T_j=25℃		I_{FSM}	A	30					
Current squared time @1ms≤t≤8.3ms Tj=25℃,rating of per diode		I^2t	A^2S	3.7					
Storage temperature		Tstg	℃	-55 ~+150					
Junction temperature		T_j	℃	-55 ~+150					
Typical junction capacitance per element (at $4V_R$ and 1MHz)		C_j	pF	13 (max 30)					

ELECTRICAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=0.4A	1.00					
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	μA	$V_{RM}=V_{RRM}$	5					

■ THERMAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S
Thermal Resistance	Between junction and ambient, On alumina substrate	RθJ-A	℃/W	76.0					
	Between junction and ambient, On glass-epoxi substrate	RθJ-A		134.0					
	Between junction and lead	RθJ-L		20.0					

■ PACKAGING INFORMATION

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MB1S-MB10S	F1	Approximate 0.12	2500	5000	40000	13' reel
MB1S-MB10S	F2	Approximate 0.12	3000	6000	48000	13' reel

■ CHARACTERISTICS (TYPICAL)

FIG1:Io-Ta Curve

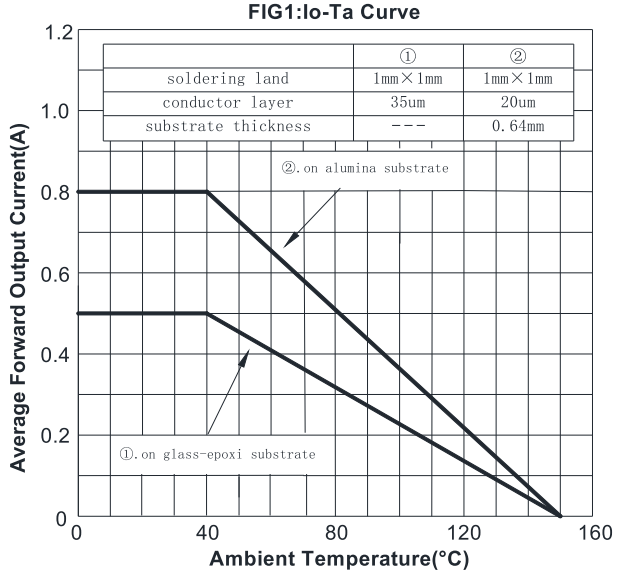


FIG2:Surge Forward Current Capability

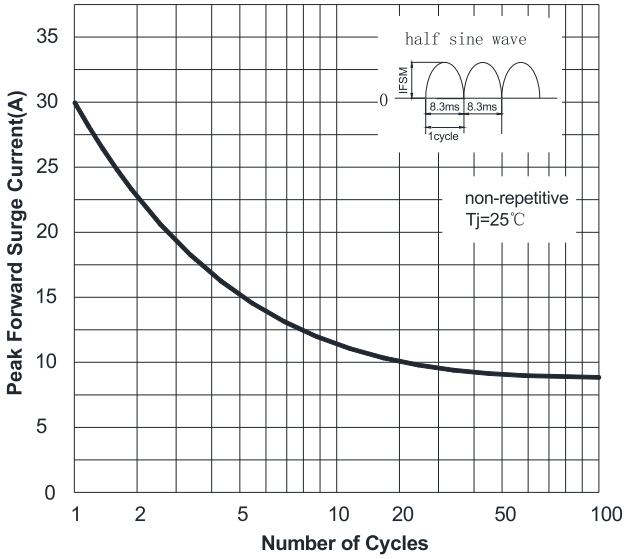


FIG3: Forward Voltage

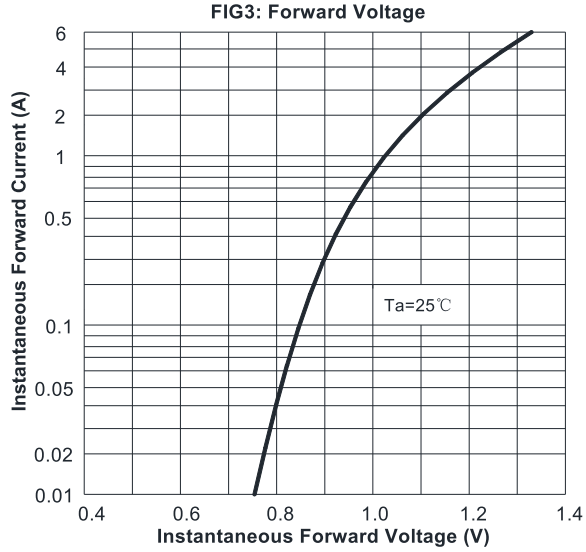
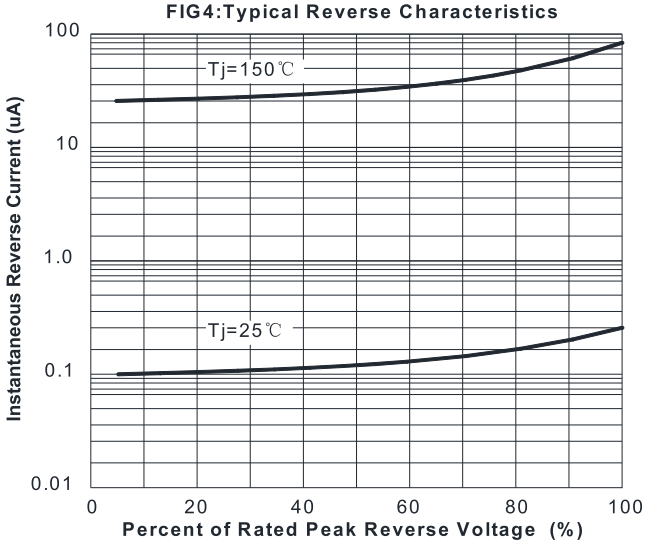
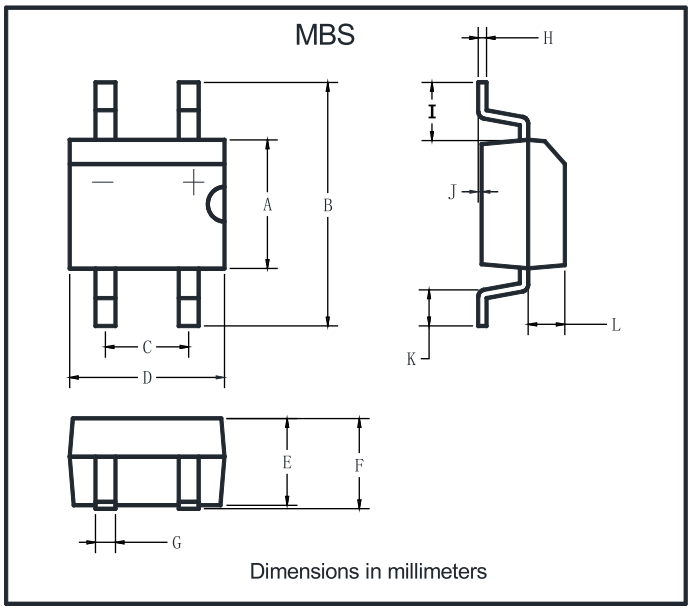


FIG4:Typical Reverse Characteristics

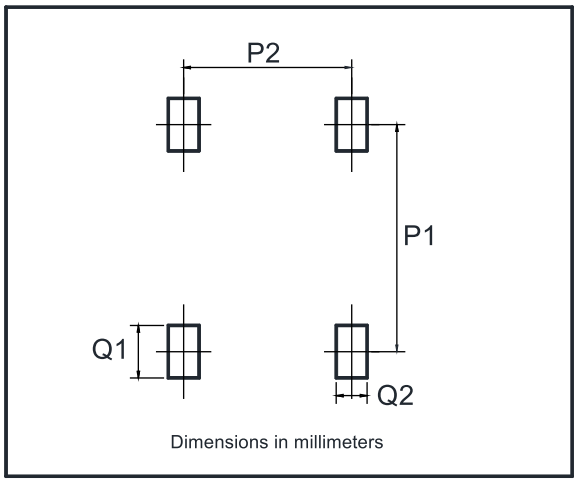


■ OUTLINE DIMENSIONS



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