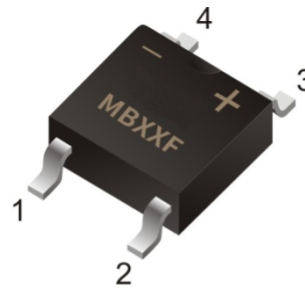


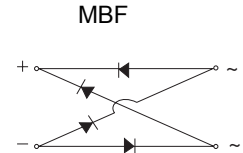


**Features**

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-O



**RoHS  
COMPLIANT**



**Mechanical Data**

- Case: MB-F, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.134 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version,

**Major Ratings and Characteristics**

<b>I<sub>F(AV)</sub></b>	<b>0.8A</b>
<b>V<sub>RRM</sub></b>	<b>50V to 1000 V</b>
<b>I<sub>FSM</sub></b>	<b>30A</b>
<b>I<sub>R</sub></b>	<b>5μA</b>
<b>V<sub>F</sub></b>	<b>1.1V</b>
<b>T<sub>Jmax.</sub></b>	<b>150°C</b>

**Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified.**

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T <sub>A</sub> = 40°C Average Rectified Output Current (Note 2) @T <sub>A</sub> = 40°C	I <sub>o</sub>	0.8							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30							A
Pt Rating for Fusing (t < 8.3ms)	Pt	5.0							A <sup>2</sup> s
Forward Voltage per element @I <sub>F</sub> = 0.5A	V <sub>FM</sub>	1.1							V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C	I <sub>RM</sub>	5.0 500							μA
Typical Junction Capacitance per leg (Note 3)	C <sub>j</sub>	13							pF
Typical Thermal Resistance per leg (Note 1)	R <sub>θJA</sub> R <sub>θJL</sub>	60 16							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-55 to +150							°C

Note: 1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.

2. Mounted on aluminum substrate PC board with 1.3mm<sup>2</sup> solder pad.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

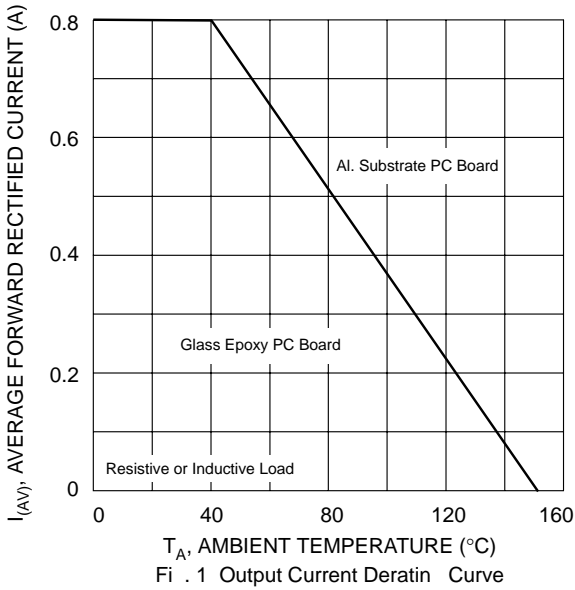


Fig. 1 Output Current Derating Curve

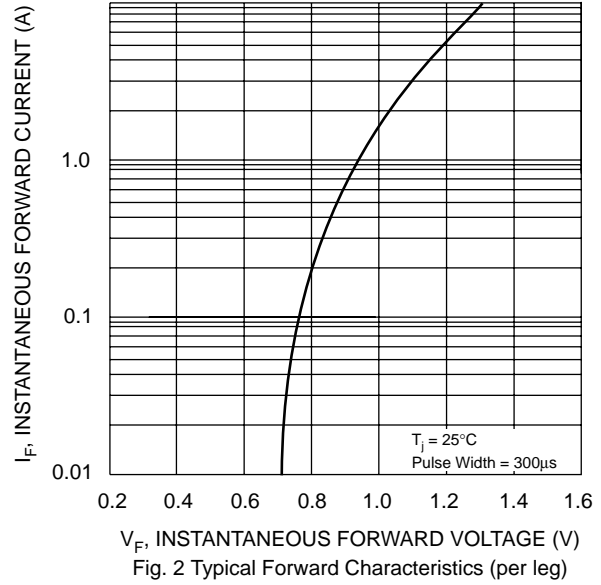


Fig. 2 Typical Forward Characteristics (per leg)

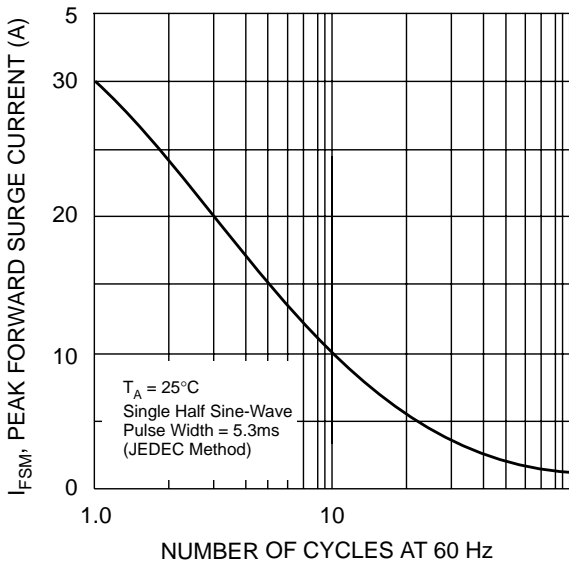


Fig. 3 Maximum Peak Forward Surge Current (per leg)

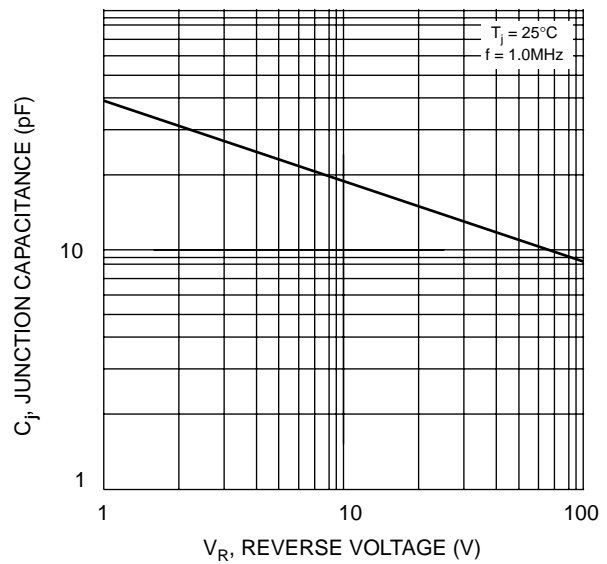


Fig. 4 Typical Junction Capacitance

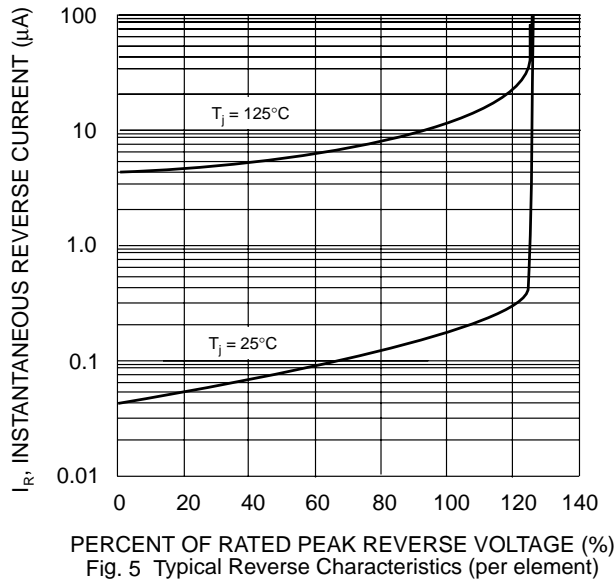
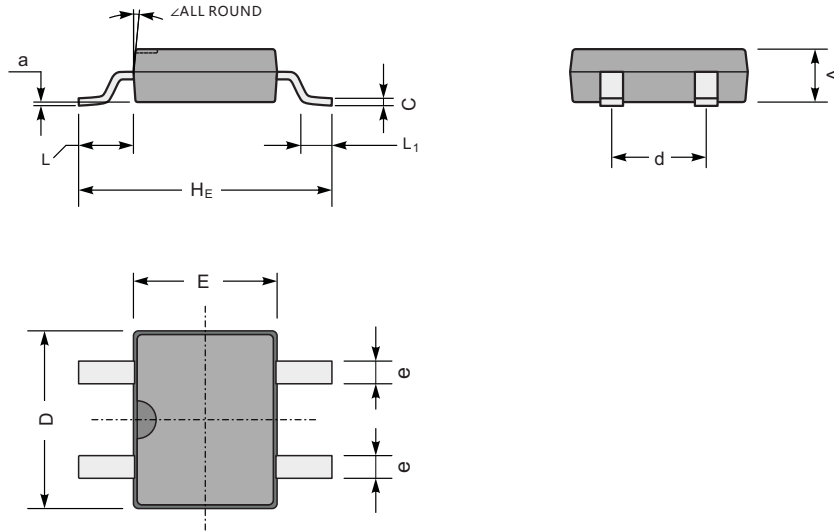


Fig. 5 Typical Reverse Characteristics (per element)

**Package Outline**



UNIT		A	C	D	E	HE	d	e	L	L1	a	∠
mm	max	1.6	0.22	5.0	4.1	7.0	2.7	0.8	1.7	1.1	0.2	7°
	min	1.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	63	8.7	197	161	276	106	31	67	43	8	
	min	47	5.9	177	142	252	91	20	51	20	—	

**The recommended mounting pad siz**

