

1. Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application

2. Mechanical Data

- Case: MB-F, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.082 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS /Lead Free Version



3. Maximum Ratings and Electrical Characteristics

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	MB 05F	MB 1F	MB 2F	MB 4F	MB 6F	MB 8F	MB 10F	Units						
Peak Repetitive Reverse Voltage	V_{RRM}														
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V						
DC Blocking Voltage	V_R														
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V						
Average Rectified Output Current (Note 1) @ $T_A=40^\circ C$	I_O	0.5							A						
Average Rectified Output Current (Note 2) @ $T_A=40^\circ C$		0.8							A						
Non-Repetitive Peak Forward Surge Current 8.3msSingle half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	30							A						
I^2t Rating for Fusing (t<8.3ms)	I^2t	5							A^2s						
Forward Voltage per element	$I_F=0.5A$	V_{FM}	1						V						
	$I_F=0.8A$		1.1						V						
Peak Reverse Current At Rated DC Blocking Voltage	$T_A=25^\circ C$	I_{RM}	5						μA						
	$T_A=215^\circ C$		500						μA						
Typical Junction Capacitance per leg (Note 3)	C_J	13							pF						
Typical Thermal Resistance per leg (Note 1)	$R_{\theta JA}$	60							$^\circ C/W$						
	$R_{\theta JL}$	16							$^\circ C/W$						
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150							$^\circ C$						

Note:

1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Mounted on aluminum substrate PC board with 1.3mm² solder pad.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



5. Typical Characteristic

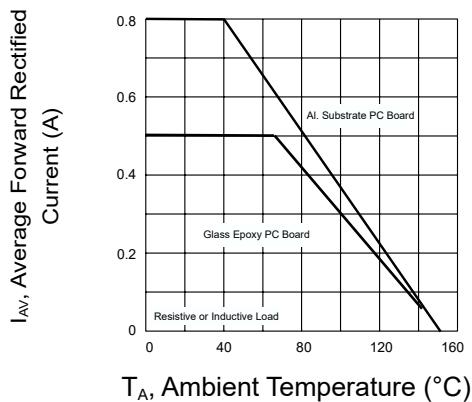


Figure 1: Output Current Derating Curve

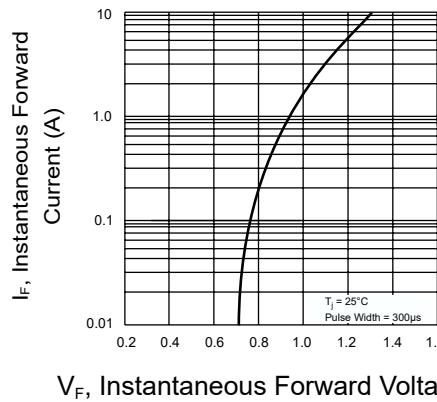


Figure 2: Typical Forward Characteristics (per leg)

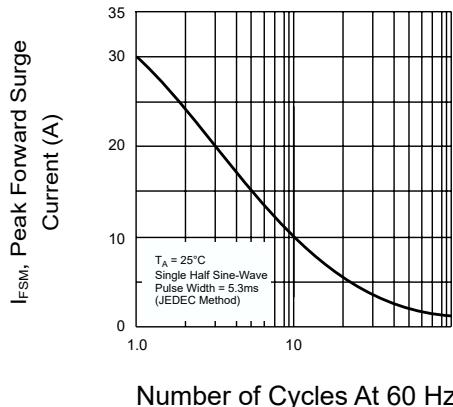


Figure 3: Maximum Peak Forward Surge Current (per leg)

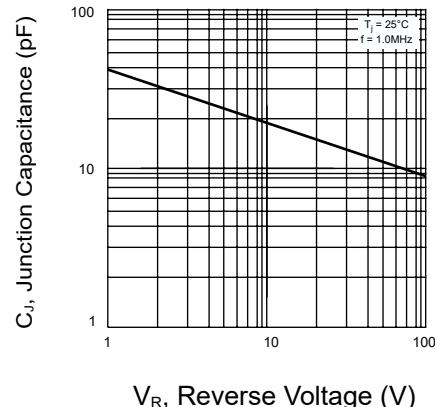


Figure 4: Typical Junction Capacitance

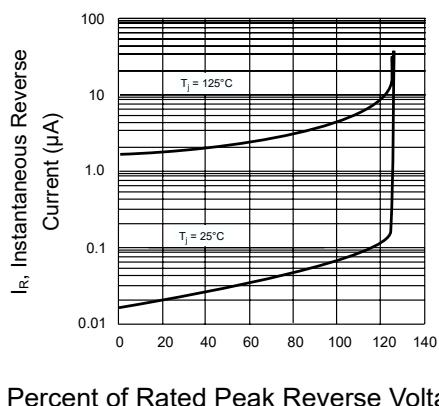
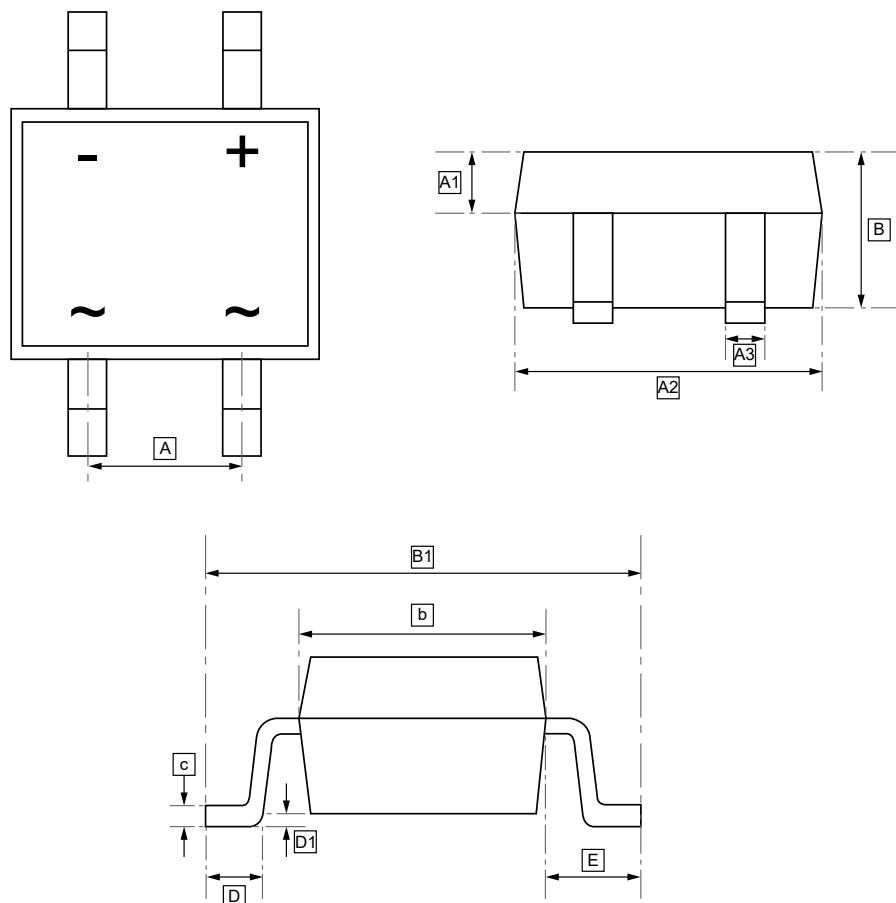


Figure 5: Typical Reverse Characteristics (per element)



6.SOP-4 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	A3	B	B1	b	c	D	D1	E
Min	2.3	0.5	4.5	0.5	1.3	-	3.5	0.15	0.7	0.2	1.3
Max	2.7	0.9	4.9	0.8	1.7	7.0	3.9	0.35	1.1	0.2	1.7



7.Ordering Information

Order Code	Marking	Package	Base QTY	Delivery Mode
UMW MB10F(0.8A)	MB10F	MBF	5000	Tape and reel
UMW MB6F(0.8A)	MB6F	MBF	5000	Tape and reel



8.Disclaimer

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