

**Kingtronics**®**MB1F THRU  
MB10F****SURFACE MOUNT FAST SWITCHING RECTIFIER****REVERSE VOLTAGE 50 to 1000 Volts    FORWARD CURRENT 1.0 Ampere****FEATURES**

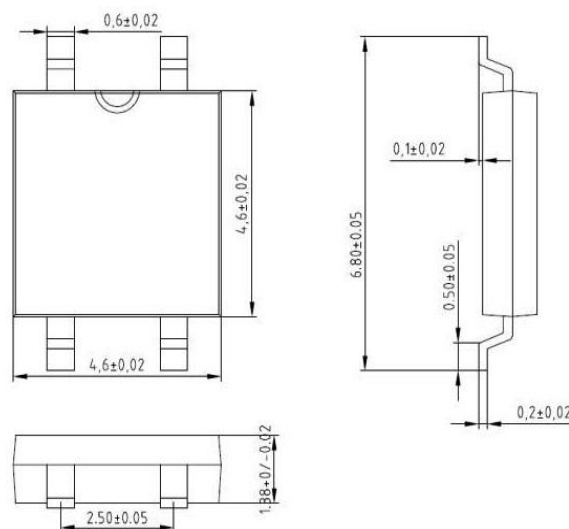
Glass passivated chip junction  
 Ideal for surface mounted applications  
 Low leakage  
 High forward surge current capability  
 High temperature soldering guaranteed:  
 260°C/10 seconds at terminals

**MECHANICAL DATA**

Case: Molded plastic body  
 Epoxy: UL94V-0 rate flame retardant  
 Polarity: Molded on body  
 Lead: Plated terminals solderable per MIL-STD-202E  
 method 208C  
 Weight: 0.003 ounce, 0.1 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified,  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load derate current by 20%

**MBF****Dimensions in inches and (millimeters)**

PARAMETER	SYMBOL	MB1F	MB2F	MB3F	MB4F	MB6F	MB8F	MB10F	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Output Current, 0.06"(1.5mm) lead length at $T_A=40^\circ\text{C}$ (Note 2)	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							A
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	10							$\text{A}^2\text{s}$
Maximum Instantaneous Forward Voltage drop Per Bridge element 1.0A	$V_F$	1.1							V
Maximum DC Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 0.5							 uA mA
Typical Junction Capacitance (Note 1)	$C_J$	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	40							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

1- Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.

2- Unit mounted on P.C.B. with 0.95"×1.15" copper pads.

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

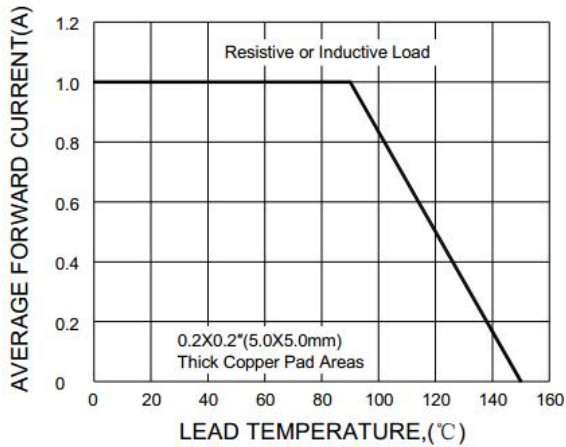


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

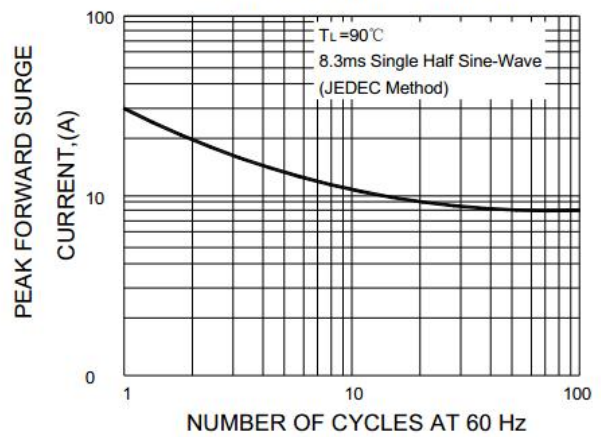


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

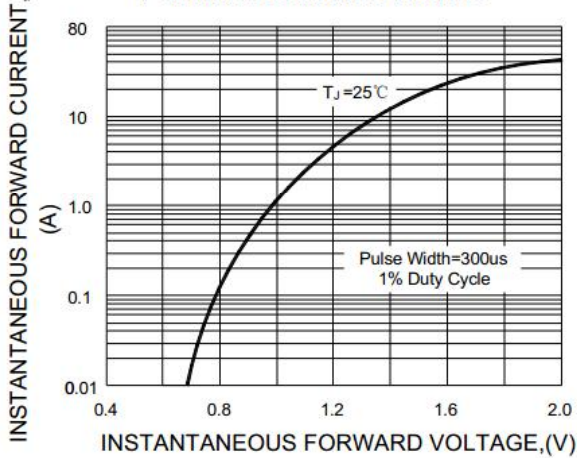


FIG.4-TYPICAL REVERSE CHARACTERISTICS

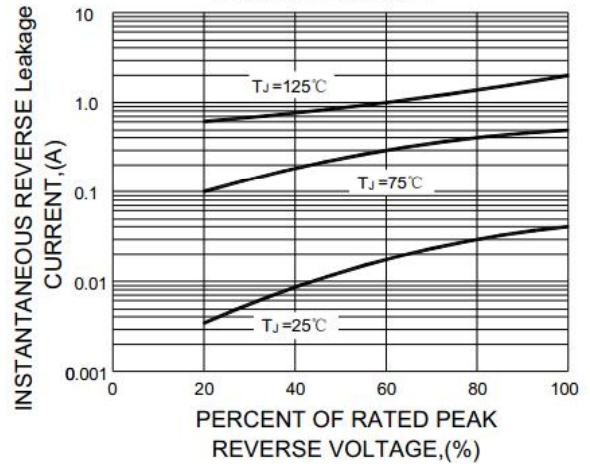
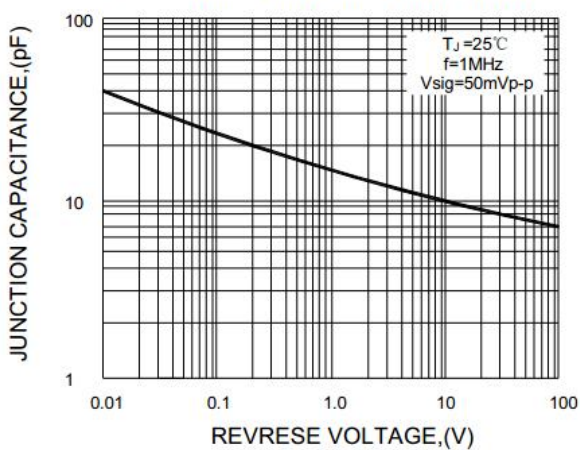


FIG.5-TYPICAL JUNCTION CAPACITANCE



Note: Specifications are subject to change without notice.

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