Kingtronics®

MB1F THRU MB10F

SURFACE MOUNT FAST SWITCHING RECTIFIER

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 1.0 Ampere

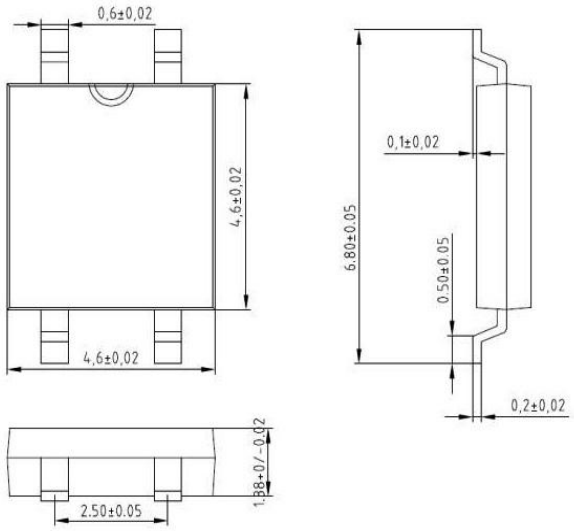
FEATURES

- Glass passivated chip junction
- Ideal for surface mounted applications
- Low leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260℃/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

MBF



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

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℃ (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＜8.3ms)	I^2t	10							A^2s
Maximum Instantaneous Forward Voltage drop Per Bridge element 1.0A	V_F	1.1							V
Maximum DC Reverse Current at T_A=25℃ at Rated DC Blocking voltage T_A=125℃	I_R	5.0							uA
		0.5							mA
Typical Junction Capacitance (Note 1)	C_J	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	40							℃/W
Operating and Storage Temperature Range	T_J , T_{STG}	-55 to +150							℃

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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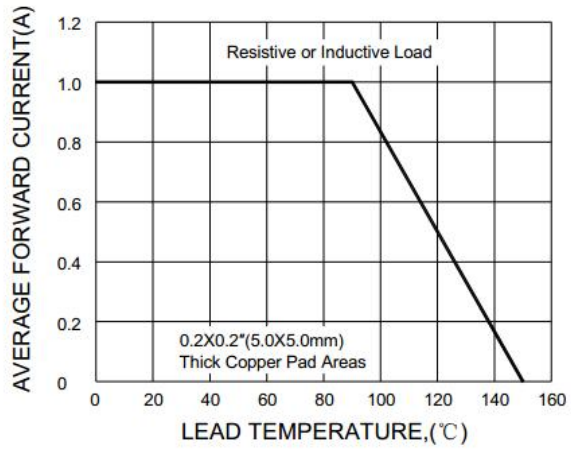
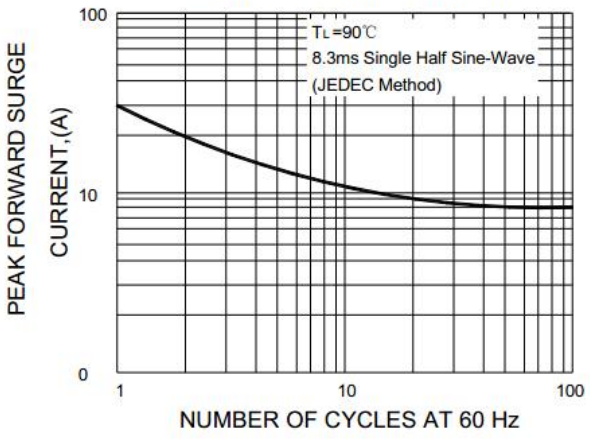
RATINGS AND CHARACTERISTIC CURVES

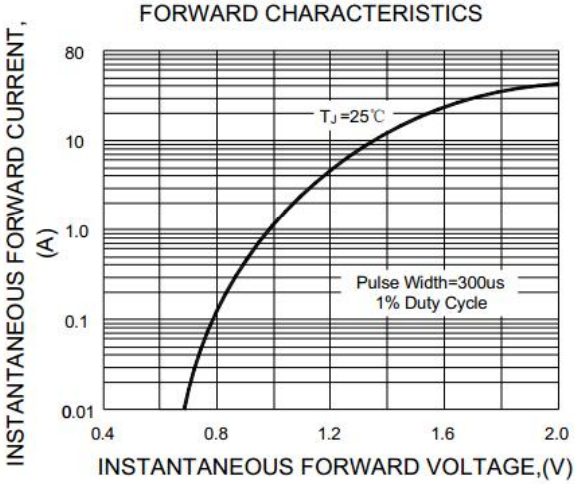
F1G.1-FORWARD CURRENT DERATING CURVE



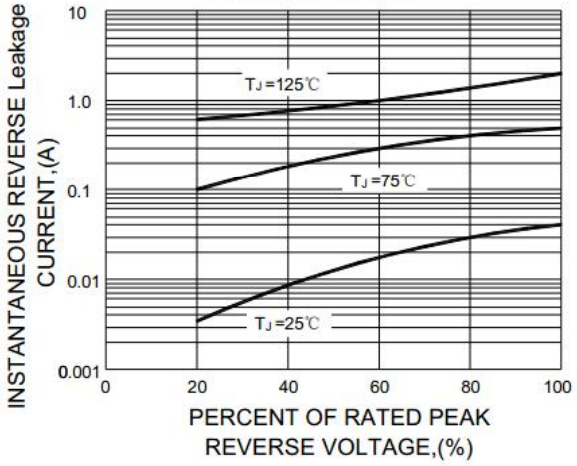
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



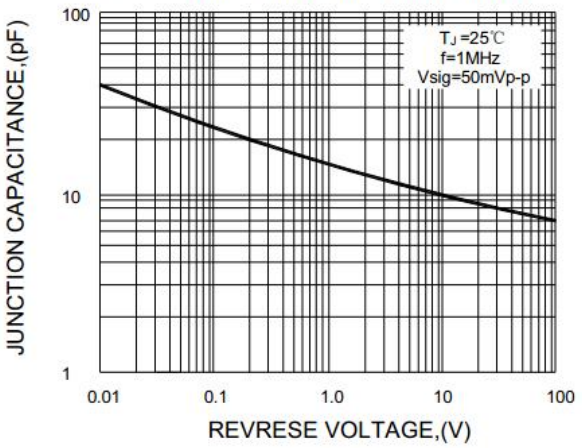
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



Note: Specifications are subject to change without notice.