MASTER INSTRUMENT CORPORATION

SINGLE-PHASE BRIDGE RECTIFIER
W005MF THRU W10MF

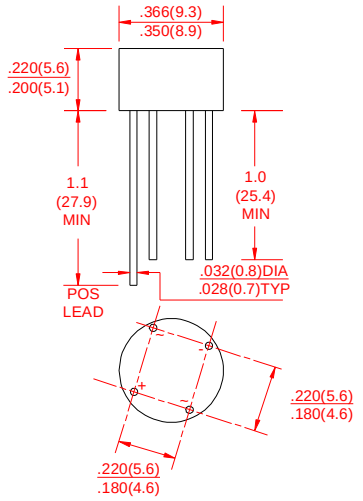
VOLTAGE RANGE **50 to 1000 Volts**
CURRENT **1.5 Amperes**

FEATURES

- Low cost
- This series is UL recognized under component index,file number E127707
- High forward surge current capability
- Ideal for printed circuit board
- High temperature soldering guaranteed: 260°C/10 second, at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Molded plastic body
- Terminal: Lead solderable per MIL-STD-202E method 208C.
- Polarity: Polarity symbols molded on case
- Mounting position: Any
- Weight:0.042ounce,1.2grams



Dimensions in inches and (millimeters)

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%.

	SYMBOLS	W005MF	W01MF	W02MF	W04MF	W06MF	W08MF	W10MF	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current, at T_A=25℃(Note1)	$I_{(AV)}$	1.5							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							Amps
Ratings for Fusing (t<8.3ms)	I^2T	10							A^2S
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element T_A=25℃	I_R	5.0				10			μAmps
Maximum DC Reverse Current at rated DC blocking voltage per element T_A=100℃	I_R	0.5							mAmps
Typical Junction Capacitance(Note2)	C_J	25							P^F
Maximum reverse recovery time (Note 3) T_J=25℃	T_{RR}	150				250	500		nS
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

NOTES:
1. Unit mounted on P.C. board with 0.22"×0.22"(5.5×5.5mm)copper pads,0.375"(9.5mm)lead length.
2. Measured at 1.0MHz and applied reverse voltage of 4.0 volts.
3. Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

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RATINGS AND CHARACTERISTIC CURVES W005MF THRU W10MF

FIG.1–DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

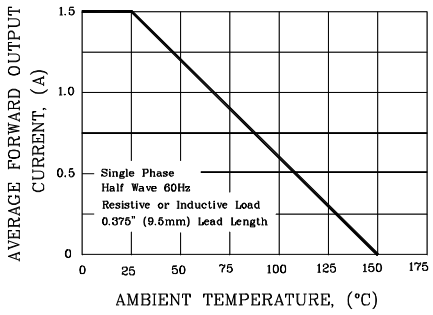


FIG.2–MAXIMUM NON–REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

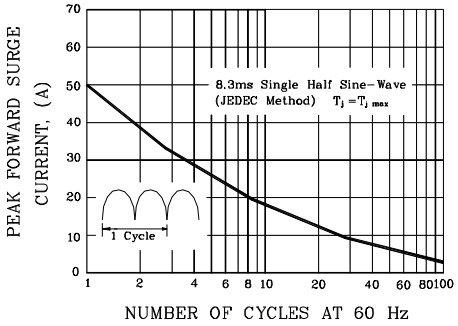


FIG.3–TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

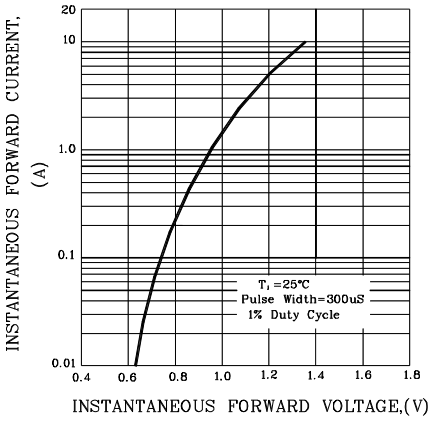


FIG.4–TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

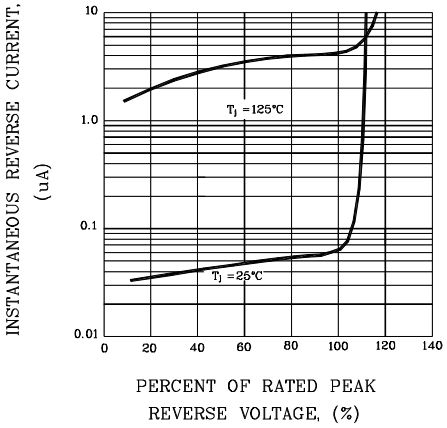


FIG.5–TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

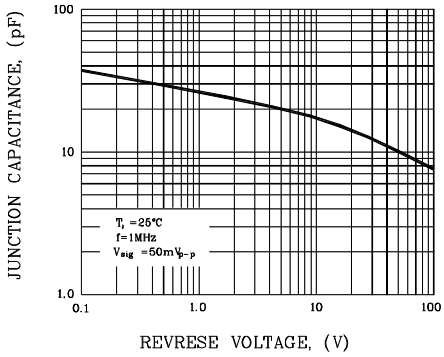
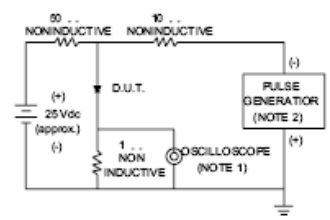


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm. 22pF
2.Rise time= 10ns max. Source Impedance= 50 ohms