

## MASTER INSTRUMENT CORPORATION

# SINGLE-PHASE BRIDGE RECTIFIER W005M THRU W10M

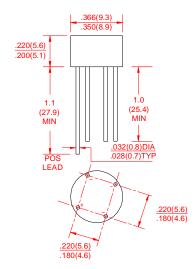
VOLTAGE RANGE CURRENT 50 to 1000 Volts 1.5 Amperes

### **FEATURES**

- I Low cost
- I This series is UL recognized under component index, file number E127707
- I High forward surge current capability
- I Ideal for printed circuit board
- High temperature soldering guaranteed: 260 °C/10 second, 0.375"(9.5mm) lead length at 5 lbs. (2.3kg) tension.

#### MECHANICAL DATA

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



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		SYMBOLS	W005M	W01M	W02M	W04M	W06M	W08M	W10M	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 <sub>A</sub> =25°C	$I_{(AV)}$	1.5						Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I <sub>FSM</sub>	50							Amps
Maximum Instantaneous Forward Voltage at 1.0A		$V_{\mathrm{F}}$	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^{\circ}\mathrm{C}$	$I_R$	10							μAmps
	$T_A\!\!=\!\!100^{\circ}\!\mathbb{C}$	$\mathbf{I}_{\mathrm{R}}$	0.5							mAmps
Typical Junction Capacitance(Note1)		$C_{J}$	15							$\mathbf{P}^{\mathrm{F}}$
Typical Thermal Resistance(Note2)		R <sub>0</sub> JA	40							°C/W
Operating Temperature Range		$T_{J}$	-55 to +125							℃
Storage Temperature Range		$T_{STG}$	-55 to +150							℃

#### NOTES:

- 1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts.
- 2. Unit mounted on P.C. board with 0.22"×0.22"(5.5×5.5mm)copper pads, 0.375"(9.5mm)lead length.

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## RATINGS AND CHARACTERISTIC CURVES WOO5M THRU W10M

PEAK FORWARD SURGE

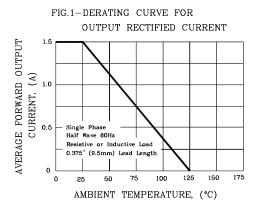


FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

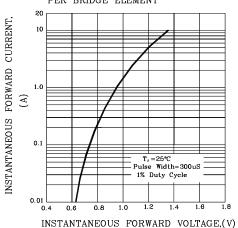


FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

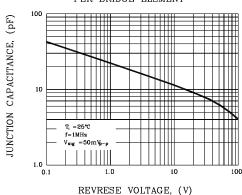


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

70

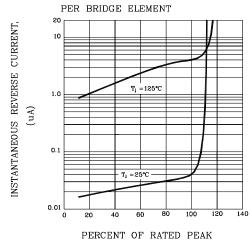
60

8.3ms Single Half Sine-Wave (JEDEC Method) T<sub>J</sub> =T<sub>J</sub> max

NUMBER OF CYCLES AT 60 Hz

60 80100

FIG.4-TYPICAL REVERSE CHARACTERISTICS



REVERSE VOLTAGE, (%)

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