



## MASTER INSTRUMENT CORPORATION

### SINGLE-PHASE BRIDGE RECTIFIER W005L THRU W10L

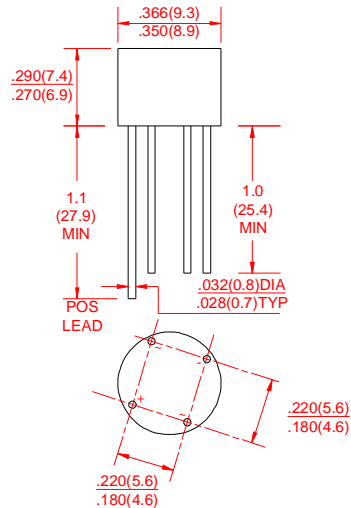
**VOLTAGE RANGE** 50 to 1000 Volts  
**CURRENT** 1.5 Amperes

#### FEATURES

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

#### MECHANICAL DATA

- l Case: Molded plastic body
- l Terminal: Lead solderable per MIL-STD-202E method 208C.
- l Polarity: Polarity symbols molded on case
- l Mounting position: Any
- l Weight: 0.05ounce, 1.42grams



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	W005L	W01L	W02L	W04L	W06L	W08L	W10L	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 $T_A=25^\circ\text{C}$	$I_{(AV)}$	1.5							Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50							Amps	
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.0							Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	$I_R$	10							$\mu\text{Amps}$
	$T_A=100^\circ\text{C}$		0.5							mAmps
Typical Junction Capacitance(Note1)	$C_J$	15							$\text{pF}$	
Typical Thermal Resistance(Note2)	$R_{\theta JA}$	40							$^\circ\text{C/W}$	
Operating Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$	
<b>NOTES:</b>										
1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts.										
2. Unit mounted on P.C. board with $0.22" \times 0.22"$ (5.5 x 5.5mm) copper pads, 0.375"(9.5mm) lead length.										



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W005L THRU W10L**

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## RATINGS AND CHARACTERISTIC CURVES W005L THRU W10L

FIG.1-DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

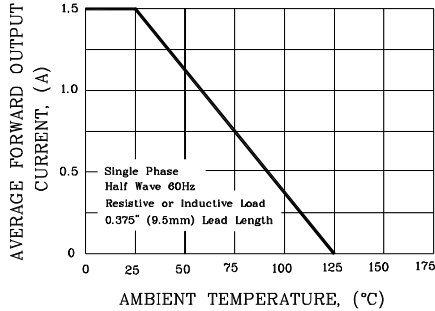


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

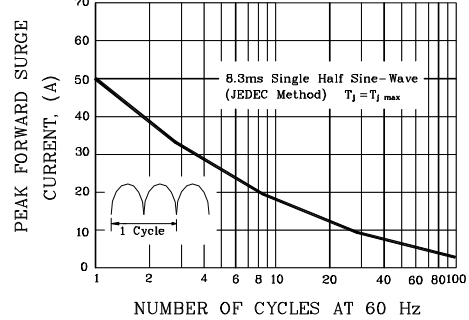


FIG.3-TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

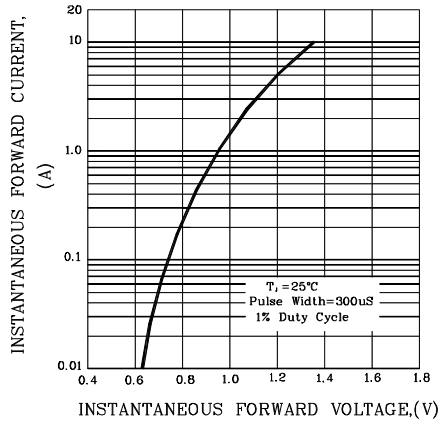


FIG.4-TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

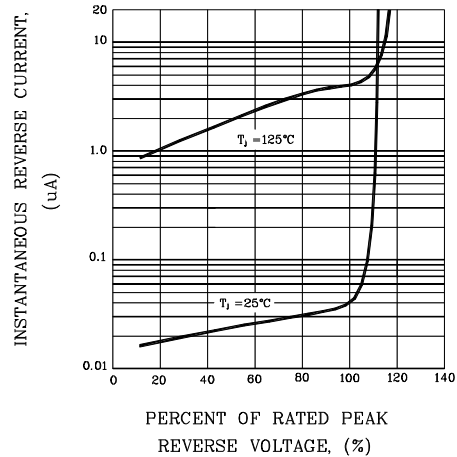


FIG.5-TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT

