

# AWL005G - AWL10G

# AVALANCHE GLASS PASSIVATED BRIDGE RECTIFIERS

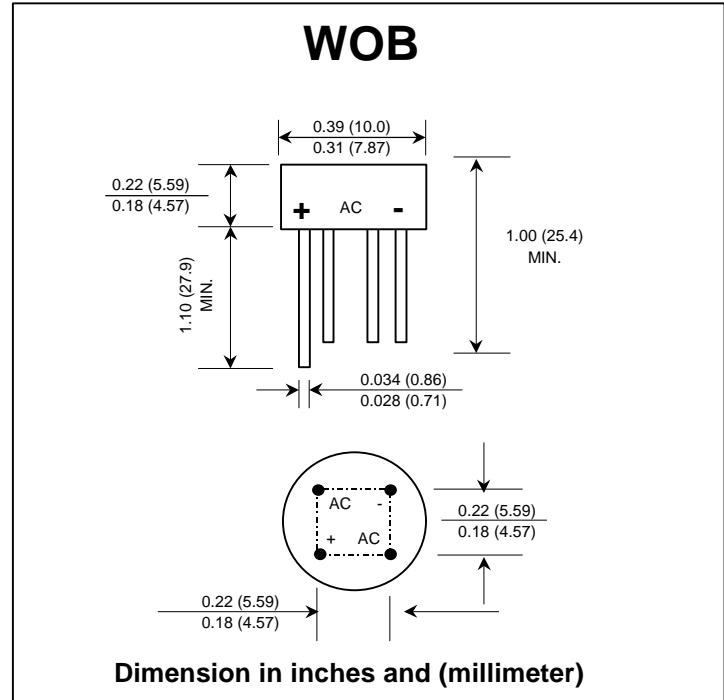
**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

### FEATURES :

- \* Glass passivated chip
- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Plated leads solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 1.29 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

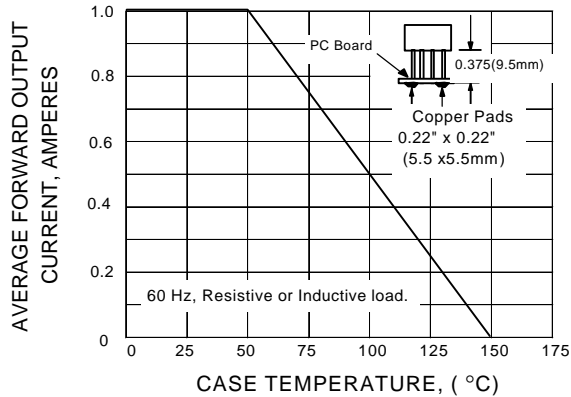
RATING	SYMBOL	AWL 005G	AWL 01G	AWL 02G	AWL 04G	AWL 06G	AWL 08G	AWL 10G	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Minimum Avalanche Breakdown Voltage at 100 $\mu$ A	$V_{BO(min.)}$	100	150	250	450	700	900	1100	V
Maximum Avalanche Breakdown Voltage at 100 $\mu$ A	$V_{BO(max.)}$	550	600	700	900	1150	1350	1550	V
Maximum Average Forward Current 0.375" (9.5 mm) lead length $T_c = 50^\circ C$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Rating for fusing ( $t < 8.3$ ms.)	$I^2t$	10							A <sup>2</sup> S
Maximum Forward Voltage per Diode at $I_F = 1.0$ A	$V_F$	1.2							V
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$	$I_R$	10							$\mu$ A
	$I_{R(H)}$	1.0							mA
Typical Junction Capacitance per Diode (Note 1)	$C_J$	24							pf
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	36							$^\circ C/W$
Operating Junction Temperature Range	$T_J$	- 50 to + 150							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 50 to + 150							$^\circ C$

**Notes :**

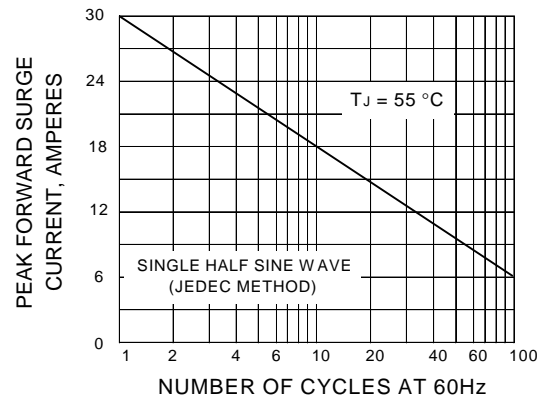
- 1 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
- 2 ) Thermal resistance from Junction to Ambient at 0.375" (9.5 mm) lead length P.C. Board mounting.

## RATING AND CHARACTERISTIC CURVES ( AWL005G - AWL10G )

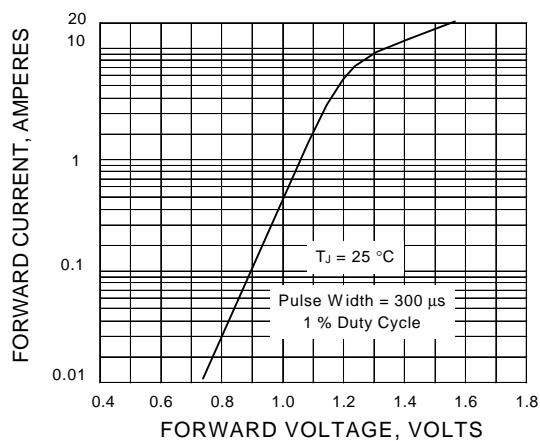
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

