

## 2W005M THRU 2W10M

### SINGLE-PHASE SILICON BRIDGE RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

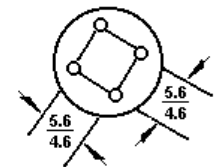
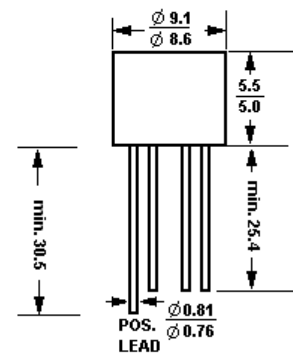
Forward Current – 2.0 Amperes

#### Features

- Surge overload ratings to 50 amperes peak
- Ideal for printed circuit board
- Reliable low cost construction technique results in inexpensive product
- High temperature soldering guaranteed:  
250°C/10 seconds/0.375" (9.5mm) lead length at 5 lbs., (2.3kg) tension.

#### Mechanical Data

- Case: Molded plastic
- Lead: Solder plated
- Polarity: As marked



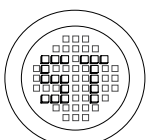
Dimensions in mm

#### Absolute Maximum Ratings and Characteristics

Rating 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	2W 005M	2W 01M	2W 02M	2W 04M	2W 06M	2W 08M	2W 10M	Units
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 current at $T_A = 50^\circ\text{C}$	$I_{(AV)}$	2							A
Peak forward surge current , 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50							A
Maximum instantaneous forward voltage @ 2A	$V_F$	1.1							V
Maximum DC reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	$I_R$	10 500							$\mu\text{A}$ $\mu\text{A}$
Typical thermal resistance(Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							$^\circ\text{C/W}$ $^\circ\text{C/W}$
Operating temperature range	$T_J$	-55 to +125							$^\circ\text{C}$
Storage temperature range	$T_S$	-55 to +150							$^\circ\text{C}$

Note: (1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length for P.C.B. mounting.



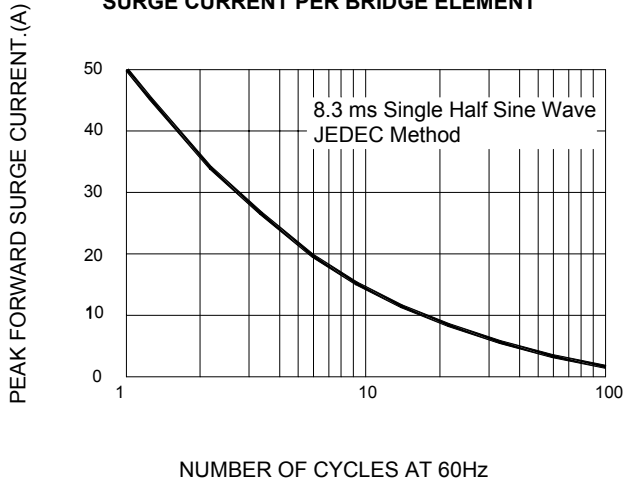
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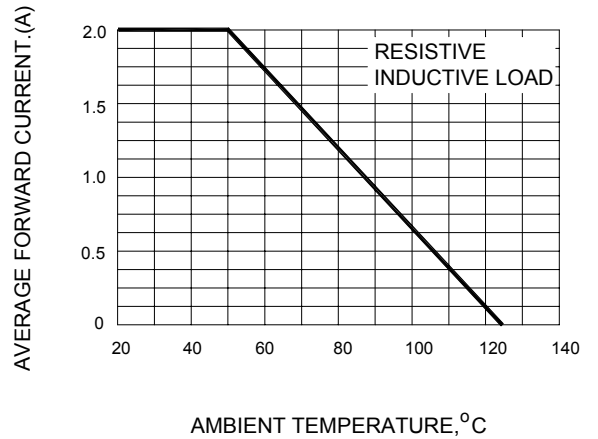
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## RATINGS AND CHARACTERISTIC CURVES

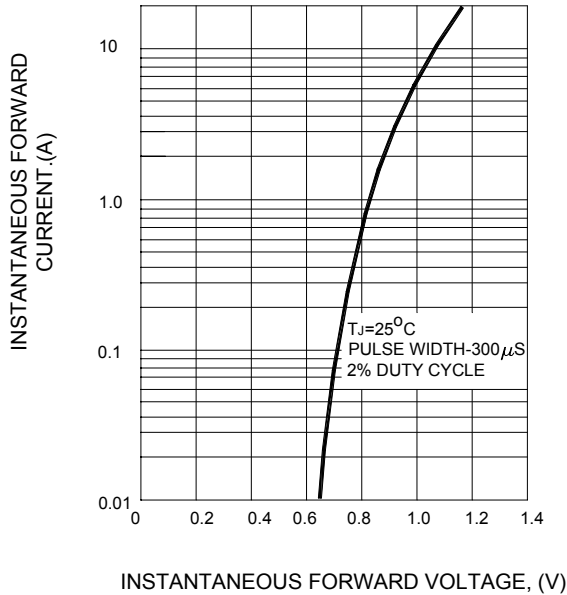
**FIG. 1-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT**



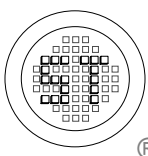
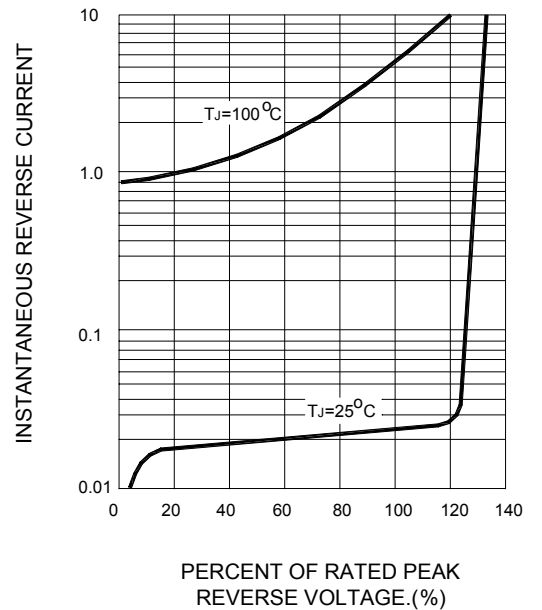
**FIG. 2-MAXIMUM CURRENT DERATING CURVE OUTPUT RECTIFIED CURRENT**



**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT**

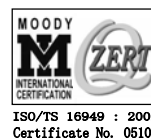


**FIG. 4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT**



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001  
Certificate No. 7116



ISO 9001 : 2000  
Certificate No. 6509-1999-00-002-001

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