

# 1H1G ~ 1H8G

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

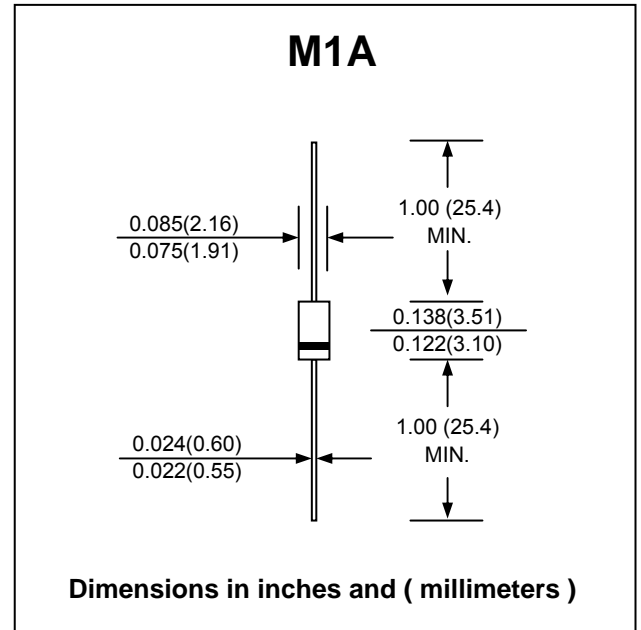
**FEATURES :**

- \* Glass passivated chip
- \* High current capability
- \* High reliability
- \* High speed switching
- \* Low leakage
- \* Low forward voltage
- \* Low power loss, high efficiency
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : M1A Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.20 gram (approximately)

## HIGH EFFICIENCY RECTIFIERS



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise noted.

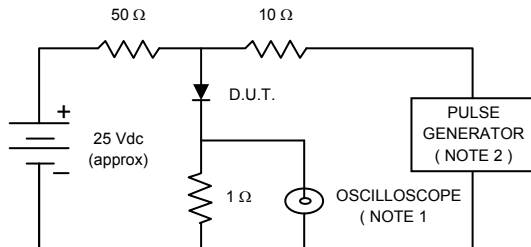
| RATING   | SYMBOL         | 1H1G          | 1H2G | 1H3G | 1H4G | 1H5G | 1H6G | 1H7G | 1H8G | UNITS         |                  |
|--|----------------|---------------|------|------|------|------|------|------|------|---------------|------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$      | 50            | 100  | 200  | 300  | 400  | 600  | 800  | 1000 | V             |                  |
| Maximum RMS Voltage  | $V_{RMS}$      | 35            | 70   | 140  | 210  | 280  | 420  | 560  | 700  | V             |                  |
| Maximum DC Blocking Voltage  | $V_{DC}$       | 50            | 100  | 200  | 300  | 400  | 600  | 800  | 1000 | V             |                  |
| Maximum Average Forward Rectified Current at $T_a = 25\text{ }^\circ\text{C}$  | $I_{F(AV)}$    | 1.0           |      |      |      |      |      |      |      | A             |                  |
| Peak Forward Surge Current , 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)                   | $I_{FSM}$      | 25            |      |      |      |      |      |      |      | A             |                  |
| Maximum Instantaneous Forward Voltage at $I_F = 1.0\text{ A}$ .  | $V_F$          | 1.0           |      | 1.3  |      | 1.7  |      |      | V    |               |                  |
| Maximum DC Reverse Current at rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$                             | $I_R$          | 5.0           |      |      |      |      |      |      |      | $\mu\text{A}$ |                  |
| Maximum Full Load Reverse Current Average, Full Cycle 0.375" (9.5mm) lead length at $T_L = 55\text{ }^\circ\text{C}$ | $I_R$          | 100           |      |      |      |      |      |      |      | $\mu\text{A}$ |                  |
| Maximum Reverse Recovery Time (Note 1)   | $T_{rr}$       | 50            |      |      |      | 75   |      |      |      | ns            |                  |
| Typical Junction Capacitance (Note 2)  | $C_J$          | 15            |      |      |      | 12   |      |      |      | pF            |                  |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$ | - 65 to + 150 |      |      |      |      |      |      |      |               | $^\circ\text{C}$ |

**Notes :**

- (1) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

## RATING AND CHARACTERISTIC CURVES ( 1H1G - 1H8G )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



Notes : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.

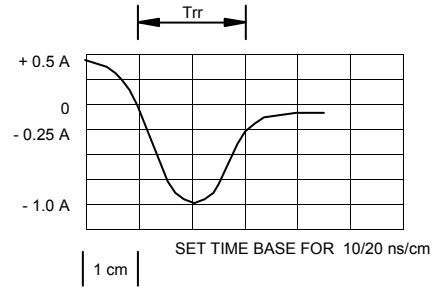


FIG.2 - TYPICAL FORWARD CURRENT DERATING CURVE

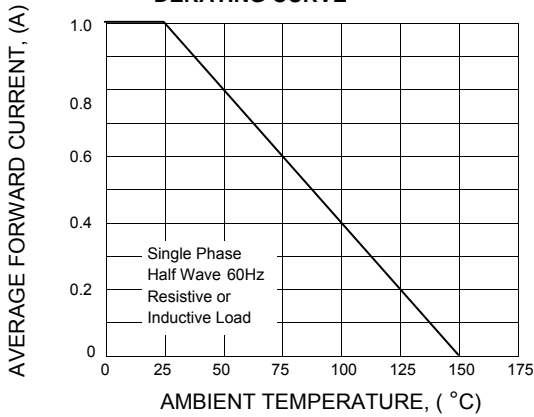


FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

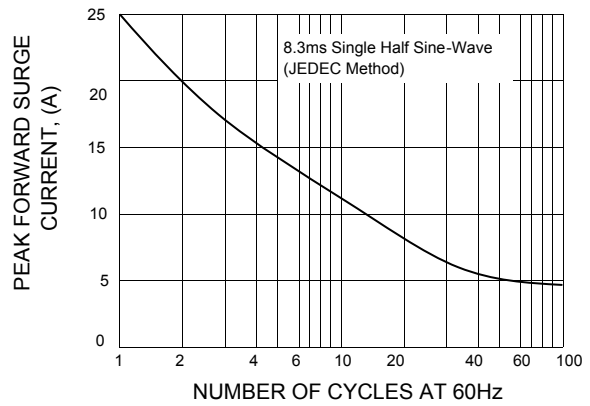


FIG.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

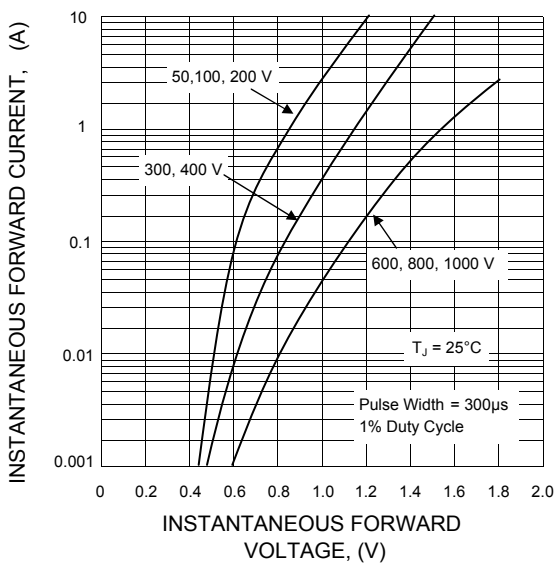


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

