

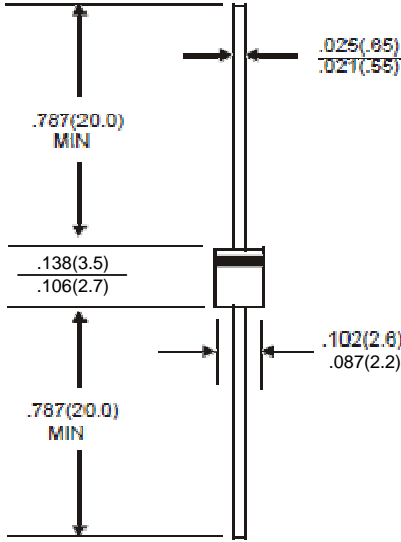


1E1G THRU 1E8G

GLASS PASSIVATED SUPER FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

R-1



Dimensions in inches and (millimeters)

FEATURES

- ◆ Low power loss, high efficiency
- ◆ Low leakage
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High speed switching
- ◆ High current surge
- ◆ High reliability
- ◆ Pb free product : 99% Sn above can meet RoHS environment substance directive request

MECHANICAL DATA

Case: R-1, Molded plastic

Terminals: Solderable per MIL-STD-750 Method 2026

Epoxy: UL94V-0 rate flame retardant

Polarity: Color band denotes cathode end

Approx. Weight: 0.0068 ounce, 0.1937 gram

Mounting Position: Any

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 current derate by 20%.

PARAMETER	SYMBOLS	1E1G	1E2G	1E3G	1E4G	1E6G	1E7G	1E8G	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Average Rectified current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1							Amp
Non-repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							Amps
Maximum Forward Voltage at $I_F=1.0A$	V_F	0.95				1.25	1.70		Volts
Maximum DC reverse current at rated DC blocking voltage at $T_A=25^\circ\text{C}$	I_R	5.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35							nS
Typical Junction Capacitance (NOTE 2)	C_J	17							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating Junction & Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B. mounted



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

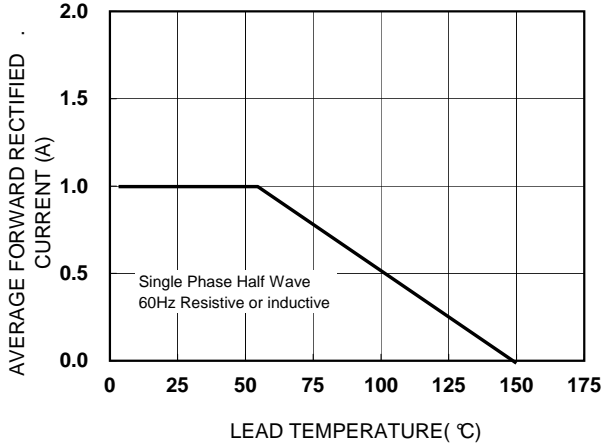


FIG. 2--MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

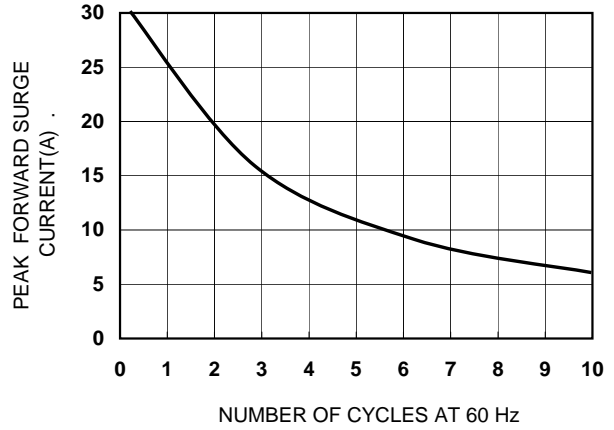


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

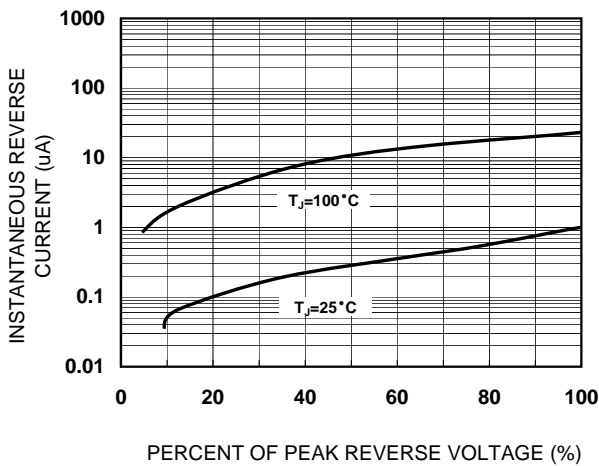


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

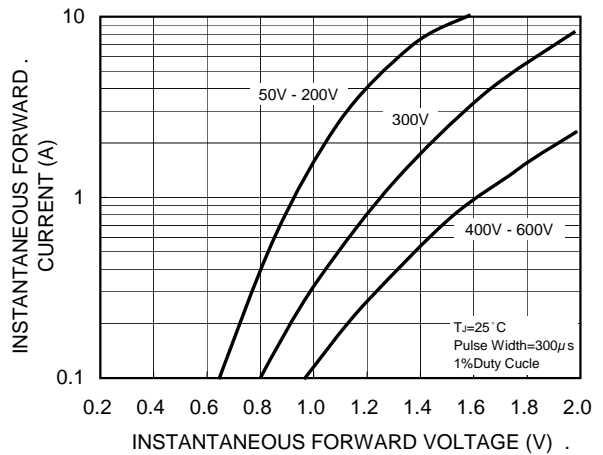


FIG. 5-TYPICAL JUNCTION CAPACITANCE

