

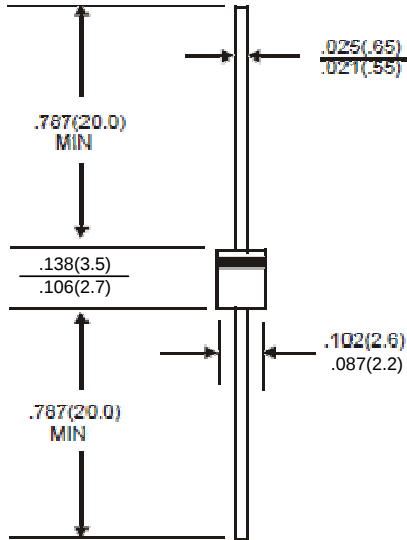


1E1 THRU 1E8

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	1E1	1E2	1E3	1E4	1E6	1E7	1E8	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℃	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 T _A =25℃ at rated DC blocking voltage	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 _{θJA}	60							℃/W
Operating Junction & Storage Temperature Range	T _J , T _{STG}	-55 to +150							℃

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

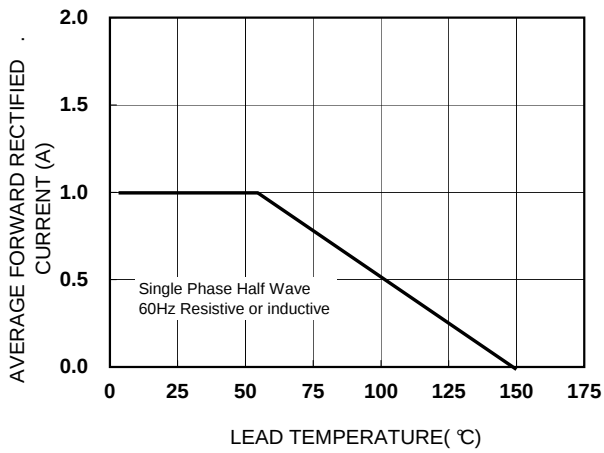


FIG. 2--MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

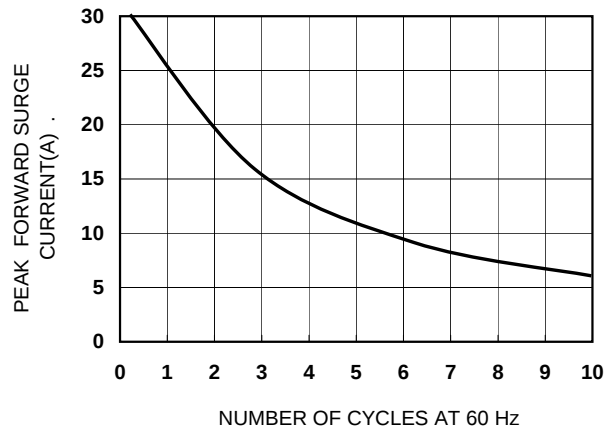


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

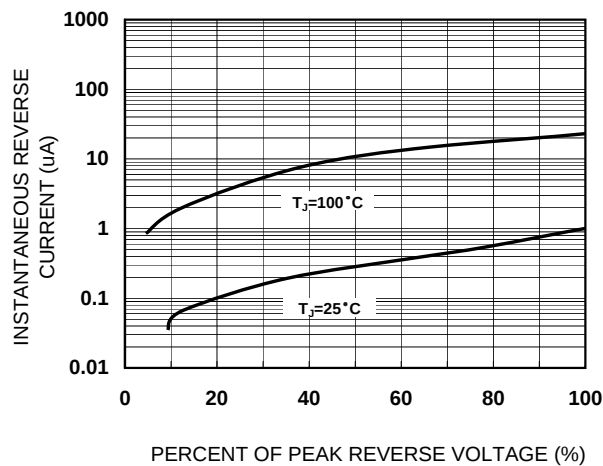


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

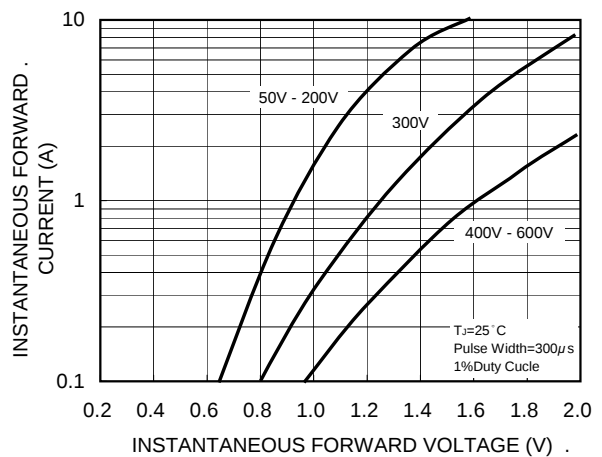


FIG. 5-TYPICAL JUNCTION CAPACITANCE

