



1A1 THRU 1A7

MINIATURE GENERAL PURPOSE PLASTIC SILICON RECTIFIER

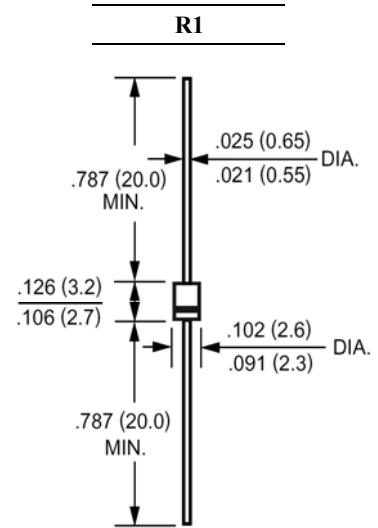
REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Low forward voltage drop
- High current capability
- High capability
- High surge current capability
- Suffix "H" indicates Halogen-free parts, ex. 1A1H

MECHANICAL DATA

Case : Molded plastic, R-1
 Epoxy : UL 94V-O rate flame retardant
 Lead : Axial leads, solderable per MIL-STD-202,
 method 208 guaranteed
 Polarity : Color band denotes cathode end
 Mounting position : Any



Dimensions in inches and (millimeters)

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, derate current by 20%.

Parameter	Symbols	1A1	1A2	1A3	1A4	1A5	1A6	1A7	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=25^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25.0							Amp
Maximum Forward Voltage at 1.0A DC and 25 °C	V_F	1.1							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	I_R					5.0	50		uAmp
Maximum Full Load Reverse Current Full Cycle Average at $T_L=75^\circ\text{C}$						100.0			uAmp
Typical Junction Capacitance (Note 1)	C_J					15			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$					60.0			°C/W
Operating Junction Temperature Range	T_J					-55 to +150			°C
Storage Temperature Range	T_{STG}					-55 to +150			°C

NOTES:

1- Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. Mounted.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

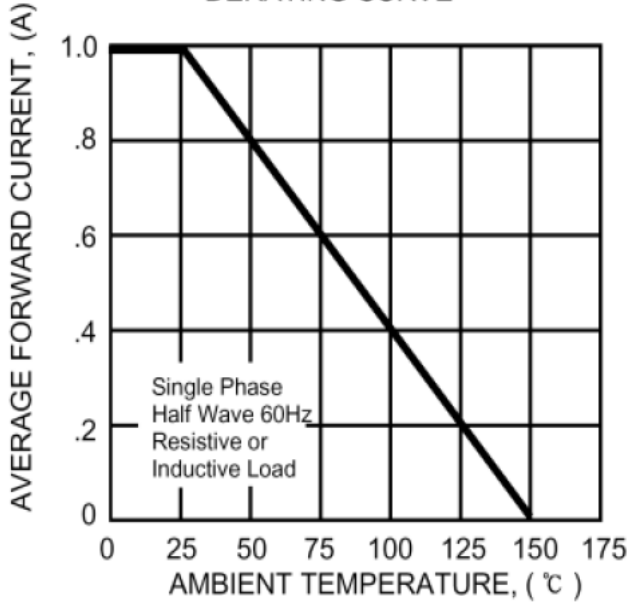


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

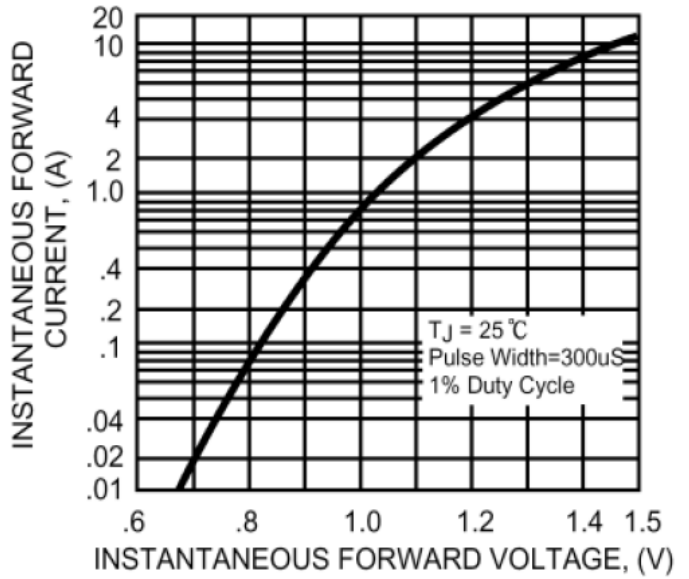


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

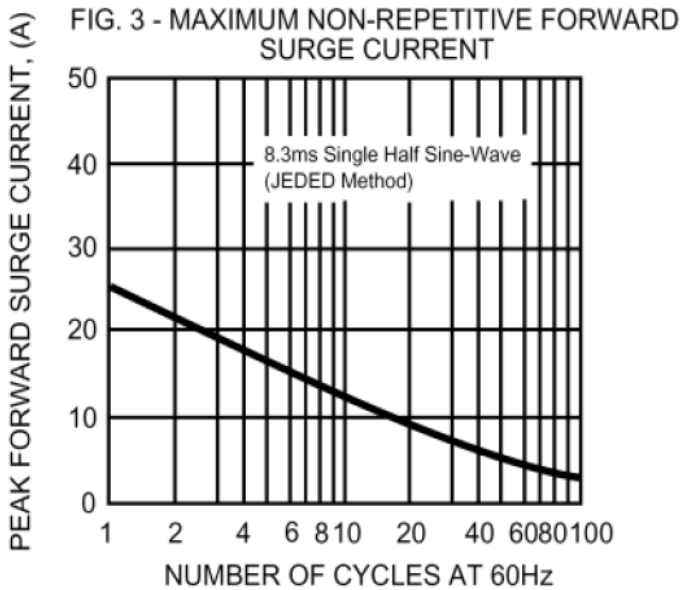


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

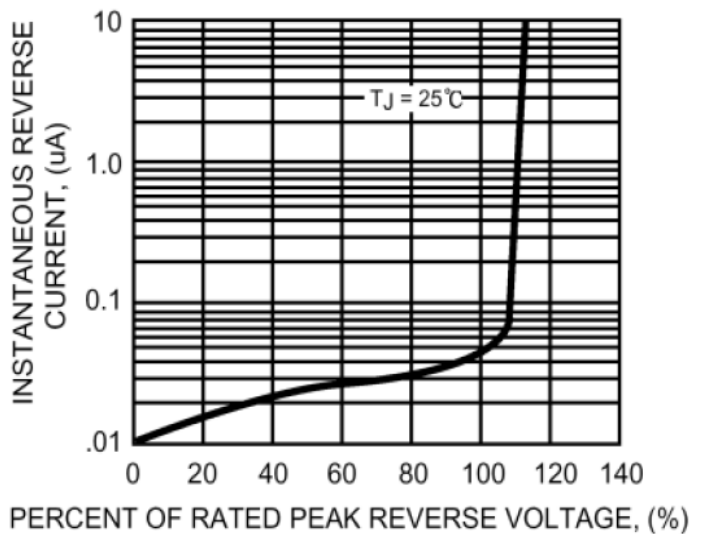


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

