



SYNSEMI SEMICONDUCTOR

1G1 thru 1G7

1.0 Amp. Glass Passivated Junction Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

Features

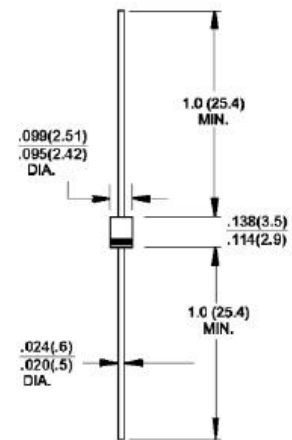
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability
- ◆ 3mm miniature body



R-1

Mechanical Data

- ◆ Case: Molded plastic R-1
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ◆ Polarity: Color band denotes cathode end
- ◆ High temperature soldering guaranteed:
250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◆ Weight: 0.007 ounce, 0.20 gram



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	1G1	1G2	1G3	1G4	1G5	1G6	1G7	Units
Maximum repetitive 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 0.375" (9.5mm) lead length @ $T_a=50^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage @ 1.0A	V_F	1.1							Volts
Maximum DC reverse current @ $T_a=25^\circ\text{C}$ at rated DC blocking voltage @ $T_a=125^\circ\text{C}$	I_R	5.0 100							μA
Typical junction capacitance (Note 1)	C_j	15							pF
Operating temperature range	T_j	-65 to +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

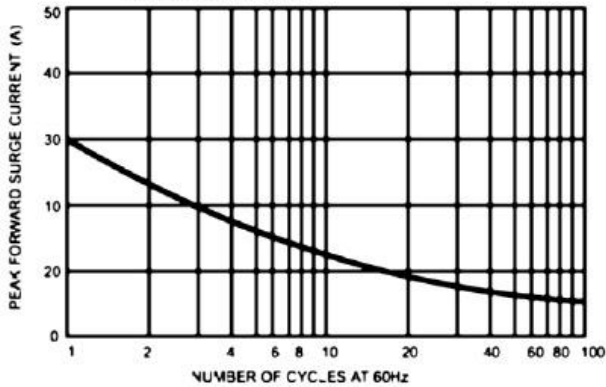


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

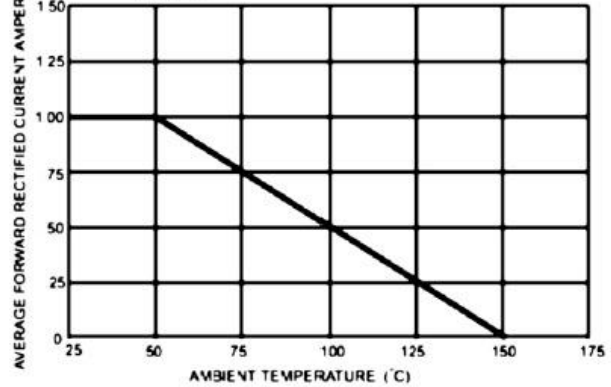


FIG. 3- TYPICAL JUNCTION CAPACITANCE

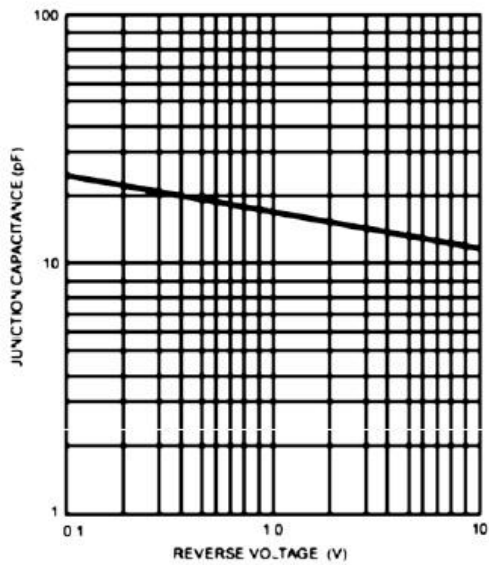


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

