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# 1A1G THRU 1A7G

## GENERAL PURPOSE SILICON RECTIFIER

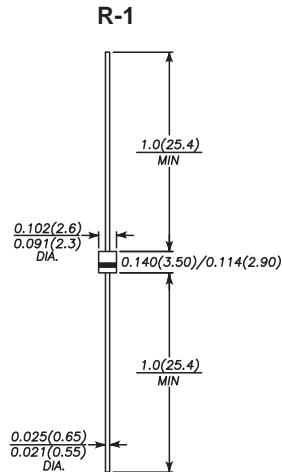
Reverse Voltage - 50 to 1000 Volts    Forward Current - 1.0 Ampere

### FEATURES

The plastic package carries Underwriters Laboratory  
Flammability Classification 94V-0  
Construction utilizes void-free  
molded plastic technique  
Low reverse leakage  
High forward surge current capability  
High temperature soldering guaranteed:  
260°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension  
Glass passivated chip junction

### MECHANICAL DATA

**Case:** R-1 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750,  
Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.007 ounce, 0.20 grams



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 current derate by 20%.

	SYMBOLS	1A1G	1A2G	1A3G	1A4G	1A5G	1A6G	1A7G	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=25^\circ\text{C}$	$I_{AV}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.1							V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 100.0							$\mu\text{A}$
Typical junction capacitance (NOTE 1)	$C_J$	15.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

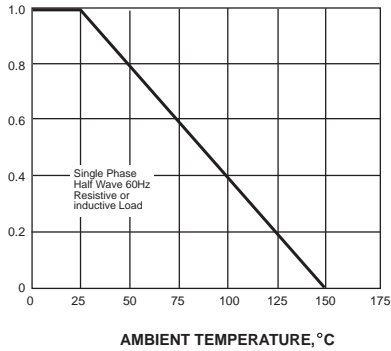


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## RATINGS AND CHARACTERISTIC CURVES 1A1G THRU 1A7G

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

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

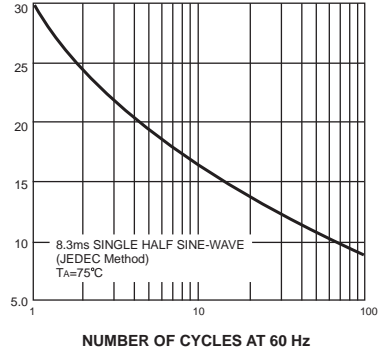
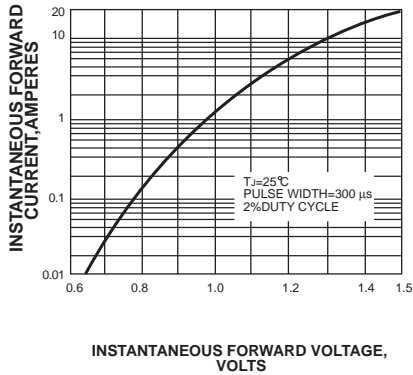


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

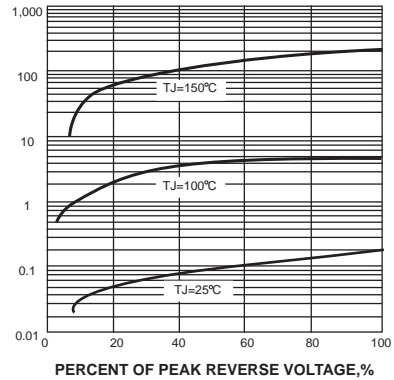
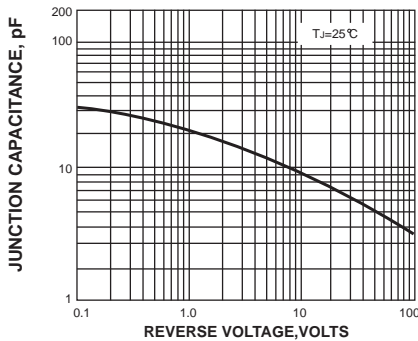


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

