

## GS1A THRU GS1M

**SURFACE MOUNT RECTIFIER**  
**VOLTAGE - 50 - 1000 Volts    CURRENT - 1.0 Ampere**

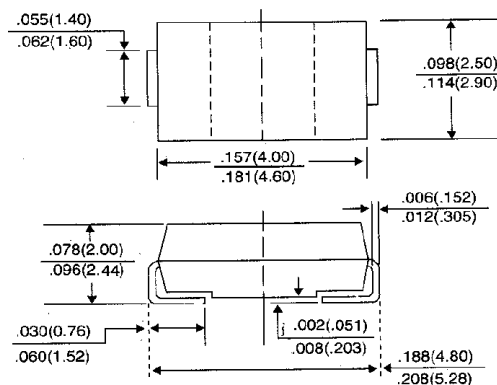
### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- High temperature soldering:  
260°C/10 seconds at terminals

### MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic  
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: Indicated by cathode band  
 Standard Packaging: 12mm tape (EIA-481)  
 Weight: 0.002 ounces, 0.064 gram

### SMA/DO-214AC



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

	SYMBOLS	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, at T <sub>L</sub> = 100°C	I <sub>(AV)</sub>	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V <sub>F</sub>	1.10							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	5.0 50							μA
Maximum Reverse Recovery Time (NOTE 1)	T <sub>RR</sub>	2.5							μS
Typical Junction Capacitance (NOTE 2)	C <sub>J</sub>	12							pf
Maximum Thermal Resistance (NOTE 3)	R <sub>θJL</sub>	30.0							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

**NOTES:**

1. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.
2. Measured at 1.0 MHz and Applied V<sub>r</sub> = 4.0 volts.
3. 8.0mm<sup>2</sup> (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES  
GS1A THRU GS1M

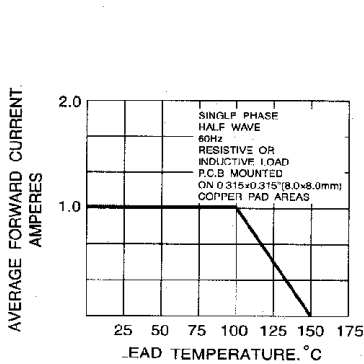


FIG. 1 - FORWARD CURRENT DERATING CURVE

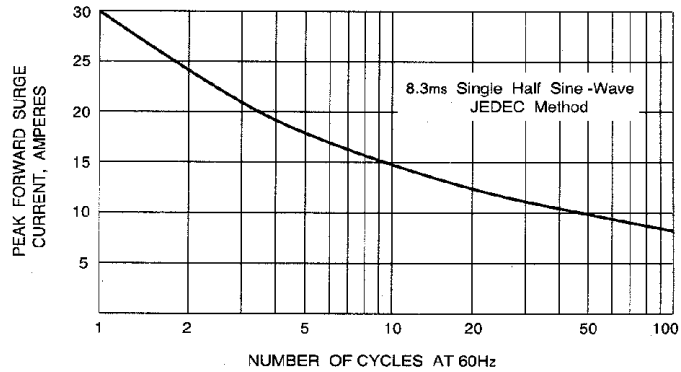


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

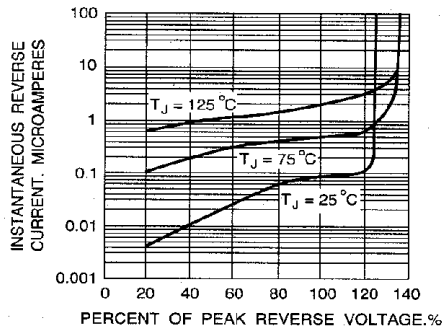


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

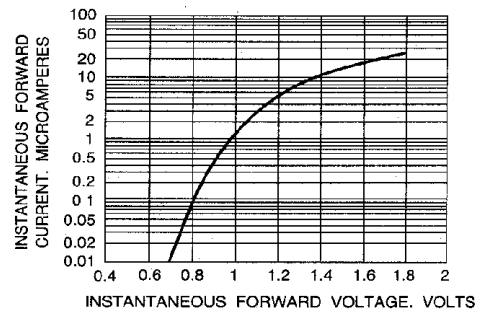


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

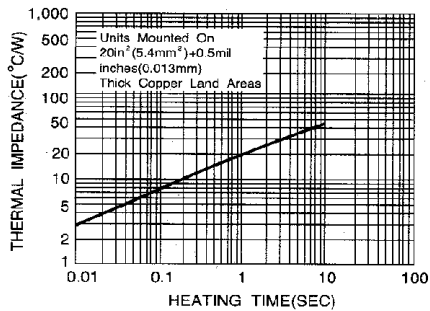


FIG. 5 - TRANSIENT THERMAL IMPEDANCE

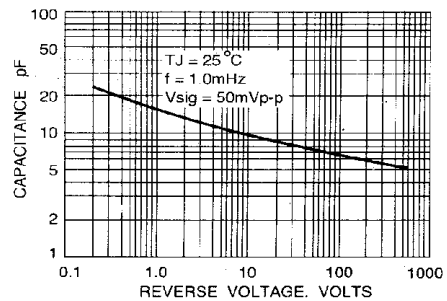


FIG. 6 - TYPICAL JUNCTION CAPACITANCE