



# DATA SHEET

## GS1A~GS1M

### SURFACE MOUNT RECTIFIER

**VOLTAGE- 50 to 1000 Volts CURRENT - 1.0 Ampere**

Unit: inch ( mm )

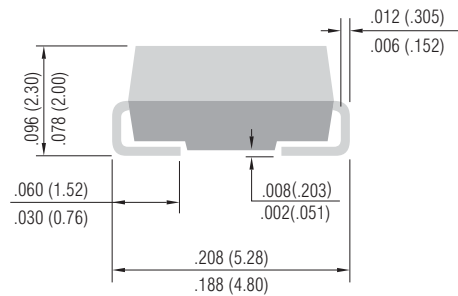
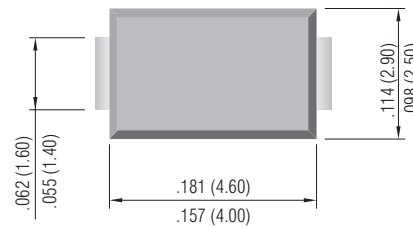
#### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 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 ounce, 0.064 gram

#### SMA / DO-214AC



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

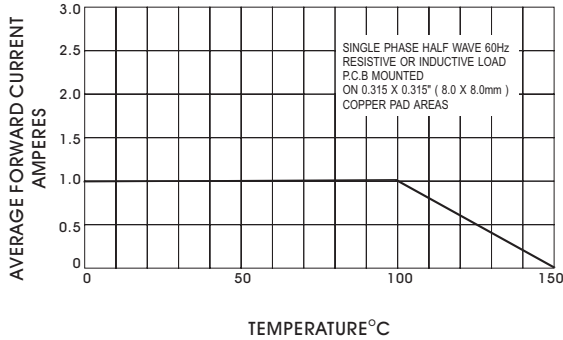
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

	SYMBOLS	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	UNIT
Maximum Recurrent 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	100	V
Maximum Average Forward Rectified Current, at $T_L=75^\circ\text{C}$	$I(AV)$	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	$V_F$	1.10							V
Maximum DC Reverse Current $T_A=25^\circ\text{C}$	$I_R$	5.0							$\mu\text{A}$
at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$		50.0							$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1) $T_J=25^\circ\text{C}$	$T_{RR}$	2.5							$\mu\text{s}$
Typical Junction Capacitance (Note 2)	$C_J$	12							pF
Maximum Thermal Resistance(Note 3) $R\theta_{JA}$	$R\theta_{JA}$	30.0							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

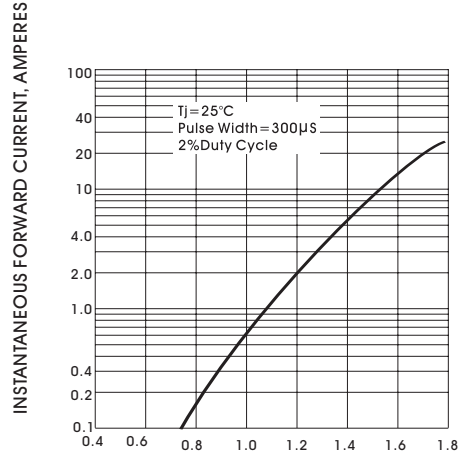
NOTES:1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$   
 2. Measured at 1 MHz and applied  $V_r = 4.0$  volts.  
 3. 8.0 mm<sup>2</sup> ( .013mm thick ) land areas.



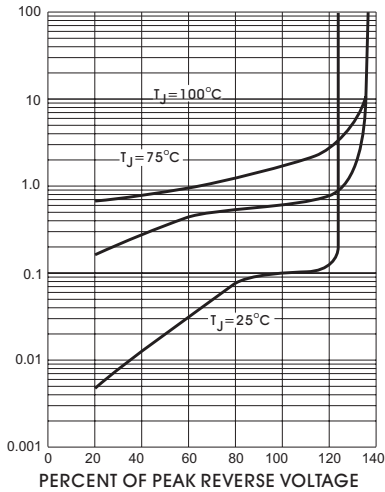
**RATING AND CHARACTERISTIC CURVES**



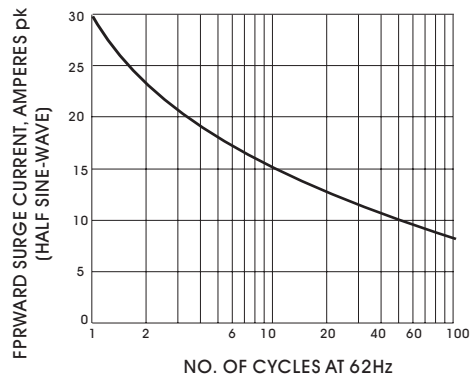
**Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



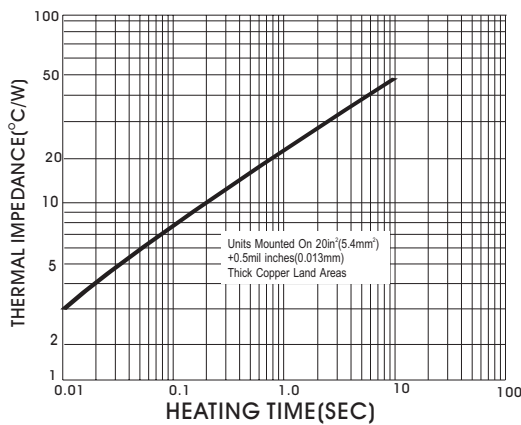
**Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT**



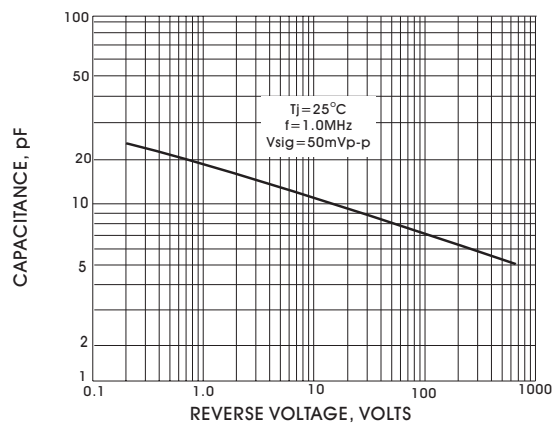
**Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS**



**Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig. 5- TRANSIENT THERMAL IMPEDANCE**



**Fig. 6- TYPICAL JUNCTION CAPACITANCE PER ELEMENT**