

## Features

- Glass Passivated Junction
- Extremely Low Thermal Resistance
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 15°C/W Junction to Lead
- Maximum Thermal Resistance: 85°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GS1A-L	GS1A	50V	35V	50V
GS1B-L	GS1B	100V	70V	100V
GS1D-L	GS1D	200V	140V	200V
GS1G-L	GS1G	400V	280V	400V
GS1J-L	GS1J	600V	420V	600V
GS1K-L	GS1K	800V	560V	800V
GS1M-L	GS1M	1000V	700V	1000V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_L = 110^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	1.0V	$I_{FM} = 1.0\text{A}; T_J = 25^\circ\text{C} *$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu\text{A}$ 50 $\mu\text{A}$	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	8pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$
Typical Reverse Recovery Time	$t_{rr}$	2.0 $\mu\text{s}$	$I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$
Rating For Fusing	$I^2t$	3.735A <sup>2</sup> s	
Avalanche Energy	EAS	20mJ	LH:40mH

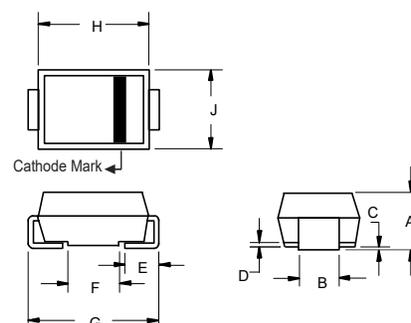
\*Pulse Test: Pulse Width 300  $\mu\text{sec}$ , Duty Cycle 2%

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

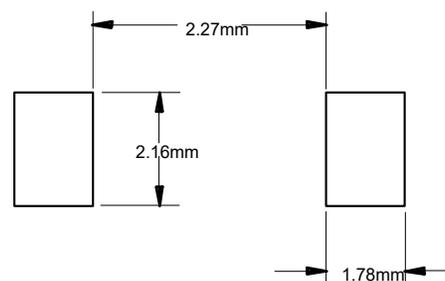
# 1 Amp Glass Passivated Rectifier 50 - 1000 Volts

## SMA (DO-214AC)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

## SUGGESTED SOLDER PAD LAYOUT



**Curve Characteristics**

Fig. 1 - Typical Instantaneous Forward Characteristics

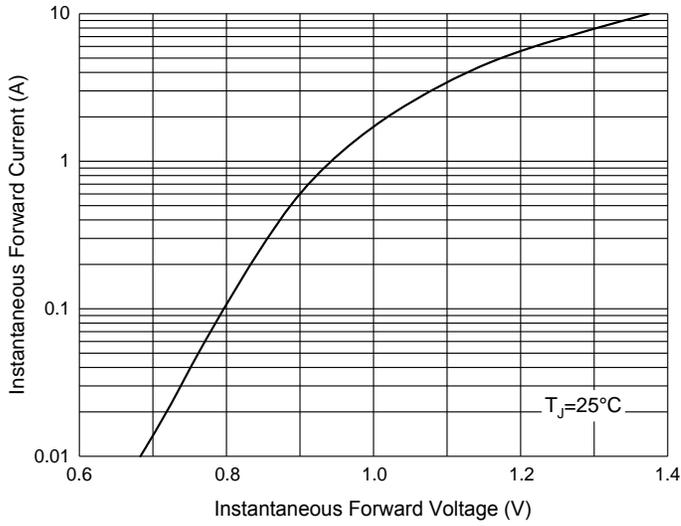


Fig. 2 - Typical Reverse Leakage Characteristics

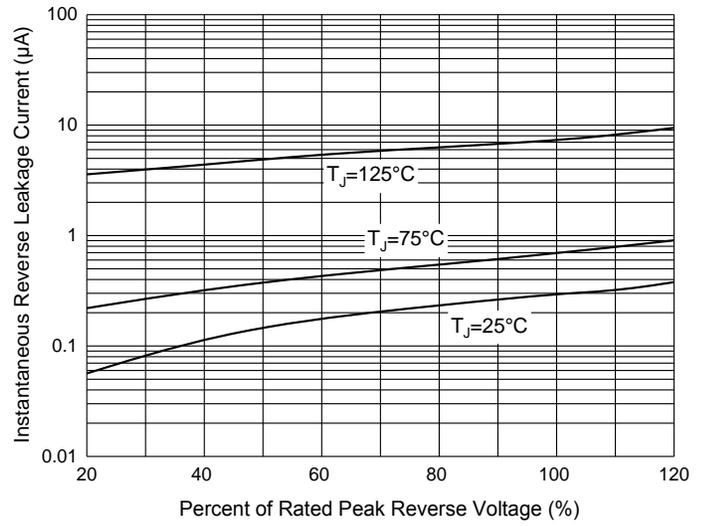


Fig. 3 - Forward Current Derating Curve

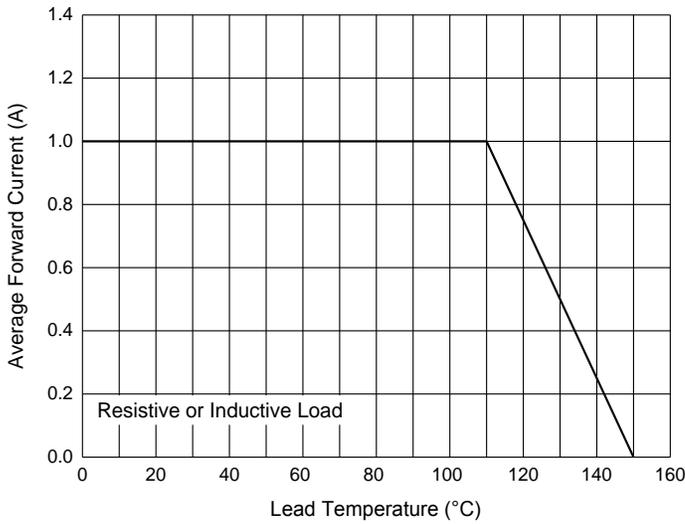
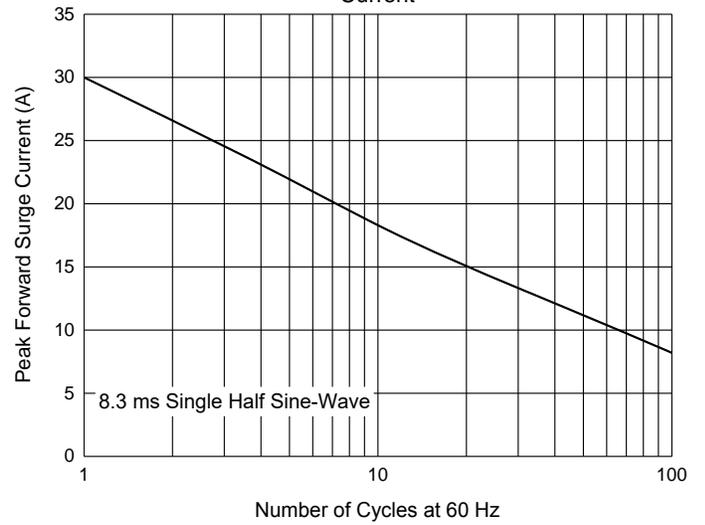


Fig. 4 - Maximum Non-Repetitive Peak Forward Surge Current



## Ordering Information

Device	Packing
GS1A-LTP~GS1M-LTP	Tape&Reel: 7.5Kpcs/Reel

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