

## Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Vacuum Soldering Process Provides Better Surge Capability
- Halogen Free Available Upon Request By Adding Suffix "-HF"

## 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

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GS1AE-TPS05	GS1A	50V	35V	50V
GS1BE-TPS05	GS1B	100V	70V	100V
GS1DE-TPS05	GS1D	200V	140V	200V
GS1GE-TPS05	GS1G	400V	280V	400V
GS1JE-TPS05	GS1J	600V	420V	600V
GS1KE-TPS05	GS1K	800V	560V	800V
GS1ME-TPS05	GS1M	1000V	700V	1000V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

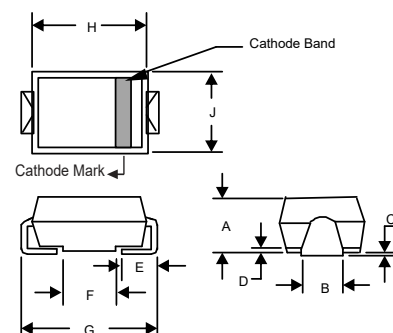
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=110^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	1.1V	$I_{FM}=1.0A$ ; $T_J=25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu\text{A}$ 50 $\mu\text{A}$	$T_J=25^\circ\text{C}$ ; $T_J=125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	15pF	Measured at 1.0MHz $V_R=4.0V$

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex Notes 7a.

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

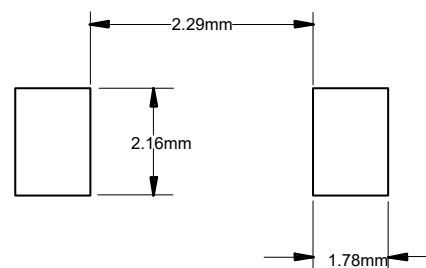
# 1.0 Amp Silicon Rectifier 50 to 1000 Volts

## SMAE



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.096	2.01	2.44	
B	0.045	0.071	1.15	1.80	
C	0.002	0.008	0.05	0.20	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.084	1.65	2.13	
G	0.189	0.208	4.80	5.30	
H	0.157	0.180	4.00	4.57	
J	0.090	0.115	2.29	2.92	

## SUGGESTED SOLDER PAD LAYOUT



**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

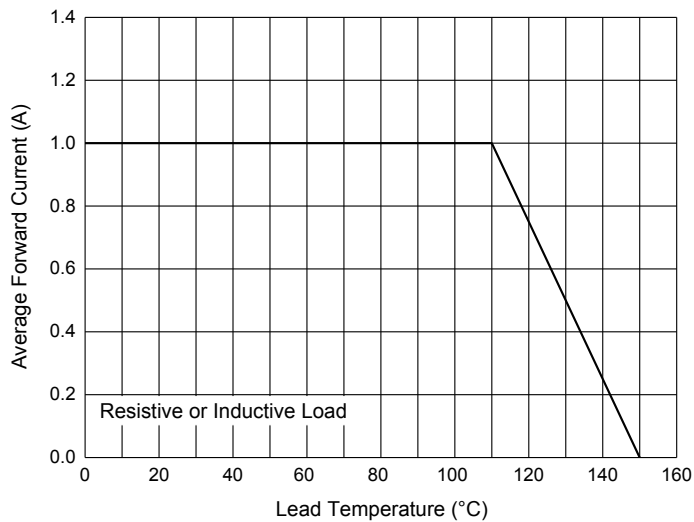


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

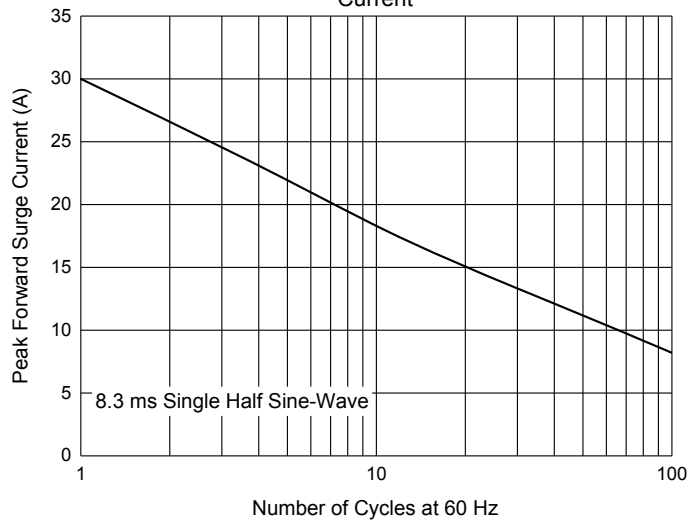


Fig. 3 - Typical Instantaneous Forward Characteristics

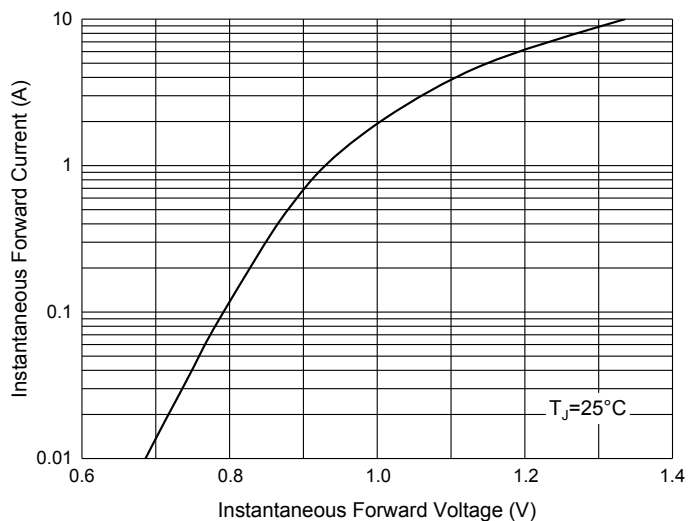
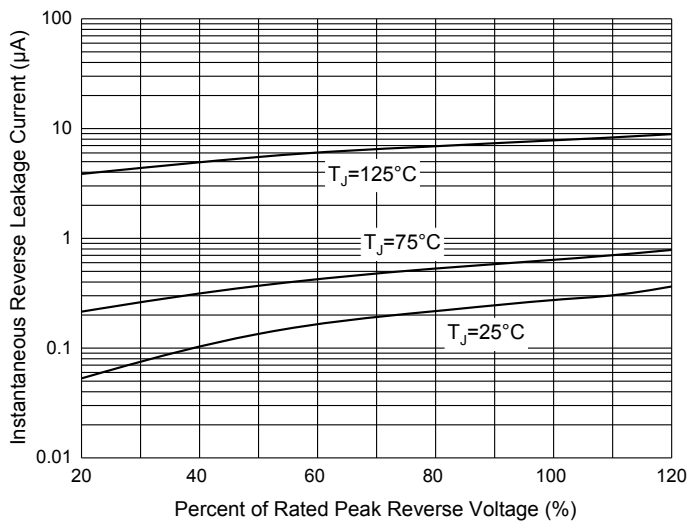


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
GS1AE-TPS05~GS1ME-TPS05	Tape&Reel: 6Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. GS1AE-TPS05~GS1ME-TPS05-HF

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