



# THE DATASHEET OF GS1K-LTP



# GS1A-L THRU GS1M-L

## Features

- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Extremely Low Thermal Resistance
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- ≠ Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

## Maximum Ratings

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

MCC Catalog 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

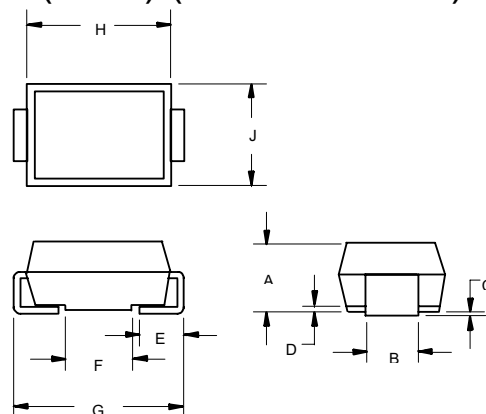
Average Forward current	$I_{F(AV)}$	1.0A	$T_L = 110^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine,
Maximum Instantaneous Forward Voltage	$V_F$	1.0V	$I_{FM} = 1.0\text{A};$ $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu\text{A}$ 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, $V_R=4.0\text{V}$
Typical Reverse Recovery Time	$T_{rr}$	2000ns	$I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$
Rating for Fusing	$I^2t$	3.735A <sup>2</sup> s	

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

Note 1: High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

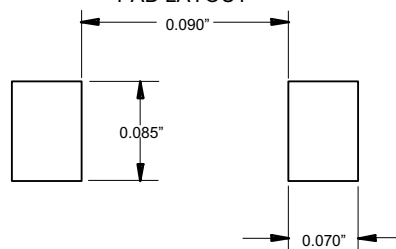
## 1.0 Amp Glass Passivated Rectifier 50 to 1000 Volts

### DO-214AC (SMA) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	---	.008	---	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

### SUGGESTED SOLDER PAD LAYOUT



# GS1A-L thru GS1M-L

Figure 1  
Typical Forward Characteristics

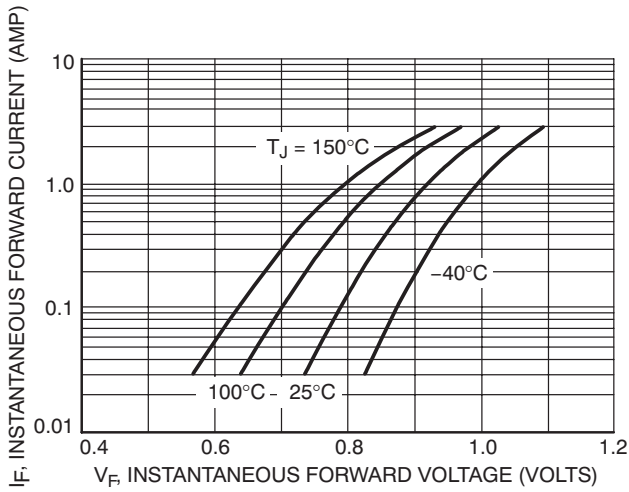
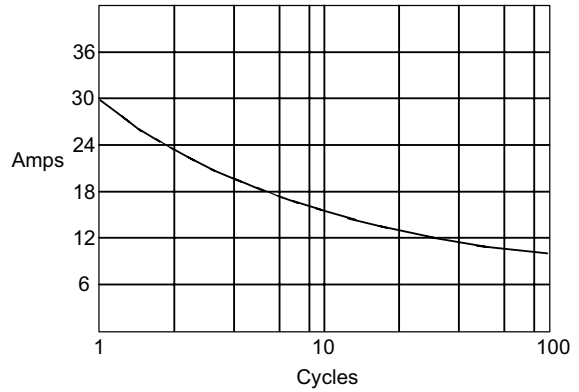
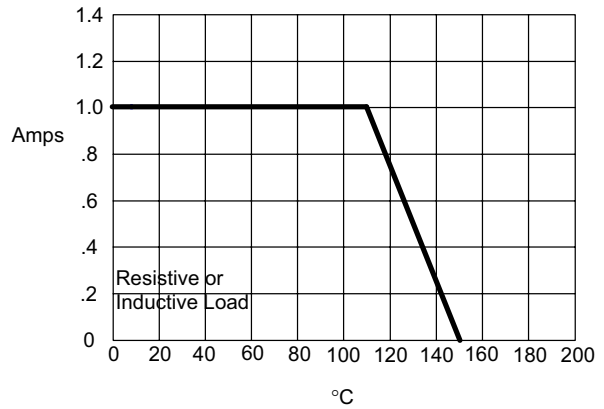


Figure 3  
Maximum Overload Surge Current



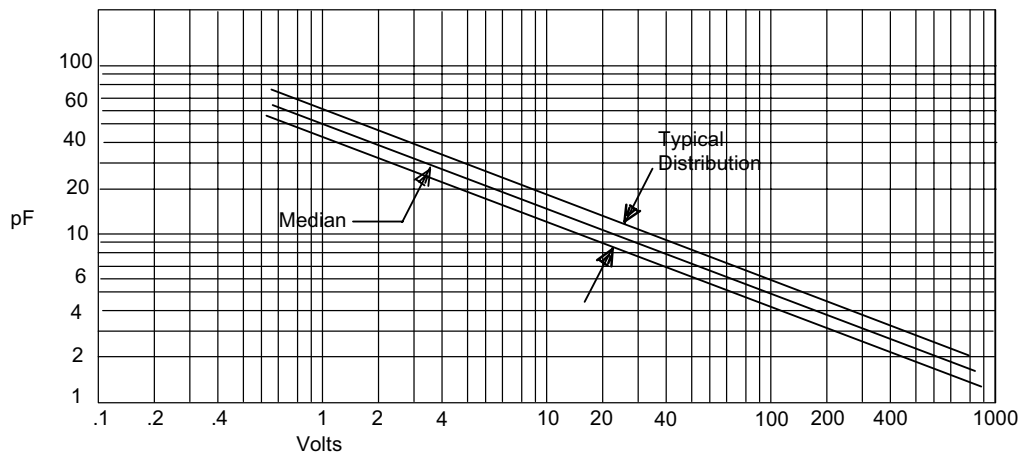
Peak Forward Current - Amperes versus  
Number of Cycles at 60Hz

Figure 4  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Lead Temperature - °C

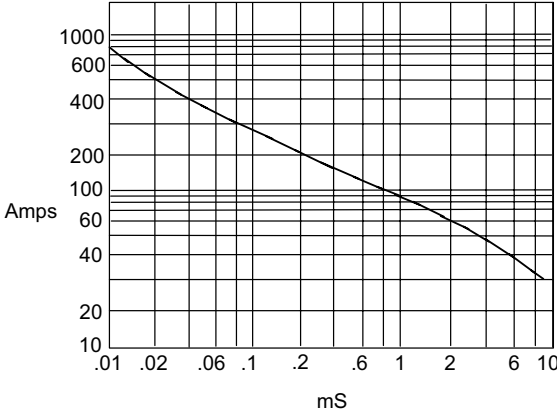
Figure 2  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

# GS1A-L thru GS1M-L

Figure 5  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Pulse Duration - Milliseconds (mS)



## Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. GS1A-LTP-HF-GS1M-LTP-HF

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