

Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Forward Surge Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value								Unit
		GS 1A-L	GS 1B-L	GS 1D-L	GS 1G-L	GS 1J-L	GS 1K-L	GS 1M-L		
Peak Repetitive Reverse Voltage	V_{RRM}									V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000		
DC Blocking Voltage	V_R									
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V	
Average Rectified Forward Current @ $T_L=125^\circ\text{C}$	$I_{F(AV)}$	1								A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	30								A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		60								
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	3.735								A^2s

Marking code

Part Number	Marking code
GS1A-L	GS1A
GS1B-L	GS1B
GS1D-L	GS1D
GS1G-L	GS1G
GS1J-L	GS1J
GS1K-L	GS1K
GS1M-L	GS1M

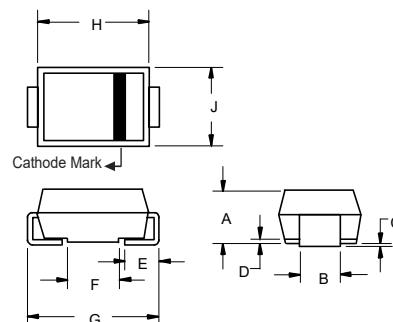
Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	Cathode		
2	Anode		

- 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.

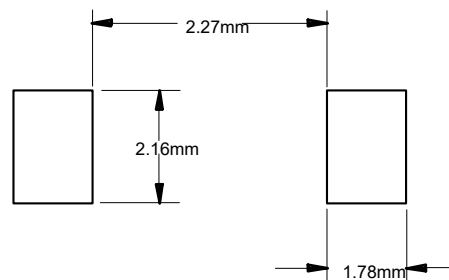
1 Amp General Purpose Rectifier 50 to 1000 Volts

SMA (DO-214AC)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.096	2.00	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



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		25		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		75		°C/W

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=1A; T_J=25^\circ C$			1.0	V
Reverse Current	I_R	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 50	uA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		8		pF
Reverse Recovery Time	t_{rr}	$I_F=0.5A; I_R=1.0A; I_{rr}=0.25A; T_J=25^\circ C$		2		uS
Avalanche Energy	E_{AS}	$L=40mH; T_J=25^\circ C$			20	mJ

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

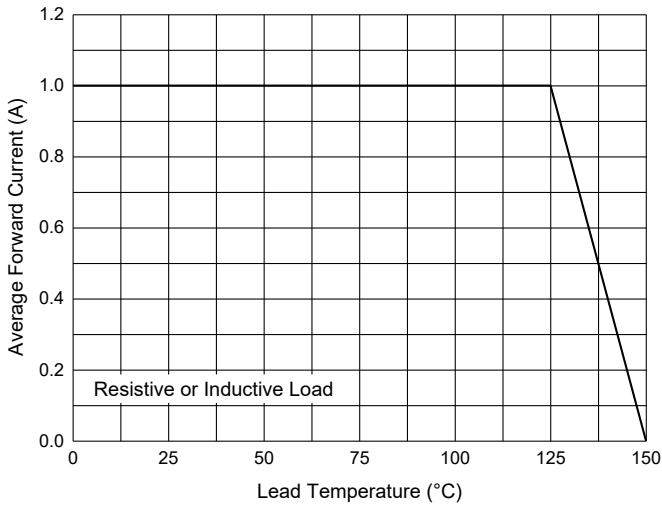


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

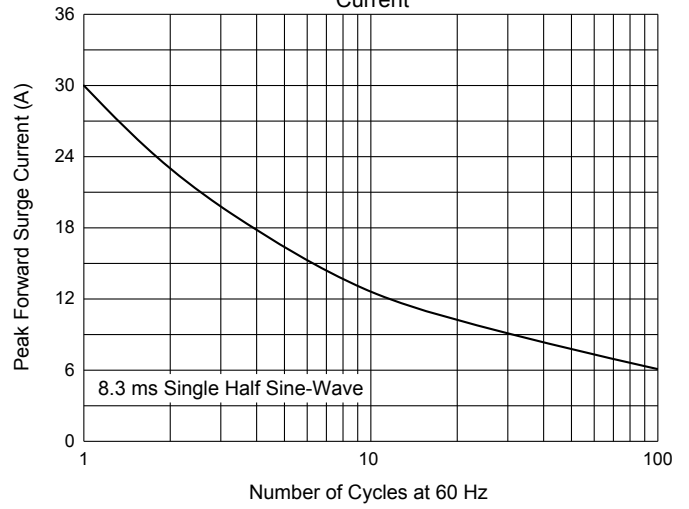


Fig. 3 - Typical Forward Characteristics

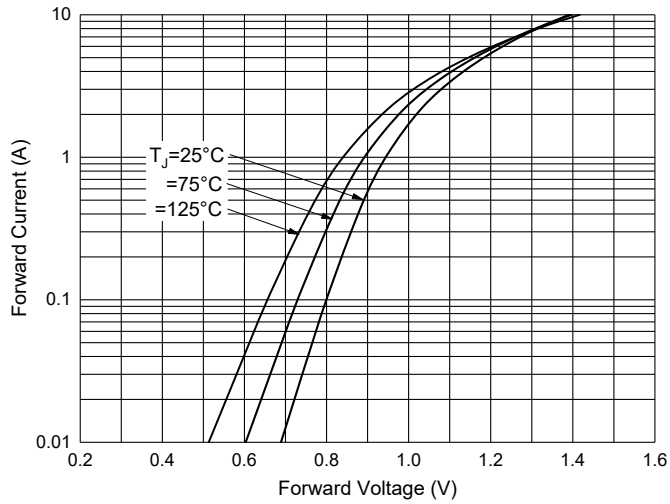


Fig. 4 - Typical Reverse Leakage Characteristics

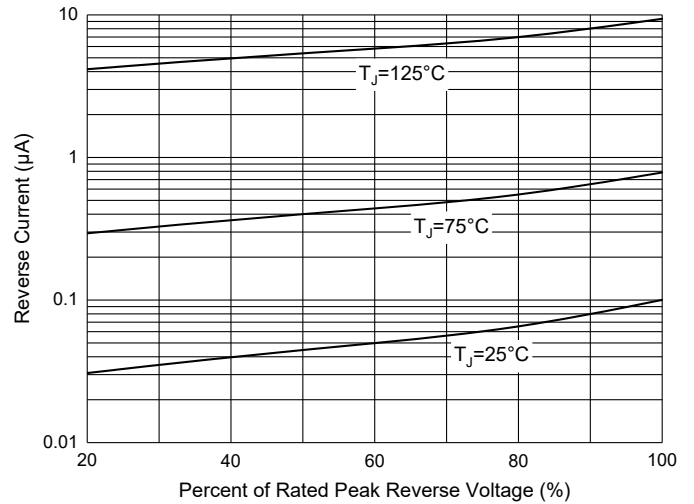
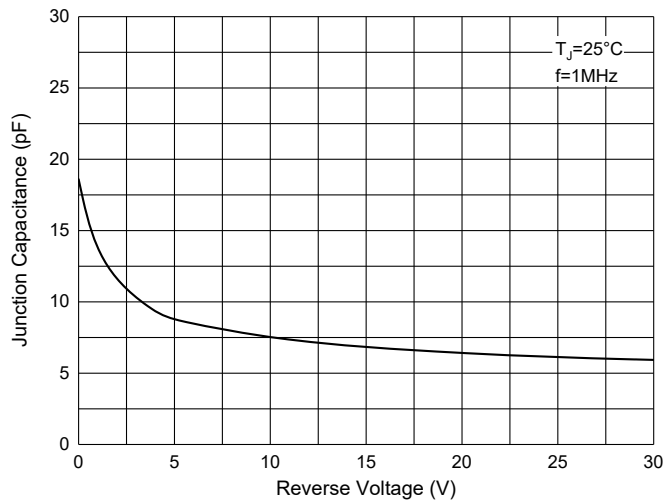


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

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

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