

Features

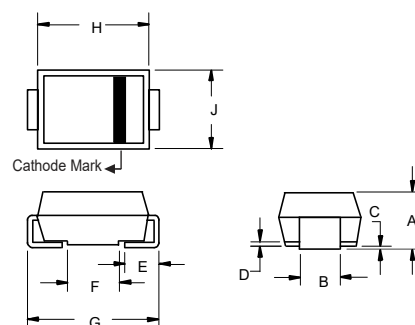
- AEC-Q101 Qualified
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Forward Surge Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		GS1A HE3-L	GS1B HE3-L	GS1D HE3-L	GS1G HE3-L	GS1J HE3-L	GS1K HE3-L	GS1M HE3-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 @ $T_L=110^\circ\text{C}$	$I_{F(AV)}$	1							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	40							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		80							
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	i^2t	6.64							A ² s

1 Amp General Purpose Rectifier 50 to 1000 Volts

SMA (DO-214AC)





DIM	INCHES		MM		NOTE
	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	

Marking code

Part Number	Marking code
GS1AHE3-L	GS1A
GS1BHE3-L	GS1B
GS1DHE3-L	GS1D
GS1GHE3-L	GS1G
GS1JHE3-L	GS1J
GS1KHE3-L	GS1K
GS1MHE3-L	GS1M

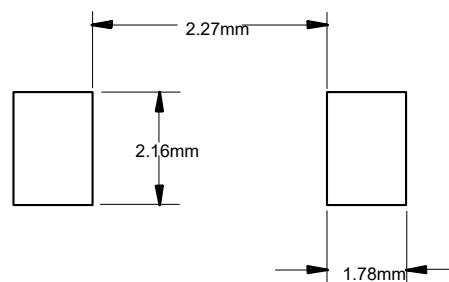
Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 <p>XXXX = Marking Code YYWW = Date Code</p>	
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.

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		30		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		85		°C/W

Note:

1. Mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper.

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 $V_R; T_J=125^\circ C$			1 50	μA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		15		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

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

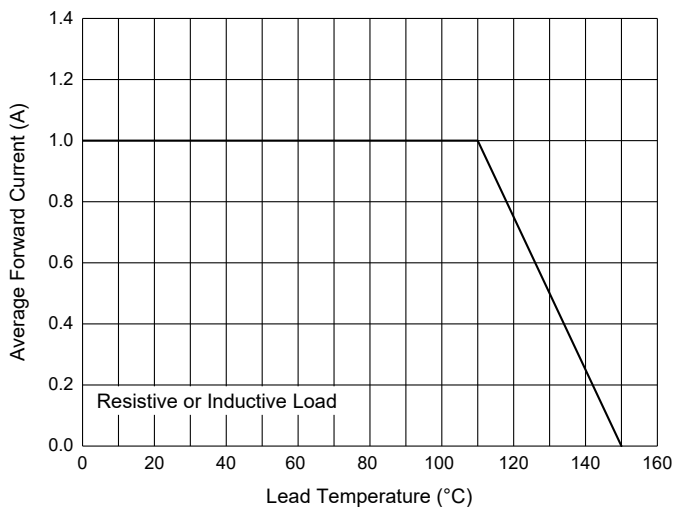


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

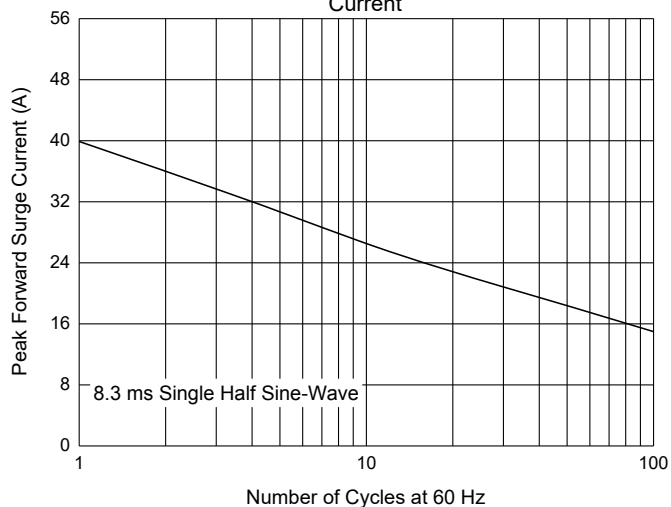


Fig. 3 - Typical Forward Characteristics

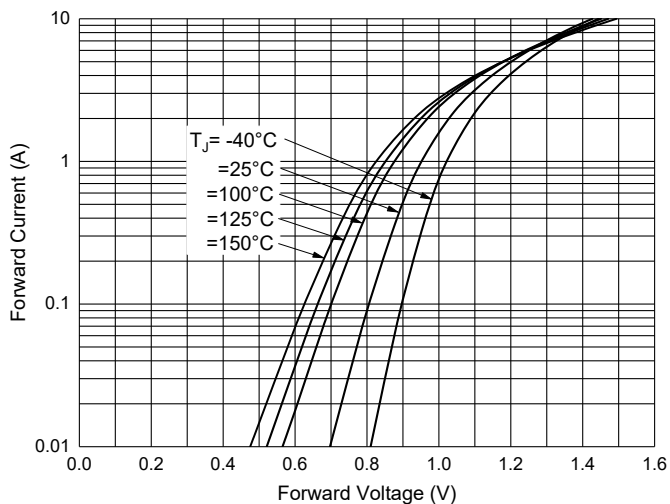


Fig. 4 - Typical Reverse Leakage Characteristics

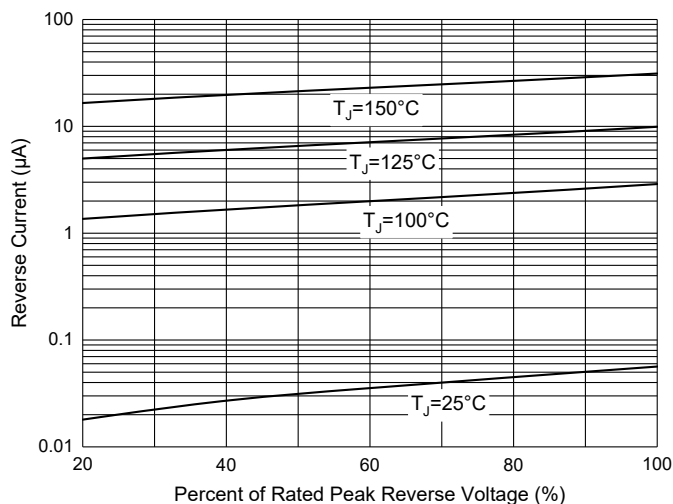
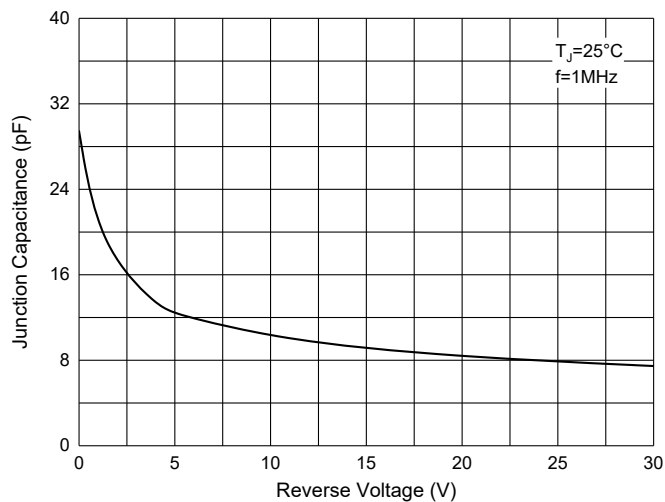


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
GS1AHE3-LTP ~ GS1MHE3-LTP	Tape&Reel:7.5Kpcs/Reel

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