

Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Low Profile Package
- 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
Peak Repetitive Reverse Voltage	V_{RRM}	1000	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	700	V
Average Rectified Forward Current @ $T_L=60^\circ\text{C}$	$I_{F(AV)}$	1	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	18	A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	1.3	A^2s

Internal Structure

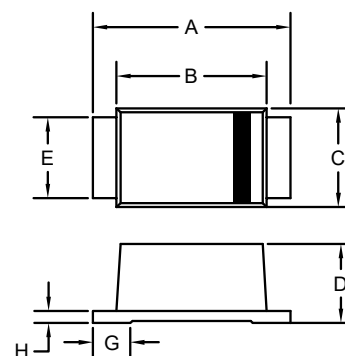
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 Marking Code: 1ML	
2	Anode		

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.

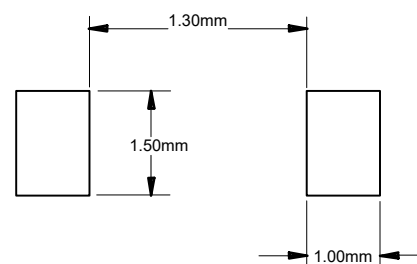
1 Amp Surface Mount General Purpose Rectifier 1000 Volts

SOD-323HL



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.091	0.106	2.30	2.70	
B	0.067	0.083	1.70	2.10	
C	0.041	0.057	1.05	1.45	
D	0.031	0.047	0.80	1.20	
E	0.035	0.045	0.90	1.15	
G	0.010	0.028	0.25	0.70	
H	0.002	0.010	0.05	0.25	

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
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		270		°C/W
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		85		°C/W

Note:

1. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B without copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=1A; T_J=25^{\circ}C$			1.10	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	μA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		3		pF
Reverse Recovery Time	t_{rr}	$I_F=0.5A; I_R=1.0A; I_{RR}=0.25A; T_J=25^{\circ}C$		1.2		μS

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

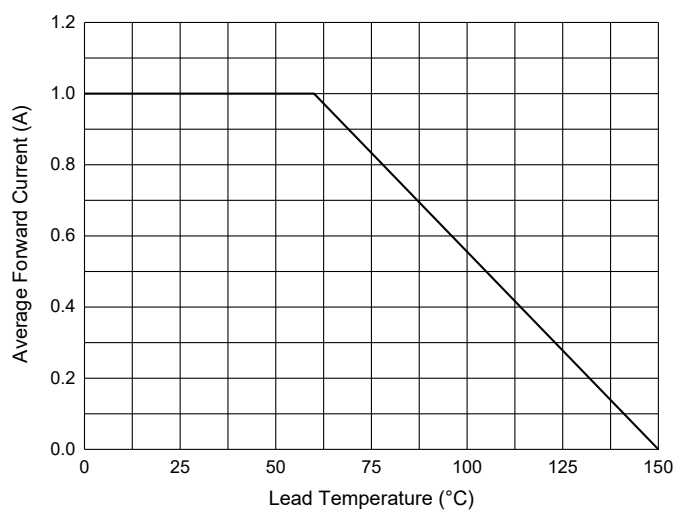


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

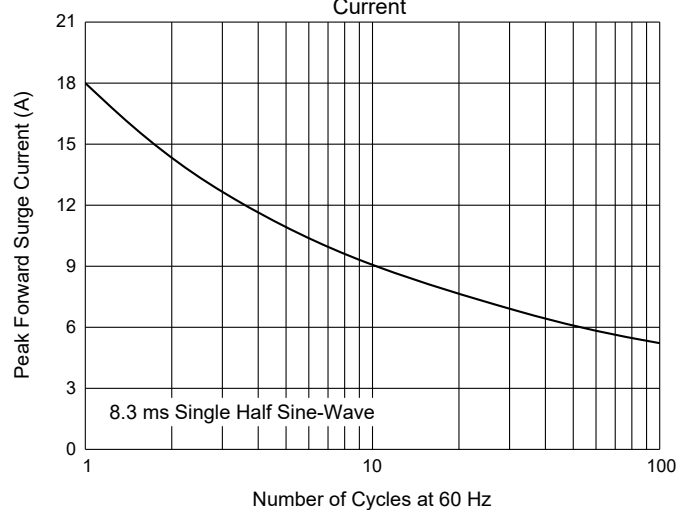


Fig. 3 - Typical Forward Characteristics

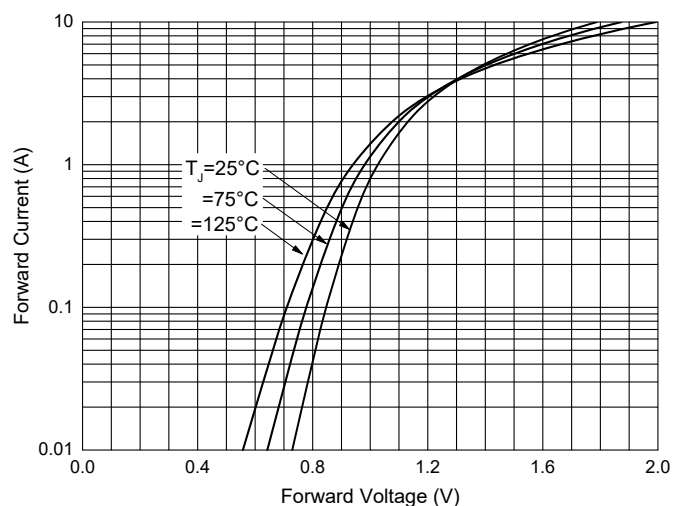


Fig. 4 - Typical Reverse Leakage Characteristics

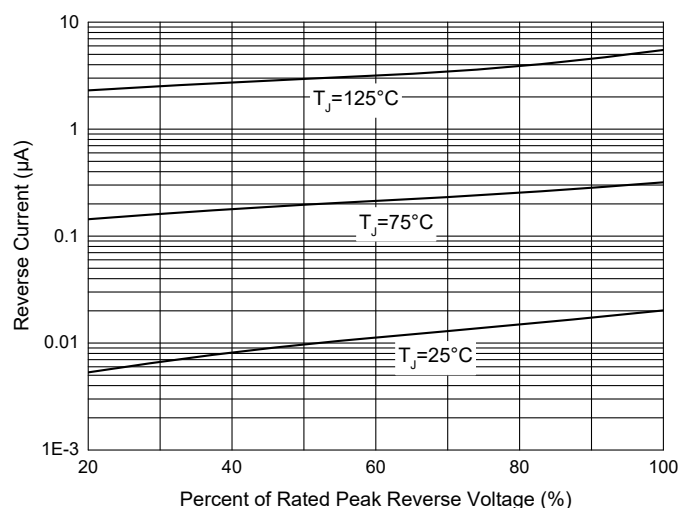
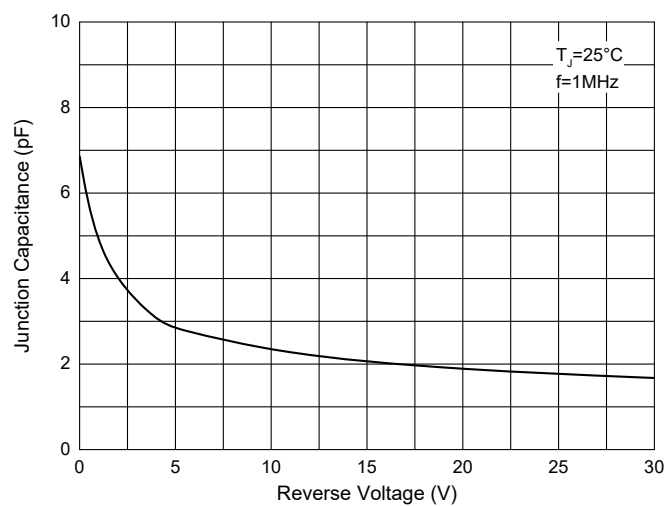


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
GS1MLF-TP	Tape&Reel:2.5Kpcs/Reel

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