GOOD-ARK
SEMICONDUCTOR

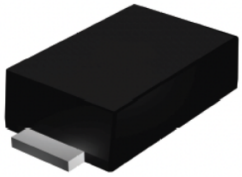
GSFU1 thru GSFU5

Surface Mount Glass Passivated Super Fast Recovery Rectifiers
Reverse Voltage 50V-600V Forward Current 1A

Features

- Glass passivated junction chip
- Ideal for automated placement
- Super fast recovery time for high efficiency
- Built-in strain relief
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

RoHS
COMPLIANT



SOD-123FL

Mechanical Data

Case: SOD-123FL
Molding compound, UL flammability classification rating 94V-0
Moisture sensitivity level: Level 1, per J-STD-020
Terminal: Matte tin plated leads, solderable per JESD22-B102
Meet JESD 201 class 2 whisker test
Polarity: Indicated by cathode band

Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	GSFU1	GSFU2	GSFU3	GSFU4	GSFU5	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS . oltage	V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	30					A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 55 to + 150					°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	GSFU1	GSFU2	GSFU3	GSFU4	GSFU5	Unit
Maximum Instantaneous Forward Voltage[1]	1 A	V_F	0.95			1.3	1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25°C T_A=125°C	I_R	5.0 100					μA
Maximum Reverse Recovery Time[2]	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	35					nS
Typical Junction Capacitance[3]	4.0V, 1MHz	C_J	16			18		pF
Typical Thermal Resistance	Juntion to Ambient	$R_{\theta JA}$	85					°C/W
	Juntion to Lead	$R_{\theta JL}$	35					

Note:
1. Pulse test with PW=300μs, 1% duty cycle
2. Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
3. Measured at 1 MHz and applied V_R=4.0 V

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

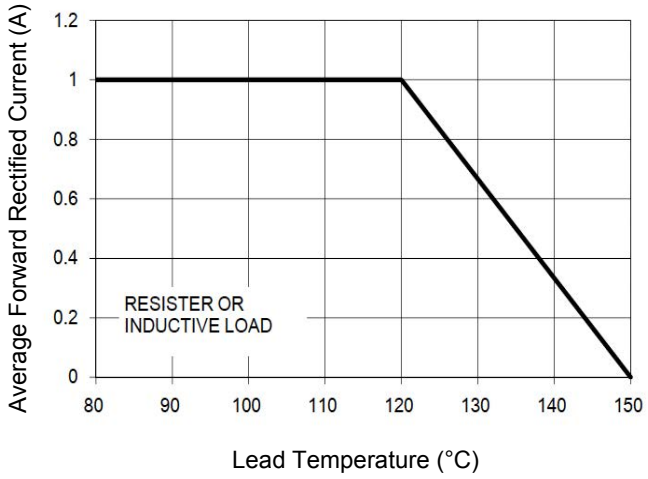


Figure 1. Maximum Forward Current Derating Curve

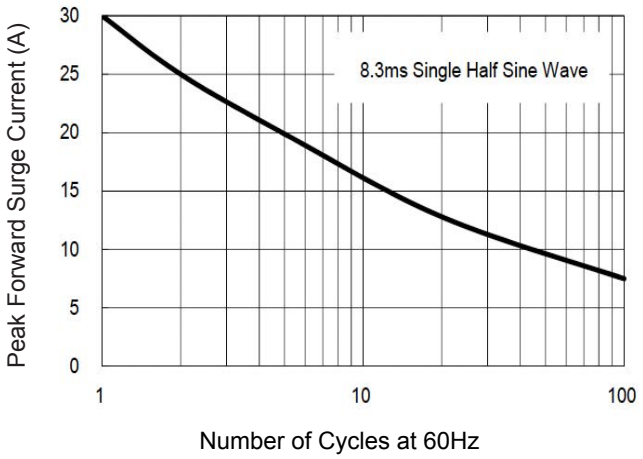


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

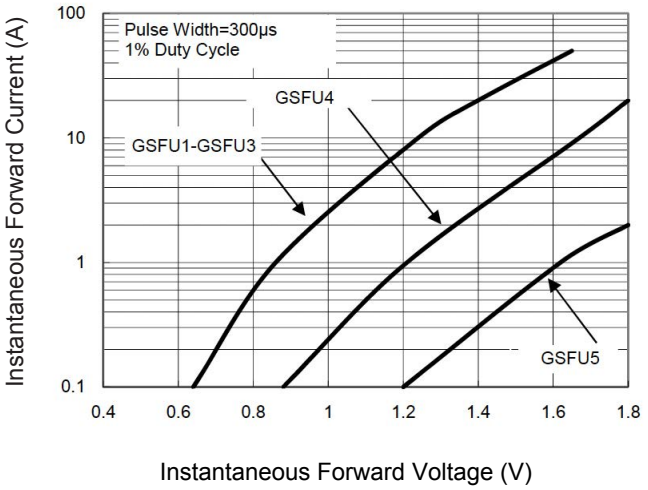


Figure 3. Typical Instantaneous Forward Characteristics

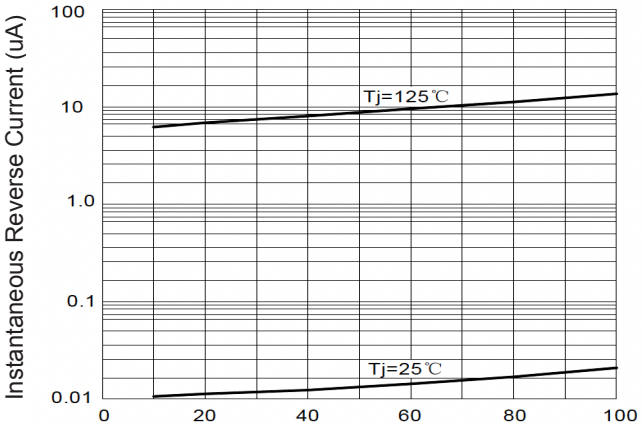


Figure 4. Typical Reverse Characteristics

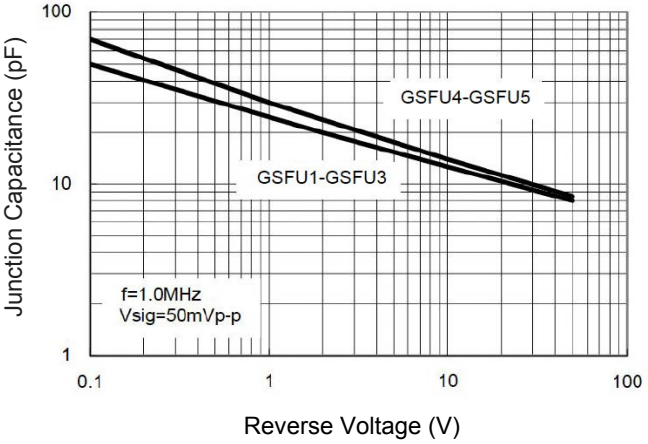


Figure 5. Typical Junction Capacitance

GSFU1 thru GSFU5

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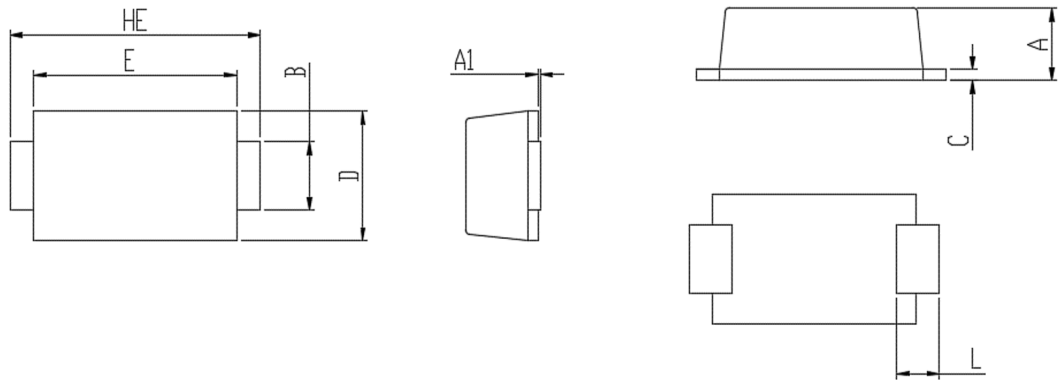
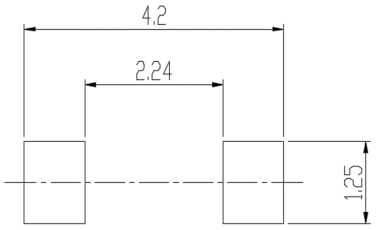
Package Outline Dimensions SOD-123FL



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.080	0.035	0.043
A1	0.000	0.100	0.000	0.004
B	0.850	1.100	0.033	0.043
C	0.100	0.250	0.004	0.010
D	1.700	2.000	0.067	0.079
E	2.900	3.100	0.114	0.122
L	0.430	0.830	0.017	0.033
HE	3.500	3.900	0.138	0.154

Recommended Pad Layout



Unit: mm

Order Information

Device	Package	Marking	Carrier	Quantity
GSFU1	SOD-123FL	FU1	Tape & Reel	3,000pcs / Reel
GSFU2	SOD-123FL	FU2	Tape & Reel	3,000pcs / Reel
GSFU3	SOD-123FL	FU3	Tape & Reel	3,000pcs / Reel
GSFU4	SOD-123FL	FU4	Tape & Reel	3,000pcs / Reel
GSFU5	SOD-123FL	FU5	Tape & Reel	3,000pcs / Reel