GSDE1□D2F Series

Fast Recovery Diode

Product Description

Reverse Voltage 50V to 600V.
Forward Current 1.0A

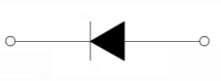
Features

- Low Reverse Recovery Time
- RoHS Compliant and Halogen Free

Mechanical Data

- SOD-123FL Package
- Polarity: Color Band denotes Cathode End

Package and Pin Assignment

SOD-123FL	Equivalent Circuit
	

Pin	Description
1	Anode
2	Cathode

Ordering and Marking Information

Ordering Information			
Part Number	**V_{RRM}**	**Marking Code**	**Quantity/Reel**
GSDE1AD2F	50	E1A	3000 PCS
GSDE1BD2F	100	E1B	3000 PCS
GSDE1DD2F	200	E1D	3000 PCS
GSDE1GD2F	400	E1G	3000 PCS
GSDE1JD2F	600	E1J	3000 PCS

GSDE1 1 D2 F

- **Product Code:** GSDE1
- **Voltage Code:** 1 is A, B, D. G or J stands for Maximum repetitive peak reverse voltage.
- **Package Code:** **D2** for SOD-123FL Package
- **Green Level:** **F** for RoHS Compliant and Halogen Free

Marking Information	
E1 1	
- **Product Code:** E1	- **Voltage Code:** 1 is A, B, D. G or J stands for Maximum repetitive peak reverse voltage.

Electrical Characteristics (Ratings at 25°C Ambient Temperature Unless Otherwise Specified.)

Symbol	Conditions		E1A	E1B	E1D	E1G	E1J	Unit
V_{RRM}	Maximum Recurrent Peak Reverse Voltage		50	100	200	400	600	V
V_{RMS}	Maximum RMS Voltage		35	70	140	280	420	V
V_{DC}	Maximum DC Blocking Voltage		50	100	200	400	600	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current		1					A
I_{FSM}	Peak Forward Surge Current (8.3ms Single Half Sinewave)		30					A
V_F	Maximum Forward Voltage at 1.0A		0.95			1.25	1.7	V
I_R	Maximum Reverse Leakage Current at rated V_R	T_A = 25°C	5					μA
		T_A = 100°C	100					μA
trr	Maximum reverse recovery time (1)		35					ns
C_J	Typical Junction Capacitance (2)		10					pF
$R_{\theta JA}$	Typical Thermal Resistance (3)		85					°C/W
T_J	Operating Junction Temperature Range		-55 to +150					°C
T_{STG}	Storage Temperature Range		-55 to +150					°C

NOTES:
1. Measured with I_F=0.5A, I_R=1A, Irr=0.25A.
2. Measured at 1MHz and applied reverse voltage of 4.0V_{DC}
3. Mounted with 0.2 x 0.2” (5.0 x 5.0mm) Copper Pad Areas

Typical Characteristics (Ratings at 25°C Ambient Temperature Unless Otherwise Specified.)

FIG. 1- FORWARD CURRENT DERATING CURVE

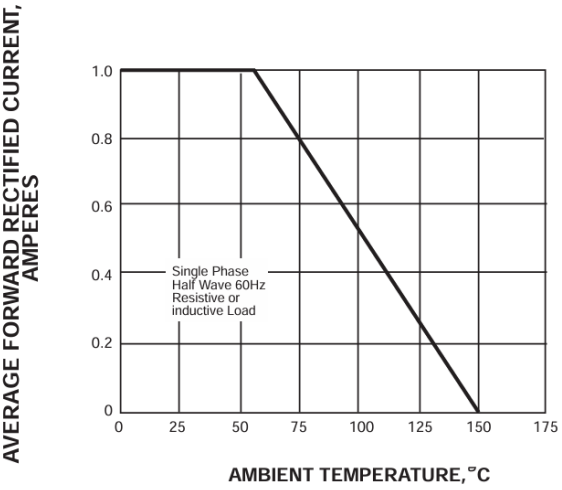


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

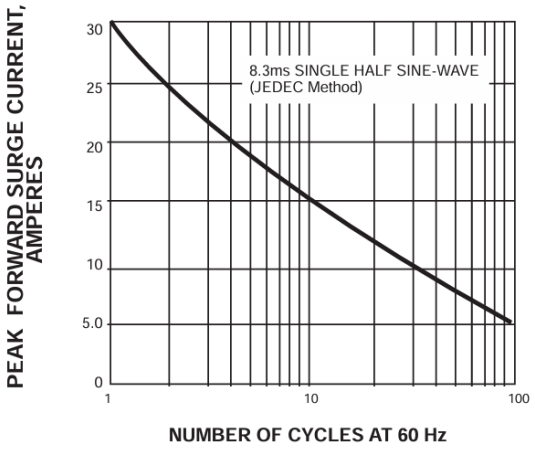


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

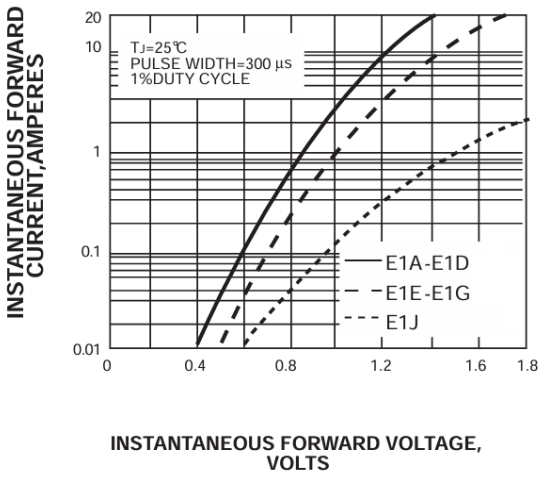


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

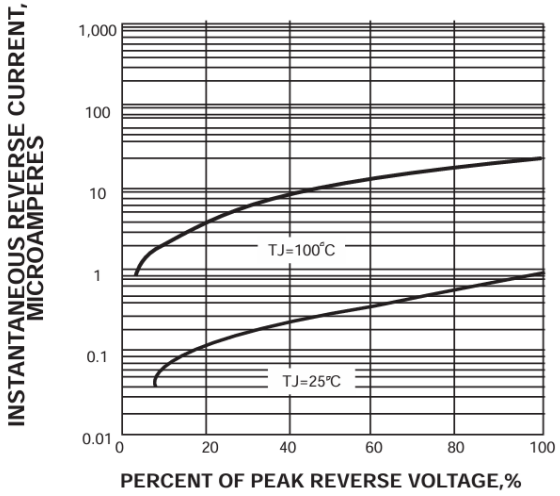


FIG. 5-TYPICAL JUNCTION CAPACITANCE

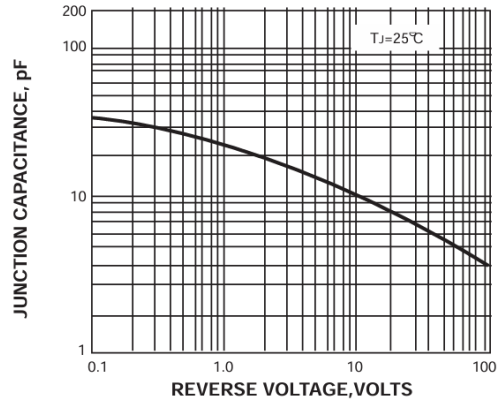
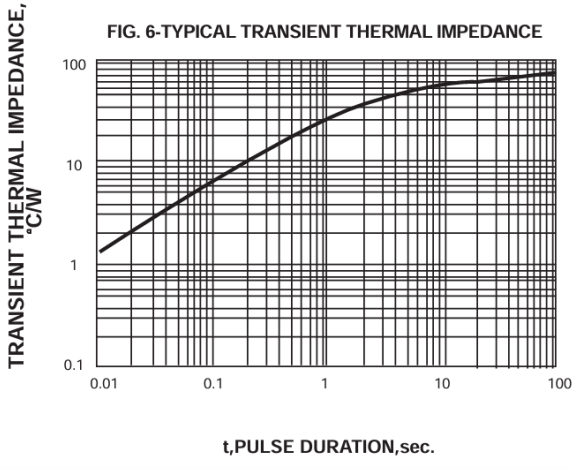
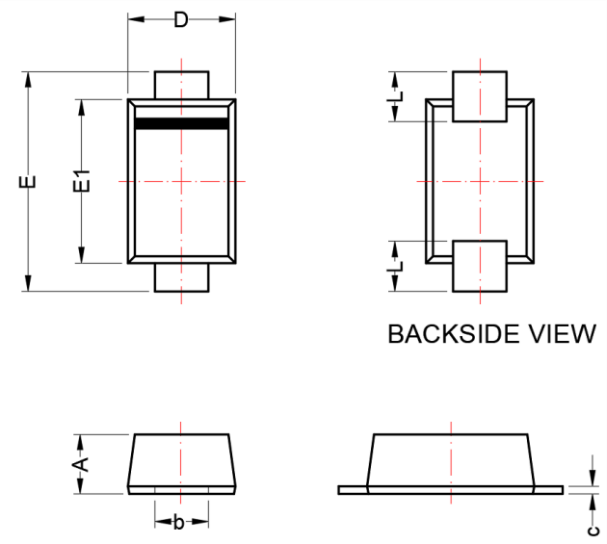


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

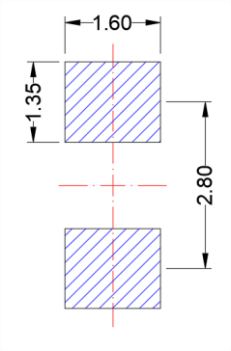


SOD-123FL

Package Dimension



Recommended Land Pattern



(Unit: mm)

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.10	0.031	0.043
b	0.50	1.20	0.020	0.047
D	1.50	1.90	0.059	0.075
E	3.30	3.80	0.130	0.150
E1	2.45	2.75	0.096	0.108
c	0.05	0.20	0.002	0.008
L	0.70	0.90	0.028	0.035

NOTE:

1. Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.
2. Terminals are partially uncovered on the bottom of package body

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