F1DS thru F7DS

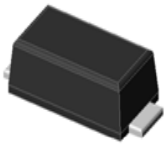
Surface Mount Glass Passivated Standard Rectifier

Reverse Voltage 50~1000V Forward Current 1A

Features

- Glass passivated Standard Rectifiers
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- AEC-Q101 qualified
- High temperature soldering guaranteed: 260℃/10 seconds
- Halogen-free according to IEC 61249-2-21 definition

RoHS COMPLIANT



eSGA
(SOD-123FL)

Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

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

Parameter	Symbol	F1DS	F2DS	F3DS	F4DS	F5DS	F6DS	F7DS	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	IF(AV)	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	25							A
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150							°C

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

Parameter	Test Conditions	Symbol	F1DS	F2DS	F3DS	F4DS	F5DS	F6DS	F7DS	Unit
Maximum instantaneous forward voltage	1 A	V_F	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25℃	I_R	5							μA
	TA=125℃		50							
Typical reverse recovery time	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	t_{rr}	1.8							uS
Typical junction capacitance	4.0 V, 1 MHz	C_J	6							pF
Typical thermal resistance[1)]	juntion to ambient	$R_{\theta JA}$	80							℃/W
	juntion to case	$R_{\theta JC}$	50							
	juntion to mount	$R_{\theta JM}$	10							

Note 1),The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 5×5mm copper pads,2 OZ,FR4 PCB

Package Outline Dimensions

(TA = 25℃ unless otherwise noted)

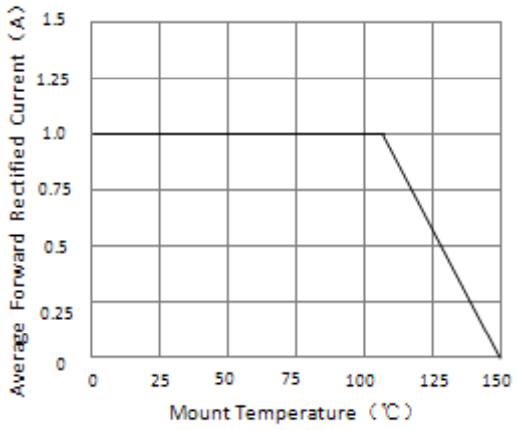


Figure 1.Forward Current Derating Curve

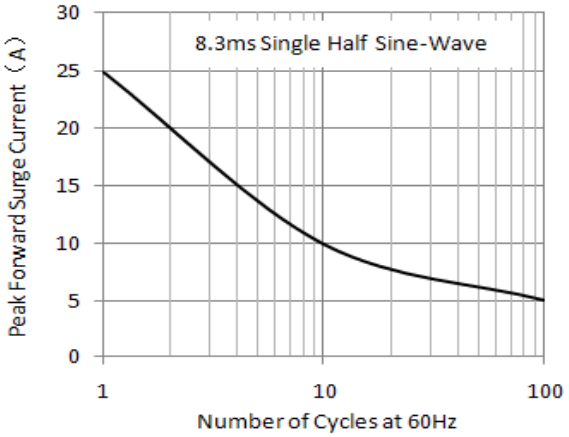


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

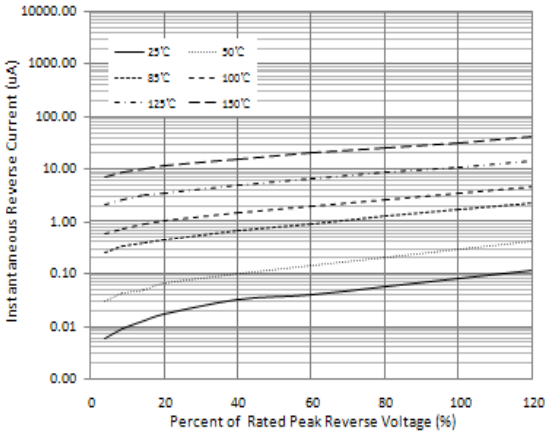


Figure 3. Typical Reverse Characteristics

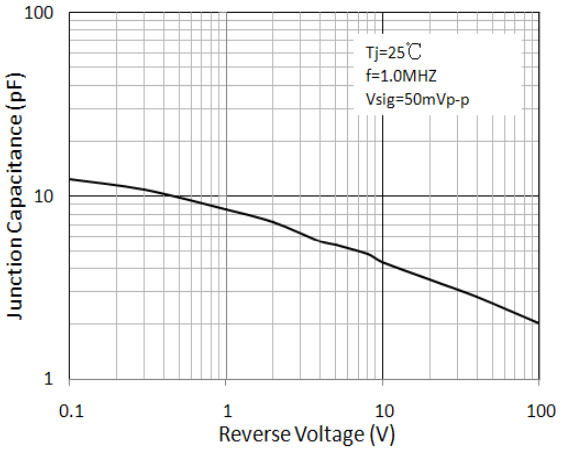


Figure 4. Typical Junction Capacitance

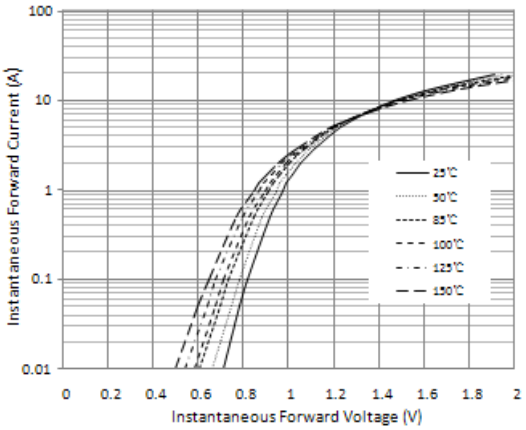
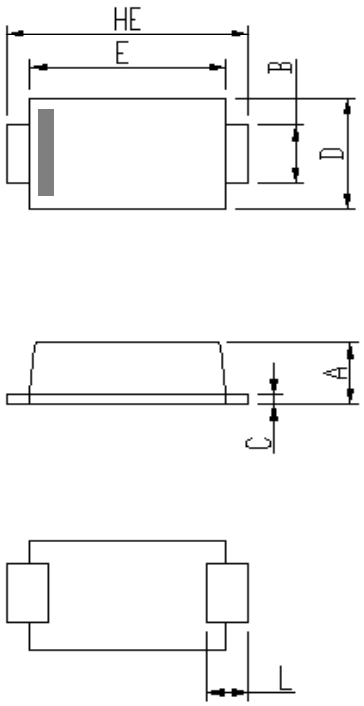


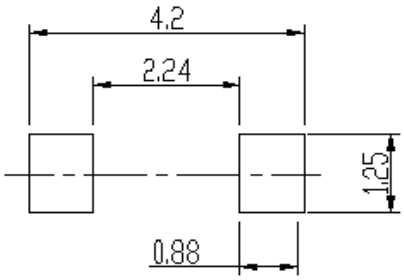
Figure 5. Typical Instantaneous Forward Characteristics

Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint

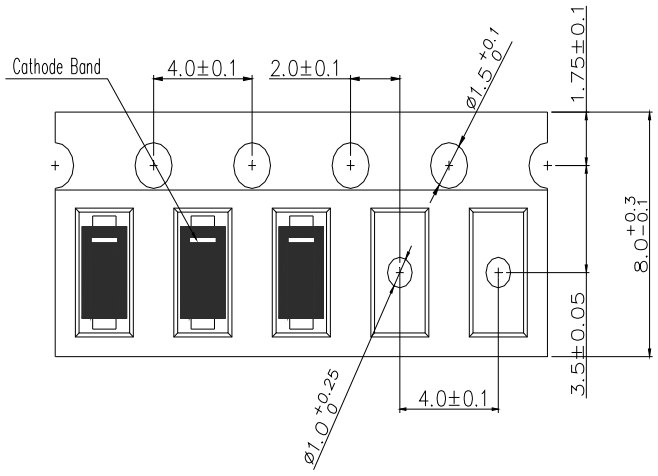


Packing Information

Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

Tape & Reel Specification



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