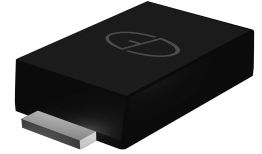


Features

- Low V_F schottky barrier rectifiers
- Low profile - typical height 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°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



Package: eSGA
(SOD-123FL)

Applications

For use in fast switching in RF module, lighting, cell phone, portable devices, power supply and other consumer applications.

Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	FS12	FS13	FS14	FS16	FS1B	FS1B5H	FS1CH	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	60	100	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current (8.3 ms Single Half Sine-wave Superimposed on Rated Load)	I_{FSM}	30.0							A
Operation Junction Temperature Range	T_J	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150							$^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	FS12	FS13	FS14	FS16	FS1B	FS1B5H	FS1CH	Unit
Maximum Instantaneous Forward Voltage	$I_F=0.5\text{A}, T_A=25^\circ\text{C}$	V_F	0.40	0.45		0.55	0.75	0.80		V
	$I_F=1\text{A}, T_A=25^\circ\text{C}$		0.50			0.70	0.81	0.90		
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	I_R	200	200		200	150	200		μA
	$T_A=125^\circ\text{C}$		10	30		20				mA
Typical Junction Capacitance	4.0V, 1MHZ	C_J	51			34	28			
Typical Thermal Resistance ¹⁾	Juntion to Ambient	$R_{\theta JA}$				90			$^\circ\text{C/W}$	
	Juntion to Case	$R_{\theta JC}$				60				
	Juntion to Mount	$R_{\theta JM}$				20				

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

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

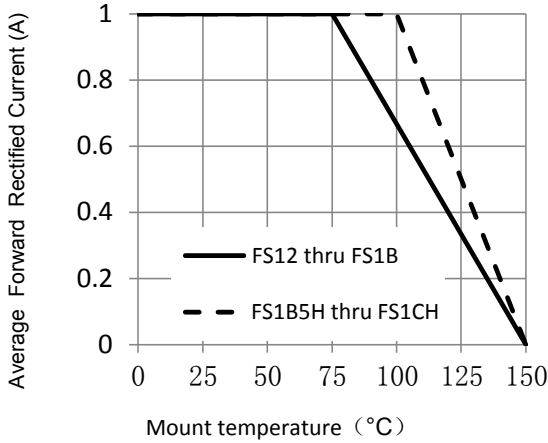


Figure 1. Forward Current Derating Curve

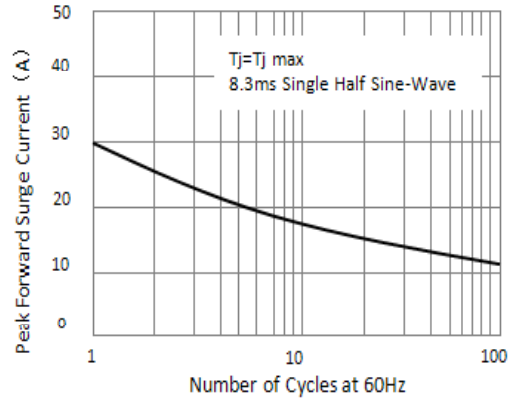


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

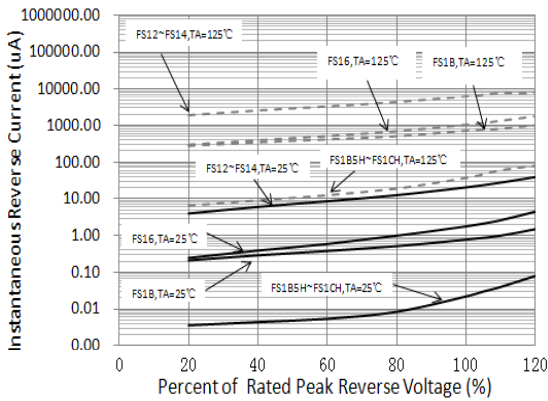


Figure 3. Typical Instantaneous Reverse Characteristics

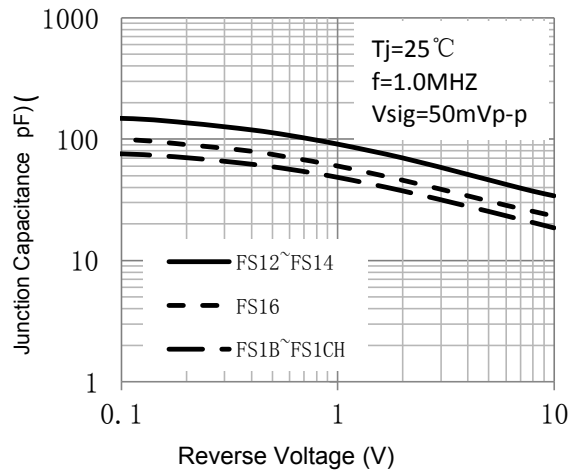


Figure 4. Typical Junction Capacitance

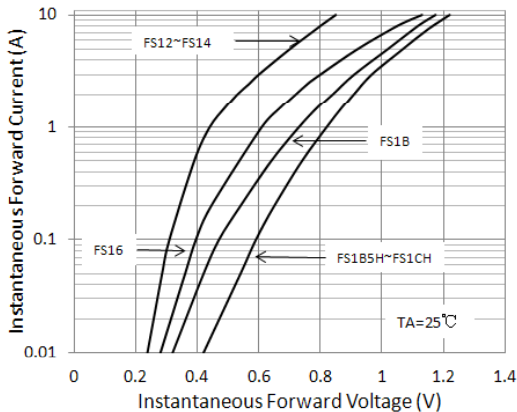


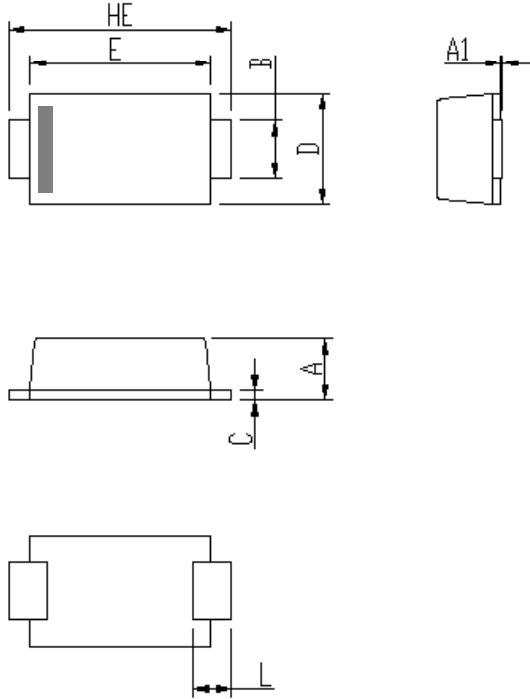
Figure 5. Typical Instantaneous Forward Characteristics

FS12 thru FS1CH

Surface Mount Schottky Rectifier
 Reverse Voltage 20-200V Forward Current 1A

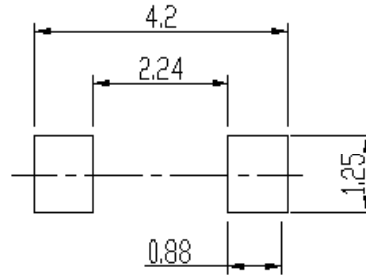
Package Outline Dimensions

eSGA (SOD-123FL)



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

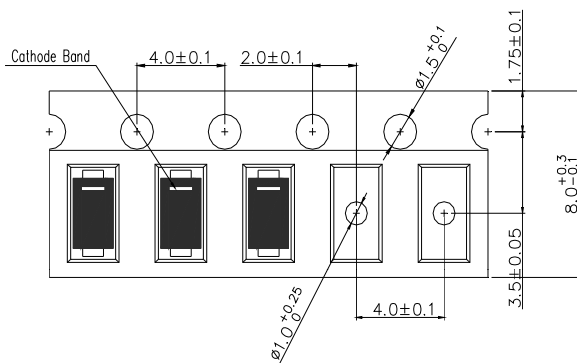


Packing Information

Packing quantities

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

Tape & Reel Specication



Marking Information

Symbol	FS12	FS13	FS14	FS16	FS1B	FS1B5H	FS1CH
Marking	12	13	14	16	1B	115	120