

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

#### **Features**

- · Low VF Schottky barrier diodes
- · 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°C/10 seconds
- · Halogen-free according to IEC 61249-2-21 definition







eSGA (SOD-123FL)

#### **Typical Applications**

For use of fast swiching in RF module, lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)									
Parameter	Symbol	FS12	FS13	FS14	FS16	FS1B	FS1B5H	FS1CH	Unit
Maximum repetitive peak reverse voltage	VRRM	20	30	40	60	100	150	200	V
Maximum RMS voltage	VRMS	14	21	28	42	70	105	140	V
Maximum DC blocking voltage	VDC	20	30	40	60	100	150	200	V
Maximum average forward rectified current	IF(AV)	1.0				Α			
Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load	IFSM	30.0				Α			
Operating junction temperature range	TJ	- 55 to + 150 - 55 to + 175				°C			
Storage temperature range	TSTG	- 55 to + 150 °C				°C			

Electrical Characteristics (TA = 25 °C unless otherwise noted)										
Parameter	Test Conditions	Symbol	FS12	FS13	FS14	FS16	FS1B	FS1B5H	FS1CH	Unit
Maximum instantaneous	IF=0.5A,TA=25℃	V <sub>F</sub>	0.40	0.45		0.55	0.75	0.80		Volts
forward voltage	IF=1 A,TA=25°C	• v <sub>F</sub>	0.50		0.70	0.81	0.0	90	Voits	
Maximum DC reverse current at rated DC blocking voltage	TA=25°C	- I <sub>R</sub>	200	200		200	150	20	0	uA
	TA=125°C		10	3	80	20				mA
	juntion to ambient	$R_{\theta JA}$	90							
Typical thermal resistance <sup>1)</sup>	juntion to case	$R_{\theta JC}$	60							°C/W
	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 5x5mm copper pads, 2 OZ, FR4 PCB

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#### Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

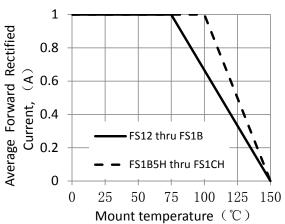


Figure 1.Forward Current Derating Curve

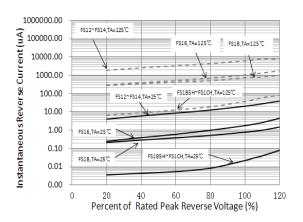


Figure 3. Typical Instantaneous Reverse Characteristics

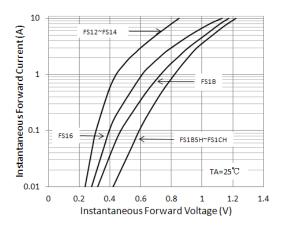


Figure 5. Typical Instantaneous Forward Characteristics

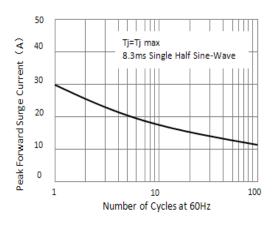


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

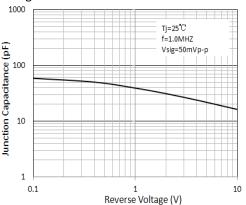
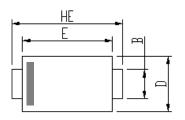


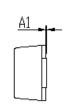
Figure 4. Typical Junction Capacitance

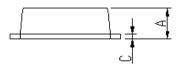


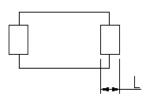
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#### **Package Outline Dimensions**



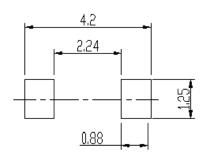






DIM	Unit:	mm	Unit: inch		
	MIN	MAX	MIN	MAX	
Α	0.9	1.08	0.035	0.043	
A1	0	0.1	0.000	0.004	
В	0.85	1.05	0.033	0.041	
С	0.1	0.25	0.004	0.010	
D	1.7	2	0.067	0.079	
Е	2.9	3.1	0.114	0.122	
L	0.43	0.83	0.017	0.033	
HE	3.5	3.9	0.138	0.154	

Soldering footprint

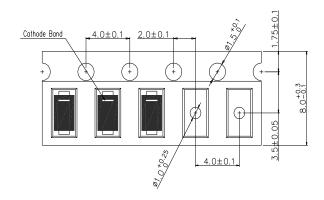


### **Packing Information**

#### Packing quantities:

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

#### **Tape & Reel Specification**





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