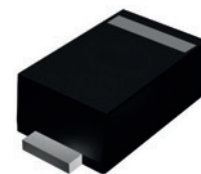


FS12 thru FS1CH

Surface Mount Schottky Rectifiers
 Reverse Voltage 20V to 200V Forward Current 1A

Features

- Low leakage current
- Schottky barrier rectifiers
- Low forward voltage drop
- Moisture sensitivity: Level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



SOD-123FL

Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

Maximum Ratings (T_A=25°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							A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	30							A
Typical Thermal Resistance, Junction to Ambient ¹	R _{θJA}	100							°C/W
Typical Thermal Resistance, Junction to Case ¹	R _{θJC}	20							°C/W
Typical Thermal Resistance, Junction to Lead ¹	R _{θJL}	20							°C/W
Operating Junction Temperature Range	T _J	-55 to +125			-55 to +150		-55 to +175		°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

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

Parameter	Symbol	Conditions	FS12	FS13	FS14	FS16	FS1B	FS1B5H	FS1CH	Unit
Forward Drop Voltage	V _F	I _F =0.5A	0.40	0.45		0.55	0.75	0.80		V
		I _F =1A	0.50			0.70	0.81	0.90		
Reverse Leakage Current @ V _R	I _R	T _J =25°C	0.20				0.15	0.20		mA
		T _J =125°C	10	30		20				
Typical Junction Capacitance	C _J	4.0V, 1MHz	51			34	28		pF	

Note:

1. Mounted on copper pad area of 0.2 x 0.2" (5.0 x 5.0mm) to each terminal.

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

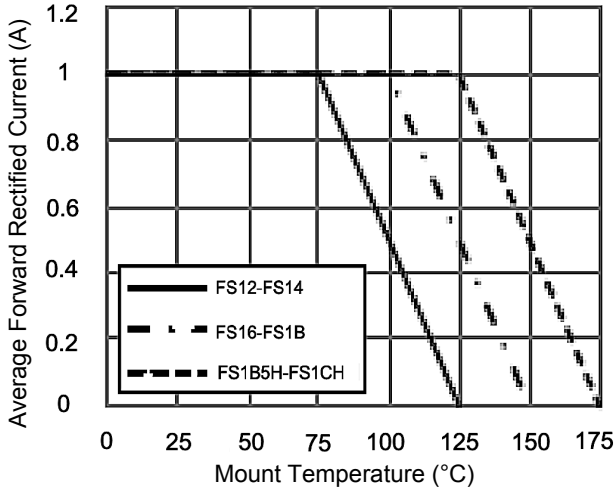


Figure 1. Forward Current Derating Curve

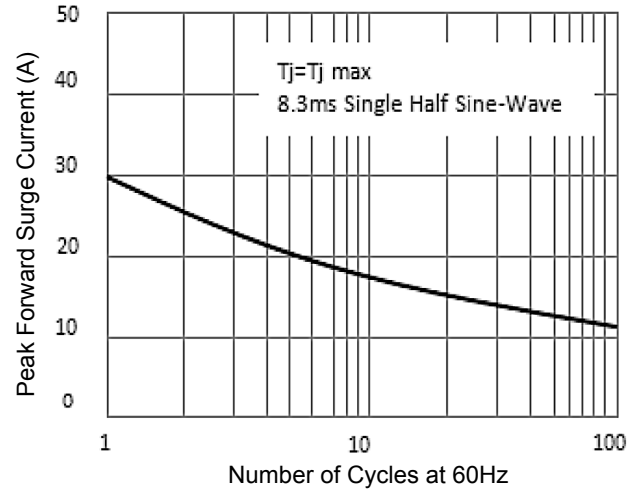


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

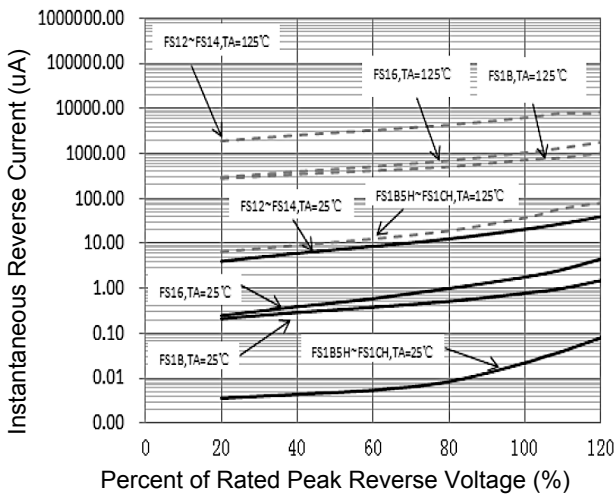


Figure 3. Typical Instantaneous Reverse Characteristics

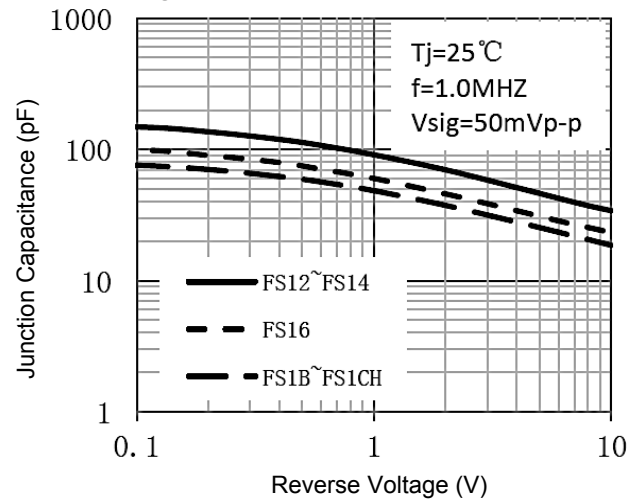


Figure 4. Typical Junction Capacitance

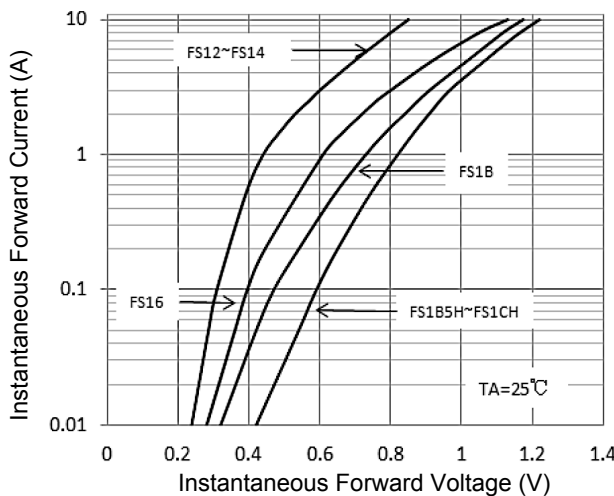


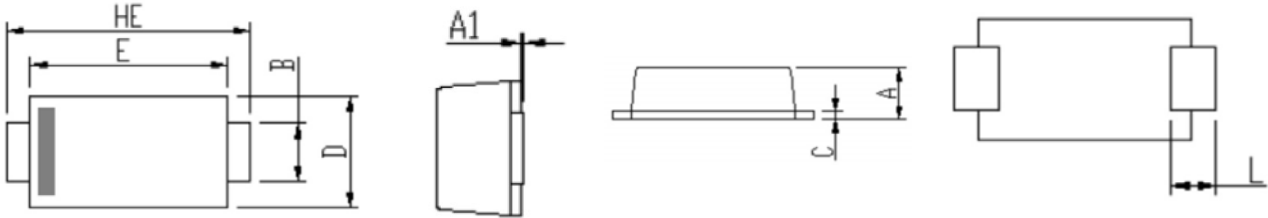
Figure 5. Typical Instantaneous Forward Voltage Characteristics

FS12 thru FS1CH

Surface Mount Schottky Rectifiers

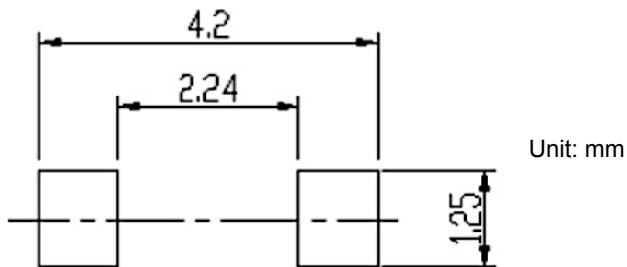
Reverse Voltage 20V to 200V Forward Current 1A

Package Outline Dimensions (SOD-123FL)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.08	0.035	0.043
A1	0.00	0.10	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.10	0.25	0.004	0.010
D	1.70	2.00	0.067	0.079
E	2.90	3.10	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.50	3.90	0.138	0.154

Recommended Pad Layout



Order Information

Device	Package	Marking	Packaging	SPQ
FS12	SOD-123FL	12	Tape & Reel	3,000 Pcs / Reel
FS13	SOD-123FL	13	Tape & Reel	3,000 Pcs / Reel
FS14	SOD-123FL	14	Tape & Reel	3,000 Pcs / Reel
FS16	SOD-123FL	16	Tape & Reel	3,000 Pcs / Reel
FS1B	SOD-123FL	1B	Tape & Reel	3,000 Pcs / Reel
FS1B5H	SOD-123FL	115	Tape & Reel	3,000 Pcs / Reel
FS1CH	SOD-123FL	120	Tape & Reel	3,000 Pcs / Reel