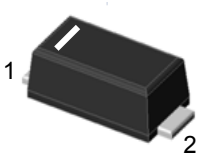
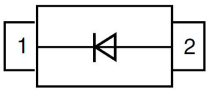
Schottky Barrier Rectifier in SOD-123FL

Features

- Schottky barrier diodes
- Low forward voltage drop
- High Tunction Temperature
- Moisture sensitivity: level 1, per J-STD-020





Mechanical Data

- **Case:** SOD-123FL (plastic package).
  Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
  UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
  260 °C/10 sec. at terminals

Applications

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

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	SS12FL	SS13FL	SS14FL	SS16FL	SS110FL	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	60	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	42	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	60	100	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					A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150					°C

Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

Parameter	Test Conditions	Symbol	SS12FL	SS13FL	SS14FL	SS16FL	SS110FL	Unit
Maximum instantaneous forward voltage	I_F=1A, T_A=25℃	V_F	0.55			0.70	0.85	V
Maximum DC reverse current at rated DC blocking voltage	T_A=25℃	I_R	0.5					mA
	T_A=125℃		50				10	
Typical junction capacitance	4.0 V, 1 MHz	C_J	110			80		pF

Thermal Characteristics

Parameter	Symbol	SS12FL	SS13FL	SS14FL	SS16FL	SS110FL	Unit
Typical thermal resistance(1)	$R_{\theta JA}$	85					℃/W
Operating junction temperature range	T_J	-50~+150					℃
Storage temperature range	T_{STG}	-50~+150					℃

Note1:Thermal resistance from junction to lead,mounted on PCB with 5.0×5.0mm copper pads

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

Figure 1.Forward Current Derating Curve

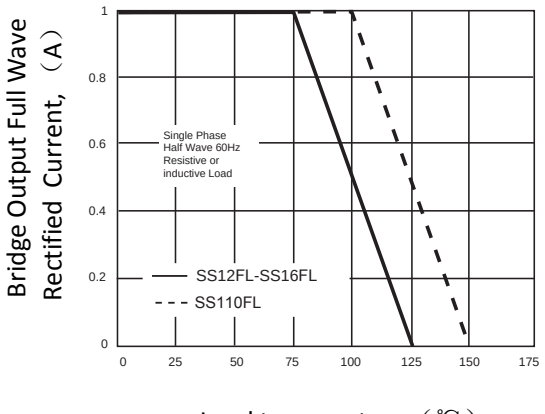


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

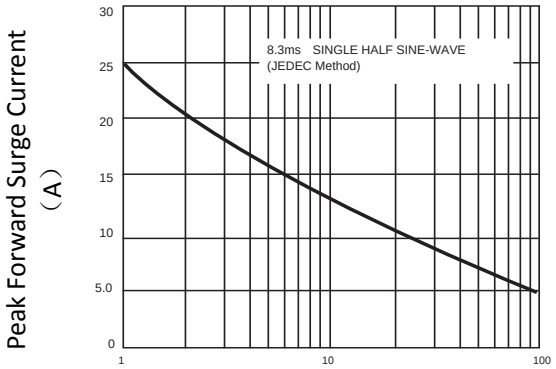


Figure 3. Typical Instantaneous Forward Characteristics

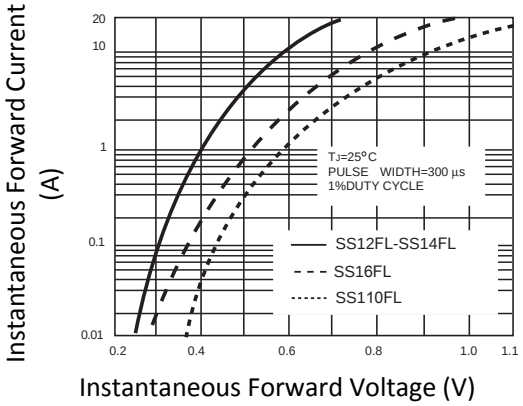


Figure 4. Typical Reverse Characteristics

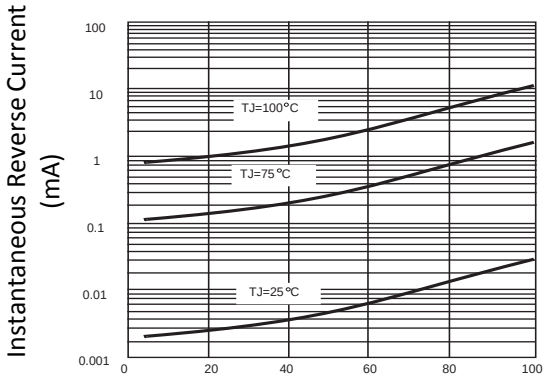
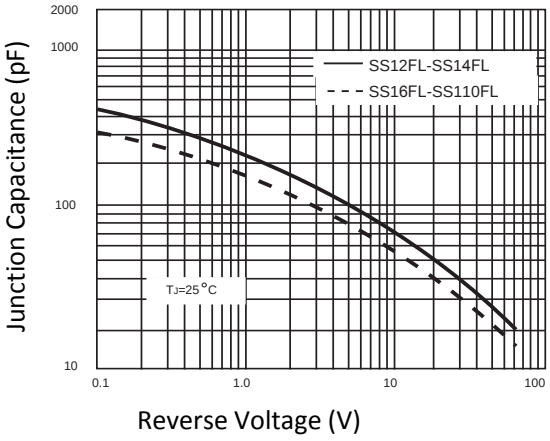
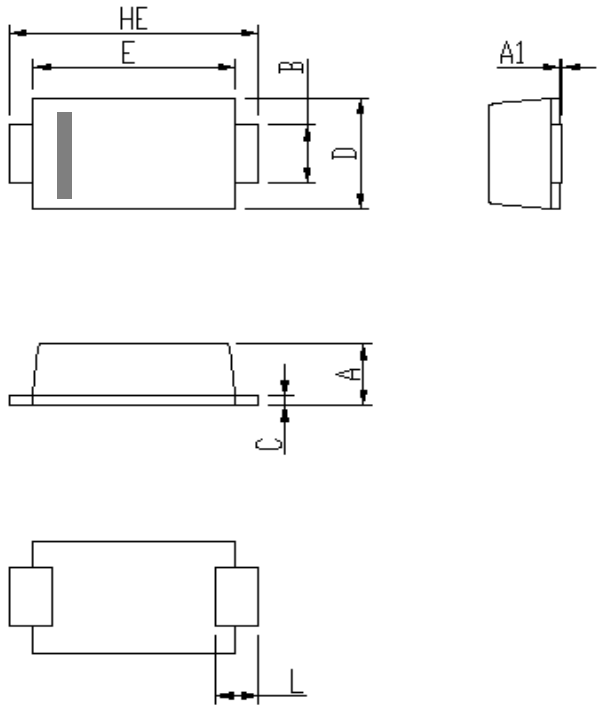


Figure 5. Typical Junction Capacitance

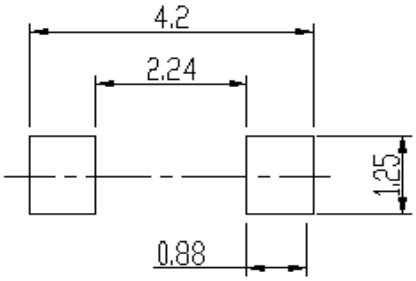


Package Dimensions

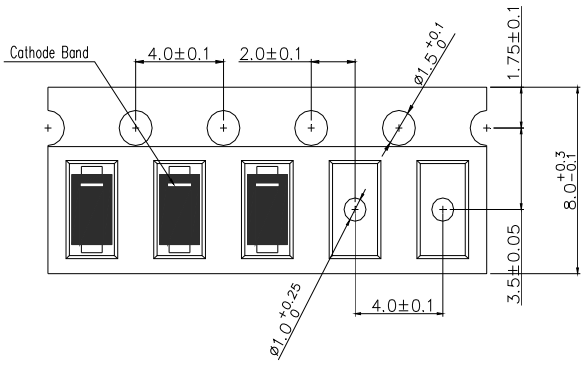


DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



Package Information



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
SS12FL Thru SS110FL	SOD-123FL	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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