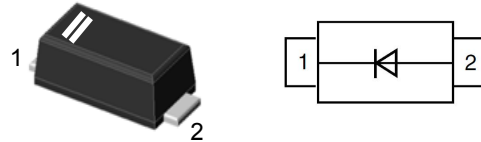


Schottky Barrier Rectifier in SOD-123FL

Features

- Schottky barrier diodes
- Low forward voltage drop
- High Junction 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 switching 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	SS32FL	SS33FL	SS34FL	SS36FL	SS310FL	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	$I_{F(AV)}$	3.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	70					A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150					°C

Electrical Characteristics

($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Test Conditions	Symbol	SS32FL	SS33FL	SS34FL	SS36FL	SS310FL	Unit
Maximum instantaneous forward voltage	$I_F=3A, T_A=25\text{ °C}$	V_F	0.55			0.70	0.85	V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25\text{ °C}$	I_R	0.5				0.05	mA
	$T_A=125\text{ °C}$		50				10	
Typical junction capacitance	4.0 V, 1 MHz	C_J	110			80	pF	

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

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Figure 1. Forward Current Derating Curve

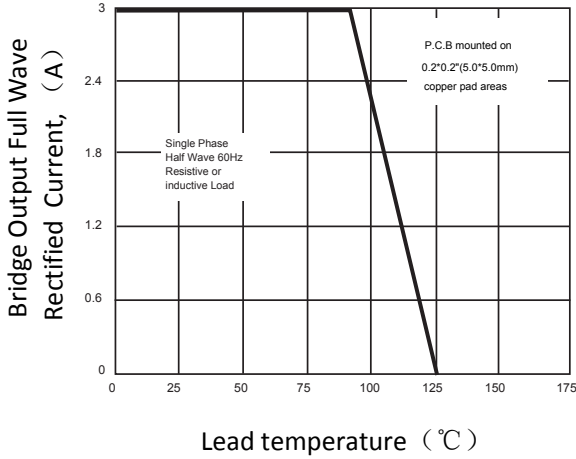


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

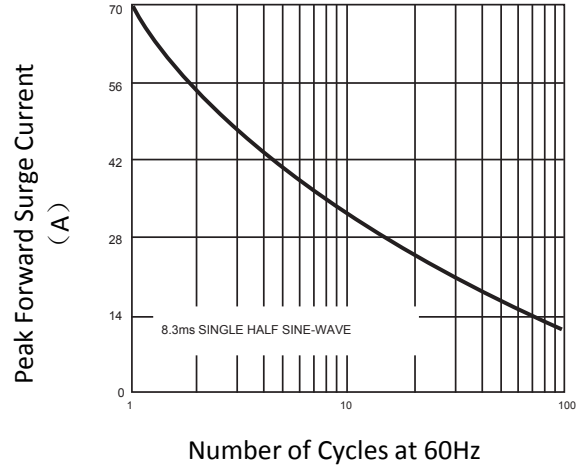


Figure 3. Typical Instantaneous Forward Characteristics

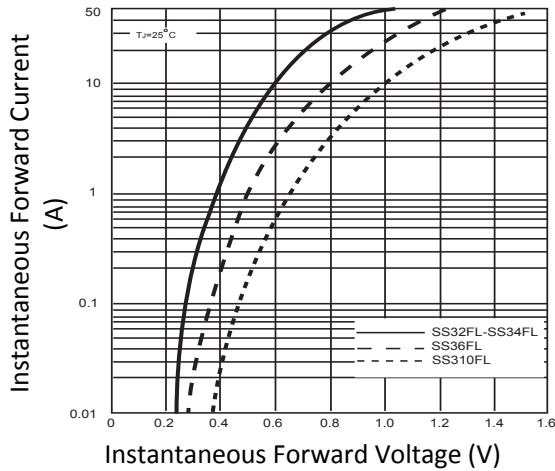


Figure 4. Typical Reverse Characteristics

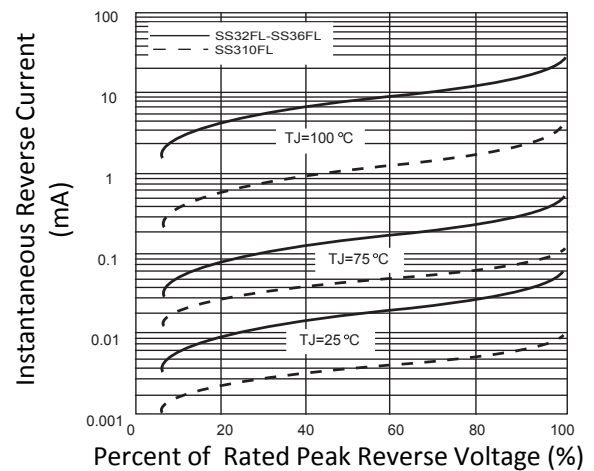
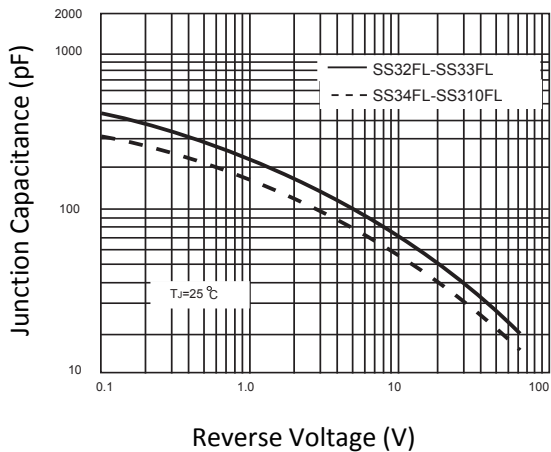
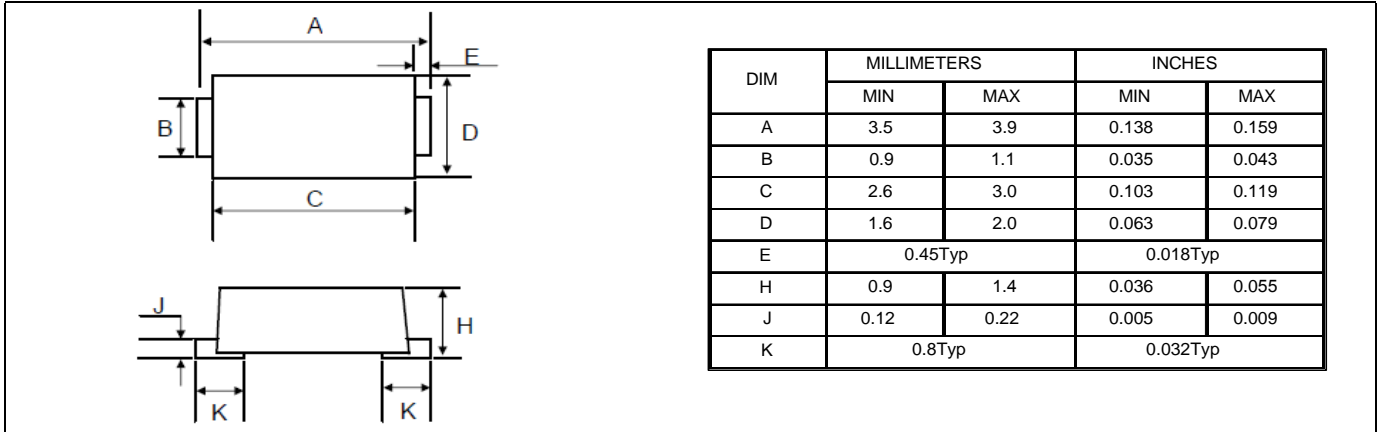


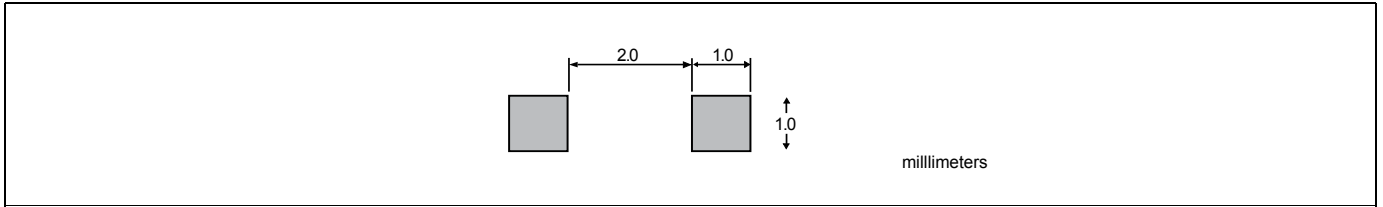
Figure 5. Typical Junction Capacitance



Package Dimensions



Pad Dimensions



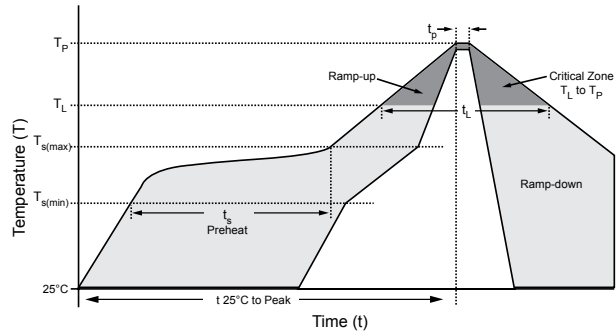
Marking



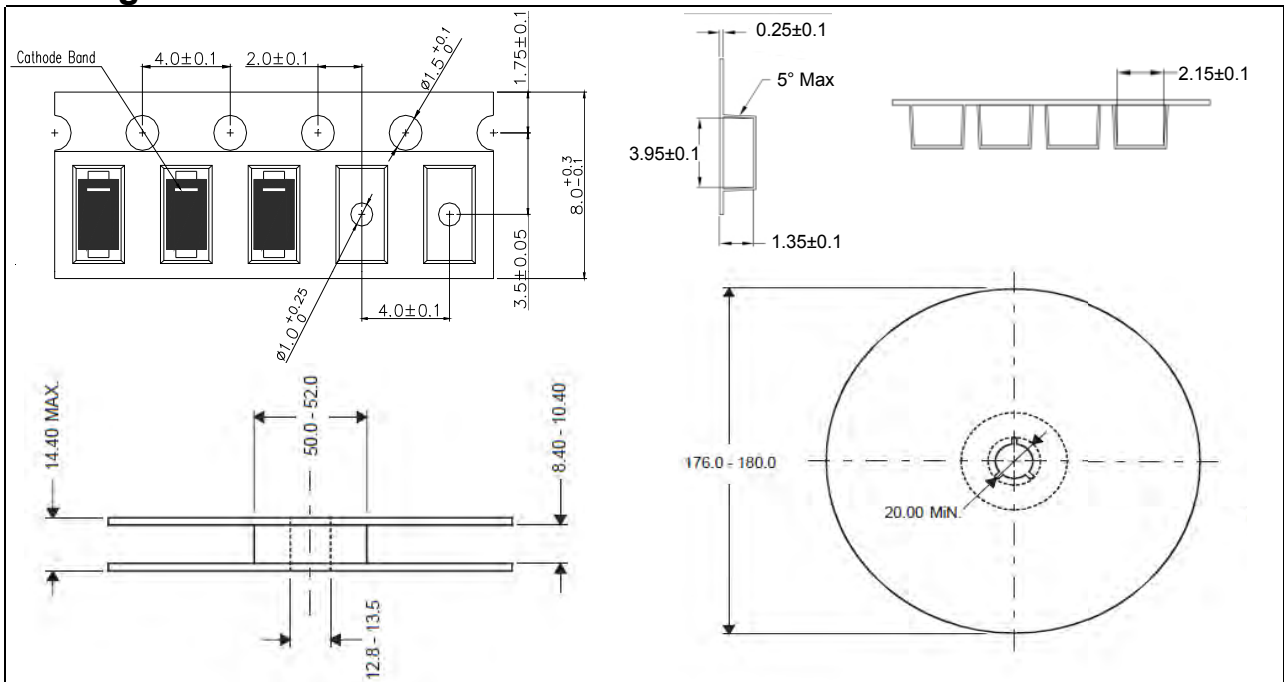
Suggested thermal profile for soldering process

1. Storage environment : Temperature=5~40°C Humidity=55±25%
2. Reflow soldering of surface-mount device
3. Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat	
- Temperature Min(T _{smin})	150°C
- Temperature Max(T _{smax})	200°C
- Time(min to max)(t _s)	60~120sec
T _{smax} to T _L	
- Ramp-up Rate	<3sec
Time maintained above:	
- Temperature (T _L)	217°C
- Time(t _L)	60-260sec
Peak Temperature(T _P)	255 -0/+5°C
Time within 5°C of actual Peak Temperature(T _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes



Package Information



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
SS32FL Thru SS310FL	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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