

Schottky Surface Mount Rectifiers

Reverse Voltage: 20 to 200V

Forward Current: 2.0 Amp

Features

- Low profile package
- For surface mounted applications
- Schottky Barrier Chip
- High forward surge capability
- High temperature soldering guaranteed
260°C/10 seconds at terminals

Mechanical Data

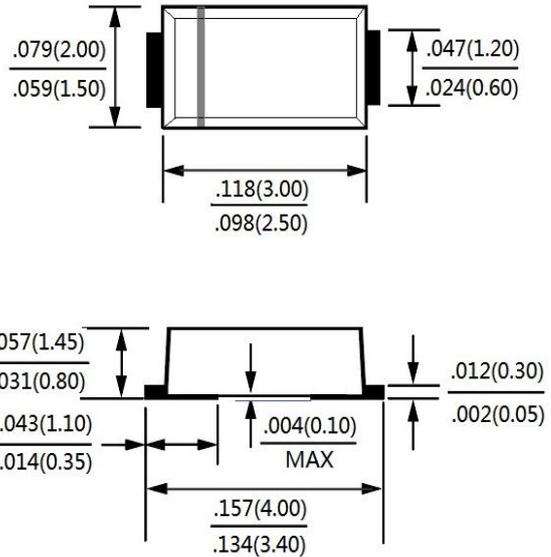
- **Package:** SOD-123FL
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Cathode line denotes the cathode end

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

SOD-123FL

RoHS COMPLIANT
HALOGEN FREE



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter&Test Conditions	SYM.	SS 22L	SS 23L	SS 24L	SS 25L	SS 26L	SS 28L	SS 210L	SS 215L	SS 220L	Unit
Device marking code		SS 22	SS 23	SS 24	SS 25	SS 26	SS 28	SS 210	SS 215	SS 220	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _{O(AV)}	2.0									A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I _{FSM}	40									A
Maximum Thermal Resistance, Junction To Ambient (Note1)	R _{θJA}	80									°C/W
Operating junction range	T _j	-55 to+125				-55 to+150					°C
Storage temperature range	T _{STG}	-55 to+150									°C

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions	SYM.	SS 22L	SS 23L	SS 24L	SS 25L	SS 26L	SS 28L	SS 210L	SS 215L	SS 220L	Unit	
Maximum Instantaneous Forward Voltage IFM =2A	V _{FM}	0.55			0.70		0.85		0.95		V	
Maximum DC reverse current at rated DC blocking voltage	TA = 25°C	0.2				0.05						mA
	TA = 100°C	10				5						

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 3mm*3mm copper pad areas.
2. The typical data above is for reference only.

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

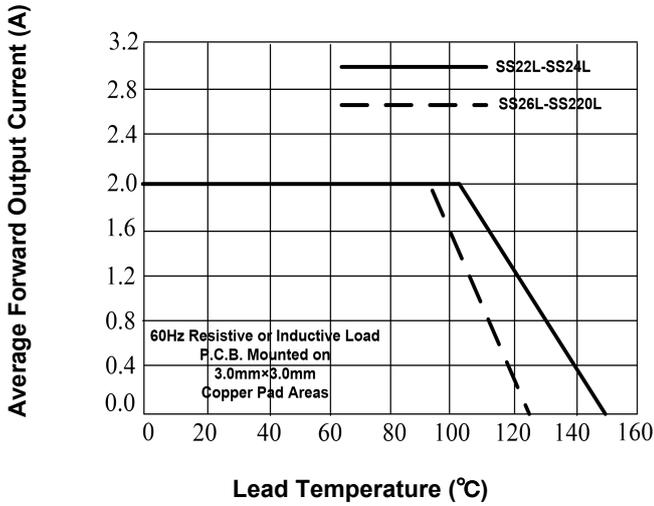


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

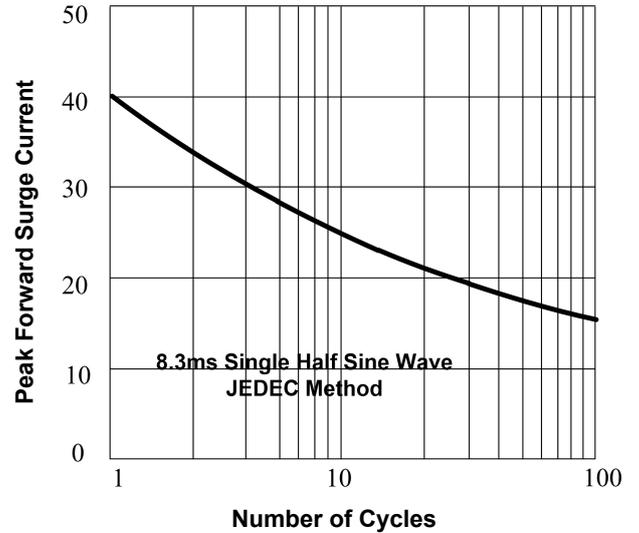


FIG. 3- TYPICAL FORWARD VOLTAGE

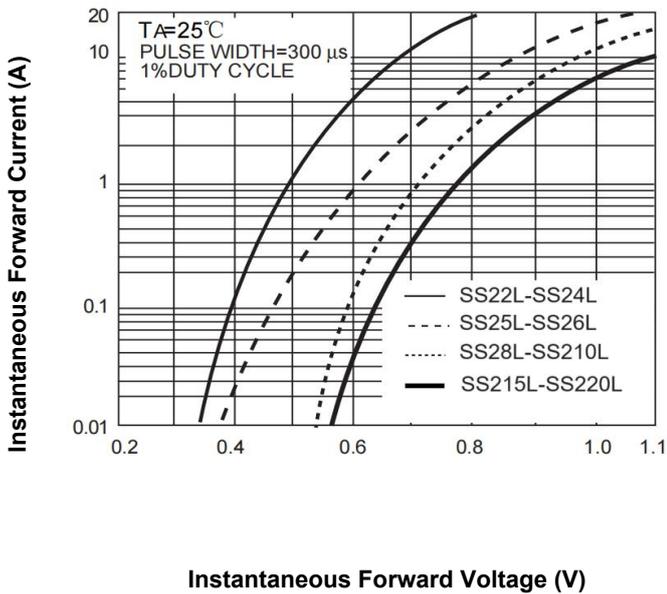
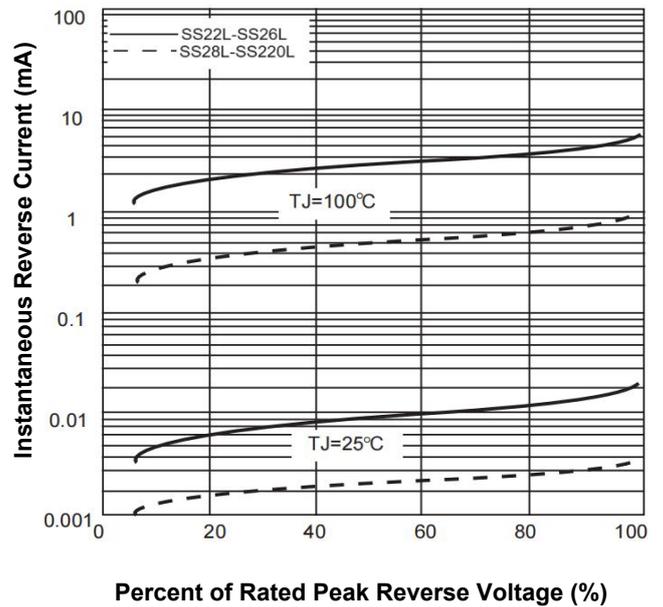
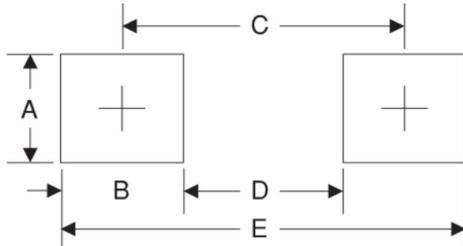


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

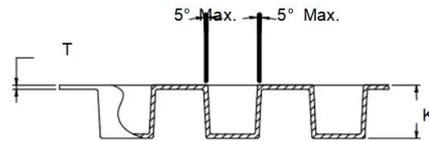
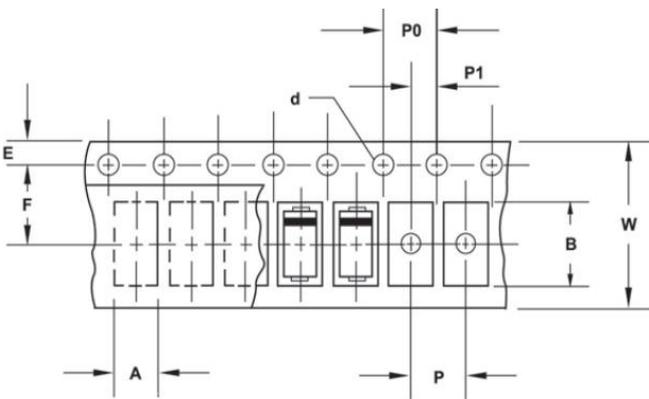
Recommended Pad Layout



SYMBOL	Millimeters
A	1.50
B	1.15
C	3.10
D	1.90
E	4.25

Package Information

Carrier Dimension(mm)



W	F	d	E
8.0	3.5	∅ 1.55	1.75
A	B	K	T
2.2	3.9	1.37	0.22
P0	P1	P	Tolerance
4.0	2.0	4.0	0.10

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOD-123FL	7'	178	3	185	15	390*400*230	180

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