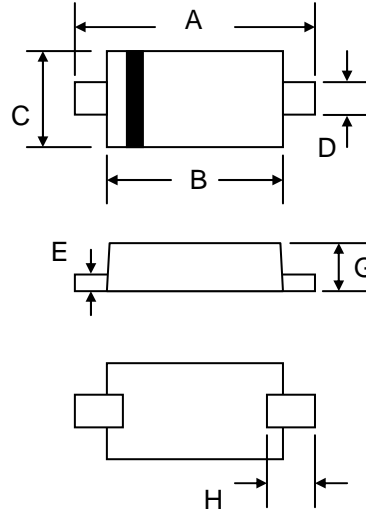


Features

- **Low Profile 1.08mm Max. Case Height**
- Glass Passivated Die Construction
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 30A Peak
- Fast Recovery Time
- Ideally Suited for Automatic Assembly
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-123FL		
Dim	Min	Max
A	3.30	3.70
B	2.60	2.95
C	1.65	1.95
D	0.75	1.35
E	0.10	0.20
G	0.98	1.08
H	0.50	0.80
All Dimensions in mm		

Mechanical Data

- Case: SOD-123FL, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.017 grams (approx.)
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	RS 1000FL	RS 1001FL	RS 1002FL	RS 1004FL	RS 1006FL	RS 1008FL	RS 1010FL	Unit
Peak Repetitive Reverse Voltage	V_{RRM}								V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_L = 75^\circ\text{C}$	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.3							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	I_{RM}	10 300							μA
Reverse Recovery Time (Note 1)	t_{rr}	150			250	500		nS	
Typical Junction Capacitance (Note 2)	C_J	10							pF
Thermal Resistance Junction to Ambient (Note 3)	R_{JA}	325							$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient (Note 4)	R_{JA}	82							
Thermal Resistance Junction to Lead (Note 3)	R_{JL}	26							
Thermal Resistance Junction to Lead (Note 4)	R_{JL}	21							
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

- Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on FR-4 P.C. Board with minimum recommended pad size.
 4. Mounted on FR-4 P.C. Board with 700mm² copper pads.

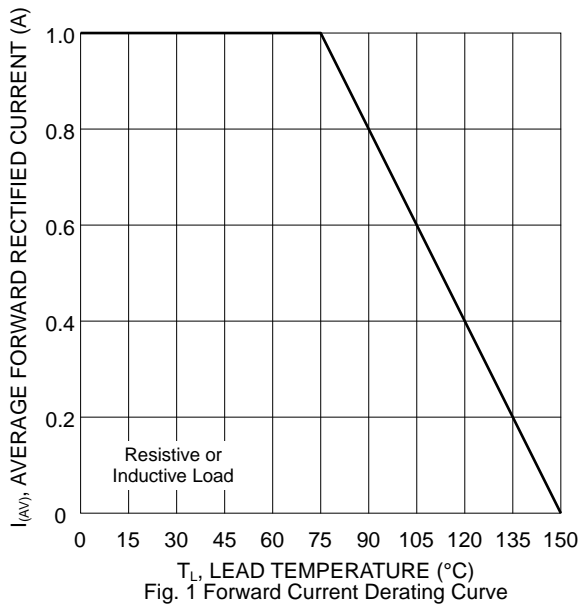


Fig. 1 Forward Current Derating Curve

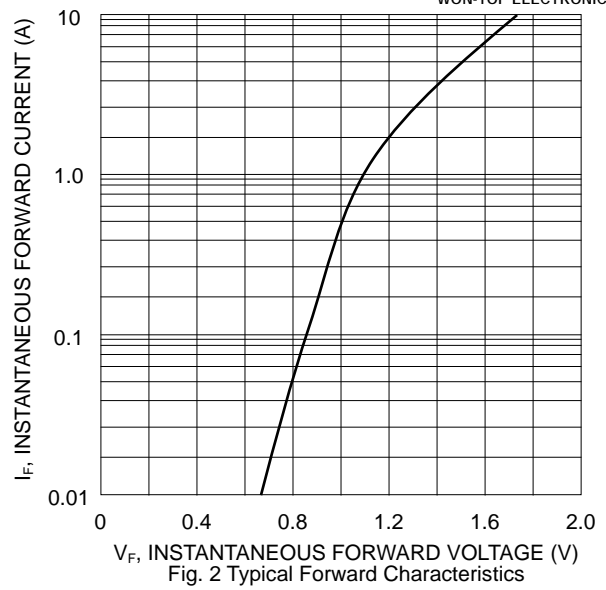


Fig. 2 Typical Forward Characteristics

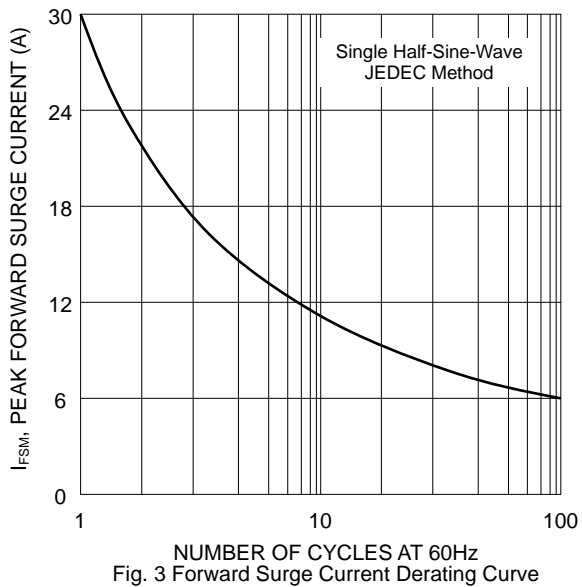


Fig. 3 Forward Surge Current Derating Curve

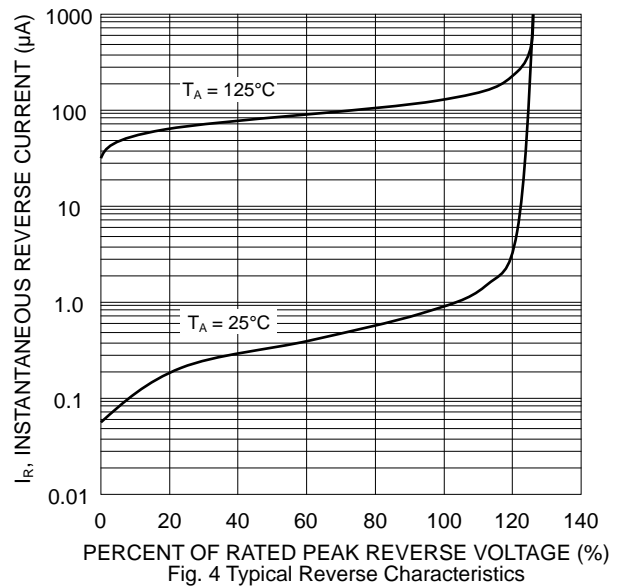


Fig. 4 Typical Reverse Characteristics

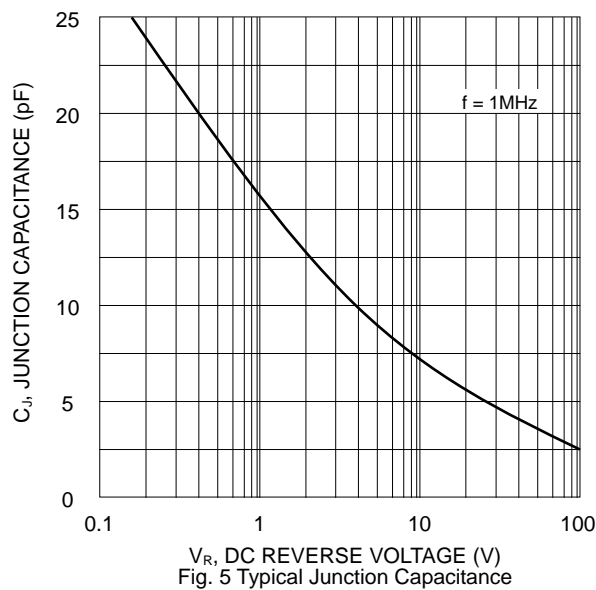


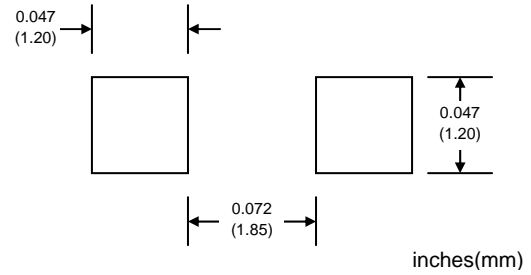
Fig. 5 Typical Junction Capacitance

MARKING INFORMATION



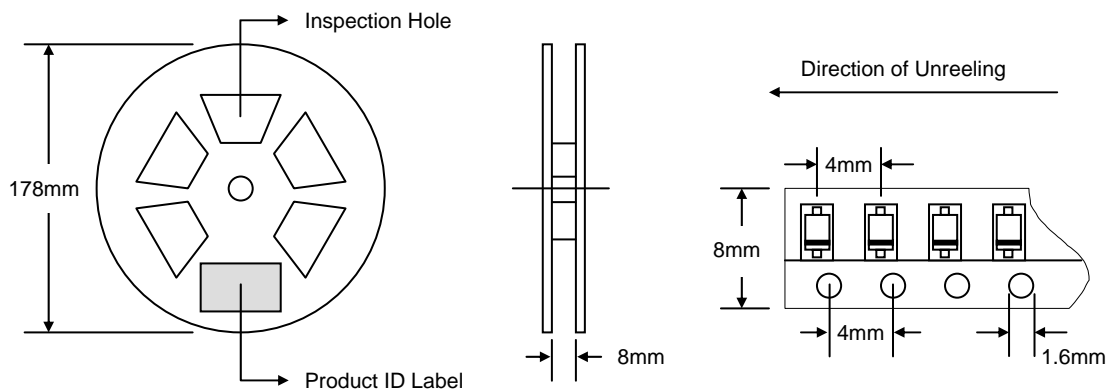
Cathode = Polarity Band
 R1x = Device Code
 x = A (RS1000FL)
 B (RS1001FL)
 D (RS1002FL)
 G (RS1004FL)
 J (RS1006FL)
 K (RS1008FL)
 M (RS1010FL)

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	195 x 135 x 195	30,000	370 x 370 x 420	240,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
RS1000FL-T1	SDO-123FL	3000/Tape & Reel
RS1001FL-T1	SDO-123FL	3000/Tape & Reel
RS1002FL-T1	SDO-123FL	3000/Tape & Reel
RS1004FL-T1	SDO-123FL	3000/Tape & Reel
RS1006FL-T1	SDO-123FL	3000/Tape & Reel
RS1008FL-T1	SDO-123FL	3000/Tape & Reel
RS1010FL-T1	SDO-123FL	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, RS1000FL-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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