Technical Data
Data Sheet N1935, Rev. A

RoHS HF

RS1AL THRU RS1ML SINGLE PHASE 1.0AMP SURFACE MOUNT FAST RECOVERY RECTIFIER

SOD-123FL

Features

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 260 C/10 seconds,0.375” (9.5mm) lead length, 5 lbs. (2.3kg) tension
- Plastic material-UL flammability 94V-0
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band dentes cathode end
- Mounting Position: Any

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Type Number	Symbol	RS1 AL	RS1 BL	RS1 DL	RS1 GL	RS1 JL	RS1 KL	RS1 ML	Units
Marking Code		**R1AL**	**R1BL**	**R1DL**	**R1GL**	**R1JL**	**R1KL**	**R1ML**	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	
Average Rectified Output Current @T_L =110°C	I_O	1.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							A
I^2 t Rating for Fusing (t < 8.3ms)	I^2 t	3.74							A^2S
Forward Voltage @I_F = 1.0A, T_J=25°C	V_F	1.3							V
Maximum DC reverse current T_A = 25°C at rated DC blocking voltage T_A = 125°C	I_R	5.0 100							μA
Typical junction capacitance (Note 1)	C_J	7							pF
Maximum Reverse Recovery Time (Note 2)	Trr	150				250	500		ns
Typical thermal resistance (Note 3)	$R_{\theta JA}$	85							°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150							°C

Note: 1. Measured at 1.0 MHZ and applied reverse voltage of 4.0 VDC
2. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
3. Thermal resistance from junction to ambient at 0.375" (9.5mm)lead length,P.C.B. Mounted

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Ratings and Characteristics Curves

Fig. 1 Forward Current Derating Curve

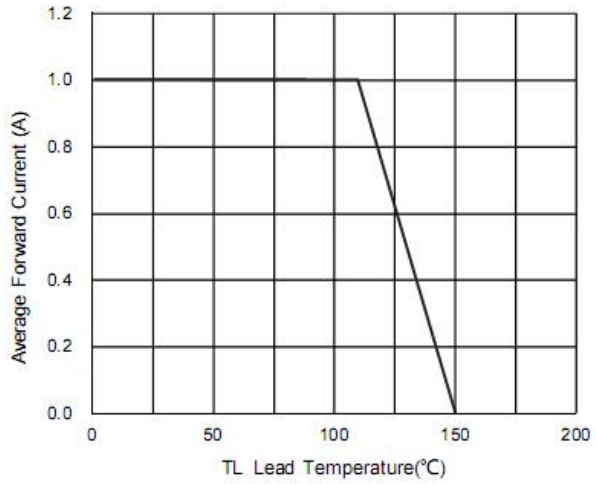


Fig. 2 Typical Forward Characteristics

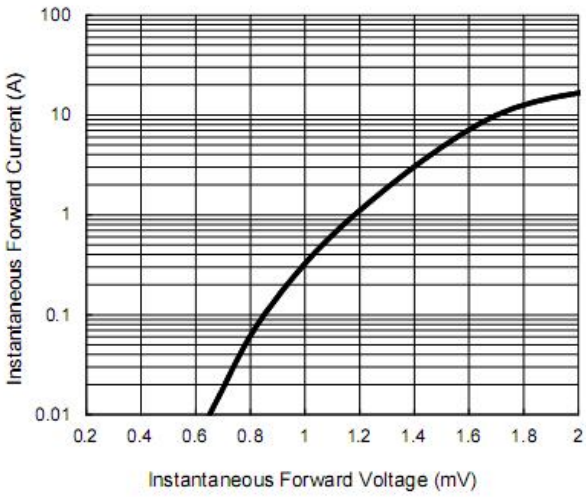


Fig. 3 Forward Surge Current Capability

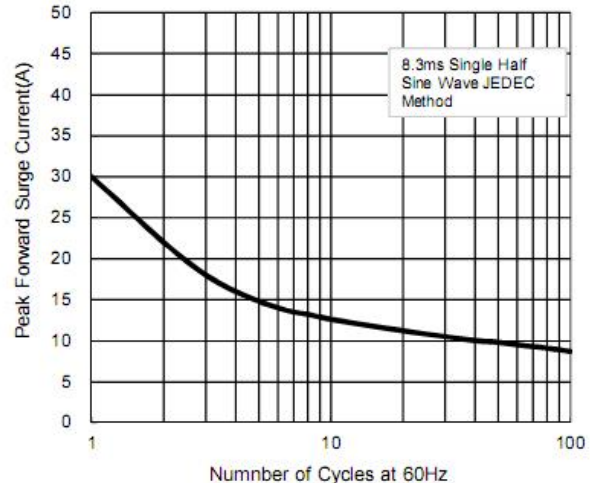


Fig.4 Typical Reverse Characteristics

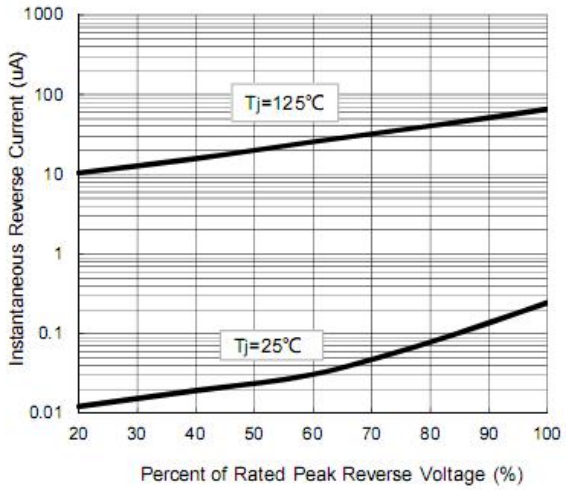
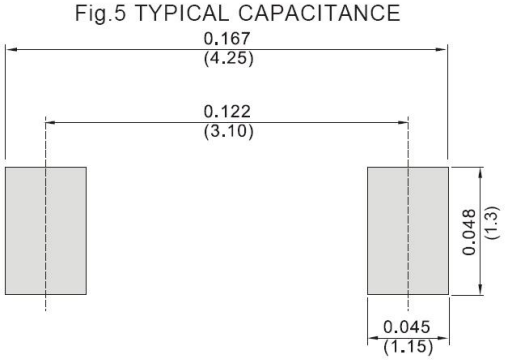


Fig.5 TYPICAL CAPACITANCE



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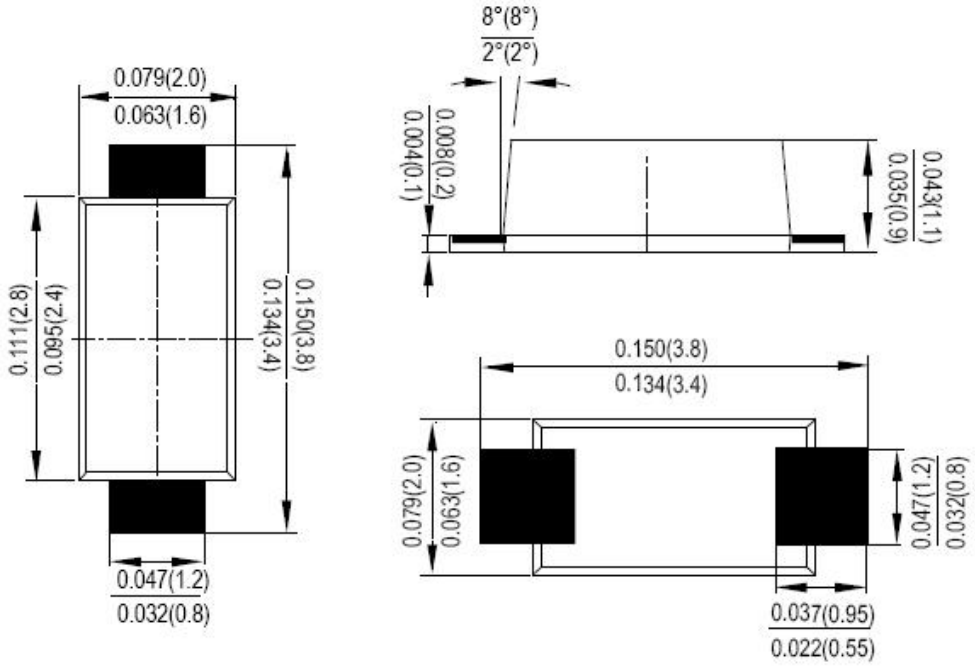
Mechanical Dimensions SOD-123FL(Inches/Millimeters)

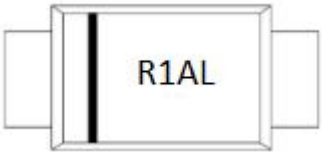


Ordering Information

Device	Package	Shipping
RS1AL THRU RS1ML	SOD-123FL	3000pcs / reel
RS1ALTR THRU RS1MLTR	SOD-123FL	3000pcs / reel

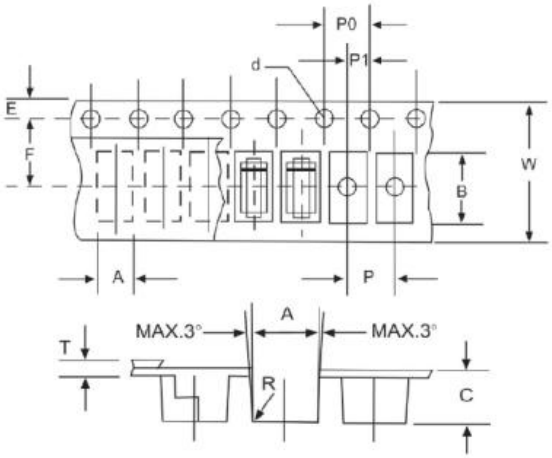
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



R1AL = Marking Code

Carrier Tape Specification SOD-123FL



SYMBOL	Millimeters	
	Min.	Max.
A	1.95	2.15
B	3.85	4.05
C	1.35	1.55
d	1.50	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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