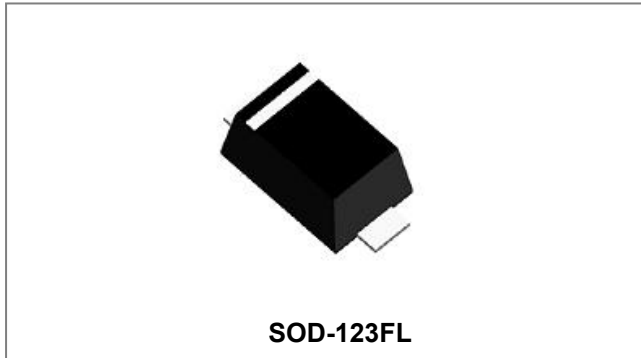


## RS1AL THRU RS1ML SINGLE PHASE 1.0AMP SURFACE MOUNT FAST RECOVERY RECTIFIER



### Features

- Glass passivated device
- Ideal for surface mounted 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 Pb - 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 denotes cathode end
- Mounting Position: Any

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ 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 @ $T_A = 30^\circ\text{C}$	$I_O$	1.0								A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0								A
Forward Voltage @ $I_F = 1.0\text{A}$ , $T_J = 25^\circ\text{C}$	$V_F$	1.3								V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 100								$\mu\text{A}$
Typical junction capacitance (Note 1)	$C_J$	15								pF
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	150				250	500		ns	
Typical thermal resistance (Note 3)	$R_{\theta JA}$	85								$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150								$^\circ\text{C}$

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

**Ratings and Characteristics Curves**

FIG. 1- FORWARD CURRENT DERATING CURVE

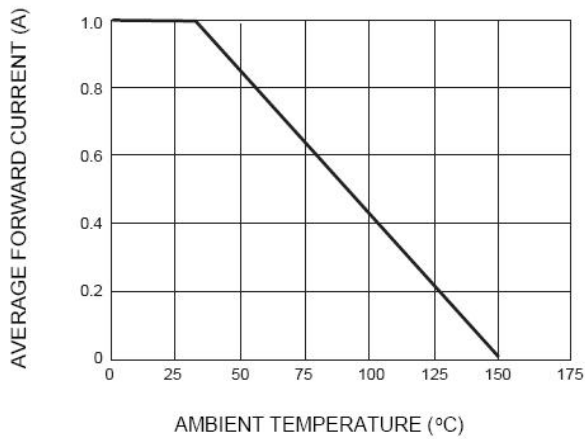


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

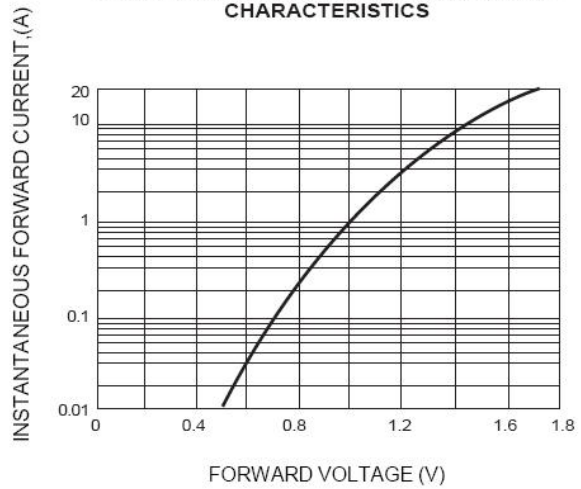


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

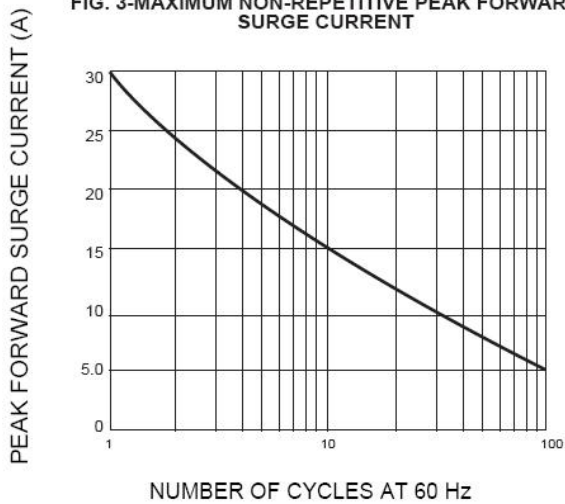


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

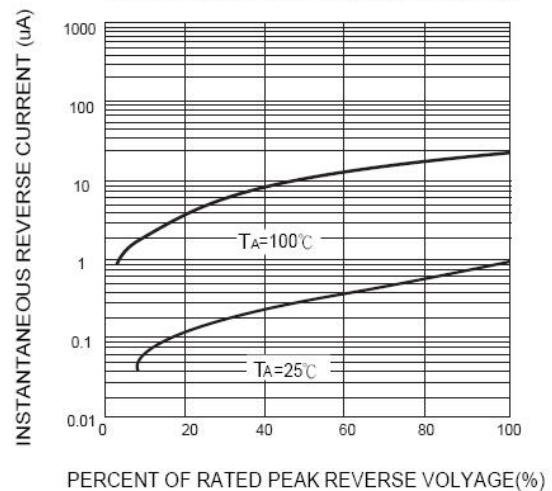
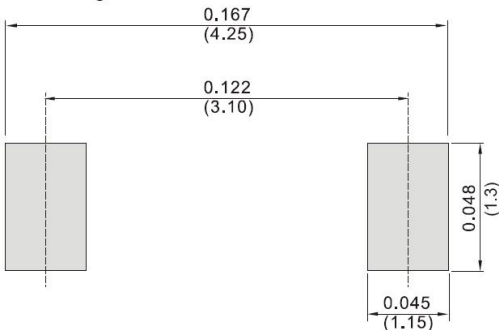
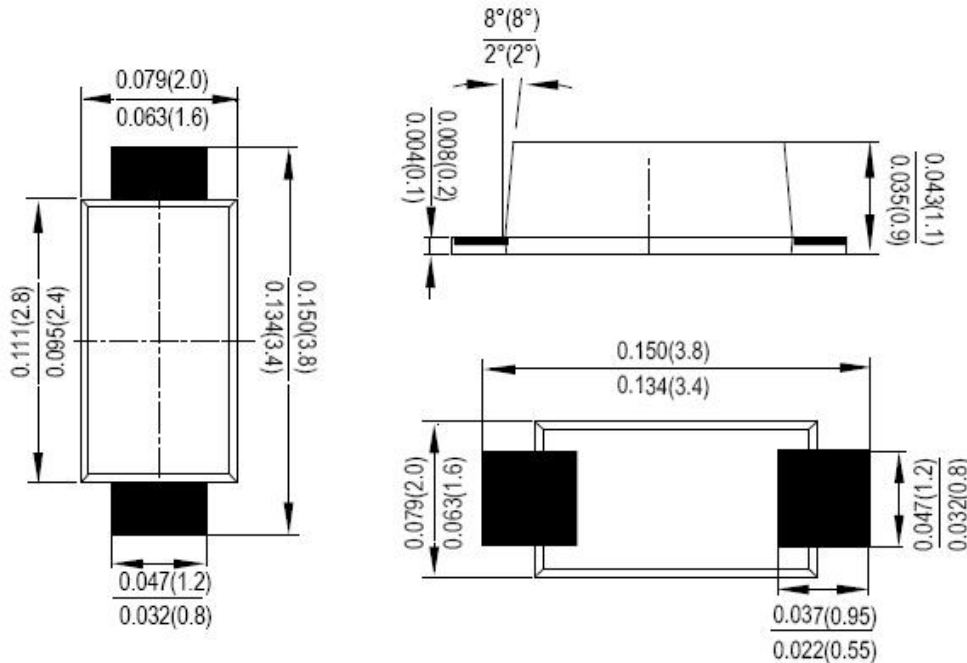


Fig.5 TYPICAL CAPACITANCE



**Mechanical Dimensions SOD-123FL(Inches/Millimeters)**



**Ordering Information**

Device	Package	Shipping
RS1AL THRU RS1ML	SOD-123FL (Pb-Free)	3000pcs / reel

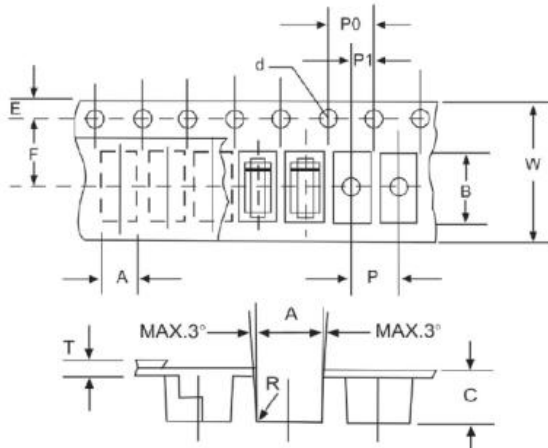
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**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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