

Features

- $I_{F(AV)}$ 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode



Applications

- Rectifier

SOD-123FL top view

Schematic diagram

Marking

- AX
- X : From 1 To 7



Halogen-Free

Maximum Ratings($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Conditions	S1AL	S1BL	S1DL	S1GL	S1JL	S1KL	S1ML	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS voltage		35	70	140	280	420	560	700	V
V_{DC}	Maximum DC Blocking Voltage		50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Forward Current	60Hz Half-sine wave, Resistance load	1							A
I_{FSM}	Surge(Non-repetitive)Forward Current	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30							A
T_J	Junction Temperature		$-55\sim+150$							$^\circ\text{C}$
T_{stg}	Storage Temperature		$-55\sim+150$							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Condition	S1AL	S1BL	S1DL	S1GL	S1JL	S1KL	S1ML	Unit
V _F	Maximum Peak Forward Voltage	I _F =1.0A	1							V
I _{RRM1}	Maximun Peak Reverse Current	V _{RM} =V _{RRM} ,Ta = 25 °C	10							μA
I _{RRM2}		V _{RM} =V _{RRM} ,Ta =125 °C	50							
C _j	Typical Junction Capacitance	Measured at 1MHz and applied reverse voltage of 4.0V D.C.	6							pF
R _{ΘJ-A}	Typical Thermal Resistance	Between junction and ambient	67.5							°C/W
R _{ΘJ-L}	Typical Thermal Resistance	Between junction and terminal	12							°C/W

Typical Operating Characteristics

Fig.1 Forward Current Derating Curve

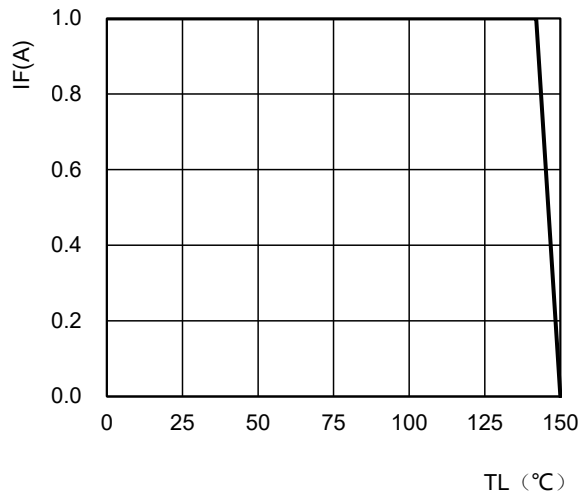


Fig.2 Maximum Non-Repetitive Forward Surge Current

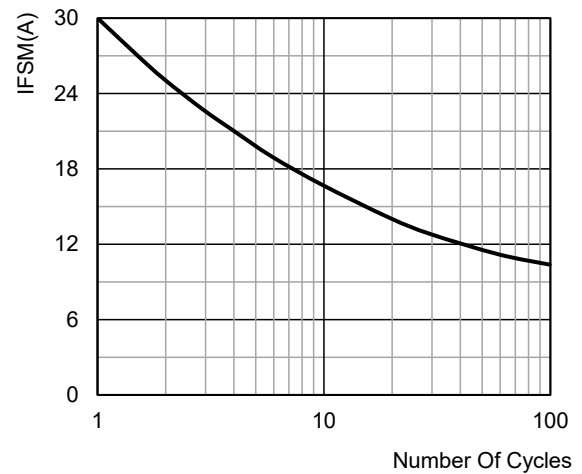


Fig.3 Typical Forward Characteristics

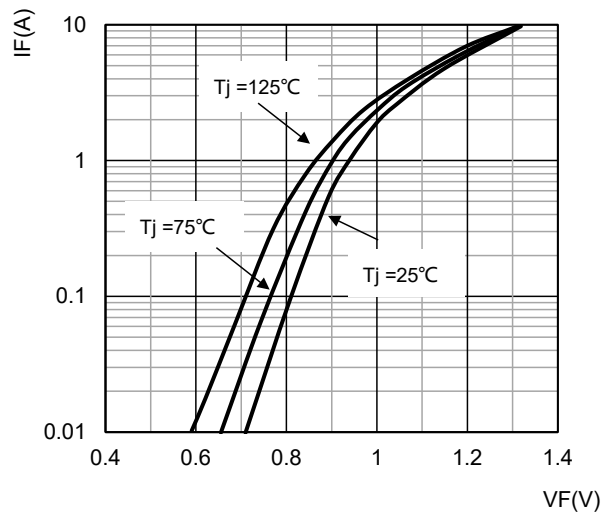
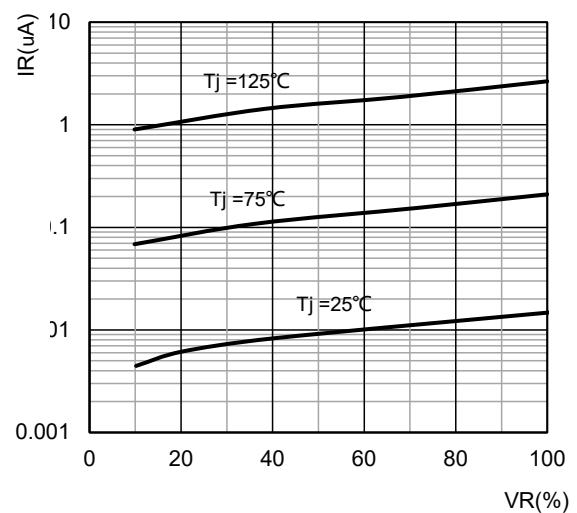


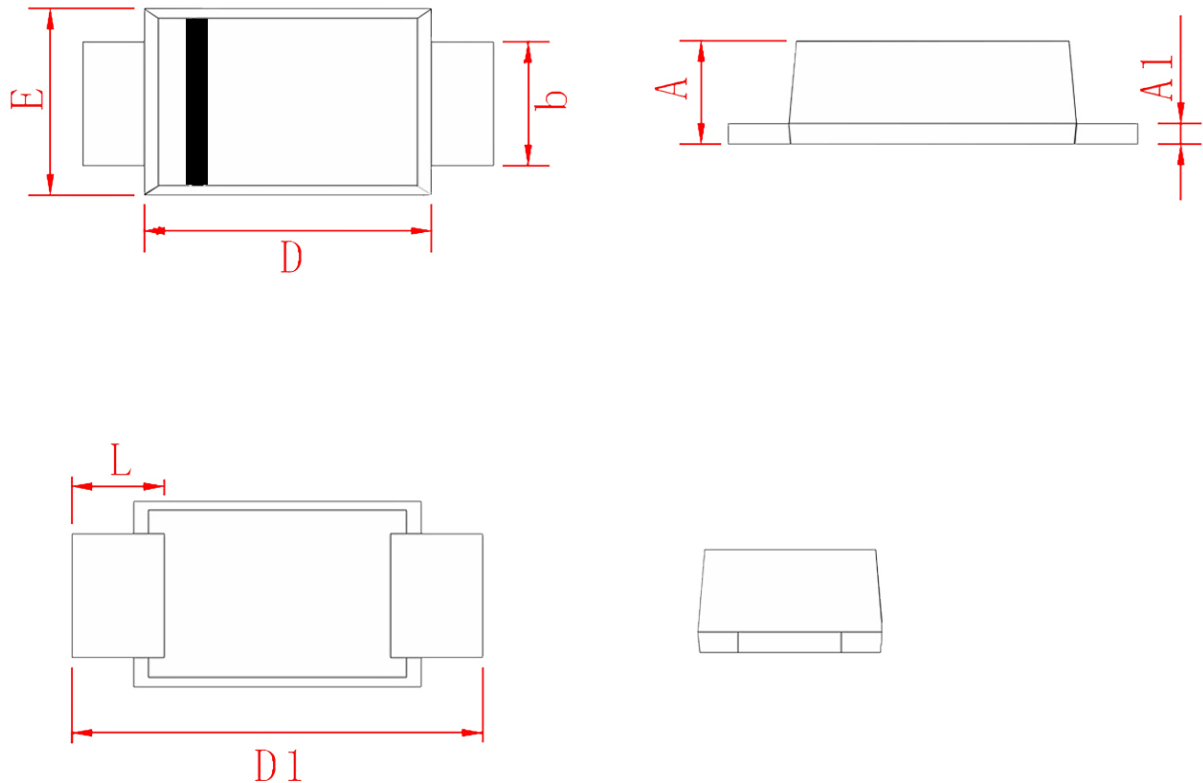
Fig.4 Typical Reverse Characteristics



Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
S1AL	SOD-123FL	A1	3,000	45,000	180,000	7"reel
S1BL		A2				
S1DL		A3				
S1GL		A4				
S1JL		A5				
S1KL		A6				
S1ML		A7				

SOD-123FL Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.200	1.400	0.047	0.055
A1	0.120	0.250	0.005	0.010
b	0.850	1.150	0.033	0.045
D	2.650	2.950	0.104	0.116
D1	3.550	3.850	0.140	0.152
E	1.700	1.900	0.067	0.075
L	0.500	0.900	0.020	0.035