

Features

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



SOD-123FL top view

Schematic diagram

Applications

- Rectifier

Marking

- R1X

X:From A To M



Pb-Free



RoHS



Halogen-Free

Limiting Values (Absolute Maximum Rating)

Symbol	Item	Conditions	RS1							Unit
			AL	BL	DL	GL	JL	KL	ML	
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
$I_{F(AV)}$	Average Rectified Output Current	60Hz Half-sine wave, Resistance load	1.0							A
I_{FSM}	Surge(Non-repetitive)Forward Current	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30							A
T_J, T_{STG}	Operating and Storage Temperature Range		-55~+150							$^\circ\text{C}$

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

Symbol	Item	Condition	RS1							Unit
			AL	BL	DL	GL	JL	KL	ML	
V_F	Peak Forward Voltage	$I_F=1.0\text{A}$	1.3							V
t_{rr}	Maximum reverse recovery time	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	150			250	500			ns
I_{RRM1}	Peak Reverse Current	$V_{RM}=V_{RRM} \quad T_a=25^\circ\text{C}$	10							μA
I_{RRM2}		$V_{RM}=V_{RRM} \quad T_a=125^\circ\text{C}$	100							
$R_{\theta J-A}$	Thermal Resistance	Between junction and ambient	72							$^\circ\text{C/W}$
$R_{\theta J-L}$		Between junction and terminal	11							
C_J	Typical junction capacitance per diode	Measured at 1.0MHz and applied reverse voltage of 4.0 volts	5							pF

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Operating Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

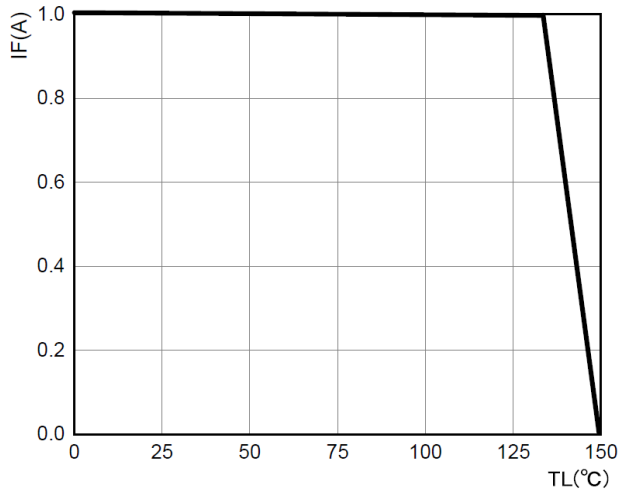


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

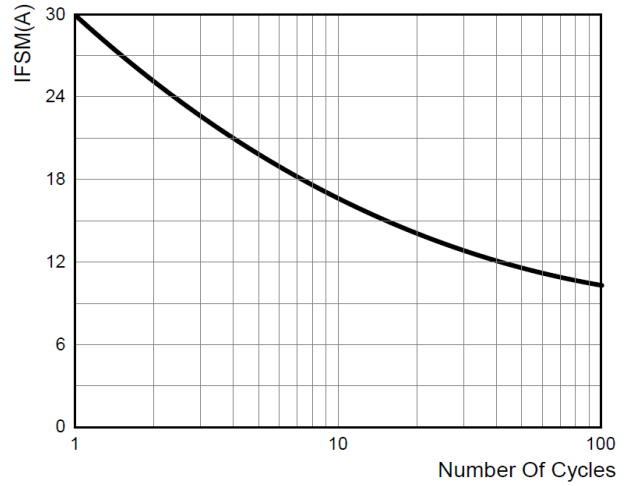


FIG.3 : TYPICAL FORWARD CHARACTERISTICS

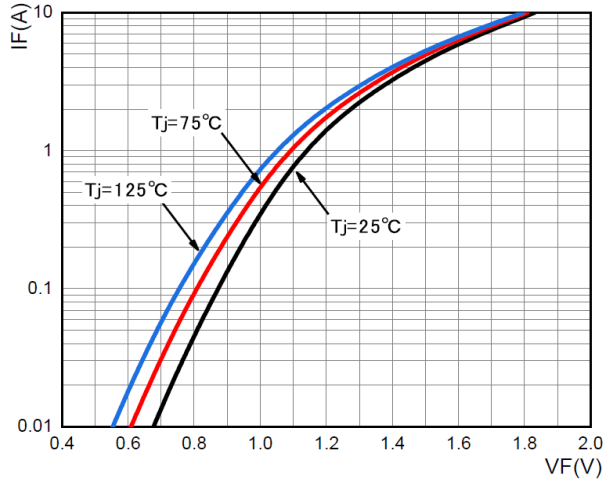
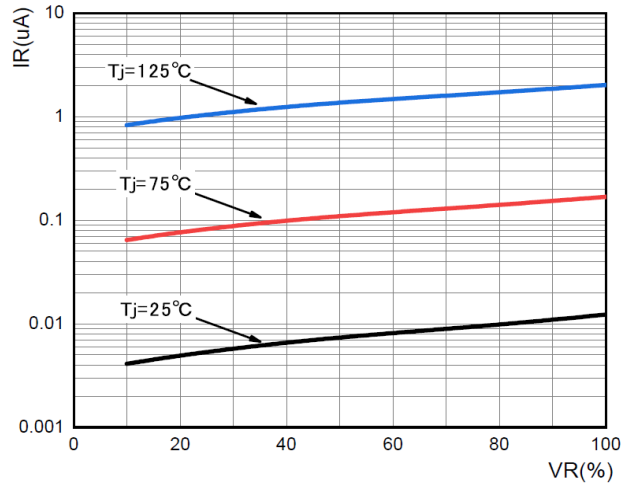
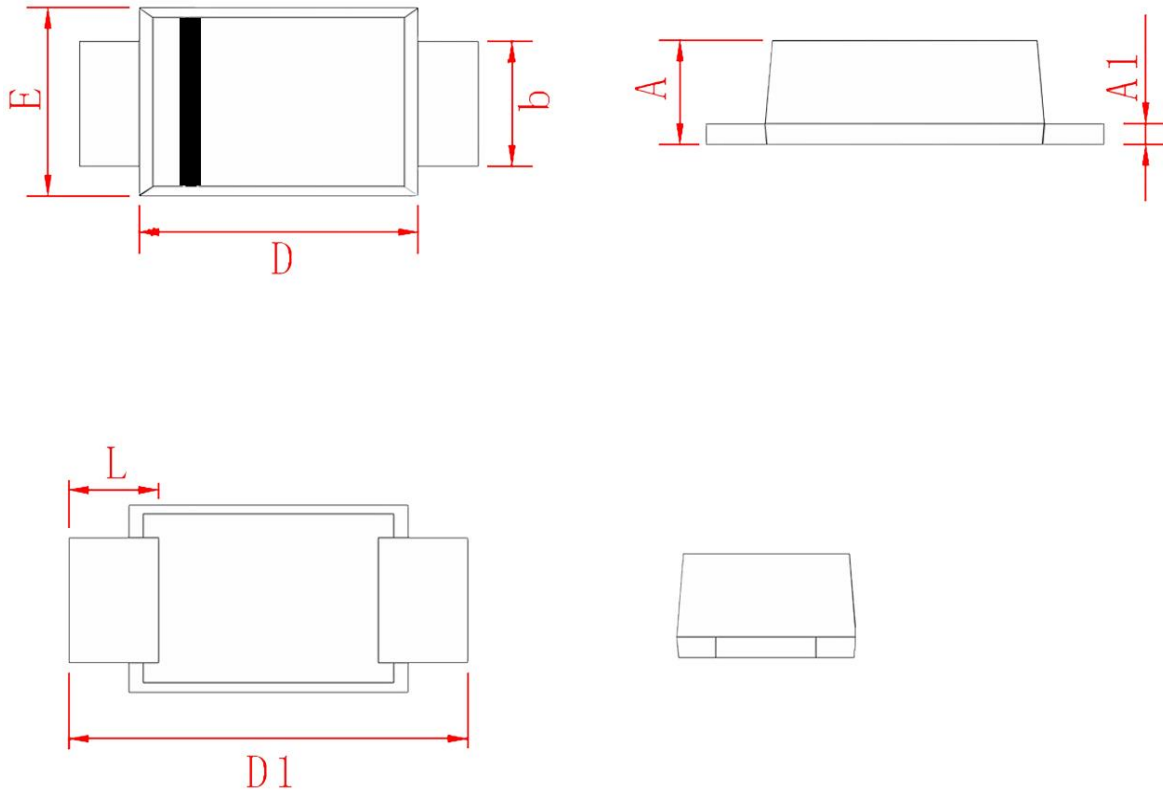


FIG.4 TYPICAL REVERSE CHARACTERISTICS



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