

### Features

- Low power loss, high efficiency
- High surge current capability

### Applications

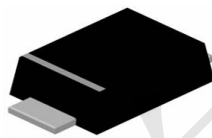
- Low voltage rectification
- Reverse polarity protection
- Low power consumption applications

### Mechanical Data

- Case : SOD-123FL Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0006 ounces, 0.017 grams
- Shipping Qty :3000pcs/7Inch Tape & Reel

### Dimensions and Pin Configuration

SOD123FL



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

PARAMETER	SYMBOL	Limits	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum Rms Voltage	$V_{RMS}$	28	V
Maximum DC Blocking Voltage	$V_R$	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2	A
Peak Forward Surge Current : 8.3ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	50	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	$C_J$	100	pF
(Note 1) Typical Thermal Resistance	$R_{\theta JA}$	200	$^\circ\text{C/W}$
(Note 2)	$R_{\theta JC}$	32	
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION		TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F = 1A$	$T_J = 25^\circ C$	0.41	-	V
		$I_F = 2A$		-	0.5	
		$I_F = 1A$	$T_J = 125^\circ C$	0.32	-	
		$I_F = 2A$		0.41	-	
Reverse Current <sup>(Note 3)</sup>	$I_R$	$V_R = 10V$	$T_J = 25^\circ C$	2	-	$\mu A$
		$V_R = 20V$		3	-	
		$V_R = 30V$		7	-	
		$V_R = 40V$		-	100	
		$V_R = 20V$	$T_J = 125^\circ C$	3	-	mA
		$V_R = 30V$		5	-	
$V_R = 40V$	6.5	-				

### Rating and Characteristic Curves

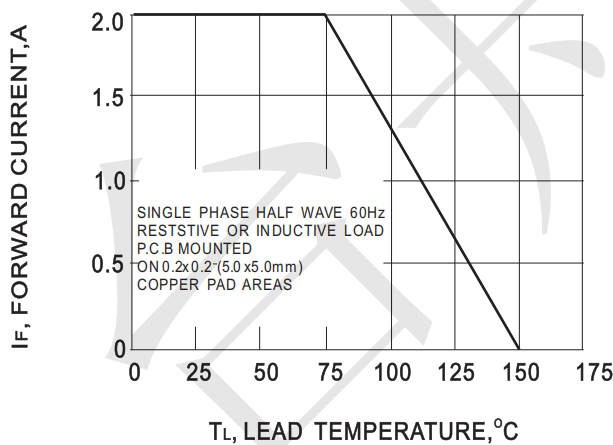


FIG. 1-FORWARD CURRENT DERATING CURVE

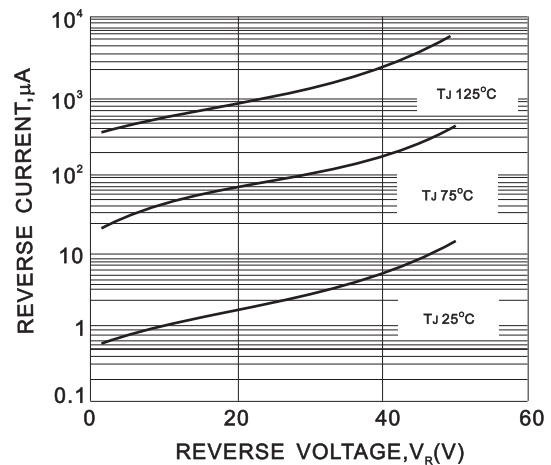


FIG. 2-TYPICAL REVERSE CHARACTERISTIC

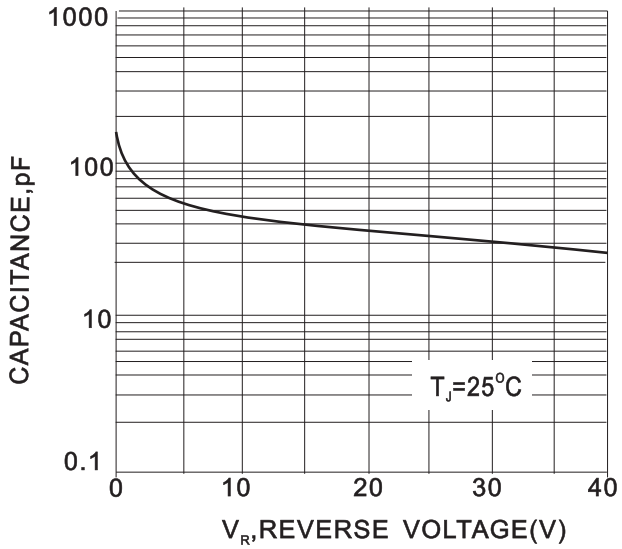


FIG. 3-TYPICAL JUNCTION CHATACTERISTIC

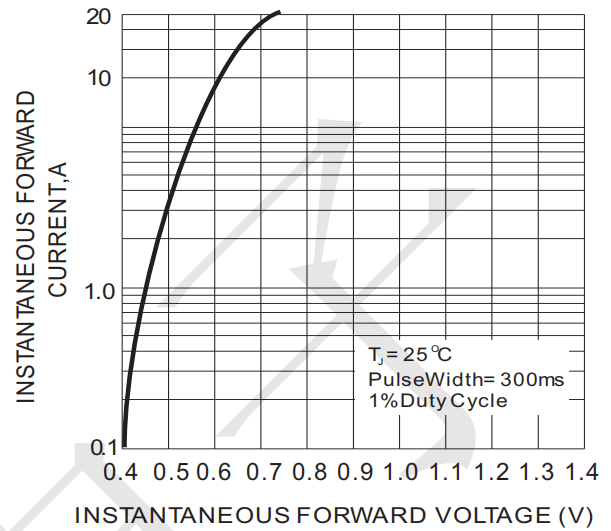


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

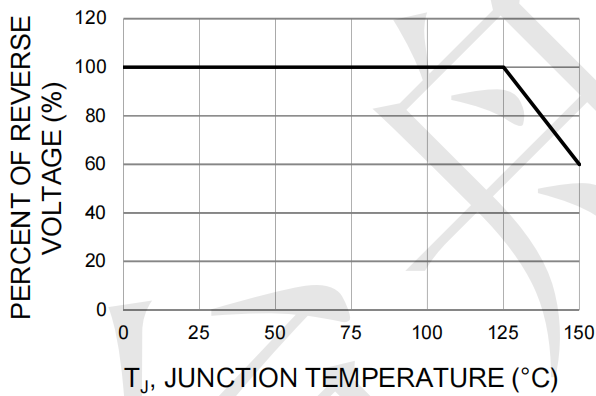
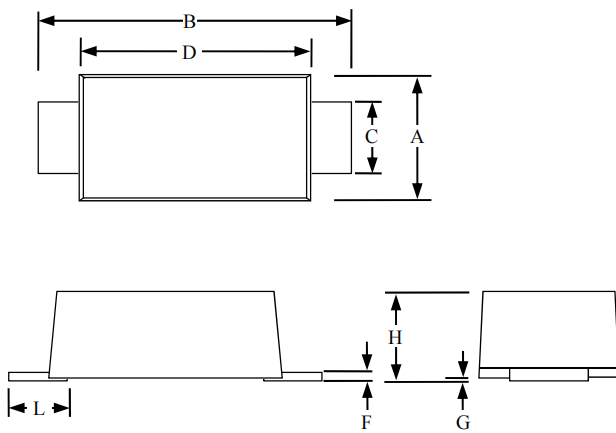


FIG. 5-OPERATING TEMPERATURE DERATING CURVE

## Package Outline Dimensions: SOD123FL



SOD-123FL						
Dimension	Inches			Millimeters		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.059		0.079	1.5		2
B	0.134		0.154	3.4		3.9
C	0.028		0.047	0.7		1.2
D	0.098		0.114	2.5		2.9
F	0.002		0.01	0.05		0.26
G	-		0.004	-		0.1
H	0.037		0.053	0.95		1.35
L	0.014		0.035	0.35		0.9