

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High current capability
- High surge capability
- Low profile surface mounted package
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



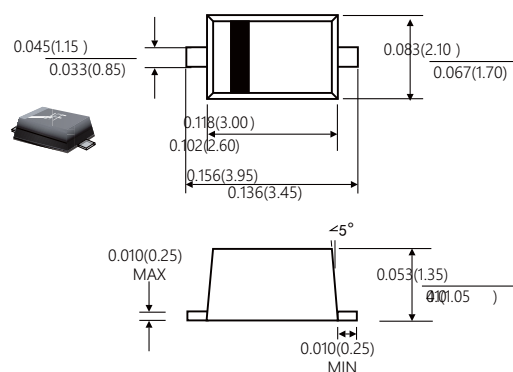
## MECHANICAL DATA

- Case: Flat lead SOD-123FL small outline plastic package
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: solderable per J-STD-002 and JESD22-B102
- Polarity: color band denotes cathode end
- Mounting Position: Any

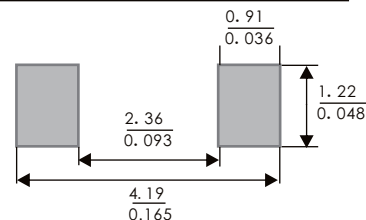
## TYPICAL APPLICATIONS

For suitable use in snubber damping circuit (RCD) in the primary of SMPS

## SOD-123FL



## Suggested PAD Layout



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	800	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	9	A
Operating junction temperature range	$T_J$	-55 to +150	°C
Storage temperature range	$T_{stg}$	-55 to +150	°C

## RATINGS AND CHARACTERISTIC OF SD1JF

### ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Voltage	$V_R^{1)}$	$I_R=200\mu\text{A}$	800	-	-	V
Forward Voltage	$V_F1^{2)}$	$I_F=0.1\text{A}$	-	-	1.1	V
	$V_F2^{2)}$	$I_F=1\text{A}$	-	-	1.7	
Reverse current	$I_R^{1)}$	$V_R=800\text{V}$	-	-	1.0	$\mu\text{A}$
	$I_R^{1)}$	$V_R=800\text{V}, T_J=125^{\circ}\text{C}$	-	-	10	$\mu\text{A}$
Typical Reverse Recovery Time	$t_{rr}$	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$	1500		3000	ns
Typical Junction Capacitance	$C_j$	$V_R=1\text{V}, f=1\text{MHz}$	-	-	8.6	pF

Notes: 1.Pulse test: 300  $\mu\text{s}$  pulse width, 1% duty cycle

2.Pulse test: pulse width  $\leq 40\text{ms}$

### THERMAL CHARACTERISTICS

Parameter	Symbol	SOD123FL	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta JA}$	206.0	$^{\circ}\text{C/W}$
	$R_{\theta JL}$	118.0	

3.PCB Mounted with The Suggested PAD Size

### AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity /pcs) reel (	Box Size L×W×H (mm)	Quantity /reel) box (	Carton Size L×W×H (mm)	Quantity /box) carton (
SD1JF-SOD-123FL	T/R	$\Phi 330$	7500	330×35×333	2	364×364×360	8

# RATINGS AND CHARACTERISTIC OF SD1JF

FIG.1-POWER DERATING CURVE

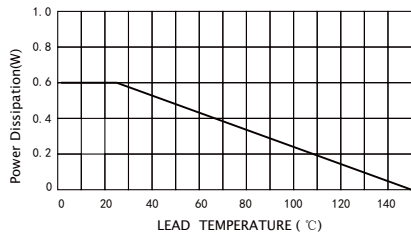


FIG.2-TYPICAL REVERSE CHARACTERISTICS

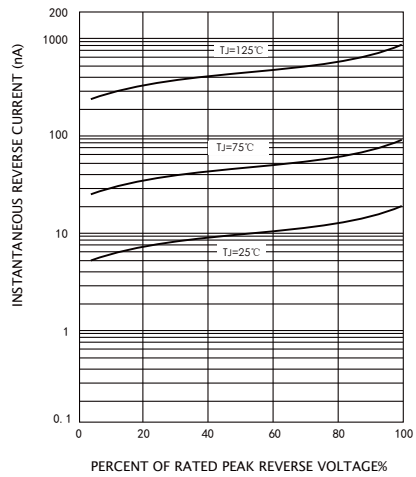


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

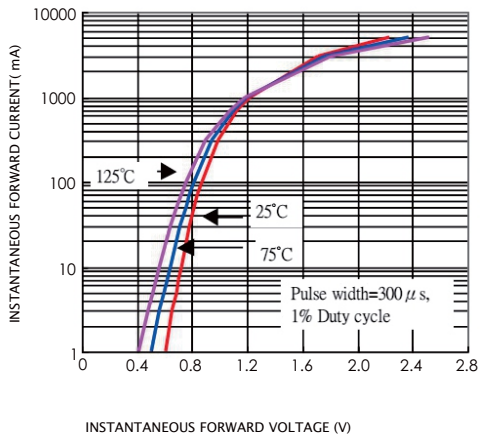


FIG.5-TYPICAL JUNCTION CAPACITANCE

