SOD-123FL Plastic-Encapsulate Diodes

Transient Voltage Suppressor Diodes

Features

- P_{PPM} 200W
- V_{RWM} 3.3V
- Low power loss, high efficiency
- Excellent clamping capability

SOD-123FL

Bi-directional 

Uni-direction 

Applications

- Protect sensitive circuit from damage by high voltage transients
- Lighting, ESD transient voltage protection of IC, system
- Inductive switching load protection of IC, system
- Electrical Fast Transient Immunity protection of IC, system

Mechical Data

- Case: SOD-123FL molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak power dissipation	P_{PPM}	W	with a 10/1000us waveform(1)	200
Peak pulse current	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Surge(Non-repetitive)Forward Current	I_{FSM}	A	Peak forward surge current, 8.3 ms single half sinewave unidirectional only	30
Peak Forward Voltage	V_F	V	Maximum instantaneous forward voltage at 10 A for unidirectional only	3.5
Operating junction and storage temperature range	T_J,T_{STG}	℃		-55 to +150
Thermal resistance	$R_{\theta JL}$	℃/W	Between junction and lead	26
	$R_{\theta JA}$	℃/W	Between junction and Ambient	300
	$R_{\theta JC}$	℃/W	Between junction and Case	40

1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1 ;

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	V_{RWM}(V)	Min.(V)	Max.(V)	I_T(mA)	$V_{C\ MAX.}$(V)	I_{PP}(A)	I_R(uA)
SMF3V3A	SMF3V3CA	3V3	3V3C	3.30	4.10	5.10	10	7.3	27.5	1000

Typical Characteristics

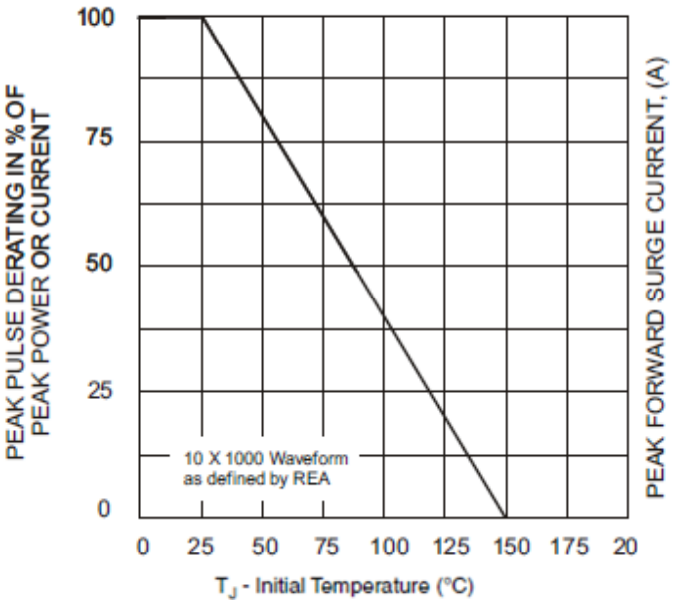


Fig. 1 - Pulse Derating Curve

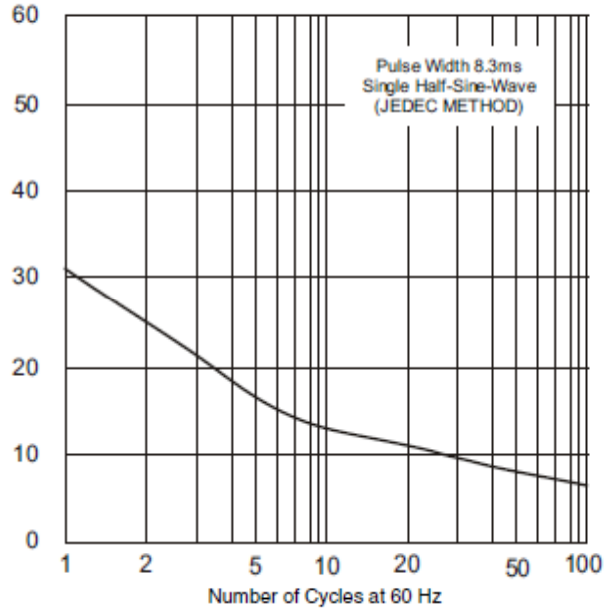


Fig. 2 - Maximum Non-Repetitive Surge Current

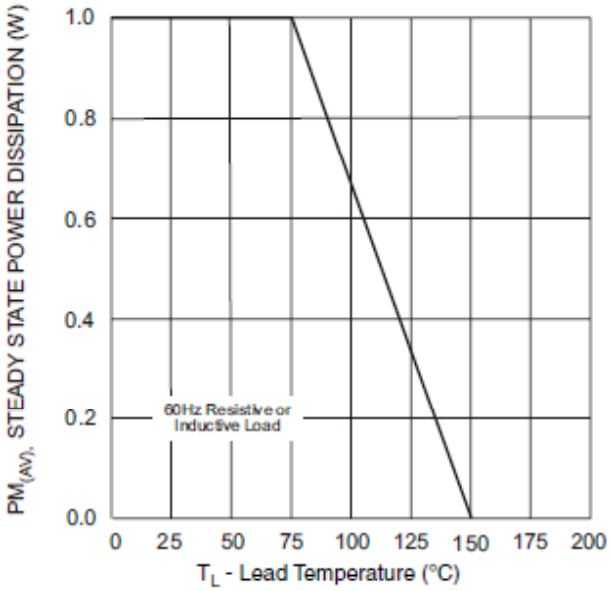


Fig. 3 - Steady State Power Derating Curve

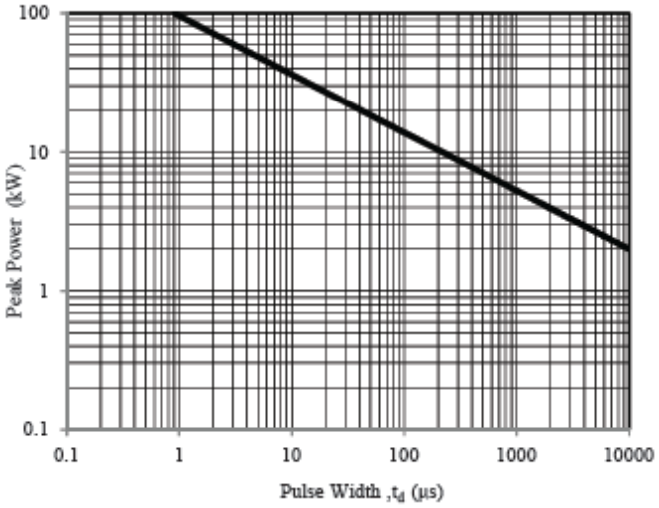


Fig. 4 - Peak Pulse Power Rating Curve

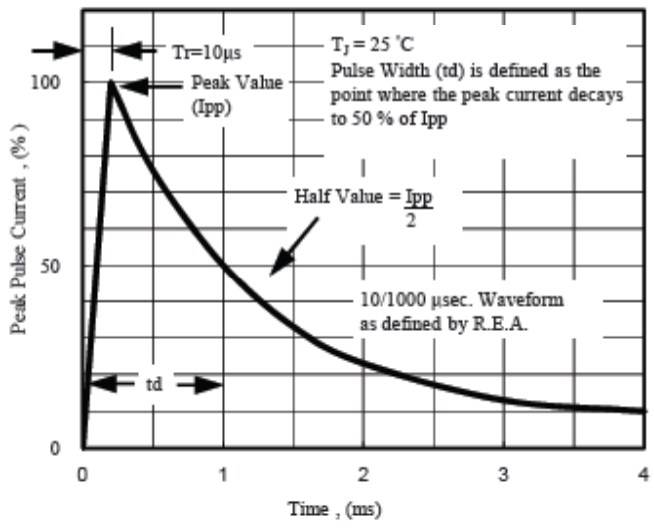


Fig. 5 - Pulse Waveform

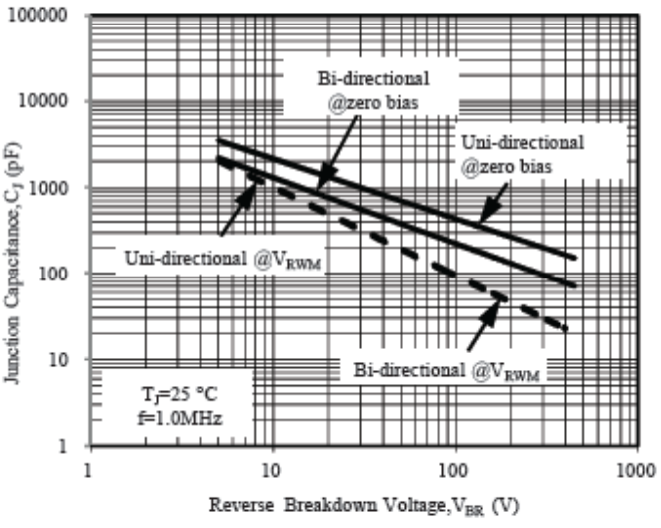
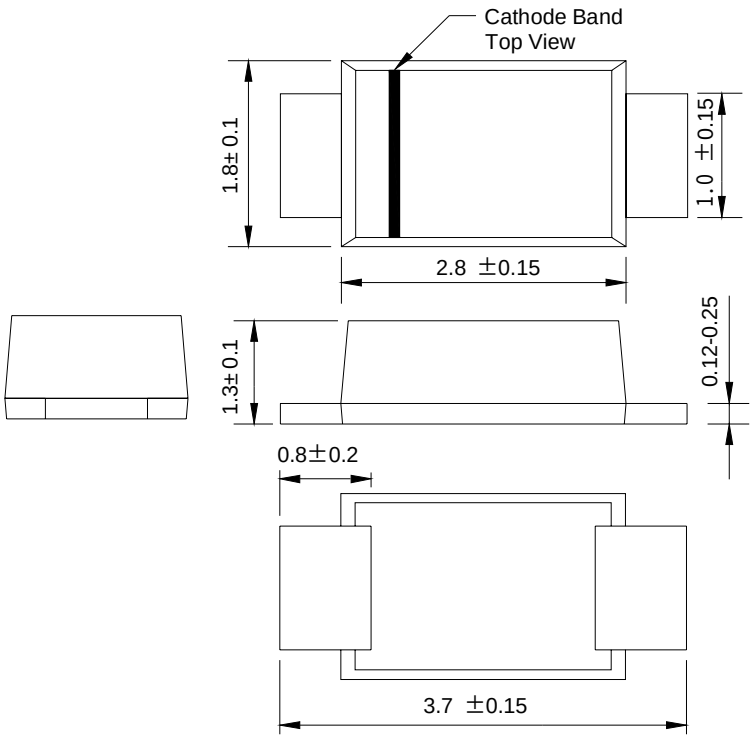


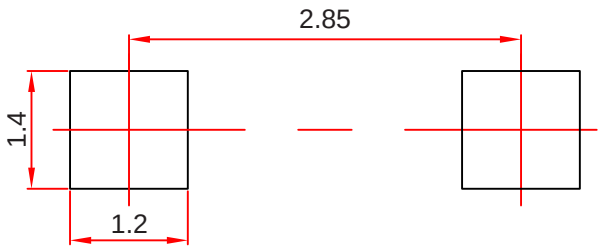
Fig. 6 - Typical Junction Capacitance

SOD-123FL Package Outline Dimensions



Dimensions in millimeters

SOD-123FL Suggested Pad Layout



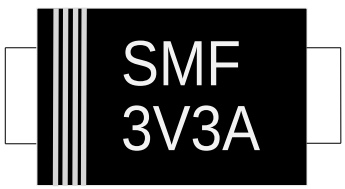
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

Part Number	Package	Shipping Quantity
SMF3V3(C)A	SOD-123FL	3000/tape&Reel

Marking Diagram

Uni-direction



Bi-directional

Reel Taping Specifications For Surface Mount Devices-SOD-123FL

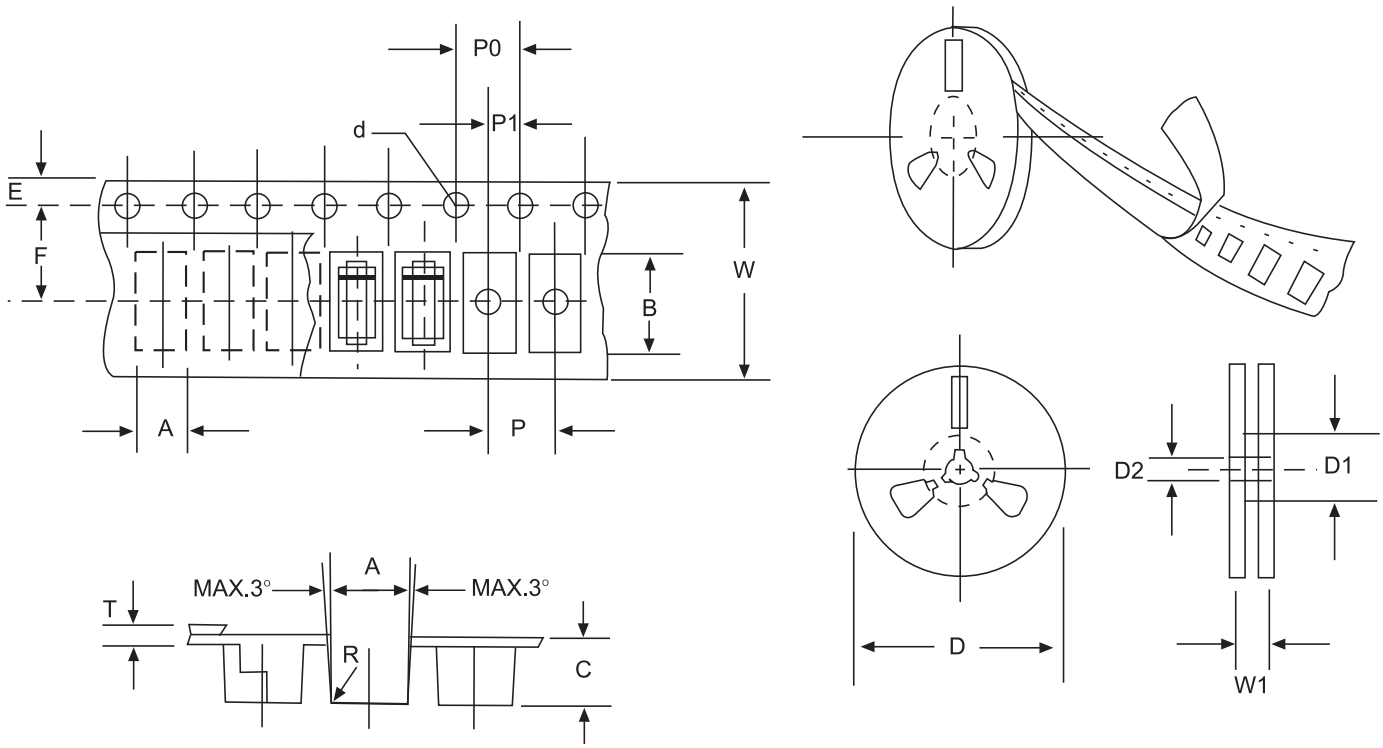


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SOD-123FLmm(inch)
Carrier width	A	2.05±0.1(0.081±0.004)
Carrier length	B	3.95±0.1(0.156±0.004)
Carrier depth	C	1.45±0.1(0.057±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	178±2.0(7.0±0.079)
Reel inner diameter	D1	54±1.0(2.13±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	3.50±0.1(0.138±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.21±0.25(0.008±0.010)
Tape width	W	8.0±0.2(0.315±0.008)
Reel width	W1	10.0±2.0(0.394±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.