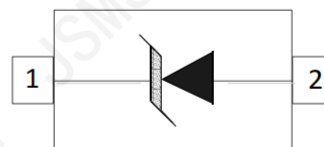
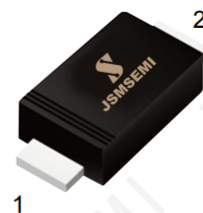


## Features

- 3800 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny SOD123FL package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data/power line to:
- IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 120A (8/20 $\mu s$ )



SOD-123FL

## Mechanical Data

- SOD123FL package
- Molding compound flammability rating:  
UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant 1.7

## Applications

- Cell Phone Handsets and Accessories
- Microprocess or based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

## Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	3800	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	120	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	30	kV
ESD per IEC 61000-4-2 (Contact)		30	
Lead Soldering Temperature	$T_L$	260 (10 seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

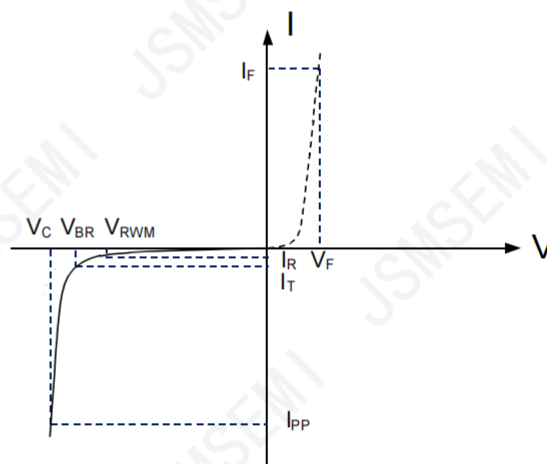
## Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				15	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	16.7			V
Reverse Leakage Current	$I_R$	$V_{RWM}=15V, T=25^{\circ}C$		0.5	1.0	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$		120		A
Clamping Voltage	$V_C$	$I_{PP}=120A, t_p=8/20\mu s$		32		V
Junction Capacitance	$C_j$	$V_R = 0V, f=1MHz$		1020		pF

## Electrical Parameters (TA = 25°C unless otherwise noted)

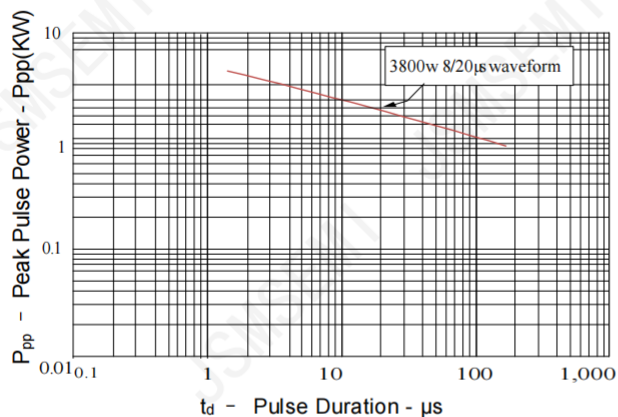
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current

Note: 8/20 $\mu s$  pulse waveform.

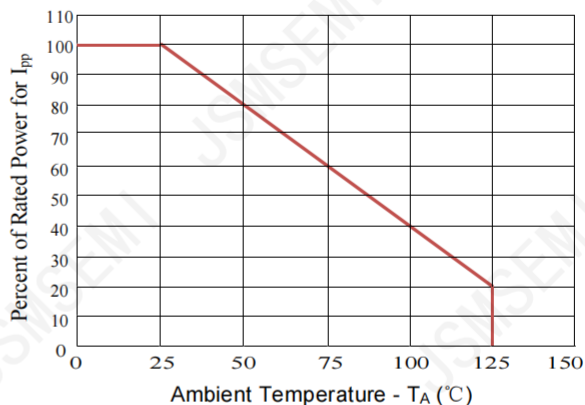


## Typical Characteristics

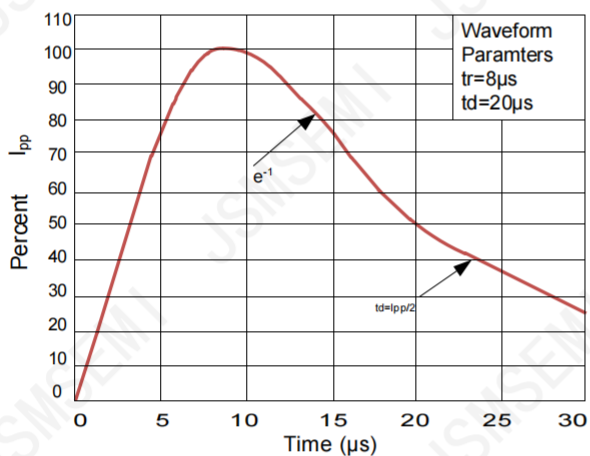
**Figure 1: Peak Pulse Power vs. Pulse Time**



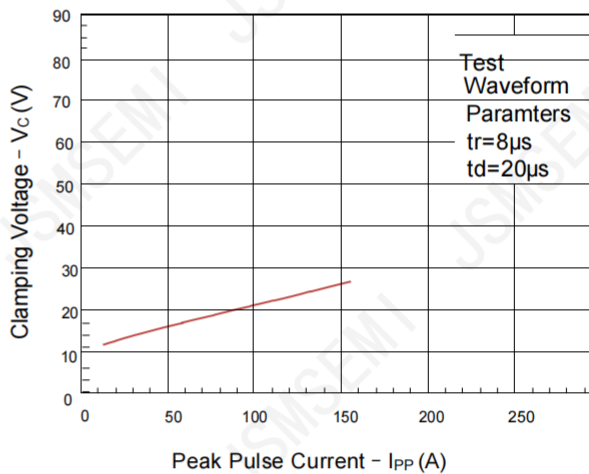
**Figure 2: Power Derating Curve**



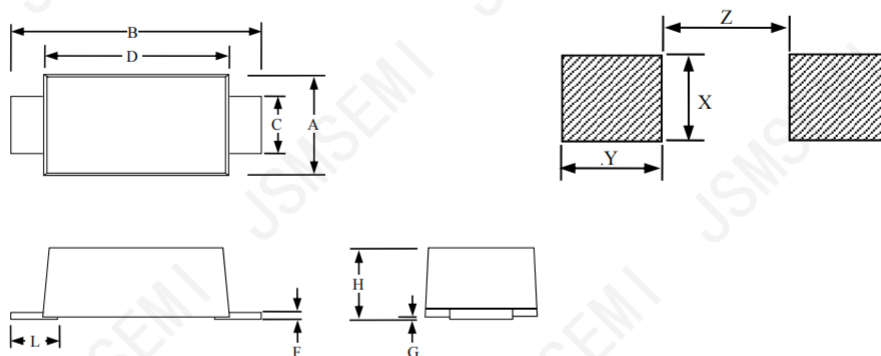
**Figure3: Pulse Waveform**



**Figure 4: Clamping Voltage vs. Ipp**



## Outline Drawing



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
X		0.055			1.4	
Y		0.051			1.3	
Z		0.063			1.6	

## Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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