

## FEATURES

- | 7400Watts peak pulse power (tp = 8/20μs)
- | Protects one data or power line
- | Working voltage: 24V
- | Fast turn-on and low clamping voltage
- | Response Time is Typically < 1 ns
- | Solid-state silicon-avalanche and active circuit triggering technology

## APPLICATIONS

- | Smart Phone and Tablet PC
- | Digital cameras, PDA
- | TV and Set Top Box
- | Wearable Devices
- | Power supplies



SOD-123FL



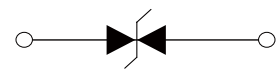
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003



Schematic Symbol

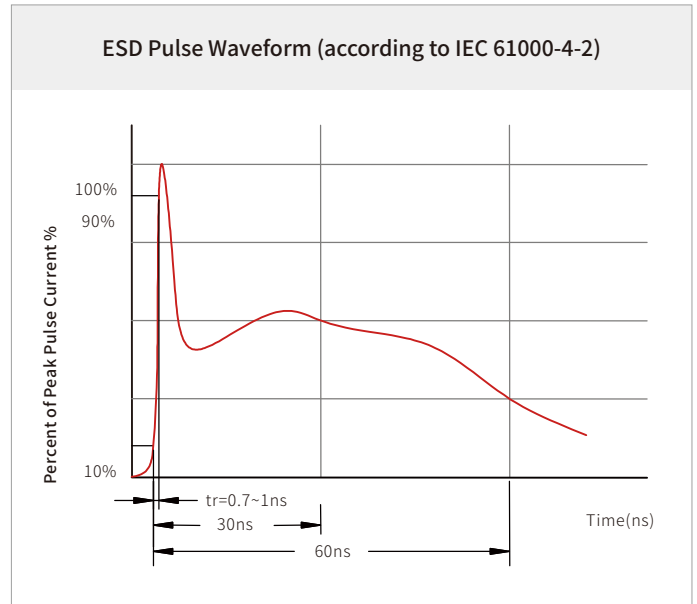
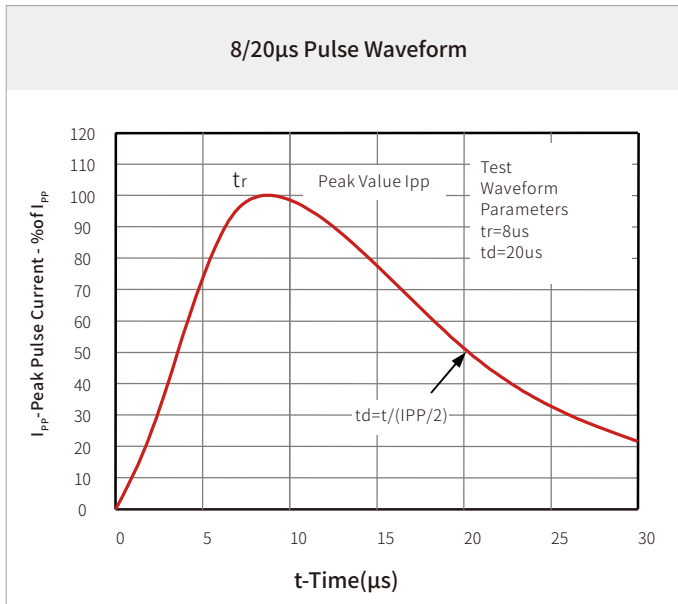
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	7400	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

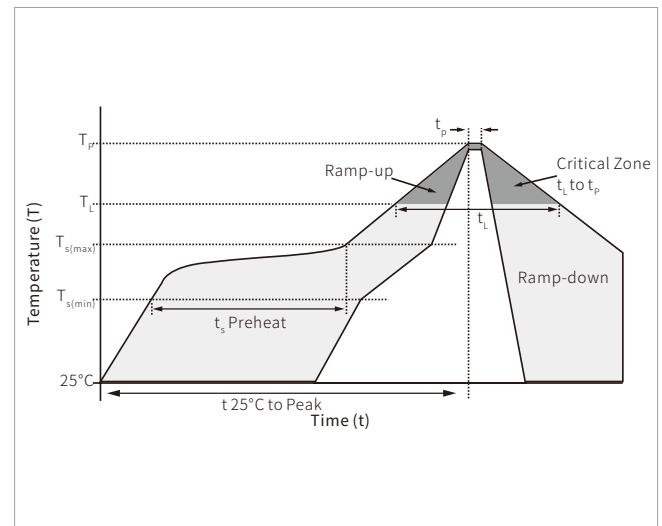
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				24.0	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	25.0			V
$I_R$	Reverse Leakage Current	$V_{RWM}=24V$			1.0	μA
$V_C$	Clamping Voltage	$I_{PP}=90A, tp=8/20\mu s$		26.0	32.0	V
$V_C$	Clamping Voltage	$I_{PP}=185A, tp=8/20\mu s$		34.0	40.0	V
$I_{PP}$	Peak Pulse Current	tp=8/20μs			185	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$		300		pF

## CHARACTERISTIC CURVES

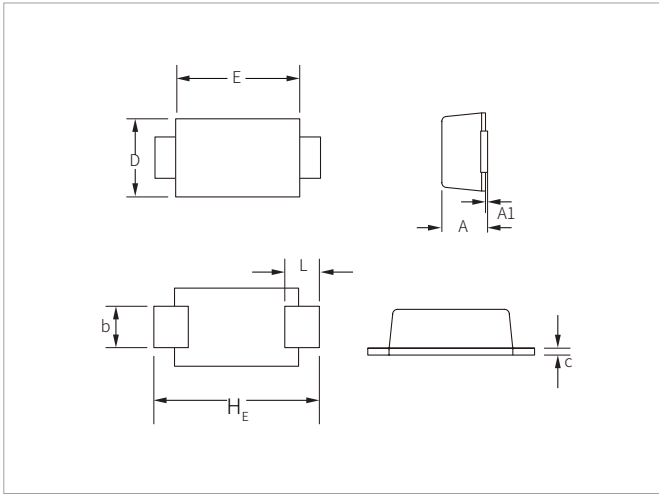


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(min)}$ )	150°C
	Temperature Max ( $T_{s(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C

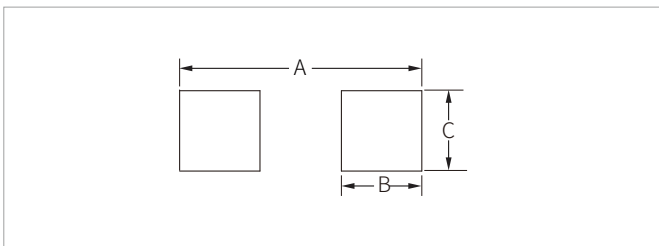


## SOD-123FL PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.95	1.45	0.037	0.057
A1	0.00	0.10	0.000	0.004
b	0.70	1.20	0.028	0.047
c	0.05	0.30	0.002	0.012
D	1.50	2.00	0.059	0.079
E	2.50	3.10	0.098	0.122
L	0.35	0.90	0.014	0.035
H <sub>E</sub>	3.40	3.90	0.134	0.154

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	4.20	0.165
B	1.50	0.059
C	1.20	0.047

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE1D740B24A	SOD-123FL	3000PCS	7"

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