

DESCRIPTION

The SE3D15B3.0MA is a low capacitance transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. This series is rated at 150 Watts for an 8/20µs waveshape.

The SE3D15B3.0MA meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. The SE3D15B3.0MA offers a low capacitance and low leakage current in a miniature SOD-323 package.

FEATURES

- > 150 Watts Peak Pulse Power per Line (tp= 8/20µs)
- > Protects One Power or I/O Port
- > Low clamping voltage
- > Low leakage current
- > Weight: 5.0mg

APPLICATIONS

- > Ethernet - 10/100/1000 Base T
- > Cellular Phones
- > I²C Bus Protection
- > Parallel & Serial Port Protection
- > Personal Digital Assistant (PDA)
- > Microcontroller Input Protection
- > WAN/LAN Equipment

IEC COMPATIBILITY

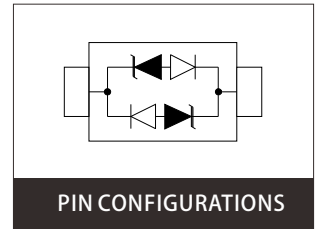
- > IEC61000-4-2 (ESD) ± 15kV (air), ± 8kV (contact)
- > IEC61000-4-4 (EFT) 40A (5/50ns)

MAXIMUM RATINGS @ 25° C UNLESS OTHERWISE SPECIFIED

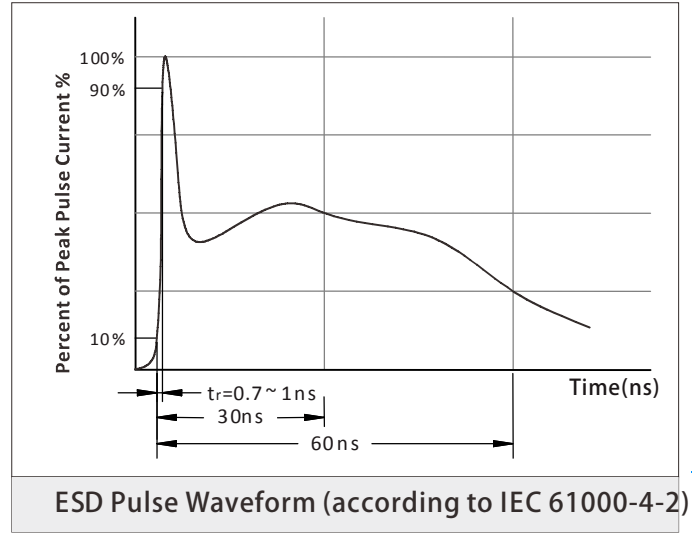
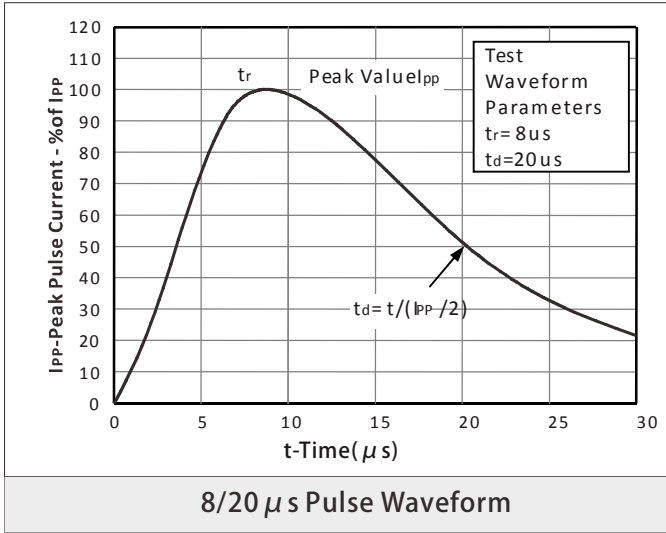
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8 /20µs waveform)	PPP	150	Watts
Lead Soldering Temperature	T _L	260(10 sec.)	°C
Operating Temperature Range	T _J	-40~150	°C
Storage Temperature Range	T _{STG}	-40~150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25° C UNLESS OTHERWISE SPECIFIED

PART NUMBER	DEVICE MARKING	V _{RWM} (V) Max.	V _B (V) Min.	I _T (mA)	V _C @1A Max.	V _C		I _R (µA) Max.	C _T (pF) Typ.
						Max.	@A		
SE3D15B3.0MA	CA1	3.0	3.5	1	5.8	15.0	10.0	0.5	1.5



CHARACTERISTIC CURVES

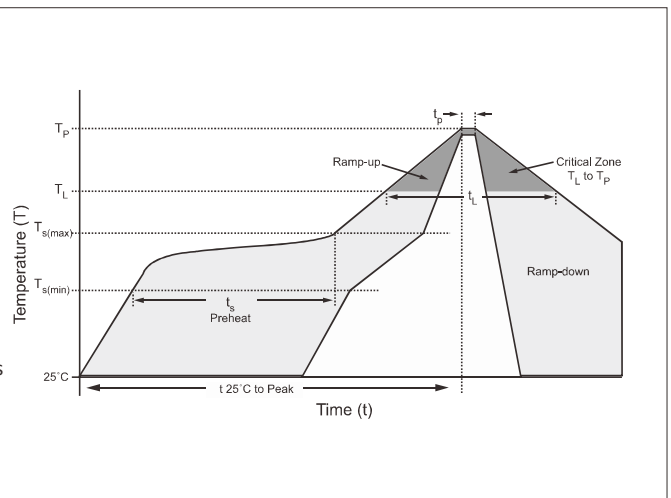


ENVIRONMENTAL CHARACTERISTICS

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature:150 \pm 3 $^{\circ}$ C,Bias= 80% VDRM ;Time:168H
High Temperature Life Test	Temperature:150 $^{\circ}$ C;Time:168H
High-Low Temperature Cycle Test	Temperature:From -40 $^{\circ}$ C to 150 $^{\circ}$ C ;Dwell Time:30 min,10-100 Cycles
High Temperature&High Humidity Test	Temperature:85 $^{\circ}$ C .Humidity:85% ; Time:168 H
Pressure Cooker Test	Temperature:121 $^{\circ}$ C, 2 atm .Humidity:100% ; Time:24H To 168H
Resistance Of Soldering Heat	Temperature:260 \pm 5 $^{\circ}$ C;Time Of Dip Soldering :10s,3 Times

REFLOW PROFILE

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min (Ts(min))	150 $^{\circ}$ C
	Temperature Max (Ts(max))	200 $^{\circ}$ C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T _L) to peak)		3 $^{\circ}$ C/second max
Ts(max)to T _L - Ramp-up Rate		3 $^{\circ}$ C/second max
Reflow	Temperature (T _L) (Liquidus)	217 $^{\circ}$ C
	Time (min to max) (ts)	60 – 150 seconds
Peak Temperature (T _P)		260 $^{\circ}$ C
Time within 5 $^{\circ}$ C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6 $^{\circ}$ C/second max
Time 25 $^{\circ}$ C to peak Temperature (T _P)		8 minutes Max.
Do not exceed		260 $^{\circ}$ C

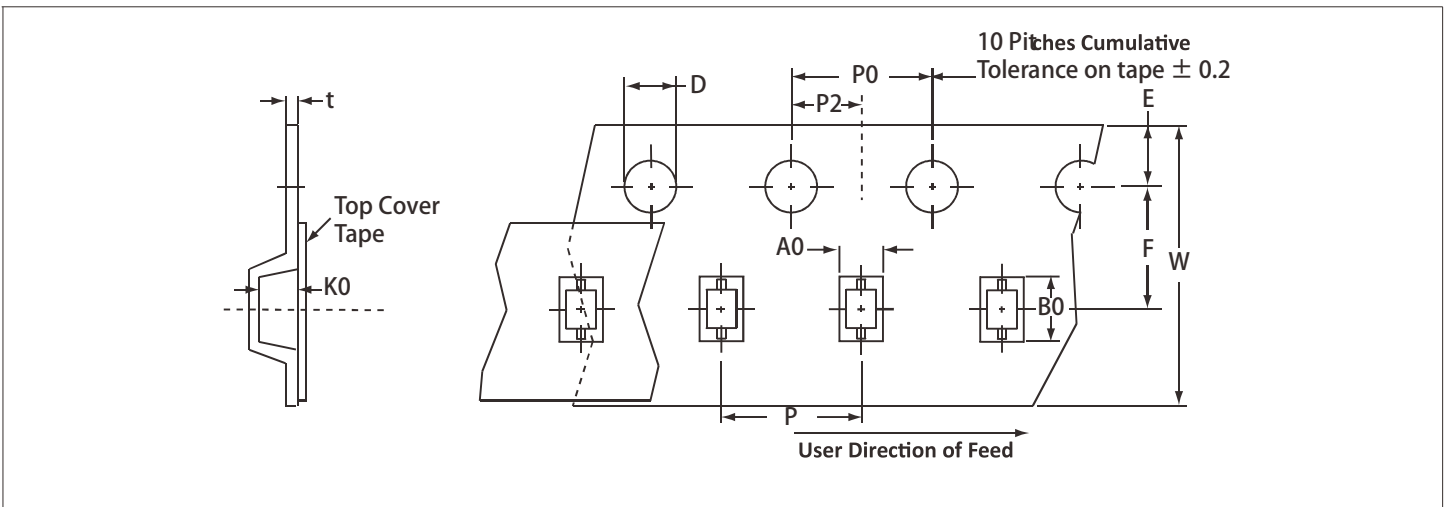


SOD-323 PACKAGE INFORMATION

OUTLINEDIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.39	2.70	0.094	0.106
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	-	0.008	-

PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.55 ± 0.10	2.90 ± 0.10	1.35 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25

NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
4. Marking on Part - marking code (see page 1)

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