

DESCRIPTION

The SE3D15B24M A is a low capacitance transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. It is rated at 150 Watts for an 8/20 μs waveshape.

The SE3D15B24M A 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 SE3D15B24M A offers a low capacitance and low leakage current in a miniature SOD-323 package.

FEATURES

- >150 Watts Peak Pulse Power per Line (tp=8/20 μs)
- >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
- >FC Bus Protection
- >Parallel & Serial Port Protection
- >Personal Digital Assistant (PDA)
- >Microcontroller Input Protection
- >WAN/LAN Equipment

IEC COMPATIBILITY

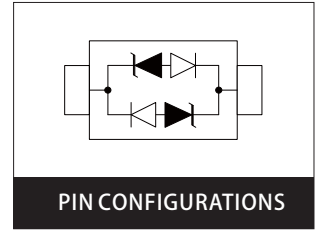
- >IEC61000-4- 2 (ESD) ±15 kV (air), ± 8kV (contact)
- >IEC61000-4- 4 (EFT) 40A (5/50ns)

MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

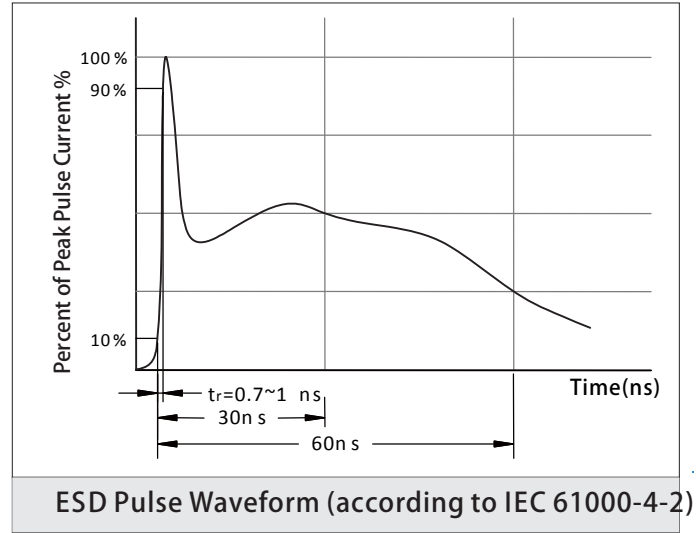
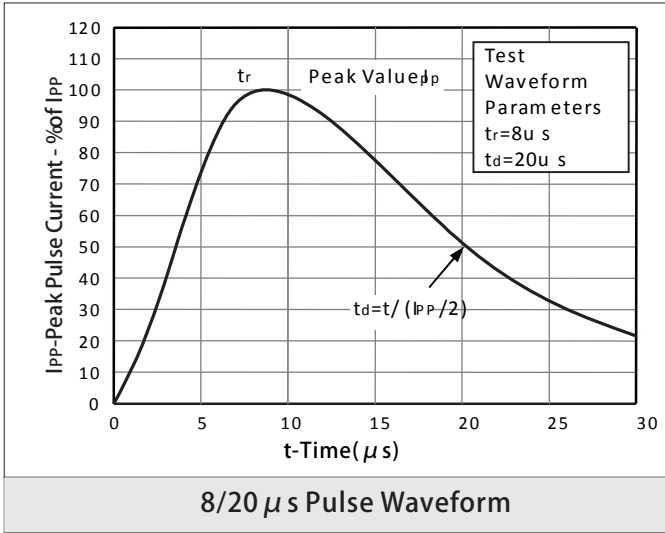
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20μs waveform)	PPP	150	Watts
Lead Soldering Temperature	TL	260(10 sec.)	°C
Operating Temperature Range	TJ	-40~150	°C
Storage Temperature Range	TSTG	-40~150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C UNLESS OTHERWISE SPECIFIED

PART NUMBER	DEVICE MARKING	VRWM (V) Max.	VB (V) Min.	IT (mA)	Vc @1A Max.	Vc		IR (uA) Max.	CT (pF) Typ.
						Max.	@ A		
SE3D15B24MA	HC	24.0	26.7	1	43.0	56.0	3.0	1	1.5



CHARACTERISTIC CURVES

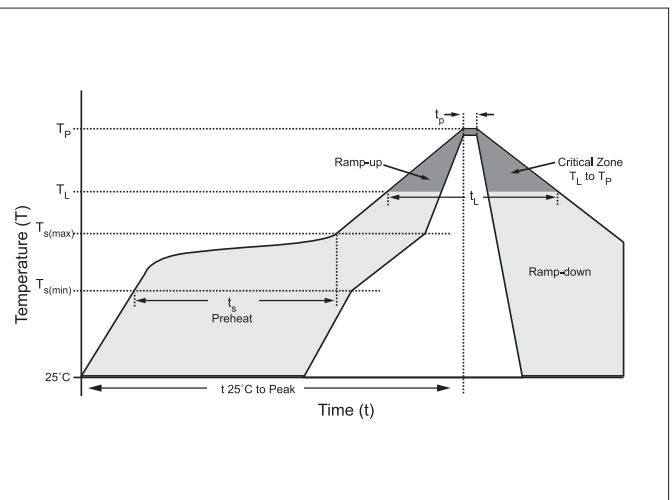


ENVIRONMENTAL CHARACTERISTICS

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: 150 \pm 3 $^{\circ}$ C, Bias=80% V _{DRM} ; Time: 168 H
High Temperature Life Test	Temperature: 150 $^{\circ}$ C; Time: 168 H
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: 24 H To 168 H
Resistance Of Soldering Heat	Temperature: 260 \pm 5 $^{\circ}$ C; Time Of Dip Soldering: 10s, 3 Times

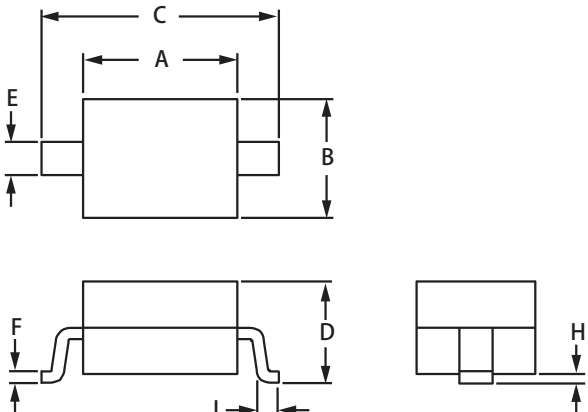
REFLOW PROFILE

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 sec
Average ramp up rate (Liquidus Temp (TL) to peak)		3 $^{\circ}$ C /second max
Ts(max) to T _p - Ramp-up Rate		3 $^{\circ}$ C /second max
Reflow	Temperature (TL) (Liquidus)	217 $^{\circ}$ C
	Time (min to max) (ts)	60 – 150 seconds
Peak Temperature (Tp)		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 (Tp)		8 minutes Max.
Do not exceed		260 $^{\circ}$ C

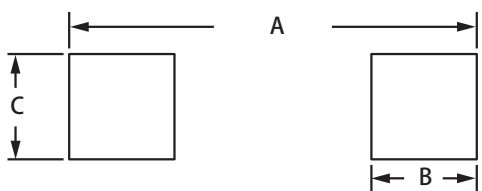


SOD-323 PACKAGE INFORMATION

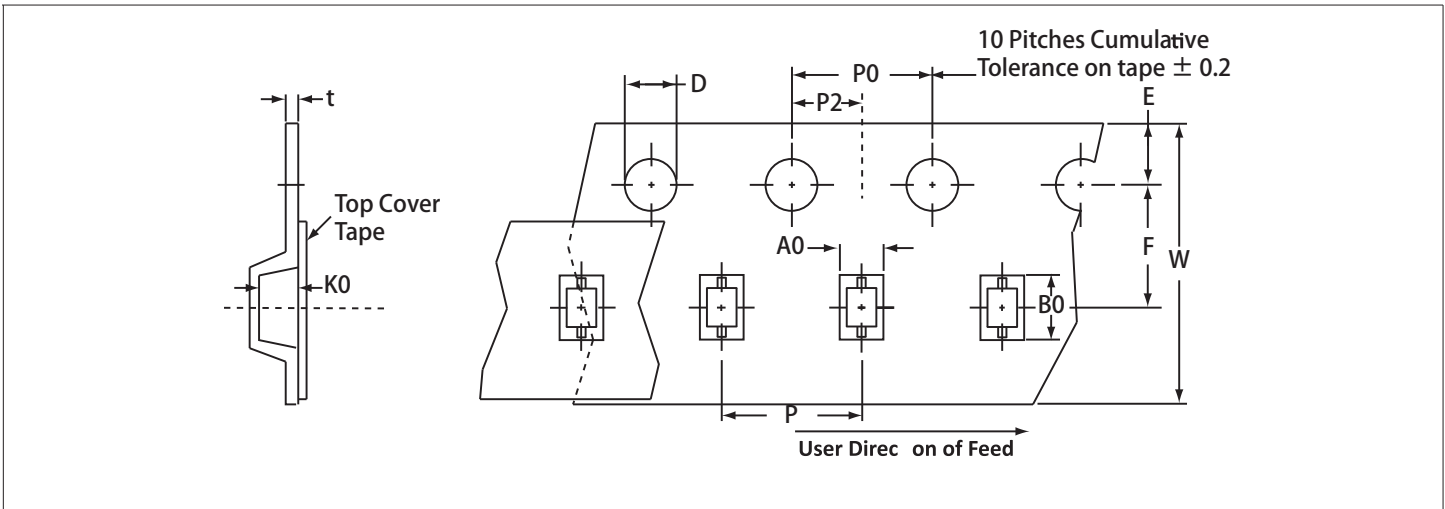
OUTLINEDIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.39	2.70	0.094	0.106
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	-	0.008	-



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

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

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