

## DESCRIPTION

The SG3D15B5.0MA is an ultra low capacitance transient voltage suppressor array , designed to protect applications such as portable electronics and SMART phones. This series is rated at 400 Watts for an 8/20 $\mu$ s waveshape.

The SG3D15B5.0MA 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 SG3D15B5.0MA offers an ultra low capacitance and low leakage current in a miniature SOD-323 package.

## FEATURES

- >400 Watts Peak Pulse Power per Line (tp=8/20 $\mu$ s)
- >Protects One Signal Line or I/O Port
- >Low clamping voltage
- >Low leakage current

## APPLICATIONS

- >Ethernet - 10/100/1000 Base T
- >Cellular Phones
- >I<sup>2</sup>C Bus Protection
- >Parallel & Serial Port Protection
- >Personal Digital Assistant (PDA)
- >Microcontroller Input Protection
- >WAN/LAN Equipment

## IEC COMPATIBILITY

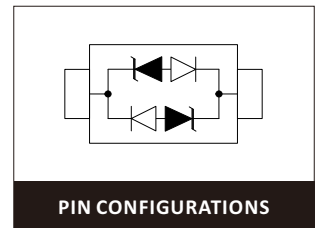
- >IEC61000-4-2 (ESD)  $\pm$ 30kV (air),  $\pm$ 30kV (contact)
- >IEC61000-4-4 (EFT) 40A (5/50ns)

## MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

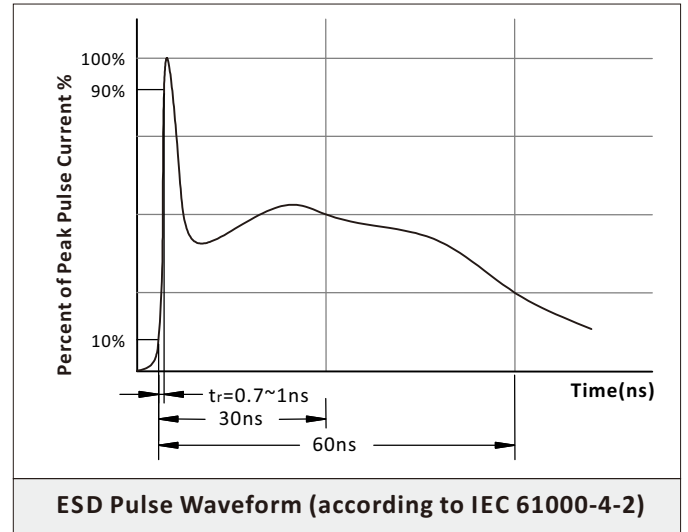
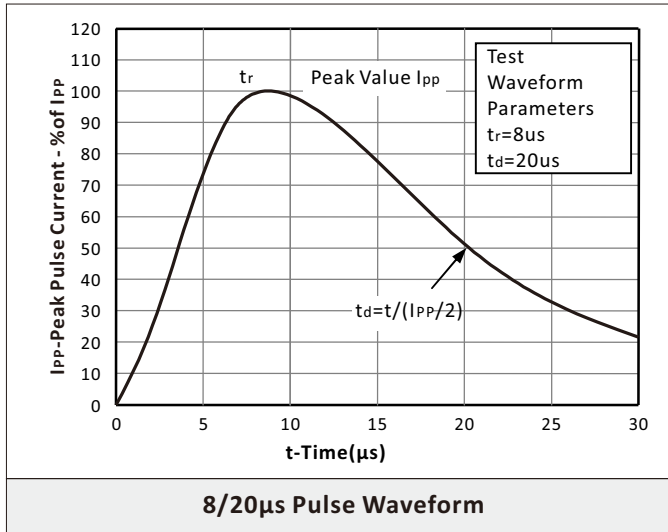
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20 $\mu$ s waveform)	PPP	400	Watts
Operating Temperature Range	TJ	-55~125	°C
Storage Temperature Range	TSTG	-55~150	°C

## ELECTRICAL CHARACTERISTICS PER LINE @ 25°C UNLESS OTHERWISE SPECIFIED

PART NUMBER	DEVICE MARKING	VRWM (V) Max.	VBR (V) Min.	IT (mA)	Vc @1A Max.	Vc		IR ( $\mu$ A) Max.	CT (pF) Typ.
						Max.	@A		
SG3D15B5.0MA	AC	5.0	6.0	1	9	21.0	20.0	0.1	1.0

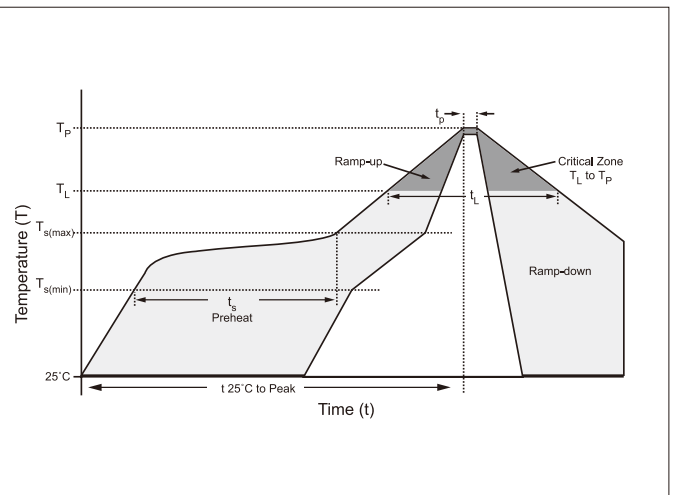


### CHARACTERISTIC CURVES



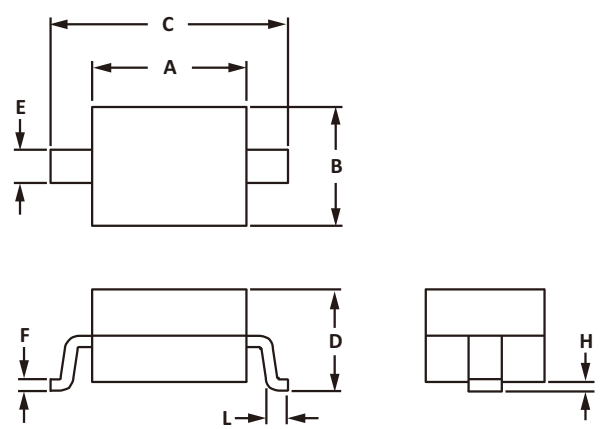
### REFLOW PROFILE

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

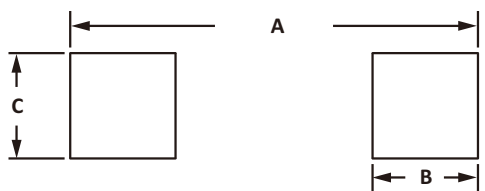


**SOD-323 PACKAGE INFORMATION**

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	-


**RECOMMENDED PAD LAYOUT DIMENSION**

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


**ORDERING INFORMATION**

Part Number	Component Package	QTY/Reel	Reel Size
SG3D15B5.0MA	SOD-323	3000PCS	7"