

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 μ 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 μ s)
- >Protects One Signal Line or I/O Port
- >Low clamping voltage
- >Low leakage current

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

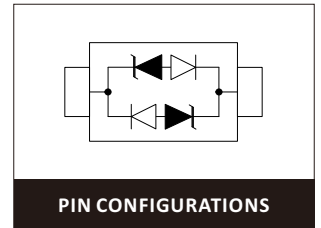
- >IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact)
- >IEC61000-4-4 (EFT) 40A (5/50ns)

MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

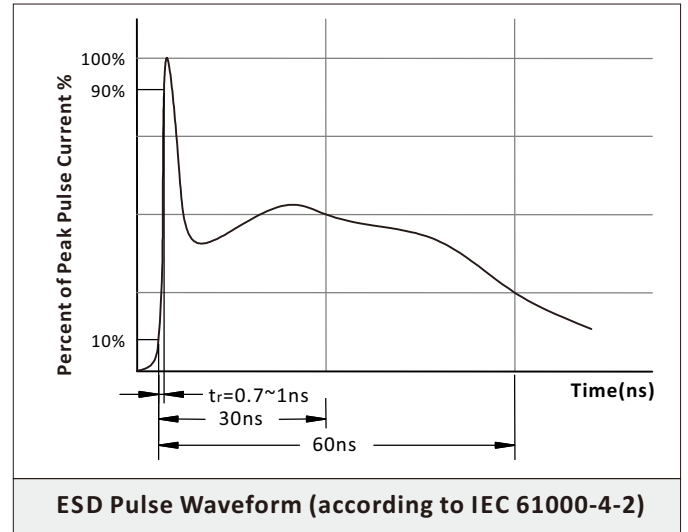
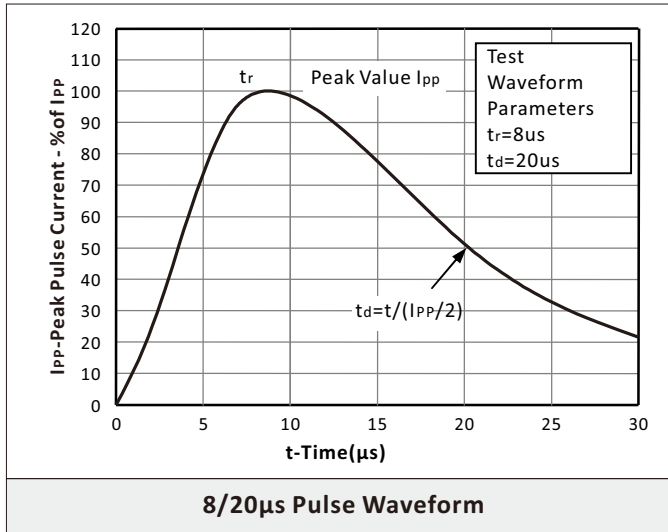
| PARAMETER | SYMBOL | VALUE | UNIT |
|---|--------|---------|-------|
| Peak Pulse Power (tp=8/20 μ s waveform) | PPP | 400 | Watts |
| Operating Temperature Range | TJ | -55~125 | °C |
| Storage Temperature Range | TSTG | -55~150 | °C |

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 (μ A) Max. | CT (pF) Typ. |
|--------------|----------------|---------------------|--------------------|------------|-------------------|------|------|--------------------------|--------------------|
| | | | | | | Max. | @A | | |
| SG3D15B5.0MA | AC | 5.0 | 6.0 | 1 | 9 | 21.0 | 20.0 | 0.1 | 1.0 |

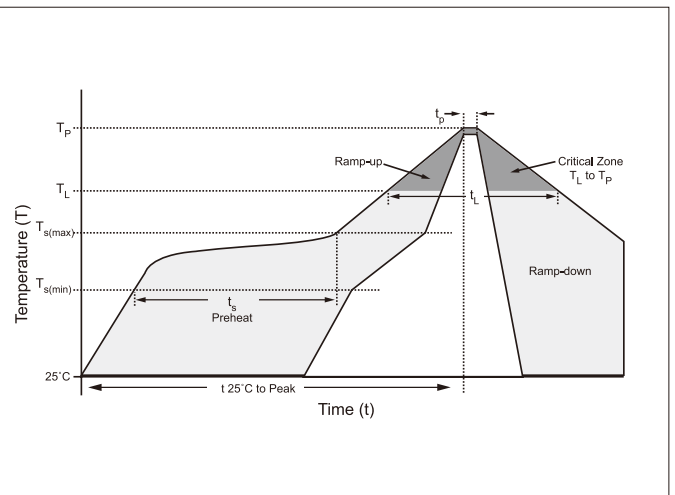


CHARACTERISTIC CURVES



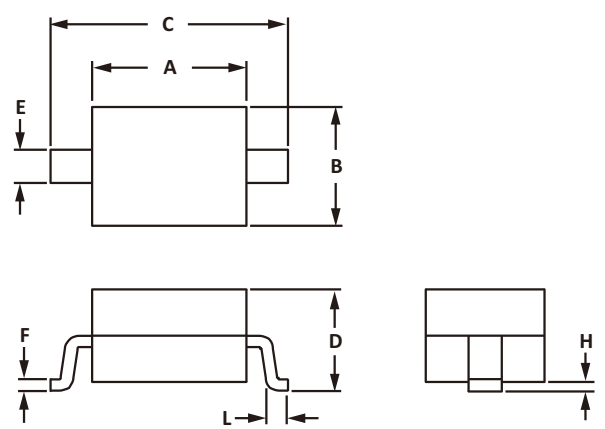
REFLOW PROFILE

| 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 |



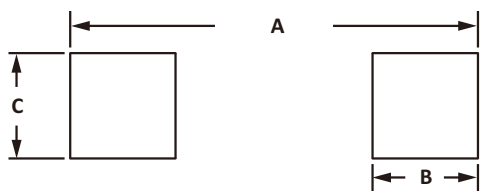
SOD-323 PACKAGE INFORMATION

| 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" |

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