

DESCRIPTION

The SESDxx and SESDxxC Series are transient voltage suppressor arrays designed for ESD protection of SMART phones, laptop computers and other portable electronics. These silicon based diodes offer superior clamping voltage and performance compared to other technologies such as MLVs.

The SESDxx and SESDxxC Series can be utilized as a single line protector in either a unidirectional or bidirectional configuration. The SOD-323 small package configuration offers designers the flexibility of placement on the printed circuit board for each I/O port or voltage bus. The SESDxx and SESDxxC Series meets the IEC 61000-4-2 (ESD), 61000-4-4 (EFT) and 61000-4-5 requirements.



FEATURES

- >350 Watts Peak Pulse Power per Line (tp=8/20μs)
- >Protects One Power or I/O Port
- >Low clamping voltage
- >Working voltages: 3V, 5V, 8V, 12V, 15V, 24V, 36V
- >Low leakage current

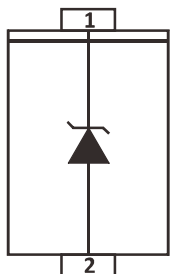
APPLICATIONS

- >Cell Phone Handsets and Accessories
- >Microprocessor based equipment
- >Personal Digital Assistants (PDA's)
- >Notebooks, Desktops, and Servers
- >Portable Instrumentation
- >Peripherals
- >USB Interface

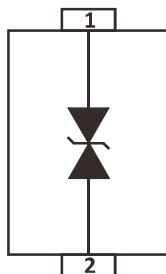
IEC COMPATIBILITY

- >IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)

PIN CONFIGURATIONS



UNIDIRECTIONAL



BIDIRECTIONAL

TYPICAL DEVICE CHARACTERISTICS

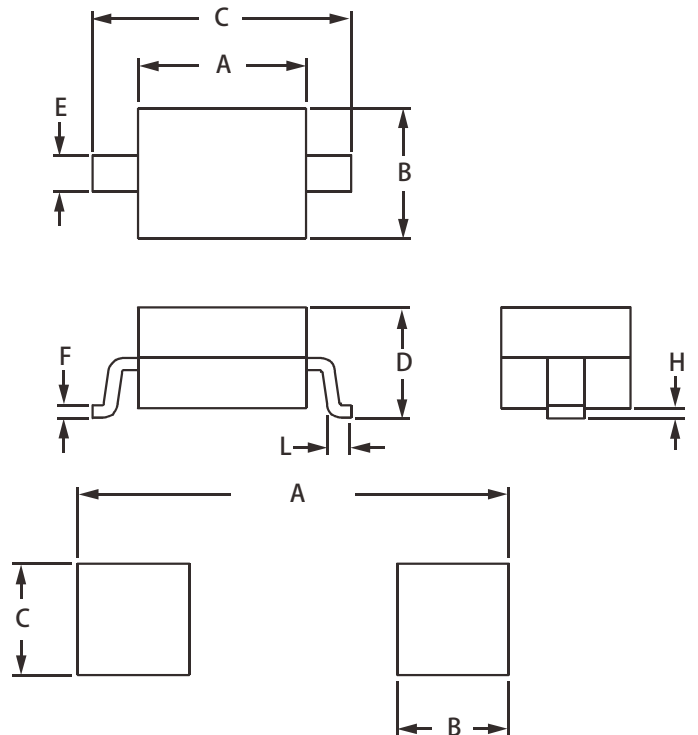
| MAXIMUM RATINGS @ 25° C UNLESS OTHERWISE SPECIFIED | | | |
|--|------------------|--------------|-------|
| PARAMETER | SYMBOL | VALUE | UNIT |
| Peak Pulse Power (tp=8/20μs waveform) | P _{PP} | 350 | Watts |
| Lead Soldering Temperature | T _L | 260(10 sec.) | °C |
| Operating Temperature Range | T _J | -55~150 | °C |
| Storage Temperature Range | T _{STG} | -55~150 | °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 (uA) Max. | C _T (pF) Typ. |
| | | | | | | Max. | @A | | |
| SESD03 | 03W | 3.0 | 4.0 | 1 | 6.50 | 10.9 | 30.0 | 40 | 500 |
| SESD05 | 05W | 5.0 | 6.0 | 1 | 9.80 | 13.5 | 24.0 | 10 | 350 |
| SESD08 | 08W | 8.0 | 8.5 | 1 | 13.40 | 21.0 | 18.0 | 10 | 150 |
| SESD12 | 12W | 12.0 | 13.3 | 1 | 19.00 | 25.9 | 15.0 | 1 | 120 |
| SESD15 | 15W | 15.0 | 16.7 | 1 | 24.00 | 30.0 | 12.0 | 1 | 100 |
| SESD24 | 24W | 24.0 | 26.7 | 1 | 43.00 | 48.0 | 8.0 | 1 | 80 |
| SESD36 | 36W | 36.0 | 40.0 | 1 | 60.00 | 75.0 | 5.0 | 1 | 30 |
| SESD03C | 2A | 3.0 | 4.0 | 1 | 7.50 | 16.0 | 25.0 | 200 | 350 |
| SESD05C | 2B | 5.0 | 6.0 | 1 | 9.80 | 17.0 | 24.0 | 10 | 260 |
| SESD08C | 2C | 8.0 | 8.5 | 1 | 13.40 | 20.0 | 18.0 | 5 | 120 |
| SESD12C | 2D | 12.0 | 13.3 | 1 | 19.00 | 25.0 | 13.0 | 1 | 110 |
| SESD15C | 2J | 15.0 | 16.7 | 1 | 24.00 | 30.0 | 6.0 | 1 | 100 |
| SESD24C | 2H | 24.0 | 26.7 | 1 | 43.00 | 52.0 | 6.0 | 1 | 75 |
| SESD36C | 2N | 36.0 | 40.0 | 1 | 60.00 | 75.0 | 4.0 | 1 | 35 |

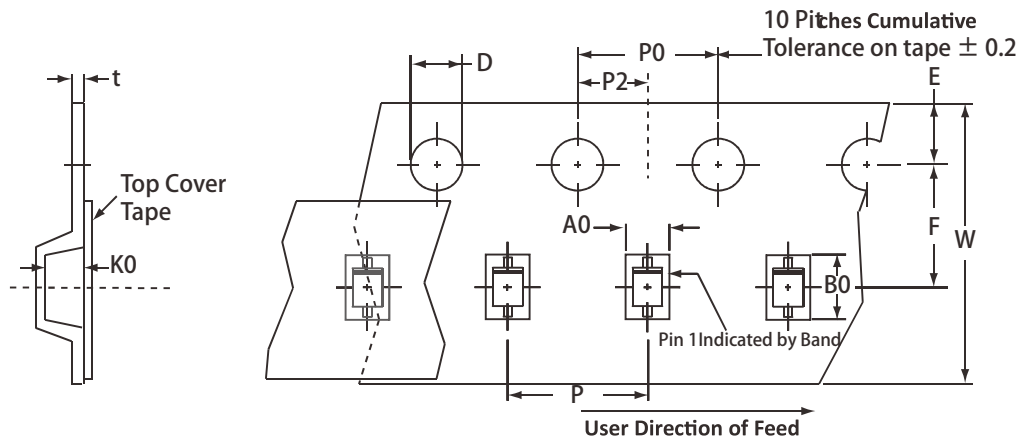
SOD-323 PACKAGE INFORMATION

| 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 \pm 0.10 | 2.90 \pm 0.10 | 1.35 \pm 0.10 | 1.50 \pm 0.10 | 1.75 \pm 0.10 | 3.50 \pm 0.05 | 8.00 \pm 0.30 | 4.00 \pm 0.10 | 2.00 \pm 0.05 | 4.00 \pm 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 2) | | | | | | | | | | | | |

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