

Transient Voltage Suppressor

DESCRIPTION

KSDxxT1G Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications.

ORDERING INFORMATION

♦ Package: SOD-323 ♦ Material: Halogen free ♦ Packing: Tape & Reel ♦ Quantity per reel: 3,000pcs

PIN CONFIGURATION

FEATURES

- ♦IEC61000-4-2 Level 4 ESD Protection
- ♦ Protects one directional I/O line
- ♦Low clamping voltage
- ♦ Working voltages : 3.3V, 5V,7V,12V
- ♦Low leakage current

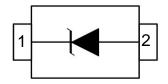
MACHANICAL DATA

- ♦SOD-323 package
- ♦Flammability Rating: UL 94V-0
- ♦ Packaging: Tape and Reel
- → High temperature soldering guaranted:260 °C/10s
- ♦Reel size: 7 inch

APPLICATIONS

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

PACKAGE OUTLINE





ABSOLUTE MAXIMUM RATING

| Symbol | Parameter | Value | Units |
|------------------|--|----------|-------|
| \/ | ESD per IEC 61000-4-2 (Air) | ±30 | IAV/ |
| V _{ESD} | ESD per IEC 61000-4-2 (Contact) | ±30 | kV |
| ESD | ESD Voltage per human body model | 16 | kV |
| E9D | ESD Voltage per machine model | 400 | V |
| P_D | Total Power Dissipation on FR-5 Board (Note 1) @ Ta=25°C | 150 | mW |
| $T_{J,}T_{STG}$ | Junction and Storage Temperature | -55/+150 | °C |
| T_L | Lead Solder Temperature – Maximum (10 Second Duration) | 260 | °C |

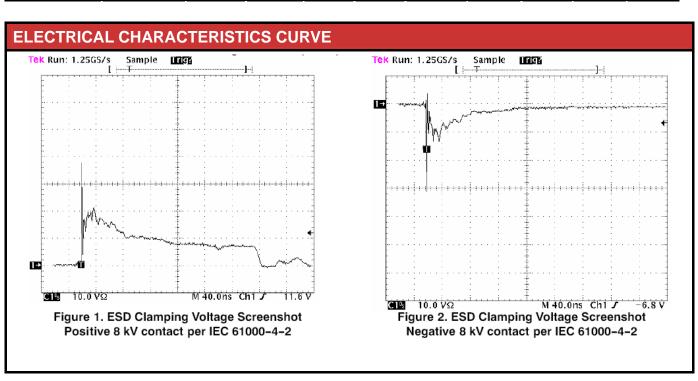
These ratings are limiting values above which the serviceability of the diode may be impaired Note 1. FR-5=1.0x0.75x0.62 in.





Transient Voltage Suppressors

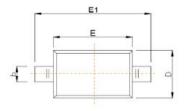
| ELECTRICA | L CHARAC | TERIST | ICS (Tar | nb=25° | C) | | | | | |
|----------------|-------------------|-----------------------------------|----------------------------------|---------------------------------|---------------------|-------------------------------------|-------------------|------|----------------------------|----------------------------------|
| PART NUMBER | DEVICE MARKING | V _{RWM} (V) (max.) | I _R (μΑ) (max.) | V _B (V) (min.) | I _T (mA) | V _C @5A (V) (max.) | \ (\ (max.) | _ | P _{PK} (W) (max.) | C _J (pF) (typ.) |
| KSD03T1G | 03 | 3.3 | 0.90 | 5.0 | 1 | 9.4 | 14.1 | 11.2 | 158 | 105 |
| KSD05T1G | 05 | 5.0 | 0.08 | 6.2 | 1 | 11.6 | 18.6 | 9.4 | 174 | 80 |
| KSD07T1G | 07 | 7.0 | 0.03 | 7.5 | 1 | 13.5 | 22.7 | 8.8 | 200 | 65 |
| KSD12T1G | 12 | 12.0 | 0.02 | 14.1 | 1 | 23.0 | 29.0 | 9.6 | 240 | 55 |

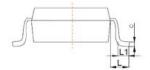


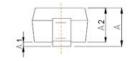




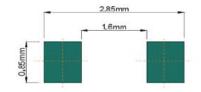
SOD-323 PACKAGE OUTLINE DIMENSIONS







| Sumbol | Dimensions In Millimeters | | | |
|--------|---------------------------|-------|--|--|
| Symbol | Min | Max | | |
| A | | 1.00 | | |
| A1 | 0.000 | 0.100 | | |
| A2 | 0.800 | 0.900 | | |
| b | 0.250 | 0.350 | | |
| С | 0.080 | 0.150 | | |
| D | 1.200 | 1.400 | | |
| E | 1.600 | 1.800 | | |
| E1 | 2.500 | 2.700 | | |
| e | 1.800 | 2.040 | | |
| L | 0.475 REF | | | |
| L1 | 0.250 | 0.400 | | |
| θ | 0° | 8° | | |



Recommended Pad outline