

CTLTVS6V2

**SURFACE MOUNT SILICON
UNI-DIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSOR**



www.centrasemi.com



DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLTVS6V2 is a low leakage, fast response silicon TVS packaged in an ultra small, ultra low profile TLM2D3D6 surface mount case. This device is designed to protect sensitive equipment against ESD damage.

MARKING CODE: S

APPLICATIONS:

- User interface protection
- Voltage rail protection
- Data line protection
- Voltage clamping

FEATURES:

- Ultra small, ultra low profile 0.3mm x 0.6mm x 0.3mm leadless surface mount package
- High peak pulse current capability
- Low leakage current

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Peak Power Dissipation (8x20 μs)
 Electrical Fast Transient (IEC 61000-4-4) (5x50ns)
 ESD Voltage (IEC 61000-4-2, Air)
 ESD Voltage (IEC 61000-4-2, Contact)
 Operating and Storage Junction Temperature

SYMBOL

P_{PK} 35
 EFT 40
 V_{ESD} 15
 V_{ESD} 8.0
 T_J, T_{stg} -55 to +150


UNITS

W
 A
 kV
 kV
 $^\circ\text{C}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$) $V_F=1.0\text{V MAX @ } I_F=10\text{mA}$

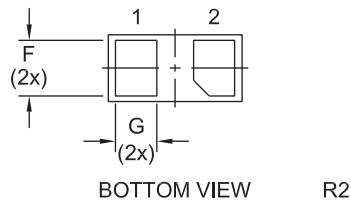
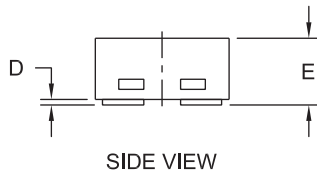
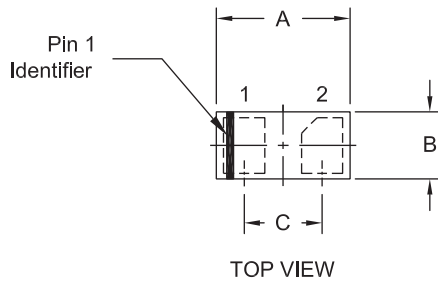
| Maximum Reverse Stand-off Voltage V_{RWM} | Breakdown Voltage | | | Test Current I_T | Maximum Reverse Leakage Current $I_R @ V_{RWM}$ | Maximum Clamping Voltage (8x20 μs) $V_C @ I_{PP}$ | | Typical TLP Clamping Voltage (Note 1) $V_{CL} @ I_{PP}$ | | Typical Dynamic Resistance (Note 1) R_{DYN} | Typical Junction Capacitance @ 0V Bias C_J |
|--|-------------------|----------|----------|-----------------------|--|--|-----|--|-----|--|---|
| | MIN V | NOM V | MAX V | | | V | A | V | A | | |
| 4.0 | 5.8 | 6.2 | 6.6 | 5.0 | 1.0 | 10.7 | 3.0 | 7.0 | 1.5 | 0.54 | 25 |
| | | | | | | | | 10 | 7.0 | | |

Note 1: Transmission Line Pulse (TLP) conditions: $Z_0=50\Omega$, $t_p=100\text{ns}$

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TLM2D3D6 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.022 | 0.026 | 0.55 | 0.65 |
| B | 0.010 | 0.014 | 0.25 | 0.35 |
| C | 0.014 | | 0.35 | |
| D | 0.000 | 0.002 | 0.00 | 0.05 |
| E | 0.011 | 0.013 | 0.28 | 0.32 |
| F | 0.008 | 0.012 | 0.20 | 0.30 |
| G | 0.005 | 0.009 | 0.13 | 0.24 |

TLM2D3D6 (REV: R2)

LEAD CODE:

- 1) Cathode
- 2) Anode

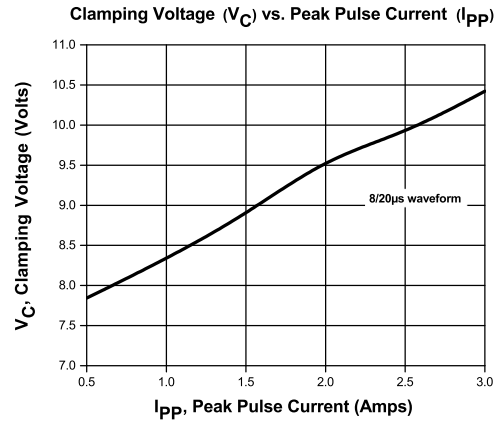
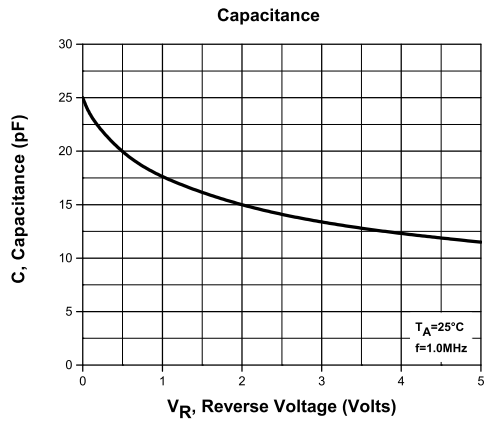
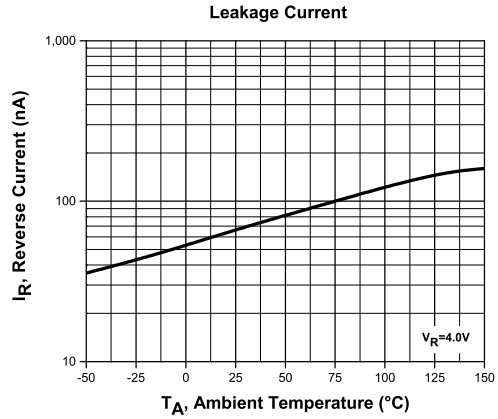
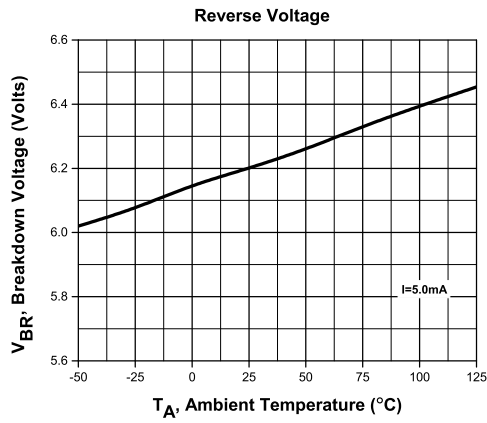
MARKING CODE: S

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TYPICAL ELECTRICAL CHARACTERISTICS

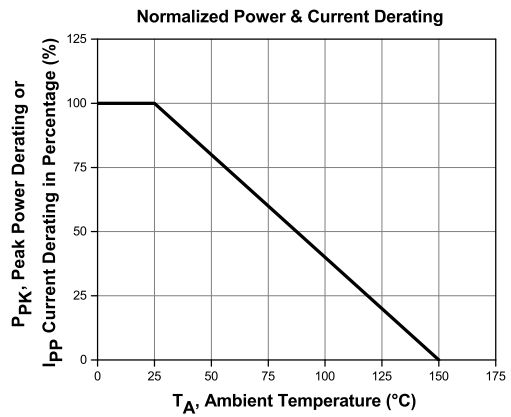
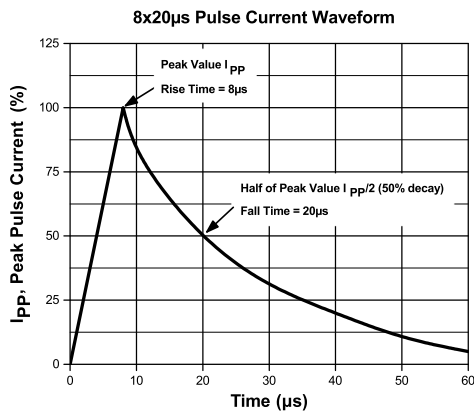
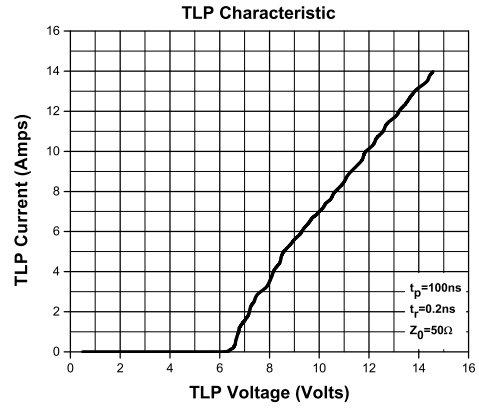
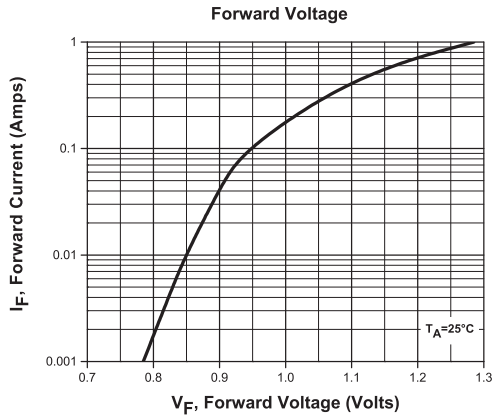


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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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