

CMYTVS5-2

**SURFACE MOUNT SILICON
LOW CAPACITANCE
5 VOLT, 2-LINE
TVS/DIODE ARRAY**



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMYTVS5-2 is a 2-line TVS/Diode array packaged in the SOT-543 surface mount case. This device, with its low capacitance, was designed to protect two high speed data or transmission lines from over-voltage transients and ESD damage.

MARKING CODE: C52

Specified by
STAND-OFF VOLTAGE

**SOT-543 CASE****APPLICATIONS:**

- USB 2.0 power and data line protection
- HDMI
- DVI
- Ethernet ports

FEATURES:

- 15kV ESD protection
- Low capacitance
- Low clamping voltage
- Protects two I/O lines
- Protects supply voltage rail

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

Peak Power Dissipation (8x20 μs)
ESD Voltage (IEC61000-4-2, Air)
Operating and Storage Junction Temperature

SYMBOL

P_{PK} 60
 V_{ESD} 15
 T_J, T_{stg} -55 to +150

UNITS

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

ELECTRICAL CHARACTERISTICS PER DIODE: ($T_A=25^\circ\text{C}$)

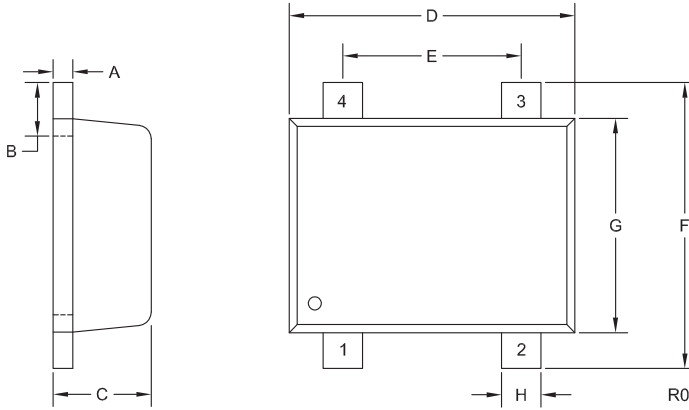
| Maximum Reverse Stand-Off Voltage V_{RWM} | Minimum Reverse Breakdown Voltage pin 4 to pin 1 $V_Z @ I_Z$ | | Maximum Reverse Leakage Current pin 4 to pin 1 $I_R @ V_R$ | | Maximum Clamping Voltage I/O to pin 1 (8x20 μs) $V_C @ I_{PP}$ | | Maximum Clamping Voltage I/O to pin 1 (8x20 μs) $V_C @ I_{PP}$ | | Off State Junction Capacitance I/O to GND ($V_R=0, f=1.0\text{MHz}$) C_J | | Off State Junction Capacitance I/O to I/O ($V_R=0, f=1.0\text{MHz}$) C_J | |
|--|--|-----|--|---------------|---|-----|---|-----|---|-----------|---|-----------|
| | V | V | mA | μA | V | V | A | V | A | TYP pF | MAX pF | TYP pF |
| 5.0 | 6.2 | 1.0 | 1.0 | 5.0 | 9.0 | 1.0 | 12 | 5.0 | 0.9 | 1.2 | 0.5 | 0.6 |

CMYTVS5-2

**SURFACE MOUNT SILICON
LOW CAPACITANCE
5 VOLT, 2-LINE
TVS/DIODE ARRAY**



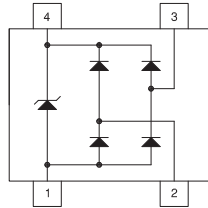
SOT-543 CASE - MECHANICAL OUTLINE



| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.002 | 0.007 | 0.07 | 0.17 |
| B | 0.004 | 0.012 | 0.10 | 0.30 |
| C | 0.019 | 0.024 | 0.50 | 0.60 |
| D | 0.059 | 0.067 | 1.50 | 1.70 |
| E | 0.035 | 0.044 | 0.90 | 1.10 |
| F | 0.059 | 0.067 | 1.50 | 1.70 |
| G | 0.044 | 0.052 | 1.10 | 1.30 |
| H | 0.006 | 0.011 | 0.17 | 0.27 |

SOT-543 (REV: R0)

PIN CONFIGURATION

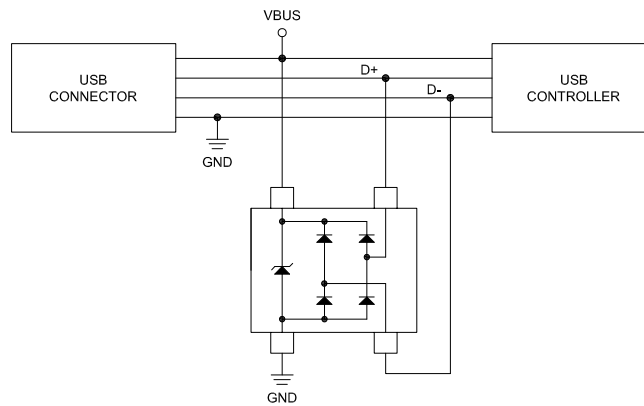


LEAD CODE:

- 1) Ground
- 2) I/O
- 3) I/O
- 4) Supply Voltage (V_{CC})

MARKING CODE: C52

TYPICAL APPLICATION - USB 2.0



R1 (4-January 2013)

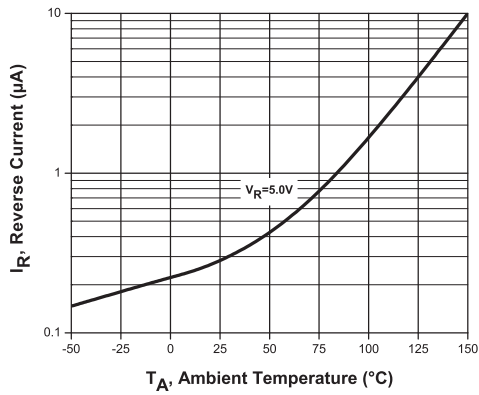
CMYTVS5-2

SURFACE MOUNT SILICON
LOW CAPACITANCE
5 VOLT, 2-LINE
TVS/DIODE ARRAY

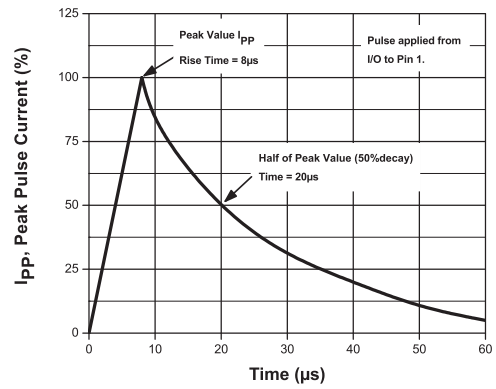


TYPICAL ELECTRICAL CHARACTERISTICS

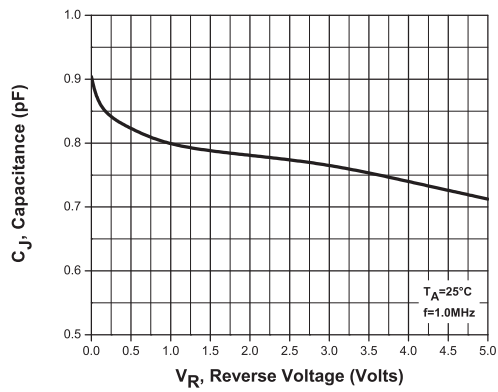
Typical Reverse Leakage Current Pin 4 to Pin 1



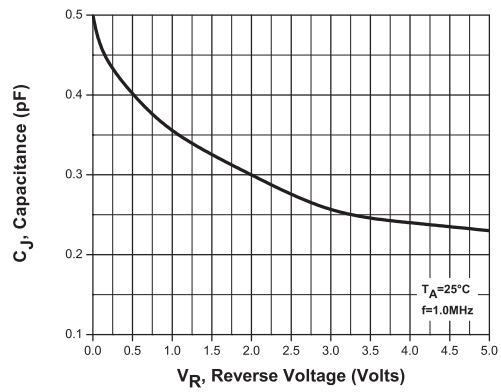
8x20 μs Surge Current Waveform



Typical Capacitance I/O to GND



Typical Capacitance I/O to I/O



R1 (4-January 2013)

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

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

Worldwide Distributors:
www.centalsemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centalsemi.com/terms