

CMYTVS5-2

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



www.centrasemi.com



SOT-543 CASE

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

FEATURES:

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

APPLICATIONS:

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

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

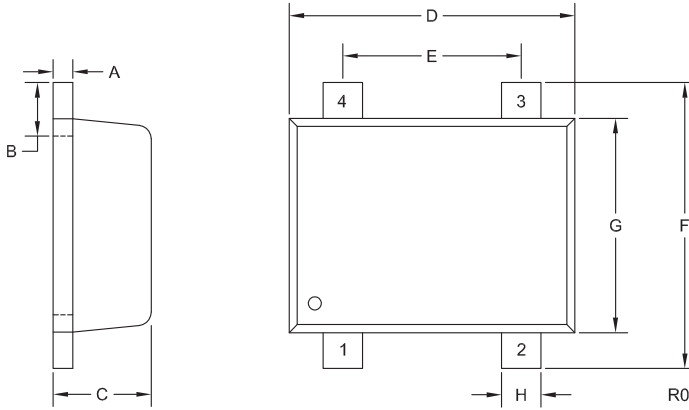
Maximum Reverse Stand-Off Voltage V_{RWM}	Minimum Reverse Breakdown Voltage pin 4 to pin 1 $V_Z @ I_Z$		Maximum Reverse Leakage Current pin 4 to pin 1 $I_R @ V_R$		Maximum Clamping Voltage I/O to pin 1 (8x20 μs) $V_C @ I_{PP}$		Maximum Clamping Voltage I/O to pin 1 (8x20 μs) $V_C @ I_{PP}$		Off State 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

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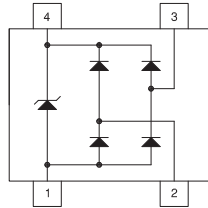
SOT-543 CASE - MECHANICAL OUTLINE



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

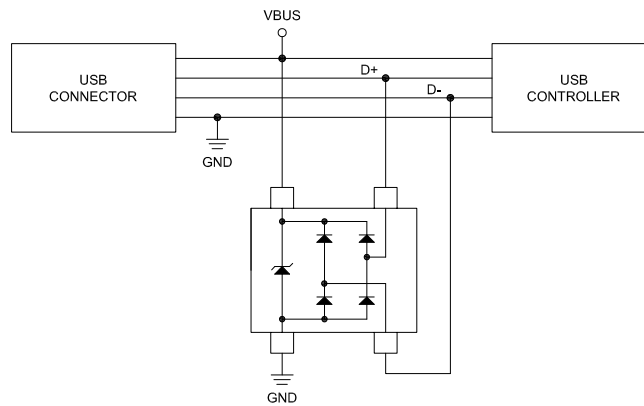


LEAD CODE:

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

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TYPICAL APPLICATION - USB 2.0



R1 (4-January 2013)

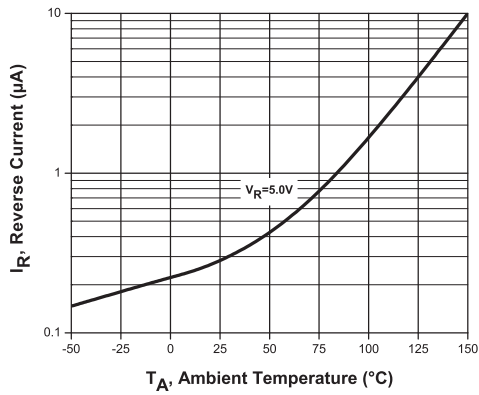
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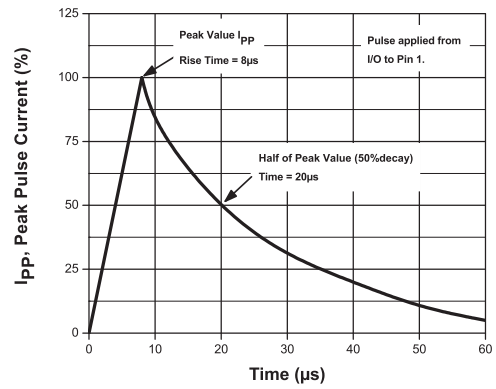


TYPICAL ELECTRICAL CHARACTERISTICS

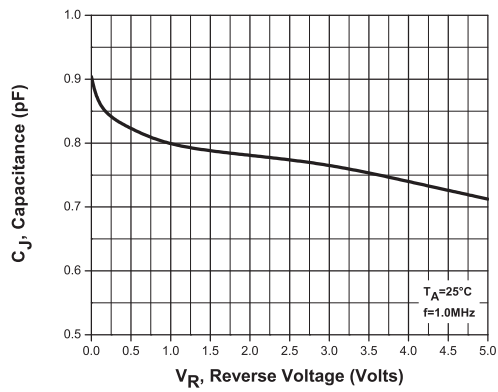
Typical Reverse Leakage Current Pin 4 to Pin 1



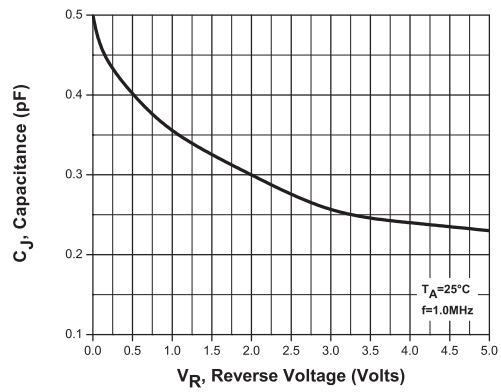
8x20 μs Surge Current Waveform



Typical Capacitance I/O to GND



Typical Capacitance I/O to I/O



R1 (4-January 2013)