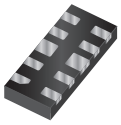
CTLTVS5-4

SURFACE MOUNT SILICON LOW CAPACITANCE QUAD TVS/DIODE ARRAY

Ideal for USB 3.0



TLM1031 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLTVS5-4 is a 4-line TVS/Diode array packaged in a TLM1031 surface mount case. With its ultra low capacitance, this device was designed to protect four high speed data or transmission lines from over-voltage transients and ESD damage.

MARKING CODE: CTL5

APPLICATIONS:

- USB 3.0 Power and Data Line Protection
- HDMI Interface Protection
- Tablets, Monitors, Displays, Smart Phones
- Ethernet Ports

FEATURES:

- Low capacitance
- Low clamping voltage
- Protects four I/O lines

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Peak Pulse Current (8x20µs)	I_{PP}	2.5	A
Peak Power Dissipation (8x20µs)	P_{PK}	32.5	W
Electrical Fast Transient (IEC 61000-4-4) (5x50ns)	EFT	40	A
ESD Voltage (IEC 61000-4-2, Air)	V_{ESD}	15	kV
ESD Voltage (IEC 61000-4-2, Contact)	V_{ESD}	8.0	kV
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS PER DIODE: (T_A=25°C)

Maximum Reverse Stand-off Voltage	Reverse Breakdown Voltage I/O to GND		Maximum Reverse Leakage Current I/O to GND	Maximum Clamping Voltage I/O to GND (8x20µs)		Typical TLP Clamping Voltage (Note 1)		Typical Dynamic Resistance (Note 1)	Maximum Off State Junction Capacitance (V_R=0, f=1.0MHz)	
									I/O to GND	I/O to I/O
V_{RWM}	V_Z @ 1.0mA		I_R @ V_{RWM}	V_C @	I_{PP}	V_{CL} @	I_{PP}	R_{DYN}	C_J	C_J
V	MIN V	MAX V	µA	V	A	V	A	Ω	pF	pF
5.0	6.0	9.0	1.0	12	1.0	12	4.0	0.5	0.8	0.4
				13	2.5	14	8.0			

Note 1: Transmission Line Pulse (TLP) conditions: Z_0=50Ω, tp=100ns

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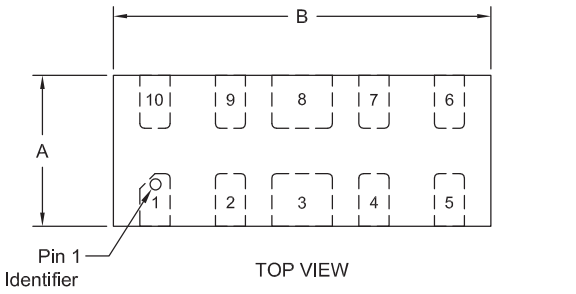
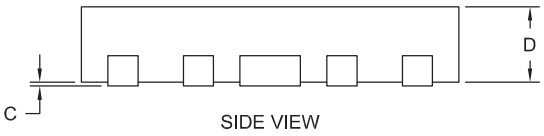
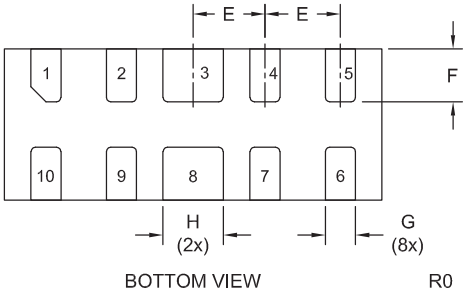
TLM1031 CASE - MECHANICAL OUTLINE







R0

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.037	0.041	0.95	1.05
B	0.096	0.100	2.45	2.55
C	0.000	0.002	0.00	0.05
D	0.018	0.022	0.45	0.55
E	0.020		0.50	
F	0.012	0.016	0.30	0.40
G	0.006	0.010	0.15	0.25
H	0.014	0.018	0.35	0.45

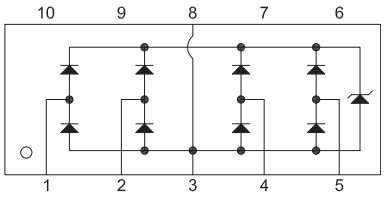
TLM1031 (REV:R0)

LEAD CODE:

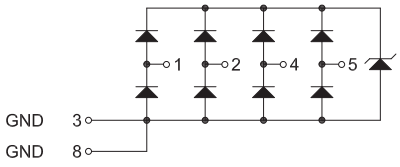
1) I/O	6) N/C
2) I/O	7) N/C
3) Ground	8) Ground
4) I/O	9) N/C
5) I/O	10) N/C

MARKING CODE: CTL5

PIN CONFIGURATION



SCHEMATIC



R4 (4-September 2015)

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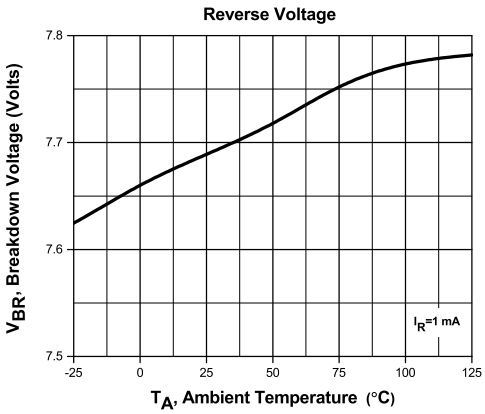
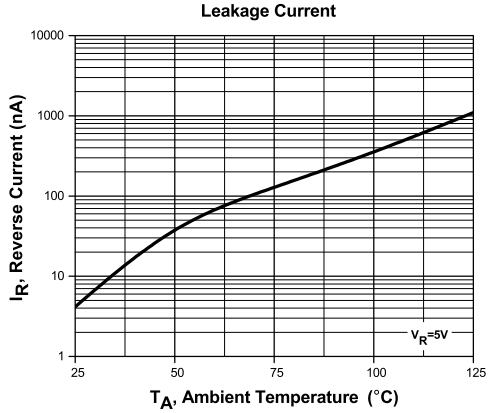
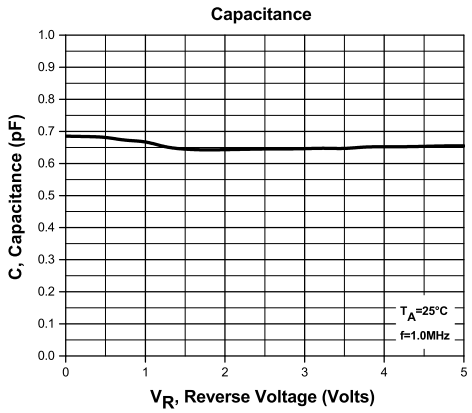
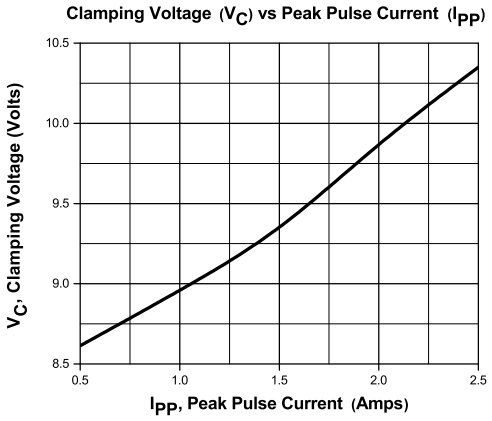
TYPICAL ELECTRICAL CHARACTERISTICS









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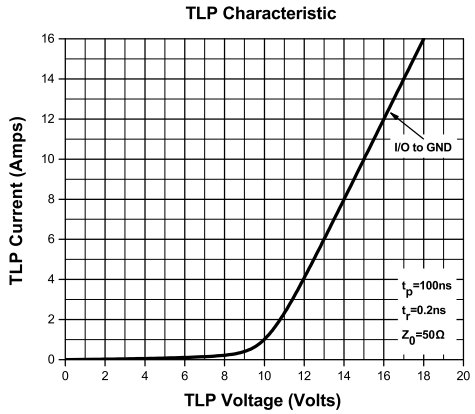

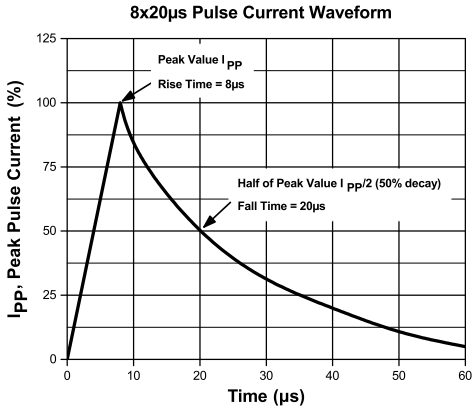

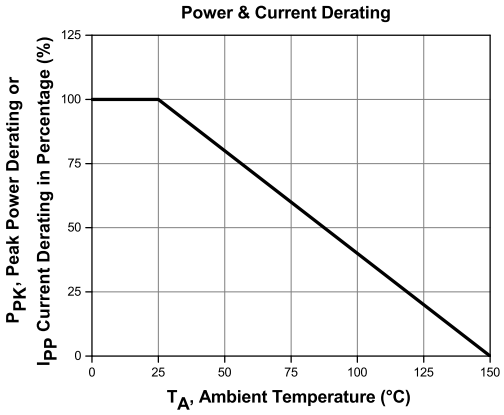

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

CONTACT US

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