

CFTVS5V0BULC

**SURFACE MOUNT SILICON
BI-DIRECTIONAL
ULTRA LOW CAPACITANCE
TRANSIENT VOLTAGE SUPPRESSOR**

**USB
3.1**

Top View

Bottom View

SOD-882L CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CFTVS5V0BULC is an ultra low capacitance, low leakage, fast response, bi-directional TVS in the space saving SOD-882L surface mount package. This device is designed to protect sensitive equipment connected to high speed data lines against ESD damage.

MARKING CODE: U

FEATURES:

- Space saving SOD-882L package
- Ultra low capacitance
- Low leakage current

APPLICATIONS:

- High speed data line protection ideal for USB 3.1, Thunderbolt and HDMI 2.0 standards
- User interface protection
- Charging/power port protection

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 Junction Temperature
 Storage Temperature

SYMBOL

P_{PK} 14
 EFT 40
 V_{ESD} 20
 V_{ESD} 20
 T_J -55 to +125
 T_{stg} -55 to +150

UNITS

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

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

Maximum Reverse Stand-off Voltage V_{RWM}	Breakdown Voltage $V_{BR} @ I_T$		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	Maximum Junction Capacitance @ 0V Bias C_J
V	MIN V	MAX V	mA	nA	V	A	V	A	Ω	pF	pF
5.0	6.0	10	1.0	500	14	1.0	15	1.6	2.94	0.2	0.35
							20	3.3			

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

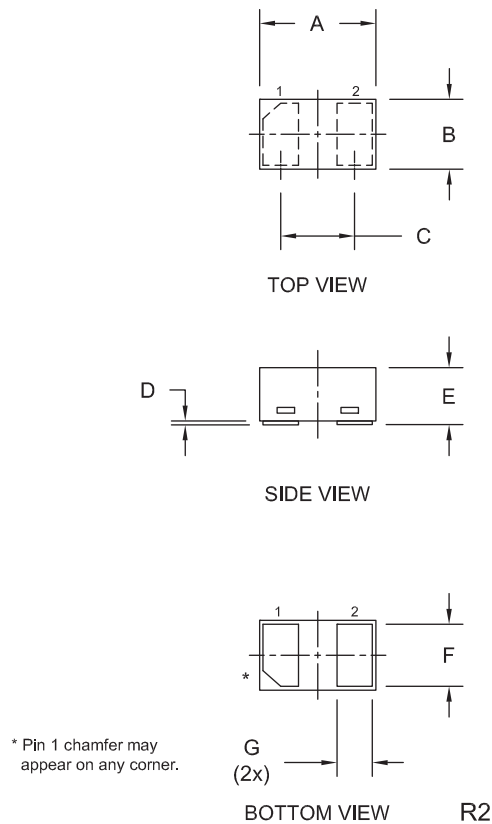
R6 (19-September 2019)

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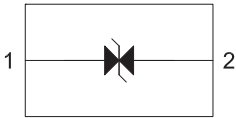
SOD-882L CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.037	0.041	0.95	1.05
B	0.022	0.026	0.55	0.65
C	0.026		0.65	
D	0.000	0.002	0.00	0.05
E	0.012	0.016	0.30	0.40
F	0.018	0.022	0.45	0.55
G	0.008	0.012	0.20	0.30

SOD-882L (REV:R2)

PIN CONFIGURATION



LEAD CODE:

- 1) Anode 1
- 2) Anode 2

MARKING CODE: U

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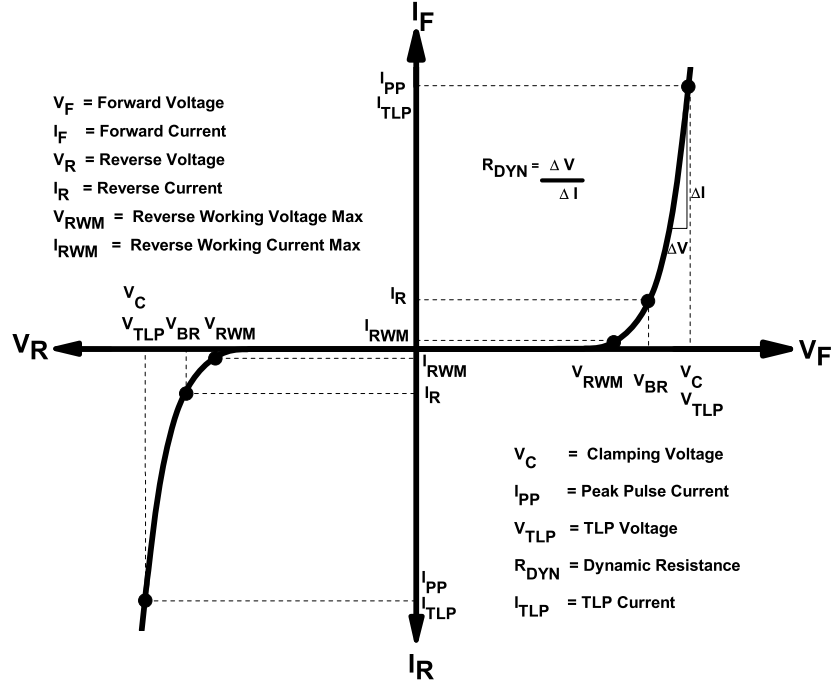
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Definition of Electrical Characteristics



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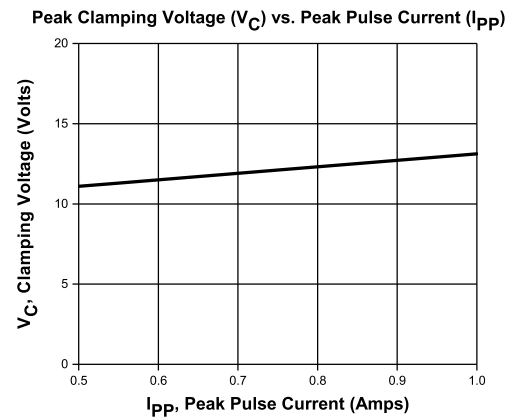
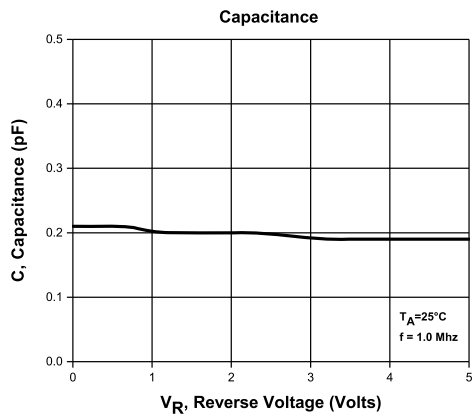
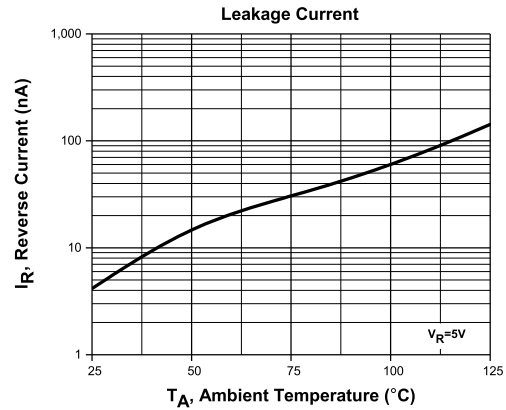
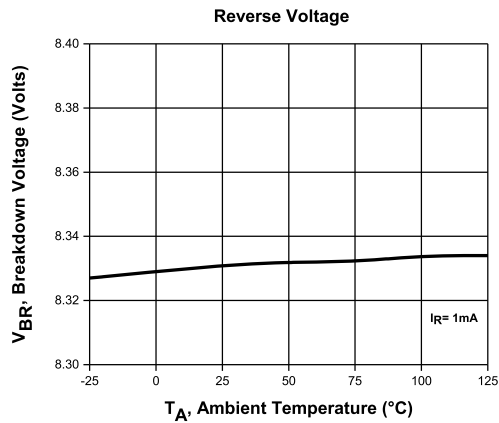
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TYPICAL ELECTRICAL CHARACTERISTICS



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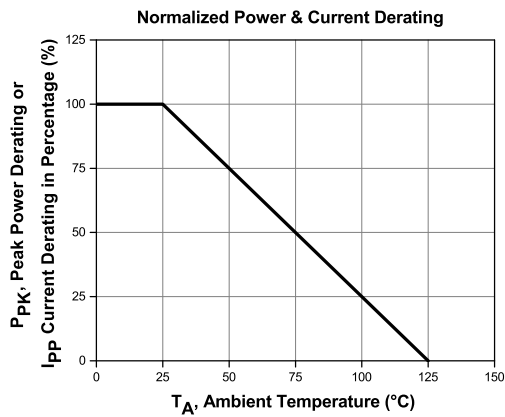
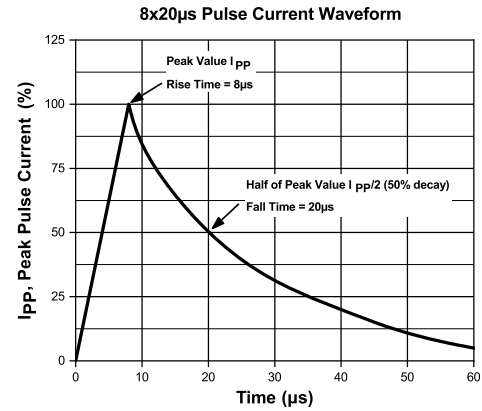
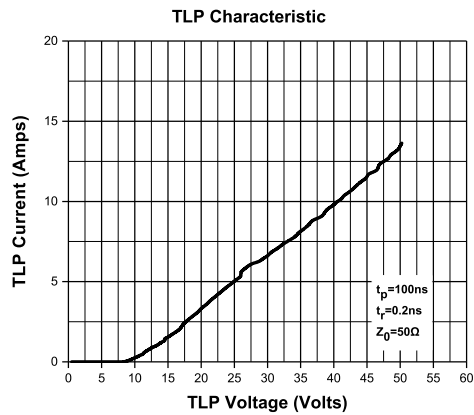
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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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