


CFTVS5V0BULC 

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



www.centrasemi.com

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

| SYMBOL | | UNITS |
|------------------|-------------|-------|
| P _{PK} | 14 | W |
| EFT | 40 | A |
| V _{ESD} | 20 | kV |
| V _{ESD} | 20 | kV |
| T _J | -55 to +125 | °C |
| T _{stg} | -55 to +150 | °C |

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

| 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 | Maximum Junction Capacitance @ 0V Bias C _J |
|---|-------------------|-------|--------------------------------|--|--|-----|--|-----|---|--|--|
| | MIN V | MAX V | | | V | A | V | A | | | |
| 5.0 | 6.0 | 10 | 1.0 | 500 | 14 | 1.0 | 15 | 1.6 | 2.94 | 0.2 | 0.35 |
| | | | | | | | 20 | 3.3 | | | |

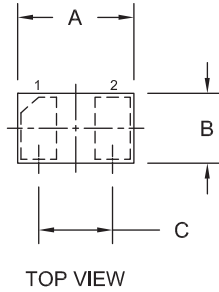
Note 1: Transmission Line Pulse (TLP) conditions: Z₀=50 Ω , t_p=100ns

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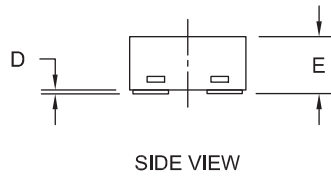


SOD-882L CASE - MECHANICAL OUTLINE

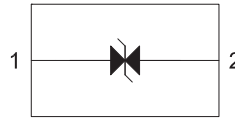


| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.037 | 0.041 | 0.95 | 1.05 |
| B | 0.022 | 0.026 | 0.55 | 0.65 |
| C | 0.026 | | 0.65 | |
| D | 0.000 | 0.002 | 0.00 | 0.05 |
| E | 0.012 | 0.016 | 0.30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

SOD-882L (REV:R2)



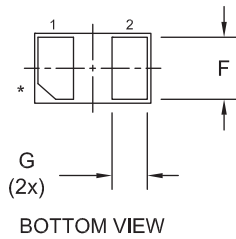
PIN CONFIGURATION



LEAD CODE:

- 1) Anode 1
- 2) Anode 2

MARKING CODE: U



* Pin 1 chamfer may appear on any corner.

R2

R6 (19-September 2019)

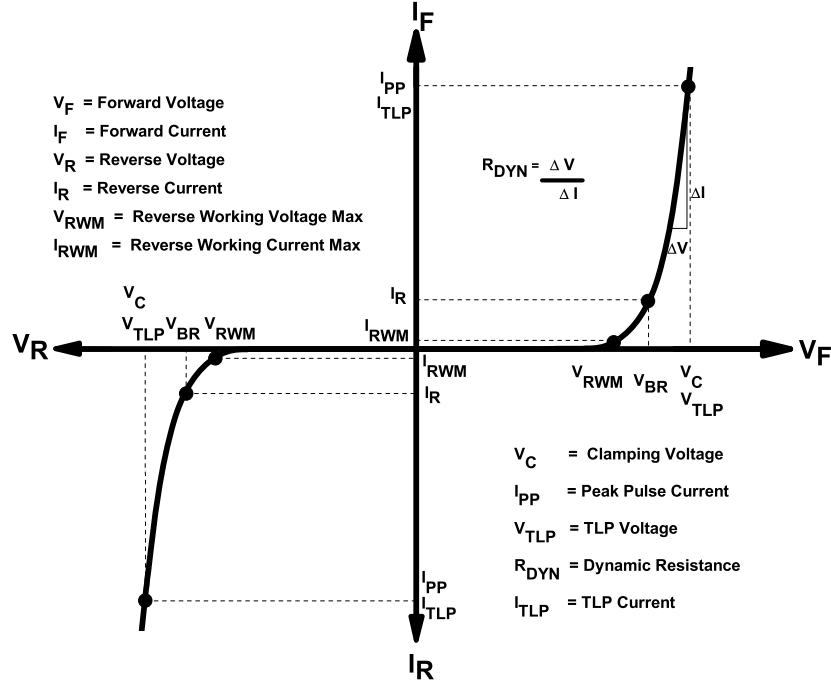
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Definition of Electrical Characteristics

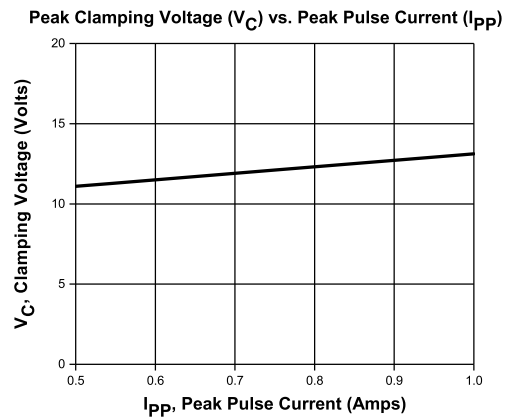
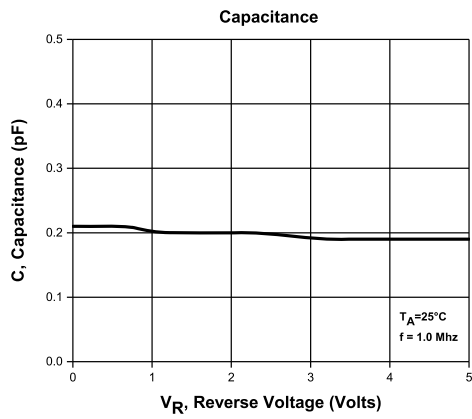
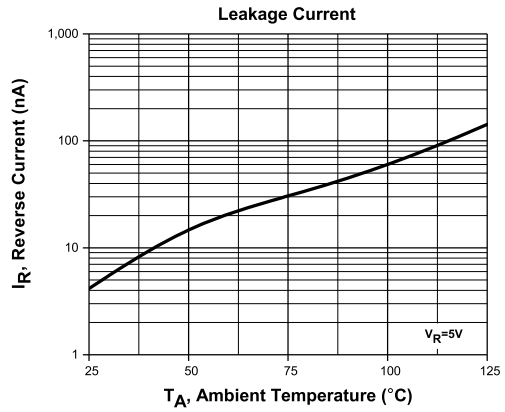
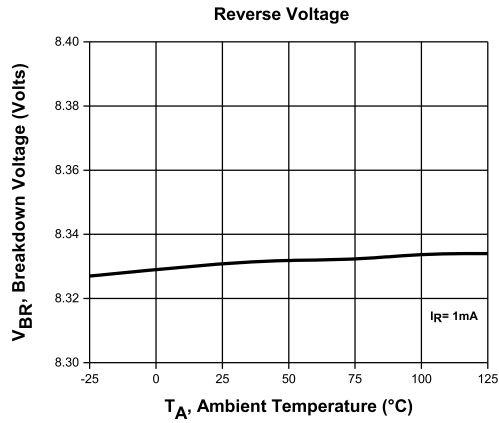


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TYPICAL ELECTRICAL CHARACTERISTICS



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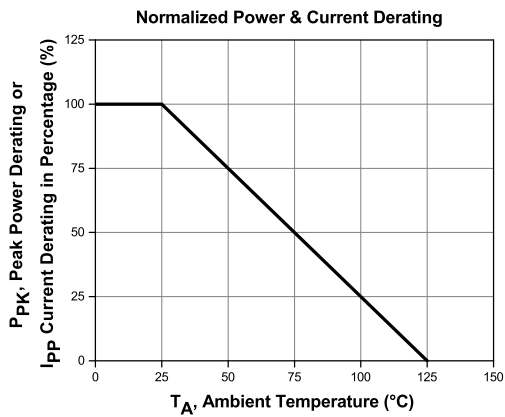
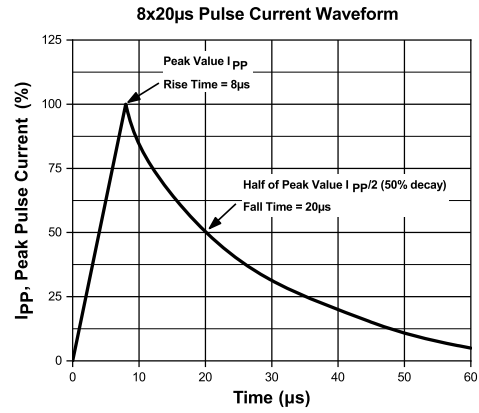
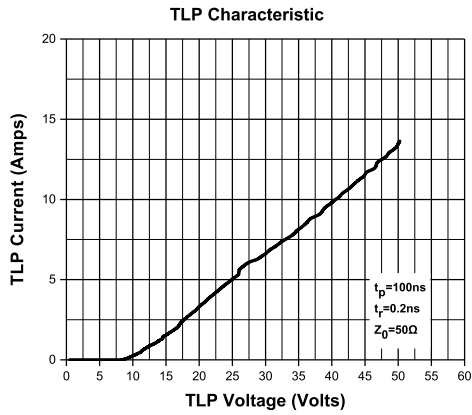
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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

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.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

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