

CTLSH01-30L

**SURFACE MOUNT SILICON  
LOW  $V_F$  SCHOTTKY DIODE**

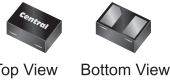


[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CTLSH01-30L is a high quality Schottky diode designed for applications where ultra small size and low forward voltage are prime requirements. This component provides performance characteristics suitable for the most demanding size constrained applications.

**MARKING CODE: D**



**TLM2D3D6 CASE**

**APPLICATIONS:**

- DC-DC Converters
- Voltage Clamping
- Protection Circuits
- Battery powered applications including Cell Phones, Digital Cameras, Pagers, PDAs, Laptop Computers, etc.

**FEATURES:**

- Current ( $I_O=100\text{mA}$ )
- Low Forward Voltage Drop ( $V_F=300\text{mV TYP @ } 10\text{mA}$ )
- Low Reverse Current ( $1.3\mu\text{A TYP @ } 10\text{V}$ )
- Ultra Small, Ultra Low Profile  $0.3\text{mm} \times 0.6\text{mm} \times 0.3\text{mm}$  Leadless Surface Mount package

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

|  |
|--|
| Peak Repetitive Reverse Voltage                |
| DC Blocking Voltage                            |
| Average Forward Current                        |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$ |
| Power Dissipation                              |
| Operating Junction Temperature                 |
| Storage Temperature                            |
| Thermal Resistance                             |

**SYMBOL**

| SYMBOL        |             | UNITS              |
|---------------|-------------|--------------------|
| $V_{RRM}$     | 30          | V                  |
| $V_R$         | 30          | V                  |
| $I_O$         | 100         | mA                 |
| $I_{FSM}$     | 500         | mA                 |
| $P_D$         | 100         | mW                 |
| $T_J$         | -65 to +125 | $^\circ\text{C}$   |
| $T_{stg}$     | -65 to +150 | $^\circ\text{C}$   |
| $\Theta_{JA}$ | 1000        | $^\circ\text{C/W}$ |

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

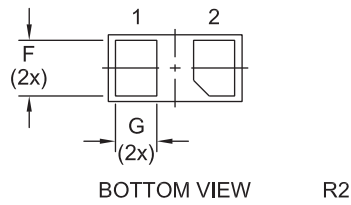
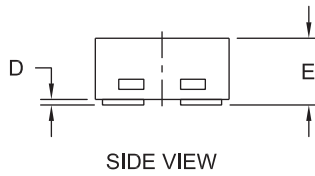
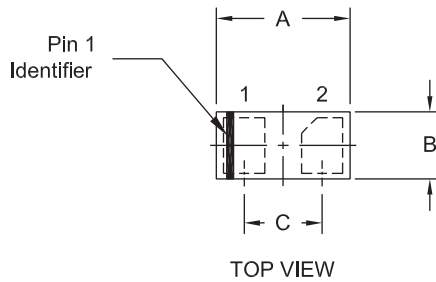
| SYMBOL | TEST CONDITIONS          | MIN | TYP | MAX | UNITS         |
|--------|--------------------------|-----|-----|-----|---------------|
| $I_R$  | $V_R=3.3\text{V}$        |     | 0.8 | 2.0 | $\mu\text{A}$ |
| $I_R$  | $V_R=10\text{V}$         |     | 1.3 | 7.0 | $\mu\text{A}$ |
| $BV_R$ | $I_R=100\mu\text{A}$     | 30  |     |     | V             |
| $V_F$  | $I_F=5.0\mu\text{A}$     |     | 70  | 95  | mV            |
| $V_F$  | $I_F=10\text{mA}$        |     | 300 | 370 | mV            |
| $C_J$  | $V_R=0, f=1.0\text{MHz}$ |     | 4.0 |     | pF            |

R3 (5-January 2015)

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**TLM2D3D6 CASE - MECHANICAL OUTLINE**



| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.022      | 0.026 | 0.55        | 0.65 |
| B      | 0.010      | 0.014 | 0.25        | 0.35 |
| C      | 0.014      |       | 0.35        |      |
| D      | 0.000      | 0.002 | 0.00        | 0.05 |
| E      | 0.011      | 0.013 | 0.28        | 0.32 |
| F      | 0.008      | 0.012 | 0.20        | 0.30 |
| G      | 0.005      | 0.009 | 0.13        | 0.24 |

TLM2D3D6 (REV: R2)

**LEAD CODE:**  
 1) Cathode  
 2) Anode

**MARKING CODE: D**

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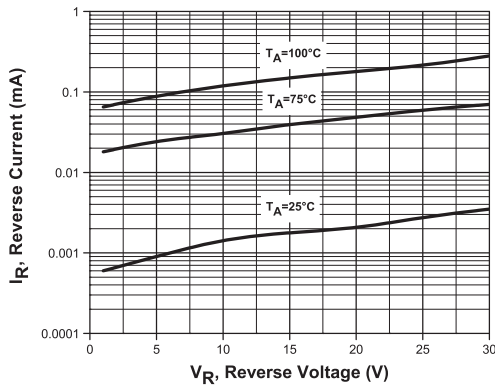
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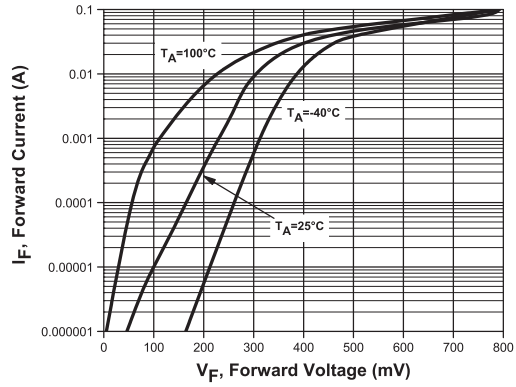


TYPICAL ELECTRICAL CHARACTERISTICS

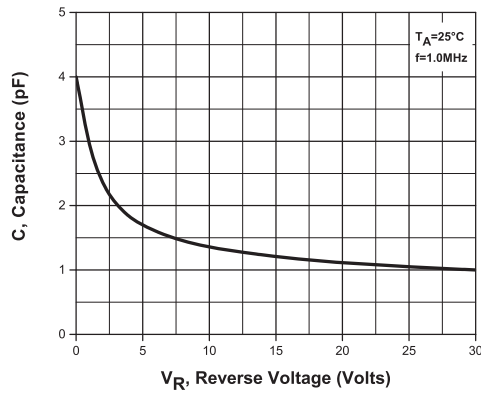
Leakage Current



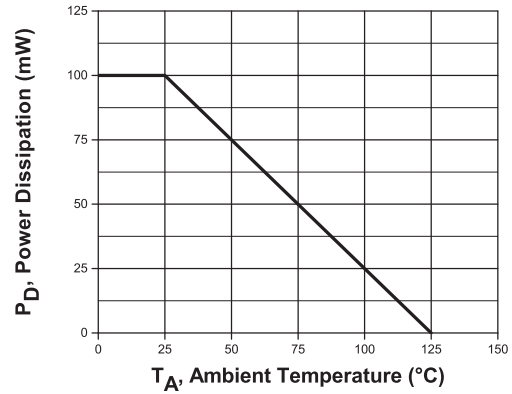
Forward Voltage



Capacitance



Power Derating



R3 (5-January 2015)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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