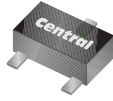


CMUD4448

**SURFACE MOUNT  
HIGH SPEED  
SILICON SWITCHING DIODE**

**ULTRA**mini™



**SOT-523 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMUD4448 type is an ultra-high speed silicon switching diode manufactured by the epitaxial planar process, epoxy molded in an ULTRAMini™ surface mount package, designed for high speed switching applications.

**MARKING CODE: DAA**

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

Continuous Reverse Voltage  
Peak Repetitive Reverse Voltage  
Continuous Forward Current  
Peak Repetitive Forward Current  
Peak Forward Surge Current,  $t_p=1.0\mu\text{s}$   
Peak Forward Surge Current,  $t_p=1.0\text{s}$   
Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

**SYMBOL**

$V_R$  75  
 $V_{RRM}$  100  
 $I_F$  250  
 $I_{FRM}$  500  
 $I_{FSM}$  4.0  
 $I_{FSM}$  1.0  
 $P_D$  250  
 $T_J, T_{stg}$  -65 to +150  
 $\Theta_{JA}$  500

**UNITS**

V  
V  
mA  
mA  
A  
A  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

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

| SYMBOL   | TEST CONDITIONS   | MIN  | MAX  | UNITS |
|----------|---|------|------|-------|
| $I_R$    | $V_R=20\text{V}$  |      | 25   | nA    |
| $BV_R$   | $I_R=5.0\mu\text{A}$                                      | 75   |      | V     |
| $BV_R$   | $I_R=100\mu\text{A}$                                      | 100  |      | V     |
| $V_F$    | $I_F=5.0\text{mA}$  | 0.62 | 0.72 | V     |
| $V_F$    | $I_F=100\text{mA}$  |      | 1.0  | V     |
| $C_T$    | $V_R=0, f=1.0\text{MHz}$                                  |      | 4.0  | pF    |
| $t_{rr}$ | $I_R=I_F=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$ |      | 4.0  | ns    |

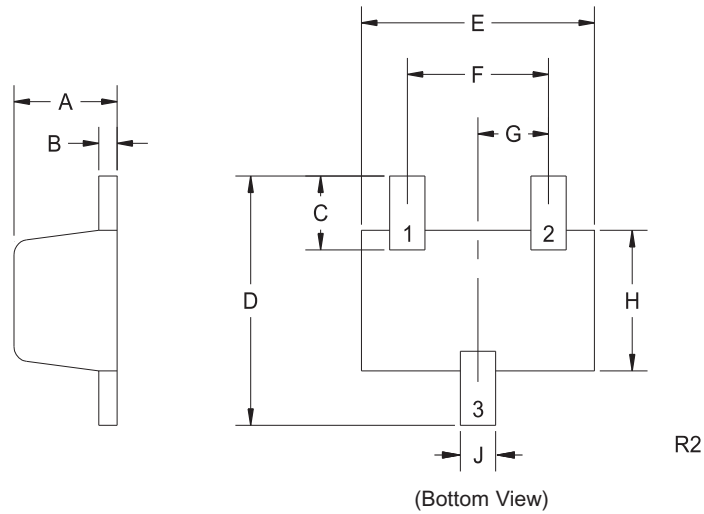
R3 (9-February 2010)

CMUD4448

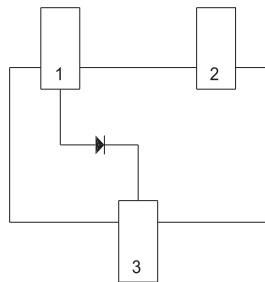
SURFACE MOUNT  
HIGH SPEED  
SILICON SWITCHING DIODE



SOT-523 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

- 1) Anode
- 2) No Connection
- 3) Cathode

MARKING CODE: DAA

| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.023      | 0.031 | 0.58        | 0.78 |
| B      | 0.002      | 0.008 | 0.04        | 0.20 |
| C      | 0.013      | 0.021 | 0.34        | 0.54 |
| D      | 0.059      | 0.067 | 1.50        | 1.70 |
| E      | 0.059      | 0.067 | 1.50        | 1.70 |
| F      | 0.035      | 0.043 | 0.90        | 1.10 |
| G      | 0.020      |       | 0.50        |      |
| H      | 0.031      | 0.039 | 0.78        | 0.98 |
| J      | 0.010      | 0.014 | 0.25        | 0.35 |

SOT-523 (REV: R2)

R3 (9-February 2010)

## 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 (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

---

### 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.centalsemi.com](http://www.centalsemi.com)

**Worldwide Field Representatives:**  
[www.centalsemi.com/wwreps](http://www.centalsemi.com/wwreps)

**Worldwide Distributors:**  
[www.centalsemi.com/wwdistributors](http://www.centalsemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centalsemi.com/terms](http://www.centalsemi.com/terms)