

CMUSH2-4  
 CMUSH2-4A  
 CMUSH2-4C  
 CMUSH2-4S  
 SURFACE MOUNT  
 ULTRAmi™  
 SILICON SCHOTTKY DIODES

ULTRAmi™



SOT-523 CASE

**Central**™  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMUSH2-4 Series types are Silicon Schottky Diodes, epoxy molded in a ULTRAmi™ SOT-523 surface mount package, designed for fast switching applications requiring a low forward voltage drop.

CMUSH2-4: SINGLE  
 CMUSH2-4A: DUAL, COMMON ANODE  
 CMUSH2-4C: DUAL, COMMON CATHODE  
 CMUSH2-4S: DUAL, IN SERIES

**MARKING CODE: C42**  
**MARKING CODE: C4A**  
**MARKING CODE: C4C**  
**MARKING CODE: C4S**

**MAXIMUM RATINGS:** (T<sub>A</sub>=25°C)

|   | SYMBOL                            |             | UNITS |
|---|-----------------------------------|-------------|-------|
| Peak Repetitive Reverse Voltage               | V <sub>RRM</sub>                  | 40          | V     |
| Continuous Forward Current                    | I <sub>F</sub>                    | 200         | mA    |
| Peak Repetitive Forward Current               | I <sub>FRM</sub>                  | 300         | mA    |
| Forward Surge Current, t <sub>p</sub> =10ms   | I <sub>FSM</sub>                  | 600         | mA    |
| Power Dissipation                             | P <sub>D</sub>                    | 250         | mW    |
| Operating and Storage<br>Junction Temperature | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C    |
| Thermal Resistance                            | θ <sub>JA</sub>                   | 500         | °C/W  |

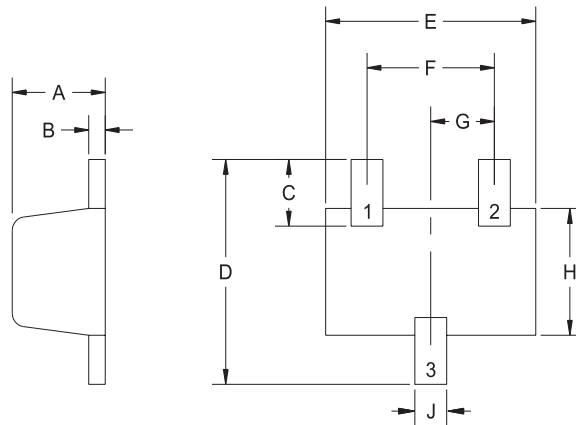
**ELECTRICAL CHARACTERISTICS PER DIODE:** (T<sub>A</sub>=25°C unless otherwise noted)

| SYMBOL          | TEST CONDITIONS  | MIN | TYP | MAX | UNITS |
|-----------------|--|-----|-----|-----|-------|
| I <sub>R</sub>  | V <sub>R</sub> =35V  |     | 170 | 500 | nA    |
| I <sub>R</sub>  | V <sub>R</sub> =35V, T <sub>A</sub> =100°C   |     | 25  | 100 | μA    |
| BV <sub>R</sub> | I <sub>R</sub> =100μA  | 40  | 55  |     | V     |
| V <sub>F</sub>  | I <sub>F</sub> =100μA  |     | 240 | 260 | mV    |
| V <sub>F</sub>  | I <sub>F</sub> =500μA  |     | 285 | 310 | mV    |
| V <sub>F</sub>  | I <sub>F</sub> =1.0mA  |     | 305 | 330 | mV    |
| V <sub>F</sub>  | I <sub>F</sub> =50mA   |     | 535 | 600 | mV    |
| V <sub>F</sub>  | I <sub>F</sub> =100mA  |     | 670 | 750 | mV    |
| C <sub>T</sub>  | V <sub>R</sub> =1.0V, f=1 MHz  |     |     | 10  | pF    |
| t <sub>rr</sub> | I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =1.0mA, R <sub>L</sub> =100Ω |     |     | 5.0 | ns    |

R0 (31-January 2005)

**SOT-523 CASE - MECHANICAL OUTLINE**

BOTTOM VIEW

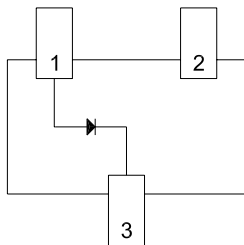


| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.023  | 0.031 | 0.58        | 0.78 |
| B      | 0.002  | 0.008 | 0.04        | 0.20 |
| C      | 0.013  | 0.021 | 0.34        | 0.54 |
| D      | 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 |

R2

SOT-523 (REV: R2)

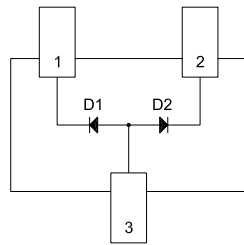
**PIN CONFIGURATION**



**CMUSH2-4**

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

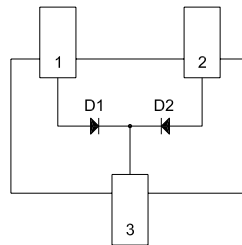
**MARKING CODE:**  
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**CMUSH2-4A**

- 1) Cathode D1
- 2) Cathode D2
- 3) Anode D1, D2

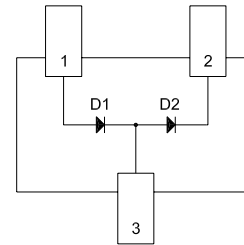
**MARKING CODE:**  
C4A



**CMUSH2-4C**

- 1) Anode D1
- 2) Anode D2
- 3) Cathode D1, D2

**MARKING CODE:**  
C4C



**CMUSH2-4S**

- 1) Anode D1
- 2) Cathode D2
- 3) Cathode D1, Anode D2

**MARKING CODE:**  
C4S