

## Microsemi Corp.

The diode experts

SANTA ANA, CA

For more information call:  
(714) 979-8220

SCOTTSDALE, AZ

For more information call:  
(602) 941-6300

## 1.5KCD6.8 thru 1.5KCD200A, CD5908 and CD6267 thru CD6303A Transient Suppressor CELLULAR DIE PACKAGE

### APPLICATION

This TAZ\* series has a peak pulse power rating of 1500 watts for one millisecond. It can protect integrated circuits, hybrids, CMOS, MOS and other voltage sensitive components that are used in a broad range of applications including: telecommunications, power supplies, computers, automotive, industrial and medical equipment. TAZ\* devices have become very important as a consequence of their high surge capability, extremely fast response time and low clamping voltage.

The cellular die (CD) package is ideal for use in hybrid applications and for solder mounting. The cellular design in hybrids assures ample bonding with immediate heat sinking to provide the required transient peak pulse power of 1500 watts.

### FEATURES

- ✓ Economical
- ✓ 1500 Watts peak pulse power dissipation
- ✓ Stand-Off voltages from 5.0V to 171V
- ✓ Uses thermally passivated die design
- ✓ Additional silicone protective coating over die for rugged environments
- ✓ Stringent process norm screening
- ✓ Low leakage current at rated stand-off voltage
- ✓ Exposed metal surfaces are readily solderable
- ✓ 100% lot traceability
- ✓ Manufactured in the U.S.A.
- ✓ Meets JEDEC IN6267 - IN6303A electrically equivalent specifications
- ✓ Available in bipolar configuration
- ✓ Additional transient suppressor ratings and sizes are available as well as zener, rectifier and reference diode configurations. Consult factory for special requirements.

### MAXIMUM RATINGS

1500 Watts of Peak Pulse Power Dissipation at 25°C\*\*

clamping (0 Volts to BV Min.):

unidirectional  $< 1 \times 10^{-12}$  seconds;

bidirectional  $< 5 \times 10^{-9}$  seconds;

Operating and Storage Temperature: -65°C to +175°C

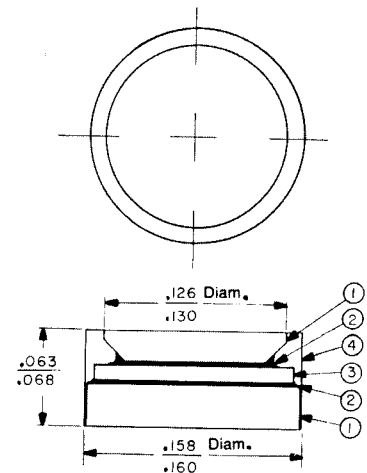
Forward Surge Rating: 200 Amps, 1/120 second at 25°C

Steady State Power Dissipation is heat sink dependent.

\*Transient Absorption Zener

\*\*Wire contact or tab geometry for interconnects should be selected with adequate cross-sectional size to prevent fusing relative to peak pulse current rating (Ipp).

### PACKAGE DIMENSIONS



| Item Number | Description                           |
|-------------|---------------------------------------|
| 1.....      | Nickel and Silver Plated Copper Discs |
| 2.....      | Solder Bond                           |
| 3.....      | Silicon Die                           |
| 4.....      | Conformal coating                     |

Illustration Represents Unipolar Only

### MECHANICAL CHARACTERISTICS

**Case:** Nickel and Silver plated copper discs with conformal coating.

**Finish:** Both external surfaces are corrosion resistant, readily solderable.

**Polarity:** Large contact side is cathode

**Mounting Position:** Any

### ELECTRICAL CHARACTERISTICS @ 25°C

**FIGURE 4**  
Derating Curve

| Temperature in °C | Peak Pulse Power (P <sub>pp</sub> ) or Current (I <sub>pp</sub> ) in percent of 25°C rating |
|-------------------|---------------------------------------------------------------------------------------------|
| 0                 | 100                                                                                         |
| 25                | 100                                                                                         |
| 50                | 85                                                                                          |
| 75                | 70                                                                                          |
| 100               | 55                                                                                          |
| 125               | 40                                                                                          |
| 150               | 25                                                                                          |
| 175               | 0                                                                                           |

**FIGURE 4**  
Derating Curve