

TD3162

Solar Array Bypass Diode

Features

- Very Thin Construction
- Passivated mesa structure for very low leakage reverse currents
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed, extremely low profile ceramic seal package
- Diode assembly has matched thermal coefficient of expansion
- Weldable / Solderable gold plated copper interconnects
- Extremely low F.I.T. rate of 1

**30 Volts
5.0 Amps**

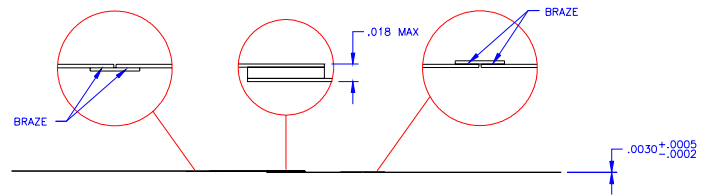
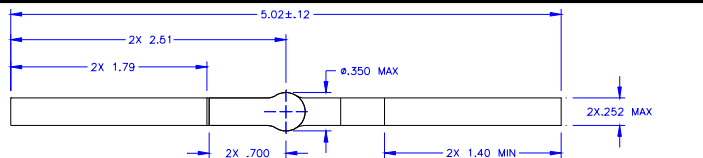
Applications

- Extreme Temperature Cycling environments
- Used on the International Space Station Alpha

Electrical Characteristics @ 25°C Junction Temperature Range -115 to +175 °C

| SYMBOL | CHARACTERISTIC | CONDITIONS | MAX | UNITS |
|--------|---------------------------|---|----------|--------|
| IR | Reverse (Leakage) Current | VR = 5 Vdc | 1 | uAmps |
| VF1 | Forward Voltage | IF = 2.5 A pulse test pw=300ms, d/c<2% | 825 | mVolts |
| VF2 | Forward Voltage | IF = 2.5 A pulse test pw=300ms, d/c<2%, TC=-110 C | 2 | Volts |
| BVR | Breakdown Voltage | IR = 1.0 mA | (min) 70 | Volts |

Mechanical Outline



Screening

- Temperature Cycling
- High Temperature Reverse Bias
- Power Burn-In
- Electrical Cycling
- Hermeticity

Qualification

- Humidity Testing
- Thermal Cycling (20,000 cycles)
- Bond Strength
- Electrical Cycling
- Radiation (electron and proton)
- Extended Reliability testing; 4,000 hours at 300°C

