REQUIREMENTS:

GENERAL:

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-7037.
SUPPLIERS SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS OF ND 101540 CLASS 2.
UNITS SHALL MEET THE GENERAL REQUIREMENTS OF MIL-S-19500 WITH THE EXCEPTIONS
AND ADDITIONS SPECIFIED IN THIS DRAWING.
UNIT PACKAGING AND PACKAGING SHALL BE IN ACCORDANCE WITH MIL-P-19491 LEVEL A
IN BOTH INSTANCES.

INSPECTION & ACCEPTANCE:

LEAD DATA: LEADS SHALL BE IRON-NICKEL ALLOY (DUMET) PER ND 101540 CERTIFICATION
OF COMPLIANCE WITH THIS REQUIREMENT SHALL ACCOMPANY EACH SHIPMENT.
MARKING: UNIT PACKAGES SHALL BE MARKED PER MIL-STD-130 WITH THE MANUFACTURER'S
NAME/TS SYMBOL AND TYPE DESIGNATION. THE NASA DRAWING NUMBER, DASH
NUMBER, AND REVISION LETTER SHALL ALSO BE INCLUDED. THE DIODES SHALL
BE MARKED WITH COLOR CODED IDENTIFYING BANDS IN ACCORDANCE WITH

ELECTRICAL SPECIFICATIONS PER TABLE I.

ZENER VOLTAGE (ZV)
ZENER IMPEDANCE (ZI)

DESIGN REQUIREMENTS:

MAXIMUM RATINGS:

ZENER CURRENT: 60 mA DC
POWER DISSIPATION: 400 MILLIWATTS (SEE DERATING CURVE)
STORAGE TEMPERATURE: -65°C TO +150°C
TEMPERATURE COEFFICIENT: .002%/°C WITH A ZENER CURRENT OF 7.5 mA.

SPECIAL CONDITIONING BY SUPPLIER:
UNITS SHALL BE BURNED IN FOR 240 HOURS AT THE FOLLOWING CONDITIONS:
1. AMBIENT TEMPERATURE 100°C ±5°C.
2. POWER DISSIPATION: 50% OF THE 100°C CASE TEMPERATURE RATING.
UNITS WHICH FAIL TO MEET ALL INITIAL REQUIREMENTS OR WHICH EXCEED THE SPECIFIED
LIMITS FOR PARAMETRIC CHANGES FOLLOWING BURN IN SHALL NOT BE SHIPPED.

THE MANUFACTURER SHALL DETERMINE AND RECORD THE FOLLOWING ELECTRICAL CHARACTERISTICS
PRIOR TO AND FOLLOWING BURN IN.
1. ZENER VOLTAGE (ZV)
2. DYNAMIC IMPEDANCE (ZI)
3. LEAKAGE CURRENT (I0)

PARAMETRIC CHANGE LIMITS:
1. ZENER VOLTAGE: ±0.05% OF INITIAL MEASURED VALUE
2. DYNAMIC IMPEDANCE: ±5% OF INITIAL MEASURED VALUE
3. LEAKAGE CURRENT: SHALL NOT EXCEED 100% OF INITIAL MEASURED VALUE.

PROCURE ONLY FROM APPROVED SOURCES LISTED ON
MANNED SPACECRAFT CENTER
INSTRUMENTATION LAB
HOUSTON, TEXAS

FOR INFORMATION ONLY
CLASS B RELEASE TED No. 014500 DATE

SEMICONDUCTOR DEVICE, DIODE
SPECIFICATION CONTROL DRAWING

RETMA COLOR
CODE BANDS DENOTE
NEGATIVE END.
### Table 1
**Electrical Characteristics at Ambient Temperature = 25°C** (unless otherwise specified)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
<th>Symbol</th>
<th>Specification Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zener Voltage</td>
<td>$I_Z = 7.5$ mA</td>
<td>$V_Z$</td>
<td>5.9 ( \pm 0.3 ) V</td>
</tr>
<tr>
<td>Zener Impedance</td>
<td>$I_Z = 7.5$ mA</td>
<td>$Z_Z$</td>
<td>6.3 ( \pm 0.3 ) V</td>
</tr>
<tr>
<td>Zener Impedance</td>
<td>$I_Z = 1$ mA</td>
<td>$Z_Z$</td>
<td>6.3 ( \pm 0.3 ) V</td>
</tr>
<tr>
<td>Leakage Current</td>
<td>$V_Z = 5.0$ V</td>
<td>$I_L$</td>
<td>100 ( \pm 0.1 ) mA</td>
</tr>
</tbody>
</table>

- **Derating Curve**
  - **100 MW**
  - **20 MW**
  - **(T Amb Temp°C)**

### FOR INFORMATION ONLY
**CLASS B RELEASE TDR No. 0450**
**DATE 8/8/06**

### Notes
- **Material**:
  - Semiconductor Device, Diode
  - Specification Control Drawing
- **Heat Treatment**:
  - None
- **Application**:
  - None