Detectors

0.01-18 GHz

Miniature Flat, Zero-Biased Schottky Detectors

- Broadband Coverage
- Flat Frequency Response
- High Sensitivity
- Field-Replaceable Diode
- Negative or Positive Output Available

Specifications

Type N (M) and SMA (M) to BNC (F), 0.01 to 18 GHz

<table>
<thead>
<tr>
<th>FREQUENCY RANGE (GHz)</th>
<th>MODEL</th>
<th>FLATNESS (dB)</th>
<th>SENSITIVITY* (mV/μW)</th>
<th>VSWR (max)</th>
<th>INPUT POWER (mW max)</th>
<th>POLARITY</th>
<th>CONNECTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01-18</td>
<td>503A</td>
<td>±0.6</td>
<td>0.5</td>
<td>&lt;1.6</td>
<td>100</td>
<td>Neg.</td>
<td>Type N-M</td>
</tr>
<tr>
<td></td>
<td>503A-03</td>
<td>±0.6</td>
<td>0.5</td>
<td>&lt;1.6</td>
<td>100</td>
<td>Pos.</td>
<td>Type N-M</td>
</tr>
<tr>
<td></td>
<td>4503A</td>
<td>±0.6</td>
<td>0.5</td>
<td>&lt;1.6</td>
<td>100</td>
<td>Neg.</td>
<td>SMA-M</td>
</tr>
<tr>
<td></td>
<td>4503A-03</td>
<td>±0.6</td>
<td>0.5</td>
<td>&lt;1.6</td>
<td>100</td>
<td>Pos.</td>
<td>SMA-M</td>
</tr>
</tbody>
</table>

* Referenced to -20 dBm maximum at 25°C

Field Diode Replacement Procedure

Using approved ESD guidelines:
1. Hold Detector by main housing (side with BNC connector). Unscrew RF Input connector by applying a wrench to flats provided.
2. Remove detector assembly.
3. Insert bushings into each assembly.
4. Insert replacement diode into RF connector side – dot should be facing out.
5. Reassemble the connector and hand tighten.

Outline Drawings

Models 4503A, 4503A-03

Models 503A, 4503A-0

Dimensions in inches (mm in parentheses), unless otherwise specified.