1.0 SCOPE

This Product Specification covers the 2.4 product family (Interface Only) and is a general performance guideline. Please contact Molex RFMS Engineering for specific design iteration performance ratings. As customer end use applications vary greatly, the performance requirements stated within are superseded by performance requirements stated on the Molex Sales Drawing(s).

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME

2.4mm

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

MIL-STD-348B

4.0 RATINGS

4.1 VOLTAGE

335 Vrms at Sea Level

4.2 TEMPERATURE

Rating: -65°C TO +165°C

4.3 FREQUENCY RATING

DC to 50 GHz

4.4 NOMINAL IMPEDANCE

50 Ohm
## 5.0 PERFORMANCE

### 5.1 ELECTRICAL REQUIREMENTS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TEST CONDITION</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Insulation Resistance</td>
<td>MIL-PRF-39012, paragraph 3.11</td>
<td>&gt;=5000 Megohms</td>
</tr>
<tr>
<td>2</td>
<td>Dielectric Withstanding Voltage</td>
<td>MIL-PRF-39012, paragraph 3.17</td>
<td>1000 Vrms</td>
</tr>
<tr>
<td>3</td>
<td>Low Level Contact Resistance (LLCR)</td>
<td>MIL-PRF-39012, paragraph 3.16</td>
<td>Initial: Baseline (Reference Only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Post Environment: 10.0 Milliohms Max Increase</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Initial: Baseline (Reference Only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Post Environment: 10.0 Milliohms (Nobel Plating) 20.0 Milliohms (Non-Nobel Plating) Max Increase</td>
</tr>
<tr>
<td>4</td>
<td>Voltage Standing Wave Ratio</td>
<td>MIL-PRF-39012, paragraph 3.14</td>
<td>See Sales Drawing</td>
</tr>
<tr>
<td>5</td>
<td>RF Insertion Loss</td>
<td>MIL-PRF-39012, paragraph 3.27</td>
<td>See Sales Drawing</td>
</tr>
</tbody>
</table>

### 5.2 MECHANICAL REQUIREMENTS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TEST CONDITION</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Material/Finish</td>
<td>MIL-PRF-39012, paragraph 3.3</td>
<td>See Sales Drawing</td>
</tr>
<tr>
<td>7</td>
<td>Design</td>
<td>MIL-PRF-39012, paragraph 3.4</td>
<td>See Sales Drawing</td>
</tr>
<tr>
<td>8</td>
<td>Panel Nut Torque</td>
<td>N/A</td>
<td>See Sales Drawing</td>
</tr>
<tr>
<td>9</td>
<td>Recommended Mating Torque</td>
<td>MIL-PRF-39012</td>
<td>7-10 inch-pounds (steel part) 4-5 inch-pounds (brass part)</td>
</tr>
<tr>
<td>10</td>
<td>Force to Engage and Disengage</td>
<td>MIL-PRF-39012, paragraph 3.5.1</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Axial Force</td>
<td></td>
<td>2 in-lb MAX</td>
</tr>
<tr>
<td></td>
<td>Radial Force</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Coupling Proof Torque</td>
<td>MIL-PRF-39012, paragraph 3.6</td>
<td>15 inch-lbs Min</td>
</tr>
<tr>
<td>12</td>
<td>Coupling Nut Retention Force</td>
<td>MIL-PRF-39012, paragraph 3.25</td>
<td>60 pounds Min</td>
</tr>
</tbody>
</table>
## 5.2 MECHANICAL REQUIREMENTS (continued)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TEST CONDITION</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Mating Characteristics</td>
<td>MIL-PRF-39012, paragraph 3.7</td>
<td>MIL-STD-348B dimensions</td>
</tr>
<tr>
<td>14</td>
<td>Connector Durability</td>
<td>MIL-PRF-39012, paragraph 3.15</td>
<td>500 Cycles</td>
</tr>
<tr>
<td>15</td>
<td>Center Contact Retention</td>
<td>MIL-PRF-39012, paragraph 3.12 Axial Force (Cable Connectors) Axial Force (Adapters) Axial Force (PCB Connectors) Radial Torque</td>
<td>6 lbs MIN (terminated to cable) 4 lbs MIN N/A N/A</td>
</tr>
<tr>
<td>16</td>
<td>Cable Retention</td>
<td>MIL-PRF-39012, paragraph 3.24 Axial Force</td>
<td>Per Cable Specification</td>
</tr>
</tbody>
</table>

## 5.3 ENVIRONMENTAL REQUIREMENTS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TEST CONDITION</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Vibration</td>
<td>MIL-PRF-39012, paragraph 3.18 Per MIL-STD-202, Method 204</td>
<td>Test Condition D</td>
</tr>
<tr>
<td>19</td>
<td>Shock (Thermal)</td>
<td>MIL-PRF-39012, paragraph 3.2 Per MIL-STD-202, Method 107</td>
<td>Test Condition B (115 °C)</td>
</tr>
<tr>
<td>20</td>
<td>Corrosion (Salt Spray)</td>
<td>MIL-PRF-39012, paragraph 3.13 Per MIL-STD-202, Method 101</td>
<td>Test Condition B</td>
</tr>
</tbody>
</table>