HUBER+SUHNER® SUCOTEST 18 ASSEMBLY

Part no.: ST-18/SMAm/SMAm/48
Order no.: 84003373

Electrical specifications
Impedance 50 Ohms
Operating frequency 18 GHz
Velocity of propagation 77%
Capacitance 87 pF/m (26.5 pF/ft)
Time delay 4.3 ns/m (1.31 ns/ft)
Insulation resistance > 5 × 10^3 MΩ
Dielectric withstand voltage 2'500 V rms
Screening effectiveness > 90 dB

General specifications
Assembly length 1219 mm (48 in.)
Cable diameter 4.6 mm (0.181 in.)
Temperature range -55°C to +105°C
Preferred bending radius 100 mm (4.0 in.)
Connector retention force > 200 N
Recommended mating torque 0.8 Nm... 1.1 Nm (7.1 ... 9.7 in.lbs)
Connector interface MIL-STD-348A/310
Weight 80 gram

Materiats and finishes
Cable jacket FEP, blue
Cable dielectric LDPTFE
Taper sleeves Santoprene / black
Marking sleeve Crosslinked polyolefin/white
Connector contacts Beryllium-copper, gold plated
Connector insulation PTFE
Connector body Stainless steel, passivated
Connector nut Stainless steel, passivated
Gasket Silicon rubber

Dimension

Electrical table

<table>
<thead>
<tr>
<th></th>
<th>up to 2 GHz</th>
<th>2.01 to 4 GHz</th>
<th>4.01 to 6 GHz</th>
<th>6.01 to 12 GHz</th>
<th>12.01 to 18 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. return loss (dB)</td>
<td>30</td>
<td>28</td>
<td>25</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Max. insertion loss at 25°C (dB)</td>
<td>&lt; 0.61</td>
<td>&lt; 0.88</td>
<td>&lt; 1.09</td>
<td>&lt; 1.57</td>
<td>&lt; 1.95</td>
</tr>
<tr>
<td>Max. cw power at 25°C, sea level (W)</td>
<td>&gt; 391</td>
<td>&gt; 277</td>
<td>&gt; 225</td>
<td>&gt; 160</td>
<td>&gt; 131</td>
</tr>
<tr>
<td>Max. insertion loss vs. shaking (dB)</td>
<td>&lt; 0.03</td>
<td>&lt; 0.03</td>
<td>&lt; 0.03</td>
<td>&lt; 0.03</td>
<td>&lt; 0.03</td>
</tr>
<tr>
<td>Max. insertion loss vs. bending (dB)</td>
<td>&lt; 0.03</td>
<td>&lt; 0.04</td>
<td>&lt; 0.04</td>
<td>&lt; 0.05</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Max. insertion loss vs. torsion (dB)</td>
<td>&lt; 0.03</td>
<td>&lt; 0.04</td>
<td>&lt; 0.04</td>
<td>&lt; 0.05</td>
<td>&lt; 0.05</td>
</tr>
</tbody>
</table>

Excellence in connectivity solutions
Care and handling instructions for HUBER + SUHNER microwave cables

HUBER + SUHNER microwave cable assemblies of all types offer a long service life providing they are treated with the appropriate care and attention. Microwave cable assemblies are high precision system components and require proper handling in order to ensure that measuring performance values are maintained.

To achieve the maximum measuring performance the following guidelines should be followed:

1. Assemblies should remain in their original packaging for delivery and storage. Storage temperature should be between -50 °C and +80 °C and the relative humidity should not exceed 85%.

2. Carefully unpack assemblies before measurement. Avoid kinking cables when straightening from a coil or reel.

3. Ensure that the surroundings are clean and free of dust, dirt and any other particles that could enter unsealed connector interfaces.

4. Use protective caps to prevent contamination whenever connectors are unmated.

5. Where interfaces are contaminated, particles can be removed with dry, oil-free compressed air. Please use eye-protection. Interfaces can be cleaned with dry cotton swabs. Do not use hard hand-tools or solvents. Do not blow into interfaces or use normal compressed-air.

6. Choose the measurement routing using the largest bend radii possible. Small bend radii may affect electrical performance. Exceeding the specified limits during the measurement process could cause a permanent degradation.

7. Avoid twisting microwave cable assemblies. Torsion of this type of assembly can alter the relative diameters of cable layers and affects the electrical characteristics. Exceeding the limit of 10° per metre during measuring process could cause a permanent degradation.

8. Examine interfaces for damage and/or contamination before mating.

9. Discharge connectors before mating or ensure that they are connected to a suitable ground.

10. When mating connectors with a screwed interface always hold the connector bodies and turn only the coupling nut. This avoids twisting the cable and ensures minimum wear on the connector pins.

11. Do not exceed the torque specified.