HUBER+SUHNER® SUCOTEST 18 ASSEMBLY

Part no.: ST-18/SMAm/SMAm/36
Order no.: 84002061

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: 914 mm (36 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: 68 gram

Materials 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; 0.48</td>
<td>&lt; 0.68</td>
<td>&lt; 0.84</td>
<td>&lt; 1.21</td>
<td>&lt; 1.51</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>
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<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>
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<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>
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</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.

The HUBER+SUHNER AG is certified according to ISO 9001 and ISO 14001.

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