RF Characterization Report

RF25S Series Cable Assemblies
RF25S-SCC21-01SP1-0305

Description:
RF Cable Assembly, RF25S Cable
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Test Setup Information

Scope:

To perform characterization tests, Insertion Loss, Return Loss and Voltage Standing Wave Ratio.

Product Description:

The table below presents a description of the RF25S cable assembly that was tested:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Length</th>
<th>Termination – End 1</th>
<th>Termination – End 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF25S-SCC21-01SP1-0305</td>
<td>305 mm</td>
<td>Bull’s Eye Coat Test Point with knurled ferrule</td>
<td>SMA, Straight, Plug</td>
</tr>
</tbody>
</table>

Test Calibration:

Calibration is performed using Agilent mechanical calibration kit, PN 85052D to the calibration point below. Any adapters beyond this point are included in the measurements.

(Actual setup depicted.)

Adapter Use:
Each port uses at least one precision adapter capable of mating to the assembly under test. Any supplementary adapter will contribute additional electrical characteristics to the measured data. Any use of additional adapters is noted.

<table>
<thead>
<tr>
<th>Product Part Number</th>
<th>Used Adapter Part Number</th>
<th>Adapter End</th>
<th>Vender</th>
<th>Used Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF25S-SCC21-01SP1-0305</td>
<td>73251-1850</td>
<td>SMA Jack</td>
<td>Molex</td>
<td>1</td>
</tr>
</tbody>
</table>

**Definition of Assembly under Test:**

The performance characteristics include the interface with adapters.

**Port Designations:**

The connector attached to port 1 of the VNA is “End 1” from the part number callout. Insertion Loss is measured using S21 and Return Loss / VSWR is measured using S11.

**Legend for Plots:**

5 samples were tested. Only the min/max plots are shown for clarity in this report.
Series: RF25S  
Description: RF Cable Assembly, RF25S Cable

RF25S-SCC21-01SP1-0305

- Insertion Loss
- Return Loss
- Voltage Standing Wave Ratio

Frequency (GHz) vs. Insertion Loss (dB)
Frequency (GHz) vs. Return Loss (dB)
Frequency (GHz) vs. Voltage Standing Wave Ratio (VSWR)
Instrument Setup:

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Analyzer</td>
<td>Agilent N5230C PNA-L Series (300 KHz - 20 GHz)</td>
</tr>
<tr>
<td>Mechanical Calibration Kit</td>
<td>85052D</td>
</tr>
<tr>
<td>Electronic Calibration Kit</td>
<td>N4433A</td>
</tr>
<tr>
<td>Averaging Factor</td>
<td>Off</td>
</tr>
<tr>
<td>Smoothing</td>
<td>Off</td>
</tr>
<tr>
<td>IF Bandwidth</td>
<td>1 KHz</td>
</tr>
<tr>
<td>Sweep Start</td>
<td>300 KHz</td>
</tr>
<tr>
<td>Sweep End</td>
<td>20 GHz</td>
</tr>
<tr>
<td>Points</td>
<td>1601</td>
</tr>
</tbody>
</table>

Test Fixture:

N5230C (Typical set-up, actual part not depicted.)