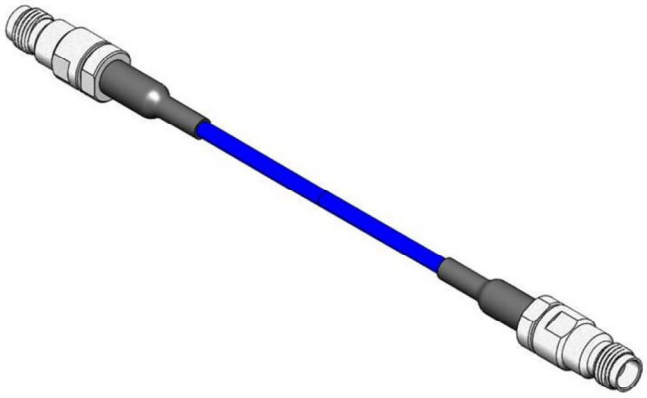
RF Characterization Report

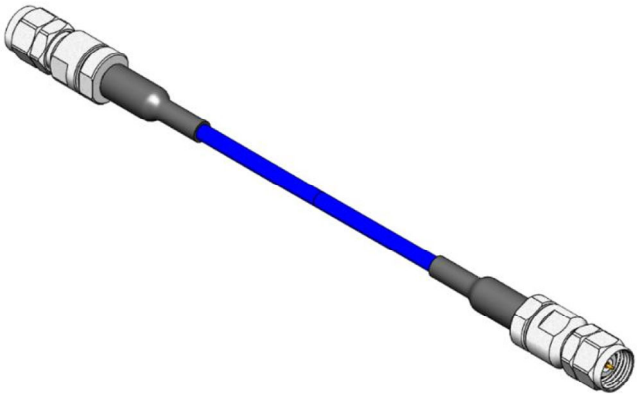
RF085-24SJ-24SJ-XXXX

Test Date: 11 June 2020



RF085-24SP-24SP-XXXX

Test Date: 11 June 2020



Description

High Performance Microwave Cable Assembly, 2.4mm Connector End, .085” Diameter 50 Ohm, RF cable assembly

Samtec Inc.
520 Park East Blvd.
New Albany IN 47151-1147 USA

WWW.SAMTEC.COM
1-800-SAMTEC-9 (US & Canada)
RF@samtec.com

Phone: 812-944-6733
Fax: 812-948-5047
Report Revision: 7/21/2020

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

Table of Contents

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

Test Setup Information

Scope:

Provide insertion loss and standing wave ratio performance parameters for RF connector types terminated to RF085 series coaxial cable.

Instrument Setup & Test Accessories:

Network Analyzer	Keysight PNA N5227B (10 MHz - 67 GHz)
Averaging Factor	0
Smoothing	Off
IF Bandwidth	1 KHz
Sweep Start	10 MHz
Sweep End	50 GHz
Points	5000
Test Cables	Gore 0F0CACB036.0-LF (DC to 67 GHz)

Calibration Type:

A Keysight ECAL calibration is performed using the Keysight ECAL N4694A kit.

Calibration Kit	Keysight ECAL N4694A

Adapter Use:

1.85 mm Female to 2.4 mm Male/Female adapters were used for the measurements of RF085-24SP-24SP-0152, RF085-24SP-24SP-1000, RF085-24SJ-24SJ-0152 and RF085-24SJ-24SJ-1000. The adapter effects were removed from the measurement using the PNA's Fixture Removal method.

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF085-24SJ-24SJ-0152 Test Definition

Part Number	Length	End 1	End 2
RF085-24SJ-24SJ-0152	152 mm	2.4 mm Straight Jack	2.4 mm Straight Jack

Assembly Under Test:

Conclusion:

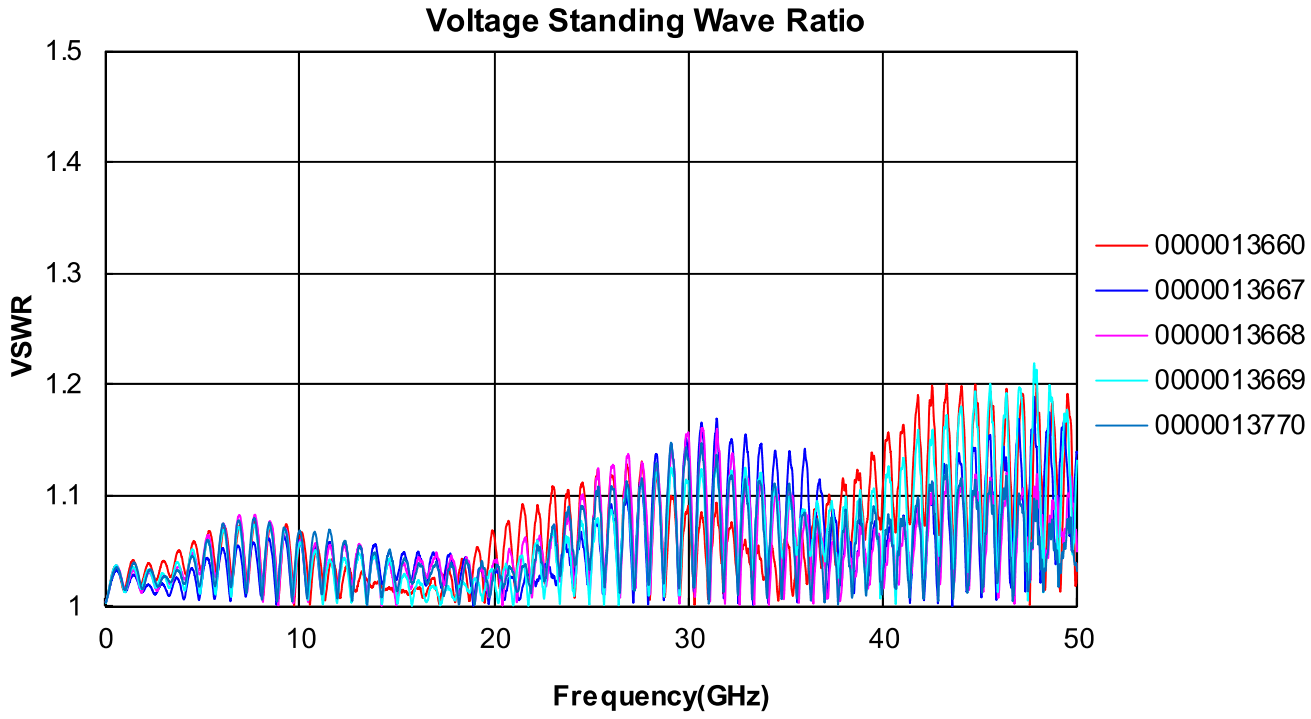
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF085 datasheet and the maximum insertion loss is specified by an equation on the RF085 Cable Assembly Drawing. The samples meet the specifications for VSWR and insertion loss.

Results: RF085-24SJ-24SJ-0152

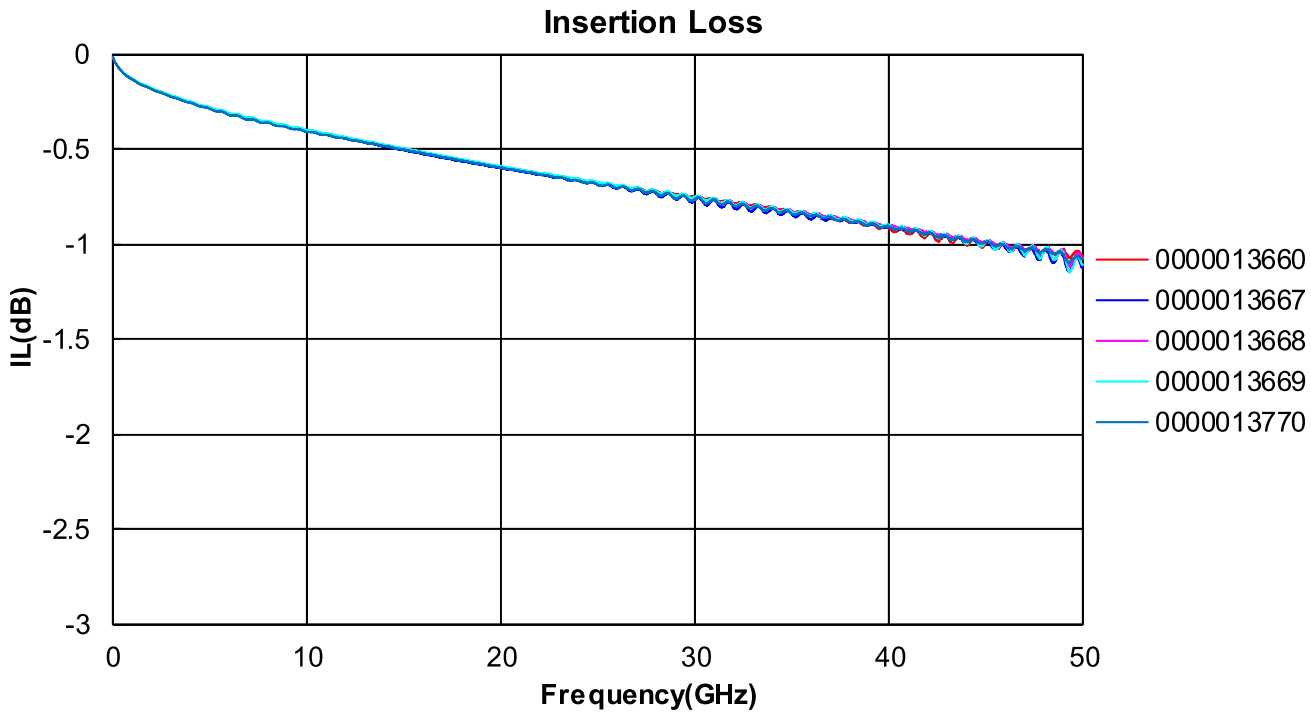
Sample	VSWR (max)	IL (max)
0000013660	1.20 @ 43.29 GHz	1.07 dB @ 49.32 GHz
0000013667	1.19 @ 47.79 GHz	1.15 dB @ 49.32 GHz
0000013668	1.16 @ 30.67 GHz	1.12 dB @ 49.34 GHz
0000013669	1.22 @ 47.79 GHz	1.15 dB @ 49.34 GHz
0000013670	1.15 @ 29.10 GHz	1.10 dB @ 49.25 GHz

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF085-24SP-24SP-0152 Test Definition

Part Number	Length	End 1	End 2
RF085-24SP-24SP-0152	152 mm	2.4 mm Straight Plug	2.4 mm Straight Plug

Assembly Under Test:

Conclusion:

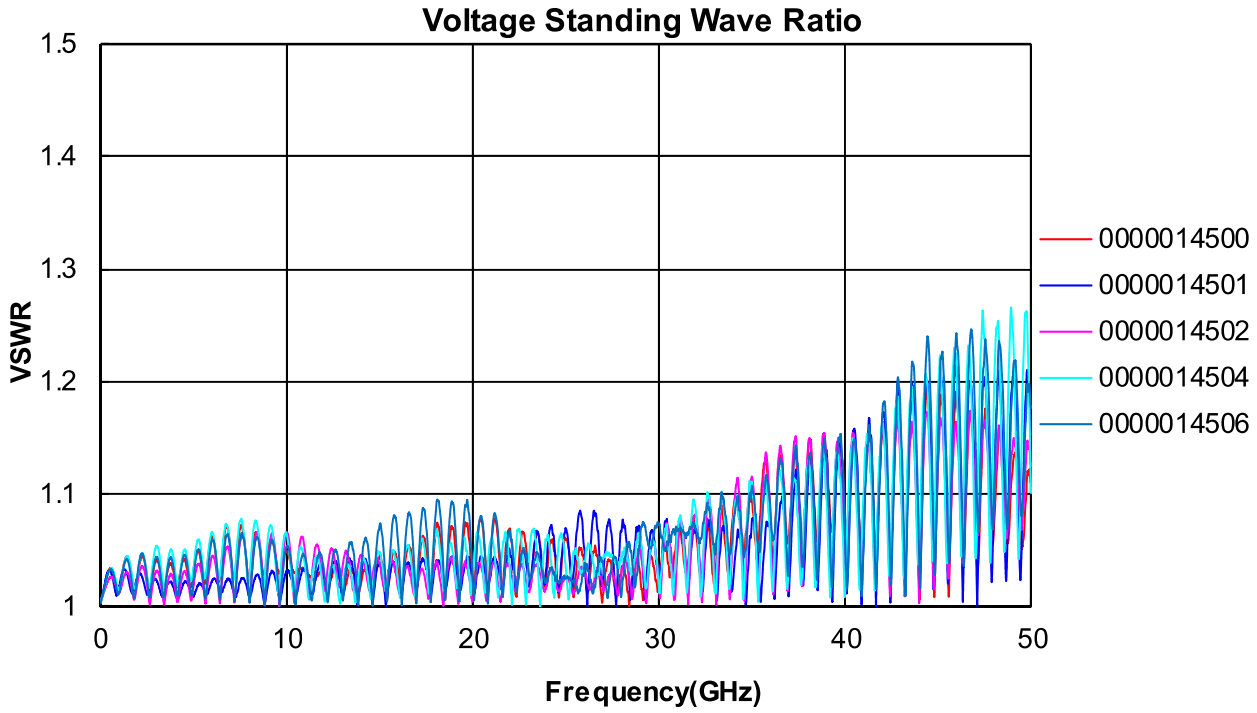
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF085 datasheet and the maximum insertion loss is specified by an equation on the RF085 Cable Assembly Drawing. The samples meet the specifications for VSWR and insertion loss.

Results: RF085-24SP-24SP-0152

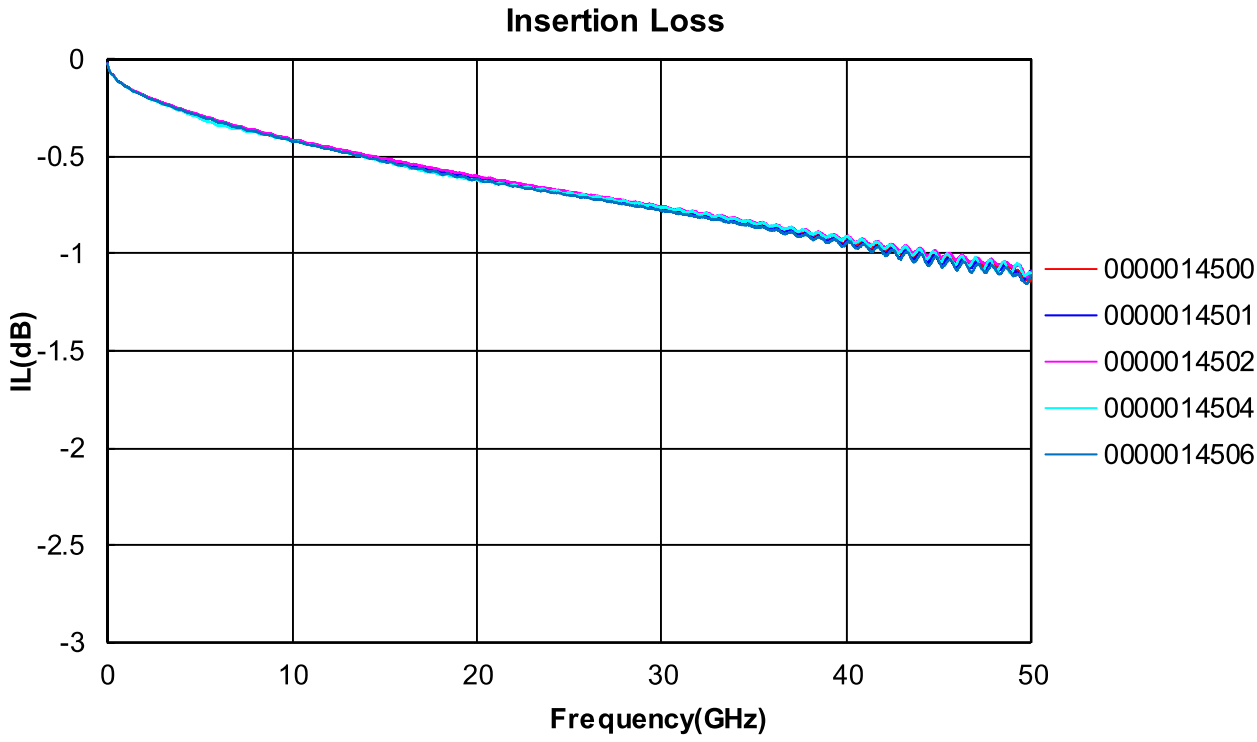
Sample	VSWR (max)	IL (max)
0000014500	1.20 @ 43.61 GHz	1.17 dB @ 49.91 GHz
0000014501	1.21 @ 45.97 GHz	1.14 dB @ 49.55 GHz
0000014502	1.17 @ 44.42 GHz	1.12 dB @ 49.77 GHz
0000014504	1.27 @ 48.93 GHz	1.11 dB @ 49.61 GHz
0000014506	1.25 @ 46.78 GHz	1.15 dB @ 49.76 GHz

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF085-24SJ-24SJ-1000 Test Definition

Part Number	Length	End 1	End 2
RF085-24SJ-24SJ-1000	1000 mm	2.4 mm Straight Jack	2.4 mm Straight Jack

Assembly Under Test:

Conclusion:

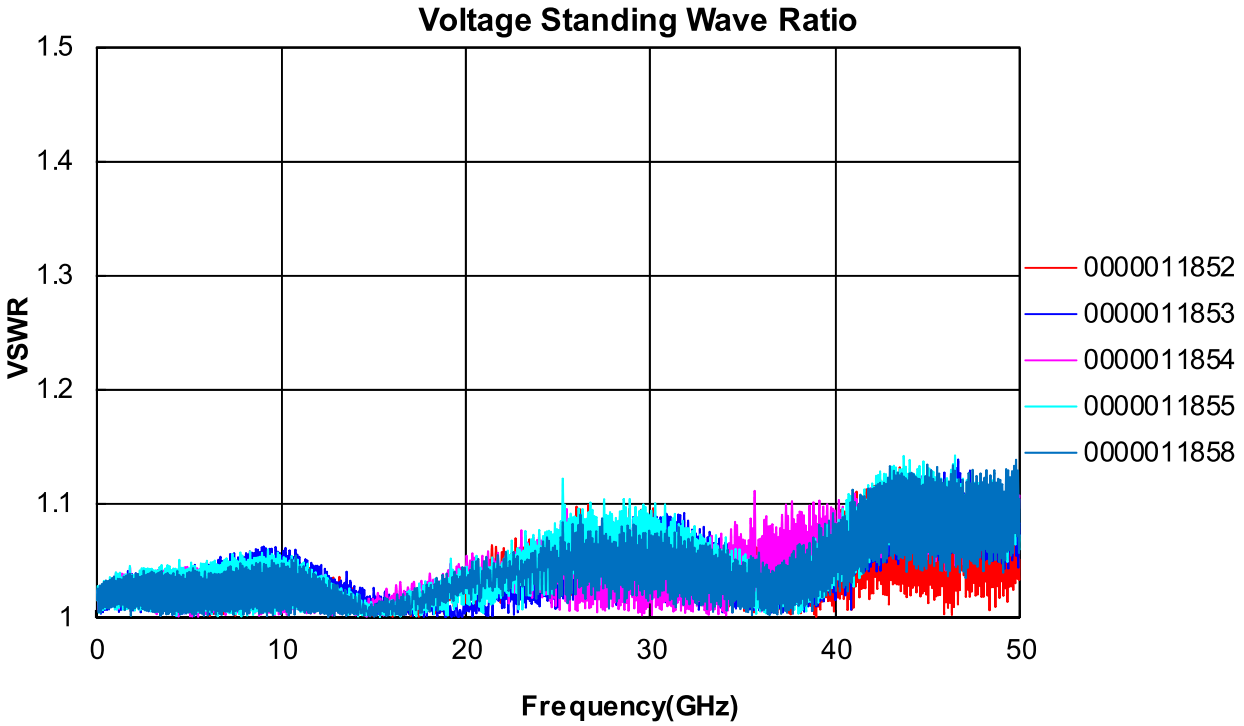
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF085 datasheet and the maximum insertion loss is specified by an equation on the RF085 Cable Assembly Drawing. The samples meet the specifications for VSWR and insertion loss.

Results: RF085-24SJ-24SJ-1000

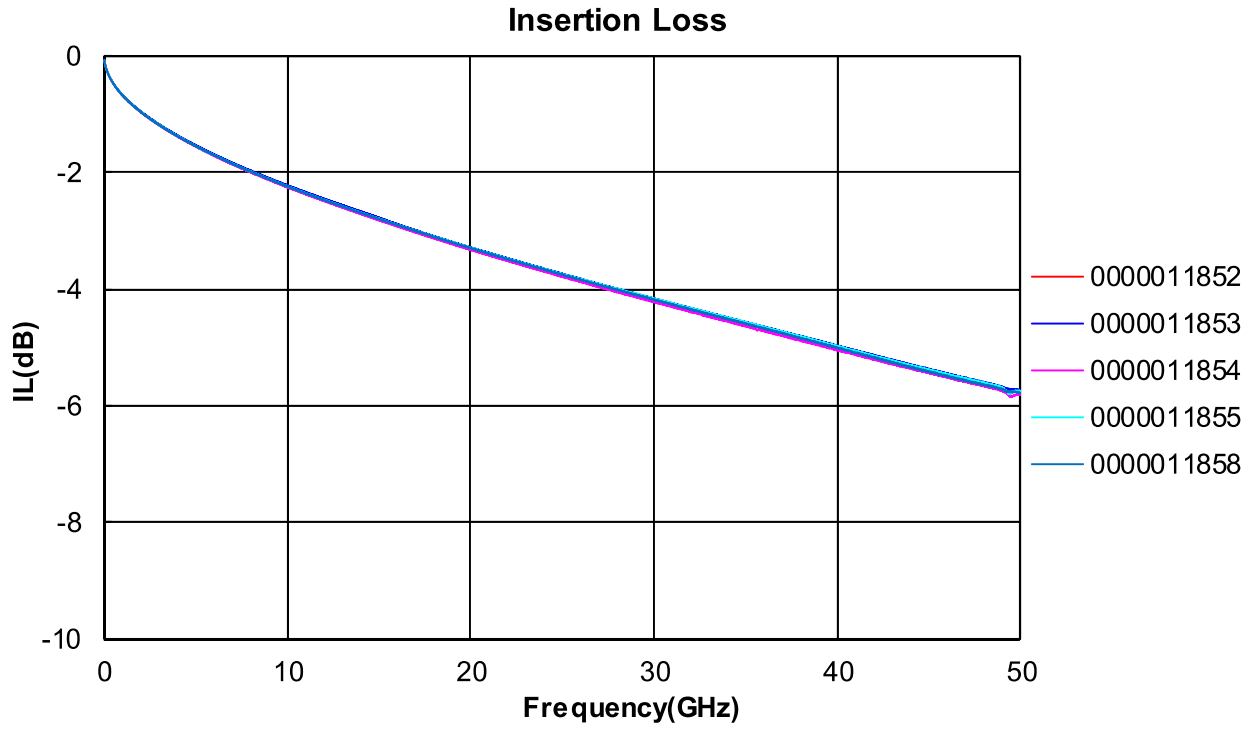
Sample	VSWR (max)	IL (max)
0000011852	1.13 @ 43.51 GHz	5.77 dB @ 50.00 GHz
0000011853	1.14 @ 46.67 GHz	5.74 dB @ 49.95 GHz
0000011854	1.12 @ 46.69 GHz	5.84 dB @ 49.47 GHz
0000011855	1.14 @ 46.50 GHz	5.80 dB @ 49.39 GHz
0000011858	1.14 @ 49.81 GHz	5.78 dB @ 49.98 GHz

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF085-24SP-24SP-1000 Test Definition

Part Number	Length	End 1	End 2
RF085-24SP-24SP-1000	1000 mm	2.4 mm Straight Plug	2.4 mm Straight Plug

Assembly Under Test:

Conclusion:

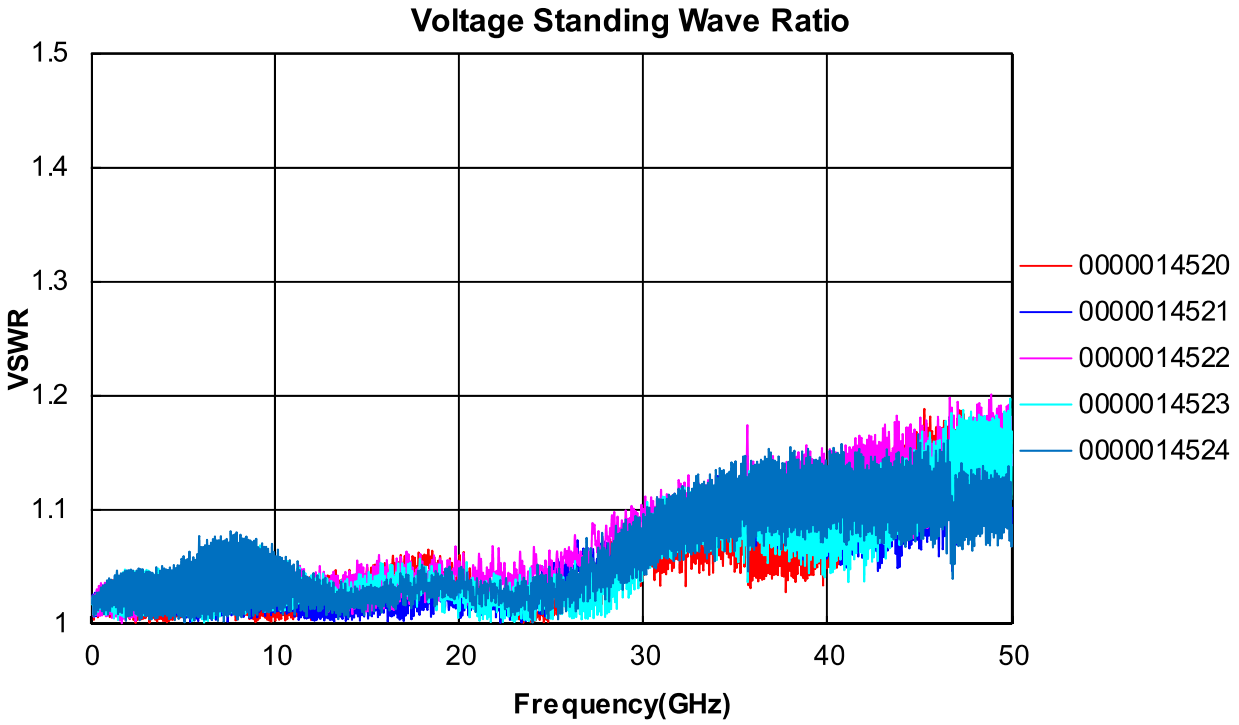
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF085 datasheet and the maximum insertion loss is specified by an equation on the RF085 Cable Assembly Drawing. The samples meet the specifications for VSWR and insertion loss.

Results: RF085-24SP-24SP-1000

Sample	SWR (max)	IL (max)
0000014520	1.19 @ 45.24 GHz	5.78 dB @ 49.61 GHz
0000014521	1.18 @ 46.62 GHz	5.79 dB @ 49.92 GHz
0000014522	1.20 @ 48.87 GHz	5.82 dB @ 49.81 GHz
0000014523	1.20 @ 49.91 GHz	5.86 dB @ 49.89 GHz
0000014524	1.17 @ 44.91 GHz	5.81 dB @ 50.00 GHz

Series: RF085
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss