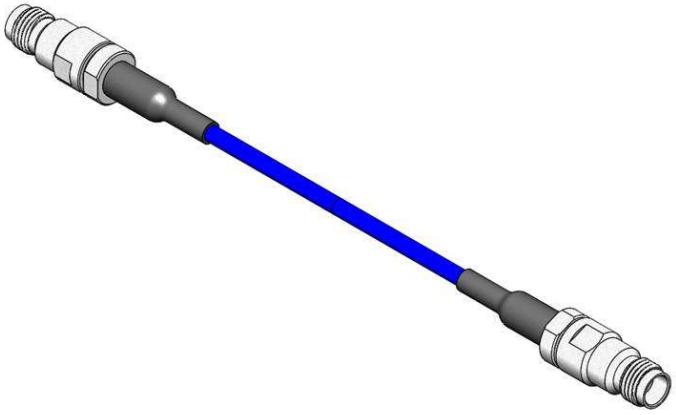
RF Characterization Report

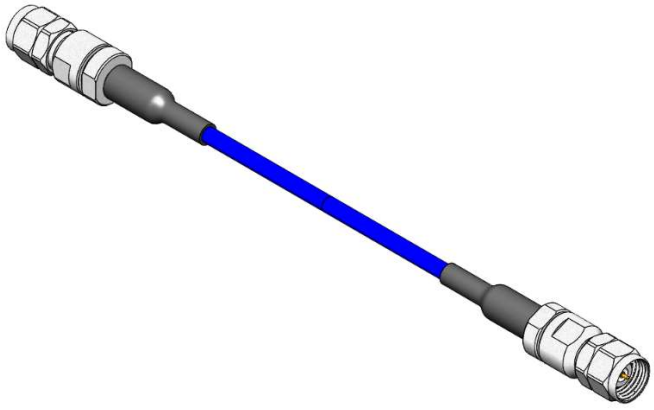
RF086-24SJ-24SJ-XXXX

Test Date: 27 September 2019



RF086-24SP-24SP-XXXX

Test Date: 27 September 2019



Description

High Performance Microwave Cable Assembly, 2.4mm Connector End, CCA-086-FFP, 50 Ohm, RF cable

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: 11/14/2019

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

Table of Contents

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

Test Setup Information

Scope:

Provide insertion loss, return loss and standing wave ratio performance parameters for RF connector types terminated to RF086 series coaxial cable. Where requested, provide extended bandwidth and TDR information.

Instrument Setup & Test Accessories:

Network Analyzer	Keysight PNA N5227A (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 SOLT calibration is performed using a Keysight 85056A 2.4 mm kit.

Calibration Kit	Keysight 85056A 2.4 mm

Adapter Use:

2.4 mm Female to 2.4 mm Male/Female adapters, used for the measurements of RF086-24SP-24SP and RF086-24SJ-24SJ, and the adapters effect are removed from the measurement.

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF086-24SJ-24SJ-0152 Test Definition

Part Number	Length	End 1	End 2
RF086-24SJ-24SJ-0152	152 mm	SMA, 2.4 Straight Jack	SMA, 2.4 Straight Jack

Assembly Under Test:

Rating Opportunity:

Not Available.

Conclusion:

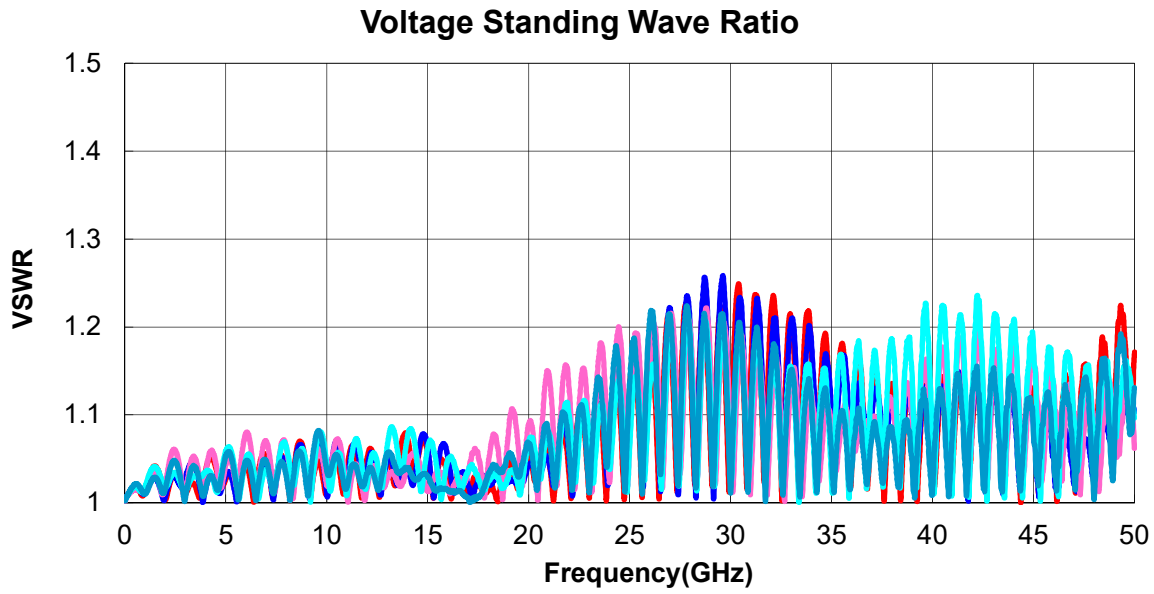
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF086 datasheet. The samples meet the specification for VSWR.

Results: RF086-24SJ-24SJ-0152

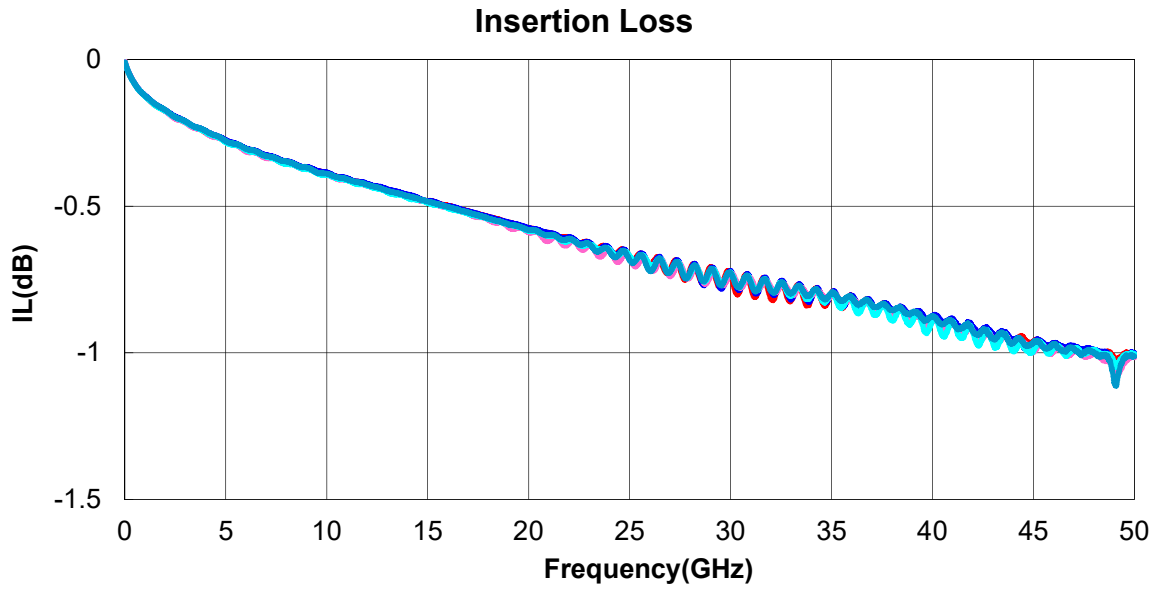
Sample	VSWR (max)	IL (min)
1	1.25 @ 30.39 GHz	-1.03 dB @ 49.09 GHz
2	1.26 @ 29.61 GHz	-1.07 dB @ 49.09 GHz
3	1.22 @ 28.79 GHz	-1.07 dB @ 49.10 GHz
4	1.24 @ 42.21 GHz	-1.05 dB @ 49.10 GHz
5	1.22 @ 27.82 GHz	-1.11 dB @ 49.07 GHz

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF086-24SP-24SP-0152 Test Definition

Part Number	Length	End 1	End 2
RF086-24SP-24SP-0152	152 mm	SMA, 2.4 Straight Plug	SMA, 2.4 Straight Plug

Assembly Under Test:

Rating Opportunity:

Not Available.

Conclusion:

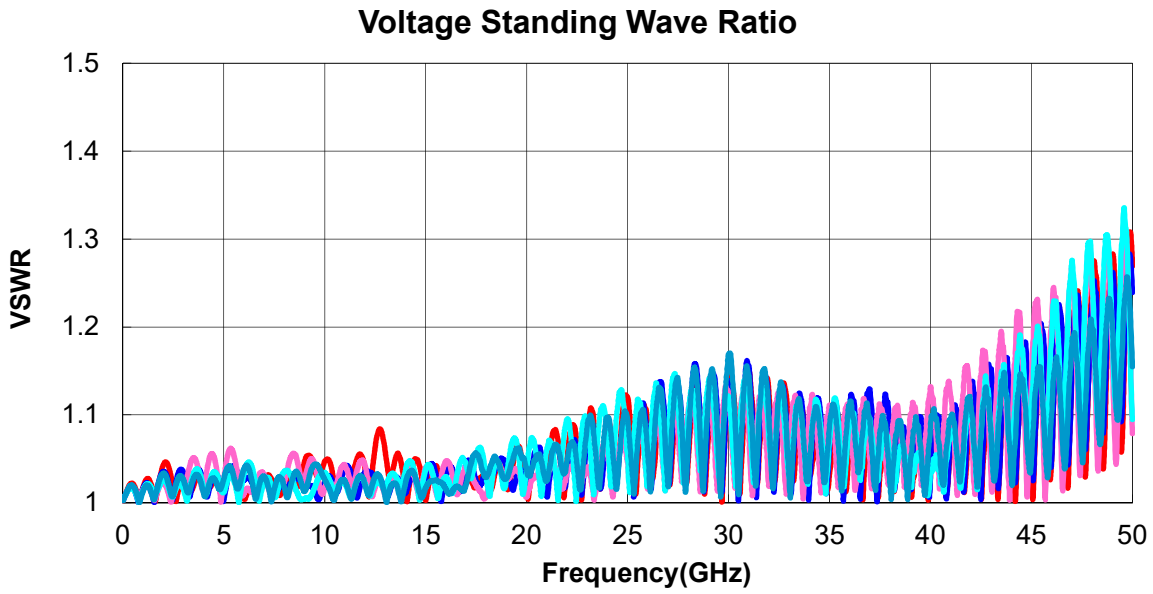
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF086 datasheet. The samples meet the specification for VSWR.

Results: RF086-24SP-24SP-0152

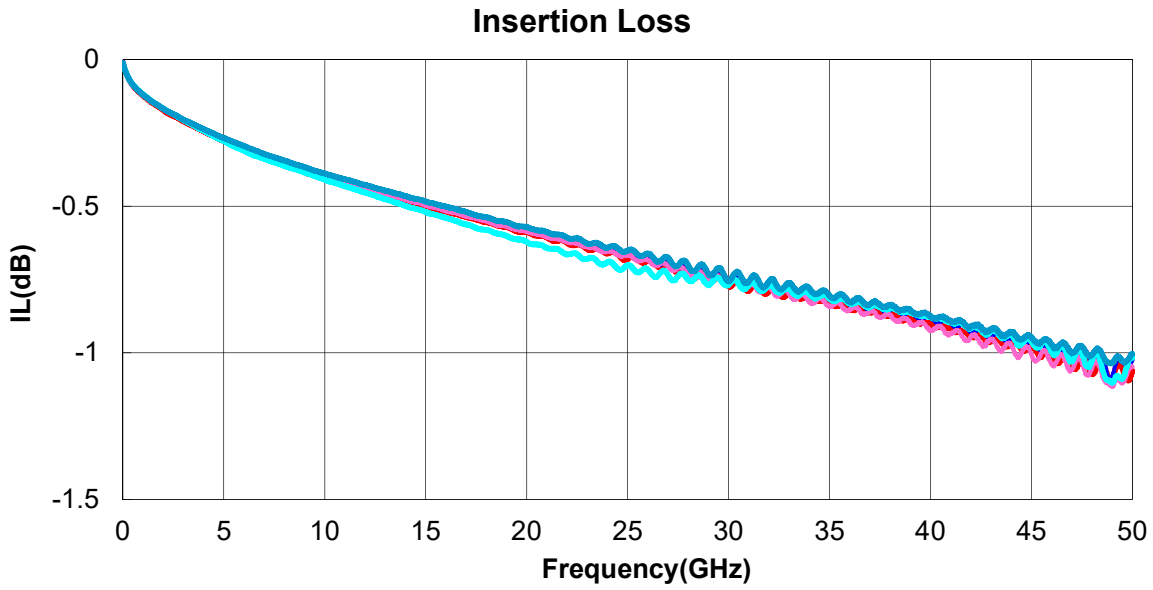
Sample	SWR (max)	IL (min)
1	1.31 @ 49.88 GHz	-1.10 dB @ 48.92 GHz
2	1.28 @ 49.85 GHz	-1.10 dB @ 48.89 GHz
3	1.31 @ 49.58 GHz	-1.12 dB @ 48.96 GHz
4	1.34 @ 49.58 GHz	-1.10 dB @ 48.96 GHz
5	1.26 @ 49.73 GHz	-1.04 dB @ 48.92 GHz

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF086-24SJ-24SJ-0500 Test Definition

Part Number	Length	End 1	End 2
RF086-24SJ-24SJ-0500	500 mm	SMA, 2.4 Straight Jack	SMA, 2.4 Straight Jack

Assembly Under Test:

Rating Opportunity:

Not Available.

Conclusion:

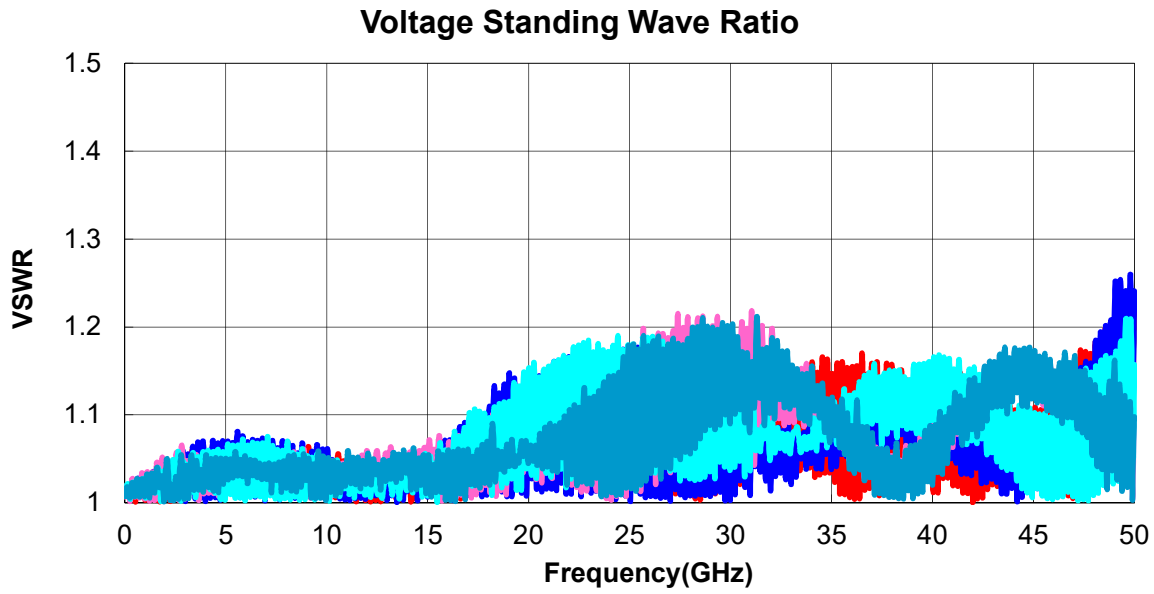
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF086 datasheet. The samples meet the specification for VSWR.

Results: RF086-24SJ-24SJ-0500

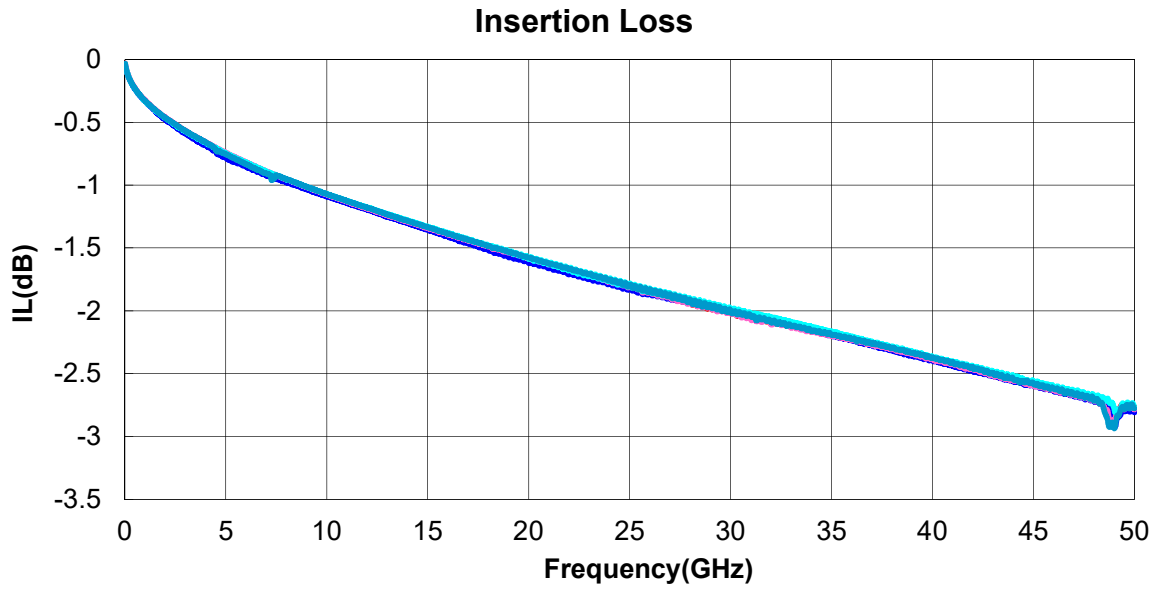
Sample	VSWR (max)	IL (min)
1	1.23 @ 49.77 GHz	-2.81 dB @ 49.03 GHz
2	1.26 @ 49.79 GHz	-2.92 dB @ 49.03 GHz
3	1.22 @ 31.04 GHz	-2.89 dB @ 48.80 GHz
4	1.21 @ 49.58 GHz	-2.81 dB @ 49.05 GHz
5	1.21 @ 31.30 GHz	-2.94 dB @ 49.00 GHz

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF086-24SP-24SP-0500 Test Definition

Part Number	Length	End 1	End 2
RF086-24SP-24SP-0500	500 mm	SMA, 2.4 Straight Plug	SMA, 2.4 Straight Plug

Assembly Under Test:

Rating Opportunity:

Not Available.

Conclusion:

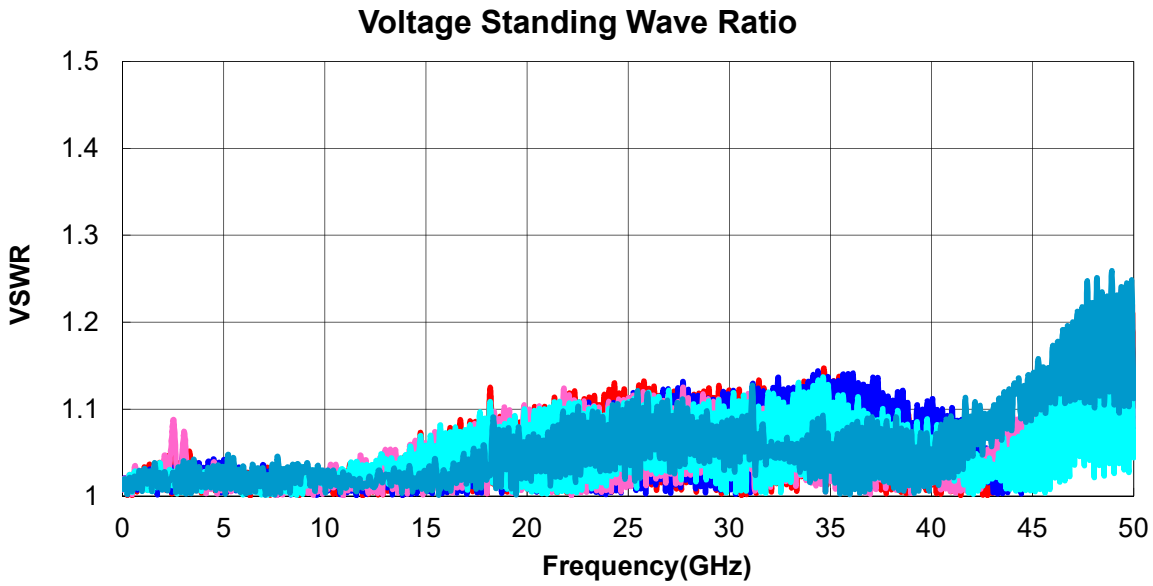
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF086 datasheet. The samples meet the specification for VSWR.

Results: RF086-24SP-24SP-0500

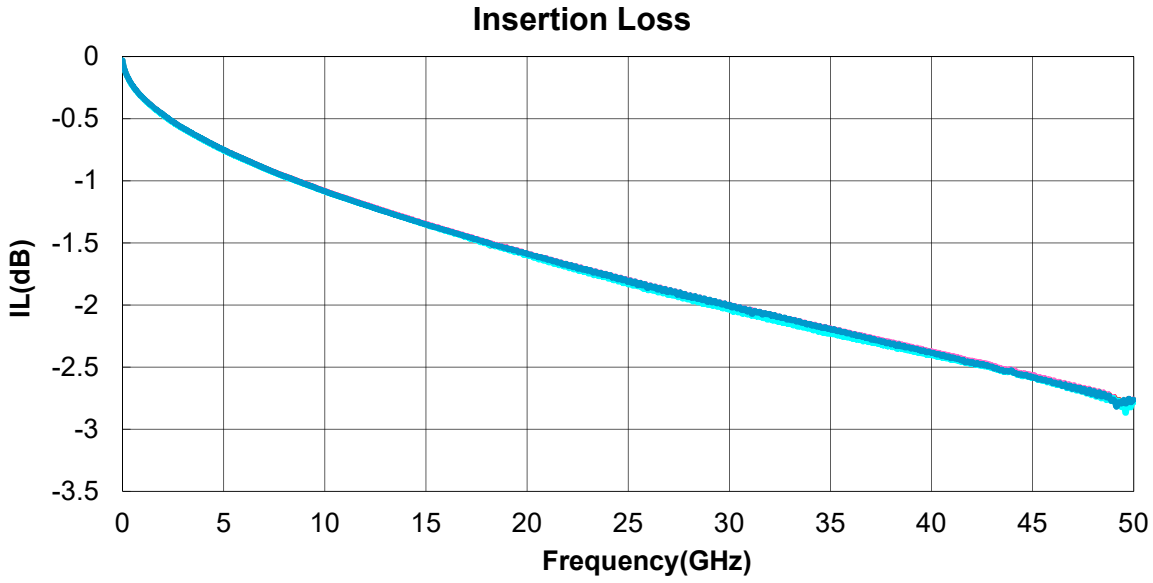
Sample	VSWR (max)	IL (min)
1	1.23 @ 49.40 GHz	-2.81 dB @ 49.40 GHz
2	1.20 @ 49.37 GHz	-2.83 dB @ 49.58 GHz
3	1.24 @ 49.38 GHz	-2.84 dB @ 49.60 GHz
4	1.23 @ 49.39 GHz	-2.87 dB @ 49.61 GHz
5	1.26 @ 49.82 GHz	-2.82 dB @ 49.15 GHz

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF086-24SJ-24SJ-1000 Test Definition

Part Number	Length	End 1	End 2
RF086-24SJ-24SJ-1000	1000 mm	SMA, 2.4 Straight Jack	SMA, 2.4 Straight Jack

Assembly Under Test:

Rating Opportunity:

Not Available.

Conclusion:

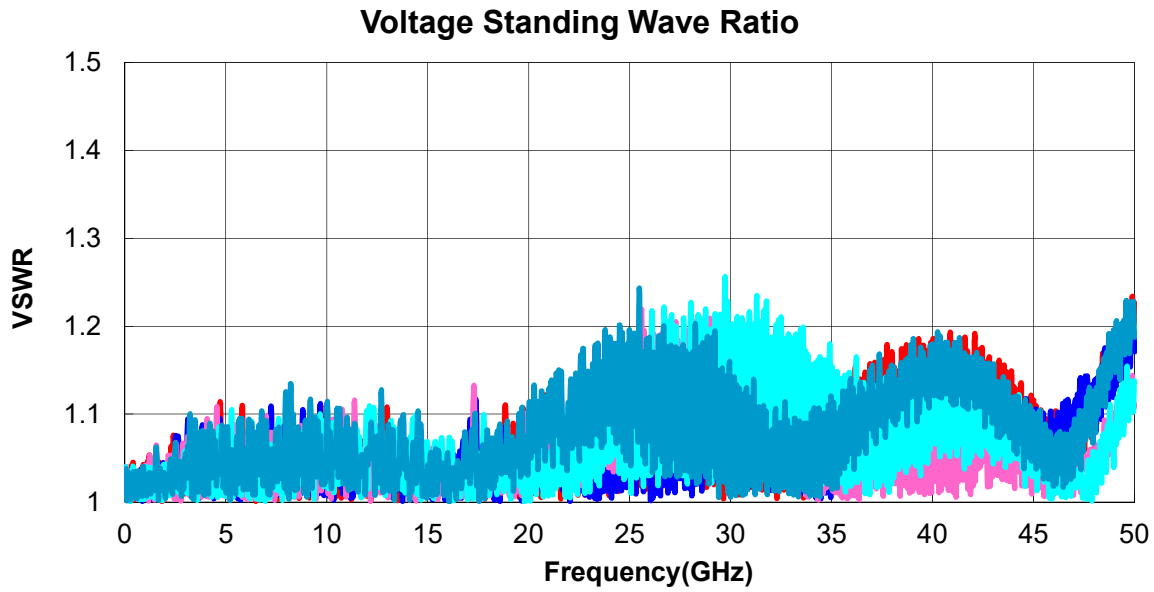
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF086 datasheet. The samples meet the specification for VSWR.

Results: RF086-24SJ-24SJ-1000

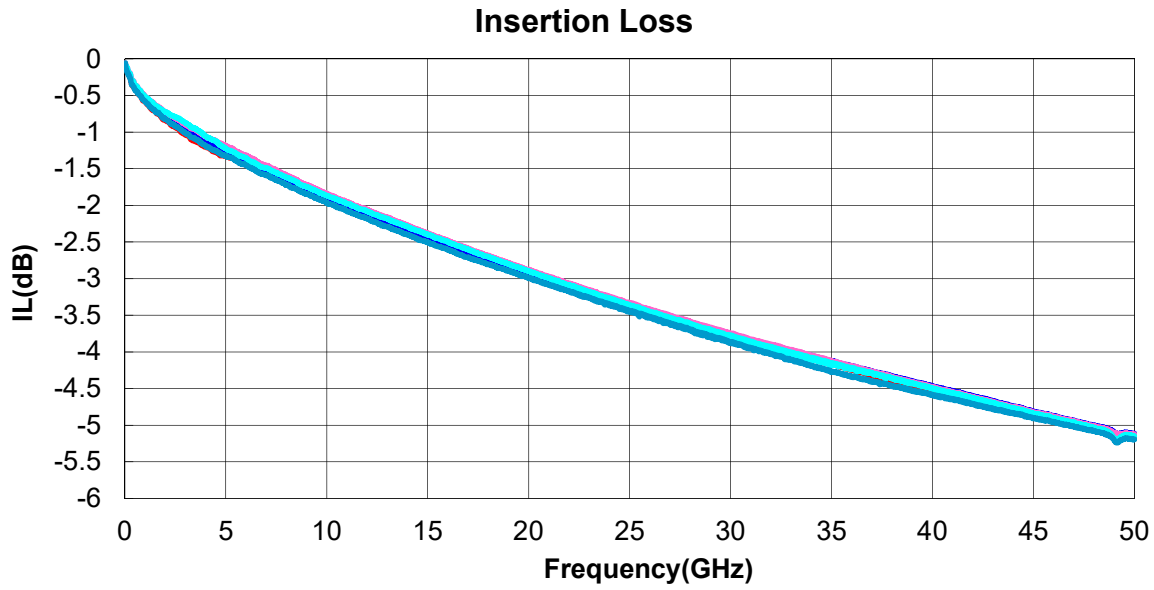
Sample	VSWR (max)	IL (min)
1	1.23 @ 49.89 GHz	-5.19 dB @ 49.03 GHz
2	1.20 @ 49.85 GHz	-5.12 dB @ 49.21 GHz
3	1.22 @ 25.58 GHz	-5.13 dB @ 49.22 GHz
4	1.26 @ 29.72 GHz	-5.20 dB @ 49.13 GHz
5	1.24 @ 25.48 GHz	-5.24 dB @ 49.15 GHz

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss



Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

RF086-24SP-24SP-1000 Test Definition

Part Number	Length	End 1	End 2
RF086-24SP-24SP-1000	1000 mm	SMA, 2.4 Straight Plug	SMA, 2.4 Straight Plug

Assembly Under Test:

Rating Opportunity:

Not Available.

Conclusion:

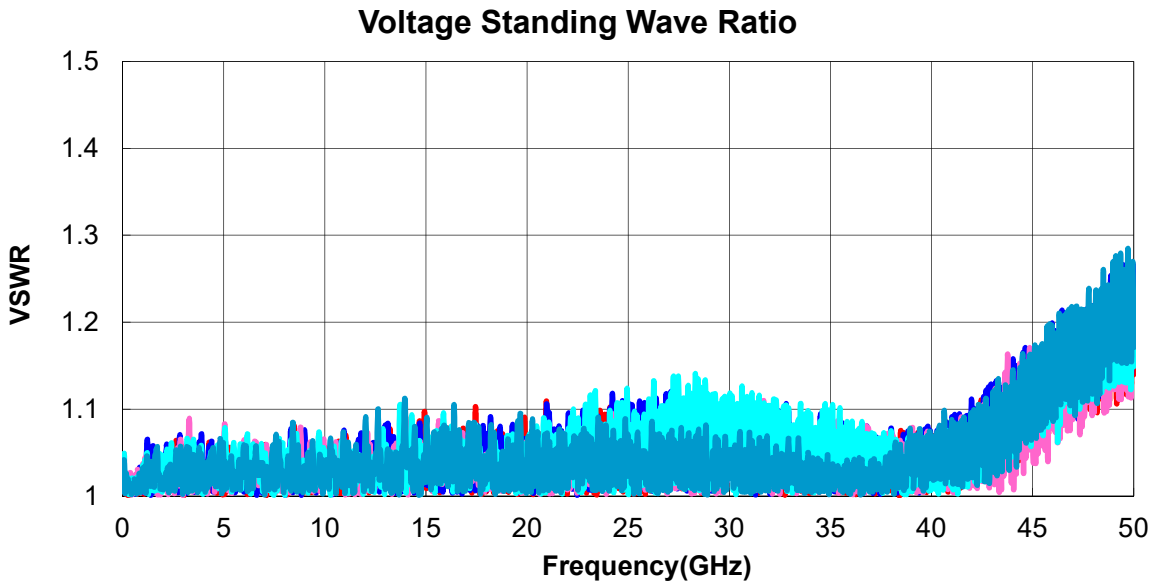
The maximum VSWR is specified as 1.4:1 from DC to 50 GHz in the RF086 datasheet. The samples meet the specification for VSWR.

Results: RF086-24SP-24SP-1000

Sample	SWR (max)	IL (min)
1	1.25 @ 49.46 GHz	-5.34 dB @ 48.97 GHz
2	1.27 @ 49.96 GHz	-5.33 dB @ 49.95 GHz
3	1.24 @ 48.96 GHz	-5.15 dB @ 49.30 GHz
4	1.23 @ 49.44 GHz	-5.18 dB @ 49.91 GHz
5	1.28 @ 49.72 GHz	-5.29 dB @ 49.98 GHz

Series: RF086
Description: High Performance Microwave Cable Assembly, 2.4 mm Connector End

VSWR



Insertion Loss