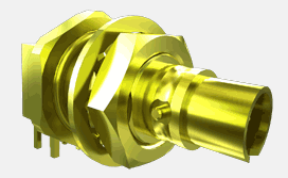
RF Characterization Report

CJT Series Circular RF Twinax Jack

CJT-T-P-HH-ST-TH1

CJT-T-P-HH-RA-BH1



Mated With

C28S-XX.XX-SPS8-SPS8

Description:
Fully Mated
Circular RF Shielded Twisted Pair Twinax Cable Assembly

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

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

Phone: 812-944-6733
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Report Revision: 8/19/2014

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Table of Contents

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Test Setup Information

Scope:

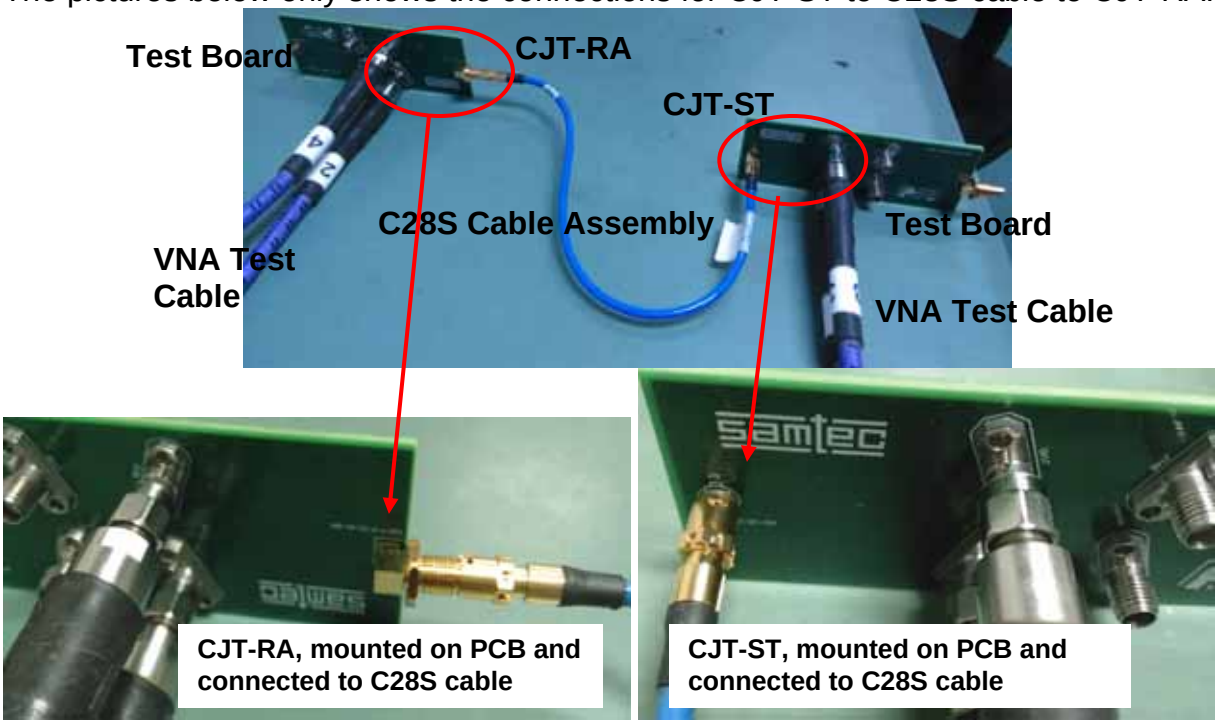
To perform characterization tests, Insertion Loss, Return Loss and Voltage Standing Wave Ratio.

Product Description:

The table below presents a description of CJT series connectors mating to C28S cable assemblies that were tested.

Part Number	Length	Termination – End 1	Termination – End 2
CJT-T-P-HH-ST-TH1		CJT, Straight, Jack, PCB mount, Through Hole	
CJT-T-P-HH-RA-BH1		CJT, Right Angle, Jack, PCB mount, Through Hole	
C28S-12.00-SPS8-SPS8	12 inches	CJT, Straight, Plug with socket	CJT, Straight, Plug with socket
C28S-36.00-SPS8-SPS8	36 inches	CJT, Straight, Plug with socket	CJT, Straight, Plug with socket

The pictures below only shows the connections for CJT-ST to C28S cable to CJT-RA.



Series: CJT Mated With C28S
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Test Calibration:

In this report, the system under test (SUT) includes the C28S cable assembly, CJT connectors and footprint effects on a typical multi-layer PCB. PCB effects (trace loss) are de-embedded from test data. Board related effects, such as pad-to-ground capacitance, are included in the data presented in this report.

Additionally, intermediate test signal connections can mask the connector's true performance. Such connection effects are minimized by using high performance test cables and adapters. Where appropriate, calibration and de-embedding routines are also used to reduce residual effects.

Test fixture losses and test point reflections were removed from the data by use of Automatic Fixture Removal (AFR) application. The calibration board is shown below. The measurements were performed under SOLT calibration and the test board effects were included in the measurements. AFR application extracts fixture S-parameters from 2X THRU measurement, and performs de-embedding on the DUT plus Fixture measurement to characterize only the DUT.

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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.

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:

3 samples were tested. Base on the insertion loss, the min/max plots are shown for clarity in this report.

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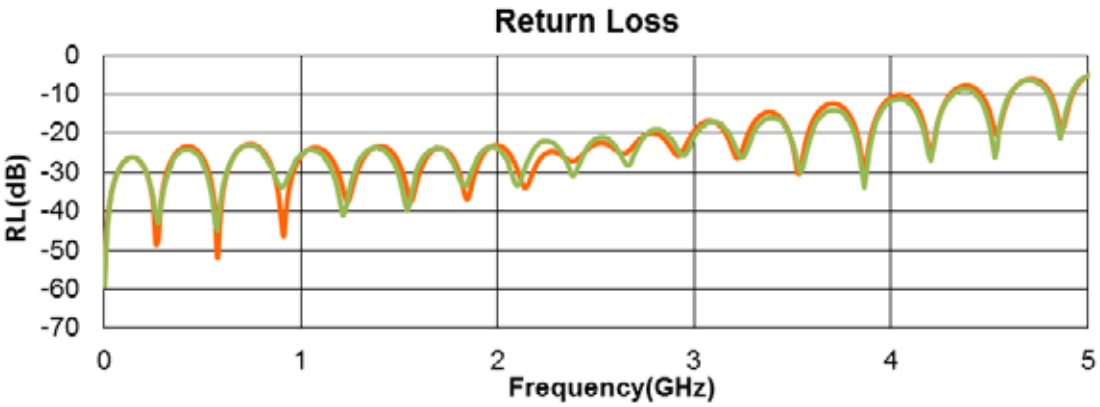
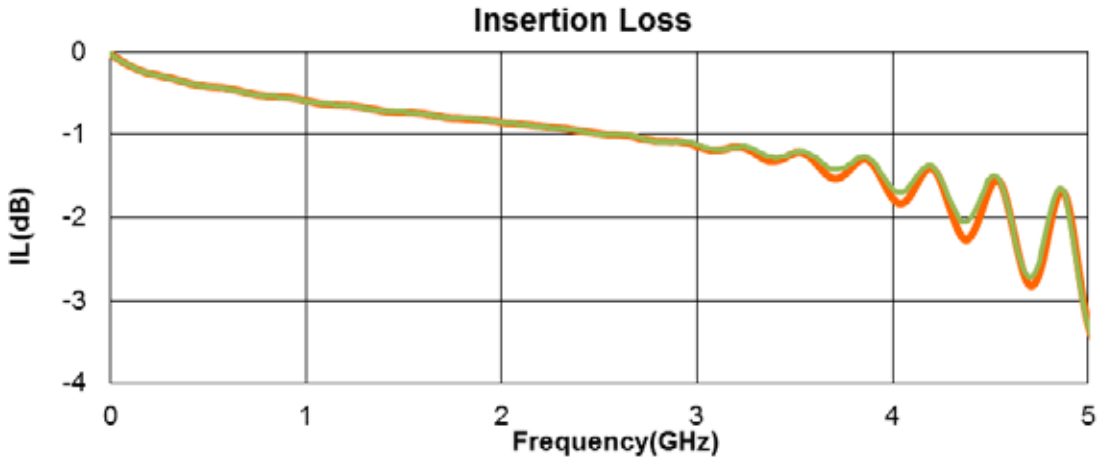
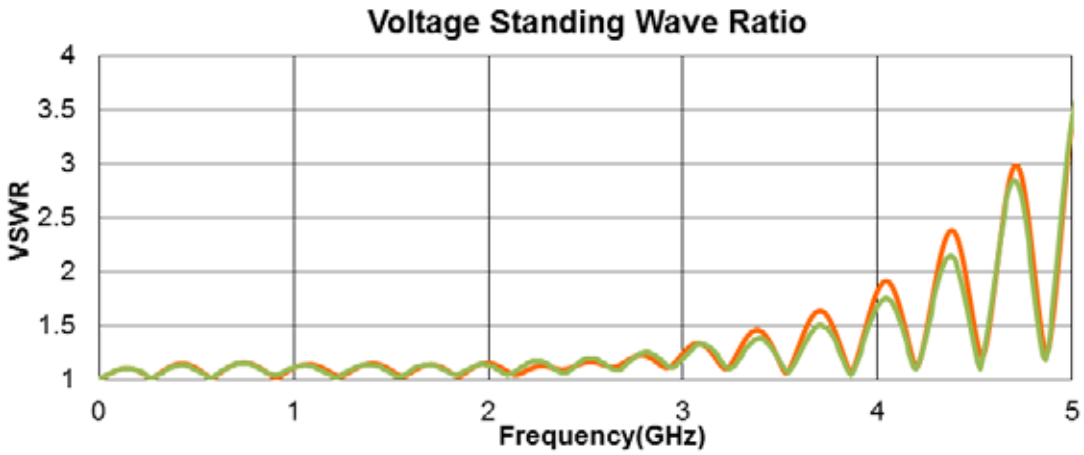
Results Summary

CJT-T-P-HH-RA-BH1 + C28S-12.00-SPS8-SPS8 + CJT-T-P-HH-RA-BH1







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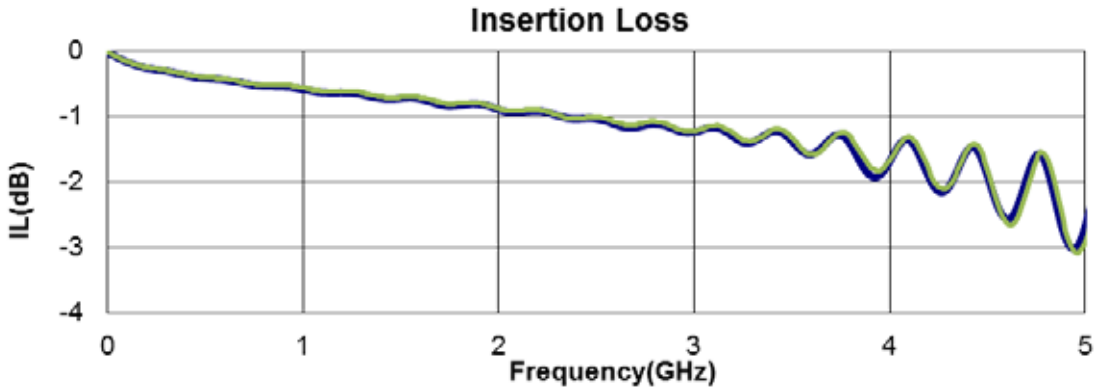

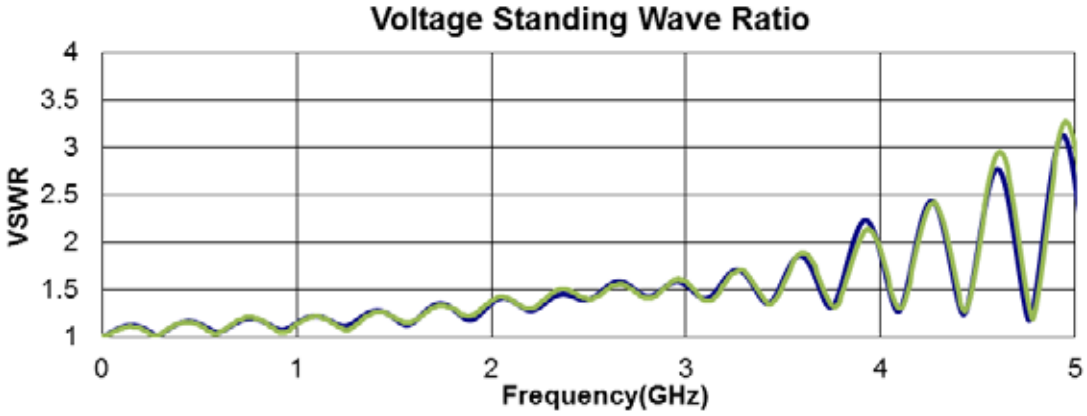

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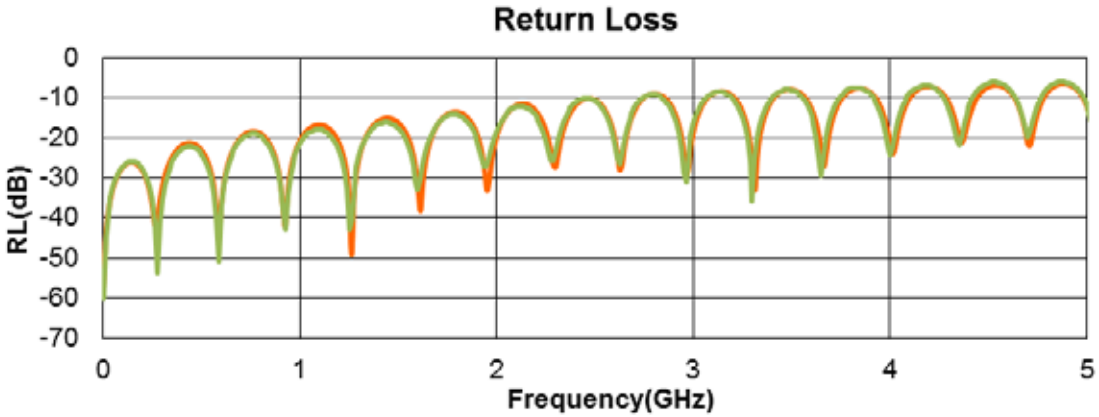

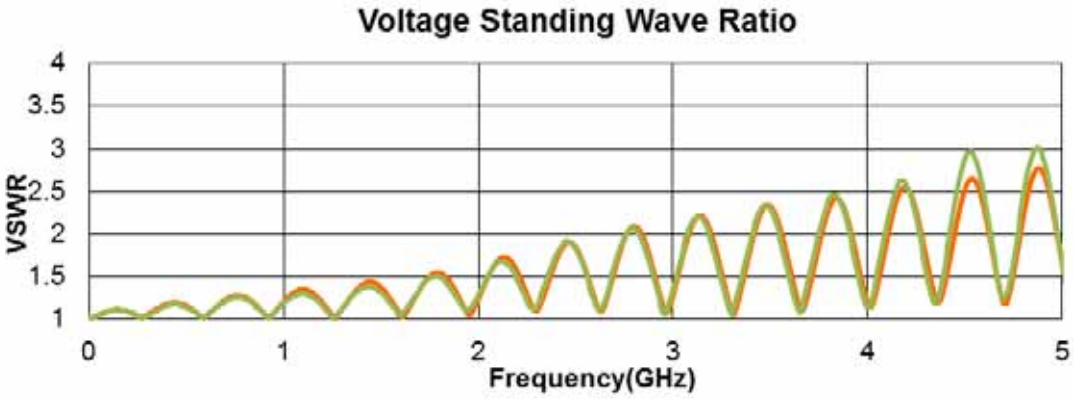

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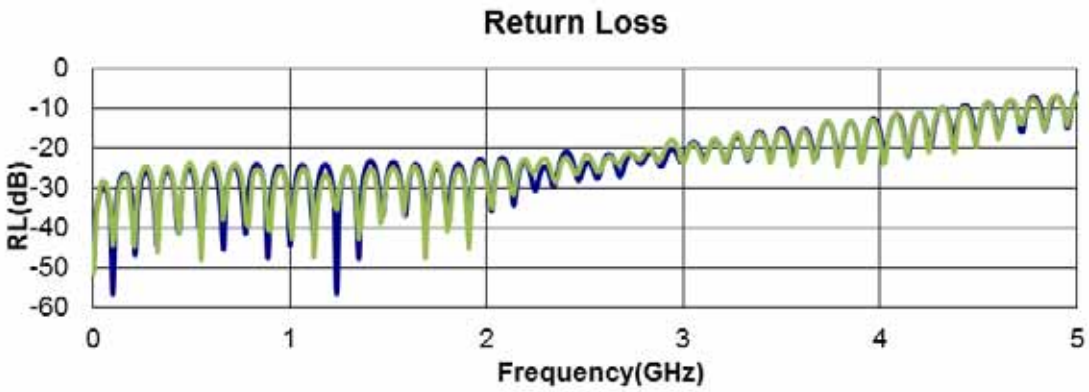

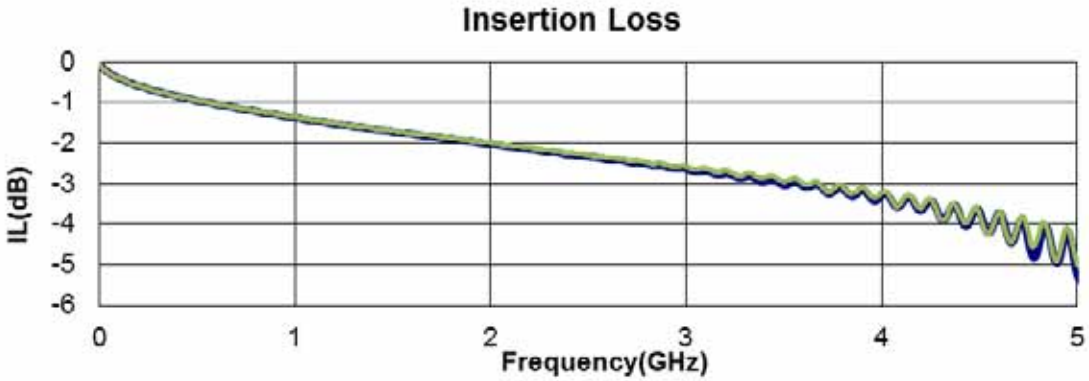

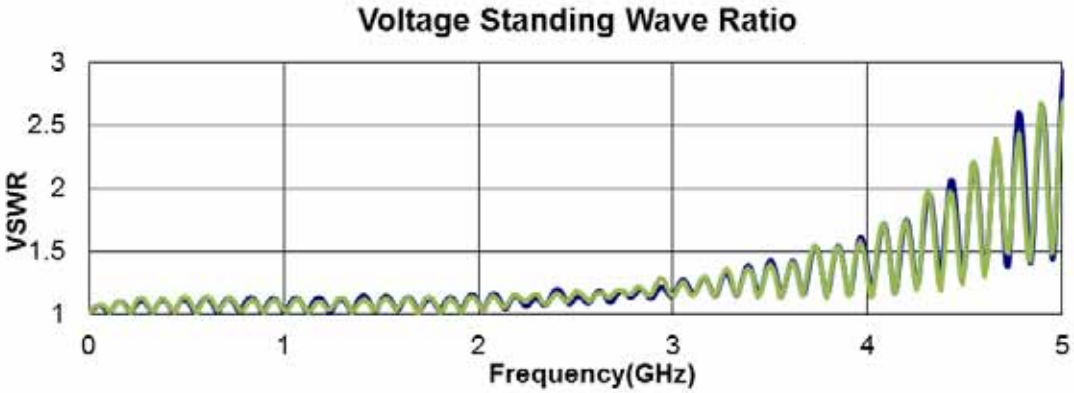

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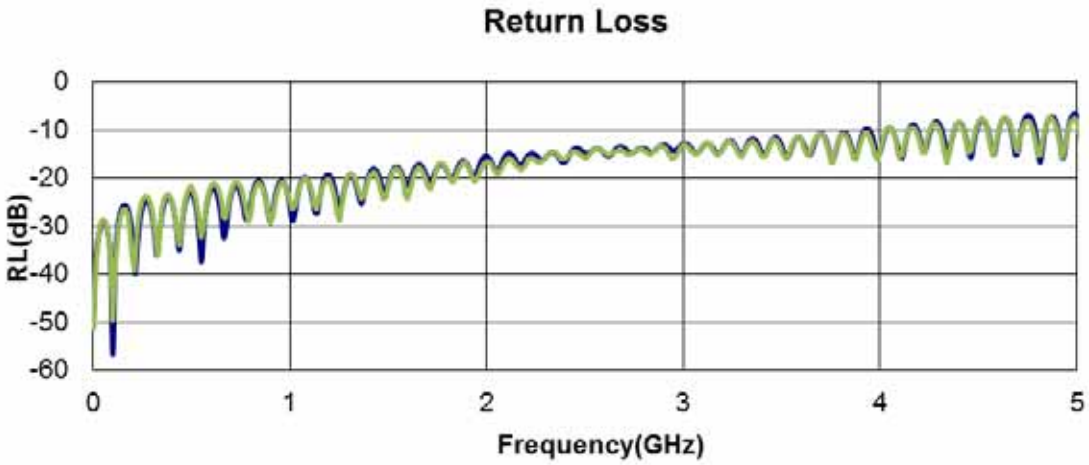

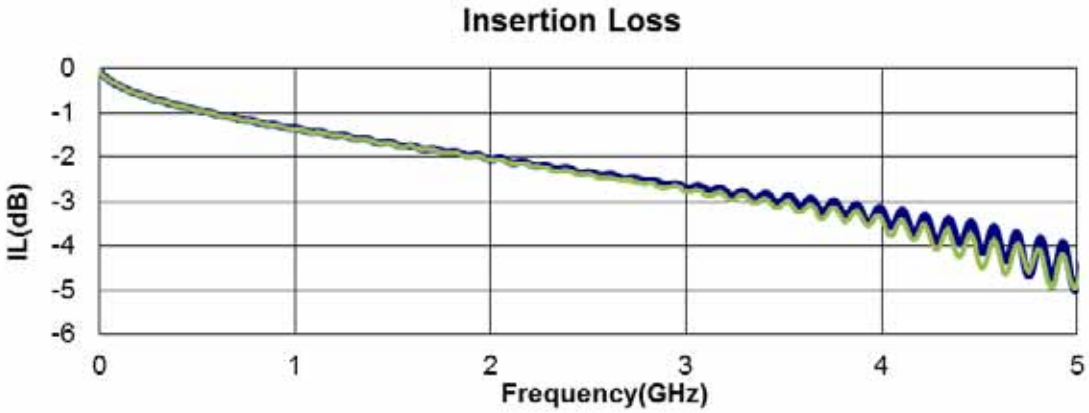

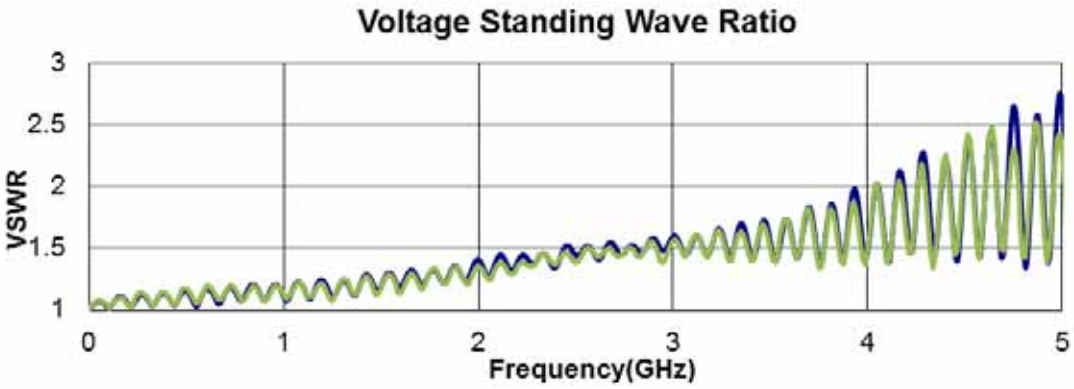

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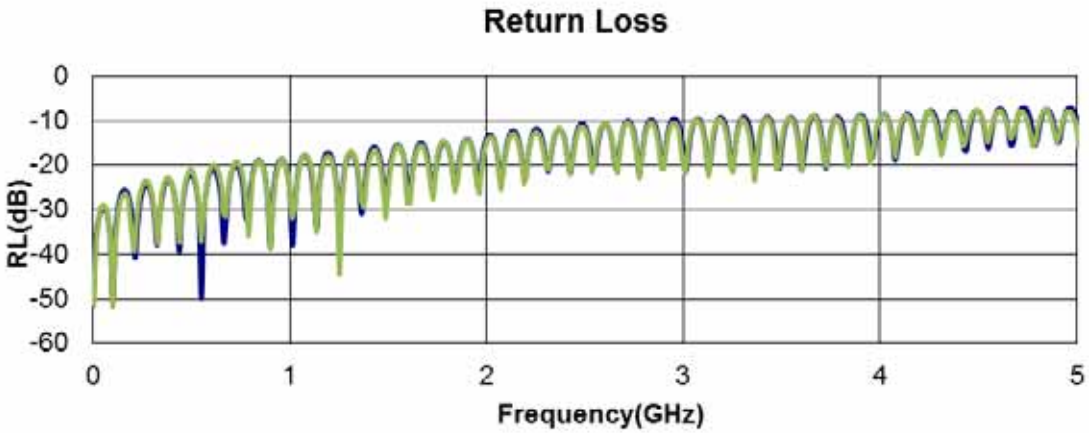

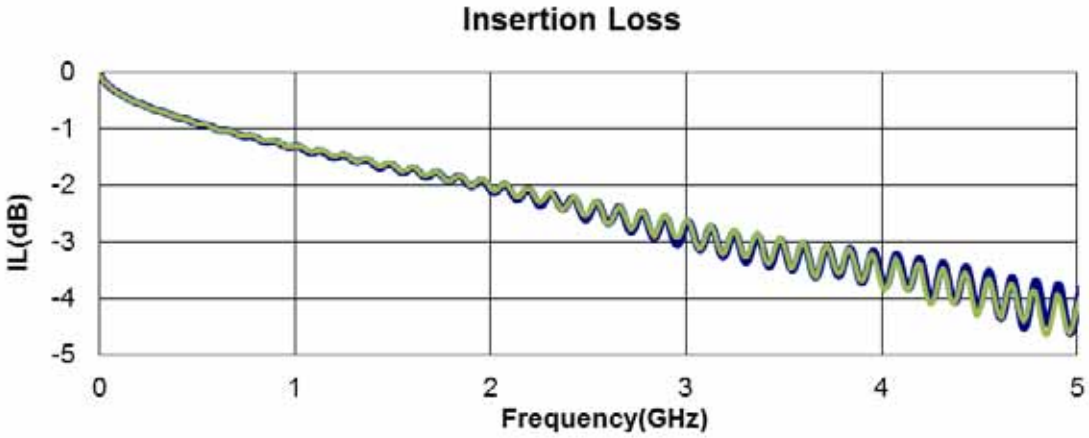

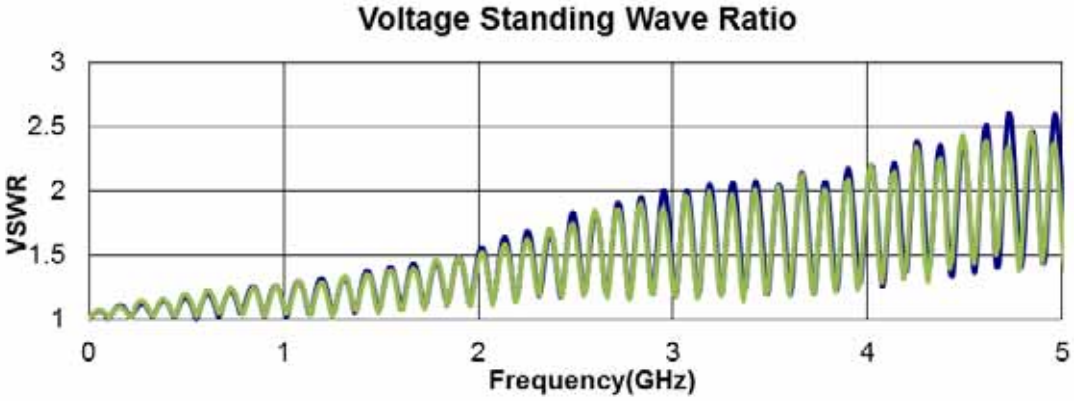

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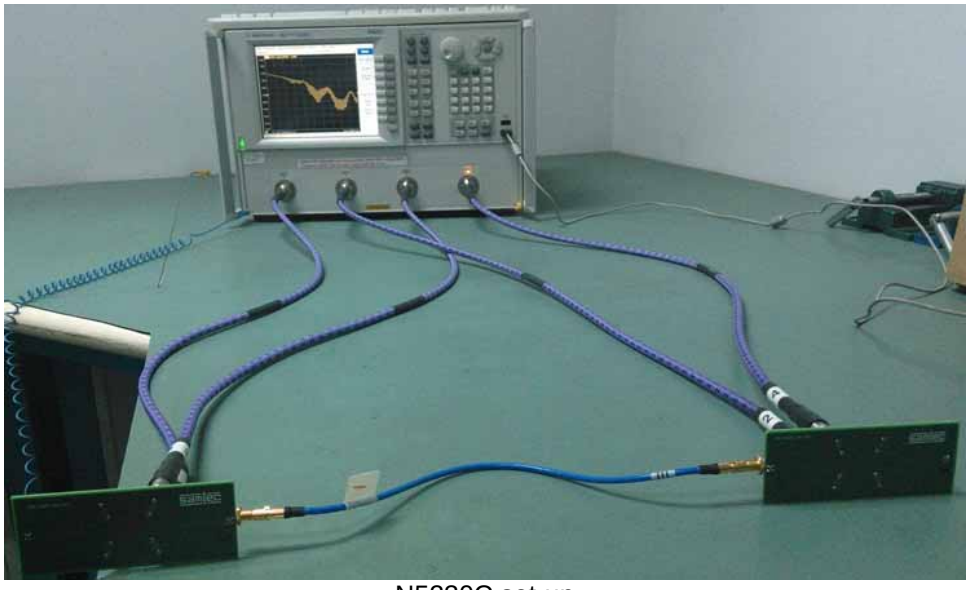
Instrument Setup:

Network analyzer (Agilent N5230C) was used for the measurements and setup as below:

Network Analyzer	Agilent N5230C PNA-L Series (300 KHz - 20 GHz)
Mechanical Calibration Kit	85052D

Averaging Factor	0
Smoothing	Off
IF Bandwidth	1 KHz
Sweep Start	300 KHz
Sweep End	20 GHz
Points	1601

Test Fixtures:



N5230C set-up