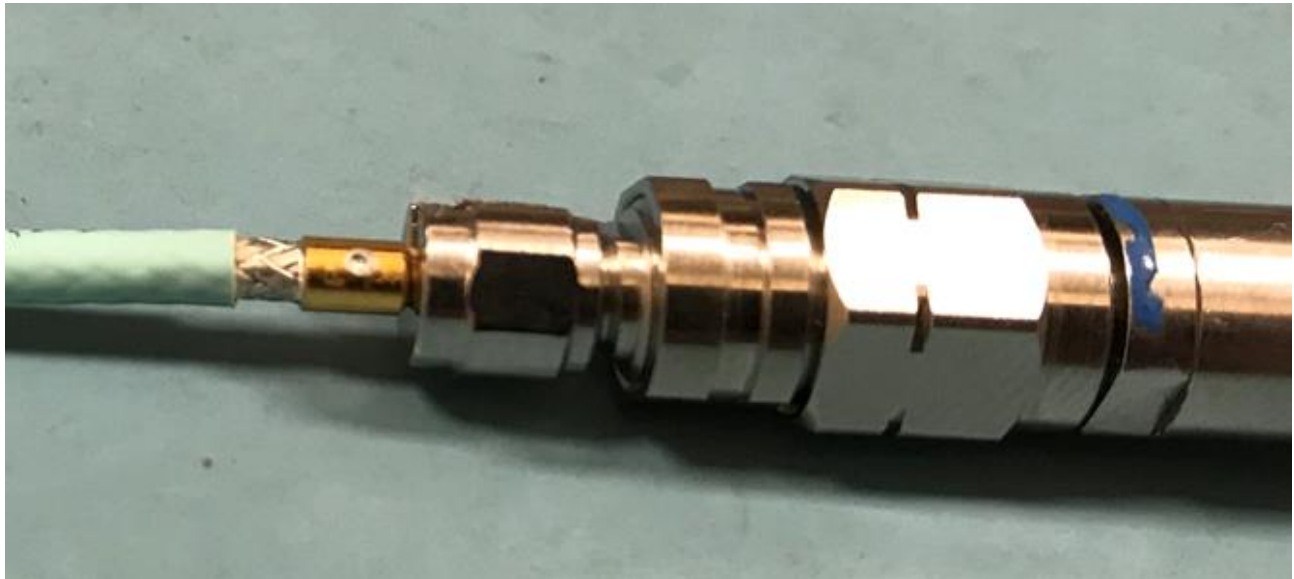


SIGNAL INTEGRITY REPORT

Test and Measurement Performance Report

Part Number TM7S-8MS-HC2 (Core HC RF Adaptor, 1.85mm, Male)

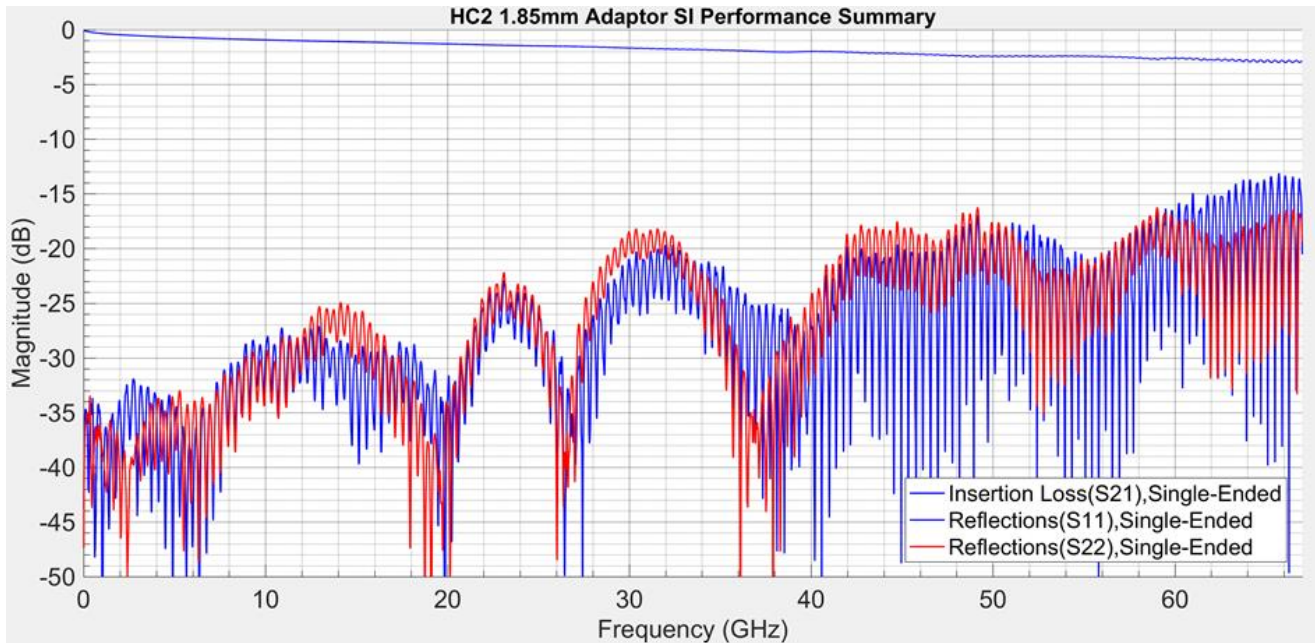
Distribution: Internal and External Use



<u>REVISION:</u> 1	<u>ECN INFORMATION:</u> EC No: N/A DATE: 05/ 22 / 2020	<u>TITLE:</u> Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	<u>SHEET No.</u> 1 of 13
<u>DOCUMENT NUMBER:</u> RSI- TM7S-8MS-HC2	<u>SI ENGINEER:</u> R.Stavoli	<u>DESIGN ENGINEER</u> T.Rus	<u>ENGINEERING MANAGER</u> E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

SI Performance Summary (Attenuation & Reflections, Single-Ended)



* **S22 (Core HC 1.85mm Adaptor)**

For further details regarding the testing setup and configuration please see the rest of the report.

<u>REVISION:</u> 1	<u>ECN INFORMATION:</u> EC No: N/A DATE: 05/22/2020	<u>TITLE:</u> Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	<u>SHEET No.</u> 2 of 13
<u>DOCUMENT NUMBER:</u> RSI- TM7S-8MS-HC2		<u>SI ENGINEER:</u> R.Stavoli	<u>DESIGN ENGINEER</u> T.Rus
		<u>ENGINEERING MANAGER</u> E.Soubh	
<small>TEMPLATE FILENAME: SPM(SIZE_AJ)(V.1).DOC</small>			

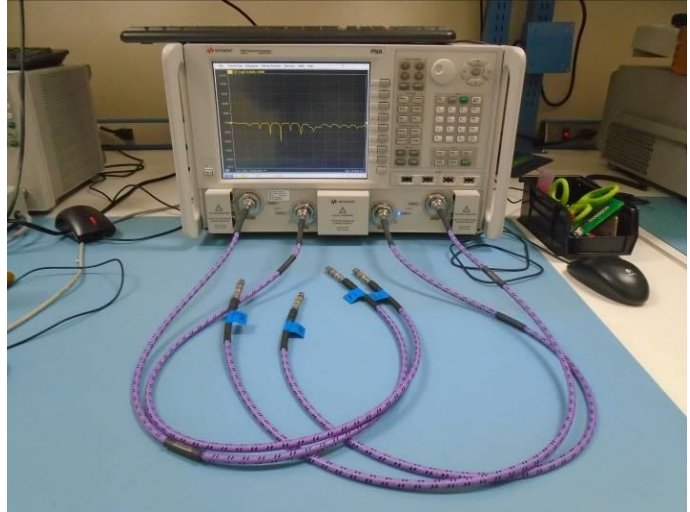
SIGNAL INTEGRITY REPORT

1.0 TEST SETUP AND DUT

Equipment, fixtures, and methods

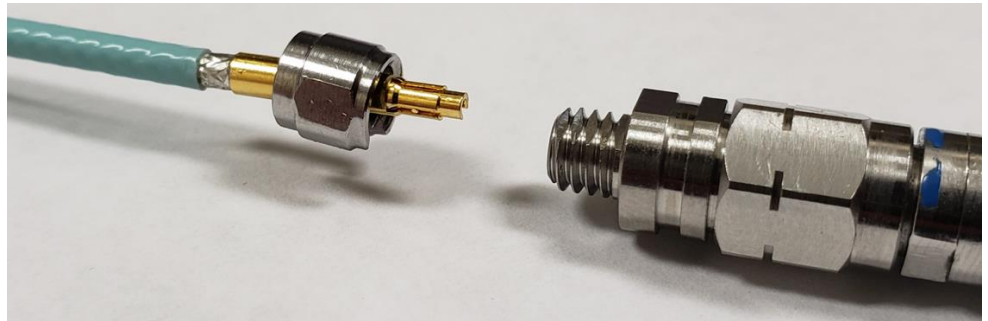
Test method: All data measured from test adaptors shown below and a N5227A PNA Network Analyzer

- Calibration was performed up to the 1.85mm SMA adapters using calibration kit: 85058B
- Data was swept from 10 MHz to 67GHz for 6700 points
- Data averaging was turned off.
- Data is not dembedded and includes the HC2 RF Adaptor and the Core HC cable assembly



Assembly Description

- T&M PN: TM7S-8MS-HC2
- HC2 Adaptor (1.85mm, male), # 1,4,6,7,8
- **11-inch solid center conductor 092 coax cable assembly**
- Port 1: 1.85mm Cable Connector (Core HC)
- Port 2: 1.85mm HC2 Adaptor



Testing Samples:

- 5 Samples
- 1 HC2 Cable Assembly
- 5 THRU Meas. w/RF Adaptor (1 HC Assy. x 5 samples)
- 20 THRU Meas. w/RF Adaptor (1 HC Assy, 1 samples x 20 Mating Cycles)

REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 3 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_AJ)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

2.0 HC2 1.85MM ADAPTOR & ASSEMBLY INFORMATION

CARLISLE Interconnect Technologies Kent, WA 98032			
TITLE: 1.85mm MALE - HC ADAPTER			
SCALE: 8:1	SUB-DIRECTORY\FILE NAME: _XXXX/	SHEET 1 OF 1	
SIZE: C	CAGE CODE: 7M924	DRAWING NO.: TM7S-8MS-HC2	REV.: -



MATERIAL:

BODY: STAINLESS STEEL
 CONTACT: BERYLLIUM COPPER
 INSULATOR: PTFE

FINISH:

BODY: PASSIVATED
 CONTACT: GOLD OVER NICKEL, MIN. 0.75µm

ELECTRICAL SPECIFICATIONS:

IMPEDANCE: 50 OHM
 FREQUENCY: UP TO 67GHz



Coupling Nut

Slip Nut

Core HC Adaptor (1.85mm)
#1, 4, 6, 7, 8

REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 4 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER: T.Rus	ENGINEERING MANAGER: E.Soubh
TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC			

SIGNAL INTEGRITY REPORT

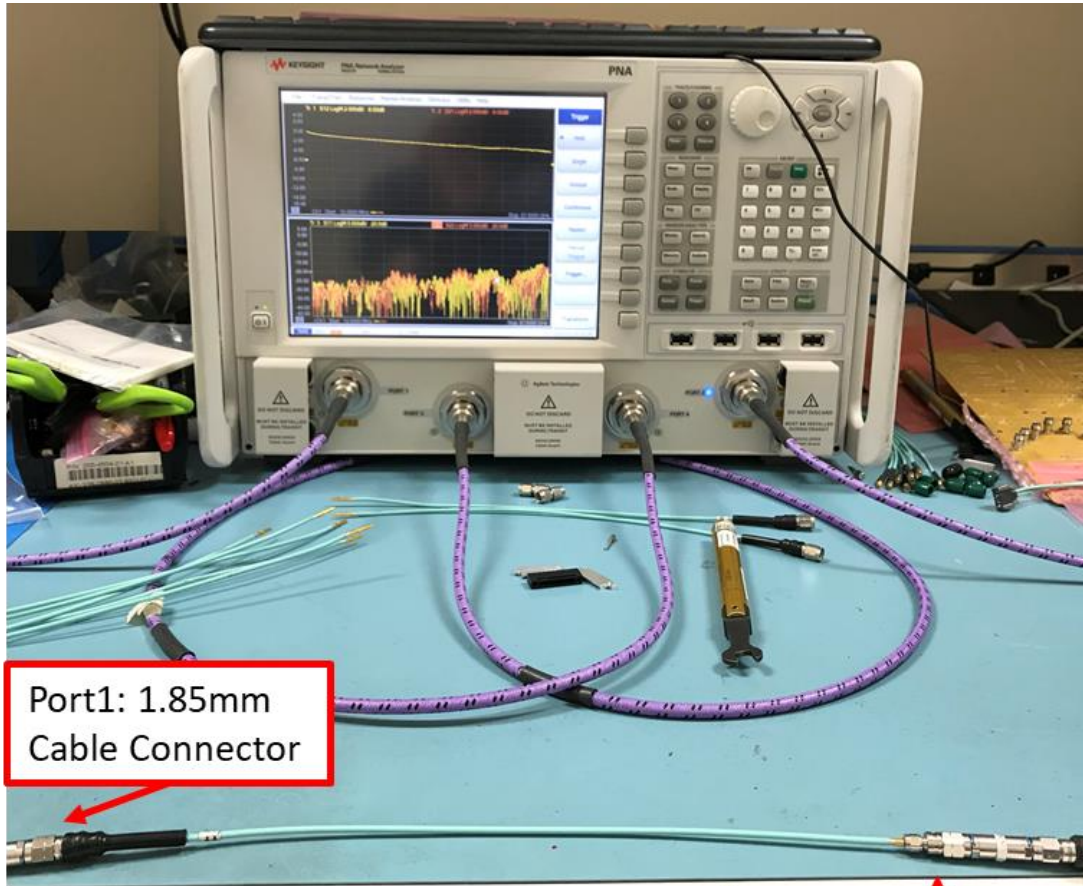
3.0 MEASUREMENT SET-UP (HC2 1.85MM RF ADAPTORS)

Port 1: Core HC
(1.85mm Cable Connector)

Device Under Test

Port 2: 1.85mm RF Core HC Adaptor, Male

- HC2 1.85mm Adaptors: # 1, 4, 6, 7, 8 (5 Adaptors tested)
- HC2 Cable Assembly # 9



Port1: 1.85mm
Cable Connector



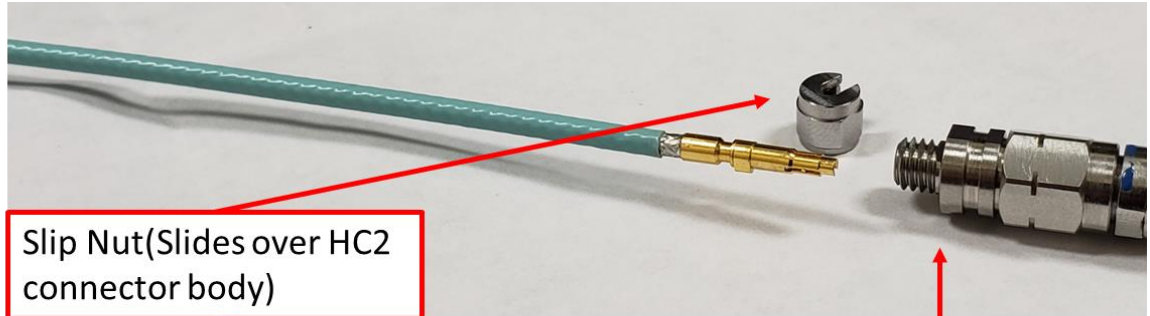
Port2: 1.85mm
CoreHC
Adaptor

REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 5 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC			

SIGNAL INTEGRITY REPORT

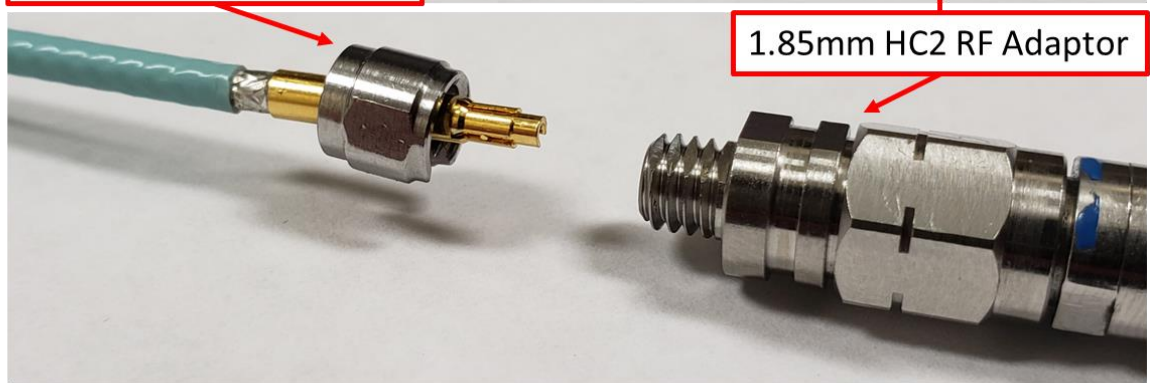
HC2 Adaptor Testing Procedure

Step 1



Slip Nut(Slides over HC2 connector body)

Step 2



1.85mm HC2 RF Adaptor

Step 3



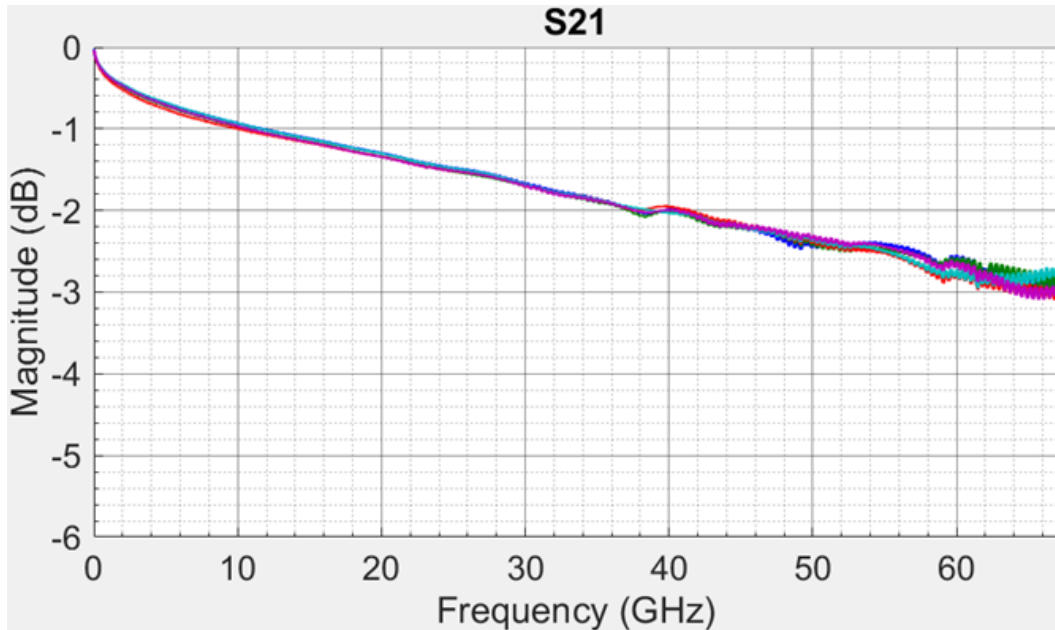
REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/ 22 / 2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 6 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_AJ)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

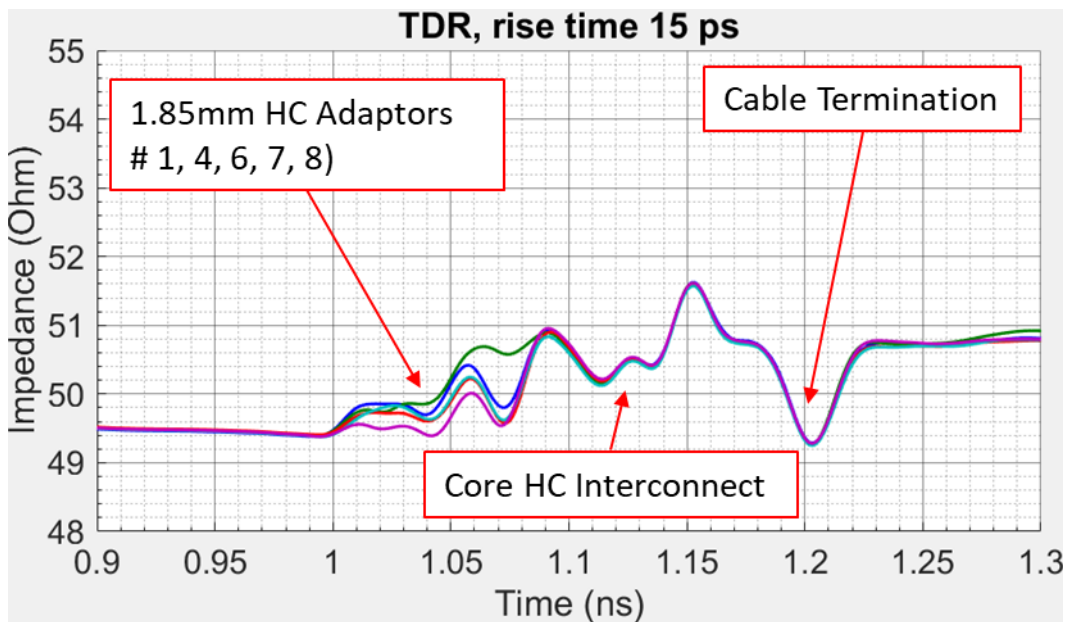
4.0 SIGNAL INTEGRITY RESULTS (HC2 1.85MM RF ADAPTORS)

Insertion Loss (S21), Single-Ended

(CoreHC Adaptors: 1, 4, 6, 7, 8 & CoreHC Cable Assembly: 9)



TDR (T22), Single-Ended

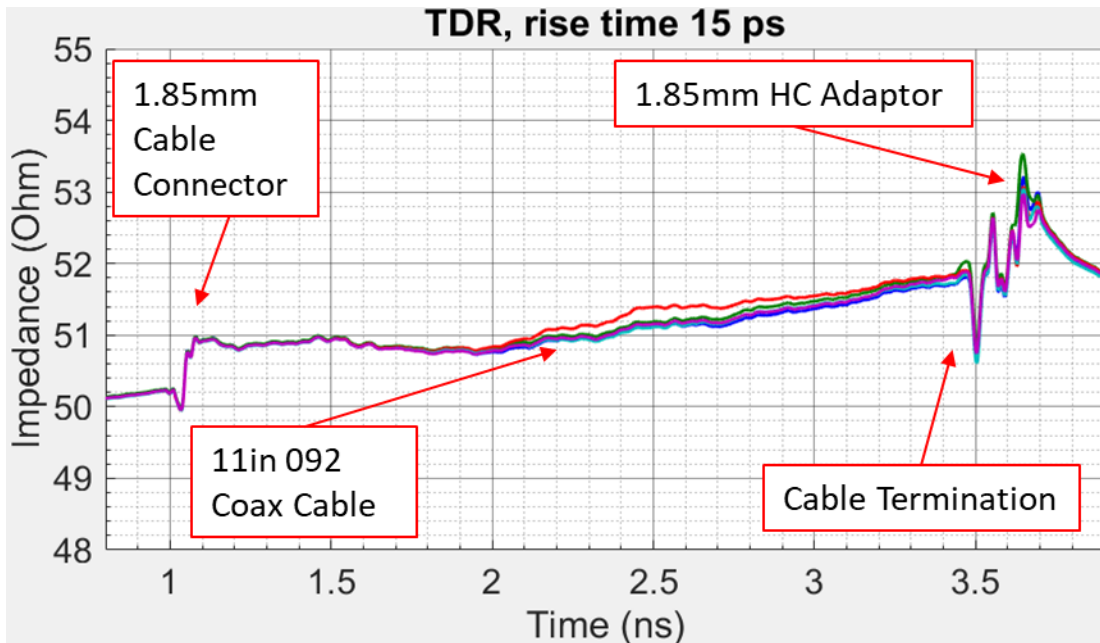
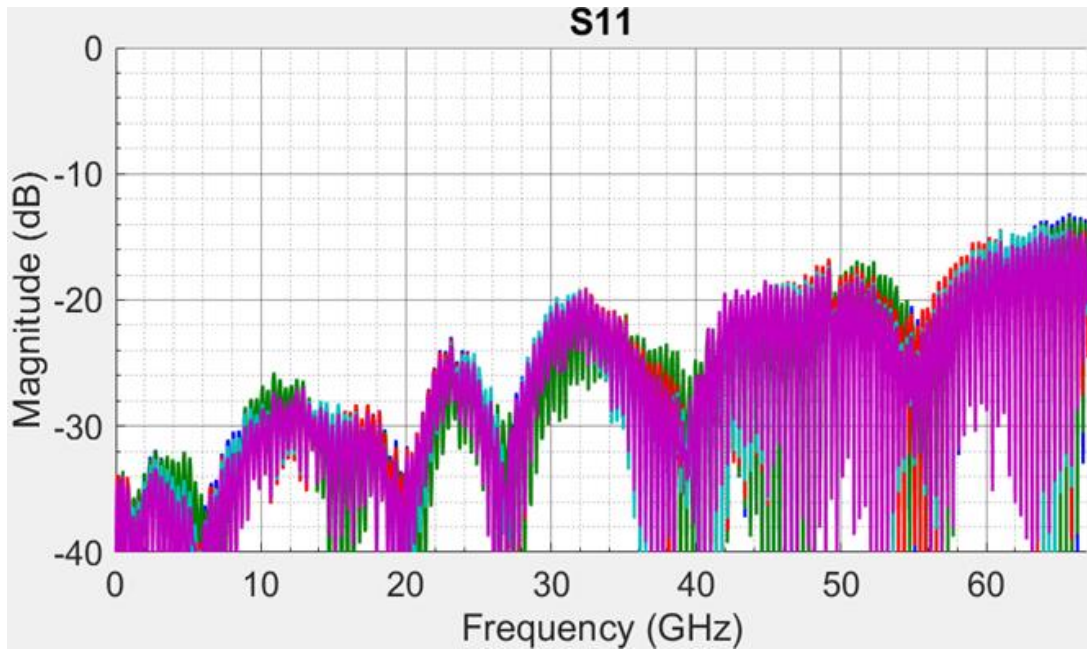


REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 7 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

Return Loss (S11)

(CoreHC Adaptors: 1, 4, 6, 7, 8 & CoreHC Cable Assembly: 9)

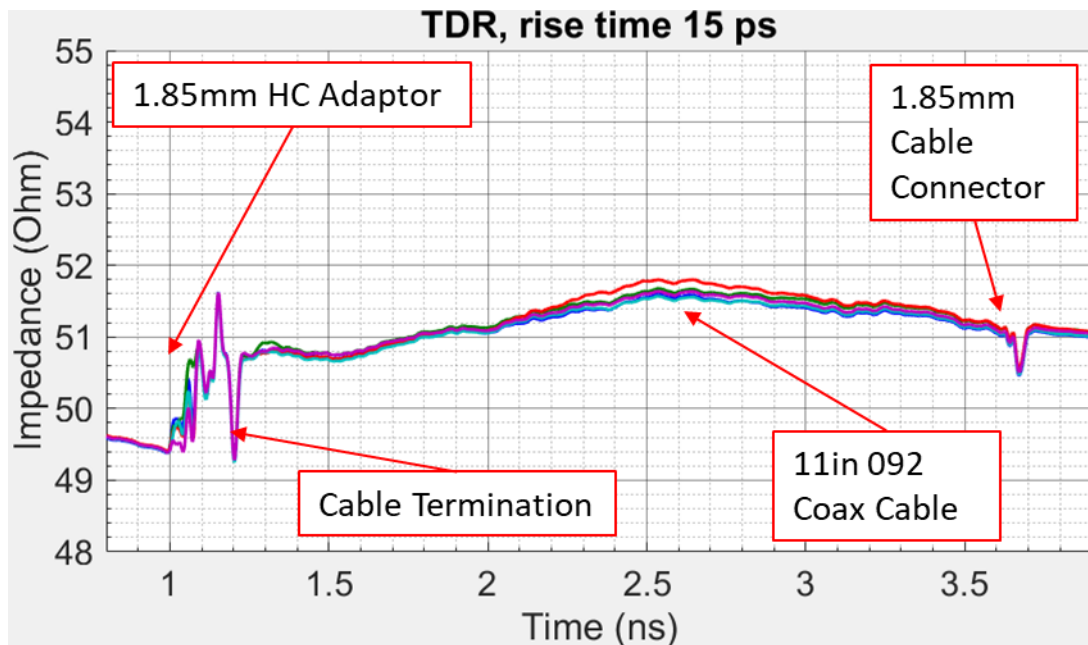
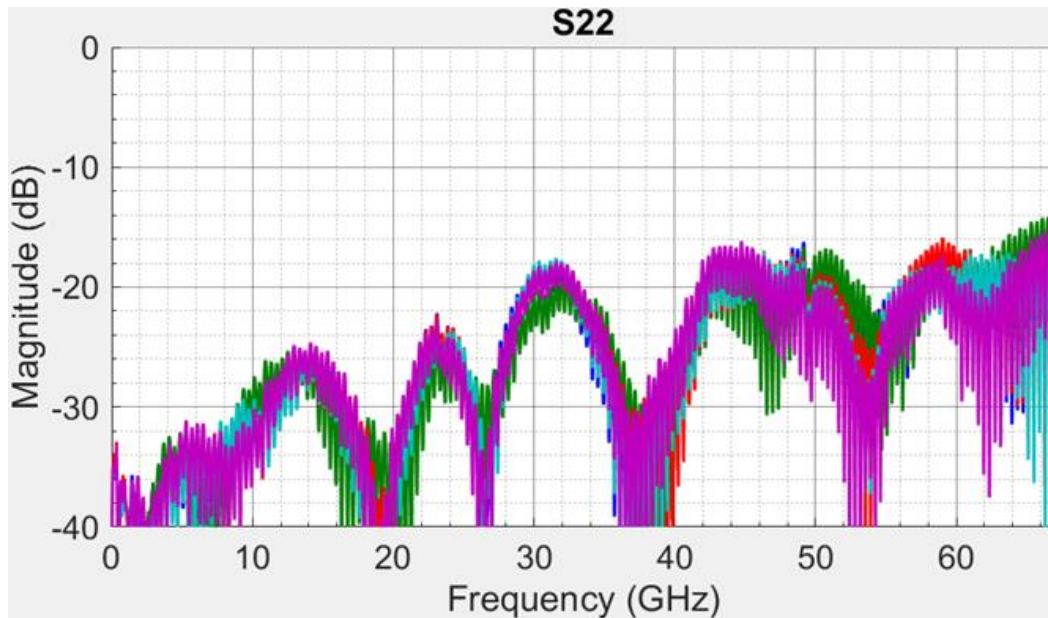


REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 8 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

Return Loss (S22)

(CoreHC Adaptors: 1, 4, 6, 7, 8 & CoreHC Cable Assembly: 9)



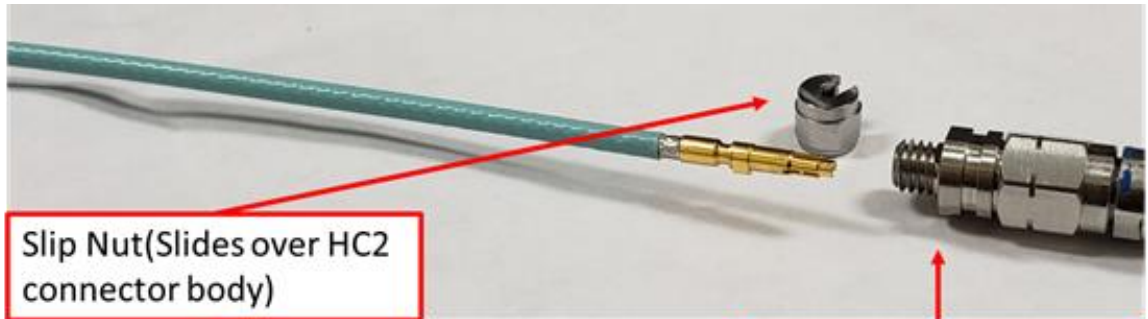
REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 9 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

5.0 MEASUREMENT SETUP (HC2 ADAPTOR, REPEATABILITY/ 20 MATING CYCLES)

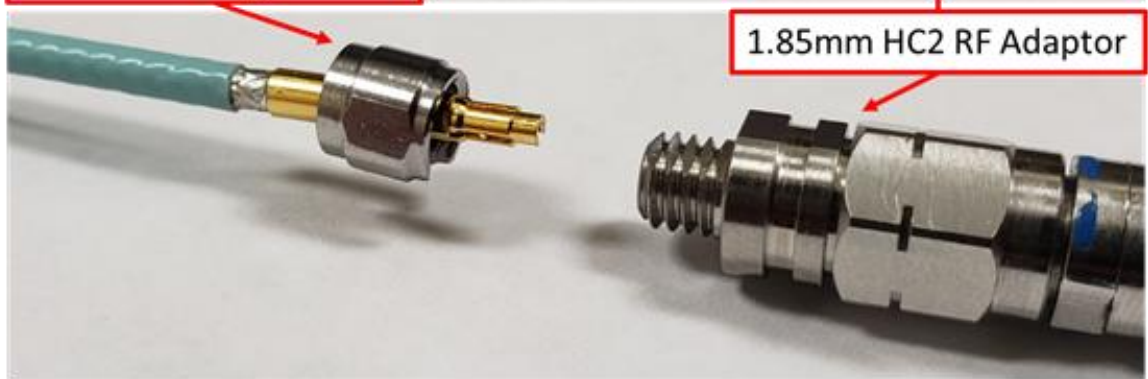
- Steps outlined below are repeated for 20 mating cycles and reviewed for consistency of performance
- **HC2 1.85mm adaptor: # 6**
- HC2 Cable Assembly # 9

Step 1



Slip Nut(Slides over HC2 connector body)

Step 2



1.85mm HC2 RF Adaptor

Step 3



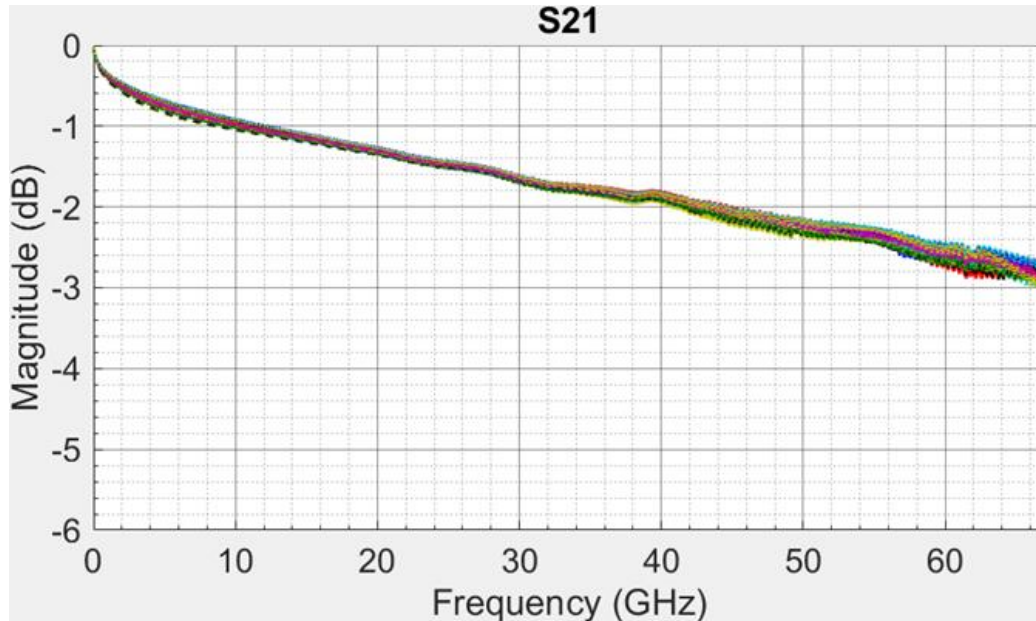
REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/ 22 / 2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 10 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

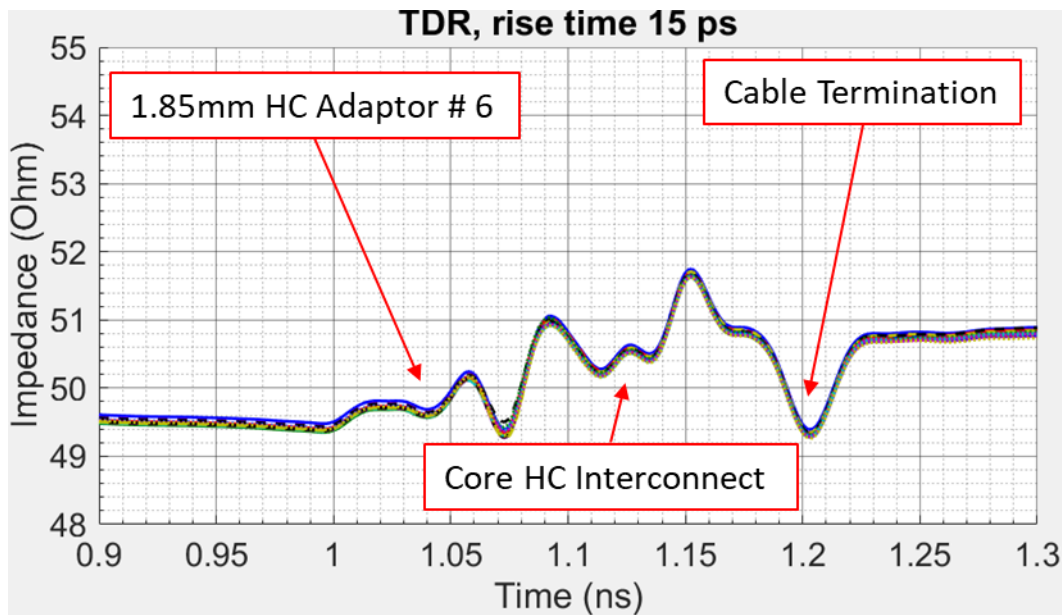
6.0 SIGNAL INTEGRITY RESULTS (HC2 ADAPTOR REPEATABILITY/ 20 MATING CYCLES)

Insertion Loss (S21), Single-Ended

(CoreHC Adaptor: 6 & CoreHC Cable Assembly: 9)



TDR (T22), Single-Ended

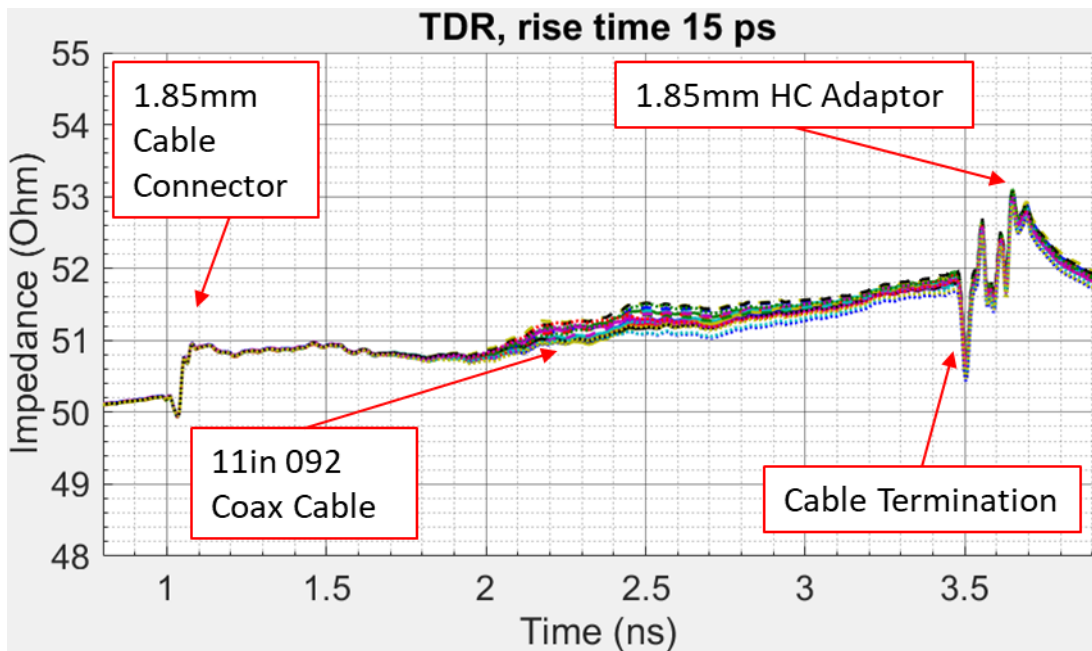
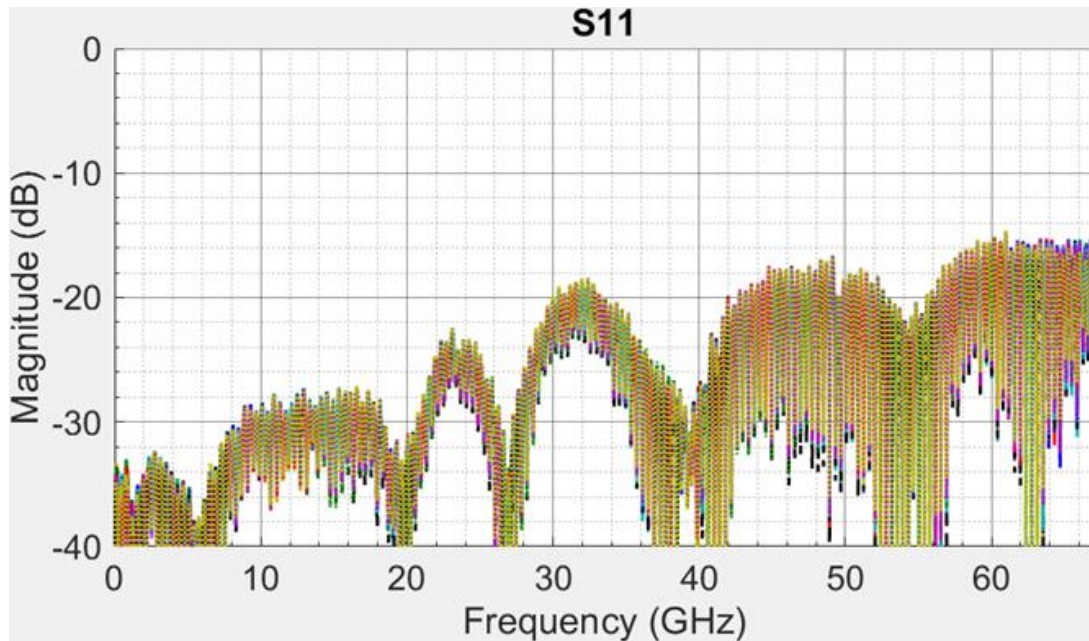


REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 11 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

Return Loss (S11)

(CoreHC Adaptor: 6 & CoreHC Cable Assembly: 9)

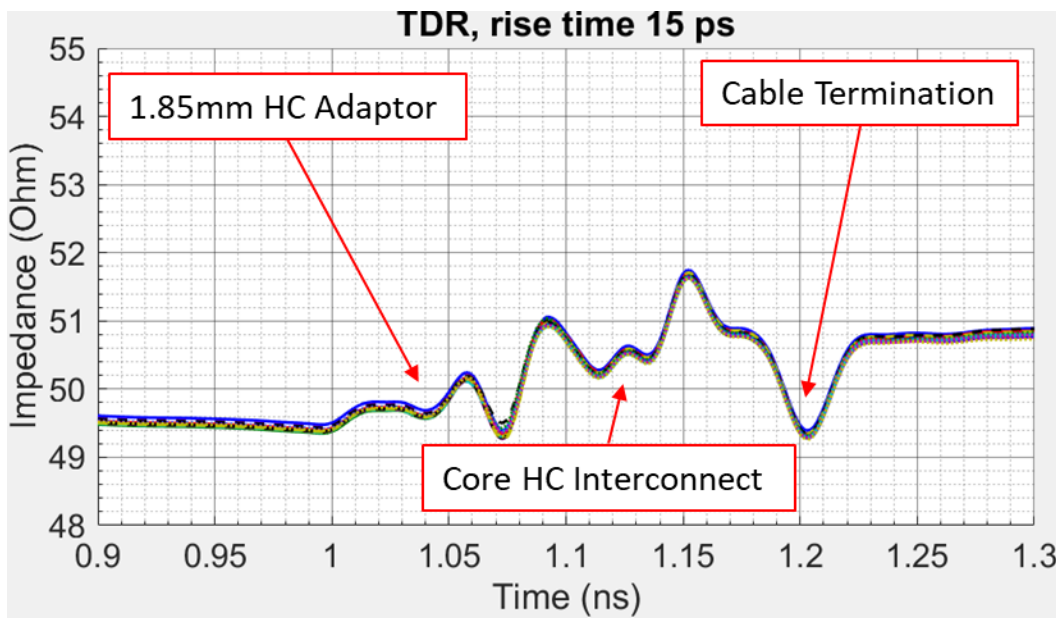
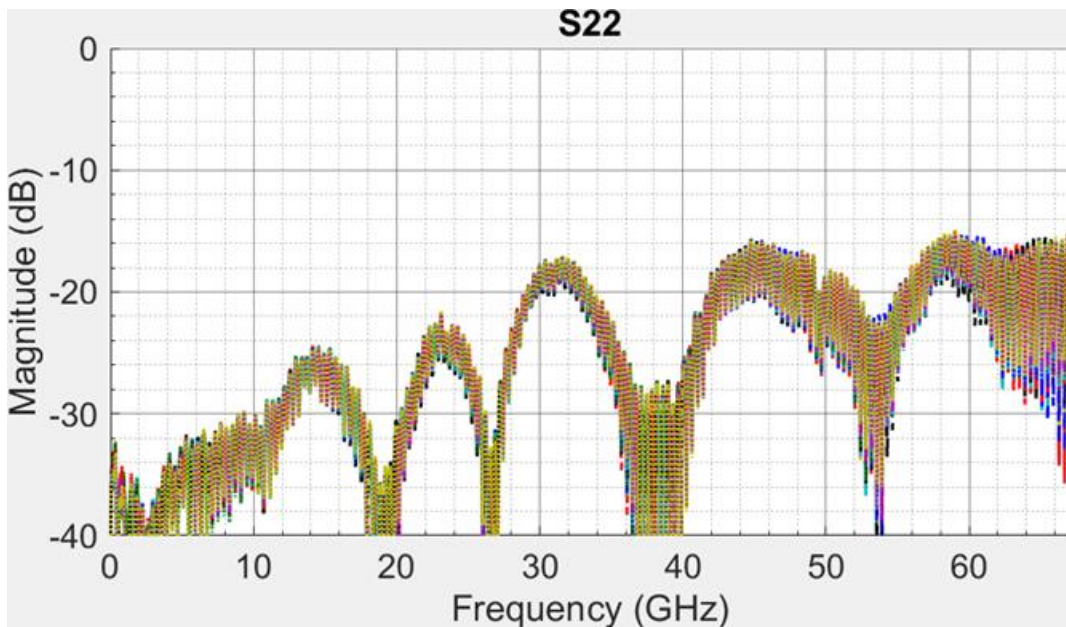


REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 12 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
<small>TEMPLATE FILENAME: SPM(SIZE_A)(V.1).DOC</small>			

SIGNAL INTEGRITY REPORT

Return Loss (S22)

(CoreHC Adaptor: 6 & CoreHC Cable Assembly: 9)



7.0 APPENDIX, (SPARAMETERS SHOWN IN REPORT)

CoreHC Reference Cable Assembly_RF Adaptor Qual_052220 5/22/2020 8:46 AM Compressed (zipp... 1,280 KB

REVISION: 1	ECN INFORMATION: EC No: N/A DATE: 05/22/2020	TITLE: Core HC RF Test Adaptor, 1.85mm, Male CARLISLE IT CONFIDENTIAL	SHEET No. 13 of 13
DOCUMENT NUMBER: RSI- TM7S-8MS-HC2	SI ENGINEER: R.Stavoli	DESIGN ENGINEER T.Rus	ENGINEERING MANAGER E.Soubh
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