

NXTCore ARINC801 Fiber Optic Terminus Qualification Test Plan

1. Scope

To define the test samples, test sequence and test methods used to validate the optical performance of NXTCon ARINC 801 fiber optic terminus. It is understood that the standard optical channel performance is governed by the optical terminus in conjunction with the connector and cable options. Optical performance has been generally governed by the performance criteria outlined in the ARINC Specification 801-2; Fiber Optic Connectors. NXTCon has utilized outside testing facilities certified by to ISO/IEC-17025:2005, Mil-STD-790 and ITL FOC to ensure the independent and quality nature of all data presented. Termini were installed onto cables and into connectors by a ISO9001/2008 supplier prior to submittal to the testing organization.

2. Order of Precedence

In case of a conflict between the text of this document and the applicable referenced documents, the text of this document shall take precedence.

3. Description of Test Articles

Item	Part Number	Qty	Description
1	TA-1260-S-P	98	Optical terminus, loose structure
2	N/A	12	Cable assembly, Item 1 to Item 1, 62.5/125 multi-mode fiber, 1.8mm to 2.0mm diameter, 4 meters in length, -55°C to 125°C minimum rating, loose structure (Fiber: Carlisle P/N NFO(EP)-125-1) supplied pre-conditioned
3	N/A	25	Cable assembly, Item 1 to Item 1, 62.5/125 multi-mode fiber, 1.8mm to 2.0mm diameter, 4 meters in length, standard temperature rating,
4	N/A	1	loose structure with Aramid strength member (Fiber: OFS) Cable assembly, Item 9 to Item 9, 62.5/125 multi-mode fiber, 1.8mm to 2.0mm diameter, 4 meters in length, standard temperature rating,
5	N/A	4	loose structure with Arimid strength member (Fiber: OFS) Cable assembly, Item 1 to Item 1, 9/125 single-mode fiber, 1.8mm to 2.0mm diameter, bend insensitive, 4 meters in length, -55°C to 125°C minimum rating, semi-loose structure (Fiber: Carlisle P/N NFO(EP)-125-5B) supplied pre-conditioned
6	N/A	8	Cable assembly, Item 1 to Item 1, 9/125 single-mode fiber, 1.8mm to 2.0mm diameter, 4 meters in length, standard temperature rating, loose structure with Arimid strength member (Fiber: TBD by cable assembly supplier)
7	N/A	36	Patch cord, 900 µm, FC UPC to FC UPC, 62.5/125 multimode fiber, 4 meters in length
8	N/A	12	Patch cord, 900 µm, FC APC to FC APC, 9/125 single-mode fiber, 4 meters in length
9	N/A	2	Optical terminus, 801-conforming, Radial P/N F725 003 419

Termini intended for multimode cables with loose structure and termini intended for single-mode cables with loose structure, shall be installed in ARINC801 capable connectors. The termini and connectors are intended for continuous operation at any temperature between -55°C and 125°C. Fiber optic termini supplied are certified to be of production source and quality.

Cable/Terminus assembly and crimping of the crimp sleeve shall be performed by an outside source cable assembly supplier using standard termination methods per the applicable ARINC documents. Fiber optic cable, supplied to the cable assembly supplier will be pre-conditioned for 5 cycles, -55°C to 135°C with a 5 minute ramp time between temperature extremes and each temperature plateau stabilized for at least 30 minutes. The cable assembly supplier will affix a unique label to each cable assembly to ensure performance and end face traceability throughout the entire test regimen. The cable assembly supplier will complete and record end face geometry per Telcordia Core GR-326 and per TIA/EIA-568-C.3. These measurements shall be made using a calibrated interferometer. The cable assembly supplier shall perform and record initial attenuation and return loss testing on all cable assemblies. All necessary test fixtures will be supplied by the selected independent testing laboratory.

The test connectors shall be populated according to the following table:

Connector Variant	Multimode position	Single-mode position
Connector 1	A1, A3	---
Connector 2	A1, A2, A4, A5	---
Connector 3	A1, A5	A2, A4
Connector 4	A1, A2, A6, A7	A3, A5

Note: Item 4 containing the Radial terminus shall be populated into connector according to the above table and considered part of Group D. This will be considered for intermate performance.

4. Guide Pins

When using NXTcon optical termini within ARINC801 connector systems all mating conditions are to be tested with standard ARINC801 specification guidance features installed into connectors.

5. Test Sequence

The test plan is divided into four (4) groups of test sequences. Groups A, B and C shall each be comprised of four mated, fully populated connector pairs and each group will consist of 16 optical channels or 32 total termini. Group D shall be comprised of one mated, fully populated connector pair and will consist of 2 optical channels or 4 total termini. Each pair of connectors shall go through the listed tests in the order specified. The test sequence is given in the table on the following page.

Test Procedure	Group A Environmental	Group B Mechanical Environment	Group C Mechanical Usage	Group D Intermate
Attenuation and splicing	X	X	X	X
Return loss	X	X	X	
Thermal cycling	X			
Humidity	X			
Temperature life	X			
Salt spray	X			
Thermal shock	X			
Vibration		X		
Mechanical shock		X		
Maintenance aging			X	
Mating durability			X	
Cable Pull-out			X	
Termini retention force			X	
Return loss	X	X	X	X

6. Test Procedures

All electrical configuration specifications, tests or electrical failure criteria associated with the following referenced test specifications are not applicable for the following tests.

6.1 Optical

All the following optical performance tests shall be performed at a nominal wavelength of 1300 nm for multimode and 1550 nm for single-mode. Multimode tests shall use overfill launch conditions as defined in TIA-455-54B (FOTP-54) or IEC 60793-1-40 (TIA-455-78B (FOTP-78)), paragraph A.1.3.

6.1.1 Attenuation

Requirements:

Test in accordance with TIA-455-171A (FOTP-171), Method D1 (multimode) and D3 (single-mode).

Criteria:

Fiber optic connector assemblies shall have a maximum attenuation of 0.3 dB for multimode connections. For all single-mode connections, measure and record only. No failure criterion exists for single-mode connections.

6.1.2 Return Loss

Requirements:

Test as specified in paragraph 2.4.3.2 of ARINC Specification 801-2 and in accordance with TIA/EIA-455-107A (FOTP-107). Return loss should be a minimum of 20 dB for multimode PC polish termini and 30 dB for single-mode PC polish termini.

Criteria: Measure and record return loss measurements.

6.1.3 Change in Transmittance (CIT)

Requirements:

Where tests specify a CIT measurement, CIT should be measured in accordance with TIA-455-20B (FOTP-20), Method A. Launch conditions for CIT measurements should be an Equilibrium Modal Distribution profile. Measurements shall be recorded before, during, and after the test, unless otherwise specified. The measurement made during a test need not be continuous, unless otherwise specified, but should be made at the extremities of the test conditions.

Criteria:

Unless otherwise specified in this test plan, the CIT for any test should not exceed 0.5 dB for multimode connections. For all single-mode connections, measure and record only. No failure criterion exists for single-mode connections.

6.2 Environmental Category

6.2.1 Thermal Cycling

Requirements:

Test as specified in ANSI/TIA-455-3B (FOTP-3) with the following procedure and criteria, which is based from paragraph 2.4.4.1 of ARINC Specification 801-2 with exceptions.

Procedure:

Connectors shall be tested using Test Condition D, 10 cycles, with Step 1 set at $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and Step 2 set at $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$. Both of these temperature plateau intervals shall not be less than 30 minutes. The rate of the environmental chamber air temperature change, between the minimum and maximum temperature

extremes, shall be between 50 and 70 minutes. No stabilization is necessary for Step 3 as it is the indicator of the start/end of each cycle. At the completion of the last cycle, the connector assemblies shall be returned to 23°C ±5°C and there shall be no damage detrimental to operation of the assembly after being subjected to the temperature extremes. The CIT measurements shall be taken continuously throughout and at 23°C ±5°C at the end of the test. The frequency of CIT measurements taken throughout the test will be up to the discretion of the testing laboratory, although an absolute minimum frequency of CIT measurements taken every 5 minutes will be herein required. Stabilization shall be considered achieved at least 30 minutes after the start of each plateau interval.

Criteria:

Fiber optic connector assemblies shall pass the CIT test as stated in 6.1.3 of this test plan and a visual inspection in accordance with the requirements of TIA-455-13A (FOTP-13).

6.2.2 Humidity

Requirements:

Test as specified in paragraph 4.5.15 of MIL-DTL-24308G and in accordance with EIA-364-31B, Method IV (-10°C to +65°C, 10 cycles, 240 hours). Optional cold shock required. Connectors are to remain in a mated condition throughout the test using the provided jackscrew hardware system. Panel mounting not required.

Procedure:

The CIT measurements shall be taken upon stabilization at every temperature plateau and at 25°C at the end of the test. Stabilization shall be considered achieved at least 30 minutes after the start of each plateau interval.

Criteria:

Fiber optic connector assemblies shall pass a CIT test.

6.2.3 Temperature Life:

Requirements:

Test as specified in TIA/EIA-455-4C (FOTP-4) with the following procedure and criteria, which is based from paragraph 2.4.4.2 of ARINC Specification 801-2 with exceptions.

Procedure:

The temperature exposure shall be 125°C ± 2°C for the duration of 1,000 hours. CIT measurements shall initially be recorded at 25°C ±2°C, once every hour for the duration of the test and at the conclusion of testing upon return to 25°C ±2°C. Cleaning of the termini is permitted prior to and post testing, but not during the test.

Criteria:

Fiber optic connector assemblies shall pass a CIT test and a visual examination using the failure criteria referenced in paragraph 5.9 of TIA/EIA-455-4C (FOTP-4).

6.2.4 Salt Spray:

Requirements:

Test as specified in paragraph 2.4.4.5 of ARINC Specification 801-2 the testing requirements of TIA-455-16A (FOTP-16), test condition C.

Procedure:

After exposure, a CIT test shall be performed. The connector assemblies shall then be thoroughly washed with tap water to remove all salt deposits and then shall be dried in a circulating air oven at a temperature of 38°C ± 3°C for a period of 12 hours. They shall then be visually examined for evidence of corrosion.

Criteria:

Fiber optic connector assemblies shall pass a CIT test and visual inspection. Mating and un-mating force testing is not required during final inspection of the connector assemblies.

6.2.5 Thermal Shock

Requirements:

Test as specified in paragraph 4.5.13.1 of MIL-DTL-24308G and in accordance with EIA-364-32F with the exception that no plateau interval shall be less than 30 minutes.

Procedure:

Connectors shall be tested using Method A, Test Condition I, 5 cycles, unless otherwise specified. At the completion of the last cycle, the connector assemblies shall be returned to 25°C and there shall be no damage detrimental to operation of the assembly after being subjected to the temperature extremes. The CIT measurements shall be taken continuously throughout and at 25°C at the end of the test. The frequency of CIT measurements taken throughout the test will be up to the discretion of the testing laboratory, although an absolute minimum frequency of CIT measurements taken every 5 minutes will be herein required. Stabilization shall be considered achieved at least 30 minutes after the start of each plateau interval.

Criteria:

No CIT failure criterion exists for this test; measure and record only. Visual inspection, using the failure criteria outlined in paragraph 4.6 of EIA-364-32F, is required.

6.3 Mechanical Environment

6.3.1 Mechanical Vibration

Requirements:

Test as specified in paragraph 4.5.13.1 of MIL-DTL-24308G and in accordance with EIA-364-32F with the exception that no plateau interval shall be less than 30 minutes.

Procedure:

Connectors shall be tested using Method A, Test Condition I, 5 cycles, unless otherwise specified. At the completion of the last cycle, the connector assemblies shall be returned to 25°C and there shall be no damage detrimental to operation of the assembly after being subjected to the temperature extremes. The CIT measurements shall be taken continuously throughout and at 25°C at the end of the test. The frequency of CIT measurements taken throughout the test will be up to the discretion of the testing laboratory, although an absolute minimum frequency of CIT measurements taken every 5 minutes will be herein required. Stabilization shall be considered achieved at least 30 minutes after the start of each plateau interval.

Criteria:

No CIT failure criterion exists for this test; measure and record only. Visual inspection, using the failure criteria outlined in paragraph 4.6 of EIA-364-32F, is required.

6.3.2 Mechanical Shock

Requirements:

Phase 1: Test as specified in paragraph 4.5.16 of MIL-DTL-24308G and in accordance with EIA-364-28F, test condition IV.

Phase 2: Test as specified in paragraph 4.5.16 of MIL-DTL-24308G and in accordance with EIA-364-28F, test condition IV with the following exception:

The 20-minute cycle shall be performed two times in each of the three mutually perpendicular directions (total of six times), so that the motion shall be applied for a total period of approximately 2 hours.

Procedure:

Phase 1 & 2: Two separate tests consisting of Phase 1 & 2 are to be performed. The first test will consist of a test fixture with two mated pair test sample mounted. The second test will consist of a test fixture with a secondary mated pair test sample mounted. Connector pairs shall be held together by their locking mechanism.

Phase 1: CIT shall be measured before and after the vibrations, and shall not be monitored during the vibration application when the discontinuity detector is in use.

Phase 2: The test laboratory is restricted to two simultaneous channels when monitoring for a 1µsec discontinuity. For this reason, it is necessary to only use two multi-mode channels, one from each connector test sample.

Criteria:

During phase 1 of the test, there shall be no optical discontinuities in excess of 50 microseconds and a change in power >0.5 dB. At the conclusion of phase 1, fiber optic connector assemblies shall pass a CIT test. In addition, the mated connectors shall not be damaged and there shall be no loosening of parts due to vibration.

During phase 2 of the test, there shall be no optical discontinuities in excess of 1 microsecond and a change in power >1.0 dB. Failure of this phase of the test will not constitute a failure of the test samples. A CIT test and visual inspection are not required after phase 2.

6.4 Mechanical Use

6.4.1 Maintenance Aging

Requirements:

Test as specified in paragraph 2.4.5.7 of ARINC Specification 801-2 and in accordance with EIA-364-24B.

Procedure:

All termini shall be removed and reinstalled ten times using the appropriate insertion and removal tools.

Criteria:

The termini insertion force should be measured during the first and last cycles and should not exceed 36 N (8 pounds).

6.4.2 Mating Durability

Requirements:

Test as specified in paragraph 4.5.18 of MIL-DTL-24308G and in accordance with EIA-364-09C, which meets or exceeds the testing requirements of TIA-455-21A (FOTP-21). The following detail applies:

- a. Manual mating and un-mating of test samples, 500 cycles at a rate between 100 and 300 cycles per hour.
- b. (Salt spray requirement removed here due to its absence in ARINC 801-2 and 2008 test plan)

Procedure:

500 cycles of engagement and separation shall be performed. A cycle shall be defined as the point at which optical termini are fully disengaged to a point at which the connectors are fully mated and termini are fully engaged. Connector shells are not required to be fully unmated.

A CIT test shall be performed after every 100 cycles. Termini may be cleaned prior to each measurement.

Criteria:

Fiber optic connector assemblies shall pass CIT tests and at the conclusion of the test, the connectors, adapters and termini shall be inspected for visual damage using the failure criteria outlined in paragraph 4.6 of TIA-455-21A (FOTP-21).

6.4.3 Cable Pull-out Force

Requirements:

Test as specified in TIA-455-6B (FOTP-6) Method 1.

Procedure:

This test applies only to cables with 1.8mm to 2.1mm outer jacket diameter and reinforced with an Aramid strength member. Mount the test sample in a test fixture such that adequate support is provided.

The test load shall be applied as follows with a rate of pull being 89N/min ±4N:

Load 1: Apply 12 lb force at 0° for at least 5 seconds but no more than 10 seconds.

Criteria:

For the procedure above, remove the load and after at least 10 seconds, measure and record the CIT.

6.4.4 Terminus Retention Force

Requirements:

Test as specified in paragraph 2.4.5.3 of ARINC Specification 801-2 and in accordance with EIA-364-38C, either Method A or B.

Procedure:

The test load shall be 12 lb force. *Note: This test is intended to prove the integrity of the connector terminus retention feature and not to prove the attachment of the cable terminus.*

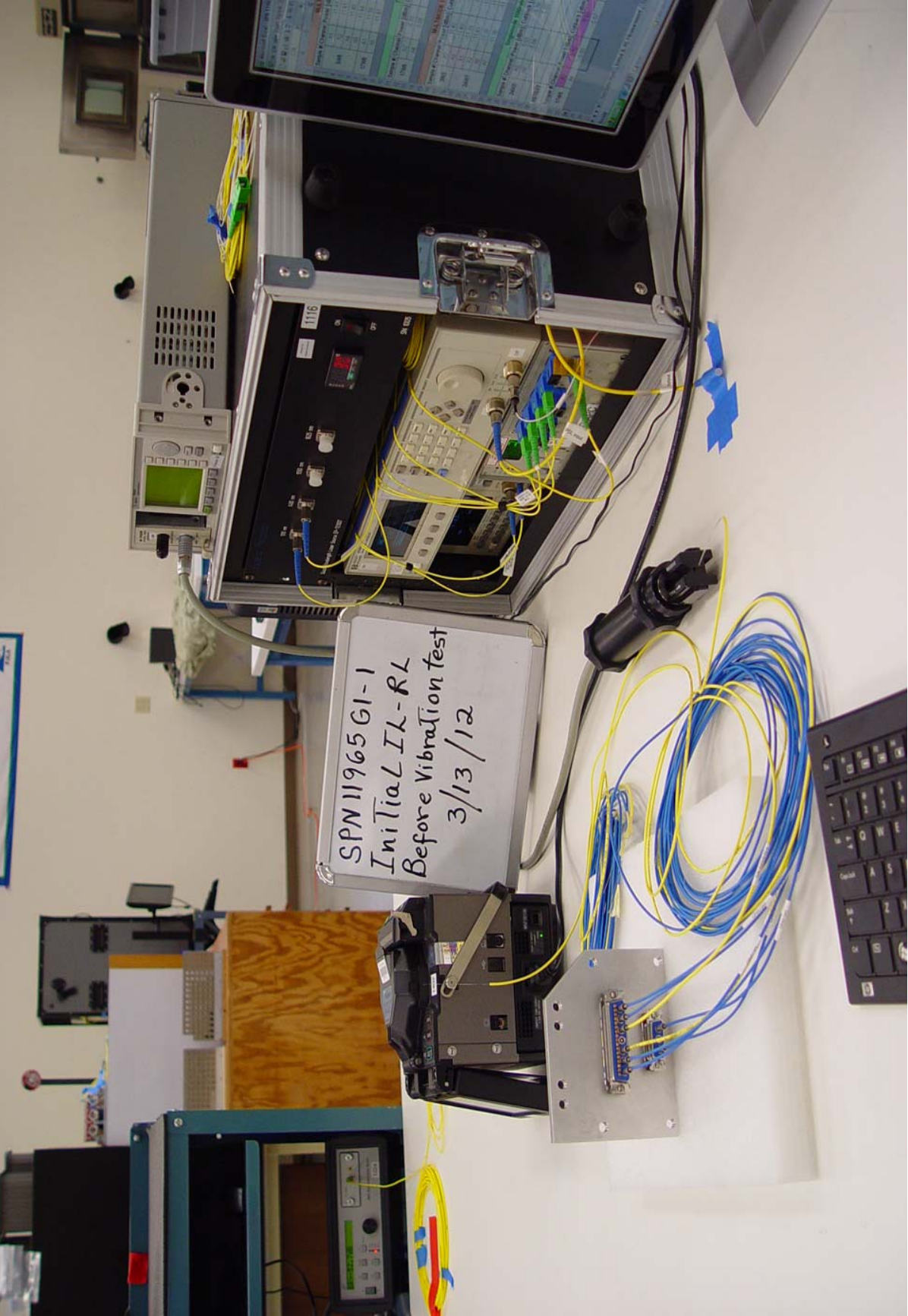
Criteria:

All termini shall be retained with no damage to the termini, the connector inserts or to the retention mechanisms.

Test Datasheet

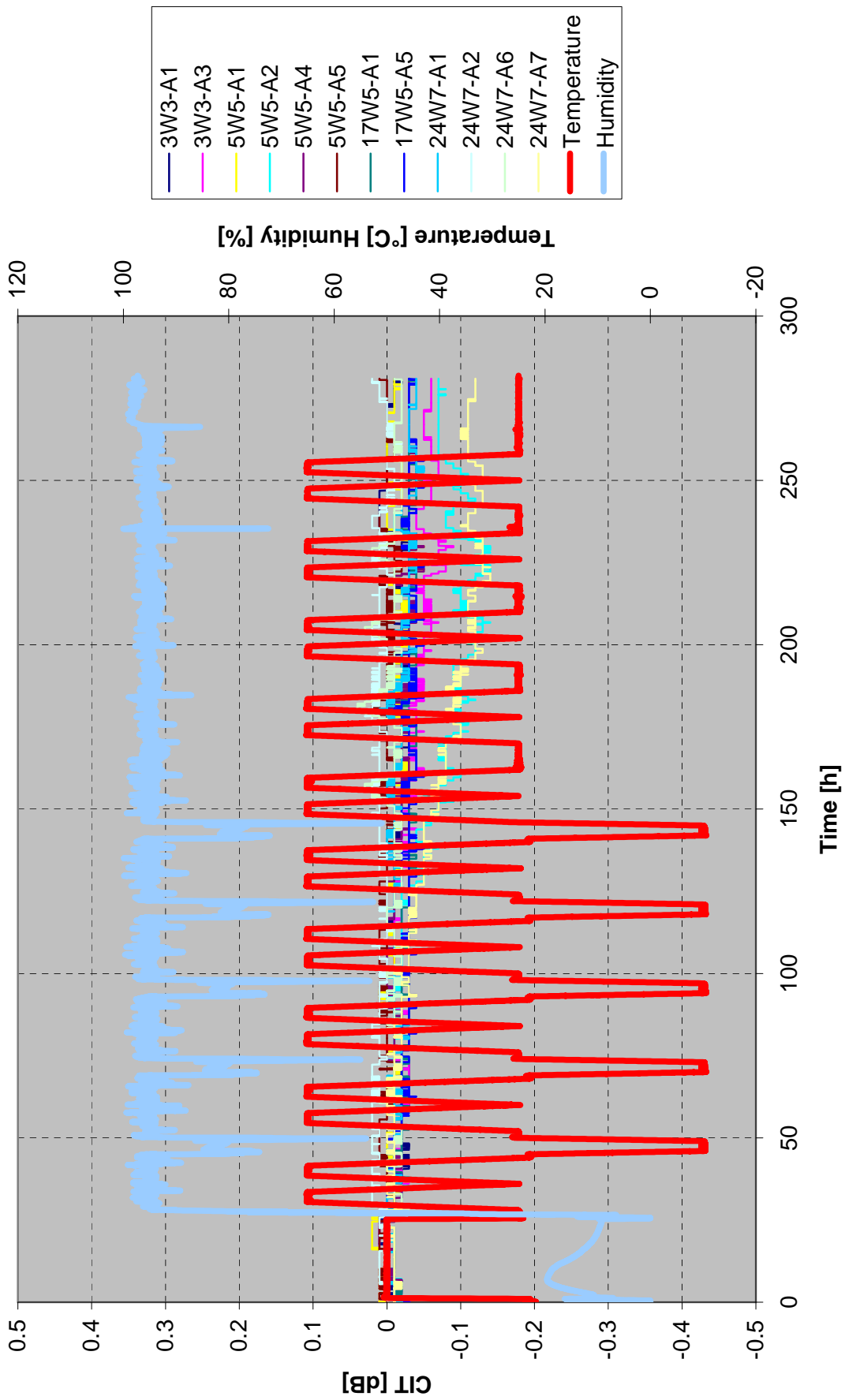
Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number SPN	Test ID #	Temperature	Humidity	DS Revision
3/21/2012	3/21/2012	NXTCore	177125	11965	GA-1	23 °C	29 %RH	03/23/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection		
IL-RL		TIA-455-171A (FOTP-171), Method D1 (multimode) and D3 (single-mode) 2.4.3.2 of ARINC Specification 801-2 and in accordance with TIA/EIA-455-107A (FOTP-107).		Fiber optic connector assemblies shall have a maximum attenuation of 0.3 dB for multimode connections. For all single-mode connections, measure and record only. No failure criterion exists for single-mode connections Return loss should be a minimum of 20 dB for multimode PC polish termini and 30 dB for single-mode PC polish termini		IL [dB], RL [dB]		
Anomaly / Interruption				Nonconformity / Deviation				
none				none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date	
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012	
1402	Fujikura	FSM-50S	12161	Fiber Fusion Splicer		Reference Only	Reference Only	
1405	Fujikura	CT-30	63162	Fiber Cleaver		Reference Only	Reference Only	
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012	
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only	
1451	Rifocs	781RL-13-110	122785	1300nm MM Return Loss Meter		9/6/2011 5:38:40 PM	9/6/2012	
1400	Fujikura	FSM-17S	687	Fiber Fusion Splicer		Reference Only	Reference Only	
1407	Fujikura	CT-30	21094	Fiber Cleaver		Reference Only	Reference Only	
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013	
1102	Hewlett Packard	81533B	3411G05696	Optical Head Interface		Reference Only	Reference Only	
1258	Hewlett Packard	HP 81524A	3248G01541	Optical Power Head		3/8/2012 3:22:08 PM	3/8/2014	
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness	
ARINC801 Connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPTP-1005 Return Loss			none	
Project Engineer	Performed By	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	JZ/HR	Signoff	JZ/HR	JZ/HR	HR	NM	NM	john kim
		Date/Time	3/21/2012 9:25 AM	3/21/2012 9:28AM	3/21/12 1pm	3/21/2012 9:25 AM	3/23/2012	
Results Summary								
Category		Requirement		Max/Min Measurement Value		Compliance		
Insertion Loss [dB]		0.3 (for MM only)		0.28		4/4		
Return Loss [dB]		20 for MM and 30 for SM		45		4/4		
Date	Time	Event Log						Initials
03/21/12	9:30 AM	Starting IL/RL measurements for SM samples.						JZ
02/21/12	9:00AM	Started Preparation for Initial IL-RL Measurements for all MM Samples						HR
	12:00PM	Finished Initial IL-RL Measurements for all MM Samples						
03/21/12	1:00 PM	Completed IL/RL measurements for SM samples. Retested 24W7 A5 due to high IL. Cleaned ferrule endface and now passes. Also did the same to 17W5 A2.						JZ/HR

MULTIMODE @1300nm, Singlemode @1550nm					
Sample #	Channel	Power [dBm]	Cutback [dbm]	IL [dB]	RL [dB]
3W3	A1 mm	-11.43	-11.37	0.06	>45
	A3 mm	-11.42	-11.36	0.02	>45
5W5	A1 mm	-11.54	-11.49	0.05	>45
	A2 mm	-11.53	-11.5	0.03	>45
	A4 mm	-11.55	-11.51	0.04	>45
	A5 mm	-11.56	-11.52	0.04	>45
17W5	A1 mm	-11.42	-11.40	0.02	>45
	A2 sm	-5.68	-5.43	0.25	55.5
	A4 sm	-5.67	-5.41	0.26	56.4
	A5 mm	-11.42	-11.39	0.03	>45
24W7	A1 mm	-11.42	-11.39	0.03	>45
	A2 mm	-11.40	-11.38	0.02	>45
	A3 sm	-5.67	-5.39	0.28	55.8
	A5 sm	-5.62	-5.39	0.23	52.1
	A6 mm	-11.42	-11.39	0.03	>45
	A7 mm	-11.42	-11.38	0.04	>45
Initial Results					
17W5	A1 mm			0.00	
	A2 sm	-5.78	-5.39	0.38	56.8
	A4 sm			0.00	
	A5 mm			0.00	
24W7	A1 mm			0.00	
	A2 mm			0.00	
	A3 sm	-5.67	-5.39	0.28	55.8
	A5 sm	-5.75	-5.39	0.36	55.9
	A6 mm			0.00	
	A7 mm			0.00	
	A5 sm	-5.72	-5.39	0.33	56.1

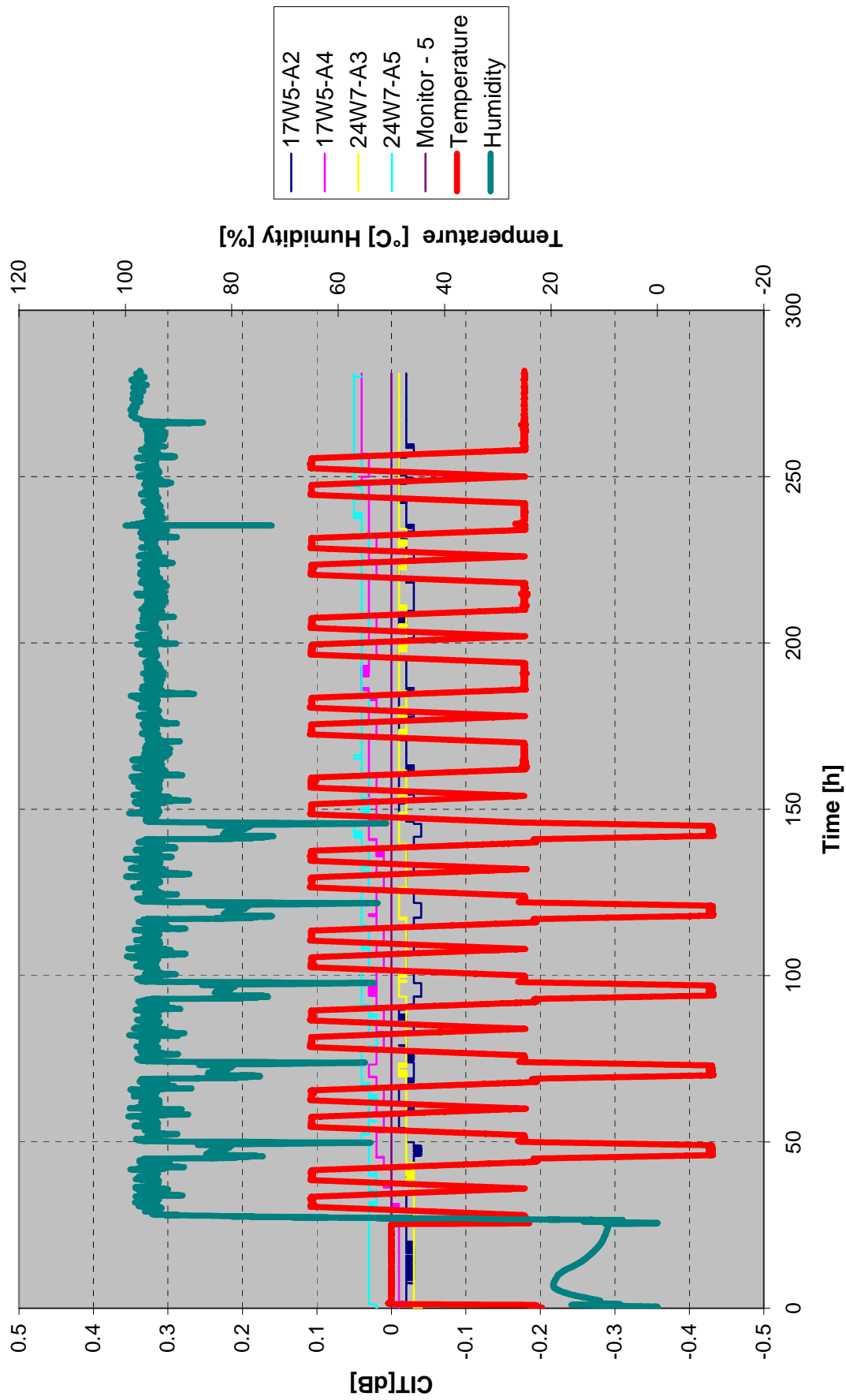


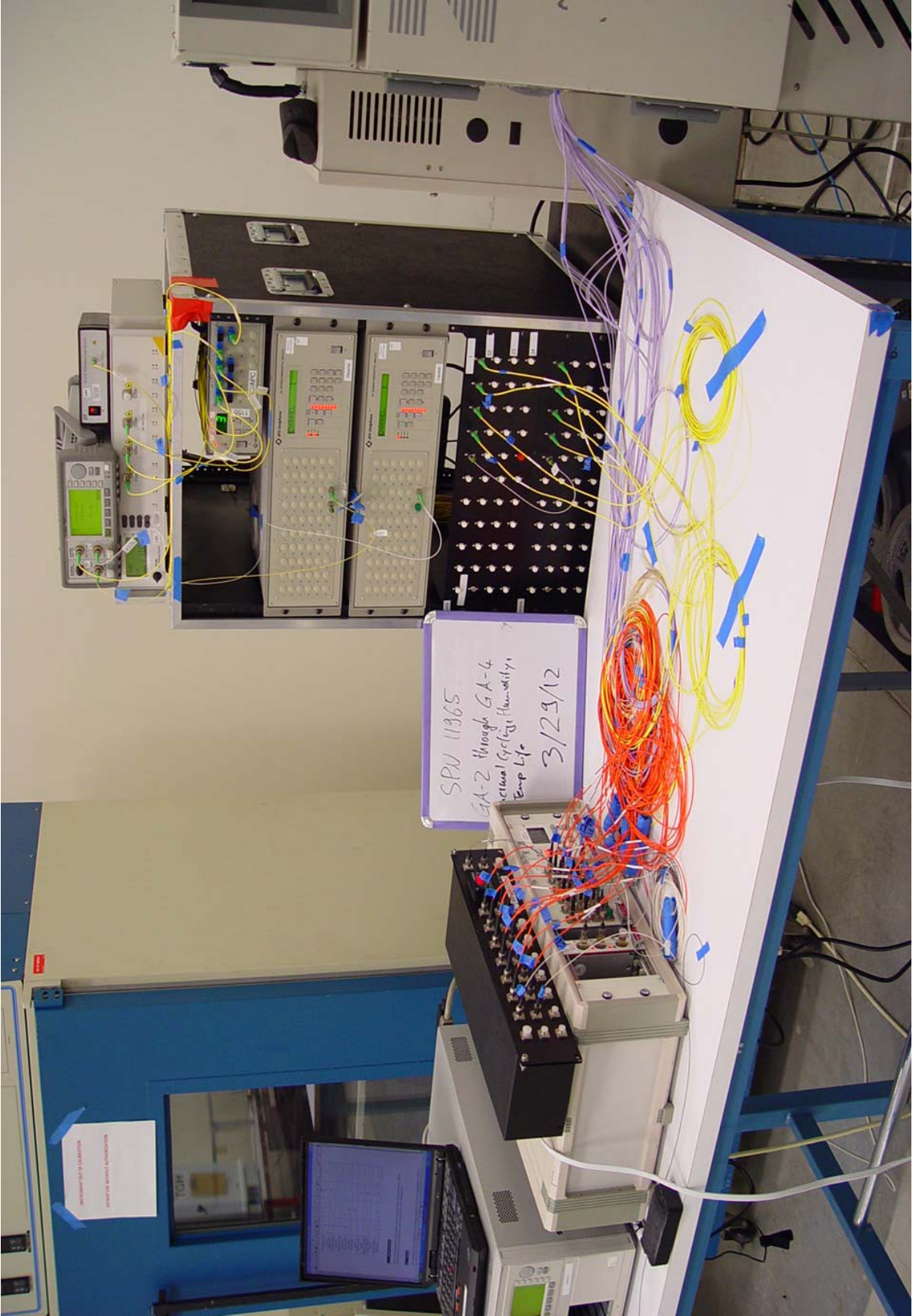
Start Date	Completion Date	Test Item	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
3/30/2012	4/12/2012	NXTCore	177125	11965		GA-3	23 °C	29 %RH	04/12/12
Test Title		Test Specification / Standard		Specific Test Conditions			Measurements / Inspection		
Humidity		4.5.15 of MIL-DTL-24308G and in accordance with EIA-364-31B, Method IV, optional cold shock required.		-10°C to +65°C, 10 cycles, 240 hours			CIT [dB], Temperature [C]		
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1264	Rifocs	753R-1300	129236	Triple 1300nm LED Source		11/7/2011 6:08:50 PM	11/7/2012		
1198	Rifocs	715RF-24	124741	Multimode 62.5 Optical Switch		Ref Only	Ref Only		
1020	Agilent	81637B	DE41300321	Fast Optical Power Meter		9/29/2011 2:47:02 PM	9/29/2013		
1072	JDS	SC Series	EG001153	2x44 Optical Switch		Reference Only	Reference Only		
1071	JDS	SC Series	EG001152	2x44 Optical Switch		Reference Only	Reference Only		
1155	JDS Uniphase	SB Series	ED155457	1x8 Optical Switch		Reference Only	Reference Only		
1191	Optotest	OP750	10397	1310/1490/1550/1625nm Laser		2/3/2012 4:56:12 PM	2/3/2014		
1016	Agilent	81637B	DE41300332	Fast Optical Power Meter		9/29/2011 2:45:32 PM	9/29/2013		
1187	Agilent	81610A	DE40500226	Return Loss Module		12/8/2011 11:47:26 AM	12/8/2012		
1460	Cincinnati Subzero	ZH-2	Z9913064	2 cu ft Environmental Chamber		4/20/2011 7:15:11 PM	4/20/2012		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
ARINC801 Connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPWI-1044 Chamber controller programming			none		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	NM	Signoff	NM	NM	N/A	NM	NM	john kim	
		Date/Time	3/30/12 6:30 AM	3/30/12 6:30 AM	4/12/12 9am	3/30/12 6:30 AM	4/12/12 9am		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
CIT [dB] MM		0.5		-0.14		4/4			
CIT [dB] SM		0.5		0.05		2/2			
Date	Time	Event Log						Initials	
03/30/12	6:30 PM	Started Humidity test						NM	
04/02/12	8:00 AM	Collected interim data and checked compliance as well as system performance							
04/03/12	8:00 AM	Collected interim data and checked compliance as well as system performance							
04/04/12	8:00 AM	Collected interim data and checked compliance as well as system performance							
04/05/12	9:30 AM	Collected interim data and checked compliance as well as system performance							
04/06/12	7:55 AM	Collected interim data and checked compliance as well as system performance							
04/09/12	8:55 AM	Collected interim data and checked compliance as well as system performance							
	1:00 PM	Paused test and collected data due to expected power outage							
04/10/12	9:48 AM	Baselined and resumed test							
04/11/12	8:11 AM	Collected interim data and checked compliance as well as system performance							
04/12/12	8:25 AM	Test completed							

SPN 11965 GA-3 Humidity MM CIT



SPN 11965 GA-3 Humidity SM CIT





SPU 11365
GA-2 through GA-4
actual cycle time: 11m-18s/1m
Temp Life
3/29/12

RESEARCH UNIT OF CALIFORNIA
IN THE UNIVERSITY OF CALIFORNIA

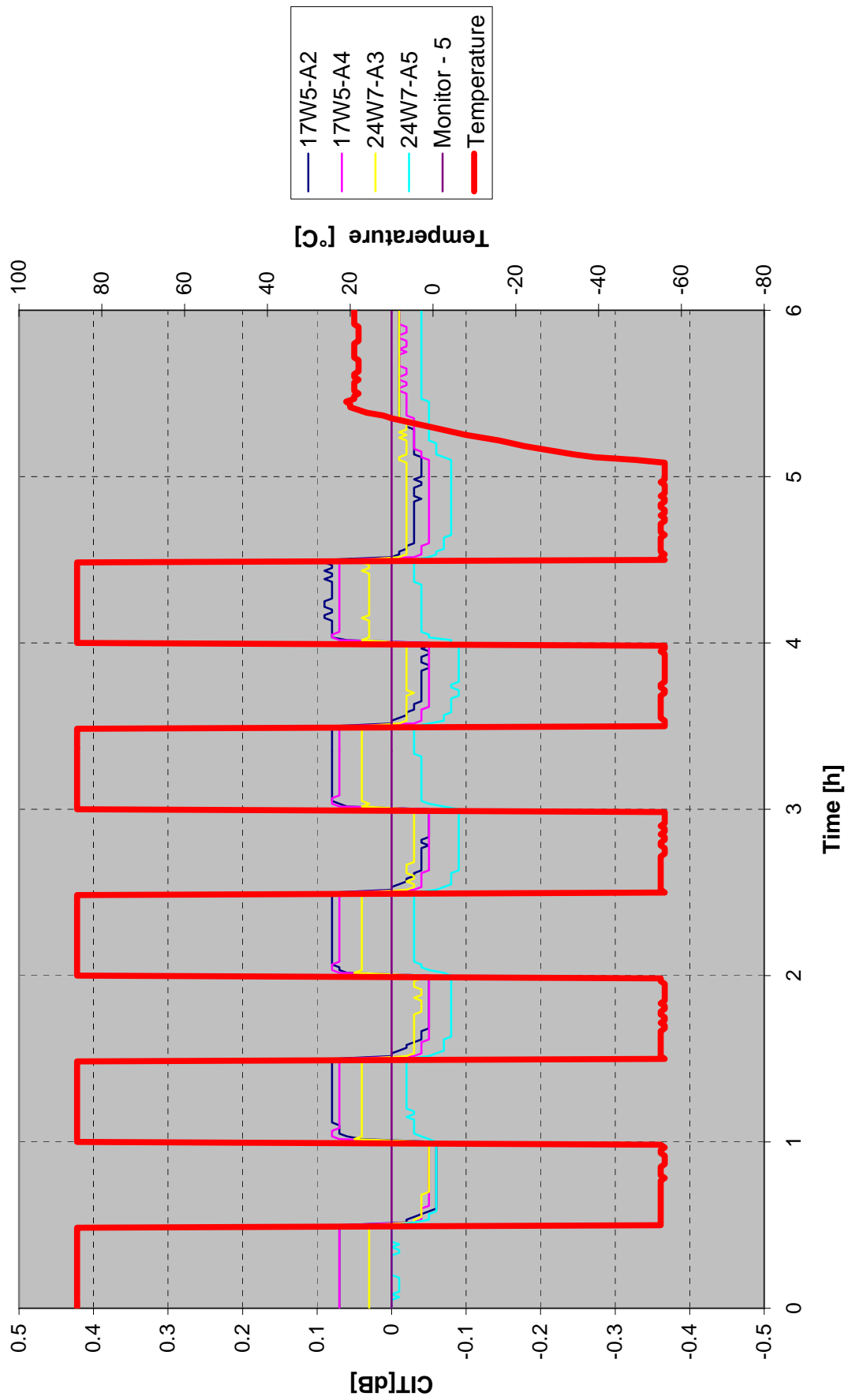
Test Datasheet

Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision	
6/5/2012	6/8/2012	NXTCon	177125	11965	GA-6		23 °C	29 %RH	06/08/12	
Test Title		Test Specification / Standard			Specific Test Conditions					
Thermal Shock		4.5.13.1 of MIL-DTL-24308G and in accordance with EIA-364-32F			Method A, Test Condition I, 5 cycles -55 °C (+0, -3), 125 °C (+3, -0)					
Anomaly / Interruption										
Test was performed twice: One time with 85C as high temperature, the second time with 125C as high temperature										
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description	Last Cal Date	Cal Due Date				
1264	Rifocs	753R-1300	129236	Triple 1300nm LED Source	11/7/2011 6:08:50 PM	11/7/2012				
1198	Rifocs	715RF-24	124741	Multimode 62.5 Optical Switch	Ref Only	Ref Only				
1020	Agilent	81637B	DE41300321	Fast Optical Power Meter	9/29/2011 2:47:02 PM	9/29/2013				
1072	JDS	SC Series	EG001153	2x44 Optical Switch	Reference Only	Reference Only				
1071	JDS	SC Series	EG001152	2x44 Optical Switch	Reference Only	Reference Only				
1155	JDS Uniphase	SB Series	ED155457	1x8 Optical Switch	Reference Only	Reference Only				
1191	Optotest	OP750	10397	1310/1490/1550/1625nm Laser	2/3/2012 4:56:12 PM	2/3/2014				
1016	Agilent	81637B	DE41300332	Fast Optical Power Meter	9/29/2011 2:45:32 PM	9/29/2013				
1187	Agilent	81610A	DE40500226	Return Loss Module	12/8/2011 11:47:26 AM	12/8/2012				
1057	Cincinnati SubZero	VTS 1.5	93-VT12231	1.5 cu ft Thermal Shock Chamber	12/2/2011 10:53:32 AM	12/2/2012				
1005	Agilent	81635A	DE38601594	Dual Optical Power Meter	9/29/2011 1:19:01 PM	9/29/2013				
1220	Agilent	81654A	DE38A00785	1310/1550nm Laser Source	12/9/2011 3:56:59 PM	12/9/2012				
1283	Rifocs	715RF-24	121439	1x24 Singlemode Optical Switch	Reference Only	Reference Only				
1001	Agilent	81635A	DE38601565	Dual Optical Power Meter	9/29/2011 1:20:11 PM	9/29/2013				
Test Sample Description		Part Number			Exporior Test Procedure # (if applicable)			Customer Witness		
NXTCore		TA0001 w/connectors			EPTP-1002 Transmittance EPWI-1044 Chamber controller programming			none		
Project Engineer	Performed By	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director			
Norman Metzner	NM	JB 6/5/12 1pm	NM 6/5/12 5pm	HR 6/6/12 4pm	NM 6/5/12 1pm	NM 6/6/12 4pm	john kim			
Results Summary										
Category		Requirement			Max/Min Measurement Value			Compliance		
CIT [dB] MM		-			0.02/-0.24			-		
CIT [dB] SM		-			0.09/-0.09			-		

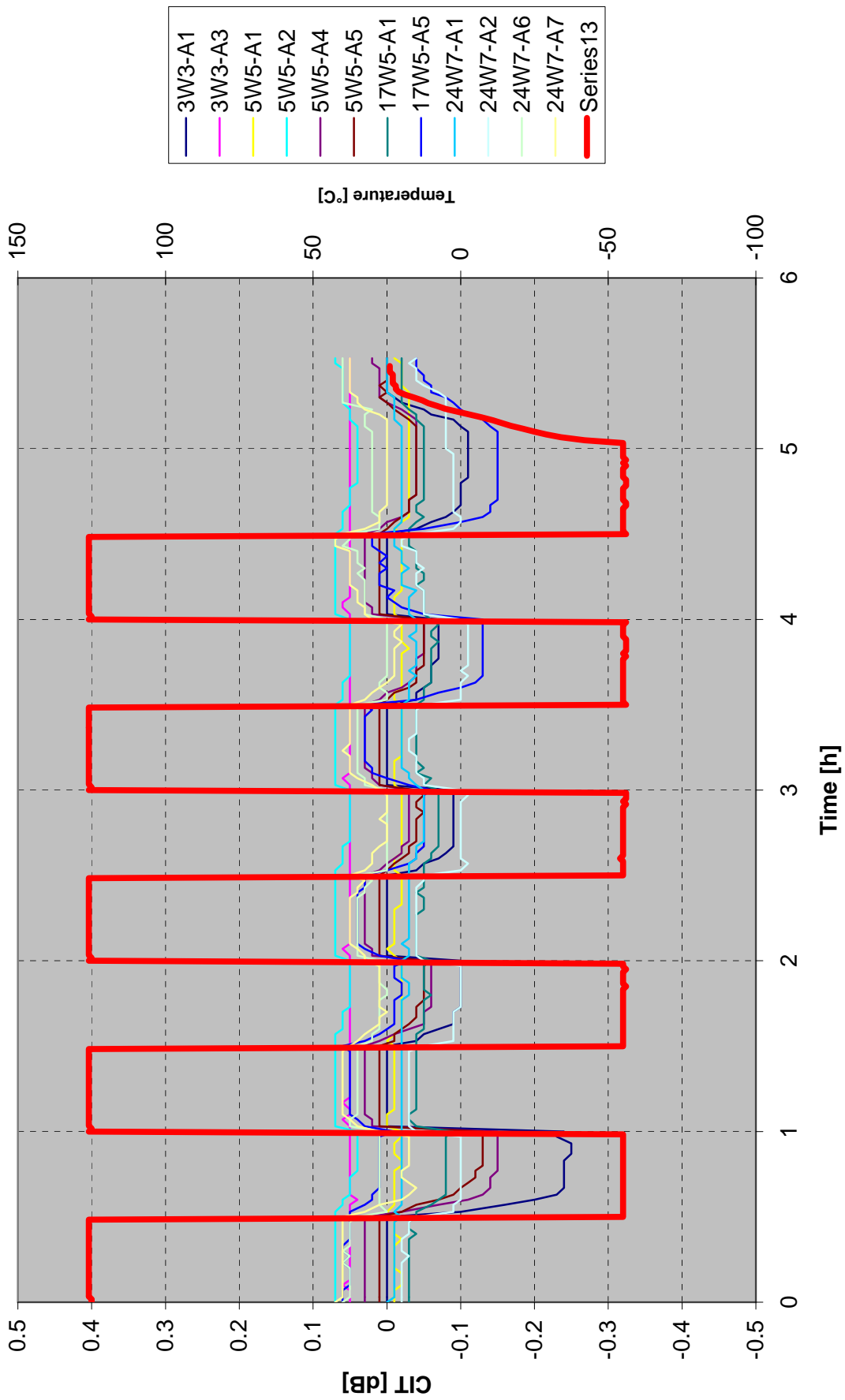
Test Datasheet

Visual Inspection		no damage detrimental to the performance of the connector	no damage observed	4/4	Initials	
Date	Time	Event Log				
06/05/12	1:00 PM	Started equipment setup and routed samples in chamber baselined optical system				JB
	5:00 PM					
	8:15 AM					
06/06/12	8:45 AM	Started rampping chamber to temperature chamber at temperature, started thermal shock				NM
	1:45 PM					
	3:00 PM					
06/07/12	5:00 PM	Thermal shock cycling completed, returned samples to ambient Started equipment setup and routed samples in chamber to prepare for thermal shock at 125C baselined optical system				NM
	7:45 AM					
06/08/12	8:00 AM	Started rampping chamber to temperature chamber at temperature, started thermal shock				
	1:00 PM					
		Thermal shock cycling completed, returned samples to ambient				

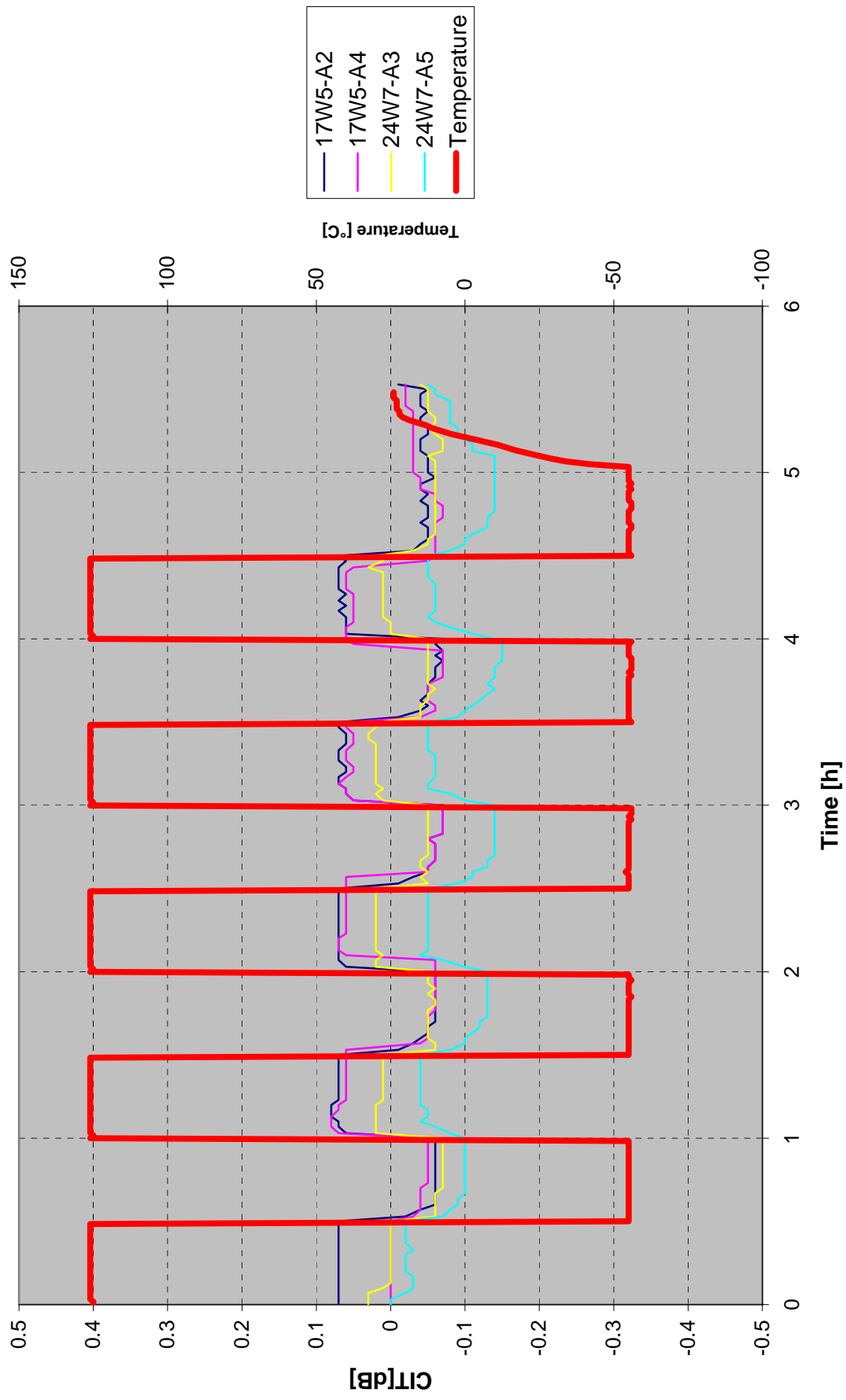
SPN 11965 GA-6 Thermal Shock SM CIT 85°C

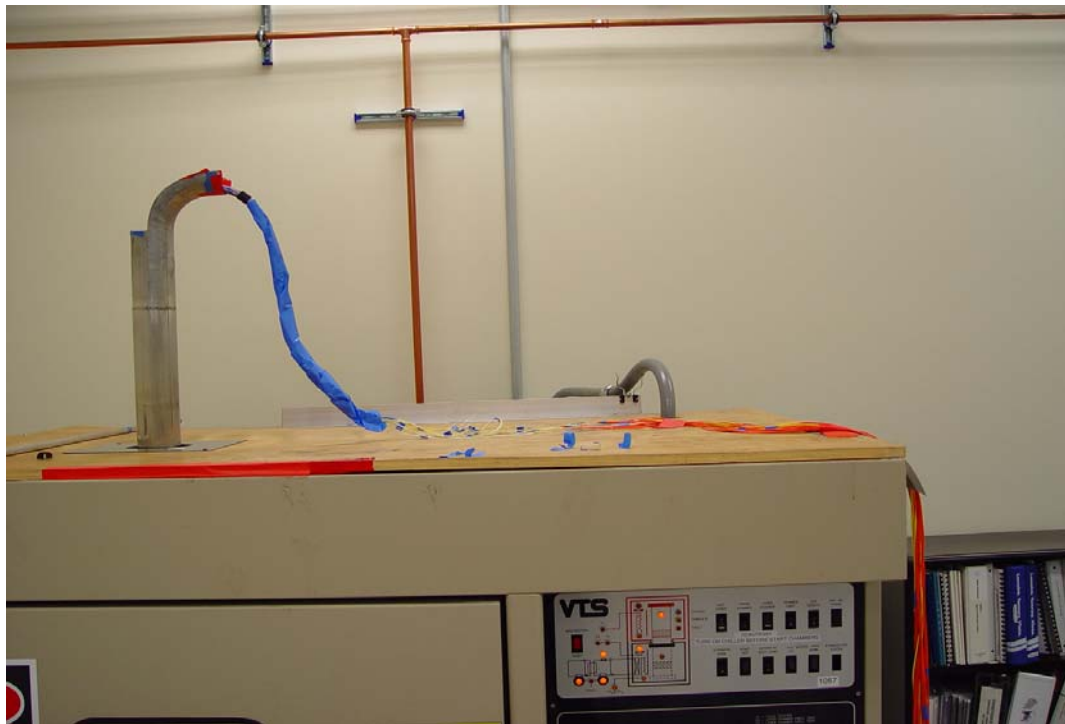
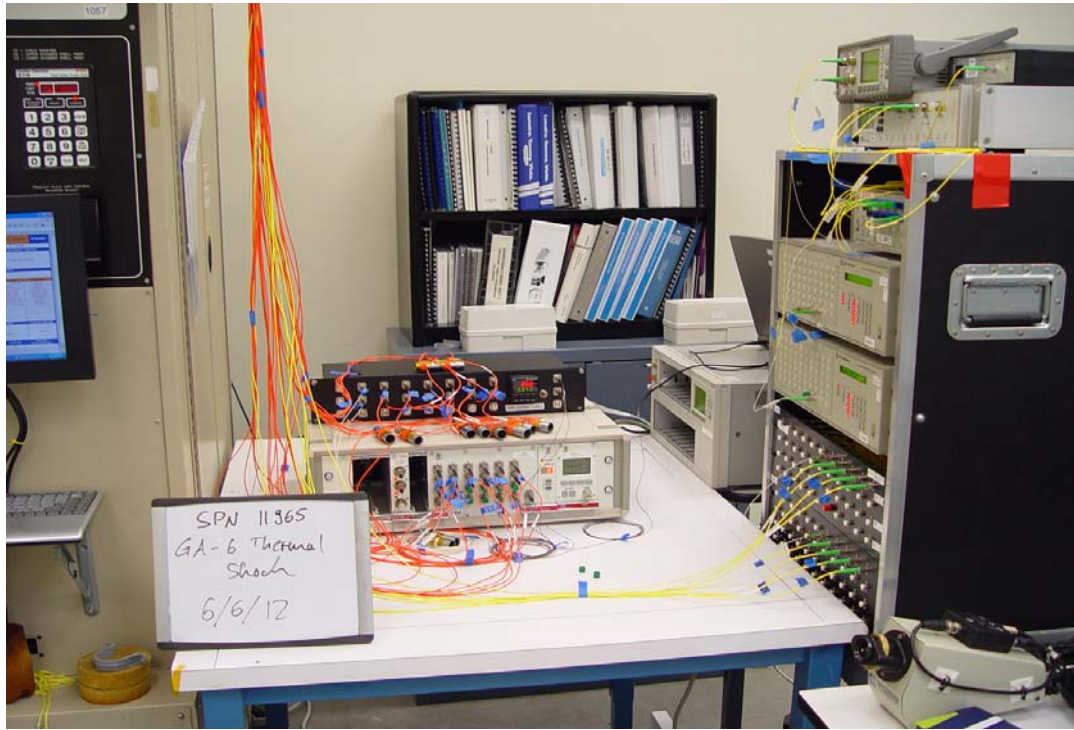


SPN 11965 GA-6 Thermal Shock MM CIT 85°C



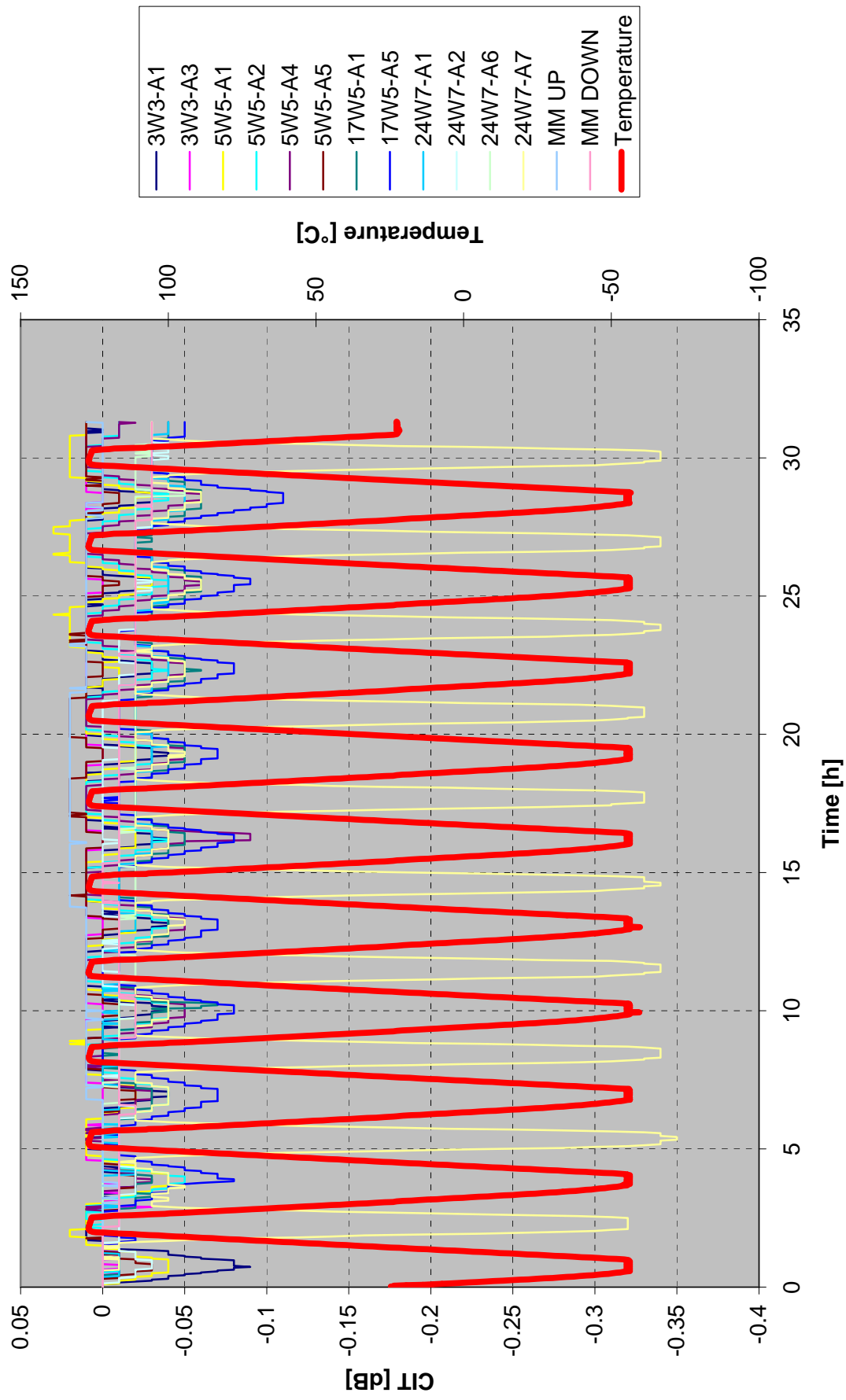
SPN 11965 GA-6 Thermal Shock SM CIT 85°C



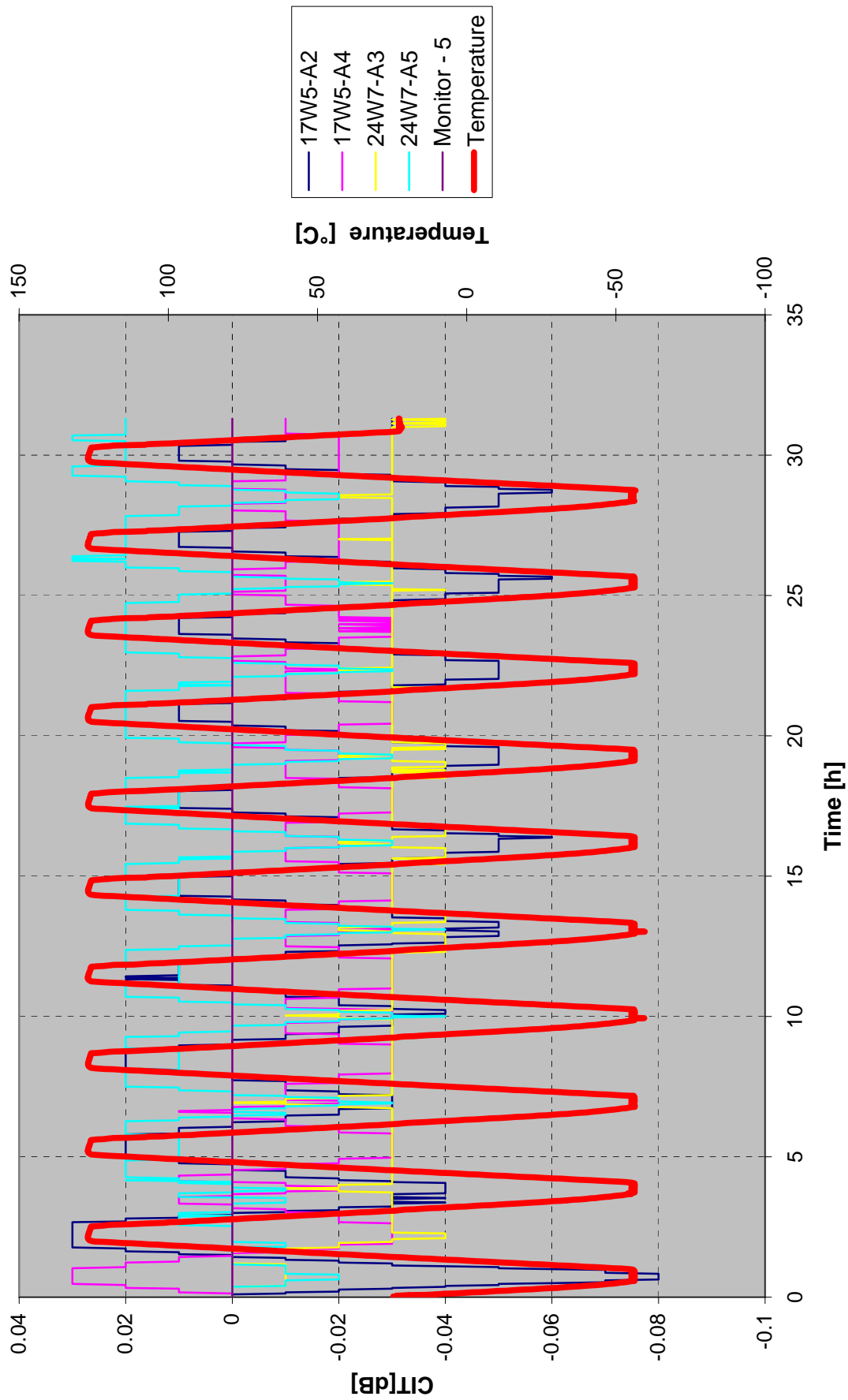


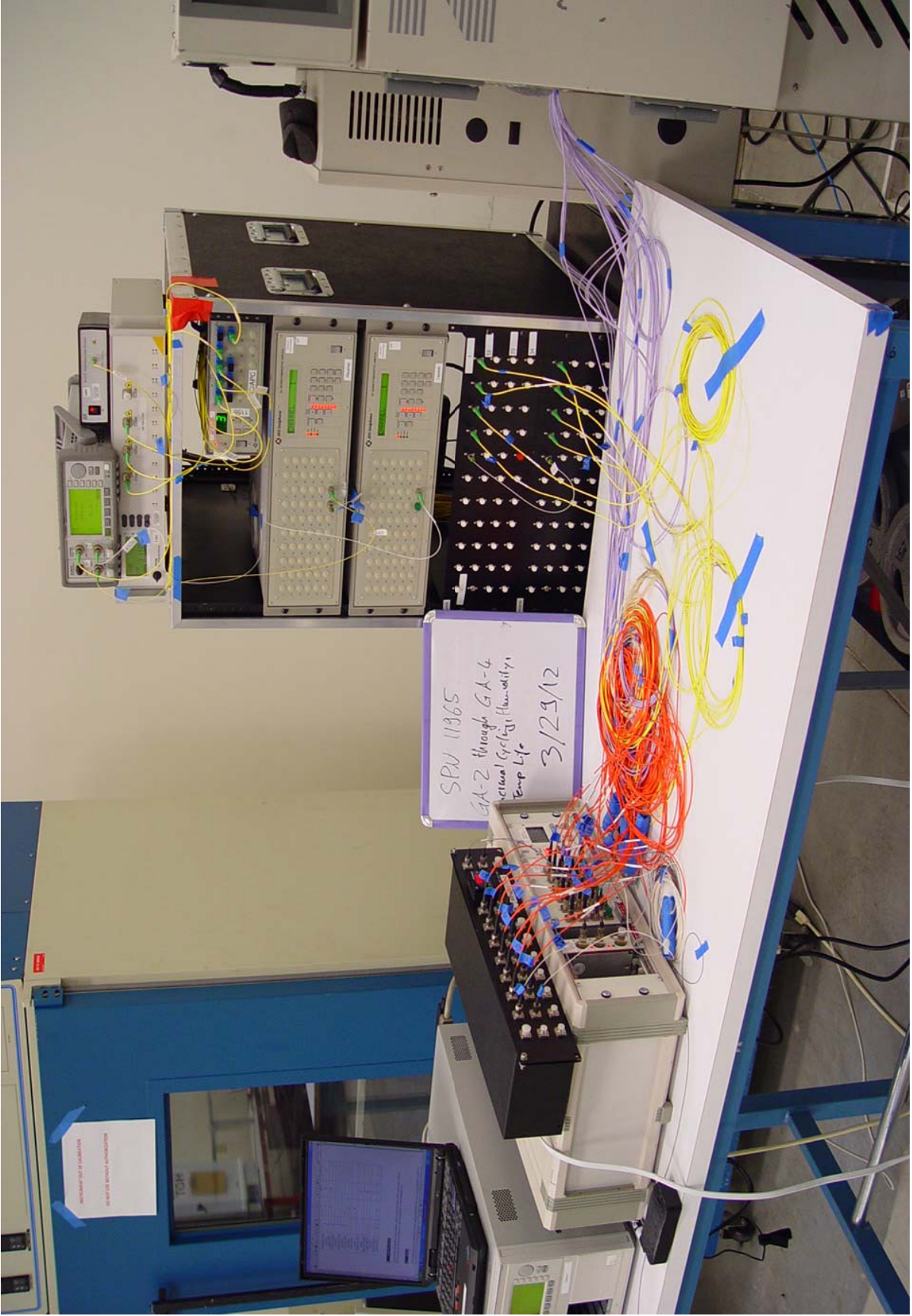
Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
3/28/2012	3/30/2012	NXTCore	177125	11965		GA-2	23 °C	29 %RH	04/02/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection			
Thermal Cycling		TIA-455-20B (FOTP-20), Method A ANSI/TIA-455-3B (FOTP-3), 2.4.4.1 of ARINC Specification 801-2		Test Condition D, 10 cycles, with Step 1 set at -55°C ±2°C and Step 2 set at 125°C ±2°C temperature plateau intervals shall not be less than 30 minutes. The rate of the environmental chamber air temperature change, between the minimum and maximum temperature extremes, shall be between 50 and 70 minutes. CIT measured every 2 minutes		CIT [dB], Temperature [C]			
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1264	Rifocs	753R-1300	129236	Triple 1300nm LED Source		11/7/2011 6:08:50 PM	11/7/2012		
1198	Rifocs	715RF-24	124741	Multimode 62.5 Optical Switch		Ref Only	Ref Only		
1020	Agilent	81637B	DE41300321	Fast Optical Power Meter		9/29/2011 2:47:02 PM	9/29/2013		
1072	JDS	SC Series	EG001153	2x44 Optical Switch		Reference Only	Reference Only		
1071	JDS	SC Series	EG001152	2x44 Optical Switch		Reference Only	Reference Only		
1155	JDS Uniphase	SB Series	ED155457	1x8 Optical Switch		Reference Only	Reference Only		
1191	Optotest	OP750	10397	1310/1490/1550/1625nm Laser		2/3/2012 4:56:12 PM	2/3/2014		
1016	Agilent	81637B	DE41300332	Fast Optical Power Meter		9/29/2011 2:45:32 PM	9/29/2013		
1187	Agilent	81610A	DE40500226	Return Loss Module		12/8/2011 11:47:26 AM	12/8/2012		
1460	Cincinnati Subzero	ZH-2	Z9913064	2 cu ft Environmental Chamber		4/20/2011 7:15:11 PM	4/20/2012		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
ARINC801 Connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPWI-1044 Chamber controller programming			none		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	NM		NM	NM	N/A	NM	NM	john kim	
		Date/Time	3/28/12 4pm	3/28/12 4pm	N/A	3/28/12 4pm	4/2/2012 11am		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
CIT [dB] MM		0.5		-0.35		4/4			
CIT [dB] SM		--		-0.08		2/2			
Date	Time	Event Log							Initials
03/28/12	4:00 PM	Started optical system setup and routed samples in chamber							NM
	6:30 PM	Finished setup and started satbility							
03/29/12	11:00 AM	Programmed chamber and started test							
03/30/12	6:30 PM	Test completed							
04/02/12	8:00 AM	Collected data							

SPN 11965 GA-2 Thermal Cycling MM CIT



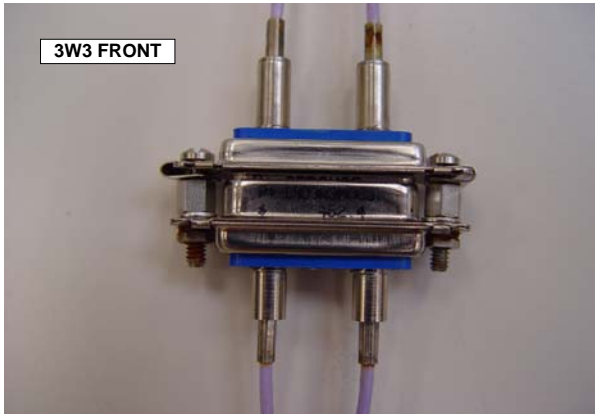
SPN 11965 GA-2 Thermal Cycling SM CIT



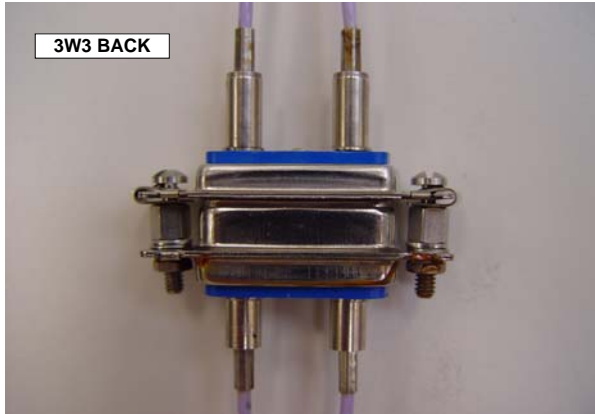


Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number SPN	Test ID #	Temperature	Humidity	DS Revision
6/2/2012	6/5/2012	NXTCon	177125	11965	GA-5	23 °C	29 %RH	06/05/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection		
Salt Spray		4.5.19 of MIL-DTL-24308G, EIA-364-26B, test condition B TIA-455-16A (FOTP-16), test condition C, based on paragraph 2.4.4.5 of ARINC Specification 801-2		48h of salt spray followed by dry-out at 38°C ± 3°C for a period of 12 hours		CIT [dB], Temperature [°C]		
Anomaly / Interruption				Nonconformity / Deviation				
none				none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date	
1264	Rifocs	753R-1300	129236	Triple 1300nm LED Source		11/7/2011 6:08:50 PM	11/7/2012	
1198	Rifocs	715RF-24	124741	Multimode 62.5 Optical Switch		Ref Only	Ref Only	
1020	Agilent	81637B	DE41300321	Fast Optical Power Meter		9/29/2011 2:47:02 PM	9/29/2013	
1072	JDS	SC Series	EG001153	2x44 Optical Switch		Reference Only	Reference Only	
1071	JDS	SC Series	EG001152	2x44 Optical Switch		Reference Only	Reference Only	
1155	JDS Uniphase	SB Series	ED155457	1x8 Optical Switch		Reference Only	Reference Only	
1191	Optotest	OP750	10397	1310/1490/1550/1625nm Laser		2/3/2012 4:56:12 PM	2/3/2014	
1016	Agilent	81637B	DE41300332	Fast Optical Power Meter		9/29/2011 2:45:32 PM	9/29/2013	
1187	Agilent	81610A	DE40500226	Return Loss Module		12/8/2011 11:47:26 AM	12/8/2012	
1521	Hanna Instruments	HI98129	M-15483	ph/Conductivity Meter		Calibrated Before Use	Calibrated Before Use	
1059	Associated	MX-9216	9368	Salt Spray chamber		12/16/2011 9:50:02 AM	12/16/2012	
1000	Agilent	81635A	DE38601573	Dual Optical Power Meter		2/21/2012 5:25:52 PM	2/21/2014	
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness	
Combo-D connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance			none	
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director
Norman Metzner	MD/JB	MD	MD	MD	JB	NM	NM	john kim
		Date/Time	6/2/12 6:00am	6/2/12 6:30am	6/5/12 1pm	6/1/12 3pm	6/5/12 1pm	
Results Summary								
Salt Solution Collected	Pass/Fail	Temperature	Deg C	Requirement	Pass/Fail	Air Pressure	Pass/Fail	Salt Solution
Front Beaker 30 mL	Pass	Chamber Temperature	35	34-41	Pass	Requirement 12-18 psi	Pass	Requirement 6.5-7.2 pH
Rear Beaker 17 mL		Tower Temperature	42	40-42	Pass	16 psi		pH 6.63
Category	Requirement			Max/Min Measurement Value		Compliance		
CIT [dB] MM	0.5			-0.13/0.03		4/4		
CIT [dB] SM	0.5			-0.12/-0.04		2/2		
Visula Inspection	no damage due to corrosion			corrosion observed, see tab "Post Test Pictures", however, no cracking or pitting		4/4		
Date	Time	Event Log						Initials
6/2/2012	6:00am	Started warming up salt spray chamber						MD
	7:30am	Prepared salt solution						
	7:40am	Calibrate ph meter and checked ph of salt solution (ph = 6.55)						
	7:45am	Loaded salt solution on salt spray tank						
06/04/12	8:30pm	Put samples in salt spray chamber, started 48 hour exposure @ 35c						MD
	8:30am	Removed samples from salt spray, finished 48 hour exposure @ 35c						
	8:45am	Rinsed samples in warm water for 5 minutes and took after test pictures						
06/05/12	9:00am	Started 12h dry-out period at 38 deg C						NM
	9:00pm	dry-out period completed						
	8:30am	took samples out of oven						
	9:30am	Baselined single and multimode						
	8:45 AM	Setup Test Equipment for Post Test Measurements						
	1:00 AM	Started Post Test Measurements for 3W3						
11:45 AM	Completed Post Test Measurements for all four Samples						JB	

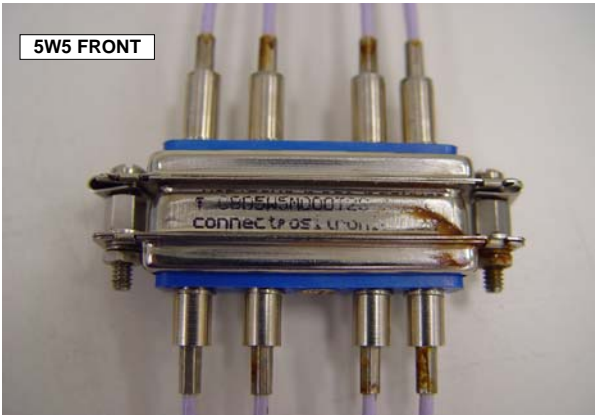
3W3 FRONT



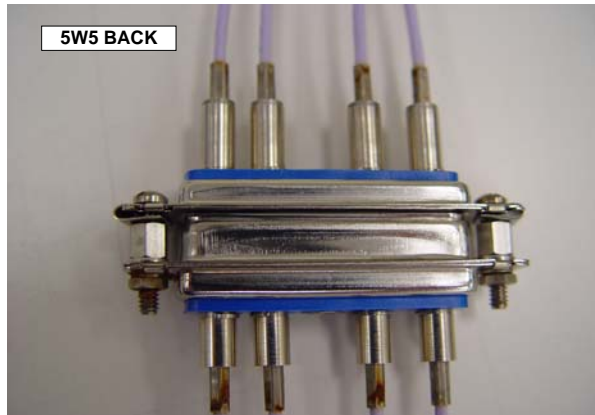
3W3 BACK



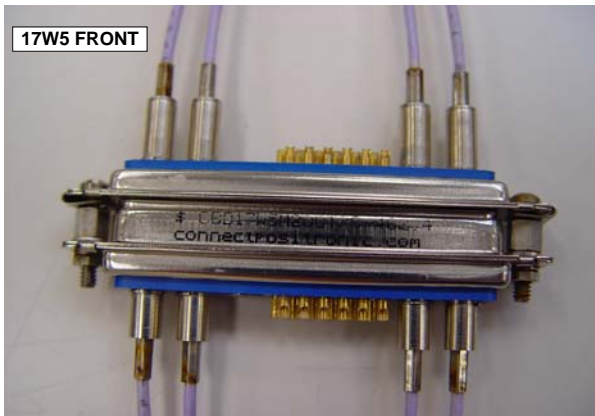
5W5 FRONT



5W5 BACK



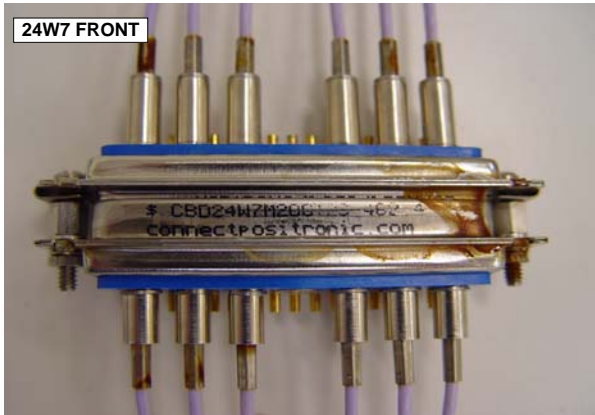
17W5 FRONT



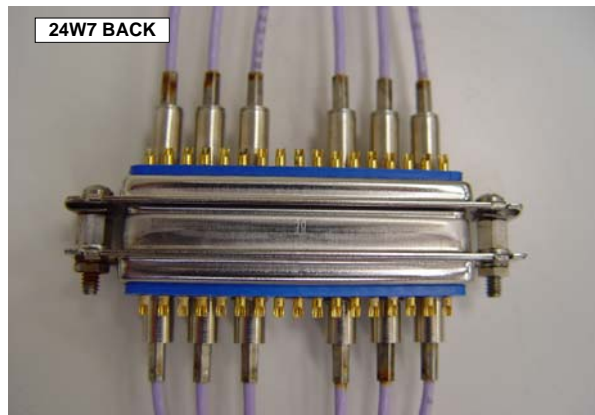
17W5 BACK



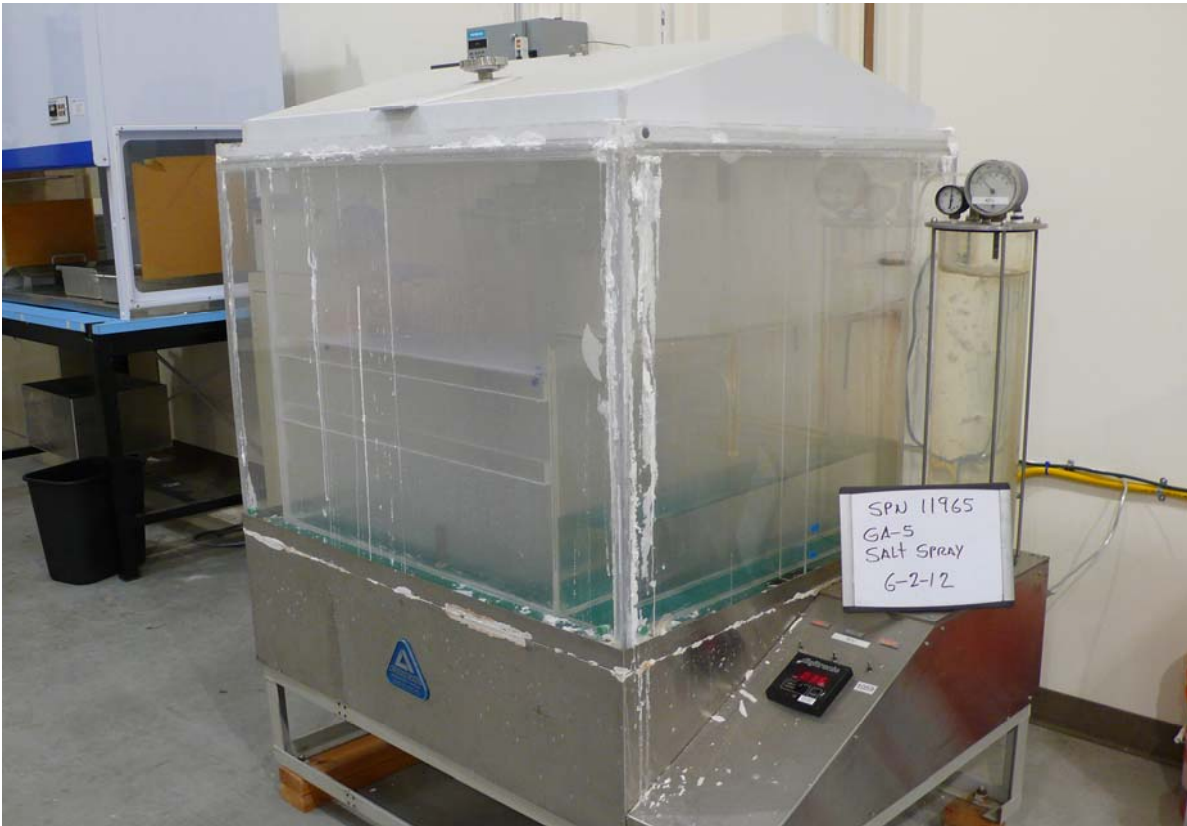
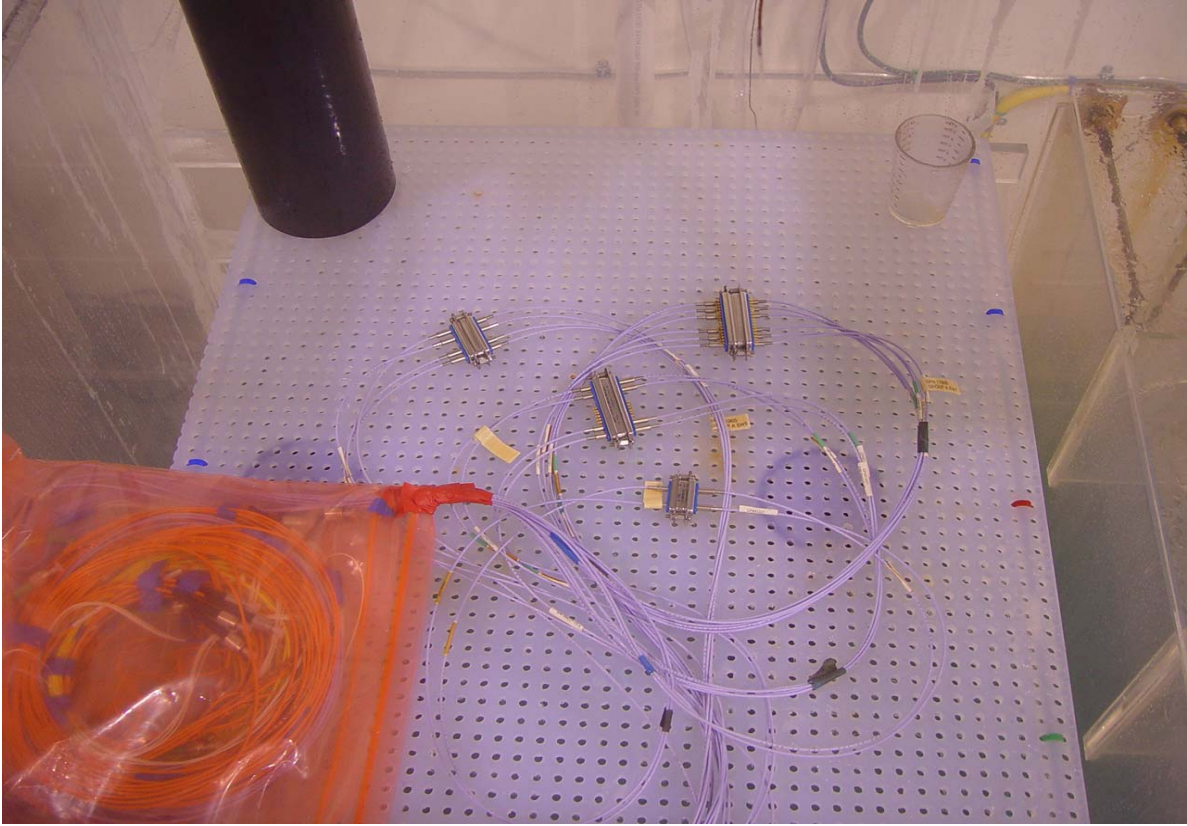
24W7 FRONT



24W7 BACK

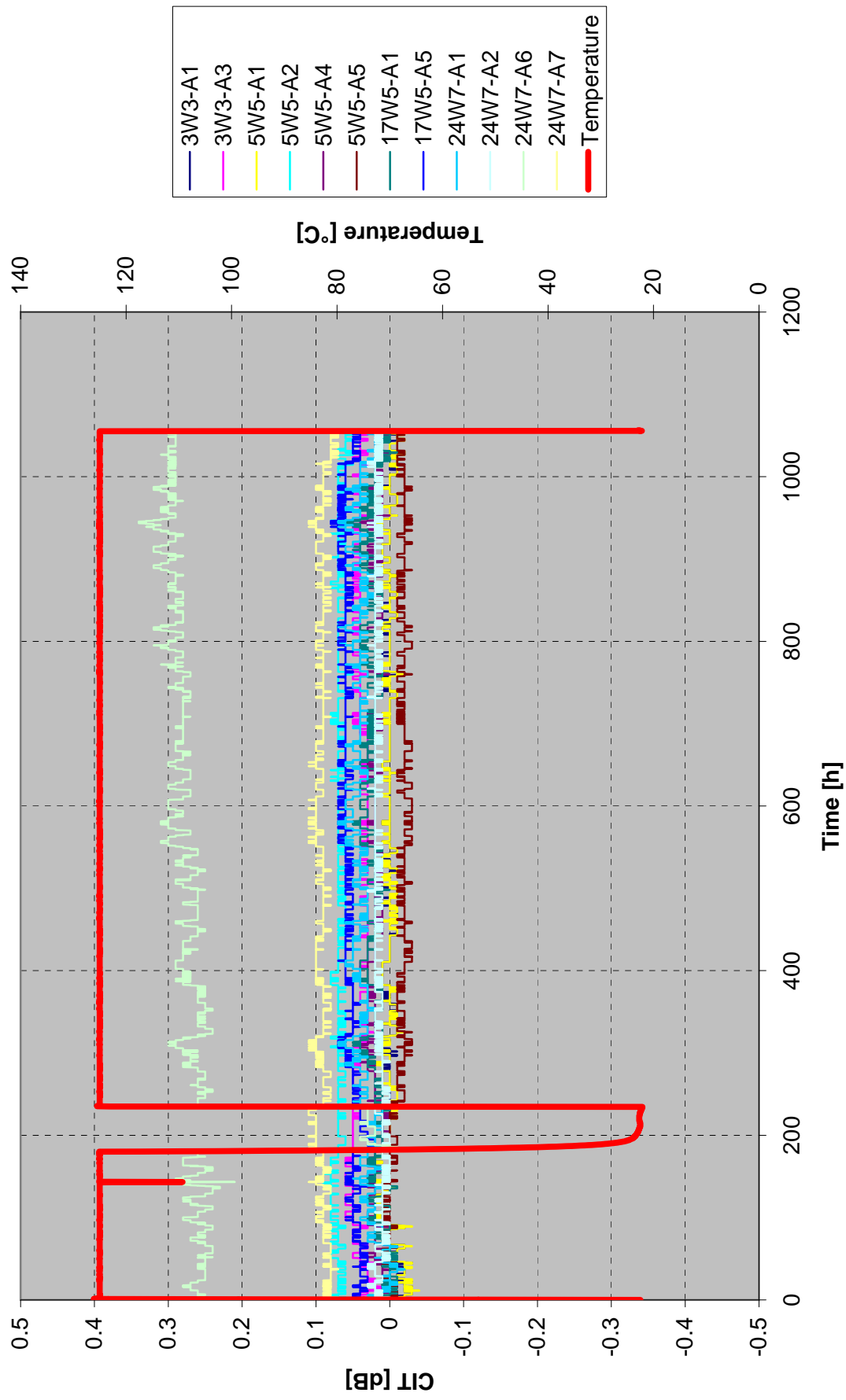


3W3			5W5					17W5					24W7					TEST
A1 mm	A3 mm	A1 mm	A2 mm	A4 mm	A5 mm	A1 mm	A2 mm	A4 mm	A5 mm	A1 mm	A2 mm	A3 mm	A5 mm	A6 mm	A7 mm	Initial IL		
0.06	0.02	0.05	0.03	0.04	0.04	0.02	0.25	0.26	0.03	0.03	0.02	0.28	0.23	0.03	0.04			
0.01	0.01	0.01	-0.01	-0.01	0.01	-0.04	-0.03	-0.01	-0.05	-0.04	-0.03	-0.04	0.02	-0.03	-0.03			
-0.01	-0.06	-0.01	-0.07	-0.03	0.01	-0.03	-0.02	0.04	-0.03	0.02	0.02	-0.01	0.05	-0.01	CIT after Thermal Cycle			
0.00	0.04	-0.01	0.06	0.01	-0.02	0.02	0.02	0.01	0.06	0.03	0.02	0.01	-0.03	0.01	CIT after Humidity			
0.06	0.03	0.06	0.05	0.07	0.04	0.07	0.28	0.22	0.05	0.08	0.01	0.32	0.79	0.06	CIT after Temp Life			
0.15	0.05	0.12	0.1	0.2	0.12	0.07	0.32	0.28	0.12	0.07	0.05	0.44	0.29	0.05	IL before Salt Spray			
-0.09	-0.02	-0.06	-0.05	-0.13	-0.08	0.00	-0.04	-0.06	-0.07	0.01	-0.04	-0.12	-0.10	0.01	IL after Salt Spray			
															CIT after Salt Spray			
-38.66	-38.56	-38.63	-38.61	-38.71	-38.63	-38.58	-8.49	-8.45	-38.63	-38.58	-38.56	-8.61	-8.46	-38.56	-38.59	sample power		
-38.51	-38.51	-38.51	-38.51	-38.51	-38.51	-38.51	-8.17	-8.17	-38.51	-38.51	-38.51	-8.17	-8.17	-38.51	-38.51	baseline		
																For CIT after Salt		

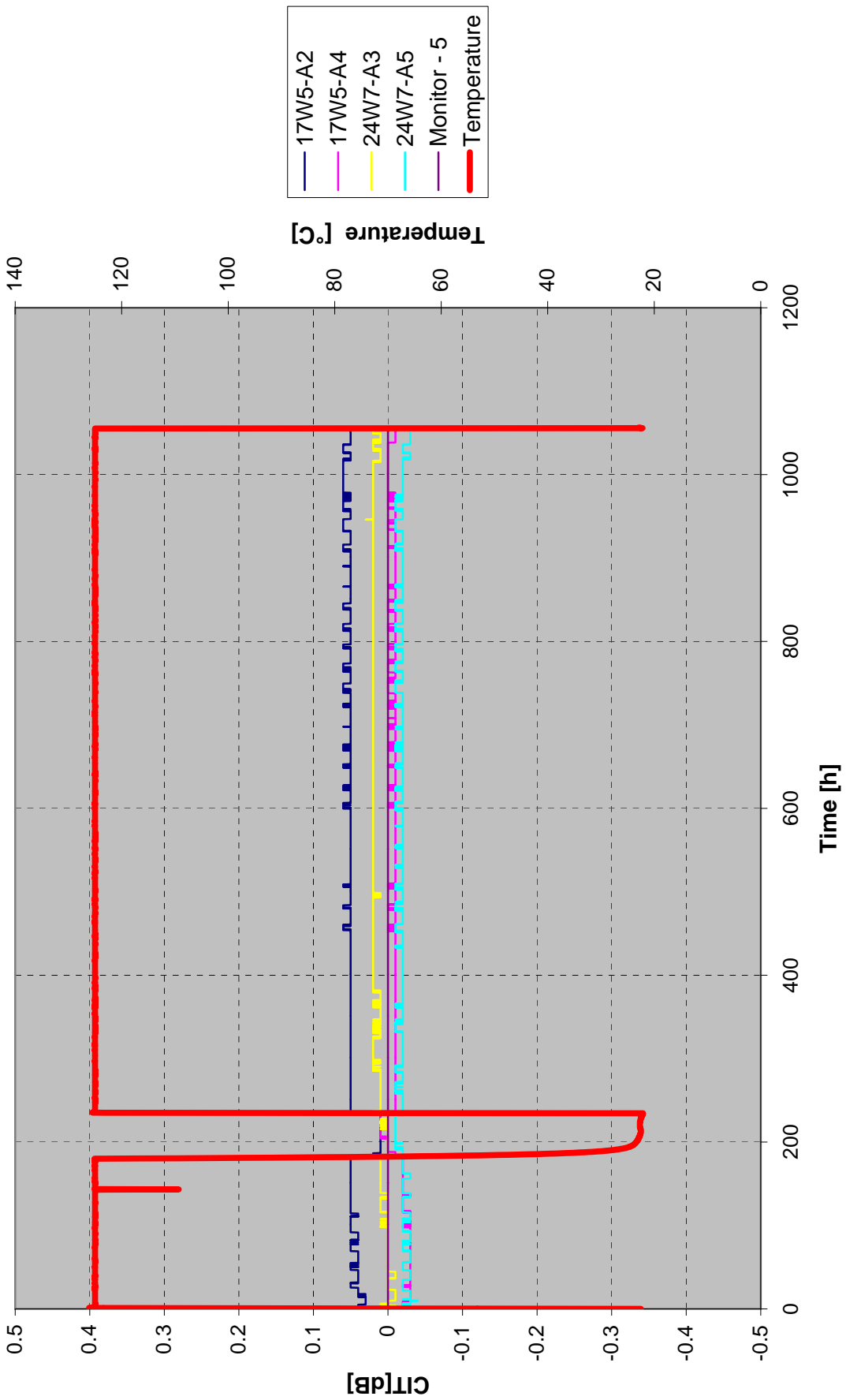


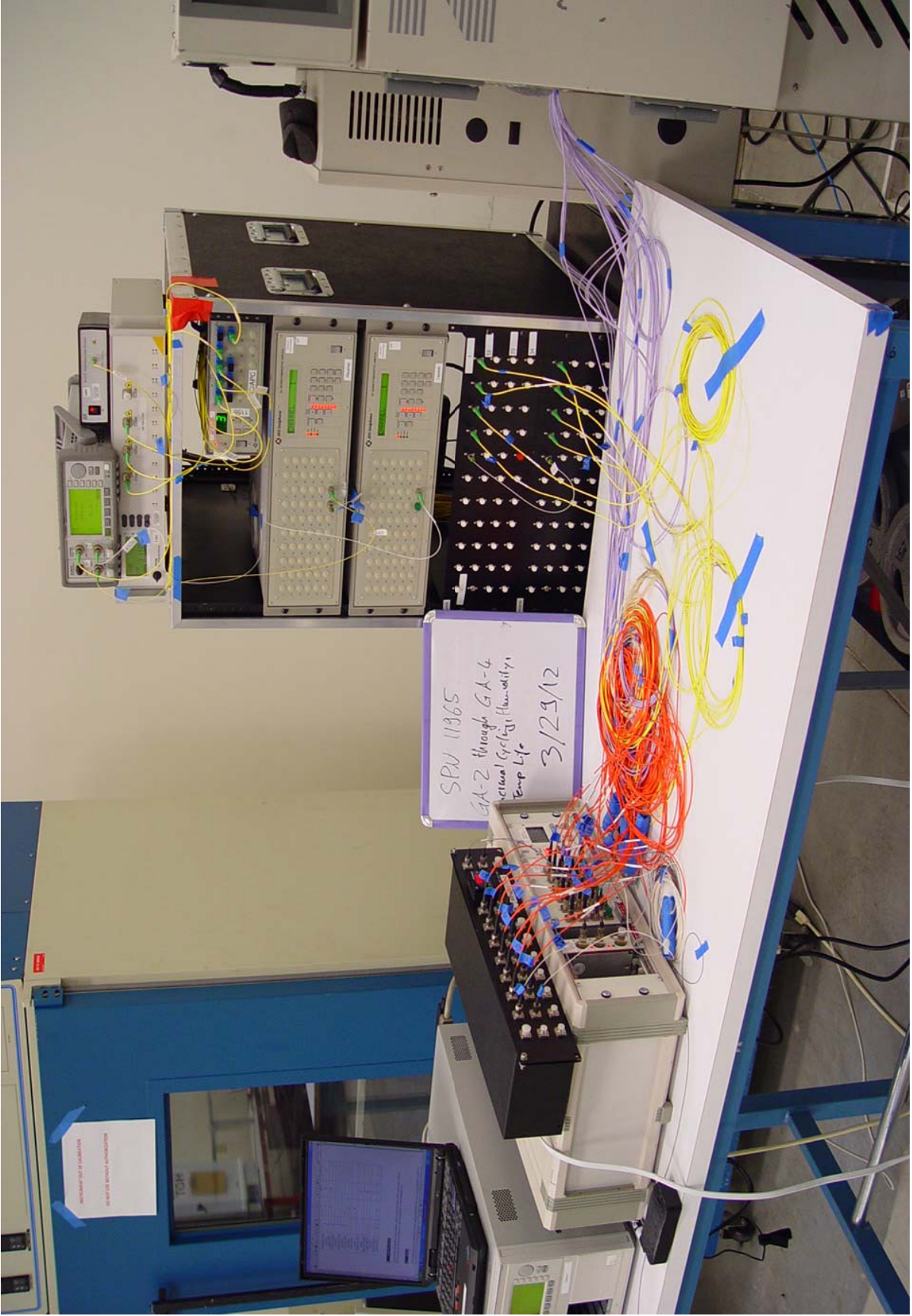
Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
4/13/2012	5/27/2012	NXTCon	177125	11965		GA-4	23 °C	29 %RH	05/30/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection			
Temperature Life		TIA/EIA-455-4C (FOTP-4) with the following procedure and criteria, which is based from paragraph 2.4.4.2 of ARINC Specification 801-2		The temperature exposure shall be 125°C ± 2°C for the duration of 1,000 hours		CIT [dB], Temperature [C]			
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1264	Rifocs	753R-1300	129236	Triple 1300nm LED Source		11/7/2011 6:08:50 PM	11/7/2012		
1198	Rifocs	715RF-24	124741	Multimode 62.5 Optical Switch		Ref Only	Ref Only		
1020	Agilent	81637B	DE41300321	Fast Optical Power Meter		9/29/2011 2:47:02 PM	9/29/2013		
1072	JDS	SC Series	EG001153	2x44 Optical Switch		Reference Only	Reference Only		
1071	JDS	SC Series	EG001152	2x44 Optical Switch		Reference Only	Reference Only		
1155	JDS Uniphase	SB Series	ED155457	1x8 Optical Switch		Reference Only	Reference Only		
1191	Optotest	OP750	10397	1310/1490/1550/1625nm Laser		2/3/2012 4:56:12 PM	2/3/2014		
1016	Agilent	81637B	DE41300332	Fast Optical Power Meter		9/29/2011 2:45:32 PM	9/29/2013		
1187	Agilent	81610A	DE40500226	Return Loss Module		12/8/2011 11:47:26 AM	12/8/2012		
1460	Cincinnati Subzero	ZH-2	Z9913064	2 cu ft Environmental Chamber		4/12/2012	4/12/2013		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
Combo-D connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPWI-1044 Chamber controller programming			none		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	NM		NM	NM	NDY	NM	NM	john kim	
		Date/Time	4/13/12 2pm	4/13/12 2pm	NDY	4/13/12 2pm	5/30/12 9am		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
CIT [dB] MM		0.5		0.34/-0.04		4/4			
CIT [dB] SM		0.5		0.11/-0.04		2/2			
Date	Time	Event Log							Initials
04/13/12	2:00 PM	Started Temperature Life test							
04/16/12	4:45 PM	Collected interim data and checked compliance as well as system performance							
04/17/12	4:45 PM	Collected interim data and checked compliance as well as system performance							
04/18/12	8:00 AM	Collected interim data and checked compliance as well as system performance							
04/19/12	11:30 AM	Collected interim data and checked compliance as well as system performance							
04/20/12	8:34 AM	Collected interim data and checked compliance as well as system performance							
04/23/12	8:28 AM	Collected interim data and checked compliance as well as system performance (power outage on Saturday, chamber idled at 23), restarted chamber							
04/24/12	9:00 AM	Collected interim data and checked compliance as well as system performance							NM
04/25/12	3:22 PM	Collected interim data and checked compliance as well as system performance							
04/26/12	10:30 AM	Collected interim data and checked compliance as well as system performance							
04/27/12	9:00 AM	Collected interim data and checked compliance as well as system performance							
04/30/12	9:00 AM	Collected interim data and checked compliance as well as system performance							
05/01/12	8:44 AM	Collected interim data and checked compliance as well as system performance							
05/02/12	8:54 AM	Collected interim data and checked compliance as well as system performance							
05/03/12	3:00 PM	Collected interim raw data							AG
05/14/12	8:45am	Collected interim data and checked compliance as well as system performance							
05/15/12	7:45am	Collected interim data and checked compliance as well as system performance							
05/17/12	10:30am	Collected interim data and checked compliance as well as system performance							
05/18/12	9:20am	Collected interim data and checked compliance as well as system performance							
05/21/12	8:10am	Collected interim data and checked compliance as well as system performance							
05/22/12	8:10am	Collected interim data and checked compliance as well as system performance							
05/23/12	8:20am	Collected interim data and checked compliance as well as system performance							NM
05/24/12	8:20am	Collected interim data and checked compliance as well as system performance, SM system crashed							
	11:00am	Baselined and restarted sm system							
05/29/12	9am	Test finished, collected data							

SPN 11965 GA-4 Temperature Life MM CIT



SPN 11965 GA-4 Temperature Life SM CIT





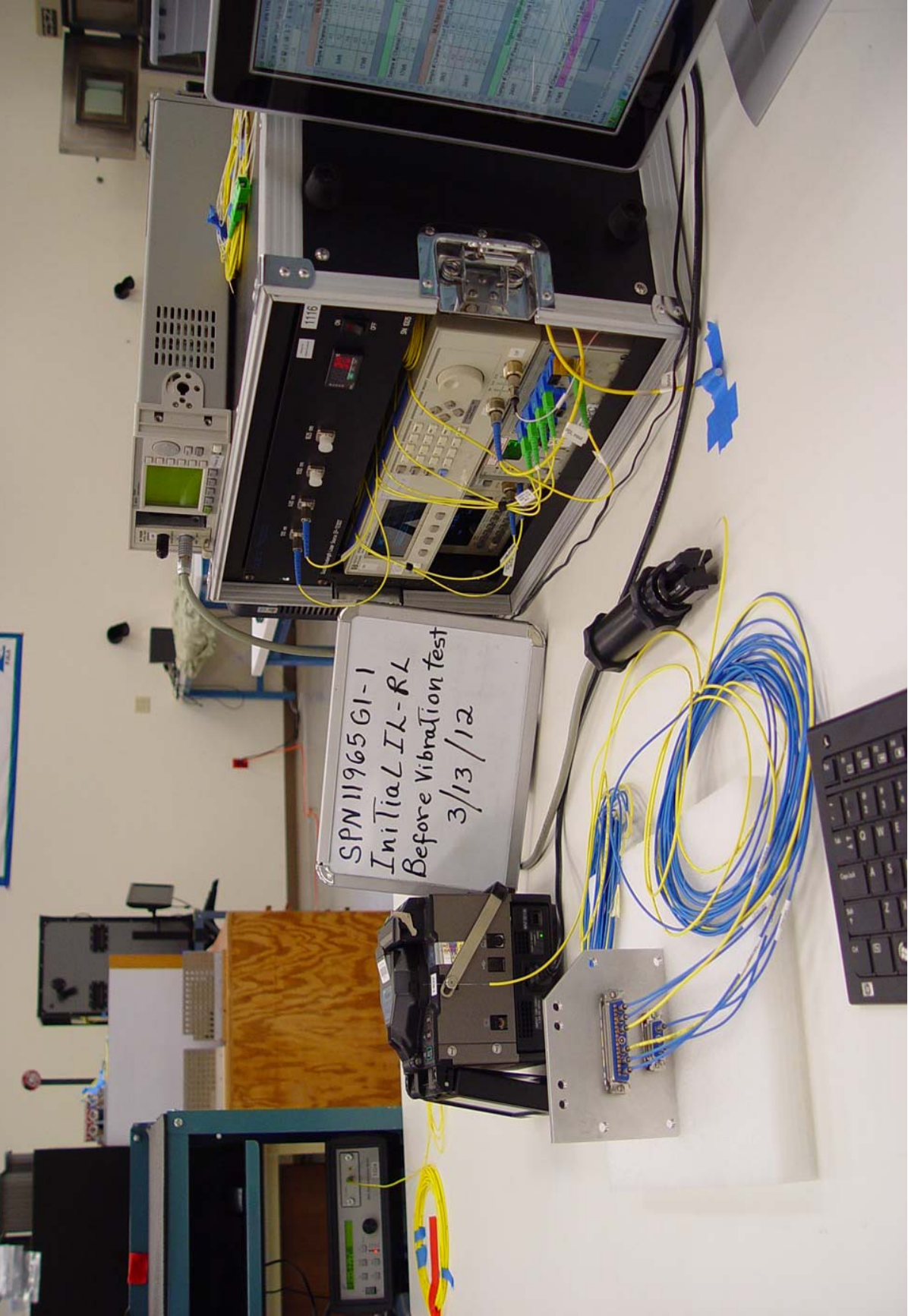
MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	RL [dB]
3W3	A1 mm	>45
	A3 mm	>45
5W5	A1 mm	>45
	A2 mm	>45
	A4 mm	>45
	A5 mm	>45
17W5	A1 mm	>45
	A2 sm	55.9
	A4 sm	56.7
	A5 mm	>45
24W7	A1 mm	>45
	A2 mm	>45
	A3 sm	56.6
	A5 sm	56.1
	A6 mm	>45
	A7 mm	>45

Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
3/12/2012	3/14/2012	NXTCore	177125	11965		GA-1	23 °C	29 %RH	03/23/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection			
IL-RL		TIA-455-171A (FOTP-171), Method D1 (multimode) and D3 (single-mode) 2.4.3.2 of ARINC Specification 801-2 and in accordance with TIA/EIA-455-107A (FOTP-107).		Fiber optic connector assemblies shall have a maximum attenuation of 0.3 dB for multimode connections. For all single-mode connections, measure and record only. No failure criterion exists for single-mode connections Return loss should be a minimum of 20 dB for multimode PC polish termini and 30 dB for single-mode PC polish termini		IL [dB], RL [dB]			
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1402	Fujikura	FSM-50S	12161	Fiber Fusion Splicer		Reference Only	Reference Only		
1405	Fujikura	CT-30	63162	Fiber Cleaver		Reference Only	Reference Only		
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012		
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only		
1451	Rifocs	781RL-13-110	122785	1300nm MM Return Loss Meter		9/6/2011 5:38:40 PM	9/6/2012		
1400	Fujikura	FSM-17S	687	Fiber Fusion Splicer		Reference Only	Reference Only		
1407	Fujikura	CT-30	21094	Fiber Cleaver		Reference Only	Reference Only		
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013		
1102	Hewlett Packard	81533B	3411G05696	Optical Head Interface		Reference Only	Reference Only		
1258	Hewlett Packard	HP 81524A	3248G01541	Optical Power Head		3/8/2012 3:22:08 PM	3/8/2014		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
Combo-D connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPTP-1005 Return Loss			Scott Youngkin		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	JZ/HR	HR	HR/JZ	NDY	NM	NM		john kim	
		Date/Time	3/12/12 12:30PM	3/13/12/ 7:30AM	NDY	3/12/12 12:30PM	3/19/12 3pm		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
Insertion Loss [dB]		0.3 (for MM only)		0.07		4/4			
Return Loss [dB]		20 for MM and 30 for SM		45		4/4			
Date	Time	Event Log						Initials	
03/12/12	2:30PM	Started IL-RL measurements						HR	
03/13/12	11:30AM	Retested the 2 single mode the A2 RL is too low, save the second Results							
	1:30PM	Finished IL-RL for all the Samples for Vibration Test							
03/14/12	8:00AM	Started IL-RL re-testing, samples have been unmated by customer and termini for all singlemode channels have been replaced							
	11:15 AM	Finish testing IL-RL retesting							

MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	Power [dBm]	Cutback [dbm]	IL [dB]	RL [dB]
3W3	A1 mm	-11.42	-11.40	0.02	>45
	A3 mm	-11.40	-11.39	0.01	>45
5W5	A1 mm	-11.41	-11.39	0.02	>45
	A2 mm	-11.41	-11.39	0.02	>45
	A4 mm	-11.40	-11.39	0.01	>45
	A5 mm	-11.44	-11.41	0.03	>45
17W5	A1 mm	-11.58	-11.54	0.04	>45
	A2 sm	-5.68	-5.66	0.02	54.4
	A4 sm	-5.60	-5.57	0.03	56.5
	A5 mm	-11.47	-11.44	0.03	>45
24W7	A1 mm	-11.40	-11.36	0.04	>45
	A2 mm	-11.38	-11.33	0.05	>45
	A3 sm	-5.31	-5.24	0.07	56.6
	A5 sm	-5.25	-5.21	0.04	55.1
	A6 mm	-11.25	-11.22	0.03	>45
	A7 mm	-11.20	-11.18	0.02	>45
Retest					
5W5	A1 mm	-11.31	-11.29	0.02	>45
	A2 mm	-11.64	-11.56	0.08	>45
	A4 mm	-11.57	-11.56	0.01	>45
	A5 mm	-11.54	-11.48	0.06	>45
17W5	A1 mm	-11.47	-11.44	0.03	>45
	A2 sm	-4.49	-4.47	0.02	59.8
	A4 sm	-5.51	-5.49	0.02	59.3
	A5 mm	-11.51	-11.47	0.04	>45



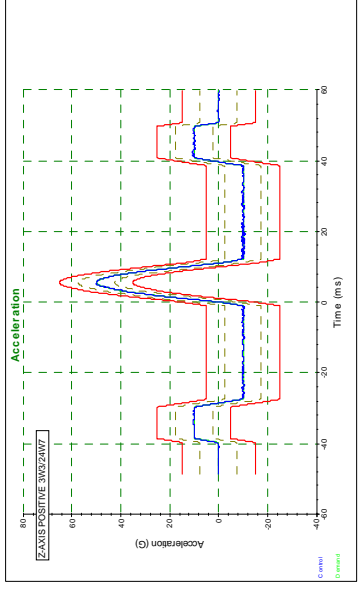
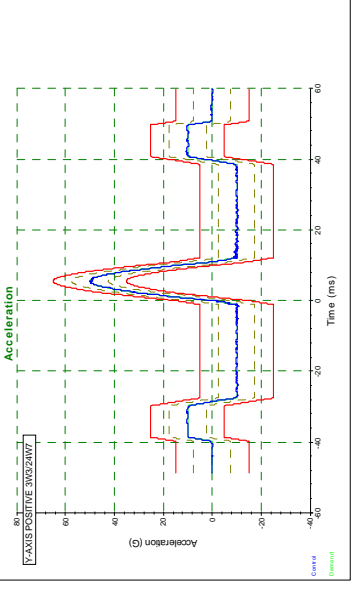
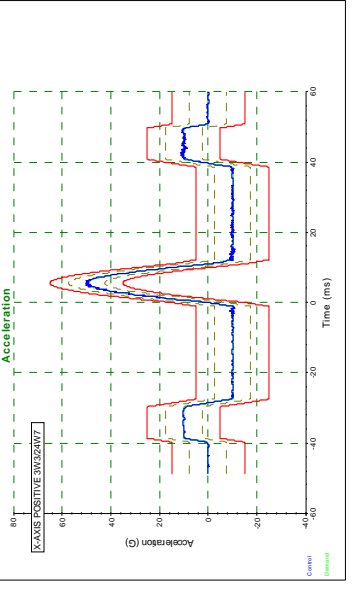
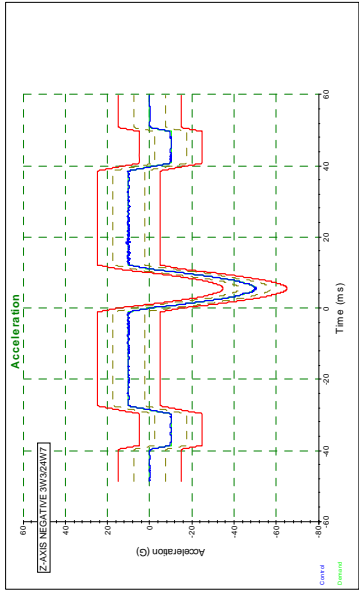
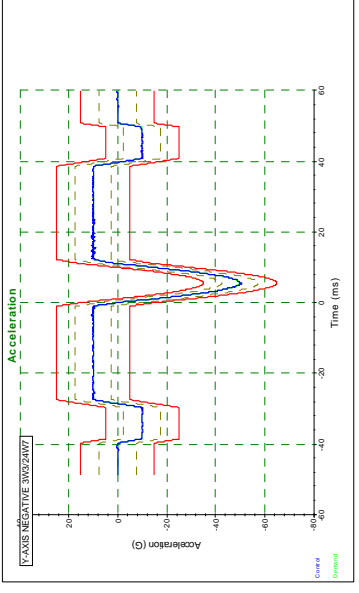
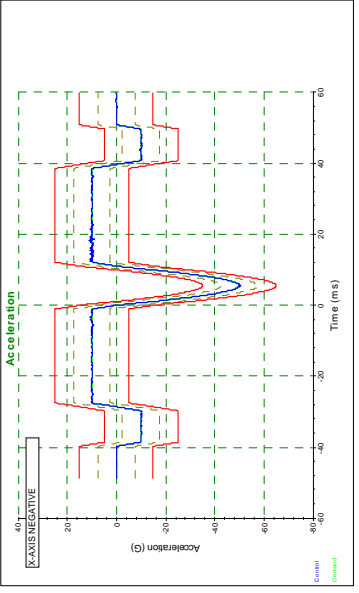
SPN11965 G1-1
Initial IL-RL
Before Vibration test
3/13/12

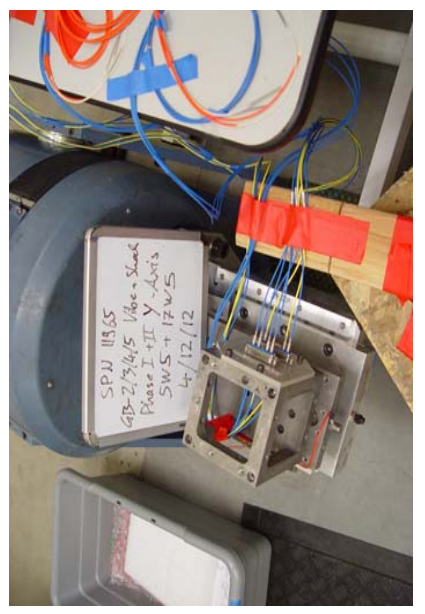
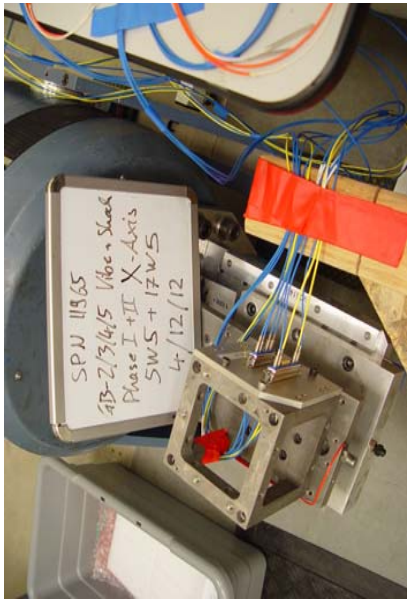
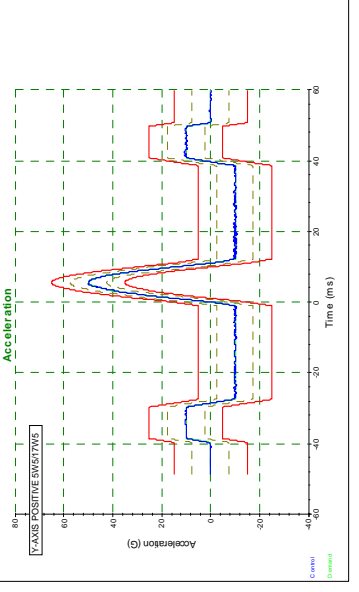
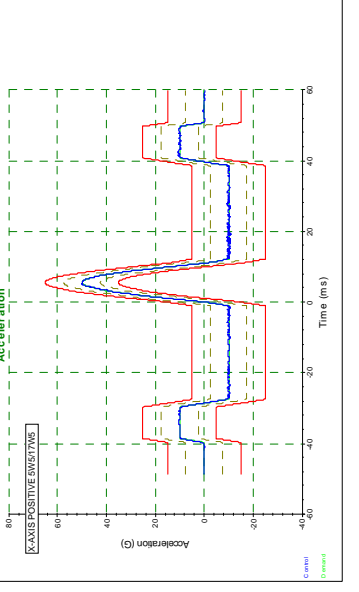
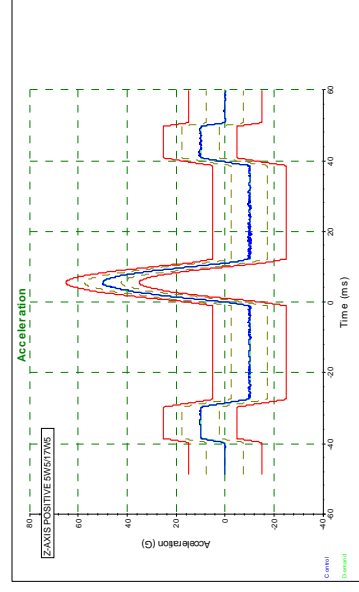
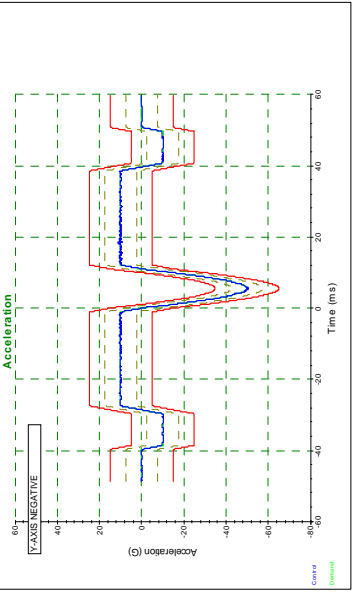
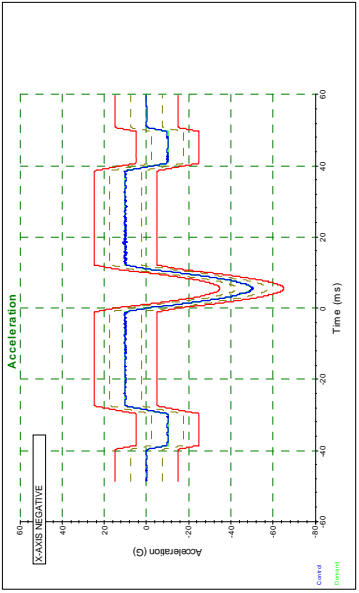
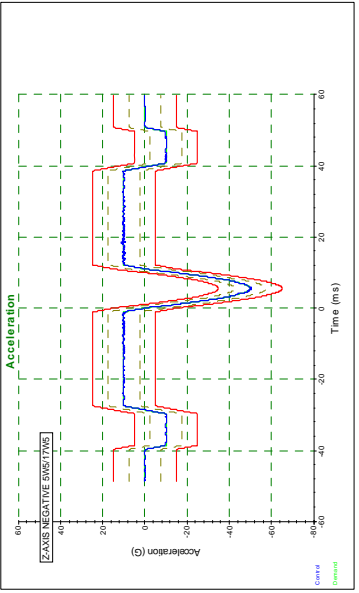
Time	Power	Temp	Vib	Acc	Stress	Strain
0:00	0.00	25.00	0.00	0.00	0.00	0.00
0:05	0.00	25.00	0.00	0.00	0.00	0.00
0:10	0.00	25.00	0.00	0.00	0.00	0.00
0:15	0.00	25.00	0.00	0.00	0.00	0.00
0:20	0.00	25.00	0.00	0.00	0.00	0.00
0:25	0.00	25.00	0.00	0.00	0.00	0.00
0:30	0.00	25.00	0.00	0.00	0.00	0.00
0:35	0.00	25.00	0.00	0.00	0.00	0.00
0:40	0.00	25.00	0.00	0.00	0.00	0.00
0:45	0.00	25.00	0.00	0.00	0.00	0.00
0:50	0.00	25.00	0.00	0.00	0.00	0.00
0:55	0.00	25.00	0.00	0.00	0.00	0.00
1:00	0.00	25.00	0.00	0.00	0.00	0.00
1:05	0.00	25.00	0.00	0.00	0.00	0.00
1:10	0.00	25.00	0.00	0.00	0.00	0.00
1:15	0.00	25.00	0.00	0.00	0.00	0.00
1:20	0.00	25.00	0.00	0.00	0.00	0.00
1:25	0.00	25.00	0.00	0.00	0.00	0.00
1:30	0.00	25.00	0.00	0.00	0.00	0.00
1:35	0.00	25.00	0.00	0.00	0.00	0.00
1:40	0.00	25.00	0.00	0.00	0.00	0.00
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1:55	0.00	25.00	0.00	0.00	0.00	0.00
2:00	0.00	25.00	0.00	0.00	0.00	0.00
2:05	0.00	25.00	0.00	0.00	0.00	0.00
2:10	0.00	25.00	0.00	0.00	0.00	0.00
2:15	0.00	25.00	0.00	0.00	0.00	0.00
2:20	0.00	25.00	0.00	0.00	0.00	0.00
2:25	0.00	25.00	0.00	0.00	0.00	0.00
2:30	0.00	25.00	0.00	0.00	0.00	0.00
2:35	0.00	25.00	0.00	0.00	0.00	0.00
2:40	0.00	25.00	0.00	0.00	0.00	0.00
2:45	0.00	25.00	0.00	0.00	0.00	0.00
2:50	0.00	25.00	0.00	0.00	0.00	0.00
2:55	0.00	25.00	0.00	0.00	0.00	0.00
3:00	0.00	25.00	0.00	0.00	0.00	0.00
3:05	0.00	25.00	0.00	0.00	0.00	0.00
3:10	0.00	25.00	0.00	0.00	0.00	0.00
3:15	0.00	25.00	0.00	0.00	0.00	0.00
3:20	0.00	25.00	0.00	0.00	0.00	0.00
3:25	0.00	25.00	0.00	0.00	0.00	0.00
3:30	0.00	25.00	0.00	0.00	0.00	0.00
3:35	0.00	25.00	0.00	0.00	0.00	0.00
3:40	0.00	25.00	0.00	0.00	0.00	0.00
3:45	0.00	25.00	0.00	0.00	0.00	0.00
3:50	0.00	25.00	0.00	0.00	0.00	0.00
3:55	0.00	25.00	0.00	0.00	0.00	0.00
4:00	0.00	25.00	0.00	0.00	0.00	0.00
4:05	0.00	25.00	0.00	0.00	0.00	0.00
4:10	0.00	25.00	0.00	0.00	0.00	0.00
4:15	0.00	25.00	0.00	0.00	0.00	0.00
4:20	0.00	25.00	0.00	0.00	0.00	0.00
4:25	0.00	25.00	0.00	0.00	0.00	0.00
4:30	0.00	25.00	0.00	0.00	0.00	0.00
4:35	0.00	25.00	0.00	0.00	0.00	0.00
4:40	0.00	25.00	0.00	0.00	0.00	0.00
4:45	0.00	25.00	0.00	0.00	0.00	0.00
4:50	0.00	25.00	0.00	0.00	0.00	0.00
4:55	0.00	25.00	0.00	0.00	0.00	0.00
5:00	0.00	25.00	0.00	0.00	0.00	0.00
5:05	0.00	25.00	0.00	0.00	0.00	0.00
5:10	0.00	25.00	0.00	0.00	0.00	0.00
5:15	0.00	25.00	0.00	0.00	0.00	0.00
5:20	0.00	25.00	0.00	0.00	0.00	0.00
5:25	0.00	25.00	0.00	0.00	0.00	0.00
5:30	0.00	25.00	0.00	0.00	0.00	0.00
5:35	0.00	25.00	0.00	0.00	0.00	0.00
5:40	0.00	25.00	0.00	0.00	0.00	0.00
5:45	0.00	25.00	0.00	0.00	0.00	0.00
5:50	0.00	25.00	0.00	0.00	0.00	0.00
5:55	0.00	25.00	0.00	0.00	0.00	0.00
6:00	0.00	25.00	0.00	0.00	0.00	0.00
6:05	0.00	25.00	0.00	0.00	0.00	0.00
6:10	0.00	25.00	0.00	0.00	0.00	0.00
6:15	0.00	25.00	0.00	0.00	0.00	0.00
6:20	0.00	25.00	0.00	0.00	0.00	0.00
6:25	0.00	25.00	0.00	0.00	0.00	0.00
6:30	0.00	25.00	0.00	0.00	0.00	0.00
6:35	0.00	25.00	0.00	0.00	0.00	0.00
6:40	0.00	25.00	0.00	0.00	0.00	0.00
6:45	0.00	25.00	0.00	0.00	0.00	0.00
6:50	0.00	25.00	0.00	0.00	0.00	0.00
6:55	0.00	25.00	0.00	0.00	0.00	0.00
7:00	0.00	25.00	0.00	0.00	0.00	0.00
7:05	0.00	25.00	0.00	0.00	0.00	0.00
7:10	0.00	25.00	0.00	0.00	0.00	0.00
7:15	0.00	25.00	0.00	0.00	0.00	0.00
7:20	0.00	25.00	0.00	0.00	0.00	0.00
7:25	0.00	25.00	0.00	0.00	0.00	0.00
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7:40	0.00	25.00	0.00	0.00	0.00	0.00
7:45	0.00	25.00	0.00	0.00	0.00	0.00
7:50	0.00	25.00	0.00	0.00	0.00	0.00
7:55	0.00	25.00	0.00	0.00	0.00	0.00
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8:05	0.00	25.00	0.00	0.00	0.00	0.00
8:10	0.00	25.00	0.00	0.00	0.00	0.00
8:15	0.00	25.00	0.00	0.00	0.00	0.00
8:20	0.00	25.00	0.00	0.00	0.00	0.00
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8:40	0.00	25.00	0.00	0.00	0.00	0.00
8:45	0.00	25.00	0.00	0.00	0.00	0.00
8:50	0.00	25.00	0.00	0.00	0.00	0.00
8:55	0.00	25.00	0.00	0.00	0.00	0.00
9:00	0.00	25.00	0.00	0.00	0.00	0.00
9:05	0.00	25.00	0.00	0.00	0.00	0.00
9:10	0.00	25.00	0.00	0.00	0.00	0.00
9:15	0.00	25.00	0.00	0.00	0.00	0.00
9:20	0.00	25.00	0.00	0.00	0.00	0.00
9:25	0.00	25.00	0.00	0.00	0.00	0.00
9:30	0.00	25.00	0.00	0.00	0.00	0.00
9:35	0.00	25.00	0.00	0.00	0.00	0.00
9:40	0.00	25.00	0.00	0.00	0.00	0.00
9:45	0.00	25.00	0.00	0.00	0.00	0.00
9:50	0.00	25.00	0.00	0.00	0.00	0.00
9:55	0.00	25.00	0.00	0.00	0.00	0.00
10:00	0.00	25.00	0.00	0.00	0.00	0.00
10:05	0.00	25.00	0.00	0.00	0.00	0.00
10:10	0.00	25.00	0.00	0.00	0.00	0.00
10:15	0.00	25.00	0.00	0.00	0.00	0.00
10:20	0.00	25.00	0.00	0.00	0.00	0.00
10:25	0.00	25.00	0.00	0.00	0.00	0.00
10:30	0.00	25.00	0.00	0.00	0.00	0.00
10:35	0.00	25.00	0.00	0.00	0.00	0.00
10:40	0.00	25.00	0.00	0.00	0.00	0.00
10:45	0.00	25.00	0.00	0.00	0.00	0.00
10:50	0.00	25.00	0.00	0.00	0.00	0.00
10:55	0.00	25.00	0.00	0.00	0.00	0.00
11:00	0.00	25.00	0.00	0.00	0.00	0.00
11:05	0.00	25.00	0.00	0.00	0.00	0.00
11:10	0.00	25.00	0.00	0.00	0.00	0.00
11:15	0.00	25.00	0.00	0.00	0.00	0.00
11:20	0.00	25.00	0.00	0.00	0.00	0.00
11:25	0.00	25.00	0.00	0.00	0.00	0.00
11:30	0.00	25.00	0.00	0.00	0.00	0.00
11:35	0.00	25.00	0.00	0.00	0.00	0.00
11:40	0.00	25.00	0.00	0.00	0.00	0.00
11:45	0.00	25.00	0.00	0.00	0.00	0.00
11:50	0.00	25.00	0.00	0.00	0.00	0.00
11:55	0.00	25.00	0.00	0.00	0.00	0.00
12:00	0.00	25.00	0.00	0.00	0.00	0.00

Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
3/19/2012	4/13/2012	NXTCore	177125	11965		GB-3	23 °C	38 %RH	04/16/12
Test Title		Test Specification / Standard		Specific Test Conditions			Measurements / Inspection		
Mechanical Shock Phase 1		4.5.17 of MIL-DTL-24308G EIA-364-27C, test condition E		Phase 1: 50g, 18 shocks, 11ms-> no discontinuities of >0.5dB for 50us during and CIT not to exceed 0.5dB after			Acceleration [g], Frequency [Hz], Discontinuity [us], CIT [dB]		
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1119	Unholtz Dickie	SA30-SO92	3117 - 271	Electrodynamic Vibration System		Reference Only	Reference Only		
1035	Dytran	3055A1	1145	10mV/G Triaxial Accelerometer		10/26/2011 9:31:58 AM	10/26/2012		
1111	Vibration Research	VRC8555B	0dffcf	2 Channel Vibration Controller		12/9/2011	12/9/2012		
1217	Rifocs	555B	122347	Optical Power Meter		10/24/2011 2:28:02 PM	10/24/2012		
1219	Exporior Photonics	EP-TE2000	SN 2008	QPL 8-channel 1300nm LED		2/3/12	2/3/14		
1085	Exporior Photonics	EP-TE1004	1002	Discontinuity Monitor 8 channel		9/11/2011 3:33:44 PM	9/11/2012		
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012		
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013		
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only		
1266	Rifocs	715RF-24-106	122114	1x24 Multimode Optical Switch		Reference Only	Reference Only		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1028	Agilent	81610A	DE40500414	Return Loss Module		12/16/2011 11:40:19 AM	12/16/2012		
Test Sample Description		Part Number		Exporior Test Procedure # (if applicable)				Customer Witness	
ARINC801 Compatible Connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPWI-1043 ETS Vibration System Operating Procedure EPWI-1100 Vibration Controller Programming EPTP-1002 Transmittance EPTP-1004 Optical Signal Discontinuity				none	
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	NM		NM	NM	NM	NM	NM	john kim	
		Date/Time	3/19/12 11:45am	3/19/12 11:45am	4/13/12 4pm	3/19/12 11:45am	4/13/12 4pm		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
CIT [dB] after		+/- 0.5dB		0.01/-0.06		4/4			
Discontinuity		no discontinuity of +/- 0.5dB for more than 50us		no discontinuities		4/4			
Date	Time	Event Log							Initials
03/19/12	11:45 AM	Started Shock setup							NM
	1:45 PM	Started X-Axis shock, 3 positive, 3 negative							
	2:00 PM	Rotated fixture, started Y-Axis shock, 3 positive, 3 negative							
	2:15 PM	Rotated fixture, started Z-Axis shock, 3 positive, 3 negative							
	2:20 PM	Took final CIT measurements							
03/23/12		Changed datasheet name from G1-3 to G1-4							
04/13/12	1:00 PM	Started X-Axis shock, 3 positive, 3 negative							NM
	1:03 PM	Rotated fixture, started Y-Axis shock, 3 positive, 3 negative							
	1:06 PM	Rotated fixture, started Z-Axis shock, 3 positive, 3 negative							
	1:09 PM	Took final CIT measurements							

Phase 1: Mechanical Shock screening for 50us/0.5dB discontinuity

Connector ID	Channel	X-Axis		Y-Axis	Z-Axis		
		Initial P [dBm]	Discontinuity	Discontinuity	Final P [dBm]	CIT [dB]	Discontinuity
3W3	A1 mm	-17.81	PASS	PASS	-17.82	-0.01	PASS
	A3 mm	-17.73	PASS	PASS	-17.75	-0.02	PASS
5W5	A1 mm	-18.11	PASS	PASS	-18.14	-0.03	PASS
	A2 mm	-17.72	PASS	PASS	-17.72	0.00	PASS
	A4 mm	-17.48	PASS	PASS	-17.54	-0.06	PASS
	A5 mm	-17.94	PASS	PASS	-17.93	0.01	PASS
17W5	A1 mm	-17.84	PASS	PASS	-17.84	0.00	PASS
	A2 sm	-14.67	PASS	PASS	-14.69	-0.02	PASS
	A4 sm	-14.62	PASS	PASS	-14.63	-0.01	PASS
	A5 mm	-17.79	PASS	PASS	-17.79	0.00	PASS
24W7	A1 mm	-17.47	PASS	PASS	-17.51	-0.04	PASS
	A2 mm	-17.62	PASS	PASS	-17.63	-0.01	PASS
	A3 sm	-12.14	PASS	PASS	-12.13	0.01	PASS
	A5 sm	-12.22	PASS	PASS	-12.22	0.00	PASS
	A6 mm	-17.95	PASS	PASS	-17.95	0.00	PASS
	A7 mm	-18.13	PASS	PASS	-18.13	0.00	PASS

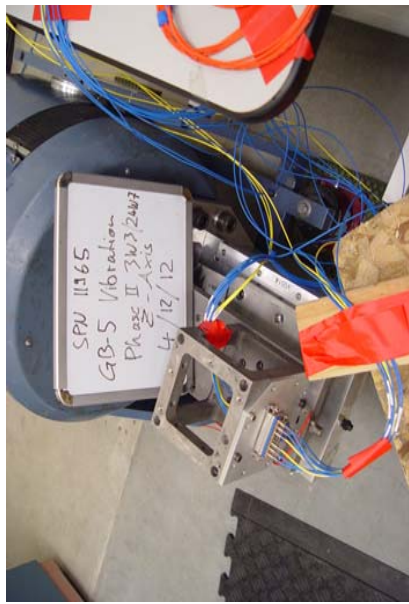
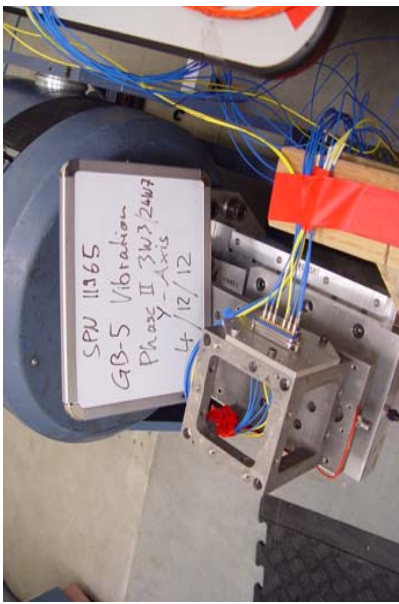
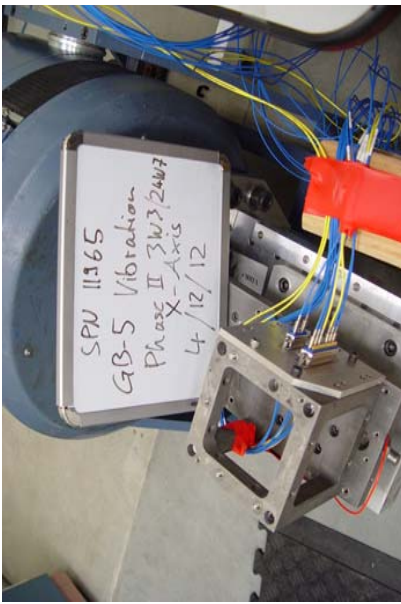
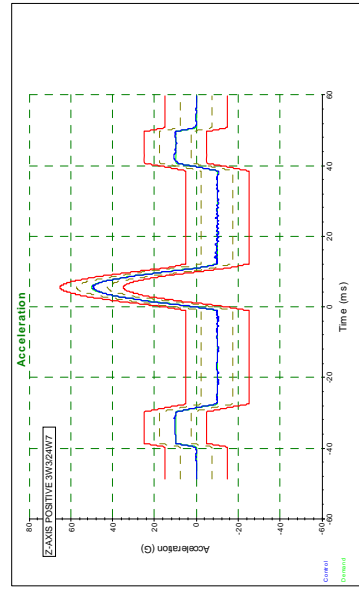
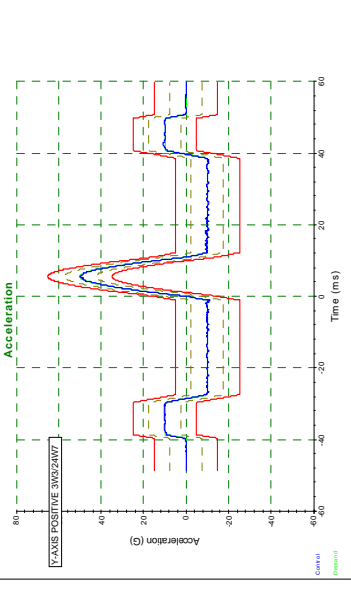
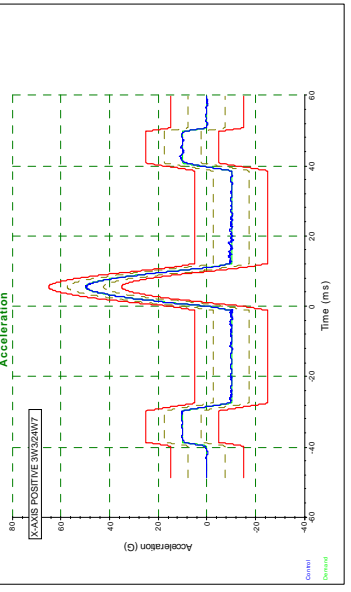
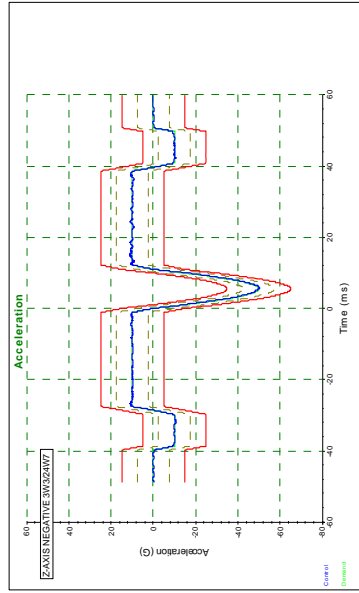
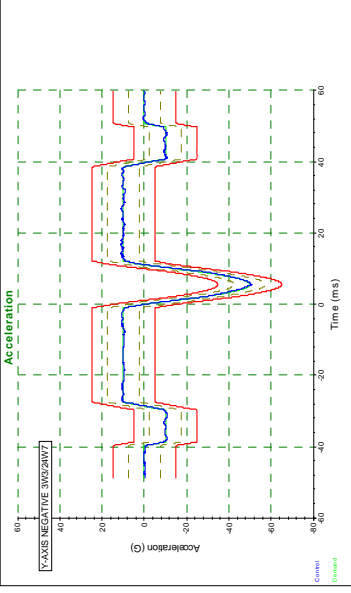
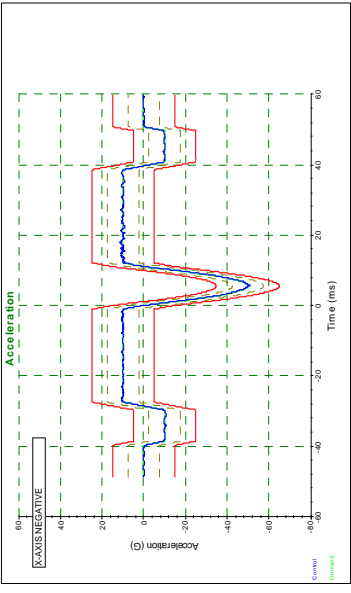


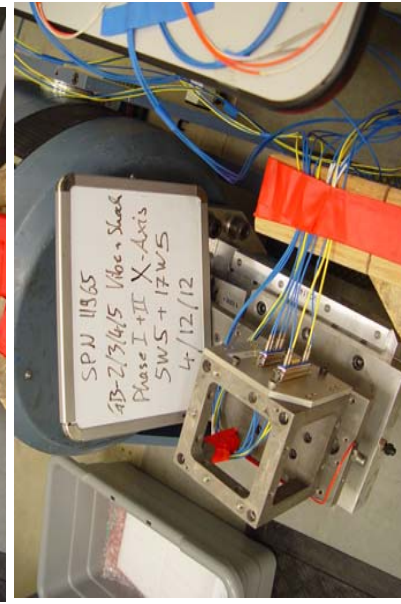
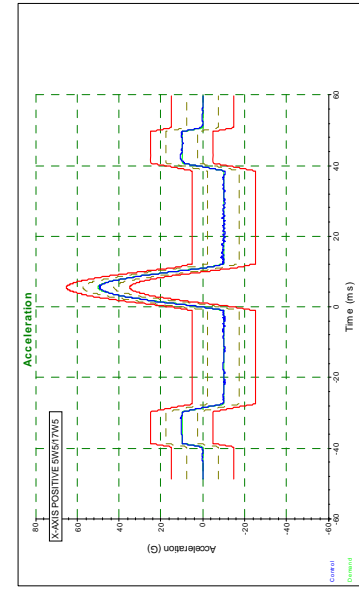
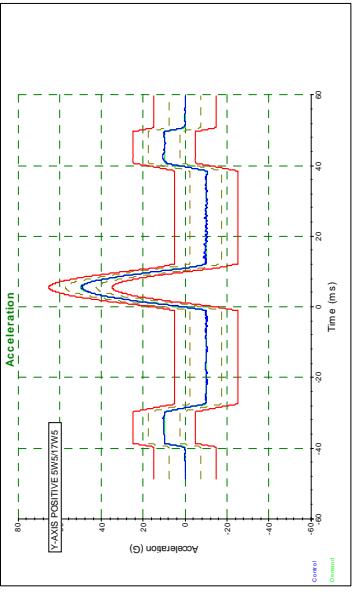
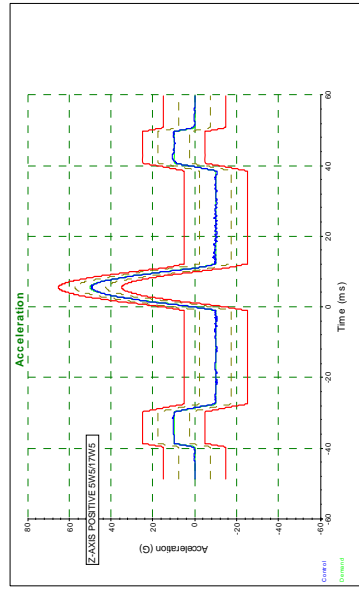
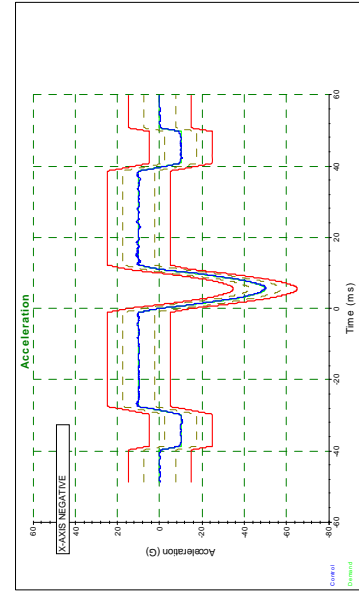
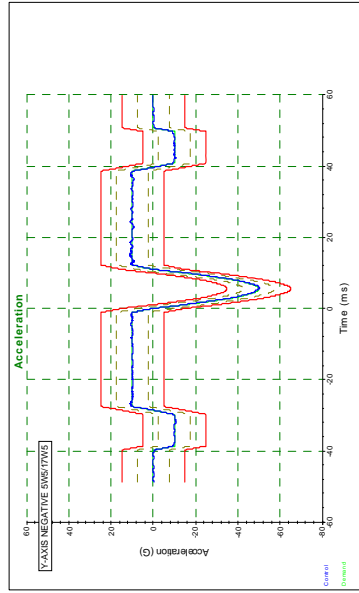
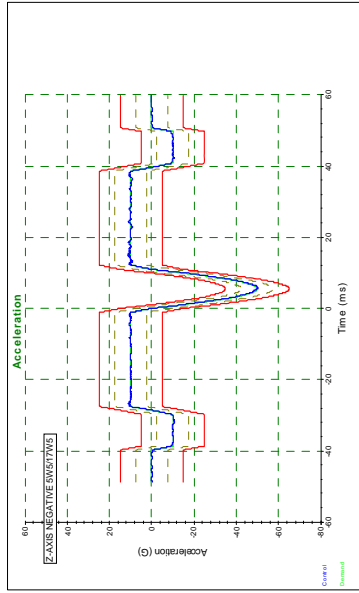


Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
4/12/2012	4/13/2012	NXTCore	177125	11965		GB-5	23 °C	38 %RH	04/16/12
Test Title		Test Specification / Standard		Specific Test Conditions			Measurements / Inspection		
Mechanical Shock Phase 2		4.5.17 of MIL-DTL-24308G EIA-364-27C, test condition E		Phase 2; 50g, 18 shocks, 11ms-> no discontinuities of >1dB for 1us during not to exceed			Acceleration [g], Frequency [Hz], Discontinuity [us], CIT [dB]		
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1119	Unholtz Dickie	SA30-SO92	3117 - 271	Electrodynamic Vibration System		Reference Only	Reference Only		
1035	Dytran	3055A1	1145	10mV/G Triaxial Accelerometer		10/26/2011 9:31:58 AM	10/26/2012		
1111	Vibration Research	VRC8555B	0dffcf	2 Channel Vibration Controller		12/9/2011	12/9/2012		
1217	Rifocs	555B	122347	Optical Power Meter		10/24/2011 2:28:02 PM	10/24/2012		
1219	Experior Photonics	EP-TE2000	SN 2008	QPL 8-channel 1300nm LED		2/3/12	2/3/14		
1085	Experior Photonics	EP-TE1004	1002	Discontinuity Monitor 8 channel		9/11/2011 3:33:44 PM	9/11/2012		
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012		
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013		
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only		
1266	Rifocs	715RF-24-106	122114	1x24 Multimode Optical Switch		Reference Only	Reference Only		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1028	Agilent	81610A	DE40500414	Return Loss Module		12/16/2011 11:40:19 AM	12/16/2012		
Test Sample Description	Part Number			Experior Test Procedure # (if applicable)				Customer Witness	
ARINC801 Connector	CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS			EPWI-1043 ETS Vibration System Operating Procedure EPWI-1100 Vibration Controller Programming EPTP-1002 Transmittance EPTP-1004 Optical Signal Discontinuity				none	
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	NM	Signoff	NM	NM	NM	NM	NM	john kim	
		Date/Time	4/12/12 8:45am	4/12/12 8:45am	4/12/12 11:30am	4/12/12 8:45am	4/13/12 4pm		
Results Summary									
Category	Requirement			Max/Min Measurement Value			Compliance		
CIT [dB] after	not required			-0.04			4/4		
Discontinuity	no discontinuity of +/- 1dB for more than 1us			no discontinuities			4/4		
Date	Time	Event Log							Initials
04/12/12	8:45 AM	Performed x-axis shock positive							NM
	8:46 AM	Performed x-axis shock negative							
	8:52 AM	Flipped axis, Performed y-axis shock positive							
	8:53 AM	Performed y-axis shock negative							
	9:01 AM	Flipped axis, Performed z-axis shock positive							
	9:02 AM	Performed z-axis shock negative							
04/13/12	3:32 PM	Started Z-Axis shock, 1 positive, 1 negative							
	3:34 PM	Rotated fixture, started Y-Axis shock, 1 positive, 1 negative							
	3:36 PM	Rotated fixture, started X-Axis shock, 1 positive, 1 negative							
	3:38 PM	Took final CIT measurements							

Phase 2: Mechanical Shock screening for 1us/>1dB discontinuity

Connector ID	Channel	X-Axis		Y-Axis	Z-Axis		
		Initial P [dBm]	Discontinuity	Discontinuity	Final P [dBm]	CIT [dB]	Discontinuity
3W3	A1 mm	-17.56	PASS	PASS	-17.56	0.00	PASS
	A3 mm	-17.65	PASS	PASS	-17.63	0.02	PASS
5W5	A1 mm	-18.15	PASS	PASS	-18.14	0.01	PASS
	A2 mm	-17.74	PASS	PASS	-17.72	0.02	PASS
	A4 mm	-17.52	PASS	PASS	-17.54	-0.02	PASS
	A5 mm	-17.93	PASS	PASS	-17.93	0.00	PASS
17W5	A1 mm	-17.85	PASS	PASS	-17.84	0.01	PASS
	A2 sm	-14.73	PASS	PASS	-14.69	0.04	PASS
	A4 sm	-14.62	PASS	PASS	-14.63	-0.01	PASS
	A5 mm	-17.75	PASS	PASS	-17.79	-0.04	PASS
24W7	A1 mm	-17.97	PASS	PASS	-17.96	0.01	PASS
	A2 mm	-17.86	PASS	PASS	-17.86	0.00	PASS
	A3 sm	-14.49	PASS	PASS	-14.52	-0.03	PASS
	A5 sm	-14.70	PASS	PASS	-14.71	-0.01	PASS
	A6 mm	-18.18	PASS	PASS	-18.18	0.00	PASS
	A7 mm	-18.33	PASS	PASS	-18.33	0.00	PASS

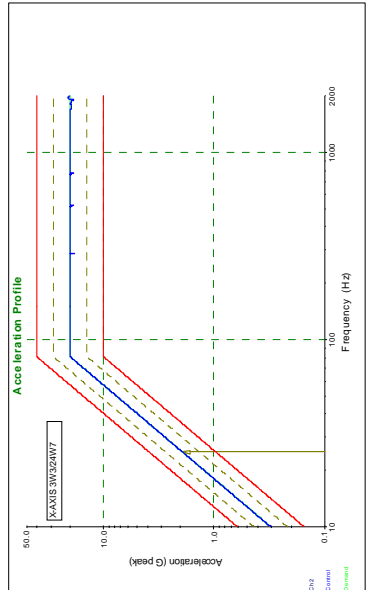
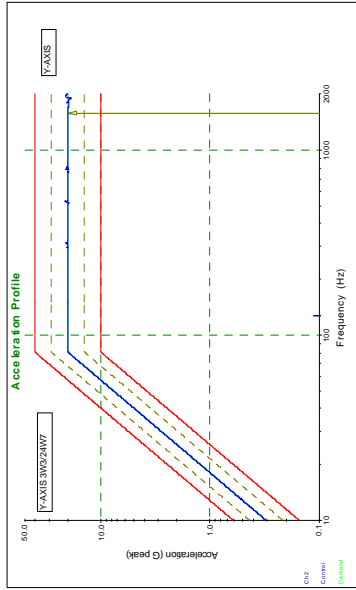
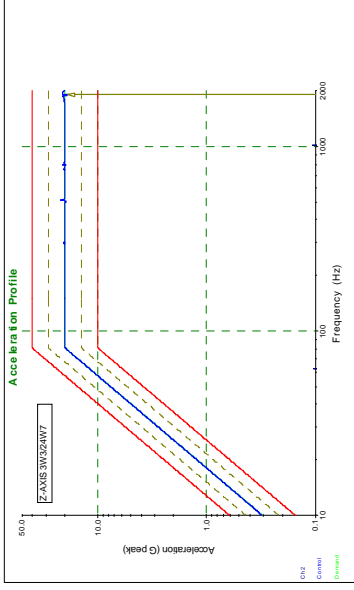


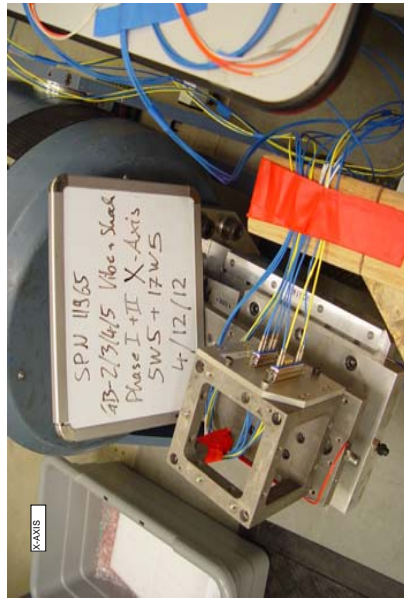
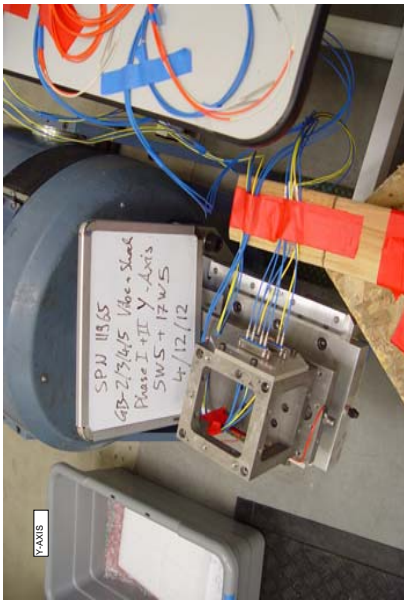
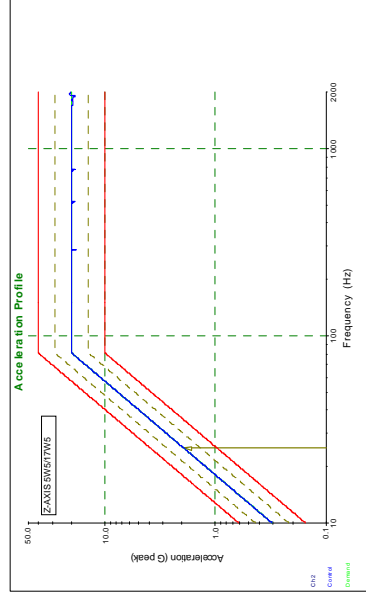
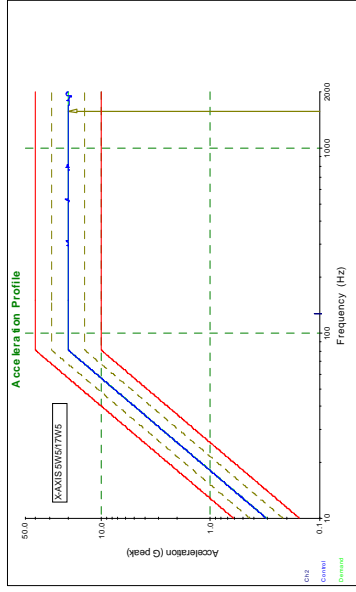
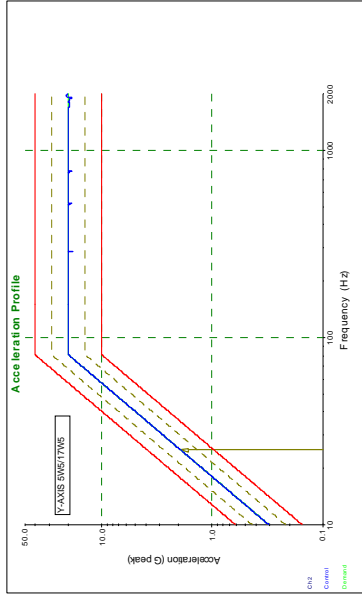


Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
4/10/2012	4/13/2012	NXTCore	177125	11965		GB-3	23 °C	38 %RH	04/16/12
Test Title		Test Specification / Standard		Specific Test Conditions			Measurements / Inspection		
Vibration Phase 2		4.5.16 of MIL-DTL-24308G EIA-364-28F, test condition IV		Phase 2: 10-2000-10Hz sine sweep in 20 minutes, 2 times in each of the 3 axes, total 2 hours -> no discontinuities of >1dB for 1us during not to exceed			Acceleration [g], Frequency [Hz], Discontinuity [us], CIT [dB]		
Anomaly / Interruption					Nonconformity / Deviation				
none					none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1119	Unholtz Dickie	SA30-SO92	3117 - 271	Electrodynamic Vibration System		Reference Only	Reference Only		
1035	Dytran	3055A1	1145	10mV/G Triaxial Accelerometer		10/26/2011 9:31:58 AM	10/26/2012		
1111	Vibration Research	VRC8555B	0dfcf	2 Channel Vibration Controller		12/9/2011	12/9/2012		
1217	Rifocs	555B	122347	Optical Power Meter		10/24/2011 2:28:02 PM	10/24/2012		
1219	Experior Photonics	EP-TE2000	SN 2008	QPL 8-channel 1300nm LED		2/3/12	2/3/14		
1085	Experior Photonics	EP-TE1004	1002	Discontinuity Monitor 8 channel		9/11/2011 3:33:44 PM	9/11/2012		
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012		
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013		
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only		
1266	Rifocs	715RF-24-106	122114	1x24 Multimode Optical Switch		Reference Only	Reference Only		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1028	Agilent	81610A	DE40500414	Return Loss Module		12/16/2011 11:40:19 AM	12/16/2012		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
ARINC801 Connector System		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPWI-1043 ETS Vibration System Operating Procedure EPWI-1100 Vibration Controller Programming EPTP-1002 Transmittance EPTP-1004 Optical Signal Discontinuity			none		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	NM	Signoff	NM	NM	NM	NM	NM	john kim	
		Date/Time	4/11/12 8am	4/11/12 8am	4/13/12 4pm	4/11/12 8am	4/13/12 4pm		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
CIT [dB] after		not required		-0.04		4/4			
Discontinuity		no discontinuity of +/- 1dB for more than 1us		no discontinuities		4/4			
Date	Time	Event Log							Initials
04/10/12	4:00 PM	Mounted test samples to vibration cube							NM
	8:00 AM	Routed cables and took baseline measurements							
	10:35 AM	Armed discontinuity system and started vibration z-axis							
04/11/12	11:15 AM	Finished z-axis							
	11:25 AM	Changed axis to y and started vibration							
	12:05 PM	Finished y-axis							
	1:00 PM	Changed axis to x and started vibration							
	1:40 PM	Finished x-axis							
	1:45 PM	Took final power measurement							
	04/13/12	1:15 PM	Armed discontinuity system and started vibration x-axis						
1:55 PM		Finished x-axis							
2:00 PM		Changed axis to y and started vibration							
2:40 PM		Finished y-axis							
2:45 PM		Changed axis to z and started vibration							
3:25 PM		Finished z-axis							
	3:30 PM	Took final power measurement							

Phase 2: Sine Vibration screening for 1us/>1dB discontinuity

Connector ID	Channel	Z-Axis		Y-Axis	X-Axis		
		Initial P [dBm]	Discontinuity	Discontinuity	Final P [dBm]	CIT [dB]	Discontinuity
3W3	A1 mm	-17.52	PASS	PASS	-17.56	-0.04	PASS
	A3 mm	-17.68	PASS	PASS	-17.65	0.03	PASS
5W5	A1 mm	-18.14	PASS	PASS	-18.15	-0.01	PASS
	A2 mm	-17.72	PASS	PASS	-17.74	-0.02	PASS
	A4 mm	-17.54	PASS	PASS	-17.52	0.02	PASS
	A5 mm	-17.93	PASS	PASS	-17.93	0.00	PASS
17W5	A1 mm	-17.84	PASS	PASS	-17.85	-0.01	PASS
	A2 sm	-14.69	PASS	PASS	-14.73	-0.04	PASS
	A4 sm	-14.63	PASS	PASS	-14.62	0.01	PASS
	A5 mm	-17.79	PASS	PASS	-17.75	0.04	PASS
24W7	A1 mm	-17.98	PASS	PASS	-17.97	0.01	PASS
	A2 mm	-17.87	PASS	PASS	-17.86	0.01	PASS
	A3 sm	-14.48	PASS	PASS	-14.49	-0.01	PASS
	A5 sm	-14.69	PASS	PASS	-14.70	-0.01	PASS
	A6 mm	-18.14	PASS	PASS	-18.18	-0.04	PASS
	A7 mm	-18.34	PASS	PASS	-18.33	0.01	PASS

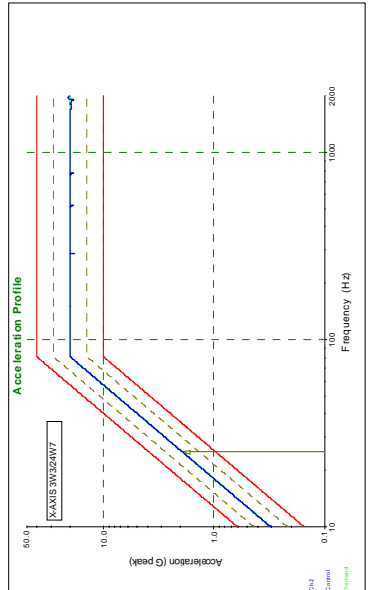
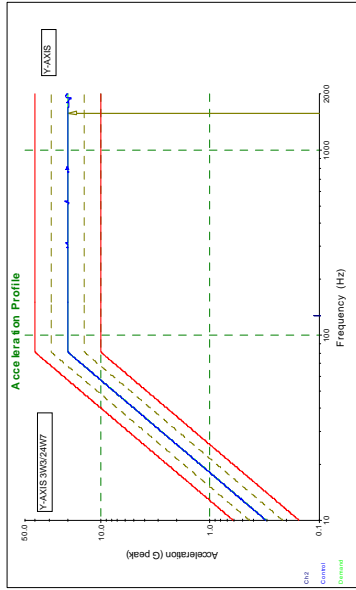
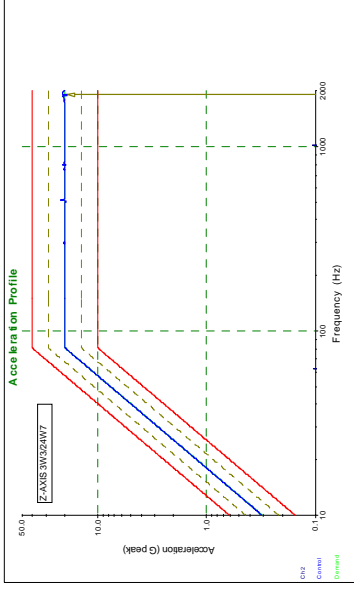
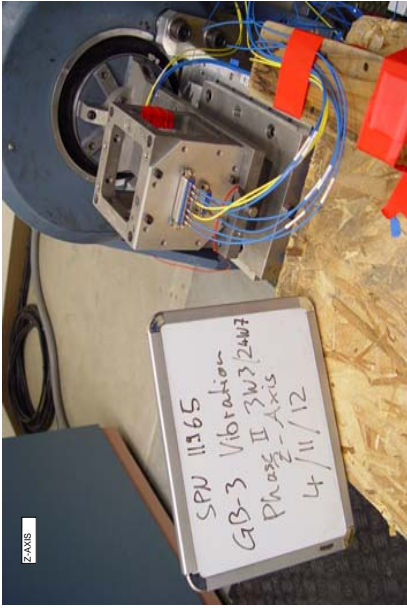


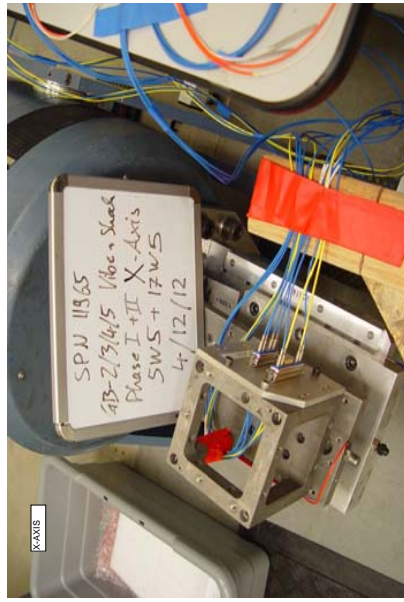
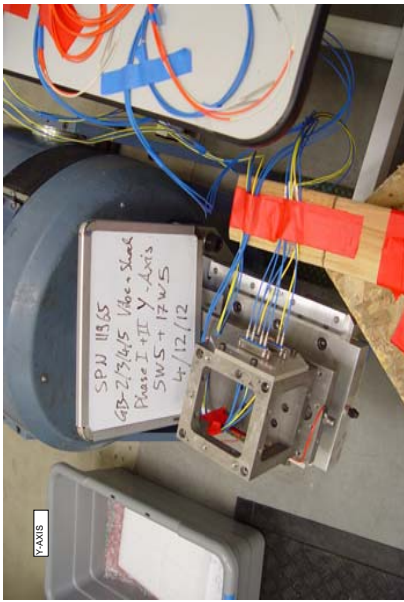
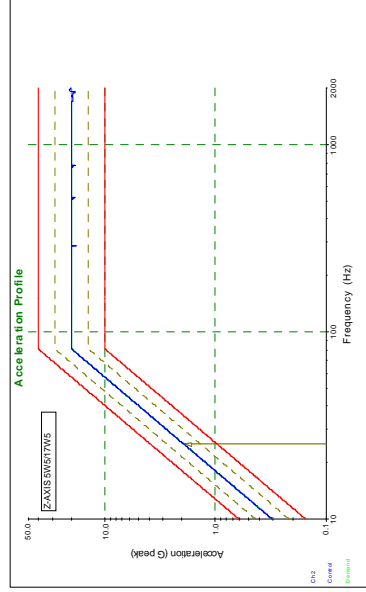
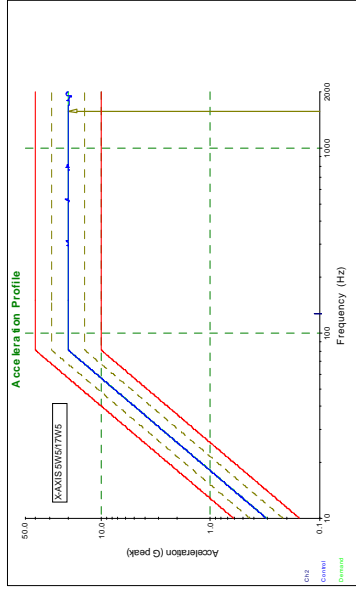
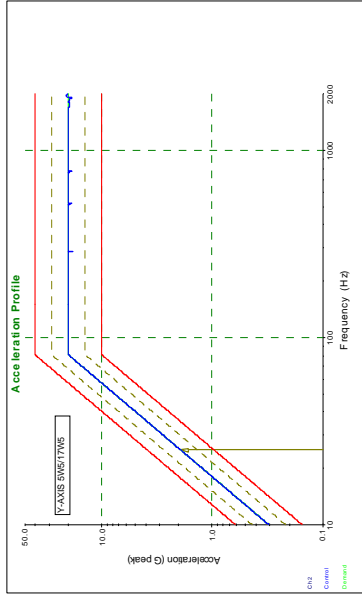


Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision	
4/10/2012	4/13/2012	NXTCore	177125	11965		GB-3	23 °C	38 %RH	04/16/12	
Test Title		Test Specification / Standard			Specific Test Conditions		Measurements / Inspection			
Vibration Phase 2		4.5.16 of MIL-DTL-24308G EIA-364-28F, test condition IV			Phase 2: 10-2000-10Hz sine sweep in 20 minutes, 2 times in each of the 3 axes, total 2 hours -> no discontinuities of >1dB for 1us during not to exceed		Acceleration [g], Frequency [Hz], Discontinuity [us], CIT [dB]			
Anomaly / Interruption					Nonconformity / Deviation					
none					none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date			
1119	Unholtz Dickie	SA30-SO92	3117 - 271	Electrodynamical Vibration System		Reference Only	Reference Only			
1035	Dytran	3055A1	1145	10mV/G Triaxial Accelerometer		10/26/2011 9:31:58 AM	10/26/2012			
1111	Vibration Research	VRC8555B	0dfcf	2 Channel Vibration Controller		12/9/2011	12/9/2012			
1217	Rifocs	555B	122347	Optical Power Meter		10/24/2011 2:28:02 PM	10/24/2012			
1219	Experior Photonics	EP-TE2000	SN 2008	QPL 8-channel 1300nm LED		2/3/12	2/3/14			
1085	Experior Photonics	EP-TE1004	1002	Discontinuity Monitor 8 channel		9/11/2011 3:33:44 PM	9/11/2012			
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012			
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013			
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only			
1266	Rifocs	715RF-24-106	122114	1x24 Multimode Optical Switch		Reference Only	Reference Only			
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012			
1028	Agilent	81610A	DE40500414	Return Loss Module		12/16/2011 11:40:19 AM	12/16/2012			
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness			
ARINC801 Connector System		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPWI-1043 ETS Vibration System Operating Procedure EPWI-1100 Vibration Controller Programming EPTP-1002 Transmittance EPTP-1004 Optical Signal Discontinuity			none			
Project Engineer	Performed By	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director			
Norman Metzner	NM	Signoff Date/Time	NM 4/11/12 8am	NM 4/11/12 8am	NM 4/13/12 4pm	NM 4/11/12 8am	NM 4/13/12 4pm	john kim		
Results Summary										
Category		Requirement		Max/Min Measurement Value		Compliance				
CIT [dB] after		not required		-0.04		4/4				
Discontinuity		no discontinuity of +/- 1dB for more than 1us		no discontinuities		4/4				
Date	Time	Event Log						Initials		
04/10/12	4:00 PM	Mounted test samples to vibration cube								
	8:00 AM	Routed cables and took baseline measurements								
04/11/12	10:35 AM	Armed discontinuity system and started vibration z-axis								
	11:15 AM	Finished z-axis								
	11:25 AM	Changed axis to y and started vibration								
	12:05 PM	Finished y-axis								
	1:00 PM	Changed axis to x and started vibration								
	1:40 PM	Finished x-axis								
	1:45 PM	Took final power measurement						NM		
04/13/12	1:15 PM	Armed discontinuity system and started vibration x-axis								
	1:55 PM	Finished x-axis								
	2:00 PM	Changed axis to y and started vibration								
	2:40 PM	Finished y-axis								
	2:45 PM	Changed axis to z and started vibration								
	3:25 PM	Finished z-axis								
	3:30 PM	Took final power measurement								

Phase 2: Sine Vibration screening for 1us/>1dB discontinuity

Connector ID	Channel	Z-Axis		Y-Axis	X-Axis		
		Initial P [dBm]	Discontinuity	Discontinuity	Final P [dBm]	CIT [dB]	Discontinuity
3W3	A1 mm	-17.52	PASS	PASS	-17.56	-0.04	PASS
	A3 mm	-17.68	PASS	PASS	-17.65	0.03	PASS
5W5	A1 mm	-18.14	PASS	PASS	-18.15	-0.01	PASS
	A2 mm	-17.72	PASS	PASS	-17.74	-0.02	PASS
	A4 mm	-17.54	PASS	PASS	-17.52	0.02	PASS
	A5 mm	-17.93	PASS	PASS	-17.93	0.00	PASS
17W5	A1 mm	-17.84	PASS	PASS	-17.85	-0.01	PASS
	A2 sm	-14.69	PASS	PASS	-14.73	-0.04	PASS
	A4 sm	-14.63	PASS	PASS	-14.62	0.01	PASS
	A5 mm	-17.79	PASS	PASS	-17.75	0.04	PASS
24W7	A1 mm	-17.98	PASS	PASS	-17.97	0.01	PASS
	A2 mm	-17.87	PASS	PASS	-17.86	0.01	PASS
	A3 sm	-14.48	PASS	PASS	-14.49	-0.01	PASS
	A5 sm	-14.69	PASS	PASS	-14.70	-0.01	PASS
	A6 mm	-18.14	PASS	PASS	-18.18	-0.04	PASS
	A7 mm	-18.34	PASS	PASS	-18.33	0.01	PASS





Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
3/20/2012	3/21/2012	NXTCore	177125	11965		GC-1	23 °C	29 %RH	03/23/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection			
IL-RL		TIA-455-171A (FOTP-171), Method D1 (multimode) and D3 (single-mode) 2.4.3.2 of ARINC Specification 801-2 and in accordance with TIA/EIA-455-107A (FOTP-107).		Fiber optic connector assemblies shall have a maximum attenuation of 0.3 dB for multimode connections. For all single-mode connections, measure and record only. No failure criterion exists for single-mode connections Return loss should be a minimum of 20 dB for multimode PC polish termini and 30 dB for single-mode PC polish termini		IL [dB], RL [dB]			
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1402	Fujikura	FSM-50S	12161	Fiber Fusion Splicer		Reference Only	Reference Only		
1405	Fujikura	CT-30	63162	Fiber Cleaver		Reference Only	Reference Only		
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012		
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only		
1451	Rifocs	781RL-13-110	122785	1300nm MM Return Loss Meter		9/6/2011 5:38:40 PM	9/6/2012		
1400	Fujikura	FSM-17S	687	Fiber Fusion Splicer		Reference Only	Reference Only		
1407	Fujikura	CT-30	21094	Fiber Cleaver		Reference Only	Reference Only		
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013		
1102	Hewlett Packard	81533B	3411G05696	Optical Head Interface		Reference Only	Reference Only		
1258	Hewlett Packard	HP 81524A	3248G01541	Optical Power Head		3/8/2012 3:22:08 PM	3/8/2014		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
ARINC801		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPTP-1005 Return Loss			none		
Project Engineer	Performed By	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director		
Norman Metzner	JZ/HR	JZ/HR	JZ	JZ	NM	NM	john kim		
		Date/Time	3/20/2012 1:25 PM	3/20/2012 1:27PM	3/21/12 4:30pm	3/20/2012 1:25 PM	3/23/12 10am		
Results Summary									
Category	Requirement	Max/Min Measurement Value		Compliance					
Insertion Loss [dB]	0.3 (for MM only)	0.20		4/4					
Return Loss [dB]	20 for MM and 30 for SM	45		4/4					
Date	Time	Event Log							Initials
03/20/12	1:30 PM	Starting IL/RL measurements for sm samples.							JZ
03/20/12	4:25 PM	Completed IL/RL measurements for sm samples. A5 IL was high. Will inspect ferrule endfaces, clean and retest.							JZ
03/20/12	2:30PM	Starting IL/RL measurements for MM samples.							
03/21/12	9:00AM	Completed IL/RL measurements for MM							HR
03/21/12	1:30 PM	A5 = Inspected and cleaned ferrule endface. Retested and passed.							JZ/HR
03/21/12	2:00 PM	S/N's and termini position's are reversed.							JZ
03/21/12	4:30 PM	Completed IL/RL for all MM samples.							JZ

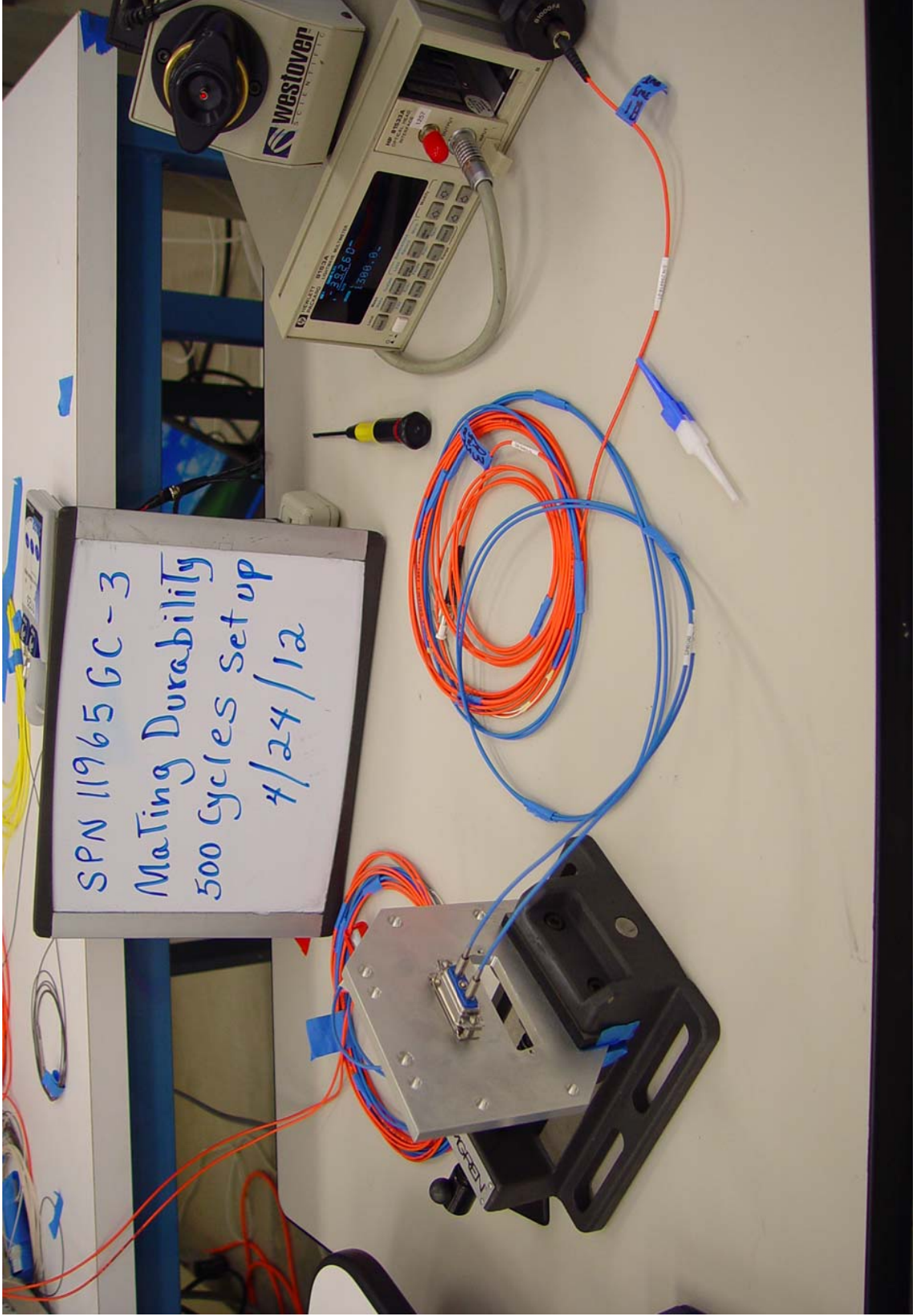
MULTIMODE @1300nm, Singlemode @1550nm					
Sample #	Channel	Power [dBm]	Cutback [dbm]	IL [dB]	RL [dB]
3W3	A1 mm	-11.37	-11.34	0.03	>45
	A3 mm	-11.36	-11.34	0.02	>45
5W5	A1 mm	-11.34	-11.32	0.02	>45
	A2 mm	-11.36	-11.32	0.04	>45
	A4 mm	-11.36	-11.33	0.03	>45
	A5 mm	-11.37	-11.34	0.03	>45
17W5	A1 mm	-11.53	-11.47	0.05	>45
	A2 sm	-5.57	-5.41	0.16	56.7
	A4 sm	-5.60	-5.41	0.20	57.1
	A5 mm	-11.50	-11.48	0.02	>45
24W7	A1 mm	-11.48	-11.47	0.00	>45
	A2 mm	-11.49	-11.48	0.01	>45
	A3 sm	-5.55	-5.39	0.16	51.1
	A5 sm	-5.54	-5.40	0.14	59.5
	A6 mm	-11.53	-11.48	0.06	>45
	A7 mm	-11.53	-11.48	0.04	>45
Initial Results					
24W7	A1 mm			0.00	
	A2 mm			0.00	
	A3 sm	-5.52	-5.40	0.11	58.7
	A5 sm	-5.74	-5.40	0.34	59.8
	A6 mm			0.00	
	A7 mm			0.00	



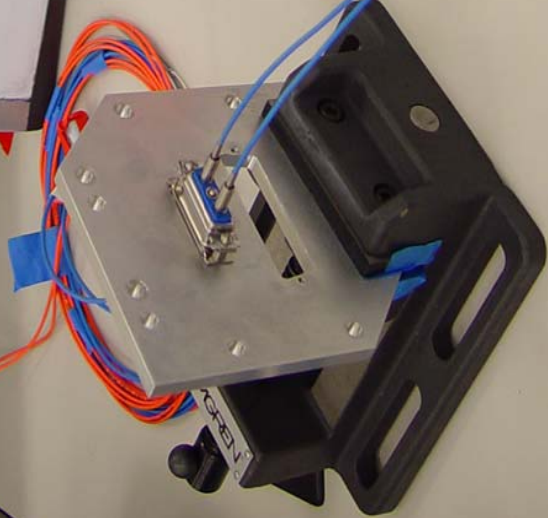
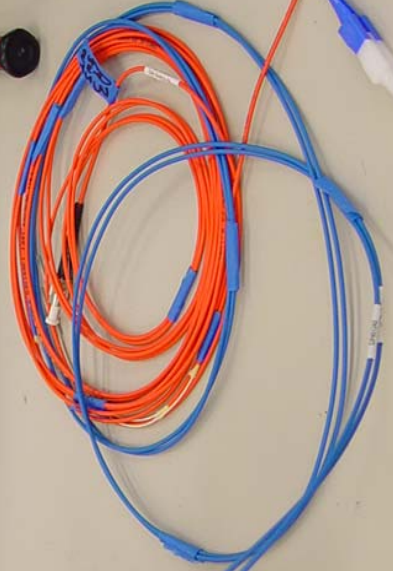
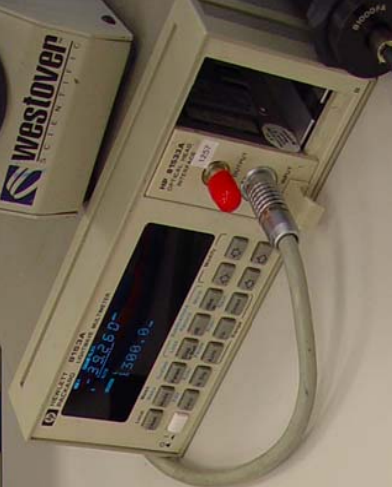
Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
4/23/2012	4/25/2012	NXTCon	177125	11965		GC-3	23 °C	50 %RH	04/25/12
Test Title		Test Specification / Standard		Specific Test Conditions			Measurements / Inspection		
Mating Durability		4.5.18 of MIL-DTL-24308G and in accordance with EIA-364-09C, TIA-455-21A (FOTP-21)		Manual mating and un-mating of test samples, 500 cycles at a rate between 100 and 300 cycles per hour. CIT test shall be performed after every 100 cycles. Termini shall be cleaned prior to each measurement.			CIT [dB]		
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1256	Hewlett Packard	HP 81524A	3248G01658	Optical Power Head		Reference Only	Reference Only		
1257	Hewlett Packard	HP 81533A	2949G00504	Optical Head Interface		3/8/2012 3:22:08 PM	3/8/2014		
1123	Tempo	252B	D91114	850/1300nm Dual LED Source		Reference Only	Reference Only		
1220	Agilent	81654A	DE38A00785	1310/1550nm Laser Source		12/9/2011 3:56:59 PM	12/9/2012		
1026	Agilent	81654A	DE38A00709	1310/1550nm Laser Source		10/31/2011 2:11:01 PM	10/31/2012		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
ARINC801 Compliant Connectors		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		per referenced industry standard			none		
Project Engineer	Performed By		Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	Harris R	Signoff	HR	HR	HR	NM	NM	John Kim	
		Date/Time	4/23/12 7:00AM	4/23/12 7:30AM	4/25/12 3:30PM	4/24/12 8am	4/25/12 4:30pm		
Results Summary									
Category		Requirement		Max/Min Measurement Value			Compliance		
CIT [dB] MM		0.5		0.08/-0.03			4/4		
CIT [dB] SM		0.5		0.11/-0.08			2/2		
Visual Inspection		No damage		no damage observed			4/4		
Date	Time	Event Log						Initials	
04/24/12	7:00AM	Started Mating Durability on 3W3						HR	
	10:45AM	Finished 500 cycles Mating Durability on 3W3							
04/25/12	3:30PM	Start Preparation and Mounting Sample 24W7 to the Plate to start Mating Durability							
	7:00AM	Finished 500 Cycles Mating Durability on 24W7							
04/25/12	10:30AM	Start Preparation and Mounting Sample 5W5 into the Plate to start Mating Durability							
	3:30PM	Finished 500 Cycles Mating Durability on 5W5							
04/25/12	3:30PM	Start Preparation and Mounting Sample 17W5 into the Plate to start Mating Durability							
		Finished 500 Cycles Mating Durability on 17W5							

MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	Power before [dBm]	Power after 100 cycles [dBm]	CIT after 100 cycles [dB]	Power after 100 cycles [dBm]	CIT after 200 cycles [dB]	Power after 200 cycles [dBm]	CIT after 200 cycles [dB]	Power after 300 cycles [dBm]	CIT after 400 cycles [dB]	Power after 400 cycles [dBm]	CIT after 500 cycles [dB]	Power after 500 cycles [dBm]	CIT after 500 cycles [dB]
3W3	A1 nm	-38.54	-38.55	-0.01	-38.55	-0.01	-38.55	-0.01	-38.54	0.00	-38.54	0.00	-38.54	0.00
	A3 nm	-37.55	-37.56	-0.01	-37.55	0.00	-37.55	0.00	-37.55	0.00	-37.55	0.00	-37.55	0.00
	A1 nm	-37.00	-37.01	-0.01	-37.01	-0.01	-37.01	-0.01	-37.00	0.00	-37.00	0.00	-36.99	0.00
5W5	A2 nm	-38.07	-38.09	-0.01	-38.08	0.00	-38.08	0.00	-38.09	-0.02	-38.07	0.00	-38.07	0.00
	A4 nm	-37.42	-37.42	0.00	-37.42	0.00	-37.42	0.00	-37.42	0.00	-37.42	0.00	-37.42	0.00
	A5 nm	-38.53	-38.53	0.00	-38.49	0.04	-38.49	0.04	-38.51	0.01	-38.49	0.04	-38.50	0.03
17W5	A1 nm	-38.68	-38.68	0.00	-38.67	0.01	-38.67	0.01	-38.68	0.00	-38.66	0.02	-38.67	0.01
	A2 sm	-4.91	-4.88	0.03	-4.90	0.01	-4.90	0.01	-4.90	0.01	-4.90	0.01	-4.90	0.01
	A4 sm	-2.40	-2.38	0.02	-2.38	0.02	-2.38	0.02	-2.38	0.02	-2.37	0.03	-2.37	0.02
	A5 nm	-38.77	-38.77	0.01	-38.69	0.08	-38.69	0.08	-38.75	0.02	-38.78	0.00	-38.75	0.02
	A1 nm	-39.96	-39.90	0.06	-39.90	0.06	-39.90	0.06	-39.89	0.07	-39.89	0.07	-39.89	0.07
24W7	A2 nm	-38.36	-38.35	0.01	-38.37	-0.01	-38.36	0.01	-38.36	0.04	-38.35	0.01	-38.35	0.01
	A3 sm	-3.59	-3.60	-0.01	-3.48	0.11	-3.55	0.04	-3.57	0.02	-3.57	0.02	-3.58	0.02
	A5 sm	-5.62	-5.65	-0.03	-5.68	-0.06	-5.68	-0.06	-5.70	-0.08	-5.57	0.05	-5.60	0.03
	A6 nm	-37.47	-37.47	-0.01	-37.48	-0.01	-37.48	-0.01	-37.49	-0.02	-37.48	-0.01	-37.49	-0.02
	A7 nm	-38.09	-38.10	-0.01	-38.08	0.01	-38.08	0.01	-38.08	0.01	-38.08	0.00	-38.12	-0.03



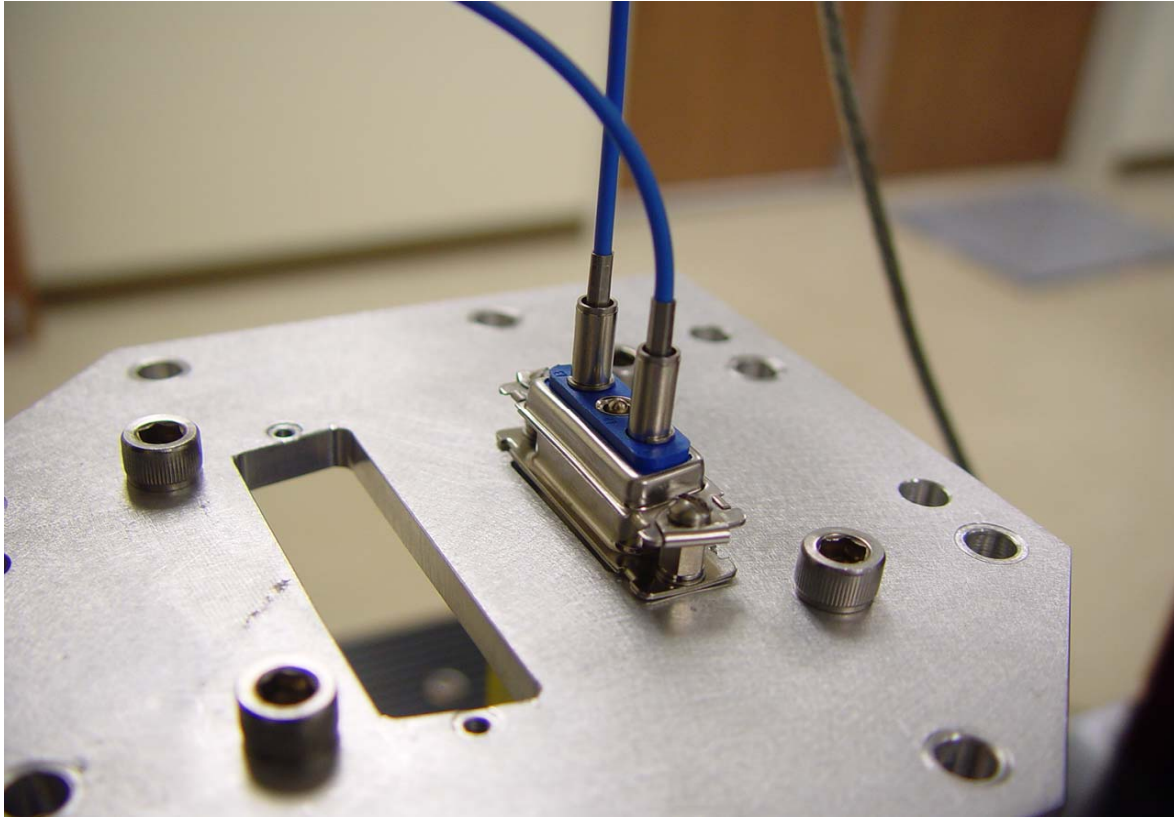
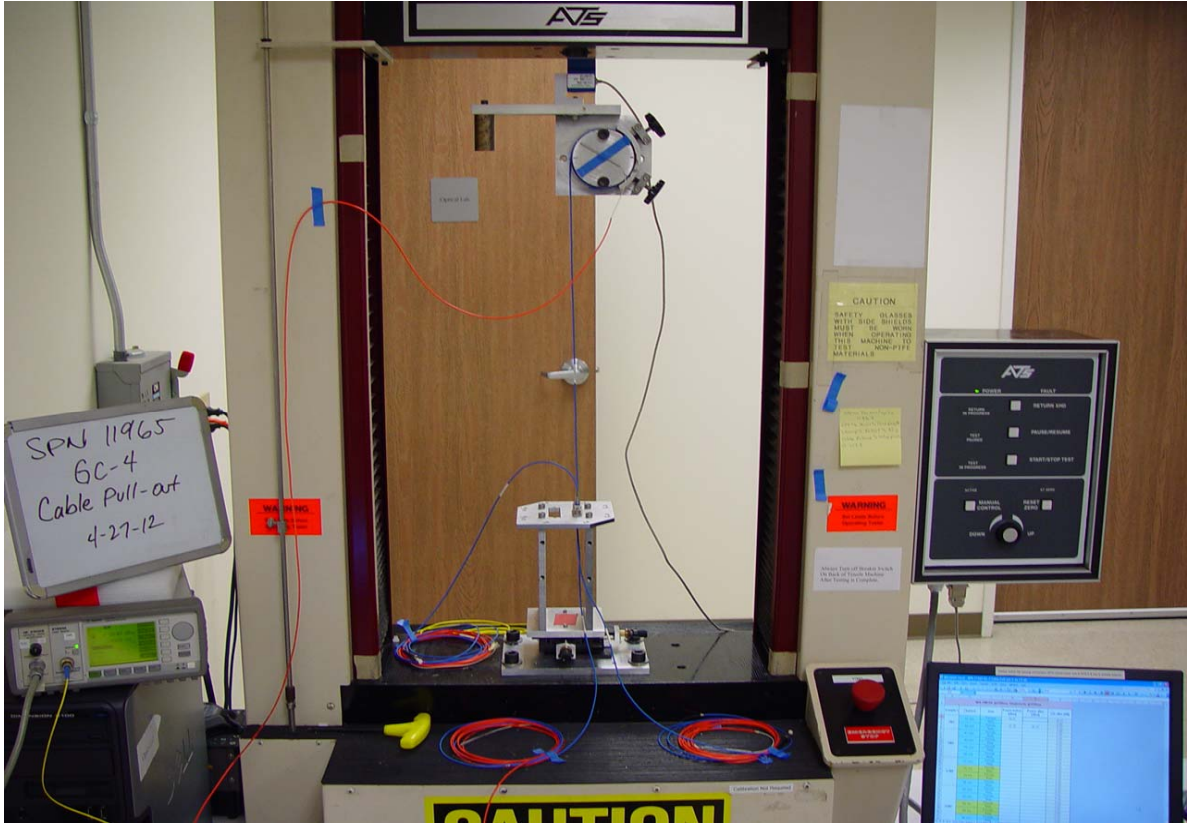
SPN 11965 GC-3
Mating Durability
500 Cycles set up
4/24/12

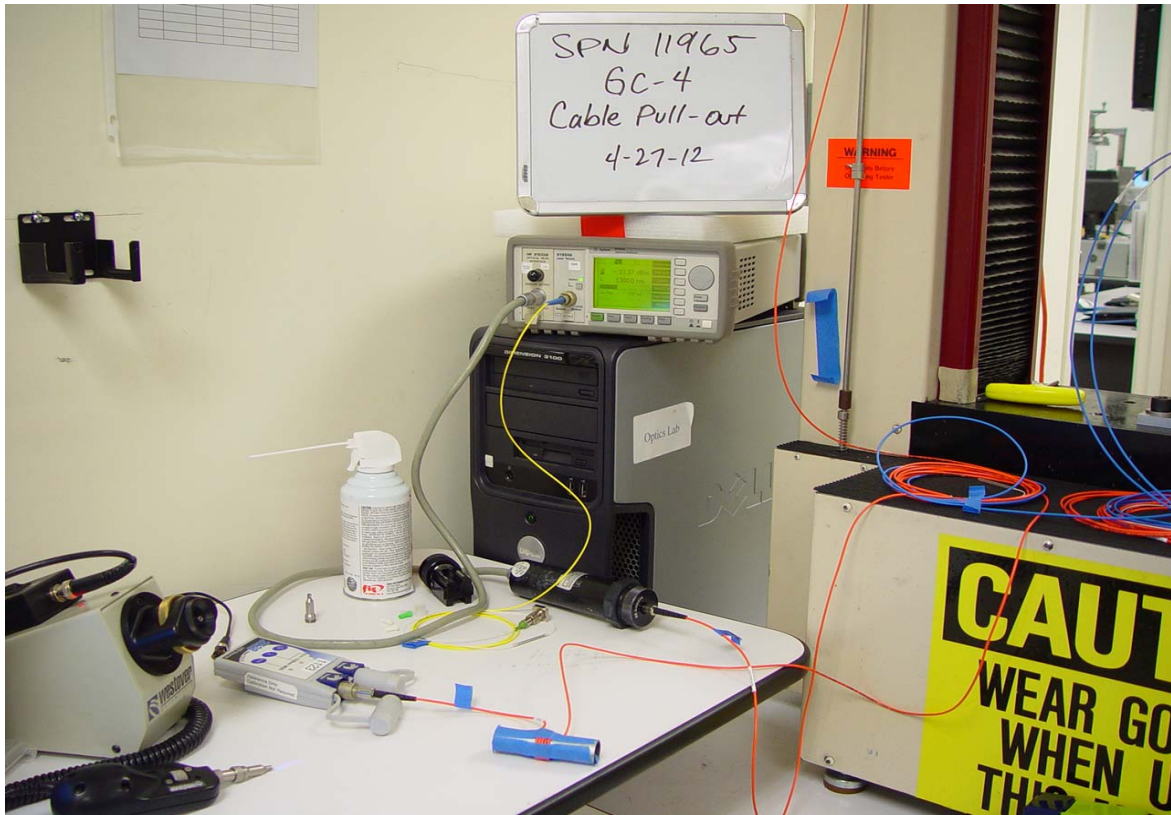
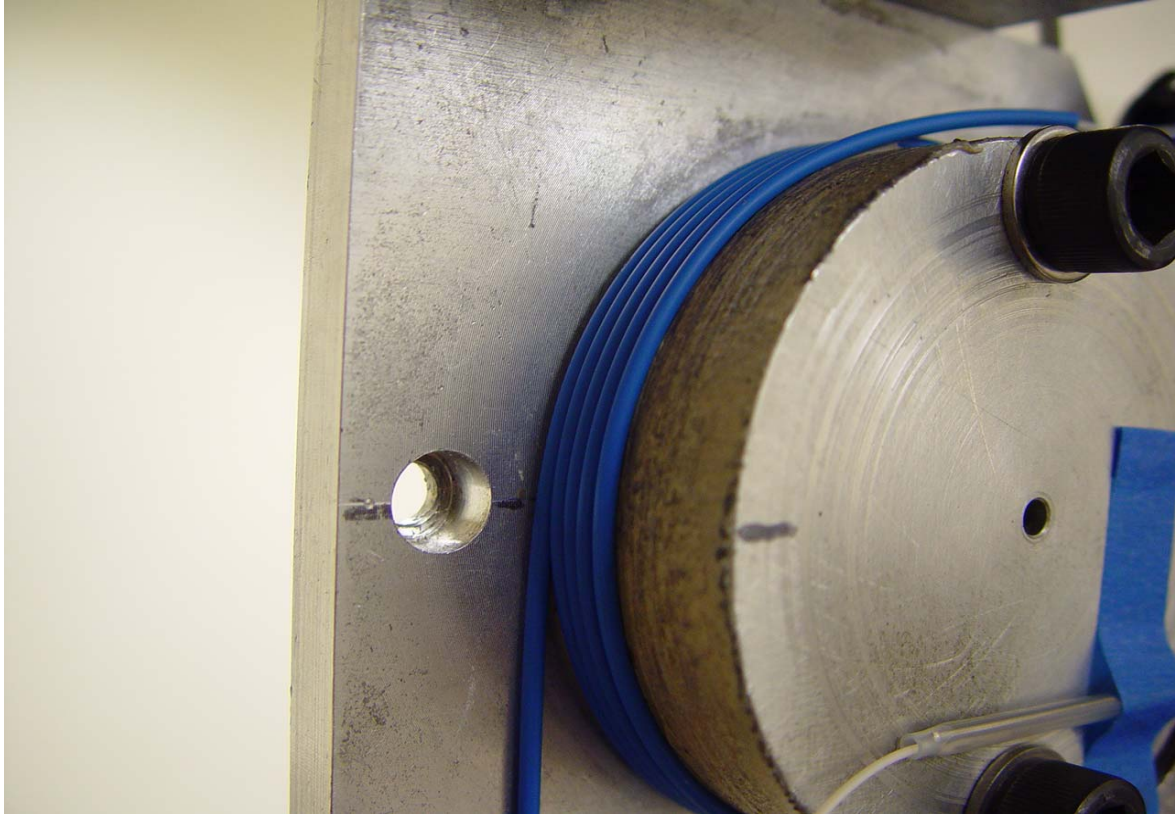


Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
4/27/2012	4/30/2012	NXTCon	177125	11965		GC-4	22.8 °C	43.8 %RH	05/01/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection			
Cable Pull-out Force		TIA-455-6B (FOTP-6) Method 1		The test load shall be applied as follows with a rate of pull being 20 lb/min (89 N/min) Load 1: Apply 12 lb force at 0° for at least 5 seconds but no more than 10 seconds.		CIT[dB], Force [lb]			
Anomaly / Interruption				Nonconformity / Deviation					
none				none					
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1261	Extech	42280	9069034	Temperature Humidity Datalogger		5/3/2011 1:03:01 PM	5/3/2012		
1080	ATS	1405 UTM	A911206-11-91	5000 lbs Universal Tensile Machi		Reference Only	Reference Only		
1102	Hewlett Packard	81533B	3411G05696	Optical Head Interface		Reference Only	Reference Only		
1026	Agilent	81654A	DE38A00709	1310/1550nm Laser Source		10/31/2011 2:11:01 PM	10/31/2012		
1258	Hewlett Packard	HP 81524A	3248G01541	Optical Power Head		3/8/2012 3:22:08 PM	3/8/2014		
1123	Tempo	252B	D91114	850/1300nm Dual LED Source		Reference Only	Reference Only		
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness		
ARINC801 Rectangular		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		-			none		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	JZ		JZ	JZ	NDY	NM	NM	john kim	
		Date/Time	4/27/2012 8:00AM	4/27/2012 8:00AM	NDY	4/27/2012 8:00AM	4/30/12 4:30pm		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
CIT [dB] MM		0.5		0.03/-0.02		4/4			
CIT [dB] SM		0.5		0.01/-0.03		2/2			
Date	Time	Event Log						Initials	
04/27/12	8:00 AM	Test setup. Preparing cables.						JZ	
04/27/12	11:00 AM	Starting test						JZ	
04/27/12	4:30 PM	Completed 3w3 and 5w5 samples						JZ	
04/30/12	8:00 AM	Test setup for 24w7 samples						JZ	
04/30/12	8:30 AM	Starting test						JZ	
04/30/12	4:15 PM	Completed 17w5 and 24w7 samples						JZ	

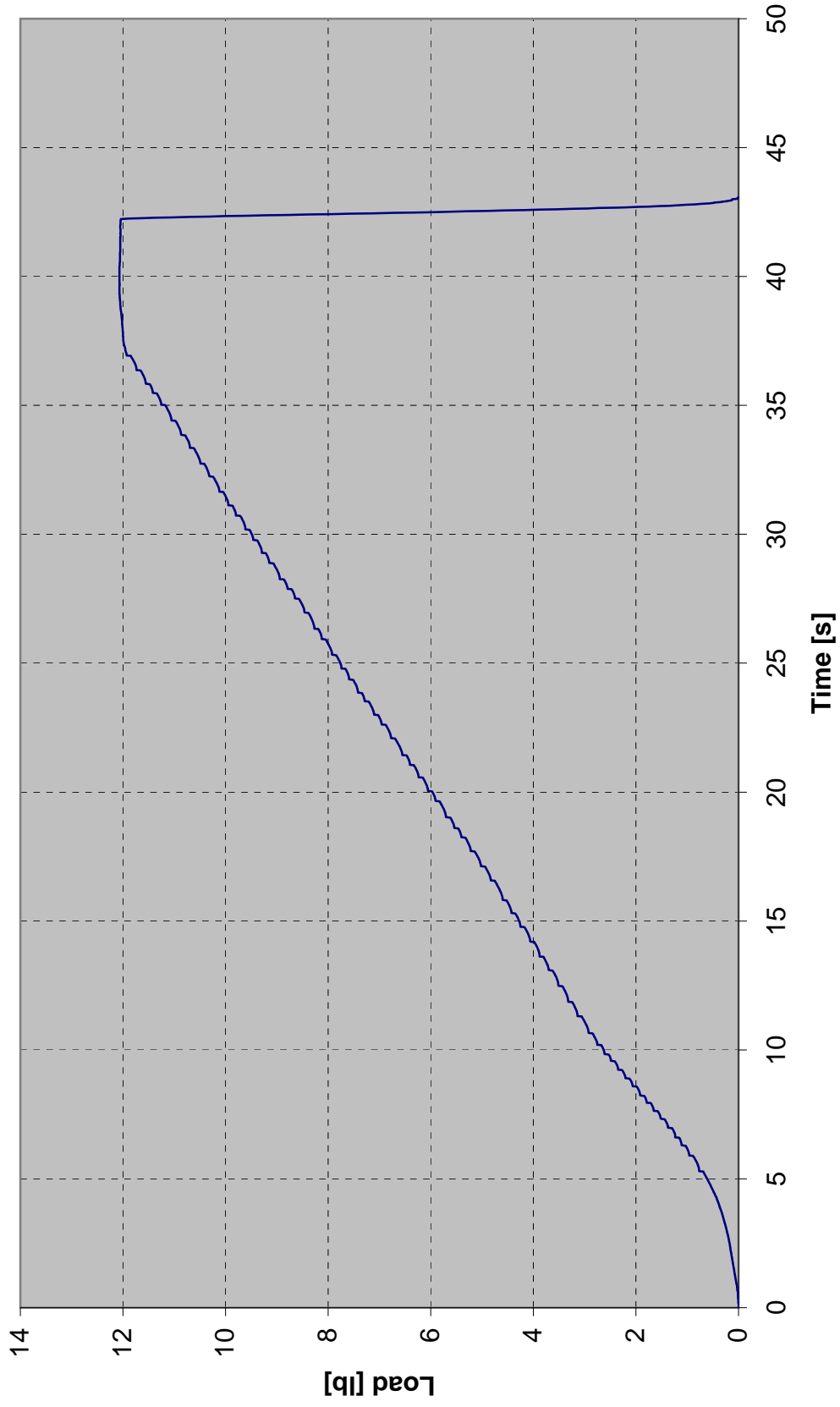
MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	Side	Power before [dBm]	Power after [dBm]	CIT after [dB]
3W3	A1 mm	Female	-20.45	-20.44	0.01
		Male	-20.42	-20.41	0.01
	A3 mm	Female	-20.25	-20.23	0.02
		Male	-21.45	-21.44	0.01
5W5	A1 mm	Female	-19.72	-19.71	0.01
		Male	-21.37	-21.38	-0.01
	A2 mm	Female	-21.10	-21.09	0.01
		Male	-21.85	-21.85	0.00
	A4 mm	Female	-21.58	-21.55	0.03
		Male	-20.98	-21.00	-0.02
	A5 mm	Female	-20.14	-20.12	0.02
		Male	-22.22	-22.22	0.00
17W5	A1 mm	Female	-20.60	-20.60	0.00
		Male	-22.33	-22.32	0.01
	A2 sm	Female	1.08	1.08	0.00
		Male	1.11	1.10	-0.01
	A4 sm	Female	1.08	1.08	0.00
		Male	1.10	1.10	0.00
	A5 mm	Female	-22.60	-22.59	0.01
		Male	-22.33	-22.32	0.01
24W7	A1 mm	Female	-20.86	-20.86	0.00
		Male	-20.56	-20.55	0.01
	A2 mm	Female	-21.01	-21.00	0.01
		Male	-21.50	-21.50	0.00
	A3 sm	Female	1.02	1.02	0.00
		Male	1.00	0.97	-0.03
	A5 sm	Female	1.10	1.11	0.01
		Male	1.10	1.10	0.00
	A6 mm	Female	-20.56	-20.57	-0.01
		Male	-21.31	-21.30	0.01
	A7 mm	Female	-21.26	-21.26	0.00
		Male	-21.29	-21.30	-0.01





SPN 11965 GC-4 Cable Pull-out



0.716 0.021 0.001144

Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number SPN	Test ID #	Temperature	Humidity	DS Revision
5/1/2012	5/9/2012	NXTCon	177125	11965	GC-5	23 °C	46 %RH	05/15/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection		
Termini Retention Force		2.4.5.3 of ARINC Specification 801-2 and in accordance with EIA-364-38C, either Method A or B		The test load shall be 12 lb force at a rate of 89 newtons per minute ± 4 newtons per minute (20 pounds per minute ± 1 pound per minute), maintain load for one hour Note: This test is intended to prove the integrity of the connector terminus retention feature and not to prove the attachment of the cable terminus		All termini shall be retained with no damage to the termini, the connector inserts or to the retention mechanisms.		
Anomaly / Interruption				Nonconformity / Deviation				
none				none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date	
1261	Extech	42280	9069034	Temperature Humidity Datalogger		5/3/2012	5/3/2013	
1080	ATS	1405 UTM	A911206-11-91	5000 lbs Universal Tensile Machi		Reference Only	Reference Only	
1203	Interface	SM-250	199710	250 lbs. Load Cell		6/21/2011 3:56:32 PM	6/21/2012	
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness	
ARINC801 Rectangular		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		per referenced industry standard			none	
Project Engineer	Performed By	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	JZ	Signoff	JZ	JZ	JZ	NM	NM	john kim
		Date/Time	5/1/2012 8:30AM	5/1/2012 8:30AM	5/9/2012 9:30PM	5/1/2012 8:30AM	5/15/12 8am	
Results Summary								
Category		Requirement		Max/Min Measurement Value		Compliance		
Visual Inspection		No damage		no damage observed		4/4		
Date	Time	Event Log						Initials
05/01/12	8:30 AM	Test setup. Removing samples from termini connector						JZ
05/01/12	10:30 AM	Starting Termini Retention Force test with customer provided retention tool						JZ
05/01/12	4:25 PM	Completed female channels A1, A2, A4 and A5 of sample 17W5						JZ
05/02/12	8:00 AM	Continuing Termini Retention Force test						JZ
05/02/12	5:30 PM	Completed sample 17W5 female and male. Also 3W3 A1 female						JZ
05/03/12	8:20 AM	Continuing Termini Retention Force test						JZ
05/03/12	2:30 PM	Completed sample 3W3 Ch. A1 and A2 male and female side						JZ
05/04/12	8:00 AM	Continuing Termini Retention Force test. Started sample 5W5						JZ
05/04/12	6:15 PM	Completed sample 5W5						JZ
05/07/12	8:00 AM	Continuing with sample 24W7						JZ
05/07/12	4:45 PM	Completed A1, A2, A3, A5 and A6 (female side) of sample 24W7						JZ
05/09/12	8:00 AM	Continuing with sample 24W7 A7 female						JZ
05/09/12	3:20 PM	Complete A7 female and A1, A2, A3, and A7 male side for sample 24W7						JZ
05/09/12	6:45 PM	Continuing test with A5 male						JZ
05/09/12	9:20 PM	Completed A5 and A6 male side for sample 24W7. Completed Termini Retention Force test for all samples.						JZ

MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	Side	Tested [Y/N]
3W3	A1 mm	Female	Y
		Male	Y
	A3 mm	Female	Y
		Male	Y
5W5	A1 mm	Female	Y
		Male	Y
	A2 mm	Female	Y
		Male	Y
	A4 mm	Female	Y
		Male	Y
	A5 mm	Female	Y
		Male	Y
17W5	A1 mm	Female	Y
		Male	Y
	A2 sm	Female	Y
		Male	Y
	A4 sm	Female	Y
		Male	Y
	A5 mm	Female	Y
		Male	Y
24W7	A1 mm	Female	Y
		Male	Y
	A2 mm	Female	Y
		Male	Y
	A3 sm	Female	Y
		Male	Y
	A5 sm	Female	Y
		Male	Y
	A6 mm	Female	Y
		Male	Y
	A7 mm	Female	Y
		Male	Y



SPN 11965

GC-5

Termini Retention
Force

5-1-12

WARNING
Stay in Balance
Call Lab Teacher

11-11
2014

BOARD

Test Datasheet

Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number SPN	Test ID #	Temperature	Humidity	DS Revision
4/9/2012	4/13/2012	NXTCore	177125	11965	GC-2	23°C	35%RH	04/13/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection		
Maintenance Aging		2.4.5.7 of ARINC Specification 801-2 and in accordance with EIA-364-24B		All termini shall be removed and reinstalled ten times using the appropriate insertion and removal tools.		The termini insertion force should be measured during the first and last cycles and should not exceed 36 N (8 pounds).		
Anomaly / Interruption				Nonconformity / Deviation				
none				none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date	
1147	Mark-10	MG10	41612	10lbs. Force Gauge		4/9/2012	4/9/2013	
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness	
ARINC801 Connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS					none	
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director
Norman Metzner	MD	MD	MD	MD	HR	NM	NM	john kim
		Date/Time	4/12/12 3pm	4/12/2012 3pm	4/13/12 11am	4/12/12 3pm	4/13/12 11am	
Results Summary								
Category		Requirement		Max Measurement Value		Compliance		
Termini Force during first and last cycle [lb]		<8		1.93		4/4		
Date	Time	Event Log						Initials
04/12/12	3:00PM	Started instruments setup						MD
	3:30PM	Started testing samples						MD
04/13/12	11:00AM	Finished testing samples						HR

Sample #	Terminus	Cycle	Plug	
			Removal Force [lb]	Insertion Force [lb]
3W3	A1 mm	1st	0.67	0.35
		10th	0.71	0.41
	A3 mm	1st	0.71	0.38
		10th	0.75	0.37
5W5	A1 mm	1st	0.76	0.36
		10th	0.80	0.35
	A2 mm	1st	0.73	0.37
		10th	0.77	0.44
	A4 mm	1st	0.70	0.35
		10th	0.81	0.37
	A5 mm	1st	0.76	0.38
		10th	0.80	0.36
17W5	A1 mm	1st	0.78	0.36
		10th	0.74	0.43
	A2 sm	1st	0.71	0.45
		10th	0.76	0.51
	A4 sm	1st	0.69	0.38
		10th	0.78	0.45
	A5 mm	1st	0.71	0.45
		10th	0.77	0.34
24W7	A1 mm	1st	0.67	0.50
		10th	0.79	0.39
	A2 mm	1st	0.69	0.27
		10th	0.71	0.39
	A3 sm	1st	0.78	0.21
		10th	0.82	0.60
	A5 sm	1st	0.79	0.58
		10th	0.74	0.40
	A6 mm	1st	0.86	0.54
		10th	0.64	0.36
A7 mm	1st	0.76	0.47	
	10th	0.74	0.32	

Receptacle		Comply?
Removal Force [lb]	Insertion Force [lb]	
1.75	1.47	PASS
0.87	1.12	PASS
1.44	1.51	PASS
1.04	1.64	PASS
1.60	1.72	PASS
1.42	1.48	PASS
0.98	1.42	PASS
1.05	1.61	PASS
1.01	1.32	PASS
0.98	1.29	PASS
1.07	1.58	PASS
1.01	1.45	PASS
0.94	1.75	PASS
1.08	1.66	PASS
1.28	1.45	PASS
1.01	1.54	PASS
1.33	1.60	PASS
1.18	1.55	PASS
1.27	1.88	PASS
1.26	1.93	PASS
1.20	1.64	PASS
1.18	1.38	PASS
1.20	1.59	PASS
1.27	1.53	PASS
1.10	1.48	PASS
1.42	1.82	PASS
0.85	1.17	PASS
1.08	1.54	PASS
0.84	1.32	PASS
1.04	1.37	PASS
0.65	1.49	PASS
0.71	1.41	PASS



SPN 11965
Maintenance Aging
Removal-Insertion Force
4/13/12

M16
Model M1010
1147

SONY

94186452768 1.1

Start Date	Completion Date	Customer Name	Purchase Order #	Service Project Number	SPN	Test ID #	Temperature	Humidity	DS Revision
5/3/2012	5/11/2012	NXTCon	177125	11965		GC-6	23 °C	55 %RH	05/15/12
Test Title		Test Specification / Standard		Specific Test Conditions		Measurements / Inspection			
Return Loss		2.4.3.2 of ARINC Specification 801-2 and in accordance with TIA/EIA-455-107A (FOTP-107).		Return loss should be a minimum of 20 dB for multimode PC polish termini and 30 dB for single-mode PC polish termini		RL [dB]			
Anomaly / Interruption					Nonconformity / Deviation				
none					none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date		
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012		
1451	Rifocs	781RL-13-110	122785	1300nm MM Return Loss Meter		9/6/2011 5:38:40 PM	9/6/2012		
1224	JGR	BR5	750004	Quad-Wave Backreflection Meter		1/3/2012 10:43:29 AM	1/3/2013		
1258	Hewlett Packard	HP 81524A	3248G01541	Optical Power Head		3/8/2012 3:22:08 PM	3/8/2014		
Test Sample Description		Part Number		Exporior Test Procedure # (if applicable)			Customer Witness		
ARINC801 Connector				EPTP-1005 Return Loss			none		
Project Engineer	Performed By	Signoff	Bench Cleaning	Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director	
Norman Metzner	Harris R	HR	HR	HR	HR	NM	NM	john kim	
		Date/Time	5/3/12 7:30AM	5/3/12 9:30AM	5/11/12 2:30Pm	5/3/12 7:30AM	5/15/12 8am		
Results Summary									
Category		Requirement		Max/Min Measurement Value		Compliance			
Return Loss [dB]		20 for MM and 30 for SM		45		4/4			
Date	Time	Event Log						Initials	
05/03/12	7:30AM	Start Preparation Cleaning and Inspecting Ferrules for RL Measurements Sample 17 W 5						HR	
	9:30AM	Finished RL to Sample 17 W 5							
	2:30PM	Start Preparation Cleaning and Inspecting Ferrules for RL Measurements 3 W 3							
05/07/12	3:30PM	Finished RL to Sample 3 W 3						HR	
	7:30AM	Start Preparation Cleaning and Inspecting Ferrules for RL Measurements 5 W 5							
05/11/12	10:00AM	Finished RL to Sample 5 W 5						HR	
	11:30AM	Start Preparation Cleaning and Inspecting Ferrules for RL Measurements 24W7							
	2:30PM	Finished RL to Sample 24W7							

MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	RL [dB]
3W3	A1 mm	>45
	A3 mm	>45
5W5	A1 mm	>45
	A2 mm	>45
	A4 mm	>45
	A5 mm	>45
17W5	A1 mm	>45
	A2 sm	54.9
	A4 sm	55.7
	A5 mm	>45
24W7	A1 mm	>45
	A2 mm	>45
	A3 sm	55.2
	A5 sm	55.3
	A6 mm	>45
	A7 mm	>45

Start Date	Completion Date	Product Name	Purchase Order #	Service Project Number SPN	Test ID #	Temperature	Humidity	DS Revision
3/22/2012	3/23/2012	NXTCore	177125	11965	GD-1	23.3 °C	43.1 %RH	03/23/12
Test Title		Test Specification / Standard		Specific Test Conditions			Measurements / Inspection	
IL-RL		TIA-455-171A (FOTP-171), Method D1 (multimode) and D3 (single-mode) 2.4.3.2 of ARINC Specification 801-2 and in accordance with TIA/EIA-455-107A (FOTP-107).		Fiber optic connector assemblies shall have a maximum attenuation of 0.3 dB for multimode connections. For all single-mode connections, measure and record only. No failure criterion exists for single-mode connections. Return loss should be a minimum of 20 dB for multimode PC polish termini and 30 dB for single-mode PC polish termini			IL [dB], RL [dB]	
Anomaly / Interruption				Nonconformity / Deviation				
none				none				
Instrum. Number	Manufacturer	Model Number	Serial Number	Instrument Description		Last Cal Date	Cal Due Date	
1260	Extech	42280	9069033	Temperature Humidity Datalogger		5/3/2011 1:03:12 PM	5/3/2012	
1451	Rifocs	781RL-13-110	122785	1300nm MM Return Loss Meter		9/6/2011 5:38:40 PM	9/6/2012	
1254	Hewlett Packard	81533B	3411G05264	Optical Head Interface		Reference Only	Reference Only	
1103	Hewlett Packard	81524A	3248G01181	Optical Power Head		10/31/2011 2:10:44 PM	10/31/2012	
1402	Fujikura	FSM-50S	12161	Fiber Fusion Splicer		Reference Only	Reference Only	
1405	Fujikura	CT-30	63162	Fiber Cleaver		Reference Only	Reference Only	
Test Sample Description		Part Number		Experior Test Procedure # (if applicable)			Customer Witness	
Combo-D connector		CBD3W3M000T2S-MOS, CBD3W3F000E2S-MOS CBD5W5M000T2S-MOS, CBD5W5F000E2S-MOS CBD17W5M200T2S-MOS, CBD17W5F200E2S-MOS CBD24W7M200T2S-MOS, CBD24W7F200E2S-MOS		EPTP-1002 Transmittance EPTP-1005 Return Loss			none	
Project Engineer	Performed By	Bench Cleaning		Equipment List	Post Test Cleanup	Setup Check	Event Log	Signoff by Technical Director
Norman Metzner	JZ	Signoff	JZ	JZ	JZ	NM	NM	john kim
		Date/Time	3/22/2012 11:00 AM	3/22/2012 11:03AM	3/22/12 12:45pm	3/22/2012 11:00 AM	3/23/2012	
Results Summary								
Category	Requirement	Max/Min Measurement Value			Compliance			
Insertion Loss [dB]	0.3 (for MM only)	0.07			1/1			
Return Loss [dB]	20 for MM and 30 for SM	45			1/1			
Date	Time	Event Log						Initials
03/22/12	11:05 AM	Starting IL/RL measurements.						JZ
03/22/12	12:15 PM	Completed IL/RL measurements. S/N's and pin #'s are reversed.						JZ

MULTIMODE @1300nm, Singlemode @1550nm

Sample #	Channel	Power [dBm]	Cutback [dbm]	IL [dB]	RL [dB]
3W3	A1 mm	-11.59	-11.57	0.02	>45
	A3 mm	-11.64	-11.57	0.07	>45