3933 US ROUTE 11, CORTLAND, NEW YORK 13045, U.S.A.
Phone Number: 1-800-345-3851 Fax Number: 607-758-3648

PROJECT NO.: 3030592-311 **DATE:** June 28, 2010

TEST REPORT NO.: 3030592CRT-080

RENDERED TO:

Ortronics, Incorporated
125 Eugene O'Neil Drive
New London, CT 06320

Ph (860) 445-3800 / Fax (860) 405-2970

TEST:

Performance testing of the cabling configurations as defined in and to the requirements of ANSI/TIA-568-C.2 Balanced Twisted-Pair Telecommunications Cabling and Components Standard.

STATEMENT OF LIMITATIONS:

The purpose of this report is to provide electrical performance data on the test sample. It is not valid to use this report for any other purpose.

STANDARDS USED:

ANSI/TIA-568-C.2 Balanced Twisted-Pair Telecommunications Cabling and Components Standard approved August 11, 2009.

AUTHORIZATION:

The project was authorized by Robert Aekins, representing, Ortronics Incorporated.

SPECIMEN DESCRIPTION:

GT CAT 5E Channel, 4-Connector, 100 meters

DATE OF TEST:

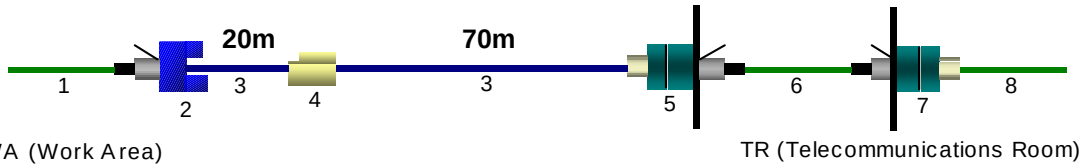
20 April 2010

TEST REPORT REVISION HISTORY:

First Issue:	06-28-2010	Original Document

SAMPLE DESCRIPTION:

Channel (4 Connector)



Component ID	Manufacturer	Part Number	Length/Qty	Description
3	BerkTek	BerkTek LANmark 350	90m	Horizontal Cable, C5E UTP CMP
5,7	Ortronics, Inc.	OR-PHD5E6U24	2	Clarity C5E Patch Panel
2	Ortronics, Inc.	OR-TJ5E00-13	1	Clarity C5E Workstation Outlet
1,6,8	Ortronics, Inc.	OR-MC5E09-02	3m / 3	Clarity C5E Patch Cords, 9 ft
4	Ortronics, Inc.	OR-110ABC5E100	1	Clarity C5E 110 Block (CP)

EQUIPMENT LIST:

The following equipment was employed in conducting the tests.

Equipment Used	Model Number	Serial Number	Control Number	Calibration Date
Agilent Technologies Network Analyzer	E5071B	MY42403324	N/A	06/03/2009
Hewlett Packard Multimeter	34401A	US36035667	N/A	06/03/2009

RESULTS:

See appendix A for the test results.

CONCLUSION:

The channel configuration, as previously described, was tested under the SAT program of Intertek in accordance with the standard contained herein, and did comply with the indicated applicable transmission requirements.

These procedures and requirements were taken from the standards referred to on page 1.

Reviewed and approved by:

Antoine Pelletier
Engineer
Global Cabling Products Testing

Kathy Heath
Program Coordinator
Global Cabling Products Testing

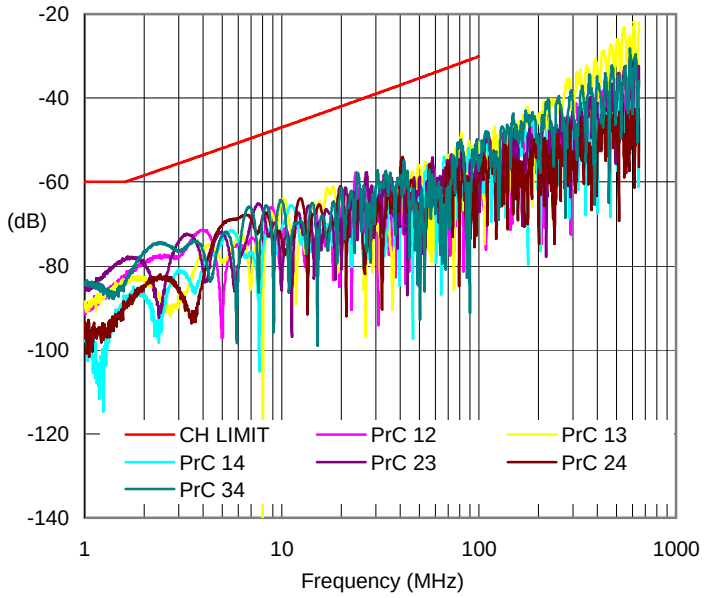
APPENDIX A

Test Results

Any data shown above 100 MHz is for indication only.

This appendix contains 7 pages.

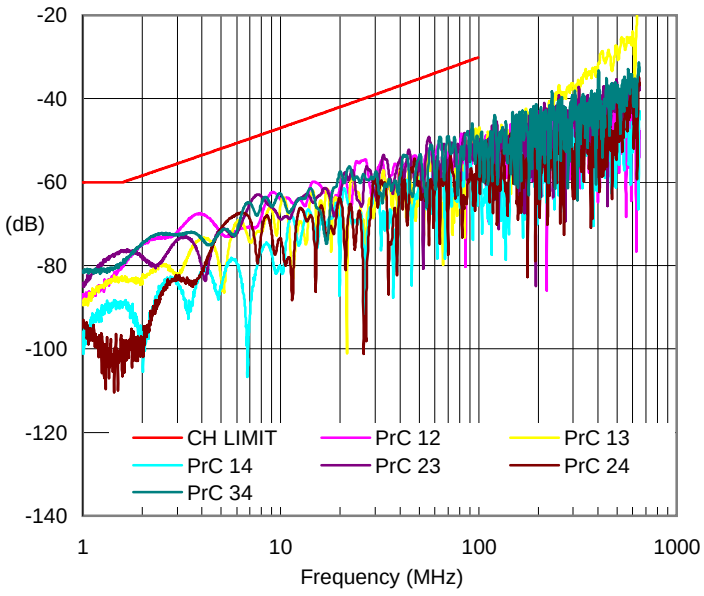
NEXT as measured from the**TELECOMMUNICATIONS ROOM (TR)**



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Measured Value (dB)	CH LIMIT Value (dB)
Swept Freq	7.6	16.3	65.2	48.9
Discrete Points	1.00	23.7	83.7	60.0
	4.00	18.1	71.6	53.5
	8.00	18.0	66.6	48.6
	10.00	17.4	64.4	47.0
	16.00	23.4	67.0	43.6
	20.00	19.3	61.2	42.0
	25.00	22.6	62.9	40.3
	31.25	22.8	61.5	38.7
	62.50	26.8	60.4	33.6
	100.00	22.2	52.2	30.1
	200.00		44.7	n/a
	250.00		40.7	n/a
	300.00		40.9	n/a
	400.00		32.9	n/a
	500.00		26.9	n/a
	650.00		21.9	n/a

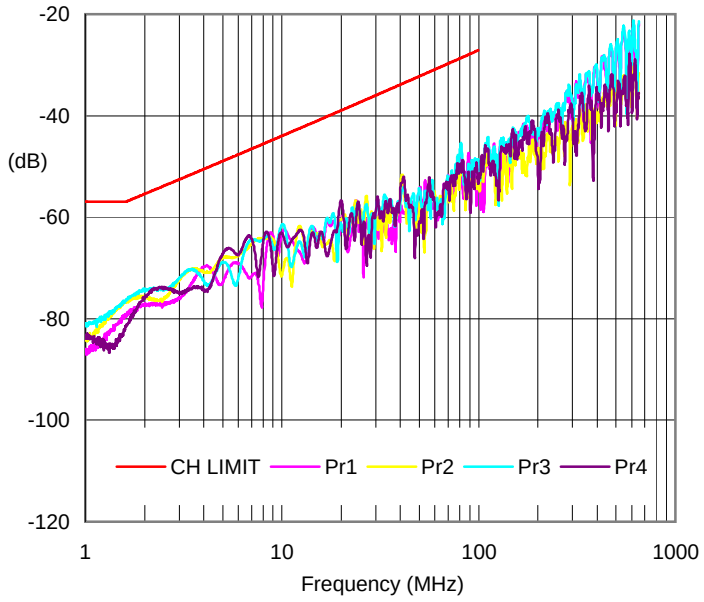
NEXT as measured from the**WORK AREA (WA)**



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Measured Value (dB)	CH LIMIT Value (dB)
Swept Freq	7.6	14.2	63.0	48.8
Discrete Points	1.00	21.3	81.3	60.0
	4.00	14.1	67.6	53.5
	8.00	14.9	63.5	48.6
	10.00	15.9	62.8	47.0
	16.00	17.5	61.1	43.6
	20.00	15.5	57.5	42.0
	25.00	15.0	55.4	40.3
	31.25	17.7	56.4	38.7
	62.50	17.4	51.0	33.6
	100.00	17.4	47.4	30.1
	200.00		44.8	n/a
	250.00		40.0	n/a
	300.00		36.5	n/a
	400.00		32.9	n/a
	500.00		28.3	n/a
	650.00		19.0	n/a

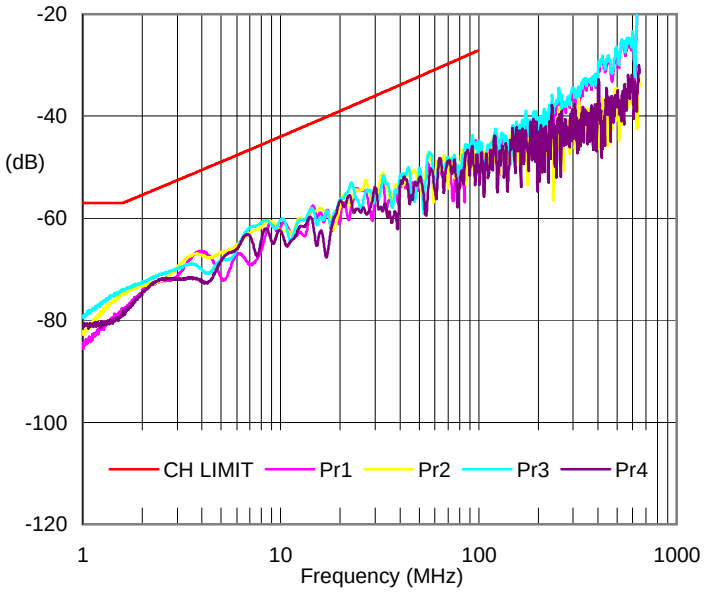
PSNEXT as measured from the**TELECOMMUNICATIONS ROOM (TR)**



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	81.5	16.7	45.3	28.6
Discrete Points	1.00	24.1	81.1	57.0
	4.00	19.3	69.8	50.5
	8.00	18.6	64.2	45.6
	10.00	17.5	61.5	44.0
	16.00	22.6	63.2	40.6
	20.00	17.7	56.7	39.0
	25.00	21.7	59.0	37.3
	31.25	22.6	58.3	35.7
	62.50	28.1	58.7	30.6
	100.00	21.9	49.0	27.1
	200.00		42.7	n/a
	250.00		37.6	n/a
	300.00		37.8	n/a
	400.00		30.8	n/a
	500.00		26.5	n/a
	650.00		21.4	n/a

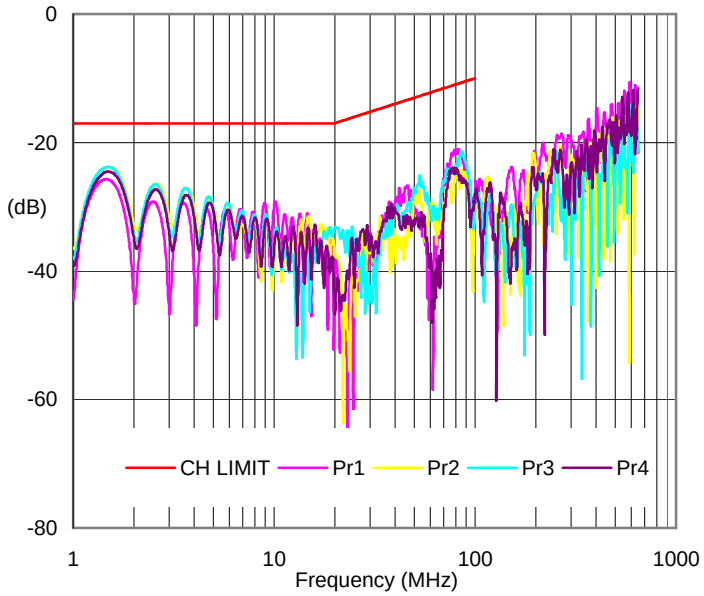
PSNEXT as measured from the**WORK AREA (WA)**



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	22.8	15.0	53.0	38.0
Discrete Points	1.00	22.1	79.1	57.0
	4.00	15.9	66.5	50.5
	8.00	15.3	60.9	45.6
	10.00	16.3	60.3	44.0
	16.00	17.4	58.0	40.6
	20.00	17.2	56.2	39.0
	25.00	17.2	54.6	37.3
	31.25	18.6	54.3	35.7
	62.50	18.1	48.7	30.6
	100.00	18.1	45.2	27.1
	200.00		41.8	n/a
	250.00		37.5	n/a
	300.00		35.1	n/a
	400.00		32.1	n/a
	500.00		27.5	n/a
	650.00		18.8	n/a

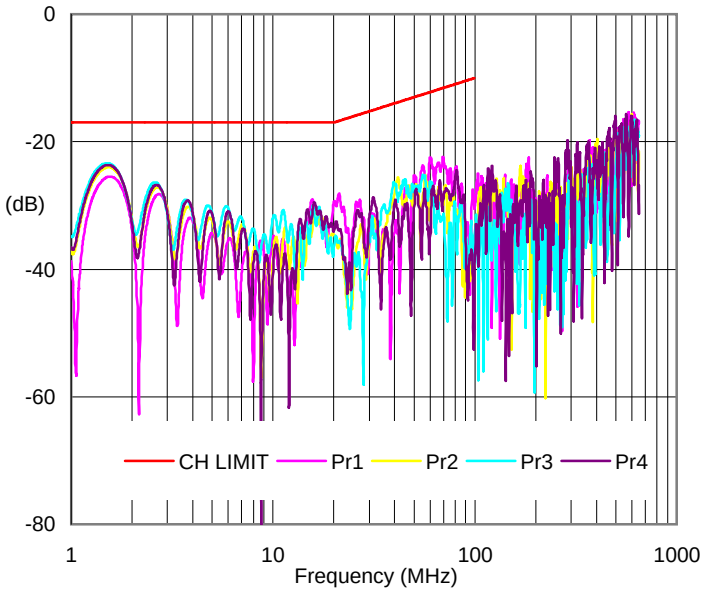
RL as measured from the**TELECOMMUNICATIONS ROOM (TR)**



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Measured Value (dB)	CH LIMIT Value (dB)
Swept Freq	1.5	6.8	23.8	17.0
Discrete Points	1.00	19.3	36.3	17.0
	4.00	12.8	29.8	17.0
	8.00	14.2	31.2	17.0
	10.00	12.8	29.8	17.0
	16.00	15.8	32.8	17.0
	20.00	16.3	33.3	17.0
	25.00	19.4	35.4	16.0
	31.25	22.7	37.8	15.1
	62.50	18.3	30.4	12.1
	100.00	18.3	28.3	10.0
	200.00		22.9	n/a
	250.00		20.6	n/a
	300.00		19.7	n/a
	400.00		15.5	n/a
	500.00		18.6	n/a
	650.00		11.6	n/a

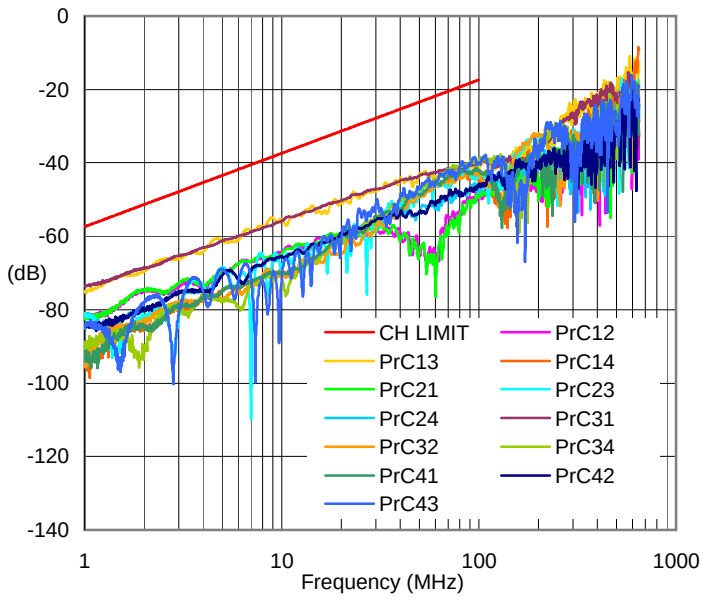
RL as measured from the**WORK AREA (WA)**



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Measured Value (dB)	CH LIMIT Value (dB)
Swept Freq	1.5	6.4	23.4	17.0
Discrete Points	1.00	17.8	34.8	17.0
	4.00	14.1	31.1	17.0
	8.00	16.7	33.7	17.0
	10.00	14.8	31.8	17.0
	16.00	12.5	29.5	17.0
	20.00	12.5	29.5	17.0
	25.00	17.6	33.6	16.0
	31.25	13.8	28.9	15.1
	62.50	13.0	25.0	12.1
	100.00	20.2	30.2	10.0
	200.00		28.9	n/a
	250.00		26.5	n/a
	300.00		24.1	n/a
	400.00		22.6	n/a
	500.00		17.9	n/a
	650.00		17.2	n/a

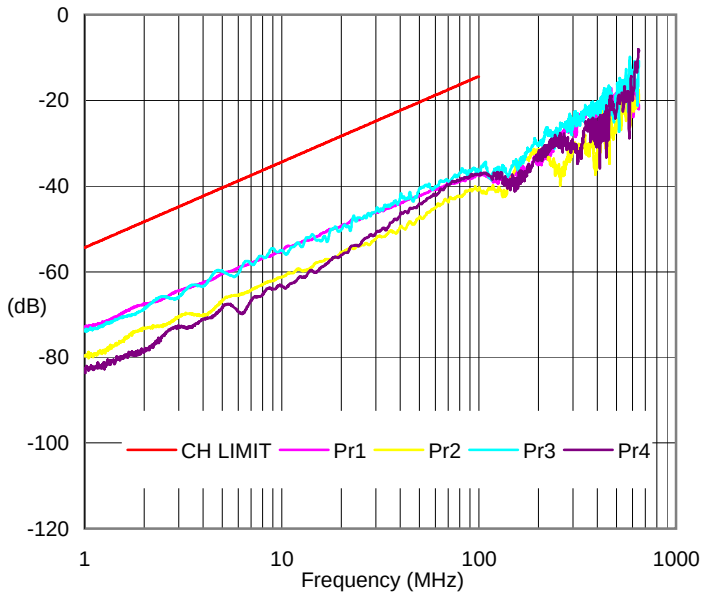
ELFEXT



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Measured Value (dB)	CH LIMIT Value (dB)
Swept Freq	8.8	16.4	54.9	38.5
Discrete Points	1.00	16.0	73.4	57.4
	4.00	17.7	63.1	45.4
	8.00	17.9	57.2	39.3
	10.00	17.8	55.2	37.4
	16.00	18.5	51.8	33.3
	20.00	18.9	50.3	31.4
	25.00	19.1	48.5	29.4
	31.25	19.6	47.1	27.5
	62.50	20.8	42.3	21.5
	100.00	21.7	39.1	17.4
	200.00		32.4	n/a
	250.00		30.6	n/a
	300.00		26.7	n/a
	400.00		22.5	n/a
	500.00		19.2	n/a
	650.00		8.8	n/a

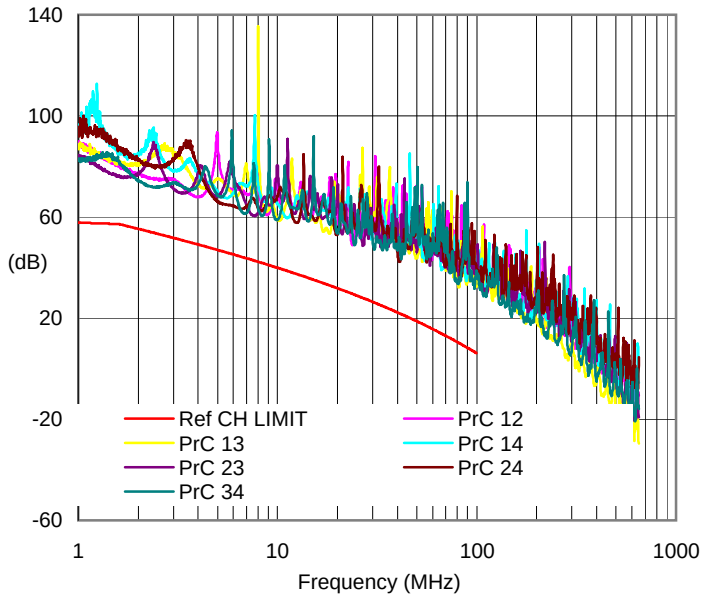
PSELFEXT



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	1.0	18.4	72.7	54.2
Discrete Points	1.00	18.4	72.8	54.4
	4.00	20.2	62.5	42.4
	8.00	20.1	56.4	36.3
	10.00	20.5	54.9	34.4
	16.00	20.7	51.1	30.3
	20.00	21.0	49.4	28.4
	25.00	21.0	47.4	26.4
	31.25	21.5	46.0	24.5
	62.50	21.3	39.7	18.5
	100.00	22.7	37.1	14.4
	200.00		30.0	n/a
	250.00		28.1	n/a
	300.00		25.7	n/a
	400.00		20.8	n/a
	500.00		18.2	n/a
	650.00		8.2	n/a

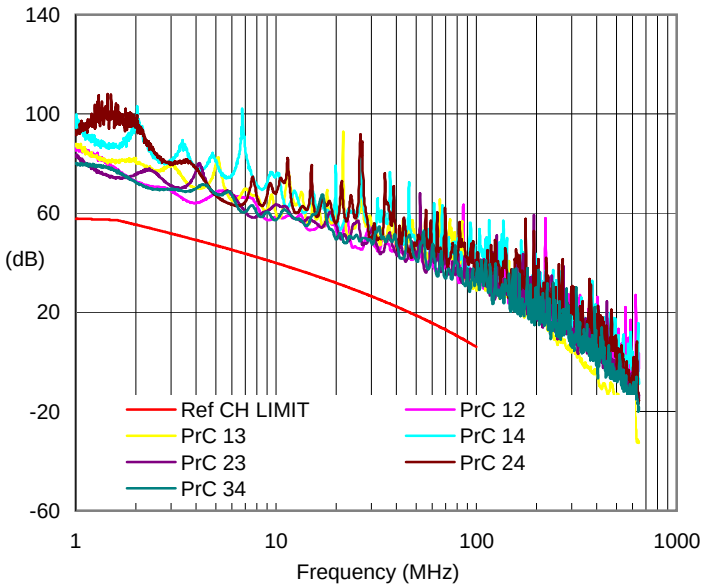
Pair-to-Pair ACR as measured from the TELECOMMUNICATIONS ROOM (TR)



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	6.8	17.5	61.4	44.0
Discrete Points	1.00	24.5	82.3	57.8
	4.00	19.0	68.1	49.0
	8.00	19.5	61.7	42.3
	10.00	18.9	58.8	39.9
	16.00	25.4	60.0	34.5
	20.00	21.4	53.2	31.8
	25.00	25.0	53.9	28.9
	31.25	25.5	51.3	25.9
	62.50	31.0	46.0	15.0
	100.00	28.2	34.2	6.1
	200.00		18.5	n/a
	250.00		10.6	n/a
	300.00		7.6	n/a
	400.00		-5.2	n/a
	500.00		-16.3	n/a
	650.00		-29.7	n/a

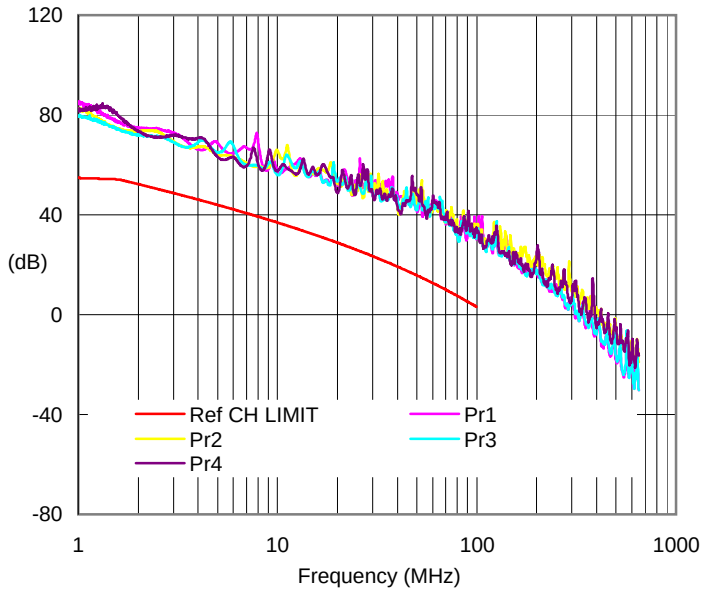
Pair-to-Pair ACR as measured from the WORK AREA (WA)



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	3.8	14.5	64.1	49.6
Discrete Points	1.00	22.0	79.8	57.8
	4.00	15.0	64.1	49.0
	8.00	16.3	58.6	42.3
	10.00	17.3	57.2	39.9
	16.00	19.5	54.0	34.5
	20.00	17.7	49.5	31.8
	25.00	17.5	46.4	28.9
	31.25	20.5	46.3	25.9
	62.50	21.7	36.7	15.0
	100.00	23.4	29.4	6.1
	200.00		18.1	n/a
	250.00		10.3	n/a
	300.00		3.9	n/a
	400.00		-5.2	n/a
	500.00		-14.8	n/a
	650.00		-32.6	n/a

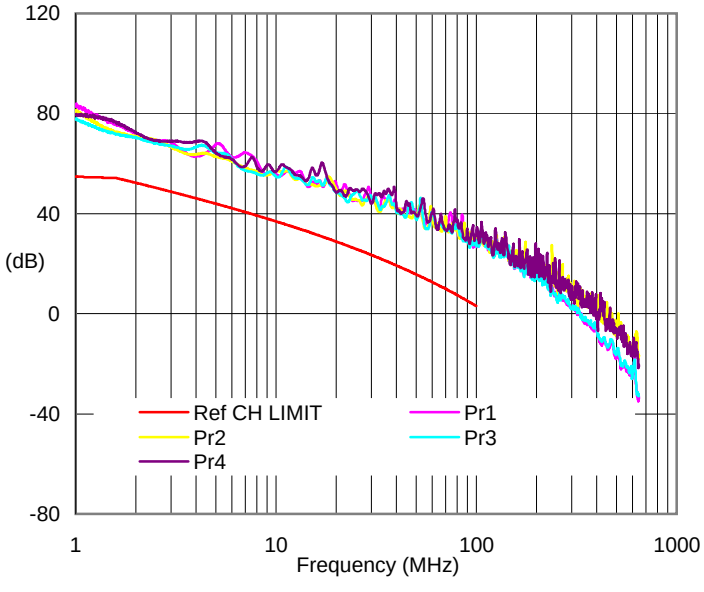
Power Sum (PS) ACR as measured from the TELECOMMUNICATIONS ROOM (TR)



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	6.8	18.1	59.1	41.0
Discrete Points	1.00	24.8	79.6	54.8
	4.00	20.1	66.2	46.1
	8.00	20.0	59.3	39.3
	10.00	19.1	56.0	36.9
	16.00	24.5	56.0	31.5
	20.00	19.9	48.7	28.8
	25.00	24.1	50.1	25.9
	31.25	25.6	48.4	22.9
	62.50	32.2	44.2	12.0
	100.00	27.9	31.0	3.1
	200.00		16.5	n/a
	250.00		7.8	n/a
	300.00		5.2	n/a
	400.00		-7.2	n/a
	500.00		-18.4	n/a
	650.00		-30.3	n/a

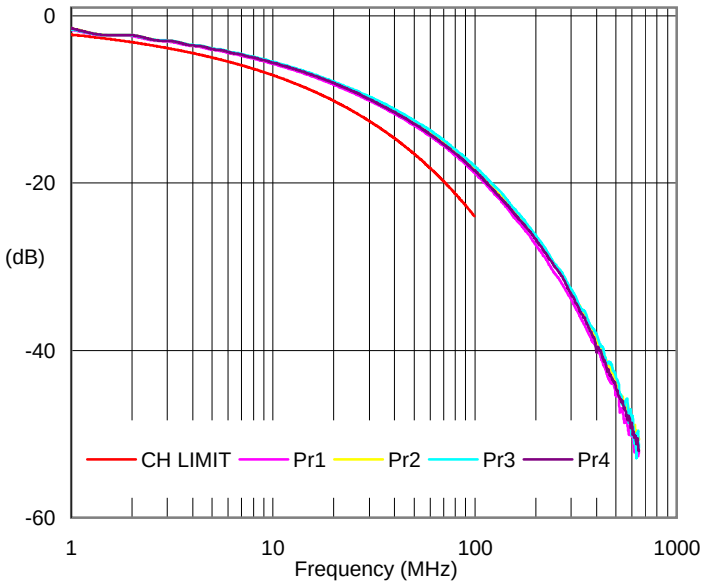
Power Sum (PS) ACR as measured from the WORK AREA (WA)



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Calculated Value (dB)	CH LIMIT Value (dB)
Swept Freq	3.8	16.5	63.0	46.6
Discrete Points	1.00	22.7	77.5	54.8
	4.00	16.8	62.9	46.1
	8.00	16.7	56.0	39.3
	10.00	17.9	54.8	36.9
	16.00	19.4	50.9	31.5
	20.00	19.6	48.4	28.8
	25.00	19.4	45.3	25.9
	31.25	21.4	44.3	22.9
	62.50	22.4	34.4	12.0
	100.00	24.1	27.2	3.1
	200.00		15.6	n/a
	250.00		7.7	n/a
	300.00		2.4	n/a
	400.00		-7.0	n/a
	500.00		-17.1	n/a
	650.00		-33.1	n/a

INSERTION LOSS (ATTN)



Worst Case Margin

	Frequency Point (MHz)	Calculated Margin (dB)	Measured Value (dB)	CH LIMIT Value (dB)
Swept Freq	1.37	0.36	2.26	2.62
Discrete Points	1.00	0.61	1.6	2.2
	4.00	0.86	3.6	4.5
	8.00	1.24	5.1	6.3
	10.00	1.38	5.7	7.1
	16.00	1.74	7.3	9.1
	20.00	1.95	8.2	10.2
	25.00	2.20	9.2	11.4
	31.25	2.51	10.3	12.9
	62.50	3.93	14.7	18.6
	100.00	5.22	18.8	24.0
	200.00		27.4	n/a
	250.00		30.9	n/a
	300.00		33.9	n/a
	400.00		40.2	n/a
	500.00		45.3	n/a
	650.00		52.1	n/a

GLOSSARY of TERMS

Calculated Margin: The minimum difference in dB between the measured value and the CH LIMIT value at the specifed frequency point for all tested pairs (CalculateMarginRL100MHz = MeasuredValueRL100MHz - CH LIMITValueRL100MHz (dB)).

Discrete Points: Specific reference points of interest in MHz within the swept frequencies.

Frequency Point: A specific frequency point in megahertz (MHz) for which the data indicated is applicable.

CH LIMIT Value: The calculated response CH LIMIT in dB at the indicated frequency point as calculated using applicable equations defined by the appropriate standard.

Measured Value: The worst case measured response in dB at the frequency indicated for all tested pairs.

Swept Freq: The band of measured values from 1 MHz to the upper frequency CH LIMIT as defined by the category of test.

Swept Freq (Margin): The minimum margin in dB detected across the Swept Frequency band.

Worst Case: A composite value calculated from the maximum response of each pair or pair combination at a given frequency. ($WorstCaseRL_{100MHz}$ = Max($Pr1RL_{100MHz}$,$Pr2RL_{100MHz}$,$Pr3RL_{100MHz}$,$Pr4RL_{100MHz}$)