

FCC PART 15, SUBPART B and C
TEST REPORT
for
VANTAGE WIRELESS COLOR CAMERA
MODEL: RC4CW

Prepared for

ITERIS, INC.
1700 CARNEGIE AVENUE, SUITE 100
SANTA ANA, CALIFORNIA 92705

Prepared by: _____

KYLE FUJIMOTO

Approved by: _____

JAMES ROSS

COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
(714) 579-0500

DATE: DECEMBER 20, 2007

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	16	2	2	2	17	17	56

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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested: Vantage Wireless Color Camera
Model: RC4CW
P/N: 493446001

Product Description: See Expository Statement

Modifications: The EUT was not modified in order to meet the specifications.

Manufacturer: Iteris, Inc.
1700 Carnegie Avenue, Suite 100
Santa Ana, California 92705

Test Date: November 28, 2007

Test Specifications: EMI requirements
CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15.209 and 15.249

Test Procedure: ANSI C63.4

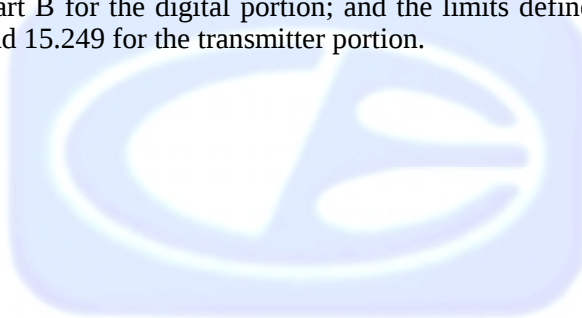
Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and Subpart C, section 15.207
2	Radiated RF Emissions, 10 kHz – 25000 MHz (Transmitter Portion)	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and 15.249.
3	Radiated RF Emissions, 10 kHz – 25000 MHz (Digital Portion)	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Vantage Wireless Color Camera, Model: RC4CW. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.207, 15.209, and 15.249 for the transmitter portion.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Iteris, Inc.

William Lee Senior Project Engineer

Compatible Electronics, Inc.

Kyle Fujimoto Test Engineer

James Ross Test Engineer

2.4 Date Test Sample was Received

The test sample was received on November 28, 2007.

2.5 Disposition of the Test Sample

The sample was returned to Iteris, Inc. on November 28, 2007.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4 2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description Of Test Configuration - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

Transmit Mode: The Vantage Wireless Color Camera, Model: RC4CW (EUT) was connected to an antenna and the AC public mains via its output and power ports, respectively. The EUT was transmitting on a continuous basis to a receiver. The receiver was connected to an LCD monitor and AC adapter via its output and power ports, respectively. The LCD monitor was displaying real time images from the EUT.

The final radiated as well as conducted data was taken in the both modes above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

Cable 1

This is a 10-centimeter braid shielded cable connecting the EUT to the antenna. The cable has an SMA cable at each end. The shield of the cable was grounded to the chassis via the connectors.

Cable 2

This is a 1.5-meter unshielded cable connecting the EUT to the AC Public Mains. The cable has a Deutsch connector at the EUT end and a 3-prong AC connector at the AC Public Mains end.

Cable 3

This is a 2-meter braid shielded cable connecting the receiver to the LCD monitor. The cable has a BNC connector at each end. The shield of the cable was grounded to the chassis via the connectors.

Cable 4

This is a 2-meter unshielded cable connecting the LCD monitor to the AC Adapter. The cable has a 1/8 inch power connector at the EUT end and is hard wired into the AC Adapter. The cable has a molded ferrite at the LCD monitor side.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
VANTAGE WIRELESS COLOR CAMERA (EUT)	ITERIS, INC.	RC4CW	P/N: 493446001	OVHCAM-RZ4W
6 dB ATTENUATOR	E-MECA	662-06-1/R	N/A	N/A
4 CHANNEL RECEIVER MODULE	ITERIS	WRCVR4	P000071376677	DoC
LCD MONITOR	PROVIEW	300	FSJ26C0445760	DoC
AC ADAPTER FOR LCD MONITOR	LINEARITY ELECTRONICS	LAD3018MB4	C2006470200045F	N/A

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08784	June 4, 2007	June 4, 2008
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22279	June 4, 2007	June 4, 2008
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	June 4, 2007	June 4, 2008
EMI Receiver	Rohde & Schwarz	ESIB40	100172	November 27, 2006	Nov. 27, 2008
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Preamplifier	Com-Power	PA-103	1582	January 16, 2007	Jan. 16, 2008
Biconical Antenna	Com Power	AB-900	15251	March 8, 2007	March 8, 2008
Log Periodic Antenna	Com Power	AL-100	16241	July 9, 2007	July 9, 2008
Loop Antenna	Com Power	AL-130	17089	September 24, 2007	Sept. 24, 2008
Horn Antenna	Com Power	AH-118	10073	July 17, 2006	July 17, 2008
Microwave Preamplifier	Com Power	PA-122	2120	February 27, 2007	Feb. 27, 2008
Microwave Preamplifier	Com Power	PA-840	711919	February 27, 2007	Feb. 27, 2008
Horn Antenna	Com Power	AH826	71957	December 12, 2005	Dec. 12, 2007
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
Transient Limiter	Seaward	252A910	1	September 19, 2007	September 19, 2008
LISN	Com Power	LI-215	12082	September 26, 2007	September 26, 2008
LISN	Com Power	LI-215	12078	September 26, 2007	September 26, 2008

6. TEST SITE DESCRIPTION**6.1 Test Facility Description**

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on metal pole, which was directly grounded to earth ground.

The EUT was grounded through the safety ground of the power cord.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in EN 55022. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.207.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer and EMI Receiver were used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-103 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier Models: PA-122 and PA-840 were used for frequencies above 1 GHz. The spectrum analyzer and EMI Receiver were used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer or EMI Receiver records the highest measured reading over all the sweeps.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the EMI Receiver to keep the amplitude reading calibrated.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 25 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

7.1.3 Radiated Emissions (Spurious and Harmonics) Test (Continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain the final test data. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.

8. CONCLUSIONS

The Vantage Wireless Color Camera, Model: RC4CW meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.207, 15.209, and 15.249 for the transmitter portion.



APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

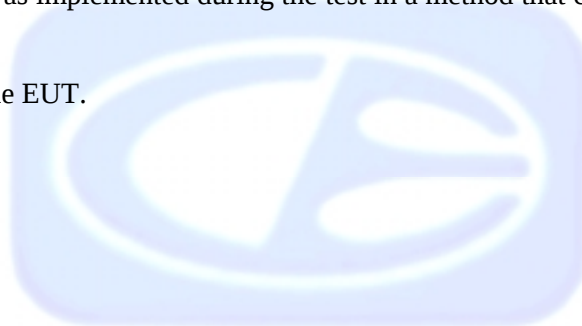
MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 or FCC Class B specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT.



APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

ADDITIONAL MODELS COVERED UNDER THIS REPORT

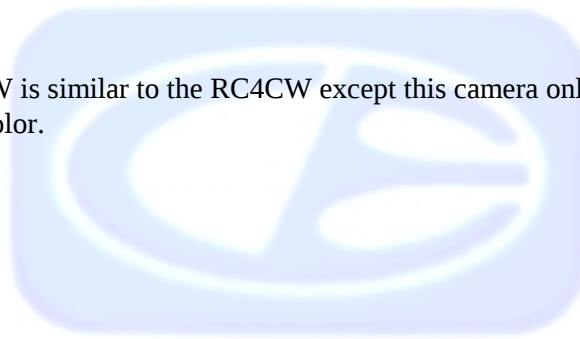
USED FOR THE PRIMARY TEST

Vantage Wireless Color Camera
Model: RC4CW
P/N: 493446001

ADDITIONAL MODEL COVERED UNDER THIS REPORT

Vantage Wireless Monochrome Camera
Model: RC4MW
P/N: 493448001

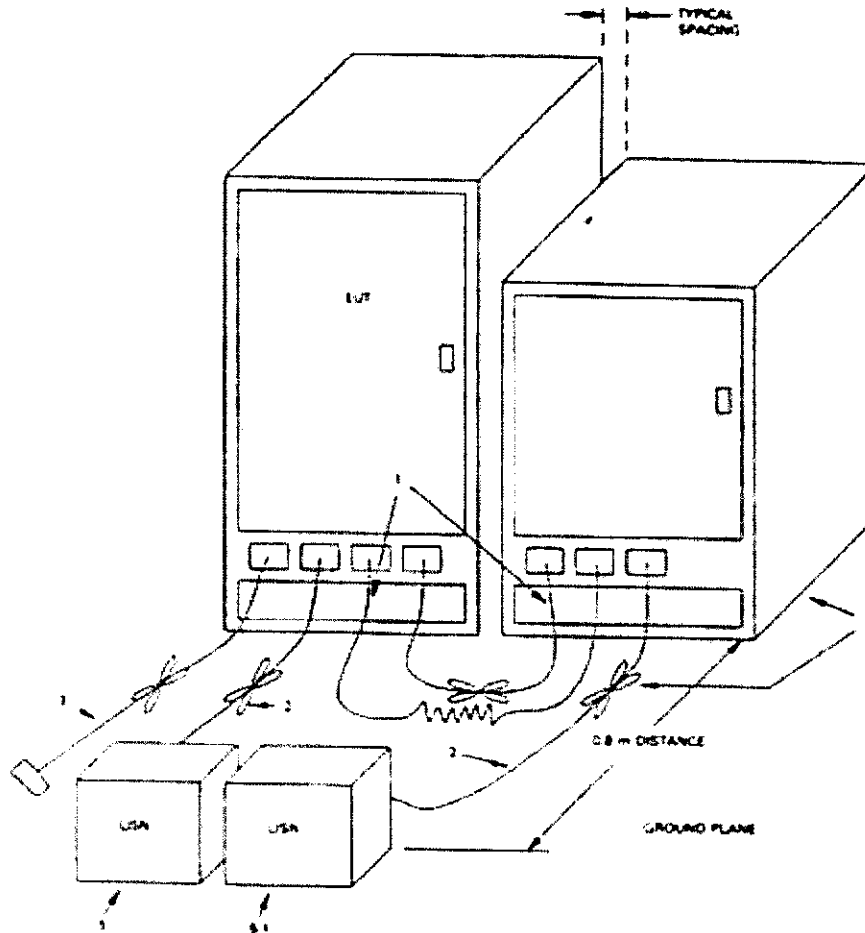
Per the client, the Model: RC4MW is similar to the RC4CW except this camera only supports black and white and does not have any oscillator for color.



APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP



Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

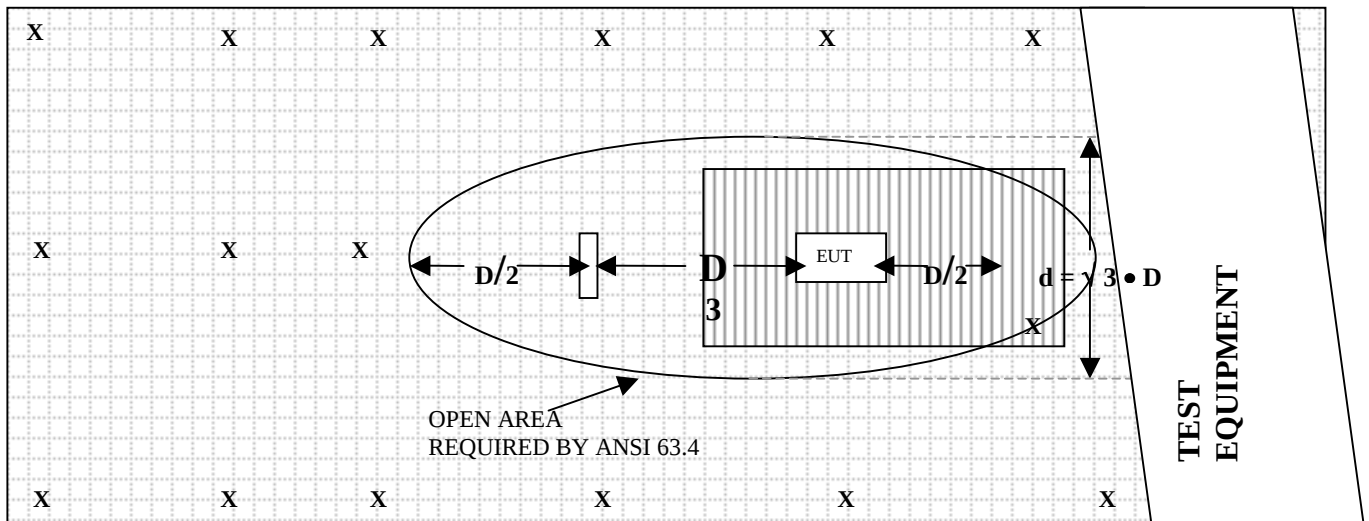
Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

FIGURE 2: PLOT MAP AND LAYOUT OF 3 METER RADIATED SITE

OPEN LAND > 15 METERS

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

X	= GROUND RODS		= GROUND SCREEN
D	= TEST DISTANCE (meters)		= WOOD COVER

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15251

CALIBRATION DATE: MARCH 8, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.9	100	10.6
35	12.1	120	12.5
40	10.7	140	11.4
45	10.9	160	12.5
50	13.4	180	15.1
60	11.6	200	16.1
70	9.5	250	14.3
80	6.9	275	18.2
90	6.6	300	20.5

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16241

CALIBRATION DATE: JULY 9, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	15.20	700	19.90
400	15.40	800	22.30
500	17.00	900	22.30
600	19.10	1000	24.20

COM-POWER PA-103**PREAMPLIFIER**

S/N: 1582

CALIBRATION DATE: JANUARY 16, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	33.0	300	33.0
40	33.0	350	32.7
50	33.0	400	32.7
60	33.0	450	32.5
70	33.1	500	32.5
80	33.1	550	32.4
90	33.1	600	32.4
100	33.1	650	32.4
125	33.2	700	32.3
150	32.9	750	32.1
175	33.1	800	32.1
200	32.9	850	32.3
225	32.9	900	32.1
250	32.9	950	32.2
275	32.9	1000	32.1

COM-POWER PA-122**PREAMPLIFIER**

S/N: 2120

CALIBRATION DATE: FEBRUARY 27, 2007

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	36.0	10.0	34.2
1.5	34.7	10.5	34.0
2.0	34.0	11.0	33.1
2.5	33.9	11.5	32.8
3.0	33.7	12.0	33.7
3.5	32.7	12.5	34.0
4.0	33.4	13.0	35.0
4.5	33.5	13.5	34.8
5.0	33.6	14.0	36.1
5.5	34.3	14.5	36.1
6.0	34.3	15.0	36.0
6.5	34.7	15.5	36.3
7.0	35.5	16.0	36.0
7.5	35.5	16.5	35.8
8.0	34.1	17.0	35.5
8.5	34.1	17.5	35.1
9.0	34.3	18.0	34.0
9.5	34.4		

COM POWER AH-118**HORN ANTENNA**

S/N: 10073

CALIBRATION DATE: JULY 17, 2006

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	25.331	10.0	42.391
1.5	27.507	10.5	39.194
2.0	31.581	11.0	38.504
2.5	30.906	11.5	40.724
3.0	30.276	12.0	41.079
3.5	30.396	12.5	41.014
4.0	30.881	13.0	41.201
4.5	32.770	13.5	42.335
5.0	34.067	14.0	43.248
5.5	33.914	14.5	45.639
6.0	34.028	15.0	43.197
6.5	35.779	15.5	41.751
7.0	38.347	16.0	42.462
7.5	39.096	16.5	41.908
8.0	39.377	17.0	40.277
8.5	38.646	17.5	48.117
9.0	37.438	18.0	54.113
9.5	38.403		

COM-POWER PA-840**MICROWAVE PREAMPLIFIER**

S/N: 711919

CALIBRATION DATE: FEBRUARY 27, 2007

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	28.3	29.5	26.1
18.5	28.0	30.0	26.2
19.0	28.0	30.5	25.9
19.5	27.7	31.0	26.2
20.0	27.7	31.5	26.5
20.5	27.9	32.0	26.5
21.0	27.7	32.5	25.4
21.5	26.5	33.0	25.8
22.0	25.9	33.5	25.0
22.5	26.8	34.0	25.2
23.0	27.2	34.5	25.1
23.5	25.9	35.0	24.7
24.0	25.5	35.5	24.6
24.5	26.4	36.0	24.7
25.0	27.5	36.5	25.2
25.5	27.7	37.0	24.7
26.0	27.8	37.5	25.8
26.5	26.3	38.0	26.4
27.0	26.0	38.5	27.9
27.5	25.9	39.0	27.7
28.0	26.2	39.5	27.5
28.5	26.2	40.0	25.4
29.0	26.2		

COM-POWER AH826

HORN ANTENNA

S/N: 71957

CALIBRATION DATE: DECEMBER 12, 2005

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	32.4	22.5	32.0
18.5	31.4	23.0	32.2
19.0	31.5	23.5	31.2
19.5	30.9	24.0	33.1
20.0	33.1	24.5	33.1
20.5	33.4	25.0	33.4
21.0	32.1	25.5	33.4
21.5	32.5	26.0	32.9
22.0	32.3	26.5	33.6

COM-POWER AL-130**LOOP ANTENNA****S/N: 17089****CALIBRATION DATE: SEPTEMBER 24, 2007**

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.27	10.23
0.01	-41.96	9.54
0.02	-41.73	9.77
0.05	-42.0	9.5
0.07	-41.5	10.0
0.1	-41.43	10.07
0.2	-43.9	7.9
0.3	-41.43	10.07
0.5	-41.40	10.1
0.7	-41.13	10.37
1	-40.83	10.67
2	-40.30	11.20
3	-40.60	10.90
4	-41.00	10.50
5	-40.20	11.30
10	-40.40	11.10
15	-41.67	9.83
20	-41.10	10.40
25	-42.80	8.70
30	-42.80	8.70



FRONT VIEW

ITERIS, INC.
VANTAGE WIRELESS COLOR CAMERA
MODEL: RC4CW

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB A – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

ITERIS, INC.

VANTAGE WIRELESS COLOR CAMERA

MODEL: RC4CW

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB A – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

ITERIS, INC.
VANTAGE WIRELESS COLOR CAMERA
MODEL: RC4CW

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB A – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

ITERIS, INC.
VANTAGE WIRELESS COLOR CAMERA
MODEL: RC4CW

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB A – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

ITERIS, INC.
VANTAGE WIRELESS COLOR CAMERA
MODEL: RC4CW

FCC SUBPART B AND C – CONDUCTED EMISSIONS – LAB A

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

ITERIS, INC.
VANTAGE WIRELESS COLOR CAMERA
MODEL: RC4CW
FCC SUBPART B AND C – CONDUCTED EMISSIONS – LAB A

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

Iteris, Inc.
Vantage Wireless Color Camera
Model: RC4CW

Date: 11/28/07
Lab: A
Tested By: Kyle Fujimoto

Low Channel Transmit Mode

[illegible]

Iteris, Inc.
Vantage Wireless Color Camera
Model: RC4CW

Date: 11/28/07
Lab: A
Tested By: Kyle Fujimoto

Low Channel Transmit Mode

[illegible]

Iteris, Inc.
Vantage Wireless Color Camera
Model: RC4CW

Date: 11/28/07
Lab: A
Tested By: Kyle Fujimoto

Middle Channel Transmit Mode

[illegible]

Iteris, Inc.
Vantage Wireless Color Camera
Model: RC4CW

Date: 11/28/07
Lab: A
Tested By: Kyle Fujimoto

Middle Channel Transmit Mode

[illegible]

Iteris, Inc.
Vantage Wireless Color Camera
Model: RC4CW

Date: 11/28/07
Lab: A
Tested By: Kyle Fujimoto

High Channel Transmit Mode

[illegible]

Iteris, Inc.
Vantage Wireless Color Camera
Model: RC4CW

Date: 11/28/07
Lab: A
Tested By: Kyle Fujimoto

High Channel Transmit Mode

[illegible]



Test Location : Compatible Electronics Page : 1/1
 Customer : Iteris, Inc. Date : 11/28/2007
 Manufacturer : Iteris, Inc. Time : 13:13:43
 Eut name : Vantage Wireless Color Camera Lab : A
 Model : RZ4CW Test Distance : 3 Meters
 Serial # : N/A
 Specification : FCC B
 Distance correction factor ($20 * \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : Test Type: Radiated Emissions Below 1 GHz
 Test Range: 10 kHz to 1 GHz
 Vertical and Horizontal Polarizations
 Tested By: Kyle Fujimoto

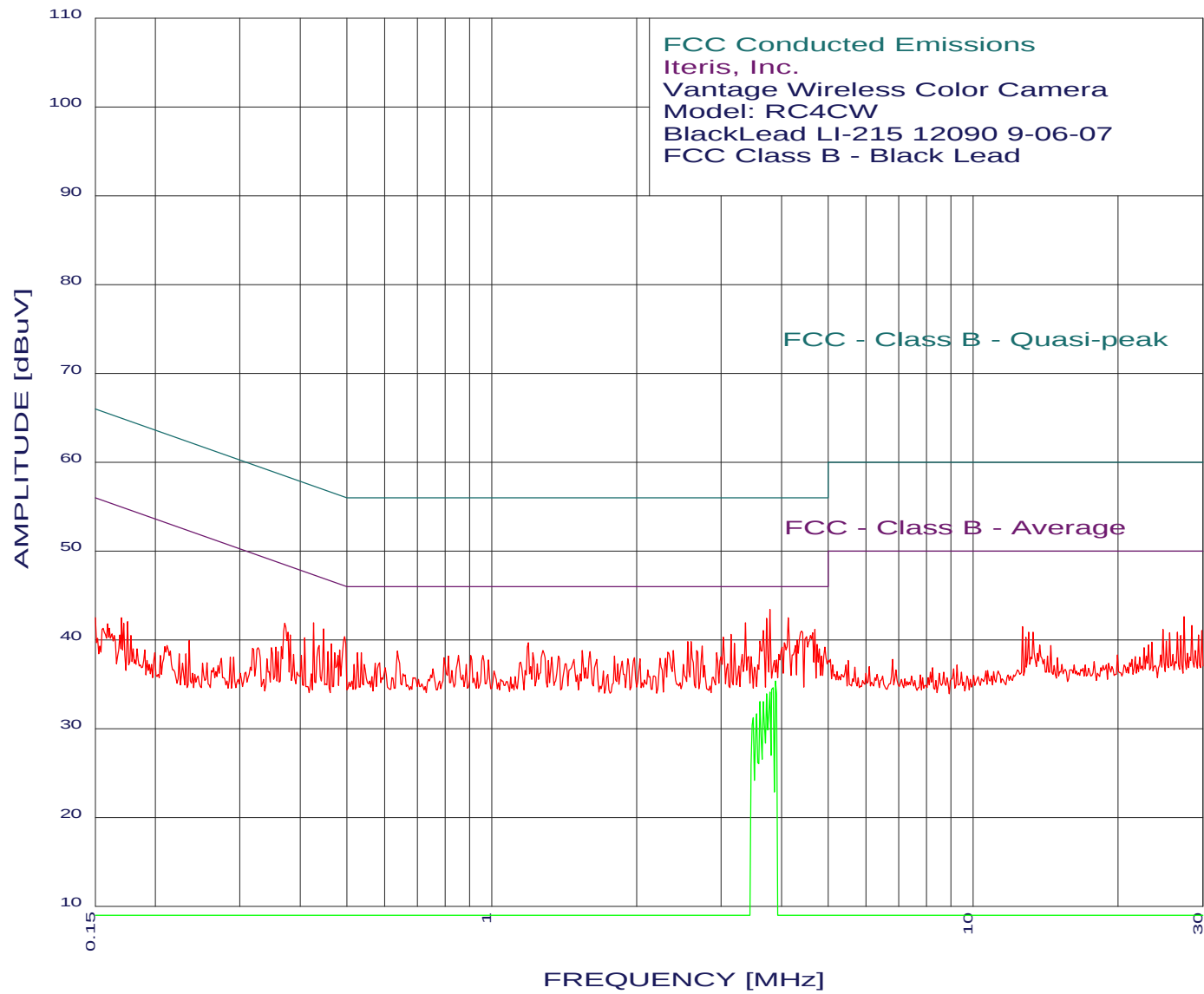
Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	39.780	50.10	0.80	10.76	33.00	28.66	40.00	-11.34
2V	56.700	49.10	1.00	12.16	33.00	29.26	40.00	-10.74
3H	84.315	50.00	1.26	6.77	33.10	24.92	40.00	-15.08
4H	97.011	44.10	1.48	9.45	33.10	21.93	43.50	-21.57
5H	118.709	41.90	1.75	12.39	33.18	22.86	43.50	-20.64
6V	118.778	51.80	1.75	12.39	33.18	32.77	43.50	-10.73
7V	121.589	47.10	1.78	12.41	33.19	28.09	43.50	-15.41
8V	123.995	45.50	1.79	12.27	33.20	26.36	43.50	-17.14
9V	124.979	51.40	1.80	12.21	33.20	32.21	43.50	-11.29
10H	137.224	42.10	2.00	11.54	33.05	22.60	43.50	-20.90
11V	143.367	46.50	2.10	11.60	32.97	27.22	43.50	-16.28
12V	162.486	50.20	2.25	12.84	33.00	32.29	43.50	-11.21
13V	224.196	45.90	2.79	15.18	32.90	30.97	46.00	-15.03
14H	239.000	44.70	2.80	14.66	32.90	29.26	46.00	-16.74
15H	240.370	46.50	2.80	14.62	32.90	31.02	46.00	-14.98
16V	250.060	39.20	2.80	14.31	32.90	23.41	46.00	-22.59
17V	260.406	40.80	2.93	15.97	32.90	26.80	46.00	-19.20
18V	267.026	52.30	3.01	17.00	32.90	39.40	46.00	-6.60
19H	274.462	36.40	3.09	18.12	32.90	24.71	46.00	-21.29
20V	276.546	49.00	3.11	18.35	32.91	37.55	46.00	-8.45
21H	276.546	46.30	3.11	18.35	32.91	34.85	46.00	-11.15
22V	300.130	36.10	3.20	15.20	33.00	21.50	46.00	-24.50
23H	314.680	51.80	3.32	15.23	32.91	37.45	46.00	-8.55
24V	320.740	31.90	3.37	15.25	32.87	17.65	46.00	-28.35
25H	324.188	48.00	3.40	15.25	32.85	33.81	46.00	-12.19
26H	401.180	40.90	3.91	15.42	32.69	27.53	46.00	-18.47
27V	433.878	34.50	4.04	15.98	32.56	21.96	46.00	-24.04
28H	498.898	41.00	4.59	16.98	32.50	30.07	46.00	-15.93
29V	500.905	39.50	4.61	17.02	32.50	28.63	46.00	-17.37
30H	564.496	42.00	5.15	18.40	32.40	33.15	46.00	-12.85
31V	726.009	36.30	6.11	20.56	32.19	30.77	46.00	-15.23
32H	739.782	35.10	6.22	20.89	32.14	30.07	46.00	-15.93

CONDUCTED EMISSIONS

DATA SHEETS

EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average

11/28/2007 14:49:27





**COMPATIBLE
ELECTRONICS**

11/28/2007

14:49:27

Iteris, Inc.

Vantage Wireless Color Camera

Model: RC4CW

FCC Class B - Black Lead

TEST ENGINEER : Kyle Fujimoto

49 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	3.781	43.44	46.00	-2.56*
2	4.137	42.45	46.00	-3.55
3	3.722	42.43	46.00	-3.57*
4	3.365	41.92	46.00	-4.08
5	4.696	41.17	46.00	-4.83
6	3.663	41.03	46.00	-4.97*
7	4.408	40.96	46.00	-5.04
8	4.648	40.77	46.00	-5.23
9	3.141	40.61	46.00	-5.39
10	0.426	41.93	47.33	-5.40
11	4.504	40.36	46.00	-5.64
12	3.027	40.31	46.00	-5.69
13	0.447	41.23	46.93	-5.70
14	0.494	40.33	46.09	-5.76
15	4.316	39.95	46.00	-6.05
16	3.605	39.83	46.00	-6.17*
17	2.596	39.79	46.00	-6.21
18	2.554	39.79	46.00	-6.21
19	1.191	39.65	46.00	-6.35
20	3.192	39.61	46.00	-6.39
21	4.748	39.47	46.00	-6.53
22	0.371	41.83	48.47	-6.65
23	4.272	39.35	46.00	-6.65
24	2.736	39.30	46.00	-6.70
25	4.928	39.18	46.00	-6.82
26	4.008	39.14	46.00	-6.86
27	4.799	38.97	46.00	-7.03
28	0.464	39.53	46.62	-7.09
29	2.665	38.79	46.00	-7.21
30	2.384	38.78	46.00	-7.22
31	1.544	38.76	46.00	-7.24
32	1.276	38.76	46.00	-7.24
33	0.637	38.74	46.00	-7.26
34	1.603	38.66	46.00	-7.34
35	27.431	42.62	50.00	-7.38
36	2.322	38.58	46.00	-7.42
37	0.484	38.83	46.27	-7.45
38	1.217	38.55	46.00	-7.45
39	0.409	40.23	47.68	-7.45
40	0.535	38.53	46.00	-7.47
41	0.527	38.53	46.00	-7.47
42	2.932	38.50	46.00	-7.50
43	3.311	38.32	46.00	-7.68
44	0.381	40.53	48.25	-7.72
45	0.958	38.25	46.00	-7.75
46	0.904	38.25	46.00	-7.75
47	0.853	38.24	46.00	-7.76
48	0.438	39.33	47.11	-7.78
49	4.851	38.17	46.00	-7.83

*Please See the Average Readings on the Next Page and on the Plot

**COMPATIBLE
ELECTRONICS**

11/28/2007

14:49:27

Iteris, Inc.

Vantage Wireless Color Camera

Model: RC4CW

FCC Class B - Black Lead

TEST ENGINEER : Kyle Fujimoto

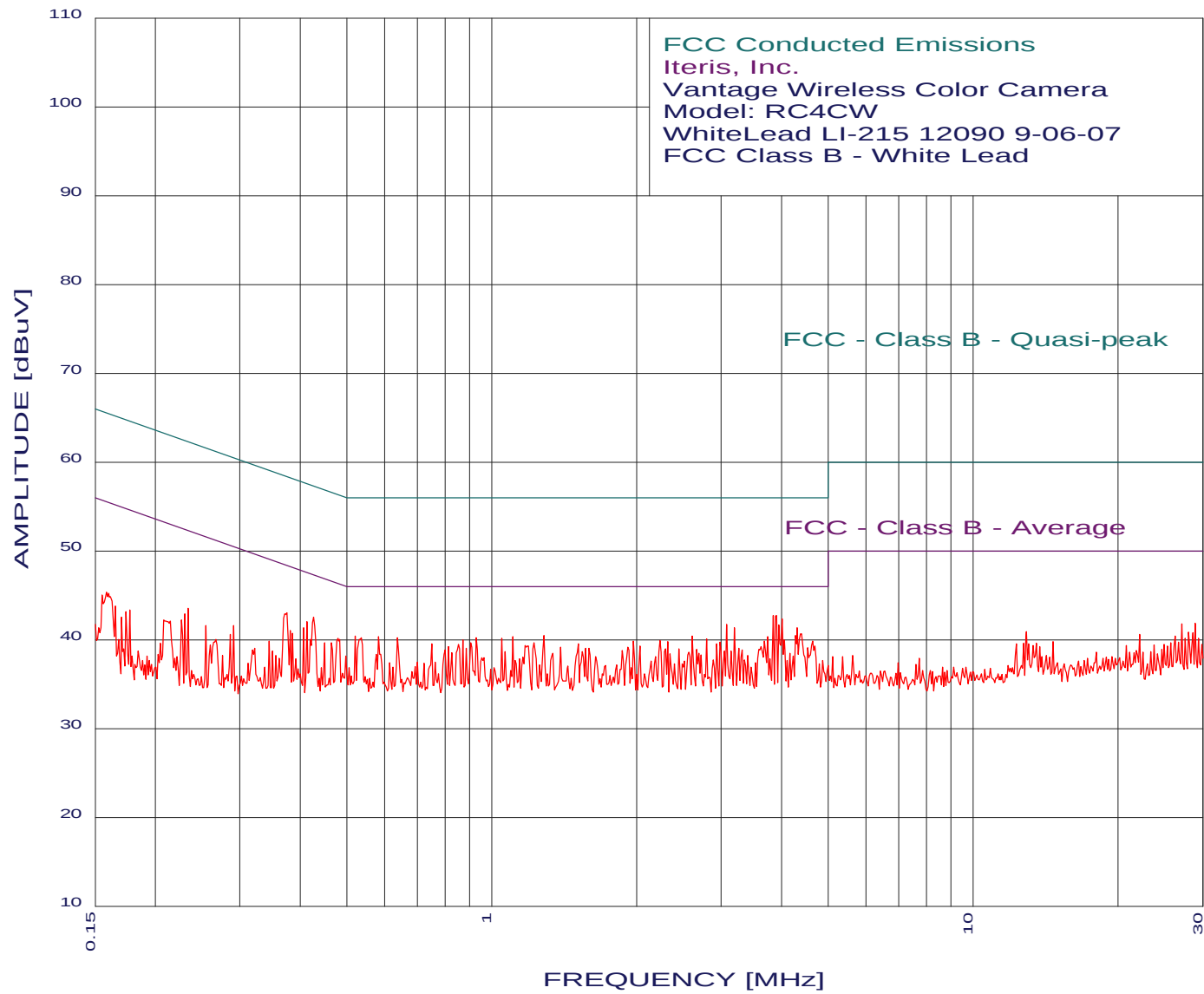
8 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	3.882	35.33	46.00	-10.67
2	3.841	34.59	46.00	-11.41
3	3.781	34.11	46.00	-11.89
4	3.722	33.93	46.00	-12.07
5	3.663	33.06	46.00	-12.94
6	3.605	33.01	46.00	-12.99
7	3.547	31.67	46.00	-14.33
8	3.492	31.23	46.00	-14.77

EMISSION LEVEL [dBuV] PEAK
Graph for Peak

11/28/2007 14:52:22





**COMPATIBLE
ELECTRONICS**

11/28/2007

14:52:22

Iteris, Inc.

Vantage Wireless Color Camera

Model: RC4CW

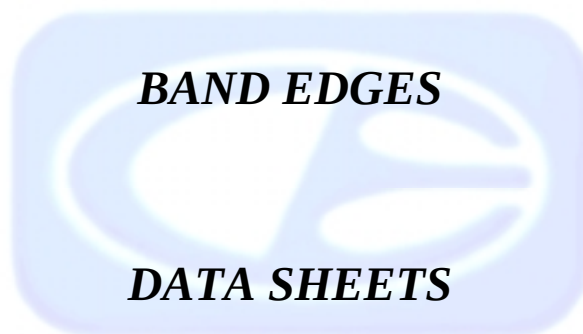
FCC Class B - White Lead

TEST ENGINEER : Kyle Fujimoto

50 highest peaks above -50.00 dB of FCC - Class B - Average limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	3.903	42.74	46.00	-3.26
2	3.841	42.74	46.00	-3.26
3	4.008	42.34	46.00	-3.66
4	3.075	41.71	46.00	-4.29
5	3.945	41.64	46.00	-4.36
6	4.316	41.35	46.00	-4.65
7	3.192	41.31	46.00	-4.69
8	0.426	42.53	47.33	-4.80
9	4.408	40.66	46.00	-5.34
10	0.375	43.03	48.38	-5.36
11	1.283	40.46	46.00	-5.54
12	0.413	42.03	47.59	-5.56
13	0.521	40.43	46.00	-5.57
14	2.610	40.39	46.00	-5.61
15	1.106	40.35	46.00	-5.65
16	3.741	40.33	46.00	-5.67
17	0.583	40.33	46.00	-5.67
18	0.929	40.25	46.00	-5.75
19	0.637	40.24	46.00	-5.76
20	0.535	40.23	46.00	-5.77
21	1.049	40.15	46.00	-5.85
22	2.796	40.10	46.00	-5.90
23	4.050	39.95	46.00	-6.05
24	0.872	39.94	46.00	-6.06
25	2.238	39.88	46.00	-6.12
26	1.971	39.87	46.00	-6.13
27	4.648	39.87	46.00	-6.13
28	3.683	39.83	46.00	-6.17
29	2.322	39.78	46.00	-6.22
30	0.479	40.13	46.36	-6.23
31	2.979	39.71	46.00	-6.29
32	1.223	39.65	46.00	-6.35
33	0.904	39.65	46.00	-6.35
34	0.406	41.33	47.72	-6.39
35	1.512	39.56	46.00	-6.44
36	0.751	39.54	46.00	-6.46
37	2.932	39.50	46.00	-6.50
38	0.853	39.44	46.00	-6.56
39	1.172	39.35	46.00	-6.65
40	2.034	39.27	46.00	-6.73
41	0.814	39.24	46.00	-6.76
42	3.624	39.23	46.00	-6.77
43	1.918	39.17	46.00	-6.83
44	1.389	39.16	46.00	-6.84
45	4.528	39.06	46.00	-6.94
46	1.594	39.06	46.00	-6.94
47	1.569	39.06	46.00	-6.94
48	0.885	39.05	46.00	-6.95
49	3.260	39.02	46.00	-6.98
50	0.464	39.63	46.62	-6.99





Test Location : Compatible Electronics
Customer : Iteris, Inc.
Manufacturer : Iteris, Inc.
Eut name : Vantage Wireless Color Camera
Model : RZ4CW
Serial # : N/A
Specification : FCC B
Distance correction factor ($20 * \log(\text{test}/\text{spec})$) : 0.00
Test Mode : FCC 15.249 - Vertical and Horizontal Polarization
Band Edges - Readings #1 to #4 = Low Channel
Readings #5 to #8 = High Channel
Tested By: Kyle Fujimoto

Page : 1/1
Date : 11/28/2007
Time : 10:21:27
Lab : A
Test Distance : 3 Meters

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	2400.000Pk	55.10	4.77	31.03	33.92	56.98	54.00	2.98
2V	2399.982Avg	35.68	4.77	31.03	33.92	37.56	54.00	-16.44
3H	2400.002Pk	47.30	4.77	31.03	33.92	49.18	54.00	-4.82
4H	2399.965Avg	34.35	4.77	31.03	33.92	36.23	54.00	-17.77
5V	2483.500Pk	47.00	4.96	30.93	33.90	48.99	54.00	-5.01
6V	2483.500Avg	38.03	4.96	30.93	33.90	40.02	54.00	-13.98
7H	2483.500Pk	42.20	4.96	30.93	33.90	44.19	54.00	-9.81
8H	2483.501Avg	33.25	4.96	30.93	33.90	35.24	54.00	-18.76