FCC PART 15 Subpart C

EMI MEASUREMENT AND TEST REPORT

For

Continental Conair Limited

35/F Standard Chartered Tower
Millennium City, 388 Kwun Tong Road
Kwun Tong, Kowloon, HK

FCC ID: LBBGH3100H

2004-04-22

This Report Concerns:	Equipment Type:
☒ Original Report	2.4GHz Cordless Phone

Test Engineer:	Ling Zhang /
Report No.:	R0403232(Handset)
Test Date:	2004-04-08
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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The Continental Conair Limited's product, model name: GH3150(XXXXX), GH3110(XXXXX), GH301WCS and GH3100(XXXXX), where 'X' may be some alphabet representing color code and packing information, the "EUT" as referred to in this report are Handset, 2.4GHz Cordless Phone. The EUT was composed of two parts, one is a Handset and the other is a Base. This report is for Handset only.

GH3150(XXXXX) which measures approximately 210mmL x 55mmW x 40mmH.
GH3110(XXXXX) which measures approximately 210mmL x 55mmW x 40mmH.
GH3100(XXXXX) which measures approximately 210mmL x 55mmW x 30mmH.

GH3150(XXXXX) and GH3110(XXXXX)'s Handset are identical in all design.

GH3100(XXXXX) and GH3150(XXXXX)'s handset are identical in construction, dimensions, and electrical circuits. The main modification for GH3100(XXXXX) is the removal of additional Caller ID and answer machine feature, Due to this change, Handset Main PCB was changed and some components were removed on the handset unit.

** The test data gathered are from production sample, serial number: GH3150OR1/GH3110R1/GH3100R1, provided by the manufacturer.*

Objective

This document is a test report based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 - 2001.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, section 15.205, 15.207, 15.249, 15.203 and 15.209 rules.

Related Submittal(s)/Grant(s)

No Related Submittals

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4 - 2001, 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. All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp.

Test Facility

The Open Area Test site used by Bay Area Compliance Laboratory Corporation to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Sunnyvale, California, USA.

Test site at Bay Area Compliance Laboratory Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules and Article 8 of the VCCI regulations. The facility also complies with the test methods and procedures set forth in ANSI C63.4-2001.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-1298 and R-1234. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratory Corporation is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (NVLAP). The scope of the accreditation covers the FCC Method - 47 CFR Part 15 - Digital Devices, CISPR 22:1997 and AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment test methods under NVLAP Lab Code 200167-0.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The EUT was configured for testing according to ANSI C63.4-2001.

Handset being tested: The Handset unit was placed on the wooden table and tested in three orthogonal axis. The Low and high channels were tested. The handset was transmitting to and receiving from the Base unit. The EUT was investigated for emissions while off hook. The radiated data was taken in this mode of operation. All initial and final investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the section of configuration of test system.

Equipment Modifications

No modifications were made to the EUT.

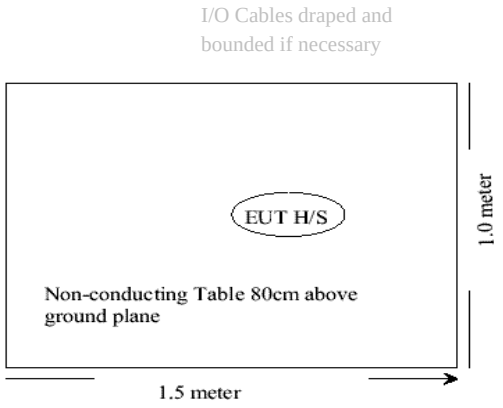
Configuration of Test System

Radiated Setup for Handset

Handset

Test Setup Block Diagram

Radiated Setup for Handset



Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
Southern Telecom	Telephone	None	None	None
Teltone Corp	Simulator	TLS-3B-01	80071	None

External I/O Cabling List and Details

Cable Description	Length (M)	Port/From	To
None-Shielded RJ-11 Cable	1.5	RJ-11 Port/EUT	Simulator RJ11Port
None-Shielded RJ-11 Cable	1.5	Support telephone	Simulator RJ11Port

Power Supply

Manufacturer	Description	Model	Serial Number	FCC ID
Southwestern Bell	AC Adaptor	DU41090045C	None	None

SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.207 (a)	Conducted Emission	Compliant
§15.249 (a)	Radiated Emission	Compliant
§15.249 (c)	Band Edge Testing	Compliant
§15.203	Antenna Requirement	Compliant
§15.205	Restricted Band of Operation	Compliant
§15.214	Cordless Telephone	Compliant

§ 15.207 - CONDUCTED EMISSIONS TEST DATA

Measurement Uncertainty

All measurements involve certain levels of uncertainties. These uncertainties are attributed to: Spectrum analyzer, Cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the estimated uncertainty of any conducted emission measurement at BACL is $\pm$2.4 dB.

EUT Setup

The measurement was performed in the shielded room, using the same setup per ANSI C63.4-2001 measurement procedure. The specification used was FCC 15 Subpart C limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle as required.

The Power Adapter system was connected with 120Vac/60Hz power source.

Spectrum Analyzer Setup

The spectrum analyzer was set to investigate the spectrum from 150 kHz to 30MHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Rohde & Schwarz	Artificial LISN	ESH2-Z5	871884/039	2004-03-28
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2004-05-06
Fluke	Calibrated Voltmeter	189	18485-38	2003-07-18

*** Statement of Traceability: BACL Corp.** certifies that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the power cord of the host system was connected to the mains outlet of the LISN-1.

Maximizing procedure were performed on the six (6) highest emissions of the EUT.

All data was recorded in the peak detection mode, quasi-peak and average. Qusi-Peak readings are distinguished with an “QP”. Average readings are distinguished with an “Ave”.

Environmental Conditions

Temperature:	15 ° C
Relative Humidity:	78%
ATM Pressure:	1016 mbar

Summary of Test Results

According to the recorded data in following table, the EUT complies with the FCC Conducted limit for a Class B device, with the *worst* margin reading of:

Model: GH3150 & GH3110

-20.9 dB at **17.9 MHz** in the **Neutral** mode

Model: GH3100

-33.5 dB at **0.810 MHz** in the **Neutral** mode

Conducted Emissions Test Data (Model: GH3150 & GH3110)

LINE CONDUCTED EMISSIONS				FCC CLASS B	
Frequency MHz	Amplitude dBµV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBµV	Margin dB
17.9	29.1	AVG	Neutral	50	-20.9
17.9	28.5	AVG	Line	50	-21.5
4.1	16.2	AVG	Line	46	-29.8
17.9	29.6	QP	Neutral	60	-30.4
4.1	14.1	AVG	Neutral	46	-31.9
17.9	27.6	QP	Line	60	-32.4
0.62	16.4	QP	Neutral	56	-39.6
4.1	16.3	QP	Line	56	-39.7
16.2	19.4	QP	Line	60	-40.6
4.1	14.0	QP	Neutral	56	-42.0
16.2	7.9	AVG	Line	50	-42.1
0.62	3.2	AVG	Neutral	46	-42.8

Conducted Emissions Test Data (GH3100)

LINE CONDUCTED EMISSIONS				FCC CLASS B	
Frequency MHz	Amplitude dBµV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBµV	Margin dB
0.810	12.5	AVG	Neutral	46	-33.5
4.100	5.5	AVG	Line	46	-40.5
0.810	13.8	QP	Neutral	56	-42.2
8.030	5.1	AVG	Line	50	-44.9
17.200	4.3	AVG	Neutral	50	-45.7
4.100	6.8	QP	Line	56	-49.2
0.176	5.3	AVG	Line	54.7	-49.4
0.185	4.9	AVG	Neutral	55	-50.1
17.200	9.8	QP	Neutral	60	-50.2
0.185	14.2	QP	Neutral	65	-50.8
0.176	13.5	QP	Line	64.7	-51.2
8.030	7.4	QP	Line	60	-52.6

Plot of Conducted Emissions Test Data

Plot of Conducted Emissions test data was presented hereinafter as reference.

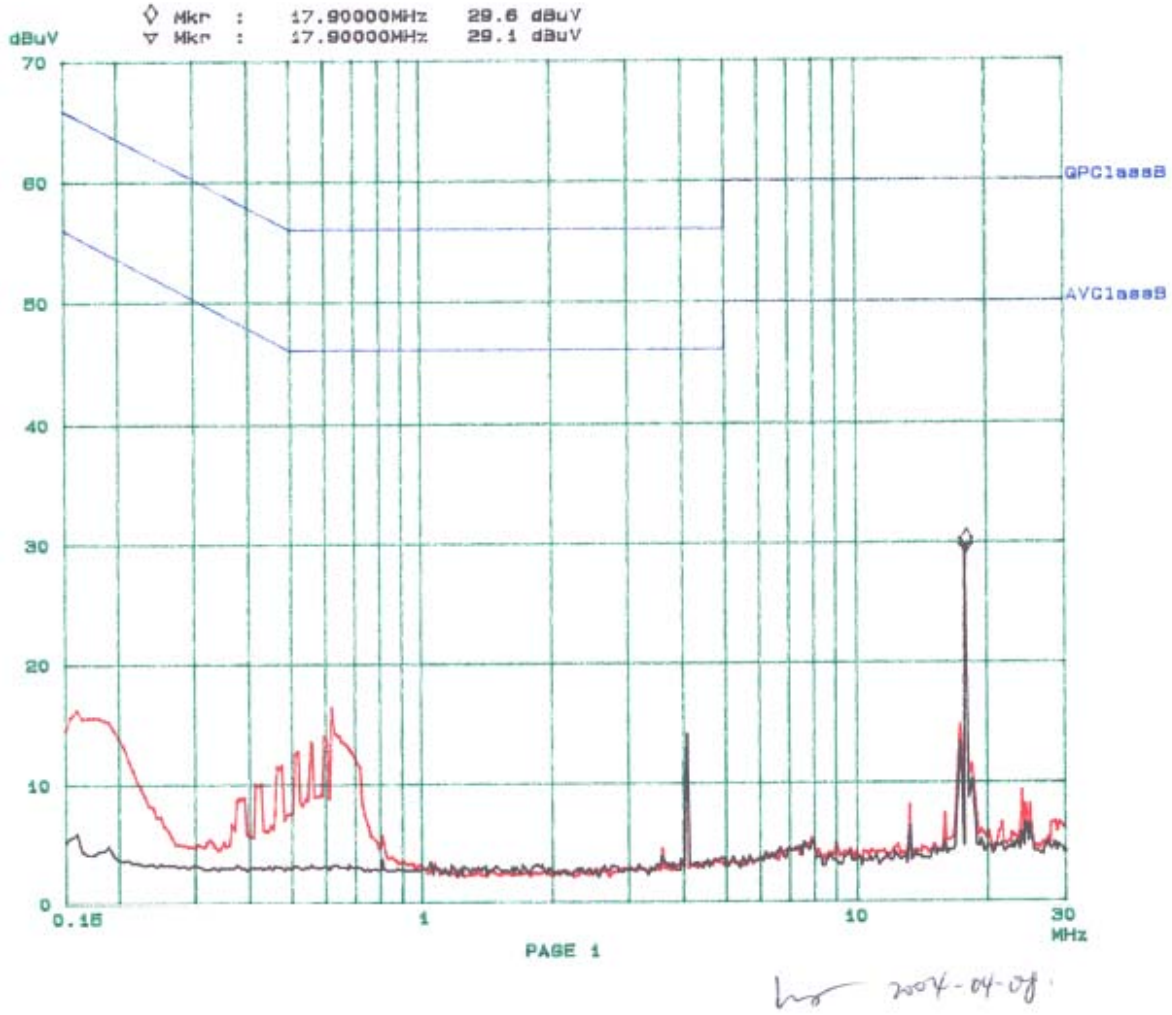
Bay Area Compliance Laboratory Corp 08. Apr 04 12:38
Class B

EUT: 6H3150
Manuf: CCT Telecom
Op Cond: Normal
Operator: LING
Comment: N

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



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Bay Area Compliance Laboratory Corp 08. Apr 04 09:54

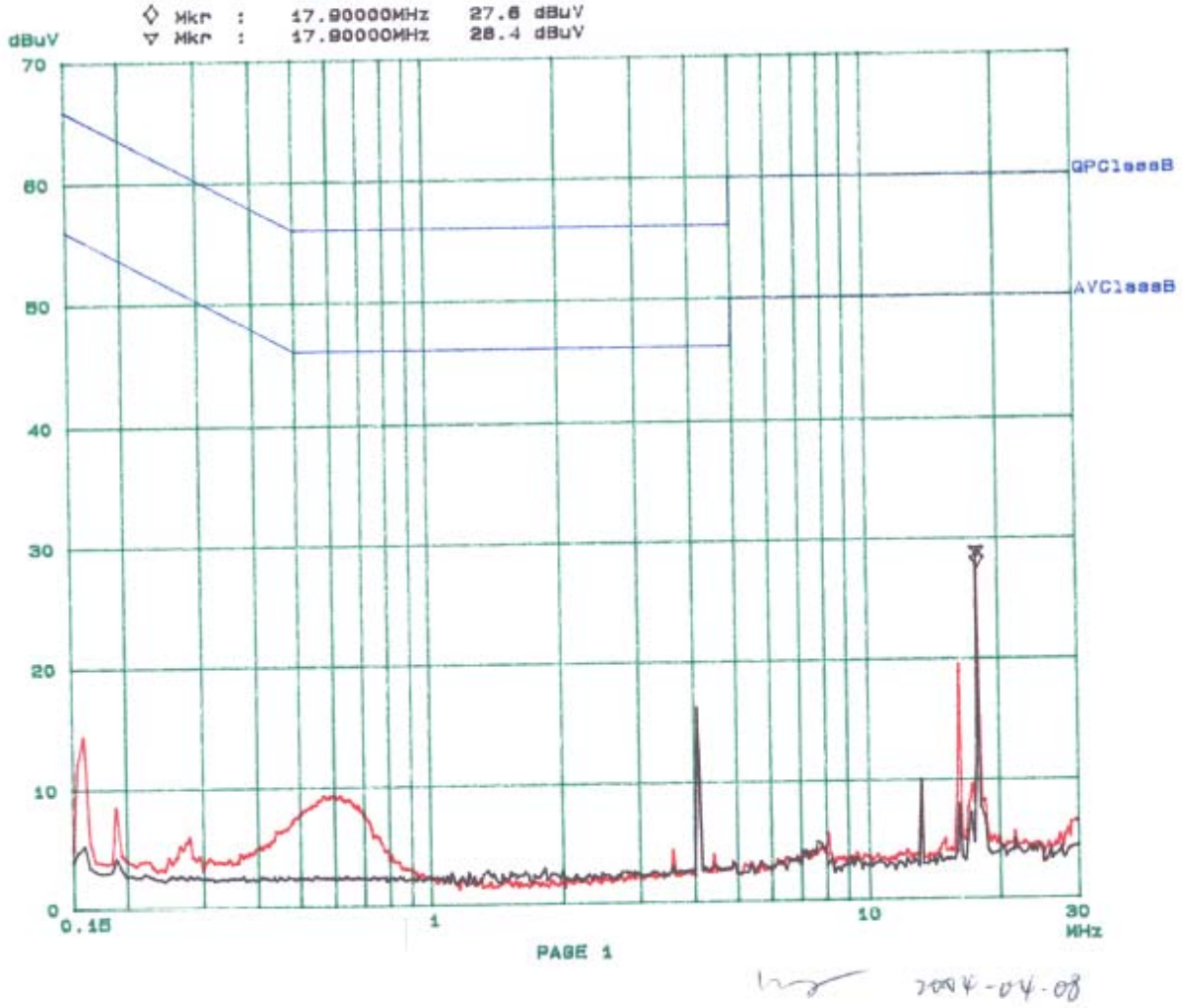
Class B

EUT: GH3150
Manuf: CCT Telecom
Op Cond: Normal
Operator: LING
Comment: L

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



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2004-04-08

Bay Area Compliance Laboratory Corp 21. Apr 04 07:42
Class B

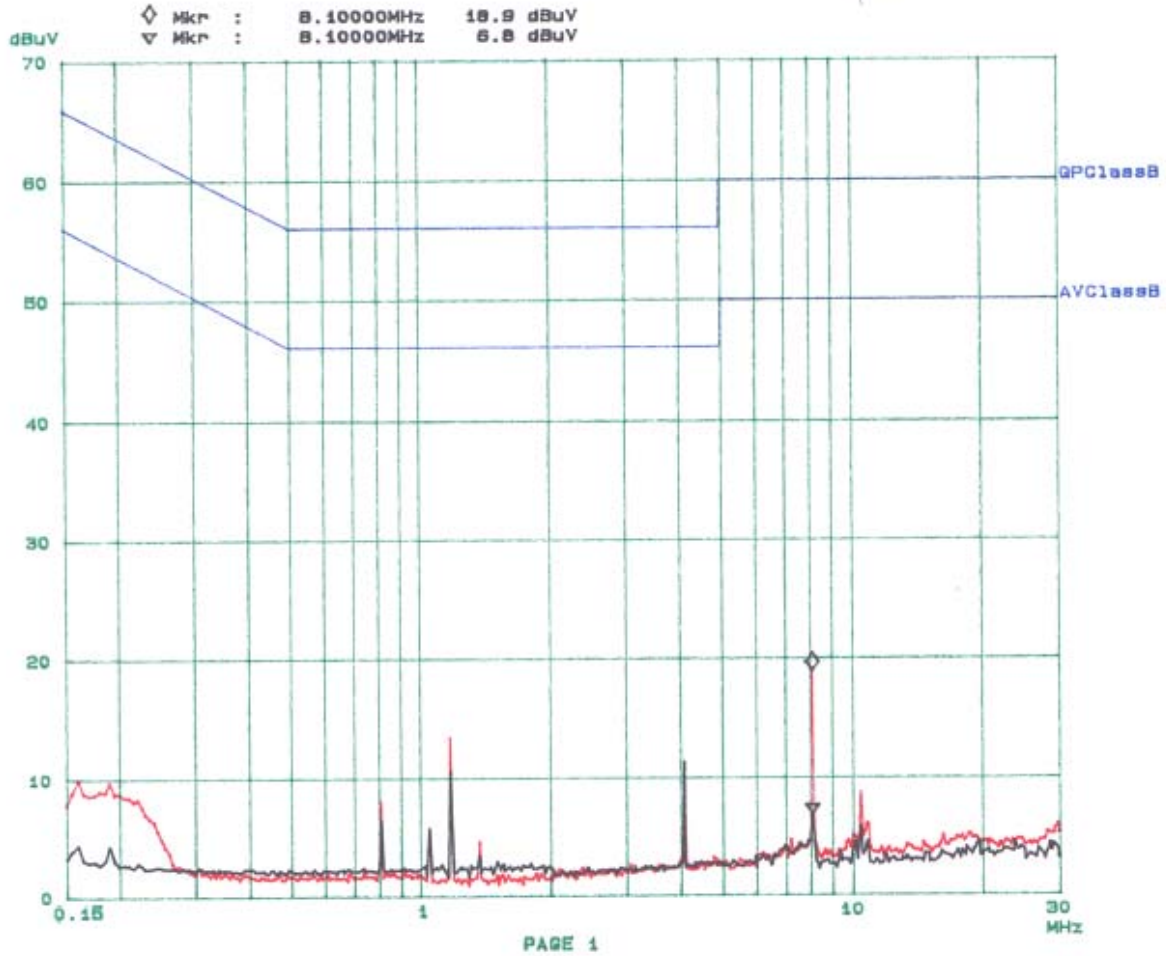
EUT: GH3110
Manuf: CCT
Op Cond: Normal
Operator: Ming
Comment: N

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

2004-4-20



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Bay Area Compliance Laboratory Corp 21. Apr 04 08:02
Class B

EUT: GH3110
Manuf: CCT
Op Cond: Normal
Operator: Ming
Comment: L

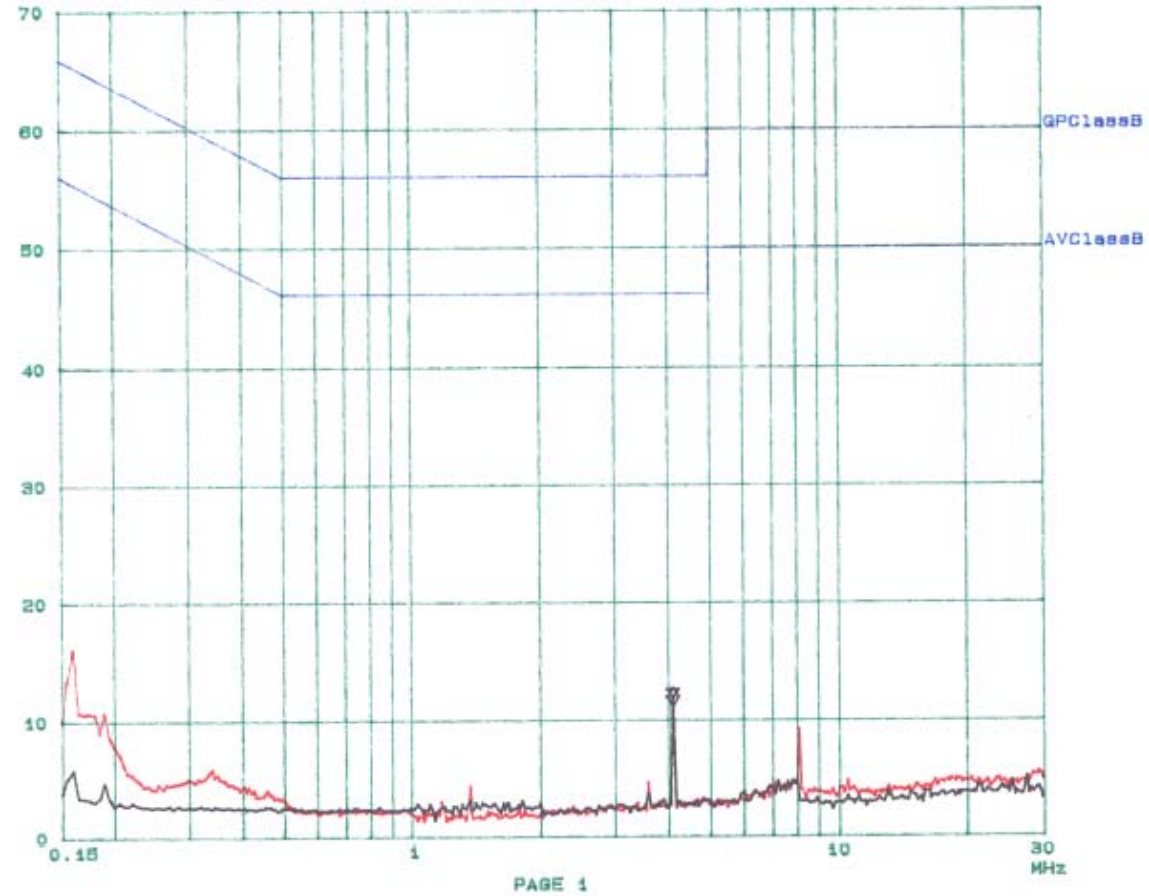
Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	8k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB

3-4-4-20

◇ Mkr : 4.10000MHz 11.2 dBuV
▽ Mkr : 4.10000MHz 11.8 dBuV



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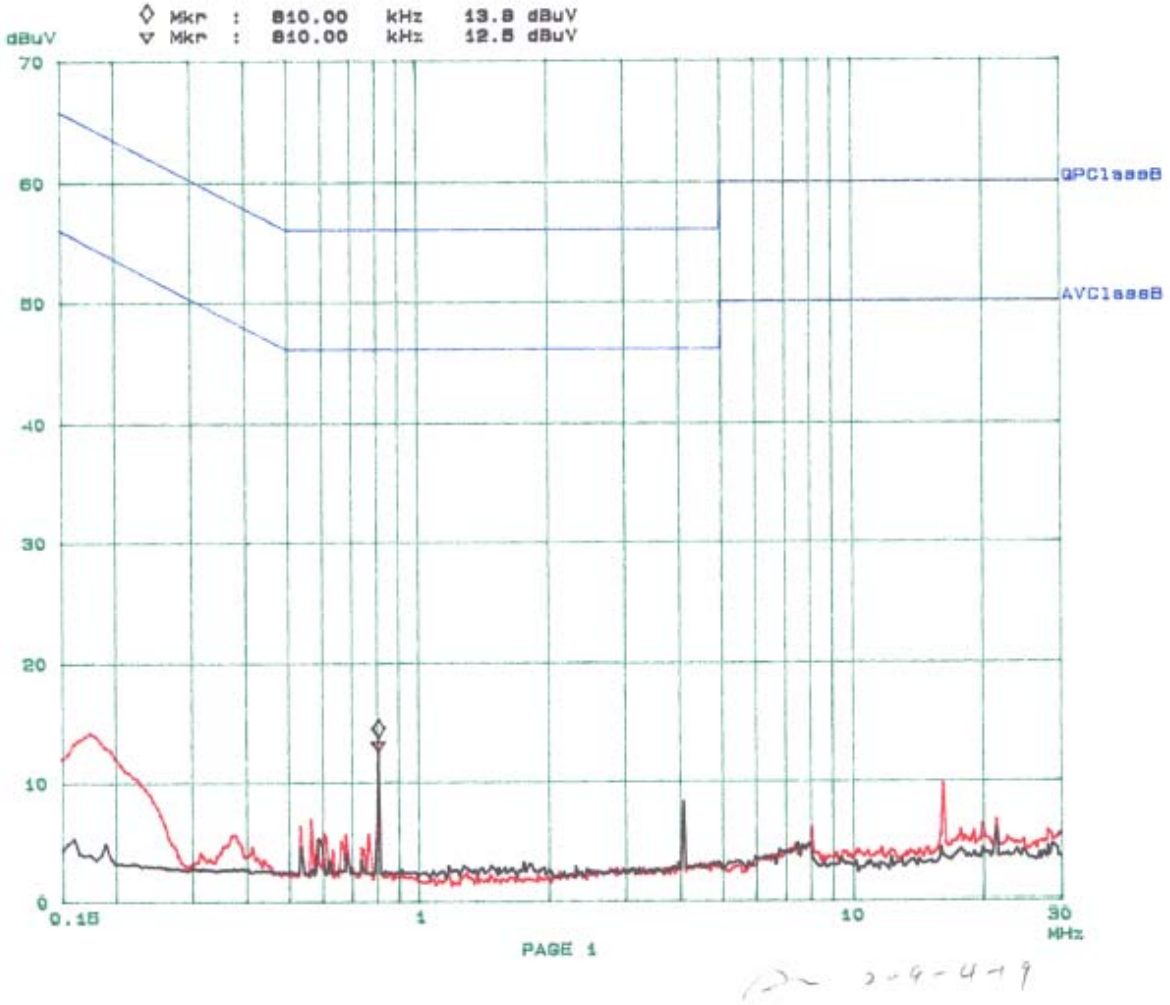
Bay Area Compliance Laboratory Corp 19. Apr 04 12:56
Class B

EUT: GH3100
Manuf: CCT
Op Cond: Normal
Operator: Daniel
Comment: N

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



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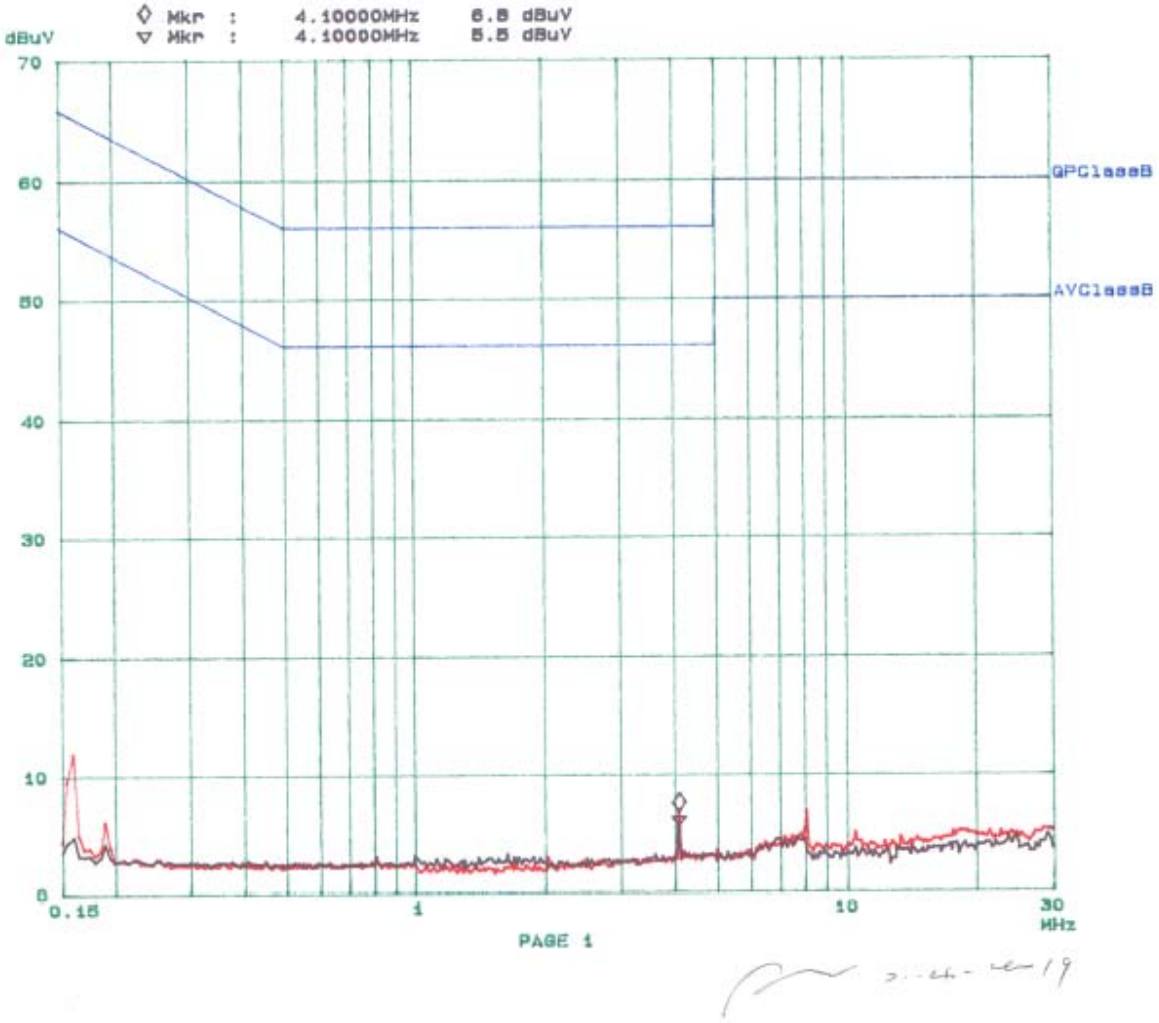
Bay Area Compliance Laboratory Corp 19. Apr 04 13:27
Class B

EUT: GH3100
Manuf: CCT
Op Cond: Normal
Operator: Daniel
Comment: L

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 6dB



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§15.209(a), §15.205 & §15.249 - RADIATED EMISSION DATA

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at BACL is ±4.0 dB.

EUT Setup

The radiated emission tests were performed in the open area 3-meter test site, using the setup in accordance with ANSI C63.4-2001. The specification used was the FCC 15 Subpart C limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle as required.

The host PC system was connected with 120Vac/60Hz power source.

Spectrum Analyzer Setup

According to FCC Rules, 47 CFR 15.33 (a) (1), the system was tested to 10GHz.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Range	***RBW***	***Video B/W***
Below 30MHz	10kHz	10kHz
30 – 1000MHz	100kHz	100kHz
Above 1000MHz	1MHz	1MHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
HP	Spectrum Analyzer	8568B	2601A02165	2003-07-07
HP	Spectrum Analyzer Display	85662A	3026A20081	2003-06-13
HP	Quasi-Peak Adapter	85650A	3019A05393	2003-06-13
Agilent	Amplifier	8447D	2944A10187	2003-09-23
Electro-Metrics	Biconical Antenna	EM-6912	585	2004-04-17
Electro-Metrics	Logperiodic Antenna	EM-6950	788	2004-04-15
HP	Spectrum Analyzer	8565EC	3946A00131	2003-06-30

*** Statement of Traceability: BACL Corp.** certifies that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Environmental Conditions

Temperature:	15 ° C
Relative Humidity:	78%
ATM Pressure:	1016 mbar

Test Procedure

For the radiated emissions test, the power cord of the host system and all support equipment were connected to the AC floor outlet.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limits), and are distinguished with a "**Qp**" in the data table.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dBμV means the emission is 7dBμV below the maximum limit for applicable limits. The equation for margin calculation is as follows:

Margin = Corr. Ampl. - Applicable Limit

Summary of Test Results

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209, and 15.249 after tested to 10^{th} harmonics as required by FCC and had the worst margin of:

Model: GH3150 & GH3110

Handset, 30MHz - 10GHz, 3 Meters

-6.15 dB at 2402.484 MHz in the Vertical polarization at Low Frequency
-5.15 dB at 2409.004 MHz in the Vertical polarization at High Frequency
-6.07dB at 325.762 MHz in the Horizontal polarization at Unintentional Emission

Model: GH3100

Handset, 30MHz – 10GHz, 3 Meters

-7.4 dB at 2402.484 MHz in the Vertical polarization at Low Frequency
-7.1 dB at 2409.004 MHz in the Vertical polarization at High Frequency
-5.2 dB at 261.920 MHz in the Verticall polarization at Unintentional Emission

Radiated Emissions Test Result Data

Handset Unit, 30 MHz to 10GHz, 3 meters (Model: GH3150 & GH3110)

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dBμV/m	Comments	Angle Degree	Height Meter	Polar H/ V	Antenna dBμV/m	Cable DB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Low Channel											
2402.484	92	Fund/Ave	180	1.1	V	28.1	3.35	35.6	87.85	94	-6.15
2402.484	89.83	Fund/Ave	15	1.5	H	28.1	3.35	35.6	85.68	94	-8.32
7207.452	32.83	Ave	0	1.6	H	36.3	5.97	35.7	39.4	54	-14.6
7207.452	32.67	Ave	180	1.5	V	36.3	5.97	35.7	39.24	54	-14.76
4804.968	34.17	Ave	30	1.3	H	32.5	4.91	34.75	36.83	54	-17.17
4804.968	33.8	Ave	270	1	V	32.5	4.91	34.75	36.46	54	-17.54
7207.452	46.83	Peak	0	1.6	H	36.3	5.97	35.7	53.4	74	-20.60
7207.452	45.83	Peak	180	1.5	V	36.3	5.97	35.7	52.4	74	-21.60
4804.968	45.83	Peak	30	1.3	H	32.5	4.91	34.75	48.49	74	-25.51
2402.484	92.17	Fund/Peak	180	1.1	V	28.1	3.35	35.6	88.02	114	-25.98
4804.968	45	Peak	270	1	V	32.5	4.91	34.75	47.66	74	-26.34
2402.484	90.83	Fund/Peak	15	1.5	H	28.1	3.35	35.6	86.68	114	-27.32
High Channel											
2409.004	93	Fund/Ave	200	1.5	V	28.1	3.35	35.6	88.85	94	-5.15
2409.004	89.33	Fund/Ave	0	1.4	H	28.1	3.35	35.6	85.18	94	-8.82
7227.013	32.83	Ave	200	1.5	V	36.3	5.97	35.7	39.4	54	-14.6
7227.013	32.7	Ave	0	1.4	H	36.3	5.97	35.7	39.27	54	-14.73
4818.008	34.83	Ave	90	1	V	32.5	4.91	34.75	37.49	54	-16.51
4818.008	33.5	Ave	30	1.5	H	32.5	4.91	34.75	36.16	54	-17.84
7227.013	46.17	Peak	200	1.5	V	36.3	5.97	35.7	52.74	74	-21.26
7227.013	45.8	Peak	0	1.4	H	36.3	5.97	35.7	52.37	74	-21.63
2409.004	93.67	Fund/Peak	200	1.5	V	28.1	3.35	35.6	89.52	114	-24.48
4818.008	45.5	Peak	90	1	V	32.5	4.91	34.75	48.16	74	-25.84
4818.008	44	Peak	30	1.5	H	32.5	4.91	34.75	46.66	74	-27.34
2409.004	90.5	Fund/Peak	0	1.4	H	28.1	3.35	35.6	86.35	114	-27.65
Unintentional Emission, 30MHz to 1000MHz											
325.762	50	/	250	2.2	H	15.5	2.33	27.9	39.93	46	-6.07
325.762	50	/	250	2.2	H	15.5	2.33	27.9	39.93	46	-6.07
262.108	51.33	/	120	1.5	H	13.4	2.2	27.96	38.97	46	-7.03
262.108	51.33	/	120	1.5	H	13.4	2.2	27.96	38.97	46	-7.03
265.415	49.5	/	180	2	H	13.4	2.2	27.96	37.14	46	-8.86
265.415	49.5	/	60	1	H	13.4	2.2	27.96	37.14	46	-8.86

Ave.: Average
Fund: Fundamental

Note: This test was performed by placing the handset on 3 orthogonal axis.

Handset Unit, 30 MHz to 10GHz, 3 meters (Model: GH3100)

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 Subpart C	
Frequency MHz	Ampl. dBμV/m	Comments	Angle Degree	Height Meter	Polar H/ V	Antenna dBμV/m	Cable DB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Low Channel											
2402.484	90.8	Fund/Ave	30	1.2	V	28.1	3.4	35.6	86.6	94	-7.4
7207.452	33.8	Ave	180	1.5	V	36.3	6.0	35.7	40.4	54	-13.6
7207.452	33.1	Ave	0	1.6	H	36.3	6.0	35.7	39.7	54	-14.3
2402.484	82.1	Fund/Ave	180	1.5	H	28.1	3.4	35.6	78.0	94	-16.1
4804.968	35.1	Ave	0	1.3	V	32.5	4.9	34.7	37.8	54	-16.2
4804.968	34.2	Ave	30	1.2	H	32.5	4.9	34.7	36.9	54	-17.1
7207.452	45.7	Peak	180	1.5	V	36.3	6.0	35.7	52.3	74	-21.7
7207.452	45.2	Peak	0	1.6	H	36.3	6.0	35.7	51.8	74	-22.2
2402.484	91.8	Fund/Peak	30	1.2	V	28.1	3.4	35.6	87.7	114	-26.3
4804.968	44.9	Peak	0	1.3	V	32.5	4.9	34.7	47.6	74	-26.4
4804.968	43.8	Peak	30	1.2	H	32.5	4.9	34.7	46.5	74	-27.5
2402.484	83.2	Fund/Peak	180	1.5	H	28.1	3.4	35.6	79.1	114	-35.0
High Channel											
2409.004	91.1	Fund/Ave	60	1.5	V	28.1	3.4	35.6	87.0	94	-7.1
7227.013	34.2	Ave	210	1.5	V	36.3	6.0	35.7	40.8	54	-13.2
7227.013	33.7	Ave	290	1.4	H	36.3	6.0	35.7	40.3	54	-13.7
2409.004	82.6	Fund/Ave	170	1.6	H	28.1	3.4	35.6	78.5	94	-15.6
4818.008	35.5	Ave	0	1.2	V	32.5	4.9	34.7	38.2	54	-15.8
4818.008	34.6	Ave	30	1.5	H	32.5	4.9	34.7	37.3	54	-16.7
7227.013	45.9	Peak	210	1.5	V	36.3	6.0	35.7	52.5	74	-21.5
7227.013	45.4	Peak	290	1.4	H	36.3	6.0	35.7	52.0	74	-22.0
2409.004	92.3	Fund/Peak	60	1.5	V	28.1	3.4	35.6	88.2	114	-25.9
4818.008	45.3	Peak	0	1.2	V	32.5	4.9	34.7	48.0	74	-26.0
4818.008	44.2	Peak	30	1.5	H	32.5	4.9	34.7	46.9	74	-27.1
2409.004	83.7	Fund/Peak	170	1.6	H	28.1	3.4	35.6	79.6	114	-34.5
Unintentional Emission, 30MHz to 1000MHz											
261.920	51.1	/	130	1.5	V	13.4	2.2	25.9	40.8	46	-5.2
261.920	50.6	/	60	1.5	H	13.4	2.2	25.9	40.3	46	-5.7
326.030	48.3	/	120	2.2	H	15.5	2.3	26.1	40.0	46	-6.0
326.030	47.9	/	0	2.2	V	15.5	2.3	26.1	39.6	46	-6.4
265.270	49.8	/	210	2.0	V	13.4	2.2	25.9	39.5	46	-6.5
265.270	49.2	/	330	1.0	H	13.4	2.2	25.9	38.9	46	-7.1

Ave.: Average
Fund: Fundamental

Note: This test was performed by placing the handset on 3 orthogonal axis.

§15.249(c) – BAND-EDGE TESTING

Standard Applicable

Requirements: FCC 15.249 (c), the emission power at the START and STOP frequencies shall be at least 50 dB below the level of the fundamental or to the general radiated emission limits in FCC 15.209, whichever is the lesser attenuation.

Test Procedure

With the EUT's antenna attached, the EUT's radiated emission power was received by the test antenna which was connected to the spectrum analyzer with the START and STOP frequencies set to the EUT's operation band.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
HP	Spectrum Analyzer	8565EC	3946A00131	2003-06-30

*** Statement of Traceability: BACL Corp.** certifies that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

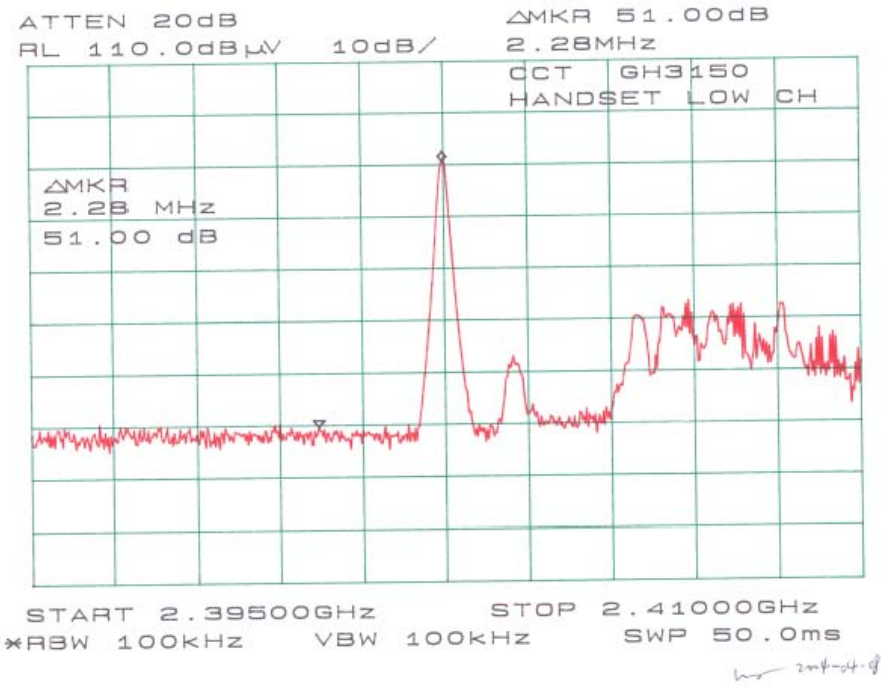
Environmental Conditions

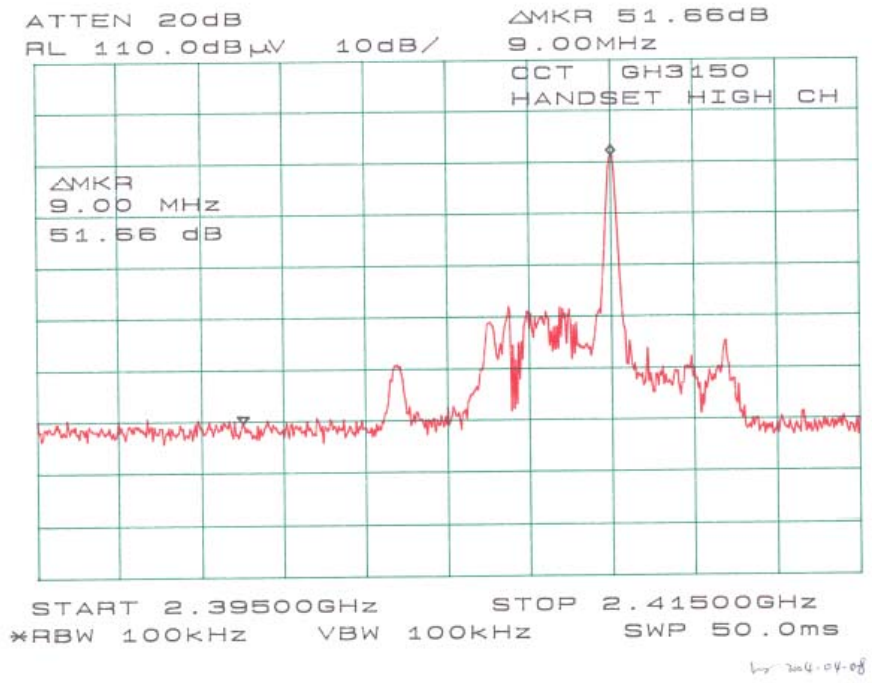
Temperature:	15 ° C
Relative Humidity:	78%
ATM Pressure:	1016 mbar

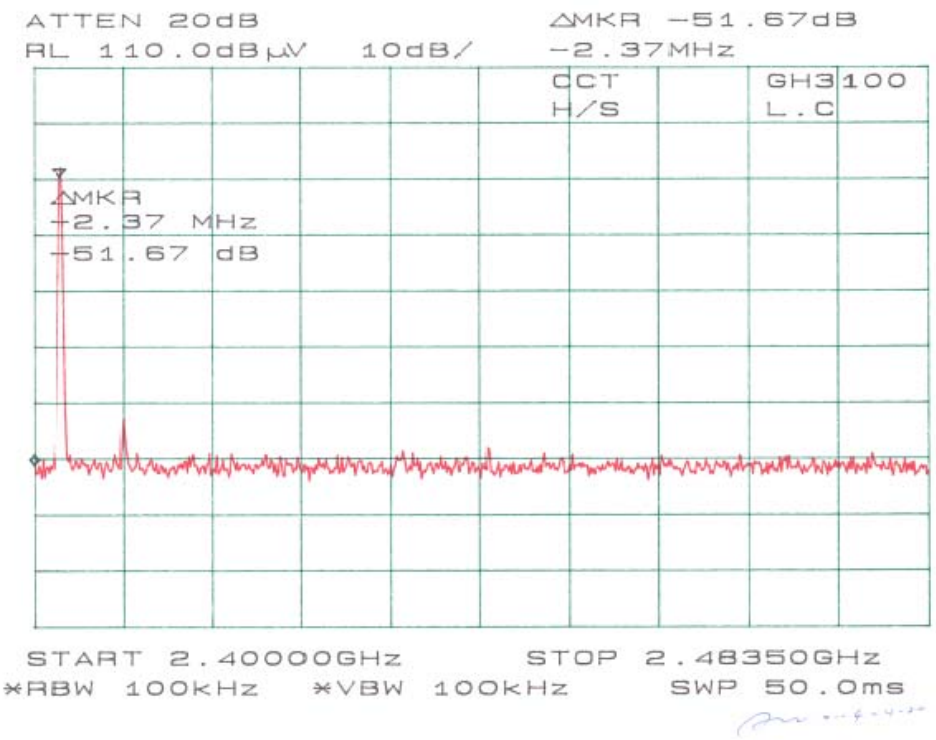
Test Results

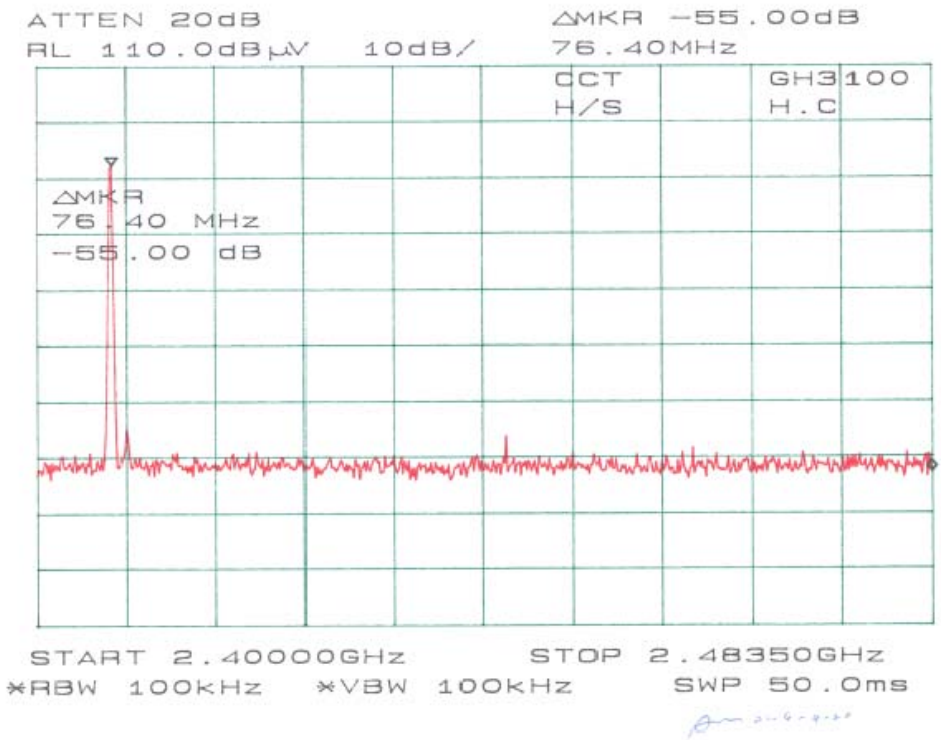
Refer to the attached plots.

Model: GH3150 & GH3110






ATTEN 20dB
RL 110.0dBμV 10dB/
ΔMKR -51.67dB
-2.37MHz
CCT
H/S
GH3100
L.C
ΔMKR
-2.37 MHz
-51.67 dB
START 2.40000GHz
STOP 2.48350GHz
*RBW 100kHz
*VBW 100kHz
SWP 50.0ms


ATTEN 20dB
RL 110.0dBμV 10dB/
ΔMKR -55.00dB
76.40MHz
CCT
H/S
GH3100
H.C
ΔMKR
76.40 MHz
-55.00 dB
START 2.40000GHz
STOP 2.48350GHz
*RBW 100kHz
*VBW 100kHz
SWP 50.0ms