



FCC 47 CFR PART 15 SUBPART C

TEST REPORT

FOR

Product Name: DX-7100

Model : GM-130027/S

Trade Name: Genius

Issued to

KYE SYSTEMS CORP.

No. 492, Sec. 5, Chongxin Rd., Sanchong Dist.,
New Taipei City 24160, Taiwan, R.O.C.

Issued by

Global Certification Corp.

**No.146, Sec. 2, Xiangzhang Rd., Xizhi Dist., New Taipei City 221, Taiwan
(R.O.C.)**



Note: This test refers exclusively to the test presented test model and sample. This report shall not be reproduced except in full, without the written approval of Global Certification Corporation. This document may be altered or revised by Global Certification Corporation. Personnel only, and shall be noted in the revision section of the document.



TABLE OF CONTENTS	2
1. GENERAL INFORMATION	3
1.1 DESCRIPTION OF THE TESTED SAMPLES	4
2. TEST METHODOLOGY	6
2.1 GENERAL TEST PROCEDURES	6
2.2 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS	7
2.3 DESCRIPTION OF TEST MODES	7
2.4 DESCRIPTION OF THE SUPPORT EQUIPMENTS	8
3. TEST AND MEASUREMENT EQUIPMENT	9
3.1 CALIBRATION	9
3.2 EQUIPMENT	9
4. SECTION 15.249 REQUIREMENTS (FUNDAMENTAL / HARMONICS)	10
4.1 TEST SETUP	10
4.2 LIMIT	10
4.3 RESULT	10
4.4 TEST DATA	11
5. SECTION 15.205 REQUIREMENTS (BAND EDGE)	20
5.1 TEST SETUP	20
5.2 LIMIT	20
5.3 RESULT	20
5.4 TEST DATA	21
6. SECTION 15.209 REQUIREMENTS (GENERAL RADIATED EMISSION)	26
6.1 TEST SETUP	26
6.2 LIMIT	27
6.3 TEST PROCEDURE	27
6.4 RESULT	27
6.5 TEST DATA	28
7. SECTION 15.207 REQUIREMENTS (POWERLINE CONDUCTED EMISSIONS)	29

APPENDIX 1

PHOTOS OF TEST CONFIGURATION

APPENDIX 2

TEST DATA

PHOTOS OF EUT



1. GENERAL INFORMATION

Applicant : KYE SYSTEMS CORP.
Address : No. 492, Sec. 5, Chongxin Rd., Sanchong Dist.,
New Taipei City 24160,, Taiwan, R.O.C.
Manufacturer : Dongguan Kunying Computer Products Co., Ltd
Address : Baodun Industrial District, Houjie Town, Dongguan City,
Guangdong Province, 523961 China
EUT : DX-7100
Model No. : GM-130027/S
Model Differences : N/A

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations Part 15 Subpart C and the measurement procedures were according to ANSI C63.4-2009. The said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

FCC Part 15 Subpart C

Receipt Date : Jan. 10, 2014

Issue Date : Feb. 27, 2014

New Taipei City, Taiwan Feb. 27, 2014

(Place)

(Date)

Adam Chou, Manager

(Signature) Designation Number: TW1069



1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name : DX-7100
Model Number : GM-130027/S
FCC ID : FSUGMZL4
Input Voltage : 1.5Vdc (1x"AAA" battery)
Power From : Inside Outside
Adapter Battery AC Power Source DC Power
Source Support Unit PC
Operate Frequency : Refer to the channel list as described below
Modulation Technique : GFSK
Number of Channels : 61
Channel spacing : 1 MHz
Operating Mode : Duplex
Bit Rate of Transmission : 1Mbps
Antenna Type : PCB Antenna
Antenna gain : 0 dBi
EUT Received Date : Jan. 10, 2014
EMC Test Completed Date : Feb. 27, 2014



Channels	Frequencies (MHz)	Channels	Frequencies (MHz)	Channels	Frequencies (MHz)	Channels	Frequencies (MHz)
1	2402	21	2427	41	2453	61	2480
2	2403	22	2428	42	2454		
3	2404	23	2429	43	2455		
4	2406	24	2430	44	2456		
5	2407	25	2433	45	2457		
6	2408	26	2435	46	2459		
7	2409	27	2436	47	2460		
8	2411	28	2437	48	2461		
9	2414	29	2438	49	2462		
10	2415	30	2439	50	2463		
11	2416	31	2440	51	2464		
12	2417	32	2441	52	2465		
13	2418	33	2442	53	2466		
14	2419	34	2443	54	2467		
15	2420	35	2444	55	2468		
16	2421	36	2445	56	2469		
17	2423	37	2447	57	2473		
18	2424	38	2448	58	2474		
19	2425	39	2449	59	2475		
20	2426	40	2450	60	2476		



2. TEST METHODOLOGY

All testing as described bellowed were performed in accordance with ANSI C63.4:2009 and FCC CFR 47 Part 15 Subpart C.

2.1 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on a wood table, which is at 0.8 m above ground plane acceding to clause 15.207 and requirements of ANSI C63.4:2009. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz are using CISPR Quasi-Peak / Average detectors.

Radiated Emissions

The EUT is a placed on a turn table, which is 0.8 m above ground plane. The turntable was rotated through 360 degrees to determine the position of maximum emission level. The EUT is placed at 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.



2.2 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
10.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

2.3 DESCRIPTION OF TEST MODES

The EUT was tested under following modes:

Modes:

- 1. Continuous transmitting**

Channels:

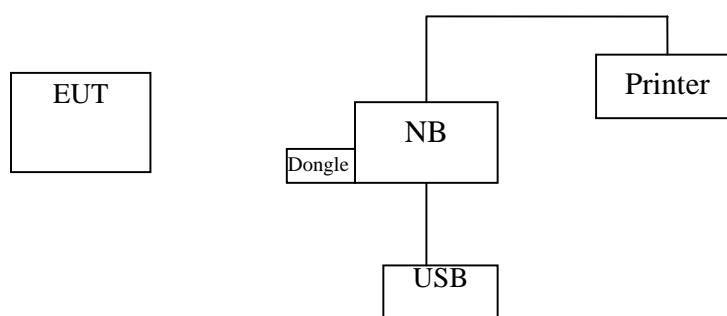
- 1. 2.402GHz (Lowest Channel)**
- 2. 2.448GHz (Middle Channel)**
- 3. 2.480GHz (Highest Channel)**



2.4 DESCRIPTION OF THE SUPPORT EQUIPMENTS

Setup Diagram

See test photographs attached in appendix 1 for the actual connections between EUT and support equipment.



Support Equipment

Peripherals Devices:

OUTSIDE SUPPORT EQUIPMENT							
No.	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade name	Data Cable	Power Cord
1.	NB	CNU8111FS B	Presario B1200	N/A	COMPAQ	N/A	Unshielded 1.8m
2.	PRINTER	STYLUS PHOTO750	BDEK0176 29	3872P011	EPSON	Shielded 1.8m	Unshielded 1.8m
3.	USB storage	TS2GJFV30	156511-640 0	DOC/ D33193	TRANSCEND	Shielded 1m	N/A
EUT							
No.	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade name	Data Cable	Power Cord
1.	PCB	XX-2 E862227	N/A	N/A	N/A	N/A	N/A
2.	Dongle	N/A	N/A	FSUGMZK E	Genius	N/A	N/A

Note: All the above equipment /cable were placed in worse case position to maximize emission signals during emission test

Grounding: Grounding was in accordance with the manufacturer's requirement and conditions for the intended use.



3. TEST AND MEASUREMENT EQUIPMENT

3.1 CALIBRATION

The measuring equipment utilized to perform the tests documented in the report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

3.2 EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1-1, CISPR 16-1-4, CISPR 16-2-3 and other required standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective.

TABLE 1 LIST OF TEST AND MEASUREMENT EQUIPMENT

Instrument	Manufacturer	Model No.	Serial No.	Calibration Due Date	Note
EMC Test Receiver	R&S	ESCI	100438	Apr. 29, 2014	
Bilog Antenna	SUNOL	JB1	A052104	Sep.30, 2014	
Bilog Antenna	SUNOL	JB1	A052104	Jul. 27, 2014	
Turn table	EMCO	2080	9508-1805	N/A	
Controller	EMCO	2090	9804-1328	N/A	
Amplifier	G.W	GAP-801	EF150001	Jul.18, 2014	
Amplifier	Schwarzbeck	BBV 9718	9718-008	Aug. 10, 2014	
Spectrum Analyzer	NEX1	NS-265	5044006	Aug. 08, 2014	
RF Cable	BELDEN	RG-8/U	E037	Jun.07, 2014	
RF Cable	Huber Suhner	SUCOFLEX 104	293864/4	Nov. 13, 2014	
Thermo-Hygro meter	WISEWIND	4-IN-1	0412	Apr.10, 2014	
Loop Antenna	Teseq GmbH	HLA 6120	26439	Sep. 11, 2014	
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-491	Aug. 05, 2014	

※ Calibration interval of instruments listed above is one year



4. SECTION 15.249 REQUIREMENTS (FUNDAMENTAL / HARMONICS)

4.1 TEST SETUP

Refer to paragraph 6.1.

4.2 LIMIT

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBμV/m at 3-meter)	Detector
902 - 928 2400 - 2483 5725 - 5875	114	Peak
902 - 928 2400 - 2483 5725 - 5875	94	AV

Fundamental Frequency (MHz)	Field Strength of Harmonics (dBμV/m at 3-meter)	Detector
902 - 928 2400 - 2483 5725 - 5875	74	Peak
902 - 928 2400 - 2483 5725 - 5875	54	AV

4.3 RESULT: PASS



4.4 TEST DATA:

4.4.1 Fundamental

Lowest Channel-Horizontal

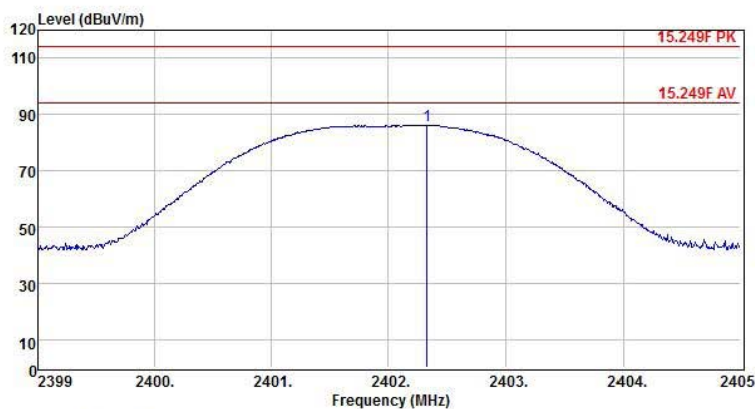


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data: 6 File: C:\Users\GCC\Desktop\ae3 DATA\報告\411001.EM6

Time: 10:06:47 Date: 2014-2-24



Site : GCC_RE-02
 Condition : 15.249F PK HORIZONTAL
 : RBW:1000 KHz VBW:1000 KHz
 EUT : See Page 1 of EMC Report
 MODEL : See Page 1 for Details
 Test Mode : 18 °C 51%
 CHL

Freq	Meter Level	System Factor	Cable Loss	Antenna Factor	Preamp Gain	Real Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2402.33	104.97	-18.84	5.10	31.66	55.60	86.13	114.00	-27.87	Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line



Lowest Channel-Vertical

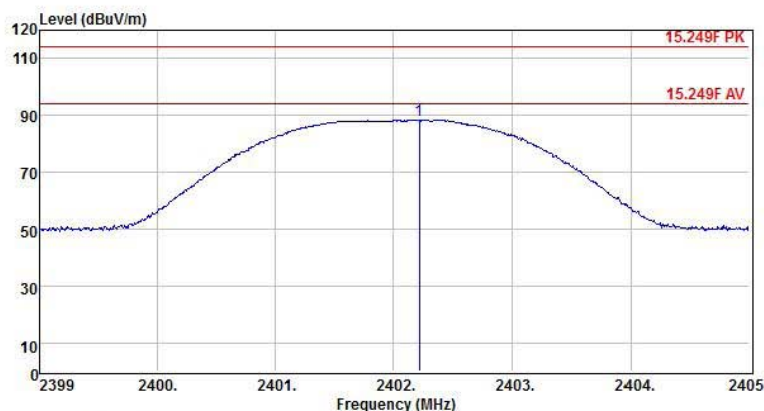


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:1 File:C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6

Time:09:55:57 Date:2014-2-24



Site : GCC_RE-02
 Condition : 15.249F PK VERTICAL
 : RBW:1000 KHz VBW:1000 KHz
 EUT : See Page 1 of EMC Report
 MODEL : See Page 1 for Details
 Test Mode : 18 °C 51%
 CHL

Freq	Meter Level	System Factor	Cable Loss	Antenna Factor	Preamp Gain	Real Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2402.22	107.15	-18.84	5.10	31.66	55.60	88.31	114.00	-25.69	Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line



Middle Channel-Horizontal

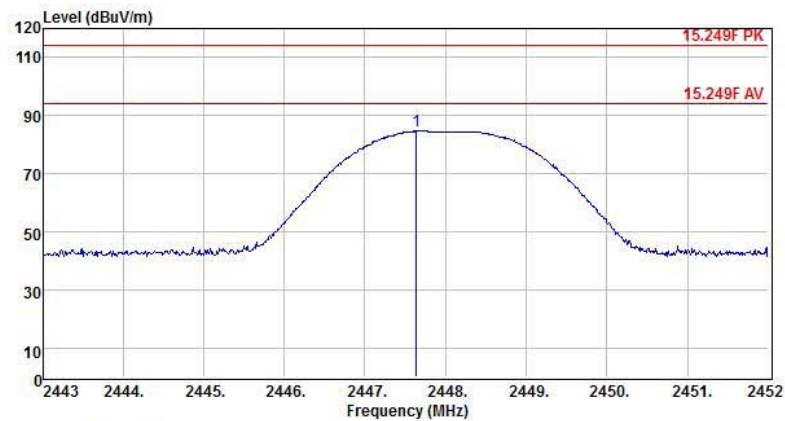


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:14 File:C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6

Time:10:24:23 Date:2014-2-24



Site : GCC RE-02
Condition : 15.249F PK HORIZONTAL
: RBW:1000 KHz VBW:1000 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test Mode : 18 °C 51%
CBM

Freq	Meter Level	System Factor	Cable Loss	Antenna Factor	Preamp Gain	Real Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2447.64	103.32	-18.70	5.15	31.73	55.58	84.62	114.00	-29.38	Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line



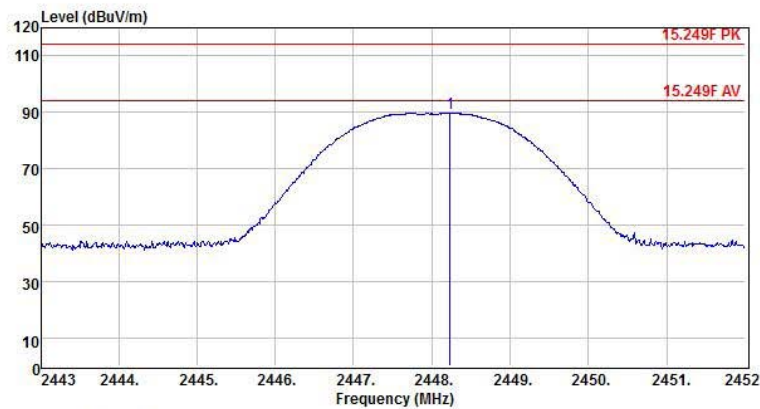
Middle Channel-Vertical



環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:13 File:C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6 Time:10:23:57 Date:2014-2-24



Site : GCC_RE-02
Condition : 15.249F PK VERTICAL
: RBW:1000 KHz VBW:1000 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test Mode : 18 °C 51% CHM

Table with columns: Meter Level, System Factor, Cable Loss, Antenna Factor, Preamp Gain, Real Level, Limit Line, Limit, Over Limit, Remark. Row 1: 1 2448.24 108.28 -18.69 5.15 31.73 55.57 89.59 114.00 -24.41 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line



Highest Channel-Horizontal

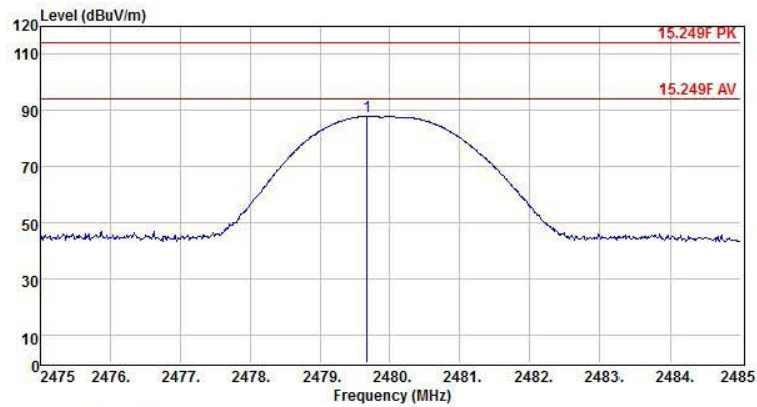


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:7 File:C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6

Time:10:09:42 Date:2014-2-24



Site : GCC_RE-02
 Condition : 15.249F PK HORIZONTAL
 : RBW:1000 KHz VBW:1000 KHz
 EUT : See Page 1 of EMC Report
 MODEL : See Page 1 for Details
 Test Mode : 18 °C 51%
 CHH

Freq	Meter Level	System Factor	Cable Loss	Antenna Factor	Preamp Gain	Real Level	Limit Line	Limit	Over	Remark
MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB		
1 2479.67	106.50	-18.60	5.19	31.77	55.56	87.90	114.00	-26.10	Peak	

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line



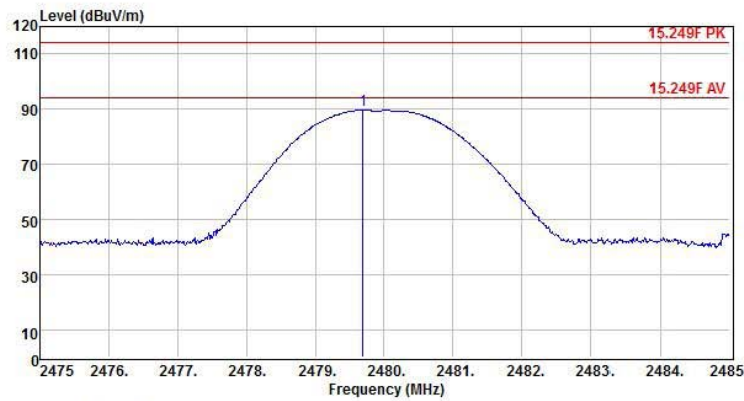
Highest Channel-Vertical



環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data: 8 File: C:\Users\GCC\Desktop\ae3 DATA\報告\411001.EM6
Time: 10:10:55 Date: 2014-2-24



Site : GCC_RE-02
Condition : 15.249F PK VERTICAL
: RBW:1000 KHz VEW:1000 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test Mode : 18 °C 51%
CHH

Table with 9 columns: Freq, Meter Level, System Factor, Cable Loss, Antenna Factor, Preamp Gain, Real Level, Limit Line, Over Limit Remark. Row 1: 2479.69, 108.18, -18.60, 5.19, 31.77, 55.56, 89.58, 114.00, -24.42 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line



4.4.2 Harmonics

Lowest Channel

HORIZONTAL

	Meter	System	Cable	Antenna	Preamp	Real	Limit Over		
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	4802.50	65.03	-14.84	7.05	33.66	55.55	50.19	74.00	-23.81 Peak
2	7217.50	62.03	-11.23	8.15	35.34	54.72	50.80	74.00	-23.20 Peak
3	9970.00	57.73	-9.50	8.92	36.86	55.28	48.23	74.00	-25.77 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line

VERTICAL

	Meter	System	Cable	Antenna	Preamp	Real	Limit Over		
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	4802.50	65.76	-14.84	7.05	33.66	55.55	50.92	74.00	-23.08 Peak
2	7217.50	61.79	-11.23	8.15	35.34	54.72	50.56	74.00	-23.44 Peak
3	9970.00	57.20	-9.50	8.92	36.86	55.28	47.70	74.00	-26.30 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line

Middle Channel

HORIZONTAL

	Meter	System	Cable	Antenna	Preamp	Real	Limit Over		
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	4900.00	64.33	-14.72	7.10	33.68	55.50	49.61	74.00	-24.39 Peak
2	7352.50	58.48	-11.16	8.12	35.37	54.65	47.32	74.00	-26.68 Peak
3	9970.00	58.00	-9.50	8.92	36.86	55.28	48.50	74.00	-25.50 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line



VERTICAL

	Meter	System	Cable	Antenna	Preamp	Real	Limit	Over	
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	4907.50	64.31	-14.72	7.10	33.68	55.50	49.59	74.00	-24.41 Peak
2	7345.00	61.47	-11.16	8.12	35.37	54.65	50.31	74.00	-23.69 Peak
3	9797.50	53.62	-9.60	8.95	36.66	55.21	44.02	74.00	-29.98 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line

Highest Channel

HORIZONTAL

	Meter	System	Cable	Antenna	Preamp	Real	Limit	Over	
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	4975.00	65.56	-14.63	7.14	33.69	55.46	50.93	74.00	-23.07 Peak
2	7450.00	61.12	-11.11	8.10	35.39	54.60	50.01	74.00	-23.99 Peak
3	9910.00	55.30	-9.54	8.93	36.79	55.26	45.76	74.00	-28.24 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line

VERTICAL

	Meter	System	Cable	Antenna	Preamp	Real	Limit	Over	
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	4952.50	64.99	-14.65	7.13	33.69	55.47	50.34	74.00	-23.66 Peak
2	7450.00	60.11	-11.11	8.10	35.39	54.60	49.00	74.00	-25.00 Peak
3	9917.50	59.86	-9.53	8.93	36.80	55.26	50.33	74.00	-23.67 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line

Note:

1. Emission level = Reading level + Correction factor
2. Correction factor = Antenna factor + Cable loss - PreAmp



3. All emissions as described above were determined by rotating the EUT through three orthogonal axes to maximize the emissions if the EUT belongs to hand-held or body-worn devices.
4. Measurements above 1000 MHz, Peak detector setting: use a 1 MHz RBW, a 3 MHz VBW.
5. Measurements above 1000 MHz, Average detector setting: 1 MHz RBW with 10 Hz VBW.
6. Peak detector measurement data will represent the worst case results.
7. “---” denotes the data which is not available.



5. SECTION 15.205 REQUIREMENTS (BAND EDGE)

5.1 TEST SETUP

Refer to paragraph 6.1.

5.2 LIMIT

Restricted Bands:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

Operation within the bands:

902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

Frequency (Hz)	Field Strength ($\mu\text{V}/\text{m}$ at 3-meter)	Field Strength ($\text{dB}\mu\text{V}/\text{m}$ at 3-meter)
1.705-30	30 (at 30-meter)	49.5
30-88	100	40
88-216	150	43
216-960	200	46
Above 960	500	54

5.3 RESULT: PASS



5.4 TEST DATA:

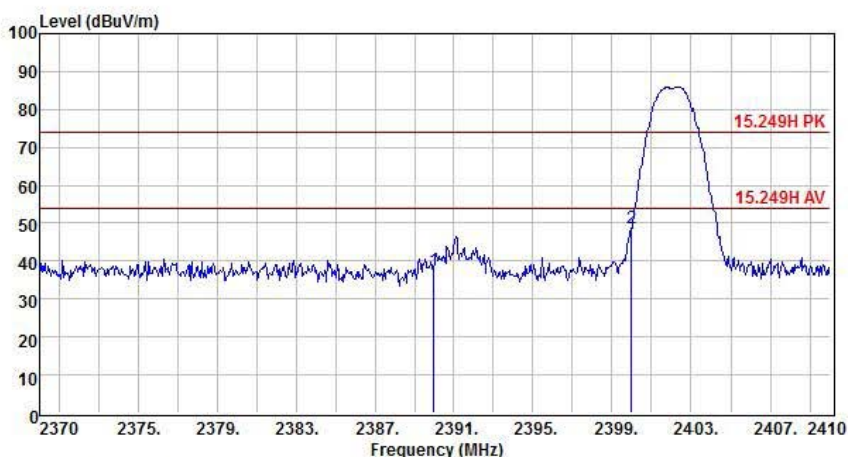
Lowest Channel-Horizontal



Global Certification Corp.
環球認證有限公司
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data: 5 File: C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6

Time: 10:05:16 Date: 2014-2-24



Site : GCC_RE-02
 Condition : 15.249H PK HORIZONTAL
 : RBW:1000 KHz VBW:1000 KHz
 EUT : See Page 1 of EMC Report
 MODEL : See Page 1 for Details
 Test Mode : 18 °C 51%
 CHL

Freq	Meter Level	System Factor	Cable Loss	Antenna Factor	Preamp Gain	Real Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2390.00	56.23	-18.86	5.09	31.65	55.60	37.37	74.00	-36.63	Peak
2 2400.00	67.60	-18.84	5.10	31.66	55.60	48.76	74.00	-25.24	Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line



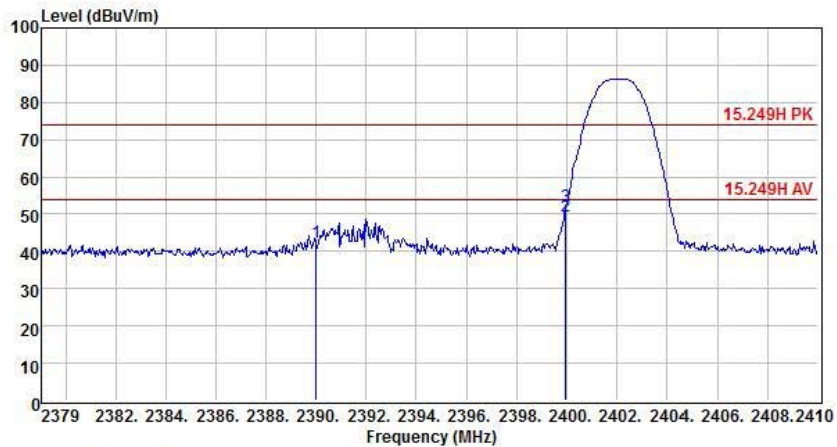
Lowest Channel-Vertical



Global Certification Corp.
環球認證有限公司
Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:2 File:C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6

Time:10:01:29 Date:2014-2-24



Site : GCC_RE-02
 Condition : 15.249H PK VERTICAL
 : RBW:1000 KHz VBW:1000 KHz
 EUT : See Page 1 of EMC Report
 MODEL : See Page 1 for Details
 Test Mode : 18 °C 51%
 CHL

	Meter	System	Cable	Antenna	Preamp	Real	Limit	Over	
Freq	Level	Factor	Loss	Factor	Gain	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2390.01	61.20	-18.86	5.09	31.65	55.60	42.34	74.00	-31.66	Peak
2 2399.99	68.33	-18.84	5.10	31.66	55.60	49.49	54.00	-4.51	Average
3 2399.99	70.97	-18.84	5.10	31.66	55.60	52.13	74.00	-21.87	Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
 Real Level = Meter Level + System Factor
 Over Limit = Real Level - Limit Line

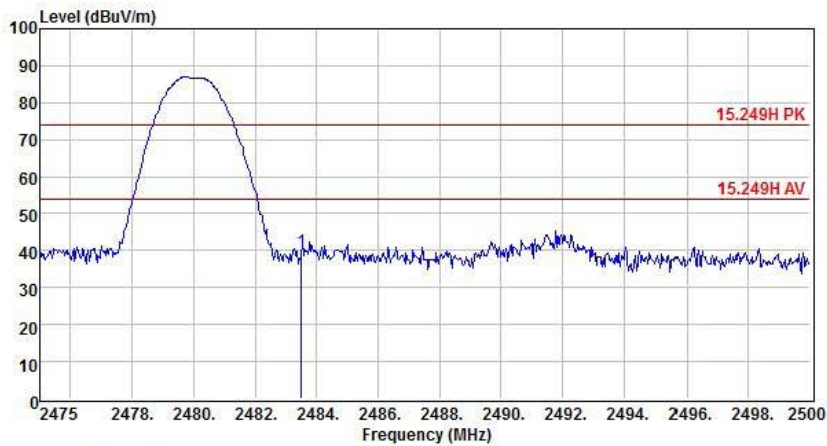


Highest Channel-Horizontal



Global Certification Corp.
環球認證有限公司
No.146, Sec. 2, Xiangzhang Rd.,
Kizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data: 11 File: C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6 Time: 10:17:24 Date: 2014-2-24



Site : GCC_RE-02
Condition : 15.249H PK HORIZONTAL
RBW:1000 KHz VBW:1000 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test Mode : 18 C 51%
CHH

Table with 10 columns: Freq, Meter Level, System Factor, Cable Loss, Antenna Factor, Preamp Gain, Real Level, Limit Line, Over Limit, Remark. Row 1: 1 2483.50 58.25 -18.59 5.19 31.78 55.56 39.66 74.00 -34.34 Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line



Highest Channel-Vertical



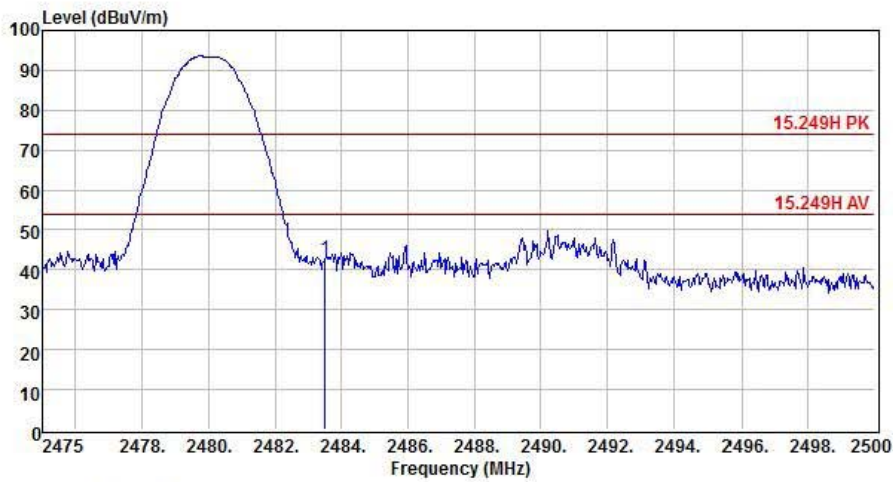
Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:12

File:C:\Users\GCC\Desktop\e3 DATA\報告\411001.EM6

Time:10:19:23

Date:2014-2-24



Site : GCC_RE-02
Condition : 15.249H PK VERTICAL
RBW:1000 KHz VBW:1000 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test Mode : 18 C 51%
CHH

Table with columns: Meter Level, System Factor, Cable Loss, Antenna Factor, Preamp Gain, Real Level, Limit Line, Over Limit, Remark. Row 1: 2483.50 MHz, 61.22 dBuV, -18.59 dB/m, 5.19 dB, 31.78 dB/m, 55.56 dB, 42.63 dBuV/m, 74.00 dBuV/m, -31.37 dB, Peak

System Factor = Cable Loss + Antenna Factor - Preamp Gain
Real Level = Meter Level + System Factor
Over Limit = Real Level - Limit Line

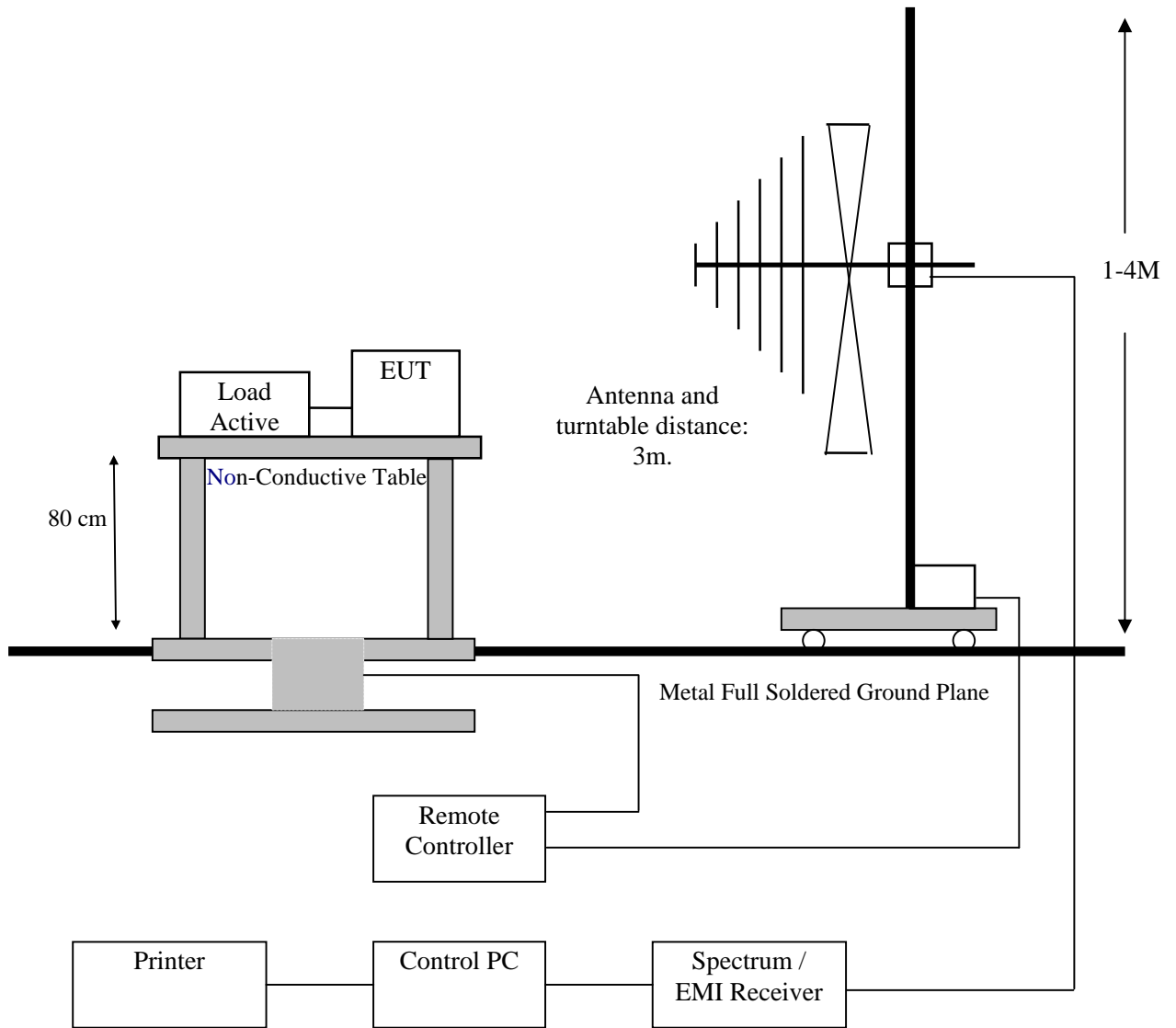


Note:

1. Emission level = Reading level + Correction factor
2. Correction factor = Antenna factor + Cable loss - PreAmp
3. All emissions as described above were determining by rotating the EUT through three orthogonal axes to maximizing the emissions if the EUT belongs to hand-held or body-worn devices.
4. Measurements above 1000 MHz, Peak detector setting: use a 1 MHz RBW, a 3 MHz VBW.
5. Measurements above 1000 MHz, Average detector setting: 1 MHz RBW with 10 Hz VBW.
6. Peak detector measurement data will represent the worst case results.

6. SECTION 15.209 REQUIREMENTS (GENERAL RADIATED EMISSION)

6.1 TEST SETUP





6.2 LIMIT

The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209 as below.

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
1.705-30	30	30
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500*	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.*

In the above emission table, the tighter limit applies at the band edges.

Frequency (Hz)	Field Strength (μ V/m at 3-meter)	Field Strength (dB μ V/m at 3-meter)
1.705-30	30 (at 30-meter)	49.5
30-88	100	40
88-216	150	43
216-960	200	46
Above 960	500	54

6.3 TEST PROCEDURE

- 1、 The EUT was placed on a turntable, which was 0.8m above ground plane.
- 2、 The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3、 EUT was set at 3m away from the receiving antenna, which was varied from 1m to 4m to find out the highest emissions.
- 4、 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5、 And also, each emission was maximized by changing the polarization of receiving antenna, both horizontal and vertical.
- 6、 Repeated above procedures until the measurements for all frequencies are completed.

6.4 RESULT: PASS



6.5 TEST DATA:

All frequencies not described in this test report and within the range of the general radiated emission limits are not detectable significantly. The table as below is representing worst emissions found.

Lowest Channel (worst emissions found)

<u>Frequency</u> (MHz)	<u>Ant.</u> <u>Polarization</u>	<u>Reading</u> (dB μ V)	<u>Correction</u> <u>factor(dB)</u>	<u>Emission</u> (dB μ V/m)	<u>Limit</u> (dB μ V/m)
123.12	H	37.28	-13.26	24.02	43.00
239.52	H	31.63	-15.13	16.5	46.00
385.99	H	35.89	-10.60	25.29	46.00
461.65	H	30.47	-8.54	21.93	46.00
662.44	H	27.44	-3.78	23.66	46.00
838.01	H	28.51	-0.44	28.07	46.00
38.73	V	43.81	-13.10	30.71	40.00
127.00	V	38.34	-13.33	25.01	43.00
239.52	V	32.33	-15.13	17.2	46.00
463.59	V	31.20	-8.49	22.71	46.00
532.46	V	31.07	-6.83	24.24	46.00
830.25	V	28.03	-0.60	27.43	46.00

Note:

1. Emission level = Reading level + Correction factor
2. Correction factor = Antenna factor + Cable loss - PreAmp
3. All emissions as described above were determining by rotating the EUT through three orthogonal axes to maximizing the emissions if the EUT belongs to hand-held or body-worn devices.
4. Measurements from 9 kHz to 150 kHz, Peak detector setting: 100 Hz RBW
5. Measurements from 150 kHz to 30MHz, Peak detector setting: 10 kHz RBW
6. Measurements from 30 MHz to 1000 MHz, Peak detector setting: 100 kHz RBW
7. Measurements from 9 kHz to 150 kHz, CISPR Quasi-Peak detector: 200 Hz RBW
8. Measurements from 150 kHz to 30MHz, CISPR Quasi-Peak detector: 9 kHz RBW
9. Measurements from 30 MHz to 1000 MHz, CISPR Quasi-Peak detector: 120 kHz RBW
10. Peak detector measurement data will represent the worst case results.



7. SECTION 15.207 REQUIREMENTS (POWERLINE CONDUCTED EMISSIONS)

The EUT is powered by the battery; therefore this test item is not applicable.

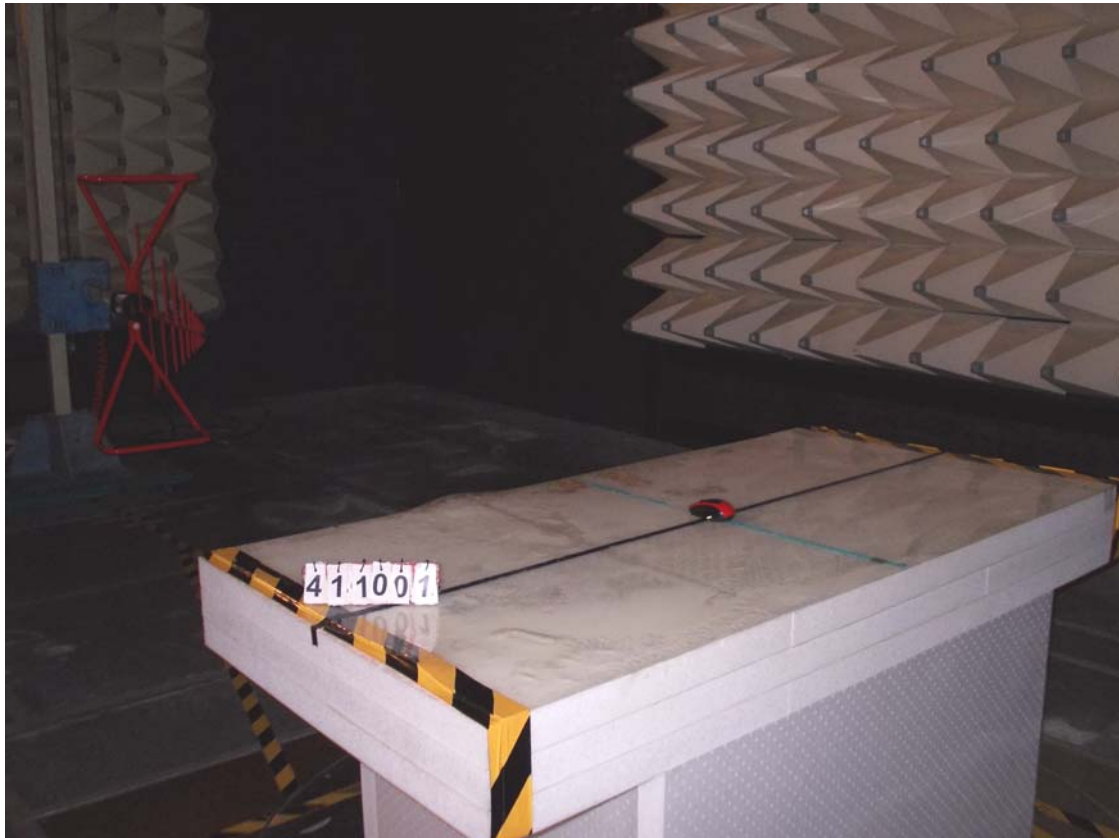


Global Certification Corp.

Appendix 1

PHOTOS OF TEST CONFIGURATION

01 RE Lowest Channel



02 RE Highest Channel

