



**FCC 47 CFR PART 15 SUBPART C**

**TEST REPORT**

**FOR**

Product Name: Traveler 6000Z BlueEye

Model : GM-140016/T

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.*



**Revision History**

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
1.	370401	370401	2013.07.11	Original Report	Lillian
2.	4D0904	370401-01	2014.12.26	Change Wireless module IC	Jane



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

**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** : Traveler 6000Z BlueEye  
**Model No.** : GM-140016/T

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 : Dec. 09, 2014

Issue Date : Dec. 26, 2014

New Taipei City, Taiwan

(Place)

Dec. 26, 2014

(Date)

---

*Adam Chou, Manager*

(Signature) Designation Number: TW1069



**1.1 DESCRIPTION OF THE TESTED SAMPLES**

EUT Name : Traveler 6000Z BlueEye  
Model Number : GM-140016/T  
FCC ID : FSUGMZKX  
Input Voltage : 1.5Vdc  
Power From : Inside Outside  
Adapter Battery AC Power Source DC Power Source  
Support Unit PC  
Operate Frequency : 2409, 2417, 2426, 2435, 2445, 2455, 2465, 2476  
Modulation Technique : O-QPSK/MSK  
Number of Channels : 8  
Channel spacing : 8~11 MHz  
Operating Mode : Duplex  
Bit Rate of Transmission : 2Mbps  
Antenna Type : integral antenna: PCB Antenna (Omnidirection)  
a dedicated antenna  
Antenna gain : 0 dBi  
EUT Received Date : Dec. 09, 2014  
EMC Test Completed Date : Dec. 26, 2014



## **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	( <sup>2</sup> )
13.36 - 13.41	322 - 335.4		

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup> 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. 2.408GHz (Lowest Channel)**
- 2. 2.434GHz (Middle Channel)**
- 3. 2.476GHz (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.	MONITOR	3008WFPT	G32VDD1	R33002	DELL	Shielded 1.6m	Unshielded 1.8m
2.	KEY BOARD	1576	0066904835 299	R31264	Microsoft	Unshielded 1.2m / USB	N/A
3.	PC	QZ709AV	SGH419R1 HS	R33001	HP	N/A	Unshielded 1.8m
4.	PRINTER	STYLUS PHOTO750	BDEK0176 29	3872P011	EPSON	Shielded 1.8m	Unshielded 1.8m
5.	USB storage	TS1GJFV30	160294-799 7	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	10230275 109 REV:2	N/A	N/A	N/A	N/A	N/A
2.	Dongle	GM-13001 2/R	N/A	FSUGMZ KQ	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, ANSI C63.2 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, 2015	
Bilog Antenna	SUNOL	JB1	A052204	Nov. 06, 2015	
Turn table	EMCO	2080	9508-1805	N/A	
Controller	EMCO	2090	9804-1328	N/A	
Amplifier	G.W	GAP-801	EF150001	Jul. 18, 2015	
Amplifier	Schwarzbeck	BBV 9718	9718-008	Aug. 10, 2015	
Spectrum Analyzer	NEX1	Ns-265	5044006	Aug. 07, 2015	
RF Cable	BELDEN	RG-8/U	28M-002	Nov. 02, 2015	
RF Cable	Huber Suhner	SUCOFLEX 104	293864/4	Nov. 13, 2015	
Thermo-Hygro meter	WISEWIND	4-IN-1	050100378	Apr. 08, 2015	
Loop Antenna	TESEO	HLA6120	26349	Sep. 11, 2015	
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-491	Aug. 05, 2015	
Wideband Peak Power Meter	Anritsu	ML2495A	0841006	Oct. 03, 2015	

※ 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**

<b>Fundamental Frequency (MHz)</b>	<b>Field Strength of Fundamental (dB<math>\mu</math>V/m at 3-meter)</b>	<b>Detector</b>
902 - 928 2400 - 2483 5725 - 5875	114	Peak
902 - 928 2400 - 2483 5725 - 5875	94	AV

<b>Fundamental Frequency (MHz)</b>	<b>Field Strength of Harmonics (dB<math>\mu</math>V/m at 3-meter)</b>	<b>Detector</b>
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

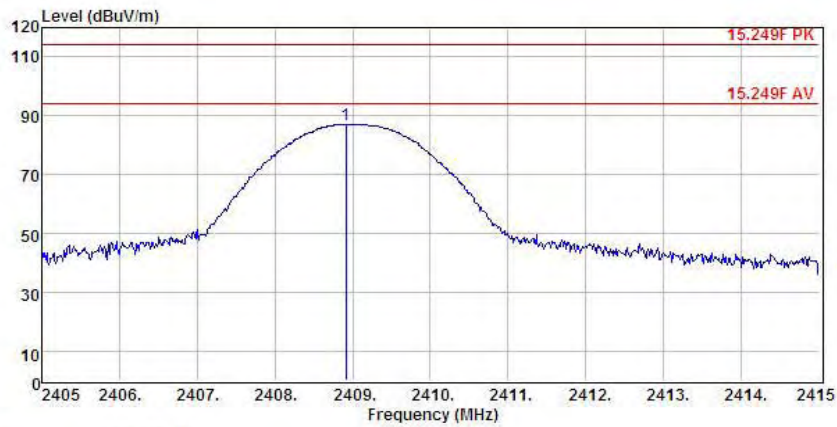


環球認證有限公司  
Global Certification Corp.

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:7 File:C:\Documents and Settings\XP\桌面\昆銀\新資料夾\4D0904.EM6

Time:14:39:36 Date:2014-12-15



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 : TX CHL

	Meter	System	Cable	Antenna	Preamp	Real	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Gain	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB/m	dB	dBuV/m	dBuV/m	dB
1	2408.91	105.87	-18.81	5.11	31.67	55.59	87.06	114.00	-26.94 Peak

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



Lowest Channel-Vertical

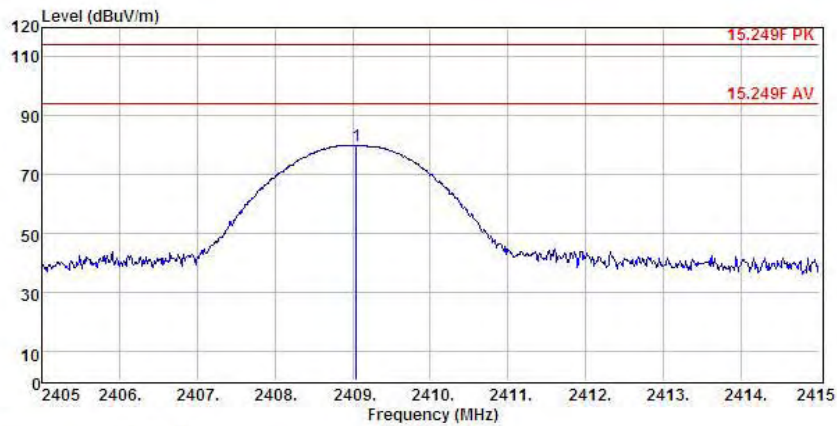


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487458
WebSite: http://www.gcc.tw

Data:8 File:C:\Documents and Settings\XP\桌面\昆銀\新資料夾\4D0904.EM6

Time:14:39:31 Date:2014-12-15



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 : TX CHL

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 2409.05 98.61 -18.81 5.11 31.67 55.59 79.80 114.00 -34.20 Peak

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



Middle Channel-Horizontal

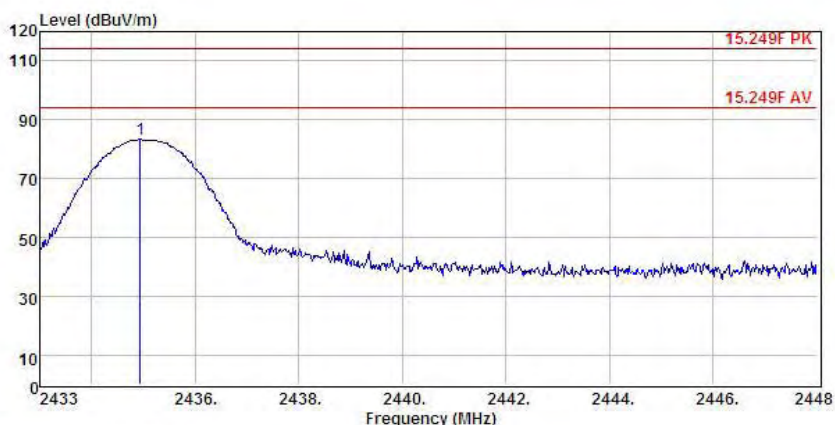


環球認證有限公司  
Global Certification Corp.

Global Certification Corp.  
No.146, Sec. 2, Xiangzhang Rd.,  
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)  
TEL:886-2-26426992 FAX:886-2-26487458  
WebSite: http://www.gcc.tw

Data:10 File:C:\Documents and Settings\XP\桌面\昆銀\新資料夾\4D0904.EM6

Time:14:39:22 Date:2014-12-15



Site : GCC\_RE-02  
 Condition : 15.249F PK HORIZONTAL  
 : RBW:1000 KHz VEW:1000 KHz  
 EUT : See Page 1 of EMC Report  
 MODEL : See Page 1 for Details  
 Test Mode : TX CHM

	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 2434.94	101.97	-18.73	5.14	31.71	55.58	83.24	114.00	-30.76	Peak

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



Middle Channel-Vertical

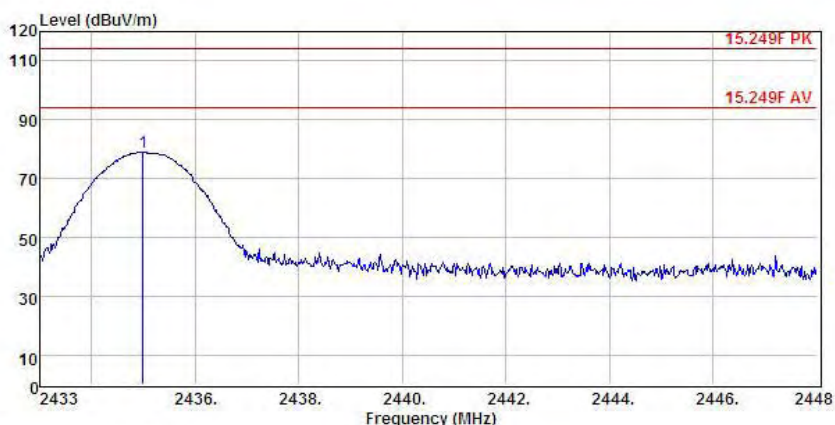


環球認證有限公司  
Global Certification Corp.

Global Certification Corp.  
No.146, Sec. 2, Xiangzhang Rd.,  
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)  
TEL:886-2-26426992 FAX:886-2-26487458  
WebSite: http://www.gcc.tw

Data: 9 File: C:\Documents and Settings\XP\桌面\昆銀\新資料夾\4D0904.EM6

Time: 14:39:26 Date: 2014-12-15



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 : TX CHM

1	MHz	Meter Level dBuV	System Factor dB/m	Cable Loss dB	Antenna Factor dB/m	Preamp Gain dB	Real Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Remark
1	2435.00	97.55	-18.73	5.14	31.71	55.58	78.82	114.00	-35.18	Peak

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





Highest Channel-Horizontal

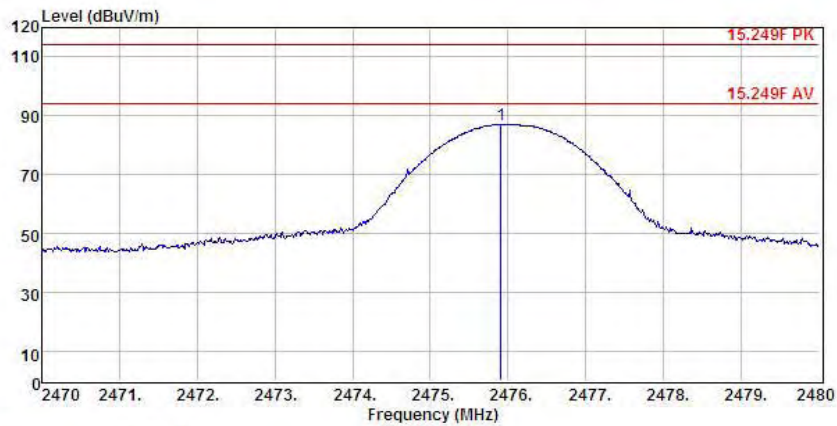


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487458
WebSite: http://www.gcc.tw

Data:11 File:C:\Documents and Settings\XP\桌面\昆銀\新資料夾\4D0904.EM6

Time:14:39:15 Date:2014-12-15



Site : GCC\_RE-02
Condition : 15.249F PK HORIZONTAL
: RBW:1000 KHz VEW:1000 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test Mode : TX CHH

Table with 10 columns: Meter, System Factor, Cable Loss, Antenna Factor, Preamp Gain, Real Level, Limit Line, Over Limit, Remark. Row 1: 1 2475.91 105.61 -18.61 5.18 31.77 55.56 87.00 114.00 -27.00 Peak

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



Highest Channel-Vertical

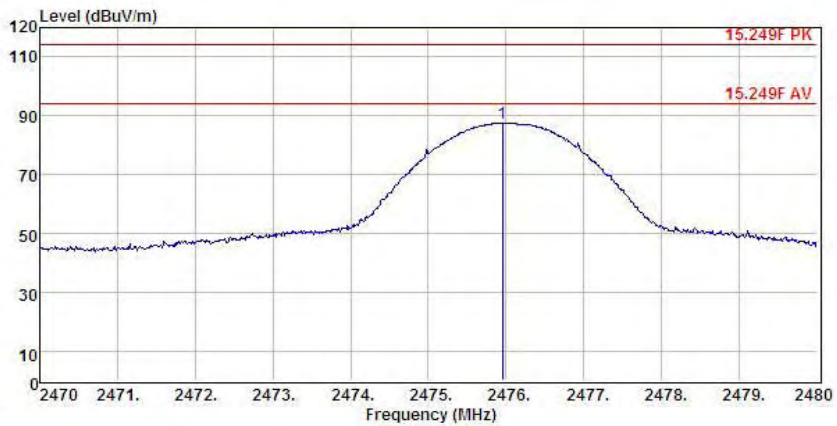


環球認證有限公司
Global Certification Corp.

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd.,
Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
TEL:886-2-26426992 FAX:886-2-26487458
WebSite: http://www.gcc.tw

Data:12 File:C:\Documents and Settings\XP\桌面\昆銀\新資料夾\4D0904.EM6

Time:14:39:08 Date:2014-12-15



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 : TX CHH

Table with columns: Meter, System, Cable, Antenna, Preamp, Real, Limit, Over, Freq, Level, Factor, Loss, Factor, Gain, Level, Line, Limit, Remark. Row 1: 1 2475.95 106.00 -18.61 5.18 31.77 55.56 87.39 114.00 -26.61 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

	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	4817.50	76.37	-14.82	7.06	33.66	55.54	61.55	74.00	-12.45	Peak
2	7232.50	73.63	-11.22	8.14	35.35	54.71	62.41	74.00	-11.59	Peak
3	9632.50	61.35	-9.70	8.99	36.46	55.15	51.65	74.00	-22.35	Peak

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

#### VERTICAL

	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	4817.50	63.40	-14.82	7.06	33.66	55.54	48.58	74.00	-25.42	Peak
2	7232.50	58.76	-11.22	8.14	35.35	54.71	47.54	74.00	-26.46	Peak
3	9970.00	58.67	-9.50	8.92	36.86	55.28	49.17	74.00	-24.83	Peak

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

#### Middle Channel

#### HORIZONTAL

	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	4870.00	74.76	-14.76	7.08	33.67	55.51	60.00	74.00	-14.00	Peak
2	7315.00	71.54	-11.18	8.13	35.36	54.67	60.36	74.00	-13.64	Peak
3	9737.50	60.61	-9.64	8.97	36.58	55.19	50.97	74.00	-23.03	Peak

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



**VERTICAL**

	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	4870.00	63.46	-14.76	7.08	33.67	55.51	48.70	74.00	-25.30	Peak
2	7352.50	59.15	-11.16	8.12	35.37	54.65	47.99	74.00	-26.01	Peak
3	9947.50	58.66	-9.51	8.92	36.84	55.27	49.15	74.00	-24.85	Peak

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

**Highest Channel**

**HORIZONTAL**

	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	4952.50	72.91	-14.65	7.13	33.69	55.47	58.26	74.00	-15.74	Peak
2	7435.00	65.84	-11.12	8.10	35.39	54.61	54.72	74.00	-19.28	Peak
3	9947.50	58.83	-9.51	8.92	36.84	55.27	49.32	74.00	-24.68	Peak

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

**VERTICAL**

	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	4952.50	69.23	-14.65	7.13	33.69	55.47	54.58	74.00	-19.42	Peak
2	7435.00	59.67	-11.12	8.10	35.39	54.61	48.55	74.00	-25.45	Peak
3	9947.50	59.45	-9.51	8.92	36.84	55.27	49.94	74.00	-24.06	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.
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
<sup>1</sup> 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	( <sup>2</sup> )
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 ( $\mu\text{V/m}$ at 3-meter)	Field Strength ( $\text{dB}\mu\text{V/m}$ 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

**5.3 RESULT: PASS**





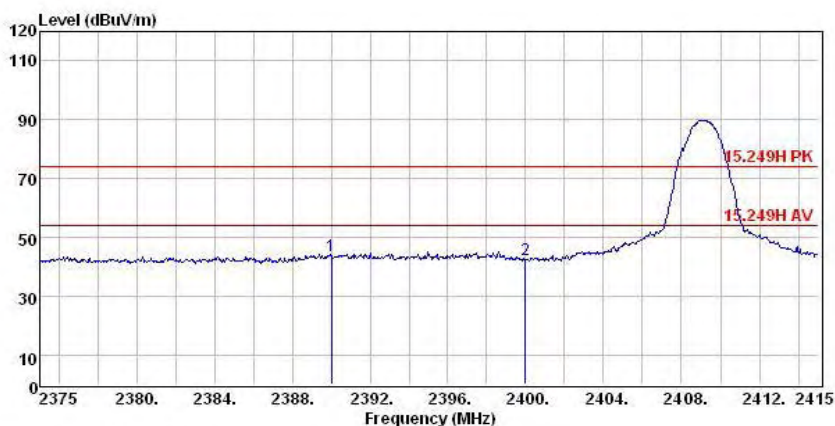
5.4 TEST DATA:

Lowest Channel-Horizontal



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

Data: 15 File: C:\Documents and Settings\Administrator\桌面\E3測試數據\4D0904\TX 定頻.EM6  
Time: 13:56:23 Date: 2014-12-15



Site : GCC\_RE-02  
Condition : 15.249H PK HORIZONTAL  
: RBW:1000 VBW:1000  
EUT : See Page 1 of EMC Report  
MODEL : See Page 1 for Details  
MEMO : TX CHL  
T/H :  
:

	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	2390.00	62.58	-18.86	5.09	31.65	55.60	43.72	74.00	-30.28 Peak
2	2400.00	61.31	-18.84	5.10	31.66	55.60	42.47	74.00	-31.53 Peak

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

Lowest Channel-Vertical



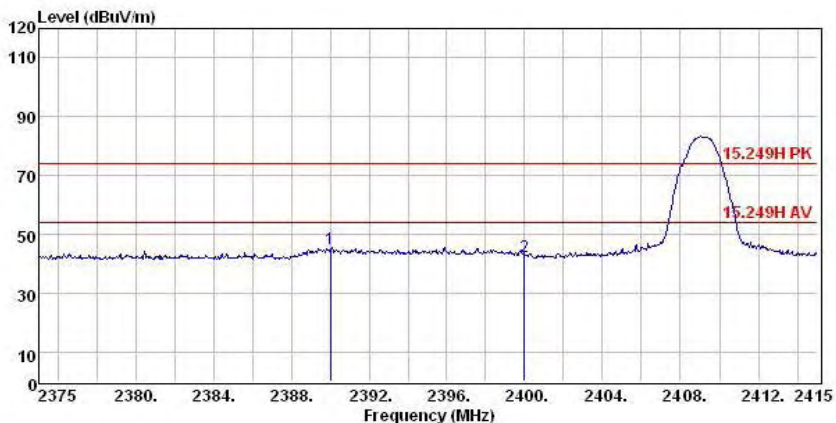
環球認證有限公司

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

Data: 16 File: C:\Documents and Settings\Administrator\桌面\E3測試數據\4D0904\TX 定頻.EM6

Time: 13:57:43 Date: 2014-12-15



Site : GCC\_RE-02  
 Condition : 15.249H PK VERTICAL  
 : RBW:1000 VBW:1000  
 EUT : See Page 1 of EMC Report  
 MODEL : See Page 1 for Details  
 MEMO : TX CHL  
 T/H :  
 :  
 :

	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 2390.00	64.14	-18.86	5.09	31.65	55.60	45.28	74.00	-28.72	Peak
2 2400.00	61.13	-18.84	5.10	31.66	55.60	42.29	74.00	-31.71	Peak

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



Highest Channel-Horizontal

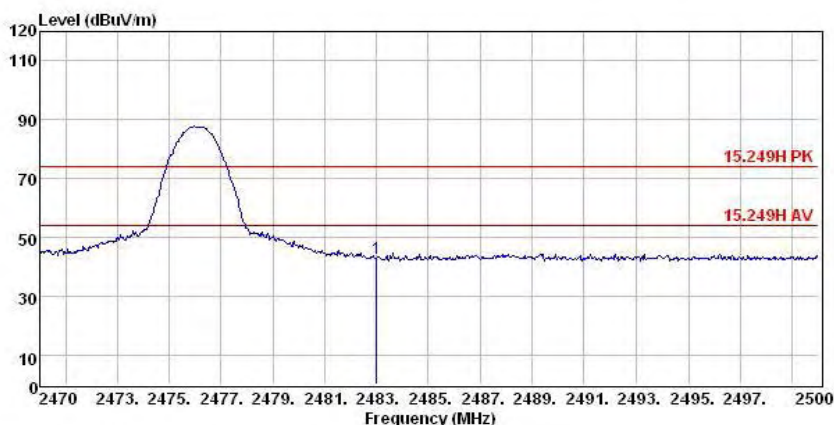


環球認證有限公司  
Global Certification Corp.

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

Data: 14 File: C:\Documents and Settings\Administrator\桌面\E3測試數據\4D0904\TX 定頻.EM6

Time: 13:48:57 Date: 2014-12-15



Site : GCC\_RE-02  
 Condition : 15.249H PK HORIZONTAL  
 : RBW:1000 VBW:1000  
 EUT : See Page 1 of EMC Report  
 MODEL : See Page 1 for Details  
 MEMO : TX CHH  
 T/H :  
 :  
 :

	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 2482.99	61.45	-18.59	5.19	31.78	55.56	42.86	74.00	-31.14	Peak

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

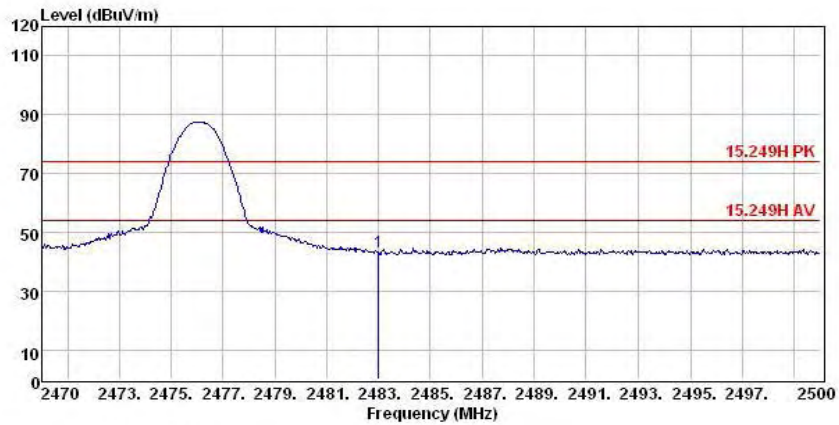


Highest Channel-Vertical



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

Data:13 File:C:\Documents and Settings\Administrator\桌面\E3測試數據\4D0904\TX 定頻.EM6  
Time:13:50:23 Date:2014-12-15



Site : GCC\_RE-02  
Condition : 15.249H PK VERTICAL  
RBW:1000 VBW:1000  
EUT : See Page 1 of EMC Report  
MODEL : See Page 1 for Details  
MEMO : TX CHH  
T/H :

Table with columns: Meter, System Factor, Cable Loss, Antenna Factor, Preamp Gain, Real Level, Limit Line, Over Limit, Remark. Row 1: 2482.99 MHz, 61.70 dBuV, -18.59 dB/m, 5.19 dB, 31.78 dB/m, 55.56 dB, 43.11 dBuV/m, 74.00 dBuV/m, -30.89 dB, Peak

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



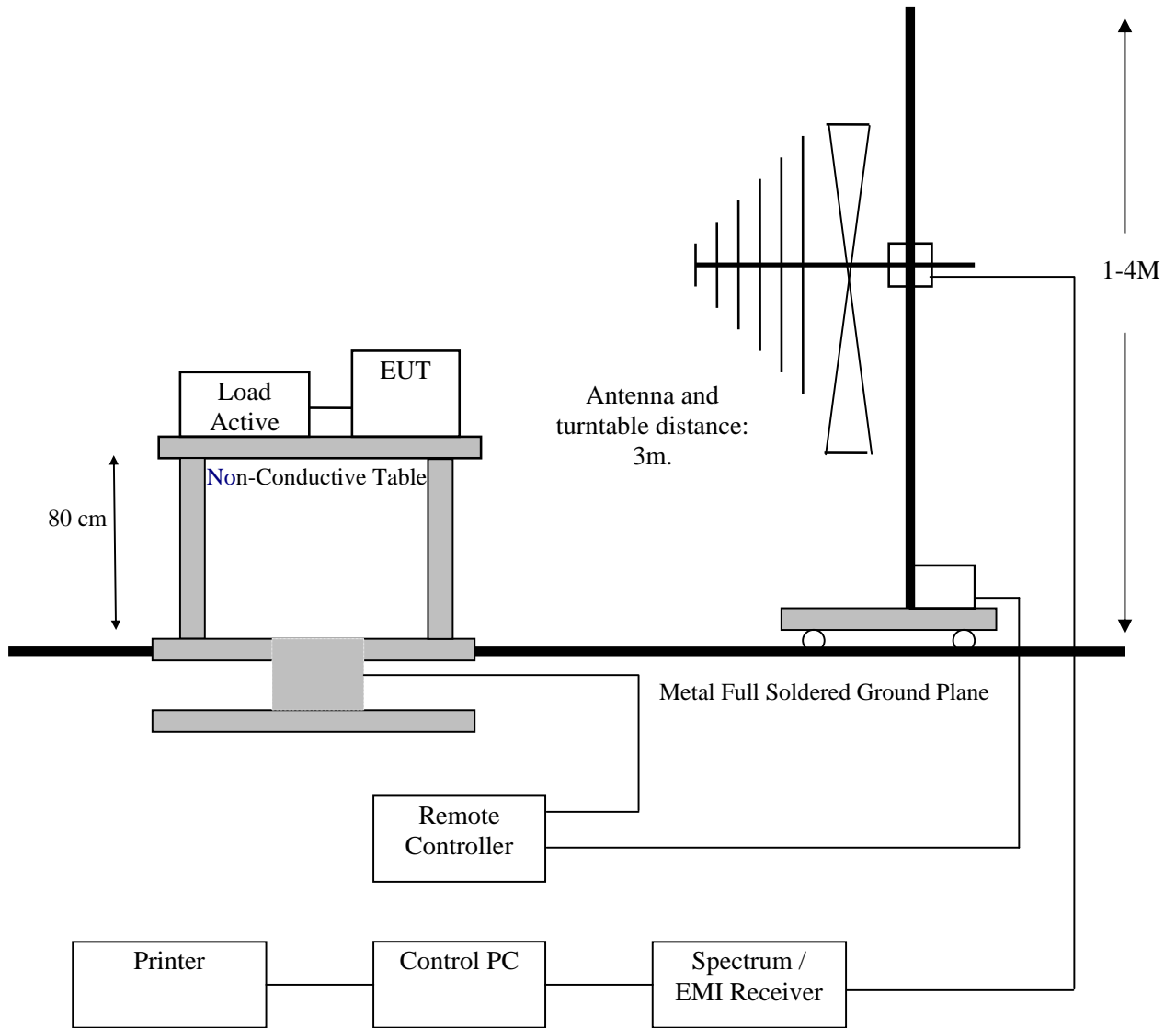


Note:

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 ( $\mu$ V/m at 3-meter)	Field Strength (dB $\mu$ 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 $\mu$ V)	<u>Correction</u> <u>factor(dB)</u>	<u>Emission</u> (dB $\mu$ V/m)	<u>Limit</u> (dB $\mu$ V/m)
227.88	H	39.15	-15.93	23.22	46
286.08	H	41.17	-13.40	28.31	46
456.80	H	32.04	-8.91	23.13	46
513.06	H	32.41	-7.38	25.03	46
627.52	H	33.48	-5.17	28.31	46
685.72	H	29.66	-4.01	25.65	46
40.67	V	50.22	-15.71	34.51	40
227.88	V	46.23	-15.93	30.30	46
286.08	V	48.82	-13.40	35.42	46
571.26	V	39.10	-6.27	32.83	46
627.52	V	40.77	-5.17	35.60	46
882.13	V	36.18	-0.06	36.12	46

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**

Low Frq.



Hight Frq.

