



FCC 47 CFR PART 15 SUBPART C

TEST REPORT

FOR

Product Name: DX-8500

Model : GM-130006/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.

EMC Test Site	Xizhi office and Lab	No.146, Sec. 2, Xiangzhang Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
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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-8500
Model No. : GM-130006/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 : Jul. 09, 2013

Issue Date : Aug. 22, 2013

New Taipei City, Taiwan Aug. 22, 2013

Adam Chou, Manager

(Place)

(Date)

(Signature)

Designation Number: TW1069



1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name : DX-8500
Model Number : GM-130006/S
FCC ID : FSUGMZKR
Input Voltage : 1.5Vdc (2x"AAA" batteries)
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 : 79
Channel spacing : 1 MHz
Operating Mode : Duplex
Bit Rate of Transmission : 1Mbps
Antenna Type : integral antenna: PCB Antenna
Antenna gain : 2 dBi
EUT Received Date : Jul. 09, 2013
EMC Test Completed Date : Aug. 19, 2013



Channels	Frequencies (MHz)	Channels	Frequencies (MHz)	Channels	Frequencies (MHz)	Channels	Frequencies (MHz)
1	2402	21	2422	41	2442	61	2462
2	2403	22	2423	42	2443	62	2463
3	2404	23	2424	43	2444	63	2464
4	2405	24	2425	44	2445	64	2465
5	2406	25	2426	45	2446	65	2466
6	2407	26	2427	46	2447	66	2467
7	2708	27	2428	47	2448	67	2468
8	2409	28	2429	48	2449	68	2469
9	2410	29	2430	49	2450	69	2470
10	2411	30	2431	50	2451	70	2471
11	2412	31	2432	51	2452	71	2472
12	2413	32	2433	52	2453	72	2473
13	2414	33	2434	53	2454	73	2474
14	2415	34	2435	54	2455	74	2475
15	2416	35	2436	55	2456	75	2476
16	2417	36	2437	56	2457	76	2477
17	2418	37	2438	57	2458	77	2478
18	2419	38	2439	58	2459	78	2479
19	2420	39	2440	59	2460	79	2480
20	2421	40	2441	60	2461		



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	()
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:

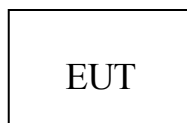
1. 2.402GHz (Lowest Channel)
2. 2.448GHz (Middle Channel)
3. 2.480GHz (Highest Channel)



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:

EUT							
No.	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade name	Data Cable	Power Cord
1.	PCB 1	ZR-01 E317642	1023026710 0 REV:3	N/A	N/A	N/A	N/A
2.	PCB 2	KYE_F-WG E_V15	1023027010 0 REV:1	N/A	N/A	N/A	N/A
3.	Dongle	N/A	N/A	FSUGMZK Q	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, CISPR16-1-4, 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, 2013	
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, 2013	
Thermo-Hygro meter	WISEWIND	4-IN-1	0412	Apr.10, 2014	
Loop Antenna	Teseq GmbH	HLA 6120	26439	Sep. 11, 2013	
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



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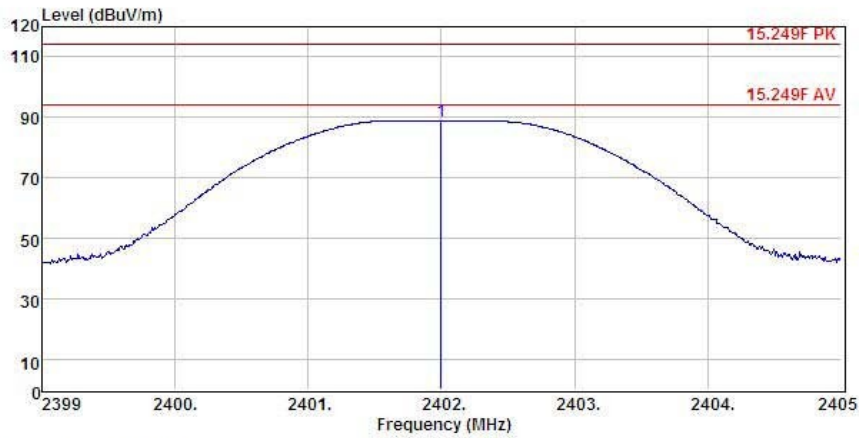
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Website: http://www.gcc.tw

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Time: 12:14:37

Date: 2013-8-19



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 : DC3V battery 28°C 29%

TX 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 2402.00	108.98	-20.14	3.91	31.66	55.71	88.84	114.00	-25.16	Peak

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



Lowest Channel-Vertical



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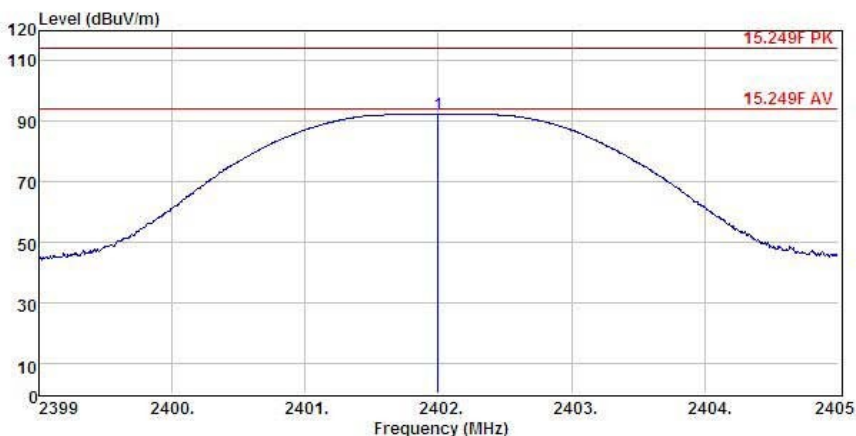
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Time: 12:16:37

Date: 2013-8-19



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 : DC3V battery 28°C 29%

TX 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 2402.00	112.34	-20.14	3.91	31.66	55.71	92.20	114.00	-21.80	Peak

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



Middle Channel-Horizontal

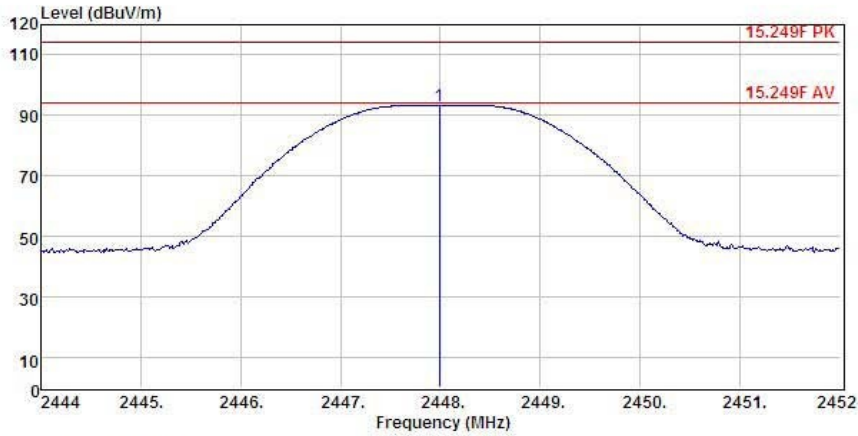


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WebSite: http://www.gcc.tw

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Time: 19:39:40 Date: 2013-8-15



Site : GCC_RE-02
Condition : 15.249F PK HORIZONTAL
: RBW:1000 KHz VEW:1000 KHz
EUT : Please refer to page 1 of report
MODEL : Please refer to page 1 of report
Test Mode : DC1.5V battery 28°C 29%
TX CHM

Table with columns: Meter, System, Cable, Antenna, Preamp, Real, Limit, Over. Row 1: 2447.99, 113.26, -20.00, 3.95, 31.73, 55.68, 93.26, 114.00, -20.74 Peak

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



Middle Channel-Vertical



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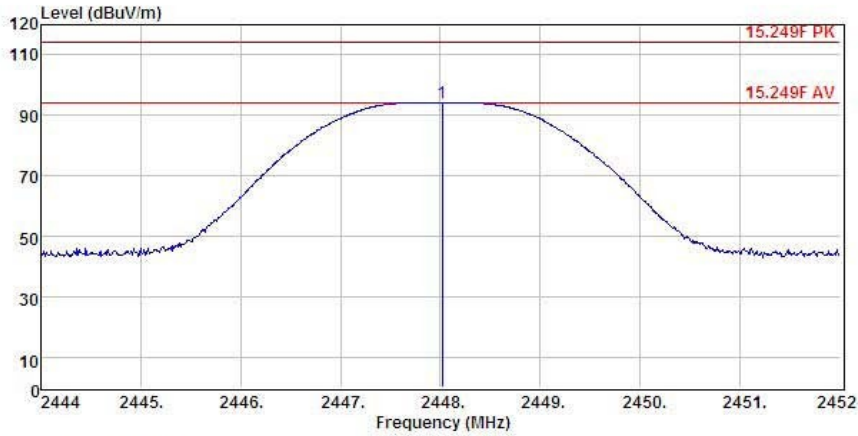
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WebSite: http://www.gcc.tw

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Time: 11:33:27

Date: 2013-8-19



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 : DC3V battery 28°C 29%

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 2448.02	113.93	-20.00	3.95	31.73	55.68	93.93	114.00	-20.07	Peak

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



Highest Channel-Horizontal



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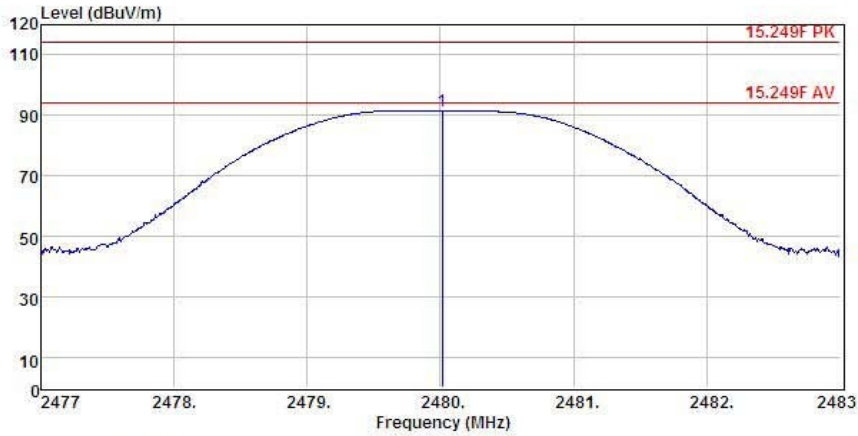
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Time: 11:45:29

Date: 2013-8-19



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 : DC3V battery 28°C 29%

TX CHH									
	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 2480.01	111.28	-19.92	3.98	31.77	55.67	91.36	114.00	-22.64	Peak

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



Highest Channel-Vertical



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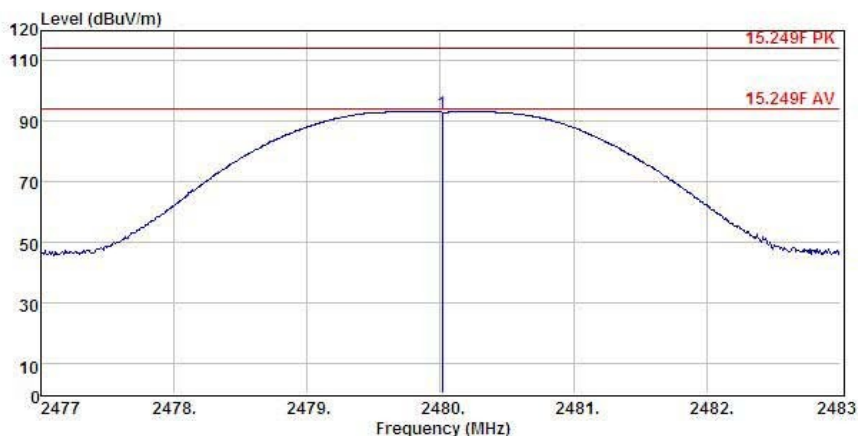
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WebSite: http://www.gcc.tw

Data: 7

File: F:\新增資料夾\370902-2.EM6

Time: 11:42:34

Date: 2013-8-19



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 : DC3V battery 28°C 29%

TX CHH									
	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 2480.01	112.93	-19.92	3.98	31.77	55.67	93.01	114.00	-20.99	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 4802.50	66.71	-16.73	5.30	33.66	55.69	49.98	54.00	-4.02	Peak
2 7217.50	64.94	-13.30	6.30	35.34	54.94	51.64	54.00	-2.36	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 4802.50	67.26	-16.73	5.30	33.66	55.69	50.53	74.00	-23.47	Peak
2 7217.50	66.16	-13.30	6.30	35.34	54.94	52.86	74.00	-21.14	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 4900.00	67.65	-16.62	5.35	33.68	55.65	51.03	74.00	-22.97	Peak
2 7352.50	65.73	-13.16	6.35	35.37	54.88	52.57	74.00	-21.43	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	4900.00	68.81	-16.62	5.35	33.68	55.65	52.19	74.00	-21.81	Peak
2	7352.50	63.18	-13.16	6.35	35.37	54.88	50.02	74.00	-23.98	Peak

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

Highest Channel

HORIZONTAL

	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	4967.50	66.76	-16.54	5.38	33.69	55.61	50.22	74.00	-23.78	Peak
2	7450.00	64.82	-13.07	6.38	35.39	54.84	51.75	74.00	-22.25	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	4967.50	67.22	-16.54	5.38	33.69	55.61	50.68	74.00	-23.32	Peak
2	7450.00	65.73	-13.07	6.38	35.39	54.84	52.66	74.00	-21.34	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
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 ($\mu\text{V/m}$ 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

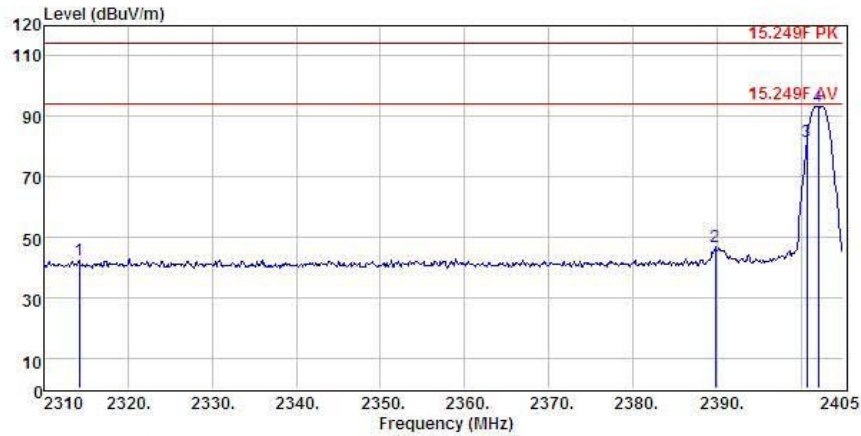


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WebSite: http://www.gcc.tw

Data:1 File:F:\新增資料夾\370902-2.EM6

Time:10:49:44 Date:2013-8-19



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 : DC3V battery 28°C 29%

TX 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	2314.18	62.72	-20.37	3.84	31.54	55.75	42.35	114.00	-71.65 Peak
2	2389.80	66.82	-20.16	3.90	31.65	55.71	46.66	114.00	-67.34 Peak
3	2400.73	101.58	-20.14	3.91	31.66	55.71	81.44	114.00	-32.56 Peak
4	2402.06	113.27	-20.14	3.91	31.66	55.71	93.13	114.00	-20.87 Peak

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



Lowest Channel-Vertical



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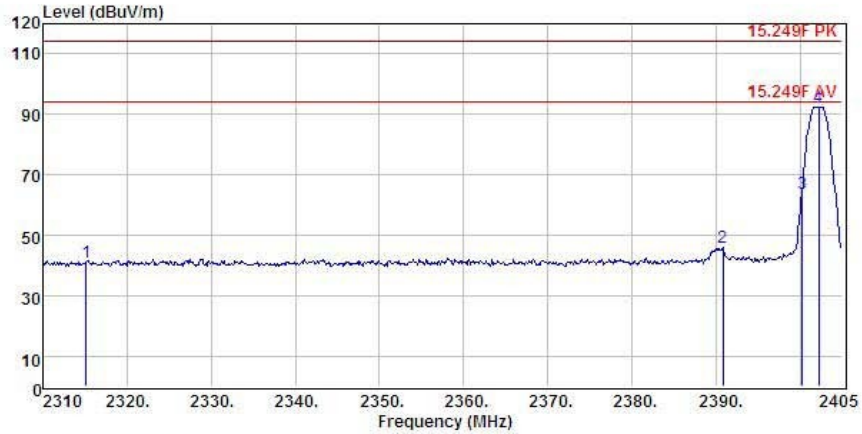
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Data:16

File:F:\新增資料夾\370902-2.EM6

Time:12:31:07

Date:2013-8-19



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 : DC3V battery 28°C 29%

TX 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 2315.13	61.25	-20.37	3.84	31.54	55.75	40.88	114.00	-73.12	Peak
2 2390.85	66.27	-20.16	3.90	31.65	55.71	46.11	114.00	-67.89	Peak
3 2400.25	84.10	-20.14	3.91	31.66	55.71	63.96	114.00	-50.04	Peak
4 2402.25	112.45	-20.14	3.91	31.66	55.71	92.31	114.00	-21.69	Peak

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



Highest Channel-Horizontal



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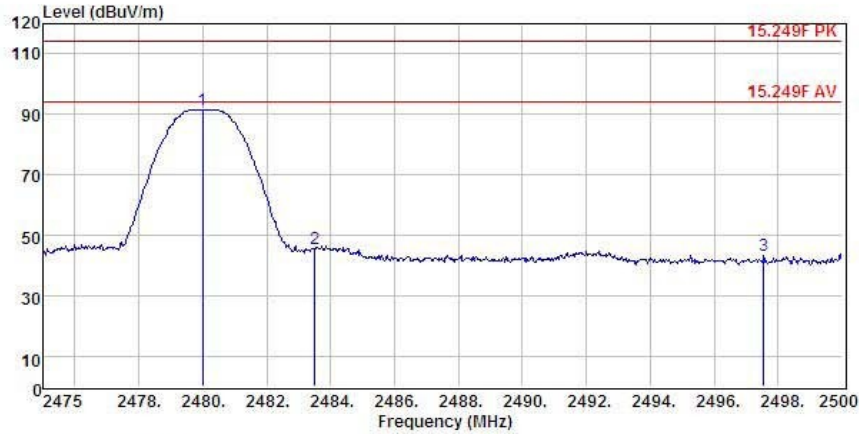
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Website: http://www.gcc.tw

Data: 9

File: F:\新增資料夾\370902-2.EM6

Time: 11:49:54

Date: 2013-8-19



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 : DC3V battery 28°C 29%

TX CHH									
	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 2480.00	111.33	-19.92	3.98	31.77	55.67	91.41	114.00	-22.59	Peak
2 2483.50	65.47	-19.90	3.99	31.78	55.67	45.57	114.00	-68.43	Peak
3 2497.55	63.30	-19.86	4.00	31.80	55.66	43.44	114.00	-70.56	Peak

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



Highest Channel-Vertical



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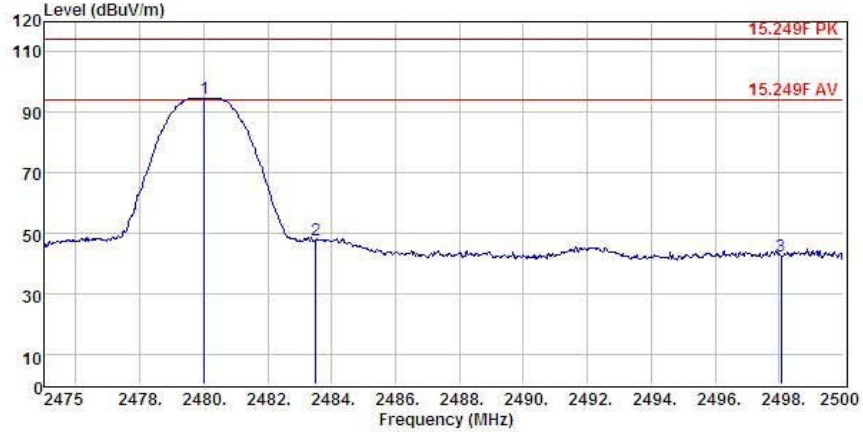
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TEL:886-2-26426992 FAX:886-2-26487450
WebSite: http://www.gcc.tw

Data:10

File:F:\新增資料夾\370902-2.EM6

Time:11:53:06

Date:2013-8-19



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 : DC3V battery 28C 29%

Table with columns: TX CHH, Meter, System Cable Antenna Preamp Real, Limit, Over. Rows include frequency, level, factor, loss, gain, and remarks.

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

Note:

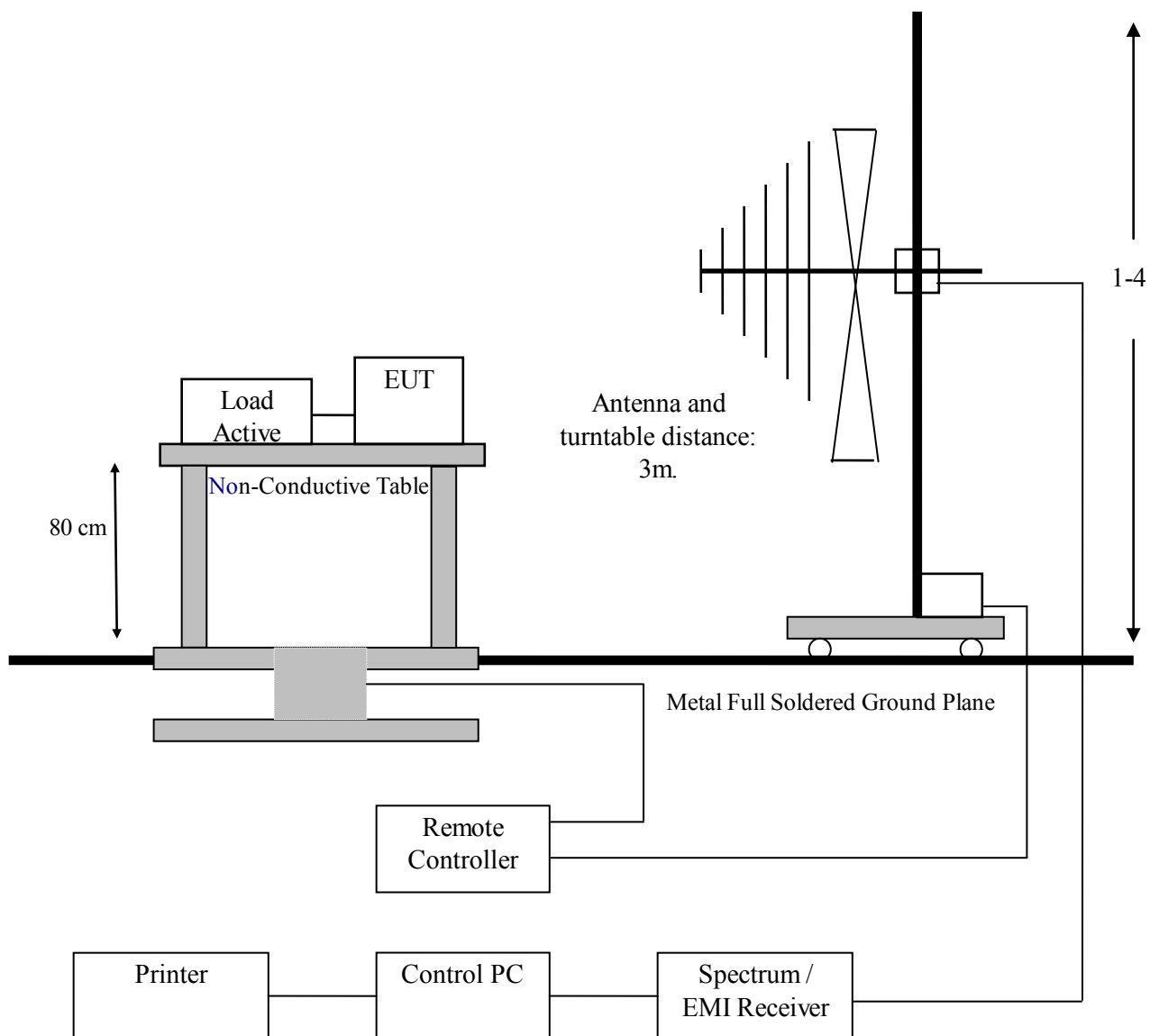
- 1. Emission level = Reading level + Correction factor
2. Correction factor = Antenna factor + Cable loss - PreAmp



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 ($\mu\text{V/m}$ 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

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 (MHz)</u>	<u>Ant. Polarization</u>	<u>Reading (dBμV)</u>	<u>Correction factor(dB)</u>	<u>Emission (dBμV/m)</u>	<u>Limit (dBμV/m)</u>
58.13	H	23.43	-19.53	3.9	40
131.85	H	26.19	-13.05	13.14	43
232.73	H	26.29	-16.40	9.89	46
448.07	H	27.16	-9.32	17.84	46
657.59	H	26.53	-5.82	20.71	46
899.83	H	26.27	-1.34	24.93	46
38.73	V	21.55	-12.18	9.37	40
123.12	V	23.44	-12.74	10.7	43
176.47	V	24.52	-16.00	8.52	43
511.12	V	26.92	-8.59	18.33	46
781.75	V	27.24	-3.82	23.42	46
922.40	V	30.18	-0.93	29.25	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.



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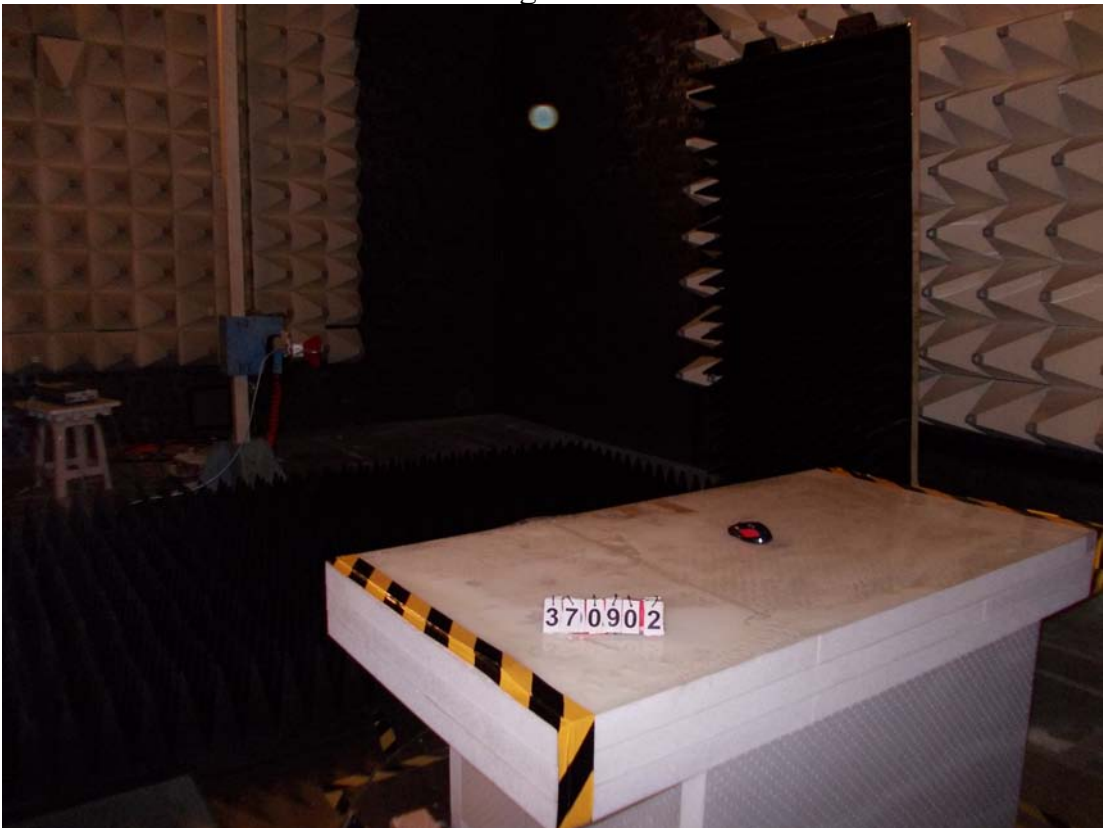
Appendix 1

PHOTOS OF TEST CONFIGURATION

01 RE Lowest Channel



02 RE Highest Channel





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Appendix 2

TEST DATA

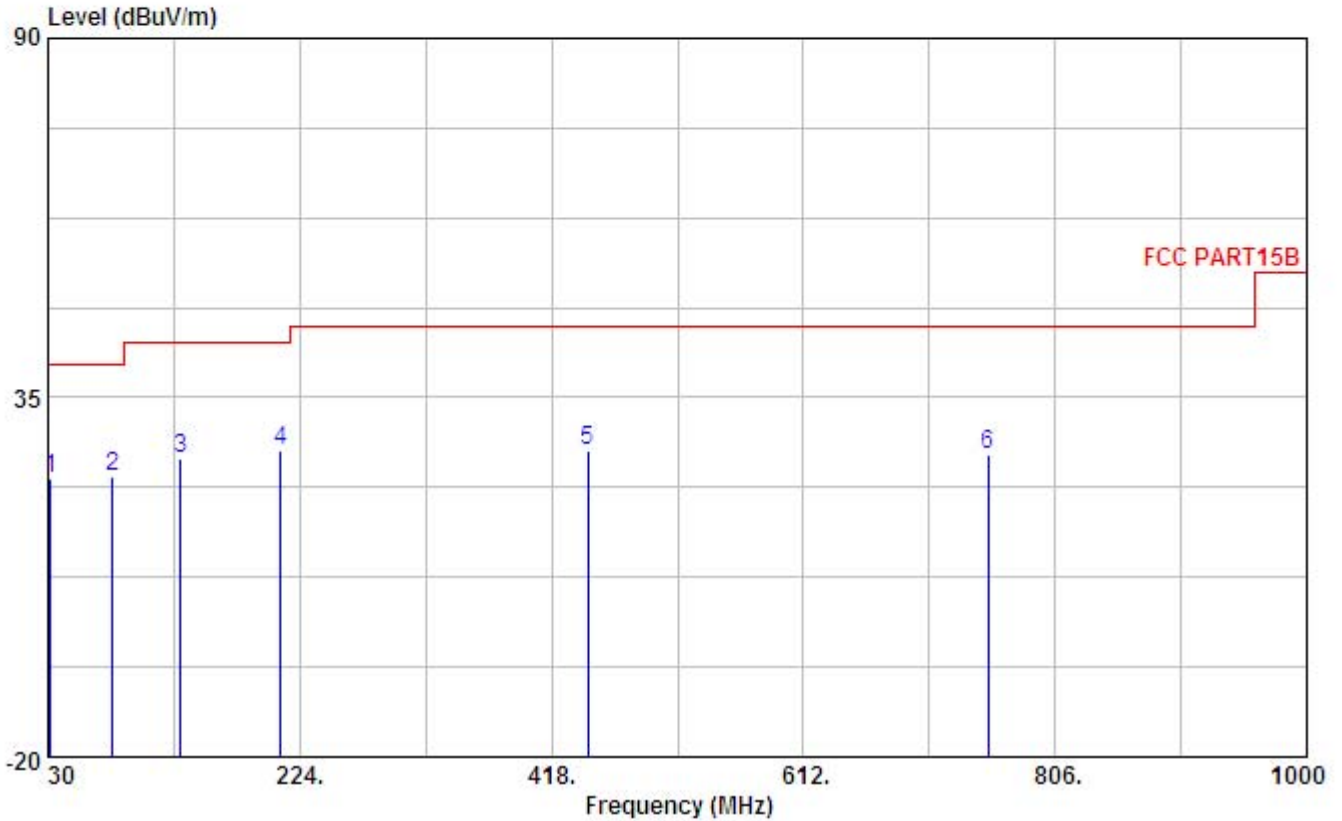


Data:4

File:C:\Documents and Settings\XP\桌面\E3 DATA\370902.EM6

Time:15:21:13

Date:2013-7-24



Site : GCC_RE-01
Condition : FCC PART15B HORIZONTAL
: RBW:120 KHz VBW:300 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test mode : 28 °C 55%
TX

	Meter 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	31.94	29.71	-7.15	0.43	20.56	28.14	22.56	40.00	-17.44	QP
2	79.47	41.75	-18.72	0.76	8.29	27.77	23.03	40.00	-16.97	QP
3	131.85	38.58	-13.05	1.00	13.91	27.96	25.53	43.50	-17.97	QP
4	209.45	43.49	-16.74	1.32	11.39	29.45	26.75	43.50	-16.75	QP
5	446.13	36.11	-9.33	2.08	17.02	28.43	26.78	46.00	-19.22	QP
6	754.59	30.51	-4.33	2.86	21.06	28.25	26.18	46.00	-19.82	QP

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

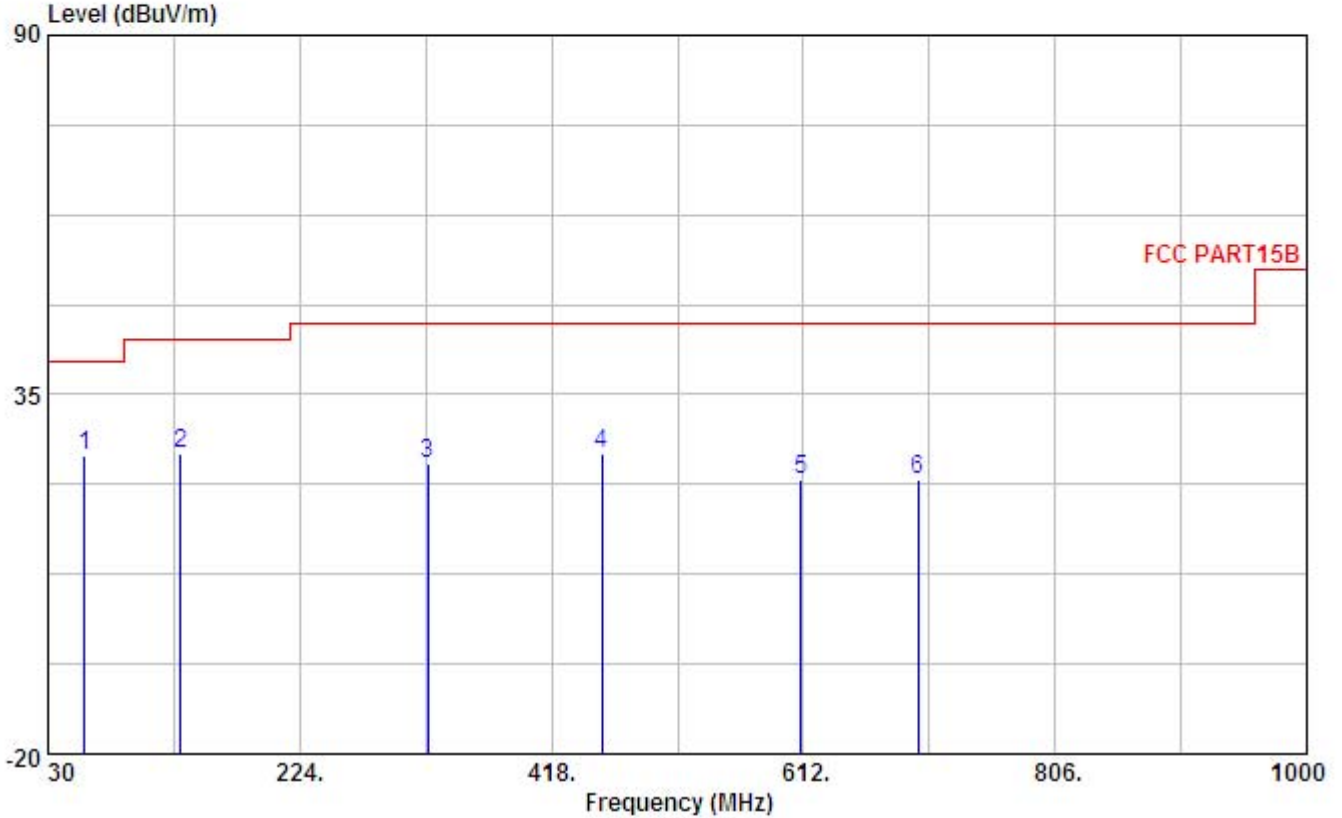


Data:3

File:C:\Documents and Settings\XP\桌面\E3 DATA\370902.EM6

Time:15:20:03

Date:2013-7-24



Site : site
Condition : FCC PART15B VERTICAL
: RBW:120 KHz VBW:300 KHz
EUT : See Page 1 of EMC Report
MODEL : See Page 1 for Details
Test mode : 28 °C 55%
TX

	Meter 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	58.13	45.12	-19.53	0.61	7.81	27.95	25.59	40.00	-14.41	QP
2	131.85	38.94	-13.05	1.00	13.91	27.96	25.89	43.50	-17.61	QP
3	322.94	37.85	-13.30	1.71	14.46	29.47	24.55	46.00	-21.45	QP
4	456.80	35.04	-9.21	2.11	17.24	28.56	25.83	46.00	-20.17	QP
5	610.06	28.88	-6.87	2.52	19.30	28.69	22.01	46.00	-23.99	QP
6	700.27	27.71	-5.64	2.75	20.10	28.49	22.07	46.00	-23.93	QP

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