FCC 47 CFR PART 15 SUBPART C

TEST REPORT

FOR

RF 2.4G USB RECEIVER DONGLE

Model : KWS-RF2.4G USB DONGLE

Trade Name: KWS

Issued to

KING WINS TECHNOLOGY CO., LTD
2F., No. 1, Jian 1 St Rd., Zhonghe Dist., New Taipei City, Taiwan

Issued by

PEP Certification Corp.

Testing Laboratory
2606

Open Site		**No. 120, Ln. 5, Hudong St., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)**
EMC Test Site	**Xizhi Office and Lab**	**12F.-3, No.27-1, Ln. 169, Kangning St., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)**

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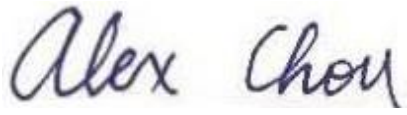
1. GENERAL INFORMATION

Applicant	:	**KING WINS TECHNOLOGY CO., LTD**
Address	:	**2F., No. 1, Jian 1 St Rd., Zhonghe Dist., New Taipei City, Taiwan**
Manufacturer	:	**KING WINS TECHNOLOGY CO., LTD**
Address	:	**2F., No. 1, Jian 1 St Rd., Zhonghe Dist., New Taipei City, Taiwan**
EUT	:	**RF 2.4G USB RECEIVER DONGLE**
Model Name	:	**KWS-RF2.4G USB DONGLE**
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 : 03/04/2014 Final Test Date : 03/20/2014



Taipei, Taiwan	MAR. 21, 2014	***Alex Chou / Manager***	
(Place)	(Date)	(Signature)	Designation Number: TW1075

1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name	:	RF 2.4G USB RECEIVER DONGLE
Model Number	::	KWS-RF2.4G USB DONGLE
FCCID Number		2AB4U-KWS82-RX
Receipt Date	:	03/04/2014
Input Voltage	:	5 Vdc (From PC)
Power From		☐ Inside ☑Outside ☐Adaptor ☐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	:	65
Channel spacing	:	☐N/A ☑ 1 MHz
Operating Mode	:	☐Simplex ☑ Half Duplex
Antenna Type	:	☑integral antenna: PCB Printing ☐a dedicated antenna
Antenna gain		-3 dBi

Channel	Freq.(MHz)	Channel	Freq.(MHz)
1	2404	34	2443
2	2405	35	2444
3	2406	36	2445
4	2407	37	2446
5	2408	38	2450
6	2409	39	2451
7	2410	40	2452
8	2411	41	2453
9	2412	42	2454
10	2413	43	2455
11	2414	44	2456
12	2418	45	2457
13	2419	46	2458
14	2420	47	2459
15	2421	48	2460
16	2422	49	2461
17	2423	50	2462
18	2424	51	2466
19	2425	52	2467
20	2426	53	2468
21	2427	54	2469
22	2428	55	2470
23	2429	56	2471
24	2430	57	2472
25	2434	58	2473
26	2435	59	2474
27	2436	60	2475
28	2437	61	2476
29	2438	62	2477
30	2439	63	2478
31	2440	64	2479
32	2441	65	2480
33	2442		

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 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 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			

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**

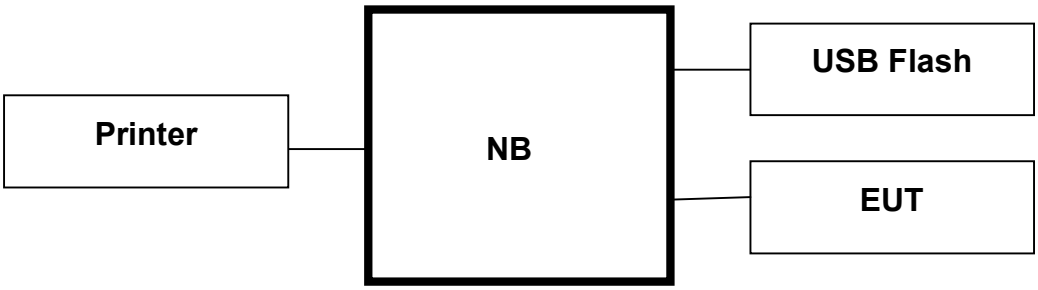
Channels:

1. **2.404 GHz (**Lowest Channel**)**
2. **2.440 GHz (**Middle Channel**)**
3. **2.480 GHz (**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.	Notebook	TPN-Q113	N/A	R33001	HP	N/A	Unshielded 1.8m
2.	Printer	D4360	N/A	R33001	HP	Shielded 1.8m	Unshielded 1.8m
3.	USB storage	TS2GJFV30	156511-6400	DOC/ D33193	TRANSCEND	Shielded 1m	N/A
INSIDE SUPPORT EQUIPMENT							
No.	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade name	Data Cable	Power Cord
1.	MA143 RX V1.0	N/A	N/A	N/A	N/A	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

Test Site	Instrument	Manufacturer	Model No.	S/N	Next Cal. Date
Conduction	Receiver	R&S	ESHS10	830223/008	Nov. 23, 2014
	Spectrum Analyzer	ADVANTEST	R3261C	87120343	Mar. 18, 2015
	RF Cable	MIYAZAKI & Anritsu	RG58A0 & MP59B	M79094	Apr. 08, 2014
	L.I.S.N	Rolf Heine Hochfrequenztechnik	NNB-2/16z	98062	Jan. 16, 2015
	EMI Test Receiver	R&S	EAHS-10	1093.4495.03	Mar. 21, 2015
	Click Analyzer	Schaffner	DIA1512C	5218	June 15, 2014
Radiation	Spectrum Analyzer	Nexl Future	FSP	N05044006	Nov. 16, 2014
	30MHz~1GHz RF Cable	YEIDA WIRE CABLE	N/A	N/A	Jan. 18, 2015
	1GHz~18GHz RF Cable	MITEQ	N/A	N/A	Sep. 22, 2014
	Hron Antenna 1GHZ~18GHz	COM-POWER	AH-118	10056	Mar. 12, 2015
	Antenna(30M-1G)	SCHWARZBECH	VULB 9161	4078	Jan. 16, 2015
	Pre-Amplifier	Schaffner	CPA-9232	1028	Jan. 20, 2015
	Preamplifier 1GHz~18GHz	MITEQ	28-5A	513015	Sep. 25, 2014
	18G~26G RF Cable	YEIDA WIRE CABLE	N/A	N/A	Nov. 18, 2014
	Hron Antenna 18G~26G	COM-Power	AH-826	081000	Mar. 21, 2014

	Preampliter 18G~26G	MITEQ	30-5A	808329	May 28, 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

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

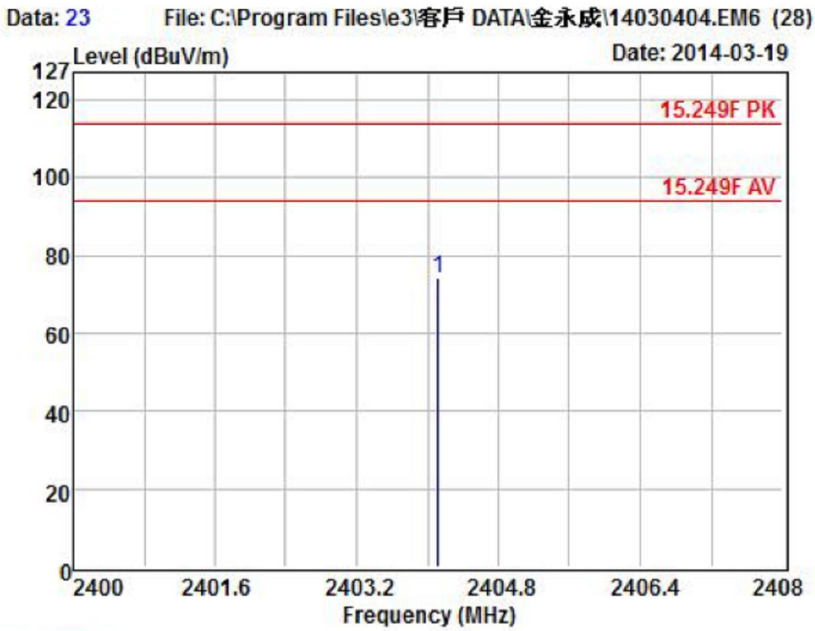
4.3 RESULT: PASSED

4.4 TEST DATA:

Fundamental

Lowest Channel- Vertical

PEP Certification Corp.



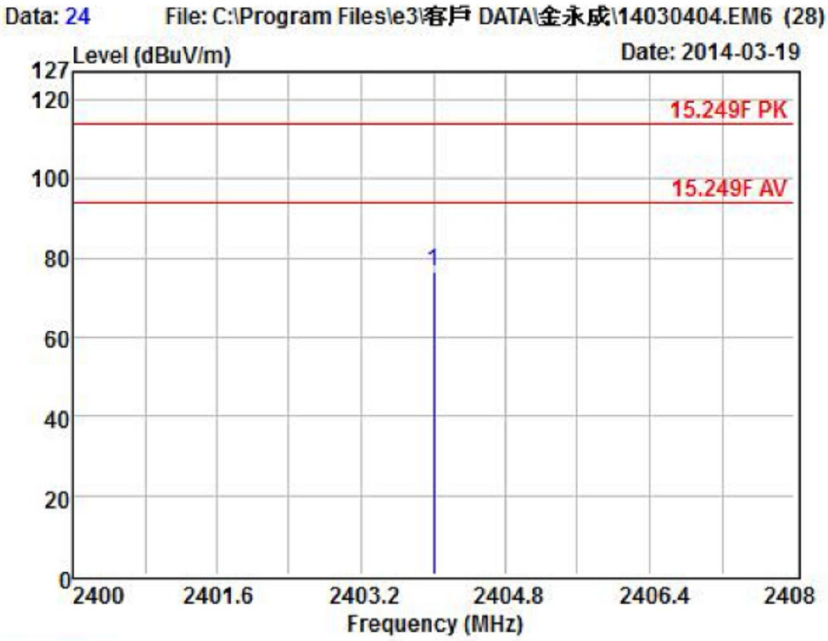
Site : OPEN SITE
Condition: 15.249F PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2404MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2404.12	90.80	74.13	-16.67	114.00	-39.87	Peak

Fundamental

Lowest Channel-Horizontal

PEP Certification Corp.



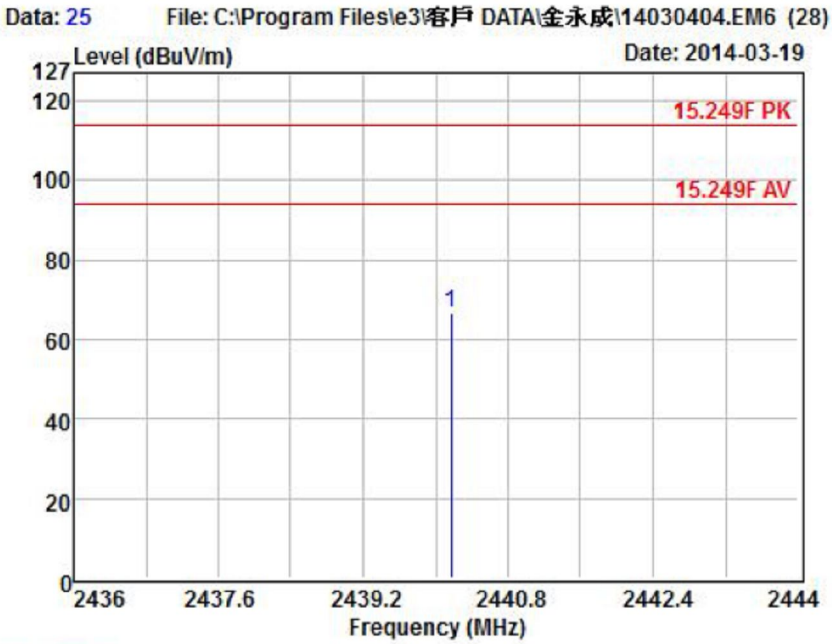
Site : OPEN SITE
Condition: 15.249F PK 3m AH118(1-18)103 HORIZONTAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2404MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2404.00	93.38	76.71	-16.67	114.00	-37.29	Peak

Fundamental

Middle Channel- Vertical

PEP Certification Corp.



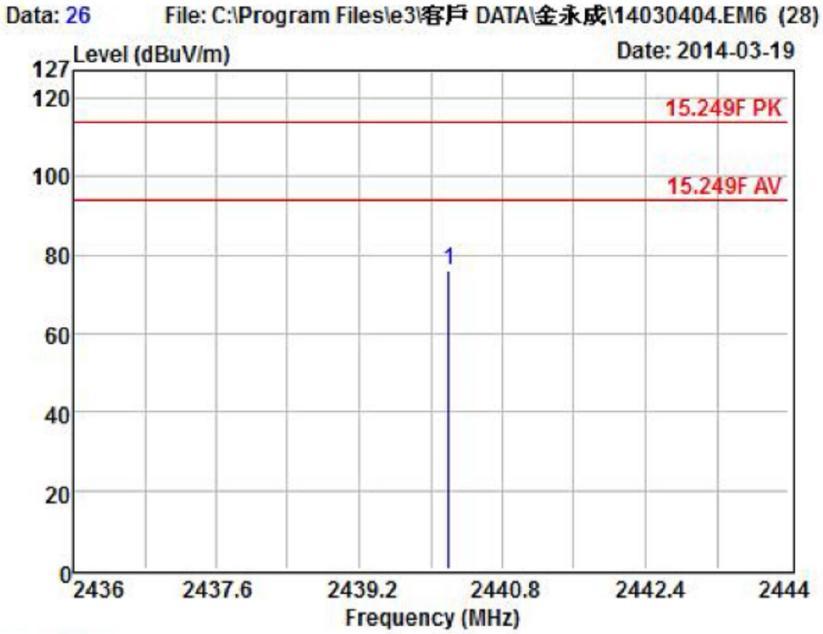
Site : OPEN SITE
Condition: 15.249F PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2440MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2440.17	83.22	66.65	-16.57	114.00	-47.35	Peak

Fundamental

Middle Channel-Horizontal

PEP Certification Corp.

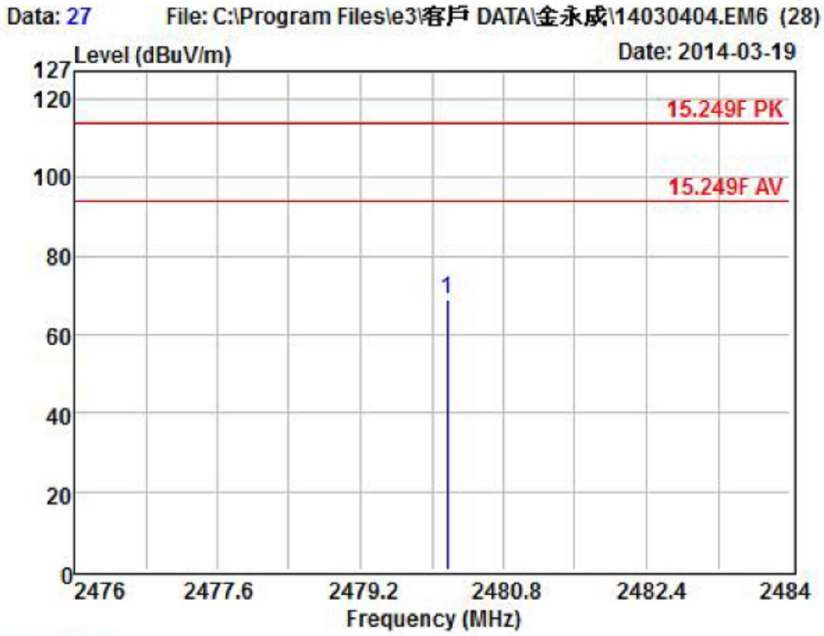



```
Site      : OPEN SITE
Condition: 15.249F PK 3m AH118(1-18)103 HORIZONTAL
eut       : 14030404
mode      : Transmit
memo      : USB Dongle,2440MHz
                 Read                 Limit   Over
           Freq  Level  Level Factor   Line  Limit Remark
          MHz    dBuV  dBuV/m   dB/m dBuV/m     dB
  1    2440.20  92.66  76.09 -16.57 114.00 -37.91 Peak
```

Fundamental

Highest Channel- Vertical

PEP Certification Corp.

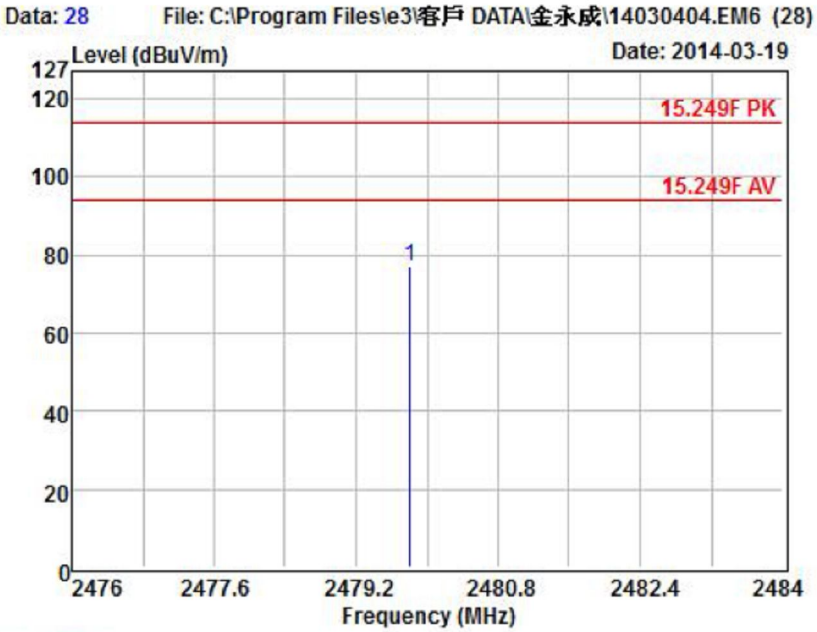



```
Site      : OPEN SITE
Condition: 15.249F PK 3m AH118(1-18)103 VERTICAL
eut       : 14030404
mode      : Transmit
memo      : USB Dongle,2480MHz
                 Read                 Limit   Over
           Freq  Level  Level Factor   Line  Limit Remark
                 MHz    dBuV dBuV/m   dB/m dBuV/m    dB
  1     2480.17  85.32  68.85 -16.47 114.00 -45.15 Peak
```

Fundamental

Highest Channel-Horizontal

PEP Certification Corp.

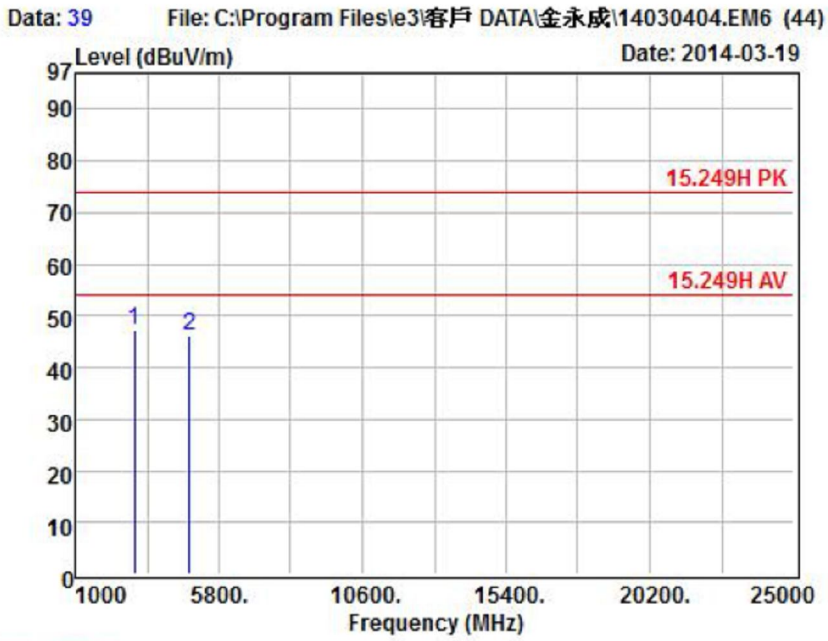



```
Site      : OPEN SITE
Condition: 15.249F PK 3m AH118(1-18)103 HORIZONTAL
eut       : 14030404
mode      : Transmit
memo      : USB Dongle,2480MHz
                 Read                 Limit   Over
           Freq  Level   Level Factor   Line   Limit Remark
                 MHz     dBuV dBuV/m   dB/m dBuV/m     dB
  1     2479.81  93.62   77.15 -16.47 114.00 -36.85 Peak
```

Harmonics

Lowest Channel- Vertical

PEP Certification Corp.



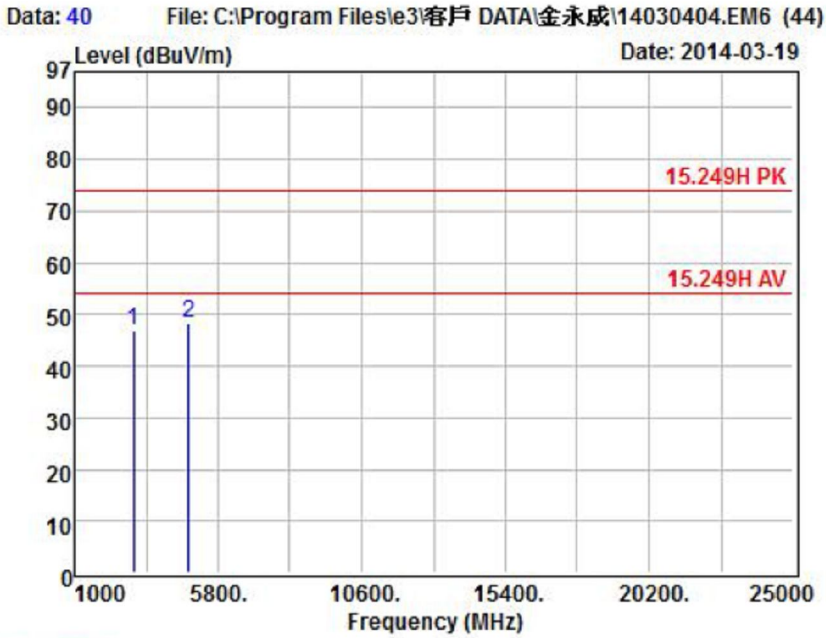
Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2404MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2988.00	61.42	47.37	-14.05	74.00	-26.63	Peak
2	4808.00	55.75	46.03	-9.72	74.00	-27.97	Peak

Harmonics

Lowest Channel-Horizontal

PEP Certification Corp.



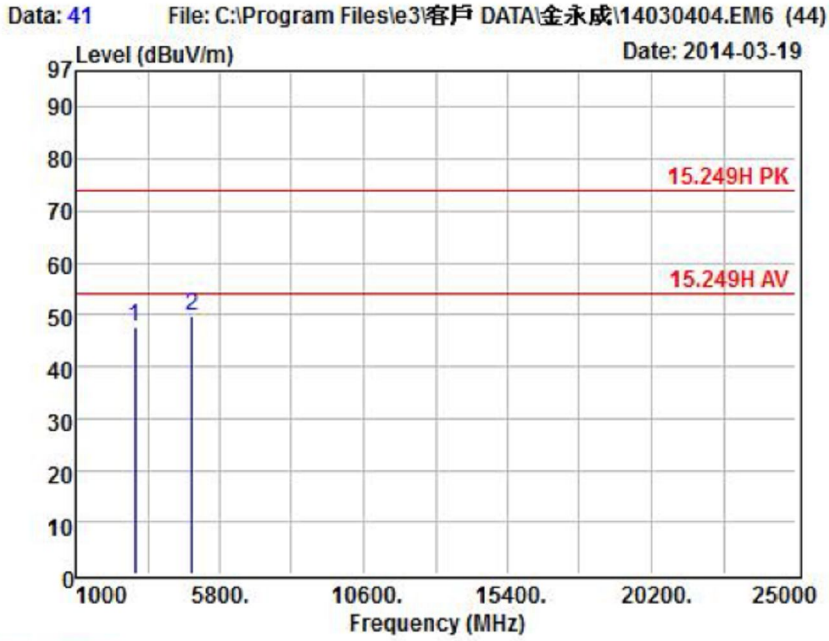
Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 HORIZONTAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2404MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2988.00	60.97	46.92	-14.05	74.00	-27.08	Peak
2	4808.00	58.19	48.47	-9.72	74.00	-25.53	Peak

Harmonics

Middle Channel- Vertical

PEP Certification Corp.



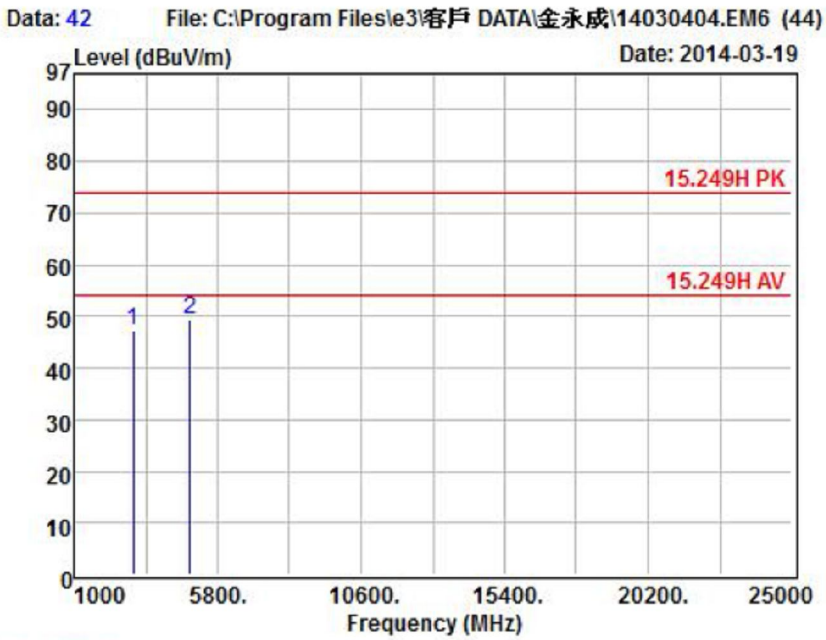
Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2440MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2988.00	61.47	47.42	-14.05	74.00	-26.58	Peak
2	4878.00	59.17	49.76	-9.41	74.00	-24.24	Peak

Harmonics

Middle Channel-Horizontal

PEP Certification Corp.



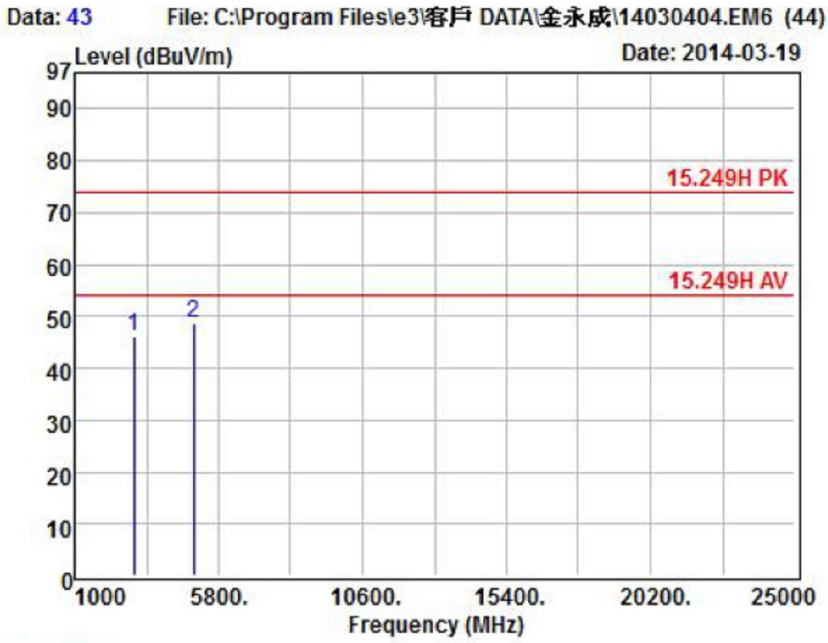
Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 HORIZONTAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2440MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2988.00	61.45	47.40	-14.05	74.00	-26.60	Peak
2	4878.00	58.75	49.34	-9.41	74.00	-24.66	Peak

Harmonics

Highest Channel- Vertical

PEP Certification Corp.



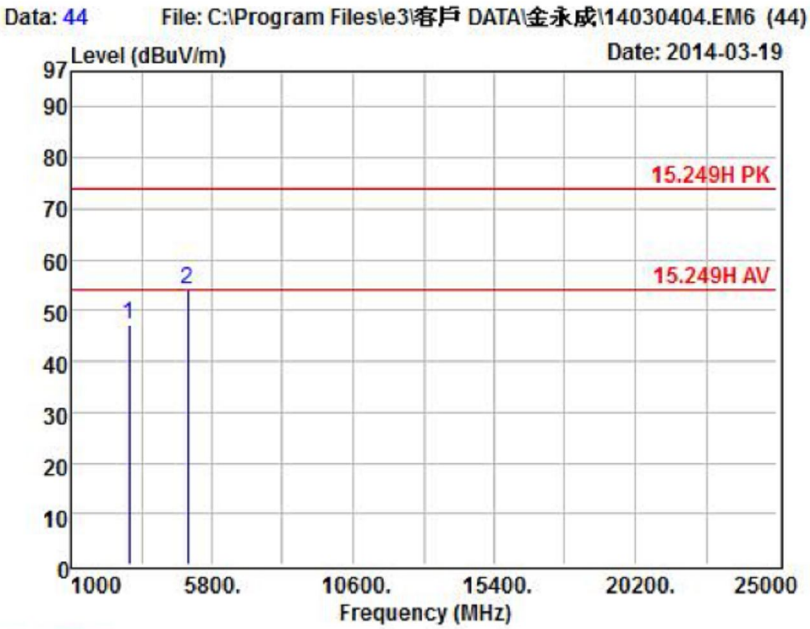
Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2480MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2988.00	60.03	45.98	-14.05	74.00	-28.02	Peak
2	4962.00	57.81	48.77	-9.04	74.00	-25.23	Peak

Harmonics

Highest Channel-Horizontal

PEP Certification Corp.



Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 HORIZONTAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2480MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2988.00	61.28	47.23	-14.05	74.00	-26.77	Peak
2	4962.00	63.00	53.96	-9.04	74.00	-20.04	Peak

Note:

1. Emission level = Reading level + Correction factor
2. Correction factor : Antenna factor, Cable loss, Pre-Amp, etc.
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.

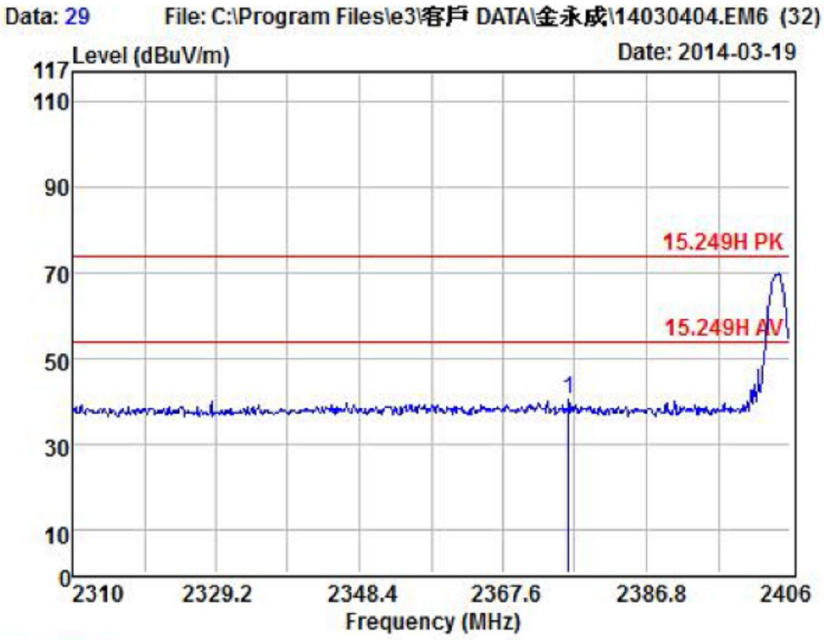
Frequency (Hz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
1.705-30	30 (at 30-meter)	49.5
30-88	100	40
88-216	150	43
216-960	200	46
Above 960	500	54

5.3 RESULT: PASSED

5.4 TEST DATA:

Lowest Channel-Vertical

PEP Certification Corp.

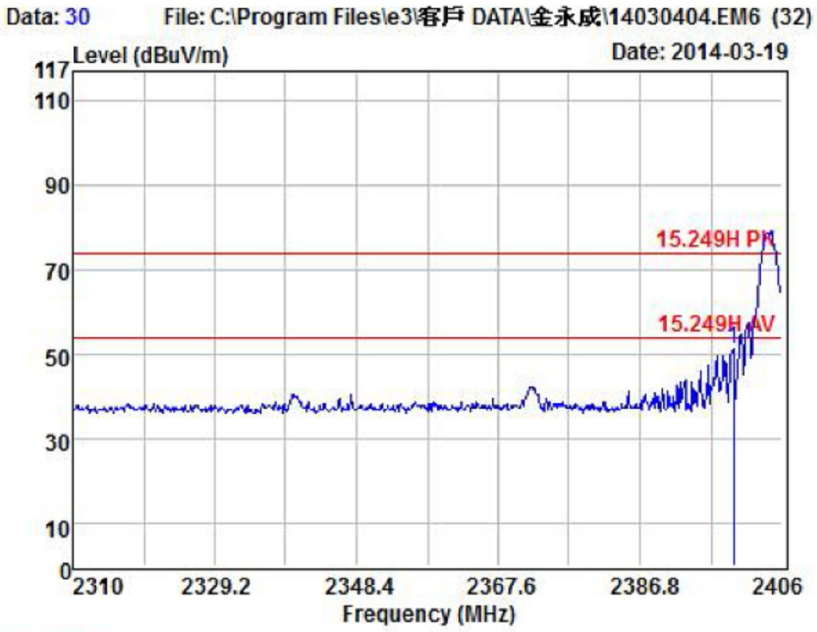


Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2404MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2376.43	57.35	40.62	-16.73	74.00	-33.38	Peak

Lowest Channel-Horizontal

PEP Certification Corp.

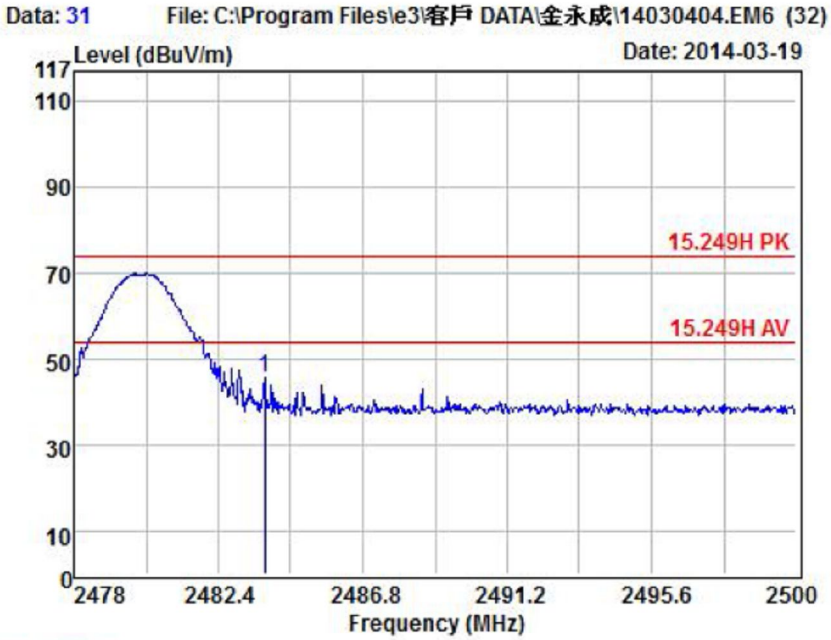


Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 HORIZONTAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2404MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2399.47	67.89	51.21	-16.68	74.00	-22.79	Peak

Highest Channel-Vertical

PEP Certification Corp.

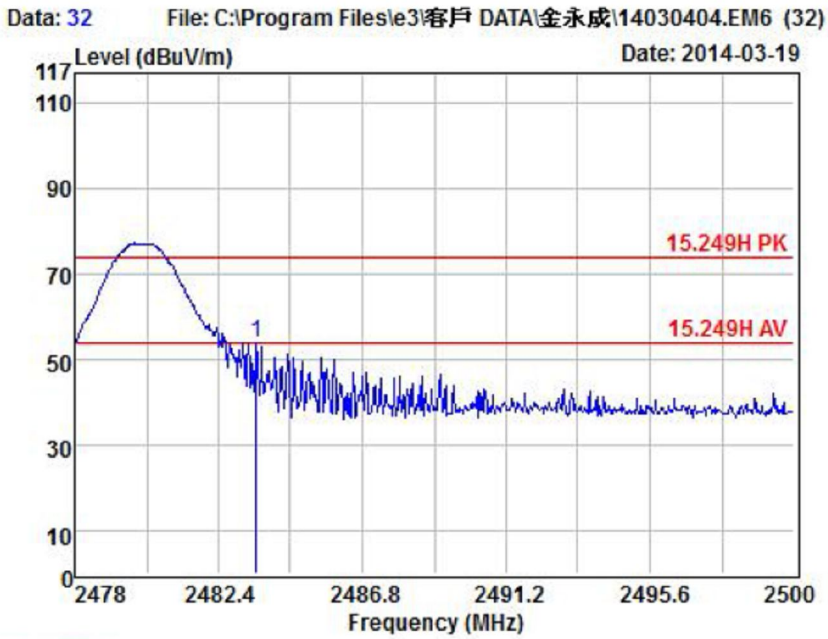


Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 VERTICAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2480MHz

	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2483.81	62.30	45.85	-16.45	74.00	-28.15	Peak

Highest Channel-Horizontal

PEP Certification Corp.



Site : OPEN SITE
Condition: 15.249H PK 3m AH118(1-18)103 HORIZONTAL
eut : 14030404
mode : Transmit
memo : USB Dongle,2480MHz

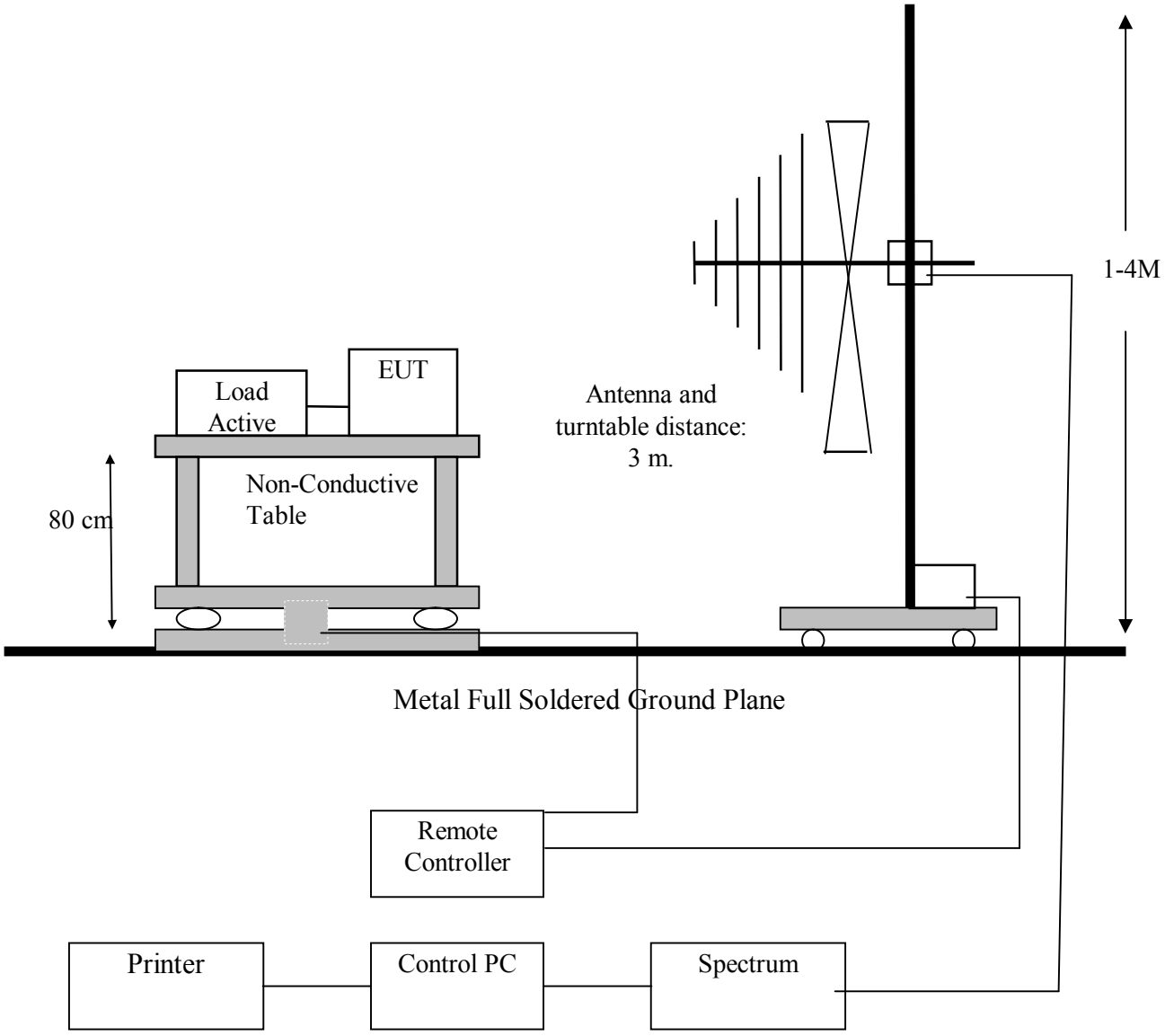
	Freq	Read Level	Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV/m	dB/m	dBuV/m	dB	
1	2483.54	70.42	53.97	-16.45	74.00	-20.03	Peak

Note:

1. Emission level = Reading level + Correction factor
2. Correction factor : Antenna factor, Cable loss, Pre-Amp, etc.
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 (μV/m at 3-meter)	Field Strength (dBμV/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: PASSED

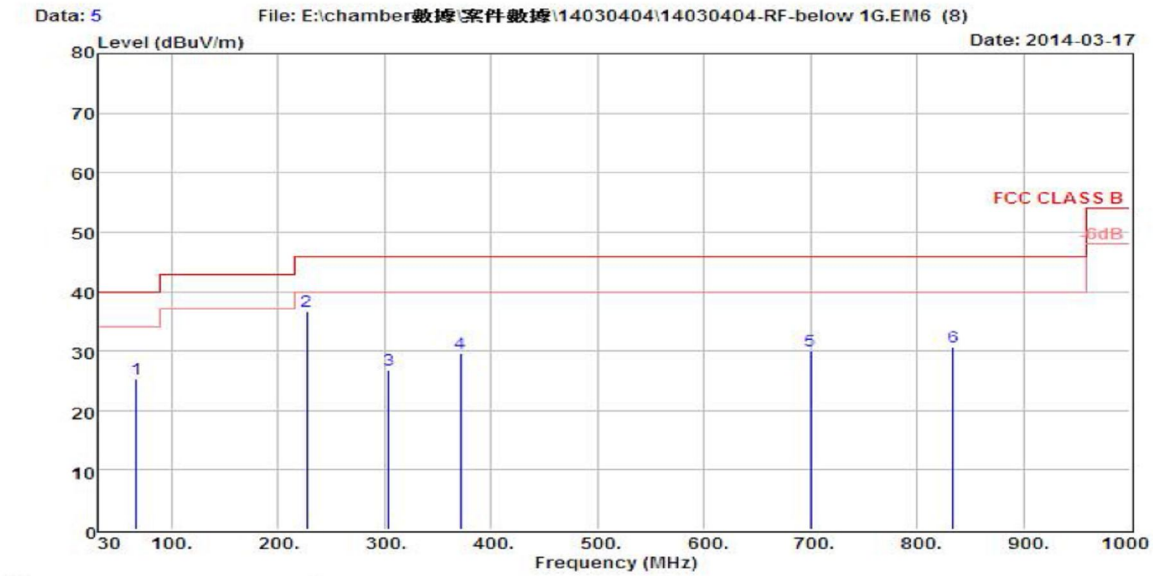
6.5 TEST DATA:

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.

Highest Channel (worst emissions found)

Vertical

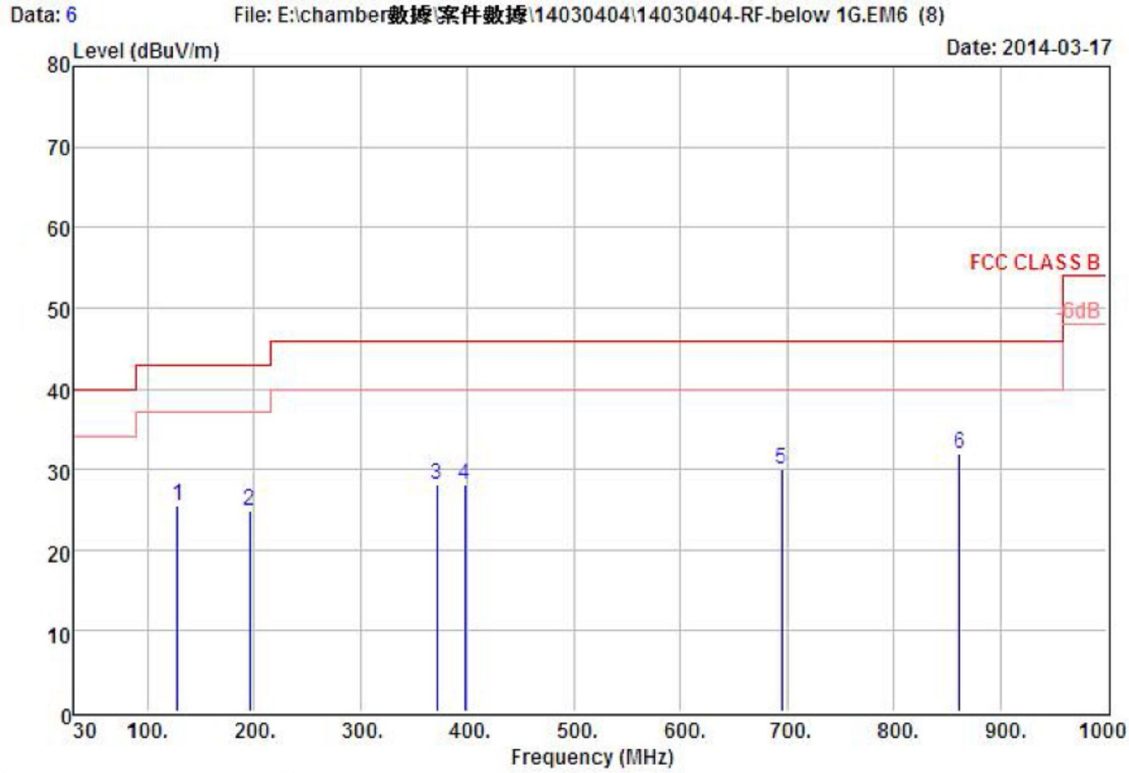
PEP Certification Corp.
PEP Certification Corp.
TEL:02-2692-2097
FAX:02-2695-6236



	Freq	Level	Read Level	Factor	Over Limit	Limit Line	Remark
	MHz	dBuV/m	dBuV	dB/m	dB	dBuV/m	
1	65.89	25.30	42.37	-17.07	-14.70	40.00	Peak
2	226.91	36.70	52.89	-16.19	-9.30	46.00	Peak
3	303.54	26.87	40.72	-13.85	-19.13	46.00	Peak
4	371.44	29.69	41.83	-12.14	-16.31	46.00	Peak
5	700.27	29.93	31.45	-1.52	-16.07	46.00	Peak
6	834.13	30.64	32.14	-1.50	-15.36	46.00	Peak

Horizontal

PEP Certification Corp.
PEP Certification Corp.
TEL:02-2692-2097
FAX:02-2695-6236



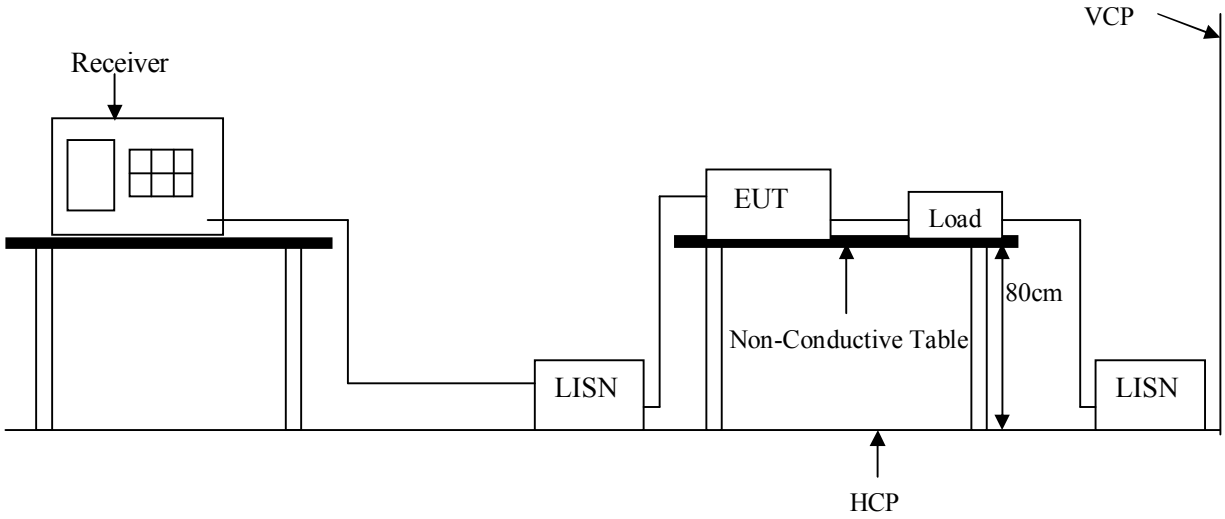
	Freq	Level	Read Level	Factor	Over Limit	Limit Line	Remark
	MHz	dBuV/m	dBuV	dB/m	dB	dBuV/m	
1	127.97	25.44	40.59	-15.15	-17.56	43.00	Peak
2	195.87	24.81	41.83	-17.02	-18.19	43.00	Peak
3	371.44	28.02	40.16	-12.14	-17.98	46.00	Peak
4	397.63	28.06	39.52	-11.46	-17.94	46.00	Peak
5	695.42	29.96	31.86	-1.90	-16.04	46.00	Peak
6	862.26	32.01	32.44	-0.43	-13.99	46.00	Peak

Note:

1. Emission level = Reading level + Correction factor
2. Correction factor : Antenna factor, Cable loss, Pre-Amp, etc.
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)

7.1 TEST SETUP



7.2 LIMIT

Frequency range (MHz)	CLASS B	
	QP dB(uV)	Average dB(uV)
0.15-0.5	66 - 56 dBuV	56 - 46 dBuV
0.5-5.0	56 dBuV	46 dBuV
5.0-30.0	60 dBuV	50 dBuV

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

7.3 TEST PROCEDURE

The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). It provides a 50 ohm / 50 μH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm / 50 μH coupling impedance with 50 ohm termination. (Please refer to the block diagram of the test setup and photograph.)

Both sides of AC line are checked for the maximum conducted emission interference. In order to find the maximum emissions, the relating positions of equipment and all of the interference cables must be changed according to EN 55022 regulations: The measurement procedure on conducted emission interference.

The resolution bandwidth of the field strength meter is set at 9 KHz.

7.4 TEST SPECIFICATION

According to PART15.207

7.5 RESULT: PASSED

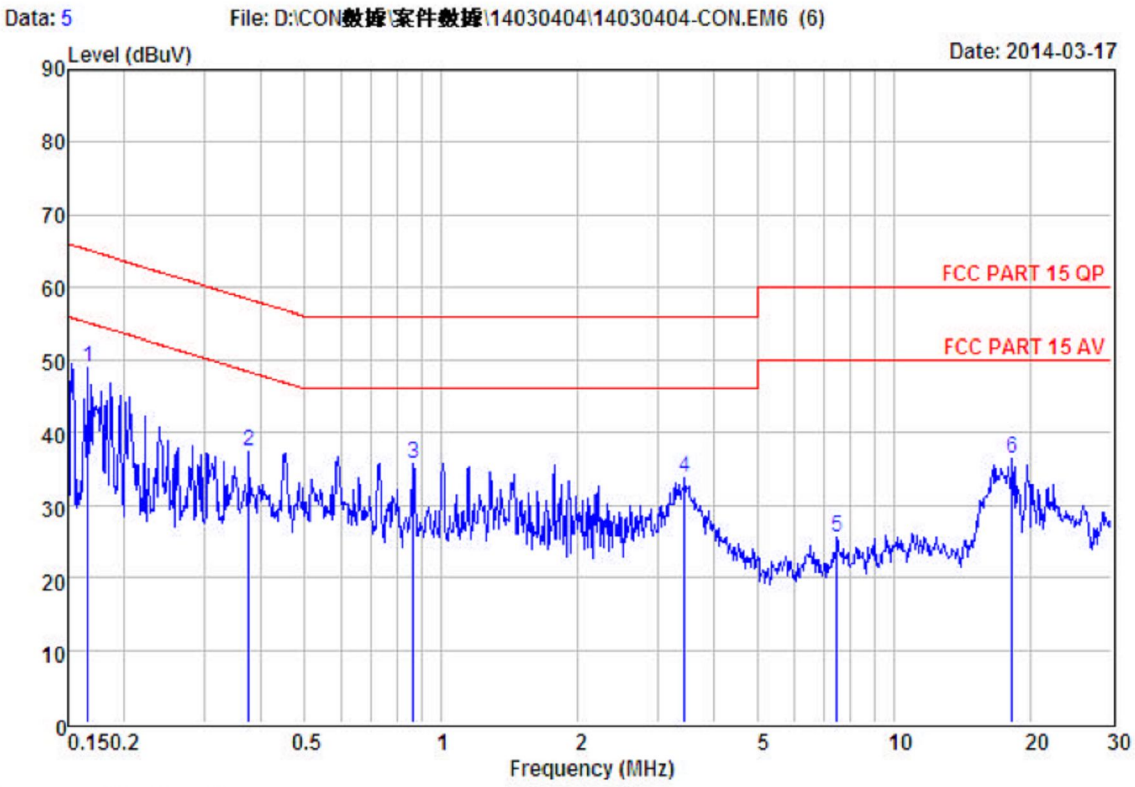
EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	150KHz--30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9KHz

7.6 TEST DATA:

PEP Certification Corp.

PEP Certification Corp.
tel:02-2692-2097
fax:02-2695-6236
email:alex@gtest.tw

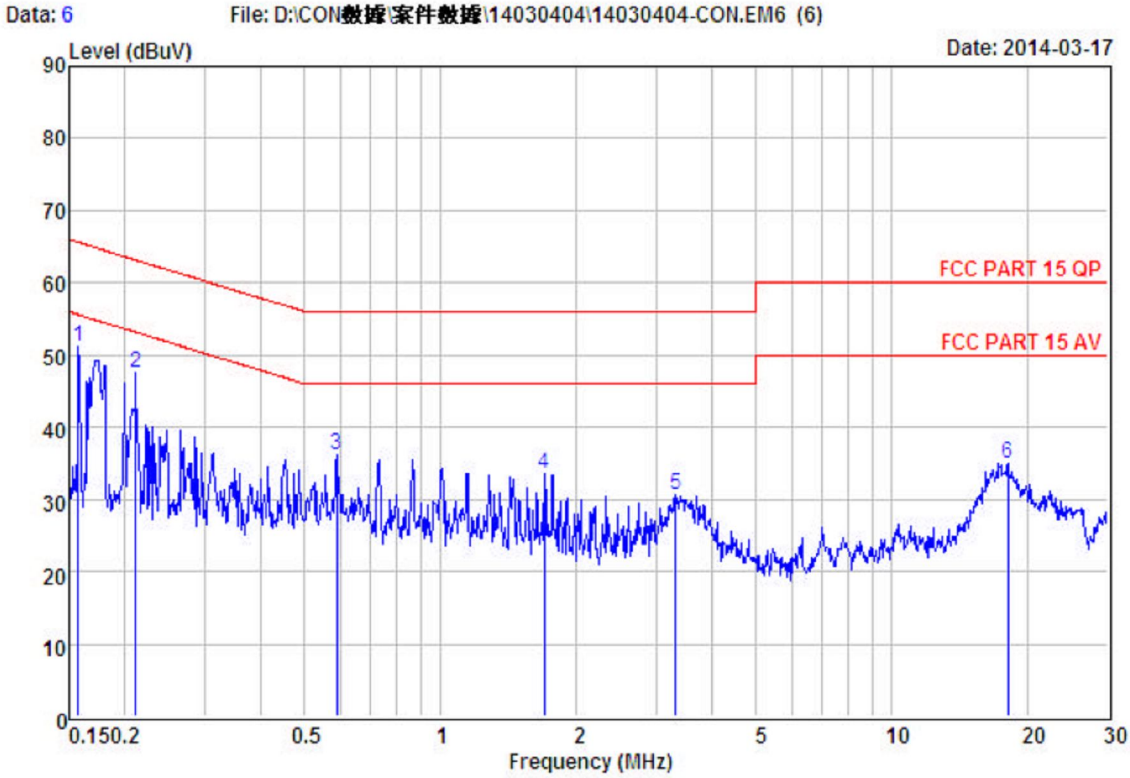


Site : Conduction
Condition: FCC PART 15 QP CON-LISN(103) LINE
EUT : 14030404
MODEL : Please refer to page 1 of report
MEMO : Transmit
T/H :
Remarks: : Factor=Insertion loss+Cable loss

	Freq	Read Level	Level	Factor	Over Limit	Limit Line	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	
1	0.17	48.86	48.98	0.12	-16.18	65.16	Peak
2	0.38	37.27	37.41	0.14	-20.98	58.39	Peak
3	0.87	35.56	35.74	0.18	-20.26	56.00	Peak
4	3.44	33.59	33.88	0.29	-22.12	56.00	Peak
5	7.45	25.05	25.47	0.42	-34.53	60.00	Peak
6	18.14	35.83	36.46	0.63	-23.54	60.00	Peak

PEP Certification Corp.

PEP Certification Corp.
tel:02-2692-2097
fax:02-2695-6236
email:alex@gtest.tw



Site : Conduction
Condition: FCC PART 15 QP CON-LISN(103) NEUTRAL
EUT : 14030404
MODEL : Please refer to page 1 of report
MEMO : Transmit
T/H :
Remarks: : Factor=Insertion loss+Cable loss

	Freq	Read Level	Level	Factor	Over Limit	Limit Line	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	
1	0.16	51.15	51.27	0.12	-14.33	65.60	Peak
2	0.21	47.31	47.42	0.11	-15.76	63.18	Peak
3	0.59	36.04	36.17	0.13	-19.83	56.00	Peak
4	1.70	33.31	33.51	0.20	-22.49	56.00	Peak
5	3.31	30.26	30.53	0.27	-25.47	56.00	Peak
6	18.04	34.52	35.08	0.56	-24.92	60.00	Peak