

APPLICATION FOR CERTIFICATION

On Behalf of

Powertech Industrial Co., Ltd.

ZigBee Tracking Smart Socket

Model No. : M9PC020000

FCC ID : NHS-M9PC02

Prepared for : Powertech Industrial Co., Ltd.
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File Number : C1M1207028
Report Number : EM-F1010643
Date of Test : Aug. 01 ~ 20, 2012
Date of Report : Aug. 20, 2012

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TEST REPORT CERTIFICATION

Applicant : Powertech Industrial Co., Ltd.
 Manufacturer : Dongguan Quan Sheng Electric Co., Ltd.
 EUT Description : ZigBee Tracking Smart Socket
 FCC ID : NHS-M9PC02
 (A) Model No. : M9PC020000
 (B) Serial No. : N/A
 (C) Power Supply : AC 120V/60Hz
 (D) Test Voltage : AC 120V/60Hz

Measurement Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART C, Oct. 2011
 (FCC CFR 47 Part 15C, §15.207, §15.249, §15.209)
 AND ANSI C63.4/2003

The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C limits.

The measurement results are contained in this test report and AUDIX Technology Corporation is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test : Aug. 01 ~ 20, 2012 Date of Report : Aug. 20, 2012

Producer : Annie Yu
 (Annie Yu/Assistant Administrator)

Signatory: Leon Liu
 (Leon Liu/Deputy General Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	ZigBee Tracking Smart Socket
FCC ID	:	NHS-M9PC02
Model Number	:	M9PC020000
Applicant	:	Powertech Industrial Co., Ltd. 10F, No. 407, Chung Shan Rd., Sec 2 Chung Ho City, New Taipei City, 235 Taiwan, R.O.C.
Manufacturer	:	Dongguan Quan Sheng Electric Co., Ltd. Chu-Tang 2nd Industrial Park Hou-Chieh Town Dongguan Guangdong 523963 China.
Fundamental Range	:	2405MHz ~ 2480MHz
Antenna Connector Requirement	:	Compliance with FCC §15.203
Frequency Channel	:	16 channels
Radio Technology	:	OQPSK Modulation
Date of Receipt of Sample	:	Jul. 03, 2012
Date of Test	:	Aug. 01 ~ 20, 2012

1.2. Description of Test Facility

Name of Firm	:	AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C.
Test Facility & Location (C1/AC)	:	No. 1 Shielded Room & No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. Semi-Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. Renewal on May 11, 2012 Federal Communication Commission Registration Number: 90993
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

1.3. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150kHz~30MHz	±1.73dB
Radiation Test (Distance: 3m)	30MHz~300MHz	± 2.91dB
	300MHz~1000MHz	± 2.94dB
	Above 1GHz	± 5.02dB

Remark : Uncertainty = $ku_c(y)$

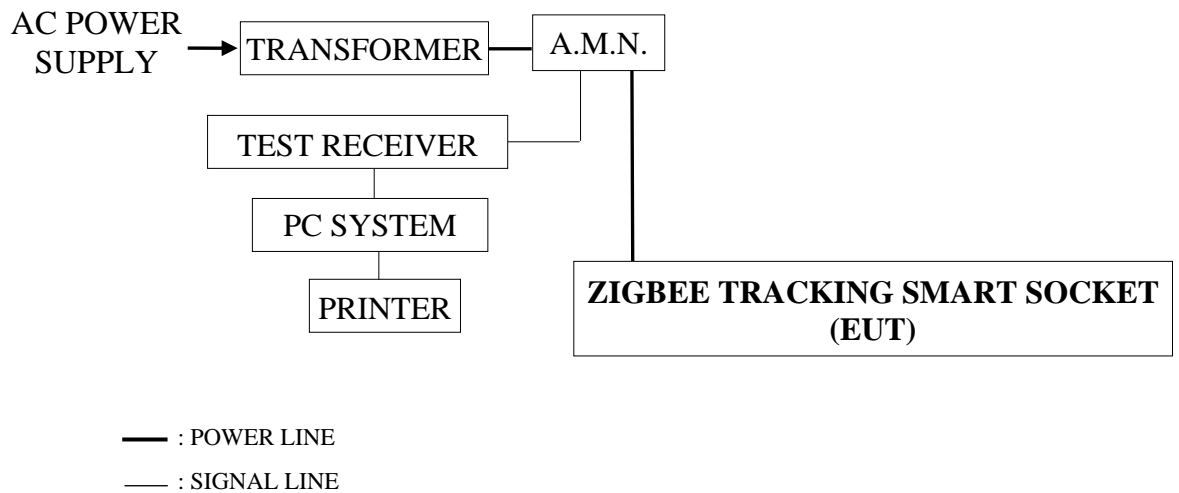
2. POWERLINE CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment was used during the conducted emission measurement :
(No. 1 Shielded Room)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCS30	100265	Aug. 25, 11'	Aug. 24, 12'
2.	A.M.N.	R&S	ENV4200	100169	May 04, 12'	May 03, 13'

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (§15.207)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

Remark1.: If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2.: The lower limit applies at the band edges.

2.4. Operating Condition of EUT

- 2.4.1. Setup the **EUT (ZigBee Tracking Smart Socket)** as shown on 2.2.
- 2.4.2. Turn on the power of all equipment.
- 2.4.3. The **EUT (ZigBee Tracking Smart Socket)** was on transmitting function at work during all testing.

2.5. Test Procedure

The EUT (link to bulbs load) was put on table which was above the ground by 80cm and it's power cord was connected to power mains through an Artificial Mains Network (A.M.N.). This provided a 50 ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.) Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions simulators of the interface cables should be manipulated according to ANSI C63.4-2003 during conducted measurement.

The bandwidth of the R & S Test Receiver ESCS 30 was set at 9kHz.

The frequency range from 150kHz to 30MHz was checked.

All the final readings from Test Receiver were measured with the Quasi-Peak detector and Average detector. (Remark: If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

2.6. Powerline Conducted Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

The EUT was measured during this section testing and all the test results are listed in next pages.

EUT : ZigBee Tracking Smart Socket Model No. : M9PC020000

Test Date : Aug. 20, 2012 Temperature : 25 Humidity : 52%

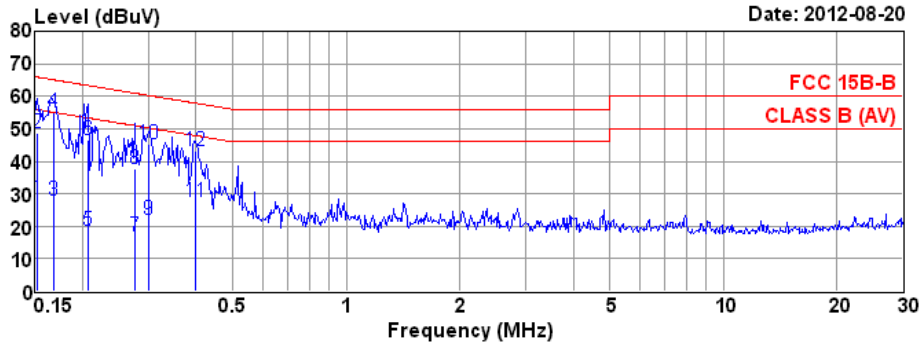
The details are as follows :

Mode	Reference Test Data	
	Neutral	Line
1.	# 2	# 1



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Data: 2 File: D:\test data\REPORT\IC1M1207XXX\IC1M1207028-C.EM6 (2)



Site no. : No.1 Shielded Room Data no. : 2
 Dis. / Ant. : ENV4200 Ant. pol. : NEUTRAL
 Limit : FCC 15B-B
 Env. / Ins. : 25°C / 52% ESCS 30 (265) Engineer : Fate
 EUT : M9PC020000
 Power Rating : 120Vac/60Hz
 Test Mode : OPERATING

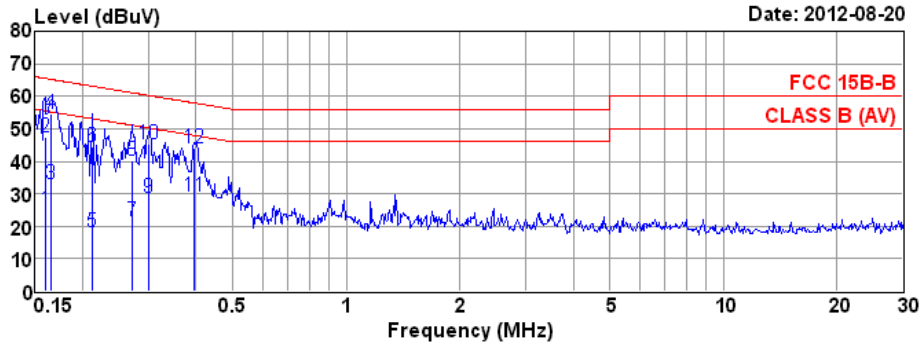
	Freq. (MHz)	AMN. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	0.15	10.23	9.92	8.16	28.31	55.91	27.60	Average
2	0.15	10.23	9.92	28.55	48.70	65.91	17.21	QP
3	0.17	10.23	9.93	7.95	28.11	55.08	26.97	Average
4	0.17	10.23	9.93	34.85	55.01	65.08	10.07	QP
5	0.21	10.23	9.94	-1.71	18.46	53.36	34.90	Average
6	0.21	10.23	9.94	26.43	46.60	63.36	16.76	QP
7	0.27	10.20	9.95	-3.23	16.92	50.98	34.06	Average
8	0.27	10.20	9.95	17.67	37.82	60.98	23.16	QP
9	0.30	10.19	9.96	1.88	22.03	50.24	28.21	Average
10	0.30	10.19	9.96	24.97	45.12	60.24	15.12	QP
11	0.40	10.17	9.97	7.32	27.46	47.86	20.40	Average
12	0.40	10.17	9.97	23.21	43.35	57.86	14.51	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 1 File: D:\test data\REPORT\IC1M1207XXX\IC1M1207028-C.EM6 (2)



Site no. : No.1 Shielded Room Data no. : 1
 Dis. / Ant. : ENV4200 Ant. pol. : LINE
 Limit : FCC 15B-B
 Env. / Ins. : 25°C / 52% ESCS 30 (265) Engineer : Fate
 EUT : M9PC020000
 Power Rating : 120Vac/60Hz
 Test Mode : OPERATING

	Freq. (MHz)	AMN. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	0.16	10.22	9.92	4.82	24.96	55.52	30.56	Average
2	0.16	10.22	9.92	27.36	47.50	65.52	18.02	QP
3	0.17	10.23	9.92	12.73	32.88	55.21	22.33	Average
4	0.17	10.23	9.92	34.42	54.57	65.21	10.64	QP
5	0.21	10.24	9.94	-1.84	18.34	53.10	34.76	Average
6	0.21	10.24	9.94	24.40	44.58	63.10	18.52	QP
7	0.27	10.22	9.95	1.48	21.65	51.12	29.47	Average
8	0.27	10.22	9.95	19.95	40.12	61.12	21.00	QP
9	0.30	10.22	9.96	8.57	28.75	50.24	21.49	Average
10	0.30	10.22	9.96	24.98	45.16	60.24	15.08	QP
11	0.40	10.20	9.97	9.26	29.43	47.95	18.52	Average
12	0.40	10.20	9.97	23.97	44.14	57.95	13.81	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipment was used during the radiated emission measurement:

3.1.1. For Frequency Range 30MHz~1000MHz (at Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 07, 12'	Aug. 06, 13'
2.	Test Receiver	R & S	ESCS30	100265	Aug. 25, 11'	Aug. 24, 12'
3.	Pre-Amplifier	HP	8447D	2944A06305	Feb. 13, 12'	Feb. 11, 13'
4.	Biconical Antenna	CHASE	VBA6106A	1264	Mar. 03, 12'	Mar. 02, 13'
5.	Log Periodic Antenna	Schwarzbeck	UHALP91 08-A	0810	Mar. 03, 12'	Mar. 02, 13'

3.1.2. For Frequency Above 1GHz (at Semi-Anechoic Chamber)

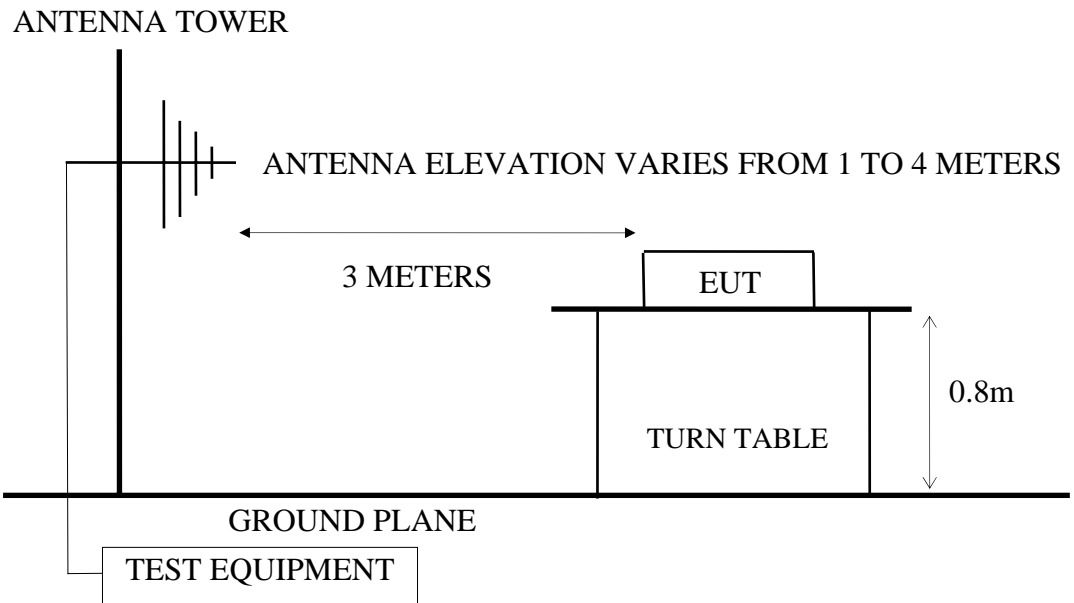
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 07, 12'	Aug. 06, 13'
2.	Pre-Amplifier	HP	8449B	3008A00529	Dec. 09, 11'	Dec. 08, 12'
3.	Horn Antenna	EMCO	3115	9609-4927	Jul. 05, 12'	Jul. 04, 13'

3.2. Block Diagram of Test Setup

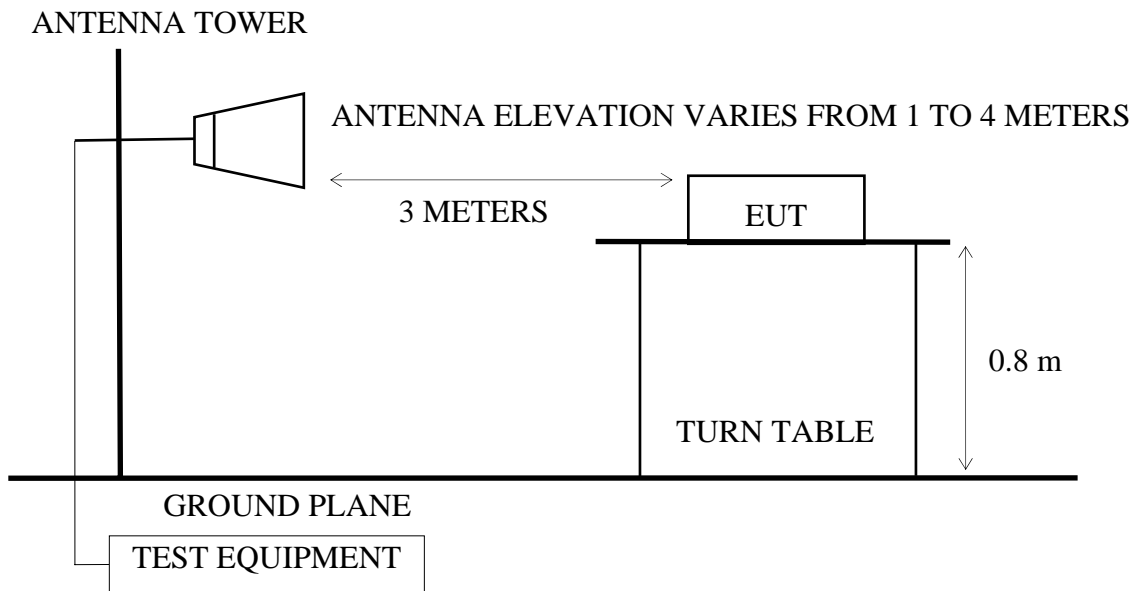
3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000MHz



3.2.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



3.3. Radiated Emission Limits (§15.209)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMITS	
		$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
Above 1000	3	74.0 $\text{dB}\mu\text{V/m}$ (Peak) 54.0 $\text{dB}\mu\text{V/m}$ (Average)	

Remark : (1) Emission level ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$)

(2) The tighter limit applies at the edge between two frequency bands.

(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

(4) The limits in this table are based on CFR 47 Part 15.205(a)(b) and Part 15.209 (a).

(5) The over 1GHz limit, FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.205(b) & Part 15.209(e) and Part 15.207(c).

3.4. Fundamental Frequency Limits [§15.249(a)]

FUNDAMENTAL FREQUENCY MHZ	LIMITS
2400-2485	114 $\text{dB}\mu\text{V/m}$ (Peak)
	94 $\text{dB}\mu\text{V/m}$ (Average)

3.5. Operating Condition of EUT

3.5.1. Setup the **EUT (ZigBee Tracking Smart Socket)** as shown on 3.2.

3.5.2. Turn on the power of all equipment.

3.5.3. The EUT was set to continuously transmit signals at 2405Hz、2450MHz and 2480MHz during testing.

3.6. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antennas such as calibrated biconical and log-periodical antenna or horn antenna were used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to FCC ANSI C63.4-2003 regulation.

The bandwidth of the R & S Test Receiver ESCS 30 was set at 120kHz.
(For 30MHz to 1000MHz)

The resolution bandwidth and video bandwidth of test spectrum analyzer is 1MHz for peak detection (PK) at frequency above 1GHz.

The frequency range from 30MHz to 25GHz (Up to 10th harmonics from fundamental frequency) was checked.

Above 1GHz was measured with peak and average detector. For frequency from 2.68GHz to 25GHz, we checked it in 1 meter distance and with a shorter cable 2 meter instead of original's. There is no signal exist

3.7. Radiated Emission Measurement Test Results

PASSED. All emissions not reported below are too low against the prescribed limits.

EUT : ZigBee Tracking Smart Socket Model No. : M9PC020000

Test Date : Aug. 09, 2012 Temperature : 25 Humidity : 61%

For Frequency Range 30MHz~1000MHz:

The EUT was measured during this section testing and all the test results are listed in section 3.7.1.

Mode	Channel	Frequency	Test Mode	Reference Test Data	
				Horizontal	Vertical
1.	11	2405MHz	Transmit	# 2, # 4	# 1, # 3
2.	20	2450MHz		# 2, # 4	# 1, # 3
3.	26	2480MHz		# 2, # 4	# 1, # 3

* Above all final readings were measured with Quasi-Peak detector.

For Frequency above 1GHz:

The EUT was measured during this section testing and all the test results are listed in section 3.7.2.

Mode	Chnnel	Frequency	Test Mode	Test Frequency Range
1.*	11	2405MHz	Transmit	1000-2680MHz*
2.				2680-4000MHz
3.*				4000-5500MHz*
4.				5500-18000MHz
5.				18000-25000MHz
6.*	20	2450MHz	Transmit	1000-2680MHz*
7.*				2680-4000MHz*
8.*				4000-5500MHz*
9.				5500-18000MHz
10.				18000-25000MHz
11.*	26	2480MHz	Transmit	1000-2680MHz*
12.*				2680-4000MHz*
13.*				4000-5500MHz*
14.*				5500-18000MHz*
15.				18000-25000MHz

- Note: 1. Above all final readings were measured with Peak and Average detector.
- 2. The emissions (up to 25GHz) not reported are too low to be measured.
- 3. "*" means there is spurious emission falling the frequency band and be measures.

For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 3.7.2. (The restricted bands defined in part 15.205(a))

Mode	Channel	Frequency	Test Mode	Reference Test Data	
				Horizontal	Vertical
1.	11	2405MHz	Transmit	# 2	# 1
2.	26	2480MHz		# 4	# 3

For Fundamental Frequency:

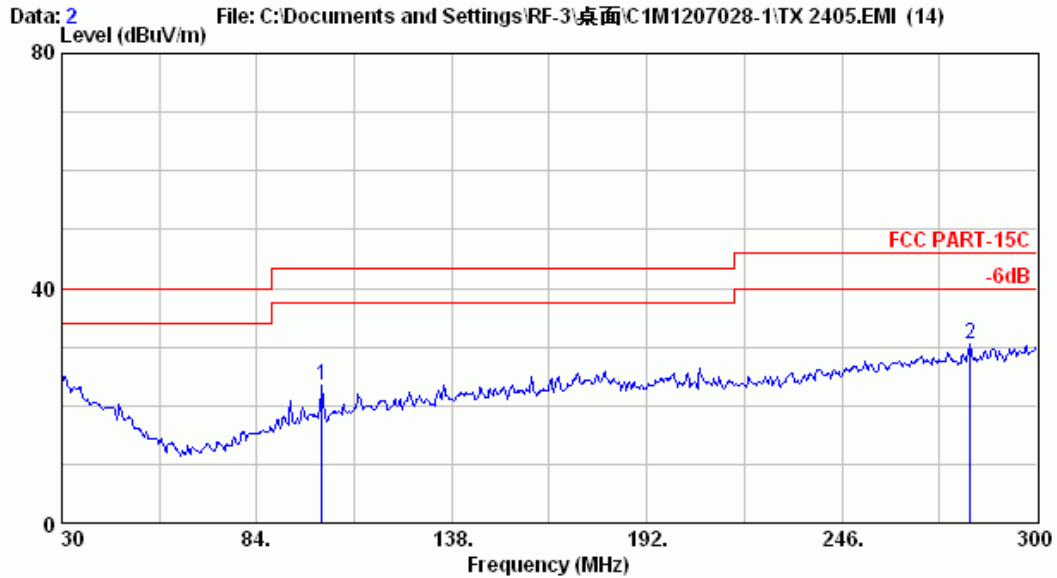
The EUT was measured during this section testing and all the test results are listed in section 3.7.4.

Mode	Channel	Frequency	Test Mode	Reference Test Data
1.	11	2405MHz	Transmit	# 1
2.	20	2450MHz		# 1
3.	26	2480MHz		# 1

3.7.1. Frequency Range 30-1000MHz



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Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C / 61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2405

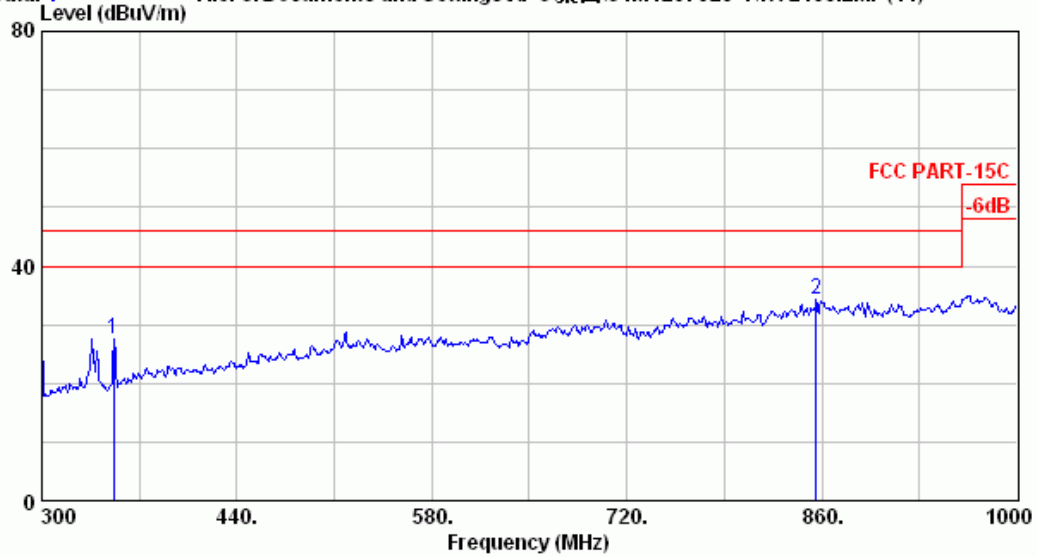
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	102.090	17.29	2.10	4.05	23.44	43.50	20.06	Peak
2	281.640	25.34	3.80	1.36	30.49	46.00	15.51	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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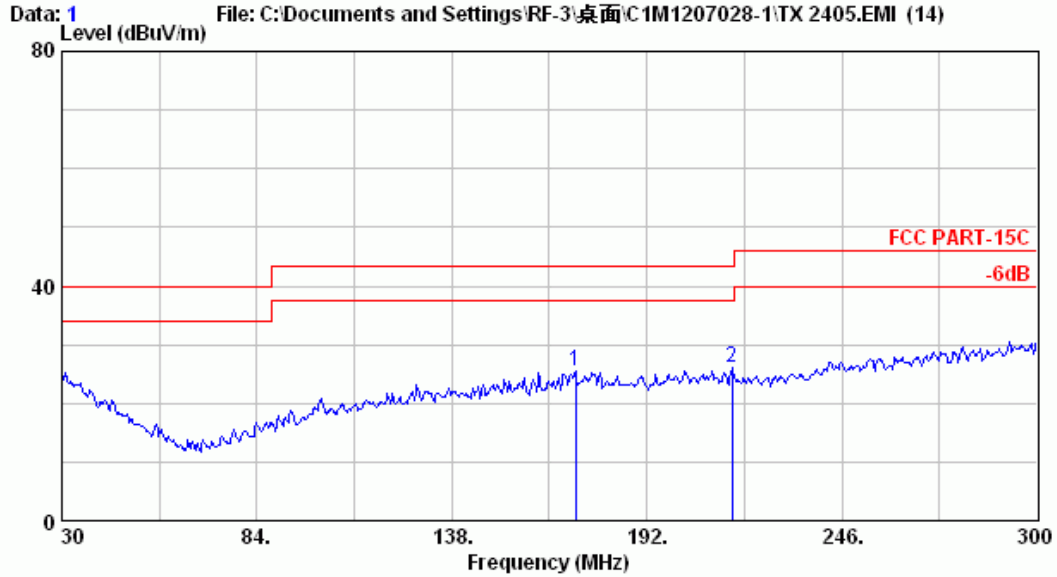
Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	351.800	15.55	4.30	7.74	27.60	46.00	18.40	Peak
2	855.800	25.87	7.19	1.11	34.17	46.00	11.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2405

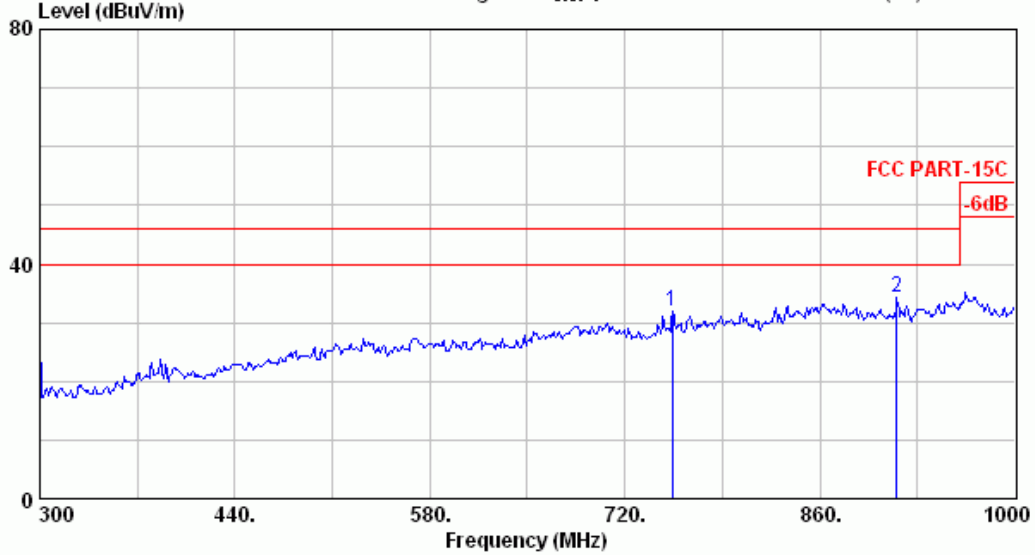
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	172.290	21.04	2.80	1.59	25.44	43.50	18.06	Peak
2	215.490	21.82	3.20	1.12	26.14	43.50	17.36	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 3 File: C:\Documents and Settings\RF-3\桌面\C1M1207028-1\TX 2405.EMI (14)



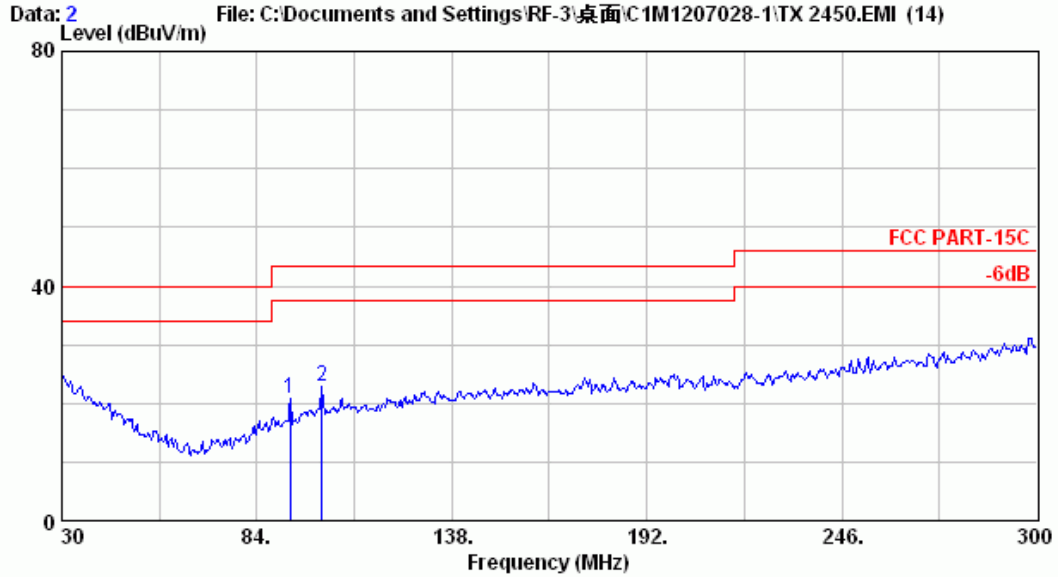
Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	754.300	23.51	6.70	1.69	31.90	46.00	14.10	Peak
2	915.300	24.90	7.40	1.94	34.24	46.00	11.76	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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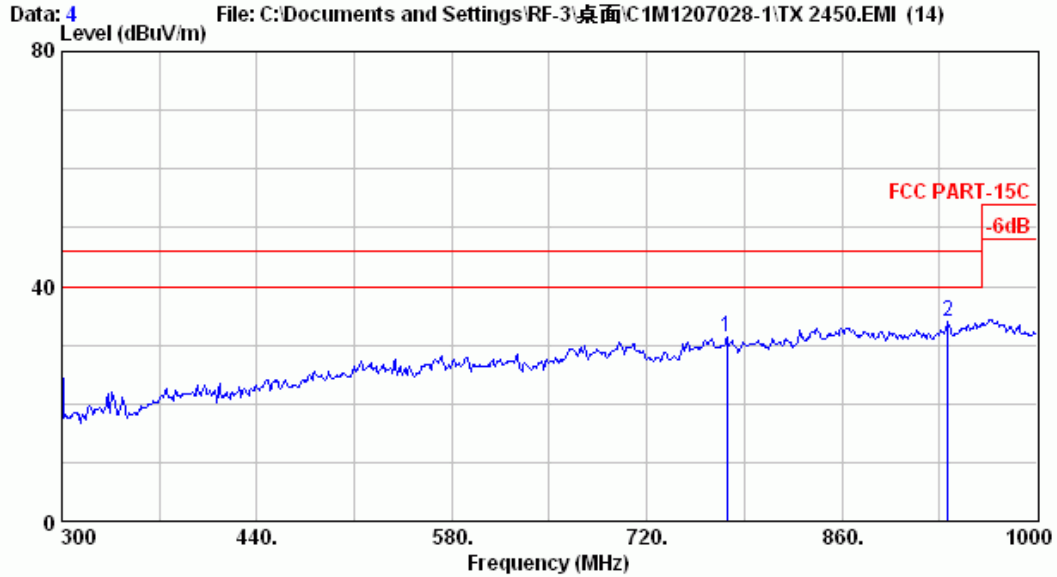
Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2450

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	93.180	16.25	2.00	2.64	20.89	43.50	22.61	Peak
2	102.090	17.29	2.10	3.44	22.83	43.50	20.67	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2450

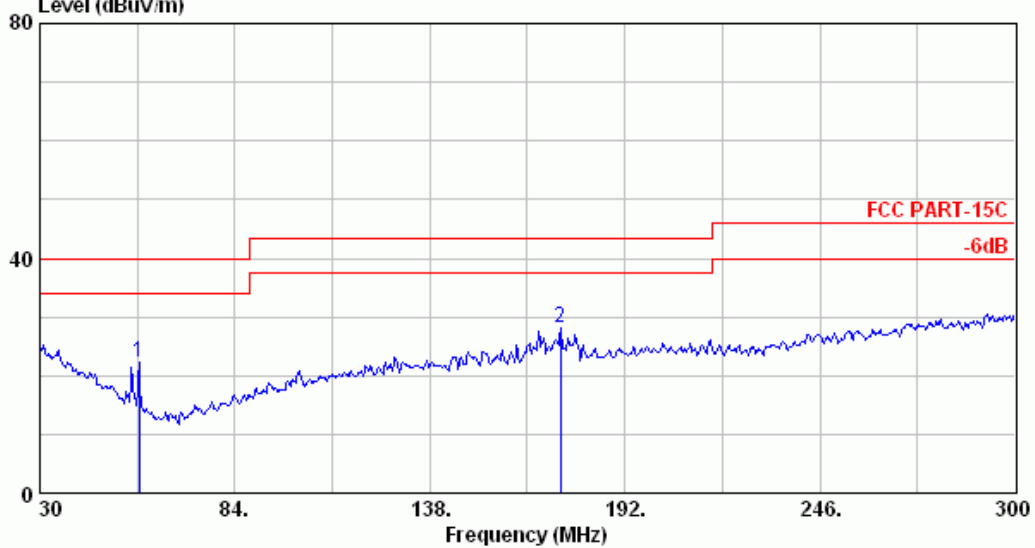
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	777.400	24.18	6.80	0.29	31.28	46.00	14.72	Peak
2	936.300	25.39	7.50	1.08	33.97	46.00	12.03	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 1 File: C:\Documents and Settings\RF-3\桌面\C1M1207028-1\TX 2450.EMI (14)



Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2450

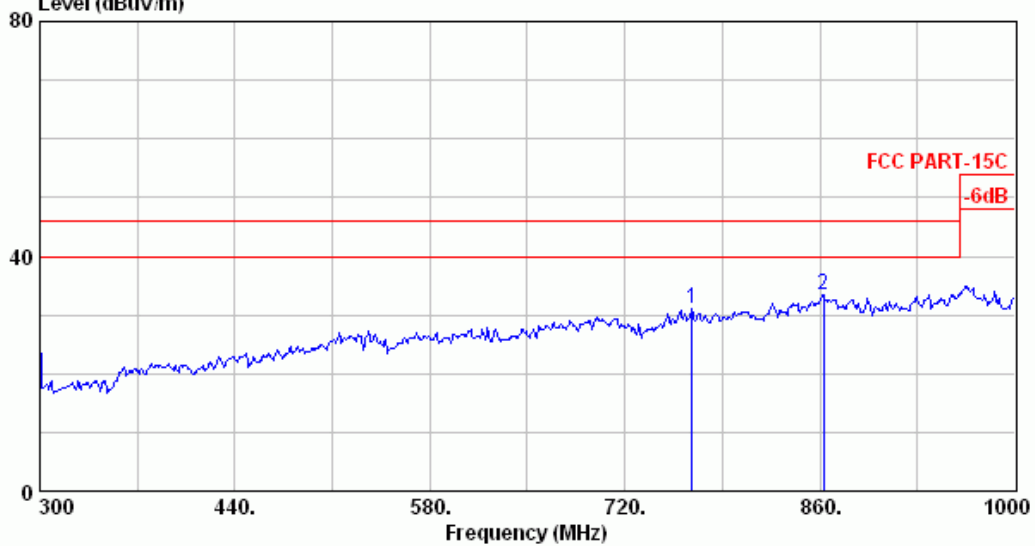
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	57.540	13.77	1.60	6.76	22.13	40.00	17.87	Peak
2	174.180	21.13	2.80	4.30	28.23	43.50	15.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 3 File: C:\Documents and Settings\RF-3\桌面\C1M1207028-1\TX 2450.EMI (14)



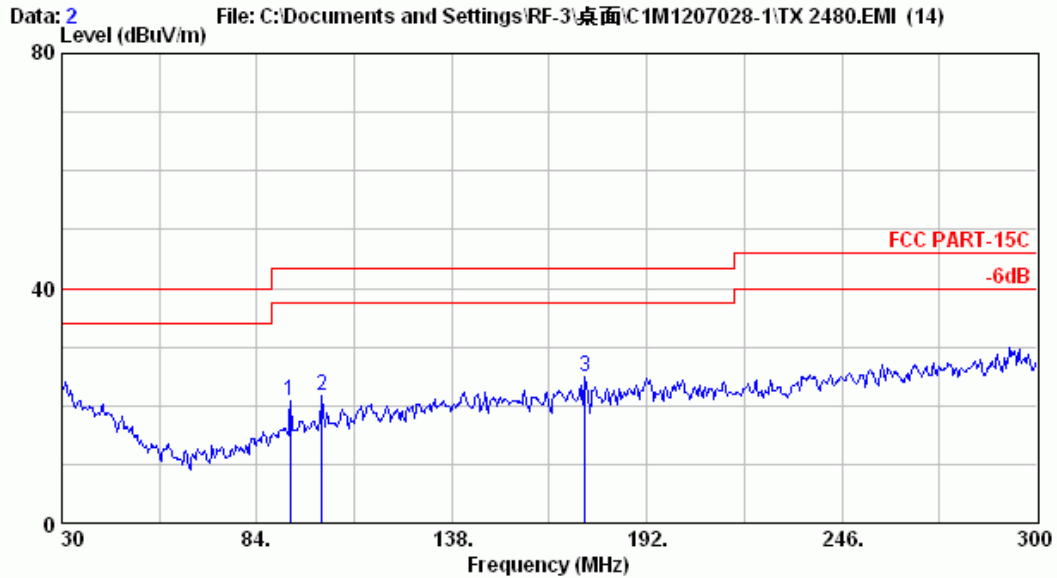
Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2450

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	768.300	23.87	6.80	0.37	31.04	46.00	14.96	Peak
2	862.800	26.09	7.20	0.17	33.46	46.00	12.54	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2480

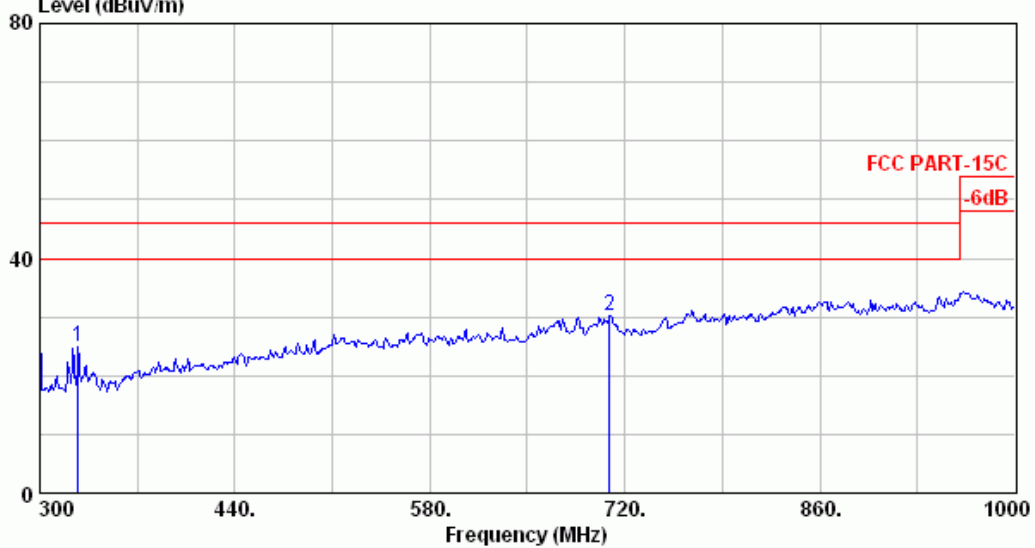
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	93.180	16.25	2.00	2.54	20.79	43.50	22.71	Peak
2	102.090	17.29	2.10	2.25	21.64	43.50	21.86	Peak
3	174.990	21.13	2.85	1.06	25.04	43.50	18.46	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 4 File: C:\Documents and Settings\RF-3\桌面\C1M1207028-1\TX 2480.EMI (14)



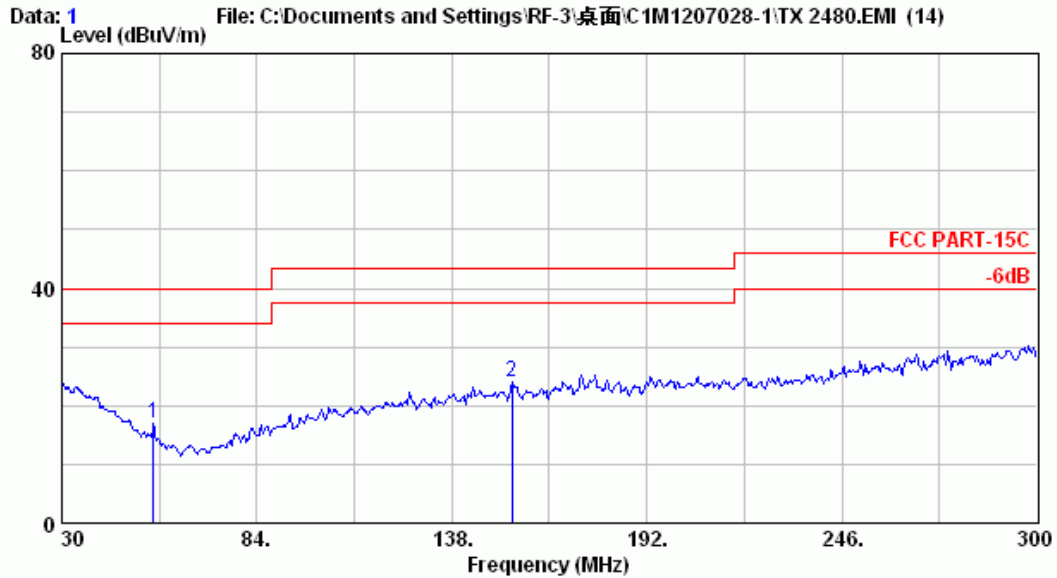
Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2480

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	327.300	15.17	4.20	5.49	24.86	46.00	21.14	Peak
2	708.800	23.54	6.60	0.12	30.27	46.00	15.73	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2480

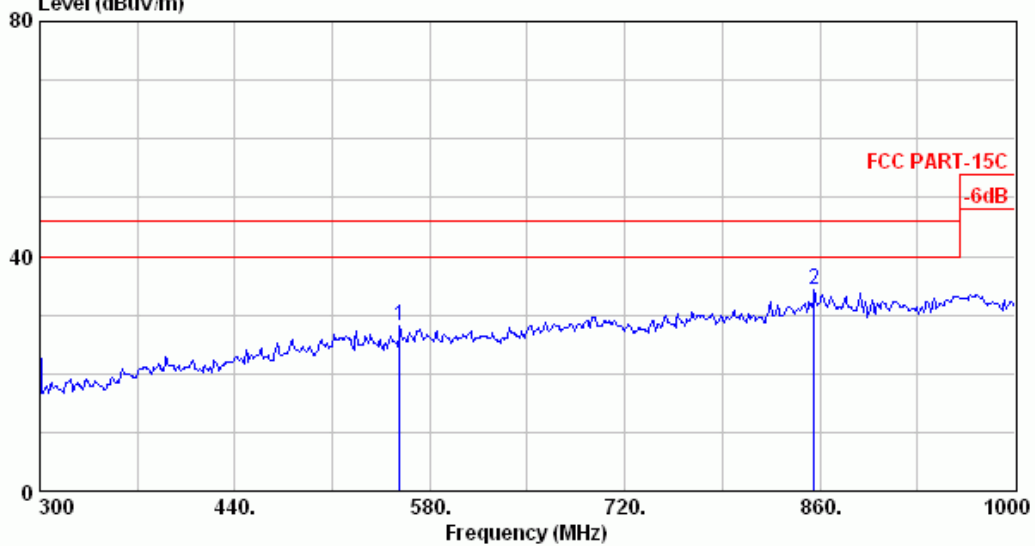
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	55.380	14.39	1.50	1.00	16.89	40.00	23.11	Peak
2	154.740	20.71	2.63	0.60	23.93	43.50	19.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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Data: 3 File: C:\Documents and Settings\RF-3\桌面\C1M1207028-1\TX 2480.EMI (14)



Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : TX2480

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	558.300	19.89	6.70	1.52	28.10	46.00	17.90	Peak
2	855.800	25.87	7.19	1.11	34.17	46.00	11.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3.7.2. Above 1GHz Frequency Range Measurement Results

Date of Test : Aug. 09, 2012 Temperature : 25

EUT : ZigBee Tracking Smart Socket Humidity : 61%

Test Mode : Transmit, Channel: 11, Frequency: 2405MHz

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Horizontal (dBμV/m)	Limits (dBμV/m)	Margin (dB)
1650.160	26.27	6.49	8.81	41.57	74.00	32.43
1826.560	26.97	6.77	9.17	42.91	74.00	31.09

- Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. All final readings of measurement were with Peak values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1650.16	41.57	-26.01	15.56	54.00	38.44
1826.56	42.91	-26.01	16.90	54.00	37.10

- Remarks: 1. Duty Cycle Factor = $20\log(\text{dwell time}/100\text{ms}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 2. Average value=Peak value+ Duty Cycle Correction Factor
 3. All final readings of measurement were with Average values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 11, Frequency: 2405MHz

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Vertical (dBμV/m)	Limits (dBμV/m)	Margin (dB)
1650.160	26.27	6.49	19.83	52.59	74.00	21.41
4813.000	33.06	9.14	12.65	54.85	74.00	19.15

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. All final readings of measurement were with Peak values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1650.16	52.59	-26.01	26.58	54.00	27.42
4813.00	54.85	-26.01	28.84	54.00	25.16

Remarks: 1. Duty Cycle Factor = $20\log(\text{dwell time}/100\text{ms}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 2. Average value=Peak value+ Duty Cycle Correction Factor
 3. All final readings of measurement were with Average values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 20, Frequency: 2450MHz

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Horizontal (dBμV/m)	Limits (dBμV/m)	Margin (dB)
1577.920	26.02	5.98	9.00	40.99	74.00	33.01
1776.160	26.78	7.04	9.68	43.50	74.00	30.50
2995.480	30.34	7.20	7.48	45.03	74.00	28.97
3659.440	31.70	8.02	7.92	47.65	74.00	26.35
4906.000	33.24	9.16	7.97	50.37	74.00	23.63

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. All final readings of measurement were with Peak values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1577.92	40.99	-26.01	14.98	54.00	39.02
1776.16	43.50	-26.01	17.49	54.00	36.51
2995.48	45.03	-26.01	19.02	54.00	34.98
3659.44	47.65	-26.01	21.64	54.00	32.36
4906.00	50.37	-26.01	24.36	54.00	29.64

Remarks: 1. Duty Cycle Factor = $20\log(\text{dwell time}/100\text{ms}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 2. Average value=Peak value+ Duty Cycle Correction Factor
 3. All final readings of measurement were with Average values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Date of Test : Aug. 09, 2012 Temperature : 25

EUT : ZigBee Tracking Smart Socket Humidity : 61%

Test Mode : Transmit, Channel: 20, Frequency: 2450MHz

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Vertical (dBμV/m)	Limits (dBμV/m)	Margin (dB)
1717.360	26.52	6.96	18.28	51.76	74.00	22.24
2926.840	30.12	7.12	8.00	45.24	74.00	28.76
3642.280	31.66	7.98	8.01	47.65	74.00	26.35
4903.000	33.24	9.16	8.90	51.30	74.00	22.70

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. All final readings of measurement were with Peak values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1717.36	51.76	-26.01	25.75	54.00	28.25
2926.84	45.24	-26.01	19.23	54.00	34.77
3642.28	47.65	-26.01	21.64	54.00	32.36
4903.00	51.30	-26.01	25.29	54.00	28.71

Remarks: 1. Duty Cycle Factor = $20\log(\text{dwell time}/100\text{ms}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 2. Average value=Peak value+ Duty Cycle Correction Factor
 3. All final readings of measurement were with Average values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 25, Frequency: 2480MHz

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Horizontal (dBμV/m)	Limits (dBμV/m)	Margin (dB)
2300.320	28.24	6.23	8.64	43.11	74.00	30.89
3299.080	30.93	7.45	7.91	46.29	74.00	27.71
4370.500	32.53	8.63	8.54	49.70	74.00	24.30

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. All final readings of measurement were with Peak values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2300.32	43.11	-26.01	17.10	54.00	36.90
3299.08	46.29	-26.01	20.28	54.00	33.72
4370.50	49.70	-26.01	23.69	54.00	30.31

Remarks: 1. Duty Cycle Factor = $20\log(\text{dwell time}/100\text{ms}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 2. Average value=Peak value+ Duty Cycle Correction Factor
 3. All final readings of measurement were with Average values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 25, Frequency: 2480MHz

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Vertical (dBμV/m)	Limits (dBμV/m)	Margin (dB)
1762.720	26.71	7.12	19.76	53.59	74.00	20.41
3292.480	30.93	7.45	9.02	47.41	74.00	26.59
3619.840	31.61	7.96	8.22	47.79	74.00	26.21
4783.000	33.03	9.20	8.70	50.92	74.00	23.08
4963.000	33.34	9.12	7.99	50.45	74.00	23.55
7425.000	36.42	11.58	14.11	62.11	74.00	11.89

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. All final readings of measurement were with Peak values.
 4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1762.72	53.59	-26.01	27.58	54.00	26.42
3292.48	47.41	-26.01	21.40	54.00	32.60
3619.84	47.79	-26.01	21.78	54.00	32.22
4783.00	50.92	-26.01	24.91	54.00	29.09
4963.00	50.45	-26.01	24.44	54.00	29.56
7425.00	62.11	-26.01	36.10	54.00	17.90

Remarks: 1. Duty Cycle Factor = $20\log(\text{dwell time}/100\text{ms}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 2. Average value=Peak value+ Duty Cycle Correction Factor
 3. All final readings of measurement were with Average values.
 4. The pre-amplifier factor has been subtracted by test program actively.

3.7.3. Restricted Bands Measurement Results

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 11, Frequency: 2405MHz

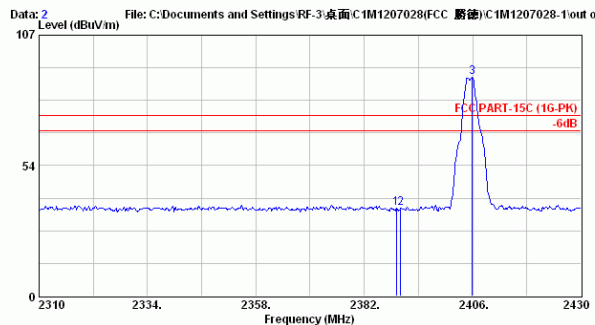
	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Horizontal (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Peak *	2389.080	28.47	6.34	1.10	35.91	74.00	38.09

	Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Average *	2389.08	35.91	-26.01	9.90	54.00	44.10

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. Low frequency section (spurious in the restricted band 2310-2430MHz).
 3. ‘*’ The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.
 4. Duty Cycle Correction Factor = $20\log$ (cumulative on/T) = $20\log(1.05\text{ms}/20.98\text{ms})=-26.01$
 ‘T’ means the period of the pulse train or 100ms if the pulse train length is greater than 100ms
 5. The pre-amplifier factor has been subtracted by test program actively.



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 Email:ttmc@ttmc.com.tw



Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115 (4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : B4446A 25°C / 61% Djianlun_hung
 EUT : M9PG020000
 Power Rating : AC120 / 60Hz
 Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2389.080	28.47	6.34	1.10	35.91	74.00	38.09	Peak
2	2390.040	28.47	6.34	1.29	36.11	74.00	37.89	Peak
3	2405.880	28.51	6.36	54.75	89.62	74.00	-15.62	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 11, Frequency: 2405MHz

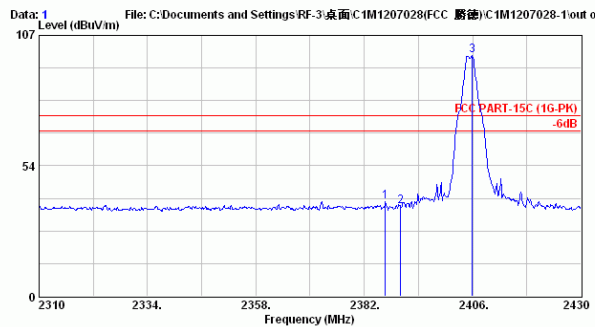
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	(MHz)	(dB/m)	(dB)	(dBμV)	(dBμV/m)	(dBμV/m)	(dB)
Peak *	2386.680	28.47	6.33	3.95	38.75	74.00	35.25

	Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
	(MHz)	(dB/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
Average *	2386.68	38.75	-26.01	12.74	54.00	41.26

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. Low frequency section (spurious in the restricted band 2310-2430MHz).
 3. ‘*’ The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.
 4. Duty Cycle Correction Factor = $20\log(\text{cumulative on/T}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 ‘T’ means the period of the pulse train or 100ms if the pulse train length is greater than 100ms
 5. The pre-amplifier factor has been subtracted by test program actively.



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Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 25°C/61%
 EUT : M9B020000 Djianlun_hung
 Power Rating : AC120 / 60Hz
 Test Mode : TX2405

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2386.680	28.47	6.33	3.95	38.75	74.00	35.25	Peak
2	2390.040	28.47	6.34	2.07	36.89	74.00	37.11	Peak
3	2405.880	28.51	6.36	63.73	98.60	74.00	-24.60	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Aug. 09, 2012 Temperature : 25

EUT : ZigBee Tracking Smart Socket Humidity : 61%

Test Mode : Transmit, Channel: 26, Frequency: 2480MHz

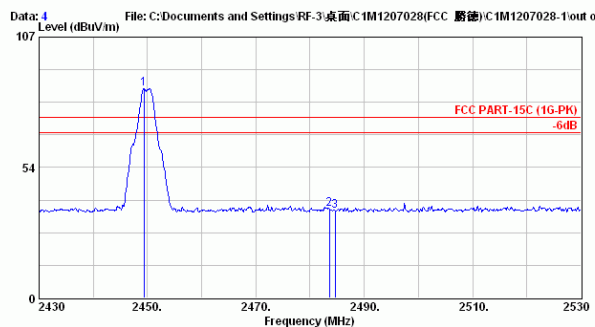
	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading Horizontal (dBμV)	Emission Level Horizontal (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Peak *	2483.600	28.66	6.45	1.35	36.46	74.00	37.54

	Emission Frequency (MHz)	Peak Value (dB/m)	Duty Cycle Correction Factor (dB)	Average Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Average *	2483.60	36.46	-26.01	10.45	54.00	43.55

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. Low frequency section (spurious in the restricted band 2470-2530MHz).
 3. "*" The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.
 4. Duty Cycle Correction Factor = $20\log(\text{cumulative on/T}) = 20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 "T" means the period of the pulse train or 100ms if the pulse train length is greater than 100ms
 5. The pre-amplifier factor has been subtracted by test program actively.



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Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 25°C/61% Djianlun_hung
 EUT : M9EG020000
 Power Rating : AC120 / 60Hz
 Test Mode : TX2480

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2449.400	28.59	6.41	50.98	85.97	74.00	-11.97	Peak
2	2483.600	28.66	6.45	1.35	36.46	74.00	37.54	Peak
3	2484.600	28.66	6.45	0.64	35.76	74.00	38.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Aug. 09, 2012 Temperature : 25
 EUT : ZigBee Tracking Smart Socket Humidity : 61%
 Test Mode : Transmit, Channel: 26, Frequency: 2480MHz

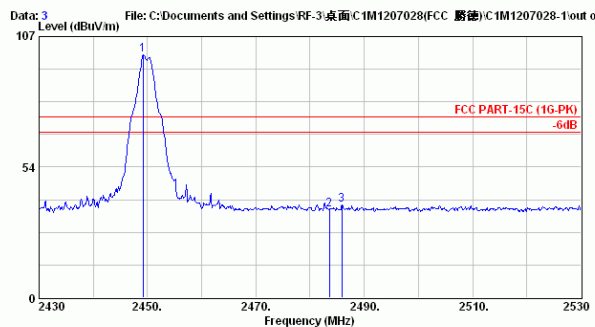
	Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Vertical	Emission Level Horizontal	Limits	Margin
	(MHz)	(dB/m)	(dB)	(dBμV)	(dBμV/m)	(dBμV/m)	(dB)
Peak *	2485.900	28.66	6.45	3.02	38.13	74.00	35.87

	Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
	(MHz)	(dB/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
Average *	2485.90	38.13	-26.01	12.12	54.00	41.88

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. Low frequency section (spurious in the restricted band 2470-2530MHz).
 3. ‘*’ The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.
 4. Duty Cycle Correction Factor = $20\log(1.05\text{ms}/20.98\text{ms}) = -26.01$
 ‘T’ means the period of the pulse train or 100ms if the pulse train length is greater than 100ms
 5. The pre-amplifier factor has been subtracted by test program actively.



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Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115 (4927) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 25°C / 61% Djianlun_hung
 EUT : M9PG020000
 Power Rating : AC120 / 60Hz
 Test Mode : TX2480

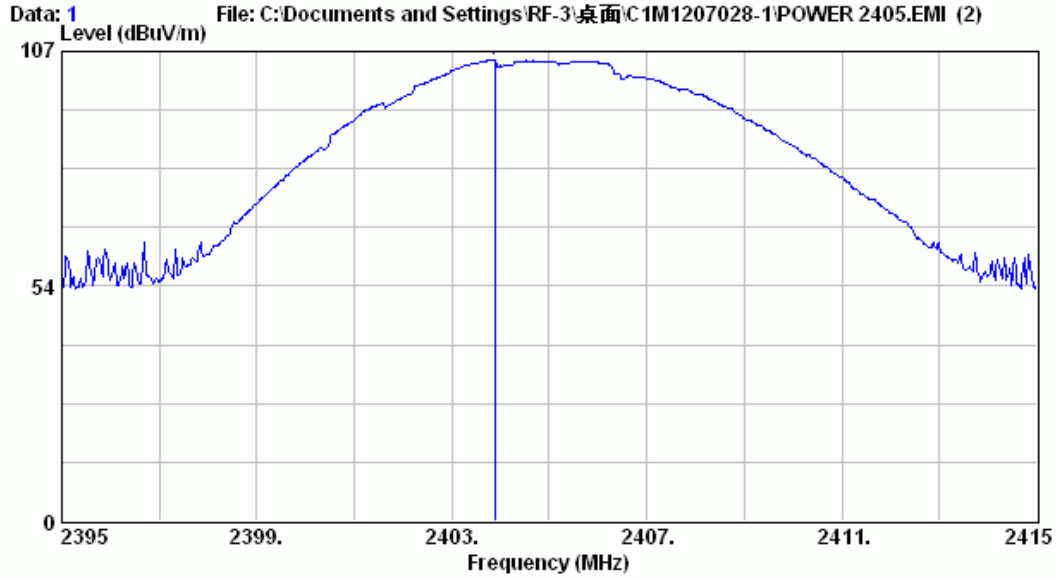
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
1	2449.200	28.59	6.41	64.47	99.46	74.00	-25.46	Peak
2	2483.600	28.66	6.45	1.11	36.23	74.00	37.77	Peak
3	2485.900	28.66	6.45	3.02	38.13	74.00	35.87	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3.7.4. Fundamental Frequency



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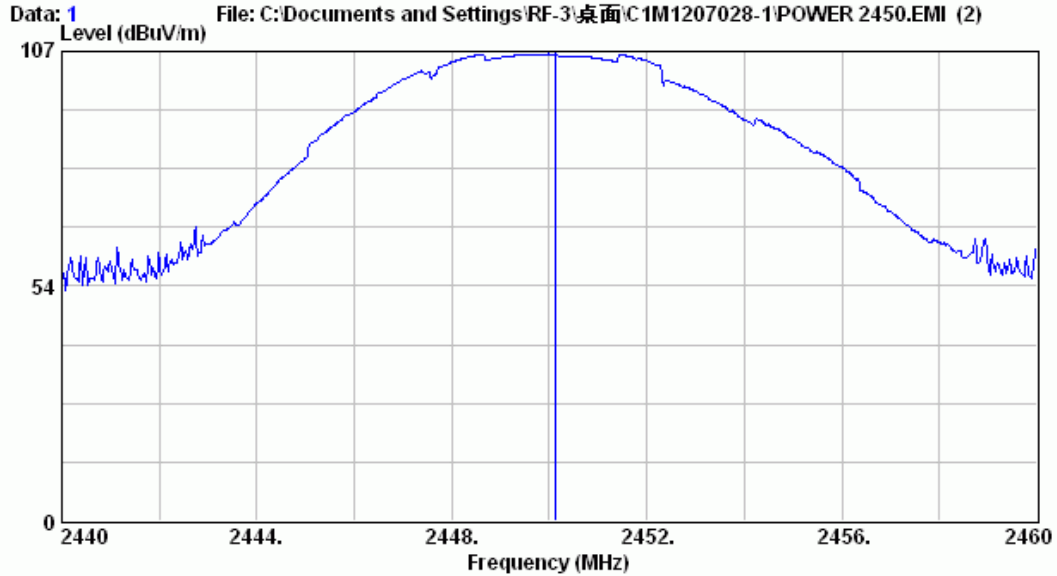
Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit :
 Env. / Ins. : E4446A 25°C / 61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : POWER 2405

	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)
1 2403.880	28.51	6.36	70.16	105.03

- Remarks:
1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. Fundament frequency peak value has complied with average limit, thus Q.P. value is not required.



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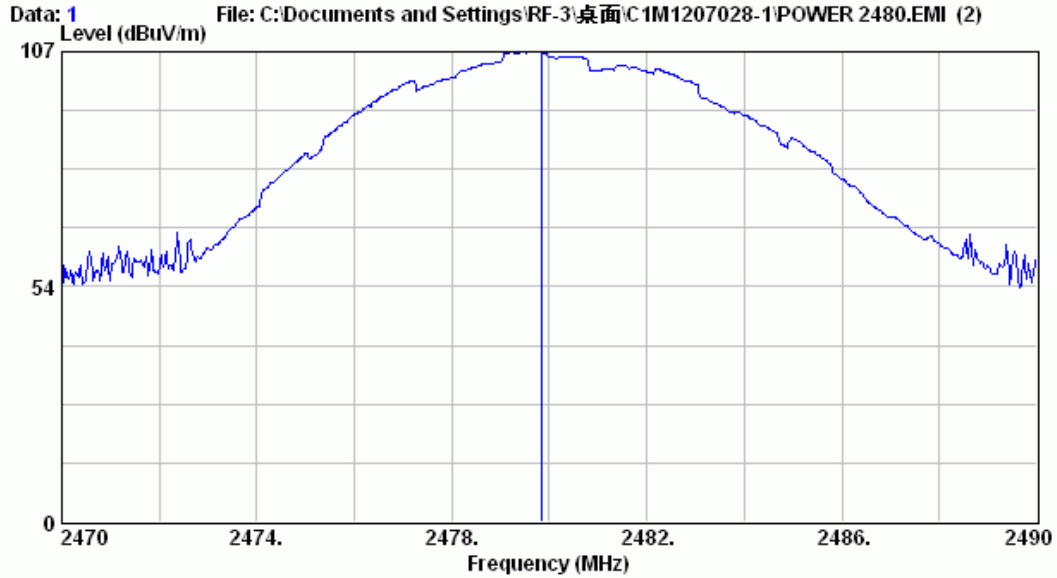
Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit :
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : POWER 2450

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)
1	2450.140	28.59	6.41	71.42	106.42

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. Fundament frequency peak value has complied with average limit, thus Q.P. value is not required.



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Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit :
 Env. / Ins. : E4446A 25°C/61% □jianlun_hung
 EUT : M9PG020000
 Power Rating : AC120V / 60Hz
 Test Mode : POWER 2480

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)	Emission Level (dBμV/m)
1	2479.840	28.66	6.44	72.04	107.15

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. Fundament frequency peak value has complied with average limit, thus Q.P. value is not required.

4. DUTY CYCLE FACTOR

4.1. Test Equipment

The following test equipment was used during the duty cycle factor measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9030A-544	US51350140	Oct. 14, 11'	Oct. 13, 12'

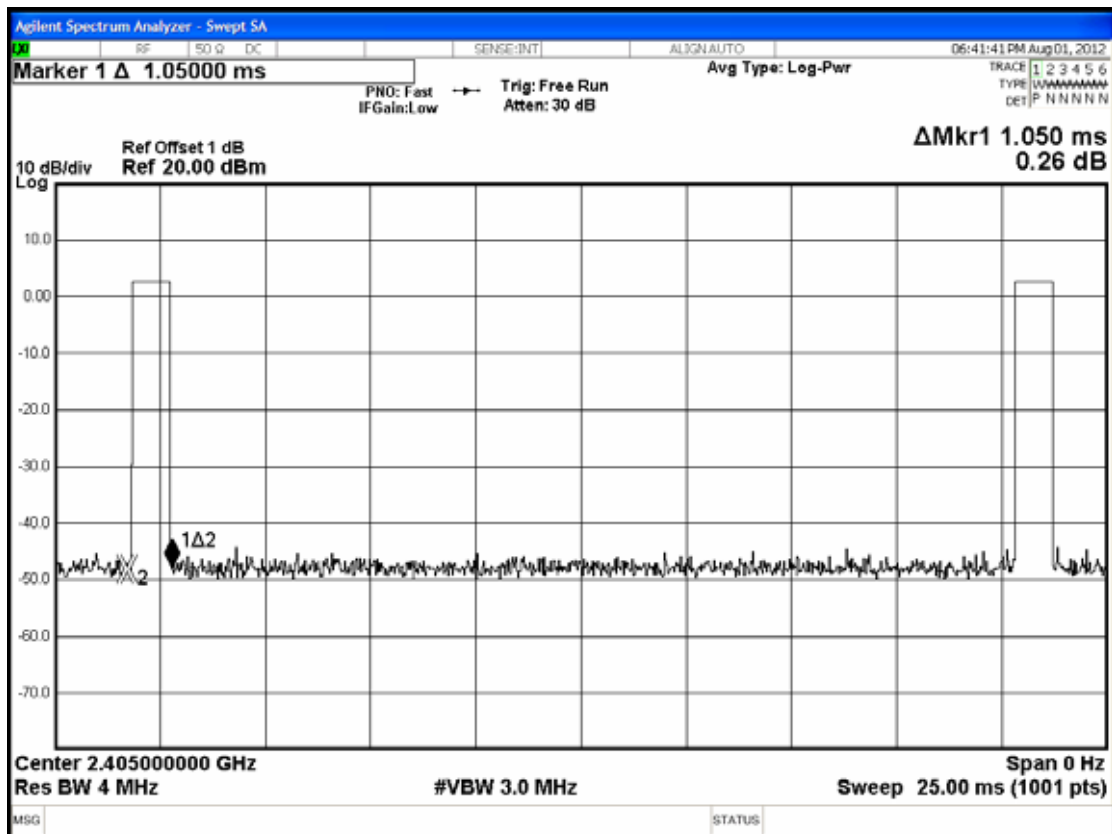
4.2. Block Diagram of Test Setup

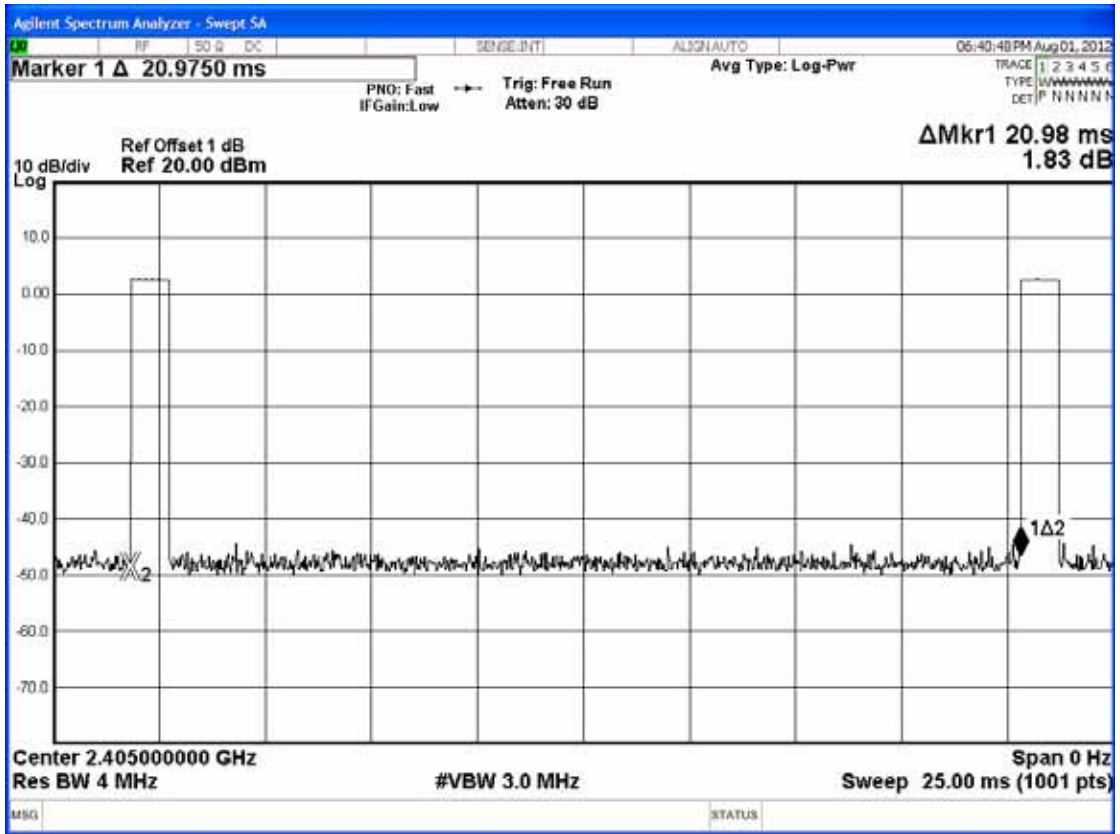


4.3. Test Results

PASSED. All the test results are attached in next pages.

Test Date: Aug. 01, 2012 Temperature : 26 Humidity : 63%





$$T_{on} = 1.050ms$$

$$T_{(on + off)} = 20.98ms$$

5. DEVIATION TO TEST SPECIFICATIONS

【NONE】

6. PHOTOGRAPHS

6.1. Photos of Powerline Conducted Emission Measurement



FRONT VIEW OF CONDUCTED MEASUREMENT



BACK VIEW OF CONDUCTED MEASUREMENT

6.2. Photos of Radiated Emission Measurement at Semi-Anechoic Chamber

6.2.1. For Frequency Range 30MHz~1GHz



6.2.2. For Frequency Above 1GHz

