

FCC Test Report

FCC Part 15 Subpart C §15.247

Product Name : GSM/WCDMA MOBILE PHONE
Model No. : M4 SS1010
FCC ID : CLNSS1010

Prepared By: : IAC Compliance Laboratory
Address: : No.789 Pu Xing Road,Shanghai,PRC
Date of Receipt : 2013.03.06
Date of Test : 2013.03.7-2013.03.11
Report No. : 20130306FCC-C



Test Report Certification

Date of Issue : Mar.13.2013

Report No. : 20130306FCC-C

Product Name : GSM/WCDMA MOBILE PHONE
Model No. : M4 SS1010
Trade Name : M4
Applicant : MFOURTEL MEXICO S.A. DE C.V.
Address : Montecito 38, Piso 23, Oficina 15. Colonia Nápoles. C.P. 03810 Mexico
Standard : FCC Part 15 Subpart C §15.247
Classification : WiFi: Digital Transmission Systems (DTS)
TX/RX Frequency Range : WLAN 802.11b/g/n (2400 MHz ~ 2483.5 MHz)
Test Result : Complied

The Test Results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of
IAC Compliance Laboratory

Documented By :  , Mar.13.2013
Judy Ge/Engineer

Tested By :  , Mar.13.2013
Alice Lee/Engineer

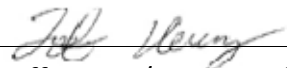
Approved By :  , Mar.13.2013
Jeff Huang/Director of Operations

TABLE OF CONTENTS

Description	Page
1. GENERAL INFORMATION	5
1.1 Applicant	5
1.1 Manufacturer	5
1.2 Feature of Equipment Under Test.....	6
1.3 Applied Standards	7
2. Test Configuration of Equipment Under Test.....	8
2.1 RF Power	8
2.2 Test Modes.....	9
2.3 Connection Diagram of Test System	10
3. Test Results.....	11
3.1 6dB and 99% Bandwidth Measurement	11
3.2 Output Power Measurement	24
3.3 Band Edges Measurement	26
3.4 Power Spectral Density Measurement.....	44
3.5 AC Conducted Emission Measurement.....	51
3.6 Radiated Emission Measurement	61
4 List of Measuring Equipment.....	103
5 Ancillary Equipment List	103
6 Uncertainty Evaluation.....	103
6.1 Uncertainty of Radiated Spurious Emission evaluation (30MHz~1GHz)	104

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	Gen 4.4.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	A8.4	Output Power Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	$\leq 20\text{dBc}$	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	$< 20\text{ dBc}$	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}$	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	Section 15.207(a)	Pass	-
3.7	15.247(d)	A8.5	Radiated Emission	FCC 47 CFR Part 15 Subpart C/ Section 15.209(a) & 15.247(d)	Pass	-
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1. GENERAL INFORMATION**1.1 Applicant**

Company Name: MFOURTEL MEXICO S.A. DE C.V.

Address: Montecito 38, Piso 23, Oficina 15. Colonia Nápoles. C.P. 03810 Mexico

1.1 Manufacturer

Company Name: CK Telecom Limited

Address: Technology Road.High-Tech Development Zone. Heyuan, Guangdong,P.R.China.

1.2 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	GSM/WCDMA MOBILE PHONE
Brand Name	M4
Model Name	M4 SS1010
FCC ID	CLNSS1010
Tx/Rx Frequency Range	WLAN 802.11b/g/n (2400 MHz ~ 2483.5 MHz)
Number of Channels	802.11b/g/n: CH01 CH06 CH11
Carrier Frequency of Each Channel	802.11b/g/n: 2412MHz 2437MHz 2462MHz
Channel Spacing	802.11b/g/n: 5MHz
Maximum Output Power to Antenna	802.11b: 16.43 (dBm) 802.11g: 14.70 (dBm) 802.11n: 15.33 (dBm)
Antenna Type	Fixed Internal Antenna
HW Version	BONFIRE-V1.0
SW Version	M4TEL_SS1010_S01_Ver200
Type of Modulation	802.11 b type of modulation: DSSS 802.11 g type of modulation: OFDM 802.11 n type of modulation: OFDM

Remark:

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results Digital Transmission Systems (DTS).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description

1.3 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Measurement Guidance v02.
- ANSI C63.4-2003

Remark:

- 1 All test items were verified and recorded according to the standards and without any deviation during the test.
- 2 This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2. Test Configuration of Equipment Under Test

2.1 RF Power

Preliminary tests were performed in different data rate and recorded the RF Output Power in the following table:

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		At DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	14.84	14.74	15.03	14.93
CH 06	2437 MHz	15.73	15.71	15.85	15.86
CH 11	2462 MHz	16.24	16.35	16.41	16.43

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		At OFDM Data Rate							
		6	9	12	18	24	36	48	54
		Mbps	Mbps	Mbps	Mbps	Mbps	Mbps	Mbps	Mbps
CH01	2412MHz	12.65	12.68	12.96	13.04	13.08	13.14	13.20	12.89
CH06	2437MHz	13.72	13.79	14.05	14.10	14.16	14.19	14.23	13.98
CH11	2462MHz	14.21	14.19	14.24	14.51	14.58	14.64	14.70	14.45

Channel	Frequency	2.4GHz 802.11n RF Power (dBm)							
		At OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
		6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
CH01	2412MHz	13.19	13.23	13.46	14.69	13.74	13.67	13.72	13.91
CH06	2437MHz	14.28	14.35	14.47	14.59	14.74	14.73	14.85	14.94
CH11	2462MHz	14.65	14.78	14.87	14.93	14.95	15.07	15.12	15.33

Remark:

The EUT is programmed to transmit signal continuously for all testing.

2.2 Test Modes

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

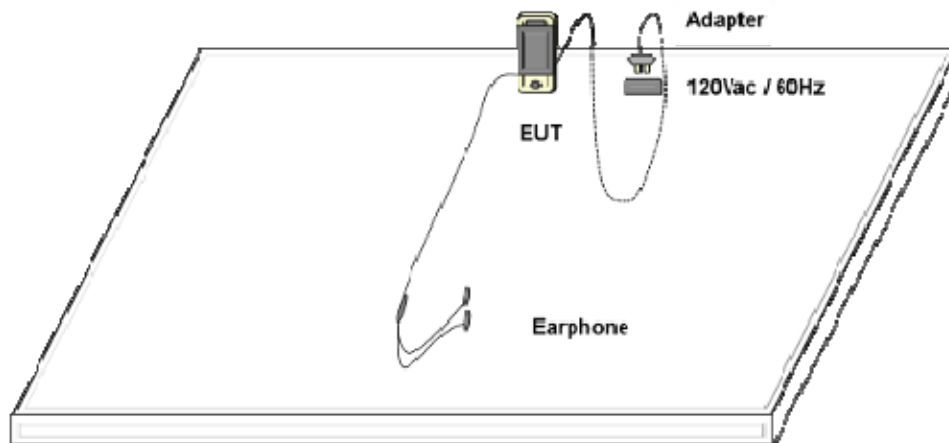
The following tables are showing the test modes as the worst cases and recorded in this report.

Test Item	802.11b (Modulation : DSSS)	802.11g (Modulation : OFDM)	802.11n (Modulation : OFDM)
Conducted TCs	Mode 1: 802.11b_CH01_2412 MHz	Mode 4: 802.11g_CH01_2412 MHz	Mode 7: 802.11n_CH01_2412 MHz
	Mode 2: 802.11b_CH06_2437 MHz	Mode 5: 802.11g_CH06_2437 MHz	Mode 8: 802.11n_CH06_2437 MHz
	Mode 3: 802.11b_CH11_2462 MHz	Mode 6: 802.11g_CH11_2462 MHz	Mode 9: 802.11n_CH11_2462 MHz

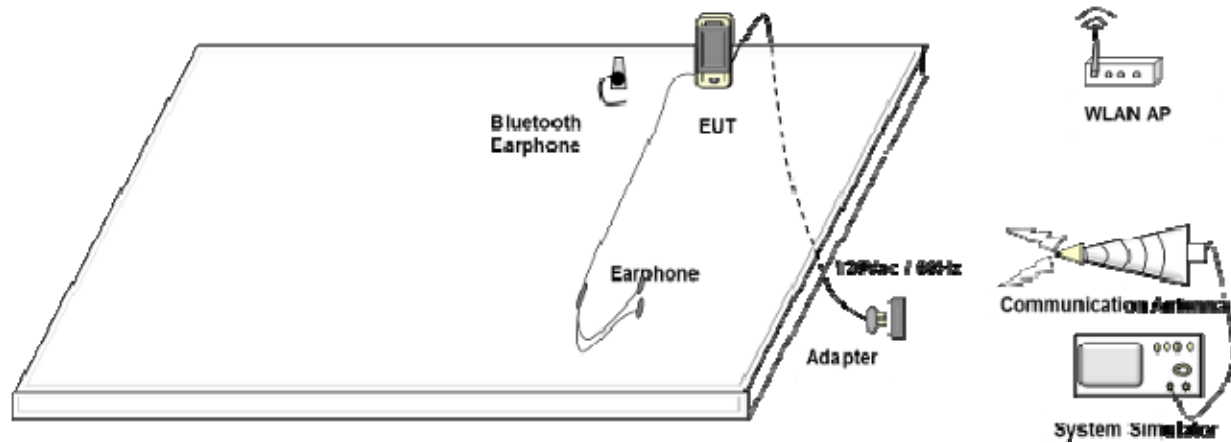
Test Cases			
Radiated TCs	Mode 1: 802.11b_CH01_ 2412 MHz + Battery	Mode 4 : 802.11g_CH01_ 2412 MHz + Battery	Mode 7 : 802.11n_CH01_ 2412 MHz + Battery
	Mode 2: 802.11b_CH06_ 2437 MHz + Battery	Mode 5 : 802.11g_CH06_ 2437 MHz + Battery	Mode 8 : 802.11n_CH06_ 2437 MHz + Battery
	Mode 3: 802.11b_CH11_ 2462 MHz + Battery	Mode 6 : 802.11g_CH11_ 2462 MHz + Battery	Mode 9 : 802.11n_CH11_ 2462 MHz + Battery
AC Conducted Emission	Mode 1 : GSM 850 Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone + Earphone + Adapter+ Battery Mode 2: GSM 1900 Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone + Earphone+ Adapter+ Battery Mode 3: WCDMA Band II Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone +Earphone+ Adapter+ Battery Mode 4: WCDMA Band V Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone +Earphone+ Adapter+ Battery		

2.3 Connection Diagram of Test System

Radiation Test



Conduction Test



3. Test Results

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

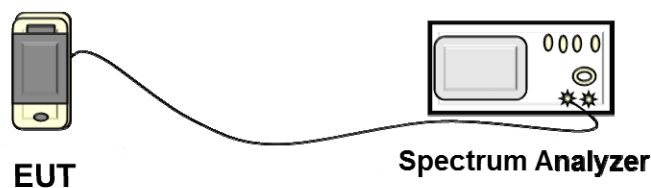
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Measurement Guidance v02.
2. Set resolution bandwidth (RBW) = 1-5 % or DTS bandwidth.
3. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.1.4 Test Setup

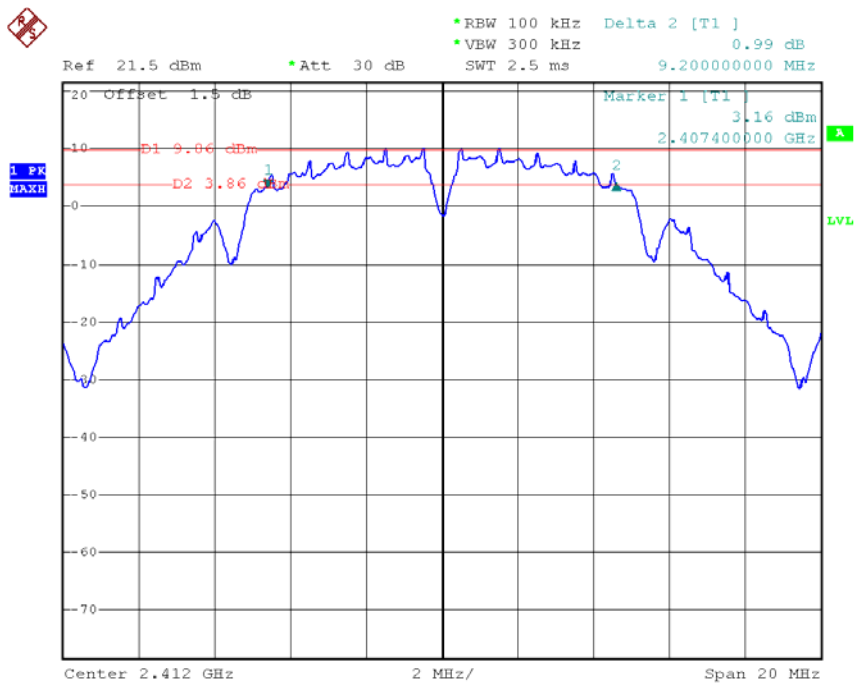


3.1.5 Test Result of 6dB Bandwidth

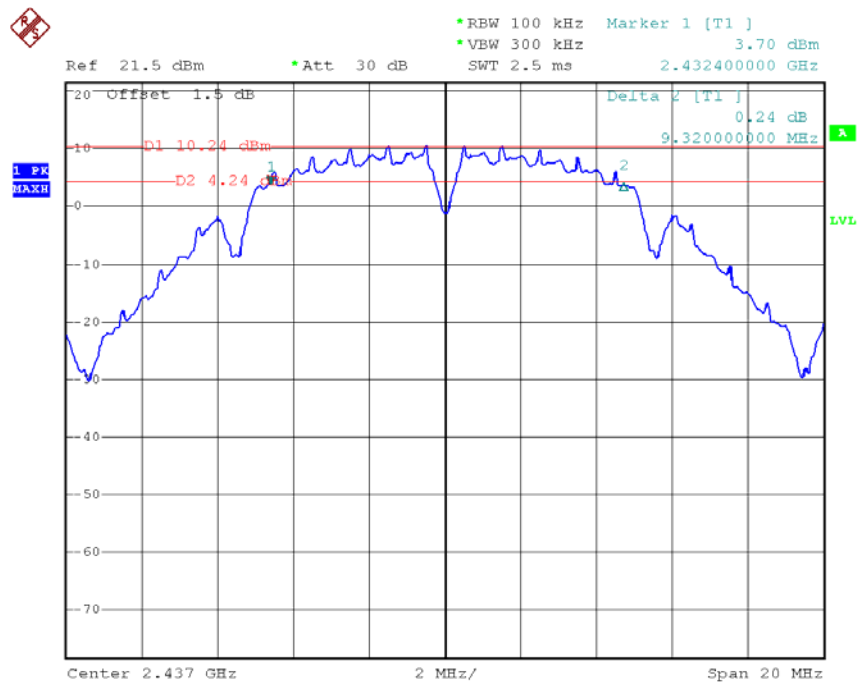
Test Mode :	Mode 1, 2, 3	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	9.20	0.5	Pass
06	2437	9.32	0.5	Pass
11	2462	9.48	0.5	Pass

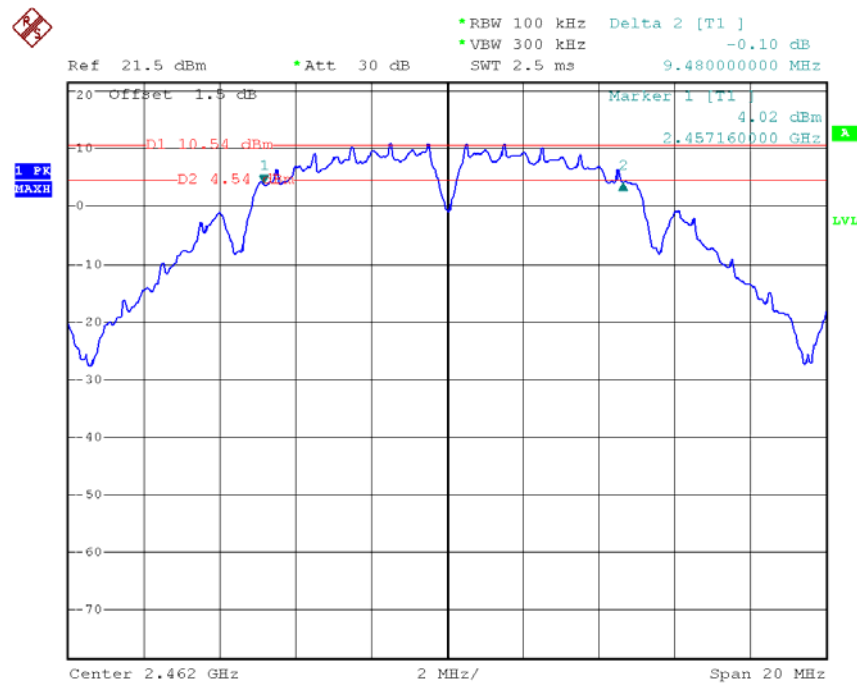
Mode 1 : 6 dB Bandwidth Plot on 802.11b Channel 01



Mode 2 : 6 dB Bandwidth Plot on 802.11b Channel 06



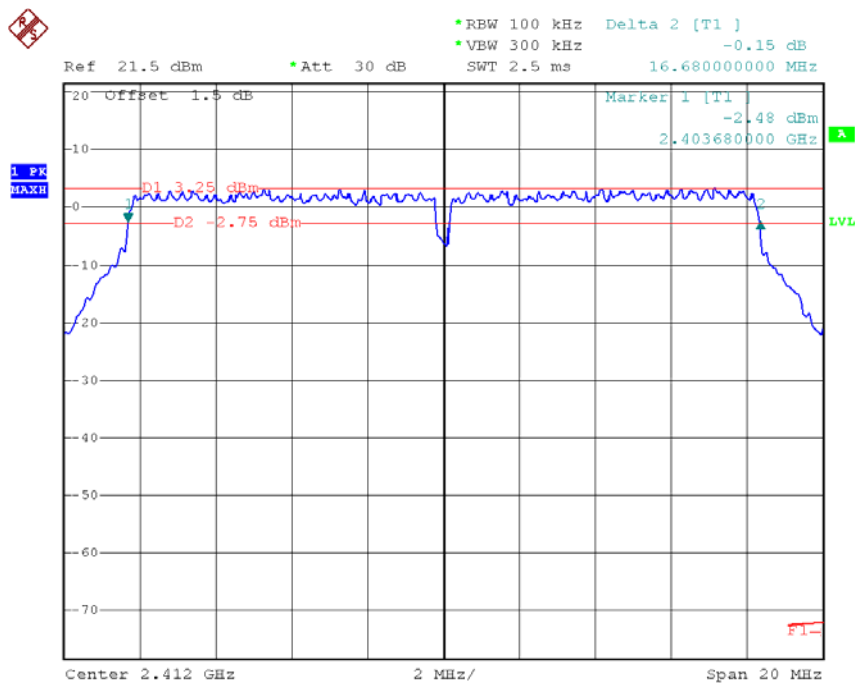
Mode 3 : 6 dB Bandwidth Plot on 802.11b Channel 11



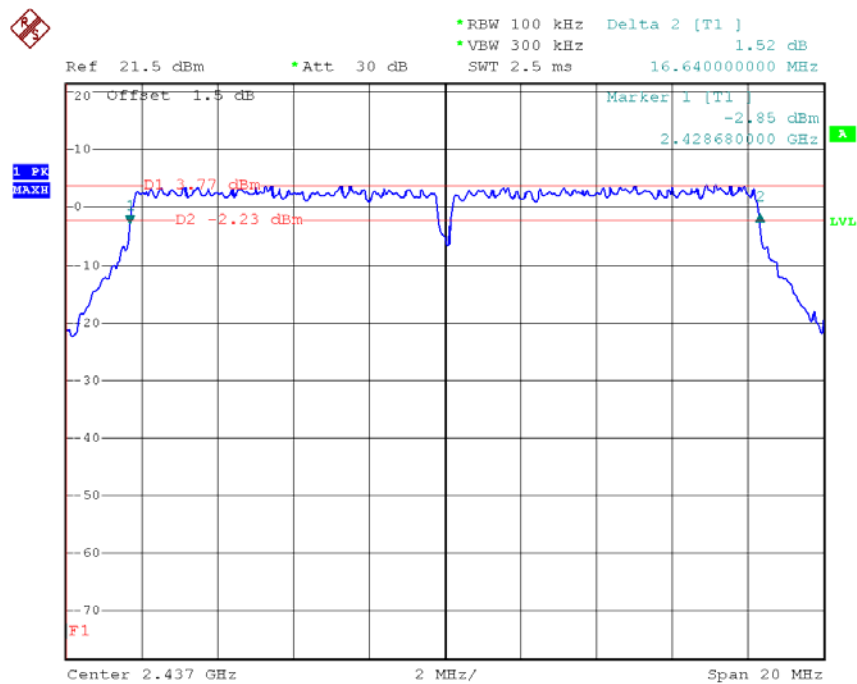
Test Mode :	Mode 4, 5, 6	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.68	0.5	Pass
06	2437	16.64	0.5	Pass
11	2462	16.64	0.5	Pass

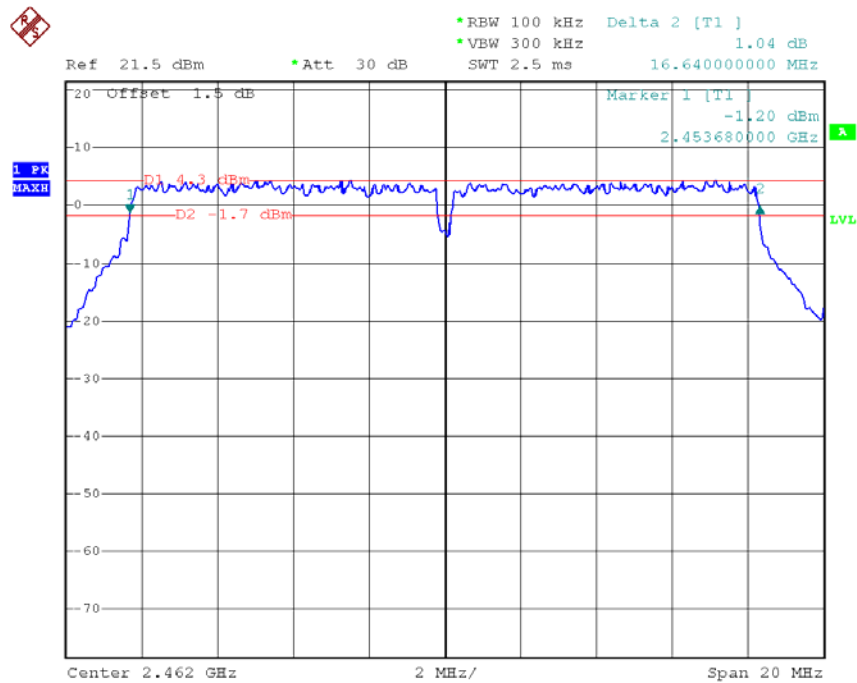
Mode 4 : 6 dB Bandwidth Plot on 802.11g Channel 01



Mode 5 : 6 dB Bandwidth Plot on 802.11g Channel 06



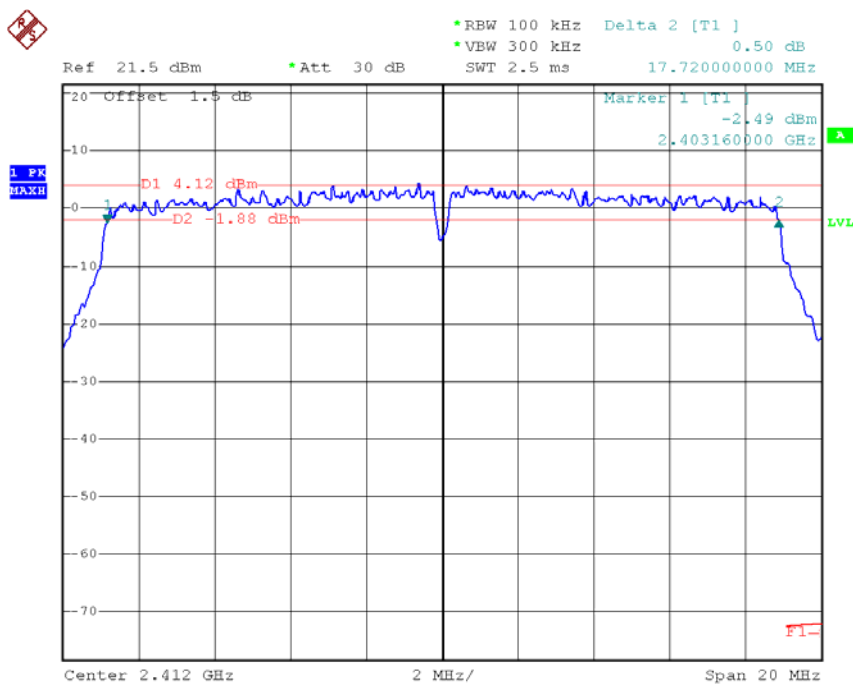
Mode 6 : 6 dB Bandwidth Plot on 802.11g Channel 11



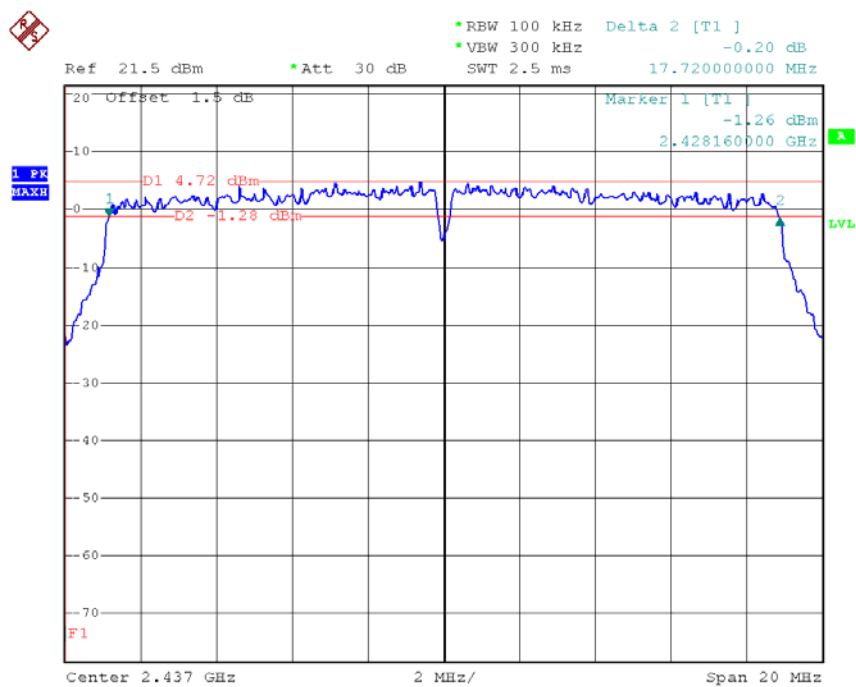
Test Mode :	Mode 7, 8, 9	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11n 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.72	0.5	Pass
06	2437	17.72	0.5	Pass
11	2462	17.72	0.5	Pass

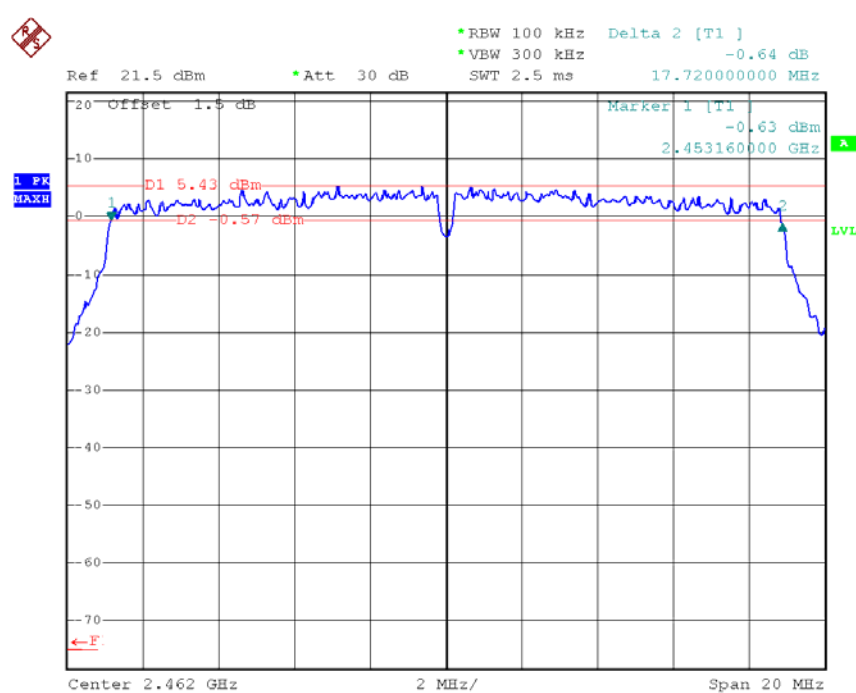
Mode 7 : 6 dB Bandwidth Plot on 802.11n Channel 01



Mode 8 : 6 dB Bandwidth Plot on 802.11n Channel 06



Mode 9 : 6 dB Bandwidth Plot on 802.11n Channel 11

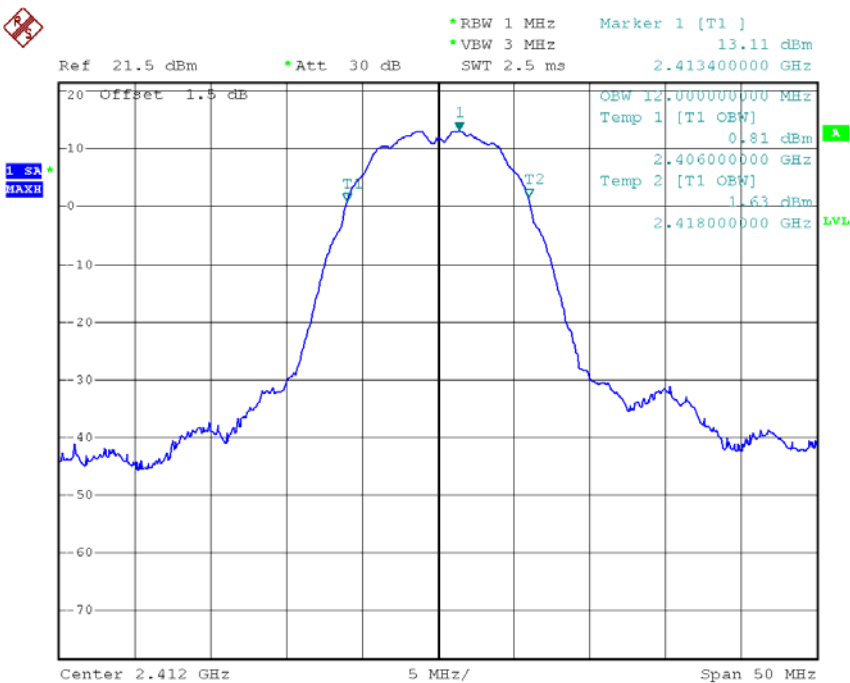


3.1.6 Test Result of 99% Occupied Bandwidth

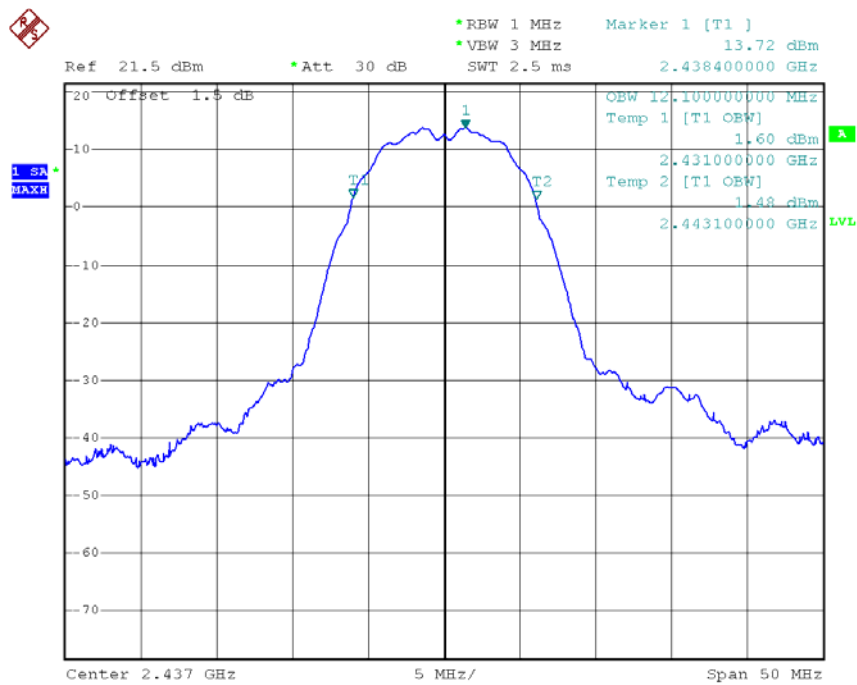
Test Mode :	Mode 1, 2, 3	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11b 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	12.00	Pass
06	2437	12.10	Pass
11	2462	12.10	Pass

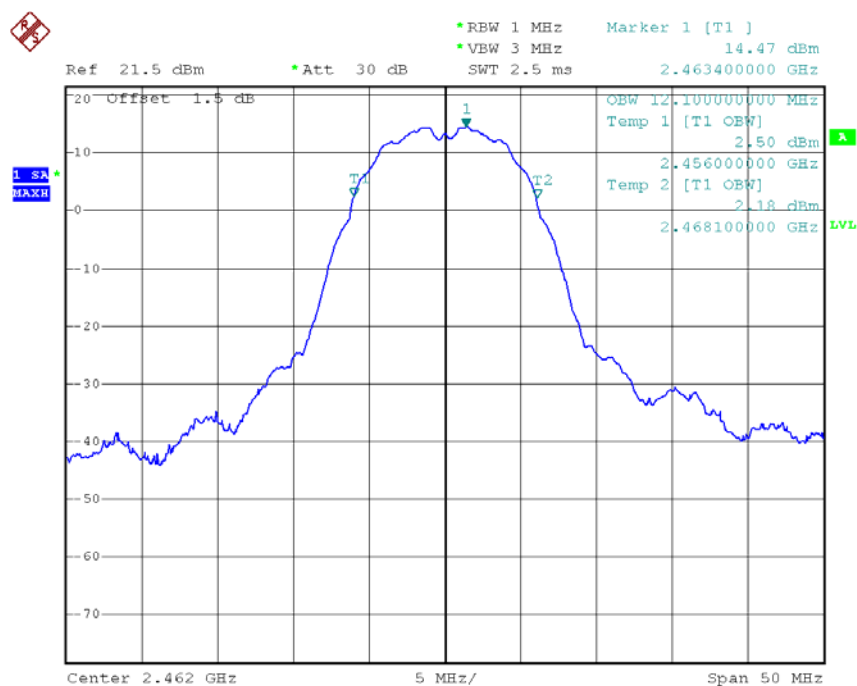
Mode 1 : 99% Occupied Bandwidth Plot on 802.11b Channel 01



Mode 2 : 99% Occupied Bandwidth Plot on 802.11b Channel 06



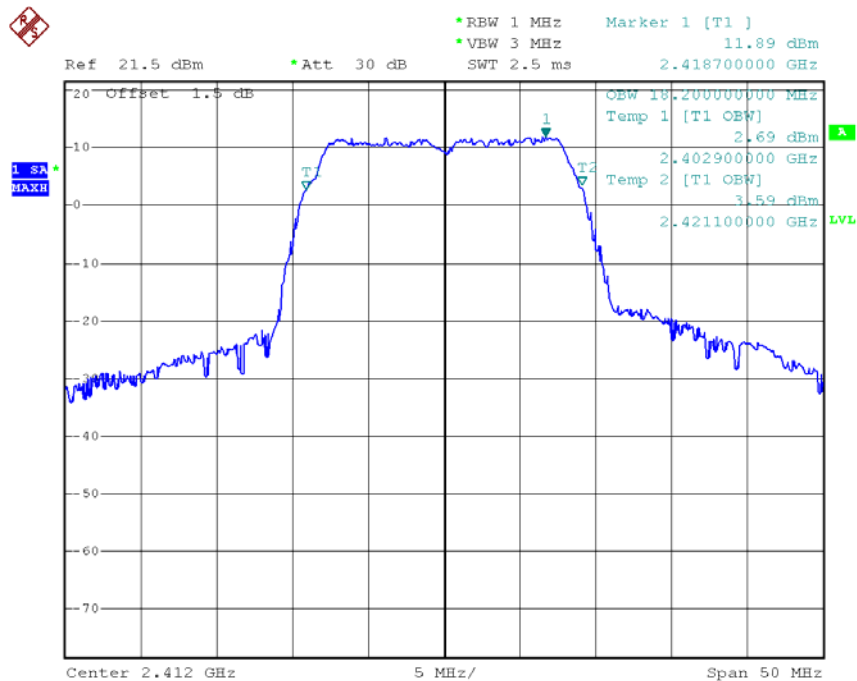
Mode 3 : 99% Occupied Bandwidth Plot on 802.11b Channel 11



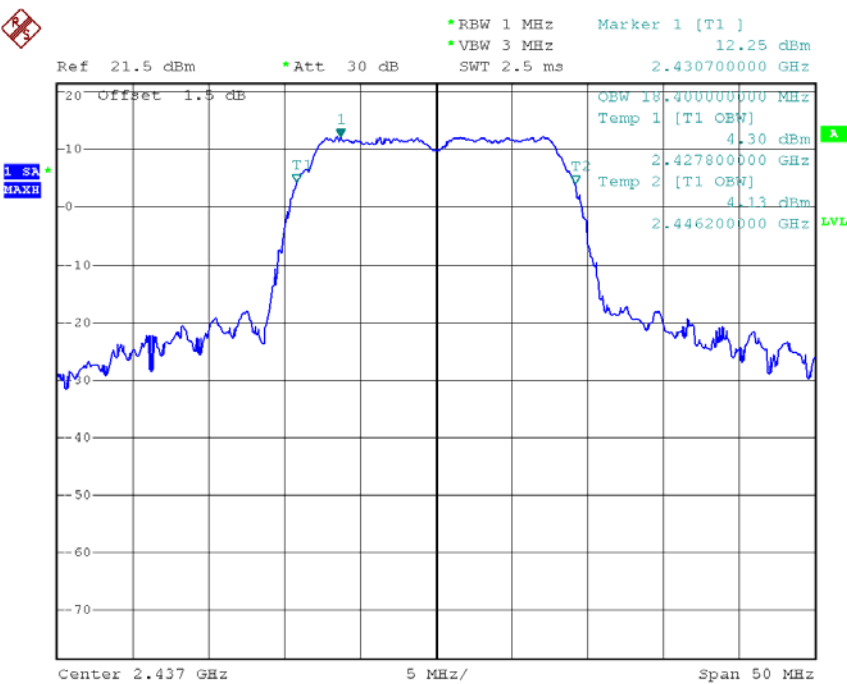
Test Mode :	Mode 4, 5, 6	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11g 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	18.20	Pass
06	2437	18.40	Pass
11	2462	18.30	Pass

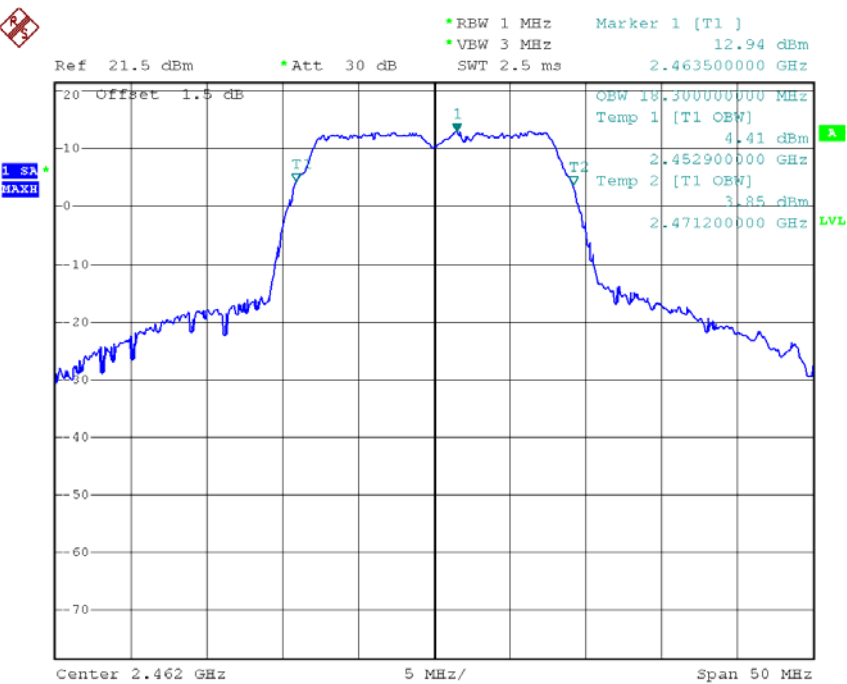
Mode 4 : 99% Occupied Bandwidth Plot on 802.11g Channel 01



Mode 5 : 99% Occupied Bandwidth Plot on 802.11g Channel 06



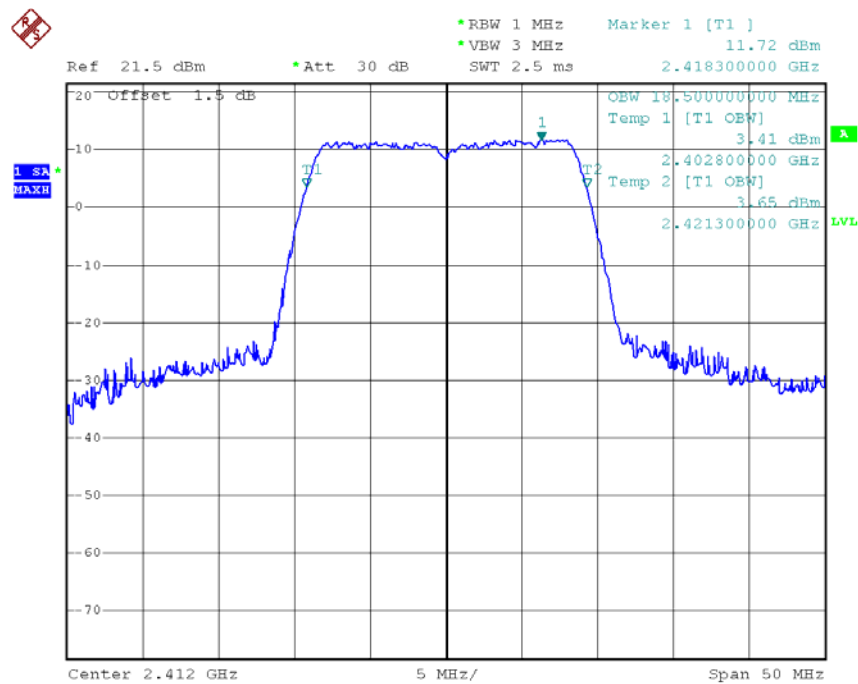
Mode 6 : 99% Occupied Bandwidth Plot on 802.11g Channel 11



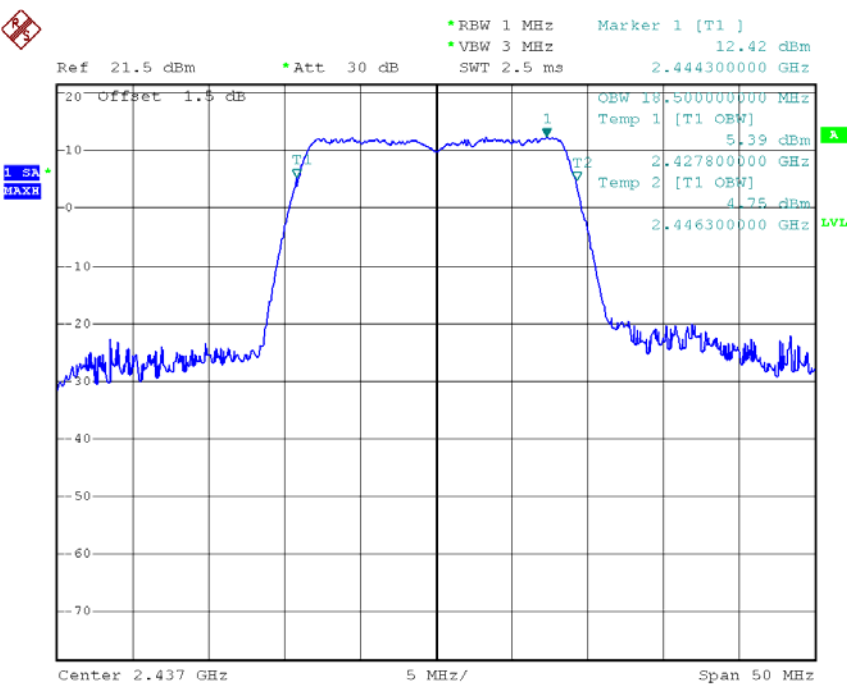
Test Mode :	Mode 7, 8, 9	Temperature :	23°C~26°C
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11n 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	18.50	Pass
06	2437	18.50	Pass
11	2462	18.50	Pass

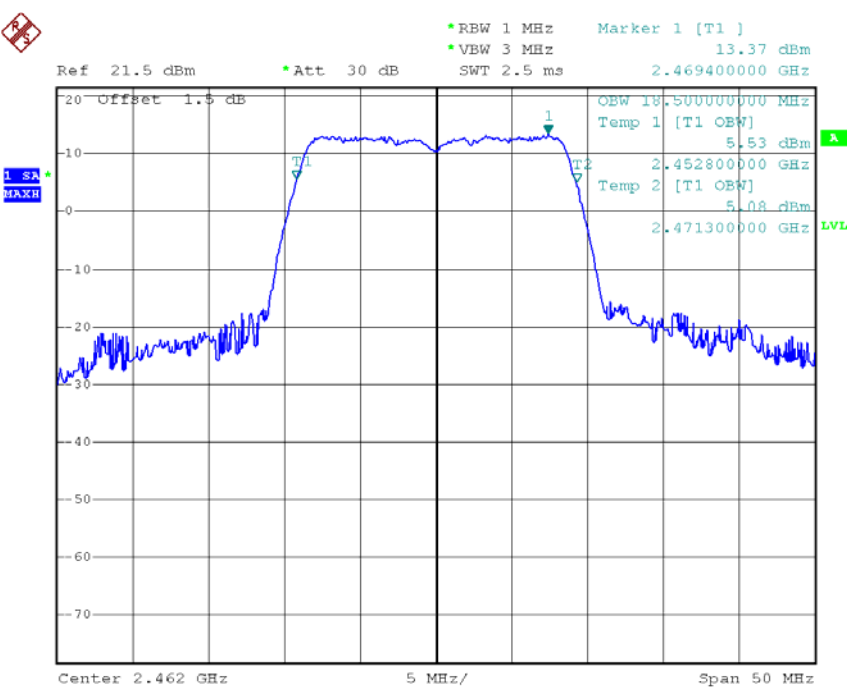
Mode 7 : 99% Occupied Bandwidth Plot on 802.11n Channel 01



Mode 8 : 99% Occupied Bandwidth Plot on 802.11n Channel 06



Mode 9 : 99% Occupied Bandwidth Plot on 802.11n Channel 11



3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

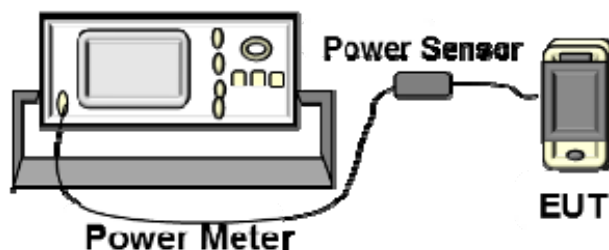
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v02.
2. The RF output of EUT was connected to the power meter by RF cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power by power meter with peak power sensor and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Output Power

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	14.93	30	Pass
06	2437	15.86	30	Pass
11	2462	16.43	30	Pass

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	13.20	30	Pass
06	2437	14.23	30	Pass
11	2462	14.70	30	Pass

Channel	Frequency (MHz)	802.11n Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	13.91	30	Pass
06	2437	14.94	30	Pass
11	2462	15.33	30	Pass

3.3 Band Edges Measurement

3.3.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. If the maximum peak conducted output power procedure was used to demonstrate compliance to 15.247(b)(3) requirements, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

3.3.2 Measuring Instruments

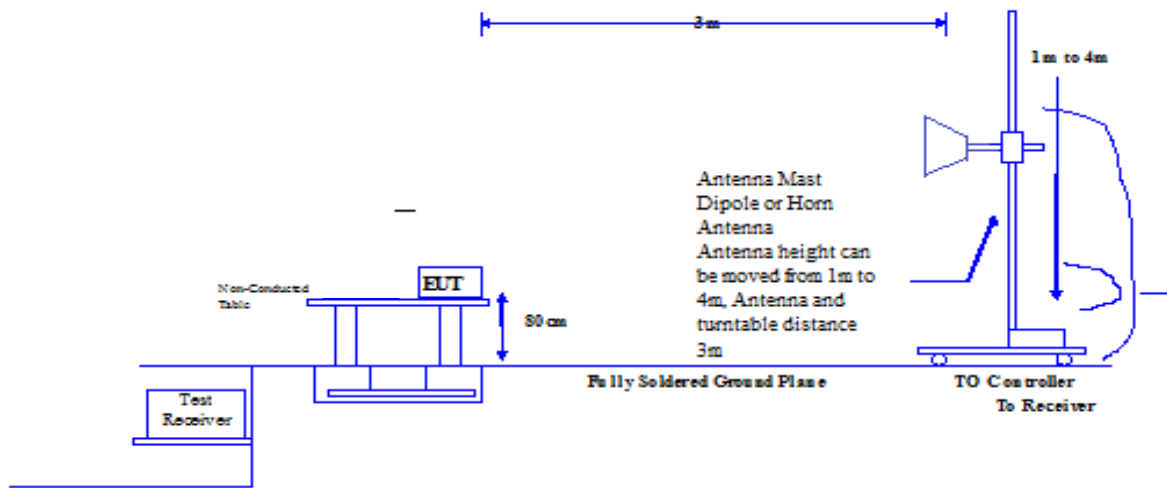
See list of measuring instruments of this test report.

3.3.3 Test Procedures

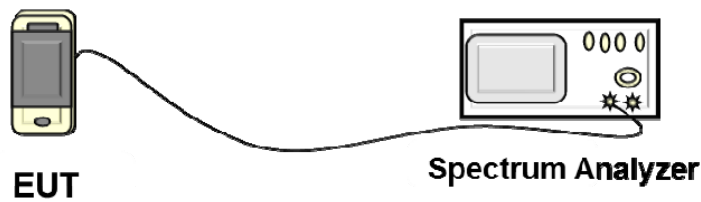
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 D01 DTS Meas Guidance v02.
2. Conducted emission test: Set RBW = 100 KHz, VBW=300 KHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz, when maximum peak conducted output power procedure is used. The attenuation is set to 30dB, when maximum conducted output power procedure is used.
3. §15.247(d) specifies that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to 15.247(b)(3) requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20dB relative to the maximum measured in-band peak PSD level.
4. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements peak radiated emission above 1 GHz, set RBW = 1MHz, VBW = 1MHz, Sweep=Auto. For measurements average radiated emission above 1 GHz, set RBW = 1MHz, VBW = 10Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c)

3.3.4 Test Setup

Radiated Band Edges



Conducted Band Edges



3.3.5 Test Result of Radiated Band Edges

Test Band :	802.11b
Test Channel	01

Frequency GHz	Level dBuv/m	Over Limit dB	Limit Line dBuv/m	Read Level dBuv	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Remark	Polarity
2.39(802.11b)	62.84	-11.16	74	52.35	27.5	6.99	24	Peak	Vertical
2.39(802.11b)	41.83	-12.17	54	31.34	27.5	6.99	24	Average	Vertical
2.39(802.11b)	63.76	-10.24	74	53.27	27.5	6.99	24	Peak	Horizontal
2.39(802.11b)	40	-14	54	29.51	27.5	6.99	24	Average	Horizontal

Test Band :	802.11b
Test Channel	11

Frequency GHz	Level dBuv/m	Over Limit dB	Limit Line dBuv/m	Read Level dBuv	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Remark	Polarity
2.4835(802.11b)	59.56	-14.44	74	48.28	27.6	7.68	24	Peak	Vertical
2.4835(802.11b)	41.73	-12.27	54	30.45	27.6	7.68	24	Average	Vertical
2.4835(802.11b)	62.66	-11.34	74	51.38	27.6	7.68	24	Peak	Horizontal
2.4835(802.11b)	43.02	-10.98	54	31.74	27.6	7.68	24	Average	Horizontal

Test Band :	802.11g
Test Channel	01

Frequency GHz	Level dBuv/m	Over Limit dB	Limit Line dBuv/m	Read Level dBuv	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Remark	Polarity
2.3886(802.11g)	66.87	-7.13	74	56.38	27.5	6.99	24	Peak	Vertical
2.3887(802.11g)	48.94	-5.06	54	38.45	27.5	6.99	24	Average	Vertical
2.3879(802.11g)	67.74	-6.26	74	57.25	27.5	6.99	24	Peak	Horizontal
2.3887(802.11g)	49.13	-4.87	54	38.64	27.5	6.99	24	Average	Horizontal

Test Band :	802.11g
Test Channel	11

Frequency GHz	Level dBuv/m	Over Limit dB	Limit Line dBuv/m	Read Level dBuv	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Remark	Polarity
2.4836(802.11g)	64.82	-9.18	74	53.54	27.6	7.68	24	Peak	Vertical
2.4836(802.11g)	45.49	-8.51	54	34.21	27.6	7.68	24	Average	Vertical
2.4836(802.11g)	62.75	-11.25	74	51.47	27.6	7.68	24	Peak	Horizontal
2.4836(802.11g)	44.93	-9.07	54	33.65	27.6	7.68	24	Average	Horizontal

Test Band :	802.11n
Test Channel	01

Frequency GHz	Level dBuv/m	Over Limit dB	Limit Line dBuv/m	Read Level dBuv	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Remark	Polarity
2.3894(802.11n)	67.97	-6.03	74	57.48	27.5	6.99	24	Peak	Vertical
2.3887(802.11n)	50.21	-3.79	54	39.72	27.5	6.99	24	Average	Vertical
2.3886(802.11n)	68.64	-5.36	74	58.15	27.5	6.99	24	Peak	Horizontal
2.3878(802.11n)	49.77	-4.23	54	39.28	27.5	6.99	24	Average	Horizontal

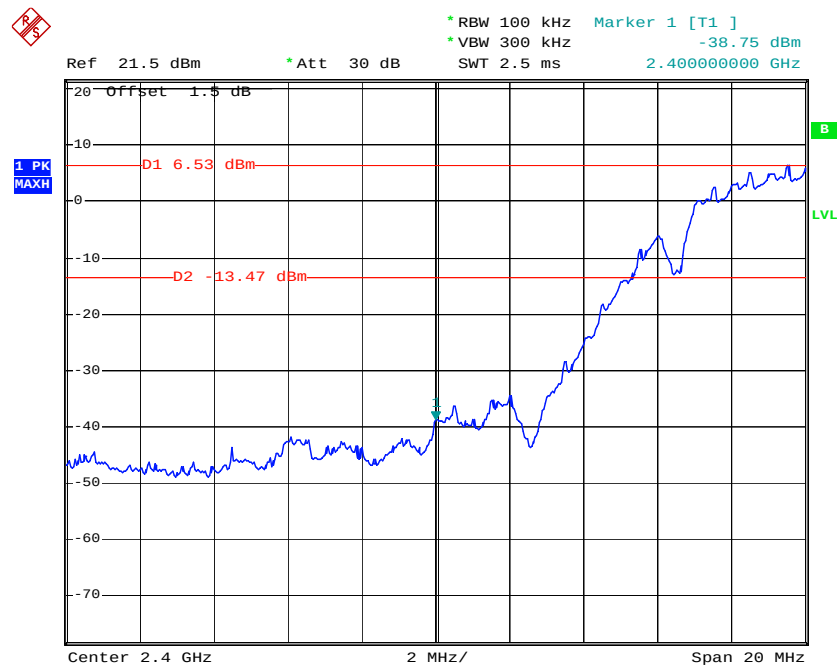
Test Band :	802.11n
Test Channel	11

Frequency GHz	Level dBuv/m	Over Limit dB	Limit Line dBuv/m	Read Level dBuv	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Remark	Polarity
2.4835(802.11n)	67	-7	74	55.72	27.6	7.68	24	Peak	Vertical
2.4836(802.11n)	48.86	-5.14	54	37.58	27.6	7.68	24	Average	Vertical
2.4836(802.11n)	67.64	-6.36	74	56.36	27.6	7.68	24	Peak	Horizontal
2.4835(802.11n)	47.02	-6.98	54	35.74	27.6	7.68	24	Average	Horizontal

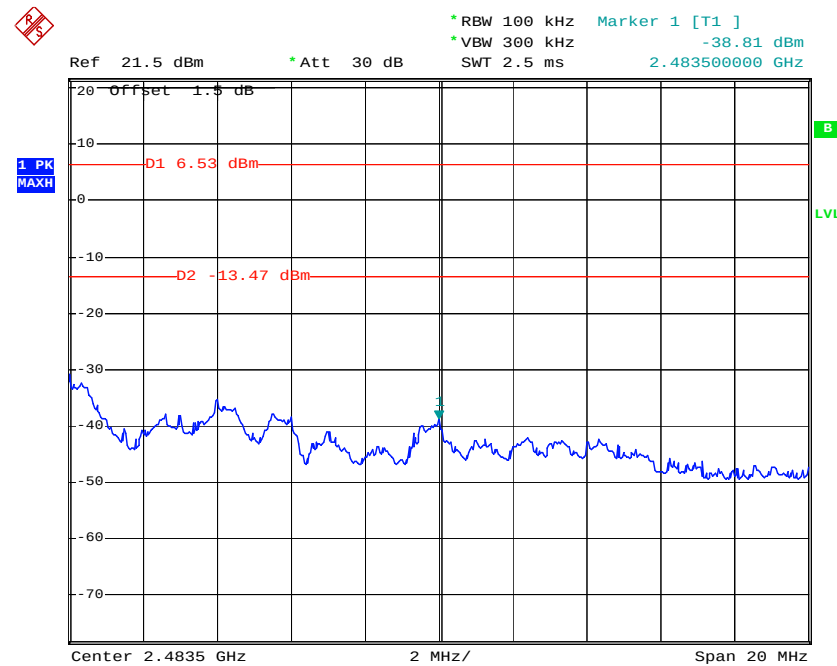
3.3.6 Test Result of Conducted Band Edges

Test Mode :	Mode 1 and 3	Temperature :	23℃~26℃
Test Band :	802.11b	Relative Humidity :	35%~60%
Test Channel :	01 and 11	Test Engineer :	Hogan He

Low Band Edge Plot on 802.11b Channel 01

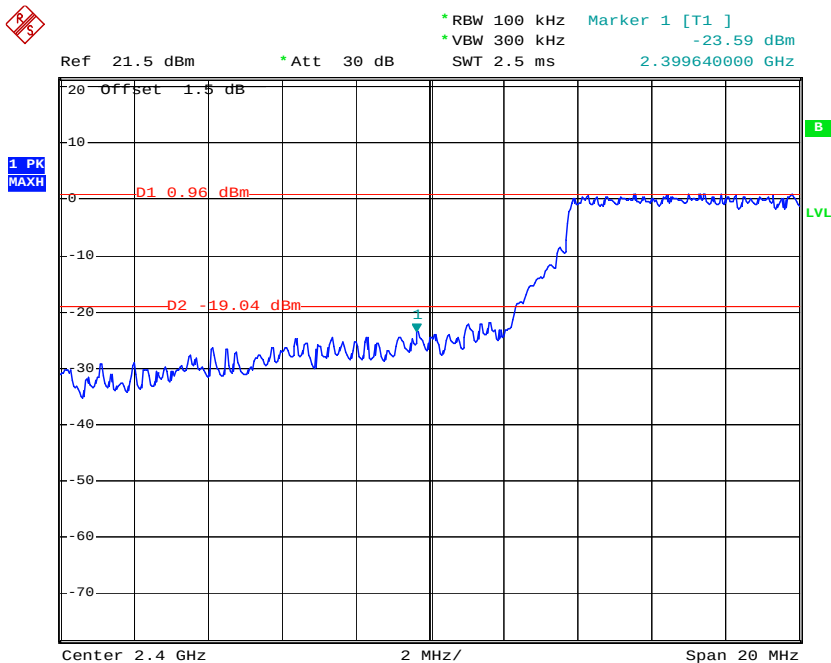


High Band Edge Plot on 802.11b Channel 11

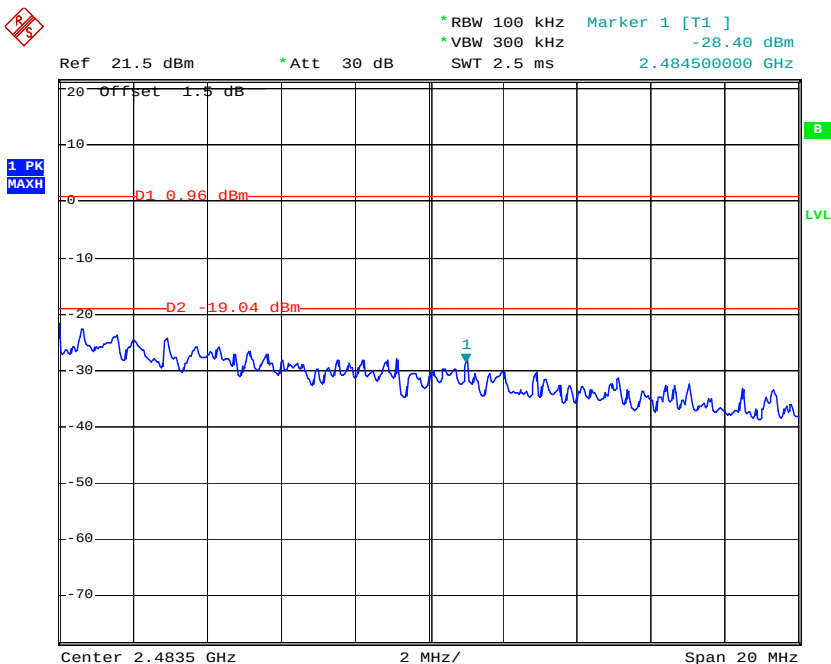


Test Mode :	Mode 4 and 6	Temperature :	23℃~26℃
Test Band :	802.11g	Relative Humidity :	35%~60%
Test Channel :	01 and 11	Test Engineer :	Hogan He

Low Band Edge Plot on 802.11g Channel 01

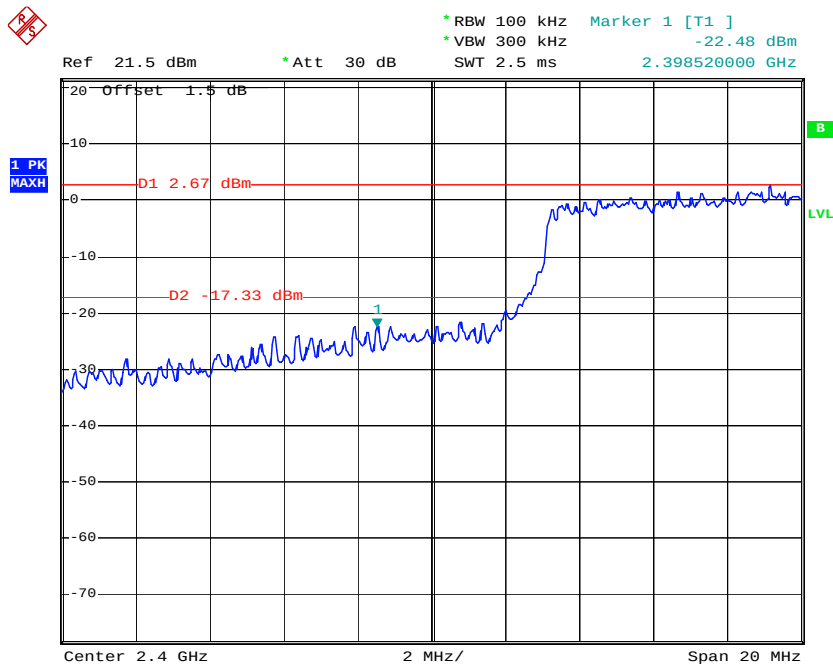


High Band Edge Plot on 802.11g Channel 11

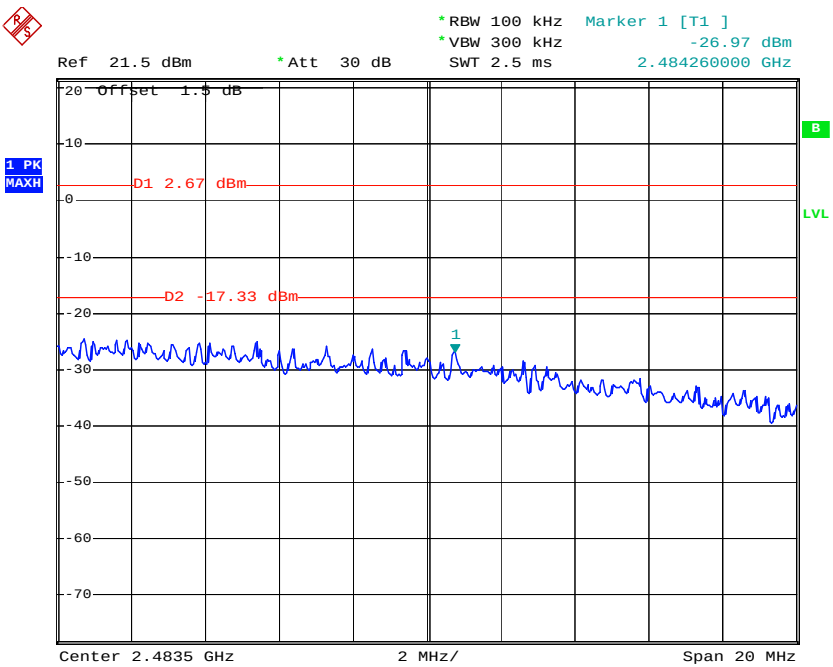


Test Mode :	Mode 7 and 9	Temperature :	23℃~26℃
Test Band :	802.11n	Relative Humidity :	35%~60%
Test Channel :	01 and 11	Test Engineer :	Hogan He

Low Band Edge Plot on 802.11n Channel 01



High Band Edge Plot on 802.11n Channel 11



3.3.7 Spurious Emission Measurement

3.3.8 Limit of Spurious Emission Measurement

All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band.

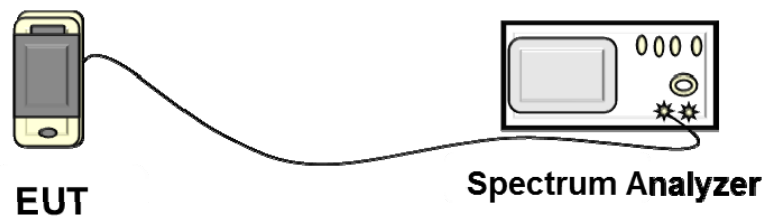
3.3.9 Measuring Instruments

See list of measuring instruments of this test report.

3.3.10 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW = 100 kHz, Video bandwidth (VBW) $\geq$ RBW, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

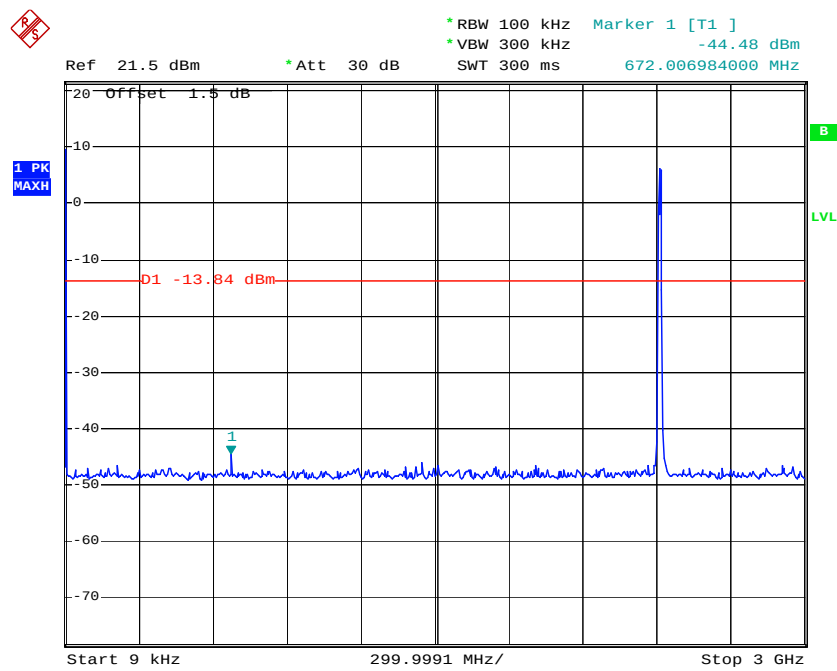
3.3.11 Test Setup



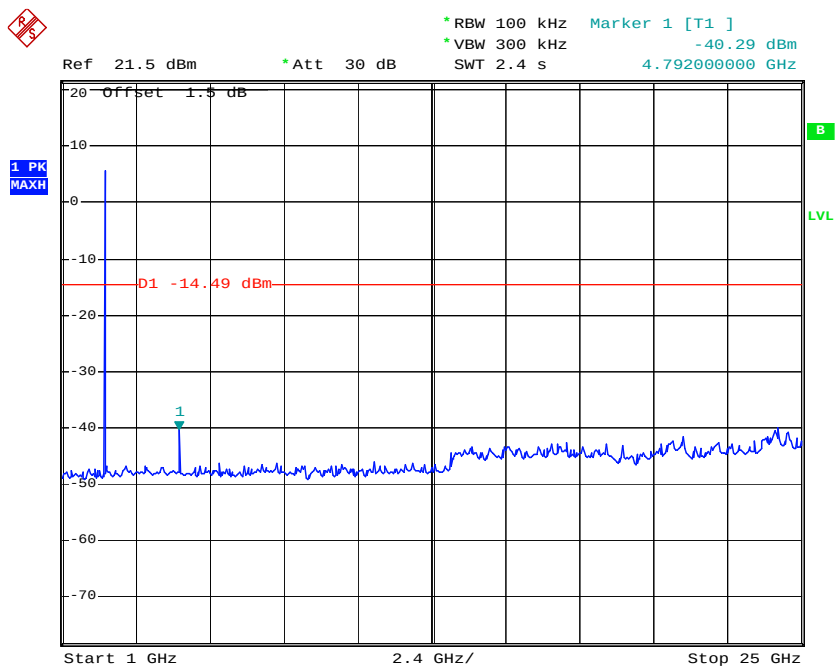
3.3.12 Test Result

Test Mode :	Mode 1	Temperature :	23℃~26℃
Test Band :	802.11b	Relative Humidity :	35%~60%
Test Channel :	01	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

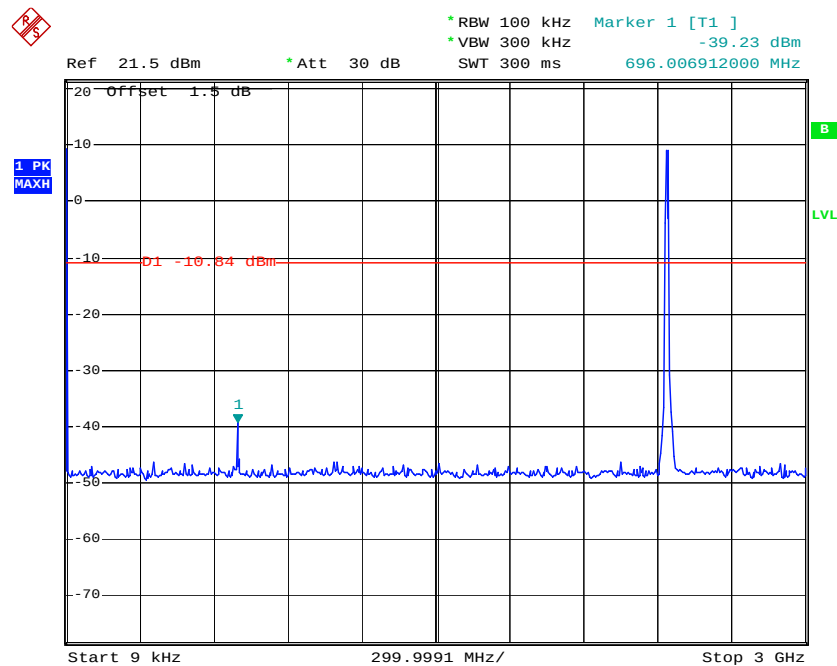


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

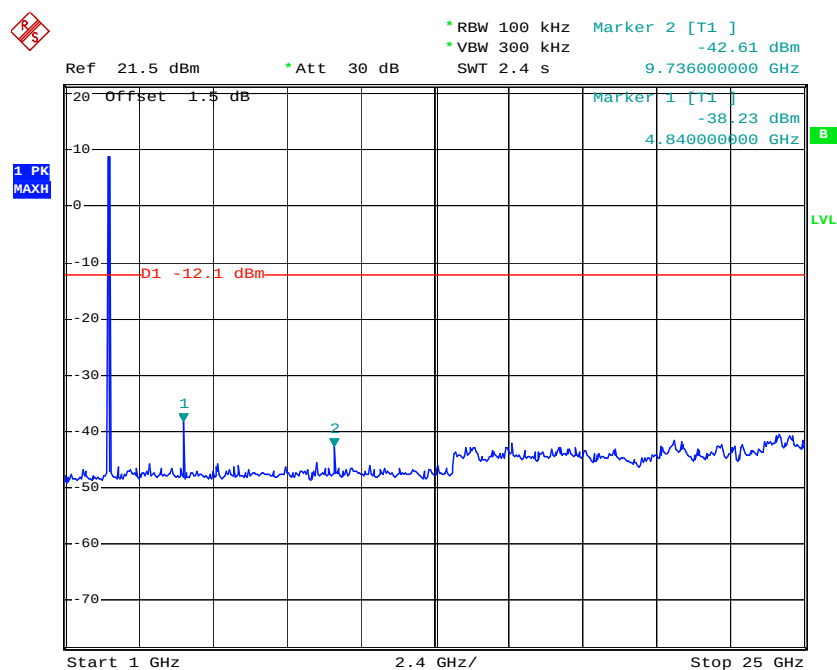


Test Mode :	Mode 2	Temperature :	23℃~26℃
Test Band :	802.11b	Relative Humidity :	35%~60%
Test Channel :	06	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

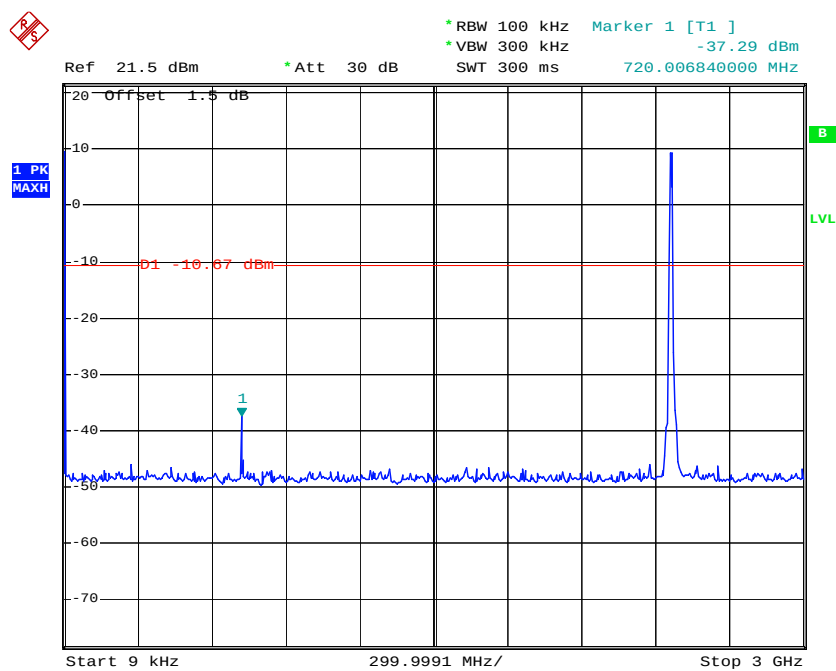


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

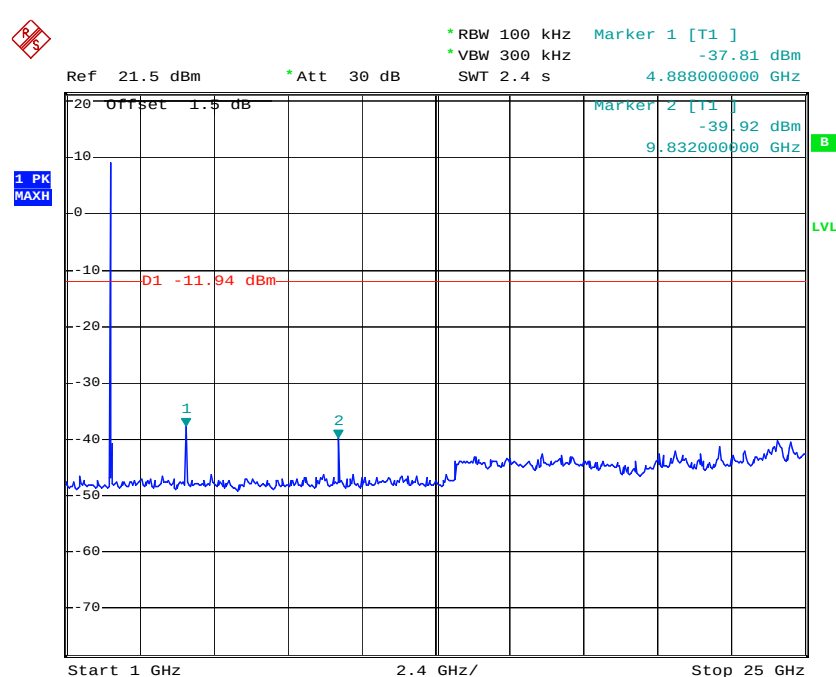


Test Mode :	Mode 3	Temperature :	23℃~26℃
Test Band :	802.11b	Relative Humidity :	35%~60%
Test Channel :	11	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

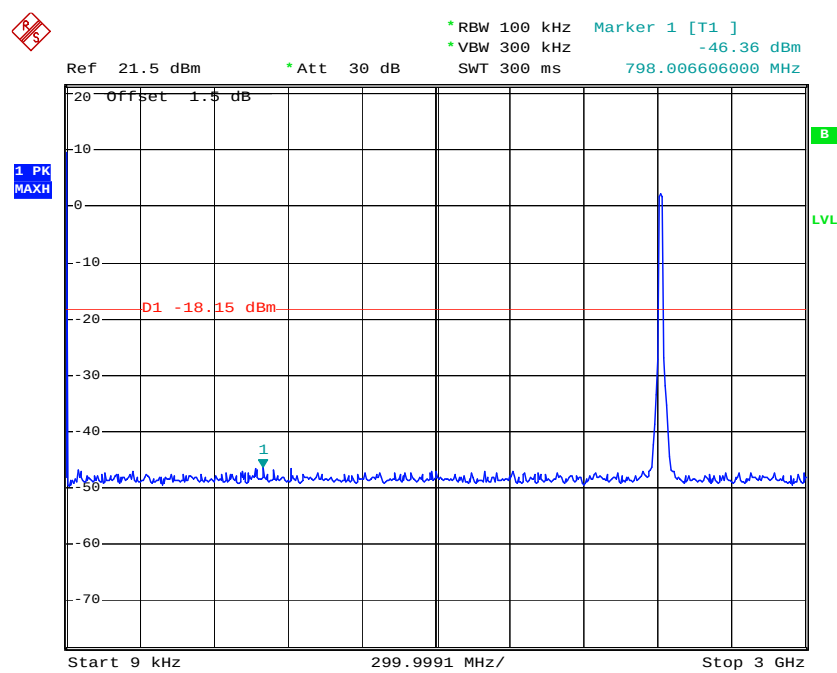


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

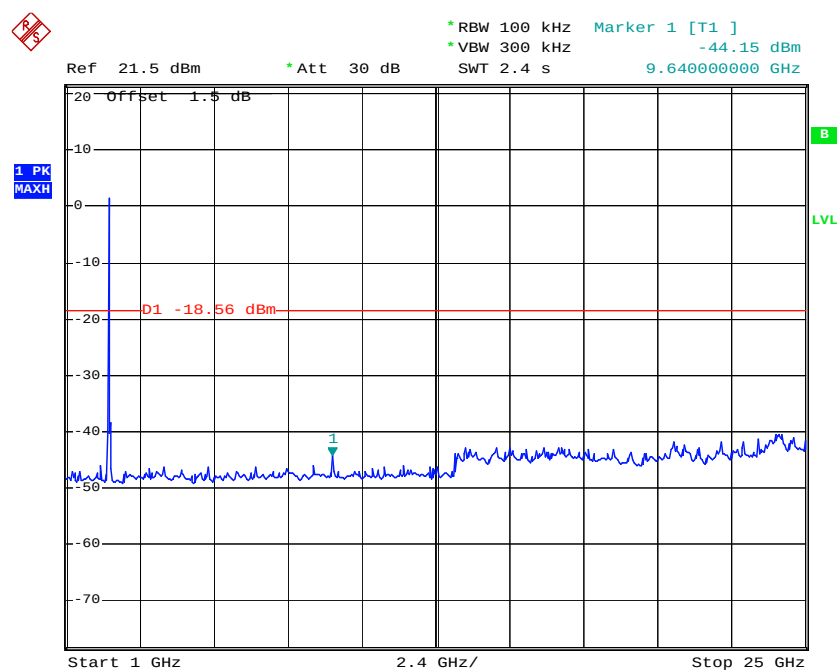


Test Mode :	Mode 4	Temperature :	23℃~26℃
Test Band :	802.11g	Relative Humidity :	35%~60%
Test Channel :	01	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

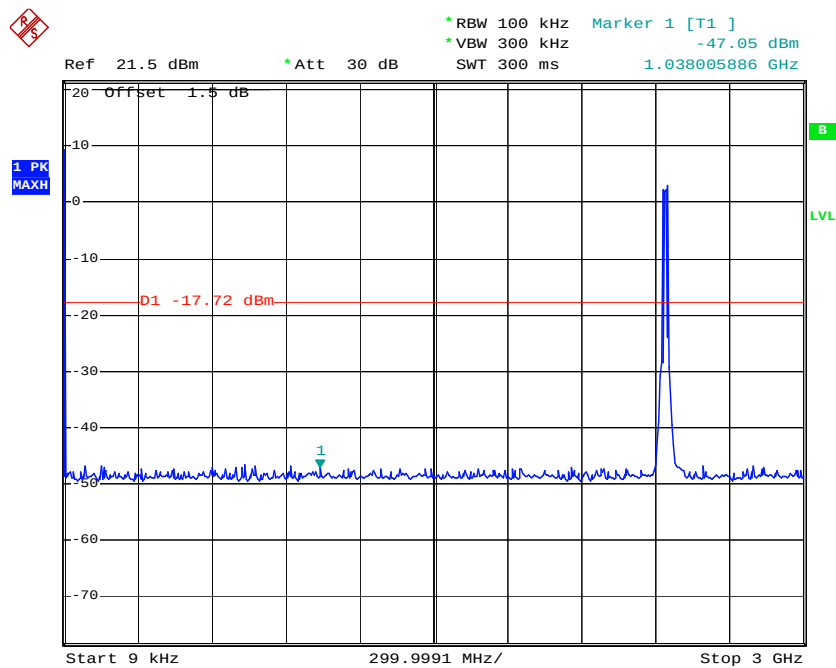


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

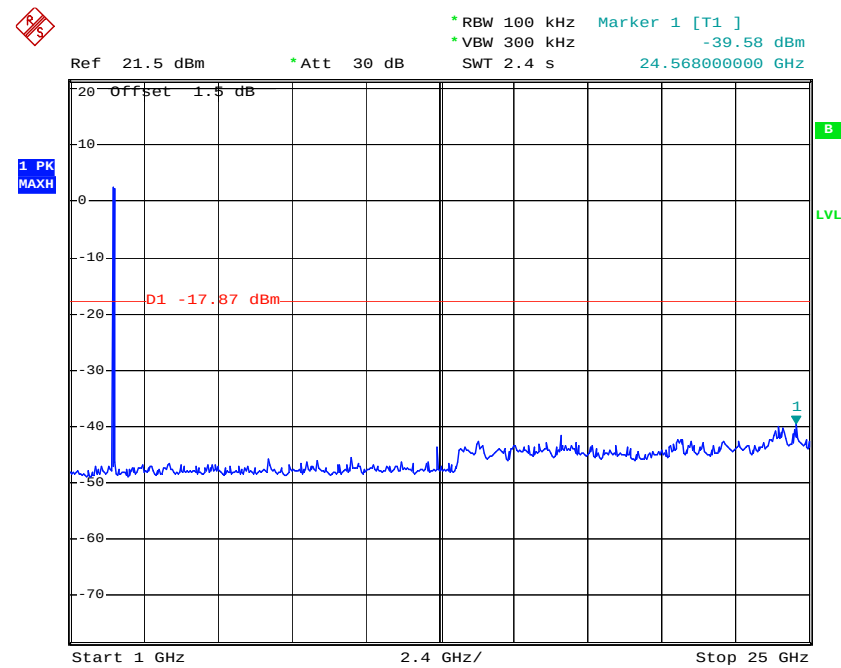


Test Mode :	Mode 5	Temperature :	23℃~26℃
Test Band :	802.11g	Relative Humidity :	35%~60%
Test Channel :	06	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

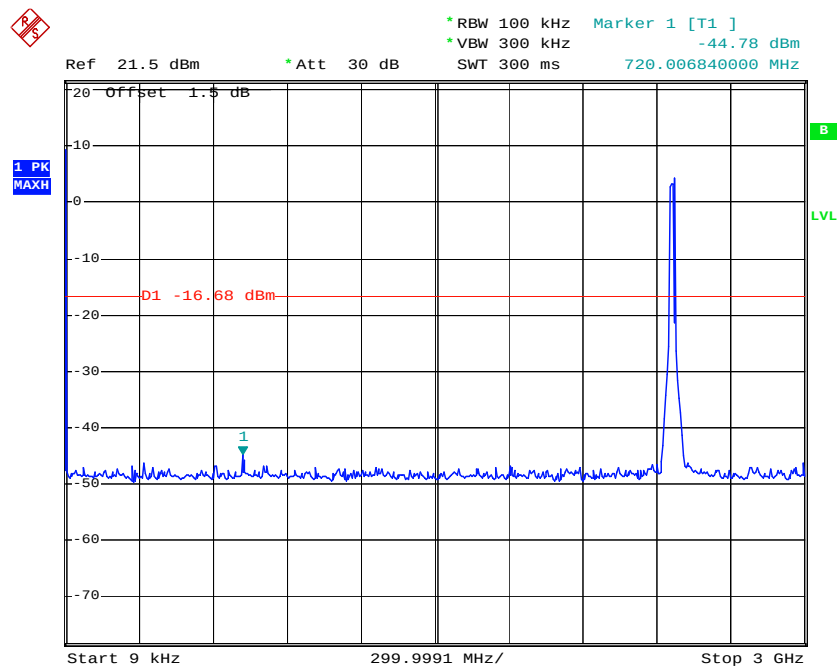


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

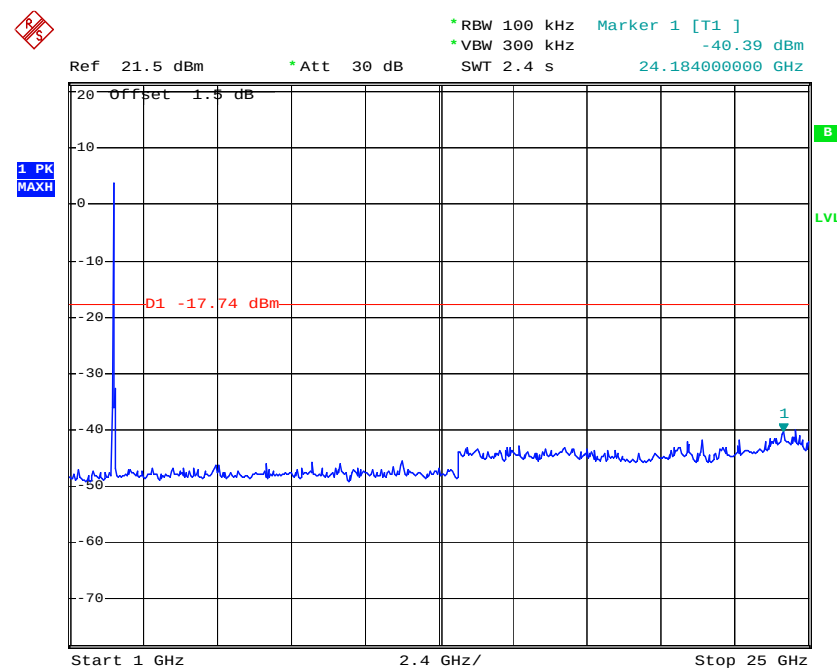


Test Mode :	Mode 6	Temperature :	23℃~26℃
Test Band :	802.11g	Relative Humidity :	35%~60%
Test Channel :	11	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

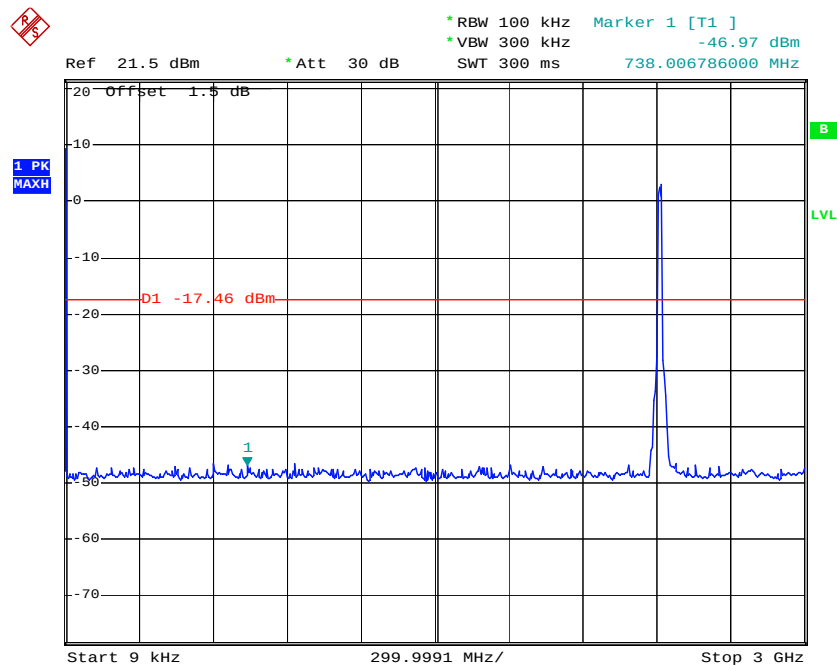


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

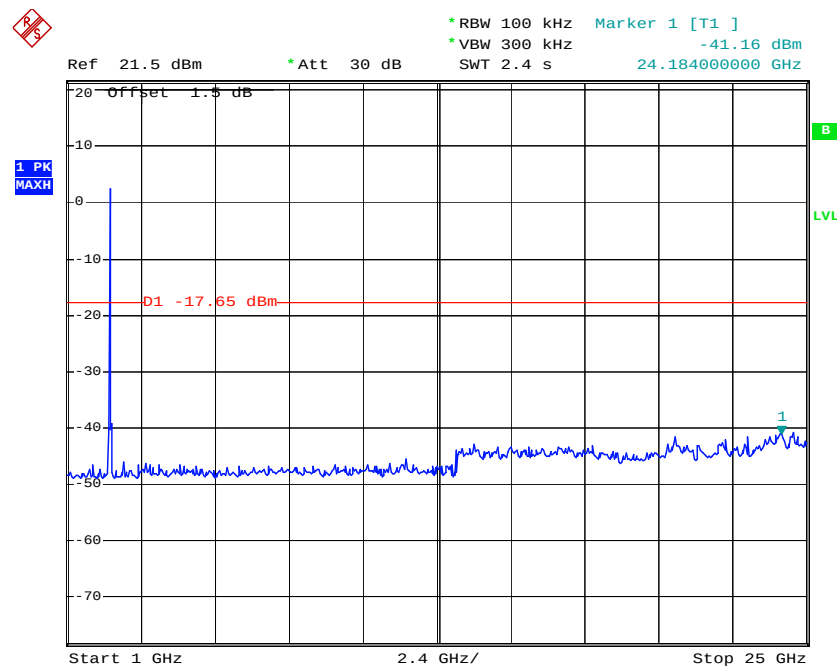


Test Mode :	Mode 7	Temperature :	23℃~26℃
Test Band :	802.11n	Relative Humidity :	35%~60%
Test Channel :	01	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

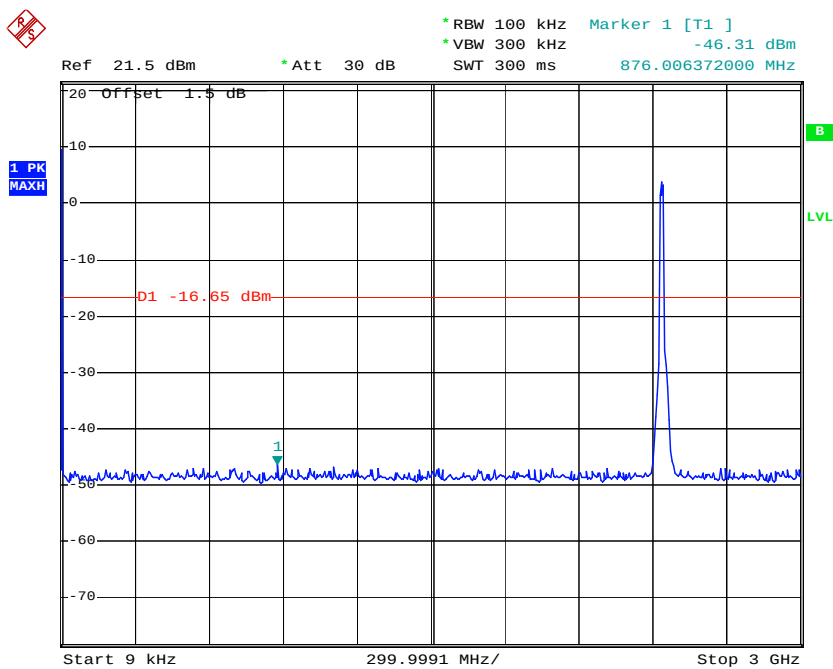


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

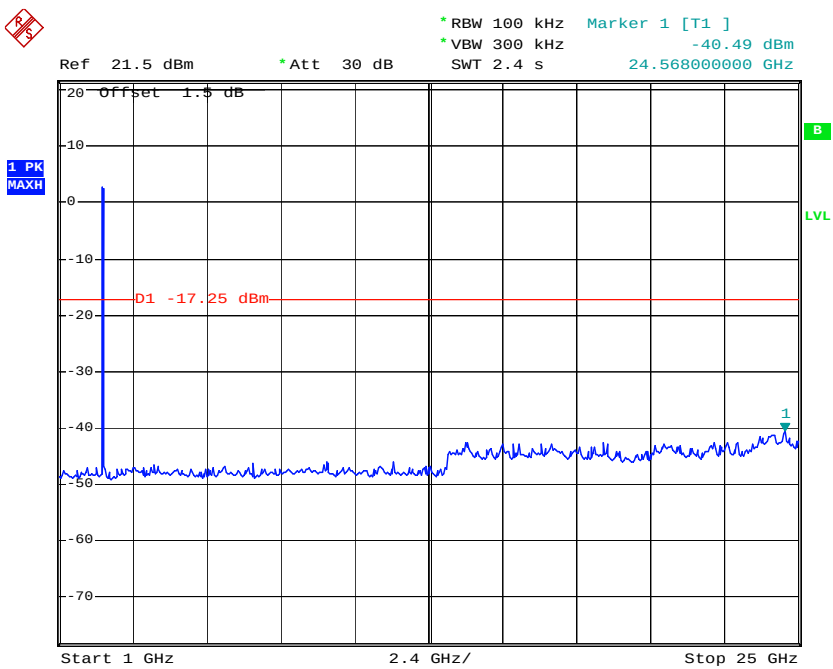


Test Mode :	Mode 8	Temperature :	23℃~26℃
Test Band :	802.11n	Relative Humidity :	35%~60%
Test Channel :	06	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz

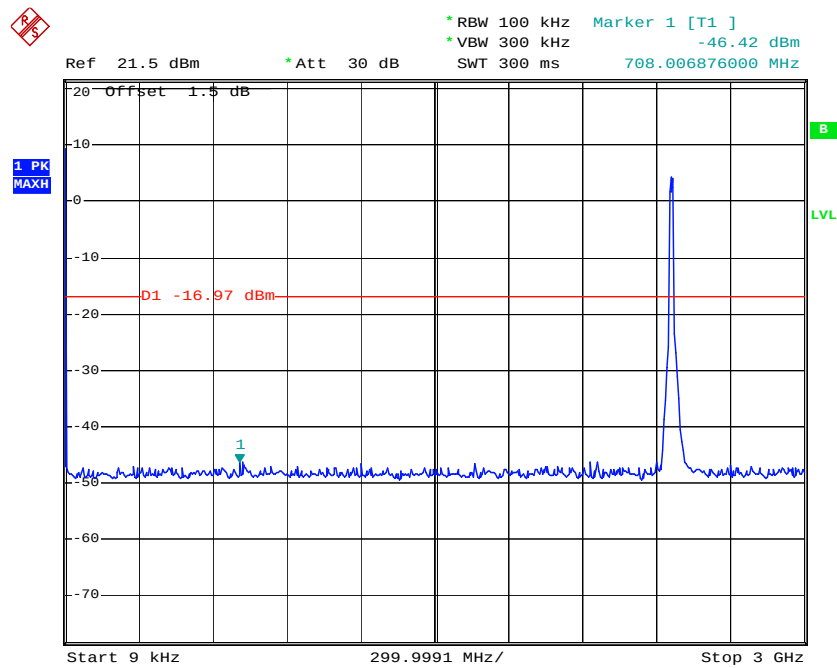


Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

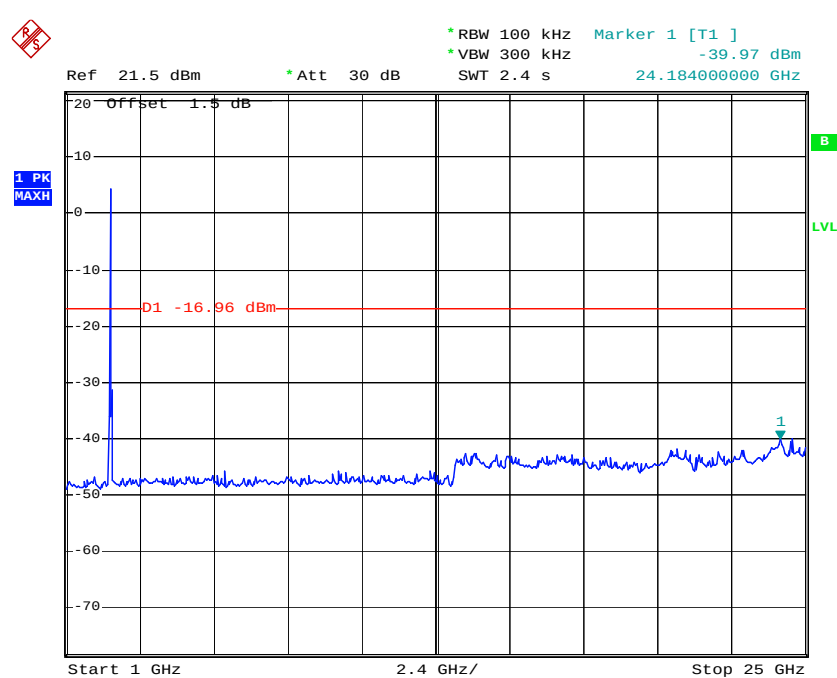


Test Mode :	Mode 9	Temperature :	23℃~26℃
Test Band :	802.11n	Relative Humidity :	35%~60%
Test Channel :	11	Test Engineer :	Hogan He

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



3.4 Power Spectral Density Measurement

3.4.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3 kHz band at any time interval of continuous transmission.

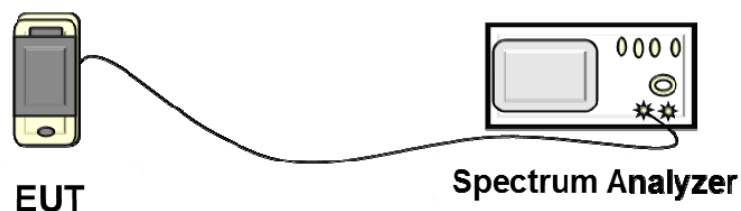
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

1. The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v02.
2. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
3. Set the span to 1.5 times the DTS channel bandwidth.
4. Set the RBW ≥ 3 kHz.
5. Set the VBW $\geq 3 \times$ RBW.
6. Detector = peak.
7. Sweep time = auto couple
8. Trace mode = max hold.
9. Allow trace to fully stabilize.
10. Use the peak marker function to determine the maximum amplitude level.

3.4.4 Test Setup

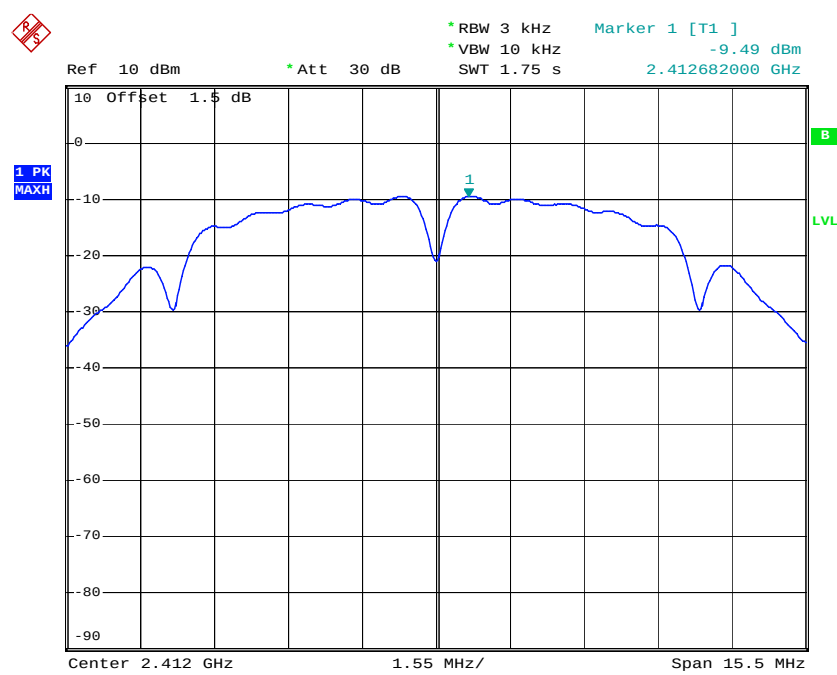


3.4.5 Test Result of Power Spectral Density

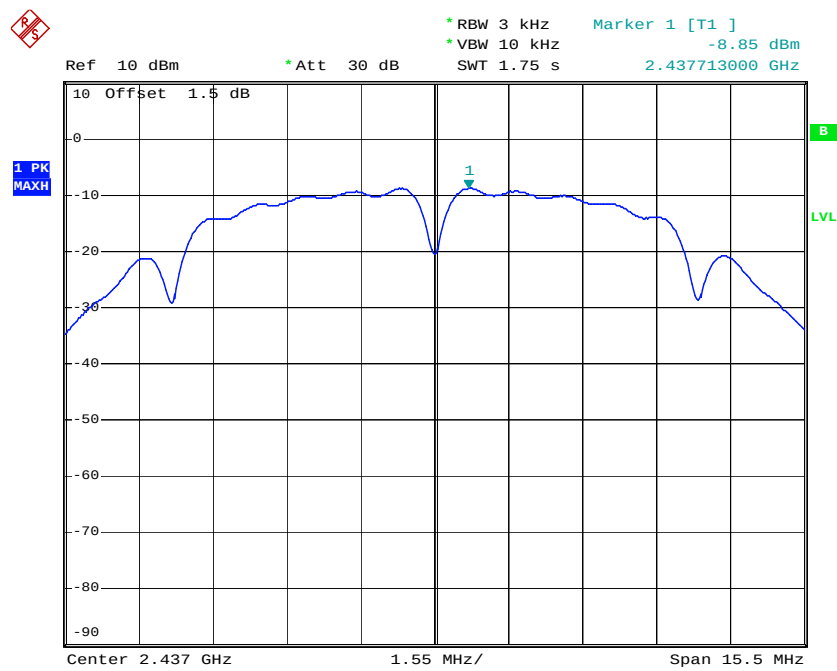
Test Mode :	Mode 1, 2, 3	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-9.49	8	Pass
06	2437	-8.83	8	Pass
11	2462	-8.54	8	Pass

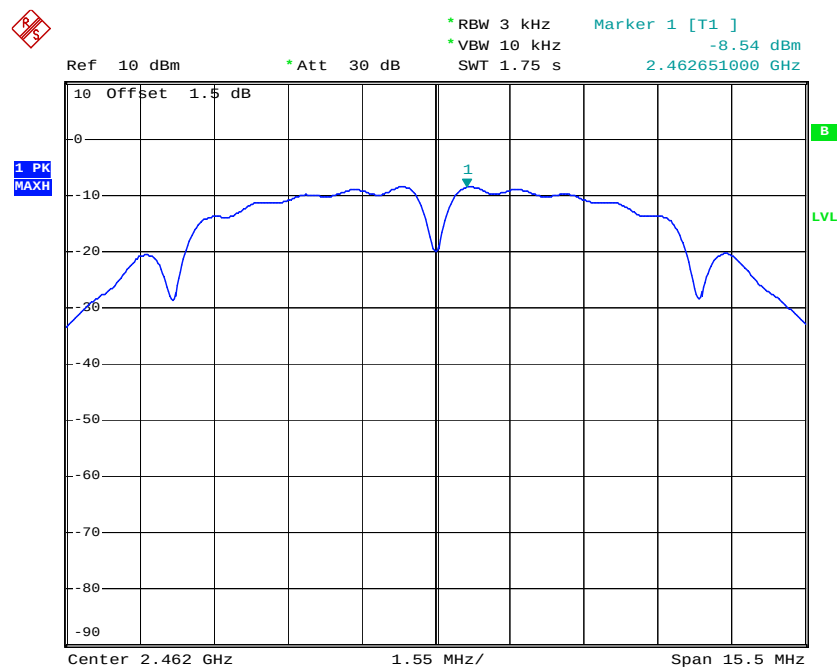
Mode 1 : PSD Plot on 802.11b Channel 01



Mode 2 : PSD Plot on 802.11b Channel 06



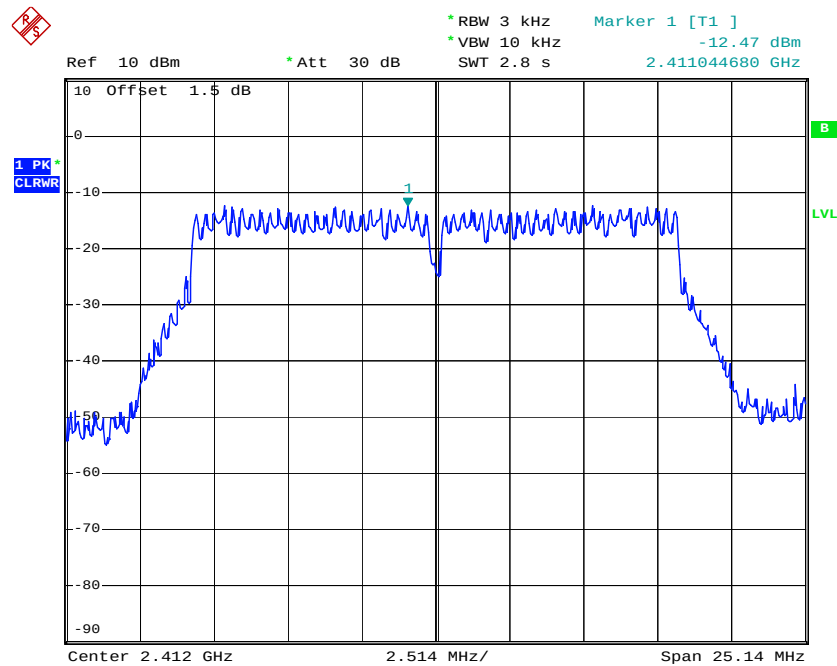
Mode 3 : PSD Plot on 802.11b Channel 11



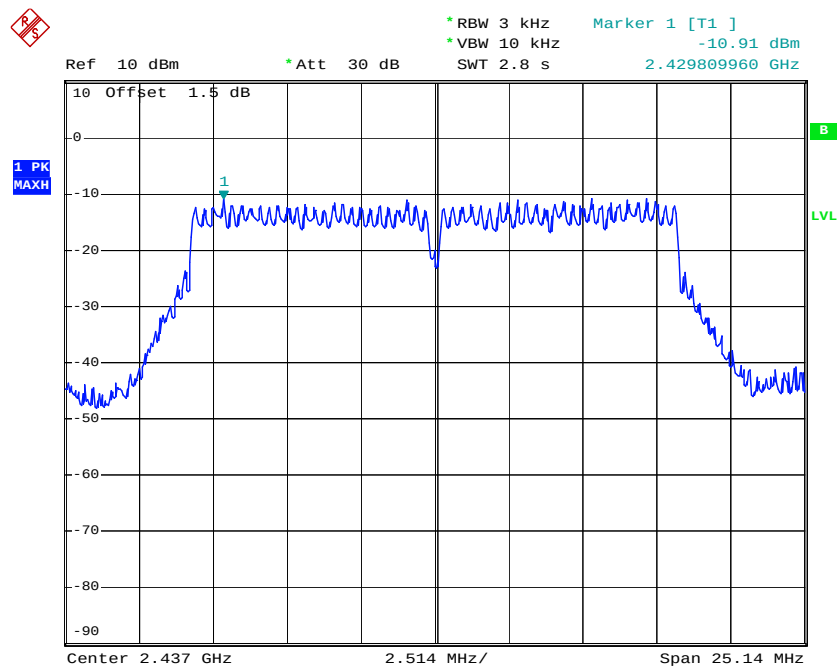
Test Mode :	Mode 4, 5, 6	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-12.47	8	Pass
06	2437	-10.91	8	Pass
11	2462	-10.40	8	Pass

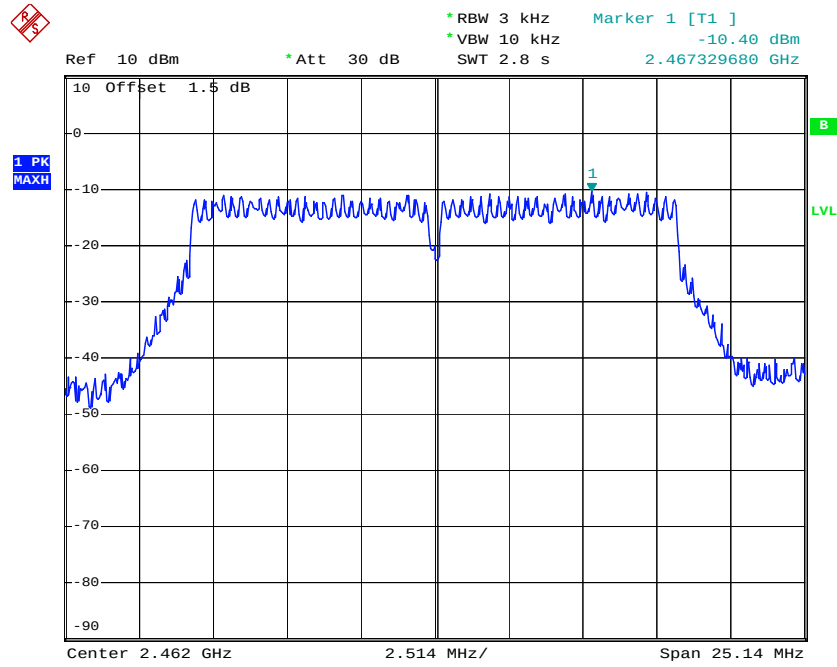
Mode 4 : PSD Plot on 802.11g Channel 01



Mode 5 : PSD Plot on 802.11g Channel 06



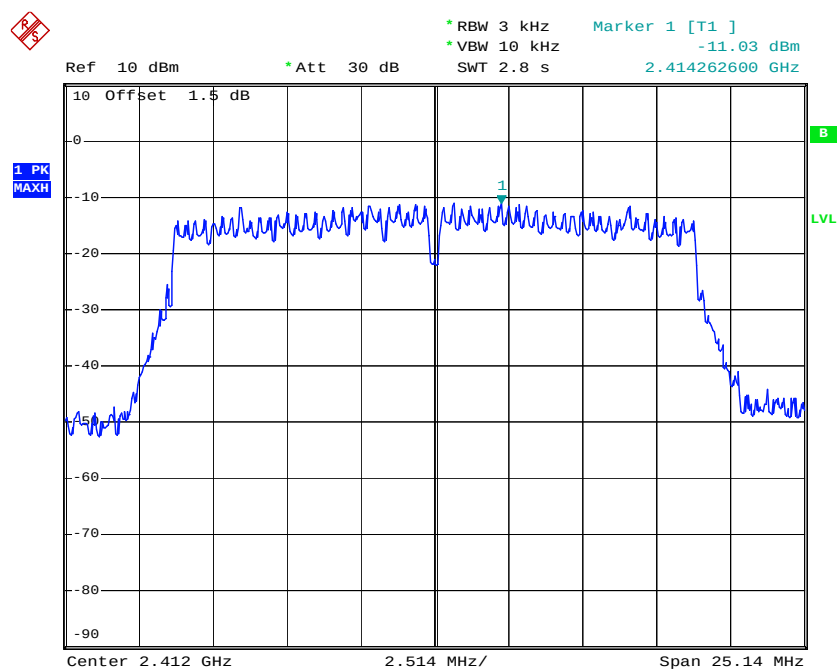
Mode 6 : PSD Plot on 802.11g Channel 11



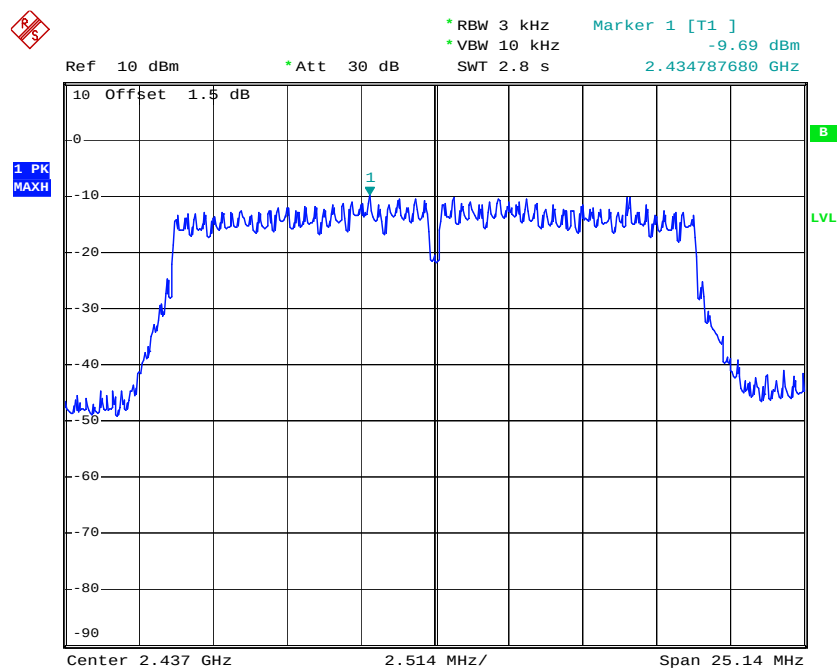
Test Mode :	Mode 7, 8, 9	Temperature :	23℃~26℃
Test Engineer :	Hogan He	Relative Humidity :	35%~60%

Channel	Frequency (MHz)	802.11n Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-11.03	8	Pass
06	2437	-9.69	8	Pass
11	2462	-9.76	8	Pass

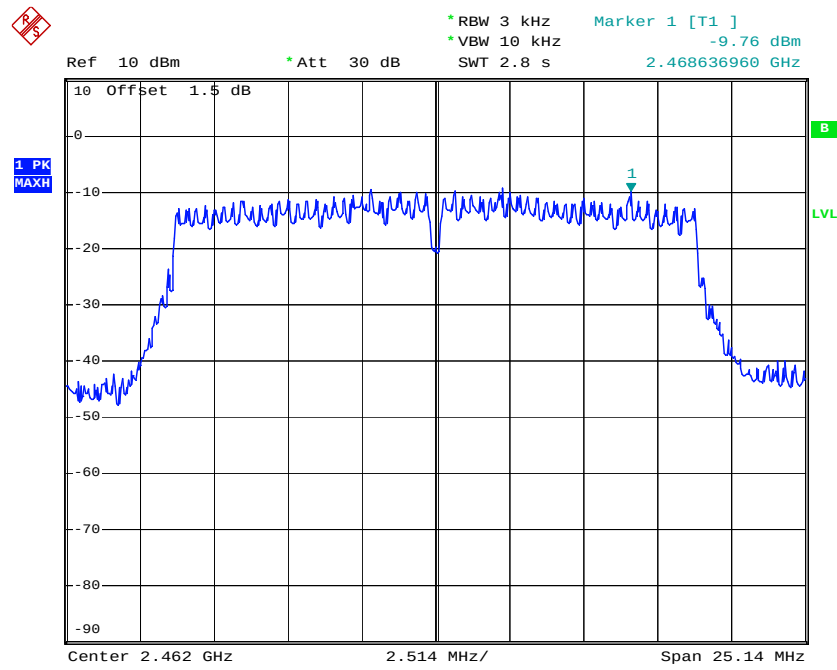
Mode 7 : PSD Plot on 802.11n Channel 01



Mode 8 : PSD Plot on 802.11n Channel 06



Mode 9 : PSD Plot on 802.11n Channel 11



3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

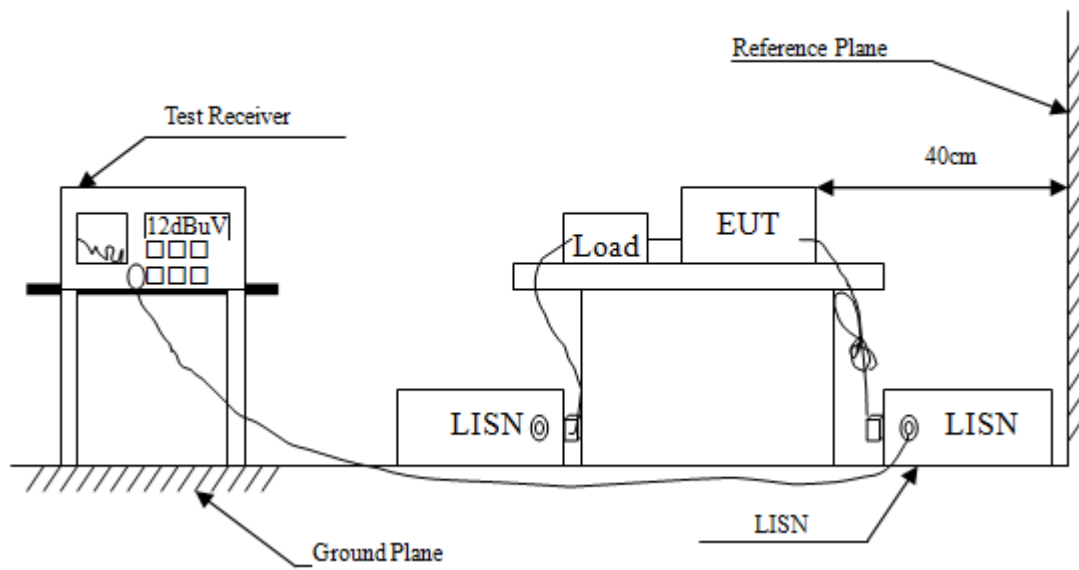
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth (RBW=9kHz and VBW=30kHz) with Maximum Hold Mode for QP limit measurement.
10. Set the test-receiver system to Average Detect Function and specified bandwidth (RBW=9kHz and VBW=30kHz) with Maximum Hold Mode for QP limit measurement.

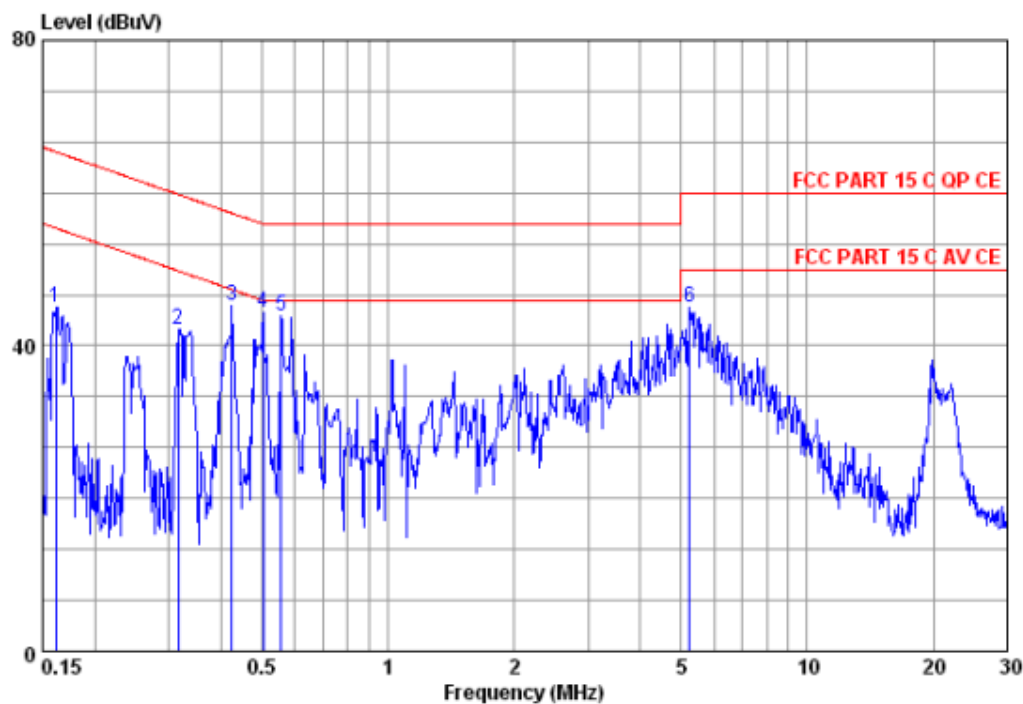
3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Test Voltage:120V/60Hz

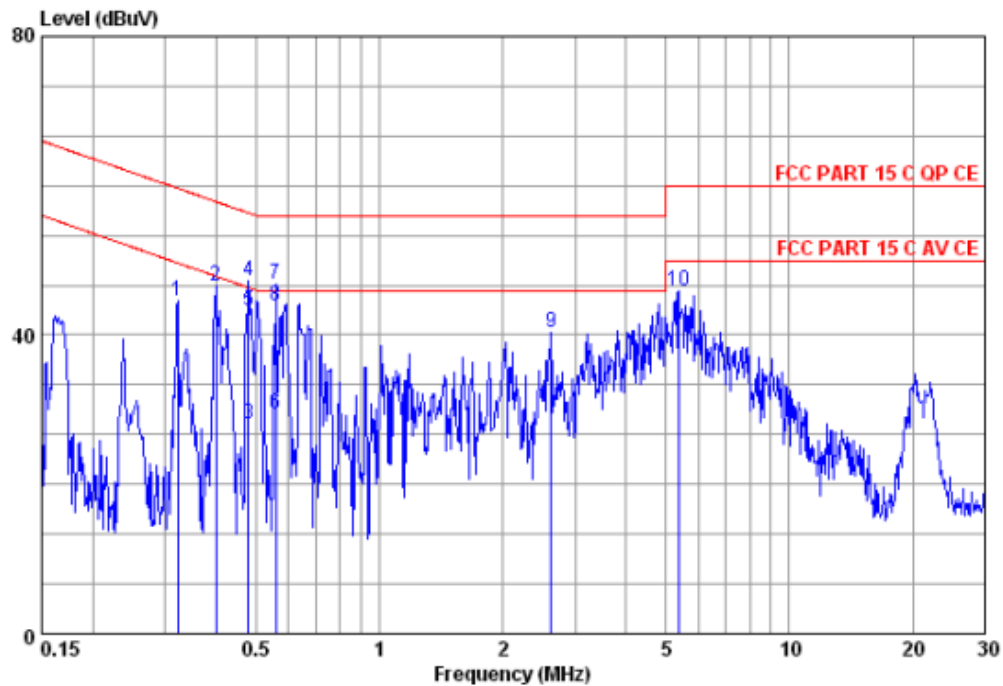
Test mode 1: GSM 850 Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone + Earphone + Adapter+ Battery +Neutral



Site : 966 CHAMBER
Condition : FCC PART 15 C QP CE ENV216 NEW NEUTRAL
 : RBW:9.000KHz VBW:30.000KHz SWT:Auto
cut : phone M4 SS1010
mode : GSM 850 idle +wifi link+ BT link
memo :

		LISN		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.16	9.44	45.08	35.63	0.00	0.01	65.38	-20.30	101	0	Peak
2	0.32	9.98	42.13	32.13	0.00	0.02	59.80	-17.67	101	0	Peak
3	0.42	9.83	45.23	35.38	0.00	0.02	57.37	-12.14	101	0	Peak
4	0.50	9.76	44.40	34.62	0.00	0.02	56.00	-11.60	101	0	Peak
5	0.56	9.77	43.86	34.07	0.00	0.02	56.00	-12.14	101	0	Peak
6	5.25	9.67	44.94	35.24	0.00	0.03	60.00	-15.06	101	0	Peak

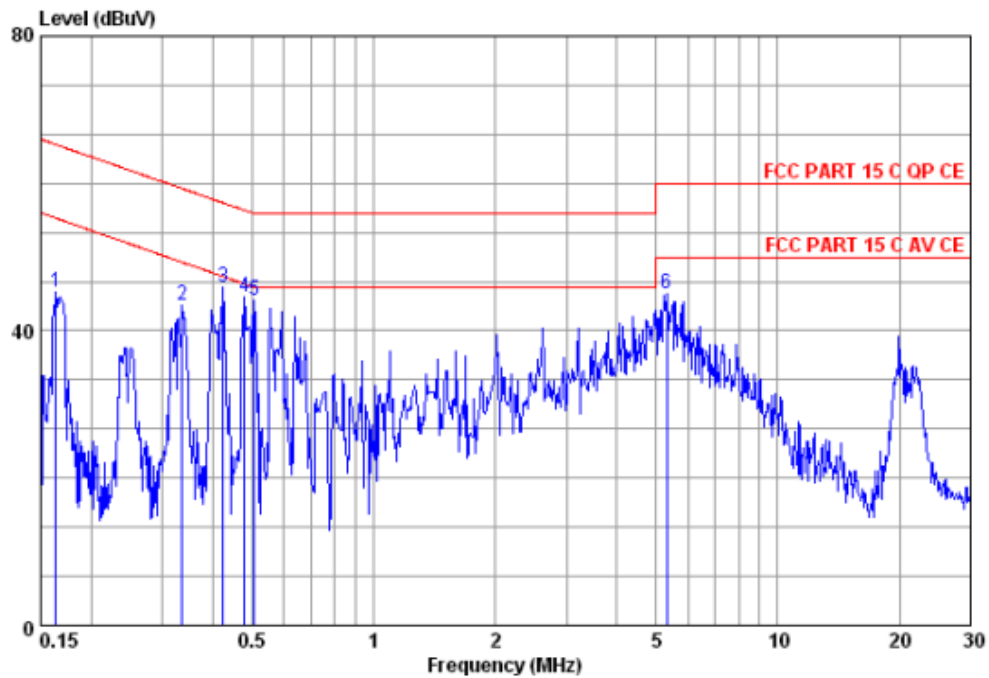
Test mode 1: GSM 850 Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone + Earphone + Adapter+ Battery +Line



Site : 966 CHAMBER
 Condition : FCC PART 15 C QP CE ENV216 NEW LINE
 : RBW:9.000KHz VBW:30.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : GSM 850 idle +wifi link+ BT link
 memo :

		LISN		Read Preamp		Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			
	MHz		dB	dBUV	dBUV	dB	dBUV	dB	cm	deg	
1	0.32	9.66	44.47	34.79	0.00	0.02	59.66	-15.19	101	0	Peak
2	0.40	9.67	46.57	36.88	0.00	0.02	57.86	-11.29	101	0	Peak
3	0.48	9.68	28.04	18.34	0.00	0.02	46.36	-18.32	101	0	Average
4	0.48	9.68	47.17	37.47	0.00	0.02	56.36	-9.19	101	0	Peak
5	0.48	9.68	43.18	33.48	0.00	0.02	56.36	-13.18	101	0	QP
6	0.56	9.69	29.43	19.72	0.00	0.02	46.00	-16.57	101	0	Average
7	0.56	9.69	46.88	37.17	0.00	0.02	56.00	-9.12	101	0	Peak
8	0.56	9.69	43.97	34.26	0.00	0.02	56.00	-12.03	101	0	QP
9	2.62	9.65	40.33	30.65	0.00	0.03	56.00	-15.67	101	0	Peak
10	5.36	9.70	45.80	36.07	0.00	0.03	60.00	-14.20	101	0	Peak

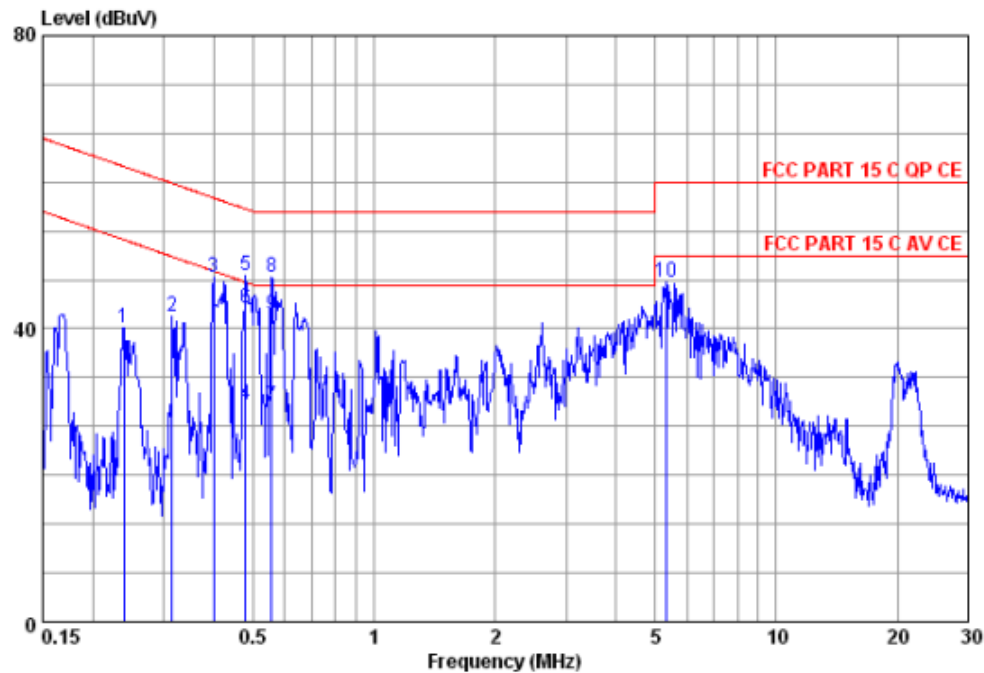
Test mode 2: GSM 1900 Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone + Earphone+ Adapter+ Battery + Neutral



Site : 966 CHAMBER
 Condition : FCC PART 15 C QP CE ENV216 NEW NEUTRAL
 : RBW:9.000KHz VBW:30.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : GSM 1900 idle +wifi link+ BT link
 memo :

		LISN		Read Preamp		Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.16	9.47	45.26	35.78	0.00	0.01	65.30	-20.04	101	0	Peak
2	0.34	9.95	43.36	33.39	0.00	0.02	59.31	-15.95	101	0	Peak
3	0.42	9.83	45.84	35.99	0.00	0.02	57.37	-11.53	101	0	Peak
4	0.48	9.78	44.55	34.75	0.00	0.02	56.36	-11.81	101	0	Peak
5	0.51	9.76	44.22	34.44	0.00	0.02	56.00	-11.78	101	0	Peak
6	5.30	9.67	45.05	35.35	0.00	0.03	60.00	-14.95	101	0	Peak

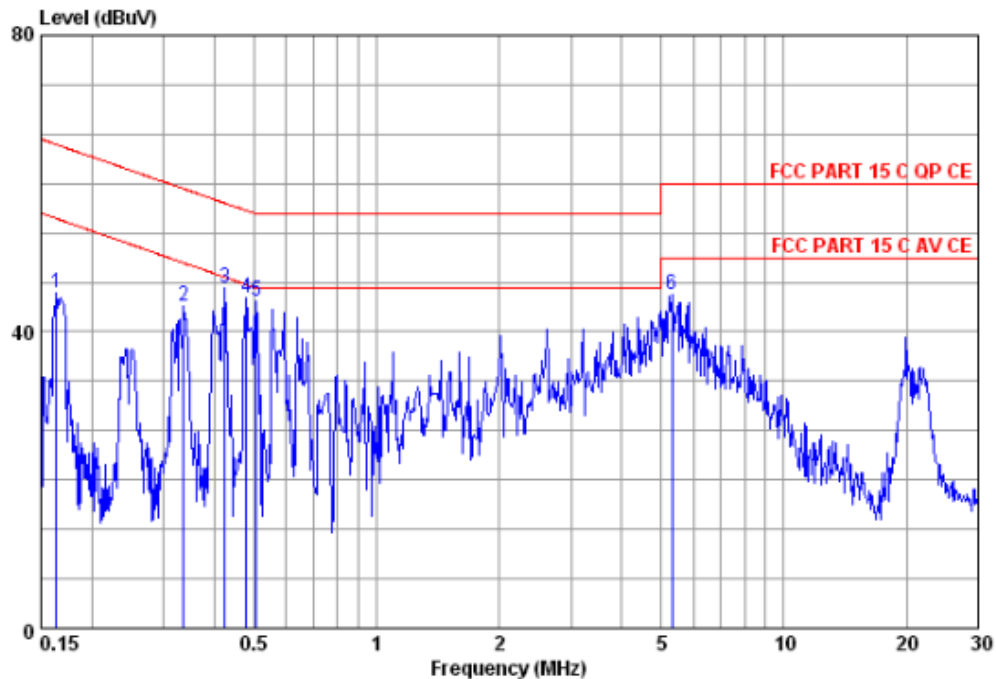
Test mode 2: GSM 1900 Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone + Earphone+ Adapter+ Battery + Line



Site : 966 CHAMBER
 Condition : FCC PART 15 C QP CE ENV216 NEW LINE
 : REW:9.000KHz VBW:30.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : GSM 1900 idle +wifi link+ BT link
 memo :

		LISN		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			Remark
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.24	9.64	40.03	30.37	0.00	0.02	62.13	-22.10	101	0	Peak
2	0.31	9.66	41.66	31.98	0.00	0.02	59.84	-18.18	101	0	Peak
3	0.40	9.67	47.12	37.43	0.00	0.02	57.86	-10.74	101	0	Peak
4	0.48	9.68	29.74	20.04	0.00	0.02	46.36	-16.62	101	0	Average
5	0.48	9.68	47.15	37.45	0.00	0.02	56.36	-9.21	101	0	Peak
6	0.48	9.68	42.86	33.16	0.00	0.02	56.36	-13.50	101	0	QP
7	0.56	9.69	29.31	19.60	0.00	0.02	46.00	-16.69	101	0	Average
8	0.56	9.69	46.95	37.24	0.00	0.02	56.00	-9.05	101	0	Peak
9	0.56	9.69	41.84	32.13	0.00	0.02	56.00	-14.16	101	0	QP
10	5.33	9.70	46.40	36.67	0.00	0.03	60.00	-13.60	101	0	Peak

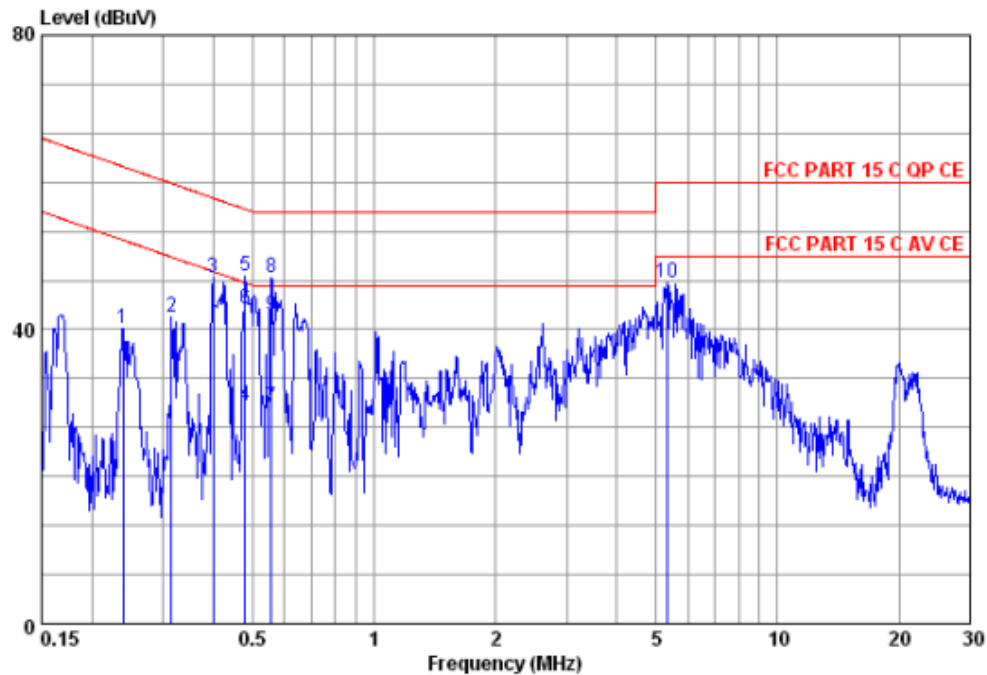
Test mode 3: WCDMA Band II Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone
+Earphone+ Adapter+ Battery +Neutral



Site : 966 CHAMBER
Condition : FCC PART 15 C QP CE ENV216 NEW NEUTRAL
: RBW:9.000KHz VBW:30.000KHz SWT:Auto
ent : phone M4 SS1010
mode : GSM 1900 idle +wifi link+ BT link
memo :

		LISN		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			Remark
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.16	9.47	45.26	35.78	0.00	0.01	65.30	-20.04	101	0	Peak
2	0.34	9.95	43.36	33.39	0.00	0.02	59.31	-15.95	101	0	Peak
3	0.42	9.83	45.84	35.99	0.00	0.02	57.37	-11.53	101	0	Peak
4	0.48	9.78	44.55	34.75	0.00	0.02	56.36	-11.81	101	0	Peak
5	0.51	9.76	44.22	34.44	0.00	0.02	56.00	-11.78	101	0	Peak
6	5.30	9.67	45.05	35.35	0.00	0.03	60.00	-14.95	101	0	Peak

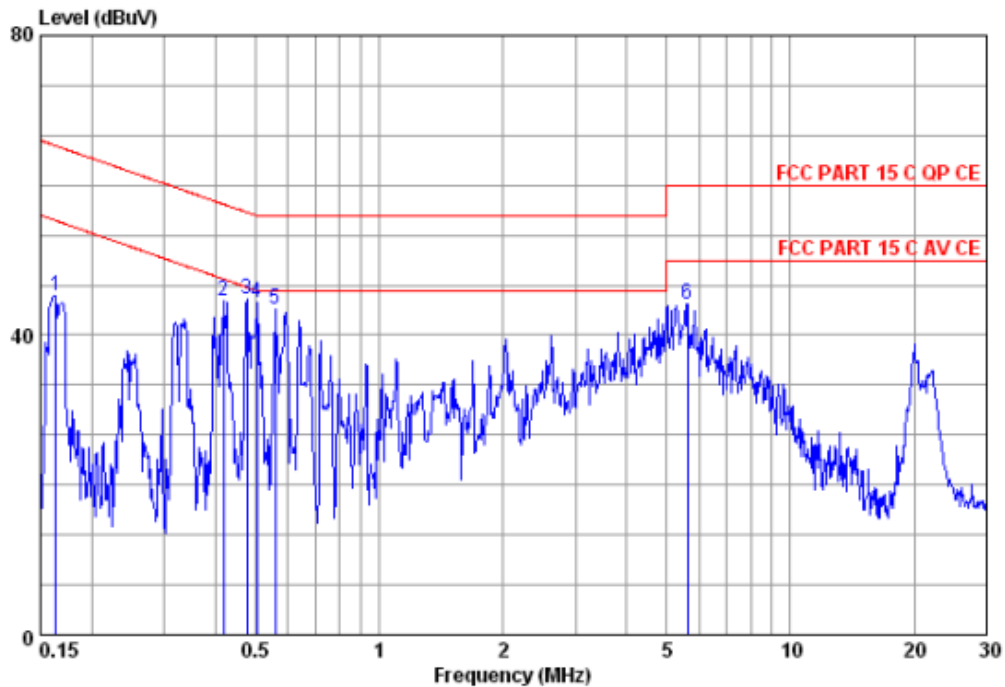
Test mode 3: WCDMA Band II Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone
+Earphone+ Adapter+ Battery +Line



Site : 966 CHAMBER
Condition : FCC PART 15 C QP CE ENV216 NEW LINE
RBW:9.000KHz VBW:30.000KHz SWT:Auto
ext : phone M4 SS1010
mode : GSM 1900 idle +wifi link+ BT link
memo :

		LISN		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.24	9.64	40.03	30.37	0.00	0.02	62.13	-22.10	101	0	Peak
2	0.31	9.66	41.66	31.98	0.00	0.02	59.84	-18.18	101	0	Peak
3	0.40	9.67	47.12	37.43	0.00	0.02	57.86	-10.74	101	0	Peak
4	0.48	9.68	29.74	20.04	0.00	0.02	46.36	-16.62	101	0	Average
5	0.48	9.68	47.15	37.45	0.00	0.02	56.36	-9.21	101	0	Peak
6	0.48	9.68	42.86	33.16	0.00	0.02	56.36	-13.50	101	0	QP
7	0.56	9.69	29.31	19.60	0.00	0.02	46.00	-16.69	101	0	Average
8	0.56	9.69	46.95	37.24	0.00	0.02	56.00	-9.05	101	0	Peak
9	0.56	9.69	41.84	32.13	0.00	0.02	56.00	-14.16	101	0	QP
10	5.33	9.70	46.40	36.67	0.00	0.03	60.00	-13.60	101	0	Peak

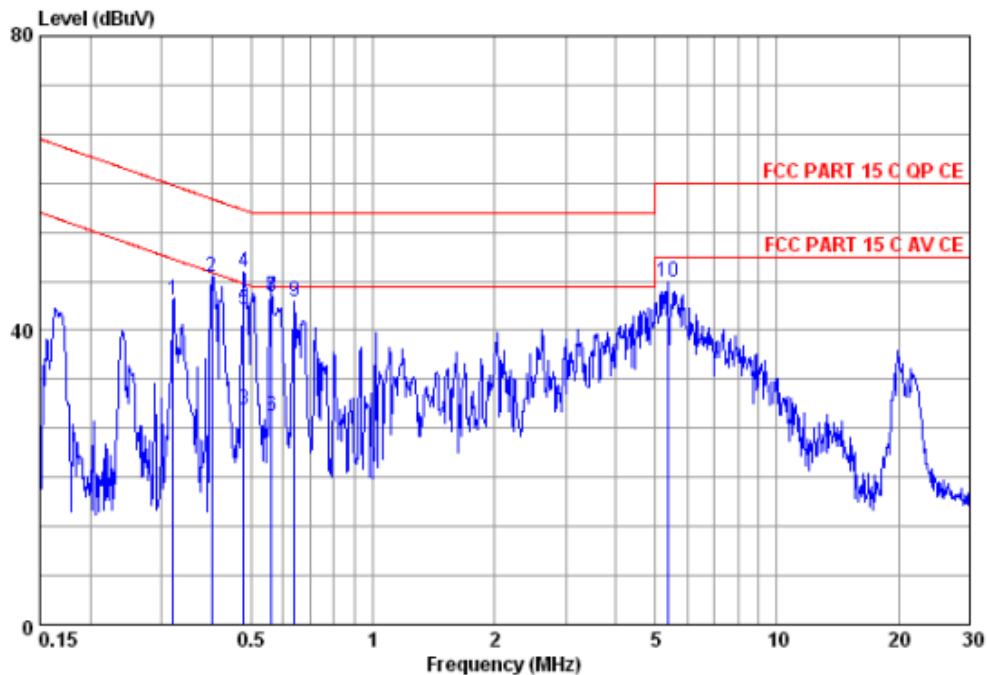
Test mode 4: WCDMA Band V Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone
+Earphone+ Adapter+ Battery +Neutral



Site : 966 CHAMBER
Condition : FCC PART 15 C QP CE ENV216 NEW NEUTRAL
: RBW:9.000KHz VBW:30.000KHz SWT:Auto
ext : phone M4 SS1010
mode : WCDMA 850 idle +wifi link+ BTlink
memo :

		LISN		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			Remark
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.16	9.47	45.34	35.86	0.00	0.01	65.30	-19.96	101	0	Peak
2	0.42	9.83	44.63	34.78	0.00	0.02	57.46	-12.83	101	0	Peak
3	0.48	9.78	44.89	35.09	0.00	0.02	56.41	-11.52	101	0	Peak
4	0.50	9.76	44.44	34.66	0.00	0.02	56.00	-11.56	101	0	Peak
5	0.56	9.77	43.45	33.66	0.00	0.02	56.00	-12.55	101	0	Peak
6	5.62	9.67	44.18	34.47	0.00	0.04	60.00	-15.82	101	0	Peak

Test mode 4: WCDMA Band V Idle + WLAN Link (2.4G) + Bluetooth Link +Bluetooth earphone
+Earphone+ Adapter+ Battery +Line



Site : 966 CHAMBER
Condition : FCC PART 15 C QP CE ENV216 NEW LINE
RBW:9.000KHz VBW:30.000KHz SWT:Auto
cut : phone M4 SS1010
mode : WCDMA 850 idle +wifi link+ BT link
memo :

		LISN		Read Preamp		Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit			
	MHz	dB	dBuV	dBuV	dB	dB	dBuV	dB	cm	deg	
1	0.32	9.66	44.21	34.53	0.00	0.02	59.71	-15.50	101	0	Peak
2	0.40	9.67	47.29	37.60	0.00	0.02	57.86	-10.57	101	0	Peak
3	0.48	9.68	29.12	19.42	0.00	0.02	46.36	-17.24	101	0	Average
4	0.48	9.68	47.83	38.13	0.00	0.02	56.36	-8.53	101	0	Peak
5	0.48	9.68	42.86	33.16	0.00	0.02	56.36	-13.50	101	0	QP
6	0.56	9.69	28.19	18.48	0.00	0.02	46.00	-17.81	101	0	Average
7	0.56	9.69	44.53	34.82	0.00	0.02	56.00	-11.47	101	0	QP
8	0.56	9.69	44.53	34.82	0.00	0.02	56.00	-11.47	101	0	QP
9	0.64	9.69	43.93	34.22	0.00	0.02	56.00	-12.07	101	0	Peak
10	5.36	9.70	46.60	36.87	0.00	0.03	60.00	-13.40	101	0	Peak

3.6 Radiated Emission Measurement

3.6.1 Limit of Radiated Emission

Radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.6.2 Measuring Instruments

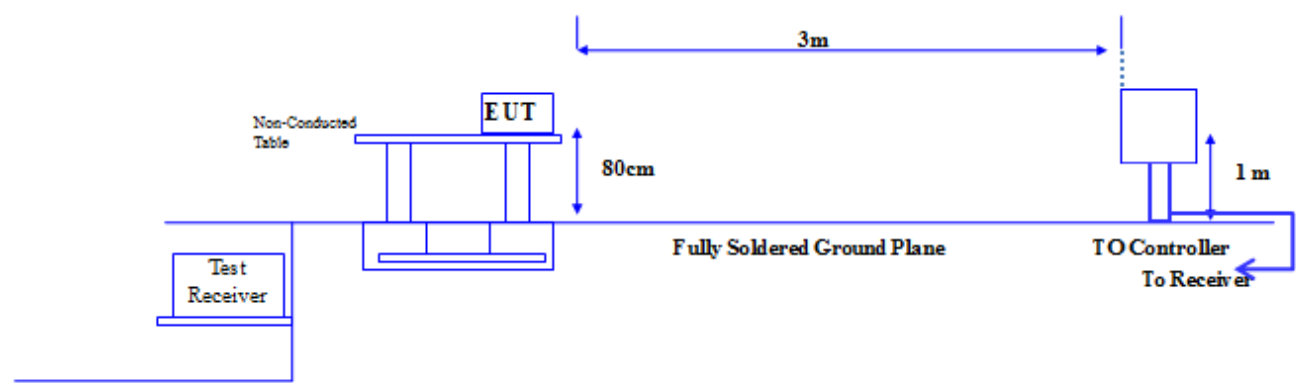
See list of measuring instruments of this test report.

3.6.3 Test Procedures

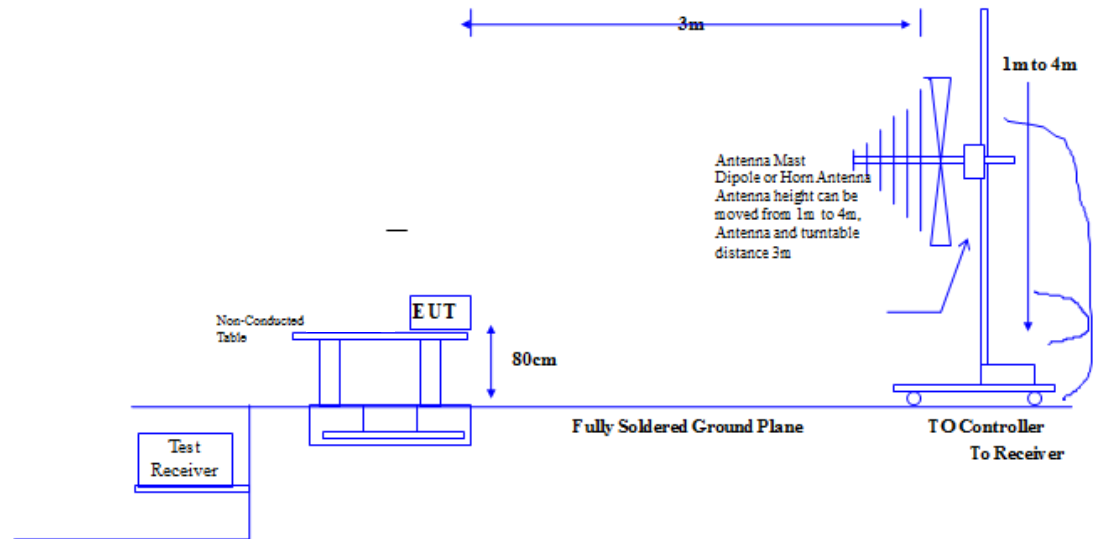
1. The testing follows the guidelines in FCC KDB Publication No. 558074 D01 DTS Measurement Guidance v02.
2. Use the following spectrum analyzer settings:
 - (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
 - (2) Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.
Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$ (dB)
3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.6.4 Test Setup

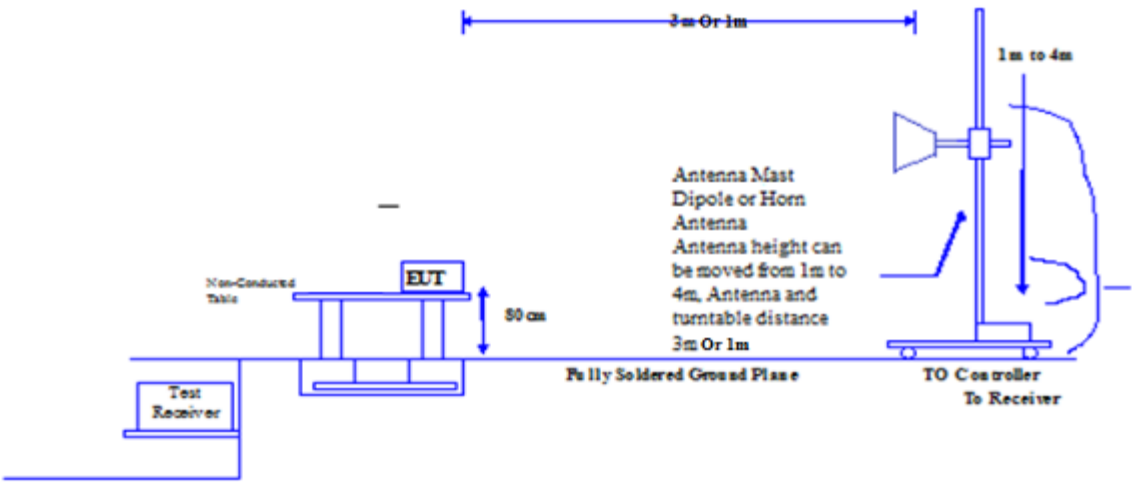
9kHz~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Radiated Emission Measurement Results (9kHz ~ 30MHz)

Test Engineer :	Hogan. He	Temperature :	23℃~26℃
		Relative Humidity :	35%~60%

Frequency (MHz)	Reading (dBu V/m)	Factor(dB) Corr.	Result (dBu V/m)	Limit (dBu V/m)	Margin (dB)	Polarization
1.075	29.13	14.89	44.02	66.98	-22.96	Horizontal
1.075	28.75	14.89	43.64	66.98	-23.34	Vertical

Notes:

1 , No emission found between lowest internal or generated frequency to 30MHz.

2 , 3m limit=(20log 24000/F(KHz)) (dBuV/m)+40log(30/3) (dBuV/m)

Example: Fundamental Frequency is 1.075MHz

3m limit(1075kHz)=20log 24000/1075(KHz) (dBuV/m)+40log(30/3) (dBuV/m)
=66.98(dBuV/m)

3 , Laboratory's Information :

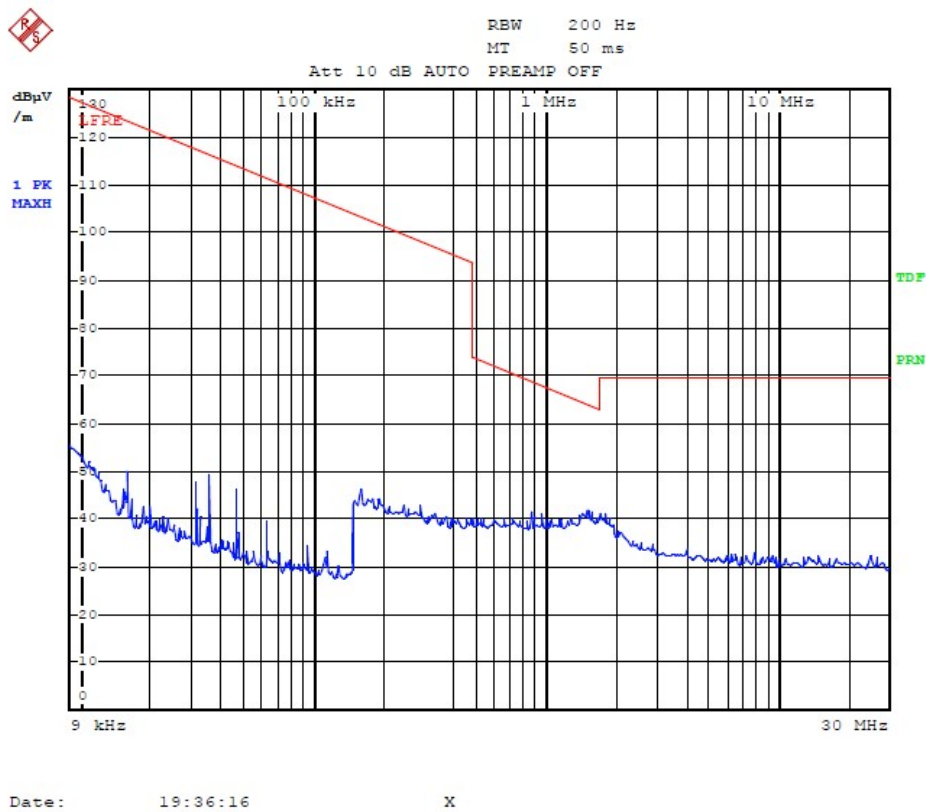
Prepared By : Accurate Technology Co., Ltd

Address: F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park
Nanshan District, Shenzhen 518057, P.R. China

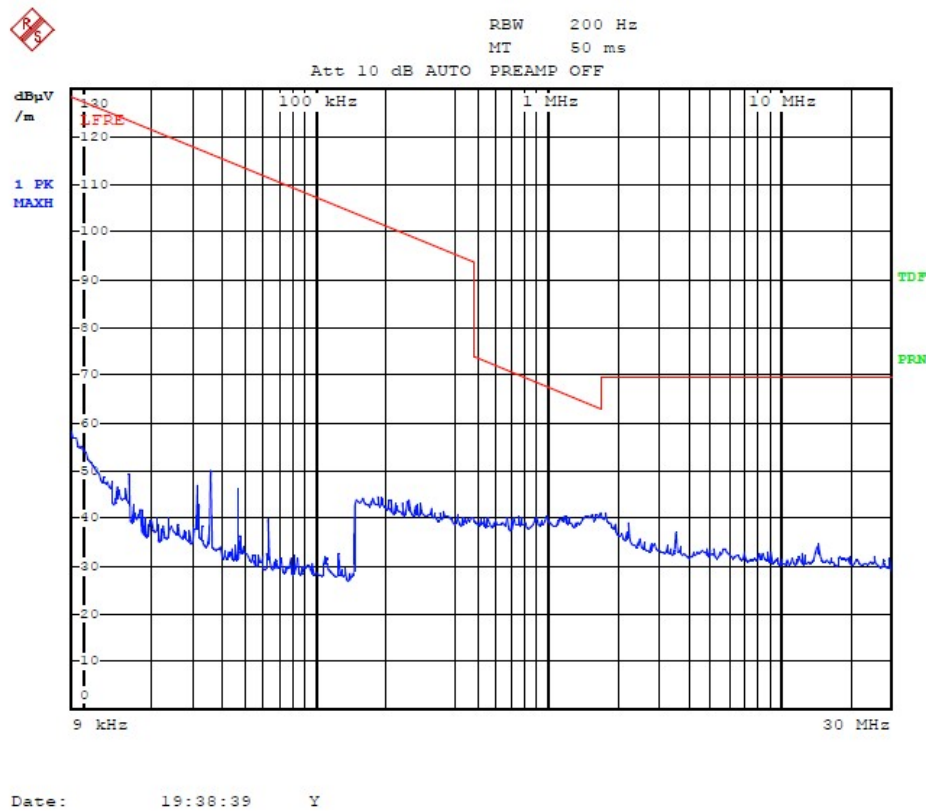
Company Registration Number : 752051

Date of Receipt : 2013.03.12

Radiated Emission Plot between 9 kHz ~ 30MHz (Horizontal)



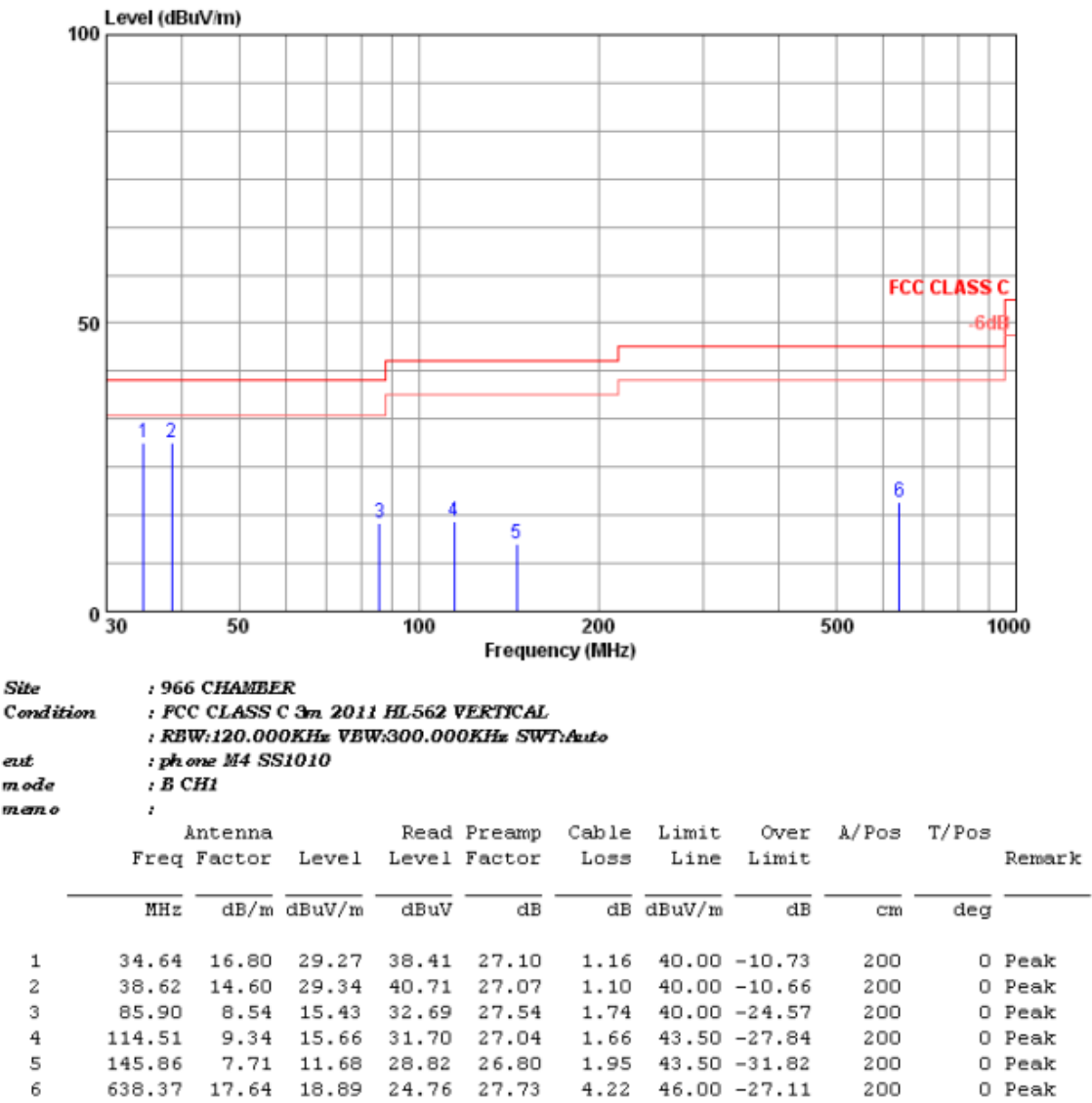
Radiated Emission Plot between 9 kHz ~ 30MHz (Vertical)



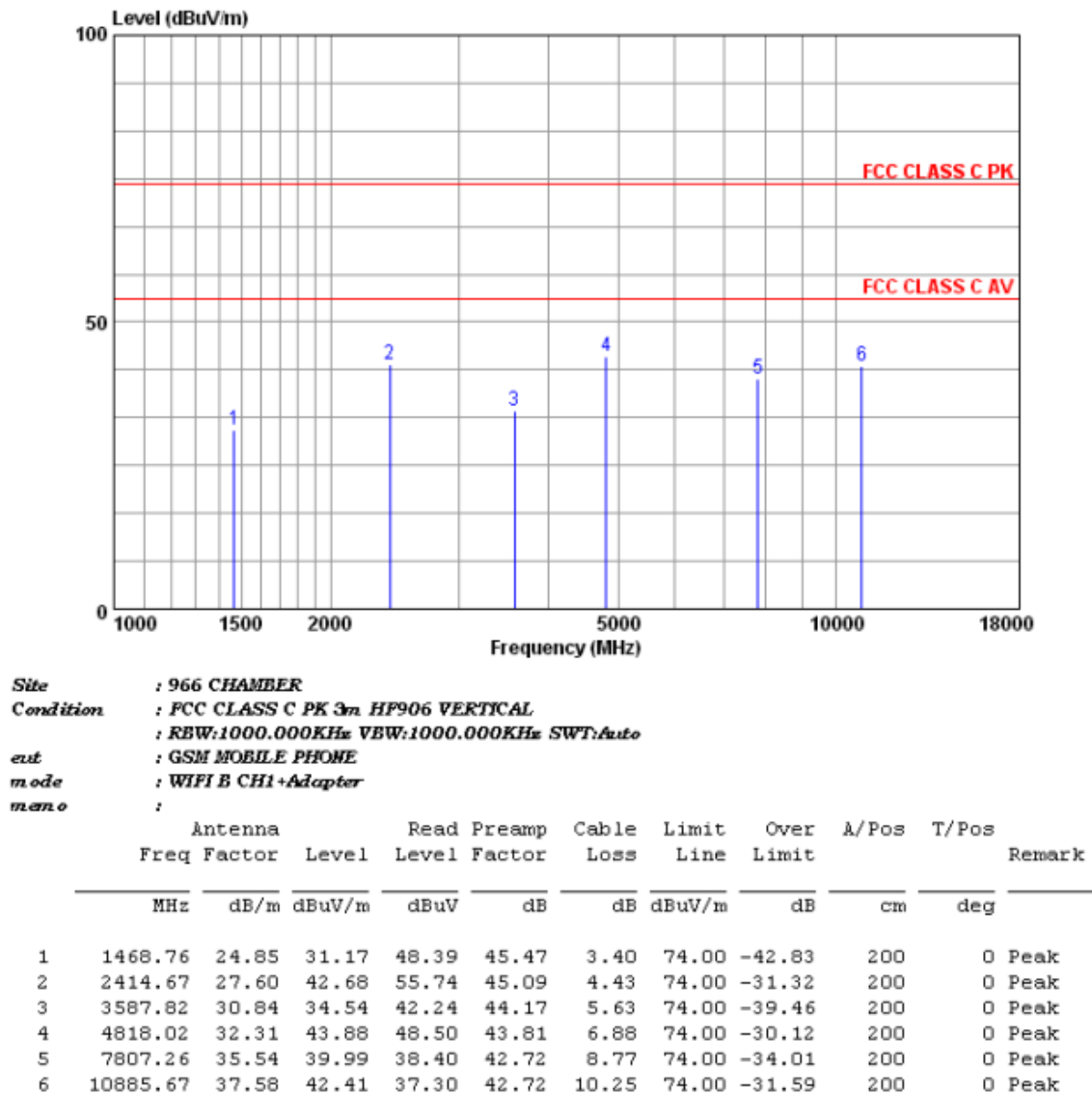
3.6.6 Radiated Emission Measurement Results (30MHz-18GHz)

Test Channel :	01	Test Mode	Mode 1
Test Band :	802.11b	Test Engineer :	Guo-Zheng Li

Radiated Emission 30MHz-1GHz Vertical

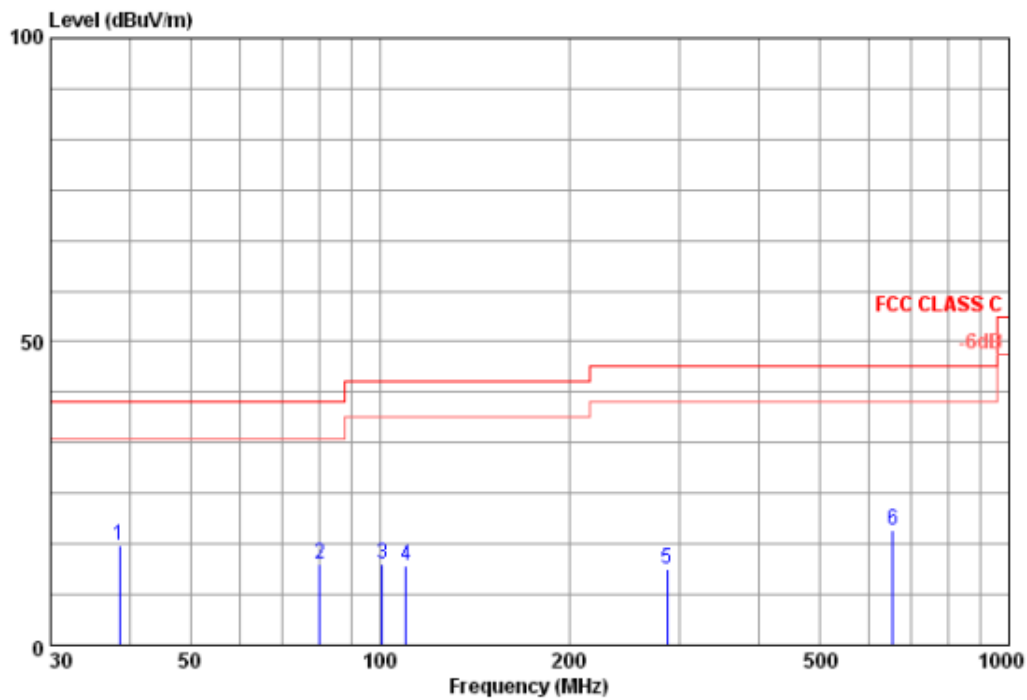


Radiated Emission 1GHz-18GHz Vertical



Remark: Marker #2 is Fundamental signal which can be ignored

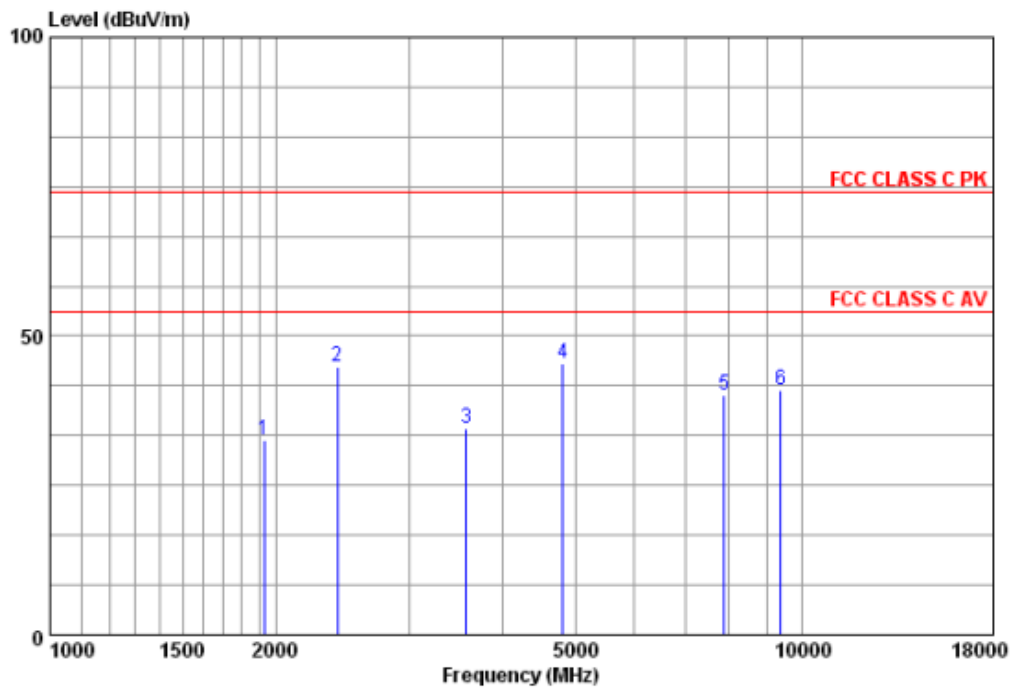
Radiated Emission 30MHz-1GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
 : RBW:120.000KHz VEW:300.000KHz SWT:Auto
 Ant : phone M4 SS1010
 mode : B CH1
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	38.62	14.60	16.40	27.77	27.07	1.10	40.00	-23.60	200	0 Peak
2	80.36	8.20	13.47	31.16	27.33	1.44	40.00	-26.53	200	0 Peak
3	100.93	8.87	13.43	30.07	27.18	1.67	43.50	-30.07	200	0 Peak
4	110.18	9.11	13.20	29.49	27.01	1.61	43.50	-30.30	200	0 Peak
5	285.98	10.57	12.51	25.46	26.31	2.79	46.00	-33.49	200	0 Peak
6	654.23	17.86	18.81	24.71	27.94	4.18	46.00	-27.19	200	0 Peak

Radiated Emission 1GHz-18GHz Horizontal



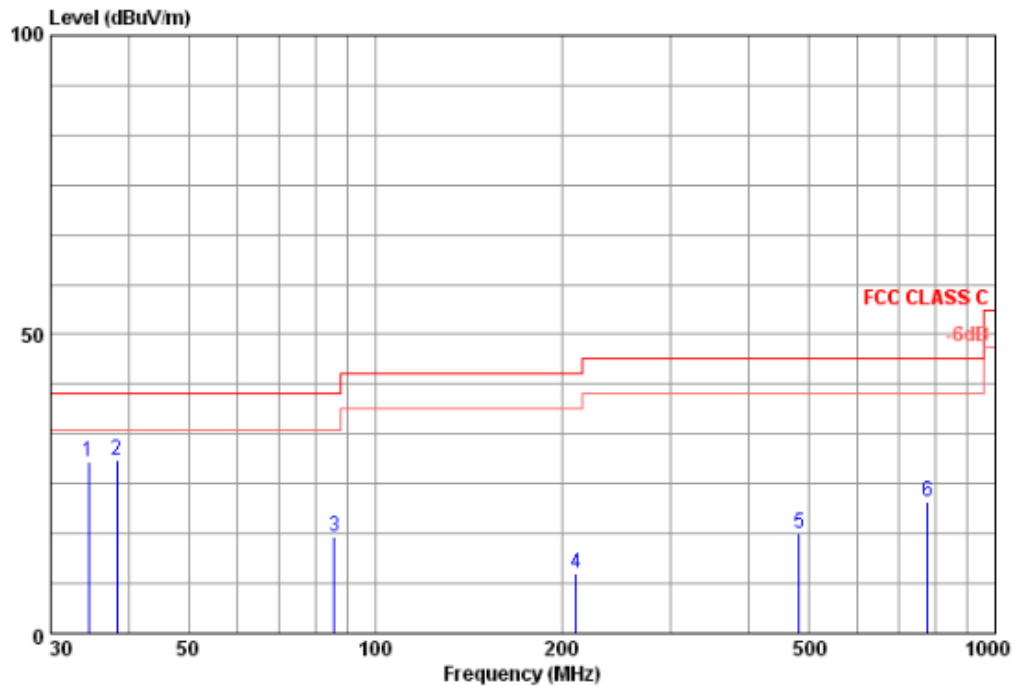
Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 HORIZONTAL
 : RBW:1000.000KHz VEW:1000.000KHz SWT:Auto
 ext : GSM MOBILE PHONE
 mode : WIFI B CH1+Adapter
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	1927.29	26.82	32.65	46.57	44.70	3.96	74.00	-41.35	200	0 Peak
2	2414.67	27.60	44.90	57.96	45.09	4.43	74.00	-29.10	200	0 Peak
3	3577.46	30.84	34.64	42.34	44.17	5.63	74.00	-39.36	200	0 Peak
4	4818.02	32.31	45.27	49.89	43.81	6.88	74.00	-28.73	200	0 Peak
5	7898.05	35.52	40.23	39.18	42.80	8.33	74.00	-33.77	200	0 Peak
6	9393.69	36.90	40.97	38.12	43.67	9.62	74.00	-33.03	200	0 Peak

Remark: Marker #2 is Fundamental signal which can be ignored

Test Channel :	06	Test Mode	Mode 2
Test Band :	802.11b	Test Engineer :	Guo-Zheng Li

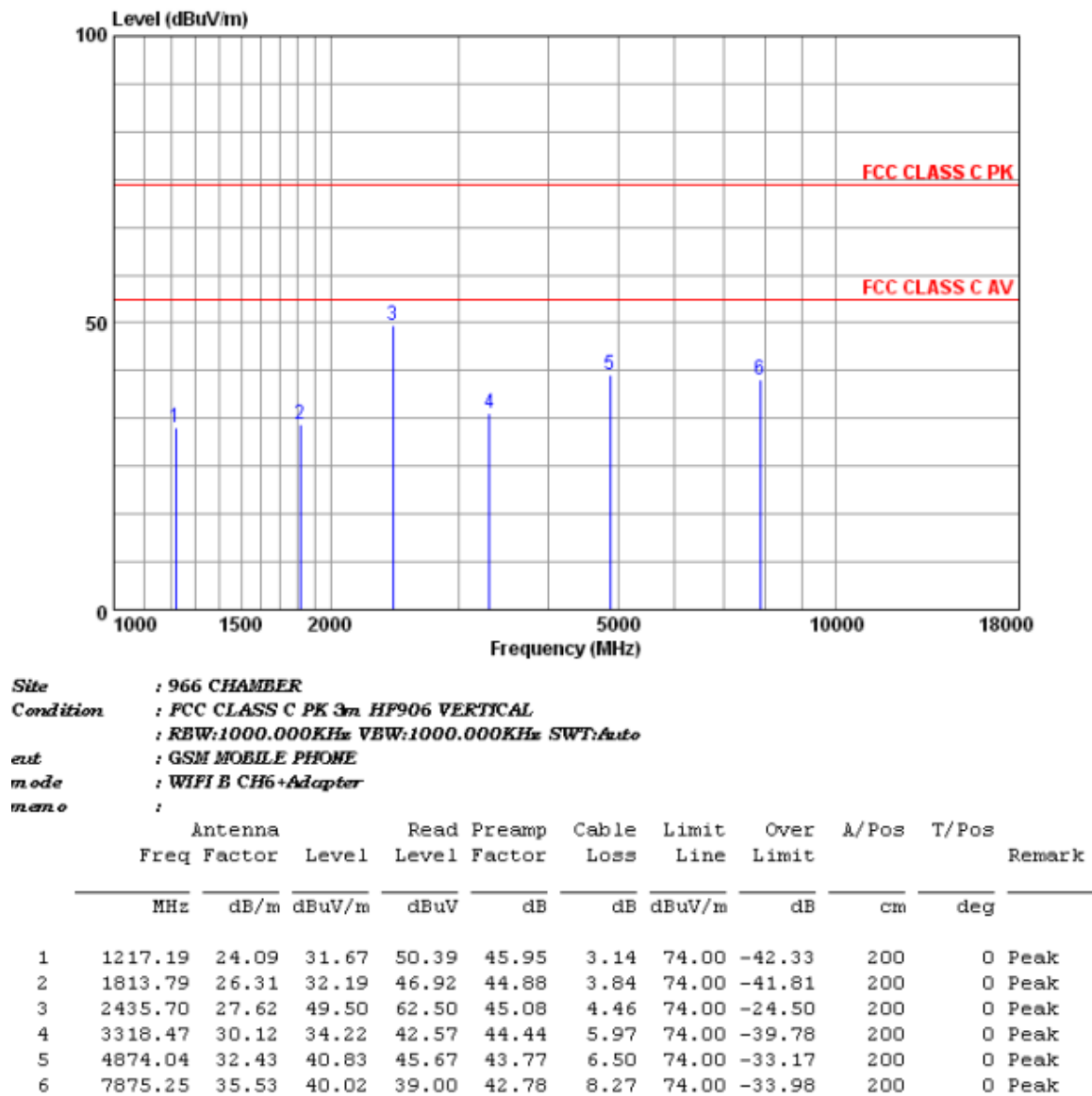
Radiated Emission 30MHz-1GHz Vertical



Site : 966 CHAMBER
Condition : FCC CLASS C 3m 2011 HL562 VERTICAL
: RBW:120.000KHz VBW:300.000KHz SWT:Auto
cut : phone M4 SS1010
mode : B CH6
memo :

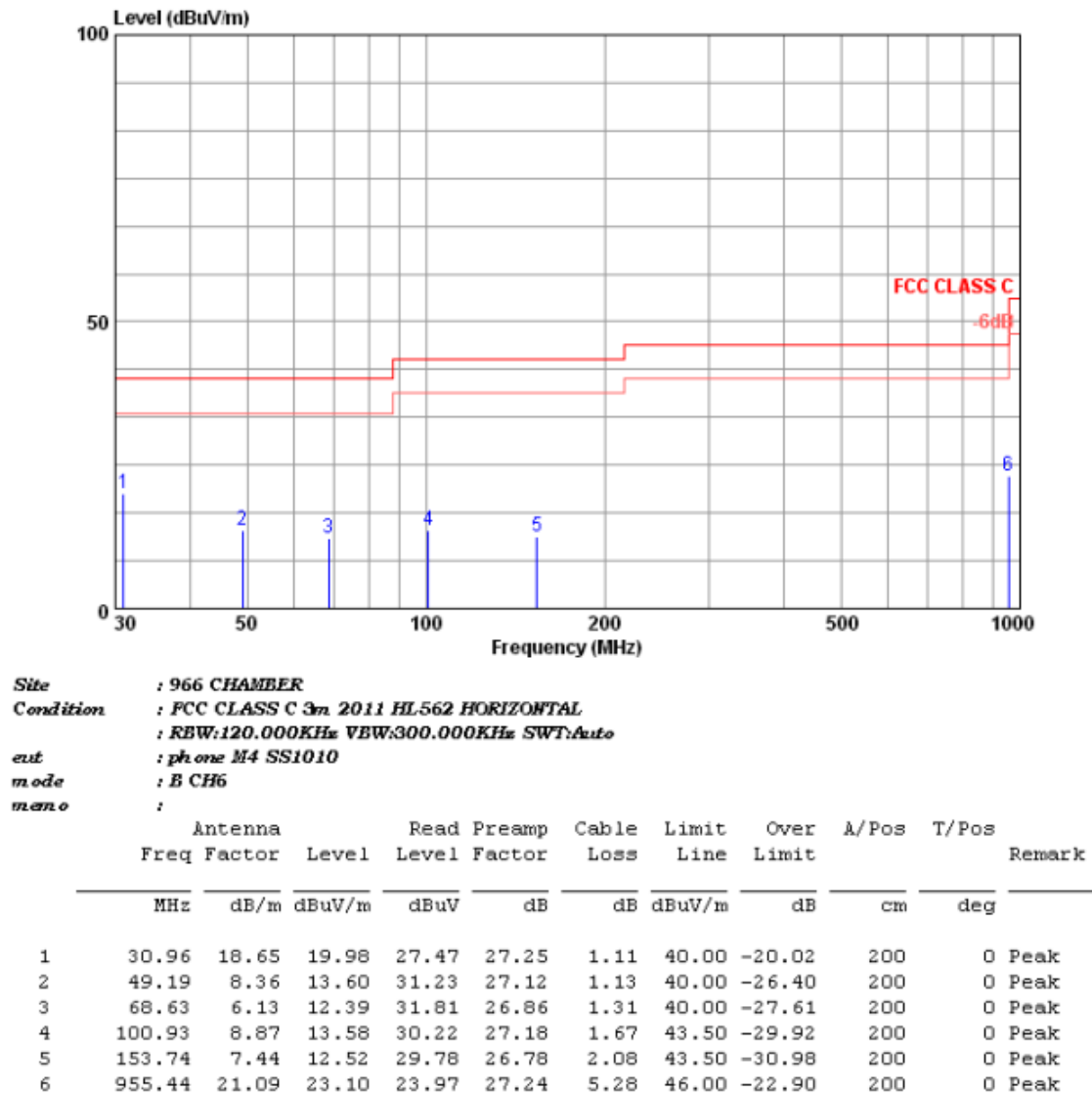
	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	34.52	16.87	28.82	37.89	27.10	1.16	40.00	-11.18	200	0 Peak
2	38.35	14.79	28.99	40.17	27.07	1.10	40.00	-11.01	200	0 Peak
3	85.90	8.54	16.18	33.44	27.54	1.74	40.00	-23.82	200	0 Peak
4	210.79	7.79	10.16	26.55	26.45	2.27	43.50	-33.34	200	0 Peak
5	482.22	15.16	16.61	25.49	27.53	3.49	46.00	-29.39	200	0 Peak
6	776.88	19.32	21.99	25.47	27.42	4.62	46.00	-24.01	200	0 Peak

Radiated Emission 1GHz-18GHz Vertical

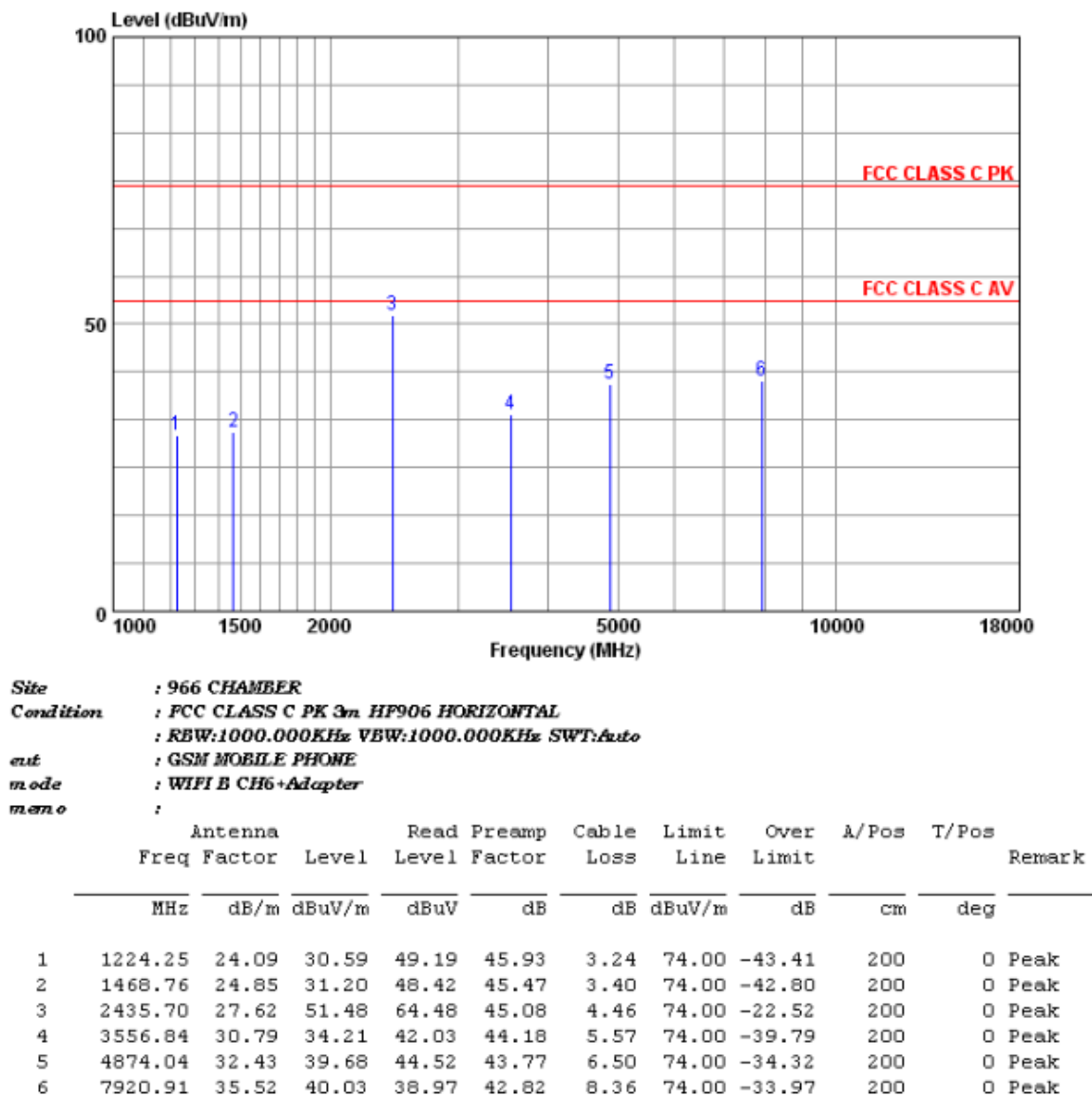


Remark: Marker #3 is Fundamental signal which can be ignored

Radiated Emission 30MHz-1GHz Horizontal



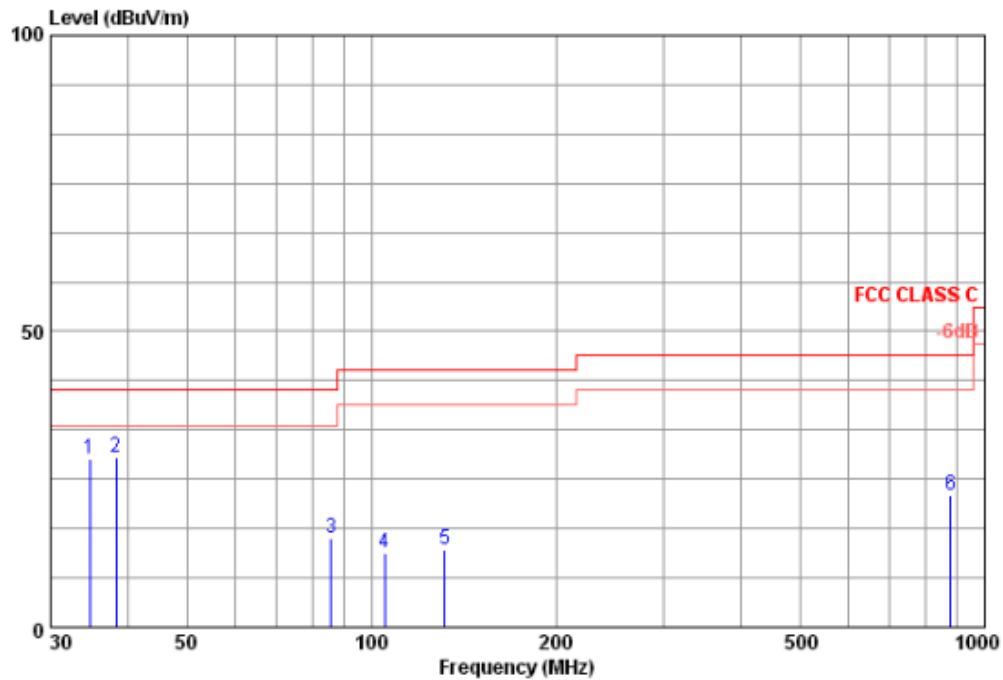
Radiated Emission 1GHz-18GHz Horizontal



Remark: Marker #3 is Fundamental signal which can be ignored

Test Channel :	11	Test Mode	Mode 3
Test Band :	802.11b	Test Engineer :	Guo-Zheng Li

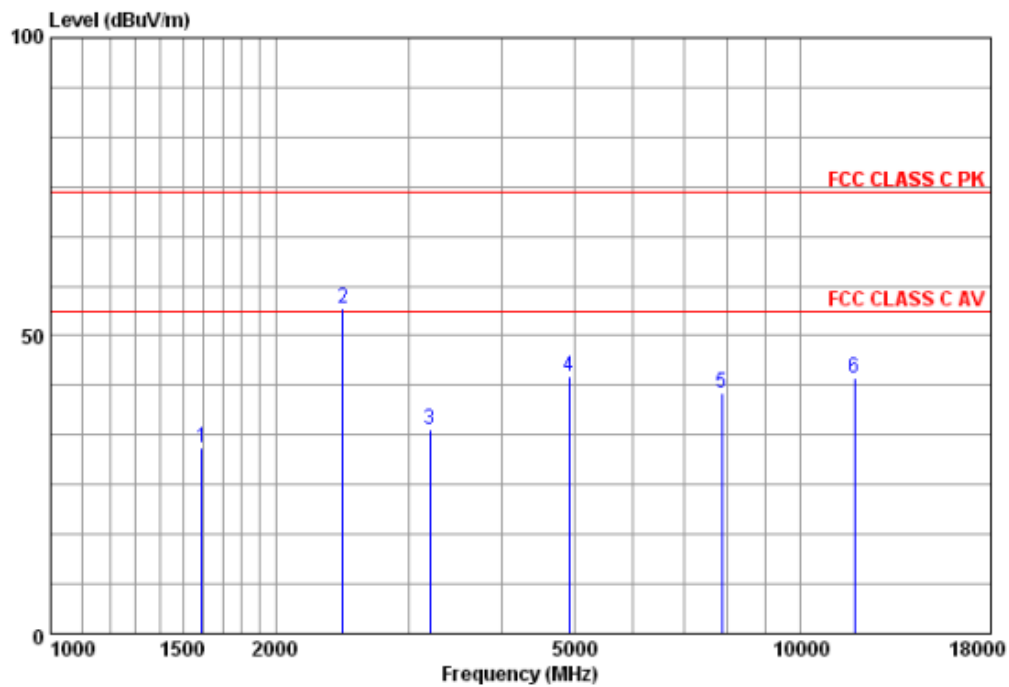
Radiated Emission 30MHz-1GHz Vertical



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 VERTICAL
 : RBW:120.000KHz VBW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : B CH11
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	34.76	16.73	28.27	37.50	27.10	1.14	40.00	-11.73	200	0 Peak
2	38.35	14.79	28.74	39.92	27.07	1.10	40.00	-11.26	200	0 Peak
3	85.90	8.54	15.00	32.26	27.54	1.74	40.00	-25.00	200	0 Peak
4	105.27	8.99	12.47	29.00	27.14	1.62	43.50	-31.03	200	0 Peak
5	131.76	8.54	13.23	29.86	26.95	1.78	43.50	-30.27	200	0 Peak
6	878.32	20.32	22.24	24.39	27.41	4.94	46.00	-23.76	200	0 Peak

Radiated Emission 1GHz-18GHz Vertical

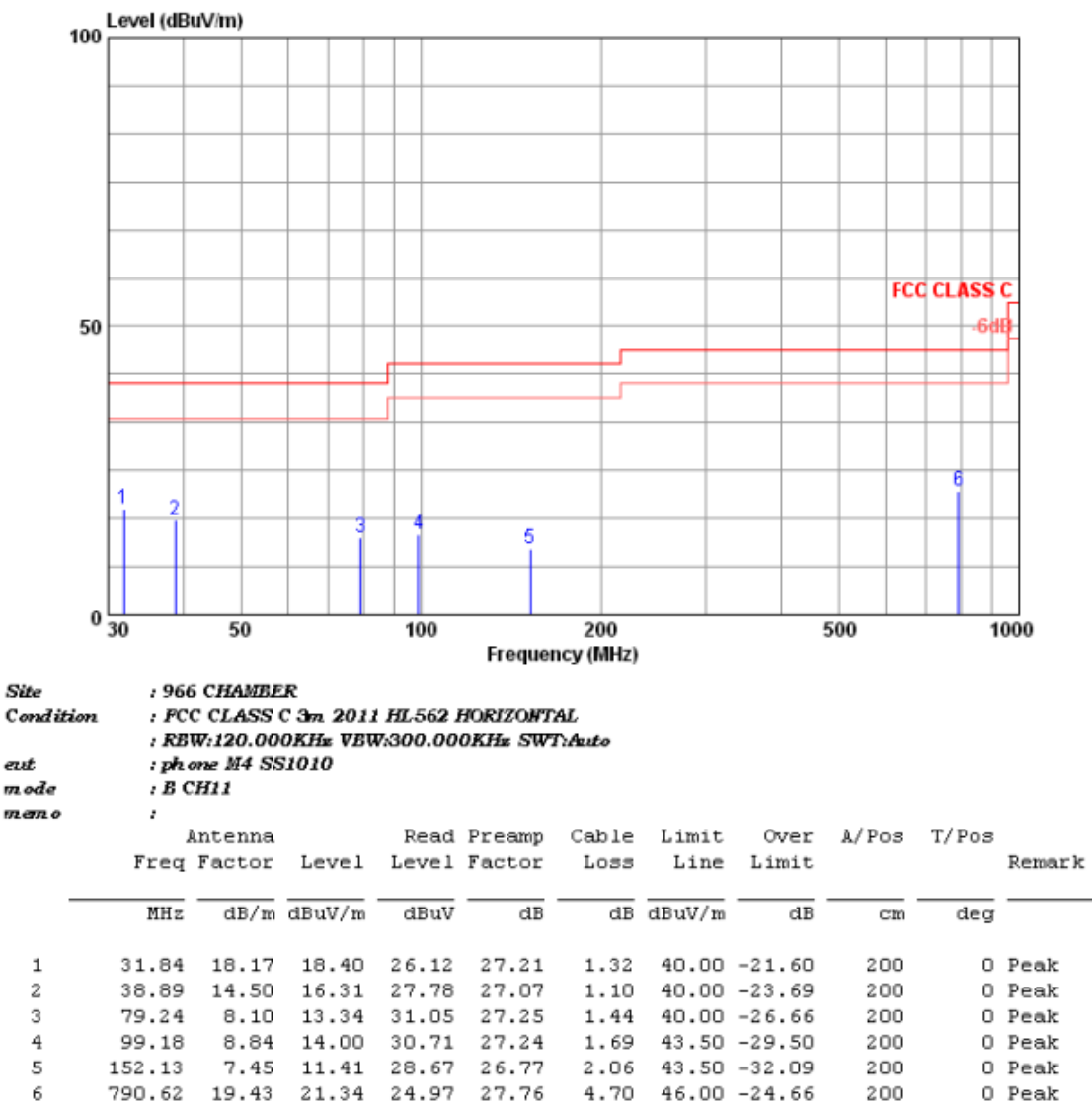


Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 VERTICAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
 ext : GSM MOBILE PHONE
 mode : WIFI B CH11+Adapter
 memo :

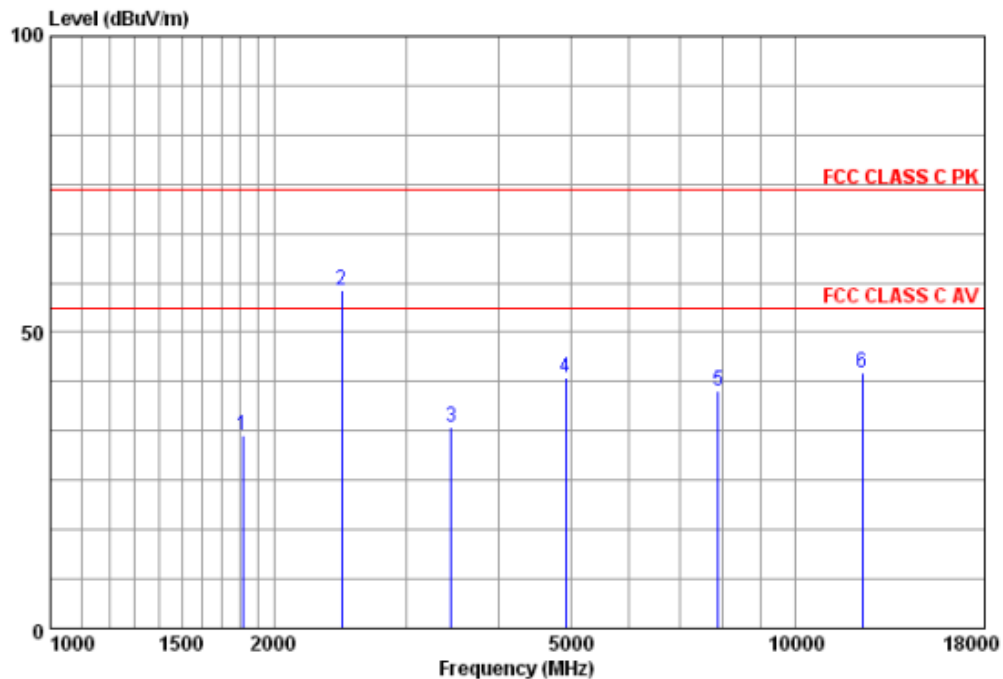
	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	1592.57	25.32	31.22	47.67	45.31	3.54	74.00	-42.78	200	0 Peak
2	2456.91	27.66	54.58	67.50	45.07	4.49	74.00	-19.42	200	0 Peak
3	3205.35	29.78	34.14	43.87	44.61	5.10	74.00	-39.86	200	0 Peak
4	4930.72	32.55	43.28	48.04	43.74	6.43	74.00	-30.72	200	0 Peak
5	7875.25	35.53	40.27	39.25	42.78	8.27	74.00	-33.73	200	0 Peak
6	11837.45	37.83	42.80	35.94	41.93	10.96	74.00	-31.20	200	0 Peak

Remark: Marker #2 is Fundamental signal which can be ignored

Radiated Emission 30MHz-1GHz Horizontal



Radiated Emission 1GHz-18GHz Horizontal



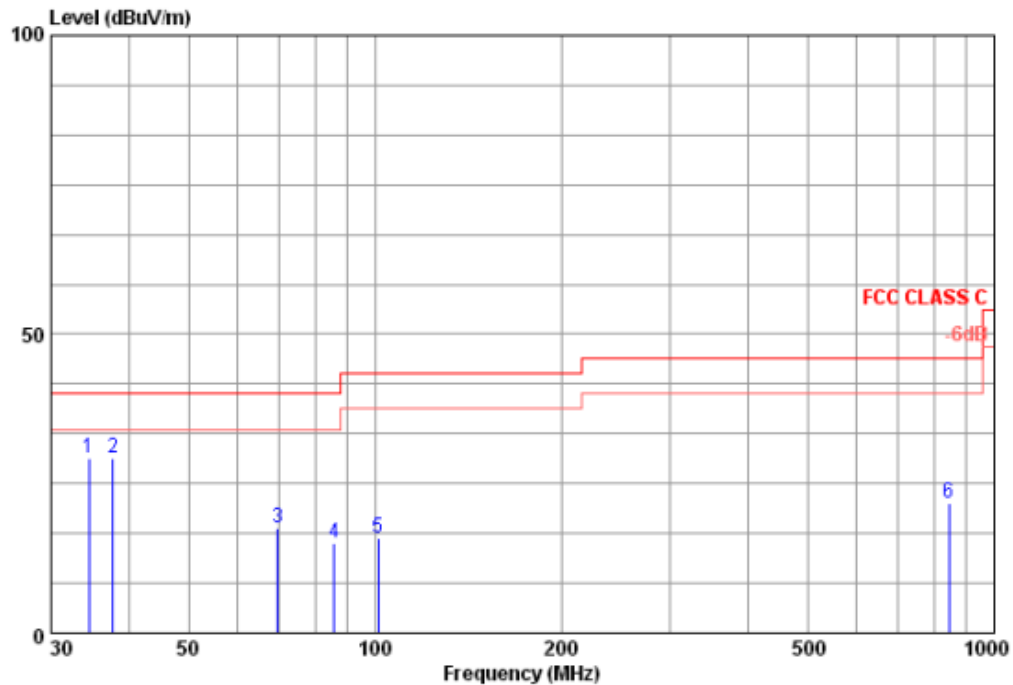
Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 HORIZONTAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
 test : GSM MOBILE PHONE
 mode : WIFI B CH11+Adapter
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	1813.79	26.31	32.63	47.36	44.88	3.84	74.00	-41.37	200	0 Peak
2	2464.02	27.66	57.09	70.01	45.07	4.49	74.00	-16.91	200	0 Peak
3	3455.51	30.55	34.02	42.36	44.26	5.37	74.00	-39.98	200	0 Peak
4	4930.72	32.55	42.29	47.05	43.74	6.43	74.00	-31.71	200	0 Peak
5	7898.05	35.52	40.00	38.95	42.80	8.33	74.00	-34.00	200	0 Peak
6	12326.27	37.99	43.12	36.64	42.08	10.57	74.00	-30.88	200	0 Peak

Remark: Marker #2 is Fundamental signal which can be ignored

Test Channel :	01	Test Mode	Mode 4
Test Band :	802.11g	Test Engineer :	Guo-Zheng Li

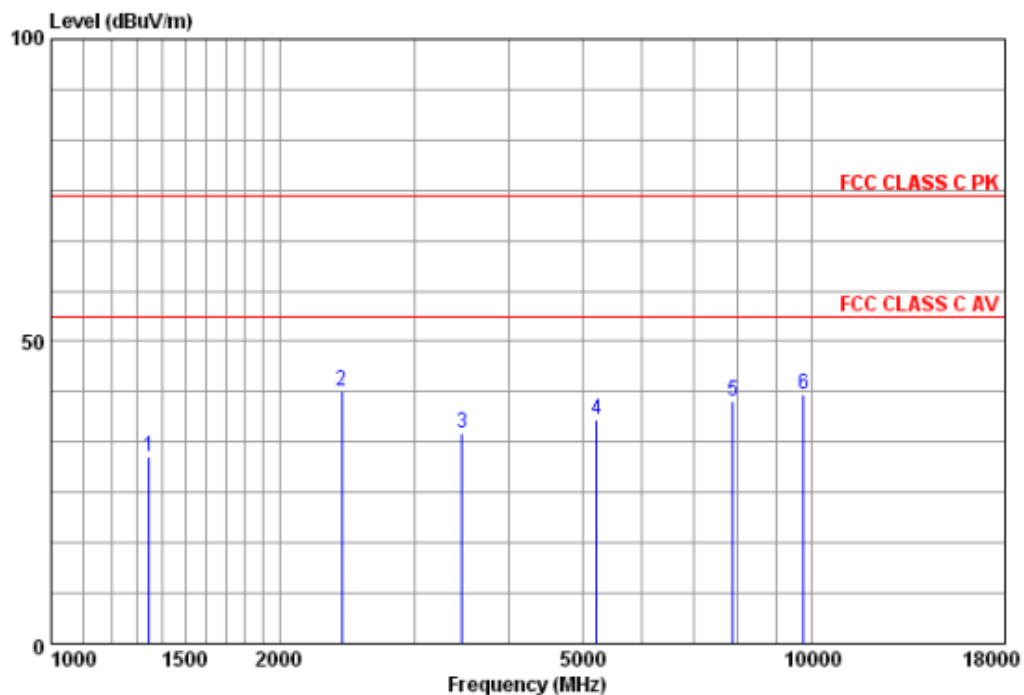
Radiated Emission 30MHz-1GHz Vertical



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 VERTICAL
 : RBW:120.000KHz VBW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : G CH1
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	34.52	16.87	29.38	38.45	27.10	1.16	40.00	-10.62	200	0 Peak
2	37.81	15.09	29.37	40.26	27.07	1.09	40.00	-10.63	200	0 Peak
3	69.60	6.45	17.43	36.47	26.83	1.34	40.00	-22.57	200	0 Peak
4	85.90	8.54	15.12	32.38	27.54	1.74	40.00	-24.88	200	0 Peak
5	101.29	8.88	15.81	32.43	27.17	1.67	43.50	-27.69	200	0 Peak
6	845.09	19.95	21.79	24.24	27.38	4.98	46.00	-24.21	200	0 Peak

Radiated Emission 1GHz-18GHz Vertical



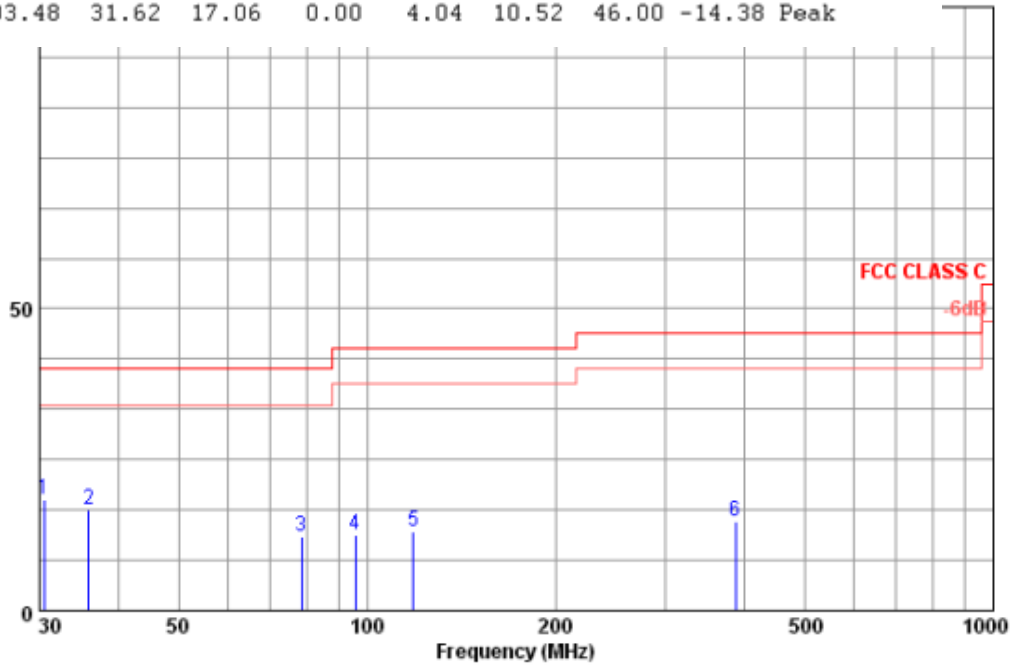
Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 VERTICAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
 ext : GSM MOBILE PHONE
 mode : WIFI G CH1+Adapter
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	1346.77	24.46	31.03	48.73	45.65	3.49	74.00	-42.97	200	0 Peak
2	2414.67	27.60	41.78	54.84	45.09	4.43	74.00	-32.22	200	0 Peak
3	3475.54	30.65	34.79	42.99	44.24	5.39	74.00	-39.21	200	0 Peak
4	5224.15	33.04	37.15	40.54	43.53	7.10	74.00	-36.85	200	0 Peak
5	7898.05	35.52	40.06	39.01	42.80	8.33	74.00	-33.94	200	0 Peak
6	9781.60	37.06	41.29	37.98	43.60	9.85	74.00	-32.71	200	0 Peak

Remark: Marker #2 is Fundamental signal which can be ignored

	Freq	Antenna Level	Factor	Aux Factor	Cable Loss	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dB/m	dB	dB	dBuV	dBuV/m	dB	
1	36.57	30.43	15.77	0.00	1.09	13.57	40.00	-9.57	Peak
2	59.64	24.20	3.72	0.00	1.39	19.09	40.00	-15.80	Peak
3	86.11	25.46	8.55	0.00	1.74	15.17	40.00	-14.54	Peak
4	207.14	20.33	7.64	0.00	2.27	10.42	43.50	-23.17	Peak
5	315.12	24.18	11.46	0.00	2.95	9.77	46.00	-21.82	Peak
6	603.48	31.62	17.06	0.00	4.04	10.52	46.00	-14.38	Peak

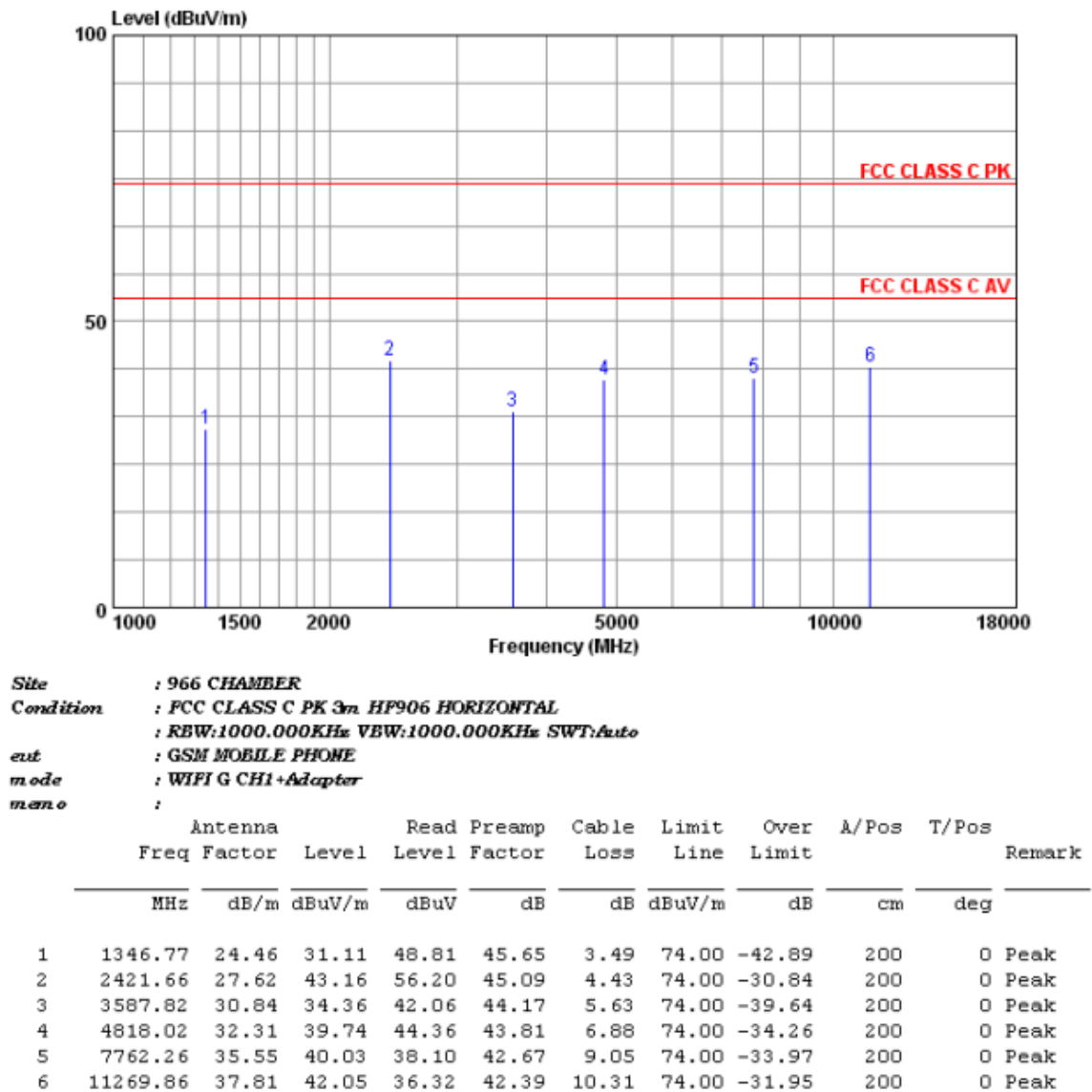
0306FCC-C



Site : 966 CHAMBER
Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
: RBW:120.000KHz VBW:300.000KHz SWT:Auto
cut : phone M4 SS1010
mode : G CH1
memo :

	Antenna Freq	Factor	Level	Read Level	Preamp Factor	Cable Loss	Limit Line	Over Limit	A/Pos	T/Pos	Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg	
1	30.53	18.88	18.49	25.81	27.28	1.08	40.00	-21.51	200	0	Peak
2	36.00	16.05	16.58	26.52	27.08	1.09	40.00	-23.42	200	0	Peak
3	78.69	8.01	12.37	30.13	27.21	1.44	40.00	-27.63	200	0	Peak
4	95.76	8.74	12.67	29.52	27.32	1.73	43.50	-30.83	200	0	Peak
5	118.60	9.55	13.10	29.05	27.20	1.70	43.50	-30.40	200	0	Peak
6	387.99	13.21	14.74	25.21	26.92	3.24	46.00	-31.26	200	0	Peak

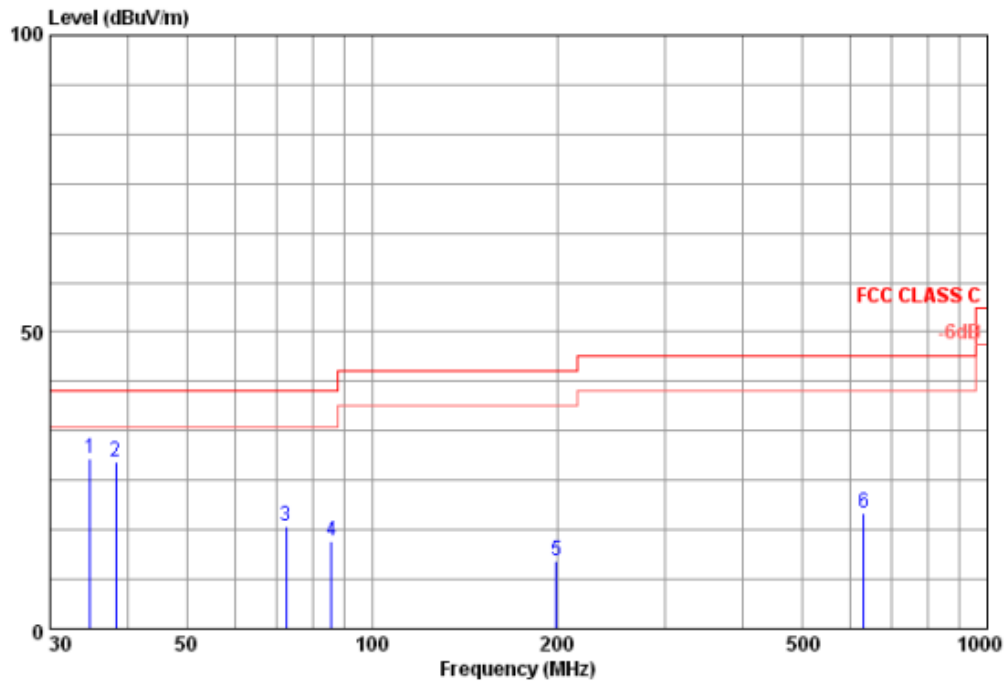
Radiated Emission 1GHz-18GHz Horizontal



Remark: Marker #2 is Fundamental signal which can be ignored

Test Channel :	06	Test Mode	Mode 5
Test Band :	802.11g	Test Engineer :	Guo-Zheng Li

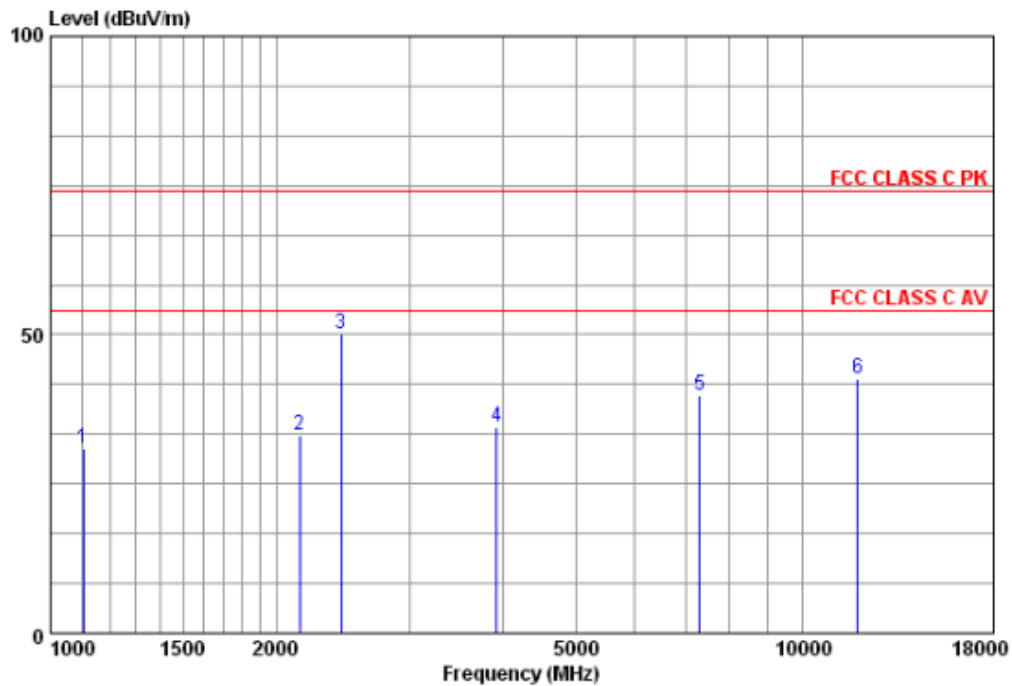
Radiated Emission 30MHz-1GHz Vertical



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 VERTICAL
 : RBW:120.000KHz VEW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : G CH6
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	34.88	16.66	28.59	37.90	27.10	1.13	40.00	-11.41	200	0 Peak
2	38.35	14.79	28.03	39.21	27.07	1.10	40.00	-11.97	200	0 Peak
3	72.59	7.07	17.20	35.47	26.79	1.45	40.00	-22.80	200	0 Peak
4	85.90	8.54	14.83	32.09	27.54	1.74	40.00	-25.17	200	0 Peak
5	199.29	7.23	11.33	28.25	26.46	2.31	43.50	-32.17	200	0 Peak
6	629.48	17.50	19.57	25.53	27.66	4.20	46.00	-26.43	200	0 Peak

Radiated Emission 1GHz-18GHz Vertical

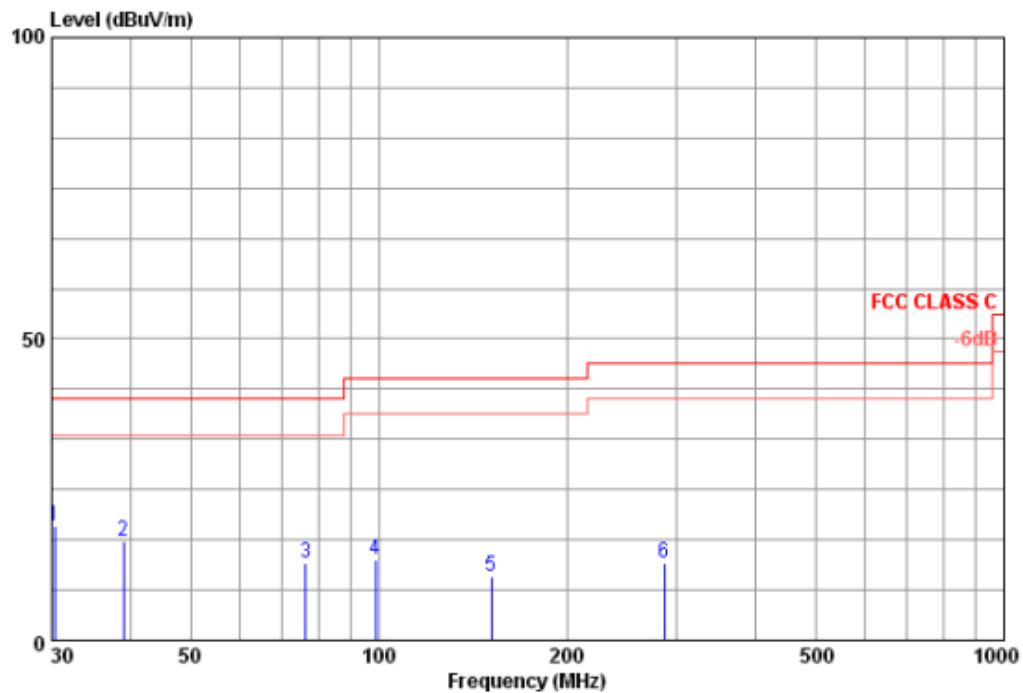


Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 VERTICAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
 Ant : GSM MOBILE PHONE
 mode : WIFI G CH6+Adapter
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Loss	Line	Limit			
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	1106.46	23.71	31.03	50.54	46.28	3.06	74.00	-42.97	200	0 Peak
2	2144.83	27.25	33.15	46.25	44.77	4.42	74.00	-40.85	200	0 Peak
3	2435.70	27.62	50.05	63.05	45.08	4.46	74.00	-23.95	200	0 Peak
4	3924.14	31.48	34.59	41.58	44.03	5.56	74.00	-39.41	200	0 Peak
5	7305.12	35.41	39.87	38.89	42.55	8.12	74.00	-34.13	200	0 Peak
6	11871.71	37.82	42.66	35.88	41.90	10.86	74.00	-31.34	200	0 Peak

Remark: Marker #3 is Fundamental signal which can be ignored

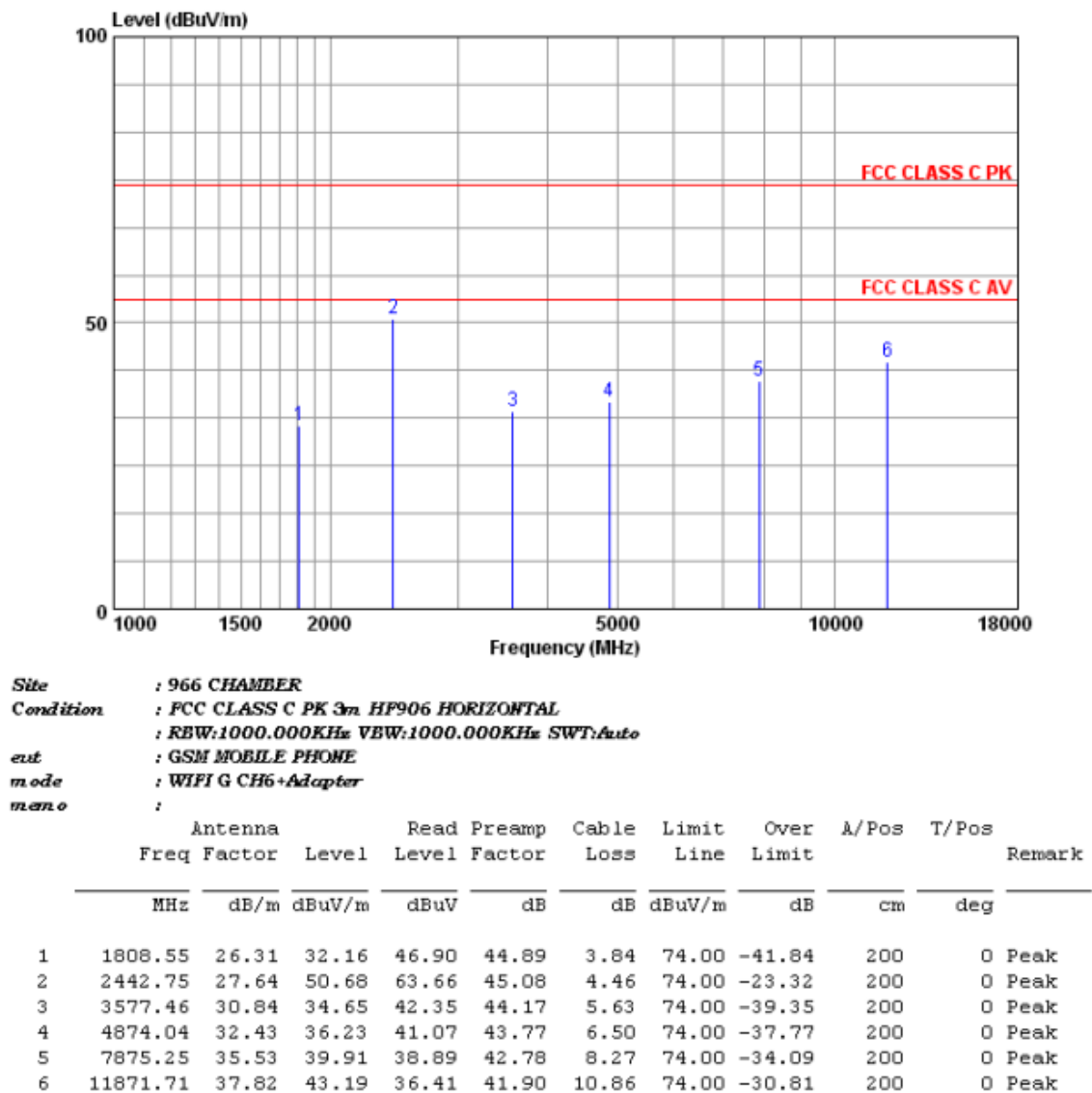
Radiated Emission 30MHz-1GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
 : RBW:120.000KHz VBW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : G CH6
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	30.32	19.03	19.04	26.21	27.30	1.10	40.00	-20.96	200	0 Peak
2	39.02	14.41	16.39	27.96	27.08	1.10	40.00	-23.61	200	0 Peak
3	76.51	7.76	12.93	30.75	27.03	1.45	40.00	-27.07	200	0 Peak
4	98.83	8.82	13.41	30.15	27.26	1.70	43.50	-30.09	200	0 Peak
5	151.60	7.45	10.69	27.95	26.76	2.05	43.50	-32.81	200	0 Peak
6	285.98	10.57	12.95	25.90	26.31	2.79	46.00	-33.05	200	0 Peak

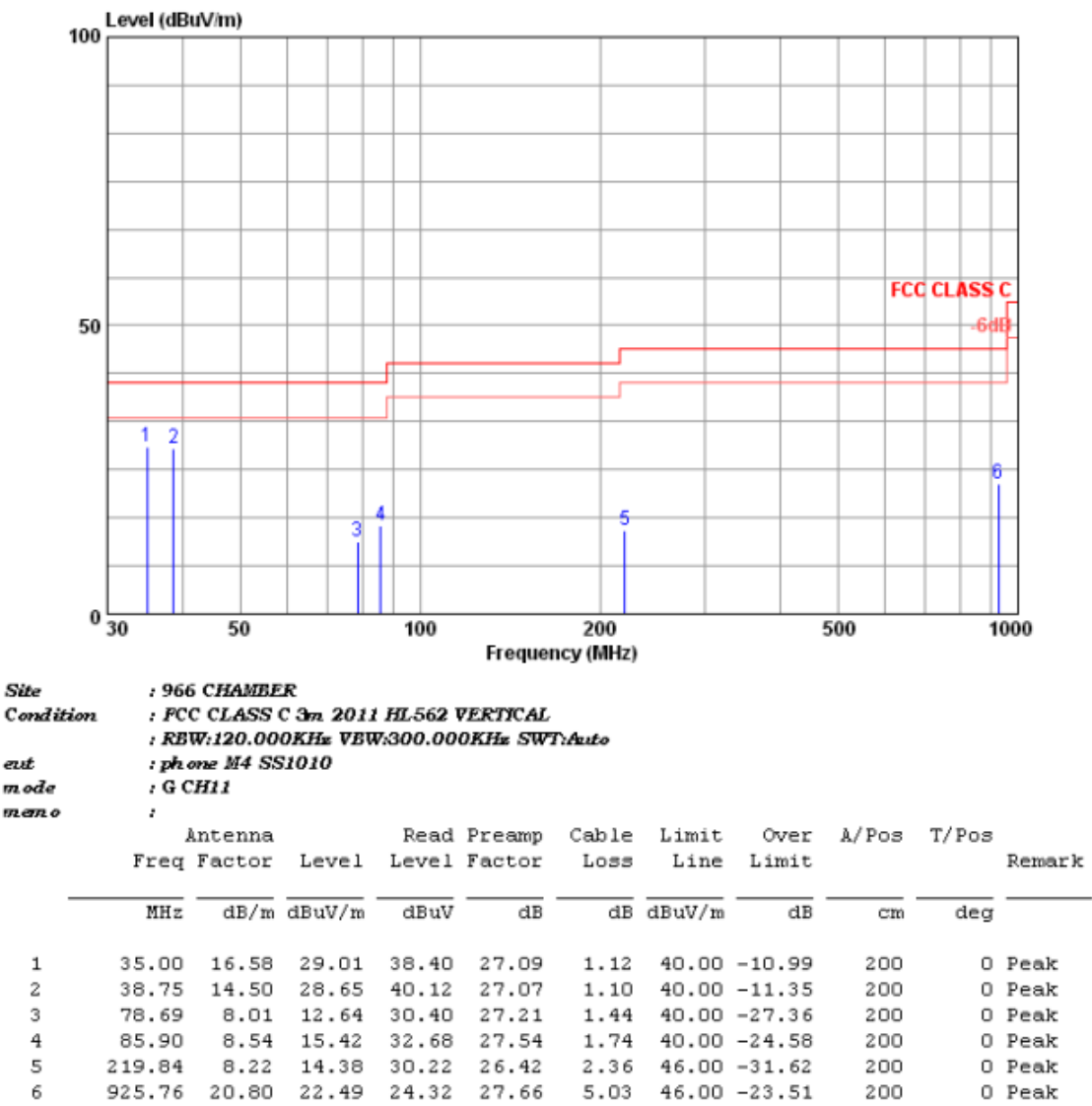
Radiated Emission 1GHz-18GHz Horizontal



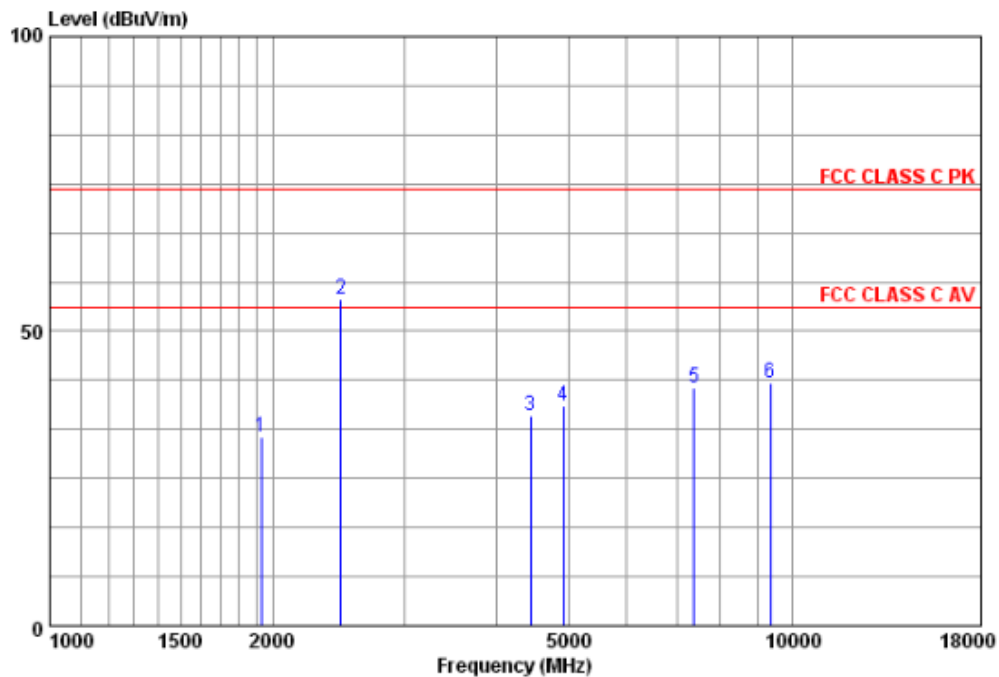
Remark: Marker #2 is Fundamental signal which can be ignored

Test Channel :	11	Test Mode	Mode 6
Test Band :	802.11g	Test Engineer :	Guo-Zheng Li

Radiated Emission 30MHz-1GHz Vertical



Radiated Emission 1GHz-18GHz Vertical

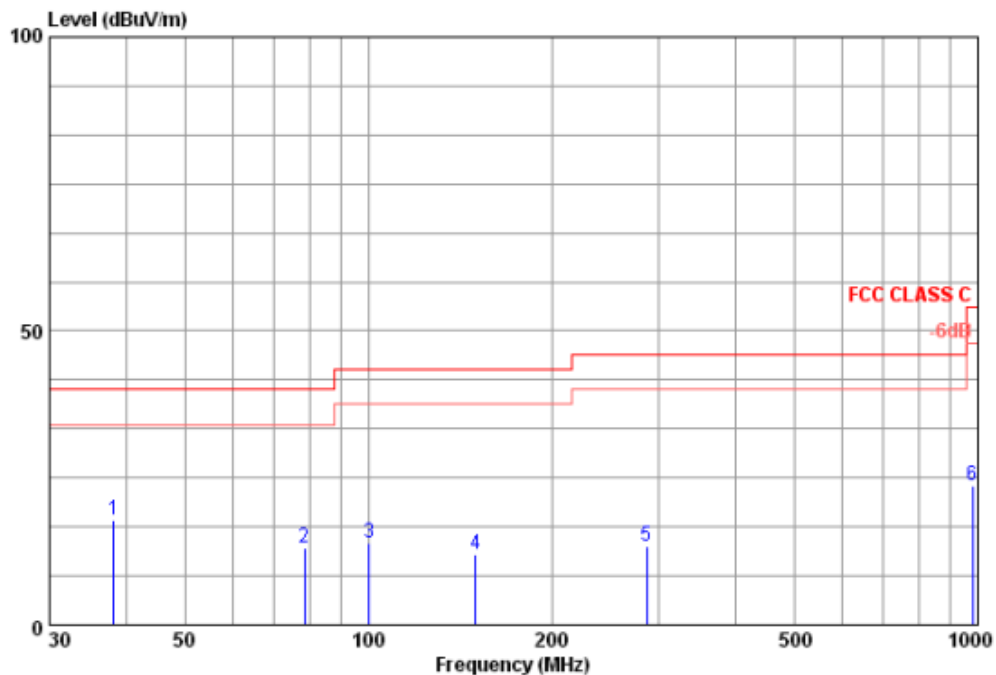


Site : 966 CHAMBER
Condition : FCC CLASS C PK 3m HP906 VERTICAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
ant : GSM MOBILE PHONE
mode : WIFI G CH11+Adapter
memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	1927.29	26.82	32.11	46.03	44.70	3.96	74.00	-41.89	200	0 Peak
2	2471.16	27.68	55.40	68.28	45.06	4.50	74.00	-18.60	200	0 Peak
3	4443.45	31.51	35.58	41.86	44.00	6.21	74.00	-38.42	200	0 Peak
4	4930.72	32.55	37.33	42.09	43.74	6.43	74.00	-36.67	200	0 Peak
5	7390.07	35.50	40.43	39.50	42.48	7.91	74.00	-33.57	200	0 Peak
6	9366.58	36.86	41.18	38.36	43.68	9.64	74.00	-32.82	200	0 Peak

Remark: Marker #2 is Fundamental signal which can be ignored

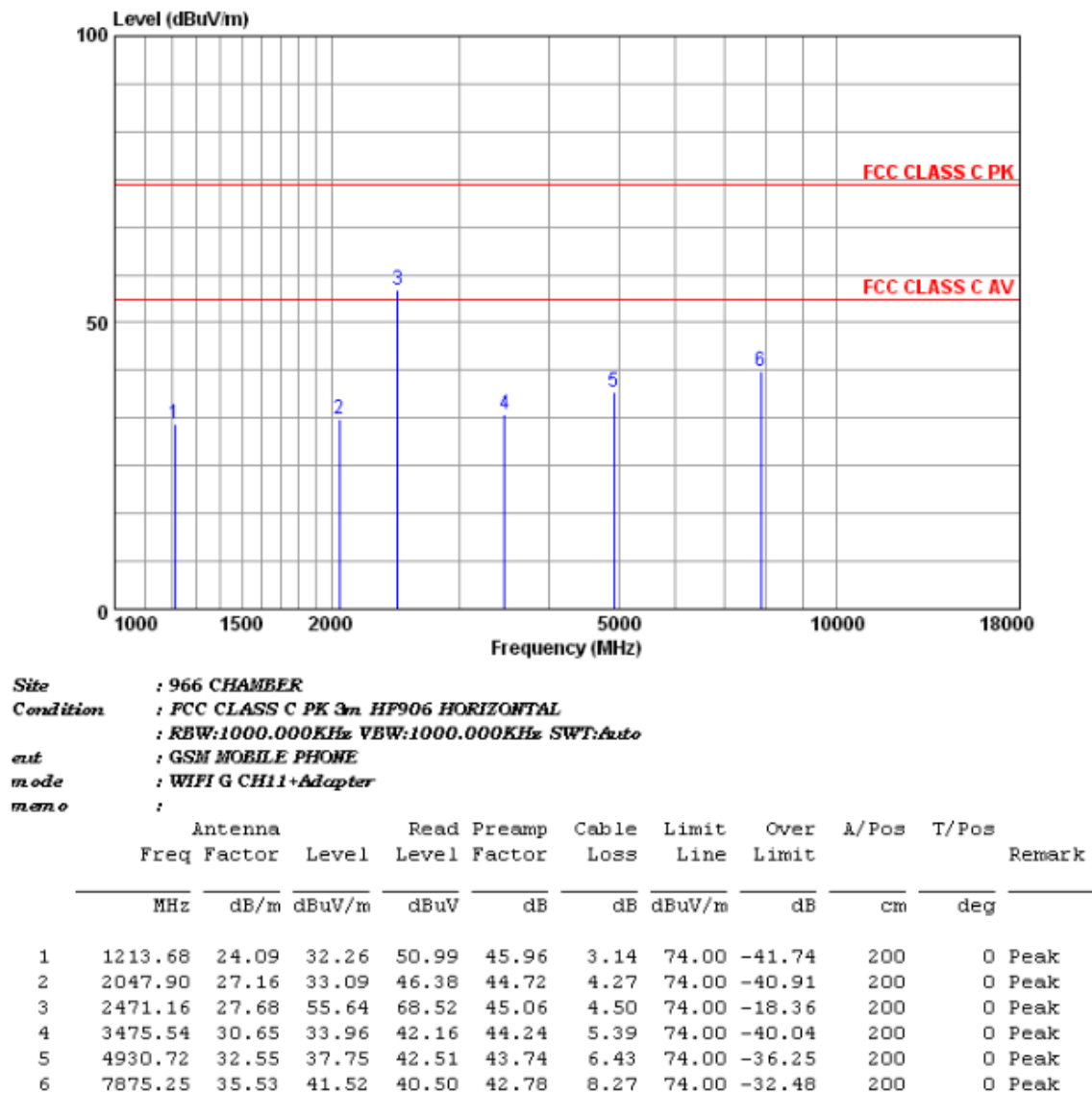
Radiated Emission 30MHz-1GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
 : RBW:120.000KHz VEW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : G CH11
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	38.21	14.79	17.95	29.13	27.07	1.10	40.00	-22.05	200	0 Peak
2	78.69	8.01	13.14	30.90	27.21	1.44	40.00	-26.86	200	0 Peak
3	100.23	8.86	14.03	30.70	27.21	1.68	43.50	-29.47	200	0 Peak
4	150.01	7.46	11.99	29.28	26.77	2.02	43.50	-31.51	200	0 Peak
5	285.98	10.57	13.39	26.34	26.31	2.79	46.00	-32.61	200	0 Peak
6	979.18	21.29	23.67	24.10	27.07	5.35	53.90	-30.23	200	0 Peak

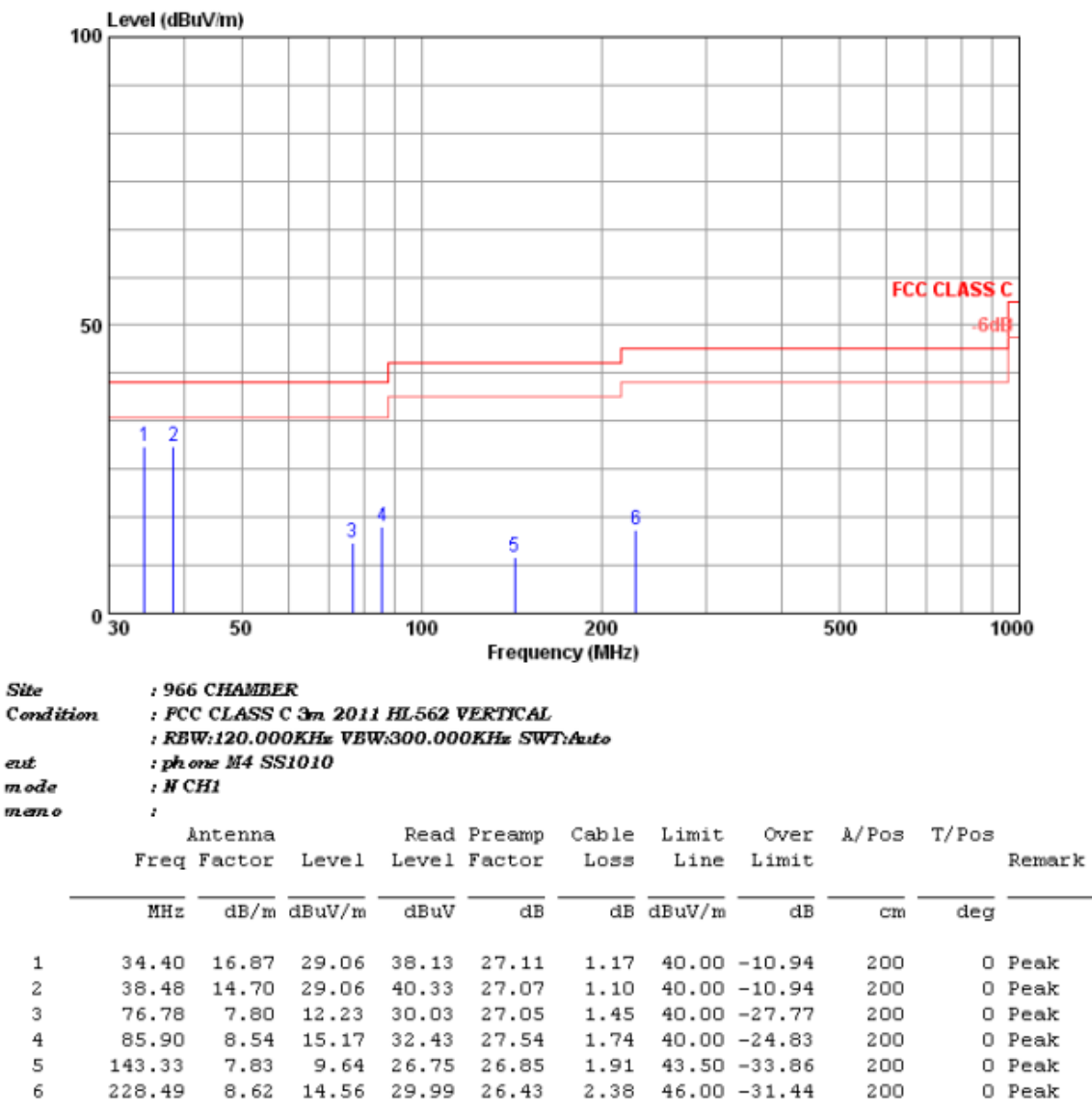
Radiated Emission 1GHz-18GHz Horizontal



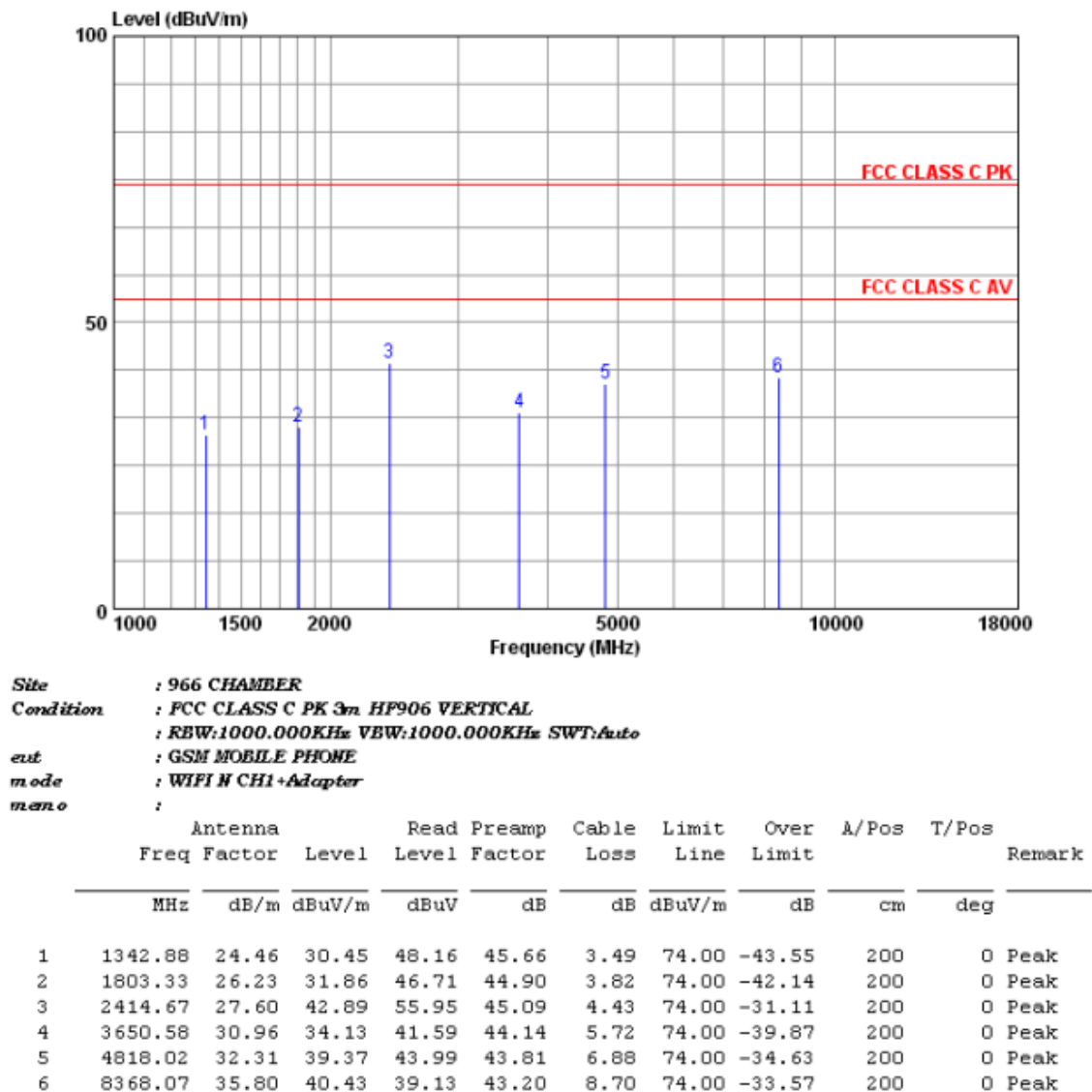
Remark: Marker #3 is Fundamental signal which can be ignored

Test Channel :	01	Test Mode	Mode 7
Test Band :	802.11n	Test Engineer :	Guo-Zheng Li

Radiated Emission 30MHz-1GHz Vertical

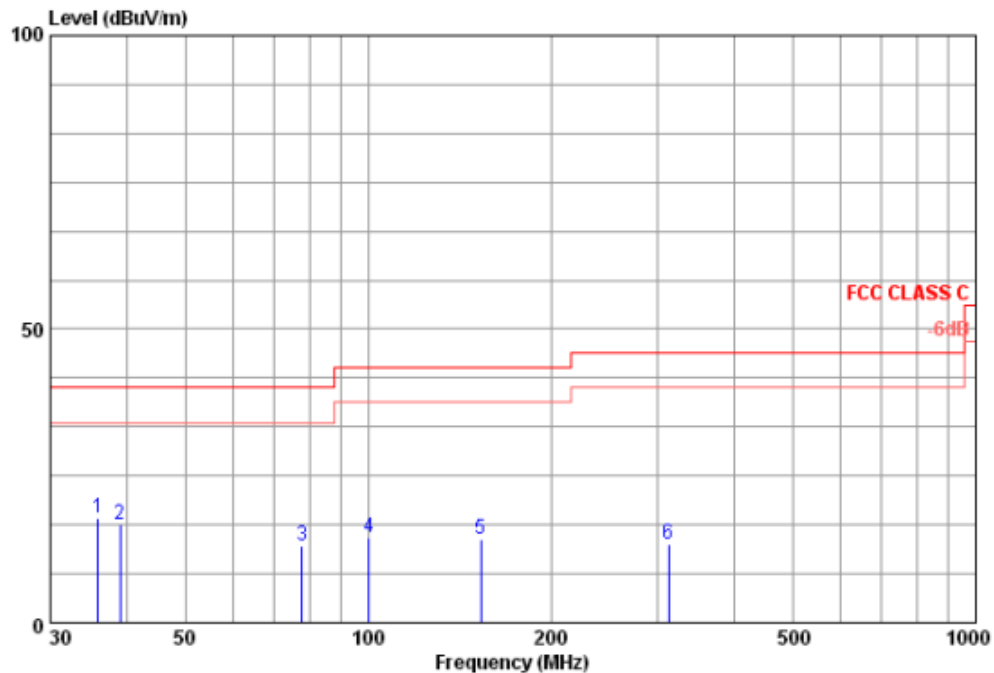


Radiated Emission 1GHz-18GHz Vertical



Remark: Marker #3 is Fundamental signal which can be ignored

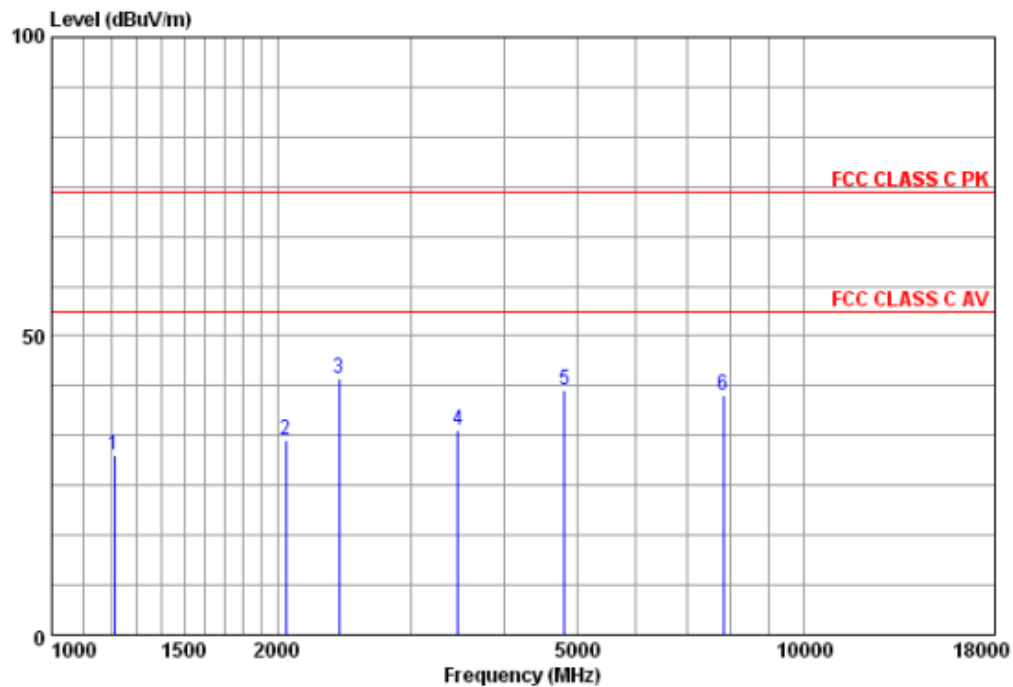
Radiated Emission 30MHz-1GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
 : REW:120.000KHz VBW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : N CH1
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	36.00	16.05	17.84	27.78	27.08	1.09	40.00	-22.16	200	0 Peak
2	39.02	14.41	16.79	28.36	27.08	1.10	40.00	-23.21	200	0 Peak
3	77.87	7.93	13.00	30.77	27.14	1.44	40.00	-27.00	200	0 Peak
4	100.23	8.86	14.43	31.10	27.21	1.68	43.50	-29.07	200	0 Peak
5	153.20	7.44	14.10	31.37	26.78	2.07	43.50	-29.40	200	0 Peak
6	312.18	11.37	13.41	25.55	26.43	2.92	46.00	-32.59	200	0 Peak

Radiated Emission 1GHz-18GHz Horizontal



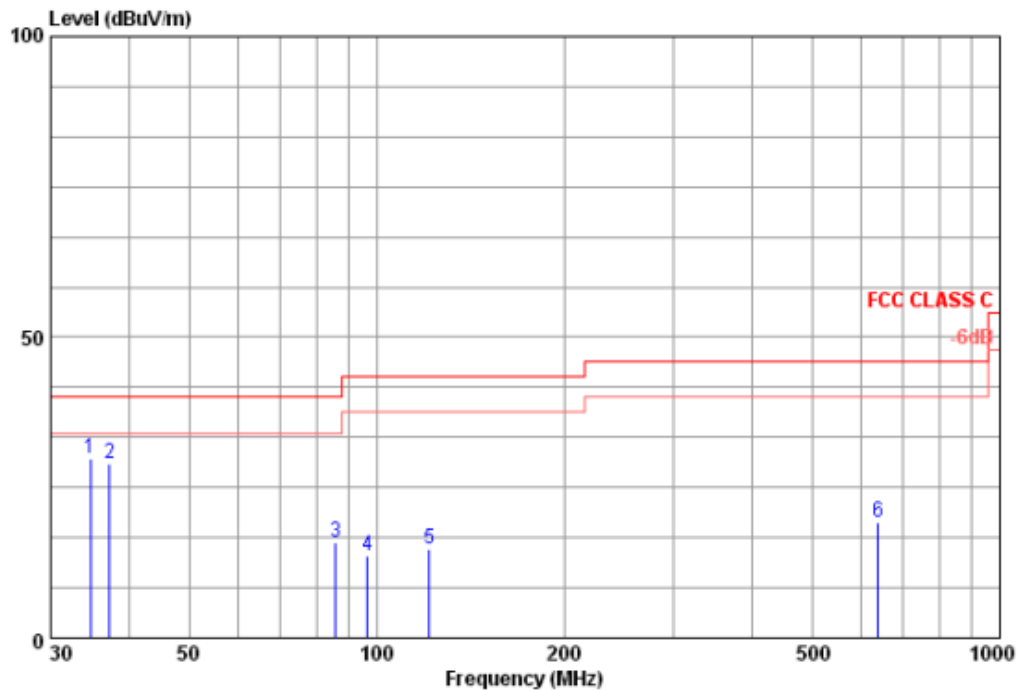
Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 HORIZONTAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
 ext : GSM MOBILE PHONE
 mode : WIFI N CH1+Adapter
 memo :

	Antenna	Read	Preamplifier	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit	
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	
1	1213.68	24.09	30.22	48.95	45.96	3.14	74.00	-43.78	200 202 Peak
2	2047.90	27.16	32.56	45.85	44.72	4.27	74.00	-41.44	200 202 Peak
3	2414.67	27.60	42.76	55.82	45.09	4.43	74.00	-31.24	200 202 Peak
4	3475.54	30.65	34.20	42.40	44.24	5.39	74.00	-39.80	200 202 Peak
5	4818.02	32.31	40.85	45.47	43.81	6.88	74.00	-33.15	200 202 Peak
6	7829.86	35.53	40.12	39.11	42.74	8.22	74.00	-33.88	200 202 Peak

Remark: Marker #3 is Fundamental signal which can be ignored

Test Channel :	06	Test Mode	Mode 8
Test Band :	802.11n	Test Engineer :	Guo-Zheng Li

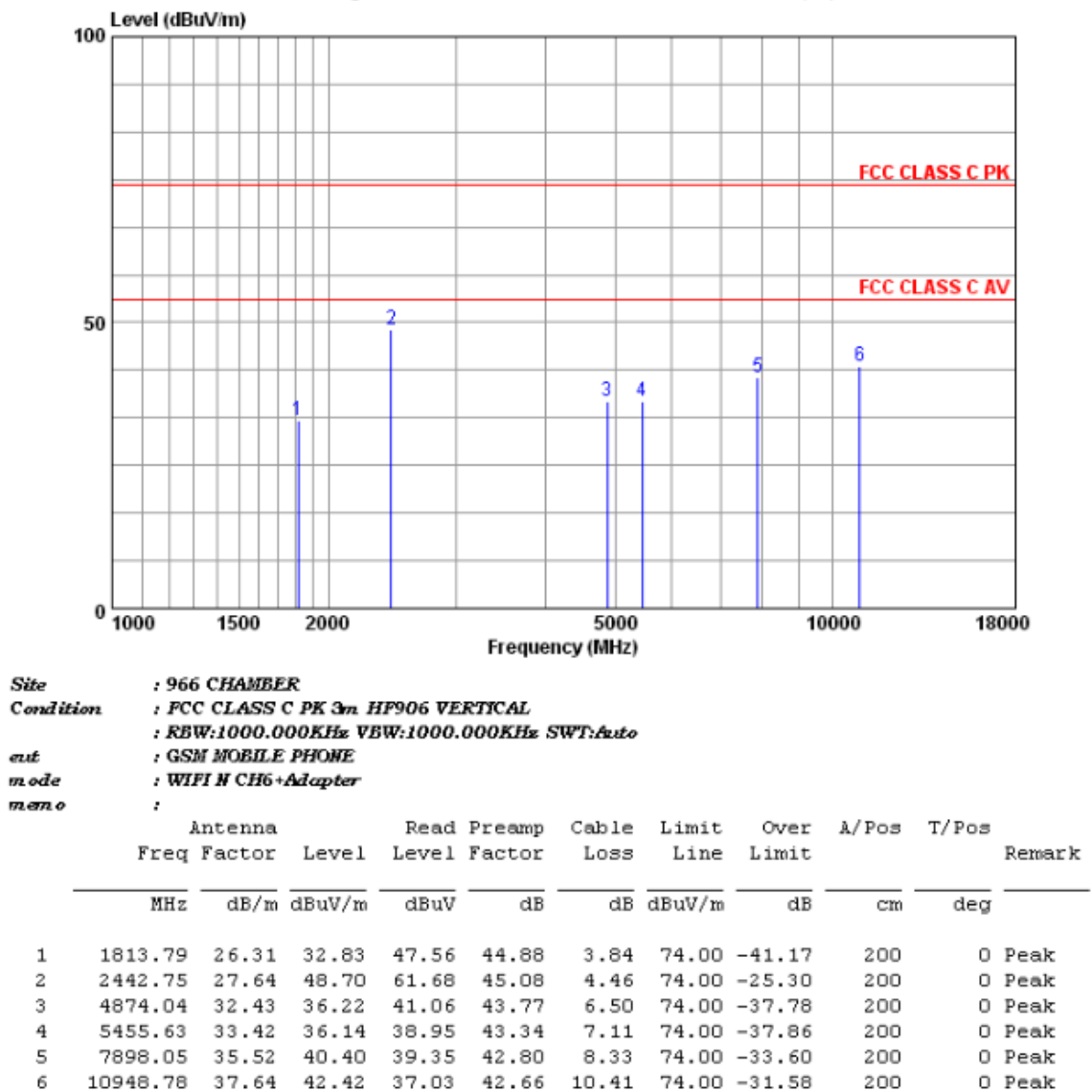
Radiated Emission 30MHz-1GHz Vertical



Site : 966 CHAMBER
Condition : FCC CLASS C 3m 2011 HL562 VERTICAL
: RBW:120.000KHz VBW:300.000KHz SWT:Auto
cut : phone M4 SS1010
mode : N CH6
memo :

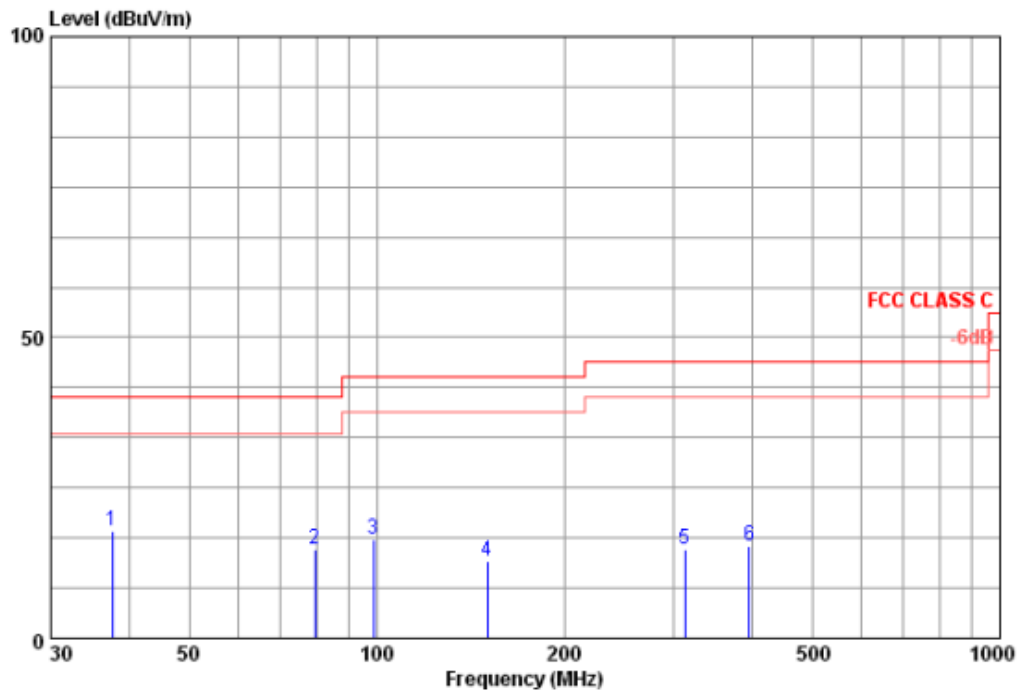
	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBUV/m	dBuV	dB	dBUV/m	dB	cm	deg	
1	34.76	16.73	29.84	39.07	27.10	1.14	40.00	-10.16	200	0 Peak
2	37.29	15.40	29.06	39.64	27.07	1.09	40.00	-10.94	200	0 Peak
3	85.90	8.54	15.86	33.12	27.54	1.74	40.00	-24.14	200	0 Peak
4	96.77	8.76	13.62	30.45	27.31	1.72	43.50	-29.88	200	0 Peak
5	121.55	9.47	14.75	30.76	27.20	1.72	43.50	-28.75	200	0 Peak
6	638.37	17.64	19.26	25.13	27.73	4.22	46.00	-26.74	200	0 Peak

Radiated Emission 1GHz-18GHz Vertical



Remark: Marker #2 is Fundamental signal which can be ignored

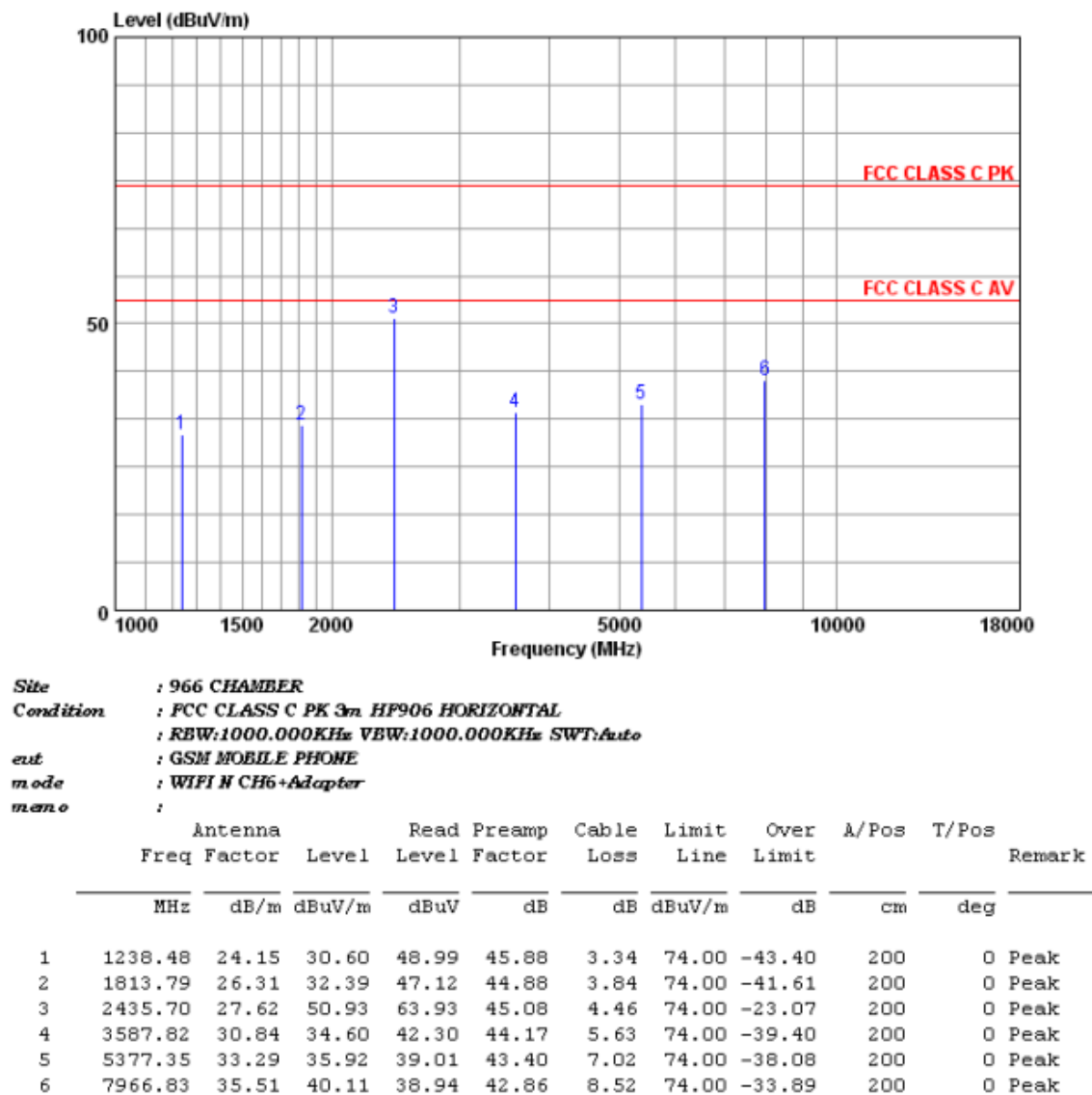
Radiated Emission 30MHz-1GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
 : RBW:120.000KHz VBW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : N CH6
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	37.68	15.20	17.69	28.47	27.07	1.09	40.00	-22.31	200	0 Peak
2	79.52	8.14	14.81	32.50	27.27	1.44	40.00	-25.19	200	0 Peak
3	98.83	8.82	16.46	33.20	27.26	1.70	43.50	-27.04	200	0 Peak
4	150.54	7.46	12.76	30.04	26.77	2.03	43.50	-30.74	200	0 Peak
5	312.18	11.37	14.77	26.91	26.43	2.92	46.00	-31.23	200	0 Peak
6	396.24	13.37	15.19	25.56	27.05	3.31	46.00	-30.81	200	0 Peak

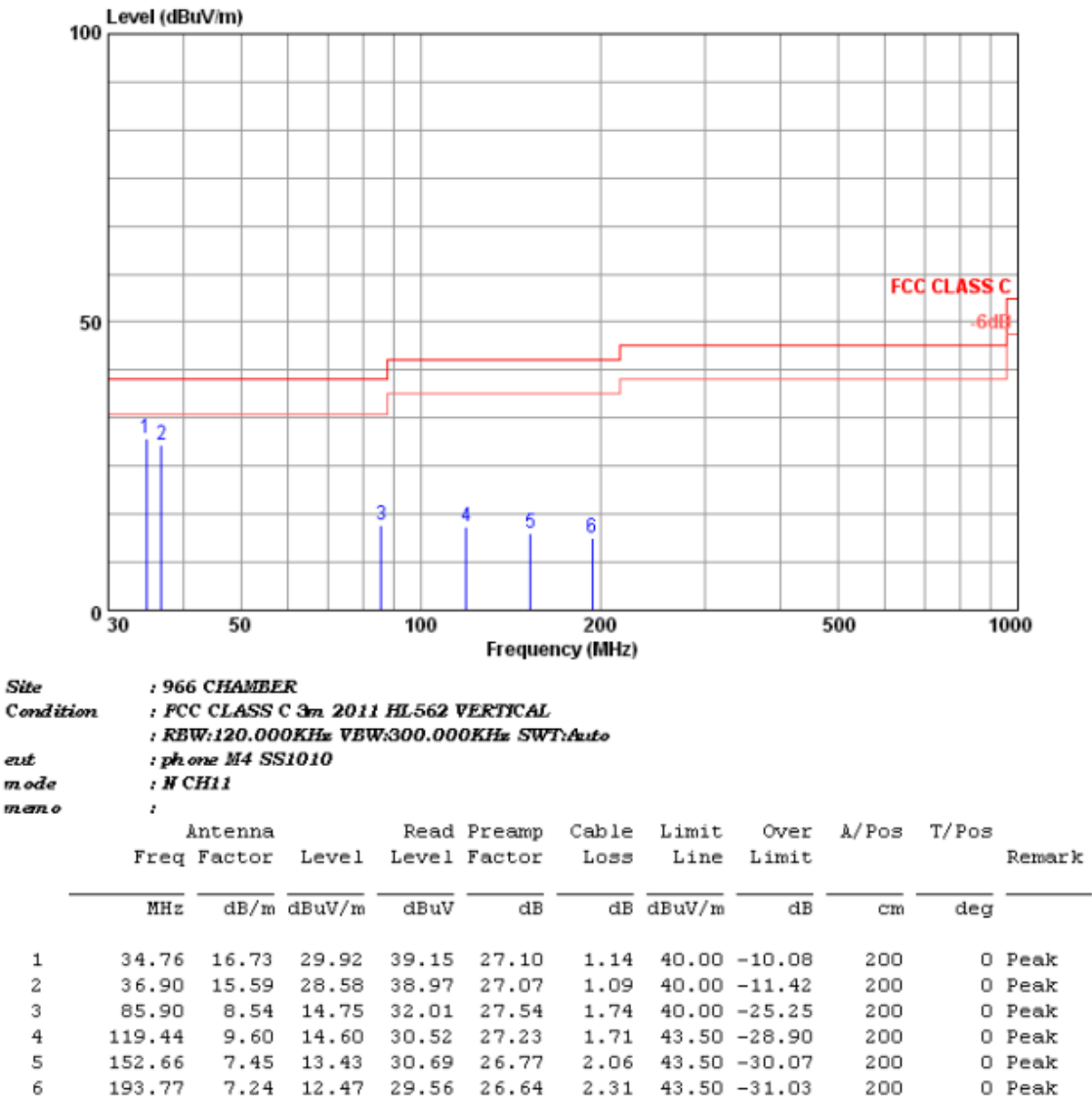
Radiated Emission 1GHz-18GHz Horizontal



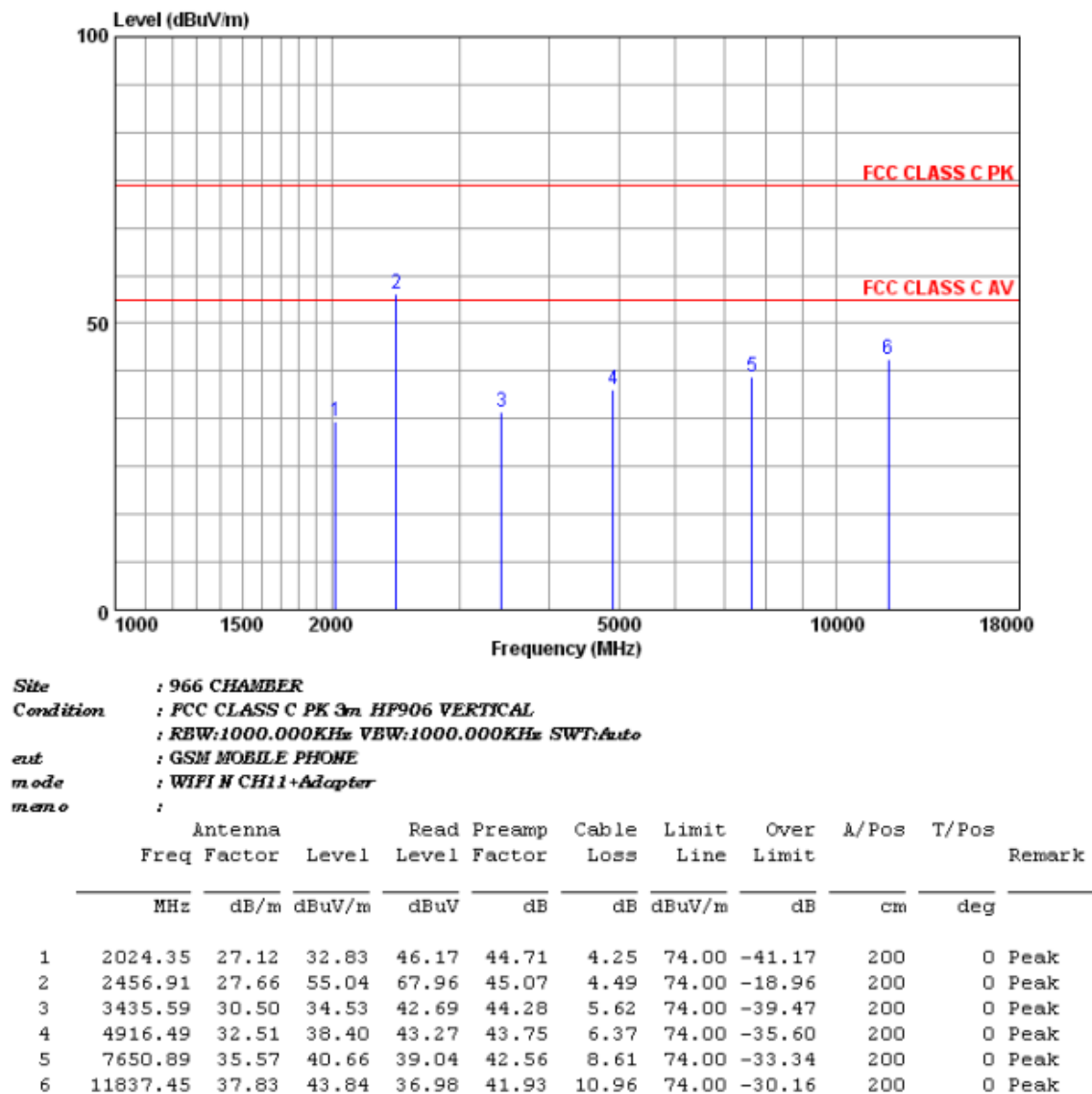
Remark: Marker #3 is Fundamental signal which can be ignored

Test Channel :	11	Test Mode	Mode 9
Test Band :	802.11n	Test Engineer :	Guo-Zheng Li

Radiated Emission 30MHz-1GHz Vertical

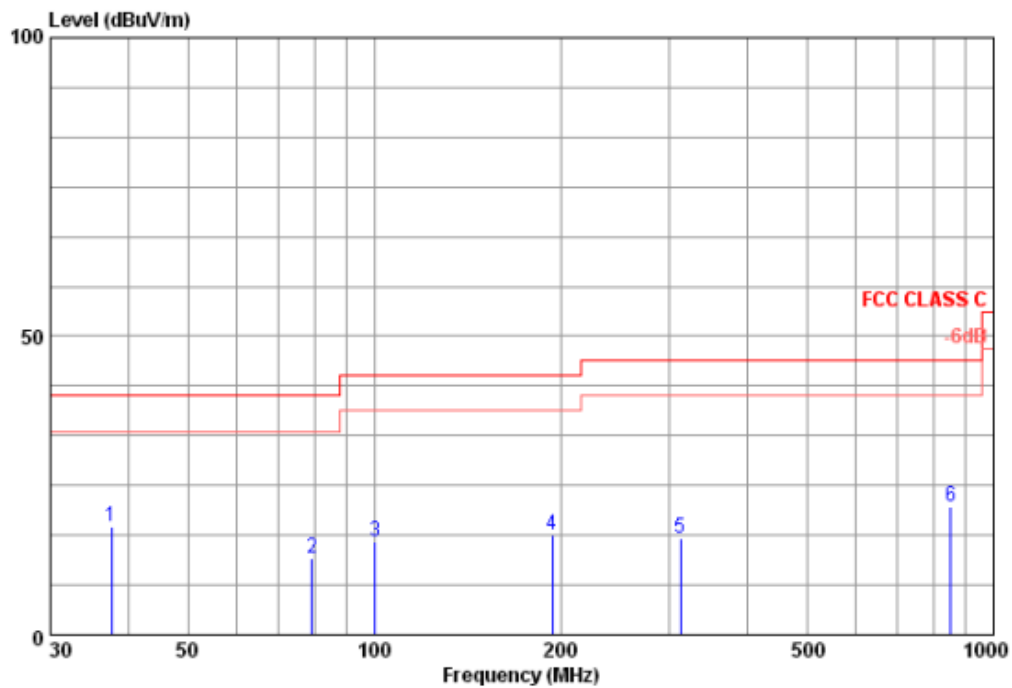


Radiated Emission 1GHz-18GHz Vertical



Remark: Marker #2 is Fundamental signal which can be ignored

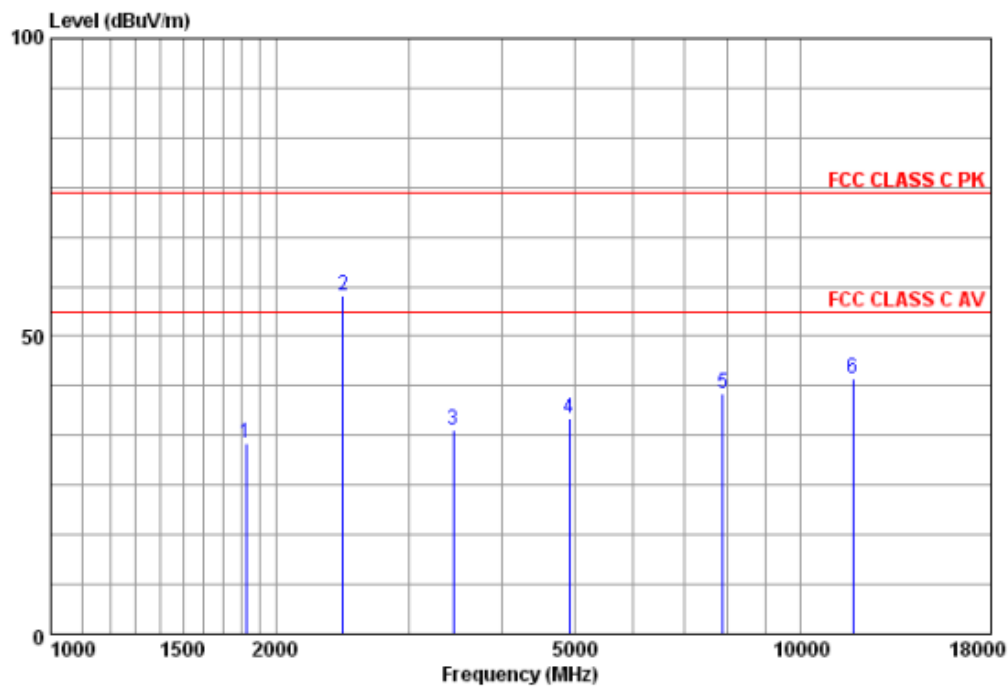
Radiated Emission 30MHz-1GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C 3m 2011 HL562 HORIZONTAL
 : REW:120.000KHz VBW:300.000KHz SWT:Auto
 ext : phone M4 SS1010
 mode : N CH11
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	
	Freq	Factor	Level	Level	Loss	Line	Limit			Remark
	MHz	dB/m	dBuV/m	dBuV	dB	dBuV/m	dB	cm	deg	
1	37.68	15.20	18.23	29.01	27.07	1.09	40.00	-21.77	200	0 Peak
2	79.24	8.10	12.84	30.55	27.25	1.44	40.00	-27.16	200	0 Peak
3	100.23	8.86	15.69	32.36	27.21	1.68	43.50	-27.81	200	0 Peak
4	193.77	7.24	16.69	33.78	26.64	2.31	43.50	-26.81	200	0 Peak
5	312.18	11.37	16.05	28.19	26.43	2.92	46.00	-29.95	200	0 Peak
6	854.02	20.04	21.49	23.99	27.51	4.97	46.00	-24.51	200	0 Peak

Radiated Emission 1GHz-18GHz Horizontal



Site : 966 CHAMBER
 Condition : FCC CLASS C PK 3m HP906 HORIZONTAL
 : RBW:1000.000KHz VBW:1000.000KHz SWT:Auto
 ext : GSM MOBILE PHONE
 mode : WIFI N CH11+Adapter
 memo :

	Antenna		Read	Preamp	Cable	Limit	Over	A/Pos	T/Pos	Remark
	Freq	Factor	Level	Level	Factor	Loss	Line	Limit		
	MHz	dB/m	dBuV/m	dBuV	dB	dB	dBuV/m	dB	cm	deg
1	1824.30	26.31	32.16	46.87	44.86	3.84	74.00	-41.84	200	0 Peak
2	2456.91	27.66	56.72	69.64	45.07	4.49	74.00	-17.28	200	0 Peak
3	3445.54	30.55	34.21	42.31	44.27	5.62	74.00	-39.79	200	0 Peak
4	4930.72	32.55	36.15	40.91	43.74	6.43	74.00	-37.85	200	0 Peak
5	7898.05	35.52	40.43	39.38	42.80	8.33	74.00	-33.57	200	0 Peak
6	11769.21	37.85	42.90	36.69	41.98	10.34	74.00	-31.10	200	0 Peak

Remark: Marker #2 is Fundamental signal which can be ignored

3.6.7 Radiated Emission Measurement Results (18GHz-25GHz)

Test Engineer :	Hogan. He	Temperature :	23℃~26℃
		Relative Humidity :	35%~60%

Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Notes:

The amplitude of radiated emissions that are attenuated by more than 20dB below the permissible value has no need to be reported. The measurement performed at 1meter distance from turn table to antenna.

4 List of Measuring Equipment

No	Instrument/Ancillary	Provider	Type/Model	Cal. Date
01	Base Station	R&S	CMU200	2012.12.08
02	Spectrum Analyzer	R&S	FSP30(9kHz~30GHz)	2012.07.19
03	Antenna	R&S	HL562 (30M-1G)	2012.11.09
04	Loop Antenna	Schwarzbeck	FMZB1516(9KHz~30MHz)	2013.02.03
05	Antenna	R&S	HF906(1G-18G)	2012.08.02
06	Antenna	Schwarzbeck	BBHA 9170 (15G-26.5G)	2012.11.09
07	High Pass Filter	R&S	System Integrated	2012.11.14
08	Thermal chamber	Hitachi	EC- 85MHP	2012.12.25
09	Pre-Amplifier	Agilent	83006A(0.01GHz-26.5GHz)	2012.08.06
10	Pre-Amplifier	Agilent	83006A(0.01GHz-26.5GHz)	2012.08.06
11	Helical Antenna	ETS	3102 (1G-10G)	NCR
12	Power Meter	R&S	NRP(10MHz~8GHz)	2012.12.05
13	Relay Switch	R&S	TS-REMI	NCR
14	Signal Generator	R&S	SMR20(10MHz-20 GHz)	2012.12.08
15	LISN	ROHDE&SCHWARZ	ENV216 TWO-LINE V-NETWORK	2012.11.13
16	Power Meter	Agilent	E4418B (EPM Series)	2012.12.08
17	Power Sensor	Agilent	E4412A (E-series CW)	

5 Ancillary Equipment List

Product	Manufacturer	Model No.	Serial No.	FCC approval	Power Cord
Wlan AP	D-Link	DWL-2000 AP+A	B2D3161002856	KA2DWLG700APB 1	AC: I/P: Unshielded 1.8m DC:O/P: Unshielded 1.8m
Bluetooth headset	acer	S100FBT	N/A	HLZDMS100FBT	N/A

6 Uncertainty Evaluation

6.1 Uncertainty of Radiated Spurious Emission evaluation (30MHz~1GHz)

Radiated Spurious Emission Measurement Uncertainty Evaluation					
Contribution		Probability Distribution	Partition Coefficient	u(xi)	
				Horizontal 30-1000MHz	Vertical 30-1000MHz
Cable Loss Calibration	U ₀₁	U-Shape	1.41	0.16	0.16
Sine wave voltage accuracy of Spectrum analyzer	U ₀₂	Triangle	2.45	0.82	0.82
Impulse response of spectrum analyzer	U ₀₃	Triangle	2.45	0.61	0.61
Pulse repetition rate of spectrum analyzer	U ₀₄	Triangle	2.45	0.61	0.61
Spectrum analyzer noise level	U ₀₅	Normal	2.00	0.25	0.25
Measurement of the signal path mismatch	U ₀₆	U-Shape	1.41	0.28	0.28
Free-space antenna factor	U ₀₇	Normal	2.00	0.70	0.70
Antenna Factor Interpolation for Frequency	U ₀₈	Rectangular	1.73	0.17	0.17
Antenna factor with height in the correlation	U ₀₉	Rectangular	1.73	0.17	0.17
Measurement antenna and the absorbing material lin the image of the mutual coupling effect	U ₁₀	Rectangular	1.73	0.58	0.58
Antenna phase center variation	U ₁₁	Rectangular	1.73	0.13	0.13
Antenna cross polarization response	U ₁₂	Rectangular	1.73	0.52	0.52
Antenna imbalance	U ₁₃	Rectangular	1.73	0.52	0.52
Test distance error	U ₁₄	Rectangular	2.45	1.02	1.22
Desktop terrain clearance variation	U ₁₅	Normal	1.73	0.17	0.17
Random uncertainty	U ₁₆	Standard deviation	2.00	0.05	0.05
Pre-Amplifier gain Calibration	U ₁₇	U-Shape	1.00	0.10	0.11
Combined Standard Uncertainty U _c (y)	U _c	Normal	1.00	2.03	2.14
Measuring Uncertainty for a level of Confidence of 95%(U=2U _c (y))	U=kU _c	Normal	k	4.05	4.28

6.2 Uncertainty of Radiated Spurious Emission evaluation (1GHz~26.5GHz)

Radiated Spurious Emission Measurement Uncertainty Evaluation					
Contribution		Probability Distribution	Partition Coefficient	u(xi)	
				Horizontal 1-26.5GHz	Vertical 1-26.5GHz
Cable Loss Calibration	U01	U-Shape	2.00	0.04	0.04
Sine wave voltage accuracy of Spectrum analyzer	U02	Triangle	2.45	0.82	0.82
Impulse response of spectrum analyzer	U03	Triangle	2.45	0.61	0.61
Pulse repetition rate of spectrum analyzer	U04	Triangle	2.45	0.61	0.61
Spectrum analyzer noise level	U05	Normal	2.00	0.25	0.25
Measurement of the signal path mismatch	U06	U-Shape	1.41	0.69	0.69
Free-space antenna factor	U07	Normal	2.00	0.50	0.50
Antenna Factor Interpolation for Frequency	U08	Rectangular	1.73	0.17	0.17
Antenna factor with height in the correlation	U09	Rectangular	1.73	NA	NA
Measurement antenna and the absorbing material in the image of the mutual coupling effect	U10	Rectangular	1.73	0.58	0.58
Antenna phase center variation	U11	Rectangular	1.73	0.13	0.13
Antenna cross polarization response	U12	Rectangular	1.73	0.52	0.52
Antenna imbalance	U13	Rectangular	1.73	0.52	0.52
Test distance error	U14	Rectangular	2.45	2.36	2.36
Desktop terrain clearance variation	U15	Normal	1.73	0.17	0.17
Random uncertainty	U16	Standard deviation	2.00	0.05	0.05
Pre-Amplifier gain Calibration	U17	U-Shape	1.00	0.09	0.10
Combined Standard Uncertainty Uc(y)	Uc	Normal	1.00	2.95	2.96
Measuring Uncertainty for a level of Confidence of 95%(U=2Uc(y))	U=kUc	Normal	k	5.91	5.92