



Part 15C

TEST REPORT

Product Name	CDMA/LTE Smart phone
Model Name	HUAWEI H882L,H882L,Marina,Y301-A3
FCC ID	QISH882L
Client	Huawei Technologies Co., Ltd.
Manufacturer	Huawei Technologies Co., Ltd.
Date of issue	March 19, 2013

TA Technology (Shanghai) Co., Ltd.

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GENERAL SUMMARY

Reference Standard(s)	FCC CFR47 Part 15C (2012) Radio Frequency Devices 15.205 Restricted bands of operation; 15.207 Conducted limits; 15.209 Radiated emission limits; general requirements; 15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850MHz. ANSI C63.4 Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40GHz. (2009) KDB 558074 D01 DTS Meas Guidance v02 Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment: Pass
Comment	The test result only responds to the measured sample.

Approved by 杨伟中
Director

Revised by 唐凯
RF Manager

Performed by 康玲玲
RF Engineer

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1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS), and accreditation number: L2264.

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements. The site recognition number is 428261.

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement. The site recognition number is 8510A.

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

If the electrical report is inconsistent with the printed one, it should be subject to the latter.

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1.2. Testing laboratory

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Yang Weizhong
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: yangweizhong@ta-shanghai.com

1.3. Applicant Information

Company: Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District
City: Shenzhen
Postal Code: 518129
Country: P.R. China

1.4. Manufacturer Information

Company: Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District
City: Shenzhen
Postal Code: 518129
Country: P.R.China

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1.5. Information of EUT

General information

Name of EUT:	CDMA/LTE Smart phone
IMEI:	99000298000408
Hardware Version:	HL1C8833LM
Software Version:	H882L V100R001C378B160
Antenna Type:	Internal Antenna
Device Operating Configurations:	
Network Standards:	802.11b, 802.11g, 802.11n(HT20); (tested)
Test Modulation:	(802.11b)DSSS; (802.11g)OFDM 802.11n(HT20)
Power Supply:	Battery or Adapter
Max Conducted Power	17.81 dBm
Operating Frequency Range(s)	2400MHz~ 2483.5 MHz

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Auxiliary Equipment Details

AE1: Battery 1

Model: HB4W1H
Manufacturer: Huawei Technologies Co., Ltd.
S/N: MAICB01X19110345

AE2: Battery 2

Model: HB4W1H
Manufacturer: Huawei Technologies Co., Ltd.
S/N: MPCCA25919100658

AE3: Adapter 1

Model: HW-050100U2W
Manufacturer: Huawei Technologies Co., Ltd.
S/N: HWBYAAC71603712

AE4: Adapter 2

Model: HW-050100U2W
Manufacturer: Huawei Technologies Co., Ltd.
S/N: HWHKAACA2815804

AE5: Adapter 3

Model: HW-050100U1W
Manufacturer: Huawei Technologies Co., Ltd.
S/N: TPACB0219072

AE6: Adapter 4

Model: HW-050100U1W
Manufacturer: Huawei Technologies Co., Ltd.
S/N: HKAC10619057

Equipment Under Test (EUT) is a CDMA/LTE Smart phone with internal antenna. The detail about these is in chapter 1.5 in this report. The EUT supports WiFi.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test is performed from February 23, 2013 to March 1, 2013.

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2. Test Information

2.1. Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) with Adapter 1 and the worst case was recorded.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.3.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests.

Results of test modes, data rates and test channels are shown as following table.

	Test items	Modes	Data Rate	Test channel
Conducted Test cases	Peak Power Output –Conducted	802.11b	All	1/6/11
		802.11g	All	1/6/11
		802.11n HT20	All	1/6/11
	Minimum 6dB bandwidth	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
	Band Edges compliance	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
	Power spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
	Conducted Emissions	802.11b	1 Mbps	6
		802.11g	6 Mbps	6
		802.11n HT20	MCS0	6
Radiated Test cases	Spurious Radiated Emissions in the restricted band	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
	Radiates Emission	802.11b	1 Mbps	6
		802.11g	6 Mbps	6
		802.11n HT20	MCS0	6

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2.2. Summary of test results

Number	Summary of measurements of results	Clause in FCC rules	Verdict
1	Peak Power Output –Conducted	15.247(b)(3)	PASS
2	Minimum 6dB bandwidth	15.247(a)(2)	PASS
3	Band Edges compliance	15.247(d)	PASS
4	Spurious Radiated Emissions in the restricted band	15.247(d),15.205,15.209	PASS
5	Power spectral Density	15.247(e)	PASS
6	Conducted Spurious Emission	15.247	PASS
7	Radiates Emission	15.247(d),15.205,15.209	PASS
8	Conducted Emissions	15.207,15.107	PASS

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2.3. Peak Power Output –Conducted

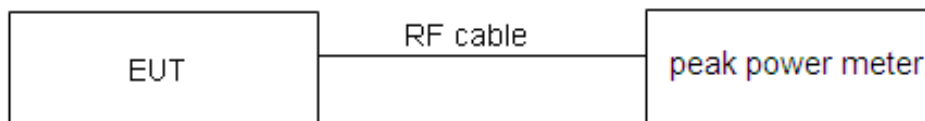
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~ 25°C	45% ~ 50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the peak power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use 5.2.1 Maximum Peak Conducted Output Power Level Method in KDB 558074 D01 for this test.

Test Setup



Limits

Rule Part 15.247 (b) (3) specifies that " For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt."

Peak Output Power	$\leq 1\text{W}$ (30dBm)
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.44$ dB.

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Test Results: Pass

Network Standards	Data Rate	Peak Output Power (dBm)		
		CH 1	CH 6	CH 11
802.11b	1 Mbps	17.25	17.81	17.15
	2 Mbps	17.32	17.68	17.06
	5.5 Mbps	16.92	16.34	16.83
	11 Mbps	17.17	17.35	17.02
802.11g	6 Mbps	14.62	13.57	14.62
	9 Mbps	14.59	13.31	14.55
	12 Mbps	14.56	13.00	13.92
	18 Mbps	14.53	12.95	13.87
	24 Mbps	14.10	12.25	13.51
	36 Mbps	13.00	11.47	12.62
	48 Mbps	12.47	10.90	12.05
	54 Mbps	12.25	10.88	11.87
802.11n HT20	MCS0	12.82	13.07	12.41
	MCS1	12.61	13.01	12.37
	MCS2	12.07	12.34	11.66
	MCS3	11.68	12.04	11.37
	MCS4	10.91	11.18	10.56
	MCS5	10.47	10.72	10.10
	MCS6	10.27	10.67	9.82
	MCS7	9.94	10.36	9.63

Note: The maximum output power values are marked in bold.

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2.4. Occupied Bandwidth (6dB)

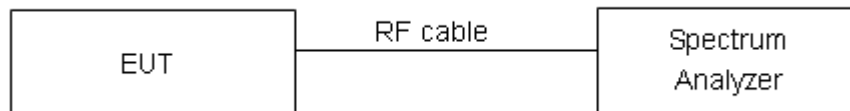
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. RBW is set to 100 kHz, VBW is set to 300 kHz on spectrum analyzer.

Test Setup



Limits

Rule Part 15.247 (a) (2) specifies that “Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.”

minimum 6 dB bandwidth	≥ 500 kHz
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

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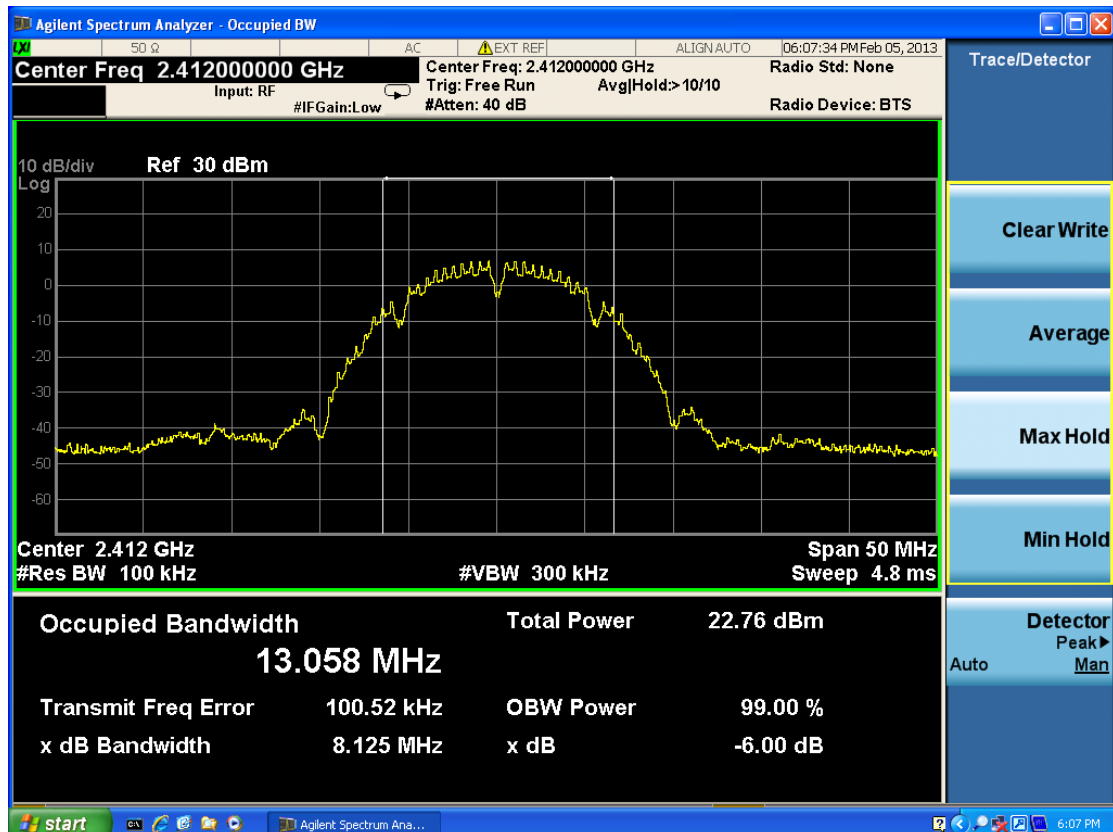
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Test Results:

Network Standards	Carrier frequency (MHz)	Minimum 6 dB bandwidth (MHz)	Conclusion
802.11b	2412	8.125	PASS
	2437	8.112	PASS
	2462	8.600	PASS
802.11g	2412	16.430	PASS
	2437	16.420	PASS
	2462	16.440	PASS
802.11n HT20	2412	17.640	PASS
	2437	17.640	PASS
	2462	17.690	PASS

802.11b



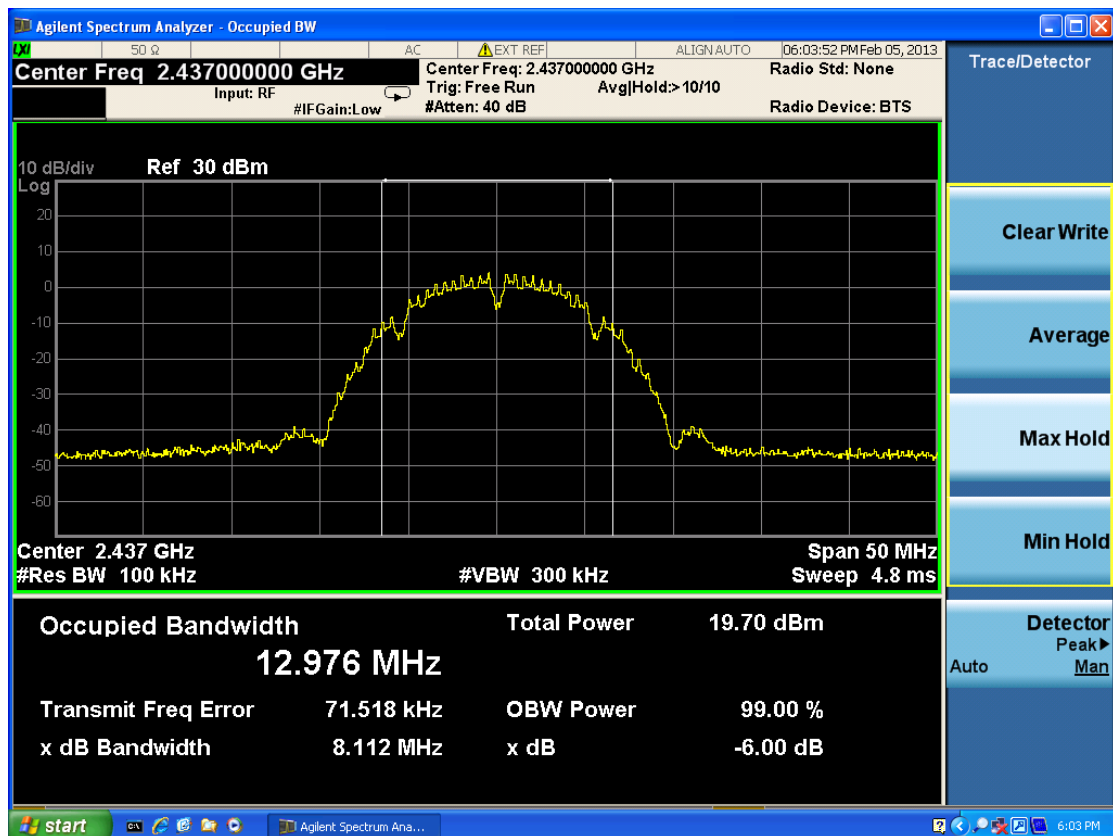
802.11b, Carrier frequency (MHz): 2412

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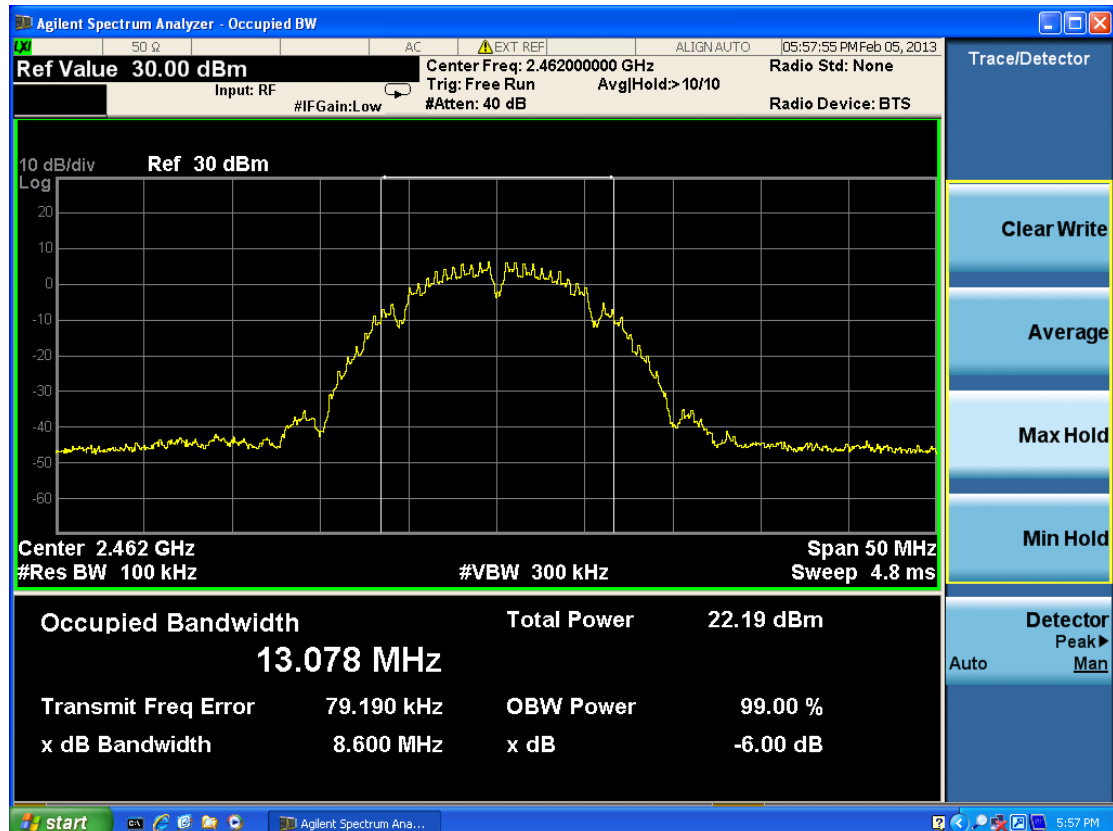
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802.11b, Carrier frequency (MHz): 2437



802.11b, Carrier frequency (MHz): 2462

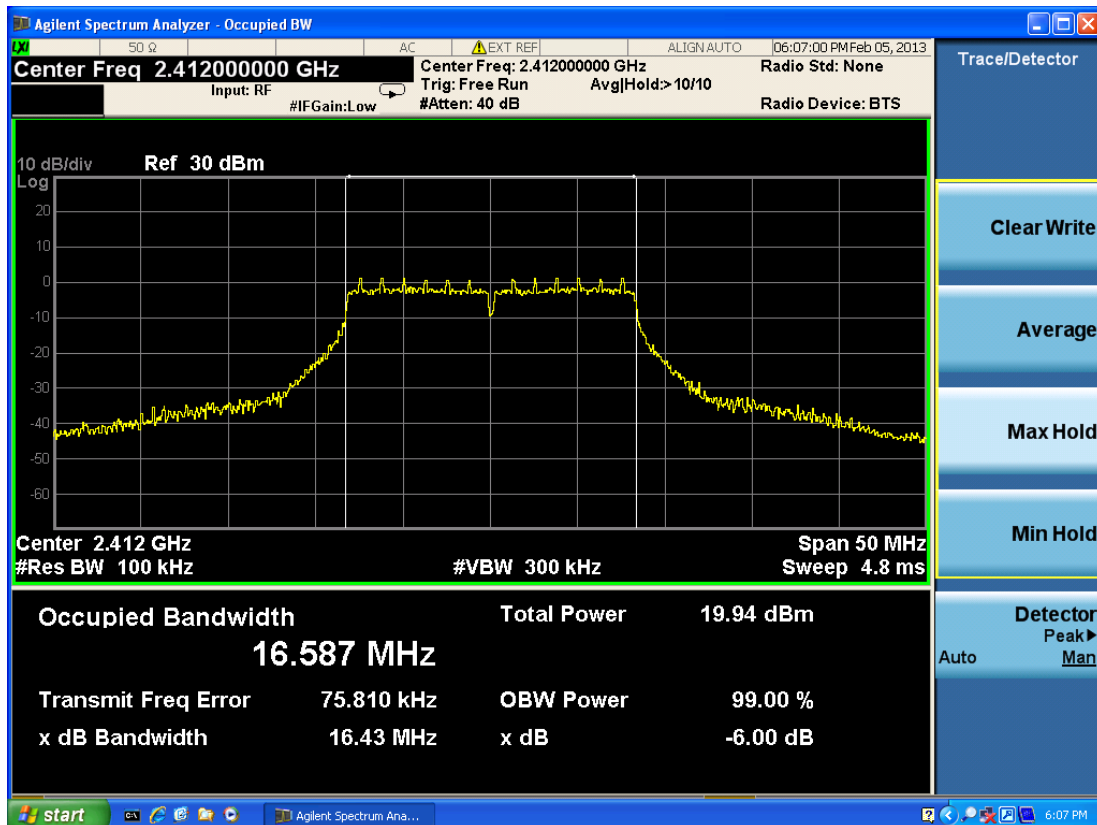
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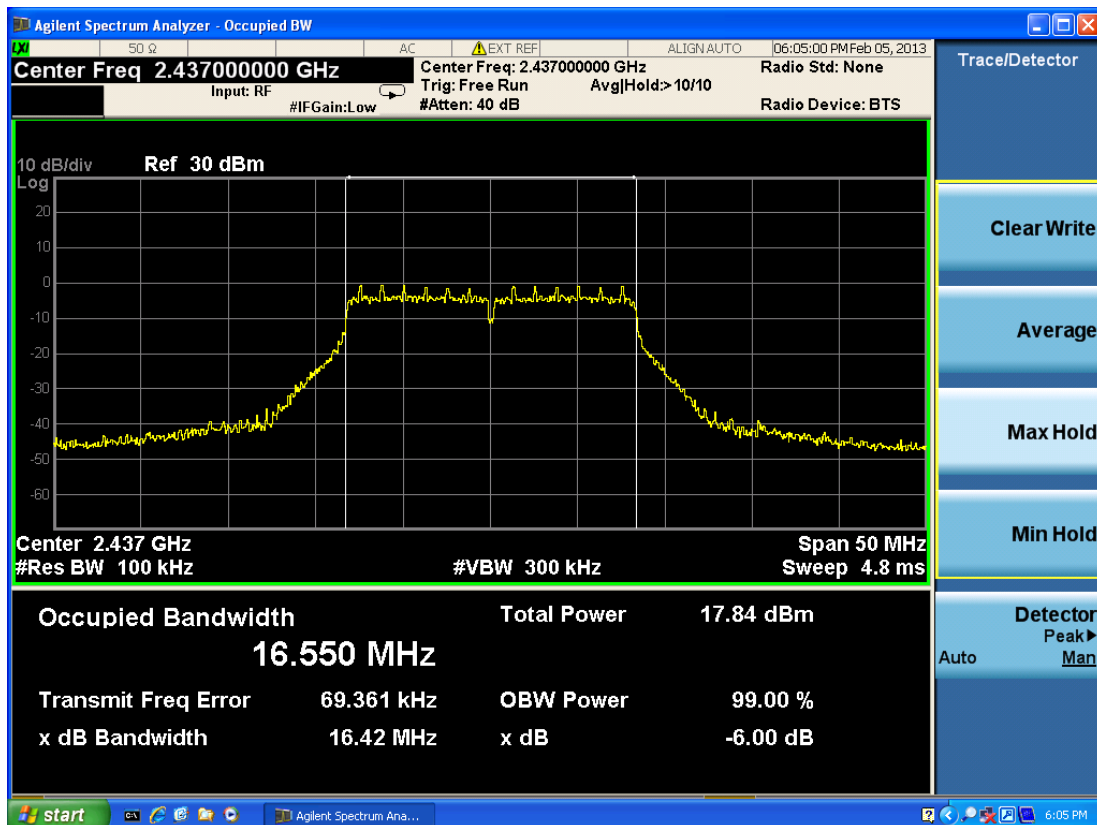
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802.11g



802.11g, Carrier frequency (MHz): 2412



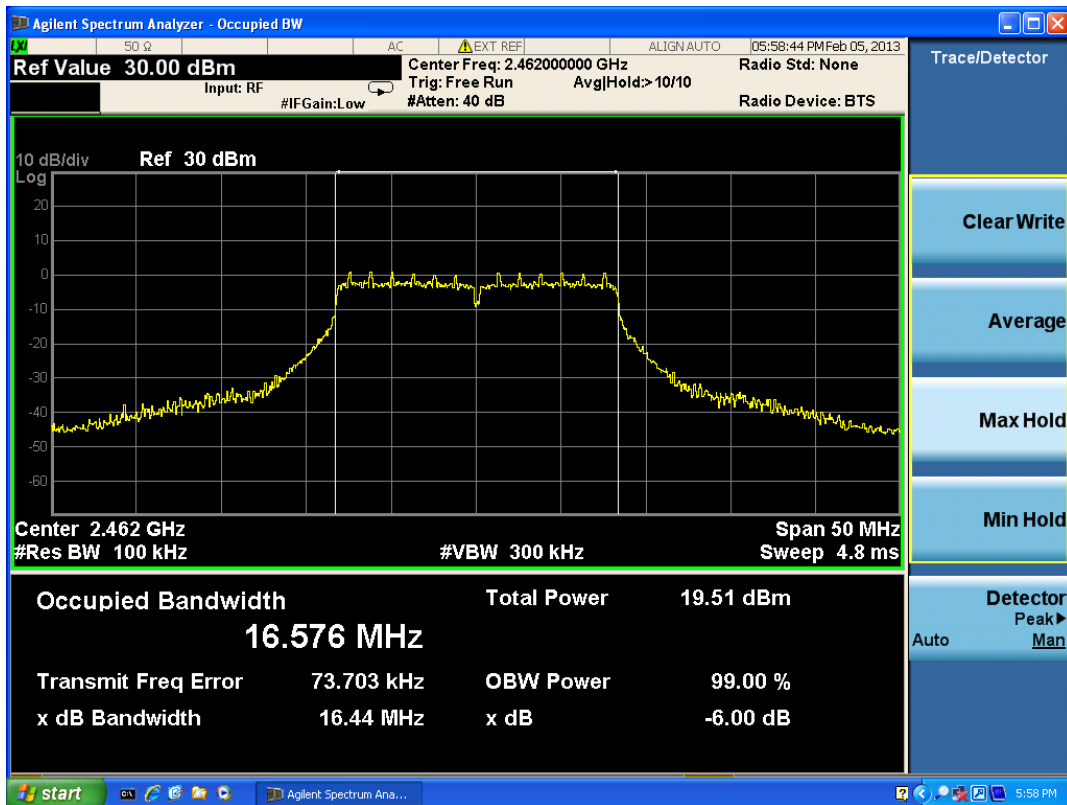
802.11g, Carrier frequency (MHz): 2437

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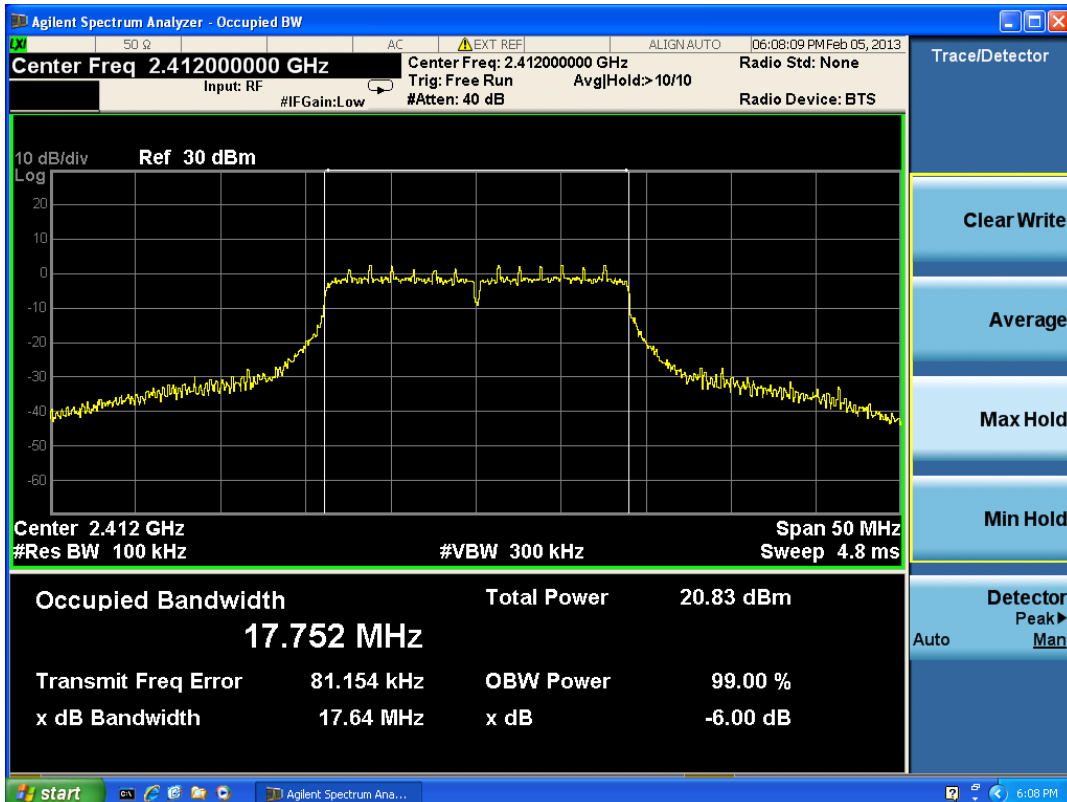
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802.11g, Carrier frequency (MHz):2462

802.11n(HT20)



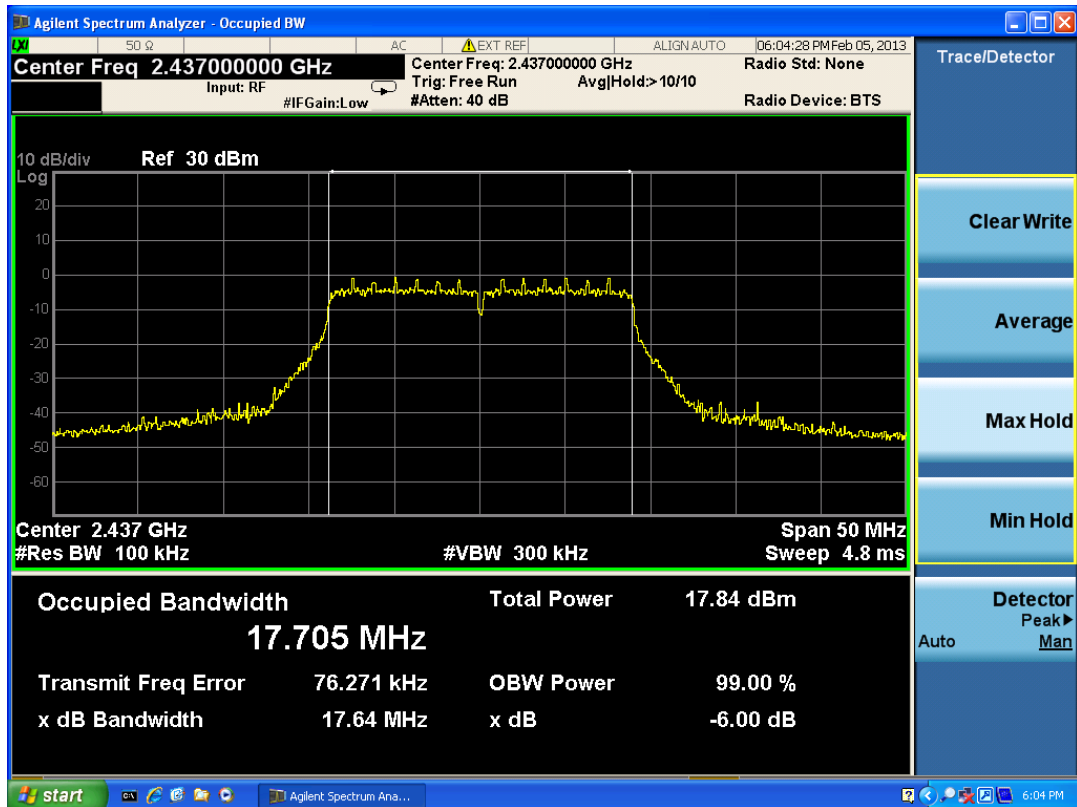
802.11n, Carrier frequency (MHz): 2412

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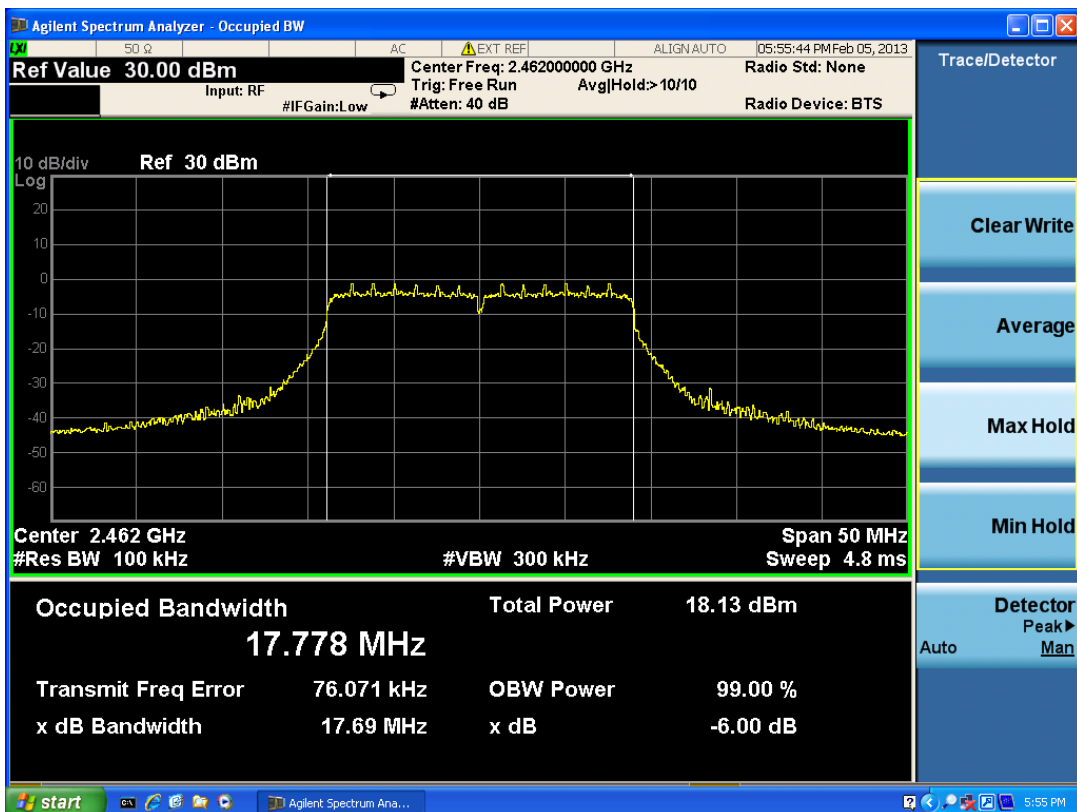
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802.11n, Carrier frequency (MHz): 2437



802.11n, Carrier frequency (MHz): 2462

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2.5. Band Edge Compliance

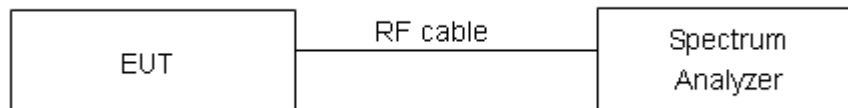
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable the band edge of the lowest and highest channels were measured. The peak detector is used and RBW is set to 100kHz on spectrum analyzer. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 15.247(d) specifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.”

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
2GHz-3GHz	1.407 dB

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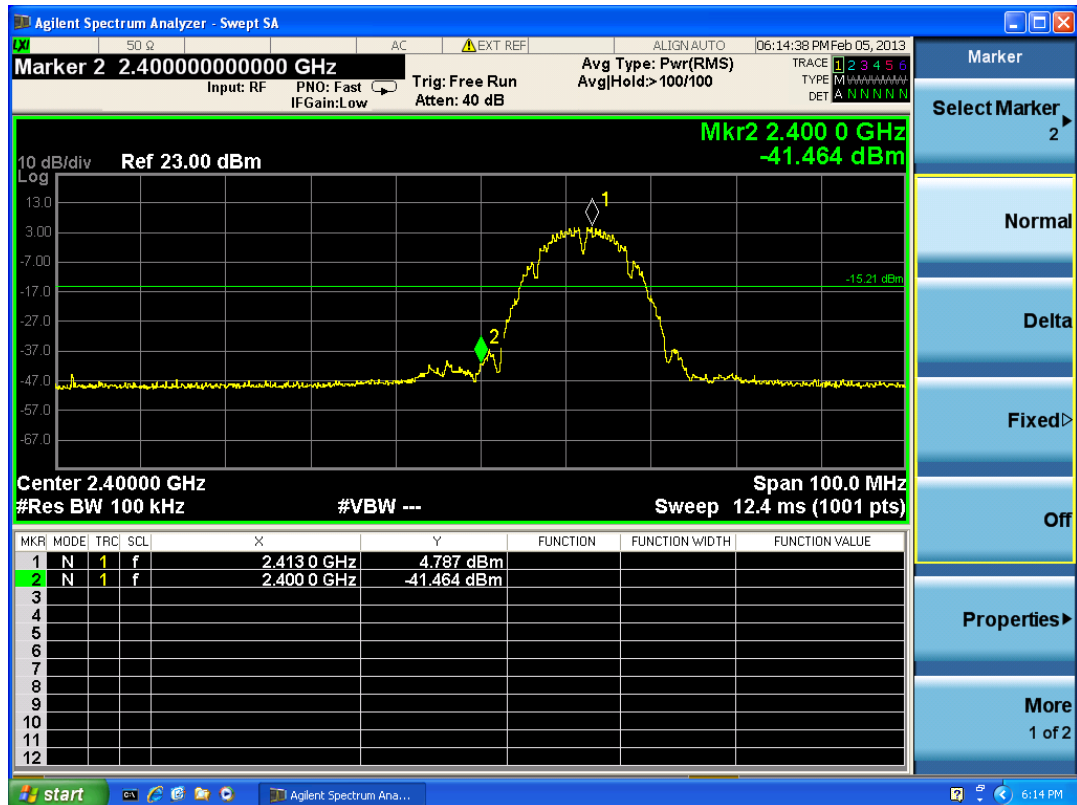
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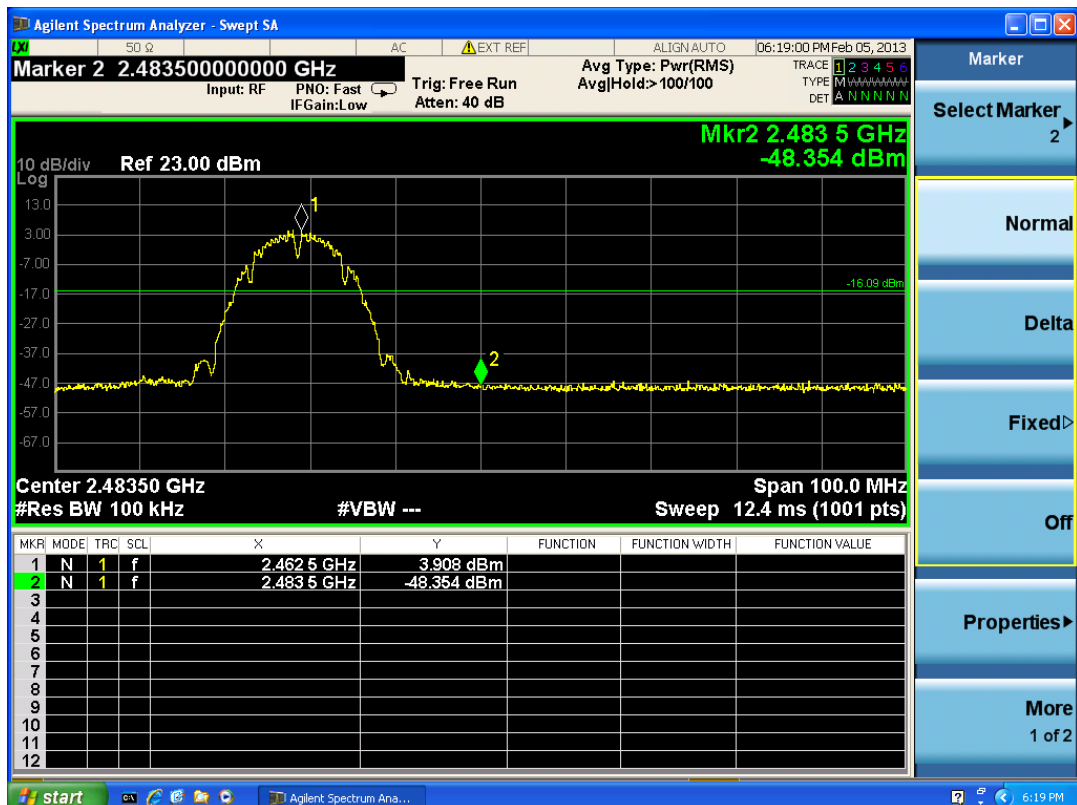
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Test Results: PASS

802.11b



802.11b, Channel No.: 1



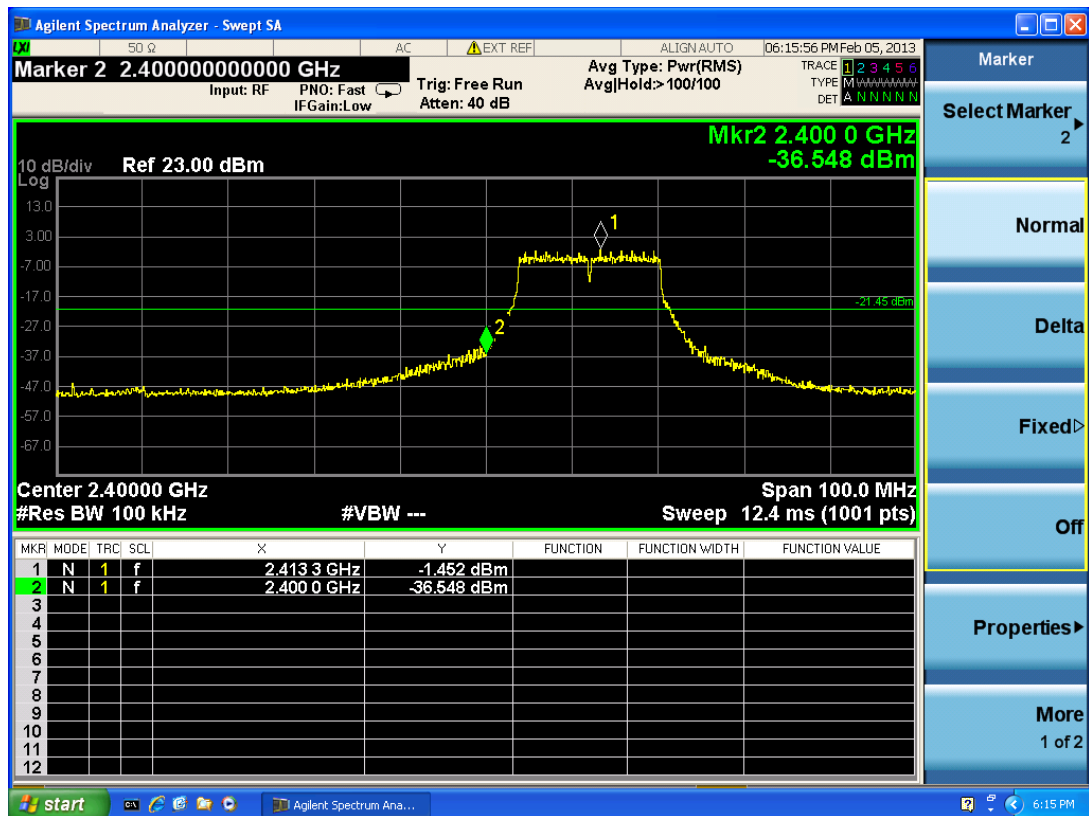
802.11b, Channel No.: 11

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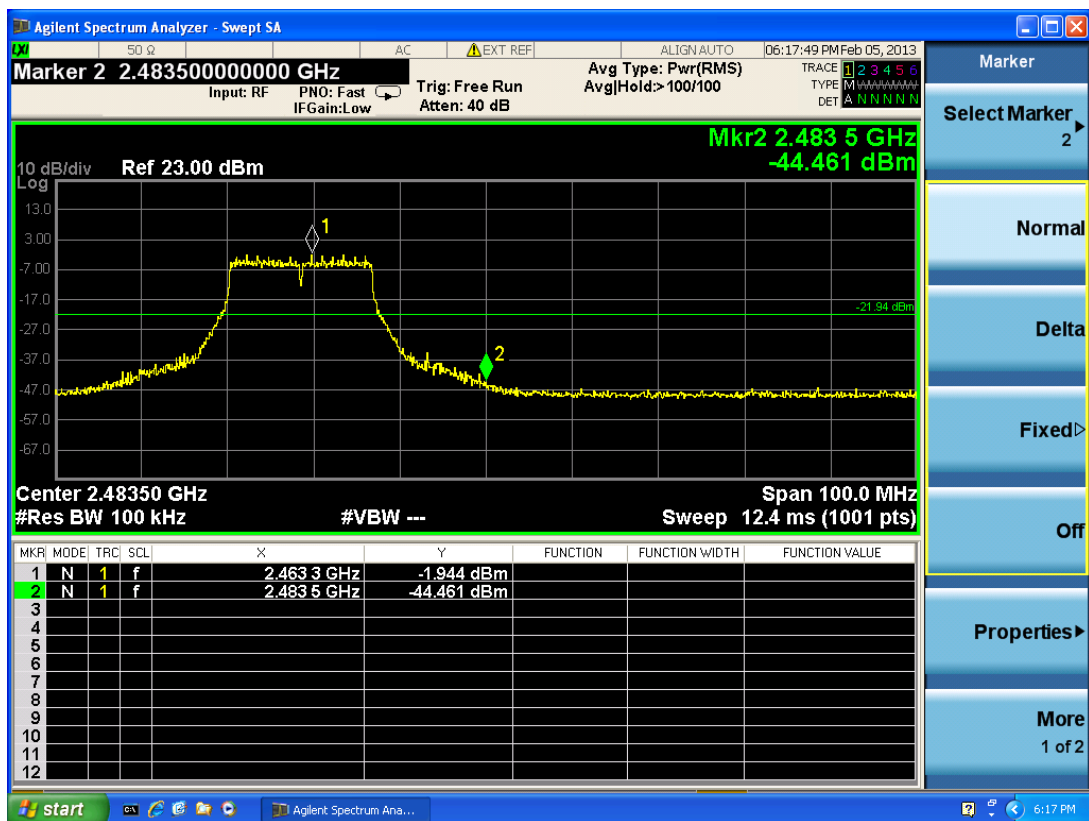
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802.11g



802.11g, Channel No.: 1



802.11g, Channel No.: 11

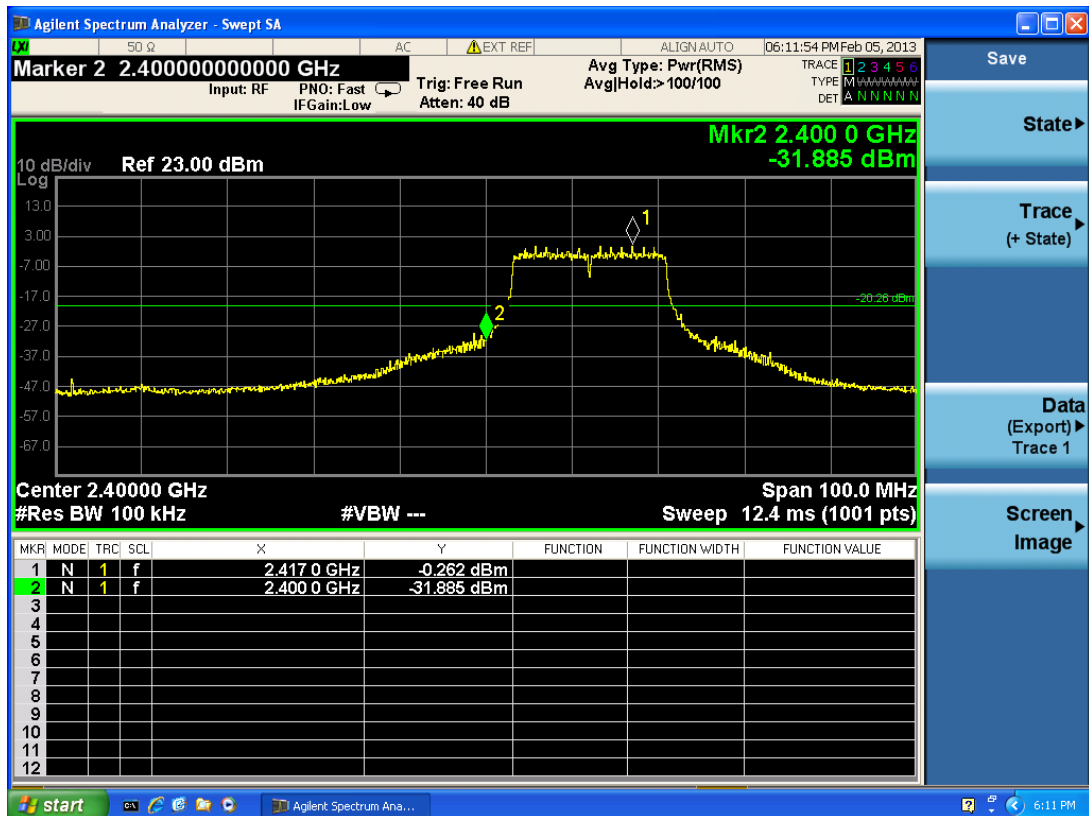
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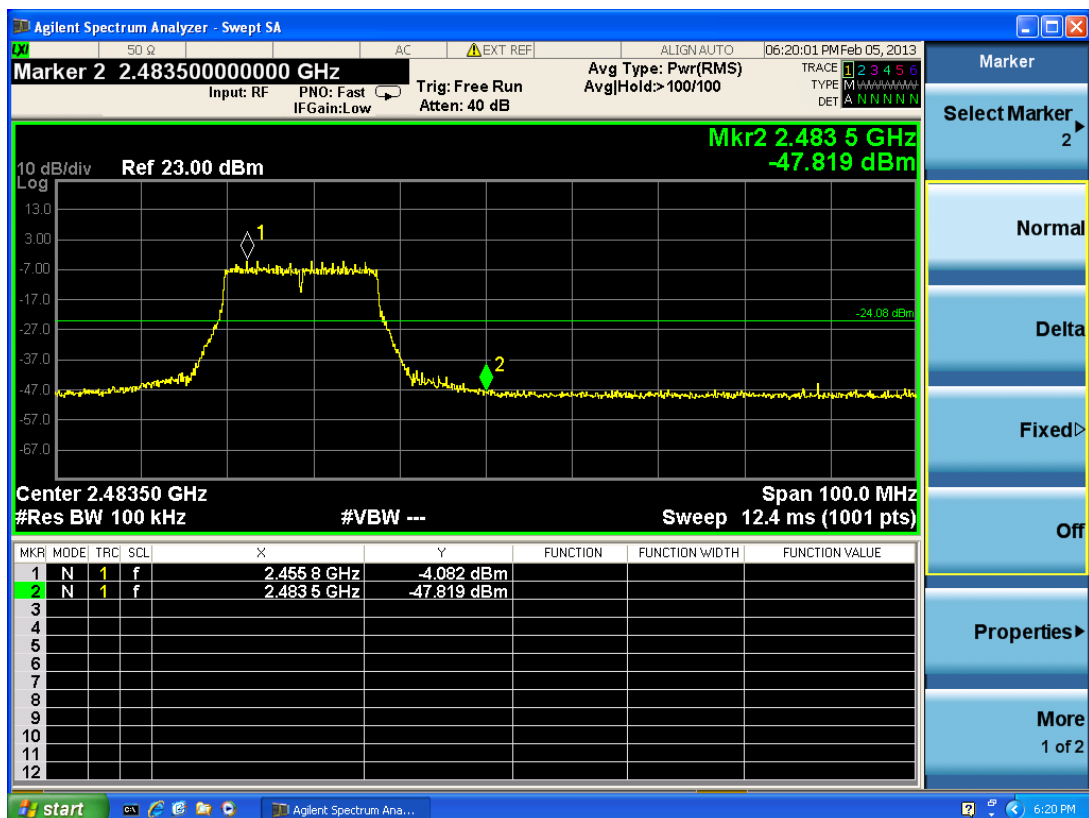
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802.11n(HT20)



802.11n, Channel No.: 1



802.11n, Channel No.: 11

2.6. Spurious Radiated Emissions in the restricted band

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

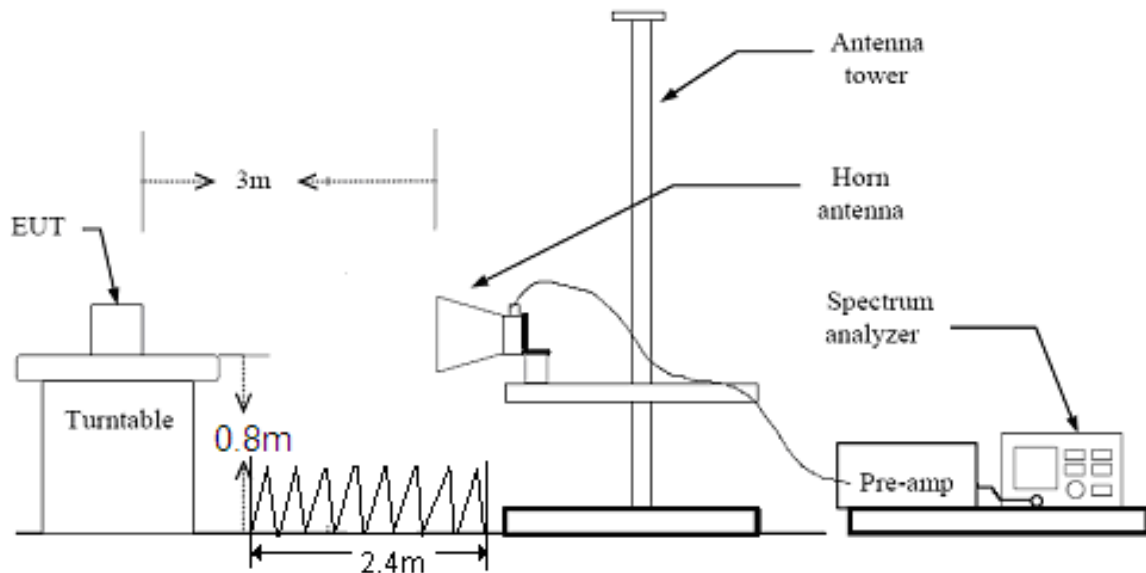
The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. RBW is set to 100kHz. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

- (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
- (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

This setting method can refer to **KDB 558074**.

Test setup



Note: Area side: 2.4mX3.6m

Limits

Spurious Radiated Emissions are permitted in any of the frequency bands listed below:

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MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

Limit in restricted band

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

§15.35(b)

There is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

Peak Limit=74 dBuV/m

Average Limit=54 dBuV/m

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

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Test Results: PASS

Channel.	Fre. (MHz)	Detecti on Type	Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading value (dBuV/m)	Correct Factor (dB)	Antenna Height (m)	Table Angle (Degree)
802.11b, Ch1	2392.08	PK	40.519	74	33.481	45.819	-5.3	1.0	179
802.11b, Ch1	2389.95	AV	36.236	54	17.764	41.536	-5.3	1.0	280
802.11b, Ch 11	2483.31	PK	40.602	74	33.398	45.102	-4.5	1.0	135
802.11b, Ch 11	2483.43	AV	37.632	54	16.368	42.132	-4.5	1.0	45
802.11gCh1	2391.42	PK	40.312	74	33.688	45.612	-5.3	1.0	75
802.11g Ch1	2391.06	AV	36.524	54	17.476	41.824	-5.3	1.0	180
802.11g Ch 11	2483.25	PK	40.234	74	33.766	44.734	-4.5	1.5	45
802.11g Ch 11	2483.25	AV	37.761	54	16.239	42.261	-4.5	1.5	225
802.11n HT20,Ch1	2390.58	PK	39.308	74	34.692	44.608	-5.3	1.0	175
802.11n HT20,Ch1	2391.18	AV	36.205	54	17.795	41.505	-5.3	1.0	90
802.11n HT20,Ch11	2483.20	PK	39.926	74	34.074	44.426	-4.5	1.0	125
802.11n HT20,Ch11	2483.09	AV	36.660	54	17.34	41.160	-4.5	1.0	0

Remark: Value = Reading value + Correction factor

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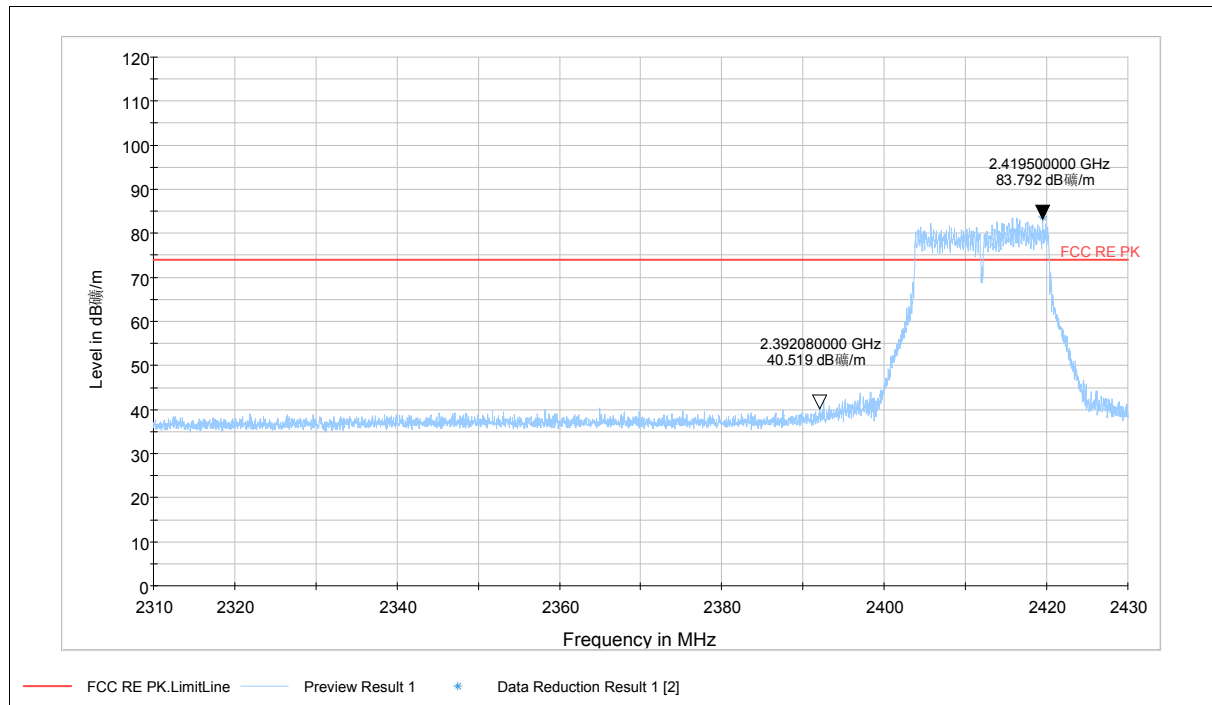
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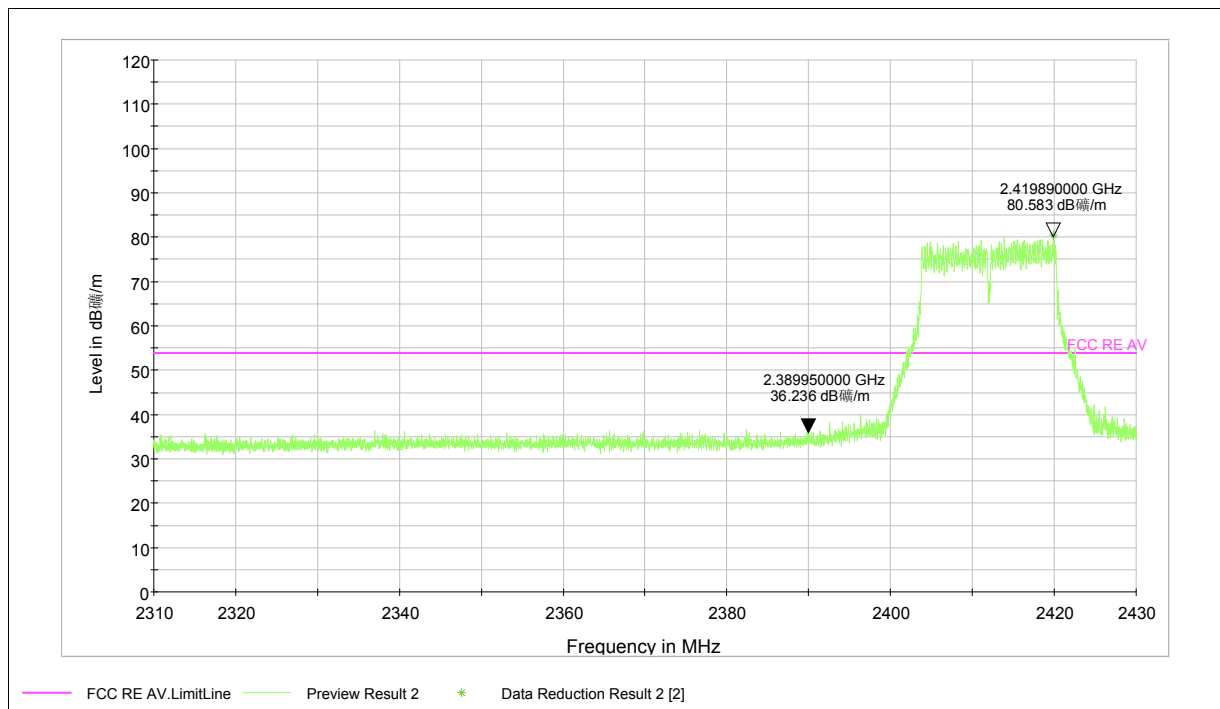
802.11b-Channel 1:

Peak



Note: The signal beyond the limit is carrier
Channel 1

Average



Note: The signal beyond the limit is carrier
Channel 1

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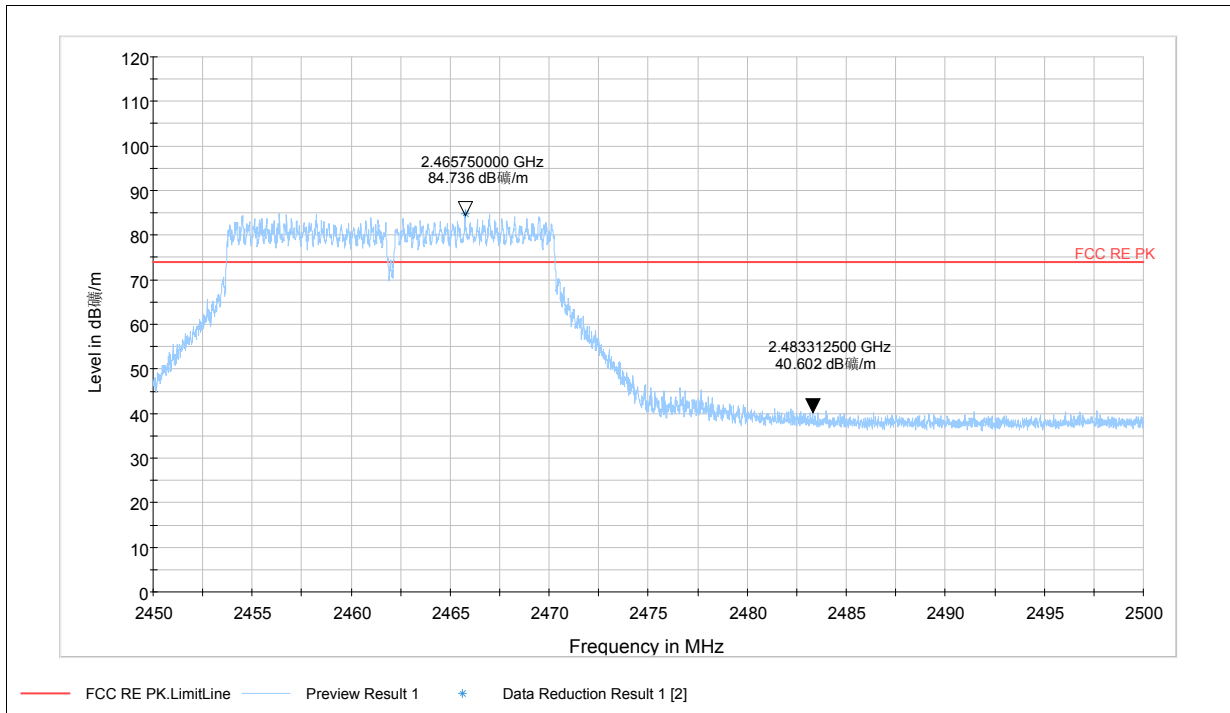
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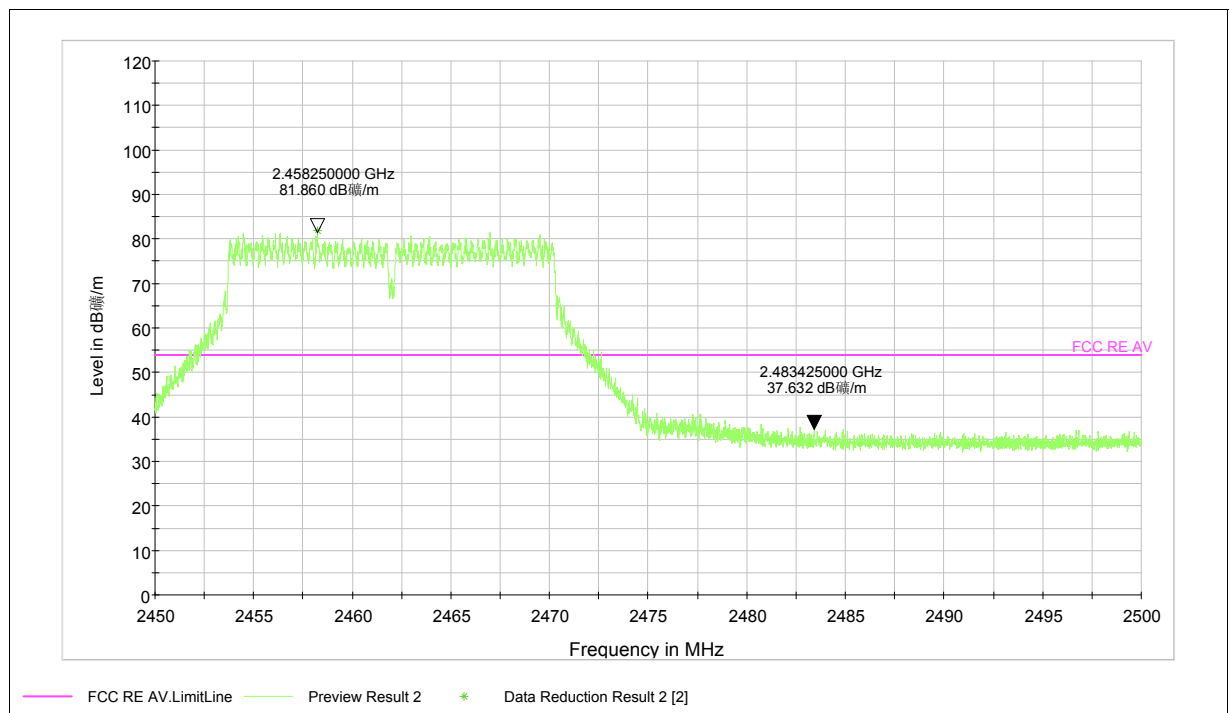
802.11b-Channel 11:

Peak



Note: The signal beyond the limit is carrier
Channel 11

Average



Note: The signal beyond the limit is carrier
Channel 11

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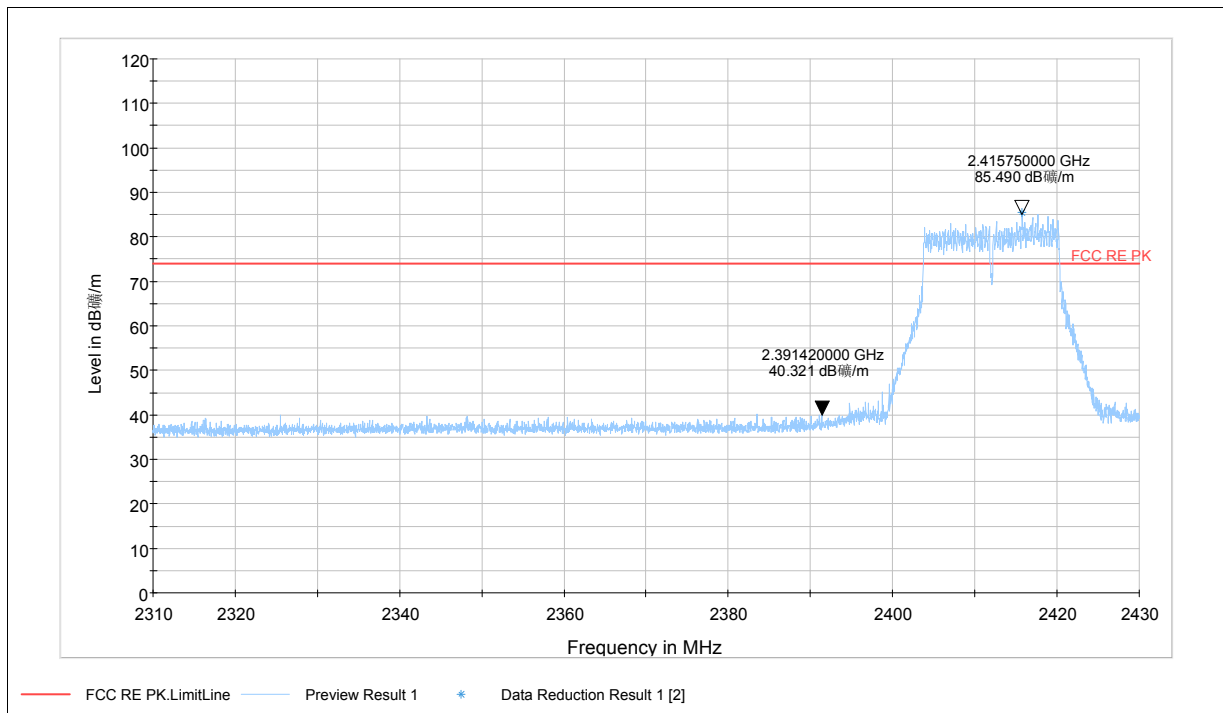
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802.11g-Channel 1:

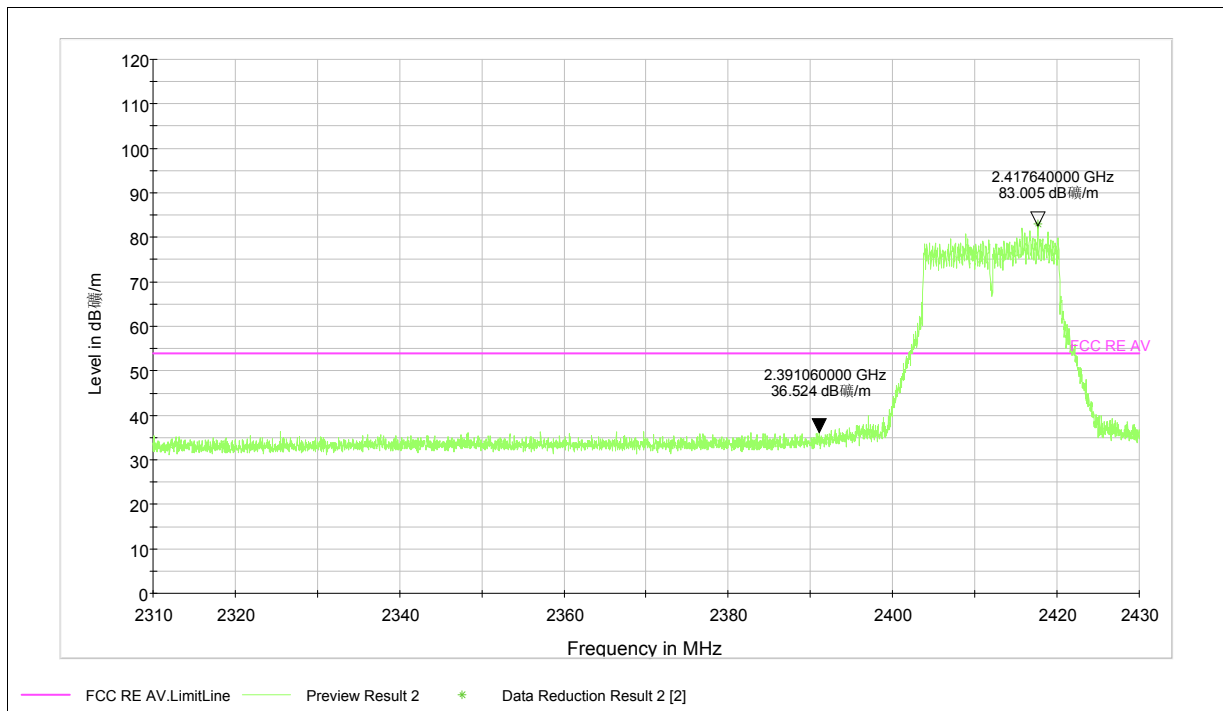
Peak



Note: The signal beyond the limit is carrier

Channel 1

Average



Note: The signal beyond the limit is carrier

Channel 1

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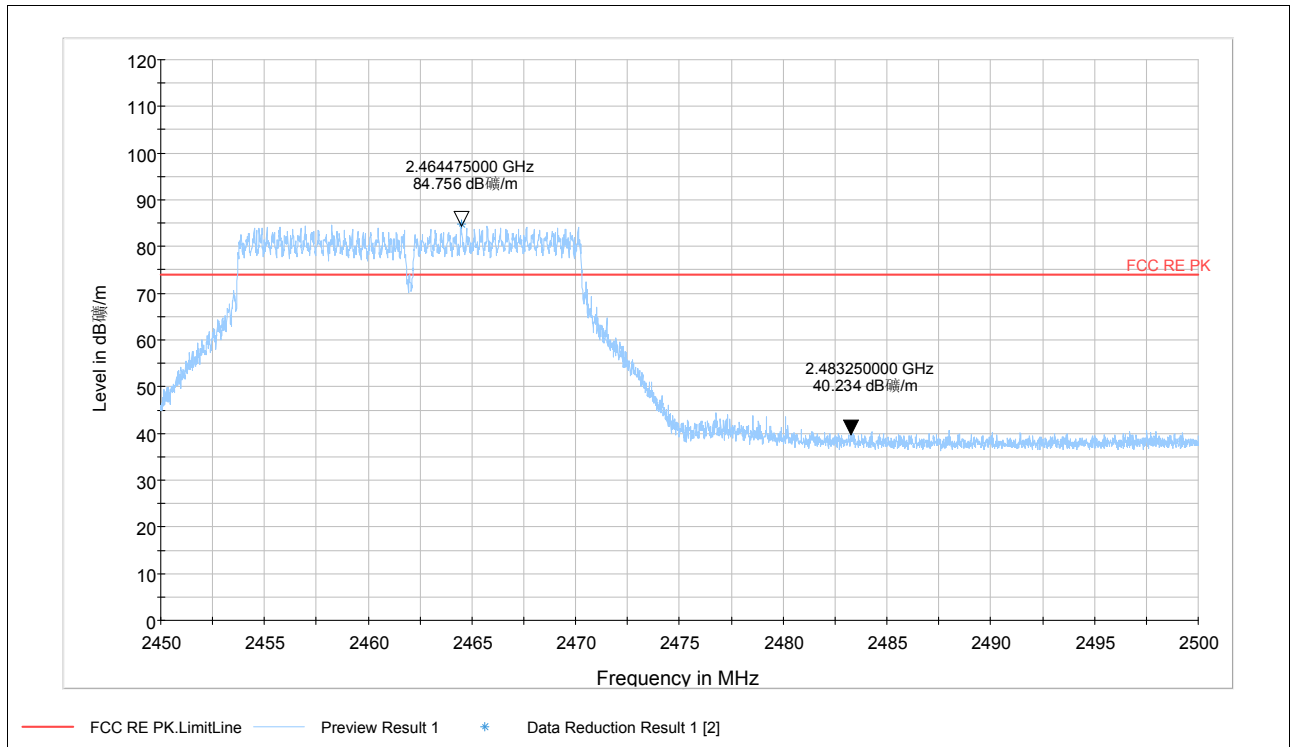
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802.11g-Channel 11:

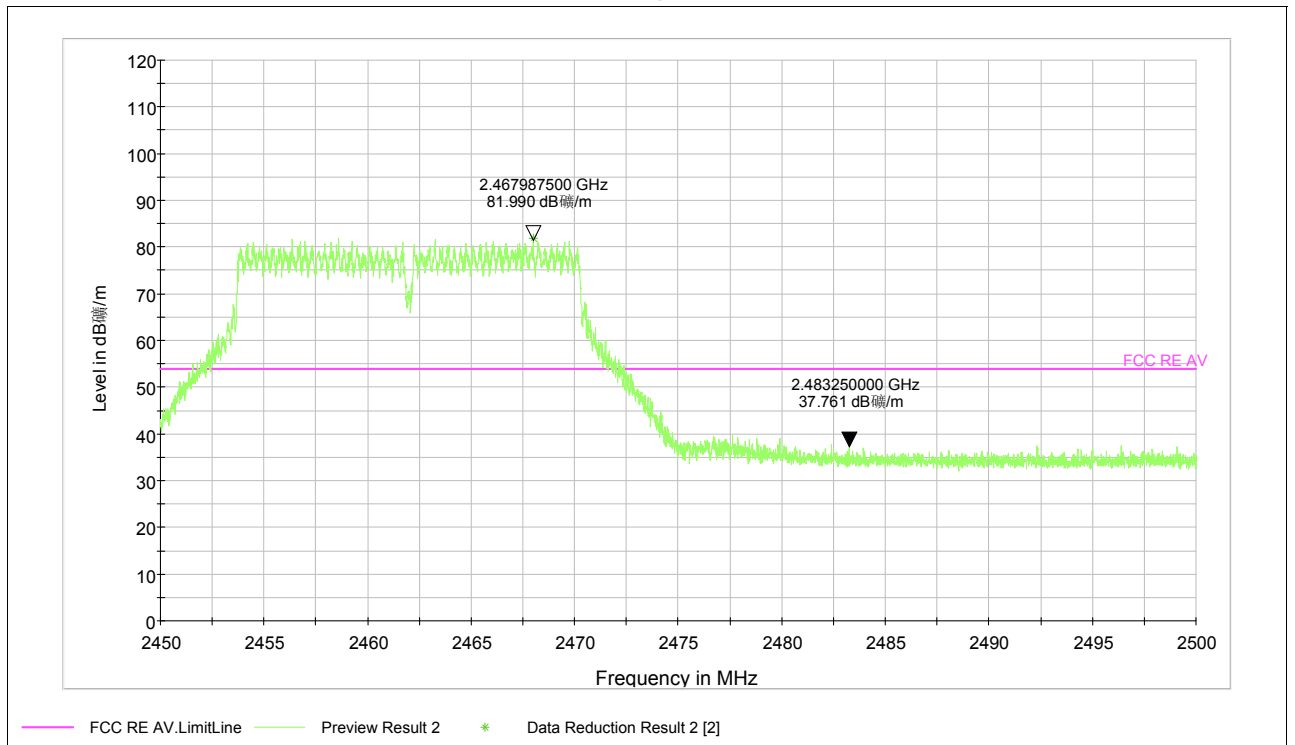
Peak



Note: The signal beyond the limit is carrier

Channel 11

Average



Note: The signal beyond the limit is carrier

Channel 11

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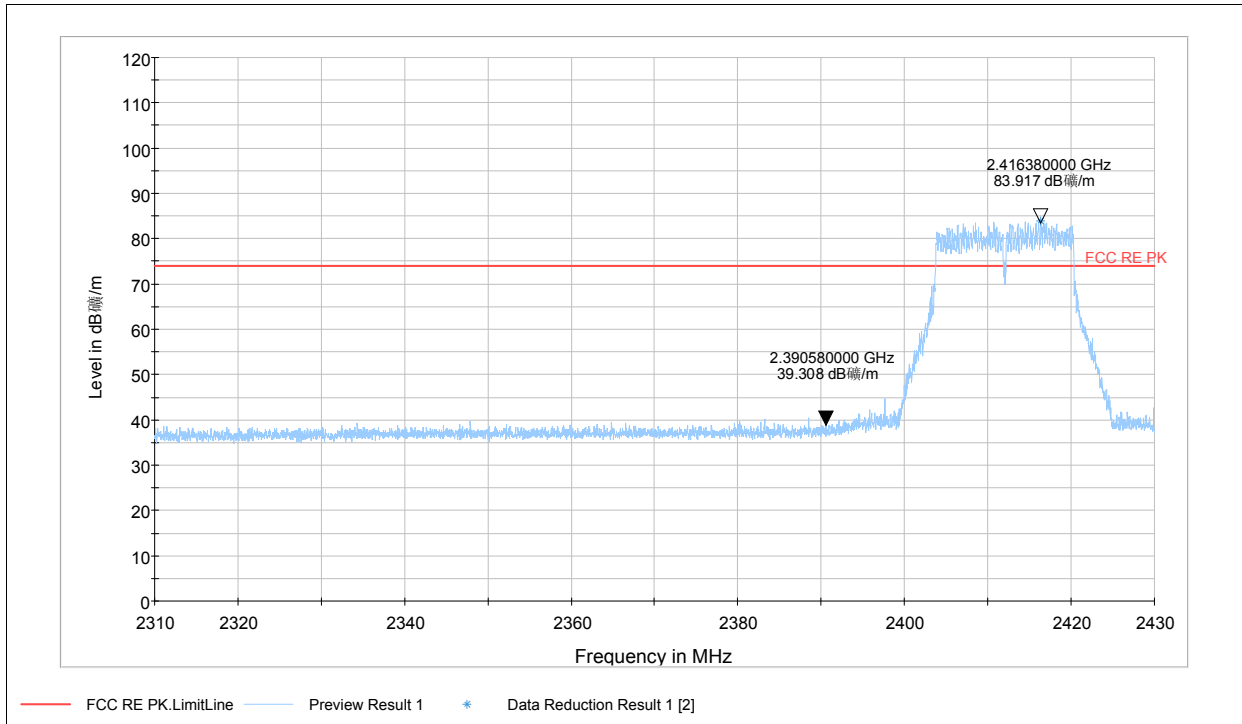
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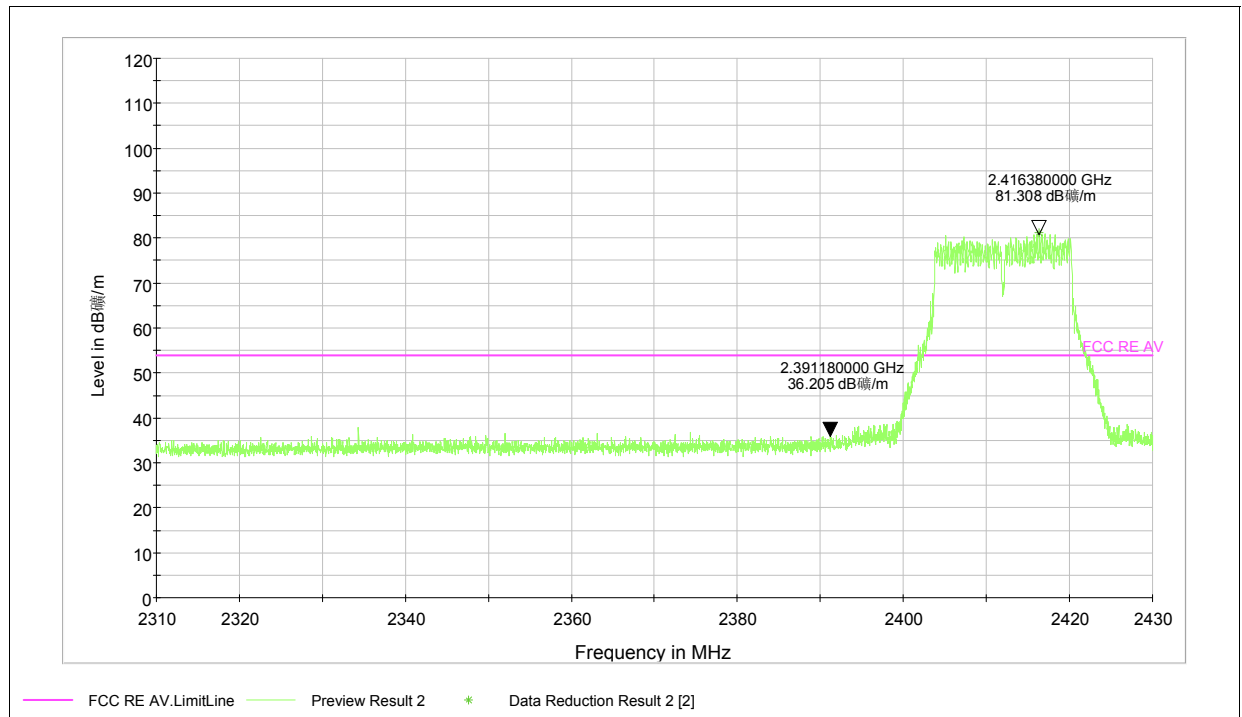
802.11n-Channel 1(HT20):

Peak



Note: The signal beyond the limit is carrier
Channel 1

Average



Note: The signal beyond the limit is carrier
Channel 1

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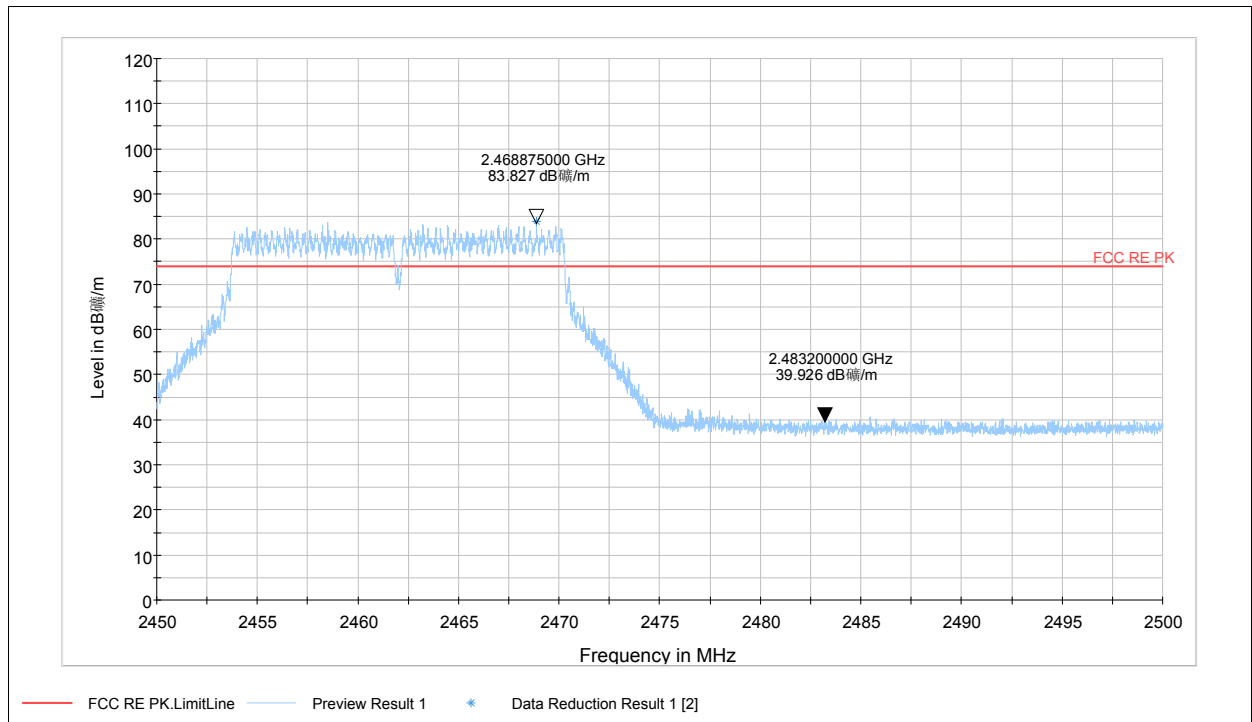
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802.11n-Channel 11(HT20):

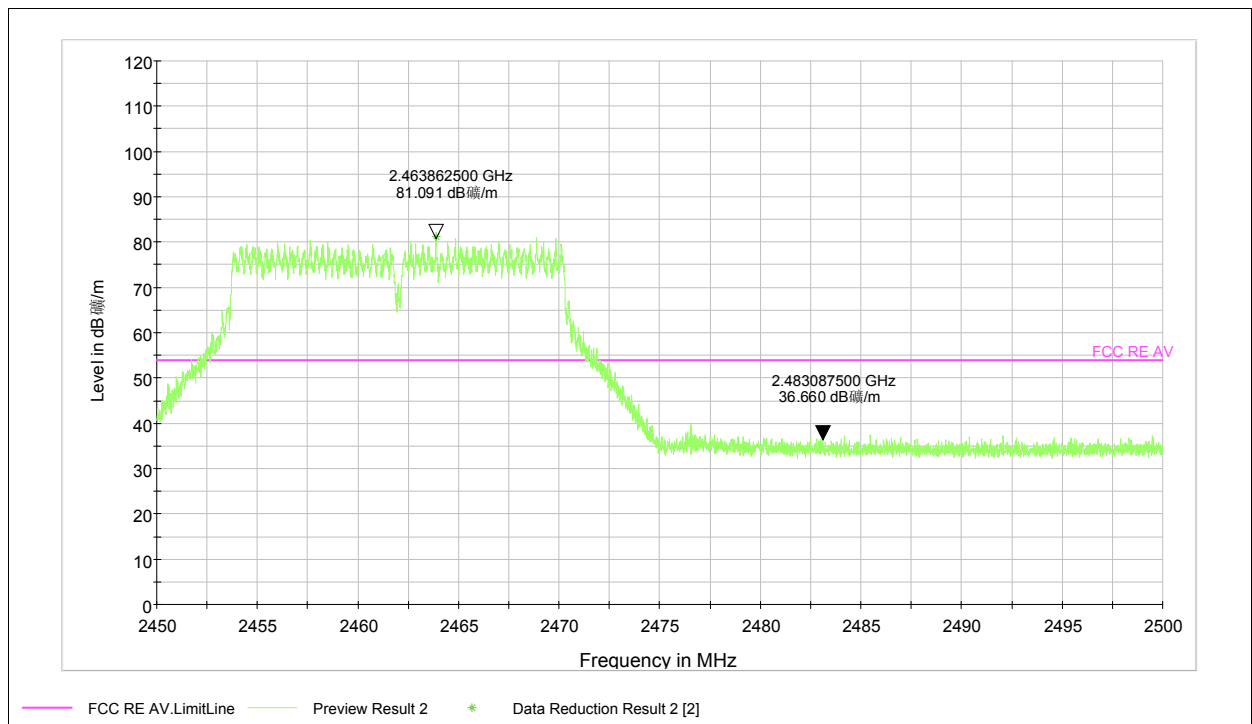
Peak



Note: The signal beyond the limit is carrier

Channel 11

Average



Note: The signal beyond the limit is carrier

Channel 11

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2.7. Power Spectral Density

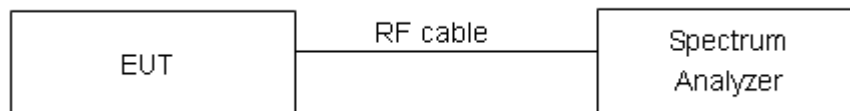
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. RBW is set to 100 kHz and VBW is set to 300 kHz on spectrum analyzer. Set the span to at least 1.5 times the DTS channel bandwidth. The peak power spectral density is recorded. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3\text{ kHz}/100\text{ kHz}) = -15.2\text{ dB}$.

Test setup



Limits

Rule Part 15.247(e) specifies that "For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission."

Limits	$\leq 8\text{ dBm} / 3\text{ kHz}$
--------	------------------------------------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.75\text{ dB}$.

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Test Report

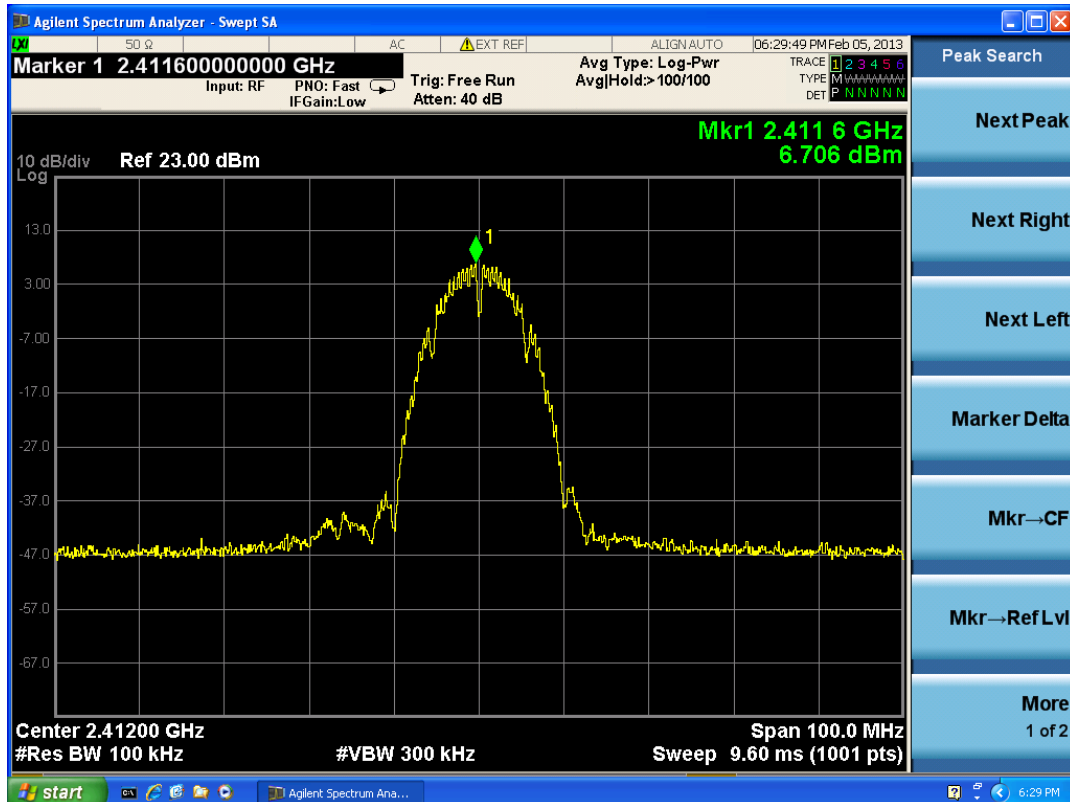
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Test Results:

Network Standards	Channel Number	Power Spectral Density dBm / 3kHz	Conclusion
802.11b	1	-8.494	PASS
	6	-8.336	PASS
	11	-8.694	PASS
802.11g	1	-12.947	PASS
	6	-13.825	PASS
	11	-14.42	PASS
802.11n HT20	1	-16.198	PASS
	6	-16.06	PASS
	11	-16.489	PASS

802.11b



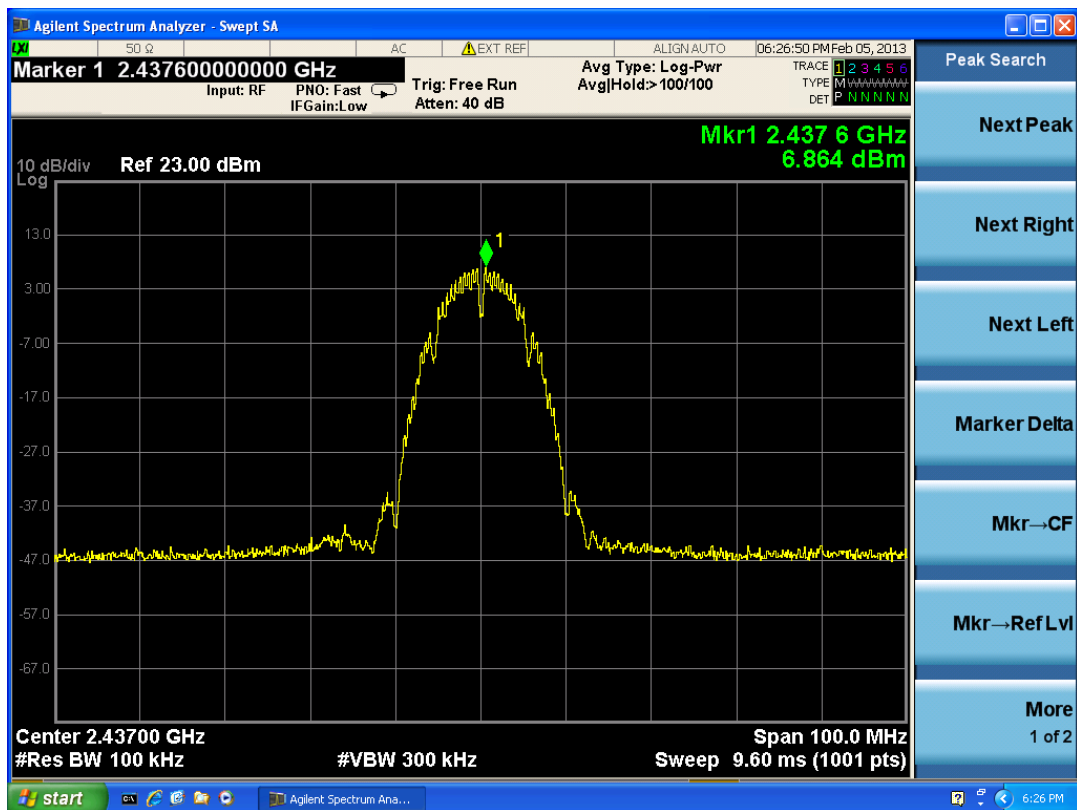
802.11b, Channel No.: 1

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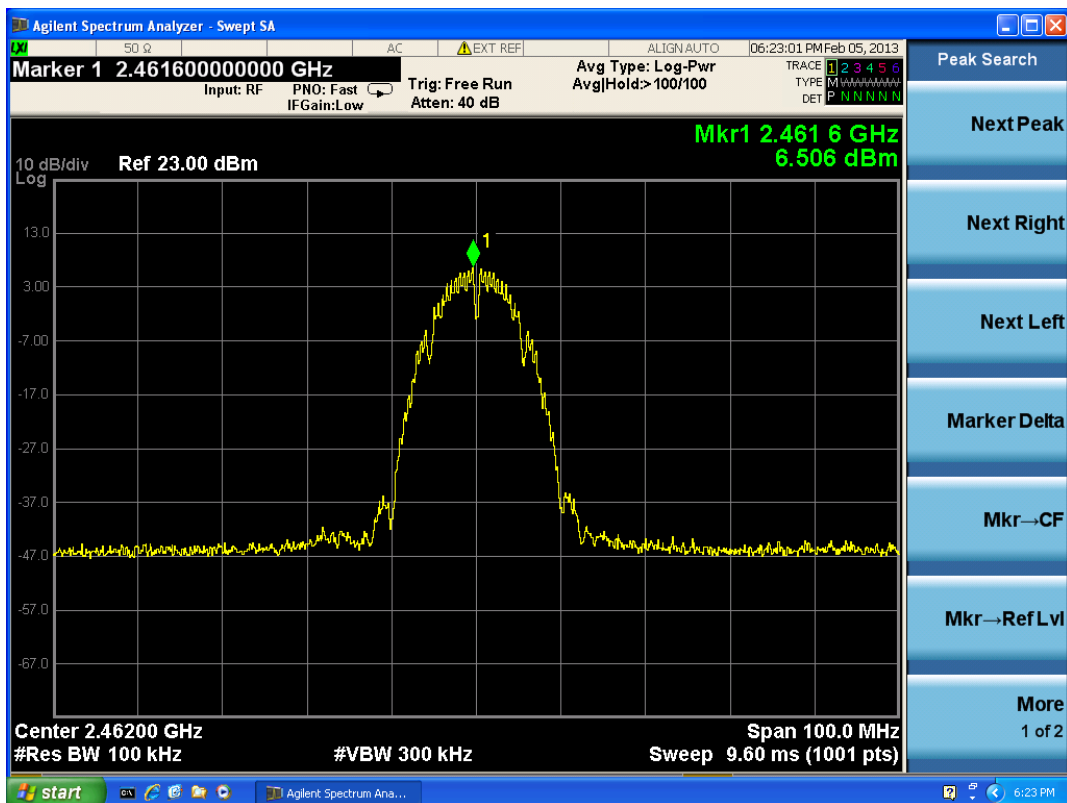
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802.11b, Channel No.: 6



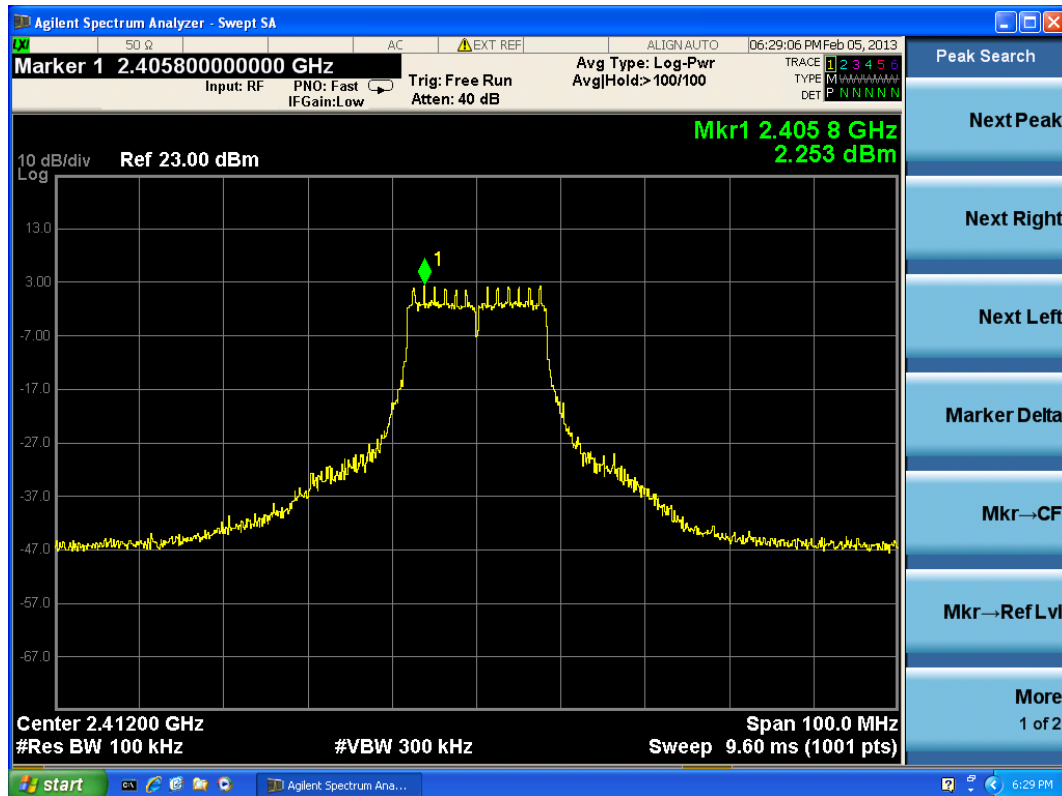
802.11b, Channel No.: 11

TA Technology (Shanghai) Co., Ltd.
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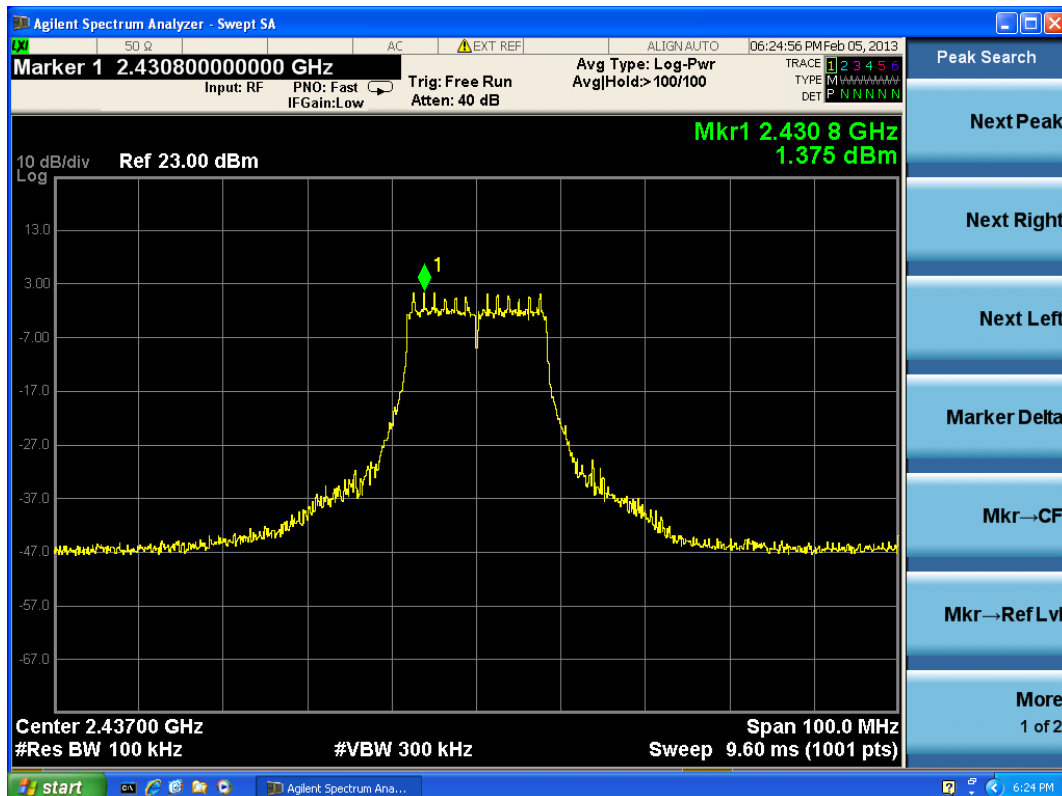
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802.11g



802.11g, Channel No.: 1



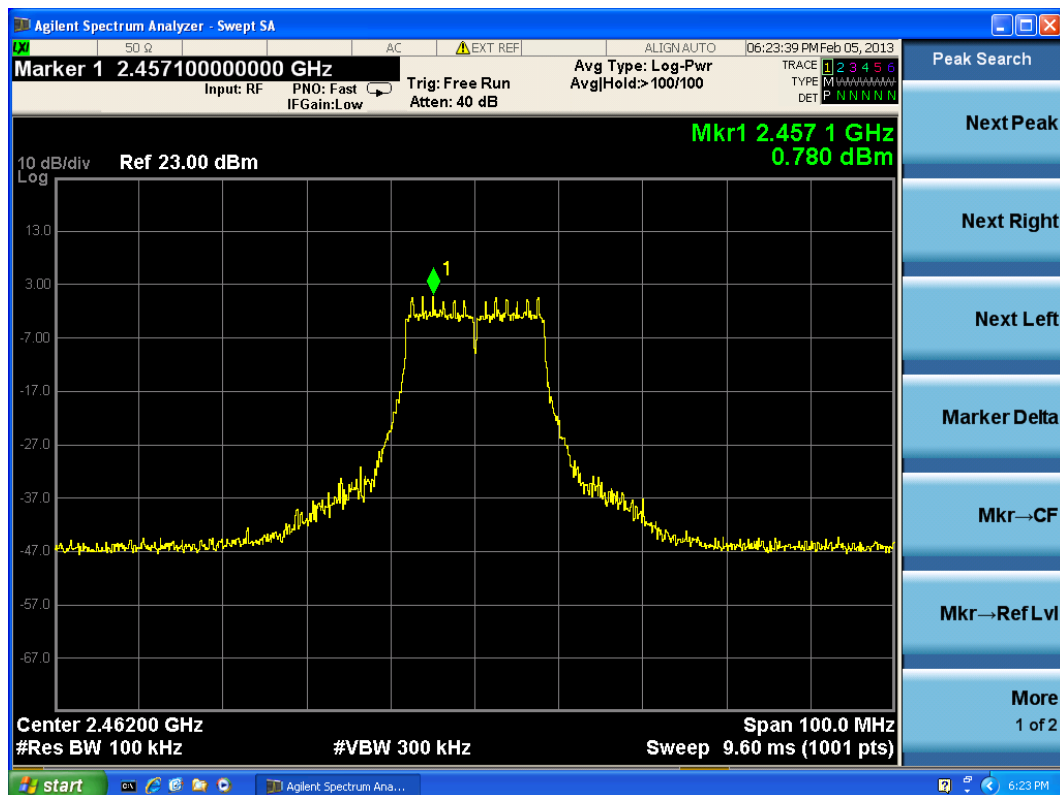
802.11g, Channel No.: 6

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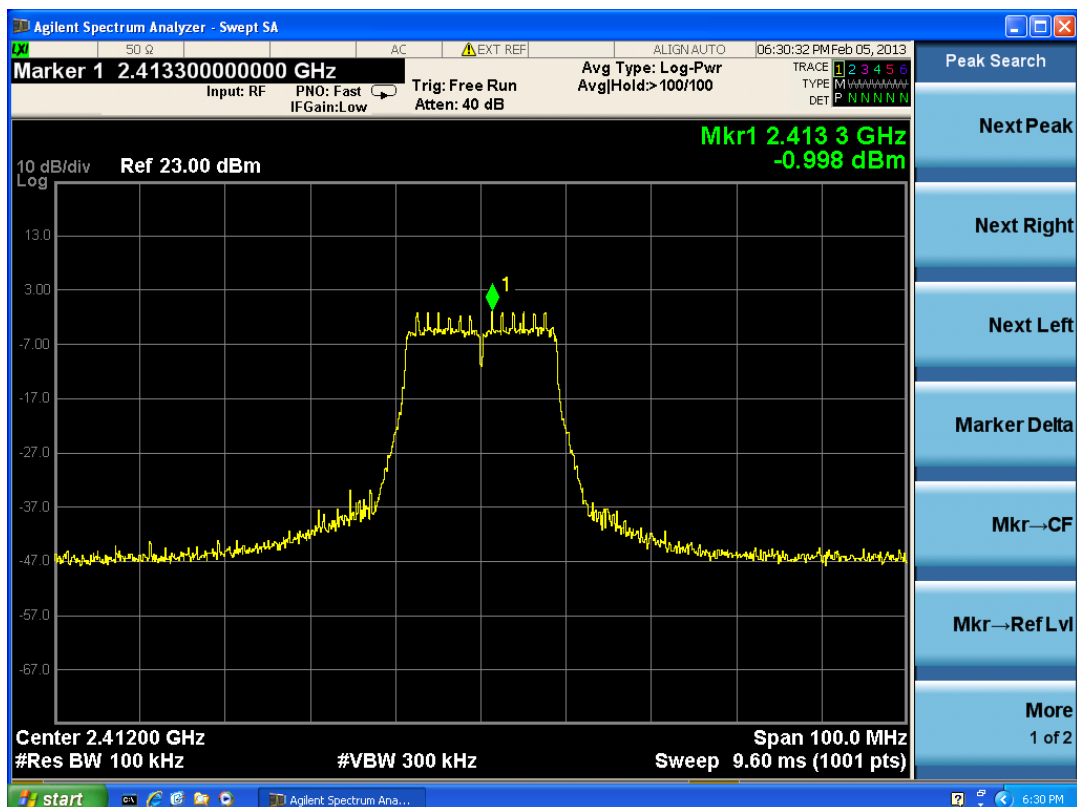
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802.11g, Channel No.: 11

802.11n(HT20)

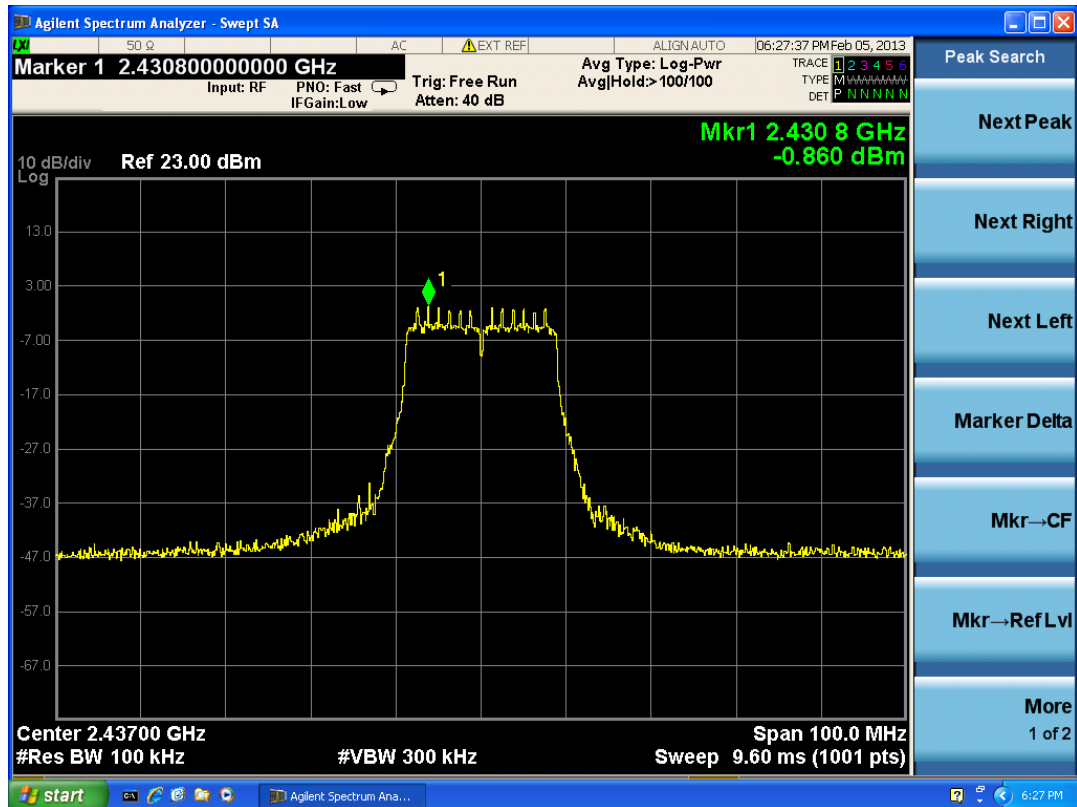


802.11n, Channel No.: 1

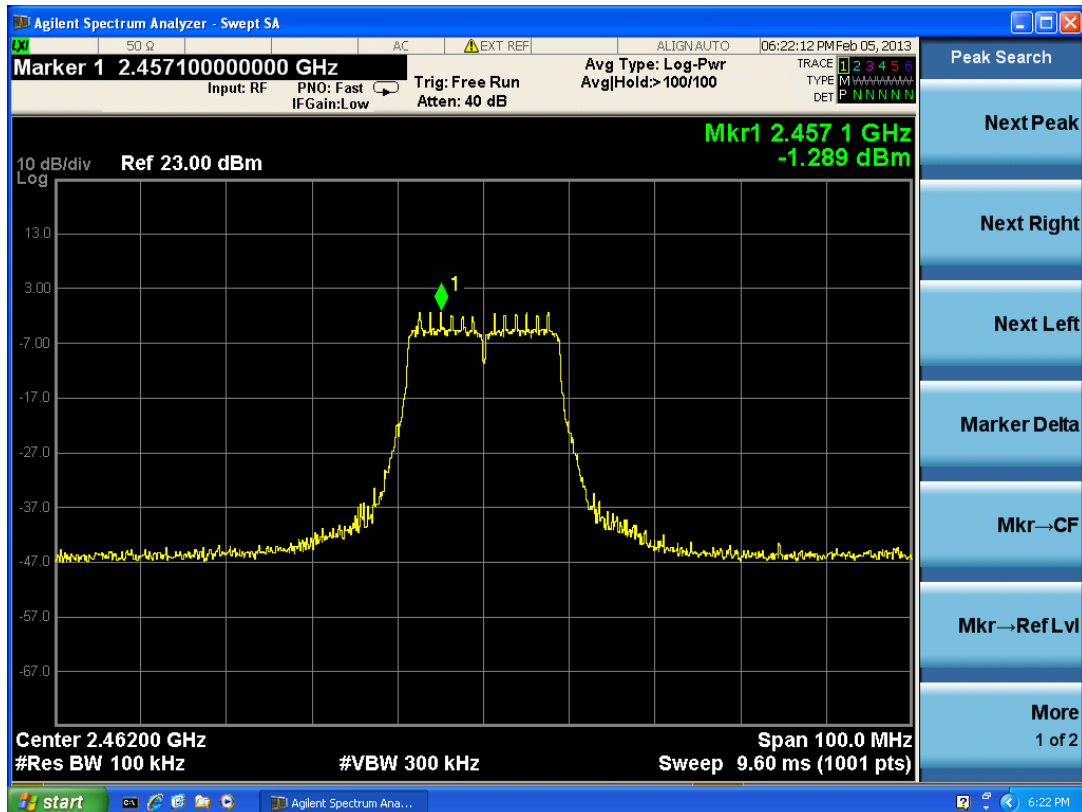
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802.11n, Channel No.: 6



802.11n, Channel No.: 11

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2.8. Spurious RF Conducted Emissions

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. RBW and VBW are set to 100 kHz, Sweep is set to ATUO.

The test is in transmitting mode.

Test setup



Limits

Rule Part 15.247(d) pacifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.”

Network Standards	Carrier frequency (MHz)	Reference value (dBm)	Limit
802.11b	2412	17.25	-2.75
	2437	17.81	-2.19
	2462	17.15	-2.85
802.11g	2412	14.62	-5.38
	2437	13.57	-6.43
	2462	14.62	-5.38
802.11n HT20	2412	12.82	-7.18
	2437	13.07	-6.93
	2462	12.41	-7.59

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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-26.5GHz	1.407 dB

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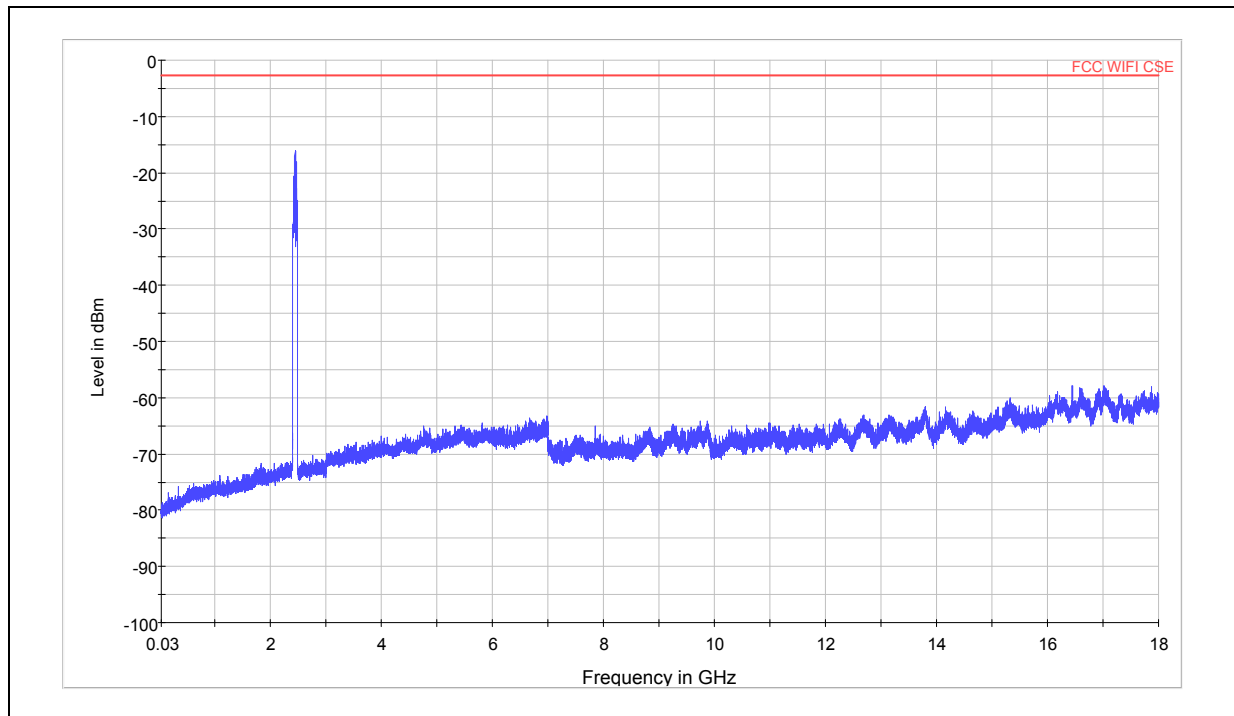
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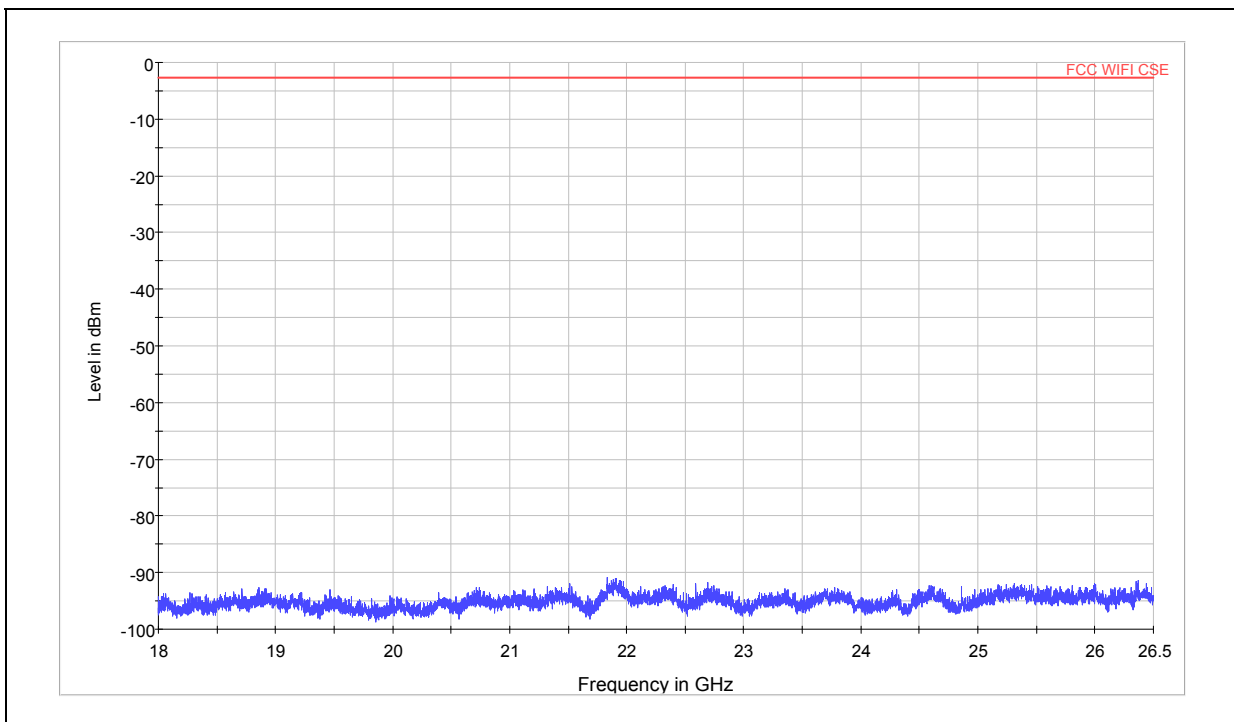
Test Results:

802.11b CH1



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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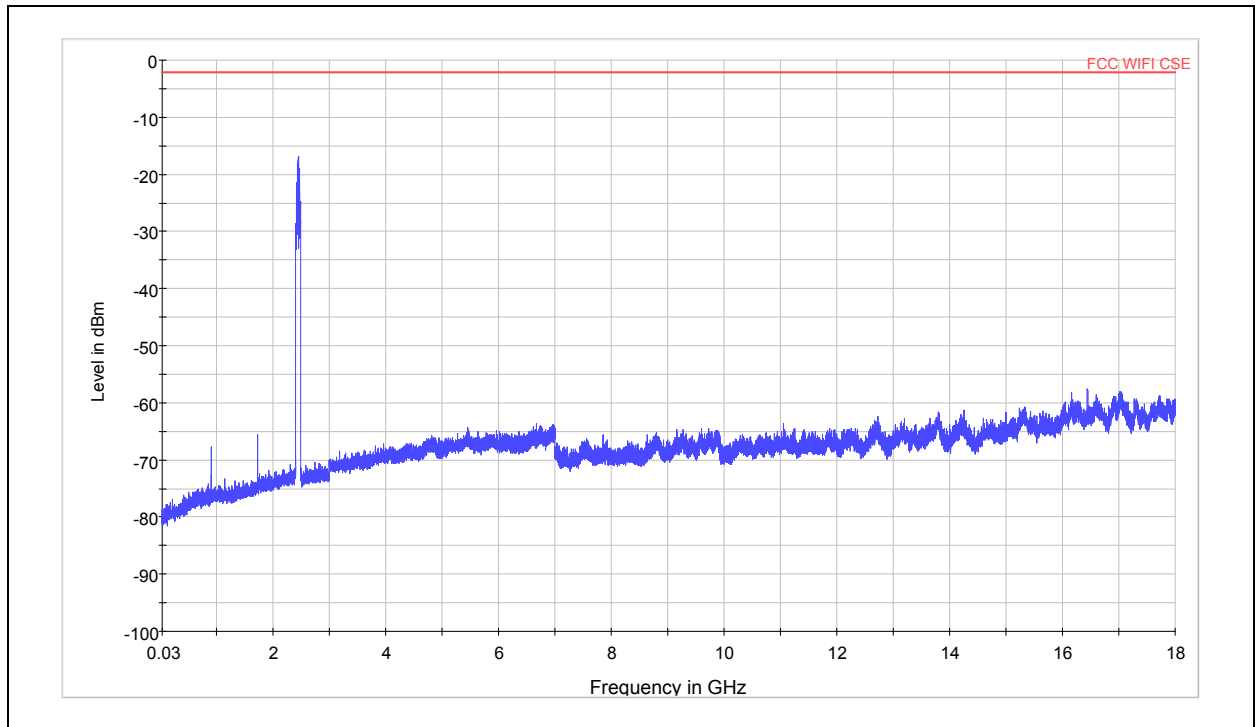
Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-2.75
3	7236	Nf	-2.75
4	9648	Nf	-2.75
5	12060	Nf	-2.75
6	14472	Nf	-2.75
7	16884	Nf	-2.75
8	19296	Nf	-2.75
9	21708	Nf	-2.75
10	24120	Nf	-2.75
Nf: noise floor			

TA Technology (Shanghai) Co., Ltd.
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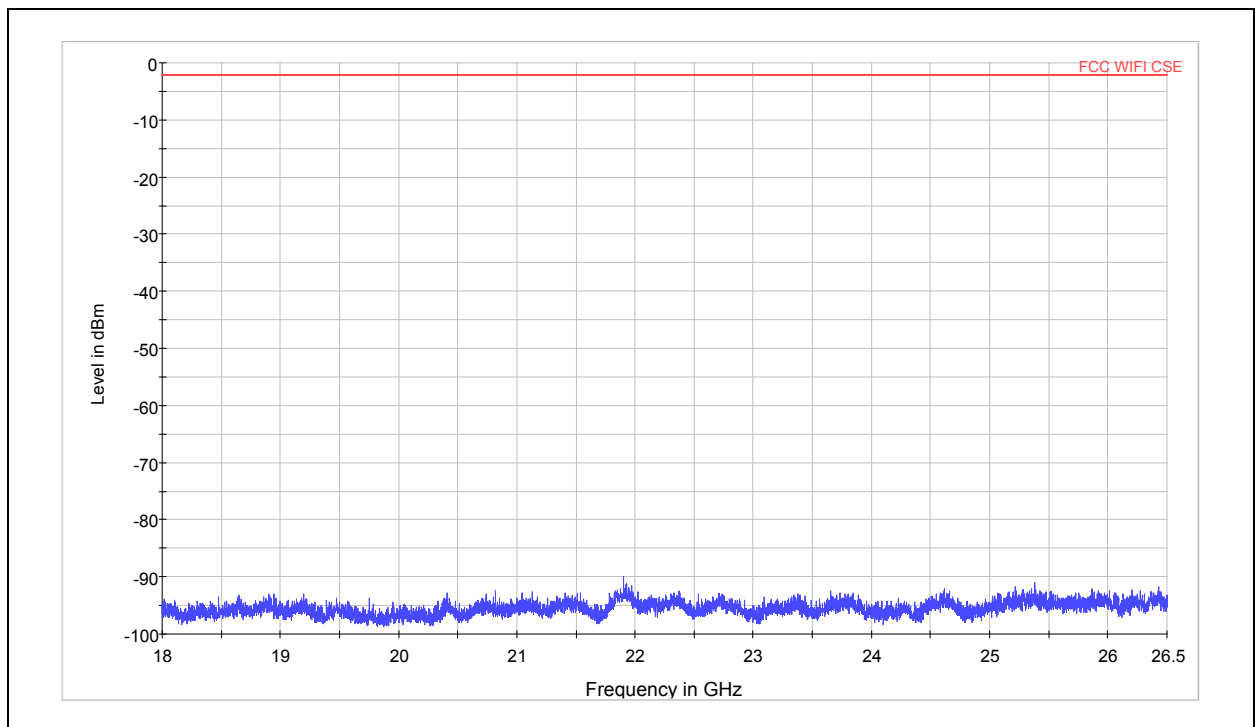
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802.11b CH6



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-2.19
3	7236	Nf	-2.19
4	9648	Nf	-2.19
5	12060	Nf	-2.19
6	14472	Nf	-2.19
7	16884	Nf	-2.19
8	19296	Nf	-2.19
9	21708	Nf	-2.19
10	24120	Nf	-2.19
Nf: noise floor			

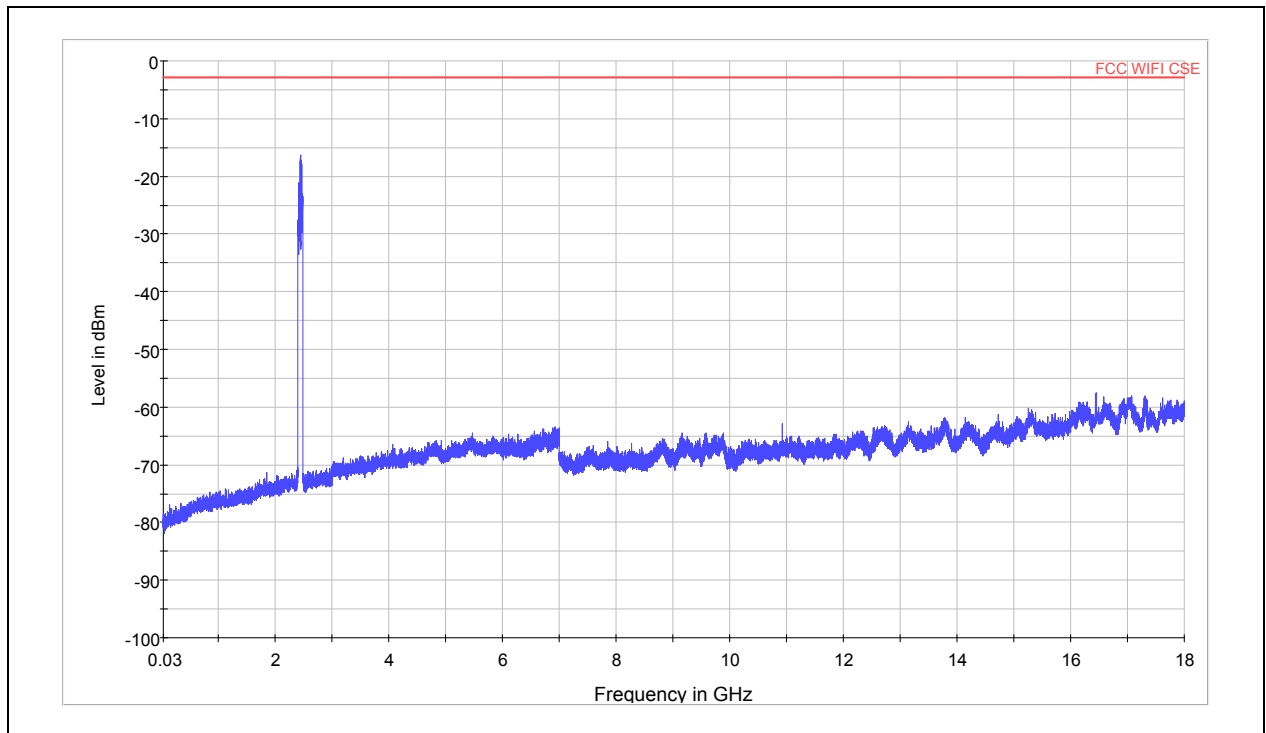
TA Technology (Shanghai) Co., Ltd.

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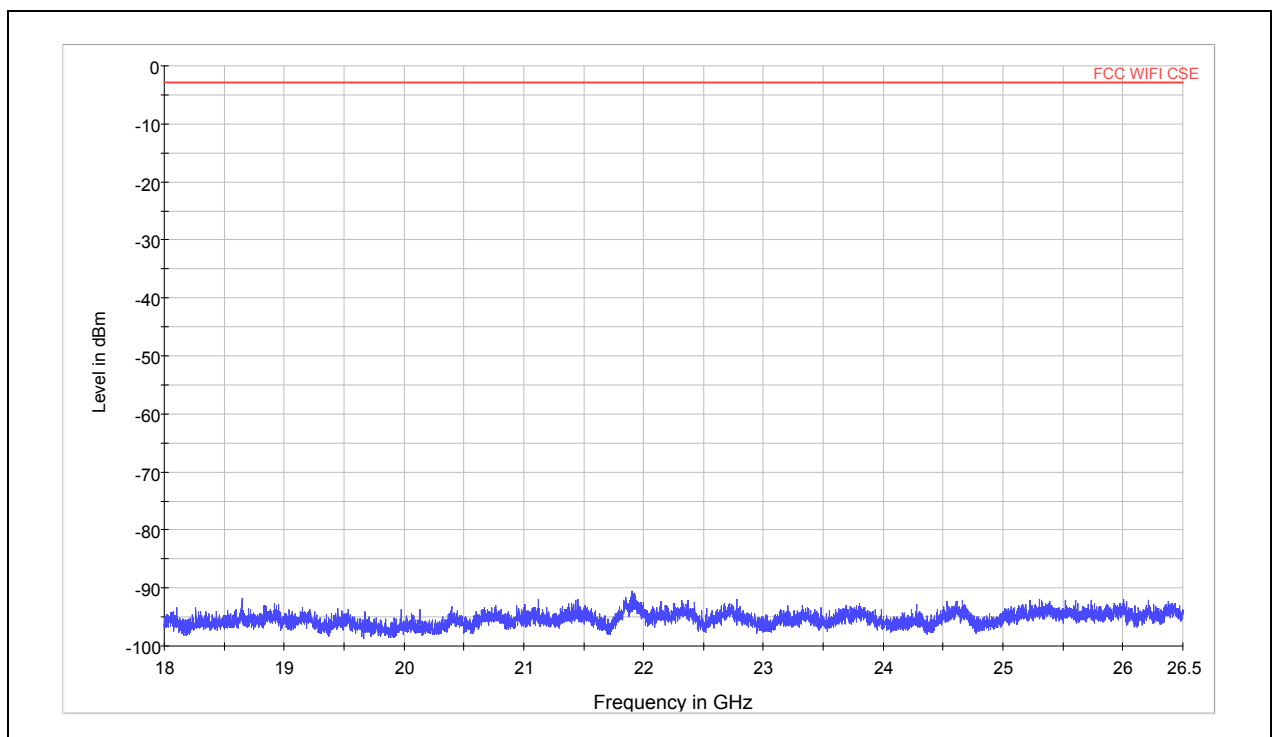
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802.11b CH11



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-2.85
3	7236	Nf	-2.85
4	9648	Nf	-2.85
5	12060	Nf	-2.85
6	14472	Nf	-2.85
7	16884	Nf	-2.85
8	19296	Nf	-2.85
9	21708	Nf	-2.85
10	24120	Nf	-2.85
Nf: noise floor			

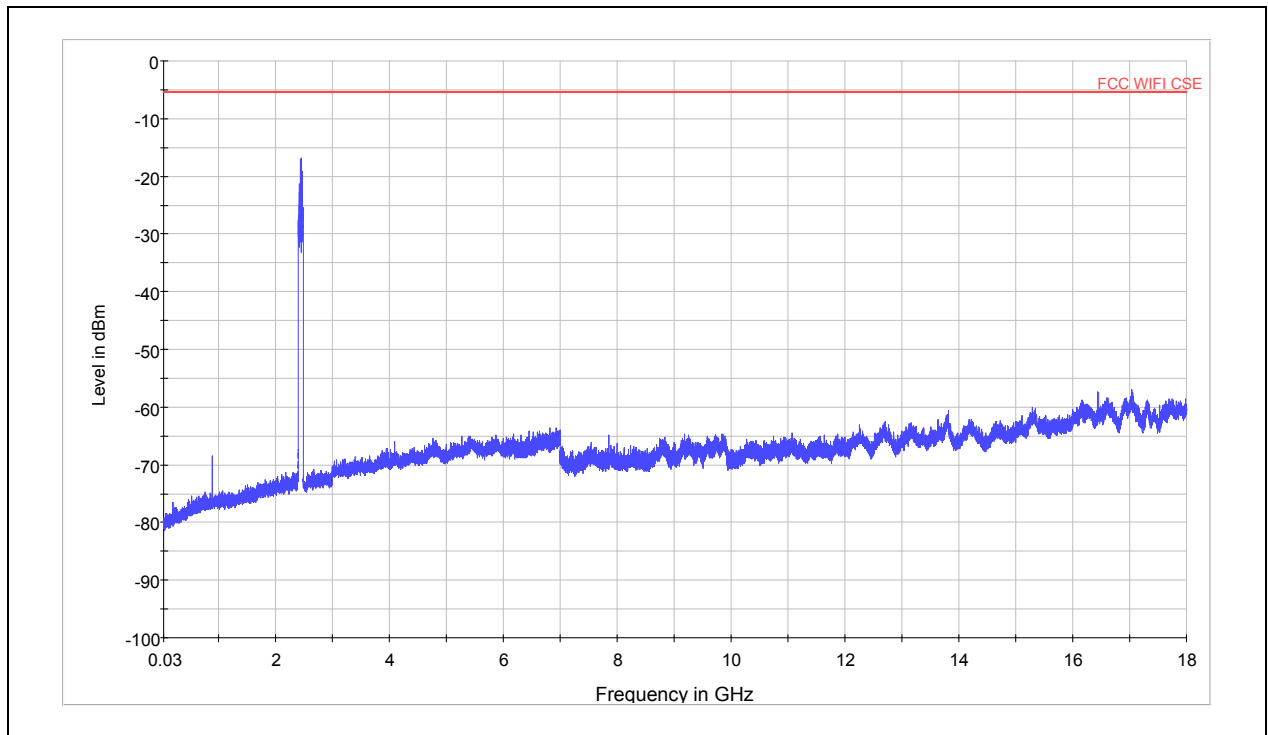
TA Technology (Shanghai) Co., Ltd.

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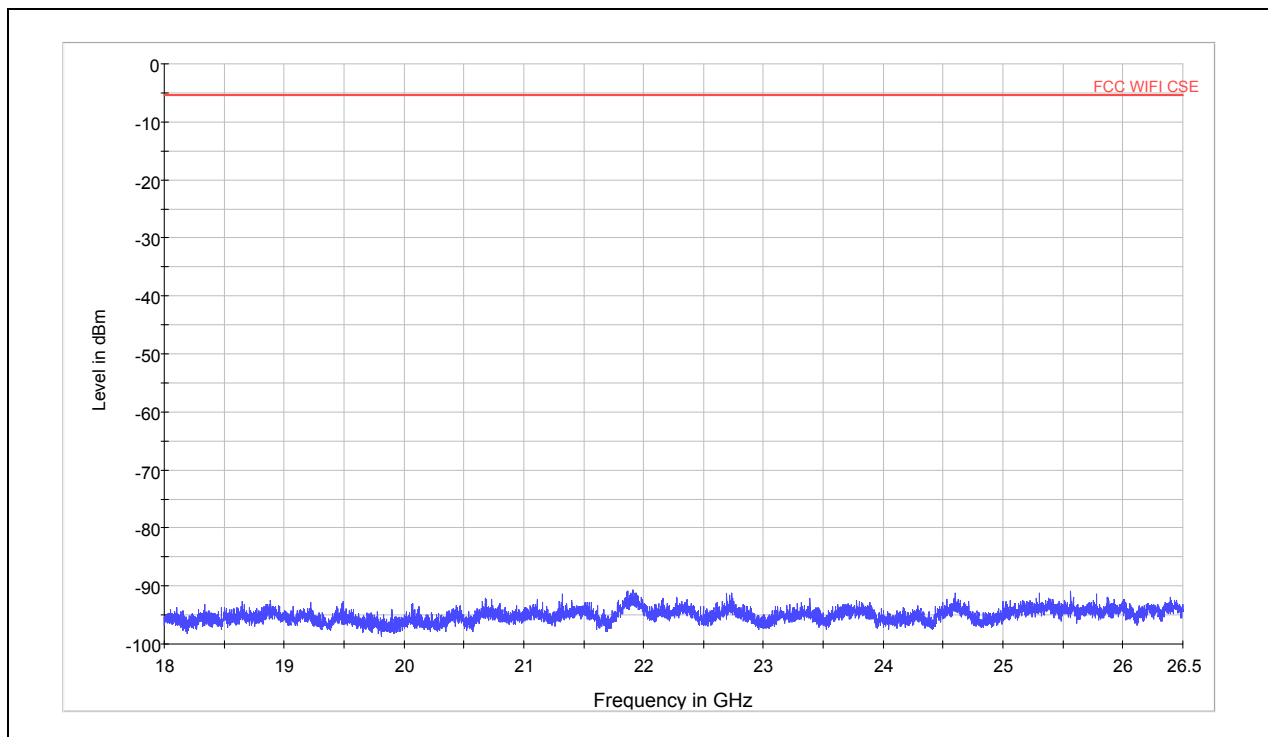
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802.11g CH1



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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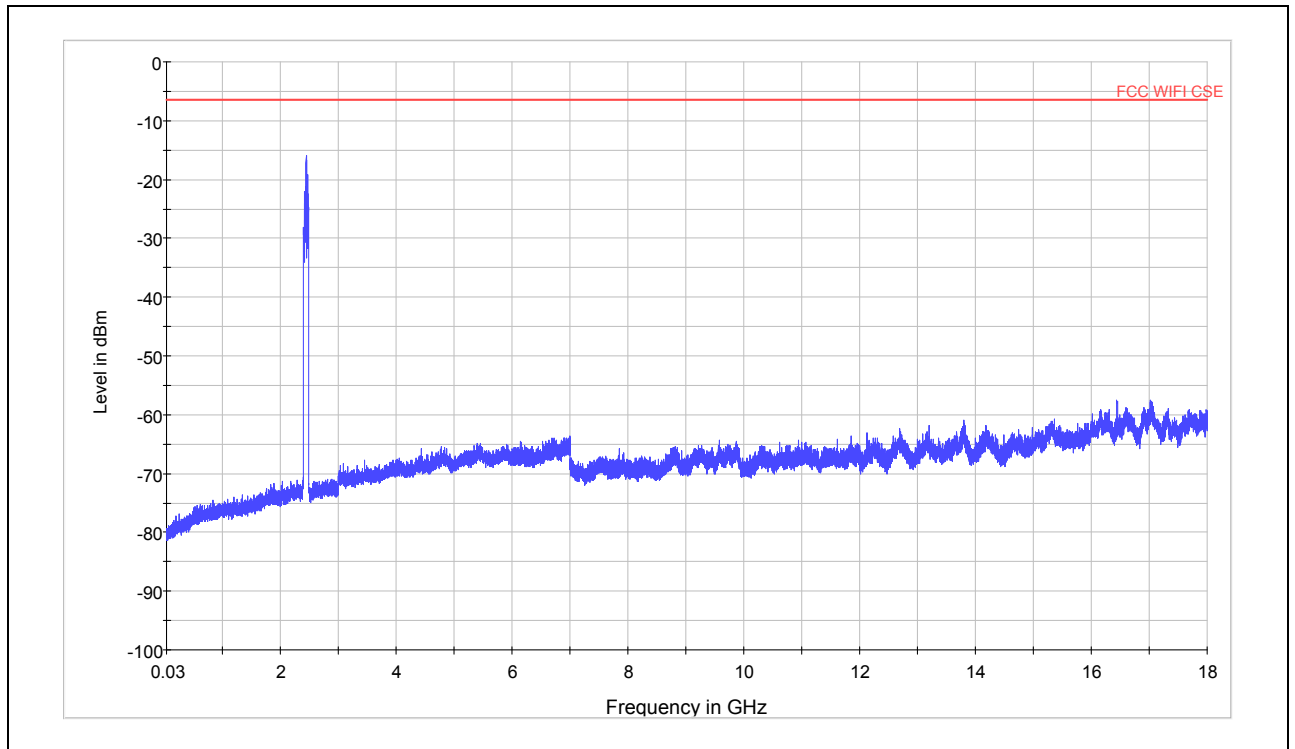
Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-5.38
3	7236	Nf	-5.38
4	9648	Nf	-5.38
5	12060	Nf	-5.38
6	14472	Nf	-5.38
7	16884	Nf	-5.38
8	19296	Nf	-5.38
9	21708	Nf	-5.38
10	24120	Nf	-5.38
Nf: noise floor			

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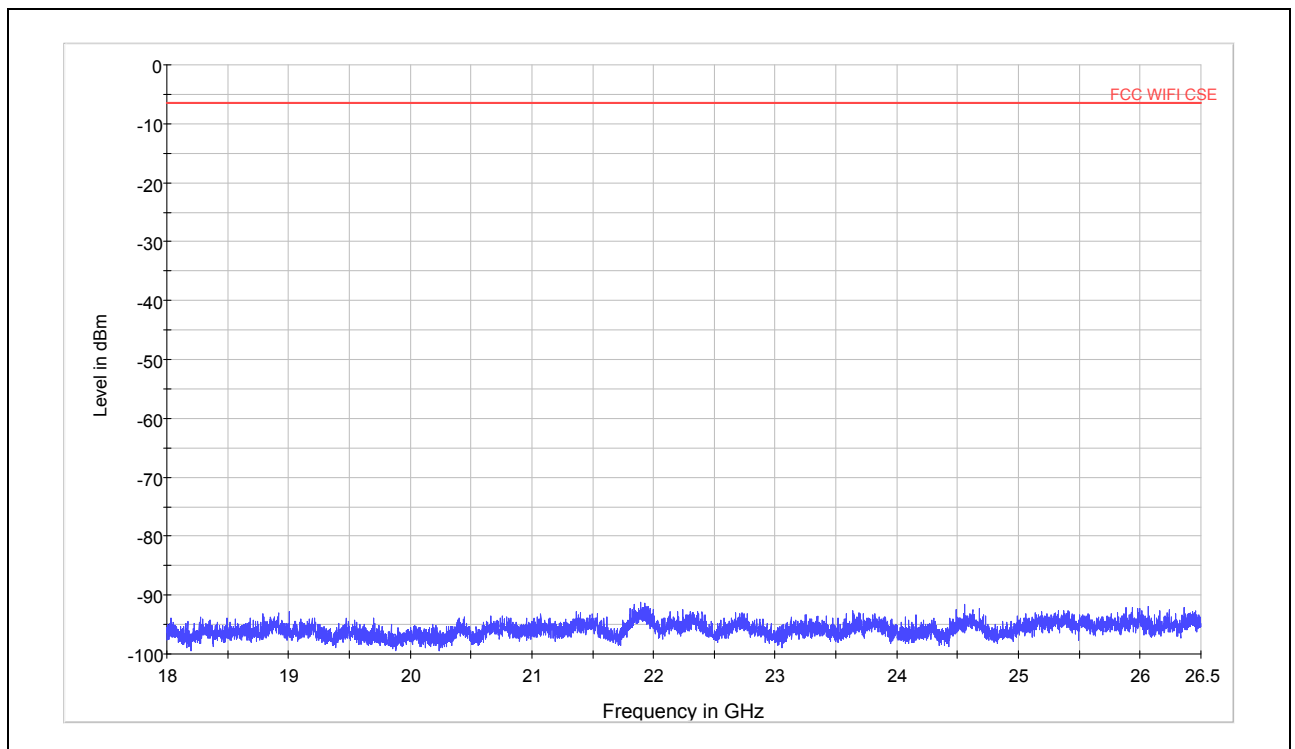
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802.11g CH6



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-6.43
3	7236	Nf	-6.43
4	9648	Nf	-6.43
5	12060	Nf	-6.43
6	14472	Nf	-6.43
7	16884	Nf	-6.43
8	19296	Nf	-6.43
9	21708	Nf	-6.43
10	24120	Nf	-6.43
Nf: noise floor			

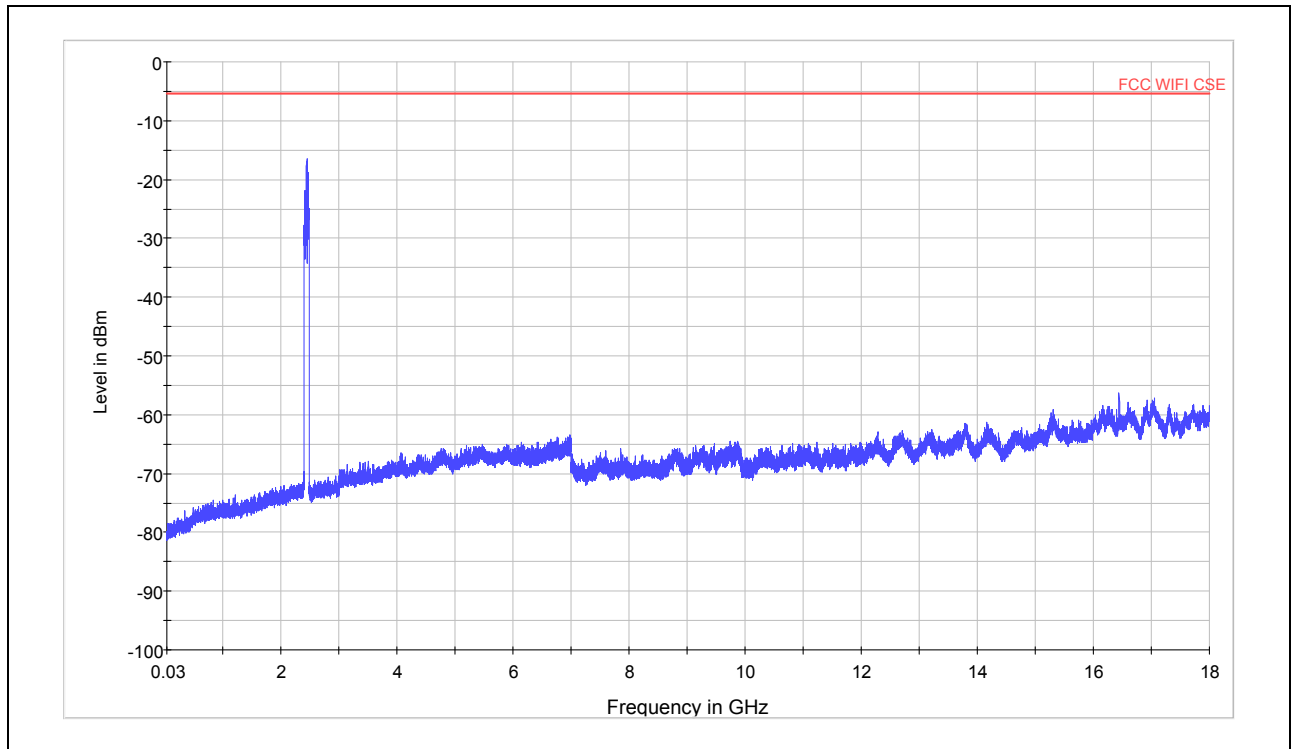
TA Technology (Shanghai) Co., Ltd.

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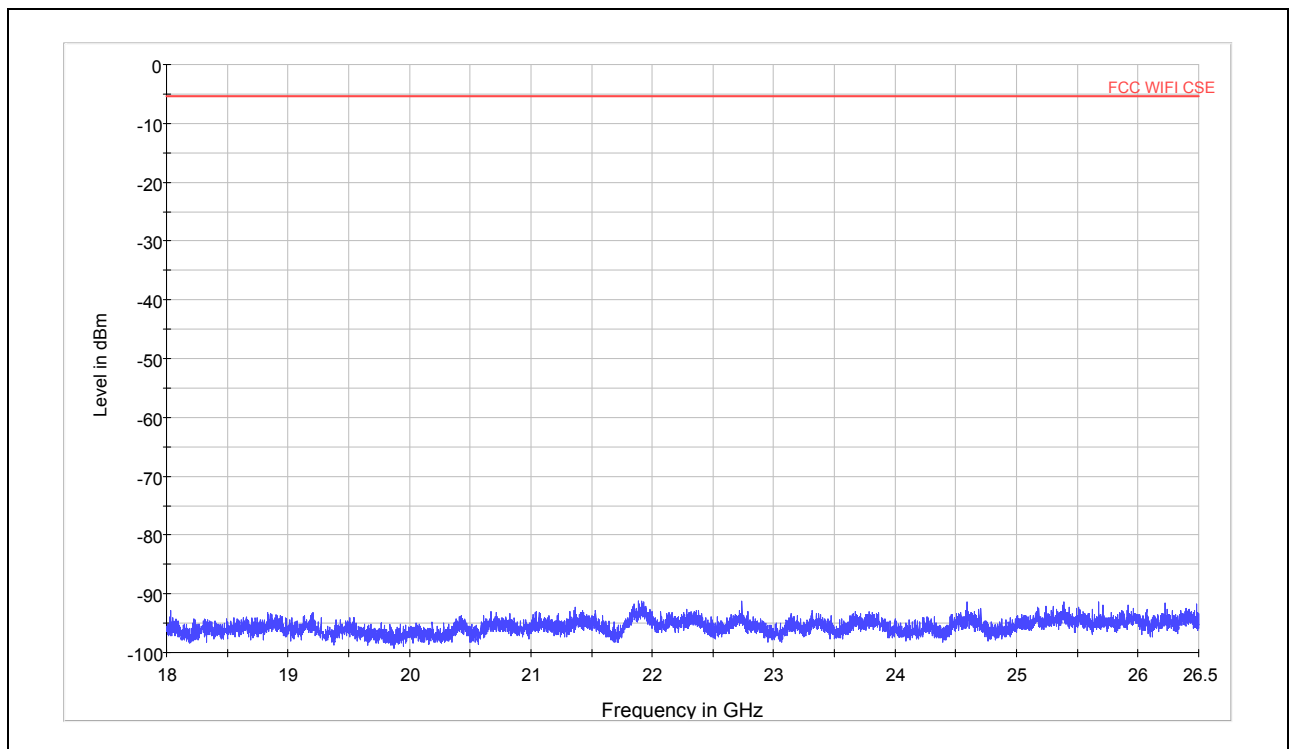
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802.11g CH11



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-5.38
3	7236	Nf	-5.38
4	9648	Nf	-5.38
5	12060	Nf	-5.38
6	14472	Nf	-5.38
7	16884	Nf	-5.38
8	19296	Nf	-5.38
9	21708	Nf	-5.38
10	24120	Nf	-5.38
Nf: noise floor			

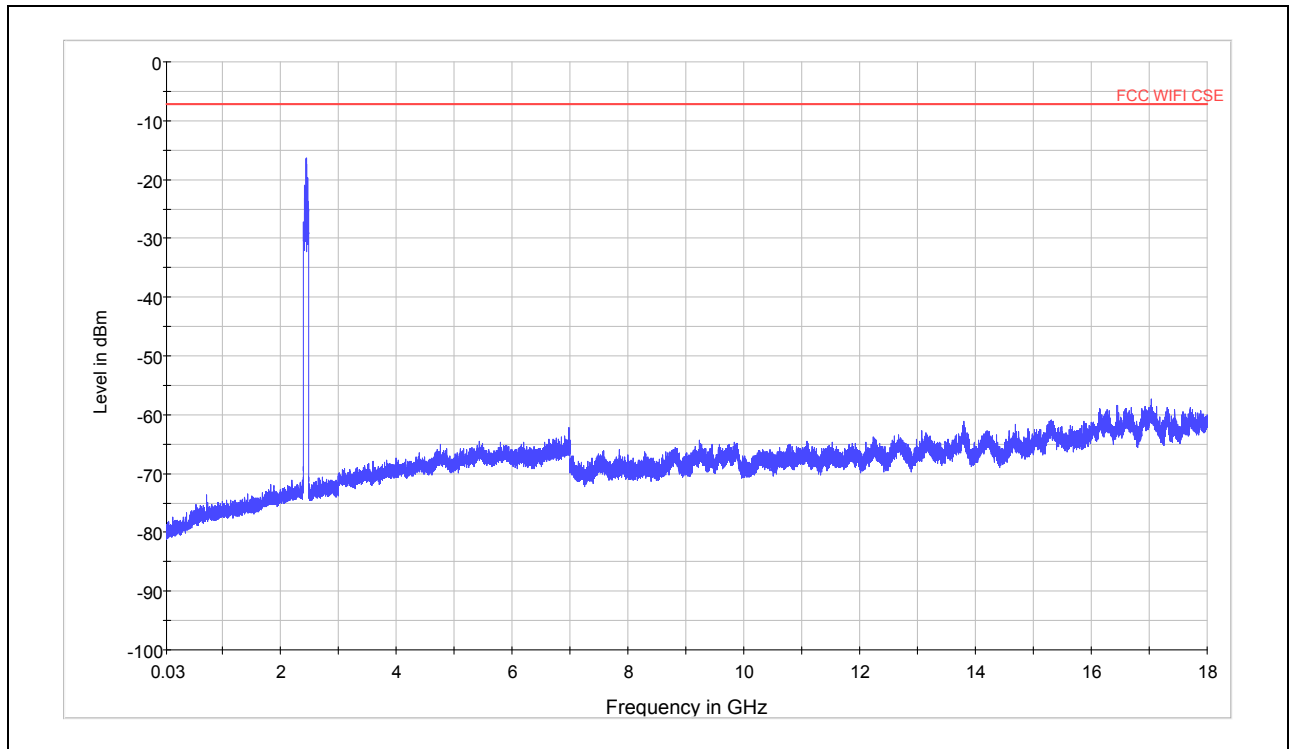
TA Technology (Shanghai) Co., Ltd.

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Report No.: RHA1301-0016RF05R1

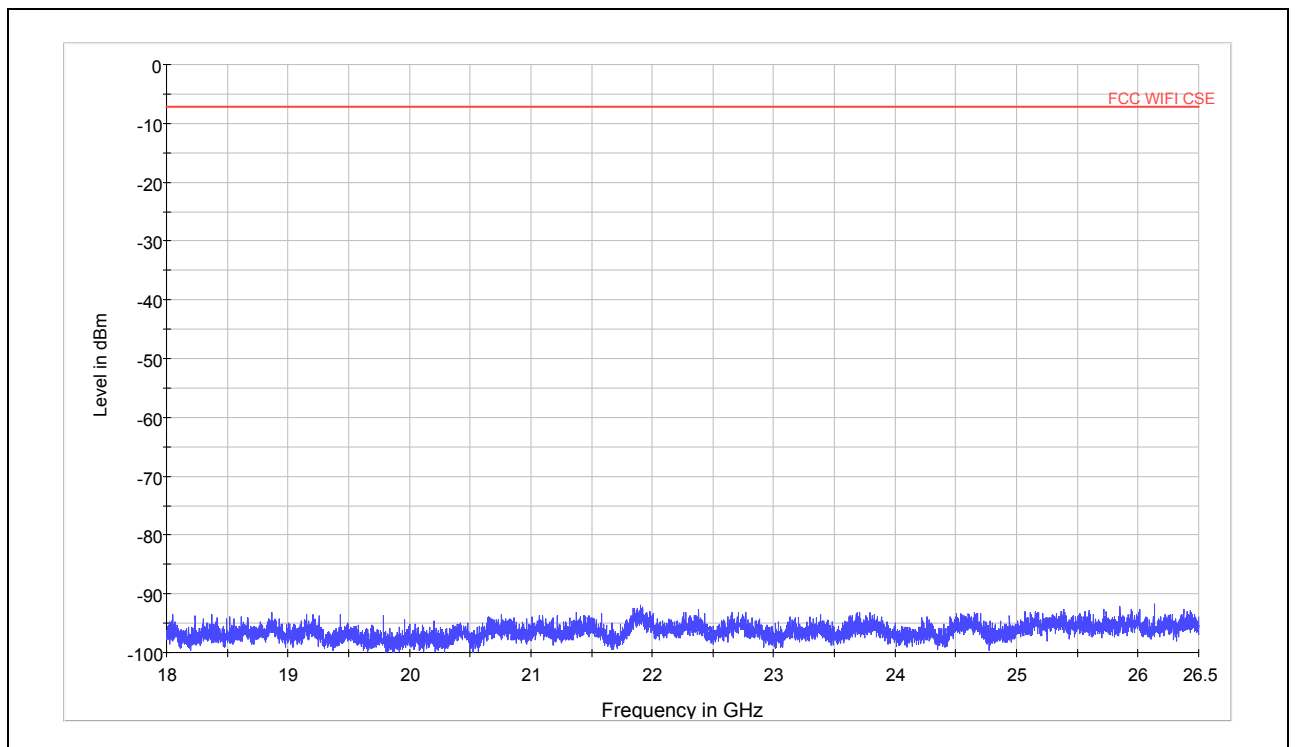
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802.11n(HT20) CH1



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-7.18
3	7236	Nf	-7.18
4	9648	Nf	-7.18
5	12060	Nf	-7.18
6	14472	Nf	-7.18
7	16884	Nf	-7.18
8	19296	Nf	-7.18
9	21708	Nf	-7.18
10	24120	Nf	-7.18
Nf: noise floor			

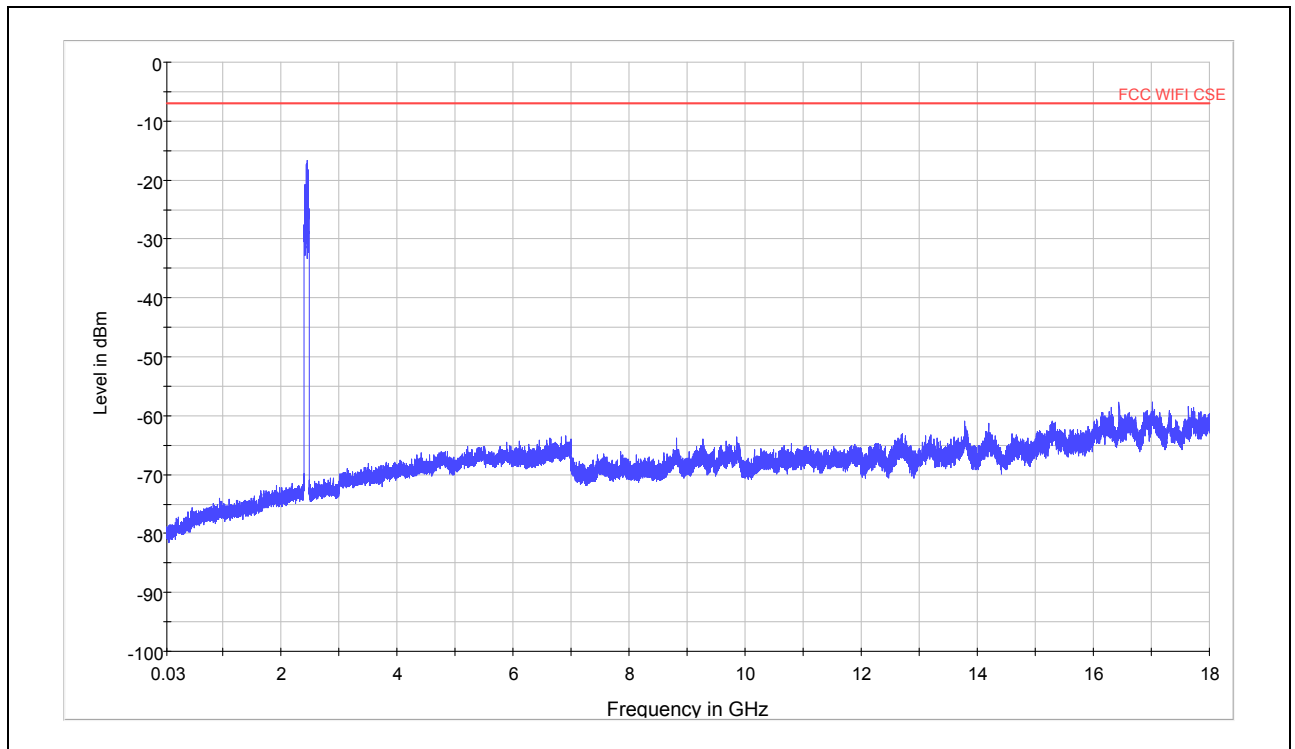
TA Technology (Shanghai) Co., Ltd.

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Report No.: RHA1301-0016RF05R1

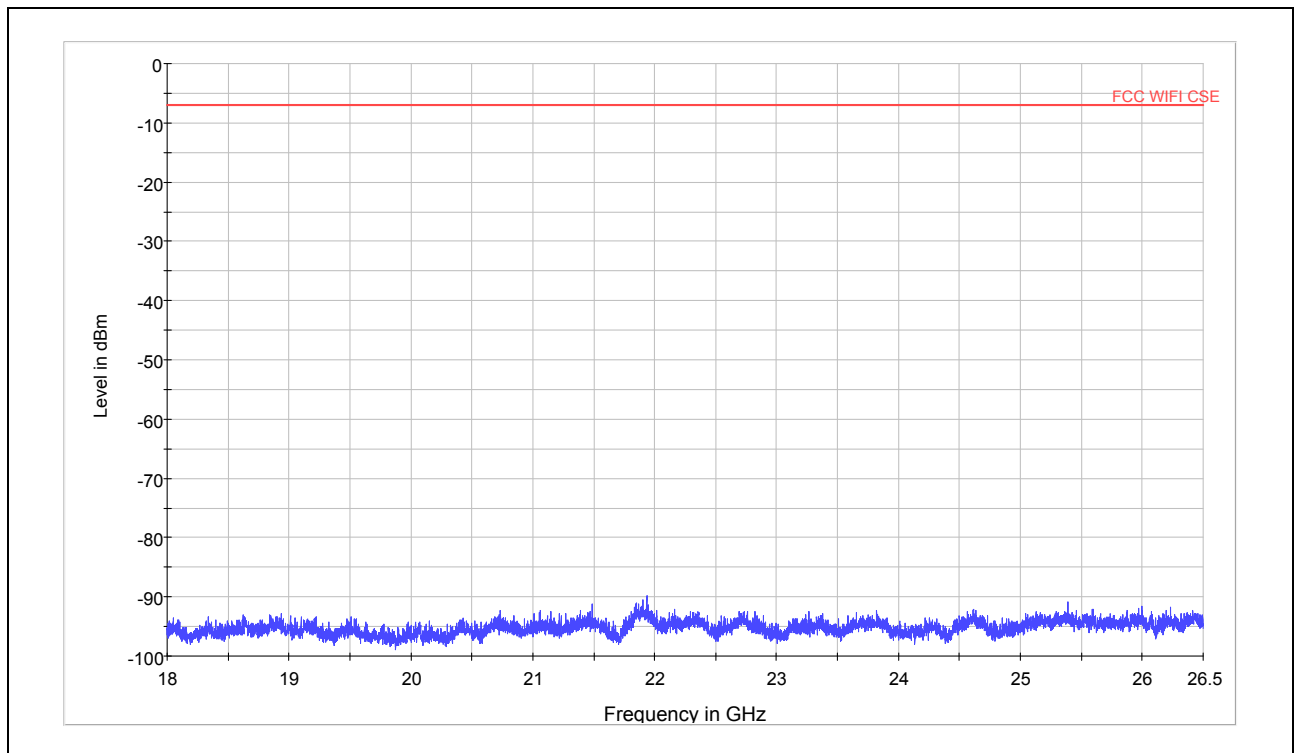
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802.11n(HT20) CH6



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-6.93
3	7236	Nf	-6.93
4	9648	Nf	-6.93
5	12060	Nf	-6.93
6	14472	Nf	-6.93
7	16884	Nf	-6.93
8	19296	Nf	-6.93
9	21708	Nf	-6.93
10	24120	Nf	-6.93
Nf: noise floor			

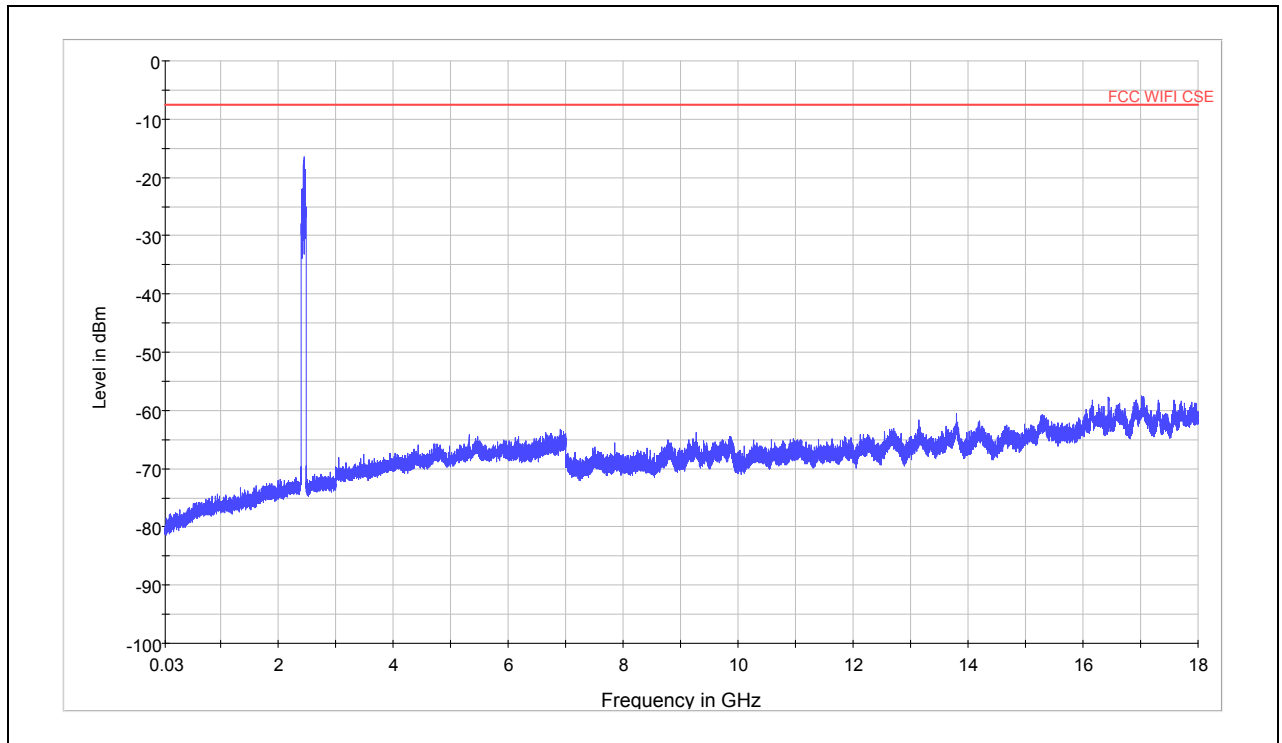
TA Technology (Shanghai) Co., Ltd.

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Report No.: RHA1301-0016RF05R1

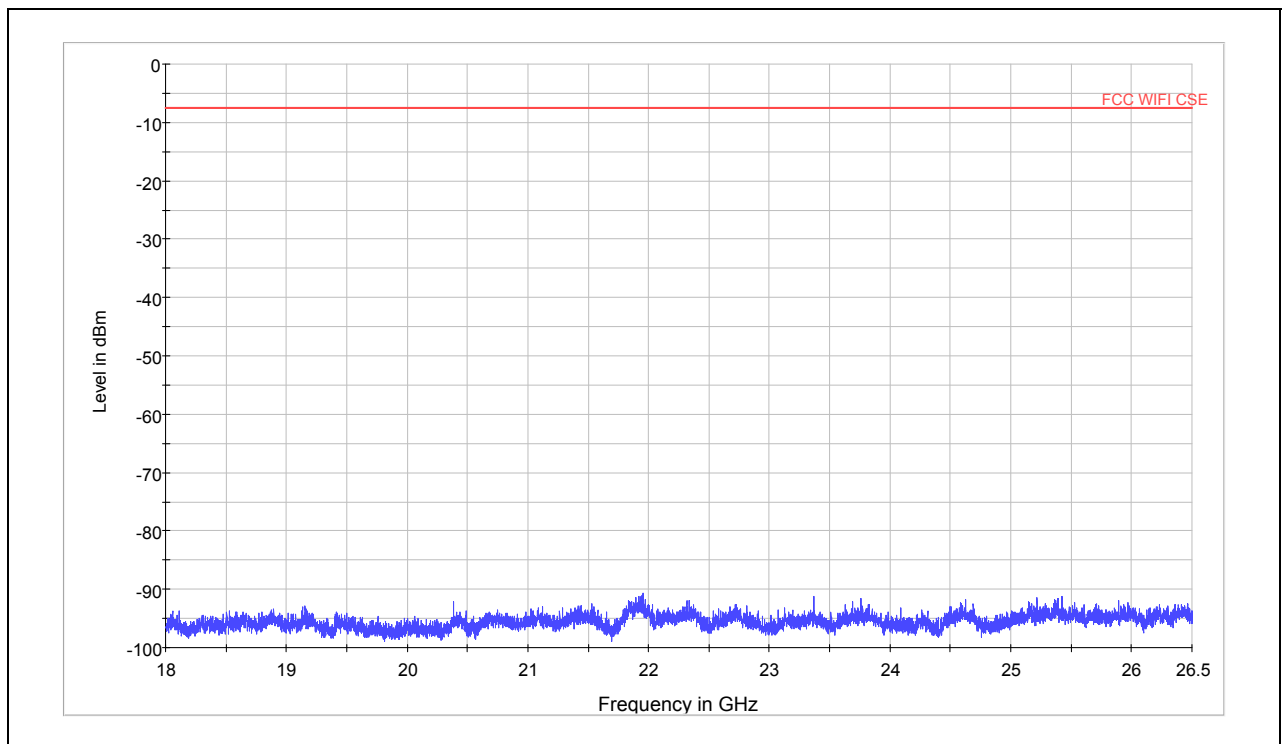
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802.11n(HT20) CH11



Note: The signal beyond the limit is carrier

Spurious RF conducted emissions from 30MHz to 18GHz



Spurious RF conducted emissions from 18GHz to 26.5GHz

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Harmonic	TX ch.1 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	4824	Nf	-7.59
3	7236	Nf	-7.59
4	9648	Nf	-7.59
5	12060	Nf	-7.59
6	14472	Nf	-7.59
7	16884	Nf	-7.59
8	19296	Nf	-7.59
9	21708	Nf	-7.59
10	24120	Nf	-7.59
Nf: noise floor			

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2.9. Radiates Emission

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The test set-up was made in accordance to the general provisions of ANSI C63.4-2009. The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration. Sweep the whole frequency band through the range from 30MHz to the 10th harmonic of the carrier.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

Below 1GHz (detector: Peak and Quasi-Peak)

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz(detector: Peak):

(a) PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

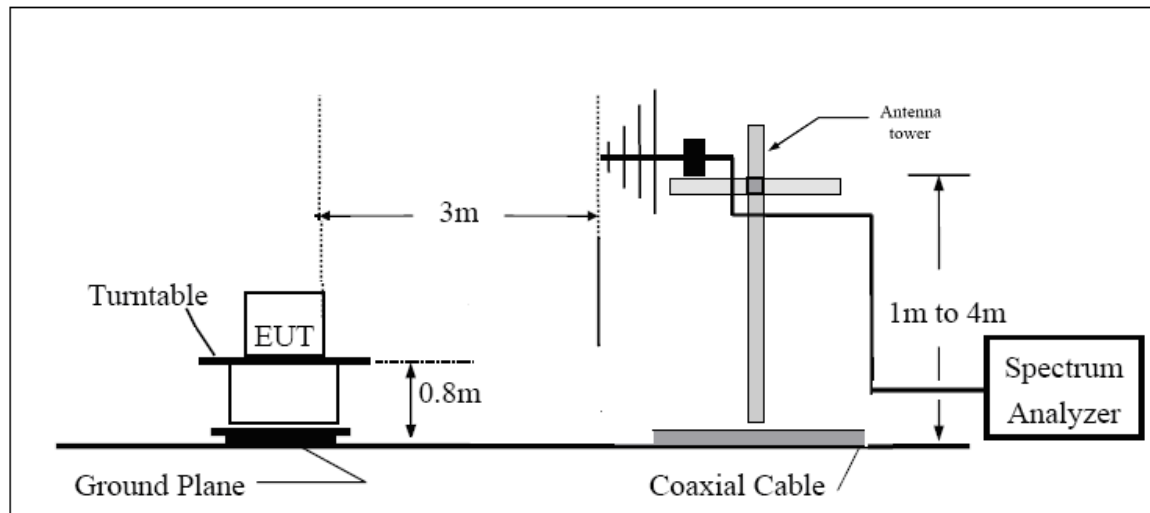
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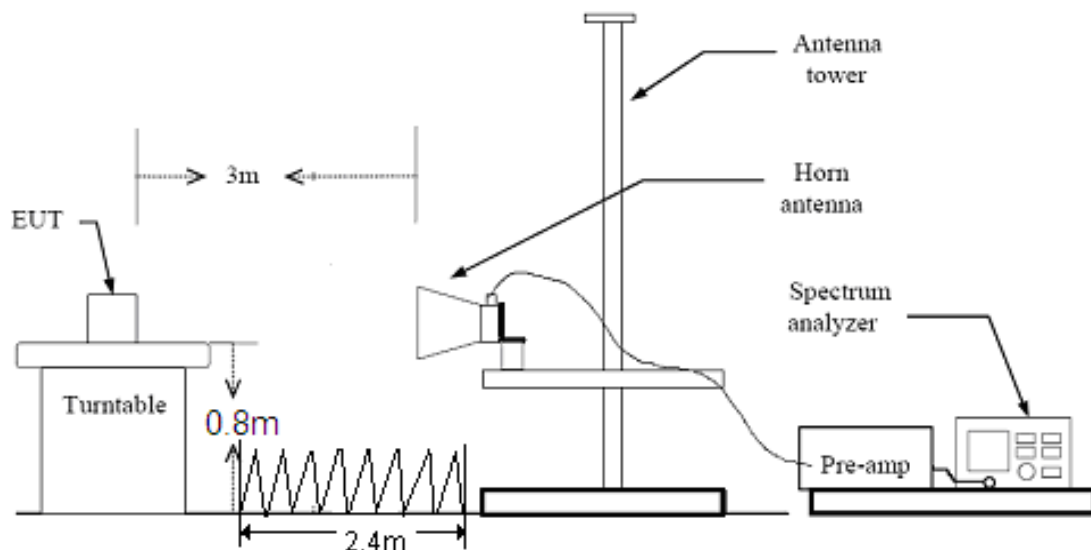
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Test setup

30MHz~~~ 1GHz



Above 1GHz



Limits

Rule Part 15.247(d) specifies that "In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))."

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Limit in restricted band

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
Above 1GHz	3.68 dB

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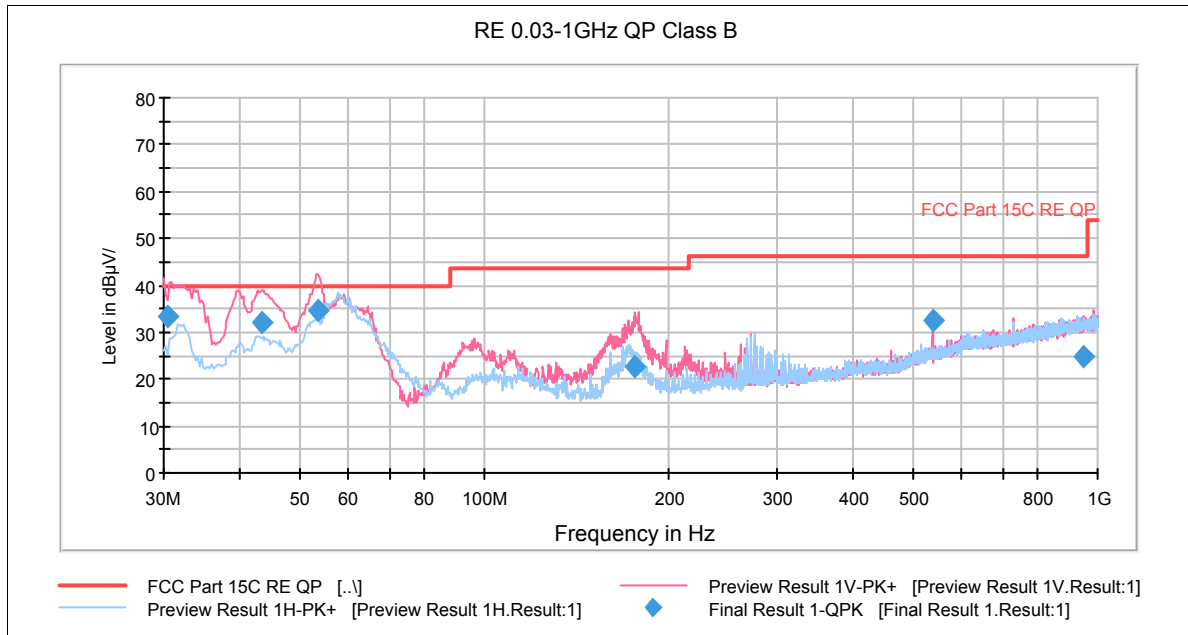
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Test result

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Note: a font (Level in dBuV/m) in the test plot =(level in dbuv/m)

Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.480000	33.4	100.0	V	294.0	16	17.4	6.6	40.0
43.460000	31.9	100.0	V	18.0	13.2	18.7	8.1	40.0
53.440000	34.5	100.0	V	305.0	16	18.5	5.5	40.0
176.030000	22.8	100.0	V	52.0	11.6	11.2	20.7	43.5
537.592500	32.4	100.0	V	334.0	11.5	20.9	13.6	46.0
946.897500	24.9	100.0	V	272.0	-1.2	26.1	21.1	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

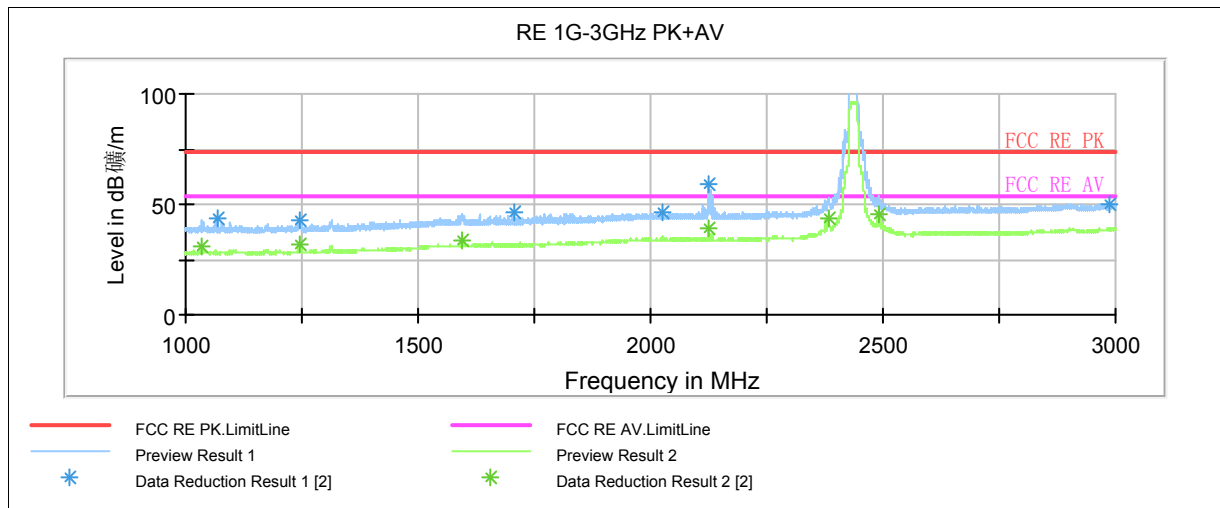
3. Margin = Limit – Quasi-Peak

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Note: a font (Level in dB/m) in the test plot =(level in dbuv/m)

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Limit (dBuV/m)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)
1068.50000	43.6	100.0	74	V	58.0	56.0	-12.4
1247.00000	42.8	100.0	74	V	203.0	54.7	-11.9
1704.75000	46.1	100.0	74	H	24.0	55.0	-8.9
2025.25000	46.1	100.0	74	V	340.0	52.5	-6.4
2125.00000	58.8	100.0	74	V	178.0	65.2	-6.4
2988.75000	50.2	100.0	74	V	317.0	52.0	-1.8

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

2. Peak = Reading value + Correction factor

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Limit (dBuV/m)	Polarization	Azimuth (deg)	Reading value	Correct Factor
1036.500000	30.9	150.0	54	V	67.0	43.1	-12.2
1244.500000	31.5	100.0	54	V	203.0	43.5	-12.0
1595.750000	33.8	100.0	54	V	234.0	42.9	-9.1
2125.000000	39.3	100.0	54	V	178.0	45.7	-6.4
2384.500000	43.3	100.0	54	H	354.0	48.7	-5.4
2489.500000	45.3	100.0	54	V	325.0	49.7	-4.4

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

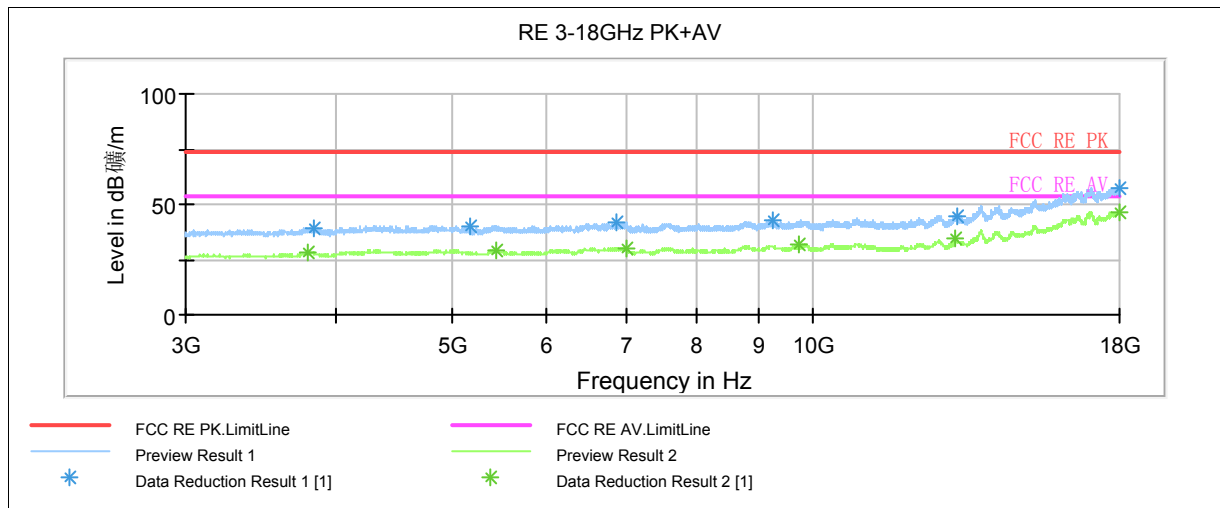
2. Average= Reading value + Correction factor

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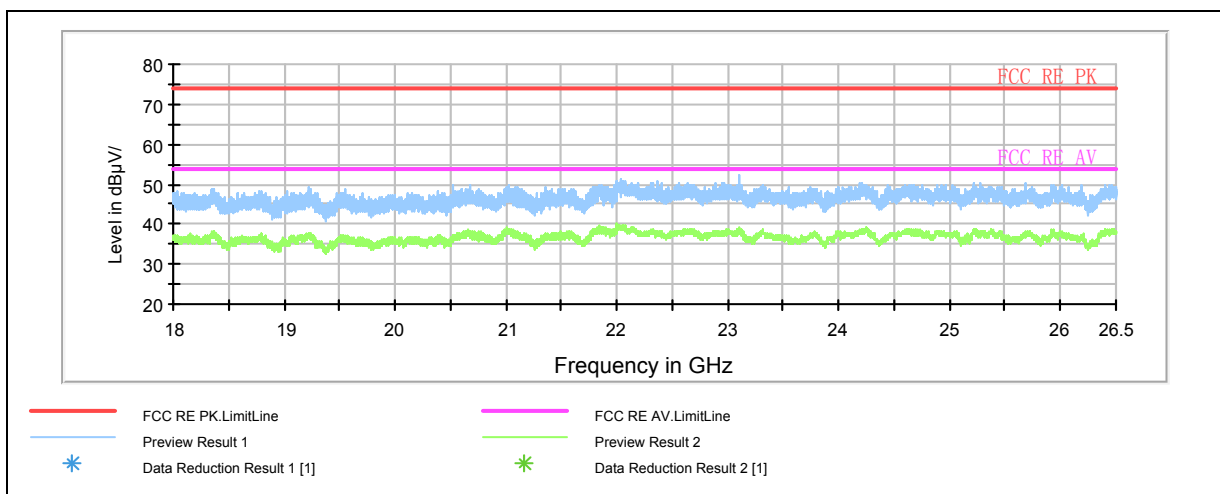
Note: a font (Level in dB 磁/m) in the test plot =(level in dbuv/m)
Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/ m)	Average (dBuV/m)	Height (cm)	Limit (dBuV/m)		Polarization	Azimuth (deg)	Reading value (dBuV/m)		Correct Factor (dB)
				Peak	Average			Peak	Avera	
3791.250	37.5	28.3	100.0	74	54	V	324.0	38.0	28.8	-0.5
5446.875	39.6	29.4	150.0	74	54	V	175.0	36.8	26.6	2.8
6982.500	38.8	30.2	98.0	74	54	H	0.0	33.9	25.3	4.9
9748.125	41.3	31.9	100.0	74	54	V	0.0	32.5	23.1	8.8
13143.750	43.4	34.1	98.0	74	54	H	159.0	30.6	21.3	12.8
17985.000	55.3	46.5	98.0	74	54	H	0.0	31.9	23.1	23.4

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

2. Peak = Reading value + Correction factor

3. Average = Reading value + Correction factor



Note: a font (Level in dB 磁/m) in the test plot =(level in dBuv/m)
Radiates Emission from 18GHz to 26.5GHz

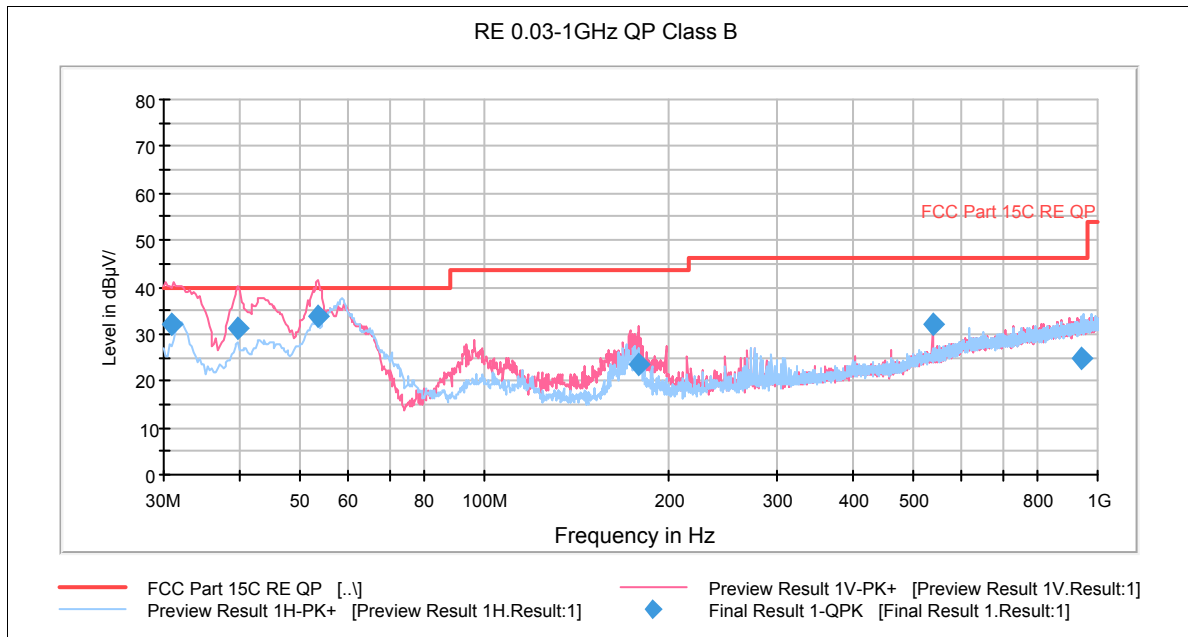
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Note: a font (Level in dBμV/m) in the test plot =(level in dbuv/m)

Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.840000	32.1	100.0	V	36.0	14.7	17.4	7.9	40.0
39.740000	31.4	100.0	V	5.0	12.8	18.6	8.6	40.0
53.442500	33.6	100.0	V	298.0	15.1	18.5	6.4	40.0
178.487500	23.5	100.0	V	41.0	12.1	11.4	20.0	43.5
537.592500	32.3	100.0	V	339.0	11.4	20.9	13.7	46.0
945.037500	24.9	214.0	H	112.0	-1.2	26.1	21.1	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

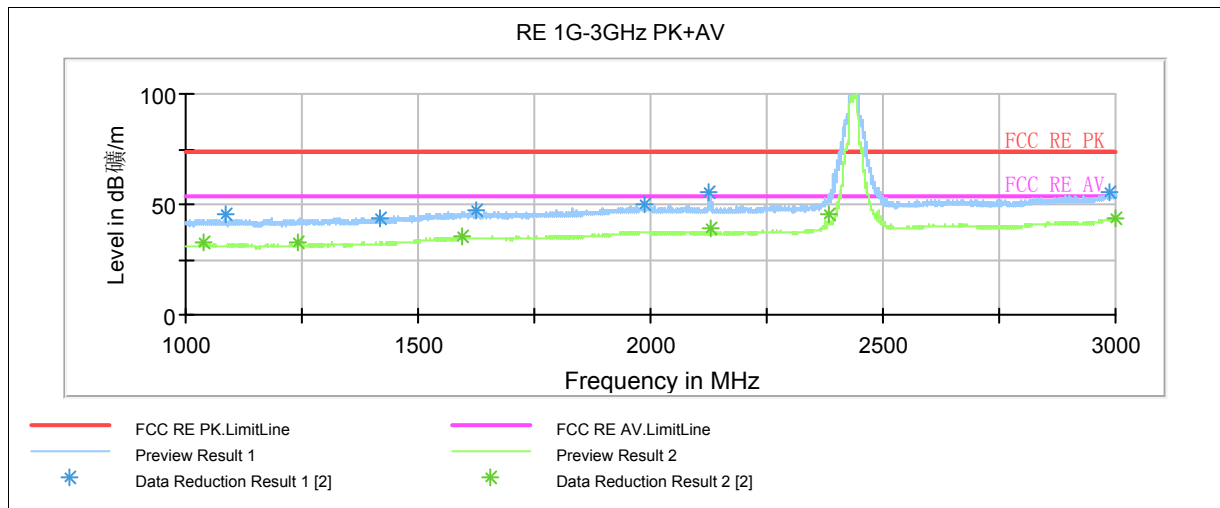
3. Margin = Limit – Quasi-Peak

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Note: a font (Level in dBμV/m) in the test plot =(level in dBuV/m)

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Limit (dBuV/m)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)
1084.750000	45.1	100.0	74	V	63.0	57.5	-12.4
1417.500000	44.0	150.0	74	H	118.0	55.1	-11.1
1624.000000	47.4	150.0	74	H	0.0	56.5	-9.1
1987.750000	49.6	100.0	74	H	69.0	56.1	-6.5
2125.250000	55.9	100.0	74	V	174.0	62.3	-6.4
2988.250000	55.1	150.0	74	V	53.0	56.9	-1.8

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

2. Peak = Reading value + Correction factor

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Limit (dBuV/m)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)
1036.750000	32.6	100.0	54	V	135.0	44.8	-12.2
1243.250000	33.1	100.0	54	V	0.0	45.1	-12.0
1596.750000	35.9	100.0	54	V	244.0	45	-9.1
2127.250000	38.7	100.0	54	V	260.0	45.1	-6.4
2384.500000	45.1	100.0	54	V	324.0	50.5	-5.4
2998.000000	43.6	150.0	54	H	257.0	45.4	-1.8

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

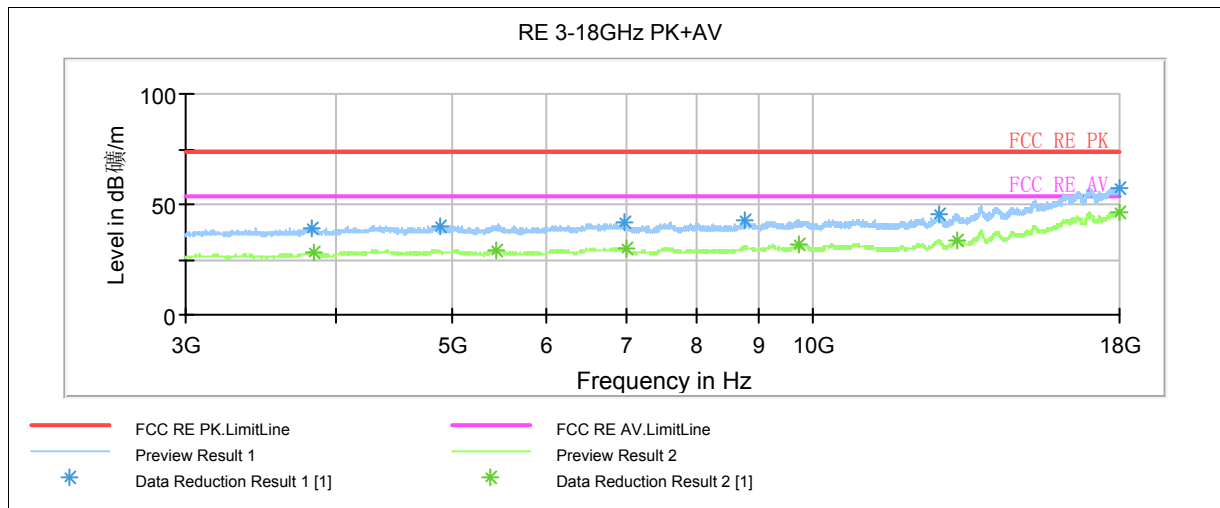
2. Average= Reading value + Correction factor

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Note: a font (Level in dBμV/m) in the test plot =(level in dbuv/m)

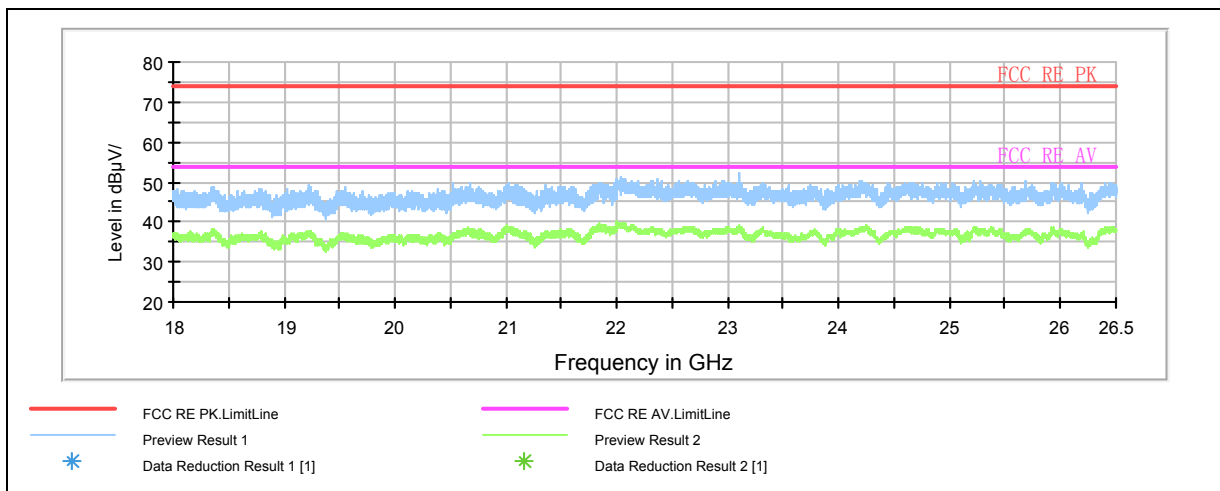
Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Height (cm)	Limit (dBuV/m)		Polarization	Azimuth (deg)	Reading value (dBuV/m)		Correct Factor (dB)
				Peak	Average			Peak	Average	
3834.375	37.0	28.3	150.0	74	54	V	188.0	37.1	28.4	-0.1
5437.500	38.3	29.2	150.0	74	54	V	167.0	35.5	26.4	2.8
6990.000	39.5	30.2	100.0	74	54	H	131.0	34.5	25.2	5.0
9748.125	41.8	31.9	100.0	74	54	V	0.0	33.0	23.1	8.8
13170.000	43.1	34.1	150.0	74	54	H	238.0	30.4	21.4	12.7
17994.375	56.1	46.4	150.0	74	54	V	56.0	32.6	22.9	23.5

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

2. Peak = Reading value + Correction factor

3. Average = Reading value + Correction factor



Note: a font (Level in dBμV) in the test plot =(level in dbuv/m)

Radiates Emission from 18GHz to 26.5GHz

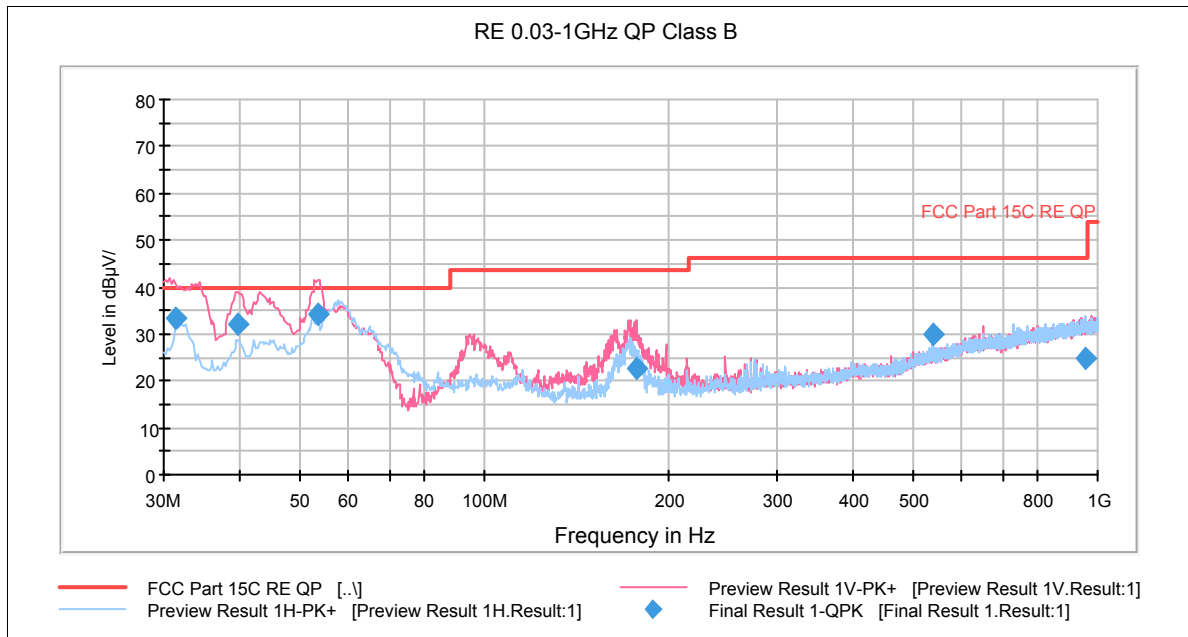
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Note: a font (Level in dBuV/m) in the test plot =(level in dbuv/m)

Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
31.327500	33.4	100.0	V	316.0	16	17.4	6.6	40.0
39.780000	32.1	100.0	V	16.0	13.5	18.6	7.9	40.0
53.482500	34.1	100.0	V	285.0	15.7	18.4	5.9	40.0
176.597500	22.6	100.0	V	46.0	11.3	11.3	20.9	43.5
537.592500	29.9	100.0	V	355.0	9	20.9	16.1	46.0
956.755000	24.8	200.0	H	22.0	-1.4	26.2	21.2	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

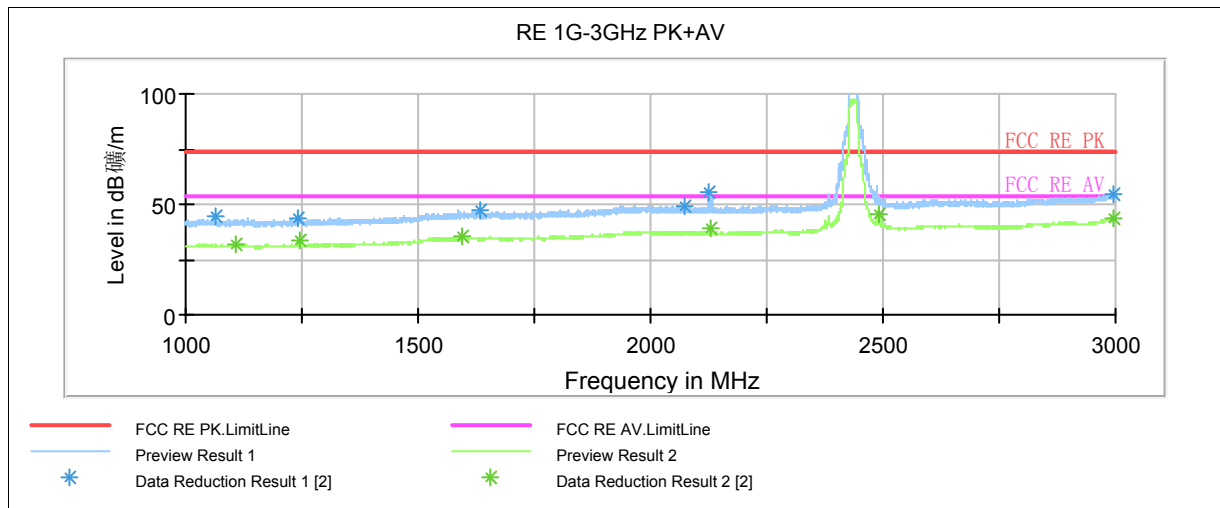
3. Margin = Limit – Quasi-Peak

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Note: a font (Level in dBμV/m) in the test plot =(level in dBuV/m)

Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 3GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Limit (dBuV/m)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)
1062.500000	44.4	150.0	74	H	324.0	56.7	-12.3
1241.500000	43.8	100.0	74	V	199.0	55.9	-12.1
1632.750000	47.4	100.0	74	V	254.0	56.7	-9.3
2073.000000	48.9	100.0	74	H	0.0	55.1	-6.2
2124.750000	55.6	100.0	74	V	176.0	62.0	-6.4
2997.250000	54.6	150.0	74	H	97.0	56.4	-1.8

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

2. Peak = Reading value + Correction factor

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Limit (dBuV/m)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)
1109.250000	31.9	100.0	54	V	0.0	44.3	-12.4
1245.500000	33.4	100.0	54	V	199.0	45.4	-12.0
1594.000000	35.3	100.0	54	H	124.0	44.5	-9.2
2129.750000	38.9	100.0	54	V	230.0	45.4	-6.5
2489.250000	45.6	100.0	54	V	343.0	50.0	-4.4
2995.000000	44.0	100.0	54	V	128.0	45.8	-1.8

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

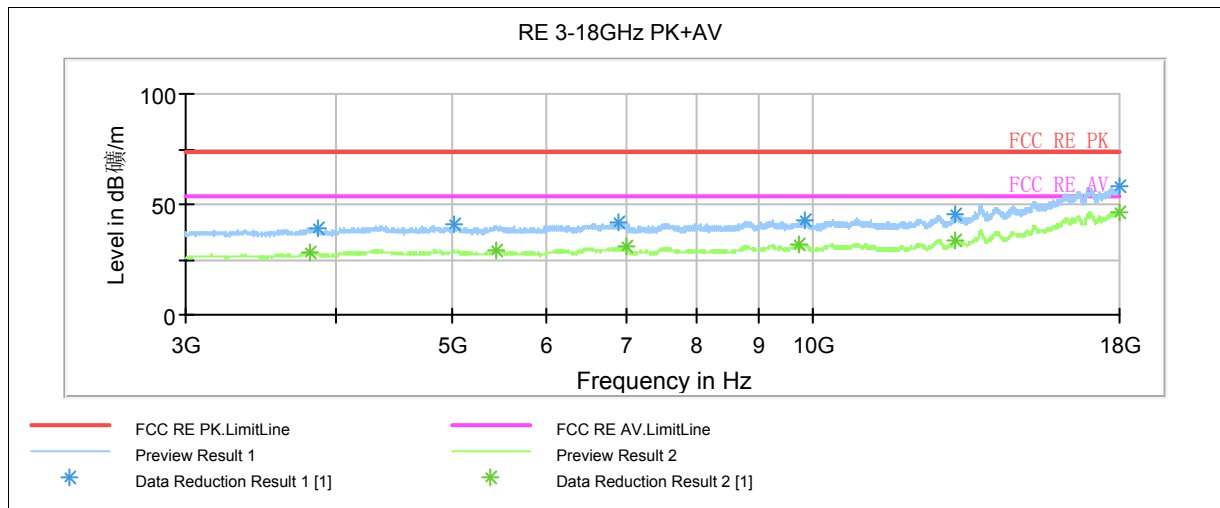
2. Average= Reading value + Correction factor

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Note: a font (Level in dB 磁/m) in the test plot =(level in dbuv/m)

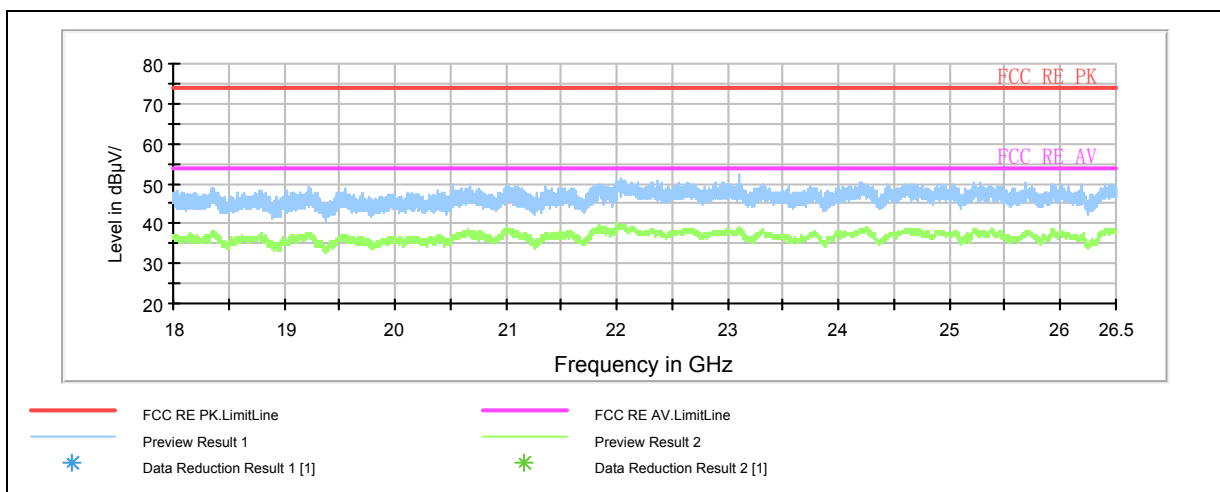
Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Height (cm)	Limit (dBuV/m)		Polarization	Azimuth (deg)	Reading value (dBuV/m)		Correction Factor (dB)
				Peak	Average			Peak	Average	
3802.500	37.3	28.1	100.0	74	54	V	114.0	37.7	28.5	-0.4
5435.625	39.3	29.3	100.0	74	54	V	308.0	36.5	26.5	2.8
6982.500	39.7	30.5	100.0	74	54	H	0.0	34.8	25.6	4.9
9748.125	41.3	31.7	100.0	74	54	V	351.0	32.5	22.9	8.8
13153.125	43.0	34.1	100.0	74	54	H	0.0	30.3	21.4	12.7
17988.750	56.4	46.7	150.0	74	54	V	71.0	32.9	23.2	23.5

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

2. Peak = Reading value + Correction factor

3. Average = Reading value + Correction factor



Note: a font (Level in dB 磁/m) in the test plot =(level in dbuv/m)

Radiates Emission from 18GHz to 26.5GHz

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2.10. Conducted Emissions

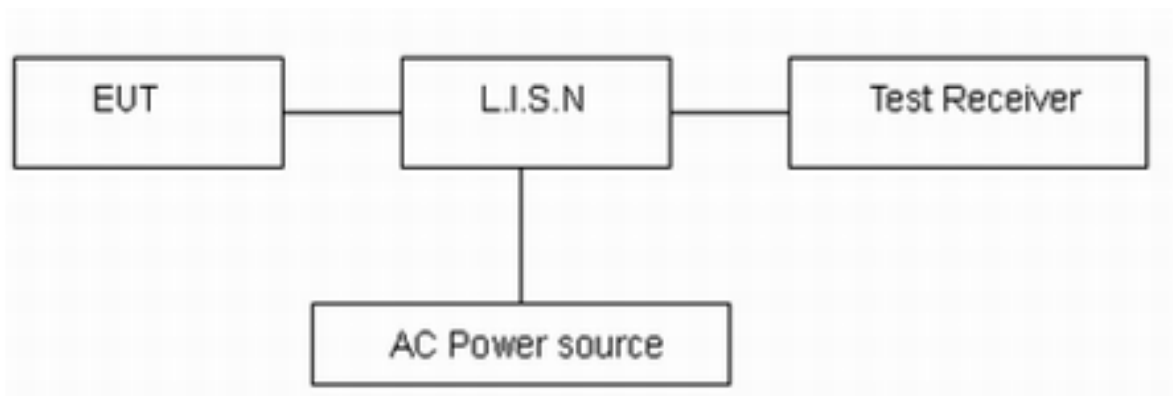
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT IS placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSIC63.4-2009. Connect the AC power line of the EUT to the LISN Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9kHz, VBW is set to 30kHz. The measurement result should include both L line and N line. The test is in transmitting mode.

Test setup



Note: AC Power source is used to change the voltage from 220V/50Hz to 110V/60Hz.

Limits

Frequency (MHz)	Conducted Limits(dBμV)	
	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.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 2.69$ dB.

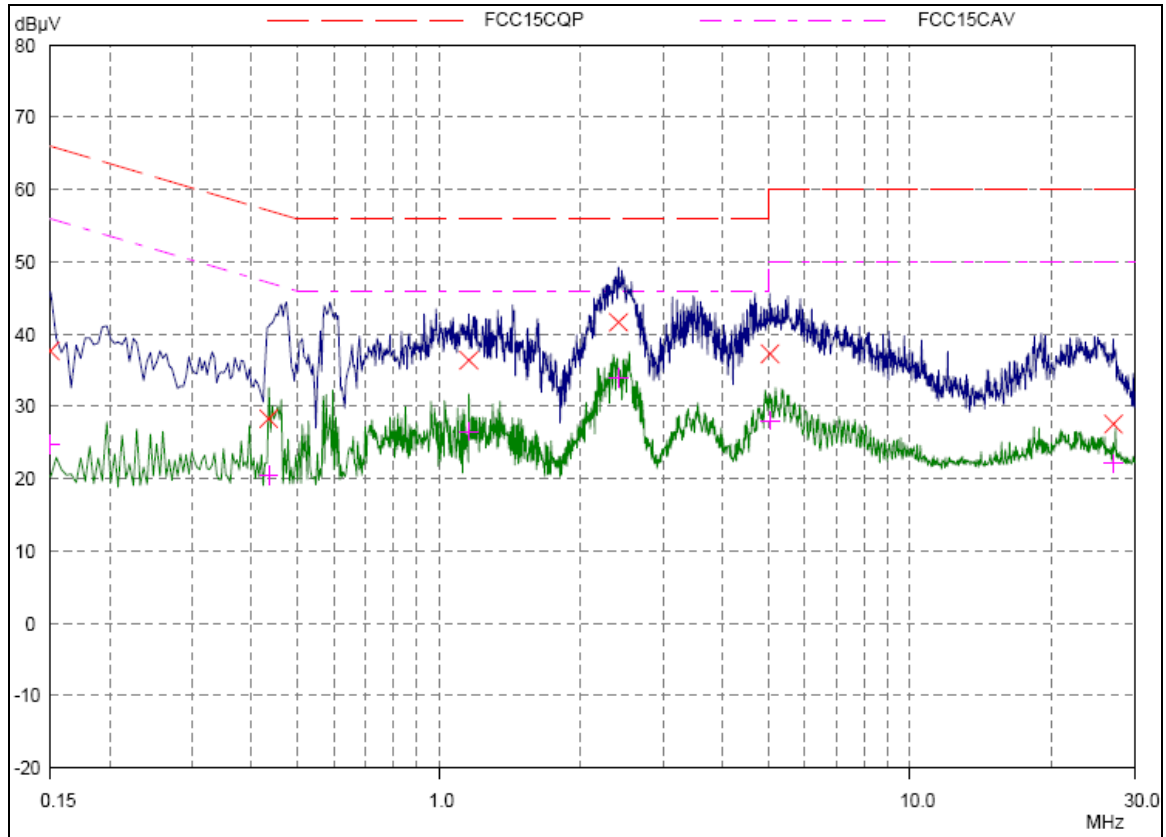
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Test Results:

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L Line

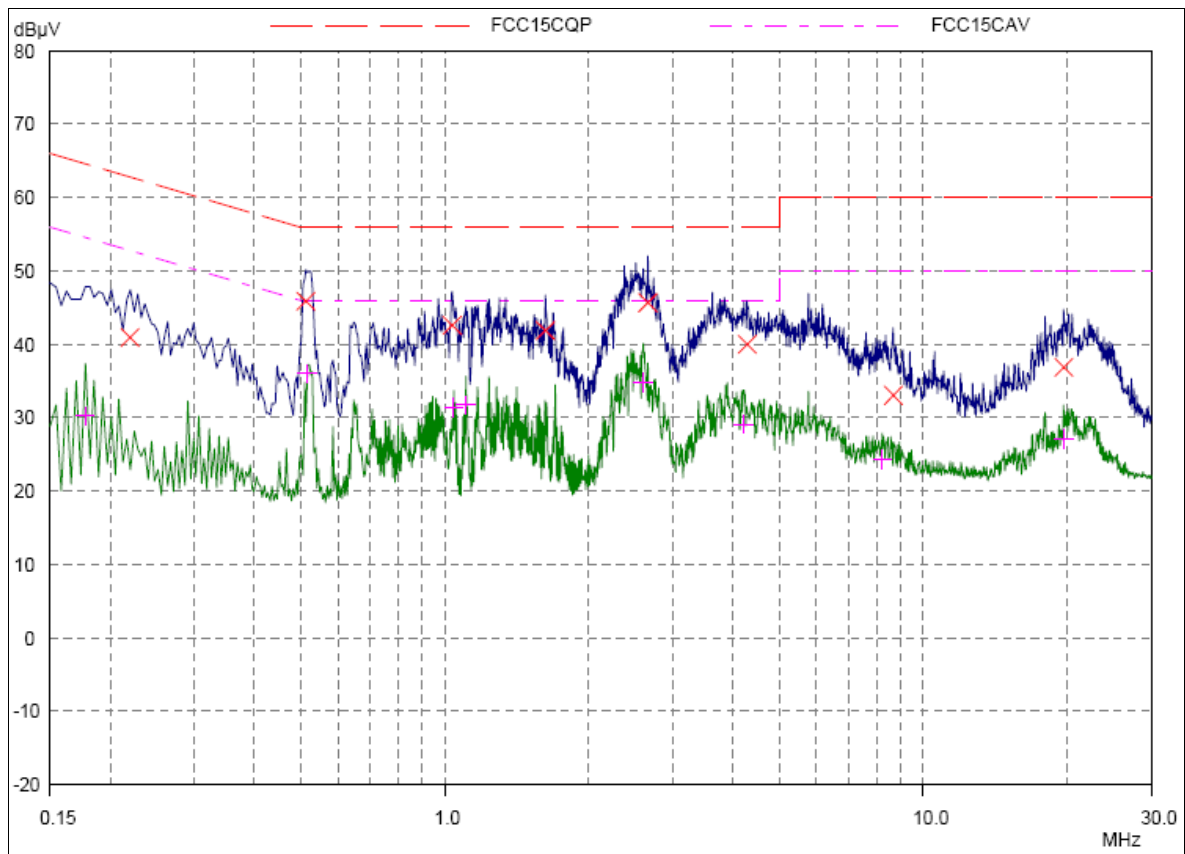
Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.15	37.68	66.00	28.32	L1
0.43515	28.30	57.15	28.85	L1
1.15781	36.41	56.00	19.59	L1
2.40781	41.63	56.00	14.37	L1
5.04843	37.29	60.00	22.71	L1
27.04062	27.56	60.00	32.44	L1
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.15	24.77	56.00	31.23	L1
0.43515	20.48	47.15	26.67	L1
1.15781	26.49	46.00	19.51	L1
2.40781	34.01	46.00	11.99	L1
5.04843	28.05	50.00	21.95	L1
27.04062	22.14	50.00	27.86	L1

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N Line

Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.22031	40.96	62.81	21.85	N
0.51327	45.90	56.00	10.10	N
1.03671	42.56	56.00	13.44	N
1.62265	41.86	56.00	14.14	N
2.65781	45.68	56.00	10.32	N
4.28671	40.01	56.00	15.99	N
8.64609	33.06	60.00	26.94	N
19.64218	36.86	60.00	23.14	N
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.17734	30.27	54.61	24.34	N
0.51718	36.01	46.00	9.99	N
1.04453	31.41	46.00	14.59	N
1.10703	31.75	46.00	14.25	N
2.59921	34.83	46.00	11.17	N
4.2125	29.12	46.00	16.88	N
8.2164	24.37	50.00	25.63	N
19.6539	27.15	50.00	22.85	N

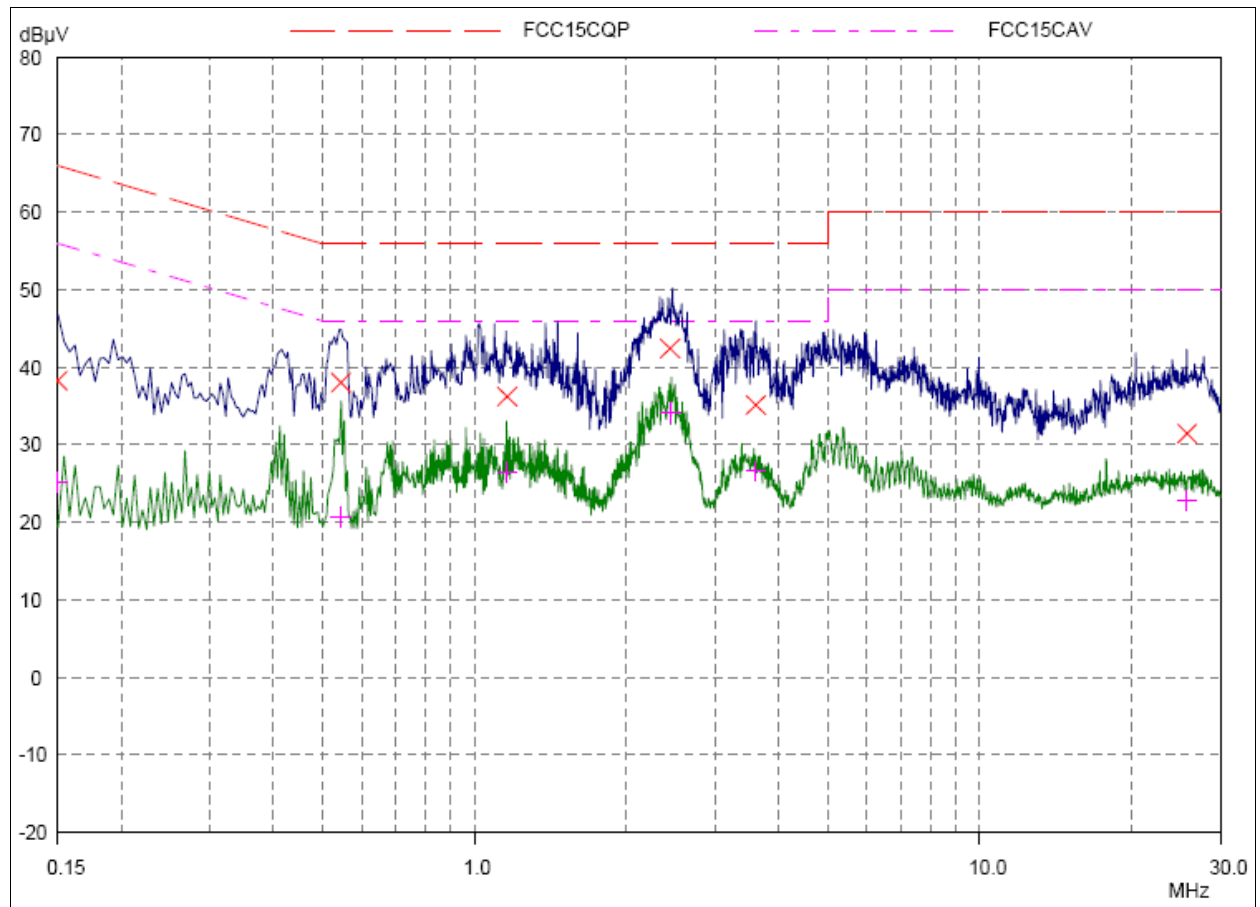
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L Line

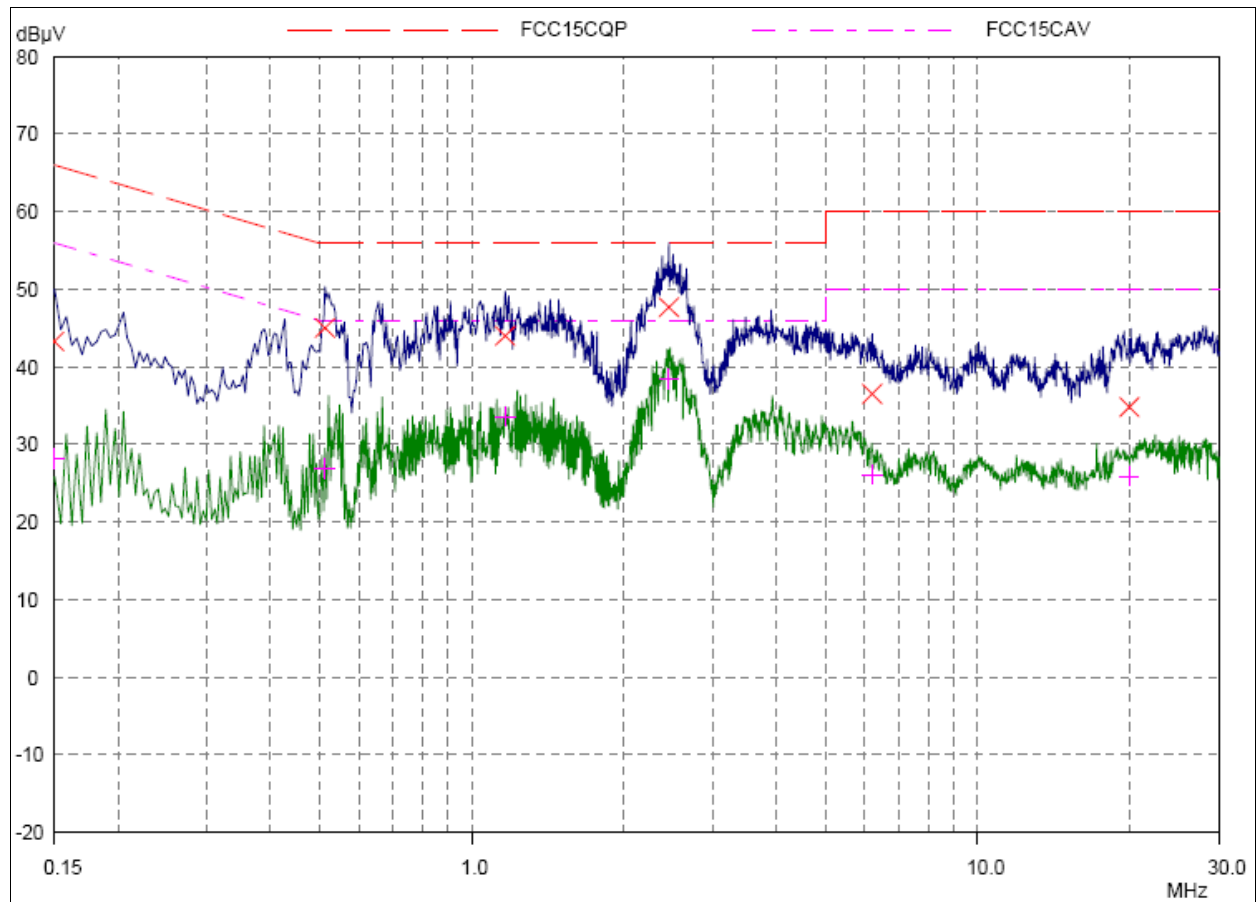
Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.15	38.26	66.00	27.74	L1
0.54453	38.05	56.00	17.95	L1
1.16171	36.23	56.00	19.77	L1
2.43906	42.44	56.00	13.56	L1
3.61093	35.17	56.00	20.83	L1
25.7125	31.46	60.00	28.54	L1
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.15	25.16	56.00	30.84	L1
0.54453	20.74	46.00	25.26	L1
1.16171	26.42	46.00	19.58	L1
2.43906	34.21	46.00	11.79	L1
3.61093	26.62	46.00	19.38	L1
25.7125	22.86	50.00	27.14	L1

TA Technology (Shanghai) Co., Ltd.

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N Line

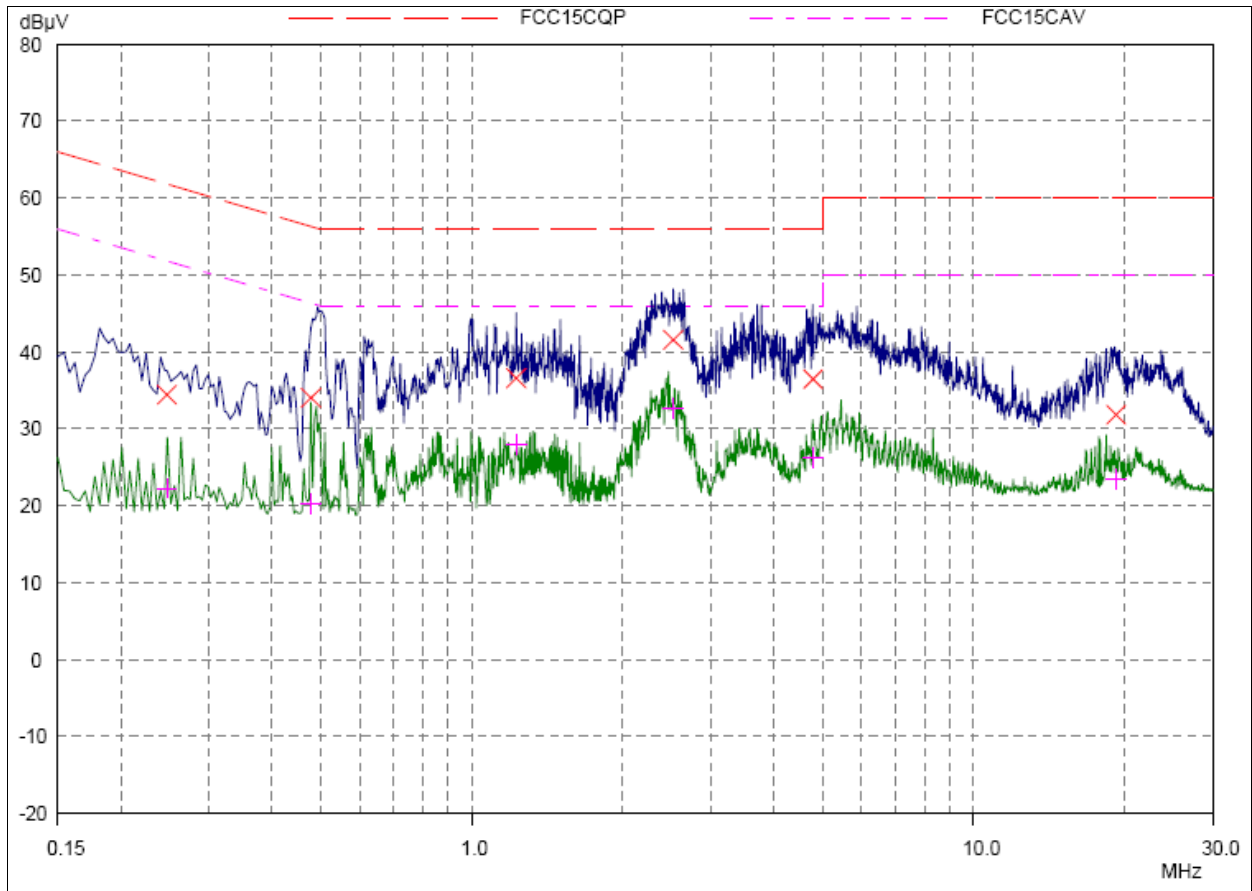
Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.15	43.32	66.00	22.68	N
0.51327	45.04	56.00	10.96	N
1.16562	44.01	56.00	11.99	N
2.45468	47.68	56.00	8.32	N
6.19687	36.52	60.00	23.48	N
19.95468	34.86	60.00	25.14	N
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.15	28.15	56.00	27.85	N
0.51327	26.88	46.00	19.12	N
1.16562	33.54	46.00	12.46	N
2.45468	38.47	46.00	7.53	N
6.19687	26.10	50.00	23.90	N
19.95468	25.92	50.00	24.08	N

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802.11n (HT20) CH6



L Line

Final Measurement Results

Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.24765	34.41	61.84	27.43	L1
0.47812	34.02	56.37	22.35	L1
1.22812	36.58	56.00	19.42	L1
2.525	41.57	56.00	14.43	L1
4.78281	36.45	56.00	19.55	L1
19.24375	31.85	60.00	28.15	L1

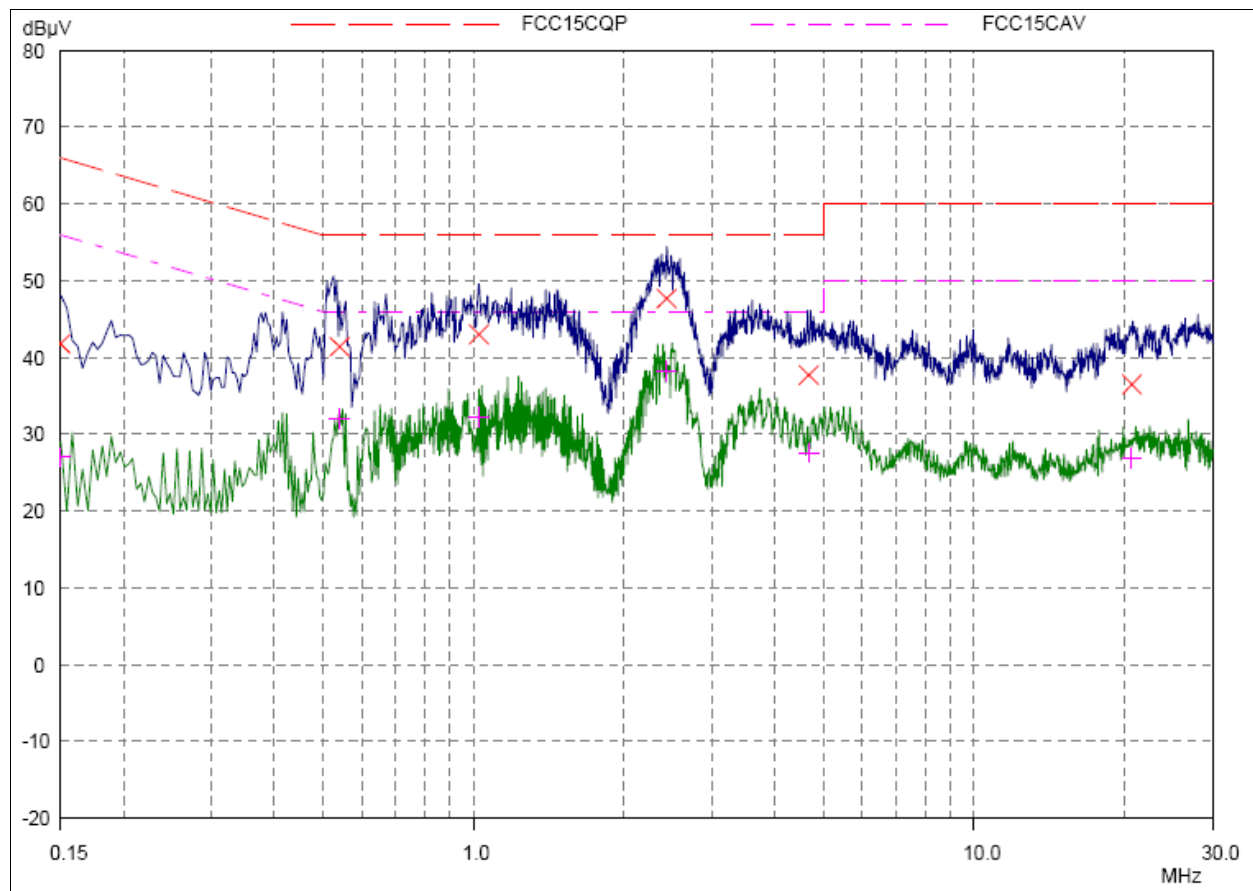
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.24765	22.26	51.84	29.58	L1
0.47812	20.21	46.37	26.16	L1
1.22812	27.97	46.00	18.03	L1
2.525	32.68	46.00	13.32	L1
4.78281	26.28	46.00	19.72	L1
19.24375	23.43	50.00	26.57	L1

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N Line

Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.15	41.78	66.00	24.22	N
0.54062	41.39	56.00	14.61	N
1.02499	43.02	56.00	12.98	N
2.43515	47.68	56.00	8.32	N
4.68515	37.75	56.00	18.25	N
20.67343	36.50	60.00	23.50	N
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.15	27.04	56.00	28.96	N
0.54062	31.98	46.00	14.02	N
1.02499	32.19	46.00	13.81	N
2.43515	38.16	46.00	7.84	N
4.68515	27.59	46.00	18.41	N
20.67343	26.87	50.00	23.13	N

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3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Valid Period
01	EMI Test Receiver	ESCI	R&S	100948	2012-06-30	One year
02	TRILOG Broadband Antenna	VULB 9163	Schwarzbeck	9163-201	2010-06-20	Three years
03	Double Ridged Waveguide Horn Antenna	HF907	R&S	100126	2012-07-02	Three years
04	EMI Test Receiver	ESCS30	R&S	100138	2013-01-15	One year
05	LISN	ENV216	R&S	101171	2010-04-16	Three years
06	PSG Analog Signal Generator	E8257D	Agilent	MY49281101	2012-06-30	One year
07	ESG Vector Signal Generator	E4438C	Agilent	MY49070900	2012-06-30	One year
08	Spectrum Analyzer	E4445A	Agilent	MY46181146	2012-06-30	One year
09	Power Splitter	SHX-GF2-2-13	Hua Xiang	10120101	NA	NA
10	MOB COMMS DC SUPPLY	66319D	Agilent	MY43004105	2012-06-30	One year
11	Peak Power Analyzer	8990B	Agilent	51000109	2012-06-01	One year
12	Wideband Power Sensors	N1923A	Agilent	MY51220004	2012-06-01	One year
13	Universal Radio Communication Tester	E5515C	Agilent	MY48367192	2012-06-30	One year

*****END OF REPORT BODY*****