

FCC TEST REPORT

FCC ID: 2AIGSFLEX360

Product	:	Notebook
Model Name	:	Flex360
Brand	:	Edugear
Report No.	:	PTC802663160921E-FC01
Prepared for		
MAG DIGITAL TECHNOLOGIES LIMITED		
Rm918,East BaihuoPlaza,No 3020,		
ShenNan East Road,Luohu District Shenzhen China		
Prepared by		
Dongguan Precise Testing & Certification Corp., Ltd.		
Building D, Baoding Technology Park, Guangming Road 2, Guangming Community		
Dongcheng District, Dongguan, Guangdong, China		

TEST RESULT CERTIFICATION

Applicant's name : MAG DIGITAL TECHNOLOGIES LIMITED
Address : Rm918,East BaihuoPlaza,No 3020, ShenNan East Road,Luohu District
Shenzhen China
Manufacture's name : MAG DIGITAL TECHNOLOGIES LIMITED
Address : Rm918,East BaihuoPlaza,No 3020, ShenNan East Road,Luohu District
Shenzhen China
Product name : Notebook
Model name : Flex360
Standards : FCC CFR47 Part 15 Section 15.247
Test procedure : ANSI C63.10:2013, KDB 558074 D01 DTS MEAS GUIDANCE V03R05
Test Date : Sep.24, 2016 ~ Sep.27, 2016
Date of Issue : Sep.27, 2016
Test Result : Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Testing Engineer

August Qiu

Authorized Signatory

Chris Du




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2 Test Summary

Test Items	Test Requirement	Result
Conduct Emission	15.207	PASS
Radiated Spurious Emissions	15.205(a) 15.209 15.247(d)	PASS
Conducted Spurious Emission	15.247(d)	PASS
Band edge	15.247(d) 15.205(a)	PASS
6dB Bandwidth	15.247(a)(2)	PASS
Maximum Peak Output Power	15.247(b)(1)	PASS
Power Spectral Density	15.247(e)	PASS
Antenna Requirement	15.203	PASS
Remark: N/A: Not Applicable		

3 General Information

3.1 General Description of E.U.T

Product Name	:	Notebook
Model Name	:	Flex360
Operating frequency	:	802.11b/802.11g/802.11n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
Antenna installation:	:	internal permanent antenna
Antenna Gain:	:	0dBi
Type of Modulation	:	IEEE 802.11b CCK/QPSK/BPSK IEEE 802.11g BPSK/QPSK/16QAM/64QAM IEEE 802.11n-HT20 BPSK/QPSK/16QAM/64QAM IEEE 802.11n-HT40 BPSK/QPSK/16QAM/64QAM
Power supply	:	DC 3.8V 34.2Wh Power by battery, DC 5V charging by adapter
Adapter	:	Input: AC 100-240V 50/60Hz 0.5A max Output: DC 5V 2.5A

3.2 Channel List

WIFI							
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	4	2427	7	2442	10	2457
2	2417	5	2432	8	2447	11	2462
3	2422	6	2437	9	2452	/	/

3.3 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported. Duty cycle $\geq 98\%$

Modulation	Test mode	Low channel	Middle channel	High channel
802.11b/g/n-HT20	Transmitting	2412MHz	2437MHz	2462MHz
802.11n-HT40	Transmitting	2422MHz	2437MHz	2452MHz

3.4 Test Site

Dongguan Precise Testing Service Co., Ltd.

Building D, Baoding Technology Park, Guangming Road2, Dongcheng District, Dongguan,

Guangdong, China, Dongguan, 523129

China

FCC Registration Number: 371540

IC Registration Number: 12191A-1

4 Equipment During Test

4.1 Equipments List

RF Conducted Test							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	EMC Analyzer (9k~26.5GHz)	Agilent	E4407B	MY45109572	Aug.04, 2016	Aug.03, 2017	1 year
2	EXA Signal Analyzer	Keysight	N9010A	MY50520207 526B25MPB W7X	Aug.04, 2016	Aug.03, 2017	1 year
3	EMI Test Receiver	ROHDE & SCHWARZ	ESIB26	101729	July 15, 2016	July 14, 2017	1 year
4	USB RF power sensor	DARE	RPR3006W	15I00325 SNO06	July 06, 2016	July.05, 2017	1 year
Radiated Emissions							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	EMI Test Receiver	Rohde&Schwarz	ESCI	101417	July 15, 2016	July 14, 2017	1 year
2	Trilog Broadband Antenna	SCHWARZB ECK	VULB9160	9160-3355	July 15, 2016	July 14, 2017	1 year
3	Amplifier	EM	EM-30180	060538	July 15, 2016	July 14, 2017	1 year
4	Horn Antenna	SCHWARZB ECK	BBHA9120 D	9120D- 1246	July 15, 2016	July 14, 2017	1 year
5	Loop Antenna	SCHWARZB ECK	FMZB1516	9130D- 1243	July 15, 2016	July 14, 2017	1 year
6	3m Anechoic Chamber	CHENGYU	966	PTC-002	June 6, 2016	June 6, 2017	1 year
Conducted Emissions							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	EMI Test Receiver	R&S	ESCI	101155	July 15, 2016	July 14, 2017	1 year
2	LISN	SCHWARZB ECK	NSLK 8128	8128-289	July 15, 2016	July 14, 2017	1 year
3	Cable	LARGE	RF300	-	July 15, 2016	July 14, 2017	1 year
4	Shielded room	CHENGYU	843	PTC-001	June 6, 2016	June 6, 2017	1 year

4.2 Measurement Uncertainty

Parameter	Uncertainty
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10 ⁻⁶
Bandwidth	± 1.5 x 10 ⁻⁶
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB

5 Conducted Emission

Test Requirement:	: FCC CFR 47 Part 15 Section 15.207
Test Method:	: ANSI C63.10:2013
Test Result:	: PASS
Frequency Range:	: 150kHz to 30MHz
Class/Severity:	: Class B
Limit:	: 66-56 dB μ V between 0.15MHz & 0.5MHz
	: 56 dB μ V between 0.5MHz & 5MHz
	: 60 dB μ V between 5MHz & 30MHz
Detector:	: Peak for pre-scan(9kHz Resolution Bandwidth)

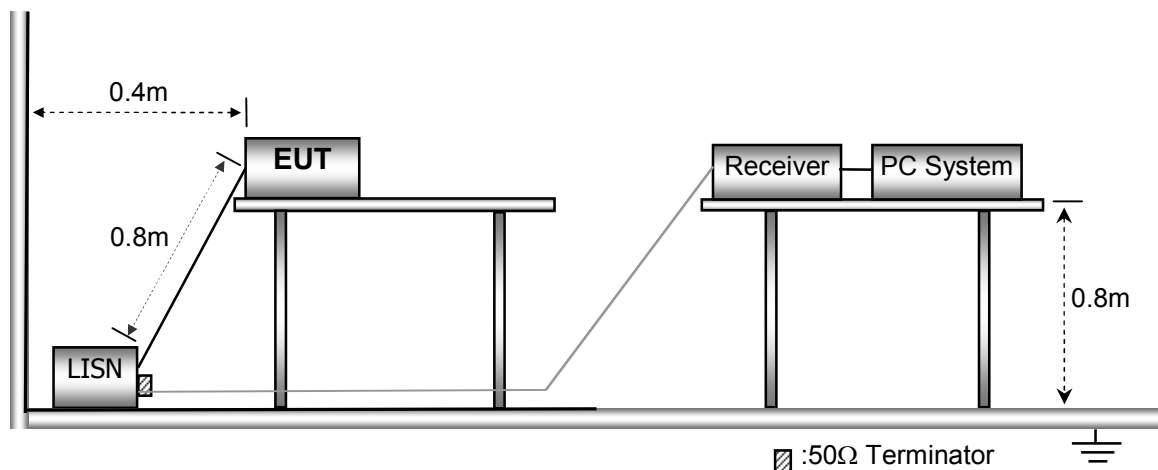
5.1 E.U.T. Operation

Operating Environment:

Temperature:	: 25.5 °C
Humidity:	: 51 % RH
Atmospheric Pressure:	: 101.2kPa
EUT Operation:	: Refer to section 3.3

5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013.

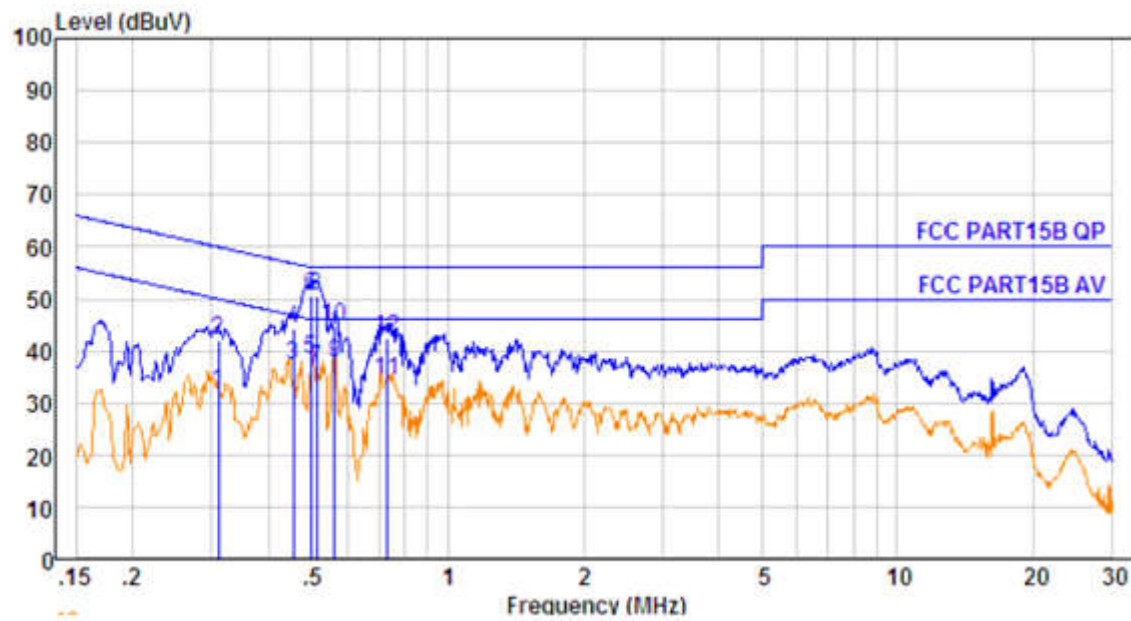


5.3 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.4 Conducted Emission Test Result

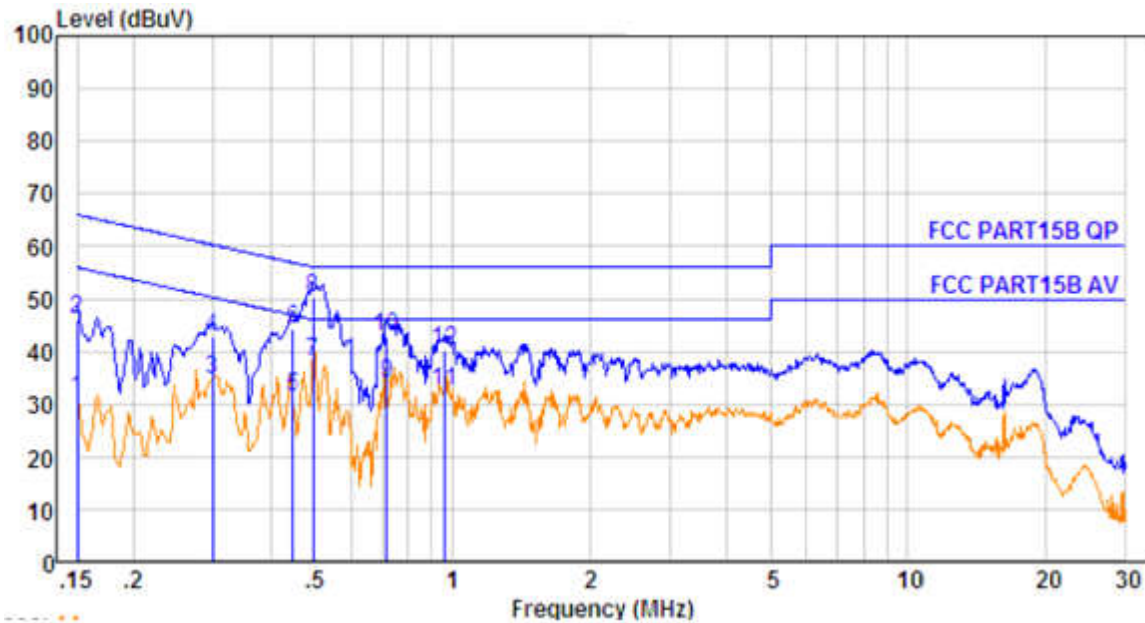
Live line:



No.	Freq MHz	Cable Loss dB	AMN Factor dB	Receiver Reading dBUV	Emission Level dBUV	Limit dBUV	Over Limit dB	Remark
1.	0.310	10.63	0.60	20.89	32.12	49.97	-17.85	Average
2.	0.310	10.63	0.60	30.89	42.12	59.97	-17.85	QP
3.	0.454	10.64	0.60	26.01	37.25	46.80	-9.55	Average
4.	0.454	10.64	0.60	33.01	44.25	56.80	-12.55	QP
5.	0.497	10.65	0.60	27.22	38.47	46.05	-7.58	Average
6.	0.497	10.65	0.60	39.22	50.47	56.05	-5.58	QP
7.	0.513	10.65	0.60	25.21	36.46	46.00	-9.54	Average
8.	0.513	10.65	0.60	39.21	50.46	56.00	-5.54	QP
9.	0.561	10.65	0.60	26.38	37.63	46.00	-8.37	Average
10.	0.561	10.65	0.60	33.38	44.63	56.00	-11.37	QP
11.	0.731	10.66	0.60	23.19	34.45	46.00	-11.55	Average
12.	0.731	10.66	0.60	31.19	42.45	56.00	-13.55	QP

Remark: Emission Level = Reading + Cable Loss + AMN Factor

Neutral line:



No.	Freq MHz	Cable Loss dB	AMN Factor dB	Receiver Reading dBuV	Emission Level dBuV	Limit dBuV	Over Limit dB	Remark
1.	0.150	10.60	0.60	19.88	31.08	56.00	-24.92	Average
2.	0.150	10.60	0.60	34.88	46.08	66.00	-19.92	QP
3.	0.299	10.63	0.60	23.63	34.86	50.28	-15.42	Average
4.	0.299	10.63	0.60	31.63	42.86	60.28	-17.42	QP
5.	0.449	10.64	0.60	20.17	31.41	46.89	-15.48	Average
6.	0.449	10.64	0.60	33.17	44.41	56.89	-12.48	QP
7.	0.497	10.65	0.60	26.76	38.01	46.05	-8.04	Average
8.	0.497	10.65	0.60	38.76	50.01	56.05	-6.04	QP
9.	0.720	10.66	0.60	22.62	33.88	46.00	-12.12	Average
10.	0.720	10.66	0.60	31.62	42.88	56.00	-13.12	QP
11.	0.963	10.67	0.60	21.03	32.30	46.00	-13.70	Average
12.	0.963	10.67	0.60	29.03	40.30	56.00	-15.70	QP

Remark: Emission Level = Reading + Cable Loss + AMN Factor

6 Radiated Spurious Emissions

Test Requirement: : FCC CFR47 Part 15 Section 15.209 & 15.247
 Test Method: : ANSI C63.10:2013,KDB 558074 D01 DTS MEAS GUIDANCE V03R05
 Test Result: : PASS
 Measurement Distance: : 3m
 Limit: : See the follow table

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

6.1 EUT Operation

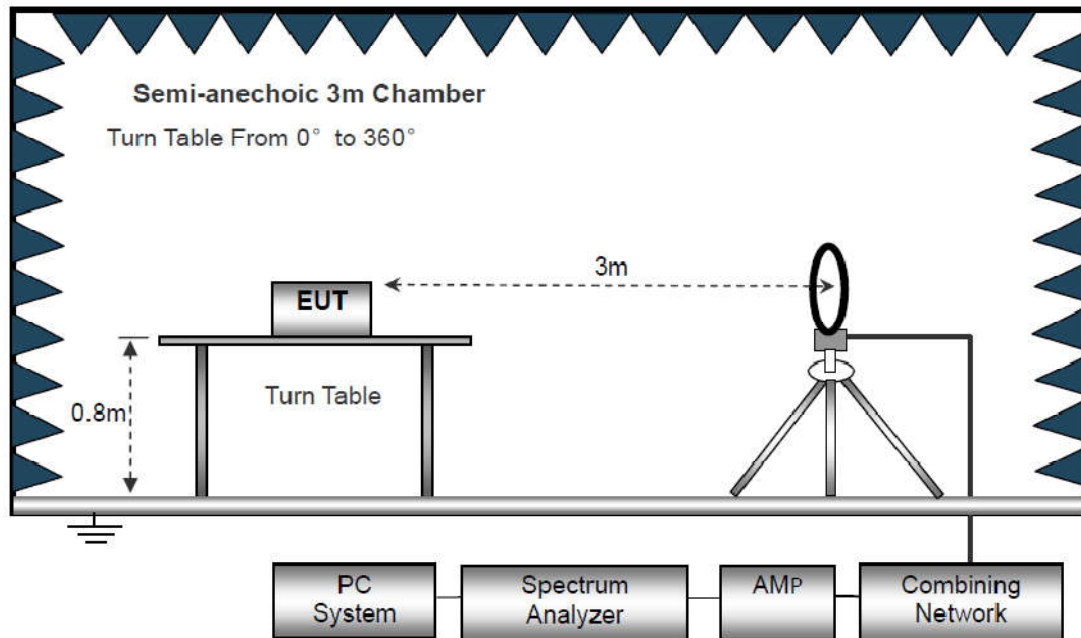
Operating Environment :

Temperature: : 23.5 °C
 Humidity: : 51.1 % RH
 Atmospheric Pressure: : 101.2kPa
 EUT Operation : : Refer to section 3.3

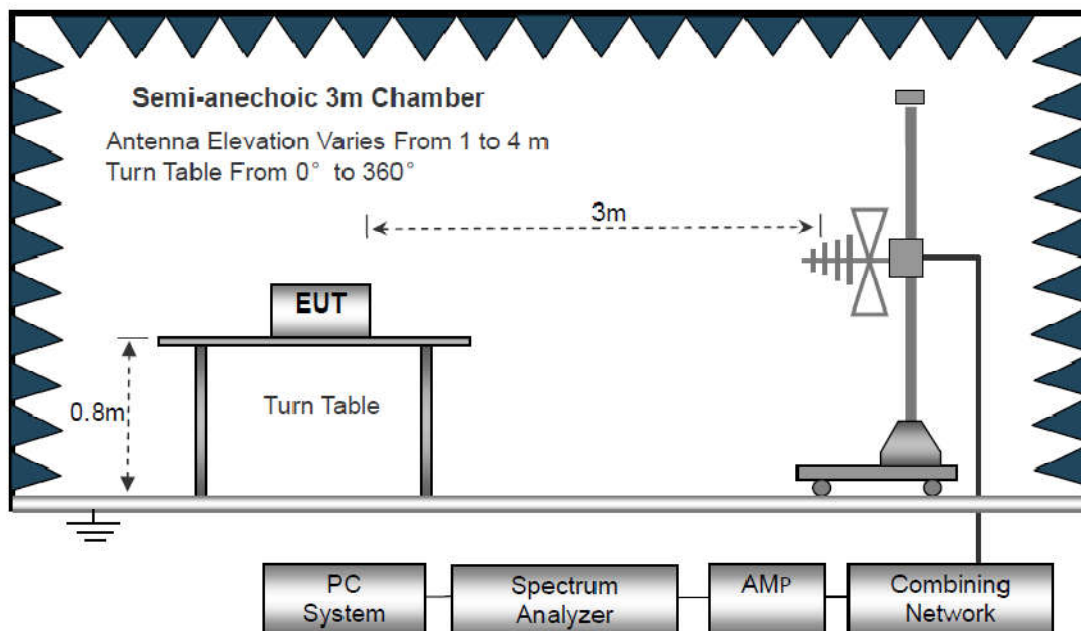
6.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber testsite

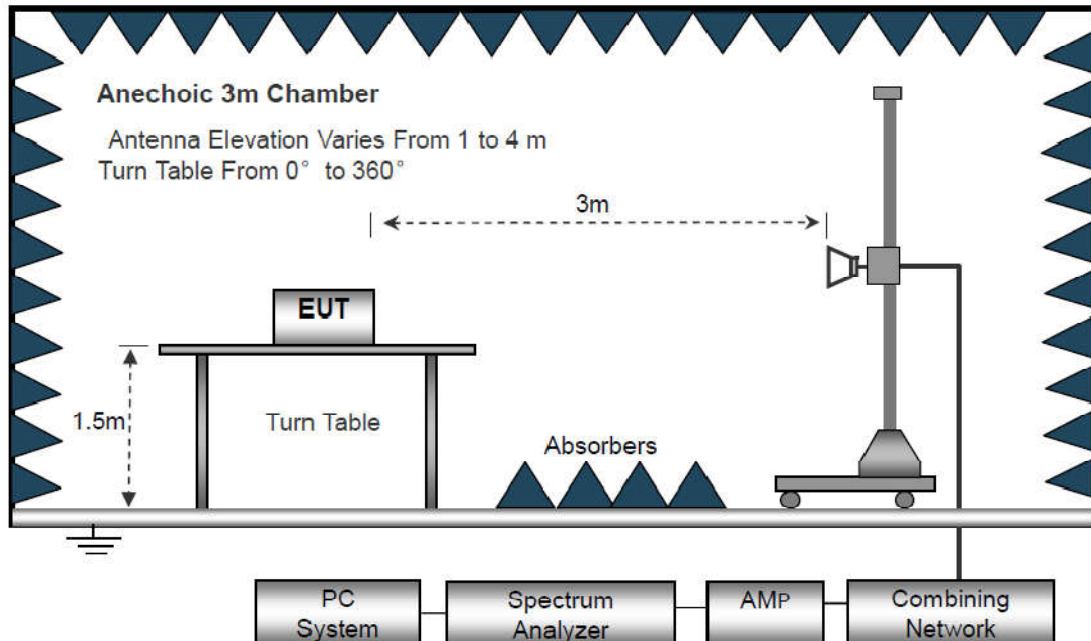
The test setup for emission measurement below 30MHz



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz



6.3 Spectrum Analyzer Setup

Below 30MHz

IF Bandwidth	10kHz
Resolution Bandwidth	10kHz
Video Bandwidth	10kHz

30MHz ~ 1GHz

Detector	: PK
Resolution Bandwidth	: 100kHz
Video Bandwidth	: 300kHz
Detector	: QP
Resolution Bandwidth	: 120kHz
Video Bandwidth	: 300kHz

Above 1GHz

Detector	: PK
Resolution Bandwidth	: 1MHz
Video Bandwidth	: 3MHz
Detector	: AV
Resolution Bandwidth	: 1MHz
Video Bandwidth	: 3MHz

6.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.
8. The test above 1GHz must be use the fully anechoic room, and the test below 1GHz use the half anechoic room



6.5 Summary of Test Results

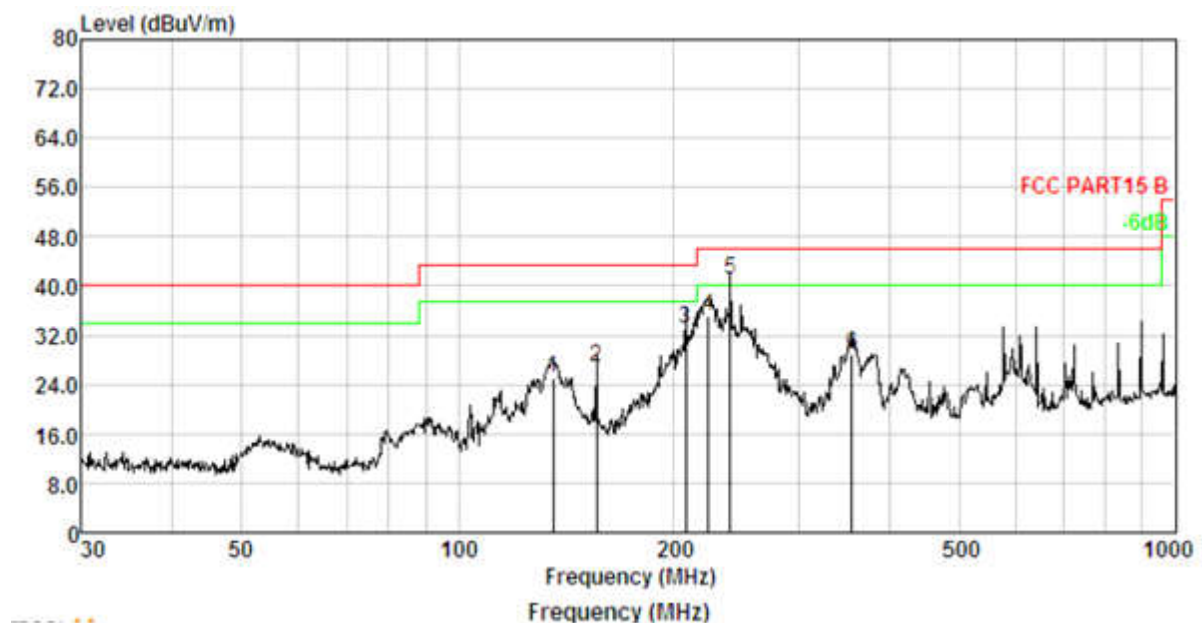
Test Frequency: Below 30MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency: 30MHz ~ 1GHz

All applicable test modes have been tested and only the worst case (802.11b TX in middle channel) is recorded.

Antenna Polarization: Horizontal

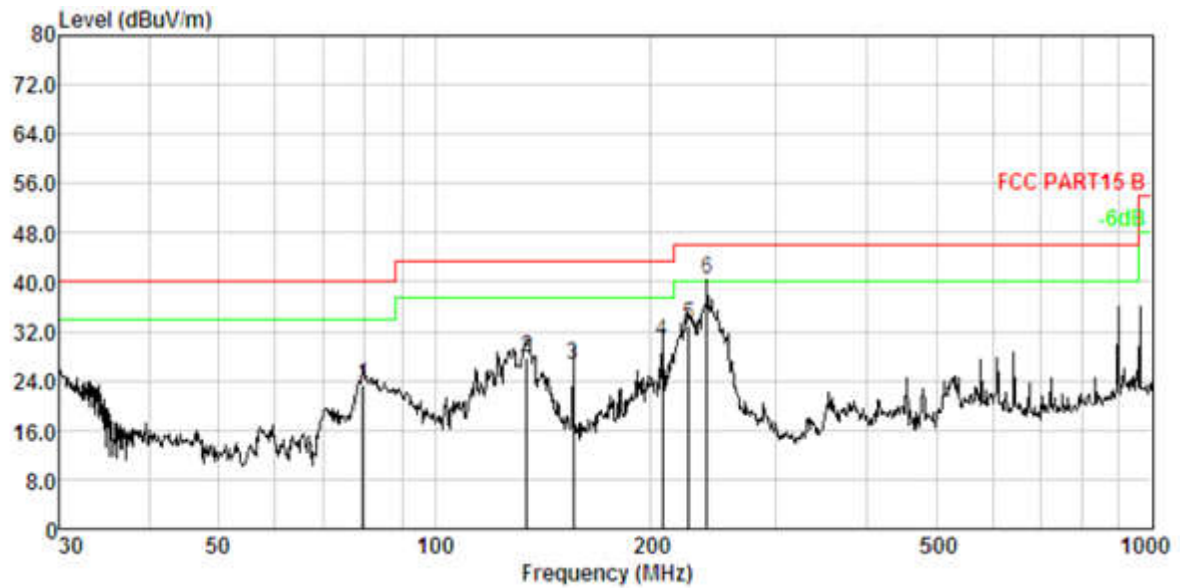


No.	Freq MHz	Cable Loss dB	ANT Factor dB/m	Receiver Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	135.506	2.42	13.04	40.18	30.49	25.15	43.50	-18.35	QP
2.	155.910	2.55	13.89	41.03	30.54	26.93	43.50	-16.57	QP
3.	207.850	2.81	10.53	50.49	30.64	33.19	43.50	-10.31	QP
4.	223.733	2.87	10.94	51.92	30.67	35.06	46.00	-10.94	QP
5.	239.987	2.94	11.71	57.11	30.69	41.07	46.00	-4.93	QP
6.	355.427	3.29	14.32	42.26	30.83	29.04	46.00	-16.96	QP

Remark: Emission Level = Reading + Cable Loss + ANT Factor - AMP Factor



Antenna Polarization: Vertical



No.	Freq MHz	Cable Loss dB	ANT Factor dB/m	Receiver Reading dBuV	Preamplifier Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	79.521	1.94	8.87	42.79	30.31	23.29	40.00	-16.71	QP
2.	134.559	2.41	12.97	42.80	30.49	27.69	43.50	-15.81	QP
3.	155.910	2.55	13.89	40.72	30.54	26.62	43.50	-16.88	QP
4.	207.850	2.81	10.53	47.75	30.64	30.45	43.50	-13.05	QP
5.	226.099	2.88	11.06	49.88	30.67	33.15	46.00	-12.85	QP
6.	239.987	2.94	11.71	56.45	30.69	40.41	46.00	-5.59	QP

Remark: Emission Level = Reading + Cable Loss + ANT Factor - AMP Factor

Test Frequency: 1GHz ~ 18GHz

Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11bLow Channel						
1350.60	43.17	Ave	-17.57	25.60	54.00	
1350.60	45.11	PK	-17.57	27.54	74.00	
4824.00	49.46	PK	-1.06	48.40	74.00	-25.60
4824.00	44.72	Ave	-1.06	43.66	54.00	-10.34
7236.00	50.10	PK	1.33	51.43	74.00	-22.57
7236.00	43.89	Ave	1.33	45.22	54.00	-8.78
2345.27	44.88	PK	-13.19	31.69	74.00	-42.31
2345.27	39.15	Ave	-13.19	25.96	54.00	-28.04
2390.00	42.83	PK	-13.14	29.69	74.00	-44.31
2390.00	37.65	Ave	-13.14	24.51	54.00	-29.49
2498.31	42.43	PK	-13.08	29.35	74.00	-44.65
2498.31	40.33	Ave	-13.08	27.25	54.00	-26.75

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11b Middle Channel						
1350.60	43.59	Ave	-17.57	26.02	54.00	
1350.60	45.70	PK	-17.57	28.13	74.00	
4874.00	48.56	PK	-0.93	47.63	74.00	-26.37
4874.00	44.22	Ave	-0.93	43.29	54.00	-10.71
7311.00	49.36	PK	1.67	51.03	74.00	-22.97
7311.00	42.92	Ave	1.67	44.59	54.00	-9.41
2341.95	45.69	PK	-13.19	32.50	74.00	-41.50
2341.95	39.56	Ave	-13.19	26.37	54.00	-27.63
2377.15	42.50	PK	-13.14	29.36	74.00	-44.64
2377.15	36.67	Ave	-13.14	23.53	54.00	-30.47
2493.76	42.46	PK	-13.08	29.38	74.00	-44.62
2493.76	39.59	Ave	-13.08	26.51	54.00	-27.49

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11b High Channel						
1350.60	44.56	Ave	-17.57	26.99	54.00	
1350.60	45.82	PK	-17.57	28.25	74.00	
4924.00	49.24	PK	-0.87	48.37	74.00	-25.63
4924.00	44.56	Ave	-0.87	43.69	54.00	-10.31
7386.00	49.72	PK	1.84	51.56	74.00	-22.44
7386.00	42.48	Ave	1.84	44.32	54.00	-9.68
2339.40	44.79	PK	-13.19	31.60	74.00	-42.40
2339.40	38.86	Ave	-13.19	25.67	54.00	-28.33
2483.50	42.60	PK	-13.14	29.46	74.00	-44.54
2483.50	36.52	Ave	-13.14	23.38	54.00	-30.62
2494.80	41.50	PK	-13.08	28.42	74.00	-45.58
2494.80	40.00	Ave	-13.08	26.92	54.00	-27.08

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11gLow Channel						
1350.60	42.21	Ave	-17.57	24.64	54.00	
1350.60	45.53	PK	-17.57	27.96	74.00	
4824.00	49.93	PK	-1.06	48.87	74.00	-25.13
4824.00	44.24	Ave	-1.06	43.18	54.00	-10.82
7236.00	49.91	PK	1.33	51.24	74.00	-22.76
7236.00	44.42	Ave	1.33	45.75	54.00	-8.25
2323.36	45.35	PK	-13.19	32.16	74.00	-41.84
2323.36	40.00	Ave	-13.19	26.81	54.00	-27.19
2390.00	42.17	PK	-13.14	29.03	74.00	-44.97
2390.00	36.73	Ave	-13.14	23.59	54.00	-30.41
2497.95	42.79	PK	-13.08	29.71	74.00	-44.29
2497.95	40.04	Ave	-13.08	26.96	54.00	-27.04

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11g Middle Channel						
1350.60	41.91	Ave	-17.57	24.34	54.00	
1350.60	44.90	PK	-17.57	27.33	74.00	
4874.00	49.02	PK	-0.93	48.09	74.00	-25.91
4874.00	43.25	Ave	-0.93	42.32	54.00	-11.68
7311.00	50.40	PK	1.67	52.07	74.00	-21.93
7311.00	44.03	Ave	1.67	45.70	54.00	-8.30
2339.24	46.01	PK	-13.19	32.82	74.00	-41.18
2339.24	40.63	Ave	-13.19	27.44	54.00	-26.56
2368.06	41.21	PK	-13.14	28.07	74.00	-45.93
2368.06	36.81	Ave	-13.14	23.67	54.00	-30.33
2484.82	42.07	PK	-13.08	28.99	74.00	-45.01
2484.82	39.96	Ave	-13.08	26.88	54.00	-27.12

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11g High Channel						
1350.60	41.11	Ave	-17.57	23.54	54.00	
1350.60	44.31	PK	-17.57	26.74	74.00	
4924.00	48.81	PK	-0.87	47.94	74.00	-26.06
4924.00	42.31	Ave	-0.87	41.44	54.00	-12.56
7386.00	51.26	PK	1.84	53.10	74.00	-20.90
7386.00	44.42	Ave	1.84	46.26	54.00	-7.74
2337.28	46.07	PK	-13.19	32.88	74.00	-41.12
2337.28	39.82	Ave	-13.19	26.63	54.00	-27.37
2383.64	41.65	PK	-13.14	28.51	74.00	-45.49
2383.64	36.34	Ave	-13.14	23.20	54.00	-30.80
2483.50	41.21	PK	-13.08	28.13	74.00	-45.87
2483.50	38.98	Ave	-13.08	25.90	54.00	-28.10

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n-HT20Low Channel						
1350.60	41.60	Ave	-17.57	24.03	54.00	
1350.60	44.96	PK	-17.57	27.39	74.00	
4824.00	49.01	PK	-1.06	47.95	74.00	-26.05
4824.00	43.75	Ave	-1.06	42.69	54.00	-11.31
7236.00	49.91	PK	1.33	51.24	74.00	-22.76
7236.00	44.92	Ave	1.33	46.25	54.00	-7.75
2319.20	45.59	PK	-13.19	32.40	74.00	-41.60
2319.20	40.33	Ave	-13.19	27.14	54.00	-26.86
2390.00	43.02	PK	-13.14	29.88	74.00	-44.12
2390.00	37.43	Ave	-13.14	24.29	54.00	-29.71
2499.79	42.60	PK	-13.08	29.52	74.00	-44.48
2499.79	39.18	Ave	-13.08	26.10	54.00	-27.90

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n-HT20 Middle Channel						
1350.60	42.09	Ave	-17.57	24.52	54.00	
1350.60	45.31	PK	-17.57	27.74	74.00	
4874.00	48.12	PK	-0.93	47.19	74.00	-26.81
4874.00	43.18	Ave	-0.93	42.25	54.00	-11.75
7311.00	50.72	PK	1.67	52.39	74.00	-21.61
7311.00	44.38	Ave	1.67	46.05	54.00	-7.95
2328.05	44.93	PK	-13.19	31.74	74.00	-42.26
2328.05	39.35	Ave	-13.19	26.16	54.00	-27.84
2364.60	42.90	PK	-13.14	29.76	74.00	-44.24
2364.60	37.65	Ave	-13.14	24.51	54.00	-29.49
2499.80	43.59	PK	-13.08	30.51	74.00	-43.49
2499.80	40.09	Ave	-13.08	27.01	54.00	-26.99

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n-HT20 High Channel						
1350.60	42.71	Ave	-17.57	25.14	54.00	
1350.60	44.91	PK	-17.57	27.34	74.00	
4924.00	47.96	PK	-0.87	47.09	74.00	-26.91
4924.00	44.11	Ave	-0.87	43.24	54.00	-10.76
7386.00	50.49	PK	1.84	52.33	74.00	-21.67
7386.00	43.80	Ave	1.84	45.64	54.00	-8.36
2342.38	44.69	PK	-13.19	31.50	74.00	-42.50
2342.38	39.23	Ave	-13.19	26.04	54.00	-27.96
2361.81	42.14	PK	-13.14	29.00	74.00	-45.00
2361.81	37.77	Ave	-13.14	24.63	54.00	-29.37
2483.50	43.43	PK	-13.08	30.35	74.00	-43.65
2483.50	39.96	Ave	-13.08	26.88	54.00	-27.12

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n-HT40Low Channel						
1279.56	45.70	PK	-18.64	27.06	74.00	
1279.56	45.26	Ave	-18.64	26.62	54.00	
4844.00	46.38	PK	-1.06	45.32	74.00	-28.68
4844.00	43.19	Ave	-1.06	42.13	54.00	-11.87
7266.00	45.98	PK	1.33	47.31	74.00	-26.69
7266.00	42.05	Ave	1.33	43.38	54.00	-10.62
2318.44	44.61	PK	-13.19	31.42	74.00	-42.58
2318.44	40.14	Ave	-13.19	26.95	54.00	-27.05
2354.59	42.30	PK	-13.14	29.16	74.00	-44.84
2354.59	38.20	Ave	-13.14	25.06	54.00	-28.94
2390.00	41.98	PK	-13.08	28.90	74.00	-45.10
2390.00	40.21	Ave	-13.08	27.13	54.00	-26.87

Remark : H and V all have been tested , only worse case is reported



Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n-HT40 Middle Channel						
1279.56	44.91	PK	-18.64	26.27	74.00	
1279.56	44.34	Ave	-18.64	25.70	54.00	
4874.00	45.60	PK	-0.93	44.67	74.00	-29.33
4874.00	42.34	Ave	-0.93	41.41	54.00	-12.59
7311.00	45.35	PK	1.67	47.02	74.00	-26.98
7311.00	43.02	Ave	1.67	44.69	54.00	-9.31
2324.57	44.18	PK	-13.19	30.99	74.00	-43.01
2324.57	39.59	Ave	-13.19	26.40	54.00	-27.60
2350.42	42.16	PK	-13.14	29.02	74.00	-44.98
2350.42	37.92	Ave	-13.14	24.78	54.00	-29.22
2487.16	42.95	PK	-13.08	29.87	74.00	-44.13
2487.16	40.10	Ave	-13.08	27.02	54.00	-26.98

Remark : H and V all have been tested , only worse case is reported

Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n-HT40 High Channel						
1279.56	45.50	PK	-18.64	26.86	74.00	
1279.56	44.75	Ave	-18.64	26.11	54.00	
4904.00	44.63	PK	-0.87	43.76	74.00	-30.24
4904.00	41.59	Ave	-0.87	40.72	54.00	-13.28
7356.00	44.71	PK	1.84	46.55	74.00	-27.45
7356.00	43.02	Ave	1.84	44.86	54.00	-9.14
2339.83	43.21	PK	-13.19	30.02	74.00	-43.98
2339.83	38.83	Ave	-13.19	25.64	54.00	-28.36
2483.50	42.96	PK	-13.14	29.82	74.00	-44.18
2483.50	38.05	Ave	-13.14	24.91	54.00	-29.09
2490.29	42.67	PK	-13.08	29.59	74.00	-44.41
2490.29	40.07	Ave	-13.08	26.99	54.00	-27.01
1.Corrected Factor=ANT Factor + Cable Loss – Amp Gain						

Remark : H and V all have been tested , only worse case is reported

Test Frequency: Above 18GHz

The measurements were more than 20 dB below the limit and not reported

7 Band Edge Measurement

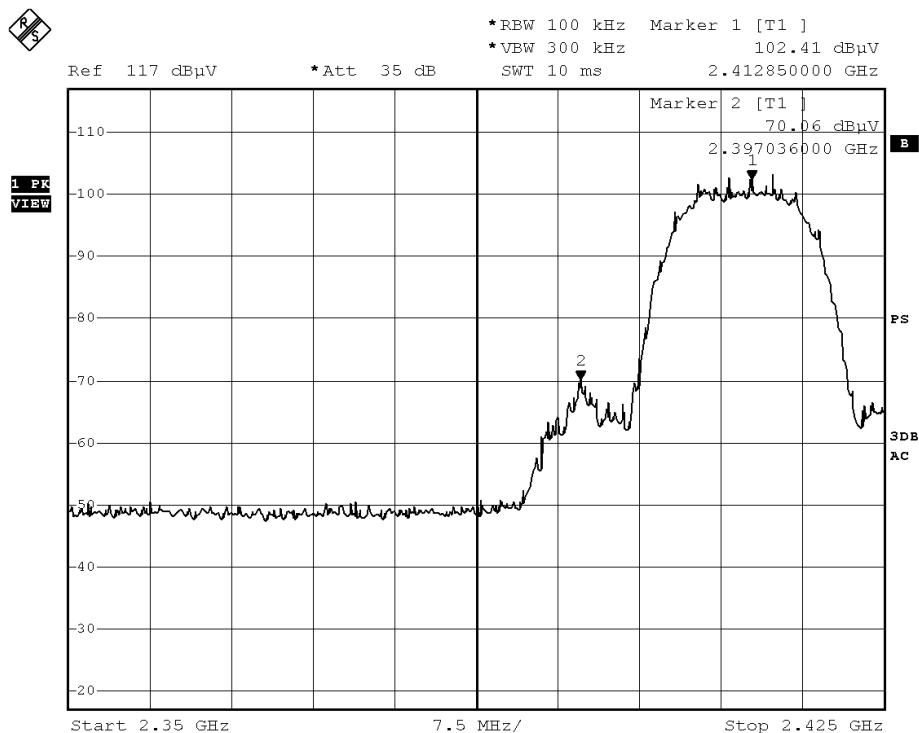
Test Requirement	:	Section 15.247(d) In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).
Test Method	:	ANSI C63.10:2013, KDB 558074 D01 DTS MEAS GUIDANCE V03R05
Test Limit	:	Regulation 15.247 (d), 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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)).
Test Mode	:	Refer to section 3.3

7.1 Test Procedure

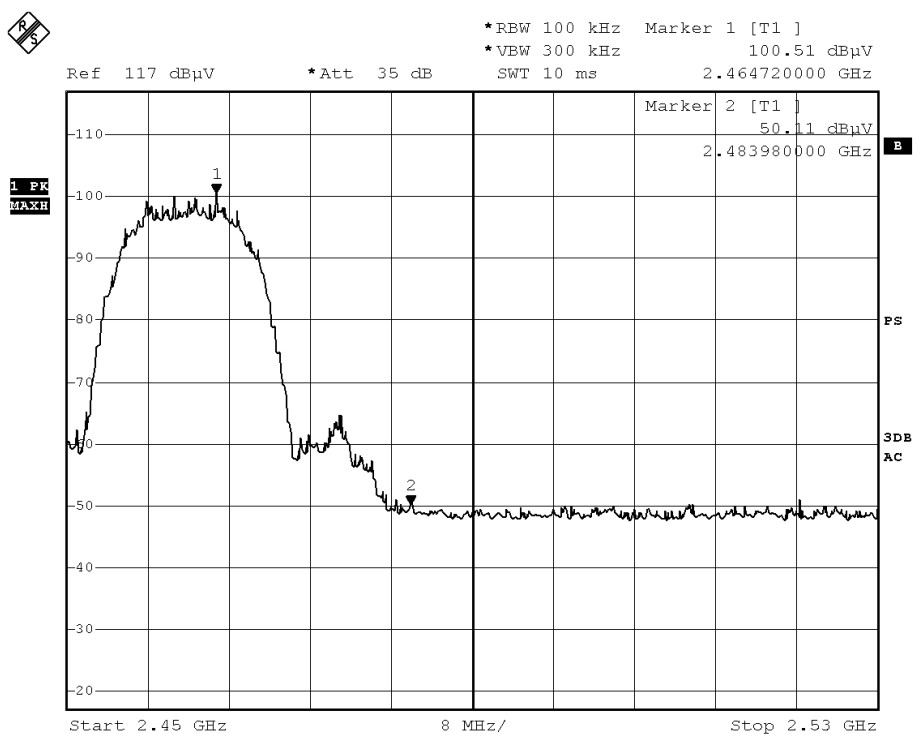
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold

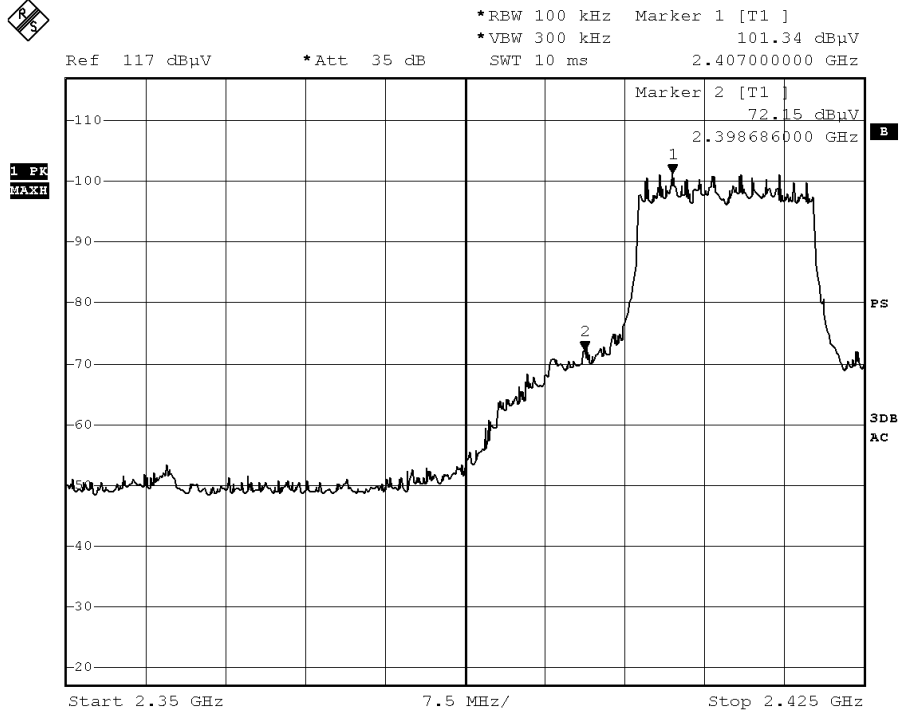
7.2 Test Result

802.11b Band edge-left side

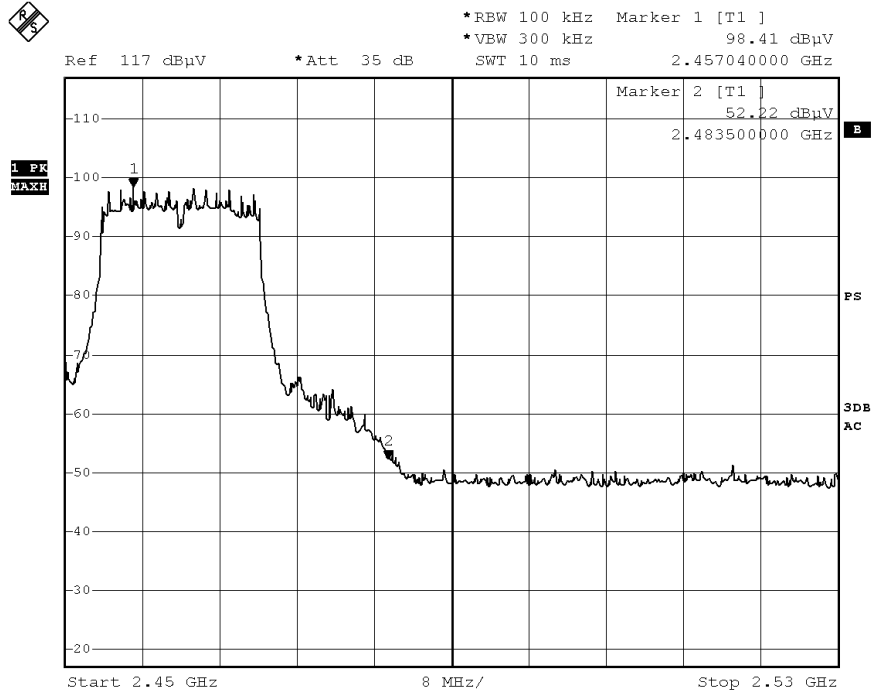


802.11b Band edge-right side

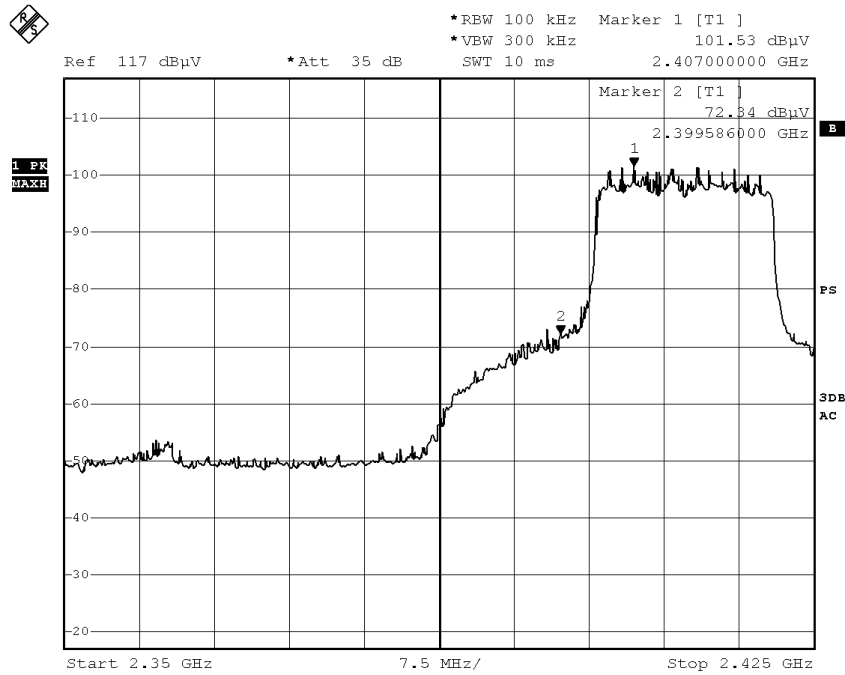




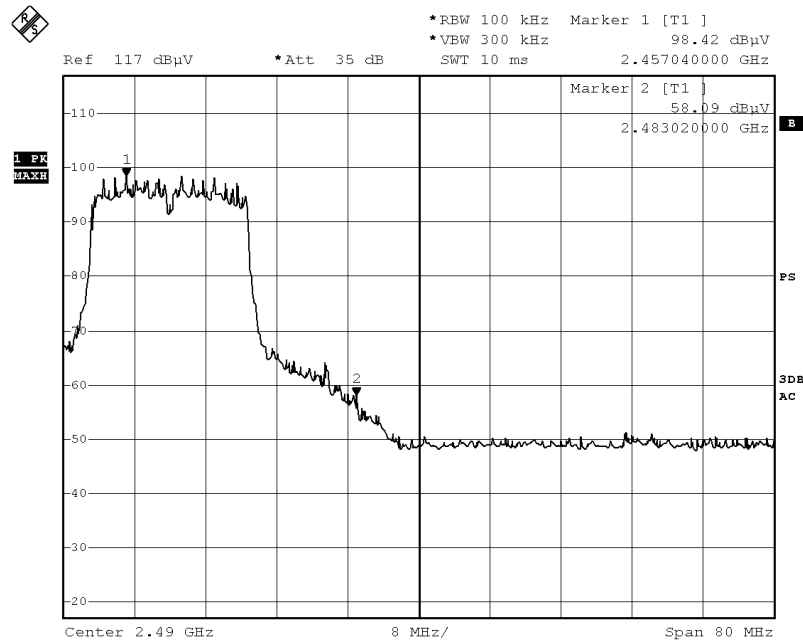
802.11g Band edge-right side



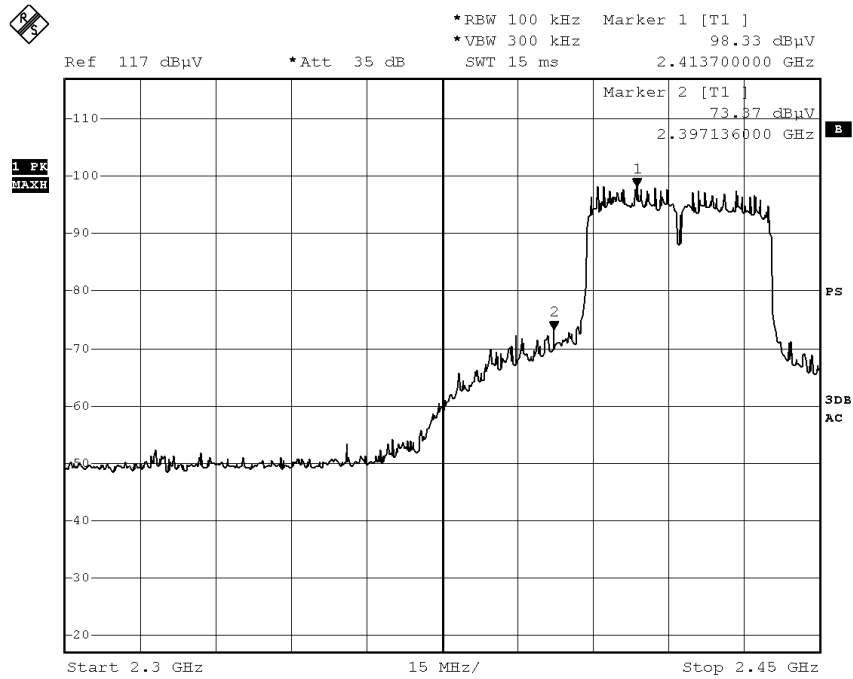
802.11n(HT20) Band edge-left side



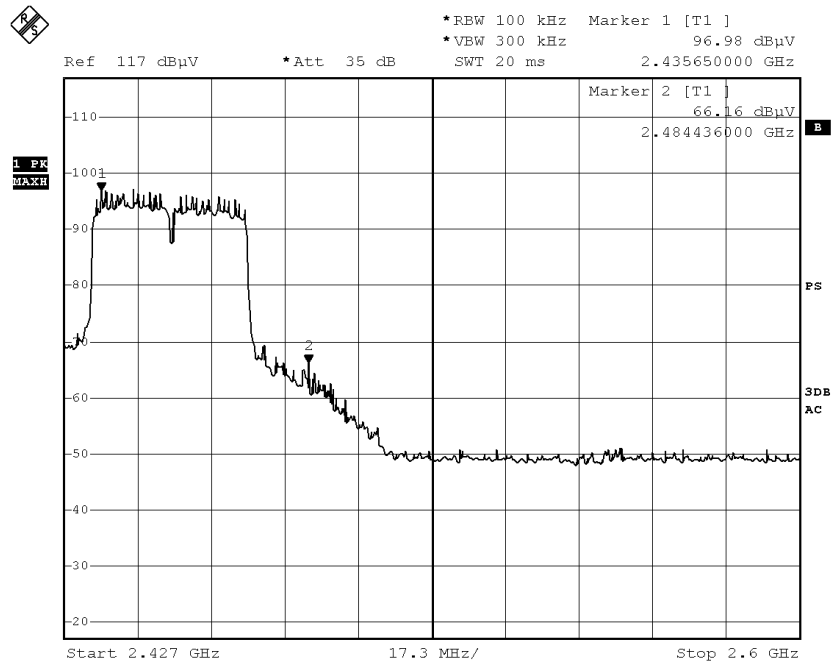
802.11n(HT20) Band edge-left side



802.11n(HT40) Band edge-left side



802.11n(HT40) Band edge-left side



8 6dB Bandwidth Measurement

Test Requirement	: FCC CFR47 Part 15 Section 15.247
Test Method	: ANSI C63.10:2013, KDB 558074 D01 DTS MEAS GUIDANCE V03R05
Test Limit	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.
Test Mode	: Refer to section 3.3

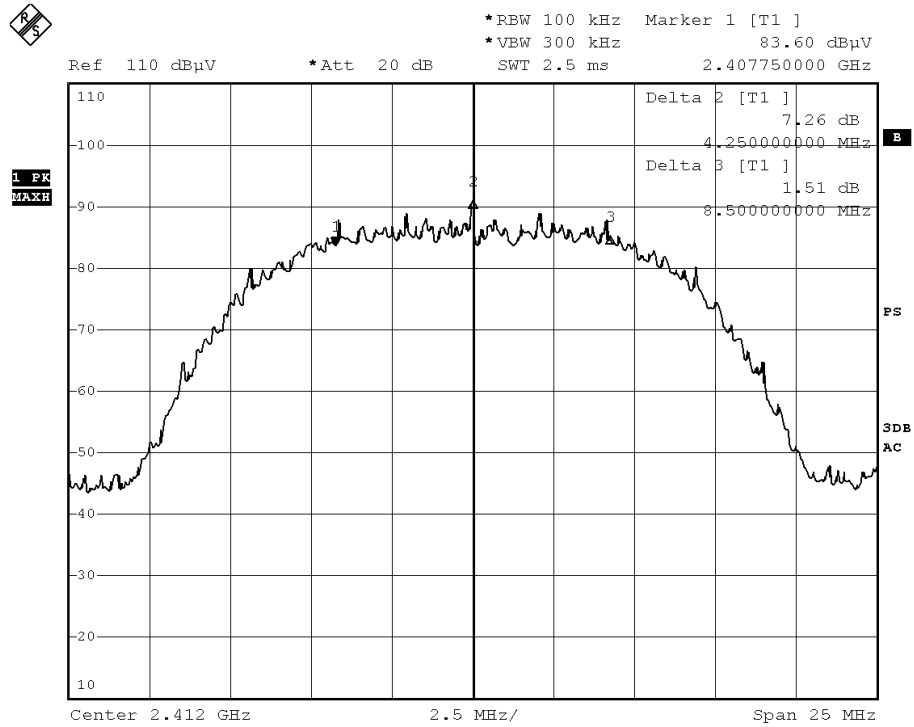
8.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: For BLE, RBW = 100 kHz, VBW = 300kHz, For WIFI, RBW = 100kHz, VBW = 300kHz,

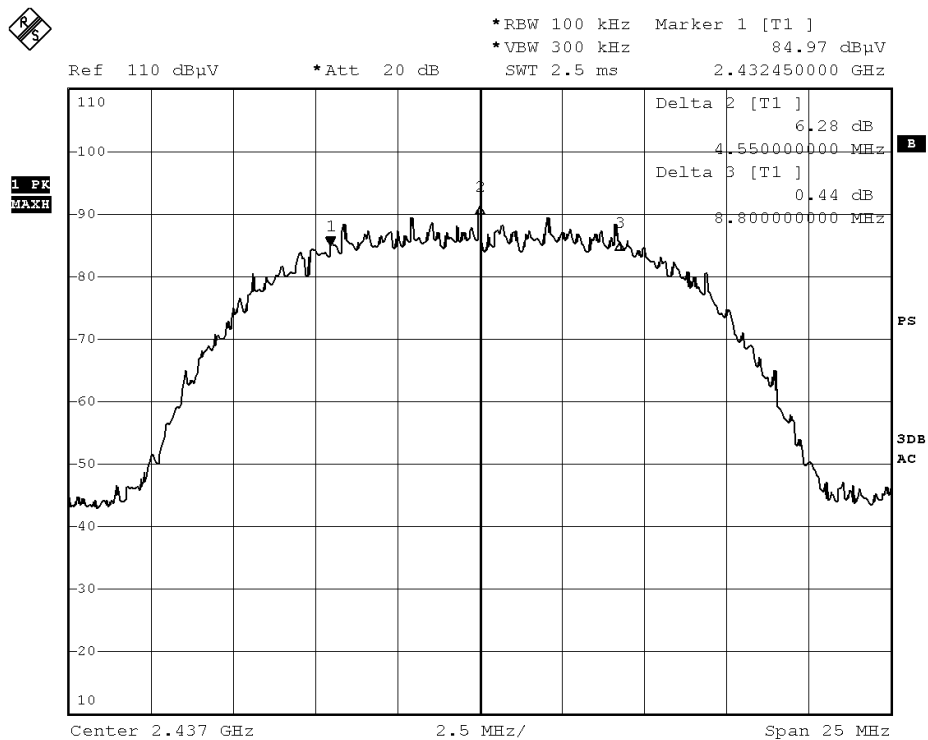
8.2 Test Result

Modulation	Bandwidth(MHz)			Limit
	Low Channel	Middle Channel	High Channel	
802.11b	8.500	8.800	9.050	≥500kHz
802.11g	16.55	16.50	16.50	≥500kHz
802.11n-HT20	17.50	17.50	17.50	≥500kHz
802.11n-HT40	36.27	36.00	36.05	≥500kHz

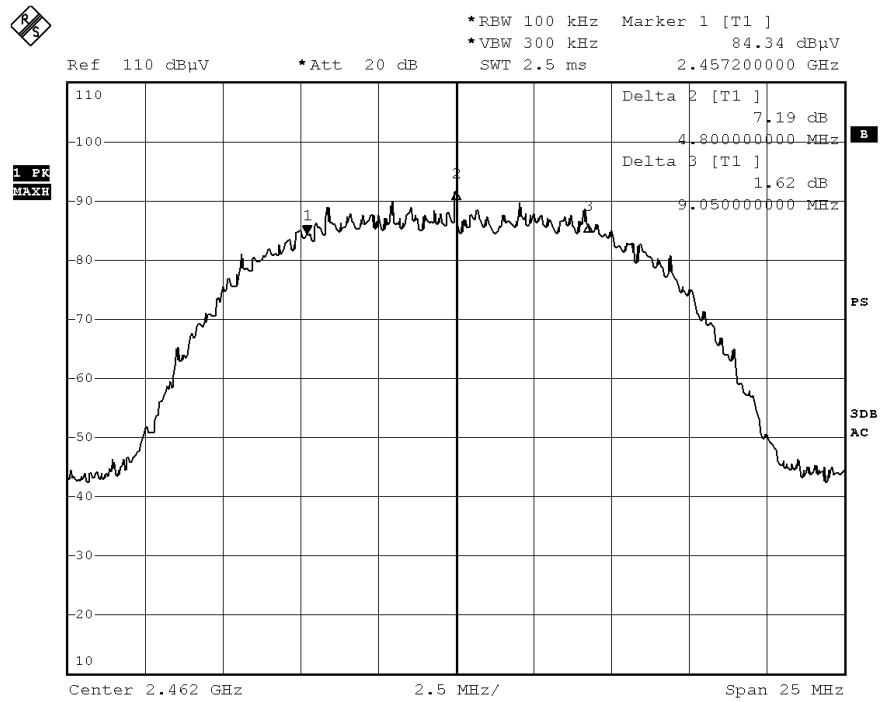
802.11b LowChannel



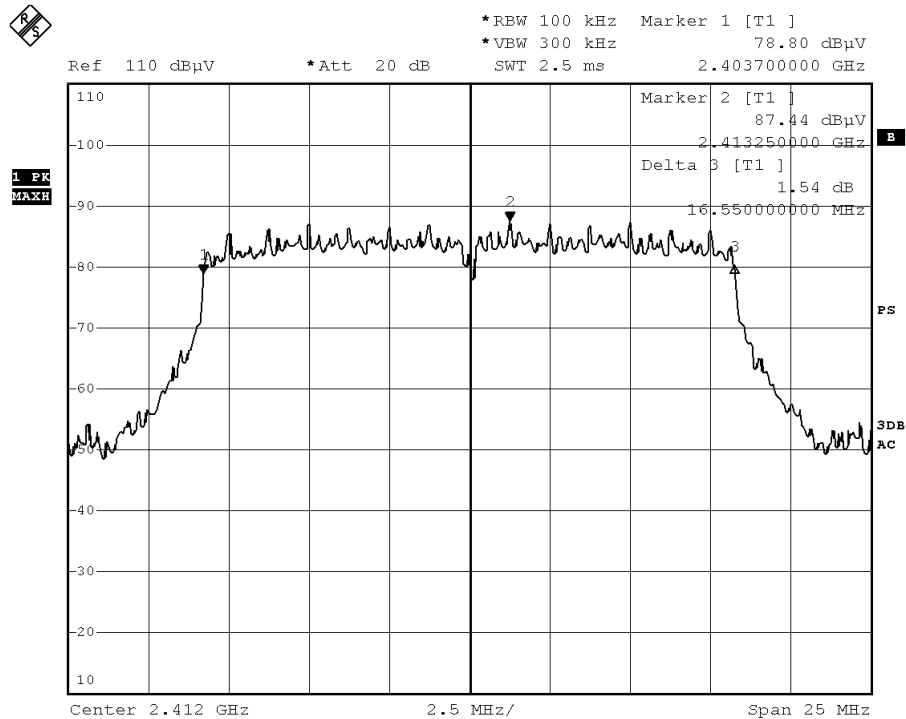
802.11b Middle Channel



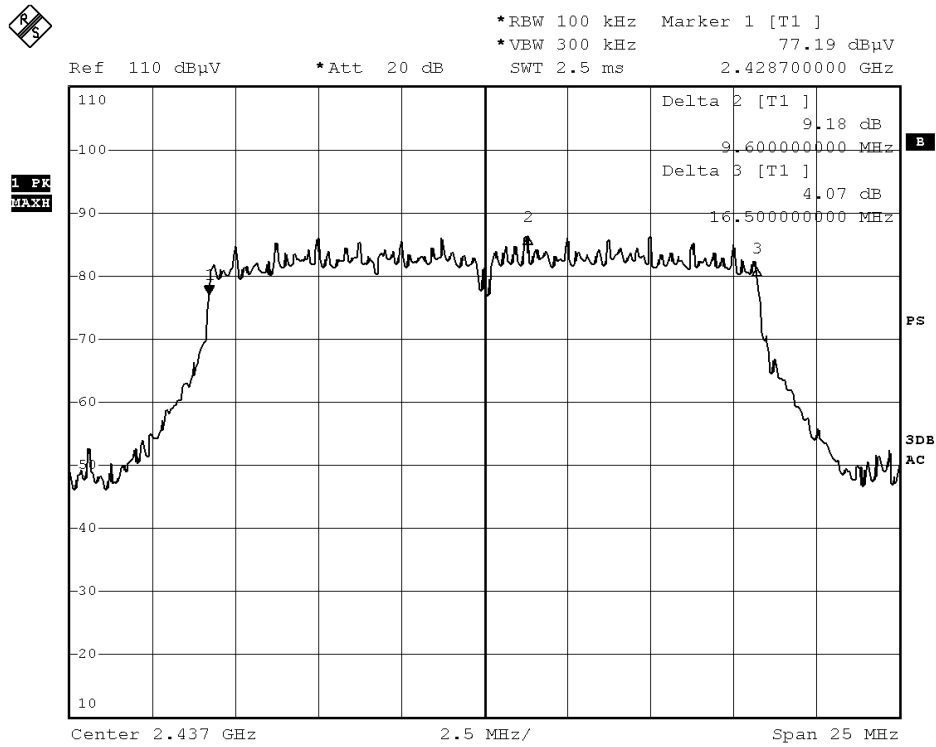
802.11b High Channel



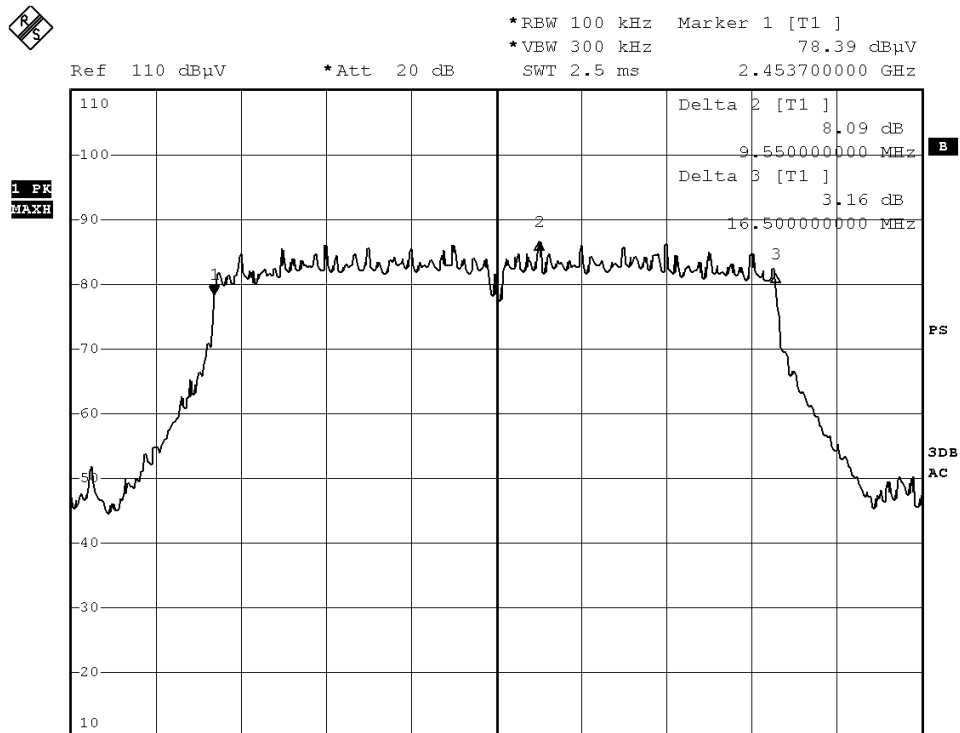
802.11g Low Channel



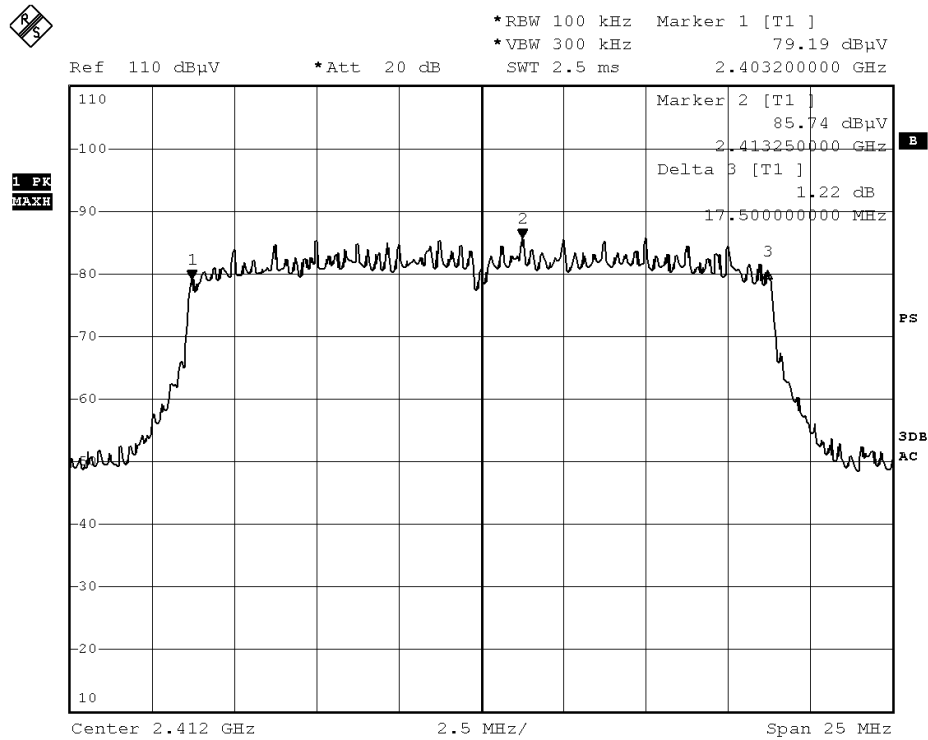
802.11g Middle Channel



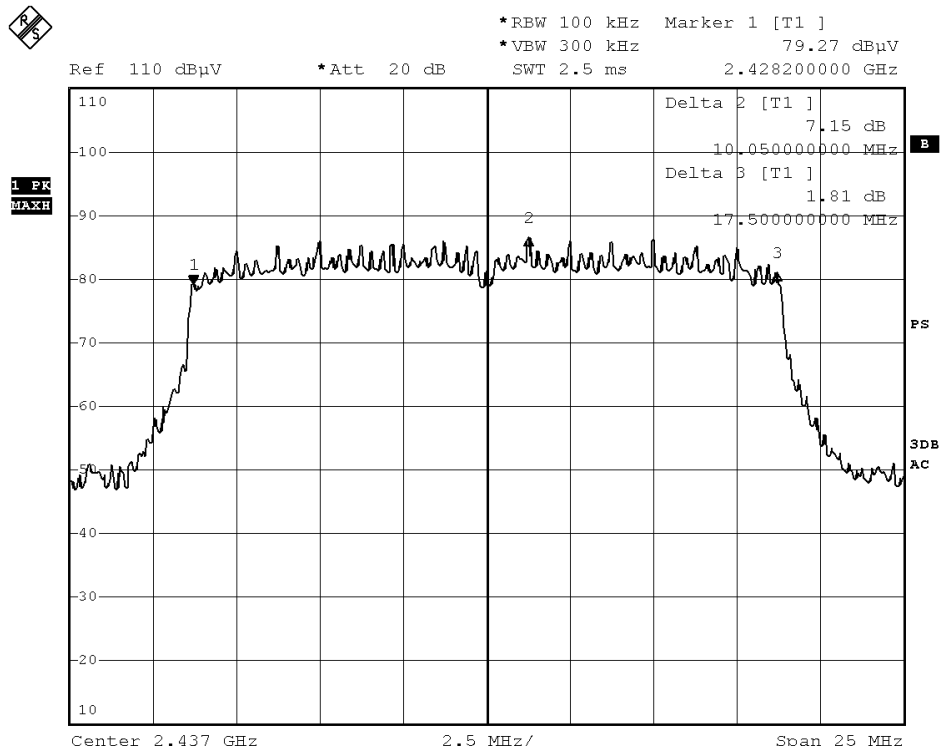
802.11g High Channel



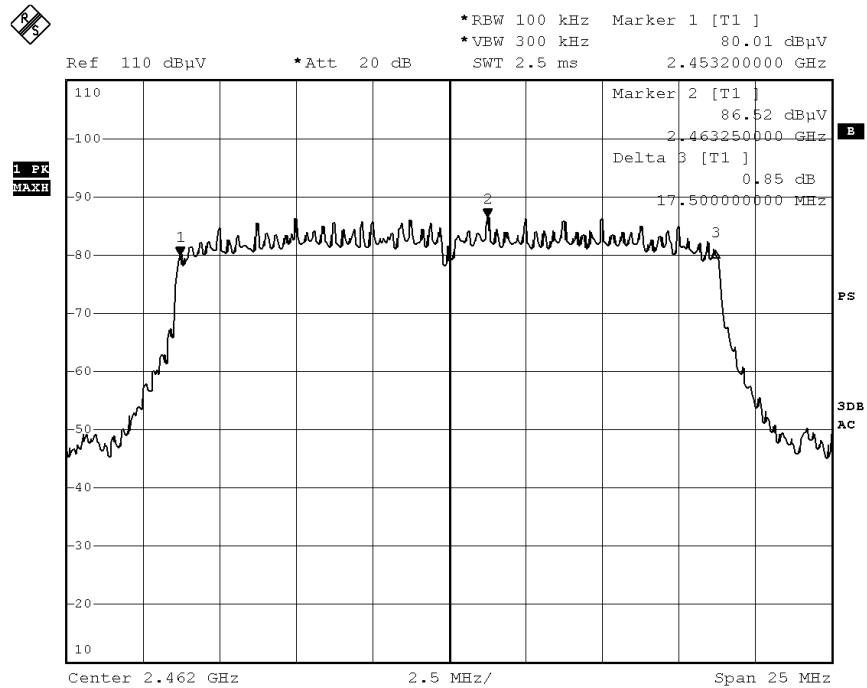
802.11n-HT20 Low Channel



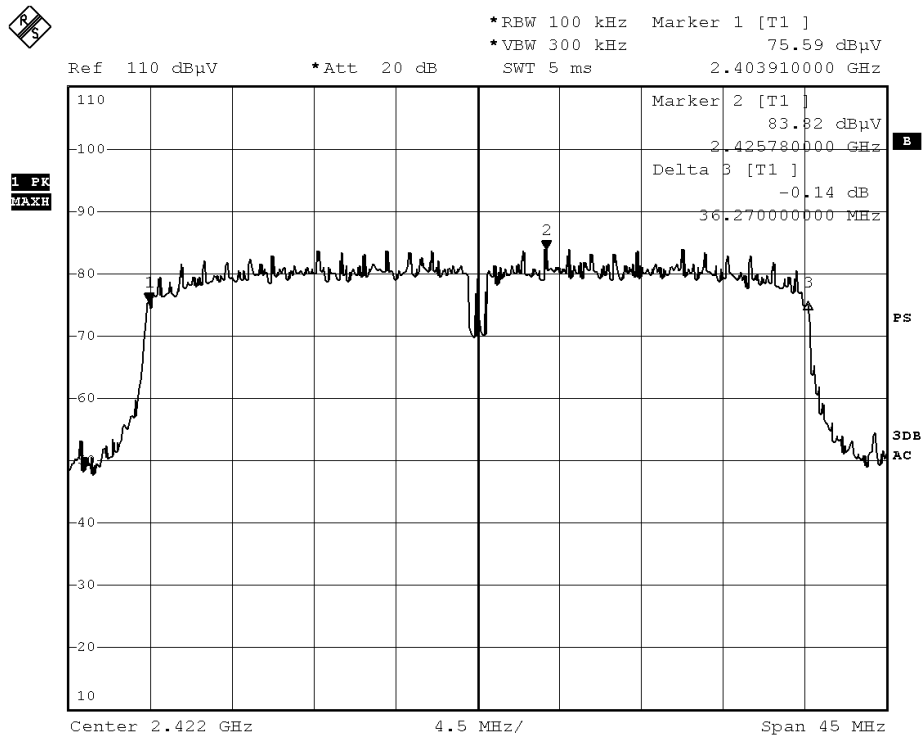
802.11n-HT20 Middle Channel



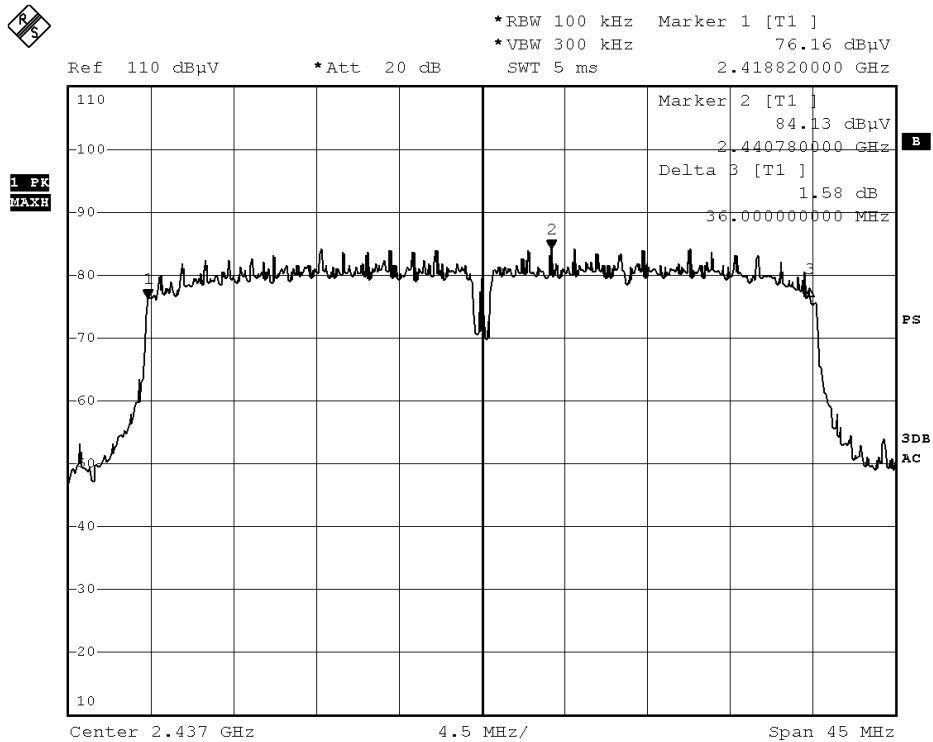
802.11n-HT20High Channel



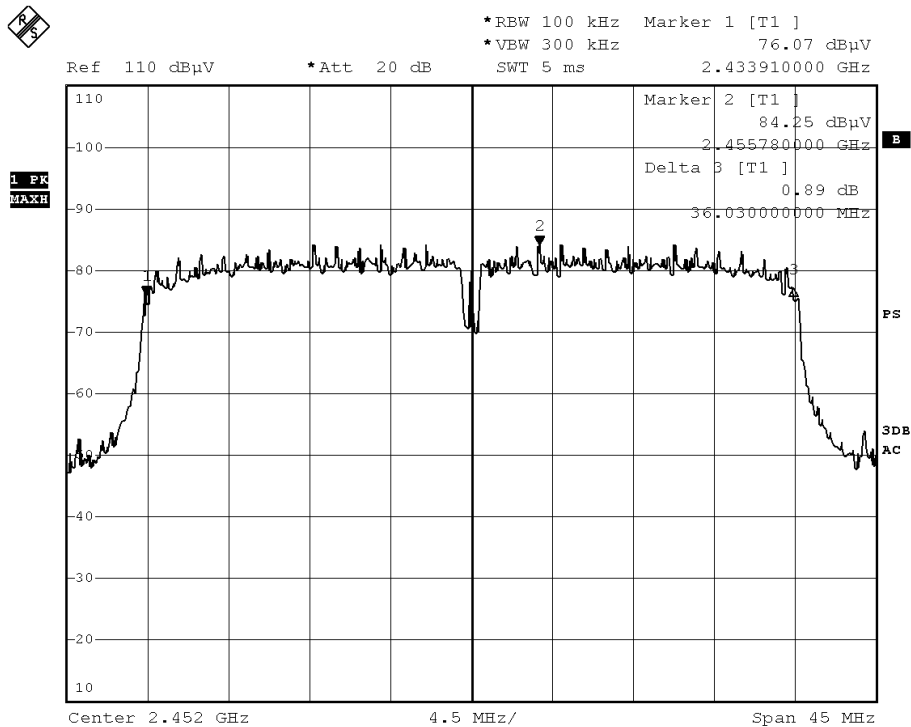
802.11n-HT40Low Channel



802.11n-HT40Middle Channel



802.11n-HT40High Channel



9 Maximum Peak Output Power

Test Requirement	: FCC CFR47 Part 15 Section 15.247
Test Method	: ANSI C63.10:2013,KDB 558074 D01 DTS MEAS GUIDANCE V03R05
Test Limit	: Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.
Test Mode	: Refer to section 3.3

9.1 Test Procedure

KDB 558074 D01 DTS Meas Guidance V03R05

section 9.1.2

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

9.2 Test Result

Modulation	Maximum Peak Output Power (dBm)			Limit
	Low Channel	Middle Channel	High Channel	
802.11b	9.55	9.42	9.30	1W(30dBm)
802.11g	9.12	9.05	9.00	1W(30dBm)
802.11n-HT20	8.96	8.85	8.80	1W(30dBm)
802.11n-HT40	8.67	8.52	8.49	1W(30dBm)

10 Power Spectral density

Test Requirement	: FCC CFR47 Part 15 Section 15.247
Test Method	: ANSI C63.10:2013,KDB 558074 D01 DTS MEAS GUIDANCE V03R05
Test Limit	: Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
Test Mode	: Refer to section 3.3

10.1 Test Procedure

KDB 558074 D01 DTS Meas Guidance V03R05

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

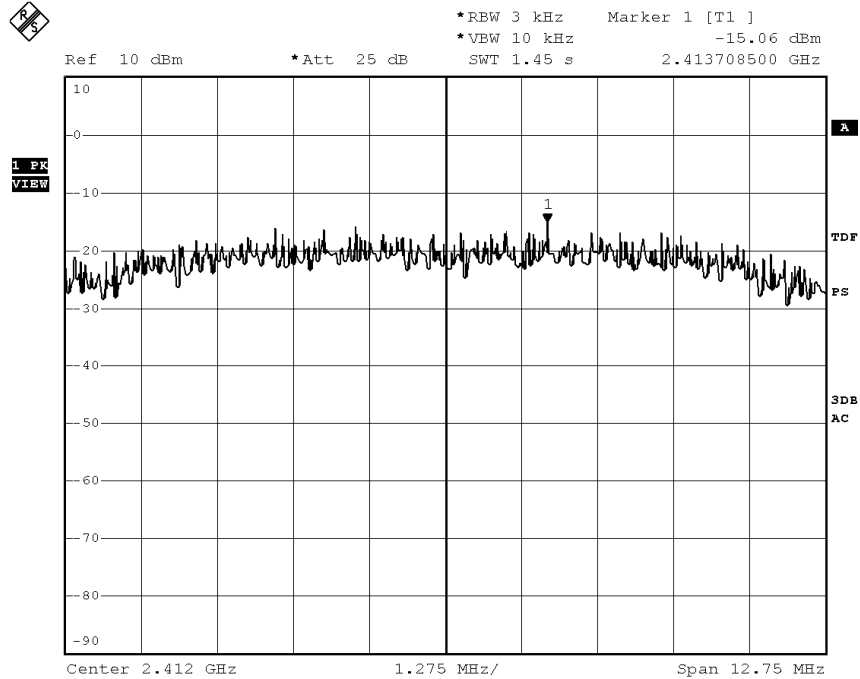
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz, Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.

3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

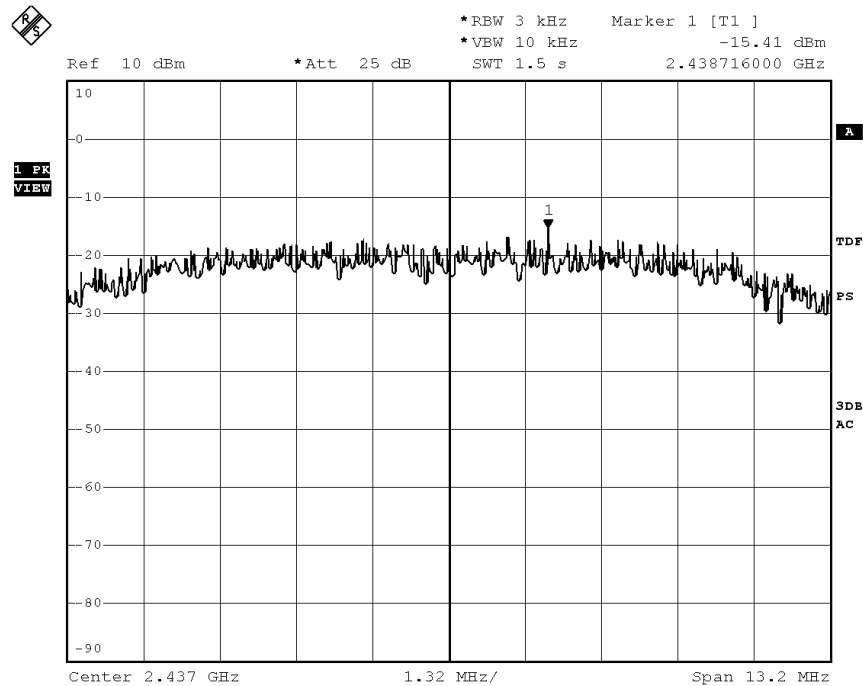
10.2 Test Result

Modulation	Power Spectral density (dBm/3kHz)			Limit
	Low Channel	Middle Channel	High Channel	
802.11b	-15.06	-15.41	-16.24	8dBm/3kHz
802.11g	-17.76	-18.99	-19.22	8dBm/3kHz
802.11n-HT20	-18.47	-17.82	-19.34	8dBm/3kHz
802.11n-HT40	-20.65	-20.68	-20.77	8dBm/3kHz

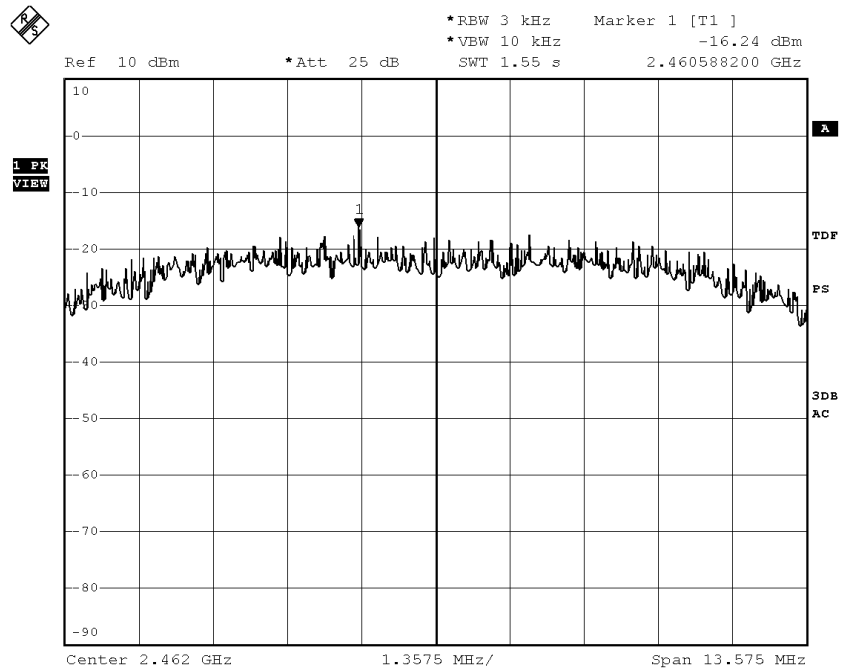
802.11b LowChannel



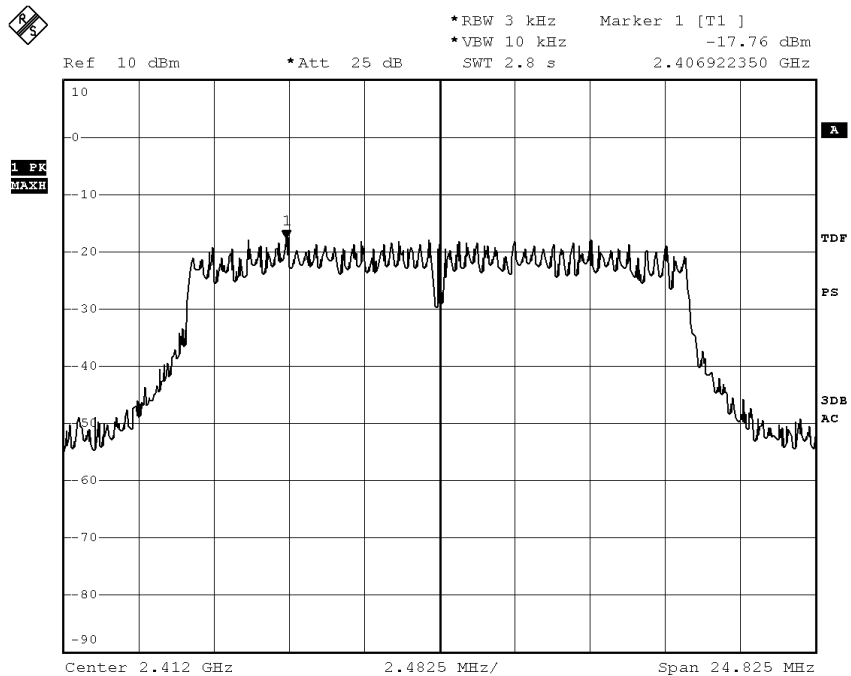
802.11b Middle Channel



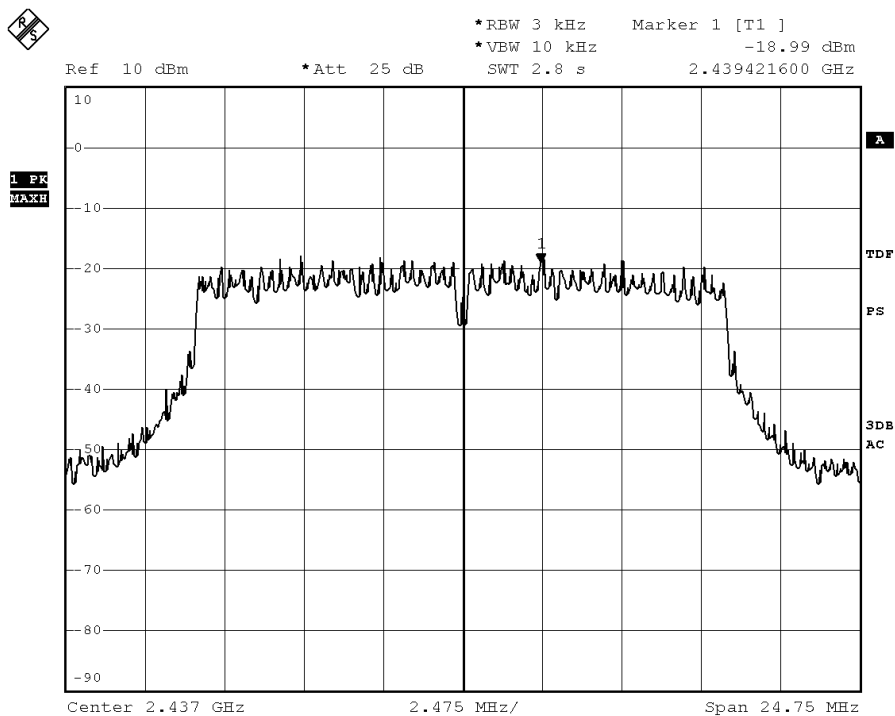
802.11b High Channel



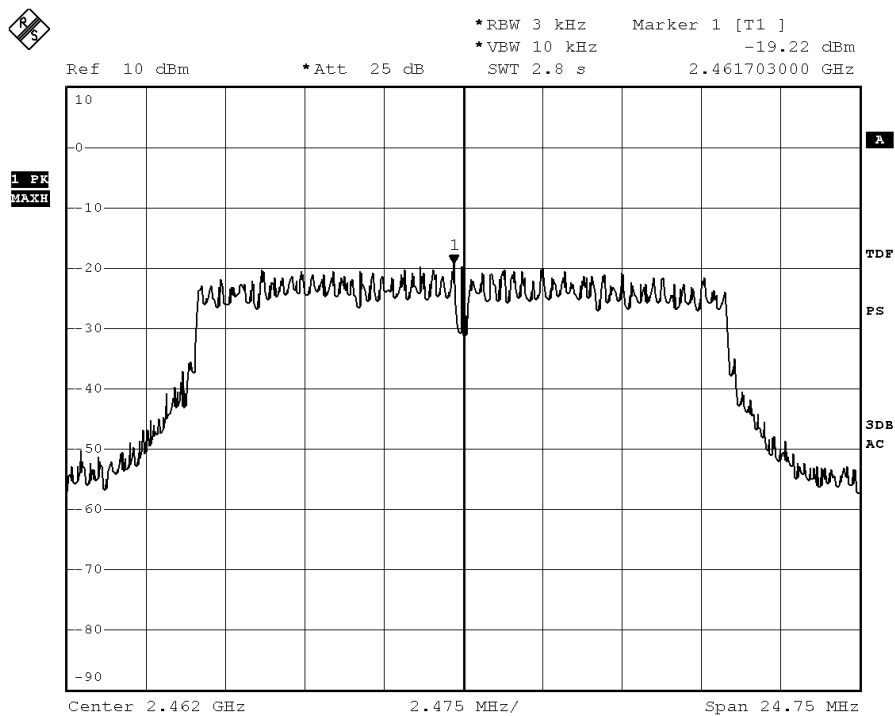
802.11g Low Channel



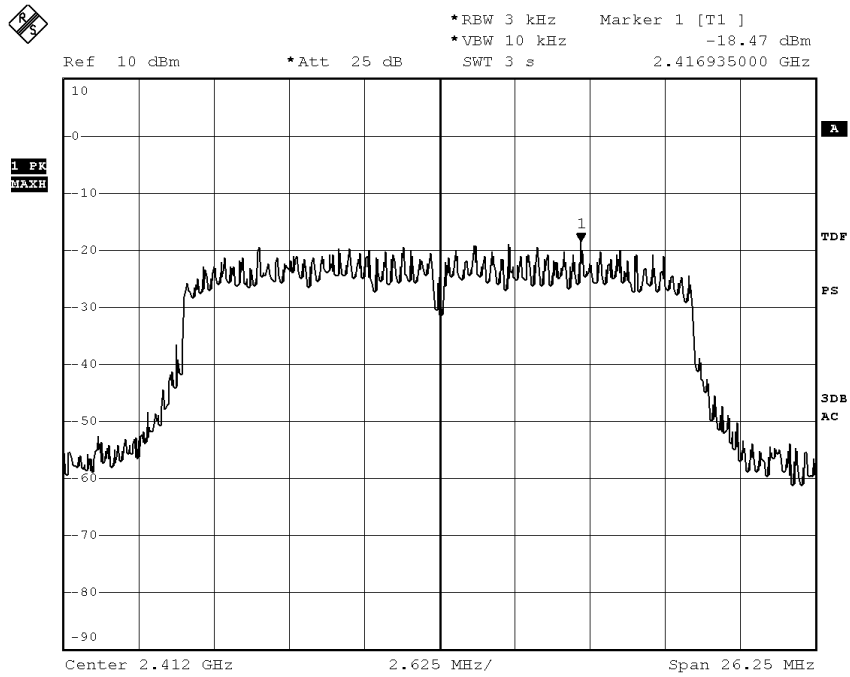
802.11g Middle Channel



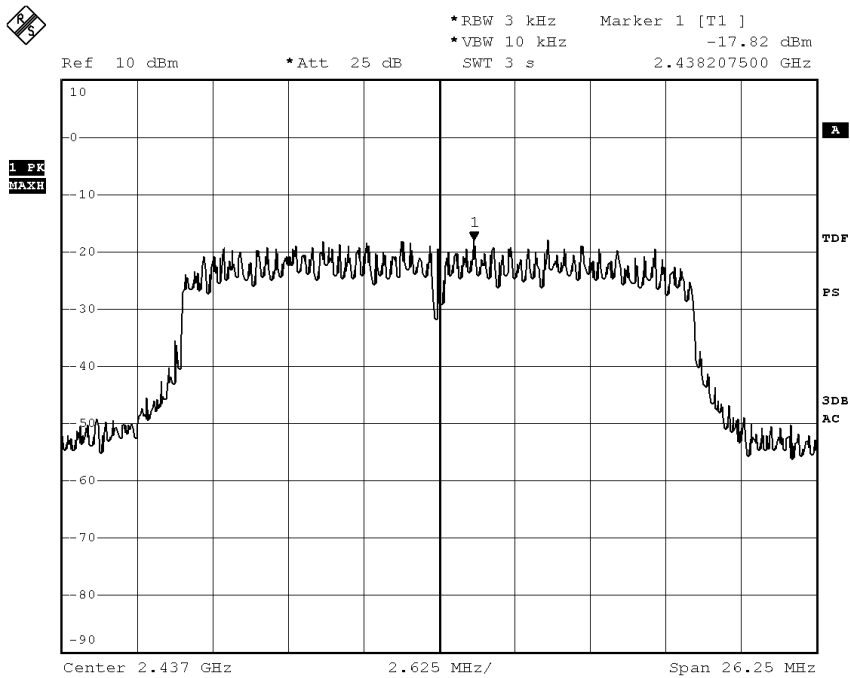
802.11g High Channel



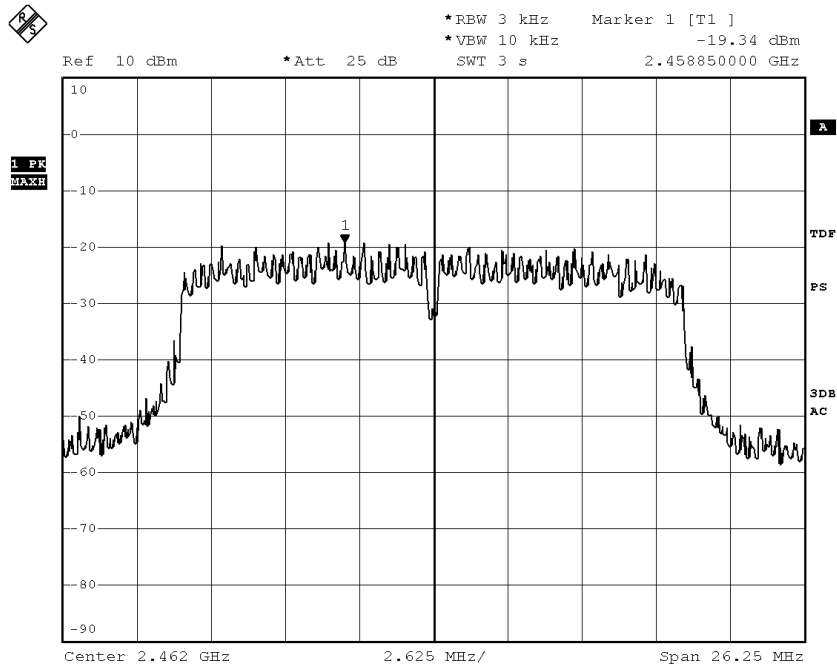
802.11n-HT20 Low Channel



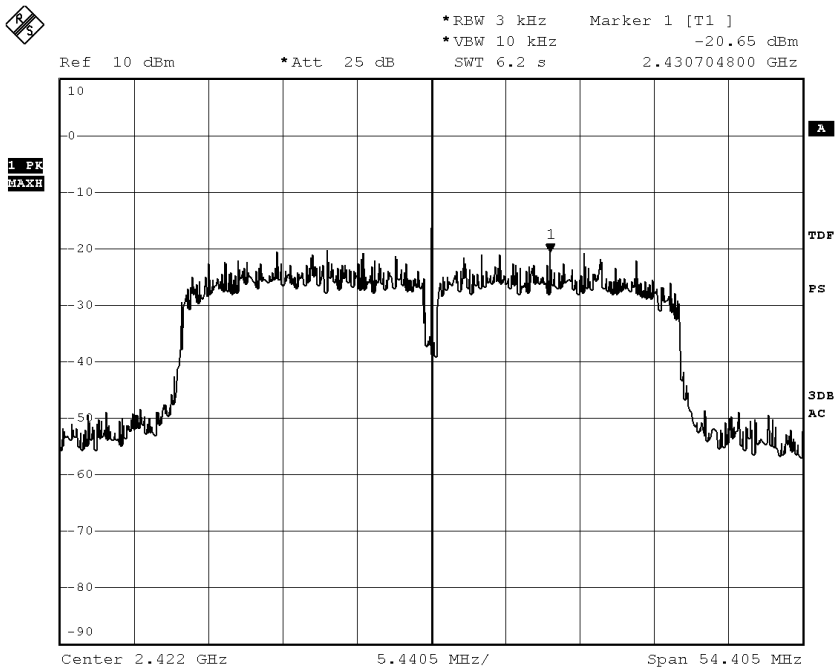
802.11n-HT20 Middle Channel



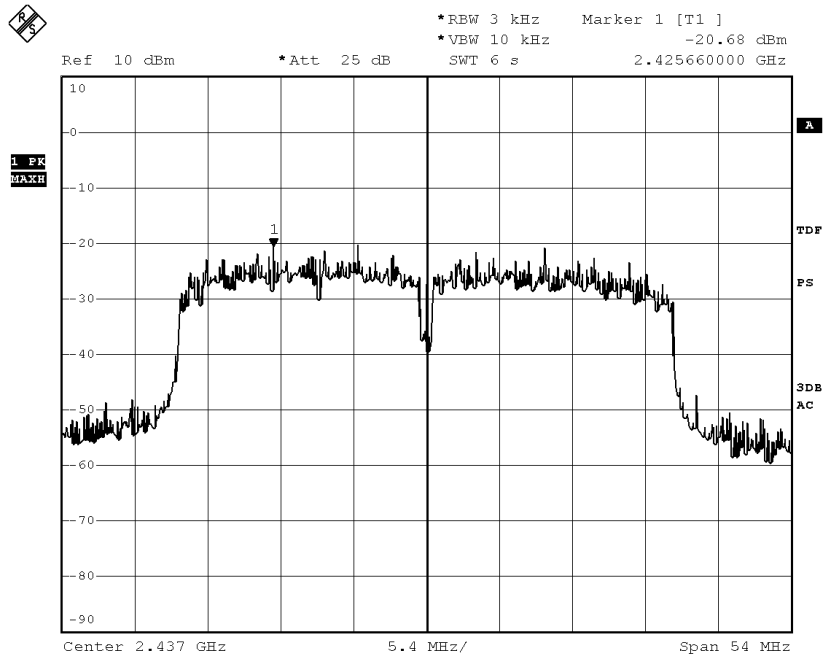
802.11n-HT20High Channel



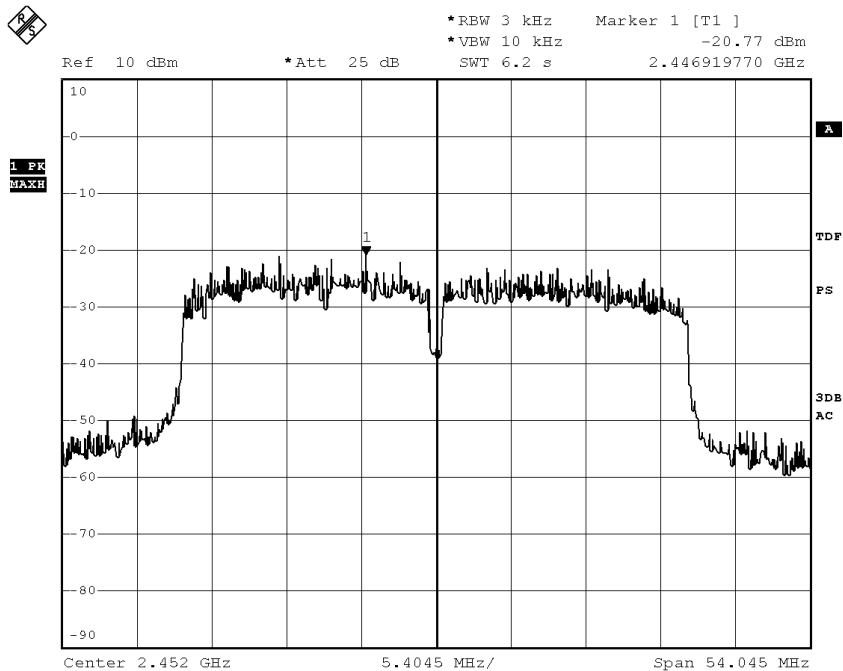
802.11n-HT40Low Channel



802.11n-HT40Middle Channel



802.11n-HT40High Channel





11 Antenna Requirement

According to the FCC part15.203, a transmitter can only be sold or operated with antennas with which it was approved. This product has a internal permanent antenna, it meet the requirement of this section.

*****THE END REPORT*****