Test Report of FCC CFR 47 Part 15 Subpart C

On Behalf of

E-matic

FCC ID:	**XHW-ET43KDBP**
Product Description:	**Tablet PC**
Model No.:	**FTABMP**
Supplementary Model:	**FTABMB (difference appearance color)**
Brand Name:	**E-matic**
Prepared for:	**E-matic** 3435 Ocean Park Blvd. #107 PMB# 29 Santa Monica, CA 90405
Prepared by:	**Bontek Compliance Testing Laboratory Co., Ltd** 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China Tel: 86-755-86337020 Fax: 86-755-86337028
Report No.:	BCT12IR-1630E-2
Issue Date:	November 6, 2012
Test Date:	September 15~ November 4, 2012

Test by: **Reviewed By:**

Vincent Jiang

Kevin Chi

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	**E-matic**
Address of applicant:	3435 Ocean Park Blvd. #107 PMB# 29 Santa Monica, CA 90405
Manufacturer:	**Shenzhen SmartBlue Technology Limited**
Address of manufacturer:	7F, No.6 Building, Yusheng Industrial Zone, No.467 Xixiang section of 107 National Rd, Xixiang Street, Bao'an District, Shenzhen

General Description of E.U.T

Items	Description
EUT Description:	**Tablet PC**
Trade Name:	**E-matic**
Model No.:	**FTABMP**
Supplementary Model:	FTABMB (difference appearance color)
Frequency Band:	IEEE 802.11b/g, IEEE 802.11n HT20 (DTS Band) : 2412MHz～2462MHz, IEEE 802.11n HT40 (DTS Band) : 2422MHz～2452MHz
Channel Spacing:	IEEE 802.11b/g, 802.11n HT20/HT40: 5MHz
Number of Channels:	IEEE 802.11b/g, 802.11n HT20:11 Channels IEEE 802.11n HT40 :7 Channels
Transmit Data Rate:	IEEE802.11b : 11 , 5.5 , 2 , 1 Mbps IEEE802.11g : 54 , 48 , 36 , 24 ,18 , 12 , 9 , 6 Mbps IEEE802.11n HT20 : 130 , 117 , 104 , 78 , 52 , 39 , 26 , 13 Mbps IEEE802.11n HT40 : 270 , 243 , 216 , 162 , 108 , 81 , 54 , 27 Mbps
Type of Modulation:	IEEE 802.11b：DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g：OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20/40：OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Type:	Built-in Antenna
Antenna Gain:	1dBi
Power Supply:	Input: DC3.7V 1100mAh for build-in battery
Adapter Information:	Model:FKS106HSC-0501500U Input:100-240V 50/60Hz 0.25A Max Output: 5VDC 1.5A

* The test data gathered are from the production sample provided by the manufacturer.

1.2 Test Standards

The tests were performed based on the Electromagnetic Interference (EMI) tests performed on the EUT. Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 - 2003 Radiated testing was performed at an antenna to EUT distance 3 meters.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.207, 15.209 and 15.247 rules and the FCC publication KDB558074 of Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247).

1.3 Test Facility

All measurement required was performed at laboratory of Bontek Compliance Testing Laboratory Ltd at 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China.

The test facility is recognized, certified, or accredited by the following organizations:

FCC – Registration No.: 338263

BONTEK COMPLIANCE TESTING LABORATORY LTD. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 338263, March 03, 2011.

IC Registration No.: 7631A

The 3m alternate test site of BONTEK COMPLIANCE TESTING LABORATORY LTD. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on January 25, 2011.

CNAS - Registration No.: L3923

BONTEK COMPLIANCE TESTING LABORATORY LTD. to ISO/IEC 17025:25 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. The acceptance letter from the CNAS is maintained in our files: Registration: L3923,March 22,2012.

TUV - Registration No.: UA 50203122-0001

BONTEK COMPLIANCE TESTING LABORATORY LTD. An assessment of the laboratory was conducted according to the"Procedures and Conditions for EMC Test Laboratories"with reference to EN ISO/IEC 17025 by a TUV Rheinland auditor. Audit Report NO. 17010783-002.

2. SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast 3 or 10 meters from the leading edge of the turntable.

2.3 General Test Procedures

Conducted Emissions: The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 7.1 of ANSI C63.4-2003 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak detector mode.

Radiated Emissions: The EUT is a placed on as turntable, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.

2.4 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Power Line Conducted Emission	+/- 2.3 dB
Radiated Emission	+/- 3.4 dB

Uncertainty figures are valid to a confidence level of 95%.

2.5 List of Measuring Equipments Used

Test equipments list of Shenzhen Bontek Compliance Testing Laboratory Co., Ltd .

No.	Equipment	Manufacturer	Model No.	S/N	Calibration date	Calibration due date
1	EMI Test Receiver	R&S	ESCI	100687	2012-4-6	2013-4-5
2	EMI Test Receiver	R&S	ESPI	100097	2012-7-25	2013-7-24
3	Amplifier	HP	8447D	1937A02492	2012-4-6	2013-4-5
4	Single Power Conductor Module	FCC	FCC-LISN-5-50-1-01-CISPR25	07101	2012-4-6	2013-4-5
5	Single Power Conductor Module	FCC	FCC-LISN-5-50-1-01-CISPR25	07102	2012-4-6	2013-4-5
6	Positioning Controller	C&C	CC-C-1F	MF7802113	N/A	N/A
7	Signal generator	Rhode & Schwarz	SMIQ 03HD + option SM-B1, SMIQB11, SMIQB12, SMIQB14, SMIQB17, SMIQB20	1125.5555.46	2012-4-6	2013-4-5
8	GSM system simulator	Rhode & Schwarz	CMU200 + option K20, K21, K22, K23, K24, K27, K28, K29, K42, K65, B12, B41, B52, B66, B56	1100.0008.34	2012-4-6	2013-4-5
9	GSM system simulator	Agilent	8960 Series 10 E1985A + GSM_AMPS	B.01.76 GB42450443	2012-4-6	2013-4-5
10	Spectrum Analyzer	Agilent	E4404B	US41192833	2012-4-6	2013-4-5
11	6dB Attenuator	Atten	Attenuator	DC-4GHz	2012-4-6	2013-4-5
12	Digital Multimeter	Fluke	15B	91280239	2012-4-6	2013-4-5
13	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	9163-324	2012-4-10	2013-4-9
14	Horn Antenna	SCHWARZBECK	BBHA9120A	0499	2011-11-28	2012-11-27
15	Active Loop Antenna	DAZE	ZN30900A	1200	2012-4-6	2013-4-6
16	9kHz-2.4GHz signal generator 2024	MARCONI	10S/6625-99-457-8730	112260/042	2012-4-6	2013-4-5
17	10dB attenuator	ELECTRO-METRICS	EM-7600	836	2012-4-6	2013-4-5
18	Spectrum Analyzer	R&S	FSP	100397	2012-11-2	2013-11-1
19	Broadband preamplifier	SCH WARZBECK	BBV9718	9718-182	2012-4-6	2013-4-5
20	Temperature & Humidity Chamber	TOPSTAT	TOS-831A	3438A05208	2012-4-6	2013-4-5

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.207	AC Power Line Conducted Emission	Pass
FCC §15.247(b)	Maximum Peak Output Power	Pass
FCC §15.247(e)	Power Spectral Density	Pass
FCC §15.247(a)	6dB Bandwidth	Pass
FCC §15.247 (d)	Conducted Spurious Emission	Pass
FCC §15.205 and §15.209	Radiated Spurious Emission	Pass
FCC §15.203/15.247(b)/(c)	Antenna Requirement	Pass

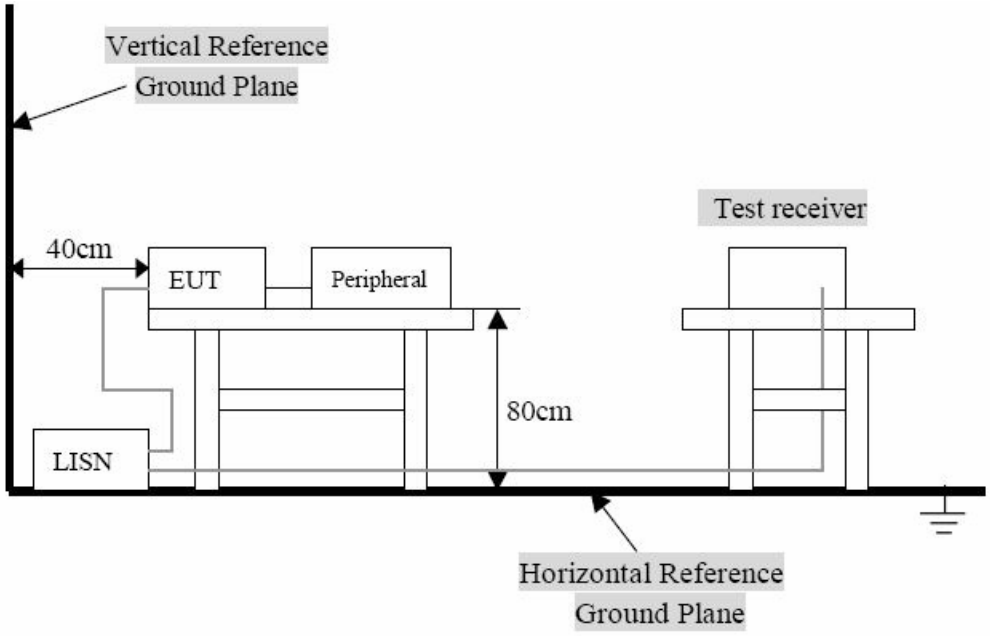
4. TEST OF AC POWER LINE CONDUCTED EMISSION

4.1 Applicable Standard

Refer to FCC §15.207.
For a Low-power Radio-frequency Device is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150～0.500	66～56	56～46
0.500～5.000	56	46
5.000～30.00	60	50

4.2 Test Setup Diagram



Remark: The EUT was connected to a 120 VAC/ 60Hz power source.

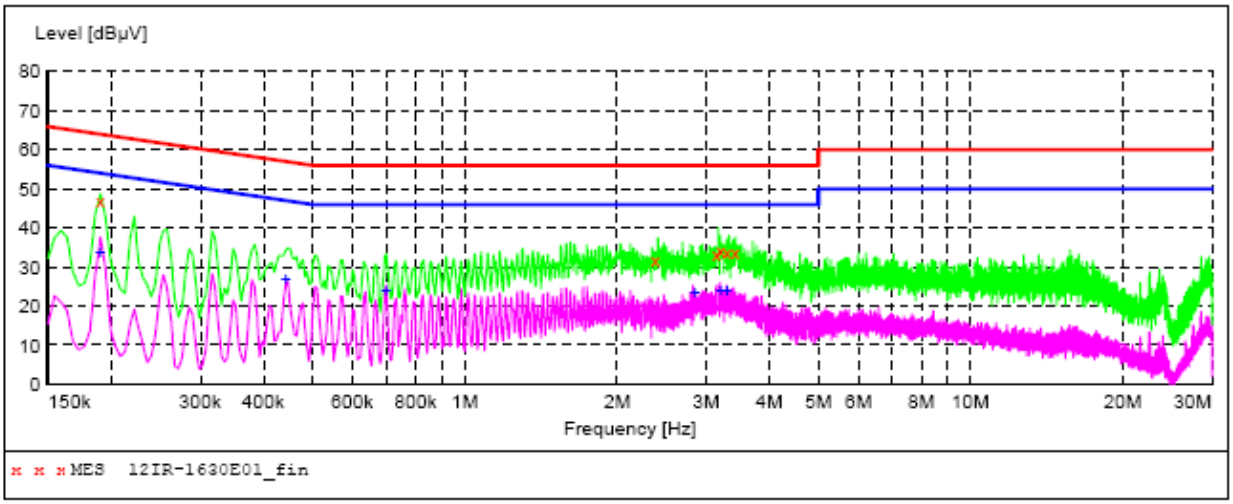
4.3 Test Result

Temperature (℃) : 23~25	EUT: Tablet PC
Humidity (%RH): 45~58	M/N: FTABMP
Barometric Pressure (mbar): 950~1000	Operation Condition: Normal operation

Conducted Emission:

EUT: Tablet PC
Operating Condition: Normal operation
Test Site: Shielded Room
Operator: Andy
Test Specification: AC/DC adapter (AC 120V/60Hz)
Comment: Live Line

SCAN TABLE: "Voltage (9K-30M) FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: 12IR-1630E01_fin"

9/22/2012 9:19PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	46.90	10.9	64	17.1	QP	L1	GND
2.382000	31.70	10.2	56	24.3	QP	L1	GND
3.142500	33.40	10.3	56	22.6	QP	L1	GND
3.205500	34.20	10.3	56	21.8	QP	L1	GND
3.300000	34.00	10.3	56	22.0	QP	L1	GND
3.426000	33.80	10.3	56	22.2	QP	L1	GND

MEASUREMENT RESULT: "12IR-1630E01_fin2"

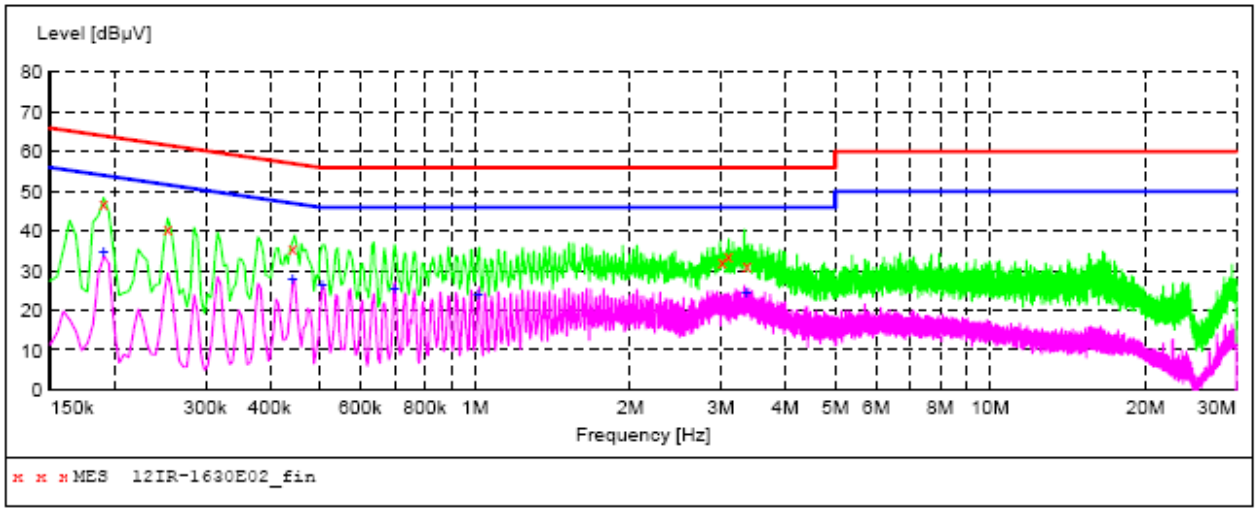
9/22/2012 9:19PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	33.90	10.9	54	20.1	AV	L1	GND
0.442500	26.70	10.3	47	20.3	AV	L1	GND
0.699000	24.20	10.2	46	21.8	AV	L1	GND
2.854500	23.40	10.2	46	22.6	AV	L1	GND
3.205500	24.20	10.3	46	21.8	AV	L1	GND
3.300000	24.20	10.3	46	21.8	AV	L1	GND

Conducted Emission:

EUT: Tablet PC
Operating Condition: Normal operation
Test Site: Shielded Room
Operator: Andy
Test Specification: AC/DC adapter (AC 120V/60Hz)
Comment: Neutral Line

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "12IR-1630E02_fin"

9/22/2012 9:23PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	47.00	10.9	64	17.0	QP	N	GND
0.253500	40.40	10.7	62	21.2	QP	N	GND
0.442500	35.80	10.3	57	21.2	QP	N	GND
3.016500	32.20	10.2	56	23.8	QP	N	GND
3.106500	33.80	10.3	56	22.2	QP	N	GND
3.367500	31.10	10.3	56	24.9	QP	N	GND

MEASUREMENT RESULT: "12IR-1630E02_fin2"

9/22/2012 9:23PM

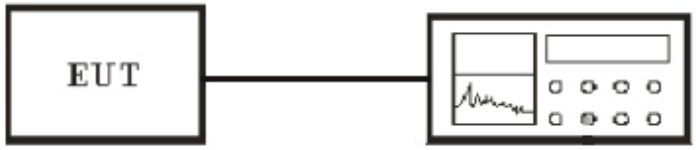
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	34.70	10.9	54	19.3	AV	N	GND
0.442500	28.00	10.3	47	19.0	AV	N	GND
0.505500	26.60	10.2	46	19.4	AV	N	GND
0.699000	25.60	10.2	46	20.4	AV	N	GND
1.014000	24.00	10.3	46	22.0	AV	N	GND
3.363000	24.50	10.3	46	21.5	AV	N	GND

5. Test of Maximum Peak Output Power

5.1 Applicable Standard

Refer to FCC §15.247 (b)

5.2 EUT Setup



Spectrum Analyzer

5.3 Test Equipment List and Details

See section 2.5.

5.4 Test Procedure

Connect the EUT to spectrum analyzer, set the center frequency of the spectrum analyzer to the channel center frequency. Set the RBW to 1MHz and VBW to 3MHz.

Measurement of Digital Transmission Systems Operating under Section 15.247

5.5 Test Result

Temperature (℃) : 22~23	EUT: Tablet PC
Humidity (%RH): 50~54	M/N: FTABMP
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	Pass / Fail
Low	2412	10.29	30	PASS
Middle	2437	10.17	30	PASS
High	2462	9.99	30	PASS

NOTE : 1. At finial test to get the worst-case emission at 11Mbps.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	Pass / Fail
Low	2412	9.76	30	PASS
Middle	2437	9.43	30	PASS
High	2462	9.63	30	PASS

NOTE : 1. At finial test to get the worst-case emission at 54Mbps.

IEEE 802.11n HT20mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	Pass / Fail
Low	2412	5.55	30	PASS
Middle	2437	5.59	30	PASS
High	2462	5.38	30	PASS

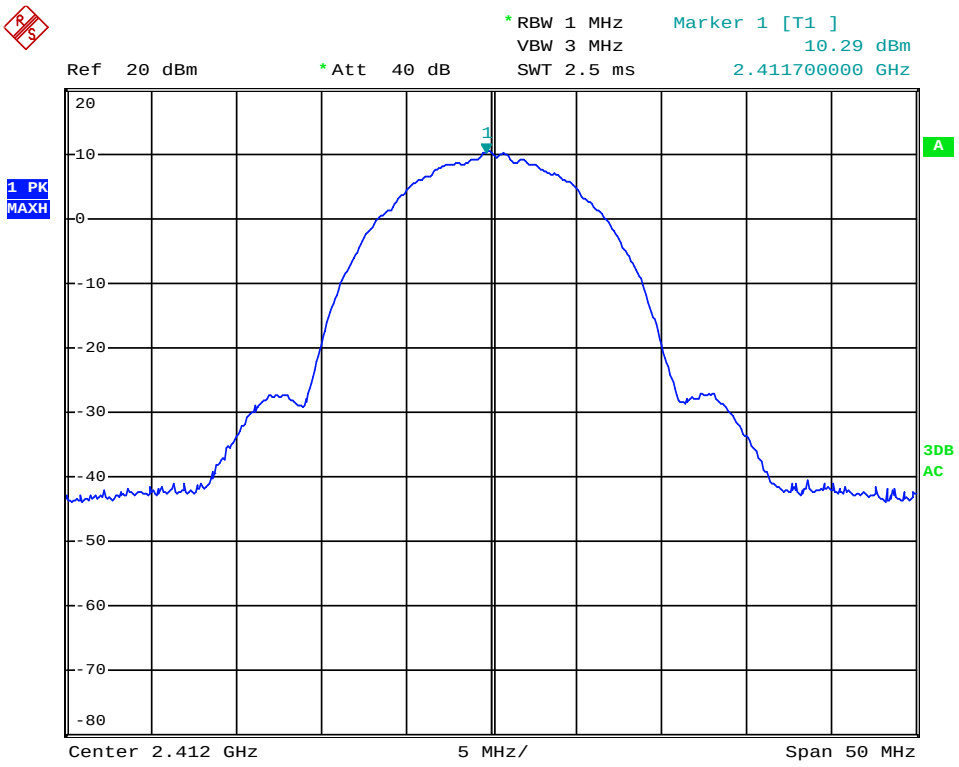
NOTE : 1. At finial test to get the worst-case emission at 12Mbps.

IEEE 802. 11n HT40 mode

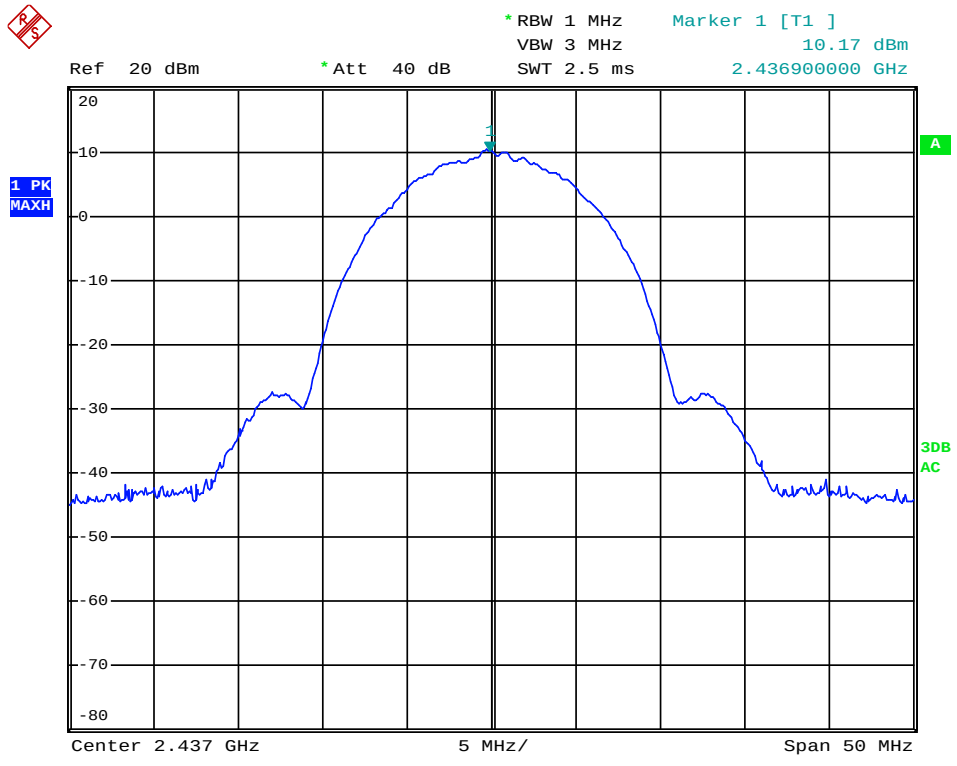
Channel	Channel Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	Pass / Fail
Low	2422	1.78	30	PASS
Middle	2437	1.66	30	PASS
High	2452	1.50	30	PASS

NOTE : 1. At finial test to get the worst-case emission at 22Mbps.

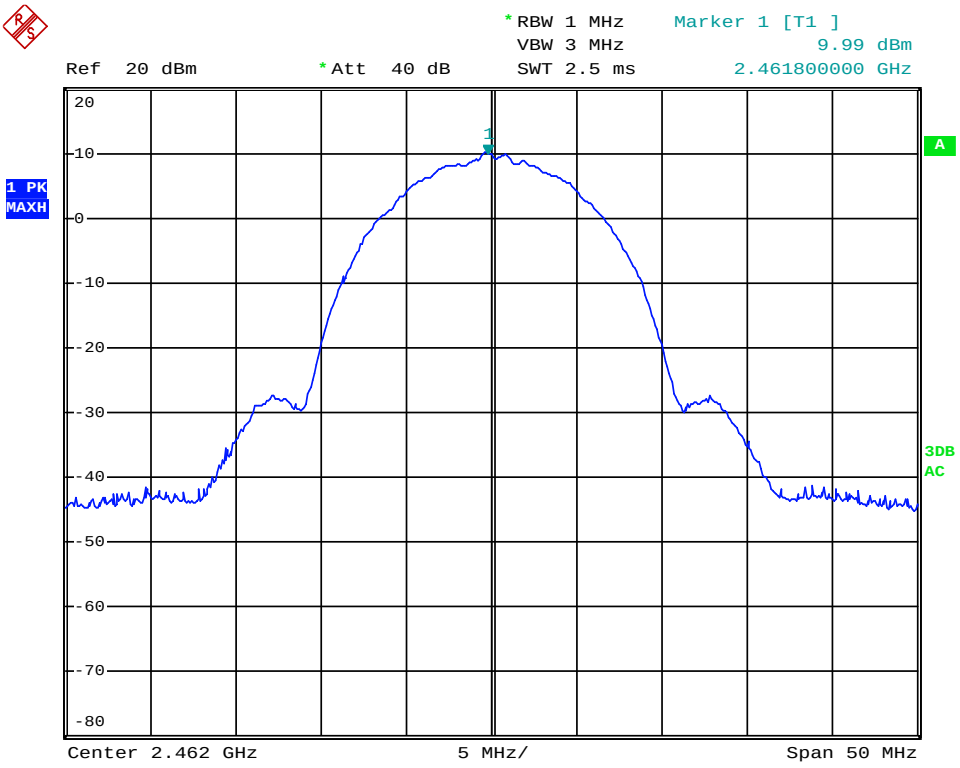
MAXIMUM PEAK OUTPUT POWER (802.11b MODE CH Low)



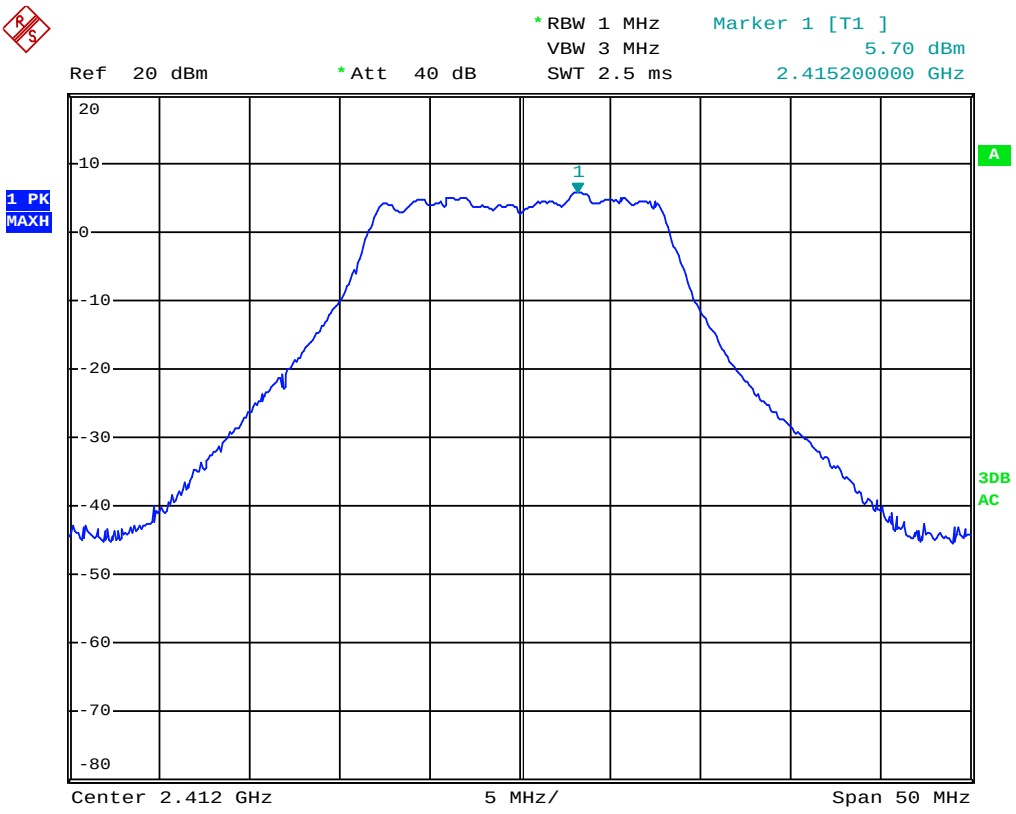
MAXIMUM PEAK OUTPUT POWER (802.11b MODE CH Mid)



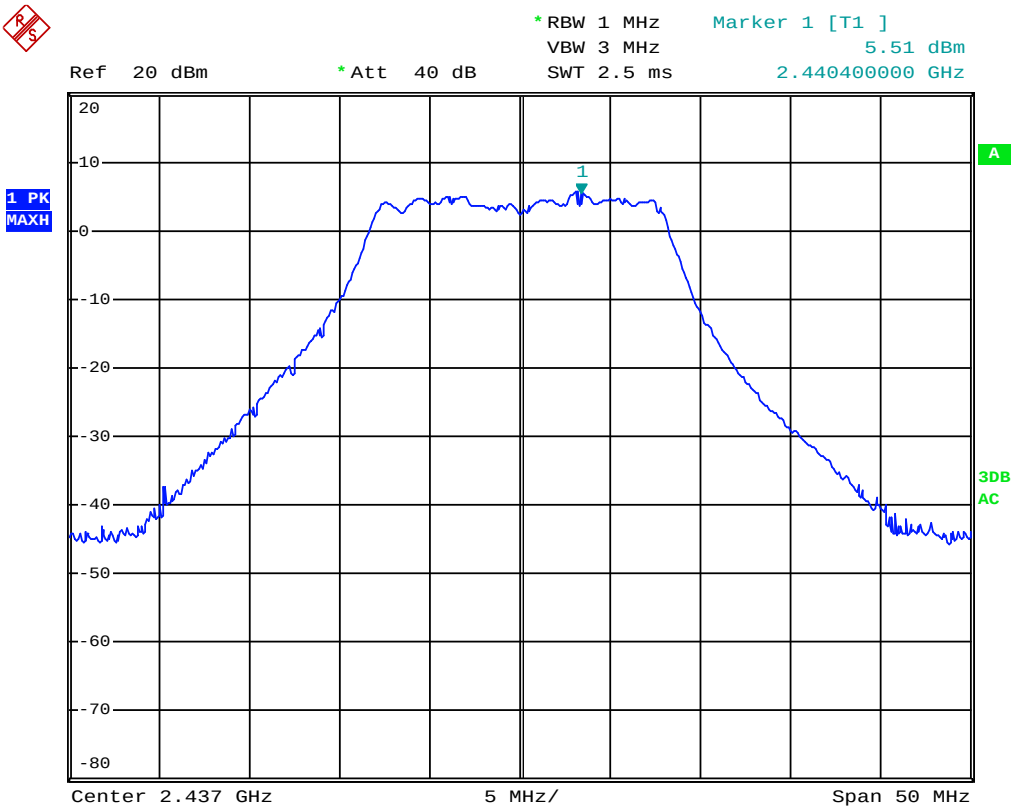
MAXIMUM PEAK OUTPUT POWER (802.11b MODE CH High)



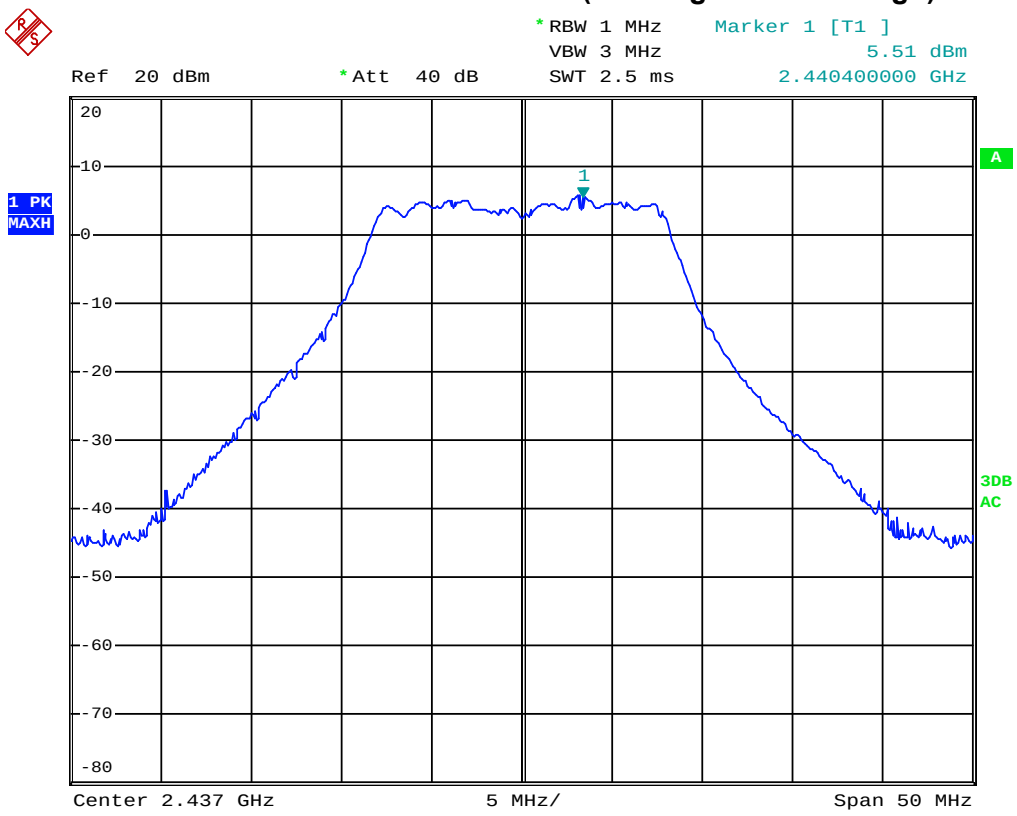
MAXIMUM PEAK OUTPUT POWER (802.11g MODE CH Low)



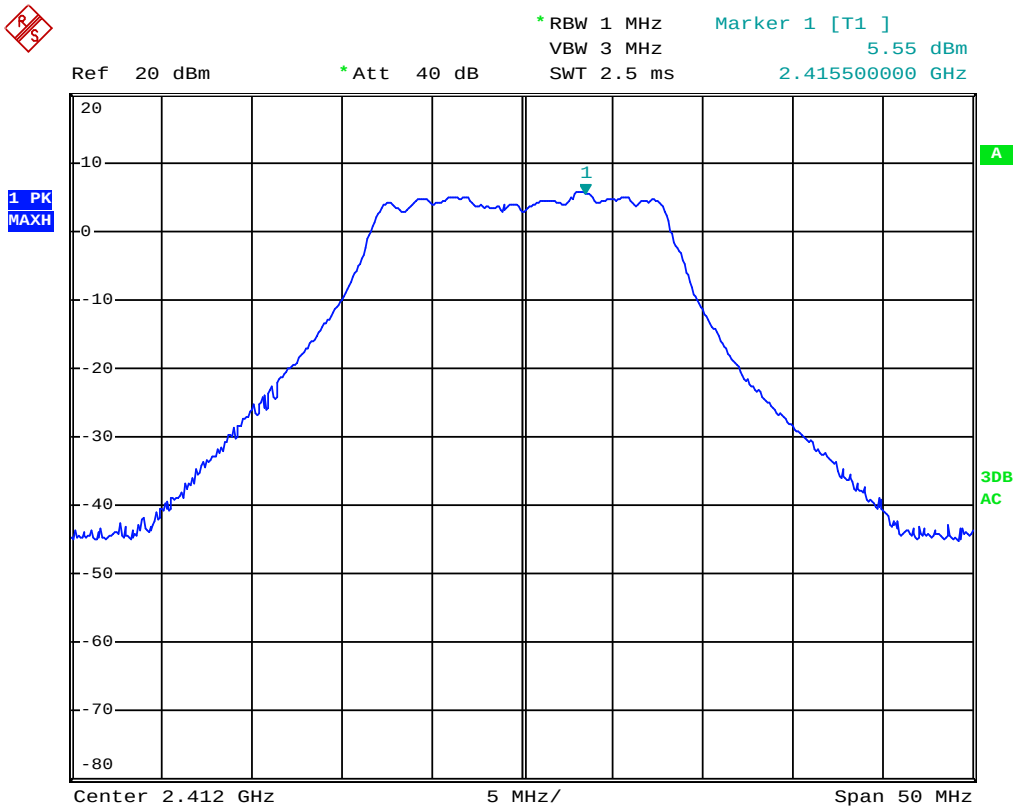
MAXIMUM PEAK OUTPUT POWER (802.11g MODE CH Mid)



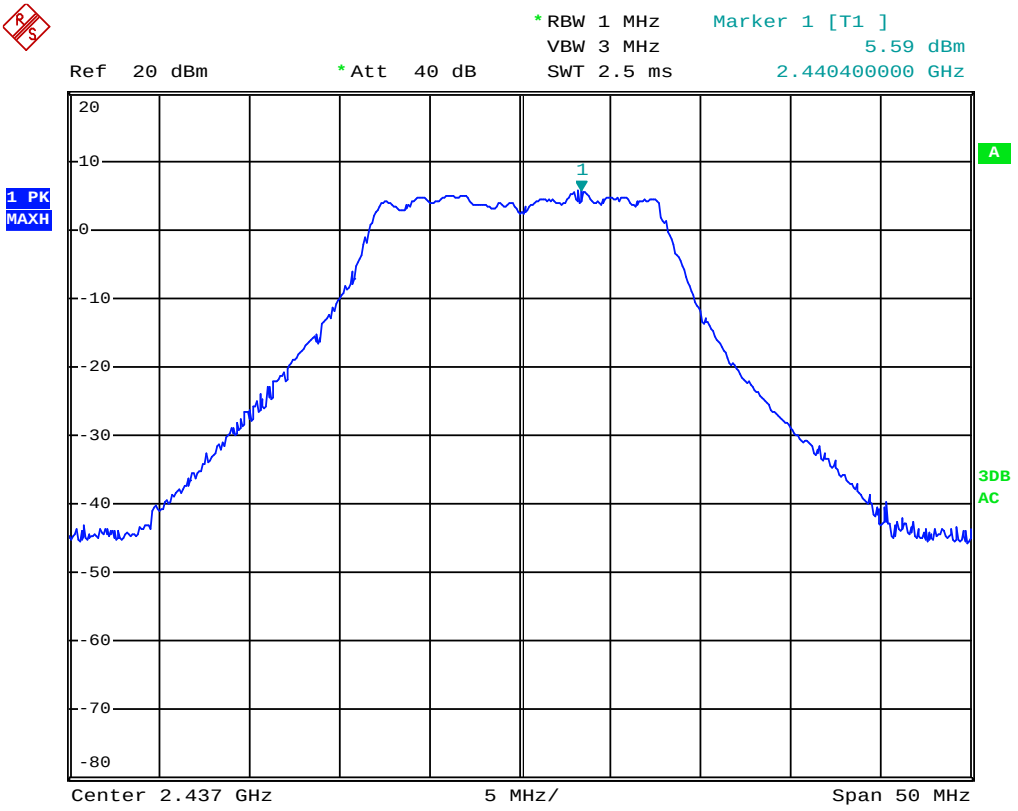
MAXIMUM PEAK OUTPUT POWER (802.11g MODE CH High)



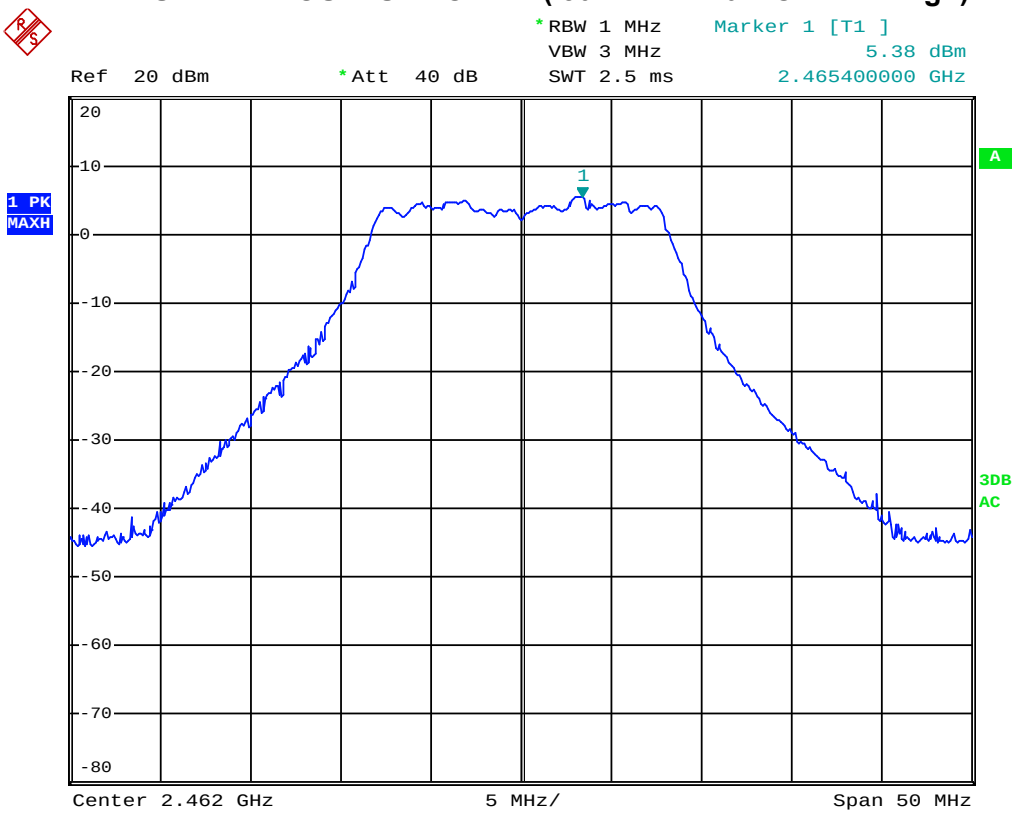
MAXIMUM PEAK OUTPUT POWER (802.11nHT20 MODE CH Low)



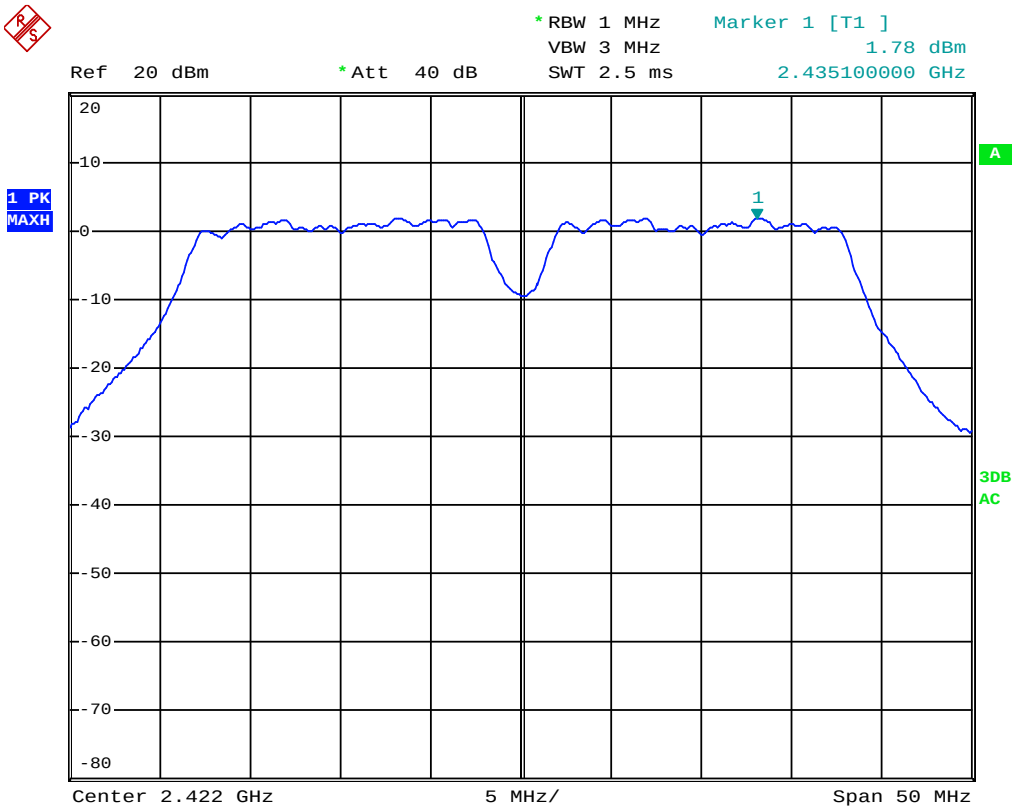
MAXIMUM PEAK OUTPUT POWER (802.11nHT20 MODE CH Mid)



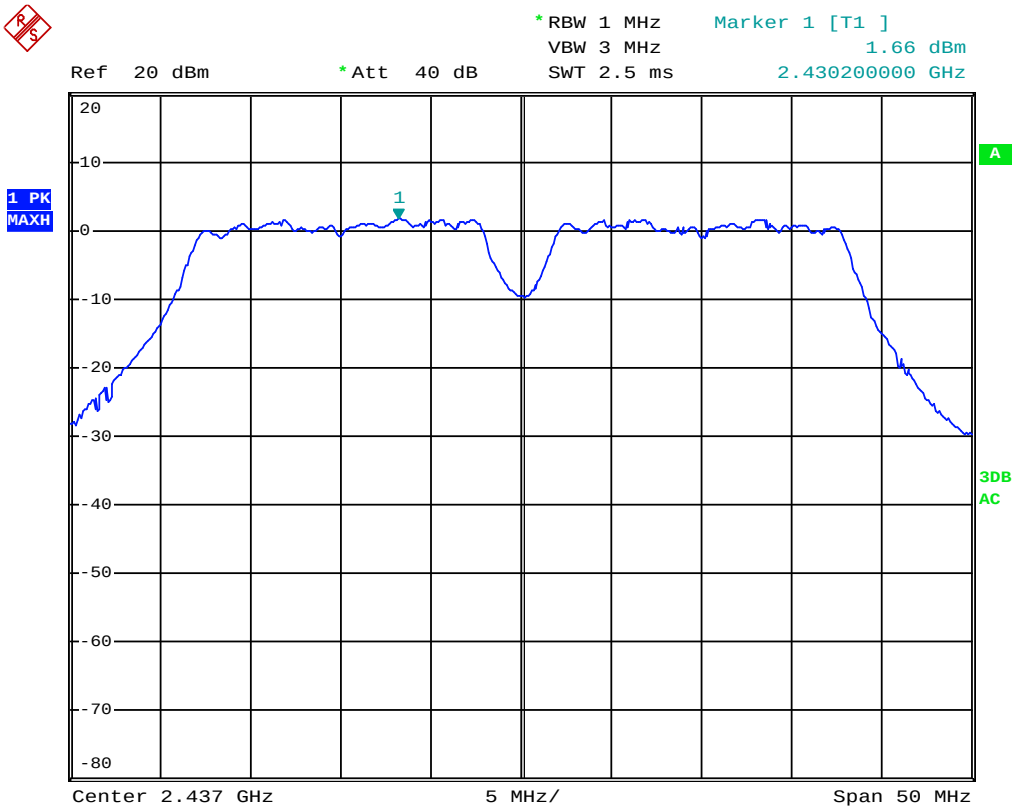
MAXIMUM PEAK OUTPUT POWER (802.11nHT20 MODE CH High)



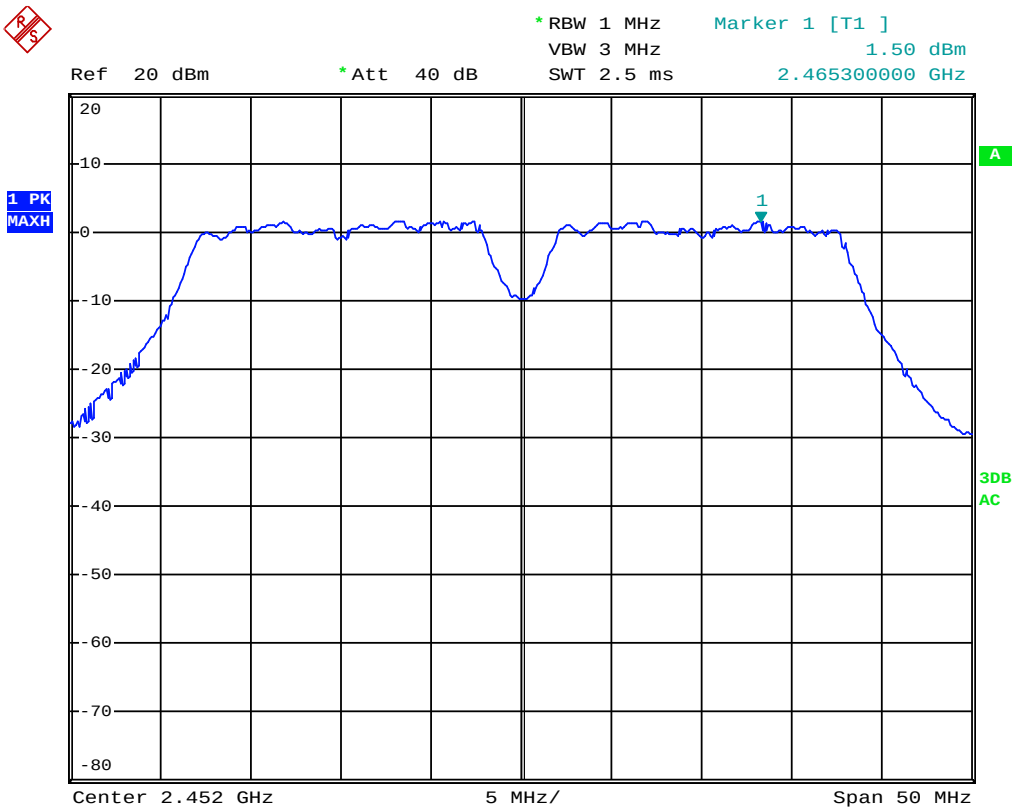
MAXIMUM PEAK OUTPUT POWER (802.11nHT40 MODE CH Low)



MAXIMUM PEAK OUTPUT POWER (802.11nHT40 MODE CH Mid)



MAXIMUM PEAK OUTPUT POWER (802.11nHT40 MODE CH High)



6. Test of Peak Power Spectral Density

6.1 Applicable Standard

Refer to FCC §15.247 (e).

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

6.2 EUT Setup

Spectrum Analyzer

6.3 Test Equipment List and Details

See section 2.5.

6.4 Test Procedure

The transmitter output was connected to the spectrum analyzer, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using RBW=3KHz and VBW≧RBW, set sweep time=span / 3KHz.
The power spectral density was measured and recorded. The sweep time is allowed to be longer than span / 3KHz for a full response of the mixer in the spectrum analyzer.

6.5 Test Result

Temperature (℃) : 22~23	EUT: Tablet PC
Humidity (%RH): 50~54	M/N: FTABMP
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maximum Limit (dBm)	Pass / Fail
Low	2412	-13.69	8	PASS
Middle	2437	-12.65	8	PASS
High	2462	-12.85	8	PASS

NOTE : 1. At finial test to get the worst-case emission at 11Mbps.

IEEE 802.11 g mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maximum Limit (dBm)	Pass / Fail
Low	2412	-19.19	8	PASS
Middle	2437	-19.06	8	PASS
High	2462	-19.29	8	PASS

NOTE : 1. At finial test to get the worst-case emission at 54Mbps.

IEEE 802.11nHT20 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maximum Limit (dBm)	Pass / Fail
Low	2412	-18.95	8	PASS
Middle	2437	-19.08	8	PASS
High	2462	-19.90	8	PASS

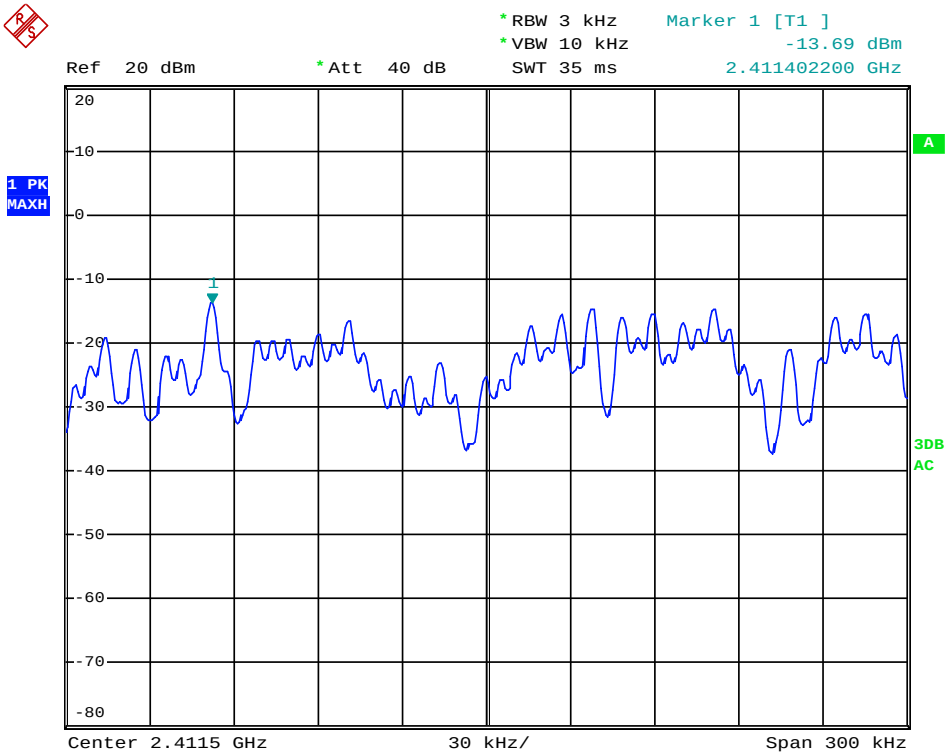
NOTE : 1. At finial test to get the worst-case emission at 12Mbps.

IEEE 802.11nHT40 mode

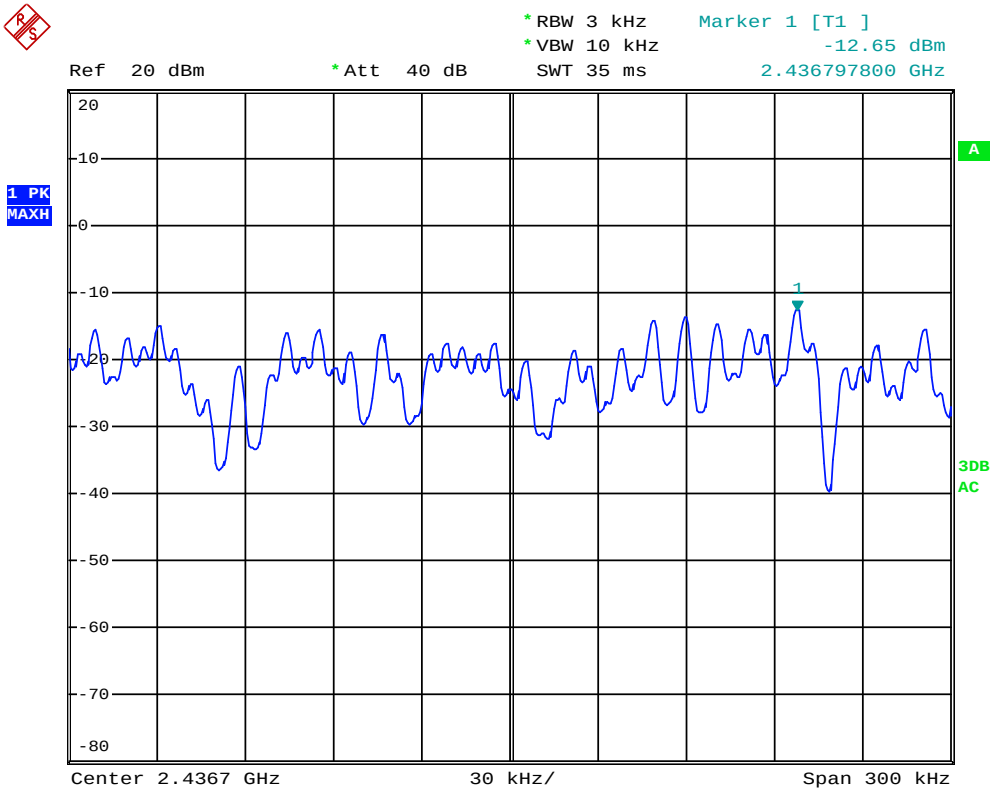
Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maximum Limit (dBm)	Pass / Fail
Low	2422	-22.33	8	PASS
Middle	2437	-22.34	8	PASS
High	2452	-22.98	8	PASS

NOTE : 1. At finial test to get the worst-case emission at 22Mbps.

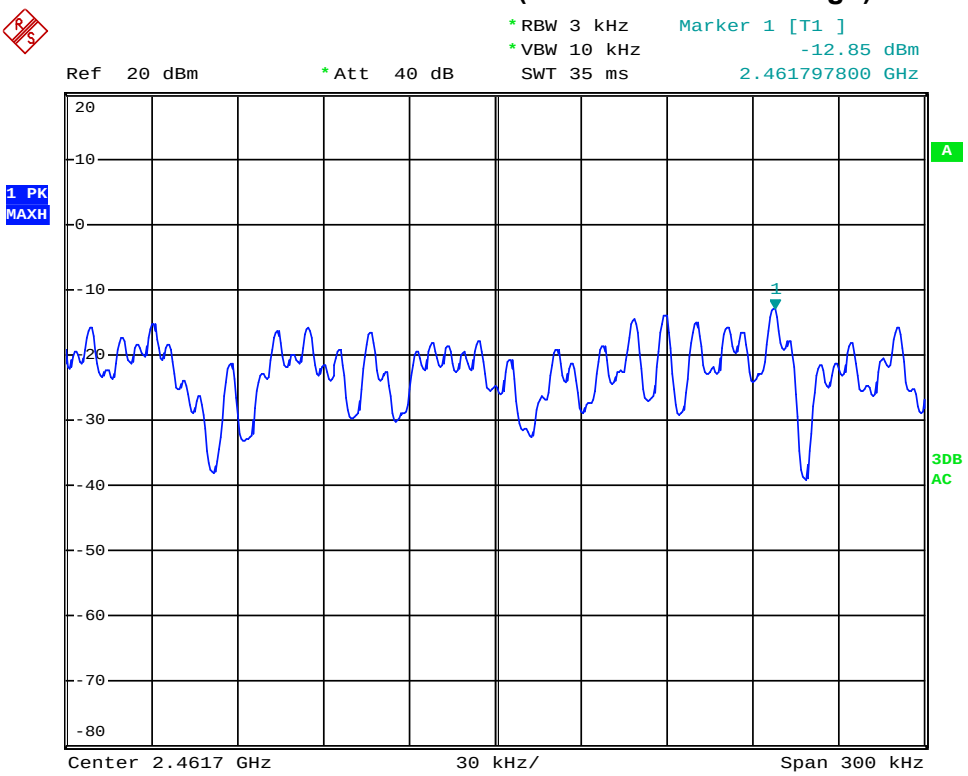
POWER SPECTRAL DENSITY (802.11b MODE CH Low)



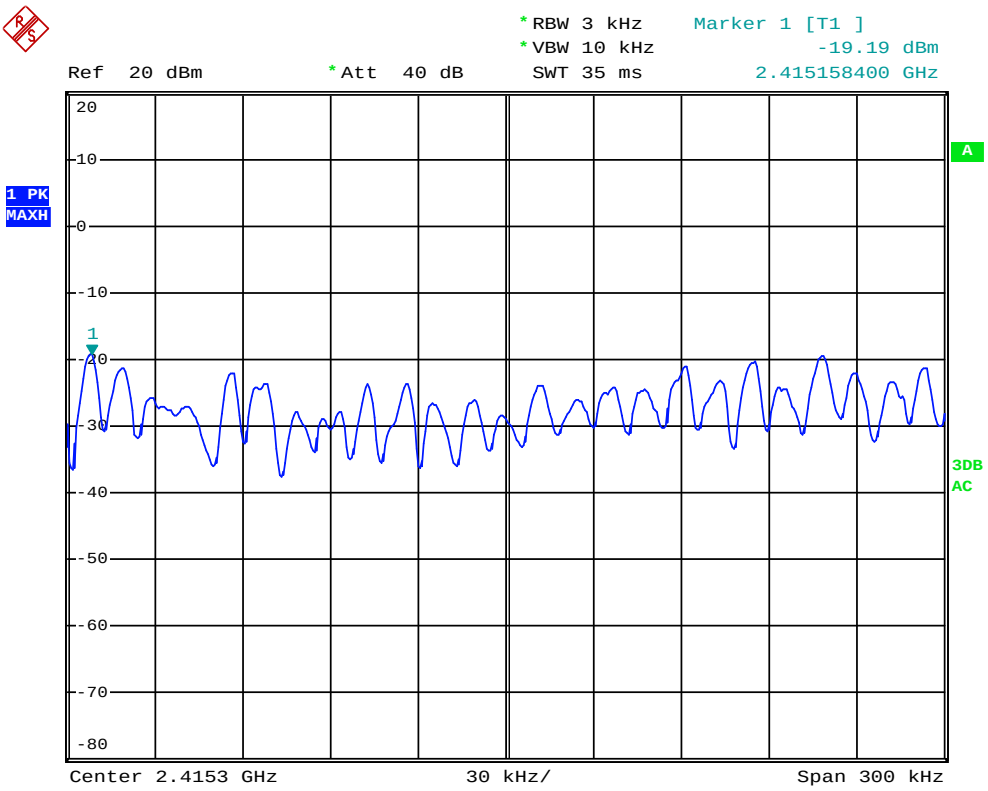
POWER SPECTRAL DENSITY (802.11b MODE CH Mid)



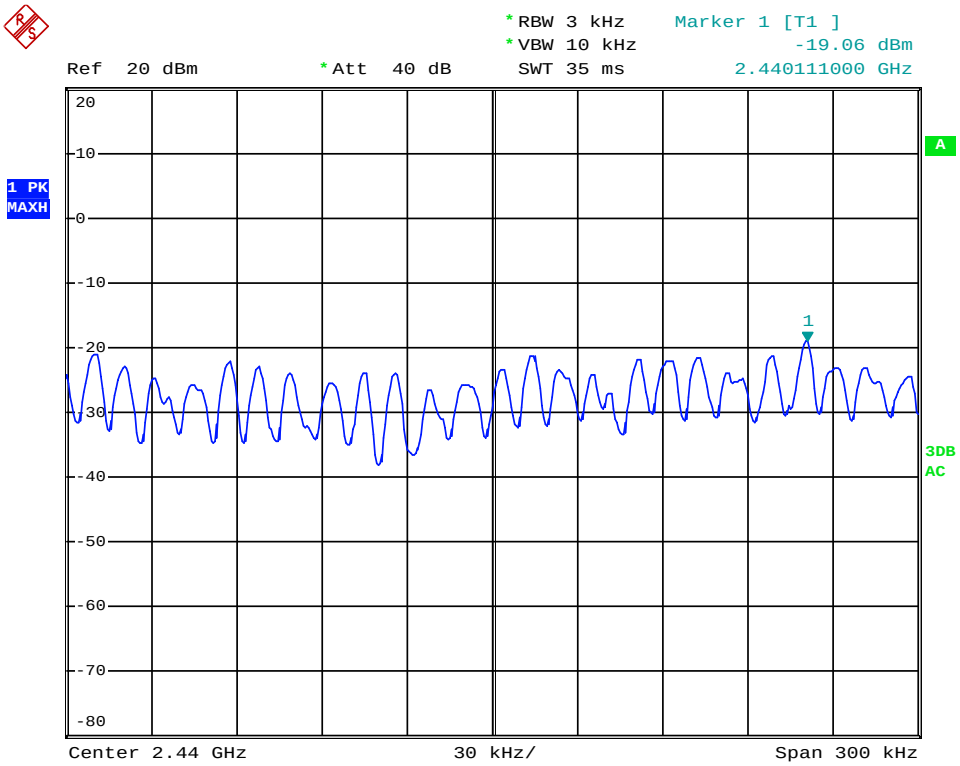
POWER SPECTRAL DENSITY (802.11b MODE CH High)



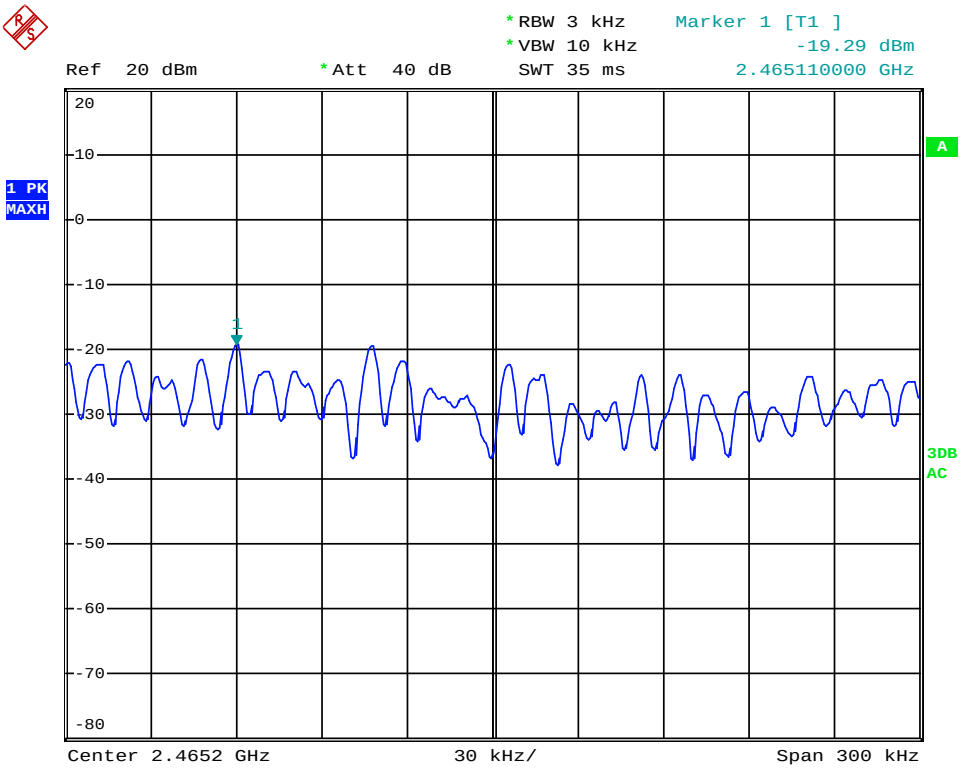
POWER SPECTRAL DENSITY (802.11g MODE CH Low)



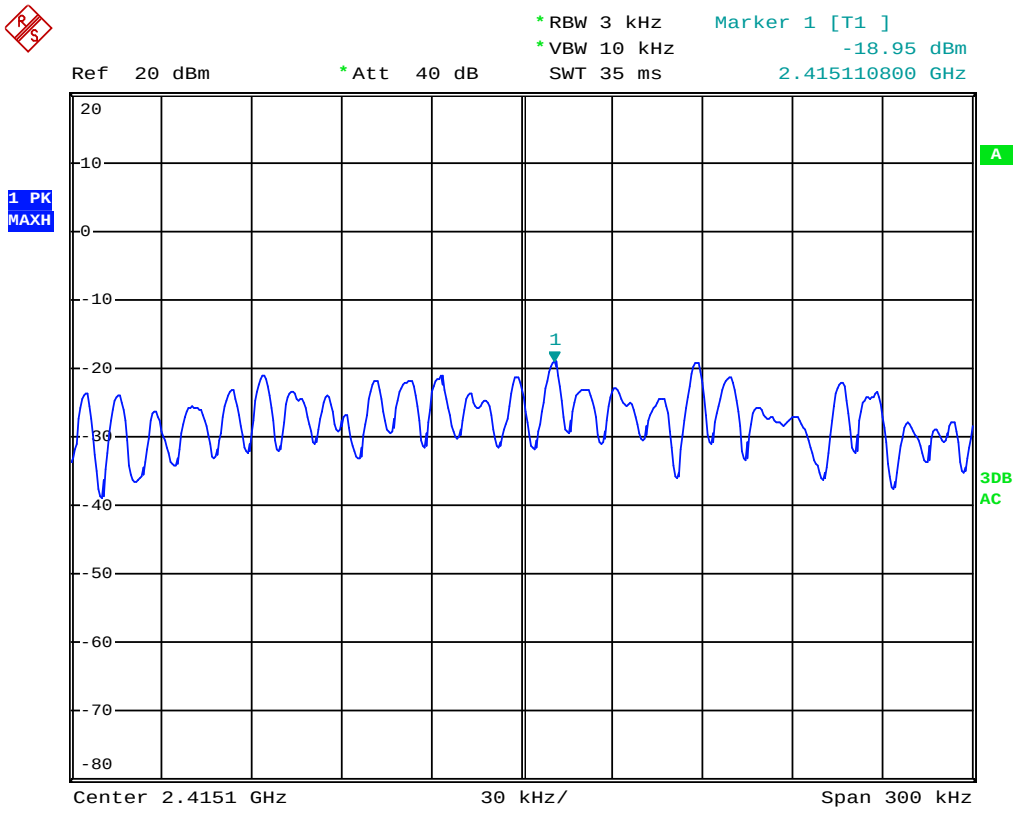
POWER SPECTRAL DENSITY (802.11g MODE CH Mid)



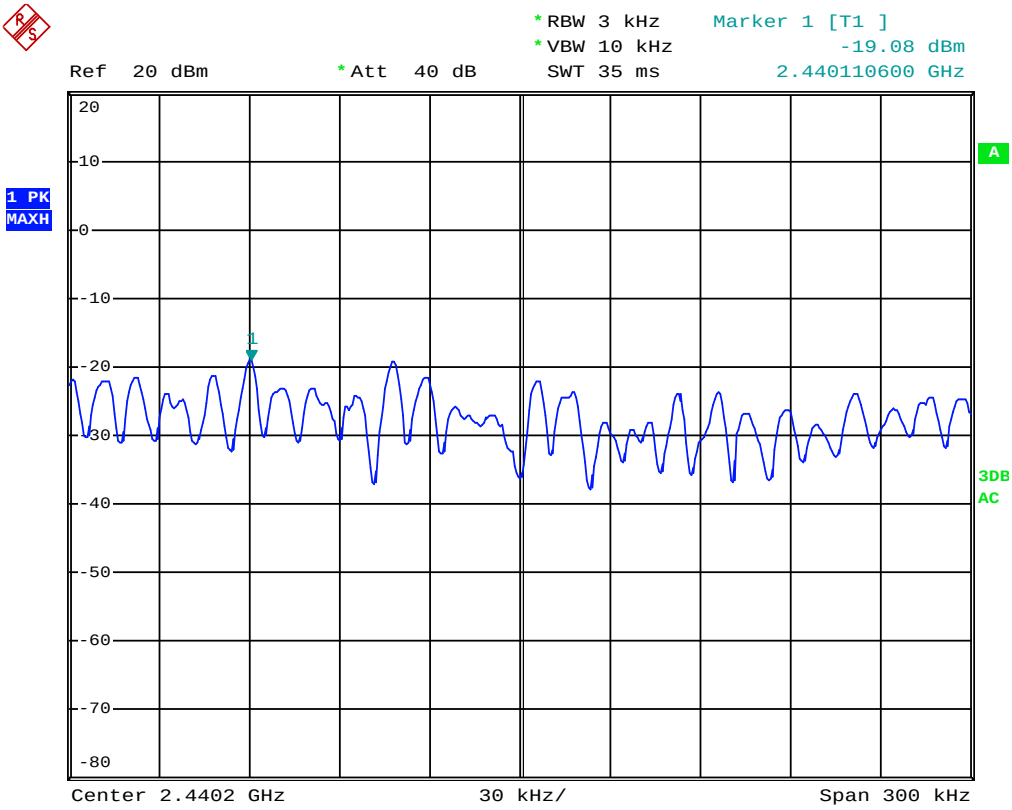
POWER SPECTRAL DENSITY (802.11g MODE CH High)



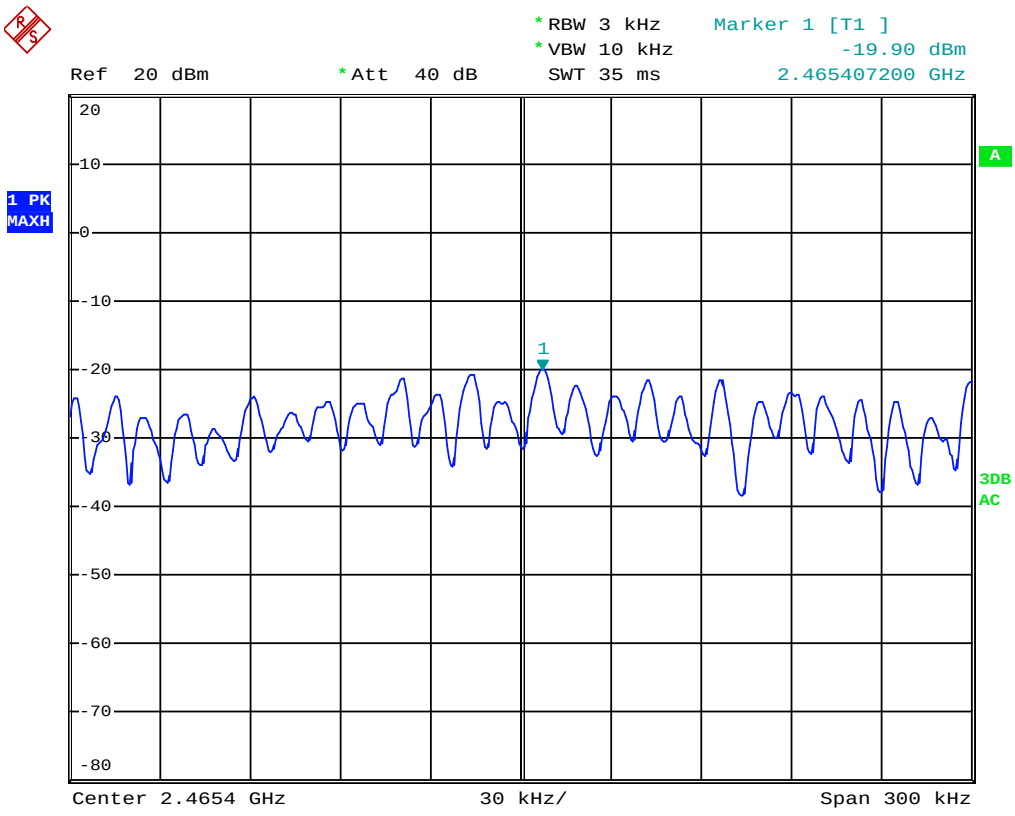
POWER SPECTRAL DENSITY (802.11nHT20 MODE CH Low)



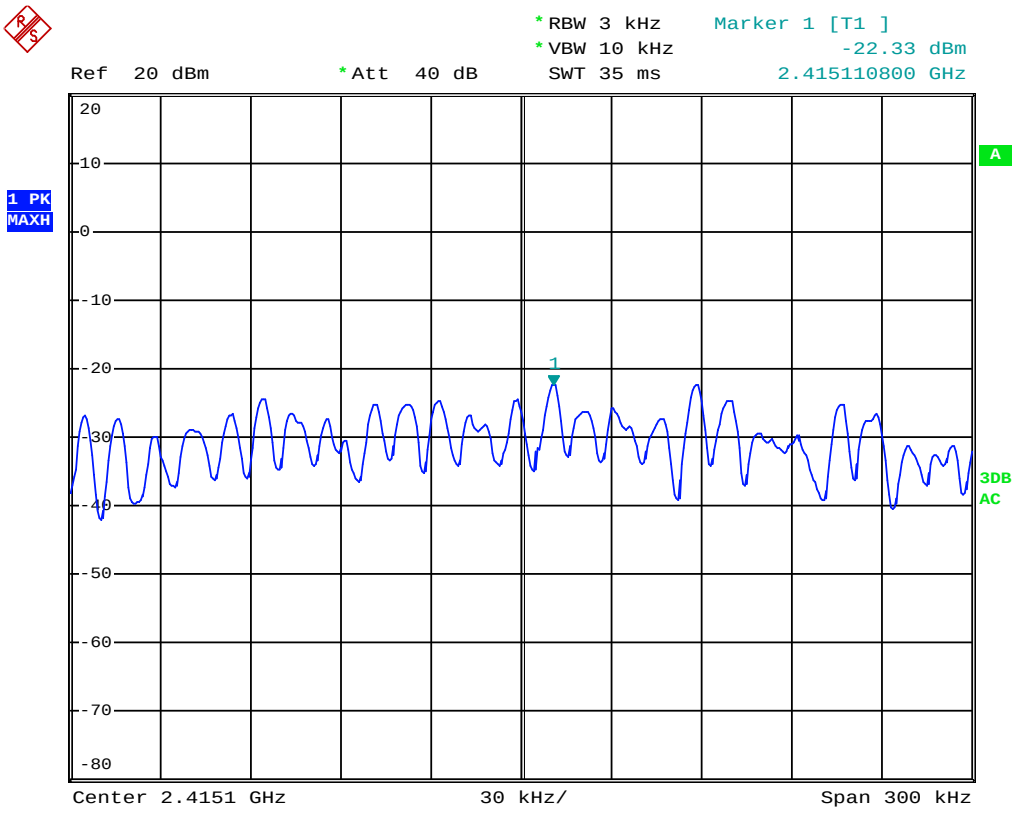
POWER SPECTRAL DENSITY (802.11nHT20 MODE CH Mid)



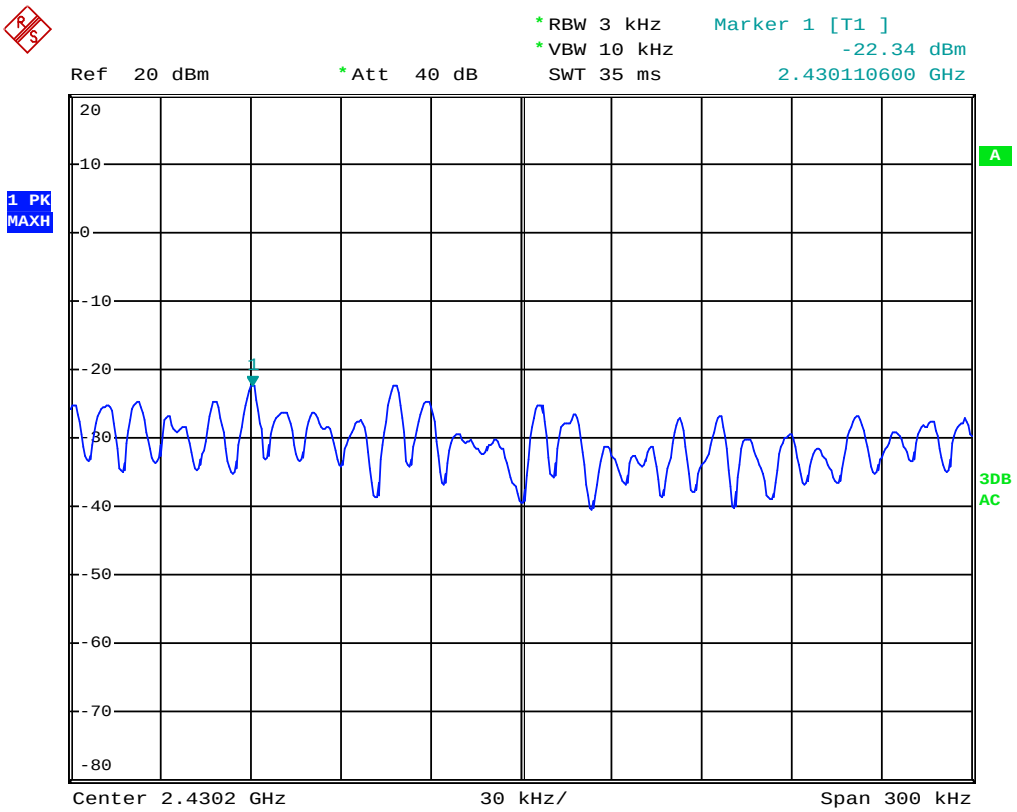
POWER SPECTRAL DENSITY (802.11nHT20 MODE CH High)



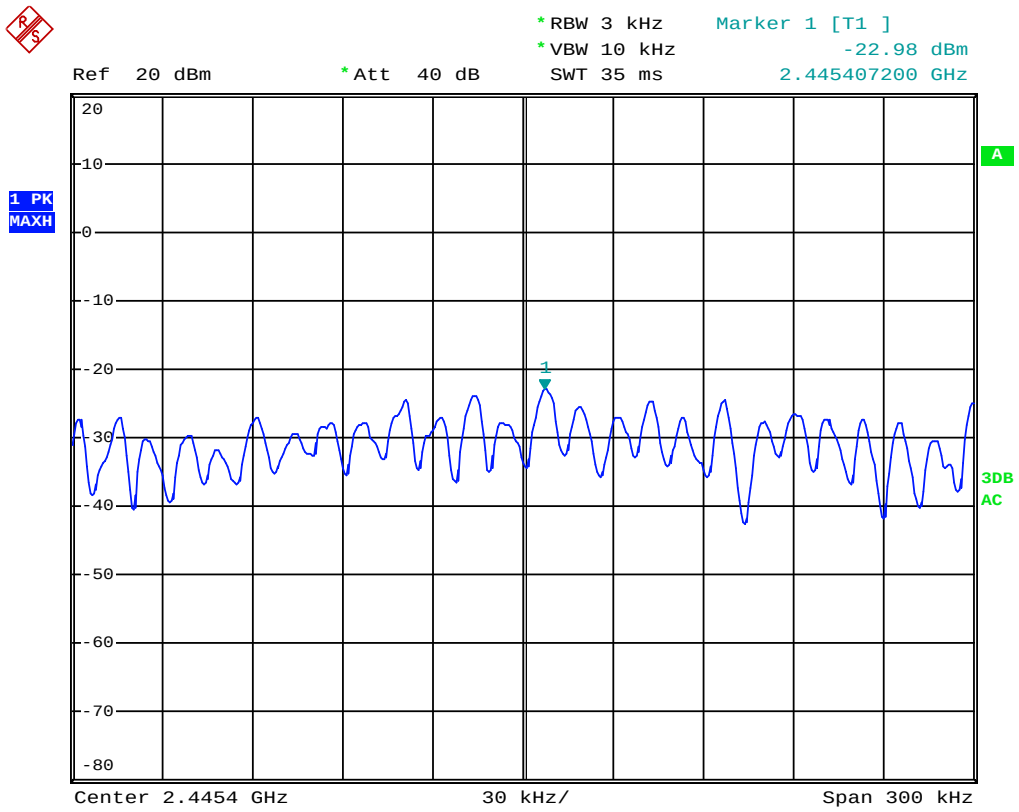
POWER SPECTRAL DENSITY (802.11nHT40 MODE CH Low)



POWER SPECTRAL DENSITY (802.11nHT40 MODE CH Mid)



POWER SPECTRAL DENSITY (802.11nHT40 MODE CH High)



7. Test of 6dB Bandwidth

7.1 Applicable Standard

Refer to FCC §15.247 (a) (2),The minimum 6 dB bandwidth shall be at least 500 kHz.

7.2 EUT Setup

Spectrum Analyzer

7.3 Test Equipment List and Details

See section 2.5.

7.4 Test Procedure

The transmitter output was connected to a spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 100 KHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.5 Test Result

Temperature (℃) : 22~23	EUT: Tablet PC
Humidity (%RH): 50~54	M/N: FTABMP
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	8400	500	PASS
Middle	2437	8700	500	PASS
High	2462	8400	500	PASS

NOTE : 1. At finial test to get the worst-case emission at11Mbps.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	16600	500	PASS
Middle	2437	16600	500	PASS
High	2462	16600	500	PASS

NOTE : 1. At finial test to get the worst-case emission at 54Mbps.

IEEE 802.11nHT20 mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	16600	500	PASS
Middle	2437	16600	500	PASS
High	2462	16600	500	PASS

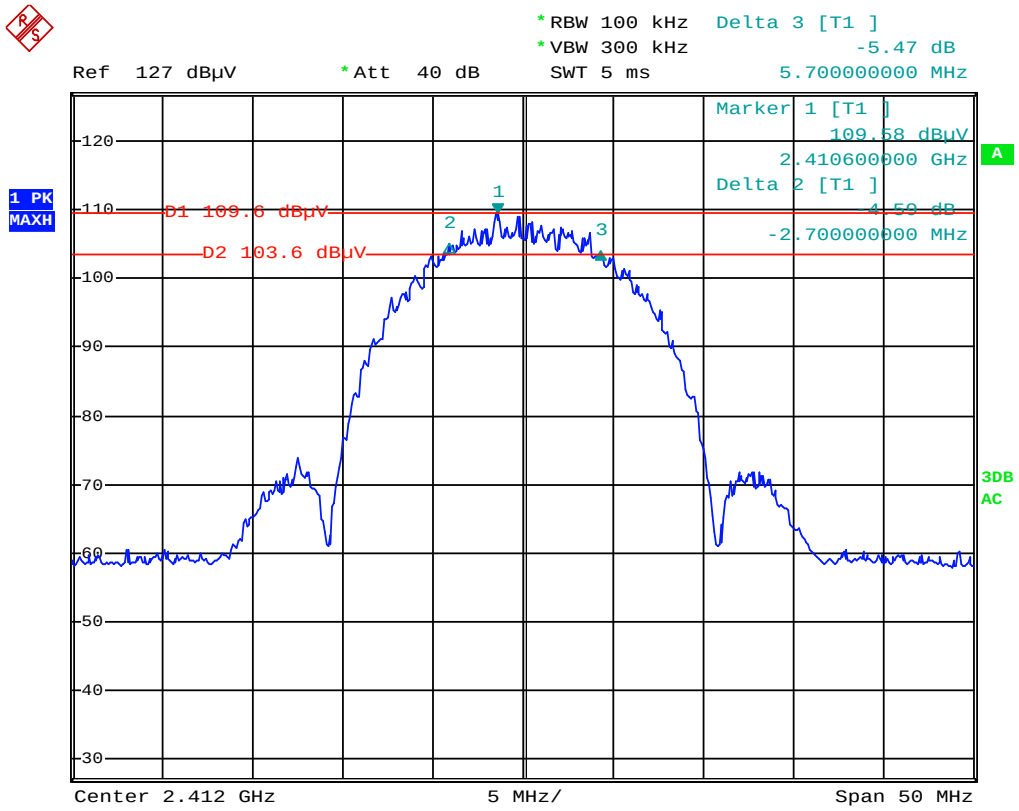
NOTE : 1. At finial test to get the worst-case emission at 12Mbps.

IEEE 802.11 nHT40mode

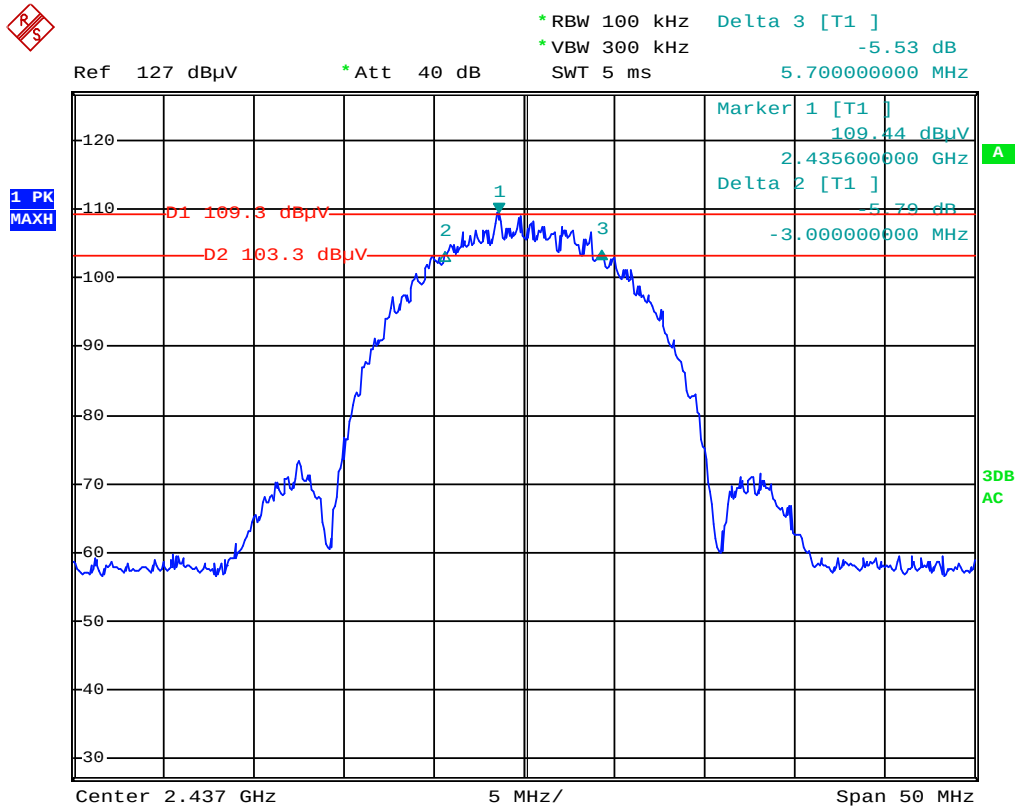
Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Minimum Limit (kHz)	Pass / Fail
Low	2422	36600	500	PASS
Middle	2437	36600	500	PASS
High	2452	36600	500	PASS

NOTE : 1. At finial test to get the worst-case emission at 22Mbps.

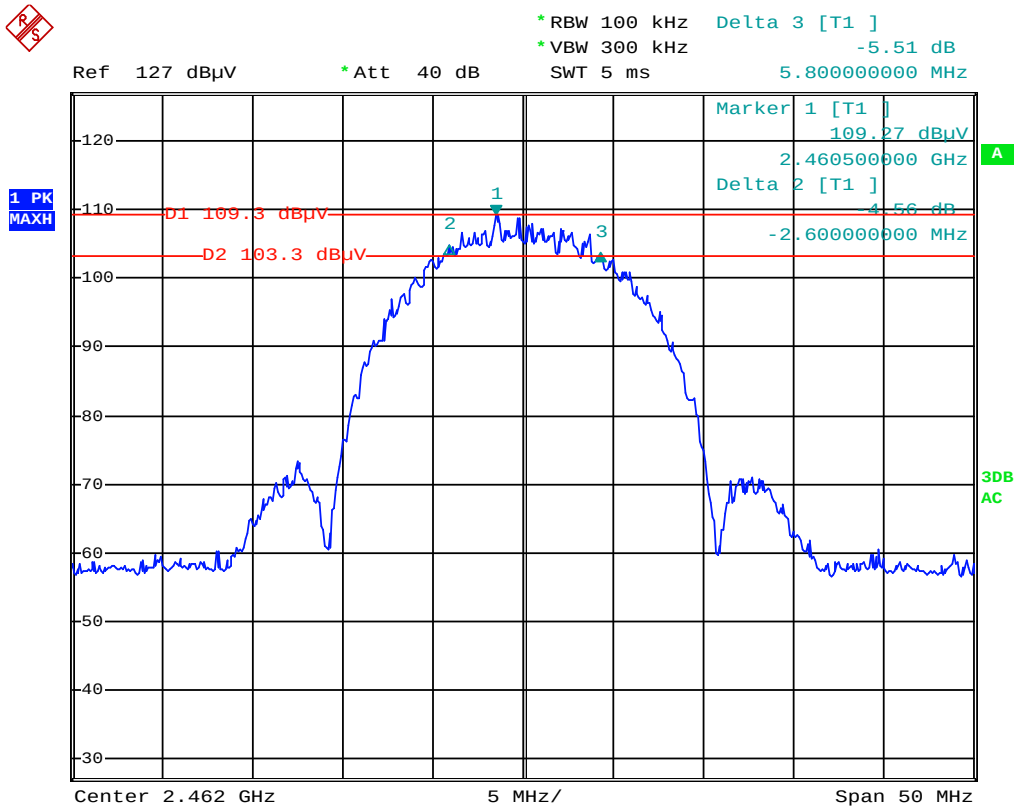
6dB BANDWIDTH (802.11b MODE CH Low)



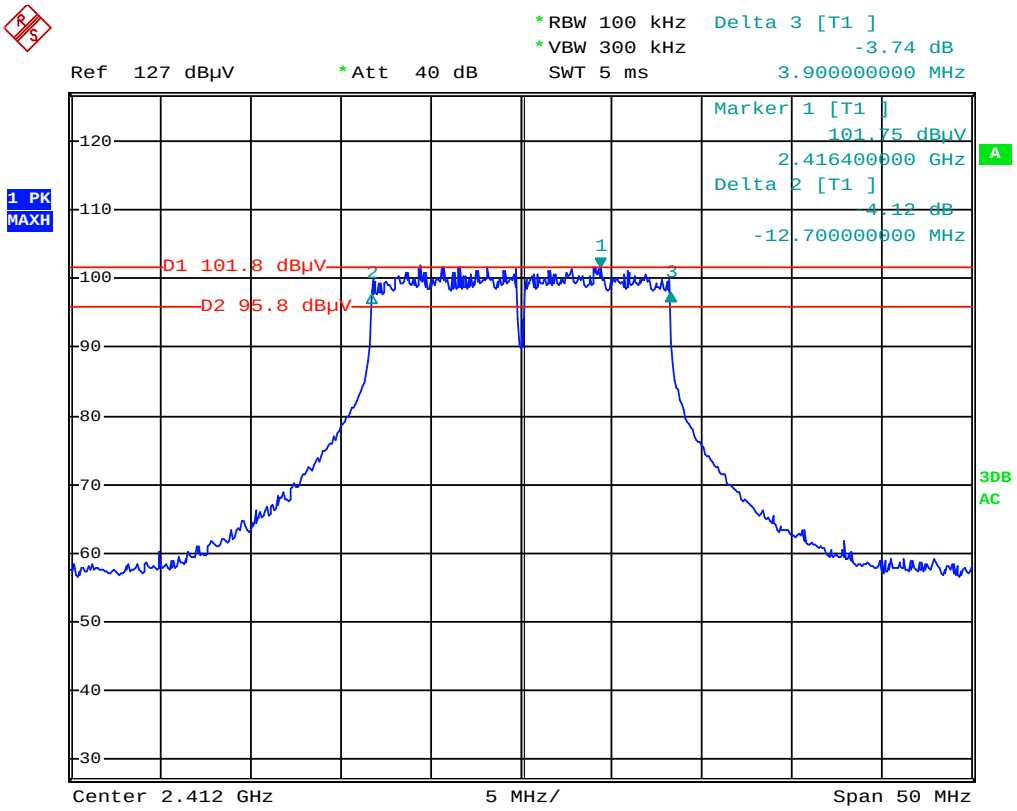
6dB BANDWIDTH (802.11b MODE CH Mid)



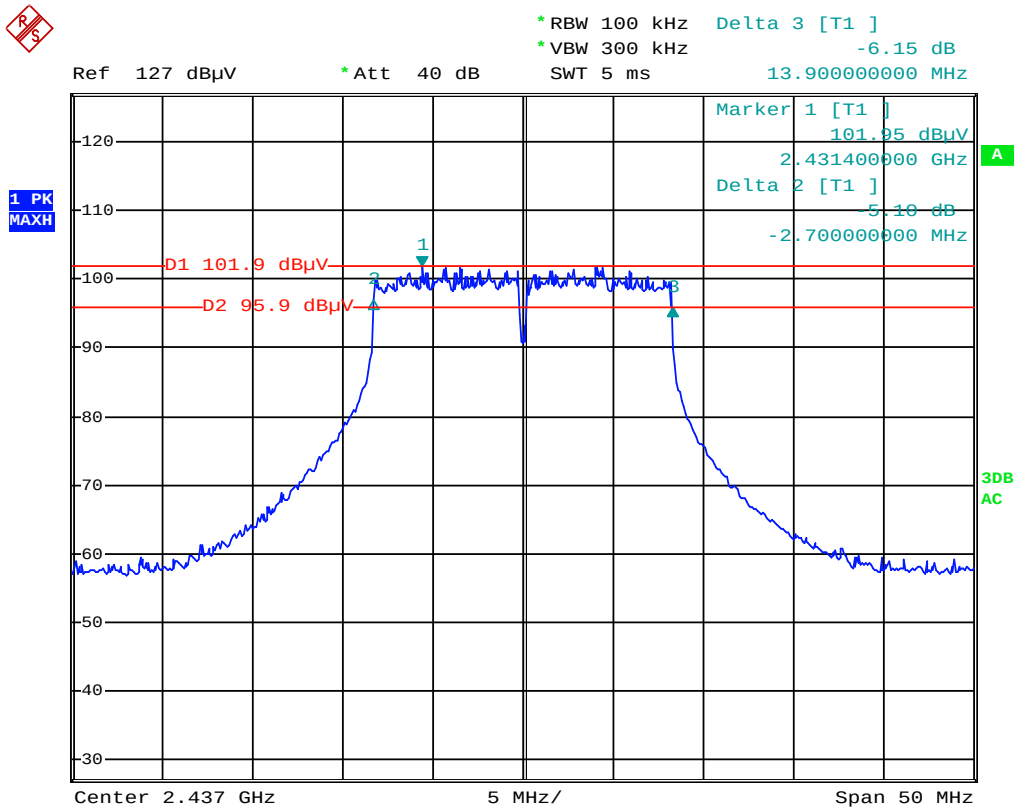
6dB BANDWIDTH (802.11b MODE CH High)



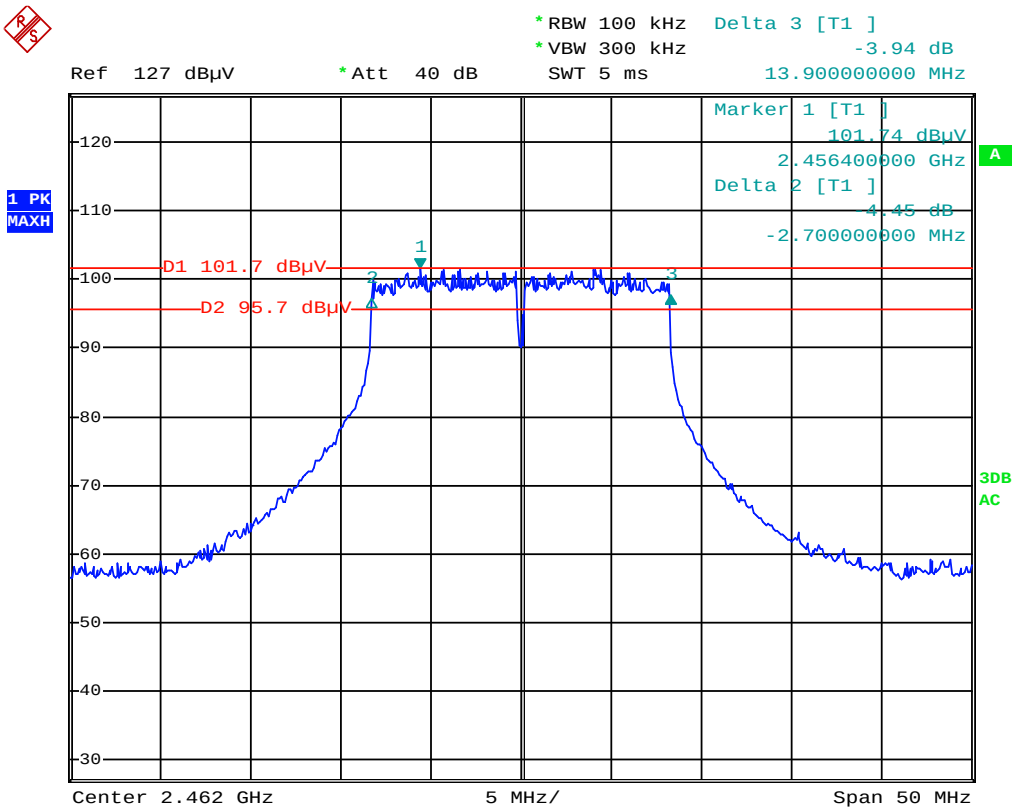
6dB BANDWIDTH (802.11g MODE CH Low)



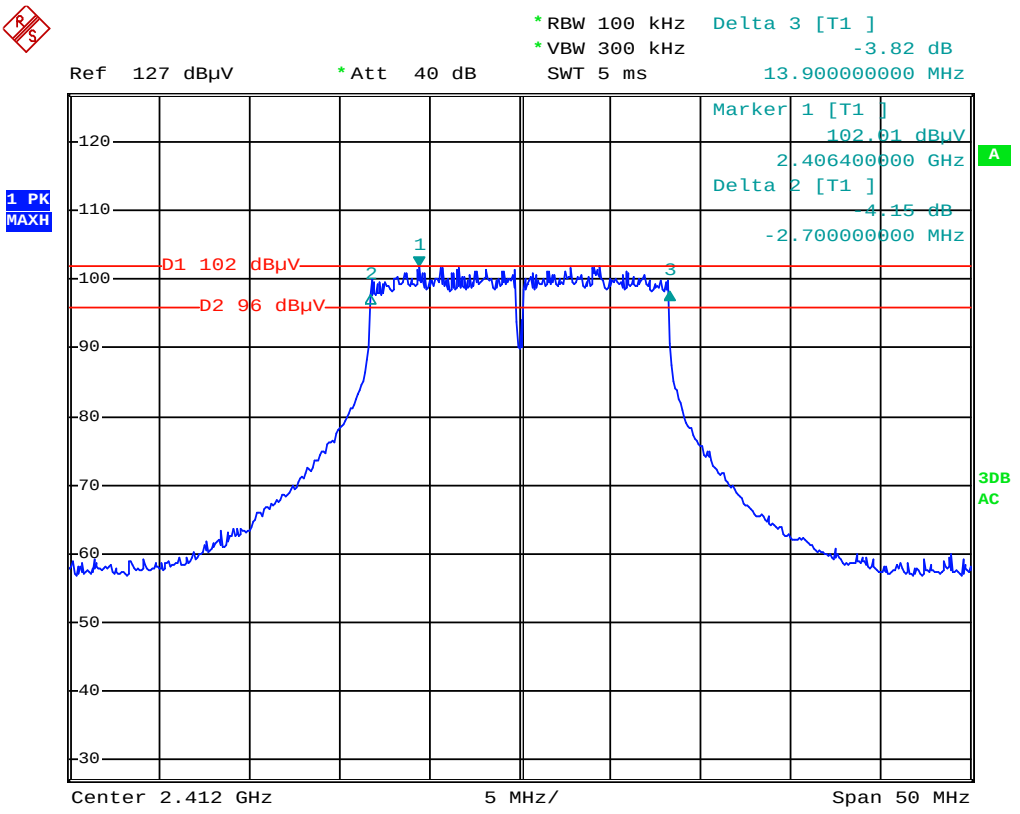
6dB BANDWIDTH (802.11g MODE CH Mid)



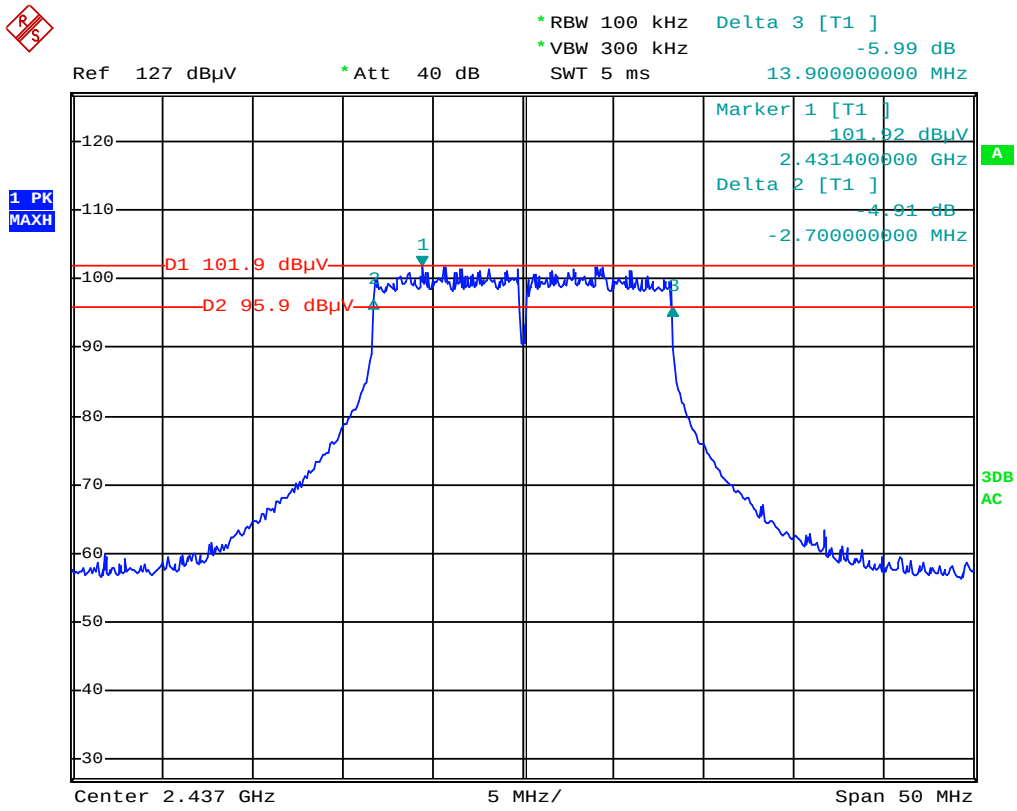
6dB BANDWIDTH (802.11g MODE CH High)



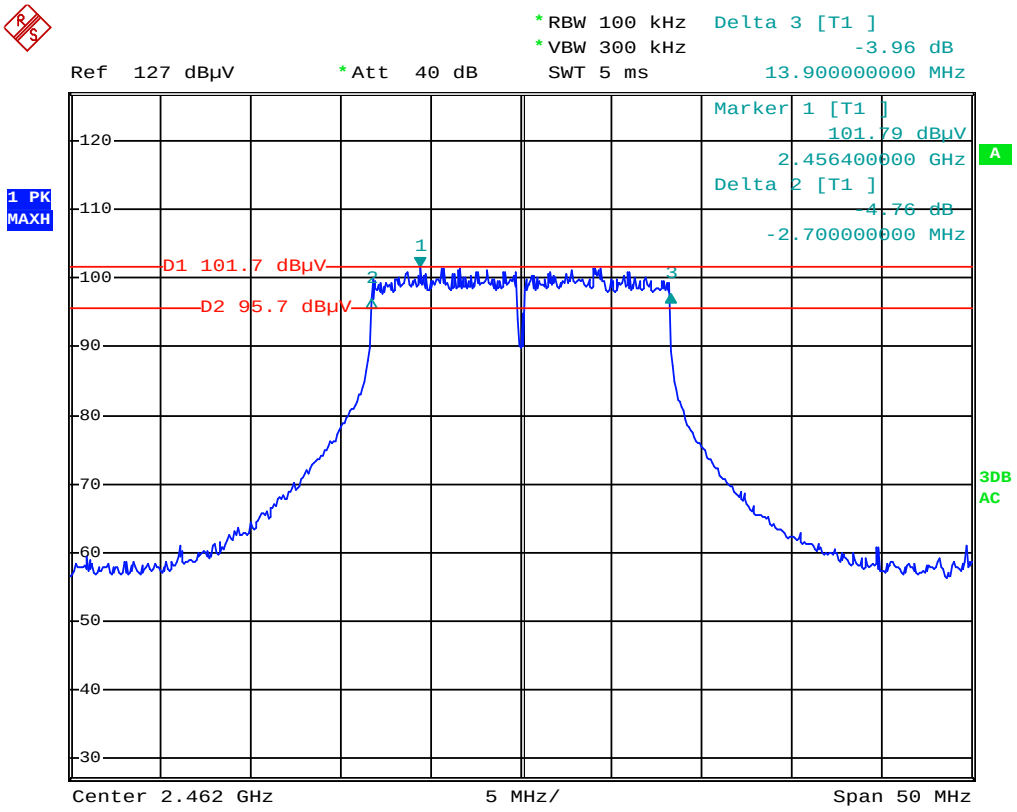
6dB BANDWIDTH (802.11nHT20 MODE CH Low)



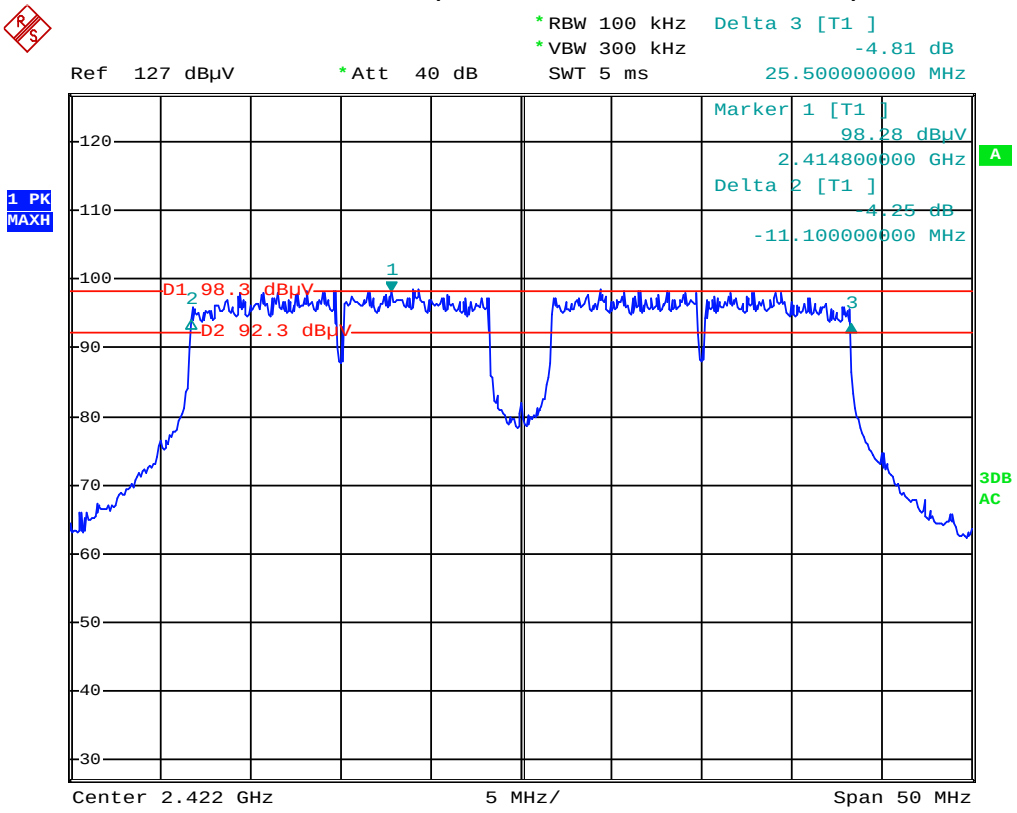
6dB BANDWIDTH (802.11 nHT20 MODE CH Mid)



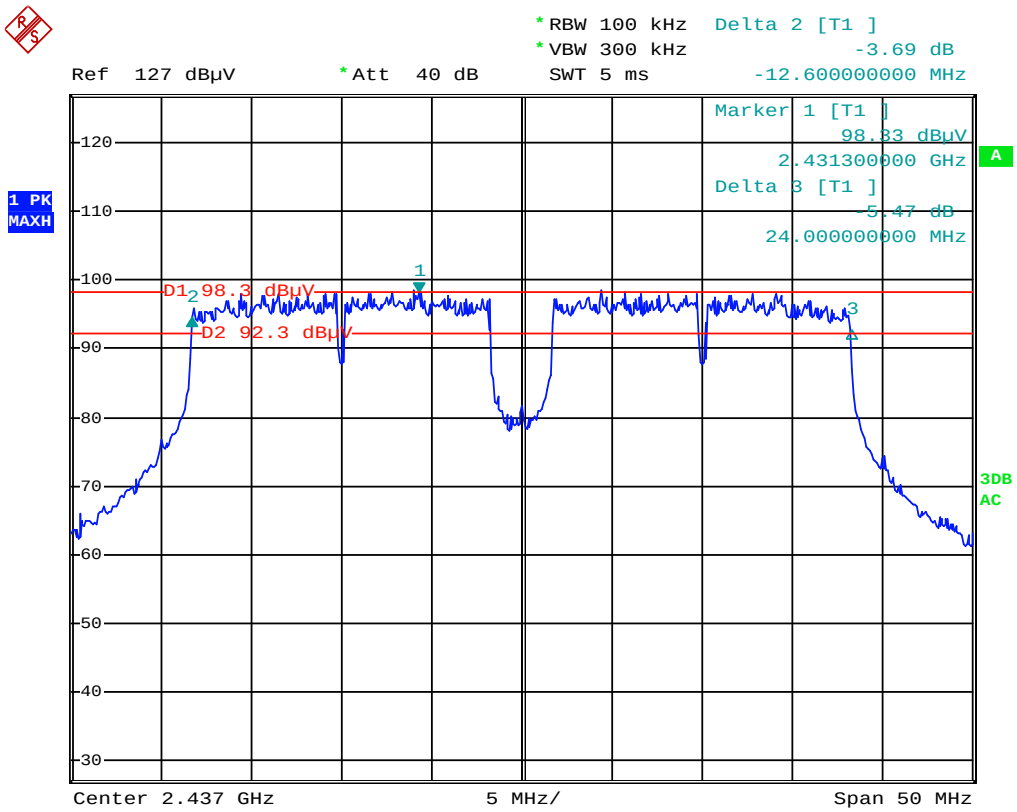
6dB BANDWIDTH (802.11 nHT20 MODE CH High)



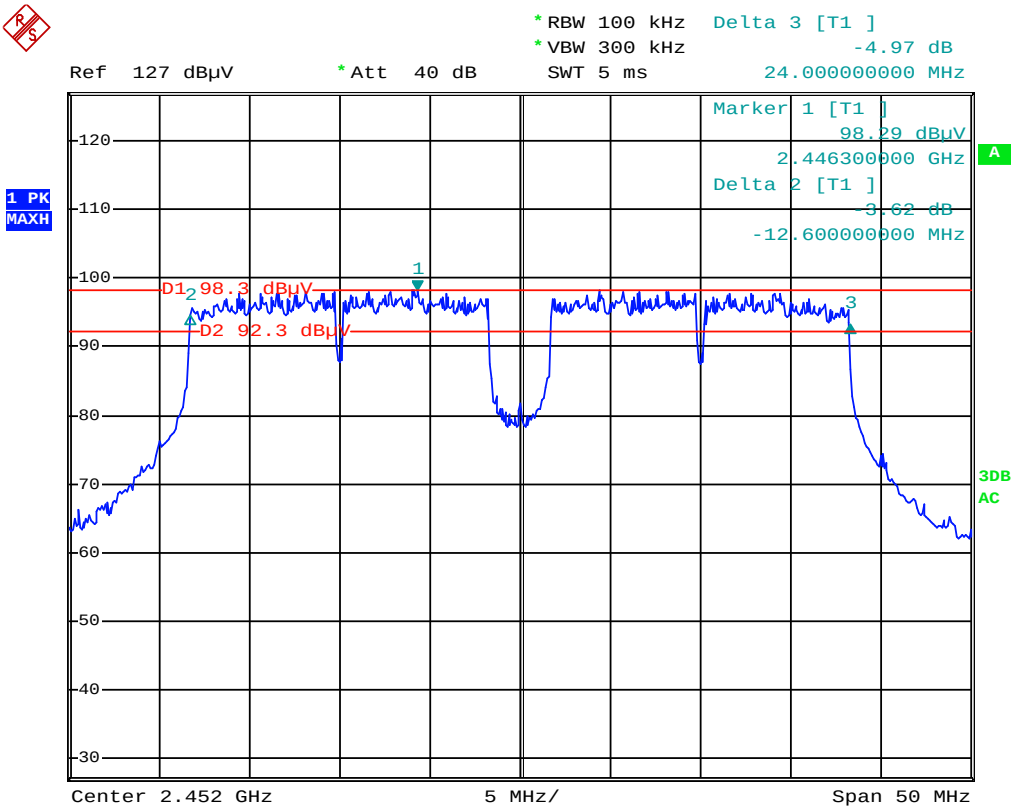
6dB BANDWIDTH (802.11 nHT40 MODE CH Low)



6dB BANDWIDTH (802.11 nHT40 MODE CH Mid)



6dB BANDWIDTH (802.11 nHT40 MODE CH High)



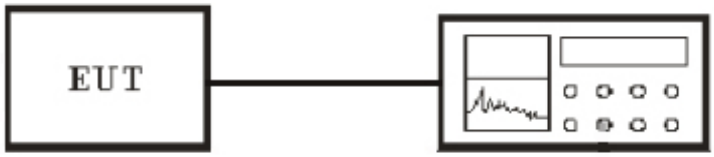
8. Test of Conducted Spurious Emission

8.1 Applicable Standard

Refer to FCC §15.247 (d)

Output power was measured based on the use of RMS averaging over a time interval, therefore the required attenuation is 30 dB.

8.2 EUT Setup



Spectrum Analyzer

8.3 Test Equipment List and Details

See section 2.5.

8.4 Test Procedure

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 100 kHz.

The spectrum from 30 MHz to 26.5 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

8.5 Test Result

Temperature (℃) : 22~23	EUT: Tablet PC
Humidity (%RH): 50~54	M/N: FTABMP
Barometric Pressure (mbar): 950~1000	Operation Condition: TX Mode

IEEE 802.11b mode

CH Low

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2412.1485	109.38	N/A	N/A	
1322.0141	54.28	89.38	-35.10	PASS
5035.2412	56.61	89.38	-32.77	PASS
6504.0382	60.15	89.38	-29.23	PASS

CH Mid

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2437.2314	109.14	N/A	N/A	
1485.2440	53.02	90.48	-37.54	PASS
4979.1940	58.72	90.48	-34.76	PASS
6831.9000	57.41	90.48	-33.02	PASS

CH High

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2462.6522	109.27	N/A	N/A	
1326.1060	52.63	89.44	-36.81	PASS
5615.7470	55.72	89.44	-33.72	PASS
6778.8546	57.09	89.44	-32.35	PASS

IEEE 802.11g mode

CH Low

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2412.2345	101.75	N/A	N/A	
1432.7982	52.19	81.75	-29.44	PASS
5987.0712	55.93	81.75	-25.82	PASS
6725.8081	58.07	81.75	-23.68	PASS

CH Mid

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2436.9987	101.95	N/A	N/A	
1674.4288	54.34	81.95	-27.61	PASS
5546.7935	56.02	81.95	-25.93	PASS
6766.8537	58.43	81.95	-23.52	PASS

CH High

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2462.0052	101.74	N/A	N/A	
1780.521	54.19	81.74	-27.55	PASS
6501.6232	58.47	81.74	-23.27	PASS
6979.038	58.35	81.74	-23.39	PASS

IEEE 802.11n HT20 mode

CH Low

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2411.8955	102.01	N/A	N/A	
1462.2444	55.02	82.01	-26.72	PASS
5440.7014	56.71	82.01	-25.30	PASS
6925.9919	59.12	82.01	-22.89	PASS

CH Mid

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2437.5666	101.92	N/A	N/A	
1674.4288	52.23	81.92	-29.73	PASS
5546.7935	53.88	81.92	-28.08	PASS
6713.8076	56.79	81.92	-25.17	PASS

CH High

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2462.3587	101.79	N/A	N/A	
1886.6132	52.54	81.79	-29.25	PASS
5546.7935	55.29	81.79	-26.50	PASS
6925.9919	57.92	81.79	-23.87	PASS

IEEE 802.11n HT40 mode

CH Low

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2422.4587	99.28	N/A	N/A	
1780.521	52.23	79.28	-27.05	PASS
6012.7248	55.24	79.28	-24.04	PASS
6861.4623	56.68	79.28	-22.60	PASS

CH Mid

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2437.6254	98.33	N/A	N/A	
1037.8757	-52.02	78.33	-26.31	PASS
4963.2865	-53.91	78.33	-24.42	PASS
6660.7615	-56.40	78.33	-21.93	PASS

CH High

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Pass/Fail
2452.7541	98.29	N/A	N/A	
1727.4749	51.51	78.29	-26.78	PASS
5599.8396	55.84	78.29	-22.45	PASS
6779.038	56.50	78.29	-21.79	PASS

9. Test of Radiated Spurious Emission

9.1 Radiated Spurious Emission

9.1.1 Limits

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[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	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 -335.4	3600 - 4400	([2])
13.36 - 13.41			

15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown is Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

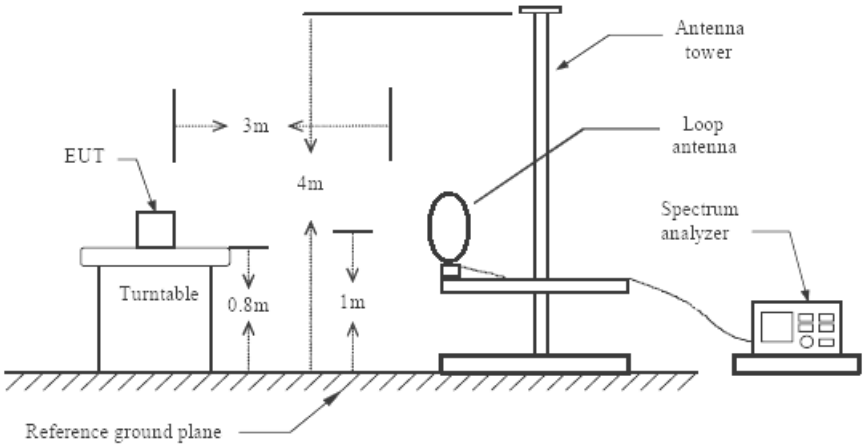
15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz, However, operation within these frequency bands is permitted under other sections of this Part, e-g, Sections 15.231 and 15.241.

15.209 (b) In the emission table above, the tighter limit applies at the band edges.

9.1.2 EUT Setup



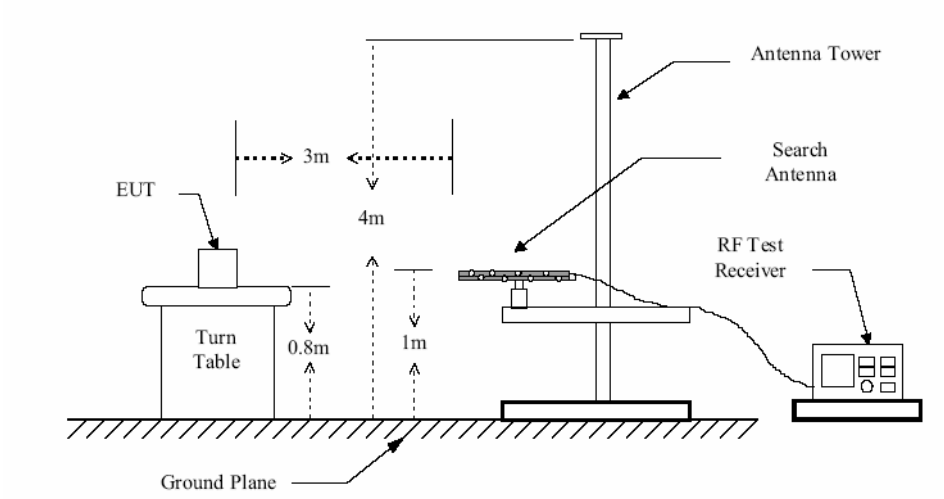


Figure 1 : Frequencies measured below 1 GHz configuration

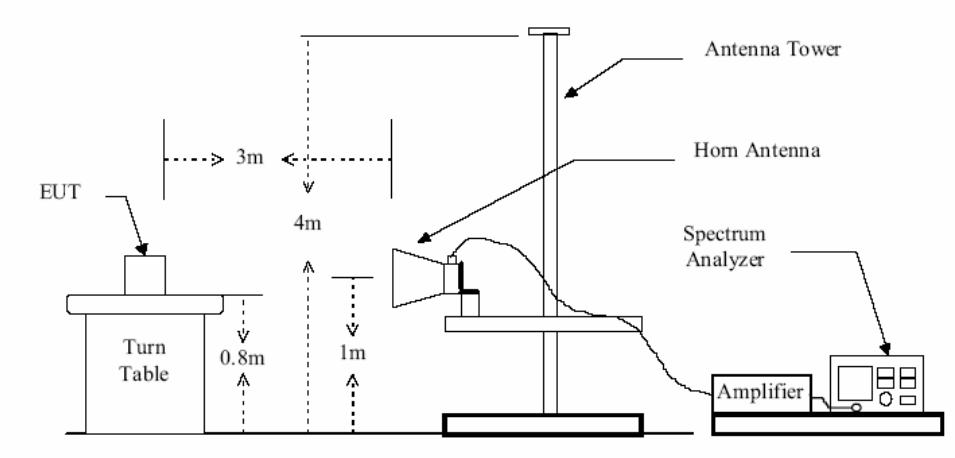


Figure 2 : Frequencies measured above 1 GHz configuration

9.1.3 Test Procedure

1. Configure the EUT according to ANSI C63.4-2003

2. The EUT was placed on the top of the turntable 0.8 meter above ground.

3. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.

4. Power on the EUT and all the supporting units.

5. The turntable was rotated by 360 degrees to determine the position of the highest radiation.

6. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.

7. For each suspected emission, the antenna tower was scanned (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.

8. According to the characteristic of the EUT crystals, the range of frequencies was investigated from 9KHz to 30MHz, 30MHz to 1GHz and 1GHz to 26GHz.

9. For emission below 1GHz, Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.

10. For emission above 1GHz, Set the RBW=1MHz,VBW=3MHz for Peak Detector while the RBW=1MHz, VBW=10Hz for Average Detector, Readings are both peak and average values.

11. The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos. The worst case data is recorded in the report. All emission not reported are much lower than the prescribed limits.

NOTE：
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.

2.The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.

3.The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

9.1.4 Test Result

Temperature (℃) : 22~23	EUT: Tablet PC
Humidity (%RH): 50~54	M/N: FTABMP
Barometric Pressure (mbar): 950~1000	Operation Condition: Normal operation & TX Mode

Note: In this testing, the EUT was respectively tested in three different orientations. That is:

EUT was lie vertically, and then its Antenna oriented upward
EUT was lie vertically, and then its Antenna oriented downward
EUT was lie flatwise, and then its Antenna oriented to the receiving antenna

The worst test data see following pages
When the EUT was lie flatwise, and its Antenna oriented to the receiving antenna, the worst test data was got as following table.

WORST-CASE RADIATED EMISSION BELOW 30 MHz

Frequency	Meter Reading	Antenna Factor	Cable Loss	Emission Levels	Limits	Margin	Detector Mode
(MHz)	(dBμV)	(dB/M)	(dB)	(dBμV/M)	(dB μ V/M)	(dB)	PK/QP
0.470	20.05	7.89	1.02	22.35	67.0	-35.74	QP
19.50	19.88	8.75	1.21	21.08	49.5	-18.46	QP
21.40	20.40	8.73	1.05	22.50	49.5	-16.72	QP
26.40	22.20	7.33	1.68	25.70	49.5	-14.79	QP

WORST-CASE RADIATED EMISSION BELOW 1 GHz
Normal operating Mode:
Horizontal

Frequency	Meter Reading	Antenna Factor	Cable Loss	Emission Levels	Limits	Margin	Detector Mode
(MHz)	(dBμV)	(dB/M)	(dB)	(dBμV/M)	(dB μ V/M)	(dB)	PK/QP
105.32	24.9	9.01	1.15	35.06	40.00	-4.940	QP
172.01	17.7	12.63	1.56	31.89	43.50	-11.61	QP
425.48	16.6	14.45	2.71	38.76	46.00	-7.24	QP
664.74	18	18.01	3.04	39.05	46.00	-6.95	QP
738.46	13.6	20.85	3.83	38.28	46.00	-7.72	QP
834.46	11.4	21.86	4.08	37.34	46.00	-8.66	QP
N/A	----	----	----	**----**	----	----	----

Vertical

Frequency	Meter Reading	Antenna Factor	Cable Loss	Emission Levels	Limits	Margin	Detector Mode
(MHz)	(dBμV)	(dB/M)	(dB)	(dBμV/M)	(dB μ V/M)	(dB)	PK/QP
163.52	23.7	7.85	1.05	32.60	40.00	-7.4	QP
203.02	17.3	12.61	1.58	31.49	43.50	-12.01	QP
239.24	27.8	12.22	2.00	42.02	46.00	-3.98	QP
251.52	26.3	14.45	2.71	43.46	46.00	-2.54	QP
515.36	20.5	18.01	3.04	41.55	46.00	-4.45	QP
760.74	14.3	21.82	4.12	40.24	46.00	-5.76	QP
N/A	----	----	----	----	----	----	----

REMARK: Emission level (dBμV/m) =Antenna Factor (dB/m) + Cable loss (dB) + Meter Reading (dBμV).

TRANSMITTER RADIATED EMISSION ABOVE 1 GHz

IEEE 802.11b TX (CH Low)

Horizontal

	TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m Horizontal polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4824.33	51.42	32.81	3.71	41.34	0.69	47.30	74.00	-26.7	P
*	4824.33	39.43	32.81	3.71	41.34	0.69	35.31	54.00	-18.69	A
	7236.65	50.03	38.83	4.93	41.42	1.44	53.80	74.00	-20.2	P
	7236.65	37.67	38.83	4.93	41.42	1.44	41.44	54.00	-12.56	A
	9646.12	48.93	38.75	5.74	38.43	0.61	55.60	74.00	-18.4	P
	9646.12	37.87	38.75	5.74	38.43	0.61	44.54	54.00	-9.46	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

Vertical

	TX / IEEE 802.11b mode / CH Low				Measurement Distance at 3m Vertical polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4823.90	53.8	32.81	3.70	41.34	0.69	49.67	74.00	-24.33	P
*	4823.90	42.18	32.81	3.70	41.34	0.69	38.05	54.00	-15.95	A
	7236.76	51.6	38.83	4.93	41.42	1.44	55.37	74.00	-18.63	P
	7236.76	40.03	38.83	4.93	41.42	1.44	43.80	54.00	-10.20	A
	9648.23	50.42	38.75	5.74	38.43	0.61	57.10	74.00	-16.90	P
	9648.23	39.86	38.75	5.74	38.43	0.61	46.54	54.00	-7.46	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11b TX (CH Middle)

Horizontal

					Measurement Distance at 3m Horizontal polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4876.68	51.46	32.93	3.73	41.41	0.71	47.42	74.00	-26.58	P
*	4876.68	42.14	32.93	3.73	41.41	0.71	38.1	54.00	-15.9	A
*	7309.56	50.42	38.93	4.96	41.32	1.59	54.58	74.00	-19.42	P
*	7309.56	39.6	38.93	4.96	41.32	1.59	43.76	54.00	-10.24	A
	9747.98	50.03	38.85	5.75	38.24	0.55	56.94	74.00	-17.06	P
	9747.98	38.83	38.85	5.75	38.24	0.55	45.74	54.00	-8.26	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

Vertical

	TX / IEEE 802.11b mode / CH Middle				Measurement Distance at 3m Vertical polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4877.07	53.82	32.93	3.73	41.42	0.71	49.78	74.00	-24.22	P
*	4877.07	44.02	32.93	3.73	41.42	0.71	39.98	54.00	-14.02	A
*	7309.40	51.69	38.93	4.96	41.32	1.59	55.85	74.00	-18.15	P
*	7309.40	41.11	38.93	4.96	41.32	1.59	45.27	54.00	-8.73	A
	9748.50	52.32	38.85	5.75	38.24	0.55	59.23	74.00	-14.77	P
	9748.50	40.75	38.85	5.75	38.24	0.55	47.66	54.00	-6.34	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11b TX (CH High)

Horizontal

	TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m Horizontal polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4924.00	52.64	33.03	3.76	41.49	0.73	48.68	74.00	-25.32	P
*	4924.00	42.29	33.03	3.76	41.49	0.73	38.33	54.00	-15.67	A
*	7385.84	51.42	39.04	4.99	41.21	1.76	56	74.00	-18	P
*	7385.84	39.69	39.04	4.99	41.21	1.76	44.27	54.00	-9.73	A
	9848.30	50.42	38.95	5.76	38.06	0.49	57.57	74.00	-16.43	P
	9848.30	39.14	38.95	5.76	38.06	0.49	46.28	54.00	-7.72	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

Vertical

	TX / IEEE 802.11b mode / CH High				Measurement Distance at 3m Vertical polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4924.18	54.02	33.03	3.76	41.49	0.73	50.06	74.00	-23.94	P
*	4924.18	43.63	33.03	3.76	41.49	0.73	39.67	54.00	-14.33	A
*	7386.23	52.59	39.04	4.99	41.21	1.76	57.17	74.00	-16.83	P
*	7386.23	40.75	39.04	4.99	41.21	1.76	45.33	54.00	-8.67	A
	9847.50	52.29	38.95	5.76	38.06	0.49	59.43	74.00	-14.57	P
	9847.50	41.53	38.95	5.76	38.06	0.49	48.67	54.00	-5.33	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11g TX (CH Low)

Horizontal

	TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m Horizontal polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4824.54	51.88	32.81	3.71	41.34	0.69	47.76	74.00	-26.24	P
*	4824.54	41.87	32.81	3.71	41.34	0.69	37.75	54.00	-16.25	A
	7236.31	51	38.83	4.93	41.42	1.44	54.77	74.00	-19.23	P
	7236.31	40.11	38.83	4.93	41.42	1.44	43.88	54.00	-10.12	A
	9642.46	49.98	38.74	5.74	38.44	0.61	56.64	74.00	-17.36	P
	9642.46	38.71	38.74	5.74	38.44	0.61	45.37	54.00	-8.63	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

Vertical

	TX / IEEE 802.11g mode / CH Low				Measurement Distance at 3m Vertical polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4824.31	54.00	32.81	3.70	41.34	0.69	49.87	74.00	-24.13	P
*	4824.31	43.73	32.81	3.70	41.34	0.69	39.60	54.00	-14.40	A
	7236.70	51.38	38.83	4.93	41.42	1.44	55.15	74.00	-18.85	P
	7236.70	41.28	38.83	4.93	41.42	1.44	45.05	54.00	-8.95	A
	9641.88	51.97	38.74	5.74	38.44	0.62	58.63	74.00	-15.37	P
	9641.88	41.01	38.74	5.74	38.44	0.62	47.67	54.00	-6.33	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11g TX (CH Middle)

Horizontal

	TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m Horizontal polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4871.16	50.00	32.92	3.73	41.41	0.71	45.95	74.00	-28.05	P
*	4871.16	41.11	32.92	3.73	41.41	0.71	37.06	54.00	-16.94	A
*	7318.25	49.61	38.95	4.96	41.31	1.61	53.82	74.00	-20.18	P
*	7318.25	39.98	38.95	4.96	41.31	1.61	44.19	54.00	-9.81	A
	9748.35	50.00	38.85	5.75	38.24	0.55	56.91	74.00	-17.09	P
	9748.35	39.34	38.85	5.75	38.24	0.55	46.25	54.00	-7.75	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

Vertical

	TX / IEEE 802.11g mode / CH Middle				Measurement Distance at 3m Vertical polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4824.00	53.38	32.92	3.73	41.41	0.71	49.33	74.00	-24.67	P
*	4824.00	43.93	32.92	3.73	41.41	0.71	39.88	54.00	-14.12	A
*	7236.39	51.00	38.94	4.96	41.31	1.61	55.21	74.00	-18.79	P
*	7236.39	42.09	38.94	4.96	41.31	1.61	46.30	54.00	-7.7	A
	9641.57	52.10	38.85	5.75	38.25	0.55	59.01	74.00	-14.99	P
	9641.57	41.28	38.85	5.75	38.25	0.55	48.19	54.00	-5.81	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11g TX (CH High)

Horizontal

	TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m Horizontal polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4924.66	51.00	33.03	3.76	41.49	0.73	47.04	74.00	-26.96	P
*	4924.66	40.02	33.03	3.76	41.49	0.73	36.06	54.00	-17.94	A
*	7385.17	49.63	39.04	4.99	41.21	1.75	54.20	74.00	-19.80	P
*	7385.17	38.41	39.04	4.99	41.21	1.75	42.98	54.00	-11.02	A
	9847.87	49.90	38.95	5.76	38.06	0.49	57.04	74.00	-16.96	P
	9847.87	39.61	38.95	5.76	38.06	0.49	46.75	54.00	-7.25	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

Vertical

	TX / IEEE 802.11g mode / CH High				Measurement Distance at 3m Vertical polarity					
	Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
*	4924.16	52.98	33.03	3.76	41.49	0.73	49.02	74.00	-24.98	P
*	4924.16	42.37	33.03	3.76	41.49	0.73	38.41	54.00	-15.59	A
*	7386.25	51.09	39.04	4.99	41.21	1.76	55.67	74.00	-18.33	P
*	7386.25	40.01	39.04	4.99	41.21	1.76	44.59	54.00	-9.41	A
	9847.90	52.40	38.95	5.76	38.06	0.49	59.54	74.00	-14.46	P
	9847.90	41.00	38.95	5.76	38.06	0.49	48.14	54.00	-5.86	A
	N/A	----	----	----	----	----	----	----	----	P
	N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11n HT20 TX (CH Low)

Horizontal

TX / IEEE 802.11n HT20 mode / CH Low				Measurement Distance at 3m Horizontal polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4824.77	50.46	32.81	3.71	41.34	0.69	46.54	74.00	-27.46	P
4824.77	39.17	32.81	3.71	41.34	0.69	35.25	54.00	-18.75	A
7236.28	51.44	38.83	4.93	41.43	1.43	55.28	74.00	-18.72	P
7236.28	39.19	38.83	4.93	41.43	1.43	42.96	54.00	-11.04	A
9648.77	50.44	38.75	5.74	38.43	0.61	57.34	74.00	-16.66	P
9648.77	38.86	38.75	5.74	38.43	0.61	45.59	54.00	-8.41	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

Vertical

TX / IEEE 802.11n HT20 mode / CH Low				Measurement Distance at 3m Vertical polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4824.01	52.86	32.81	3.70	41.34	0.69	48.71	74.00	-25.29	P
4824.01	41.47	32.81	3.70	41.34	0.69	37.35	54.00	-16.65	A
7236.66	53.48	38.83	4.93	41.42	1.44	57.2	74.00	-16.8	P
7236.66	41.47	38.83	4.93	41.42	1.44	45.24	54.00	-8.76	A
9647.57	52.36	38.75	5.74	38.43	0.61	59.33	74.00	-14.67	P
9647.57	40.58	38.75	5.74	38.43	0.61	47.26	54.00	-6.74	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11n HT20 TX (CH Middle)

Horizontal

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m Horizontal polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4873.11	50.46	32.92	3.73	41.41	0.71	46.31	74.00	-27.69	P
4873.11	40.58	32.92	3.73	41.41	0.71	36.63	54.00	-17.37	A
7311.96	50.09	38.94	4.96	41.32	1.60	54.37	74.00	-19.63	P
7311.96	38.87	38.94	4.96	41.32	1.60	43.05	54.00	-10.95	A
9748.69	50.46	38.85	5.75	38.24	0.55	57.37	74.00	-16.63	P
9748.69	40.07	38.85	5.75	38.24	0.55	47.08	54.00	-6.92	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

Vertical

TX / IEEE 802.11n HT20 mode / CH Middle				Measurement Distance at 3m Vertical polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4872.69	52.36	32.92	3.73	41.41	0.71	48.56	74.00	-25.44	P
4872.69	42.55	32.92	3.73	41.41	0.71	38.5	54.00	-15.5	A
7311.54	52.06	38.94	4.96	41.32	1.60	56.34	74.00	-17.66	P
7311.54	40.47	38.94	4.96	41.32	1.60	44.65	54.00	-9.35	A
9748.27	51.9	38.85	5.75	38.24	0.55	58.83	74.00	-15.17	P
9748.27	41.47	38.85	5.75	38.24	0.55	48.38	54.00	-5.62	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11n HT20 TX (CH High)

Horizontal

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m Horizontal polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4924.27	51.36	33.03	3.76	41.49	0.73	47.20	74.00	-26.8	P
4924.27	40.57	33.03	3.76	41.49	0.73	36.71	54.00	-17.29	A
7386.96	50.5	39.04	4.99	41.21	1.76	55.08	74.00	-18.92	P
7386.96	39.7	39.04	4.99	41.21	1.76	44.38	54.00	-9.62	A
9849.75	50.09	38.95	5.76	38.06	0.49	57.34	74.00	-16.66	P
9849.75	39.87	38.95	5.76	38.06	0.49	47.03	54.00	-6.97	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

Vertical

TX / IEEE 802.11n HT20 mode / CH High				Measurement Distance at 3m Vertical polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4923.58	53.48	33.03	3.76	41.48	0.73	49.67	74.00	-24.33	P
4923.58	42.39	33.03	3.76	41.48	0.73	38.55	54.00	-15.45	A
7385.88	53.08	39.04	4.99	41.21	1.75	57.75	74.00	-16.25	P
7385.88	41.55	39.04	4.99	41.21	1.75	46.12	54.00	-7.88	A
9849.59	52.56	38.95	5.76	38.06	0.49	59.69	74.00	-14.31	P
9849.59	42.87	38.95	5.76	38.06	0.49	50.04	54.00	-3.96	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11n HT40 TX (CH Low)

Horizontal

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m Horizontal polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4843.34	50.46	32.85	3.72	41.36	0.70	46.57	74.00	-27.43	P
4843.34	40.08	32.85	3.72	41.36	0.70	35.99	54.00	-18.01	A
7265.04	50.09	38.87	4.94	41.38	1.50	53.97	74.00	-20.03	P
7265.04	38.78	38.87	4.94	41.38	1.50	42.71	54.00	-11.29	A
9687.53	50.46	38.79	5.75	38.36	0.59	57.23	74.00	-16.77	P
9687.53	39.19	38.79	5.75	38.36	0.59	45.98	54.00	-8.02	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

Vertical

TX / IEEE 802.11n HT40 mode / CH Low				Measurement Distance at 3m Vertical polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4844.83	52.86	32.86	3.72	41.37	0.70	48.8	74.00	-25.2	P
4844.83	41.57	32.86	3.72	41.37	0.70	37.39	54.00	-16.61	A
7265.32	51.46	38.87	4.94	41.38	1.50	55.55	74.00	-18.45	P
7265.32	40.55	38.87	4.94	41.38	1.50	44.46	54.00	-9.54	A
9686.53	53.48	38.79	5.75	38.36	0.59	60.3	74.00	-13.7	P
9686.53	41.79	38.79	5.75	38.36	0.59	48.56	54.00	-5.44	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit.

IEEE 802.11n HT40 TX (CH Middle)

Horizontal

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m Horizontal polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4873.44	51.46	32.92	3.73	41.41	0.71	47.51	74.00	-26.49	P
4873.44	38.81	32.92	3.73	41.41	0.71	34.80	54.00	-19.20	A
7312.37	50.46	38.94	4.96	41.32	1.60	54.68	74.00	-19.32	P
7312.37	40.38	38.94	4.96	41.32	1.60	44.57	54.00	-9.43	A
9748.03	50.09	38.85	5.75	38.24	0.55	57.01	74.00	-16.99	P
9748.03	39.19	38.85	5.75	38.24	0.55	46.00	54.00	-8.00	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

Vertical

TX / IEEE 802.11n HT40 mode / CH Middle				Measurement Distance at 3m Vertical polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4874.77	53.48	32.92	3.73	41.41	0.71	49.64	74.00	-24.36	P
4874.77	41.36	32.92	3.73	41.41	0.71	37.32	54.00	-16.68	A
7312.42	53.09	38.94	4.96	41.32	1.60	57.26	74.00	-16.74	P
7312.42	42.55	38.94	4.96	41.32	1.60	46.73	54.00	-7.27	A
9747.34	51.46	38.85	5.75	38.25	0.55	59.07	74.00	-14.93	P
9747.34	40.38	38.85	5.75	38.25	0.55	47.49	54.00	-6.41	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit

IEEE 802.11n HT40 TX (CH High)

Horizontal

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m Horizontal polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4903.44	50.36	32.99	3.75	41.45	0.72	46.56	74.00	-27.44	P
4903.44	40.09	32.99	3.75	41.45	0.72	35.99	54.00	-18.01	A
7355.07	51.46	39.00	4.98	41.26	1.69	55.87	74.00	-18.13	P
7355.07	38.81	39.00	4.98	41.26	1.69	43.22	54.00	-10.78	A
9808.53	50.46	38.91	5.76	38.13	0.51	57.61	74.00	-16.39	P
9808.53	40.09	38.91	5.76	38.13	0.51	47.04	54.00	-6.96	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

Vertical

TX / IEEE 802.11n HT40 mode / CH High				Measurement Distance at 3m Vertical polarity					
Freq.	Reading	AF	Cable Loss	Pre-amp	Filter	Level	Limit	Margin	Mark
(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(P/Q/A)
4904.33	52.69	32.99	3.75	41.46	0.72	48.69	74.00	-25.31	P
4904.33	41.46	32.99	3.75	41.46	0.72	37.56	54.00	-16.44	A
7353.83	53.47	39.00	4.98	41.26	1.69	57.80	74.00	-16.20	P
7353.83	40.37	39.00	4.98	41.26	1.69	44.77	54.00	-9.23	A
9808.33	52.36	38.91	5.76	38.13	0.52	59.41	74.00	-14.59	P
9808.33	41.47	38.91	5.76	38.13	0.52	48.62	54.00	-5.38	A
N/A	----	----	----	----	----	----	----	----	P
N/A	----	----	----	----	----	----	----	----	A

REMARK:
1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)

2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz

3.The result basic equation calculation is as follow: Level = Reading + AF + Cable – Preamp + Filter – Dist, Margin = Level-Limit

4.The other emission levels were 20dB below the limit

5. The test limit distance is 3M limit

9.2 RESTRICTED BAND EDGES

TEST RESULT

IEEE 802.11b mode

Channel	Freq.(MHz)	Level(dBuV)	Limit(dBuV)	Margin(dB)	Detector
	2390	49.95	74	-24.05	Peak
LOW	2390	43.42	54	-20.58	Average
	2483.5	50.34	74	-23.66	Peak
HIGH	2483.5	45.09	54	-9.91	Average

IEEE 802.11g mode

Channel	Freq.(MHz)	Level(dBuV)	Limit(dBuV)	Margin(dB)	Detector
	2390	47.79	74	-26.21	Peak
LOW	2390	42.06	54	-11.94	Average
	2483.5	48.99	74	-25.01	Peak
HIGH	2483.5	45.17	54	-8.83	Average

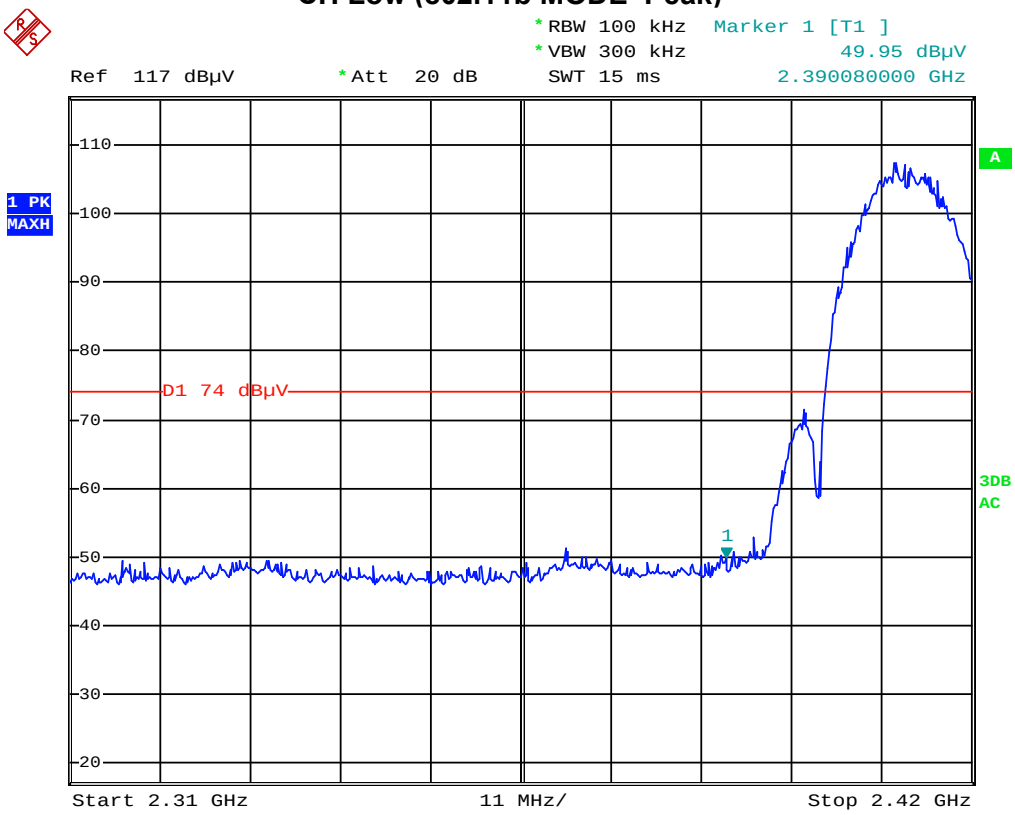
IEEE 802.11n HT20 mode

Channel	Freq.(MHz)	Level(dBuV)	Limit(dBuV)	Margin(dB)	Detector
	2390	48.02	74	-25.92	Peak
LOW	2390	42.98	54	-11.02	Average
	2483.5	44.80	74	-29.20	Peak
HIGH	2483.5	44.50	54	-9.50	Average

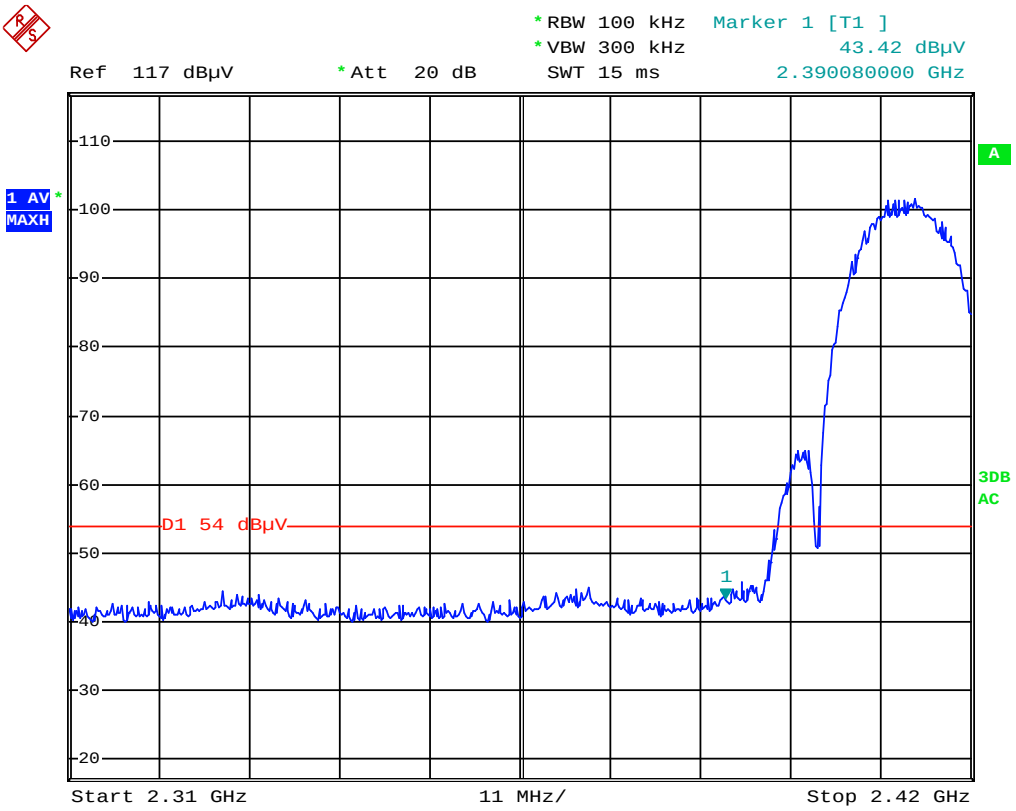
IEEE 802.11n HT40 mode

Channel	Freq.(MHz)	Level(dBuV)	Limit(dBuV)	Margin(dB)	Detector
	2390	52.90	74	-21.10	Peak
LOW	2390	45.65	54	-9335	Average
	2483.5	52.46	74	-21.54	Peak
HIGH	2483.5	47.86	54	-6.14	Average

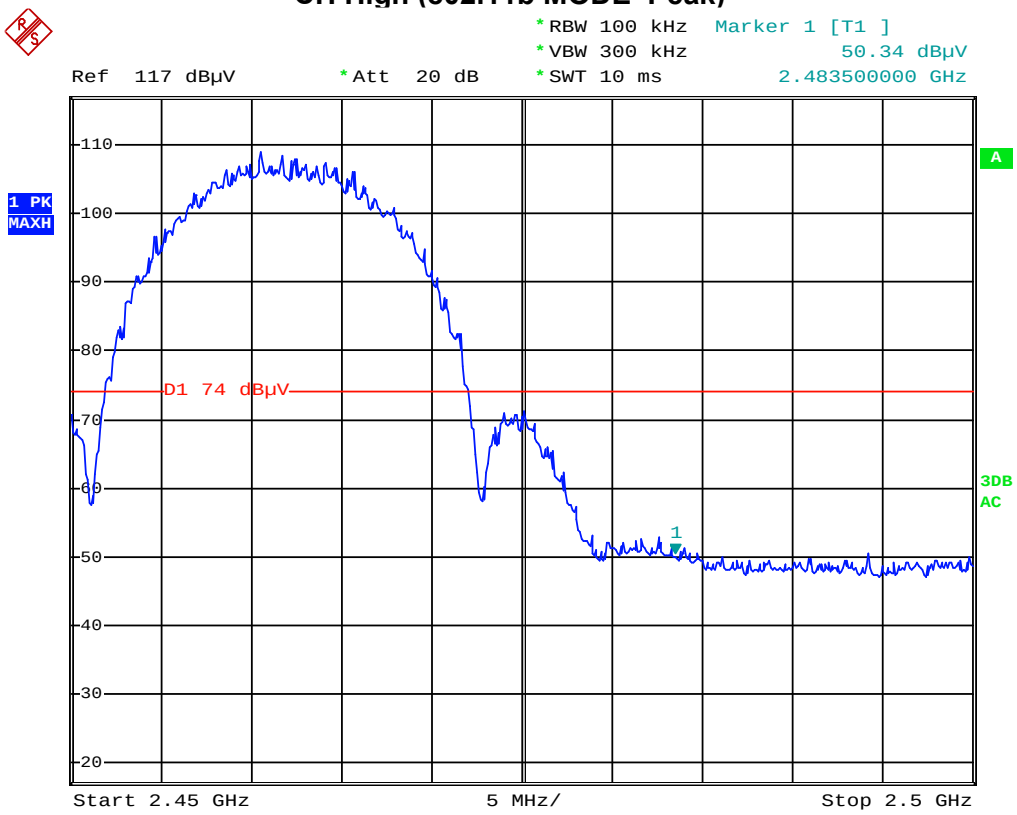
CH Low (802.11b MODE–Peak)



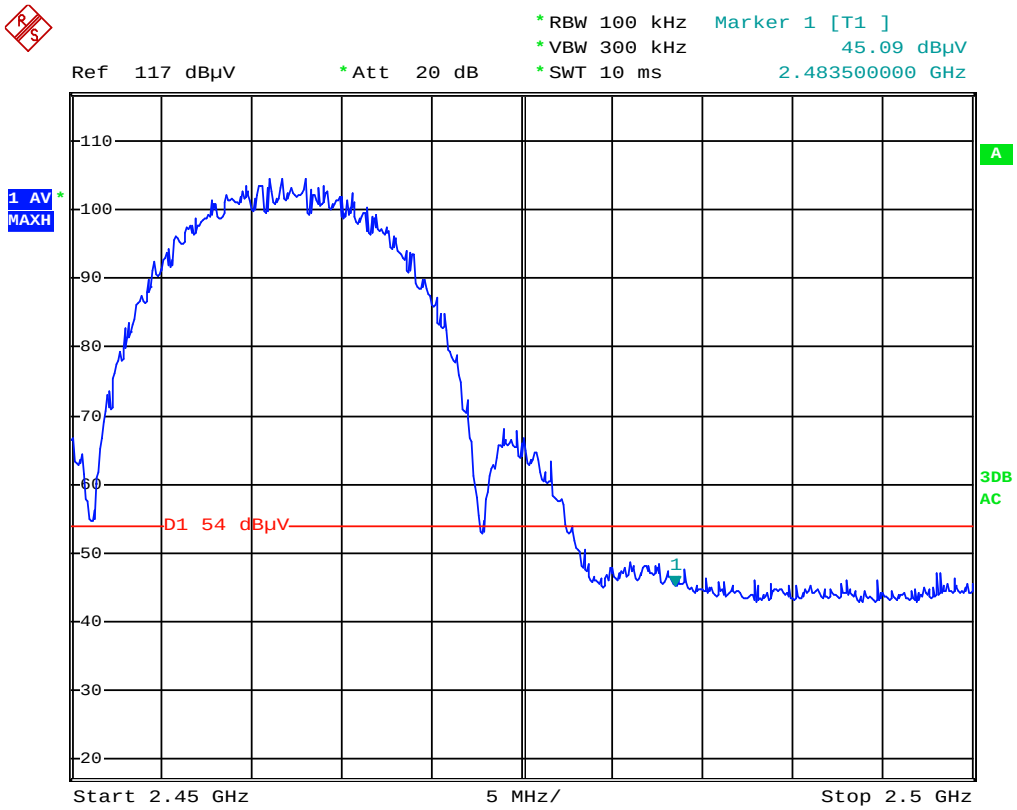
CH Low (802.11b MODE–Average)



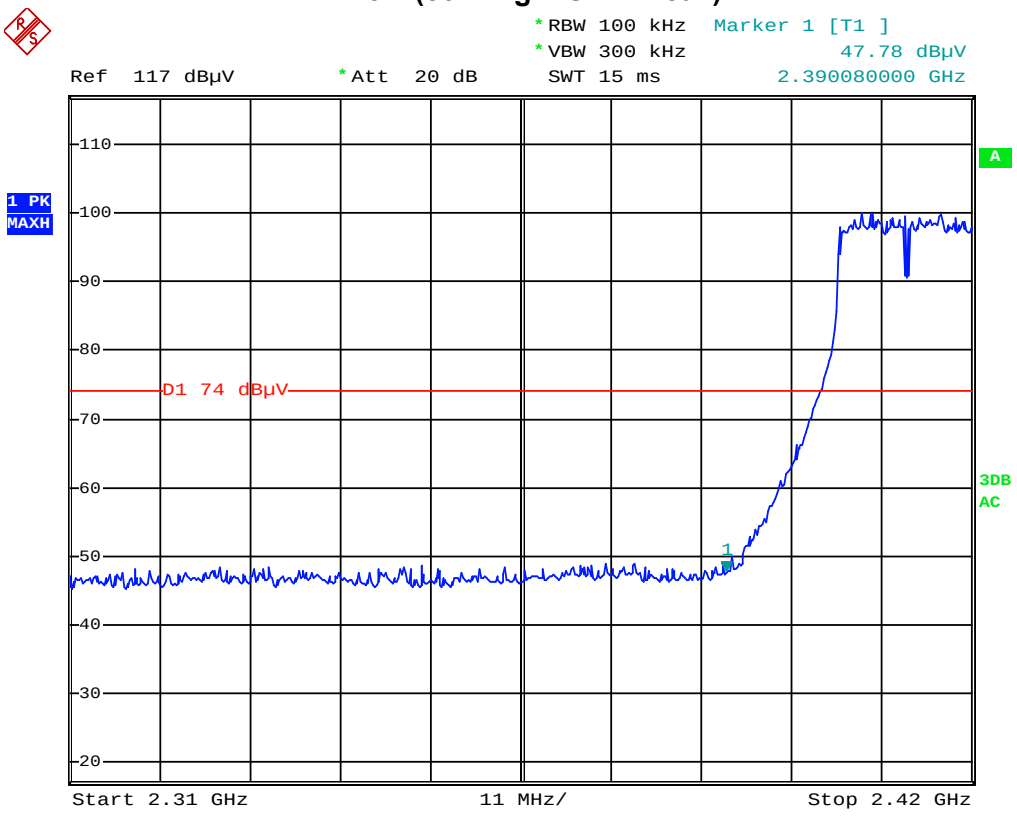
CH High (802.11b MODE–Peak)



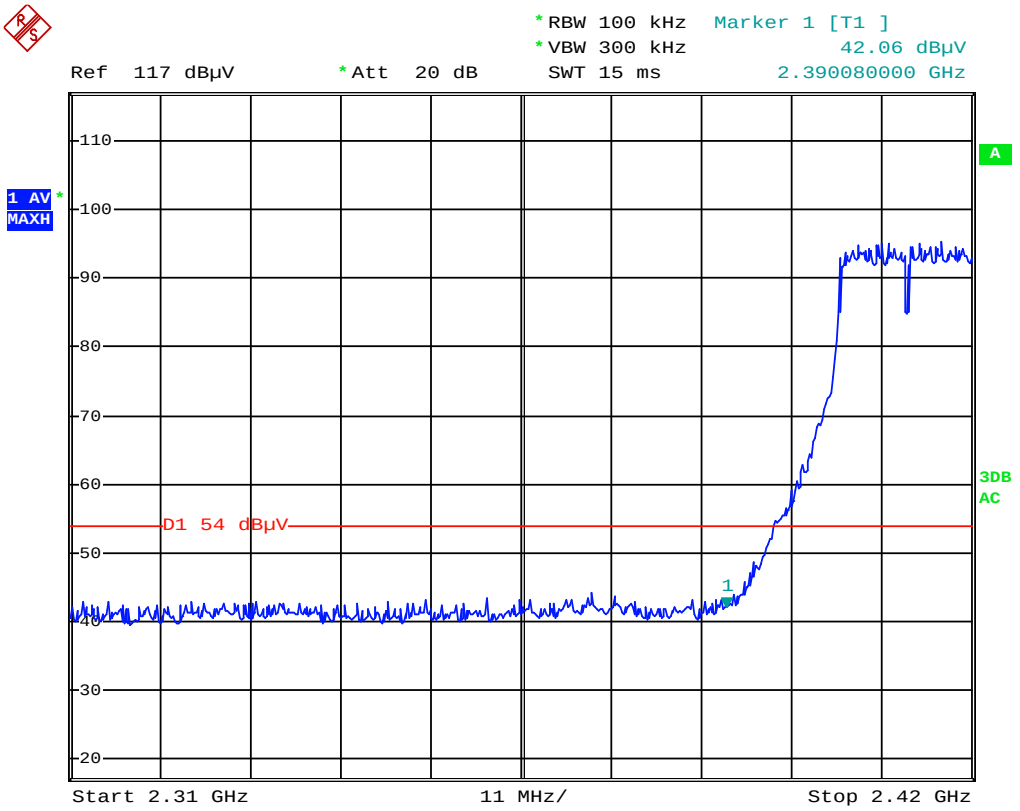
CH High (802.11b MODE–Average)



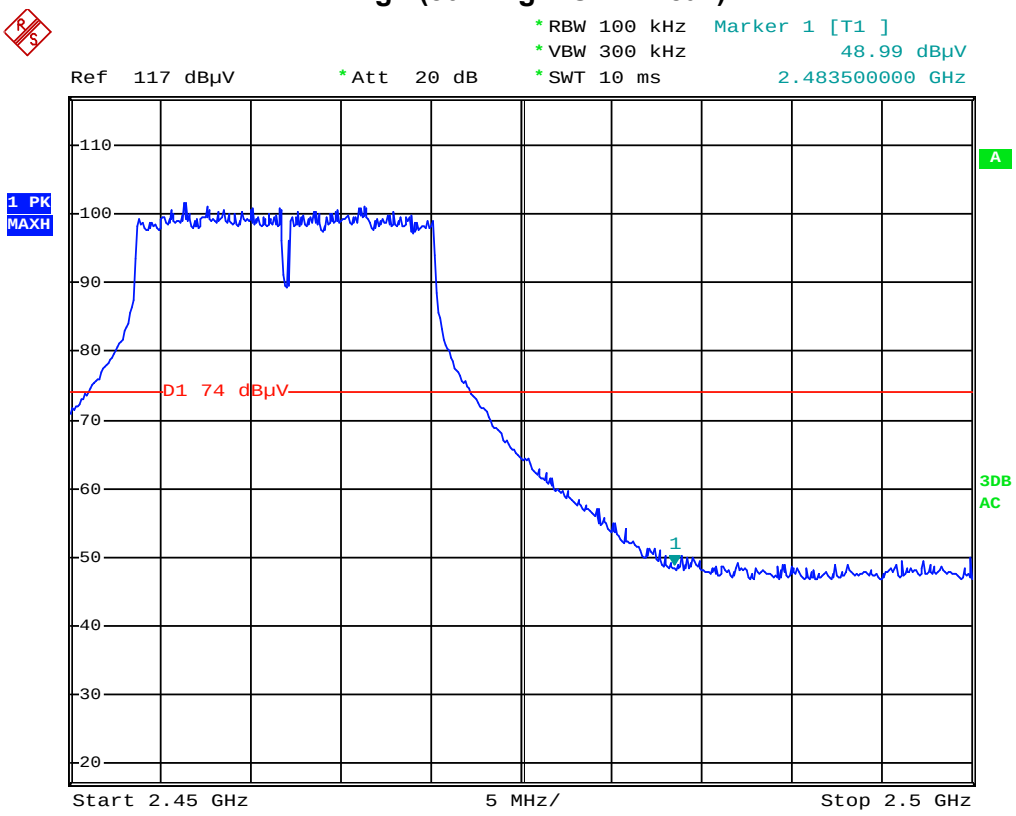
CH Low (802.11g MODE–Peak)



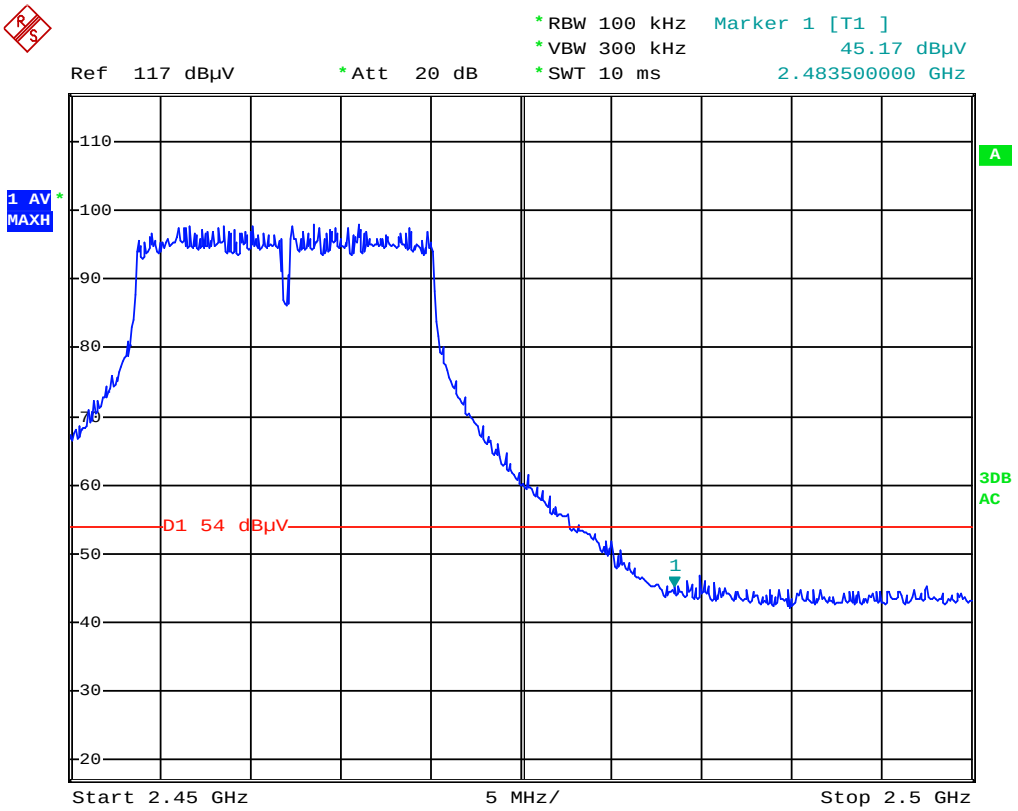
CH Low (802.11g MODE–Average)



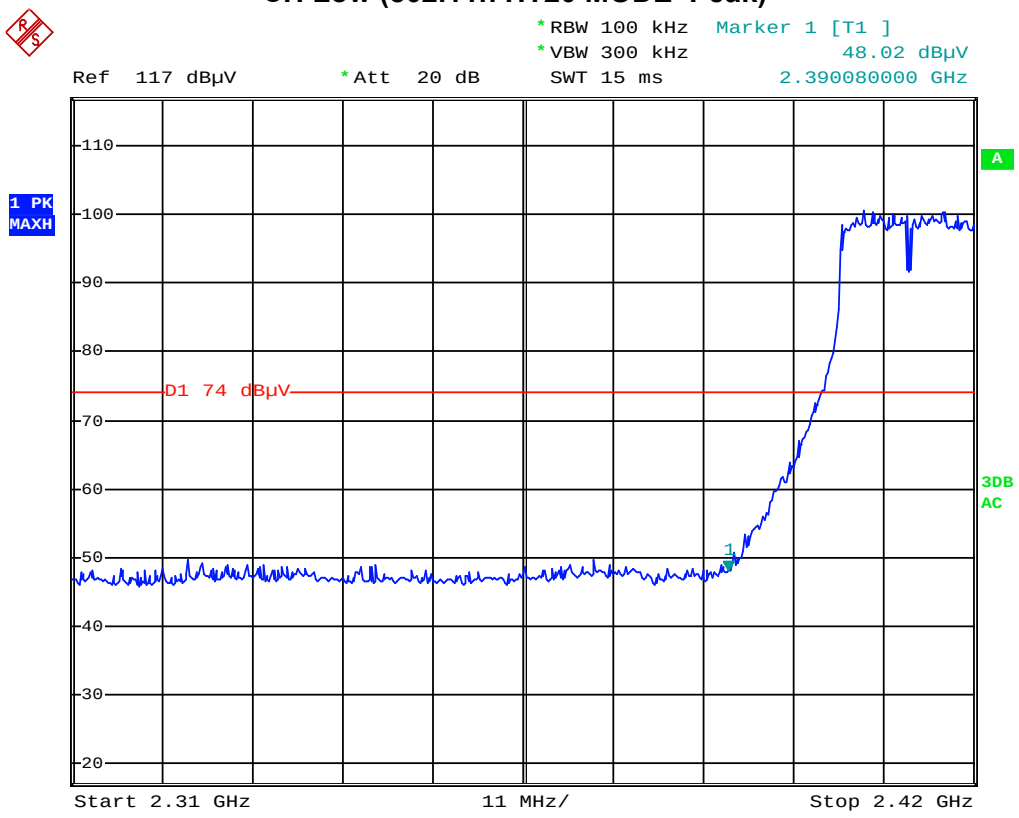
CH High (802.11g MODE–Peak)



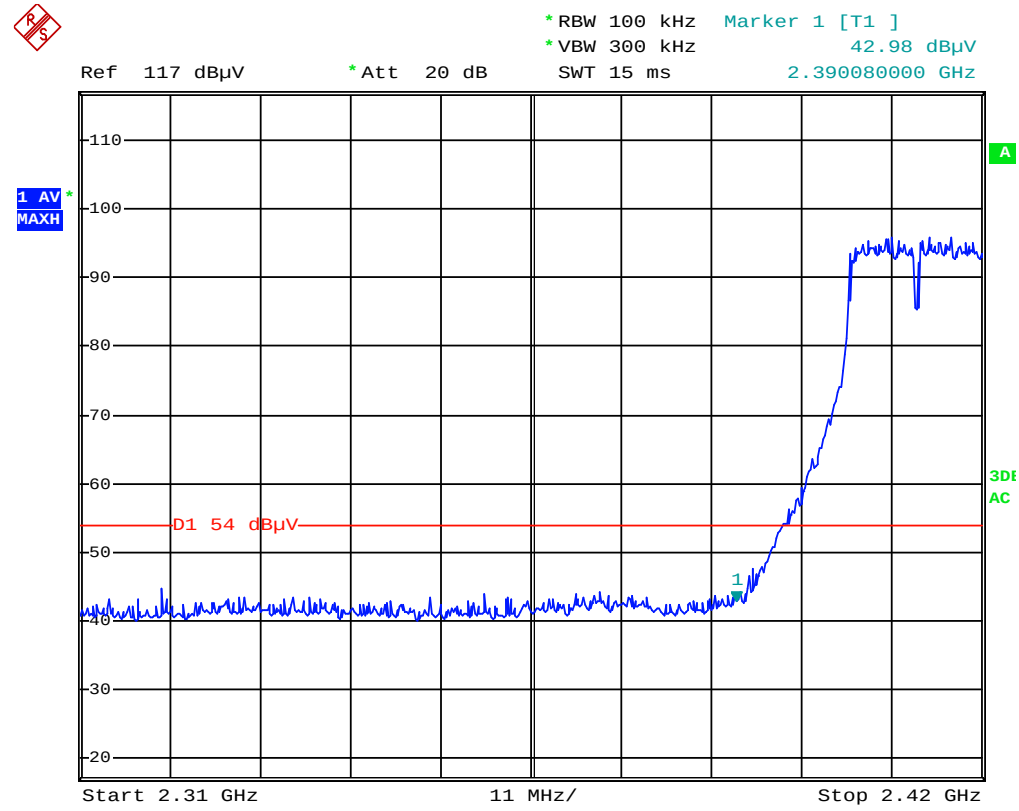
CH High (802.11g MODE–Average)



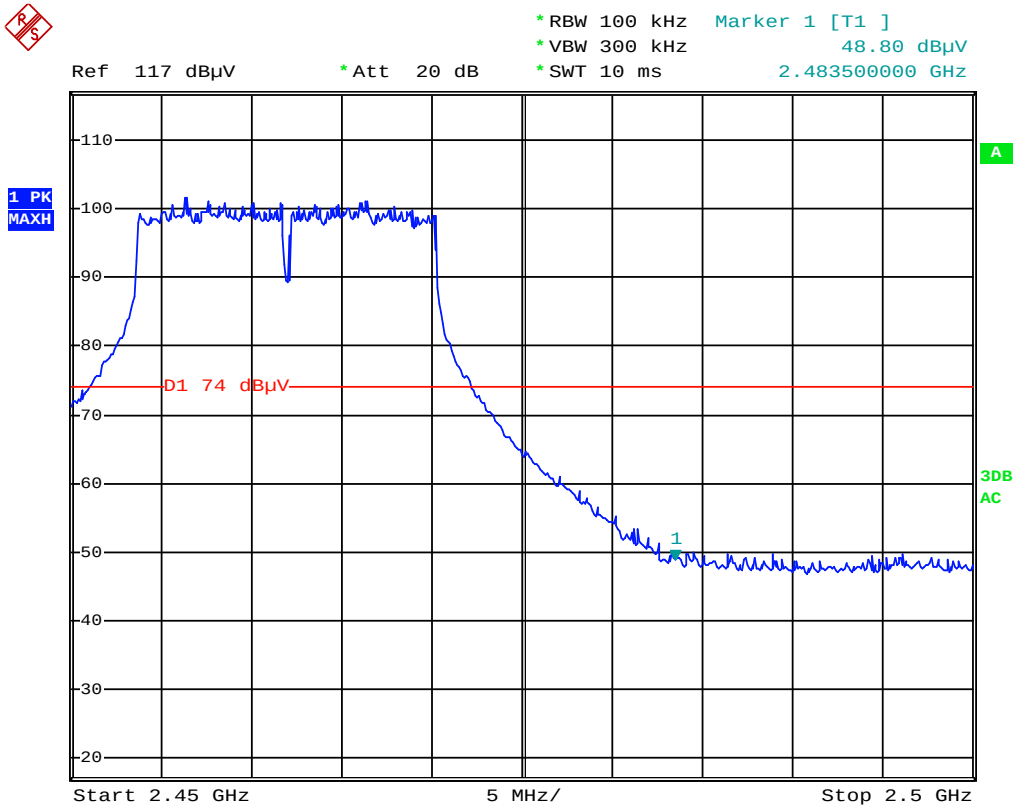
CH Low (802.11n HT20 MODE–Peak)



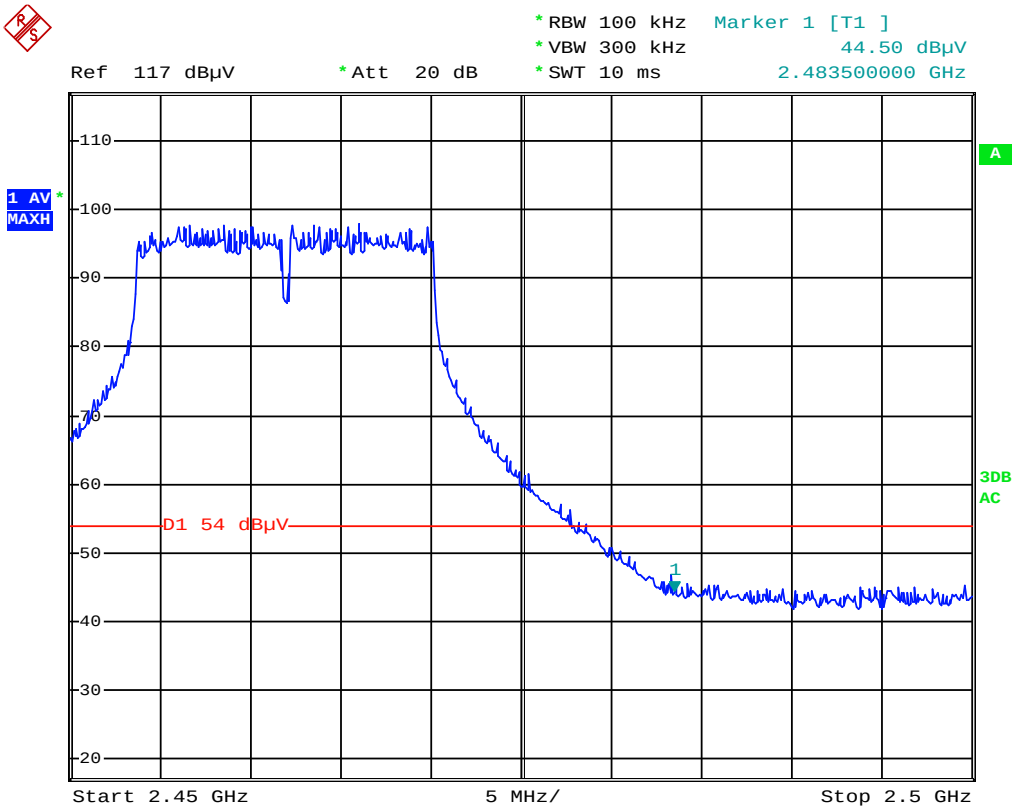
CH Low (802.11n HT20 MODE–Average)



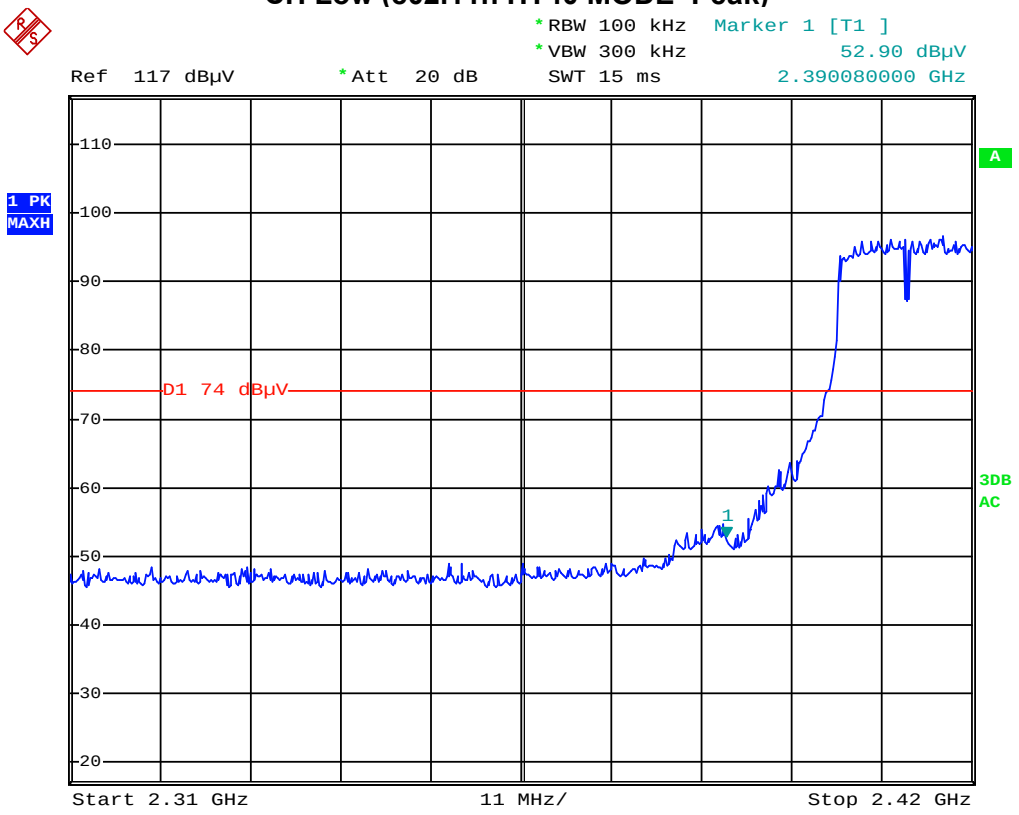
CH High (802.11n HT20 MODE–Peak)



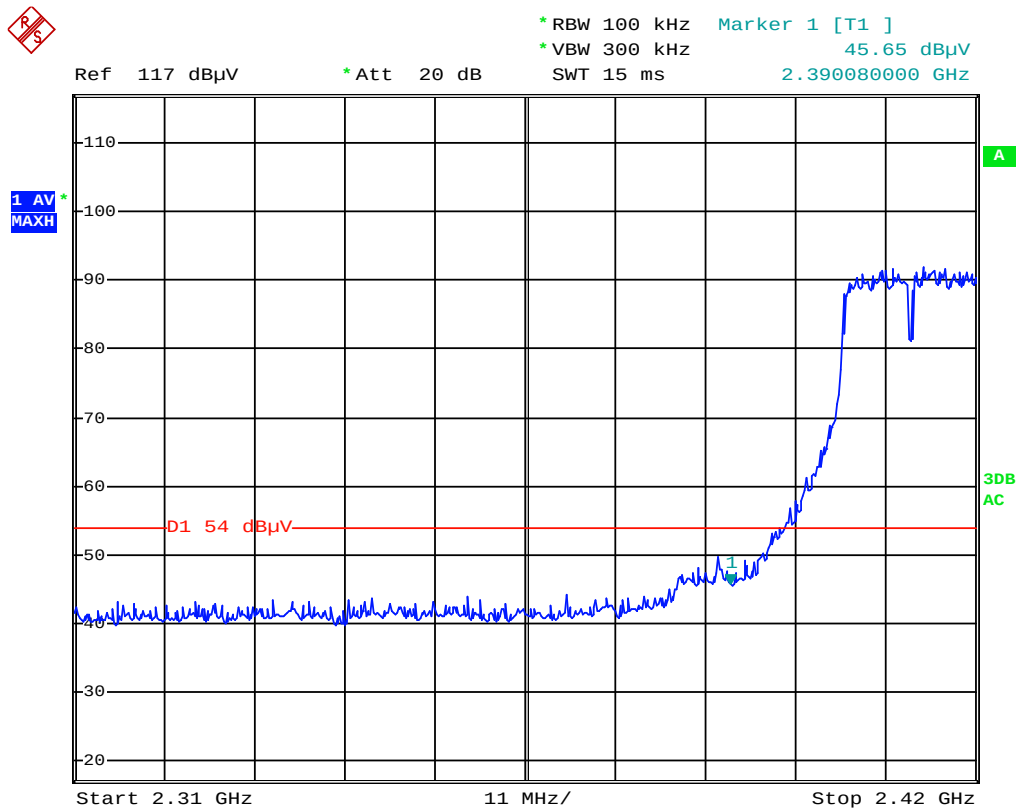
CH High (802.11n HT20 MODE–Average)



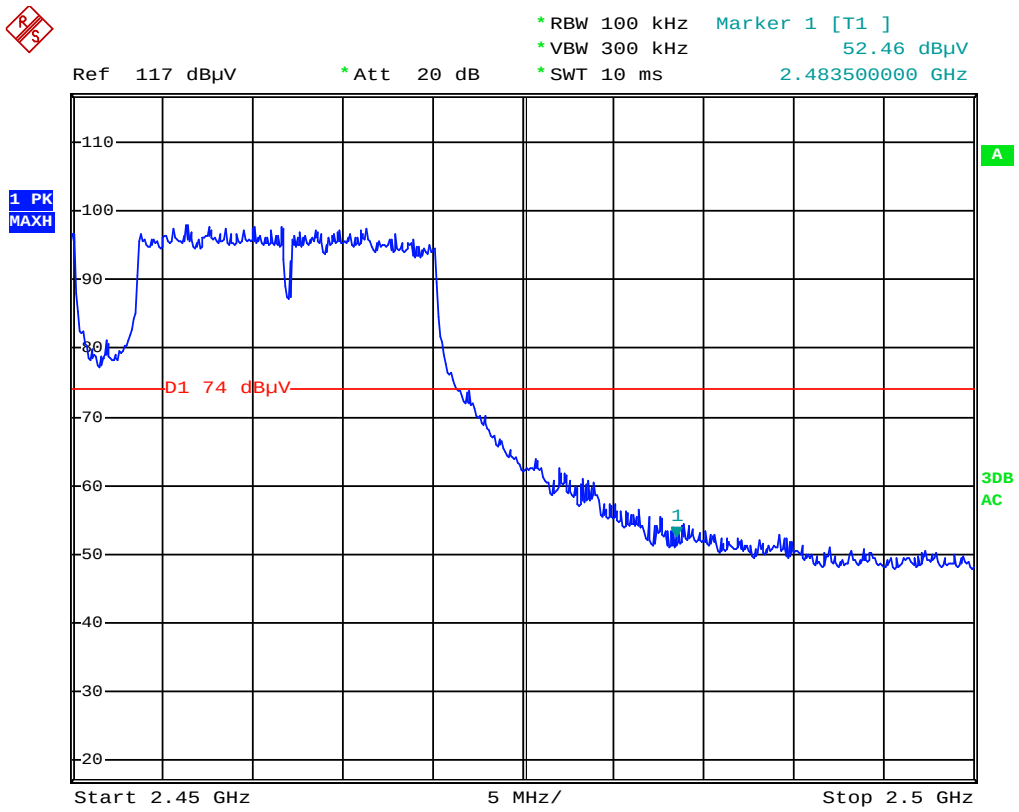
CH Low (802.11n HT40 MODE–Peak)



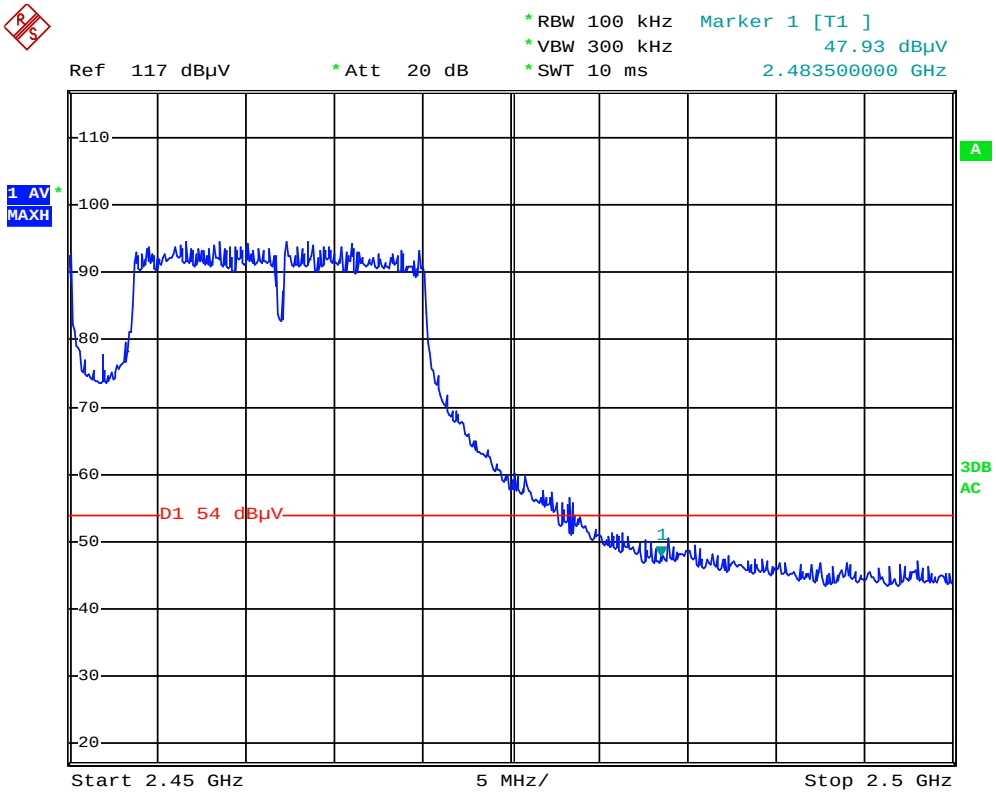
CH Low (802.11n HT40 MODE–Average)



CH High (802.11n HT40 MODE–Peak)



CH High (802.11n HT40 MODE–Average)



10. ANTENNA REQUIREMENT

10.1 Standard Applicable

Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Section 15.247(b)/(c):

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

If the intentional radiator is used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

10.2 Antenna Connected Construction

The antenna connector is designed with permanent attachment and no consideration of replacement.