



EUROFINS ELECTRICAL TESTING SERVICE (SHENZHEN) CO., LTD.

RADIO TEST - REPORT

FCC Compliance Test Report for

Product name: Wi-Fi Hub/Socket

Model name: TWG004WRF/TWG007WRF/TCS002W/WCS004DM

FCC ID: 2AWDBTWG004WRF

Test Report Number: EFGX20040021-IE-08-E01

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1 General Information

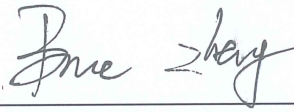
1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

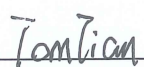
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Operator:

2020-07-28		Bruce Zheng / Project Engineer	
<hr/>			
Date	Eurofins-Lab.	Name / Title	Signature

Technical responsibility for area of testing:

2020-07-28		Tom Tian / Supervisor	
<hr/>			
Date	Eurofins	Name / Title	Signature

1.2 Testing laboratory

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.

1st Floor, Building 2, Chungu, Meisheng Huigu Science and Technology Park, No. 83 Dabao Road, Bao'an District, Shenzhen. P.R.China.

Telephone : +86-755-82911867

Fax : +86-755-82910749

The Laboratory has passed the Accreditation by the American Association for Laboratory Accreditation (A2LA). The Accreditation number is 5376.01

The Laboratory has been listed by industry Canada to perform electromagnetic emission measurements, The CAB identifier is CN0088

1.3 Details of approval holder

Name : FUJIAN BALDR TECHNOLOGY CO.,LTD
 Address : Zone D, Floor 2, Production Workshop, No.36, Jinrong North Road, Jianxin Town, Cangshan District, Fuzhou, P.R.China
 Telephone : N/A
 Fax : N/A

1.4 Application details

Date of receipt of application : April 03, 2020
 Date of receipt of test item : April 03, 2020
 Date of test : April 03, 2020– July 07, 2020
 Date of issue : July 28, 2020

1.5 Test item

Product type : Wi-Fi Hub/Socket
 Model name : TWG004WRF/TWG007WRF/TCS002W/WCS004DM
 Brand : N/A
 Serial number : N/A
 Ratings : 100-240V~, 50/60Hz
 Test voltage : DC3.3V for radio module
 FCC ID : 2AWDBTWG004WRF
 PMN : Wi-Fi Hub/Socket
 HVIN : TWG004WRF/TWG007WRF/TCS002W/WCS004DM
 Additional information : Models TWG004WRF,TWG007WRF,TCS002W and WCS004DM are identical except model name

RadioTechnical data

Frequency range : 802.11 b/g/n(HT20) :2412MHz – 2462MHz
 802.11 n(HT40) :2422MHz – 2452MHz
 Radio Tech. : WLAN 2.4G
 Frequency channel : 802.11 b/g/n(HT20) :11
 802.11 n(HT40) :7
 Modulation : DSSS,OFDM
 Antenna type : PCB antenna
 Antenna gain : 2.5dBi



Radio module

Type : WLAN 2.4G
Model : WRG1
Manufacturer : Tuya Inc.

1.6 Test standards

Test Standards	
FCC Part 15 Subpart C 6-29-2020 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

Test Method

- 1: ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
- 2: ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices.
- 3: KDB558074 D01 15.247 Meas Guidance v05r02

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

or

The deviations as specified were ascertained in the course of the tests performed.

2.2 Test environment

Temperature : 20 ... 25°C
 Relative humidity content : 30 ... 60%
 Air pressure : 100 ... 101kPa

2.3 Measurement uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Conducted RF test	RF Power Conducted: 1.16dB Frequency test involved: 1.05×10 ⁻⁷ or 1%
Uncertainty for Radiated Spurious Emission 25MHz-3000MHz	Horizontal: 4.46dB; Vertical: 4.54dB;
Uncertainty for Radiated Spurious Emission 3000MHz-18000MHz	Horizontal: 4.42dB; Vertical: 4.41dB;
Uncertainty for Radiated Spurious Emission 18000MHz-40000MHz	Horizontal: 4.63dB; Vertical: 4.62dB;

2.4 Test mode

The EUT is operating at 2.4GHz ISM; it supports 802.11b, 802.11g, 802.11n(HT20,HT40) and they are all tested in this report.

For 802.11b/g/n(HT20) (2.4GHz band), the lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 1 (2412MHz), 6 (2437MHz) and 11 (2462MHz).

For 802.11n(HT40) (2.4GHz band), the lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 3 (2422MHz), 6 (2437MHz) and 9 (2452MHz).

2.5 Test equipment utilized

EQUIPMENT ID	EQUIPMENT NAME	MODEL NO.	CAL. DUE DATE
23-2-13-12	Signal Analyzer	N9010B-544	2021-04-14
23-2-13-13	BT/WLAN Tester	CMW270	2021-04-14
23-2-13-14	Signal Generator	N5183B-520	2021-05-05
23-2-13-15	Vector Signal Generator	N5182B-506	2021-04-14
23-2-10-43	Switch and Control Unit	ERIT-E-JS0806-2	2021-04-14
23-2-10-44	DC power supply	E3642A	2021-04-14
23-2-10-45	temperature test chamber	SG-80-CC-2	2021-05-05
23-2-13-01	EMI Test Receiver	ESR7	2021-04-04
23-2-13-02	Signal Analyzer	N9020B-544	2021-05-05
23-2-12-01	Active Loop Antenna	FMZB 1519B	2020-04-20
23-2-12-02	TRILOG Broadband Antenna	VULB9168	2021-04-13
23-2-12-03	Horn Antenna	3117	2021-04-13
23-2-12-04	Horn Antenna	BBHA 9170	2021-04-17
23-2-12-05	Universal Antenna Stand	CLSA0110	2021-04-13
23-2-10-01	Preamplifier	BBV9745	2021-04-15
23-2-10-02	Preamplifier	EMC001330	2021-04-15
23-2-10-03	Preamplifier	EMC051845SE	2021-05-06
23-2-10-14	Switch and Control Unit	ERIT-E-JS0806-SF1	N/A

2.6 Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.	S/N
Laptop	LENOVO	TP00096A	PF-1QH0LV

2.7 Test software information:

Test Software Version	UI_mptool_1V16		
Mode	Setting TX Power	TX Pattern	Modulation Type
802.11b	33	TX Continuous	DBPSK
802.11g	34	TX Continuous	BPSK
802.11n HT20	30	TX Continuous	BPSK
802.11n HT40	28	TX Continuous	BPSK

2.8 Customized Configurations

EUT Conf.	Signal Description	Operating Frequency	Duty Cycle
TM1	802.11b(DBPSK)	2412 MHz – 2462MHz	100%
TM1	802.11g(BPSK)	2412 MHz – 2462MHz	100%
TM1	802.11n HT20(BPSK)	2412 MHz – 2462MHz	100%
TM1	802.11n HT40(BPSK)	2422 MHz – 2452MHz	100%

2.9 Test Environments

Environment Parameter	Temperature	Voltage	Relative Humidity
101.5Kpa	25.2°C	3.3Vdc	57.4%

2.10 Test results

 1st test

 test after modification

 production test

Technical Requirements				
FCC Part 15 Subpart C				
Test Condition		Test Result	Verdict	Test Site
§15.207	Conducted emission AC power port	Page 12-13	Pass	Site 1
§15.247(b)(1)	Conducted output power for FHSS	--	N/A	--
§15.247(b)(3)	Conducted output power and E.I.R.P for DTS	Appendix C	Pass	Site 1
§15.247(e)	Power spectral density	Appendix D	Pass	Site 1
§15.247(a)(2)	6dB bandwidth	Appendix B	Pass	Site 1
§15.247(a)(1)	20dB Occupied bandwidth	--	N/A	--
§15.247(a)(1)	Carrier frequency separation	--	N/A	--
§15.247(a)(1)(iii)	Number of hopping frequencies	--	N/A	--
§15.247(a)(1)(iii)	Dwell Time	--	N/A	--
§15.247(d) §15.205	Spurious RF conducted emissions	Appendix F Appendix G	Pass	Site 1
§15.247(d)	Band edge	Appendix E	Pass	Site 1
§15.247(d) & §15.209 & §15.205	Spurious radiated emissions for trans- mitter	See page 23-61	Pass	Site 1
§15.203	Antenna requirement	See note 1	Pass	--

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses an PCB antenna, the gain: 2.5dBi. According to §15.203, it is considered sufficiently to comply with the provisions of this section.

3 Technical Requirement

3.1 Conducted Emission

Test Method:

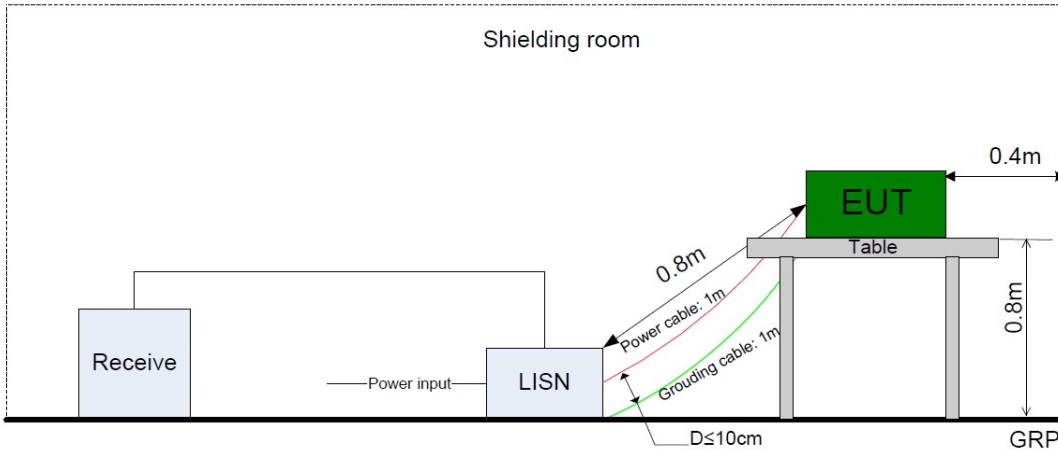
The test method was referred to the subclause 5.2 of ANSI C63.4-2014.

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

Test Setup:

The mains cable of the EUT (per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.



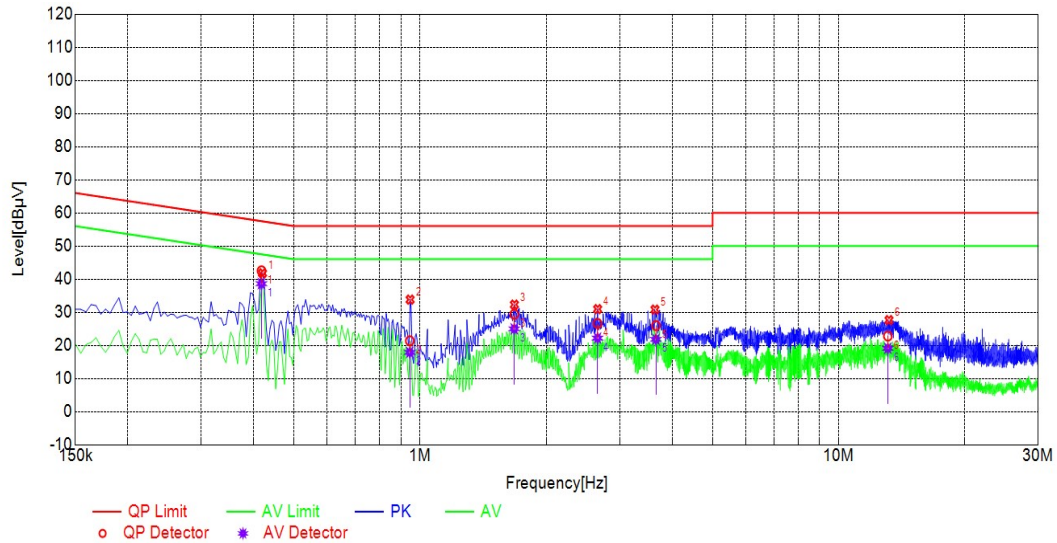
Limit:

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

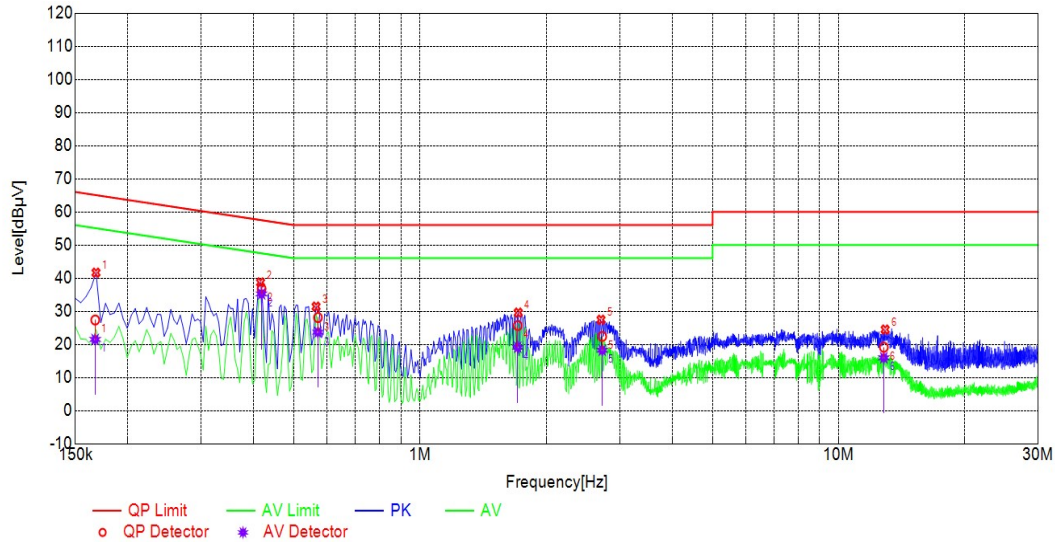
Decreasing linear.

Test Result:

WIFI TX: L



Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
0.4175	10.21	42.51	57.50	14.99	38.63	47.50	8.87	PASS
0.9444	10.23	21.38	56.00	34.62	17.88	46.00	28.12	PASS
1.6785	10.25	29.40	56.00	26.60	24.99	46.00	21.01	PASS
2.6542	10.27	26.63	56.00	29.37	22.20	46.00	23.80	PASS
3.6598	10.29	25.97	56.00	30.03	21.82	46.00	24.18	PASS
13.1182	10.47	22.81	60.00	37.19	19.11	50.00	30.89	PASS

WIFI TX: N


Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
0.1672	10.22	27.37	65.10	37.73	21.49	55.10	33.61	PASS
0.4178	10.20	36.79	57.49	20.70	35.26	47.49	12.23	PASS
0.5696	10.21	28.10	56.00	27.90	23.68	46.00	22.32	PASS
1.7111	10.25	25.68	56.00	30.32	19.11	46.00	26.89	PASS
2.7239	10.27	22.40	56.00	33.60	18.22	46.00	27.78	PASS
12.8279	10.48	19.13	60.00	40.87	15.94	50.00	34.06	PASS

3.2 Conducted output power and E.I.R.P

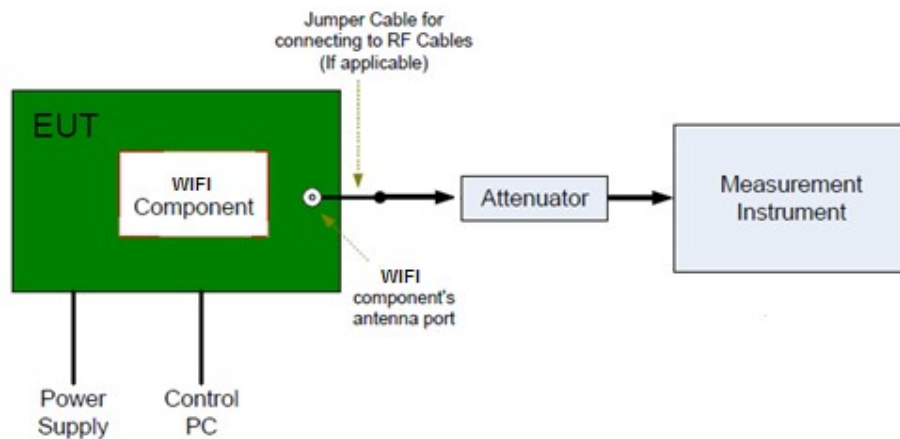
Test Method

The test method was referred to the subclause 11.9.1.1 of ANSI C63.10-2013.

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 2.4GHz.
3. Then set the EUT to transmit at high, middle and low frequency and measure the conducted output power separately.
4. RBW=2MHz, VBW≥3RBW, Sweep = auto, Detector function = RMS, Trace = max hold
5. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



Limits:

According to §15.247 (b) (3), conducted output power limit as below:

Conducted Power Limit

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

E.I.R.P Limit

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤4	≤36

Test Result: Pass

3.3 6dB bandwidth

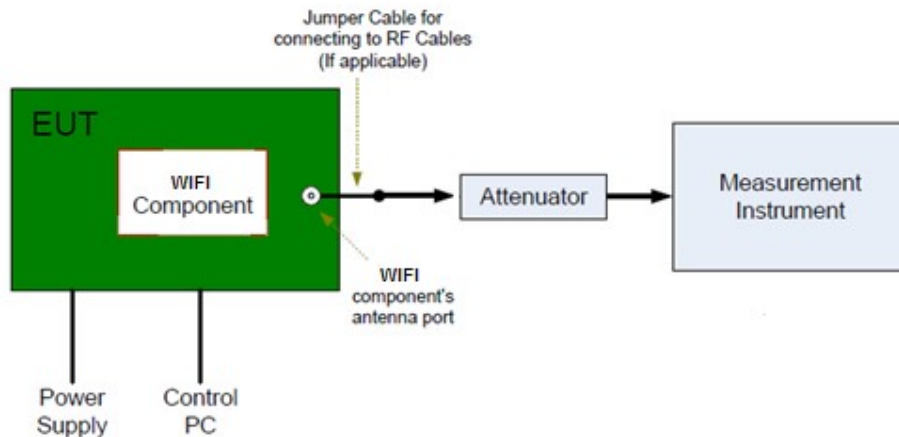
Test Method:

The test method was referred to the subclause 11.8 of ANSI C63.10-2013.

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 2.4GHz.
3. Then set the EUT to transmit at high, middle and low frequency and measure the conducted output power separately.
4. RBW=100K, VBW \geq 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
5. Use the automatic bandwidth measurement capability of an instrument, may be employed using the X dB bandwidth mode with X set to 6 dB, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be \geq 6 dB.
6. Allow the trace to stabilize, record the X dB Bandwidth value.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



Limit:

According to §15.247(a)(2) 6dB bandwidth limit as below:

Limit [kHz]

≥500

Test Result: Pass

3.4 Power spectral density

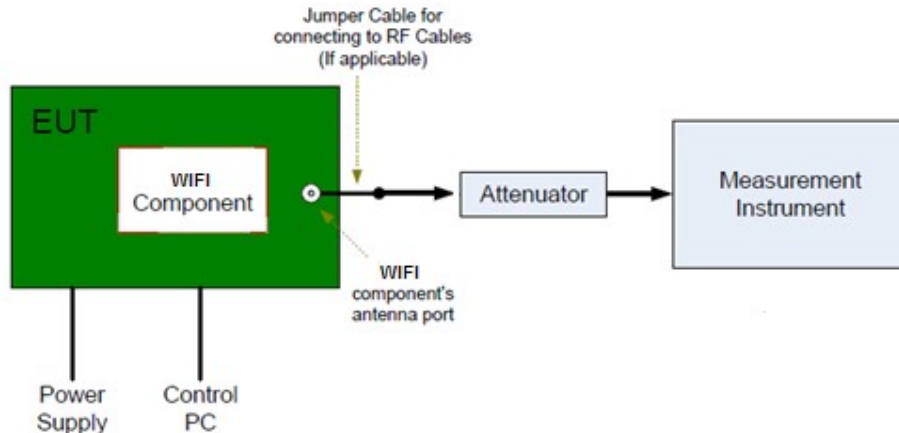
Test Method:

The test method was referred to the subclause 11.10 of ANSI C63.10-2013.

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 2.4GHz.
3. Then set the EUT to transmit at high, middle and low frequency separately.
4. Set analyzer center frequency to DTS channel center frequency.
5. Set the span to 1.5DTS bandwidth, set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$, set the VBW $\geq 3\text{RBW}$.
6. Detector = peak.
7. Sweep time = auto couple.
8. Trace mode = max hold.
9. Allow trace to fully stabilize.
10. Use the peak marker function to determine the maximum amplitude level within the RBW.
11. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



Limit:

According to §15.247(e), Power spectral density limit as below:

Limit [dBm]

≤8

Test Result: Pass

3.5 Spurious RF conducted emissions

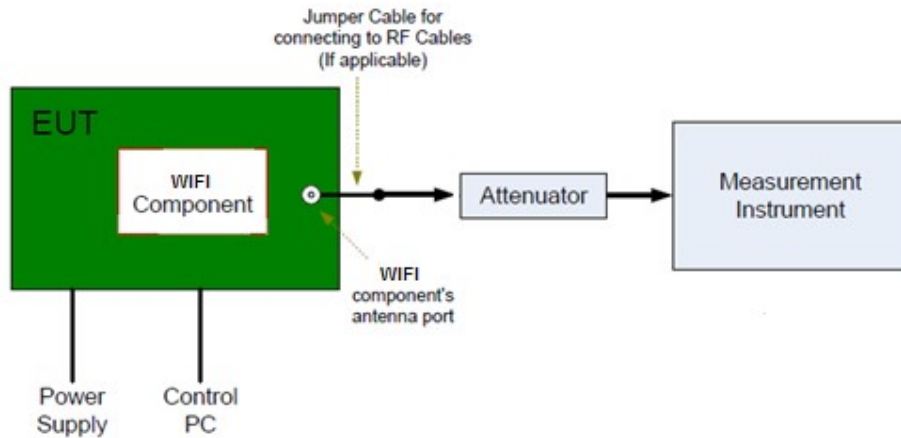
Test Method:

The test method was referred to the subclause 11.11/11.12 of ANSI C63.10-2013.

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 2.4GHz.
3. Then set the EUT to transmit at high, middle and low frequency separately.
4. Set Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
5. Set RBW = 100 kHz, VBW \geq RBW.
6. Set Sweep = auto.
7. Set Detector function = peak.
8. Allow the trace to stabilize.
9. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



Limit:

According to §15.247(d) & §15.209 & §15.205 Spurious RF conducted emissions limit as below:

Frequency Range MHz	L edimit (dBc)
30-25000	-20

Test Result: Pass

3.6 Band edge

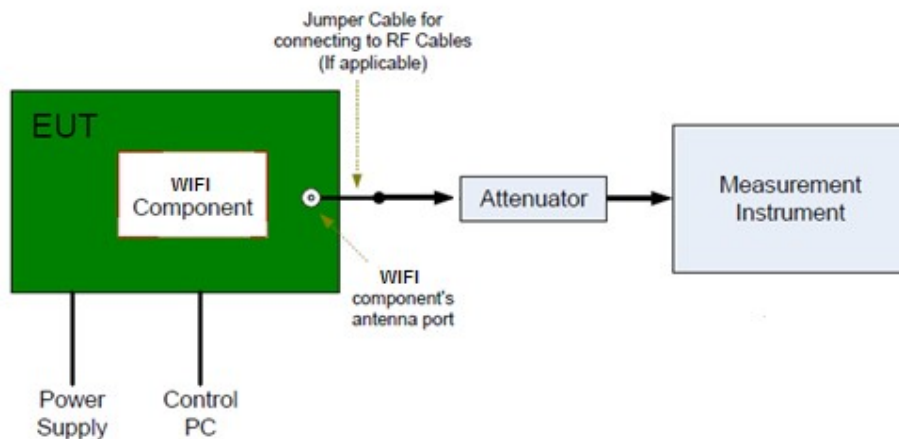
Test Method:

The test method was referred to the subclause 11.13.3.4 of ANSI C63.10-2013.

1. Connect EUT test port to spectrum analyzer.
2. Set the EUT to transmit maximum output power at 2.4GHz.
3. Then set the EUT to transmit at high, middle and low frequency separately.
4. Set Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
5. Set RBW \geq 1% of the span, VBW \geq RBW.
6. Set Sweep = auto.
7. Set Detector function = peak.
8. Allow the trace to stabilize.
9. Repeat above procedures until all frequencies measured were complete.

Test Setup:

The WIFI component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



Limit:

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits.

Test Result: Pass

3.7 Spurious radiated emissions for transmitter

Test Method:

The test method was referred to the subclause 11.11/11.12 of ANSI C63.10-2013.

- 1: The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2: The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
- 3: The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4: For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5: Use the following spectrum analyzer settings According to C63.10:

For Above 1GHz

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW ≥ RBW for peak measurement and VBW = 10Hz for average measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 1GHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 KHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 30MHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 200 Hz, VBW ≥ RBW from 9KHz to 0.15MHz, RBW 9KHz VBW ≥ RBW from 0.15MHz to 30MHz for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

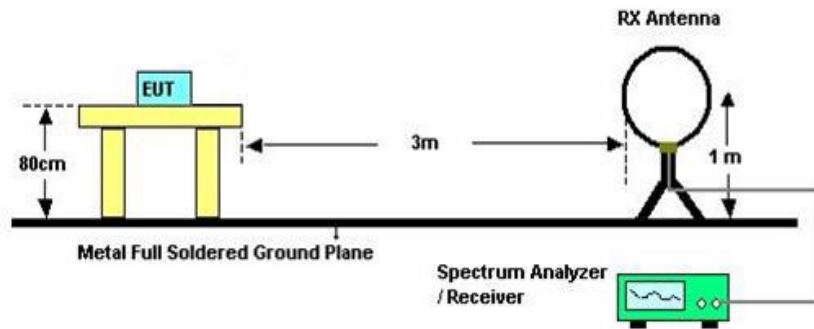
Note:

- 1: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for peak detection (PK) at frequency above 1GHz.
- 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($20\log(1/\text{duty cycle})$).
- 4: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
- 5: When duty cycle < 98%, The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\text{VBW} \geq 1 / T$, the T is transmission duration (T).

Test Setup:

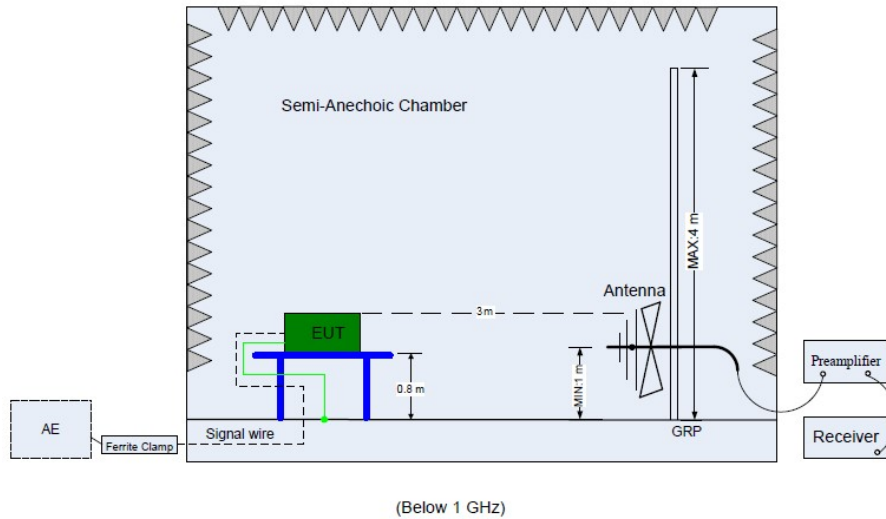
Test Setup 1: Radiated Emission test below 30MHz

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4.



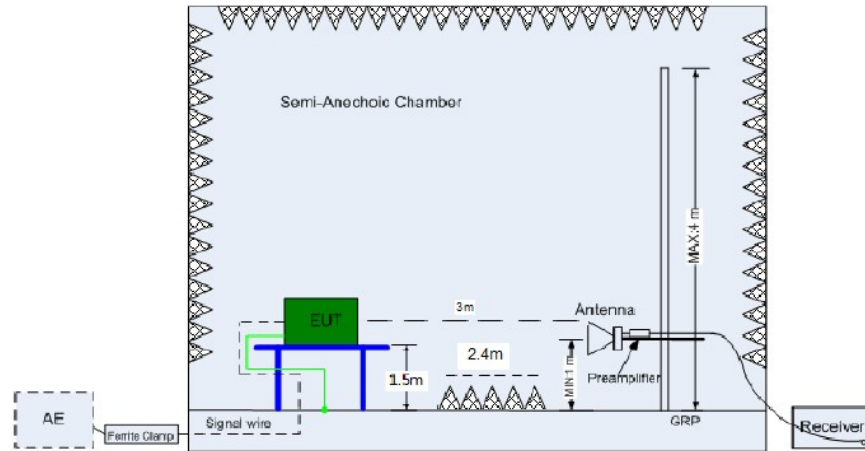
Test Setup 2: Radiated Emission test below 1GHz

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4.



Test Setup 3: Radiated Emission test above 1GHz

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4.



(Above 1 GHz)

Limit:

Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

§ 15.209

Frequency MHz	Field Strength uV/m	Field Strength dB μ V/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

§15.205 Restricted bands of operation

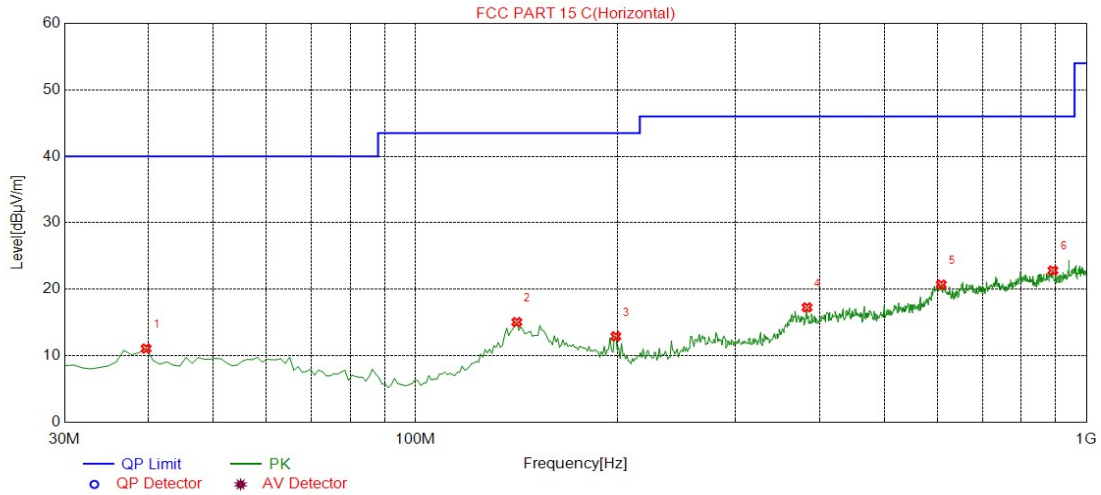
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218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

Test Result: Pass

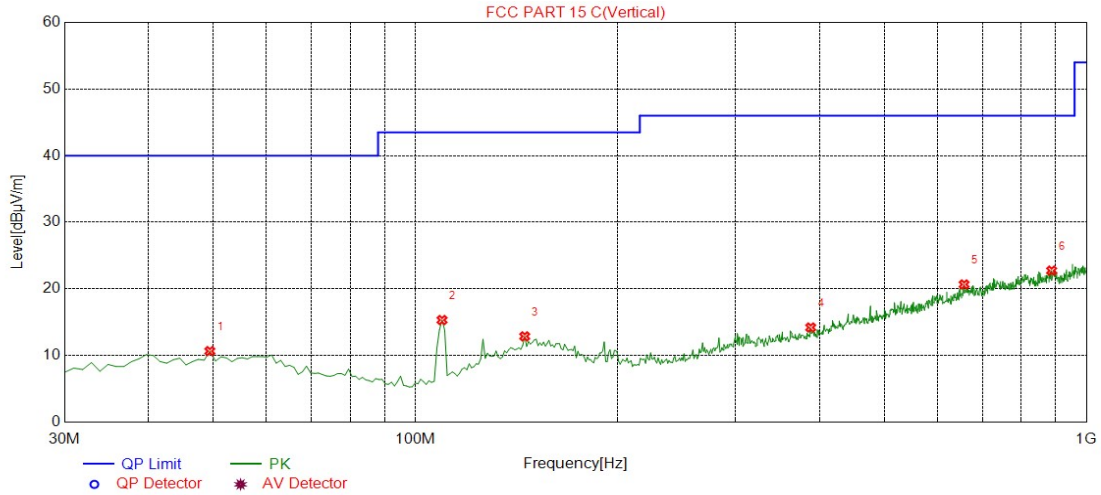
Spurious radiated emissions (Radiated)

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

802.11b - 2402MHz Test Result

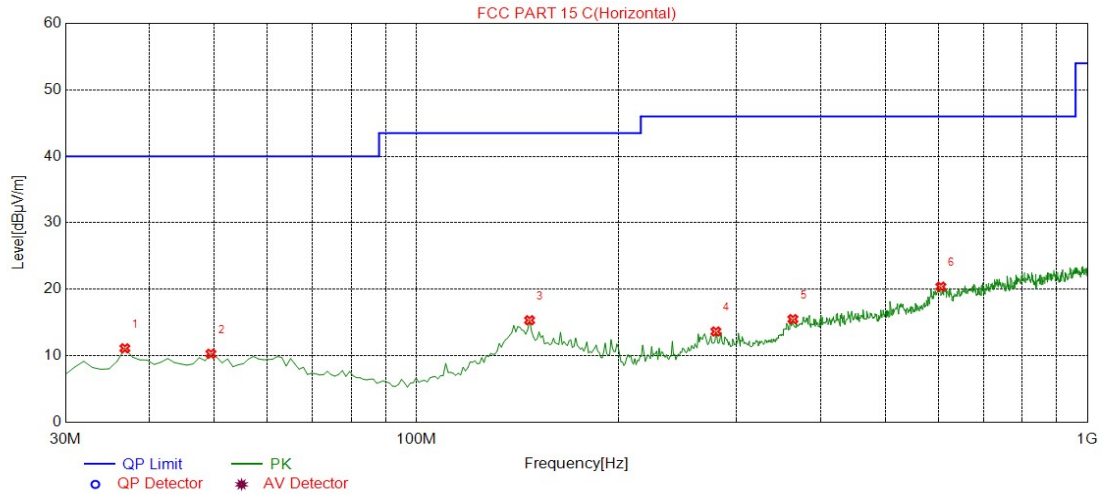


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
39.7097	11.09	-16.44	40.00	28.91	100	240	Horizontal
141.6617	15.07	-15.38	43.50	28.43	100	160	Horizontal
198.9489	12.93	-18.35	43.50	30.57	100	340	Horizontal
383.4334	17.28	-14.39	46.00	28.72	100	220	Horizontal
607.7277	20.71	-9.71	46.00	25.29	100	120	Horizontal
891.2513	22.83	-5.85	46.00	23.17	100	50	Horizontal

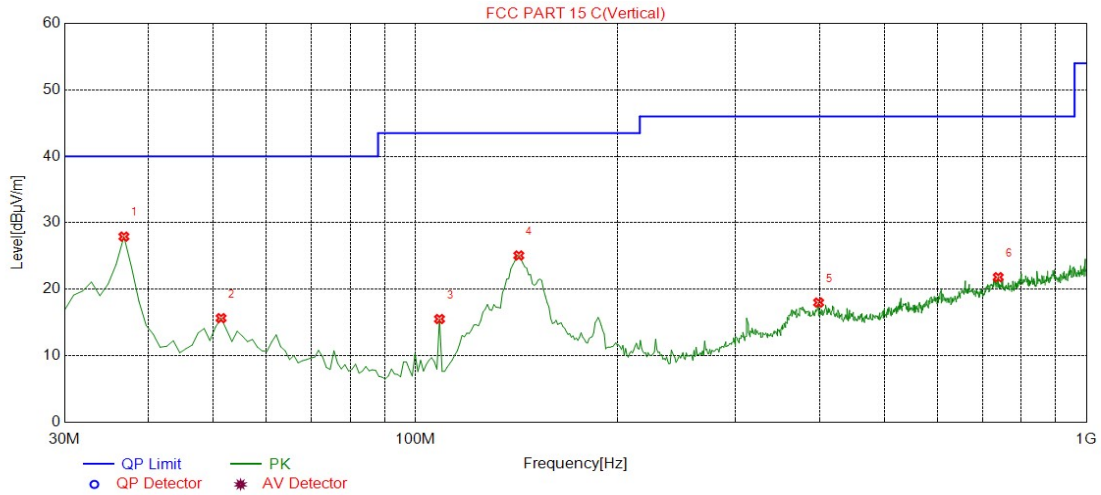


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
49.4194	10.66	-16.14	40.00	29.34	100	190	Vertical
109.6196	15.33	-19.39	43.50	28.17	100	180	Vertical
145.5455	12.88	-15.14	43.50	30.62	100	330	Vertical
388.2883	14.21	-14.27	46.00	31.79	100	30	Vertical
657.2472	20.67	-8.74	46.00	25.33	100	130	Vertical
887.3674	22.74	-5.86	46.00	23.26	100	290	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBuV/m		dBµV/m				
1000-25000MHz	4823.4117	54.09	Horizontal	74.00	PK	19.91	-16.57	Pass
	4823.4117	52.55	Horizontal	54.00	AV	1.45	-16.57	Pass
	7232.1161	59.86	Vertical	74.00	PK	14.14	-12.68	Pass
	7232.1161	50.09	Vertical	54.00	AV	3.91	-12.67	Pass

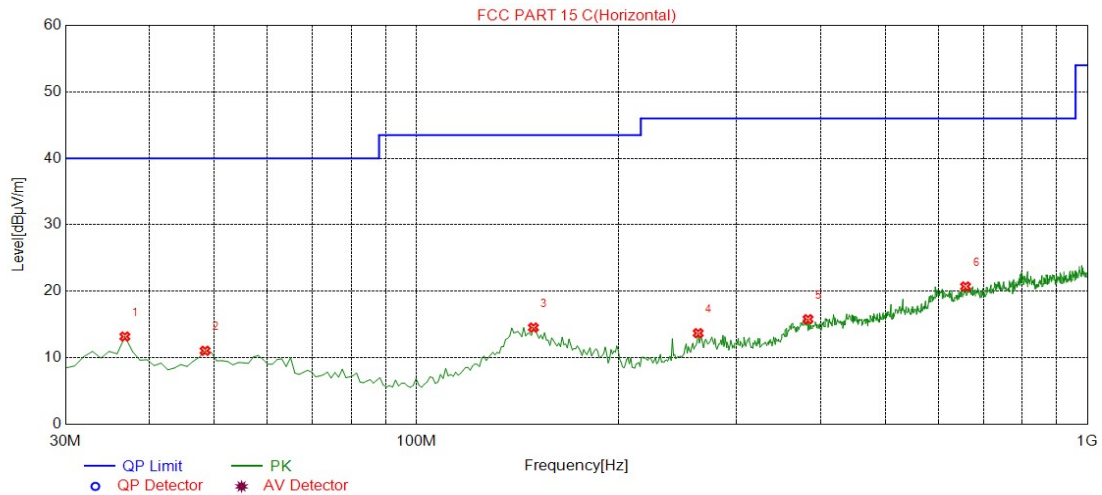
802.11b - 2437MHz Test Result


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	11.13	-17.00	40.00	28.87	100	10	Horizontal
49.4194	10.31	-16.14	40.00	29.69	100	50	Horizontal
147.4875	15.35	-15.01	43.50	28.15	100	10	Horizontal
279.5395	13.66	-16.23	46.00	32.34	100	110	Horizontal
364.0140	15.52	-14.71	46.00	30.48	100	110	Horizontal
604.8148	20.40	-9.76	46.00	25.60	100	130	Horizontal

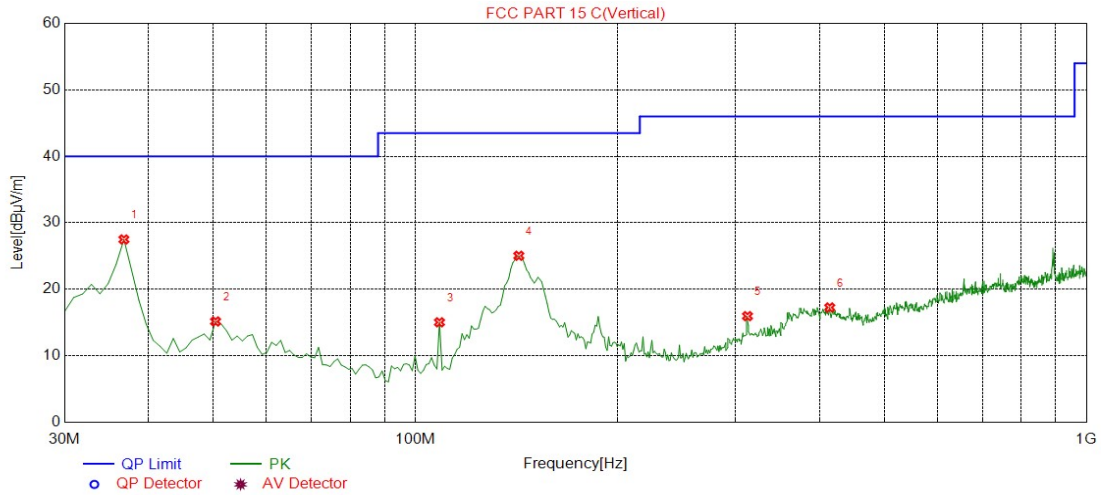


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.93	-17.00	40.00	12.07	100	190	Vertical
51.3614	15.67	-16.18	40.00	24.33	100	270	Vertical
108.6486	15.54	-19.54	43.50	27.96	100	80	Vertical
142.6326	25.09	-15.32	43.50	18.41	100	220	Vertical
398.9690	18.01	-13.96	46.00	27.99	100	300	Vertical
738.8088	21.83	-7.57	46.00	24.17	100	280	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBµV/m		dBµV/m				
1000-25000MHz	7322.1611	53.13	H	74.00	PK	20.87	-12.81	Pass
	--	--	H	--	AV	--	--	Pass
	7329.6648	55.15	V	74.00	PK	18.85	-12.76	Pass
	7329.6648	45.22	V	54.00	AV	8.78	-12.76	Pass

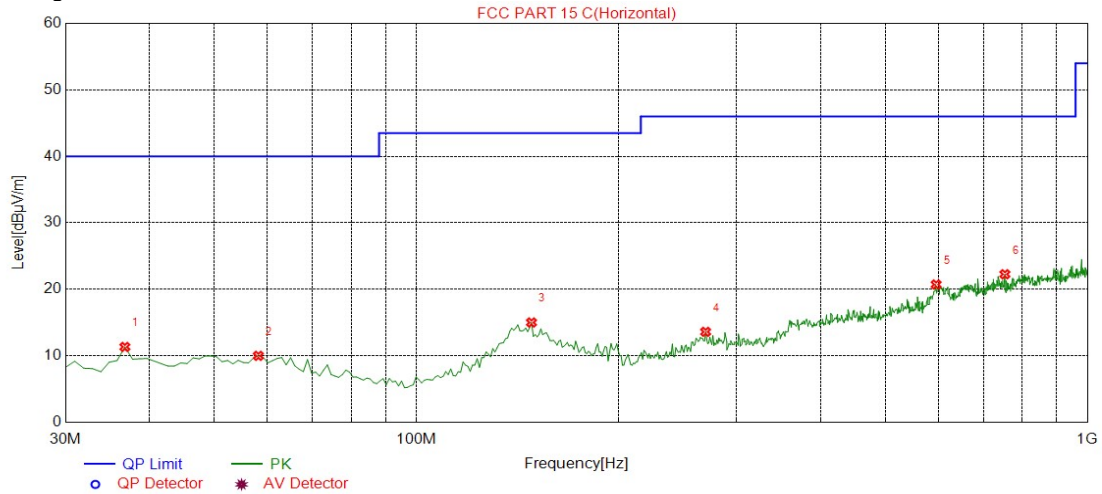
802.11b - 2462MHz Test Result


Freq. [MHz]	Level [$\text{dB}\mu\text{V}/\text{m}$]	Factor [dB/m]	Limit [$\text{dB}\mu\text{V}/\text{m}$]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	13.20	-17.00	40.00	26.80	100	10	Horizontal
48.4484	11.06	-16.17	40.00	28.94	100	310	Horizontal
149.4294	14.55	-14.89	43.50	28.95	100	10	Horizontal
263.0330	13.71	-16.78	46.00	32.29	100	10	Horizontal
383.4334	15.81	-14.39	46.00	30.19	100	80	Horizontal
658.2182	20.73	-8.73	46.00	25.27	100	200	Horizontal

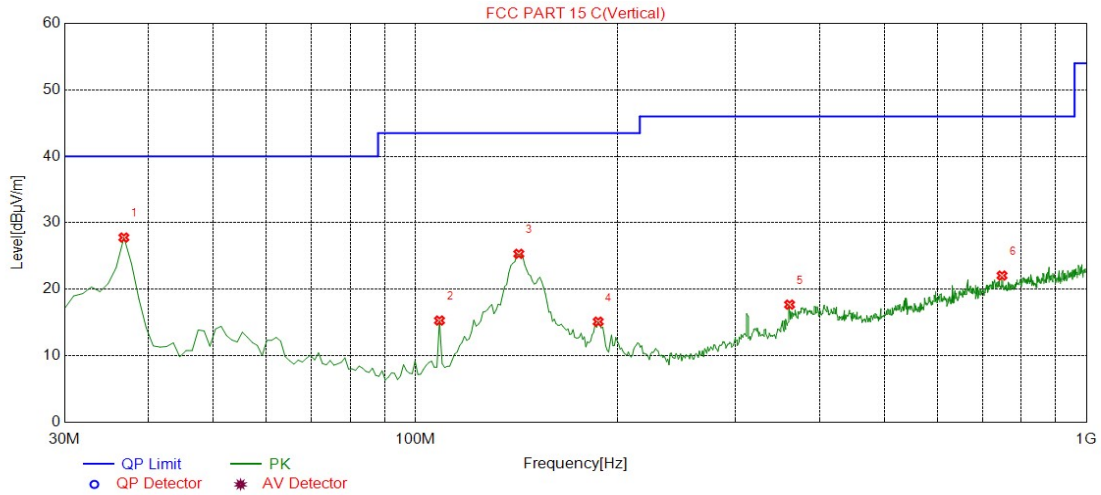


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.50	-17.00	40.00	12.50	100	320	Vertical
50.3904	15.17	-16.14	40.00	24.83	100	300	Vertical
108.6486	15.04	-19.54	43.50	28.46	100	10	Vertical
142.6326	25.05	-15.32	43.50	18.45	100	30	Vertical
312.5526	15.97	-15.18	46.00	30.03	100	10	Vertical
414.5045	17.27	-13.44	46.00	28.73	100	300	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBuV/m		dBµV/m				
1000-25000MHz	8822.9115	53.31	H	74.00	PK	20.69	-11.09	Pass
	--	--	H	--	AV	--	--	Pass
	6466.7334	51.52	V	74.00	PK	22.48	-12.69	Pass
	--	--	V	--	AV	--	--	Pass

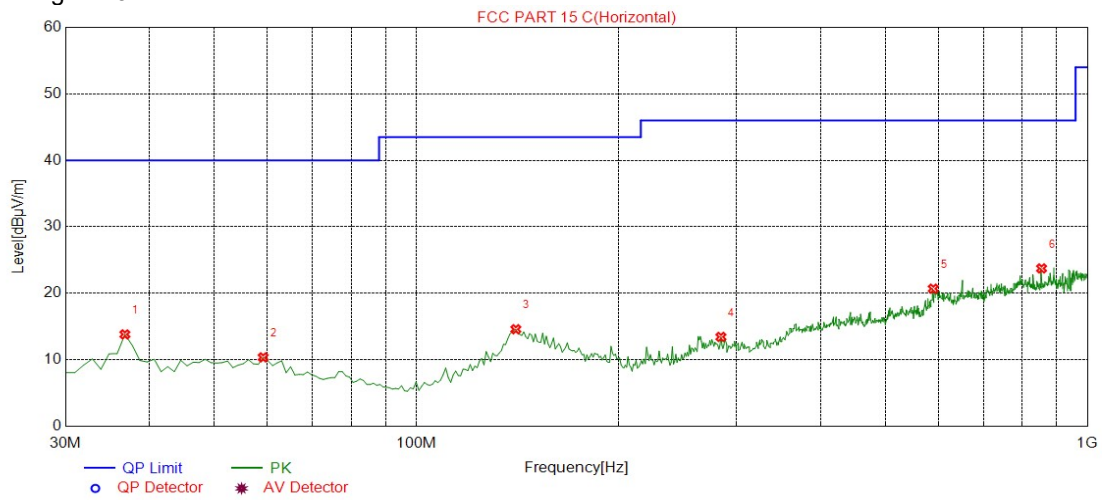
802.11g - 2412MHz Test Result


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	11.34	-17.00	40.00	28.66	100	140	Horizontal
58.1582	10.00	-16.41	40.00	30.00	100	170	Horizontal
148.4585	15.01	-14.95	43.50	28.49	100	90	Horizontal
269.8298	13.61	-16.54	46.00	32.39	100	170	Horizontal
595.1051	20.73	-9.91	46.00	25.27	100	30	Horizontal
753.3734	22.27	-7.54	46.00	23.73	100	360	Horizontal

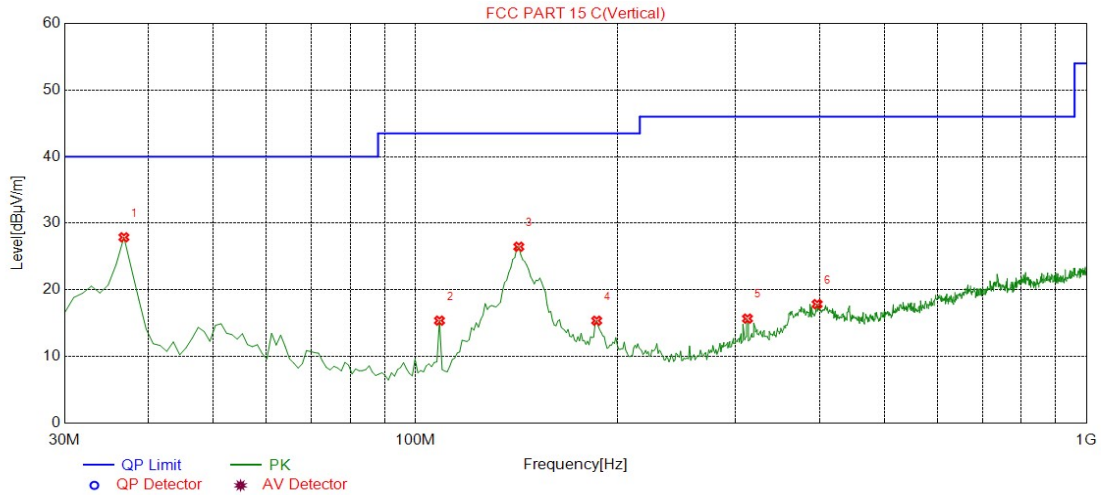


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.79	-17.00	40.00	12.21	100	180	Vertical
108.6486	15.31	-19.54	43.50	28.19	100	280	Vertical
142.6326	25.34	-15.32	43.50	18.16	100	60	Vertical
187.2973	15.14	-17.13	43.50	28.36	100	220	Vertical
361.1011	17.70	-14.73	46.00	28.30	100	10	Vertical
748.5185	22.07	-7.59	46.00	23.93	100	190	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBµV/m		dBµV/m				
1000-25000MHz	7719.8599	52.40	H	74.00	PK	21.60	-11.95	Pass
	--	--	H	--	AV	--	--	Pass
	7239.6198	54.91	V	74.00	PK	19.09	-12.66	Pass
	7239.6198	42.32	V	54.00	AV	11.68	-12.66	Pass

802.11g - 2437MHz Test Result


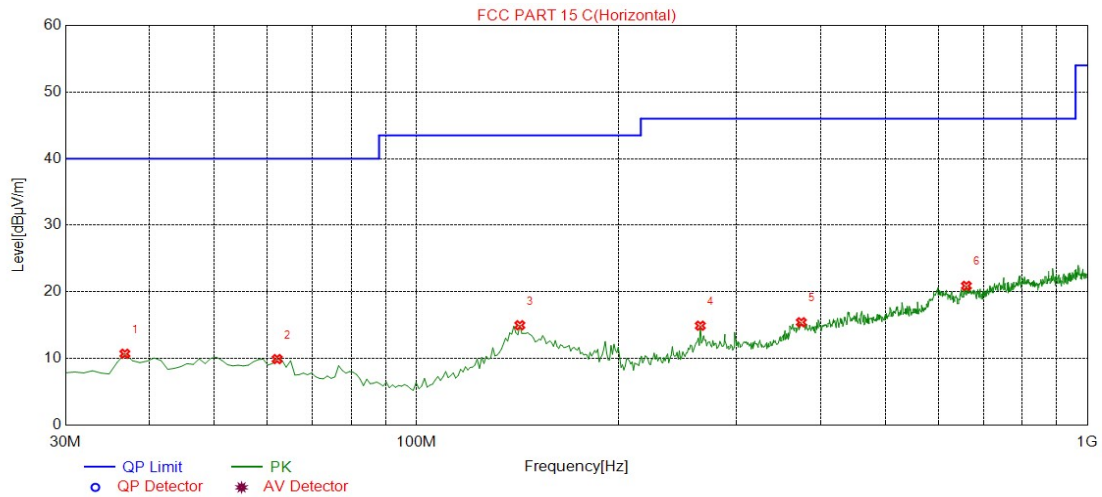
Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	13.83	-17.00	40.00	26.17	100	10	Horizontal
59.1291	10.37	-16.44	40.00	29.63	100	270	Horizontal
140.6907	14.60	-15.45	43.50	28.90	100	40	Horizontal
284.3944	13.45	-16.05	46.00	32.55	100	260	Horizontal
589.2793	20.70	-10.02	46.00	25.30	100	150	Horizontal
854.3544	23.75	-6.31	46.00	22.25	100	230	Horizontal



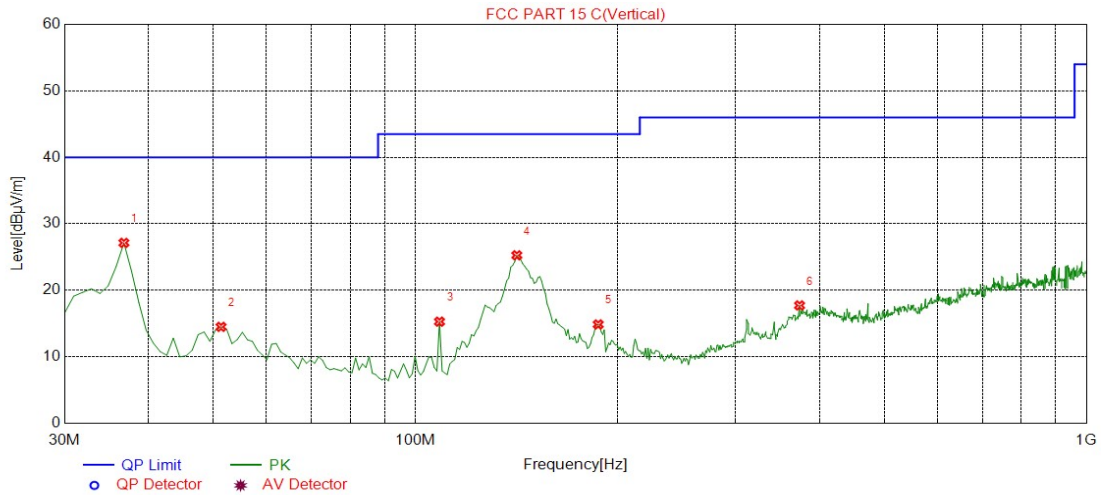
Freq. [MHz]	Level [dBuV/m]	Factor [dB/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.90	-17.00	40.00	12.10	100	40	Vertical
108.6486	15.39	-19.54	43.50	28.11	100	310	Vertical
142.6326	26.48	-15.32	43.50	17.02	100	10	Vertical
186.3263	15.38	-17.07	43.50	28.12	100	220	Vertical
312.5526	15.69	-15.18	46.00	30.31	100	280	Vertical
397.0270	17.87	-14.02	46.00	28.13	100	220	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr. (dB)	Result
	MHz	dBuV/m		dBuV/m		dB		
1000-25000MHz	7194.5973	51.89	H	74.00	PK	22.11	-12.72	Pass
	--	--	H	--	AV	--	--	Pass
	7787.3937	52.33	V	74.00	PK	21.67	-12.10	Pass
	--	--	V	--	AV	--	--	Pass

802.11g - 2462MHz Test Result

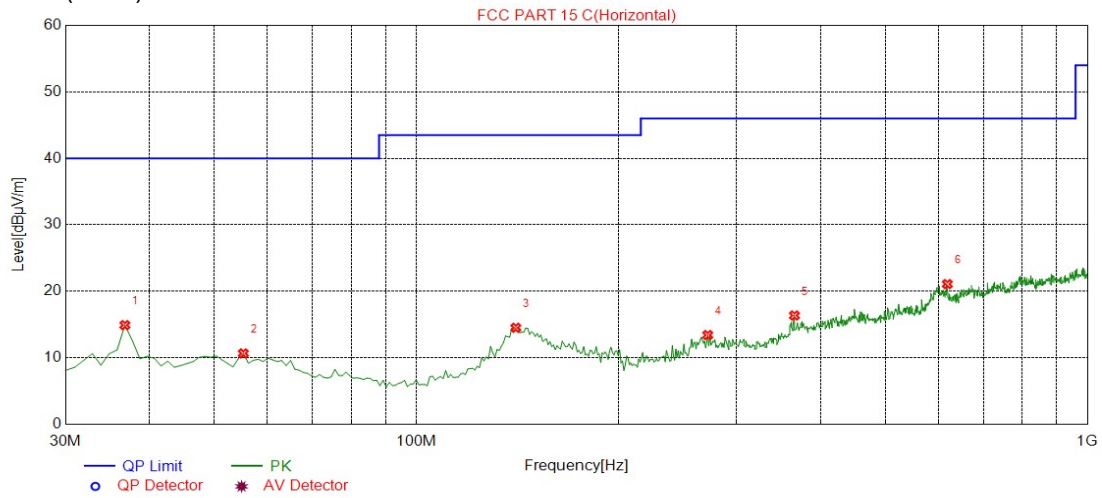


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	10.72	-17.00	40.00	29.28	100	130	Horizontal
62.0420	9.92	-16.99	40.00	30.08	100	10	Horizontal
142.6326	15.00	-15.32	43.50	28.50	100	360	Horizontal
264.9750	14.93	-16.71	46.00	31.07	100	10	Horizontal
374.6947	15.44	-14.58	46.00	30.56	100	240	Horizontal
660.1602	20.91	-8.70	46.00	25.09	100	90	Horizontal

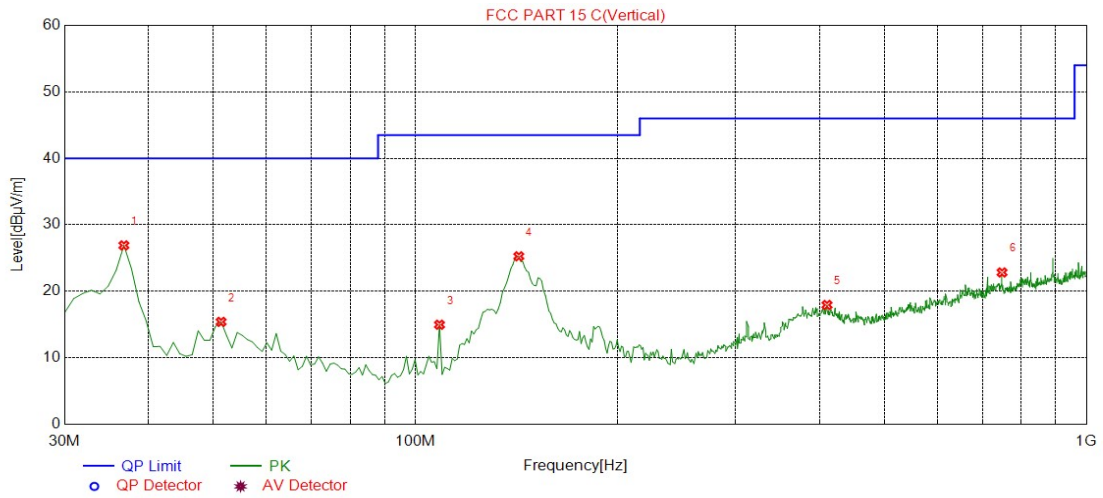


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.14	-17.00	40.00	12.86	100	80	Vertical
51.3614	14.51	-16.18	40.00	25.49	100	80	Vertical
108.6486	15.29	-19.54	43.50	28.21	100	340	Vertical
141.6617	25.27	-15.38	43.50	18.23	100	220	Vertical
187.2973	14.87	-17.13	43.50	28.63	100	20	Vertical
373.7237	17.73	-14.59	46.00	28.27	100	10	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr. (dB)	Result
	MHz	dBuV/m		dBµV/m		dB		
1000-25000MHz	6451.7259	51.19	H	74.00	PK	22.81	-12.62	Pass
	--	--	H	--	AV	--	--	Pass
	7637.3187	51.83	V	74.00	PK	22.17	-12.46	Pass
	--	--	V	--	AV	--	--	Pass

802.11n(HT20) - 2412MHz Test Result


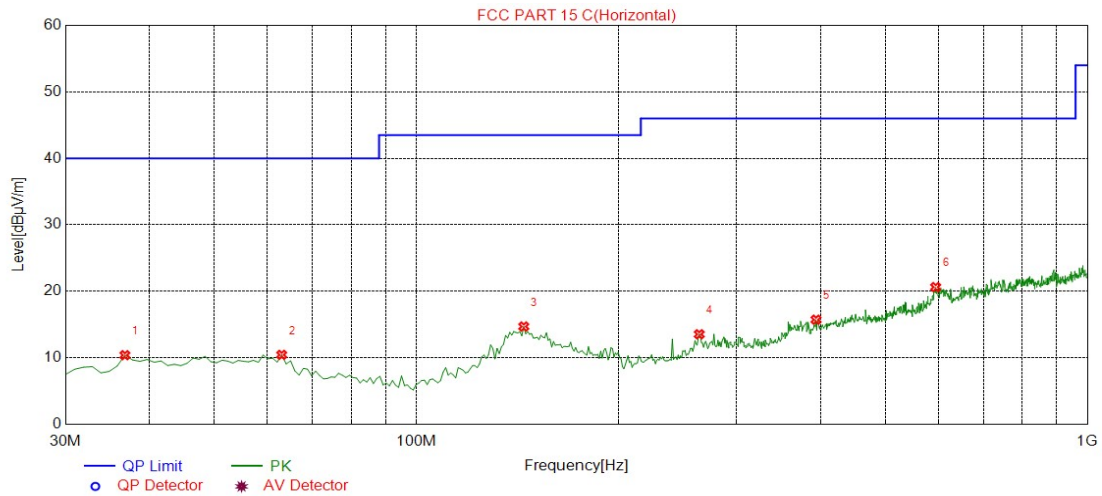
Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	14.92	-17.00	40.00	25.08	100	10	Horizontal
55.2452	10.66	-16.31	40.00	29.34	100	130	Horizontal
140.6907	14.52	-15.45	43.50	28.98	100	230	Horizontal
271.7718	13.43	-16.48	46.00	32.57	100	90	Horizontal
365.9560	16.37	-14.69	46.00	29.63	100	360	Horizontal
618.4084	21.09	-9.56	46.00	24.91	100	40	Horizontal



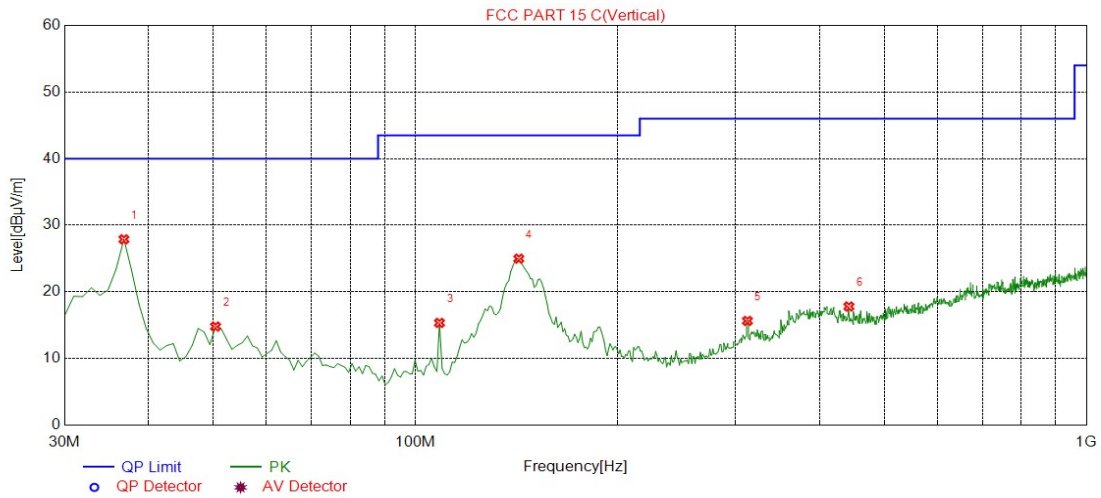
Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	26.91	-17.00	40.00	13.09	100	30	Vertical
51.3614	15.41	-16.18	40.00	24.59	100	180	Vertical
108.6486	14.98	-19.54	43.50	28.52	100	140	Vertical
142.6326	25.27	-15.32	43.50	18.23	100	10	Vertical
410.6206	17.95	-13.54	46.00	28.05	100	270	Vertical
748.5185	22.84	-7.59	46.00	23.16	100	270	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr. (dB)	Result
	MHz	dBuV/m		dBµV/m		dB		
1000-25000MHz	8822.9115	52.79	H	74.00	PK	21.21	-11.09	Pass
	--	--	H	--	AV	--	--	Pass
	8470.2351	52.36	V	74.00	PK	21.64	-11.60	Pass
	--	--	V	--	AV	--	--	Pass

802.11n(HT20) - 2437MHz Test Result

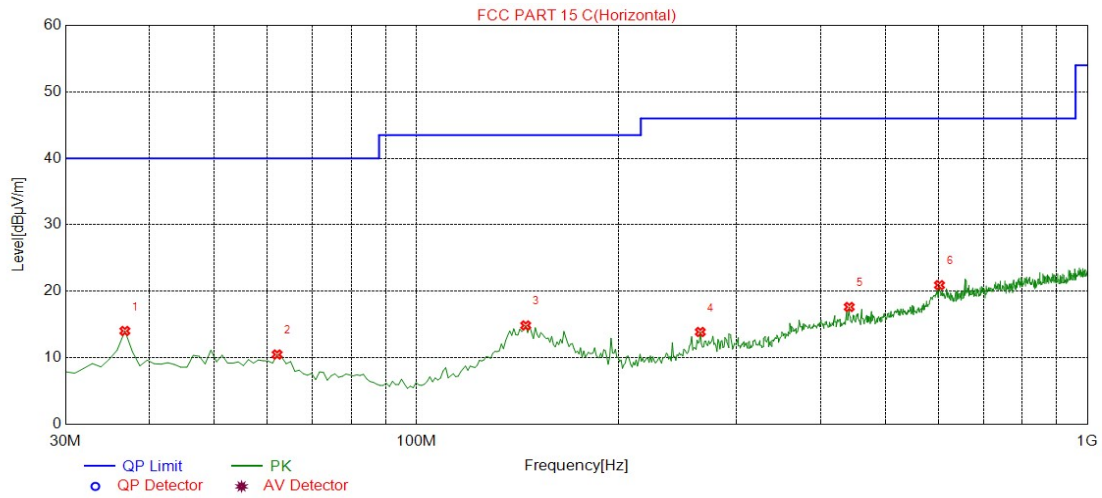


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	10.40	-17.00	40.00	29.60	100	190	Horizontal
63.0130	10.45	-17.24	40.00	29.55	100	10	Horizontal
144.5746	14.71	-15.20	43.50	28.79	100	40	Horizontal
264.0040	13.55	-16.75	46.00	32.45	100	130	Horizontal
394.1141	15.74	-14.11	46.00	30.26	100	280	Horizontal
594.1341	20.64	-9.93	46.00	25.36	100	330	Horizontal

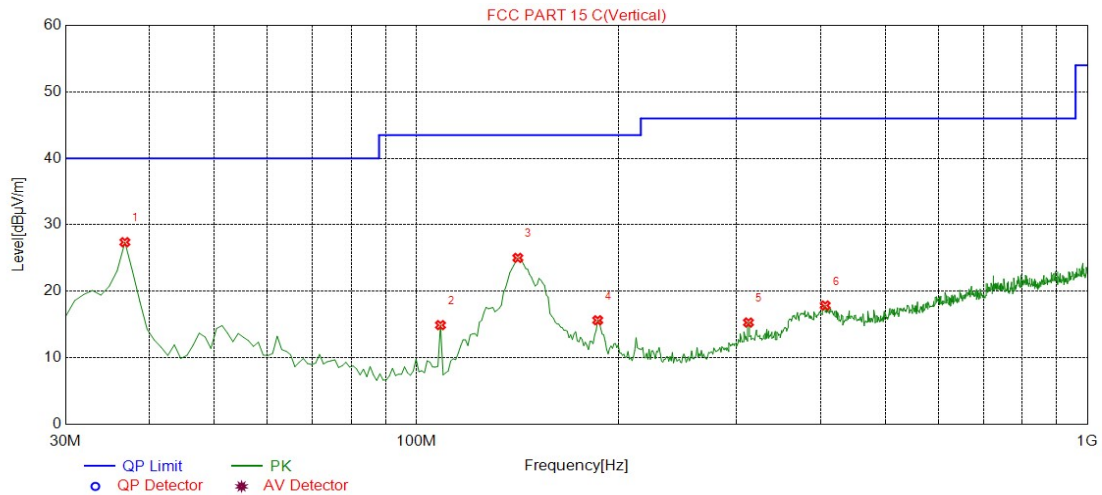


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.90	-17.00	40.00	12.10	100	140	Vertical
50.3904	14.80	-16.14	40.00	25.20	100	250	Vertical
108.6486	15.35	-19.54	43.50	28.15	100	350	Vertical
142.6326	24.99	-15.32	43.50	18.51	100	230	Vertical
312.5526	15.65	-15.18	46.00	30.35	100	10	Vertical
442.6627	17.81	-12.82	46.00	28.19	100	10	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBuV/m		dBµV/m		dB		
1000-25000MHz	7712.3562	52.07	H	74.00	PK	21.93	-12.00	Pass
	--	--	H	--	AV	--	--	Pass
	7502.2511	52.18	V	74.00	PK	21.82	-12.32	Pass
	--	--	V	--	AV	--	--	Pass

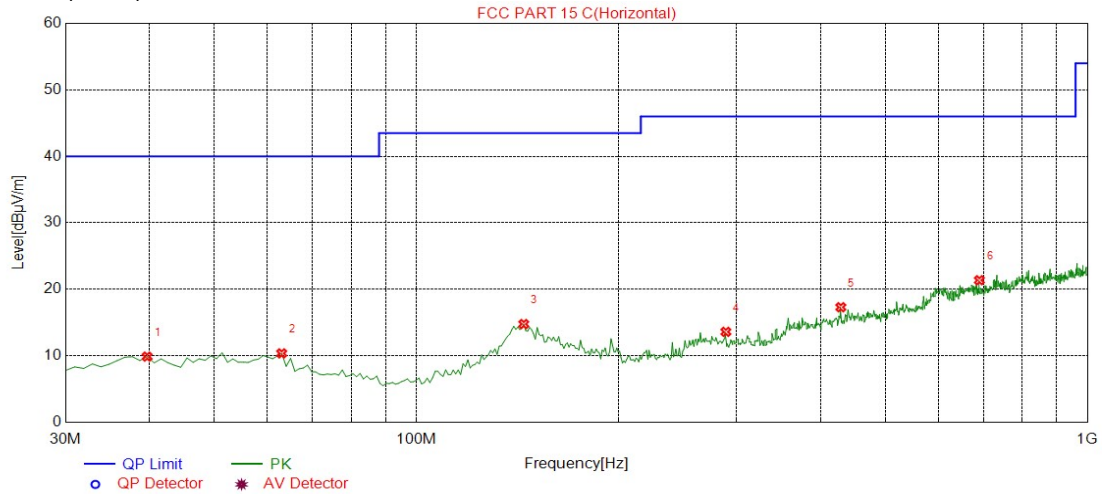
802.11n(HT20) - 2462MHz Test Result


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	14.04	-17.00	40.00	25.96	100	10	Horizontal
62.0420	10.50	-16.99	40.00	29.50	100	200	Horizontal
145.5455	14.87	-15.14	43.50	28.63	100	280	Horizontal
264.9750	13.89	-16.71	46.00	32.11	100	10	Horizontal
441.6917	17.65	-12.84	46.00	28.35	100	170	Horizontal
601.9019	20.93	-9.80	46.00	25.07	100	240	Horizontal

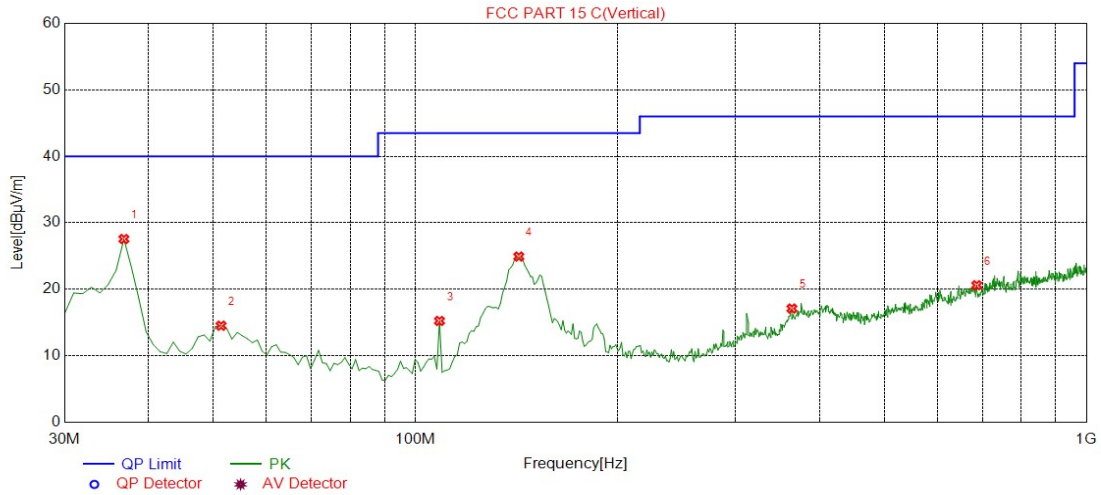


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.39	-17.00	40.00	12.61	100	10	Vertical
108.6486	14.92	-19.54	43.50	28.58	100	10	Vertical
141.6617	25.03	-15.38	43.50	18.47	100	10	Vertical
186.3263	15.65	-17.07	43.50	27.85	100	50	Vertical
312.5526	15.31	-15.18	46.00	30.69	100	10	Vertical
406.7367	17.87	-13.68	46.00	28.13	100	60	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBuV/m		dBµV/m				
1000-25000MHz	8132.5663	52.52	H	74.00	PK	21.93	-11.63	Pass
	--	--	H	--	AV	--	--	Pass
	8350.1751	52.07	H	74.00	PK	21.48	-11.47	Pass
	--	--	V	--	AV	--	--	Pass

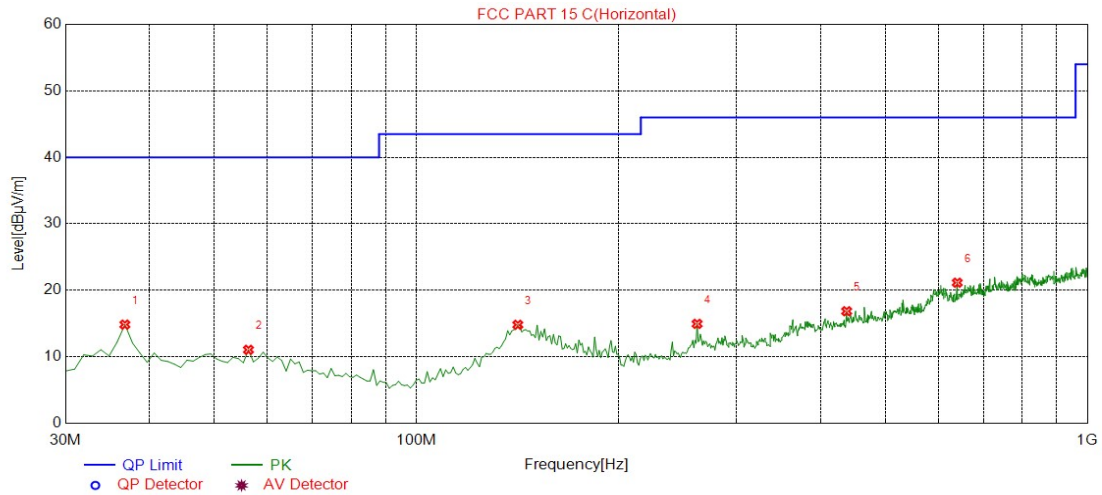
802.11n(HT40) - 2422MHz Test Result


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
39.7097	9.88	-16.44	40.00	30.12	100	90	Horizontal
63.0130	10.37	-17.24	40.00	29.63	100	140	Horizontal
144.5746	14.78	-15.20	43.50	28.72	100	240	Horizontal
289.2492	13.61	-15.86	46.00	32.39	100	110	Horizontal
429.0691	17.31	-13.10	46.00	28.69	100	70	Horizontal
690.2603	21.37	-8.21	46.00	24.63	100	80	Horizontal

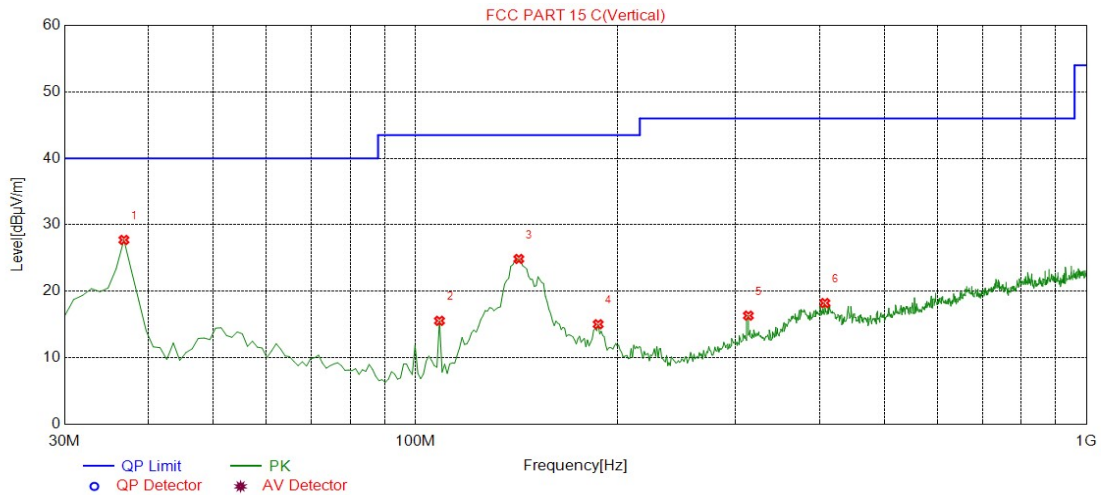


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.57	-17.00	40.00	12.43	100	280	Vertical
51.3614	14.53	-16.18	40.00	25.47	100	80	Vertical
108.6486	15.25	-19.54	43.50	28.25	100	110	Vertical
142.6326	24.93	-15.32	43.50	18.57	100	70	Vertical
364.0140	17.11	-14.71	46.00	28.89	100	10	Vertical
686.3764	20.62	-8.27	46.00	25.38	100	60	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBuV/m		dBµV/m				
1000-25000MHz	8852.9265	53.74	H	74.00	PK	20.26	-10.92	Pass
	--	--	H	--	AV	--	--	Pass
	9055.5278	52.98	V	74.00	PK	21.02	-10.50	Pass
	--	--	V	--	AV	--	--	Pass

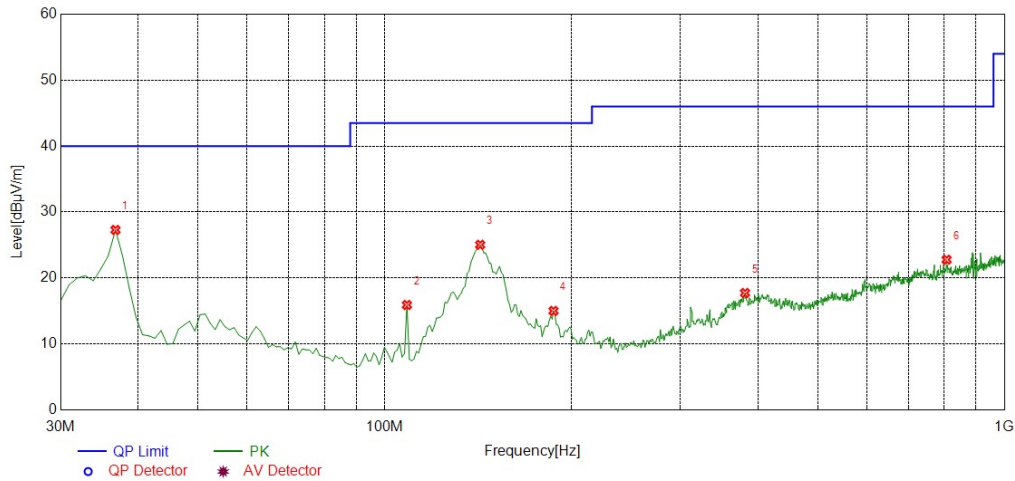
802.11n(HT40) - 2437MHz Test Result


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	14.85	-17.00	40.00	25.15	100	10	Horizontal
56.2162	11.06	-16.34	40.00	28.94	100	320	Horizontal
141.6617	14.82	-15.38	43.50	28.68	100	240	Horizontal
262.0621	14.96	-16.82	46.00	31.04	100	350	Horizontal
437.8078	16.86	-12.93	46.00	29.14	100	10	Horizontal
639.7698	21.15	-9.04	46.00	24.85	100	10	Horizontal

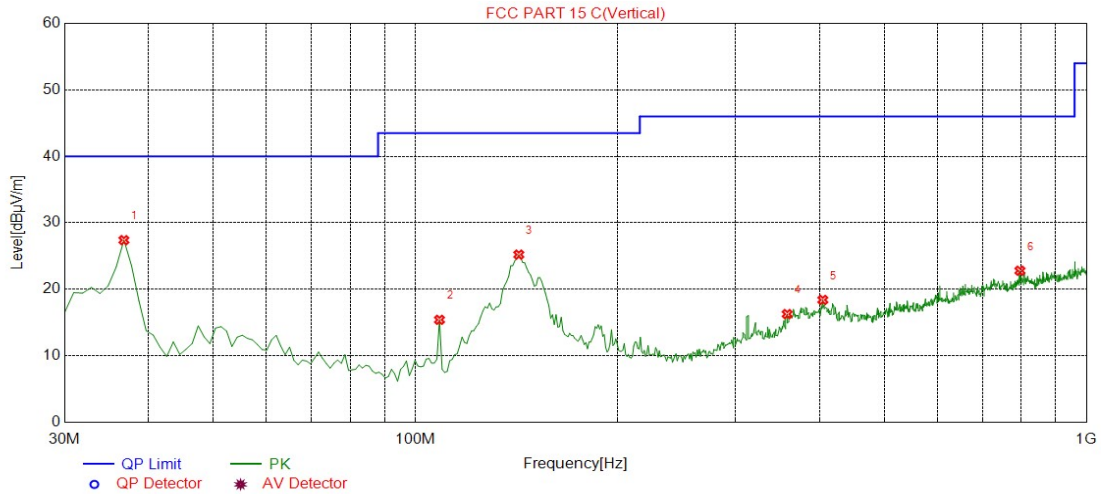


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.73	-17.00	40.00	12.27	100	20	Vertical
108.6486	15.57	-19.54	43.50	27.93	100	80	Vertical
142.6326	24.87	-15.32	43.50	18.63	100	280	Vertical
187.2973	15.05	-17.13	43.50	28.45	100	60	Vertical
313.5235	16.35	-15.17	46.00	29.65	100	240	Vertical
407.7077	18.24	-13.64	46.00	27.76	100	280	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr. (dB)	Result
	MHz	dBuV/m		dBµV/m		dB		
1000-25000MHz	9565.7829	52.37	H	74.00	PK	21.63	-9.86	Pass
	--	--	H	--	AV	--	--	Pass
	8537.7689	51.63	V	74.00	PK	22.37	-11.52	Pass
	--	--	V	--	AV	--	--	Pass

802.11n(HT40) - 2452MHz Test Result


Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.30	-17.00	40.00	12.70	100	110	Horizontal
108.6486	15.92	-19.54	43.50	27.58	100	330	Horizontal
142.6326	25.04	-15.32	43.50	18.46	100	10	Horizontal
187.2973	15.02	-17.13	43.50	28.48	100	40	Horizontal
381.4915	17.74	-14.44	46.00	28.26	100	70	Horizontal
806.7768	22.78	-6.67	46.00	23.22	100	10	Horizontal



Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
36.7968	27.40	-17.00	40.00	12.60	100	60	Vertical
108.6486	15.42	-19.54	43.50	28.08	100	60	Vertical
142.6326	25.22	-15.32	43.50	18.28	100	190	Vertical
358.1882	16.28	-14.77	46.00	29.72	100	330	Vertical
404.7948	18.41	-13.75	46.00	27.59	100	10	Vertical
796.0961	22.80	-6.70	46.00	23.20	100	290	Vertical

Frequency Band	Frequency	Emission Level	Polarization	Limit	Detector	Margin	Corr.	Result
	MHz	dBuV/m		dBµV/m		dB	(dB)	
1000-25000MHz	9753.3767	52.84	H	74.00	PK	21.16	-9.34	Pass
	--	--	H	--	AV	--	--	Pass
	9513.2501	51.84	V	74.00	PK	22.16	-9.79	Pass
	--	--	V	--	AV	--	--	Pass

Remark:

- (1) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.
- (2) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Above 1GHz: Corrector factor = Antenna Factor + Cable Loss - Amplifier Gain.
- (4) Below 1GHz: Corrector factor = Antenna Factor + Cable Loss - Amplifier Gain.
- (5) Note: The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Band Edge (Radiated)

802.11b - 2412MHz Test Result



Freq. [MHz]	PK Level [dBµV/m]	Factor [dB]	PK Limit [dBµV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	57.27	-23.89	74.00	16.73	150	Horizontal
2386.24	60.61	-23.89	74.00	13.39	150	Horizontal

PK level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.



Freq. [MHz]	AV Level [dBμV/m]	Factor [dB]	AV Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	43.50	-23.89	54.00	10.50	150	Horizontal
2386.58	51.36	-23.89	54.00	2.64	150	Horizontal

AV level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.

802.11b - 2462MHz Test Result


Freq. [MHz]	PK Level [dBµV/m]	Factor [dB]	PK Limit [dBµV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	41.33	-23.89	74.00	32.67	150	Horizontal
2483.54	40.71	-23.89	74.00	26.01	150	Horizontal

PK level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.

802.11g - 2412MHz Test Result



Freq. [MHz]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	69.40	-23.89	74.00	4.60	150	Horizontal
2389.60	68.67	-23.89	74.00	5.33	150	Horizontal

PK level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.



Freq. [MHz]	AV Level [dBμV/m]	Factor [dB]	AV Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	51.82	-23.89	54.00	2.18	150	Horizontal
2389.60	50.75	-23.89	54.00	3.25	150	Horizontal

AV level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.

802.11g - 2462MHz Test Result


Freq. [MHz]	PK Level [dBµV/m]	Factor [dB]	PK Limit [dBµV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	56.35	-23.89	74.00	17.65	150	Horizontal
2483.54	56.51	-23.89	74.00	17.49	150	Horizontal

PK level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.



Freq. [MHz]	AV Level [dBμV/m]	Factor [dB]	AV Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	38.43	-23.89	54.00	15.57	150	Horizontal
2483.54	38.35	-23.89	54.00	15.65	150	Horizontal

AV level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.

802.11n (HT20) - 2412MHz Test Result


Freq. [MHz]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	70.65	-23.89	74.00	3.35	150	Horizontal
2389.60	69.53	-23.89	74.00	4.47	150	Horizontal

PK level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.



Freq. [MHz]	AV Level [dBμV/m]	Factor [dB]	AV Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	50.76	-23.89	54.00	3.24	150	Horizontal
2389.60	49.84	-23.89	54.00	4.16	150	Horizontal

AV level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.

802.11n (HT20) - 2462MHz Test Result


Freq. [MHz]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	65.93	-23.89	74.00	8.07	150	Horizontal
2483.54	66.42	-23.89	74.00	7.58	150	Horizontal

PK level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.



Freq. [MHz]	AV Level [dBμV/m]	Factor [dB]	AV Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	48.80	-23.89	54.00	5.20	150	Horizontal
2483.54	48.78	-23.89	54.00	5.22	150	Horizontal

AV level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.

802.11n (HT40) - 2422MHz Test Result


Freq. [MHz]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	66.36	-23.89	74.00	7.64	150	Horizontal
2388.62	68.69	-23.89	74.00	5.31	150	Horizontal

PK level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.



Freq. [MHz]	AV Level [dBμV/m]	Factor [dB]	AV Limit [dBμV/m]	Margin [dB]	Height [cm]	Polarity
2390.00	50.52	-23.89	54.00	3.48	150	Horizontal
2388.62	49.54	-23.89	54.00	4.46	150	Horizontal

AV level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.

802.11n (HT40) - 2452MHz Test Result


Freq. [MHz]	PK Level [dBµV/m]	Factor [dB]	PK Limit [dBµV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	63.70	-23.89	74.00	10.30	150	Horizontal
2487.90	64.83	-23.89	74.00	9.17	150	Horizontal

PK level= Read level + Factor

Factor= Antenna Factor + Cable loss – Preamp Factor

The worst emission data were recorded.



Freq. [MHz]	AV Level [dBµV/m]	Factor [dB]	AV Limit [dBµV/m]	Margin [dB]	Height [cm]	Polarity
2483.50	51.75	-23.89	54.00	2.25	150	Horizontal
2483.77	51.70	-23.89	54.00	2.30	150	Horizontal

AV level= Read level + Factor
 Factor= Antenna Factor + Cable loss – Preamp Factor
 The worst emission data were recorded.

End