RF TEST REPORT

Applicant	Xiaomi Communications Co., Ltd.
FCC ID	2AFZZ3QPG
Product	Mobile Phone
Brand	POCO
Model	220333QPG
Report No.	R2202A0131-R6V1
Issue Date	March 31, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2021)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Peng Tao

Approved by: Kai Xu

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TABLE OF CONTENT

Version	Revision description	Issue Date
Rev.0	Initial issue of report.	March 24, 2022
Rev.1	Update data. Update description.	March 31, 2022
Note: This revised report (Report No. R2202A0131-R6V1) supersedes and replaces the previously issued report (Report No. R2202A0131-R6). Please discard or destroy the previously issued report and dispose of it accordingly.		

Summary of measurement results

Number	Test Case	Clause in FCC rules	Verdict
1	Average output power	15.407(a)	PASS
2	Occupied bandwidth	15.407(e)	PASS
3	Frequency stability	15.407(g)	PASS
4	Power spectral density	15.407(a)	PASS
5	Unwanted Emissions	15.407(b)	PASS
6	Conducted Emissions	15.207	PASS
Date of Testing: February 28, 2022 ~ March 8, 2022 and March 31, 2022 Date of Sample Received: February 28, 2022			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1. Test Laboratory

1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

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

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

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

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Xiaomi Communications Co., Ltd.
Applicant address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer	Xiaomi Communications Co., Ltd.
Manufacturer address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

2.2. General information

EUT Description		
Model	220333QPG	
IMEI	IMEI 1: 862598050104504 IMEI 2: 862598050104512	
Hardware Version	P2.0	
Software Version	MIUI 13	
Antenna Type	PIFA Antenna	
Antenna Gain	Band	Gain(dBi)
	U-NII-1	-0.92
	U-NII-2A	-0.72
	U-NII-2C	-0.55
	U-NII-3	-0.45
Directional Gain	NA	
Operating Frequency Range(s)	U-NII-1: 5150MHz-5250MHz U-NII-2A: 5250MHz -5350MHz U-NII-2C: 5470MHz-5725MHz U-NII-3: 5725MHz -5850MHz	
Modulation Type	802.11a/n (HT20/HT40) : OFDM 802.11ac (VHT20/VHT40/VHT80): OFDM	
Max. Conducted Power	15.94 dBm	
Testing temperature range	-20 ° C to 50° C	
Operating temperature range	0 ° C to 40° C	
Operating voltage range	3.6V to 4.2V	
State DC voltage	3.87V	
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. 2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.		

3. (a) Manufacturers implements security features in any digitally modulated devices capable of operating in any of the U-NII bands, so that third parties are not able to reprogram the device to operate outside the parameters for which the device was certified. The software prevents the user from operating the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved for the device. Manufacturers uses means including, but not limited to the use of a private network that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements and must describe the methods in their application for equipment authorization.
(b) Manufacturers take steps to ensure that DFS functionality cannot be disabled by the operator of the U-NII device.

3. Applied Standards

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

Test standards:

FCC CFR47 Part 15E (2021) Unlicensed National Information Infrastructure Devices

ANSI C63.10 (2013)

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

4. Test Configuration

Test Mode

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

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

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Mode	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Wireless Technology and Frequency Range

Wireless Technology		Bandwidth	Channel	Frequency
Wi-Fi	U-NII-1	20 MHz	36	5180MHz
			40	5200MHz
			44	5220MHz
			48	5240MHz
		40 MHz	38	5190MHz
			46	5230MHz
		80 MHz	42	5210MHz
	U-NII-2A	20 MHz	52	5260MHz
			56	5280MHz
			60	5300MHz
			64	5320MHz
		40 MHz	54	5270MHz
			62	5310MHz
		80 MHz	58	5290MHz
	U-NII-2C	20 MHz	100	5500MHz
			104	5520MHz
			108	5540MHz
			112	5560MHz
			116	5580MHz
			120	5600MHz
			124	5620MHz
			128	5640MHz
			132	5660MHz
			136	5680MHz
			140	5700MHz
		40 MHz	102	5510MHz
			110	5550MHz
			118	5590MHz
			126	5630MHz
			134	5670MHz
			142	5710MHz
		80 MHz	106	5530MHz
			122	5610MHz
			138	5690MHz
	U-NII-3	20 MHz	149	5745MHz
			153	5765MHz
			157	5785MHz
			161	5805MHz

			165	5825MHz
		40 MHz	151	5755MHz
			159	5795MHz
		80 MHz	155	5775MHz
Does this device support TPC Function? ☐Yes ☒No				
Does this device support TDWR Band? ☒Yes ☐No				

5. Test Case Results

5.1. Occupied Bandwidth

Ambient condition

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

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

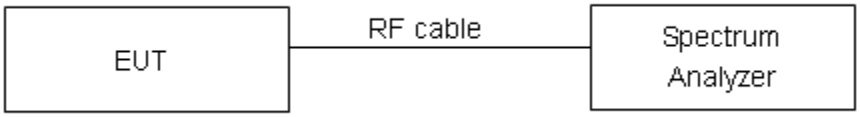
For U-NII-1/U-NII-2A/U-NII-2C, set RBW ≈1% OCB kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

For U-NII-3, Set RBW = 100 kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

Use the 99 % power bandwidth function of the instrument

Test Setup



Limits

Rule FCC Part §15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Measurement Uncertainty

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

Test Results:

U-NII-1

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5180	16.585	22.922	PASS
	5200	16.651	22.827	PASS
	5240	16.636	22.168	PASS
802.11n HT20	5180	17.770	23.228	PASS
	5200	17.762	23.601	PASS
	5240	17.772	24.519	PASS
802.11n HT40	5190	35.949	39.971	PASS
	5230	36.000	40.035	PASS
802.11ac VHT20	5180	17.757	23.410	PASS
	5200	17.799	24.179	PASS
	5240	17.781	24.096	PASS
802.11ac VHT40	5190	35.987	40.332	PASS
	5230	36.055	40.445	PASS
802.11ac VHT80	5210	74.416	80.338	PASS

U-NII-2A

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5260	16.627	22.799	PASS
	5300	16.657	22.170	PASS
	5320	16.622	22.550	PASS
802.11n HT20	5260	17.748	23.138	PASS
	5300	17.761	22.632	PASS
	5320	17.803	24.211	PASS
802.11n HT40	5270	36.039	40.057	PASS
	5310	36.039	40.265	PASS
802.11ac VHT20	5260	17.787	23.908	PASS
	5300	17.756	23.223	PASS
	5320	17.784	23.297	PASS
802.11ac VHT40	5270	35.995	40.502	PASS
	5310	36.045	39.892	PASS
802.11ac VHT80	5290	74.452	80.103	PASS

U-NII-2C

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5500	16.649	22.756	PASS
	5600	16.586	22.137	PASS
	5700	16.609	23.130	PASS
	5720	16.653	22.428	PASS
802.11n HT20	5500	17.763	23.450	PASS
	5600	17.772	23.038	PASS
	5700	17.727	23.213	PASS
	5720	17.773	23.017	PASS
802.11n HT40	5510	36.042	39.927	PASS
	5590	36.066	40.029	PASS
	5670	35.965	39.956	PASS
	5710	36.056	40.851	PASS
802.11ac VHT20	5500	17.731	23.244	PASS
	5600	17.730	23.533	PASS
	5700	17.737	22.903	PASS
	5720	17.772	22.991	PASS
802.11ac VHT40	5510	36.027	39.892	PASS
	5590	36.042	40.386	PASS
	5670	36.015	40.949	PASS
	5710	36.069	40.329	PASS
802.11ac VHT80	5610	74.555	80.434	PASS
	5690	74.634	80.401	PASS

U-NII-3

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	5745	16.480	15.910	500	PASS
	5785	16.487	16.300	500	PASS
	5825	16.491	14.140	500	PASS
802.11n HT20	5745	17.630	15.030	500	PASS
	5785	17.630	15.410	500	PASS
	5825	17.680	14.910	500	PASS
802.11n HT40	5755	36.034	35.110	500	PASS
	5795	35.996	35.050	500	PASS
802.11ac VHT20	5745	17.654	15.090	500	PASS
	5785	17.618	13.880	500	PASS
	5825	17.668	16.510	500	PASS
802.11ac VHT40	5755	36.036	35.130	500	PASS
	5795	35.942	35.100	500	PASS
802.11ac VHT80	5775	74.430	67.590	500	PASS

U-NII-1, 802.11a

Carrier frequency (MHz): 5180

U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5180

U-NII-1, 802.11a

Carrier frequency (MHz): 5200

U-NII-1, 802.11n HT20

Carrier frequency (MHz): 5200

U-NII-1, 802.11a

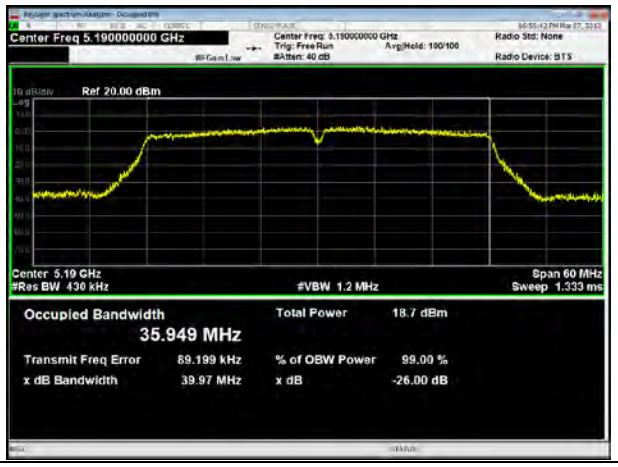
Carrier frequency (MHz):5240

U-NII-1, 802.11n HT20

Carrier frequency (MHz):5240

U-NII-1, 802.11n HT40

Carrier frequency (MHz): 5190

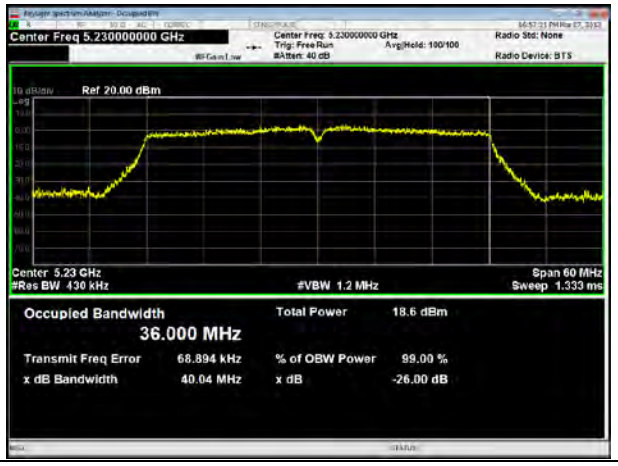


U-NII-1, 802.11ac VHT20

Carrier frequency (MHz): 5180

U-NII-1, 802.11n HT40

Carrier frequency (MHz): 5230

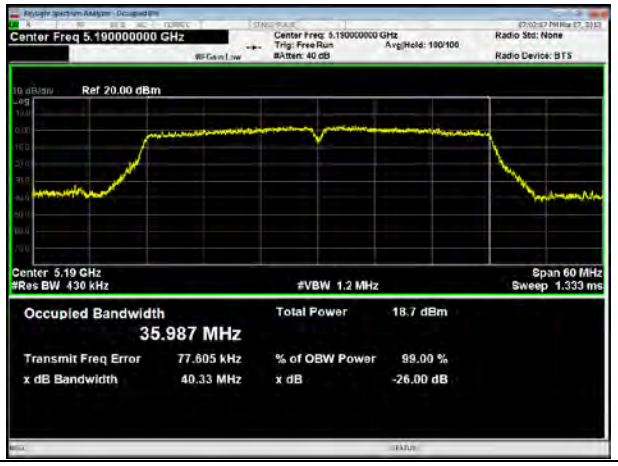


U-NII-1, 802.11ac VHT20

Carrier frequency (MHz): 5200

U-NII-1, 802.11ac VHT40

Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20

Carrier frequency (MHz):5240

U-NII-1, 802.11ac VHT40

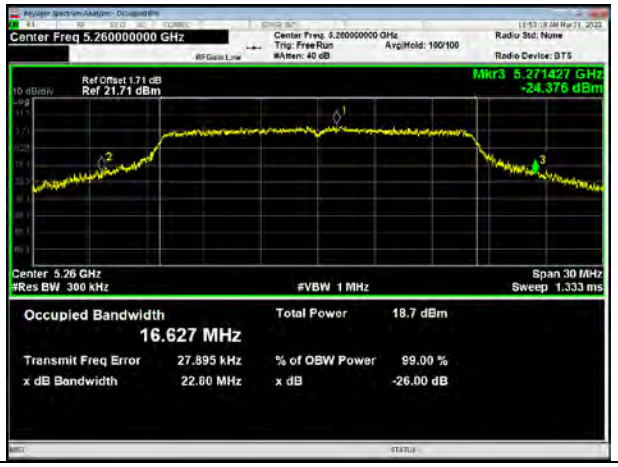
Carrier frequency (MHz): 5230

U-NII-1, 802.11ac VHT80

Carrier frequency (MHz): 5210

U-NII-2A, 802.11a

Carrier frequency (MHz): 5260



U-NII-2A, 802.11n HT20

Carrier frequency (MHz): 5260

U-NII-2A, 802.11a

Carrier frequency (MHz): 5300

U-NII-2A, 802.11n HT20

Carrier frequency (MHz): 5300

U-NII-2A, 802.11a

Carrier frequency (MHz):5320

U-NII-2A, 802.11n HT20

Carrier frequency (MHz):5320

U-NII-2A, 802.11n HT40

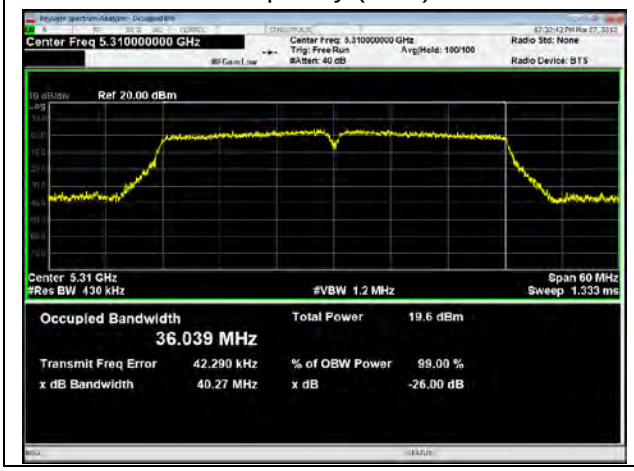
Carrier frequency (MHz): 5270

U-NII-2A, 802.11ac VHT20

Carrier frequency (MHz):5260

U-NII-2A, 802.11n HT40

Carrier frequency (MHz): 5310

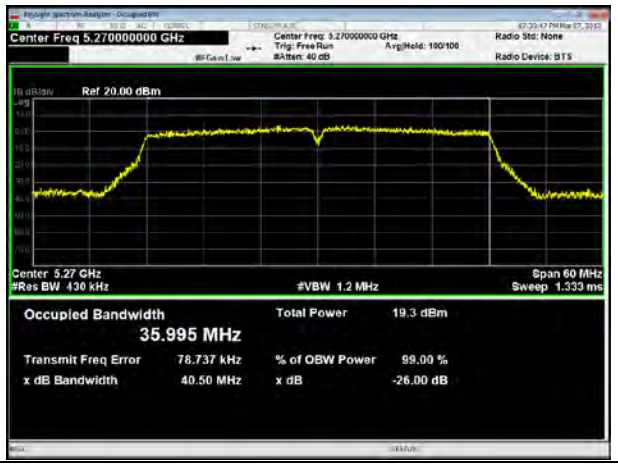


U-NII-2A, 802.11ac VHT20

Carrier frequency (MHz): 5300

U-NII-2A, 802.11ac VHT40

Carrier frequency (MHz): 5270

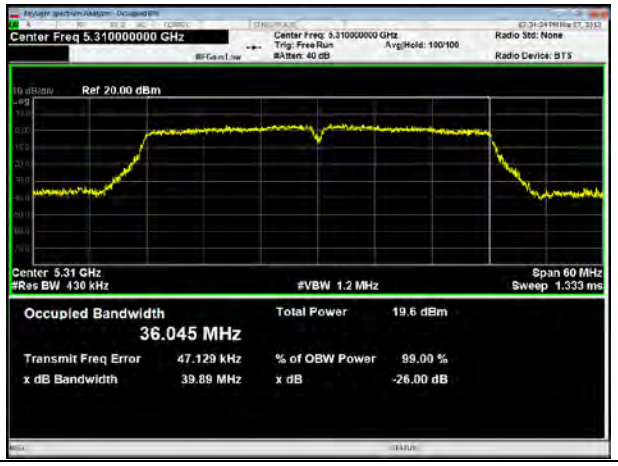


U-NII-2A, 802.11ac VHT20

Carrier frequency (MHz):5320

U-NII-2A, 802.11ac VHT40

Carrier frequency (MHz): 5310



U-NII-2A, 802.11ac VHT80

Carrier frequency (MHz): 5290

U-NII-2C, 802.11a

Carrier frequency (MHz): 5500

U-NII-2C, 802.11n HT20

Carrier frequency (MHz): 5500

U-NII-2C, 802.11a

Carrier frequency (MHz): 5600

U-NII-2C, 802.11n HT20

Carrier frequency (MHz): 5600

U-NII-2C, 802.11a

Carrier frequency (MHz): 5700

U-NII-2C, 802.11n HT20

Carrier frequency (MHz): 5700

U-NII-2C, 802.11a

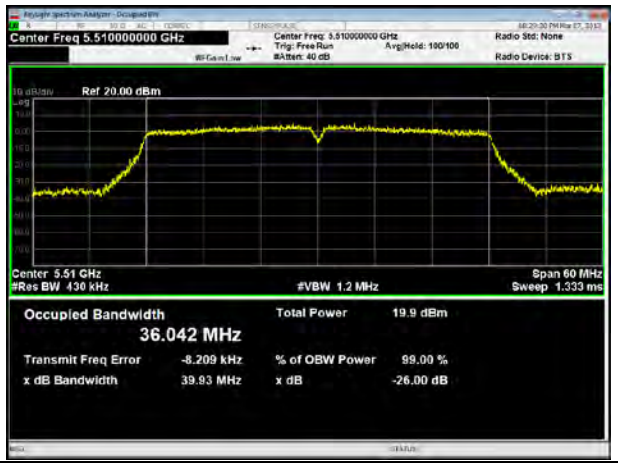
Carrier frequency (MHz):5720

U-NII-2C, 802.11n HT20

Carrier frequency (MHz): 5720

U-NII-2C, 802.11n HT40

Carrier frequency (MHz): 5510

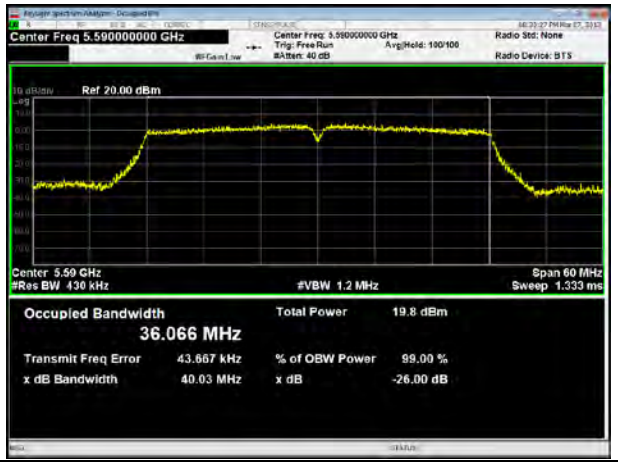


U-NII-2C, 802.11ac VHT20

Carrier frequency (MHz): 5500

U-NII-2C, 802.11n HT40

Carrier frequency (MHz): 5590



U-NII-2C, 802.11ac VHT20

Carrier frequency (MHz): 5600

U-NII-2C, 802.11n HT40

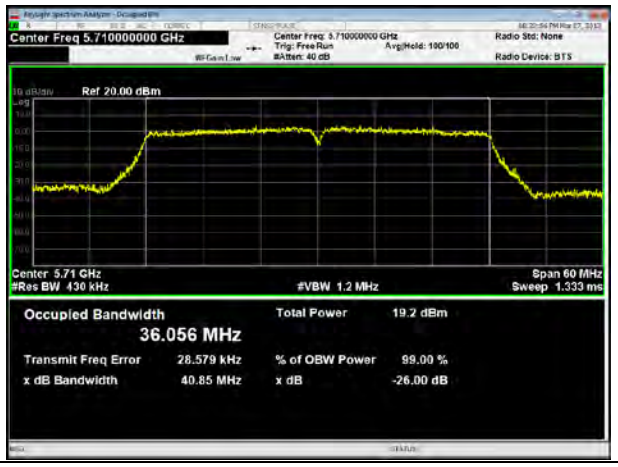
Carrier frequency (MHz): 5670

U-NII-2C, 802.11ac VHT20

Carrier frequency (MHz): 5700

U-NII-2C, 802.11n HT40

Carrier frequency (MHz): 5710

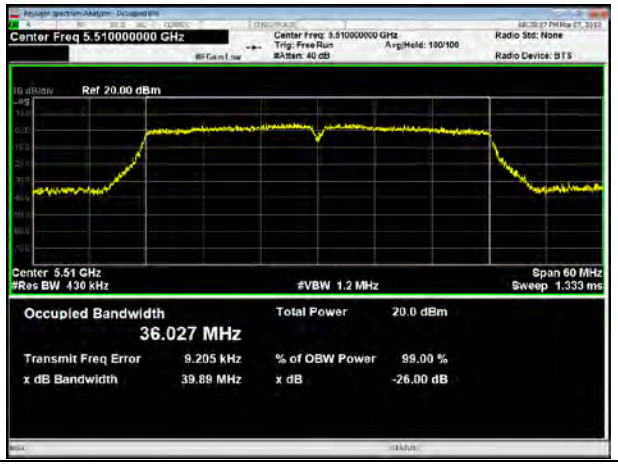


U-NII-2C, 802.11ac VHT20

Carrier frequency (MHz):5720

U-NII-2C, 802.11ac VHT40

Carrier frequency (MHz): 5510

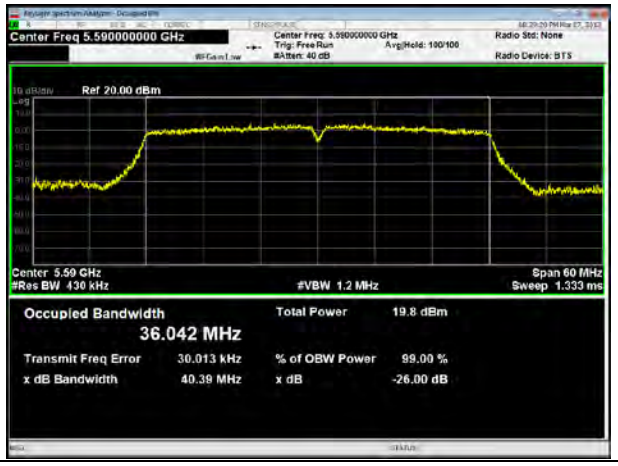


U-NII-2C, 802.11ac VHT80

Carrier frequency (MHz): 5610

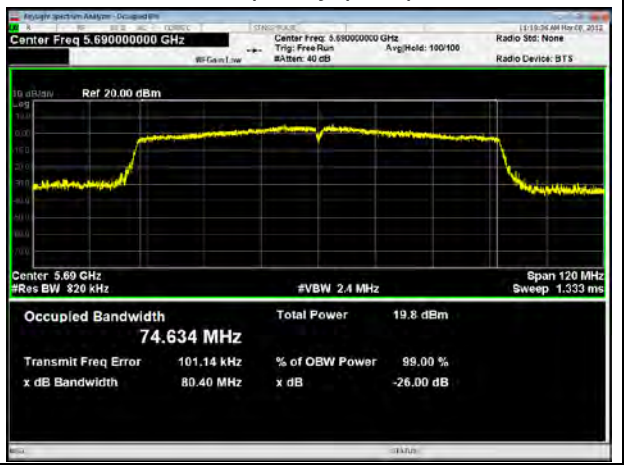
U-NII-2C, 802.11ac VHT40

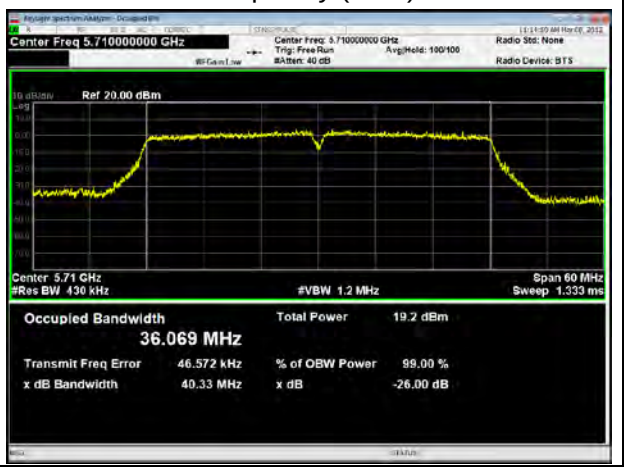
Carrier frequency (MHz): 5590



U-NII-2C, 802.11ac VHT80

Carrier frequency (MHz): 5690



U-NII-2C, 802.11ac VHT40 Carrier frequency (MHz): 5670	U-NII-2C, 802.11ac VHT40 Carrier frequency (MHz): 5710
	

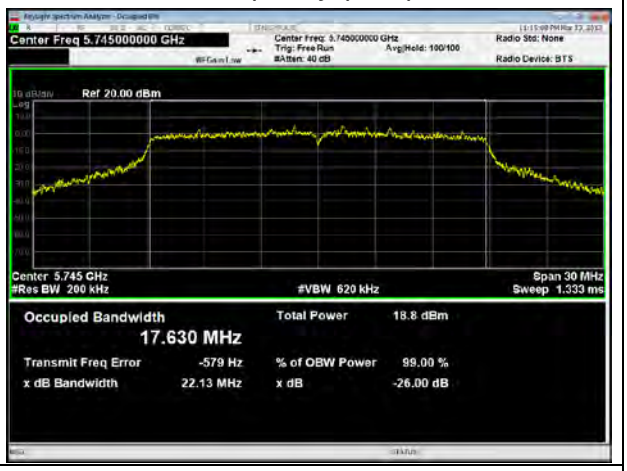
99% bandwidth

U-NII-3, 802.11a

Carrier frequency (MHz): 5745

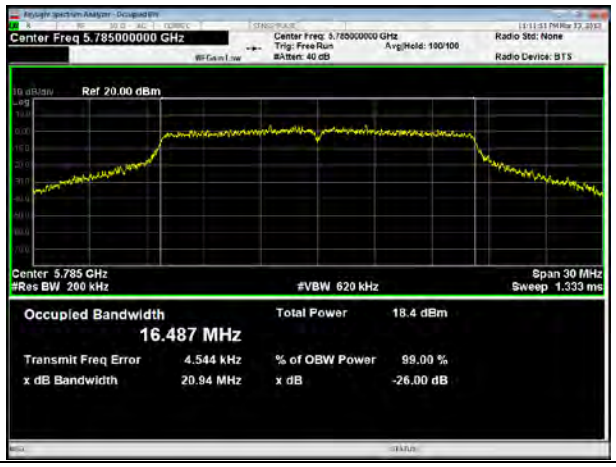
U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5745



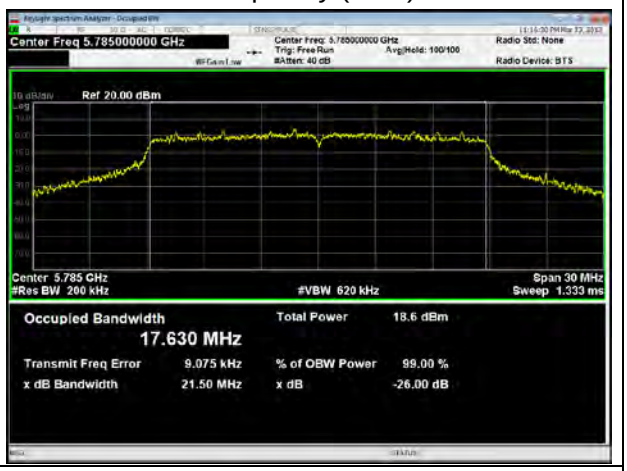
U-NII-3, 802.11a

Carrier frequency (MHz): 5785



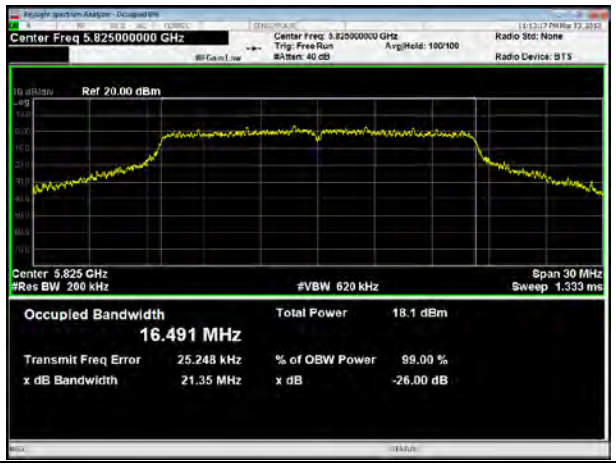
U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5785



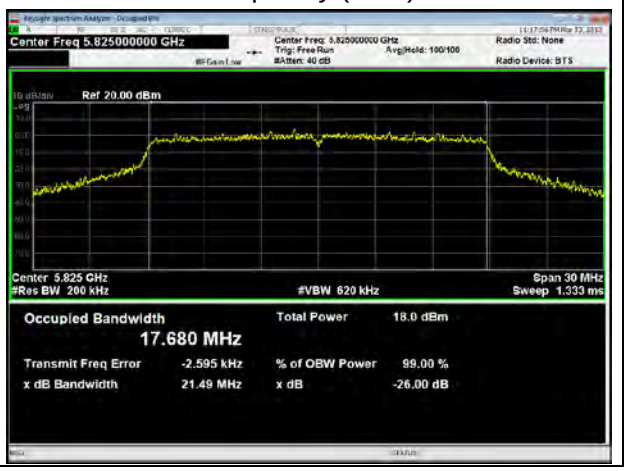
U-NII-3, 802.11a

Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5795

U-NII-3, 802.11ac VHT20

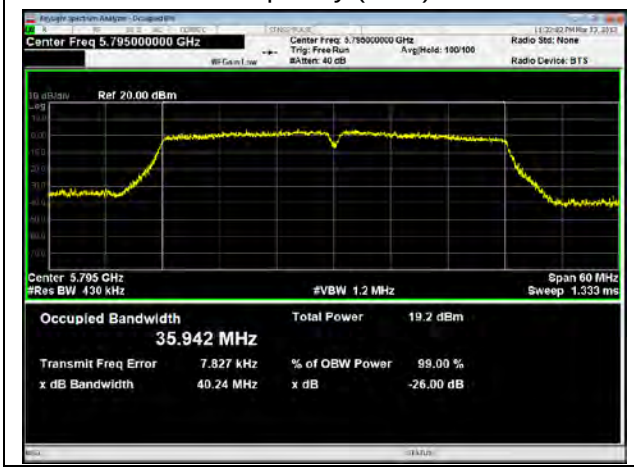
Carrier frequency (MHz): 5785

U-NII-3, 802.11ac VHT40

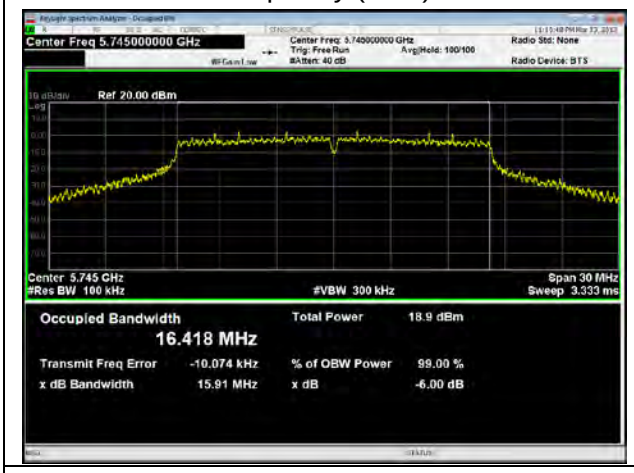
Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5825

U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5795	U-NII-3, 802.11ac VHT80 Carrier frequency (MHz): 5775
	

Minimum 6 dB bandwidth

U-NII-3, 802.11a Carrier frequency (MHz): 5745	U-NII-3, 802.11n HT20 Carrier frequency (MHz): 5745
	
U-NII-3, 802.11a Carrier frequency (MHz): 5785	U-NII-3, 802.11n HT20 Carrier frequency (MHz): 5785
	

U-NII-3, 802.11a

Carrier frequency (MHz): 5825

U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5825

U-NII-3, 802.11n HT40

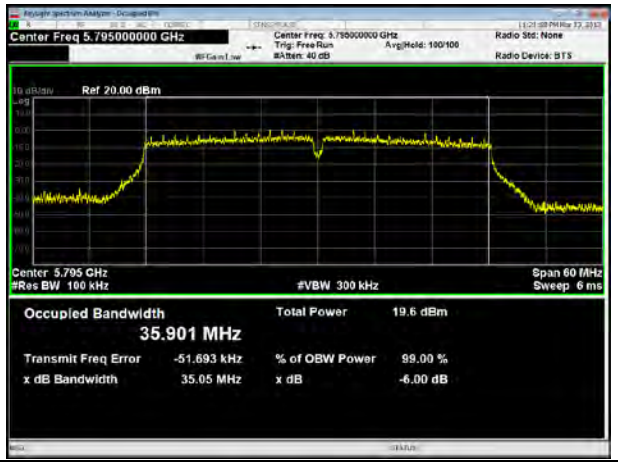
Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5785

U-NII-3, 802.11ac VHT40

Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20

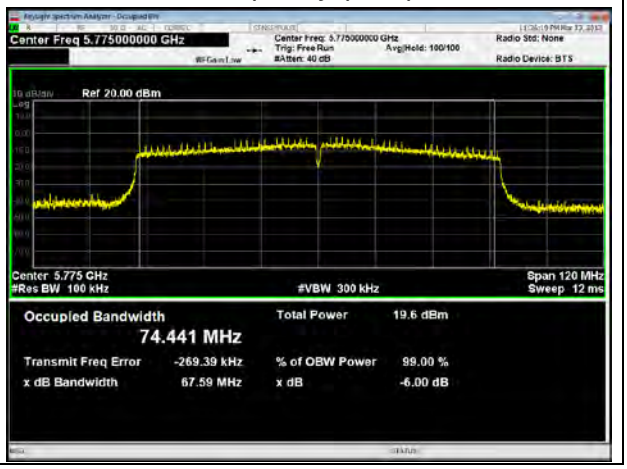
Carrier frequency (MHz): 5825

U-NII-3, 802.11ac VHT40

Carrier frequency (MHz): 5795

U-NII-3, 802.11ac VHT80

Carrier frequency (MHz): 5775



5.2. Average Power Output

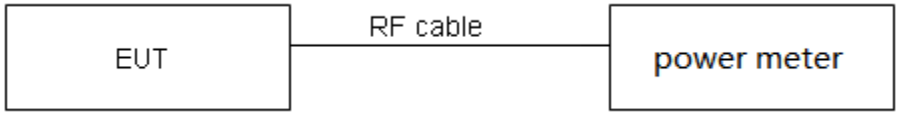
Ambient condition

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

Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

Test Setup



Limits

Rule FCC Part 15.407(a)(1)(2)(3)
(1) For the band 5.15-5.25 GHz.
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude

the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3)For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Measurement Uncertainty

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

Test Results

Mode	T_{on} (ms)	$T_{(on+off)}$ (ms)	Duty cycle	Duty cycle correction Factor(dB)
802.11a	1.39	1.42	0.97	0.14
802.11n HT20	1.30	1.34	0.97	0.14
802.11n HT40	0.64	0.68	0.95	0.24
802.11ac VHT20	1.30	1.34	0.97	0.14
802.11ac VHT40	1.30	1.34	0.97	0.14
802.11ac VHT80	0.32	0.36	0.90	0.47
Note: when Duty cycle≥0.98, Duty cycle correction Factor not required.				

Power Index								
Channel	802.11a	802.11n HT20	802.11ac VHT20	Channel	802.11n HT40	802.11ac VHT40	Channel	802.11ac VHT80
CH36	15	15	15	CH38	14	14	CH42	12
CH40	15	15	15	CH46	14	14	/	/
CH48	15	15	15	/	/	/	/	/
CH52	15	15	15	CH54	14	14	CH58	12
CH60	15	15	15	CH62	14	14	/	/
CH64	15	15	15	/	/	/	/	/
CH100	15	15	15	CH102	14	14	CH122	12
CH120	15	15	15	CH118	14	14	CH138	12
CH140	15	15	15	CH134	14	14	/	/
CH144	15	15	15	CH142	14	14	/	/
CH149	14	14	14	CH151	14	14	CH155	14
CH157	14	14	14	CH159	14	14	/	/
CH165	14	14	14	/	/	/	/	/

Test Mode		Channel/Frequency (MHz)	B=26 dB bandwidth (MHz)	Limit 11 dBm + 10 log B (dBm)	Final Limit(dBm)
U-NII-2A	802.11a	52/5260	22.799	24.58 > 24	24.00
		60/5300	22.170	24.46 > 24	24.00
		64/5320	22.550	24.53 > 24	24.00
	802.11n HT20	52/5260	23.138	24.64 > 24	24.00
		60/5300	22.632	24.55 > 24	24.00
		64/5320	24.211	24.84 > 24	24.00
	802.11n HT40	54/5270	40.057	27.03 > 24	24.00
		62/5310	40.265	27.05 > 24	24.00
	802.11ac VHT20	52/5260	23.908	24.79 > 24	24.00
		60/5300	23.223	24.66 > 24	24.00
		64/5320	23.297	24.67 > 24	24.00
	802.11ac VHT40	54/5270	40.502	27.07 > 24	24.00
		62/5310	39.892	27.01 > 24	24.00
	802.11ac VHT80	58/5290	80.103	30.04 > 24	24.00
U-NII-2C	802.11a	100/5500	22.756	24.57 > 24	24.00
		120/5600	22.137	24.45 > 24	24.00
		140/5700	23.130	24.64 > 24	24.00
		144/5720	22.428	24.51 > 24	24.00
	802.11n HT20	100/5500	23.450	24.70 > 24	24.00
		120/5600	23.038	24.62 > 24	24.00
		140/5700	23.213	24.66 > 24	24.00
		144/5720	23.017	24.62 > 24	24.00
	802.11n HT40	102/5510	39.927	27.01 > 24	24.00
		118/5590	40.029	27.02 > 24	24.00
		134/5670	39.956	27.02 > 24	24.00
		142/5710	40.851	27.11 > 24	24.00
	802.11ac VHT20	100/5500	23.244	24.66 > 24	24.00
		120/5600	23.533	24.72 > 24	24.00
		140/5700	22.903	24.60 > 24	24.00
		144/5720	22.991	24.62 > 24	24.00
	802.11ac VHT40	102/5510	39.892	27.01 > 24	24.00
		118/5590	40.386	27.06 > 24	24.00
		134/5670	40.949	27.12 > 24	24.00
		142/5710	40.329	27.06 > 24	24.00
	802.11ac VHT80	122/5610	80.434	30.05 > 24	24.00
		138/5690	80.401	30.05 > 24	24.00
Note: 250mW=24dBm					

Note: Average Power with duty factor = Average Power Measured +Duty cycle correction facto

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	14.03	14.17	24.00	PASS
	40/5200	14.31	14.45	24.00	PASS
	48/5240	14.80	14.94	24.00	PASS
802.11n HT20	36/5180	13.92	14.06	24.00	PASS
	40/5200	14.15	14.29	24.00	PASS
	48/5240	14.60	14.74	24.00	PASS
802.11n HT40	38/5190	14.20	14.44	24.00	PASS
	46/5230	14.56	14.80	24.00	PASS
802.11ac VHT20	36/5180	13.92	14.06	24.00	PASS
	40/5200	14.12	14.26	24.00	PASS
	48/5240	14.66	14.80	24.00	PASS
802.11ac VHT40	38/5190	14.23	14.37	24.00	PASS
	46/5230	14.60	14.74	24.00	PASS
802.11ac VHT80	42/5210	12.75	13.22	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	15.17	15.31	24.00	PASS
	60/5300	15.10	15.24	24.00	PASS
	64/5320	15.23	15.37	24.00	PASS
802.11n HT20	52/5260	14.63	14.77	24.00	PASS
	60/5300	15.00	15.14	24.00	PASS
	64/5320	15.06	15.20	24.00	PASS
802.11n HT40	54/5270	14.91	15.15	24.00	PASS
	62/5310	15.10	15.34	24.00	PASS
802.11ac VHT20	52/5260	14.70	14.84	24.00	PASS
	60/5300	15.03	15.17	24.00	PASS
	64/5320	15.13	15.27	24.00	PASS
802.11ac VHT40	54/5270	15.01	15.15	24.00	PASS
	62/5310	15.11	15.25	24.00	PASS
802.11ac VHT80	58/5290	12.88	13.35	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	15.60	15.74	24.00	PASS
	120/5600	15.80	15.94	24.00	PASS
	140/5700	15.53	15.67	24.00	PASS
	144/5720	15.34	15.48	24.00	PASS
802.11n HT20	100/5500	15.50	15.64	24.00	PASS
	120/5600	15.62	15.76	24.00	PASS
	140/5700	15.40	15.54	24.00	PASS
	144/5720	15.19	15.33	24.00	PASS
802.11n HT40	102/5510	15.55	15.79	24.00	PASS
	118/5590	15.49	15.73	24.00	PASS
	134/5670	15.36	15.60	24.00	PASS
	142/5710	15.07	15.31	24.00	PASS
802.11ac VHT20	100/5500	15.56	15.70	24.00	PASS
	120/5600	15.62	15.76	24.00	PASS
	140/5700	15.44	15.58	24.00	PASS
	144/5720	15.25	15.39	24.00	PASS
802.11ac VHT40	102/5510	15.58	15.72	24.00	PASS
	118/5590	15.51	15.65	24.00	PASS
	134/5670	15.38	15.52	24.00	PASS
	142/5710	15.08	15.22	24.00	PASS
802.11ac VHT80	122/5610	13.56	14.03	24.00	PASS
	138/5690	13.42	13.89	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	149/5745	14.94	15.08	30.00	PASS
	157/5785	14.74	14.88	30.00	PASS
	165/5825	14.28	14.42	30.00	PASS
802.11n HT20	149/5745	14.85	14.99	30.00	PASS
	157/5785	14.63	14.77	30.00	PASS
	165/5825	14.15	14.29	30.00	PASS
802.11n HT40	151/5755	15.37	15.61	30.00	PASS
	159/5795	15.30	15.54	30.00	PASS
802.11ac VHT20	149/5745	14.84	14.98	30.00	PASS
	157/5785	14.69	14.83	30.00	PASS
	165/5825	14.20	14.34	30.00	PASS
802.11ac VHT40	151/5755	15.42	15.56	30.00	PASS
	159/5795	15.38	15.52	30.00	PASS
802.11ac VHT80	155/5775	15.01	15.48	30.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

5.3. Frequency Stability

Ambient condition

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

Method of Measurement

1. Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10°C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
c) Measure the frequency at each of the frequencies specified in 5.6.
d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Measurement Uncertainty

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

Test Results

Voltage (V)	Temperature (°C)	U-NII-1 Test Results			
		5200MHz			
		1min	2min	5min	10min
3.87	-20	5199.999576	5199.99314	5199.988327	5199.987676
3.87	-10	5199.996794	5199.99120	5199.978352	5199.979424
3.87	0	5199.989049	5199.990786	5199.977091	5199.973053
3.87	10	5199.980833	5199.989419	5199.976813	5199.968037
3.87	20	5199.979958	5199.980931	5199.975855	5199.960201
3.87	30	5199.973308	5199.980408	5199.975837	5199.957841
3.87	40	5199.963476	5199.979732	5199.966838	5199.953077
3.87	50	5199.959098	5199.973184	5199.962926	5199.946445
3.60	20	5199.951883	5199.971216	5199.960173	5199.945029
4.20	20	5199.948857	5199.963392	5199.959221	5199.938186
Max. ΔMHz		-0.051142564	-0.036608385	-0.040779133	-0.061813847
PPM		-9.83510849	-7.040074091	-7.84214105	-11.88727819

Voltage (V)	Temperature (°C)	U-NII-2A Test Results			
		5300MHz			
		1min	2min	5min	10min
3.87	-20	5300.004996	5300.002935	5299.996311	5299.994656
3.87	-10	5300.002507	5299.998868	5299.987987	5299.98874
3.87	0	5300.002139	5299.994061	5299.982014	5299.982469
3.87	10	5300.000546	5299.991204	5299.978841	5299.97352
3.87	20	5299.995509	5299.983299	5299.972567	5299.965604
3.87	30	5299.994302	5299.979864	5299.96942	5299.959473
3.87	40	5299.989792	5299.971369	5299.962647	5299.958397
3.87	50	5299.988363	5299.967489	5299.954192	5299.956526
3.60	20	5299.982728	5299.957716	5299.946042	5299.948208
4.20	20	5299.973485	5299.954198	5299.940533	5299.941968
Max. ΔMHz		-0.026515173	-0.04580163	-0.059466953	-0.058032057
PPM		-5.002862773	-8.641817028	-11.22017987	-10.94944479

Voltage (V)	Temperature (°C)	U-NII-2C Test Results			
		5580MHz			
		1min	2min	5min	10min
3.87	-20	5580.005252	5579.995956	5579.987011	5579.982974
3.87	-10	5579.995768	5579.990048	5579.9781	5579.976234
3.87	0	5579.99009	5579.981404	5579.977872	5579.970582
3.87	10	5579.985411	5579.976114	5579.974443	5579.960684
3.87	20	5579.98442	5579.969367	5579.970048	5579.959759
3.87	30	5579.974463	5579.966639	5579.960685	5579.953505
3.87	40	5579.972519	5579.957853	5579.958829	5579.94868
3.87	50	5579.969236	5579.956611	5579.953481	5579.939772
3.60	20	5579.967182	5579.949248	5579.952375	5579.935296
4.20	20	5579.957721	5579.94902	5579.944036	5579.931638
Max. ΔMHz		-0.042278794	-0.050979526	-0.055964005	-0.068361936
PPM		-7.576844847	-9.136115776	-10.02939157	-12.25124302

Voltage (V)	Temperature (°C)	U-NII-3 Test Results			
		5785MHz			
		1min	2min	5min	10min
3.87	-20	5785.009300	5785.004278	5784.996274	5784.990658
3.87	-10	5785.008186	5784.999165	5784.989908	5784.98807
3.87	0	5785.003726	5784.993369	5784.982427	5784.983138
3.87	10	5785.001903	5784.987198	5784.972477	5784.979307
3.87	20	5784.998721	5784.98623	5784.970007	5784.976042
3.87	30	5784.993275	5784.985975	5784.96399	5784.970083
3.87	40	5784.992602	5784.980509	5784.962072	5784.965337
3.87	50	5784.988672	5784.97435	5784.954703	5784.959088
3.60	20	5784.985696	5784.965653	5784.949458	5784.954469
4.20	20	5784.977504	5784.960665	5784.943013	5784.948518
Max. ΔMHz		-0.022495907	-0.039334763	-0.056986864	-0.051482042
PPM		-3.88866158	-6.799440461	-9.850797517	-8.899229397

5.4. Power Spectral Density

Ambient condition

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

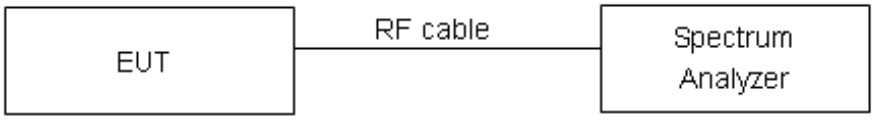
Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz, 5.250-5.350GHz, 5.470-5.725GHz.
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test setup



Limits

Rule FCC Part 15.407(a)(1)/ Part 15.407(a)(2) / Part 15.407(a)(3)
For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz band. If transmittingantennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the

amount in dB that the directional gain of the antenna exceeds 6 dBi.

Frequency Bands/MHz	Limits
5150-5250	11dBm/MHz
5.25-5.35 GHz and 5.47-5.725 GHz	11dBm/MHz
5725-5850	30dBm/500kHz

Measurement Uncertainty

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

Test Results:

Note: Power Spectral Density =Read Value+Duty cycle correction factor

U-NII-1

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36	4.20	4.34	11	PASS
	40	4.57	4.71	11	PASS
	48	4.73	4.87	11	PASS
802.11n HT20	36	4.05	4.19	11	PASS
	40	3.90	4.04	11	PASS
	48	4.45	4.59	11	PASS
802.11n HT40	38	1.70	1.94	11	PASS
	46	1.79	2.03	11	PASS
802.11ac VHT20	36	3.83	3.97	11	PASS
	40	3.96	4.10	11	PASS
	48	4.71	4.85	11	PASS
802.11ac VHT40	38	2.38	2.52	11	PASS
	46	2.00	2.14	11	PASS
802.11ac VHT80	42	-2.35	-1.88	11	PASS

U-NII-2A

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	52	5.14	5.28	11	PASS
	60	5.17	5.31	11	PASS
	64	5.05	5.19	11	PASS
802.11n HT20	52	4.34	4.48	11	PASS
	60	4.78	4.92	11	PASS
	64	4.82	4.96	11	PASS
802.11n HT40	54	2.15	2.39	11	PASS
	62	2.34	2.58	11	PASS
802.11ac VHT20	52	4.20	4.34	11	PASS
	60	4.80	4.94	11	PASS
	64	4.72	4.86	11	PASS
802.11ac VHT40	54	2.05	2.19	11	PASS
	62	2.29	2.43	11	PASS
802.11ac VHT80	58	-1.88	-1.41	11	PASS

U-NII-2C

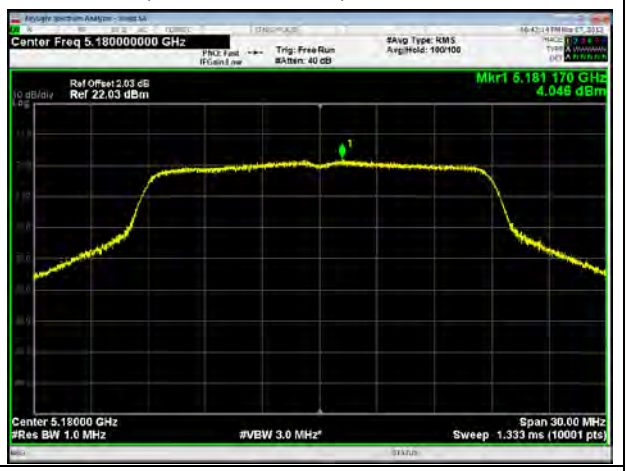
Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	100	5.70	5.84	11	PASS
	120	5.77	5.91	11	PASS
	140	4.64	4.78	11	PASS
	144	4.96	5.10	11	PASS
802.11n HT20	100	5.31	5.45	11	PASS
	120	5.33	5.47	11	PASS
	140	4.33	4.47	11	PASS
	144	4.54	4.68	11	PASS
802.11n HT40	102	2.89	3.03	11	PASS
	118	2.93	3.07	11	PASS
	134	2.55	2.69	11	PASS
	142	2.24	2.38	11	PASS
802.11ac VHT20	100	5.23	5.37	11	PASS
	120	5.31	5.45	11	PASS
	140	4.30	4.44	11	PASS
	144	4.53	4.67	11	PASS
802.11ac VHT40	102	2.92	3.06	11	PASS
	118	2.83	2.97	11	PASS
	134	2.40	2.54	11	PASS
	142	2.26	2.40	11	PASS
802.11ac VHT80	122	-0.93	-0.79	11	PASS
	138	-1.15	-1.01	11	PASS

U-NII-3

Mode	Channel Number	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	149	1.79	2.20	30	PASS
	157	1.77	2.18	30	PASS
	165	0.94	1.35	30	PASS
802.11n HT20	149	1.75	2.16	30	PASS
	157	1.44	1.85	30	PASS
	165	0.68	1.09	30	PASS
802.11n HT40	151	-0.57	-0.06	30	PASS
	159	-0.43	0.08	30	PASS
802.11ac VHT20	149	1.57	1.98	30	PASS
	157	1.31	1.72	30	PASS
	165	0.93	1.34	30	PASS
802.11ac VHT40	151	-0.61	-0.20	30	PASS
	159	-0.23	0.18	30	PASS
802.11ac VHT80	155	-3.41	-2.67	30	PASS
Note: PSD=Read Value+Duty cycle correction factor +10*LOG(500/470)					

U-NII-1, 802.11a, Channel No.: 36

U-NII-1, 802.11n HT20, Channel No.: 36



U-NII-1, 802.11a, Channel No.: 40

U-NII-1, 802.11n HT20, Channel No.: 40

U-NII-1, 802.11a, Channel No.: 48

U-NII-1, 802.11n HT20, Channel No.: 48

U-NII-1, 802.11n HT40, Channel No.: 38

U-NII-1, 802.11ac VHT20, Channel No.: 36

U-NII-1, 802.11n HT40, Channel No.: 46

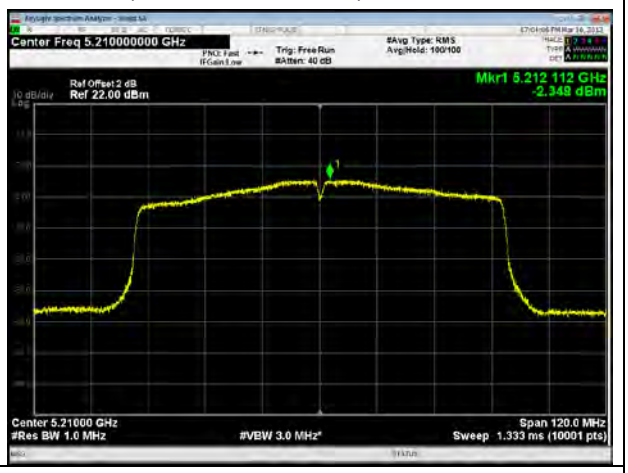
U-NII-1, 802.11ac VHT20, Channel No.: 40

U-NII-1, 802.11ac VHT40, Channel No.: 38

U-NII-1, 802.11ac VHT20, Channel No.: 48

U-NII-1, 802.11ac VHT40, Channel No.: 46

U-NII-1, 802.11ac VHT80, Channel No.: 42



U-NII-2A, 802.11a, Channel No.: 52

U-NII-2A, 802.11n HT20, Channel No.: 52

U-NII-2A, 802.11a, Channel No.: 60

U-NII-2A, 802.11n HT20, Channel No.: 60

U-NII-2A, 802.11a, Channel No.: 64

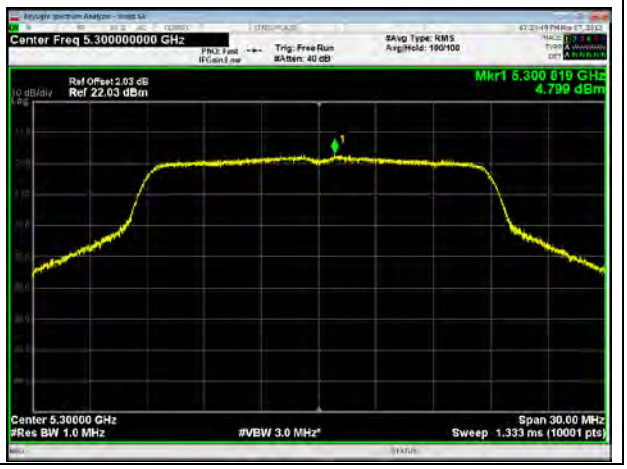
U-NII-2A, 802.11n HT20, Channel No.: 64

U-NII-2A, 802.11n HT40, Channel No.: 54

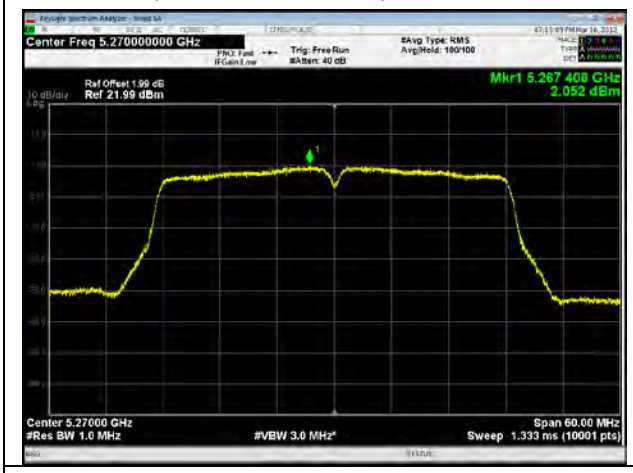
U-NII-2A, 802.11ac VHT20, Channel No.:52

U-NII-2A, 802.11n HT40, Channel No.: 62

U-NII-2A, 802.11ac VHT20, Channel No.: 60



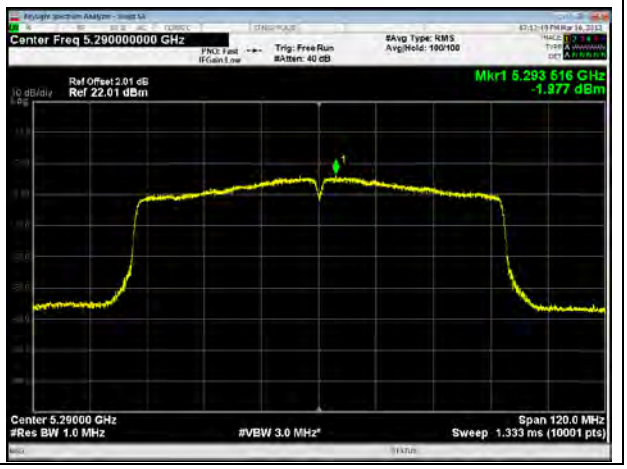
U-NII-2A, 802.11ac VHT40, Channel No.: 54



U-NII-2A, 802.11ac VHT20, Channel No.: 64

U-NII-2A, 802.11ac VHT40, Channel No.: 62

U-NII-2A, 802.11ac VHT80, Channel No.: 58



U-NII-2C, 802.11a, Channel No.: 100

U-NII-2C, 802.11n HT20, Channel No.: 100

U-NII-2C, 802.11a, Channel No.: 116

U-NII-2C, 802.11n HT20, Channel No.: 116

U-NII-2C, 802.11a, Channel No.: 140

U-NII-2C, 802.11n HT20, Channel No.: 140

U-NII-2C, 802.11a, Channel No.: 144

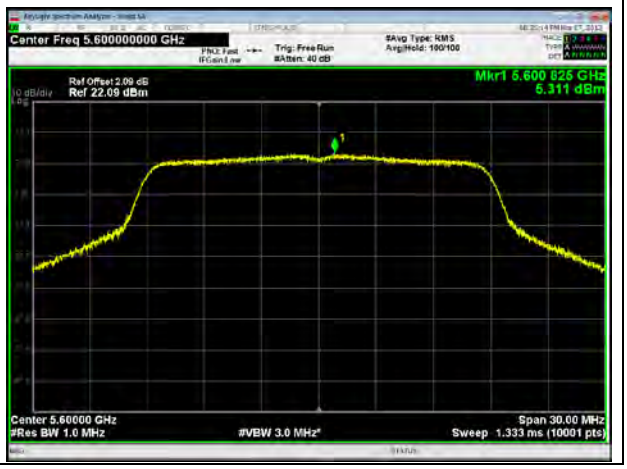
U-NII-2C, 802.11n HT20, Channel No.: 144

U-NII-2C, 802.11n HT40, Channel No.: 102

U-NII-2C, 802.11ac VHT20, Channel No.: 100

U-NII-2C, 802.11n HT40, Channel No.: 118

U-NII-2C, 802.11ac VHT20, Channel No.: 120



U-NII-2C, 802.11n HT40, Channel No.: 134

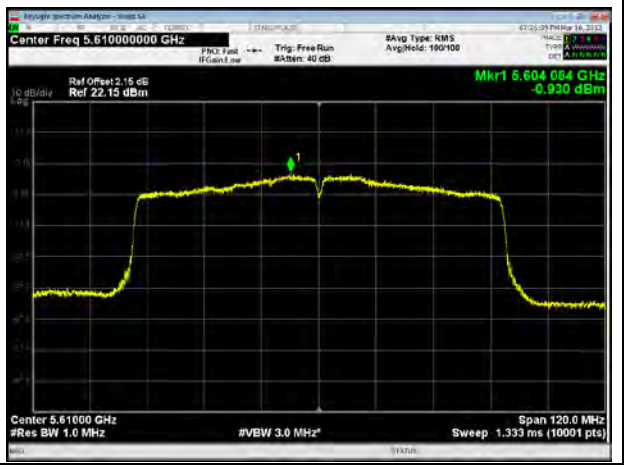
U-NII-2C, 802.11ac VHT20, Channel No.: 140

U-NII-2C, 802.11n HT40, Channel No.: 142

U-NII-2C, 802.11ac VHT20, Channel No.: 144

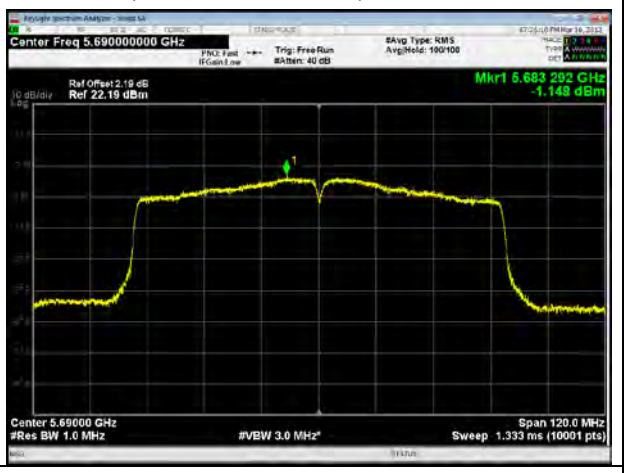
U-NII-2C, 802.11ac VHT40, Channel No.: 102

U-NII-2C, 802.11ac VHT80, Channel No.: 122



U-NII-2C, 802.11ac VHT40, Channel No.: 118

U-NII-2C, 802.11ac VHT80, Channel No.: 138



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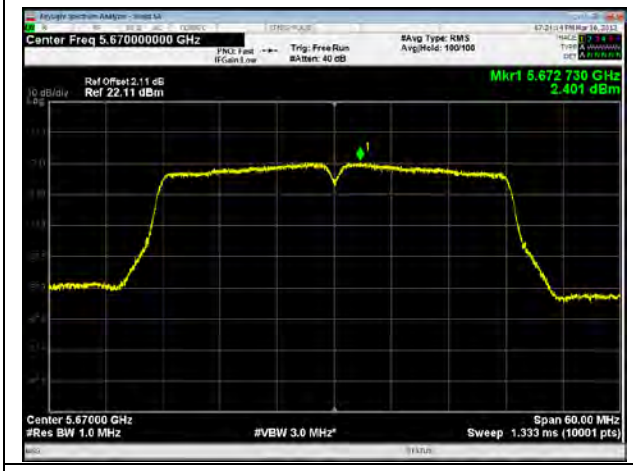
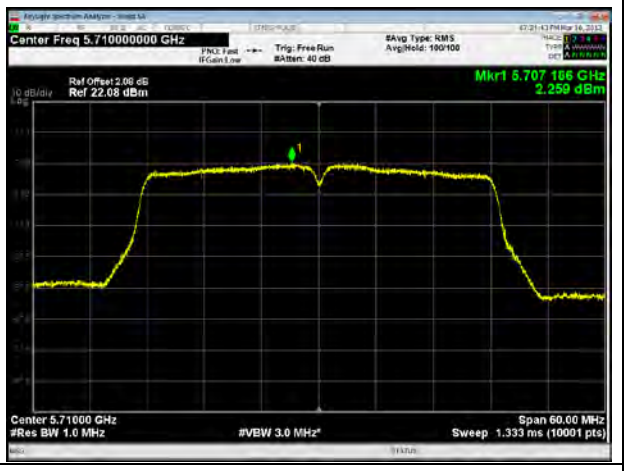
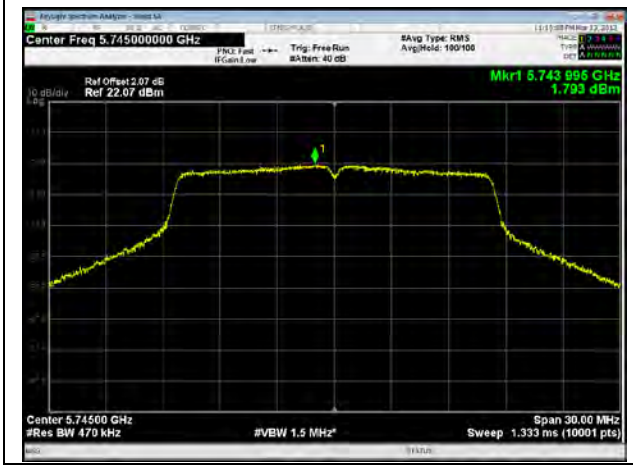


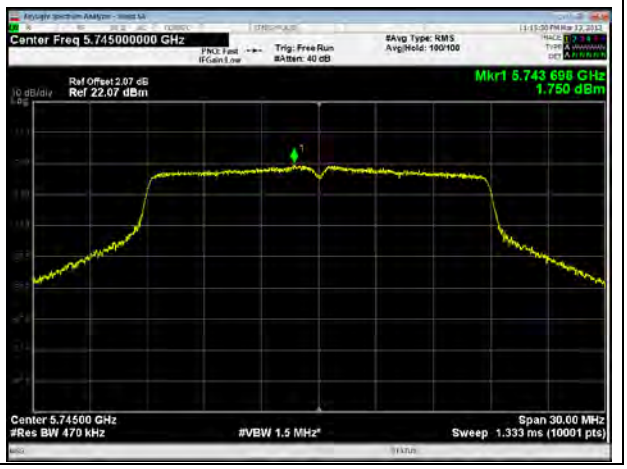
U-NII-2C, 802.11ac VHT40, Channel No.: 142



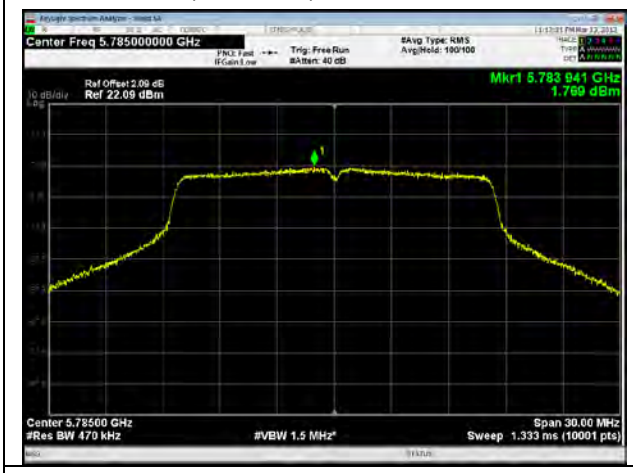
U-NII-3, 802.11a, Channel No.: 149



U-NII-3, 802.11n HT20, Channel No.: 149



U-NII-3, 802.11a, Channel No.: 157



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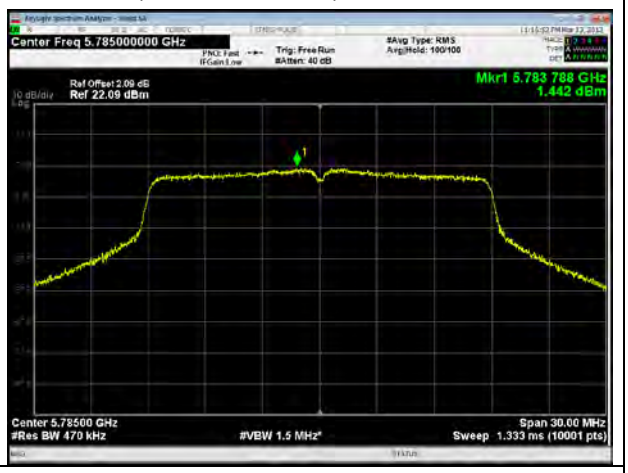
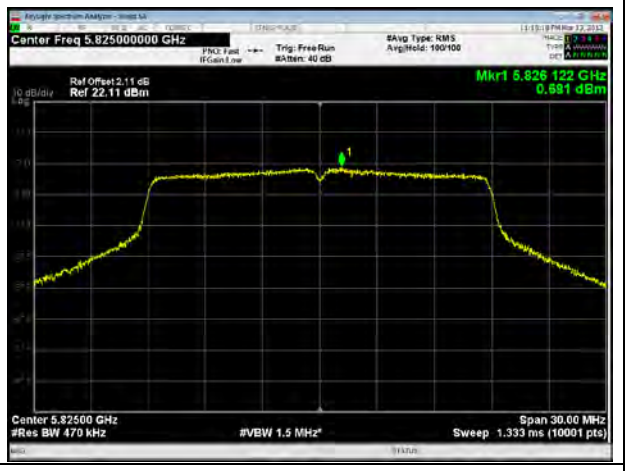


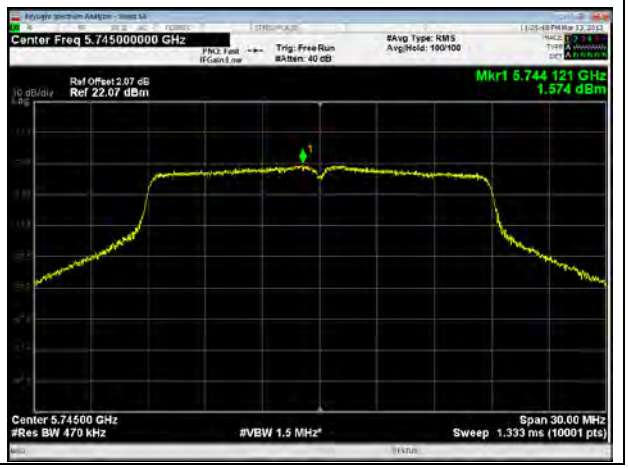
U-NII-3, 802.11a, Channel No.: 165

U-NII-3, 802.11n HT20, Channel No.: 165

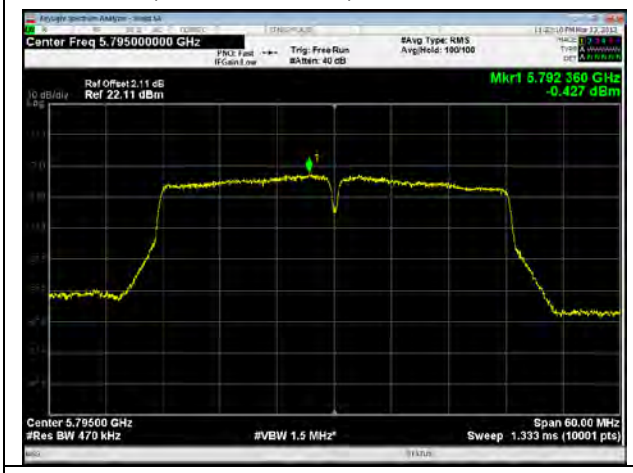


U-NII-3, 802.11n HT40, Channel No.: 151

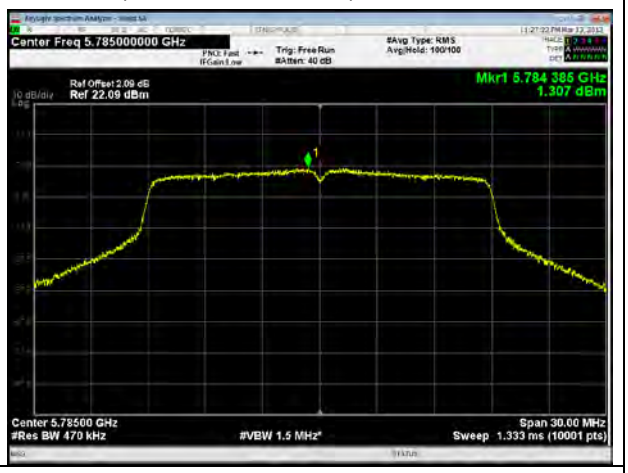
U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT40, Channel No.: 159

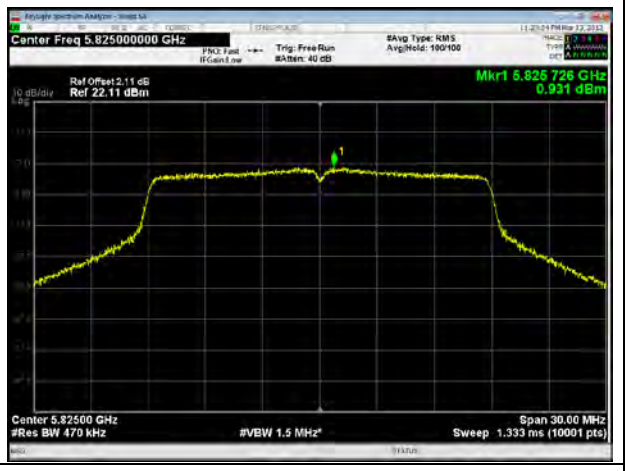


U-NII-3, 802.11ac VHT20, Channel No.: 157



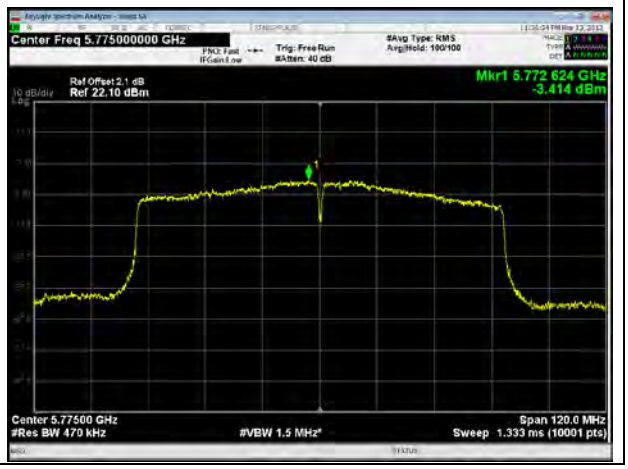
U-NII-3, 802.11ac VHT40, Channel No.: 151

U-NII-3, 802.11ac VHT20, Channel No.: 165



U-NII-3, 802.11ac VHT40, Channel No.: 159

U-NII-3, 802.11ac VHT80, Channel No.: 155



5.5. Unwanted Emission

Ambient condition

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

Method of Measurement

The test set-up was made in accordance to the general provisions of ANSI C63.10. The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.
Sweep the whole frequency band range from 9kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.
Set the spectrum analyzer in the following:
9kHz~150 kHz
RBW=200Hz, VBW=1kHz/ Sweep=AUTO
150 kHz~30MHz
RBW=9KHz, VBW=30KHz,/ Sweep=AUTO
Below 1GHz
RBW=100kHz / VBW=300kHz / Sweep=AUTO
a) Peak emission levels are measured by setting the instrument as follows:
Above 1GHz
PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO
b) Average emission levels are measured by setting the instrument as follows:
Above 1GHz
AVERAGE: RBW=1MHz / VBW=3MHz / Sweep=AUTO
c) Detector: The measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)
e) Sweep time = auto.
f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific

emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)

g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is [10 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.

2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is [20 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

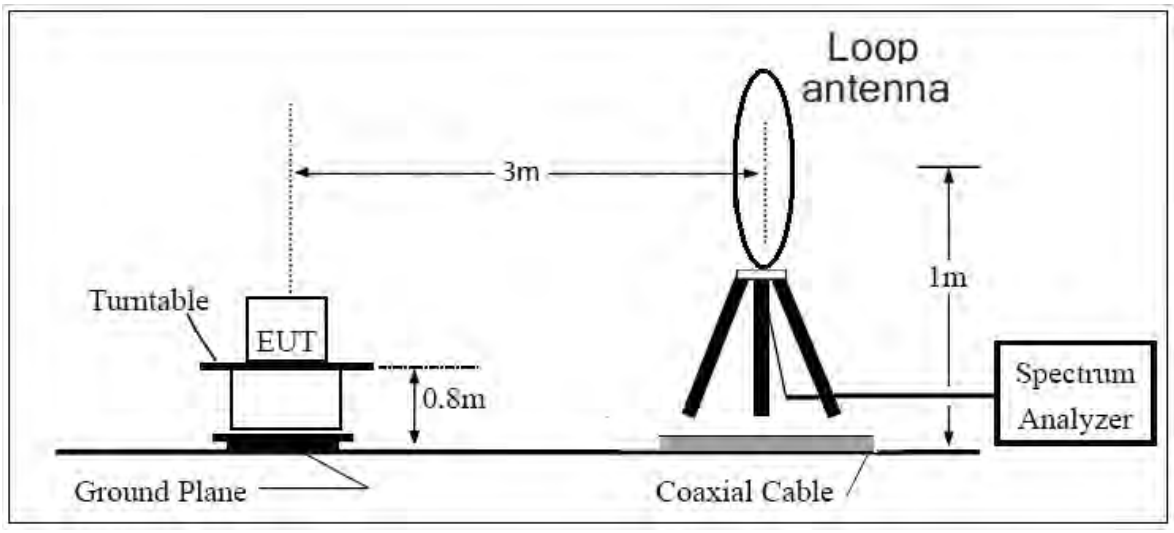
3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

Reduce the video bandwidth until no significant variations in the displayed signal are observed in subsequent traces, provided the video bandwidth is no less than 1 Hz. For regulatory requirements that specify averaging only over the transmit duration (e.g., digital transmission system [DTS] and Unlicensed National Information Infrastructure [U-NII]), the video bandwidth shall be greater than [1 / (minimum transmitter on time)] and no less than 1 Hz.

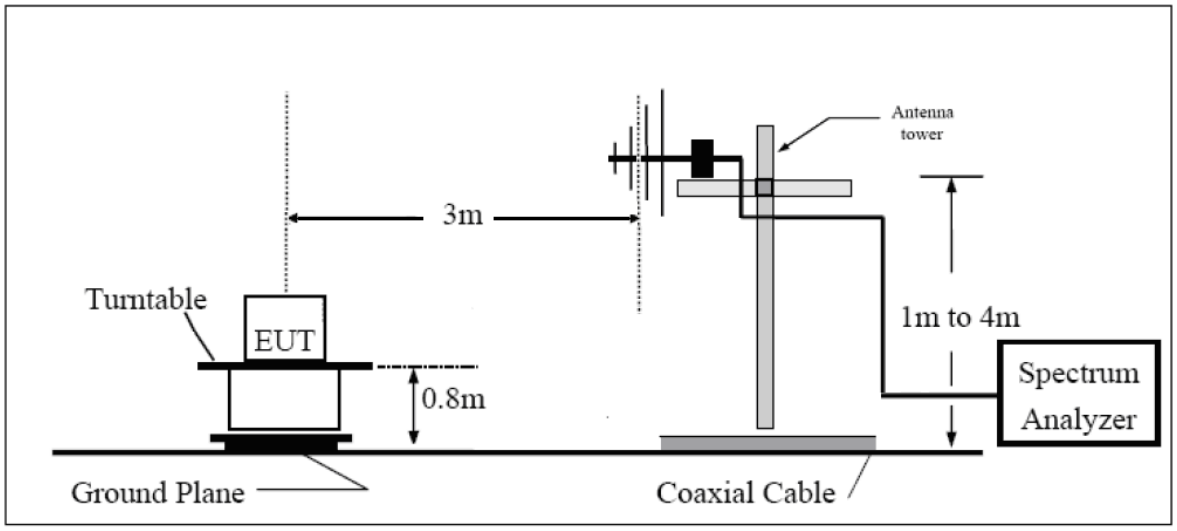
The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the loop antenna is vertical, others antenna are vertical and horizontal.

The test is in transmitting mode.

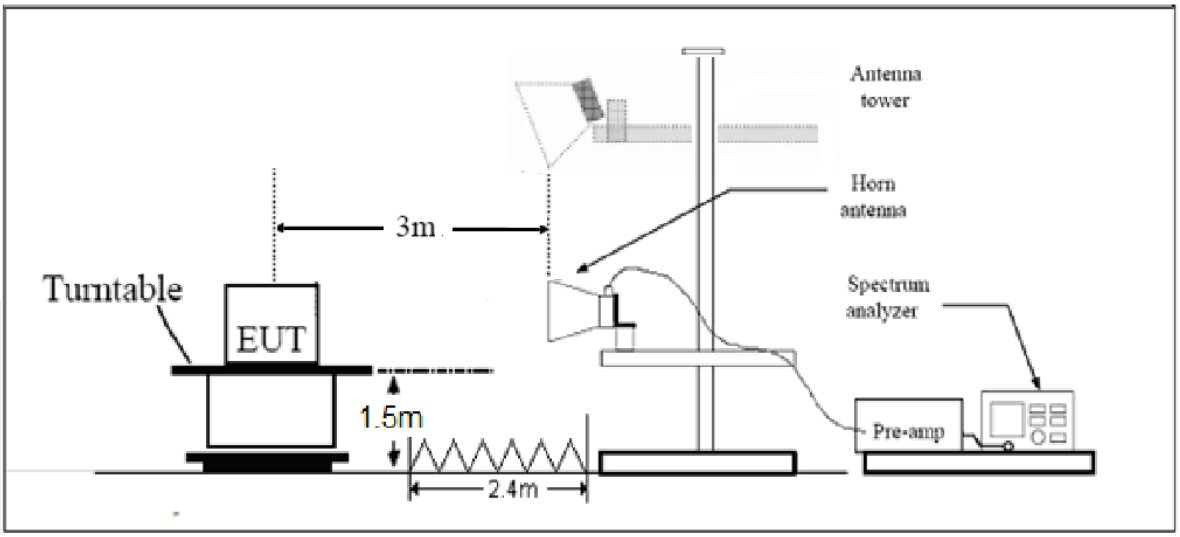
9KHz~~~30MHz



30MHz~~~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

(1) For transmitters operating in the 5725-5850 MHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(2) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz(68.2dBμV/m).

(3) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz(68.2dBμV/m).

(4) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz(68.2dBμV/m).

Note: the following formula is used to convert the EIRP to field strength

§1、E[dBμV/m] = EIRP[dBm] - 20 log(d[meters]) + 104.77, where E = field strength and

d = distance at which field strength limit is specified in the rules;

§2、E[dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters

(5) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table.

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
0.009–0.490	2400/F(kHz)	/
0.490–1.705	24000/F(kHz)	/
1.705–30.0	30	/
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

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

Measurement Uncertainty

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

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.17 dB
200MHz-1GHz	4.84 dB
1-18GHz	4.35 dB
18-26.5GHz	5.90 dB
26.5GHz~40GHz	5.92 dB

Test Results:

The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for V20MHz/V40MHz, therefore investigated worst case to representative mode in test report.

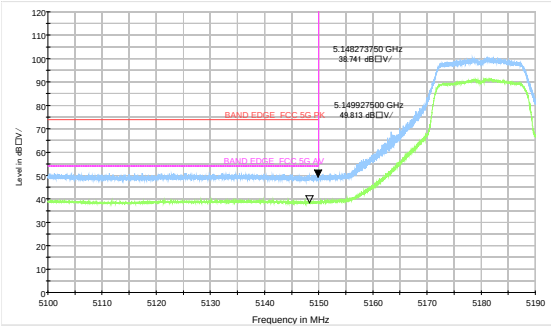
A font (Level in dB礦/m)in the test plot =(level in dB μ V/m)

A font (Level in dBμV/)in the test plot =(level in dB μ V/m)

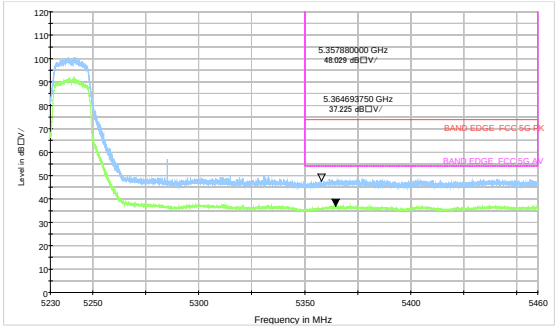
The signal beyond the limit is carrier.

U-NII-1

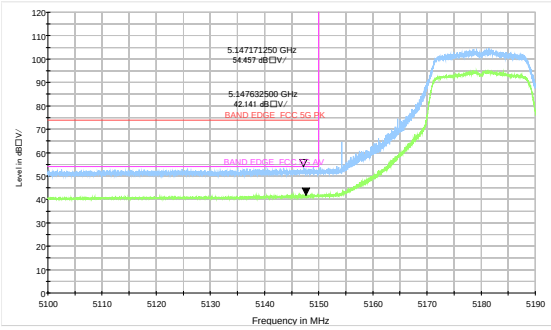
802.11a-Channel 36: Peak + Average



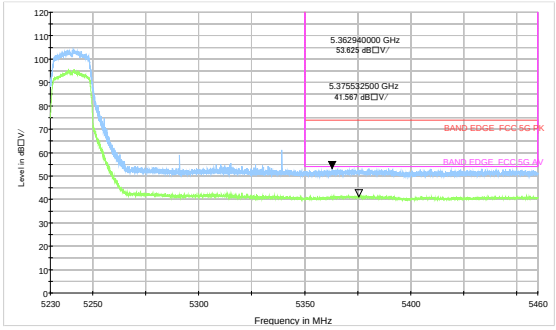
802.11a-Channel 48: Peak + Average



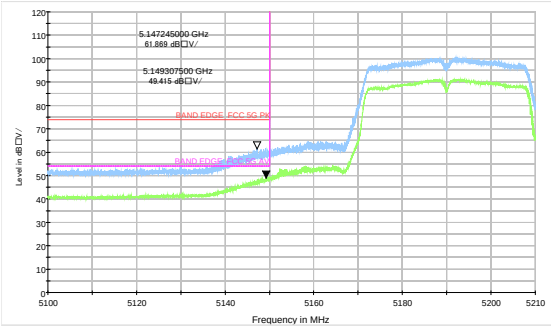
802.11n HT20-Channel 36: Peak + Average



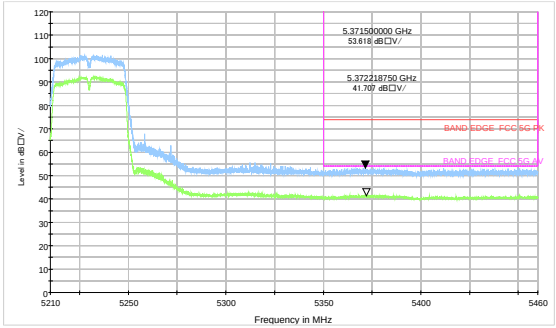
802.11n HT20-Channel 48: Peak + Average



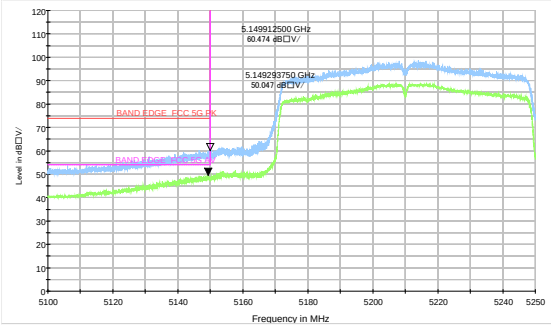
802.11n HT40-Channel 38: Peak + Average



802.11n HT40-Channel 46: Peak + Average

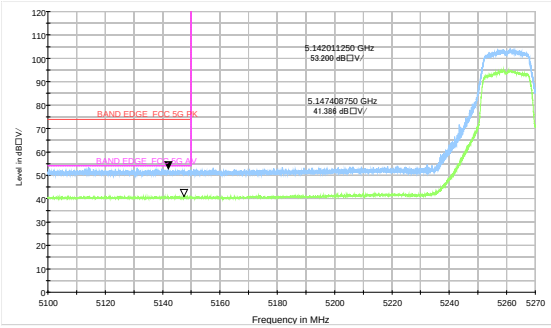


802.11ac VHT80 –Channel 42: Peak + Average

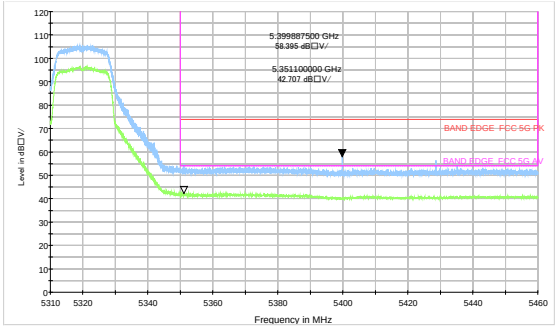


U-NII-2A

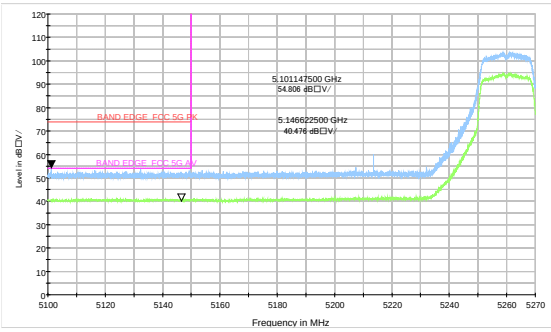
802.11a-Channel 52: Peak + Average



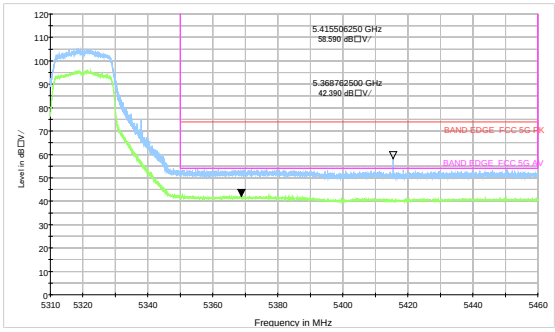
802.11a-Channel 64: Peak + Average



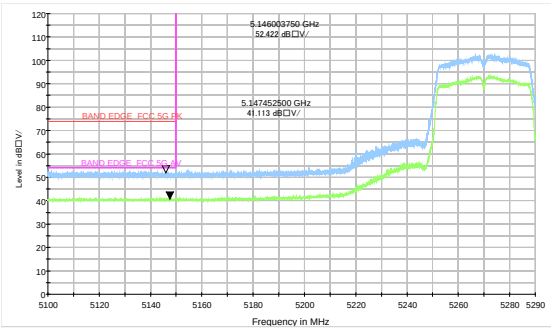
802.11n HT20-Channel 52: Peak + Average



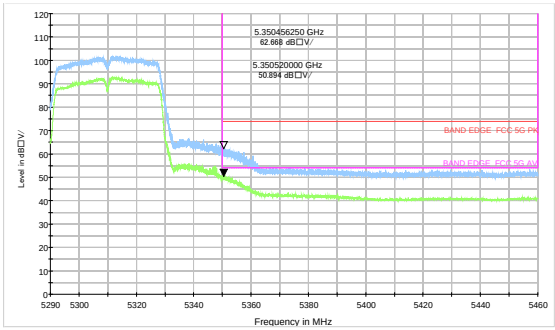
802.11n HT20-Channel 64: Peak + Average



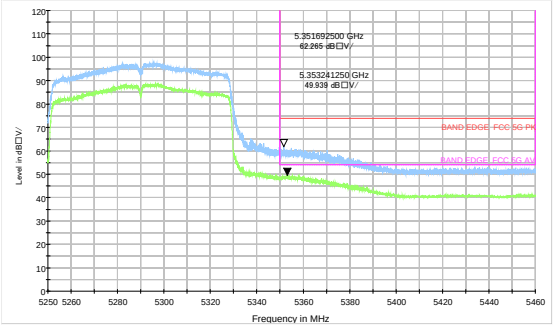
802.11n HT40-Channel 54: Peak + Average



802.11n HT40-Channel 62: Peak + Average

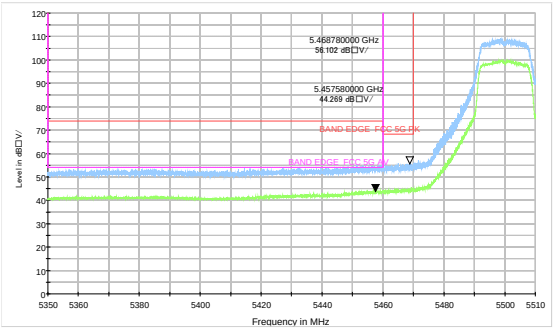


802.11ac VHT80 –Channel 58: Peak + Average

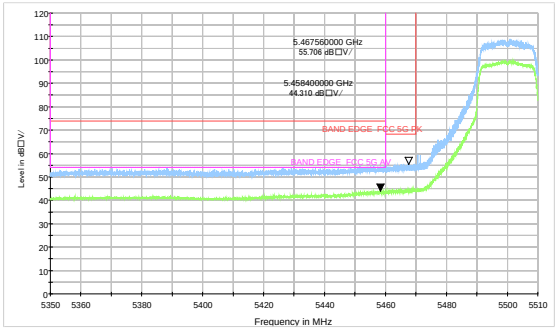


U-NII-2C

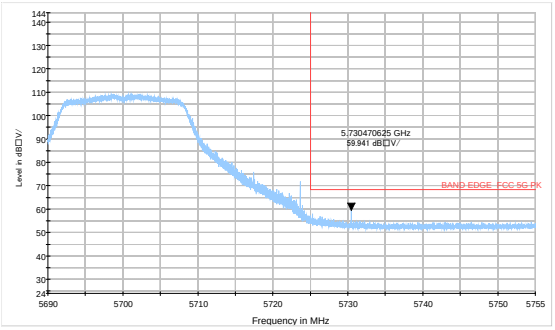
802.11a-Channel 100: Peak + Average



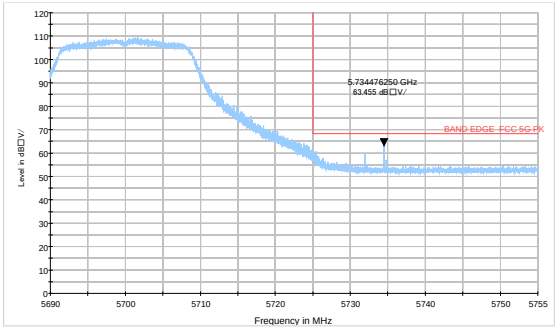
802.11n HT20 -Channel 100: Peak + Average



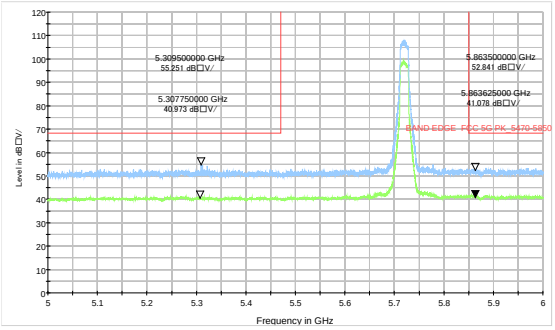
802.11a-Channel 140: Peak



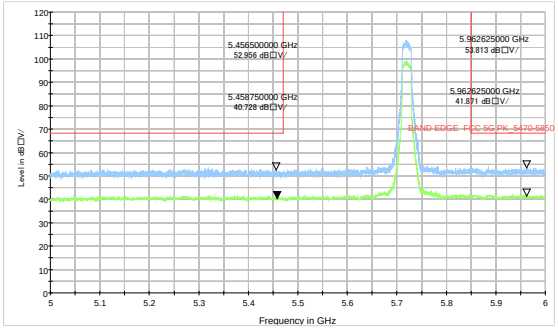
802.11n HT20 -Channel 140: Peak



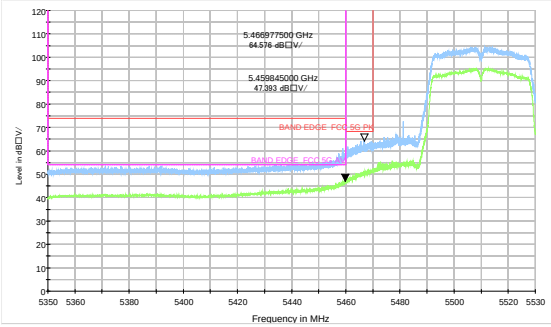
802.11a-Channel 144: Peak



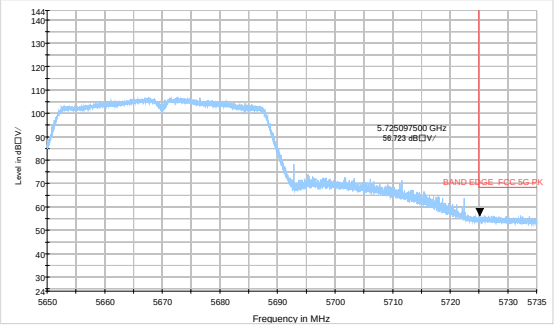
802.11n HT20-Channel 144: Peak



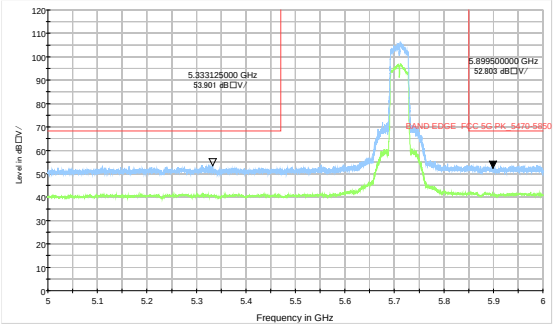
802.11n HT40-Channel 102: Peak + Average



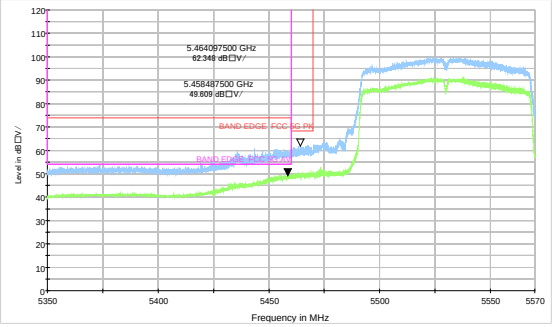
802.11n HT40-Channel 134: Peak



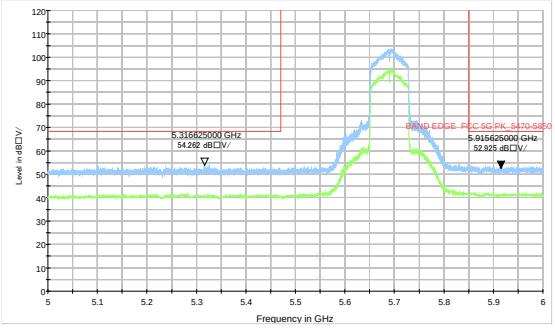
802.11n HT40-Channel 142: Peak



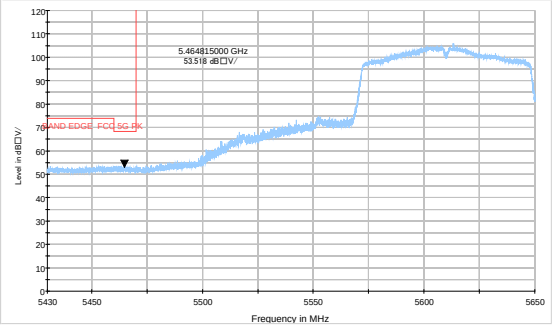
802.11ac VHT80-Channel 106: Peak



802.11ac VHT80-Channel 138: Peak

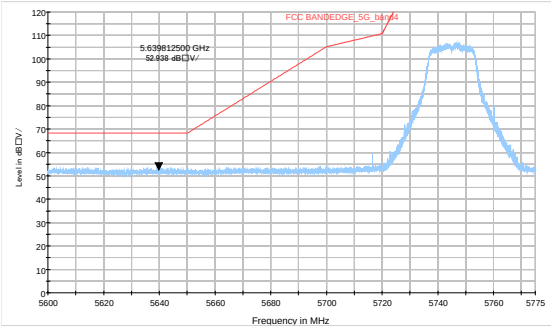


802.11ac VHT80-Channel 122: Peak

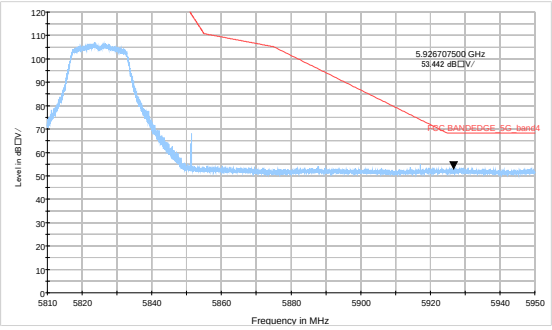


U-NII-3

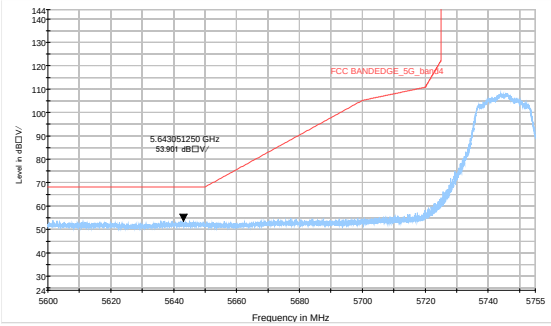
802.11a-Channel 149: Peak



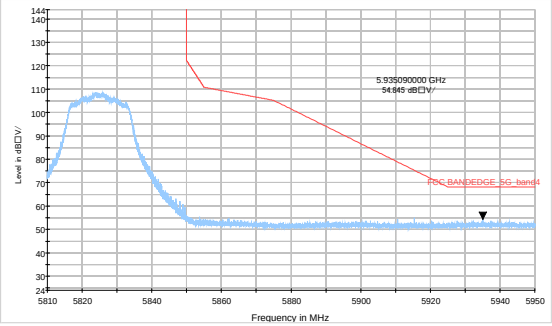
802.11a-Channel 165: Peak



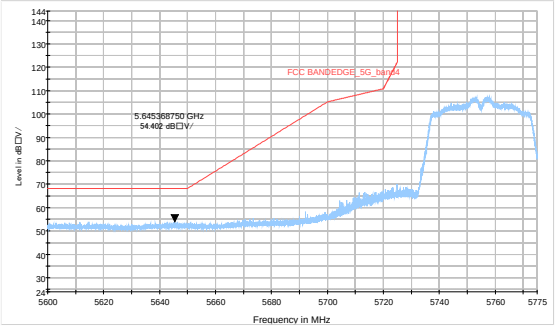
802.11n HT20-Channel 149: Peak



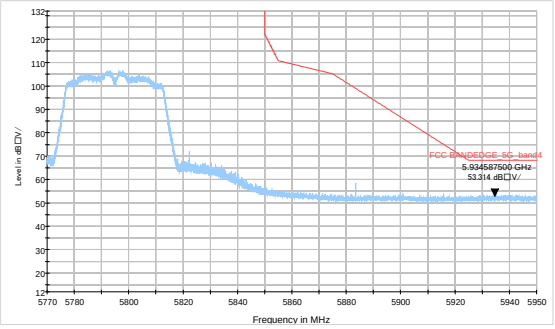
802.11n HT20-Channel 165: Peak



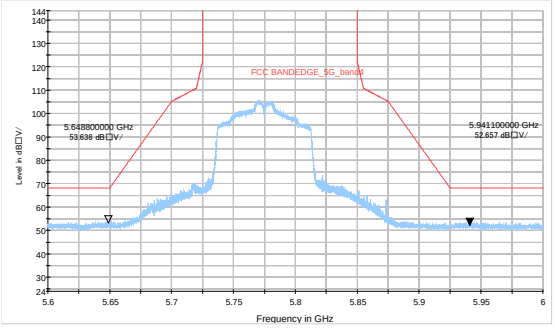
802.11n HT40-Channel 151: Peak



802.11n HT40-Channel 159: Peak



802.11ac VHT80- Channel 155: Peak



Result of RE

Test result

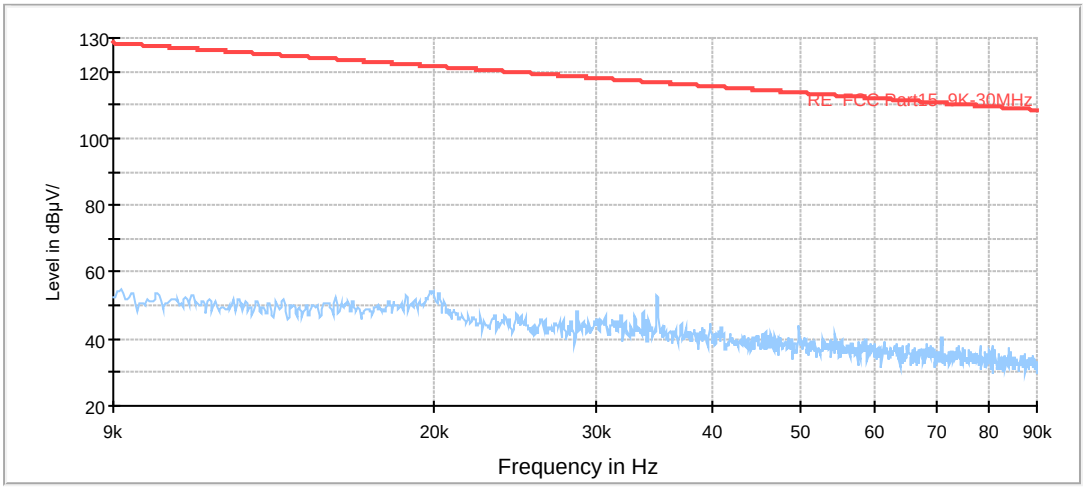
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the Emissions in the frequency band 9kHz-30MHz and 18GHz-40GHz are more than 20dB below the limit are not reported.

A font (Level in dB礦/m)in the test plot =(level in dB μ V/m)
A font (Level in dBμV/)in the test plot =(level in dB μ V/m)

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels, 802.11n (HT20), Channel 100 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

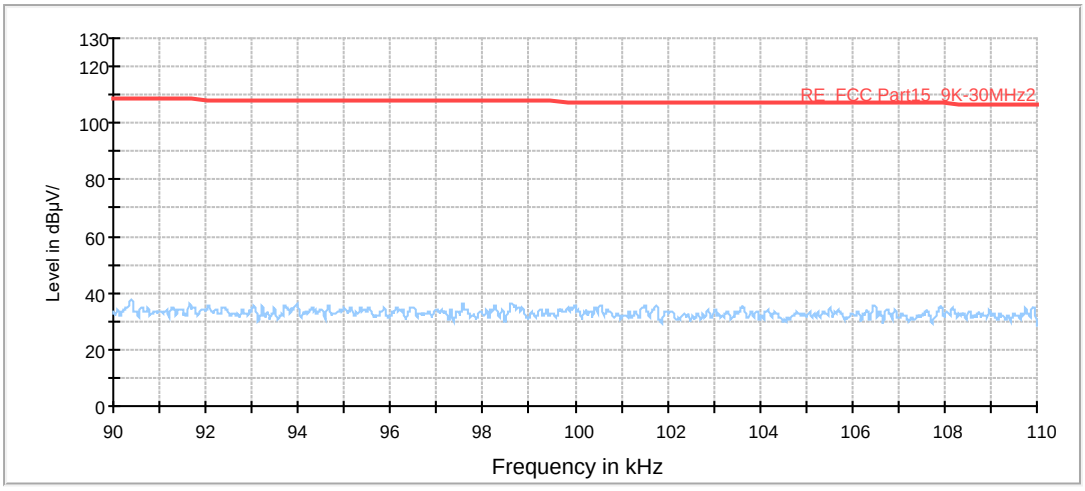
Continuous TX mode:

FCC RE 9K-90KHz AV



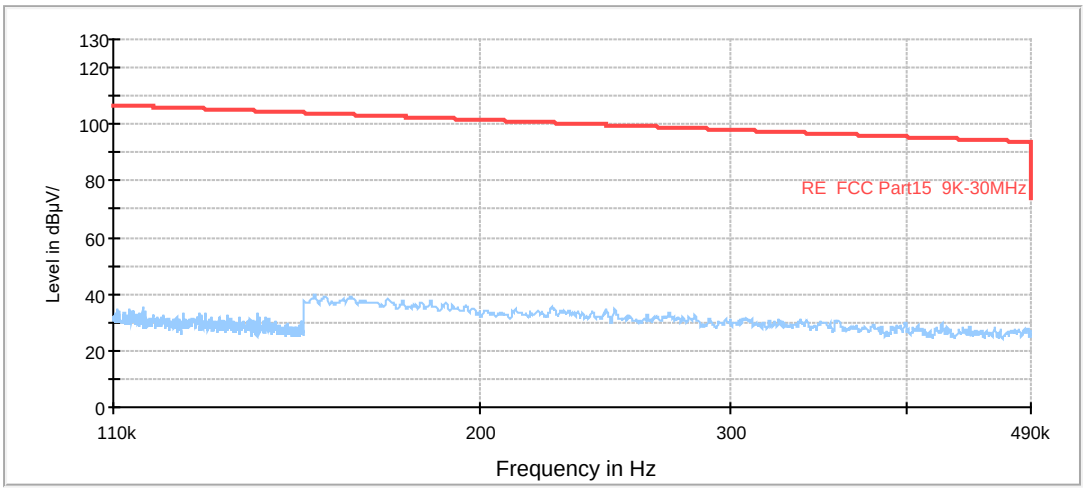
Radiates Emission from 9KHz to 90KHz

FCC RE 90K-110KHz QP



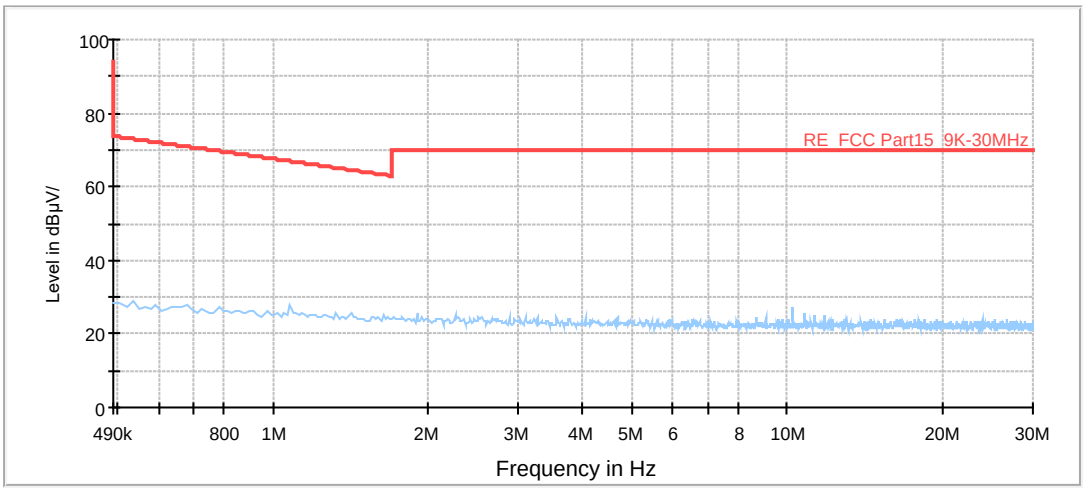
Radiates Emission from 90KHz to 110KHz

FCC RE 110K-490KHz AV

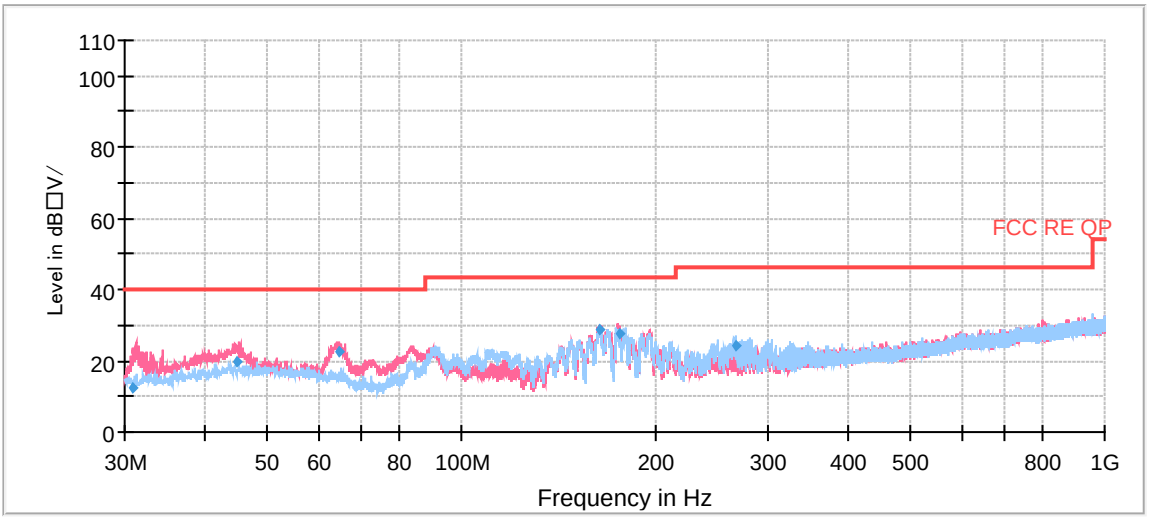


Radiates Emission from 110KHz to 490KHz

FCC RE 490K-30MHz QP



Radiates Emission from 490KHz to 30MHz



Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.92	12.51	125.0	V	122.00	17	27.49	40.00
44.69	19.64	109.0	V	79.00	20	20.36	40.00
64.41	22.61	100.0	V	333.00	18	17.39	40.00
164.26	28.80	100.0	V	334.00	15	14.70	43.50
175.90	27.46	100.0	V	320.00	16	16.04	43.50
267.30	24.26	125.0	H	86.00	20	21.74	46.00

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

2. Margin = Limit – Quasi-Peak

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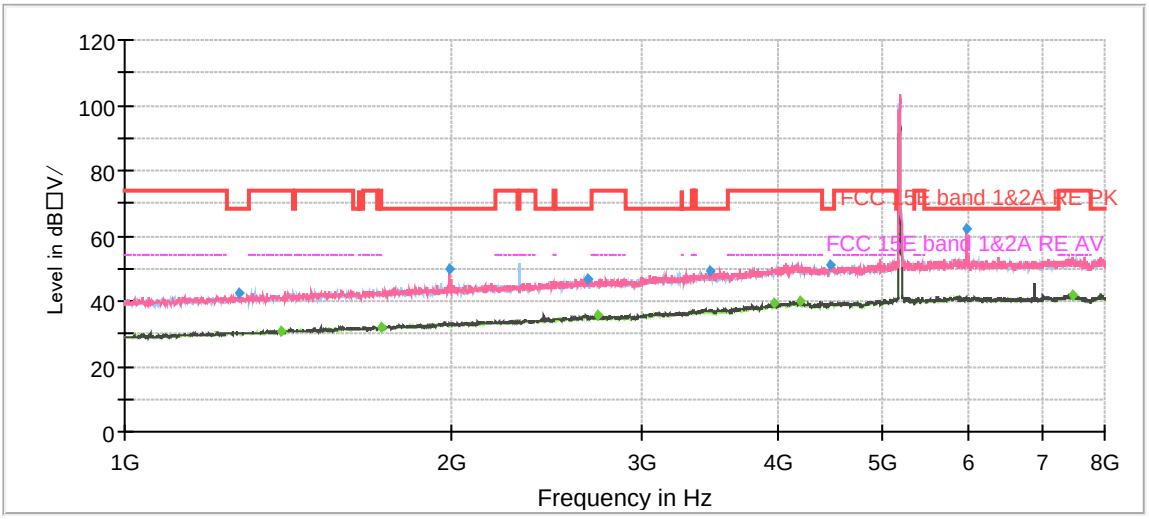
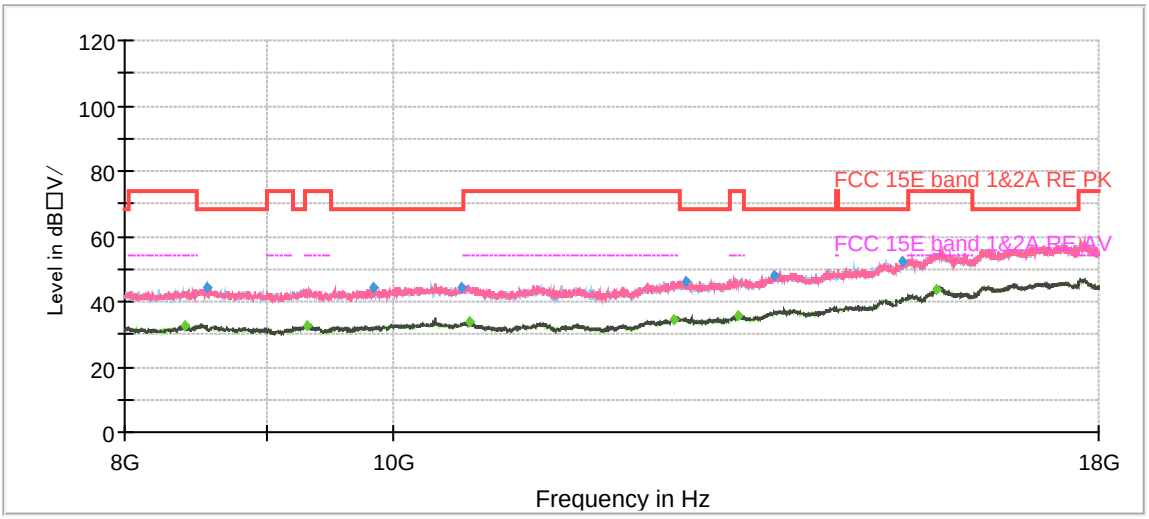


Note: The signal beyond the limit is carrier.
Radiates Emission from 1GHz to 8GHz

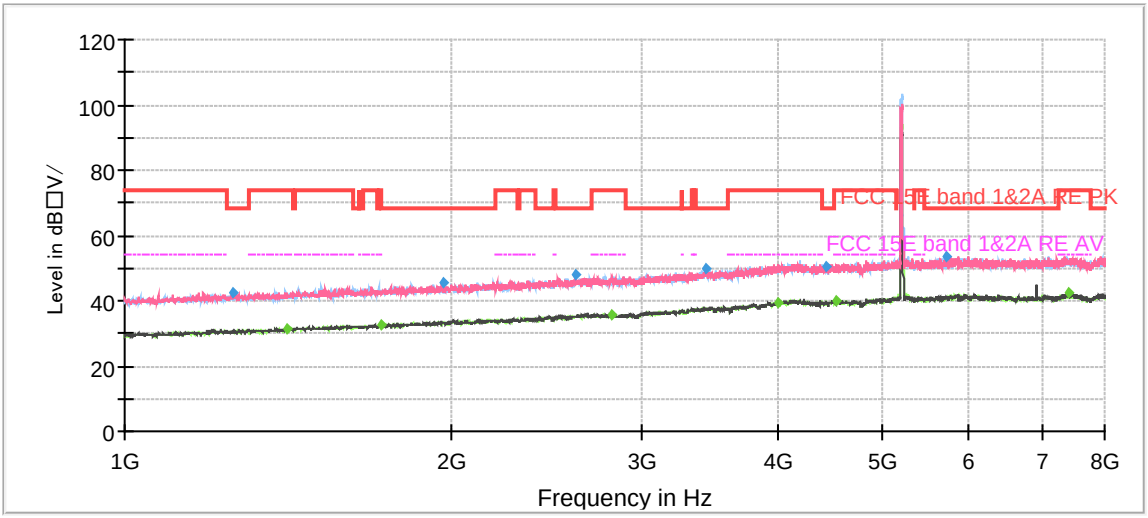


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1274.75	42.20	---	68.20	26.00	200.0	V	304.00	-7
1394.63	---	31.07	54.00	22.93	200.0	H	254.00	-6
1721.00	---	32.17	54.00	21.83	100.0	H	232.00	-4
1993.13	49.87	---	68.20	18.33	200.0	V	133.00	-3
2670.38	46.79	---	68.20	21.41	200.0	V	313.00	0
2728.13	---	35.52	54.00	18.48	200.0	H	94.00	1
3468.38	49.41	---	68.20	18.79	200.0	H	99.00	4
3963.63	---	39.10	54.00	14.90	200.0	V	294.00	6
4185.00	---	39.77	54.00	14.23	200.0	V	274.00	7
4470.25	51.10	---	68.20	17.10	100.0	V	345.00	7
5972.63	61.93	---	68.20	6.27	100.0	V	250.00	10
7476.75	---	41.86	54.00	12.14	200.0	V	294.00	11

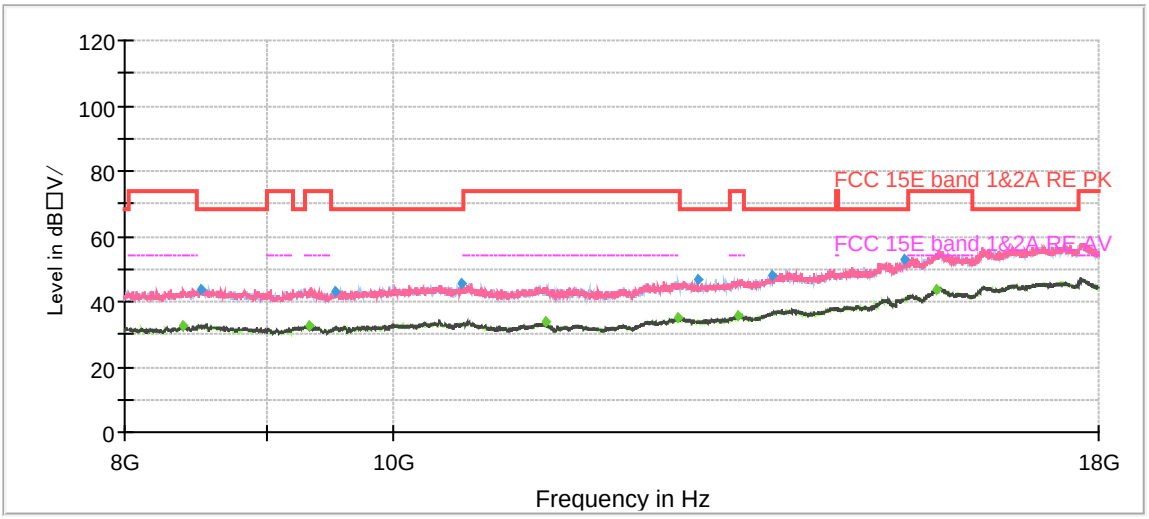
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH40



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

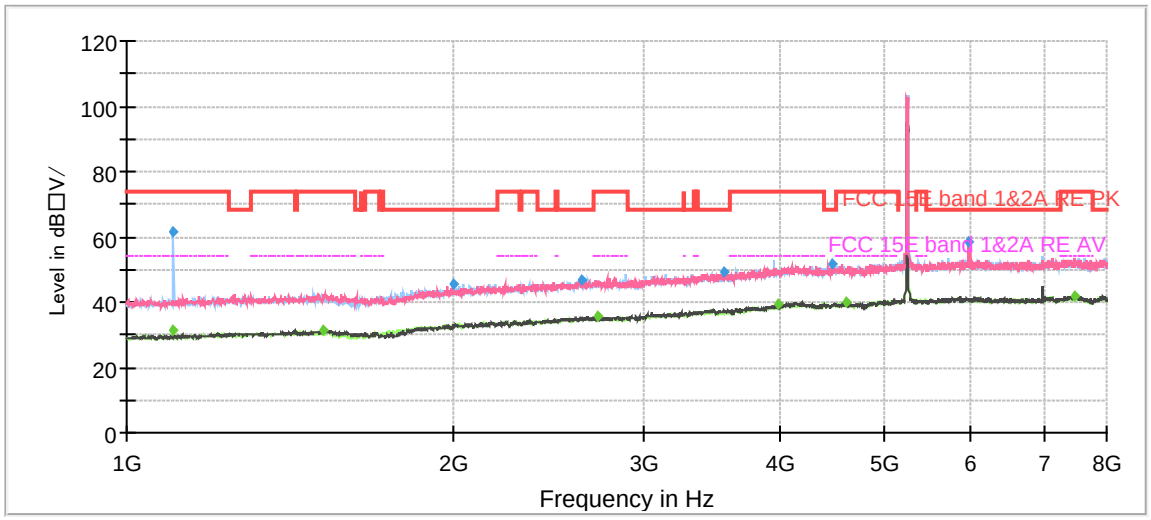


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1256.38	42.32	---	68.20	25.88	100.0	H	47.00	-7
1412.13	---	31.40	54.00	22.60	200.0	V	233.00	-6
1721.00	---	32.75	54.00	21.25	100.0	V	73.00	-4
1962.50	45.60	---	68.20	22.60	100.0	V	325.00	-3
2603.00	47.77	---	68.20	20.43	200.0	H	183.00	0
2808.63	---	35.92	54.00	18.08	100.0	H	191.00	1
3430.75	49.71	---	68.20	18.49	200.0	V	32.00	4
3996.00	---	39.56	54.00	14.44	200.0	H	332.00	6
4434.38	50.44	---	68.20	17.76	200.0	V	43.00	7
4530.63	---	40.14	54.00	13.86	200.0	V	328.00	7
5712.75	53.80	---	68.20	14.40	100.0	V	268.00	10
7401.50	---	42.19	54.00	11.81	200.0	V	307.00	11

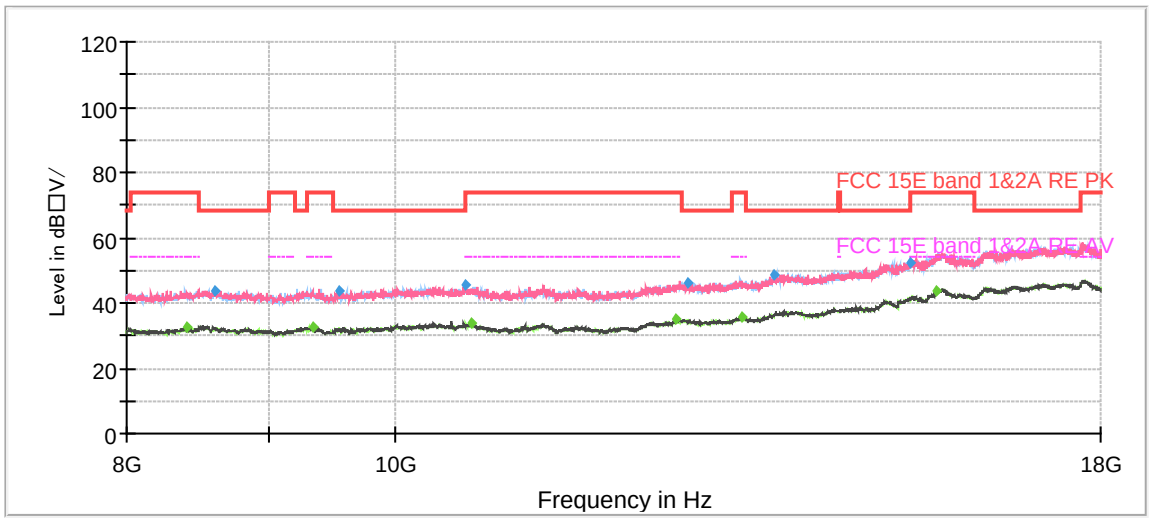
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH48



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

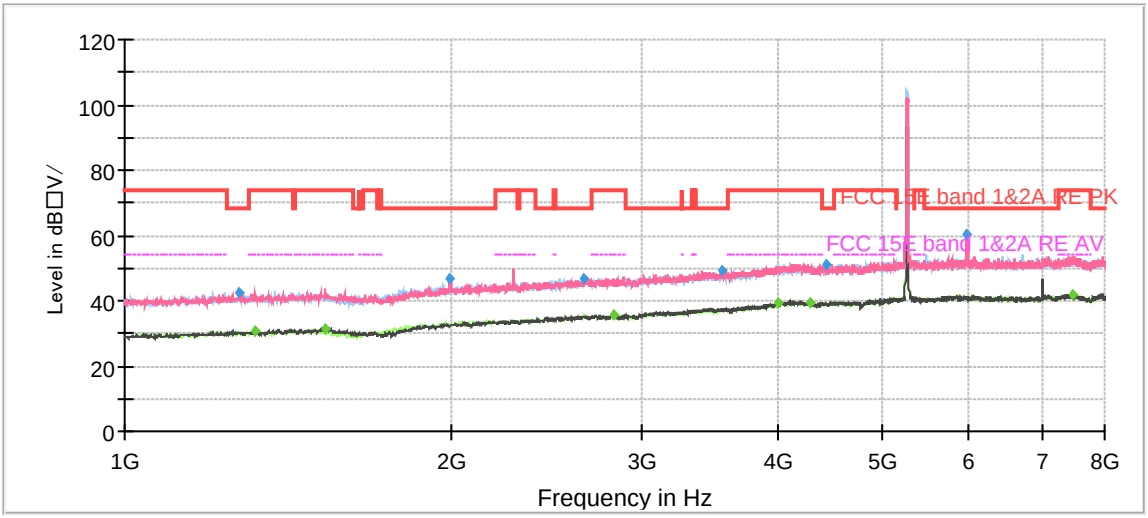


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1105.00	---	31.69	54.00	22.31	200.0	H	160.00	-8
1105.00	61.75	---	74.00	12.25	200.0	H	160.00	-8
1515.38	---	31.39	54.00	22.61	200.0	V	175.00	-5
1996.63	45.53	---	68.20	22.67	200.0	V	237.00	-3
2624.00	46.90	---	68.20	21.30	100.0	V	22.00	0
2717.63	---	35.50	54.00	18.50	200.0	V	267.00	1
3546.25	49.29	---	68.20	18.91	200.0	H	39.00	4
3989.00	---	39.14	54.00	14.86	200.0	V	282.00	6
4466.75	51.78	---	68.20	16.42	200.0	V	221.00	7
4593.63	---	39.90	54.00	14.10	200.0	V	122.00	7
5976.13	58.53	---	68.20	9.67	200.0	V	338.00	10
7461.00	---	42.02	54.00	11.98	200.0	V	267.00	11

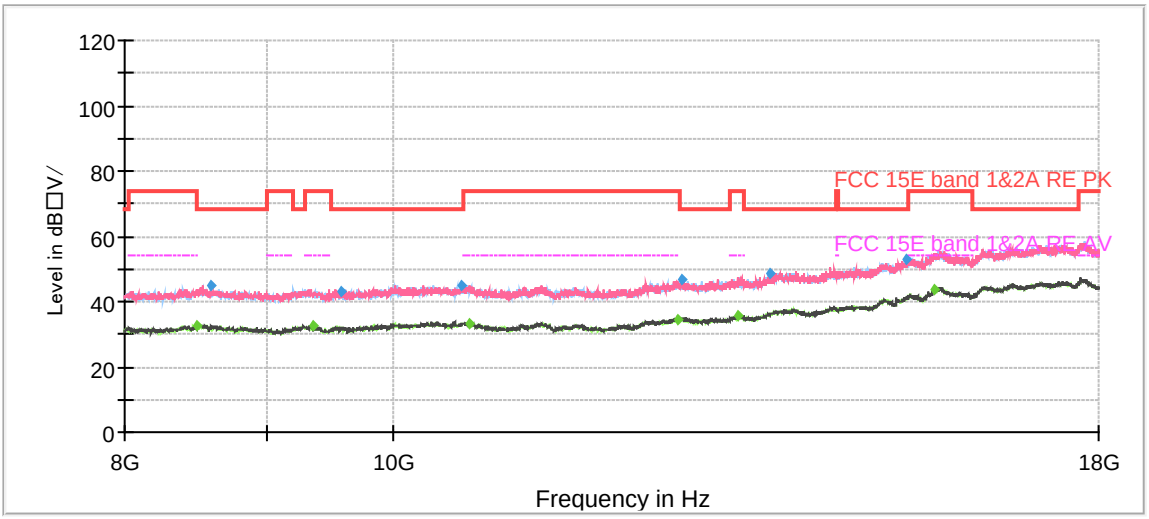
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH52



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

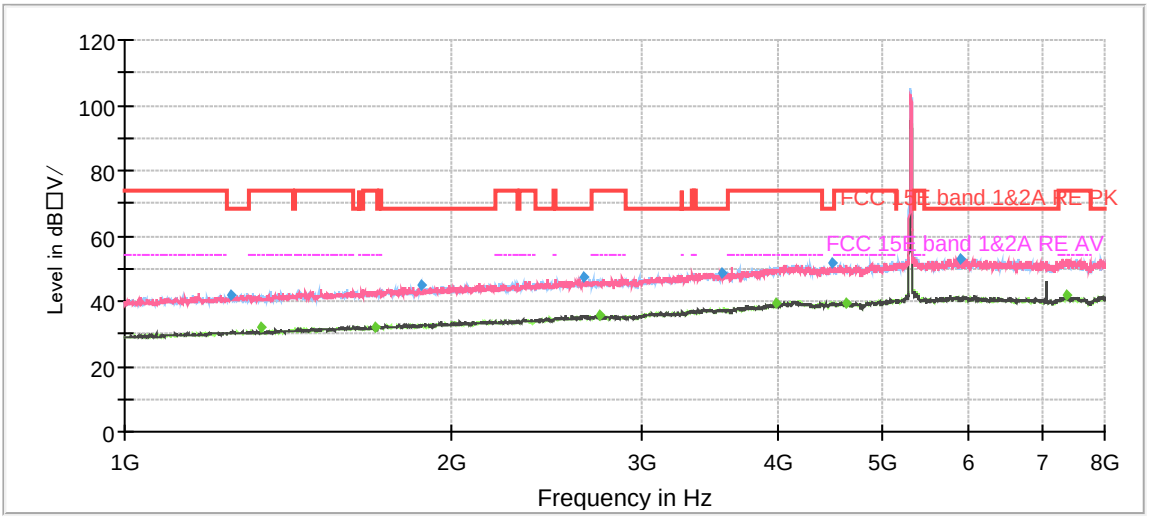


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1276.50	42.21	---	68.20	25.99	200.0	H	146.00	-7
1317.63	---	30.73	54.00	23.27	100.0	V	92.00	-7
1529.38	---	31.49	54.00	22.51	200.0	V	333.00	-5
1991.38	46.75	---	68.20	21.45	200.0	V	179.00	-3
2646.75	47.06	---	68.20	21.14	100.0	H	247.00	0
2820.00	---	35.44	54.00	18.56	200.0	V	19.00	1
3554.13	49.25	---	68.20	18.95	100.0	V	0.00	4
3991.63	---	39.18	54.00	14.82	200.0	H	109.00	6
4276.00	---	39.56	54.00	14.44	200.0	V	184.00	7
4431.75	51.05	---	68.20	17.15	200.0	V	323.00	7
5975.25	60.38	---	68.20	7.82	200.0	V	328.00	10
7471.50	---	41.97	54.00	12.03	100.0	V	39.00	11

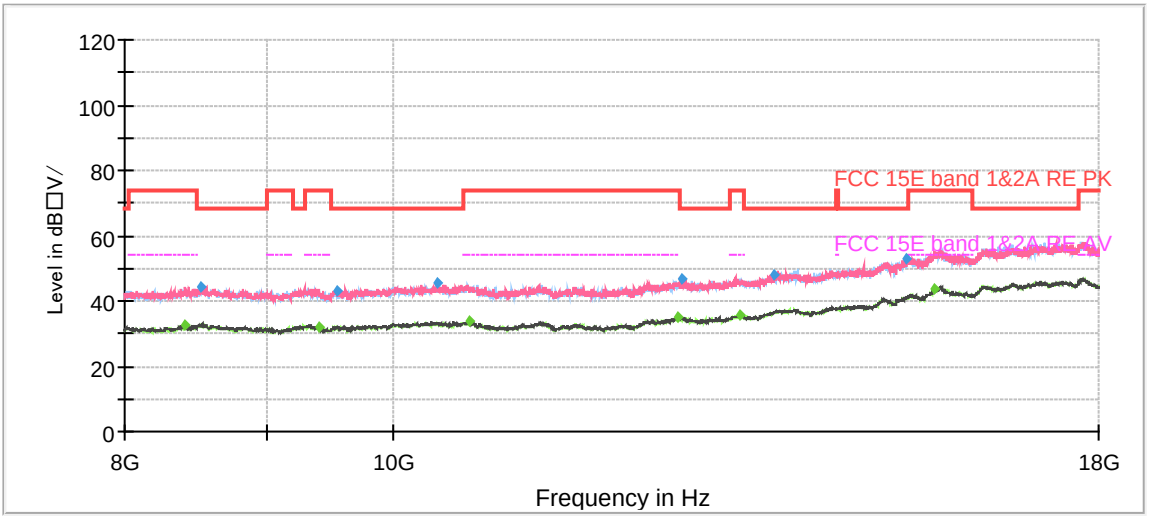
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH60



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

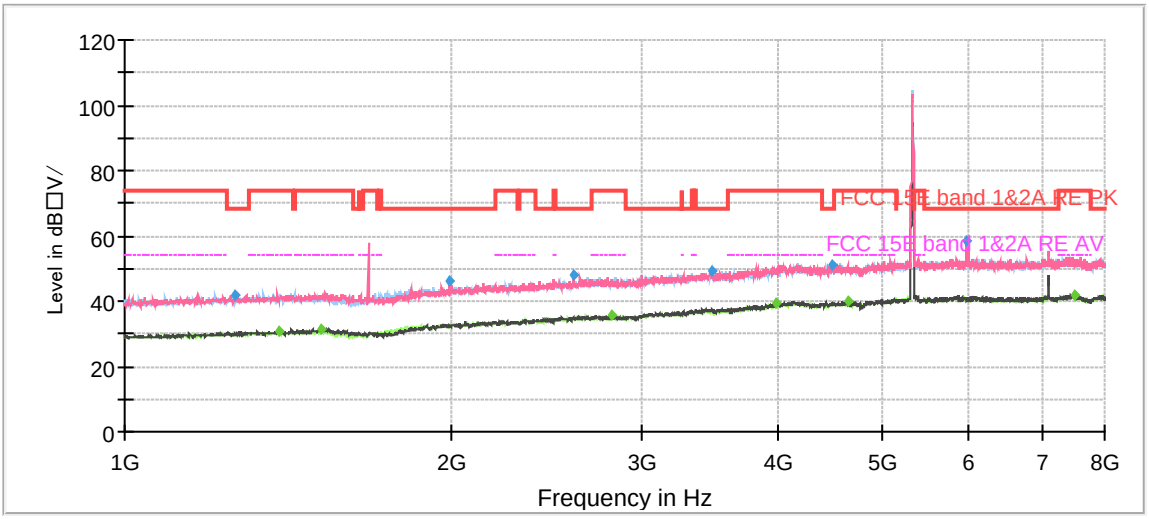


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1252.88	41.64	---	68.20	26.56	200.0	V	204.00	-7
1334.25	---	31.73	54.00	22.27	100.0	H	348.00	-7
1698.25	---	32.15	54.00	21.85	200.0	V	17.00	-5
1873.25	44.73	---	68.20	23.47	100.0	H	80.00	-4
2648.50	47.27	---	68.20	20.93	100.0	H	85.00	0
2737.75	---	35.67	54.00	18.33	100.0	H	224.00	1
3553.25	48.84	---	68.20	19.36	200.0	H	100.00	4
3989.88	---	39.15	54.00	14.85	200.0	H	271.00	6
4480.75	51.51	---	68.20	16.69	100.0	H	21.00	7
4616.38	---	39.44	54.00	14.56	100.0	V	281.00	7
5886.00	53.17	---	68.20	15.03	100.0	H	75.00	10
7371.75	---	41.73	54.00	12.27	200.0	V	38.00	11

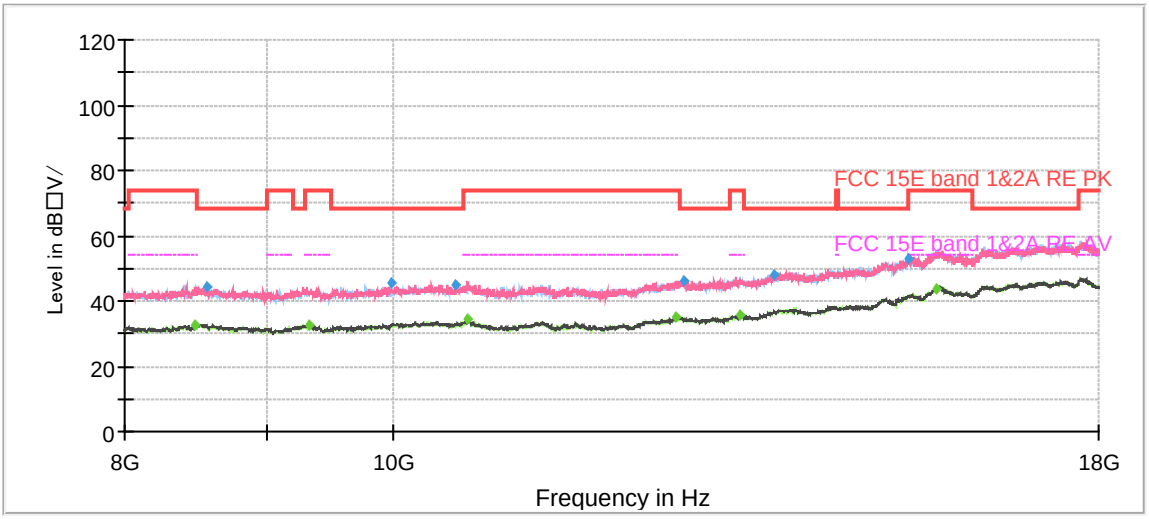
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH64



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

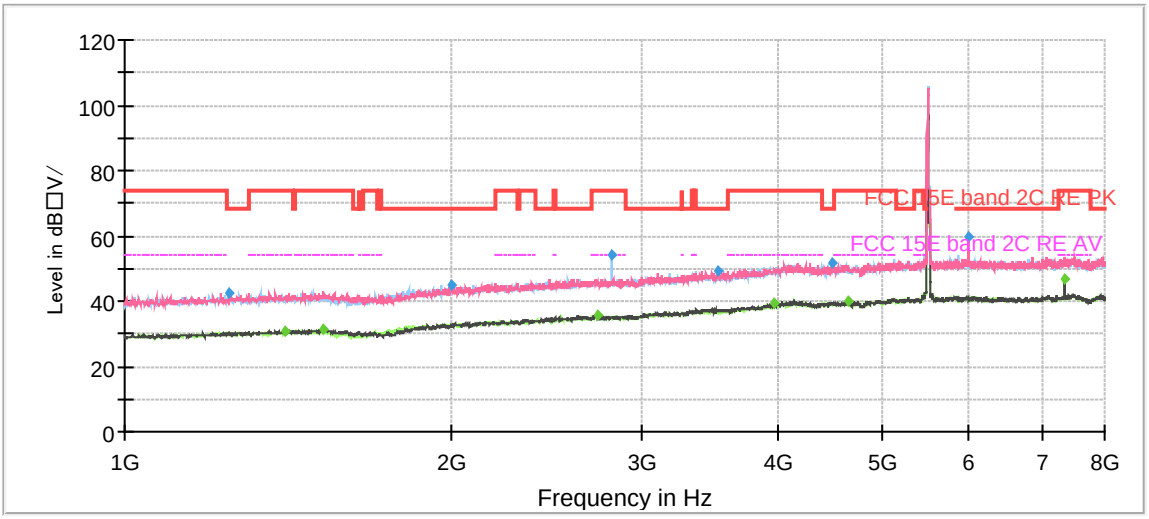


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1262.50	41.80	---	68.20	26.40	100.0	V	87.00	-7
1385.00	---	30.96	54.00	23.04	200.0	V	159.00	-6
1519.75	---	31.28	54.00	22.72	100.0	V	29.00	-5
1993.13	46.20	---	68.20	22.00	100.0	V	167.00	-3
2589.00	47.79	---	68.20	20.41	200.0	V	356.00	0
2814.75	---	35.60	54.00	18.40	200.0	V	0.00	1
3469.25	49.20	---	68.20	19.00	200.0	H	5.00	4
3989.88	---	39.32	54.00	14.68	200.0	V	0.00	6
4486.88	51.23	---	68.20	16.97	200.0	V	189.00	7
4647.00	---	39.87	54.00	14.13	200.0	V	249.00	7
5972.63	58.34	---	68.20	9.86	200.0	V	294.00	10
7496.00	---	41.91	54.00	12.09	200.0	V	234.00	11

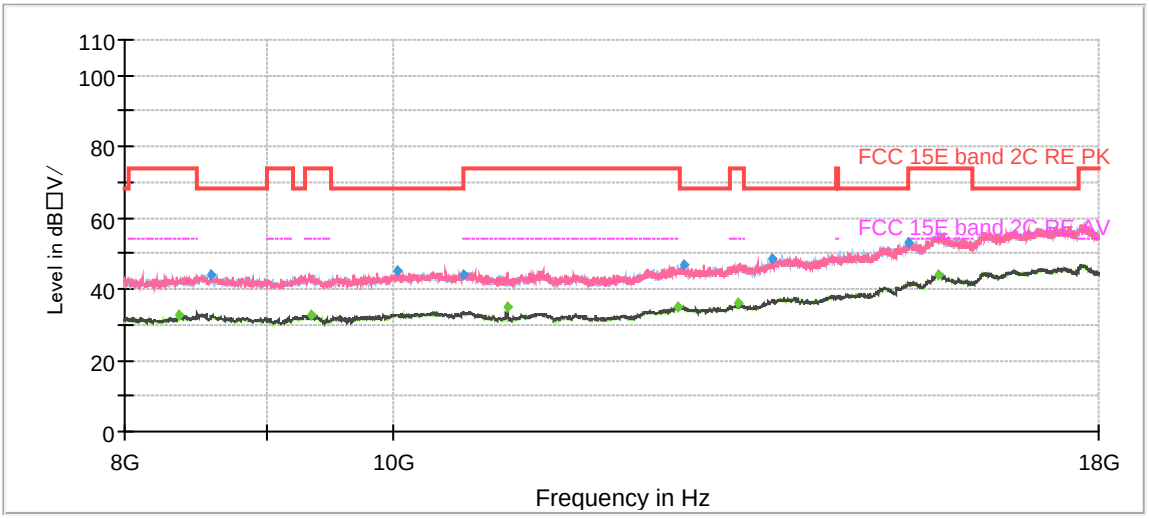
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH100



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

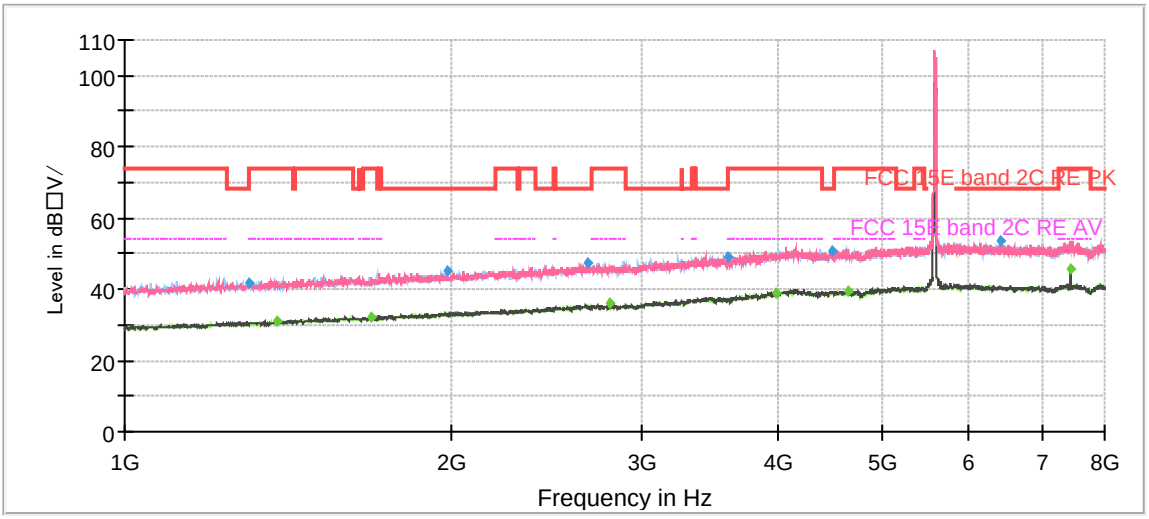


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1245.00	42.29	---	68.20	25.91	100.0	H	358.00	-7
1404.25	---	30.60	54.00	23.40	200.0	V	131.00	-6
1520.63	---	31.42	54.00	22.58	200.0	V	84.00	-5
1997.50	44.78	---	68.20	23.42	100.0	H	92.00	-3
2726.38	---	35.63	54.00	18.37	200.0	V	223.00	1
2814.75	54.46	---	74.00	19.54	200.0	H	353.00	1
3520.88	49.38	---	68.20	18.82	100.0	V	148.00	4
3963.63	---	39.22	54.00	14.78	200.0	H	105.00	6
4488.63	51.39	---	68.20	16.81	200.0	V	227.00	7
4640.00	---	39.75	54.00	14.25	200.0	V	0.00	7
5990.13	59.47	---	68.20	8.73	200.0	V	278.00	10
7334.13	---	47.07	54.00	6.93	200.0	V	257.00	11

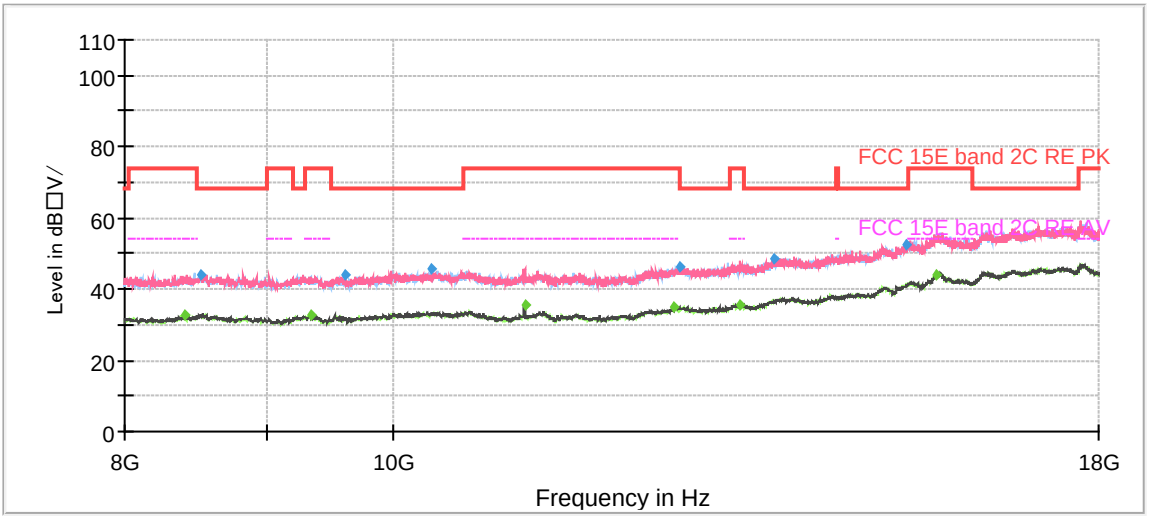
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH116



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

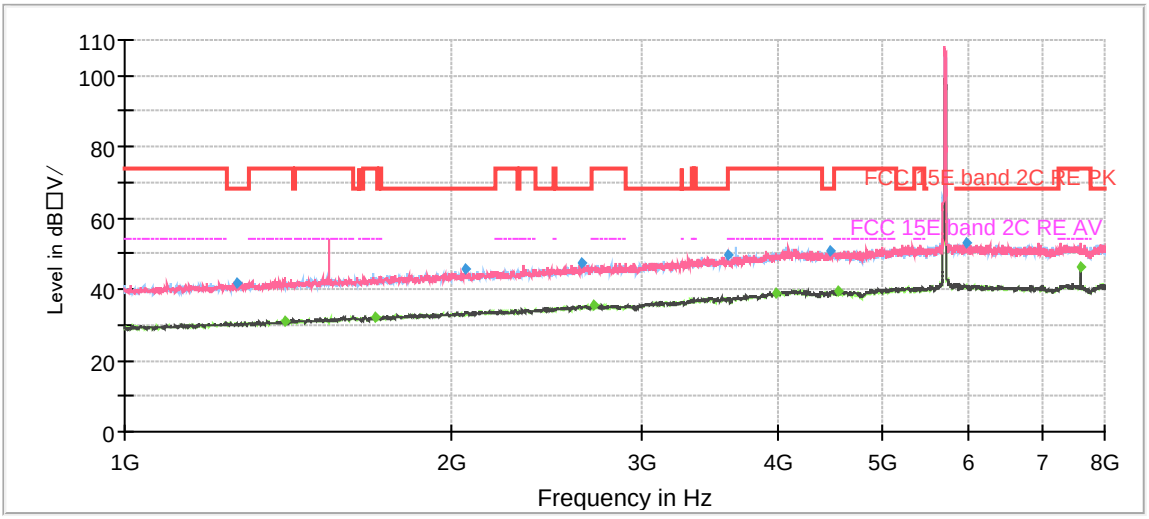


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1299.25	41.92	---	68.20	26.29	200.0	H	311.00	-7
1383.25	---	31.20	54.00	22.80	200.0	V	295.00	-6
1687.75	---	32.39	54.00	21.61	100.0	V	68.00	-5
1983.50	45.20	---	68.20	23.00	200.0	H	165.00	-3
2675.63	47.20	---	68.20	21.00	200.0	V	123.00	0
2802.50	---	35.82	54.00	18.18	200.0	V	46.00	1
3599.63	49.19	---	68.20	19.01	200.0	V	31.00	4
3982.88	---	39.12	54.00	14.88	100.0	V	0.00	6
4491.25	50.80	---	68.20	17.40	200.0	V	359.00	7
4636.50	---	39.32	54.00	14.68	100.0	V	0.00	7
6412.75	53.55	---	68.20	14.65	100.0	V	330.00	10
7440.88	---	45.73	54.00	8.27	200.0	V	279.00	11

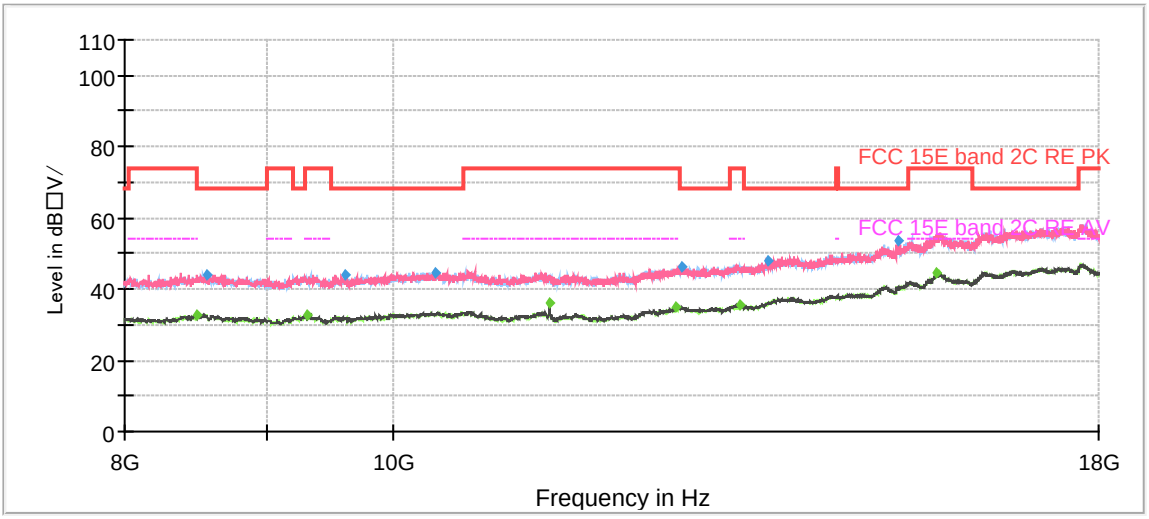
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH140



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

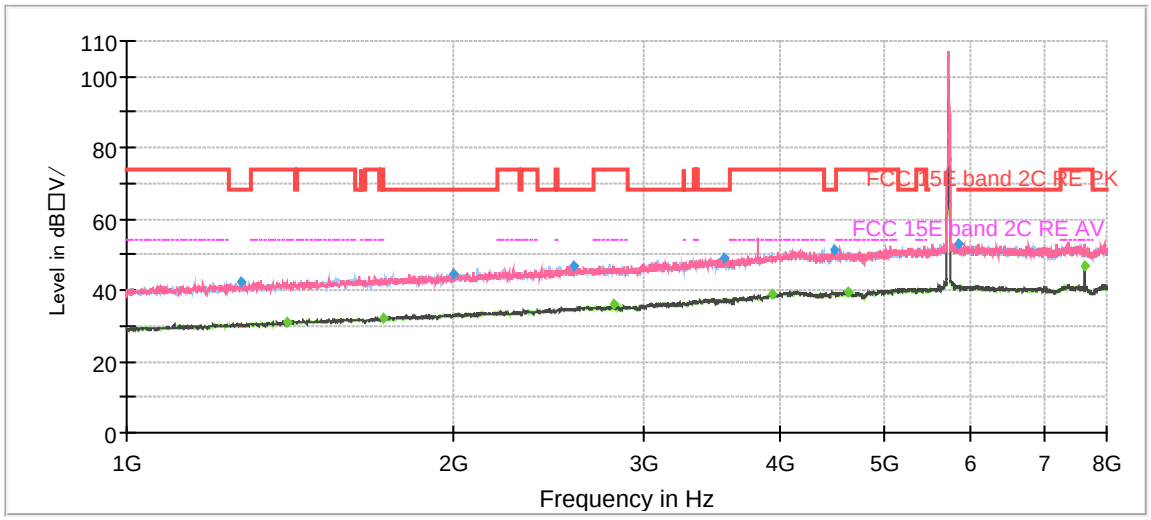


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1269.50	41.69	---	68.20	26.51	100.0	H	86.00	-7
1407.75	---	31.24	54.00	22.76	200.0	H	286.00	-6
1700.00	---	32.28	54.00	21.72	200.0	V	61.00	-5
2059.63	45.58	---	68.20	22.62	100.0	H	269.00	-3
2640.63	47.35	---	68.20	20.85	100.0	H	66.00	0
2705.38	---	35.52	54.00	18.48	200.0	H	0.00	1
3589.13	49.81	---	68.20	18.39	200.0	V	163.00	4
3983.75	---	39.15	54.00	14.85	200.0	H	198.00	6
4460.63	50.61	---	68.20	17.59	100.0	H	163.00	7
4545.50	---	39.47	54.00	14.53	100.0	V	349.00	7
5967.38	53.04	---	68.20	15.16	100.0	V	298.00	10
7600.13	---	46.06	54.00	7.94	100.0	V	103.00	11

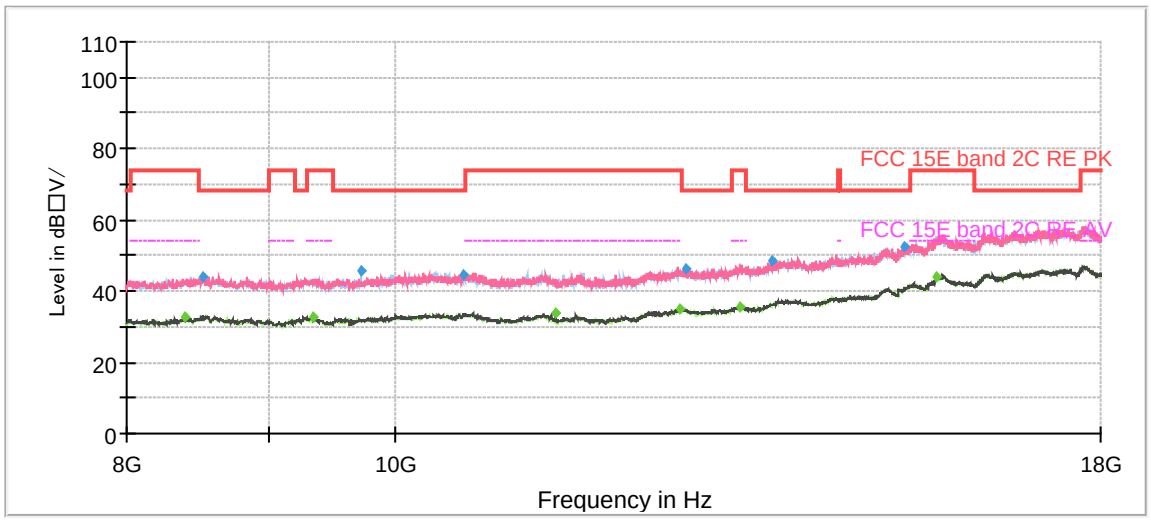
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH144



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

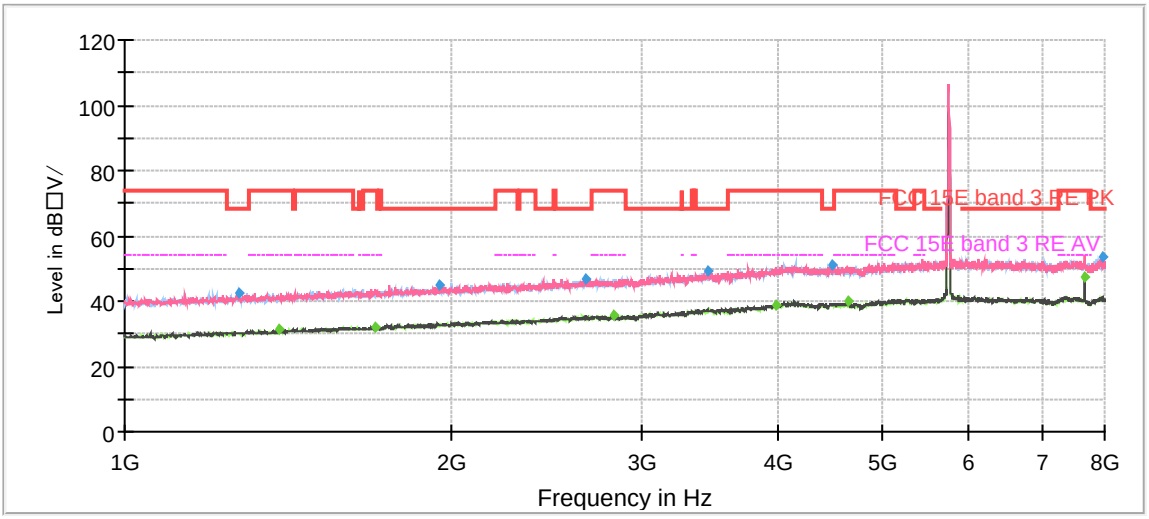


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1273.00	42.39	---	68.20	25.81	200.0	V	94.00	-7
1402.50	---	31.25	54.00	22.75	100.0	V	0.00	-6
1721.88	---	32.33	54.00	21.67	200.0	V	201.00	-4
1998.38	44.63	---	68.20	23.57	200.0	V	41.00	-3
2579.38	46.89	---	68.20	21.31	100.0	V	320.00	0
2810.38	---	35.83	54.00	18.17	100.0	H	101.00	1
3553.25	49.34	---	68.20	18.86	100.0	V	93.00	4
3940.88	---	39.14	54.00	14.86	100.0	V	130.00	6
4491.25	51.07	---	68.20	17.13	100.0	V	352.00	7
4629.50	---	39.66	54.00	14.34	100.0	V	255.00	7
5850.13	53.27	---	68.20	14.93	100.0	V	227.00	10
7627.25	---	46.86	54.00	7.14	100.0	V	104.00	11

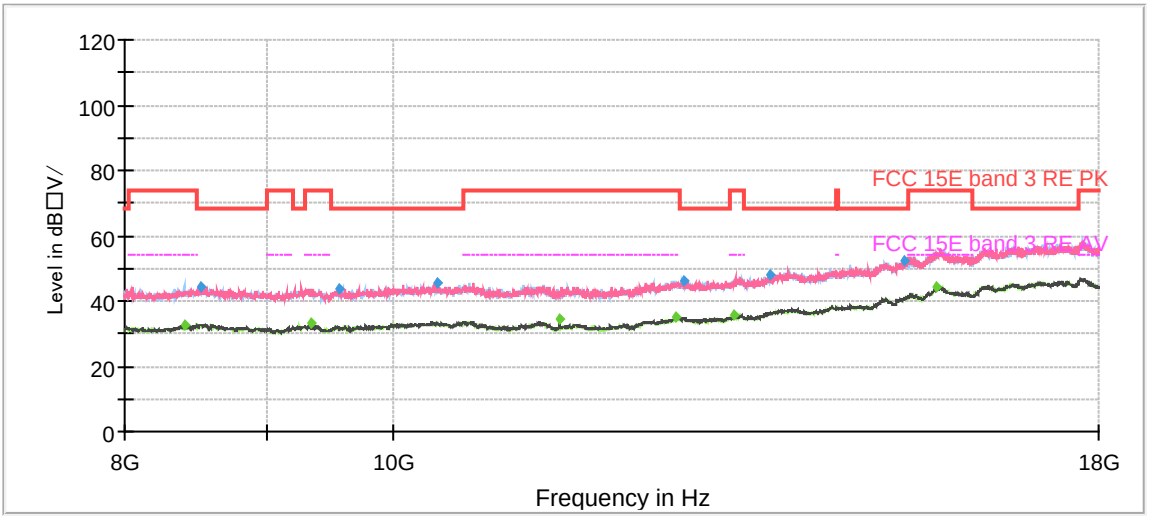
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH149



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

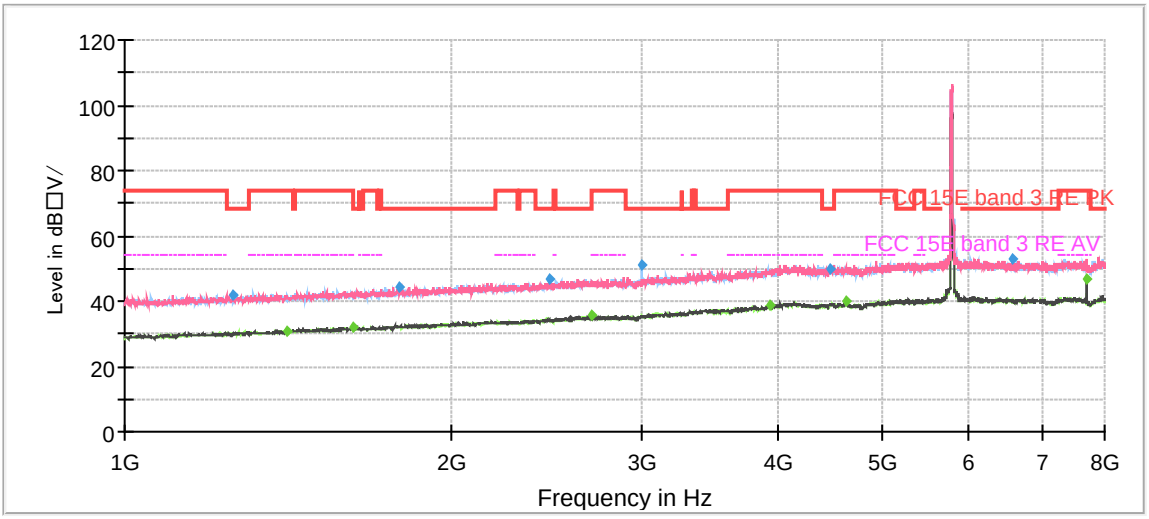


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1276.50	42.43	---	68.20	25.77	100.0	H	228.00	-7
1389.38	---	31.24	54.00	22.76	200.0	H	338.00	-6
1702.63	---	32.17	54.00	21.83	100.0	V	352.00	-5
1947.63	44.67	---	68.20	23.53	200.0	V	13.00	-3
2653.75	46.73	---	68.20	21.47	200.0	H	227.00	0
2826.13	---	35.54	54.00	18.46	200.0	V	183.00	1
3450.00	49.44	---	68.20	18.76	100.0	V	280.00	4
3985.50	---	38.98	54.00	15.02	100.0	H	141.00	6
4490.38	51.23	---	68.20	16.97	100.0	V	157.00	7
4648.75	---	39.84	54.00	14.16	200.0	V	1.00	7
7660.50	---	47.41	54.00	6.59	100.0	V	105.00	11
7950.13	53.45	---	68.20	14.75	100.0	V	243.00	12

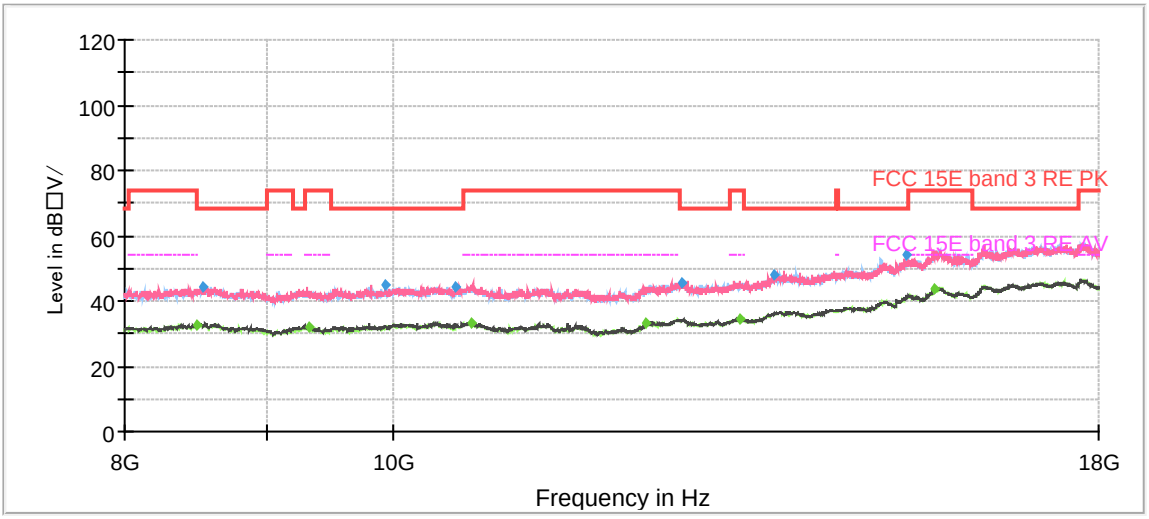
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH157



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

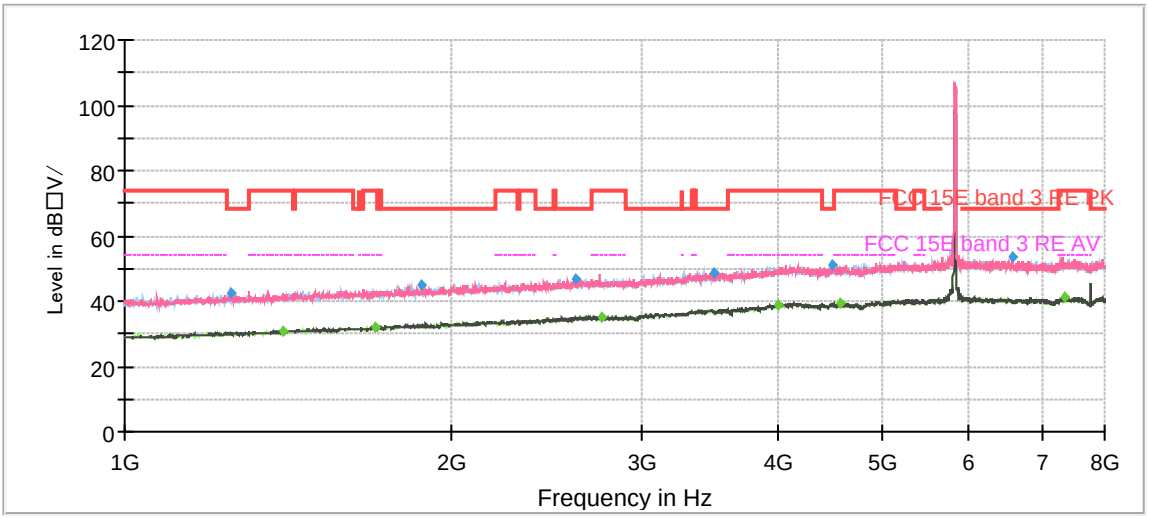


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1255.50	41.95	---	68.20	26.25	200.0	H	64.00	-7
1412.13	---	31.05	54.00	22.95	200.0	H	140.00	-6
1621.25	---	32.18	54.00	21.82	200.0	V	95.00	-5
1792.75	44.60	---	68.20	23.60	100.0	V	265.00	-4
2460.38	46.65	---	68.20	21.55	100.0	H	0.00	-1
2694.88	---	35.42	54.00	18.58	200.0	V	140.00	1
2999.38	51.00	---	68.20	17.20	100.0	H	292.00	2
3932.13	---	38.93	54.00	15.07	200.0	V	353.00	6
4476.38	49.79	---	68.20	18.41	100.0	V	76.00	7
4622.50	---	39.83	54.00	14.17	200.0	H	329.00	7
6590.38	52.93	---	68.20	15.27	100.0	H	186.00	10
7713.88	---	47.00	54.00	7.00	100.0	V	98.00	11

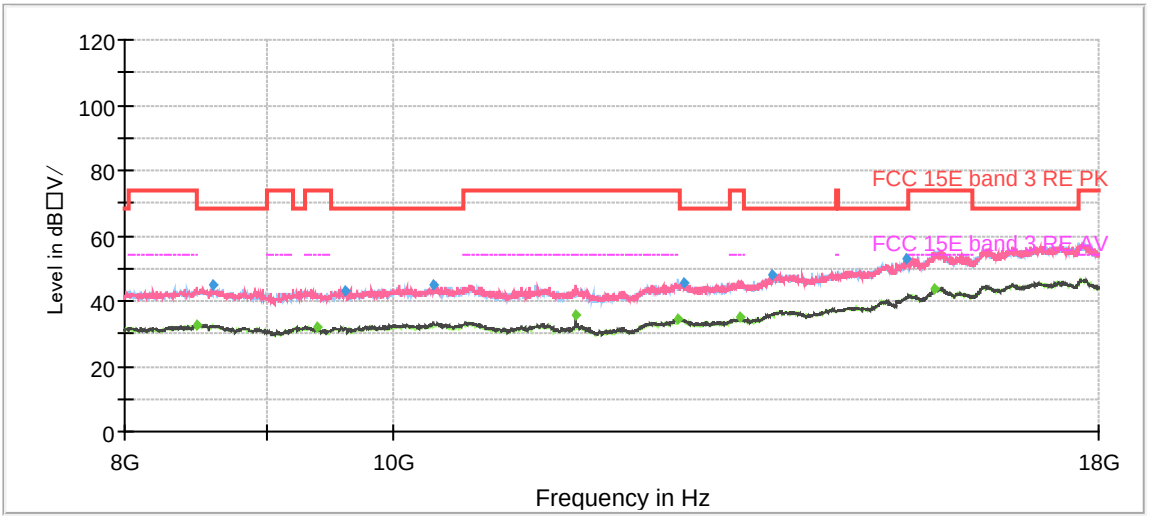
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH165



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

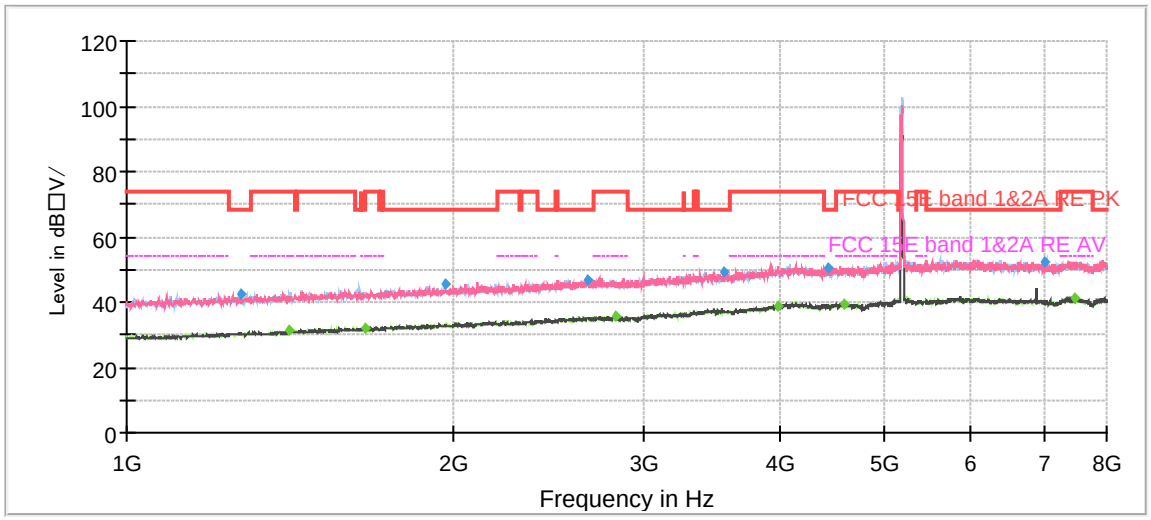


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1254.63	42.25	---	68.20	25.95	200.0	V	0.00	-7
1397.25	---	30.98	54.00	23.02	100.0	V	277.00	-6
1698.25	---	32.24	54.00	21.76	200.0	V	197.00	-5
1874.13	44.67	---	68.20	23.53	100.0	H	336.00	-4
2603.00	46.54	---	68.20	21.66	100.0	V	353.00	0
2755.25	---	35.32	54.00	18.68	200.0	H	132.00	1
3488.50	48.86	---	68.20	19.34	200.0	H	197.00	4
3996.00	---	38.89	54.00	15.11	200.0	V	34.00	6
4488.63	51.32	---	68.20	16.88	200.0	H	0.00	7
4557.75	---	39.16	54.00	14.84	200.0	V	334.00	7
6569.38	53.43	---	68.20	14.77	100.0	V	272.00	10
7355.13	---	41.09	54.00	12.91	100.0	V	297.00	11

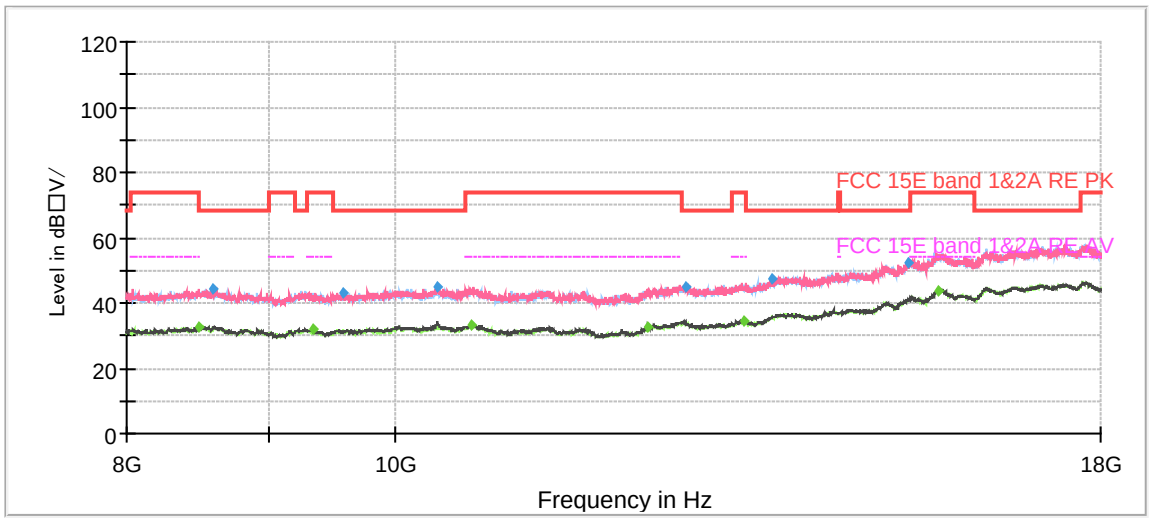
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH36



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

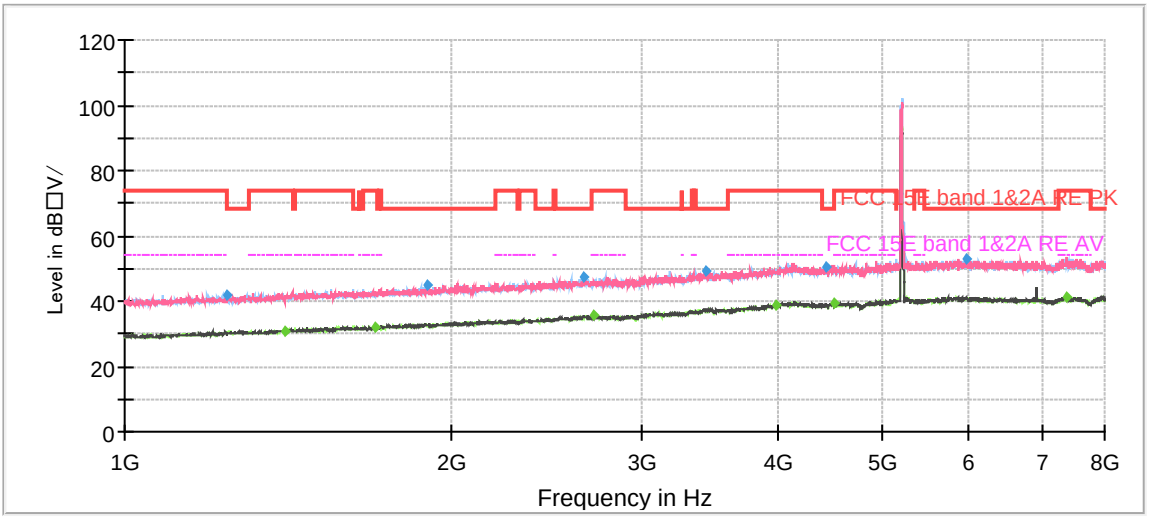


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1273.88	42.27	---	68.20	25.93	200.0	H	119.00	-7
1413.00	---	31.20	54.00	22.80	100.0	V	135.00	-6
1661.50	---	32.25	54.00	21.75	100.0	H	56.00	-5
1963.38	45.52	---	68.20	22.68	200.0	H	250.00	-3
2664.25	47.06	---	68.20	21.14	100.0	V	354.00	0
2817.38	---	35.52	54.00	18.48	100.0	H	249.00	1
3545.38	49.22	---	68.20	18.98	200.0	H	341.00	4
3988.13	---	38.96	54.00	15.04	200.0	V	198.00	6
4427.38	50.48	---	68.20	17.72	200.0	V	157.00	7
4583.13	---	39.60	54.00	14.40	200.0	V	229.00	7
7005.13	52.61	---	68.20	15.59	200.0	V	177.00	11
7484.63	---	41.44	54.00	12.56	200.0	V	167.00	11

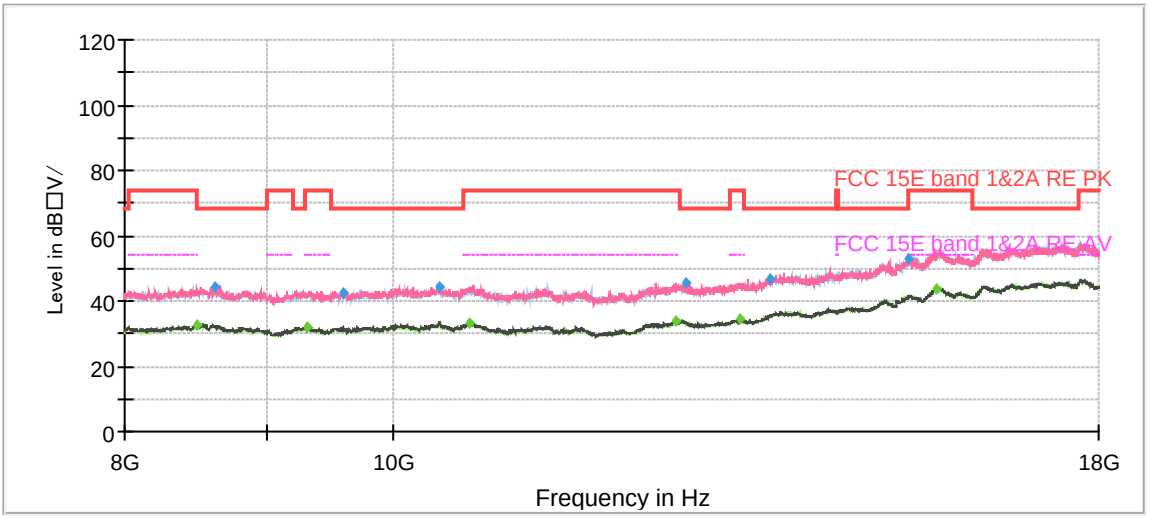
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH40



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

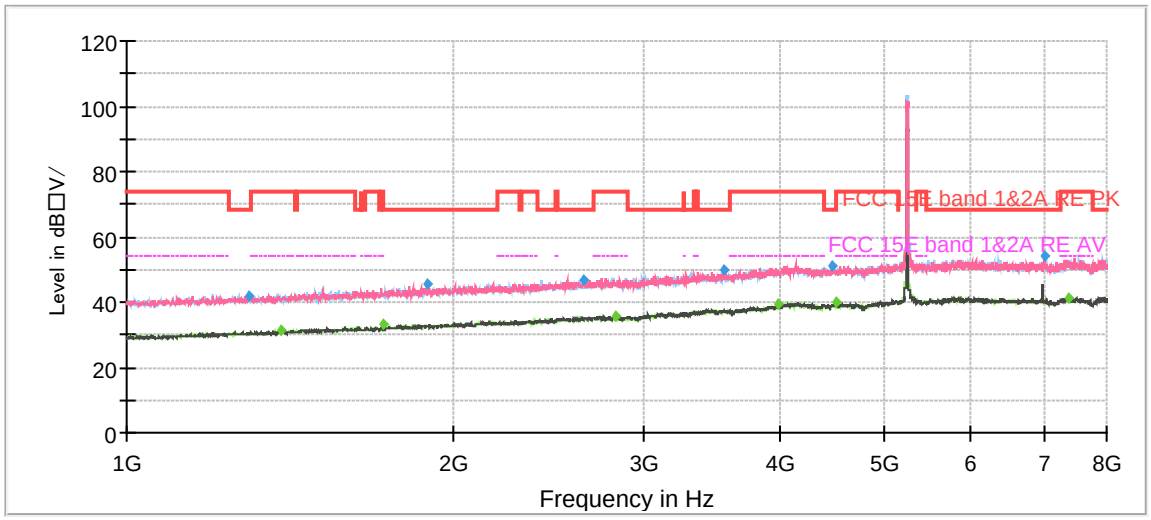


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1242.38	41.92	---	68.20	26.28	200.0	H	340.00	-7
1406.00	---	31.01	54.00	22.99	100.0	V	347.00	-6
1701.75	---	32.23	54.00	21.77	200.0	H	340.00	-5
1900.38	44.94	---	68.20	23.26	200.0	V	191.00	-4
2645.88	47.34	---	68.20	20.86	100.0	H	67.00	0
2699.25	---	35.59	54.00	18.41	200.0	H	0.00	1
3438.63	49.34	---	68.20	18.86	200.0	V	79.00	4
3987.25	---	38.97	54.00	15.03	200.0	V	84.00	6
4433.50	50.23	---	68.20	17.97	100.0	V	31.00	7
4508.75	---	39.31	54.00	14.69	100.0	V	338.00	7
5956.88	52.96	---	68.20	15.24	200.0	V	161.00	10
7389.25	---	41.34	54.00	12.66	200.0	V	27.00	11

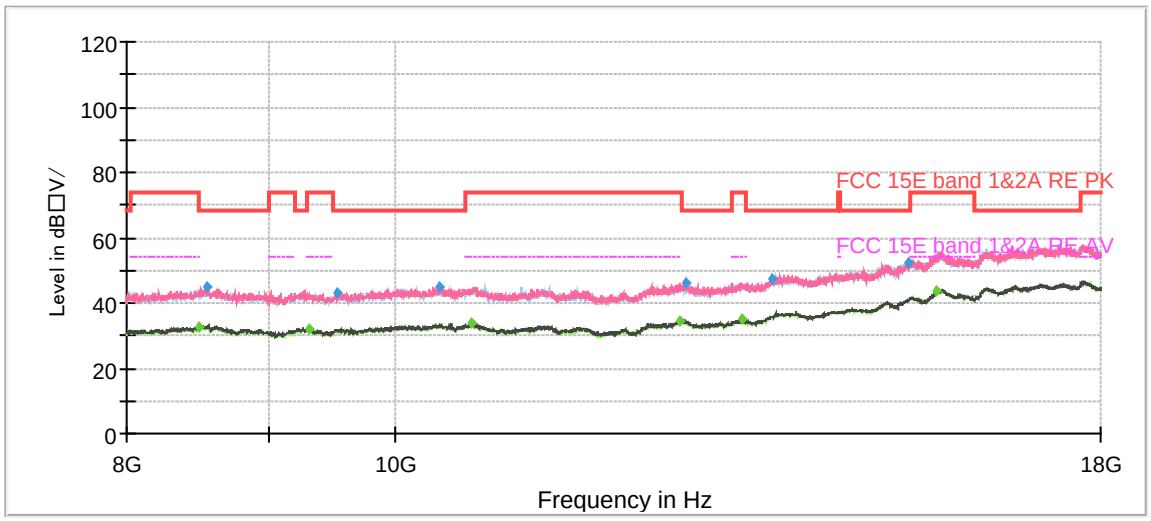
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH48



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

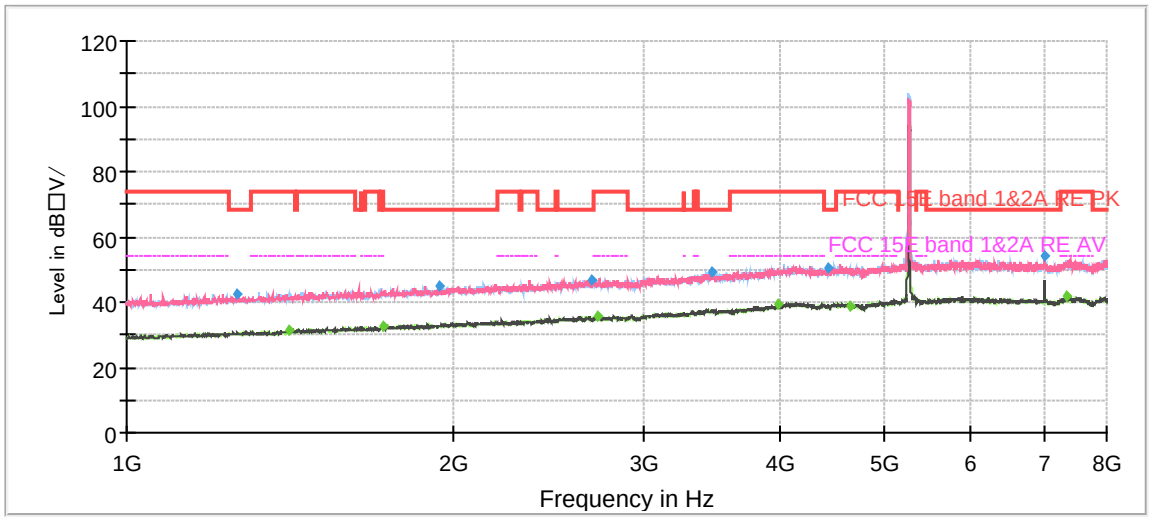


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1297.50	41.94	---	68.20	26.26	200.0	H	256.00	-7
1385.00	---	31.15	54.00	22.85	200.0	H	246.00	-6
1721.00	---	32.97	54.00	21.03	100.0	V	217.00	-4
1893.38	45.31	---	68.20	22.89	100.0	H	20.00	-4
2641.50	46.68	---	68.20	21.52	200.0	V	50.00	0
2823.50	---	35.70	54.00	18.30	100.0	V	291.00	1
3545.38	49.66	---	68.20	18.54	200.0	H	210.00	4
3983.75	---	39.10	54.00	14.90	100.0	H	41.00	6
4468.50	51.36	---	68.20	16.84	200.0	V	338.00	7
4507.00	---	39.80	54.00	14.20	200.0	V	277.00	7
7014.75	53.91	---	68.20	14.29	100.0	V	274.00	11
7393.63	---	41.39	54.00	12.61	200.0	H	205.00	11

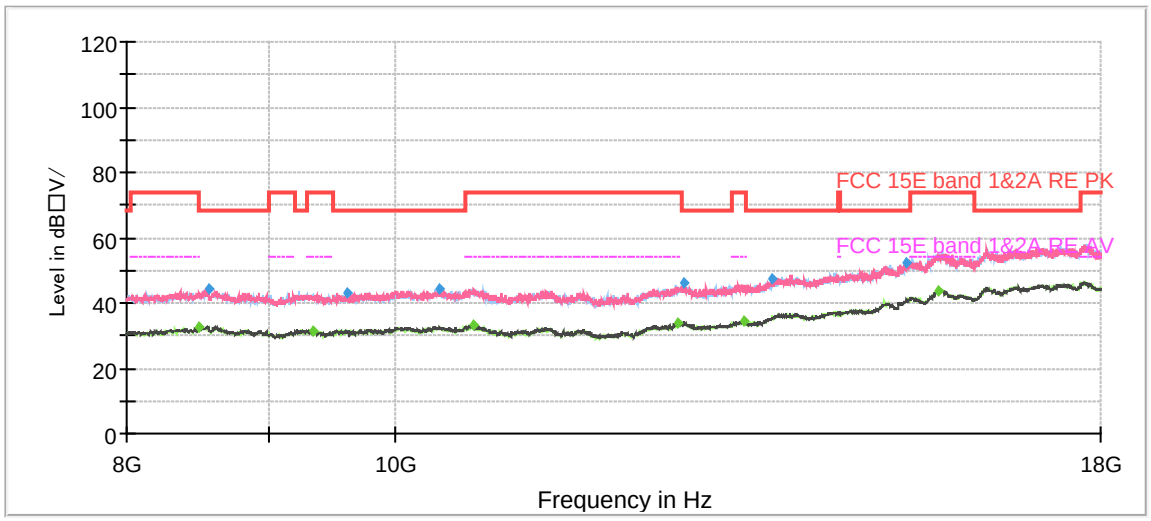
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH52



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

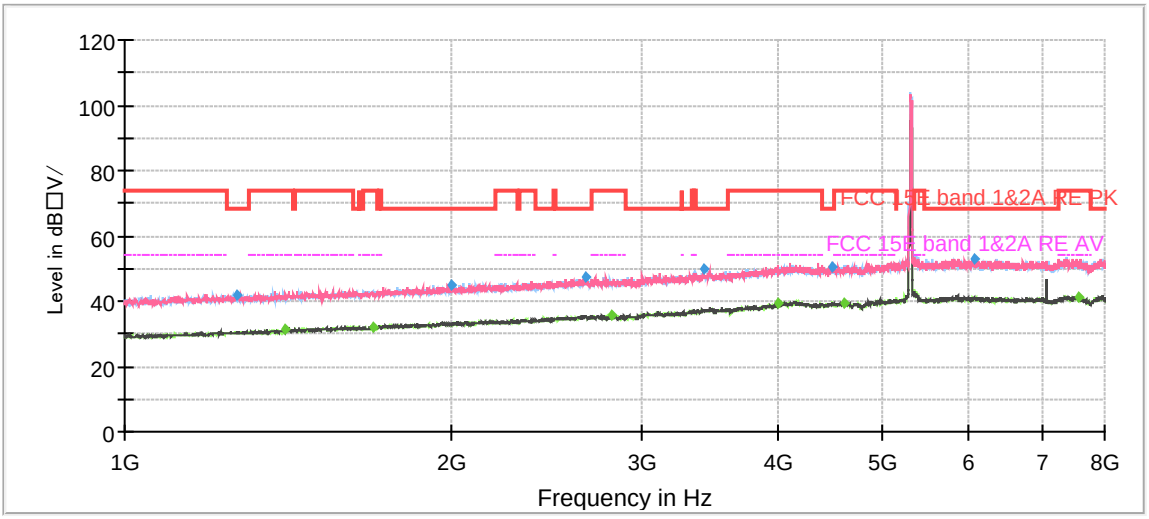


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1262.50	42.71	---	68.20	25.49	100.0	H	249.00	-7
1412.13	---	31.27	54.00	22.73	200.0	H	116.00	-6
1721.88	---	32.53	54.00	21.47	200.0	H	319.00	-4
1944.13	44.72	---	68.20	23.48	100.0	H	187.00	-3
2677.38	46.83	---	68.20	21.37	100.0	H	75.00	0
2719.38	---	35.60	54.00	18.40	200.0	H	256.00	1
3458.75	49.03	---	68.20	19.17	100.0	H	127.00	4
3984.63	---	39.24	54.00	14.76	100.0	V	34.00	6
4433.50	50.45	---	68.20	17.75	200.0	V	89.00	7
4638.25	---	39.01	54.00	14.99	200.0	H	137.00	7
7013.88	53.89	---	68.20	14.31	100.0	V	81.00	11
7357.75	---	41.68	54.00	12.32	200.0	V	70.00	11

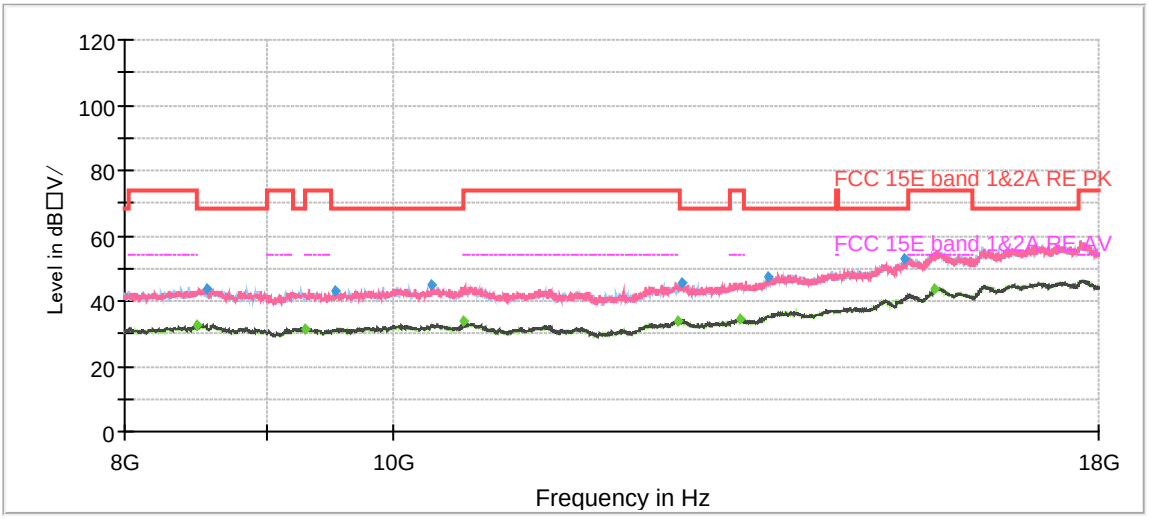
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH60



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

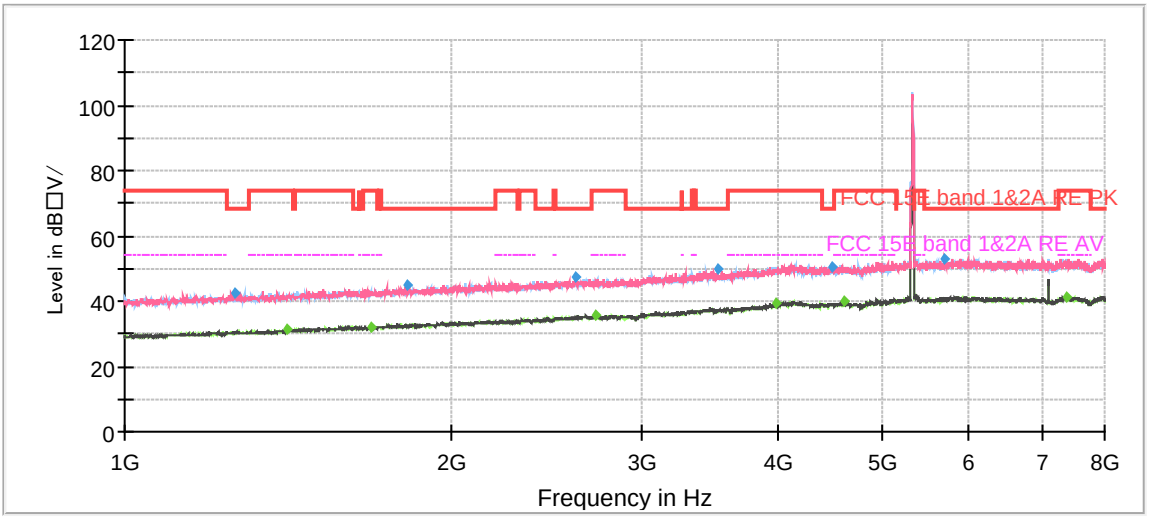


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1271.25	42.10	---	68.20	26.10	200.0	V	143.00	-7
1407.75	---	31.16	54.00	22.84	100.0	V	334.00	-6
1694.75	---	32.19	54.00	21.81	200.0	H	126.00	-5
1998.38	44.90	---	68.20	23.30	100.0	V	358.00	-3
2654.63	47.65	---	68.20	20.55	200.0	V	195.00	0
2809.50	---	35.73	54.00	18.27	200.0	V	56.00	1
3421.13	49.57	---	68.20	18.63	200.0	V	143.00	4
3993.38	---	39.09	54.00	14.91	100.0	V	298.00	6
4486.88	50.74	---	68.20	17.46	200.0	V	52.00	7
4605.00	---	39.46	54.00	14.54	200.0	V	56.00	7
6064.50	53.11	---	68.20	15.09	100.0	H	194.00	10
7573.88	---	41.43	54.00	12.57	200.0	V	195.00	11

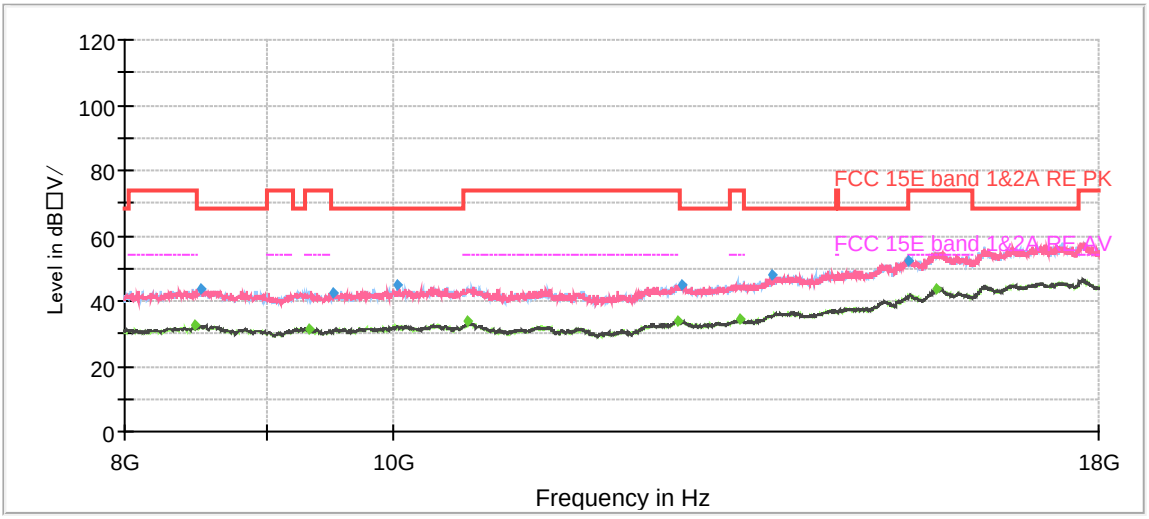
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH64



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

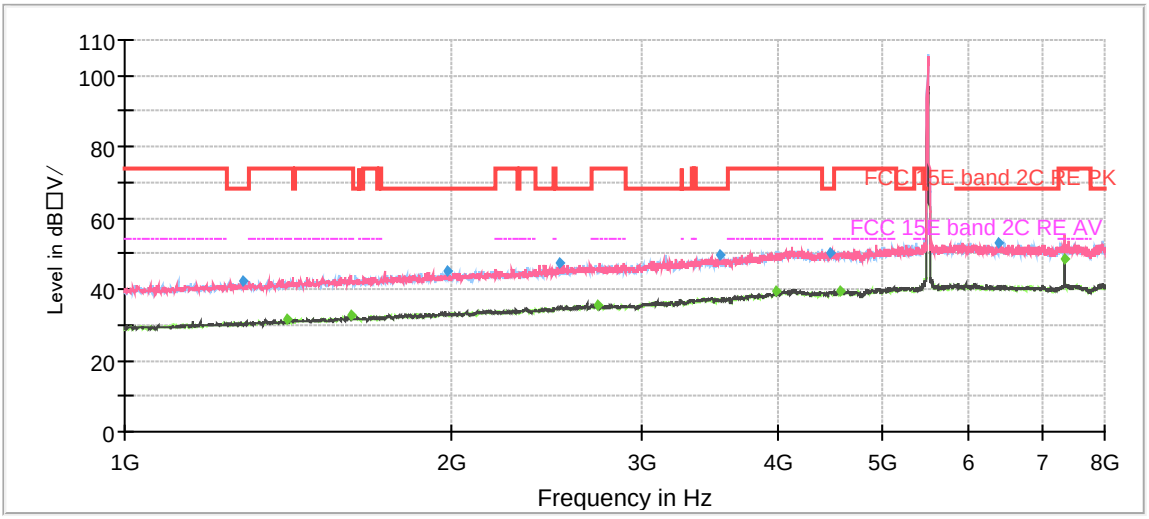


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1264.25	42.62	---	68.20	25.58	100.0	H	24.00	-7
1409.50	---	31.19	54.00	22.81	200.0	V	106.00	-6
1689.50	---	32.29	54.00	21.71	100.0	V	286.00	-5
1818.13	45.16	---	68.20	23.04	100.0	V	224.00	-4
2606.50	47.28	---	68.20	20.92	200.0	V	86.00	0
2722.00	---	35.74	54.00	18.26	200.0	H	164.00	1
3522.63	49.58	---	68.20	18.62	200.0	H	204.00	4
3988.13	---	39.15	54.00	14.85	100.0	H	305.00	6
4484.25	50.56	---	68.20	17.64	100.0	H	13.00	7
4594.50	---	39.73	54.00	14.27	100.0	V	224.00	7
5704.88	53.10	---	68.20	15.10	100.0	V	111.00	10
7391.00	---	41.48	54.00	12.52	200.0	H	0.00	11

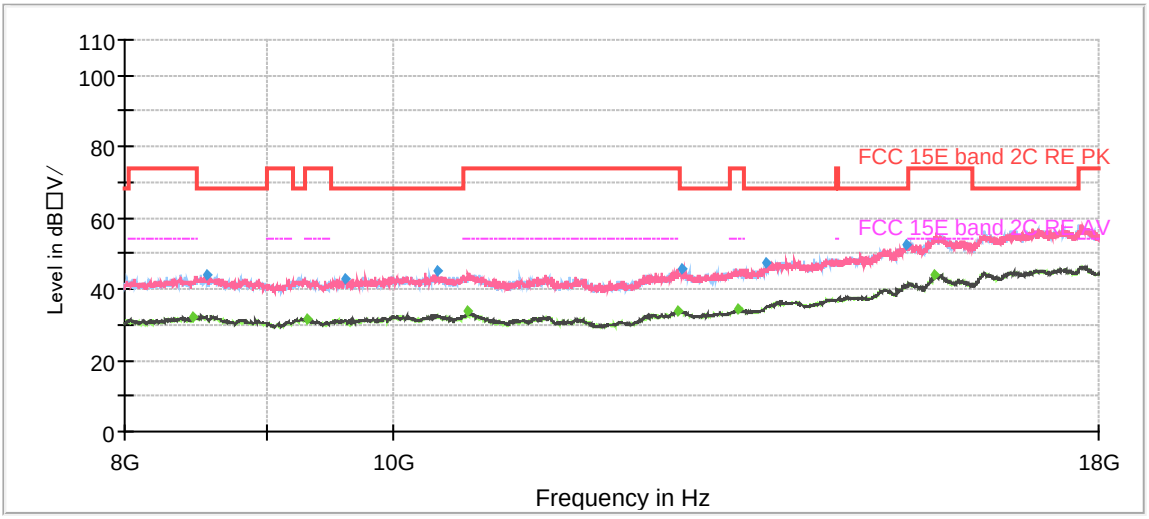
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH100



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

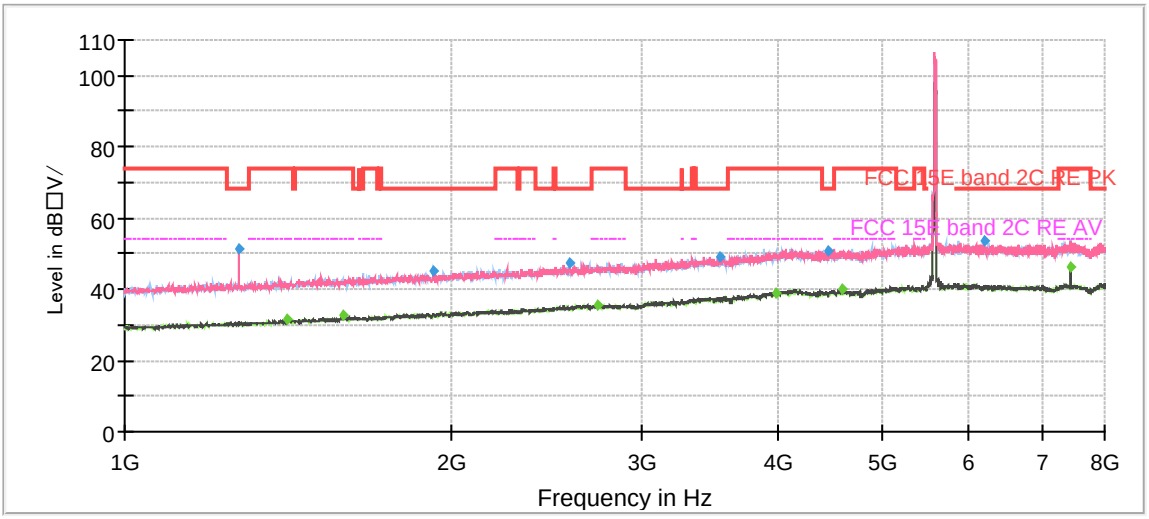


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1283.50	42.09	---	68.20	26.11	100.0	V	202.00	-7
1410.38	---	31.42	54.00	22.58	200.0	V	153.00	-6
1616.00	---	32.53	54.00	21.47	200.0	V	34.00	-5
1981.75	45.10	---	68.20	23.10	200.0	H	0.00	-3
2514.63	47.37	---	68.20	20.83	200.0	V	338.00	0
2725.50	---	35.79	54.00	18.21	100.0	V	263.00	1
3538.38	49.59	---	68.20	18.61	200.0	V	220.00	4
3988.13	---	39.31	54.00	14.69	100.0	V	278.00	6
4461.50	50.47	---	68.20	17.73	200.0	V	251.00	7
4555.13	---	39.57	54.00	14.43	200.0	V	356.00	7
6390.00	53.21	---	68.20	14.99	100.0	V	318.00	10
7334.13	---	48.62	54.00	5.38	100.0	V	258.00	11

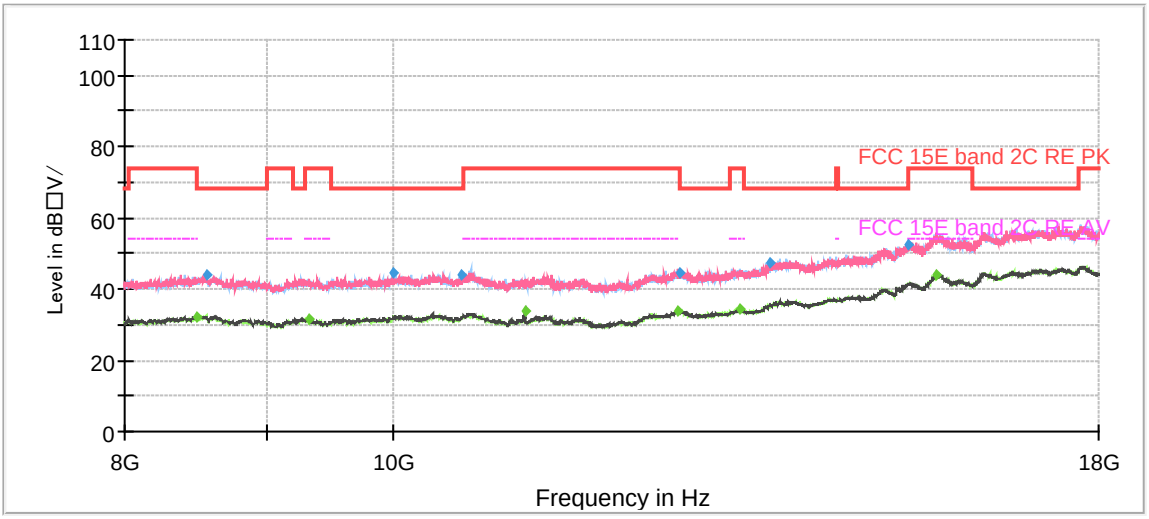
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH116



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

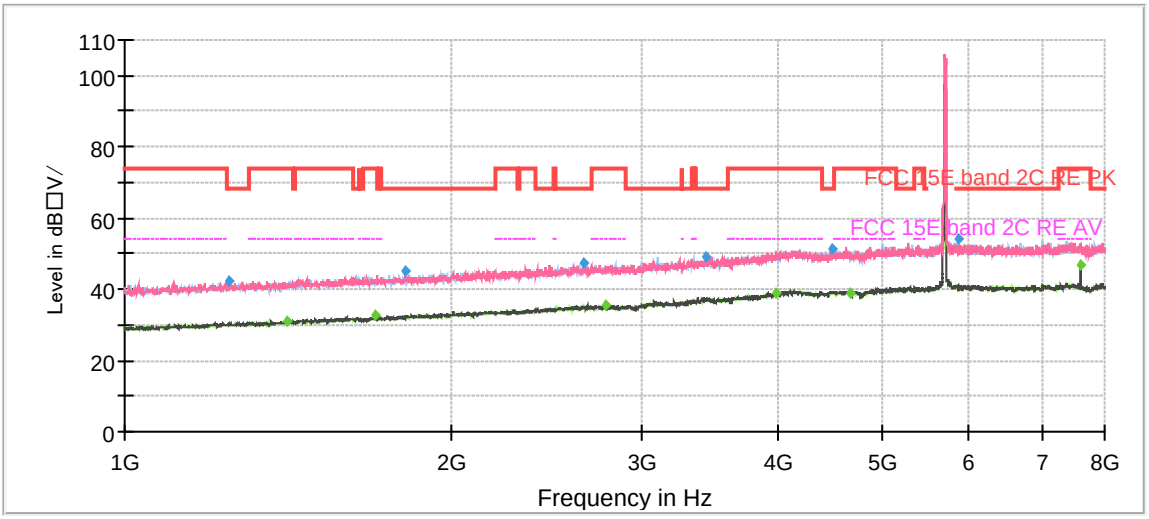


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1274.75	51.08	---	68.20	17.12	100.0	V	0.00	-7
1412.13	---	31.31	54.00	22.69	200.0	V	128.00	-6
1588.00	---	32.49	54.00	21.51	100.0	H	18.00	-5
1928.38	45.01	---	68.20	23.19	100.0	H	134.00	-3
2566.25	47.63	---	68.20	20.57	100.0	H	33.00	0
2722.88	---	35.57	54.00	18.43	100.0	V	356.00	1
3534.88	49.24	---	68.20	18.96	200.0	V	60.00	4
3984.63	---	39.19	54.00	14.81	200.0	V	0.00	6
4446.63	50.56	---	68.20	17.64	100.0	H	108.00	7
4576.13	---	39.87	54.00	14.13	100.0	V	340.00	7
6186.13	53.40	---	68.20	14.80	200.0	V	152.00	10
7440.88	---	46.03	54.00	7.97	100.0	V	269.00	11

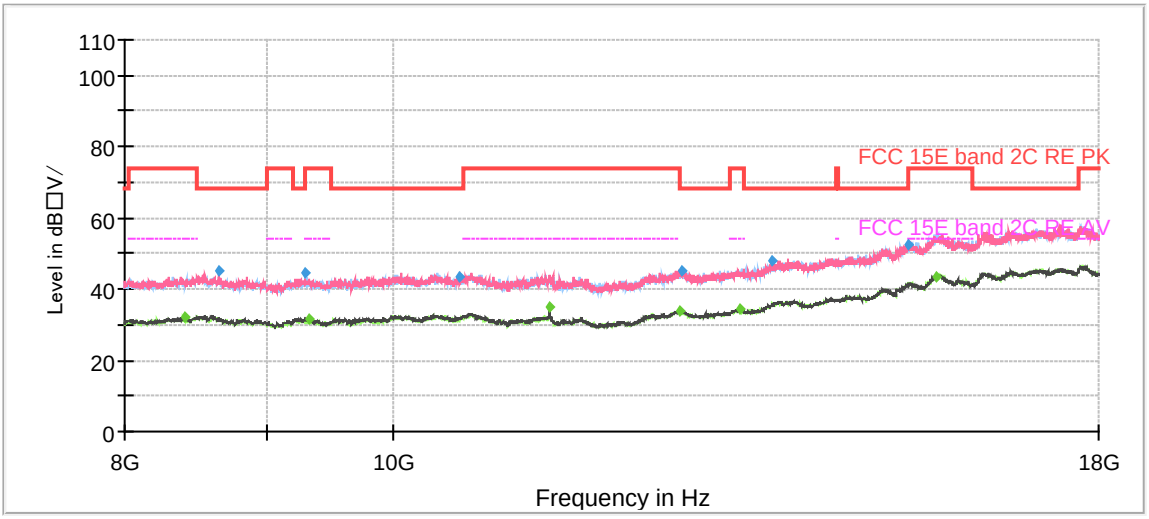
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH140



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

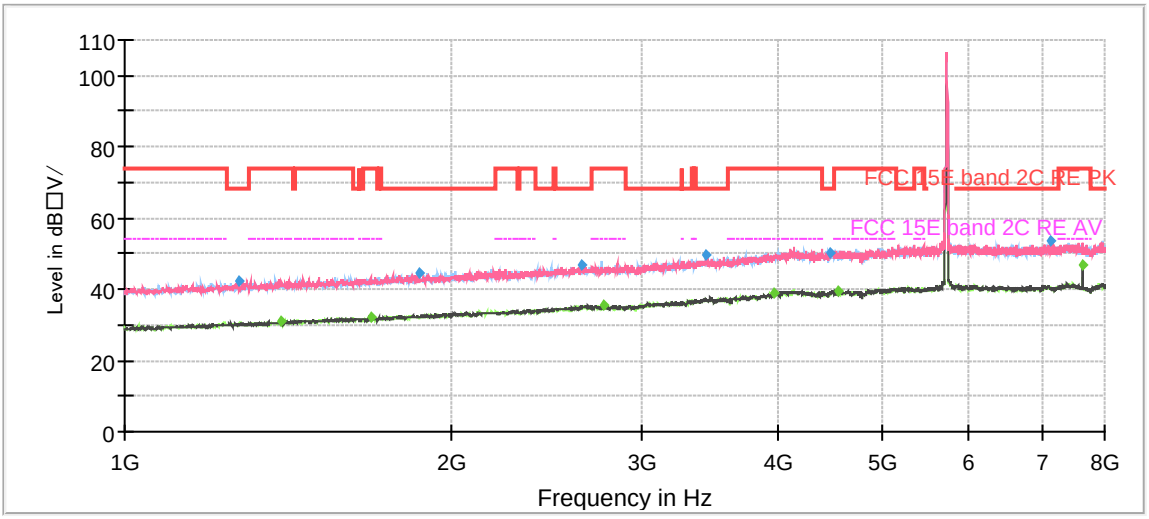


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1249.38	42.12	---	68.20	26.08	200.0	H	126.00	-7
1411.25	---	30.99	54.00	23.01	200.0	H	349.00	-6
1700.88	---	32.70	54.00	21.30	200.0	V	334.00	-5
1812.00	44.91	---	68.20	23.29	200.0	V	290.00	-4
2648.50	47.40	---	68.20	20.80	100.0	H	0.00	0
2779.75	---	35.61	54.00	18.39	100.0	V	146.00	1
3434.25	49.11	---	68.20	19.09	200.0	H	106.00	4
3982.00	---	38.92	54.00	15.08	100.0	V	7.00	6
4483.38	51.52	---	68.20	16.68	100.0	H	250.00	7
4670.63	---	39.10	54.00	14.90	200.0	V	163.00	7
5858.88	53.91	---	68.20	14.29	200.0	H	82.00	10
7600.13	---	46.56	54.00	7.44	100.0	V	100.00	11

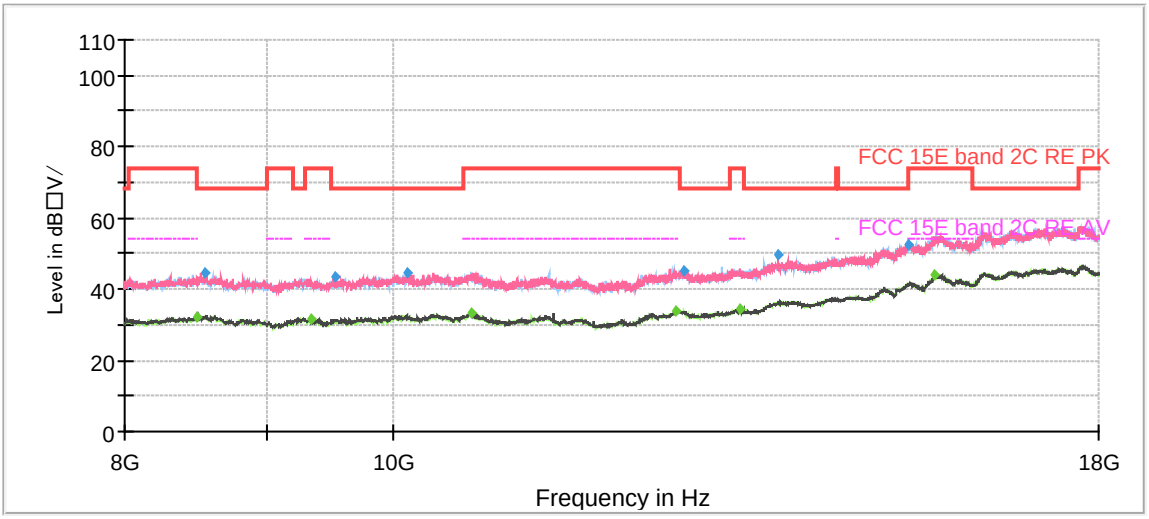
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH144



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

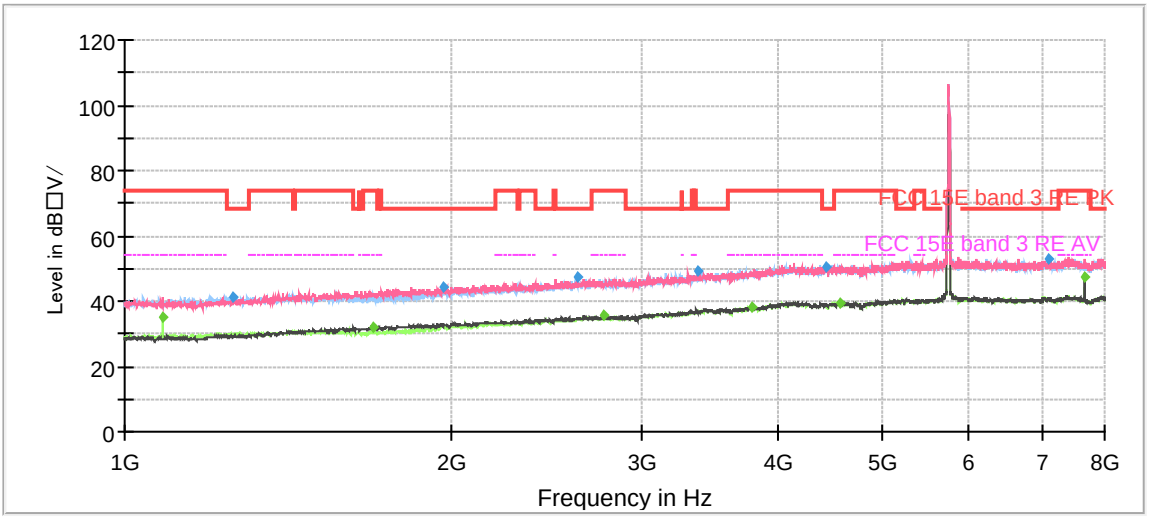


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1273.00	42.22	---	68.20	25.98	200.0	V	38.00	-7
1392.00	---	31.01	54.00	22.99	200.0	V	166.00	-6
1685.13	---	32.35	54.00	21.65	100.0	V	0.00	-5
1870.63	44.80	---	68.20	23.40	100.0	H	281.00	-4
2639.75	46.64	---	68.20	21.56	100.0	H	152.00	0
2757.88	---	35.43	54.00	18.57	200.0	V	171.00	1
3426.38	49.67	---	68.20	18.53	200.0	H	164.00	4
3962.75	---	39.04	54.00	14.96	100.0	V	13.00	6
4458.88	50.47	---	68.20	17.73	100.0	V	8.00	7
4545.50	---	39.41	54.00	14.59	100.0	V	290.00	7
7124.13	53.37	---	68.20	14.83	200.0	V	265.00	11
7627.25	---	46.80	54.00	7.20	100.0	V	96.00	11

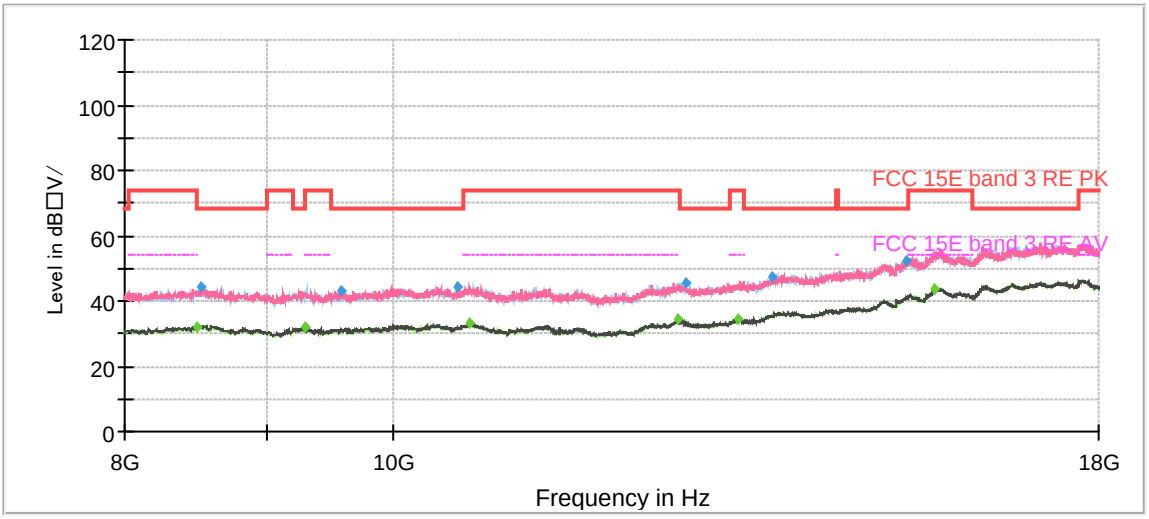
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH149



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

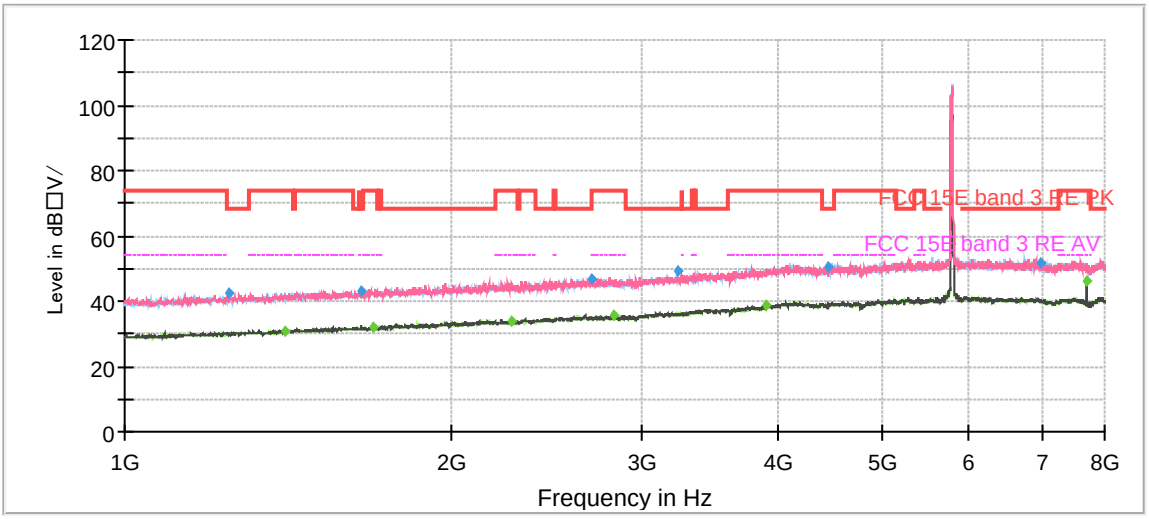


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1084.88	---	35.17	54.00	18.83	200.0	H	246.00	-8
1259.00	41.32	---	68.20	26.88	200.0	H	126.00	-7
1696.50	---	31.93	54.00	22.07	100.0	V	226.00	-5
1969.50	44.45	---	68.20	23.75	200.0	V	103.00	-3
2610.88	47.08	---	68.20	21.12	200.0	V	246.00	0
2762.25	---	35.47	54.00	18.53	100.0	V	21.00	1
3368.63	49.24	---	68.20	18.96	200.0	V	103.00	3
3781.63	---	38.38	54.00	15.62	200.0	V	220.00	5
4437.00	50.20	---	68.20	18.00	100.0	H	238.00	7
4572.63	---	39.29	54.00	14.71	200.0	H	26.00	7
7111.00	52.88	---	68.20	15.32	200.0	V	352.00	11
7660.50	---	47.16	54.00	6.84	200.0	V	175.00	11

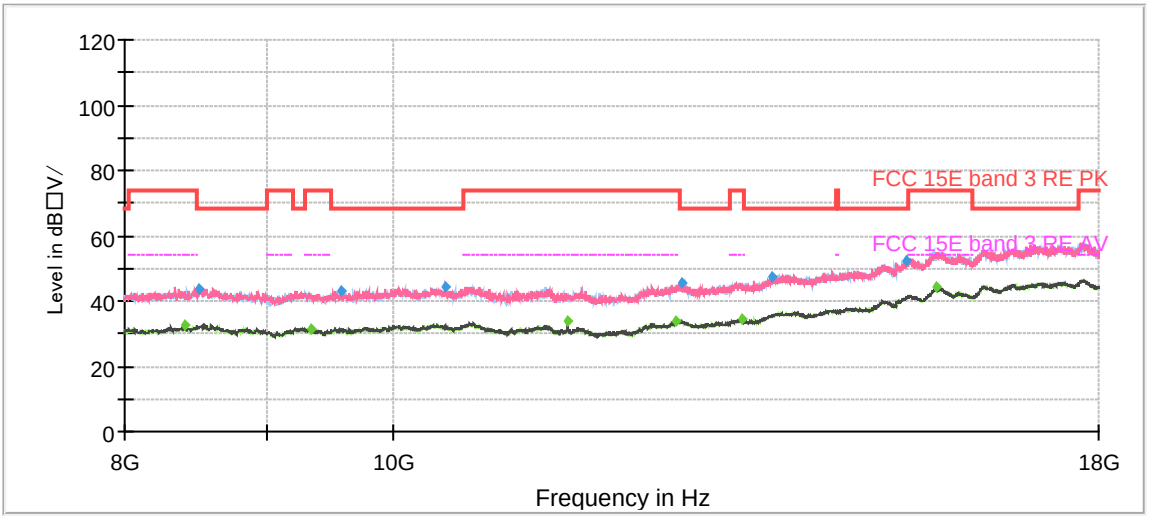
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH157



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

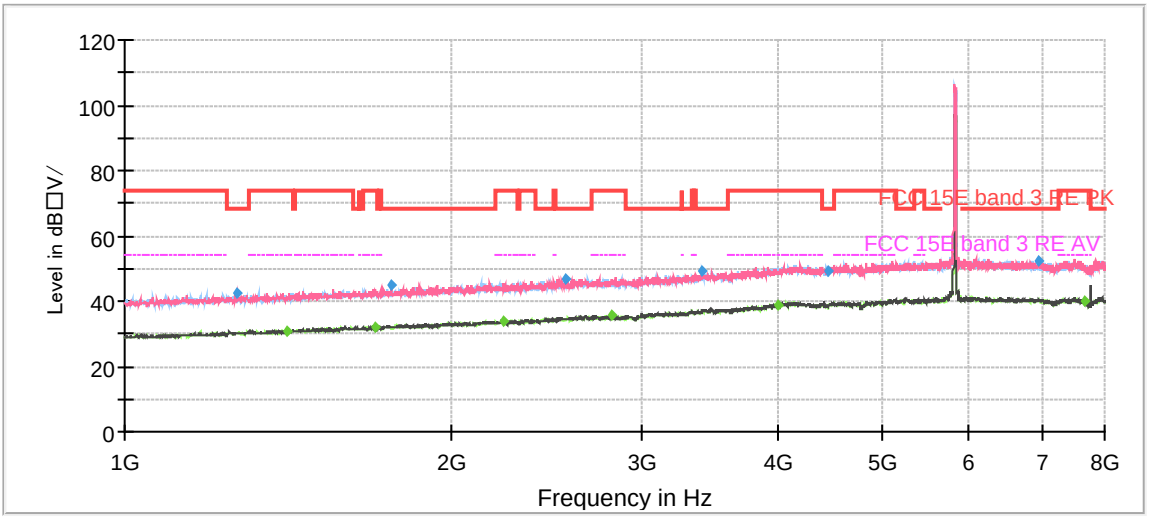


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1248.50	42.18	---	68.20	26.02	100.0	H	351.00	-7
1407.75	---	31.04	54.00	22.96	100.0	H	64.00	-6
1649.25	43.15	---	68.20	25.05	200.0	V	251.00	-5
1693.88	---	32.13	54.00	21.87	100.0	H	217.00	-5
2276.63	---	33.74	54.00	20.26	100.0	V	134.00	-2
2689.63	46.79	---	68.20	21.41	100.0	H	296.00	1
2820.88	---	35.44	54.00	18.56	200.0	V	278.00	1
3227.75	49.15	---	68.20	19.05	200.0	H	58.00	3
3905.88	---	39.02	54.00	14.98	200.0	V	215.00	6
4449.25	50.65	---	68.20	17.55	200.0	H	342.00	7
6977.13	51.51	---	68.20	16.69	100.0	H	326.00	11
7713.88	---	46.29	54.00	7.71	100.0	V	86.00	11

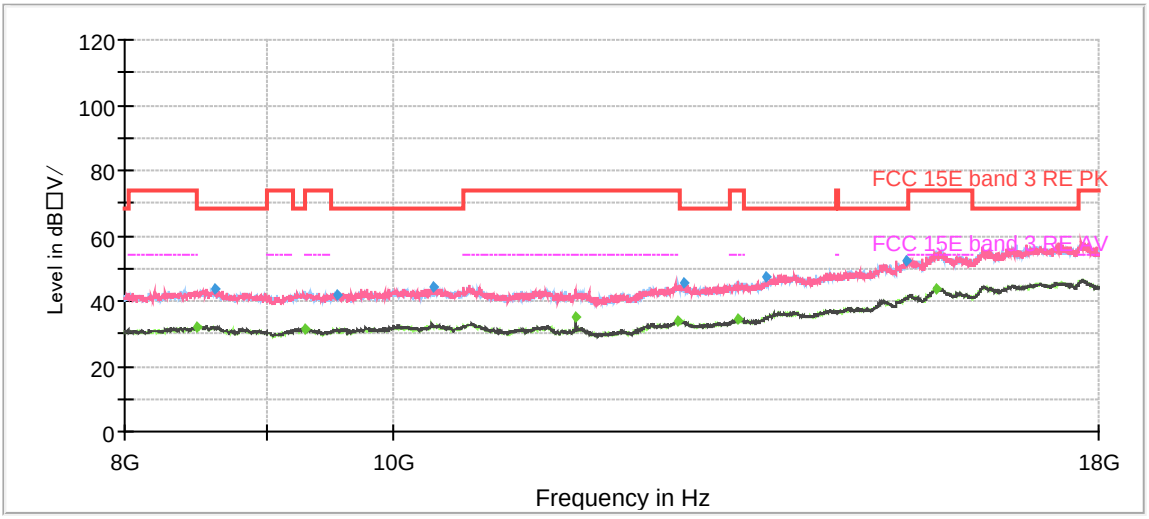
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH165



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

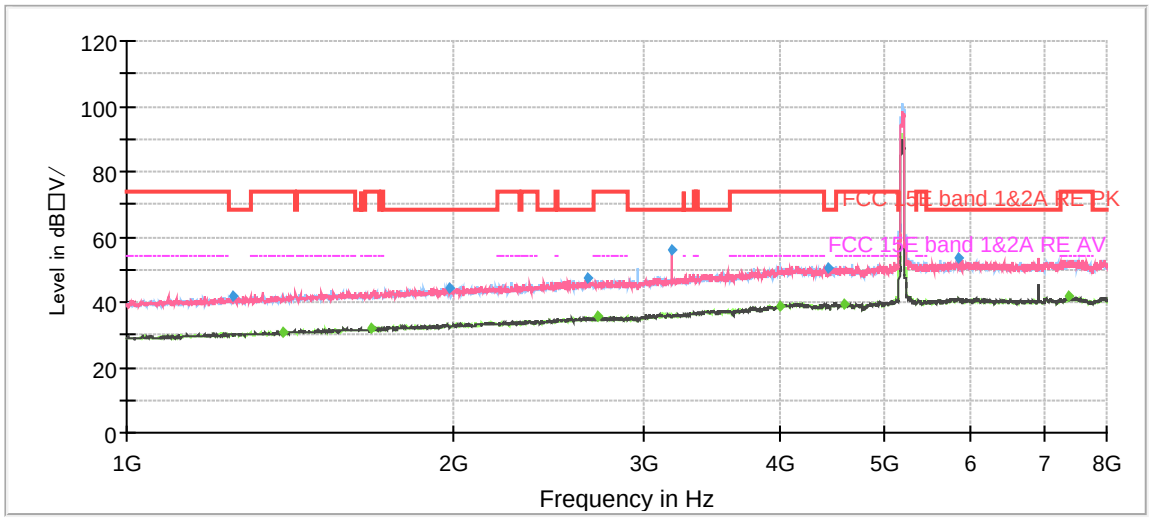


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1266.88	42.25	---	68.20	25.95	200.0	V	190.00	-7
1411.25	---	31.05	54.00	22.95	100.0	H	308.00	-6
1699.13	---	32.13	54.00	21.87	100.0	V	77.00	-5
1758.63	44.92	---	68.20	23.28	200.0	H	102.00	-4
2232.88	---	33.80	54.00	20.20	200.0	H	102.00	-2
2546.13	46.97	---	68.20	21.23	100.0	V	93.00	0
2810.38	---	35.51	54.00	18.49	200.0	H	175.00	1
3409.75	49.16	---	68.20	19.04	200.0	H	0.00	4
3996.00	---	38.88	54.00	15.12	200.0	H	240.00	6
4455.38	49.30	---	68.20	18.90	100.0	H	52.00	7
6955.25	52.27	---	68.20	15.93	200.0	V	117.00	11
7655.25	---	39.86	54.00	14.14	100.0	V	117.00	11

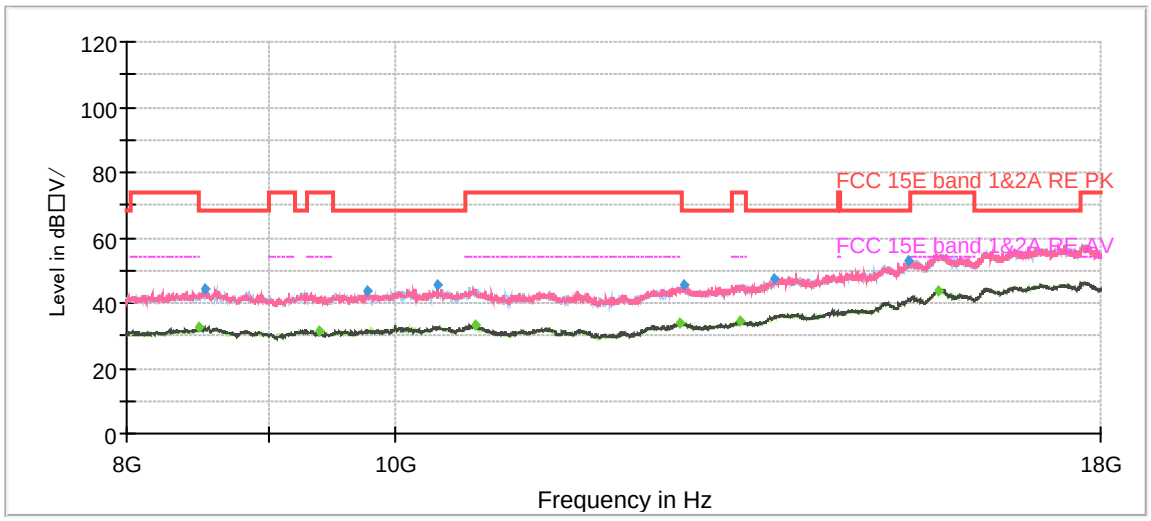
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH38



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

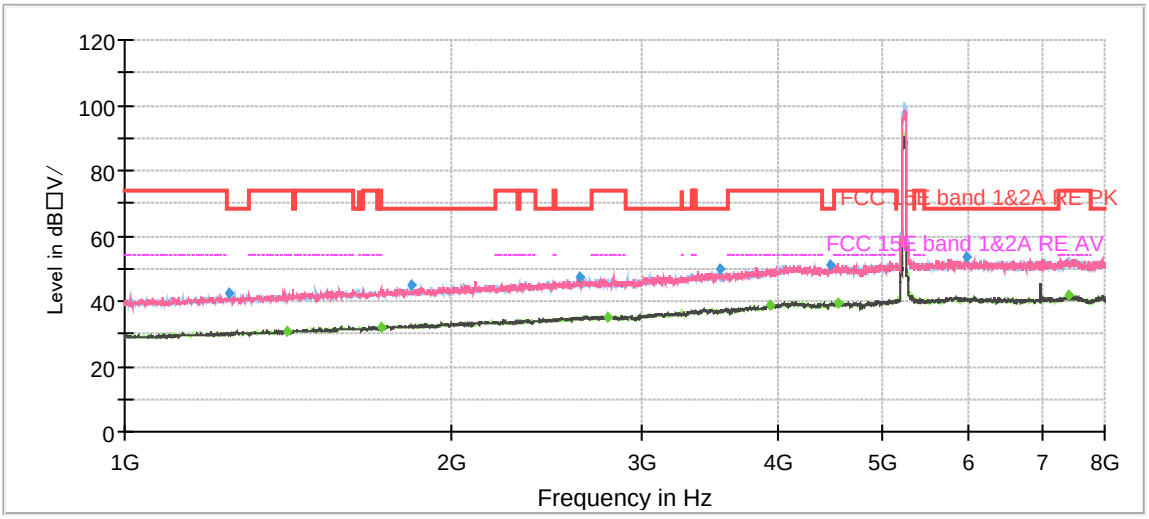


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1251.13	41.91	---	68.20	26.29	100.0	V	92.00	-7
1392.00	---	30.93	54.00	23.07	100.0	V	103.00	-6
1683.38	---	32.05	54.00	21.95	200.0	V	206.00	-5
1984.38	44.34	---	68.20	23.86	100.0	V	8.00	-3
2659.00	47.25	---	68.20	20.95	200.0	V	291.00	0
2722.00	---	35.66	54.00	18.34	200.0	H	132.00	1
3177.00	55.77	---	68.20	12.43	200.0	V	286.00	2
3997.75	---	39.01	54.00	14.99	100.0	V	13.00	6
4428.25	50.33	---	68.20	17.87	200.0	V	327.00	7
4575.25	---	39.33	54.00	14.67	200.0	V	302.00	7
5851.00	53.37	---	68.20	14.83	200.0	H	46.00	10
7394.50	---	41.66	54.00	12.34	200.0	H	0.00	11

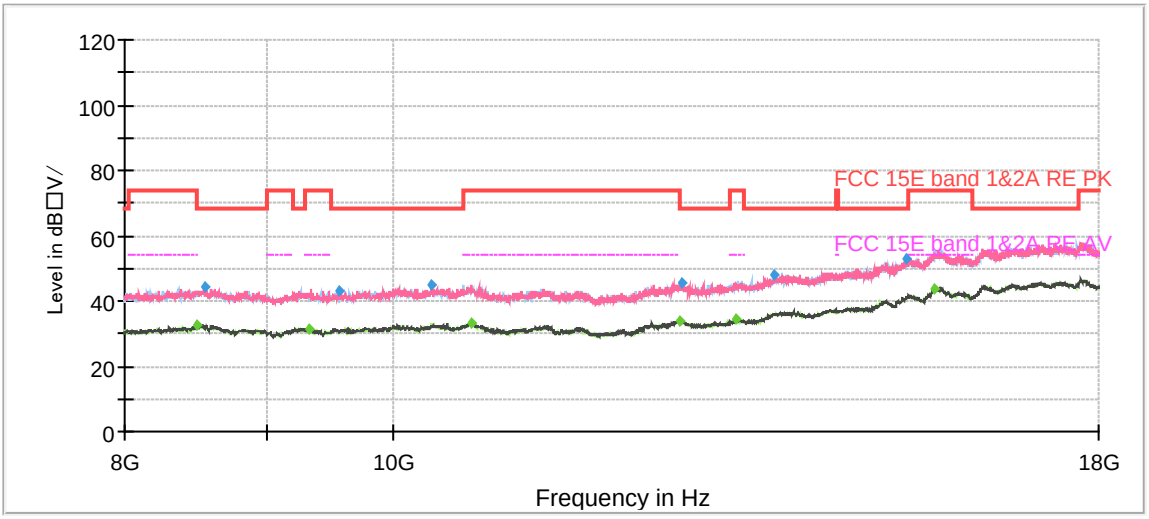
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH46



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

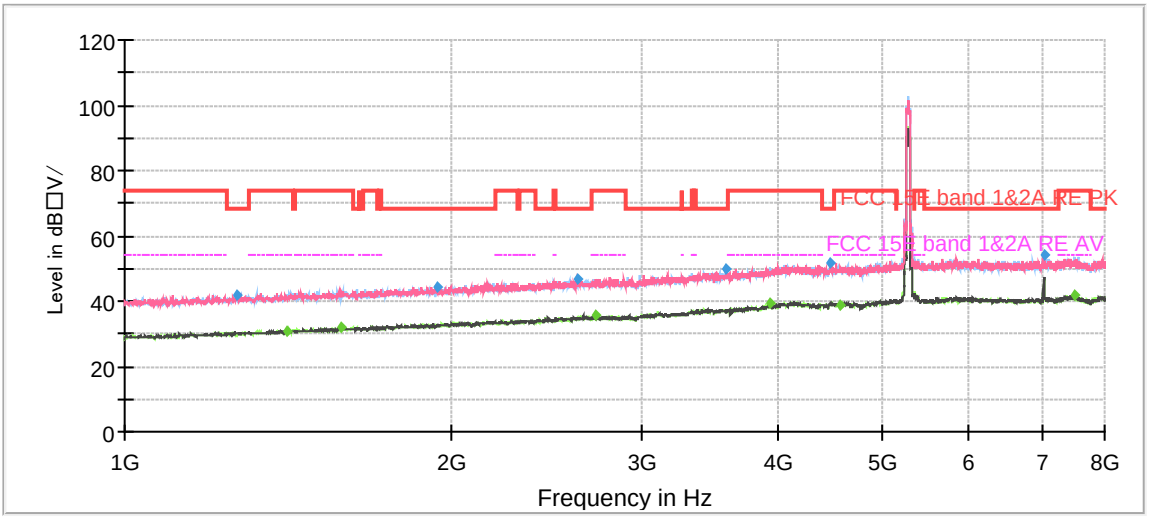


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1245.00	42.73	---	68.20	25.47	200.0	H	176.00	-7
1412.13	---	30.95	54.00	23.05	100.0	H	354.00	-6
1721.00	---	32.09	54.00	21.91	100.0	V	26.00	-4
1833.88	44.99	---	68.20	23.21	100.0	H	97.00	-4
2628.38	47.27	---	68.20	20.93	200.0	V	328.00	0
2781.50	---	35.34	54.00	18.66	200.0	V	251.00	1
3542.75	49.88	---	68.20	18.32	200.0	H	258.00	4
3931.25	---	38.80	54.00	15.20	200.0	H	279.00	6
4467.63	51.27	---	68.20	16.93	200.0	V	117.00	7
4545.50	---	39.17	54.00	14.83	200.0	V	0.00	7
5962.13	53.28	---	68.20	14.92	200.0	H	253.00	10
7403.25	---	41.59	54.00	12.41	200.0	V	153.00	11

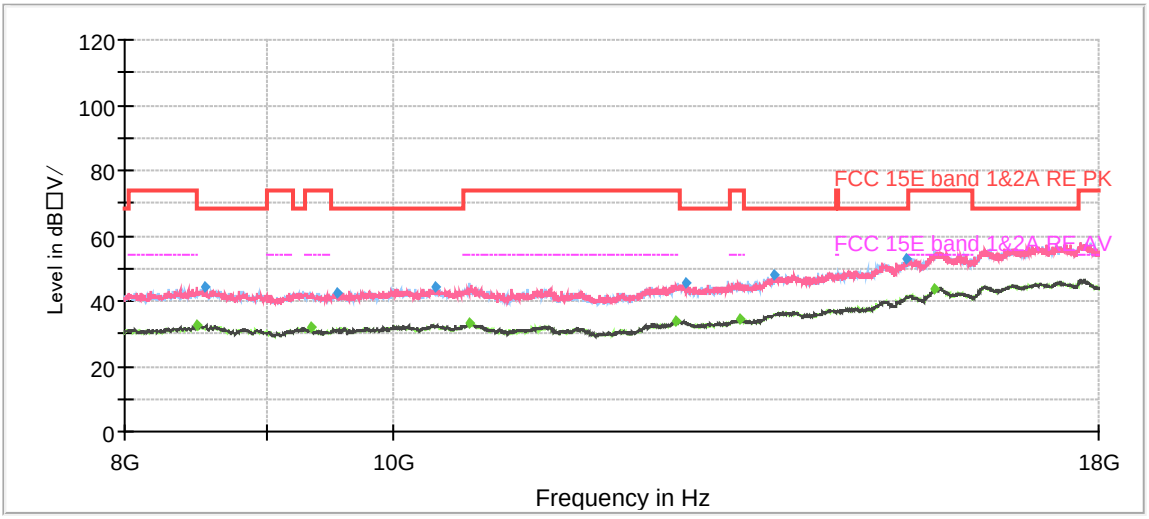
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH54



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

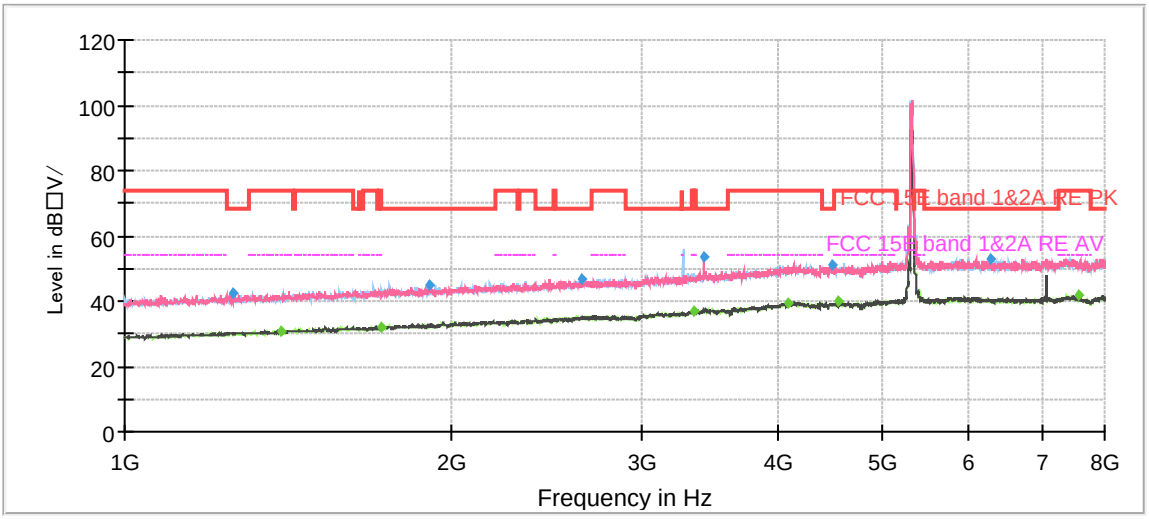


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1268.63	41.85	---	68.20	26.35	100.0	V	133.00	-7
1409.50	---	30.86	54.00	23.14	200.0	V	288.00	-6
1582.75	---	32.23	54.00	21.77	200.0	H	108.00	-5
1942.38	44.50	---	68.20	23.70	200.0	V	46.00	-3
2619.63	46.92	---	68.20	21.28	100.0	V	143.00	0
2719.38	---	35.45	54.00	18.55	200.0	V	93.00	1
3584.75	49.55	---	68.20	18.65	200.0	H	256.00	4
3926.88	---	39.11	54.00	14.89	200.0	V	129.00	6
4464.13	51.51	---	68.20	16.69	200.0	V	288.00	7
4556.00	---	39.07	54.00	14.93	100.0	V	143.00	7
7027.00	53.94	---	68.20	14.26	200.0	V	0.00	11
7489.88	---	41.82	54.00	12.18	200.0	V	267.00	11

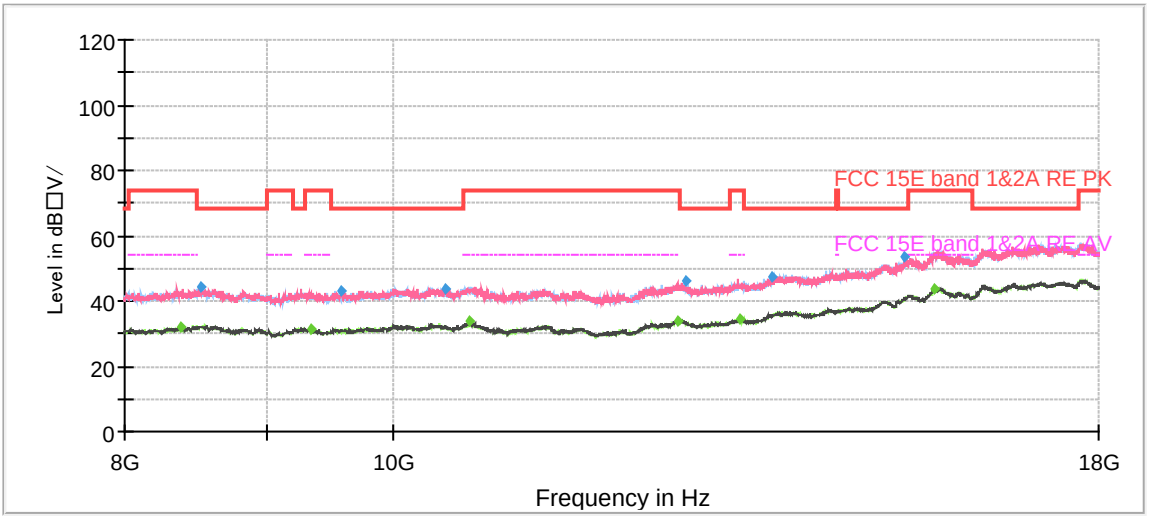
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH62



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

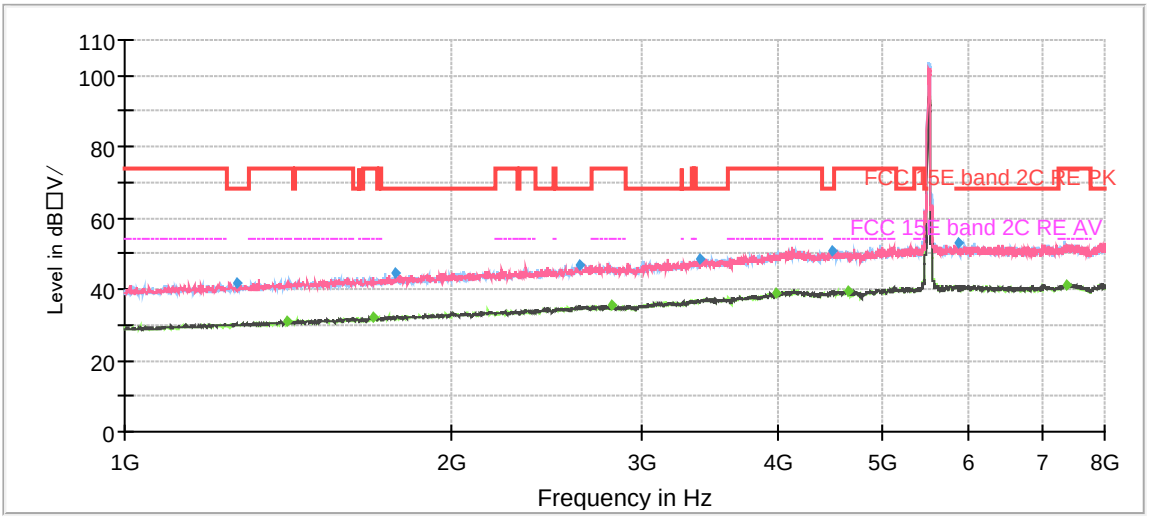


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1258.13	42.52	---	68.20	25.68	200.0	V	0.00	-7
1395.50	---	30.96	54.00	23.04	200.0	V	158.00	-6
1721.00	---	32.19	54.00	21.81	200.0	V	54.00	-4
1907.38	45.08	---	68.20	23.12	200.0	H	83.00	-4
2641.50	46.78	---	68.20	21.42	200.0	V	224.00	0
3348.50	---	36.63	54.00	17.37	200.0	H	136.00	3
3422.88	53.80	---	68.20	14.40	100.0	V	357.00	4
4093.13	---	39.53	54.00	14.47	200.0	V	347.00	7
4492.13	51.00	---	68.20	17.20	200.0	V	199.00	7
4544.63	---	39.86	54.00	14.14	200.0	V	229.00	7
6264.88	52.95	---	68.20	15.25	200.0	V	319.00	10
7560.75	---	41.68	54.00	12.32	100.0	V	8.00	11

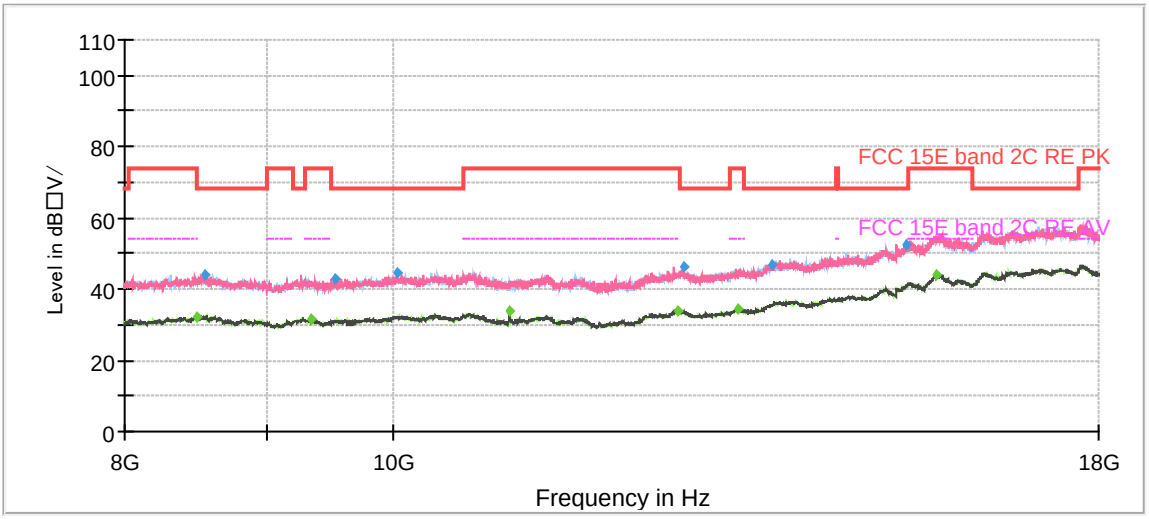
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH102



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

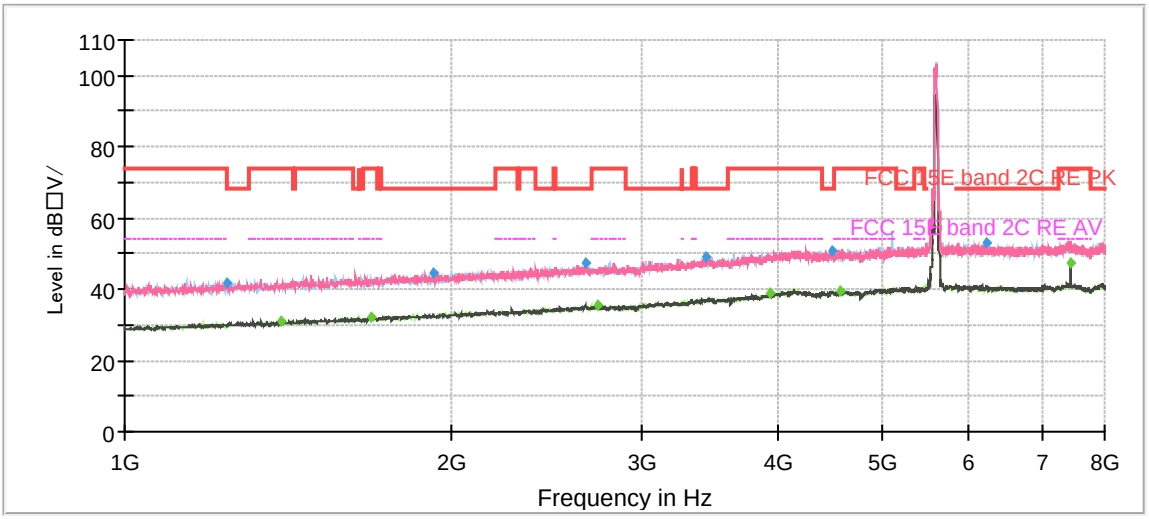


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1271.25	41.92	---	68.20	26.28	200.0	H	12.00	-7
1410.38	---	31.03	54.00	22.97	100.0	H	257.00	-6
1691.25	---	32.07	54.00	21.93	200.0	V	195.00	-5
1777.88	44.65	---	68.20	23.55	100.0	H	284.00	-4
2624.88	47.06	---	68.20	21.14	100.0	H	215.00	0
2805.13	---	35.56	54.00	18.44	200.0	V	325.00	1
3386.13	48.70	---	68.20	19.50	200.0	H	37.00	3
3989.00	---	39.08	54.00	14.92	200.0	H	172.00	6
4486.88	50.51	---	68.20	17.69	100.0	H	299.00	7
4647.00	---	39.52	54.00	14.48	200.0	H	110.00	7
5857.13	52.99	---	68.20	15.21	100.0	V	78.00	10
7394.50	---	41.35	54.00	12.65	100.0	V	0.00	11

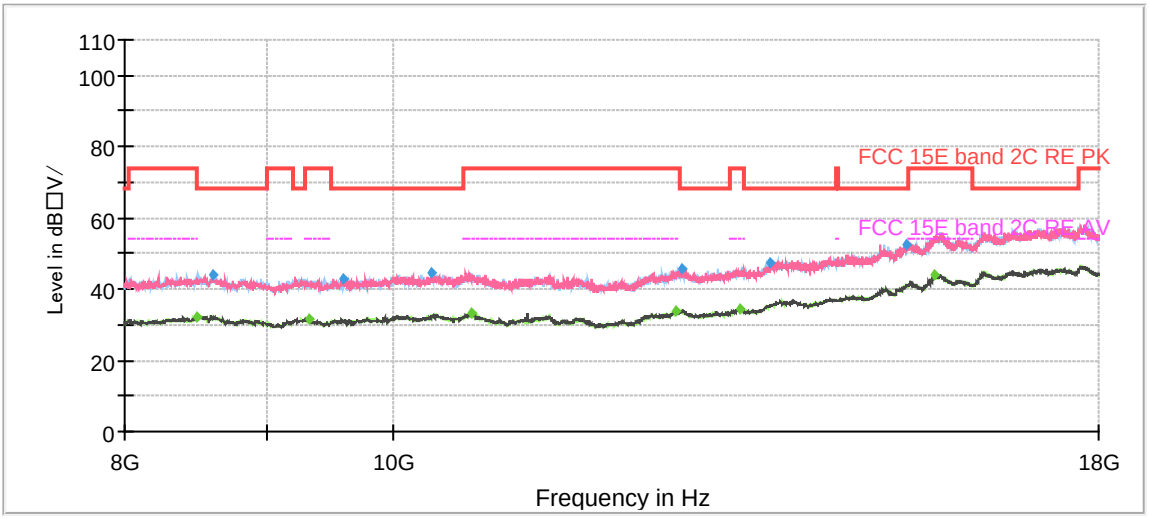
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH118



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

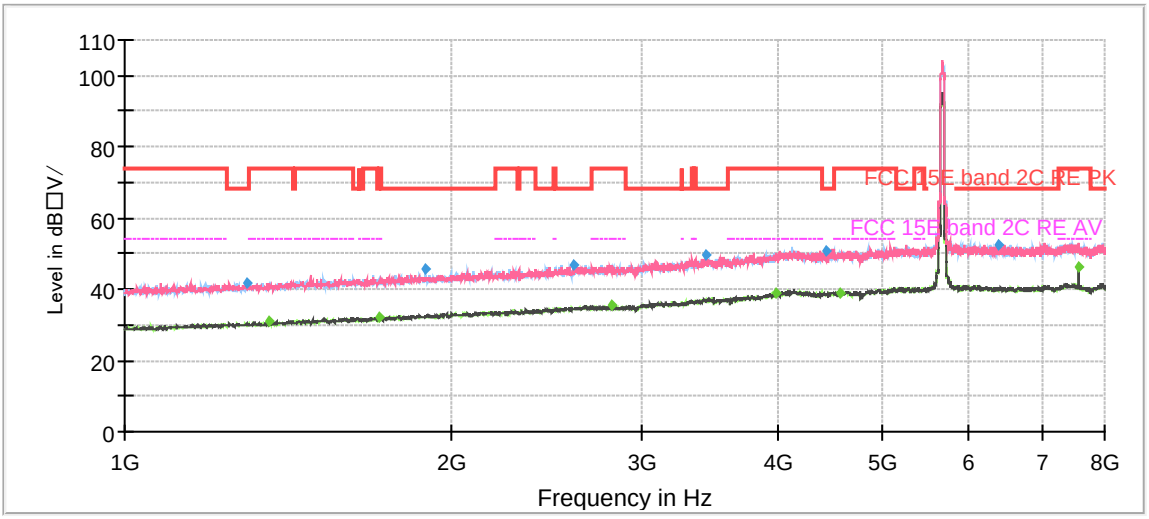


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1241.50	41.89	---	68.20	26.31	200.0	H	242.00	-7
1393.75	---	30.97	54.00	23.03	200.0	H	8.00	-6
1687.75	---	32.26	54.00	21.74	200.0	H	65.00	-5
1924.88	44.37	---	68.20	23.83	100.0	V	150.00	-3
2660.75	47.56	---	68.20	20.64	100.0	H	11.00	0
2729.00	---	35.58	54.00	18.42	100.0	H	275.00	1
3433.38	49.25	---	68.20	18.95	200.0	V	237.00	4
3933.88	---	38.86	54.00	15.14	100.0	V	52.00	6
4482.50	50.90	---	68.20	17.30	200.0	H	49.00	7
4554.25	---	39.55	54.00	14.45	200.0	V	186.00	7
6216.75	52.76	---	68.20	15.44	100.0	V	109.00	10
7454.00	---	47.41	54.00	6.59	100.0	V	165.00	11

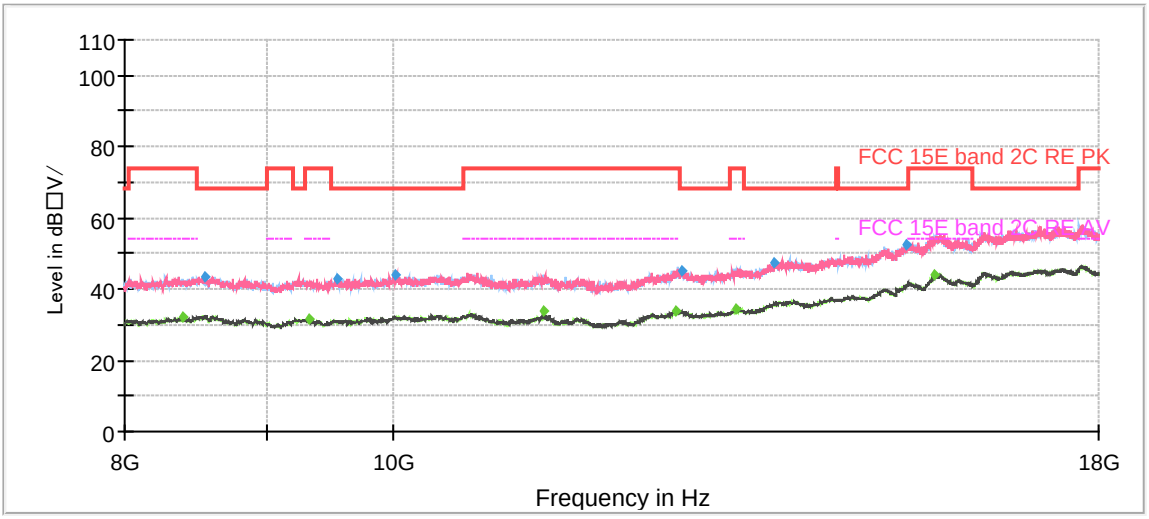
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH134



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

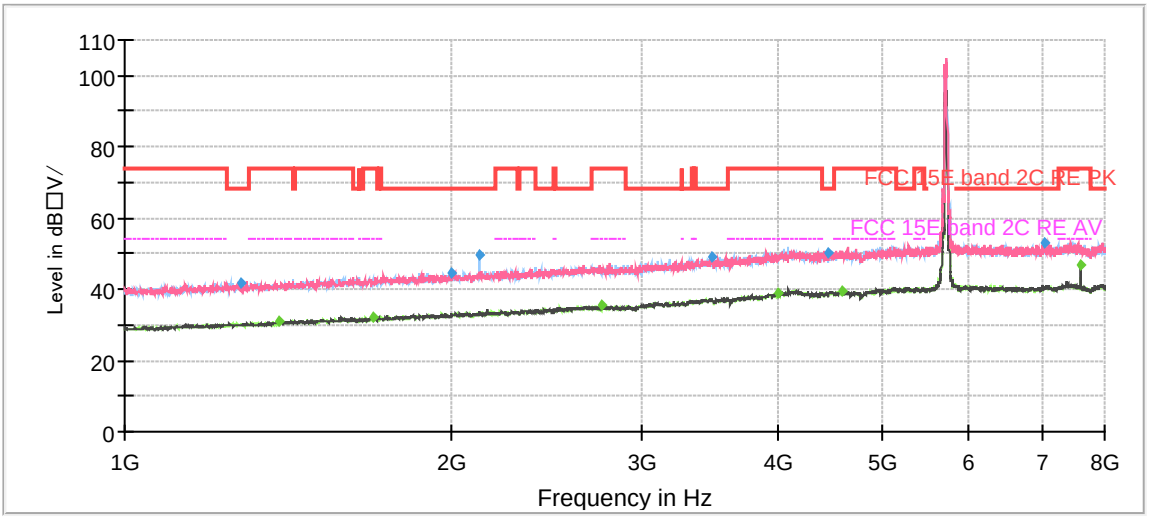


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1296.63	41.77	---	68.20	26.43	200.0	V	126.00	-7
1360.50	---	30.94	54.00	23.06	100.0	H	139.00	-7
1719.25	---	31.96	54.00	22.04	200.0	V	187.00	-5
1893.38	45.42	---	68.20	22.78	200.0	H	27.00	-4
2592.50	46.87	---	68.20	21.33	100.0	V	238.00	0
2810.38	---	35.40	54.00	18.60	100.0	V	269.00	1
3437.75	49.56	---	68.20	18.64	200.0	V	351.00	4
3981.13	---	39.09	54.00	14.91	200.0	H	214.00	6
4430.88	50.58	---	68.20	17.62	200.0	V	203.00	7
4557.75	---	39.18	54.00	14.82	100.0	V	151.00	7
6384.75	52.71	---	68.20	15.49	200.0	V	326.00	10
7560.75	---	46.15	54.00	7.85	100.0	V	84.00	11

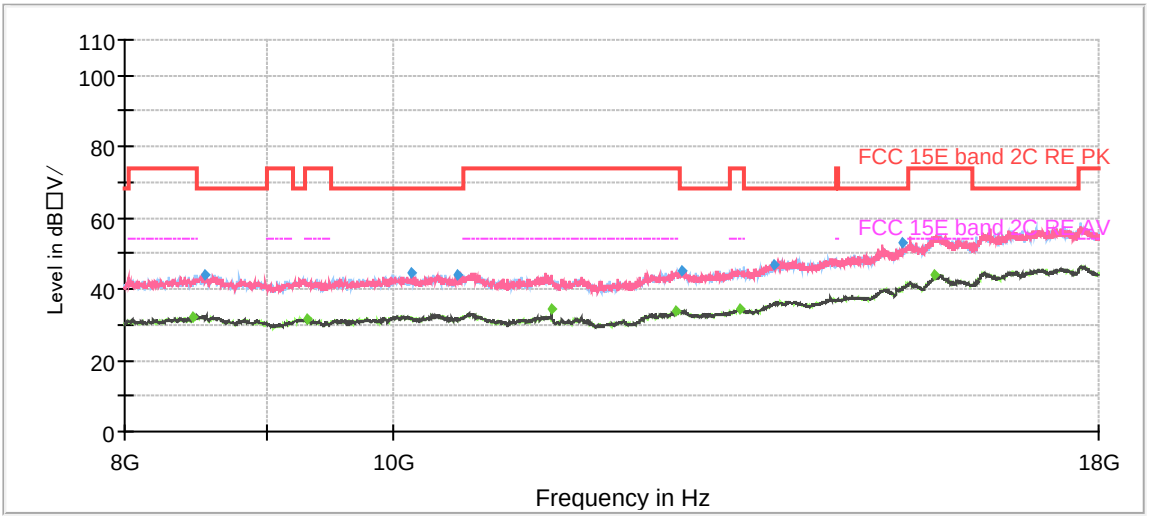
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH142



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

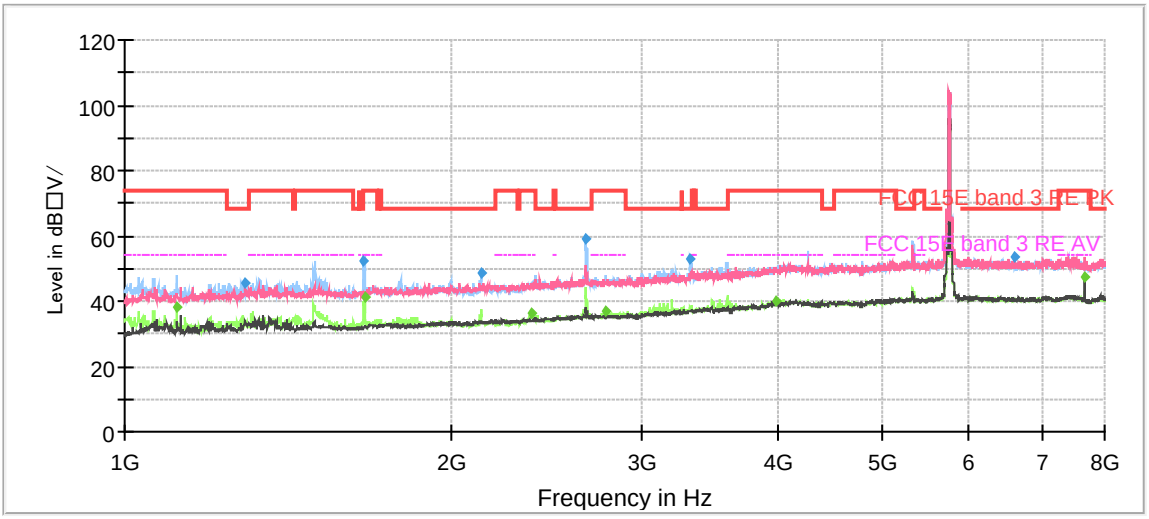


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1279.13	41.58	---	68.20	26.62	200.0	V	352.00	-7
1390.25	---	31.23	54.00	22.77	200.0	H	120.00	-6
1691.25	---	32.07	54.00	21.93	100.0	V	3.00	-5
1998.38	44.66	---	68.20	23.54	200.0	H	183.00	-3
2125.25	49.50	---	68.20	18.70	100.0	H	0.00	-2
2753.50	---	35.26	54.00	18.74	200.0	H	131.00	1
3483.25	49.22	---	68.20	18.98	100.0	V	14.00	4
3993.38	---	38.96	54.00	15.04	200.0	H	342.00	6
4456.25	50.25	---	68.20	17.95	200.0	V	119.00	7
4581.38	---	39.31	54.00	14.69	200.0	V	203.00	7
7041.00	53.05	---	68.20	15.15	200.0	V	130.00	11
7614.13	---	46.55	54.00	7.45	100.0	V	92.00	11

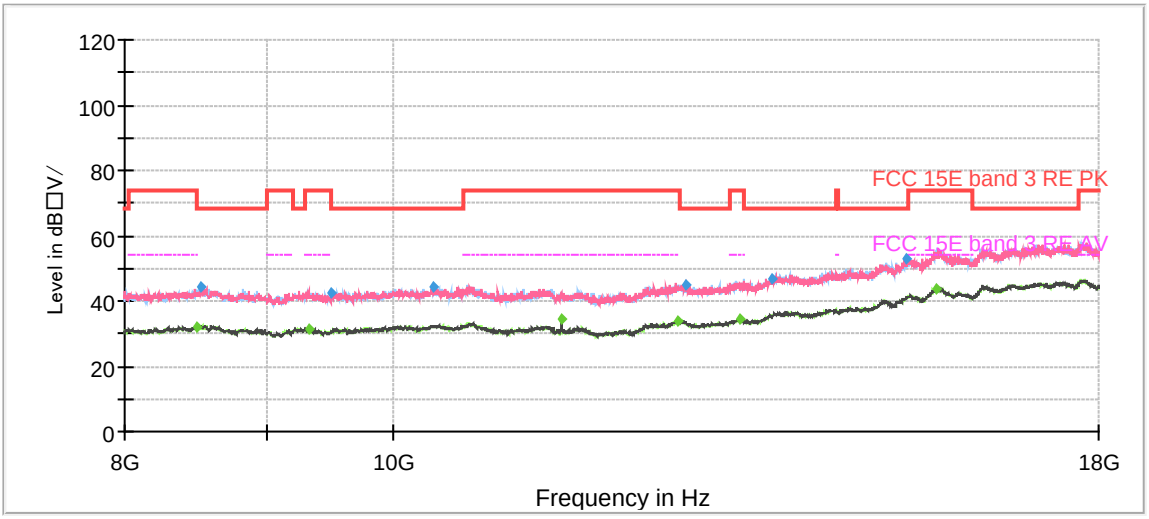
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH151



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

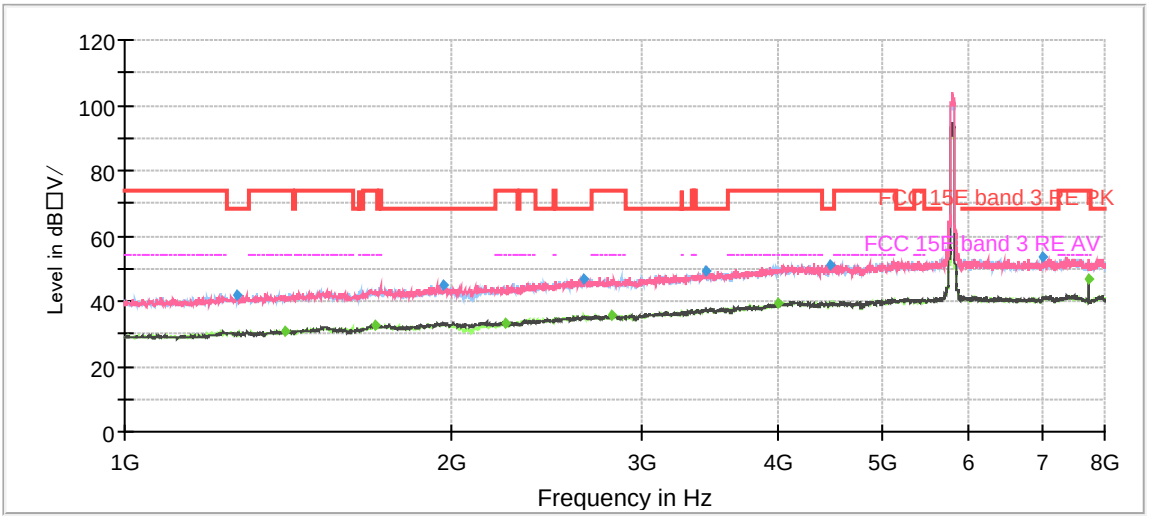


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1116.38	---	37.98	54.00	16.02	100.0	H	89.00	-8
1289.63	45.74	---	68.20	22.46	100.0	H	101.00	-7
1659.75	52.08	---	68.20	16.12	100.0	H	95.00	-5
1663.25	---	40.95	54.00	13.05	100.0	H	95.00	-5
2131.38	48.76	---	68.20	19.44	100.0	H	0.00	-2
2372.00	---	36.58	54.00	17.42	100.0	H	77.00	-1
2659.88	58.91	---	68.20	9.29	100.0	H	139.00	0
2778.88	---	36.65	54.00	17.35	100.0	H	0.00	1
3324.00	52.95	---	68.20	15.25	100.0	H	4.00	3
3984.63	---	40.25	54.00	13.75	100.0	H	77.00	6
6613.13	53.75	---	68.20	14.45	100.0	V	16.00	10
7673.63	---	47.60	54.00	6.40	100.0	V	85.00	11

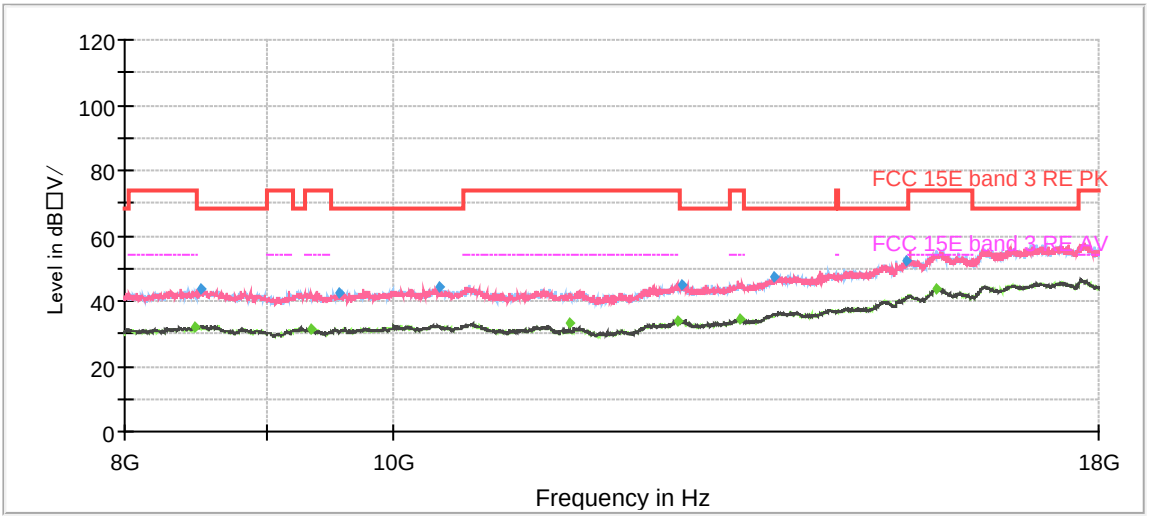
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH159



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

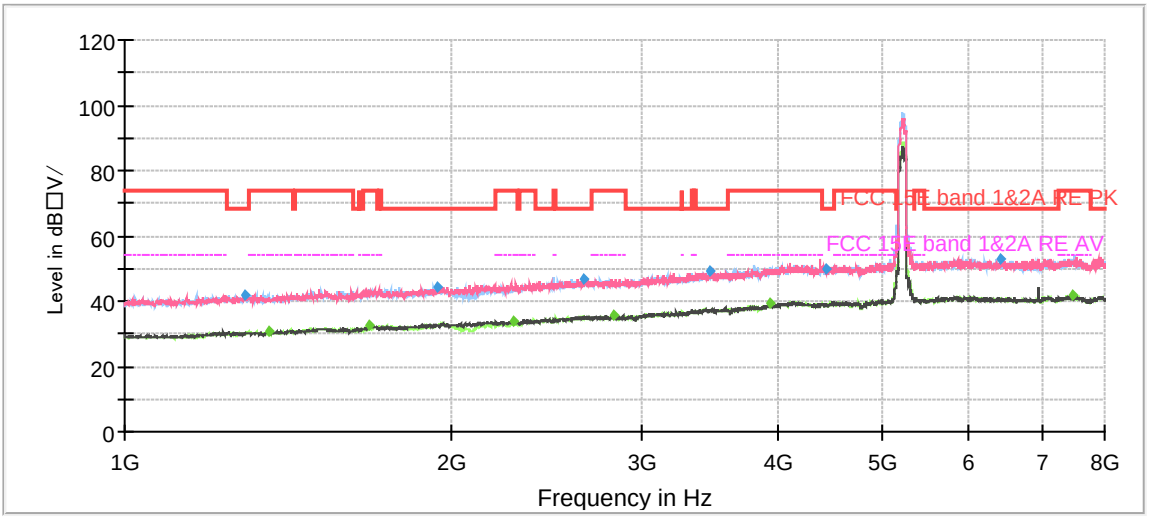


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1269.50	41.89	---	68.20	26.31	200.0	H	289.00	-7
1406.88	---	30.76	54.00	23.24	200.0	V	302.00	-6
1698.25	---	32.59	54.00	21.41	100.0	V	110.00	-5
1965.13	45.16	---	68.20	23.04	100.0	V	234.00	-3
2246.88	---	33.27	54.00	20.73	200.0	V	334.00	-2
2647.63	46.56	---	68.20	21.64	200.0	V	88.00	0
2809.50	---	35.67	54.00	18.33	200.0	H	64.00	1
3428.13	49.12	---	68.20	19.08	200.0	V	264.00	4
3995.13	---	39.20	54.00	14.80	100.0	H	232.00	6
4476.38	50.82	---	68.20	17.38	200.0	H	276.00	7
7018.25	53.59	---	68.20	14.61	100.0	H	108.00	11
7727.00	---	46.81	54.00	7.19	100.0	V	79.00	11

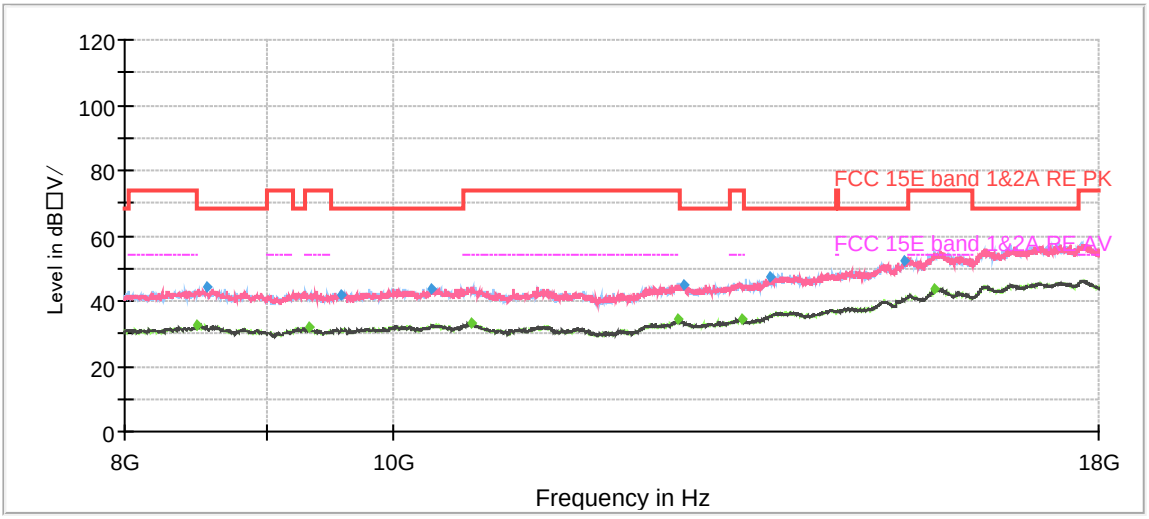
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (VHT80) CH42



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

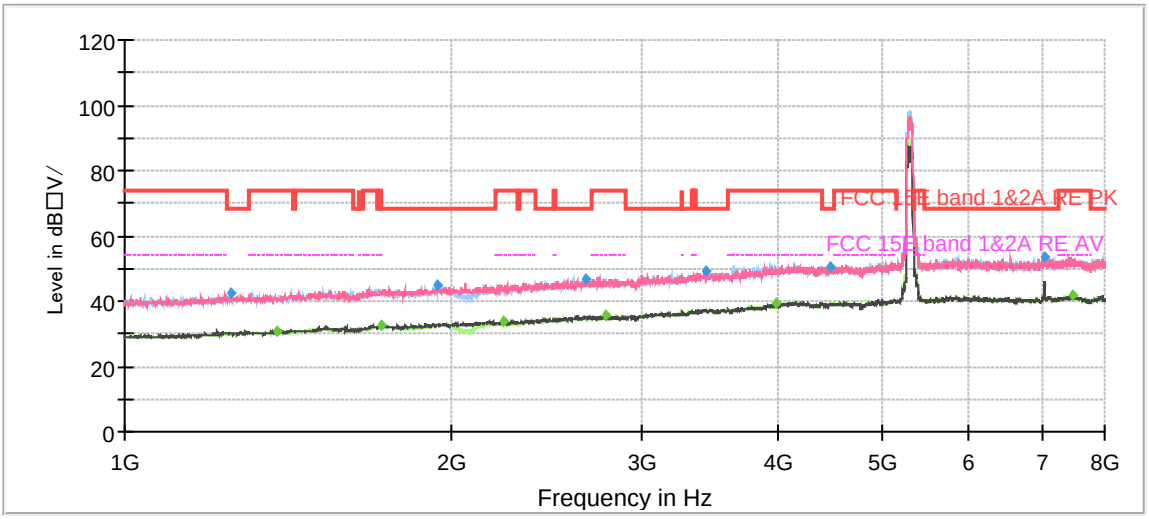


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1289.63	42.13	---	68.20	26.07	100.0	H	135.00	-7
1357.88	---	30.90	54.00	23.10	200.0	V	276.00	-7
1681.63	---	32.73	54.00	21.27	100.0	V	54.00	-5
1941.50	44.56	---	68.20	23.64	100.0	V	64.00	-3
2279.25	---	33.62	54.00	20.38	100.0	V	143.00	-2
2645.88	47.04	---	68.20	21.16	200.0	H	266.00	0
2827.88	---	35.57	54.00	18.43	200.0	H	137.00	1
3457.00	49.23	---	68.20	18.97	100.0	H	297.00	4
3933.88	---	39.11	54.00	14.89	200.0	H	297.00	6
4424.75	50.14	---	68.20	18.06	100.0	H	166.00	7
6402.25	52.72	---	68.20	15.48	100.0	H	338.00	10
7482.88	---	41.76	54.00	12.24	100.0	H	53.00	11

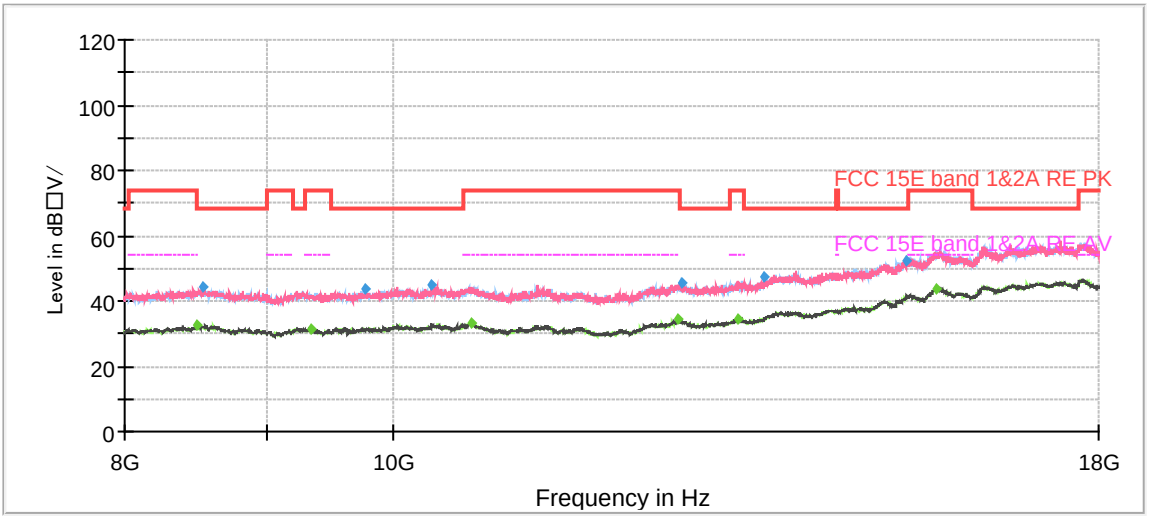
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (VHT80) CH58



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

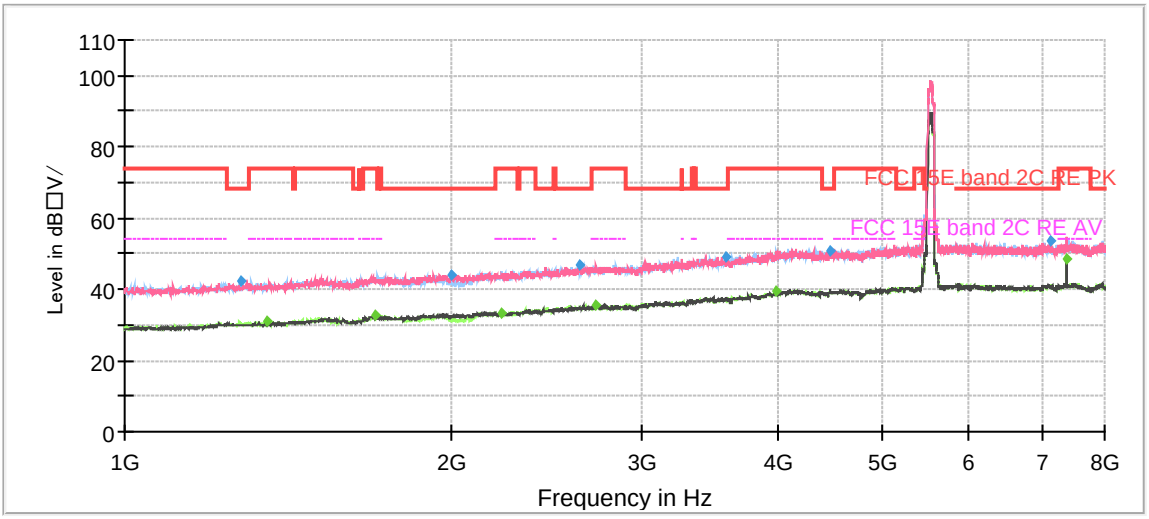


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1254.63	42.29	---	68.20	25.91	100.0	V	95.00	-7
1381.50	---	30.95	54.00	23.05	200.0	V	14.00	-6
1721.00	---	32.58	54.00	21.42	100.0	V	110.00	-4
1944.13	44.77	---	68.20	23.43	200.0	H	305.00	-3
2230.25	---	33.80	54.00	20.20	200.0	V	261.00	-2
2655.50	46.88	---	68.20	21.32	100.0	H	287.00	0
2780.63	---	35.64	54.00	18.36	100.0	H	123.00	1
3429.88	49.10	---	68.20	19.10	200.0	H	223.00	4
3985.50	---	39.29	54.00	14.71	200.0	H	310.00	6
4464.13	50.68	---	68.20	17.52	100.0	V	121.00	7
7053.25	53.45	---	68.20	14.75	200.0	V	158.00	11
7477.63	---	41.66	54.00	12.34	200.0	H	255.00	11

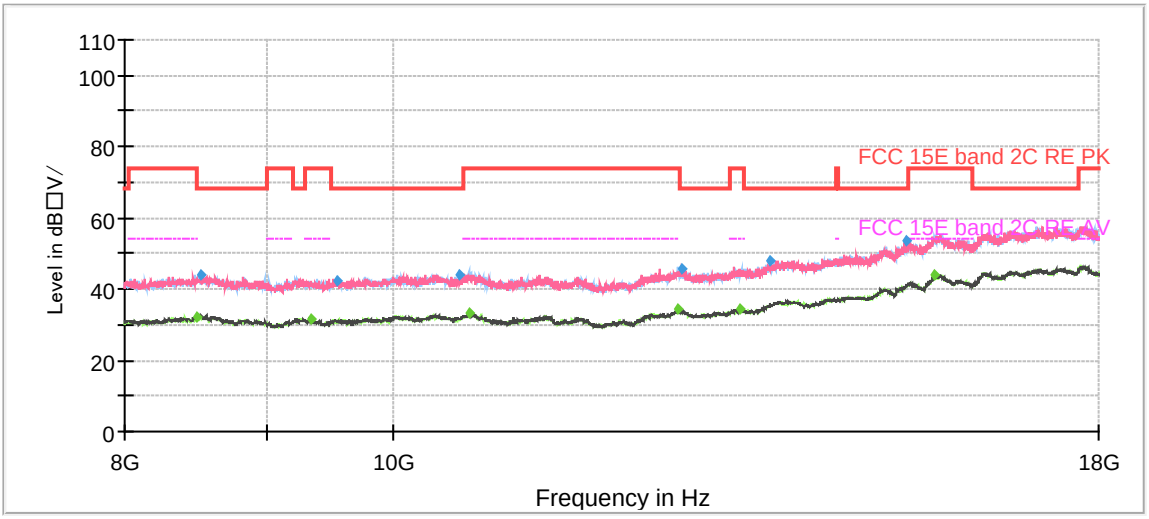
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (VHT80) CH106



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

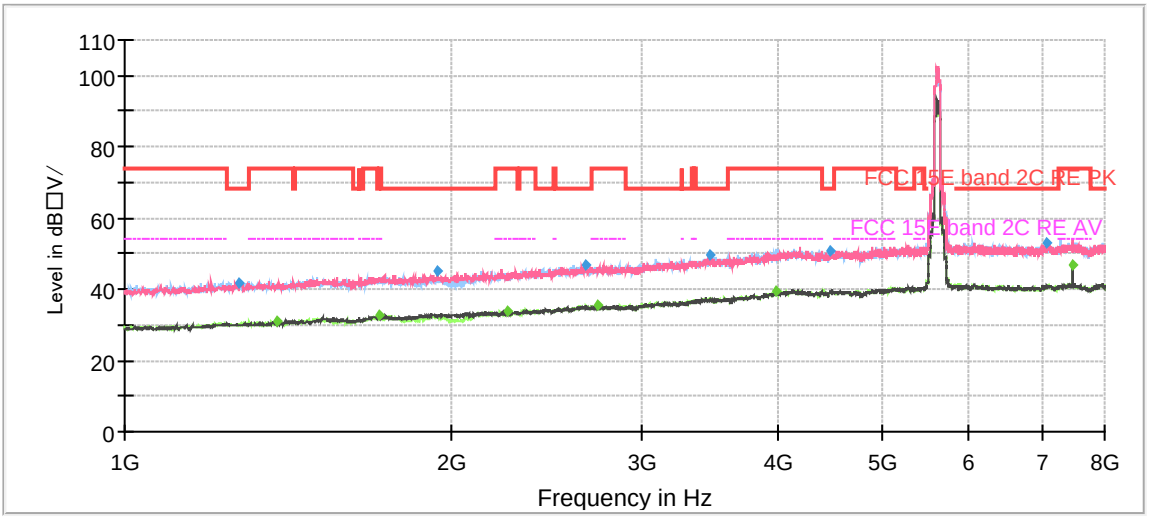


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1279.13	42.48	---	68.20	25.72	100.0	H	169.00	-7
1353.50	---	30.94	54.00	23.06	200.0	V	351.00	-7
1700.88	---	32.44	54.00	21.56	100.0	V	137.00	-5
1998.38	44.21	---	68.20	23.99	200.0	V	113.00	-3
2225.88	---	33.20	54.00	20.80	200.0	H	120.00	-2
2621.38	46.98	---	68.20	21.22	200.0	H	36.00	0
2718.50	---	35.63	54.00	18.37	200.0	V	346.00	1
3587.38	49.16	---	68.20	19.04	200.0	V	306.00	4
3985.50	---	39.25	54.00	14.75	200.0	V	264.00	6
4465.88	50.93	---	68.20	17.27	100.0	H	31.00	7
7122.38	53.78	---	68.20	14.42	100.0	H	224.00	11
7373.50	---	48.27	54.00	5.73	100.0	V	43.00	11

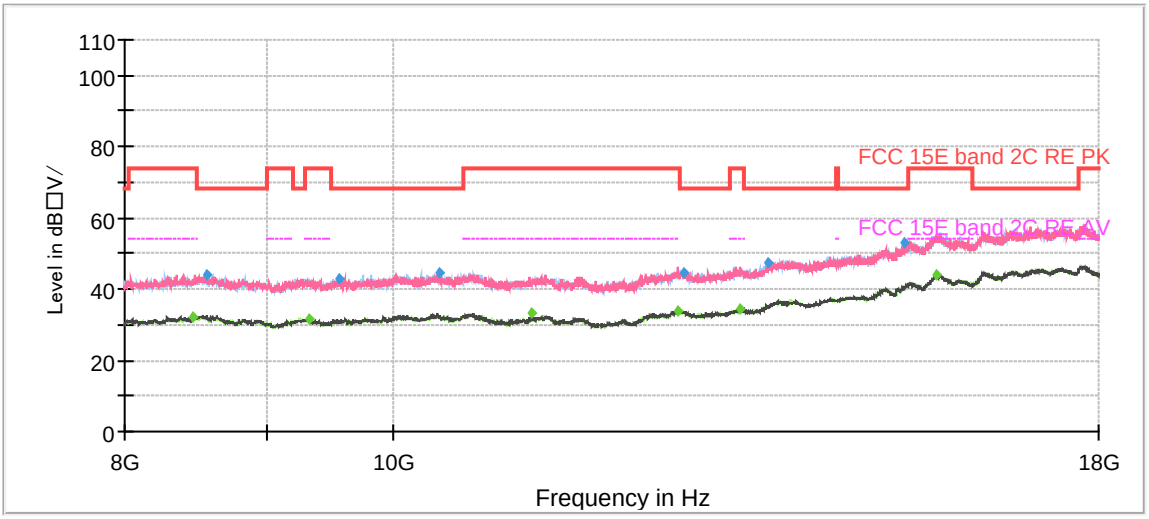
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (VHT80) CH122



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

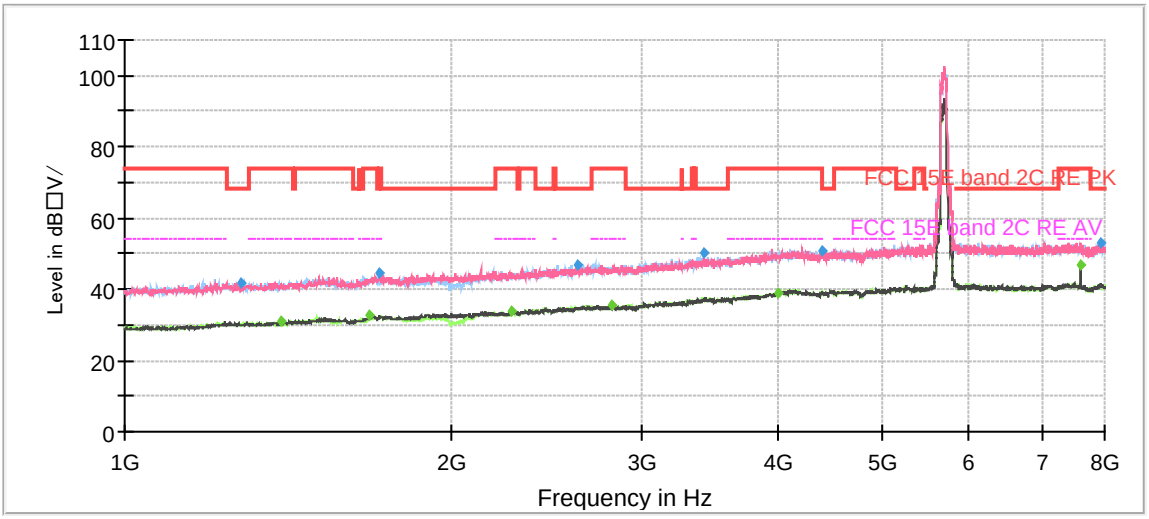


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1273.00	41.78	---	68.20	26.42	200.0	V	7.00	-7
1382.38	---	30.97	54.00	23.03	100.0	H	176.00	-6
1719.25	---	32.46	54.00	21.54	200.0	H	218.00	-5
1944.13	44.94	---	68.20	23.26	100.0	V	102.00	-3
2254.75	---	33.70	54.00	20.30	200.0	V	224.00	-2
2655.50	46.81	---	68.20	21.39	100.0	V	137.00	0
2725.50	---	35.32	54.00	18.68	200.0	H	9.00	1
3465.75	49.68	---	68.20	18.52	100.0	V	83.00	4
3990.75	---	39.38	54.00	14.62	200.0	H	43.00	6
4458.88	50.51	---	68.20	17.69	200.0	H	0.00	7
7076.88	53.30	---	68.20	14.90	200.0	V	151.00	11
7480.25	---	46.63	54.00	7.37	200.0	V	265.00	11

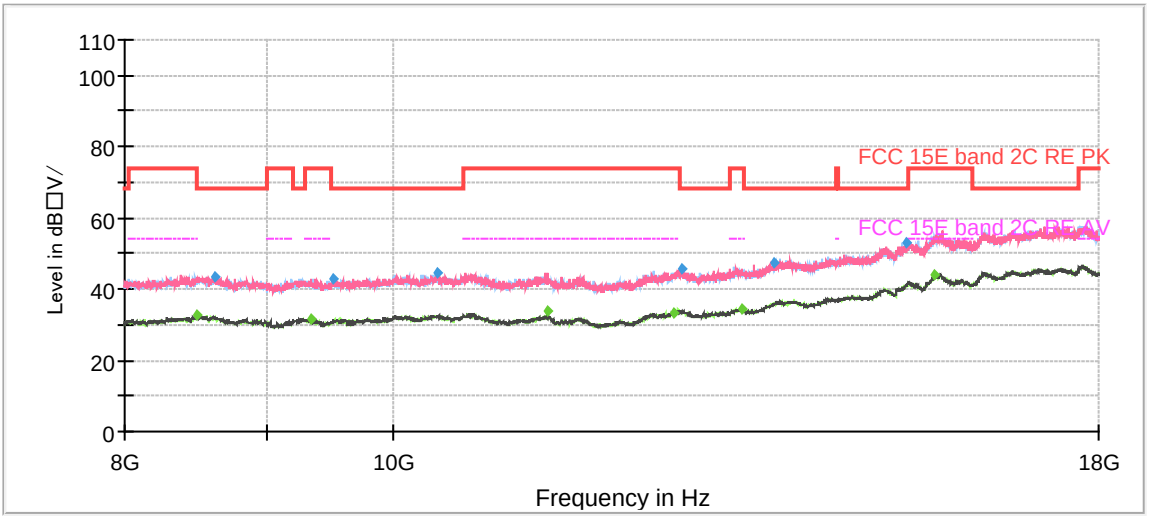
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (VHT80) CH138



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

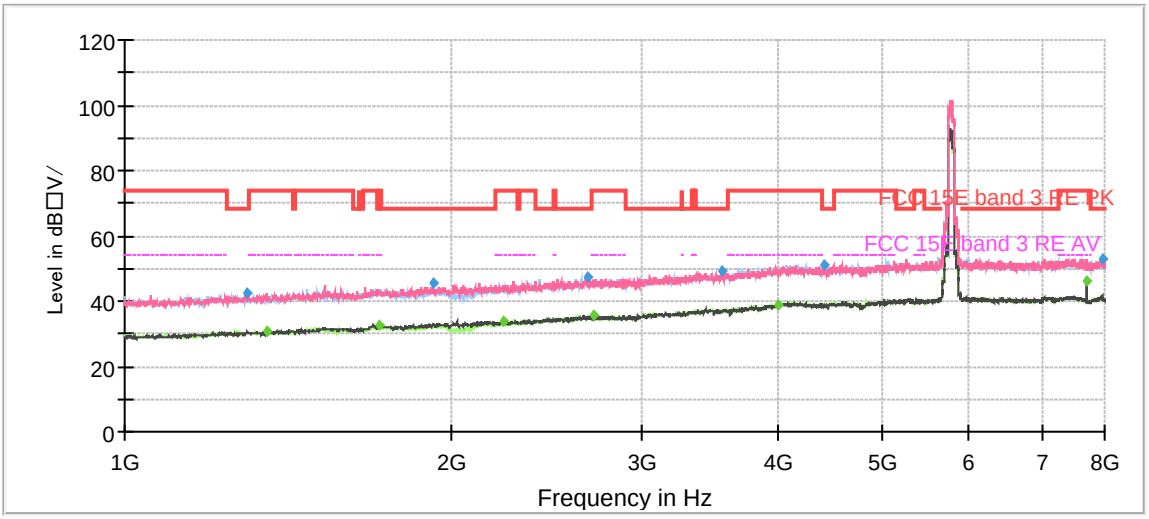


Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1281.75	41.81	---	68.20	26.39	100.0	H	135.00	-7
1393.75	---	30.89	54.00	23.11	100.0	H	358.00	-6
1683.38	---	32.48	54.00	21.52	100.0	V	333.00	-5
1716.63	44.31	---	68.20	23.89	100.0	V	245.00	-5
2276.63	---	33.73	54.00	20.27	200.0	V	313.00	-2
2618.75	46.72	---	68.20	21.48	200.0	H	280.00	0
2813.00	---	35.33	54.00	18.67	200.0	H	209.00	1
3421.13	50.11	---	68.20	18.09	100.0	V	318.00	4
3996.00	---	39.20	54.00	14.80	200.0	V	105.00	6
4397.63	50.50	---	74.00	23.50	100.0	H	88.00	7
7587.00	---	47.00	54.00	7.00	100.0	V	83.00	11
7944.88	53.15	---	68.20	15.05	100.0	V	23.00	12

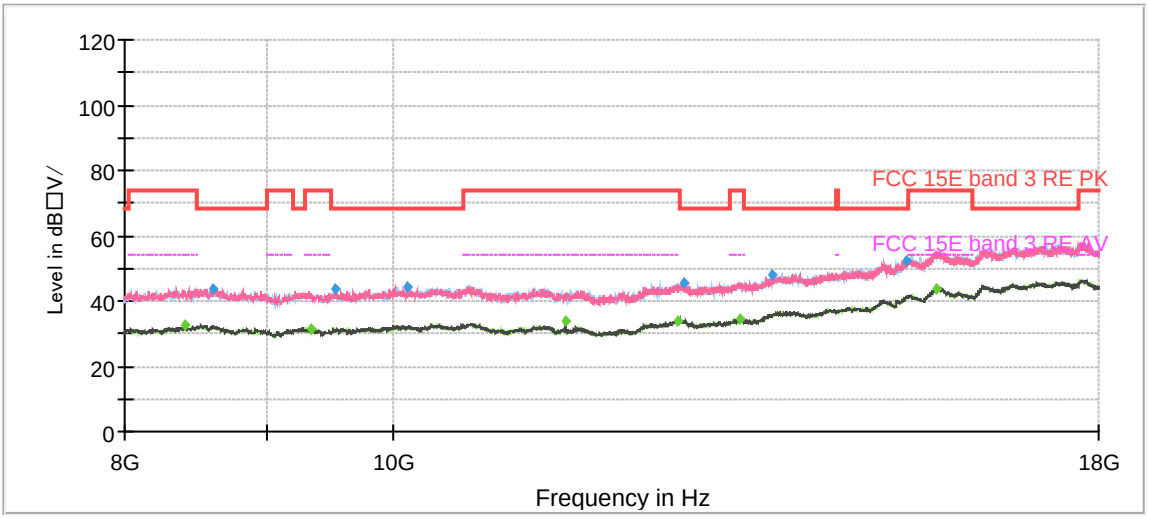
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (VHT80) CH155



Note: The signal beyond the limit is carrier.

Radiates Emission from 1GHz to 8GHz

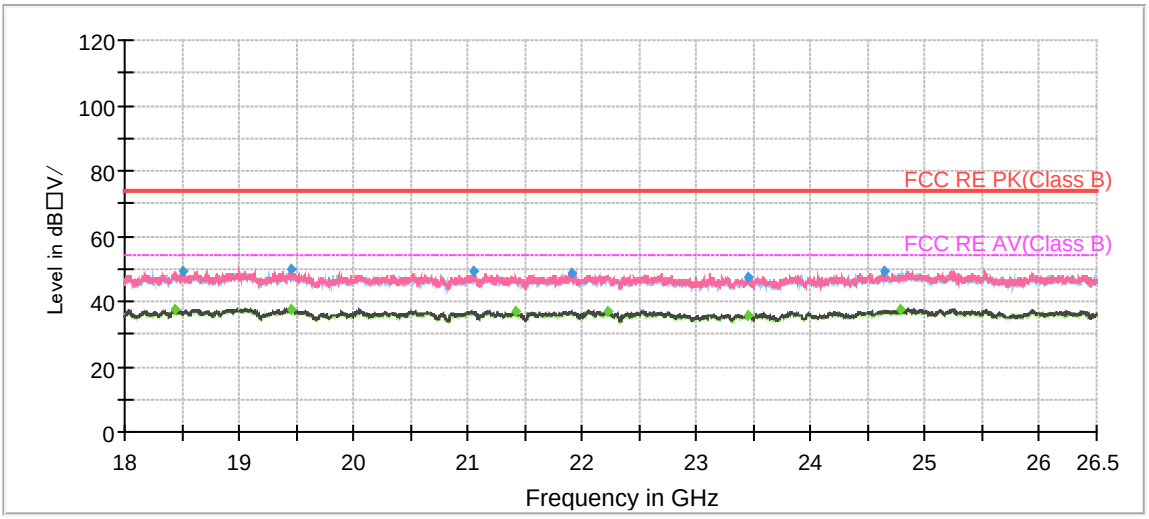


Radiates Emission from 8GHz to 18GHz

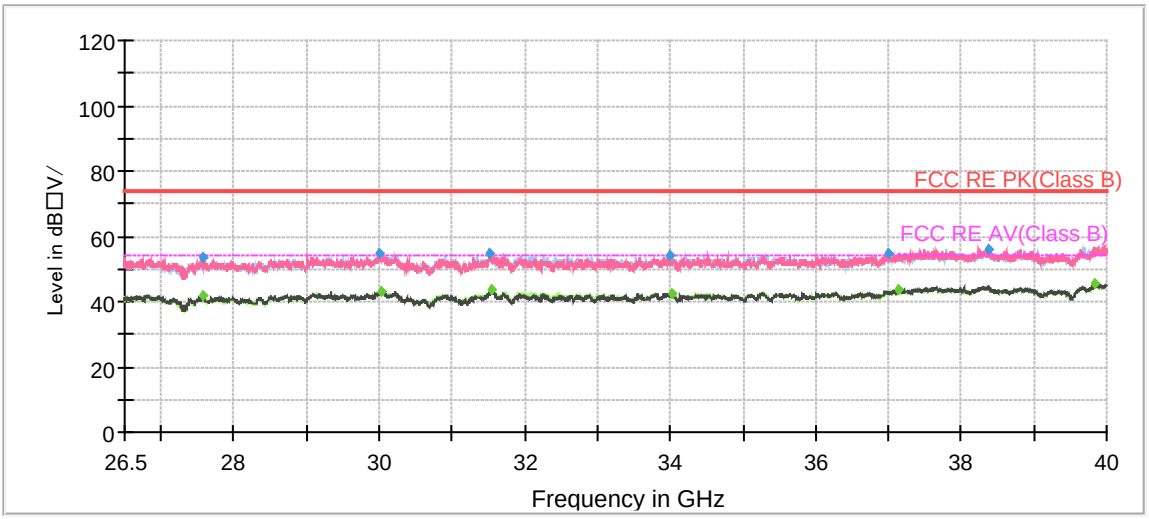
Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
1294.88	42.45	---	68.20	25.75	100.0	H	350.00	-7
1350.88	---	30.86	54.00	23.14	100.0	V	74.00	-7
1719.25	---	32.53	54.00	21.47	100.0	H	253.00	-5
1924.00	45.47	---	68.20	22.73	100.0	V	345.00	-3
2229.38	---	33.63	54.00	20.37	200.0	V	288.00	-2
2666.00	47.33	---	68.20	20.87	100.0	H	350.00	0
2704.50	---	35.52	54.00	18.48	100.0	H	94.00	1
3551.50	49.14	---	68.20	19.06	200.0	H	143.00	4
3991.63	---	39.03	54.00	14.97	200.0	H	137.00	6
4409.88	50.84	---	68.20	17.36	200.0	H	51.00	7
7700.75	---	46.17	54.00	7.83	100.0	V	81.00	11
7953.63	53.12	---	68.20	15.08	100.0	V	13.00	12

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

During the test, the Radiates Emission from 18GHz to 40GHz was performed in all modes with all channels, 802.11n (HT20), Channel 100 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.



Radiates Emission from 18GHz to 26.5GHz



Radiates Emission from 26.5GHz to 40GHz

Frequency (MHz)	Peak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
18430.31	---	37.81	54.00	16.19	100.0	V	78.00	-2
18508.94	49.37	---	74.00	24.63	100.0	V	157.00	-2
19455.63	---	37.73	54.00	16.27	100.0	V	167.00	-1
19460.94	49.80	---	74.00	24.20	100.0	V	49.00	-1
21047.25	48.94	---	74.00	25.06	100.0	V	192.00	0
21411.69	---	37.05	54.00	16.95	100.0	V	223.00	0
21914.25	48.62	---	74.00	25.38	200.0	V	232.00	1
22222.38	---	37.23	54.00	16.77	100.0	V	157.00	1
23442.13	47.19	---	74.00	26.81	100.0	V	132.00	2
23443.19	---	35.93	54.00	18.07	100.0	V	213.00	2
24641.69	49.05	---	74.00	24.95	200.0	H	37.00	3
24785.13	---	37.65	54.00	16.35	200.0	V	334.00	3

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

5.6. Conducted Emission

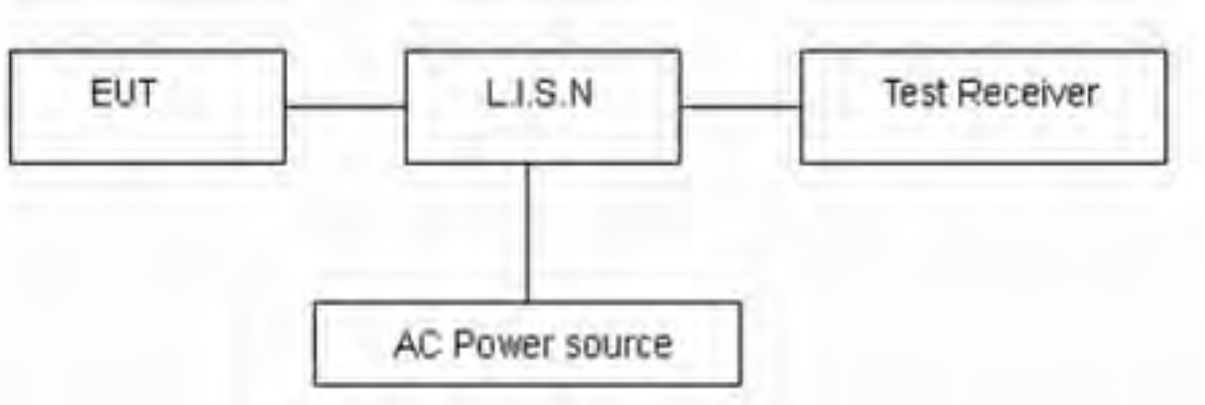
Ambient condition

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

Methods of Measurement

The EUT IS placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10.Connect the AC power line of the EUT to the LISN Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9kHz, VBW is set to 30kHz The measurement result should include both L line and N line.
The test is in transmitting mode.

Test Setup



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

Limits

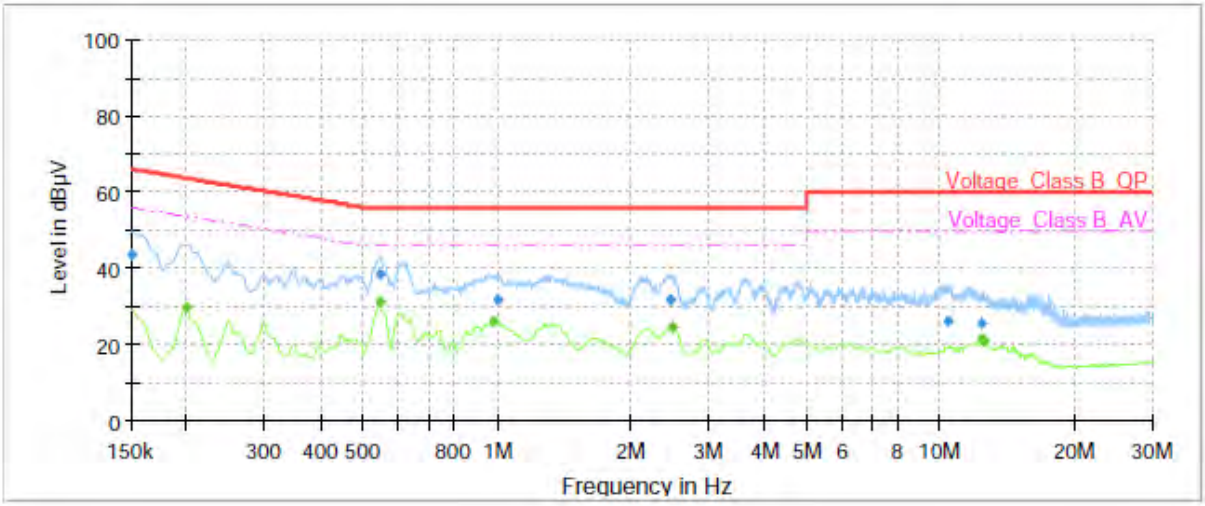
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

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

Test Results:

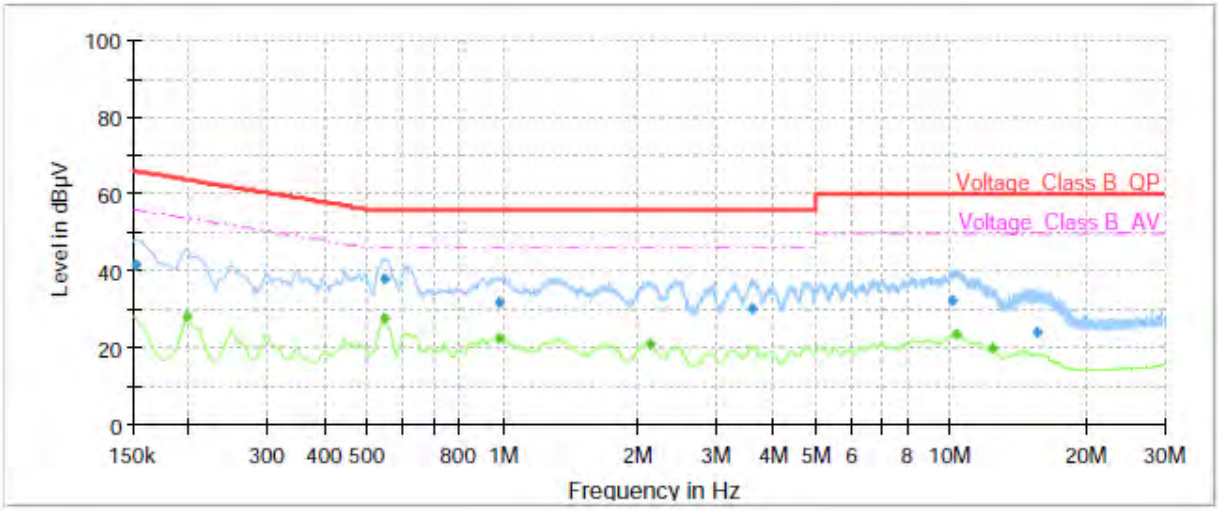
Following plots, Blue trace uses the peak detection and Green trace uses the average detection. During the test, the Conducted Emission was performed in all modes with all channels, 802.11n (HT20), Channel 100 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.15	43.63	---	66.00	22.37	1000.00	9.000	L1	ON	21
0.20	---	29.76	53.63	23.87	1000.00	9.000	L1	ON	21
0.54	---	31.18	46.00	14.82	1000.00	9.000	L1	ON	20
0.54	38.33	---	56.00	17.67	1000.00	9.000	L1	ON	20
0.99	---	26.18	46.00	19.82	1000.00	9.000	L1	ON	20
1.01	31.85	---	56.00	24.15	1000.00	9.000	L1	ON	20
2.45	31.88	---	56.00	24.12	1000.00	9.000	L1	ON	19
2.49	---	24.63	46.00	21.37	1000.00	9.000	L1	ON	19
10.39	26.22	---	60.00	33.78	1000.00	9.000	L1	ON	20
12.40	---	21.35	50.00	28.65	1000.00	9.000	L1	ON	20
12.43	25.47	---	60.00	34.53	1000.00	9.000	L1	ON	20
12.57	---	20.98	50.00	29.02	1000.00	9.000	L1	ON	20

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 KHz to 30 MHz



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.15	41.54	---	65.88	24.34	1000.00	9.000	N	ON	21
0.20	---	28.28	53.73	25.45	1000.00	9.000	N	ON	21
0.54	---	27.62	46.00	18.38	1000.00	9.000	N	ON	20
0.54	37.90	---	56.00	18.10	1000.00	9.000	N	ON	20
0.99	---	22.36	46.00	23.64	1000.00	9.000	N	ON	20
0.99	31.77	---	56.00	24.23	1000.00	9.000	N	ON	20
2.12	---	20.83	46.00	25.17	1000.00	9.000	N	ON	20
3.60	30.06	---	56.00	25.94	1000.00	9.000	N	ON	19
10.05	32.39	---	60.00	27.61	1000.00	9.000	N	ON	20
10.30	---	23.69	50.00	26.31	1000.00	9.000	N	ON	20
12.42	---	19.95	50.00	30.05	1000.00	9.000	N	ON	20
15.58	24.11	---	60.00	35.89	1000.00	9.000	N	ON	20

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 KHz to 30 MHz

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Spectrum Analyzer	R&S	FSV40	100816	2021-05-15	2022-05-14
Spectrum Analyzer	R&S	FSV30	103591	2021-05-15	2022-05-14
EMI Test Receiver	R&S	ESCI7	100936	2021-12-12	2022-12-11
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2020-04-02	2023-04-01
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	391	2019-12-16	2022-12-15
Horn Antenna	Schwarzbeck	BBHA 9120D	430	2021-07-26	2024-07-25
Horn Antenna	ETS-Lindgren	3160-09	00102643	2021-10-10	2024-10-09
Horn Antenna	STEATITE	QSH-SL-26-40-K-15	16779	2019-12-24	2022-12-23
EMI Test Receiver	R&S	ESR	101667	2021-05-16	2022-05-15
LISN	R&S	ENV216	102191	2020-12-13	2022-12-12
Power Sensor	R&S	NRP18S	101955	2021-05-15	2022-05-14
DC power	GWINSTEK	GPS-3030D	GEP882653	2021-05-15	2022-05-14
Climate Chamber	ESPEC	SU-242	93000506	2021-12-12	2022-12-11
Spectrum Analyzer	KEYSIGHT	N9020A	MY54420163	2021-12-12	2022-12-11
Software	R&S	EMC32	9.26.01	/	/
Software	R&S	EMC32	10.35.10	/	/

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

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.