

FCC Test Report

Product Name : peplink PEPWAVE Wireless Product
Brand Name : PEPWAVE / peplink
Model No. : Balance 20X Pro, BPL-021X-PRO-LTEA-Q-T-PRM
FCC ID : U8G-P1AX19

Applicant : PISMO LABS TECHNOLOGY LIMITED
Address : A8, 5/F, HK Spinners Industrial Building, Phase 6, 481
Castle Peak Road, Cheung Sha Wan, Hong Kong

Date of Receipt : Jul. 06, 2022
Issued Date : Sep. 28, 2022
Report No. : 2270136R-RFUSWL5V01-A
Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

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Manufacturer : PISMO LABS TECHNOLOGY LIMITED
Address : A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle
Peak Road, Cheung Sha Wan, Hong Kong
Brand Name : PEPWAVE / peplink
Model No. : Balance 20X Pro, BPL-021X-PRO-LTEA-Q-T-PRM
FCC ID : U8G-P1AX19
EUT Voltage : DC 12V (adapter)
Applicable Standard : FCC CFR Title 47 Part 15 Subpart E Section 15.407
ANSI C63.10: 2013
Laboratory Name : DEKRA Testing and Certification Co., Ltd.
Hsin Chu Laboratory
Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township,
Hsinchu County 310, Taiwan, R.O.C.
Test Result : Complied

Documented By :



(Amelia Wu / Project Specialist)

Approved By :



(Rueyyan Lin / Supervisor)

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Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Sep. 28, 2022

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1. General Information

1.1. EUT Description

Product Name	peplink PEPWAVE Wireless Product	
Brand Name	PEPWAVE / peplink	
Model No.	Balance 20X Pro, BPL-021X-PRO-LTEA-Q-T-PRM	
Frequency Range / Channel Number	IEEE 802.11a / IEEE 802.11n (20 MHz) / IEEE 802.11ac (20 MHz) / IEEE 802.11ax (20 MHz)	5180 ~ 5240 MHz / 4 Channels 5745 ~ 5825 MHz / 5 Channels
	IEEE 802.11n (40 MHz) / IEEE 802.11ac (40 MHz) / IEEE 802.11ax (40 MHz)	5190 ~ 5230 MHz / 2 Channels 5755 ~ 5795 MHz / 2 Channels
	IEEE 802.11ac (80 MHz) / IEEE 802.11ax (80 MHz)	5210 MHz / 1 Channel 5775 MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac	OFDM
	IEEE 802.11ax	OFDMA
Data Rate	IEEE 802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0 ~ MCS 15 and bandwidth defined in 802.11n
	IEEE 802.11ax	Support a subset of the combination of GI, MCS 0 ~ MCS 9 and bandwidth defined in 802.11ax
	IEEE 802.11ax	Support a subset of the combination of GI, MCS 0 ~ MCS 11 and bandwidth defined in 802.11ax

Accessories Information				
No.	Equipment Name	Brand Name	Model No.	Rating
1	Adapter	DVE	DSA-36PFN-12 FUS 120300	INPUT: 100~240Vac, 50/60Hz, 1.0A OUTPUT: 12Vdc, 3.0A, 36.0W

The brand name/model number in the following table are all refer to the identical product.

Brand Name	Description
PEPWAVE	There is nothing different of two models, just for different marketing use.
peplink	
Model No.	
Balance 20X Pro	
BPL-021X-PRO-LTEA-Q-T-PRM	

From the above models, model: Balance 20X Pro was selected as representative model for the test and its data was recorded in this report.

Antenna Information							
Ant.	Brand Name	Model No.	Type	Antenna Gain (dBi)		Directional Gain (dBi)	
				5GHz Band 1	5GHz Band 4	5GHz Band 1	5GHz Band 4
0	Master Wave	98614PRSX000	Omni-directional	4.10	4.73	7.11	7.74
1	Master Wave	98614PRSX000	Omni-directional	4.10	4.73		

$$\text{Directional Gain} = 10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{\text{Ant}}]$$

For IEEE 802.11a/n/ac/ax Mode: (2TX, 2RX)

All of the antenna No. can be used as transmitting/receiving antennas, and them can transmit/receive signal simultaneously.

EUT Operational Condition	
Testing Voltage	AC 120V/60Hz

IEEE 802.11a & IEEE 802.11n/ac/ax (20 MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	-	-	-	-	-	-

IEEE 802.11n/ac/ax (40 MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz	159	5795 MHz

IEEE 802.11ac/ax (80 MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775 MHz	-	-	-	-

Note:

1. Regards to the frequency band operation; the lowest middle and highest frequency of channel were selected to perform the test, and then shown on this report.
2. The above EUT information is declared by the manufacturer.

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

Test Mode	Mode 1: Transmit
-----------	------------------

Test Items	Test Mode	Modulation	Channel	Antenna	Result
AC Power Line Conducted Emission	Mode 1	11ax (40 MHz)	38	0+1	Pass
Emission Bandwidth	Mode 1	11a	36/44/48/149/157/165	0+1	Pass
		11ax (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11ax (40 MHz)	38/46/151/159	0+1	Pass
		11ax (80 MHz)	42/155	0+1	Pass
Maximum Conducted Output Power	Mode 1	11a	36/44/48/149/157/165	0+1	Pass
		11n (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11ac (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11ax (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11n (40 MHz)	38/46/151/159	0+1	Pass
		11ac (40 MHz)	38/46/151/159	0+1	Pass
		11ax (40 MHz)	38/46/151/159	0+1	Pass
		11ac (80 MHz)	42/155	0+1	Pass
Maximum Power Spectral Density	Mode 1	11a	36/44/48/149/157/165	0+1	Pass
		11ax (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11ax (40 MHz)	38/46/151/159	0+1	Pass
		11ax (80 MHz)	42/155	0+1	Pass
Radiated Emission Below 1 GHz	Mode 1	11ax (40 MHz)	38	0+1	Pass
Radiated Emission Above 1 GHz	Mode 1	11a	36/44/48/149/157/165	0+1	Pass
		11ax (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11ax (40 MHz)	38/46/151/159	0+1	Pass
		11ax (80 MHz)	42/155	0+1	Pass
Radiated Emission Band Edge	Mode 1	11a	36/44/48/149/157/165	0+1	Pass
		11ax (20 MHz)	36/44/48/149/157/165	0+1	Pass
		11ax (40 MHz)	38/46/151/159	0+1	Pass
		11ax (80 MHz)	42/155	0+1	Pass

Note:

- Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- The worst case of data rate for 802.11b is 1 Mbps, for 802.11g is 6 Mbps, for 802.11ax (20 MHz)/802.11ax (40 MHz) are MCS 0, Nss1.

3. The modulation and bandwidth are similar for 802.11n mode for HT20/HT40, 802.11ac mode for VHT20/VHT40/VHT80 and 802.11ax mode for HE20/HE40/HE80, therefore investigated worst case to representative mode in test report. (Please refer to the test result of RF output power for detail.)
4. For radiated emission below 1 GHz and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.
5. The EUT could be applied with 1. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN WCDMA function and 2. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN LTE function; therefore Co-location Maximum Permissible Exposure (Please refer to DEKRA Report No.: 2270136R-RFUSMPEV02-A) and Radiated Emission Co-location (Please refer to Appendix A) tests are added for simultaneously transmit with 1. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN WCDMA function and 2. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN LTE function.
6. The EUT contains a WWAN module (brand name: Telit, model: LN920A12-WW, FCC ID: RI7LN920).

1.3. Comments and Remarks

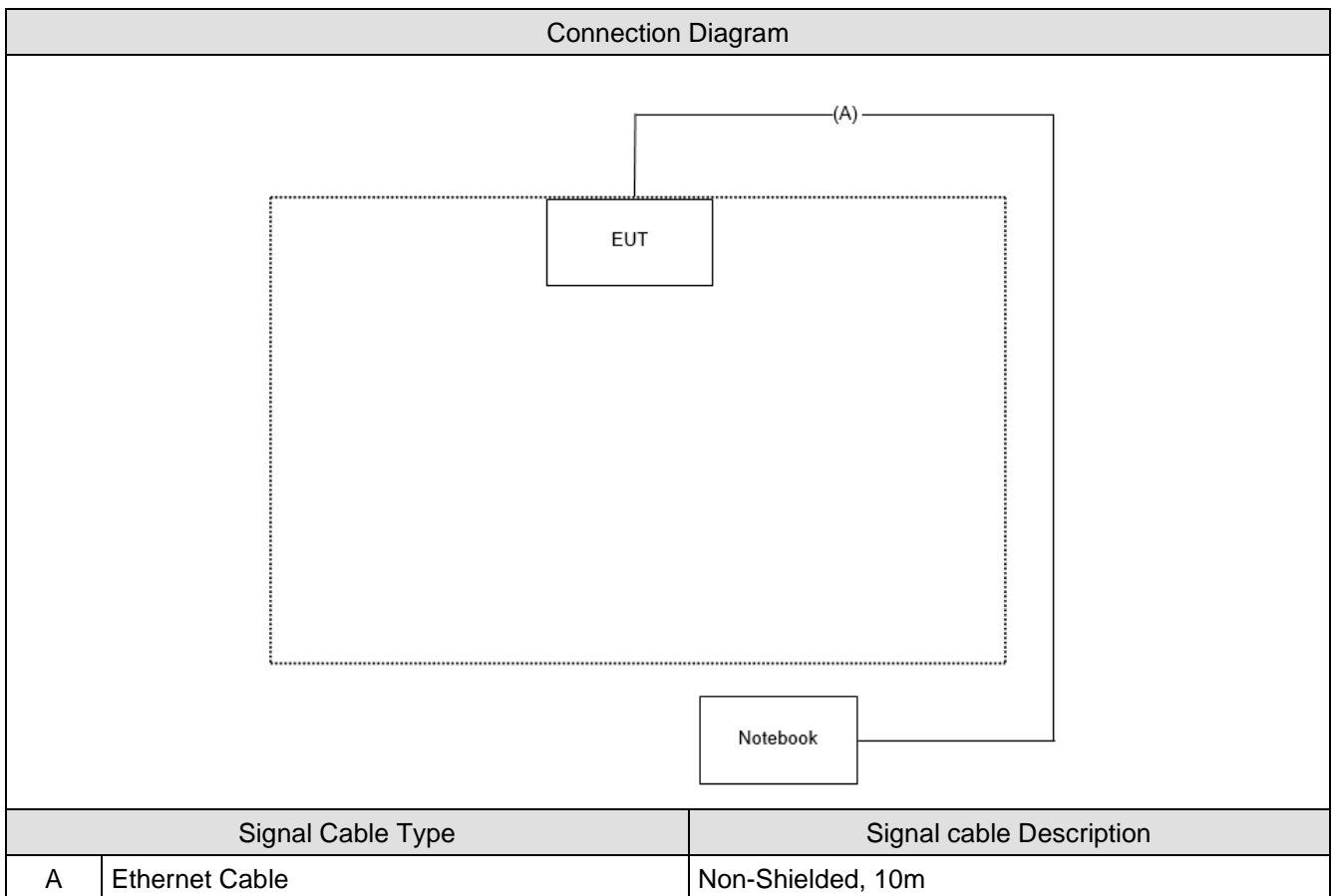
The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.4. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system.

Product		Manufacturer	Model No.	Serial No.
1	Notebook	Lenove	Lenovo Ideapad 320	PF0SXXY1

1.5. Configuration of tested System



1.6. EUT Operation of during Test

1	Execute control command by software “QSPR v5.0-00197”.
2	Configure the test mode, the test channel, and the data rate.
3	Press “Start TX” to start the continuous transmitting.
4	Verify that the EUT works properly.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Actually	Tested by	Test Date	Test Site
Temperature (°C)	AC Power Line Conducted Emission	22.8	Ling Chen	2022/08/04	HC-SR02
Humidity (%RH)		62			
Temperature (°C)	99% & 26dB & DTS Bandwidth	23 ~ 25	Clemens Fang	2022/07/27 ~ 2022/08/09	HC-SR12
Humidity (%RH)		57 ~ 63			
Temperature (°C)	Maximum Conducted Output Power	23	Scott Chang	2022/08/23	HC-SR12
Humidity (%RH)		65			
Temperature (°C)	Maximum Power Spectral Density	24.1	Scott Chang	2022/08/30	HC-SR12
Humidity (%RH)		55			
Temperature (°C)	Radiated Emission	23 ~ 24.3	Gary Liao Ling Chen	2022/08/23 ~ 2022/08/27	HC-CB04
Humidity (%RH)		58 ~ 59			
Temperature (°C)	Radiated Emission Band Edge	22.5 ~ 24.3	Gary Liao Ling Chen	2022/08/23 ~ 2022/08/24	HC-CB04
Humidity (%RH)		58			

Note: Test site information refers to Laboratory Information.

USA : **FCC Registration Number: TW3024**
Canada **CAB identifier : TW3024**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: <http://www.dekra.com.tw>

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
E mail address	info.tw@dekra.com
Website	http://www.dekra.com.tw
Note: Test site number for address 1 includes HC-SR02. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, HC-SR10 and HC-SR12.	

1.8. List of Test Equipment

HC-SR02

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2021/12/27	2022/12/26
EMI Test Receiver	R&S	ESR3	102608	2022/05/30	2023/05/29
LISN	R&S	ENV216	100092	2022/04/29	2023/04/28
Coaxial Cable(9 m)	Harbour	RG-400	HC-SR02	2021/08/15	2022/08/14
DEKRA Testing System	DEKRA	Version 2.0	HC-SR02	N/A	N/A

HC-SR12

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2021/11/12	2022/11/11
Pulse Power Sensor	Anritsu	MA2411B	1531043	2021/11/12	2022/11/11
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2022/01/07	2023/01/06
Pulse Power Sensor	Anritsu	MA2411B	1531044	2021/11/12	2022/11/11
Power Meter	Keysight	8990B	MY51000248	2022/05/06	2023/05/05
Power Sensor	Keysight	N1923A	MY57240005	2022/05/06	2023/05/05
Signal and Spectrum Analyzer	R&S	FSVA40	101435	2022/05/30	2023/05/29

HC-CB04

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2021/10/22	2022/10/21
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2022/01/07	2023/01/06
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1209	2022/06/14	2023/06/13
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2022/05/06	2023/05/05
Horn Antenna	Schwarzbeck	BBHA 9170	203	2022/02/23	2023/02/22
Pre-Amplifier	EMCI	EMC01820I	980365	2022/04/15	2023/04/14
Pre-Amplifier	EMEC	EM01G18GA	060741	2022/05/06	2023/05/05
Pre-Amplifier	DEKRA	AP-400C	201801231	2021/12/24	2022/12/23
Coaxial Cable(10m)	Suhner	SF102_SF104	HC-CB04	2022/08/08	2023/08/07
Coaxial Cable(3m)	Suhner,Rosnol	SF102_UP0264	HC-CB04_1	2022/08/14	2023/08/13
EMI Test Receiver	R&S	ESR7	102260	2021/12/22	2022/12/21
Magnetic Loop Antenna	Teseq	HLA 6121	44287	2021/09/06	2022/09/05
Radiated Software	AUDIX	e3 V9	HC-CB04_1	N/A	N/A

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

1.9. Measurement Uncertainty

Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Test Item	Uncertainty
AC Power Line Conducted Emission	± 2.10 dB
99% & 26dB & DTS Bandwidth	± 636.54 Hz
Maximum Conducted Output Power	± 1.16 dB
Maximum Power Spectral Density	± 1.60 dB
Radiated Emission	± 3.25 dB below 1 GHz ± 3.32 dB above 1 GHz
Radiated Emission Band Edge	± 3.32 dB above 1 GHz

1.10. Duty Cycle

Modulation	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.420	1.560	91.03	0.408	0.704
802.11ax (20 MHz)	5.420	5.760	94.10	0.264	0.185
802.11ax (40 MHz)	5.440	5.700	95.44	0.203	0.184
802.11ax (80 MHz)	5.420	5.760	94.10	0.264	0.185

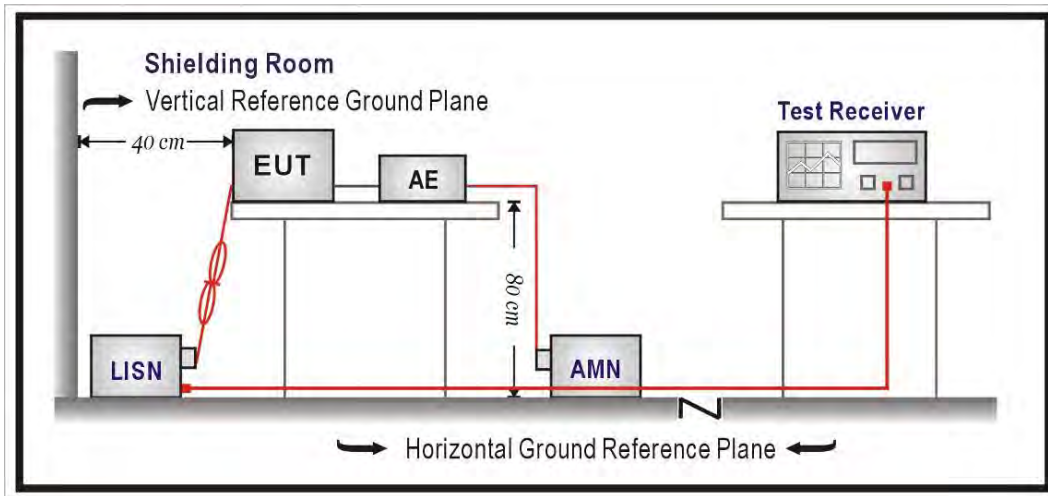


2. Antenna Requirements

According to FCC 47CFR 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

3. AC Power Line Conducted Emission

3.1. Test Setup



3.2. Test Limit

Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remark: In the above table, the tighter limit applies at the band edges.

3.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

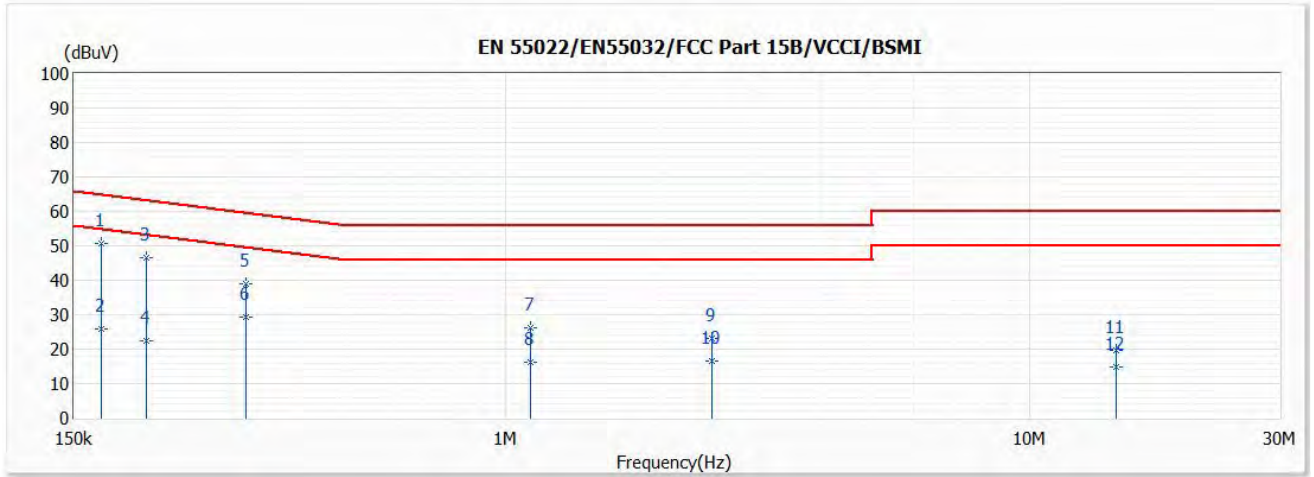
Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

3.4. Test Specification

According to FCC CFR Title 47 Part 15 Subpart E.

3.5. Test Result of AC Power Line Conducted Emission

Test Mode	Mode 1: Transmit	Phase	Line
Test Condition	802.11ax (40 MHz) / Ant. 0 + Ant. 1 / 5190 MHz		

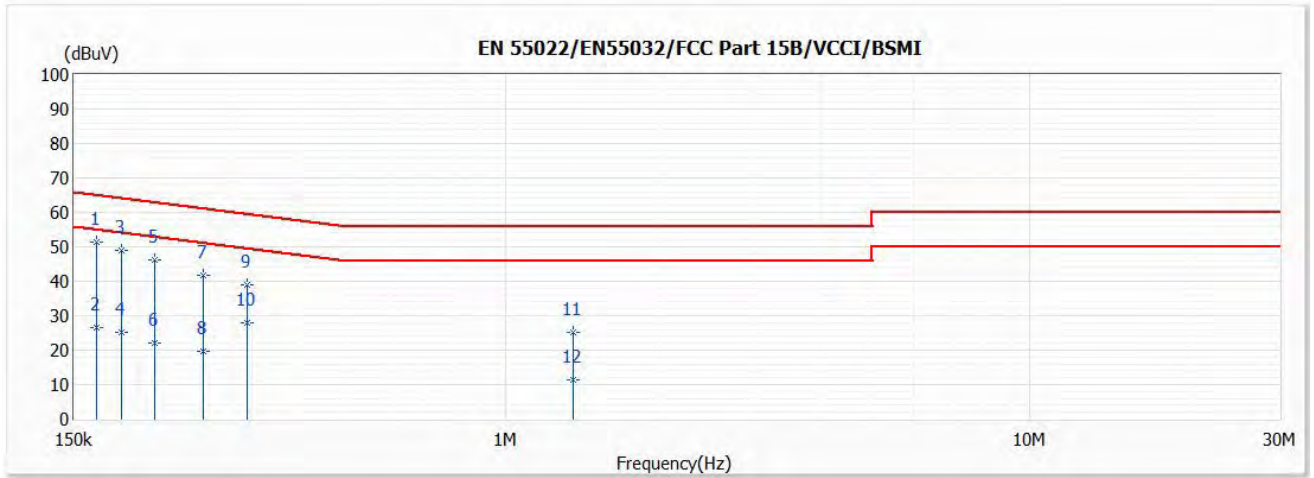


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.169	50.84	64.99	-14.15	41.22	9.62	QP
2	0.169	25.79	54.99	-29.20	16.17	9.62	AV
3	0.206	46.60	63.35	-16.75	36.99	9.61	QP
4	0.206	22.25	53.35	-31.10	12.64	9.61	AV
5	0.319	39.02	59.73	-20.71	29.39	9.63	QP
6	0.319	29.41	49.73	-20.32	19.78	9.63	AV
7	1.112	26.16	56.00	-29.84	16.45	9.71	QP
8	1.112	16.15	46.00	-29.85	6.44	9.71	AV
9	2.468	23.01	56.00	-32.99	13.24	9.77	QP
10	2.468	16.59	46.00	-29.41	6.82	9.77	AV
11	14.596	19.72	60.00	-40.28	9.50	10.22	QP
12	14.596	14.71	50.00	-35.29	4.49	10.22	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Test Mode	Mode 1: Transmit	Phase	Neutral
Test Condition	802.11ax (40 MHz) / Ant. 0 + Ant. 1 / 5190 MHz		



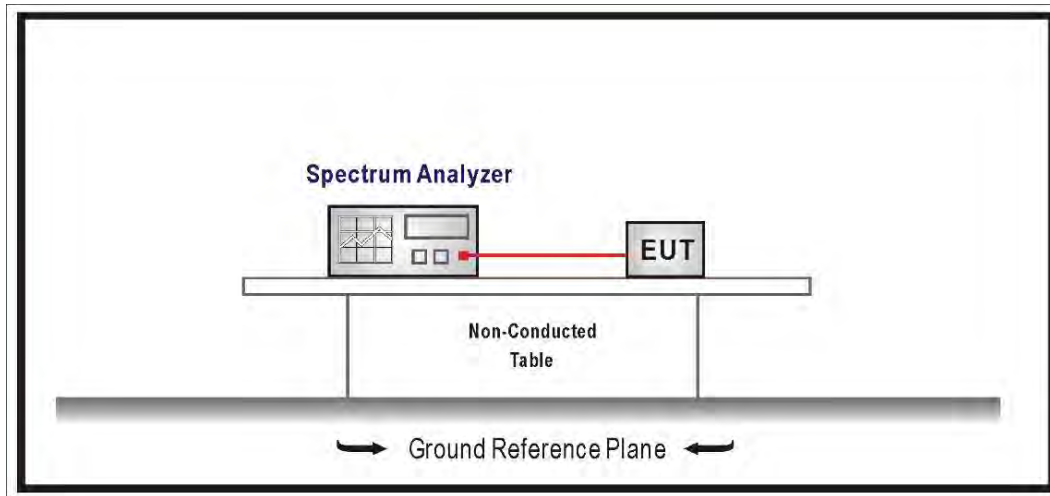
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.165	51.40	65.19	-13.79	41.78	9.62	QP
2	0.165	26.72	55.19	-28.47	17.10	9.62	AV
3	0.185	48.91	64.25	-15.34	39.30	9.61	QP
4	0.185	25.20	54.25	-29.05	15.59	9.61	AV
5	0.213	46.06	63.07	-17.01	36.44	9.62	QP
6	0.213	22.11	53.07	-30.96	12.49	9.62	AV
7	0.265	41.63	61.27	-19.64	32.01	9.62	QP
8	0.265	19.49	51.27	-31.78	9.87	9.62	AV
9	0.322	38.92	59.66	-20.74	29.30	9.62	QP
10	0.322	28.01	49.66	-21.65	18.39	9.62	AV
11	1.345	25.17	56.00	-30.83	15.45	9.72	QP
12	1.345	11.40	46.00	-34.60	1.68	9.72	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

4. Emission Bandwidth

4.1. Test Setup



4.2. Test Limit

99% & 26dB Bandwidth : No Required

6dB Bandwidth \geq 500kHz

4.3. Test Procedure

99% & 26dB Bandwidth :

The EUT was tested according to U-NII test procedure of KDB 789033.D02 V02r01

Set RBW 1% of the emission bandwidth, VBW equal to 3 times the RBW.

DTS Bandwidth :

Set RBW = 100kHz, VBW \geq 3xRBW, Sweep time=Auto, Set Peak detector.

4.4. Test Specification

According to FCC CFR Title 47 Part 15 Subpart E.

4.5. Test Result of Emission Bandwidth

Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% & 26dB Bandwidth	
802.11a	36	5180	16.663	16.663	20.619	21.019	-	
	44	5220	16.743	16.863	21.698	24.495	-	
	48	5240	16.823	16.783	22.137	24.495	-	
Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		DTS Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% Bandwidth	DTS Bandwidth
802.11a	149	5745	16.863	16.583	16.063	15.704		≥0.50
	157	5785	16.583	16.543	15.304	15.304	-	≥0.50
	165	5825	16.623	16.663	15.344	15.704	-	≥0.50

Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% & 26dB Bandwidth	
802.11ax (20 MHz)	36	5180	18.981	19.100	21.658	21.618	-	
	44	5220	19.100	19.300	22.257	28.331	-	
	48	5240	19.140	19.180	21.738	27.652	-	
Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		DTS Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% Bandwidth	DTS Bandwidth
802.11ax (20 MHz)	149	5745	18.861	18.981	16.383	18.581		≥0.50
	157	5785	19.020	19.060	18.581	18.261		≥0.50
	165	5825	19.180	19.060	17.702	17.822	-	≥0.50

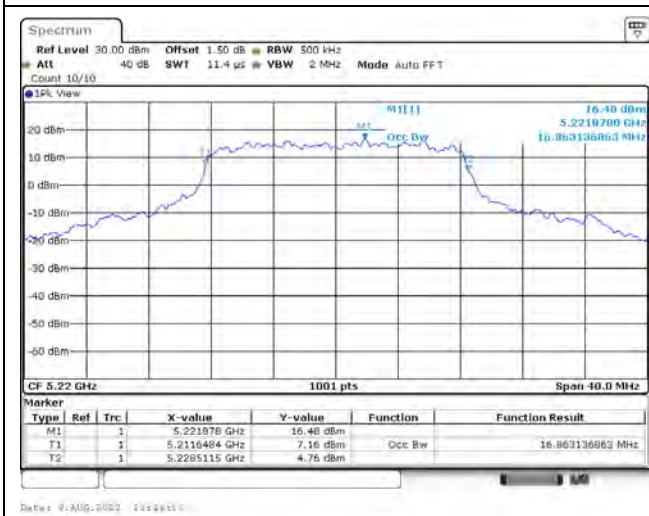
Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% & 26dB Bandwidth	
802.11ax (40 MHz)	38	5190	37.802	37.722	40.759	40.759	-	
	46	5230	37.722	37.882	40.999	41.558	-	
Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		DTS Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% Bandwidth	DTS Bandwidth
802.11ax (40 MHz)	151	5755	37.802	37.802	36.123	36.123	-	≥0.50
	159	5795	37.802	37.722	37.562	37.882	-	≥0.50

Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% & 26dB Bandwidth	
802.11ax (80 MHz)	42	5210	77.042	77.042	81.838	81.678	-	
Modulation	Channel	Frequency (MHz)	99% Bandwidth (MHz)		DTS Bandwidth (MHz)		Limit (MHz)	
			Ant. 0	Ant. 1	Ant. 0	Ant. 1	99% Bandwidth	DTS Bandwidth
802.11ax (80 MHz)	155	5755	77.202	77.042	75.924	75.924	-	≥ 0.50

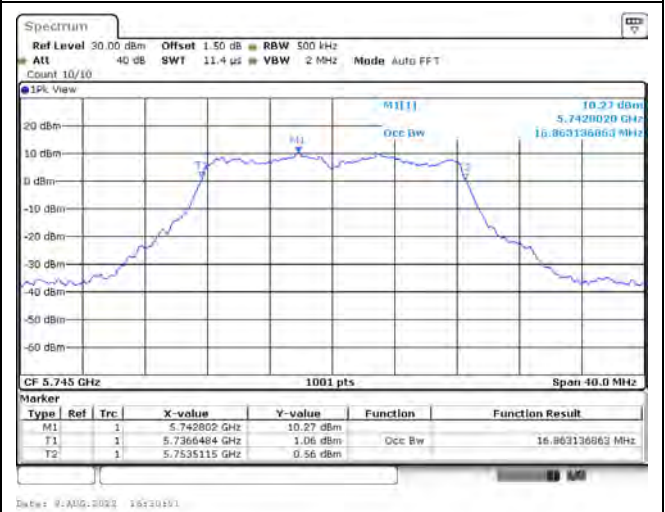
For 99% Bandwidth:

Spectrum plot of worst value

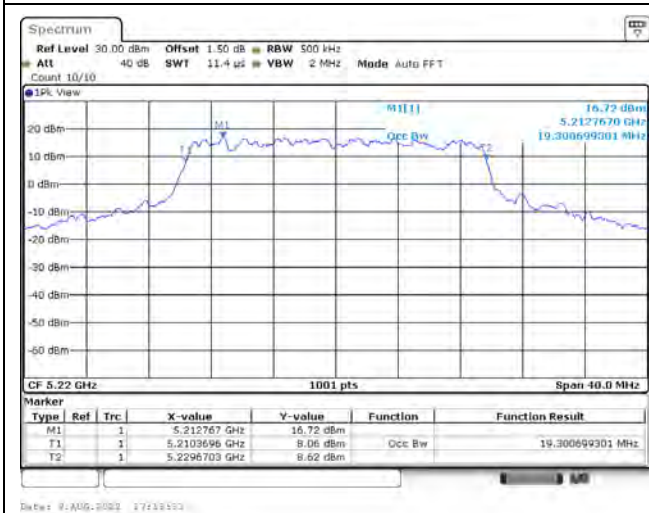
802.11a / Ant. 1 / 5220 MHz (U-NII-1)



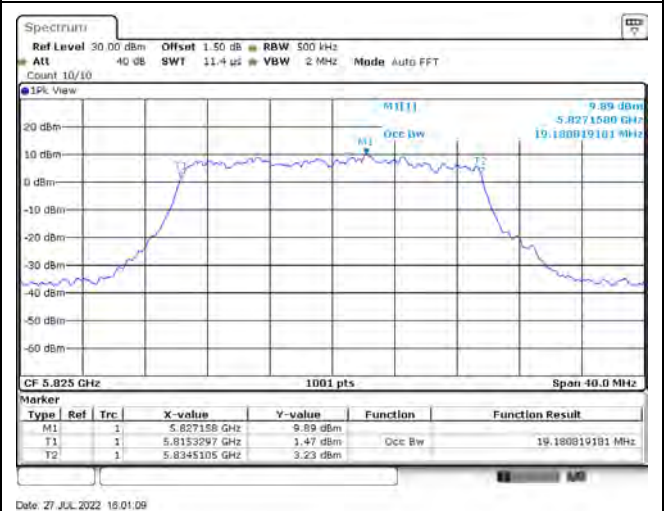
802.11a / Ant. 0 / 5745 MHz (U-NII-3)



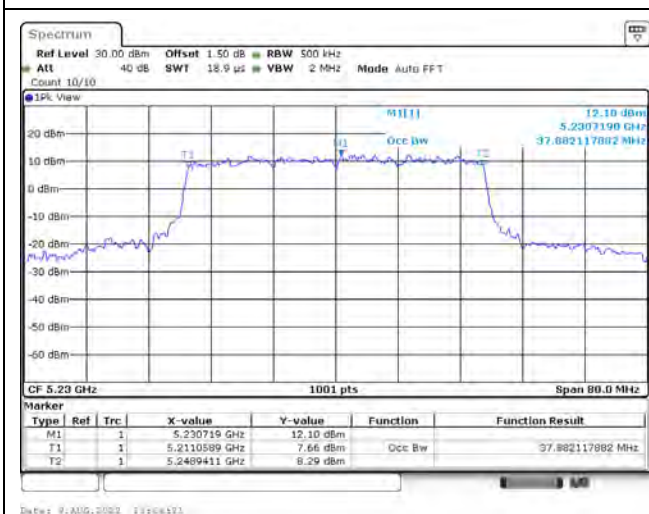
802.11ax (20 MHz) / Ant. 1 / 5220 MHz (U-NII-1)



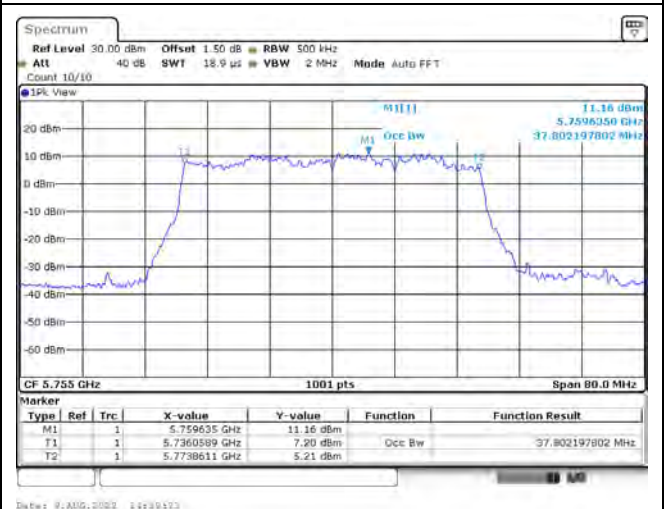
802.11ax (20 MHz) / Ant. 0 / 5825 MHz (U-NII-3)



802.11ax (40 MHz) / Ant. 1 / 5230 MHz (U-NII-1)



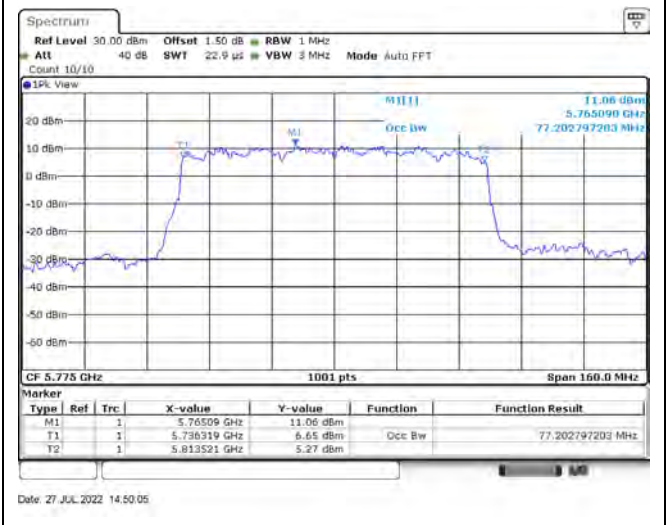
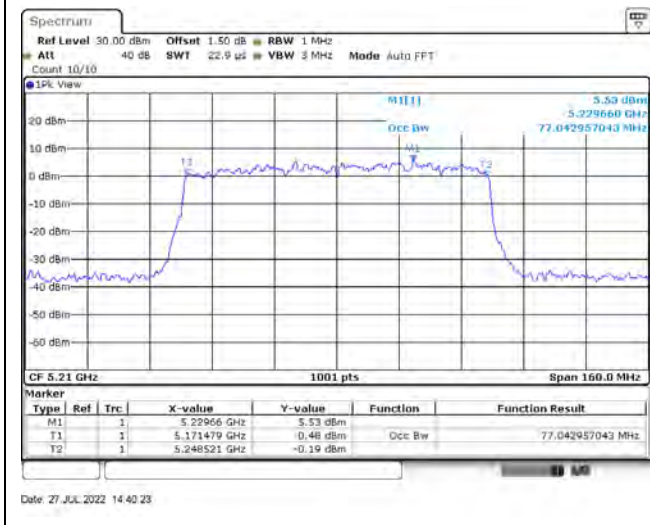
802.11ax (40 MHz) / Ant. 0 / 5755 MHz (U-NII-3)



Spectrum plot of worst value

802.11ax (80 MHz) / Ant. 0 / 5210 MHz (U-NII-1)

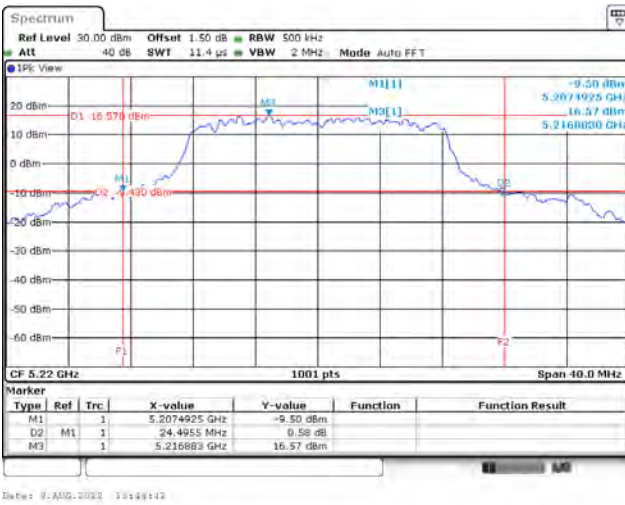
802.11ax (80 MHz) / Ant. 0 / 5775 MHz (U-NII-3)



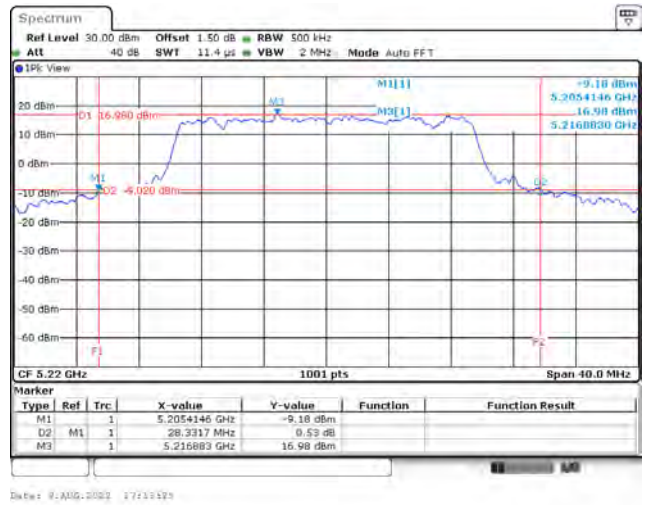
For 26dB Bandwidth:

Spectrum plot of worst value

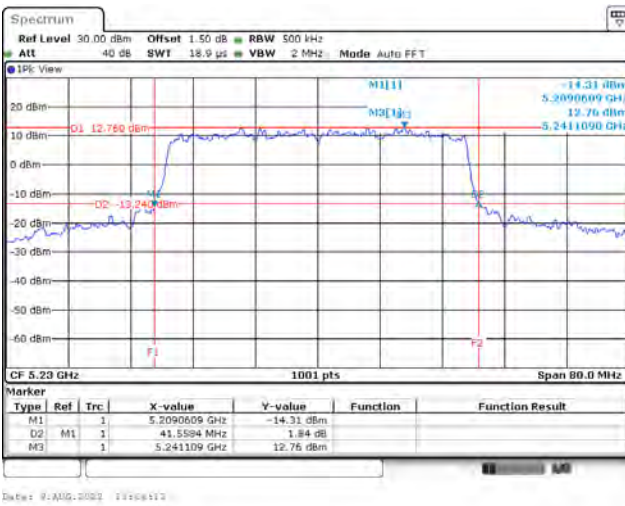
802.11a / Ant. 1 / 5220 MHz (U-NII-1)



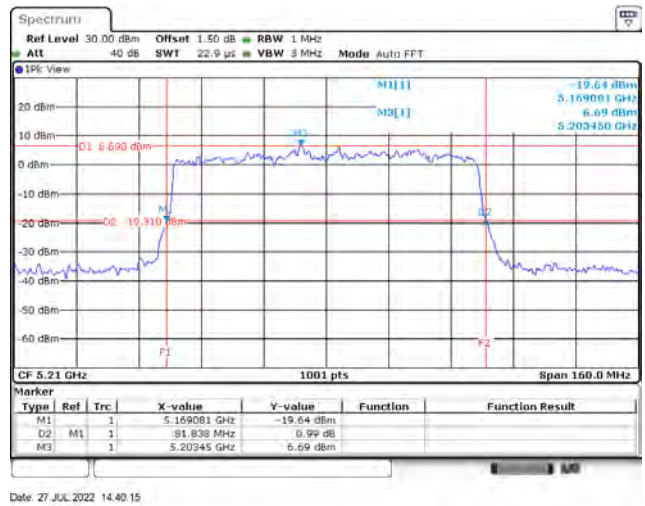
802.11ax (20 MHz) / Ant. 1 / 5220 MHz (U-NII-1)



802.11ax (40 MHz) / Ant. 1 / 5230 MHz (U-NII-1)



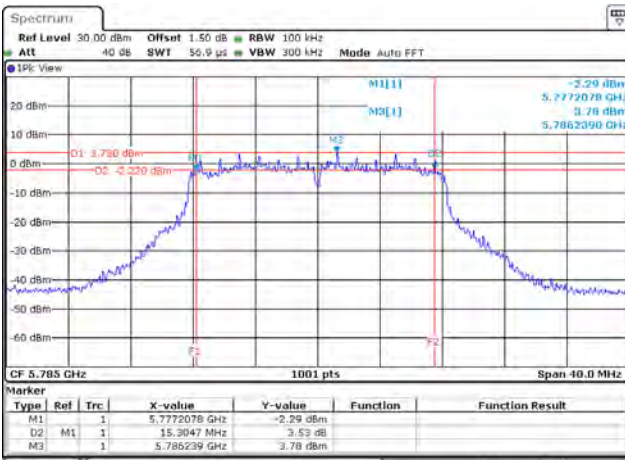
802.11ax (80 MHz) / Ant. 0 / 5210 MHz (U-NII-1)



For DTS Bandwidth:

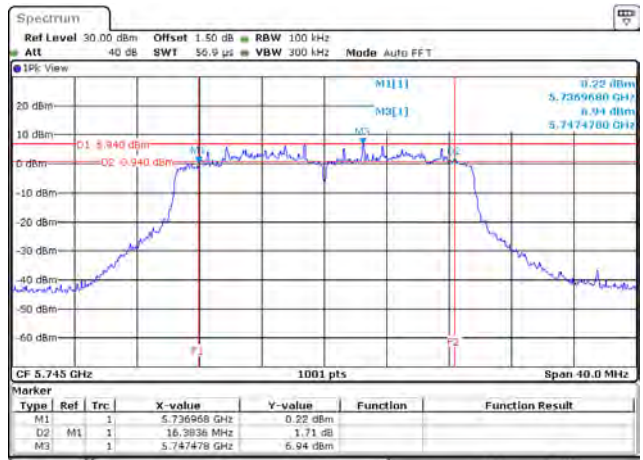
Spectrum plot of worst value

802.11a / Ant. 0 / 5785 MHz



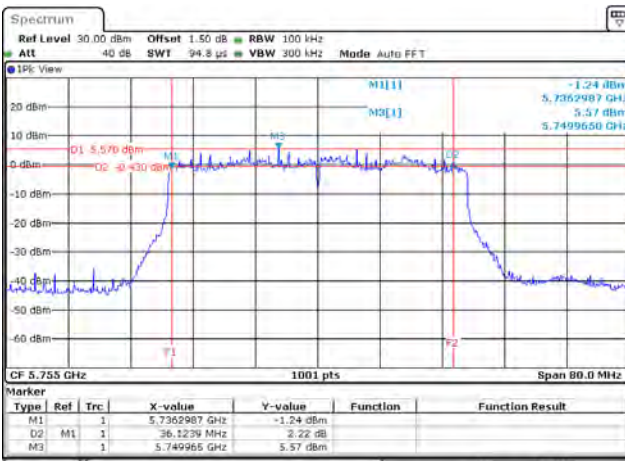
Date: 27 JUL 2022 16:09:50

802.11ax (20 MHz) / Ant. 0 / 5745 MHz



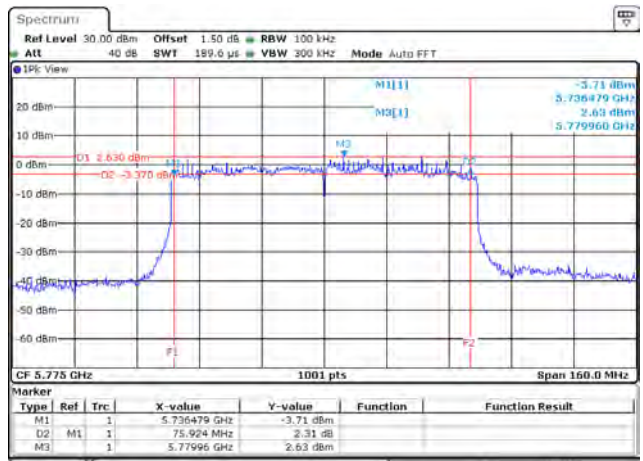
Date: 9 AUG 2022 16:59:22

802.11ax (40 MHz) / Ant. 0 / 5755 MHz



Date: 9 AUG 2022 16:59:13

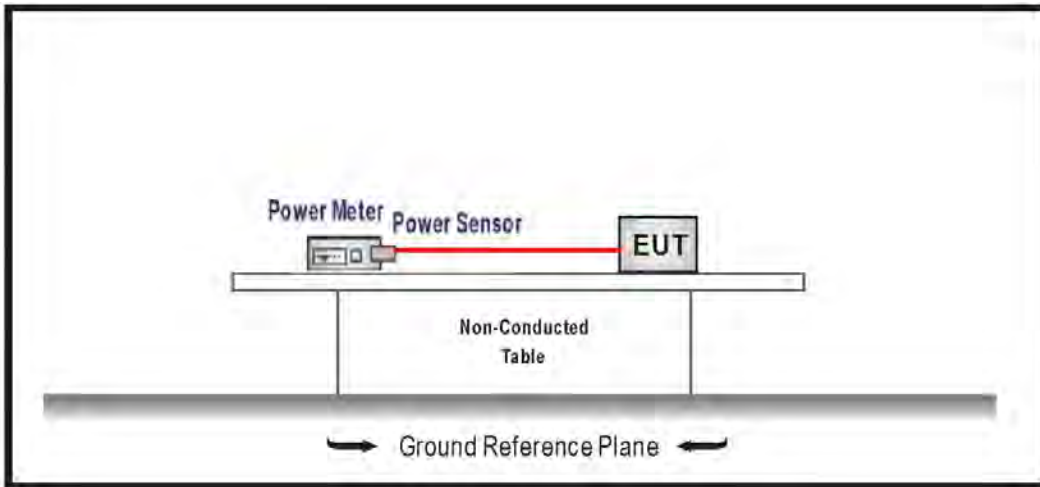
802.11ax (80 MHz) / Ant. 0 / 5775 MHz



Date: 27 JUL 2022 14:49:57

5. Maximum Conducted Output Power

5.1. Test Setup



5.2. Test Limit

1. For an outdoor access point and 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. 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. 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 $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. 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 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. 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.

5.3. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to U-NII test procedure of 789033 D02 V02r01 for compliance to FCC CFR Title 47 Part 15 Subpart E.

5.4. Test Specification

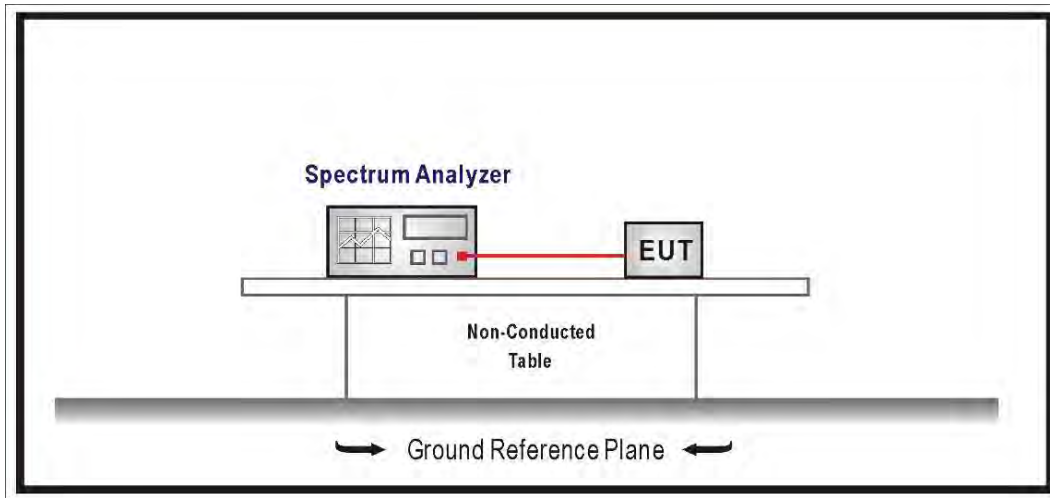
According to FCC CFR Title 47 Part 15 Subpart E.

5.5. Test Result of Maximum Conducted Output Power

Modulation	Channel	Frequency (MHz)	Maximum Conducted Output Power (dBm)			Limit (dBm)	Result
			Ant. 0	Ant. 1	Total		
802.11a	36	5180	15.68	15.87	18.79	≤ 30.00	Pass
	44	5220	15.65	15.81	18.74	≤ 30.00	Pass
	48	5240	15.61	15.88	18.76	≤ 30.00	Pass
	149	5745	15.56	15.83	18.71	≤ 30.00	Pass
	157	5785	15.19	15.34	18.28	≤ 30.00	Pass
	165	5825	15.16	15.26	18.22	≤ 30.00	Pass
802.11n (20 MHz)	36	5180	15.55	15.68	18.63	≤ 30.00	Pass
	44	5220	15.51	15.77	18.65	≤ 30.00	Pass
	48	5240	15.58	15.31	18.46	≤ 30.00	Pass
	149	5745	15.41	15.85	18.65	≤ 30.00	Pass
	157	5785	15.38	15.72	18.56	≤ 30.00	Pass
	165	5825	15.78	15.86	18.83	≤ 30.00	Pass
802.11ac (20 MHz)	36	5180	15.70	15.75	18.74	≤ 30.00	Pass
	44	5220	15.77	15.68	18.74	≤ 30.00	Pass
	48	5240	15.60	15.33	18.48	≤ 30.00	Pass
	149	5745	15.48	15.91	18.71	≤ 30.00	Pass
	157	5785	15.44	15.73	18.60	≤ 30.00	Pass
	165	5825	15.83	15.91	18.88	≤ 30.00	Pass
802.11ax (20 MHz)	36	5180	15.76	15.78	18.78	≤ 30.00	Pass
	44	5220	15.81	15.71	18.77	≤ 30.00	Pass
	48	5240	15.61	15.35	18.49	≤ 30.00	Pass
	149	5745	15.52	15.95	18.75	≤ 30.00	Pass
	157	5785	15.45	15.75	18.61	≤ 30.00	Pass
	165	5825	15.86	15.94	18.91	≤ 30.00	Pass
802.11n (40 MHz)	38	5190	15.57	15.48	18.54	≤ 30.00	Pass
	46	5230	15.51	15.40	18.47	≤ 30.00	Pass
	151	5755	15.16	15.65	18.42	≤ 30.00	Pass
	159	5795	15.45	15.62	18.55	≤ 30.00	Pass
802.11ac (40 MHz)	38	5190	15.60	15.53	18.58	≤ 30.00	Pass
	46	5230	15.58	15.30	18.45	≤ 30.00	Pass
	151	5755	15.22	15.61	18.43	≤ 30.00	Pass
	159	5795	15.52	15.69	18.62	≤ 30.00	Pass
802.11ax (40 MHz)	38	5190	15.63	15.60	18.63	≤ 30.00	Pass
	46	5230	15.61	15.33	18.48	≤ 30.00	Pass
	151	5755	15.25	15.62	18.45	≤ 30.00	Pass
	159	5795	15.57	15.73	18.66	≤ 30.00	Pass
802.11ac (80 MHz)	42	5210	14.81	14.71	17.77	≤ 30.00	Pass
	155	5775	15.80	15.88	18.85	≤ 30.00	Pass
802.11ax (80 MHz)	42	5210	14.83	14.73	17.79	≤ 30.00	Pass
	155	5775	15.85	15.91	18.89	≤ 30.00	Pass

6. Maximum Power Spectral Density

6.1. Test Setup



6.2. Test Limit

1. For the band 5.15 ~ 5.25 GHz, the peak power spectral density shall not exceed 17 dBm in any 1 MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For client devices in the 5.15 ~ 5.25 GHz band, 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 5.25 ~ 5.35 GHz ,5470 ~ 5600 MHz and 5650 ~ 5725 MHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
4. For the band 5.725 ~ 5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

6.3. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to U-NII test procedure of KDB 789033.D02 V02r01 for compliance to FCC CFR Title 47 Part 15 Subpart E requirements.

6.4. Test Specification

According to FCC CFR Title 47 Part 15 Subpart E.

6.5. Test Result of Maximum Power Spectral Density

Modulation	Channel	Frequency (MHz)	Power Spectral Density (dBm)			Limit (dBm)	Result
			Ant. 0	Ant. 1	Total		
802.11a	36	5180	3.720	3.380	6.972	≤ 15.89	Pass
	44	5220	3.490	3.270	6.800	≤ 15.89	Pass
	48	5240	3.240	3.420	6.750	≤ 15.89	Pass
	149	5745	0.920	1.330	4.548	≤ 28.26	Pass
	157	5785	0.570	0.370	3.890	≤ 28.26	Pass
	165	5825	0.570	0.420	3.914	≤ 28.26	Pass
802.11ax (20 MHz)	36	5180	3.130	3.140	6.410	≤ 15.89	Pass
	44	5220	3.020	2.880	6.225	≤ 15.89	Pass
	48	5240	2.750	2.860	6.080	≤ 15.89	Pass
	149	5745	1.020	0.770	4.171	≤ 28.26	Pass
	157	5785	0.390	0.490	3.715	≤ 28.26	Pass
	165	5825	0.830	0.680	4.030	≤ 28.26	Pass
802.11ax (40 MHz)	38	5190	0.690	0.430	3.775	≤ 15.89	Pass
	46	5230	-0.470	-0.780	2.591	≤ 15.89	Pass
	151	5755	-2.570	-2.600	0.628	≤ 28.26	Pass
	159	5795	-2.320	-2.250	0.928	≤ 28.26	Pass
802.11ax (80 MHz)	42	5210	-2.260	-3.050	0.637	≤ 15.89	Pass
	155	5775	-4.840	-4.800	-1.545	≤ 28.26	Pass

Note:

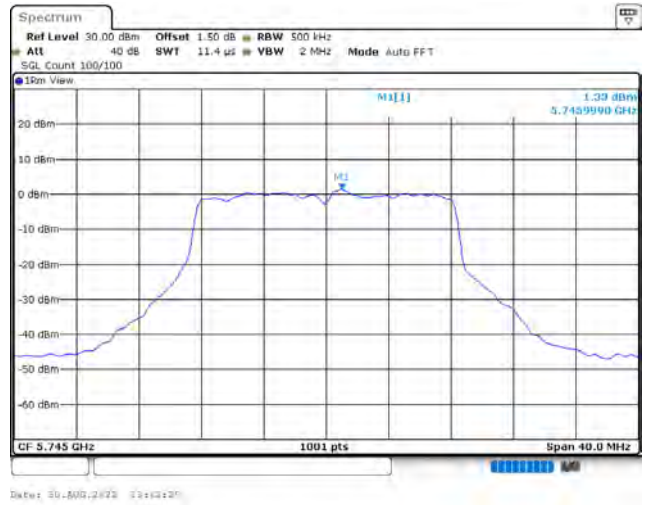
- Total power spectral density = power spectral density + duty factor, and the duty factor refer to section 1.10.
- U-NII-1 Directional Gain = $10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{Ant}] = 7.11 \text{dBi} > 6 \text{dBi}$, so limit = $17 - (7.11 - 6) = 15.89 \text{dBm}$.
- U-NII-3 Directional Gain = $10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{Ant}] = 7.74 \text{dBi} > 6 \text{dBi}$, so limit = $30 - (7.74 - 6) = 28.26 \text{dBm}$.

Spectrum plot of worst value

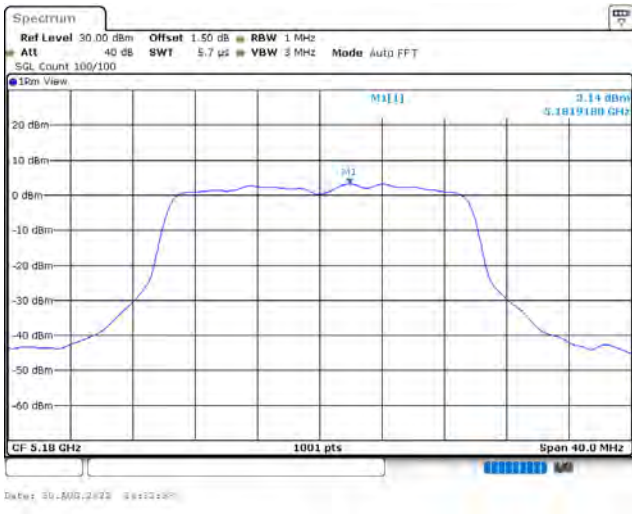
802.11a / Ant. 0 / 5180 MHz (U-NII-1)



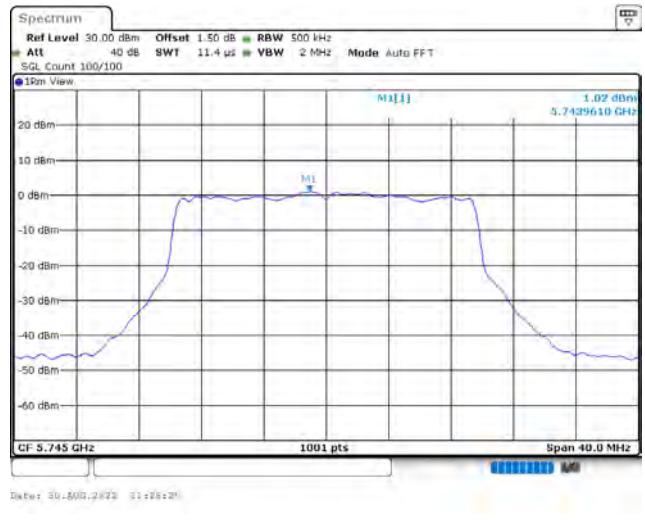
802.11a / Ant. 1 / 5745 MHz (U-NII-3)



802.11ax (20 MHz) / Ant. 1 / 5180 MHz (U-NII-1)

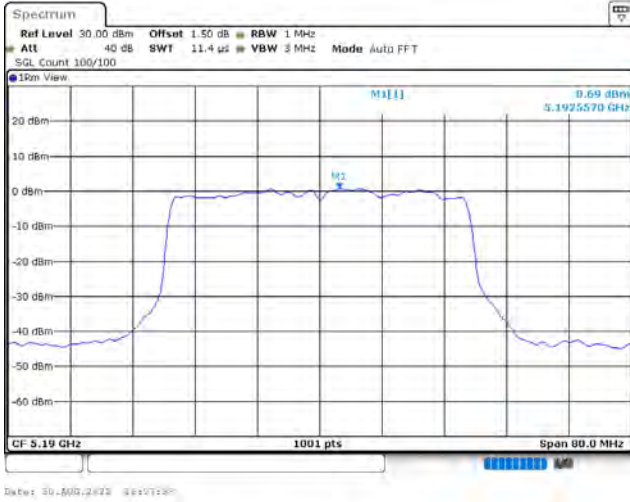


802.11ax (20 MHz) / Ant. 0 / 5745 MHz (U-NII-3)

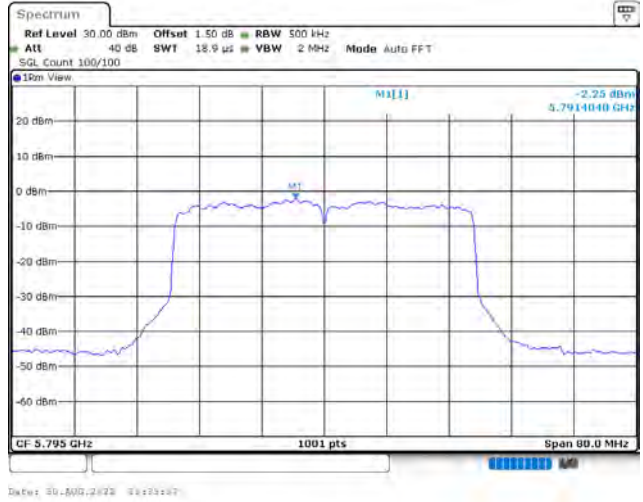


Spectrum plot of worst value

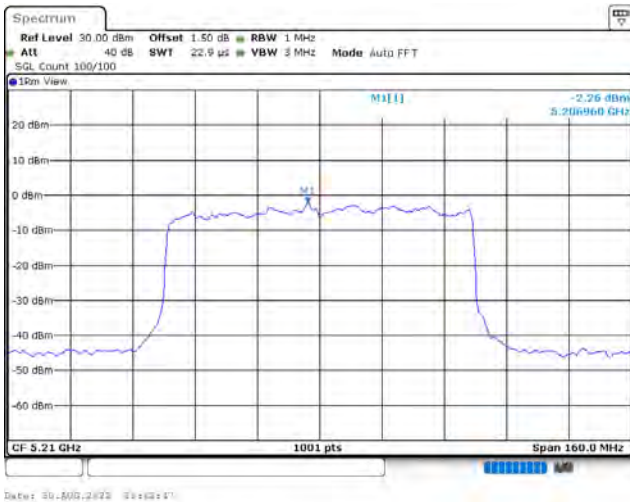
802.11ax (40 MHz) / Ant. 0 / 5190 MHz (U-NII-1)



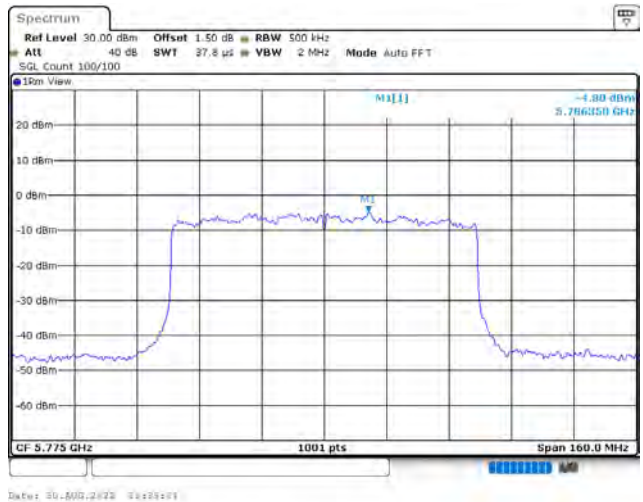
802.11ax (40 MHz) / Ant. 1 / 5795 MHz (U-NII-3)



802.11ax (80 MHz) / Ant. 0 / 5210 MHz (U-NII-1)



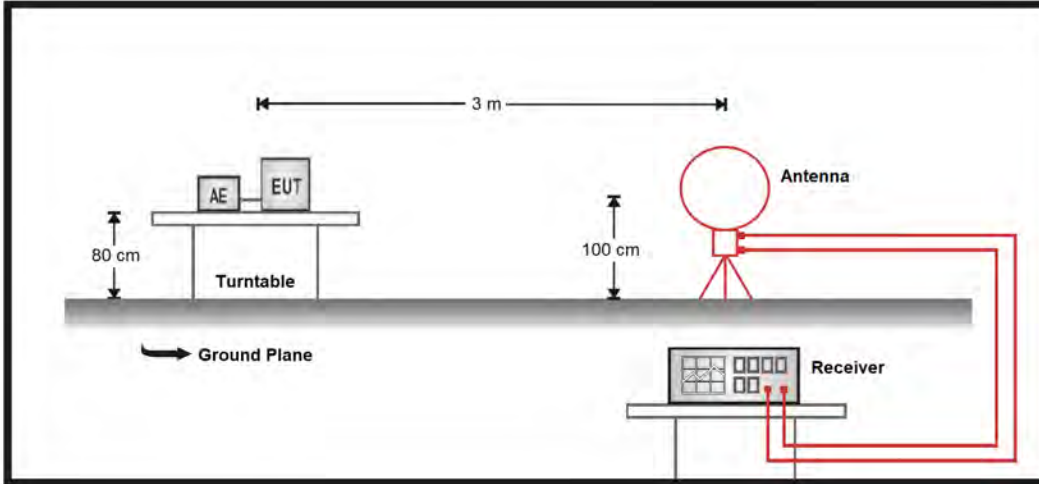
802.11ax (80 MHz) / Ant. 1 / 5775 MHz (U-NII-3)



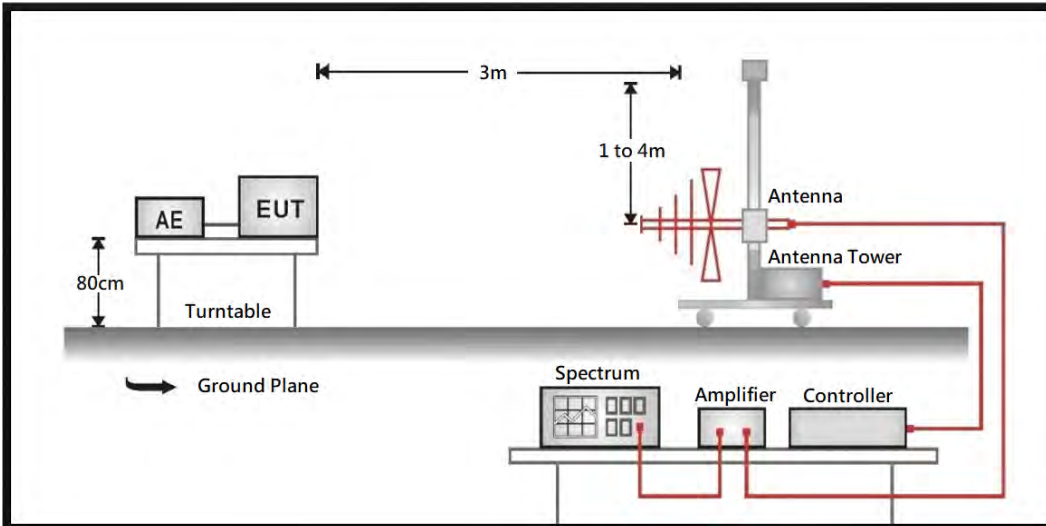
7. Radiated Emission

7.1. Test Setup

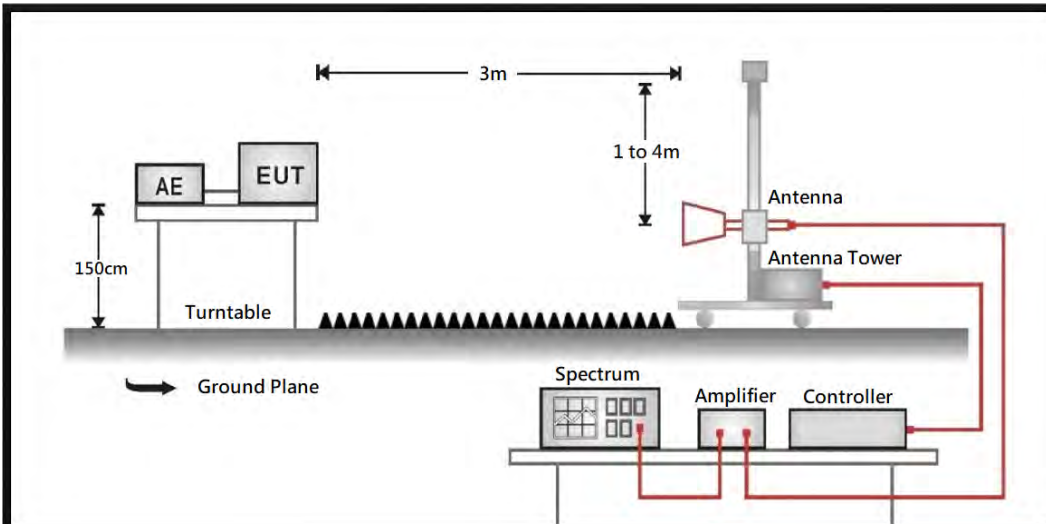
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz



7.2. Test Limit

General Radiated Emission Test Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 30 dB below the level of the fundamental or to the general radiated emission limit in paragraph 15.209, whichever is the lesser attenuation.

Frequency (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	20 log (2400/F(kHz))	300
0.490 – 1.705	24000/F(kHz)	20 log (24000/F(kHz))	30
1.705 - 30	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks:

1. Field strength (dBuV/m) = 20 log Field strength (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Unwanted Emission out of the restricted bands Test Limit

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (dBuV/m@3m)
5150 - 5250	-27	68.2
5250 - 5350	-27	68.2
5470 - 5725	-27	68.2
5725 - 5850	-27 ^{*1}	68.2 ^{*1}
	10 ^{*2}	105.2 ^{*2}
	15.6 ^{*3}	110.8 ^{*3}
	27 ^{*4}	122.2 ^{*4}

^{*1} beyond 75 MHz or more above of the band edge.

^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \text{ uV/m, where P is the eirp (Watts).}$$

7.3. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The additional latch filter below 1 GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1 GHz setting on the field strength meter is 120 kHz, above 1 GHz are 1 MHz.

The frequency range from 9 kHz to 10th harmonics and included The frequency range from the lowest oscillator frequency generated within the device up to the 10th harmonic was checked is checked.

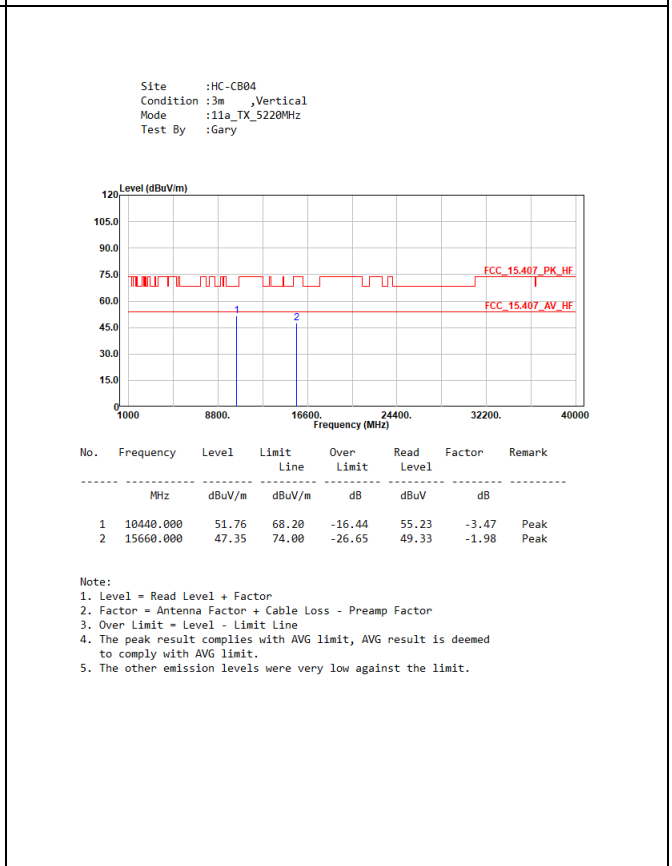
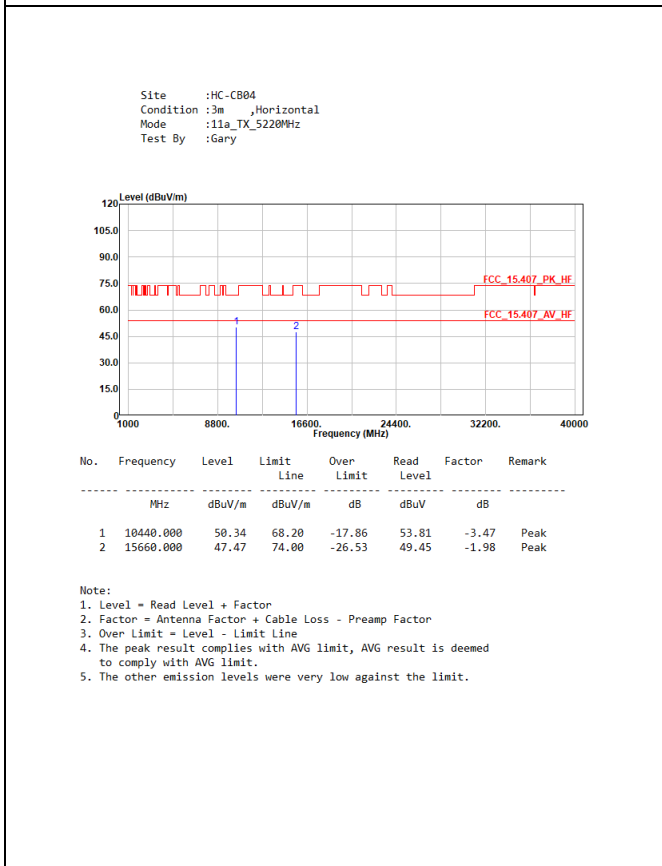
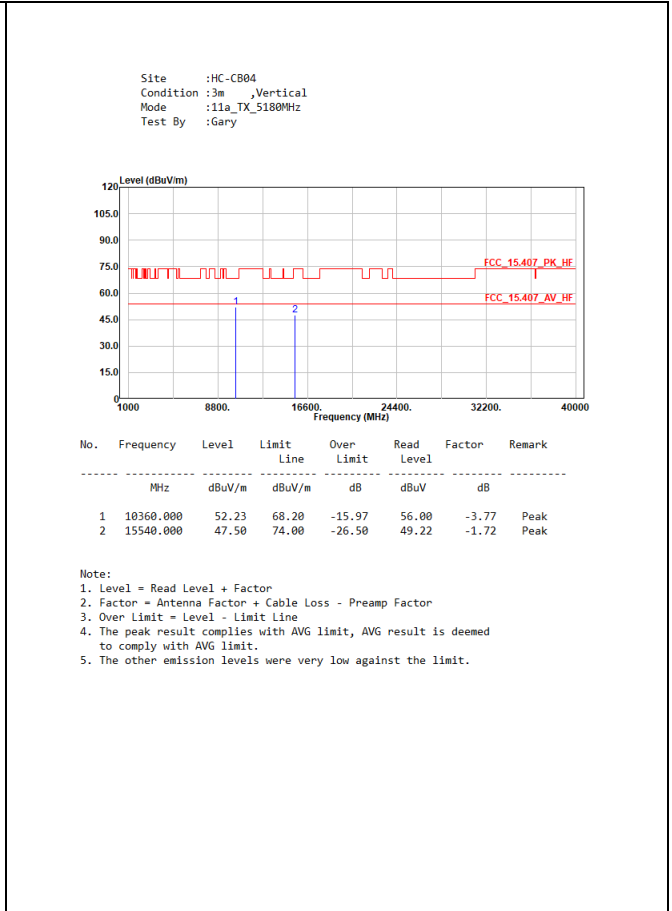
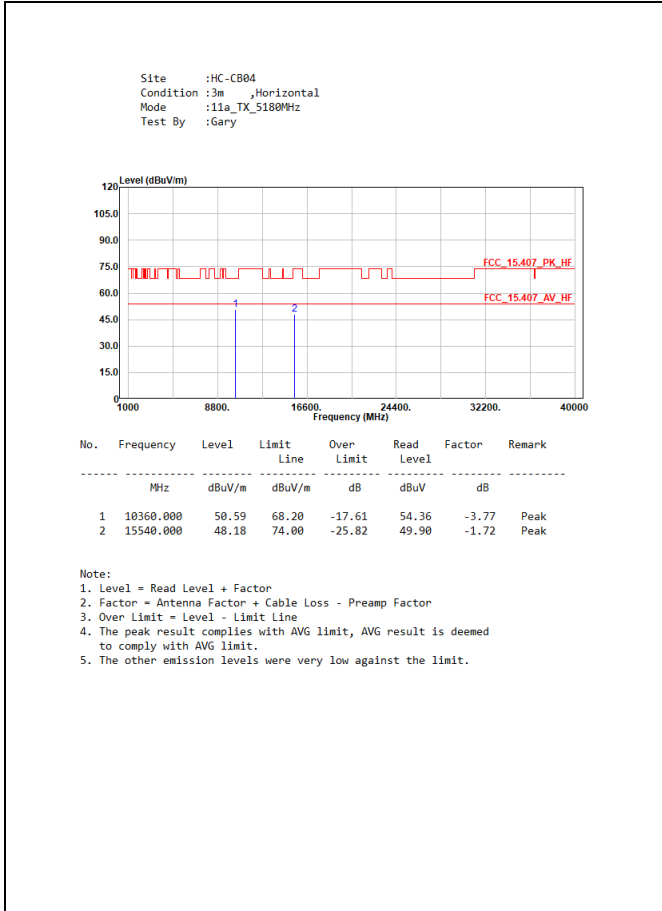
7.4. Test Specification

According to FCC CFR Title 47 Part 15 Subpart E.

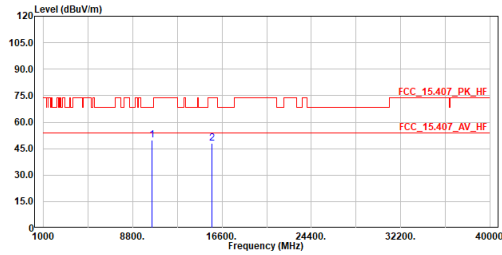
7.5. Test Result of Radiated Emissions (30 MHz ~ 1 GHz)



7.6. Test Result of Radiated Emissions (1 GHz ~ 10th Harmonic)



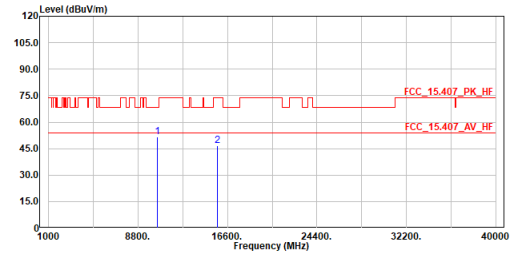
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5240MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10480.000	49.79	68.20	-18.41	53.17	-3.38	Peak
2	15720.000	47.87	74.00	-26.13	49.83	-1.96	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

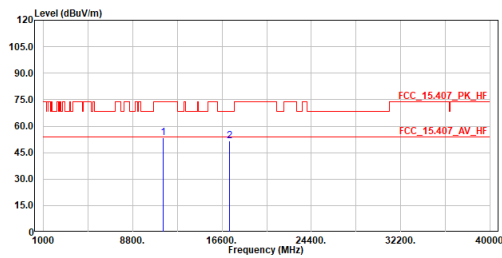
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5240MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	10480.000	51.84	68.20	-16.36	55.22	-3.38	Peak
2	15720.000	46.64	74.00	-27.36	48.60	-1.96	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

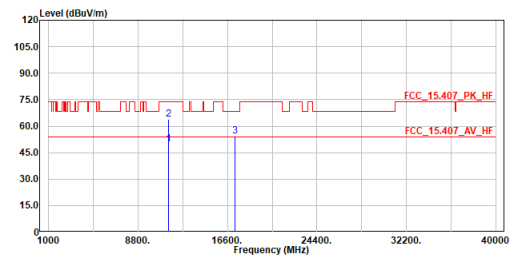
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5745MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11490.000	53.48	74.00	-20.52	54.91	-1.43	Peak
2	17235.000	51.44	68.20	-16.76	50.47	0.97	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

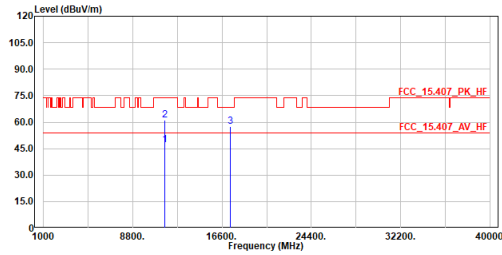
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5745MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11490.000	49.66	54.00	-4.34	51.29	-1.63	Average
2	11490.000	63.63	74.00	-10.37	65.26	-1.63	Peak
3	17235.000	54.22	68.20	-13.98	51.68	2.54	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

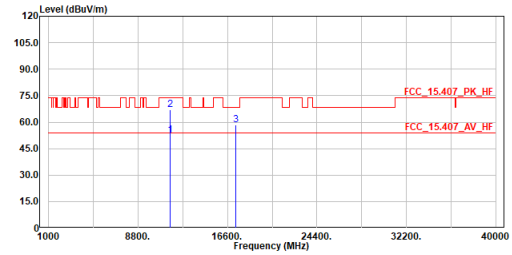
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5785MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11570.000	47.28	54.00	-6.72	46.66	0.62	Average
2	11570.000	61.09	74.00	-12.91	60.47	0.62	Peak
3	17355.000	57.58	68.20	-10.62	52.86	4.72	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

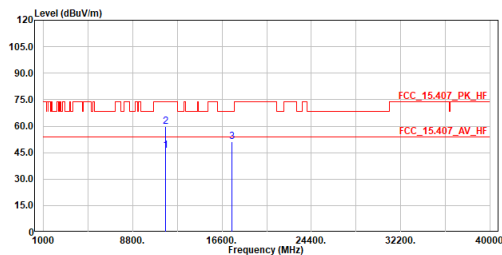
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5785MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11570.000	52.60	54.00	-1.40	51.98	0.62	Average
2	11570.000	66.94	74.00	-7.06	66.32	0.62	Peak
3	17355.000	58.24	68.20	-9.96	53.52	4.72	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

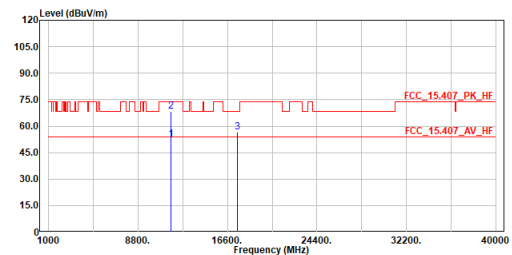
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5825MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11650.000	45.98	54.00	-8.02	48.14	-2.16	Average
2	11650.000	59.87	74.00	-14.13	62.03	-2.16	Peak
3	17475.000	51.01	68.20	-17.19	47.80	3.21	Peak

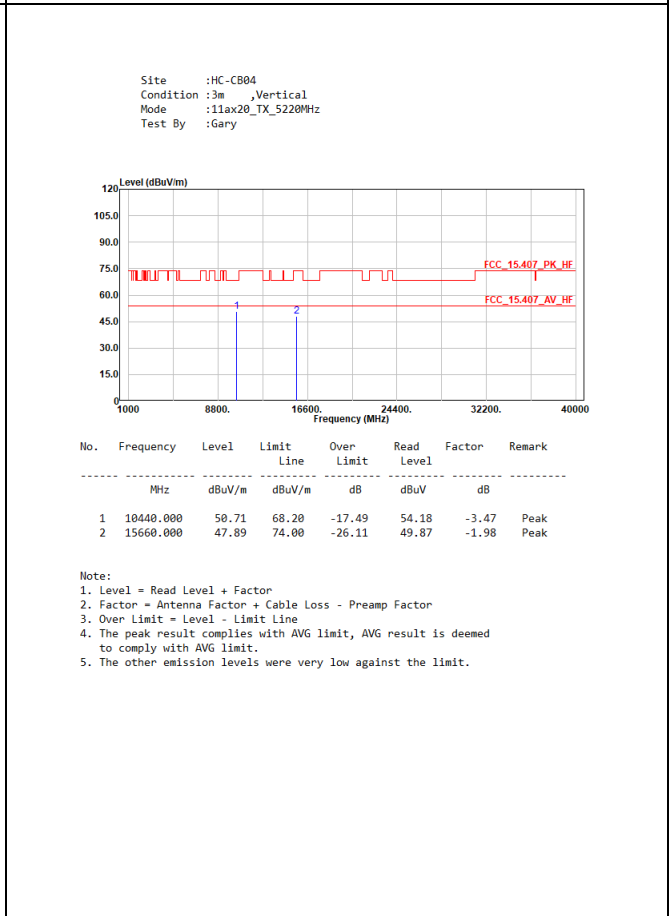
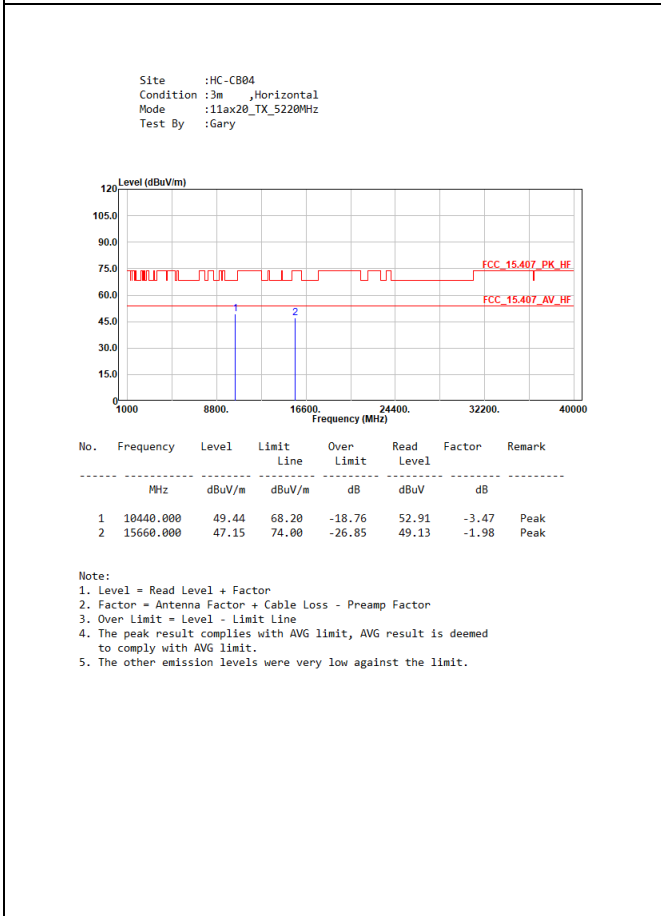
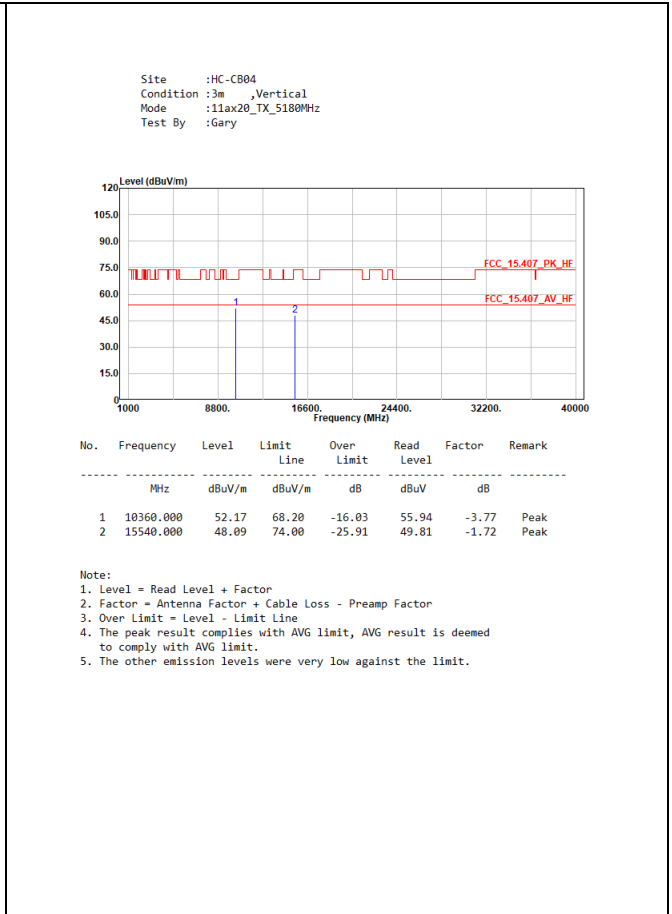
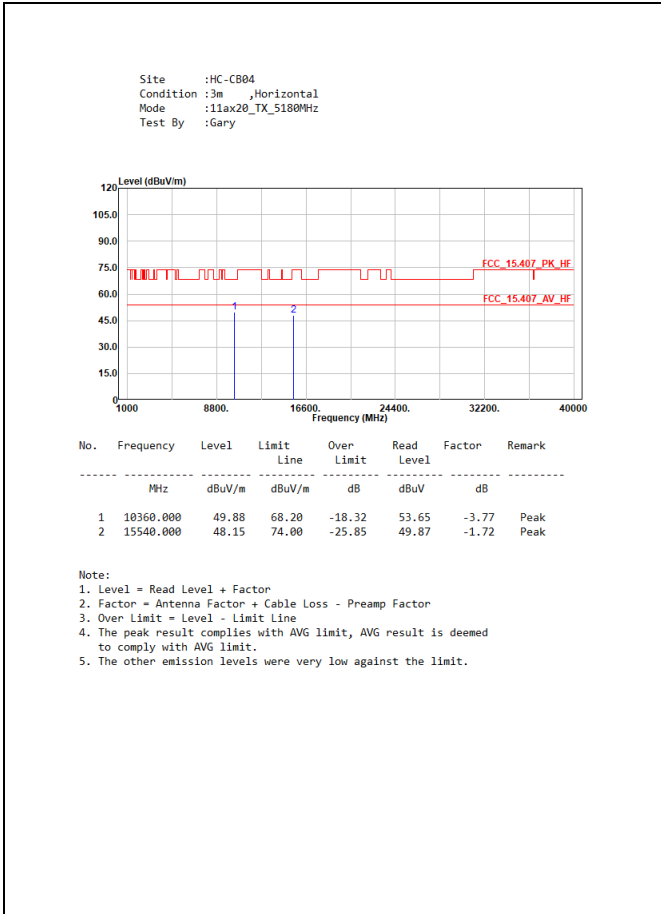
Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

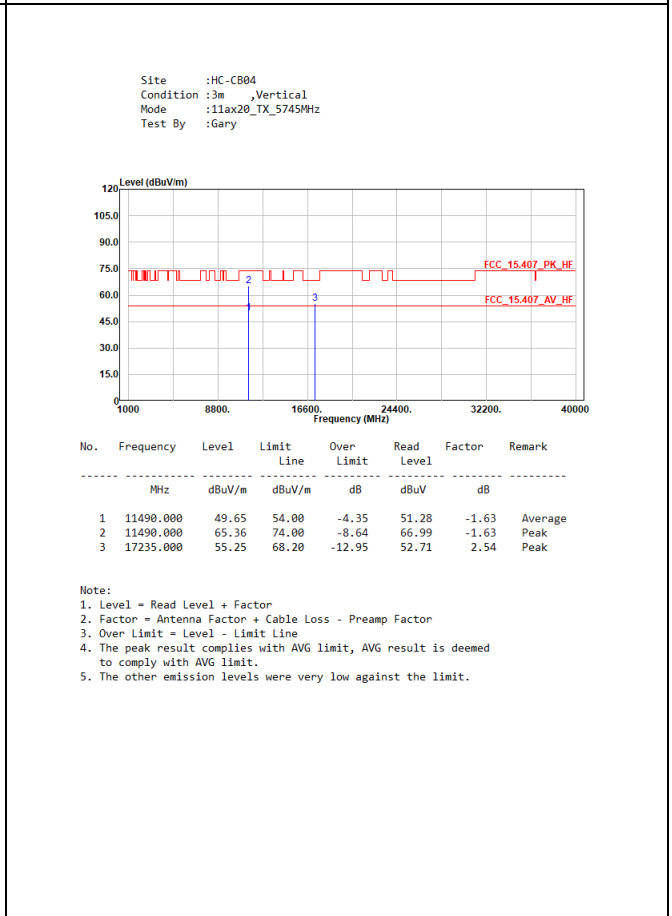
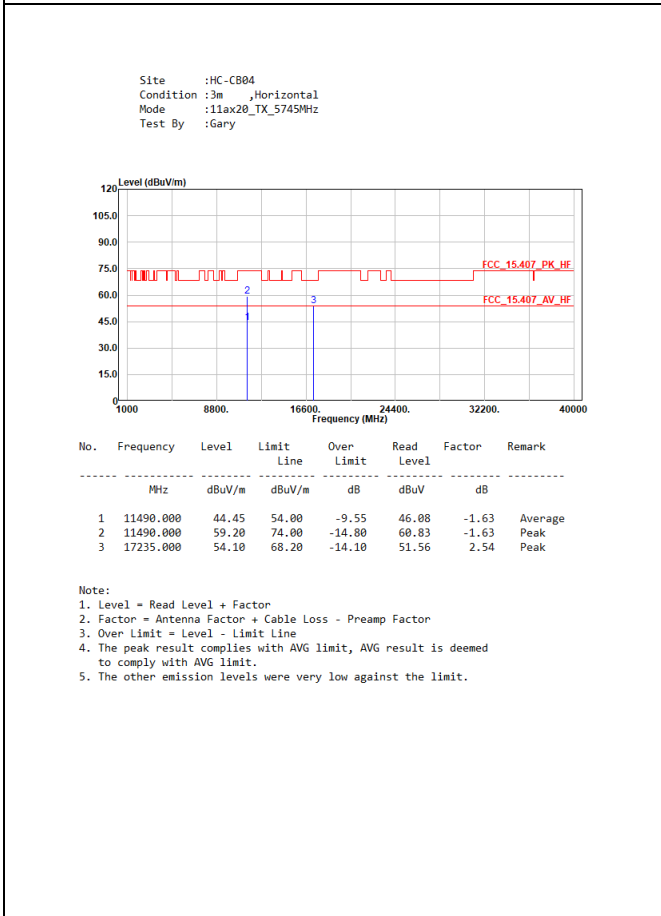
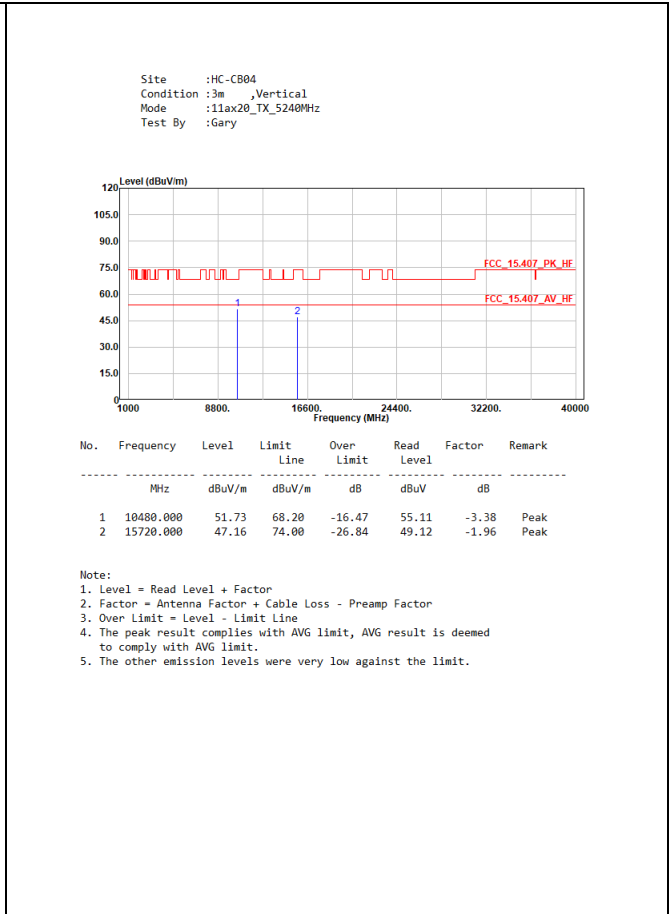
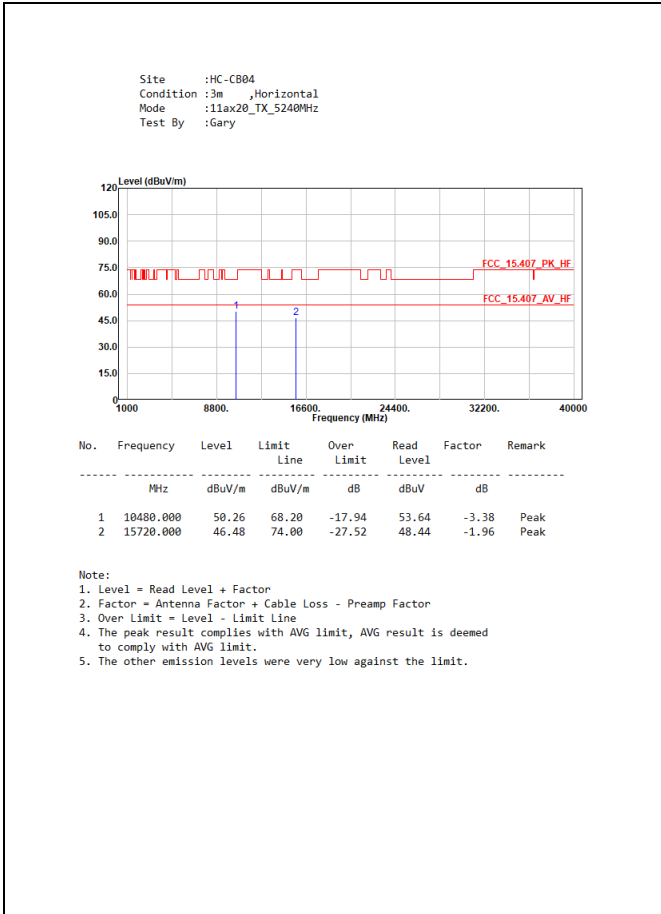
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5825MHz
 Test By :Gary

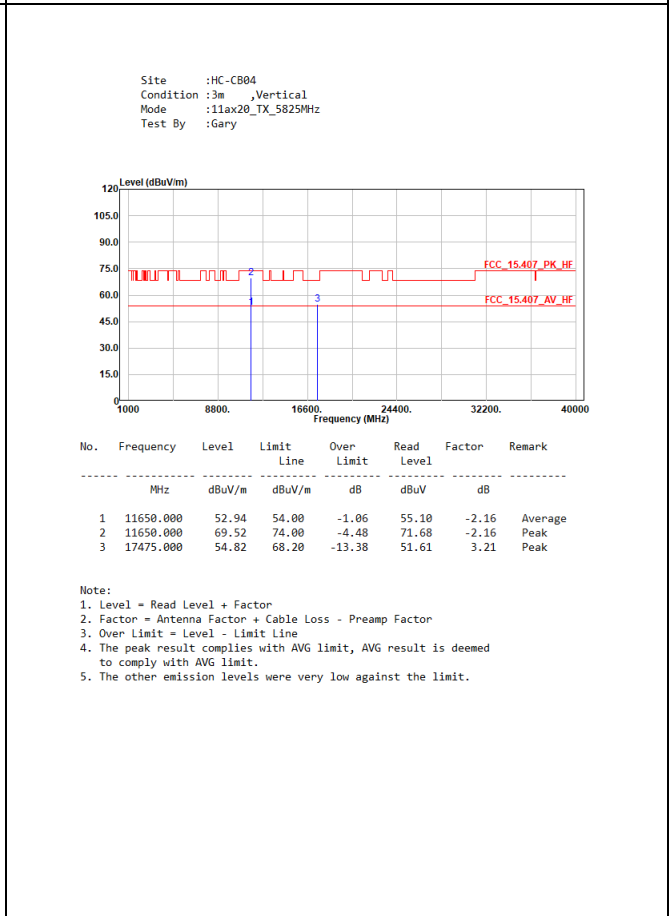
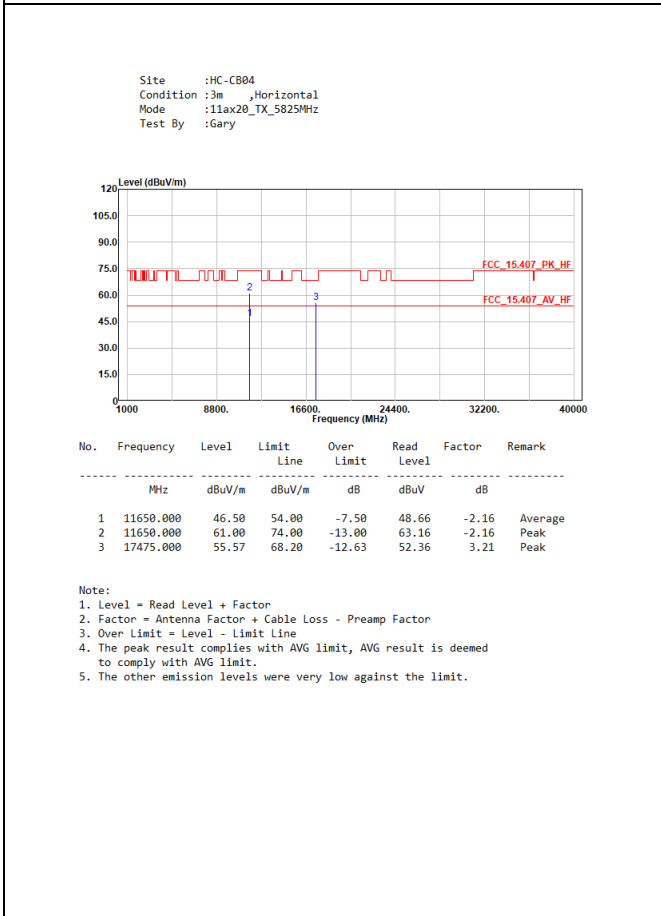
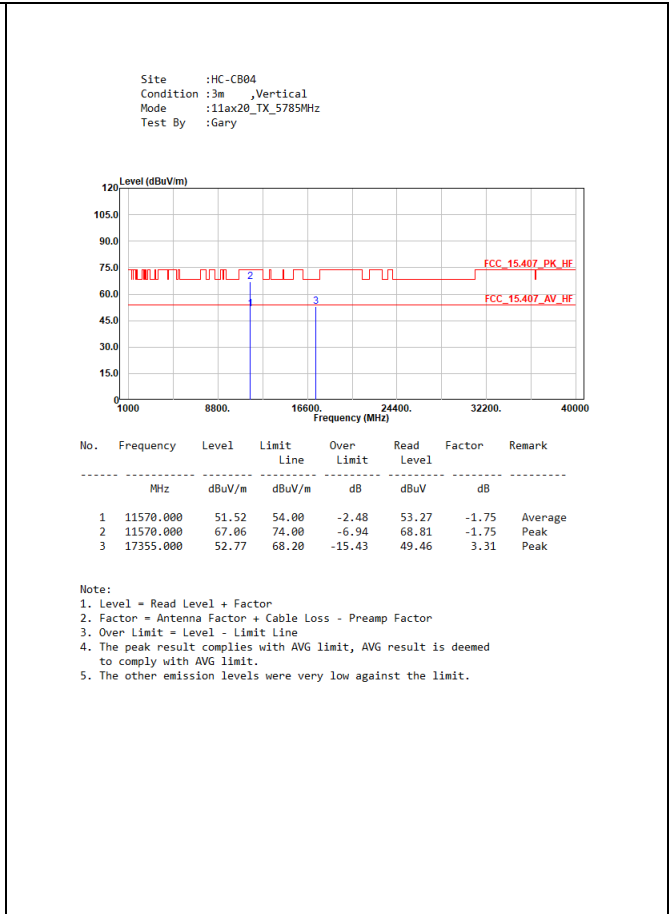
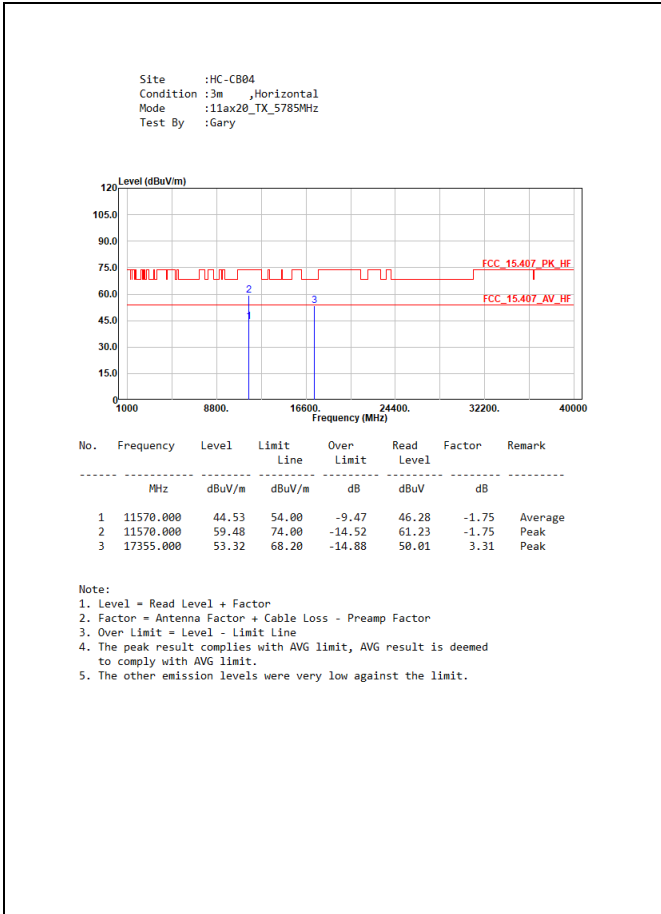


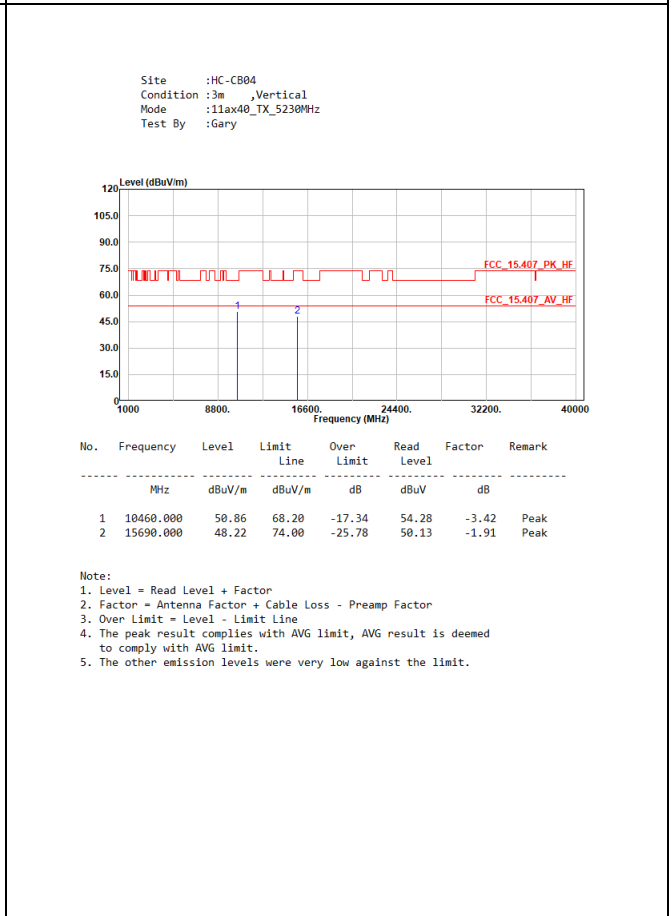
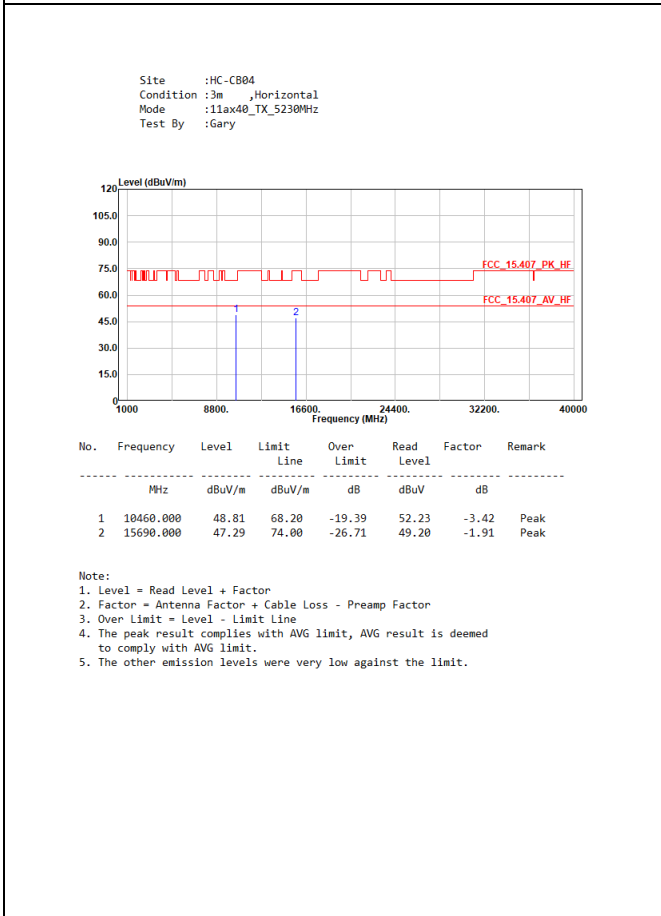
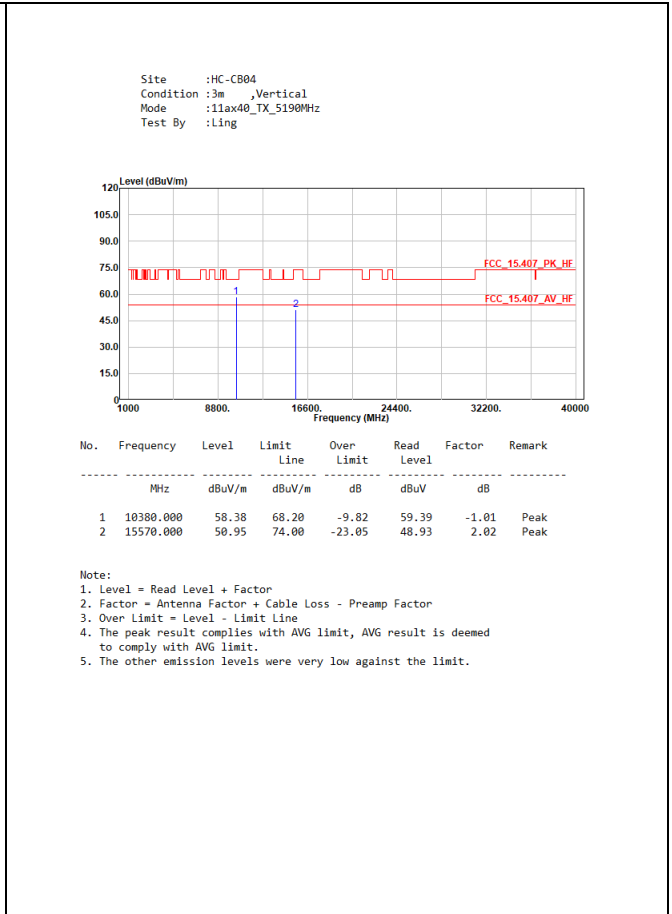
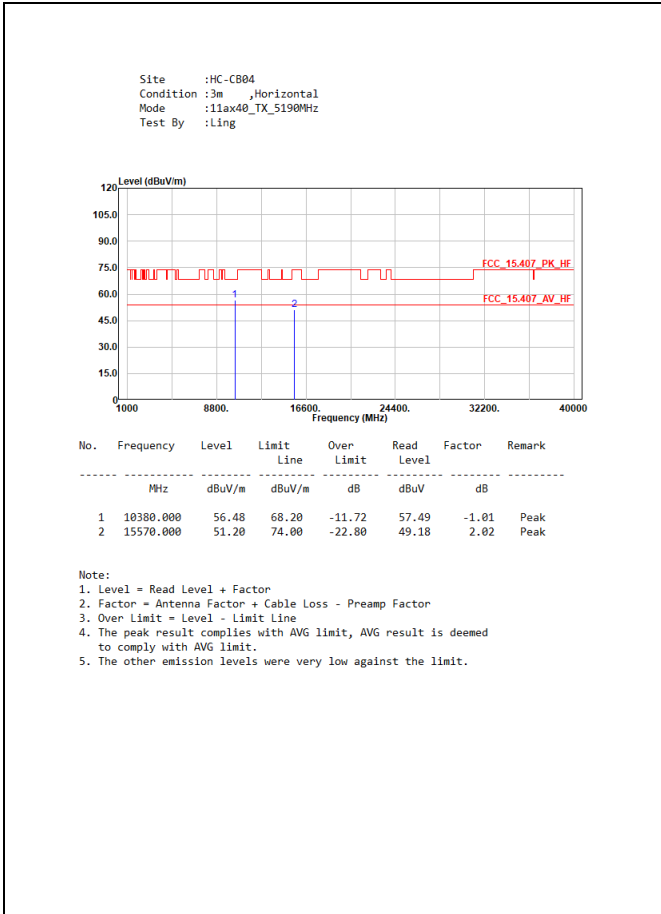
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11650.000	52.55	54.00	-1.45	54.71	-2.16	Average
2	11650.000	68.35	74.00	-5.65	70.51	-2.16	Peak
3	17475.000	56.42	68.20	-11.78	53.21	3.21	Peak

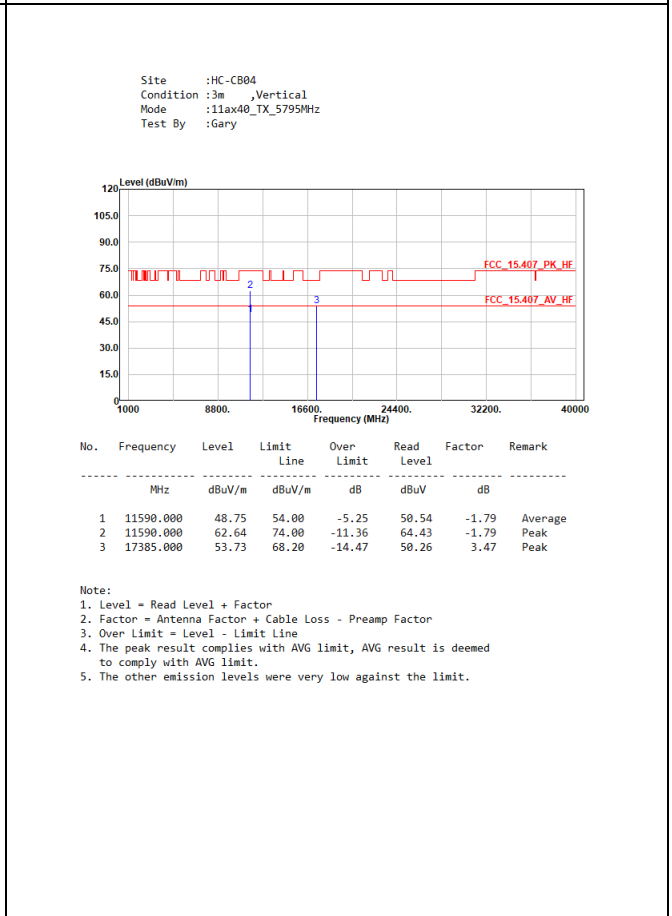
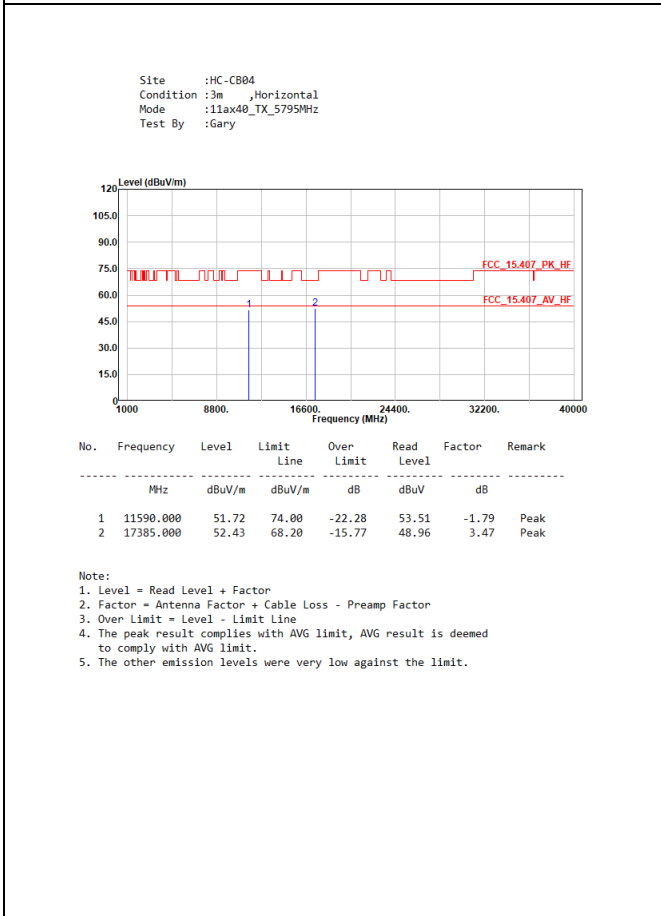
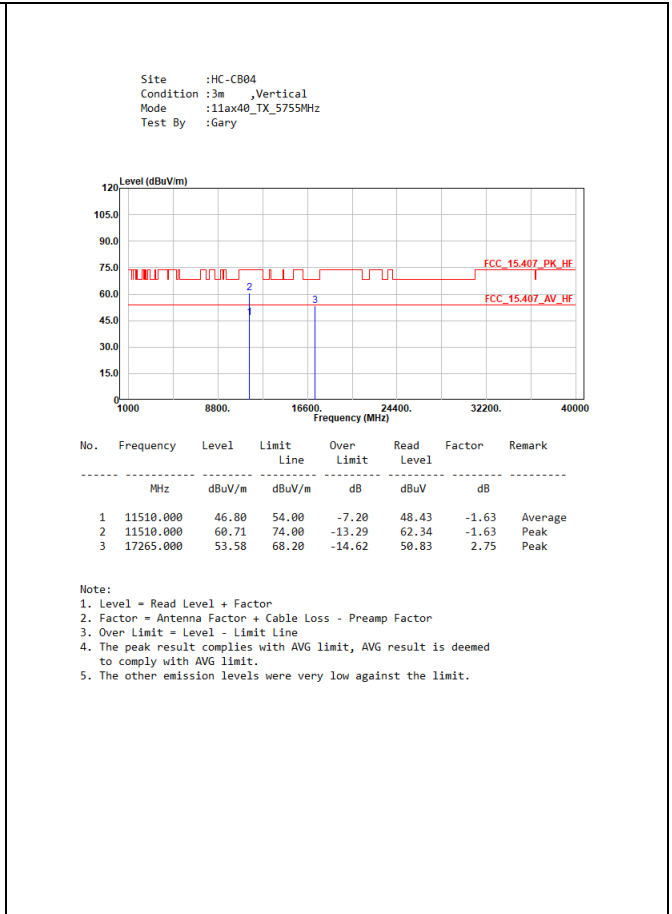
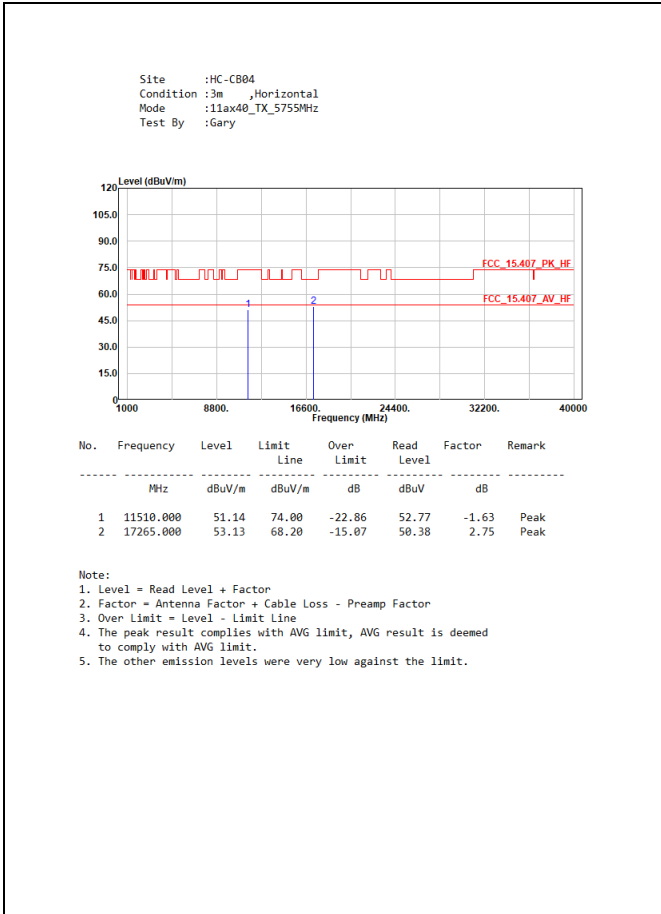
Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

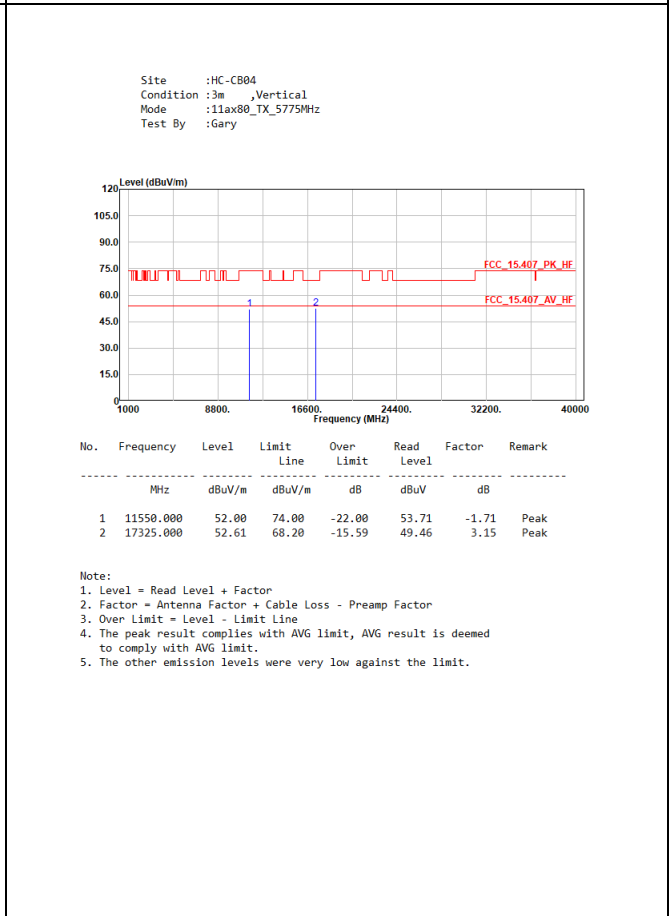
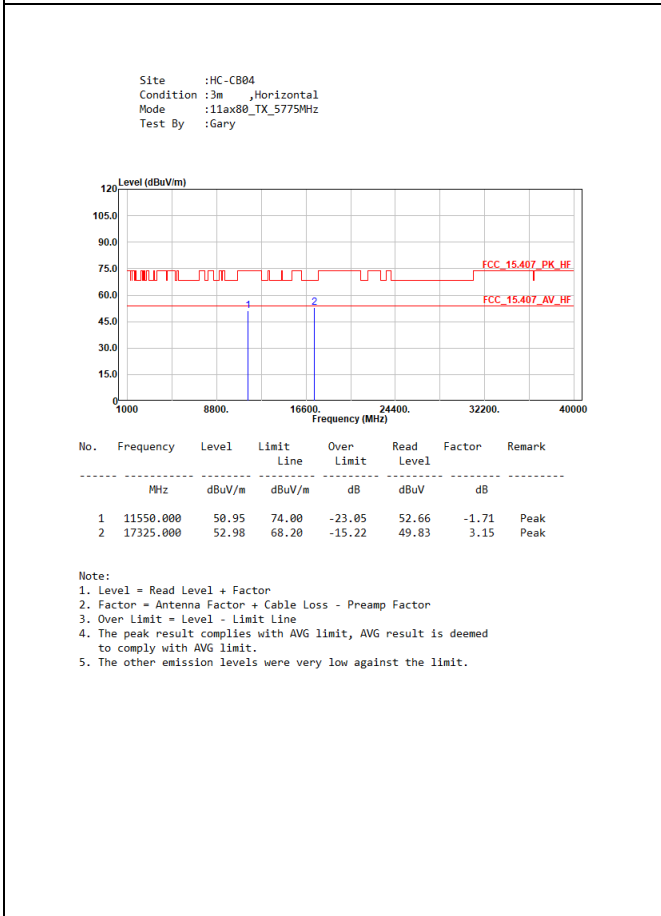
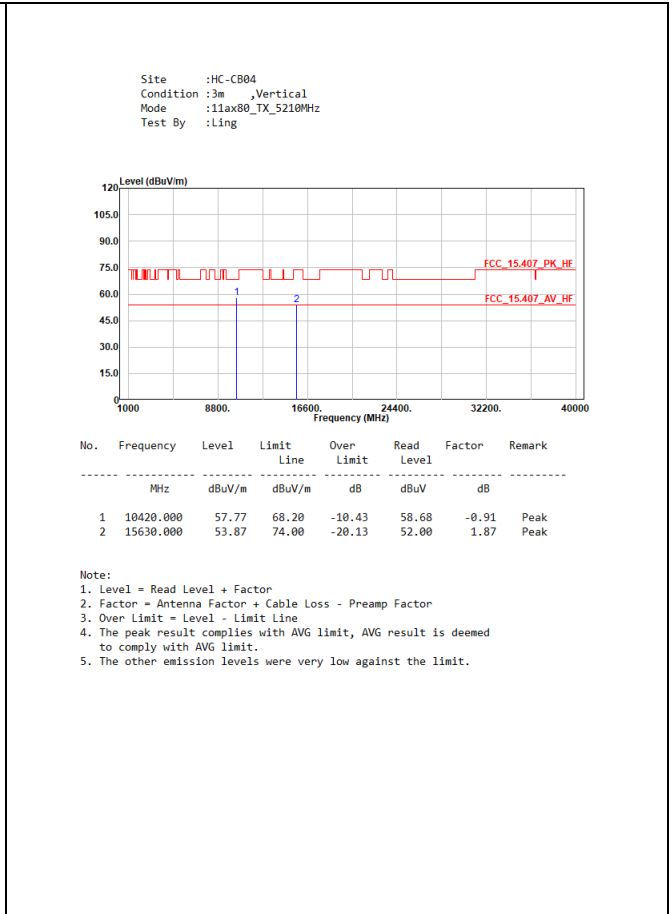
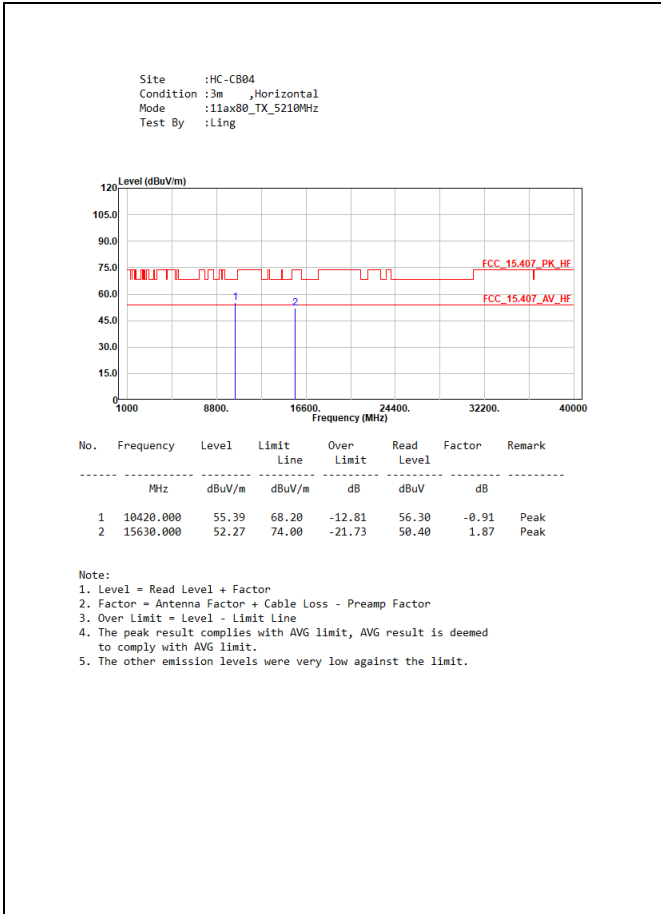






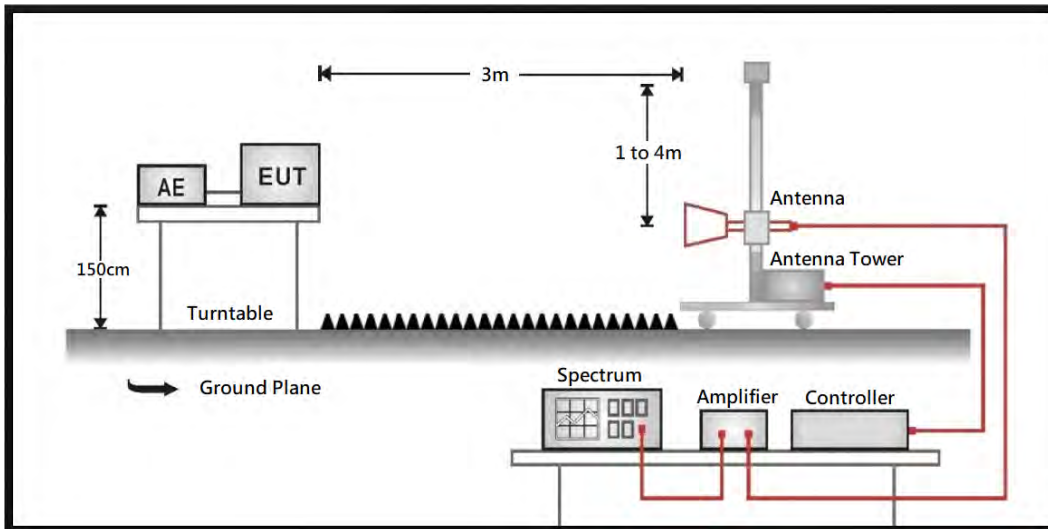






8. Radiated Emission Band Edge

8.1. Test Setup



8.2. Test Limit

General Radiated Emission Test Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 30 dB below the level of the fundamental or to the general radiated emission limit in paragraph 15.209, whichever is the lesser attenuation.

Frequency (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks:

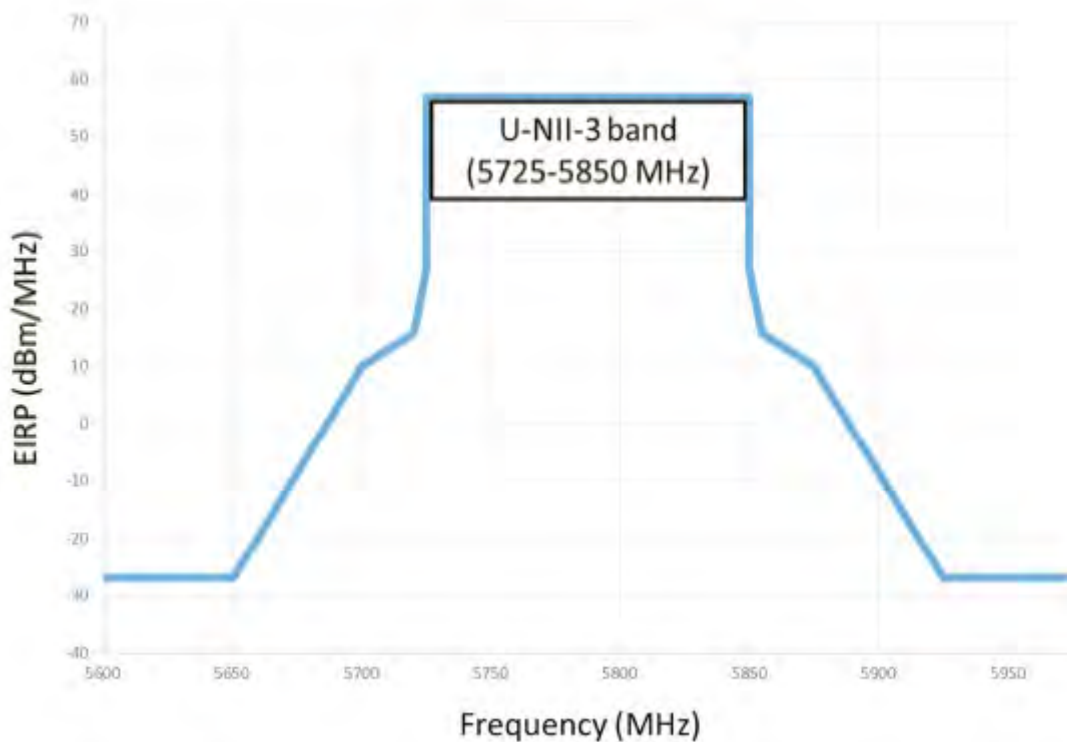
1. Field strength (dBuV/m) = 20 log Field strength (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Unwanted Emission out of the restricted bands Test Limit

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (dBuV/m@3m)
5150 - 5250	-27	68.2
5250 - 5350	-27	68.2
5470 - 5725	-27	68.2

For transmitters operating in the 5.725 ~ 5.85 GHz 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.



Remark:

1. For frequencies more than 10 MHz above or below the band edges.
2. For frequency range from the band edges to 10 MHz above or below the band edges.
3.
$$uV/m = \frac{1000000\sqrt{30 \times EIRP}}{3}$$
, RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)

8.3. Test Procedure

The EUT and its simulators are placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

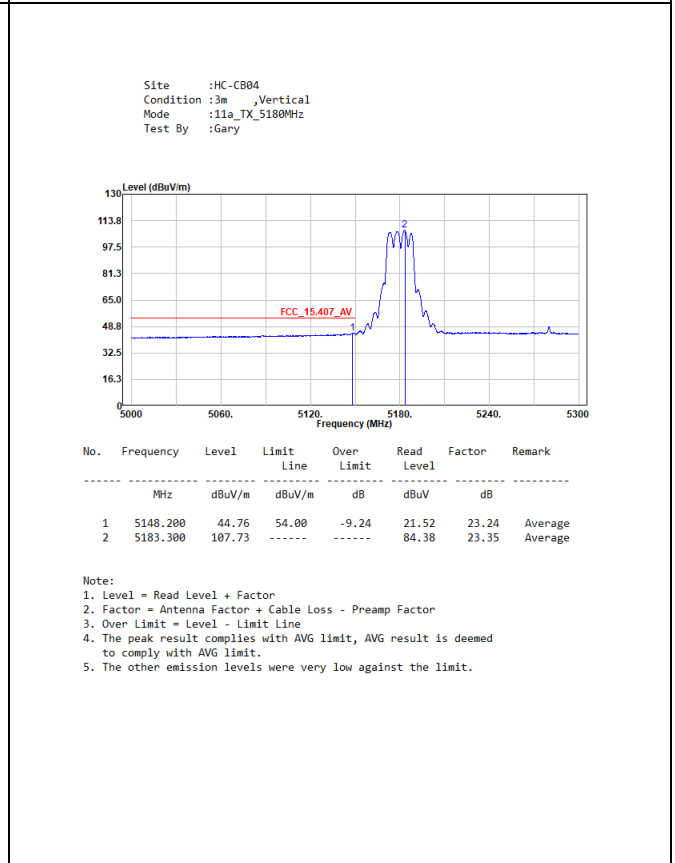
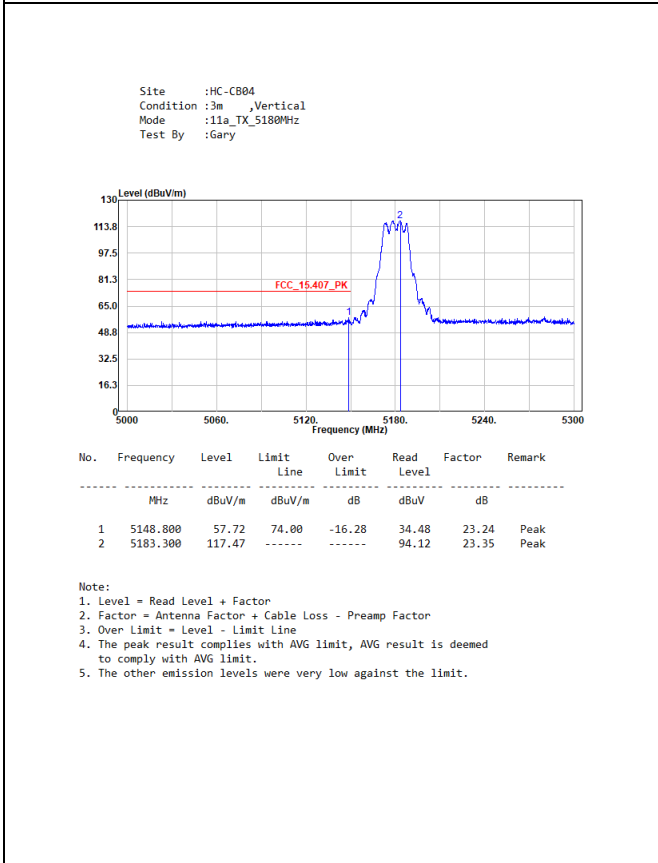
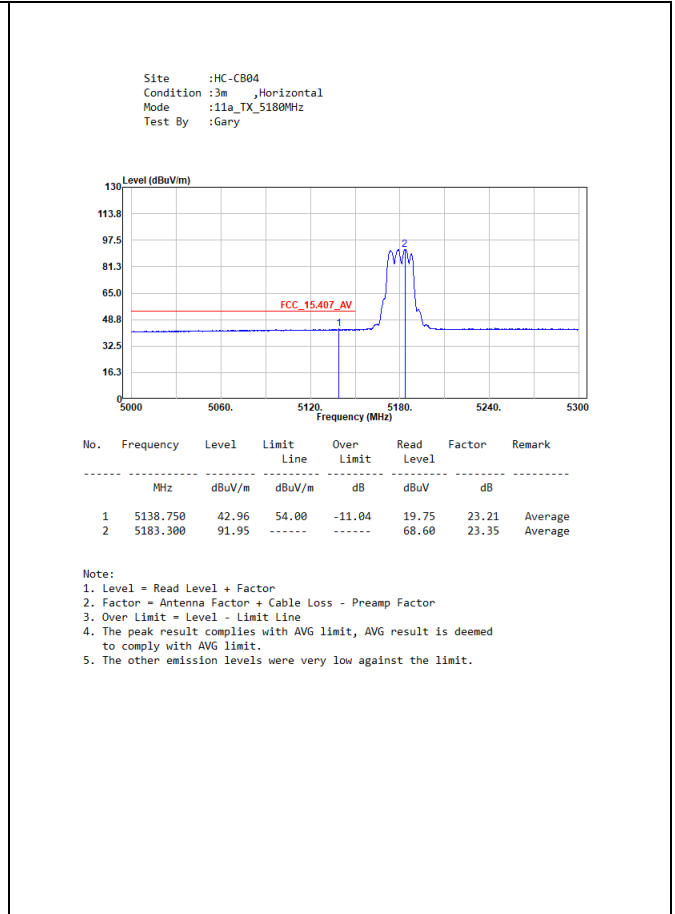
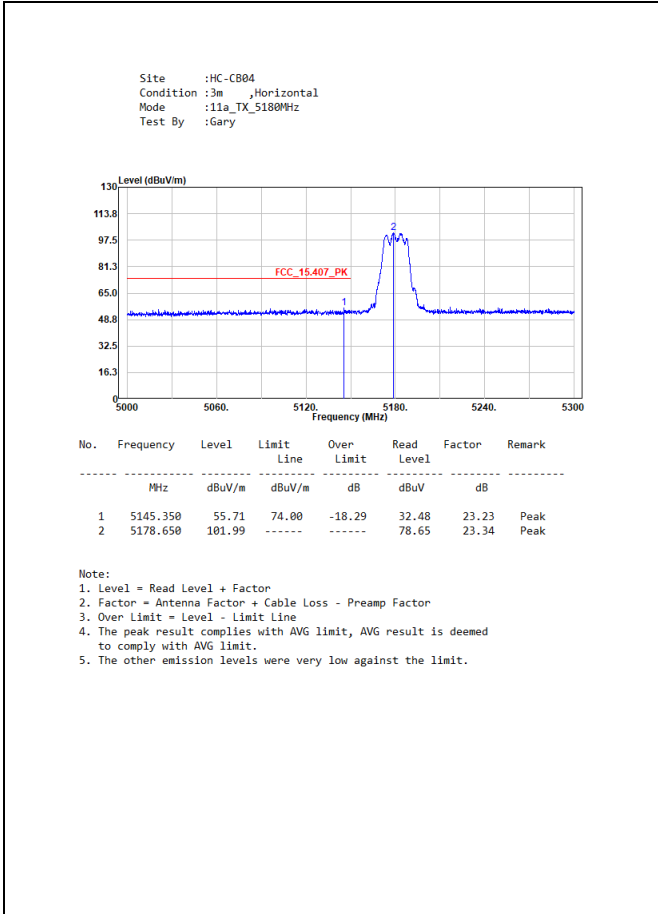
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.

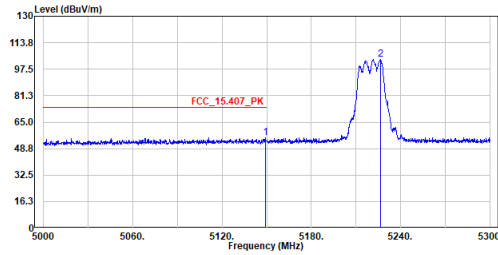
8.4. Test Specification

According to FCC CFR Title 47 Part 15 Subpart E.

8.5. Test Result of Radiated Emission Band Edge



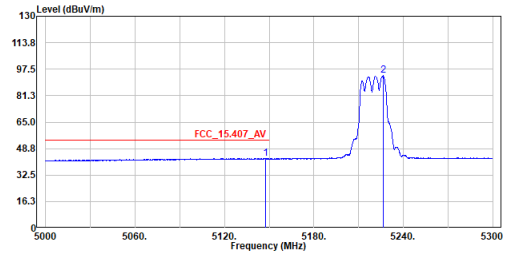
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5220MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5149.100	55.36	74.00	-18.64	32.12	23.24	Peak
2	5226.500	103.73	-----	-----	80.25	23.48	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

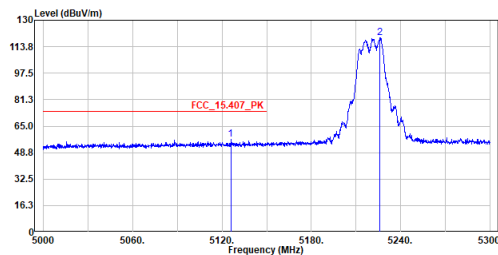
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5220MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5147.450	42.84	54.00	-11.16	19.61	23.23	Average
2	5226.350	93.46	-----	-----	69.98	23.48	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

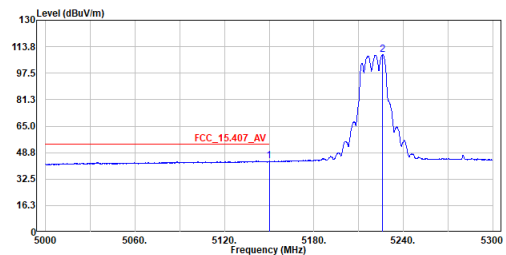
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5220MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5125.850	56.76	74.00	-17.24	33.59	23.17	Peak
2	5226.200	119.21	-----	-----	95.73	23.48	Peak

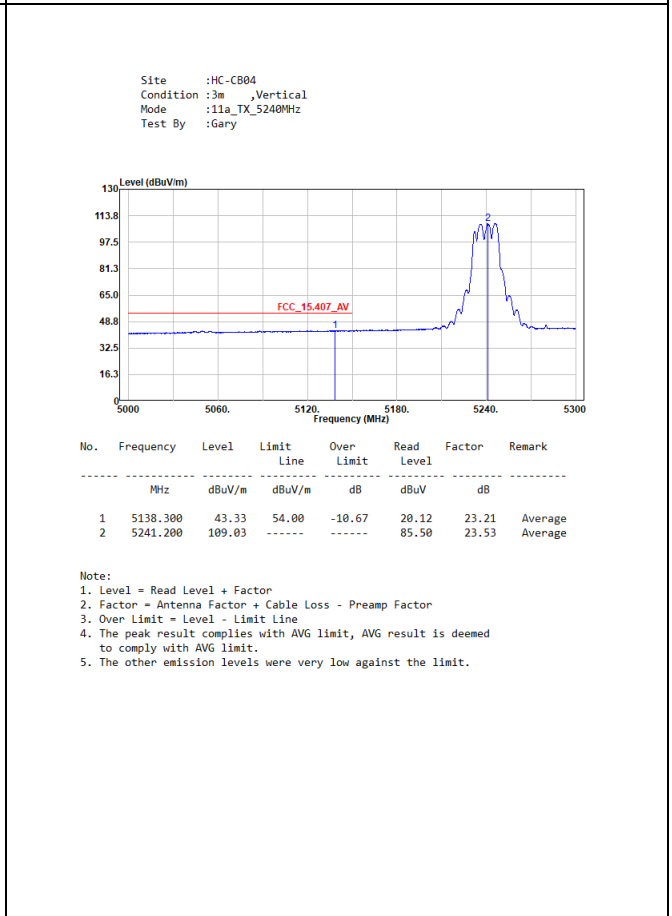
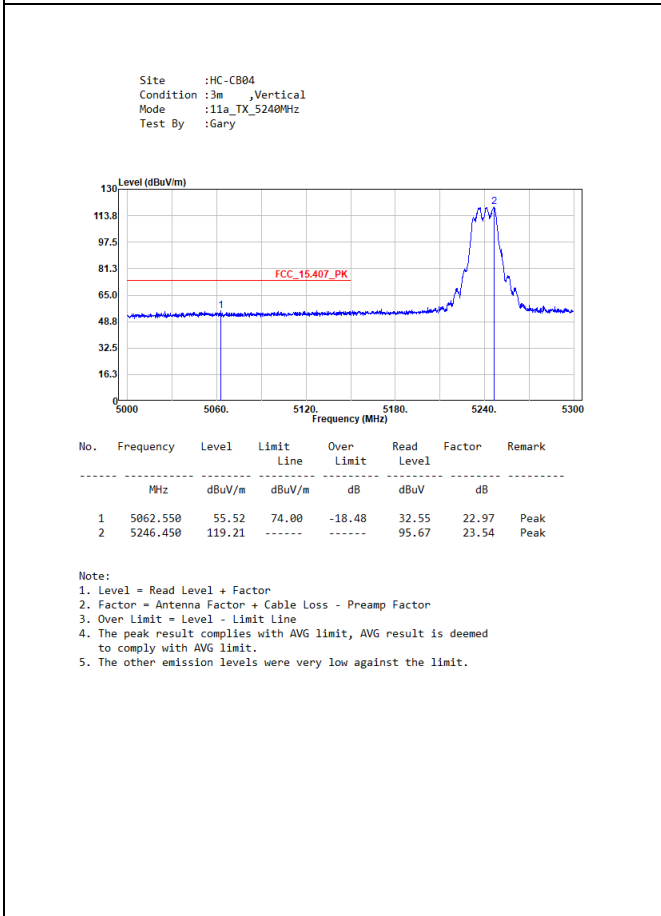
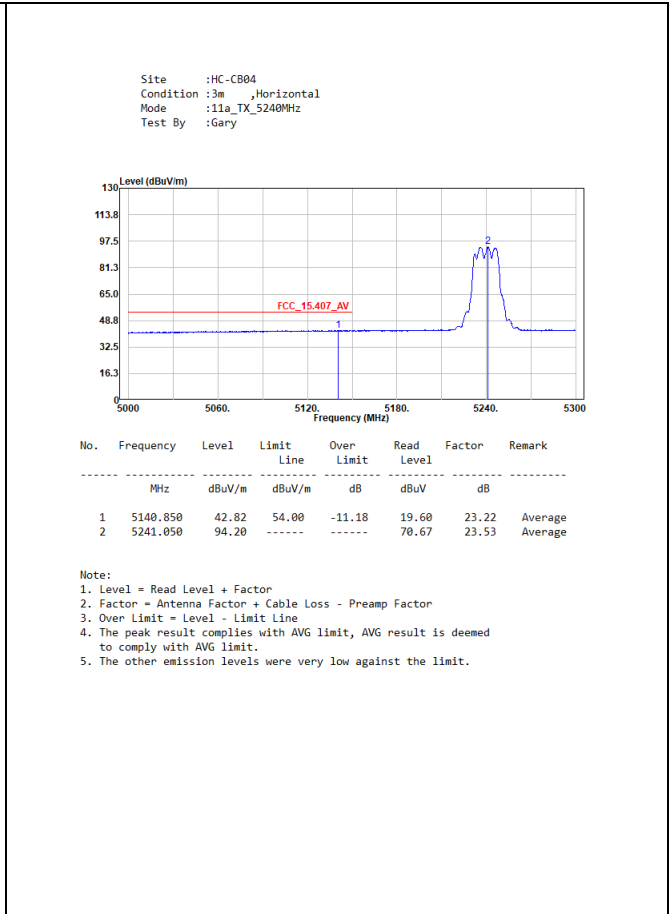
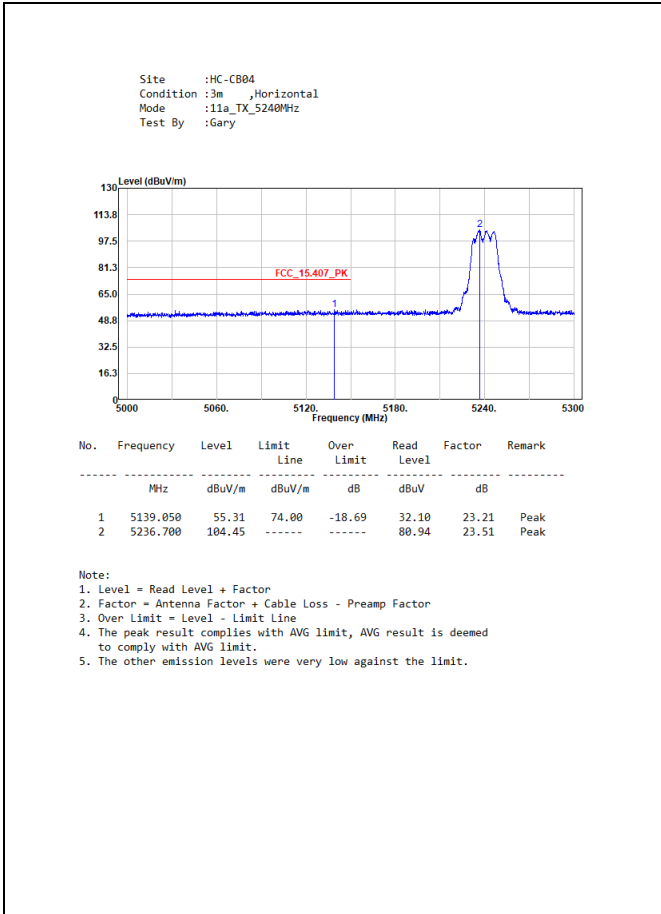
Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5220MHz
 Test By :Gary

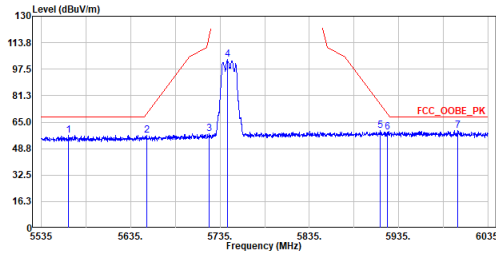


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5150.000	43.51	54.00	-10.49	20.27	23.24	Average
2	5226.050	109.01	-----	-----	85.53	23.48	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.



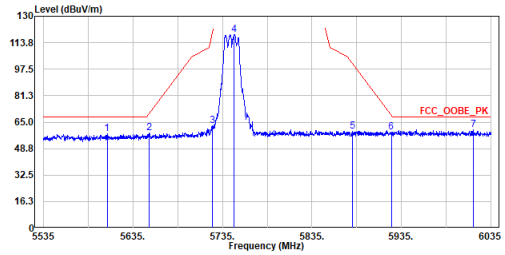
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5745MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5565.250	57.00	68.20	-11.20	32.30	24.70	Peak
2	5653.000	57.07	70.43	-13.36	31.90	25.17	Peak
3	5723.000	57.67	117.64	-59.97	32.13	25.54	Peak
4	5743.500	103.31	-----	-----	77.65	25.66	Peak
5	5914.750	59.75	75.79	-16.04	33.33	26.42	Peak
6	5922.500	59.00	70.06	-10.98	32.63	26.45	Peak
7	6001.500	59.99	68.20	-8.21	33.19	26.80	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

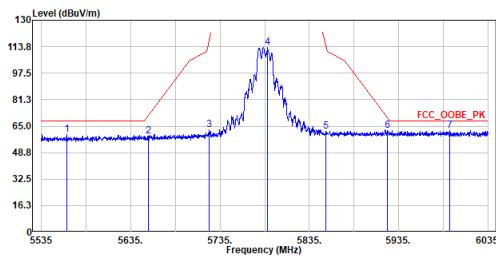
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5745MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5606.000	58.12	68.20	-10.08	33.21	24.91	Peak
2	5653.000	58.45	70.43	-11.98	33.28	25.17	Peak
3	5724.000	62.88	119.92	-57.04	37.33	25.55	Peak
4	5747.750	118.86	-----	-----	93.18	25.68	Peak
5	5880.000	59.56	101.50	-41.94	33.29	26.27	Peak
6	5923.750	58.91	69.13	-10.22	32.45	26.46	Peak
7	6015.250	60.42	68.20	-7.78	33.59	26.83	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

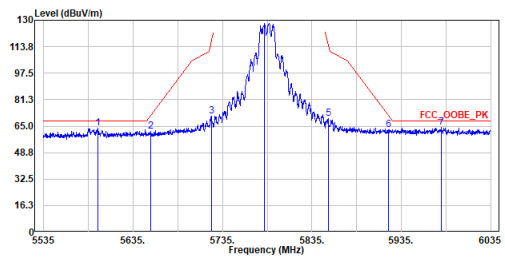
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5785MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5563.250	60.04	68.20	-8.16	35.35	24.69	Peak
2	5654.500	58.84	71.54	-12.70	33.66	25.18	Peak
3	5722.500	62.79	116.50	-53.71	37.25	25.54	Peak
4	5788.000	113.43	-----	-----	87.57	25.86	Peak
5	5853.750	61.76	113.05	-51.09	35.62	26.14	Peak
6	5922.000	62.30	70.43	-8.13	35.85	26.45	Peak
7	5992.000	62.29	68.20	-5.91	35.52	26.77	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

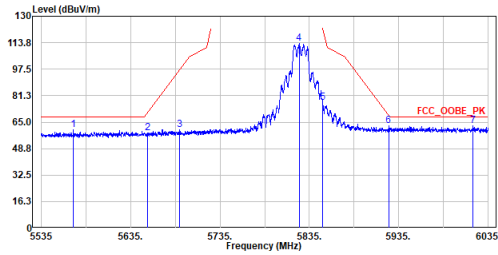
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5785MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5595.500	63.83	68.20	-4.37	38.97	24.86	Peak
2	5654.500	61.71	71.54	-9.83	36.53	25.18	Peak
3	5722.500	71.37	116.50	-45.13	45.83	25.54	Peak
4	5781.750	128.26	-----	-----	102.43	25.83	Peak
5	5853.250	69.61	114.79	-45.18	43.47	26.14	Peak
6	5920.500	63.03	71.54	-8.51	36.59	26.44	Peak
7	5979.500	64.22	68.20	-3.98	37.50	26.72	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

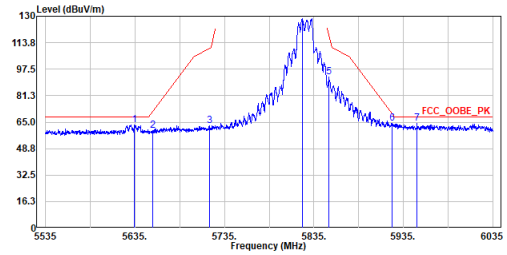
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11a_TX_5825MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5571.000	60.22	68.20	-7.98	35.49	24.73	Peak
2	5653.750	58.31	70.98	-12.67	33.14	25.17	Peak
3	5690.000	60.37	97.80	-37.43	35.01	25.36	Peak
4	5823.500	113.18	-----	-----	87.17	26.01	Peak
5	5850.000	76.81	122.20	-45.39	50.68	26.13	Peak
6	5923.750	62.57	69.13	-6.56	36.11	26.46	Peak
7	6018.000	62.69	68.20	-5.51	35.86	26.83	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

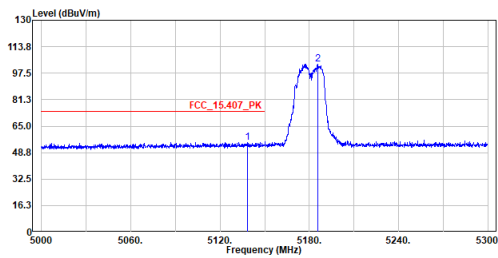
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11a_TX_5825MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5634.000	63.50	68.20	-4.70	38.43	25.07	Peak
2	5654.750	59.85	71.72	-11.87	34.67	25.18	Peak
3	5718.500	62.83	110.38	-47.55	37.31	25.52	Peak
4	5822.000	128.46	-----	-----	102.45	26.01	Peak
5	5851.750	92.58	118.21	-25.63	66.44	26.14	Peak
6	5922.000	64.35	70.43	-6.08	37.90	26.45	Peak
7	5950.500	64.05	68.20	-4.15	37.47	26.58	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

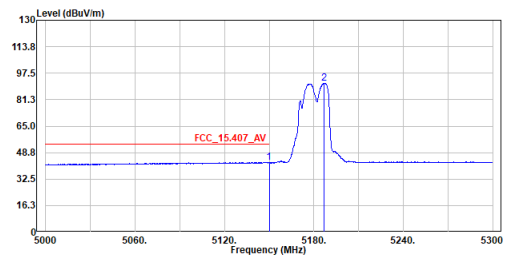
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax20_TX_5180MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5138.600	55.16	74.00	-18.84	31.95	23.21	Peak
2	5185.850	103.17	-----	-----	79.81	23.36	Peak

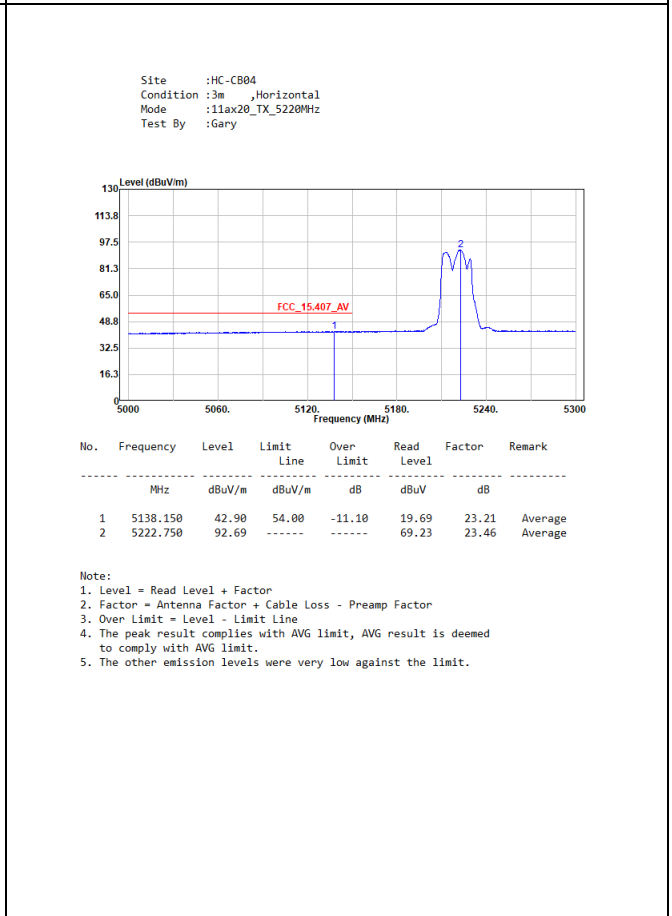
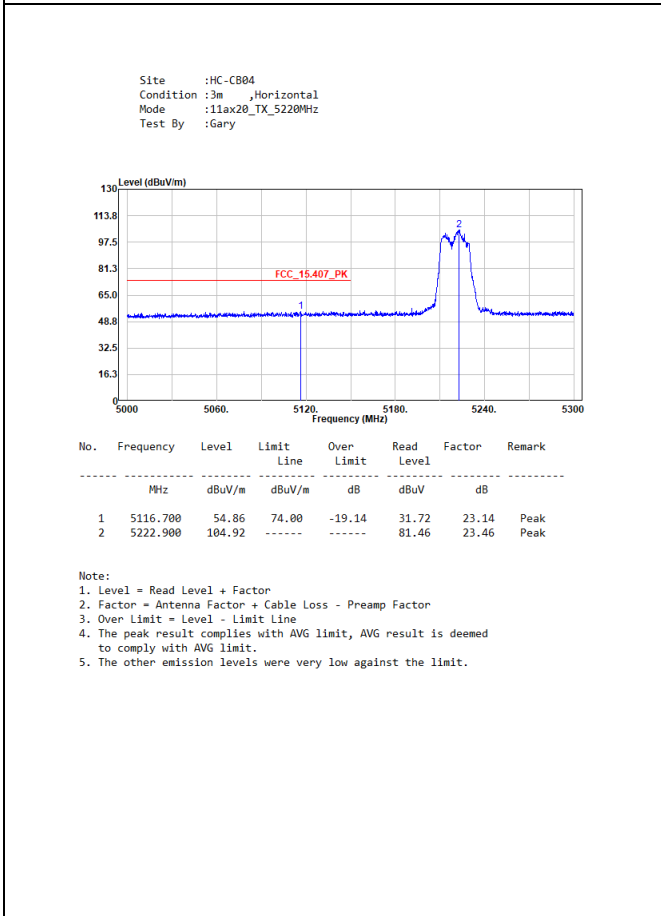
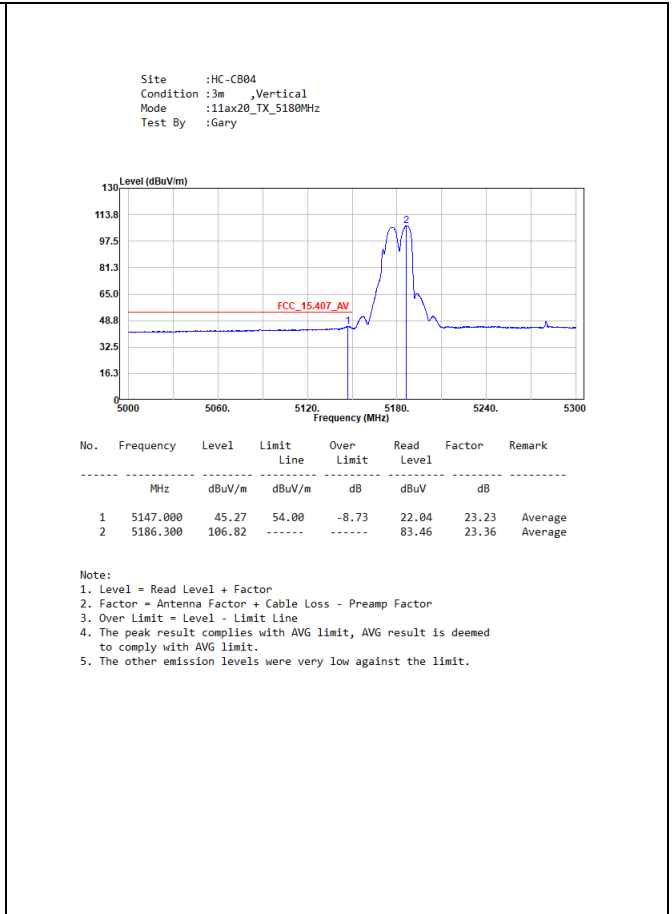
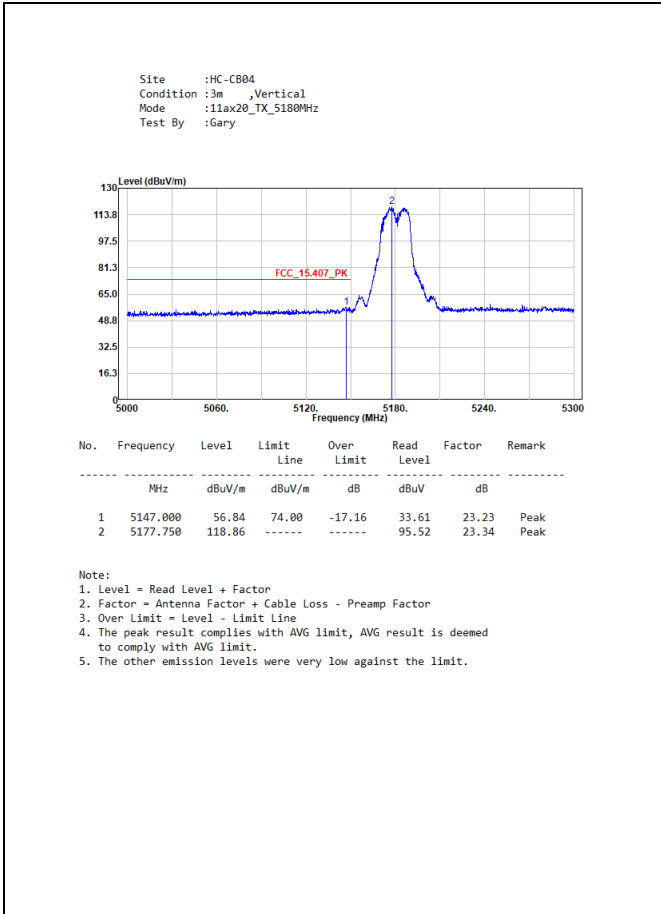
Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

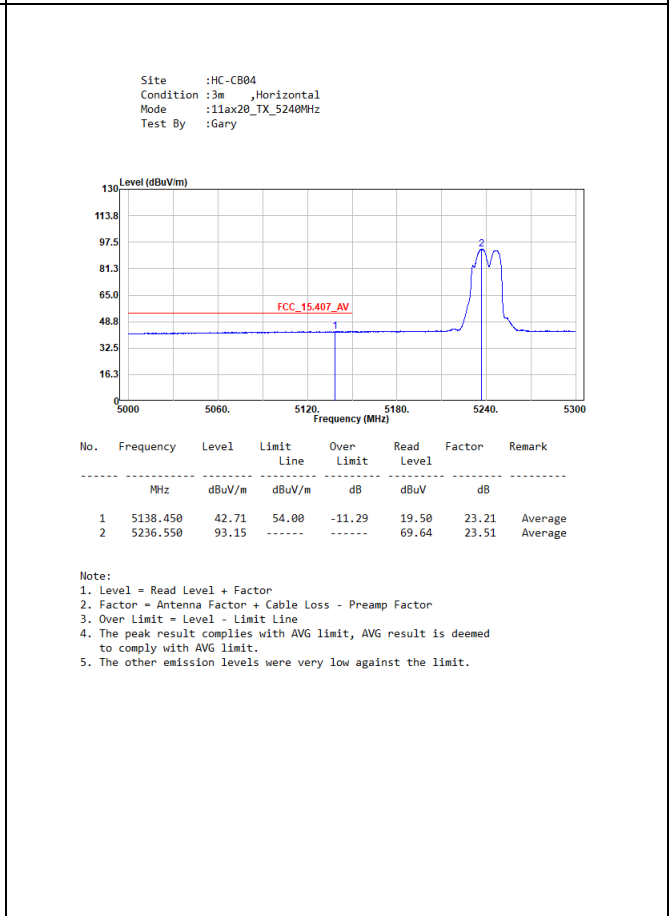
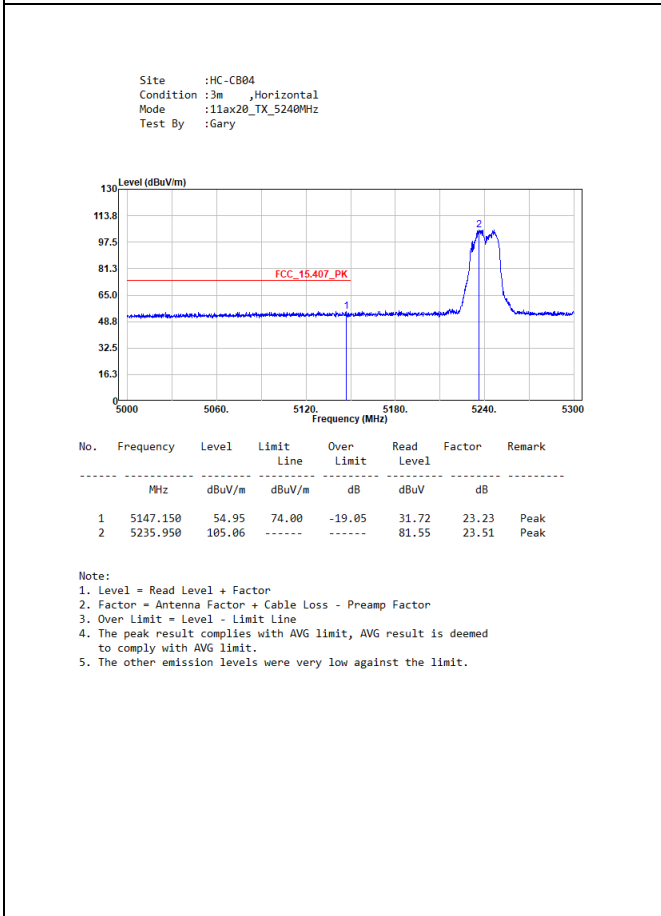
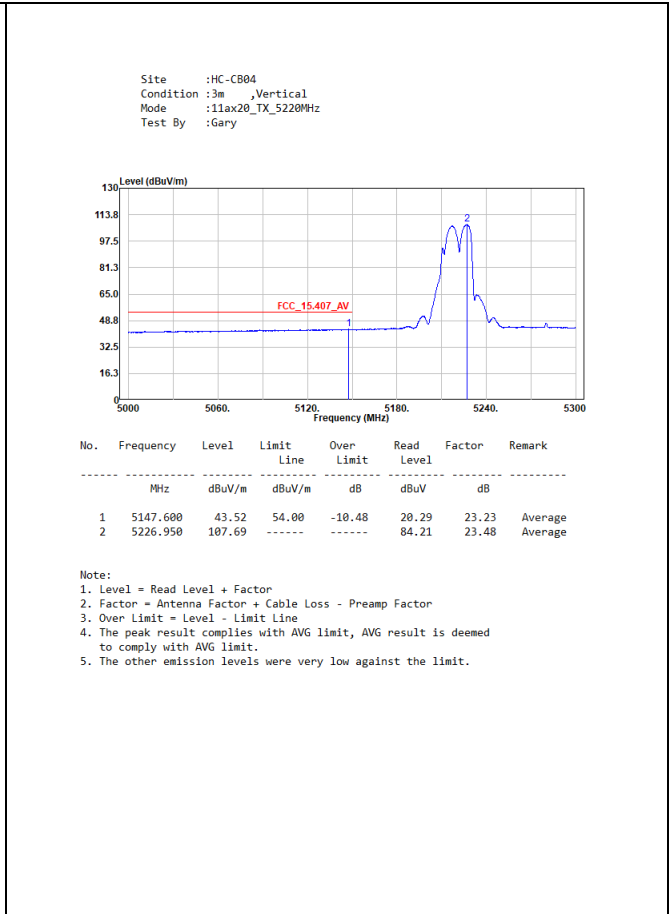
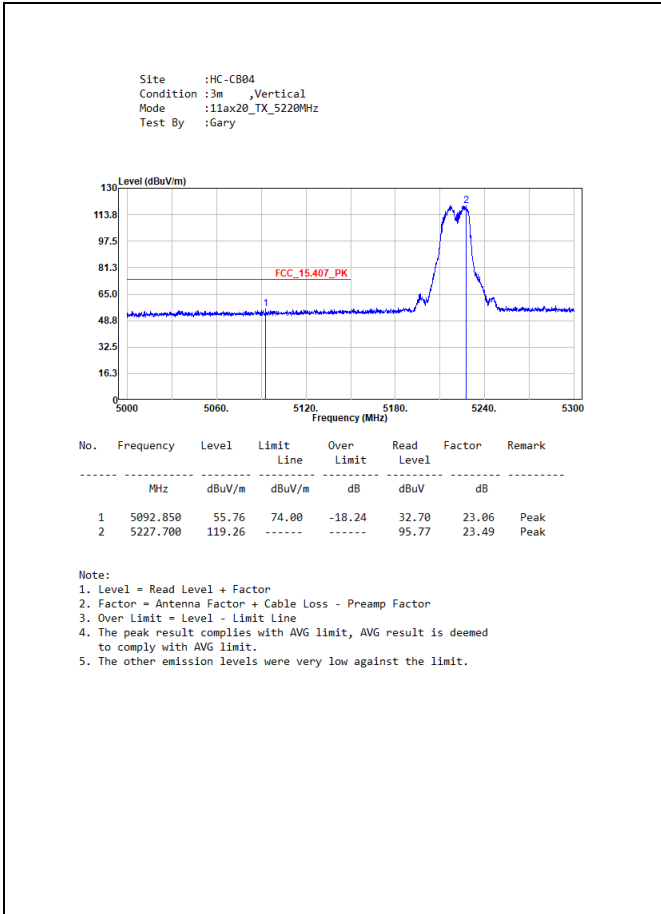
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax20_TX_5180MHz
 Test By :Gary



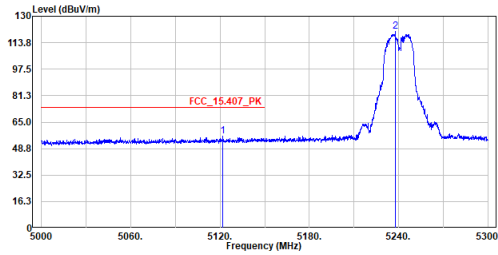
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5150.000	42.80	54.00	-11.20	19.56	23.24	Average
2	5187.050	91.31	-----	-----	67.95	23.36	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.





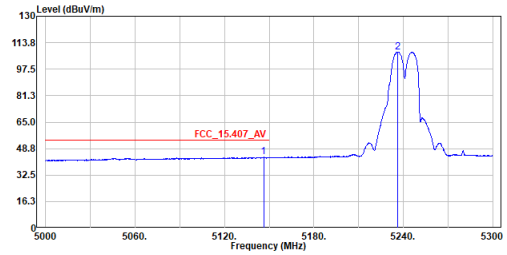
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax20_TX_5240MHz
 Test By :Gary



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5121.950	56.45	74.00	-17.55	33.30	23.15	Peak
2	5237.750	120.52	-----	-----	97.01	23.51	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

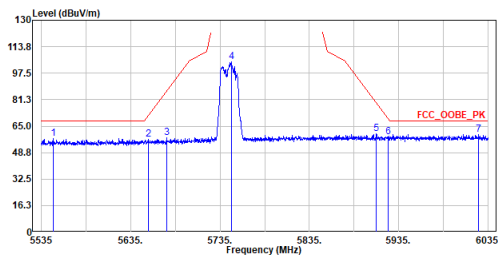
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax20_TX_5240MHz
 Test By :Gary



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.250	43.45	54.00	-10.55	20.22	23.23	Average
2	5236.250	108.15	-----	-----	84.64	23.51	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

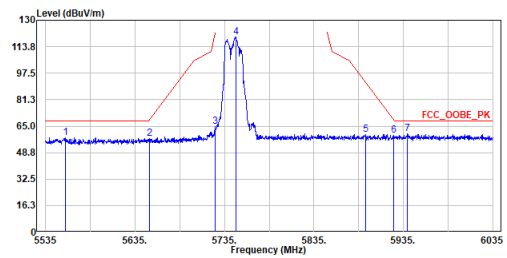
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax20_TX_5745MHz
 Test By :Ling



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5548.000	57.46	68.20	-10.74	32.85	24.61	Peak
2	5655.000	56.68	71.91	-15.23	31.50	25.18	Peak
3	5675.250	58.12	86.89	-28.77	32.83	25.29	Peak
4	5748.250	104.54	-----	-----	78.86	25.68	Peak
5	5910.250	60.29	79.12	-18.83	33.08	26.41	Peak
6	5923.000	58.57	69.69	-11.12	32.12	26.45	Peak
7	6024.500	59.84	68.20	-8.36	33.00	26.84	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

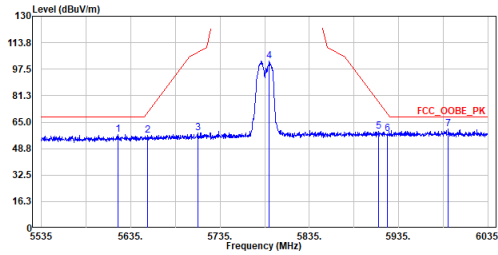
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax20_TX_5745MHz
 Test By :Ling



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5557.250	58.11	68.20	-10.09	33.45	24.66	Peak
2	5651.500	57.37	69.32	-11.95	32.20	25.17	Peak
3	5724.250	64.82	120.49	-55.67	39.27	25.55	Peak
4	5747.750	119.72	-----	-----	94.04	25.68	Peak
5	5893.000	59.73	91.88	-32.15	33.41	26.32	Peak
6	5924.000	59.44	68.95	-9.51	32.98	26.46	Peak
7	5939.750	60.24	68.20	-7.96	33.71	26.53	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

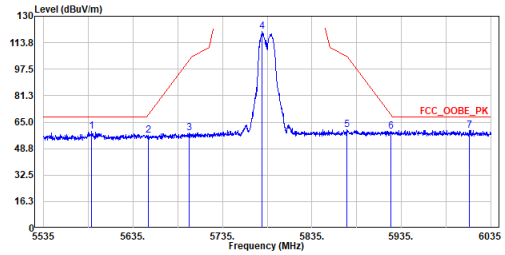
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax20_TX_5785MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5620.500	57.18	68.20	-11.02	32.19	24.99	Peak
2	5654.250	56.91	71.35	-14.44	31.73	25.18	Peak
3	5710.500	58.57	108.14	-49.57	33.09	25.48	Peak
4	5790.250	102.62	-----	-----	76.76	25.86	Peak
5	5912.500	59.24	77.46	-18.22	32.82	26.42	Peak
6	5922.000	58.11	70.43	-12.32	31.66	26.45	Peak
7	5990.750	60.84	68.20	-7.36	34.08	26.76	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

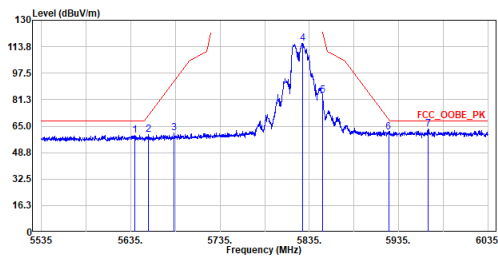
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax20_TX_5785MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5588.750	59.47	68.20	-8.73	34.65	24.82	Peak
2	5652.000	57.03	69.69	-12.66	31.86	25.17	Peak
3	5697.750	58.48	103.54	-45.06	33.07	25.41	Peak
4	5779.000	120.53	-----	-----	94.71	25.82	Peak
5	5874.250	60.38	105.41	-45.03	34.14	26.24	Peak
6	5923.000	59.52	69.69	-10.17	33.07	26.45	Peak
7	6011.250	59.97	68.20	-8.23	33.16	26.81	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

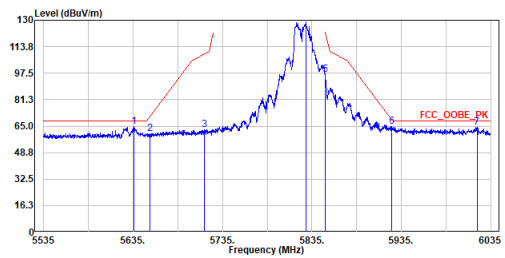
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax20_TX_5825MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5639.500	59.50	68.20	-8.70	34.41	25.09	Peak
2	5654.750	59.72	71.72	-12.00	34.54	25.18	Peak
3	5683.250	60.68	92.81	-32.13	35.35	25.33	Peak
4	5827.250	115.90	-----	-----	89.86	26.04	Peak
5	5850.000	83.66	122.20	-38.54	57.53	26.13	Peak
6	5923.750	61.42	69.13	-7.71	34.96	26.46	Peak
7	5968.250	63.09	68.20	-5.11	36.43	26.66	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

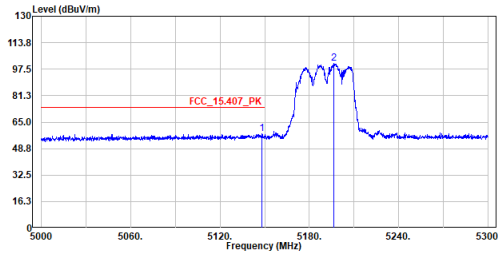
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax20_TX_5825MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5636.250	64.82	68.20	-3.38	39.74	25.08	Peak
2	5654.250	60.54	71.35	-10.81	35.36	25.18	Peak
3	5714.500	62.88	109.26	-46.38	37.38	25.50	Peak
4	5828.000	129.23	-----	-----	103.19	26.04	Peak
5	5850.000	96.46	122.20	-25.74	70.33	26.13	Peak
6	5924.000	64.82	68.95	-4.13	38.36	26.46	Peak
7	6019.500	64.36	68.20	-3.84	37.53	26.83	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

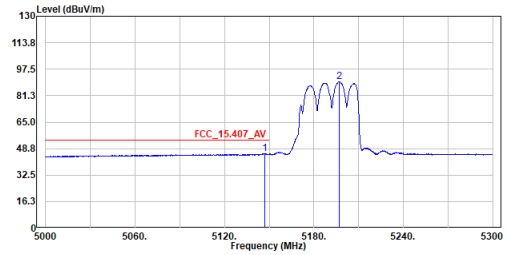
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax40_TX_5190MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5148.350	57.92	74.00	-16.08	34.68	23.24	Peak
2	5196.500	100.86	-----	-----	77.48	23.38	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

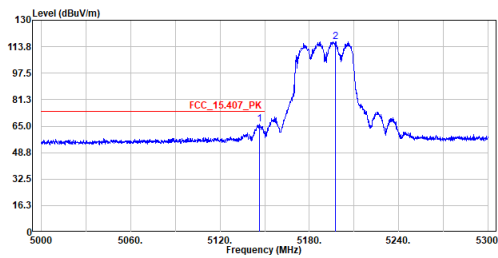
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax40_TX_5190MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5147.300	45.50	54.00	-8.50	22.27	23.23	Average
2	5196.950	89.86	-----	-----	66.48	23.38	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

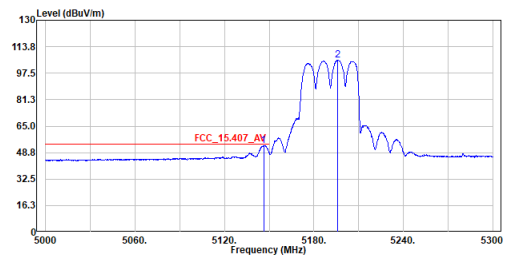
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax40_TX_5190MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.700	66.25	74.00	-7.75	43.02	23.23	Peak
2	5197.400	116.99	-----	-----	93.61	23.38	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

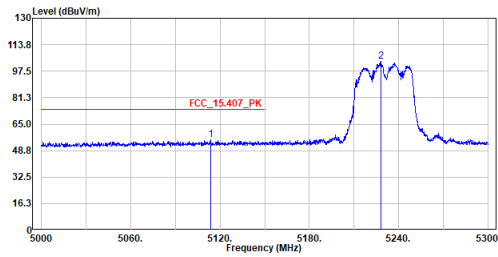
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax40_TX_5190MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5146.250	53.00	54.00	-1.00	29.77	23.23	Average
2	5195.750	105.70	-----	-----	82.32	23.38	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

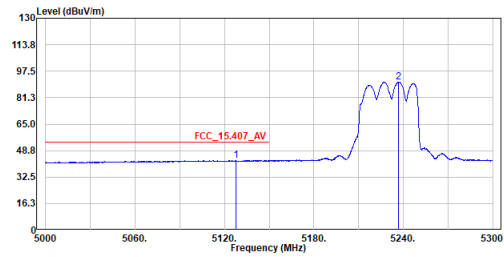
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax40_TX_5230MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5113.700	55.21	74.00	-18.79	32.09	23.12	Peak
2	5228.150	103.65	-----	-----	80.16	23.49	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

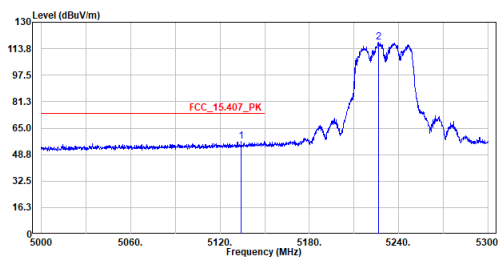
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax40_TX_5230MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5127.500	42.67	54.00	-11.33	19.49	23.18	Average
2	5236.550	90.93	-----	-----	67.42	23.51	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

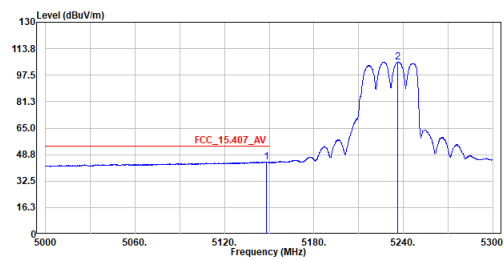
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax40_TX_5230MHz
 Test By :Gary



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5134.100	57.13	74.00	-16.87	33.94	23.19	Peak
2	5226.350	117.82	-----	-----	94.34	23.48	Peak

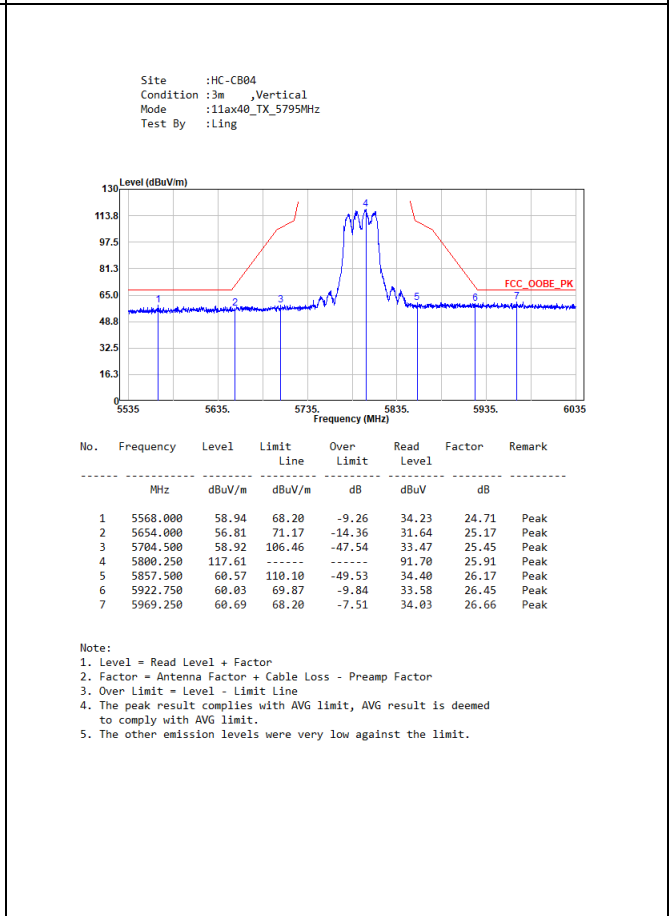
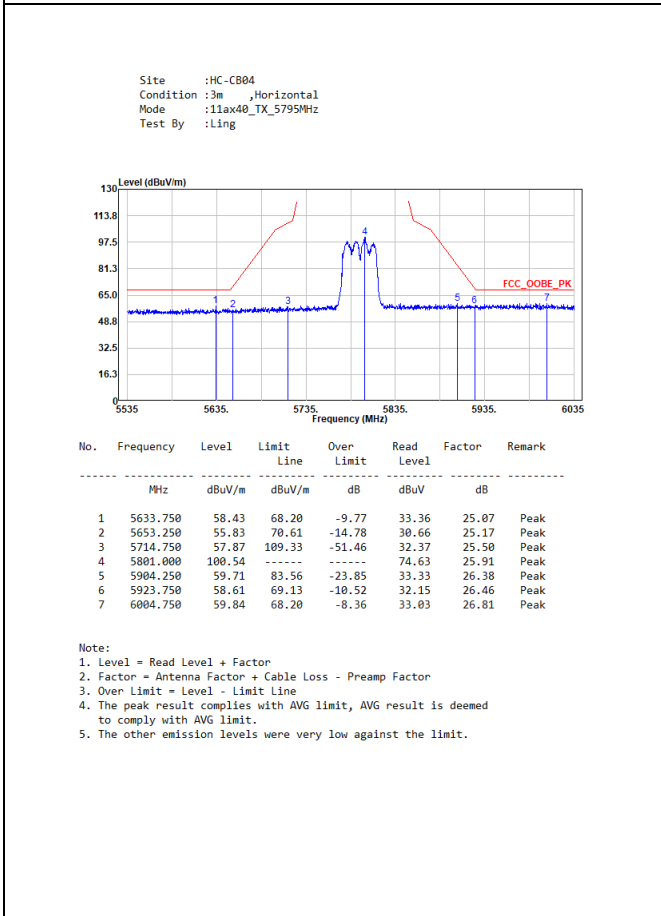
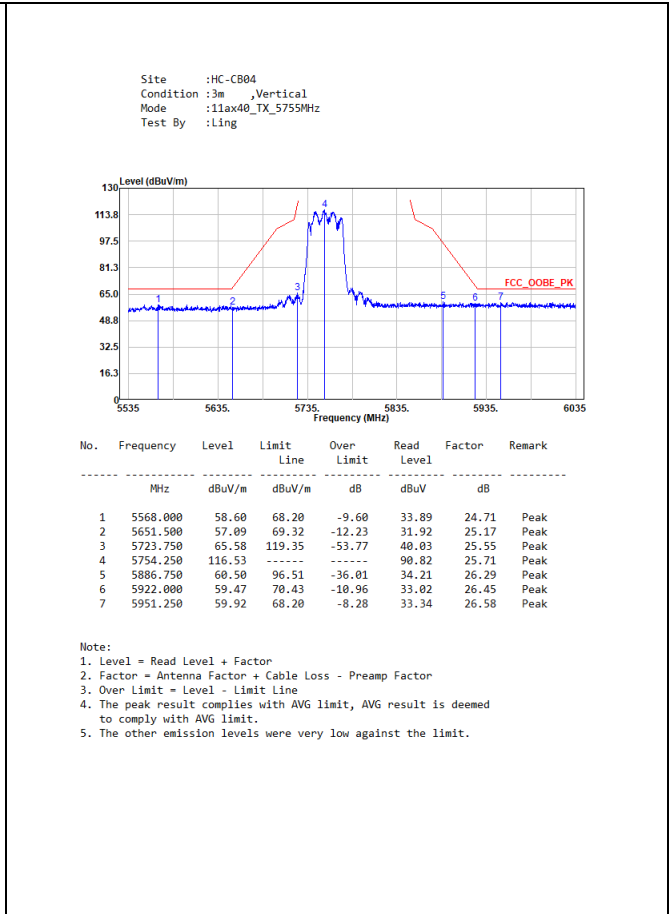
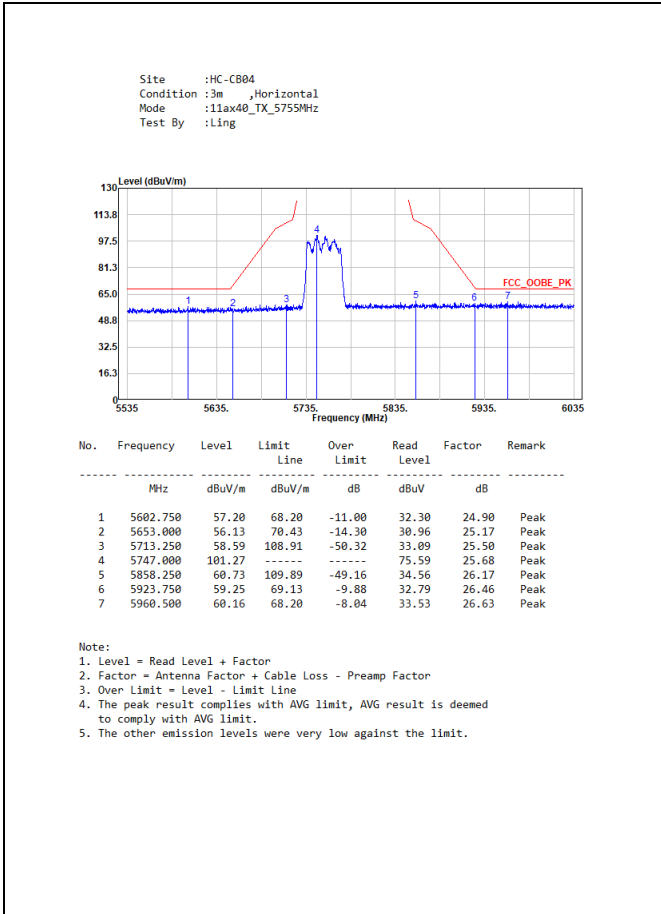
Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

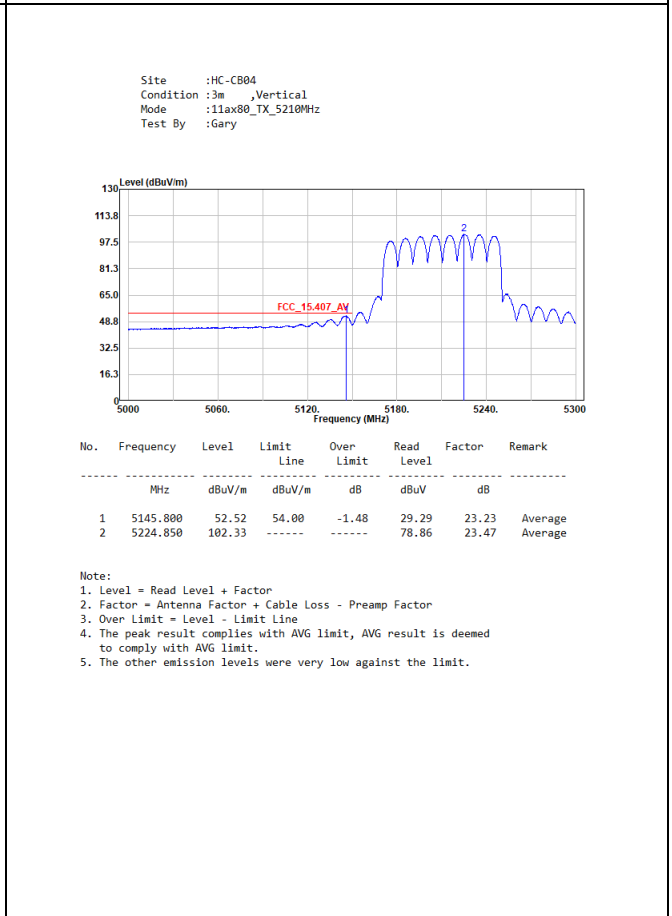
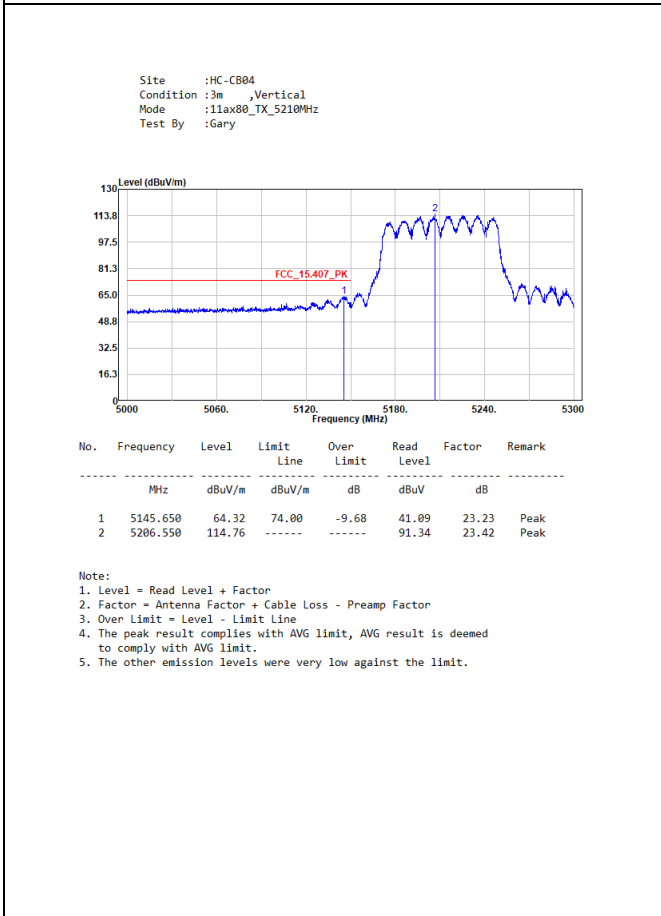
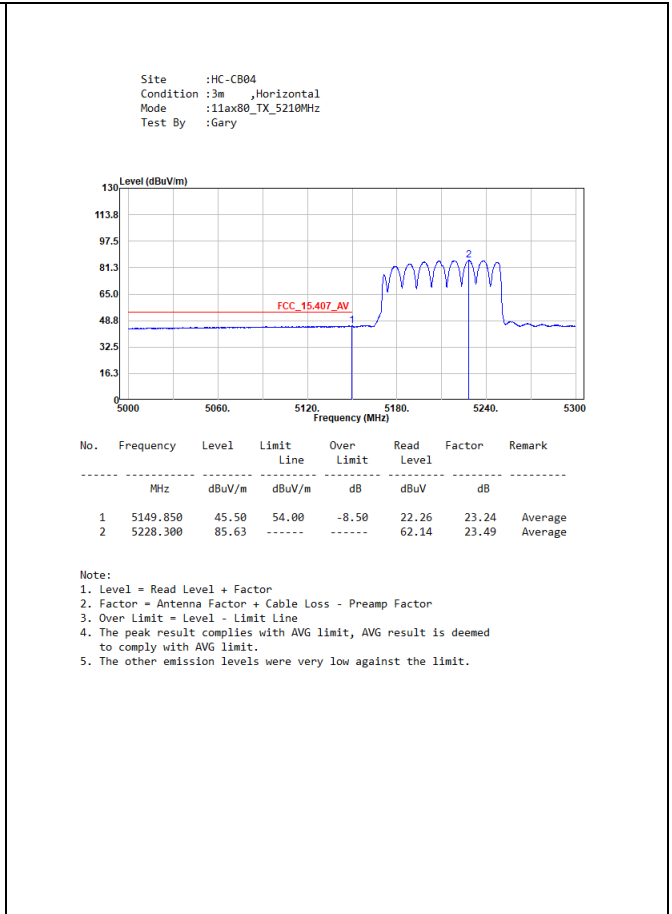
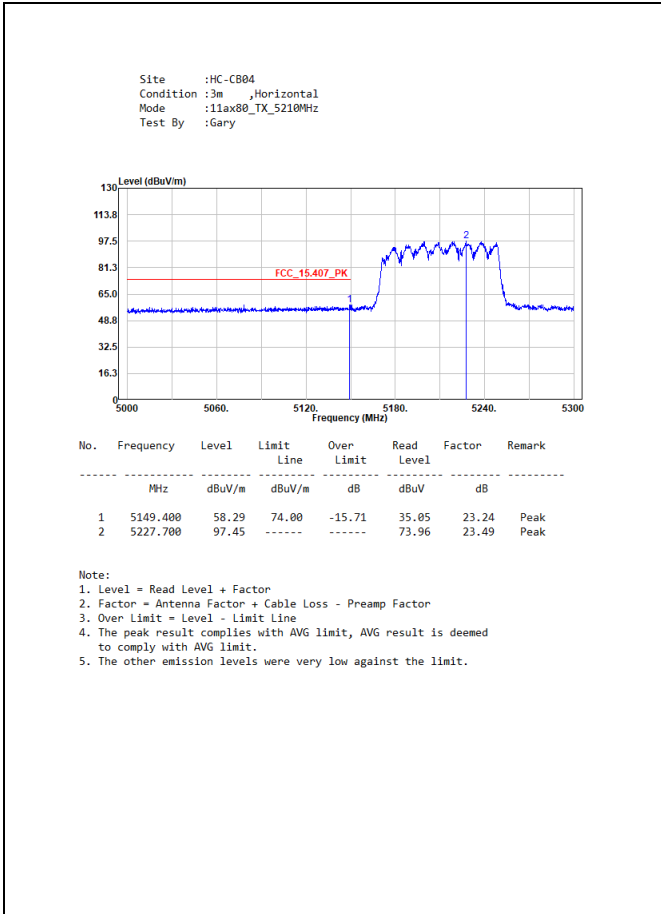
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax40_TX_5230MHz
 Test By :Gary



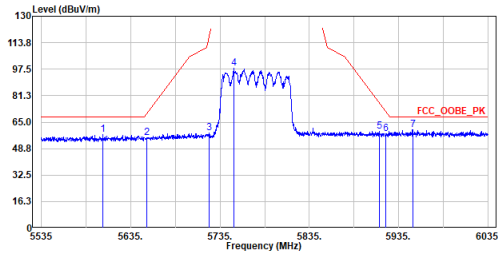
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5148.350	44.33	54.00	-9.67	21.09	23.24	Average
2	5235.950	105.69	-----	-----	82.18	23.51	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.





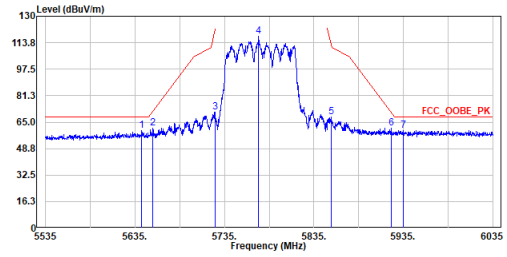
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11ax80_TX_5775MHz
 Test By :Ling



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	Mhz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5603.750	57.63	68.20	-10.57	32.73	24.90	Peak
2	5653.000	55.62	70.43	-14.81	30.45	25.17	Peak
3	5723.000	58.21	117.64	-59.43	32.67	25.54	Peak
4	5750.500	98.18	-----	-----	72.49	25.69	Peak
5	5913.500	59.37	76.72	-17.35	32.95	26.42	Peak
6	5920.250	58.05	71.72	-13.67	31.61	26.44	Peak
7	5950.750	60.35	68.20	-7.85	33.77	26.58	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11ax80_TX_5775MHz
 Test By :Ling



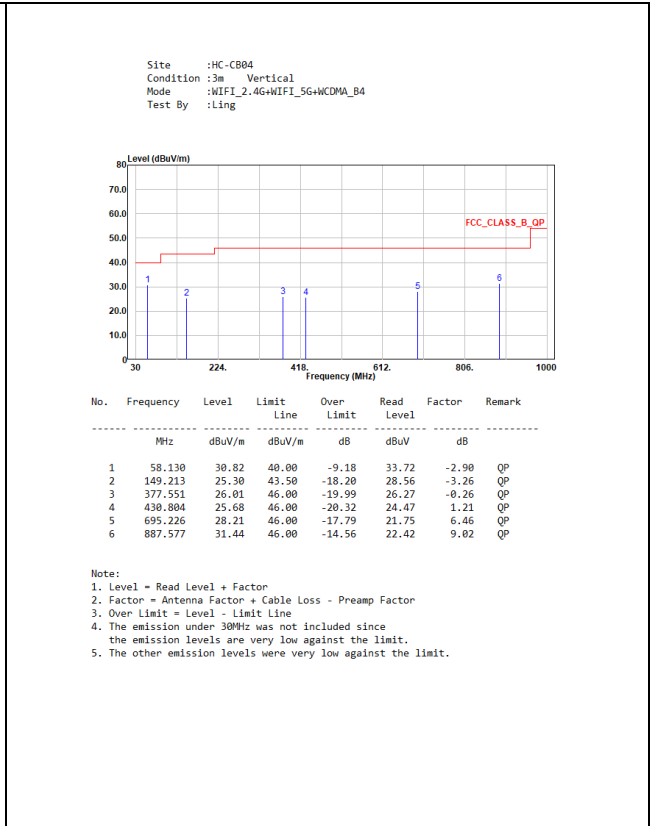
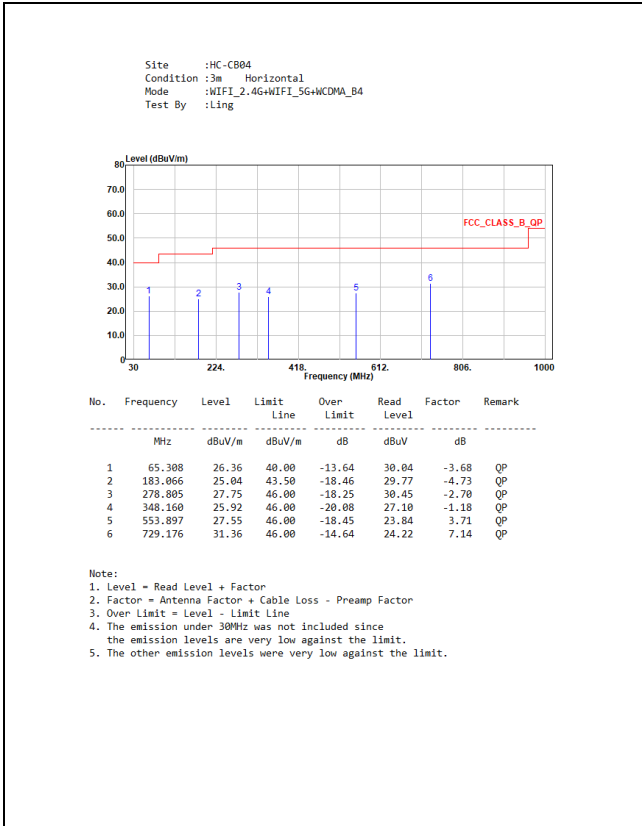
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	Mhz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5642.500	59.82	68.20	-8.38	34.70	25.12	Peak
2	5655.000	61.34	71.91	-10.57	36.16	25.18	Peak
3	5724.250	71.26	120.49	-49.23	45.71	25.55	Peak
4	5773.250	117.50	-----	-----	91.71	25.79	Peak
5	5854.250	68.38	112.51	-44.13	42.22	26.16	Peak
6	5921.250	61.26	70.98	-9.72	34.81	26.45	Peak
7	5935.000	59.98	68.20	-8.22	33.47	26.51	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

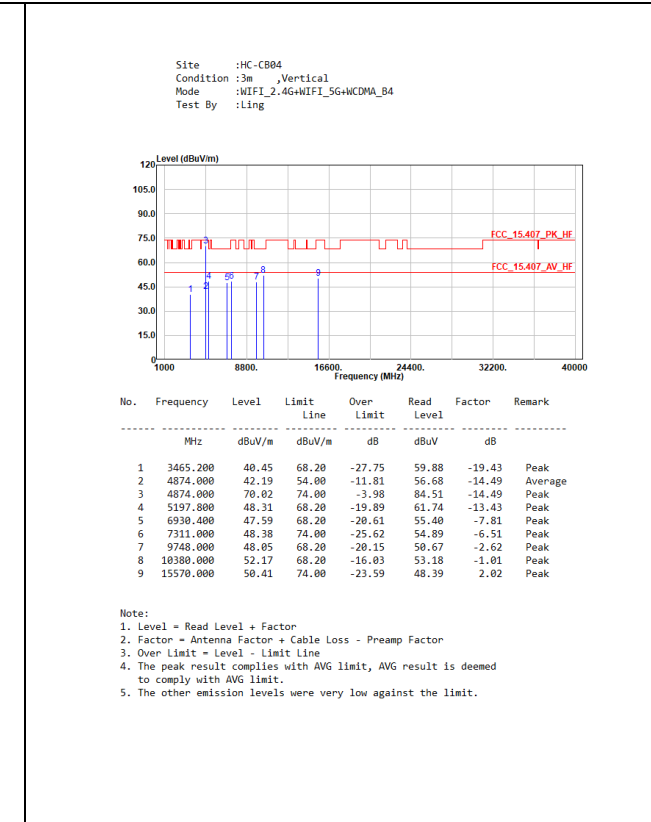
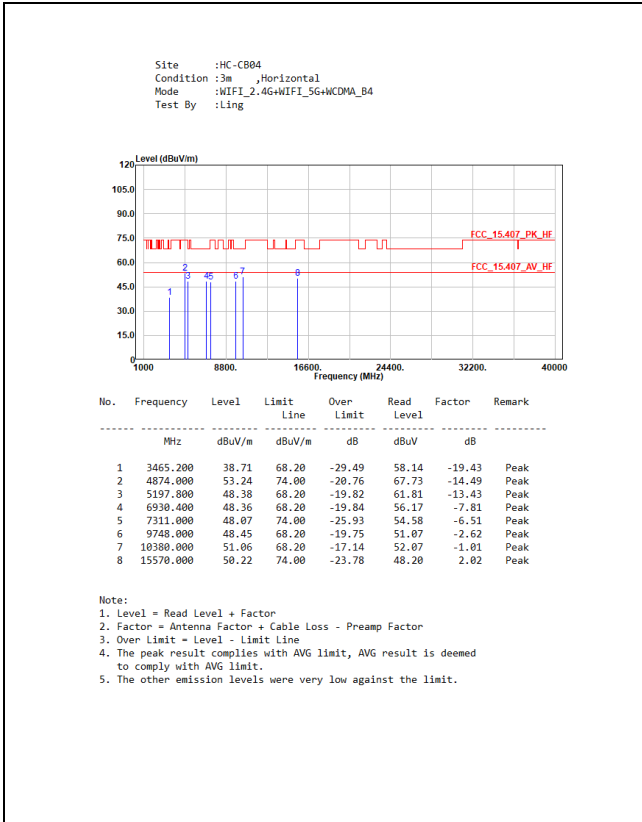
Appendix A

➤ Test Result of Radiated Emissions Co-location

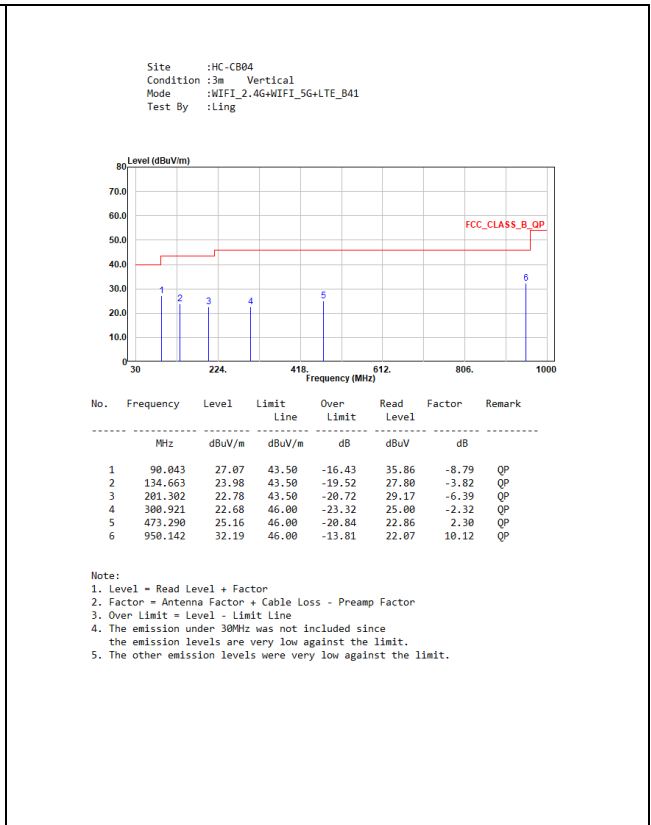
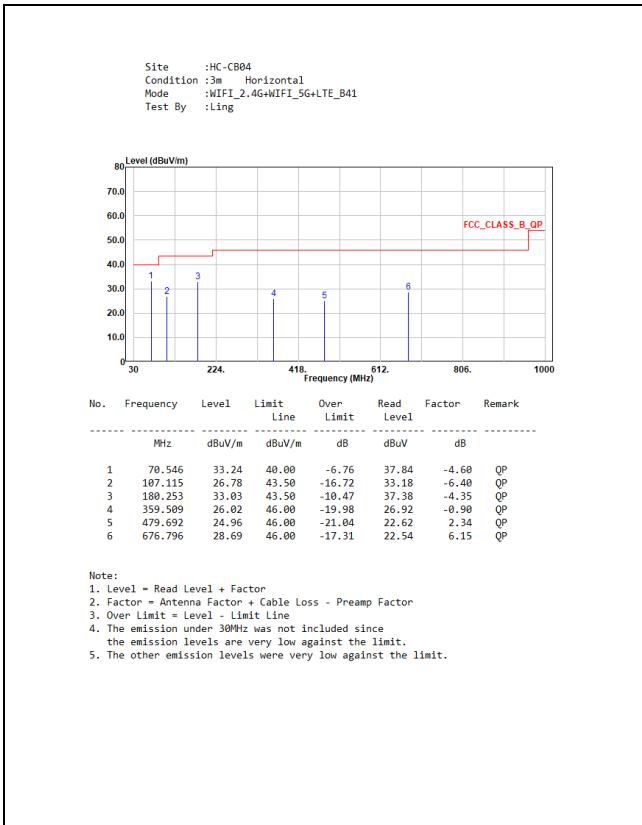
1. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN WCDMA function 30 MHz ~ 1 GHz:



Above 1 GHz:



**2. WiFi 2.4 GHz function + WiFi 5 GHz function + WWAN LTE function
30 MHz ~ 1 GHz:**



Above 1 GHz:

