FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT1929-4(SS)
FCC ID	:	IHDT56XE1
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

This is partial report. The product was received on Jan. 18, 2018 and testing was completed on Mar. 03, 2018. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Laboratory SPORTON INTERNATIONAL INC.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

James Huang

TESTING
NVLAP LAB CODE 600155-0

Approved by: James Huang / Manager

Sporton International (Kunshan) Inc.
No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR811821I	Rev. 01	Initial issue of report	Mar. 05, 2018

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.407(b)	Unwanted Emissions	15.407(b)(4)(i) &15.209(a)	Pass	Under limit 6.98 dB at 49.400 MHz
3.3	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT1929-4(SS)
FCC ID	IHDT56XE1
IMEI Code	**Radiation :** IMEI: 351886090018703
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT2
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Accessory List		
AC Adapter 1	Brand Name :	Motorola
	Model Name :	SC-22 SPN5970A
	Manufacturer :	Salom
AC Adapter 2	Brand Name :	Motorola
	Model Name :	SC-22 SPN5993A
	Manufacturer :	Chenyang
Battery	Brand Name :	Motorola
	Model Name :	JS40
	Manufacturer :	SUNWODA
C2Audio Cable 1	Brand Name :	Motorola
	Model Name :	SC18C27844
	Manufacturer :	Luxshare
C2Audio Cable 2	Brand Name :	Motorola
	Model Name :	SC18C27845
	Manufacturer :	Cabletech
USB Cable 1	Brand Name :	Cabletech
	Model Name :	SKN6473A
USB Cable 2	Brand Name :	FOXLINK
	Model Name :	SKN6473A 17195-C 0403532
USB Cable 3	Brand Name :	SAIBAO
	Model Name :	SKN6473A 17214-C 1127044
USB Cable 4	Brand Name :	Luxshare
	Model Name :	SKN6473A 17227-C 1126538

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Antenna Type / Gain	Internal Antenna with gain -7.00 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

1.4 Modification of EUT

No modifications are made to the EUT during all test items.

1.5 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

Test Site	Sporton International (Kunshan) Inc.	
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	**Sporton Site No.**	**FCC Test Firm Registration No.**
	03CH03-KS	630927

Note: The test site complies with ANSI C63.4 2014 requirement.

1.6 Applicable Standards

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

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

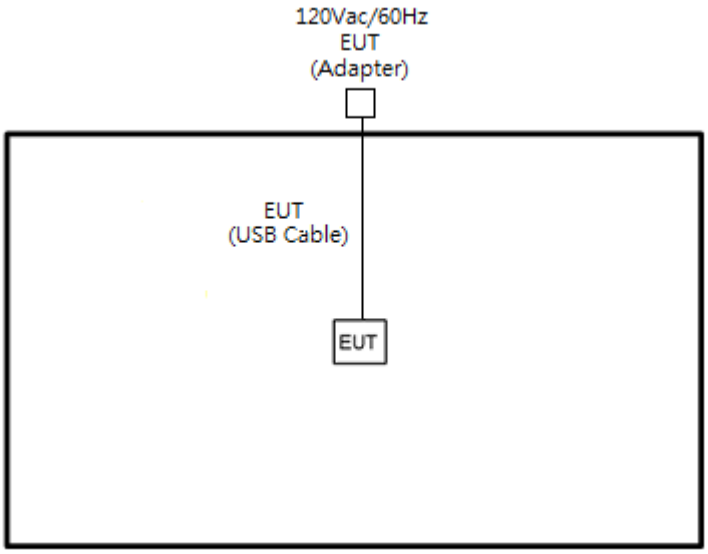
Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0
802.11ac VHT80	MCS0

Remark: For Radiated Test Cases, The tests were performance with Adapter 1, and USB Cable 1 Type C.

Ch. #		Band IV：5725-5850 MHz			
		802.11a	802.11n HT20	802.11n HT40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

2.3 Connection Diagram of Test System

<EUT with Adapter>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
5.	Earphone	Motorola	SH38C16618	N/A	Unshielded, 1.2 m	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.1.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5.725-5.85 GHz band:
15.407(b)(4)(i) 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) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

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

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

EIRP (dBm)	Field Strength at 3m (dBµV/m)
-17	78.3
- 27	68.3

(3) KDB789033 D02 v02r01 G)2)c)

(i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.[3]

(ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.[4]

Note 3: An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

Note 4: Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

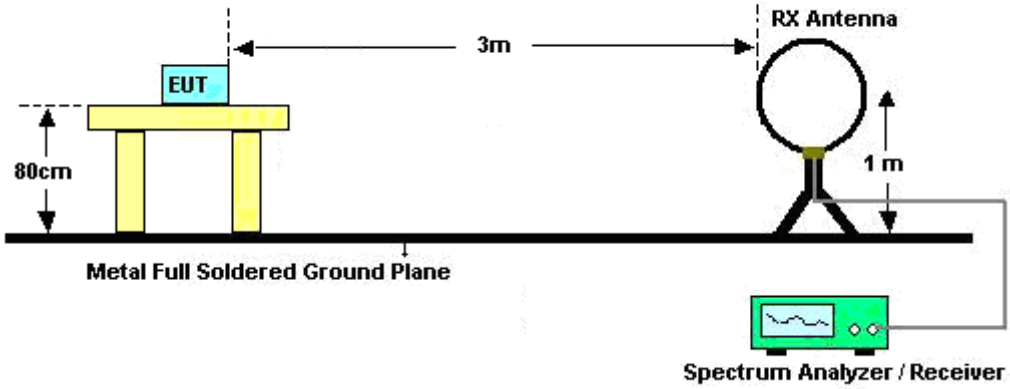
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

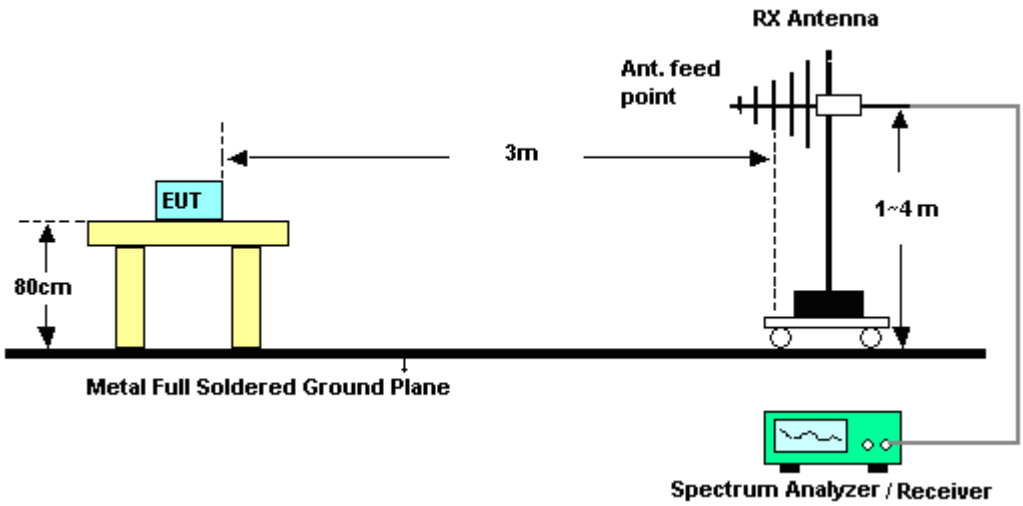
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.1.4 Test Setup

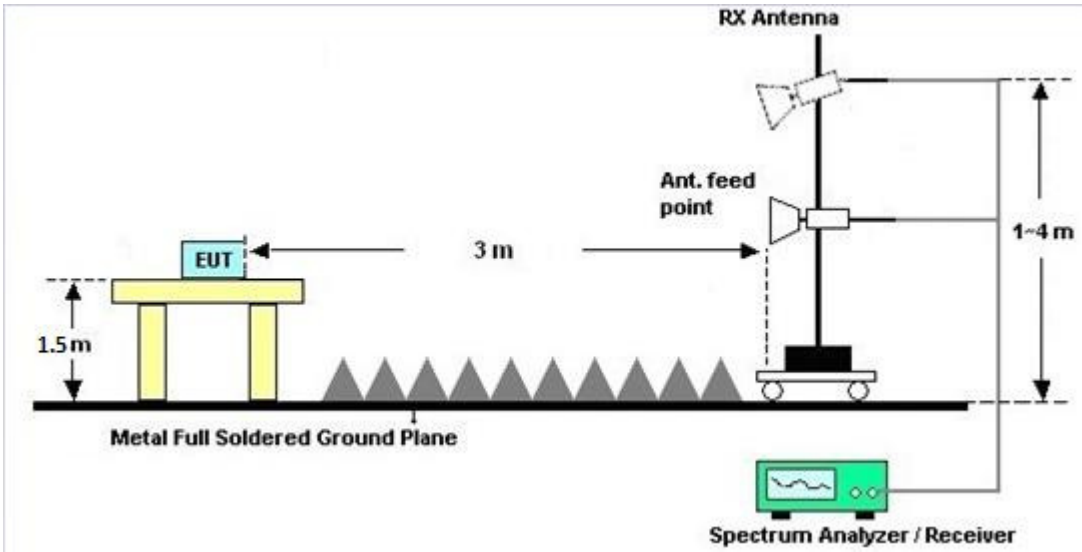
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.1.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.1.6 Test Result of Radiated Band Edges

Please refer to Appendix A and B.

3.1.7 Duty Cycle

Please refer to Appendix C.

3.1.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix A and B.

3.2 Automatically Discontinue Transmission

3.2.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.3 Antenna Requirements

3.3.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Apr. 18, 2017	Mar. 03, 2018	Apr. 17, 2018	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 23, 2017	Mar. 03, 2018	Nov. 22, 2018	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz-2GHz	Apr. 22, 2017	Mar. 03, 2018	Apr. 21, 2018	Radiation (03CH03-KS)
Double Ridge horn Antenna	ETS-lindgren	3117	75957	1GHz~18GHz	Oct. 21, 2017	Mar. 03, 2018	Oct. 20, 2018	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101093	18GHz ~40GHz	Dec. 21, 2017	Mar. 03, 2018	Dec. 20, 2018	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz ~1000MHz / 32 dB	Apr. 18, 2017	Mar. 03, 2018	Apr. 17, 2018	Radiation (03CH03-KS)
Amplifier	com-power	MITEQ	2025788	100MHz ~1800MHz /	Apr. 18, 2017	Mar. 03, 2018	Apr. 17, 2018	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 12, 2017	Mar. 03, 2018	Oct. 12, 2017	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	2014749	18~40GHz	Apr. 18, 2017	Mar. 03, 2018	Apr. 17, 2018	Radiation (03CH03-KS)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.60

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.50

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.50

Appendix A. Radiated Spurious Emission

Test Engineer :	Dream Li	Temperature :	21~23°C
		Relative Humidity :	44~47%

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5601.2	52.58	-15.72	68.3	42.18	35.03	8.55	33.18	100	54	P	H
		5684.8	62.85	-31.24	94.09	52.5	34.95	8.57	33.17	100	54	P	H
		5703.6	64.84	-41.47	106.31	54.49	34.94	8.58	33.17	100	54	P	H
		5724.8	58.19	-63.65	121.84	47.86	34.92	8.58	33.17	100	54	P	H
		5744	107.14	-	-	96.81	34.91	8.59	33.17	100	54	P	H
		5744	99.71	-	-	89.38	34.91	8.59	33.17	100	54	A	H
													H
													H
		5648.8	52.07	-16.23	68.3	41.68	35	8.56	33.17	296	89	P	V
		5698.8	63.46	-40.96	104.42	53.11	34.95	8.57	33.17	296	89	P	V
		5716	64.4	-45.38	109.78	54.05	34.94	8.58	33.17	296	89	P	V
		5724.8	58.77	-63.07	121.84	48.44	34.92	8.58	33.17	296	89	P	V
		5746	107.61	-	-	97.28	34.91	8.59	33.17	296	89	P	V
		5746	100.09	-	-	89.76	34.91	8.59	33.17	296	89	A	V
													V
													V

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5630	51.75	-16.55	68.3	41.36	35.01	8.56	33.18	100	174	P	H
		5678	52.45	-36.61	89.06	42.08	34.97	8.57	33.17	100	174	P	H
		5717.6	57.16	-53.07	110.23	46.83	34.92	8.58	33.17	100	174	P	H
		5721.6	54.62	-59.93	114.55	44.29	34.92	8.58	33.17	100	174	P	H
		5850	52.06	-70.24	122.3	41.8	34.82	8.61	33.17	100	174	P	H
		5860	55.13	-54.37	109.5	44.88	34.8	8.62	33.17	100	174	P	H
		5878	51.83	-51.24	103.07	41.59	34.8	8.62	33.18	100	174	P	H
		5956.4	52.22	-16.08	68.3	41.98	34.81	8.65	33.22	100	174	P	H
		5784	107.21	-	-	96.9	34.88	8.6	33.17	100	174	P	H
		5784	98.92	-	-	88.61	34.88	8.6	33.17	100	174	A	H
													H
													H
		5616.4	52.42	-15.88	68.3	42.03	35.01	8.56	33.18	326	99	P	V
		5695.6	52.98	-49.08	102.06	42.63	34.95	8.57	33.17	326	99	P	V
		5714.4	57.17	-52.16	109.33	46.82	34.94	8.58	33.17	326	99	P	V
		5722.4	53.65	-62.72	116.37	43.32	34.92	8.58	33.17	326	99	P	V
		5851.6	54.4	-64.25	118.65	44.14	34.82	8.61	33.17	326	99	P	V
		5863.6	54	-54.49	108.49	43.75	34.8	8.62	33.17	326	99	P	V
		5875.2	52.23	-52.92	105.15	41.99	34.8	8.62	33.18	326	99	P	V
		5929.2	51.76	-16.54	68.3	41.51	34.81	8.64	33.2	326	99	P	V
		5780	107.07	-	-	96.76	34.88	8.6	33.17	326	99	P	V
		5780	99.65	-	-	89.34	34.88	8.6	33.17	326	99	A	V
													V
													V

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz		5853.2	62.99	-52.01	115	52.73	34.82	8.61	33.17	100	174	P	H
		5857.2	62.93	-47.35	110.28	52.68	34.8	8.62	33.17	100	174	P	H
		5875.2	52.91	-52.24	105.15	42.67	34.8	8.62	33.18	100	174	P	H
		5945.2	52.15	-16.15	68.3	41.91	34.81	8.64	33.21	100	174	P	H
		5824	107.2	-	-	96.93	34.83	8.61	33.17	100	174	P	H
		5824	98.59	-	-	88.32	34.83	8.61	33.17	100	174	A	H
													H
													H
		5851.2	64.95	-54.61	119.56	54.69	34.82	8.61	33.17	301	91	P	V
		5867.2	62.29	-45.19	107.48	52.04	34.8	8.62	33.17	301	91	P	V
		5881.2	60.32	-40.37	100.69	50.08	34.8	8.62	33.18	301	91	P	V
		5967.6	53.11	-15.19	68.3	42.87	34.81	8.65	33.22	301	91	P	V
		5824	107.41	-	-	97.14	34.83	8.61	33.17	301	91	P	V
		5824	99.24	-	-	88.97	34.83	8.61	33.17	301	91	A	V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	45.59	-28.41	74	55.97	39.29	12.91	62.58	100	360	P	H
													H
													H
													H
		11490	45.93	-28.07	74	56.31	39.29	12.91	62.58	100	360	P	V
													V
													V
													V
802.11a CH 157 5785MHz		11570	45.58	-28.42	74	56.07	39.37	12.84	62.7	100	360	P	H
													H
													H
													H
		11570	45.38	-28.62	74	55.87	39.37	12.84	62.7	100	360	P	V
													V
													V
													V
802.11a CH 165 5825MHz		11650	45.65	-28.35	74	56.27	39.44	12.78	62.84	100	360	P	H
													H
													H
													H
		11650	45.88	-28.12	74	56.5	39.44	12.78	62.84	100	360	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5640.8	54.38	-13.92	68.3	43.99	35	8.56	33.17	100	32	P	H
		5685.2	60.99	-33.39	94.38	50.64	34.95	8.57	33.17	100	32	P	H
		5707.2	64.29	-43.03	107.32	53.94	34.94	8.58	33.17	100	32	P	H
		5724.8	61.55	-60.29	121.84	51.22	34.92	8.58	33.17	100	32	P	H
		5748	107.89	-	-	97.56	34.91	8.59	33.17	100	32	P	H
		5748	99.17	-	-	88.84	34.91	8.59	33.17	100	32	A	H
802.11n													H
HT20													H
CH 149		5606.4	53.46	-14.84	68.3	43.06	35.03	8.55	33.18	309	89	P	V
5745MHz		5698.4	62.17	-41.95	104.12	51.82	34.95	8.57	33.17	309	89	P	V
		5705.2	55.39	-51.37	106.76	45.04	34.94	8.58	33.17	309	89	P	V
		5724.8	60.46	-61.38	121.84	50.13	34.92	8.58	33.17	309	89	P	V
		5744	107.32	-	-	96.99	34.91	8.59	33.17	309	89	P	V
		5744	99.38	-	-	89.05	34.91	8.59	33.17	309	89	A	V
													V
													V

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5606.8	52.88	-15.42	68.3	42.48	35.03	8.55	33.18	100	57	P	H
		5688.8	52.22	-44.82	97.04	41.87	34.95	8.57	33.17	100	57	P	H
		5708.8	53.68	-54.09	107.77	43.33	34.94	8.58	33.17	100	57	P	H
		5724.4	52.25	-68.68	120.93	41.92	34.92	8.58	33.17	100	57	P	H
		5854	53.79	-59.39	113.18	43.54	34.8	8.62	33.17	100	57	P	H
		5864.4	55.17	-53.1	108.27	44.92	34.8	8.62	33.17	100	57	P	H
		5917.2	52.35	-21.7	74.05	42.1	34.81	8.63	33.19	100	57	P	H
		5931.2	52.01	-16.29	68.3	41.76	34.81	8.64	33.2	100	57	P	H
		5786	106.76	-	-	96.47	34.86	8.6	33.17	100	57	P	H
		5786	98.03	-	-	87.74	34.86	8.6	33.17	100	57	A	H
802.11n													H
HT20													H
CH 157		5616.8	52.22	-16.08	68.3	41.83	35.01	8.56	33.18	301	90	P	V
5785MHz		5688.4	52.96	-43.78	96.74	42.61	34.95	8.57	33.17	301	90	P	V
		5719.6	57.51	-53.28	110.79	47.18	34.92	8.58	33.17	301	90	P	V
		5722	58.42	-57.04	115.46	48.09	34.92	8.58	33.17	301	90	P	V
		5851.6	58.19	-60.46	118.65	47.93	34.82	8.61	33.17	301	90	P	V
		5858.8	58.38	-51.45	109.83	48.13	34.8	8.62	33.17	301	90	P	V
		5875.2	53.67	-51.48	105.15	43.43	34.8	8.62	33.18	301	90	P	V
		5977.2	51.74	-16.56	68.3	41.51	34.81	8.65	33.23	301	90	P	V
		5790	106.81	-	-	96.52	34.86	8.6	33.17	301	90	P	V
		5790	98.59	-	-	88.3	34.86	8.6	33.17	301	90	A	V
													V
													V

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5850.4	55.69	-65.7	121.39	45.43	34.82	8.61	33.17	123	155	P	H
		5872	60.74	-45.4	106.14	50.5	34.8	8.62	33.18	123	155	P	H
		5875.6	60.7	-44.15	104.85	50.46	34.8	8.62	33.18	123	155	P	H
		5925	52.16	-16.14	68.3	41.91	34.81	8.64	33.2	123	155	P	H
		5826	106.22	-	-	95.95	34.83	8.61	33.17	123	155	P	H
		5826	98.31	-	-	88.04	34.83	8.61	33.17	123	155	A	H
802.11n													H
HT20													H
CH 165		5850.8	54.42	-66.06	120.48	44.16	34.82	8.61	33.17	301	91	P	V
5825MHz		5861.2	63.09	-46.07	109.16	52.84	34.8	8.62	33.17	301	91	P	V
		5891.6	57.83	-35.15	92.98	47.58	34.8	8.63	33.18	301	91	P	V
		5948.8	52.66	-15.64	68.3	42.42	34.81	8.64	33.21	301	91	P	V
		5824	107.72	-	-	97.45	34.83	8.61	33.17	301	91	P	V
		5824	98.91	-	-	88.64	34.83	8.61	33.17	301	91	A	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		11490	45.93	-28.07	74	56.31	39.29	12.91	62.58	100	360	P	H
													H
													H
													H
		11490	46.11	-27.89	74	56.49	39.29	12.91	62.58	100	360	P	V
													V
													V
													V
802.11n HT20 CH 157 5785MHz		11570	45.51	-28.49	74	56	39.37	12.84	62.7	100	360	P	H
													H
													H
													H
		11570	45.97	-28.03	74	56.46	39.37	12.84	62.7	100	360	P	V
													V
													V
													V
802.11n HT20 CH 165 5825MHz		11650	46	-28	74	56.62	39.44	12.78	62.84	100	360	P	H
													H
													H
													H
		11650	46.36	-27.64	74	56.98	39.44	12.78	62.84	100	360	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5644	53.57	-14.73	68.3	43.18	35	8.56	33.17	176	352	P	H
		5688.8	61.99	-35.05	97.04	51.64	34.95	8.57	33.17	176	352	P	H
		5707.2	66.42	-40.9	107.32	56.07	34.94	8.58	33.17	176	352	P	H
		5723.2	59.52	-58.68	118.2	49.19	34.92	8.58	33.17	176	352	P	H
		5852.8	52.45	-63.47	115.92	42.19	34.82	8.61	33.17	176	352	P	H
		5859.2	52.19	-57.53	109.72	41.94	34.8	8.62	33.17	176	352	P	H
		5880.4	52.93	-48.36	101.29	42.69	34.8	8.62	33.18	176	352	P	H
		5978.4	53.34	-14.96	68.3	43.11	34.81	8.65	33.23	176	352	P	H
		5758	105.54	-	-	95.23	34.89	8.59	33.17	176	352	P	H
		5758	96.95	-	-	86.64	34.89	8.59	33.17	176	352	A	H
802.11n													H
HT40													H
CH 151		5635.2	56.26	-12.04	68.3	45.87	35	8.56	33.17	318	91	P	V
5755MHz		5696	63.05	-39.3	102.35	52.7	34.95	8.57	33.17	318	91	P	V
		5718.4	65.04	-45.41	110.45	54.71	34.92	8.58	33.17	318	91	P	V
		5722	65.54	-49.92	115.46	55.21	34.92	8.58	33.17	318	91	P	V
		5850	52.16	-70.14	122.3	41.9	34.82	8.61	33.17	318	91	P	V
		5862.4	53.12	-55.71	108.83	42.87	34.8	8.62	33.17	318	91	P	V
		5893.6	52.27	-39.23	91.5	42.02	34.8	8.63	33.18	318	91	P	V
		5934.8	51.81	-16.49	68.3	41.56	34.81	8.64	33.2	318	91	P	V
		5758	104.19	-	-	93.88	34.89	8.59	33.17	318	91	P	V
		5758	95.33	-	-	85.02	34.89	8.59	33.17	318	91	A	V
													V
													V

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5636.4	51.85	-16.45	68.3	41.46	35	8.56	33.17	316	100	P	H
		5696	56.81	-45.54	102.35	46.46	34.95	8.57	33.17	316	100	P	H
		5700.4	55.66	-49.75	105.41	45.31	34.95	8.57	33.17	316	100	P	H
		5722	60.8	-54.66	115.46	50.47	34.92	8.58	33.17	316	100	P	H
		5850	53.49	-68.81	122.3	43.23	34.82	8.61	33.17	316	100	P	H
		5870.4	59.16	-47.43	106.59	48.91	34.8	8.62	33.17	316	100	P	H
		5888.4	55.47	-39.88	95.35	45.22	34.8	8.63	33.18	316	100	P	H
		5942.4	51.74	-16.56	68.3	41.5	34.81	8.64	33.21	316	100	P	H
		5798	104.79	-	-	94.5	34.86	8.6	33.17	316	100	P	H
		5798	95.82	-	-	85.53	34.86	8.6	33.17	316	100	A	H
802.11n													H
HT40													H
CH 159		5620.4	52.48	-15.82	68.3	42.09	35.01	8.56	33.18	176	352	P	V
5795MHz		5696	57.47	-44.88	102.35	47.12	34.95	8.57	33.17	176	352	P	V
		5713.2	61.98	-47.02	109	51.63	34.94	8.58	33.17	176	352	P	V
		5724	54.06	-65.96	120.02	43.73	34.92	8.58	33.17	176	352	P	V
		5853.2	53.6	-61.4	115	43.34	34.82	8.61	33.17	176	352	P	V
		5861.6	61.79	-47.26	109.05	51.54	34.8	8.62	33.17	176	352	P	V
		5880.4	57.19	-44.1	101.29	46.95	34.8	8.62	33.18	176	352	P	V
		5953.2	51.79	-16.51	68.3	41.55	34.81	8.64	33.21	176	352	P	V
		5798	105.14	-	-	94.85	34.86	8.6	33.17	176	352	P	V
		5798	96.83	-	-	86.54	34.86	8.6	33.17	176	352	A	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		11510	45.47	-28.53	74	55.83	39.3	12.9	62.56	100	360	P	H
													H
													H
													H
		11510	45.98	-28.02	74	56.34	39.3	12.9	62.56	100	360	P	V
													V
													V
													V
802.11n HT40 CH 159 5795MHz		11590	46.11	-27.89	74	56.64	39.39	12.82	62.74	100	360	P	H
													H
													H
													H
		11590	46.07	-27.93	74	56.6	39.39	12.82	62.74	100	360	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5648	52.17	-16.13	68.3	41.78	35	8.56	33.17	226	349	P	H
		5699.2	59.41	-45.3	104.71	49.06	34.95	8.57	33.17	226	349	P	H
		5718	61.44	-48.9	110.34	51.11	34.92	8.58	33.17	226	349	P	H
		5724	61.4	-58.62	120.02	51.07	34.92	8.58	33.17	226	349	P	H
		5851.2	55.39	-64.17	119.56	45.13	34.82	8.61	33.17	226	349	P	H
		5855.6	54.74	-55.99	110.73	44.49	34.8	8.62	33.17	226	349	P	H
		5875.6	52.32	-52.53	104.85	42.08	34.8	8.62	33.18	226	349	P	H
		5928.4	52.92	-15.38	68.3	42.67	34.81	8.64	33.2	226	349	P	H
		5770	100.93	-	-	90.62	34.88	8.6	33.17	226	349	P	H
		5770	91.99	-	-	81.68	34.88	8.6	33.17	226	349	A	H
802.11ac													H
VHT80													H
CH 155		5625.2	53.07	-15.23	68.3	42.68	35.01	8.56	33.18	298	101	P	V
5775MHz		5695.6	59.17	-42.89	102.06	48.82	34.95	8.57	33.17	298	101	P	V
		5715.2	62.3	-47.26	109.56	51.95	34.94	8.58	33.17	298	101	P	V
		5724.8	61	-60.84	121.84	50.67	34.92	8.58	33.17	298	101	P	V
		5851.6	57.56	-61.09	118.65	47.3	34.82	8.61	33.17	298	101	P	V
		5857.2	55.45	-54.83	110.28	45.2	34.8	8.62	33.17	298	101	P	V
		5917.2	52.52	-21.53	74.05	42.27	34.81	8.63	33.19	298	101	P	V
		5925.2	51.42	-16.88	68.3	41.17	34.81	8.64	33.2	298	101	P	V
		5774	101.06	-	-	90.75	34.88	8.6	33.17	298	101	P	V
		5774	92.66	-	-	82.35	34.88	8.6	33.17	298	101	A	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		11550	46.99	-27.01	74	57.46	39.35	12.85	62.67	100	360	P	H
													H
													H
													H
		11550	45.93	-28.07	74	56.4	39.35	12.85	62.67	100	360	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11n HT40 (LF @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11n HT40 LF		30.97	21.19	-18.81	40	25.95	25.74	0.58	31.08	100	16	P	H
		176.47	23.86	-19.64	43.5	36.98	16.45	1.44	31.01			P	H
		202.66	22.46	-21.04	43.5	36.22	15.83	1.52	31.11			P	H
		281.23	21.96	-24.04	46	32.55	18.97	1.83	31.39			P	H
		549.92	24.51	-21.49	46	28.62	24.8	2.59	31.5			P	H
		752.65	24.83	-21.17	46	25.23	27.33	3.06	30.79			P	H
													H
													H
													H
													H
													H
													H
		32.91	29.24	-10.76	40	35.05	24.62	0.61	31.04			P	V
		49.4	33.02	-6.98	40	48.28	15.47	0.75	31.48	100	256	P	V
		81.41	20.35	-19.65	40	35.21	15.56	0.98	31.4			P	V
		182.29	26.29	-17.21	43.5	39.6	16.26	1.46	31.03			P	V
		596.48	24.05	-21.95	46	27.4	25.45	2.7	31.5			P	V
		919.49	27.87	-18.13	46	26.08	29.53	3.44	31.18			P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

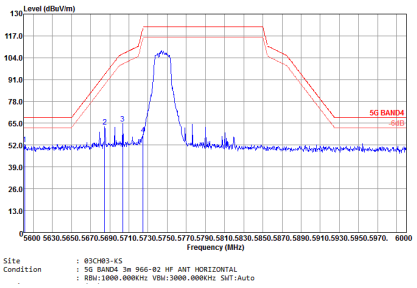
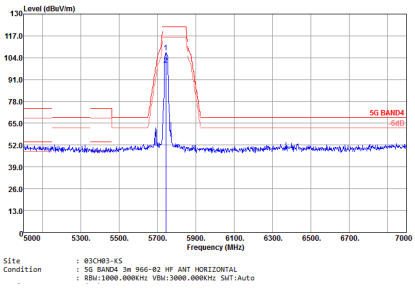
Both peak and average measured complies with the limit line, so test result is “PASS”.

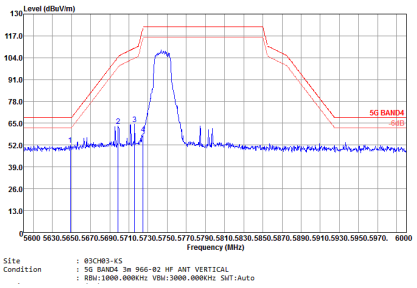
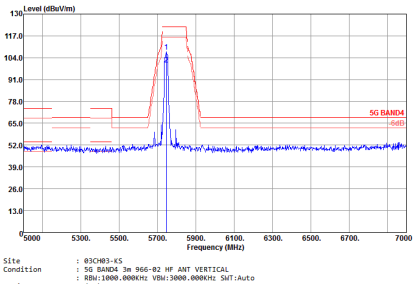
Appendix C. Radiated Spurious Emission Plots

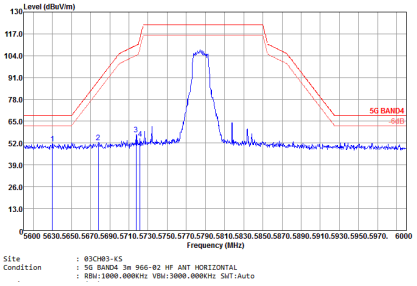
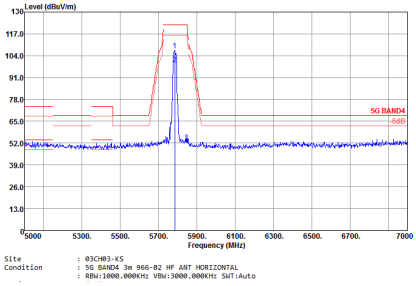
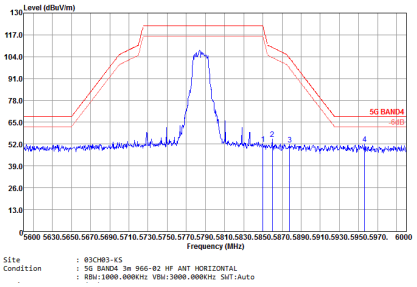
Test Engineer :	Dream Li	Temperature :	21~23°C
		Relative Humidity :	44~47%

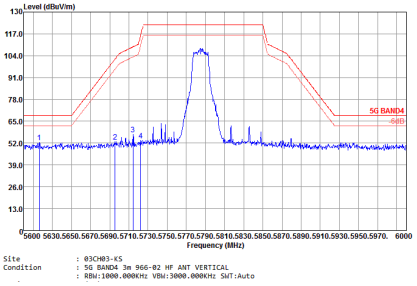
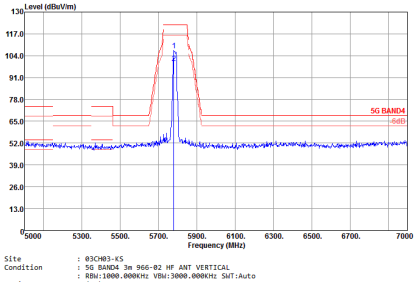
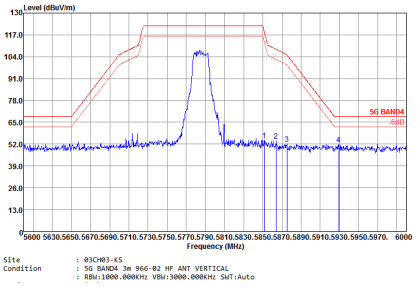
Band 4 - 5725~5850MHz

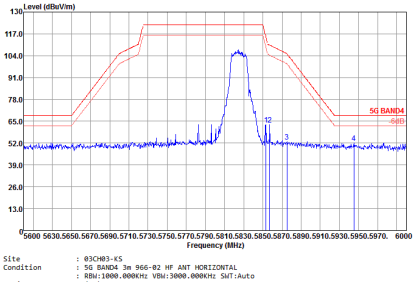
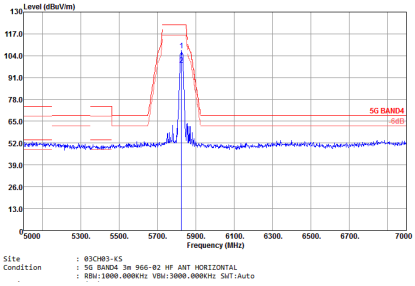
WIFI 802.11a (Band Edge @ 3m)

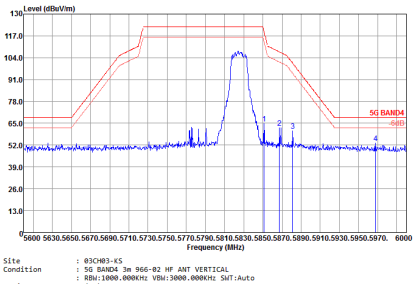
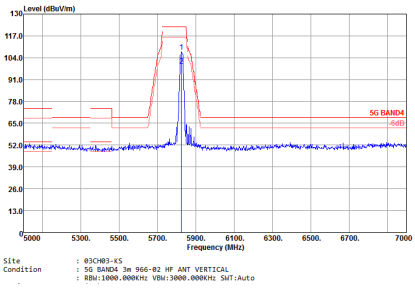
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Vertical	Fundamental
Peak		

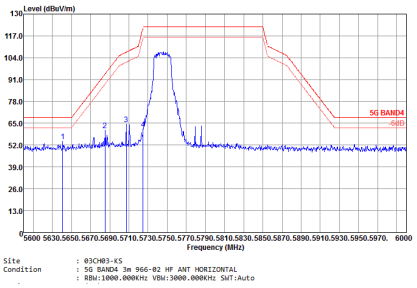
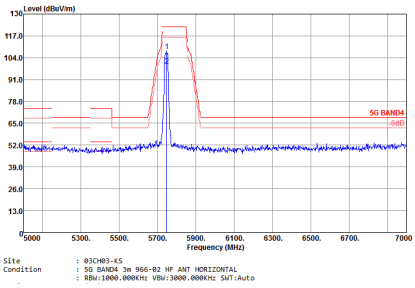
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

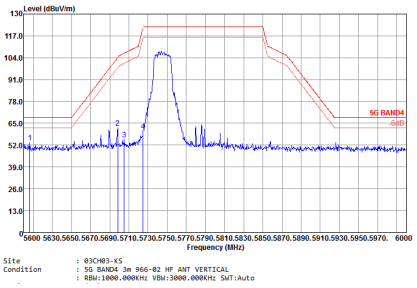
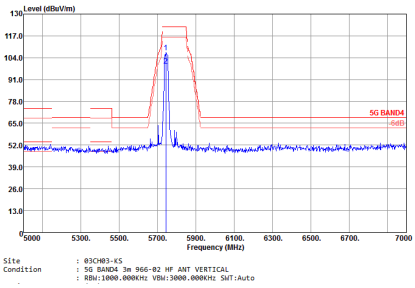
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

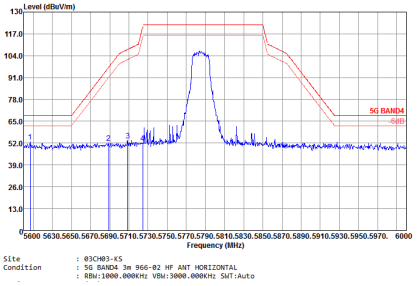
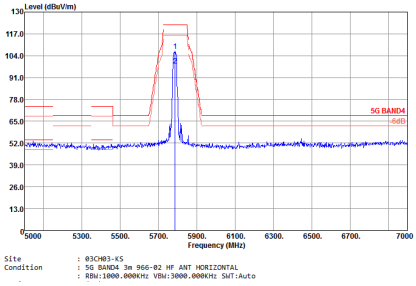
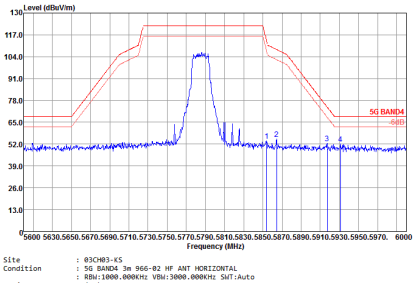
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

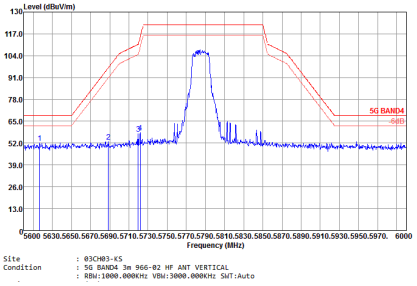
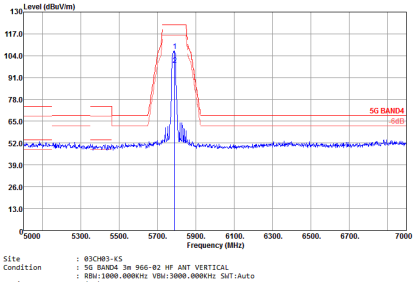
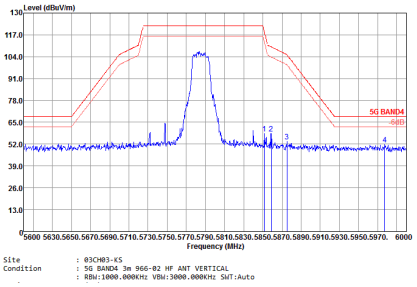
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak		

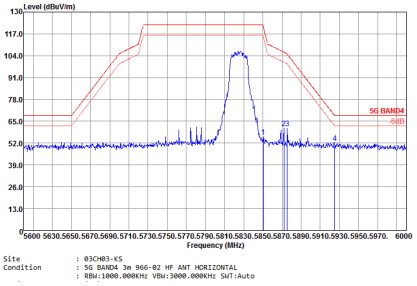
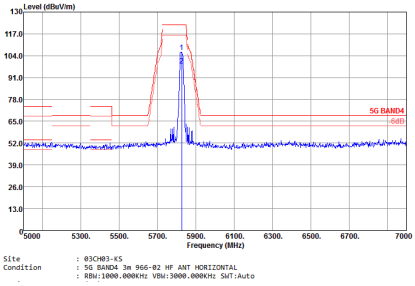
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

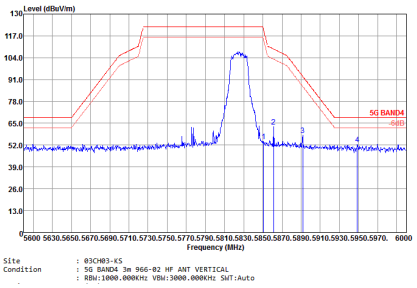
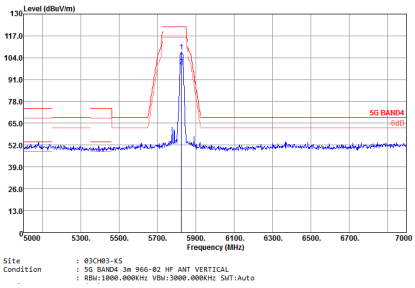
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Vertical	Fundamental
Peak		

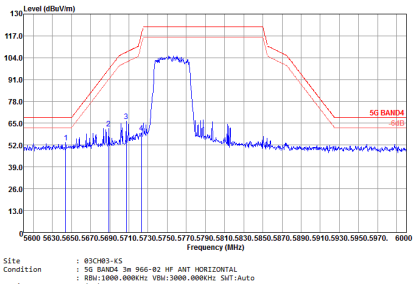
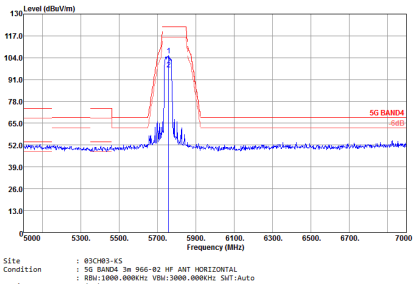
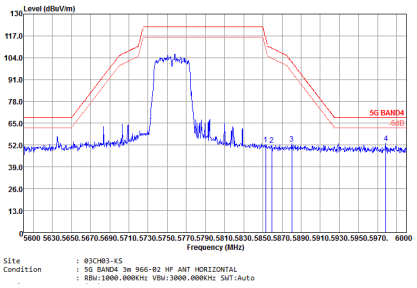
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

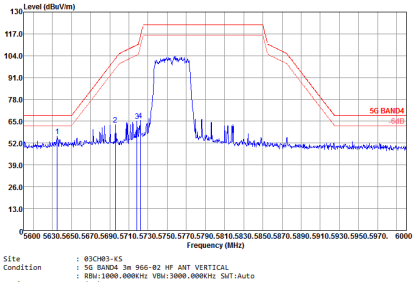
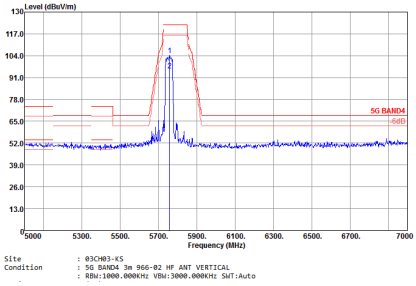
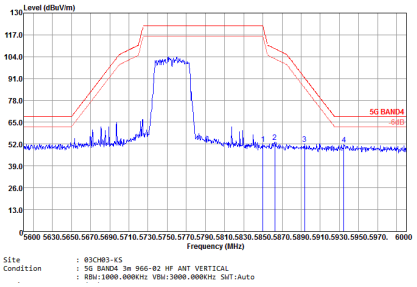
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

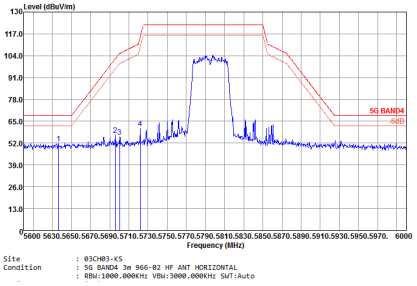
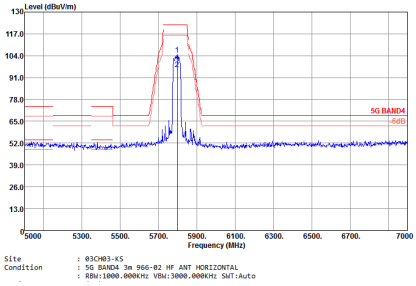
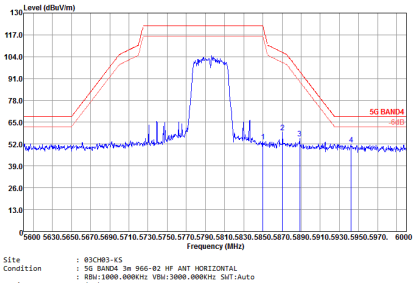
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

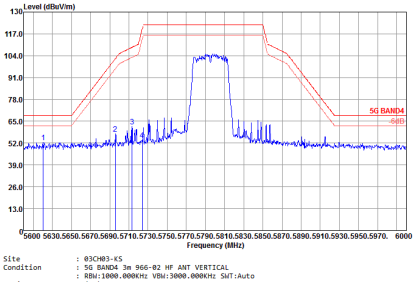
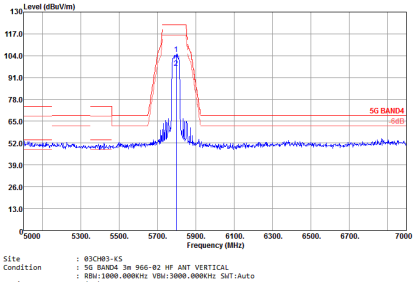
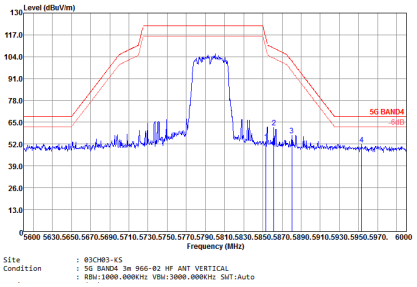
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak		

Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

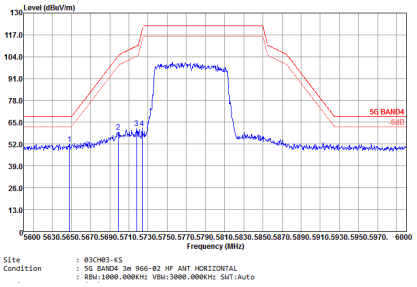
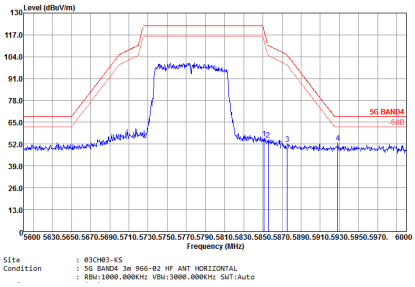
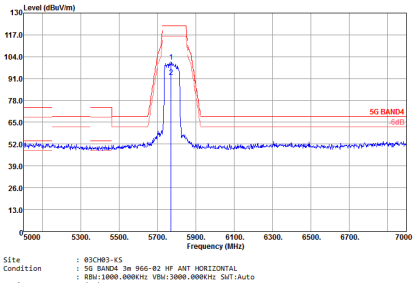
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

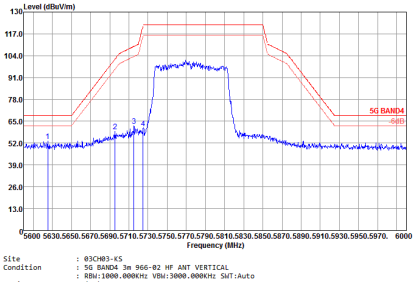
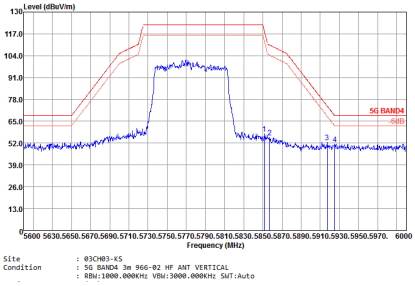
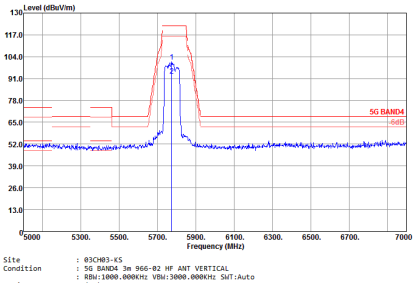
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

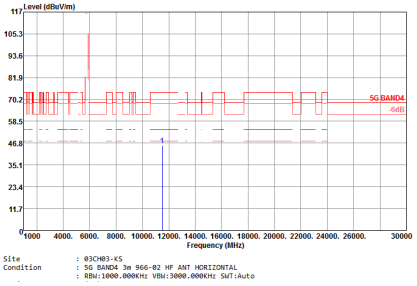
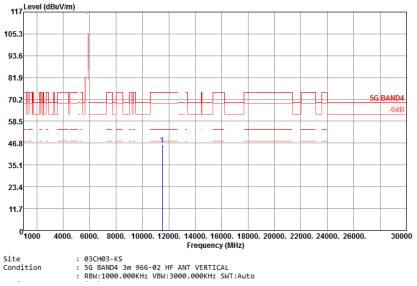
Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

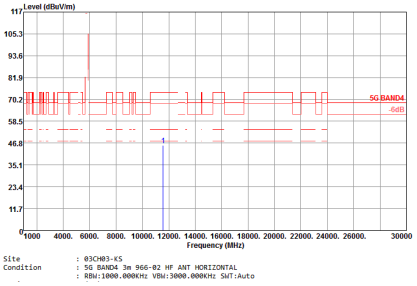
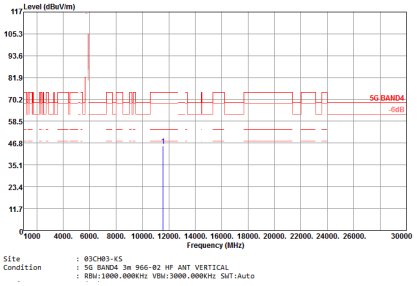
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

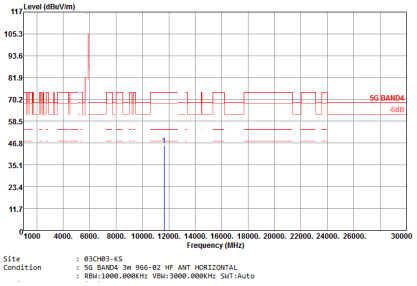
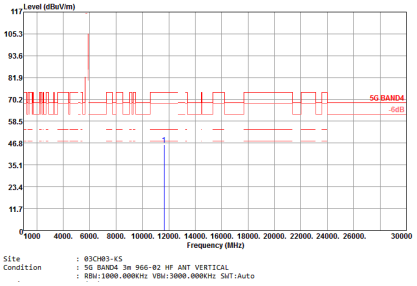
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 - 5725~5850MHz

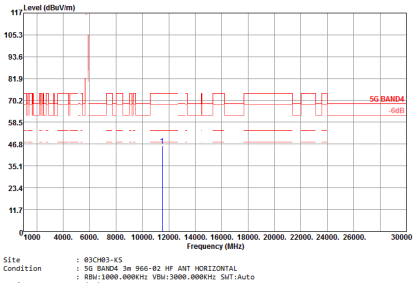
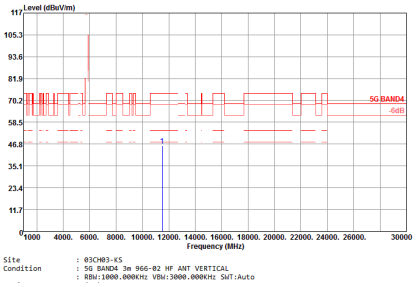
WIFI 802.11a (Harmonic @ 3m)

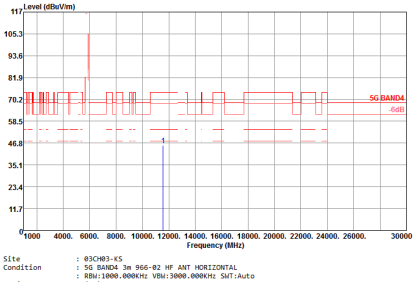
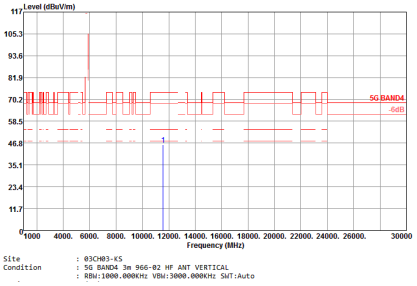
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.		

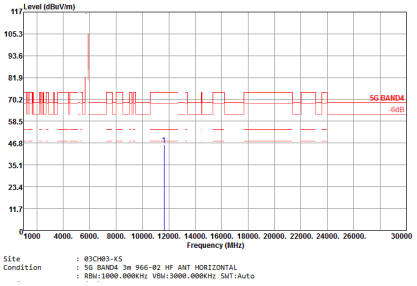
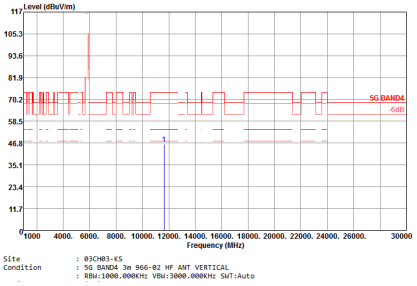
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.		

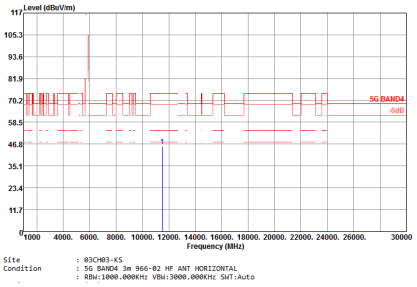
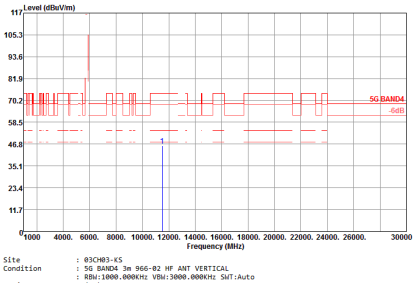
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

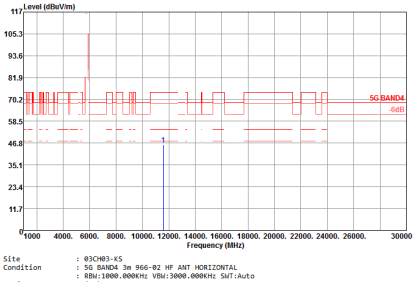
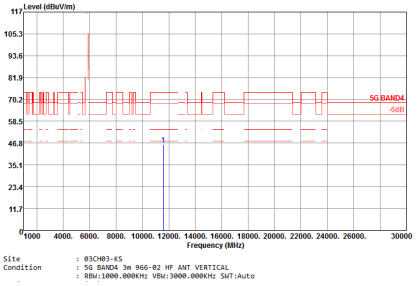
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

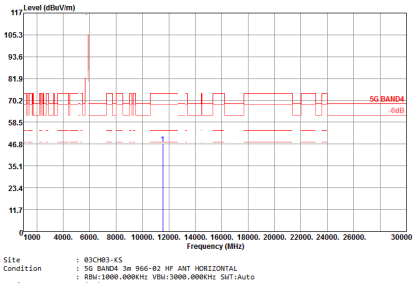
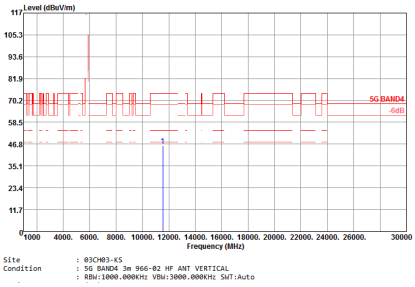
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Vertical
Peak Avg.		

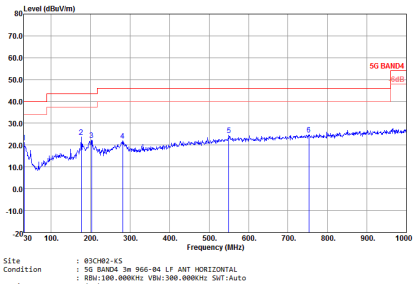
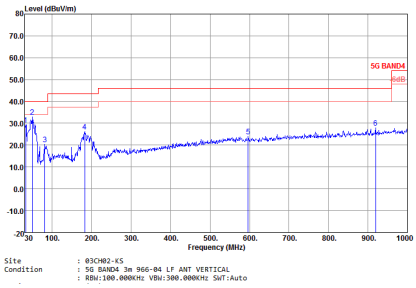
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

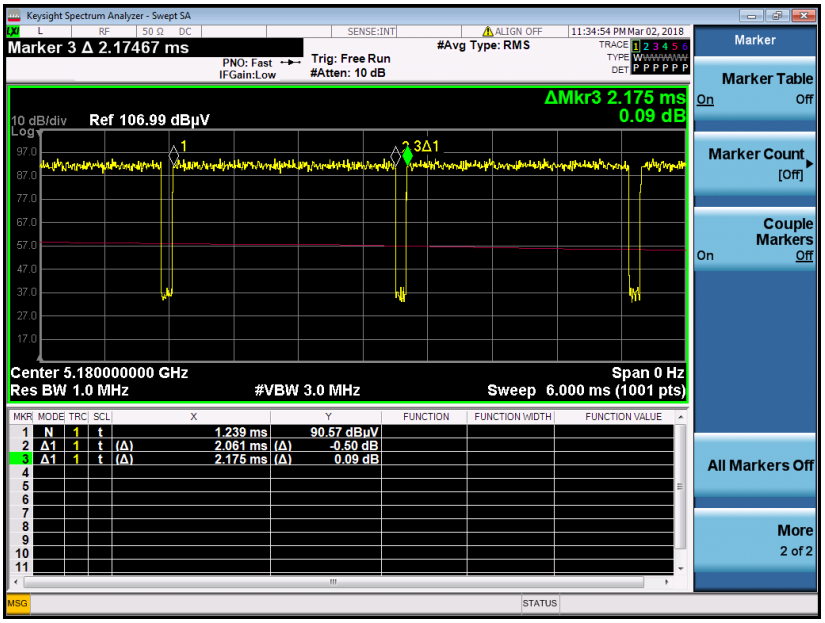
5GHz WIFI 802.11n HT40 (LF)

WIFI	5GHz 5725~5850MHz	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak		

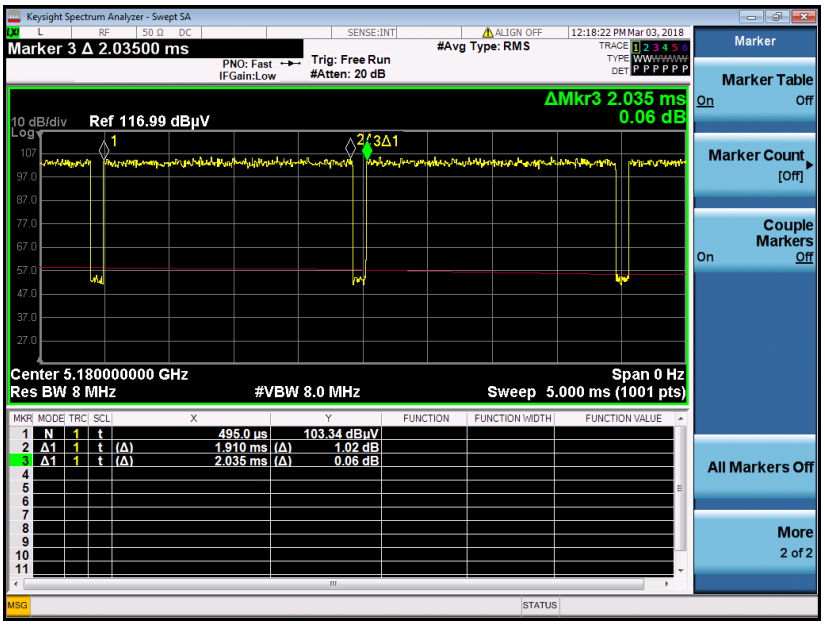
Appendix C. Duty Cycle Plots

Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11a	94.76	2.061	0.49	1KHz	0.29
5GHz 802.11n HT20	93.86	1.910	0.52	1KHz	0.16
5GHz 802.11n HT40	90.80	0.948	1.055	3KHz	0.27
5GHz 802.11ac VHT80	82.50	0.462	2.165	3KHz	0.60

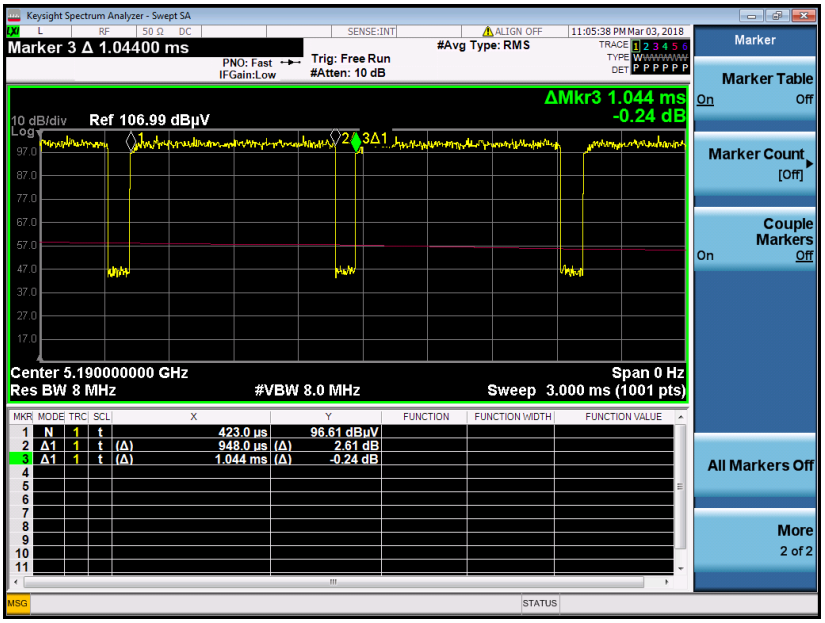
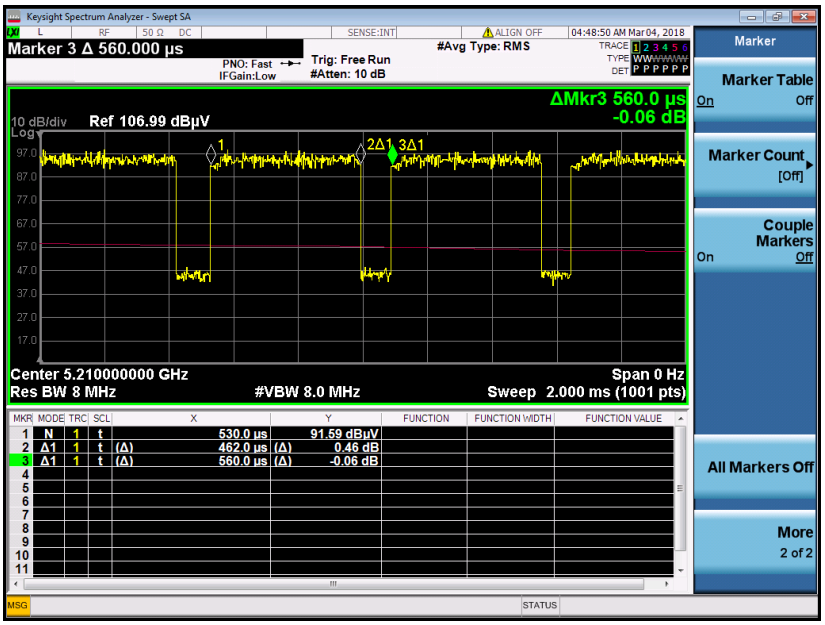
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80