FCC RF Test Report

APPLICANT	:	Amazon.com Services LLC
EQUIPMENT	:	Digital Media Receiver
MODEL NAME	:	C2N6L4
FCC ID	:	2A4DH-0821
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System
TEST DATE(S)	:	May 01, 2022 ~ Jul. 07, 2022

We, Sporton International Inc. (Shenzhen), 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.

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

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.01

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR1D0934-01B	Rev. 01	Initial issue of report	Jul. 18, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	99% Bandwidth	-	Report only	-
3.2	15.247(b)(3)	Peak Output Power	≤ 30dBm	Pass	-
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	Conducted Band Edges and Spurious Emission	≤ 20dBc	Pass	-
3.5	15.247(d)	Radiated Band Edges and Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 10.53 dB at 2483.520 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 21.96 dB at 0.401 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	15.203 & 15.247(b)	Pass	-
Remark: Not required means after assessing, test items are not necessary to carry out.					

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

Amazon.com Services LLC
410 Terry Avenue N Seattle, WA 98109-5210 United States

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	C2N6L4
FCC ID	2A4DH-0821

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

1.3 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	2402 MHz ~ 2480 MHz
Number of Channels	40
Carrier Frequency of Each Channel	40 Channel(37 hopping + 3 advertising channel)
Maximum Output Power to Antenna	Bluetooth LE 1Mbps : 4.90dBm (0.0031 W) Bluetooth LE 2Mbps : 4.80dBm (0.0030 W)
99% Occupied Bandwidth	Bluetooth LE 1Mbps : 1.033MHz Bluetooth LE 2Mbps : 2.058MHz
Antenna Type / Gain	PIFA Antenna type with gain 4 dBi
Type of Modulation	Bluetooth LE : GFSK

1.4 Modification of EUT

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

1.5 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-SZ TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH02-SZ	CN1256	421272

1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH02-SZ	AUDIX	E3	6.2009-8-24a
2.	CO01-SZ	AUDIX	E3	6.120613b

1.7 Applicable Standards

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

- 47 CFR Part 15 Subpart C §15.247
- FCC KDB 558074 D01 15.247 Meas Guidance v05r02
- 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

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	0	2402	21	2444
	1	2404	22	2446
	2	2406	23	2448
	3	2408	24	2450
	4	2410	25	2452
	5	2412	26	2454
	6	2414	27	2456
	7	2416	28	2458
	8	2418	29	2460
	9	2420	30	2462
	10	2422	31	2464
	11	2424	32	2466
	12	2426	33	2468
	13	2428	34	2470
	14	2430	35	2472
	15	2432	36	2474
	16	2434	37	2476
	17	2436	38	2478
	18	2438	39	2480
	19	2440	-	-
	20	2442	-	-

2.2 Test Mode

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: conduction emission (150 kHz to 30 MHz), 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 (Y plane) were recorded in this report.

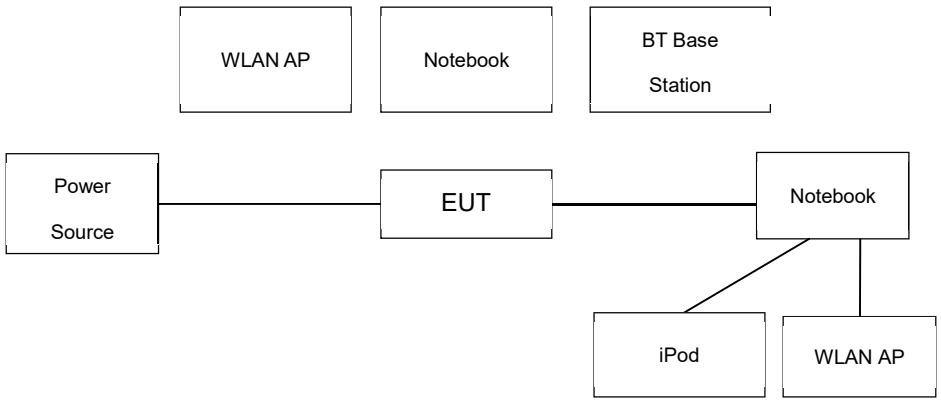
b. AC power line Conducted Emission was tested under maximum output power.

The following summary table is showing all test modes to demonstrate in compliance with the standard.

Summary table of Test Cases	
Test Item	**Data Rate / Modulation**
	Bluetooth – LE / GFSK
Conducted TCs	Mode 1: Bluetooth Tx CH00_2402 MHz Mode 2: Bluetooth Tx CH19_2440 MHz Mode 3: Bluetooth Tx CH39_2480 MHz
Radiated TCs	Mode 1: Bluetooth Tx CH00_2402 MHz Mode 2: Bluetooth Tx CH19_2440 MHz Mode 3: Bluetooth Tx CH39_2480 MHz
AC Conducted Emission	Mode 1: All Stress(CPU, DDR, NAND, all LEDs, Max Audio, Mic On)+ NB +Bluetooth Link+ WLAN Link(2.4G)+ Adapter(Acbel US)

2.3 Connection Diagram of Test System

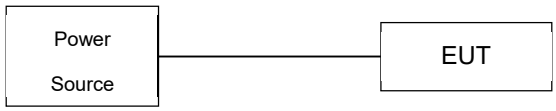
For AC Conducted Emission:



This example is connection diagram of EUT test configurations.

For detail, please refer to test mode configuration and setup photographs for each test item.

For Radiated Emission:



This example is connection diagram of EUT test configurations.

For detail, please refer to test mode configuration and setup photographs for each test item.

2.4 Support Unit used in test configuration and system

Item	Equipment	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,2.7m with Core
2.	Notebook	Inspiron 15-7570	Fcc DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
3.	IPod	MC525 ZP/A	Fcc DoC	Shielded, 1.0m	N/A
4.	Base Station	R&S	CBT32	N/A	Unshielded,1.8m

2.5 EUT Operation Test Setup

For BLE function, the engineering test program (compliance tool) was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

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 1.5 dB and 10dB attenuator.

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

= 1.5 + 10 = 11.5 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

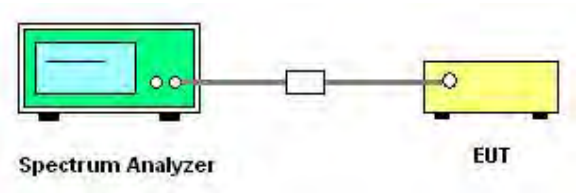
3.1.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.1.3 Test Procedures

1. The testing follows ANSI C63.10-2013 clause 11.8
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1% to 5% of the 99% OBW and the VBW is set to 3 times of the RBW.
6. Measure and record the results in the test report.

3.1.4 Test Setup



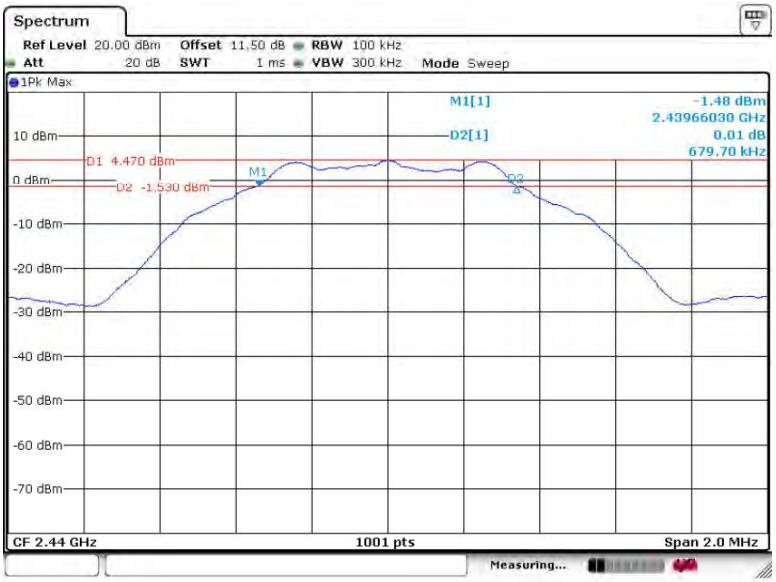
3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

Bluetooth LE 1Mbps:

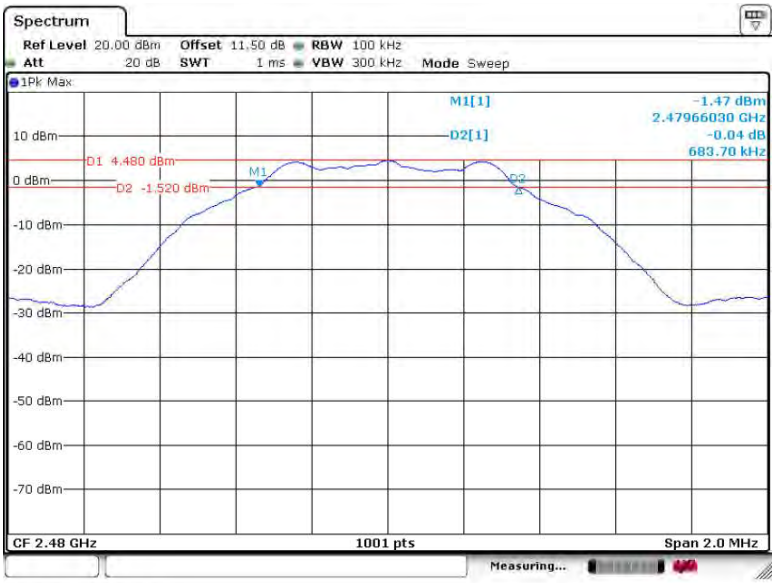
6 dB Bandwidth Plot on Channel 00

6 dB Bandwidth Plot on Channel 19



Date: 1.MAY.2022 21:27:30

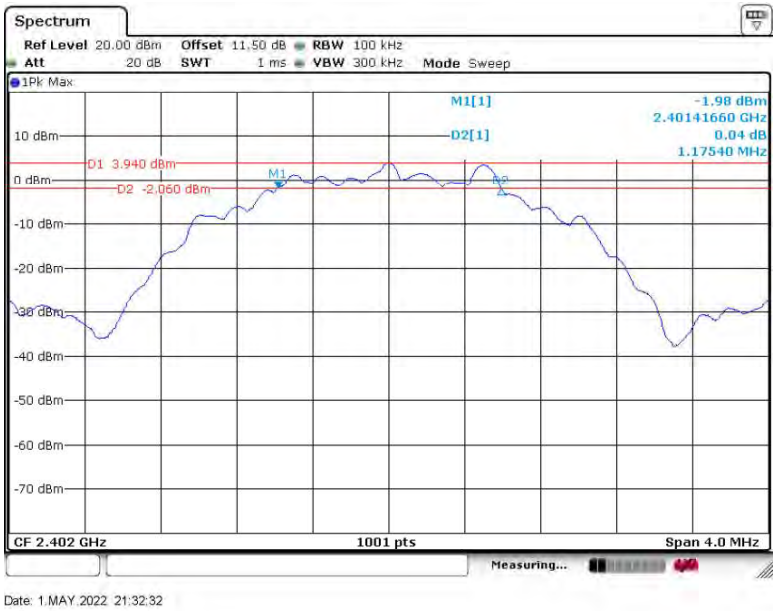
6 dB Bandwidth Plot on Channel 39



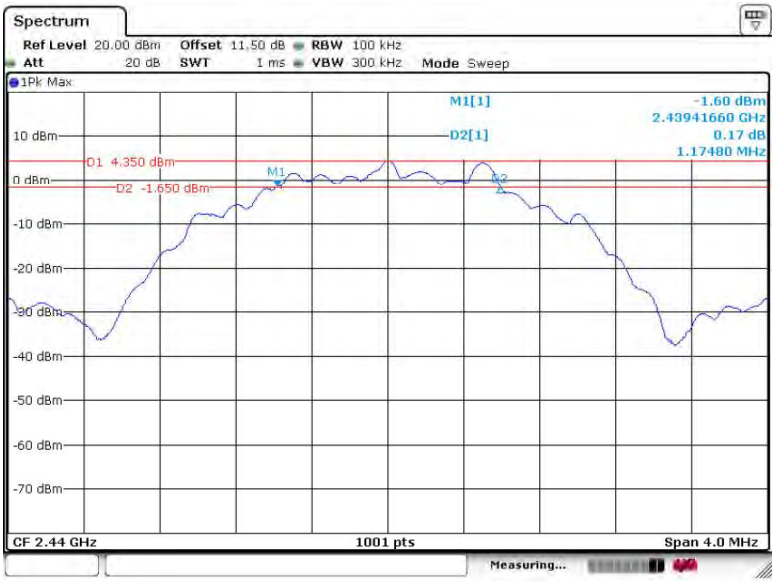
Date: 1.MAY.2022 21:29:49

Bluetooth LE 2Mbps:

6 dB Bandwidth Plot on Channel 00



6 dB Bandwidth Plot on Channel 19



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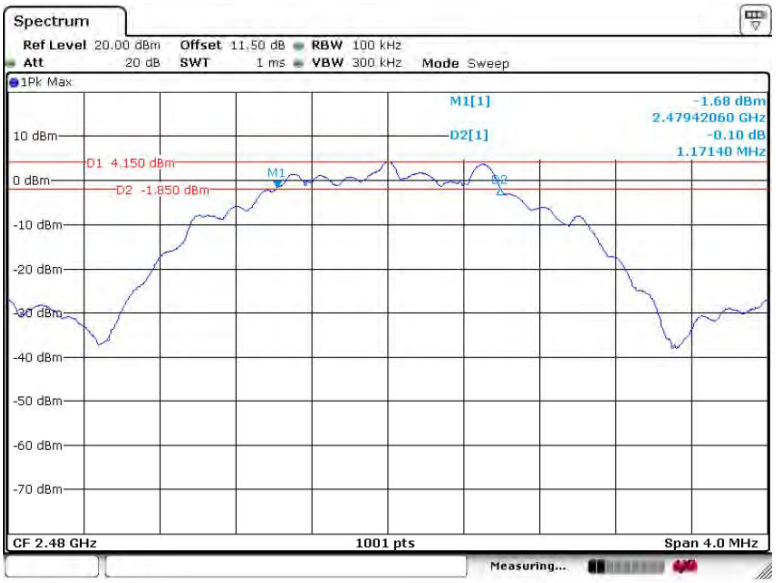
6 dB Bandwidth Plot on Channel 39



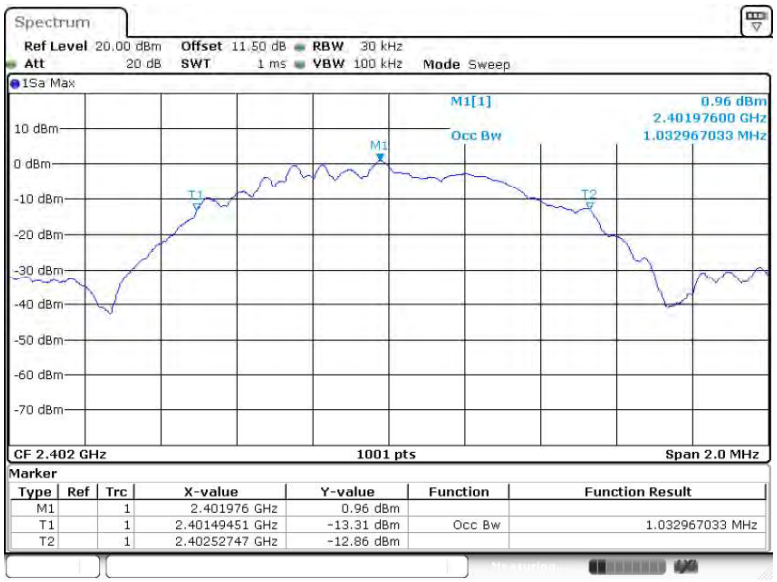
Date: 1.MAY.2022 21:37:53

3.1.6 Test Result of 99% Occupied Bandwidth

Please refer to Appendix A.

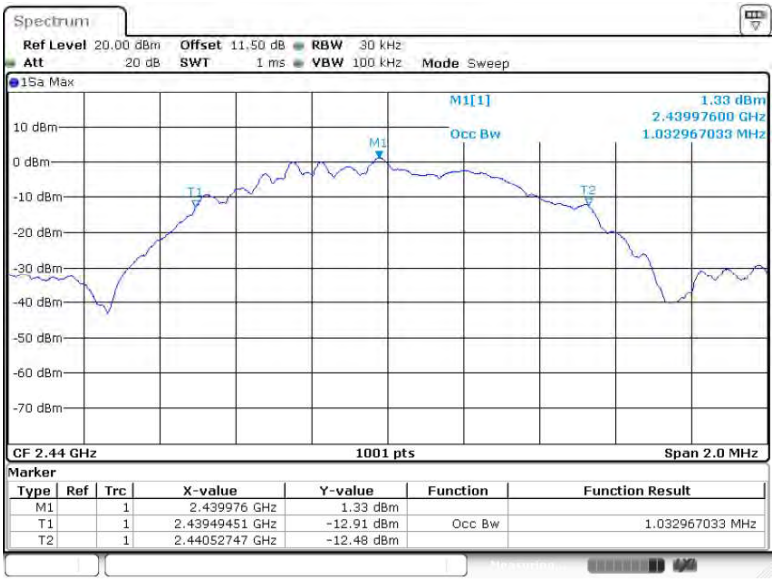
Bluetooth LE 1Mbps:

99% Occupied Bandwidth Plot on Channel 00



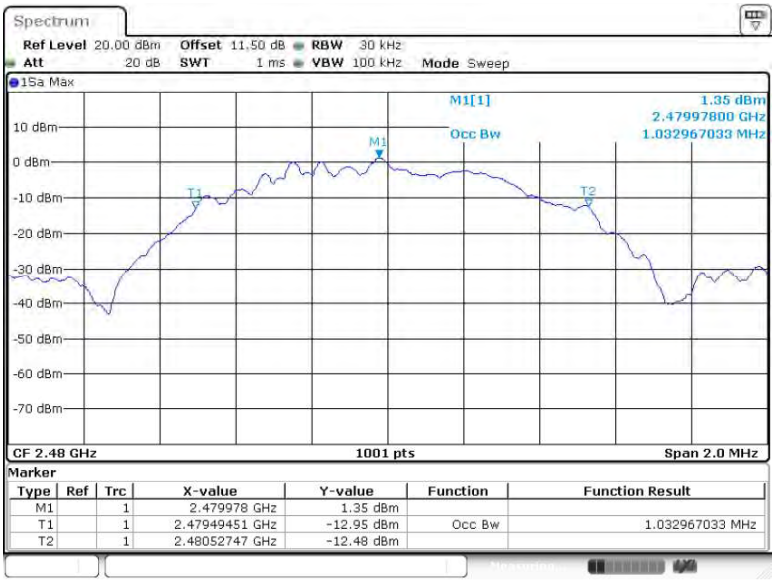
Date: 1.MAY.2022 21:26:40

99% Occupied Bandwidth Plot on Channel 19



Date: 1.MAY.2022 21:29:01

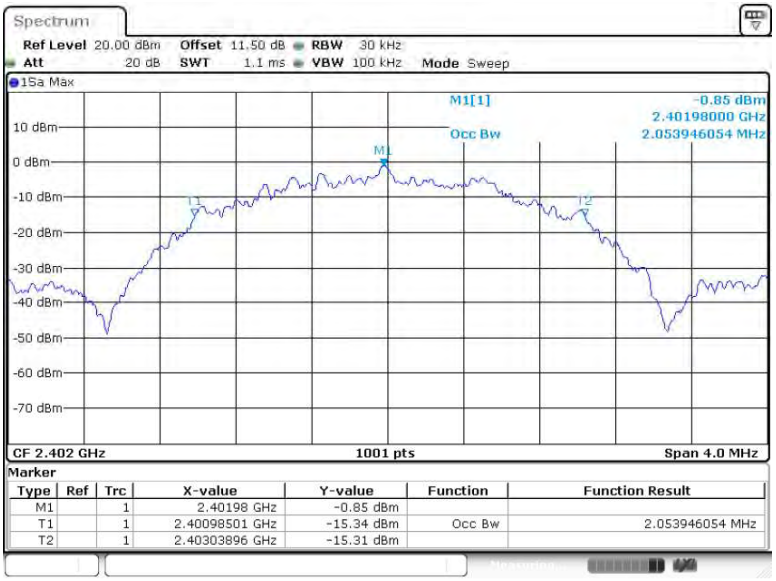
99% Occupied Bandwidth Plot on Channel 39



Date: 1.MAY.2022 21:31:15

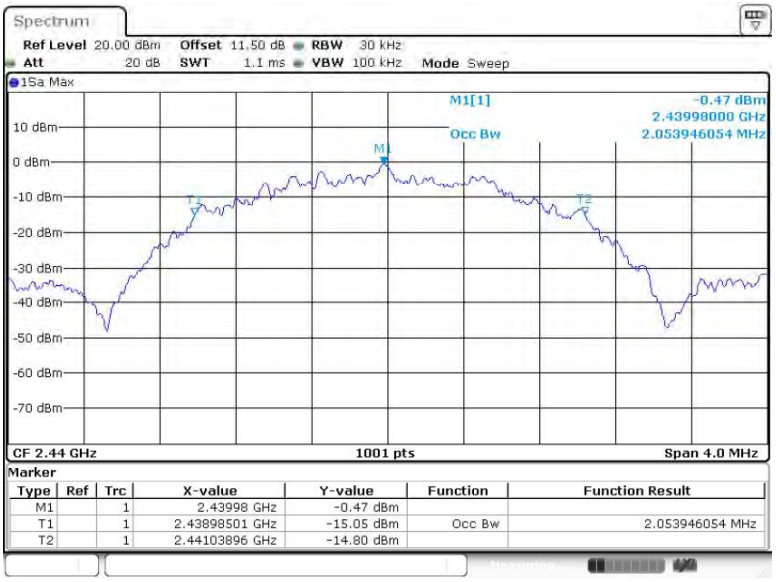
Bluetooth LE 2Mbps:

99% Occupied Bandwidth Plot on Channel 00



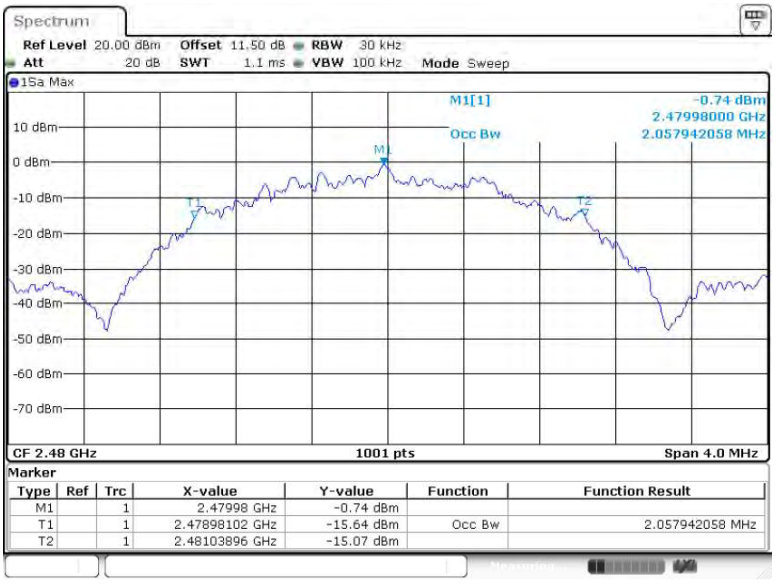
Date: 1.MAY.2022 21:34:55

99% Occupied Bandwidth Plot on Channel 19



Date: 1.MAY.2022 21:37:00

99% Occupied Bandwidth Plot on Channel 39



Date: 1.MAY.2022 21:39:03

Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

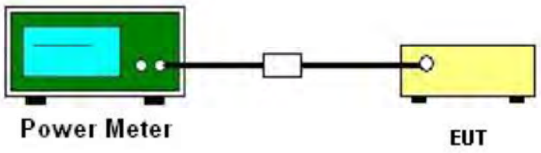
3.2.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2013 clause 11.9.1.3 PKPM1 Peak power meter or ANSI C63.10-2013 clause 11.9.2.3.1 Method AVGPM method.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

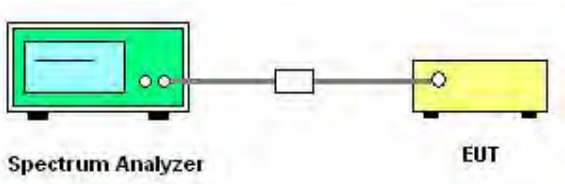
3.3.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure of ANSI C63.10-2013 clause 11.10.2 Method PKPSD.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. The Measured power density (dBm)/ 100kHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

3.3.4 Test Setup



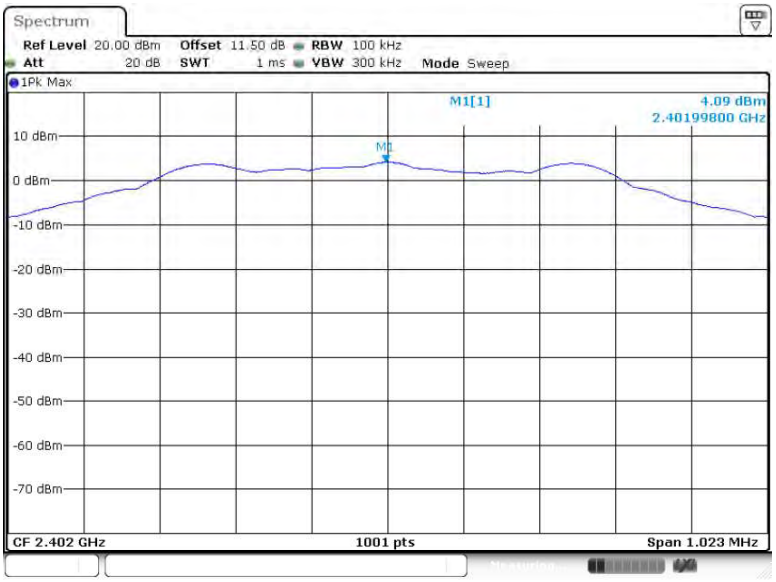
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.3.6 Test Result of Power Spectral Density Plots (100kHz)

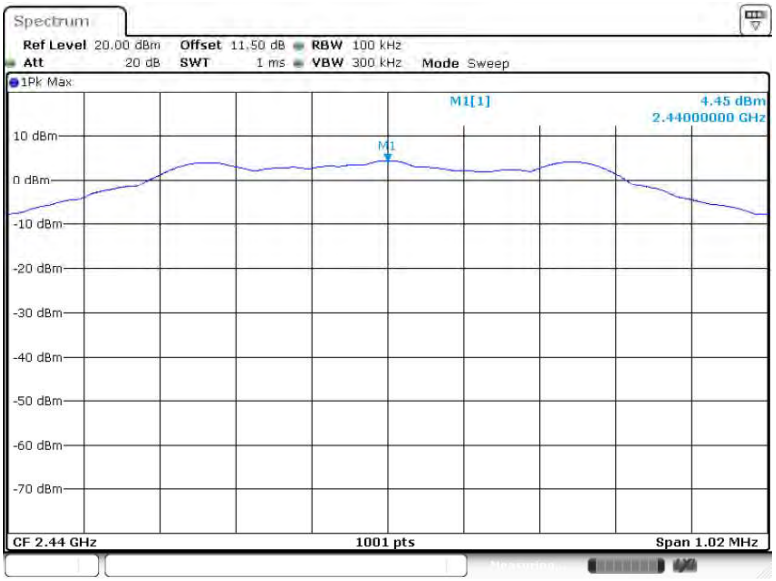
Bluetooth LE 1Mbps:

PSD 100kHz Plot on Channel 00



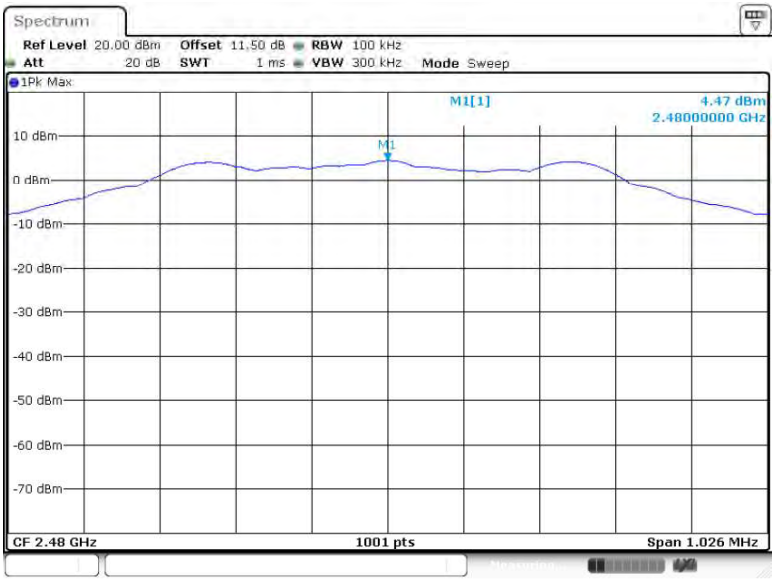
Date: 1.MAY.2022 21:25:47

PSD 100kHz Plot on Channel 19



Date: 1.MAY.2022 21:27:52

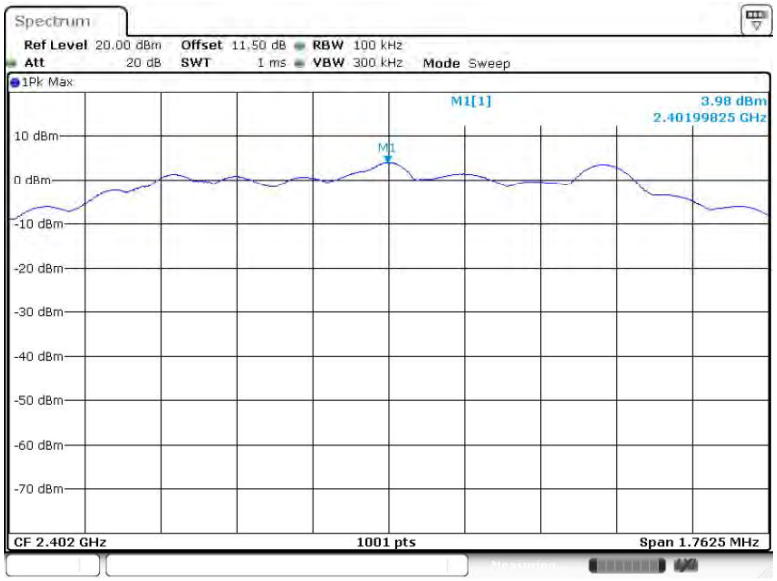
PSD 100kHz Plot on Channel 39



Date: 1.MAY.2022 21:30:30

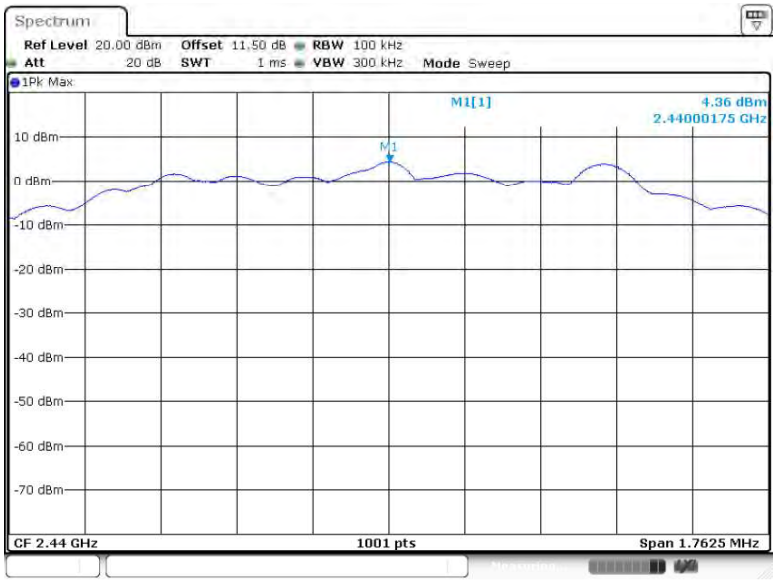
Bluetooth LE 2Mbps:

PSD 100kHz Plot on Channel 00



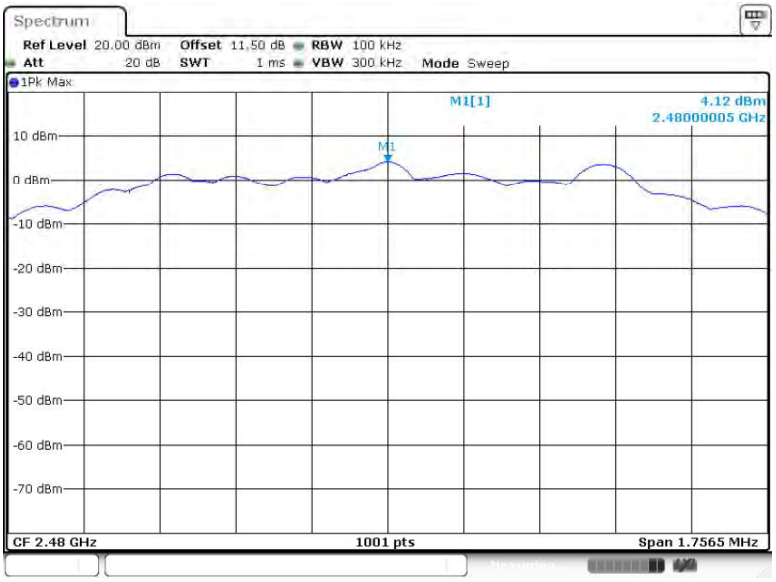
Date: 1.MAY.2022 21:32:54

PSD 100kHz Plot on Channel 19



Date: 1.MAY.2022 21:36:23

PSD 100kHz Plot on Channel 39

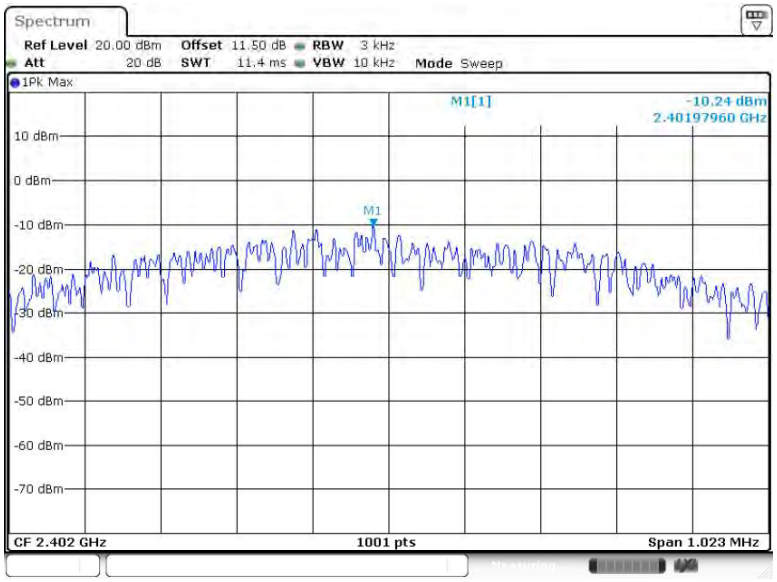


Date: 1.MAY.2022 21:38:16

3.3.7 Test Result of Power Spectral Density Plots (3kHz)

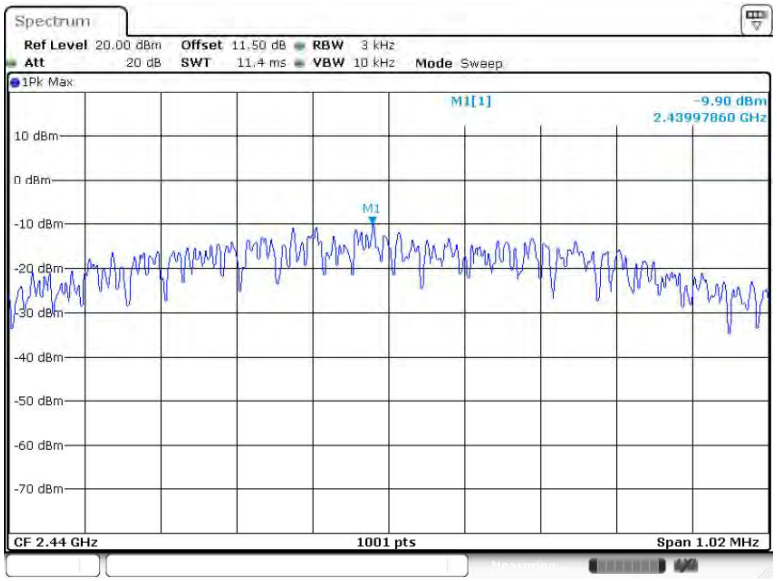
Bluetooth LE 1Mbps:

PSD 3kHz Plot on Channel 00



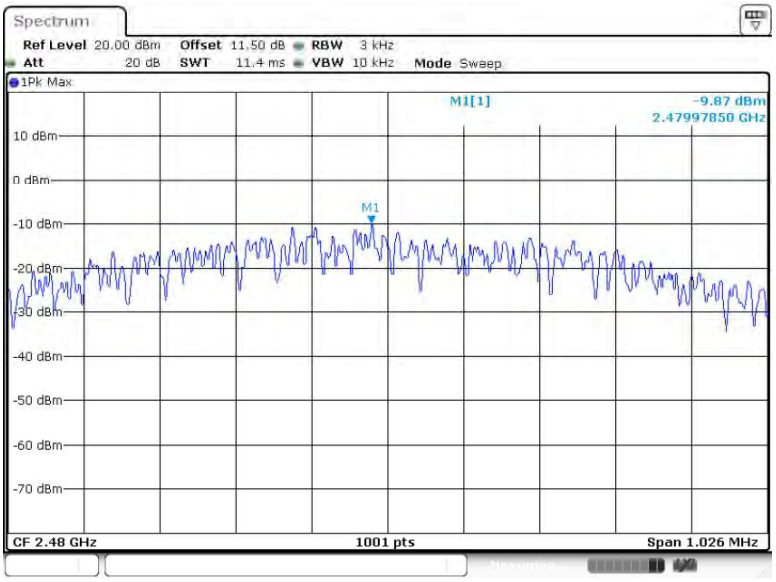
Date: 1.MAY.2022 21:25:33

PSD 3kHz Plot on Channel 19



Date: 1.MAY.2022 21:27:42

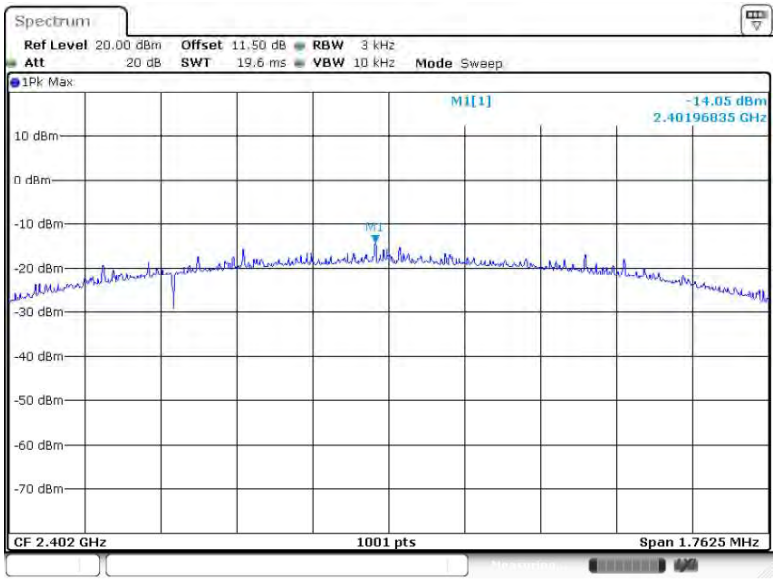
PSD 3kHz Plot on Channel 39



Date: 1.MAY.2022 21:30:02

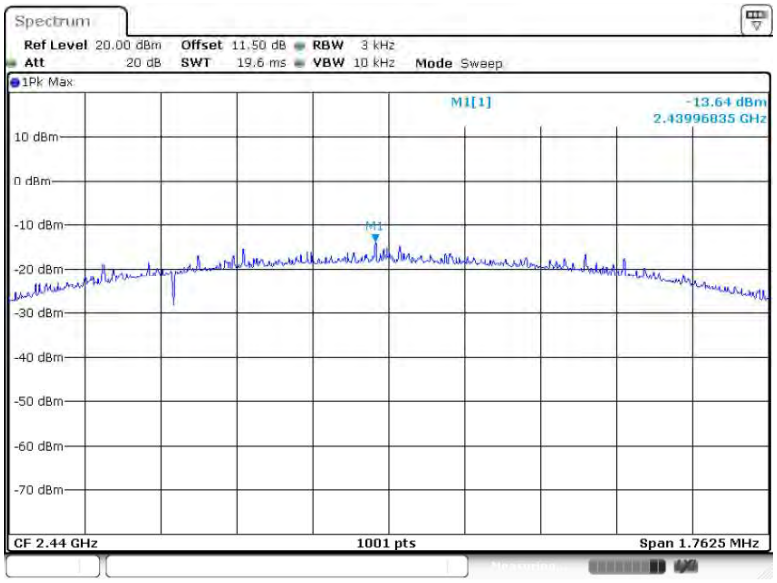
Bluetooth LE 2Mbps:

PSD 3kHz Plot on Channel 00



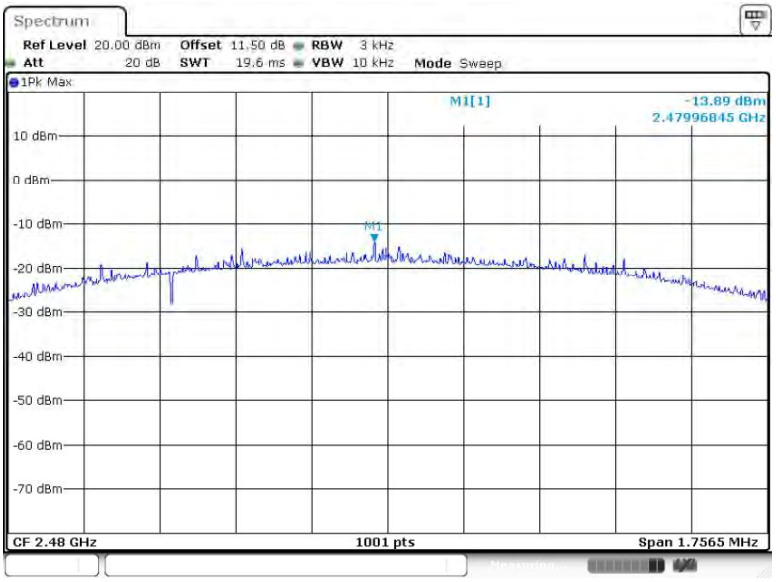
Date: 1.MAY.2022 21:32:43

PSD 3kHz Plot on Channel 19



Date: 1.MAY.2022 21:36:13

PSD 3kHz Plot on Channel 39



Date: 1.MAY.2022 21:38:05

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission

All harmonics/spurious must be at least 20 dB down from the highest emission level within the authorized band.

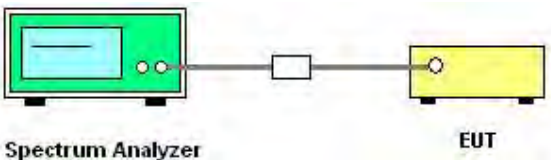
3.4.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.4.3 Test Procedure

1. The testing follows ANSI C63.10-2013 clause 11.13
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

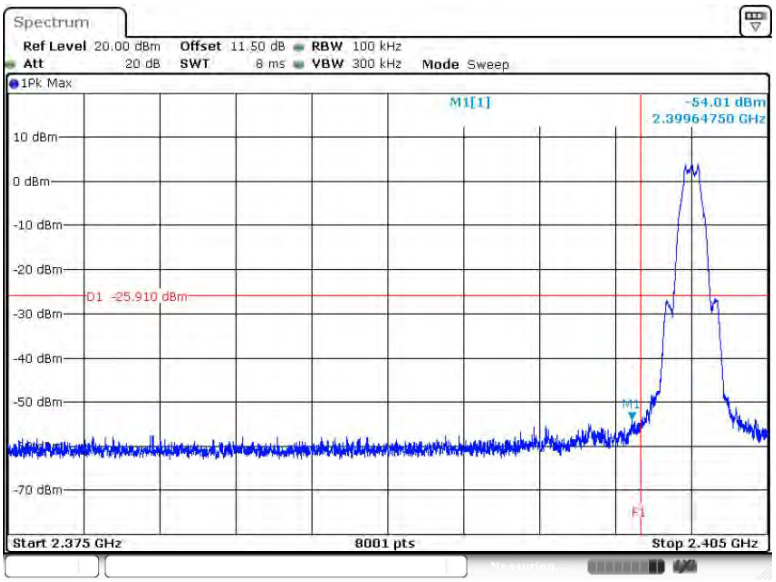
3.4.4 Test Setup



3.4.5 Test Result of Conducted Band Edges Plots

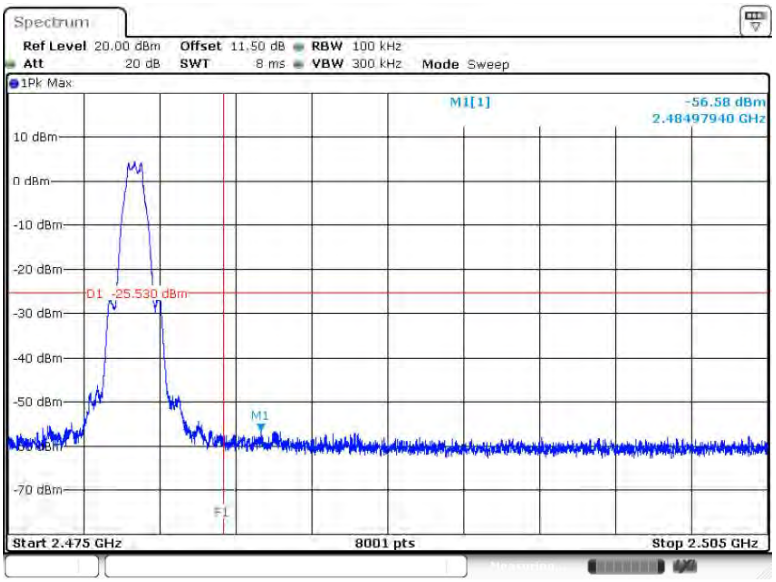
Bluetooth LE 1Mbps:

Low Band Edge Plot on Channel 00



Date: 1.MAY.2022 21:26:06

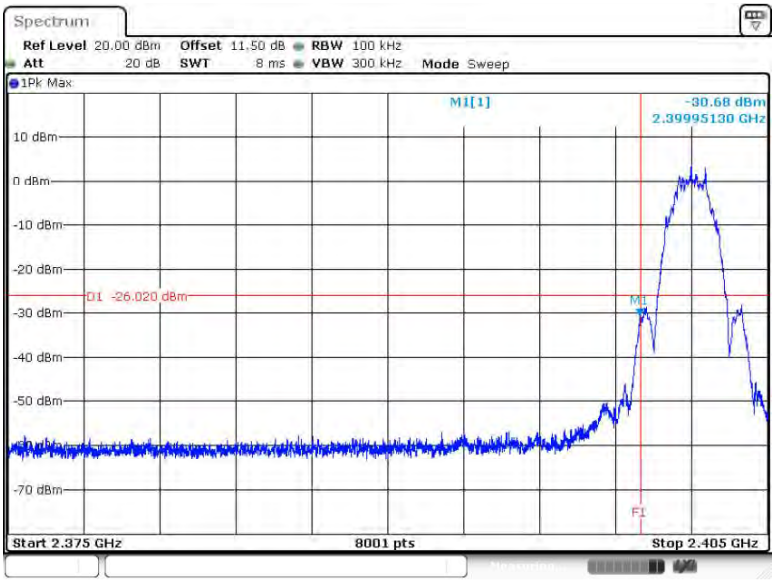
High Band Edge Plot on Channel 39



Date: 1.MAY.2022 21:30:41

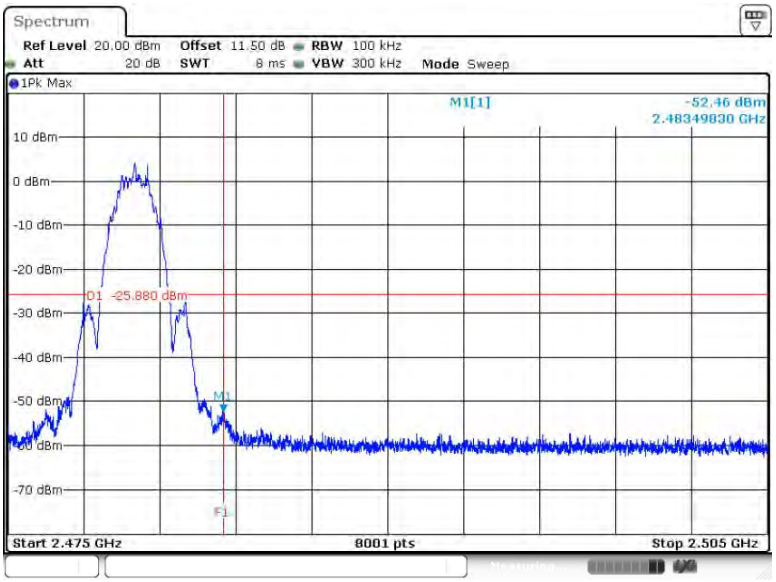
Bluetooth LE 2Mbps:

Low Band Edge Plot on Channel 00



Date: 1.MAY.2022 21:33:52

High Band Edge Plot on Channel 39



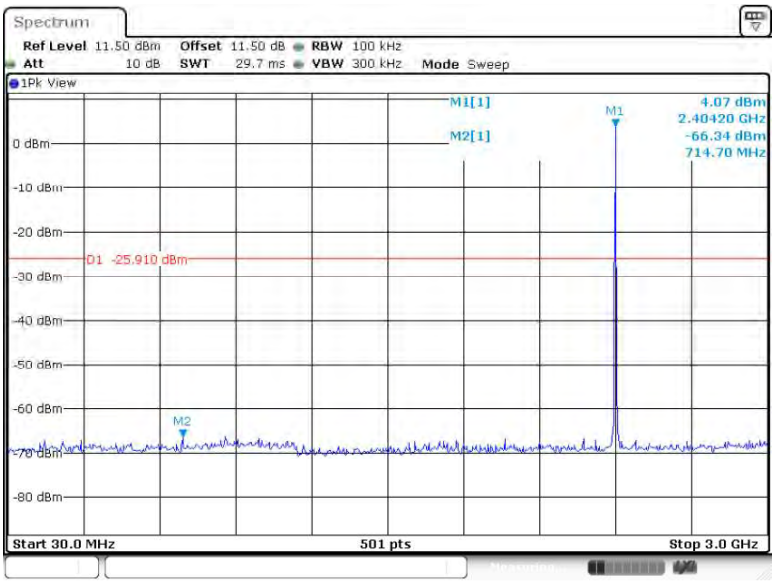
Date: 1.MAY.2022 21:38:26

3.4.6 Test Result of Conducted Spurious Emission Plots

Bluetooth LE 1Mbps:

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps

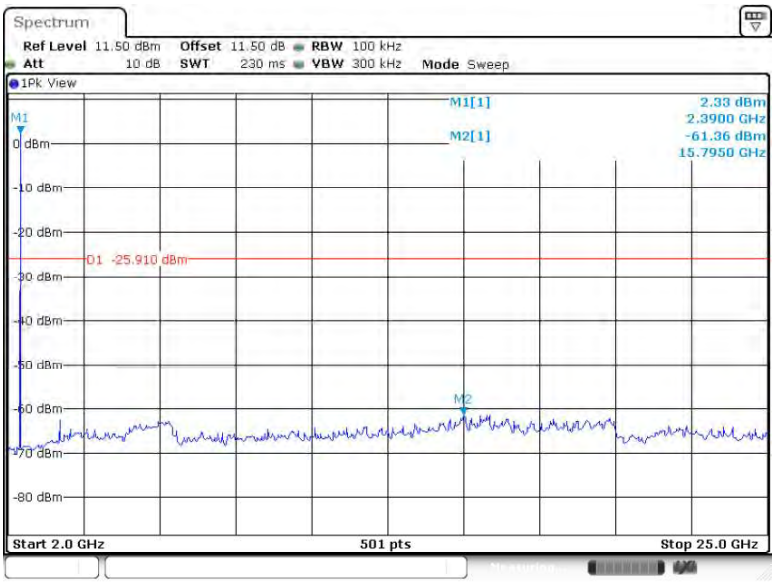
GFSK Channel 00



Date: 1.MAY.2022 21:26:19

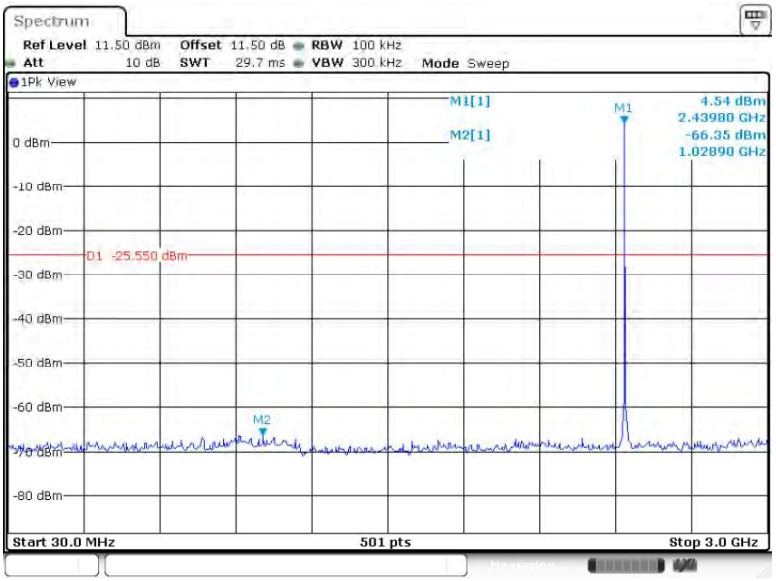
Conducted Spurious Emission Plot on Bluetooth LE 1Mbps

GFSK Channel 00



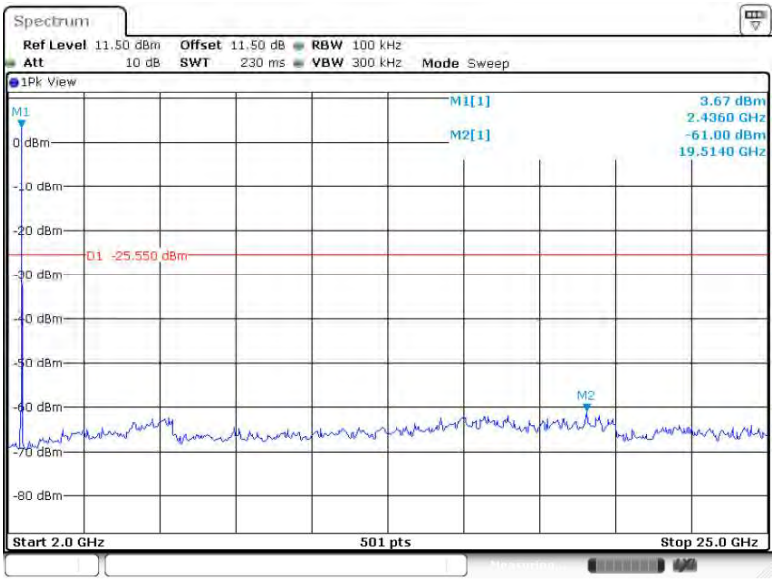
Date: 1.MAY.2022 21:26:29

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 19



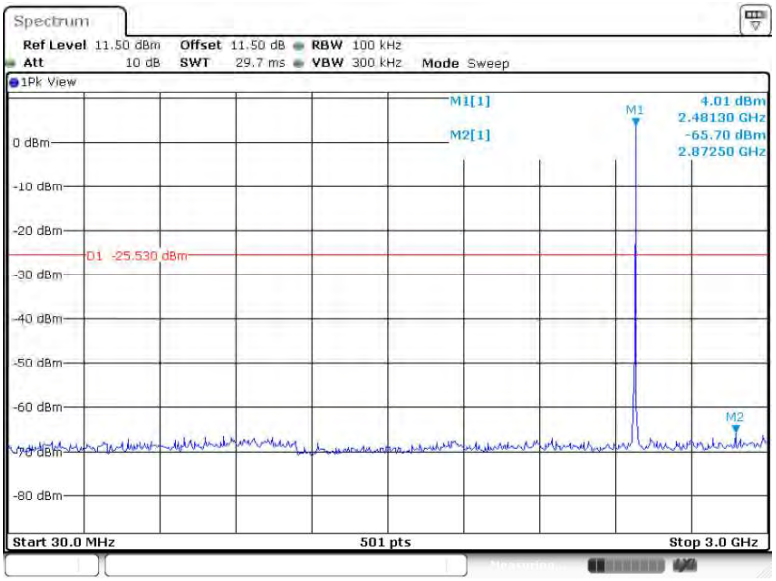
Date: 1.MAY.2022 21:28:41

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 19



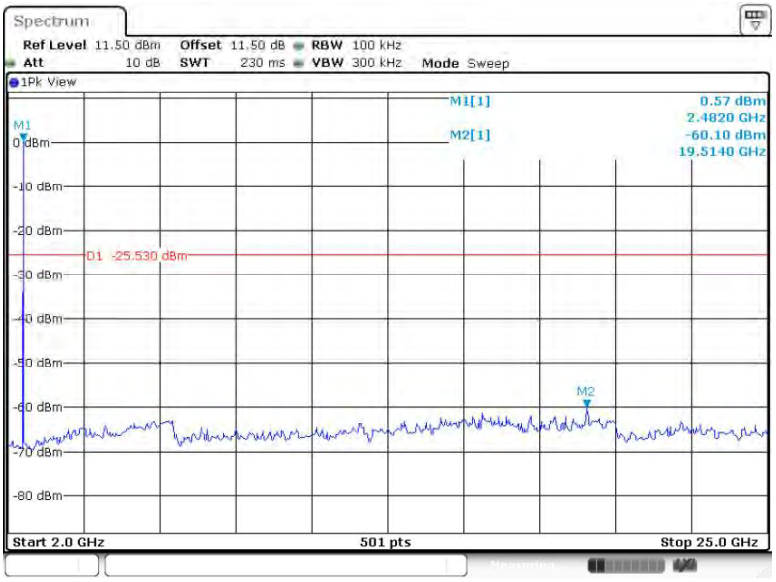
Date: 1.MAY.2022 21:28:51

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 39



Date: 1.MAY.2022 21:30:54

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 39

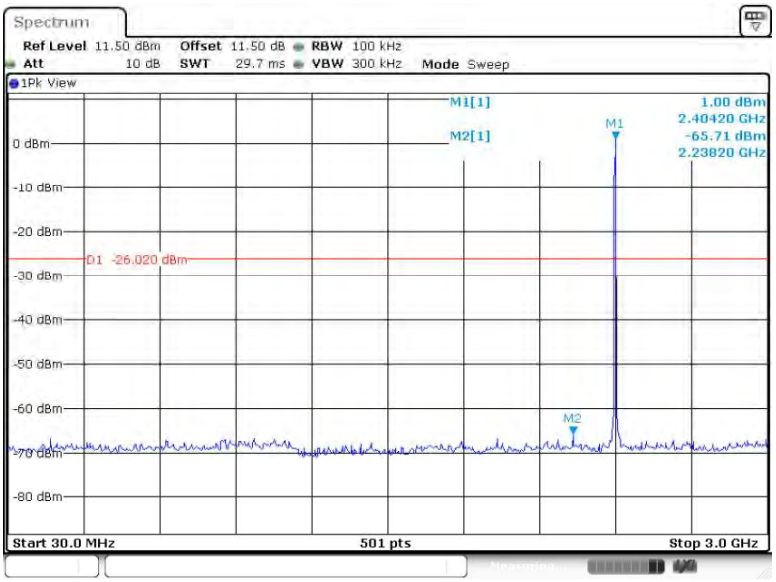


Date: 1.MAY.2022 21:31:05

Bluetooth LE 2Mbps:

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps

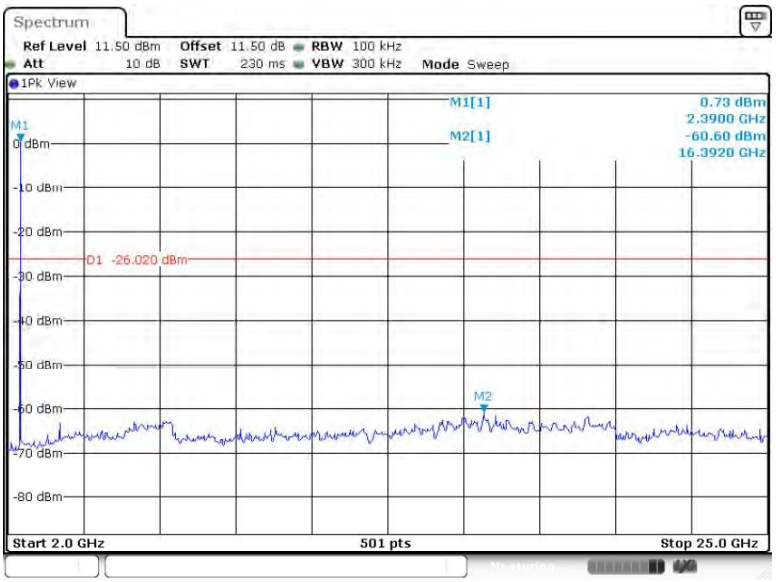
GFSK Channel 00



Date: 1.MAY.2022 21:34:34

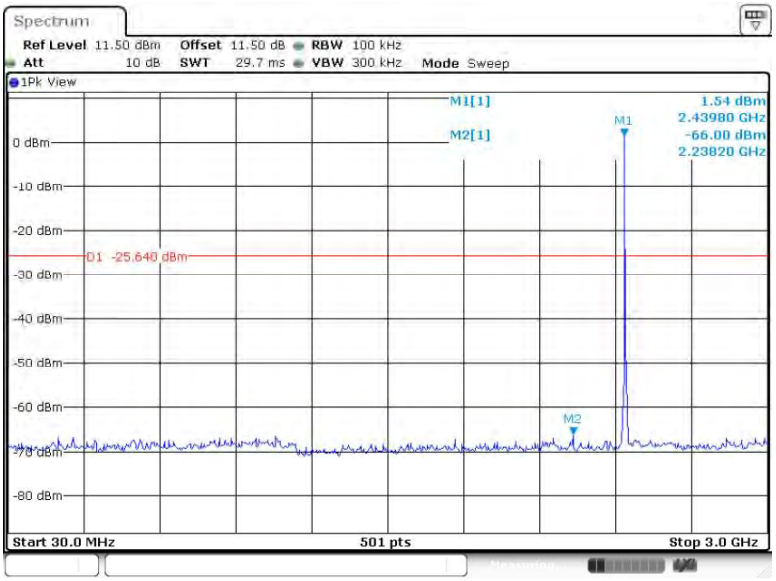
Conducted Spurious Emission Plot on Bluetooth LE 1Mbps

GFSK Channel 00



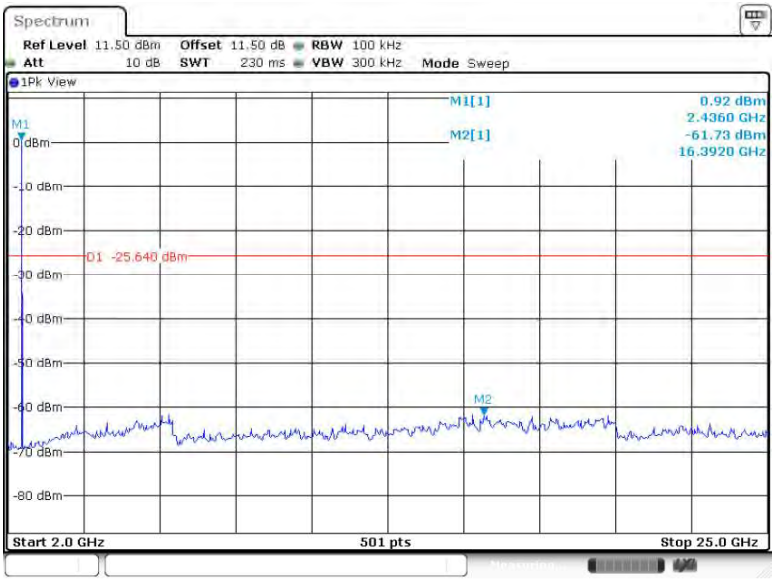
Date: 1.MAY.2022 21:34:44

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 19



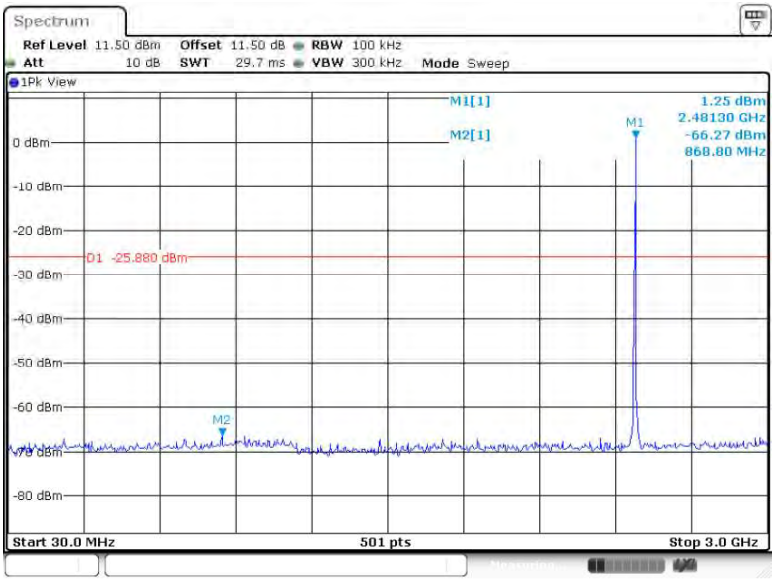
Date: 1.MAY.2022 21:36:35

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 19



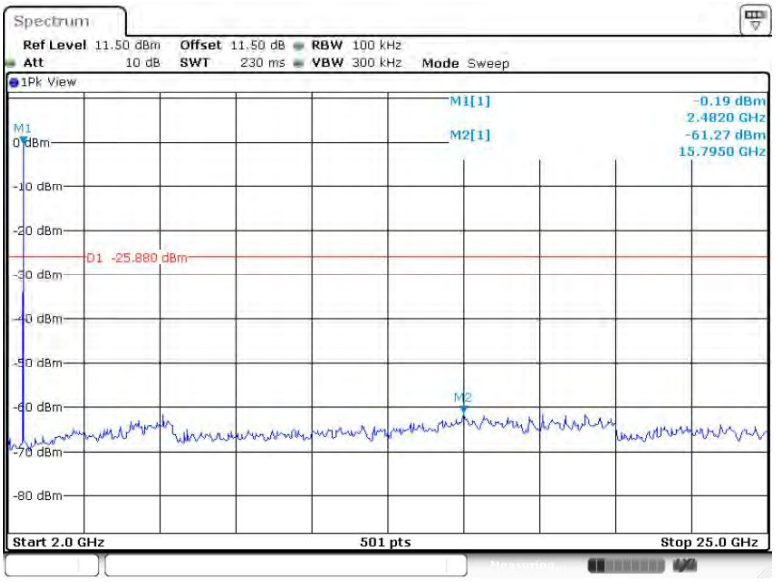
Date: 1.MAY.2022 21:36:47

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 39



Date: 1.MAY.2022 21:38:42

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 39



Date: 1.MAY.2022 21:38:52

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.5.2 Measuring Instruments

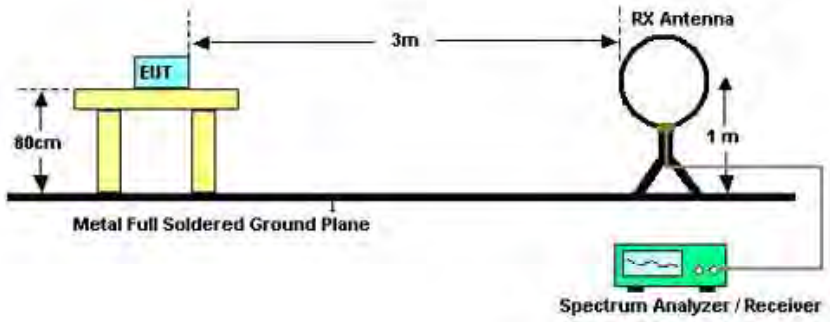
The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.5.3 Test Procedures

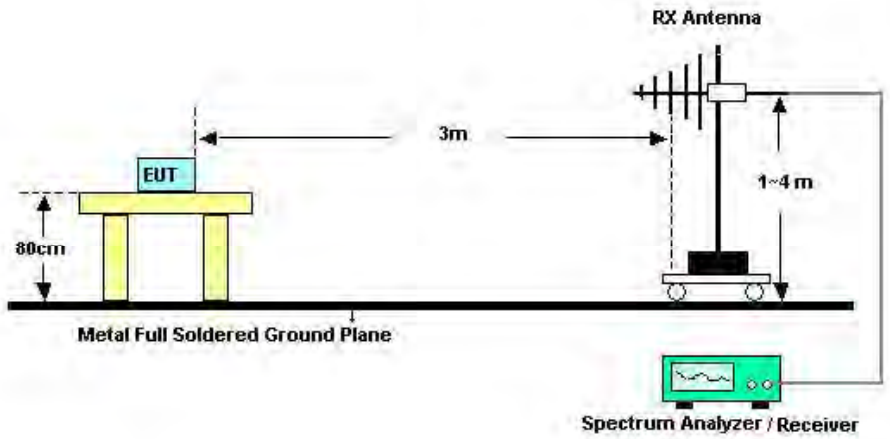
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
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 peak 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.
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - 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.

3.5.4 Test Setup

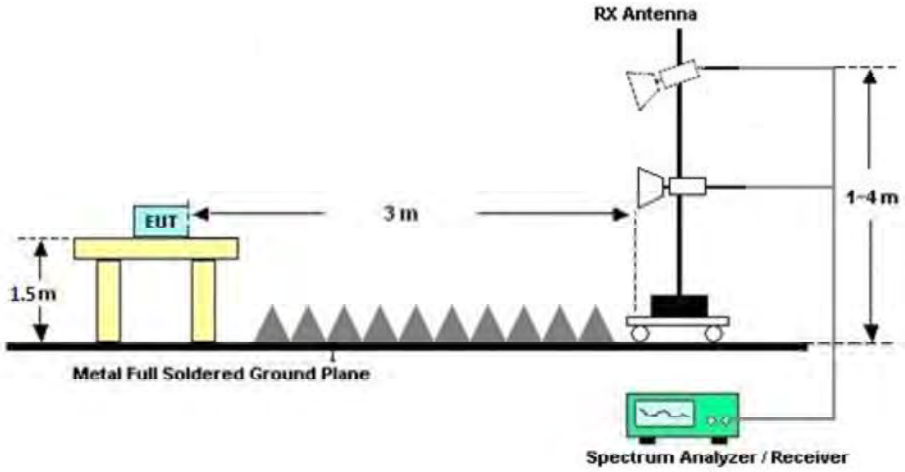
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Spurious 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.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C&D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C&D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

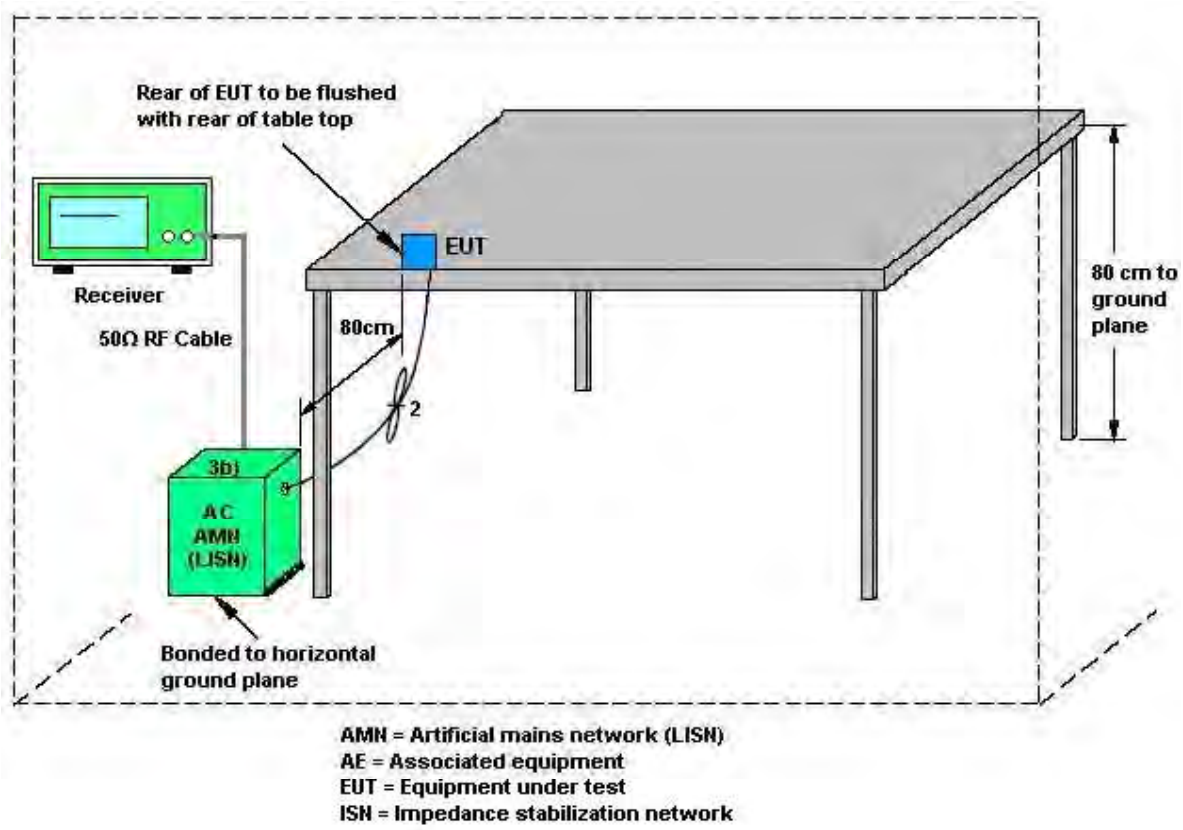
3.6.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. 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 rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 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
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	May 01, 2022	Apr. 08, 2023	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 28, 2021	May 01, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 28, 2021	May 01, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 14, 2021	Jul. 07, 2022	Jul. 13, 2022	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2022	Jul. 07, 2022	Jun. 21, 2023	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Sep. 28, 2021	Jul. 07, 2022	Sep. 27, 2022	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 18, 2021	Jul. 07, 2022	Jul. 18, 2022	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 13, 2021	Jul. 07, 2022	Jul. 13, 2022	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 10, 2022	Jul. 07, 2022	Apr. 10, 2023	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 22, 2021	Jul. 07, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-001018000-30-10P-R	1943528	1GHz~18GHz	Oct. 22, 2021	Jul. 07, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 22, 2021	Jul. 07, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 07, 2022	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jul. 07, 2022	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jul. 07, 2022	NCR	Radiation (03CH02-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 14, 2021	Jul. 07, 2022	Jul. 13, 2022	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Sep. 01, 2021	Jul. 14, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Sep. 01, 2021	Jul. 14, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 29, 2021	Jul. 14, 2022	Oct. 28, 2022	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 14, 2022	Jul. 14, 2022	Jul. 13, 2023	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±0.13 %
Conducted Power Spectral Density	±1.32 dB

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.2dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

---------- THE END ----------

Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Zhang Xue Yi	Temperature:	21~25	°C
Test Date:	2022/5/1	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	1Mbps	1	0	2402	1.033	0.682	0.50	Pass
BLE	1Mbps	1	19	2440	1.033	0.680	0.50	Pass
BLE	1Mbps	1	39	2480	1.033	0.684	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	1Mbps	1	0	2402	2.12	4.60	30.00	4.00	8.60	36.00	Pass
BLE	1Mbps	1	19	2440	2.12	4.90	30.00	4.00	8.90	36.00	Pass
BLE	1Mbps	1	39	2480	2.12	4.90	30.00	4.00	8.90	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	1Mbps	1	0	2402	4.09	-10.24	4.00	8.00	Pass
BLE	1Mbps	1	19	2440	4.45	-9.90	4.00	8.00	Pass
BLE	1Mbps	1	39	2480	4.47	-9.87	4.00	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Zhang Xue Yi	Temperature:	21~25	°C
Test Date:	2022/5/1	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	2Mbps	1	0	2402	2.054	1.175	0.50	Pass
BLE	2Mbps	1	19	2440	2.054	1.175	0.50	Pass
BLE	2Mbps	1	39	2480	2.058	1.171	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	1	0	2402	2.44	4.50	30.00	4.00	8.50	36.00	Pass
BLE	2Mbps	1	19	2440	2.44	4.80	30.00	4.00	8.80	36.00	Pass
BLE	2Mbps	1	39	2480	2.44	4.80	30.00	4.00	8.80	36.00	Pass

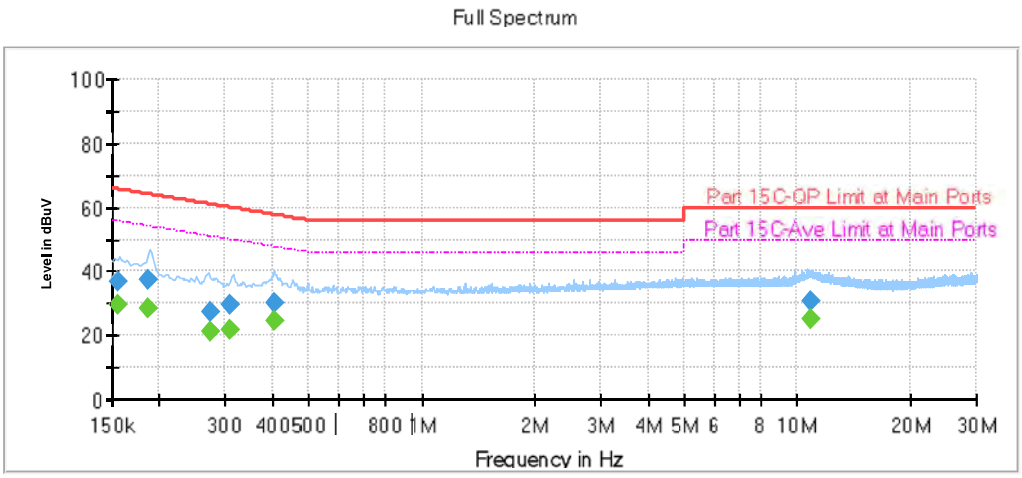
TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	1	0	2402	3.98	-14.05	4.00	8.00	Pass
BLE	2Mbps	1	19	2440	4.36	-13.64	4.00	8.00	Pass
BLE	2Mbps	1	39	2480	4.12	-13.89	4.00	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

Appendix B. AC Conducted Emission Test Results

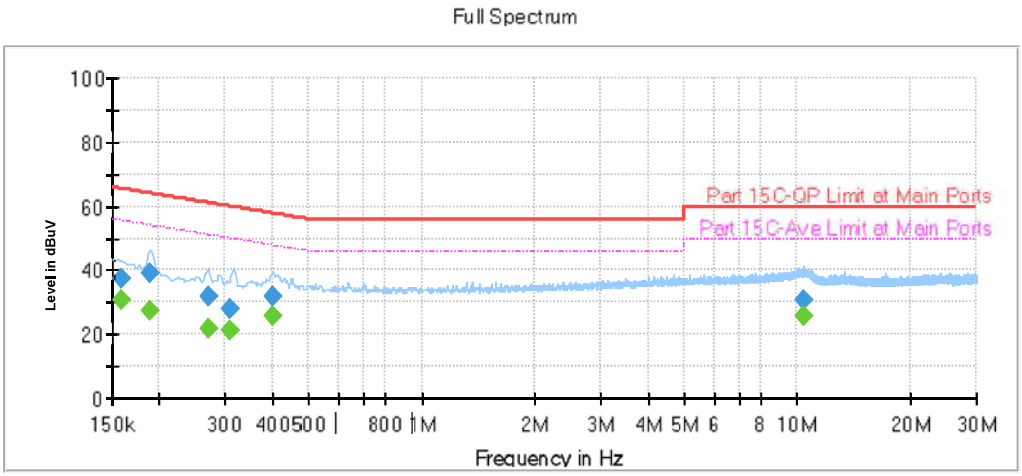
Test Engineer :	Zhang Tao	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.155400	36.92	---	65.71	28.78	L1	OFF	19.7
0.155400	---	29.64	55.71	26.07	L1	OFF	19.7
0.186000	37.62	---	64.21	26.59	L1	OFF	19.7
0.186000	---	28.43	54.21	25.78	L1	OFF	19.7
0.273750	27.31	---	61.00	33.70	L1	OFF	19.7
0.273750	---	21.38	51.00	29.63	L1	OFF	19.7
0.309750	29.77	---	59.98	30.20	L1	OFF	19.7
0.309750	---	21.78	49.98	28.19	L1	OFF	19.7
0.406500	29.95	---	57.72	27.77	L1	OFF	19.7
0.406500	---	24.32	47.72	23.40	L1	OFF	19.7
10.849650	30.51	---	60.00	29.49	L1	OFF	20.0
10.849650	---	25.14	50.00	24.86	L1	OFF	20.0

Test Engineer :	Zhang Tao	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	37.35	---	65.52	28.17	N	OFF	19.7
0.159000	---	30.80	55.52	24.72	N	OFF	19.7
0.188070	39.31	---	64.12	24.81	N	OFF	19.7
0.188070	---	27.33	54.12	26.79	N	OFF	19.7
0.269430	31.79	---	61.14	29.34	N	OFF	19.7
0.269430	---	21.96	51.14	29.17	N	OFF	19.7
0.309750	27.91	---	59.98	32.07	N	OFF	19.7
0.309750	---	21.30	49.98	28.68	N	OFF	19.7
0.401460	31.67	---	57.82	26.16	N	OFF	19.7
0.401460	---	25.86	47.82	21.96	N	OFF	19.7
10.349250	30.72	---	60.00	29.28	N	OFF	20.0
10.349250	---	25.51	50.00	24.49	N	OFF	20.0

Appendix C. Radiated Spurious Emission

<Bluetooth LE 1Mbps>

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2339.08	50.36	-23.64	74	45.43	31.7	5.49	32.26	244	66	P	H
		2378.56	41.31	-12.69	54	36.33	31.7	5.53	32.25	244	66	A	H
	*	2402	98.32	-	-	93.31	31.7	5.55	32.24	244	66	P	H
	*	2402	97.48	-	-	92.47	31.7	5.55	32.24	244	66	A	H
		2348.74	51.27	-22.73	74	46.34	31.7	5.49	32.26	111	259	P	V
		2385.70	41.45	-12.55	54	36.45	31.7	5.55	32.25	111	259	A	V
	*	2402	97.5	-	-	92.49	31.7	5.55	32.24	111	259	P	V
	*	2402	96.55	-	-	91.54	31.7	5.55	32.24	111	259	A	V
BLE CH 19 2440MHz		2362.92	50.18	-23.82	74	45.23	31.7	5.51	32.26	100	187	P	H
		2377.76	41.2	-12.8	54	36.22	31.7	5.53	32.25	100	187	A	H
	*	2440	97.91	-	-	92.44	32	5.61	32.14	100	187	P	H
	*	2440	96.91	-	-	91.44	32	5.61	32.14	100	187	A	H
		2496.64	50.71	-23.29	74	44.78	32.1	5.68	31.85	100	187	P	H
		2485.37	42.12	-11.88	54	36.34	32.07	5.66	31.95	100	187	A	H
		2360.68	50.56	-23.44	74	45.61	31.7	5.51	32.26	100	281	P	V
		2368.52	40.96	-13.04	54	35.98	31.7	5.53	32.25	100	281	A	V
	*	2440	98.41	-	-	92.94	32	5.61	32.14	100	281	P	V
	*	2440	97.46	-	-	91.99	32	5.61	32.14	100	281	A	V
		2493.14	50.92	-23.08	74	44.99	32.1	5.68	31.85	100	281	P	V
		2497.27	42.11	-11.89	54	36.18	32.1	5.68	31.85	100	281	A	V

BLE CH 39 2480MHz	*	2480	96.62	-	-	90.84	32.07	5.66	31.95	100	180	P	H
	*	2480	95.77	-	-	89.99	32.07	5.66	31.95	100	180	A	H
		2498.56	51.11	-22.89	74	45.18	32.1	5.68	31.85	100	180	P	H
		2488.88	42.11	-11.89	54	36.28	32.1	5.68	31.95	100	180	A	H
	*	2480	98.34	-	-	92.56	32.07	5.66	31.95	100	294	P	V
	*	2480	95.52	-	-	89.74	32.07	5.66	31.95	100	294	A	V
		2486.6	51.64	-22.36	74	45.86	32.07	5.66	31.95	100	294	P	V
		2487.96	42.13	-11.87	54	36.3	32.1	5.68	31.95	100	294	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 00 2402MHz		4804	41.59	-32.41	74	57.01	33.8	8.68	57.9	-	-	P	H
		4804	41.59	-32.41	74	57.01	33.8	8.68	57.9	-	-	P	V
BLE CH 19 2440MHz		4880	42.78	-31.22	74	58.16	33.73	8.79	57.9	-	-	P	H
		7320	45.73	-28.27	74	58.43	35.73	11.09	59.52	-	-	P	H
		4880	43.64	-30.36	74	59.02	33.73	8.79	57.9	-	-	P	V
		7320	45.53	-28.47	74	58.23	35.73	11.09	59.52	-	-	P	V
BLE CH 39 2480MHz		4960	42.2	-31.8	74	57.39	33.73	8.98	57.9	-	-	P	H
		7440	45.13	-28.87	74	58.09	35.78	11.12	59.86	-	-	P	H
		4960	44.4	-29.6	74	59.59	33.73	8.98	57.9	-	-	P	V
		7440	45.98	-28.02	74	58.94	35.78	11.12	59.86	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

<Bluetooth LE 2Mbps>

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 00 2402MHz		2342.65	51.84	-22.16	74	46.91	31.7	5.49	32.26	100	360	P	H
		2388.43	40.75	-13.25	54	35.75	31.7	5.55	32.25	100	360	A	H
	*	2402	95.61	-	-	90.6	31.7	5.55	32.24	100	360	P	H
	*	2402	93.21	-	-	88.2	31.7	5.55	32.24	100	360	A	H
		2380.66	50.92	-23.08	74	45.94	31.7	5.53	32.25	100	290	P	V
		2389.06	40.82	-13.18	54	35.82	31.7	5.55	32.25	100	290	A	V
	*	2402	98.59	-	-	93.58	31.7	5.55	32.24	100	290	P	V
	*	2402	95.92	-	-	90.91	31.7	5.55	32.24	100	290	A	V
BLE CH 19 2440MHz		2361.66	50.82	-23.18	74	45.87	31.7	5.51	32.26	100	183	P	H
		2379.44	40.32	-13.68	54	35.34	31.7	5.53	32.25	100	183	A	H
	*	2440	98.55	-	-	93.08	32	5.61	32.14	100	183	P	H
	*	2440	96.5	-	-	91.03	32	5.61	32.14	100	183	A	H
		2491.11	51.49	-22.51	74	45.66	32.1	5.68	31.95	100	183	P	H
		2496.43	41.23	-12.77	54	35.3	32.1	5.68	31.85	100	183	A	H
		2353.54	52.16	-21.84	74	47.21	31.7	5.51	32.26	100	295	P	V
		2372.02	40.44	-13.56	54	35.46	31.7	5.53	32.25	100	295	A	V
	*	2440	98.9	-	-	93.43	32	5.61	32.14	100	295	P	V
	*	2440	95.08	-	-	89.61	32	5.61	32.14	100	295	A	V
		2486.91	50.86	-23.14	74	45.08	32.07	5.66	31.95	100	295	P	V
		2491.04	41.21	-12.79	54	35.38	32.1	5.68	31.95	100	295	A	V

BLE CH 39 2480MHz	*	2480	96.29	-	-	90.51	32.07	5.66	31.95	100	360	P	H
	*	2480	93.15	-	-	87.37	32.07	5.66	31.95	100	360	A	H
		2484.96	52.14	-21.86	74	46.36	32.07	5.66	31.95	100	360	P	H
		2483.6	42.79	-11.21	54	37.01	32.07	5.66	31.95	100	360	A	H
	*	2480	97.85	-	-	92.07	32.07	5.66	31.95	100	290	P	V
	*	2480	95.57	-	-	89.79	32.07	5.66	31.95	100	290	A	V
		2486.44	53.04	-20.96	74	47.26	32.07	5.66	31.95	100	290	P	V
		2483.52	43.38	-10.62	54	37.6	32.07	5.66	31.95	100	290	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 00 2402MHz		4804	41.2	-32.8	74	56.62	33.8	8.68	57.9	-	-	P	H
		4804	42.37	-31.63	74	57.79	33.8	8.68	57.9	-	-	P	V
BLE CH 19 2440MHz		4880	41.95	-32.05	74	57.33	33.73	8.79	57.9	-	-	P	H
		7320	44.59	-29.41	74	57.29	35.73	11.09	59.52	-	-	P	H
		4880	41.95	-32.05	74	57.33	33.73	8.79	57.9	-	-	P	V
		7320	45.25	-28.75	74	57.95	35.73	11.09	59.52	-	-	P	V
BLE CH 39 2480MHz		4960	42.61	-31.39	74	57.8	33.73	8.98	57.9	-	-	P	H
		7440	44.66	-29.34	74	57.62	35.78	11.12	59.86	-	-	P	H
		4960	42.66	-31.34	74	57.85	33.73	8.98	57.9	-	-	P	V
		7440	44.82	-29.18	74	57.78	35.78	11.12	59.86	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 00 2402MHz		2480	95.07	-	-	89.29	32.07	5.66	31.95	100	205	P	H
		2480	92.83	-	-	87.05	32.07	5.66	31.95	100	205	A	H
	*	2493.08	53.15	-20.85	74	47.22	32.1	5.68	31.85	100	205	P	H
	*	2483.52	42.2	-11.8	54	36.42	32.07	5.66	31.95	100	205	A	H
		2480	99.92	-	-	94.14	32.07	5.66	31.95	254	255	P	V
		2480	97.25	-	-	91.47	32.07	5.66	31.95	254	255	A	V
	*	2484.96	53.09	-20.91	74	47.31	32.07	5.66	31.95	254	255	P	V
	*	2483.52	43.47	-10.53	54	37.69	32.07	5.66	31.95	254	255	A	V

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 39 2480MHz		4960	43.56	-30.44	74	58.75	33.73	8.98	57.9	-	-	P	H
		7440	45.45	-28.55	74	58.41	35.78	11.12	59.86	-	-	P	H
		4960	43.2	-30.8	74	58.39	33.73	8.98	57.9	-	-	P	V
		7440	44.74	-29.26	74	57.7	35.78	11.12	59.86	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz BLE (LF)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz BLE LF		89.17	20.04	-23.46	43.5	40.2	14.04	0.98	35.18	-	-	P	H
		196.84	23.73	-19.77	43.5	40.87	16.51	1.45	35.1	-	-	P	H
		317.12	25.19	-20.81	46	38.06	20.15	1.88	34.9	-	-	P	H
		681.84	25.57	-20.43	46	30.57	26.67	2.83	34.5	-	-	P	H
		828.31	27.62	-18.38	46	30.34	28.42	3.16	34.3	-	-	P	H
		974.78	29.12	-24.88	54	29.85	29.99	3.43	34.15	-	-	P	H
		36.79	27.86	-12.14	40	42.84	19.38	0.64	35	-	-	P	V
		196.84	29.01	-14.49	43.5	46.15	16.51	1.45	35.1	-	-	P	V
		332.64	23.29	-22.71	46	35.64	20.63	1.92	34.9	-	-	P	V
		512.09	24.04	-21.96	46	32.19	24.1	2.43	34.68	-	-	P	V
		842.86	28.45	-17.55	46	30.99	28.57	3.19	34.3	-	-	P	V
		988.36	29.84	-24.16	54	30.37	30.13	3.46	34.12	-	-	P	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 **Margin** 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:

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		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. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =

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

3. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path 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. Margin (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) + Path 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. Margin (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 D. Radiated Spurious Emission Plots

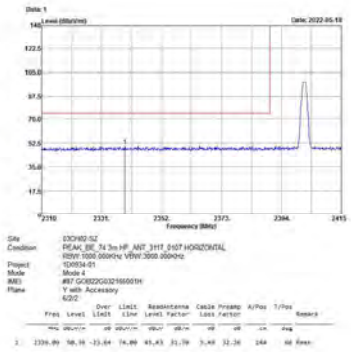
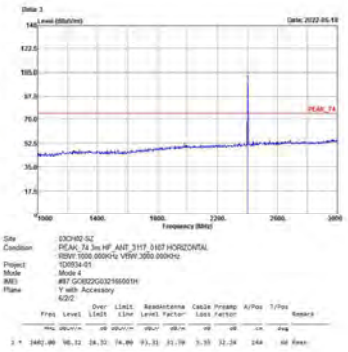
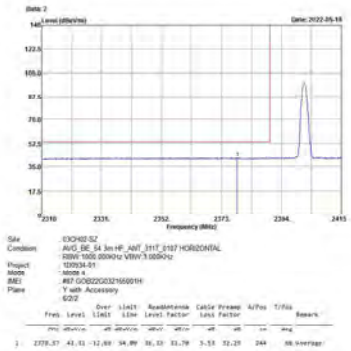
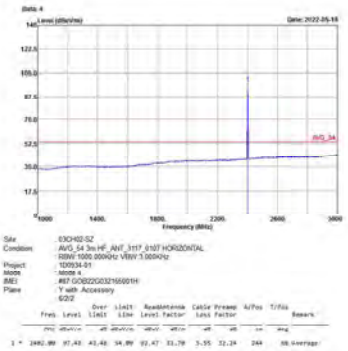
Note symbol

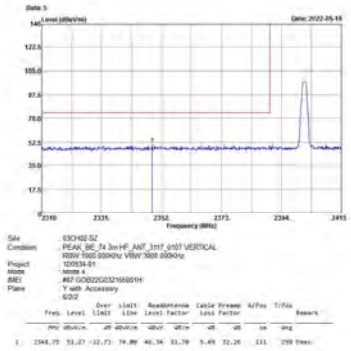
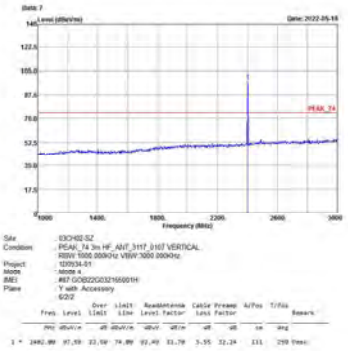
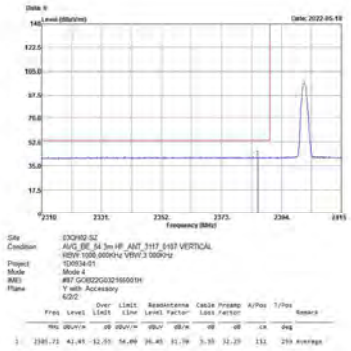
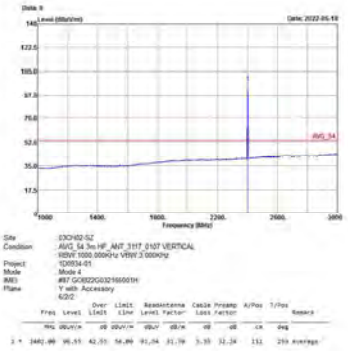
-L	**Low channel location**
-R	**High channel location**

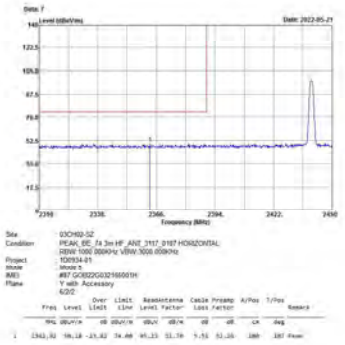
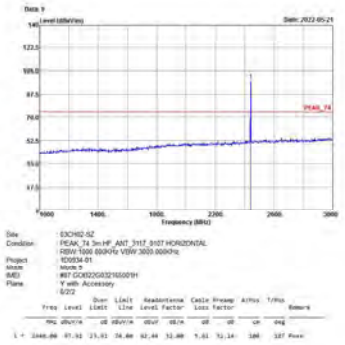
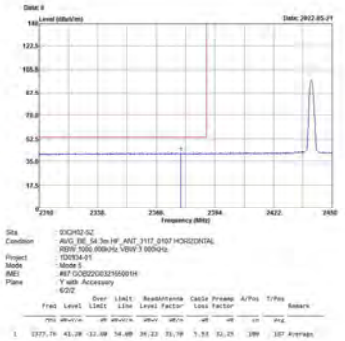
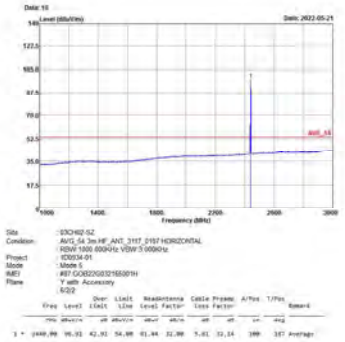
<Bluetooth LE 1Mbps>

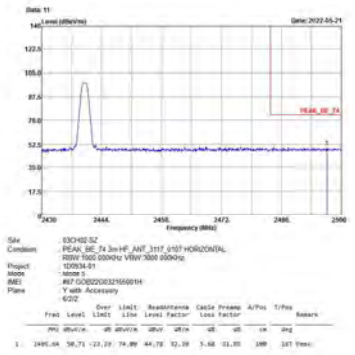
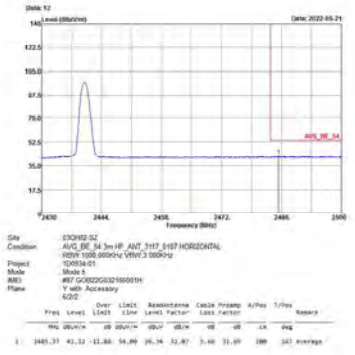
2.4GHz 2400~2483.5MHz

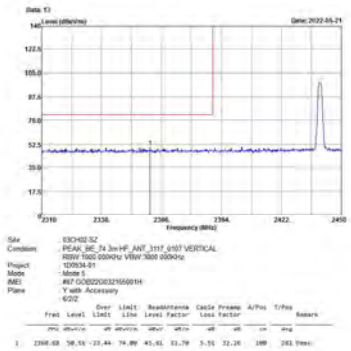
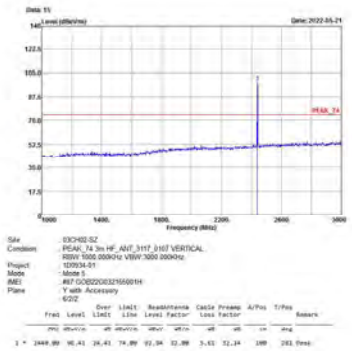
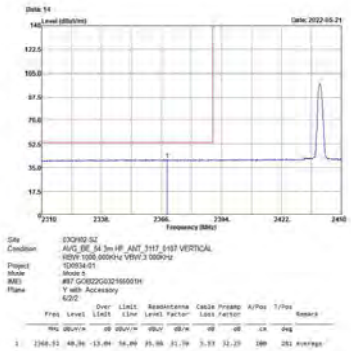
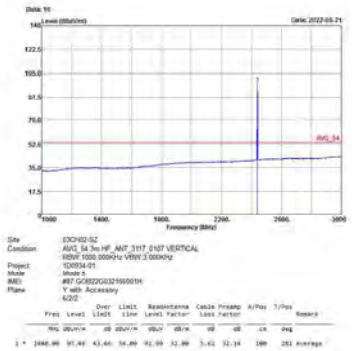
BLE (Band Edge @ 3m)

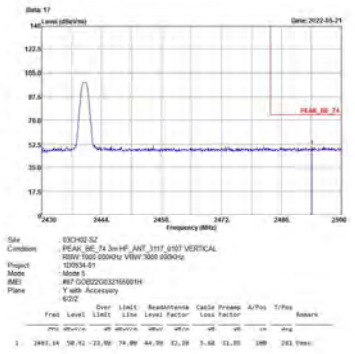
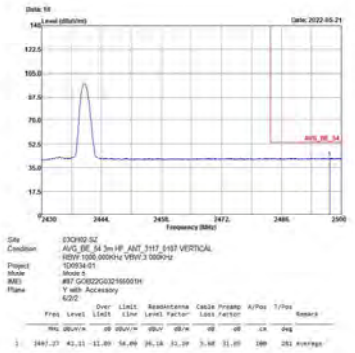
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

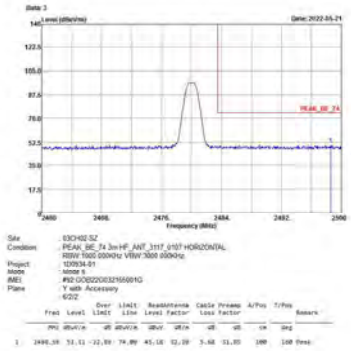
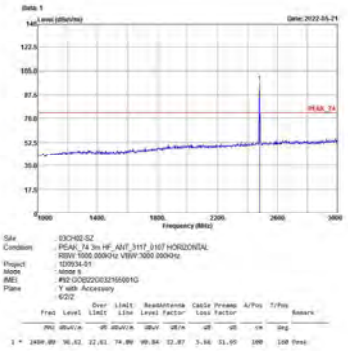
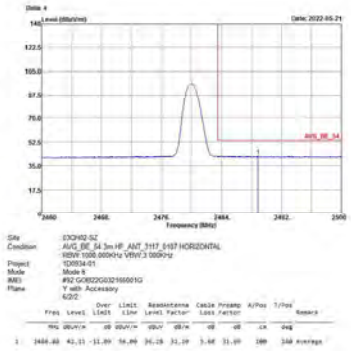
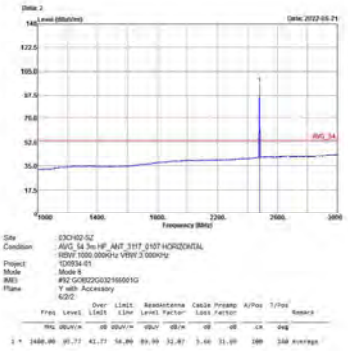
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
1	Vertical	Fundamental
Peak		
Avg		

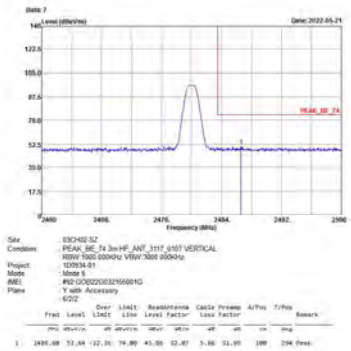
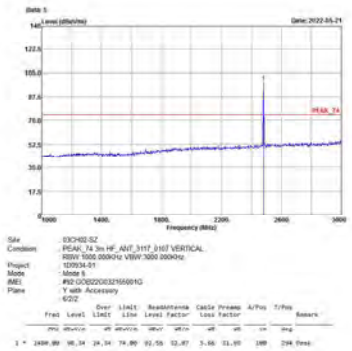
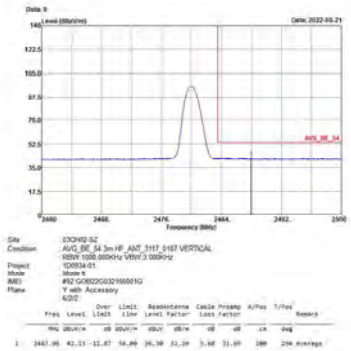
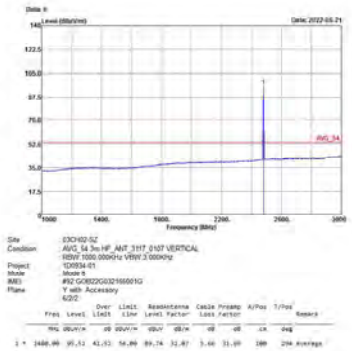
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

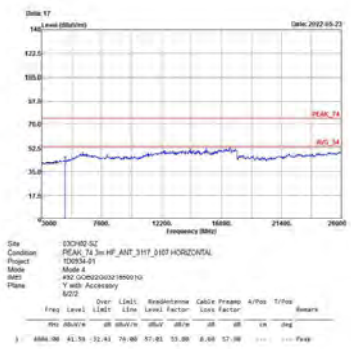
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

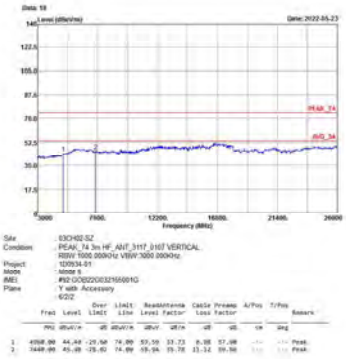
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
1	Vertical	Fundamental
Peak		
Avg.		

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH00 2402MHz	
1	Horizontal	Vertical
Peak Avg.		

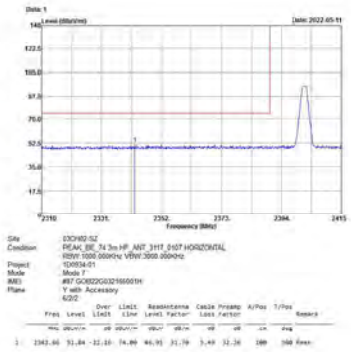
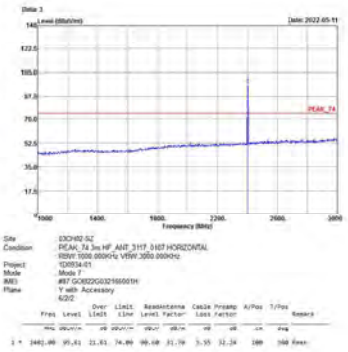
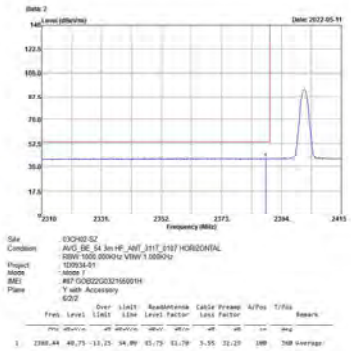
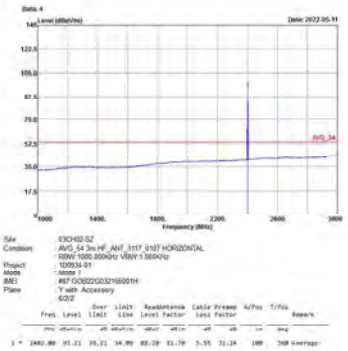
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH19 2440MHz	
1	Horizontal	Vertical
Peak Avg.		

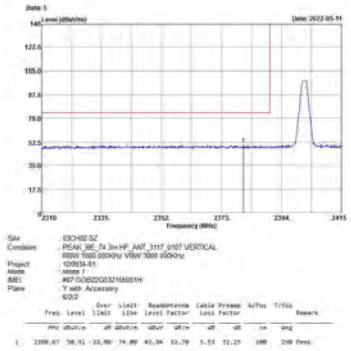
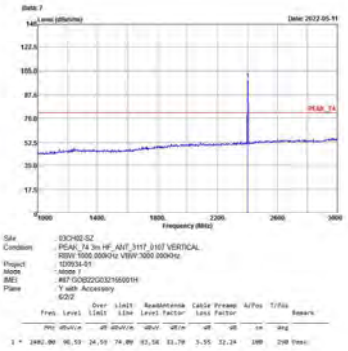
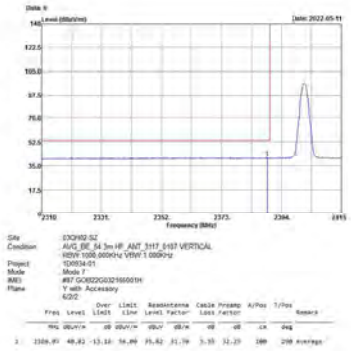
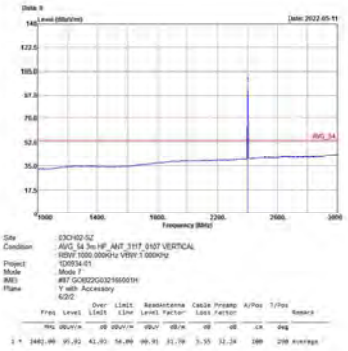
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH39 2480MHz	
1	Horizontal	Vertical
Peak		

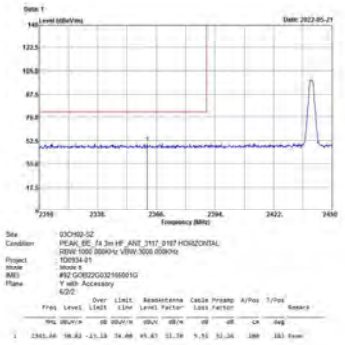
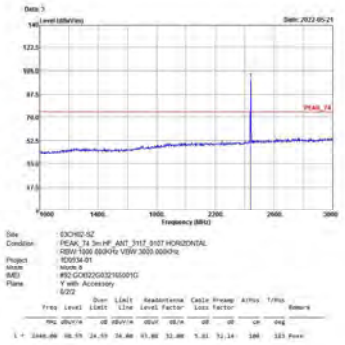
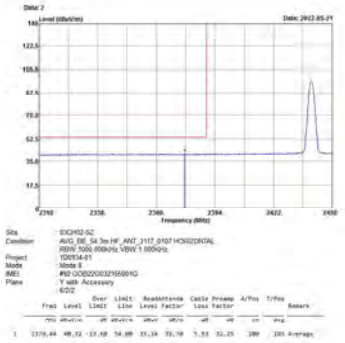
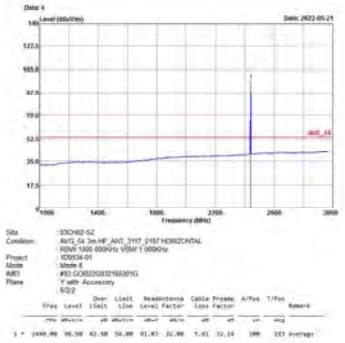
<Bluetooth LE 2Mbps>

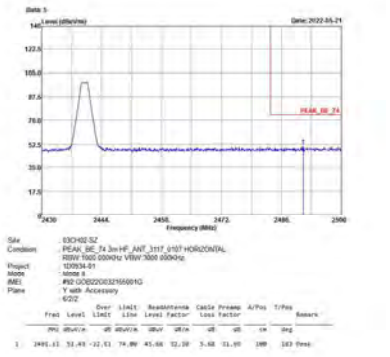
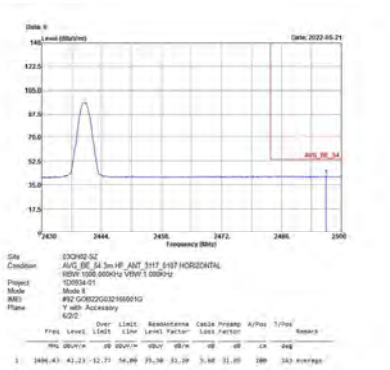
2.4GHz 2400~2483.5MHz

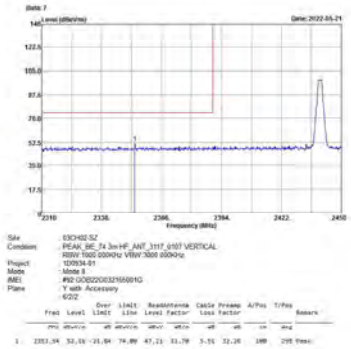
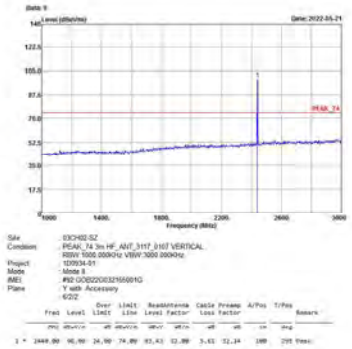
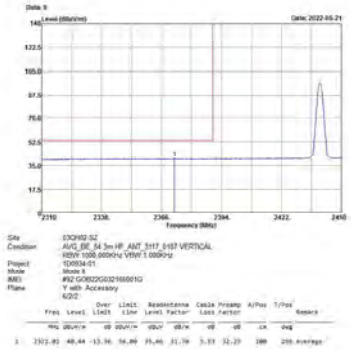
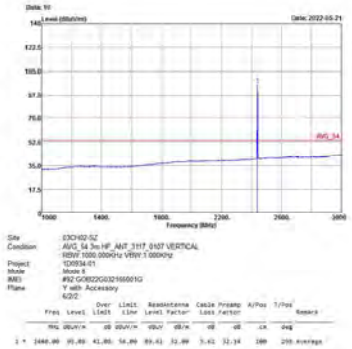
BLE (Band Edge @ 3m)

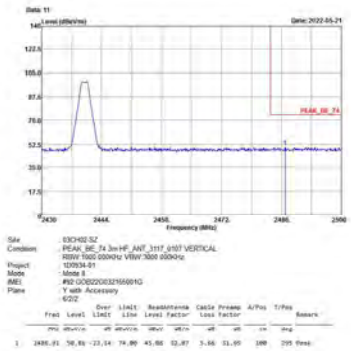
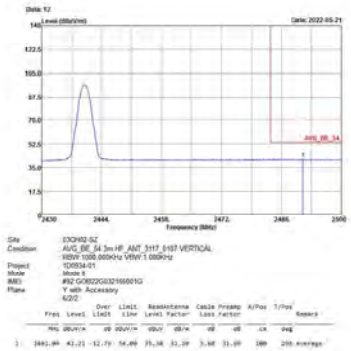
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

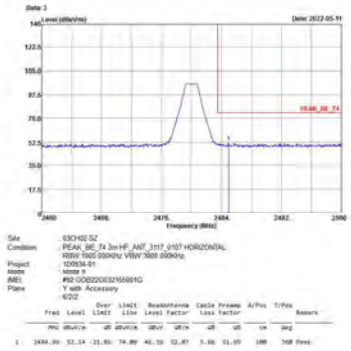
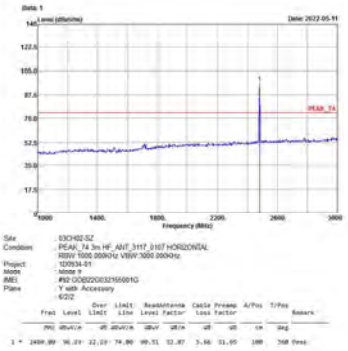
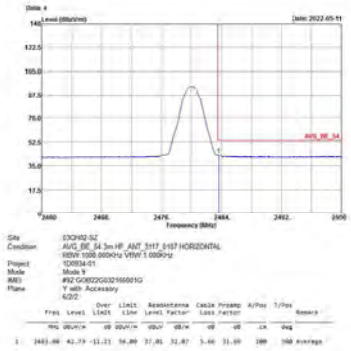
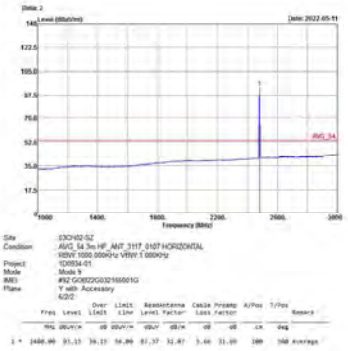
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
1	Vertical	Fundamental
Peak		
Avg		

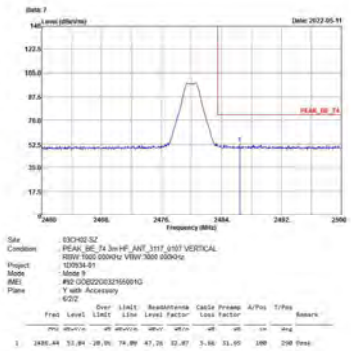
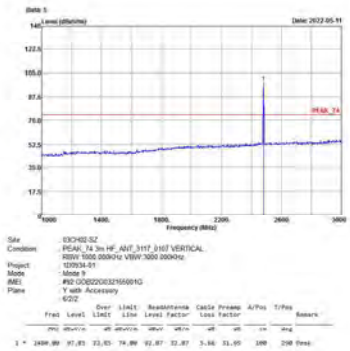
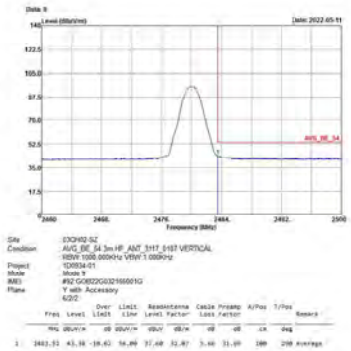
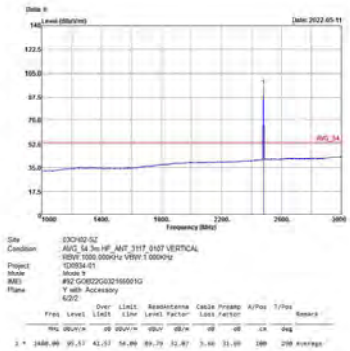
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

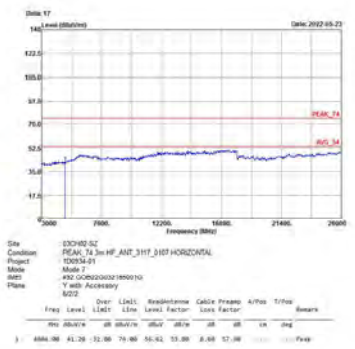
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

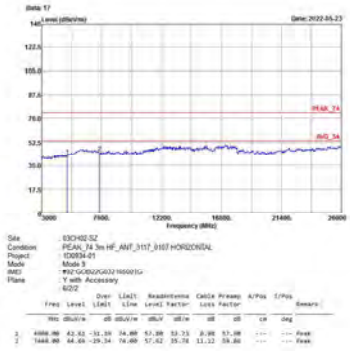
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
1	Vertical	Fundamental
Peak		
Avg.		

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

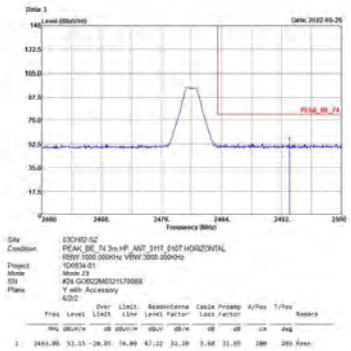
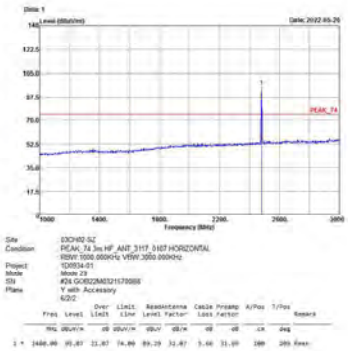
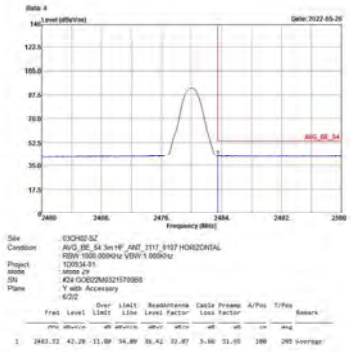
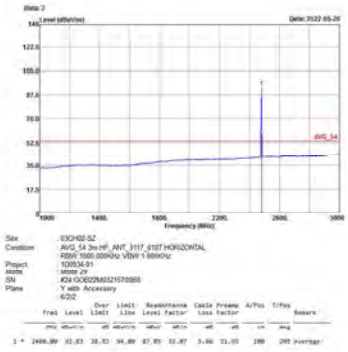
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH00 2402MHz	
1	Horizontal	Vertical
Peak Avg.		

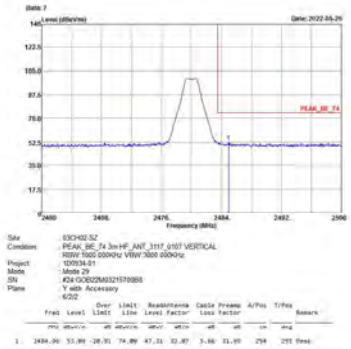
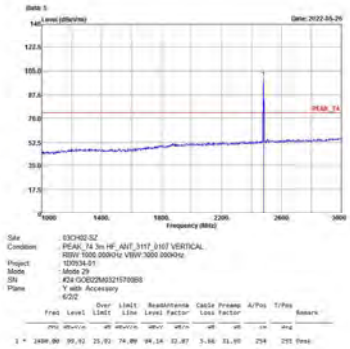
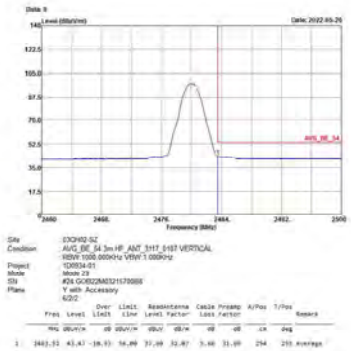
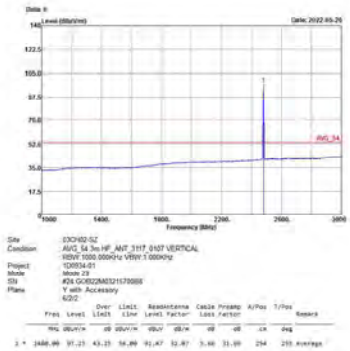
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH19 2440MHz	
1	Horizontal	Vertical
Peak Avg.		

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH39 2480MHz	
1	Horizontal	Vertical
Peak		

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
1	Vertical	Fundamental
Peak		
Avg		

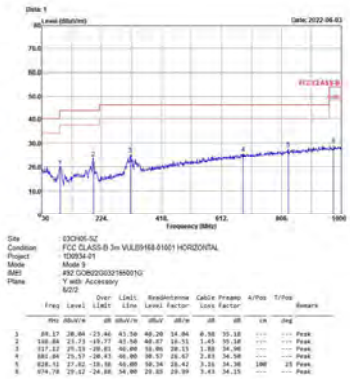
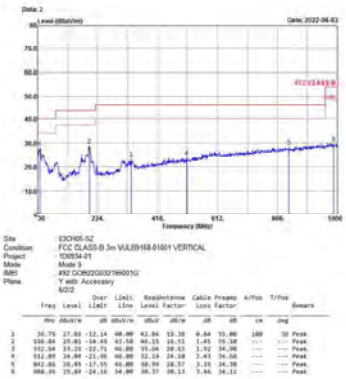
2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH00 2402MHz	
1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

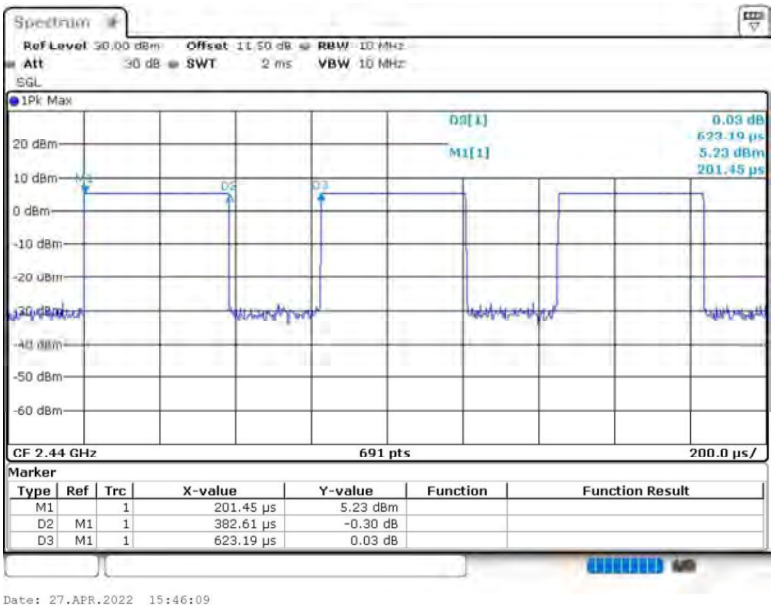
2.4GHz BLE (LF)

BLE	2.4GHz 2400~2483.5MHz	
ANT	BLE LF	
1	Horizontal	Vertical
QP / Peak		

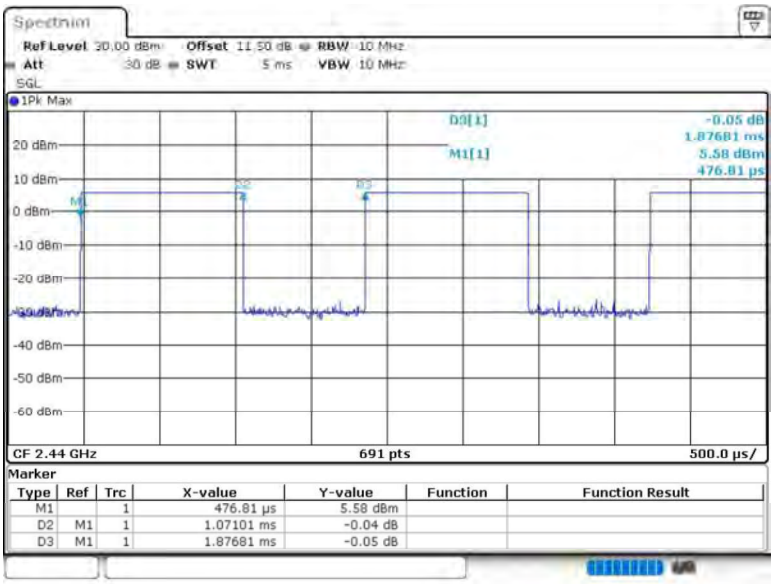
Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
Bluetooth LE 1Mbps	61.40	0.383	2.614	3KHz
Bluetooth LE 2Mbps	57.07	1.071	0.934	1KHz

Bluetooth LE 1Mbps



Bluetooth LE 2Mbps



FCC RF Test Report

APPLICANT	:	**Amazon.com Services LLC**
EQUIPMENT	:	**Digital Media Receiver**
MODEL NAME	:	**C2N6L4**
FCC ID	:	**2A4DH-0821**
STANDARD	:	**FCC Part 15 Subpart E §15.407**
CLASSIFICATION	:	**(NII) Unlicensed National Information Infrastructure**
TEST DATE(S)	:	**Apr. 29, 2022 ~ Jul. 13, 2022**

We, Sporton International Inc. (ShenZhen), 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.

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

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APPENDIX C. RADIATED SPURIOUS EMISSION
APPENDIX D. RADIATED SPURIOUS EMISSION PLOTS
APPENDIX E. DUTY CYCLE PLOTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR1D0934-01E	Rev. 01	Initial issue of report	Jul. 18, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result
3.1	15.403(i)	6dB, 26dB and 99% Occupied Bandwidth	> 500kHz	Pass
3.2	15.407(a)	Maximum Conducted Output Power	≤ 30 dBm	Pass
3.3	15.407(a)	Power Spectral Density	≤ 30 dBm/500kHz	Pass
3.4	15.407(b)	Unwanted Emissions	15.407(b)(4)(i) &15.209(a)	Pass
3.5	15.207	AC Conducted Emission	15.207(a)	Pass
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(a)	Pass

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

Amazon.com Services LLC
410 Terry Avenue N, Seattle, WA 98109-5210, United States

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	C2N6L4
FCC ID	2A4DH-0821

1.3 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power	802.11a : 17.48 dBm / 0.0560 W 802.11n HT20 : 16.44 dBm / 0.0441 W 802.11n HT40 : 16.58 dBm / 0.0455 W 802.11ac VHT20: 16.36 dBm / 0.0433 W 802.11ac VHT40: 16.52 dBm / 0.0449 W 802.11ac VHT80: 16.37 dBm / 0.0434 W
99% Occupied Bandwidth	802.11a : 16.83 MHz 802.11n HT20 : 17.78 MHz 802.11n HT40 : 36.36 MHz 802.11ac VHT80 : 75.40 MHz
Antenna Type / Gain	PIFA Antenna with gain 6.0 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note: For 802.11n HT20 / 11ac VHT20 and 802.11n HT40 / 11ac VHT40 mode, the whole testing have assessed only 802.11n HT20 & HT40 by referring to their higher output power.

1.4 Modification of EUT

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

1.5 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO02-SZ 03CH02-SZ	CN1256	421272

1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH02-SZ	AUDIX	E3	6.2009-8-24a
2.	CO02-SZ	Rohde&Schwarz	EMC32	10.60.0.0

1.7 Applicable Standards

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

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

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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: conduction emission (150 kHz to 30 MHz), 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 (Y plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5745-5825 MHz 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 (cover 11ac VHT20)	MCS0
802.11n HT40 (cover 11ac VHT40)	MCS0
802.11ac VHT80	MCS0

AC Conducted Emission	Mode 1 : All Stress(CPU, DDR, NAND, all LEDs, Max Audio, Mic On) + NB + BT Link + WLAN 5G Link + Adapter(Acbel US)
Remark: For Radiated Test Cases, The tests were performance with Adapter.	

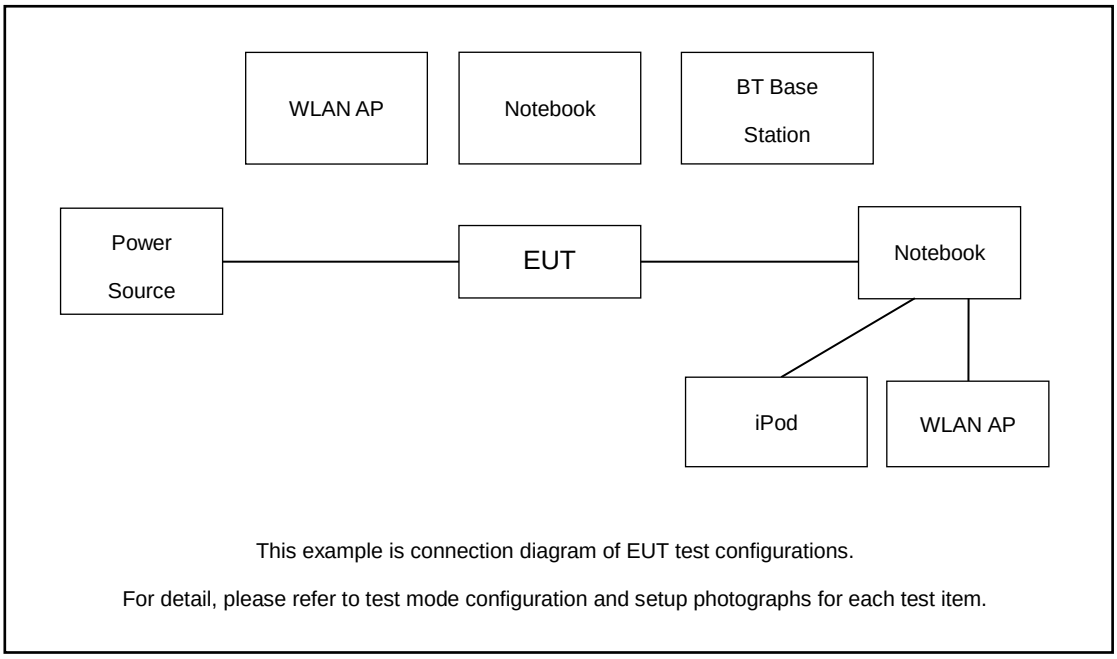
Co-location
802.11a CH165 Tx + BLE(2M)CH39 TX

Note: The RSE Co-location mode is from the worst combination of WLAN 5G and BLE TX mode.

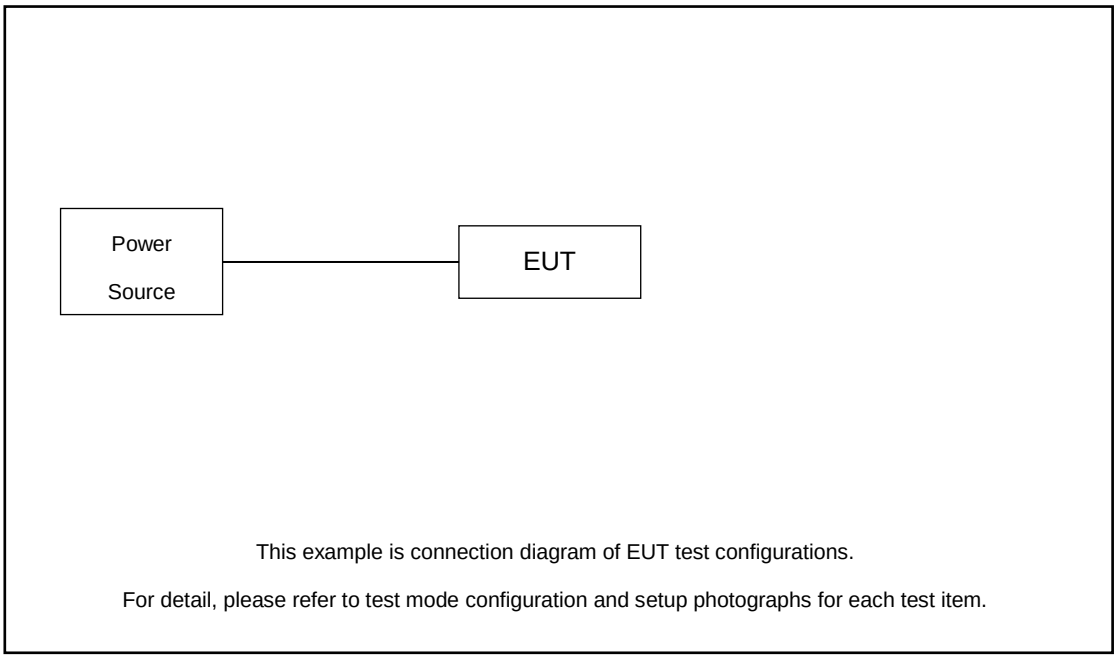
Ch. #		U-NII-3：5745-5825 MHz			
		802.11a	802.11n HT20	802.11n HT40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

2.3 Connection Diagram of Test System

For AC Conducted Emission:



For Radiated Emission:



2.4 Support Unit used in test configuration and system

Item	Equipment	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,2.7m with Core
2.	Notebook	Inspiron 15-7570	Fcc DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
3.	IPod	MC525 ZP/A	Fcc DoC	Shielded, 1.0m	N/A
4.	Base Station	R&S	CBT32	N/A	Unshielded,1.8m

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program (compliance tool) was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the router under large package sizes transmission.

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 2.8 dB and 10dB attenuator.

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

= 2.8 + 10 = 12.8 (dB)

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

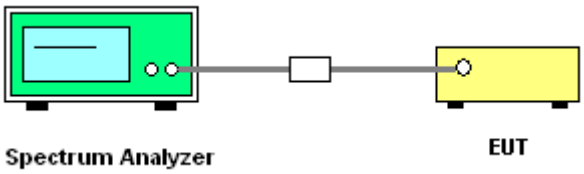
3.1.2 Measuring Instruments

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 C) Emission bandwidth for the band 5.725-5.85GHz
2. For 6dB BW, Set RBW = 100kHz.
   For 26dB BW, Set RBW = approximately 1% of the emission bandwidth.
   For 99% OBW, Set RBW = 1% to 5% of the OBW.
3. For 26dB BW, Set the VBW > RBW.
   For 6dB BW & 99% OBW, Set the VBW ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

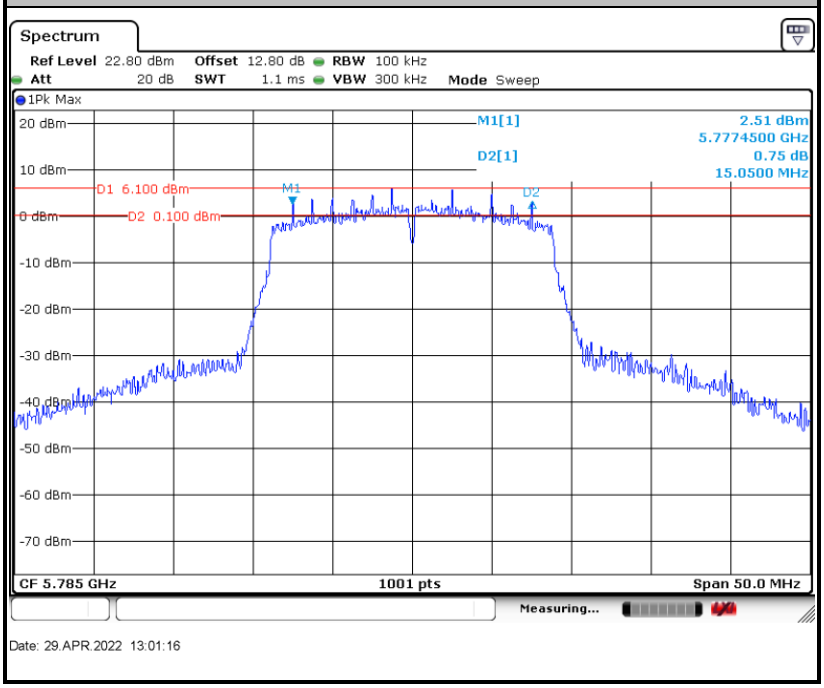
3.1.4 Test Setup



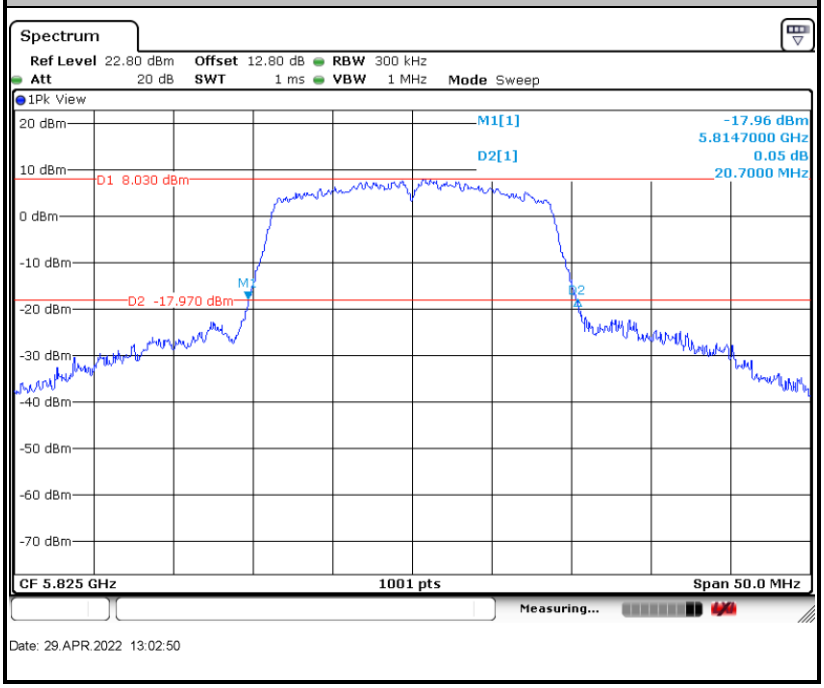
3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

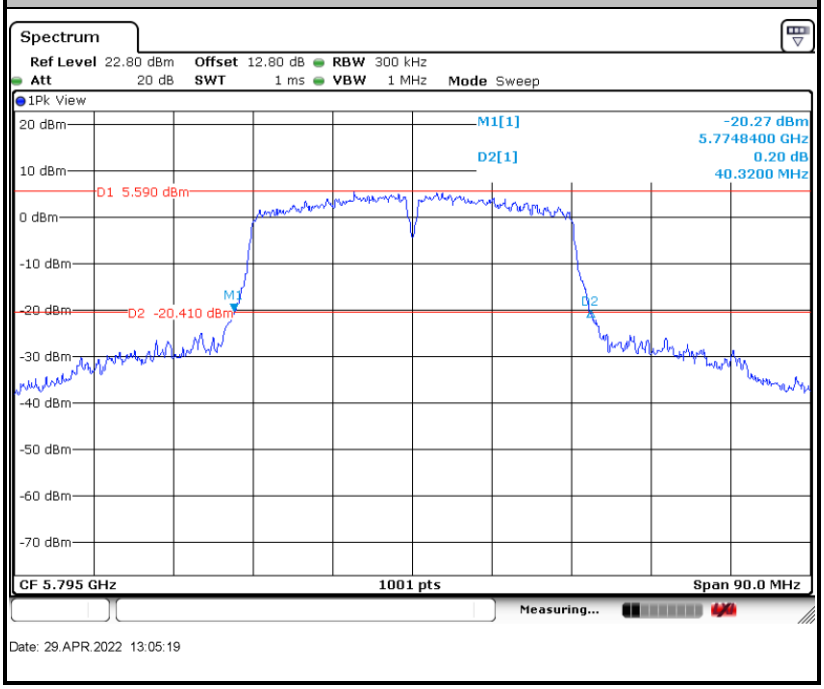
Minimum 6dB Bandwidth



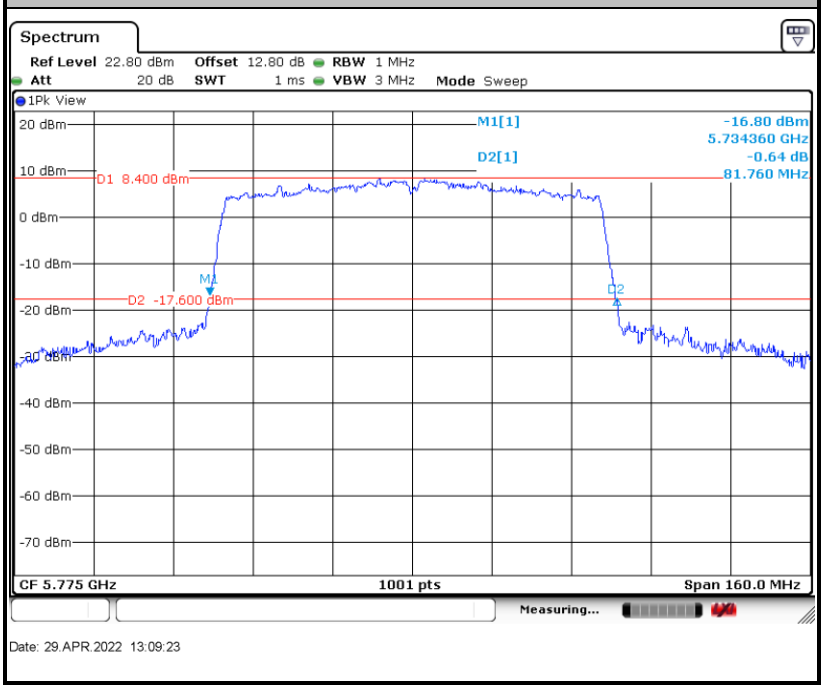
Maximum 26dB Bandwidth for 20M BW



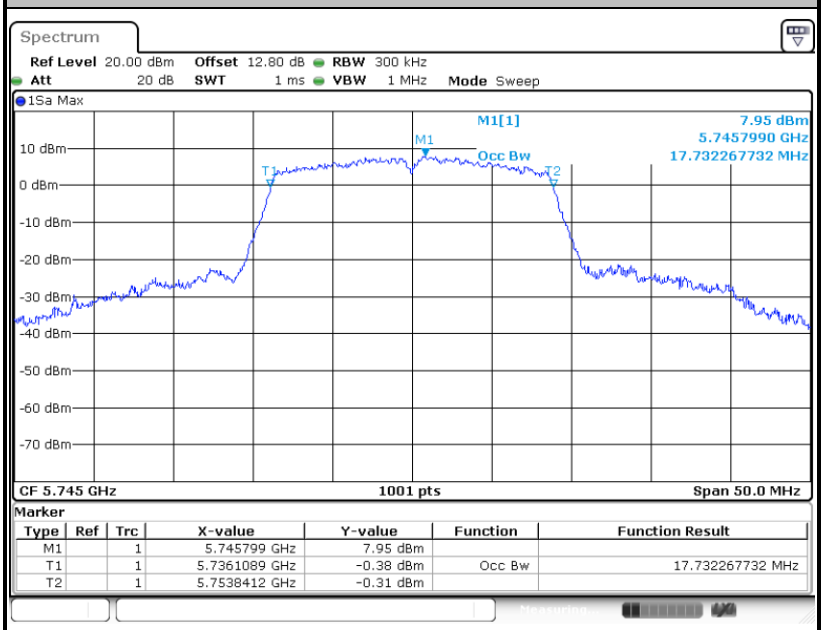
Maximum 26dB Bandwidth for 40M BW



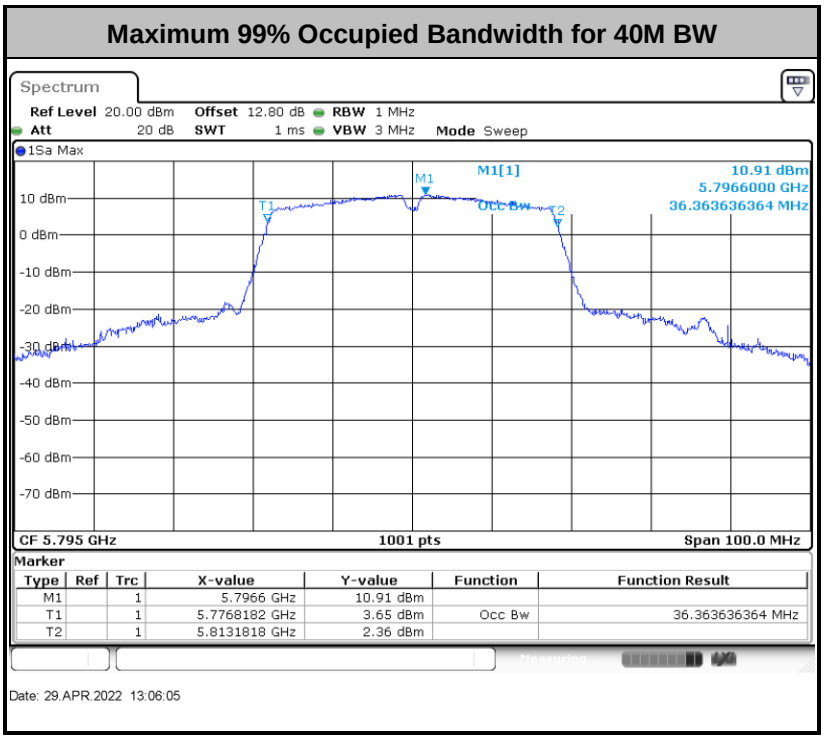
Maximum 26dB Bandwidth for 80M BW



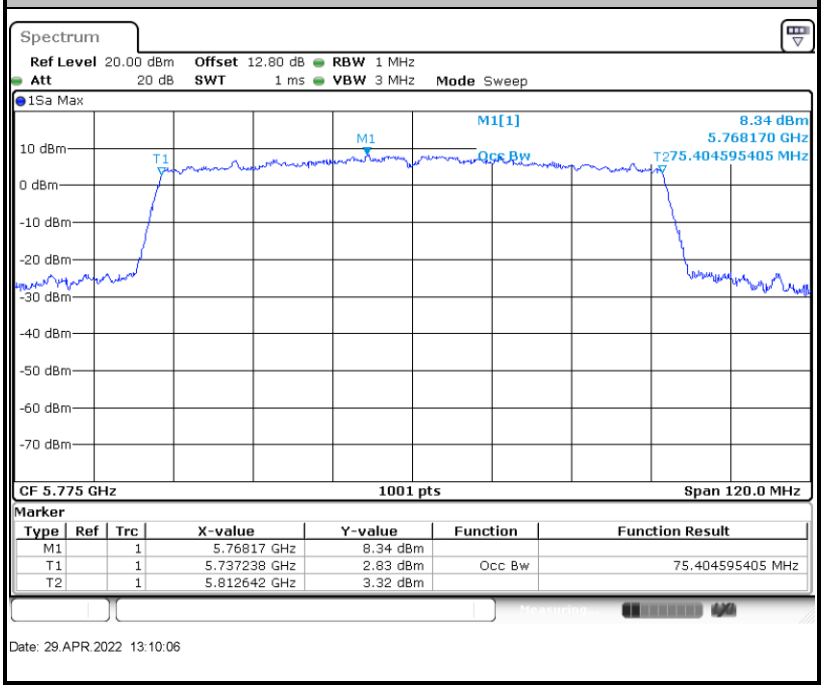
Maximum 99% Occupied Bandwidth for 20M BW



Maximum 99% Occupied Bandwidth for 40M BW



Maximum 99% Occupied Bandwidth for 80M BW



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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

3.2.2 Measuring Instruments

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

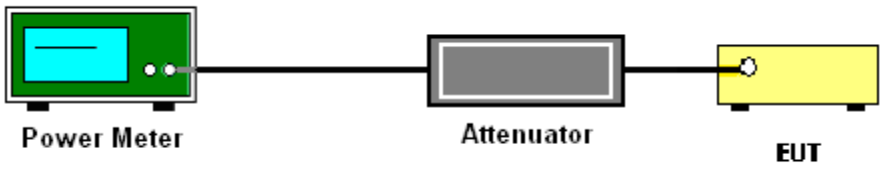
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

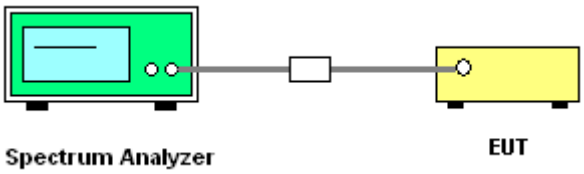
 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW ≥ 1 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(500kHz/RBW) to the test result.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

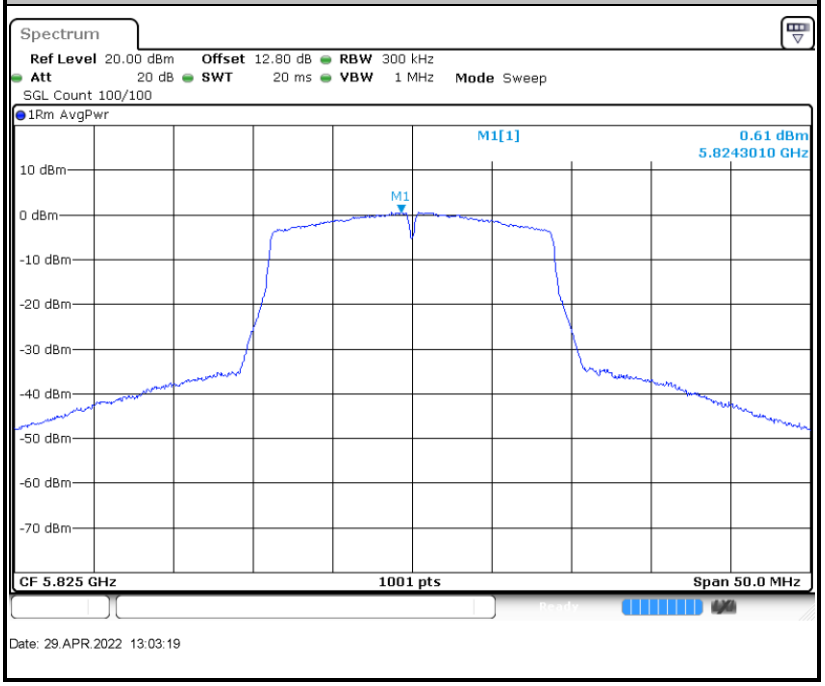
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

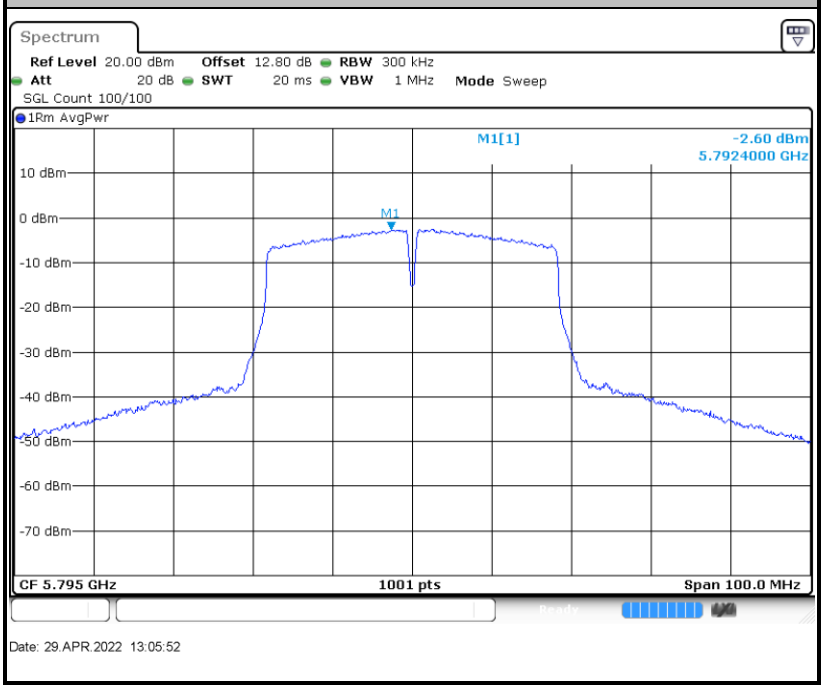
Please refer to Appendix A.

Worst Case Power Density (dBm/MHz) for 20M BW



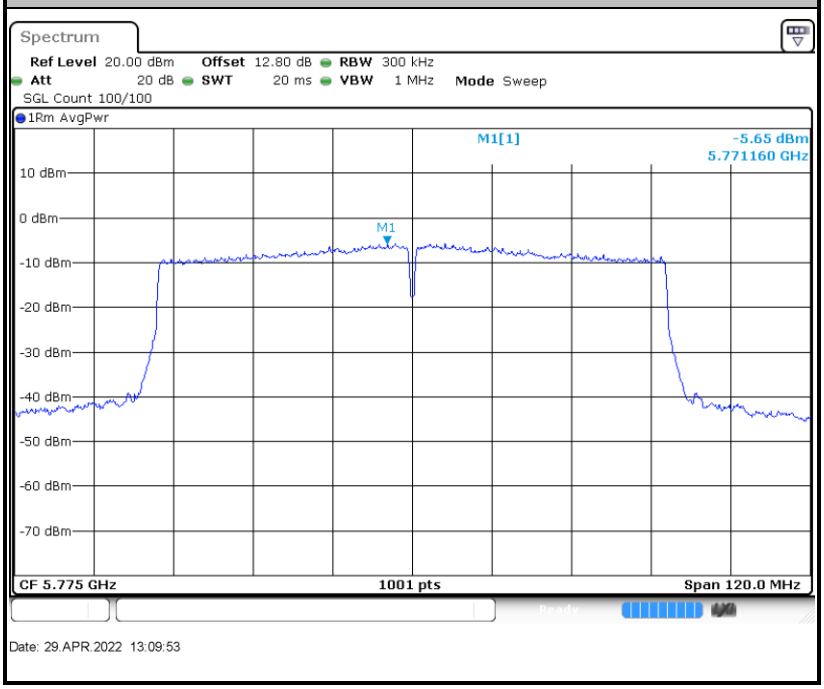
Note: Average Power Density (dB) = Measured value+ Duty Factor

Worst Case Power Density (dBm/MHz) for 40M BW



Note: Average Power Density (dB) = Measured value+ Duty Factor

Worst Case Power Density (dBm/MHz) for 80M BW



Note: Average Power Density (dB) = Measured value+ Duty Factor

3.4 Unwanted Emissions Measurement

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

3.4.1 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

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

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

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBµV/m

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

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

3.4.3 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

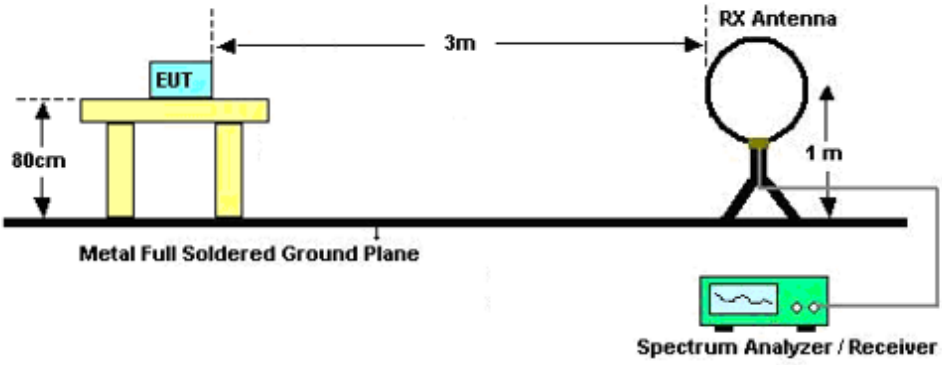
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - 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 peak

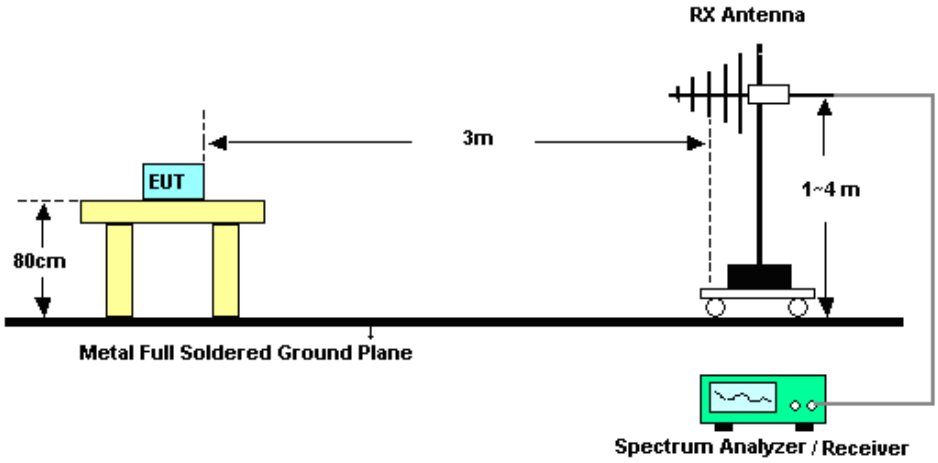
limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

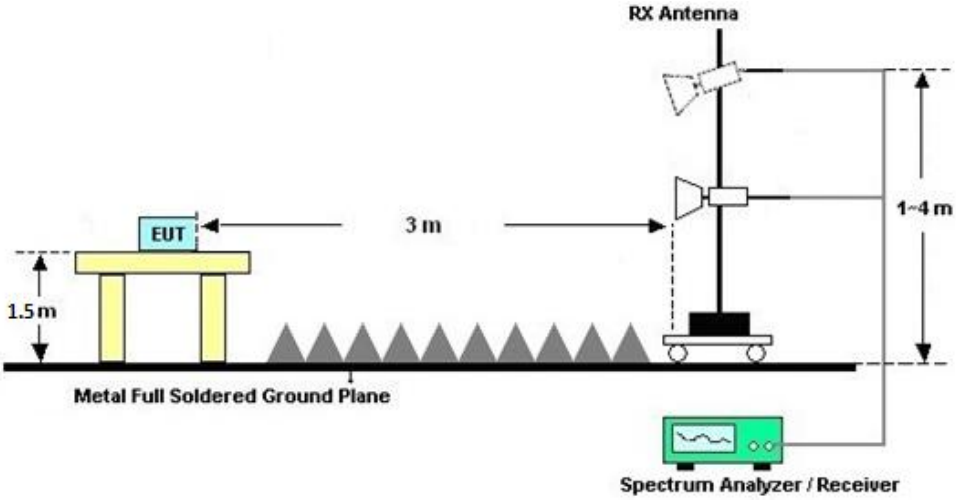
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 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.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C&D.

3.4.7 Duty Cycle

Please refer to Appendix E.

3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C&D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

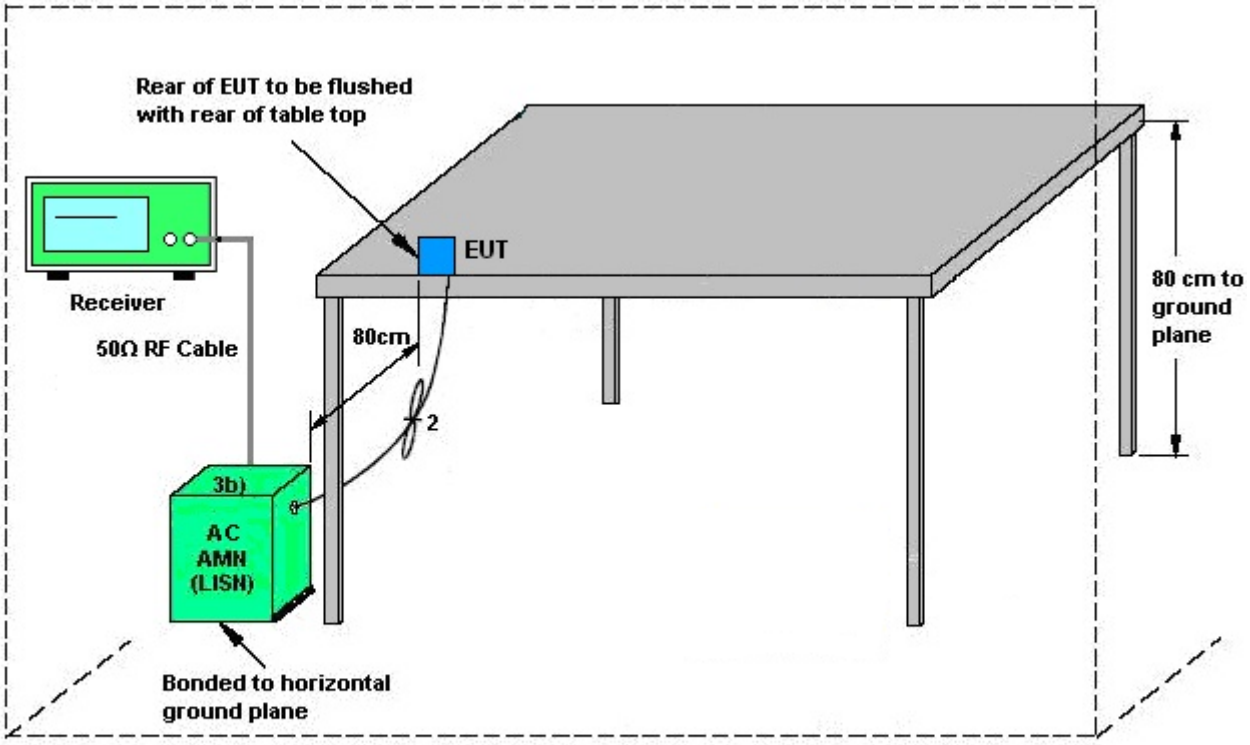
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 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.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 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
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Apr. 29, 2022	Apr. 06, 2023	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 28, 2021	Apr. 29, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 28, 2021	Apr. 29, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 22,2021	May 22, 2022~ Jun. 28, 2022	Oct. 21,2022	Radiation (03CH02-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 13, 2021	May 22, 2022~ Jun. 28, 2022	Jul. 12, 2022	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	May 22, 2022~ Jun. 28, 2022	Jun. 21, 2022	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 21, 2022		Jun. 20, 2024	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 15, 2021	May 22, 2022~ Jun. 28, 2022	Jul. 14, 2022	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 25, 2021	May 22, 2022~ Jun. 28, 2022	Jul. 24, 2022	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 10 2022	May 22, 2022~ Jun. 28, 2022	Apr. 09, 2023	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 22, 2021	May 22, 2022~ Jun. 28, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 22, 2021	May 22, 2022~ Jun. 28, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 22, 2021	May 22, 2022~ Jun. 28, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 13, 2021	May 22, 2022~ Jun. 28, 2022	Jul. 12, 2022	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	May 22, 2022~ Jun. 28, 2022	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	May 22, 2022~ Jun. 28, 2022	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	May 22, 2022~ Jun. 28, 2022	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul 14, 2021	Jul. 13, 2022	Jul 13, 2022	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul 14, 2021	Jul. 13, 2022	Jul 13, 2022	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	NCR	Jul. 13, 2022	NCR	Conduction (CO02-SZ))

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±0.13 %
Conducted Power Spectral Density	±1.32 dB

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.2dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

---------- THE END ----------

Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Chen Hong	Temperature:	21~25	°C
Test Date:	2022/4/29	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

Band IV									
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	6 dB Bandwidth (MHz)	6dB Bandwidth min. Limit (MHz)	Pass/Fail
11a	6M bps	1	149	5745	16.83	20.50	15.14	0.5	Pass
11a	6Mbps	1	157	5785	16.78	20.50	15.09	0.5	Pass
11a	6Mbps	1	165	5825	16.83	20.50	15.10	0.5	Pass
HT20	MCS 0	1	149	5745	17.73	20.55	15.10	0.5	Pass
HT20	MCS 0	1	157	5785	17.78	20.65	15.05	0.5	Pass
HT20	MCS 0	1	165	5825	17.73	20.70	15.10	0.5	Pass
HT40	MCS 0	1	151	5755	36.26	40.14	35.10	0.5	Pass
HT40	MCS 0	1	159	5795	36.36	40.32	35.10	0.5	Pass
VHT80	MCS 0	1	155	5775	75.40	81.76	75.20	0.5	Pass

TEST RESULTS DATA
Average Power Table

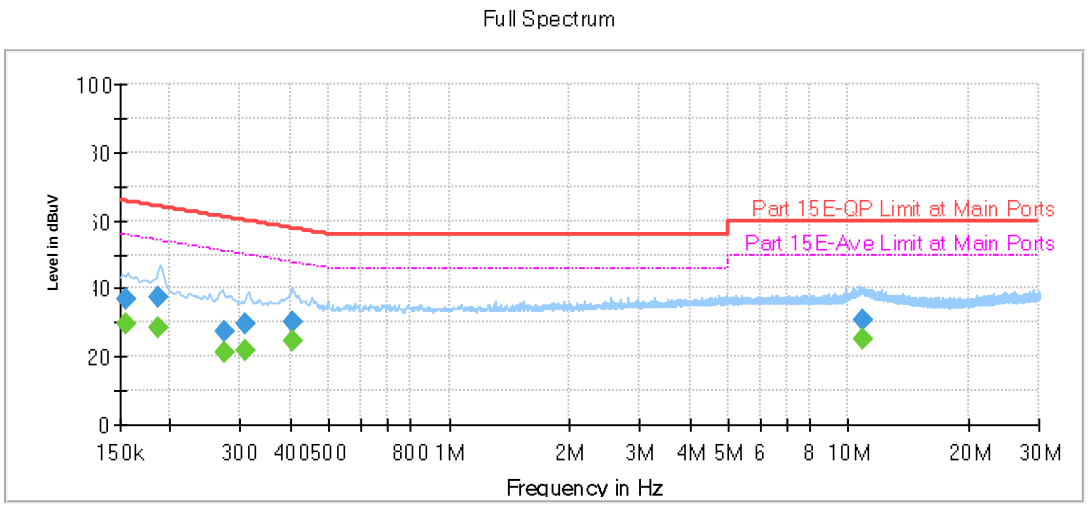
Band IV										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6M bps	1	149	5745	0.16	17.43	30.00	6.00		Pass
11a	6Mbps	1	157	5785	0.16	17.48	30.00	6.00		Pass
11a	6Mbps	1	165	5825	0.16	17.46	30.00	6.00		Pass
HT20	MCS 0	1	149	5745	0.17	16.40	30.00	6.00		Pass
HT20	MCS 0	1	157	5785	0.17	16.44	30.00	6.00		Pass
HT20	MCS 0	1	165	5825	0.17	16.40	30.00	6.00		Pass
HT40	MCS 0	1	151	5755	0.33	16.54	30.00	6.00		Pass
HT40	MCS 0	1	159	5795	0.33	16.58	30.00	6.00		Pass
VHT20	MCS 0	1	149	5745	0.15	16.34	30.00	6.00		Pass
VHT20	MCS 0	1	157	5785	0.15	16.36	30.00	6.00		Pass
VHT20	MCS 0	1	165	5825	0.15	16.35	30.00	6.00		Pass
VHT40	MCS 0	1	151	5755	0.33	16.51	30.00	6.00		Pass
VHT40	MCS 0	1	159	5795	0.33	16.52	30.00	6.00		Pass
VHT80	MCS 0	1	155	5775	0.66	16.37	30.00	6.00		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	10log (500kHz /RBW) Factor (dB)	Average Power Density (dBm/500kHz)	Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass/Fail
11a	6M bps	1	149	5745	0.16	2.22	4.23	30.00	6.00	Pass
11a	6Mbps	1	157	5785	0.16	2.22	4.18	30.00	6.00	Pass
11a	6Mbps	1	165	5825	0.16	2.22	4.17	30.00	6.00	Pass
HT20	MCS 0	1	149	5745	0.17	2.22	2.91	30.00	6.00	Pass
HT20	MCS 0	1	157	5785	0.17	2.22	2.83	30.00	6.00	Pass
HT20	MCS 0	1	165	5825	0.17	2.22	2.99	30.00	6.00	Pass
HT40	MCS 0	1	151	5755	0.33	2.22	-0.11	30.00	6.00	Pass
HT40	MCS 0	1	159	5795	0.33	2.22	-0.05	30.00	6.00	Pass
VHT80	MCS 0	1	155	5775	0.66	2.22	-2.77	30.00	6.00	Pass

Appendix B. AC Conducted Emission Test Results

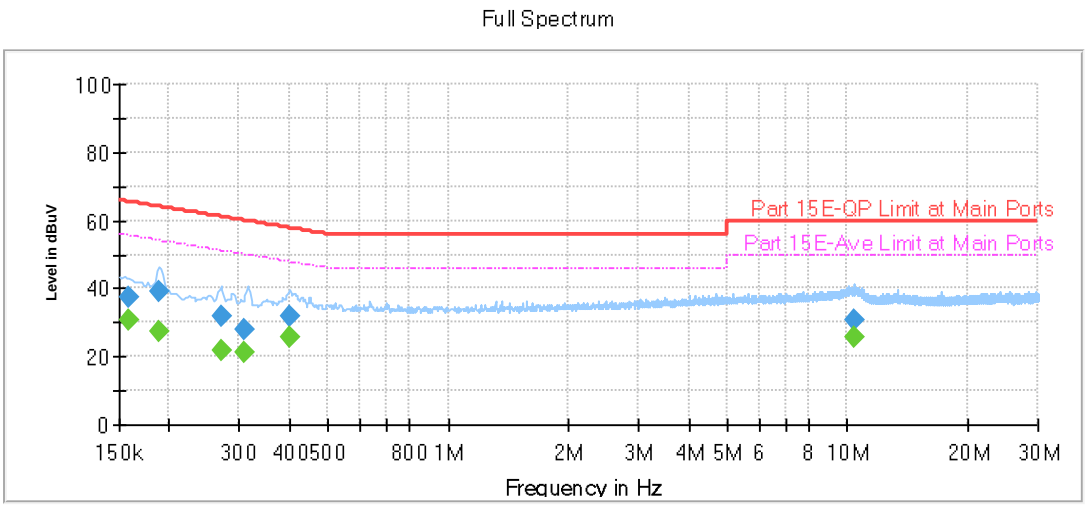
Test Engineer :	ZhangTao	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.155400	36.92	---	65.71	28.78	L1	OFF	19.7
0.155400	---	29.64	55.71	26.07	L1	OFF	19.7
0.186000	37.62	---	64.21	26.59	L1	OFF	19.7
0.186000	---	28.43	54.21	25.78	L1	OFF	19.7
0.273750	27.31	---	61.00	33.70	L1	OFF	19.7
0.273750	---	21.38	51.00	29.63	L1	OFF	19.7
0.309750	29.77	---	59.98	30.20	L1	OFF	19.7
0.309750	---	21.78	49.98	28.19	L1	OFF	19.7
0.406500	29.95	---	57.72	27.77	L1	OFF	19.7
0.406500	---	24.32	47.72	23.40	L1	OFF	19.7
10.849650	30.51	---	60.00	29.49	L1	OFF	20.0
10.849650	---	25.14	50.00	24.86	L1	OFF	20.0

Test Engineer :	ZhangTao	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	37.35	---	65.52	28.17	N	OFF	19.7
0.159000	---	30.80	55.52	24.72	N	OFF	19.7
0.188070	39.31	---	64.12	24.81	N	OFF	19.7
0.188070	---	27.33	54.12	26.79	N	OFF	19.7
0.269430	31.79	---	61.14	29.34	N	OFF	19.7
0.269430	---	21.96	51.14	29.17	N	OFF	19.7
0.309750	27.91	---	59.98	32.07	N	OFF	19.7
0.309750	---	21.30	49.98	28.68	N	OFF	19.7
0.401460	31.67	---	57.82	26.16	N	OFF	19.7
0.401460	---	25.86	47.82	21.96	N	OFF	19.7
10.349250	30.72	---	60.00	29.28	N	OFF	20.0
10.349250	---	25.51	50.00	24.49	N	OFF	20.0

Appendix C. Radiated Spurious Emission

U-NII-3 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path 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		5648.8	51.68	-16.62	68.3	37.49	34.3	10.33	30.44	100	59	P	H
		5699.8	52.36	-52.69	105.05	38.07	34.5	10.32	30.53	100	59	P	H
		5716.8	57.32	-52.59	109.91	42.9	34.53	10.38	30.49	100	59	P	H
		5724.2	61.06	-59.32	120.38	46.54	34.57	10.44	30.49	100	59	P	H
	*	5745	106.47	-	-	91.82	34.6	10.49	30.44	100	59	P	H
		5745	99.25	-	-	84.6	34.6	10.49	30.44	100	59	A	H
		5601.4	51.36	-16.94	68.3	37.08	34.3	10.33	30.35	100	118	P	V
		5699	52.88	-51.59	104.47	38.59	34.5	10.32	30.53	100	118	P	V
		5718.6	59.15	-51.26	110.41	44.63	34.57	10.44	30.49	100	118	P	V
		5723.8	63.35	-56.11	119.46	48.83	34.57	10.44	30.49	100	118	P	V
	*	5745	108.21	-	-	93.56	34.6	10.49	30.44	100	118	P	V
		5745	100.88	-	-	86.23	34.6	10.49	30.44	100	118	A	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5618.6	51.77	-16.53	68.3	37.54	34.3	10.33	30.4	100	63	P	H
		5674.2	52.14	-34.06	86.2	37.91	34.4	10.32	30.49	100	63	P	H
		5712.4	52.86	-55.81	108.67	38.44	34.53	10.38	30.49	100	63	P	H
		5721.4	52.18	-61.81	113.99	37.66	34.57	10.44	30.49	100	63	P	H
	*	5785	105.56	-	-	90.64	34.67	10.61	30.36	100	63	P	H
		5785	99.04	-	-	84.12	34.67	10.61	30.36	100	63	A	H
		5850.6	52.79	-68.04	120.83	37.59	34.9	10.78	30.48	100	63	P	H
		5864	53.99	-54.29	108.28	38.77	34.93	10.82	30.53	100	63	P	H
		5885.6	52.31	-45.02	97.33	37.08	34.97	10.85	30.59	100	63	P	H
		5925	52.98	-15.22	68.2	37.51	35.07	10.94	30.54	100	63	P	H
		5602.8	53.23	-15.07	68.3	39	34.3	10.33	30.4	100	118	P	V
		5658.8	52.64	-22.18	74.82	38.51	34.3	10.32	30.49	100	118	P	V
		5707	53.28	-53.88	107.16	38.86	34.53	10.38	30.49	100	118	P	V
		5720.2	52.65	-58.61	111.26	38.13	34.57	10.44	30.49	100	118	P	V
	*	5785	108.24	-	-	93.32	34.67	10.61	30.36	100	118	P	V
		5785	101.22	-	-	86.3	34.67	10.61	30.36	100	118	A	V
		5851.6	53.03	-65.52	118.55	37.83	34.9	10.78	30.48	100	118	P	V
		5864	53.76	-54.52	108.28	38.54	34.93	10.82	30.53	100	118	P	V
		5895.2	53.24	-36.97	90.21	37.94	35	10.89	30.59	100	118	P	V
		5933.2	53.36	-14.94	68.3	37.89	35.07	10.94	30.54	100	118	P	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	105.77	-	-	90.62	34.83	10.74	30.42	100	65	P	H
		5825	98.91	-	-	83.76	34.83	10.74	30.42	100	65	A	H
		5851	60.35	-59.57	119.92	45.15	34.9	10.78	30.48	100	65	P	H
		5857	55.17	-55.07	110.24	39.9	34.93	10.82	30.48	100	65	P	H
		5905	52.92	-30.04	82.96	37.57	35.03	10.91	30.59	100	65	P	H
		5932.8	51.56	-16.74	68.3	36.09	35.07	10.94	30.54	100	65	P	H
	*	5825	107.84	-	-	92.69	34.83	10.74	30.42	120	124	P	V
		5825	100.26	-	-	85.11	34.83	10.74	30.42	120	124	A	V
		5851	58.94	-60.98	119.92	43.74	34.9	10.78	30.48	120	124	P	V
		5855.8	55.08	-55.5	110.58	39.81	34.93	10.82	30.48	120	124	P	V
		5903.2	52.06	-32.23	84.29	36.76	35	10.89	30.59	120	124	P	V
		5935.8	52.04	-16.26	68.3	36.52	35.07	10.94	30.49	120	124	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		9192	50.46	-23.54	74	61.55	36.39	10.82	58.3	-	-	P	H
		11490	53.05	-20.95	74	60.3	38.34	12.32	57.91	100	25	P	H
		11490	47.88	-6.12	54	55.13	38.34	12.32	57.91	100	25	A	H
		17235	50.86	-17.44	68.3	49.84	42.27	15.58	56.83	-	-	P	H
		9192	51.54	-22.46	74	62.63	36.39	10.82	58.3	100	88	P	V
		9192	47.4	-6.6	54	58.49	36.39	10.82	58.3	100	88	A	V
		11490	56.4	-17.6	74	63.65	38.34	12.32	57.91	100	133	P	V
		11490	49.61	-4.39	54	56.86	38.34	12.32	57.91	100	133	A	V
		17235	50.99	-17.31	68.3	49.97	42.27	15.58	56.83	-	-	P	V
802.11a CH 157 5785MHz		9256	46.18	-22.12	68.3	57.36	36.46	10.77	58.41	100	124	P	H
		11570	54.18	-19.82	74	61.36	38.42	12.31	57.91	100	78	P	H
		11570	48.18	-5.82	54	55.36	38.42	12.31	57.91	100	78	A	H
		17355	50.63	-17.67	68.3	49.83	42.1	15.65	56.95	-	-	P	H
		9256	50.68	-17.62	68.3	61.86	36.46	10.77	58.41	-	-	P	V
		11570	55.18	-18.82	74	62.36	38.42	12.31	57.91	100	129	P	V
		11570	48.95	-5.05	54	56.13	38.42	12.31	57.91	100	129	A	V
		17355	50.22	-18.08	68.3	49.42	42.1	15.65	56.95	-	-	P	V
802.11a CH 165 5825MHz		9320	47.91	-26.09	74	59.13	36.51	10.77	58.5	-	-	P	H
		11650	53.39	-20.61	74	60.48	38.48	12.36	57.93	100	116	P	H
		11650	46.03	-7.97	54	53.12	38.48	12.36	57.93	100	116	A	H
		17475	50.46	-17.84	68.3	49.8	41.94	15.79	57.07	-	-	P	H
		9320	51.13	-22.87	74	62.35	36.51	10.77	58.5	100	117	P	V
		9320	49.2	-4.8	54	60.42	36.51	10.77	58.5	100	117	A	V
		11650	58.32	-15.68	74	65.41	38.48	12.36	57.93	100	131	P	V
		11650	50.16	-3.84	54	57.25	38.48	12.36	57.93	100	131	A	V
		17475	50.2	-18.1	68.3	49.54	41.94	15.79	57.07	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		5614.4	52.03	-16.27	68.3	37.57	34.3	10.56	30.4	100	58	P	H
		5673.2	52.34	-33.12	85.46	37.84	34.4	10.59	30.49	100	58	P	H
		5719.6	57.93	-52.76	110.69	43.24	34.57	10.61	30.49	100	58	P	H
		5723.4	59.71	-58.84	118.55	45.02	34.57	10.61	30.49	100	58	P	H
	*	5745	106.38	-	-	91.6	34.6	10.62	30.44	100	58	P	H
		5745	98.38	-	-	83.6	34.6	10.62	30.44	100	58	A	H
		5638.4	52.16	-16.14	68.3	37.72	34.3	10.58	30.44	116	129	P	V
		5689.4	51.54	-45.86	97.4	36.98	34.5	10.59	30.53	116	129	P	V
		5718.8	56.92	-53.54	110.46	42.23	34.57	10.61	30.49	116	129	P	V
		5724.6	61.49	-59.8	121.29	46.8	34.57	10.61	30.49	116	129	P	V
	*	5745	106.79	-	-	92.01	34.6	10.62	30.44	116	129	P	V
		5745	99.04	-	-	84.26	34.6	10.62	30.44	116	129	A	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 157 5785MHz		5631	52.04	-16.26	68.3	37.6	34.3	10.58	30.44	100	58	P	H
		5685.4	51.75	-42.71	94.46	37.19	34.5	10.59	30.53	100	58	P	H
		5701.2	53.02	-52.52	105.54	38.41	34.53	10.61	30.53	100	58	P	H
		5722.2	51.76	-64.06	115.82	37.07	34.57	10.61	30.49	100	58	P	H
	*	5785	106.17	-	-	91.22	34.67	10.64	30.36	100	58	P	H
		5785	99.05	-	-	84.1	34.67	10.64	30.36	100	58	A	H
		5850.4	51.58	-69.71	121.29	36.48	34.9	10.68	30.48	100	58	P	H
		5874.6	53.38	-51.93	105.31	38.23	34.97	10.71	30.53	100	58	P	H
		5878	54.42	-48.55	102.97	39.27	34.97	10.71	30.53	100	58	P	H
		5933.8	52.87	-15.43	68.3	37.56	35.07	10.78	30.54	100	58	P	H
		5625.6	52.16	-16.14	68.3	37.68	34.3	10.58	30.4	100	118	P	V
		5679.4	53.36	-36.68	90.04	38.9	34.4	10.59	30.53	100	118	P	V
		5709.8	53.09	-54.86	107.95	38.44	34.53	10.61	30.49	100	118	P	V
		5723	52.26	-65.38	117.64	37.57	34.57	10.61	30.49	100	118	P	V
	*	5785	106.42	-	-	91.47	34.67	10.64	30.36	100	118	P	V
		5785	99.91	-	-	84.96	34.67	10.64	30.36	100	118	A	V
		5850	52.17	-70.03	122.2	37.07	34.9	10.68	30.48	100	118	P	V
		5858	52.73	-57.23	109.96	37.62	34.93	10.71	30.53	100	118	P	V
		5894.8	53.61	-36.9	90.51	38.45	35	10.75	30.59	100	118	P	V
		5947	52.81	-15.49	68.3	37.42	35.1	10.78	30.49	100	118	P	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 165 5825MHz	*	5825	104.41	-	-	89.32	34.83	10.68	30.42	100	60	P	H
		5825	98.69	-	-	83.6	34.83	10.68	30.42	100	60	A	H
		5852.2	59.62	-57.56	117.18	44.52	34.9	10.68	30.48	100	60	P	H
		5855.8	55.65	-54.93	110.58	40.49	34.93	10.71	30.48	100	60	P	H
		5910.2	52.34	-26.78	79.12	37.1	35.03	10.75	30.54	100	60	P	H
		5943.4	52.63	-15.67	68.3	37.24	35.1	10.78	30.49	100	60	P	H
	*	5825	106.24	-	-	91.15	34.83	10.68	30.42	108	122	P	V
		5825	99.69	-	-	84.6	34.83	10.68	30.42	108	122	A	V
		5850.8	57.35	-63.03	120.38	42.25	34.9	10.68	30.48	108	122	P	V
		5855.2	53.46	-57.28	110.74	38.33	34.93	10.68	30.48	108	122	P	V
		5913.8	52.88	-23.58	76.46	37.64	35.03	10.75	30.54	108	122	P	V
		5925.6	52.62	-15.68	68.3	37.34	35.07	10.75	30.54	108	122	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		9192	50.43	-23.57	74	61.52	36.39	10.82	58.3	-	-	P	H
		11490	50.55	-23.45	74	57.8	38.34	12.32	57.91	-	-	P	H
		17235	50.23	-18.07	68.3	49.21	42.27	15.58	56.83	-	-	P	H
		9192	51.43	-22.57	74	62.52	36.39	10.82	58.3	100	147	P	V
		9192	47.7	-6.3	54	58.79	36.39	10.82	58.3	100	147	A	V
		11490	55.08	-18.92	74	62.33	38.34	12.32	57.91	100	142	P	V
		11490	49.08	-4.92	54	56.33	38.34	12.32	57.91	100	142	A	V
		17235	50.91	-17.39	68.3	49.89	42.27	15.58	56.83	-	-	P	V
802.11n HT20 CH 157 5785MHz		9256	47.94	-20.36	68.3	59.12	36.46	10.77	58.41	-	-	P	H
		11570	49.52	-24.48	74	56.7	38.42	12.31	57.91	-	-	P	H
		17355	50.07	-18.23	68.3	49.27	42.1	15.65	56.95	-	-	P	H
		9256	51.53	-16.77	68.3	62.71	36.46	10.77	58.41	-	-	P	V
		11570	54.42	-19.58	74	61.6	38.42	12.31	57.91	100	125	P	V
		11570	48.93	-5.07	54	56.11	38.42	12.31	57.91	100	125	A	V
		17355	50.39	-17.91	68.3	49.59	42.1	15.65	56.95	-	-	P	V
802.11n HT20 CH 165 5825MHz		9320	49.49	-24.51	74	60.71	36.51	10.77	58.5	-	-	P	H
		11650	50.3	-23.7	74	57.39	38.48	12.36	57.93	-	-	P	H
		17475	50.17	-18.13	68.3	49.51	41.94	15.79	57.07	-	-	P	H
		9320	51.93	-22.07	74	63.15	36.51	10.77	58.5	100	66	P	V
		9320	48.22	-5.78	54	59.44	36.51	10.77	58.5	100	66	A	V
		11650	54.37	-19.63	74	61.46	38.48	12.36	57.93	125	163	P	V
		11650	49.94	-4.06	54	57.03	38.48	12.36	57.93	125	163	A	V
		17475	50.4	-17.9	68.3	49.74	41.94	15.79	57.07	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		5603.2	51.4	-16.9	68.3	37.17	34.3	10.33	30.4	100	57	P	H
		5698.2	55.7	-48.18	103.88	41.41	34.5	10.32	30.53	100	57	P	H
		5718.4	61.95	-48.4	110.35	47.43	34.57	10.44	30.49	100	57	P	H
		5724.6	61.41	-59.88	121.29	46.89	34.57	10.44	30.49	100	57	P	H
	*	5755	101.83	-	-	87.09	34.63	10.55	30.44	100	57	P	H
		5755	95.4	-	-	80.66	34.63	10.55	30.44	100	57	A	H
		5852.6	51.58	-64.69	116.27	36.38	34.9	10.78	30.48	100	57	P	H
		5874.4	52.24	-53.13	105.37	36.95	34.97	10.85	30.53	100	57	P	H
		5875.8	52.65	-51.96	104.61	37.36	34.97	10.85	30.53	100	57	P	H
		5942.4	53.32	-14.98	68.3	37.75	35.1	10.96	30.49	100	57	P	H
		5620.2	52.18	-16.12	68.3	37.95	34.3	10.33	30.4	100	117	P	V
		5697.2	57.2	-45.94	103.14	42.91	34.5	10.32	30.53	100	117	P	V
		5719.8	60.98	-49.76	110.74	46.46	34.57	10.44	30.49	100	117	P	V
		5723.2	64.5	-53.6	118.1	49.98	34.57	10.44	30.49	100	117	P	V
	*	5755	104.78	-	-	90.04	34.63	10.55	30.44	100	117	P	V
		5755	98.4	-	-	83.66	34.63	10.55	30.44	100	117	A	V
		5851	51.87	-68.05	119.92	36.67	34.9	10.78	30.48	100	117	P	V
		5855.8	53.73	-56.85	110.58	38.46	34.93	10.82	30.48	100	117	P	V
		5909.6	53.14	-26.42	79.56	37.74	35.03	10.91	30.54	100	117	P	V
		5944.8	53.08	-15.22	68.3	37.51	35.1	10.96	30.49	100	117	P	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 159 5795MHz		5612	52.12	-16.18	68.3	37.89	34.3	10.33	30.4	100	58	P	H
		5695.6	52.93	-49.04	101.97	38.64	34.5	10.32	30.53	100	58	P	H
		5718.8	52.27	-58.19	110.46	37.75	34.57	10.44	30.49	100	58	P	H
		5724.6	52.4	-68.89	121.29	37.88	34.57	10.44	30.49	100	58	P	H
	*	5795	102.15	-	-	87.14	34.7	10.67	30.36	100	58	P	H
		5795	95.14	-	-	80.13	34.7	10.67	30.36	100	58	A	H
		5855	57.14	-53.66	110.8	41.87	34.93	10.82	30.48	100	58	P	H
		5855	57.14	-53.66	110.8	41.87	34.93	10.82	30.48	100	58	P	H
		5887.6	53.81	-42.04	95.85	38.51	35	10.89	30.59	100	58	P	H
		5925	53.09	-15.11	68.2	37.62	35.07	10.94	30.54	100	58	P	H
		5600	51.71	-16.59	68.3	37.43	34.3	10.33	30.35	100	122	P	V
		5680.8	51.86	-39.21	91.07	37.67	34.4	10.32	30.53	100	122	P	V
		5712.8	51.88	-56.91	108.79	37.46	34.53	10.38	30.49	100	122	P	V
		5720	51.79	-59.01	110.8	37.27	34.57	10.44	30.49	100	122	P	V
	*	5795	104.28	-	-	89.27	34.7	10.67	30.36	100	122	P	V
		5795	97.14	-	-	82.13	34.7	10.67	30.36	100	122	A	V
		5850	52.82	-69.38	122.2	37.62	34.9	10.78	30.48	100	122	P	V
		5856	53.21	-57.31	110.52	37.94	34.93	10.82	30.48	100	122	P	V
		5908.8	52.48	-27.67	80.15	37.08	35.03	10.91	30.54	100	122	P	V
		5931.4	52.81	-15.49	68.3	37.34	35.07	10.94	30.54	100	122	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		9206	50.88	-17.42	68.3	61.99	36.41	10.81	58.33	-	-	P	H
		11510	48.37	-25.63	74	55.57	38.36	12.34	57.9	-	-	P	H
		17265	50.3	-18	68.3	49.44	42.22	15.51	56.87	-	-	P	H
		9206	50.18	-18.12	68.3	61.29	36.41	10.81	58.33	-	-	P	V
		11510	54.1	-19.9	74	61.3	38.36	12.34	57.9	100	75	P	V
		11510	49.26	-4.74	54	56.46	38.36	12.34	57.9	100	75	A	V
		17265	50.66	-17.64	68.3	49.8	42.22	15.51	56.87	-	-	P	V
802.11n HT40 CH 159 5795MHz		9272	50.28	-18.02	68.3	61.48	36.48	10.76	58.44	-	-	P	H
		11590	48.91	-25.09	74	56.09	38.43	12.31	57.92	-	-	P	H
		17385	50.51	-17.79	68.3	49.65	42.05	15.79	56.98	-	-	P	H
		9272	50.35	-17.95	68.3	61.55	36.48	10.76	58.44	-	-	P	V
		11590	53.22	-20.78	74	60.4	38.43	12.31	57.92	100	62	P	V
		11590	49.07	-4.93	54	56.25	38.43	12.31	57.92	100	62	A	V
		17385	50.58	-17.72	68.3	49.72	42.05	15.79	56.98	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5641.4	53.99	-14.31	68.3	39.55	34.3	10.58	30.44	100	58	P	H
		5694.8	58.29	-43.09	101.38	43.73	34.5	10.59	30.53	100	58	P	H
		5719.4	60.84	-49.79	110.63	46.15	34.57	10.61	30.49	100	58	P	H
		5723.4	61.93	-56.62	118.55	47.24	34.57	10.61	30.49	100	58	P	H
	*	5775	99.35	-	-	84.46	34.67	10.62	30.4	100	58	P	H
		5775	92.79	-	-	77.9	34.67	10.62	30.4	100	58	A	H
		5851.2	58.36	-61.1	119.46	43.26	34.9	10.68	30.48	100	58	P	H
		5857	58.62	-51.62	110.24	43.46	34.93	10.71	30.48	100	58	P	H
		5875.2	56.21	-48.84	105.05	41.06	34.97	10.71	30.53	100	58	P	H
		5932.2	53.3	-15	68.3	38.02	35.07	10.75	30.54	100	58	P	H
		5633.6	53.57	-14.73	68.3	39.13	34.3	10.58	30.44	100	123	P	V
		5698.8	58.71	-45.61	104.32	44.15	34.5	10.59	30.53	100	123	P	V
		5717.4	59.85	-50.22	110.07	45.2	34.53	10.61	30.49	100	123	P	V
		5722.8	61.25	-55.93	117.18	46.56	34.57	10.61	30.49	100	123	P	V
	*	5775	102.1	-	-	87.21	34.67	10.62	30.4	100	123	P	V
		5775	94.29	-	-	79.4	34.67	10.62	30.4	100	123	A	V
		5851.2	59.39	-60.07	119.46	44.29	34.9	10.68	30.48	100	123	P	V
		5856.4	60.14	-50.27	110.41	44.98	34.93	10.71	30.48	100	123	P	V
		5876.2	55.75	-48.56	104.31	40.6	34.97	10.71	30.53	100	123	P	V
		5936.2	52.7	-15.6	68.3	37.34	35.07	10.78	30.49	100	123	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		9240	48.84	-19.46	68.3	60.01	36.44	10.78	58.39	-	-	P	H
		11550	48.58	-25.42	74	55.77	38.4	12.32	57.91	-	-	P	H
		17325	50.49	-17.81	68.3	49.74	42.15	15.52	56.92	-	-	P	H
		9240	50.71	-17.59	68.3	61.88	36.44	10.78	58.39	-	-	P	V
		11550	49.26	-24.74	74	56.45	38.4	12.32	57.91	-	-	P	V
		17325	50.84	-17.46	68.3	50.09	42.15	15.52	56.92	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII-3 5725~5850MHz

Emission below 1GHz

WIFI 802.11a (LF @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path 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 LF		90.14	23.01	-20.49	43.5	43.29	13.92	0.98	35.18	-	-	P	H
		196.84	24.73	-18.77	43.5	41.87	16.51	1.45	35.1	-	-	P	H
		317.12	24.19	-21.81	46	37.06	20.15	1.88	34.9	-	-	P	H
		581.93	24.65	-21.35	46	31.13	25.43	2.63	34.54	-	-	P	H
		796.3	26.56	-19.44	46	29.59	28.19	3.09	34.31	-	-	P	H
		974.78	29.21	-24.79	54	29.94	29.99	3.43	34.15	-	-	P	H
		36.79	25.86	-14.14	40	40.84	19.38	0.64	35	-	-	P	V
		94.02	24.82	-18.68	43.5	45.03	13.98	1	35.19	-	-	P	V
		196.84	29.01	-14.49	43.5	46.15	16.51	1.45	35.1	-	-	P	V
		325.85	25.59	-20.41	46	38.15	20.44	1.9	34.9	-	-	P	V
		842.86	27.9	-18.1	46	30.44	28.57	3.19	34.3	-	-	P	V
		988.36	29.29	-24.71	54	29.82	30.13	3.46	34.12	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Co-location

5 GHz 5250~5350MHz

WIFI 802.11a TX &BLE TX (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 CH165 5825MHz & BLE(2M) CH39		5825	106.01	-	-	90.86	34.83	10.74	30.42	116	174	P	H
		5825	98.79	-	-	83.64	34.83	10.74	30.42	116	174	A	H
	*	5851.2	58.06	-61.4	119.46	42.86	34.9	10.78	30.48	116	174	P	H
	*	5856	55.17	-55.35	110.52	39.9	34.93	10.82	30.48	116	174	A	H
		5893	52.54	-39.3	91.84	37.24	35	10.89	30.59	116	174	P	H
		5937.2	53.02	-15.28	68.3	37.5	35.07	10.94	30.49	116	174	A	H
		5825	107.75	-	-	92.6	34.83	10.74	30.42	100	115	P	V
		5825	100.52	-	-	85.37	34.83	10.74	30.42	100	115	A	V
	*	5850.6	61.85	-58.98	120.83	46.65	34.9	10.78	30.48	100	115	P	V
	*	5858.2	60.49	-49.41	109.9	45.27	34.93	10.82	30.53	100	115	A	V
		5878	54.07	-48.9	102.97	38.78	34.97	10.85	30.53	100	115	P	V
		5944	52.47	-15.83	68.3	36.9	35.1	10.96	30.49	100	115	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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)
802.11a CH165 5825MHz & BLE(2M) CH39		2480	96.18	-	-	90.4	32.07	5.66	31.95	116	356	P	H
		2480	94.08	-	-	88.3	32.07	5.66	31.95	116	356	A	H
	*	2494.8	51.94	-22.06	74	46.01	32.1	5.68	31.85	116	356	P	H
	*	2483.52	43.09	-10.91	54	37.31	32.07	5.66	31.95	116	356	A	H
		2480	96.62	-	-	90.84	32.07	5.66	31.95	136	281	P	V
		2480	94.06	-	-	88.28	32.07	5.66	31.95	136	281	A	V
	*	2490.24	52.31	-21.69	74	46.48	32.1	5.68	31.95	136	281	P	V
	*	2483.52	43.36	-10.64	54	37.58	32.07	5.66	31.95	136	281	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

5 GHz 5250~5350MHz

WIFI 802.11a TX &BLE TX (Harmonic @ 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 CH165 5825MHz & BLE(2M) CH39		4960	50.03	-23.97	74	38.15	33.73	8.98	30.83	-	-	P	H
		7440	46.25	-27.75	74	31.38	35.78	11.12	32.03	-	-	P	H
		9320	48.91	-25.09	74	60.13	36.51	10.77	58.5	-	-	P	H
		11650	53.16	-20.84	74	60.25	38.48	12.36	57.93	100	214	P	H
		11650	46.43	-7.57	54	53.52	38.48	12.36	57.93	100	214	A	H
		17475	54.21	-14.09	68.3	53.55	41.94	15.79	57.07	-	-	P	H
		4960	50.41	-23.59	74	38.53	33.73	8.98	30.83	-	-	P	V
		7440	45.64	-28.36	74	30.77	35.78	11.12	32.03	-	-	P	V
		9320	51.44	-22.56	74	62.66	36.51	10.77	58.5	100	119	P	V
		9320	47.07	-6.93	54	58.29	36.51	10.77	58.5	100	119	P	V
		11650	56.59	-17.41	74	63.68	38.48	12.36	57.93	100	270	P	V
		11650	49.69	-4.31	54	56.78	38.48	12.36	57.93	100	270	A	V
		17475	55.3	-13	68.3	54.64	41.94	15.79	57.07	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average 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 **Margin** 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	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					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. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path 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. Margin (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) + Path 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. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

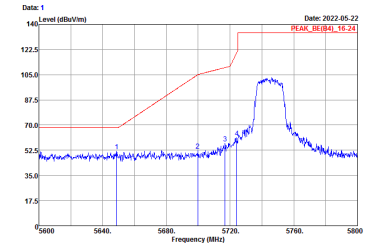
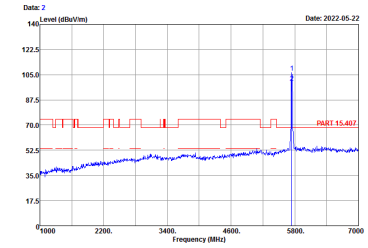
= -10.46(dB)

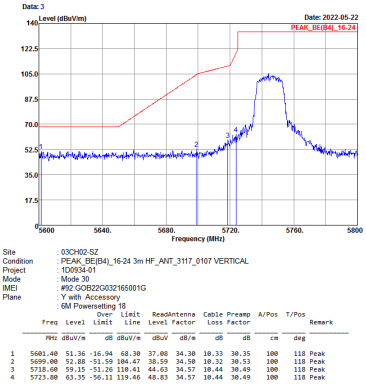
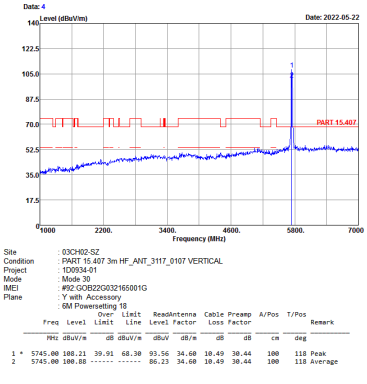
Both peak and average measured complies with the limit line, so test result is “PASS”.

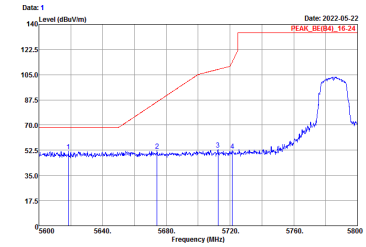
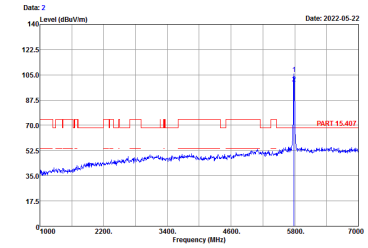
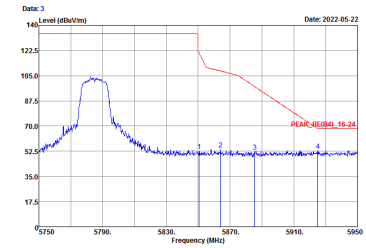
Appendix D. Radiated Spurious Emission

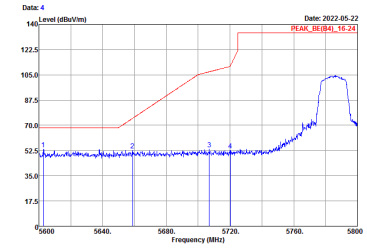
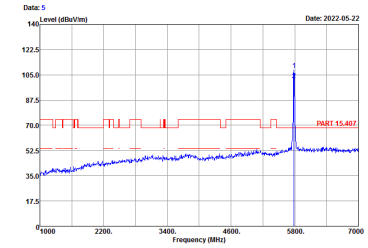
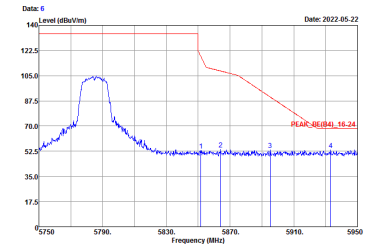
U-NII-3 - 5725~5850MHz

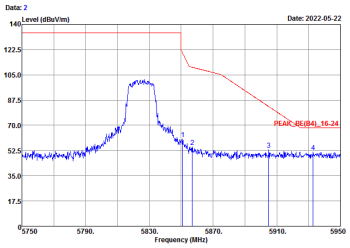
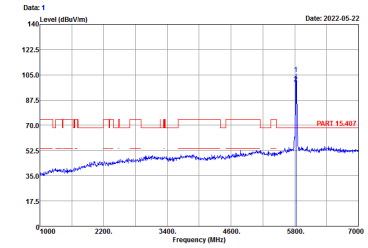
WIFI 802.11a (Band Edge @ 3m)

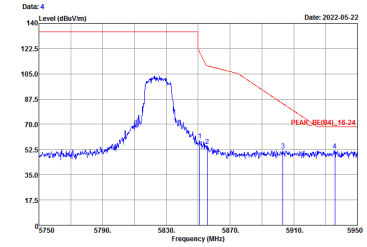
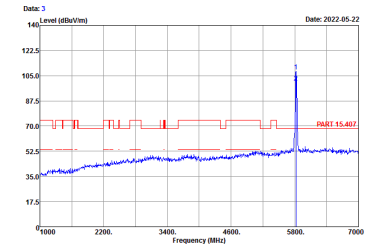
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 30 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5648.80 51.68 -16.62 68.30 37.49 34.30 10.33 30.44 100 59 Peak 2 5699.80 52.36 -52.69 105.05 38.07 34.50 10.32 30.53 100 59 Peak 3 5716.80 57.32 -52.59 109.91 42.90 34.53 10.38 30.49 100 59 Peak 4 5724.20 61.06 -59.32 120.38 46.54 34.57 10.44 30.49 100 59 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 30 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5745.00 106.47 38.17 68.30 91.82 34.60 10.49 30.44 100 59 Peak 2 5745.00 99.25 ------ ------ 84.60 34.60 10.49 30.44 100 59 Average

WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 30 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5601.40 51.36 -16.94 68.30 37.08 34.30 10.33 30.35 100 118 Peak 2 5699.00 52.88 -51.59 104.47 38.59 34.50 10.32 30.53 100 118 Peak 3 5718.60 59.15 -51.26 110.41 44.63 34.57 10.44 30.49 100 118 Peak 4 5723.80 63.35 -56.11 119.46 48.83 34.57 10.44 30.49 100 118 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 30 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5745.00 108.21 39.91 68.30 93.56 34.60 10.49 30.44 100 118 Peak 2 5745.00 100.88 ------ ------ 86.23 34.60 10.49 30.44 100 118 Average

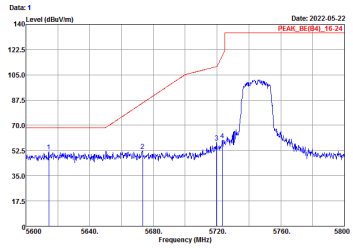
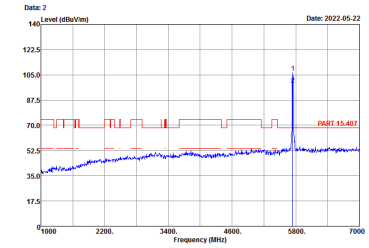
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5618.60 51.77 -16.53 68.30 37.54 34.30 10.33 30.40 100 63 Peak 2 5674.20 52.14 -34.06 86.20 37.91 34.40 10.32 30.49 100 63 Peak 3 5712.40 52.86 -55.81 108.67 38.44 34.53 10.38 30.49 100 63 Peak 4 5721.40 52.18 -61.81 113.99 37.66 34.57 10.44 30.49 100 63 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5785.00 105.56 37.26 68.30 90.64 34.67 10.61 30.36 100 63 Peak 2 5785.00 99.04 ------ ------ 84.12 34.67 10.61 30.36 100 63 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5850.60 52.79 -68.04 120.83 37.59 34.90 10.78 30.48 100 63 Peak 2 5864.00 53.99 -54.29 108.28 38.77 34.93 10.82 30.53 100 63 Peak 3 5885.60 52.31 -45.02 97.33 37.08 34.97 10.85 30.59 100 63 Peak 4 5925.00 52.98 -15.22 68.20 37.51 35.07 10.94 30.54 100 63 Peak	Left blank

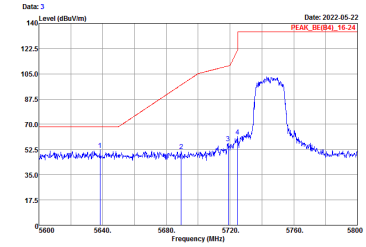
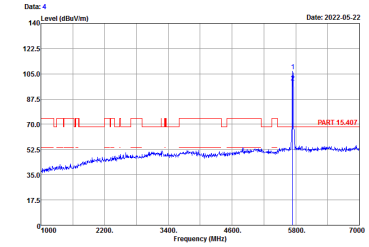
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5602.80 53.23 -15.07 68.30 39.00 34.30 10.33 30.40 100 118 Peak 2 5658.80 52.64 -22.18 74.82 38.51 34.30 10.32 30.49 100 118 Peak 3 5707.00 53.28 -53.88 107.16 38.86 34.53 10.38 30.49 100 118 Peak 4 5720.20 52.65 -58.61 111.26 38.13 34.57 10.44 30.49 100 118 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5785.00 108.24 39.94 68.30 93.32 34.67 10.61 30.36 100 118 Peak 2 5785.00 101.22 ------ ------ 86.30 34.67 10.61 30.36 100 118 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.60 53.03 -65.52 118.55 37.83 34.90 10.78 30.48 100 118 Peak 2 5864.00 53.76 -54.52 108.28 38.54 34.93 10.82 30.53 100 118 Peak 3 5895.20 53.24 -36.97 90.21 37.94 35.00 10.89 30.59 100 118 Peak 4 5933.20 53.36 -14.94 68.30 37.89 35.07 10.94 30.54 100 118 Peak	Left blank

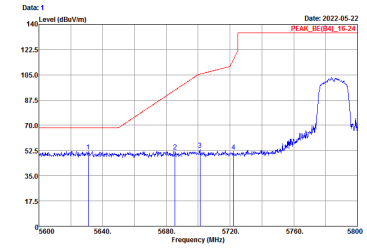
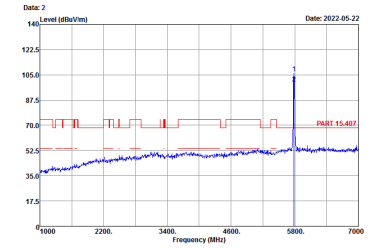
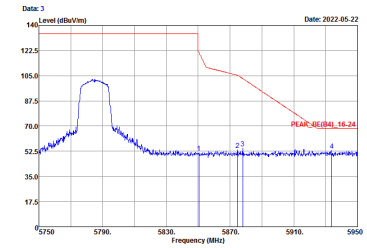
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line Level ReadAntenna Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.00 60.35 -59.57 119.92 45.15 34.90 10.78 30.48 100 65 Peak 2 5857.00 55.17 -55.07 110.24 39.90 34.93 10.82 30.48 100 65 Peak 3 5905.00 52.92 -30.04 82.96 37.57 35.03 10.91 30.59 100 65 Peak 4 5932.80 51.56 -16.74 68.30 36.09 35.07 10.94 30.54 100 65 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line Level ReadAntenna Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5825.00 105.77 37.47 68.30 90.62 34.83 10.74 30.42 100 65 Peak 2 5825.00 98.91 ------ ------ 83.76 34.83 10.74 30.42 100 65 Average

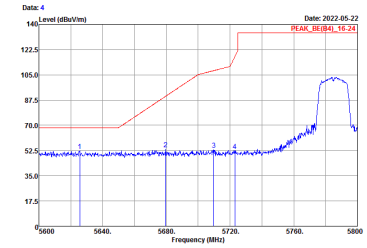
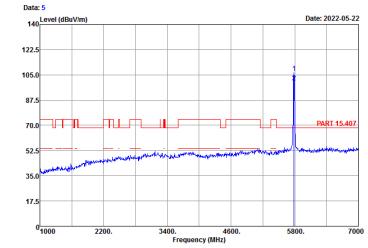
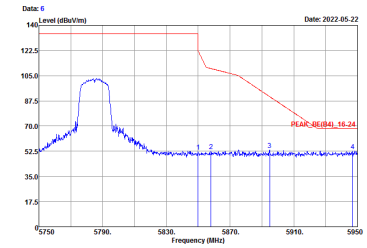
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit ReadAntenna Level Cable Factor Preamp Loss Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.00 58.94 -60.98 119.92 43.74 34.90 10.78 30.48 120 124 Peak 2 5855.00 55.08 -55.50 110.58 39.81 34.93 10.82 30.48 120 124 Peak 3 5903.20 52.06 -32.23 84.29 36.76 35.00 10.89 30.59 120 124 Peak 4 5935.80 52.04 -16.26 68.30 36.52 35.07 10.94 30.49 120 124 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit ReadAntenna Level Cable Factor Preamp Loss Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5825.00 107.84 39.54 68.30 92.69 34.83 10.74 30.42 120 124 Peak 2 5825.00 100.26 ------ ------ 85.11 34.83 10.74 30.42 120 124 Average

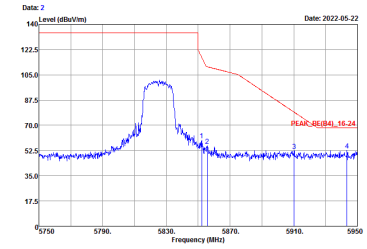
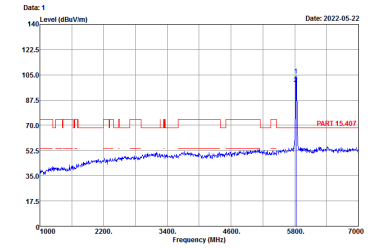
U-NII-3 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

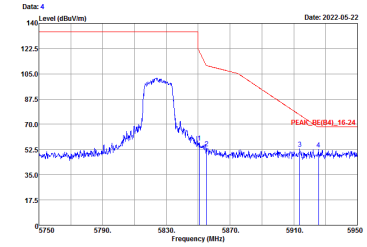
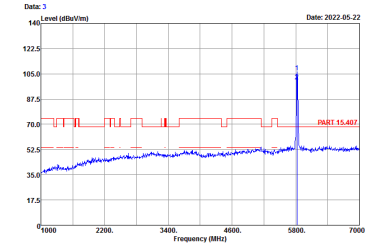
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 33 IMEI : #07 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Cable Factor Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5614.40 52.03 -16.27 68.30 37.57 34.30 10.56 30.40 100 58 Peak 2 5673.20 52.34 -33.12 85.46 37.84 34.40 10.59 30.49 100 58 Peak 3 5719.60 57.93 -52.76 110.69 43.24 34.57 10.61 30.49 100 58 Peak 4 5723.40 59.71 -58.84 118.55 45.02 34.57 10.61 30.49 100 58 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 33 IMEI : #07 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Cable Factor Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5745.00 106.38 38.08 68.30 91.60 34.60 10.62 30.44 100 58 Peak 2 5745.00 98.38 ------ ------ 83.60 34.60 10.62 30.44 100 58 Average

WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 33 IMEI : #87.GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos Remark T/Pos MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5638.40 52.16 -16.14 68.30 37.72 34.30 10.58 30.44 116 129 Peak 2 5689.40 51.54 -45.86 97.40 36.98 34.50 10.59 30.53 116 129 Peak 3 5718.80 56.92 -53.54 110.46 42.23 34.57 10.61 30.49 116 129 Peak 4 5724.60 61.49 -59.00 121.29 46.00 34.57 10.61 30.49 116 129 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 33 IMEI : #87.GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos Remark T/Pos MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5745.00 106.79 38.49 68.30 92.01 34.60 10.62 30.44 116 129 Peak 2 5745.00 99.04 ------ ------ 84.26 34.60 10.62 30.44 116 129 Average

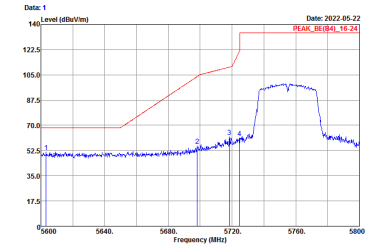
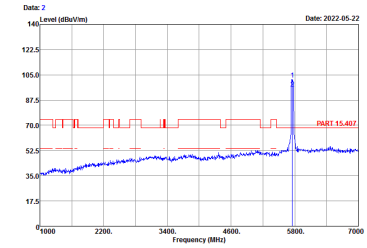
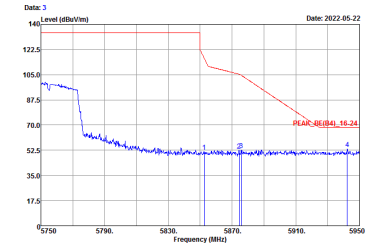
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5631.00 52.04 -16.26 68.30 37.60 34.30 10.58 30.44 100 58 Peak 2 5685.40 51.75 -42.71 94.46 37.19 34.50 10.59 30.53 100 58 Peak 3 5701.20 53.02 -52.52 105.54 38.41 34.53 10.61 30.53 100 58 Peak 4 5722.20 51.76 -64.06 115.82 37.07 34.57 10.61 30.49 100 58 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5785.00 106.17 37.87 68.30 91.22 34.67 10.64 30.36 100 58 Peak 2 5785.00 99.05 ------ ------ 84.10 34.67 10.64 30.36 100 58 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5850.40 51.58 -69.71 121.29 36.48 34.90 10.68 30.48 100 58 Peak 2 5874.60 53.38 -51.93 105.31 38.23 34.97 10.71 30.53 100 58 Peak 3 5878.00 54.42 -48.55 102.97 39.27 34.97 10.71 30.53 100 58 Peak 4 5933.80 52.87 -15.43 68.30 37.56 35.07 10.78 30.54 100 58 Peak	Left blank

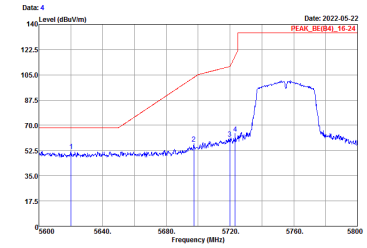
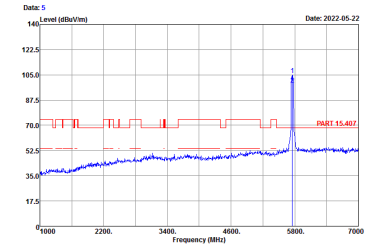
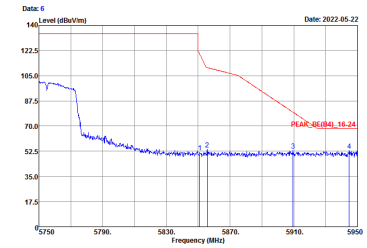
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5625.60 52.16 -16.14 68.30 37.68 34.30 10.58 30.40 100 118 Peak 2 5679.40 53.36 -36.68 90.04 38.90 34.40 10.59 30.53 100 118 Peak 3 5709.00 53.09 -54.06 107.95 38.44 34.53 10.61 30.49 100 118 Peak 4 5723.00 52.26 -65.38 117.64 37.57 34.57 10.61 30.49 100 118 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5785.00 106.42 38.12 68.30 91.47 34.67 10.64 30.36 100 118 Peak 2 5785.00 99.91 ------ ------ 84.96 34.67 10.64 30.36 100 118 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5850.00 52.17 -70.03 122.20 37.07 34.90 10.68 30.48 100 118 Peak 2 5858.00 52.73 -57.23 109.96 37.62 34.93 10.71 30.53 100 118 Peak 3 5894.80 53.61 -36.90 90.51 38.45 35.00 10.75 30.59 100 118 Peak 4 5947.00 52.81 -15.49 68.30 37.42 35.10 10.78 30.49 100 118 Peak	Left blank

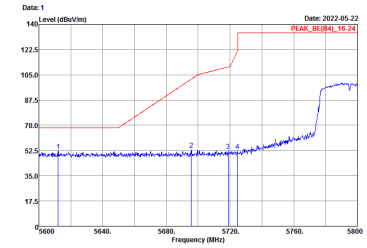
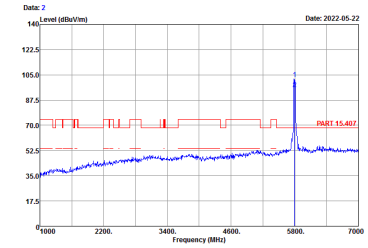
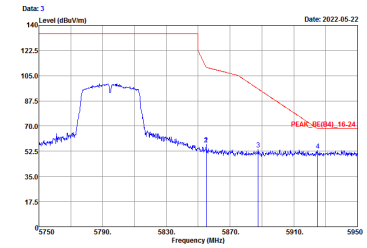
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 35 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5852.20 59.62 -57.56 117.18 44.52 34.90 10.68 30.48 100 60 Peak 2 5855.80 55.65 -54.93 110.58 40.49 34.93 10.71 30.48 100 60 Peak 3 5910.20 52.34 -26.78 79.12 37.10 35.03 10.75 30.54 100 60 Peak 4 5943.40 52.63 -15.67 68.30 37.24 35.10 10.78 30.49 100 60 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 35 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5825.00 104.41 36.11 68.30 89.32 34.83 10.68 30.42 100 60 Peak 2 5825.00 98.69 ------ ------ 83.60 34.83 10.68 30.42 100 60 Average

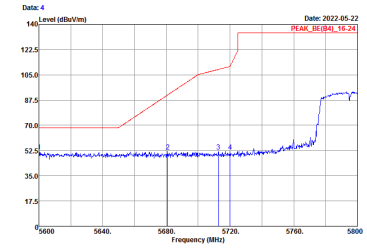
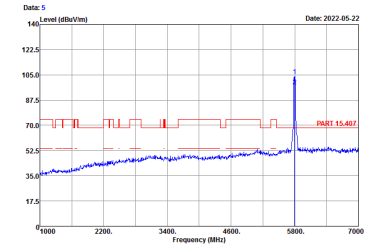
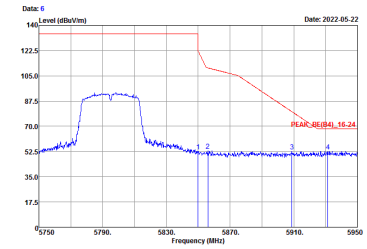
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 35 IMEI : #87 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos Remark T/Pos MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5850.00 57.35 -63.03 120.38 42.25 34.90 10.68 30.48 108 122 Peak 2 5855.20 53.46 -57.28 110.74 38.33 34.93 10.68 30.48 108 122 Peak 3 5913.00 52.88 -23.58 76.46 37.64 35.03 10.75 30.54 108 122 Peak 4 5925.60 52.62 -15.68 68.30 37.34 35.07 10.75 30.54 108 122 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 35 IMEI : #87 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos Remark T/Pos MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5825.00 106.24 37.94 68.30 91.15 34.83 10.68 30.42 108 122 Peak 2 5825.00 99.69 ------ ------ 84.60 34.83 10.68 30.42 108 122 Average

U-NII-3 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

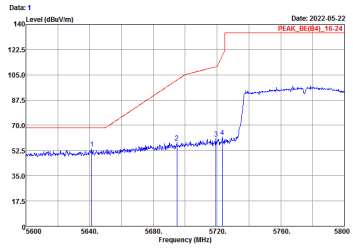
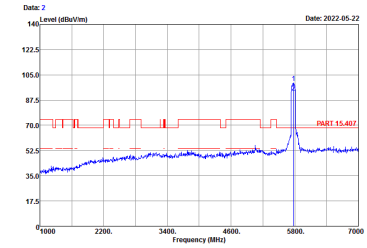
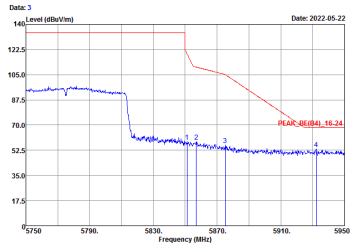
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Cable Loss Preamp Factor Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5603.20 51.40 -16.90 68.30 37.17 34.30 10.33 30.40 100 57 Peak 2 5698.20 55.70 -48.18 103.88 41.41 34.50 10.32 30.53 100 57 Peak 3 5718.40 61.95 -48.40 110.35 47.43 34.57 10.44 30.49 100 57 Peak 4 5724.60 61.41 -59.88 121.29 46.89 34.57 10.44 30.49 100 57 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Cable Loss Preamp Factor Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5755.00 101.83 33.53 68.30 87.09 34.63 10.55 30.44 100 57 Peak 2 5755.00 95.40 ------ ------ 80.66 34.63 10.55 30.44 100 57 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Cable Loss Preamp Factor Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5852.60 51.58 -64.69 116.27 36.38 34.90 10.78 30.48 100 57 Peak 2 5874.40 52.24 -53.13 105.37 36.95 34.97 10.85 30.53 100 57 Peak 3 5875.80 52.65 -51.96 104.61 37.36 34.97 10.85 30.53 100 57 Peak 4 5942.40 53.32 -14.98 68.30 37.75 35.10 10.96 30.49 100 57 Peak	Left blank

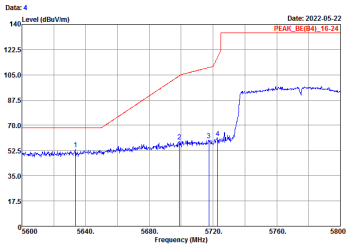
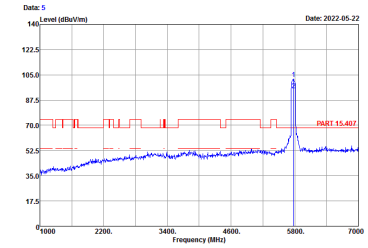
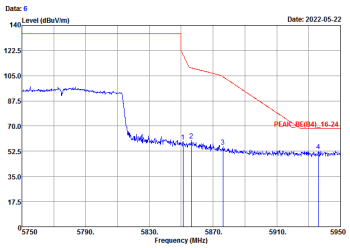
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5620.20 52.18 -16.12 68.30 37.95 34.30 10.33 30.40 100 117 Peak 2 5697.20 57.20 -45.94 103.14 42.91 34.50 10.32 30.53 100 117 Peak 3 5719.00 60.98 -49.76 110.74 46.46 34.57 10.44 30.49 100 117 Peak 4 5723.20 64.50 -53.60 118.10 49.98 34.57 10.44 30.49 100 117 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5755.00 104.78 36.48 68.30 90.04 34.63 10.55 30.44 100 117 Peak 2 5755.00 98.40 ------ ------ 83.66 34.63 10.55 30.44 100 117 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.00 51.87 -68.05 119.92 36.67 34.90 10.78 30.48 100 117 Peak 2 5855.00 53.73 -56.85 110.58 38.46 34.93 10.82 30.48 100 117 Peak 3 5909.60 53.14 -26.42 79.56 37.74 35.03 10.91 30.54 100 117 Peak 4 5944.00 53.08 -15.22 68.30 37.51 35.10 10.96 30.49 100 117 Peak	Left blank

WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5612.00 52.12 -16.18 68.30 37.89 34.30 10.33 30.40 100 58 Peak 2 5695.60 52.93 -49.04 101.97 38.64 34.50 10.32 30.53 100 58 Peak 3 5718.00 52.27 -58.19 110.46 37.75 34.57 10.44 30.49 100 58 Peak 4 5724.60 52.40 -68.89 121.29 37.88 34.57 10.44 30.49 100 58 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5795.00 102.15 33.85 68.30 87.14 34.70 10.67 30.36 100 58 Peak 2 5795.00 95.14 ------ ------ 80.13 34.70 10.67 30.36 100 58 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5855.00 57.14 -53.66 110.80 41.87 34.93 10.82 30.48 100 58 Peak 2 5855.00 57.14 -53.66 110.80 41.87 34.93 10.82 30.48 100 58 Peak 3 5887.60 53.81 -42.04 95.85 38.51 35.00 10.89 30.59 100 58 Peak 4 5925.00 53.09 -15.11 68.20 37.62 35.07 10.94 30.54 100 58 Peak	Left blank

WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5600.00 51.71 -16.59 68.30 37.43 34.30 10.33 30.35 100 122 Peak 2 5680.80 51.86 -39.21 91.07 37.67 34.40 10.32 30.53 100 122 Peak 3 5712.00 51.88 -56.91 108.79 37.46 34.53 10.38 30.49 100 122 Peak 4 5720.00 51.79 -59.01 110.80 37.27 34.57 10.44 30.49 100 122 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5795.00 104.28 35.98 68.30 89.27 34.70 10.67 30.36 100 122 Peak 2 5795.00 97.14 ------ ------ 82.13 34.70 10.67 30.36 100 122 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5850.00 52.82 -69.38 122.20 37.62 34.90 10.78 30.48 100 122 Peak 2 5856.00 53.21 -57.31 110.52 37.94 34.93 10.82 30.48 100 122 Peak 3 5908.00 52.48 -27.67 80.15 37.08 35.03 10.91 30.54 100 122 Peak 4 5931.40 52.81 -15.49 68.30 37.34 35.07 10.94 30.54 100 122 Peak	Left blank

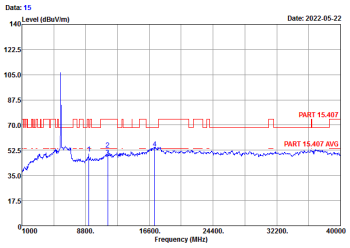
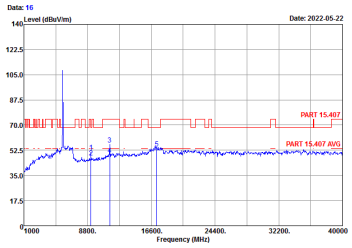
U-NII-3 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

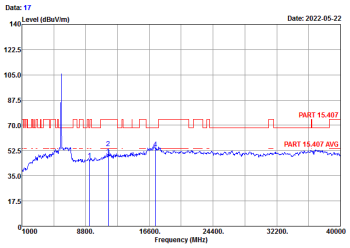
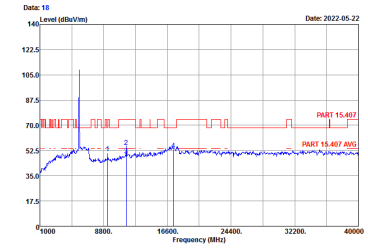
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5641.40 53.99 -14.31 68.30 39.55 34.30 10.58 30.44 100 58 Peak 2 5694.80 58.29 -43.09 101.38 43.73 34.50 10.59 30.53 100 58 Peak 3 5719.40 60.84 -49.79 110.63 46.15 34.57 10.61 30.49 100 58 Peak 4 5723.40 61.93 -56.62 118.55 47.24 34.57 10.61 30.49 100 58 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5775.00 99.35 31.05 68.30 84.46 34.67 10.62 30.40 100 58 Peak 2 5775.00 92.79 ------ ------ 77.90 34.67 10.62 30.40 100 58 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.20 58.36 -61.10 119.46 43.26 34.90 10.68 30.48 100 58 Peak 2 5857.00 58.62 -51.62 110.24 43.46 34.93 10.71 30.48 100 58 Peak 3 5875.20 56.21 -48.84 105.05 41.06 34.97 10.71 30.53 100 58 Peak 4 5932.20 53.30 -15.00 68.30 38.02 35.07 10.75 30.54 100 58 Peak	Left blank

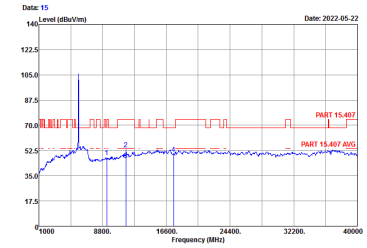
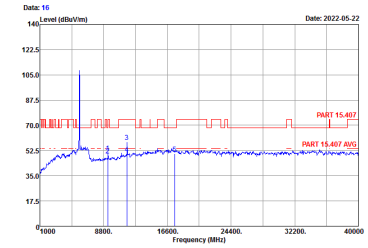
WIFI	U-NII-3 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5633.60 53.57 -14.73 68.30 39.13 34.30 10.58 30.44 100 123 Peak 2 5698.80 58.71 -45.61 104.32 44.15 34.50 10.59 30.53 100 123 Peak 3 5717.40 59.85 -50.22 110.07 45.20 34.53 10.61 30.49 100 123 Peak 4 5722.80 61.25 -55.93 117.18 46.56 34.57 10.61 30.49 100 123 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5775.00 102.10 33.80 68.30 87.21 34.67 10.62 30.40 100 123 Peak 2 5775.00 94.29 ------ ------ 79.40 34.67 10.62 30.40 100 123 Average
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.20 59.39 -60.07 119.46 44.29 34.90 10.68 30.48 100 123 Peak 2 5856.40 60.14 -58.27 118.41 44.98 34.93 10.71 30.48 100 123 Peak 3 5876.20 55.75 -48.56 104.31 40.60 34.97 10.71 30.53 100 123 Peak 4 5936.20 52.70 -15.60 68.30 37.34 35.07 10.78 30.49 100 123 Peak	Left blank

U-NII-3 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

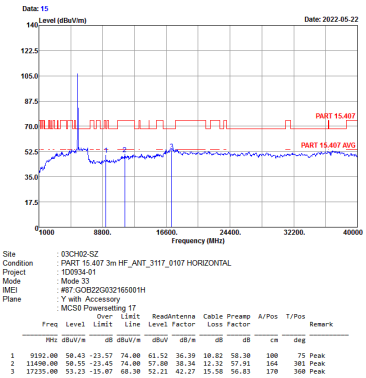
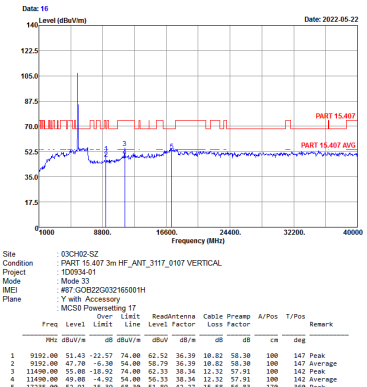
WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 30 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Data: 15 Level (dBuV/m) Date: 2022-05-22 PART 15.407 PART 15.407 AVG Frequency (MHz) Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9192.00 50.46 -23.54 74.00 61.55 36.39 10.82 58.30 100 128 Peak 2 11490.00 53.05 -20.95 74.00 60.30 38.34 12.32 57.91 100 25 Peak 3 11490.00 47.88 -6.12 54.00 55.13 38.34 12.32 57.91 100 25 Average 4 17235.00 53.86 -14.44 68.30 52.84 42.27 15.58 56.83 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 30 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Data: 16 Level (dBuV/m) Date: 2022-05-22 PART 15.407 PART 15.407 AVG Frequency (MHz) Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9192.00 51.54 -22.46 74.00 62.63 36.39 10.82 58.30 100 88 Peak 2 9192.00 47.40 -6.60 54.00 58.49 36.39 10.82 58.30 100 88 Average 3 11490.00 56.40 -17.60 74.00 63.65 38.34 12.32 57.91 100 133 Peak 4 11490.00 49.61 -4.39 54.00 56.86 38.34 12.32 57.91 100 133 Average 5 17235.00 53.99 -14.31 68.30 52.97 42.27 15.58 56.83 --- --- Peak

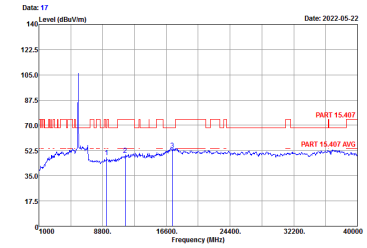
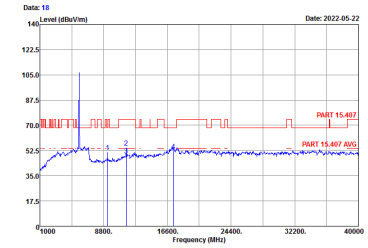
WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9256.00 46.18 -22.12 68.30 57.36 36.46 10.77 58.41 100 124 Peak 2 11570.00 54.18 -19.82 74.00 61.36 38.42 12.31 57.91 100 78 Peak 3 11570.00 48.18 -5.82 54.00 55.36 38.42 12.31 57.91 100 78 Average 4 17355.00 53.63 -14.67 68.30 52.83 42.10 15.65 56.95 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 31 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9256.00 50.68 -17.62 68.30 61.86 36.46 10.77 58.41 100 33 Peak 2 11570.00 55.18 -18.82 74.00 62.36 38.42 12.31 57.91 100 129 Peak 3 11570.00 48.95 -5.05 54.00 56.13 38.42 12.31 57.91 100 129 Average 4 17355.00 53.22 -15.08 68.30 52.42 42.10 15.65 56.95 --- --- Peak

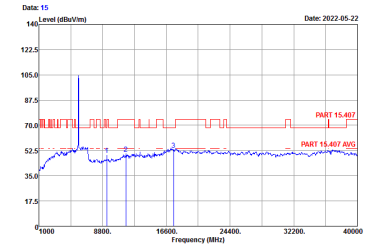
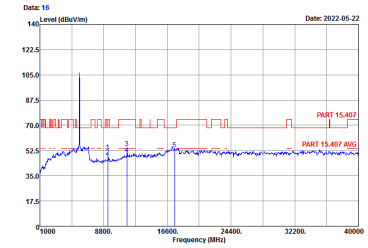
WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9320.00 47.91 -26.09 74.00 59.13 36.51 10.77 58.50 --- --- Peak 2 11650.00 53.39 -20.61 74.00 60.48 38.48 12.36 57.93 100 116 Peak 3 11650.00 46.03 -7.97 54.00 53.12 38.48 12.36 57.93 100 116 Average 4 17475.00 50.46 -17.84 68.30 49.80 41.94 15.79 57.07 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9320.00 51.13 -22.87 74.00 62.35 36.51 10.77 58.50 100 117 Peak 2 9320.00 49.20 -4.80 54.00 60.42 36.51 10.77 58.50 100 117 Average 3 11650.00 58.32 -15.68 74.00 65.41 38.48 12.36 57.93 100 131 Peak 4 11650.00 50.16 -3.84 54.00 57.25 38.48 12.36 57.93 100 131 Average 5 17475.00 50.20 -18.10 68.30 49.54 41.94 15.79 57.07 --- --- Peak

U-NII-3 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

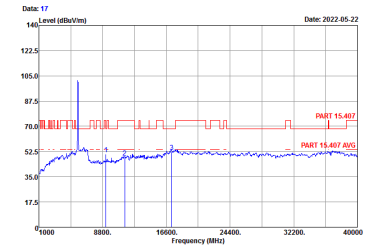
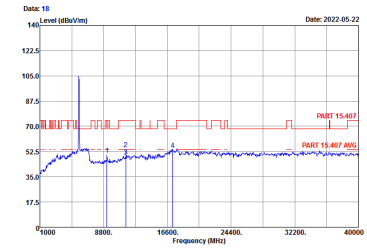
WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 33 IMEI : #87 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 1 9192.00 50.43 -23.57 74.00 61.52 36.39 10.82 58.30 100 75 Peak 2 11490.00 50.55 -23.45 74.00 57.00 38.34 12.32 57.91 164 301 Peak 3 17235.00 53.23 -15.07 68.30 52.21 42.27 15.58 56.83 170 360 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 33 IMEI : #87 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 1 9192.00 51.43 -22.57 74.00 62.52 36.39 10.82 58.30 100 147 Peak 2 9192.00 47.70 -6.30 54.00 58.79 36.39 10.82 58.30 100 147 Average 3 11490.00 55.08 -18.92 74.00 62.33 38.34 12.32 57.91 100 142 Peak 4 11490.00 49.08 -4.92 54.00 56.33 38.34 12.32 57.91 100 142 Average 5 17235.00 52.91 -15.39 68.30 51.89 42.27 15.58 56.83 170 360 Peak

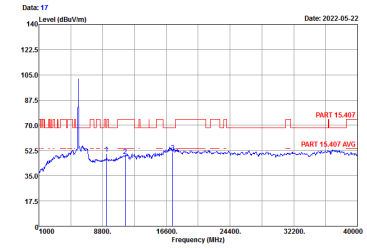
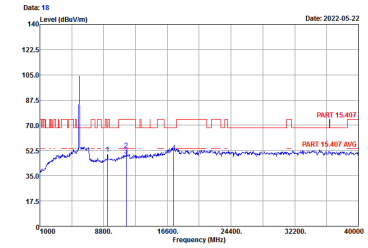
WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9256.00 47.94 -20.36 68.30 59.12 36.46 10.77 58.41 100 39 Peak 2 11570.00 49.52 -24.48 74.00 56.70 38.42 12.31 57.91 --- --- Peak 3 17355.00 53.07 -15.23 68.30 52.27 42.10 15.65 56.95 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 34 IMEI : #87:GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9256.00 51.53 -16.77 68.30 62.71 36.46 10.77 58.41 100 112 Peak 2 11570.00 54.42 -19.58 74.00 61.60 38.42 12.31 57.91 100 125 Peak 3 11570.00 49.07 -4.93 54.00 56.25 38.42 12.31 57.91 100 125 Average 4 17355.00 52.39 -15.91 68.30 51.59 42.10 15.65 56.95 --- --- Peak

WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 35 IMEI : #87 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9320.00 49.49 -24.51 74.00 60.71 36.51 10.77 58.50 100 36 Peak 2 11650.00 50.30 -23.70 74.00 57.39 38.48 12.36 57.93 156 347 Peak 3 17475.00 53.17 -15.13 68.30 52.51 41.94 15.79 57.07 150 360 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 35 IMEI : #87 GOB22G032165001H Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9320.00 51.93 -22.07 74.00 63.15 36.51 10.77 58.50 100 66 Peak 2 9320.00 48.22 -5.78 54.00 59.44 36.51 10.77 58.50 100 66 Average 3 11650.00 54.37 -19.63 74.00 61.46 38.48 12.36 57.93 125 163 Peak 4 11650.00 49.94 -4.06 54.00 57.03 38.48 12.36 57.93 125 163 Average 5 17475.00 53.40 -14.90 68.30 52.74 41.94 15.79 57.07 150 360 Peak

U-NII-3 5725~5850MHz

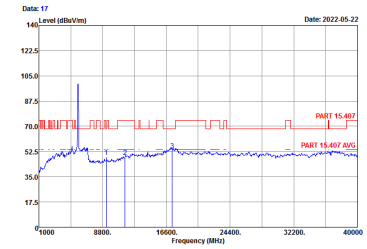
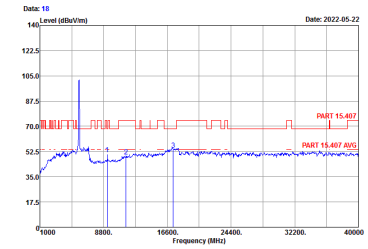
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9206.00 50.88 -17.42 68.30 61.99 36.41 10.81 58.33 100 63 Peak 2 11510.00 48.37 -25.63 74.00 55.57 38.36 12.34 57.90 --- --- Peak 3 17265.00 52.30 -16.00 68.30 51.44 42.22 15.51 56.87 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 36 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9206.00 50.18 -18.12 68.30 61.29 36.41 10.81 58.33 100 155 Peak 2 11510.00 54.10 -19.90 74.00 61.30 38.36 12.34 57.90 100 75 Peak 3 11510.00 49.26 -4.74 54.00 56.46 38.36 12.34 57.90 100 75 Average 4 17265.00 53.66 -14.64 68.30 52.00 42.22 15.51 56.87 --- --- Peak

WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9272.00 50.28 -18.02 68.30 61.48 36.48 10.76 58.44 100 76 Peak 2 11590.00 48.91 -25.09 74.00 56.09 38.43 12.31 57.92 --- --- Peak 3 17385.00 51.51 -16.79 68.30 50.65 42.05 15.79 56.98 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 37 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9272.00 50.35 -17.95 68.30 61.55 36.48 10.76 58.44 100 26 Peak 2 11590.00 53.22 -20.78 74.00 60.40 38.43 12.31 57.92 100 62 Peak 3 11590.00 49.07 -4.93 54.00 56.25 38.43 12.31 57.92 100 62 Average 4 17385.00 51.58 -16.72 68.30 50.72 42.05 15.79 56.98 --- --- Peak

U-NII-3 5725~5850MHz

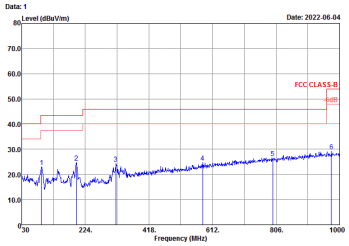
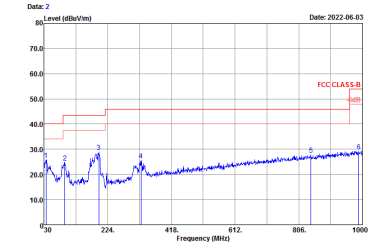
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	U-NII-3 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9240.00 48.84 -19.46 68.30 60.01 36.44 10.78 58.39 200 0 Peak 2 11550.00 48.58 -25.42 74.00 55.77 38.40 12.32 57.91 --- --- Peak 3 17325.00 53.49 -14.81 68.30 52.74 42.15 15.52 56.92 170 360 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 38 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : MCS0 Powersetting 17 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 9240.00 50.71 -17.59 68.30 61.68 36.44 10.78 58.39 100 20 Peak 2 11550.00 49.26 -24.74 74.00 56.45 38.40 12.32 57.91 200 0 Peak 3 17325.00 53.84 -14.46 68.30 53.09 42.15 15.52 56.92 --- --- Peak

U-NII-3 - 5725~5850MHz

Emission below 1GHz

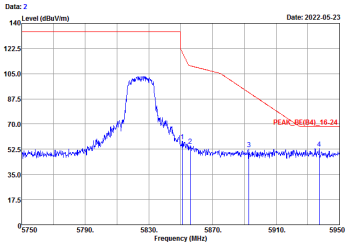
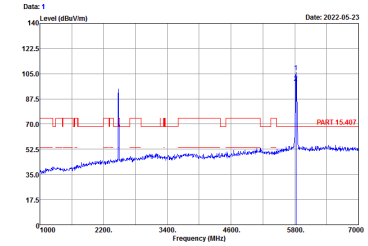
5GHz WIFI 802.11a (LF)

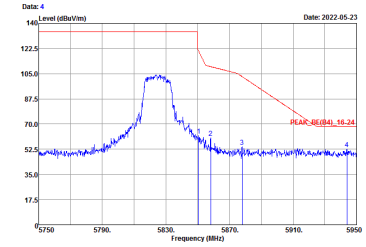
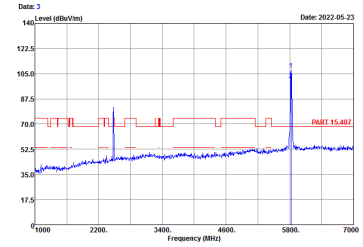
WIFI	5GHz WIFI	
ANT	802.11a LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH05-SZ Condition : FCC CLASS-B 3m VULB9168-01001 HORIZONTAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 90.14 23.01 -20.49 43.50 43.29 13.92 0.98 35.18 --- --- Peak 2 196.84 24.73 -18.77 43.50 41.87 16.51 1.45 35.10 --- --- Peak 3 317.12 24.19 -21.81 46.00 37.86 20.15 1.88 34.90 --- --- Peak 4 581.93 24.65 -21.35 46.00 31.13 25.43 2.63 34.54 --- --- Peak 5 796.38 26.56 -19.44 46.00 29.59 28.19 3.09 34.31 --- --- Peak 6 974.78 29.21 -24.79 54.00 29.94 29.99 3.43 34.15 --- --- Peak	 Site : 03CH05-SZ Condition : FCC CLASS-B 3m VULB9168-01001 VERTICAL Project : 1D0934-01 Mode : Mode 32 IMEI : #92 GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 36.79 25.86 -14.14 40.00 40.84 19.38 0.64 35.00 --- --- Peak 2 94.02 24.82 -18.68 43.50 45.03 13.98 1.00 35.19 --- --- Peak 3 196.84 29.01 -14.49 43.50 46.15 16.51 1.45 35.10 --- --- Peak 4 325.85 25.59 -20.41 46.00 38.15 20.44 1.90 34.90 --- --- Peak 5 842.86 27.90 -18.10 46.00 30.44 28.57 3.19 34.30 --- --- Peak 6 988.36 29.29 -24.71 54.00 29.82 30.13 3.46 34.12 --- --- Peak

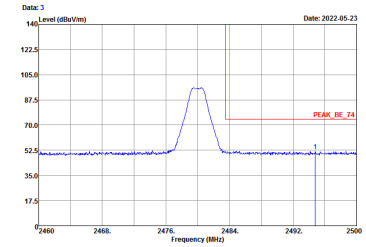
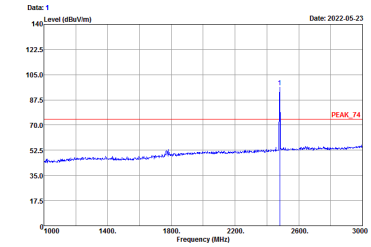
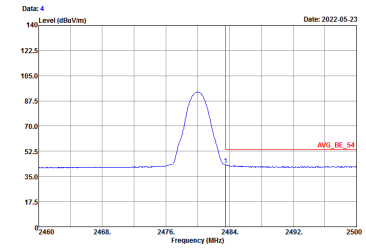
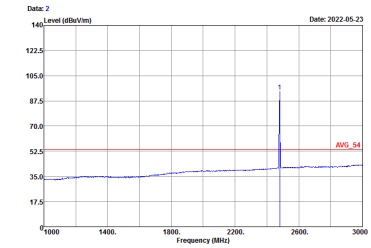
Co-location

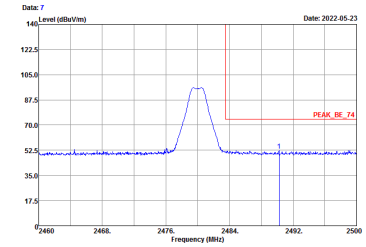
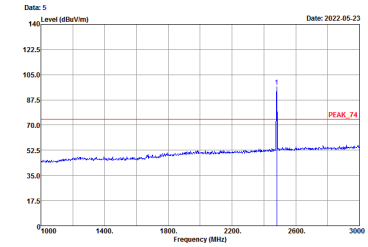
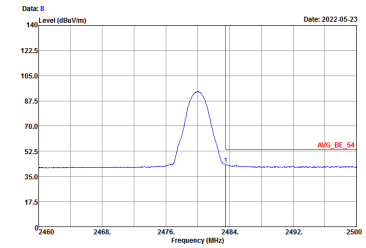
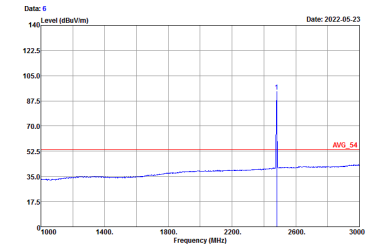
5 GHz 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	5 GHz 5725~5850.5MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz & BLE(2M) CH39	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5851.20 58.06 -61.40 119.46 42.86 34.90 10.78 30.48 116 174 Peak 2 5856.00 55.17 -55.35 110.52 39.90 34.93 10.82 30.48 116 174 Peak 3 5893.00 52.54 -39.30 91.84 37.24 35.00 10.89 30.59 116 174 Peak 4 5937.20 53.02 -15.28 68.30 37.50 35.07 10.94 30.49 116 174 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5825.00 106.01 37.71 68.30 90.86 34.83 10.74 30.42 116 174 Peak 2 5825.00 98.79 ------ ------ 83.64 34.83 10.74 30.42 116 174 Average
Avg.	Left Blank	Left Blank

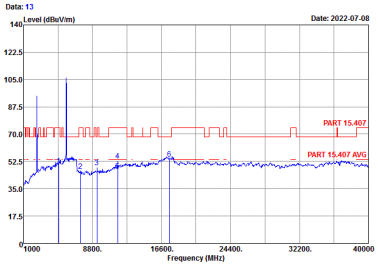
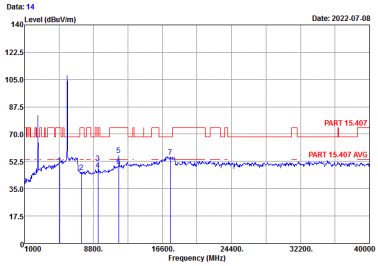
WIFI	5 GHz 5725~5850.5MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz & BLE(2M) CH39	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE(B4)_16-24 3m HF_ANT_3117_0107 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 5850.60 61.85 -58.98 120.83 46.65 34.90 10.78 30.48 100 115 Peak 2 5858.20 60.49 -49.41 109.90 45.27 34.93 10.82 30.53 100 115 Peak 3 5878.00 54.07 -48.00 102.07 38.78 34.97 10.85 30.53 100 115 Peak 4 5944.00 52.47 -15.83 68.30 36.90 35.10 10.96 30.49 100 115 Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 5825.00 107.75 39.45 68.30 92.60 34.83 10.74 30.42 100 115 Peak 2 5825.00 100.52 ------ ------ 85.37 34.83 10.74 30.42 100 115 Average
Avg.	Left Blank	Left Blank

WIFI	5 GHz 5725~5850.5MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz & BLE(2M) CH39	
1	Horizontal	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE_74 3m HF_ANT_3117_0107 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 2494.80 51.94 -22.06 74.00 46.01 32.10 5.68 31.85 116 356 Peak	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 2480.00 96.18 22.18 74.00 90.40 32.07 5.66 31.95 116 356 Peak
Avg.	 Site : 03CH02-SZ Condition : AVG_BE_54 3m HF_ANT_3117_0107 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 2483.52 43.09 -10.91 54.00 37.31 32.07 5.66 31.95 116 356 Average	 Site : 03CH02-SZ Condition : AVG_54 3m HF_ANT_3117_0107 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 2480.00 94.08 40.08 54.00 88.30 32.07 5.66 31.95 116 356 Average

WIFI	5 GHz 5725~5850.5MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz & BLE(2M) CH39	
1	Vertical	Fundamental
Peak	 Site : 03CH02-SZ Condition : PEAK_BE_74 3m HF_ANT_3117_0107 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 2490.24 52.31 -21.69 74.00 46.48 32.10 5.68 31.95 136 281 Peak	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 2480.00 96.62 22.62 74.00 90.84 32.07 5.66 31.95 136 281 Peak
Avg.	 Site : 03CH02-SZ Condition : AVG_BE_54 3m HF_ANT_3117_0107 VERTICAL : RBW:1000.000KHz VBW:1.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 2483.52 43.36 -10.64 54.00 37.58 32.07 5.66 31.95 136 281 Average	 Site : 03CH02-SZ Condition : AVG_54 3m HF_ANT_3117_0107 VERTICAL : RBW:1000.000KHz VBW:1.000KHz Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 * 2480.00 94.06 40.06 54.00 88.28 32.07 5.66 31.95 136 281 Average

5 GHz 5725~5850MHz

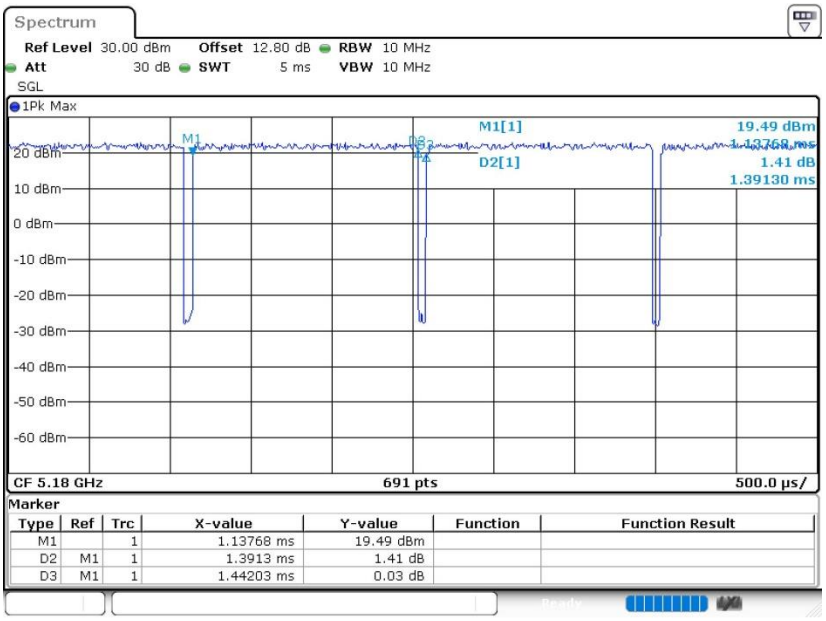
WIFI 802.11a (Harmonic @ 3m)

WIFI	5 GHz 5725~5850.5MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz & BLE(2M) CH39	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 HORIZONTAL Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 1 4960.00 50.03 -23.97 74.00 38.15 33.73 8.98 30.83 --- --- Peak 2 7440.00 46.25 -27.75 74.00 31.38 35.78 11.12 32.03 --- --- Peak 3 9320.00 48.91 -25.09 74.00 60.13 36.51 10.77 58.50 --- --- Peak 4 11650.00 53.16 -20.84 74.00 60.25 38.48 12.36 57.93 100 214 Peak 5 11650.00 46.43 -7.57 54.00 53.52 38.48 12.36 57.93 100 214 Average 6 17475.00 54.21 -14.09 68.30 53.55 41.94 15.79 57.07 --- --- Peak	 Site : 03CH02-SZ Condition : PART 15.407 3m HF_ANT_3117_0107 VERTICAL Project : 1D0934-01 Mode : Mode 43 IMEI : #92:GOB22G032165001G Plane : Y with Accessory : 6M Powersetting 18 : 6/2/2 1 4960.00 50.41 -23.59 74.00 38.53 33.73 8.98 30.83 --- --- Peak 2 7440.00 45.64 -28.36 74.00 30.77 35.78 11.12 32.03 --- --- Peak 3 9320.00 51.44 -22.56 74.00 62.66 36.51 10.77 58.50 100 119 Peak 4 9320.00 47.07 -6.93 54.00 58.29 36.51 10.77 58.50 100 119 Average 5 11650.00 56.59 -17.41 74.00 63.68 38.48 12.36 57.93 100 270 Peak 6 11650.00 49.69 -4.31 54.00 56.78 38.48 12.36 57.93 100 270 Average 7 17475.00 55.30 -13.00 68.30 54.64 41.94 15.79 57.07 --- --- Peak

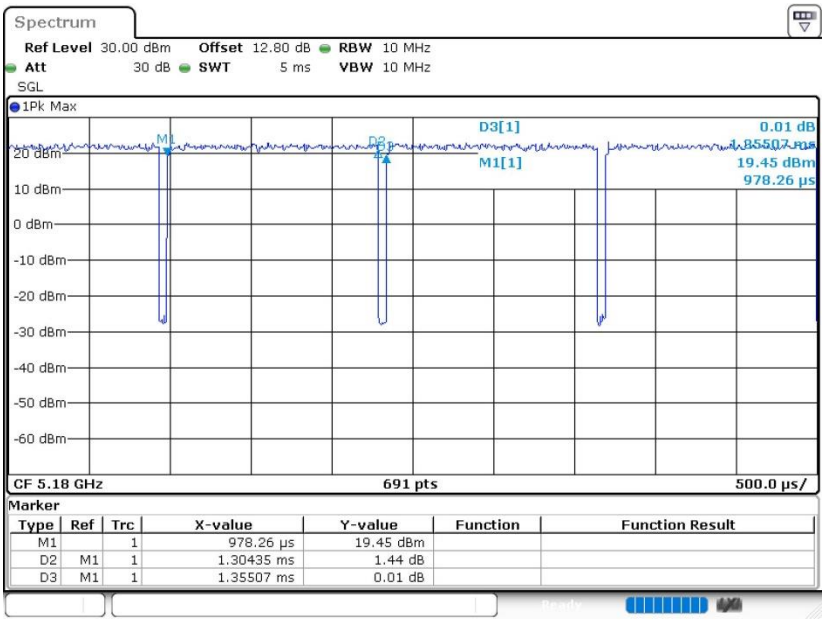
Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	96.48	1.391	0.719	1KHz
802.11n HT20	96.26	1.304	0.767	1KHz
802.11n HT40	92.58	0.651	1.537	3KHz
802.11ac VHT80	85.82	0.325	3.080	10KHZ

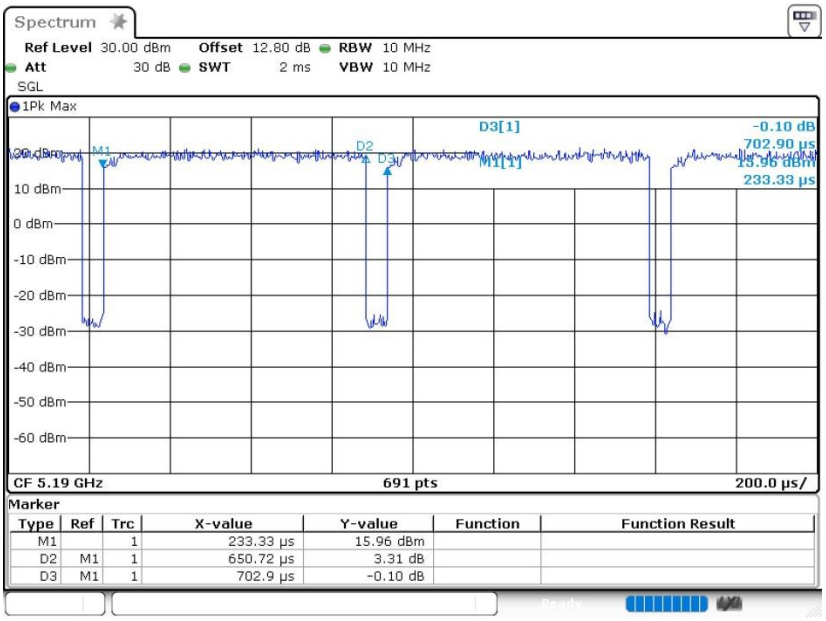
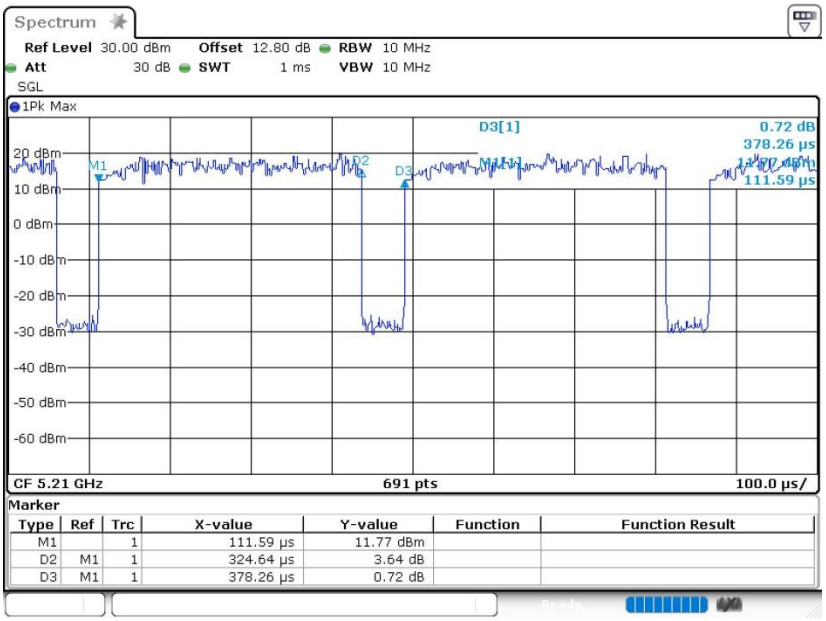
802.11a



802.11n HT20



802.11n HT40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