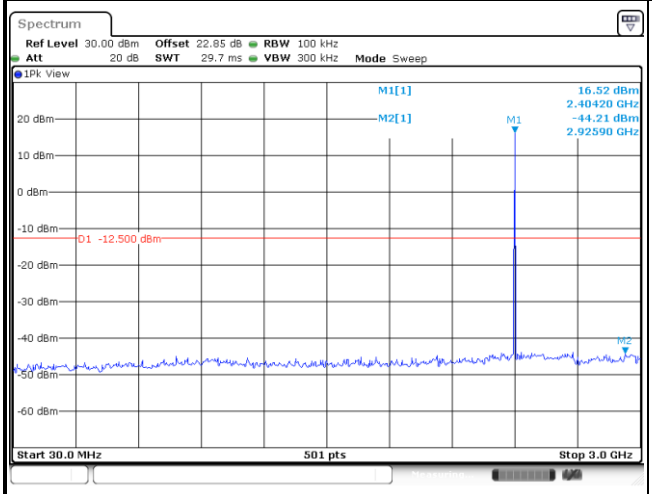
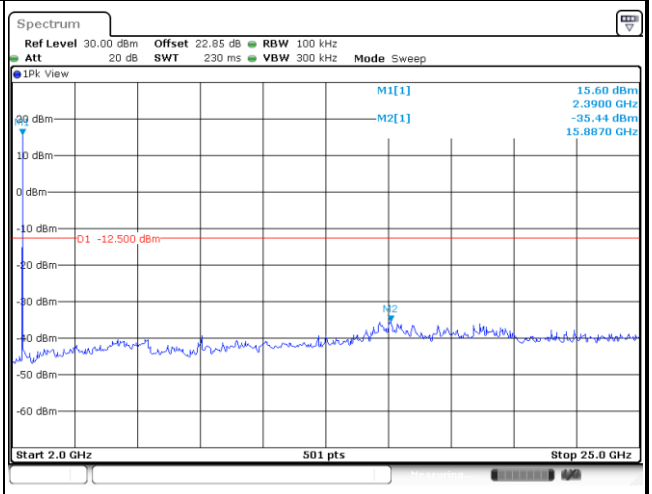
<Ant. 3>

<1Mbps>

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 00	Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 00
	
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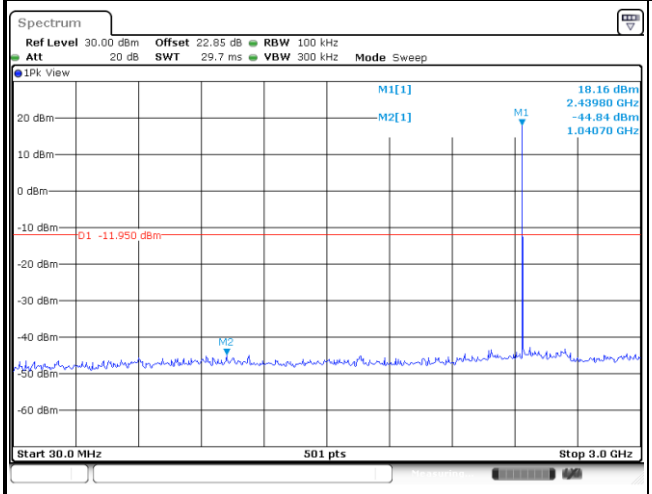	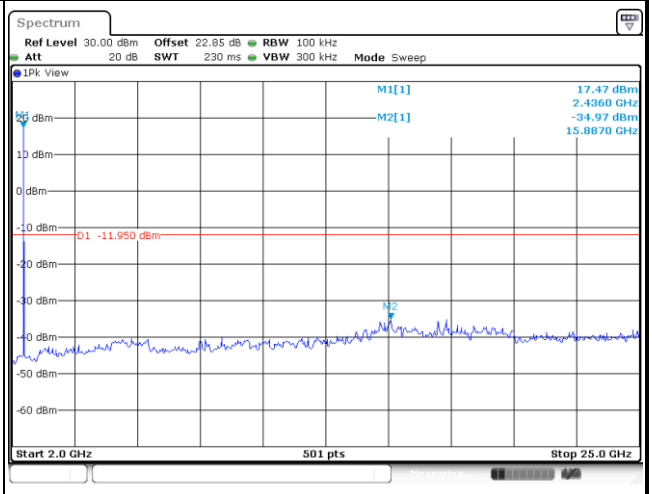

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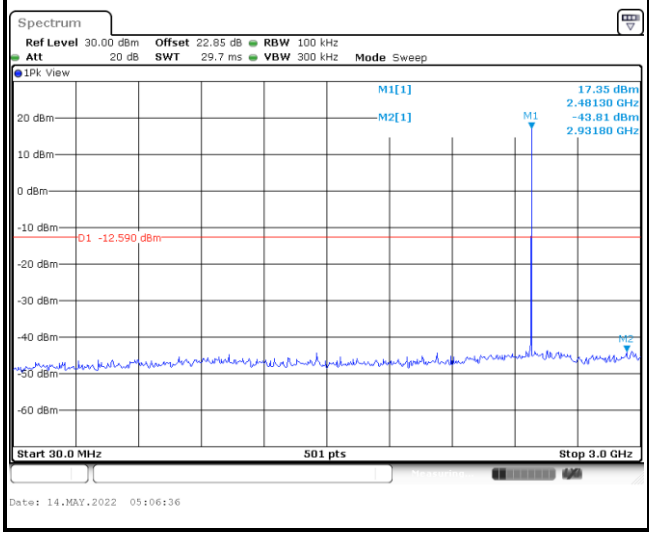	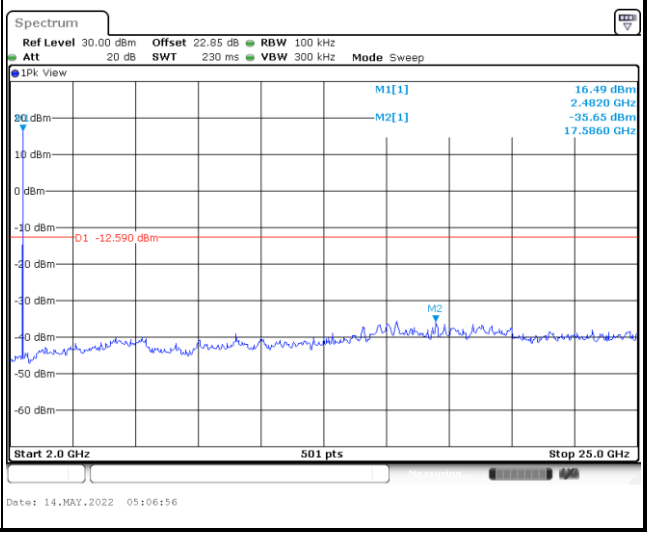

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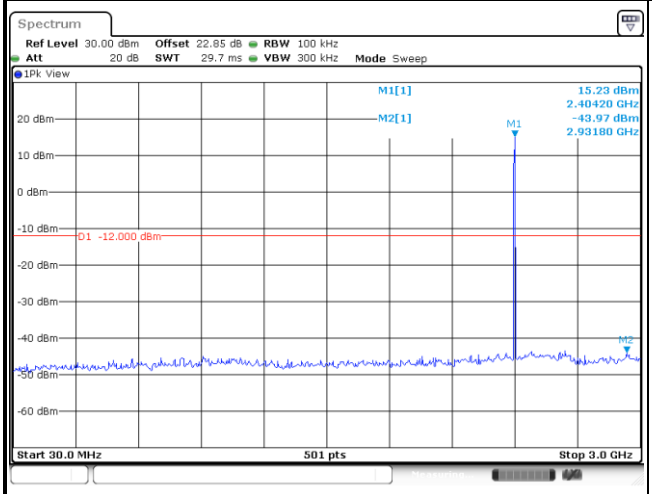	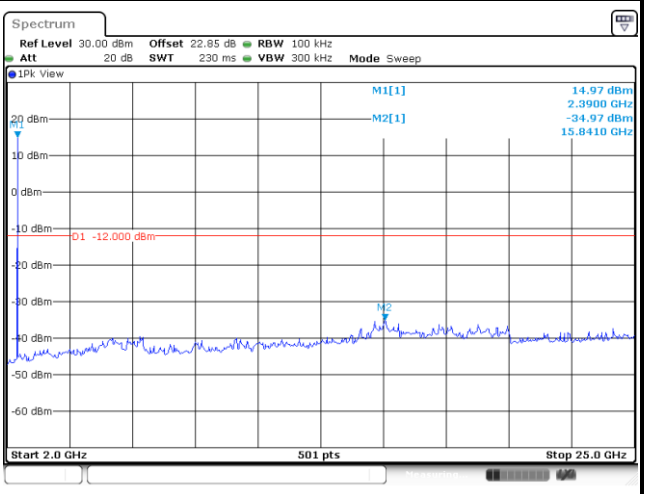
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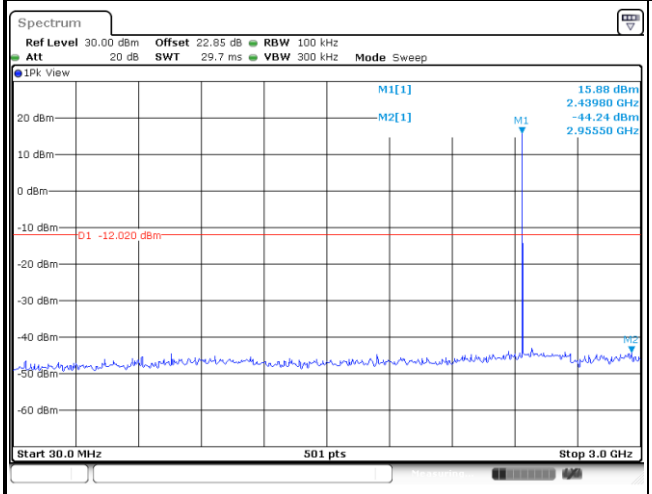	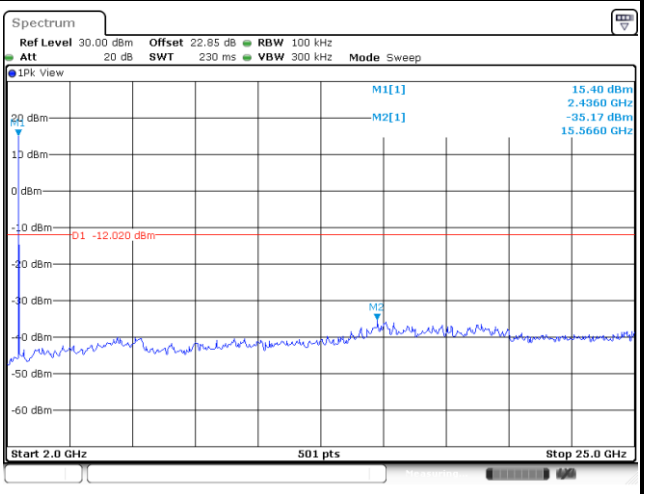

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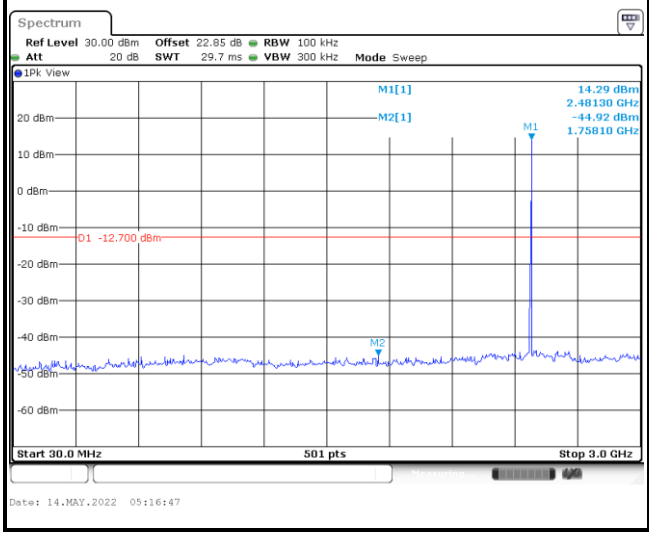	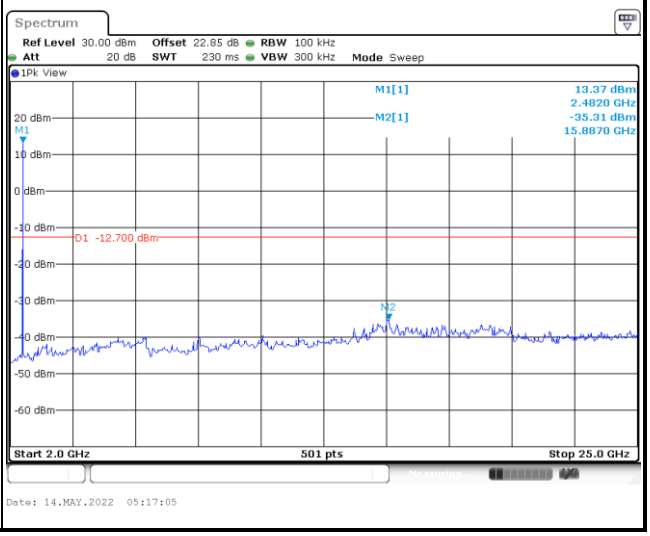

MIMO <Ant. 4>

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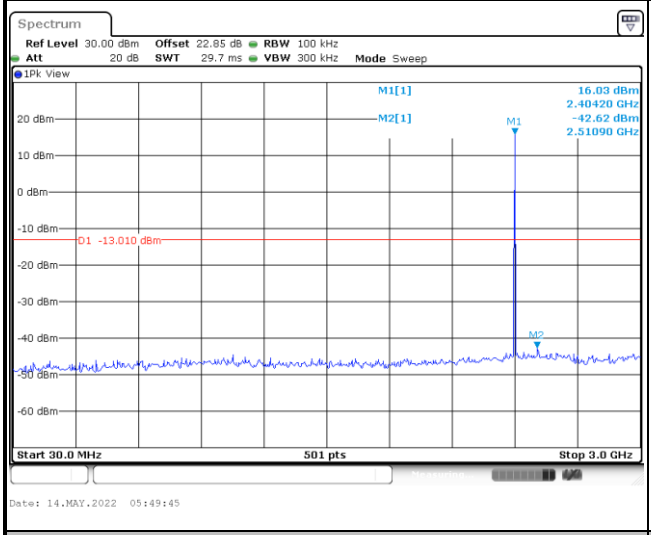
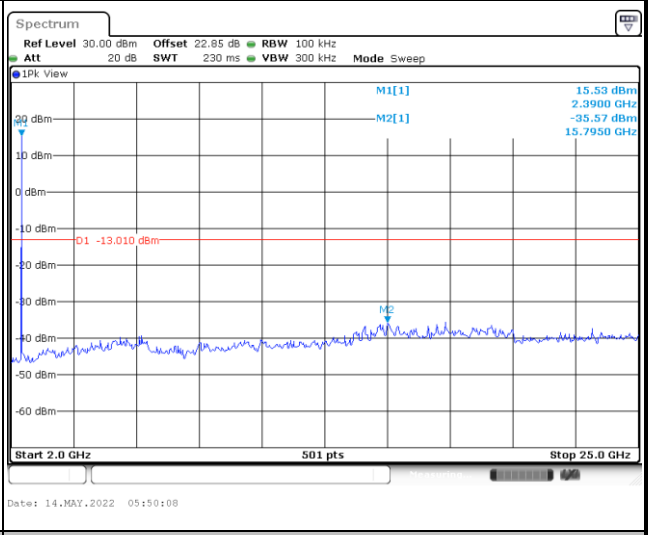
Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 00	Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 00
	
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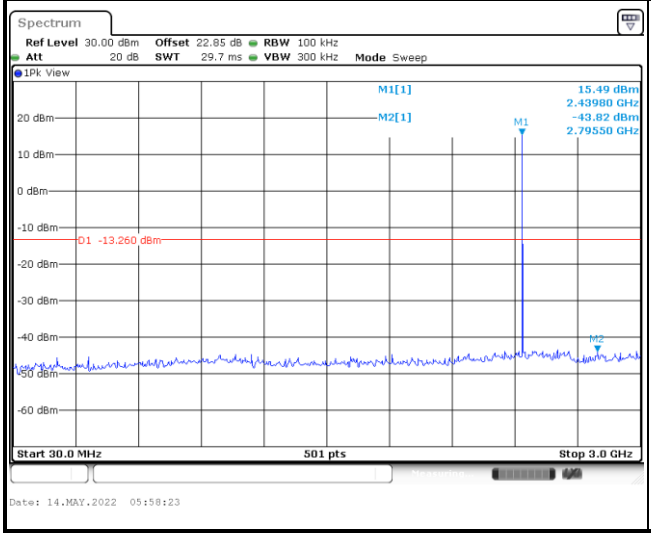
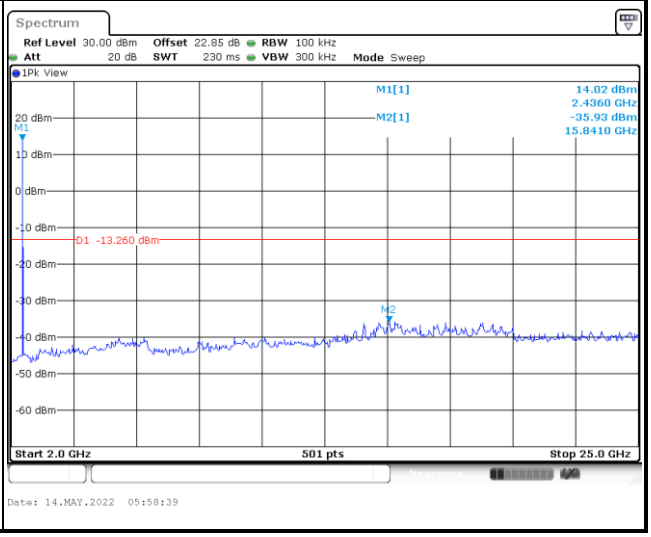
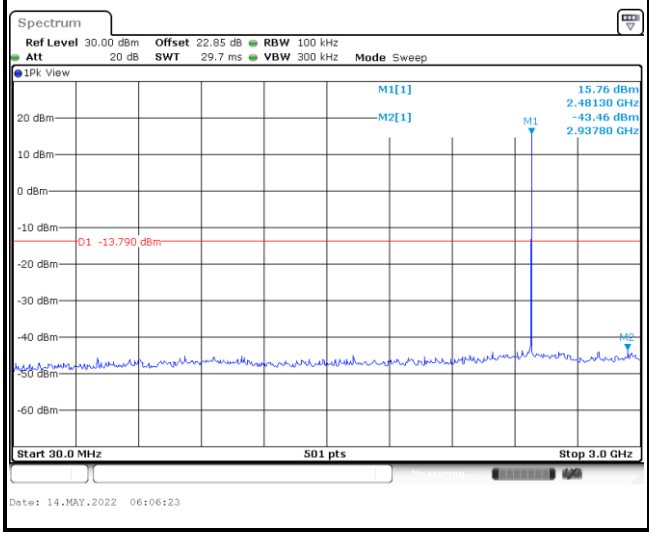
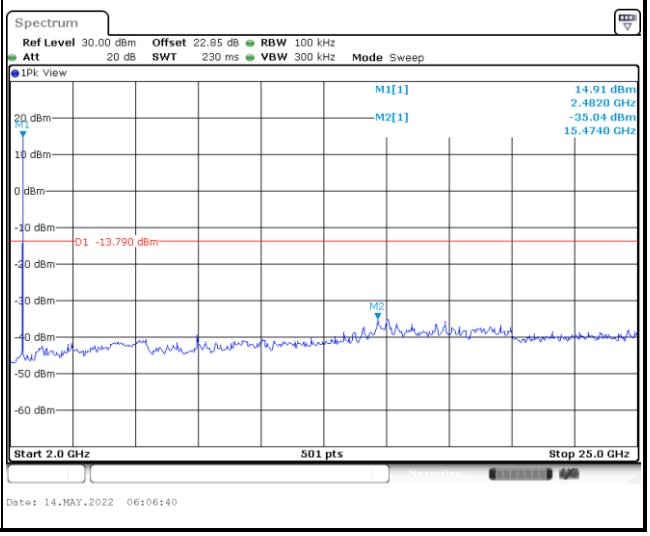
	

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 39	Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 39
	

<2Mbps>

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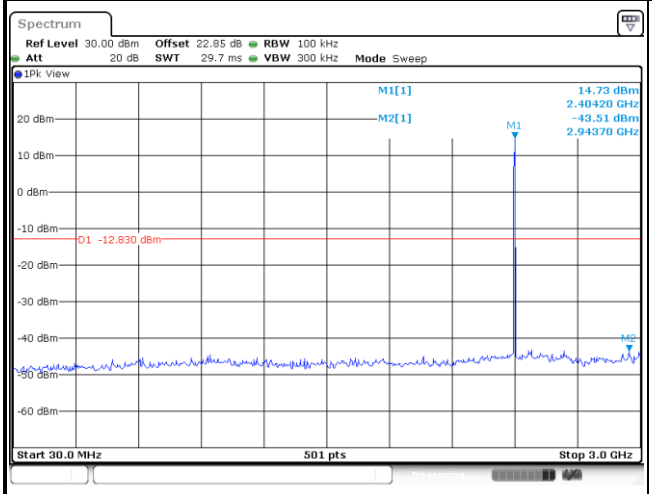
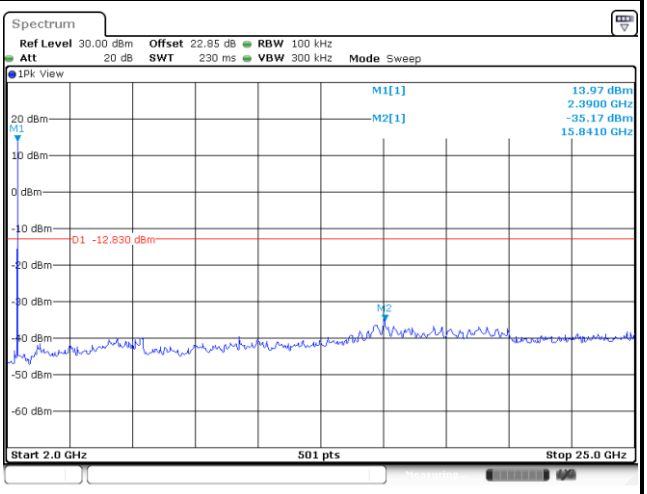
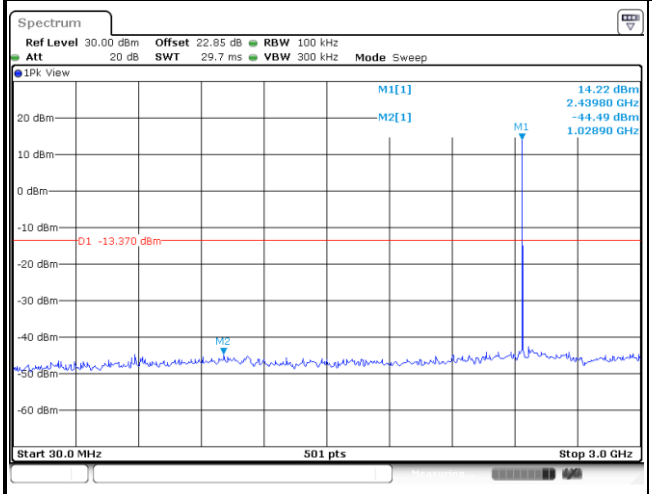
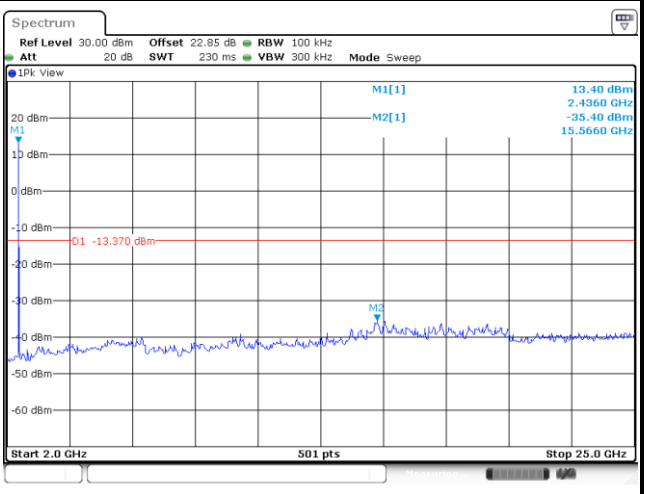
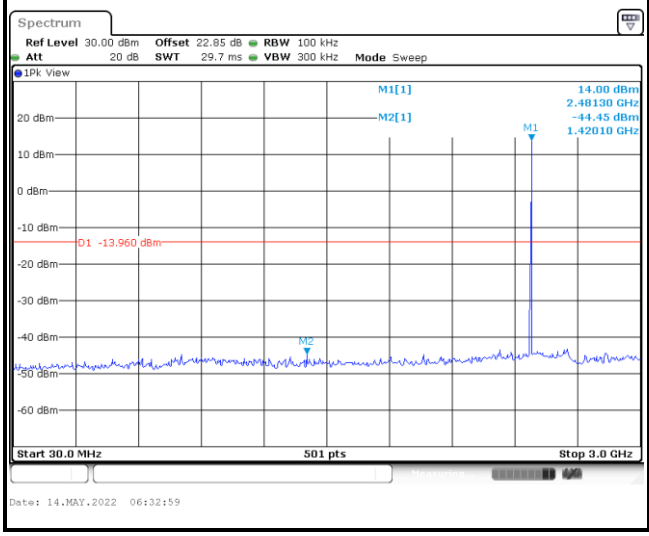
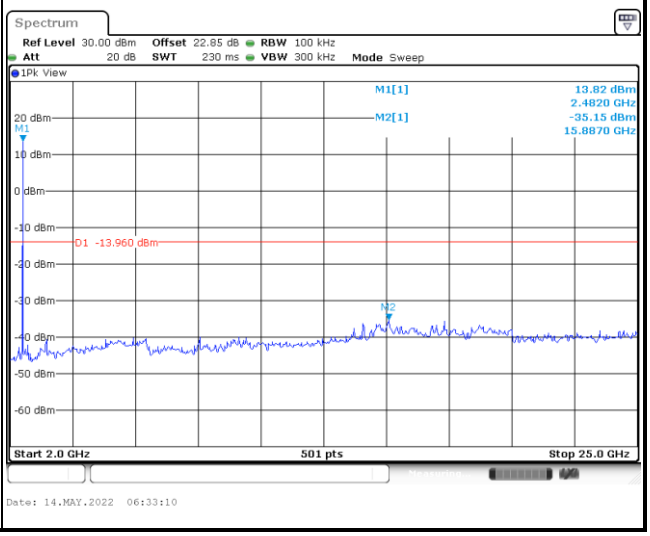
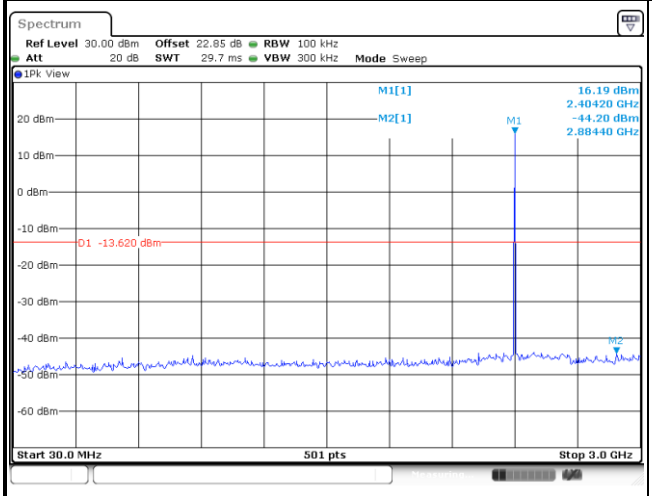
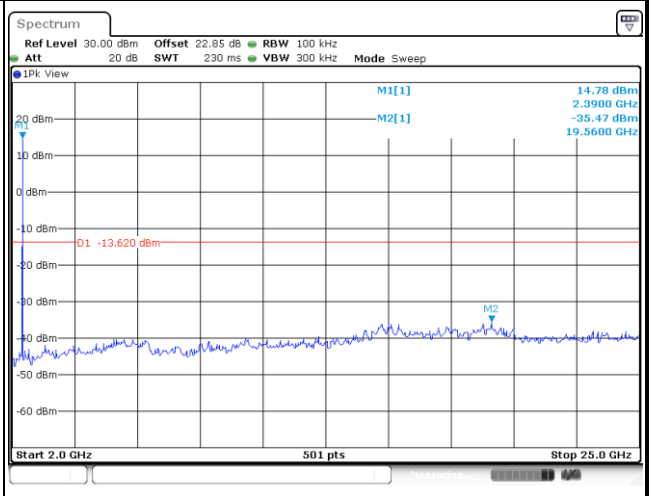
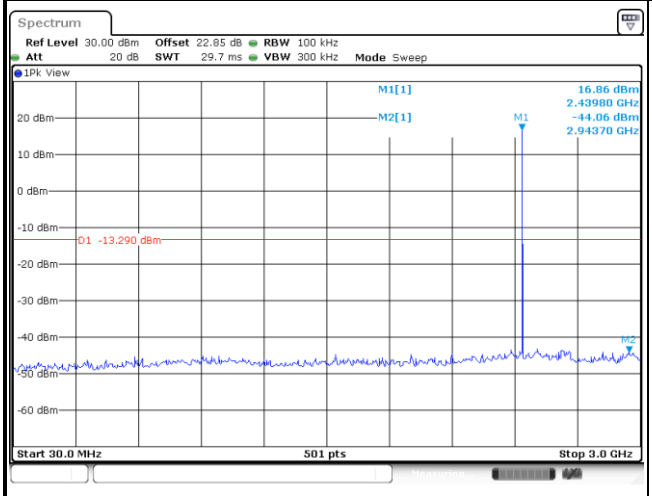
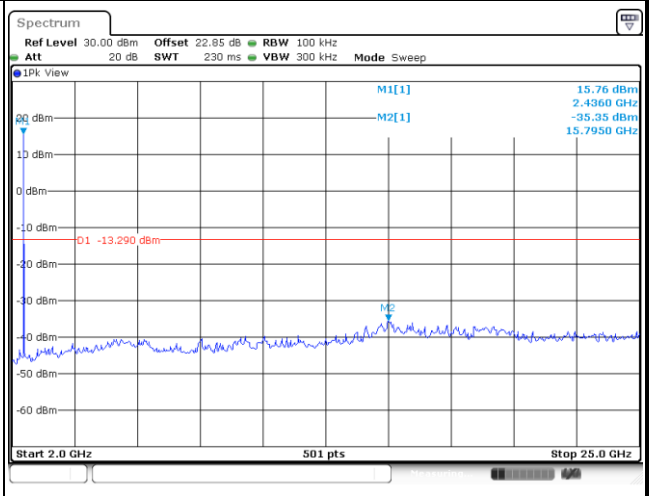
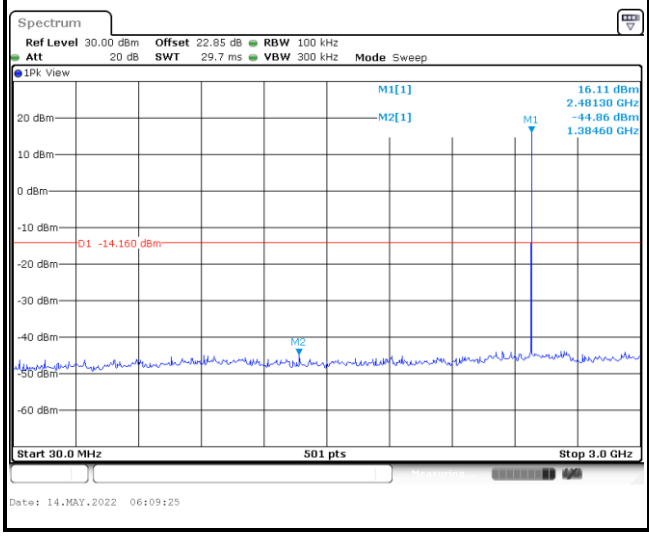
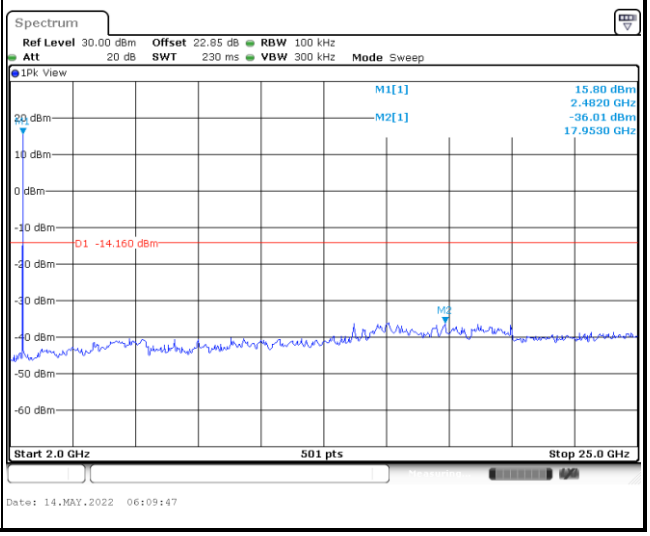
	
Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 19	**Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 19**
	

Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 39	Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 39
	

MIMO <Ant. 3>

<1Mbps>

Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 00	Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 00
	
Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 19	**Conducted Spurious Emission Plot on Bluetooth LE 1Mbps GFSK Channel 19**
	

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

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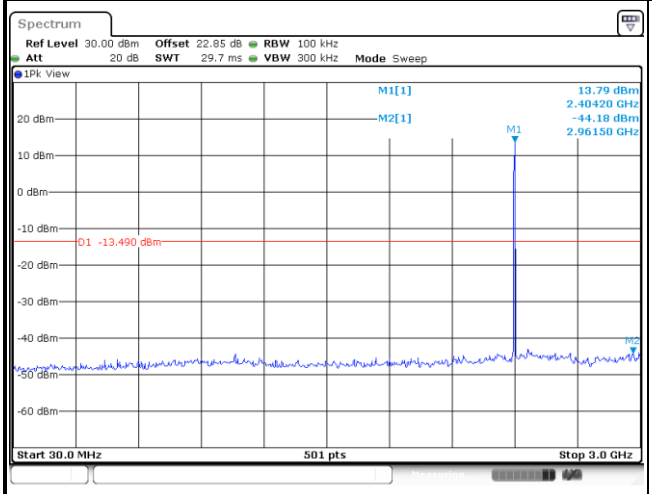
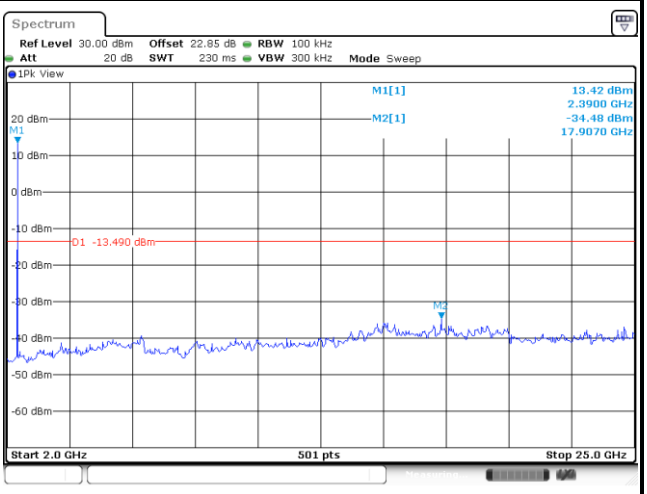
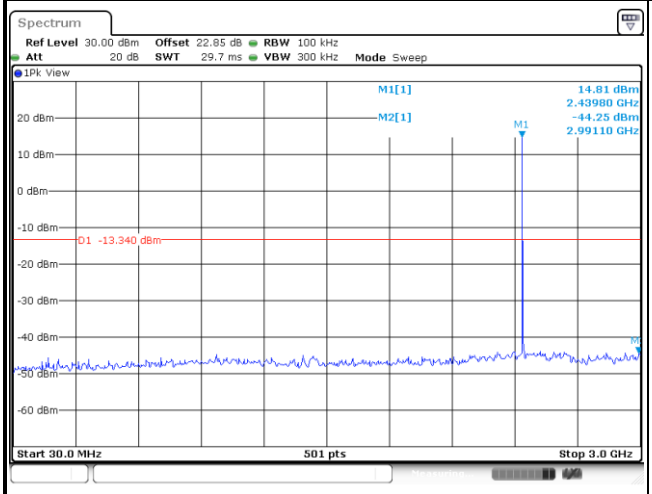
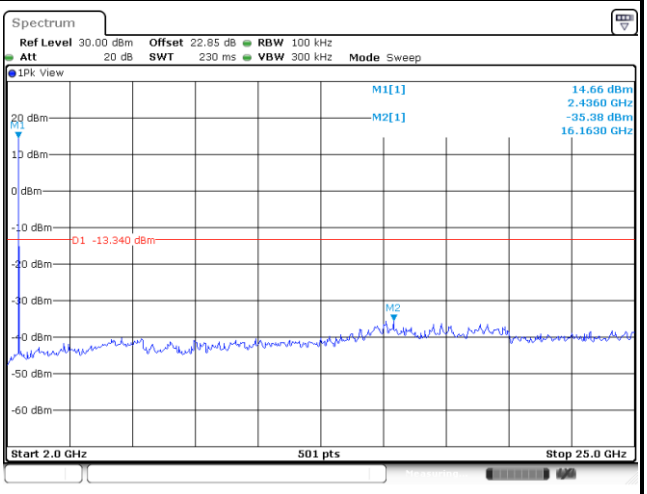
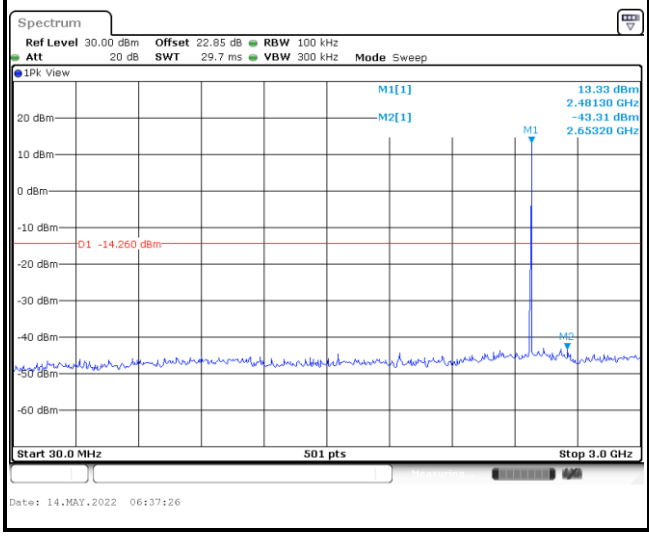
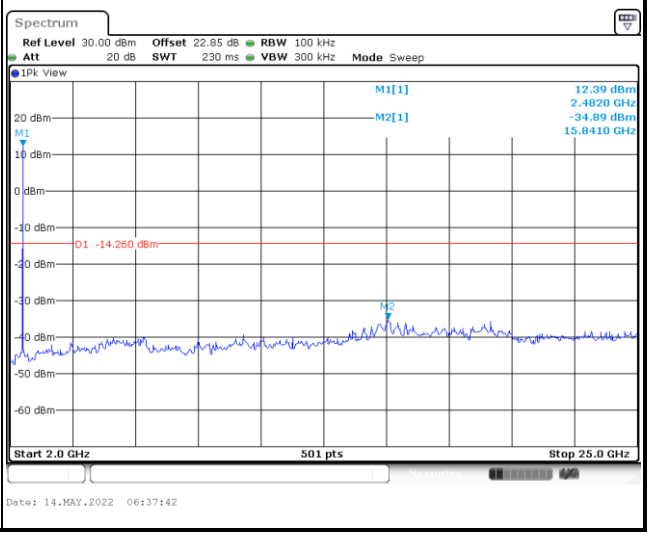
Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 00	Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 00
	
Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 19	**Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 19**
	

Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 39	Conducted Spurious Emission Plot on Bluetooth LE 2Mbps GFSK Channel 39
	

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 is 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

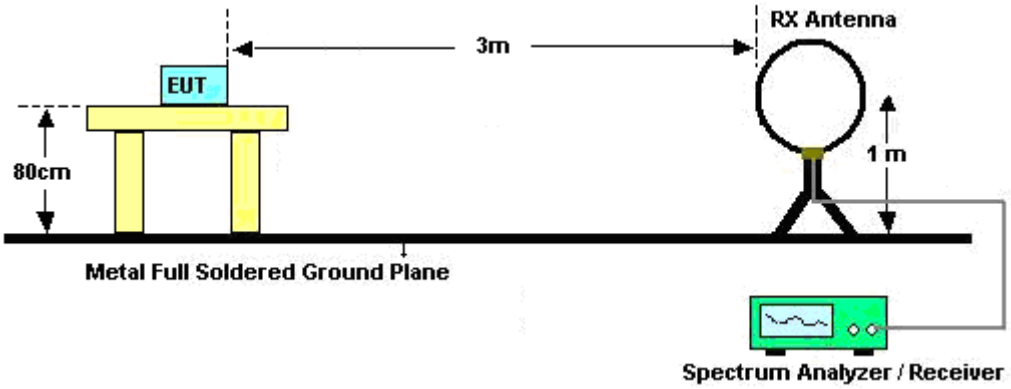
Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

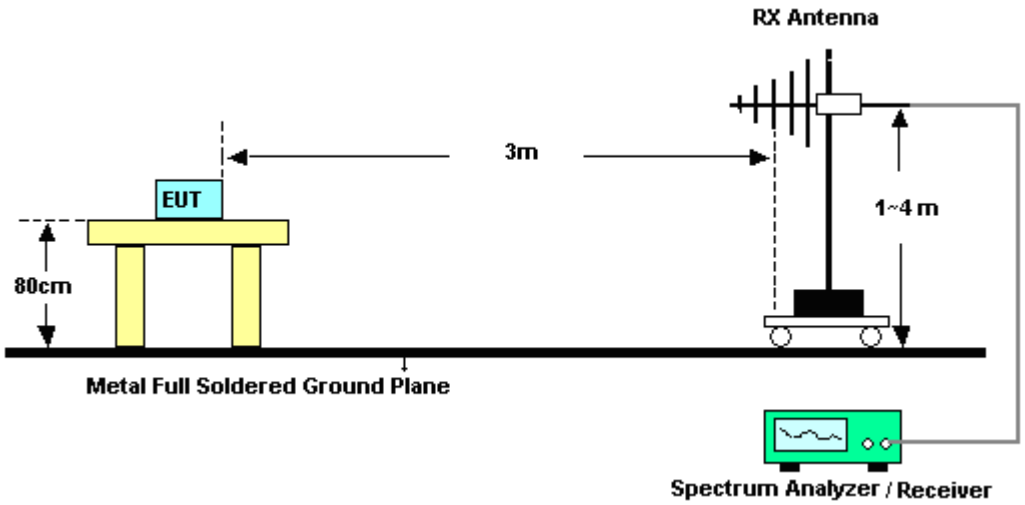
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".
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 = 3 MHz 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

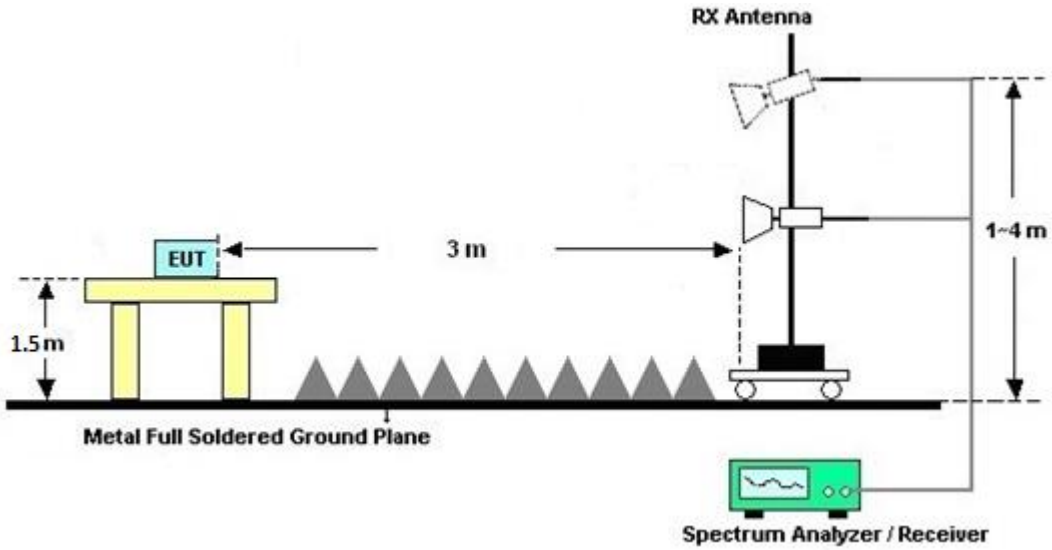
For radiated test below 30MHz



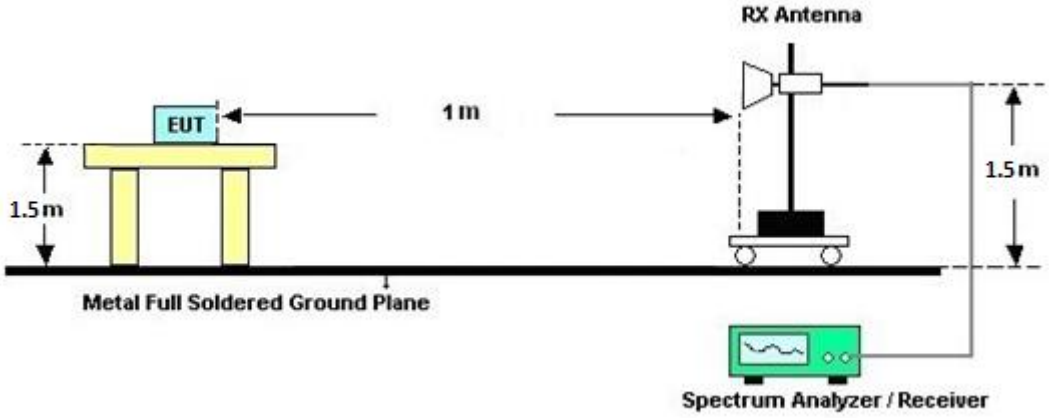
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result comes out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30 MHz ~ 10th Harmonic)

Please refer to Appendix C and 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.

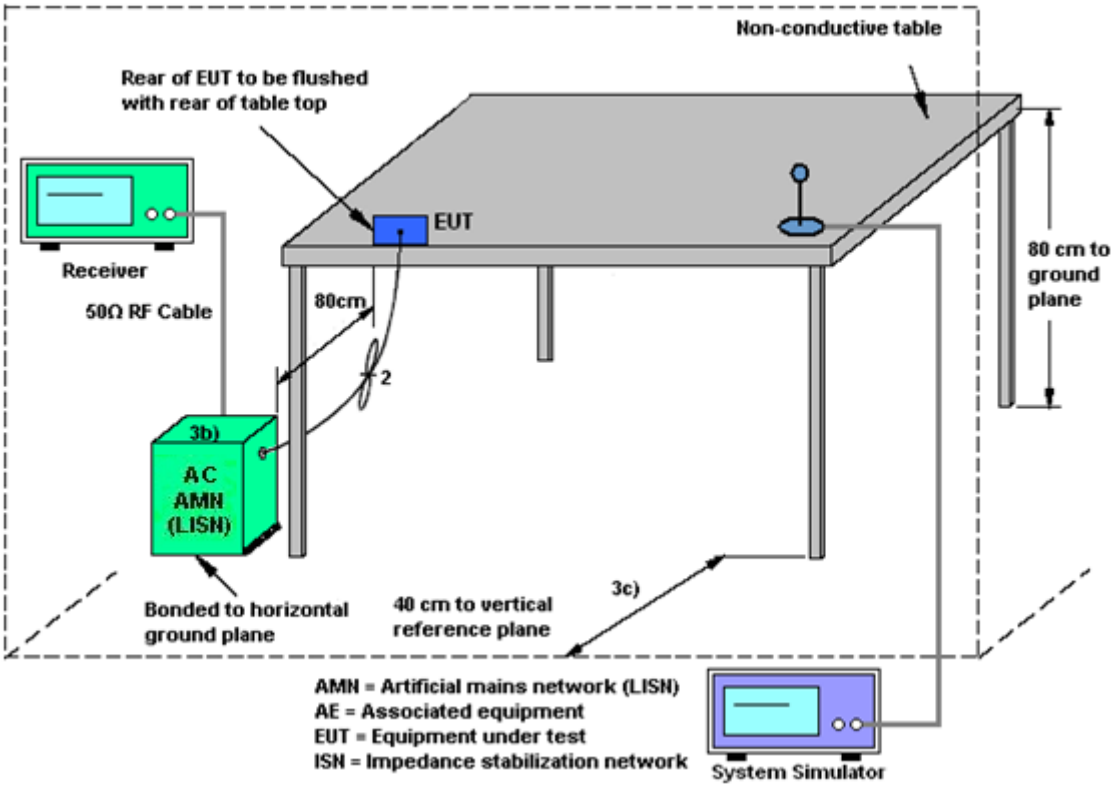
3.6.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.6.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is 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 shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9 kHz) 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 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. 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

<CDD Modes >

For power measurements on IEEE 802.11 devices,

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows:

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

G_{ANT} is set equal to the gain of the antenna having the highest gain.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~50 MHz	Jan. 07, 2022	Apr. 09, 2022~ Apr. 25, 2022	Jan. 06, 2023	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 09, 2021	Apr. 09, 2022~ Apr. 25, 2022	Oct. 08, 2022	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 25, 2021	Apr. 09, 2022~ Apr. 25, 2022	Oct. 24, 2022	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz~40GHz	Nov. 30, 2021	Apr. 09, 2022~ Apr. 25, 2022	Nov. 29, 2022	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 10, 2021	Apr. 09, 2022~ Apr. 25, 2022	Dec. 09, 2022	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 10, 2021	Apr. 09, 2022~ Apr. 25, 2022	Nov. 09, 2022	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-303	17100018000 55007	1GHz~18GHz	Jun. 16, 2021	Apr. 09, 2022~ Apr. 25, 2022	Jun. 15, 2022	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Apr. 09, 2022~ Apr. 25, 2022	Jun. 21, 2022	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 15, 2021	Apr. 09, 2022~ Apr. 25, 2022	Oct. 14, 2022	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 15, 2021	Apr. 09, 2022~ Apr. 25, 2022	Jul. 14, 2022	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Apr. 09, 2022~ Apr. 25, 2022	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Apr. 09, 2022~ Apr. 25, 2022	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Apr. 09, 2022~ Apr. 25, 2022	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Apr. 09, 2022~ Apr. 25, 2022	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 10, 2022	Apr. 09, 2022~ Apr. 25, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz-30MHz	Mar. 10, 2022	Apr. 09, 2022~ Apr. 25, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30MHz-18GHz	Mar. 10, 2022	Apr. 09, 2022~ Apr. 25, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	811852/4	30MHz-18GHz	Mar. 10, 2022	Apr. 09, 2022~ Apr. 25, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53G Low Pass	Sep. 13, 2021	Apr. 09, 2022~ Apr. 25, 2022	Sep. 12, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN3	3GHz High Pass Filter	Sep. 13, 2021	Apr. 09, 2022~ Apr. 25, 2022	Sep. 12, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40SS	SN3	6.75GHz High Pass Filter	Sep. 13, 2021	Apr. 09, 2022~ Apr. 25, 2022	Sep. 12, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-900-1000-15000-60SS	SN12	1GHz High Pass Filter	Nov. 04, 2021	Apr. 09, 2022~ Apr. 25, 2022	Nov. 03, 2022	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Nov. 26, 2021	Apr. 09, 2022~ Apr. 25, 2022	Nov. 25, 2022	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP200880	N/A	Sep. 30, 2021	Apr. 09, 2022~ Apr. 25, 2022	Sep. 29, 2022	Radiation (03CH11-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Mar. 29, 2022~ May 14, 2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Mar. 29, 2022~ May 14, 2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Mar. 29, 2022~ May 14, 2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Control Mainframe	E-IUSTRUME NT	ETF-1405-0	EC1900067 (BOX7)	N/A	Aug. 12, 2021	Mar. 29, 2022~ May 14, 2022	Aug. 11, 2022	Conducted (TH05-HY)
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Apr. 22, 2022	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 22, 2022	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBE CK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 29, 2021	Apr. 22, 2022	Oct. 28, 2022	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 16, 2022	Apr. 22, 2022	Mar. 15, 2023	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Feb. 16, 2022	Apr. 22, 2022	Feb. 15, 2023	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI7	100724	9kHz~7GHz	Feb. 24, 2022	Apr. 22, 2022	Feb. 23, 2023	Conduction (CO07-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.3 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.8 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.4 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.9 dB**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Jacob Yu/Junyu Jhou	Temperature:	21~25	°C
Test Date:	2022/3/29~2022/5/14	Relative Humidity:	51~54	%

<Ant. 4>

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	1.035	0.712	0.50	Pass
BLE	1Mbps	1	19	2440	1.035	0.718	0.50	Pass
BLE	1Mbps	1	39	2480	1.037	0.716	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	1Mbps	1	0	2402	19.35	30.00	1.60	20.95	36.00	Pass
BLE	1Mbps	1	19	2440	18.75	30.00	1.60	20.35	36.00	Pass
BLE	1Mbps	1	39	2480	18.05	30.00	1.60	19.65	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	17.57	2.80	1.60	8.00	Pass
BLE	1Mbps	1	19	2440	18.06	3.40	1.60	8.00	Pass
BLE	1Mbps	1	39	2480	17.25	2.58	1.60	8.00	Pass

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

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	2.042	1.188	0.50	Pass
BLE	2Mbps	1	19	2440	2.050	1.244	0.50	Pass
BLE	2Mbps	1	39	2480	2.046	1.248	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	1	0	2402	19.15	30.00	1.60	20.75	36.00	Pass
BLE	2Mbps	1	19	2440	18.25	30.00	1.60	19.85	36.00	Pass
BLE	2Mbps	1	39	2480	18.05	30.00	1.60	19.65	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	18.47	0.08	1.60	8.00	Pass
BLE	2Mbps	1	19	2440	18.06	-0.19	1.60	8.00	Pass
BLE	2Mbps	1	39	2480	17.17	-1.06	1.60	8.00	Pass

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

<Ant. 3>

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	1.035	0.712	0.50	Pass
BLE	1Mbps	1	19	2440	1.037	0.720	0.50	Pass
BLE	1Mbps	1	39	2480	1.037	0.718	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	1Mbps	1	0	2402	18.35	30.00	-1.50	16.85	36.00	Pass
BLE	1Mbps	1	19	2440	18.55	30.00	-1.50	17.05	36.00	Pass
BLE	1Mbps	1	39	2480	17.95	30.00	-1.50	16.45	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	17.50	2.80	-1.50	8.00	Pass
BLE	1Mbps	1	19	2440	18.05	3.39	-1.50	8.00	Pass
BLE	1Mbps	1	39	2480	17.41	2.71	-1.50	8.00	Pass

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

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	2.050	1.192	0.50	Pass
BLE	2Mbps	1	19	2440	2.046	1.240	0.50	Pass
BLE	2Mbps	1	39	2480	2.046	1.236	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	1	0	2402	19.05	30.00	-1.50	17.55	36.00	Pass
BLE	2Mbps	1	19	2440	18.65	30.00	-1.50	17.15	36.00	Pass
BLE	2Mbps	1	39	2480	18.15	30.00	-1.50	16.65	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	18.00	-0.26	-1.50	8.00	Pass
BLE	2Mbps	1	19	2440	17.98	-0.27	-1.50	8.00	Pass
BLE	2Mbps	1	39	2480	17.30	-0.99	-1.50	8.00	Pass

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

MIMO <Ant. 4+3>

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	2	0	2402	1.035	0.708	0.50	Pass
BLE	1Mbps	2	19	2440	1.037	0.716	0.50	Pass
BLE	1Mbps	2	39	2480	1.035	0.718	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power Ant 4 (dBm)	Average Conducted Power Ant 3 (dBm)	Total Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	Total EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	1Mbps	2	0	2402	17.65	17.45	20.56	30.00	1.60	22.16	36.00	Pass
BLE	1Mbps	2	19	2440	17.45	17.55	20.51	30.00	1.60	22.11	36.00	Pass
BLE	1Mbps	2	39	2480	16.95	16.85	19.91	30.00	1.60	21.51	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	Peak PSD Worst +3.01 (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	1Mbps	2	0	2402	16.99	2.21	5.22	1.60	8.00	Pass
BLE	1Mbps	2	19	2440	16.74	2.04	5.05	1.60	8.00	Pass
BLE	1Mbps	2	39	2480	16.21	1.54	4.55	1.60	8.00	Pass

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

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	2	0	2402	2.042	1.184	0.50	Pass
BLE	2Mbps	2	19	2440	2.046	1.236	0.50	Pass
BLE	2Mbps	2	39	2480	2.050	1.248	0.50	Pass

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power Ant 4 (dBm)	Average Conducted Power Ant 3 (dBm)	Total Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	Total EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	2	0	2402	17.95	17.75	20.86	30.00	1.60	22.46	36.00	Pass
BLE	2Mbps	2	19	2440	17.65	17.85	20.76	30.00	1.60	22.36	36.00	Pass
BLE	2Mbps	2	39	2480	17.15	17.05	20.11	30.00	1.60	21.71	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	Peak PSD Worst +3.01 (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	2	0	2402	17.17	-1.17	1.84	1.60	8.00	Pass
BLE	2Mbps	2	19	2440	16.63	-1.59	1.42	1.60	8.00	Pass
BLE	2Mbps	2	39	2480	16.04	-2.29	0.72	1.60	8.00	Pass

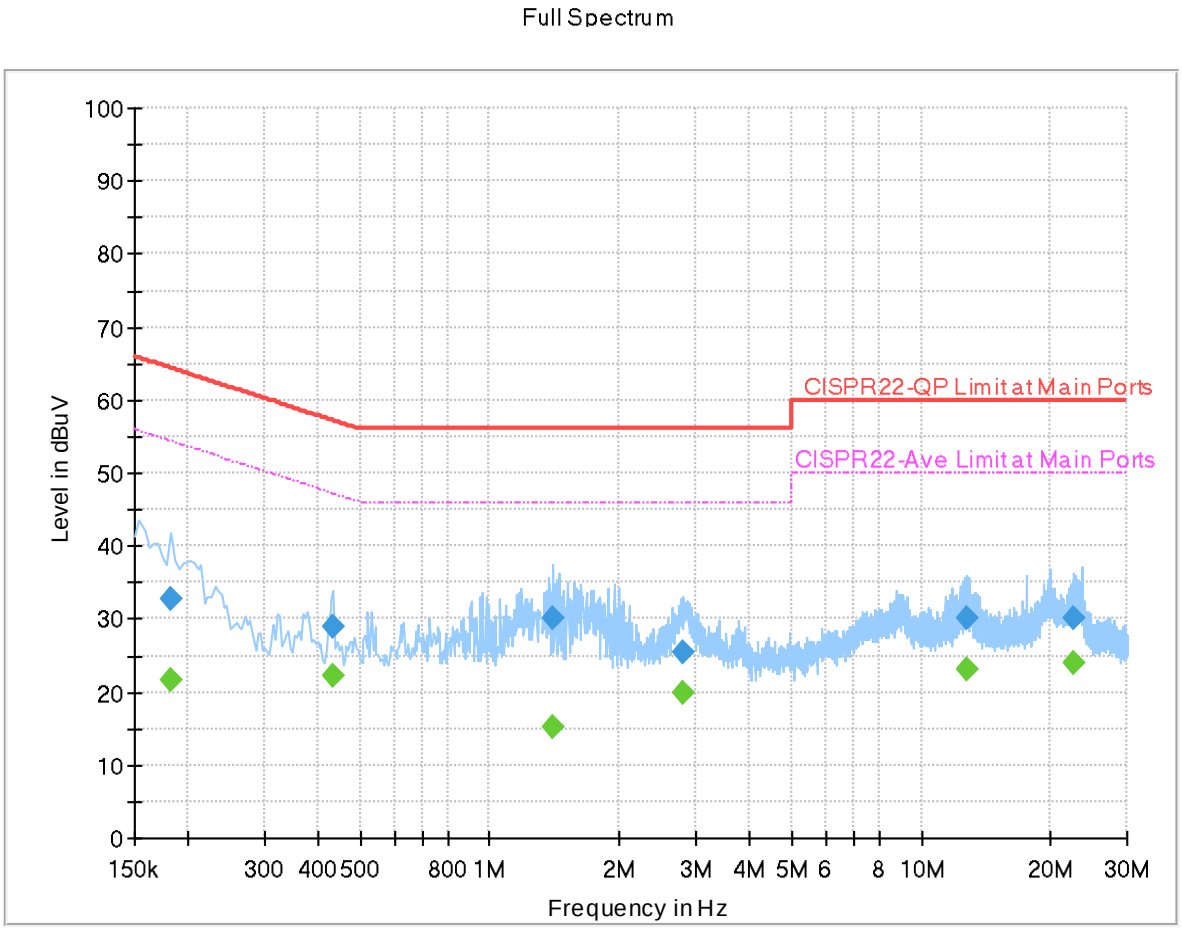
Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	**Temperature :**	24.7~27.8℃
		Relative Humidity :	45.2~63.8%

EUT Information

Report NO :	1O2843-06
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

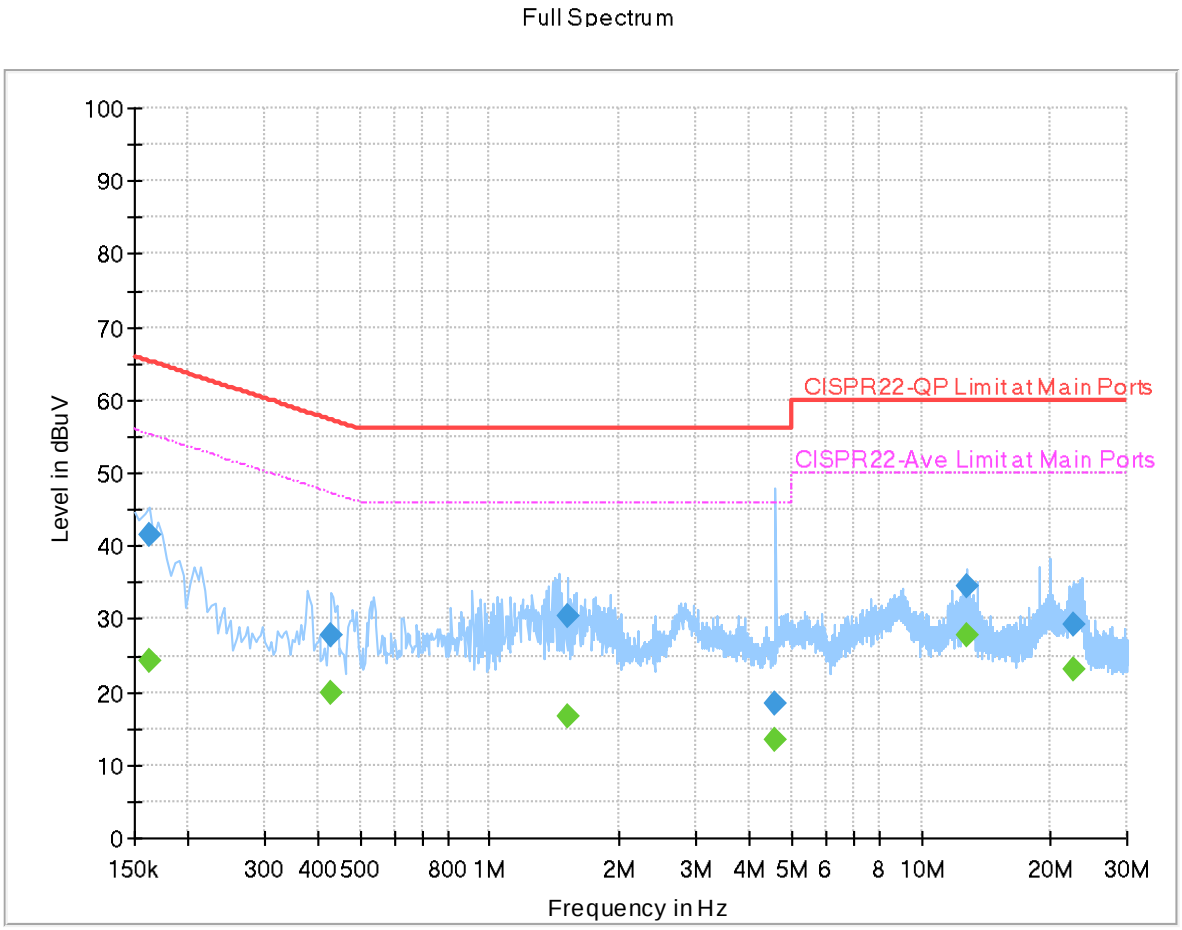


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.182000	---	21.54	54.39	32.85	L1	OFF	20.0
0.182000	32.69	---	64.39	31.70	L1	OFF	20.0
0.434000	---	22.19	47.18	24.99	L1	OFF	20.0
0.434000	28.94	---	57.18	28.24	L1	OFF	20.0
1.402000	---	15.34	46.00	30.66	L1	OFF	20.0
1.402000	30.02	---	56.00	25.98	L1	OFF	20.0
2.802000	---	20.01	46.00	25.99	L1	OFF	20.0
2.802000	25.34	---	56.00	30.66	L1	OFF	20.0
12.754000	---	23.22	50.00	26.78	L1	OFF	20.2
12.754000	29.99	---	60.00	30.01	L1	OFF	20.2
22.486000	---	24.05	50.00	25.95	L1	OFF	20.3
22.486000	30.05	---	60.00	29.95	L1	OFF	20.3

EUT Information

Report NO :	1O2843-06
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.162000	---	24.28	55.36	31.08	N	OFF	20.0
0.162000	41.49	---	65.36	23.87	N	OFF	20.0
0.430000	---	19.83	47.25	27.42	N	OFF	20.0
0.430000	27.67	---	57.25	29.58	N	OFF	20.0
1.518000	---	16.55	46.00	29.45	N	OFF	20.0
1.518000	30.29	---	56.00	25.71	N	OFF	20.0
4.602000	---	13.32	46.00	32.68	N	OFF	20.1
4.602000	18.54	---	56.00	37.46	N	OFF	20.1
12.766000	---	27.83	50.00	22.17	N	OFF	20.2
12.766000	34.45	---	60.00	25.55	N	OFF	20.2
22.658000	---	23.01	50.00	26.99	N	OFF	20.3
22.658000	29.35	---	60.00	30.65	N	OFF	20.3

Appendix C. Radiated Spurious Emission

Test Engineer :	Theodore Huang, Fu Chen and Troye Hsieh	Temperature :	20.1~21.8°C
		Relative Humidity :	56.1~66.8%

<1Mbps>

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE ANT	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
4		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2316.51	52.42	-21.58	74	41.37	27.83	17.19	33.97	100	123	P	H
		2378.355	43.53	-10.47	54	32.57	27.64	17.27	33.95	100	123	A	H
	*	2402	115.27	-	-	104.32	27.6	17.3	33.95	100	123	P	H
	*	2402	114.59	-	-	103.64	27.6	17.3	33.95	100	123	A	H
													H
													H
		2350.635	53.92	-20.08	74	42.94	27.7	17.24	33.96	350	119	P	V
		2331.105	43.37	-10.63	54	32.34	27.78	17.21	33.96	350	119	A	V
	*	2402	110.38	-	-	99.43	27.6	17.3	33.95	350	119	P	V
	*	2402	109.75	-	-	98.8	27.6	17.3	33.95	350	119	A	V
													V
													V
BLE CH 19 2440MHz		2329.68	52.91	-21.09	74	41.88	27.78	17.21	33.96	120	145	P	H
		2352.56	43.43	-10.57	54	32.46	27.69	17.24	33.96	120	145	A	H
	*	2440	116.37	-	-	105.43	27.52	17.36	33.94	120	145	P	H
	*	2440	115.77	-	-	104.83	27.52	17.36	33.94	120	145	A	H
		2491.28	53.4	-20.6	74	42.46	27.42	17.44	33.92	120	145	P	H
		2490.08	43.31	-10.69	54	32.37	27.42	17.44	33.92	120	145	A	H
		2352.72	52.89	-21.11	74	41.92	27.69	17.24	33.96	336	119	P	V
		2354.48	43.29	-10.71	54	32.32	27.69	17.24	33.96	336	119	A	V
	*	2440	111.58	-	-	100.64	27.52	17.36	33.94	336	119	P	V
	*	2440	110.91	-	-	99.97	27.52	17.36	33.94	336	119	A	V
		2492.64	52.24	-21.76	74	41.31	27.41	17.44	33.92	336	119	P	V
		2494.8	43.32	-10.68	54	32.39	27.41	17.44	33.92	336	119	A	V

BLE CH 39 2480MHz	*	2480	113.13	-	-	102.2	27.44	17.42	33.93	118	140	P	H
	*	2480	112.57	-	-	101.64	27.44	17.42	33.93	118	140	A	H
		2484.36	53.62	-20.38	74	42.68	27.43	17.43	33.92	118	140	P	H
		2484.16	43.99	-10.01	54	33.05	27.43	17.43	33.92	118	140	A	H
													H
													H
	*	2480	111.15	-	-	100.22	27.44	17.42	33.93	330	85	P	V
	*	2480	109.55	-	-	98.62	27.44	17.42	33.93	330	85	A	V
		2487	53.98	-20.02	74	43.04	27.43	17.43	33.92	330	85	P	V
		2483.84	43.77	-10.23	54	32.83	27.43	17.43	33.92	330	85	A	V
													V
													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 ANT 4	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	38.14	-35.86	74	53.91	31.29	11.4	58.46	-	-	P	H
		10875	47.96	-26.04	74	51.86	40.2	17.25	61.35	-	-	P	H
		14490	48.37	-25.63	74	49.25	41.3	20.83	63.01	-	-	P	H
		14490	40.25	-13.75	54	41.13	41.3	20.83	63.01	-	-	A	H
		17985	52.94	-21.06	74	39.99	46.56	23.03	56.64	-	-	P	H
		17985	43.77	-10.23	54	30.82	46.56	23.03	56.64	-	-	A	H
													H
													H
													H
													H
													H
													H
		4804	38.1	-35.9	74	53.87	31.29	11.4	58.46	-	-	P	V
		10965	48.4	-25.6	74	52.23	40.26	17.37	61.46	-	-	P	V
		10965	36.4	-17.6	54	40.23	40.26	17.37	61.46	-	-	A	V
		14475	47.76	-26.24	74	48.68	41.3	20.81	63.03	-	-	P	V
		17970	53.52	-20.48	74	40.86	46.32	23.01	56.67	-	-	P	V
		17970	43.7	-10.3	54	31.04	46.32	23.01	56.67	-	-	A	V
													V
													V
													V
													V
													V
													V

BLE ANT 4	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)
		4880	38.26	-35.74	74	53.83	31.26	11.65	58.48	-	-	P	H
		7320	40.82	-33.18	74	49.95	36.6	13.44	59.17	-	-	P	H
		10980	48.56	-25.44	74	52.37	40.28	17.39	61.48	-	-	P	H
		10980	36.3	-17.7	54	40.11	40.28	17.39	61.48	-	-	A	H
		14490	48.09	-25.91	74	48.97	41.3	20.83	63.01	-	-	P	H
		14490	40.12	-13.88	54	41	41.3	20.83	63.01	-	-	A	H
		17985	53.93	-20.07	74	40.98	46.56	23.03	56.64	-	-	P	H
		17985	43.73	-10.27	54	30.78	46.56	23.03	56.64	-	-	A	H
													H
													H
													H
BLE CH 19 2440MHz													H
		4880	38.8	-35.2	74	54.37	31.26	11.65	58.48	-	-	P	V
		7320	41.28	-32.72	74	50.41	36.6	13.44	59.17	-	-	P	V
		11055	47.65	-26.35	74	51.71	40.08	17.43	61.57	-	-	P	V
		14490	49.59	-24.41	74	50.47	41.3	20.83	63.01	-	-	P	V
		14490	40.4	-13.6	54	41.28	41.3	20.83	63.01	-	-	A	V
		17955	53.22	-20.78	74	40.85	46.08	23	56.71	-	-	P	V
		17955	43.44	-10.56	54	31.07	46.08	23	56.71	-	-	A	V
													V
													V
													V
													V
													V

BLE ANT 4	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	38.95	-35.05	74	54.05	31.5	11.89	58.49	-	-	P	H
		7440	40.85	-33.15	74	49.54	36.68	13.75	59.12	-	-	P	H
		10980	47.42	-26.58	74	51.23	40.28	17.39	61.48	-	-	P	H
		14505	49.3	-24.7	74	50.15	41.3	20.85	63	-	-	P	H
		14505	40.33	-13.67	54	41.18	41.3	20.85	63	-	-	A	H
		17985	53.21	-20.79	74	40.26	46.56	23.03	56.64	-	-	P	H
		17985	43.69	-10.31	54	30.74	46.56	23.03	56.64	-	-	A	H
													H
													H
													H
													H
													H
		4960	38.68	-35.32	74	53.78	31.5	11.89	58.49	-	-	P	V
		7440	40.81	-33.19	74	49.5	36.68	13.75	59.12	-	-	P	V
		10875	48.3	-25.7	74	52.2	40.2	17.25	61.35	-	-	P	V
		10875	36.61	-17.39	54	40.51	40.2	17.25	61.35	-	-	A	V
		14475	47.7	-26.3	74	48.62	41.3	20.81	63.03	-	-	P	V
		17970	52.92	-21.08	74	40.26	46.32	23.01	56.67	-	-	P	V
		17970	43.72	-10.28	54	31.06	46.32	23.01	56.67	-	-	A	V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
ANT					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2374.26	52.89	-21.11	74	41.92	27.65	17.27	33.95	123	114	P	H
		2341.815	43.51	-10.49	54	32.52	27.73	17.22	33.96	123	114	A	H
	*	2402	116.03	-	-	105.08	27.6	17.3	33.95	123	114	P	H
	*	2402	115.11	-	-	104.16	27.6	17.3	33.95	123	114	A	H
													H
													H
		2357.25	52.98	-21.02	74	42.01	27.69	17.24	33.96	308	125	P	V
		2329.005	43.32	-10.68	54	32.29	27.78	17.21	33.96	308	125	A	V
	*	2402	110.58	-	-	99.63	27.6	17.3	33.95	308	125	P	V
	*	2402	109.95	-	-	99	27.6	17.3	33.95	308	125	A	V
		2357.25	52.98	-21.02	74	42.01	27.69	17.24	33.96	308	125	P	V
													V
BLE CH 19 2440MHz		2376.88	53.17	-20.83	74	42.2	27.65	17.27	33.95	121	145	P	H
		2381.52	43.54	-10.46	54	32.57	27.64	17.28	33.95	121	145	A	H
	*	2440	116.39	-	-	105.45	27.52	17.36	33.94	121	145	P	H
	*	2440	115.61	-	-	104.67	27.52	17.36	33.94	121	145	A	H
		2493.2	52.6	-21.4	74	41.67	27.41	17.44	33.92	121	145	P	H
		2487.36	43.45	-10.55	54	32.51	27.43	17.43	33.92	121	145	A	H
		2383.28	52.86	-21.14	74	41.9	27.63	17.28	33.95	309	85	P	V
		2333.36	43.47	-10.53	54	32.45	27.77	17.21	33.96	309	85	A	V
	*	2440	112.78	-	-	101.84	27.52	17.36	33.94	309	85	P	V
	*	2440	112.19	-	-	101.25	27.52	17.36	33.94	309	85	A	V
		2487.36	52.47	-21.53	74	41.53	27.43	17.43	33.92	309	85	P	V
		2485.76	43.31	-10.69	54	32.37	27.43	17.43	33.92	309	85	A	V

BLE CH 39 2480MHz	*	2480	114.22	-	-	103.29	27.44	17.42	33.93	150	144	P	H
	*	2480	113.68	-	-	102.75	27.44	17.42	33.93	150	144	A	H
		2483.64	54.19	-19.81	74	43.25	27.43	17.43	33.92	150	144	P	H
		2483.68	44.79	-9.21	54	33.85	27.43	17.43	33.92	150	144	A	H
													H
													H
	*	2480	109.97	-	-	99.04	27.44	17.42	33.93	300	88	P	V
	*	2480	109.47	-	-	98.54	27.44	17.42	33.93	300	88	A	V
		2484.12	52.63	-21.37	74	41.69	27.43	17.43	33.92	300	88	P	V
		2484	43.6	-10.4	54	32.66	27.43	17.43	33.92	300	88	A	V
													V
													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 ANT 3	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	37.6	-36.4	74	53.37	31.29	11.4	58.46	-	-	P	H
		10950	48.03	-25.97	74	51.87	40.25	17.35	61.44	-	-	P	H
		10950	36.37	-17.63	54	40.21	40.25	17.35	61.44	-	-	A	H
		14475	48.19	-25.81	74	49.11	41.3	20.81	63.03	-	-	P	H
		14475	40.14	-13.86	54	41.06	41.3	20.81	63.03	-	-	A	H
		17985	53.5	-20.5	74	40.55	46.56	23.03	56.64	-	-	P	H
		17985	43.68	-10.32	54	30.73	46.56	23.03	56.64	-	-	A	H
													H
													H
													H
													H
													H
		4804	37.76	-36.24	74	53.53	31.29	11.4	58.46	-	-	P	V
		10995	47.96	-26.04	74	51.75	40.29	17.41	61.49	-	-	P	V
		14490	47.93	-26.07	74	48.81	41.3	20.83	63.01	-	-	P	V
		17985	52.87	-21.13	74	39.92	46.56	23.03	56.64	-	-	P	V
		17985	44.04	-9.96	54	31.09	46.56	23.03	56.64	-	-	A	V
													V
													V
													V
													V
													V
													V
													V

BLE ANT 3	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)
		4880	37.76	-36.24	74	53.33	31.26	11.65	58.48	-	-	P	H
		7320	40.69	-33.31	74	49.82	36.6	13.44	59.17	-	-	P	H
		11145	47.48	-26.52	74	51.92	39.76	17.47	61.67	-	-	P	H
		14490	48.34	-25.66	74	49.22	41.3	20.83	63.01	-	-	P	H
		14490	40.18	-13.82	54	41.06	41.3	20.83	63.01	-	-	A	H
		17985	52.98	-21.02	74	40.03	46.56	23.03	56.64	-	-	P	H
		17985	43.47	-10.53	54	30.52	46.56	23.03	56.64	-	-	A	H
													H
													H
													H
													H
BLE CH 19 2440MHz													H
		4880	38.15	-35.85	74	53.72	31.26	11.65	58.48	-	-	P	V
		7320	40.67	-33.33	74	49.8	36.6	13.44	59.17	-	-	P	V
		10950	47.44	-26.56	74	51.28	40.25	17.35	61.44	-	-	P	V
		14505	48.91	-25.09	74	49.76	41.3	20.85	63	-	-	P	V
		14505	40.24	-13.76	54	41.09	41.3	20.85	63	-	-	A	V
		17985	53.21	-20.79	74	40.26	46.56	23.03	56.64	-	-	P	V
		17985	44.07	-9.93	54	31.12	46.56	23.03	56.64	-	-	A	V
													V
													V
													V
													V
													V

BLE ANT 3	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	38.86	-35.14	74	53.96	31.5	11.89	58.49	-	-	P	H
		7440	41.23	-32.77	74	49.92	36.68	13.75	59.12	-	-	P	H
		11010	47.85	-26.15	74	51.69	40.26	17.41	61.51	-	-	P	H
		14490	48.41	-25.59	74	49.29	41.3	20.83	63.01	-	-	P	H
		14490	40.43	-13.57	54	41.31	41.3	20.83	63.01	-	-	A	H
		17970	52.56	-21.44	74	39.9	46.32	23.01	56.67	-	-	P	H
		17970	43.47	-10.53	54	30.81	46.32	23.01	56.67	-	-	A	H
													H
													H
													H
													H
													H
		4960	38.56	-35.44	74	53.66	31.5	11.89	58.49	-	-	P	V
		7440	40.19	-33.81	74	48.88	36.68	13.75	59.12	-	-	P	V
		10920	47.41	-26.59	74	51.28	40.22	17.31	61.4	-	-	P	V
		14490	47.86	-26.14	74	48.74	41.3	20.83	63.01	-	-	P	V
		17985	53.42	-20.58	74	40.47	46.56	23.03	56.64	-	-	P	V
		17985	44.02	-9.98	54	31.07	46.56	23.03	56.64	-	-	A	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.

Emission above 18GHz

2.4GHz BLE (SHF)

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
ANT					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BLE SHF		18707	34.66	-39.34	74	54.83	38.07	-2.96	55.28	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		22592	36.2	-37.8	74	55.99	38.37	-3.73	54.43	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

2.4GHz BLE (LF)

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
ANT					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BLE LF		30	24.53	-15.47	40	31.67	24.27	0.95	32.36	-	-	P	H
		94.02	24.78	-18.72	43.5	40.76	14.93	1.48	32.39	-	-	P	H
		156.1	22.43	-21.07	43.5	36.51	16.45	1.93	32.46	-	-	P	H
		849.65	29.91	-16.09	46	27.88	29.03	4.49	31.49	-	-	P	H
		897.18	30.02	-15.98	46	27.77	28.84	4.65	31.24	-	-	P	H
		954.41	31.08	-14.92	46	26.55	30.61	4.79	30.87	-	-	P	H
													H
													H
													H
													H
													H
													H
		45.52	33.24	-6.76	40	48.3	16.41	0.99	32.46	-	-	P	V
		65.89	27.22	-12.78	40	46.61	11.85	1.22	32.46	-	-	P	V
		93.05	25.33	-18.17	43.5	41.39	14.86	1.48	32.4	-	-	P	V
		826.37	29.58	-16.42	46	28.68	28.08	4.43	31.61	-	-	P	V
		878.75	29.64	-16.36	46	27.42	28.97	4.59	31.34	-	-	P	V
		953.44	30.51	-15.49	46	26.02	30.57	4.79	30.87	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
ANT					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2346.435	53.11	-20.89	74	42.13	27.71	17.23	33.96	130	140	P	H
		2364.39	43.38	-10.62	54	32.42	27.67	17.25	33.96	130	140	A	H
	*	2402	115.19	-	-	104.24	27.6	17.3	33.95	130	140	P	H
	*	2402	114.56	-	-	103.61	27.6	17.3	33.95	130	140	A	H
													H
													H
		2334.57	52.74	-21.26	74	41.73	27.76	17.21	33.96	397	130	P	V
		2352.63	43.61	-10.39	54	32.64	27.69	17.24	33.96	397	130	A	V
	*	2402	113.09	-	-	102.14	27.6	17.3	33.95	397	130	P	V
	*	2402	112.16	-	-	101.21	27.6	17.3	33.95	397	130	A	V
													V
													V
BLE CH 19 2440MHz		2314.48	53.4	-20.6	74	42.34	27.84	17.19	33.97	120	147	P	H
		2371.12	43.21	-10.79	54	32.24	27.66	17.26	33.95	120	147	A	H
	*	2440	115.96	-	-	105.02	27.52	17.36	33.94	120	147	P	H
	*	2440	115.33	-	-	104.39	27.52	17.36	33.94	120	147	A	H
		2497.12	53.08	-20.92	74	42.14	27.41	17.45	33.92	120	147	P	H
		2495.68	43.11	-10.89	54	32.18	27.41	17.44	33.92	120	147	A	H
		2371.28	52.56	-21.44	74	41.59	27.66	17.26	33.95	337	108	P	V
		2344.72	43.38	-10.62	54	32.39	27.72	17.23	33.96	337	108	A	V
	*	2440	111.66	-	-	100.72	27.52	17.36	33.94	337	108	P	V
	*	2440	111.1	-	-	100.16	27.52	17.36	33.94	337	108	A	V
		2492.16	52.66	-21.34	74	41.72	27.42	17.44	33.92	337	108	P	V
		2495.92	43.29	-10.71	54	32.36	27.41	17.44	33.92	337	108	A	V

BLE CH 39 2480MHz	*	2480	113.84	-	-	102.91	27.44	17.42	33.93	100	137	P	H
	*	2480	113.27	-	-	102.34	27.44	17.42	33.93	100	137	A	H
		2483.68	53.45	-20.55	74	42.51	27.43	17.43	33.92	100	137	P	H
		2483.88	44.3	-9.7	54	33.36	27.43	17.43	33.92	100	137	A	H
													H
													H
	*	2480	111.33	-	-	100.4	27.44	17.42	33.93	330	62	P	V
	*	2480	110.74	-	-	99.81	27.44	17.42	33.93	330	62	A	V
		2484.68	52.75	-21.25	74	41.81	27.43	17.43	33.92	330	62	P	V
		2483.6	44.32	-9.68	54	33.38	27.43	17.43	33.92	330	62	A	V
													V
													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 ANT 4+3	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	42.75	-31.25	74	58.52	31.29	11.4	58.46	-	-	P	H
		10920	49.61	-24.39	74	53.48	40.22	17.31	61.4	-	-	P	H
		10920	38.19	-15.81	54	42.06	40.22	17.31	61.4	-	-	A	H
		14475	49.35	-24.65	74	50.27	41.3	20.81	63.03	-	-	P	H
		14475	39.5	-14.5	54	40.42	41.3	20.81	63.03	-	-	A	H
		18000	54.64	-19.36	74	41.4	46.8	23.04	56.6	-	-	P	H
		18000	44.77	-9.23	54	31.53	46.8	23.04	56.6	-	-	A	H
													H
													H
													H
													H
													H
		4804	39.72	-34.28	74	55.49	31.29	11.4	58.46	-	-	P	V
		10920	48.6	-25.4	74	52.47	40.22	17.31	61.4	-	-	P	V
		10920	37.23	-16.77	54	41.1	40.22	17.31	61.4	-	-	A	V
		14475	50.3	-23.7	74	51.22	41.3	20.81	63.03	-	-	P	V
		14475	38.68	-15.32	54	39.6	41.3	20.81	63.03	-	-	A	V
		17985	54.05	-19.95	74	41.1	46.56	23.03	56.64	-	-	P	V
		17985	44.55	-9.45	54	31.6	46.56	23.03	56.64	-	-	A	V
													V
													V
													V
													V
													V

BLE ANT 4+3	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)
		4880	39.14	-34.86	74	54.71	31.26	11.65	58.48	-	-	P	H
		7320	41.72	-32.28	74	50.85	36.6	13.44	59.17	-	-	P	H
		10830	48.65	-25.35	74	52.57	40.2	17.18	61.3	-	-	P	H
		10830	37.72	-16.28	54	41.64	40.2	17.18	61.3	-	-	A	H
		14475	49.35	-24.65	74	50.27	41.3	20.81	63.03	-	-	P	H
		14475	39.61	-14.39	54	40.53	41.3	20.81	63.03	-	-	A	H
		18000	53.71	-20.29	74	40.47	46.8	23.04	56.6	-	-	P	H
		18000	44.72	-9.28	54	31.48	46.8	23.04	56.6	-	-	A	H
													H
													H
													H
BLE CH 19 2440MHz													H
		4880	38.98	-35.02	74	54.55	31.26	11.65	58.48	-	-	P	V
		7320	41.43	-32.57	74	50.56	36.6	13.44	59.17	-	-	P	V
		10740	48.08	-25.92	74	52.19	40.02	17.06	61.19	-	-	P	V
		10740	37.29	-16.71	54	41.4	40.02	17.06	61.19	-	-	A	V
		14500	49.76	-24.24	74	50.62	41.3	20.84	63	-	-	P	V
		14500	39.42	-14.58	54	40.28	41.3	20.84	63	-	-	A	V
		17970	53.61	-20.39	74	40.95	46.32	23.01	56.67	-	-	P	V
		17970	43.41	-10.59	54	30.75	46.32	23.01	56.67	-	-	A	V
													V
													V
													V
													V

BLE ANT 4+3	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)
		4960	39.37	-34.63	74	54.47	31.5	11.89	58.49	-	-	P	H
		7440	41.73	-32.27	74	50.42	36.68	13.75	59.12	-	-	P	H
		11220	49.08	-24.92	74	53.72	39.62	17.5	61.76	-	-	P	H
		11220	37.01	-16.99	54	41.65	39.62	17.5	61.76	-	-	A	H
		14475	49.08	-24.92	74	50	41.3	20.81	63.03	-	-	P	H
		14475	39.71	-14.29	54	40.63	41.3	20.81	63.03	-	-	A	H
		18000	53.97	-20.03	74	40.73	46.8	23.04	56.6	-	-	P	H
		18000	44.71	-9.29	54	31.47	46.8	23.04	56.6	-	-	A	H
													H
													H
													H
BLE CH 39 2480MHz													H
		4960	38.94	-35.06	74	54.04	31.5	11.89	58.49	-	-	P	V
		7440	42.19	-31.81	74	50.88	36.68	13.75	59.12	-	-	P	V
		10980	47.79	-26.21	74	51.6	40.28	17.39	61.48	-	-	P	V
		10980	37.85	-16.15	54	41.66	40.28	17.39	61.48	-	-	A	V
		14475	49.73	-24.27	74	50.65	41.3	20.81	63.03	-	-	P	V
		14475	39.43	-14.57	54	40.35	41.3	20.81	63.03	-	-	A	V
		17985	54.29	-19.71	74	41.34	46.56	23.03	56.64	-	-	P	V
		17985	44.13	-9.87	54	31.18	46.56	23.03	56.64	-	-	A	V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.

Note symbol

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

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

BLE	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
ANT					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+3		(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

Test Engineer :	Theodore Huang, Fu Chen and Troye Hsieh	**Temperature :**	20.1~21.8°C
		Relative Humidity :	56.1~66.8%

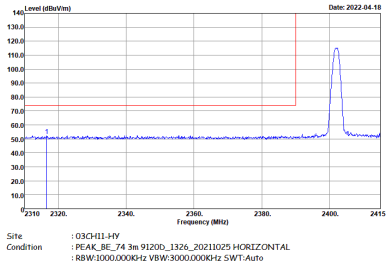
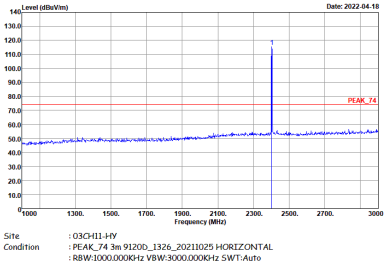
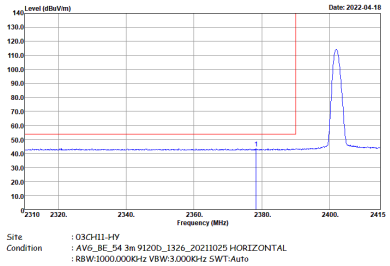
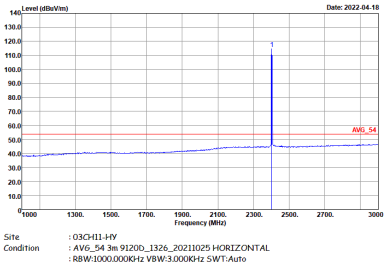
Note symbol

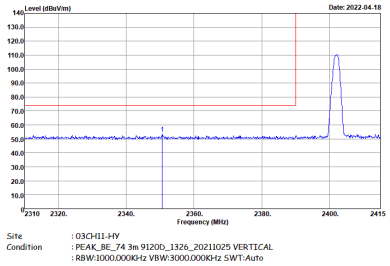
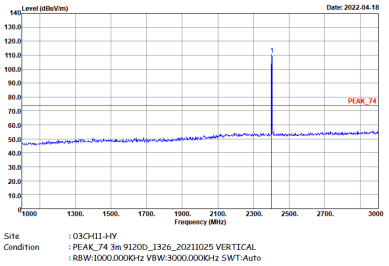
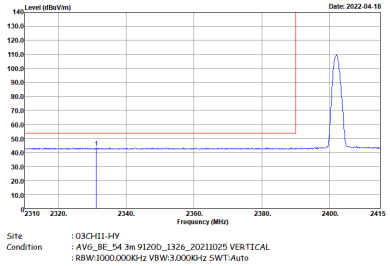
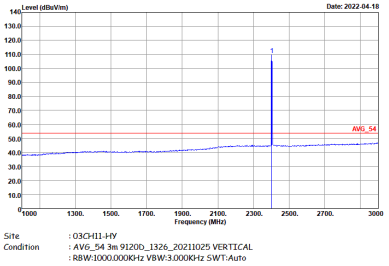
-L	**Low channel location**
-R	**High channel location**

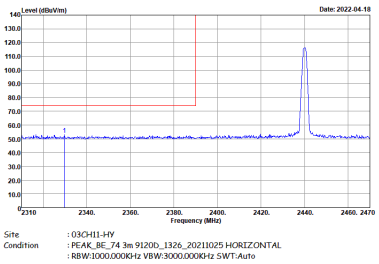
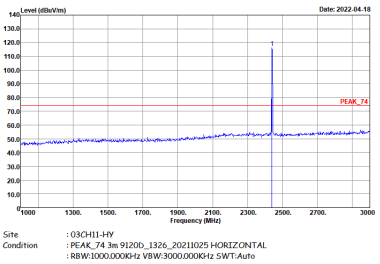
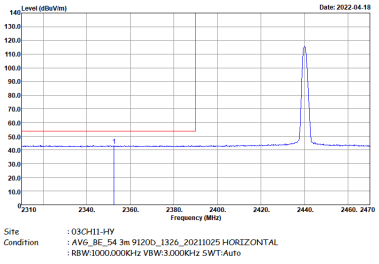
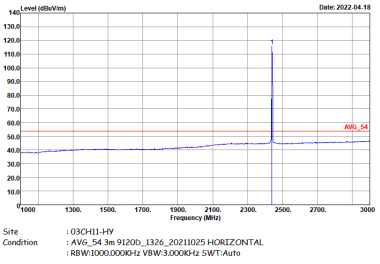
<1Mbps>

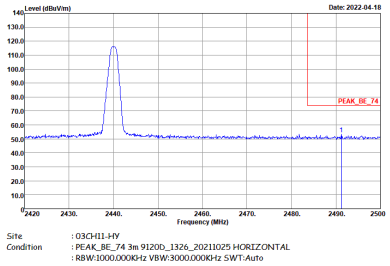
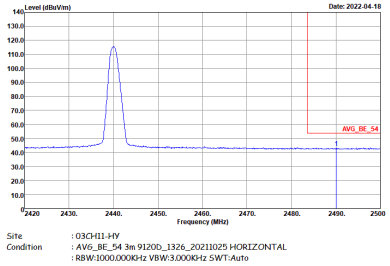
2.4GHz 2400~2483.5MHz

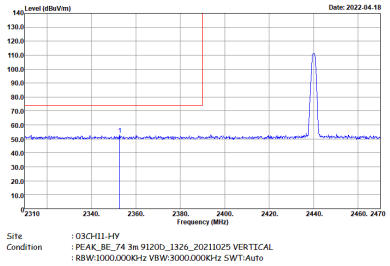
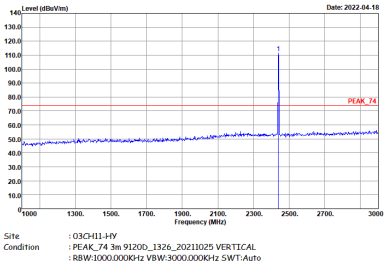
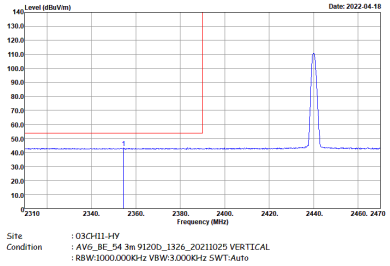
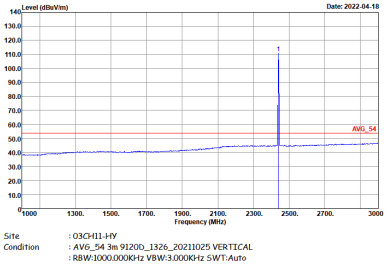
BLE (Band Edge @ 3m)

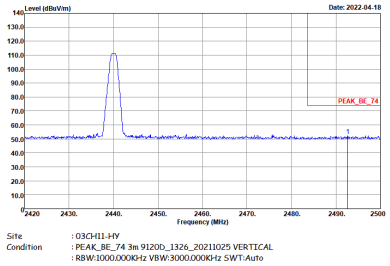
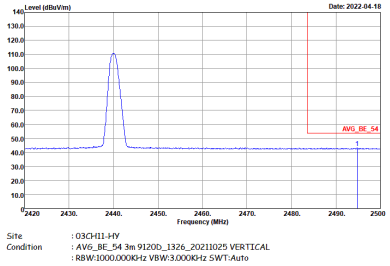
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
4	Horizontal	Fundamental
Peak		
Avg.		

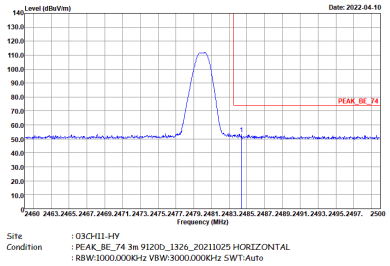
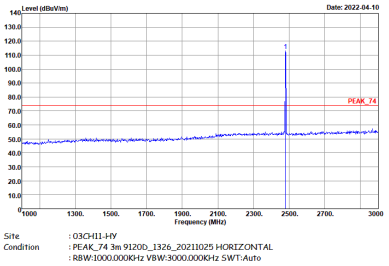
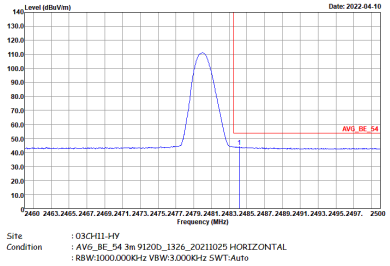
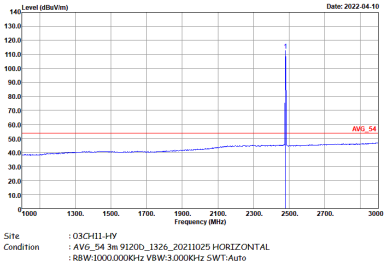
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
4	Vertical	Fundamental
Peak		
Avg.		

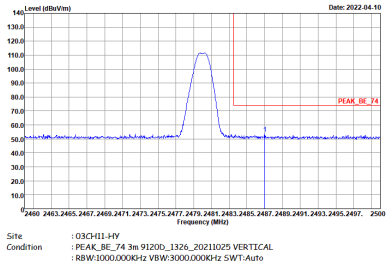
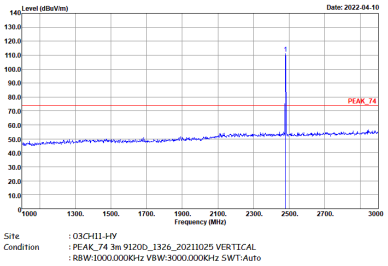
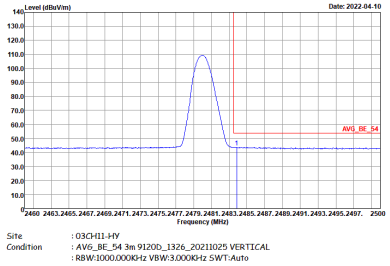
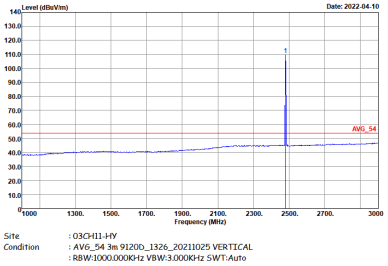
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
4	Horizontal	Fundamental
Peak		
Avg.		

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

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

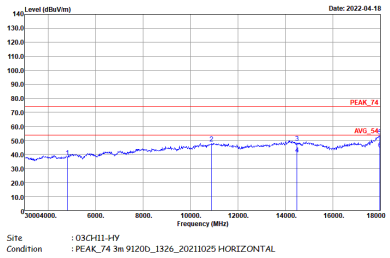
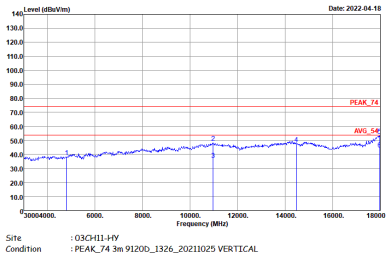
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
4	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

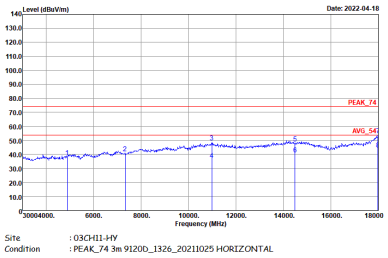
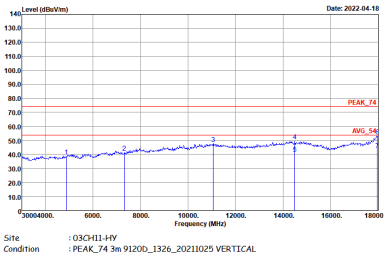
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
4	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

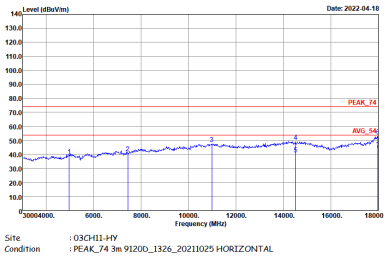
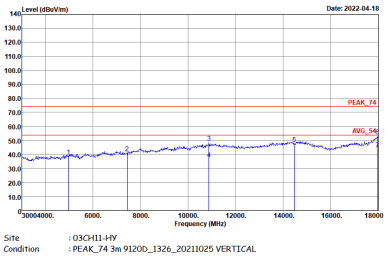
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
4	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

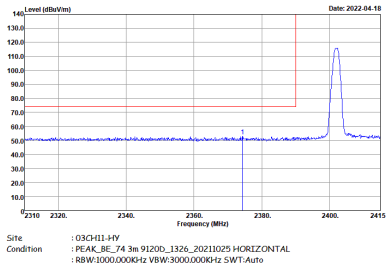
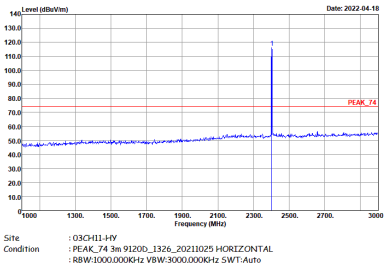
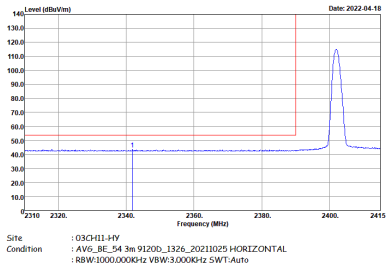
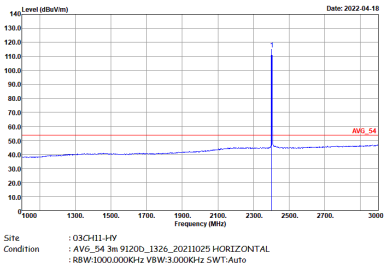
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH00 2402MHz	
4	Horizontal	Vertical
Peak Avg.		

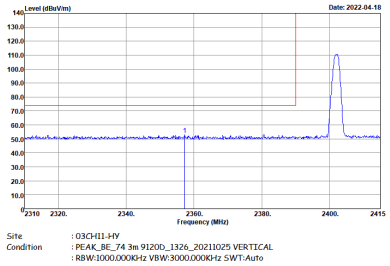
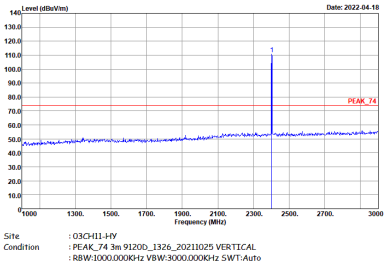
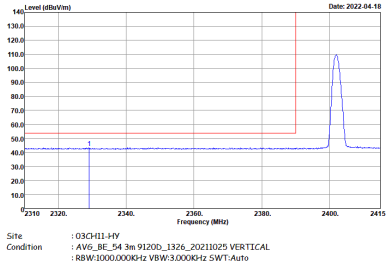
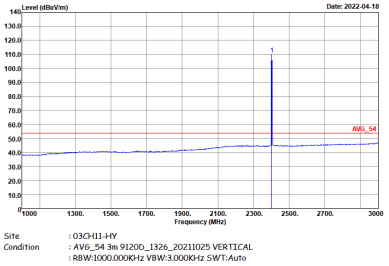
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH19 2440MHz	
4	Horizontal	Vertical
Peak Avg.		

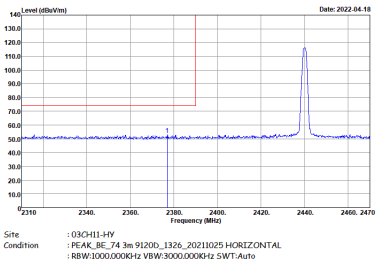
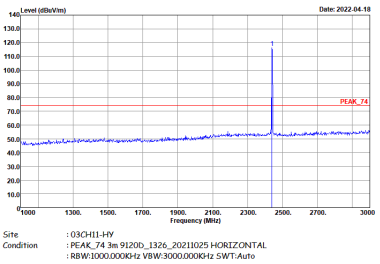
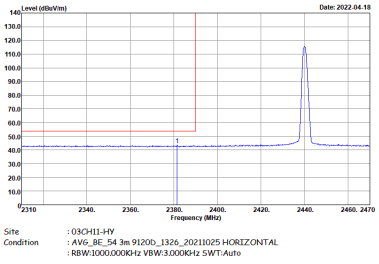
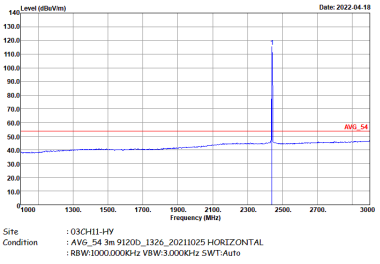
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH39 2480MHz	
4	Horizontal	Vertical
Peak Avg.		

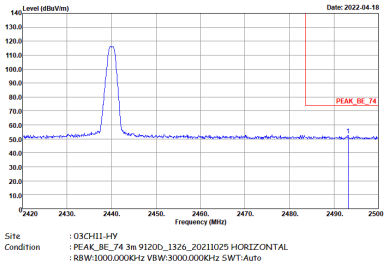
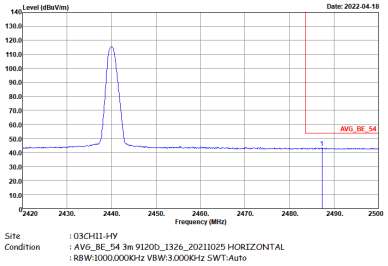
2.4GHz 2400~2483.5MHz

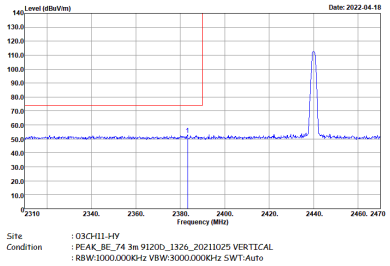
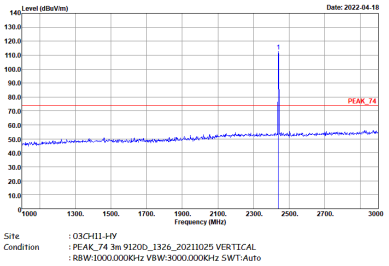
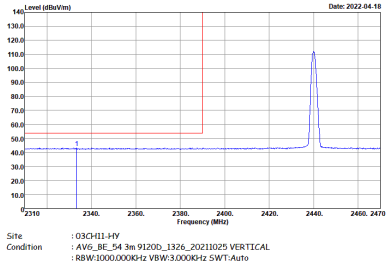
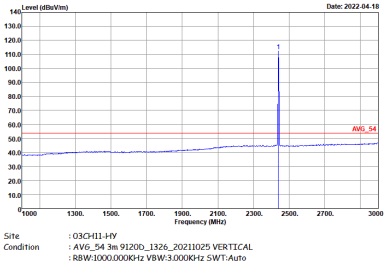
BLE (Band Edge @ 3m)

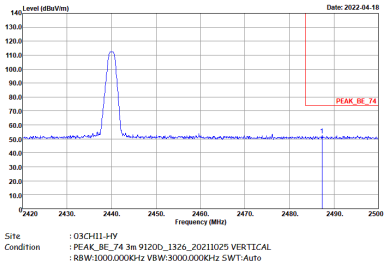
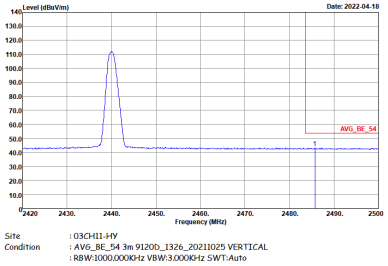
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
3	Horizontal	Fundamental
Peak		
Avg.		

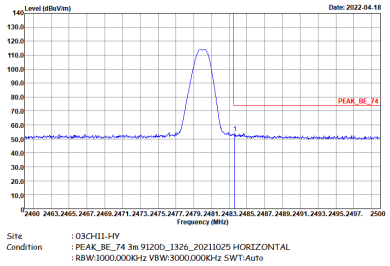
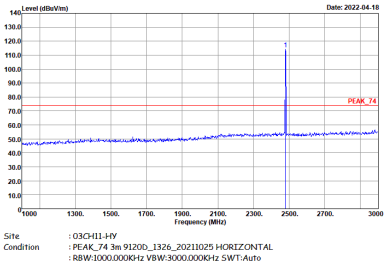
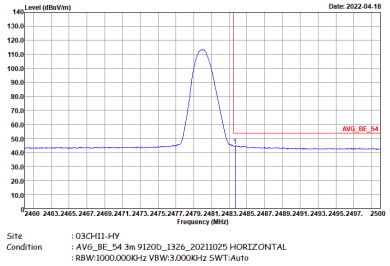
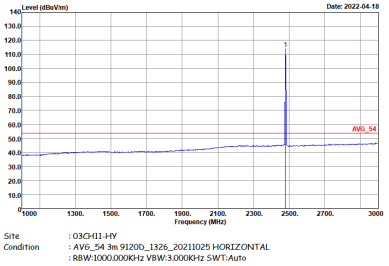
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
3	Vertical	Fundamental
Peak		
Avg.		

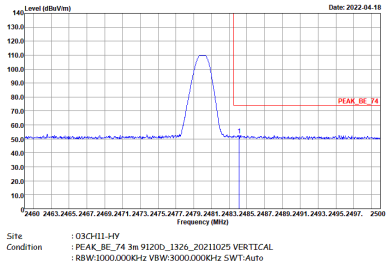
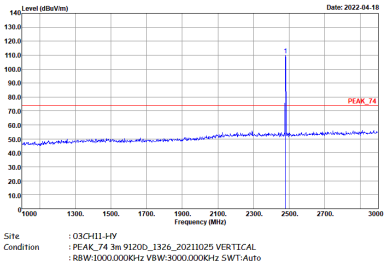
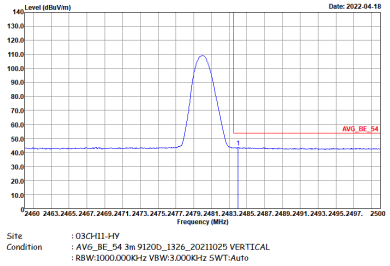
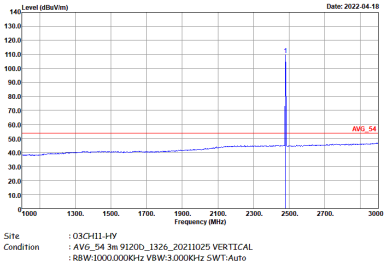
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
3	Horizontal	Fundamental
Peak		
Avg.		

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

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

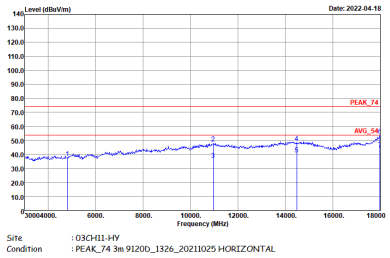
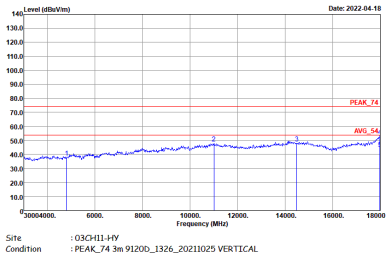
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
3	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

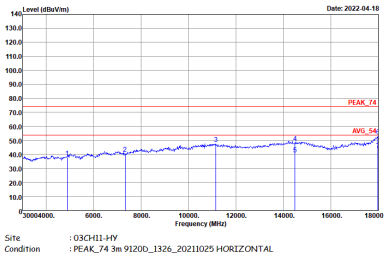
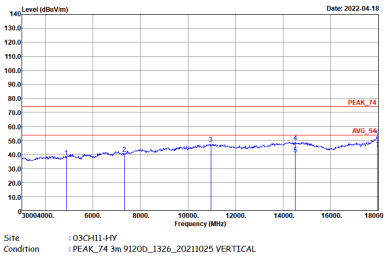
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
3	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

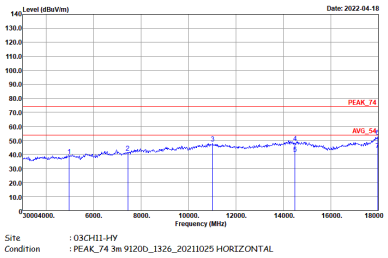
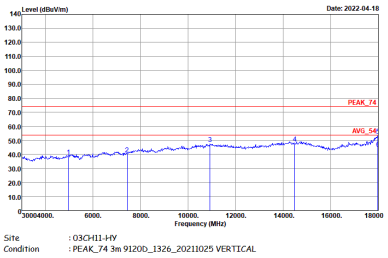
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
3	Vertical	Fundamental
Peak		
Avg.		

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

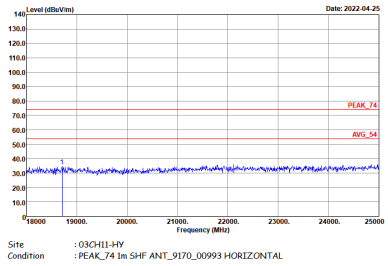
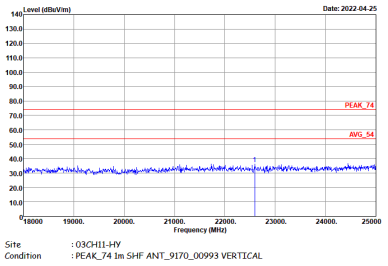
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH00 2402MHz	
3	Horizontal	Vertical
Peak Avg.		

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

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

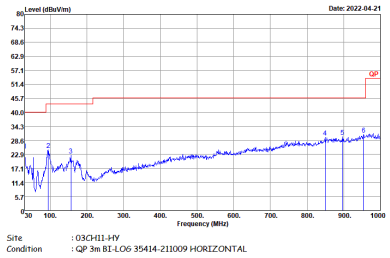
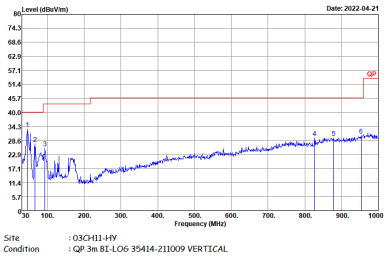
Emission above 18GHz

2.4GHz BLE (SHF)

BLE	2.4GHz 2400~2483.5MHz	
ANT	BLE SHF	
3	Horizontal	Vertical
QP / Peak		

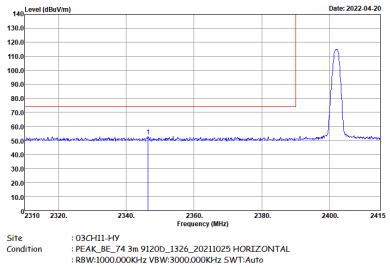
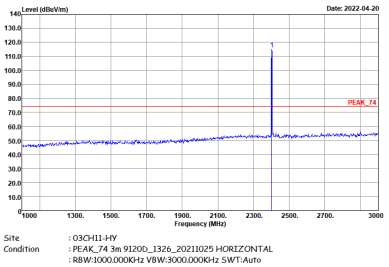
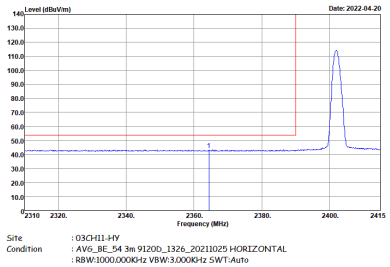
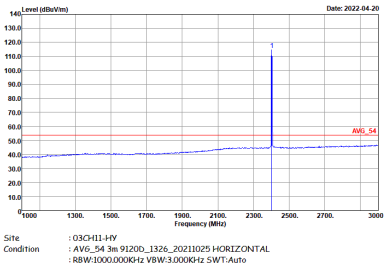
Emission below 1GHz

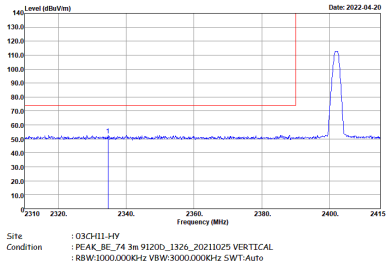
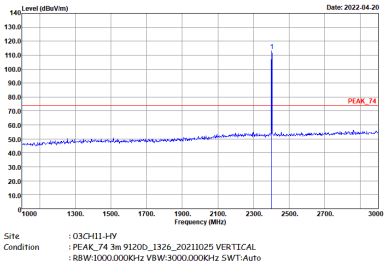
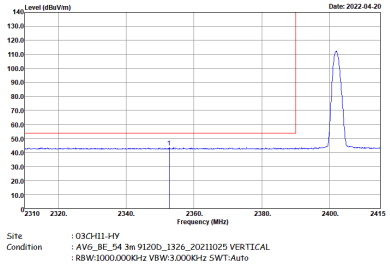
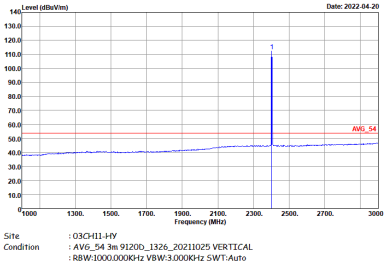
2.4GHz BLE (LF)

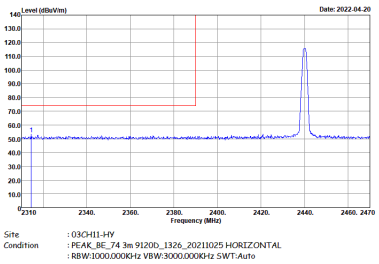
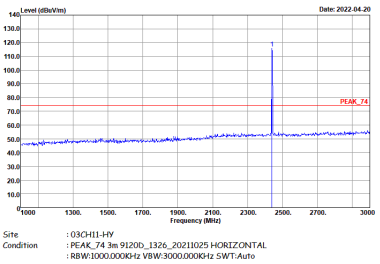
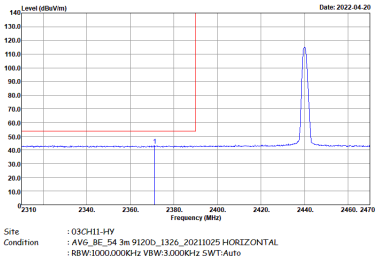
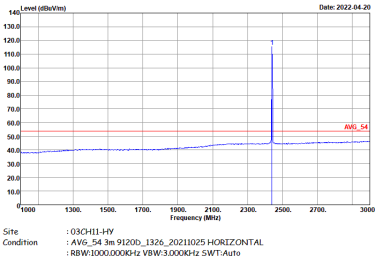
BLE	2.4GHz 2400~2483.5MHz	
ANT	BLE LF	
3	Horizontal	Vertical
QP / Peak		

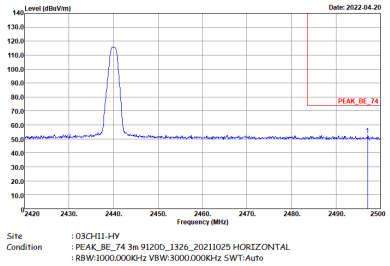
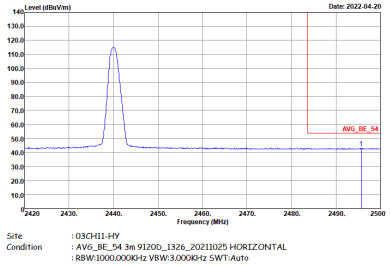
2.4GHz 2400~2483.5MHz

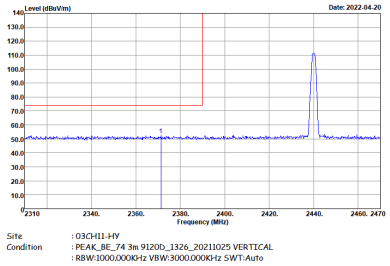
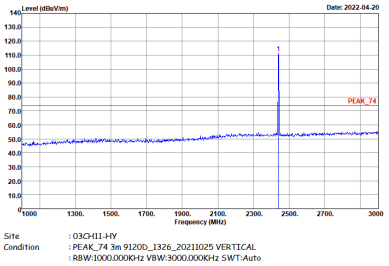
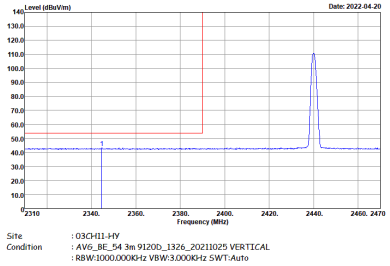
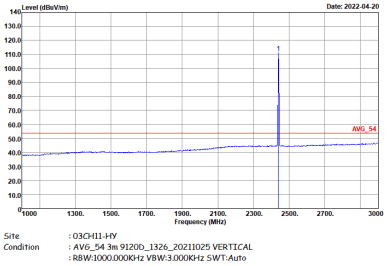
BLE (Band Edge @ 3m)

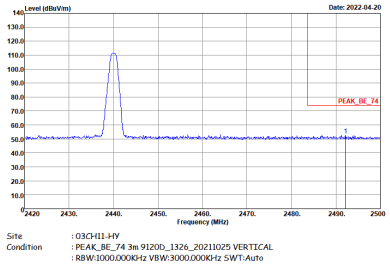
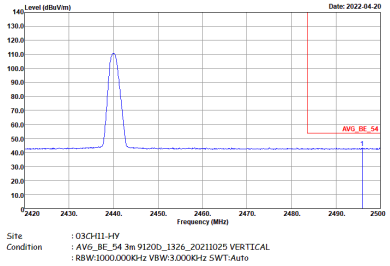
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
4+3	Horizontal	Fundamental
Peak		
Avg.		

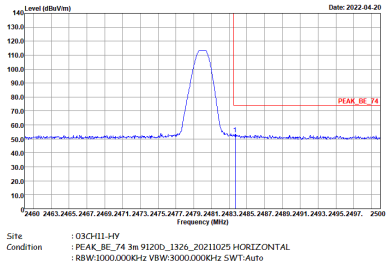
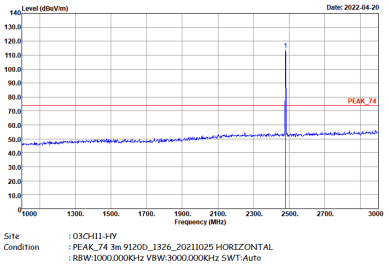
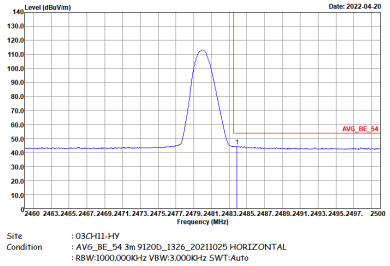
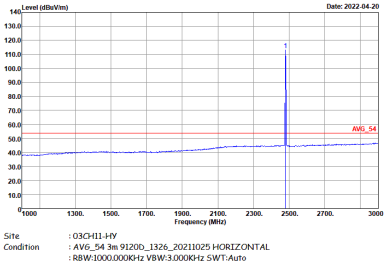
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH00 2402MHz	
4+3	Vertical	Fundamental
Peak		
Avg.		

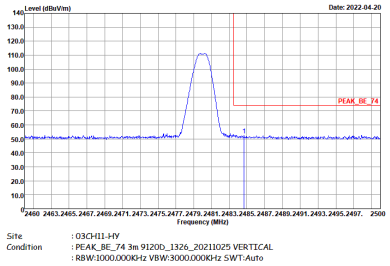
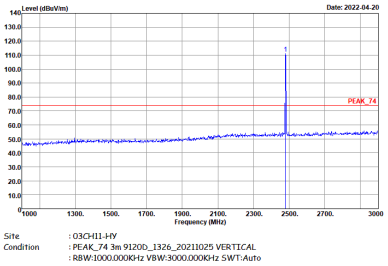
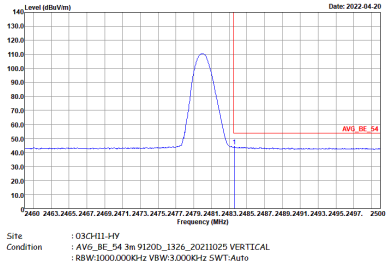
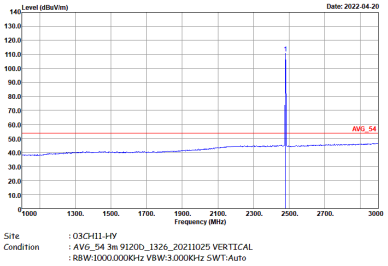
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
4+3	Horizontal	Fundamental
Peak		
Avg.		

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
4+3	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - L	
4+3	Vertical	Fundamental
Peak		
Avg.		

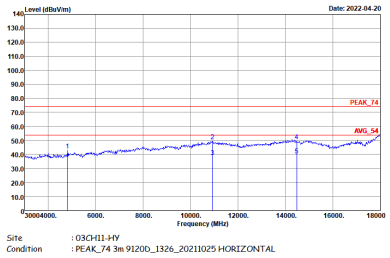
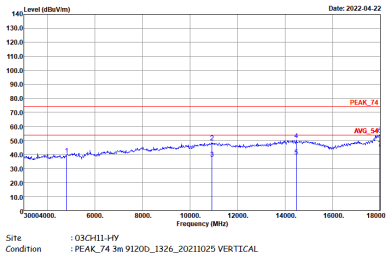
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH19 2440MHz - R	
4+3	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

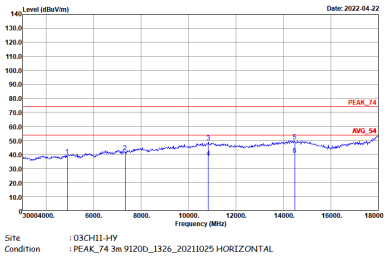
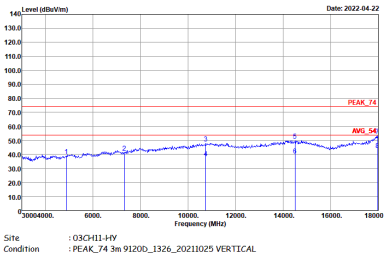
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
4+3	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m 9120D_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

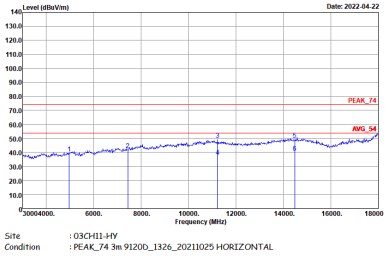
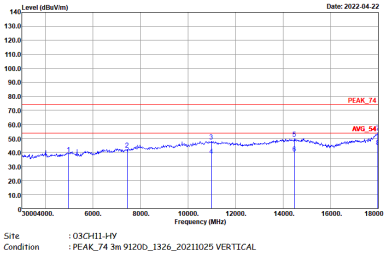
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BLE CH39 2480MHz	
4+3	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH00 2402MHz	
4+3	Horizontal	Vertical
Peak Avg.		

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH19 2440MHz	
4+3	Horizontal	Vertical
Peak Avg.		

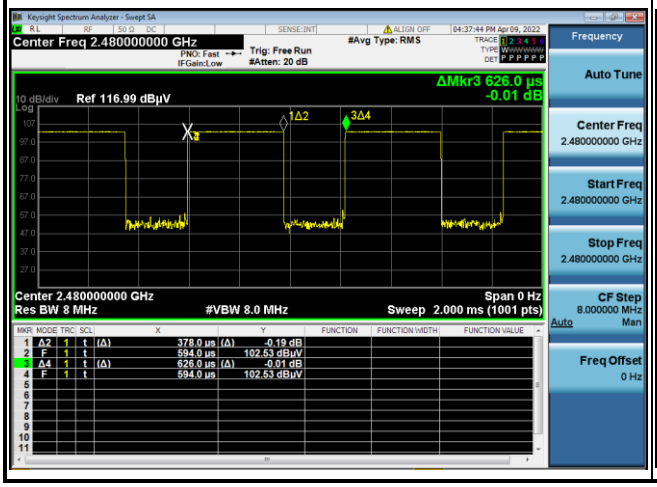
BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BLE CH39 2480MHz	
4+3	Horizontal	Vertical
Peak Avg.		

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
4	Bluetooth - LE for 1Mbps	60.38	378	2.65	3kHz
3	Bluetooth - LE for 1Mbps	60.38	378	2.65	3kHz
4+3	Bluetooth - LE for 1Mbps	60.26	376	2.66	3kHz

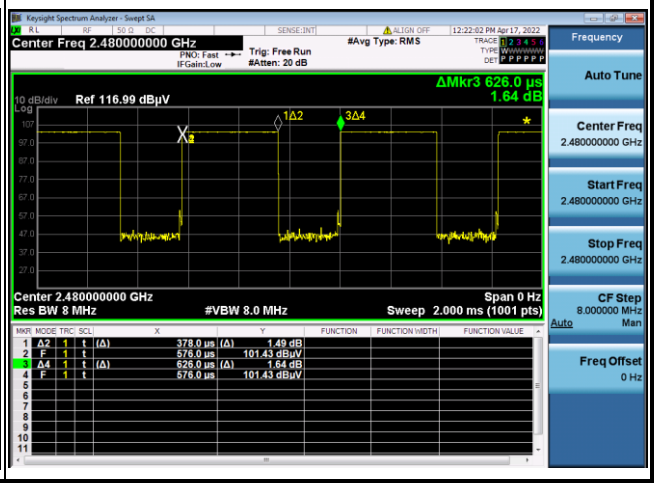
<Ant. 4>

Bluetooth – LE for 1Mbps



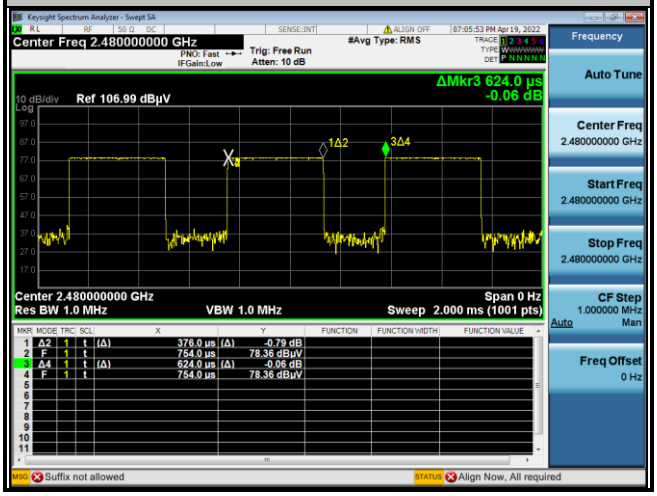
<Ant. 3>

Bluetooth – LE for 1Mbps



MIMO <Ant. 4+3>

Bluetooth – LE for 1Mbps



———THE END———