

RADIO TEST REPORT

Product : IEEE 802.11ax/ac/a/b/g/n 2x2 WiFi with Bluetooth5.0 Combo Module

Model Name : WNFB265AX

FCC ID : VPQ-WNFB265AXIBT

Test Regulation : FCC 47 CFR Part 15 Subpart C (Section 15.247)

Received Date : 2023/6/29

Test Date : 2023/7/17 ~ 2023/12/8

Issued Date : 2023/12/11

Applicant : TRIXELL
460 Rue du Pommarin, 38430 Moirans

Issued By : Underwriters Laboratories Taiwan Co., Ltd.
Building A, B and E, No. 372-7, Sec. 4, Zhongxing Rd.,
Zhudong Township, Hsinchu County, Taiwan



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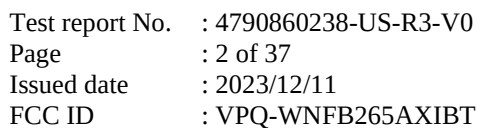
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Doc No: Form-ULID-004737 (DCS:17-EM-F0876) / 6.1



Original Test Report No.: 4790860238-US-R3-V0

[illegible]

Doc No: Form-ULID-004737 (DCS:17-EM-F0876) / 6.1

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1. Attestation of Test Results

APPLICANT: TRIXELL
460 Rue du Pommarin, 38430 Moirans

MANUFACTURER: SparkLAN Communications, Inc.
8F., No.257, Sec. 2, Tiding Blvd., Neihu District, Taipei City 11493,
Taiwan (R.O.C.)

EUT DESCRIPTION: IEEE 802.11ax/ac/a/b/g/n 2x2 WiFi with Bluetooth5.0 Combo
Module

BRAND: TRIXELL

MODEL: WNFB265AX

SAMPLE STAGE: Engineering Verification Test sample

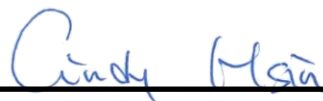
DATE of TESTED: 2023/7/17 ~ 2023/12/8

APPLICABLE STANDARDS	
STANDARD	Test Results
FCC 47 CFR PART 15 Subpart C (Section 15.247)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:



Cindy Hsin
Project Handler

Date : 2023/12/11

Approved and Authorized By:



Eric Lee
Senior Laboratory Engineer

Date : 2023/12/11

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2. Summary of Test Results

Summary of Test Results		
FCC Clause	Test Items	Result
15.247(a)(2)	6dB Bandwidth	See Note 1
15.247(b)	Conducted Output Power	PASS
15.247(e)	Power Spectral Density	See Note 1
15.247(d)	Antenna Port Emission	See Note 1
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS
15.207	AC Power Conducted Emission	See Note 1
15.203	Antenna Requirement	See Note 1

Note:

1. This report is as a supplementary report of report no.: 4789558390-US-R4-V0.

3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB558074 D01 Meas Guidance v05r02, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building A, B and E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.

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5. Measurement Uncertainty

For statement of conformity, Simple acceptance (Section 3.1.4 & 4.3.4 of ISO Guide 115) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k=2$.

Determining compliance based on the results of the compliance measurement, not considering measurement instrumentation uncertainty.

Measurement	Frequency	Uncertainty
Conducted disturbance at mains terminals ports	150kHz ~ 30MHz	3.1 dB
RF Conducted	9 kHz - 40GHz	2.3 dB
Radiated disturbance below 30MHz	9 kHz - 30 MHz	3.2 dB
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	6.1 dB
Radiated disturbance above 1 GHz	1GHz ~ 40GHz	5.1 dB

6. Equipment under Test

6.1. Description of EUT

Product	IEEE 802.11ax/ac/a/b/g/n 2x2 WiFi with Bluetooth5.0 Combo Module
Brand Name	TRIXELL
Model Name	WNFB265AX
Operating Frequency	2402MHz ~ 2480MHz
Modulation	GFSK
Transfer Rate	Up to 3 Mbps
Number of Channel	40
Maximum Output Power	7.25 dBm
Normal Voltage	3.3Vdc
Sample ID	6110881

Note:

1. The model number of this application: WNFB265AX, based on original FCC ID: RYK-WNFB265AXIBT, Model: WNFB-265AXI(BT) whose RF circuit are identical, only the RF antenna, applicant, brand and model number have been changed. According to the above changed, the radiated emission and conducted output power need to be performed, other test results are referred to the original report (Report No.: 4789558390-US-R4-V0).
2. The EUT contains following accessory devices:

Product	Brand	Model	Description
Antenna	TAOGLAS	FXP831.07.0100C	2.4GHz: 3dBi 5GHz: 5.5dBi I-PEX

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual, the laboratory shall not be held responsible.

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6.2. Channel List

40 channels are provided to this EUT:

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

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6.3. Test Condition

Test Item	Test Site No.	Environmental Condition	Input Power	Test Date	Tested by
Radiated Spurious Emission	966-2	21~27°C/ 51~69%RH	3.3Vdc	2023/07/17~ 2023/12/08	Rex Chen
Antenna Port Conducted Measurement	SR4	21~27°C/ 51~69%RH	3.3Vdc	2023/07/17~ 2023/07/18	Rex Chen

FCC Test Firm Registration Number: 498077

Sample Calculation:

Antenna Port Conducted Measurement:

- Where relevant, the follow sample calculation is provided:
Result Value (dBm) = Reading Value (dBm) + Attenuator Factor (dB) + Cable Loss (dB).
Example: Result Value (10dBm) = Reading Value (-2dBm) + Attenuator Factor (10dB) + Cable Loss(2dB).
*Test plot only shown the “Result Value”.

Radiated Spurious Emission:

- Where relevant, the follow sample calculation is provided:
Result Value (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
Example: Result Value (34.5dBuV/m) = Reading Value (40.1dBuV) + Antenna Factor (18.7dB/m) + Cable Loss (4.2dB) - Preamp Factor (28.5dB).

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6.4. Description of Available Antennas

Ant. No.	Transmitter Circuit	Brand Name	Model Name	Ant. Type	Maximum Gain (dBi)
1	Chain (0)+(1)	TAOGLAS	FXP831.07.0100C	Dipole	2.4GHz: 3 5GHz: 5.5

Note: The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual, the laboratory shall not be held responsible.

6.5. Test Mode Applicability and Tested Channel Detail

- The model number of this application: WNFB265AX, based on original FCC ID: RYK-WNFB265AXIBT, Model: WNFB-265AXI(BT) whose RF circuit are identical, only the RF antenna, applicant, brand and model number have been changed. According to the above changed, the radiated emission and conducted output power need to be performed, other test results are referred to the original report (Report No.: 4789558390-US-R4-V0).

Test Item	Modulation Type	Available Channel	Test Channel	Data Rate
Radiated Emissions	GFSK	0 to 39	0,19,39	1 Mbps
	GFSK			2 Mbps
Radiated Emissions (Below 1GHz)	GFSK	0 to 39	0	1 Mbps
Antenna Port Conducted Measurement	GFSK	0 to 39	0,19,39	1 Mbps
	GFSK			2 Mbps

7. Test Equipment

Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Expired date
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070827	2023/4/7	2024/4/6
EMI Test Receiver	Rohde & Schwarz	ESR7	101754	2022/12/13	2023/12/12
Loop Antenna	ETS lindgren	6502	00213440	2023/1/4	2024/1/3
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT-N0538	2023/2/13	2024/2/12
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	2023/6/7	2024/6/6
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-4 & 170425-2	2022/12/1	2023/11/30
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-4 & 170425-2	2023/11/29	2024/11/28
Antenna Port Conducted Measurement					
Spectrum Analyzer	Keysight	N9010A	MY56070834	2022/10/24	2023/10/23
Attenuator	EMCI	EMC-40ATK2W10	17002	2022/12/9	2023/12/8
Pulse Power Sensor	Anritsu	MA2411B	1531202	2023/1/4	2024/1/3
Power Meter	Anritsu	ML2495A	1645002	2023/1/4	2024/1/3

UL Software		
Description	Name	Version
Radiated measurement	e3	6.191211 (V6)
Conducted measurement	RF-Conducted-FCC 15247	ver 1.0

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8. Description of Test Setup

Support Equipment

ID	Equipment	Brand Name	Model Name	S/N	Remark
A	Test Tool	Broadcom	Bluetool	NA	Supplied by client
B	Monitor	Dell	SE2417HG	NA	Provide by lab
C	Computer	Gigabyte	H310M-S2P	BC00049	Supplied by client
D	Keyboard	Dell	KB216I	CH2-WD050	Provide by lab

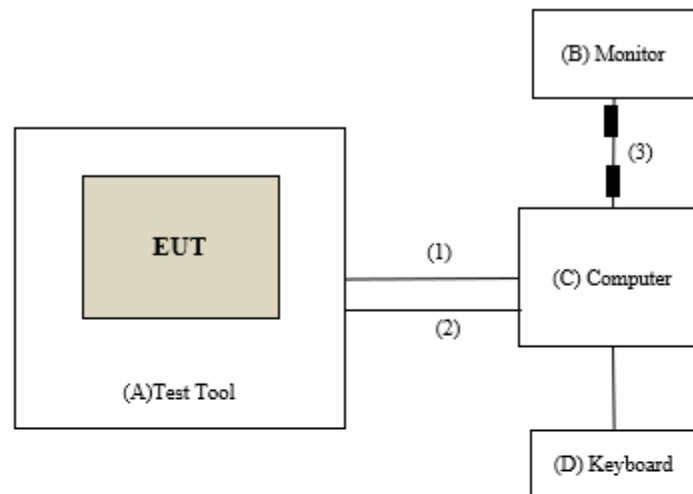
I/O Cables

ID	Equipment	Brand Name	Model Name	Length (m)	Remark
1	Flexible Cable	Soliton	PEM-1LC	0.47	Supplied by client
2	Micro USB Cable	Centenary	US-26	1.8	Supplied by client
3	HDMI Cable	EATON	P568010	1.44	Provide by lab with two core

Test Setup

The EUT was worked in engineering mode to transmit signal.

Setup Diagram for Test



Under Table

Remote Site

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9. Test Results

9.1. Conducted Output Power

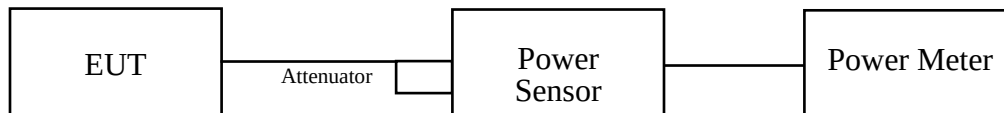
Requirements

For systems using digital modulation in the 2400-2483.5 MHz bands: 1 Watt.

Test Procedure

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Test Setup



The loss between RF output port of the EUT and the input port of the Power Meter has been taken into consideration.

Test Data**Peak Power****BT LE_1Mbps**

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
0	2402	3.784	5.78	30	PASS
19	2440	3.972	5.99	30	PASS
39	2480	4.055	6.08	30	PASS

BT LE_2Mbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
0	2402	4.036	6.06	30	PASS
19	2440	4.457	6.49	30	PASS
39	2480	4.159	6.19	30	PASS

BT LR_125kbps

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
0	2402	3.908	5.92	30	PASS
19	2440	4.375	6.41	30	PASS
39	2480	4.111	6.14	30	PASS

Average Power (Reference Only)**BT LE_1Mbps**

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	3.573	5.53
19	2440	3.75	5.74
39	2480	3.828	5.83

BT LE_2Mbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	3.589	5.55
19	2440	3.963	5.98
39	2480	3.698	5.68

BT LR_125kbps

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	3.475	5.41
19	2440	3.89	5.90
39	2480	3.656	5.63

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9.2. Radiated Spurious Emission

Requirements

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Test Procedures

[For 9 kHz ~ 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

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Note:

- a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- b. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

Configuration	Average	
	RBW	VBW
Bluetooth LE	1MHz	Duty cycle refer to original report

- d. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
- e. Test data of Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- f. Test data of Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- g. Test data of Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
- h. Test data of Notation "@" = Fundamental Frequency
- i. Test data of Notation "*" = The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.

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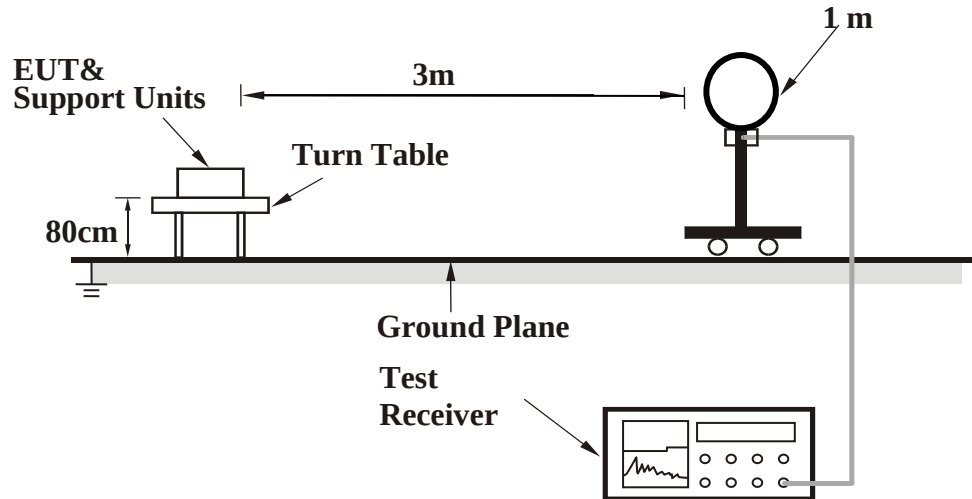
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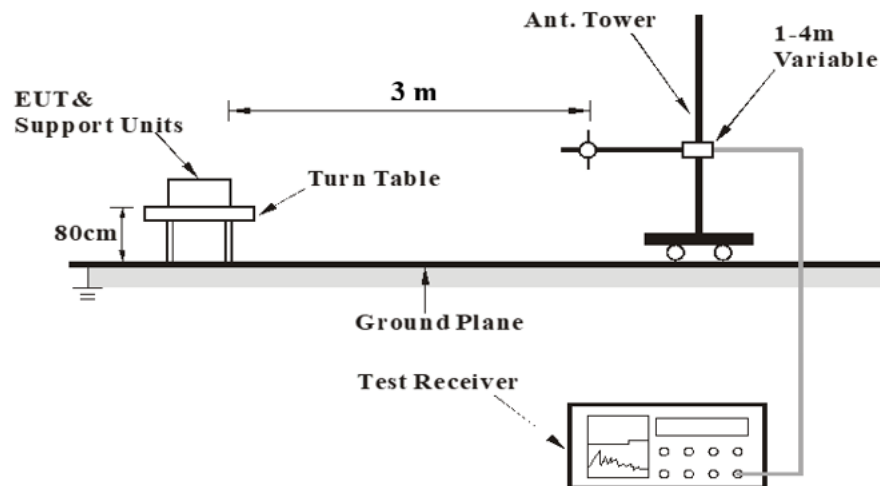
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Test Setup

<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >



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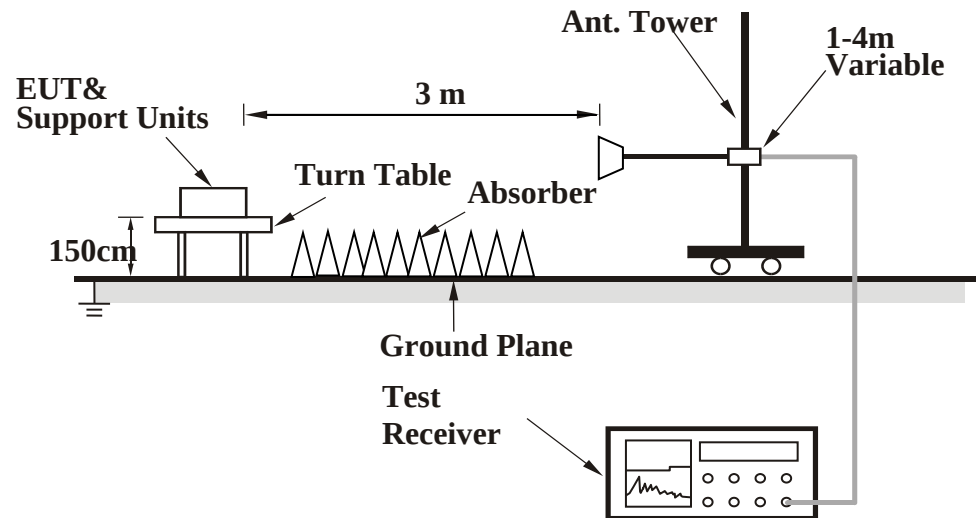
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<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the Setup Configurations.

Test Data

Above 1 GHz

Mode	BT-LE-1Mbps	Channel	0
------	-------------	---------	---

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2310.76	40.51	15.99	56.5	74	-17.5	PK
		2375.93	29.26	16.15	45.41	54	-8.59	AVG
	@	2402	83.47	15.98	99.45	N/A	N/A	PK
	@	2402	82.6	15.98	98.58	N/A	N/A	AVG
	*	4804	36.5	5.07	41.57	74	-32.43	PK
Vertical		2378.02	41.35	16.14	57.49	74	-16.51	PK
		2386.76	30.01	16.06	46.07	54	-7.93	AVG
	@	2402	89.8	15.98	105.78	N/A	N/A	PK
	@	2402	89.35	15.98	105.33	N/A	N/A	AVG
	*	4804	39.27	5.07	44.34	74	-29.66	PK

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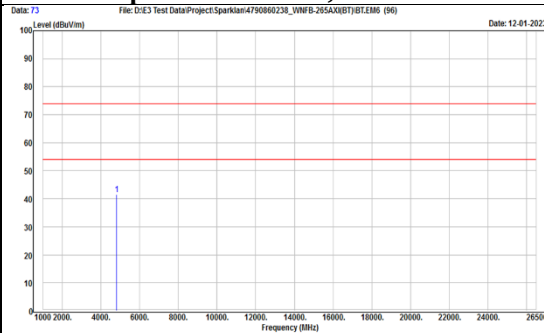
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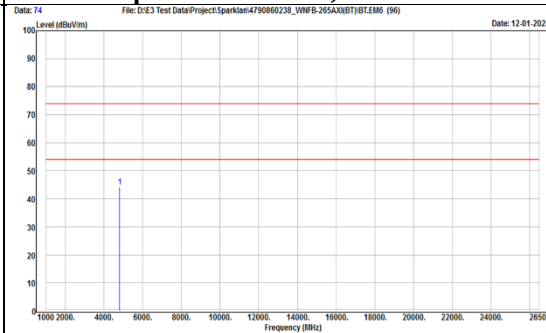
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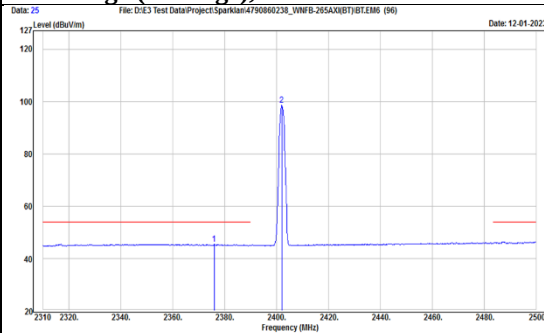
TX, BT-LE-1Mbps (Ch 0)
Radiated Spurious Emission, Horizontal



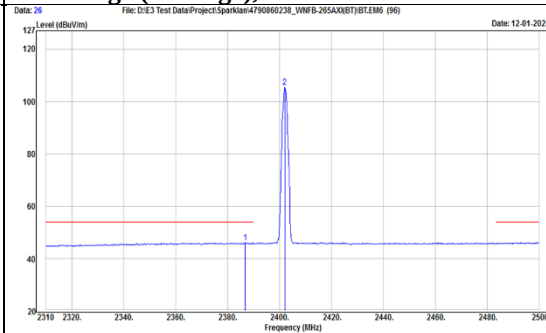
TX, BT-LE-1Mbps (Ch 0)
Radiated Spurious Emission, Vertical



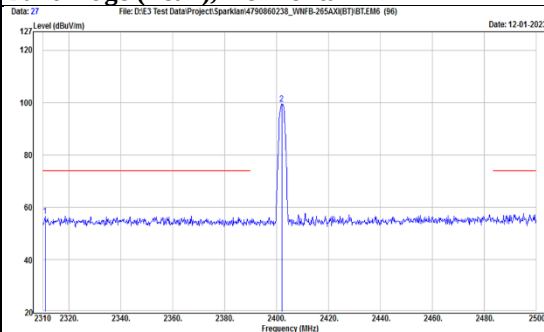
TX, BT-LE-1Mbps (Ch 0)
Band Edge (Average), Horizontal



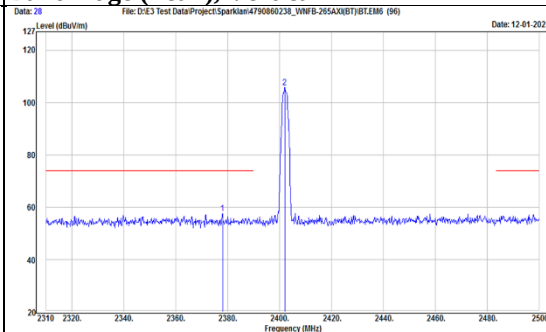
TX, BT-LE-1Mbps (Ch 0)
Band Edge (Average), Vertical



TX, BT-LE-1Mbps (Ch 0)
Band Edge (Peak), Horizontal



TX, BT-LE-1Mbps (Ch 0)
Band Edge (Peak), Vertical



Mode	BT-LE-1Mbps	Channel	19
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2333.56	40.74	16.21	56.95	74	-17.05	PK
		2376.31	29.48	16.15	45.63	54	-8.37	AVG
	@	2440	82	16.42	98.42	N/A	N/A	PK
	@	2440	81.73	16.42	98.15	N/A	N/A	AVG
		2489.17	40.56	16.84	57.4	74	-16.6	PK
		2499.24	29.44	16.92	46.36	54	-7.64	AVG
	*	4880	36.32	5.31	41.63	74	-32.37	PK
Vertical		2376.12	30.23	16.15	46.38	54	-7.62	AVG
		2383.53	41.73	16.09	57.82	74	-16.18	PK
	@	2440	85.52	16.42	101.94	N/A	N/A	PK
	@	2440	85.45	16.42	101.87	N/A	N/A	AVG
		2486.32	40.88	16.82	57.7	74	-16.3	PK
		2500	29.31	16.92	46.23	54	-7.77	AVG
	*	4880	36.12	5.31	41.43	74	-32.57	PK

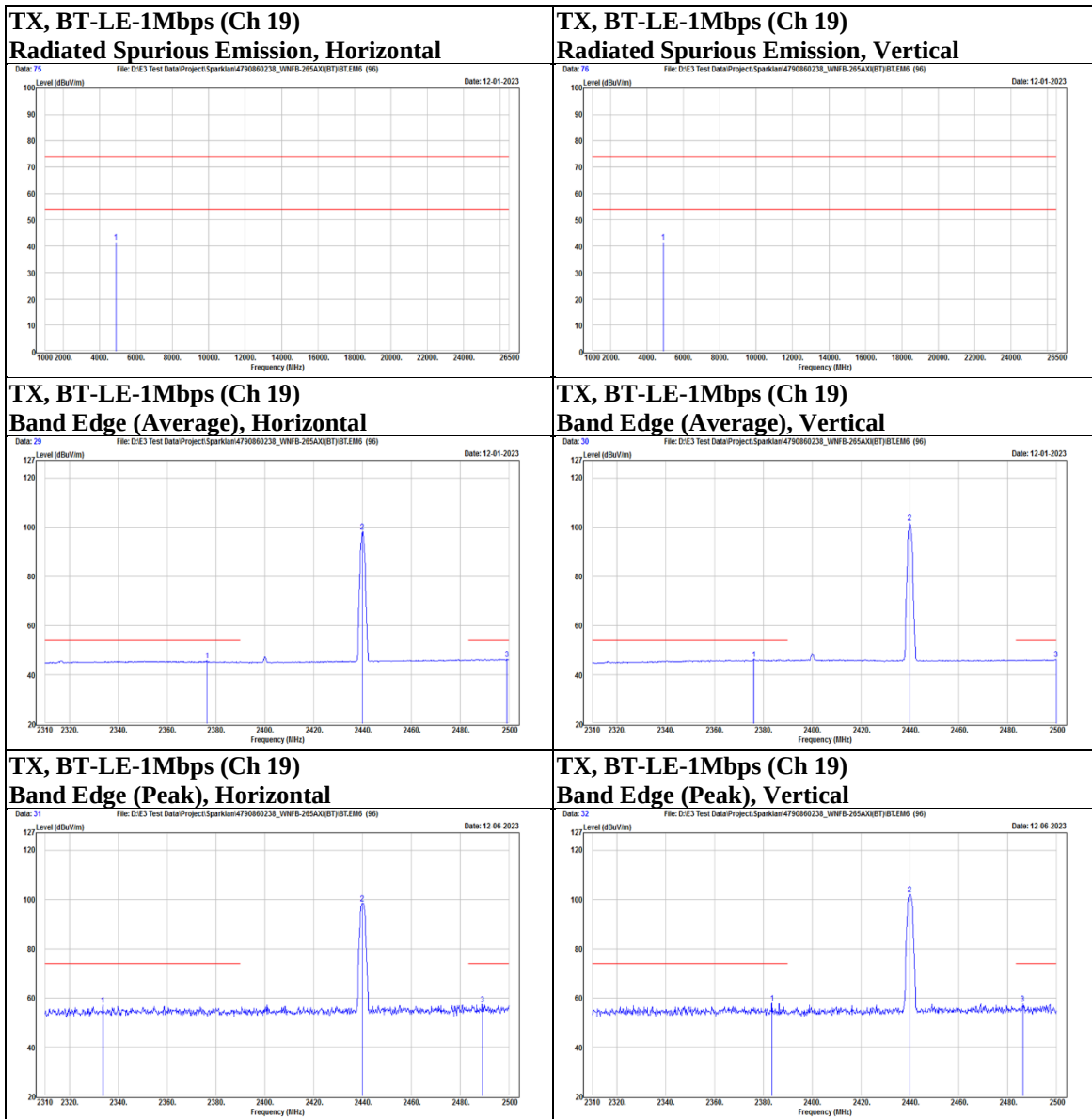
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Mode	BT-LE-1Mbps	Channel	39
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2480	85.82	16.76	102.58	N/A	N/A	PK
	@	2480	85.51	16.76	102.27	N/A	N/A	AVG
		2485.56	40.92	16.8	57.72	74	-16.28	PK
		2500	29.45	16.92	46.37	54	-7.63	AVG
	*	4960	37.63	5.42	43.05	74	-30.95	PK
Vertical	@	2480	84.82	16.76	101.58	N/A	N/A	PK
	@	2480	83.3	16.76	100.06	N/A	N/A	AVG
		2491.07	40.77	16.85	57.62	74	-16.38	PK
		2500	29.21	16.92	46.13	54	-7.87	AVG
	*	4960	39.15	5.42	44.57	74	-29.43	PK

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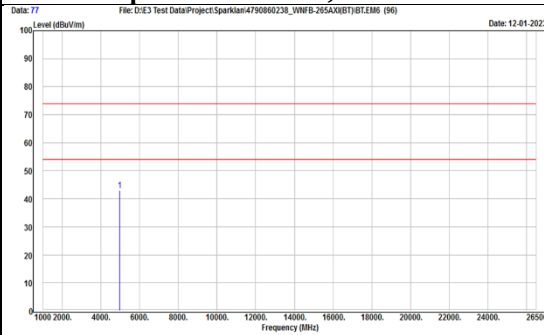
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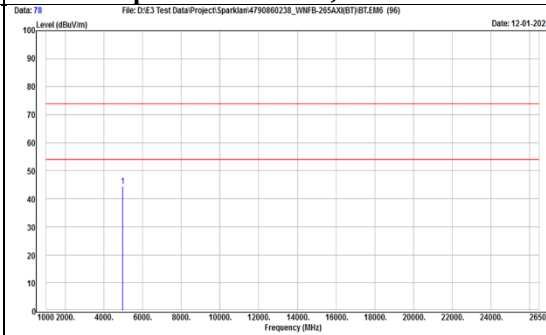
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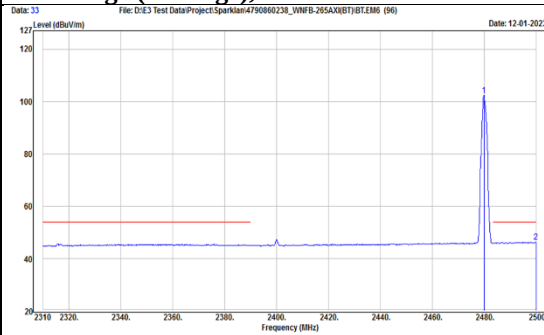
TX, BT-LE-1Mbps (Ch 39)
Radiated Spurious Emission, Horizontal



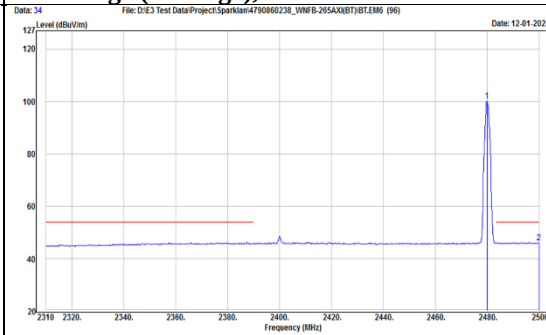
TX, BT-LE-1Mbps (Ch 39)
Radiated Spurious Emission, Vertical



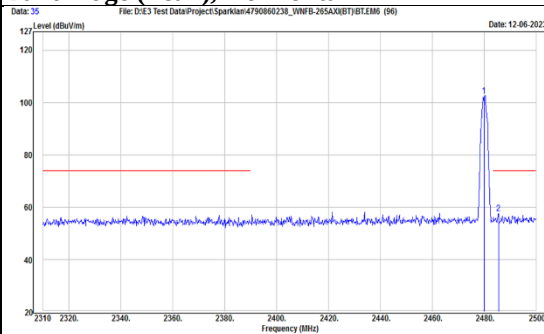
TX, BT-LE-1Mbps (Ch 39)
Band Edge (Average), Horizontal



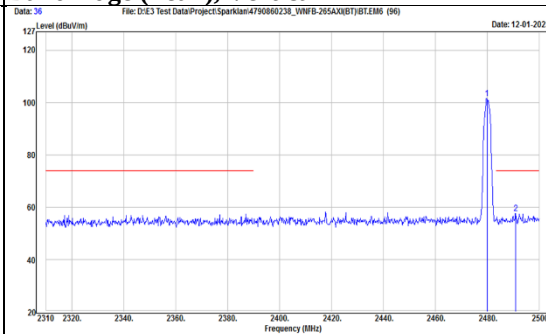
TX, BT-LE-1Mbps (Ch 39)
Band Edge (Average), Vertical



TX, BT-LE-1Mbps (Ch 39)
Band Edge (Peak), Horizontal



TX, BT-LE-1Mbps (Ch 39)
Band Edge (Peak), Vertical



Mode	BT-LE-2Mbps	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2316.65	29.52	16.04	45.56	54	-8.44	AVG
		2322.16	40.59	16.1	56.69	74	-17.31	PK
	@	2402	82.33	15.98	98.31	N/A	N/A	PK
	@	2402	81.07	15.98	97.05	N/A	N/A	AVG
	*	4804	38.82	5.07	43.89	74	-30.11	PK
Vertical		2357.5	41.65	16.31	57.96	74	-16.04	PK
		2375.93	30.32	16.15	46.47	54	-7.53	AVG
	@	2402	89.96	15.98	105.94	N/A	N/A	PK
	@	2402	87.74	15.98	103.72	N/A	N/A	AVG
	*	4804	43.06	5.07	48.13	74	-25.87	PK

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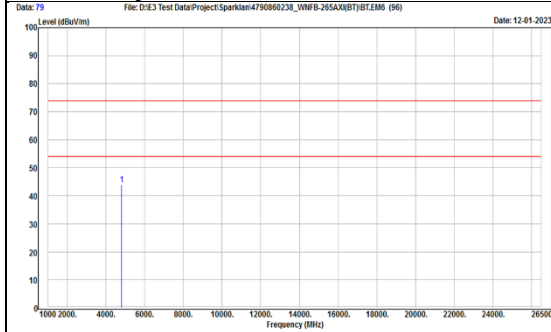
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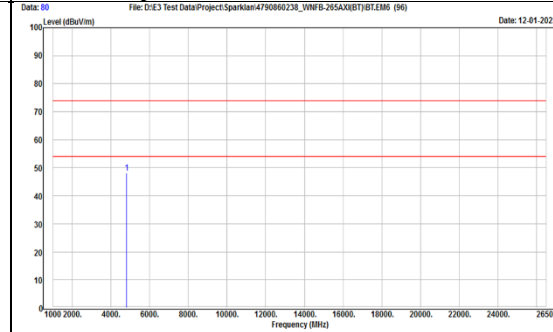
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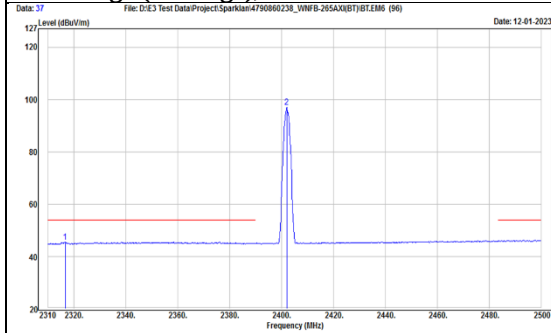
TX, BT-LE-2Mbps (Ch 0)
Radiated Spurious Emission, Horizontal



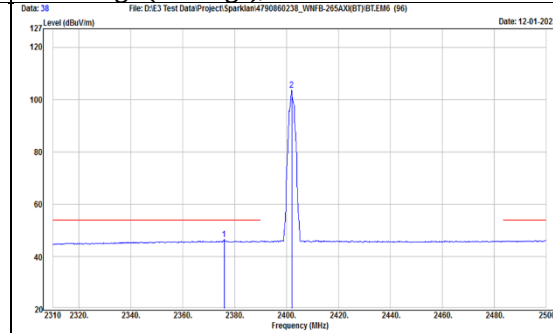
TX, BT-LE-2Mbps (Ch 0)
Radiated Spurious Emission, Vertical



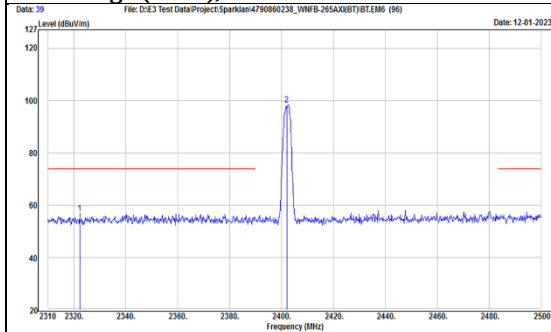
TX, BT-LE-2Mbps (Ch 0)
Band Edge (Average), Horizontal



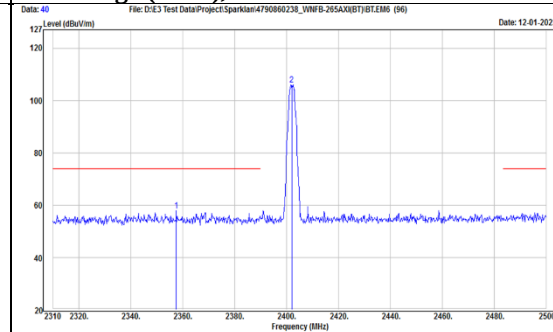
TX, BT-LE-2Mbps (Ch 0)
Band Edge (Average), Vertical



TX, BT-LE-2Mbps (Ch 0)
Band Edge (Peak), Horizontal



TX, BT-LE-2Mbps (Ch 0)
Band Edge (Peak), Vertical



Mode	BT-LE-2Mbps	Channel	19
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2313.23	41.84	16.01	57.85	74	-16.15	PK
		2346.29	29.03	16.34	45.37	54	-8.63	AVG
	@	2440	82.22	16.42	98.64	N/A	N/A	PK
	@	2440	78.89	16.42	95.31	N/A	N/A	AVG
		2487.27	29.39	16.82	46.21	54	-7.79	AVG
		2489.17	40.91	16.84	57.75	74	-16.25	PK
	*	4880	37.04	5.31	42.35	74	-31.65	PK
Vertical		2359.4	40.96	16.3	57.26	74	-16.74	PK
		2375.93	30.32	16.15	46.47	54	-7.53	AVG
	@	2440	86.69	16.42	103.11	N/A	N/A	PK
	@	2440	84.14	16.42	100.56	N/A	N/A	AVG
		2496.01	41.78	16.89	58.67	74	-15.33	PK
		2500	29.17	16.92	46.09	54	-7.91	AVG
	*	4880	36.64	5.31	41.95	74	-32.05	PK

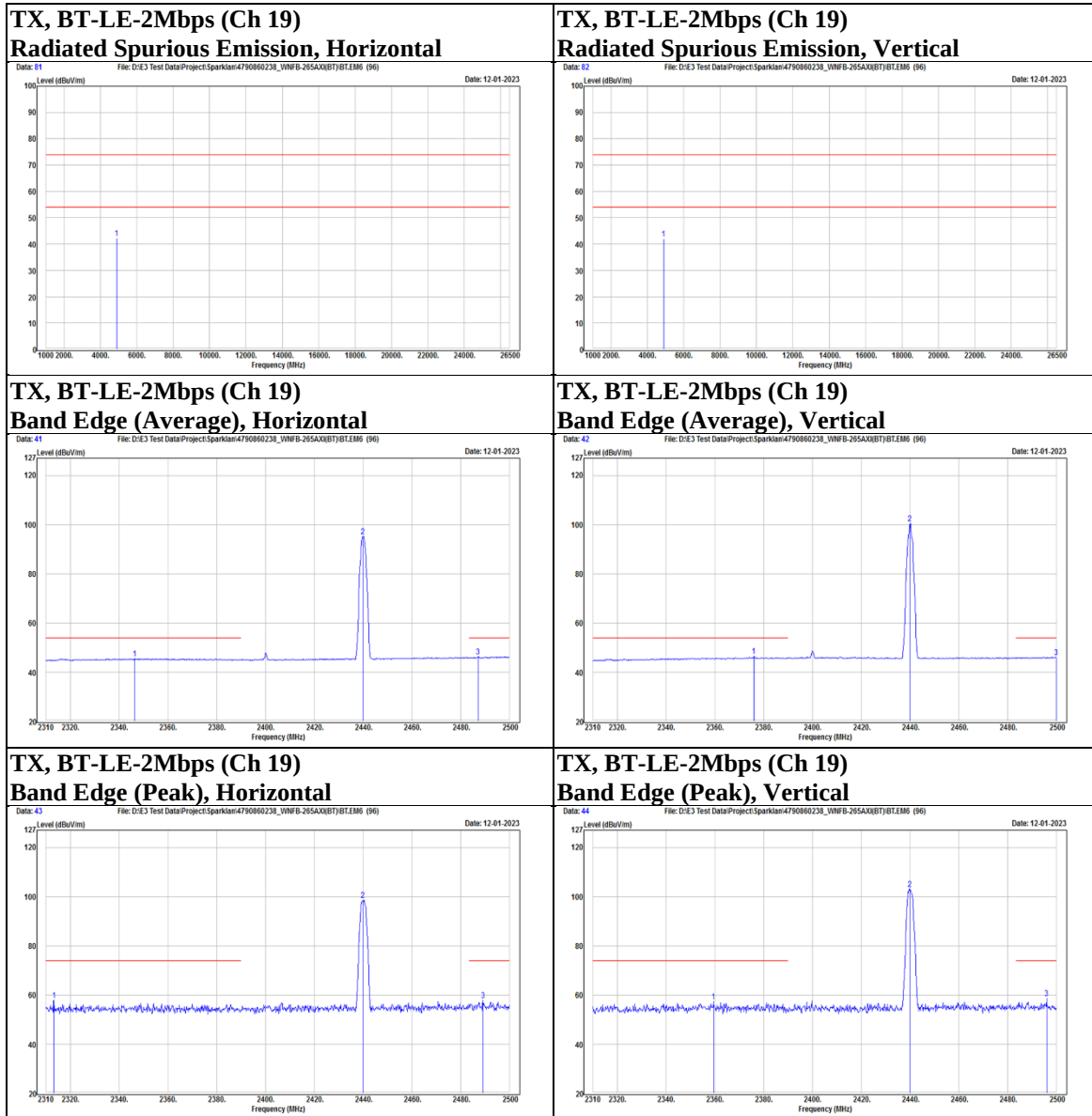
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Mode	BT-LE-2Mbps	Channel	39
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2480	82.64	16.76	99.4	N/A	N/A	PK
	@	2480	82.15	16.76	98.91	N/A	N/A	AVG
		2497.15	40.6	16.89	57.49	74	-16.51	PK
		2499.81	29.37	16.92	46.29	54	-7.71	AVG
	*	4960	38.01	5.42	43.43	74	-30.57	PK
Vertical	@	2480	84.7	16.76	101.46	N/A	N/A	PK
	@	2480	81.08	16.76	97.84	N/A	N/A	AVG
		2488.41	40.03	16.83	56.86	74	-17.14	PK
		2500	29.23	16.92	46.15	54	-7.85	AVG
	*	4960	39.79	5.42	45.21	74	-28.79	PK

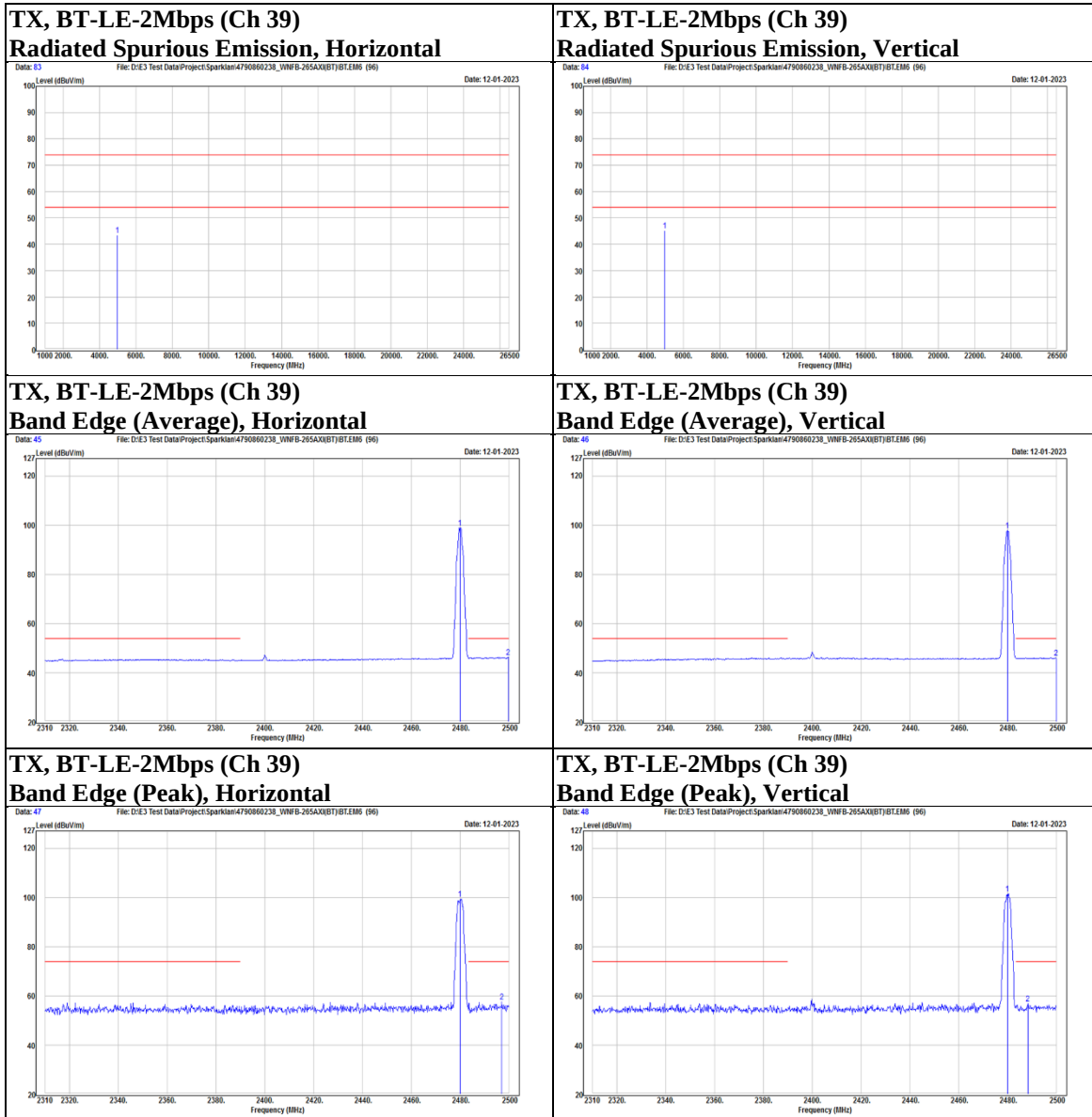
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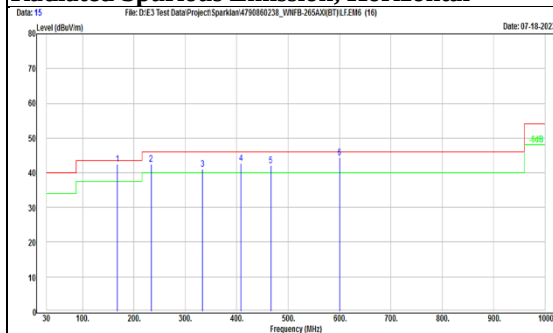


Below 1 GHz

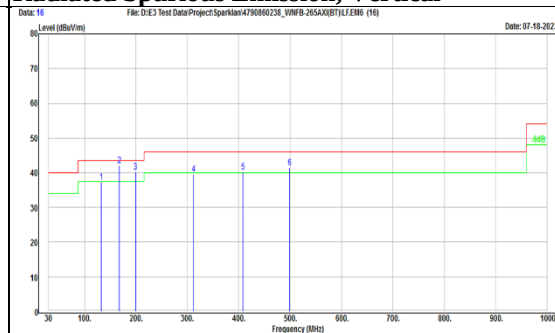
Mode	BT-LE-1Mbps	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		167.74	54.36	-11.85	42.51	43.5	-0.99	PK
		233.7	55.83	-13.37	42.46	46	-3.54	PK
		333.61	50.38	-9.44	40.94	46	-5.06	PK
		408.3	50.23	-7.63	42.6	46	-3.4	PK
		466.5	47.66	-5.65	42.01	46	-3.99	PK
		600.36	46.67	-2.38	44.29	46	-1.71	PK
Vertical		132.82	50.76	-13.55	37.21	43.5	-6.29	PK
		167.74	53.89	-11.85	42.04	43.5	-1.46	PK
		199.75	54.94	-14.81	40.13	43.5	-3.37	PK
		312.27	49.73	-10.24	39.49	46	-6.51	PK
		408.3	47.82	-7.63	40.19	46	-5.81	PK
		499.48	46.59	-5.16	41.43	46	-4.57	PK

TX, BT-LE-1Mbps (Ch 0)
Radiated Spurious Emission, Horizontal



TX, BT-LE-1Mbps (Ch 0)
Radiated Spurious Emission, Vertical



9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

END OF REPORT**Underwriters Laboratories Taiwan Co., Ltd.**

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