



FCC RADIO TEST REPORT

FCC ID : HLZA24002
Equipment : Tablet PC
Brand Name : acer
Model Name : A24002
Marketing Name : Acer Iconia Tab A8 ,A8-11
Applicant : Acer Incorporated
8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22181, Taiwan (R.O.C)
Manufacturer : Acer Incorporated
8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22181, Taiwan (R.O.C)
Standard : FCC Part 15 Subpart C §15.247

The product was received on Mar. 27, 2024 and testing was performed from Apr. 23, 2024 to May 25, 2024. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR432784C	01	Initial issue of report	May 31, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	2.14 dB under the limit at 2390.00 MHz
3.6	15.207	AC Conducted Emission	Pass	9.94 dB under the limit at 0.59 MHz
3.7	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Lewis Ho

Report Producer: Lucy Wu



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
<p>General Specs Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax, and Wi-Fi 5GHz 802.11a/n/ac/ax.</p> <p>Antenna Type WLAN: FPC Antenna Bluetooth: FPC Antenna</p>

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	2.37

Remark: The EUT’s information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, CO07-HY, 03CH22-HY

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

FCC designation No.: TW3786

1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

The final test modes include the worst data rates for each modulation shown in the table below.

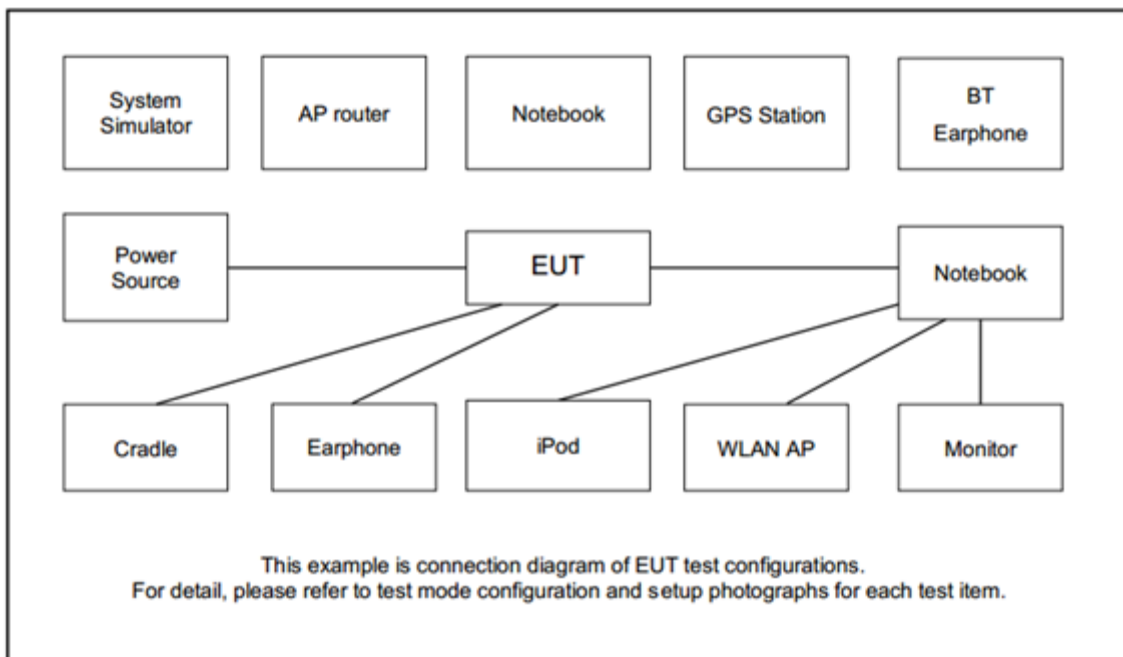
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11ax HE20	MCS0

Test Cases	
AC Conducted Emission	Mode 1 :Bluetooth Link + WLAN (2.4GHz) Link + MPEG4 + Earphone + USB Cable (Charging from AC Adapter)

Ch. #	2400-2483.5 MHz			
	802.11b	802.11g	802.11n HT20	802.11ax HE20
Low	01	01	01	01
Middle	06	06	06	-
High	11	11	11	11

Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC52	MSQ-RTAC4A00	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Earphone + Mic	Samsung	Ecouteur	N/A	Unshielded, 1.8 m	N/A
5.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A



2.5 EUT Operation Test Setup

The RF test items, utility “adb command 1.0.36” was installed in EUT which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

$$\begin{aligned} \text{Offset}(dB) &= \text{RF cable loss}(dB) + \text{attenuator factor}(dB). \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

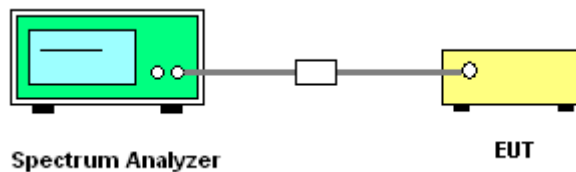
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
6. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

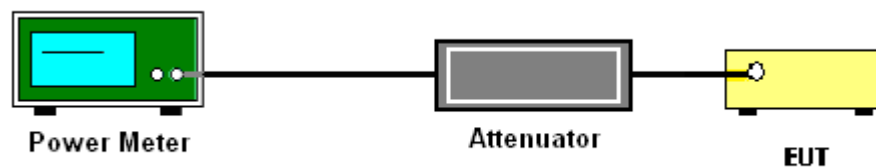
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

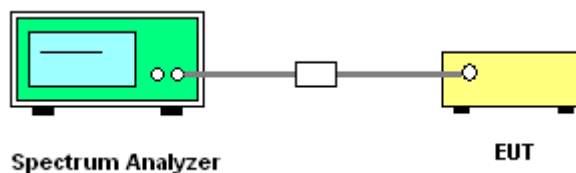
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

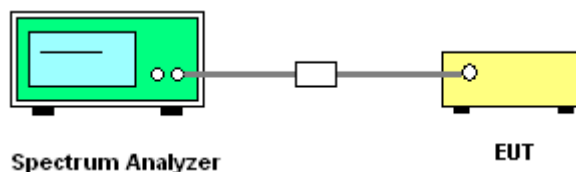
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Please refer to Appendix A.



3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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.

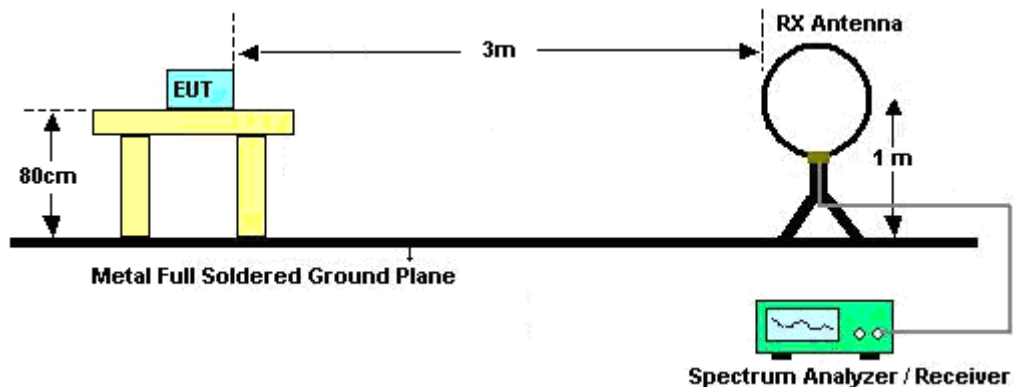
3.5.3 Test Procedures

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 “-“.

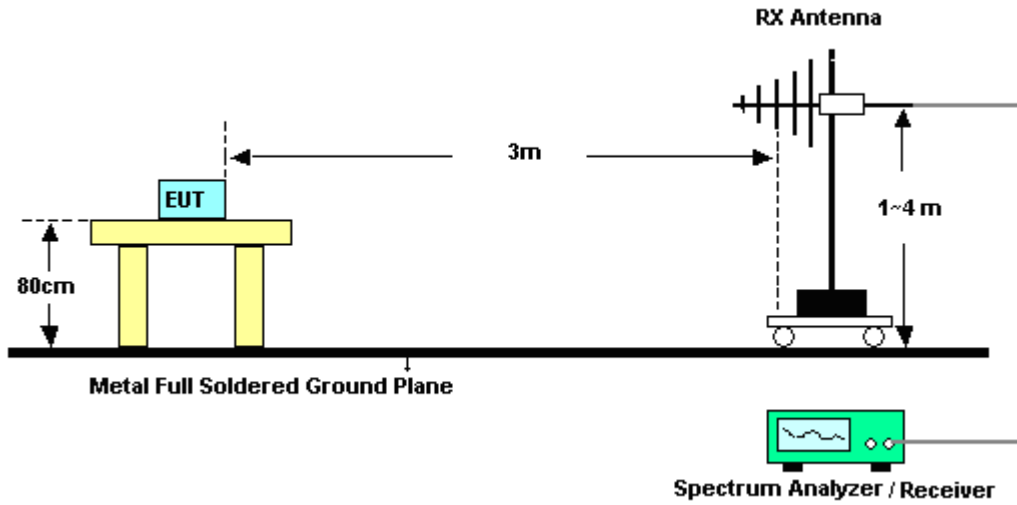
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with 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 \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3 MHz for $f \geq 1$ GHz for peak measurement.For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

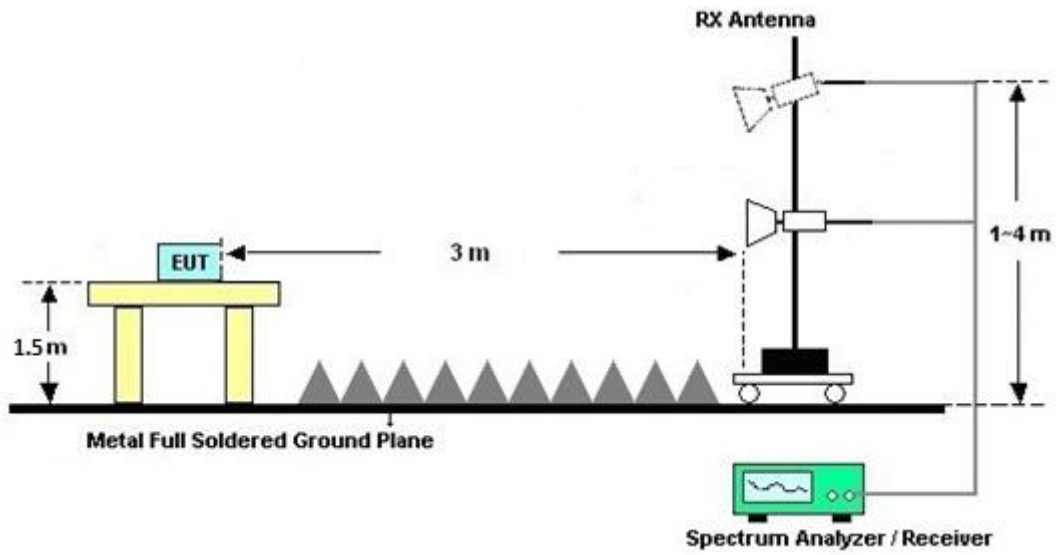
For radiated emissions below 30MHz



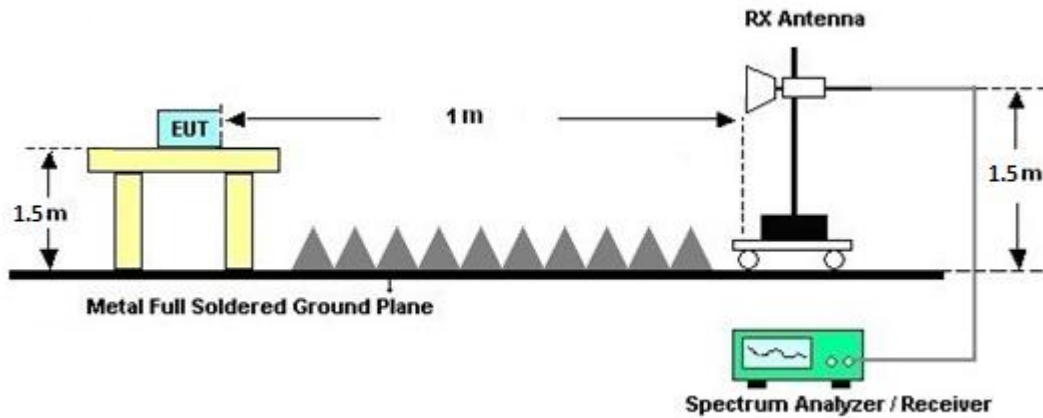
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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 (30MHz ~ 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 (dB μ V)	
	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 = 9kHz) with Maximum Hold Mode.

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

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.



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	9kHz~30MHz	Feb. 23, 2024	May 02, 2024~ May 25, 2024	Feb. 22, 2025	Radiation (03CH22-HY)
Bilog Antenna with 6dB	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	63304 & 002	30MHz~1GHz	Oct. 15, 2023	May 02, 2024~ May 25, 2024	Oct. 14, 2024	Radiation (03CH22-HY)
Amplifier	SONOMA	310N	421581	N/A	Jul. 15, 2023	May 02, 2024~ May 25, 2024	Jul. 14, 2024	Radiation (03CH22-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C04A18EN	1GHz~18GHz	Jul. 12, 2023	May 02, 2024~ May 25, 2024	Jul. 11, 2024	Radiation (03CH22-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz~40GHz	Jul. 10, 2023	May 02, 2024~ May 25, 2024	Jul. 09, 2024	Radiation (03CH22-HY)
Amplifier	EMEC	EM01G18GA	060877	N/A	Sep. 28, 2023	May 02, 2024~ May 25, 2024	Sep. 27, 2024	Radiation (03CH22-HY)
Preamplifier	EMEC	EM18G40G	060801	18-40GHz	Jun. 27, 2023	May 02, 2024~ May 25, 2024	Jun. 26, 2024	Radiation (03CH22-HY)
Signal Analyzer	Keysight	N9010B	MY60241058	10Hz~44GHz	Jul. 06, 2023	May 02, 2024~ May 25, 2024	Jul. 05, 2024	Radiation (03CH22-HY)
Hygrometer	TECPEL	DTM-303A	TP211469	N/A	Jan. 03, 2024	May 02, 2024~ May 25, 2024	Jan. 02, 2025	Radiation (03CH22-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	May 02, 2024~ May 25, 2024	N/A	Radiation (03CH22-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	May 02, 2024~ May 25, 2024	N/A	Radiation (03CH22-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	May 02, 2024~ May 25, 2024	N/A	Radiation (03CH22-HY)
Software	Audix	E3 6.09824_2019122	RK-002347	N/A	N/A	May 02, 2024~ May 25, 2024	N/A	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 06, 2024	May 02, 2024~ May 25, 2024	Mar. 05, 2025	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804390/2,804611/2,804615/2	N/A	Oct. 24, 2023	May 02, 2024~ May 25, 2024	Oct. 23, 2024	Radiation (03CH22-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 07, 2023	May 02, 2024~ May 23, 2024	Nov. 06, 2024	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	15I00041SNO10 (NO:248)	10MHz~6GHz	Jan. 10, 2024	May 02, 2024~ May 23, 2024	Jan. 09, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101466	10HZ~44GHZ	Jan. 24, 2024	May 02, 2024~ May 23, 2024	Jan. 23, 2025	Conducted (TH05-HY)
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Apr. 23, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 23, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz~200MHz	Oct. 20, 2023	Apr. 23, 2024	Oct. 19, 2024	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 14, 2024	Apr. 23, 2024	Mar. 13, 2025	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 10, 2024	Apr. 23, 2024	Mar. 09, 2025	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 07, 2024	Apr. 23, 2024	Mar. 06, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 20, 2023	Apr. 23, 2024	Sep. 19, 2024	Conduction (CO07-HY)



5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.44 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.5 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5 dB
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Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.4 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiming Liu and Junyu Jhou	Temperature:	21~25	°C
Test Date:	2024/5/2~2024/5/23	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band Single Antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	1	1	2412	14.95	-	10.03	-	0.50	Pass
11b	1Mbps	1	6	2437	14.96	-	10.04	-	0.50	Pass
11b	1Mbps	1	11	2462	14.98	-	9.54	-	0.50	Pass
11g	6Mbps	1	1	2412	17.07	-	15.78	-	0.50	Pass
11g	6Mbps	1	6	2437	17.06	-	15.78	-	0.50	Pass
11g	6Mbps	1	11	2462	17.06	-	15.47	-	0.50	Pass
HT20	MCS0	1	1	2412	18.19	-	15.68	-	0.50	Pass
HT20	MCS0	1	6	2437	18.32	-	16.27	-	0.50	Pass
HT20	MCS0	1	11	2462	18.14	-	15.70	-	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
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
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	7.30	-		30.00	-	2.37	-	9.67	-	36.00	-	Pass
11b	1Mbps	1	6	2437	6.80	-		30.00	-	2.37	-	9.17	-	36.00	-	Pass
11b	1Mbps	1	11	2462	4.80	-		30.00	-	2.37	-	7.17	-	36.00	-	Pass
11g	6Mbps	1	1	2412	11.40	-		30.00	-	2.37	-	13.77	-	36.00	-	Pass
11g	6Mbps	1	6	2437	13.60	-		30.00	-	2.37	-	15.97	-	36.00	-	Pass
11g	6Mbps	1	11	2462	13.70	-		30.00	-	2.37	-	16.07	-	36.00	-	Pass
HT20	MCS0	1	1	2412	11.30	-		30.00	-	2.37	-	13.67	-	36.00	-	Pass
HT20	MCS0	1	6	2437	13.60	-		30.00	-	2.37	-	15.97	-	36.00	-	Pass
HT20	MCS0	1	11	2462	13.00	-		30.00	-	2.37	-	15.37	-	36.00	-	Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band Single Antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	-15.22	-		2.37	-	8.00	-	Pass
11b	1Mbps	1	6	2437	-16.07	-		2.37	-	8.00	-	Pass
11b	1Mbps	1	11	2462	-17.78	-		2.37	-	8.00	-	Pass
11g	6Mbps	1	1	2412	-12.85	-		2.37	-	8.00	-	Pass
11g	6Mbps	1	6	2437	-11.69	-		2.37	-	8.00	-	Pass
11g	6Mbps	1	11	2462	-10.95	-		2.37	-	8.00	-	Pass
HT20	MCS0	1	1	2412	-13.39	-		2.37	-	8.00	-	Pass
HT20	MCS0	1	6	2437	-11.53	-		2.37	-	8.00	-	Pass
HT20	MCS0	1	11	2462	-11.52	-		2.37	-	8.00	-	Pass

Note: Measured power density (dBm) has offset with cable loss.

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band Single Antenna											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
						Ant1	Ant2	Ant1	Ant2		
HE20	MCS0	1	1	2412	Full	19.14	-	18.34	-	0.50	Pass
HE20	MCS0	1	6	2437	Full	19.12	-	18.17	-	0.50	Pass
HE20	MCS0	1	11	2462	Full	19.14	-	18.11	-	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	1	1	2412	Full	11.20	-		30.00	-	2.37	-	13.57	-	36.00	-	Pass
HE20	MCS0	1	6	2437	Full	13.50	-		30.00	-	2.37	-	15.87	-	36.00	-	Pass
HE20	MCS0	1	11	2462	Full	12.90	-		30.00	-	2.37	-	15.27	-	36.00	-	Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

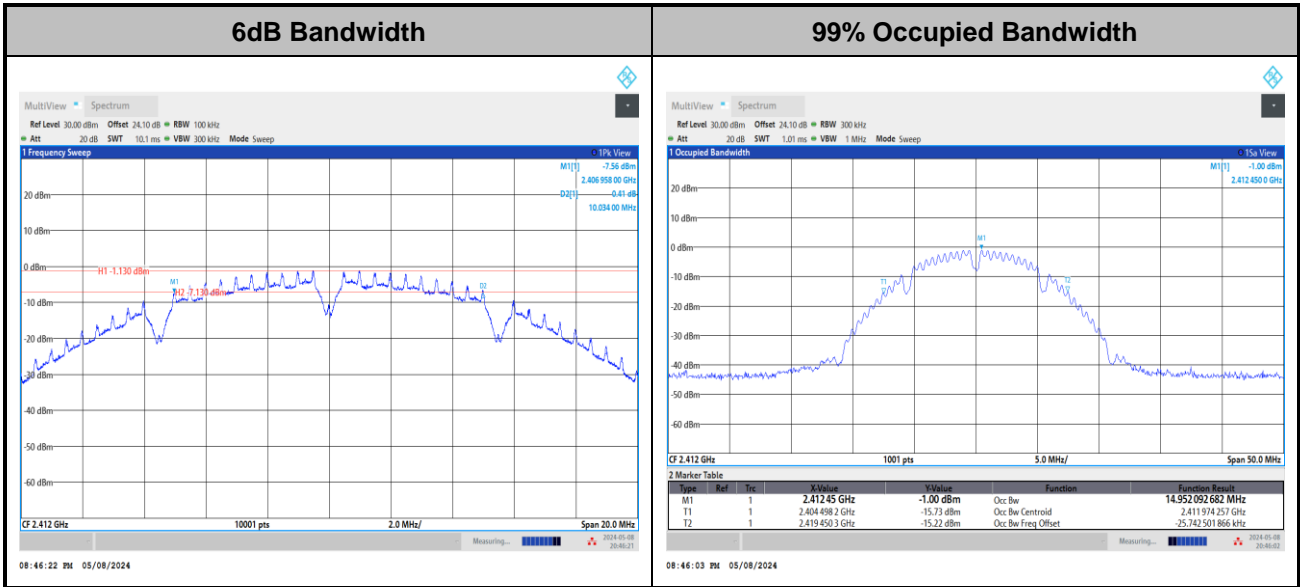
2.4GHz Band Single Antenna													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	1	1	2412	Full	-14.95	-		2.37	-	8.00	-	Pass
HE20	MCS0	1	6	2437	Full	-11.80	-		2.37	-	8.00	-	Pass
HE20	MCS0	1	11	2462	Full	-12.17	-		2.37	-	8.00	-	Pass

Note: Measured power density (dBm) has offset with cable loss.



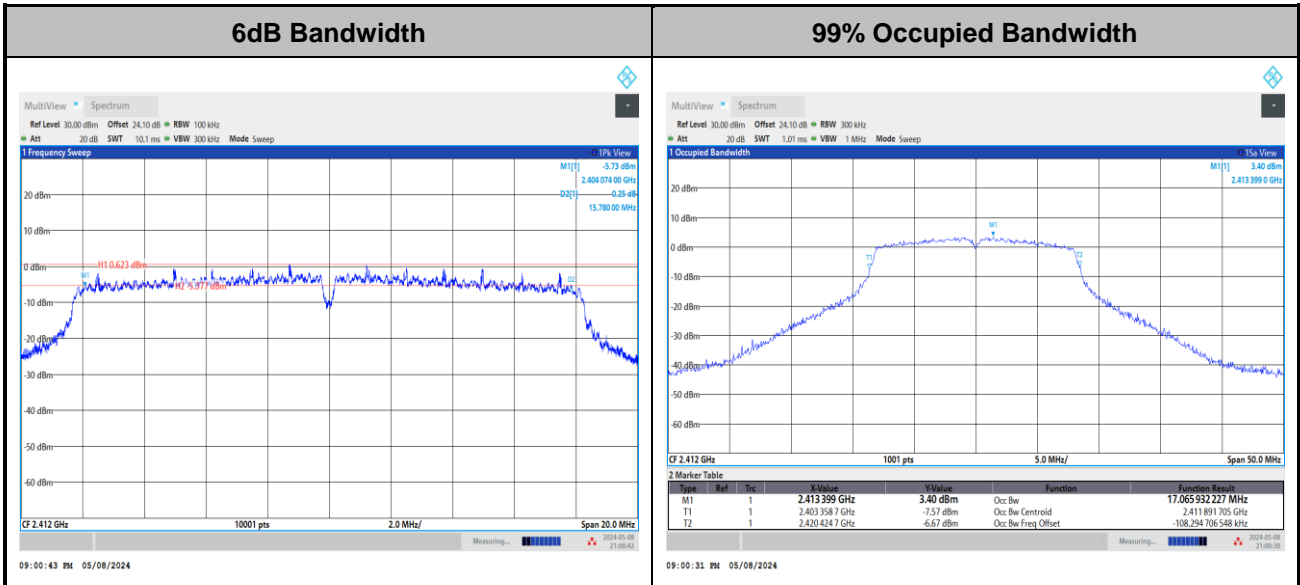
6dB and 99% Occupied Bandwidth

<802.11b>



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

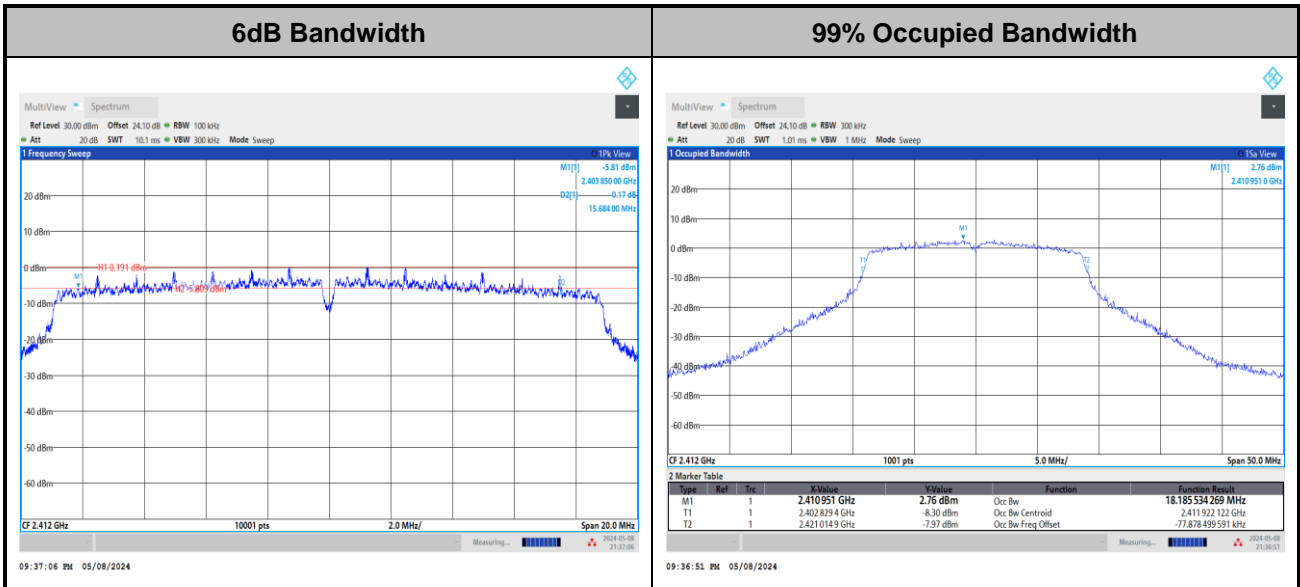
<802.11g>



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

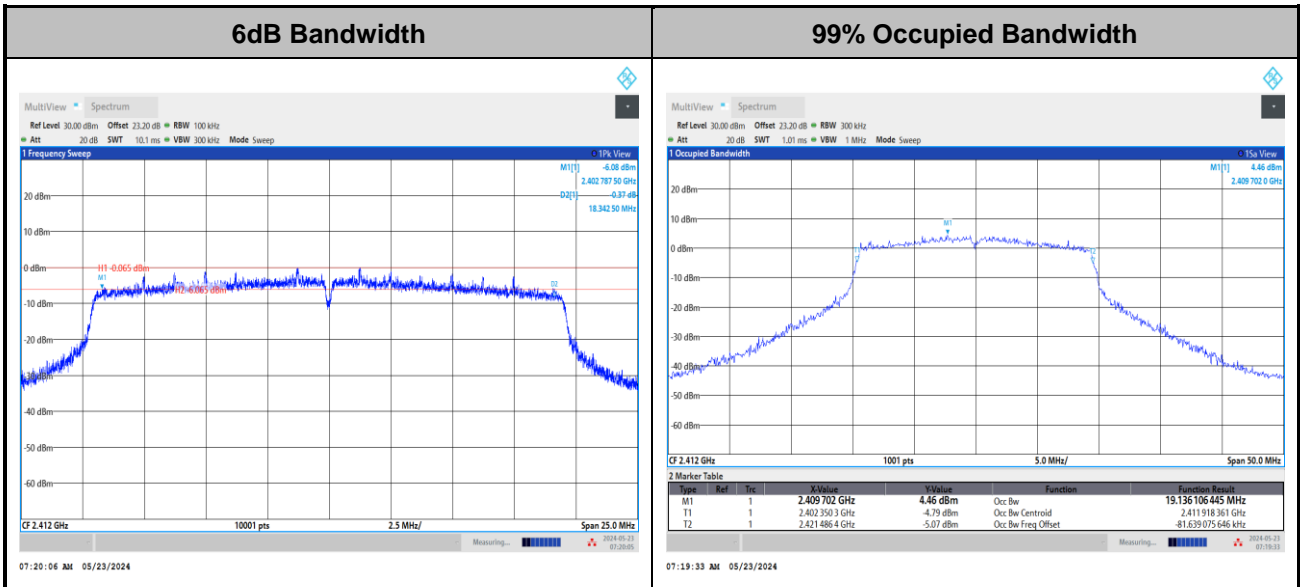


<802.11n HT20>



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

<802.11ax HE20>

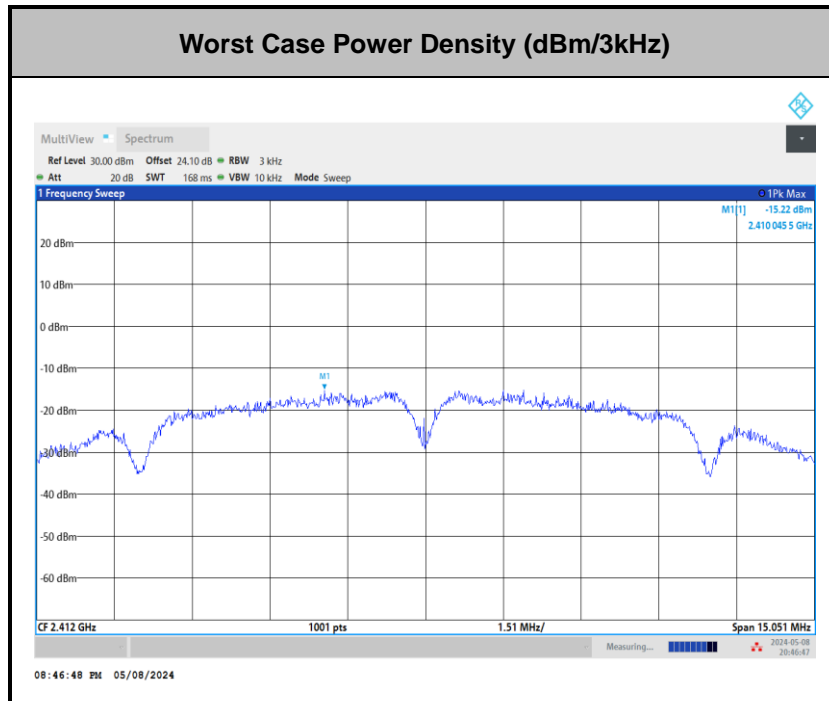


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

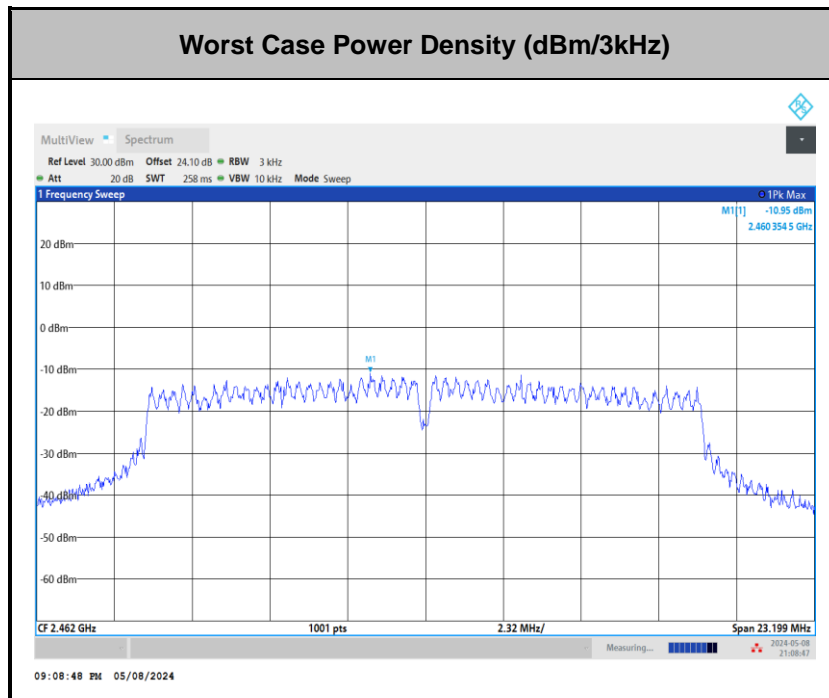


Power Spectral Density(dBm/3kHz)

<802.11b>

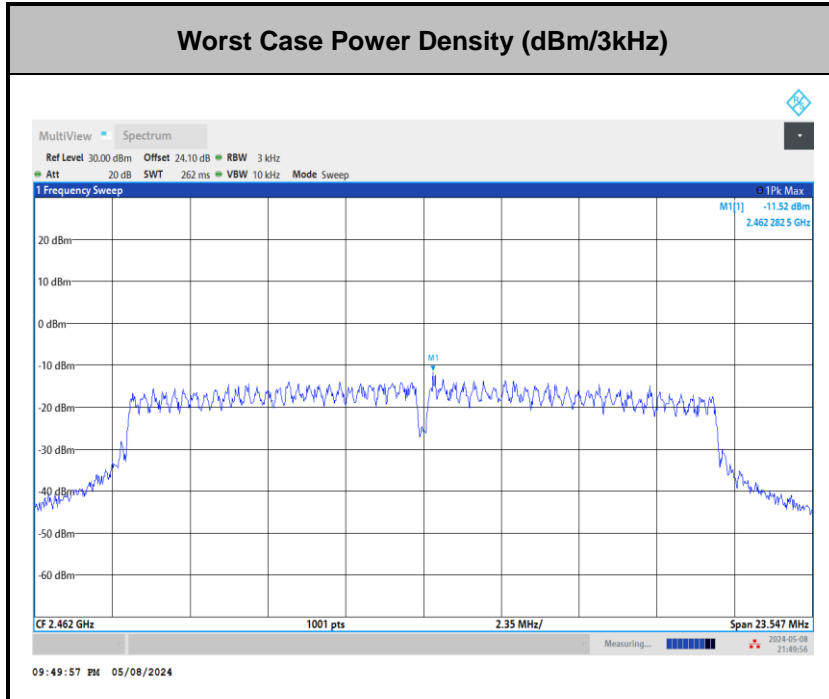


<802.11g>

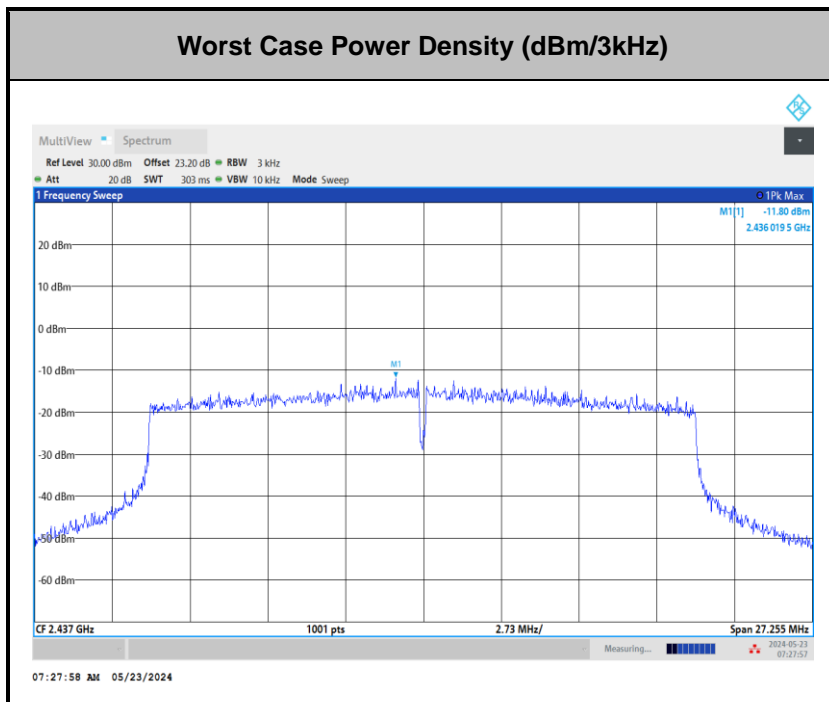




<802.11n HT20>



<802.11ax HE20>

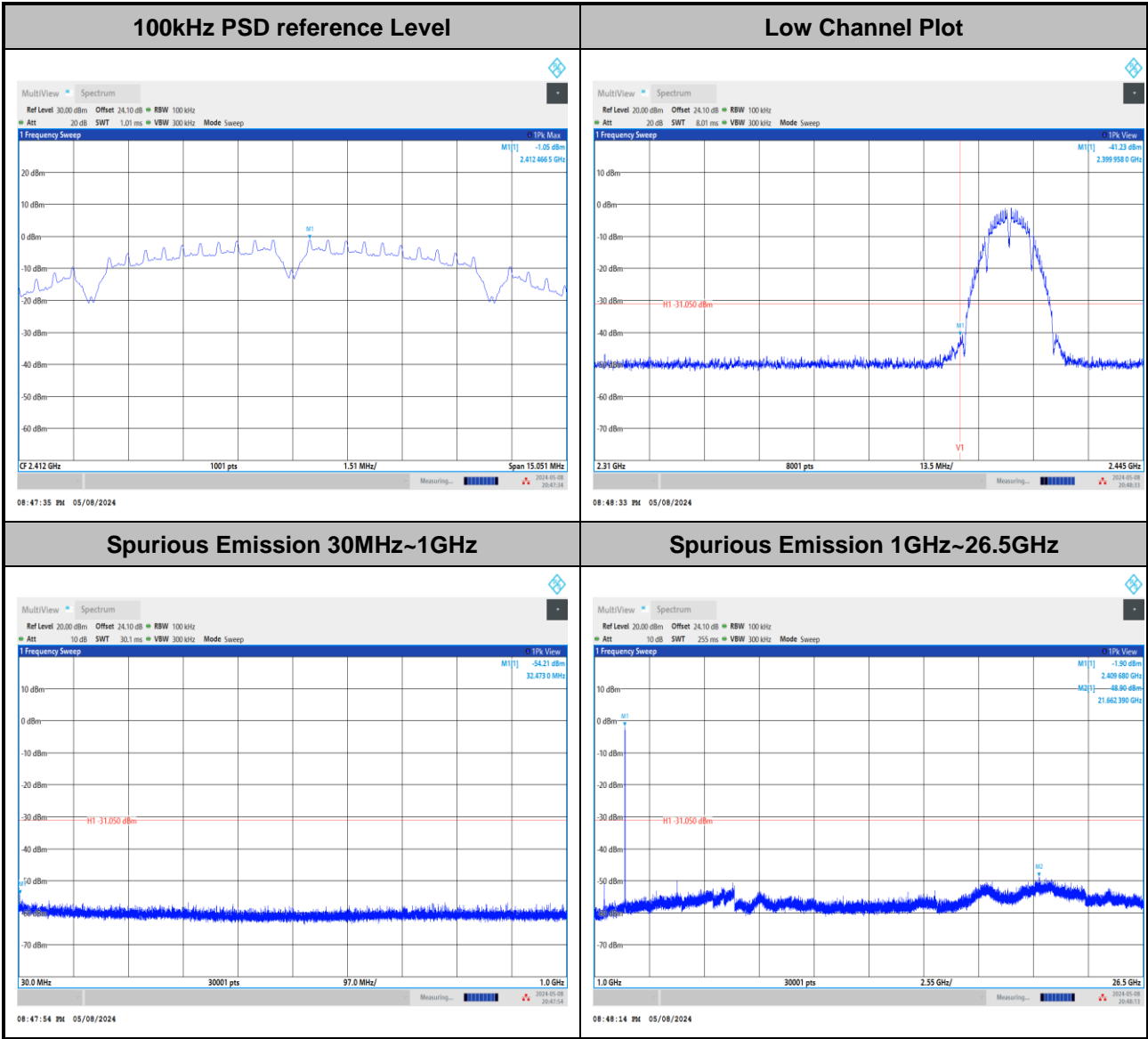




Band Edges and Spurious Emission

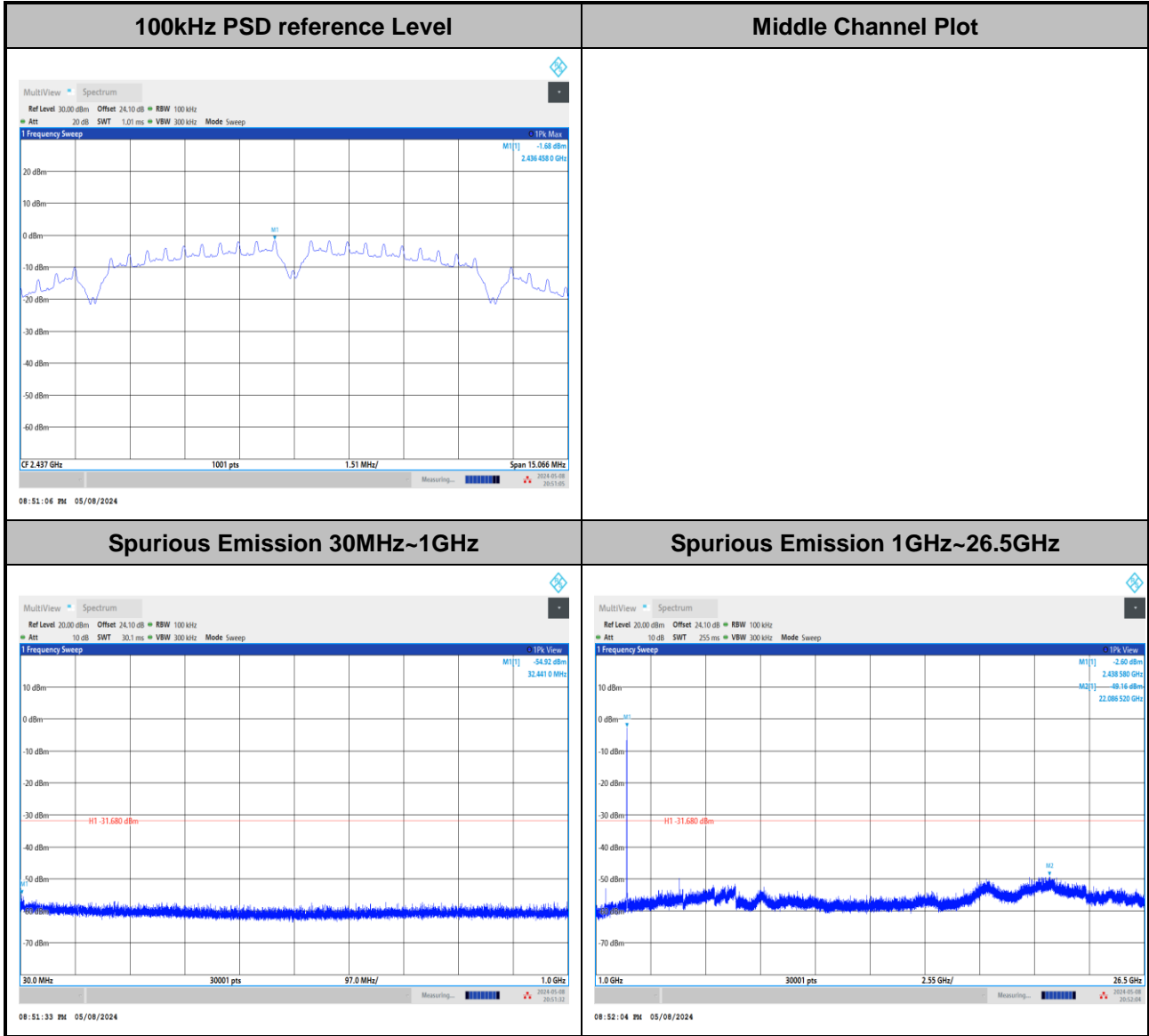
Number of TX = 1, Ant. 1 (Measured)

Test Mode :	802.11b	Test Channel :	01
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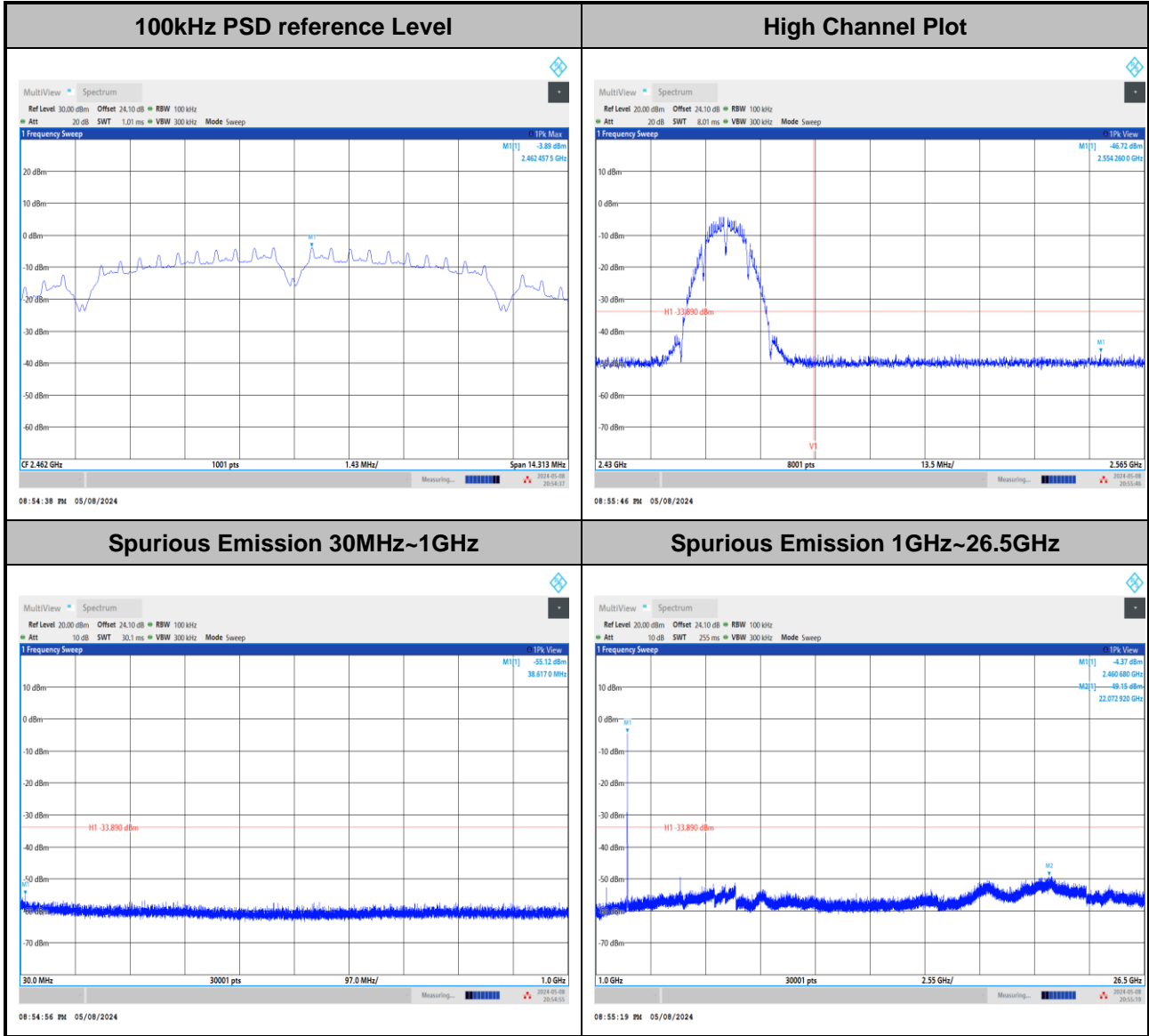


Test Mode :	802.11b	Test Channel :	06
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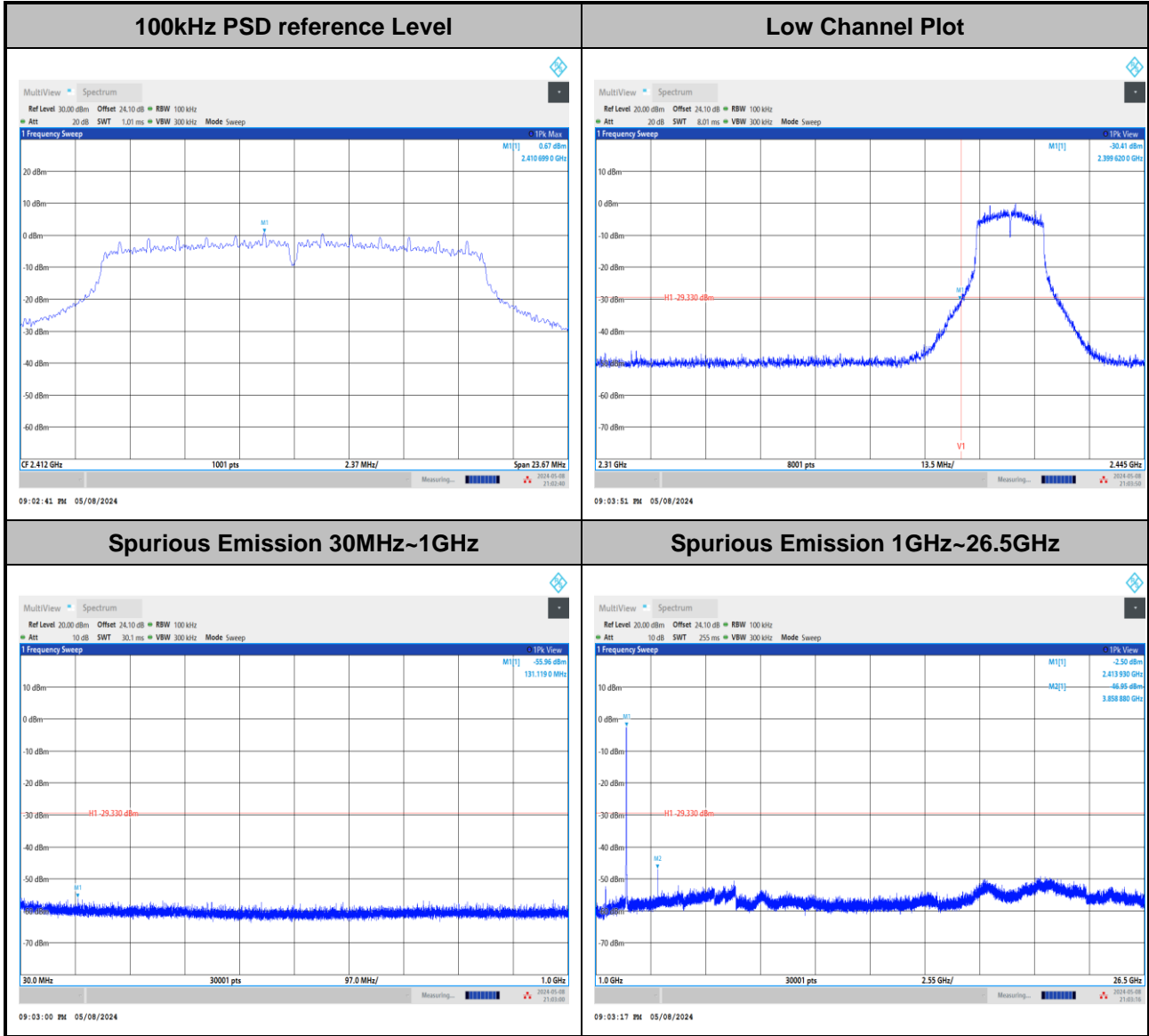


Test Mode :	802.11b	Test Channel :	11
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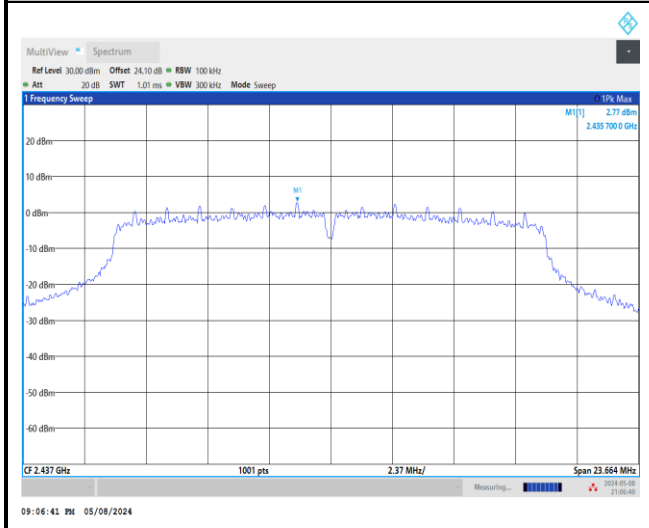
Test Mode :	802.11g	Test Channel :	01
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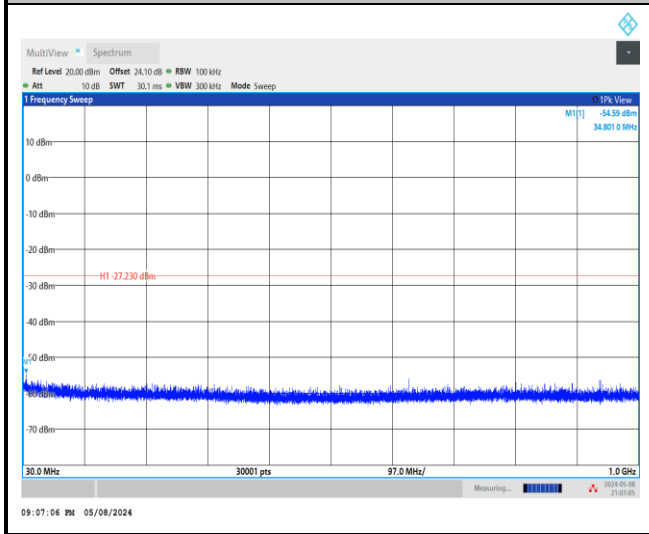


Test Mode :	802.11g	Test Channel :	06
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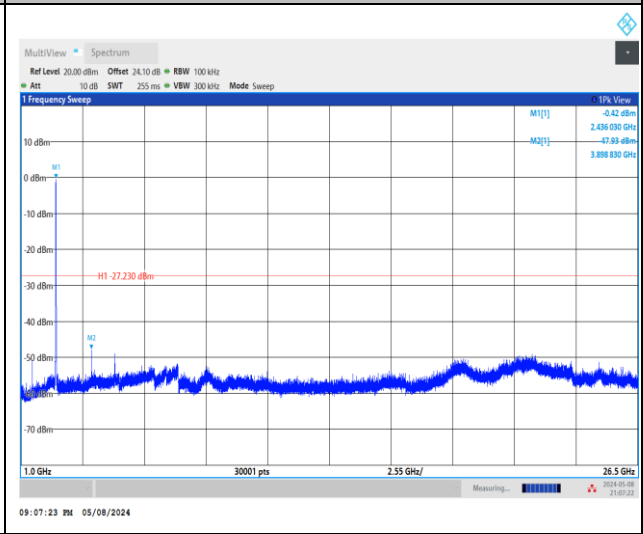
100kHz PSD reference Level	Middle Channel Plot
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Spurious Emission 30MHz~1GHz

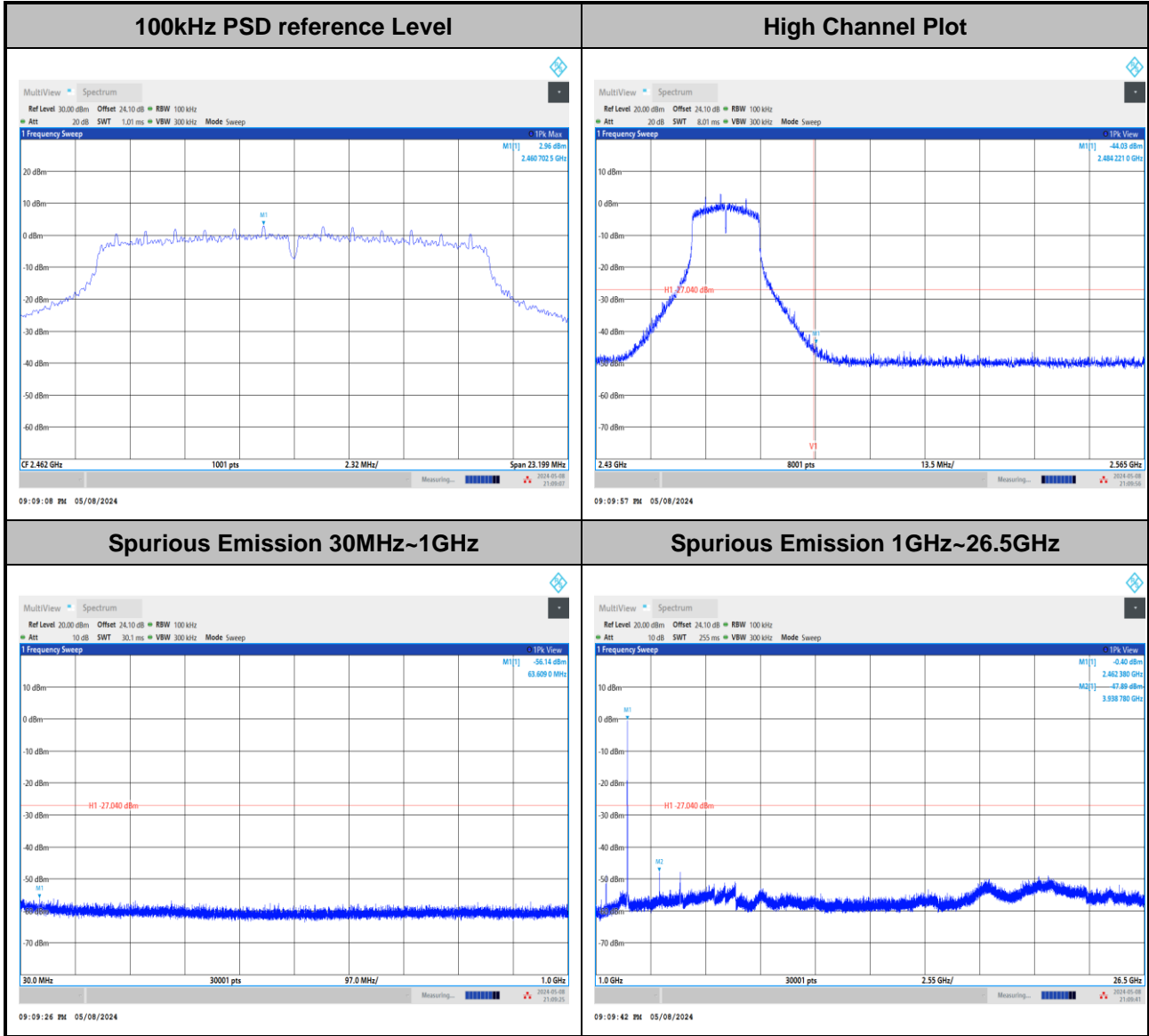


Spurious Emission 1GHz~26.5GHz



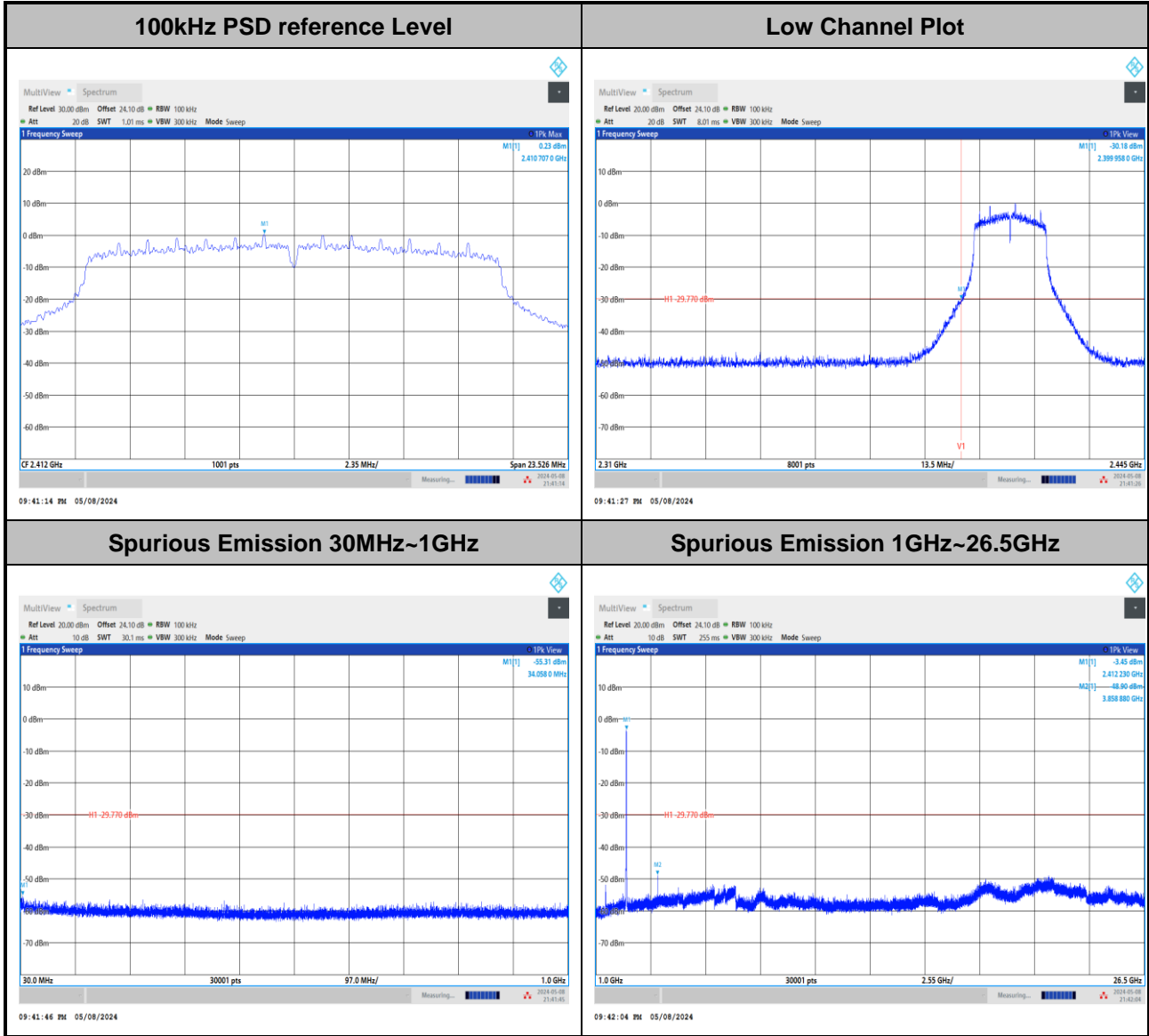


Test Mode :	802.11g	Test Channel :	11
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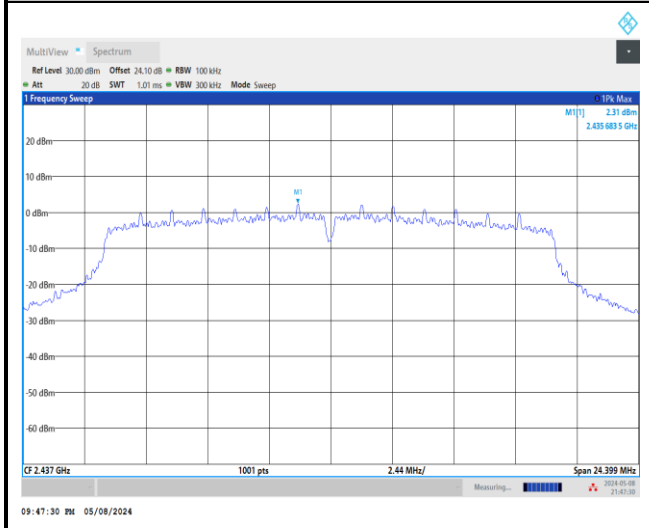
Test Mode :	802.11n HT20	Test Channel :	01
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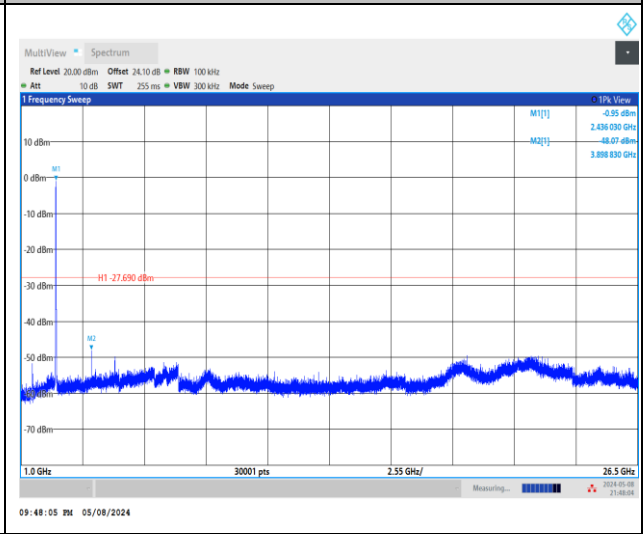
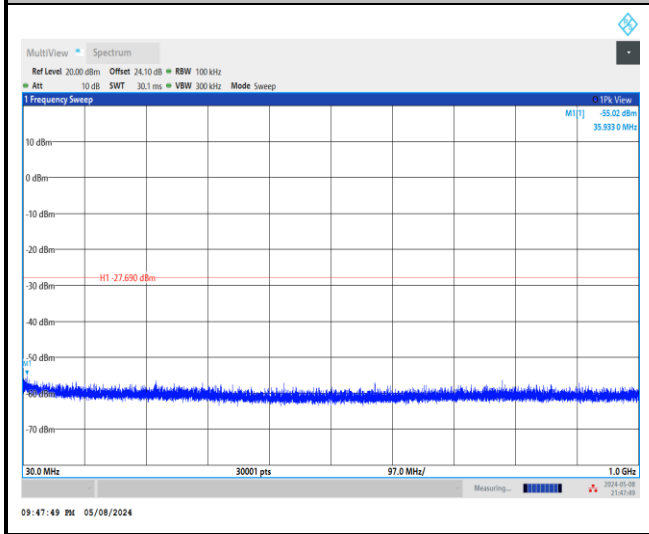


Test Mode :	802.11n HT20	Test Channel :	06
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100kHz PSD reference Level	Middle Channel Plot
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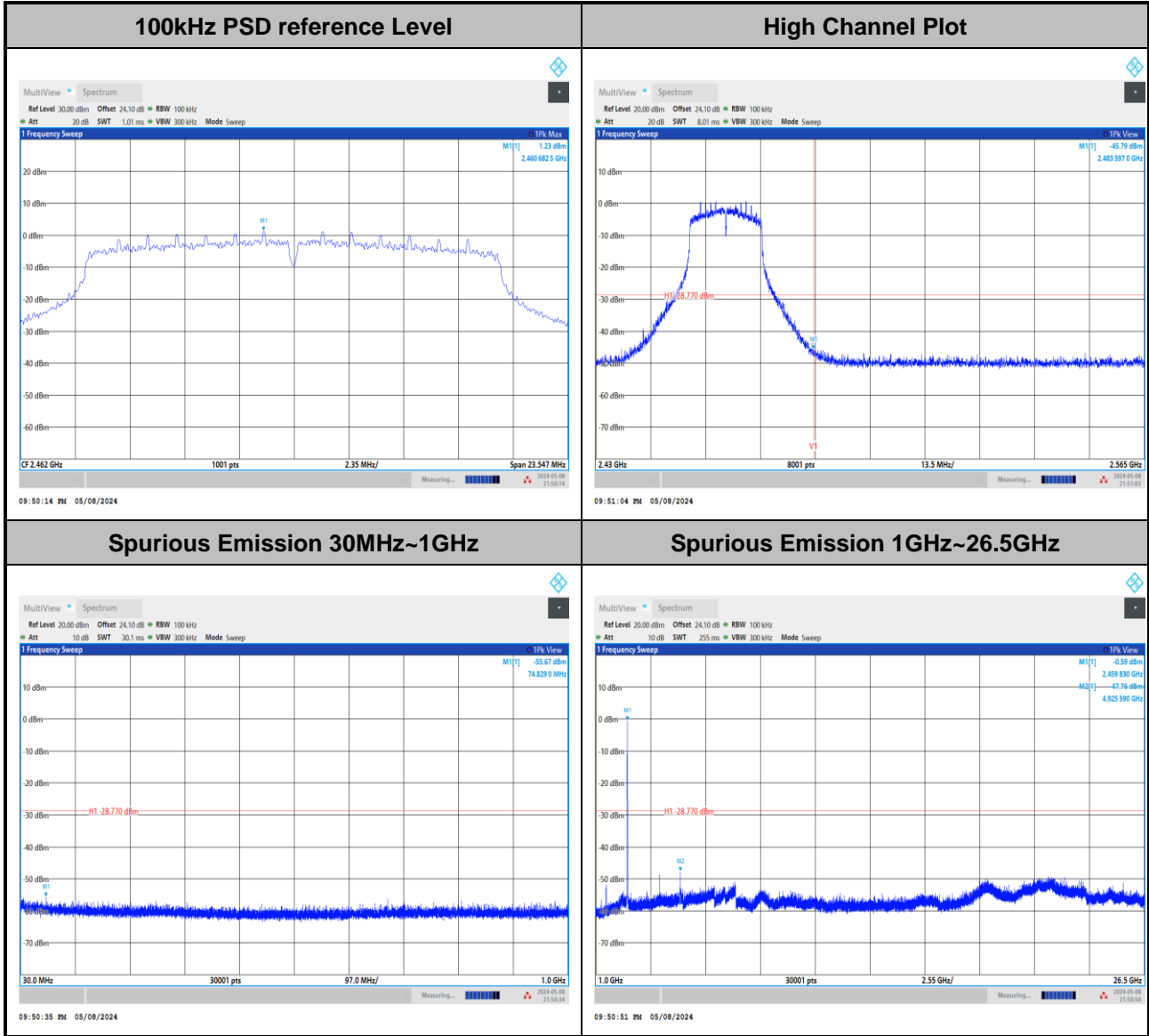


Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
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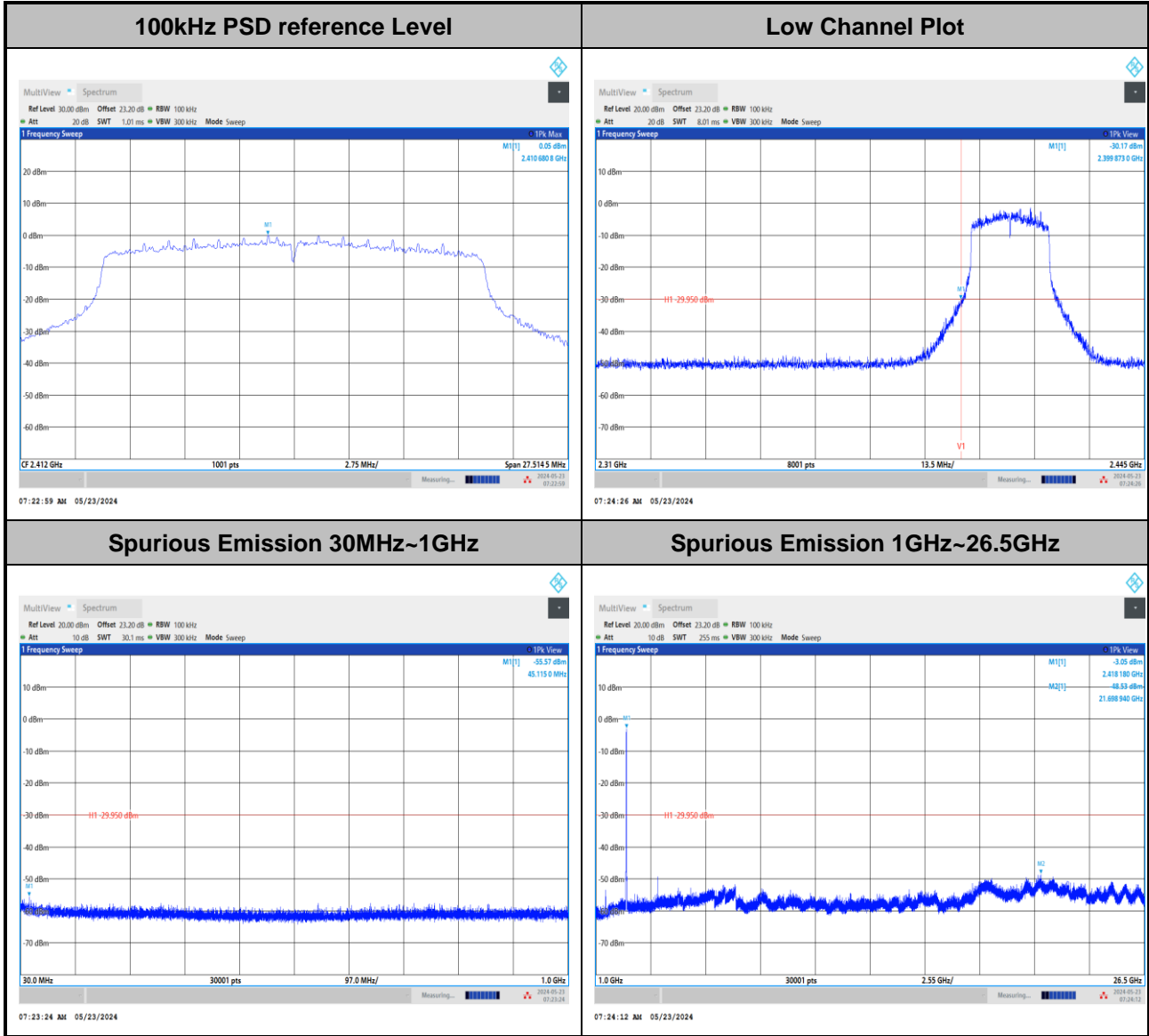


Test Mode :	802.11n HT20	Test Channel :	11
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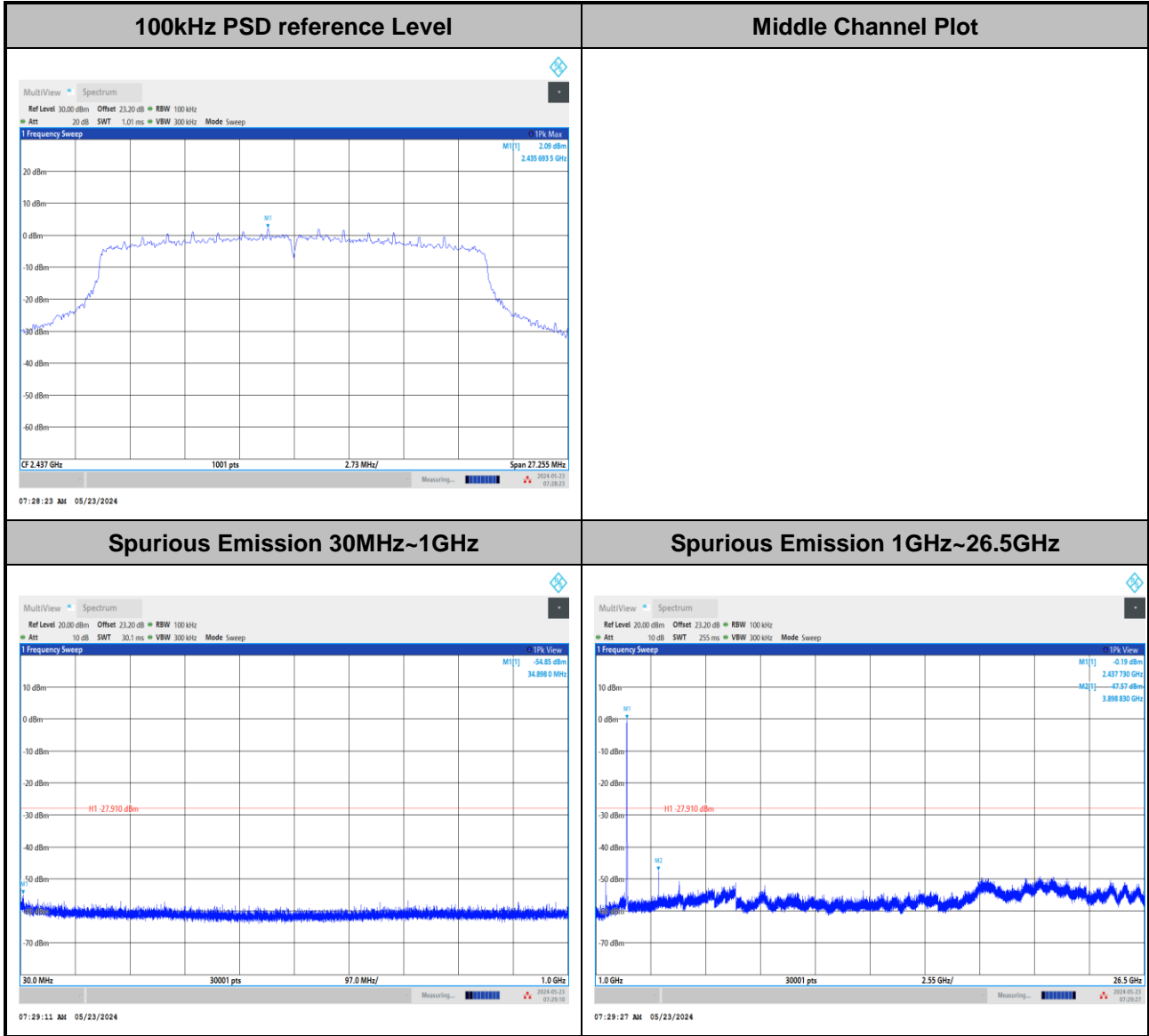


Test Mode :	802.11ax HE20_FullIRU	Test Channel :	01
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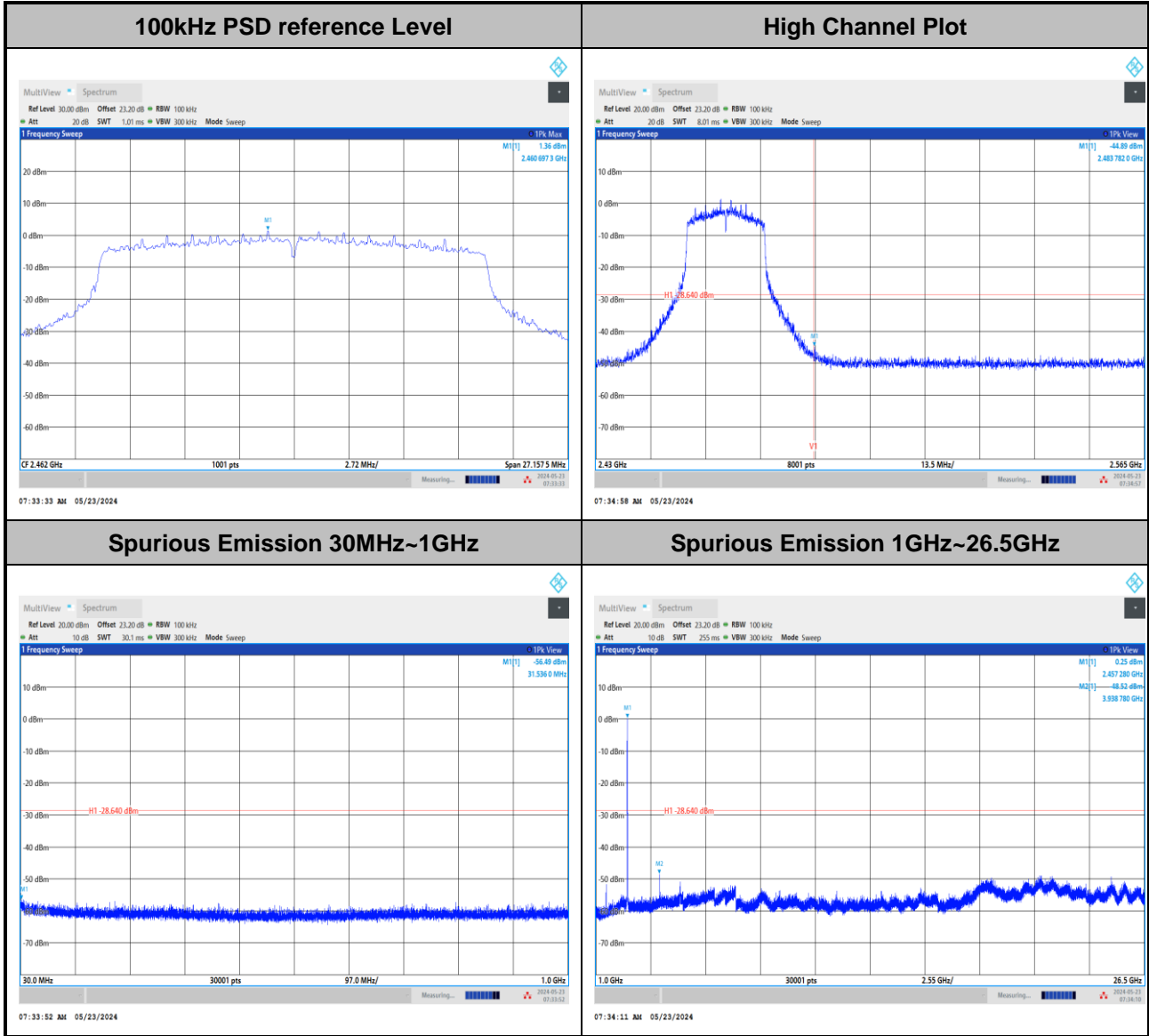


Test Mode : 802.11ax HE20_FullIRU	Test Channel : 06
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Test Mode :	802.11ax HE20_FullIRU	Test Channel :	11
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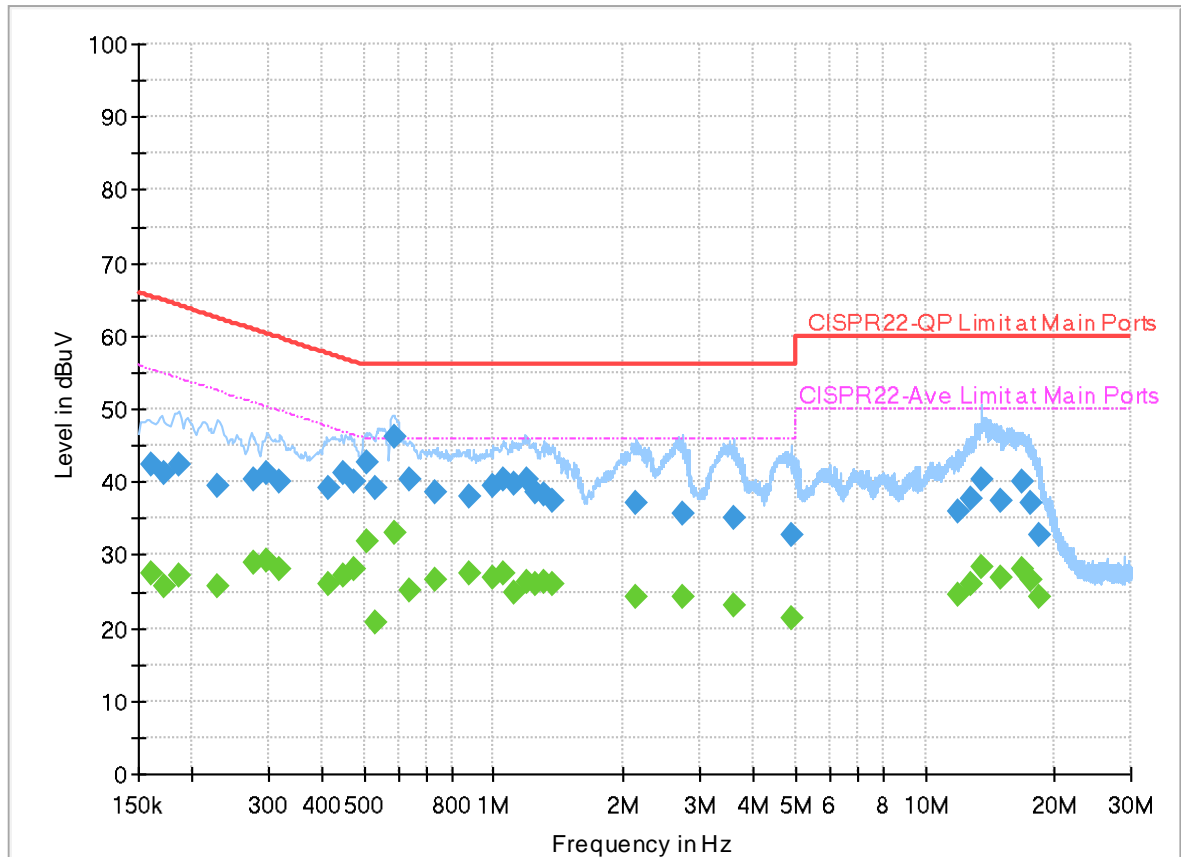
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	Temperature :	22.2~23.3°C
		Relative Humidity :	42.7~60.1%

EUT Information

Report NO : 432784
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final_Result

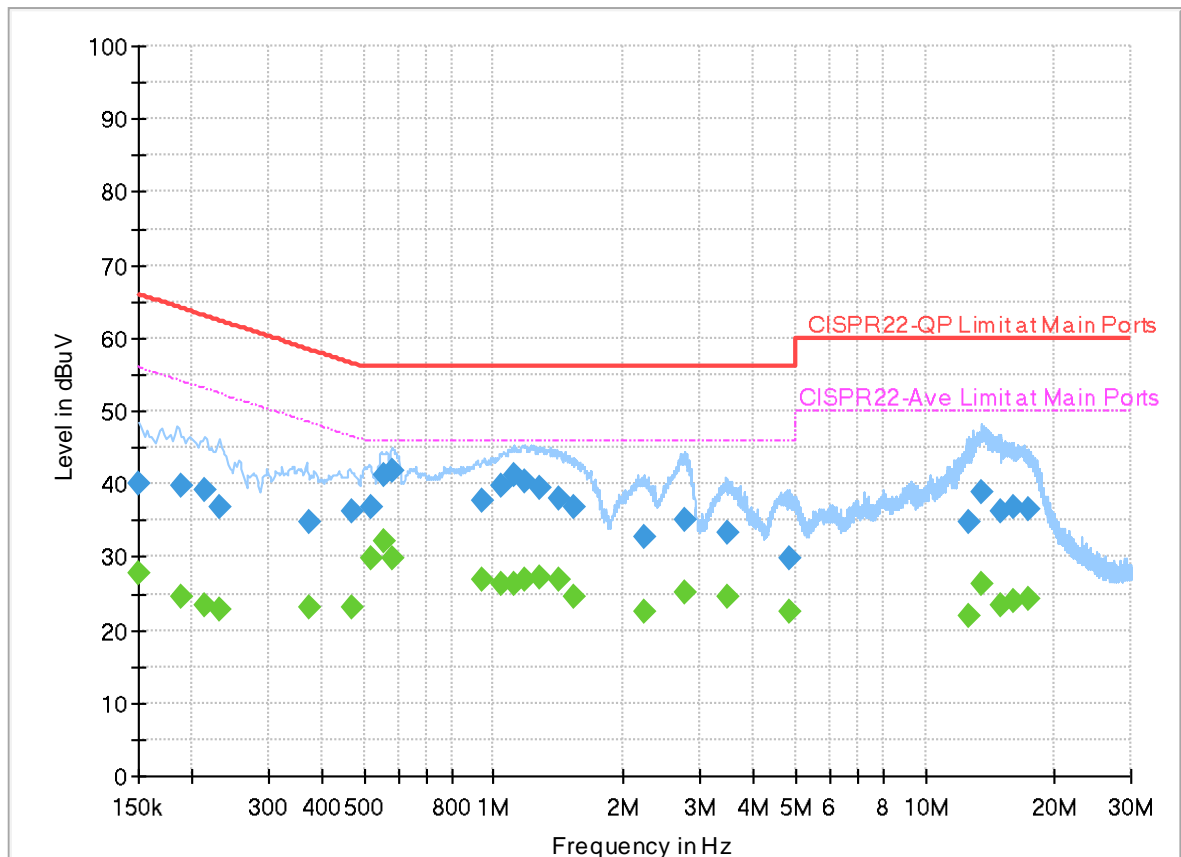
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	27.48	55.40	27.92	L1	OFF	19.9
0.161250	42.27	---	65.40	23.13	L1	OFF	19.9
0.171240	---	25.69	54.90	29.21	L1	OFF	19.9
0.171240	41.21	---	64.90	23.69	L1	OFF	19.9
0.185460	---	27.10	54.24	27.14	L1	OFF	19.9
0.185460	42.53	---	64.24	21.71	L1	OFF	19.9
0.229290	---	25.61	52.48	26.87	L1	OFF	19.9
0.229290	39.34	---	62.48	23.14	L1	OFF	19.9
0.278250	---	28.91	50.87	21.96	L1	OFF	19.9
0.278250	40.48	---	60.87	20.39	L1	OFF	19.9
0.296610	---	29.38	50.34	20.96	L1	OFF	19.9
0.296610	41.12	---	60.34	19.22	L1	OFF	19.9
0.316500	---	28.15	49.80	21.65	L1	OFF	19.9
0.316500	40.12	---	59.80	19.68	L1	OFF	19.9
0.415500	---	26.10	47.54	21.44	L1	OFF	19.9
0.415500	39.29	---	57.54	18.25	L1	OFF	19.9
0.446820	---	27.26	46.93	19.67	L1	OFF	19.9
0.446820	41.15	---	56.93	15.78	L1	OFF	19.9
0.476250	---	28.11	46.40	18.29	L1	OFF	19.9

0.476250	40.10	---	56.40	16.30	L1	OFF	19.9
0.510000	---	31.79	46.00	14.21	L1	OFF	19.9
0.510000	42.83	---	56.00	13.17	L1	OFF	19.9
0.530250	---	20.90	46.00	25.10	L1	OFF	19.9
0.530250	39.11	---	56.00	16.89	L1	OFF	19.9
0.586500	---	32.98	46.00	13.02	L1	OFF	19.9
0.586500	46.06	---	56.00	9.94	L1	OFF	19.9
0.639690	---	25.09	46.00	20.91	L1	OFF	19.9
0.639690	40.27	---	56.00	15.73	L1	OFF	19.9
0.735000	---	26.59	46.00	19.41	L1	OFF	19.9
0.735000	38.69	---	56.00	17.31	L1	OFF	19.9
0.878100	---	27.34	46.00	18.66	L1	OFF	19.9
0.878100	38.03	---	56.00	17.97	L1	OFF	19.9
0.996810	---	26.86	46.00	19.14	L1	OFF	19.9
0.996810	39.56	---	56.00	16.44	L1	OFF	19.9
1.056750	---	27.51	46.00	18.49	L1	OFF	19.9
1.056750	40.38	---	56.00	15.62	L1	OFF	19.9
1.115250	---	24.78	46.00	21.22	L1	OFF	19.9
1.115250	39.70	---	56.00	16.30	L1	OFF	19.9
1.191750	---	26.35	46.00	19.65	L1	OFF	19.9
1.191750	40.38	---	56.00	15.62	L1	OFF	19.9
1.243500	---	25.89	46.00	20.11	L1	OFF	19.9
1.243500	38.56	---	56.00	17.44	L1	OFF	19.9
1.310190	---	26.23	46.00	19.77	L1	OFF	19.9
1.310190	38.40	---	56.00	17.60	L1	OFF	19.9
1.363830	---	25.94	46.00	20.06	L1	OFF	19.9
1.363830	37.51	---	56.00	18.49	L1	OFF	19.9
2.139000	---	24.36	46.00	21.64	L1	OFF	20.0
2.139000	37.15	---	56.00	18.85	L1	OFF	20.0
2.728860	---	24.38	46.00	21.62	L1	OFF	20.0
2.728860	35.74	---	56.00	20.26	L1	OFF	20.0
3.605820	---	23.11	46.00	22.89	L1	OFF	20.0
3.605820	35.01	---	56.00	20.99	L1	OFF	20.0
4.884000	---	21.35	46.00	24.65	L1	OFF	20.0
4.884000	32.78	---	56.00	23.22	L1	OFF	20.0
11.893830	---	24.48	50.00	25.52	L1	OFF	20.1
11.893830	35.95	---	60.00	24.05	L1	OFF	20.1
12.741000	---	26.17	50.00	23.83	L1	OFF	20.1
12.741000	37.74	---	60.00	22.26	L1	OFF	20.1
13.564500	---	28.31	50.00	21.69	L1	OFF	20.1
13.564500	40.48	---	60.00	19.52	L1	OFF	20.1
14.954820	---	26.76	50.00	23.24	L1	OFF	20.1
14.954820	37.40	---	60.00	22.60	L1	OFF	20.1
16.701000	---	28.08	50.00	21.92	L1	OFF	20.1
16.701000	40.16	---	60.00	19.84	L1	OFF	20.1
17.636100	---	26.56	50.00	23.44	L1	OFF	20.1
17.636100	37.20	---	60.00	22.80	L1	OFF	20.1
18.426750	---	24.22	50.00	25.78	L1	OFF	20.1
18.426750	32.77	---	60.00	27.23	L1	OFF	20.1

EUT Information

Report NO : 432784
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150270	---	27.75	55.99	28.24	N	OFF	19.9
0.150270	40.18	---	65.99	25.81	N	OFF	19.9
0.188250	---	24.64	54.11	29.47	N	OFF	19.9
0.188250	39.89	---	64.11	24.22	N	OFF	19.9
0.213000	---	23.32	53.09	29.77	N	OFF	19.9
0.213000	39.23	---	63.09	23.86	N	OFF	19.9
0.230010	---	22.82	52.45	29.63	N	OFF	19.9
0.230010	36.85	---	62.45	25.60	N	OFF	19.9
0.372660	---	23.02	48.44	25.42	N	OFF	19.9
0.372660	34.82	---	58.44	23.62	N	OFF	19.9
0.467250	---	23.21	46.56	23.35	N	OFF	19.9
0.467250	36.15	---	56.56	20.41	N	OFF	19.9
0.519000	---	29.70	46.00	16.30	N	OFF	19.9
0.519000	36.90	---	56.00	19.10	N	OFF	19.9
0.555000	---	32.30	46.00	13.70	N	OFF	19.9
0.555000	41.25	---	56.00	14.75	N	OFF	19.9
0.582990	---	29.77	46.00	16.23	N	OFF	19.9
0.582990	41.76	---	56.00	14.24	N	OFF	19.9
0.937500	---	26.84	46.00	19.16	N	OFF	19.9

0.937500	37.83	---	56.00	18.17	N	OFF	19.9
1.041000	---	26.41	46.00	19.59	N	OFF	19.9
1.041000	39.65	---	56.00	16.35	N	OFF	19.9
1.115430	---	26.26	46.00	19.74	N	OFF	19.9
1.115430	41.12	---	56.00	14.88	N	OFF	19.9
1.183380	---	26.90	46.00	19.10	N	OFF	19.9
1.183380	40.42	---	56.00	15.58	N	OFF	19.9
1.284720	---	27.14	46.00	18.86	N	OFF	19.9
1.284720	39.50	---	56.00	16.50	N	OFF	19.9
1.409640	---	26.88	46.00	19.12	N	OFF	19.9
1.409640	37.96	---	56.00	18.04	N	OFF	19.9
1.531050	---	24.61	46.00	21.39	N	OFF	19.9
1.531050	36.71	---	56.00	19.29	N	OFF	19.9
2.222250	---	22.41	46.00	23.59	N	OFF	20.0
2.222250	32.87	---	56.00	23.13	N	OFF	20.0
2.780790	---	25.17	46.00	20.83	N	OFF	20.0
2.780790	35.21	---	56.00	20.79	N	OFF	20.0
3.466500	---	24.44	46.00	21.56	N	OFF	20.0
3.466500	33.33	---	56.00	22.67	N	OFF	20.0
4.830000	---	22.50	46.00	23.50	N	OFF	20.0
4.830000	29.91	---	56.00	26.09	N	OFF	20.0
12.642270	---	21.81	50.00	28.19	N	OFF	20.1
12.642270	34.66	---	60.00	25.34	N	OFF	20.1
13.561440	---	26.22	50.00	23.78	N	OFF	20.1
13.561440	38.95	---	60.00	21.05	N	OFF	20.1
14.919990	---	23.36	50.00	26.64	N	OFF	20.1
14.919990	36.30	---	60.00	23.70	N	OFF	20.1
16.071000	---	23.88	50.00	26.12	N	OFF	20.2
16.071000	36.89	---	60.00	23.11	N	OFF	20.2
17.359620	---	24.22	50.00	25.78	N	OFF	20.2
17.359620	36.43	---	60.00	23.57	N	OFF	20.2



Appendix C. Radiated Spurious Emission

Test Engineer :	BANK Lin, Ken Kuo and Karl Hou	Temperature :	21.3~23.5°C
		Relative Humidity :	51~58%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11b CH 01 2412MHz		2373	51.17	-22.83	74	38.18	27	18.33	32.34	170	25	P	H	
		2375.625	40.52	-13.48	54	27.54	27	18.33	32.35	170	25	A	H	
	*	2412	102.23	-	-	89.22	26.98	18.4	32.37	170	25	P	H	
	*	2412	99.09	-	-	86.08	26.98	18.4	32.37	170	25	A	H	
													H	
														H
			2350.005	50.76	-23.24	74	37.8	27	18.29	32.33	400	19	P	V
			2375.835	39.47	-14.53	54	26.48	27	18.34	32.35	400	19	A	V
	*		2412	96.34	-	-	83.33	26.98	18.4	32.37	400	19	P	V
	*		2412	93.2	-	-	80.19	26.98	18.4	32.37	400	19	A	V
														V
														V
802.11b CH 06 2437MHz		2378.64	51.78	-22.22	74	38.79	27	18.34	32.35	147	23	P	H	
		2388.88	40.32	-13.68	54	27.4	26.91	18.36	32.35	147	23	A	H	
	*	2437	100.8	-	-	87.93	26.8	18.45	32.38	147	23	P	H	
	*	2437	97.67	-	-	84.8	26.8	18.45	32.38	147	23	A	H	
			2500	51.16	-22.84	74	38.01	27	18.57	32.42	147	23	P	H
			2485.12	39.82	-14.18	54	26.8	26.9	18.53	32.41	147	23	A	H
			2370.96	51.32	-22.68	74	38.33	27	18.33	32.34	400	15	P	V
			2389.04	39.39	-14.61	54	26.47	26.91	18.36	32.35	400	15	A	V
	*		2437	96.55	-	-	83.68	26.8	18.45	32.38	400	15	P	V
	*		2437	93.45	-	-	80.58	26.8	18.45	32.38	400	15	A	V
			2490.08	51.37	-22.63	74	38.34	26.9	18.54	32.41	400	15	P	V
			2499.04	39.57	-14.43	54	26.44	26.99	18.56	32.42	400	15	A	V



802.11b CH 11 2462MHz	*	2462	96.95	-	-	84.06	26.8	18.49	32.4	133	21	P	H
	*	2462	93.82	-	-	80.93	26.8	18.49	32.4	133	21	A	H
		2488.84	51.05	-22.95	74	38.02	26.9	18.54	32.41	133	21	P	H
		2487.84	40	-14	54	26.97	26.9	18.54	32.41	133	21	A	H
													H
													H
	*	2462	93.37	-	-	80.48	26.8	18.49	32.4	400	14	P	V
	*	2462	90.24	-	-	77.35	26.8	18.49	32.4	400	14	A	V
		2486.76	51.23	-22.77	74	38.2	26.9	18.54	32.41	400	14	P	V
		2487.84	39.69	-14.31	54	26.66	26.9	18.54	32.41	400	14	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
WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11b CH 01 2412MHz		4824	51.92	-22.08	74	39.97	32.4	13.05	33.5	106	107	P	H	
		4824	48	-6	54	36.05	32.4	13.05	33.5	106	107	A	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
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													H	
													H	
													H	
													H	
			4824	54.77	-19.23	74	42.82	32.4	13.05	33.5	328	249	P	V
			4824	51.4	-2.6	54	39.45	32.4	13.05	33.5	328	249	A	V
														V
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Margin (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 06 2437MHz		4874	51.72	-22.28	74	39.59	32.55	13.07	33.49	135	115	P	H
		4874	48.25	-5.75	54	36.12	32.55	13.07	33.49	135	115	A	H
		7311	49.5	-24.5	74	31.84	37.5	16	35.84	-	-	P	H
		7311	40.31	-13.69	54	22.65	37.5	16	35.84	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			4874	53.97	-20.03	74	41.84	32.55	13.07	33.49	318	247	P
		4874	51.56	-2.44	54	39.43	32.55	13.07	33.49	318	247	A	V
		7311	50.58	-23.42	74	32.92	37.5	16	35.84	-	-	P	V
		7311	40.25	-13.75	54	22.59	37.5	16	35.84	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V



WiFi Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11b CH 11 2462MHz		4924	51.62	-22.38	74	39.35	32.65	13.1	33.48	114	109	P	H	
		4924	47.9	-6.1	54	35.63	32.65	13.1	33.48	114	109	A	H	
		7386	49.7	-24.3	74	32.07	37.43	16.09	35.89	-	-	P	H	
		7386	40.33	-13.67	54	22.7	37.43	16.09	35.89	-	-	A	H	
													H	
													H	
													H	
													H	
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													H	
802.11b CH 11 2462MHz		4924	54.12	-19.88	74	41.85	32.65	13.1	33.48	334	249	P	V	
		4924	51.78	-2.22	54	39.51	32.65	13.1	33.48	334	249	A	V	
		7386	49.42	-24.58	74	31.79	37.43	16.09	35.89	-	-	P	V	
		7386	40.61	-13.39	54	22.98	37.43	16.09	35.89	-	-	A	V	
													V	
													V	
													V	
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													V	
													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.												



**2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 01 2412MHz		2389.59	65.81	-8.19	74	52.9	26.9	18.36	32.35	152	25	P	H	
		2390	50.4	-3.6	54	37.49	26.9	18.36	32.35	152	25	A	H	
	*	2412	108.09	-	-	95.08	26.98	18.4	32.37	152	25	P	H	
	*	2412	100.45	-	-	87.44	26.98	18.4	32.37	152	25	A	H	
													H	
													H	
			2389.38	59.43	-14.57	74	46.51	26.91	18.36	32.35	394	318	P	V
			2390	45.48	-8.52	54	32.57	26.9	18.36	32.35	394	318	A	V
	*		2412	102	-	-	88.99	26.98	18.4	32.37	394	318	P	V
	*		2412	94.11	-	-	81.1	26.98	18.4	32.37	394	318	A	V
													V	
													V	
802.11g CH 06 2437MHz		2334	60.79	-13.21	74	47.79	27.06	18.26	32.32	176	25	P	H	
		2388.24	42.83	-11.17	54	29.9	26.92	18.36	32.35	176	25	A	H	
	*	2437	109.48	-	-	96.61	26.8	18.45	32.38	176	25	P	H	
	*	2437	102.04	-	-	89.17	26.8	18.45	32.38	176	25	A	H	
			2498.24	51.2	-22.8	74	38.08	26.98	18.56	32.42	176	25	P	H
			2483.52	41.04	-12.96	54	28.02	26.9	18.53	32.41	176	25	A	H
			2337.04	55.2	-18.8	74	42.23	27.03	18.26	32.32	400	16	P	V
			2389.36	40.46	-13.54	54	27.54	26.91	18.36	32.35	400	16	A	V
	*		2437	105.57	-	-	92.7	26.8	18.45	32.38	400	16	P	V
	*		2437	97.82	-	-	84.95	26.8	18.45	32.38	400	16	A	V
			2499.68	50.99	-23.01	74	37.85	27	18.56	32.42	400	16	P	V
			2483.6	40.39	-13.61	54	27.37	26.9	18.53	32.41	400	16	A	V



802.11g CH 11 2462MHz	*	2462	108.29	-	-	95.4	26.8	18.49	32.4	139	20	P	H
	*	2462	100.75	-	-	87.86	26.8	18.49	32.4	139	20	A	H
		2483.52	65.9	-8.1	74	52.88	26.9	18.53	32.41	139	20	P	H
		2483.52	50.21	-3.79	54	37.19	26.9	18.53	32.41	139	20	A	H
													H
													H
	*	2462	103.84	-	-	90.95	26.8	18.49	32.4	400	12	P	V
	*	2462	96.21	-	-	83.32	26.8	18.49	32.4	400	12	A	V
		2483.8	61.63	-12.37	74	48.61	26.9	18.53	32.41	400	12	P	V
		2483.52	46.85	-7.15	54	33.83	26.9	18.53	32.41	400	12	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
WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 01 2412MHz		4824	55.75	-18.25	74	43.8	32.4	13.05	33.5	100	104	P	H	
		4824	44.05	-9.95	54	32.1	32.4	13.05	33.5	100	104	A	H	
													H	
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			4824	58.89	-15.11	74	46.94	32.4	13.05	33.5	328	247	P	V
			4824	48.1	-5.9	54	36.15	32.4	13.05	33.5	328	247	A	V
													V	
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FCC RADIO TEST REPORT

Report No. : FR432784C

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 06 2437MHz		4874	59.88	-14.12	74	47.75	32.55	13.07	33.49	128	115	P	H	
		4874	48.4	-5.6	54	36.27	32.55	13.07	33.49	128	115	A	H	
		7311	48.02	-25.98	74	30.36	37.5	16	35.84	-	-	P	H	
		7311	40.77	-13.23	54	23.11	37.5	16	35.84	-	-	A	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4874	63.49	-10.51	74	51.36	32.55	13.07	33.49	323	249	P	V
			4874	51.65	-2.35	54	39.52	32.55	13.07	33.49	323	249	A	V
			7311	49.79	-24.21	74	32.13	37.5	16	35.84	-	-	P	V
			7311	40.78	-13.22	54	23.12	37.5	16	35.84	-	-	A	V
														V
														V
													V	
													V	
													V	
													V	



WiFi Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 11 2462MHz		4924	57.62	-16.38	74	45.35	32.65	13.1	33.48	128	307	P	H
		4924	47.81	-6.19	54	35.54	32.65	13.1	33.48	128	307	A	H
		7386	49.43	-24.57	74	31.8	37.43	16.09	35.89	-	-	P	H
		7386	40.31	-13.69	54	22.68	37.43	16.09	35.89	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
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													H
													H
													H
													H
			4924	62.93	-11.07	74	50.66	32.65	13.1	33.48	334	259	P
		4924	51.8	-2.2	54	39.53	32.65	13.1	33.48	334	259	A	V
		7386	49.79	-24.21	74	32.16	37.43	16.09	35.89	-	-	P	V
		7386	40.68	-13.32	54	23.05	37.43	16.09	35.89	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 01 2412MHz		2389.065	66.48	-7.52	74	53.56	26.91	18.36	32.35	152	25	P	H	
		2390	51.86	-2.14	54	38.95	26.9	18.36	32.35	152	25	A	H	
	*	2412	108.46	-	-	95.45	26.98	18.4	32.37	152	25	P	H	
	*	2412	100.43	-	-	87.42	26.98	18.4	32.37	152	25	A	H	
													H	
														H
			2389.38	61.98	-12.02	74	49.06	26.91	18.36	32.35	400	316	P	V
			2390	47.88	-6.12	54	34.97	26.9	18.36	32.35	400	316	A	V
		*	2412	101.32	-	-	88.31	26.98	18.4	32.37	400	316	P	V
		*	2412	93.65	-	-	80.64	26.98	18.4	32.37	400	316	A	V
													V	
													V	
802.11n HT20 CH 06 2437MHz		2333.84	60.81	-13.19	74	47.81	27.06	18.26	32.32	152	25	P	H	
		2388.88	43.01	-10.99	54	30.09	26.91	18.36	32.35	152	25	A	H	
	*	2437	109.58	-	-	96.71	26.8	18.45	32.38	152	25	P	H	
	*	2437	102.19	-	-	89.32	26.8	18.45	32.38	152	25	A	H	
			2483.68	54.02	-19.98	74	41	26.9	18.53	32.41	152	25	P	H
			2484.64	41.15	-12.85	54	28.13	26.9	18.53	32.41	152	25	A	H
			2324.56	52.9	-21.1	74	39.87	27.1	18.24	32.31	375	13	P	V
			2389.04	40.37	-13.63	54	27.45	26.91	18.36	32.35	375	13	A	V
		*	2437	104.67	-	-	91.8	26.8	18.45	32.38	375	13	P	V
		*	2437	97.06	-	-	84.19	26.8	18.45	32.38	375	13	A	V
		2483.52	51.27	-22.73	74	38.25	26.9	18.53	32.41	375	13	P	V	
		2498.56	40.35	-13.65	54	27.22	26.99	18.56	32.42	375	13	A	V	



802.11n HT20 CH 11 2462MHz	*	2462	107.35	-	-	94.46	26.8	18.49	32.4	163	21	P	H
	*	2462	99.72	-	-	86.83	26.8	18.49	32.4	163	21	A	H
		2483.52	66.08	-7.92	74	53.06	26.9	18.53	32.41	163	21	P	H
		2483.52	50.73	-3.27	54	37.71	26.9	18.53	32.41	163	21	A	H
													H
													H
	*	2462	103.43	-	-	90.54	26.8	18.49	32.4	400	14	P	V
	*	2462	95.83	-	-	82.94	26.8	18.49	32.4	400	14	A	V
		2483.8	64.58	-9.42	74	51.56	26.9	18.53	32.41	400	14	P	V
		2483.52	47.39	-6.61	54	34.37	26.9	18.53	32.41	400	14	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
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 01 2412MHz		4824	55.06	-18.94	74	43.11	32.4	13.05	33.5	100	107	P	H	
		4824	44.23	-9.77	54	32.28	32.4	13.05	33.5	100	107	A	H	
													H	
													H	
													H	
													H	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 06 2437MHz		4874	56.45	-17.55	74	44.32	32.55	13.07	33.49	102	112	P	H	
		4874	48.11	-5.89	54	35.98	32.55	13.07	33.49	102	112	A	H	
		7311	49.94	-24.06	74	32.28	37.5	16	35.84	-	-	P	H	
		7311	39.01	-14.99	54	21.35	37.5	16	35.84	-	-	A	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4874	60.71	-13.29	74	48.58	32.55	13.07	33.49	320	246	P	V
			4874	51.32	-2.68	54	39.19	32.55	13.07	33.49	320	246	A	V
			7311	48.88	-25.12	74	31.22	37.5	16	35.84	-	-	P	V
			7311	38.52	-15.48	54	20.86	37.5	16	35.84	-	-	A	V
														V
														V
														V
													V	
													V	
													V	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 11 2462MHz		4924	58.67	-15.33	74	46.4	32.65	13.1	33.48	120	110	P	H	
		4924	47.29	-6.71	54	35.02	32.65	13.1	33.48	120	110	A	H	
		7386	50.18	-23.82	74	32.55	37.43	16.09	35.89	-	-	P	H	
		7386	40.23	-13.77	54	22.6	37.43	16.09	35.89	-	-	A	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4924	62.72	-11.28	74	50.45	32.65	13.1	33.48	314	249	P	V
			4924	51.08	-2.92	54	38.81	32.65	13.1	33.48	314	249	A	V
			7386	49.28	-24.72	74	31.65	37.43	16.09	35.89	-	-	P	V
			7386	40.42	-13.58	54	22.79	37.43	16.09	35.89	-	-	A	V
														V
														V
														V
													V	
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



**2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ax HE20 Full CH 01 2412MHz		2389.59	65.73	-8.27	74	52.82	26.9	18.36	32.35	151	24	P	H	
		2390	50.76	-3.24	54	37.85	26.9	18.36	32.35	151	24	A	H	
	*	2412	108.57	-	-	95.56	26.98	18.4	32.37	151	24	P	H	
	*	2412	98.95	-	-	85.94	26.98	18.4	32.37	151	24	A	H	
													H	
													H	
			2388.645	63.06	-10.94	74	50.14	26.91	18.36	32.35	363	295	P	V
			2390	47.5	-6.5	54	34.59	26.9	18.36	32.35	363	295	A	V
		*	2412	104.38	-	-	91.37	26.98	18.4	32.37	363	295	P	V
		*	2412	95.09	-	-	82.08	26.98	18.4	32.37	363	295	A	V
802.11ax HE20 Full CH 11 2462MHz													V	
													V	
		*	2462	107.54	-	-	94.65	26.8	18.49	32.4	165	18	P	H
		*	2462	98.67	-	-	85.78	26.8	18.49	32.4	165	18	A	H
			2484.36	66.09	-7.91	74	53.07	26.9	18.53	32.41	165	18	P	H
			2483.52	50.03	-3.97	54	37.01	26.9	18.53	32.41	165	18	A	H
														H
														H
		*	2462	104.87	-	-	91.98	26.8	18.49	32.4	333	300	P	V
		*	2462	95.94	-	-	83.05	26.8	18.49	32.4	333	300	A	V
		2483.76	64.47	-9.53	74	51.45	26.9	18.53	32.41	333	300	P	V	
		2483.56	47.03	-6.97	54	34.01	26.9	18.53	32.41	333	300	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

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 01 2412MHz		4824	54.5	-19.5	74	42.55	32.4	13.05	33.5	101	106	P	H
		4824	44.31	-9.69	54	32.36	32.4	13.05	33.5	101	106	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			4824	58.07	-15.93	74	46.12	32.4	13.05	33.5	296	248	P
		4824	47.69	-6.31	54	35.74	32.4	13.05	33.5	296	248	A	V
													V
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WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ax HE20 Full CH 11 2462MHz		4924	56.37	-17.63	74	44.1	32.65	13.1	33.48	143	114	P	H	
		4924	46.2	-7.8	54	33.93	32.65	13.1	33.48	143	114	A	H	
		7386	49.34	-24.66	74	31.71	37.43	16.09	35.89	-	-	P	H	
		7386	39.51	-14.49	54	21.88	37.43	16.09	35.89	-	-	A	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4924	62.1	-11.9	74	49.83	32.65	13.1	33.48	301	250	P	V
			4924	50.49	-3.51	54	38.22	32.65	13.1	33.48	301	250	A	V
			7386	49.95	-24.05	74	32.32	37.43	16.09	35.89	-	-	P	V
			7386	39.66	-14.34	54	22.03	37.43	16.09	35.89	-	-	A	V
														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.



**Emission above 18GHz
2.4GHz WIFI 802.11n HT20 (SHF)**

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT20 SHF		22718	42.05	-31.95	74	45.57	38.8	18.32	60.64	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			18966	42.94	-31.06	74	52.93	38.17	15.78	63.94	-	-	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 WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
2.4GHz 802.11n HT20 LF		99.66	27.35	-16.15	43.5	42.29	15.98	1.8	32.72	-	-	P	H	
		135.57	24.26	-19.24	43.5	37.26	17.65	2.05	32.7	-	-	P	H	
		185.52	33.01	-10.49	43.5	48.43	14.78	2.47	32.67	-	-	P	H	
		308.4	30.39	-15.61	46	40.69	19.32	3.11	32.73	-	-	P	H	
		605.2	34.58	-11.42	46	37.17	25.81	4.41	32.81	-	-	P	H	
		859.3	32.93	-13.07	46	30.51	29.28	5.27	32.13	-	-	P	H	
														H
														H
														H
														H
														H
														H
			96.96	27.69	-15.81	43.5	42.96	15.7	1.76	32.73	-	-	P	V
			145.83	30.1	-13.4	43.5	43.38	17.3	2.13	32.71	-	-	P	V
			176.88	28.78	-14.72	43.5	43.83	15.2	2.43	32.68	-	-	P	V
			309.1	27.18	-18.82	46	37.47	19.33	3.11	32.73	-	-	P	V
			605.2	32.67	-13.33	46	35.26	25.81	4.41	32.81	-	-	P	V
			848.1	32.56	-13.44	46	30.38	29.14	5.25	32.21	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	

Remark

- No other spurious found.
- All results are PASS against limit line.
- 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.



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is Margin line.
P/A	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		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 :	BANK Lin, Ken Kuo and Karl Hou	Temperature :	21.3~23.5°C
		Relative Humidity :	51~58%

Note symbol

-L	Low channel location
-R	High channel location



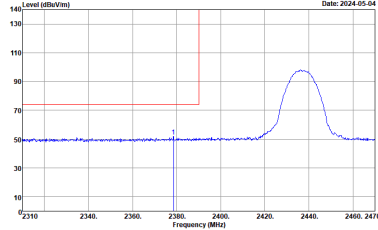
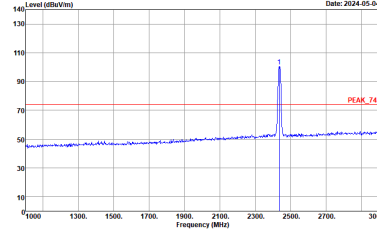
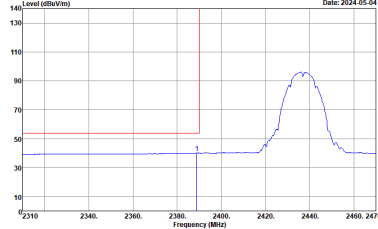
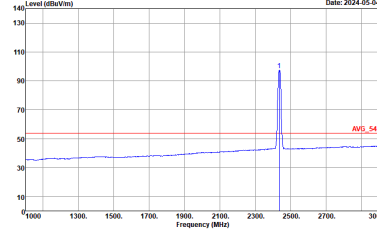
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AVG_BE_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>

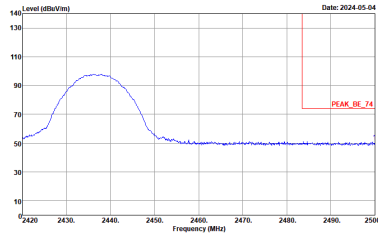
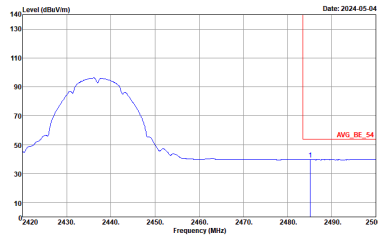


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

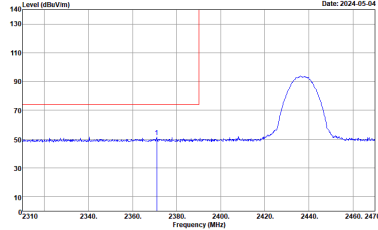
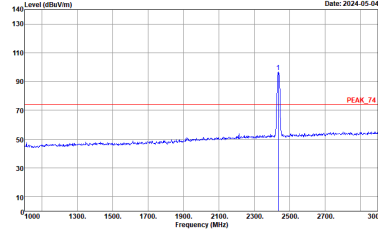
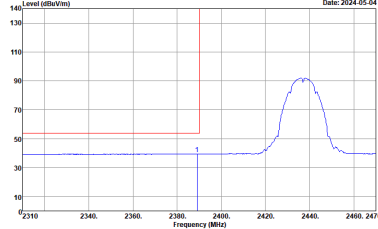
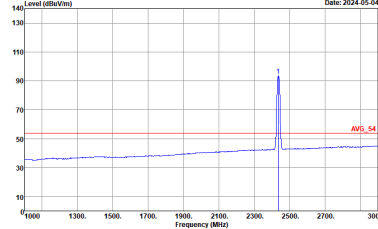


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

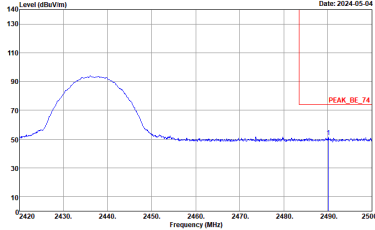
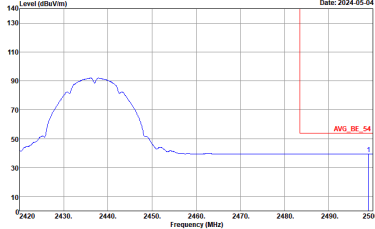


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZC04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LEZC04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>	Left blank

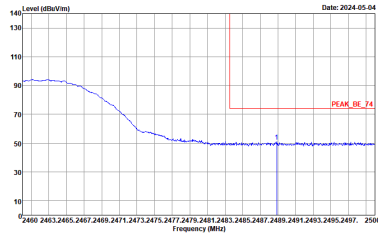
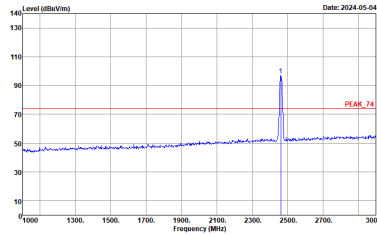
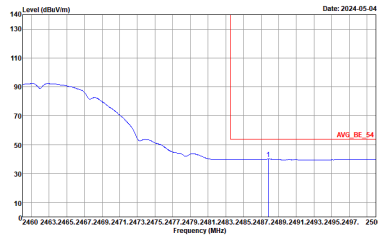
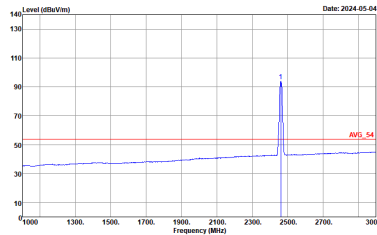


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

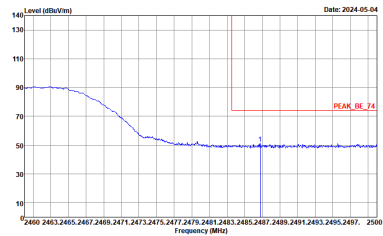
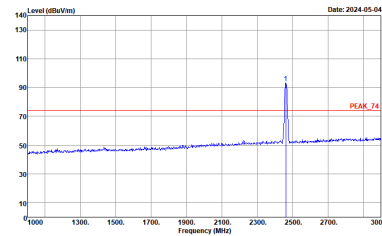
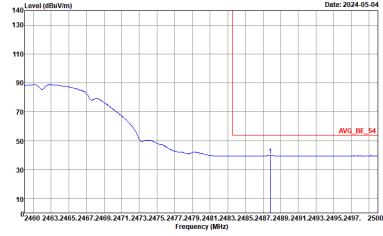
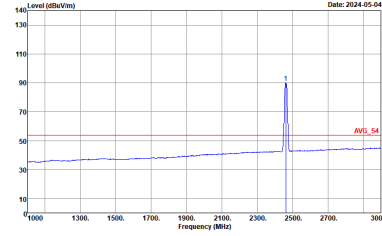


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



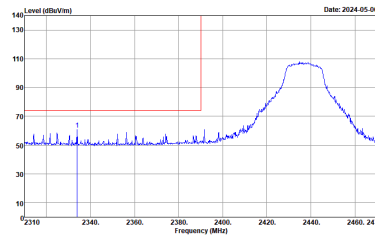
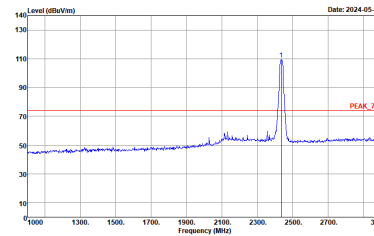
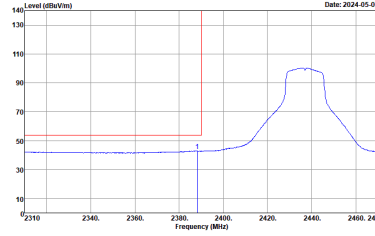
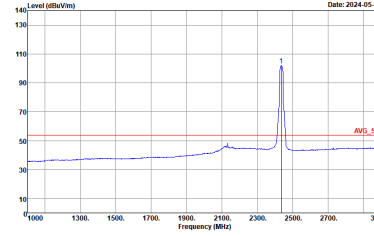
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AVG_BE_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>

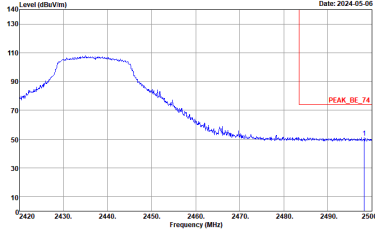
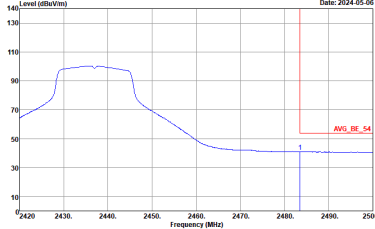


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>

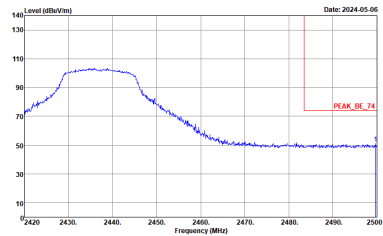
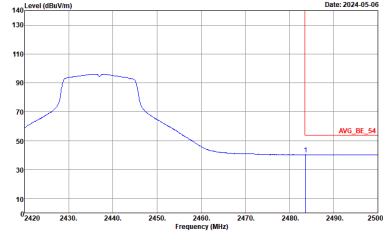


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.200kHz SWT:Auto</p>	Left blank

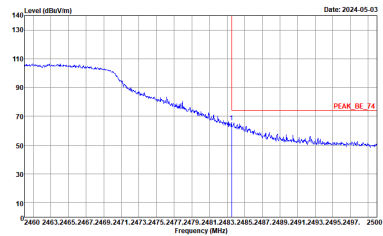
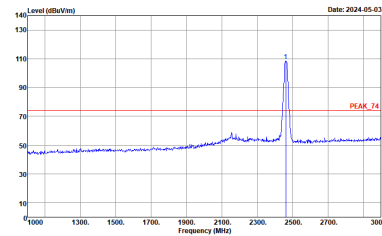
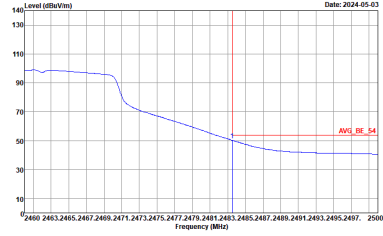
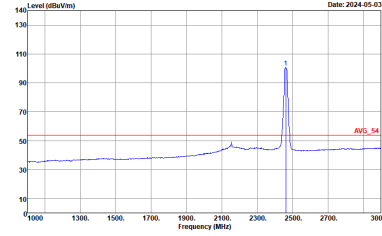


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	<p>Level (dBm/100kHz) vs Frequency (MHz) for Vertical polarization. Peak at 2437 MHz.</p> <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Level (dBm/100kHz) vs Frequency (MHz) for Fundamental polarization. Peak at 2437 MHz.</p> <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
	<p>Level (dBm/100kHz) vs Frequency (MHz) for Vertical polarization. Average level at 2437 MHz.</p> <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	<p>Level (dBm/100kHz) vs Frequency (MHz) for Fundamental polarization. Average level at 2437 MHz.</p> <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>

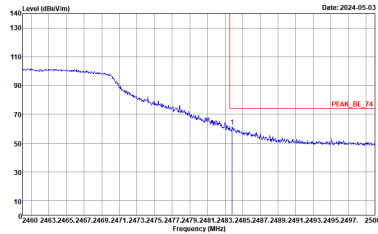
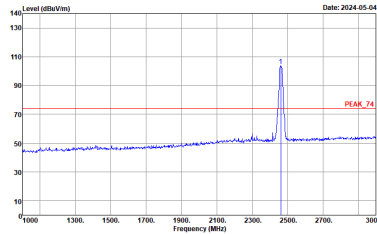
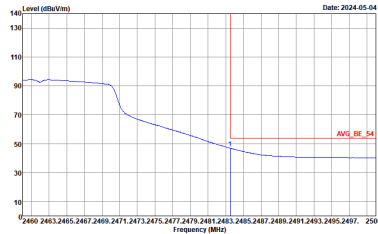
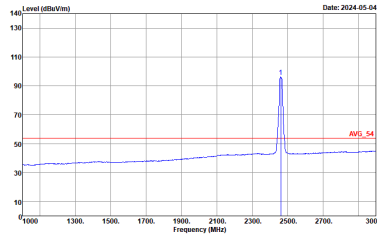


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Left Blank</p>
<p>Avg.</p>	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.200kHz SWT:Auto</p>	<p>Left Blank</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.200kHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.200kHz SWT:Auto</p>



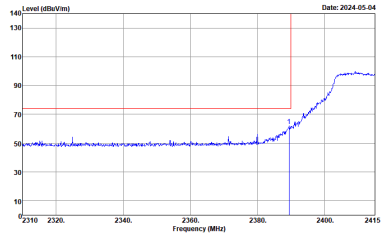
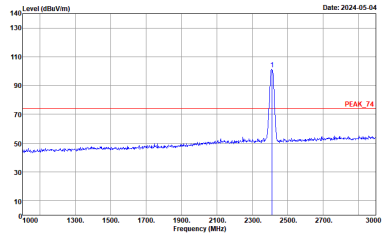
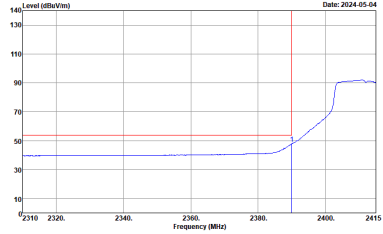
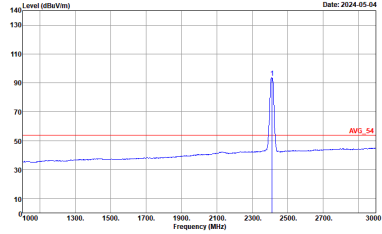
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>



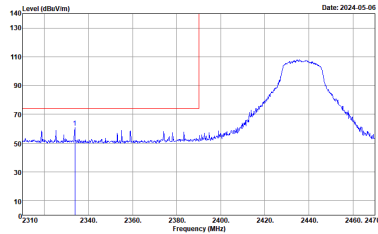
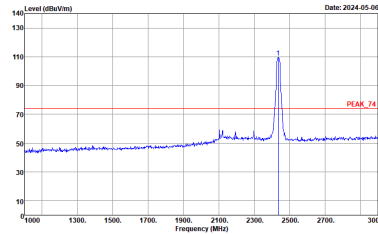
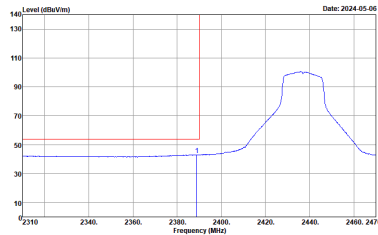
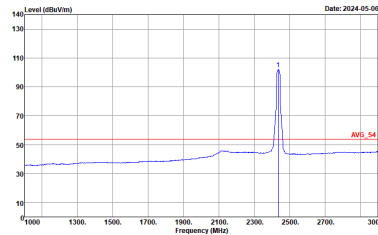
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>

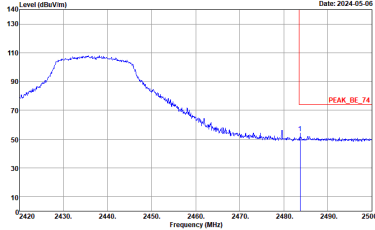
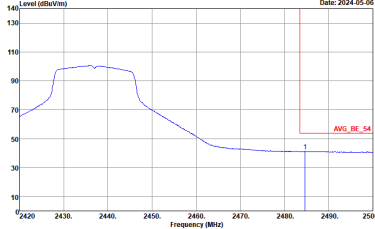


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>

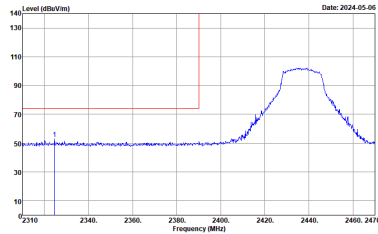
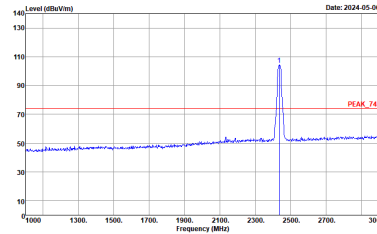
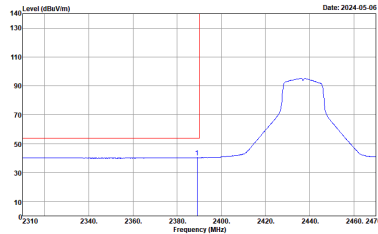
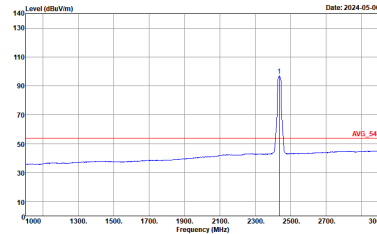


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.200kHz SWT:Auto</p>	Left blank

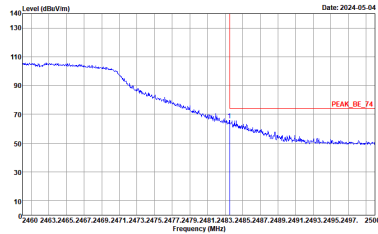
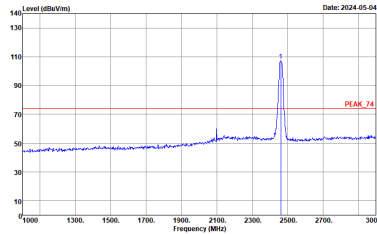
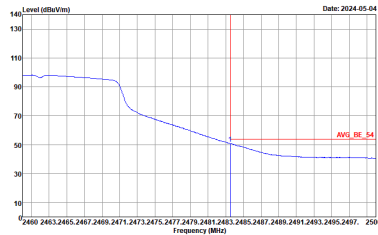
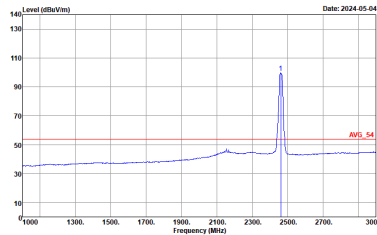


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>

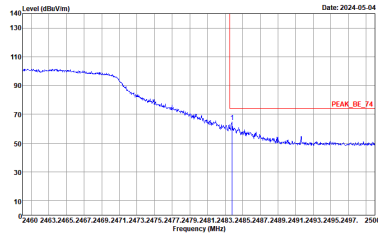
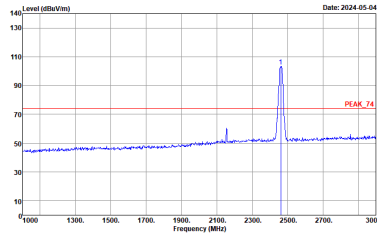
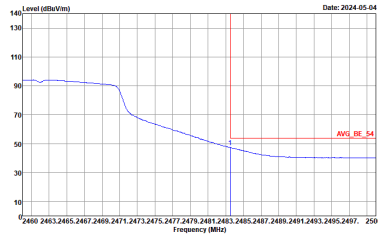
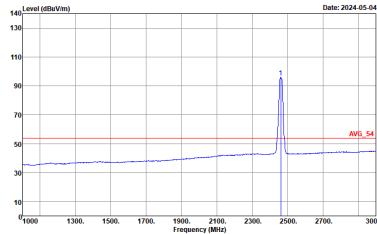


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left Blank
Avg.	<p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.200kHz SWT:Auto</p>	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AVG_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.200KHz SWT:Auto</p>



2.4GHz 2400~2483.5MHz

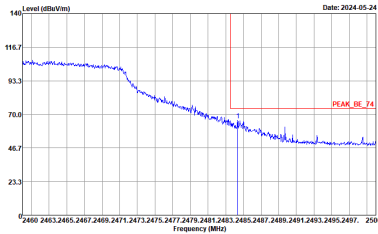
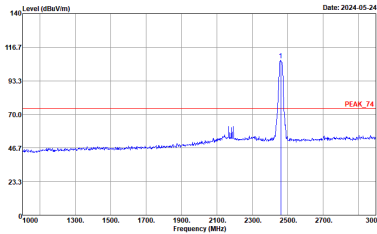
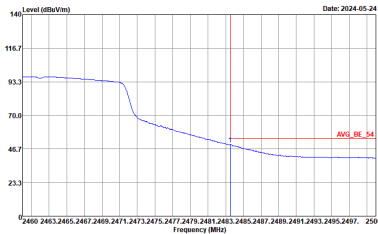
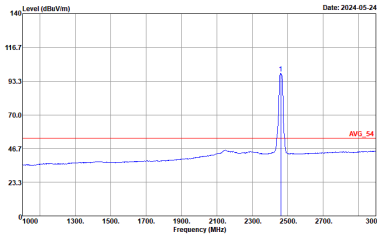
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.300kHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.300kHz SWT:Auto</p>

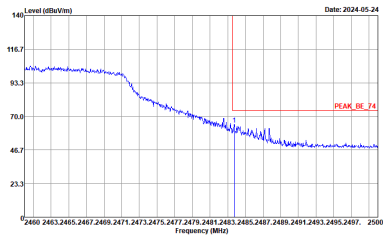
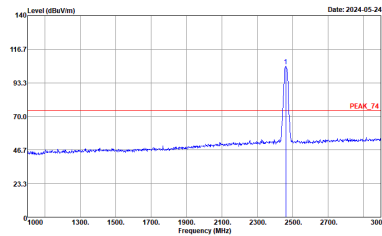
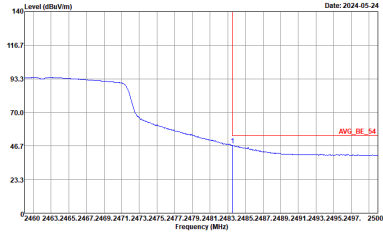
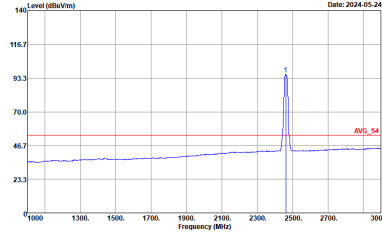


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto</p>	<p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18ENL_230712 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18ENL_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto</p>



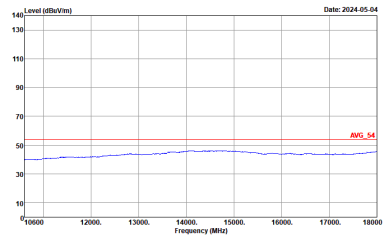
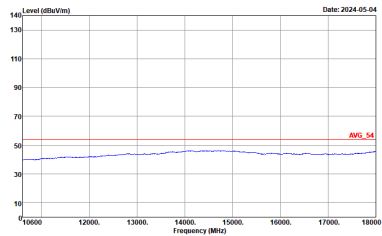
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH22-HY Condition : PEAK_BE_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH22-HY Condition : AV6_BE_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto</p>	 <p>Site : 03CH22-HY Condition : AV6_54 3m LEZ004A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto</p>



2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL</p>

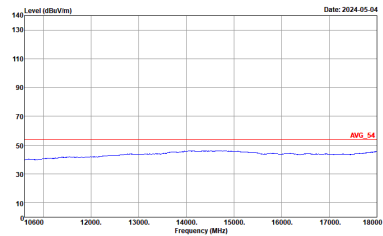
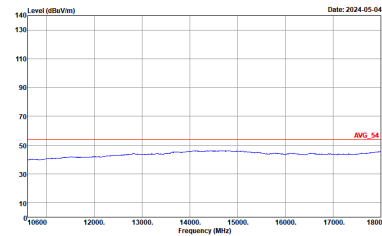


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
<p>10.6G ~18G Avg.</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL :</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL :</p>

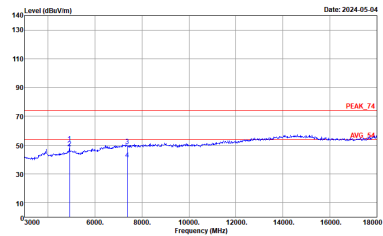
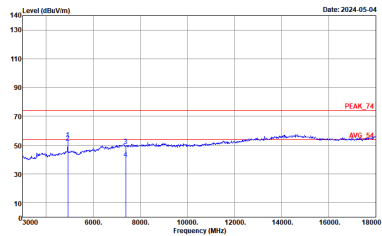


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
<p>10.6G ~18G Avg.</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18ENL_230712 HORIZONTAL :</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18ENL_230712 VERTICAL :</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 HORIZONTAL</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



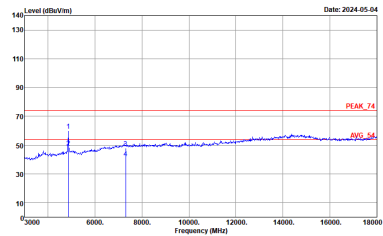
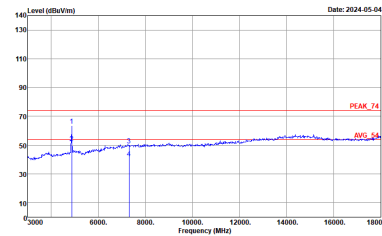
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 HORIZONTAL</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



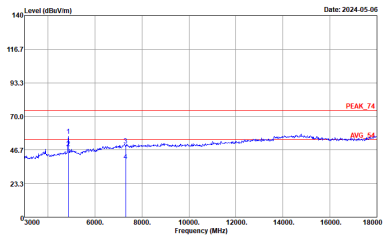
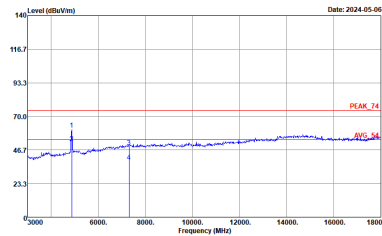
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>

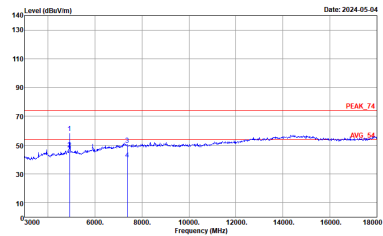
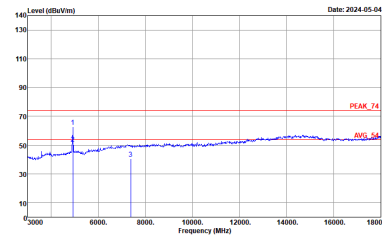


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 HORIZONTAL</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 VERTICAL</p>

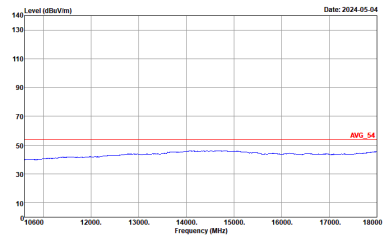
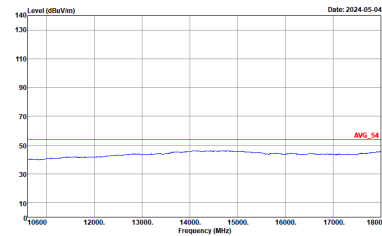


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18ENL_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18ENL_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 HORIZONTAL</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2004A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
<p>10.6G ~18G Avg.</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	 <p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



2.4GHz 2400~2483.5MHz

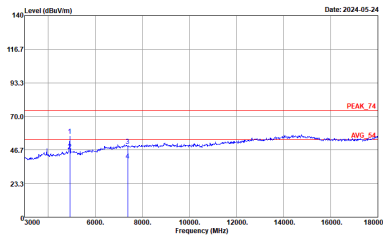
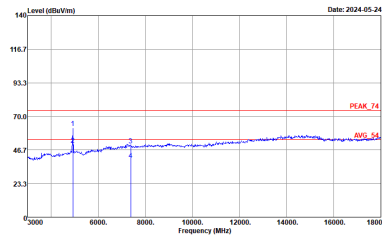
WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-1HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH01 2412MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL</p>	 <p>Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p>	<p>Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p>



Emission above 18GHz
2.4GHz WIFI 802.11n HT20 (SHF @ 1m)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 SHF	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH22-4Y Condition : PEAK_74 1m SHF_1224_230710 HORIZONTAL</p>	<p>Site : 03CH22-4Y Condition : PEAK_74 1m SHF_1224_230710 VERTICAL</p>



Emission below 1GHz
2.4GHz WIFI 802.11n HT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak	<p>Site : 03CH22-4FY Condition : QP 3m BIL0663304_231015_16 HORIZONTAL</p>	<p>Site : 03CH22-4FY Condition : QP 3m BIL0663304_231015_16 VERTICAL</p>



Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	98.80	-	-	10Hz
802.11g	97.51	5480	0.18	200Hz
2.4GHz 802.11n HT20	97.32	5080	0.18	200Hz
2.4GHz 802.11ax HE20 Full RU	96.76	3880	0.26	300Hz

