FCC RF Test Report

APPLICANT	:	Hangzhou Tuya Information Technology Co., Ltd
EQUIPMENT	:	Wi-Fi and Bluetooth Module
MODEL NAME	:	WR11-U
FCC ID	:	2ANDL-WR11U
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System
TEST DATE(S)	:	Apr. 29, 2025 ~ May 13, 2025

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Fly Liang

Approved by: Fly Liang

ACCREDITED
Cert #5145.01

Sporton International Inc. (ShenZhen)

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR541608B	Rev. 01	Initial issue of report	Jul. 04, 2025

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	99% Bandwidth	-	Report Only	-
3.2	15.247(b)	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	Conducted Band Edges	≤ 20dBc	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 2.13 dB at 4874.00 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.44 dB at 0.16 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	15.203 & 15.247(b)	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.

1 General Description

1.1 Applicant

Hangzhou Tuya Information Technology Co., Ltd
Room 301,Building 1,Huace Center,Xihu District,Hangzhou City,Zhejiang Province, China

1.2 Manufacturer

Hangzhou Tuya Information Technology Co., Ltd
Room 301,Building 1,Huace Center,Xihu District,Hangzhou City,Zhejiang Province, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Wi-Fi and Bluetooth Module
Model Name	WR11-U
FCC ID	2ANDL-WR11U
SN Code	Conducted: 20000445300084 Conduction: 2000044530003B Radiation: 2000044530003B
HW Version	V1.0.2
SW Version	V3.5.0
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to antenna	802.11b : 15.50 dBm (0.0355 W) 802.11g : 27.23 dBm (0.5284 W) 802.11n HT20 : 26.96 dBm (0.4966 W) 802.11n HT40 : 26.52 dBm (0.4487 W)
99% Occupied Bandwidth	802.11b : 13.930MHz 802.11g : 17.033MHz 802.11n HT20 : 18.118MHz 802.11n HT40 : 36.106MHz
Antenna Type / Gain	PCB Antenna type with gain 0.88 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ CO02-SZ 03CH04-SZ	CN1256	421272

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-SZ	AUDIX	E3	6.2009-8-24
2.	CO02-SZ	AUDIX	E3	6.120613b

1.8 Applicable Standards

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

- 47 CFR Part 15 Subpart C §15.247
- FCC KDB 558074 D01 15.247 Meas Guidance v05r02
- ANSI C63.10-2013

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

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
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

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

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

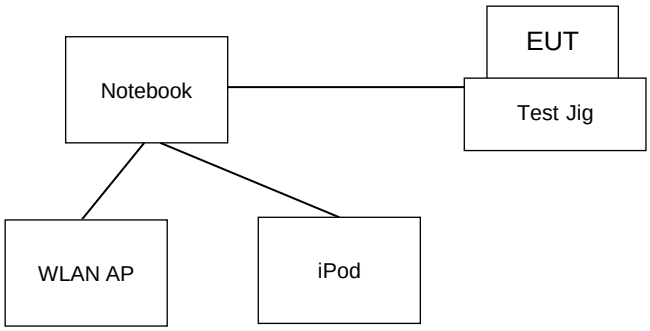
Test Cases	
AC Conducted Emission	Mode 1 :Bluetooth Tx + Charging from Notebook Mode 2 WLAN Link(2.4G) + Charging from Notebook

Remark:

1. The worst case of conducted emission is mode 1; only the test data of it was reported.
2. For Radiated Test Cases, The tests were performance with Notebook.

2.3 Connection Diagram of Test System

AC Conducted Emission:



This example is connection diagram of EUT test configurations.

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

Radiated Emission:

This example is connection diagram of EUT test configurations.

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

2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latiude 3400	N/A	N/A	Unshielded, 1.8 m
3.	iPod	Apple	MC69029/A	N/A	N/A	N/A
4.	Test Jig	N/A	N/A	N/A	N/A	N/A

2.5 EUT Operation Test Setup

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

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

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 0.8 dB and 10dB attenuator.

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

= 0.8 + 10 = 10.8 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

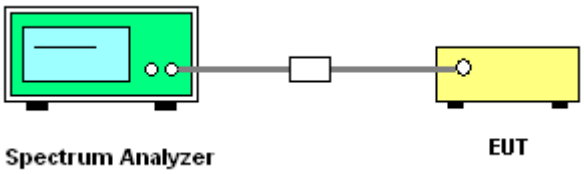
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

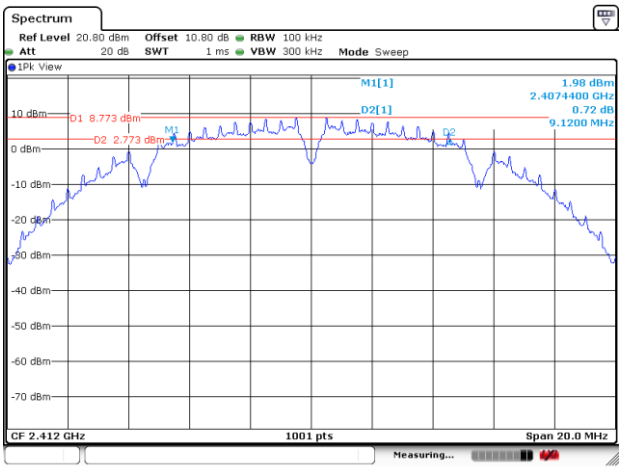
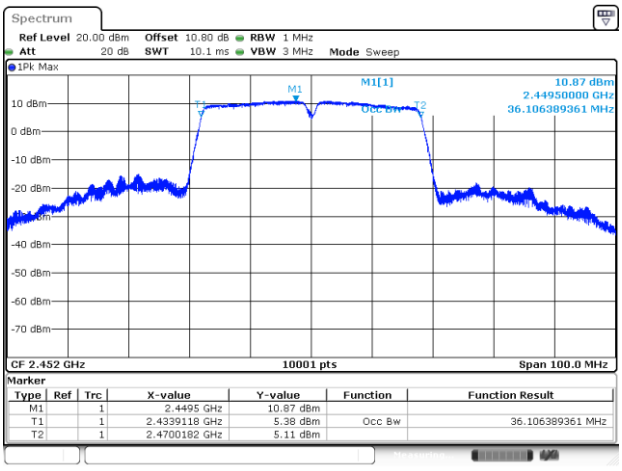
1. The testing follows ANSI C63.10-2013 clause 11.8
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) ≥ 3*RBW. 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) = 1%~5% of OBW and set the Video bandwidth (VBW) approximately three times the 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.

Minimum 6dB Bandwidth	Maximum 99% Occupied Bandwidth
	

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

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

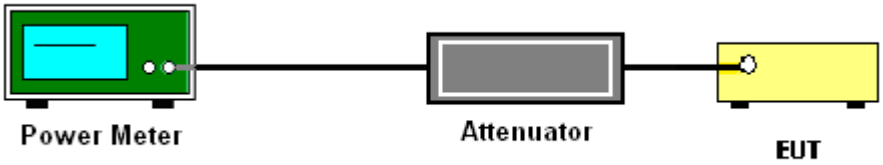
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.2.6 Test Result of Average Output Power (Reporting Only)

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

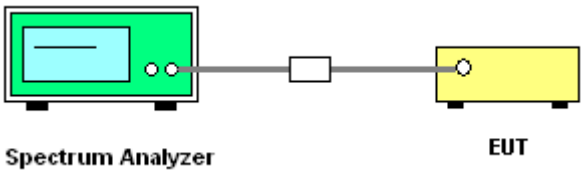
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

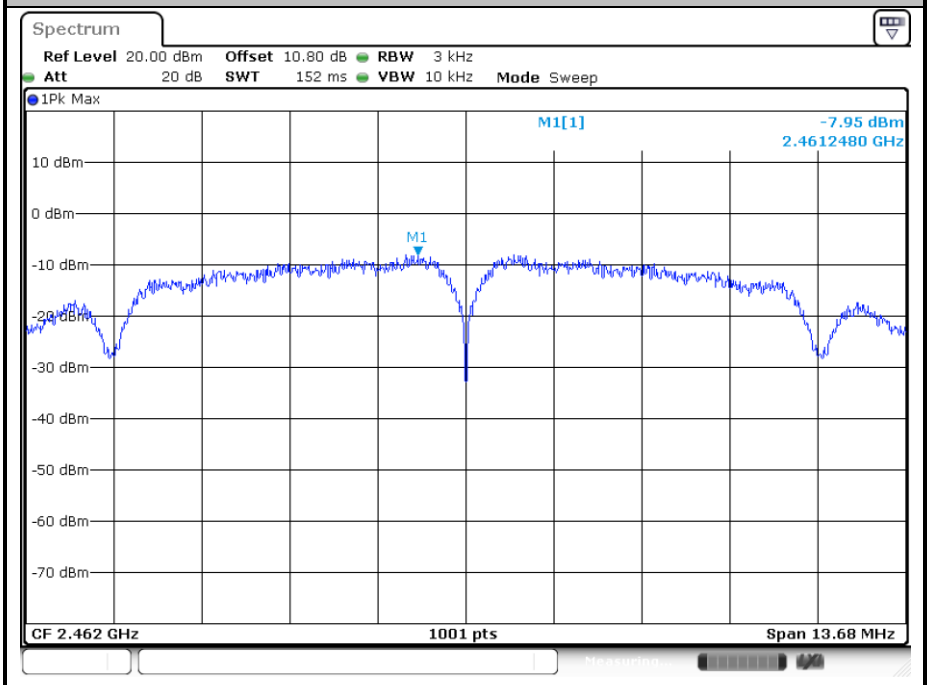
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/3kHz)



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 relative to the maximum PSD level in 100 kHz by RF conducted measurement.

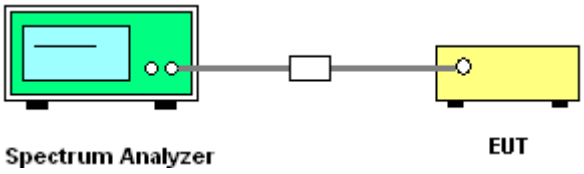
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows ANSI C63.10-2013 clause 11.11
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB 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



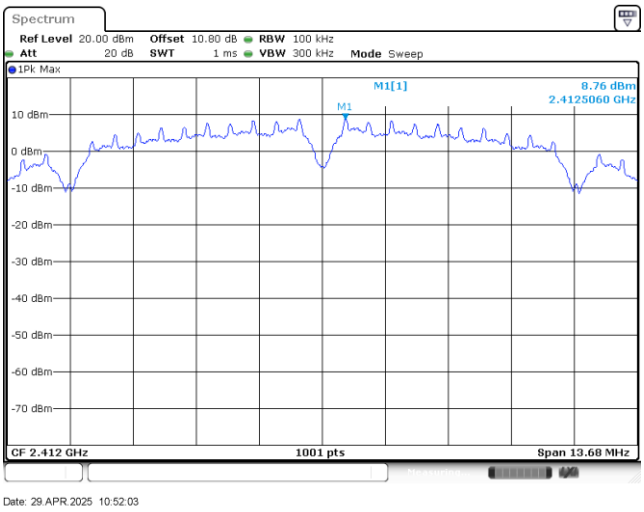
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Sam Zheng	**Temperature :**	24~26℃
		Relative Humidity :	50~53%

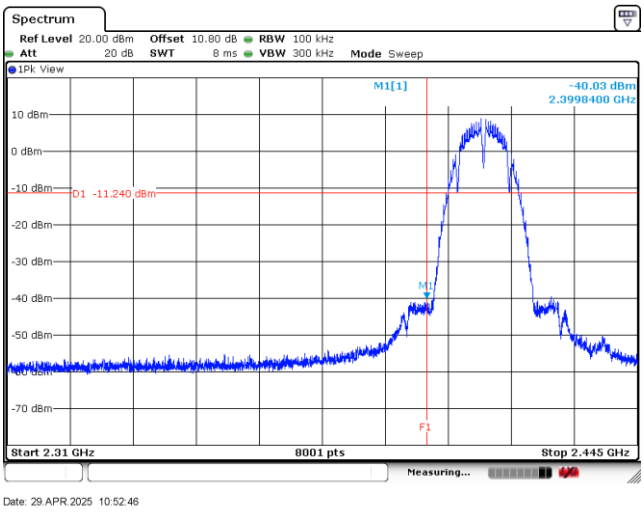
Number of TX = 1, Ant. 1 (Measured)

Test Mode :	802.11b	**Test Channel :**	01

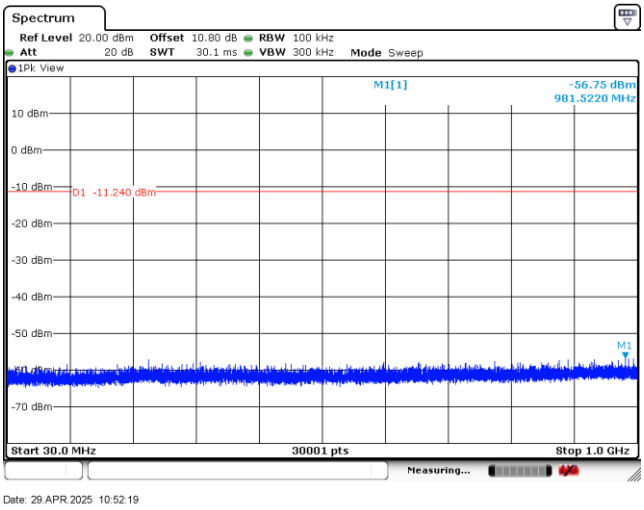
100kHz PSD reference Level



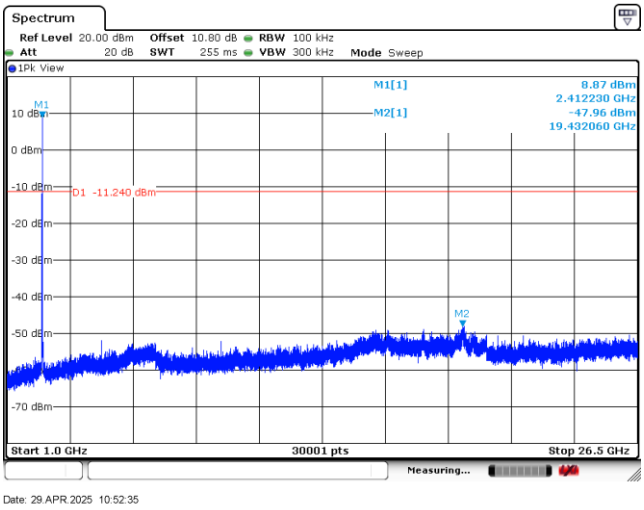
Channel Plot



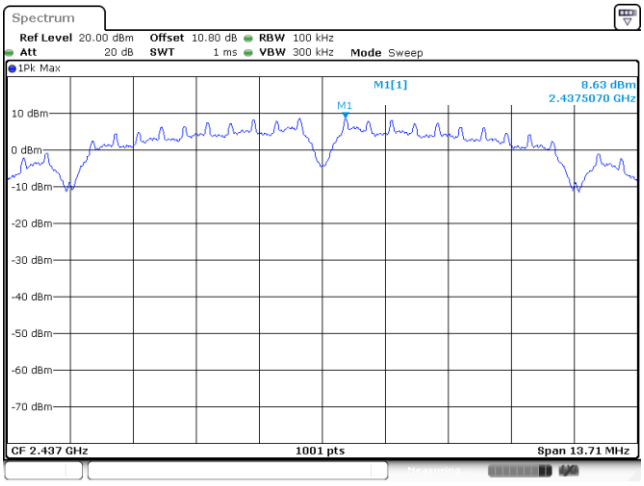
Spurious Emission Plot-1

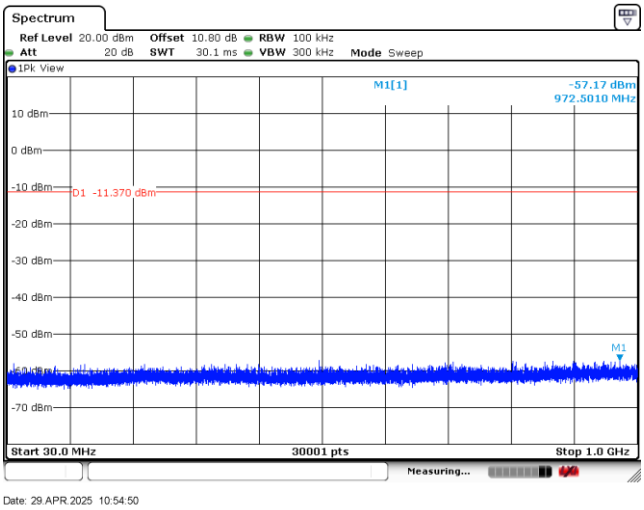
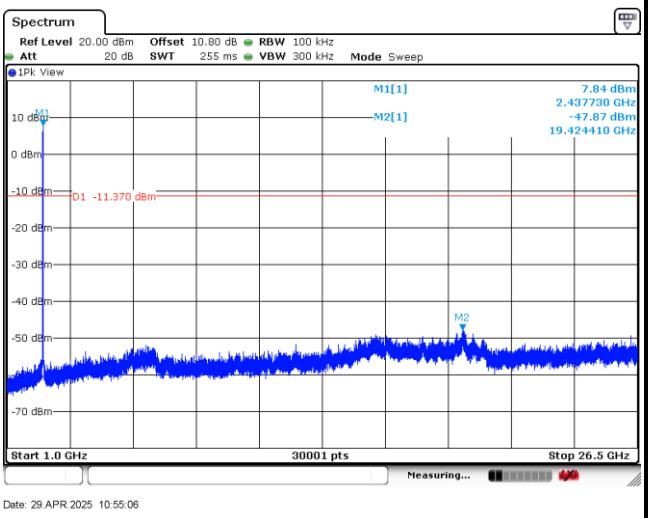


Spurious Emission Plot-2

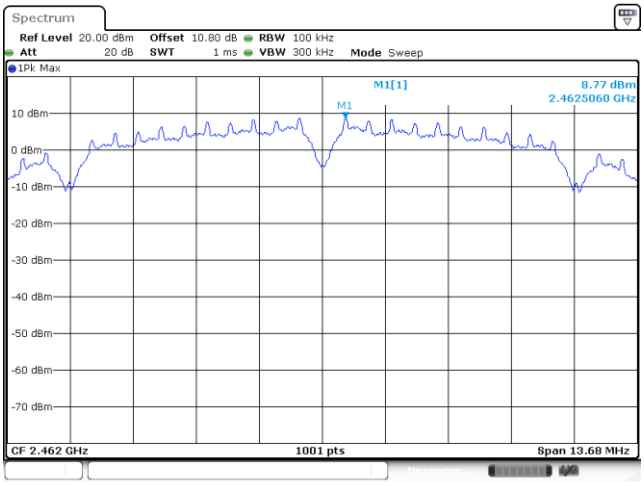
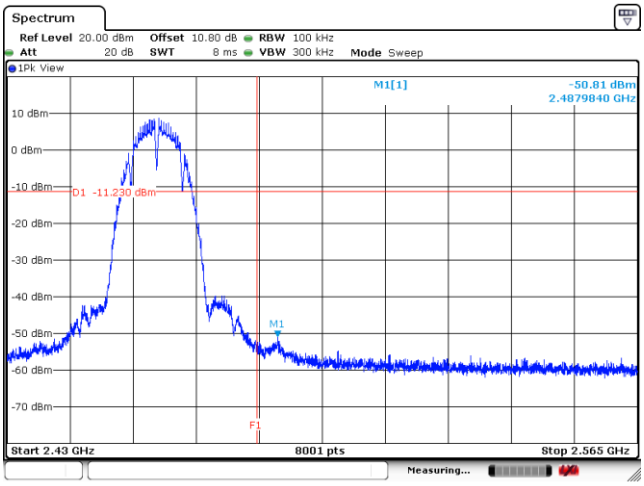
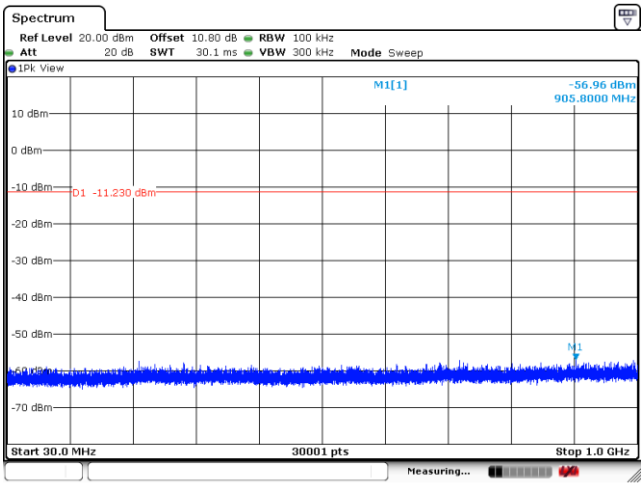
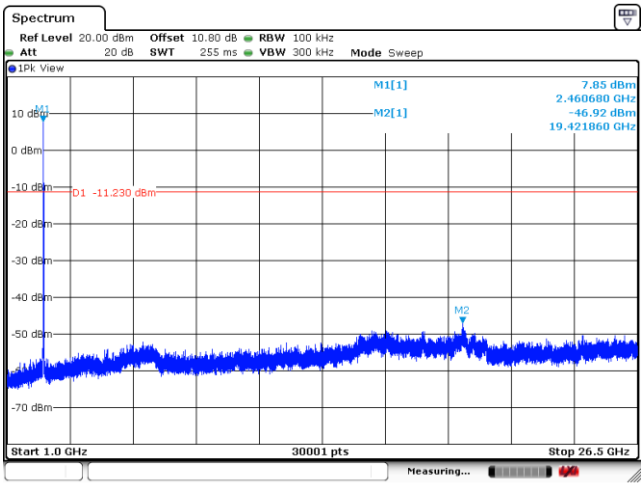


Test Mode :	802.11b	Test Channel :	06

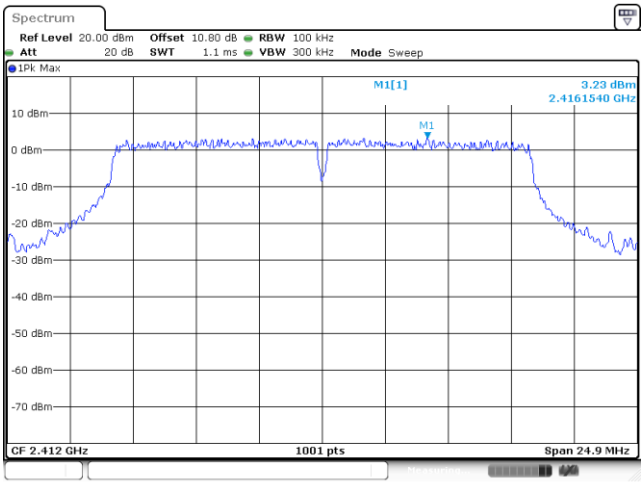
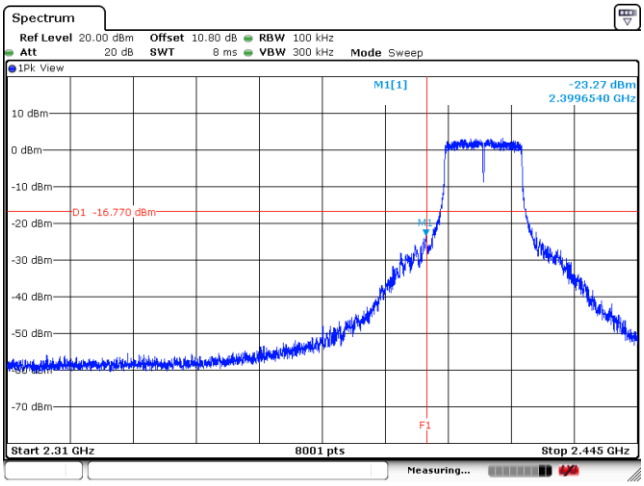
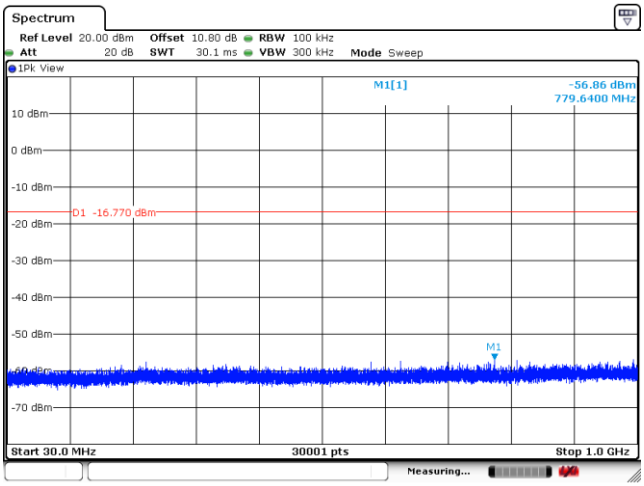
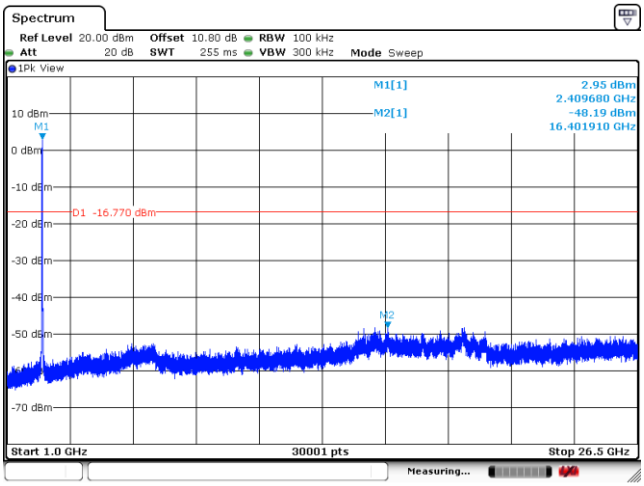
100kHz PSD reference Level	Channel Plot
	-

Spurious Emission Plot-1	Spurious Emission Plot-2
	

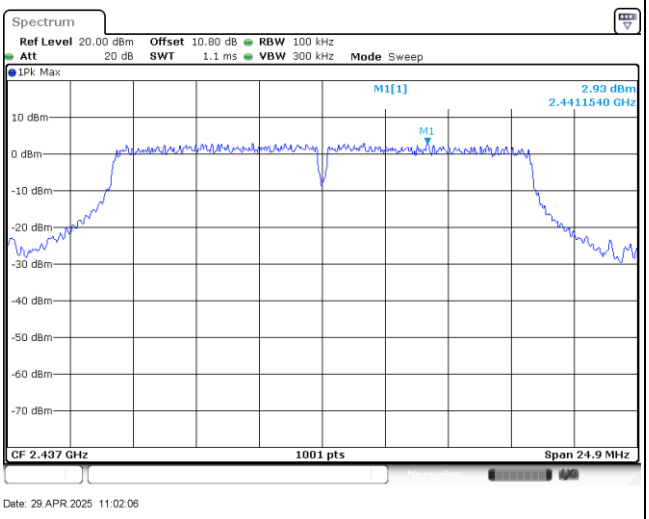
Test Mode :	802.11b	Test Channel :	11

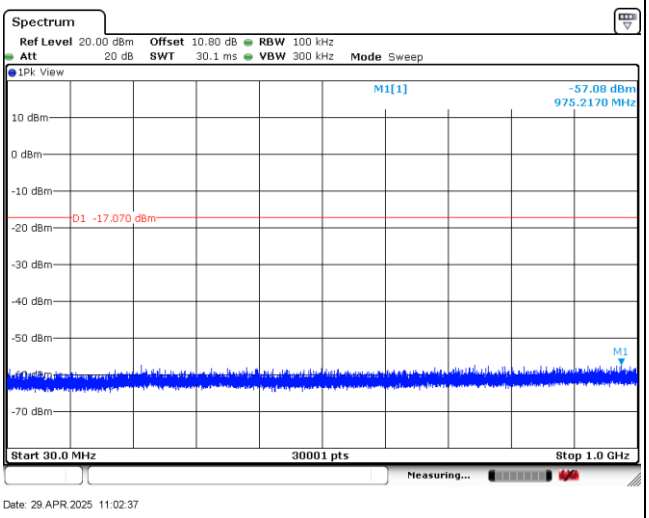
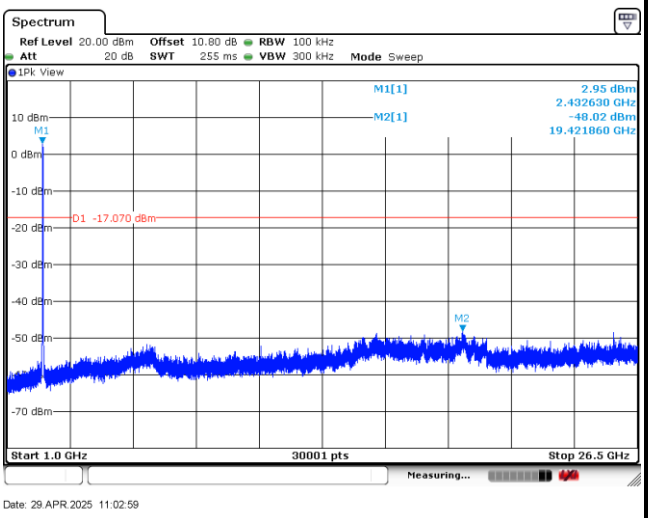
100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 10:56:16	Date: 29.APR.2025 10:57:25
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 10:56:55	Date: 29.APR.2025 10:57:13

Test Mode :	802.11g	Test Channel :	01

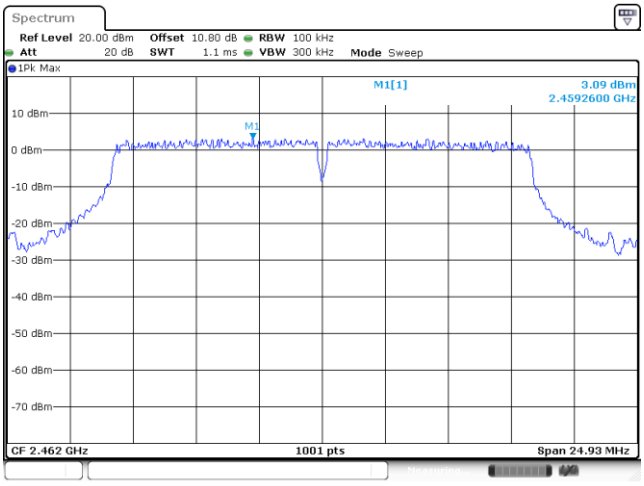
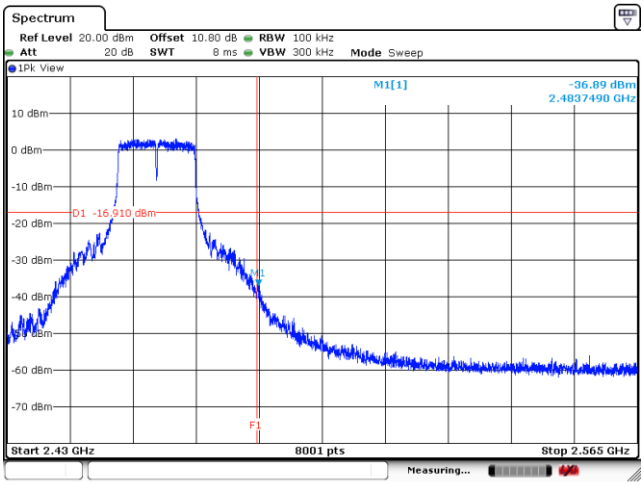
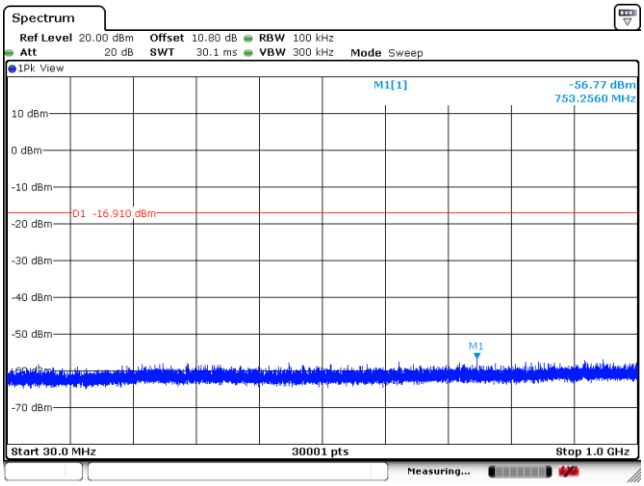
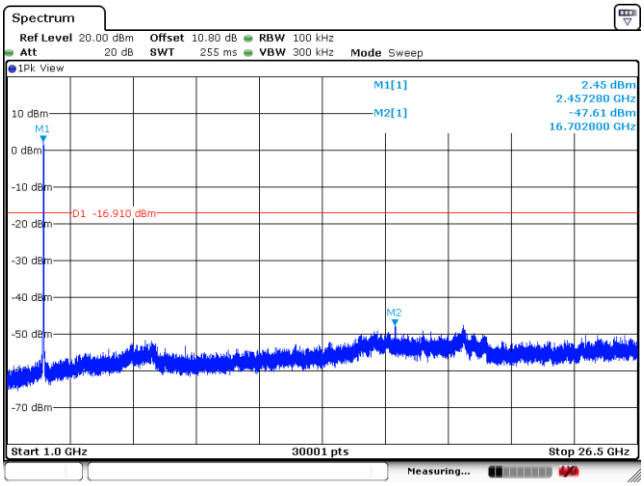
100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 10:59:55	Date: 29.APR.2025 11:00:52
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 11:00:14	Date: 29.APR.2025 11:00:38

Test Mode :	802.11g	Test Channel :	06

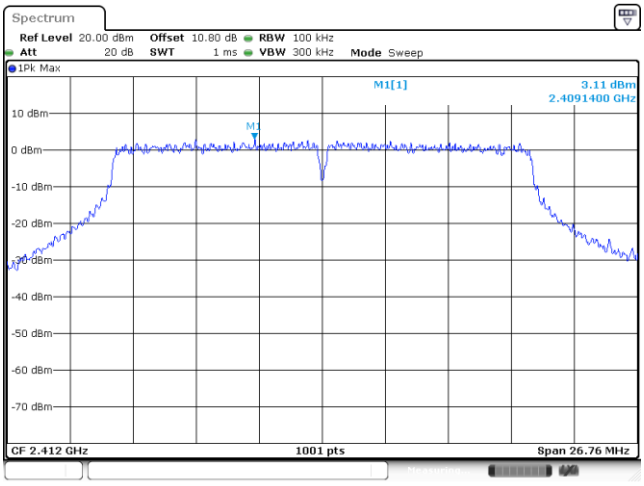
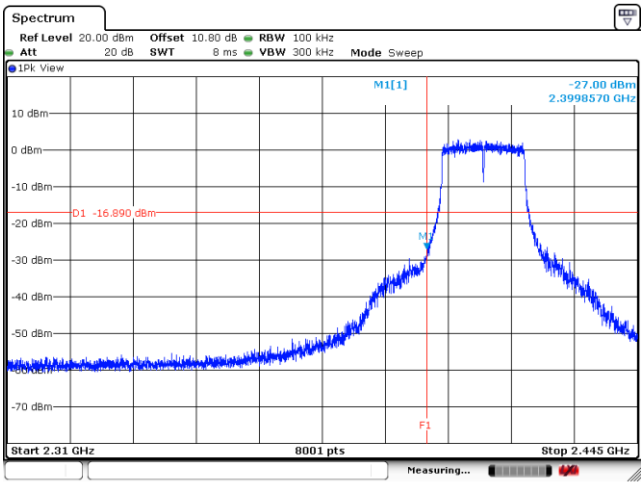
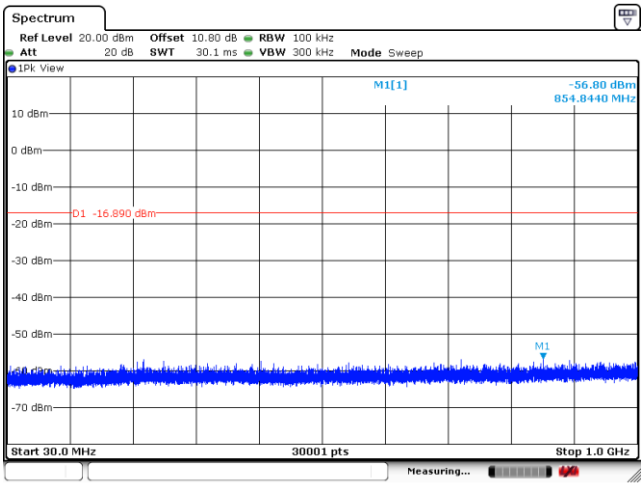
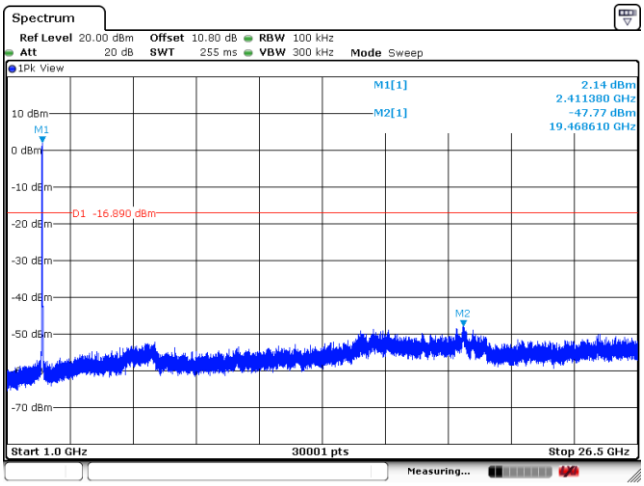
100kHz PSD reference Level	Channel Plot
	-

Spurious Emission Plot-1	Spurious Emission Plot-2
	

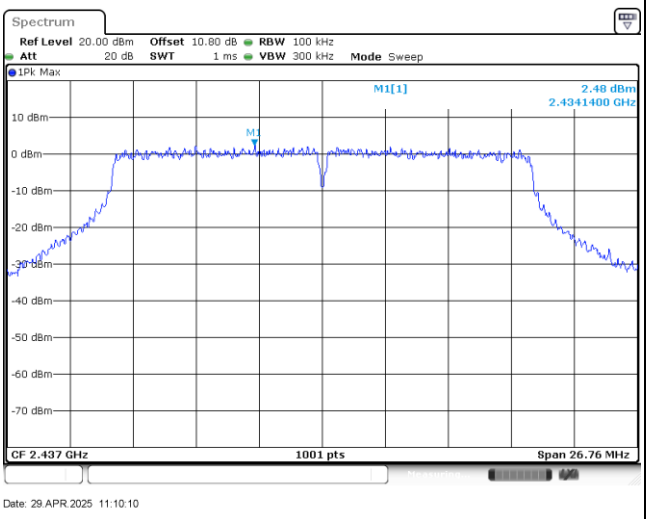
Test Mode :	802.11g	Test Channel :	11

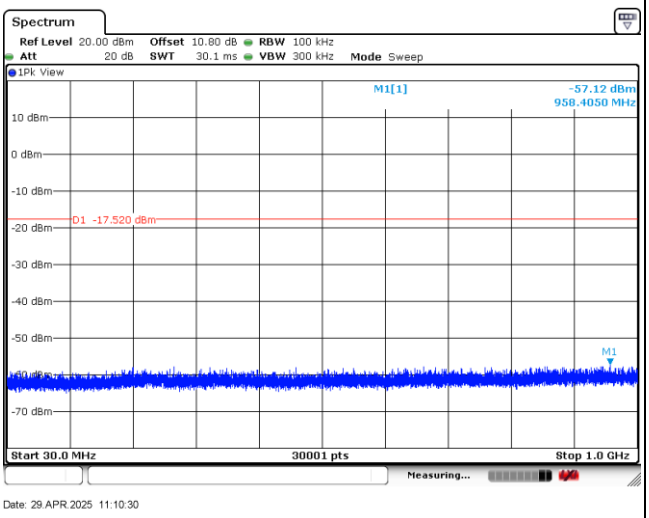
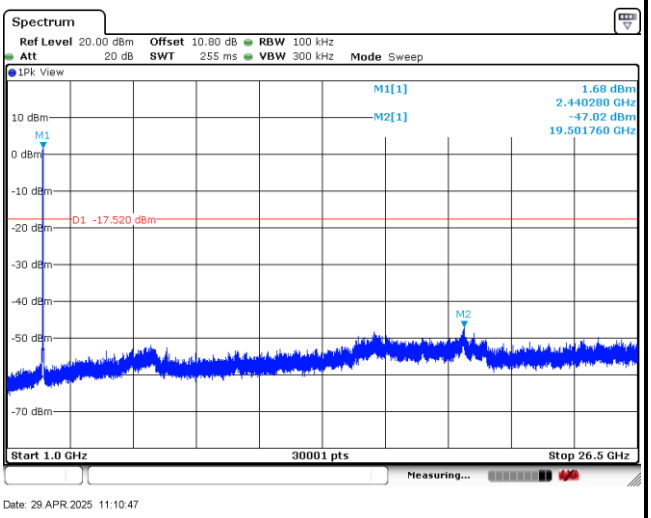
100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 11:04:25	Date: 29.APR.2025 11:05:15
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 11:04:42	Date: 29.APR.2025 11:05:03

Test Mode :	802.11n HT20	Test Channel :	01

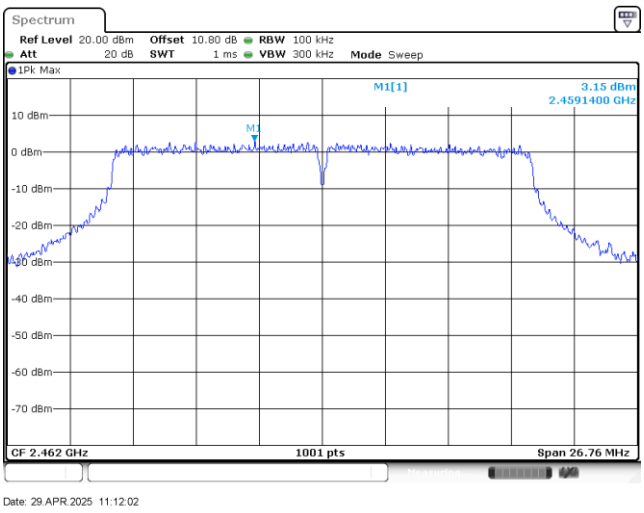
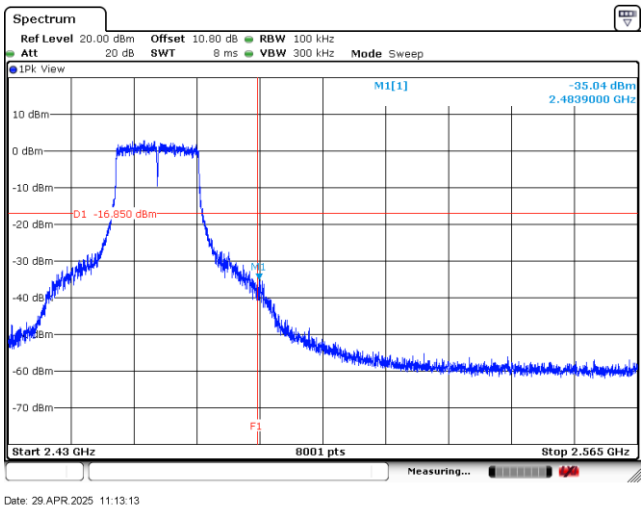
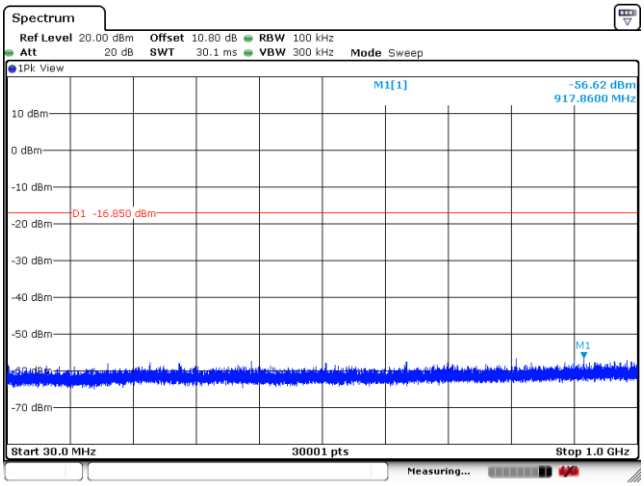
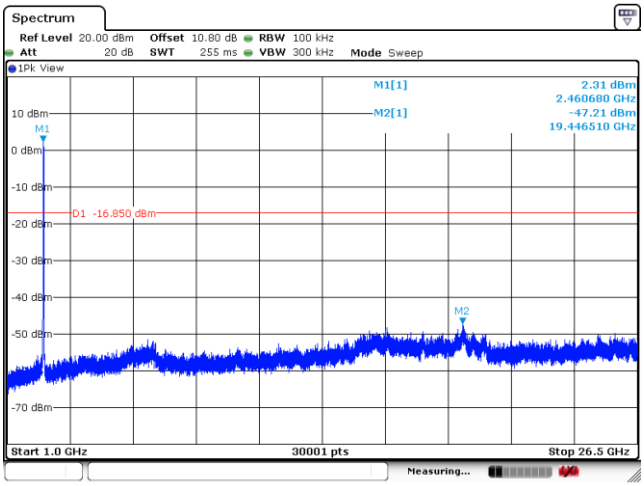
100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 11:07:33	Date: 29.APR.2025 11:08:35
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 11:07:50	Date: 29.APR.2025 11:08:06

Test Mode :	802.11n HT20	Test Channel :	06

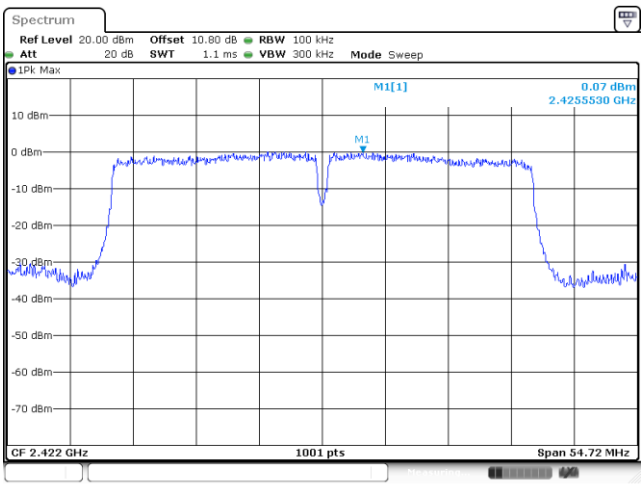
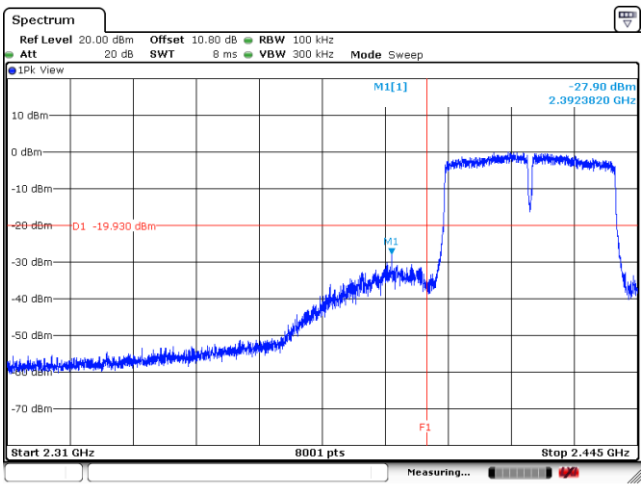
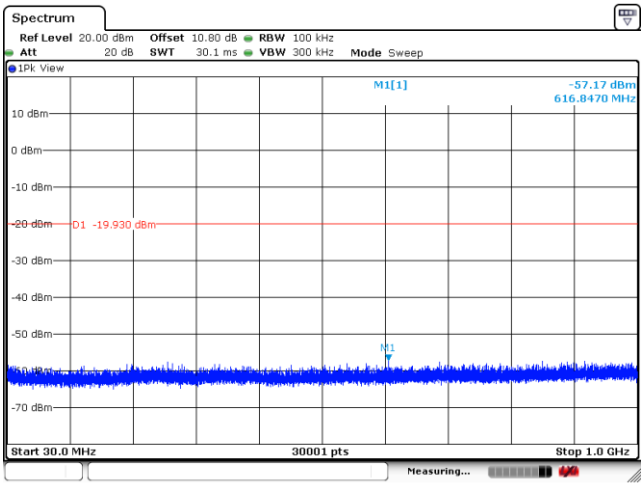
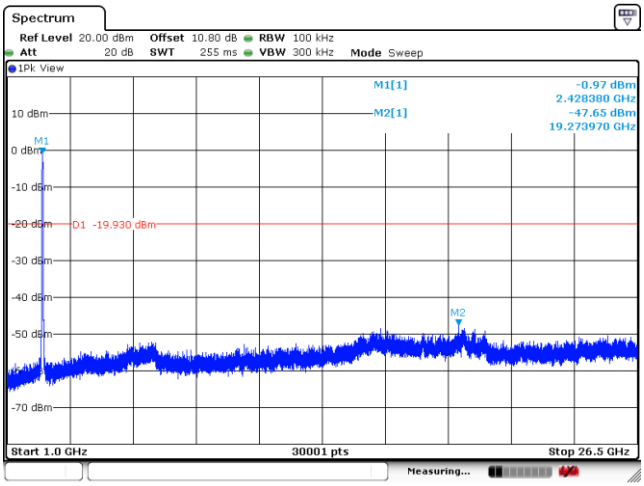
100kHz PSD reference Level	Channel Plot
	-

Spurious Emission Plot-1	Spurious Emission Plot-2
	

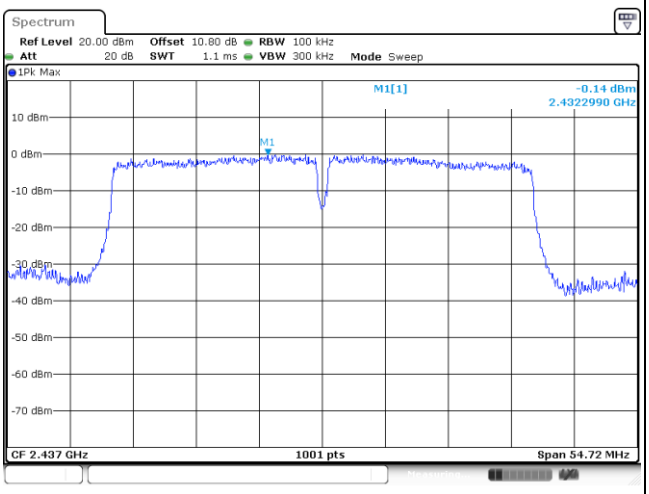
Test Mode :	802.11n HT20	Test Channel :	11

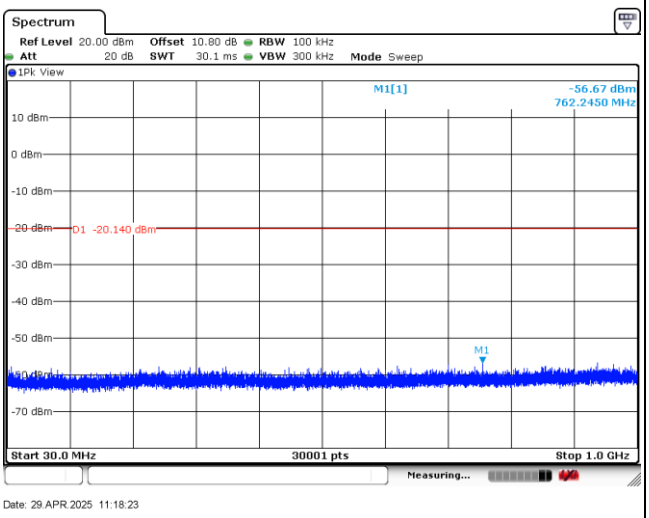
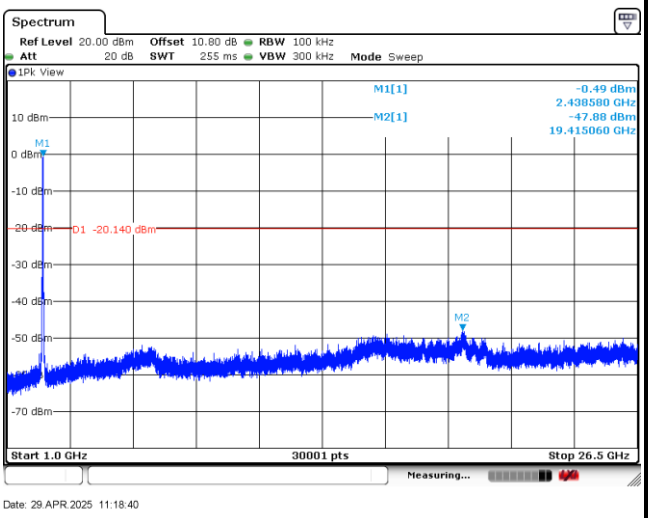
100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 11:12:02	Date: 29.APR.2025 11:13:13
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 11:12:22	Date: 29.APR.2025 11:12:37

Test Mode :	802.11n HT40	Test Channel :	03

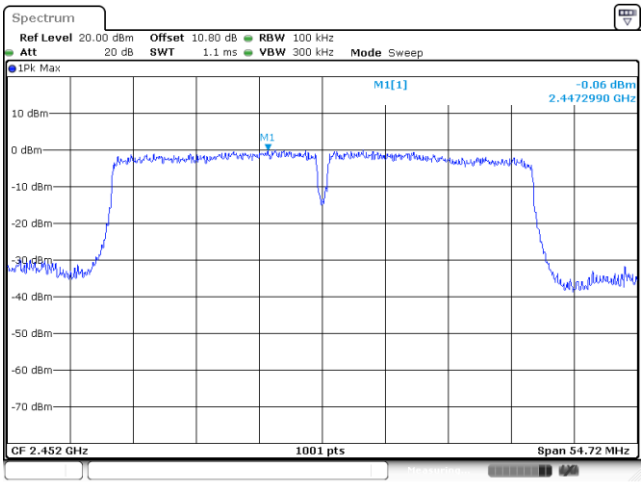
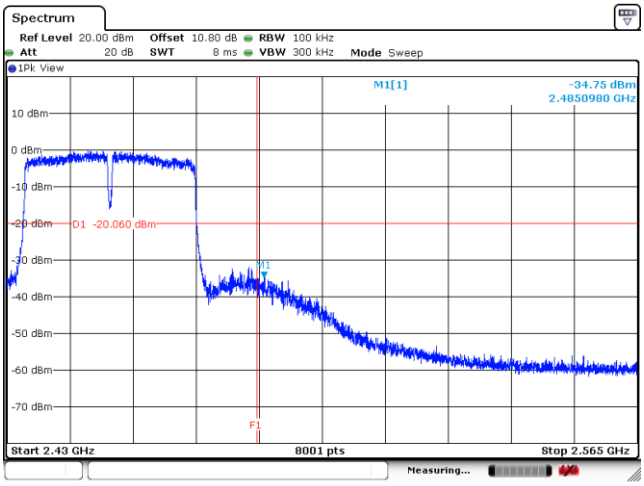
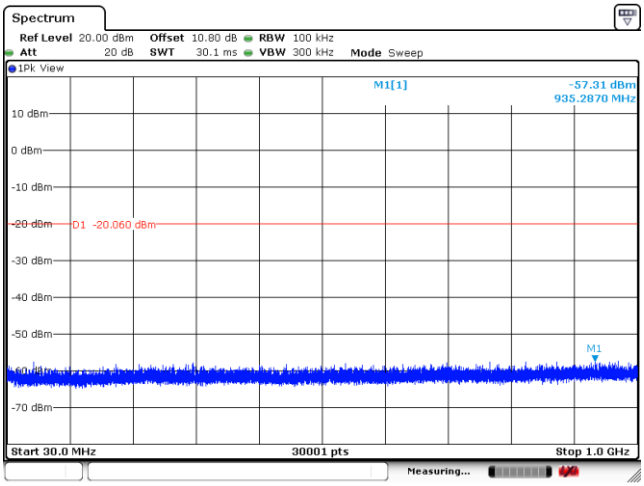
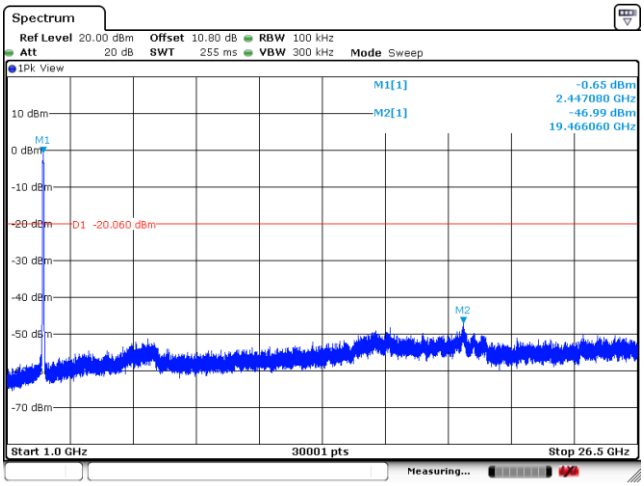
100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 11:15:09	Date: 29.APR.2025 11:16:29
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 11:15:31	Date: 29.APR.2025 11:16:12

Test Mode :	802.11n HT40	Test Channel :	06

100kHz PSD reference Level	Channel Plot
	

Spurious Emission Plot-1	Spurious Emission Plot-2
	

Test Mode :	802.11n HT40	Test Channel :	09

100kHz PSD reference Level	Channel Plot
	
Date: 29.APR.2025 11:20:04	Date: 29.APR.2025 11:21:05
Spurious Emission Plot-1	**Spurious Emission Plot-2**
	
Date: 29.APR.2025 11:20:27	Date: 29.APR.2025 11:20:53

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 was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.5.2 Measuring Instruments

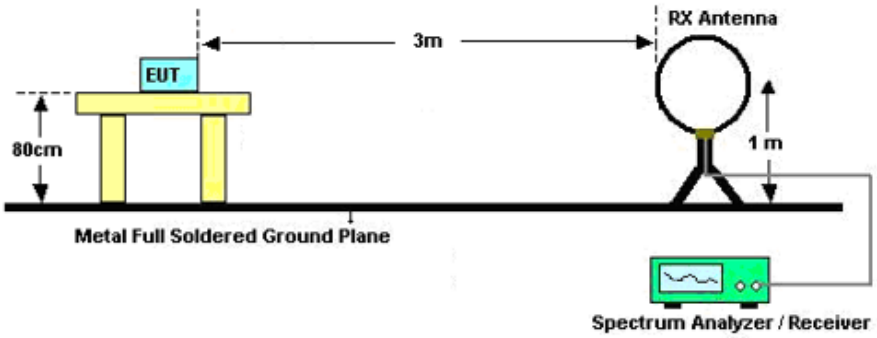
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

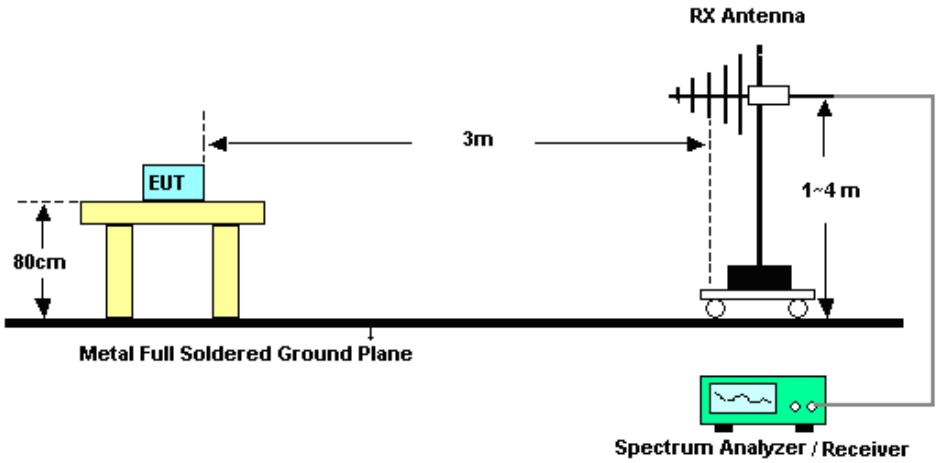
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

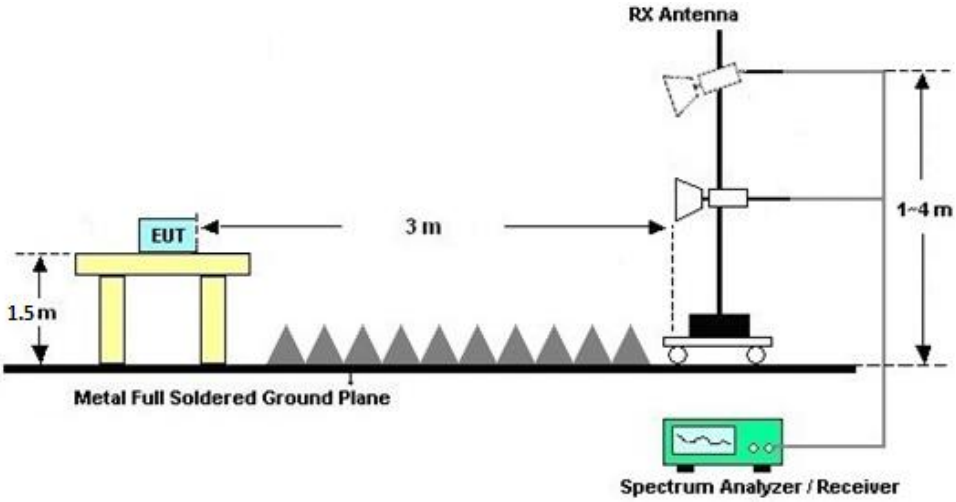
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.5.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

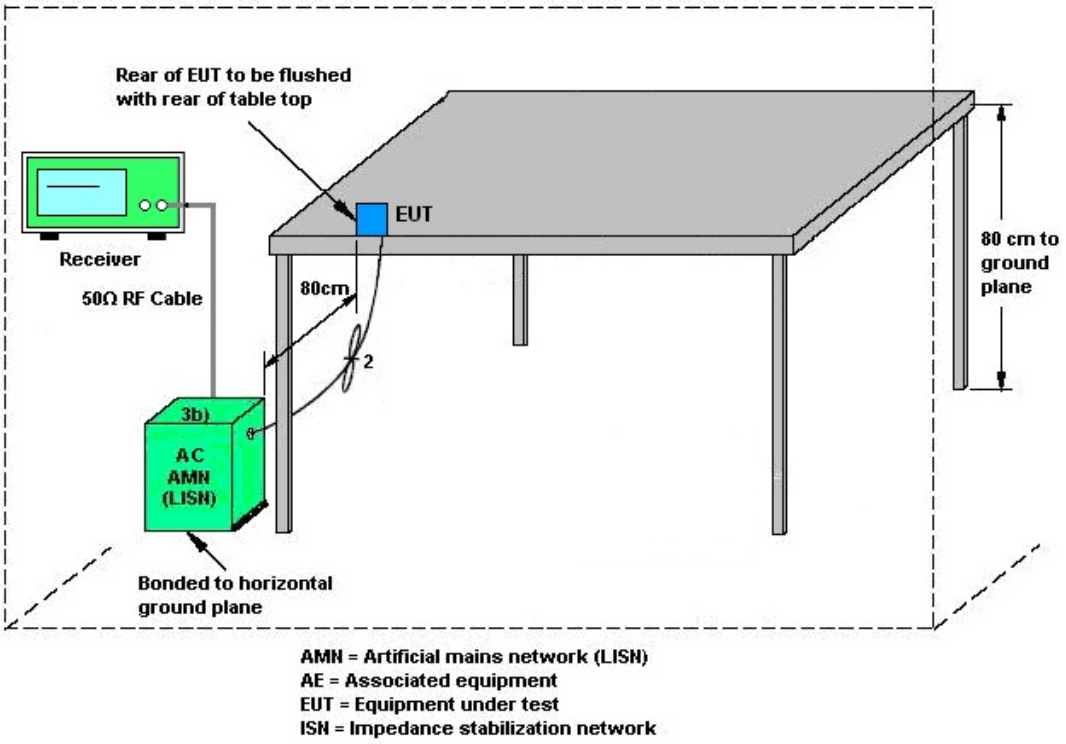
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

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

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 14, 2024	May 12, 2025~ May 13, 2025	Oct. 13, 2025	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	May 12, 2025~ May 13, 2025	Jul. 02, 2025	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	May 12, 2025~ May 13, 2025	Dec. 27, 2025	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	May 09, 2025	May 12, 2025~ May 13, 2025	May 08, 2026	Radiation (03CH04-SZ)
Double Ridge Guide Antenna	ETS-Lindgren	Burgeon-3117	00240057	1GHz~18GHz	Jul. 13, 2024	May 12, 2025~ May 13, 2025	Jul. 12, 2025	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 04, 2024	May 12, 2025~ May 13, 2025	Jul. 03, 2025	Radiation (03CH04-SZ)
LF Amplifier	EM Electronics	EM330	060773	20MHz-3GHz	Apr. 02, 2025	May 12, 2025~ May 13, 2025	Apr. 01, 2026	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	May 12, 2025~ May 13, 2025	Oct. 13, 2025	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	May 12, 2025~ May 13, 2025	Jul. 02, 2025	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY57280136	500MHz~26.5GHz	Jul. 03, 2024	May 12, 2025~ May 13, 2025	Jul. 02, 2025	Radiation (03CH04-SZ)
AC Power Source	APC	AFV-S-600B	F119050019	N/A	Oct. 14, 2024	May 12, 2025~ May 13, 2025	Oct. 13, 2025	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 12, 2025~ May 13, 2025	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 12, 2025~ May 13, 2025	NCR	Radiation (03CH04-SZ)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 03, 2024	May 06, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 03, 2024	May 06, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec.25, 2024	May 06, 2025	Dec. 24, 2025	Conduction (CO02-SZ)
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 02, 2025	Apr. 29, 2025	Apr. 01, 2026	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 25, 2024	Apr. 29, 2025	Dec. 24, 2025	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Oct. 14,2024	Apr. 29, 2025	Oct. 13, 2025	Conducted (TH01-SZ)

NCR: No Calibration Required

5 Measurement Uncertainty

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

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Conducted Power Spectral Density	±1.32 dB
Frequency	±1.3 Hz

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.5 dB

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

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

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

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

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

Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Sam Zheng	Temperature:	21~25	°C
Test Date:	2025/4/29	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band								
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
					Ant 1	Ant 1		
11b	1Mbps	1	1	2412	13.893	9.12	0.50	Pass
11b	1Mbps	1	6	2437	13.930	9.14	0.50	Pass
11b	1Mbps	1	11	2462	13.793	9.12	0.50	Pass
11g	6Mbps	1	1	2412	16.983	16.60	0.50	Pass
11g	6Mbps	1	6	2437	17.023	16.60	0.50	Pass
11g	6Mbps	1	11	2462	17.033	16.62	0.50	Pass
HT20	MCS0	1	1	2412	18.113	17.84	0.50	Pass
HT20	MCS0	1	6	2437	18.098	17.84	0.50	Pass
HT20	MCS0	1	11	2462	18.118	17.84	0.50	Pass
HT40	MCS0	1	3	2422	36.096	36.48	0.50	Pass
HT40	MCS0	1	6	2437	36.096	36.48	0.50	Pass
HT40	MCS0	1	9	2452	36.106	36.48	0.50	Pass

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band								
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)	DG (dBi)	Peak PSD Limit (dBm/3kHz)	Pass/Fail
					Ant 1	Ant 1	Ant 1	
11b	1Mbps	1	1	2412	-7.97	0.88	8.00	Pass
11b	1Mbps	1	6	2437	-8.08	0.88	8.00	Pass
11b	1Mbps	1	11	2462	-7.95	0.88	8.00	Pass
11g	6Mbps	1	1	2412	-11.18	0.88	8.00	Pass
11g	6Mbps	1	6	2437	-11.37	0.88	8.00	Pass
11g	6Mbps	1	11	2462	-11.15	0.88	8.00	Pass
HT20	MCS0	1	1	2412	-10.74	0.88	8.00	Pass
HT20	MCS0	1	6	2437	-11.21	0.88	8.00	Pass
HT20	MCS0	1	11	2462	-10.79	0.88	8.00	Pass
HT40	MCS0	1	3	2422	-11.66	0.88	8.00	Pass
HT40	MCS0	1	6	2437	-13.04	0.88	8.00	Pass
HT40	MCS0	1	9	2452	-11.63	0.88	8.00	Pass

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

TEST RESULTS DATA
Average Output Power

2.4GHz Band											
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	Setting
					Ant 1	Ant 1	Ant 1	Ant 1	Ant 1		Ant 1
11b	1Mbps	1	1	2412	12.90	30.00	0.88	13.78	36.00	Pass	71.00
11b	1Mbps	1	6	2437	11.80	30.00	0.88	12.68	36.00	Pass	68.00
11b	1Mbps	1	11	2462	11.50	30.00	0.88	12.38	36.00	Pass	67.00
11g	6Mbps	1	1	2412	18.50	30.00	0.88	19.38	36.00	Pass	93.00
11g	6Mbps	1	6	2437	18.10	30.00	0.88	18.98	36.00	Pass	93.00
11g	6Mbps	1	11	2462	18.10	30.00	0.88	18.98	36.00	Pass	93.00
HT20	MCS0	1	1	2412	17.80	30.00	0.88	18.68	36.00	Pass	90.00
HT20	MCS0	1	6	2437	17.20	30.00	0.88	18.08	36.00	Pass	90.00
HT20	MCS0	1	11	2462	17.50	30.00	0.88	18.38	36.00	Pass	90.00
HT40	MCS0	1	3	2422	17.60	30.00	0.88	18.48	36.00	Pass	90.00
HT40	MCS0	1	6	2437	17.20	30.00	0.88	18.08	36.00	Pass	90.00
HT40	MCS0	1	9	2452	17.30	30.00	0.88	18.18	36.00	Pass	90.00

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

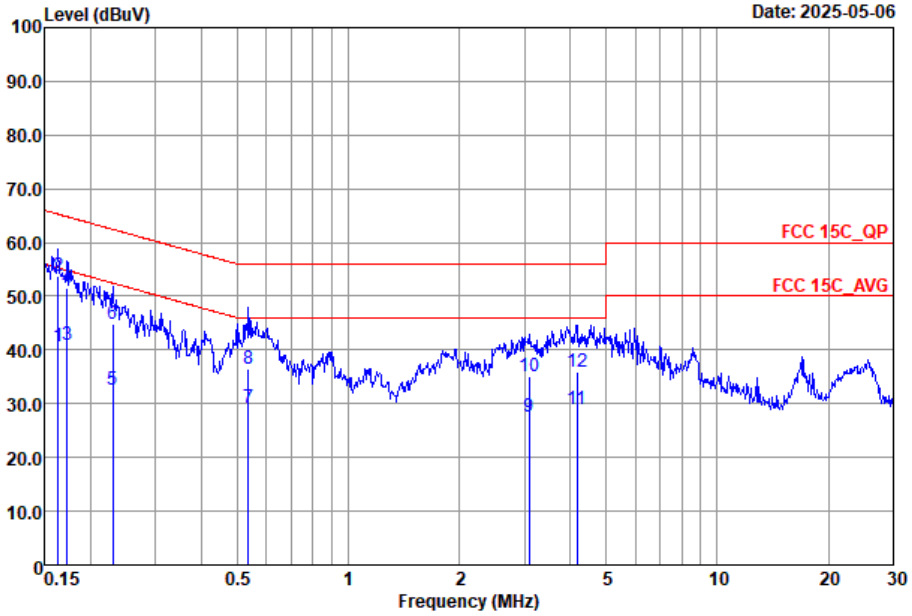
TEST RESULTS DATA
Peak Output Power

2.4GHz Band										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 1	Ant 1	Ant 1	Ant 1	
11b	1Mbps	1	1	2412	15.50	30.00	0.88	16.38	36.00	Pass
11b	1Mbps	1	6	2437	14.51	30.00	0.88	15.39	36.00	Pass
11b	1Mbps	1	11	2462	14.22	30.00	0.88	15.10	36.00	Pass
11g	6Mbps	1	1	2412	27.23	30.00	0.88	28.11	36.00	Pass
11g	6Mbps	1	6	2437	26.80	30.00	0.88	27.68	36.00	Pass
11g	6Mbps	1	11	2462	26.84	30.00	0.88	27.72	36.00	Pass
HT20	MCS0	1	1	2412	26.96	30.00	0.88	27.84	36.00	Pass
HT20	MCS0	1	6	2437	26.46	30.00	0.88	27.34	36.00	Pass
HT20	MCS0	1	11	2462	26.40	30.00	0.88	27.28	36.00	Pass
HT40	MCS0	1	3	2422	26.52	30.00	0.88	27.40	36.00	Pass
HT40	MCS0	1	6	2437	26.22	30.00	0.88	27.10	36.00	Pass
HT40	MCS0	1	9	2452	26.08	30.00	0.88	26.96	36.00	Pass

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

Appendix B. AC Conducted Emission Test Results

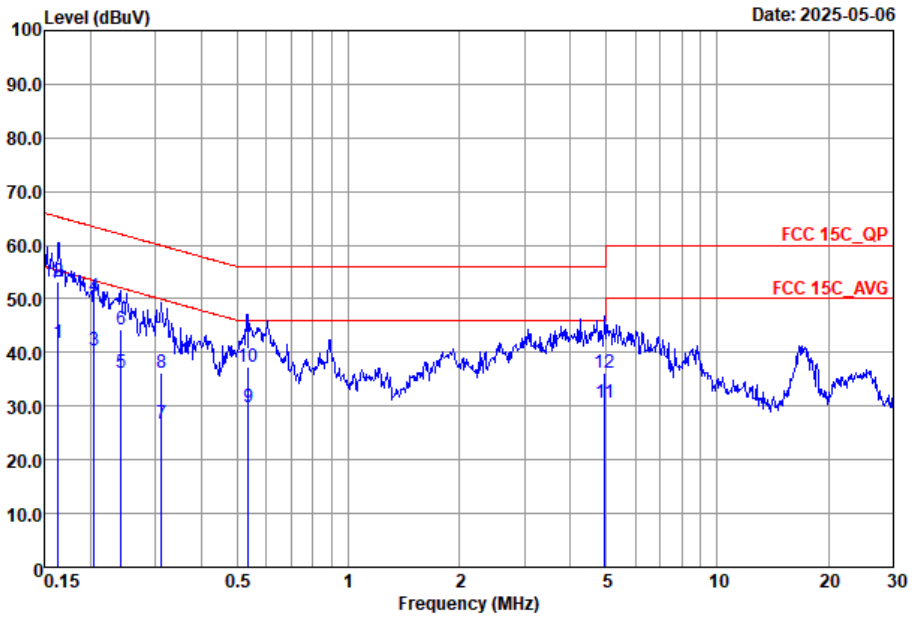
Test Engineer :	Nathon & Xuruibin	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO02-SZ
Condition : FCC 15C_QP LISN_2025-L LINE

		Freq MHz	Level dBuV	Over Limit dB	Limit Line dBuV	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark
1		0.16	40.66	-14.64	55.30	20.80	9.67	10.19	Average
2	*	0.16	53.86	-11.44	65.30	34.00	9.67	10.19	QP
3		0.17	40.87	-13.94	54.81	21.01	9.68	10.18	Average
4		0.17	51.57	-13.24	64.81	31.71	9.68	10.18	QP
5		0.23	32.51	-19.93	52.44	12.60	9.72	10.19	Average
6		0.23	44.91	-17.53	62.44	25.00	9.72	10.19	QP
7		0.53	29.21	-16.79	46.00	9.30	9.67	10.24	Average
8		0.53	36.41	-19.59	56.00	16.50	9.67	10.24	QP
9		3.09	27.52	-18.48	46.00	7.60	9.66	10.26	Average
10		3.09	35.02	-20.98	56.00	15.10	9.66	10.26	QP
11		4.16	29.03	-16.97	46.00	9.10	9.66	10.27	Average
12		4.16	35.83	-20.17	56.00	15.90	9.66	10.27	QP

Test Engineer :	Nathon & Xuruibin	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO02-SZ
Condition : FCC 15C_QP LISN_2025-N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.16	41.77	-13.53	55.30	21.90	9.68	10.19	Average
2	*	0.16	53.07	-12.23	65.30	33.20	9.68	10.19	QP
3		0.21	40.31	-13.09	53.40	20.31	9.82	10.18	Average
4		0.21	50.41	-12.99	63.40	30.41	9.82	10.18	QP
5		0.24	36.16	-15.88	52.04	16.40	9.57	10.19	Average
6		0.24	44.26	-17.78	62.04	24.50	9.57	10.19	QP
7		0.31	26.82	-23.11	49.93	6.80	9.81	10.21	Average
8		0.31	36.32	-23.61	59.93	16.30	9.81	10.21	QP
9		0.53	29.86	-16.14	46.00	10.00	9.62	10.24	Average
10		0.53	37.26	-18.74	56.00	17.40	9.62	10.24	QP
11		4.95	30.77	-15.23	46.00	10.80	9.70	10.27	Average
12		4.95	36.27	-19.73	56.00	16.30	9.70	10.27	QP

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission

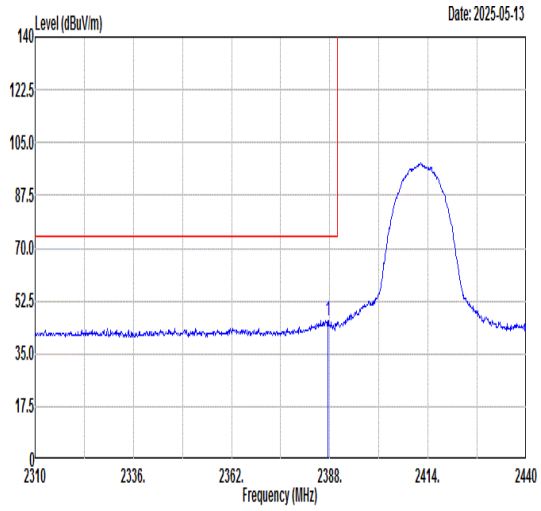
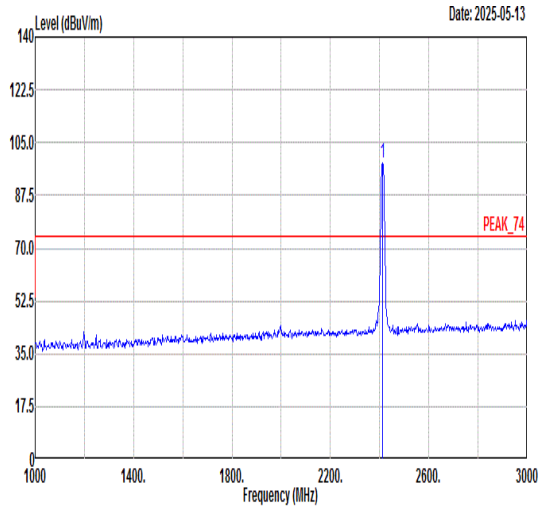
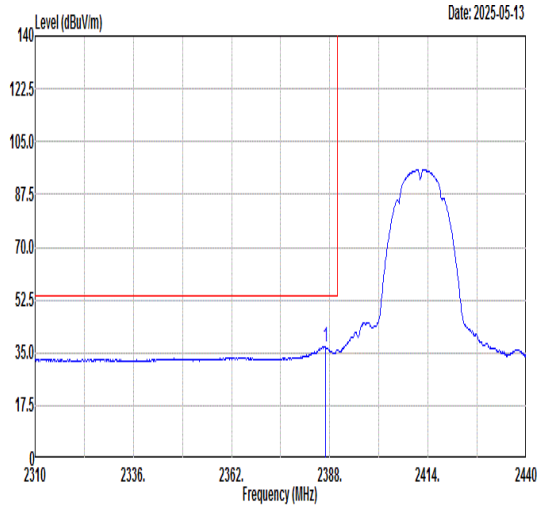
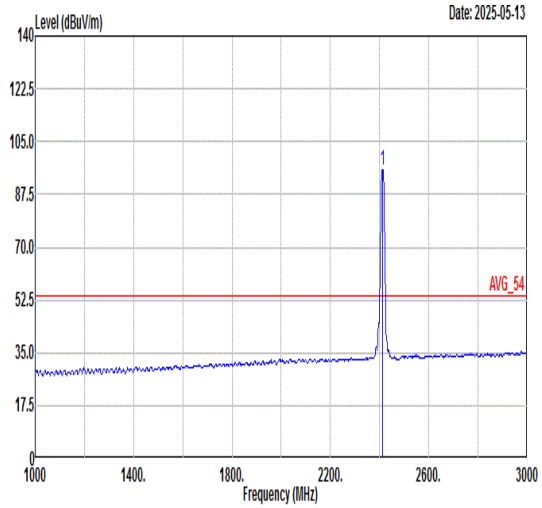
Test Engineer :	Winter	Relative Humidity :	50%
		Temperature :	20℃-22℃

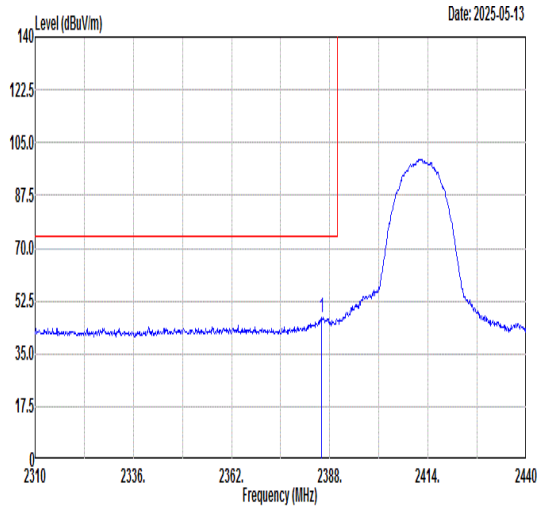
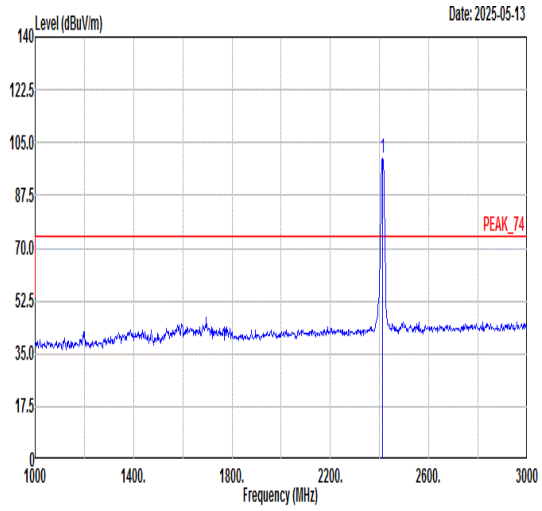
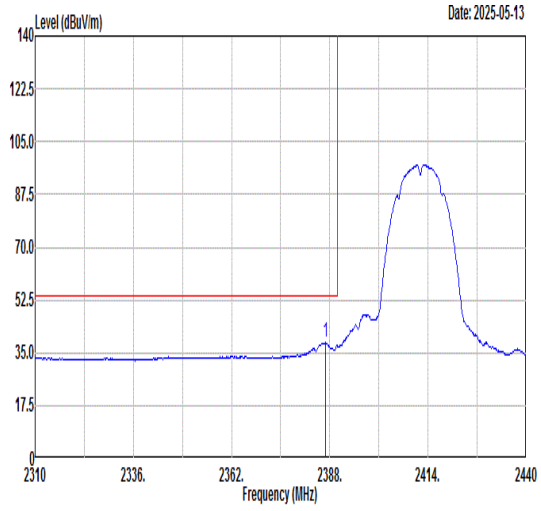
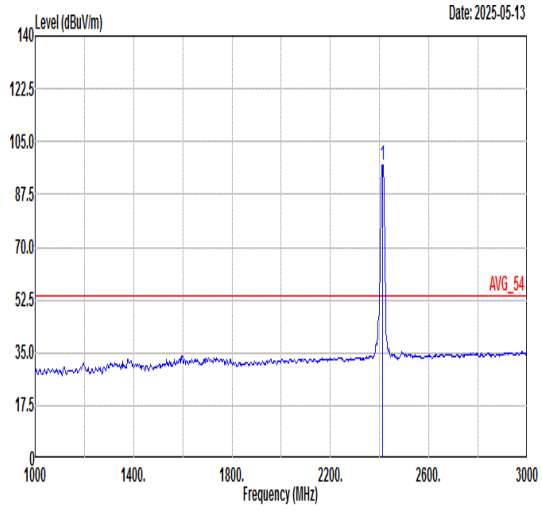
Radiated Spurious Emission Test Modes

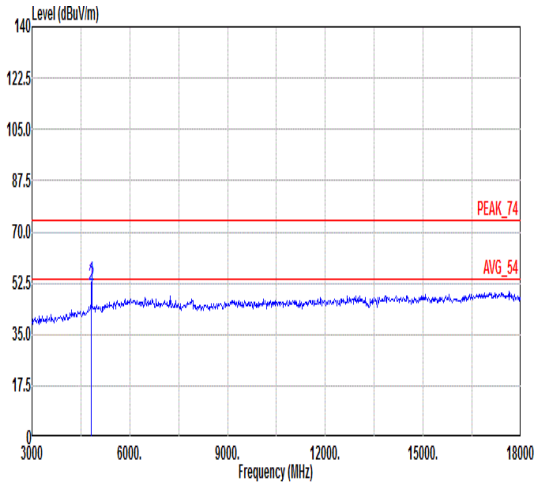
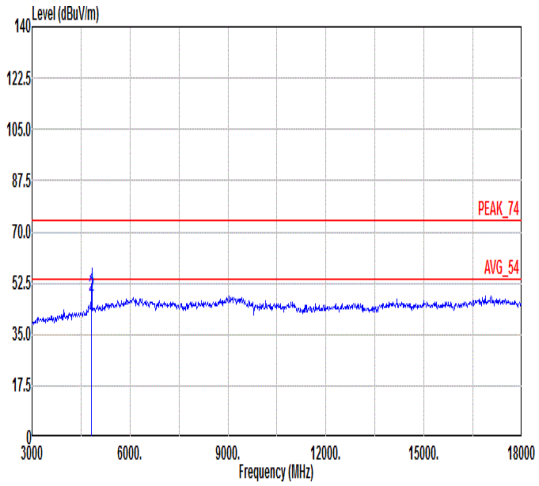
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 7	2400-2483.5	1	802.11b	01	2412	1Mbps	-	-
Mode 8	2400-2483.5	1	802.11b	06	2437	1Mbps	-	-
Mode 9	2400-2483.5	1	802.11b	11	2462	1Mbps	-	-
Mode 10	2400-2483.5	1	802.11g	01	2412	6Mbps	-	-
Mode 11	2400-2483.5	1	802.11g	06	2437	6Mbps	-	-
Mode 12	2400-2483.5	1	802.11g	11	2462	6Mbps	-	-
Mode 13	2400-2483.5	1	802.11n HT20	01	2412	MCS0	-	-
Mode 14	2400-2483.5	1	802.11n HT20	06	2437	MCS0	-	-
Mode 15	2400-2483.5	1	802.11n HT20	11	2462	MCS0	-	-
Mode 16	2400-2483.5	1	802.11n HT40	03	2422	MCS0	-	-
Mode 17	2400-2483.5	1	802.11n HT40	06	2437	MCS0	-	-
Mode 18	2400-2483.5	1	802.11n HT40	09	2452	MCS0	-	-
Mode 19	2400-2483.5	1	802.11b	06	2437	1Mbps	-	LF

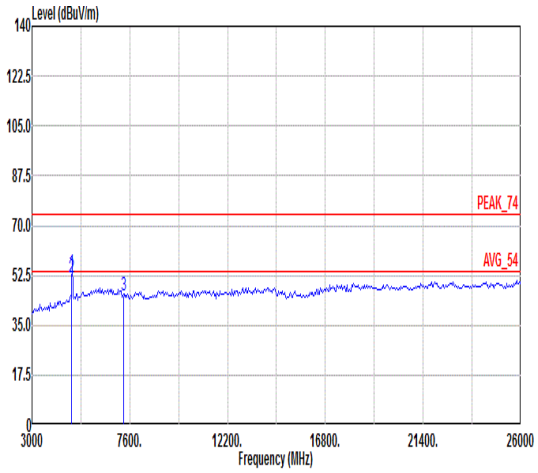
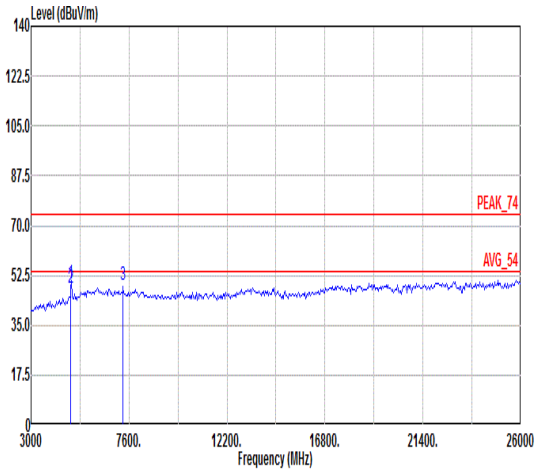
Summary of each worse mode

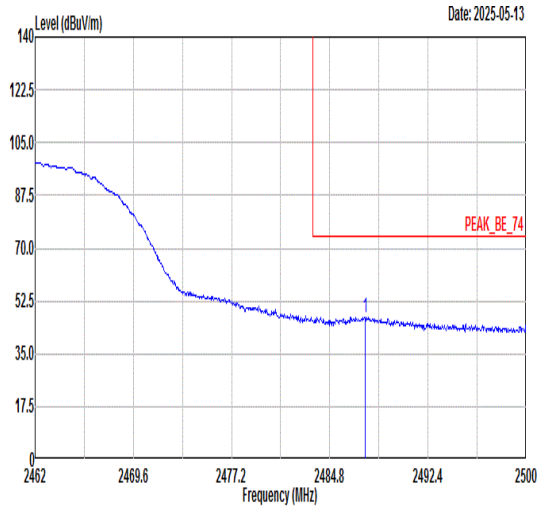
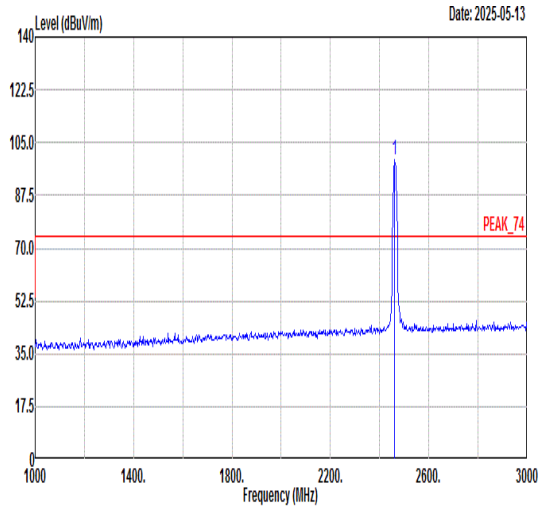
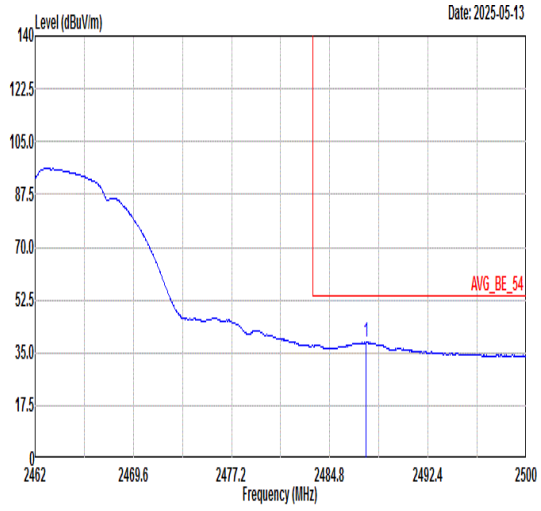
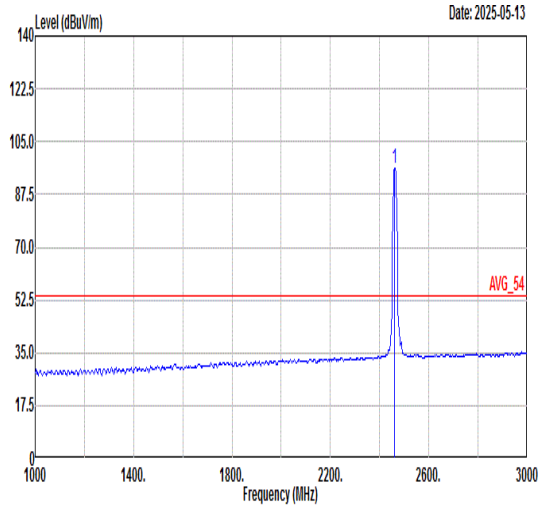
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
7	802.11b	01	2386.96	38.32	54.00	-15.68	V	Average	Pass	Band Edge
7	802.11b	01	4824.00	51.63	54.00	-2.37	H	Average	Pass	Harmonic
8	802.11b	06	-	-	-	-	-	-	-	Band Edge
8	802.11b	06	4874.00	51.87	54.00	-2.13	H	Average	Pass	Harmonic
9	802.11b	11	2487.61	38.39	54.00	-15.61	H	Average	Pass	Band Edge
9	802.11b	11	4924.00	51.85	54.00	-2.15	H	Average	Pass	Harmonic
10	802.11g	01	2389.95	48.47	54.00	-5.53	V	Average	Pass	Band Edge
10	802.11g	01	4824.00	48.60	54.00	-5.40	H	Average	Pass	Harmonic
11	802.11g	06	-	-	-	-	-	-	-	Band Edge
11	802.11g	06	4874.00	49.47	54.00	-4.53	H	Average	Pass	Harmonic
12	802.11g	11	2483.55	51.41	54.00	-2.59	V	Average	Pass	Band Edge
12	802.11g	11	4924.00	49.86	54.00	-4.14	H	Average	Pass	Harmonic
13	802.11n HT20	01	2389.95	45.86	54.00	-8.14	V	Average	Pass	Band Edge
13	802.11n HT20	01	4824.00	46.85	54.00	-7.15	H	Average	Pass	Harmonic
14	802.11n HT20	06	-	-	-	-	-	-	-	Band Edge
14	802.11n HT20	06	4874.00	47.82	54.00	-6.18	H	Average	Pass	Harmonic
15	802.11n HT20	11	2483.51	45.59	54.00	-8.41	H	Average	Pass	Band Edge
15	802.11n HT20	11	4924.00	48.21	54.00	-5.79	H	Average	Pass	Harmonic
16	802.11n HT40	03	2389.97	51.48	54.00	-2.52	V	Average	Pass	Band Edge
16	802.11n HT40	03	4844.00	44.56	54.00	-9.44	H	Average	Pass	Harmonic
17	802.11n HT40	06	2389.88	42.37	54.00	-11.63	V	Average	Pass	Band Edge
17	802.11n HT40	06	4874.00	45.51	54.00	-8.49	H	Average	Pass	Harmonic
18	802.11n HT40	09	2483.58	47.17	54.00	-6.83	H	Average	Pass	Band Edge
18	802.11n HT40	09	4904.00	46.34	54.00	-7.66	H	Average	Pass	Harmonic
19	802.11b	06	796.30	35.26	46.00	-10.74	H	PEAK	Pass	LF

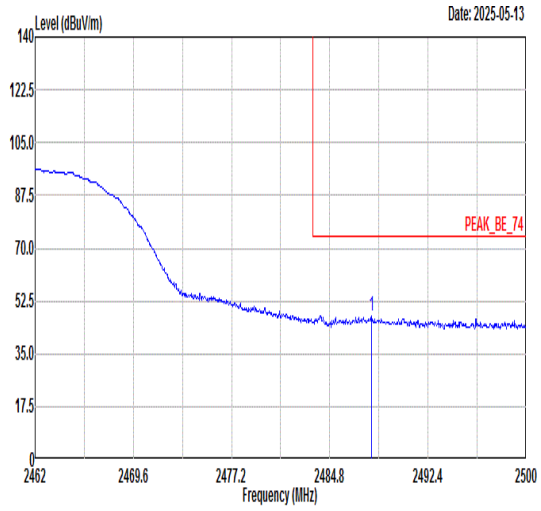
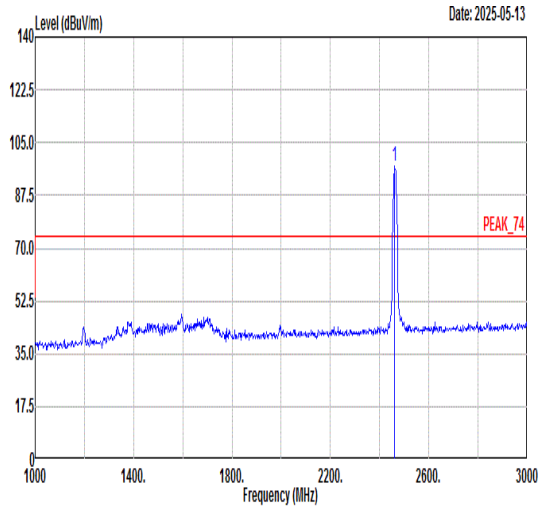
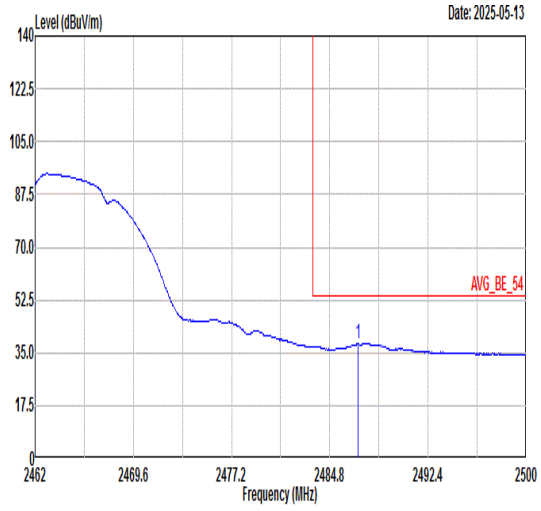
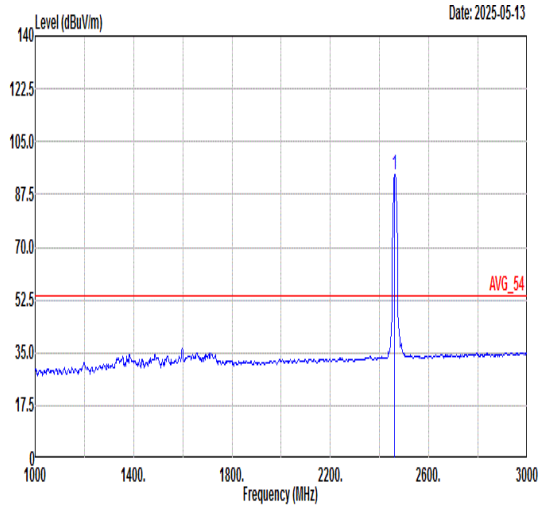
Mode	7	
	Band Edge	
	2400-2483.5_802.11b_CH01_2412MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2387.48 46.02 74.00 -27.98 44.03 30.78 5.36 34.15 400 135 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2412.00 98.53 ------ ------ 96.51 30.78 5.38 34.14 400 135 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2386.96 36.93 54.00 -17.07 34.94 30.78 5.36 34.15 400 135 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2412.00 95.71 ------ ------ 93.69 30.78 5.38 34.14 400 135 AVERAGE

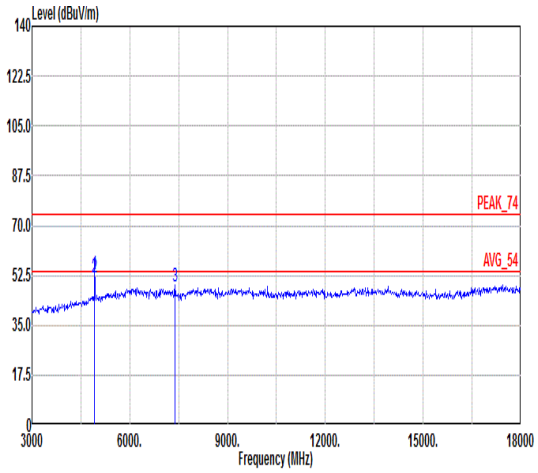
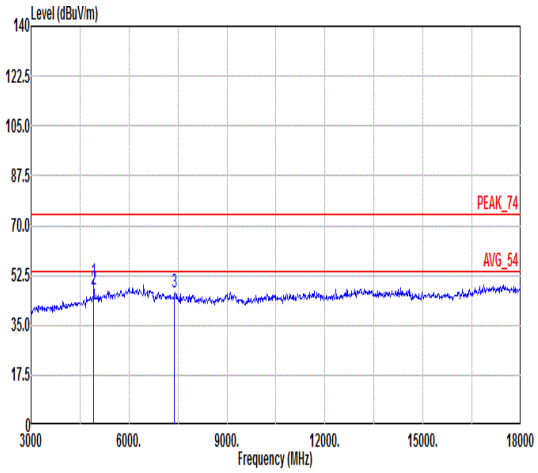
Mode	7	
	Band Edge	
	2400-2483.5_802.11b_CH01_2412MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2385.92 47.03 74.00 -26.97 45.04 30.78 5.36 34.15 305 206 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 100.02 ------ ------ 98.00 30.78 5.38 34.14 305 206 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2386.96 38.32 54.00 -15.68 36.33 30.78 5.36 34.15 305 206 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 97.23 ------ ------ 95.21 30.78 5.38 34.14 305 206 AVERAGE

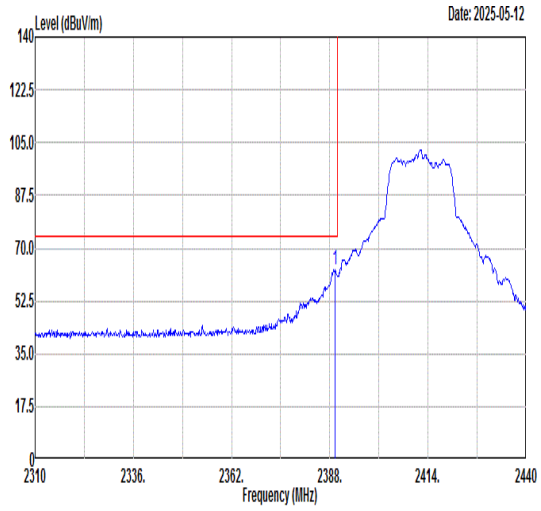
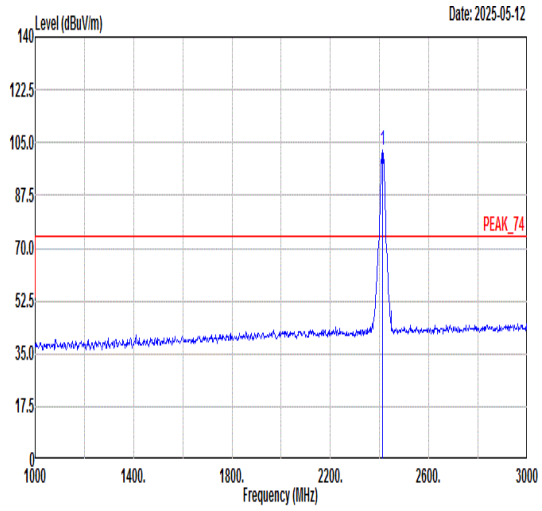
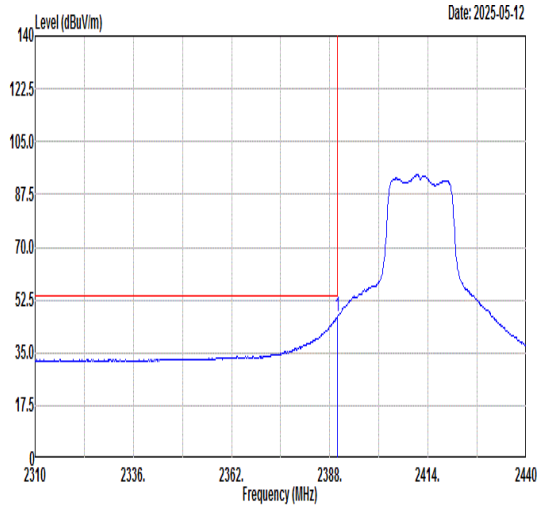
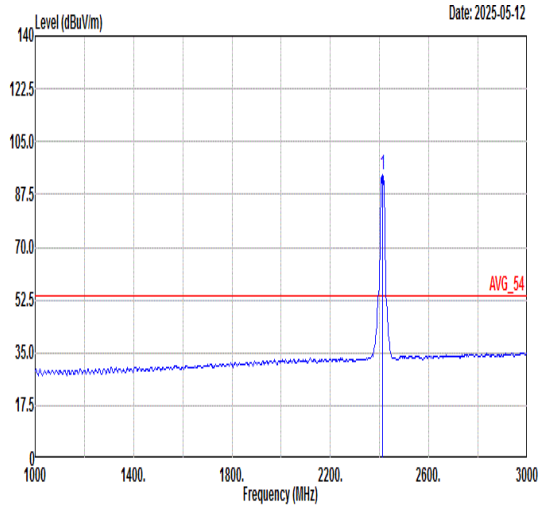
Mode	7	
	Harmonic	
	2400-2483.5_802.11b_CH01_2412MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4824.00 53.10 74.00 -20.90 72.64 36.42 8.88 64.84 106 107 Peak 2 4824.00 51.63 54.00 -2.37 71.17 36.42 8.88 64.84 106 107 Average	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4824.00 49.69 74.00 -24.31 69.23 36.42 8.88 64.84 340 220 Peak 2 4824.00 48.09 54.00 -5.91 67.63 36.42 8.88 64.84 340 220 Average

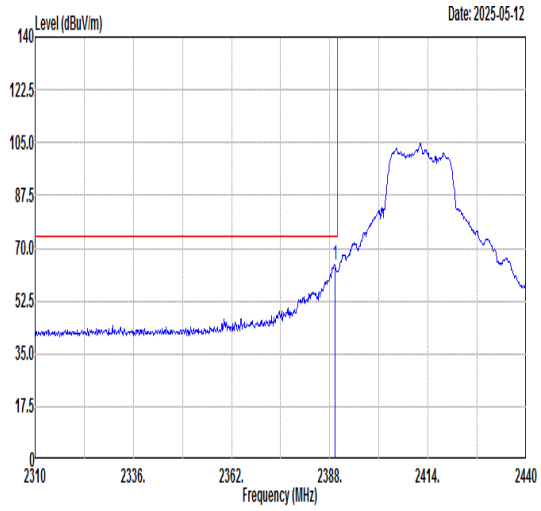
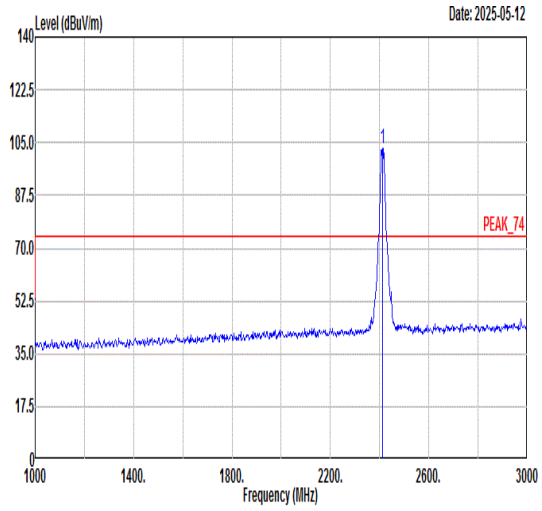
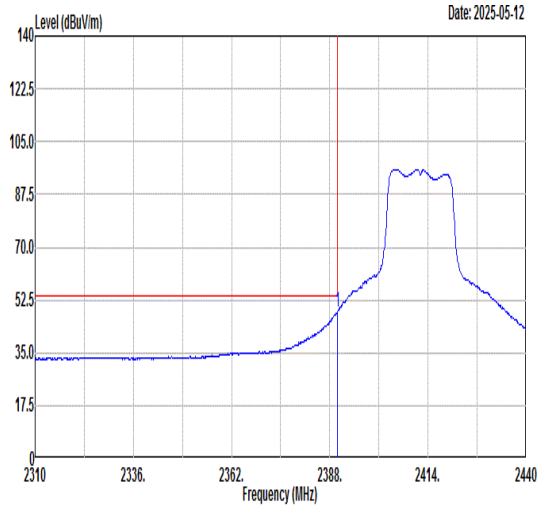
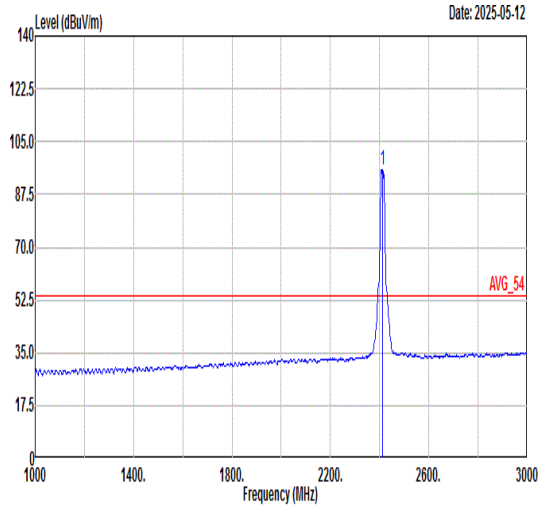
Mode	8	
	Harmonic	
	2400-2483.5_802.11b_CH06_2437MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 53.14 74.00 -20.86 72.75 36.50 8.72 64.83 100 103 Peak 2 4874.00 51.87 54.00 -2.13 71.48 36.50 8.72 64.83 100 103 Average 3 7311.00 45.55 74.00 -28.45 63.49 36.89 10.18 65.01 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 49.41 74.00 -24.59 69.02 36.50 8.72 64.83 340 220 Peak 2 4874.00 48.26 54.00 -5.74 67.87 36.50 8.72 64.83 340 220 Average 3 7311.00 48.95 74.00 -25.05 66.89 36.89 10.18 65.01 --- --- Peak

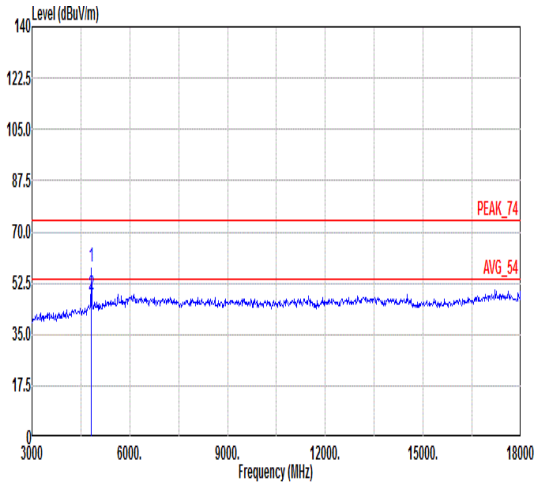
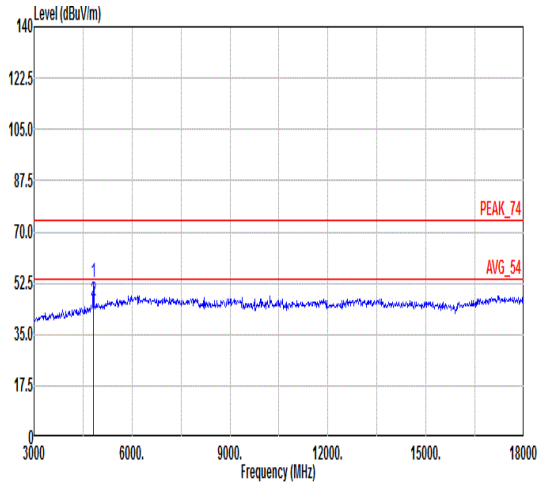
Mode	9	
	Band Edge	
	2400-2483.5_802.11b_CH11_2462MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2487.54 47.13 74.00 -26.87 44.97 30.80 5.46 34.10 102 121 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 99.34 ------ ------ 97.23 30.79 5.44 34.12 102 121 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2487.61 38.39 54.00 -15.61 36.23 30.80 5.46 34.10 102 121 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 96.34 ------ ------ 94.23 30.79 5.44 34.12 102 121 AVERAGE

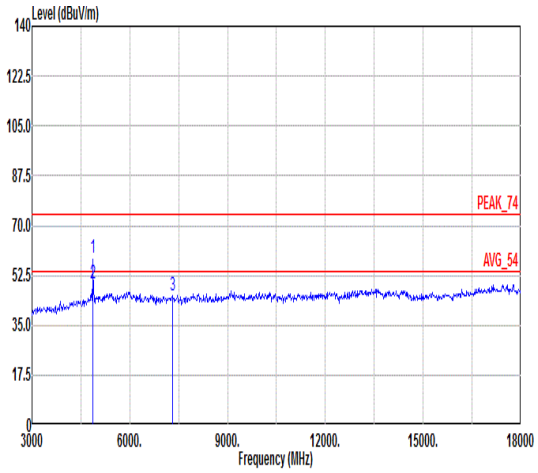
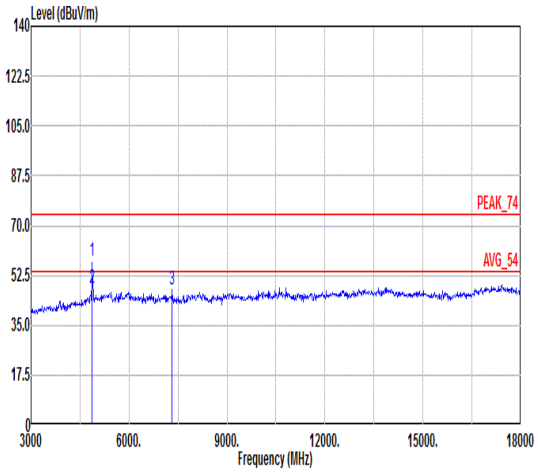
Mode	9	
	Band Edge	
	2400-2483.5_802.11b_CH11_2462MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2488.03 47.60 74.00 -26.40 45.44 30.80 5.46 34.10 400 210 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 97.04 ------ ------ 94.93 30.79 5.44 34.12 400 210 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2486.97 38.13 54.00 -15.87 35.98 30.80 5.46 34.11 400 210 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 94.19 ------ ------ 92.08 30.79 5.44 34.12 400 210 AVERAGE

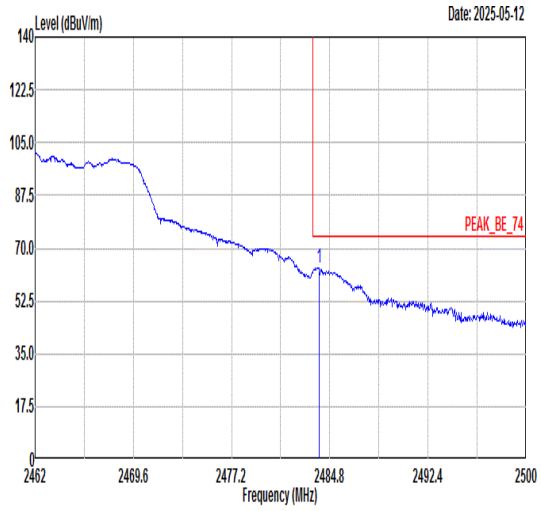
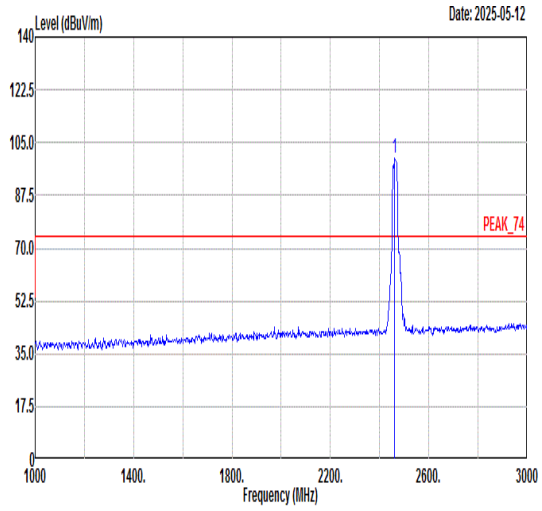
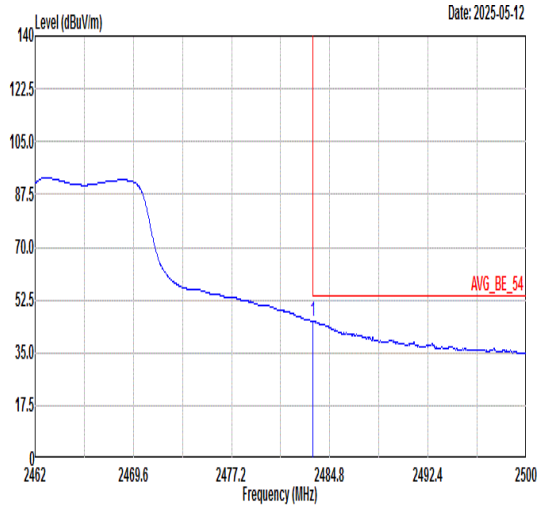
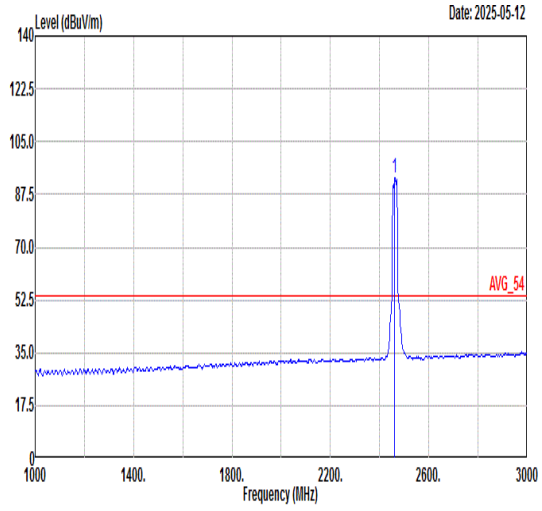
Mode	9	
	Harmonic	
	2400-2483.5_802.11b_CH11_2462MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4924.00 52.90 74.00 -21.10 72.57 36.58 8.57 64.82 103 101 Peak 2 4924.00 51.85 54.00 -2.15 71.52 36.58 8.57 64.82 103 101 Average 3 7386.00 48.77 74.00 -25.23 66.76 36.81 10.18 64.98 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4924.00 50.25 74.00 -23.75 69.92 36.58 8.57 64.82 395 220 Peak 2 4924.00 47.61 54.00 -6.39 67.28 36.58 8.57 64.82 395 220 Average 3 7386.00 46.54 74.00 -27.46 64.53 36.81 10.18 64.98 --- --- Peak

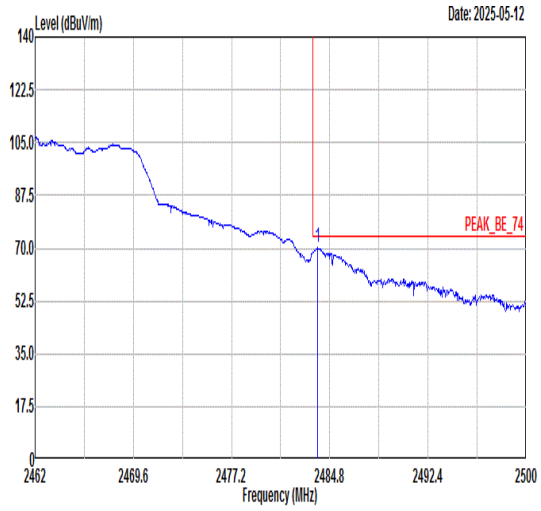
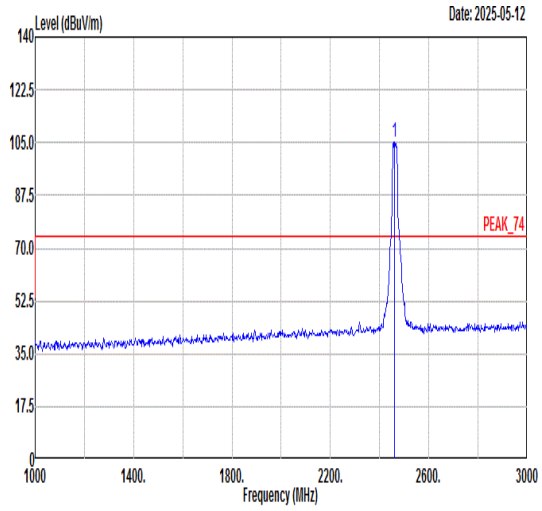
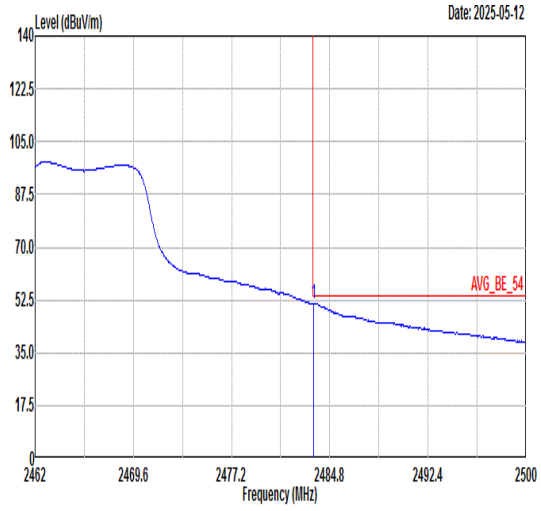
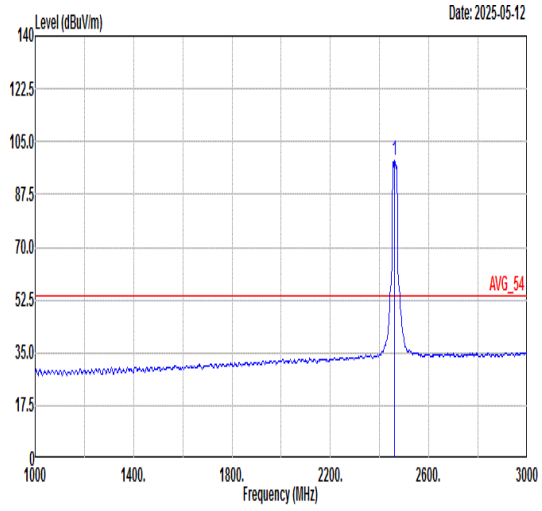
Mode	10	
	Band Edge	
	2400-2483.5_802.11g_CH01_2412MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.30 62.87 74.00 -11.13 60.87 30.78 5.36 34.14 350 184 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 102.69 ------ ------ 100.67 30.78 5.38 34.14 350 184 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.95 46.82 54.00 -7.18 44.82 30.78 5.36 34.14 350 184 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 93.97 ------ ------ 91.95 30.78 5.38 34.14 350 184 AVERAGE

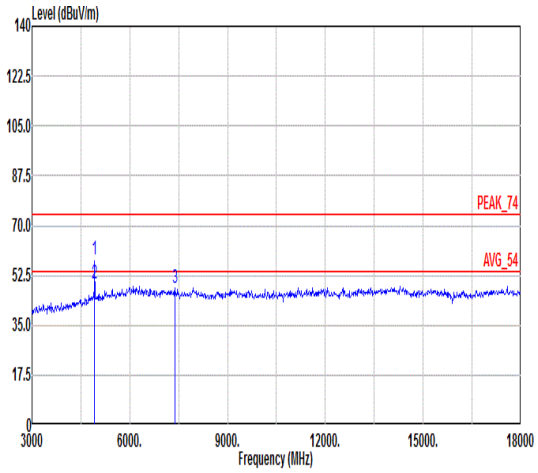
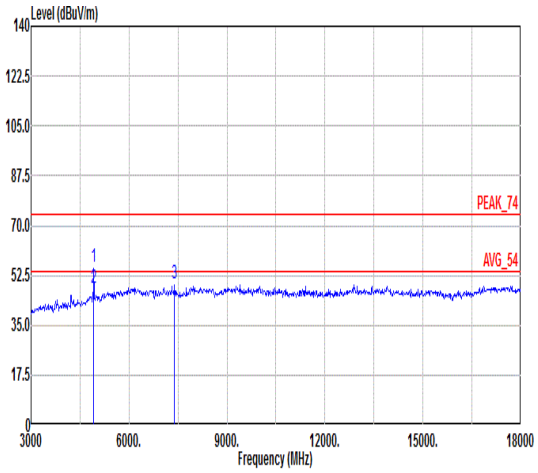
Mode	10	
	Band Edge	
	2400-2483.5_802.11g_CH01_2412MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.30 64.41 74.00 -9.59 62.41 30.78 5.36 34.14 300 217 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 103.08 ------ ------ 101.06 30.78 5.38 34.14 300 217 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.95 48.47 54.00 -5.53 46.47 30.78 5.36 34.14 300 217 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 95.71 ------ ------ 93.70 30.78 5.37 34.14 300 217 AVERAGE

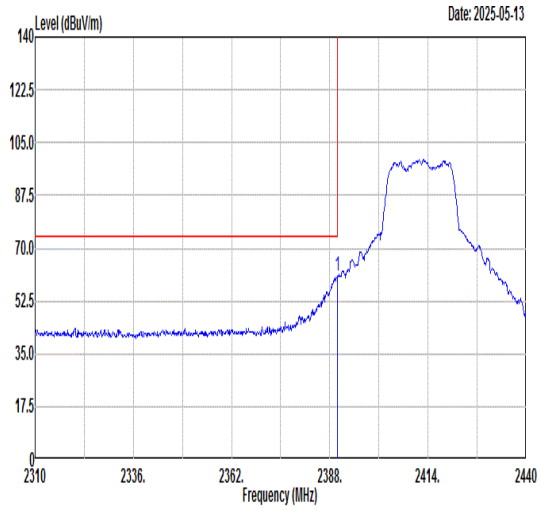
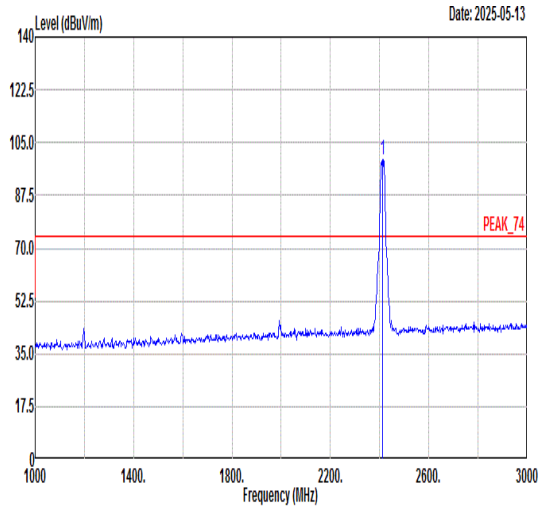
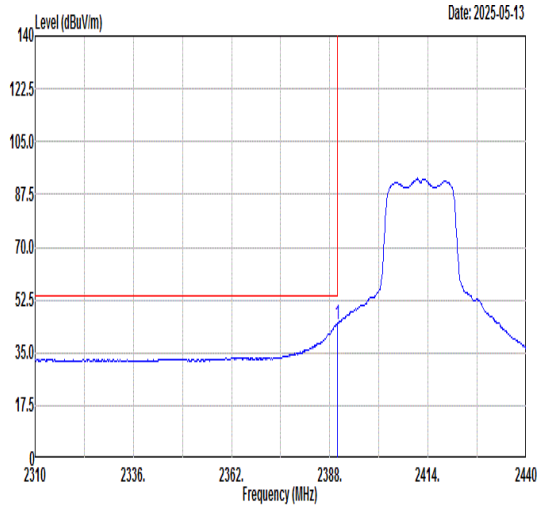
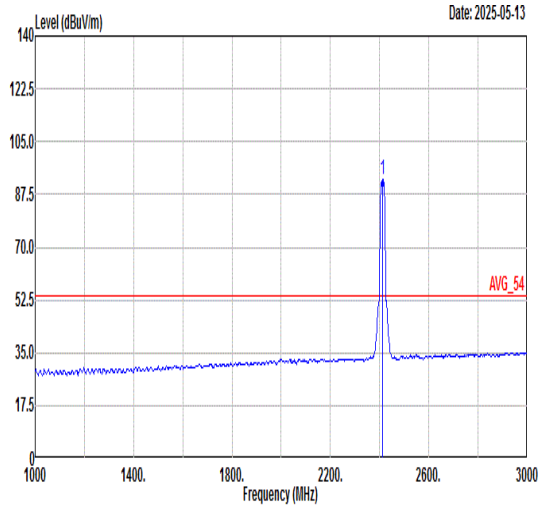
Mode	10	
	Harmonic	
	2400-2483.5_802.11g_CH01_2412MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4824.00 58.33 74.00 -15.67 77.87 36.42 8.88 64.84 103 101 Peak 2 4824.00 48.60 54.00 -5.40 68.14 36.42 8.88 64.84 103 101 Average	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4824.00 52.65 74.00 -21.35 72.19 36.42 8.88 64.84 395 96 Peak 2 4824.00 46.74 54.00 -7.26 66.28 36.42 8.88 64.84 395 96 Average

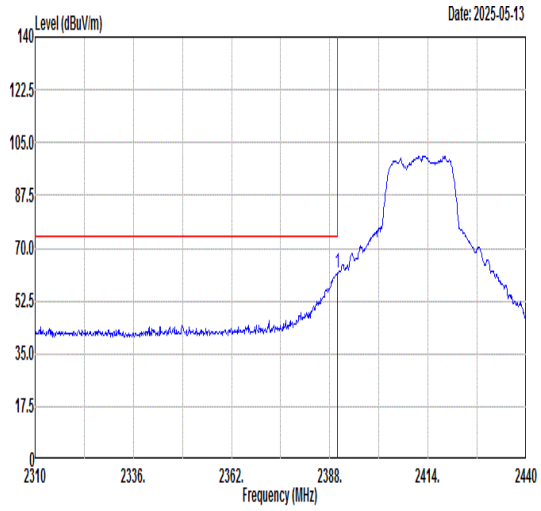
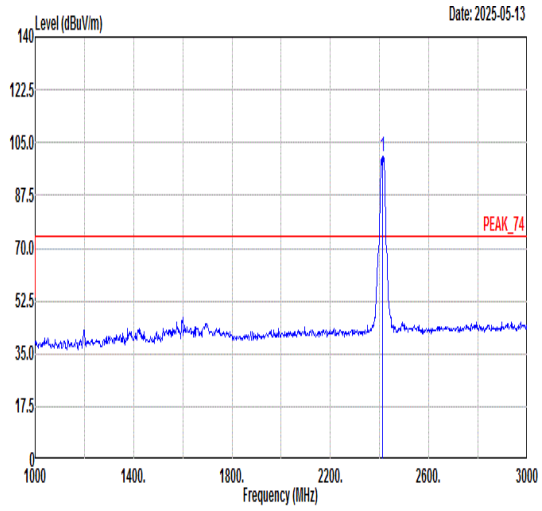
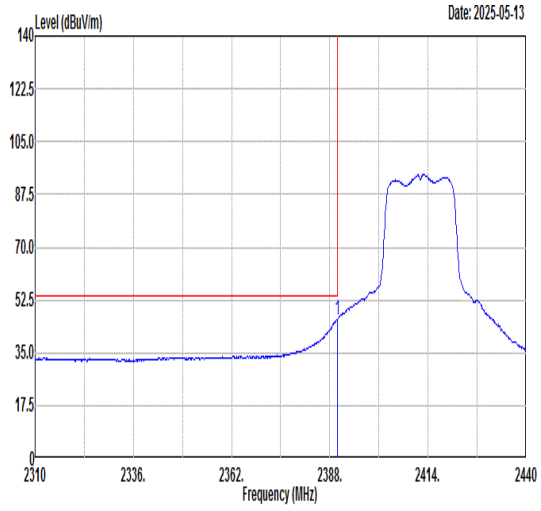
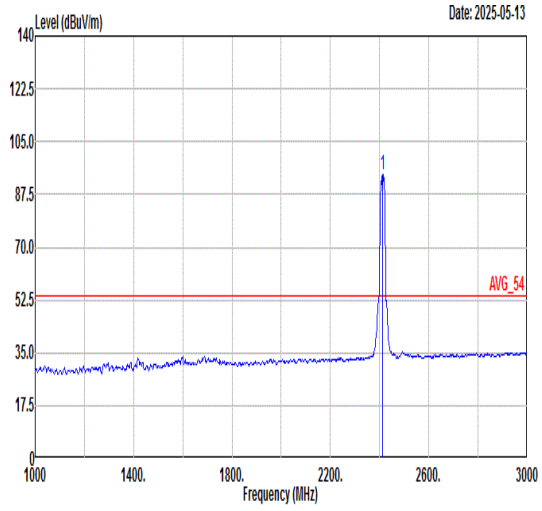
Mode	11	
	Harmonic	
	2400-2483.5_802.11g_CH06_2437MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 58.82 74.00 -15.18 78.43 36.50 8.72 64.83 100 62 Peak 2 4874.00 49.47 54.00 -4.53 69.08 36.50 8.72 64.83 100 62 Average 3 7311.00 45.20 74.00 -28.80 63.14 36.89 10.18 65.01 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 57.39 74.00 -16.61 77.00 36.50 8.72 64.83 100 237 Peak 2 4874.00 48.22 54.00 -5.78 67.83 36.50 8.72 64.83 100 237 Average 3 7311.00 47.30 74.00 -26.70 65.24 36.89 10.18 65.01 --- --- Peak

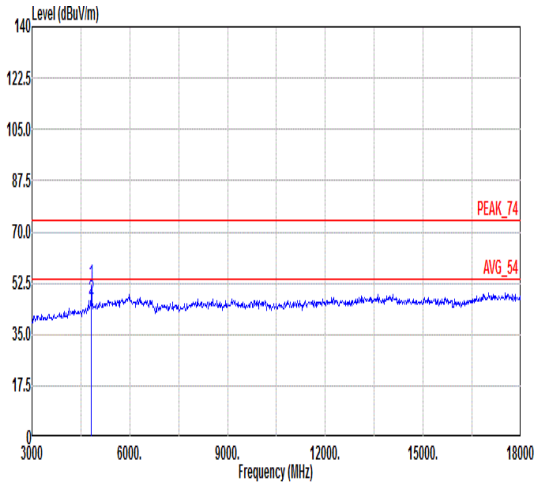
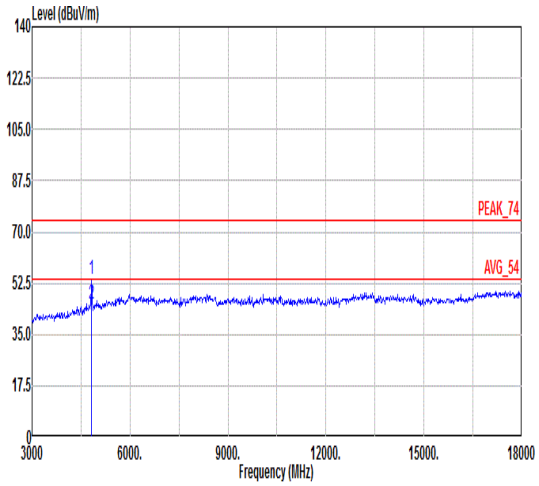
Mode	12	
	Band Edge	
	2400-2483.5_802.11g_CH11_2462MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.96 63.47 74.00 -10.53 61.32 30.80 5.46 34.11 361 201 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 100.02 ------ ------ 97.91 30.79 5.44 34.12 361 201 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.51 45.68 54.00 -8.32 43.53 30.80 5.46 34.11 361 201 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 92.96 ------ ------ 90.85 30.79 5.44 34.12 361 201 AVERAGE

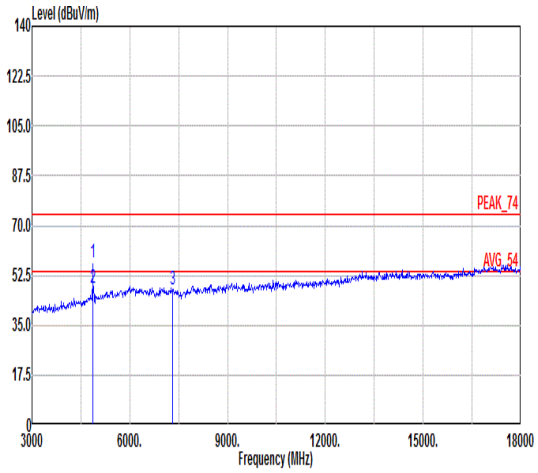
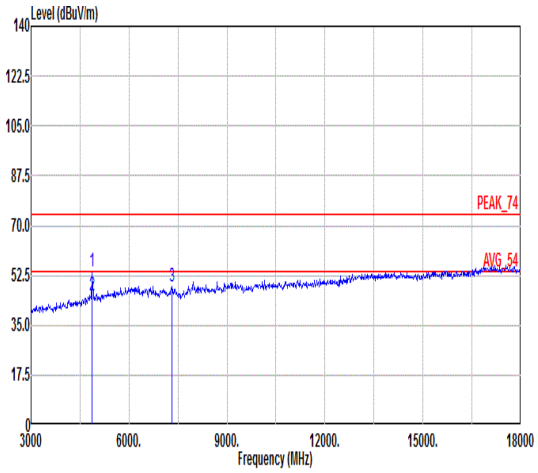
Mode	12	
	Band Edge	
	2400-2483.5_802.11g_CH11_2462MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.85 70.03 74.00 -3.97 67.88 30.80 5.46 34.11 243 238 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 105.30 ------ ------ 103.20 30.79 5.43 34.12 243 238 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.55 51.41 54.00 -2.59 49.26 30.80 5.46 34.11 243 238 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 98.57 ------ ------ 96.46 30.79 5.44 34.12 243 238 AVERAGE

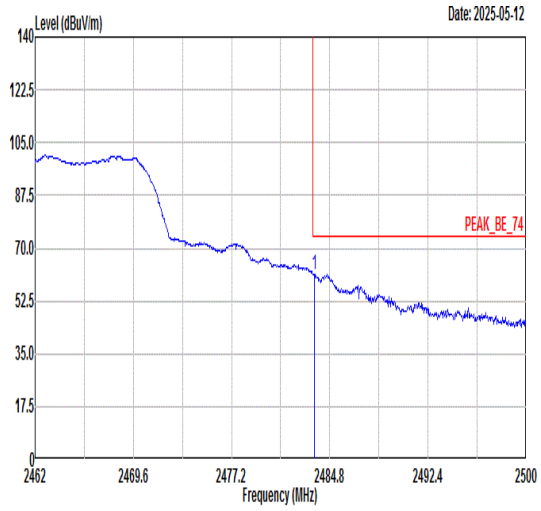
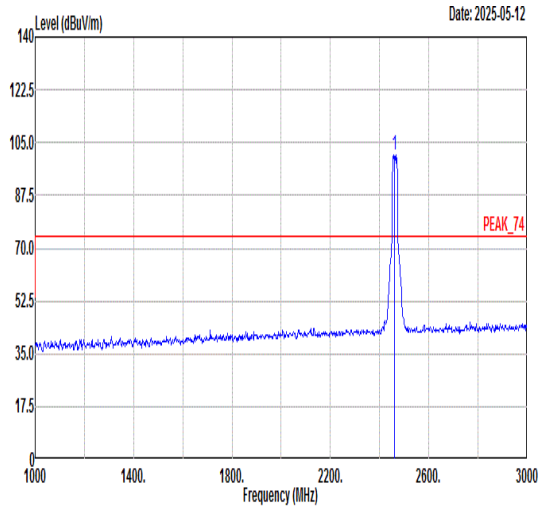
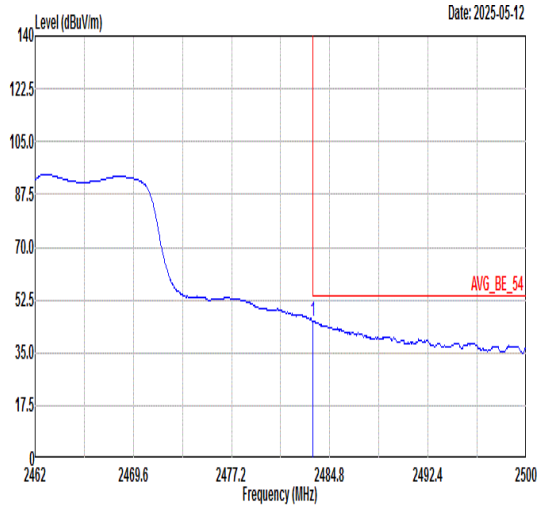
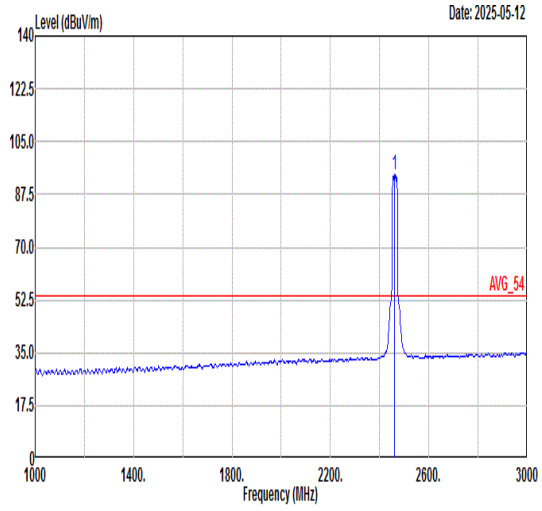
Mode	12	
	Harmonic	
	2400-2483.5_802.11g_CH11_2462MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4924.00 58.15 74.00 -15.85 77.82 36.58 8.57 64.82 333 256 Peak 2 4924.00 49.86 54.00 -4.14 69.53 36.58 8.57 64.82 333 256 Average 3 7386.00 47.82 74.00 -26.18 65.81 36.81 10.18 64.98 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4924.00 55.66 74.00 -18.34 75.33 36.58 8.57 64.82 361 0 Peak 2 4924.00 47.82 54.00 -6.18 67.49 36.58 8.57 64.82 361 0 Average 3 7386.00 49.51 74.00 -24.49 67.50 36.81 10.18 64.98 --- --- Peak

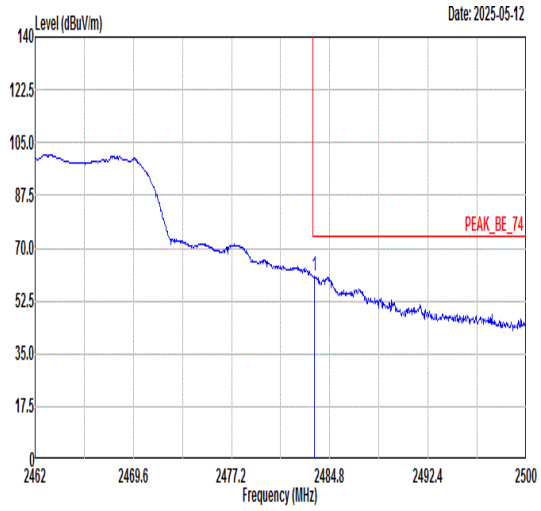
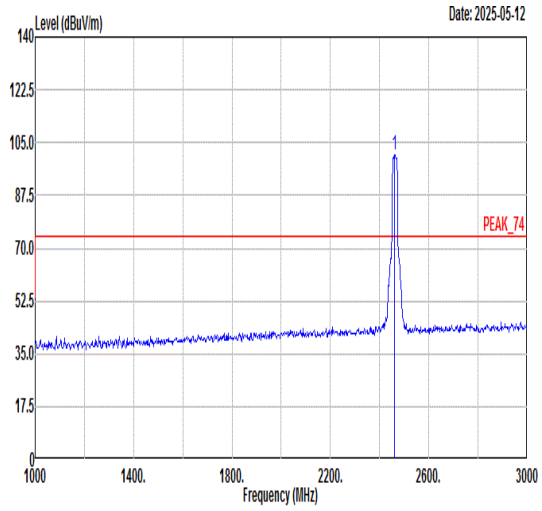
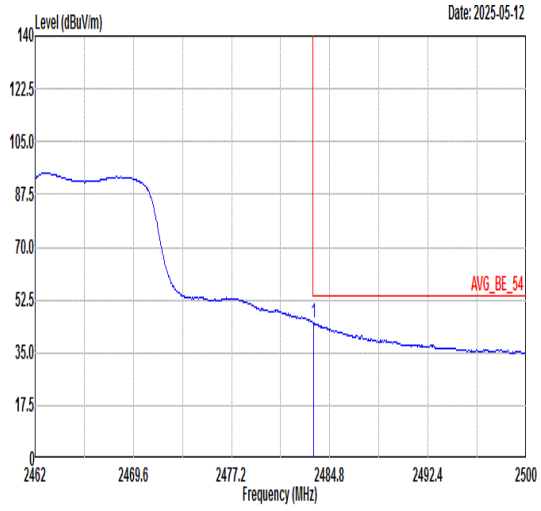
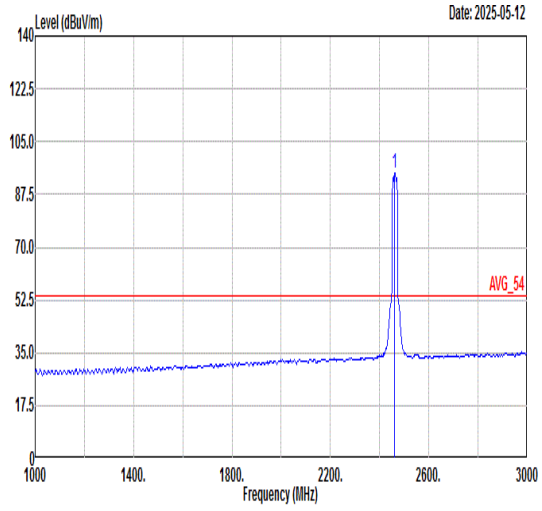
Mode	13	
	Band Edge	
	2400-2483.5_802.11n HT20_CH01_2412MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2389.95 60.73 74.00 -13.27 58.73 30.78 5.36 34.14 400 131 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2412.00 99.57 ------ ------ 97.55 30.78 5.38 34.14 400 131 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2389.95 44.41 54.00 -9.59 42.41 30.78 5.36 34.14 400 131 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2412.00 92.63 ------ ------ 90.61 30.78 5.38 34.14 400 131 AVERAGE

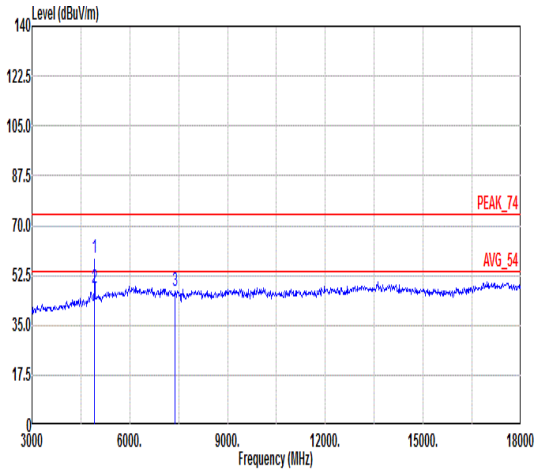
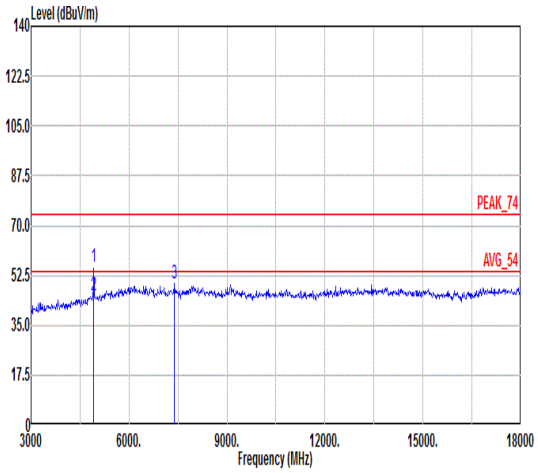
Mode	13	
	Band Edge	
	2400-2483.5_802.11n HT20_CH01_2412MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.95 61.83 74.00 -12.17 59.83 30.78 5.36 34.14 307 210 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 100.53 ------ ------ 98.50 30.78 5.38 34.13 307 210 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.95 45.86 54.00 -8.14 43.86 30.78 5.36 34.14 307 210 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2412.00 94.02 ------ ------ 92.00 30.78 5.38 34.14 307 210 AVERAGE

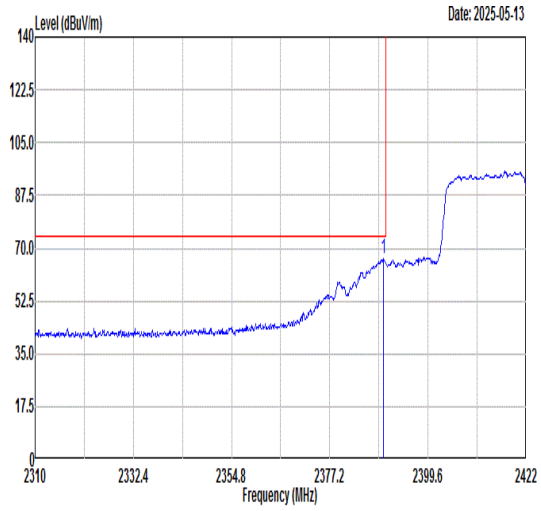
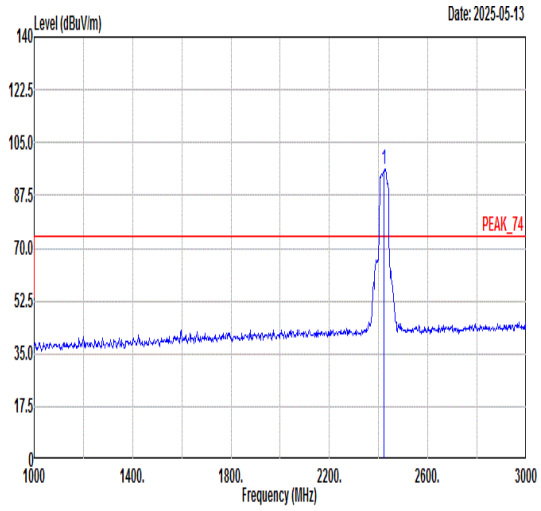
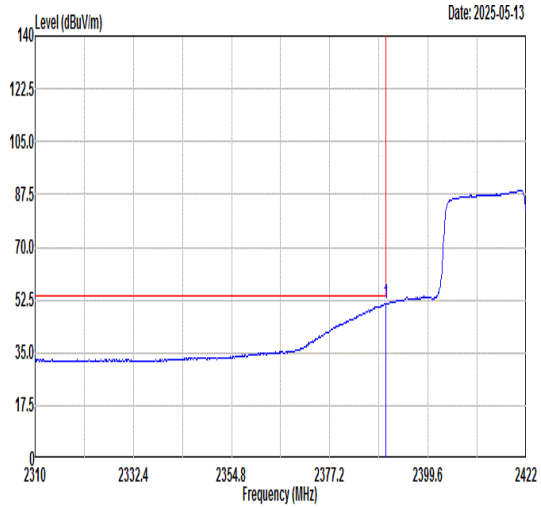
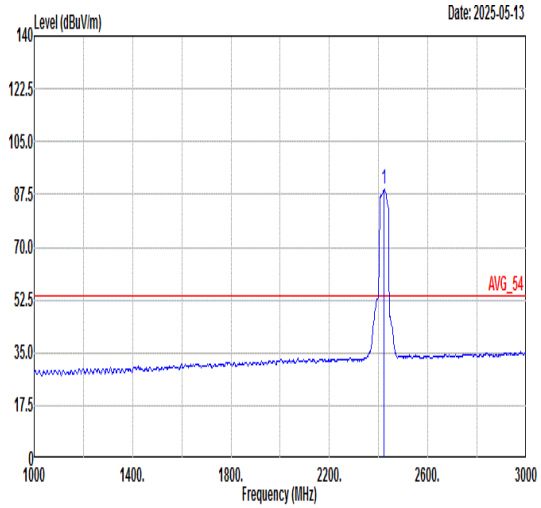
Mode	13	
	Harmonic	
	2400-2483.5_802.11n HT20_CH01_2412MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4824.00 52.28 74.00 -21.72 71.82 36.42 8.88 64.84 100 64 Peak 2 4824.00 46.85 54.00 -7.15 66.39 36.42 8.88 64.84 100 64 Average	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4824.00 54.02 74.00 -19.98 73.56 36.42 8.88 64.84 245 114 Peak 2 4824.00 45.57 54.00 -8.43 65.11 36.42 8.88 64.84 245 114 Average

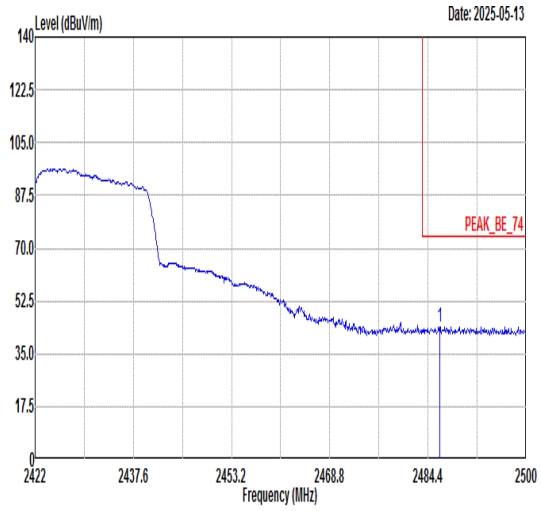
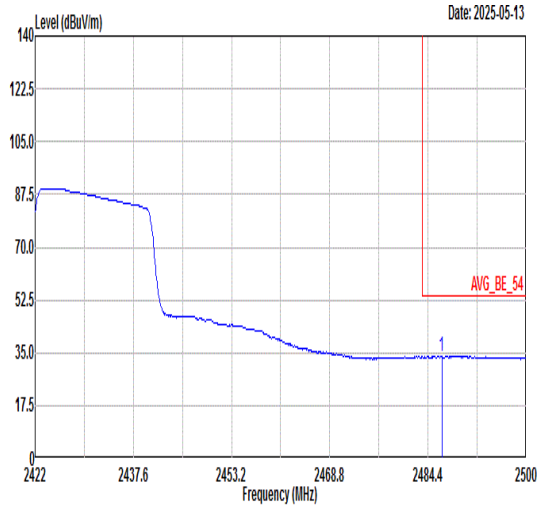
Mode	14	
	Harmonic	
	2400-2483.5_802.11n HT20_CH06_2437MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 56.95 74.00 -17.05 76.56 36.50 8.72 64.83 100 55 Peak 2 4874.00 47.82 54.00 -6.18 67.43 36.50 8.72 64.83 330 255 Average 3 7311.00 47.29 74.00 -26.71 65.23 36.89 10.18 65.01 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 53.99 74.00 -20.01 73.60 36.50 8.72 64.83 360 125 Peak 2 4874.00 45.50 54.00 -8.50 65.11 36.50 8.72 64.83 360 125 Average 3 7311.00 48.61 74.00 -25.39 66.55 36.89 10.18 65.01 --- --- Peak

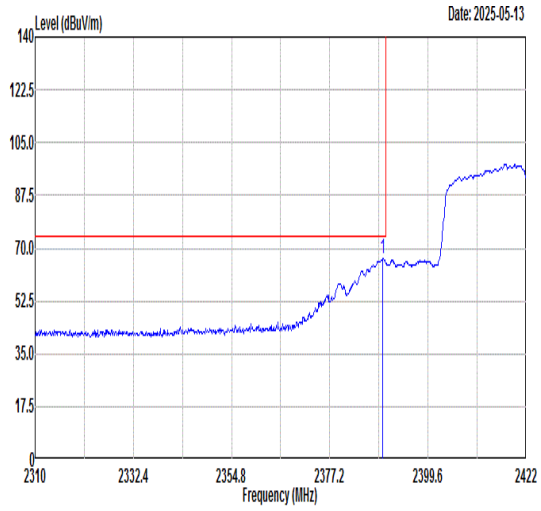
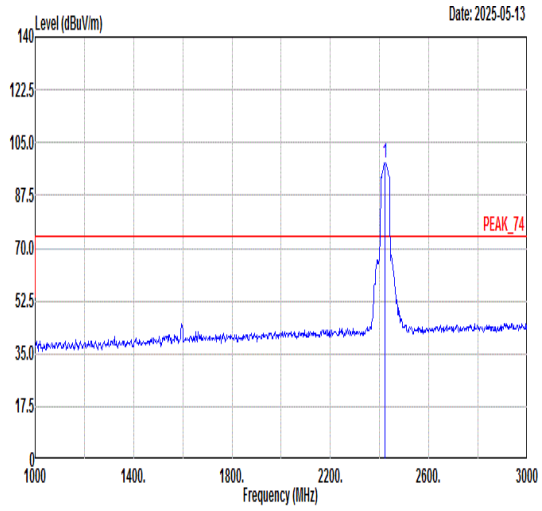
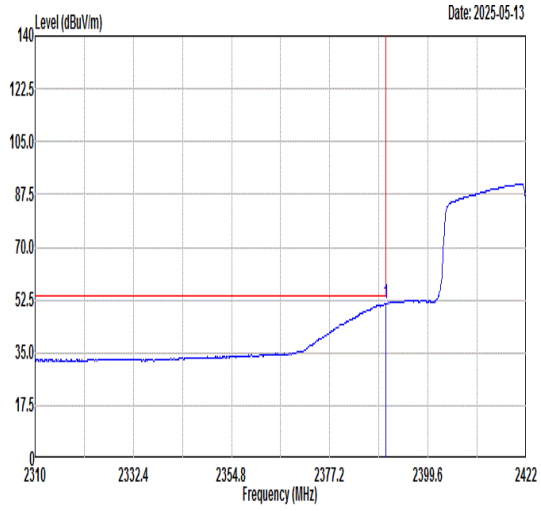
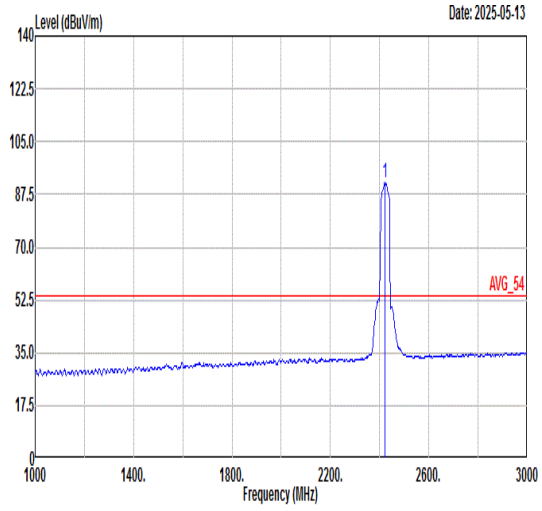
Mode	15	
	Band Edge	
	2400-2483.5_802.11n HT20_CH11_2462MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.58 61.43 74.00 -12.57 59.28 30.80 5.46 34.11 260 151 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 100.94 ------ ------ 98.84 30.79 5.43 34.12 260 151 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.51 45.59 54.00 -8.41 43.44 30.80 5.46 34.11 260 151 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 94.26 ------ ------ 92.15 30.79 5.44 34.12 260 151 AVERAGE

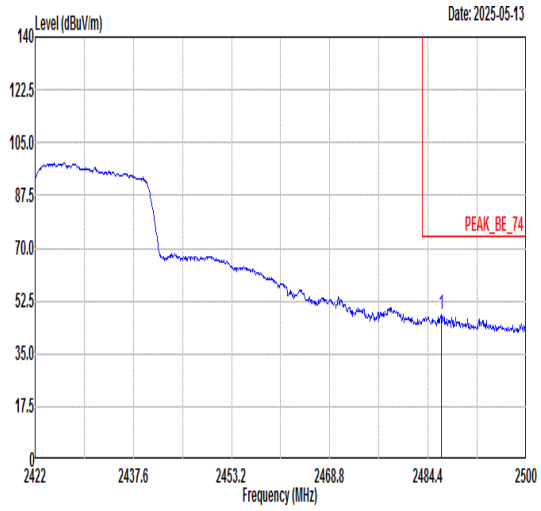
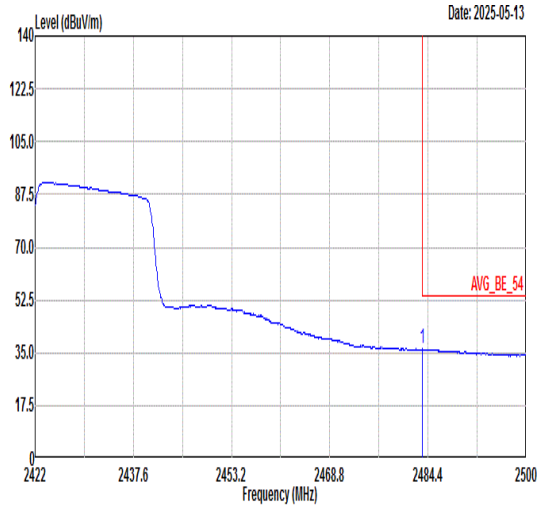
Mode	15	
	Band Edge	
	2400-2483.5_802.11n HT20_CH11_2462MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.62 60.54 74.00 -13.46 58.39 30.80 5.46 34.11 114 188 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 101.05 ------ ------ 98.94 30.79 5.44 34.12 114 188 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.55 44.86 54.00 -9.14 42.71 30.80 5.46 34.11 114 188 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2462.00 94.54 ------ ------ 92.43 30.79 5.44 34.12 114 188 AVERAGE

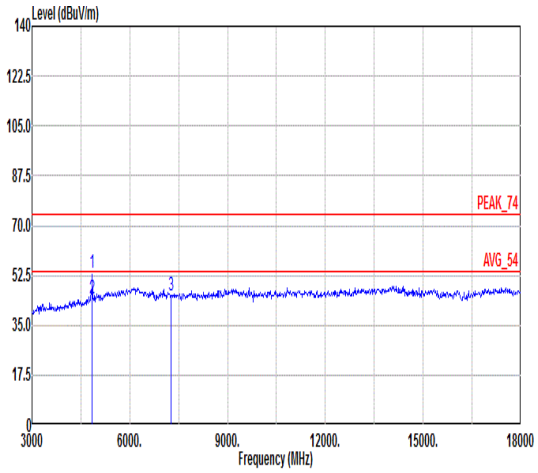
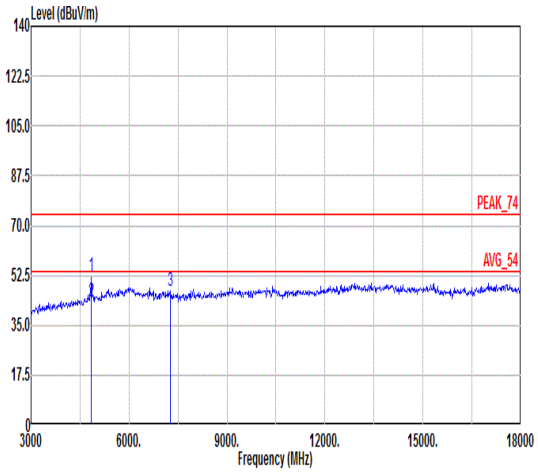
Mode	15	
	Harmonic	
	2400-2483.5_802.11n HT20_CH11_2462MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4924.00 58.65 74.00 -15.35 78.32 36.58 8.57 64.82 330 241 Peak 2 4924.00 48.21 54.00 -5.79 67.88 36.58 8.57 64.82 330 241 Average 3 7386.00 46.79 74.00 -27.21 64.78 36.81 10.18 64.98 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4924.00 55.65 74.00 -18.35 75.32 36.58 8.57 64.82 276 127 Peak 2 4924.00 45.60 54.00 -8.40 65.27 36.58 8.57 64.82 276 127 Average 3 7386.00 49.70 74.00 -24.30 67.69 36.81 10.18 64.98 --- --- Peak

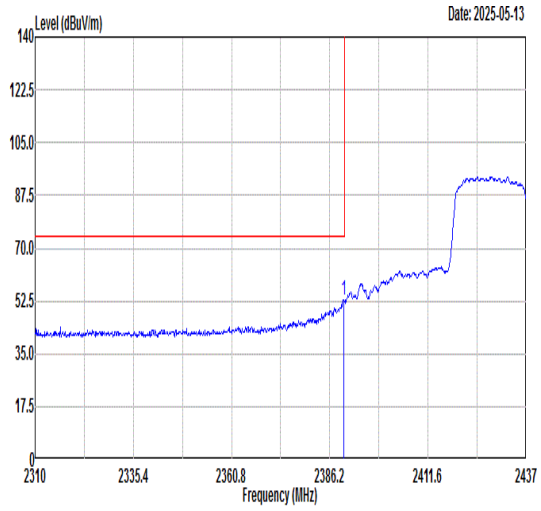
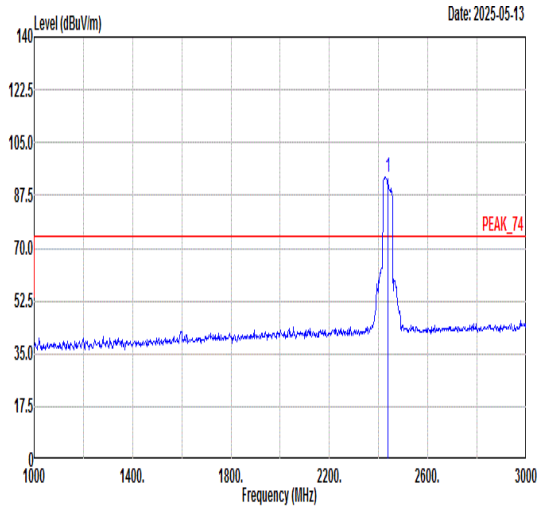
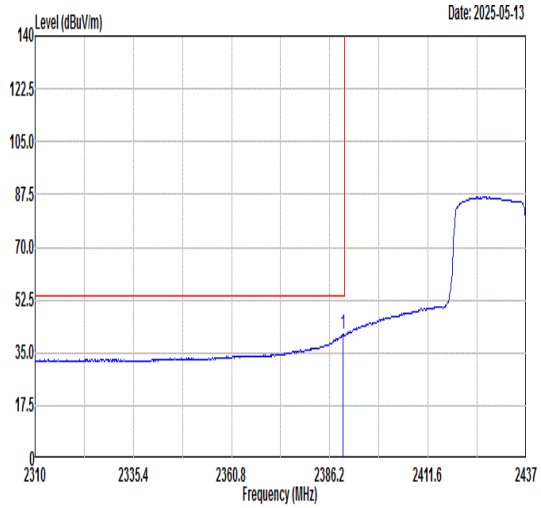
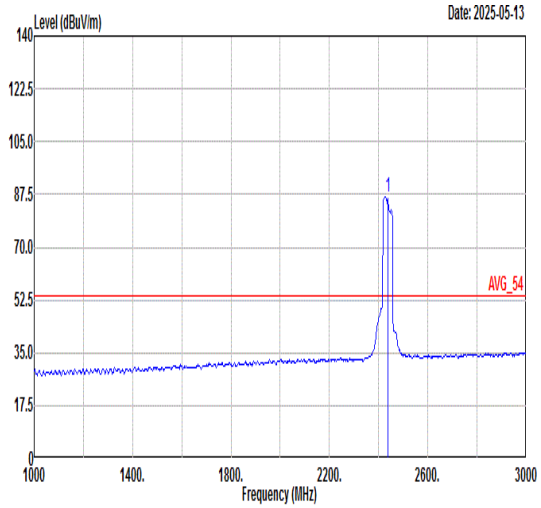
Mode	16	
	Band Edge - L	
	2400-2483.5_802.11n HT40_CH03_2422MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2389.41 66.31 74.00 -7.69 64.31 30.78 5.36 34.14 353 123 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2422.00 96.21 ------ ------ 94.16 30.79 5.39 34.13 353 123 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2389.97 51.33 54.00 -2.67 49.33 30.78 5.36 34.14 353 123 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2422.00 89.10 ------ ------ 87.06 30.78 5.39 34.13 353 123 AVERAGE

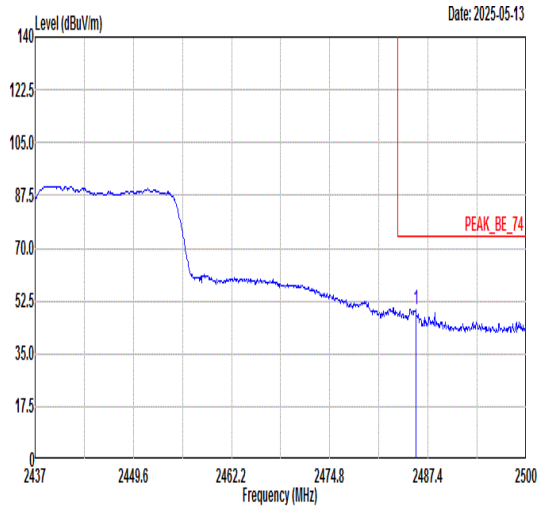
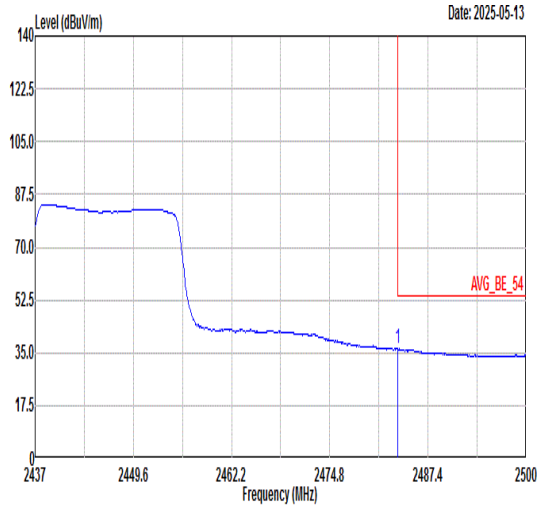
Mode	16	
	Band Edge - R	
	2400-2483.5_802.11n HT40_CH03_2422MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2486.27 44.06 74.00 -29.94 41.91 30.80 5.46 34.11 353 123 PEAK	Blank
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2486.58 33.91 54.00 -20.09 31.76 30.80 5.46 34.11 353 123 AVERAGE	Blank

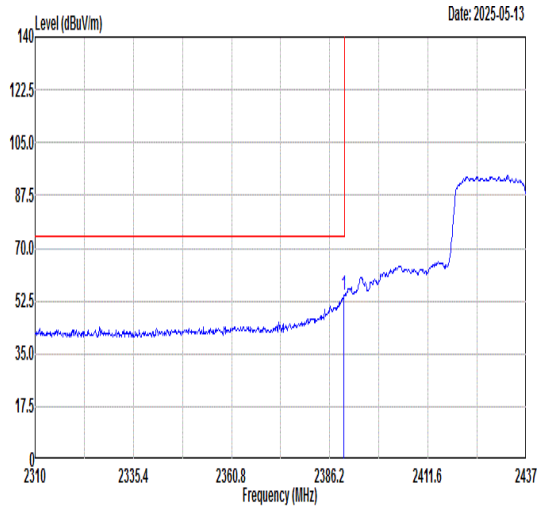
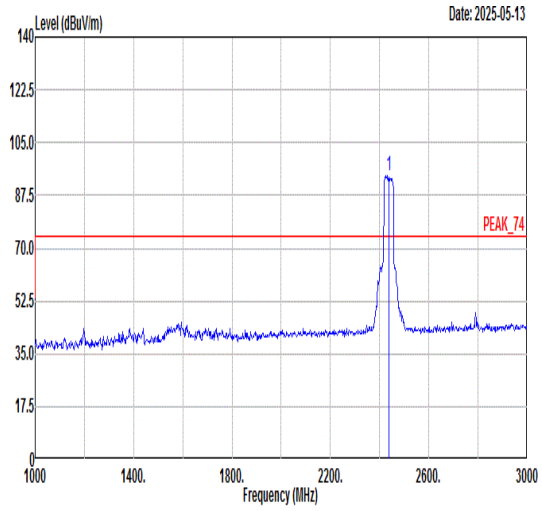
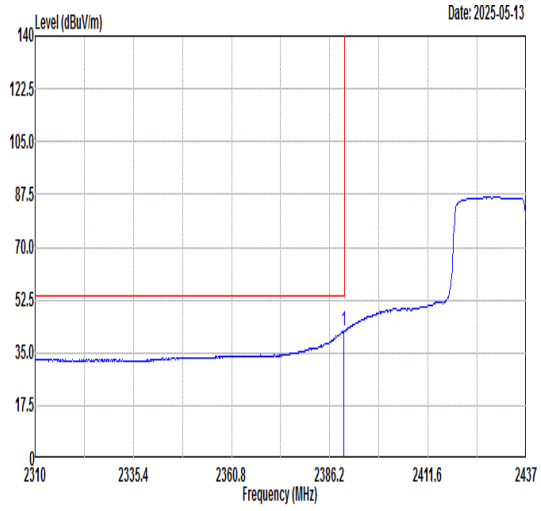
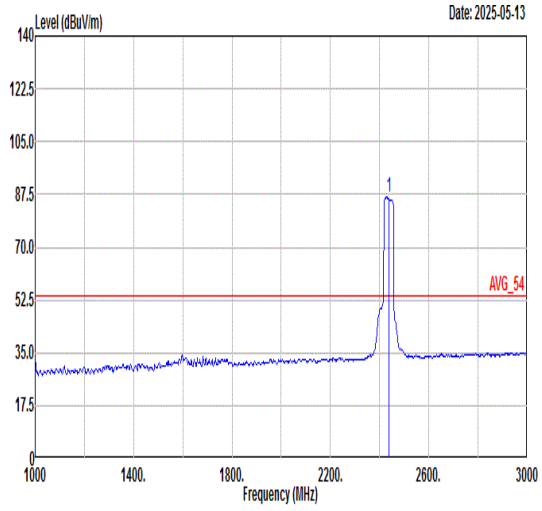
Mode	16	
	Band Edge - L	
	2400-2483.5_802.11n HT40_CH03_2422MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.18 66.52 74.00 -7.48 64.52 30.78 5.36 34.14 166 25 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2422.00 98.36 ------ ------ 96.31 30.79 5.39 34.13 166 25 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.97 51.48 54.00 -2.52 49.48 30.78 5.36 34.14 166 25 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2422.00 91.28 ------ ------ 89.24 30.78 5.39 34.13 166 25 AVERAGE

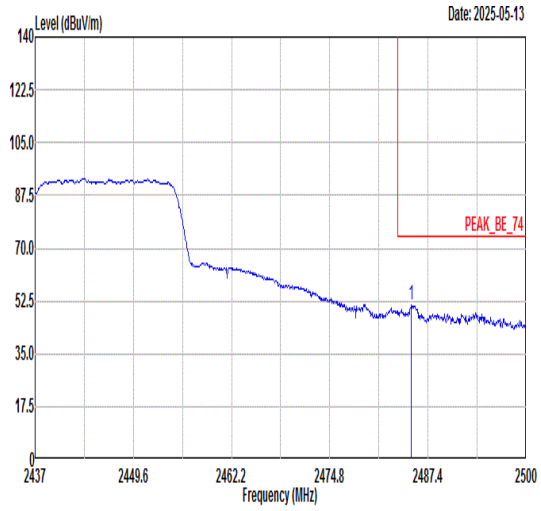
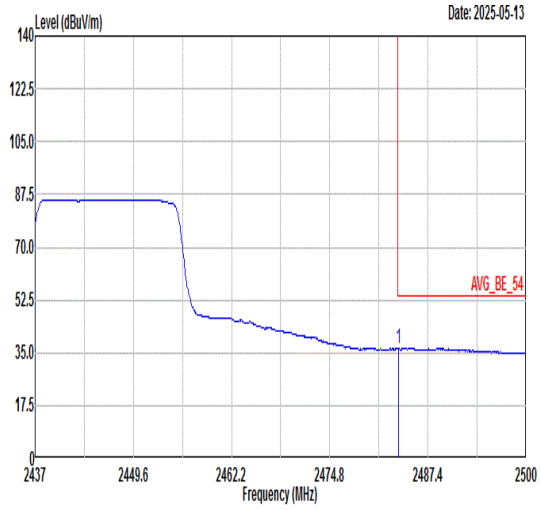
Mode	16	
	Band Edge - R	
	2400-2483.5_802.11n HT40_CH03_2422MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2486.51 48.05 74.00 -25.95 45.90 30.80 5.46 34.11 166 25 PEAK	Blank
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.54 36.23 54.00 -17.77 34.08 30.80 5.46 34.11 166 25 AVERAGE	Blank

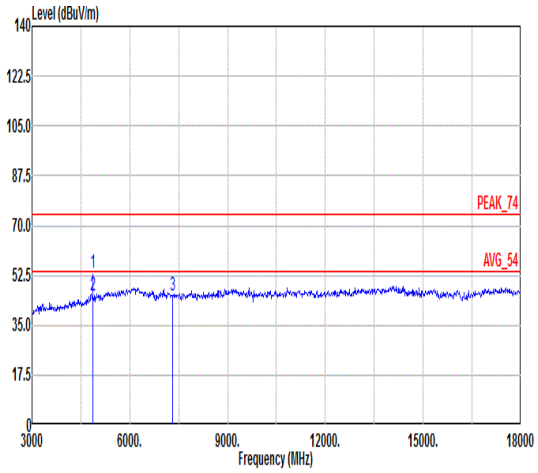
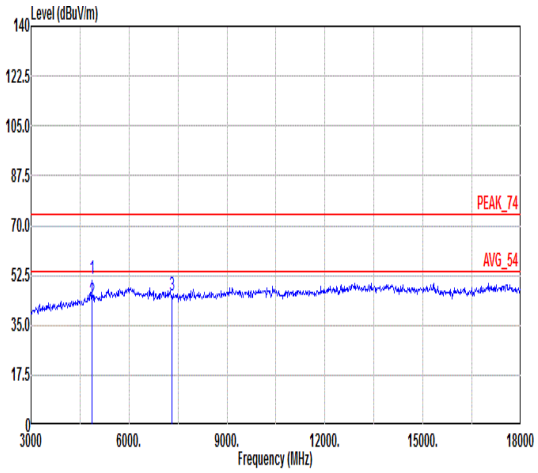
Mode	16	
	Harmonic	
	2400-2483.5_802.11n HT40_CH03_2422MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4844.00 53.17 74.00 -20.83 72.74 36.45 8.81 64.83 344 254 Peak 2 4844.00 44.56 54.00 -9.44 64.13 36.45 8.81 64.83 344 254 Average 3 7266.00 45.55 74.00 -28.45 63.46 36.93 10.18 65.02 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4844.00 52.17 74.00 -21.83 71.74 36.45 8.81 64.83 305 116 Peak 2 4844.00 43.50 54.00 -10.50 63.07 36.45 8.81 64.83 305 116 Average 3 7266.00 47.13 74.00 -26.87 65.04 36.93 10.18 65.02 --- --- Peak

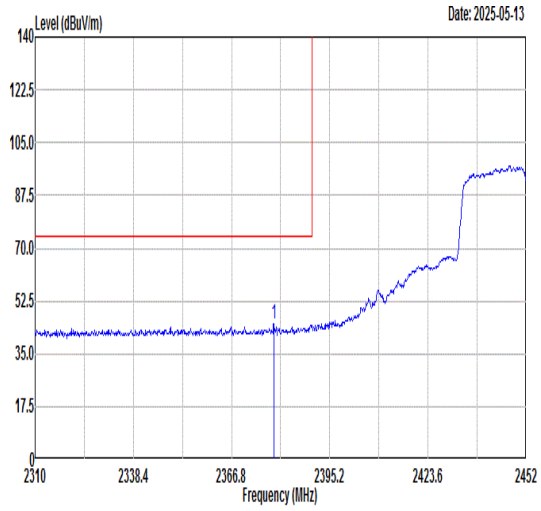
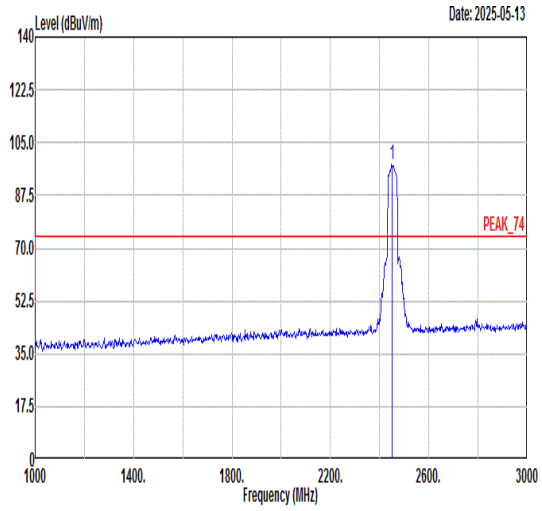
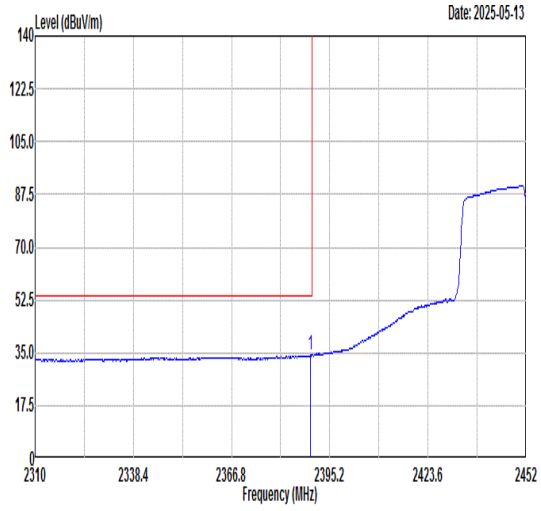
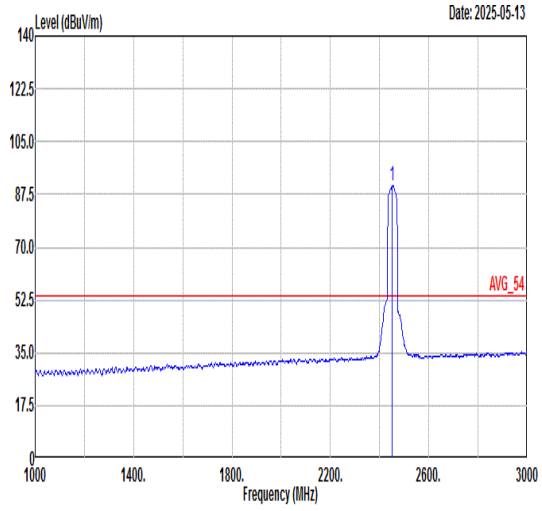
Mode	17	
	Band Edge - L	
	2400-2483.5_802.11n HT40_CH06_2437MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2389.88 52.82 74.00 -21.18 50.82 30.78 5.36 34.14 315 128 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2437.00 93.44 ------ ------ 91.39 30.79 5.39 34.13 315 128 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2389.63 41.04 54.00 -12.96 39.04 30.78 5.36 34.14 315 128 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark 1 2437.00 86.49 ------ ------ 84.44 30.79 5.39 34.13 315 128 AVERAGE

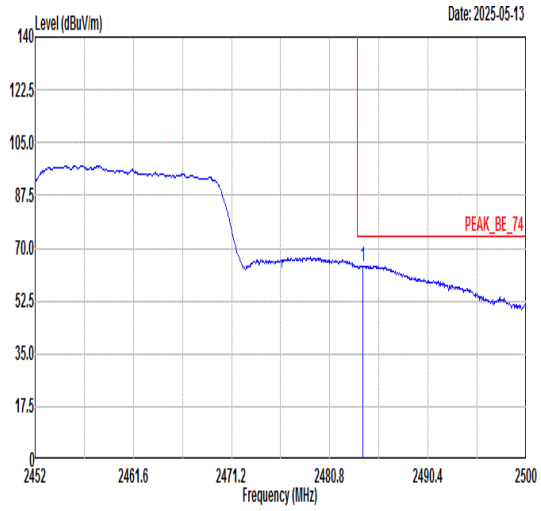
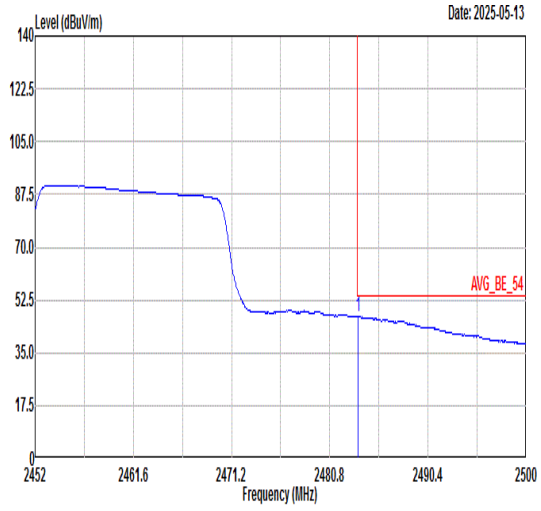
Mode	17	
	Band Edge - R	
	2400-2483.5_802.11n HT40_CH06_2437MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2485.83 49.88 74.00 -24.12 47.73 30.80 5.46 34.11 315 128 PEAK	Blank
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.56 36.30 54.00 -17.70 34.15 30.80 5.46 34.11 315 128 AVERAGE	Blank

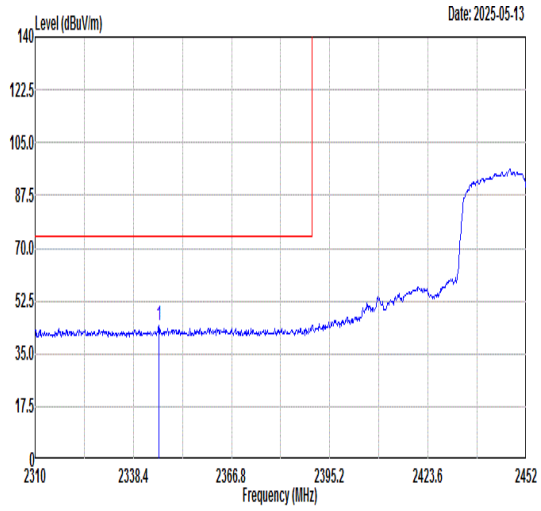
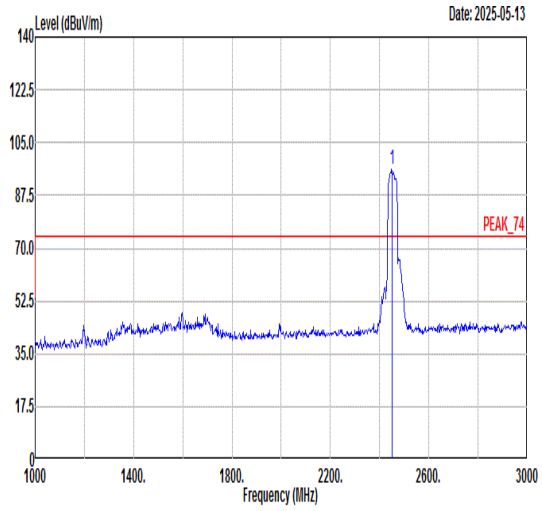
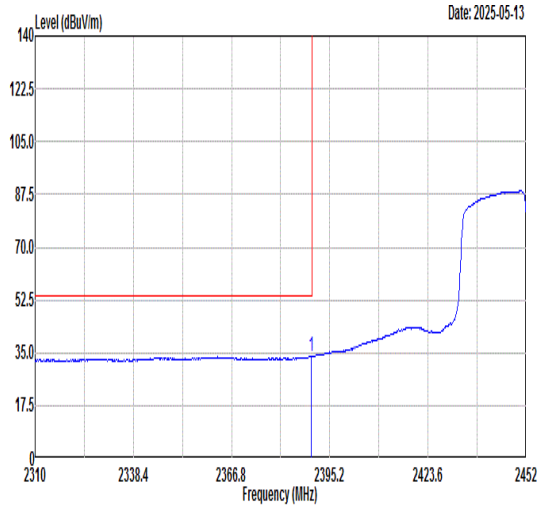
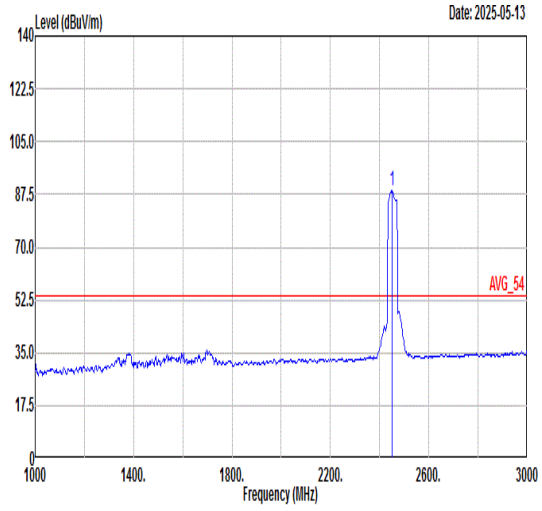
Mode	17	
	Band Edge - L	
	2400-2483.5_802.11n HT40_CH06_2437MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.88 54.34 74.00 -19.66 52.34 30.78 5.36 34.14 304 201 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2437.00 93.83 ------ ------ 91.77 30.79 5.40 34.13 304 201 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.88 42.37 54.00 -11.63 40.37 30.78 5.36 34.14 304 201 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2437.00 86.54 ------ ------ 84.48 30.79 5.40 34.13 304 201 AVERAGE

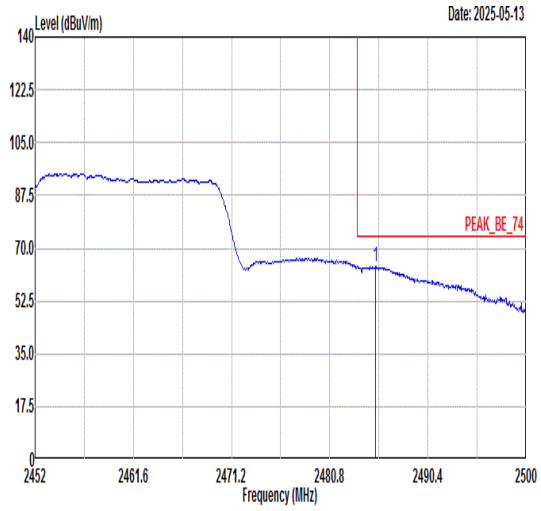
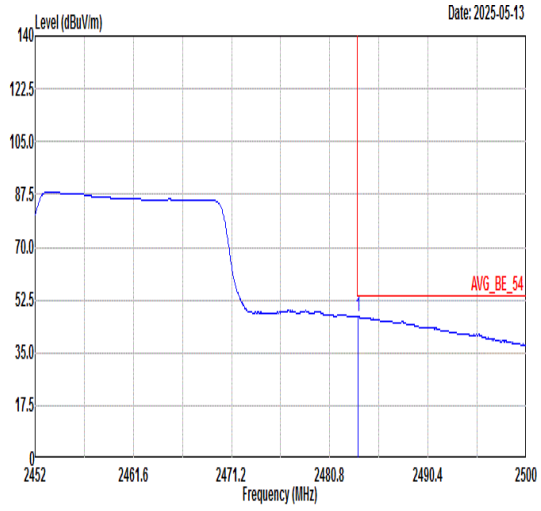
Mode	17	
	Band Edge - R	
	2400-2483.5_802.11n HT40_CH06_2437MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2485.26 51.04 74.00 -22.96 48.89 30.80 5.46 34.11 304 201 PEAK	Blank
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.62 36.60 54.00 -17.40 34.45 30.80 5.46 34.11 304 201 AVERAGE	Blank

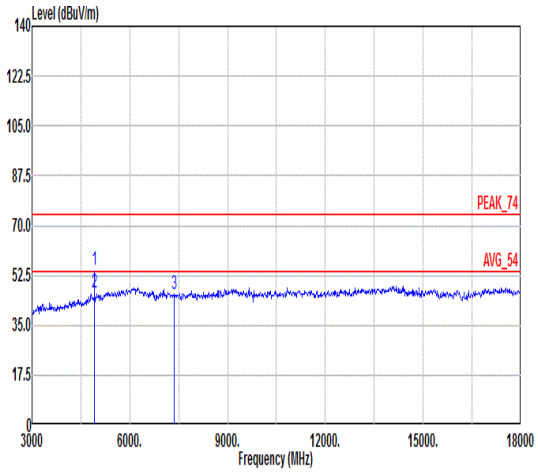
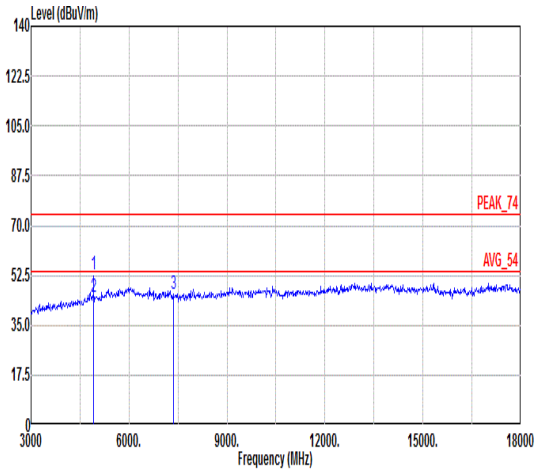
Mode	17	
	Harmonic	
	2400-2483.5_802.11n HT40_CH06_2437MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 53.47 74.00 -20.53 73.08 36.50 8.72 64.83 336 255 Peak 2 4874.00 45.51 54.00 -8.49 65.12 36.50 8.72 64.83 336 255 Average 3 7311.00 45.43 74.00 -28.57 63.37 36.89 10.18 65.01 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4874.00 51.09 74.00 -22.91 70.70 36.50 8.72 64.83 306 110 Peak 2 4874.00 43.36 54.00 -10.64 62.97 36.50 8.72 64.83 306 110 Average 3 7311.00 45.23 74.00 -28.77 63.17 36.89 10.18 65.01 --- --- Peak

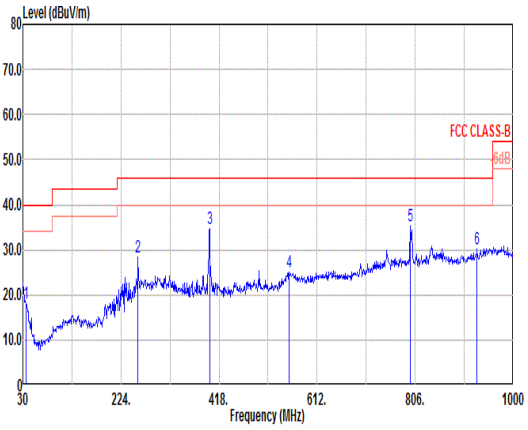
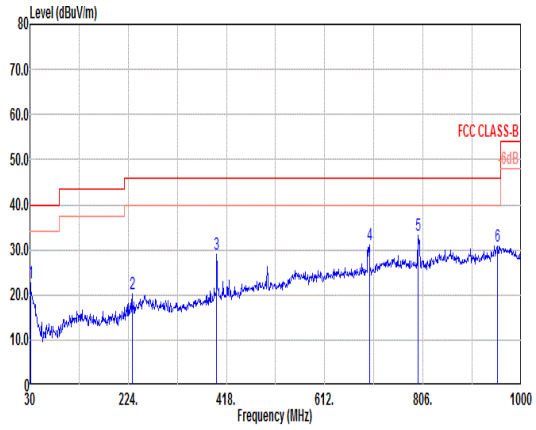
Mode	18	
	Band Edge - L	
	2400-2483.5_802.11n HT40_CH09_2452MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2379.01 45.16 74.00 -28.84 43.18 30.78 5.35 34.15 103 126 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2452.00 97.70 ------ ------ 95.61 30.79 5.42 34.12 103 126 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.52 34.16 54.00 -19.84 32.16 30.78 5.36 34.14 103 126 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2452.00 90.33 ------ ------ 88.23 30.79 5.43 34.12 103 126 AVERAGE

Mode	18	
	Band Edge - R	
	2400-2483.5_802.11n HT40_CH09_2452MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2484.06 64.15 74.00 -9.85 62.00 30.80 5.46 34.11 103 126 PEAK	Blank
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.58 47.17 54.00 -6.83 45.02 30.80 5.46 34.11 103 126 AVERAGE	Blank

Mode	18	
	Band Edge - L	
	2400-2483.5_802.11n HT40_CH09_2452MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2345.78 44.11 74.00 -29.89 42.18 30.77 5.32 34.16 400 209 PEAK	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2452.00 96.13 ------ ------ 94.04 30.79 5.42 34.12 400 209 PEAK
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2389.95 33.81 54.00 -20.19 31.81 30.78 5.36 34.14 400 209 AVERAGE	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2452.00 88.62 ------ ------ 86.53 30.79 5.42 34.12 400 209 AVERAGE

Mode	18	
	Band Edge - R	
	2400-2483.5_802.11n HT40_CH09_2452MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2485.26 63.79 74.00 -10.21 61.64 30.80 5.46 34.11 400 209 PEAK	Blank
Avg	 Freq Level Limit Line Margin (dB) Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dBuV dB/m dB dB cm deg 1 2483.58 46.98 54.00 -7.02 44.83 30.80 5.46 34.11 400 209 AVERAGE	Blank

Mode	18	
	Harmonic	
	2400-2483.5_802.11n HT40_CH09_2452MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4904.00 54.56 74.00 -19.44 74.20 36.55 8.63 64.82 337 257 Peak 2 4904.00 46.34 54.00 -7.66 65.98 36.55 8.63 64.82 337 257 Average 3 7356.00 45.71 74.00 -28.29 63.68 36.84 10.18 64.99 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4904.00 52.68 74.00 -21.32 72.32 36.55 8.63 64.82 315 120 Peak 2 4904.00 44.77 54.00 -9.23 64.41 36.55 8.63 64.82 315 120 Average 3 7356.00 45.80 74.00 -28.20 63.77 36.84 10.18 64.99 --- --- Peak

Mode	19	
	LF	
	2400-2483.5_802.11n HT40	
ANT	1	
Pol.	Horizontal	Vertical
QP/ Peak		

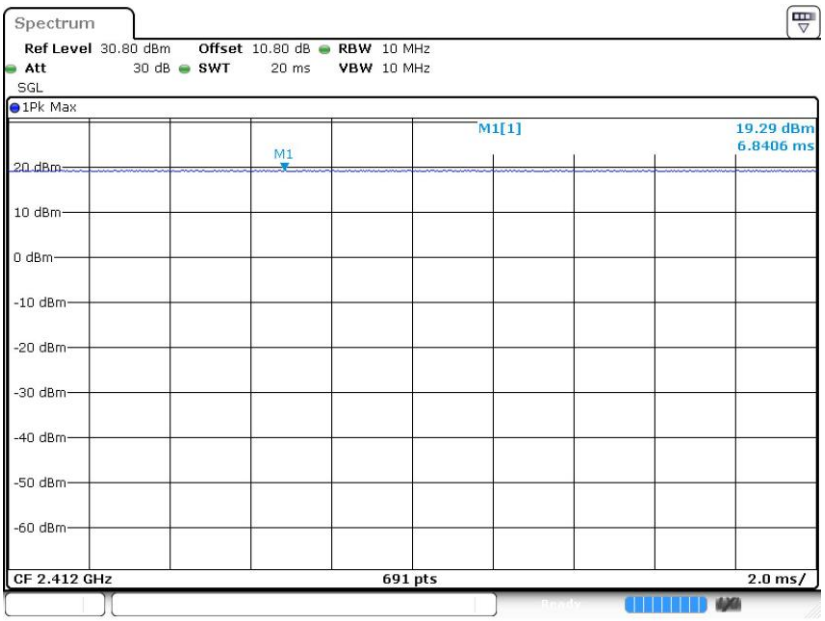
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	35.82	18.05	40.00	-21.95	26.94	22.23	0.58	31.70	---	---	Peak
2	257.95	28.51	46.00	-17.49	38.63	19.73	1.67	31.52	---	---	Peak
3	399.57	34.82	46.00	-11.18	41.96	22.06	2.10	31.30	---	---	Peak
4	556.71	25.06	46.00	-20.94	26.91	26.95	2.47	31.27	---	---	Peak
5	796.30	35.26	46.00	-10.74	34.61	28.81	2.93	31.09	---	---	Peak
6	928.22	30.04	46.00	-15.96	27.39	30.37	3.20	30.92	---	---	Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	30.97	22.66	40.00	-17.34	28.94	24.72	0.54	31.54	---	---	Peak
2	231.76	20.37	46.00	-25.63	33.91	16.39	1.57	31.50	---	---	Peak
3	398.60	29.04	46.00	-16.96	36.24	22.01	2.10	31.31	---	---	Peak
4	700.27	31.08	46.00	-14.92	32.89	26.53	2.76	31.10	---	---	Peak
5	796.30	33.21	46.00	-12.79	32.56	28.81	2.93	31.09	---	---	Peak
6	952.47	30.85	46.00	-15.15	26.92	31.54	3.23	30.84	---	---	Peak

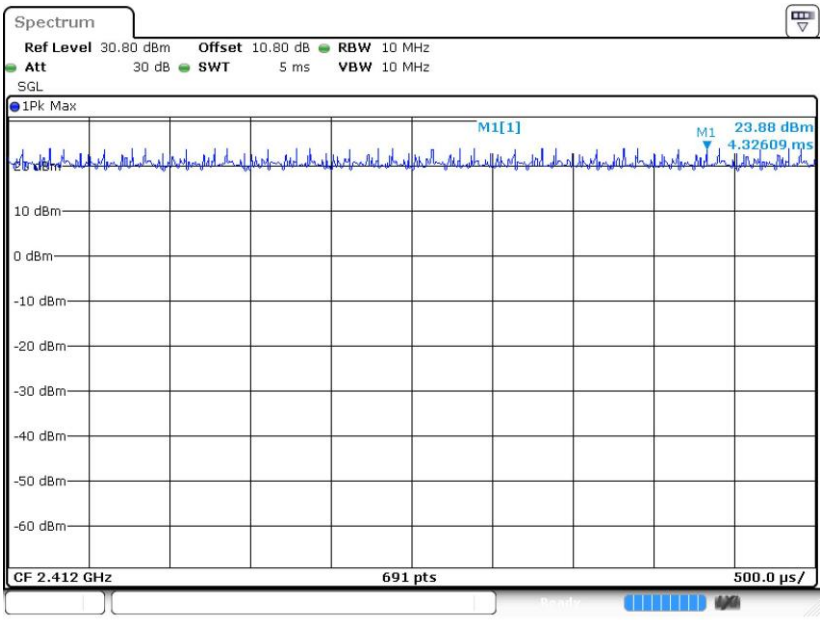
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	100	-	-	10Hz
802.11g	100	-	-	10Hz
802.11n HT20	100	-	-	10Hz
802.11n HT40	100	-	-	10Hz

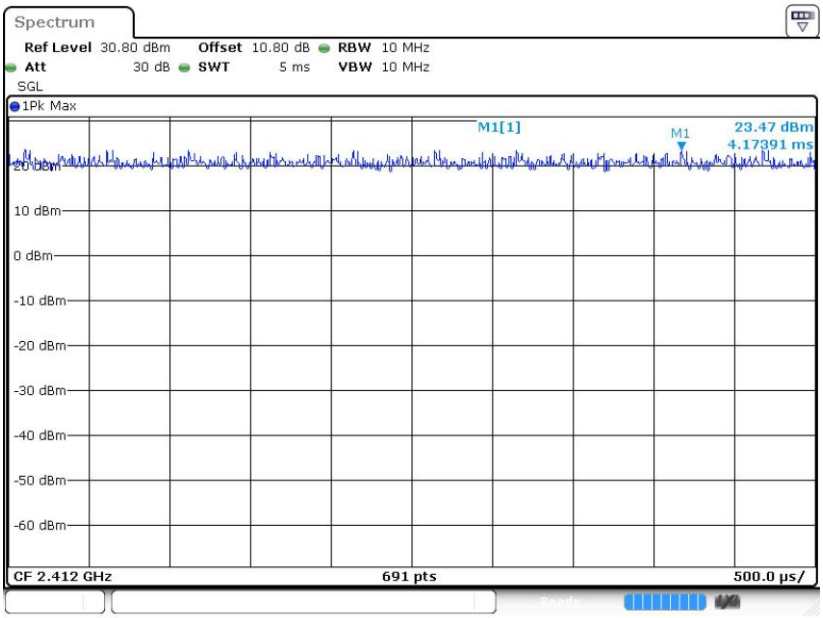
802.11b



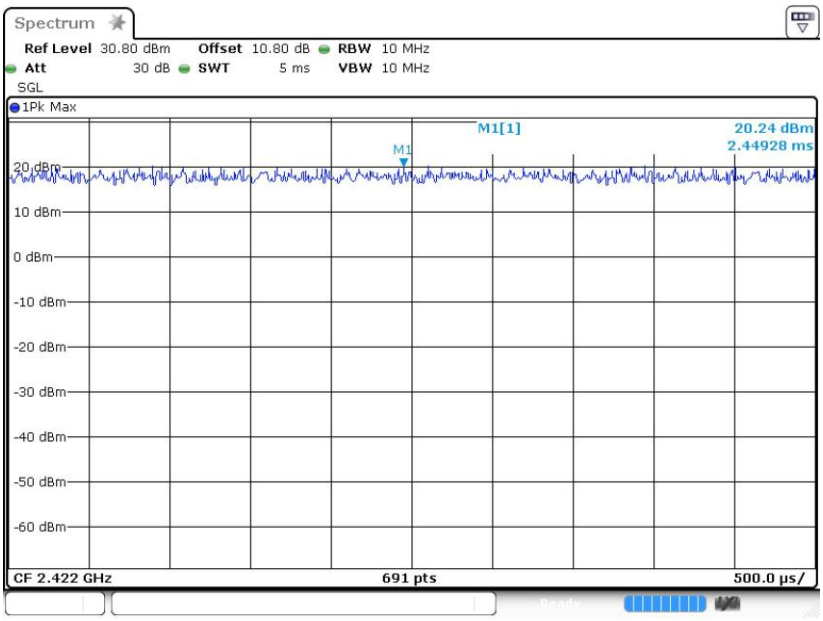
802.11g



802.11n HT20



802.11n HT40


Spectrum
Ref Level 30.80 dBm Offset 10.80 dB RBW 10 MHz
Att 30 dB SWT 5 ms VBW 10 MHz
SGL
1Pk Max
M1[1] 20.24 dBm
2.44928 ms
M1
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
CF 2.422 GHz
691 pts
500.0 µs/