Nemko Korea Co., Ltd.

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FCC & IC EVALUATION REPORT FOR CERTIFICATION

Project No. : NK-25-R-066
Applicant : Medit Corp.
9F, 10F, 13F, 14F, 16F, 8, Yangpyeong-ro 25-gil, Yeongdeungpo-gu, Seoul, 07207, Korea, Republic of

Dates of receipt : February 27, 2025
Dates of Issue : July 30, 2025
Test Site :
Nemko Korea Co., Ltd.

FCC ID :	**2A2QMMO3-WFH**
IC :	**27675-MO3WFH**
Applicant :	**Medit Corp.**
Brand Name :	**MEDIT**

Model:	**MO3-WFH**
Additional Model(s):	**-**
EUT Type:	**Wireless Hub**
Classification:	**Unlicensed National Information Infrastructure (NII)**
Date of Test:	**April 21, 2025 ~ June 27, 2025**
Applied Standard:	**FCC 47 CFR Part 15.407** **RSS-247 issue3, RSS-Gen issue5**

The device bearing the brand name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. The client should not use it to claim product endorsement by TAF or any government agencies. The test results in the report only apply to the tested sample.

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By : Jinhee Goo
Test Engineer

Reviewed By : Hoonpyo Lee
Technical Manager

Revision History

Rev.	Issue Date	Revisions	Revised By
00	July 30, 2025	Initial issue	Jinhee Goo

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1. INTRODUCTION

1.1 Test facility

The measurement procedure described in American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (ANSI C63.4-2014), the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013) was used in determining radiated and conducted emissions emanating.

These measurement tests were conducted at **Nemko Korea Co., Ltd.**
The site address 165-51, Yurim-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, 17042, Rep. of Korea.

1.2 Accreditation and listing

Accreditation type		Accreditation number
FC	CAB Accreditation for DOC	Designation No. KR0026
KOREA LABORATORY ACCREDITATION SCHEME KOLAS TESTING NO. 155	KOLAS Accredited Lab. (Korea Laboratory Accreditation Scheme)	Registration No. KT155
Industry Canada	Canada IC Registered site	Site No. 29506
VCCI	VCCI registration site(RE/CE/Telecom CE)	Member No. 2118
IECEE CB SCHEME	EMC CBTL	TL124
KC	KCC(RRL)Designated Lab.	Registration No. KR0026

2. EUT INFORMATION & TEST CONDITIONS

2.1 EUT Information

2.1.1 Specifications

EUT Type	Wireless Hub
Model Name	MO3-WFH
Frequency of Operation	For U-NII-1 Band 5 210 MHz : 802.11ac,ax (80 MHz) For U-NII-3 Band 5 775 MHz : 802.11ac,ax (80 MHz)
Maximum Conducted Output Power	802.11ac,ax (80 MHz) : 12.58 dBm 802.11ac ax (80 MHz) : 12.99 dBm
Number of Channels	For U-NII-1 Band 802.11ac,ax (80 MHz) : 1 ch For U-NII-3 Band 802.11ac,ax (80 MHz) : 1 ch
Modulations	BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Antenna Gain (peak)	U-NII-1 : 3.81 dBi (Directional Gain: 6.82 dBi) U-NII-3 : 4.51 dBi (Directional Gain: 7.52 dBi)
Antenna Setup	2TX / 2RX
EUT Rated Voltage	DC 5.0 V
EUT Test Voltage	DC 5.0 V
HVIN (Hardware Version Number)	Ver 0.8.0
FVIN (Firmware Version Identification Number)	WLAN: ver 1.0 BT: ver 0.0.8
Remarks	-

2.2 Operation During Test

The EUT is the transceiver which is module supporting the 802.11ac/ax (80 MHz) mode.
The Laptop PC was used to control the EUT to transmit the wanted TX channel by the testing program and testing command supported by manufacturer.
The operating voltage of EUT was 5.0 Vdc supplied from battery.

The EUT was tested at the lowest, middle and the highest channels with the maximum output power in accordance with the manufacturer's specifications. The worst data were recorded in the report.

2.2.1 Table of Test power setting

Frequency [MHz]	Mode	Power setting Level
5 210	802.11ac VHT80	10
5 775		10
5 210	802.11ax EHT80	10
5 775		10

2.2.2 Table of Test frequency

Frequency band	Modulation	Test Channel (CH)	Frequency (MHz)
U-NII-1	802.11ac,ax (80 MHz)	42	5 210
U-NII-3	802.11ac,ax (80 MHz)	155	5 775

2.2.3 Antenna Information

Frequency band	Mode	Data rate	Antenna TX mode	Support CDD	Support MIMO
5 GHz	802.11ac (80MHz)	MCS 0~11	☐ 1TX, ■ 2TX	■ Yes, ☐ No	■ Yes, ☐ No
	802.11ax (80MHz)	MCS 0~11	☐ 1TX, ■ 2TX	■ Yes, ☐ No	■ Yes, ☐ No

2.2.4 Additional Information Related to Testing

The cable and attenuator loss from 30 MHz to 26.5 GHz was reflected in spectrum analyzer with correction factor for all conducted testing.

2.2.5 Worst-case Configuration and Mode

Radiated emission below 1GHz was performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.
Radiated emission above 1GHz was performed with the EUT set to transmit low/mid/high channels.

The emissions (Band-edge & spurious emissions) were tested in orthogonal orientations X because the wireless hub is designed to resemble a desktop cradle.

Accordingly, the orientation was determined and tested as shown in the table below:

Test Items	X	Y	Z
Band-edge	O	-	-
Spurious emissions	O	-	-

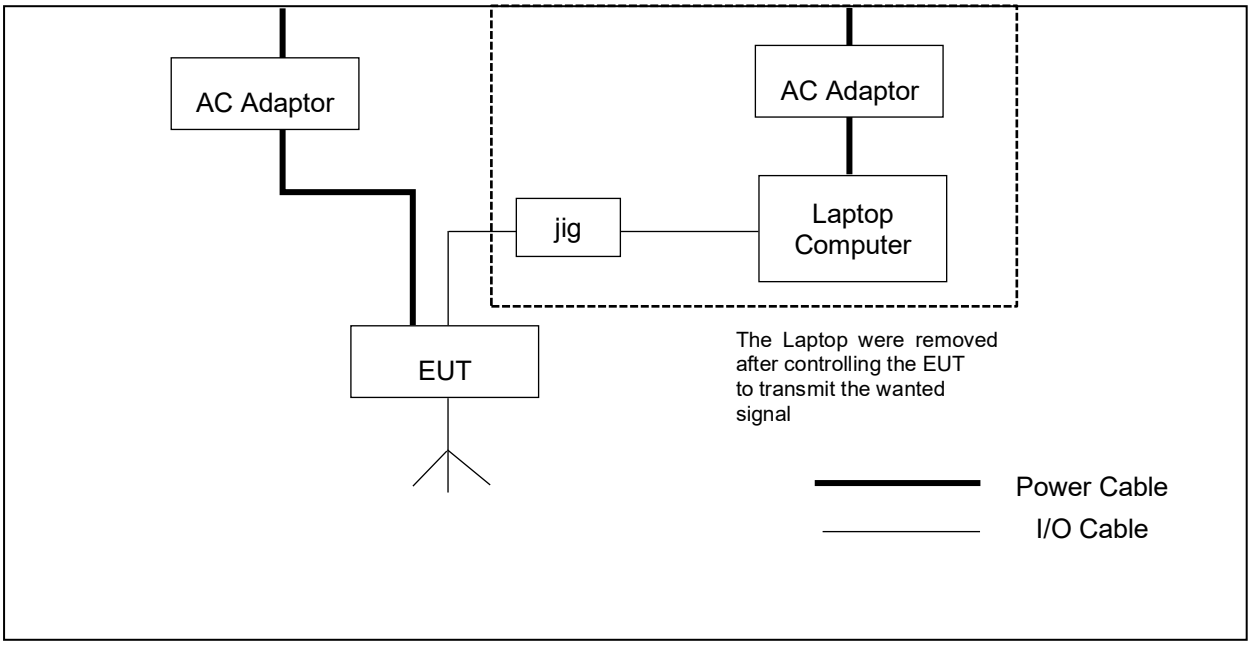
2.2.6 Additional model covered by this report

- N/A

2.3 Support Equipment

EUT	Medit Corp. Model : MO3-WFH	S/N: N/A
Laptop Computer	Lenovo Model :IdeaPad Slim 3 15ABR8	FCC DOC S/N : PF4YWJKK
AC Adapter	Lenovo Model : ADI.X65NCC3A	FCC DOC S/N : 8SGX21J75539C1TJ43F12CL

2.4 Setup Drawing



3. ANTENNA REQUIREMENTS

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission under FCC part 15.

§15.203 of the FCC Rules part 15 Subpart C

: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. 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 provisions of this section.

The antenna of the EUT and there are no provisions for connection to an external antenna. It complies with the requirement of §15.203.

The transmitter has attached FPCB antenna (Internal antenna) inside the EUT case.

Used Antenna	
Model name	5 150 MHz ~ 5 850 MHz
	Max. peak gain (dBi)
INNO-AFP-0420	U-NII-1 : 3.81 U-NII-3 : 4.51

4. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specification:

Name of Test	FCC/IC Paragraph No.	Test Condition	Result	Remark
26dB Bandwidth	15.407(a) RSS-247 (6.2)	Conducted	Complies	-
6dB Bandwidth	15.407(e) RSS-247 (6.2)		Complies	-
Occupied Bandwidth	-			-
Conducted Output Power	15.407(a) RSS-247 (6.2)		Complies	-
Power Spectral Density	15.407(a) RSS-247 (6.2)		Complies	-
Radiated Spurious Emission	15.407(b) 15.205, 15.209 RSS-Gen (8.9),(8.10)	Radiated	Complies	-
AC Line Conducted Emission	15.207 RSS-Gen (8.8)	Line Conducted	Complies	-

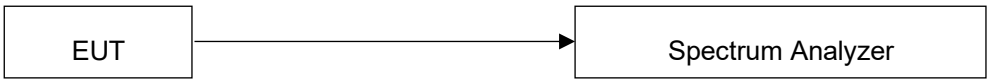
5. TEST METHODOLOGY

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
4. ANSI C63.10-2013.
5. RSS-Gen Issue 5
6. RSS-247 Issue 3
7. ANSI C63.10-2013.

6. DESCRIPTION OF TESTS

6.1 6 dB Bandwidth / 26 dB Bandwidth / Occupied Bandwidth

Test Setup



Test Measurement Method

ANSI C63.10-2013, Section 12.4
KDB 789033 D02 v02r01, Section C
RSS-Gen section 6.7

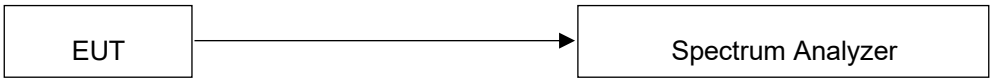
Test Procedure

- 6 dB Bandwidth
EUTs 6 dB bandwidth is measured at low, middle, high channels with a spectrum analyzer connected to the antenna terminal while the EUTs operating at its maximum power control level.
The spectrum analyzer setting is as follows.
RBW = 100 kHz
VBW > 3 x RBW
Detector = Peak
Trace mode = max hold
Sweep = auto couple
Allow trace to fully stabilize.
The bandwidth measurement function on the spectrum analyzer is used to measure the 6 dB bandwidth.

- 26 dB Bandwidth
EUTs 26 dB bandwidth is measured at low, middle, high channels with a spectrum analyzer connected to the antenna terminal while the EUTs operating at its maximum power control level.
The spectrum analyzer setting is as follows.
RBW = approximately 1 % of the emission bandwidth
VBW > RBW
Detector = Peak
Trace mode = max hold
The bandwidth measurement function on the spectrum analyzer is used to measure the 26 dB bandwidth and 99% occupied bandwidth.

6.2 Maximum Conducted Output Power(average)

Test Setup



Test Measurement Method

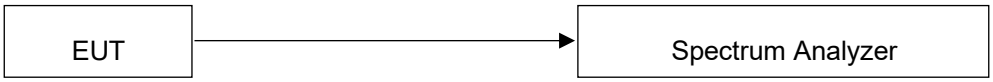
ANSI C63.10-2013, Section 12.3
KDB 789033 D02 v02r01, Section E

Test Procedure

EUTs Maximum Conducted Output Power(average) is measured at low, middle, high channels with a spectrum analyzer connected to the antenna terminal while the EUTs operating at its maximum power control level.
The spectrum analyzer setting is as follows.
Measure the duty cycle, x, of the transmitter output signal.
Span to encompass the entire 26 dB EBW or 99% OBW of the signal.
RBW = 1 MHz
VBW ≥ 3 MHz
Number of points in sweep ≥ 2 x span / RBW
Sweep time ≥ [10 × (number of points in sweep) × (total ON/OFF period of the transmitted signal)].
Detector = RMS
Trace average at least 100 traces in power averaging mode.
Add 10 log(1/x), where x is the duty cycle.
Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges.

6.3 Power Spectral Density

Test Setup



Test Measurement Method

ANSI C63.10-2013, Section 12.5
KDB 789033 D02 v02r01, Section F

Test Procedure

EUTs Power Spectral Density is measured at low, middle, high channels with a spectrum analyzer connected to the antenna terminal while the EUTs operating at its maximum power control level.
The spectrum analyzer setting is as follows.
Measure the duty cycle, x, of the transmitter output signal
Center frequency = Channel center frequency
Span = encompass the EBW of the signal
RBW ≥ 1 MHz for UNII-1, 2A, 2C band or 500 kHz for UNII-3 band
VBW ≥ 3 x RBW
Detector = RMS
Sweep time = auto couple
Trace average at least 100 traces in power averaging mode
Allow the trace to stabilize.
The peak search function on the spectrum analyzer is used to determine the maximum amplitude level within the RBW.

6.4 Radiated Emissions

Test Measurement Method

ANSI C63.10-2013, Section 6.6.4.3, Section 12.7
KDB 789033 D02 v02r01, Section G

Test Procedure

The measurement was performed at the test site that is specified in accordance with ANSI C63.10-2013. The spurious emission was scanned from 9 kHz to 30 MHz using Loop Antenna and 30 to 1000 MHz using Trilog broadband test antenna. Above 1 GHz, Horn antenna was used.
For emissions testing at below 1GHz, The test equipment was placed on turntable with 0.8 m above ground. For emission measurements above 1 GHz, The test equipment was placed on turntable with 1.5 m above ground. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The EUT, cable, wire arrangement and mode of operation that has the highest amplitude relative to the limit was selected. Then, the turn table was rotated from 0˚ to 360˚ and an antenna mast was moved from 1 m to 4 m height to maximize the suspected highest amplitude signal. The final maximized level was recorded.

At frequencies below 1000 MHz, measurements performed using the CISPR quasi-peak detection. At frequencies above 1000 MHz, measurements performed using the peak and average measurement procedures described in ANSI 63.10-2013 section 12.7. Peak emission levels were measured by setting the analyzer RBW = 1 MHz, VBW = 3 MHz, Detector = Peak, Trace mode = max hold. Average emission levels were measured by setting the analyzer RBW = 1 MHz, VBW = 10 kHz, Detector = Peak, Trace mode = max hold. Allow max hold to run for at least 50 times (1/duty cycle) traces.

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

Radiated Emissions Limits per 47 CFR 15.209(a)

6.5 AC Line Conducted Emissions

Test Measurement Method

ANSI C63.10-2013, Section 6.2

Test Procedure

The Line conducted emission test facility is located inside a 4 x 7 x 2.5 meter shielded enclosure. It is manufactured by EM engineering. The shielding effectiveness of the shielded room is in accordance with MIL-STD-285 or NSA 65-6. A 1 m x 1.5 m wooden table 0.8 m height is placed 0.4 m away from the vertical wall and 1.5 m away from the side of wall of the shielded room. Rohde & Schwarz (ENV216) of the 50 ohm/50 μH Line Impedance Stabilization Network (LISN) are bonded to the shielded room. The EUT is powered from the Rohde & Schwarz LISN. Power to the LISNs are filtered by high-current high insertion loss Power line filters. The purpose of filter is to attenuate ambient signal interference and this filter is also bonded to shielded enclosure. All electrical cables are shielded by tinned copper zipper tubing with inner diameter of 1 / 2 ". If DC power device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the LISNs, All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1 meter length. Sufficient time for EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT. The spectrum was scanned from 150 kHz to 30 MHz with 200 msec sweep time. The frequency producing the maximum level was re-examined using the EMI test receiver. (Rohde & Schwarz ESR3). The detector functions were set to CISPR quasi-peak mode & average mode. The bandwidth of receiver was set to 9 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each EME emission. Each emission was maximized by; switching power lines; varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and of support equipment, and powering the monitor from the floor mounted outlet box and computer aux AC outlet, if applicable; whichever determined the worst case emission.
Each EME reported was calibrated using the R&S signal generator.

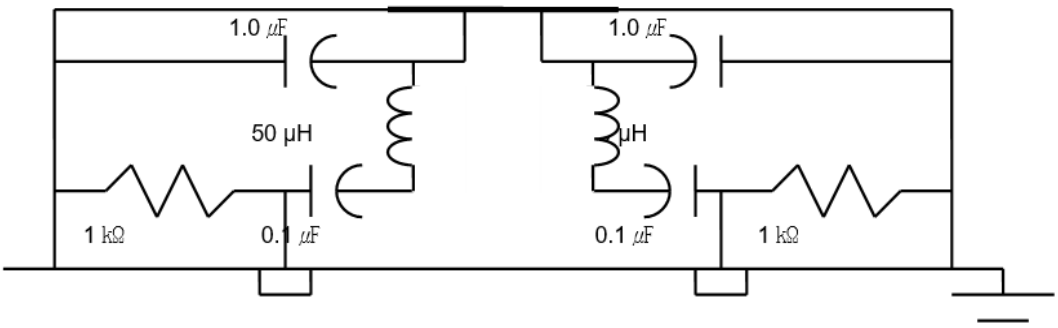


Fig. 2. LISN Schematic Diagram

7. TEST DATA

7.1 6 dB Bandwidth / 26 dB Bandwidth / Occupied Bandwidth

7.1.1 26 dB Bandwidth / Occupied Bandwidth

FCC §15.407(a), RSS-247 (6.2)

Test Mode : Set to Lowest channel, Middle channel and Highest channel

Result

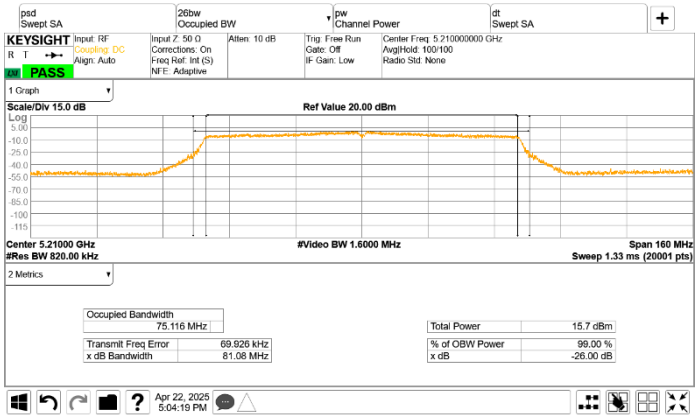
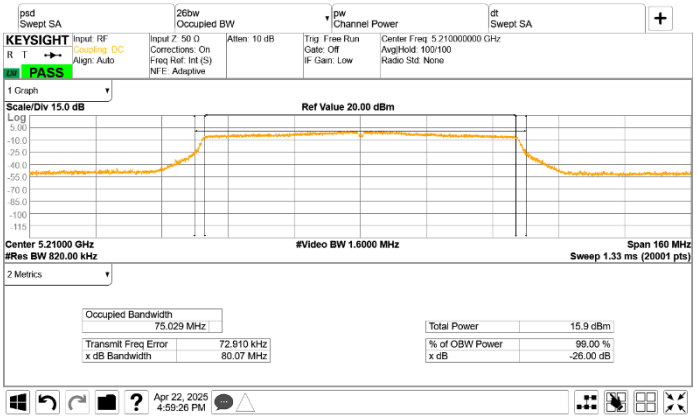
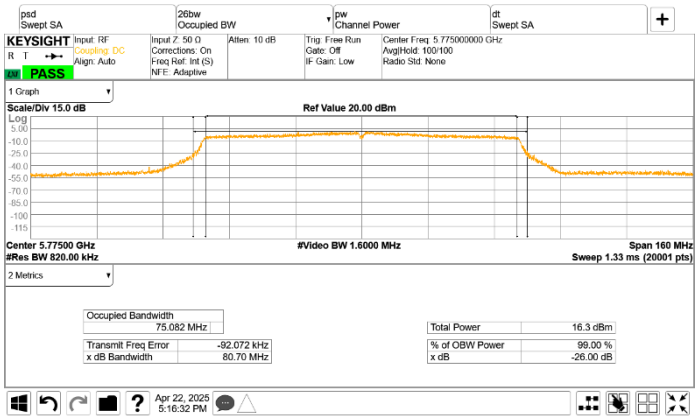
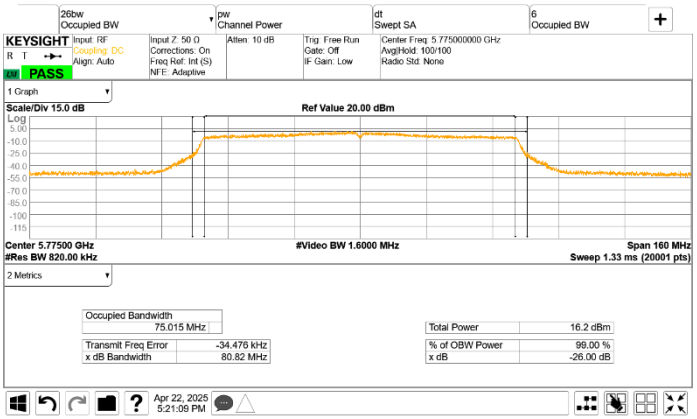
802.11ac(80 MHz) mode

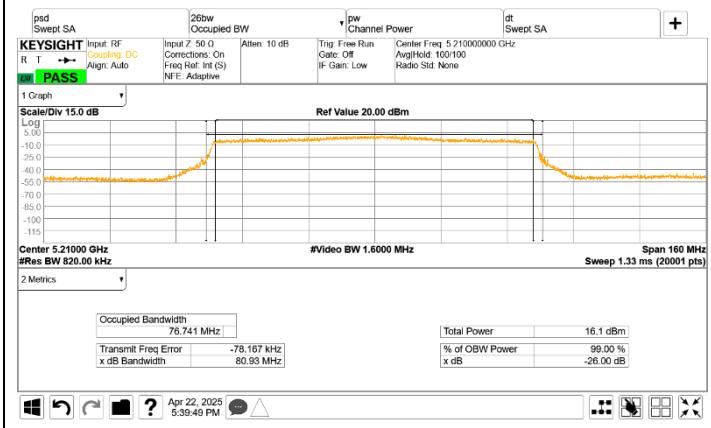
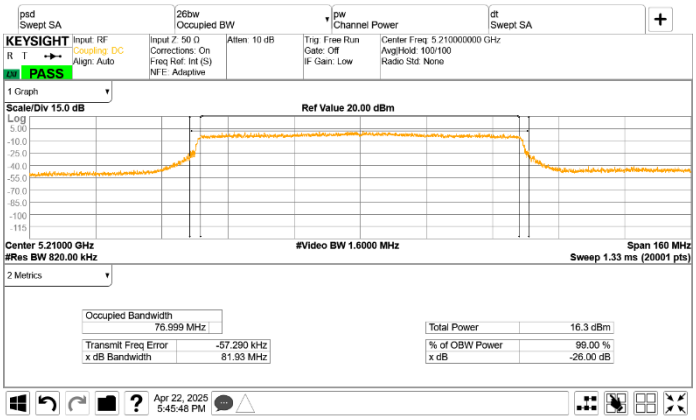
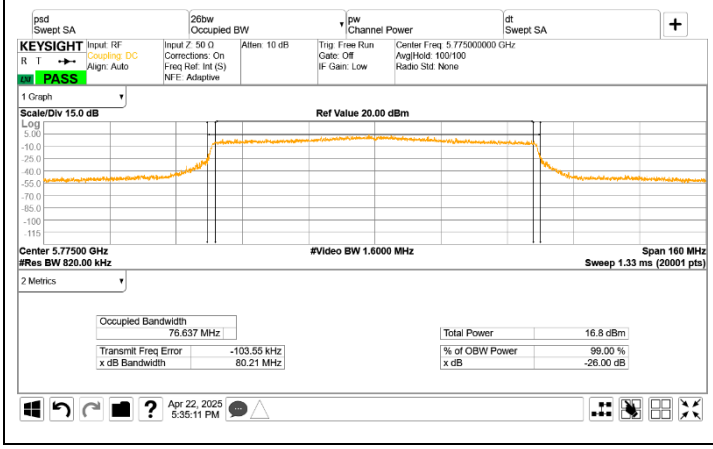
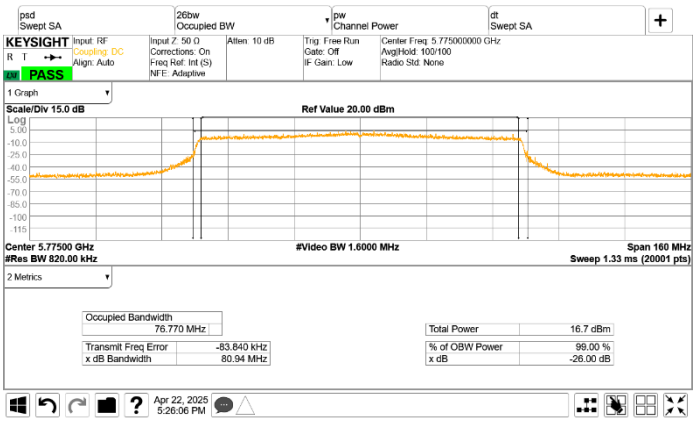
Band	Frequency (MHz)	26 dB Bandwidth (MHz) Ant1	26 dB Bandwidth (MHz) Ant2	99% Occupied Bandwidth (MHz) Ant1	99% Occupied Bandwidth (MHz) Ant2
U-NII-1	5 210	81.08	80.07	75.12	75.03
U-NII-3	5 775	80.70	80.82	75.08	75.02

802.11ax(80 MHz) mode

Band	Frequency (MHz)	26 dB Bandwidth (MHz) Ant1	26 dB Bandwidth (MHz) Ant2	99% Occupied Bandwidth (MHz) Ant1	99% Occupied Bandwidth (MHz) Ant2
U-NII-1	5 210	80.93	81.93	76.74	77.00
U-NII-3	5 775	80.21	80.94	76.64	76.77

PLOTS OF EMISSIONS

802.11ac(80 MHz)	
U-NII-1, ANT1	U-NII-1, ANT2
	
U-NII-3, ANT1	U-NII-3, ANT2
	

802.11ax(80 MHz)	
U-NII-1, ANT1	U-NII-1, ANT2
	
U-NII-3, ANT1	U-NII-3, ANT2
	

7.1.2 6 dB Bandwidth U-NII-3 Band

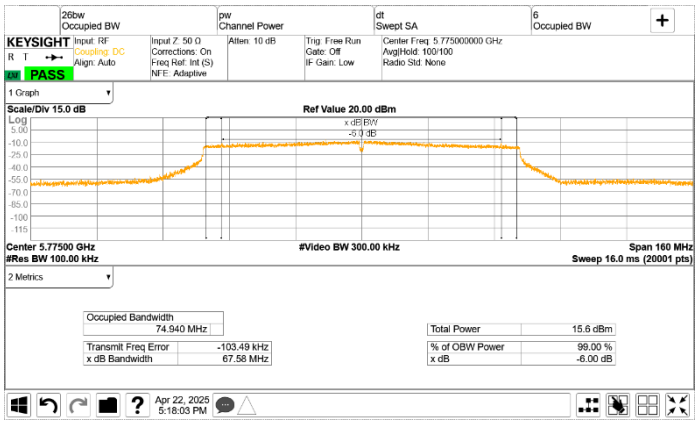
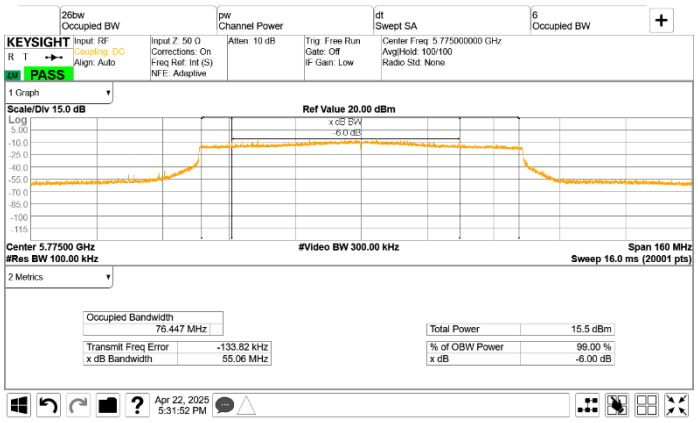
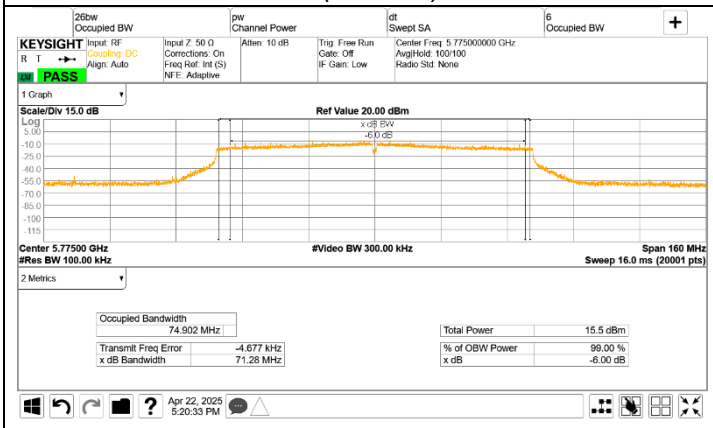
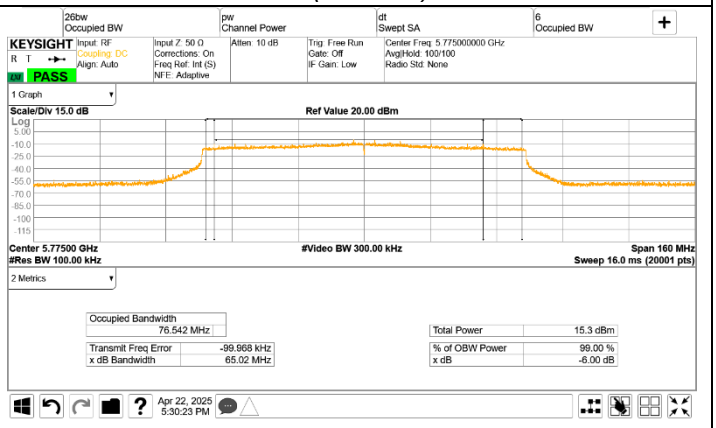
FCC §15.407(e), RSS-247 (6.2)

Test Mode : Set to Lowest channel, Middle channel and Highest channel

Result

Mode	Frequency (MHz)	6 dB Bandwidth (MHz) Ant1	6 dB Bandwidth (MHz) Ant2	Limit (kHz)
802.11ac (80 MHz)	5 775	67.58	71.28	> 500
802.11ax (80 MHz)	5 775	55.06	65.02	

PLOTS OF EMISSIONS

802.11ac(80 MHz) ANT1	802.11ax(80 MHz) ANT1
	
802.11ac(80 MHz) ANT2	**802.11ax(80 MHz) ANT2**
	

7.2 Maximum Conducted Output Power(average)

FCC §15.407(a), RSS-247(6.2)

Test Mode : Set to Lowest channel, Middle channel and Highest channel

Result

U-NII-1

- 5 210 MHz

Mode	Measured Conducted Power (dBm) ANT1	Measured Conducted Power (dBm) ANT2	Measured Conducted Power (dBm)	Duty Factor (dB)	*Maximum Conducted Power (dBm)	FCC Limit (dBm)	E.I.R.P (dBm)	IC E.I.R.P Limit (dBm)
802.11ac (80 MHz)	9.45	9.69	12.58	0.02	12.60	24.00	19.42	23.00
802.11ax (80 MHz)	9.37	9.44	12.42	0.02	12.44	24.00	19.26	23.00

U-NII-3

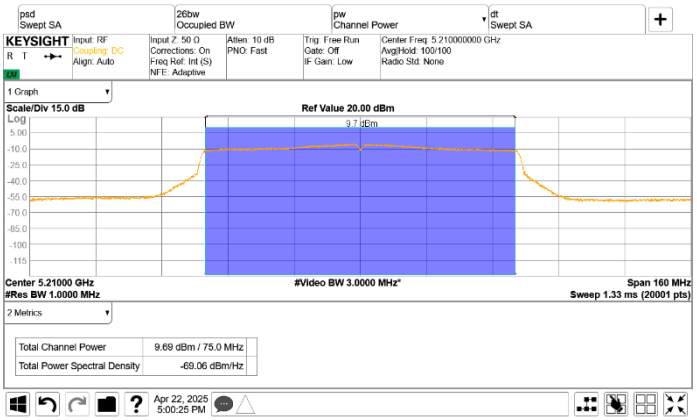
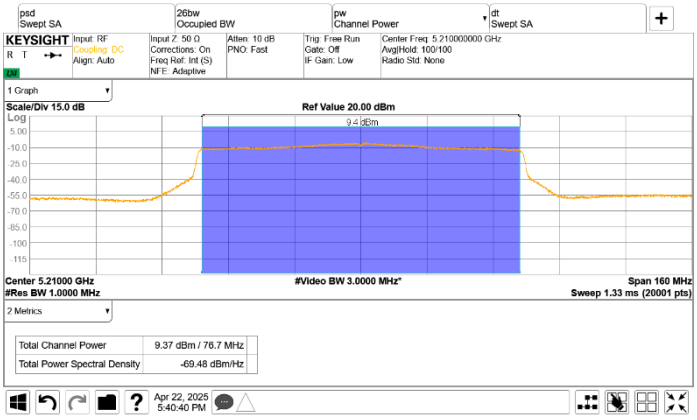
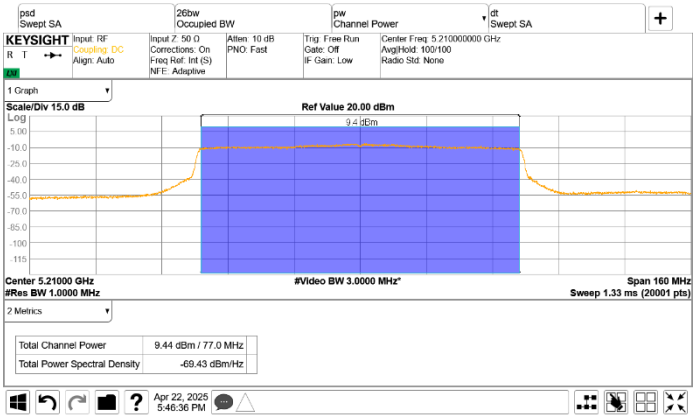
- 5 775 MHz

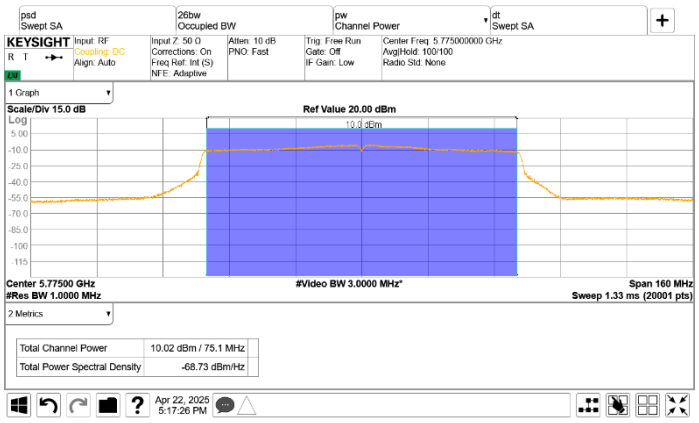
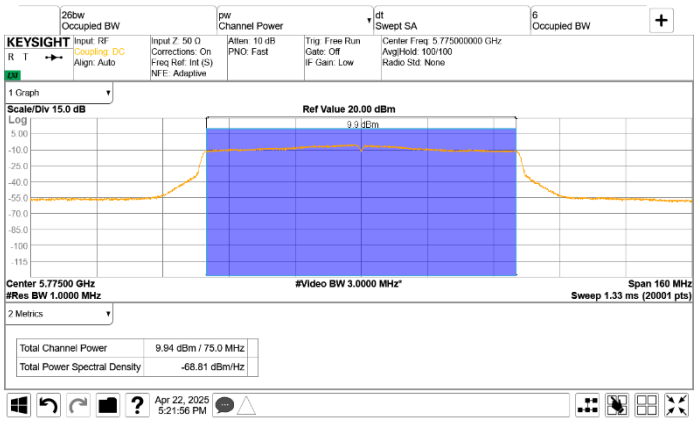
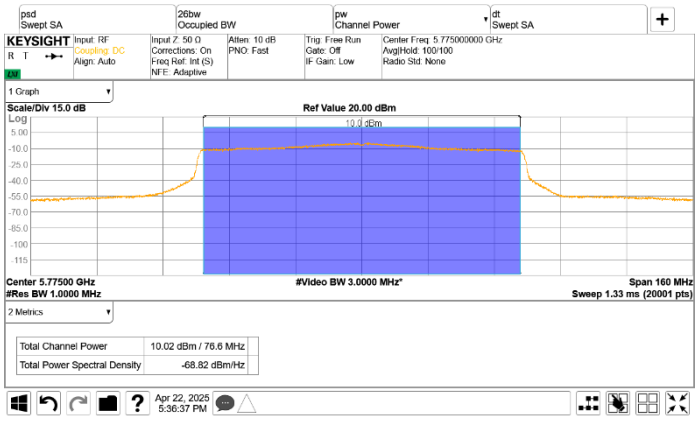
Mode	Measured Conducted Power (dBm) ANT1	Measured Conducted Power (dBm) ANT2	Measured Conducted Power (dBm)	Duty Factor (dB)	*Maximum Conducted Power (dBm)	FCC Limit (dBm)	E.I.R.P (dBm)	IC E.I.R.P Limit (dBm)
802.11ac (80 MHz)	10.02	9.94	12.99	0.02	13.01	30.00	20.53	30.00
802.11ax (80 MHz)	10.02	9.89	12.97	0.02	12.99	30.00	20.51	30.00

Notes:

1. *Maximum Conducted(average) Power = Measured conducted power + Duty Factor
2. The following equation was used for spectrum offset :
   Spectrum offset (dB) = Attenuator (dB) + Cable Loss (dB) + SMA Type Connector Loss (dB)
3. *E.I.R.P* = Maximum conducted Power + Duty Cycle Factor + Antenna gain.
   E.I.R.P was calculated by following equation according to KDB412172 D01 Determining ERP and EIRP v01.
   $E.I.R.P = P_T + G_T - L_C$
   P_T = Peak output power (dBm)
   G_T = Gain of the transmitting antenna in dBi, Directional antenna gain is 6.82 dBi for U-NII-1, 7.52 dBi for U-NII-3.
   L_C = Signal attenuation in the connecting cable between the transmitter and antenna in dB. This factor of an integral antenna is negligible.
4. IC *E.I.R.P* Limit = 200 mW or 10 + 10 log10B, dBm, whichever power is less.
   B is the 99% emission bandwidth in megahertz.

PLOTS OF EMISSIONS

U-NII-1	
802.11ac(80 MHz), ANT1	802.11ac(80 MHz), ANT2
	
802.11ax(80 MHz), ANT1	802.11ax(80 MHz), ANT2
	

U-NII-3	
802.11ac(80 MHz), ANT1	802.11ac(80 MHz), ANT2
	
802.11ax(80 MHz), ANT1	802.11ax(80 MHz), ANT2
	

7.3 Power Spectral Density

FCC §15.407(a), RSS-247(6.2)

Test Mode : Set to Lowest channel, Middle channel and Highest channel

Result

U-NII-1

- 5 210 MHz

Mode	Measured PSD (dBm/MHz) ANT1	Measured PSD (dBm/MHz) ANT2	Measured PSD (dBm/MHz)	Duty Factor (dB)	*Maximum PSD (dBm/MHz)	FCC Limit (dBm/MHz)	E.I.R.P (dBm/MHz)	IC E.I.R.P Limit (dBm/MHz)
802.11ac (80 MHz)	-5.72	-5.40	-2.55	0.02	-2.53	11	4.27	10
802.11ax (80 MHz)	-5.75	-6.21	-2.96	0.02	-2.94	11	3.86	11

U-NII-3

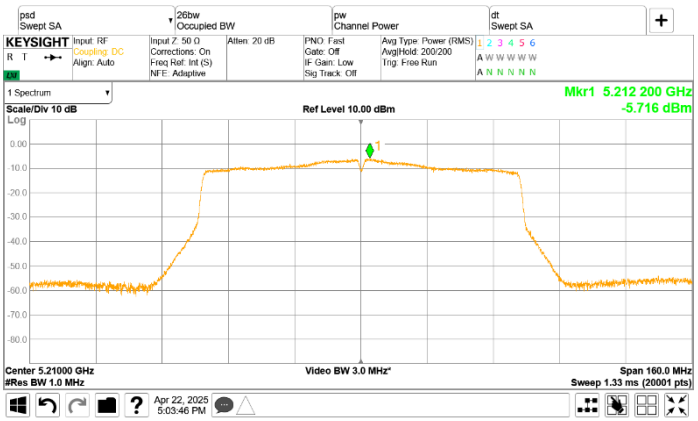
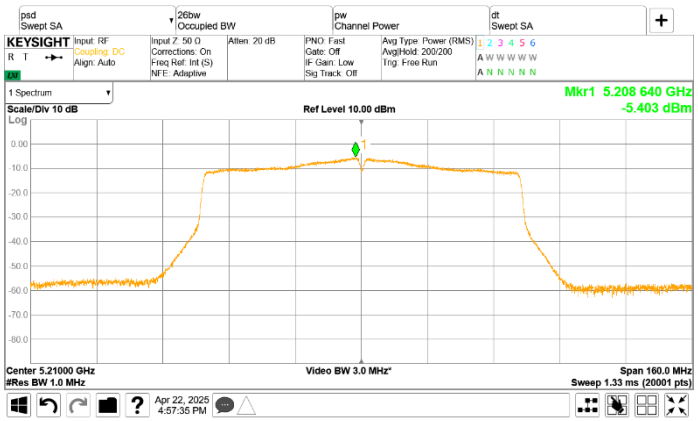
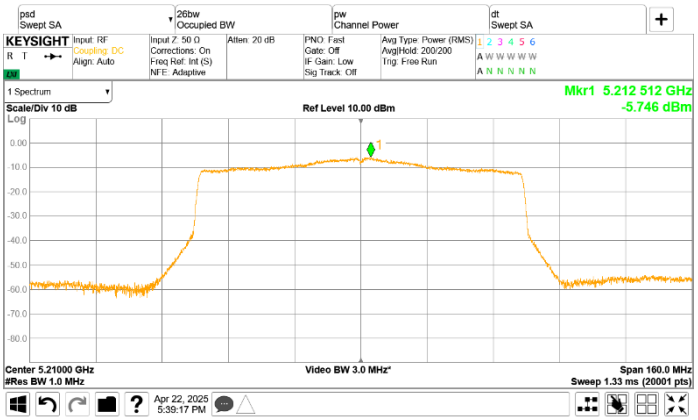
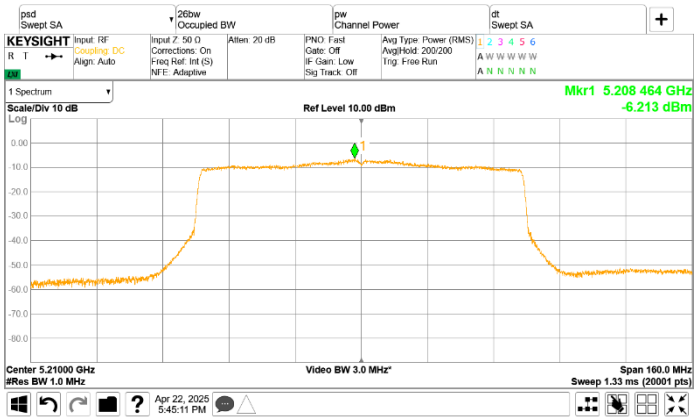
- 5 775 MHz

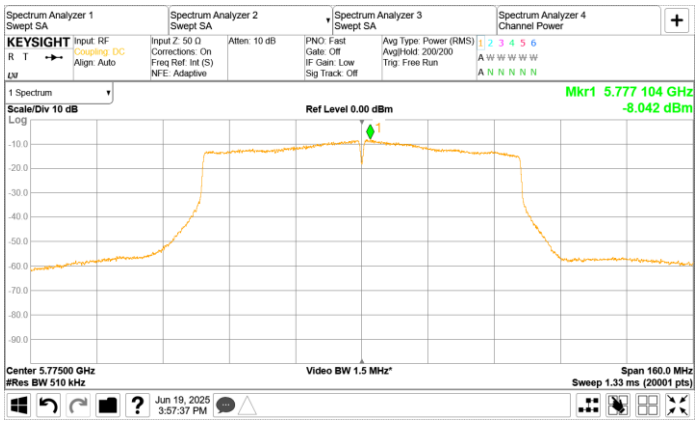
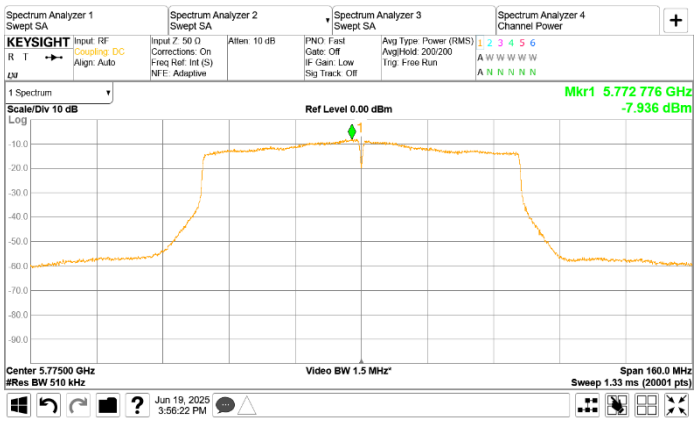
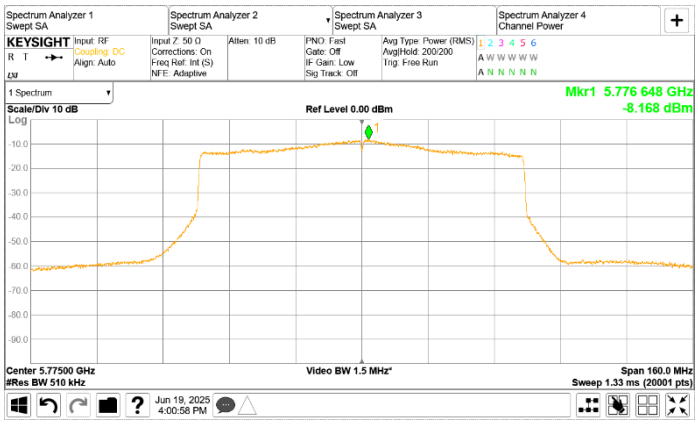
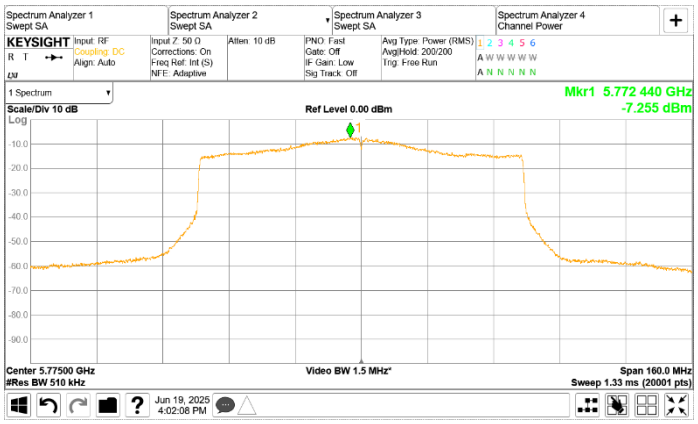
Mode	Measured PSD (dBm/500kHz) ANT1 (dBm/MHz)	Measured PSD (dBm/500kHz) ANT2 (dBm/MHz)	Measured PSD (dBm/500kHz) (dBm/MHz)	Duty Factor (dB)	*Maximum PSD (dBm/500kHz) (dBm/MHz)	FCC/IC Limit (dBm/500kHz) (dBm/MHz)
802.11ac (80 MHz)	-8.04	-7.94	-4.98	0.02	-4.96	30
802.11ax (80 MHz)	-8.17	-7.26	-4.68	0.02	-4.66	30

Notes:

1. * Maximum PSD = Measured PSD + Duty Factor
2. The following equation was used for spectrum offset:
   Spectrum offset (dB) = Attenuator (dB) + Cable Loss (dB) + SMA Type Connector Loss (dB)
3. *E.I.R.P* = Maximum conducted Power + Duty Cycle Factor + Antenna gain.
   E.I.R.P was calculated by following equation according to KDB412172 D01 Determining ERP and EIRP v01.
   $E.I.R.P = P_T + G_T - L_C$
   P_T = Peak output power (dBm)
   G_T = Gain of the transmitting antenna in dBi, Directional antenna gain is 6.82 dBi for U-NII-1, 7.52 dBi for U-NII-3.
   L_C = Signal attenuation in the connecting cable between the transmitter and antenna in dB. This factor of an integral antenna is negligible.
4. IC conducted output power limit = 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever power is less.
   B is the 99% emission bandwidth in megahertz.
   IC *E.I.R.P* Limit = 1.0 W (30dBm) or 17 + 10 $\log_{10}$B, dBm, whichever power is less.
   B is the 99% emission bandwidth in megahertz.

PLOTS OF EMISSIONS

U-NII-1	
802.11ac(80 MHz), ANT1	802.11ac(80 MHz), ANT2
	
802.11ax(80 MHz), ANT1	802.11ax(80 MHz), ANT2
	

U-NII-3	
802.11ac(80 MHz), ANT1	802.11ac(80 MHz), ANT2
	
802.11ax(80 MHz), ANT1	802.11ax(80 MHz), ANT2
	

7.4 Radiated Spurious Emissions

7.4.1 Radiated Spurious Emissions – U-NII-1 Band

FCC §15.209, §15.407(b), RSS-Gen (8.9),(8.10), RSS-247 6.2

Test Mode : Set to Lowest channel, Middle channel and Highest channel

Result

802.11ac(80 MHz)

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
10 446.10	37.13	V	PK	19	56.13	68.20	12.07
10 452.45	26.68	H	AV	19	45.68	54.00	8.32

802.11ax(80 MHz)

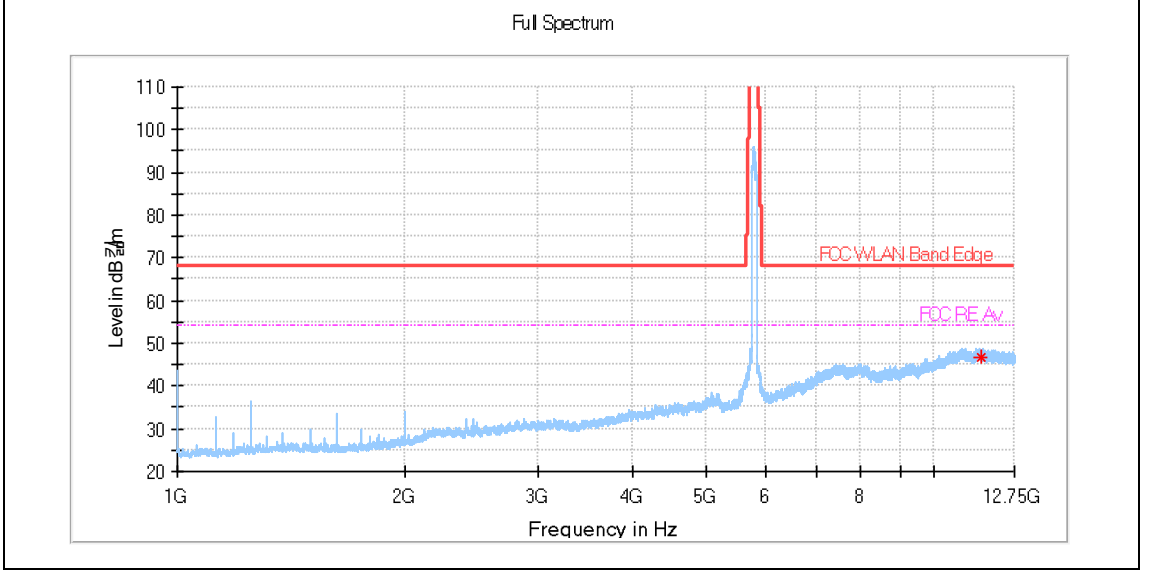
Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
10 359.00	38.02	V	PK	18.4	56.42	68.20	11.78
10 496.90	26.56	H	AV	19	45.56	54.00	8.44

Notes:
1. *Pol. : H = Horizontal, V = Vertical, Mode : PK = Peak, AV = Average
2. **AF + CL + Amp. = Antenna Factor + Cable Loss + Amplifier.
3. Nothing detected above 18GHz
4. Other spurious was under 20 dB below Fundamental.
5. The radiated emissions testing were made by rotating EUT through three orthogonal axes and rotating the receive antenna with horizontal, vertical polarization.
6. Peak emissions were measured using RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
7. Average emissions were measured using RBW = 1 MHz, VBW = 10 kHz, Detector = Peak.
8. The spectrum was measured from 1 GHz to 10th harmonic and the worst-case emissions were reported.

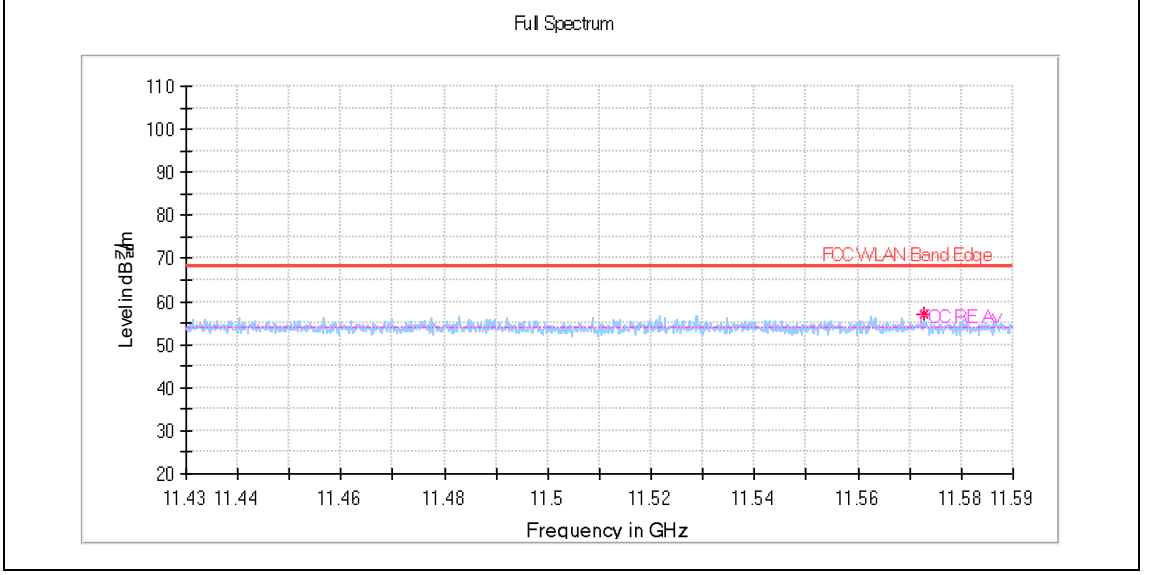
PLOTS OF EMISSIONS

Worst Case

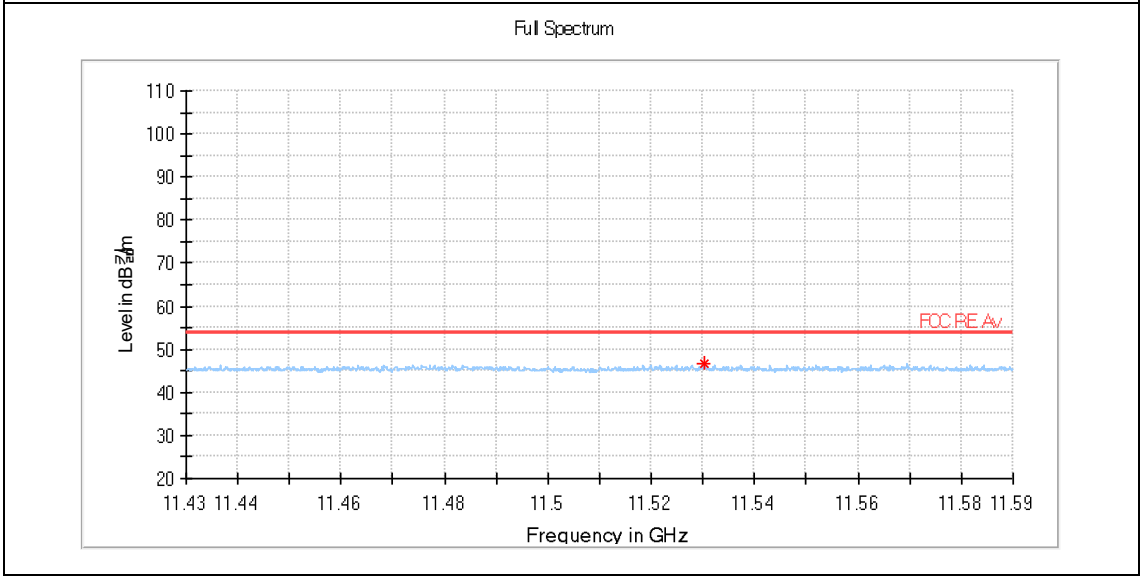
802.11ac80, Peak



802.11ac80, Zoom scan, 10 450 MHz, Peak



802.11ac80, Zoom scan, 10 450 MHz, Average



7.4.2 Radiated Spurious Emissions – U-NII-3 Band

FCC §15.209, §15.407(b), RSS-Gen (8.9),(8.10), RSS-247 6.2

Test Mode : Set to Lowest channel, Middle channel and Highest channel

Result

802.11ac(80 MHz)

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
11 572.80	36.9	V	PK	20.2	57.1	68.20	11.10
11 530.40	26.19	V	AV	20.3	46.49	54.00	7.51

802.11ax(80 MHz)

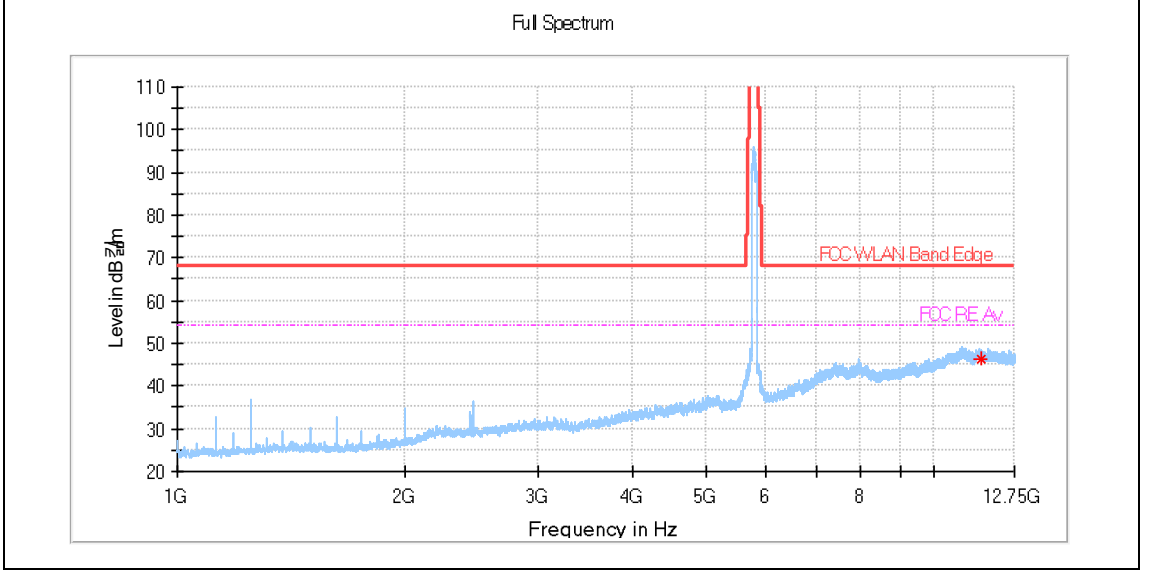
Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
11 551.90	36.6	V	PK	20.3	56.9	68.20	11.30
11 481.40	26.43	V	AV	20.3	46.73	54.00	7.27

Notes:
1. *Pol. : H = Horizontal, V = Vertical, Mode : PK = Peak, AV = Average
2. **AF + CL + Amp. = Antenna Factor + Cable Loss + Amplifier.
3. Nothing detected above 18GHz
4. Other spurious was under 20 dB below Fundamental.
5. The radiated emissions testing were made by rotating EUT through three orthogonal axes and rotating the receive antenna with horizontal, vertical polarization.
6. Peak emissions were measured using RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
7. Average emissions were measured using RBW = 1 MHz, VBW = 10 kHz, Detector = Peak.
8. The spectrum was measured from 1 GHz to 10th harmonic and the worst-case emissions were reported.

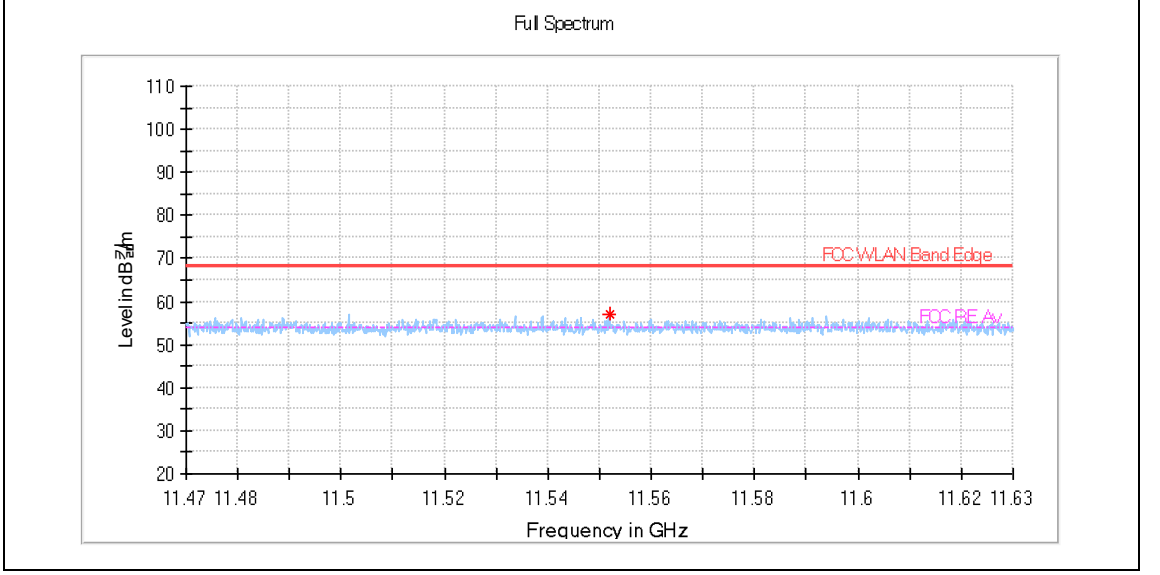
PLOTS OF EMISSIONS

Worst Case

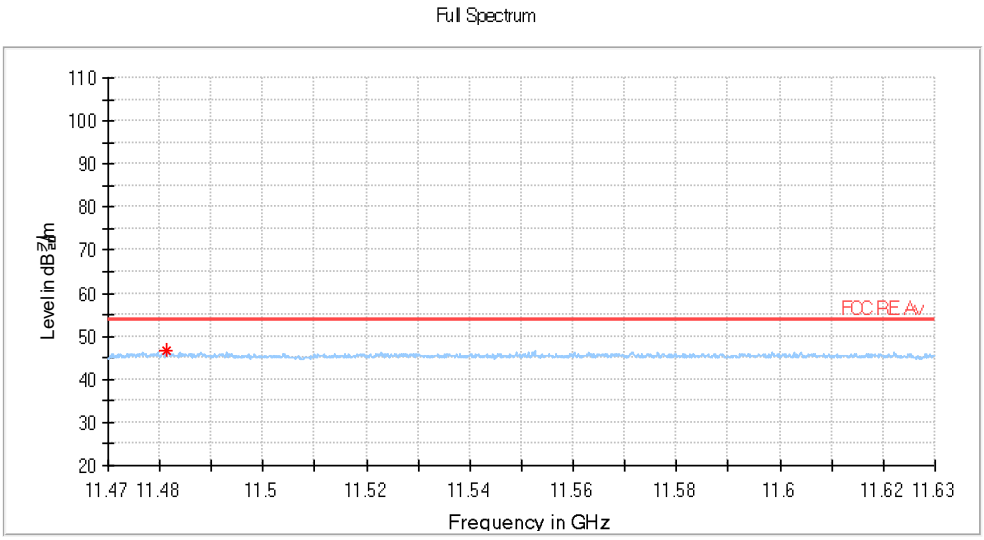
802.11ax80, Peak



802.11ax80, Zoom scan, 11 500 MHz, Peak



802.11ax80, Zoom scan, 11 500 MHz, Average



7.5 Radiated Band Edge

7.5.1 Radiated Band Edge – U-NII-1 Band

FCC §15.209, §15.407(b), RSS-Gen (8.9),(8.10), RSS-247 6.2

Test Mode : Set to Lowest channel and Highest channel

Result

802.11 ac(80 MHz) mode

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5 144.84	53.74	H	PK	4.6	58.34	68.20	9.86
5 132.65	43.94	H	AV	4.5	48.44	54.00	5.56
5 150.01	50.51	H	PK	4.6	55.11	68.20	13.09
5 150.01	40.54	H	AV	4.6	45.14	54.00	8.86
5 250.01	58.39	H	AV	4.2	62.59	68.20	5.61
5 250.58	56.96	H	AV	4.2	61.16	68.20	7.04

802.11 ax(80 MHz) mode

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5 139.51	53.51	H	PK	4.5	58.01	68.20	10.19
5 140.81	43.91	H	AV	4.6	48.51	54.00	5.49
5 150.01	49.92	H	PK	4.6	54.52	68.20	13.68
5 150.01	41.87	H	AV	4.6	46.47	54.00	7.53
5 250.01	63.46	H	AV	4.2	67.66	68.20	0.54
5 250.44	57.10	H	AV	4.2	61.30	68.20	6.90

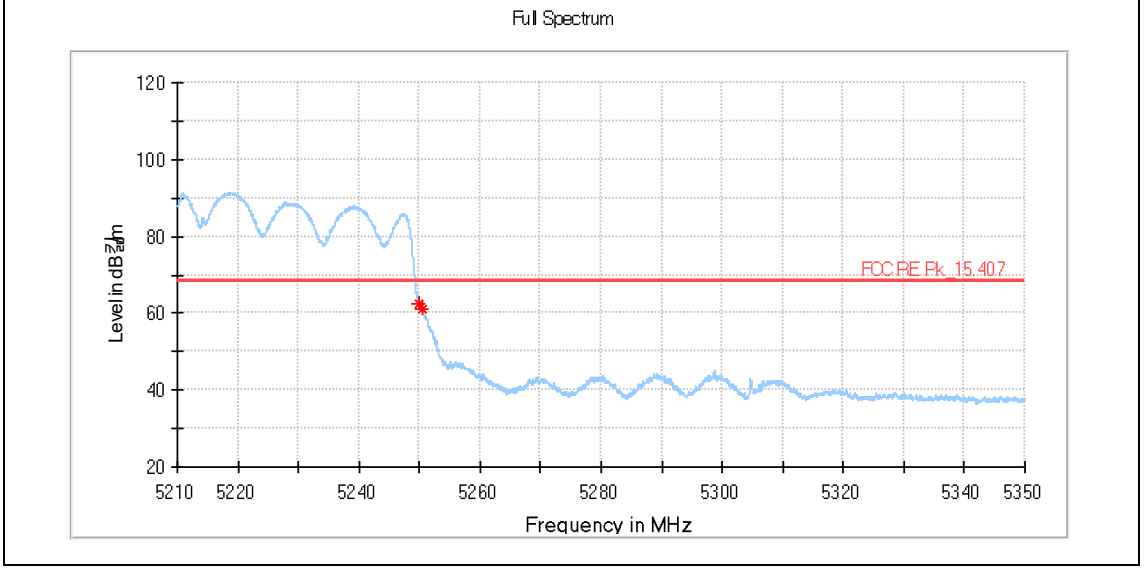
Notes:

1. *Pol. : H = Horizontal, V = Vertical, Mode : PK = Peak, AV = Average
2. **AF + CL + Amp. = Antenna Factor + Cable Loss + Amplifier.
3. Other spurious was under 20 dB below Fundamental.
4. The radiated emissions testing were made by rotating EUT through three orthogonal axes and rotating the receive antenna with horizontal, vertical polarization.
5. Peak emissions were measured using RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
6. Average emissions were measured using RBW = 1 MHz, VBW = 10 kHz, Detector = Peak.

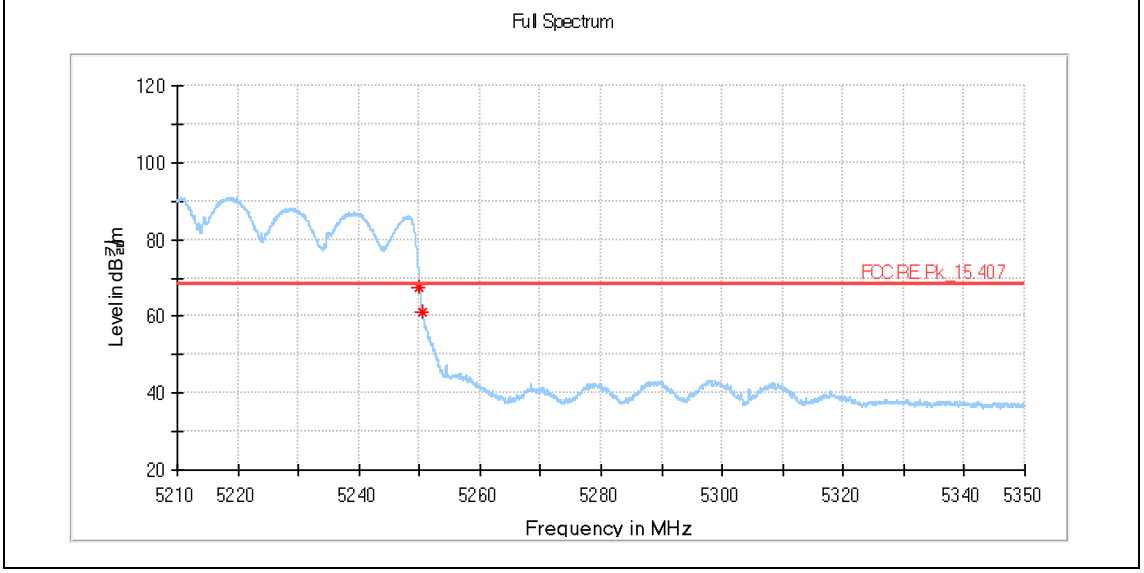
PLOTS OF EMISSIONS

802.11 a mode

802.11ac80, Average



802.11ax80, Average



7.5.2 Radiated Band Edge – U-NII-3 Band

FCC §15.209, §15.407(b), RSS-Gen (8.9),(8.10), RSS-247 6.2

Test Mode : Set to Lowest channel and Highest channel

Result

802.11 ac(80 MHz) mode

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
The emissions were 20 dB lower than the limit.							

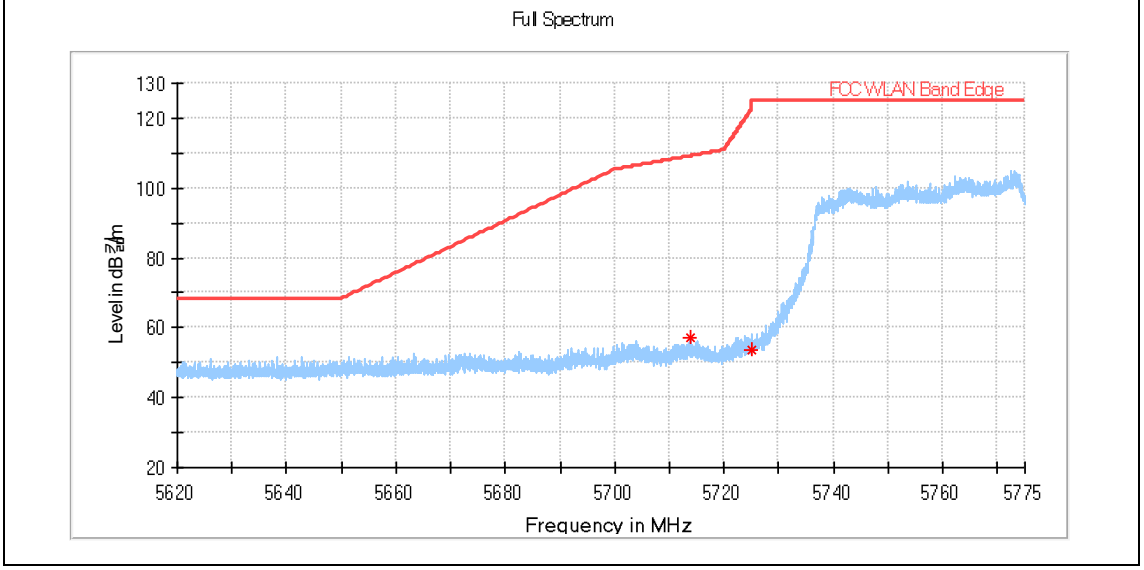
802.11 ax(80 MHz) mode

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode*	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
The emissions were 20 dB lower than the limit.							

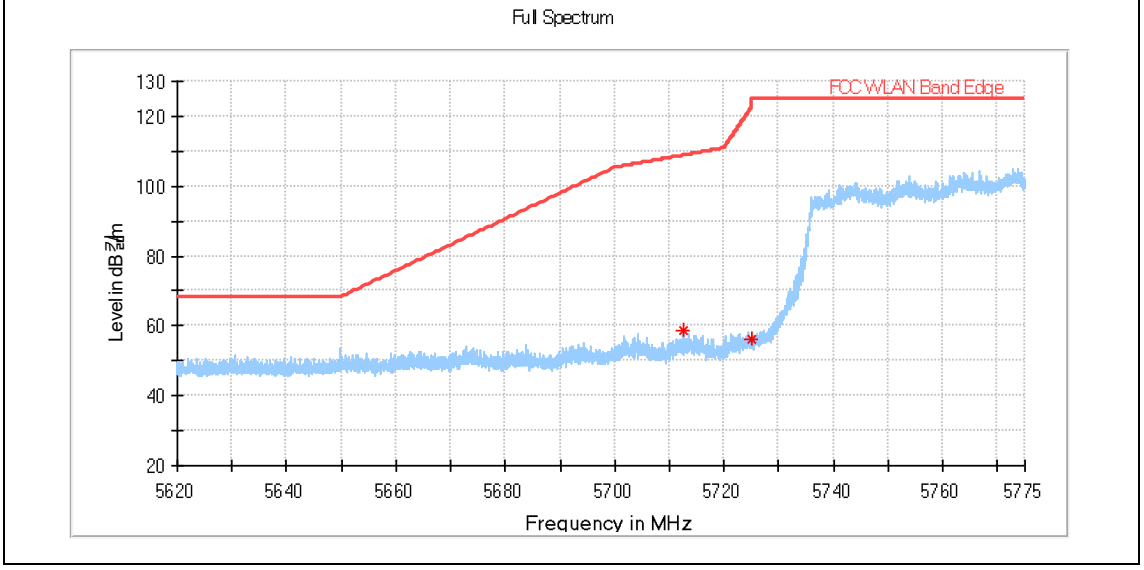
Notes:
1. *Pol. : H = Horizontal, V = Vertical, Mode : PK = Peak, AV = Average
2. **AF + CL + Amp. = Antenna Factor + Cable Loss + Amplifier.
3. Other spurious was under 20 dB below Fundamental.
4. The radiated emissions testing were made by rotating EUT through three orthogonal axes and rotating the receive antenna with horizontal, vertical polarization.
5. Peak emissions were measured using RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
6. Average emissions were measured using RBW = 1 MHz, VBW = 10 kHz, Detector = Peak.

PLOTS OF EMISSIONS

802.11ac80, Peak



802.11ax80, Peak



7.6 Radiated Emissions_Below 1GHz

FCC §15.209, RSS-Gen (8.9)

Result

802.11 ax mode U-NII-1

Frequency (MHz)	Reading (dBμV)	Pol* (H/V)	Mode	AF+CL+Amp (dB)**	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
32.04	33.18	V	QP	-10.0	23.18	40.00	16.82
57.19	35.66	V	QP	-6.2	29.46	40.00	10.54
375.00	37.09	V	QP	-2.6	34.54	46.00	11.46
599.97	34.30	H	QP	1.7	35.96	46.00	10.04
624.97	32.20	V	QP	1.7	33.86	46.00	12.14
874.97	36.80	H	QP	5.2	42.01	46.00	3.99

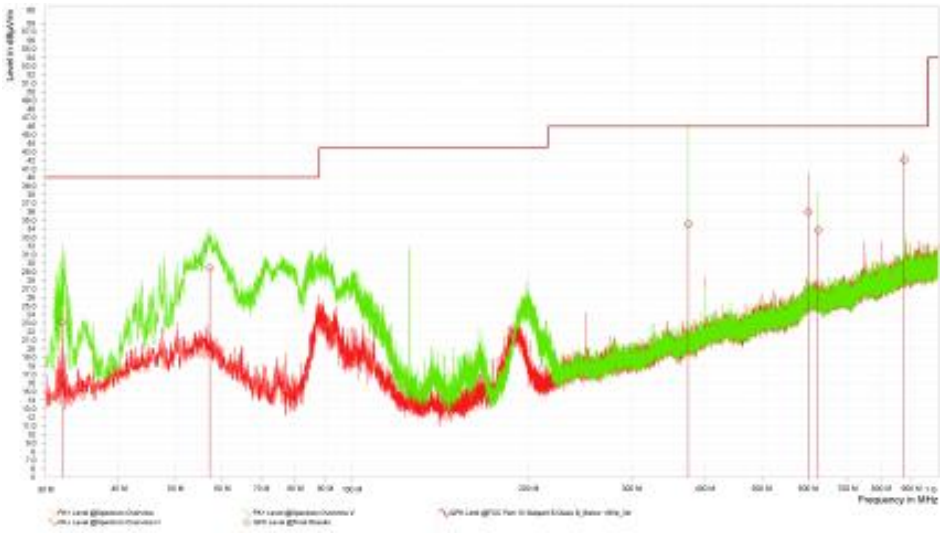
Radiated Measurements at 3meters

Notes:
1. The worst-case emission was reported.
2. *Pol. : H = Horizontal, V = Vertical.
3. **AF + CL + Amp. = Antenna Factor + Cable Loss + Amplifier.
4. Measurements using CISPR quasi-peak mode below 1 GHz.
5. The radiated emissions testing were made by rotating EUT through three orthogonal axes and rotating the receive antenna with horizontal, vertical polarization. The worst data was recorded.
6. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).
   Per FCC part 15.31(o), test results were not reported.
   Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
   Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.
7. The limit is on the FCC §15.209.

PLOTS OF EMISSIONS

Worst Case

Radiated emission below 1GHz, U-NII-1



7.7 AC Line Conducted Emissions

FCC §15.207, RSS-Gen(8.8)

Result

802.11 ac80 mode, Lowest channel

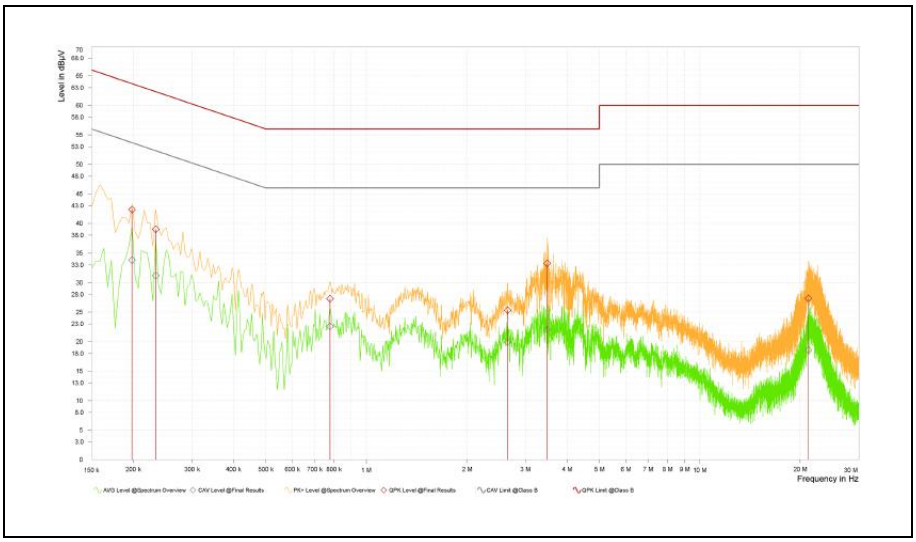
Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	CAV Level [dBµV]	CAV Limit [dBµV]	CAV Margin [dB]	Correction [dB]	Line
0.198	42.35	63.68	21.33				10.05	N
0.198				33.78	53.68	19.90	10.05	N
0.233	39.01	62.33	23.32				9.85	N
0.233				31.14	52.33	21.19	9.85	N
0.778	27.24	56.00	28.76				9.97	N
0.778				22.57	46.00	23.43	9.97	N
2.652	25.29	56.00	30.71				9.93	N
2.652				19.83	46.00	26.17	9.93	N
3.491	33.25	56.00	22.75				10.01	N
3.491				22.02	46.00	23.98	10.01	N
21.181	27.28	60.00	32.72				11.05	L1
21.181				18.57	50.00	31.43	11.05	L1

Line Conducted Emission Tabulated Data

Notes:
1. Measurement using CISPR quasi-peak mode & average mode.
2. The worst channel was investigated and the worst-case emission are reported. See attached Plots.
3. Lowest channel is the worst case.
4. *) Factor = LISN + Cable loss
5. **) LINE : L = Line, N = Neutral
6. The limit is on the FCC §15.207.

PLOTS OF EMISSIONS

Worst Case



7.8 Simultaneous radiation

FCC §15.205, §15.209, §15.207
RSS-Gen (8.8), (8.9) ,(8.10)

Test Mode :

Case	Bluetooth LE	5 GHz WLAN	6 GHz WLAN
1	O	O	X
2	O	X	O

Result

-Case 1

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
7 204.53	43.28	V	PK	13.1	56.38	74.00	17.62
7 204.80	35.93	V	AV	13.1	49.03	54.00	4.97
12 012.45	38.65	H	PK	19.7	58.35	74.00	15.65
12 007.63	29.08	H	AV	19.7	48.78	54.00	5.22
11 578.80	36.88	V	PK	20.2	57.08	68.20	11.12
11 521.70	26.42	H	AV	20.3	46.72	54.00	7.28

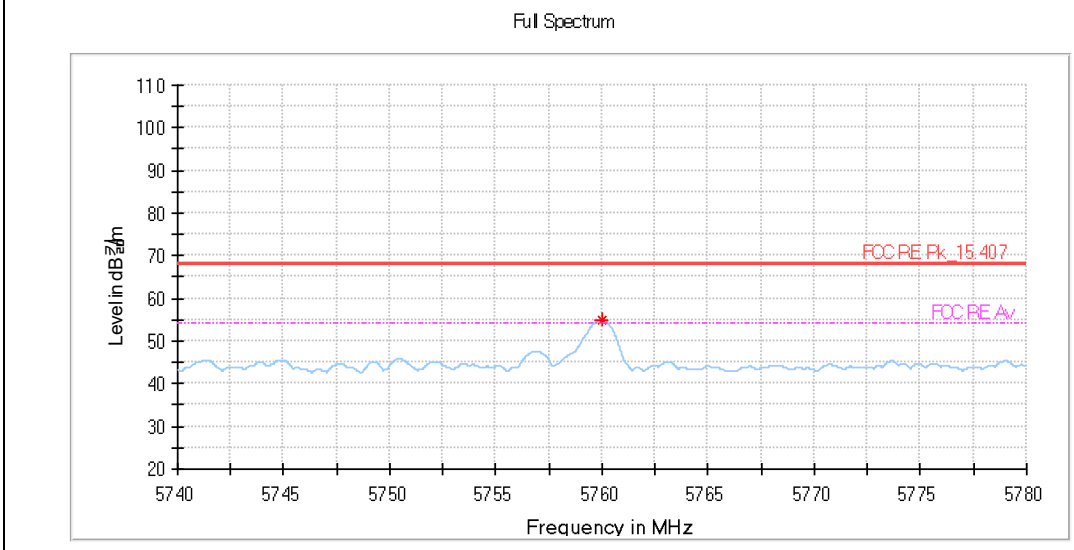
-Case 2

Frequency (MHz)	Reading (dBµV)	Pol* (H/V)	Mode	AF+CL+Amp (dB)**	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5 760.00	48.42	H	PK	6.7	55.12	68.20	13.08
5 759.94	43.77	H	AV	6.7	50.47	54.00	3.53
7 204.49	41.62	V	PK	11.6	53.22	74.00	20.78
7 204.54	35.08	V	AV	11.6	46.68	54.00	7.32
12 007.85	38.52	H	PK	19.7	58.22	74.00	15.78
12 007.40	29.27	H	AV	19.7	48.97	54.00	5.03

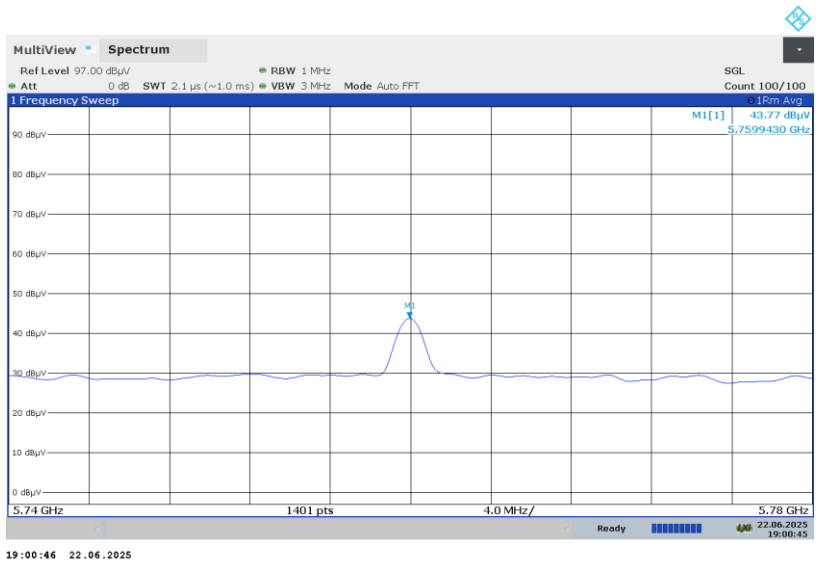
PLOTS OF EMISSIONS

Worst Case

Case2, 5 760 MHz, Peak



Case2, 5 760 MHz, Average



8. TEST EQUIPMENT

No.	Instrument	Manufacture	Model	Serial No.	Calibration Date	Next Calibration Date
1	Humidity Temperature	Lutron	MHB-382SD	AK.26553	2024-10-16	2025-10-16
2	Signal & Spectrum Analyzer	R&S	FSW43	100732	2025-03-27	2026-03-27
3	Signal & Spectrum Analyzer	KEYSIGHT	N9030B	MY57144327	2025-03-27	2026-03-27
4	System DC Power Supply	H.P	6653A	3502A-01527	2024-07-02	2025-07-02
5	Signal Generator	R&S	SMB100A	175861	2025-03-27	2026-03-27
6	Vector Signal Generator	R&S	SMW200A	105755	2025-04-18	2026-04-18
7	10 dB Attenuator	API technologies corp	40A2W-10	1917	2025-01-08	2026-01-08
8	Signal & Spectrum Analyzer	R&S	FSW43	104084	2025-03-27	2026-03-27
9	OPEN SWITCH AND CONTROL UNIT	R&S	OSP120	100081	N/A	N/A
10	Humidity Temperature	SAMWON ENG	TH01C	1113	2025-01-13	2026-01-13
11	BROADBAND LOW NOISE AMPLIFIER	EXYNOD	ELNA03-40D	631516	2024-08-29	2025-08-29
12	WiFi Filter Bank	R&S	U083	U083-001	N/A	N/A
13	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-508	2024-07-09	2025-07-09
14	Horn Antenna	Q-par Angus	QMS-00208	17636	2024-08-28	2025-08-28
15	Horn Antenna	Q-par Angus	QSH20S20	8179	2024-07-09	2025-07-09
16	Horn Antenna	Q-par Angus	QSH22K20	8180	2024-07-09	2025-07-09
17	Signal Conditioning Unit	R&S	SCU-18F	180025	2025-03-27	2026-03-27
18	Signal Conditioning Unit	R&S	SCU-26	10011	2024-07-05	2025-07-05
19	Signal Conditioning Unit	R&S	SCU 40	100380	2024-07-05	2025-07-05
20	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESW44	103318	2025-01-08	2026-01-08
21	Open Switch and Control Unit	ROHDE & SCHWARZ	OSP220	102977	N/A	N/A
22	Humidity Temperature	DRETEC	O-230	NK-B-E-0157	2025-01-13	2026-01-13
23	DIGITAL MULTIMETER	EZ DIGITAL	DM-334	2111395	2024-10-08	2025-10-08
24	AMPLIFIER	HP	8447F	2805A03406	2025-01-08	2026-01-08

25	Active Loop Antenna	ROHDE & SCHWARZ	HFH2-Z2E	101190	2025-01-13	2026-01-13
26	TRILOG Broadband Test Antenna	Schwarzbeck	VULB 9163	01431	2024-11-11	2026-11-11
27	BIAS UNIT	ROHDE & SCHWARZ	IN 600	101621	N/A	N/A
28	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESR7	102803	2024-10-07	2025-10-07
29	TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	103021	2024-10-07	2025-10-07

9. ACCURACY OF MEASUREMENT & DECISION RULE

9.1 Uncertainty Calculation

The Measurement Uncertainties stated were calculated in accordance with the requirements of measurement uncertainty contained in CISPR 16-4-2 with the confidence level of 95%

PARAMETER	UNCERTAINTY
Radiated Disturbance, Below 30 MHz	4.36 dB
Radiated Disturbance, 30 MHz to 1 GHz	5.60 dB
Radiated Disturbance, 1 GHz ~ 18 GHz	3.70 dB
Radiated Disturbance, 18 GHz ~ 26.5 GHz	4.90 dB
Radiated Disturbance, 26.5 GHz ~ 40 GHz	5.00 dB

9.2 Decision rule

The choice of whether or not to include the measurement uncertainty of the measuring system used in the test in the conformance determination.:

☐ Application of internal procedures used in type testing where traceability of measurement uncertainty is established.
☒ Applying the decision that the standard used for type testing does not require it.

END REPORT