



The following test report is submitted to supplement the spot check test report S-4792232027-E3 for variant model FCC ID: A3LSMX840.

It contains test data from FCC ID: A3LSMX848U as referenced in the variant model spot check report.

Compliance of variant model A3LSMX840 is based on the combination of reports in accordance with FCC KDB 484596.



CERTIFICATION TEST REPORT

Report Number. : S-4792232010-E9V5

Applicant : SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Model : SM-X848U

FCC ID : A3LSMX848U

EUT Description : WCDMA/LTE/5G NR Tablet + BT/BLE, DTS/UNII a/b/g/n/ac/ax
and digitizer

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2026-07-13

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2026-06-19	Initial issue	SunGeun Lee
V2	2026-06-29	Updated to address TCB's question	SunGeun Lee
V3	2026-07-09	Update the cover page	SunGeun Lee
V4	2026-07-13	Updated the SU mode data	SunGeun Lee
V5	2026-07-13	Cover page version	SunGeun Lee

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: WCDMA/LTE/5G NR Tablet + BT/BLE, DTS/UNII a/b/g/n/ac/ax and digitizer

MODEL NUMBER: SM-X848U

SERIAL NUMBER: R3GL40GJ5JD, R3GL40GJ4PN, R3GL40GJ3GX (CONDUCTED);
R3GL40GJ5MZ, R3GL40GJ4NY (RADIATED);

DATE TESTED: 2026-05-18 ~ 2026-07-13

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	Complies

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

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

Approved & Released For
UL KOREA LTD. By:



Seokhwan Hong
Suwon Lab Engineer
UL KOREA LTD.

Tested By:



Sungeun Lee
Suwon Lab Engineer
UL KOREA LTD.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. KDB 789033 D02 General UNII Test Procedures New Rules v02r01
4. KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02
5. KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02
6. KDB 662911 D01 Multiple Transmitter Output v02r01
7. KDB 291074 D02 v01
8. ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro	
☒	Chamber 1(3m semi-anechoic chamber)
☒	Chamber 2(3m semi-anechoic chamber)
☒	Chamber 3(3m semi-anechoic chamber)
☐	Chamber 4(3m Full-anechoic chamber)
☐	Chamber 5(3m Full-anechoic chamber)

UL KOREA LTD. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

$$\begin{aligned} \text{AC Corrected Reading (dBuV)} &= \text{Measured Voltage (dBuV)} + \text{Extension Cord} \\ &\text{Loss (dB)} + \text{Cable Loss (dB)} \\ 44.72 \text{ dBuV} &= 34.72 \text{ dBuV} + 9.9 \text{ dB} + 0.1 \text{ dB} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
RF Output Power	0.70 dB
Power Spectral Density	1.99 dB
Time (Duty cycle and DFS)	0.62 %
Occupied Bandwidth	0.04 %
Conducted Disturbance, 9 kHz to 30 MHz	1.84 dB
Radiated Disturbance, 9 kHz to 30 MHz	2.41 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.78 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.25 dB
Radiated Disturbance, 18 GHz to 40 GHz	5.07 dB

Uncertainty figures are valid to a confidence level of 95%.

4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Clause 4.4.3 in IEC Guide 115:2023.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is BT/BLE Tablet + DTS/UNII a/b/g/n/ac/ax and digitizer. This test report addresses the NII (WLAN) operational mode.

WiFi operating mode

Frequency rage	Mode	ANT1	ANT2
5GHz (5150 MHz~5925 MHz)	802.11a MIMO	TX/RX	TX/RX
	802.11n MIMO	TX/RX	TX/RX
	802.11ac MIMO	TX/RX	TX/RX
	802.11ax MIMO	TX/RX	TX/RX

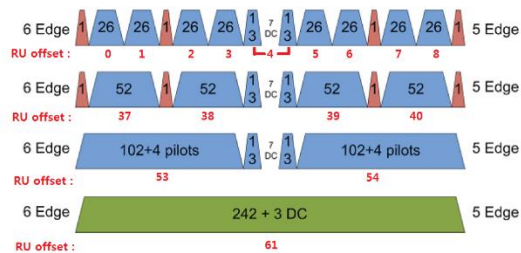
Simultaneous TX Condition

# of TX	WWAN	5GHz / 6GHz WLAN		2.4GHz WLAN		Bluetooth		Test Case
		ANT1	ANT2	ANT1	ANT2	ANT1	ANT2	
5	O	O	O	O	O	-	-	O
5	O	O	O	O	-	-	O	O
5	O	O	O	-	O	O	-	O

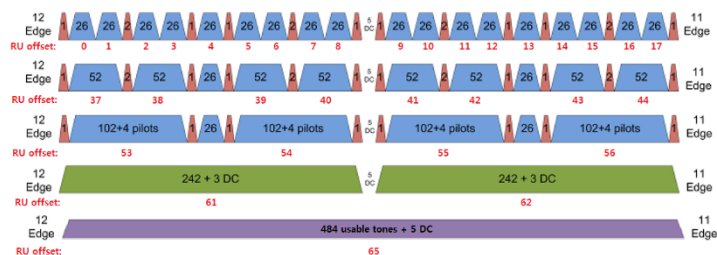
Note. Simultaneous transmission with the Bluetooth and Wi-Fi were investigated, and no noticeable emission was found.

802.11ax RU allocations

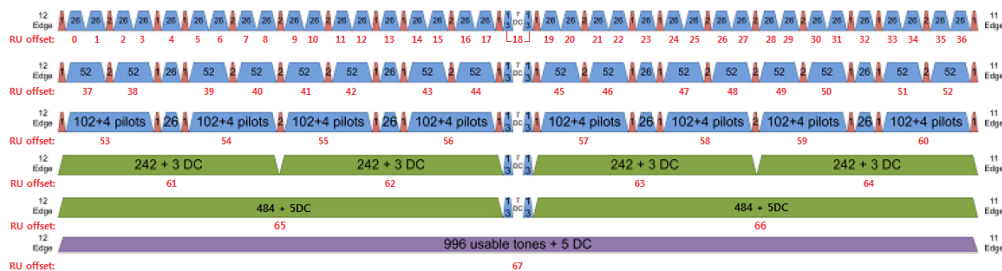
- HE 20 Mode - 20 MHz



- HE 40 Mode - 40 MHz



- HE 80(996T) & 160 Mode(996T + 996T) -



Test RU offset for tones in each modes

Mode	Tones	RU offset
HE20	26T	0
		4
		8
	52T	37
		38
		40
	106T	53
	242T / SU Note	54
HE40	26T	61 / -
		0
		9
	52T	17
		37
		41
	106T	44
		53
		54
	242T	56
		61
		62
HE80	26T	63 / -
		0
		18
	52T	36
		37
		45
	106T	52
		53
		57
	242T	60
		61
		62
	484T	64
		65
		66
	996T / SU Note	67 / -

Mode	Tones	80 MHz * 2	RU offset
HE160	26T.	Lower 80 MHz	0L
		Upper 80 MHz	0U
			36U
	52T	Lower 80 MHz	37L
		Upper 80 MHz	37U
			52U
	106T	Lower 80 MHz	53L
		Upper 80 MHz	53U
			60U
	242T	Lower 80 MHz	61L
		Upper 80 MHz	61U
			64U
	484T	Lower 80 MHz	65L
		Upper 80 MHz	66L
			66U
	996T	Lower 80 MHz	67L
		Upper 80 MHz	67U
	SU ^{Note}	-	-

Note: Full RU(Resource Unit) mode and SU(Single Unit) mode have no difference in physical waveform. This report has been reported the SU mode with highest output power in MIMO.

Band portion of RU allocation about straddle channels

Mode	Channel	Tones	RU offset	Portion
HE20	Straddle 5720 MHz	26T	6	UNII 2C & UNII 3
		242T / SU	61 / -	
HE40	Straddle 5710 MHz	26T	15	UNII 2C & UNII 3
		484T / SU	65 / -	
HE80	Straddle 5690 MHz	26T	34	UNII 2C & UNII 3
		996T / SU	67 / -	

Note: In case of RU straddle channel, test was performed overlapping RU position.

MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted average output power as follows except UNII-4 listed is based on EIRP as noted:

Band	Frequency Range [MHz]	Mode	Output Power [dBm]	Output Power [mW]
UNII-1	5180 - 5240	802.11a MIMO	19.99	99.75
		802.11n(HT20) MIMO	20.11	102.50
		802.11ax HE20 MIMO	13.23	21.05
	5190 - 5230	802.11n(HT40) MIMO	19.08	80.94
		802.11ax HE40 MIMO	13.18	20.79
	5210	802.11ac(VHT80) MIMO	17.85	61.01
		802.11ax HE80 MIMO	12.66	18.47
UNII-2A	5260 - 5320	802.11a MIMO	20.14	103.35
		802.11n(HT20) MIMO	20.16	103.65
		802.11ax HE20 MIMO	13.01	20.00
	5270 - 5310	802.11n(HT40) MIMO	18.97	78.88
		802.11ax HE40 MIMO	13.00	19.97
	5290	802.11ac(VHT80) MIMO	17.90	61.66
		802.11ax HE80 MIMO	12.99	19.92
	5250 ^{Note1}	802.11ac(VHT160) MIMO	17.06	50.87
		802.11ax HE160 MIMO	13.02	20.06
UNII-2C	5500 - 5720	802.11a MIMO	20.30	107.18
		802.11n(HT20) MIMO	20.34	108.14
		802.11ax HE20 MIMO	13.05	20.19
	5510 - 5710	802.11n(HT40) MIMO	19.27	84.55
		802.11ax HE40 MIMO	13.32	21.49
	5530 - 5690	802.11ac(VHT80) MIMO	18.32	67.85
		802.11ax HE80 MIMO	13.27	21.23
	5570	802.11ac(VHT160) MIMO	17.28	53.51
		802.11ax HE160 MIMO	13.19	20.85
UNII-3	5745 - 5825	802.11a MIMO	20.12	102.72
		802.11n(HT20) MIMO	19.95	98.76
		802.11ax HE20 MIMO	13.06	20.24
	5755 - 5795	802.11n(HT40) MIMO	18.81	76.11
		802.11ax HE40 MIMO	12.84	19.25
	5775	802.11ac(VHT80) MIMO	18.27	67.11
		802.11ax HE80 MIMO	13.28	21.27
UNII-4 (e.i.r.p)	5845 - 5885	802.11a MIMO	15.94	39.30
		802.11n(HT20) MIMO	16.23	42.02
		802.11ax HE20 MIMO	9.25	8.41
	5835 - 5875	802.11n(HT40) MIMO	14.96	31.30
		802.11ax HE40 MIMO	8.95	7.86
	5855	802.11ac(VHT80) MIMO	14.30	26.92
		802.11ax HE80 MIMO	8.74	7.48
	5815 ^{Note2}	802.11ac(VHT160) MIMO	13.33	21.54
		802.11ax HE160 MIMO	8.85	7.67

Note1. Overlap channel(UNII-1 & 2A)

Note2. Overlap channel(UNII-3 & 4)

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 internal antenna was Permanently attached.
Therefore this E.U.T Complies with the requirement of §15.203.**

The radio utilizes a internal antenna, with a maximum gain of:

UNII Band	Frequency Range[MHz]	ANT1 Gain [dBi]	ANT2 Gain [dBi]	Correlated Chains Directional Gain[dBi]
UNII 1	5150–5250	-8.00	-7.70	-4.84
UNII 2A	5250–5350	-8.90	-6.10	-4.38
UNII 2C	5470–5725	-7.50	-5.60	-3.49
UNII 3	5725–5850	-8.20	-6.00	-4.02
UNII 4	5850–5925	-7.50	-6.50	-3.98

Directional gain for the MIMO operations is determined using KDB 662911 D01 Multiple Transmitter Output section F (2)(d)(1) for *Unequal antenna gains, with equal transmit powers*. The gain is calculated using the formula for correlated transmissions across the two transmit antennas.

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ dBi.

Sample calculation for this device with $N_{ANT} = 2$

Directional gain = $10 \log[(10^{-7.50/20} + 10^{-5.60/20})^2 / 2] = -3.49$ dBi

“WIFI0” and “WIFI1” as indicated in antenna specification are written as ANT1 and ANT2 in this report.

5.3. List of test reduction and modes covering other modes:

The output power on covered modes is equal to or less than one referenced.

Authorized Frequency Band			
Mode	Antenna Stream	Mode	Covered by
802.11a	MIMO	802.11a 2TX	
802.11n HT20		802.11n HT20 2TX	
802.11ac VHT20		802.11ac VHT20 2TX	802.11n HT20 2TX
802.11ax HE20		802.11ax HE20 2TX	
802.11n HT40		802.11n HT40 2TX	
802.11ac VHT40		802.11ac VHT40 2TX	802.11n HT40 2TX
802.11ax HE40		802.11ax HE40 RU 2TX	
802.11ac VHT80		802.11ac VHT80 2TX	
802.11ax HE80		802.11ax HE80 2TX	
802.11ac VHT160		802.11ac VHT160 2TX	
802.11ax HE160		802.11ax HE160 2TX	

5.4. WORST-CASE CONFIGURATION AND MODE

Both SISO and MIMO have been investigated and confirmed that MIMO was the worst case set for radiated band edge and spurious emission tests.

UNII Bands	Radiated Band-edge emissions	Radiated spurious emissions
	EUT axis	EUT axis
UNII 1	Y	Z
UNII 2A	Y	Z
UNII 2C	X	X
UNII 3	X	Z
UNII 4	X	Z

For the 2TX MIMO mode, band-edge measurements and spurious emissions tests were performed as shown in the table above, representing the worst-case scenario.

Radiated and power line conducted tests were performed with EUT connected to AC power adapter as the worst-case configuration. Radiated harmonics spurious emissions from 1–18 GHz Low/Mid/High channels, 18–40 GHz were performed with the EUT set at the 2TX MIMO mode. Radiated emissions below 1 GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Simultaneous transmission with related transmitters were investigated and no noticeable emission was found.

For the radiated spurious test, 802.11a 2TX mode was tested representatively in OFDM mode. Other OFDM modes were set as full tests if they had higher PSD results than 802.11a 2TX mode. For OFDMA mode, the highest power offset of the tone showing the highest PSD reading for each bandwidth in the worst channel of 802.11a 2TX mode was spot checked.

For radiated band-edge test, 802.11a 2TX, 802.11n 2TX, 802.11ac 2TX, 802.11ax 2TX SU modes were fully tested except 802.11ax 2TX partial RU modes. 802.11ax SU mode resulted in worse radiated band-edge test results than partial RU modes; therefore, SU mode was reported.

For the 802.11ax mode, output power and PSD tests were investigated among all different tones. The SU mode has the widest bandwidth, and for partial RU cases, tests were performed on tones showing the highest PSD readings for each bandwidth.

Therefore, tests were performed in both SU mode and worst-case(highest PSD) partial RU mode by bandwidth. MRU modes were verified in the channel showing the highest PSD of single RU.

Mode	PSD Worst Case Tone
802.11ax HE20	26T
802.11ax HE40	26T
802.11ax HE80	26T
802.11ax HE160	26T

In case of 26dB Bandwidth, it was tested at the RU allocation with lowest tones number, RU 26Tones as the worst-case scenario.

In case of 6dB Bandwidth, it was tested at the RU allocation with lowest tones number, RU 26Tones as the worst-case scenario.

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps 2Tx

802.11n HT20 mode: MCS0 2Tx

802.11n HT40 mode: MCS0 2Tx

802.11ac VHT80 mode: MCS0 2Tx

802.11ac VHT160 mode: MCS0 2Tx

802.11ax HE20 mode: MCS0 2Tx

802.11ax HE40 mode: MCS0 2Tx

802.11ax HE80 mode: MCS0 2Tx

802.11ax HE160 mode: MCS0 2Tx

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-T2510	N/A	N/A
Data Cable	SAMSUNG	EP-DN980	N/A	N/A

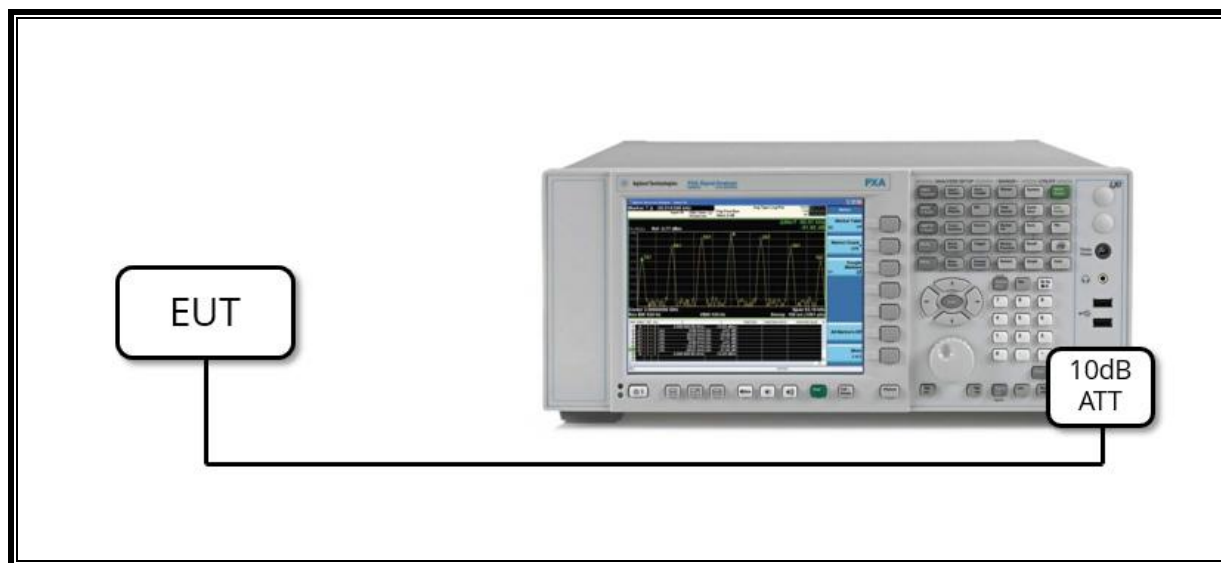
I/O CABLE

I/O Cable List						
Cable No.	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	C Type	Shielded	1.0 m	N/A

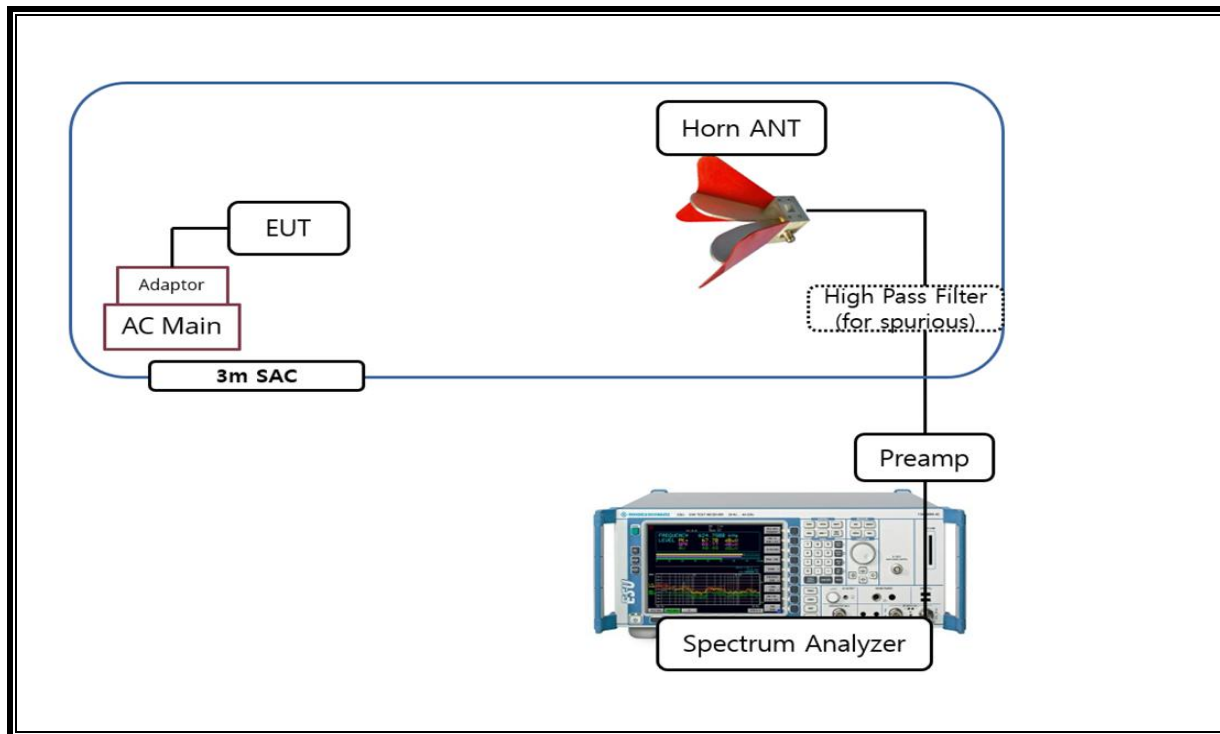
TEST SETUP

The EUT is a stand-alone unit during the tests.
Test software exercised the EUT to enable NII mode.

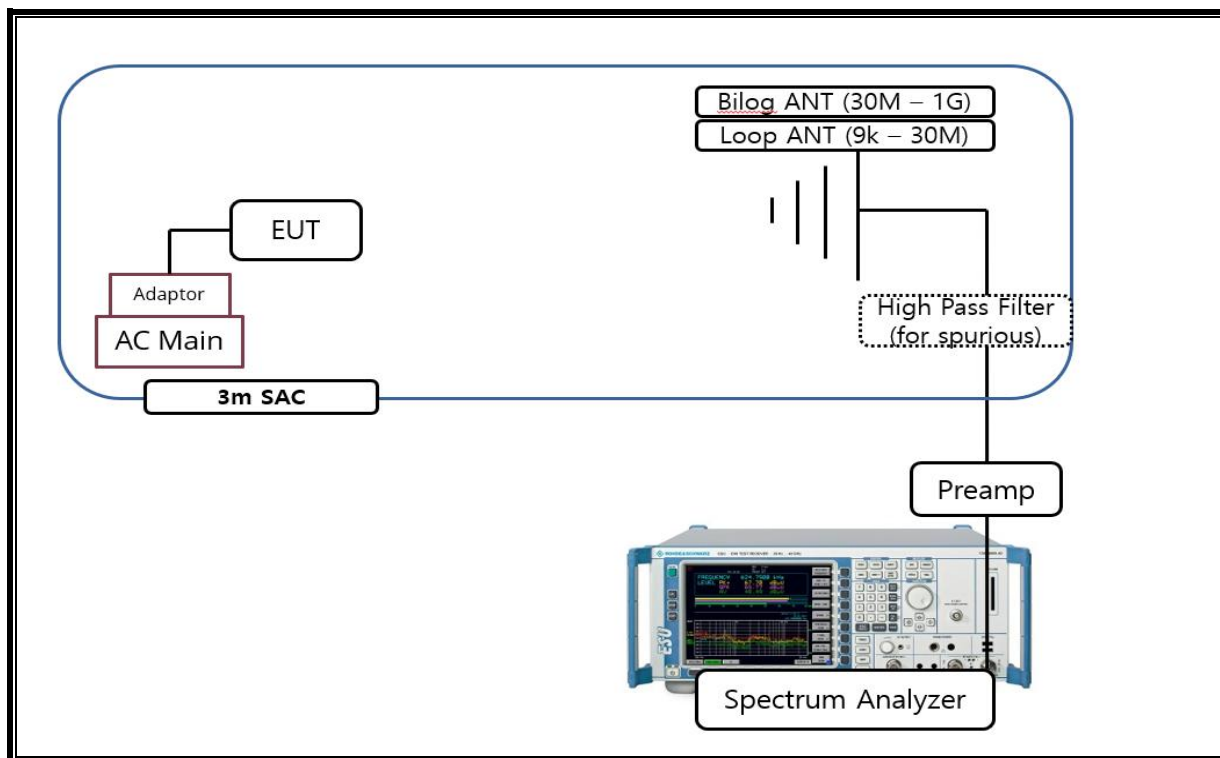
SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP) Below 1GHz



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	Manufacturer	Model	S/N	Cal Due
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB 9163	749	2026-08-12
Antenna, Horn, 18 GHz	ETS	3117	00168717	2026-07-17
Antenna, Horn, 18 GHz	ETS	3117	00218957	2027-03-24
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2026-07-23
Preamplifier	ETS	3116C-PA	00168841	2026-07-28
Preamplifier, 1000 MHz	Sonoma	310N	341282	2026-07-21
Preamplifier, 18 GHz	B&Z Technologies, LLC	BZR-01001800-231040-181515	23576	2026-07-22
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2026-07-21
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2026-07-21
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2027-01-07
RF Switching Unit	TA Engineering	TA-018S-16	SW-1	N/A
Average Power Sensor	Agilent / HP	U2000A	MY54270007	2026-07-22
Average Power Sensor	Agilent / HP	U2000A	MY54260010	2026-07-22
Attenuator	PASTERNAK	PE7087-10	A001	2026-07-22
Attenuator	PASTERNAK	PE7087-10	A008	2026-07-22
Attenuator	PASTERNAK	PE7004-10	2	2026-07-22
Attenuator	PASTERNAK	PE7087-10	A009	2026-07-22
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2026-07-21
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2026-07-21
EMI Test Receive, 3 GHz	R&S	ESR 3	101832	2026-11-11
Notch Filter	Micro-Tronics	BRM50702-02	G037	2026-07-23
Notch Filter	Micro-Tronics	BRM50716-2	006	2026-07-23
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	020	2026-07-21
High Pass Filter 3GHz	Micro-Tronics	HPM17543	20	2026-07-21
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	2026-07-21
LISN	R&S	ENV216	101836	2026-07-22
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2E	101308	2027-10-27
Termination	WEINSCHL	M1406A	T08	2026-07-22
Attenuator	WEINSCHL	WA76-30-21	A015	2026-07-22
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.407(e)	6dB Bandwidth (5.725–5.895)	> 500kHz	Conducted	Complies
15.407 (a)(1)(iv)	TX Cond. Power (5.150–5.250)	< 24dBm		Complies
15.407 (a)(2)	TX Cond. Power (5.250–5.350 & 5.470–5.725)	< 24dBm or 11+10Log(26dB BW)		Complies
15.407 (a)(3)(i)	TX Cond. Power (5.725–5.850)	< 30dBm		Complies
15.407 (a)(3)(iii)	TX Cond. Power (5.850–5.895)	< 30dBm e.i.r.p.		Complies
15.407 (a)(1)(iv) & (a)(2)	PSD (5.150–5.350 & 5.470–5.725)	< 11dBm/MHz		Complies
15.407 (a)(3)	PSD (5.725–5.850)	< 30dBm/500kHz		Complies
15.407 (a)(3)(iii)	PSD (5.850–5.895)	< 14dBm/MHz e.i.r.p.		Complies
15.207 (a)	AC Power Line conducted emissions	Section 13	Radiated	Complies
15.407 (b) & 15.209	Radiated Spurious Emission	< 74dBuV/m PK < 54dBuV/m AV		Complies
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Condcuted	Complies

8. MEASUREMENT METHODS

On-Time and Duty Cycle: KDB 789033 D02 v02r01, Section II.B.

6dB Emission BW: KDB 789033 D02 v02r01, Section II.C.2.

26dB Emission BW: ANSI C63.10-2020, Section 12.5.2.

99% Occupied BW: KDB 789033 D02 v02r01, Section II.D.

Conducted Output Power: KDB 789033 D02 v02r01, Section II.E.3.a(Method PM)

Conducted Output Power for Straddle Channel (ch144/142/138 for 20/40/80MHz BW):

KDB 789033 D02 v02r01, Section II.E.2.b(Method SA-1)

Power Spectral Density: KDB 789033 D02 v02r01, Section II.F.

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Section II.G.3 – II.G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Section II.G.3 – II.G.6.

AC Power Line Conducted Emission: ANSI C63.10-2020, Section 6.2.

9. REFERENCE MEASUREMENTS RESULTS

9.1. ON TIME AND DUTY CYCLE RESULTS

Mode		On Time [ms]	Period [ms]	Duty Cycle X [Linear]		Duty Cycle X [%]	Duty Cycle Correction Factor[dB]
802.11a MIMO		2.015	2.123	0.9491		94.91	0.23
802.11n(HT20) MIMO		4.638	4.758	0.9748		97.48	0.11
802.11n(HT40) MIMO		2.254	2.364	0.9535		95.35	0.21
802.11ac(VHT80) MIMO		3.180	3.294	0.9654		96.54	0.15
802.11ac(VHT160) MIMO		3.184	3.298	0.9654		96.54	0.15
Mode	ANT.	Tone	On Time [ms]	Period [ms]	Duty Cycle X [Linear]	Duty Cycle X [%]	Duty Cycle Correction Factor[dB]
802.11ax HE20	MIMO	SU	2.113	2.220	0.9518	95.18	0.21
802.11ax HE40		SU	1.092	1.195	0.9138	91.38	0.39
802.11ax HE80		SU	3.064	3.175	0.9650	96.50	0.15
802.11ax HE160		SU	3.064	3.175	0.9650	96.50	0.15
802.11ax HE160		26T	5.018	5.155	0.9734	97.34	0.12
		52T	4.989	5.123	0.9738	97.38	0.12
		106T	4.687	4.811	0.9742	97.42	0.11
		242T	4.096	4.213	0.9722	97.22	0.12
		484T	4.094	4.208	0.9729	97.29	0.12
		996T	3.910	4.023	0.9719	97.19	0.12

Note. If the duty cycle is over 98%, compensation is not included in average measurement.

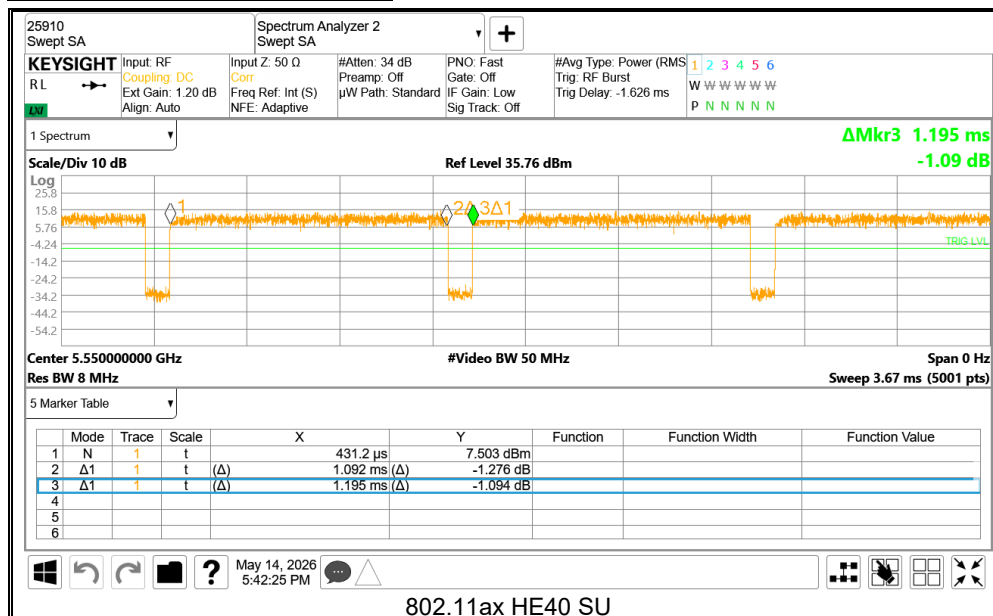
LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 D02 v02r01 Zero-Span Spectrum Analyzer Method.

DUTY CYCLE SAMPLE PLOTS



9.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

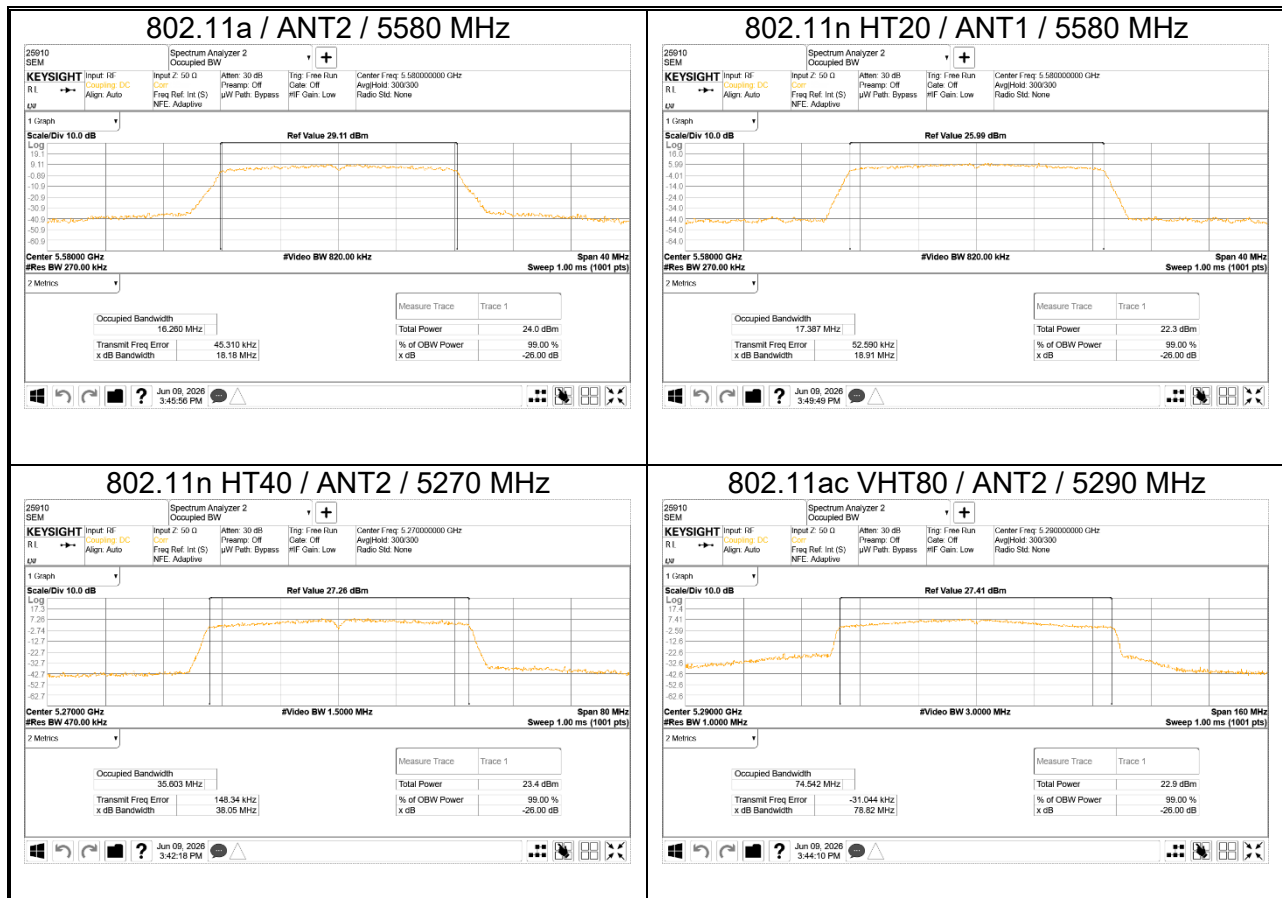
TEST PROCEDURE

Reference to ANSI C63.10-2020, Section 12.5.2: The transmitter output is connected to a spectrum analyzer with the RBW set to a value in the range of 1% to 5% of the emission bandwidth, the VBW > RBW, peak detector and max hold.

RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS





9.2.1. 802.11a

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	36	5180	18.81	18.28	18.23	16.345	16.347
	40	5200	18.59	18.58		16.342	16.317
	48	5240	18.23	18.38		16.279	16.333
UNII-2A ^{Note}	52	5260	18.26	18.30	18.26	16.278	16.301
	60	5300	18.70	18.60		16.327	16.331
	64	5320	19.04	18.35		16.335	16.339
UNII-2C	100	5500	18.65	18.40	18.18		
	116	5580	18.33	18.18			
	140	5700	18.77	18.45			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.2. 802.11n HT20

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	36	5180	18.97	19.05	18.97	17.441	17.406
	40	5200	19.09	19.17		17.454	17.412
	48	5240	19.00	19.05		17.389	17.455
UNII-2A ^{Note}	52	5260	18.93	18.97	18.93	17.381	17.395
	60	5300	19.11	19.03		17.438	17.412
	64	5320	19.02	18.99		17.416	17.439
UNII-2C	100	5500	19.08	19.13	18.91		
	116	5580	18.91	18.99			
	140	5700	19.22	19.06			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.3. 802.11n HT40

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	38	5190	38.31	38.35	38.09	35.771	35.796
	46	5230	38.09	38.24		35.716	35.780
UNII-2A ^{Note}	54	5270	38.16	38.05	38.05	35.691	35.603
	62	5310	38.30	38.48		35.782	35.931
UNII-2C	102	5510	38.47	38.19	38.17		
	110	5550	38.30	38.41			
	134	5670	38.32	38.17			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.4. 802.11ac VHT80

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	42	5210	79.40	78.88	78.88	75.170	74.400
UNII-2A ^{Note}	58	5290	79.25	78.82	78.82	75.195	74.542
UNII-2C	106	5530	79.20	92.58	79.19		
	122	5610	79.22	79.19			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.5. 802.11ac VHT160

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz]	
			ANT1	ANT2		ANT1	ANT2
UNII-1&2A	50	5250	160.20	159.80	159.80		
UNII-2C	114	5570	160.00	159.90	159.90		

9.2.6. 802.11ax HE20

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz] ^(Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	36	5180	19.90	19.85	19.82	18.755	18.747
	40	5200	19.89	19.83		18.760	18.729
	48	5240	19.84	19.82		18.743	18.724
UNII-2A ^{Note}	52	5260	19.86	19.82	19.78	18.751	18.709
	60	5300	19.87	19.78		18.728	18.743
	64	5320	19.87	19.83		18.752	18.755
UNII-2C	100	5500	19.82	19.81	19.80		
	116	5580	19.83	19.83			
	140	5700	19.83	19.80			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.7. 802.11ax HE40

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz] ^(Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	38	5190	39.48	39.34	39.34	37.561	37.407
	46	5230	39.41	39.39		37.466	37.467
UNII-2A ^{Note}	54	5270	39.40	39.40	39.40	37.518	37.335
	62	5310	39.47	39.58		37.530	37.558
UNII-2C	102	5510	39.48	39.38	39.38		
	110	5550	39.63	39.43			
	134	5670	39.54	39.40			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.8. 802.11ax HE 80

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz](Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1 ^{Note}	42	5210	80.10	80.23	80.10	76.855	77.042
UNII-2A ^{Note}	58	5290	80.19	80.27	80.19	76.748	77.062
UNII-2C	106	5530	80.11	80.22	80.10		
	122	5610	80.10	80.10			

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.9. 802.11ax HE160

Band	Channel	Center Freq. [MHz]	26 dB BW [MHz]		Worst	99% BW [MHz](Note)	
			ANT1	ANT2		ANT1	ANT2
UNII-1&2A	50	5250	161.90	161.60	161.60		
UNII-2C	114	5570	161.90	161.70	161.70		

9.2.10. STRADDLE CHANNEL

Mode	Channel	Center Freq. [MHz]	26 dB BW [MHz]			
			ANT1		ANT2	
			UNII-2C	UNII-3	UNII-2C	UNII-3
802.11a	Straddle	5720	14.08	3.21	14.00	3.21
802.11n HT20	Straddle	5720	14.40	3.67	14.40	3.64
802.11n HT40	Straddle	5710	34.12	3.26	34.12	3.13
802.11ac VHT80	Straddle	5690	74.68	3.28	74.68	3.26
802.11ax HE20(SU)	Straddle	5720	14.88	4.49	14.92	4.48
802.11ax HE40(SU)	Straddle	5710	34.68	4.11	34.68	4.11
802.11ax HE80(SU)	Straddle	5690	75.16	4.10	75.16	4.12

9.2.11. 802.11ax HE20(RU)

Band Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1 ^{Note}	5180	26T	0	18.93	18.50	17.294	17.705
			4	17.99	17.15	16.509	16.073
			8	19.06	18.75	16.985	17.896
	5200		0	17.86	18.34	16.927	17.413
			4	17.27	17.39	16.193	16.360
			8	18.31	18.94	17.462	17.259
	5240		0	18.78	18.92	18.025	16.360
			4	18.01	16.76	16.610	15.844
			8	18.98	18.37	18.043	17.430
UNII-2A ^{Note}	5260	26T	0	18.95	17.75	18.058	16.959
			4	17.93	17.99	16.767	16.353
			8	18.58	18.30	17.677	17.537
	5300		0	17.86	18.90	16.924	17.793
			4	17.38	16.79	16.384	15.970
			8	18.96	18.95	17.982	18.000
	5320		0	18.57	18.92	17.547	18.052
			4	17.19	16.87	16.231	15.931
			8	18.36	18.29	17.493	17.375
UNII-2C	5500	26T	0	18.94	18.53		
			4	18.08	17.43		
			8	18.99	18.96		
	5580		0	18.81	18.62		
			4	18.03	17.70		
			8	17.95	18.98		
	5700		0	18.97	18.97		
			4	17.88	17.23		
			8	18.96	18.96		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.12. 802.11ax HE40(RU)

Band	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1 ^{Note}	5190	26T	0	18.99	18.97	17.880	17.766
			9	22.14	21.74	20.175	20.553
			17	17.86	18.42	16.886	17.479
	5230		0	18.88	18.88	17.880	17.781
			9	22.77	22.67	21.110	20.437
			17	19.20	19.10	17.865	17.797
UNII-2A ^{Note}	5270	26T	0	18.94	19.27	17.732	17.947
			9	19.98	22.48	18.791	20.730
			17	18.42	19.21	17.368	17.990
	5310		0	18.90	17.41	17.817	16.532
			9	23.02	21.97	20.542	20.453
			17	18.31	18.99	17.465	17.843
UNII-2C	5510	26T	0	19.05	17.13		
			9	22.42	20.04		
			17	19.04	18.92		
	5550		0	19.08	19.00		
			9	23.78	23.03		
			17	18.51	19.05		
	5670		0	18.28	18.42		
			9	23.05	22.00		
			17	19.03	18.99		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.13. 802.11ax HE80(RU)

Band	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1 ^{Note}	5210	26T	0	20.17	20.32	18.134	18.221
			18	38.96	38.15	35.158	36.121
			36	19.73	19.66	18.151	18.048
UNII-2A ^{Note}	5290	26T	0	19.02	12.16	17.723	11.278
			18	38.42	38.95	36.097	36.496
			36	19.68	19.48	18.290	18.041
UNII-2C	5530	26T	0	17.26	19.90		
			18	38.53	38.18		
			36	19.04	19.61		
	5610	26T	0	19.08	18.83		
			18	38.12	38.78		
			36	19.75	18.82		

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

9.2.14. 802.11ax HE160(RU)

Band	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]		99% BW [MHz]	
				ANT1	ANT2	ANT1	ANT2
UNII-1&2A	5250	26T	0 L	22.25	21.43	19.404	19.347
			0 U	27.83	24.42	22.770	22.452
			36 U	21.65	20.27	19.717	18.113
UNII-2C	5570	26T	0 L	20.59	20.21		
			0 U	24.23	25.45		
			36 U	20.82	20.67		

9.2.15. 802.11ax STRADDLE CHANNEL(RU)

Band	Mode	Center Freq. [MHz]	Tones	RU offset	26 dB BW [MHz]			
					ANT1		ANT2	
					UNII-2C	UNII-3	UNII-2C	UNII-3
Straddle Channel	HE20	5720	26T	6	12.40	4.08	13.96	3.68
	HE40	5710		15	14.04	2.20	13.48	4.12
	HE80	5690		34	14.36	3.08	14.52	4.52

10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407

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

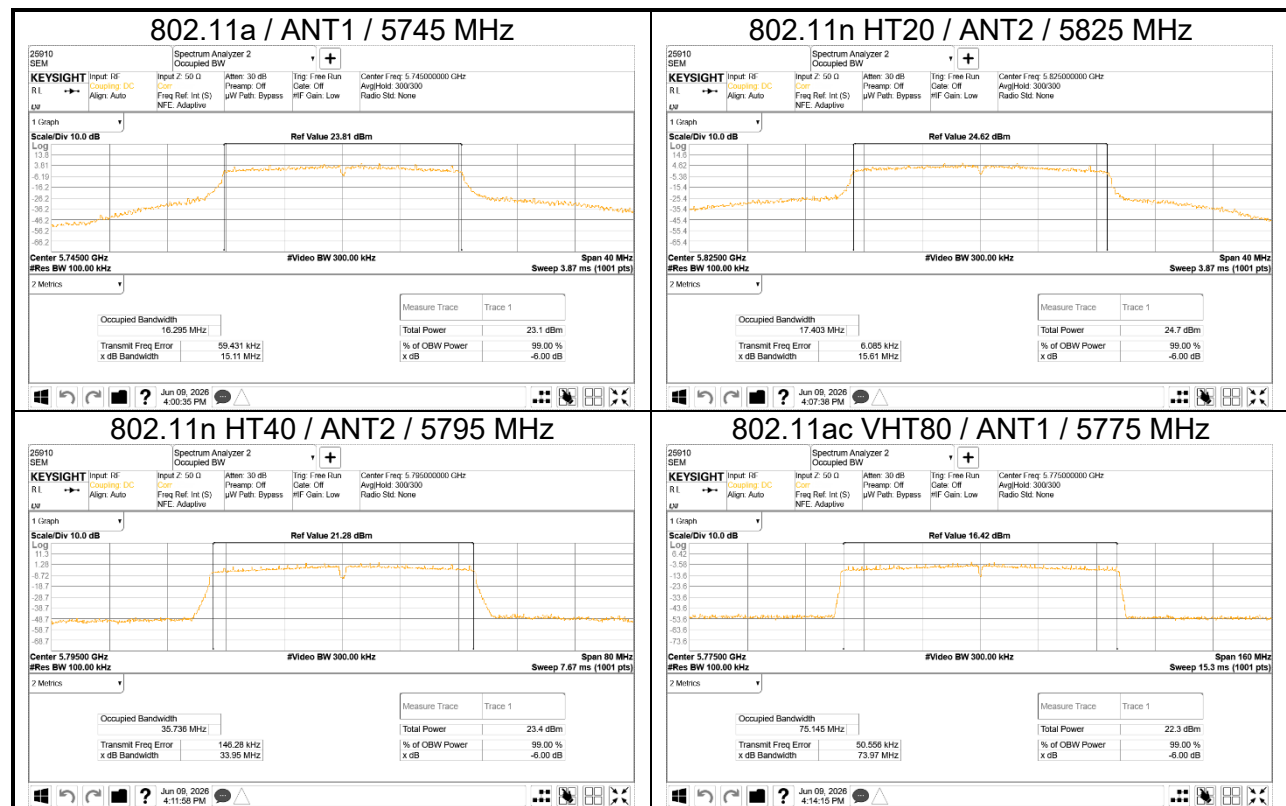
TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100kHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS





10.1.1. UNII-3 & 4 BAND

Mode	Channel	Center Freq. [MHz]	6 dB BW [MHz]		Worst	Minimum Limit [MHz]
			ANT1	ANT2		
802.11a	149	5745	15.11	15.34	15.11	0.5
	157	5785	15.65	15.70		
	165	5825	15.15	15.66		
	169	5845	15.32	16.30		
	173	5865	15.36	15.14		
	177	5885	15.31	15.13		
802.11n HT20	149	5745	16.01	16.70	15.61	
	157	5785	16.30	16.73		
	165	5825	16.78	15.61		
	169	5845	17.23	16.72		
	173	5865	16.98	16.12		
	177	5885	16.30	16.41		
802.11n HT40	151	5755	35.29	35.19	33.95	
	159	5795	35.13	33.95		
	167	5835	35.14	35.41		
	175	5875	35.06	33.95		
802.11ac VHT80	155	5775	73.97	75.88	73.97	
	171	5855	75.20	74.01		
802.11ac VHT160	163	5815	153.90	152.90	152.90	
802.11ax HE20(SU)	149	5745	18.57	18.72	16.65	
	157	5785	18.86	17.61		
	165	5825	17.11	18.16		
	169	5845	17.66	17.81		
	173	5865	18.25	16.65		
	177	5885	18.20	18.25		
802.11ax HE40(SU)	151	5755	37.26	37.57	35.23	
	159	5795	36.15	36.39		
	167	5835	35.23	36.02		
	175	5875	35.91	37.64		
802.11ax HE(SU)	155	5775	76.12	70.30	70.30	
	171	5855	76.18	75.15		
802.11ax HE160(SU)	163	5815	154.00	154.40	154.00	

10.1.2. UNII-3 & 4 BAND(RU)

Mode	Channel	Center Freq. [MHz]	Tones	RU offset	6 dB BW [MHz]		Minimum Limit [MHz]
					ANT1	ANT2	
HE20	149	5745	26T	0	2.057	2.054	0.5
	157	5785			2.055	2.054	
	165	5825			2.061	2.042	
	169	5845			2.091	2.025	
	173	5865			2.045	2.062	
	177	5885			2.021	2.016	
	Minimum 6dB Bandwidth				2.016		
HE40	151	5755	26T	0	2.110	2.154	
	159	5795			2.118	2.156	
	167	5835			2.132	2.133	
	175	5875			2.147	2.163	
	Minimum 6dB Bandwidth				2.110		
HE80	155	5775	26T	0	2.247	2.232	
	171	5855			2.182	2.220	
	Minimum 6dB Bandwidth				2.182		
HE160	163	5815	26T	0	2.593	2.552	
	Minimum 6dB Bandwidth				2.552		

10.2. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a)(1)(iv), (a)(2), (a)(3)(i), (a)(3)(iii)

FCC

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

TEST PROCEDURE

KDB 789033 Method PM is used for output power. Duty correction factor has already been applied to the power meter and the average power value is measured.

KDB 789033 Method SA-2 is used for PSD. RBW set to 1MHz(500kHz for the band 5.725-5.85 GHz, the VBW $\geq 3 \times$ RBW, RMS detector and trace averaging).

Straddle Channel(UNII-2C&3)

KDB 789033 Method PM is used for output power of straddle channel.
(verification that both limit of UNII-2C and UNII-3 power are satisfied)

KDB 789033 Method SA-2 is used for PSD of straddle channel. RBW set to 1MHz, VBW $\geq 3 \times$ RBW, RMS detector and trace averaging. Peak marker value of the spectrum is used for PSD. Considering the PSD's RBW setting and test limit, the UNII-2C measurement method (RBW 1MHz) covers UNII-3 (RBW 500kHz).

Straddle Channel(UNII-3&4)

KDB 789033 Method PM is used for total power of straddle channel.
(verification that both limit of UNII-3 and UNII-4 power & e.i.r.p. are satisfied)

KDB 789033 Method SA-2 is used for PSD of straddle channel. RBW set to 1MHz, VBW $\geq 3 \times$ RBW, RMS detector and trace averaging. Peak marker value of the spectrum is used for PSD. Considering the PSD's RBW setting and test limit, the UNII-4 measurement method (RBW 1MHz) covers UNII-3 (RBW 500kHz).

DIRECTIONAL ANTENNA GAIN

For OUTPUT POWER and PSD: The TX chains are correlated and the antenna gains are unequal among the chains. The directional gain is:

Frequency Band [MHz]	ANT1 Gain [dBi]	ANT2 Gain [dBi]	Correlated Chains Directional Gain [dBi]
UNII 1 5150 - 5250	-8.00	-7.70	-4.84
UNII 2A 5250 - 5350	-8.90	-6.10	-4.38
UNII 2C 5470 - 5725	-7.50	-5.60	-3.49
UNII 3 5725 - 5850	-8.20	-6.00	-4.02
UNII 4 5850 - 5925	-7.50	-6.50	-3.98

Note. Since the correlated gain does not exceed 6dBi, bands except for UNII-4 do not consider the antenna gain.

OUTPUT POWER AND PSD CALCULATION FORMULA

For OUTPUT POWER :

Average Power(dBm)
= Meas Power(dBm) + DCCF(dB)

MIMO total Corr'd power(dBm)(conducted)
= Ant1 Average Power + Ant2 Average Power
= $10 \cdot \log(10^{\text{ANT1}/10} + 10^{\text{ANT2}/10})$

MIMO total Corr'd power(dBm)(e.i.r.p.) (in case of UNII-4: added directional gain)
= Ant1 Average Power + Ant2 Average Power + Directional Gain(dBi)
= $10 \cdot \log(10^{\text{ANT1}/10} + 10^{\text{ANT2}/10}) + \text{Directional Gain(dBi)}$

For PSD :

MIMO total Corr'd PSD(conducted)
= ANT1 Meas PSD + Ant2 Meas PSD + DCCF(dB)
= $10 \cdot \log(10^{\text{ANT1 PSD}/10} + 10^{\text{ANT2 PSD}/10}) + \text{DCCF(dB)}$

MIMO total Corr'd PSD(e.i.r.p.) (in case of UNII-4: added directional gain)
= ANT1 Meas PSD + Ant2 Meas PSD + DCCF(dB) + Directional Gain(dBi)
= $10 \cdot \log(10^{\text{ANT1 PSD}/10} + 10^{\text{ANT2 PSD}/10}) + \text{DCCF(dB)} + \text{Directional Gain(dBi)}$

10.2.1. 802.11a MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
			ANT1	ANT2					
UNII-1	36	5180	16.41	17.10	19.78	23.98	-4.84	14.94	N/A
	40	5200	16.38	16.99	19.71		-4.84	14.87	
	48	5240	16.62	17.31	19.99		-4.84	15.15	
UNII-2A	52	5260	16.59	17.18	19.91	23.62	-4.38	15.53	N/A
	60	5300	16.34	16.93	19.66		-4.38	15.28	
	64	5320	16.97	17.29	20.14		-4.38	15.76	
UNII-2C	100	5500	16.62	17.26	19.96	23.60	-3.49	16.47	N/A
	116	5580	16.68	17.52	20.13		-3.49	16.64	
	140	5700	17.03	17.18	20.12		-3.49	16.63	
UNII-2C&3	144 Straddle	5720	17.20	17.38	20.30	23.60 or 30.00	-3.49	16.81	N/A or N/A
UNII-3	149	5745	16.78	17.41	20.12	30.00	-4.02	16.10	N/A
	157	5785	16.83	17.32	20.09		-4.02	16.07	
	165	5825	16.56	17.56	20.10		-4.02	16.08	
UNII-3&4	169 Straddle	5845 5845	16.52 16.52	17.27 17.27	19.92 19.92	30.00 N/A	-4.02 -3.98	15.90 15.94	N/A 30.00
UNII-4	173	5865	16.36	17.25	19.84	N/A	-3.98	15.86	30.00
	177	5885	16.44	17.34	19.92		-3.98	15.94	

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
			ANT1	ANT2						
UNII-1	36	5180	5.145	5.982	0.23	8.82	11.00	-4.84	3.981	N/A
	40	5200	5.063	6.478	0.23	9.06		-4.84	4.225	
	48	5240	5.570	6.616	0.23	9.36		-4.84	4.521	
UNII-2A	52	5260	5.354	6.463	0.23	9.18	11.00	-4.38	4.801	N/A
	60	5300	5.760	6.117	0.23	9.18		-4.38	4.799	
	64	5320	6.162	6.354	0.23	9.50		-4.38	5.116	
UNII-2C	100	5500	5.767	6.642	0.23	9.46	11.00	-3.49	5.974	N/A
	116	5580	5.829	7.222	0.23	9.82		-3.49	6.328	
	140	5700	6.171	6.996	0.23	9.84		-3.49	6.350	
UNII-2C&3	144 Straddle	5720	6.543	4.303	0.23	8.80	11.00 or 30.00/500kHz	-3.49	5.313	N/A
UNII-3	149	5745	3.441	4.841	0.23	7.43	30.00/500kHz	-4.02	3.414	N/A
	157	5785	3.646	4.363	0.23	7.26		-4.02	3.236	
	165	5825	3.617	5.298	0.23	7.78		-4.02	3.755	
UNII-3&4	169 Straddle	5845 5845	5.896 5.896	7.241 7.241	0.23 0.23	9.86 9.86	30.00/500kHz N/A	-4.02 -3.98	5.837 5.877	N/A 14.00
UNII-4	173	5865	6.289	7.058	0.23	9.93	N/A	-3.98	5.948	14.00
	177	5885	6.108	7.207	0.23	9.93		-3.98	5.949	

10.2.2. 802.11n HT20 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
			ANT1	ANT2					
UNII-1	36	5180	16.26	16.98	19.65	23.98	-4.84	14.81	N/A
	40	5200	16.96	17.23	20.11		-4.84	15.27	
	48	5240	16.45	17.21	19.86		-4.84	15.02	
UNII-2A	52	5260	16.43	17.00	19.73	23.77	-4.38	15.35	N/A
	60	5300	16.96	17.26	20.12		-4.38	15.74	
	64	5320	17.08	17.21	20.16		-4.38	15.78	
UNII-2C	100	5500	17.03	17.61	20.34	23.77	-3.49	16.85	N/A
	116	5580	16.52	17.40	19.99		-3.49	16.50	
	140	5700	16.90	17.06	19.99		-3.49	16.50	
UNII-2C&3	144 Straddle	5720	17.04	17.17	20.12	23.77 or 30.00	-3.49	16.63	N/A or N/A
UNII-3	149	5745	16.62	17.23	19.95	30.00	-4.02	15.93	N/A
	157	5785	16.66	17.14	19.92		-4.02	15.90	
	165	5825	16.38	17.42	19.94		-4.02	15.92	
UNII-3&4	169 Straddle	5845	16.84	17.54	20.21	30.00	-4.02	16.19	N/A
		5845	16.84	17.54	20.21	N/A	-3.98	16.23	30.00
UNII-4	173	5865	16.70	17.49	20.12	N/A	-3.98	16.14	30.00
	177	5885	16.32	17.17	19.78		-3.98	15.80	

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
			ANT1	ANT2						
UNII-1	36	5180	4.871	5.930	0.11	8.55	11.00	-4.84	3.714	N/A
	40	5200	5.653	6.597	0.11	9.27		-4.84	4.432	
	48	5240	5.467	6.500	0.11	9.14		-4.84	4.295	
UNII-2A	52	5260	5.311	6.326	0.11	8.97	11.00	-4.38	4.589	N/A
	60	5300	5.887	6.422	0.11	9.28		-4.38	4.904	
	64	5320	5.916	6.068	0.11	9.11		-4.38	4.734	
UNII-2C	100	5500	6.156	6.814	0.11	9.62	11.00	-3.49	6.129	N/A
	116	5580	5.493	6.846	0.11	9.34		-3.49	5.853	
	140	5700	6.061	6.747	0.11	9.54		-3.49	6.049	
UNII-2C&3	144 Straddle	5720	6.310	6.860	0.11	9.71	11.00 or 30.00/500kHz	-3.49	6.225	N/A
UNII-3	149	5745	3.176	4.661	0.11	7.10	30.00/500kHz	-4.02	3.083	N/A
	157	5785	3.243	4.157	0.11	6.85		-4.02	2.825	
	165	5825	3.347	4.682	0.11	7.19		-4.02	3.167	
UNII-3&4	169 Straddle	5845	6.153	7.450	0.11	9.97	30.00/500kHz	-4.02	5.951	N/A
		5845	6.153	7.450	0.11	9.97	N/A	-3.98	5.991	14.00
UNII-4	173	5865	6.577	7.084	0.11	9.96	N/A	-3.98	5.979	14.00
	177	5885	5.765	6.948	0.11	9.52		-3.98	5.538	

10.2.3. 802.11n HT40 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
			ANT1	ANT2					
UNII-1	38	5190	15.62	16.25	18.96	23.98	-4.84	14.12	N/A
	46	5230	15.68	16.43	19.08		-4.84	14.24	
UNII-2A	54	5270	15.59	16.30	18.97	23.98	-4.38	14.59	N/A
	62	5310	15.65	16.10	18.89		-4.38	14.51	
UNII-2C	102	5510	15.84	16.53	19.21	23.98	-3.49	15.72	N/A
	110	5550	15.76	16.71	19.27		-3.49	15.78	
	134	5670	15.84	15.68	18.77		-3.49	15.28	
UNII-2C&3	142 Straddle	5710	15.66	15.91	18.80	23.98 or 30.00	-3.49	15.31	N/A or N/A
UNII-3	151	5755	15.44	16.14	18.81	30.00	-4.02	14.79	N/A
	159	5795	15.36	15.93	18.66		-4.02	14.64	
UNII-3&4	167	5835	15.38	16.41	18.94	30.00	-4.02	14.92	N/A
	Straddle	5835	15.38	16.41	18.94	N/A	-3.98	14.96	30.00
UNII-4	175	5875	15.34	16.28	18.85	N/A	-3.98	14.87	30.00

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
			ANT1	ANT2						
UNII-1	38	5190	1.220	2.379	0.21	5.06	11.00	-4.84	0.215	N/A
	46	5230	1.563	2.322	0.21	5.18		-4.84	0.336	
UNII-2A	54	5270	1.594	2.766	0.21	5.44	11.00	-4.38	1.057	N/A
	62	5310	1.640	1.683	0.21	4.88		-4.38	0.499	
UNII-2C	102	5510	1.287	2.777	0.21	5.31	11.00	-3.49	1.823	N/A
	110	5550	1.875	3.085	0.21	5.74		-3.49	2.249	
	134	5670	1.728	2.682	0.21	5.45		-3.49	1.958	
UNII-2C&3	142 Straddle	5710	2.090	2.596	0.21	5.57	11.00 or 30.00/500kHz	-3.49	2.078	N/A
UNII-3	151	5755	-1.199	0.080	0.21	2.70	30.00/500kHz	-4.02	-1.315	N/A
	159	5795	-0.840	-0.036	0.21	2.80		-4.02	-1.222	
UNII-3&4	167	5835	1.897	3.131	0.21	5.77	30.00/500kHz	-4.02	1.755	N/A
	Straddle	5835	1.897	3.131	0.21	5.77	N/A	-3.98	1.795	14.00
UNII-4	175	5875	2.023	3.100	0.21	5.81	N/A	-3.98	1.832	14.00

10.2.4. 802.11ac VHT80 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
			ANT1	ANT2					
UNII-1	42	5210	14.56	15.11	17.85	23.98	-4.84	13.01	N/A
UNII-2A	58	5290	14.59	15.17	17.90	23.98	-4.38	13.52	N/A
UNII-2C	106	5530	14.72	15.60	18.19	23.98	-3.49	14.70	N/A
	122	5610	14.74	15.68	18.25		-3.49	14.76	
UNII-2C&3	168 Straddle	5690	15.32	15.29	18.32	23.98 or 30.00	-3.49	14.83	N/A or N/A
UNII-3	155	5775	14.85	15.63	18.27	30.00	-4.02	14.25	N/A
UNII-3&4	171	5855	14.88	15.63	18.28	30.00	-4.02	14.26	N/A
	Straddle	5855	14.88	15.63	18.28	N/A	-3.98	14.30	30.00

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
			ANT1	ANT2						
UNII-1	42	5210	-2.937	-0.960	0.15	1.33	11.00	-4.84	-3.514	N/A
UNII-2A	58	5290	-2.421	-0.748	0.15	1.66	11.00	-4.38	-2.721	N/A
UNII-2C	106	5530	-2.435	-0.893	0.15	1.57	11.00	-3.49	-1.923	N/A
	122	5610	-2.441	-1.154	0.15	1.41		-3.49	-2.077	
UNII-2C&3	168 Straddle	5690	-4.839	-4.742	0.15	-1.63	11.00 or 30.00/500kHz	-3.49	-5.117	N/A
UNII-3	155	5775	-4.675	-4.481	0.15	-1.41	30.00/500kHz	-4.02	-5.434	N/A
UNII-3&4	171	5855	-1.689	-0.849	0.15	1.91	30.00/500kHz	-4.02	-2.105	N/A
	Straddle	5855	-1.689	-0.849	0.15	1.91	N/A	-3.98	-2.065	14.00

10.2.5. 802.11ac VHT160 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
			ANT1	ANT2					
UNII-1&2A	50	5250	13.76	14.33	17.06	23.98	-4.84	12.22	N/A
UNII-2C	114	5570	13.85	14.66	17.28	23.98	-3.49	13.79	N/A
UNII-3&4	163	5815	13.85	14.71	17.31	30.00	-4.02	13.29	N/A
	Straddle	5815	13.85	14.71	17.31	N/A	-3.98	13.33	30.00

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
			ANT1	ANT2						
UNII-1&2A	50	5250	-6.359	-5.243	0.15	-2.60	11.00	-4.84	-7.442	N/A
UNII-2C	114	5570	-6.022	-3.931	0.15	-1.69	11.00	-3.49	-5.179	N/A
UNII-3&4	163	5815	-5.361	-3.396	0.15	-1.11	30.00 _{/500kHz}	-4.02	-5.125	N/A
	Straddle	5815	-5.361	-3.396	0.15	-1.11	N/A	-3.98	-5.085	14.00

10.2.6. 802.11ax HE20 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
					ANT1	ANT2					
UNII-1	36	5180	26T	0	4.77	5.47	8.14	23.98	-4.84	3.30	N/A
				4	4.62	5.45	8.07		-4.84	3.23	
				8	4.66	5.37	8.04		-4.84	3.20	
			SU	-	9.82	10.59	13.23		-4.84	8.39	
	40	5200	26T	0	4.67	5.45	8.09		-4.84	3.25	
				4	4.55	5.33	7.97		-4.84	3.13	
				8	4.59	5.37	8.01		-4.84	3.17	
			SU	-	9.77	10.59	13.21		-4.84	8.37	
	48	5240	26T	0	4.70	5.85	8.32		-4.84	3.48	
				4	4.62	5.75	8.23		-4.84	3.39	
				8	4.64	5.80	8.27		-4.84	3.43	
			SU	-	9.66	10.51	13.12		-4.84	8.28	
UNII-2A	52	5260	26T	0	4.74	5.71	8.26	23.25	-4.38	3.88	N/A
				4	4.60	5.55	8.11		-4.38	3.73	
				8	4.62	5.55	8.12		-4.38	3.74	
			SU	-	9.70	10.28	13.01		-4.38	8.63	
	60	5300	26T	0	4.62	5.50	8.09		-4.38	3.71	
				4	4.53	5.36	7.98		-4.38	3.60	
				8	4.60	5.44	8.05		-4.38	3.67	
			SU	-	9.19	10.05	12.65		-4.38	8.27	
	64	5320	26T	0	4.69	5.36	8.05		-4.38	3.67	
				4	4.60	5.29	7.97		-4.38	3.59	
				8	4.71	5.33	8.04		-4.38	3.66	
			SU	-	9.46	9.94	12.72		-4.38	8.34	
UNII-2C	100	5500	26T	0	4.33	5.33	7.87	23.36	-3.49	4.38	N/A
				4	4.19	5.20	7.73		-3.49	4.24	
				8	4.24	5.26	7.79		-3.49	4.30	
			SU	-	9.54	10.32	12.96		-3.49	9.47	
	116	5580	26T	0	4.63	5.85	8.29		-3.49	4.80	
				4	4.52	5.77	8.20		-3.49	4.71	
				8	4.62	5.75	8.23		-3.49	4.74	
			SU	-	9.40	10.60	13.05		-3.49	9.56	
	140	5700	26T	0	4.99	5.60	8.32		-3.49	4.83	
				4	4.89	5.52	8.23		-3.49	4.74	
				8	4.89	5.55	8.24		-3.49	4.75	
			SU	-	9.63	9.92	12.79		-3.49	9.30	

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
					ANT1	ANT2					
UNII-2C&3	144 Straddle	5720	26T	0	4.94	5.54	8.26	23.36	-3.49	4.77	N/A
				4	4.82	5.56	8.22		-3.49	4.73	
				8	4.90	5.60	8.27		-3.49	4.78	
			SU	-	9.82	10.14	12.99		-3.49	9.50	
UNII-3	149	5745	26T	0	4.83	5.76	8.33	30.00	-4.02	4.31	N/A
				4	4.68	5.70	8.23		-4.02	4.21	
				8	4.74	5.75	8.28		-4.02	4.26	
			SU	-	9.65	10.42	13.06		-4.02	9.04	
	157	5785	26T	0	4.72	5.50	8.14		-4.02	4.12	
				4	4.57	5.40	8.02		-4.02	4.00	
				8	4.62	5.47	8.08		-4.02	4.06	
			SU	-	9.57	10.34	12.98		-4.02	8.96	
	165	5825	26T	0	4.66	5.63	8.18		-4.02	4.16	
				4	4.52	5.53	8.06		-4.02	4.04	
				8	4.57	5.62	8.14		-4.02	4.12	
			SU	-	9.54	10.26	12.93		-4.02	8.91	
UNII-3&4	169 Straddle	5845	26T	0	4.41	5.30	7.89	30.00	-4.02	3.87	N/A
				4	4.26	5.13	7.73		-4.02	3.71	
				8	4.26	5.16	7.74		-4.02	3.72	
			SU	-	9.96	10.46	13.23		-4.02	9.21	
		5845	26T	0	4.41	5.30	7.89	N/A	-3.98	3.91	30.00
				4	4.26	5.13	7.73		-3.98	3.75	
				8	4.26	5.16	7.74		-3.98	3.76	
			SU	-	9.96	10.46	13.23		-3.98	9.25	
UNII-4	173	5865	26T	0	4.72	5.68	8.24	N/A	-3.98	4.26	30.00
				4	4.57	5.55	8.10		-3.98	4.12	
				8	4.58	5.56	8.11		-3.98	4.13	
			SU	-	9.82	10.40	13.13		-3.98	9.15	
	177	5885	26T	0	4.50	5.43	8.00		-3.98	4.02	
				4	4.34	5.43	7.93		-3.98	3.95	
				8	4.41	5.50	8.00		-3.98	4.02	
			SU	-	9.45	9.91	12.70		-3.98	8.72	

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]	
					[dBm/MHz]								
					ANT1	ANT2							
UNII-1	36	5180	26T	0	1.749	1.936	0.12	4.971	11.00	-4.84	0.131	N/A	
				4	0.430	0.793	0.12	3.743		-4.84	-1.097		
				8	1.348	1.607	0.12	4.607		-4.84	-0.233		
	40	5200	26T	SU	-	-2.475	-1.309	0.2145		1.372	-4.84		-3.468
				0	1.458	2.198	0.12	4.971		-4.84	0.131		
				4	0.394	0.817	0.12	3.738		-4.84	-1.102		
	48	5240	26T	8	1.744	1.359	0.12	4.683		-4.84	-0.157		
				SU	-	-2.214	-1.007	0.21		1.656	-4.84		-3.184
				0	1.861	1.755	0.12	4.936		-4.84	0.096		
				26T	4	0.840	0.930	0.12		4.013	-4.84		-0.827
					8	1.606	2.219	0.12		5.051	-4.84		0.211
					SU	-	-2.296	-1.123		0.21	1.555		-4.84
UNII-2A	52	5260	26T	0	1.546	2.252	0.12	5.041	11.00	-4.38	0.661	N/A	
				4	0.416	1.322	0.12	4.020		-4.38	-0.360		
				8	1.586	1.972	0.12	4.911		-4.38	0.531		
			SU	-	-2.217	-1.320	0.21	1.479		-4.38	-2.901		
	60	5300	26T	0	1.757	1.554	0.12	4.784		-4.38	0.404		
				4	0.644	0.689	0.12	3.794		-4.38	-0.586		
				8	1.735	2.094	0.12	5.045		-4.38	0.665		
			SU	-	-2.382	-1.758	0.21	1.166		-4.38	-3.214		
	64	5320	26T	0	2.011	1.458	0.12	4.871		-4.38	0.491		
				4	0.854	0.618	0.12	3.865		-4.38	-0.515		
				8	1.746	2.267	0.12	5.142		-4.38	0.762		
			SU	-	-2.303	-1.783	0.21	1.190		-4.38	-3.190		
UNII-2C	100	5500	26T	0	1.678	2.203	0.12	5.076	11.00	-3.49	1.586	N/A	
				4	0.628	0.774	0.12	3.829		-3.49	0.339		
				8	1.835	1.745	0.12	4.918		-3.49	1.428		
			SU	-	-2.107	-1.311	0.21	1.534		-3.49	-1.956		
	116	5580	26T	0	1.744	3.212	0.12	5.667		-3.49	2.177		
				4	0.574	1.791	0.12	4.352		-3.49	0.862		
				8	1.756	2.314	0.12	5.171		-3.49	1.681		
			SU	-	-1.999	-0.738	0.21	1.902		-3.49	-1.588		
	140	5700	26T	0	2.575	2.998	0.12	5.919		-3.49	2.429		
				4	1.769	1.753	0.12	4.888		-3.49	1.398		
				8	2.735	2.601	0.12	5.796		-3.49	2.306		
			SU	-	-2.093	-1.225	0.21	1.587		-3.49	-1.903		

Band	Channel	Center Freq.	Tones	RU offset	Meas PSD		DCCF	Corr'd Conducted PSD	Conducted PSD Limit	Direct. Gain	e.i.r.p PSD	e.i.r.p PSD Limit
					[dBm/MHz]							
		[MHz]			ANT1	ANT2						
UNII-2C&3	144 Straddle	5720	26T	0	2.815	3.003	0.12	6.037	11.00 or 30.00/500kHz	-3.49	2.547	N/A
				4	1.530	1.502	0.12	4.643		-3.49	1.153	
				8	2.555	2.603	0.12	5.706		-3.49	2.216	
			SU	-	-1.724	-1.066	0.21	1.842		-3.49	-1.648	
UNII-3	149	5745	26T	0	-0.496	0.165	0.12	2.974	30.00/500kHz	-4.02	-1.046	N/A
				4	-1.077	-0.098	0.12	2.567		-4.02	-1.453	
				8	-0.892	0.250	0.12	2.844		-4.02	-1.176	
			SU	-	-4.519	-3.321	0.21	-0.654		-4.02	-4.674	
	157	5785	26T	0	-0.883	-0.318	0.12	2.536		-4.02	-1.484	
				4	-1.260	-0.572	0.12	2.225		-4.02	-1.795	
				8	-0.766	-0.488	0.12	2.503		-4.02	-1.517	
			SU	-	-4.457	-3.879	0.21	-0.934		-4.02	-4.954	
	165	5825	26T	0	-0.295	0.485	0.12	3.240		-4.02	-0.780	
				4	-0.586	0.150	0.12	2.925		-4.02	-1.095	
				8	-0.427	0.615	0.12	3.252		-4.02	-0.768	
			SU	-	-4.503	-3.460	0.21	-0.725		-4.02	-4.745	
UNII-3&4	169 Straddle	5845	26T	0	1.695	2.758	0.12	5.386	30.00/500kHz	-4.02	1.366	N/A
				4	0.154	1.840	0.12	4.206		-4.02	0.186	
				8	1.436	2.969	0.12	5.397		-4.02	1.377	
			SU	-	-1.383	-0.551	0.21	2.278		-4.02	-1.742	
		5845	26T	0	1.695	2.758	0.12	5.386	N/A	-3.98	1.406	14.00
				4	0.154	1.840	0.12	4.206		-3.98	0.226	
				8	1.436	2.969	0.12	5.397		-3.98	1.417	
			SU	-	-1.383	-0.551	0.21	2.278		-3.98	-1.702	
UNII-4	173	5865	26T	0	2.077	3.143	0.12	5.770	N/A	-3.98	1.790	14.00
				4	1.181	1.612	0.12	4.529		-3.98	0.549	
				8	2.232	2.425	0.12	5.457		-3.98	1.477	
			SU	-	-1.294	-0.656	0.21	2.262		-3.98	-1.718	
	177	5885	26T	0	2.038	2.924	0.12	5.631		-3.98	1.651	
				4	0.936	1.645	0.12	4.432		-3.98	0.452	
				8	2.306	2.628	0.12	5.597		-3.98	1.617	
			SU	-	-2.102	-1.122	0.21	1.640		-3.98	-2.340	

10.2.7. 802.11ax HE40 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
					ANT1	ANT2					
UNII-1	38	5190	26T	0	4.75	5.77	8.30	23.98	-4.84	3.46	N/A
				9	4.70	5.67	8.22		-4.84	3.38	
				17	4.63	5.65	8.18		-4.84	3.34	
			SU	-	9.81	10.50	13.18		-4.84	8.34	
	46	5230	26T	0	4.28	5.41	7.89		-4.84	3.05	
				9	4.21	5.39	7.85		-4.84	3.01	
				17	4.19	5.40	7.85		-4.84	3.01	
			SU	-	9.50	10.21	12.88		-4.84	8.04	
UNII-2A	54	5270	26T	0	4.72	5.76	8.28	23.41	-4.38	3.90	N/A
				9	4.64	5.75	8.24		-4.38	3.86	
				17	4.54	5.66	8.15		-4.38	3.77	
			SU	-	9.40	10.04	12.74		-4.38	8.36	
	62	5310	26T	0	4.75	5.37	8.08		-4.38	3.70	
				9	4.69	5.30	8.02		-4.38	3.64	
				17	4.75	5.28	8.03		-4.38	3.65	
			SU	-	9.63	10.33	13.00		-4.38	8.62	
UNII-2C	102	5510	26T	0	4.71	5.76	8.28	23.34	-3.49	4.79	N/A
				9	4.68	5.74	8.25		-3.49	4.76	
				17	4.76	5.73	8.28		-3.49	4.79	
			SU	-	9.90	10.69	13.32		-3.49	9.83	
	110	5550	26T	0	4.58	5.92	8.31		-3.49	4.82	
				9	4.62	5.93	8.33		-3.49	4.84	
				17	4.55	5.78	8.22		-3.49	4.73	
			SU	-	9.42	10.47	12.99		-3.49	9.50	
	134	5670	26T	0	5.23	5.45	8.35		-3.49	4.86	
				9	5.15	5.41	8.29		-3.49	4.80	
				17	5.05	5.22	8.15		-3.49	4.66	
			SU	-	9.88	9.67	12.79		-3.49	9.30	

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
					ANT1	ANT2					
UNII-2C&3	142 Straddle	5710	26T	0	4.97	5.55	8.28	23.34	-3.49	4.79	N/A
				9	4.93	5.57	8.27		-3.49	4.78	
				17	4.91	5.53	8.24		-3.49	4.75	
			SU	-	9.77	9.88	12.84		-3.49	9.35	
UNII-3	151	5755	26T	0	4.36	5.36	7.90	30.00	-4.02	3.88	N/A
				9	4.25	5.22	7.77		-4.02	3.75	
				17	4.12	5.25	7.73		-4.02	3.71	
			SU	-	9.31	10.30	12.84		-4.02	8.82	
	159	5795	26T	0	4.21	5.04	7.66		-4.02	3.64	
				9	4.58	5.53	8.09		-4.02	4.07	
				17	4.58	5.54	8.10		-4.02	4.08	
			SU	-	9.36	10.08	12.75		-4.02	8.73	
UNII-3&4	167 Straddle	5835	26T	0	4.69	5.74	8.26	30.00	-4.02	4.24	N/A
				9	4.61	5.74	8.22		-4.02	4.20	
				17	4.50	5.68	8.14		-4.02	4.12	
			SU	-	9.58	10.24	12.93		-4.02	8.91	
		5835	26T	0	4.69	5.74	8.26	N/A	-3.98	4.28	30.00
				9	4.61	5.74	8.22		-3.98	4.24	
				17	4.50	5.68	8.14		-3.98	4.16	
			SU	-	9.58	10.24	12.93		-3.98	8.95	
UNII-4	175	5875	26T	0	4.74	5.64	8.22	N/A	-3.98	4.24	30.00
				9	4.55	5.57	8.10		-3.98	4.12	
				17	4.50	5.59	8.09		-3.98	4.11	
			SU	-	9.49	10.06	12.79		-3.98	8.81	

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dB]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
					ANT1	ANT2						
UNII-1	38	5190	26T	0	1.627	1.608	0.12	4.745	11.00	-4.84	-0.095	N/A
				9	1.518	1.901	0.12	4.841		-4.84	0.001	
				17	1.771	1.195	0.12	4.620		-4.84	-0.220	
			SU	-	-5.209	-4.314	0.39	-1.337		-4.84	-6.177	
	46	5230	26T	0	1.381	1.111	0.12	4.375		-4.84	-0.465	
				9	1.613	1.093	0.12	4.488		-4.84	-0.352	
				17	1.220	1.912	0.12	4.707		-4.84	-0.133	
			SU	-	-5.514	-4.612	0.39	-1.638		-4.84	-6.478	
UNII-2A	54	5270	26T	0	1.588	2.347	0.12	5.111	11.00	-4.38	0.731	N/A
				9	1.576	2.509	0.12	5.195		-4.38	0.815	
				17	1.439	1.427	0.12	4.560		-4.38	0.180	
			SU	-	-5.554	-4.221	0.39	-1.435		-4.38	-5.815	
	62	5310	26T	0	1.651	1.252	0.12	4.583		-4.38	0.203	
				9	1.942	1.160	0.12	4.696		-4.38	0.316	
				17	1.855	1.819	0.12	4.964		-4.38	0.584	
			SU	-	-4.662	-4.550	0.39	-1.204		-4.38	-5.584	
UNII-2C	102	5510	26T	0	2.108	2.506	0.12	5.439	11.00	-3.49	1.949	N/A
				9	2.069	2.472	0.12	5.402		-3.49	1.912	
				17	2.249	2.839	0.12	5.681		-3.49	2.191	
			SU	-	-5.010	-3.874	0.39	-1.003		-3.49	-4.493	
	110	5550	26T	0	1.551	2.334	0.12	5.087		-3.49	1.597	
				9	1.415	2.951	0.12	5.378		-3.49	1.888	
				17	1.210	2.271	0.12	4.900		-3.49	1.410	
			SU	-	-5.306	-3.516	0.39	-0.918		-3.49	-4.408	
	134	5670	26T	0	2.332	2.405	0.12	5.496		-3.49	2.006	
				9	1.854	1.854	0.12	4.981		-3.49	1.491	
				17	1.840	2.537	0.12	5.330		-3.49	1.840	
			SU	-	-5.131	-4.565	0.39	-1.437		-3.49	-4.927	
UNII-2C&3	142 Straddle	5710	26T	0	1.861	2.276	0.12	5.201	11.00 or 30.00/500kHz	-3.49	1.711	N/A
				9	2.427	2.417	0.12	5.549		-3.49	2.059	
				17	2.024	2.088	0.12	5.183		-3.49	1.693	
			SU	-	-4.779	-4.286	0.39	-1.124		-3.49	-4.614	
UNII-3	151	5755	26T	0	-1.150	-0.266	0.12	2.442	30.00/500kHz	-4.02	-1.578	N/A
				9	-1.302	-0.600	0.12	2.190		-4.02	-1.830	
				17	-1.393	-0.348	0.12	2.288		-4.02	-1.732	
			SU	-	-7.755	-6.597	0.39	-3.736		-4.02	-7.756	
	159	5795	26T	0	-1.569	-0.593	0.12	2.074		-4.02	-1.946	
				9	-0.687	0.340	0.12	2.984		-4.02	-1.036	
				17	-0.632	-0.119	0.12	2.759		-4.02	-1.261	
			SU	-	-7.751	-6.614	0.39	-3.744		-4.02	-7.764	
UNII-3&4	167 Straddle	5835	26T	0	2.308	3.187	0.12	5.897	30.00/500kHz	-4.02	1.877	N/A
				9	1.846	2.933	0.12	5.551		-4.02	1.531	
				17	1.739	3.551	0.12	5.866		-4.02	1.846	
			SU	-	-4.798	-3.700	0.39	-0.813		-4.02	-4.833	
		5835	26T	0	2.308	3.187	0.12	5.897	N/A	-3.98	1.917	14.00
				9	1.846	2.933	0.12	5.551		-3.98	1.571	
				17	1.739	3.551	0.12	5.866		-3.98	1.886	
			SU	-	-4.798	-3.700	0.39	-0.813		-3.98	-4.793	
UNII-4	175	5875	26T	0	1.966	2.931	0.12	5.603	N/A	-3.98	1.623	14.00
				9	2.086	2.622	0.12	5.490		-3.98	1.510	
				17	2.331	2.547	0.12	5.568		-3.98	1.588	
			SU	-	-4.748	-4.120	0.39	-1.021		-3.98	-5.001	

10.2.8. 802.11ax HE80 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
					ANT1	ANT2					
UNII-1	42	5210	26T	0	4.81	5.72	8.30	23.98	-4.84	3.46	N/A
				18	4.57	5.60	8.13		-4.84	3.29	
				36	4.56	5.62	8.13		-4.84	3.29	
			SU	-	9.12	10.13	12.66		-4.84	7.82	
UNII-2A	58	5290	26T	0	4.87	5.58	8.25	23.41	-4.38	3.87	N/A
				18	4.57	5.35	7.99		-4.38	3.61	
				36	4.66	5.42	8.07		-4.38	3.69	
			SU	-	9.65	10.29	12.99		-4.38	8.61	
UNII-2C	106	5530	26T	0	4.18	5.62	7.97	23.34	-3.49	4.48	N/A
				18	4.09	5.43	7.82		-3.49	4.33	
				36	4.14	5.39	7.82		-3.49	4.33	
			SU	-	9.61	10.73	13.22		-3.49	9.73	
	122	5610	26T	0	4.45	5.56	8.05		-3.49	4.56	
				18	4.20	5.28	7.78		-3.49	4.29	
				36	4.25	5.24	7.78		-3.49	4.29	
			SU	-	9.48	10.82	13.21		-3.49	9.72	
UNII-2C&3	138 Straddle	5690	26T	0	4.79	5.14	7.98	23.34	-3.49	4.49	N/A
				18	4.54	4.86	7.71		-3.49	4.22	
				36	4.62	4.91	7.78		-3.49	4.29	
			SU	-	10.25	10.27	13.27		-3.49	9.78	
UNII-3	155	5775	26T	0	4.37	5.40	7.93	30.00	-4.02	3.91	N/A
				18	4.49	5.62	8.10		-4.02	4.08	
				36	4.52	5.69	8.15		-4.02	4.13	
			SU	-	9.71	10.76	13.28		-4.02	9.26	
UNII-3&4	171 Straddle	5855	26T	0	4.92	5.72	8.35	30.00	-4.02	4.33	N/A
				18	4.63	5.57	8.14		-4.02	4.12	
				36	4.49	5.54	8.06		-4.02	4.04	
			SU	-	9.44	9.96	12.72		-4.02	8.70	
		5855	26T	0	4.92	5.72	8.35	N/A	-3.98	4.37	30.00
				18	4.63	5.57	8.14		-3.98	4.16	
				36	4.49	5.54	8.06		-3.98	4.08	
			SU	-	9.44	9.96	12.72		-3.98	8.74	

PSD Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dB]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
					ANT1	ANT2						
UNII-1	42	5210	26T	0	1.480	1.836	0.12	4.789	11.00	-4.84	-0.051	N/A
				18	0.375	0.285	0.12	3.458		-4.84	-1.382	
				36	1.291	1.985	0.12	4.779		-4.84	-0.061	
			SU	-	-8.623	-8.042	0.15	-5.158		-4.84	-9.998	
UNII-2A	58	5290	26T	0	1.663	2.349	0.12	5.147	11.00	-4.38	0.767	N/A
				18	0.389	0.683	0.12	3.666		-4.38	-0.714	
				36	1.602	1.996	0.12	4.931		-4.38	0.551	
			SU	-	-7.760	-7.776	0.15	-4.603		-4.38	-8.983	
UNII-2C	106	5530	26T	0	1.218	2.245	0.12	4.889	11.00	-3.49	1.399	N/A
				18	0.049	0.961	0.12	3.656		-3.49	0.166	
				36	0.874	2.146	0.12	4.684		-3.49	1.194	
			SU	-	-8.118	-6.423	0.15	-4.023		-3.49	-7.513	
	122	5610	26T	0	0.960	2.571	0.12	4.967		-3.49	1.477	
				18	-0.022	1.167	0.12	3.740		-3.49	0.250	
				36	0.885	2.042	0.12	4.629		-3.49	1.139	
			SU	-	-8.010	-6.132	0.15	-3.805		-3.49	-7.295	
UNII-2C&3	138 Straddle	5690	26T	0	1.725	2.357	0.12	5.180	11.00 or 30.00/500kHz	-3.49	1.690	N/A
				18	0.552	1.229	0.12	4.031		-3.49	0.541	
				36	1.679	1.863	0.12	4.899		-3.49	1.409	
			SU	-	-7.412	-6.344	0.15	-3.680		-3.49	-7.170	
UNII-3	155	5775	26T	0	-1.610	-0.153	0.12	2.307	30.00/500kHz	-4.02	-1.713	N/A
				18	-1.509	-0.161	0.12	2.344		-4.02	-1.676	
				36	-0.847	0.062	0.12	2.759		-4.02	-1.261	
			SU	-	-10.304	-8.517	0.15	-6.154		-4.02	-10.174	
UNII-3&4	171 Straddle	5855	26T	0	2.836	3.116	0.12	6.106	30.00/500kHz	-4.02	2.086	N/A
				18	0.766	2.264	0.12	4.707		-4.02	0.687	
				36	2.133	2.902	0.12	5.662		-4.02	1.642	
			SU	-	-7.519	-6.487	0.15	-3.808		-4.02	-7.828	
		5855	26T	0	2.836	3.116	0.12	6.106	N/A	-3.98	2.126	14.00
				18	0.766	2.264	0.12	4.707		-3.98	0.727	
				36	2.133	2.902	0.12	5.662		-3.98	1.682	
			SU	-	-7.519	-6.487	0.15	-3.808		-3.98	-7.788	

10.2.9. 802.11ax HE160 MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Tones	RU offset	Average Power [dBm]		Corr'd Conducted Power [dBm]	Conducted Power Limit [dBm]	Direct. Gain [dBi]	e.i.r.p [dBm]	e.i.r.p Limit [dBm]
					ANT1	ANT2					
UNII-1&2A	50	5250	26T	0 L	4.50	5.38	7.97	23.41	-4.38	3.59	N/A
				0 U	4.26	5.26	7.80		-4.38	3.42	
				36 U	4.42	5.47	7.99		-4.38	3.61	
			SU	-	9.74	10.27	13.02		-4.38	8.64	
UNII-2C	114	5570	26T	0 L	4.66	5.84	8.30	23.34	-3.49	4.81	N/A
				0 U	4.63	5.67	8.19		-3.49	4.70	
				36 U	4.34	5.39	7.91		-3.49	4.42	
			SU	-	9.51	10.76	13.19		-3.49	9.70	
UNII-3&4	163 Straddle	5815	26T	0 L	4.90	5.71	8.33	30.00	-4.02	4.31	N/A
				0 U	4.57	5.68	8.17		-4.02	4.15	
				36 U	4.16	5.48	7.88		-4.02	3.86	
			SU	-	9.29	10.29	12.83		-4.02	8.81	
		5815	26T	0 L	4.90	5.71	8.33	N/A	-3.98	4.35	30.00
				0 U	4.57	5.68	8.17		-3.98	4.19	
				36 U	4.16	5.48	7.88		-3.98	3.90	
			SU	-	9.29	10.29	12.83		-3.98	8.85	

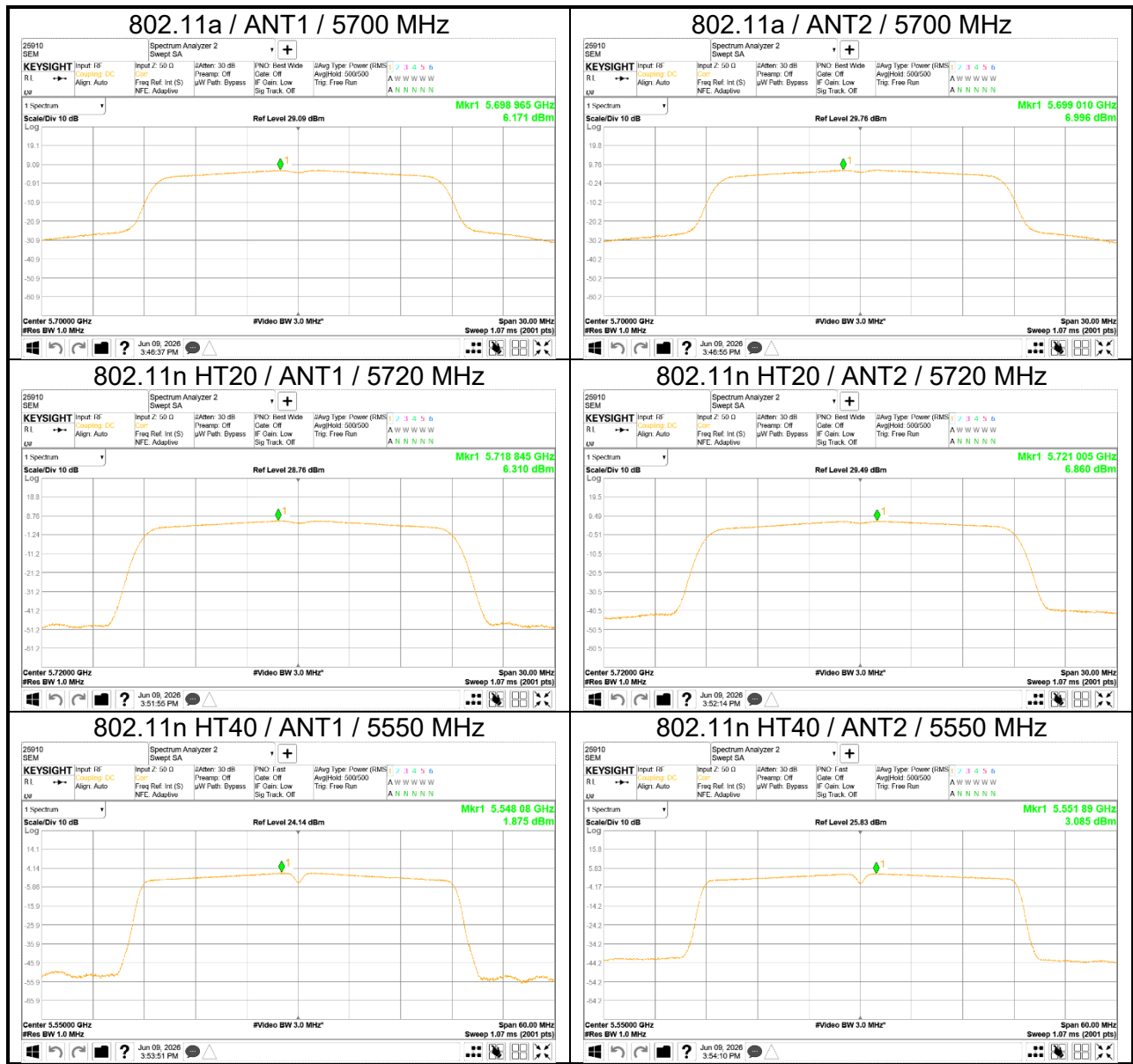
Note. LB=Lower band(Lower 996T),UB=Upper band(Upper 996T), L=Lower side, U=Upper side

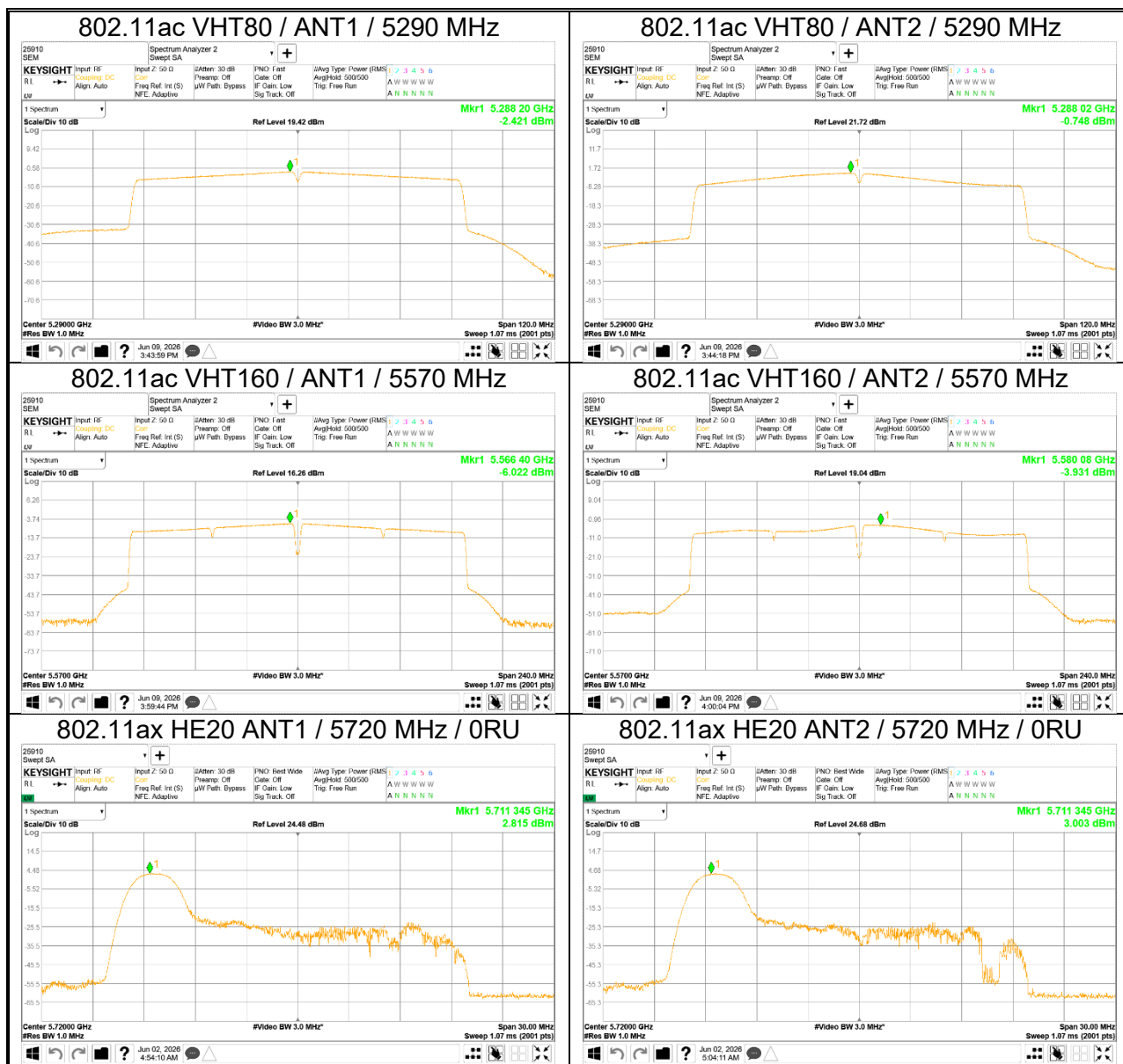
PSD Results

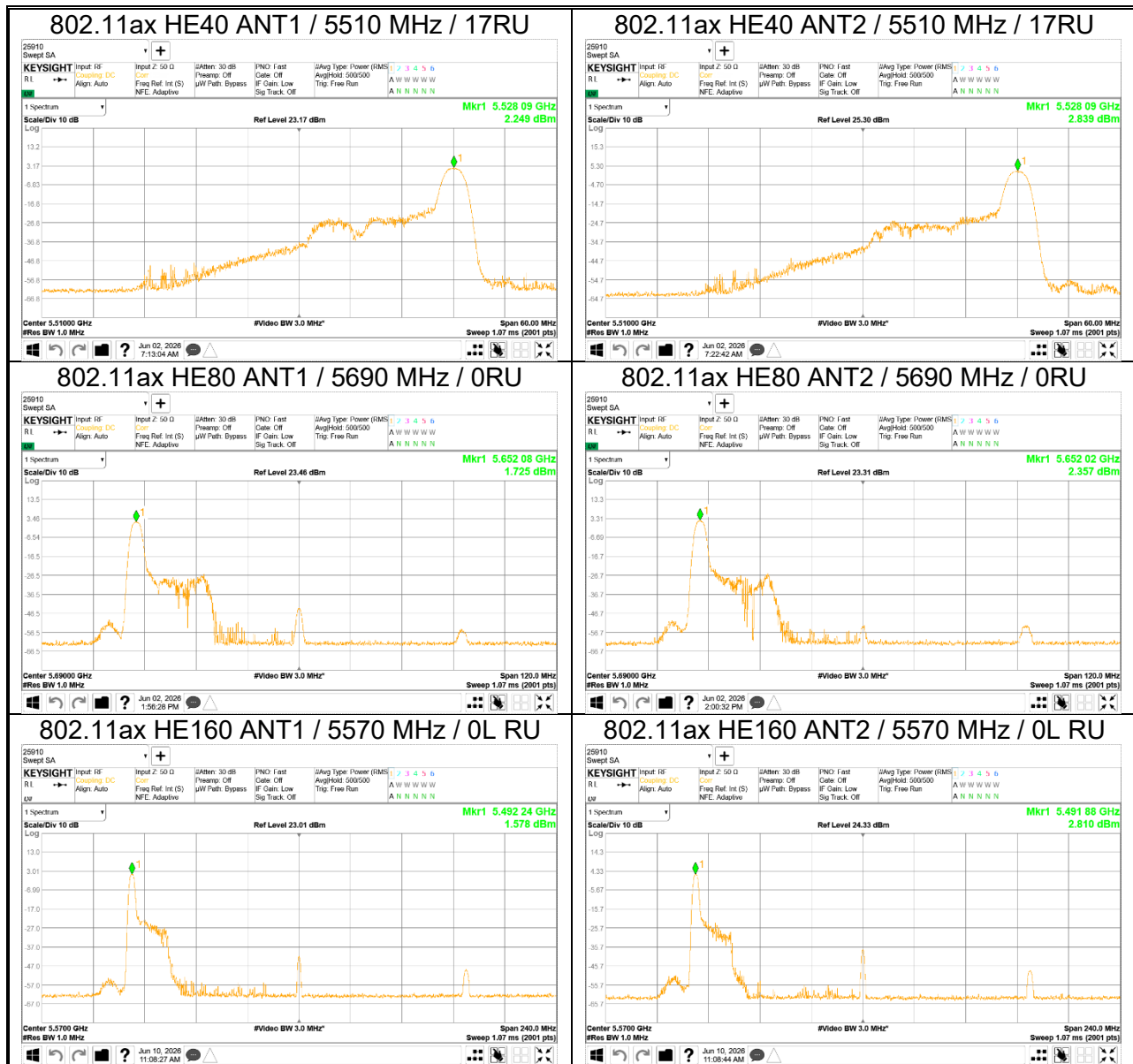
Band	Channel	Center Freq. [MHz]	Tones	RU offset	Meas PSD [dBm/MHz]		DCCF [dB]	Corr'd Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Direct. Gain [dBi]	e.i.r.p PSD [dBm/MHz]	e.i.r.p PSD Limit [dBm/MHz]
					ANT1	ANT2						
UNII-2A	50	5250	26T	0 L	0.709	1.705	0.12	4.363	11.00	-4.38	-0.017	N/A
				0 U	0.745	1.933	0.12	4.507		-4.38	0.127	
				36 U	0.976	2.006	0.12	4.649		-4.38	0.269	
			SU	-	-10.874	-10.106	0.15	-7.308		-4.38	-11.688	
UNII-2C	114	5570	26T	0 L	1.578	2.810	0.12	5.365	11.00	-3.49	1.875	N/A
				0 U	1.348	2.783	0.12	5.252		-3.49	1.762	
				36 U	1.328	2.117	0.12	4.868		-3.49	1.378	
			SU	-	-10.411	-8.697	0.15	-6.305		-3.49	-9.795	
UNII-3&4	163 Straddle	5815	26T	0 L	1.575	2.874	0.12	5.400	30.00/500kHz	-4.02	1.380	N/A
				0 U	1.322	2.893	0.12	5.305		-4.02	1.285	
				36 U	0.893	2.505	0.12	4.901		-4.02	0.881	
			SU	-	-10.755	-8.558	0.15	-6.354		-4.02	-10.374	
		5815	26T	0 L	1.575	2.874	0.12	5.400	N/A	-3.98	1.420	14.00
				0 U	1.322	2.893	0.12	5.305		-3.98	1.325	
				36 U	0.893	2.505	0.12	4.901		-3.98	0.921	
			SU	-	-10.755	-8.558	0.15	-6.354		-3.98	-10.334	

Note. LB=Lower band(Lower 996T),UB=Upper band(Upper 996T), L=Lower side, U=Upper side

10.2.10. PPSD PLOTS (WORST CASE)







11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	Measurement Distance (m)
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

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

FCC Part 15.205 (a) : Only spurious emissions are permitted in any of the frequency bands listed below :

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~ 156.52525	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.7 ~ 156.9	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	162.0125 ~ 167.17	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	167.72 ~ 173.2	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	240 ~ 285	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	322 ~ 335.4	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	960 ~ 1240	3345.8 ~ 3358		
			3600 ~ 4400		

▪ FCC Part 15.205(b) : The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

FCC §15.407 (b)

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating solely in the 5.725–5.850 GHz band:
 - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (5) For transmitters operating solely in the 5.850-5.895 GHz band or operating on a channel that spans across 5.725-5.895 GHz:
 - (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz.
 - (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.
- (6) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (7) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
- (8) The provisions of §15.205 apply to intentional radiators operating under this section.
- (9) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Note

- Limit translation to field strength level (FCC §15.407)

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -27\text{dBm} + 95.2 = 68.2\text{dBuV/m}$$

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -17\text{dBm} + 95.2 = 78.2\text{dBuV/m}$$

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 100 cm for above 1GHz. EUT is set 3 meters away from the receiving antenna and scan from 1m to 4m to find out the highest emission.

The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Reference to KDB 789033 D02 v02r01 UNII part G) 6) c) Method AD:

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements. In UNII-4, unwanted emissions outside of restricted bands are measured with an RMS detector.

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

The spectrum from 1GHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

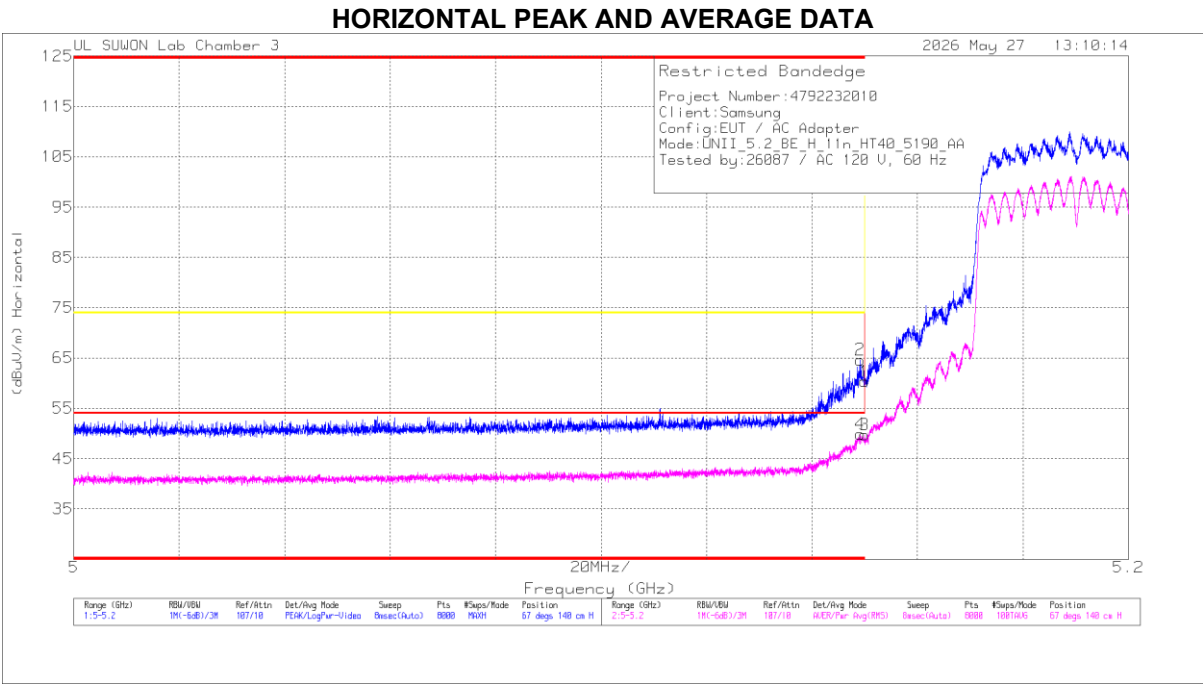
Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open area 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.

11.1. TX ABOVE 1GHz 2Tx MODE IN THE 5.2GHz BAND

BANDEDGE (WORST CASE: 802.11n HT40 / 5190 MHz)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dBm)	10dB_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.14999	46.57	Pk	34.4	-20.6	0	60.37	-	-	74	-13.63	67	140	H
2	* 5.14909	50.85	Pk	34.4	-20.6	0	64.65	-	-	74	-9.35	67	140	H
3	* 5.14999	35.78	RMS	34.4	-20.6	-21	49.79	54	-4.21	-	-	67	140	H
4	* 5.14909	35.85	RMS	34.4	-20.6	-21	49.86	54	-4.14	-	-	67	140	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

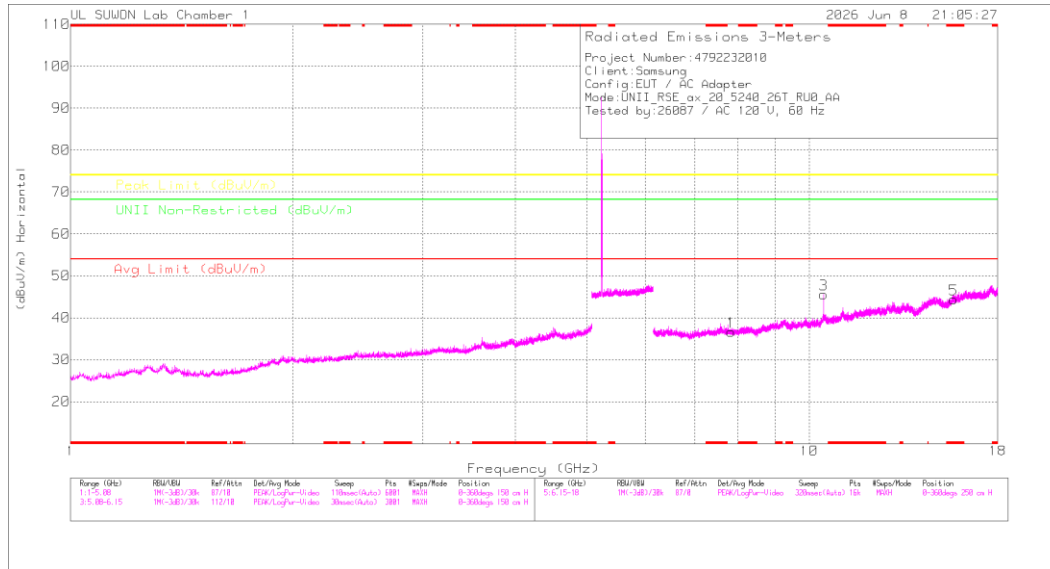
Bandedge Test Data

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5180	MIMO	* 5.14999	39.83	Pk	34.40	-20.60	0.00	53.63	-	-	74.00	-20.37	66	156	H
			* 5.14704	41.30	Pk	34.40	-20.50	0.00	55.20	-	-	74.00	-18.80	66	156	H
			* 5.14999	29.43	RMS	34.40	-20.60	0.23	43.46	54.00	-10.54	-	-	66	156	H
			* 5.14794	29.98	RMS	34.40	-20.60	0.23	44.01	54.00	-9.99	-	-	66	156	H
802.11n (HT20)	5180	MIMO	* 5.14999	39.04	Pk	34.40	-20.60	0.00	52.84	-	-	74.00	-21.16	66	156	H
			* 5.14927	41.21	Pk	34.40	-20.60	0.00	55.01	-	-	74.00	-18.99	66	156	H
			* 5.14999	28.62	RMS	34.40	-20.60	0.11	42.53	54.00	-11.47	-	-	66	156	H
			* 5.14572	29.94	RMS	34.40	-20.40	0.11	44.05	54.00	-9.95	-	-	66	156	H
802.11n (HT40)	5190	MIMO	* 5.14999	46.57	Pk	34.40	-20.60	0.00	60.37	-	-	74.00	-13.63	67	140	H
			* 5.14909	50.85	Pk	34.40	-20.60	0.00	64.65	-	-	74.00	-9.35	67	140	H
			* 5.14999	35.78	RMS	34.40	-20.60	0.21	49.79	54.00	-4.21	-	-	67	140	H
			* 5.14909	35.85	RMS	34.40	-20.60	0.21	49.86	54.00	-4.14	-	-	67	140	H
			* 5.14999	45.35	Pk	34.40	-20.60	0.00	59.15	-	-	74.00	-14.85	186	263	V
			* 5.14912	49.59	Pk	34.40	-20.60	0.00	63.39	-	-	74.00	-10.61	186	263	V
			* 5.14999	33.91	RMS	34.40	-20.60	0.21	47.92	54.00	-6.08	-	-	186	263	V
			* 5.14834	34.59	RMS	34.40	-20.60	0.21	48.60	54.00	-5.40	-	-	186	263	V
802.11ac (VHT80)	5210	MIMO	* 5.14999	46.03	Pk	34.40	-20.60	0.00	59.83	-	-	74.00	-14.17	66	146	H
			* 5.14972	48.51	Pk	34.40	-20.60	0.00	62.31	-	-	74.00	-11.69	66	146	H
			* 5.14999	34.80	RMS	34.40	-20.60	0.15	48.75	54.00	-5.25	-	-	66	146	H
			* 5.14964	35.39	RMS	34.40	-20.60	0.15	49.34	54.00	-4.66	-	-	66	146	H
802.11ac (VHT160)	5250 Lower	MIMO	* 5.14999	45.28	Pk	34.40	-20.60	0.00	59.08	-	-	74.00	-14.92	66	155	H
			* 5.11696	47.77	Pk	34.30	-20.60	0.00	61.47	-	-	74.00	-12.53	66	155	H
			* 5.14999	33.47	RMS	34.40	-20.60	0.15	47.42	54.00	-6.58	-	-	66	155	H
			* 5.14554	34.49	RMS	34.40	-20.40	0.15	48.64	54.00	-5.36	-	-	66	155	H
802.11ax (HE20)	5180	MIMO	* 5.14999	36.26	Pk	34.40	-20.60	0.00	50.06	-	-	74.00	-23.94	66	138	H
			* 5.14812	39.70	Pk	34.40	-20.60	0.00	53.50	-	-	74.00	-20.50	66	138	H
			* 5.14999	27.28	RMS	34.40	-20.60	0.21	41.29	54.00	-12.71	-	-	66	138	H
			* 5.14729	28.06	RMS	34.40	-20.50	0.21	42.17	54.00	-11.83	-	-	66	138	H
802.11ax (HE40)	5190	MIMO	* 5.14999	39.34	Pk	34.40	-20.60	0.00	53.14	-	-	74.00	-20.86	66	138	H
			* 5.14992	41.59	Pk	34.40	-20.60	0.00	55.39	-	-	74.00	-18.61	66	138	H
			* 5.14999	27.91	RMS	34.40	-20.60	0.39	42.10	54.00	-11.90	-	-	66	138	H
			* 5.14964	28.96	RMS	34.40	-20.60	0.39	43.15	54.00	-10.85	-	-	66	138	H
802.11ax (HE80)	5210	MIMO	* 5.14999	39.47	Pk	34.40	-20.60	0.00	53.27	-	-	74.00	-20.73	66	138	H
			* 5.13637	40.06	Pk	34.40	-20.50	0.00	53.96	-	-	74.00	-20.04	66	138	H
			* 5.14999	27.85	RMS	34.40	-20.60	0.15	41.80	54.00	-12.20	-	-	66	138	H
			* 5.14639	29.13	RMS	34.40	-20.40	0.15	43.28	54.00	-10.72	-	-	66	138	H
			* 5.14999	38.12	Pk	34.40	-20.60	0.00	51.92	-	-	74.00	-22.08	189	249	V
			* 5.14534	39.56	Pk	34.40	-20.50	0.00	53.46	-	-	74.00	-20.54	189	249	V
			* 5.14999	27.25	RMS	34.40	-20.60	0.15	41.20	54.00	-12.80	-	-	189	249	V
			* 5.12959	28.52	RMS	34.40	-20.60	0.15	42.47	54.00	-11.53	-	-	189	249	V
802.11ax (HE80) RU mode 484 Tone offset 65	5210	MIMO	* 5.14999	39.49	Pk	34.40	-20.60	0.00	53.29	-	-	74.00	-20.71	67	140	H
			* 5.14854	42.81	Pk	34.40	-20.60	0.00	56.61	-	-	74.00	-17.39	67	140	H
			* 5.14999	29.72	RMS	34.40	-20.60	0.12	43.64	54.00	-10.36	-	-	67	140	H
			* 5.14882	30.44	RMS	34.40	-20.60	0.12	44.36	54.00	-9.64	-	-	67	140	H
			* 5.14999	41.30	Pk	34.40	-20.60	0.00	55.10	-	-	74.00	-18.90	186	253	V
			* 5.14684	42.40	Pk	34.40	-20.50	0.00	56.30	-	-	74.00	-17.70	186	253	V
			* 5.14999	29.41	RMS	34.40	-20.60	0.12	43.33	54.00	-10.67	-	-	186	253	V
			* 5.14992	30.31	RMS	34.40	-20.60	0.12	44.23	54.00	-9.77	-	-	186	253	V
802.11ax (HE160)	5250 Lower	MIMO	* 5.14999	38.53	Pk	34.40	-20.60	0.00	52.33	-	-	74.00	-21.67	66	138	H
			* 5.13812	41.06	Pk	34.40	-20.50	0.00	54.96	-	-	74.00	-19.04	66	138	H
			* 5.14999	27.63	RMS	34.40	-20.60	0.15	41.58	54.00	-12.42	-	-	66	138	H
			* 5.13689	28.60	RMS	34.40	-20.50	0.15	42.65	54.00	-11.35	-	-	66	138	H

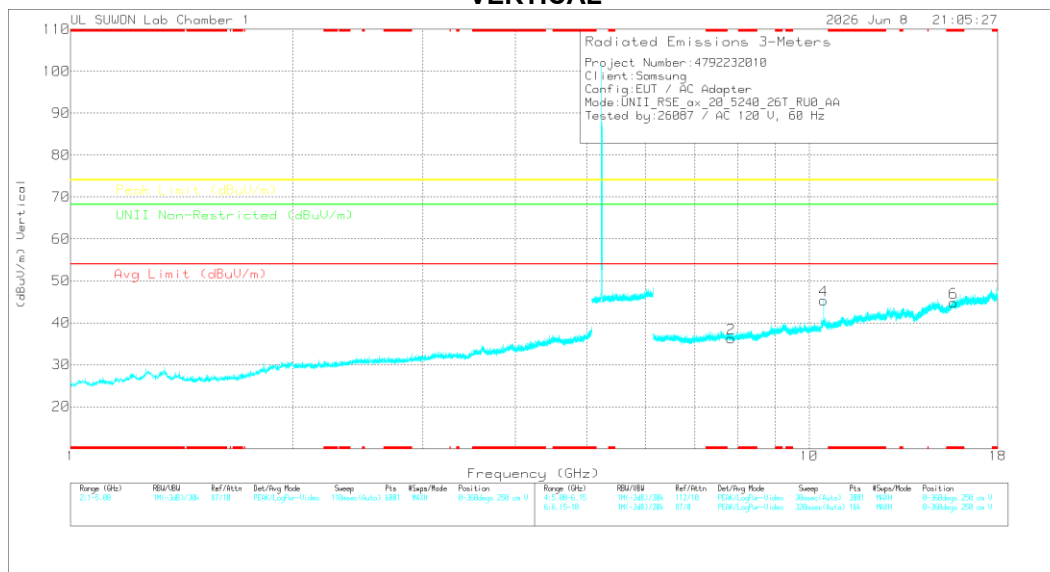
Note1. Pk - Peak detector, RMS - RMS detector

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 / 5240 MHz / 26T 0 RU)
HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Radiated Emissions

Frequency (GHz)	Meas. Reading (dBm)	Det	Antenna_Factor (dBm)	8GHz_HF_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBm/Vm)	Margin (dB)	Peak Limit (dBm/Vm)	Margin (dB)	UNII Non-Restricted (dBm/Vm)	Margin (dB)	Adm'n (dBm)	Height (cm)	Polarity
7.84359	41.22	PK-U	35.9	-29.8	0	47.32	-	-	-	-	68.2	-20.88	0	100	H
7.84673	40.85	PK-U	35.9	-29.8	0	46.95	-	-	-	-	68.2	-21.25	0	100	V
10.46269	52.64	PK-U	37.7	-25.3	0	65.04	-	-	-	-	68.2	-3.16	304	100	H
10.46314	51.9	PK-U	37.7	-25.3	0	64.3	-	-	-	-	68.2	-3.9	272	209	V
* 15.69129	37.36	PK-U	40.3	-22.7	0	54.86	-	-	74	-19.04	-	-	0	100	H
* 15.68837	28.37	ADR	40.3	-22.7	-12	43.89	54	-10.91	-	-	-	-	0	100	H
* 15.68892	37.48	PK-U	40.3	-22.7	0	55.08	-	-	74	-18.92	-	-	0	100	V
* 15.69175	25.56	ADR	40.3	-22.7	-12	43.28	54	-10.72	-	-	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

Note. The highest spurious listed except for the noise floor.

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

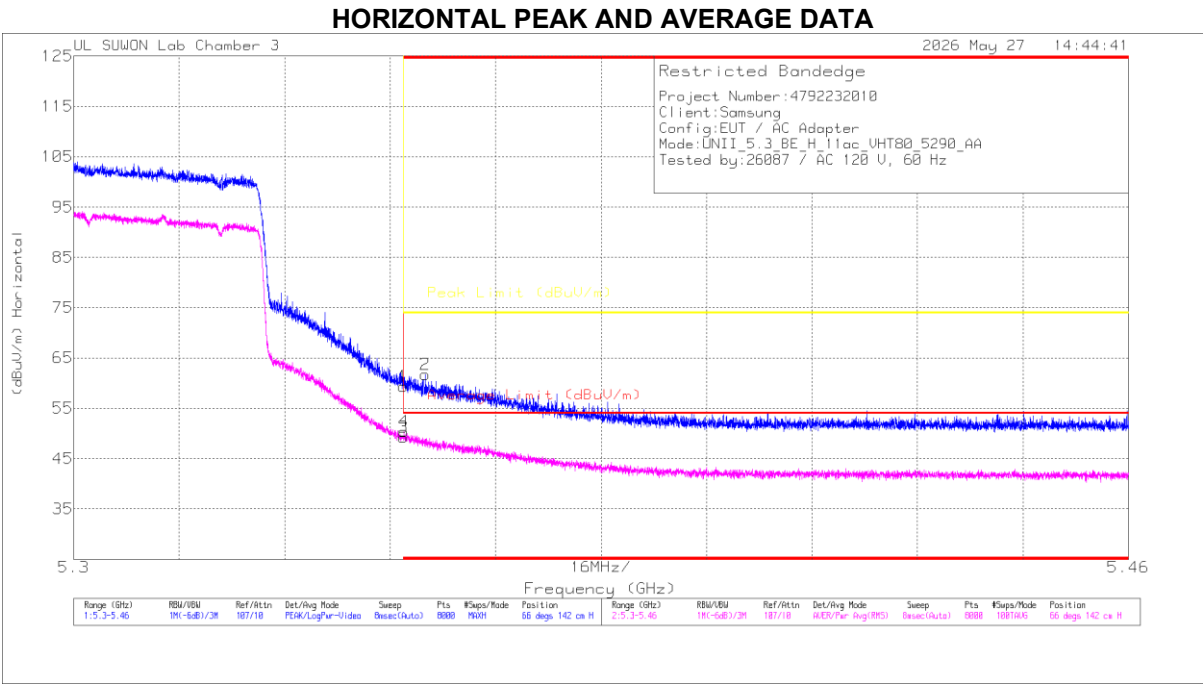
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5180	MIMO	7.768	41.55	PK-U	35.80	-29.90	0.00	47.45	-	-	-	-	68.20	-20.75	0	100	H
			7.765	41.51	PK-U	35.80	-29.90	0.00	47.41	-	-	-	-	68.20	-20.79	0	100	V
			10.360	42.95	PK-U	37.60	-26.40	0.00	54.15	-	-	-	-	68.20	-14.05	304	125	H
			10.363	39.67	PK-U	37.60	-26.30	0.00	50.97	-	-	-	-	68.20	-17.23	125	129	V
			* 15.52341	37.59	PK-U	39.90	-23.20	0.00	54.29	-	-	74.00	-19.71	-	-	0	100	H
			* 15.54839	25.60	ADR	40.00	-23.00	0.23	42.83	54.00	-11.17	-	-	-	-	0	100	H
			* 15.5219	38.14	PK-U	39.90	-23.20	0.00	54.84	-	-	74.00	-19.16	-	-	0	100	V
			* 15.53195	25.30	ADR	39.90	-23.20	0.23	42.23	54.00	-11.77	-	-	-	-	0	100	V
			7.779	42.09	PK-U	35.80	-29.80	0.00	48.09	-	-	-	-	68.20	-20.11	0	100	H
			7.794	41.23	PK-U	35.80	-29.90	0.00	47.13	-	-	-	-	68.20	-21.07	0	100	V
			10.399	43.06	PK-U	37.60	-25.80	0.00	54.86	-	-	-	-	68.20	-13.34	306	122	H
			10.399	39.42	PK-U	37.60	-25.80	0.00	51.22	-	-	-	-	68.20	-16.98	222	129	V
	5200	MIMO	* 15.61515	37.39	PK-U	40.10	-22.60	0.00	54.89	-	-	74.00	-19.11	-	-	0	100	H
			* 15.61275	24.94	ADR	40.10	-22.50	0.23	42.77	54.00	-11.23	-	-	-	-	0	100	H
			* 15.6234	37.36	PK-U	40.10	-22.60	0.00	54.86	-	-	74.00	-19.14	-	-	0	100	V
			* 15.60185	24.96	ADR	40.10	-22.60	0.23	42.69	54.00	-11.31	-	-	-	-	0	100	V
			7.863	41.91	PK-U	35.90	-29.90	0.00	47.91	-	-	-	-	68.20	-20.29	0	100	H
			7.861	41.29	PK-U	35.90	-29.80	0.00	47.39	-	-	-	-	68.20	-20.81	0	100	V
			10.481	42.64	PK-U	37.70	-25.30	0.00	55.04	-	-	-	-	68.20	-13.16	303	100	H
			10.478	41.76	PK-U	37.70	-25.30	0.00	54.16	-	-	-	-	68.20	-14.04	268	219	V
			* 15.71822	37.58	PK-U	40.30	-22.80	0.00	55.08	-	-	74.00	-18.92	-	-	0	100	H
			* 15.72022	24.99	ADR	40.30	-22.80	0.23	42.72	54.00	-11.28	-	-	-	-	0	100	H
			* 15.71751	37.70	PK-U	40.30	-22.80	0.00	55.20	-	-	74.00	-18.80	-	-	0	100	V
			* 15.7202	25.26	ADR	40.30	-22.80	0.23	42.99	54.00	-11.01	-	-	-	-	0	100	V
802.11n HT20 Spot-check	5240	MIMO	7.858	41.55	PK-U	35.90	-29.80	0.00	47.65	-	-	-	-	68.20	-20.55	0	100	H
			7.859	41.10	PK-U	35.90	-29.80	0.00	47.20	-	-	-	-	68.20	-21.00	0	100	V
			10.481	42.01	PK-U	37.70	-25.30	0.00	54.41	-	-	-	-	68.20	-13.79	304	103	H
			10.482	42.15	PK-U	37.70	-25.30	0.00	54.55	-	-	-	-	68.20	-13.65	270	216	V
			* 15.72143	37.68	PK-U	40.30	-22.80	0.00	55.18	-	-	74.00	-18.82	-	-	0	100	H
			* 15.72003	25.16	ADR	40.30	-22.80	0.11	42.77	54.00	-11.23	-	-	-	-	0	100	H
			* 15.72004	37.66	PK-U	40.30	-22.80	0.00	55.16	-	-	74.00	-18.84	-	-	0	100	V
			* 15.71929	25.33	ADR	40.30	-22.80	0.11	42.94	54.00	-11.06	-	-	-	-	0	100	V
			7.844	41.18	PK-U	35.90	-29.80	0.00	47.26	-	-	-	-	68.20	-20.94	0	100	H
			7.843	41.22	PK-U	35.90	-29.80	0.00	47.32	-	-	-	-	68.20	-20.88	0	100	V
			10.460	39.26	PK-U	37.70	-25.30	0.00	51.66	-	-	-	-	68.20	-16.54	302	121	H
			10.455	39.12	PK-U	37.70	-25.40	0.00	51.42	-	-	-	-	68.20	-16.78	181	112	V
802.11n HT40 Spot-check	5230	MIMO	* 15.6924	37.34	PK-U	40.30	-22.70	0.00	54.94	-	-	74.00	-19.06	-	-	0	100	H
			* 15.68776	25.46	ADR	40.30	-22.70	0.21	43.27	54.00	-10.73	-	-	-	-	0	100	H
			* 15.69094	37.84	PK-U	40.30	-22.70	0.00	55.44	-	-	74.00	-18.56	-	-	0	100	V
			* 15.68808	25.55	ADR	40.30	-22.70	0.21	43.36	54.00	-10.64	-	-	-	-	0	100	V
			7.817	41.17	PK-U	35.80	-29.70	0.00	47.27	-	-	-	-	68.20	-20.93	0	100	H
			7.816	40.96	PK-U	35.80	-29.70	0.00	47.06	-	-	-	-	68.20	-21.14	0	100	V
			10.410	38.86	PK-U	37.60	-25.80	0.00	50.66	-	-	-	-	68.20	-17.54	304	123	H
			10.421	38.52	PK-U	37.60	-25.60	0.00	50.52	-	-	-	-	68.20	-17.68	180	106	V
			* 15.6319	36.95	PK-U	40.10	-22.50	0.00	54.55	-	-	74.00	-19.45	-	-	0	100	H
			* 15.63139	25.05	ADR	40.10	-22.50	0.15	42.80	54.00	-11.20	-	-	-	-	0	100	H
			* 15.63238	37.06	PK-U	40.10	-22.50	0.00	54.66	-	-	74.00	-19.34	-	-	0	100	V
			* 15.62774	25.21	ADR	40.10	-22.60	0.15	42.86	54.00	-11.14	-	-	-	-	0	100	V
802.11ac VHT160 Spot-check	5250	MIMO	7.873	40.98	PK-U	35.90	-29.90	0.00	46.98	-	-	-	-	68.20	-21.22	0	100	H
			7.874	41.44	PK-U	35.90	-29.90	0.00	47.44	-	-	-	-	68.20	-20.76	0	100	V
			10.500	37.91	PK-U	37.70	-25.40	0.00	50.21	-	-	-	-	68.20	-17.99	216	181	H
			10.505	37.99	PK-U	37.70	-25.40	0.00	50.29	-	-	-	-	68.20	-17.91	68	153	V
			* 15.75208	37.40	PK-U	40.40	-23.00	0.00	54.80	-	-	74.00	-19.20	-	-	0	100	H
			* 15.74861	25.27	ADR	40.40	-23.00	0.15	42.82	54.00	-11.18	-	-	-	-	0	100	H
			* 15.75048	37.31	PK-U	40.40	-22.90	0.00	54.81	-	-	74.00	-19.19	-	-	0	100	V
			* 15.74827	25.43	ADR	40.40	-23.00	0.15	42.98	54.00	-11.02	-	-	-	-	0	100	V
			7.844	41.22	PK-U	35.90	-29.80	0.00	47.32	-	-	-	-	68.20	-20.88	0	100	H
			7.847	40.85	PK-U	35.90	-29.80	0.00	46.95	-	-	-	-	68.20	-21.25	0	100	V
			10.463	52.64	PK-U	37.70	-25.30	0.00	65.04	-	-	-	-	68.20	-3.16	304	100	H
			10.463	51.90	PK-U	37.70	-25.30	0.00	64.30	-	-	-	-	68.20	-3.90	272	209	V
802.11ax (HE20) RU mode 26 Tone offset 0	5240	MIMO	* 15.69129	37.36	PK-U	40.30	-22.70	0.00	54.96	-	-	74.00	-19.04	-	-	0	100	H
			* 15.68837	25.37	ADR	40.30	-22.70	0.12	43.09	54.00	-10.91	-	-	-	-	0	100	H
			* 15.68892	37.48	PK-U	40.30	-22.70	0.00	55.08	-	-	74.00	-18.92	-	-	0	100	V
			* 15.69175	25.56	ADR	40.30	-22.70	0.12	43.28	54.00	-10.72	-	-	-	-	0	100	V

Note1. PK-U - U-NII: Maximum Peak

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

11.2. TX ABOVE 1GHz 2Tx MODE IN THE 5.3GHz BAND

BANDEDGE (WORST CASE: 802.11ac VHT80 / 5290 MHz)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dBm)	10dB_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35001	44.9	Pk	34.7	-20.3	0	59.3	-	-	74	-14.7	66	142	H
2	* 5.35333	47.33	Pk	34.7	-20.3	0	61.73	-	-	74	-12.27	66	142	H
3	* 5.35001	34.75	RMS	34.7	-20.3	.15	49.3	54	-4.7	-	-	66	142	H
4	* 5.35007	35.78	RMS	34.7	-20.3	.15	50.33	54	-3.67	-	-	66	142	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK - Peak detector
RMS - RMS detection

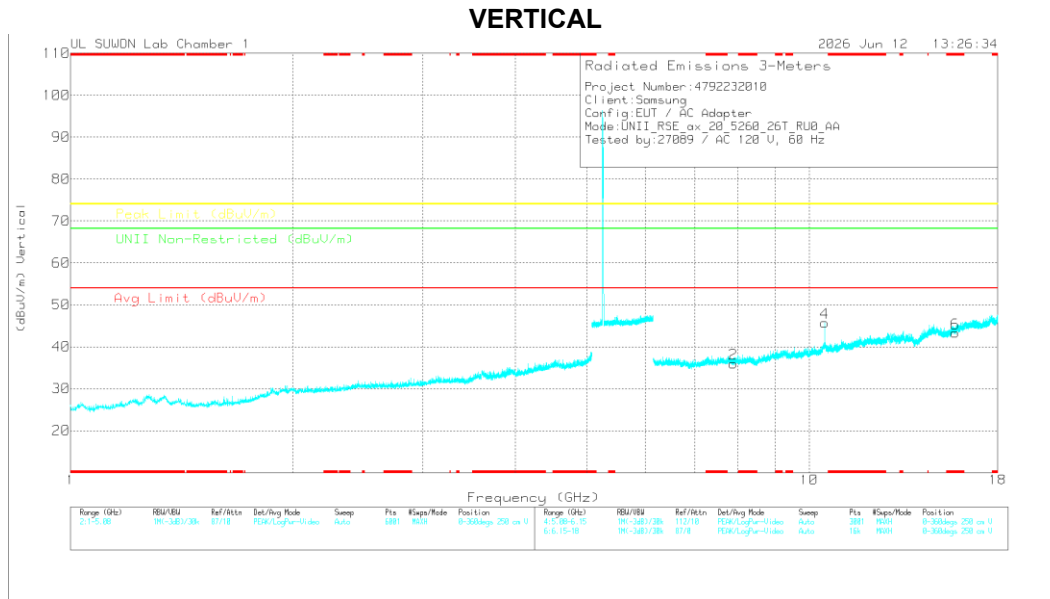
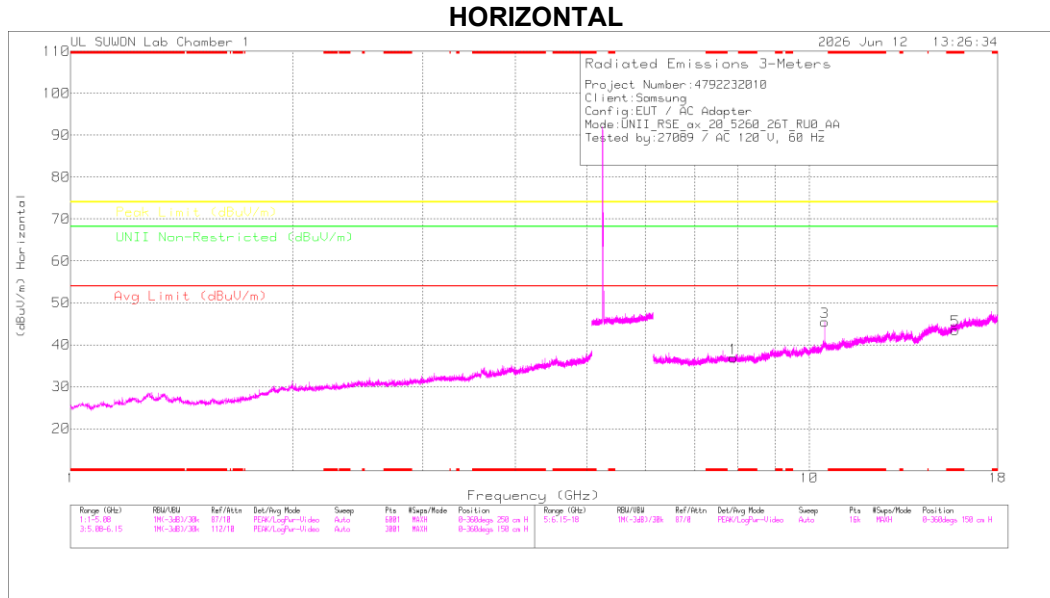
BANDEDGE TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dBm]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5320	MIMO	* 5.35001	40.57	Pk	34.70	-20.30	0.00	54.97	-	-	74.00	-19.03	68	140	H
			* 5.37007	41.94	Pk	34.70	-20.30	0.00	56.34	-	-	74.00	-17.66	68	140	H
			* 5.35001	30.47	RMS	34.70	-20.30	0.23	45.10	54.00	-9.90	-	-	68	140	H
			* 5.35289	30.21	RMS	34.70	-20.30	0.23	44.84	54.00	-9.16	-	-	68	140	H
			* 5.35001	39.79	Pk	34.70	-20.30	0.00	54.19	-	-	74.00	-19.81	66	164	H
802.11n (HT20)	5320	MIMO	* 5.35011	41.50	Pk	34.70	-20.30	0.00	55.90	-	-	74.00	-18.10	66	164	H
			* 5.35001	29.50	RMS	34.70	-20.30	0.11	44.01	54.00	-9.99	-	-	66	164	H
			* 5.35089	30.19	RMS	34.70	-20.30	0.11	44.70	54.00	-9.30	-	-	66	164	H
			* 5.35001	47.30	Pk	34.70	-20.30	0.00	61.70	-	-	74.00	-12.30	66	153	H
			* 5.35025	49.21	Pk	34.70	-20.30	0.00	63.61	-	-	74.00	-10.39	66	153	H
802.11n (HT40)	5310	MIMO	* 5.35001	34.07	RMS	34.70	-20.30	0.21	48.68	54.00	-5.32	-	-	66	153	H
			* 5.35061	35.53	RMS	34.70	-20.30	0.21	50.14	54.00	-3.86	-	-	66	153	H
			* 5.35001	44.90	Pk	34.70	-20.30	0.00	59.30	-	-	74.00	-14.70	66	142	H
			* 5.35333	47.33	Pk	34.70	-20.30	0.00	61.73	-	-	74.00	-12.27	66	142	H
			* 5.35001	34.75	RMS	34.70	-20.30	0.15	49.30	54.00	-4.70	-	-	66	142	H
802.11ac (VHT80)	5290	MIMO	* 5.35007	35.78	RMS	34.70	-20.30	0.15	50.33	54.00	-3.67	-	-	66	142	H
			* 5.35001	45.56	Pk	34.70	-20.30	0.00	59.96	-	-	74.00	-14.04	182	269	V
			* 5.35095	48.99	Pk	34.70	-20.30	0.00	63.39	-	-	74.00	-10.61	182	269	V
			* 5.35001	34.47	RMS	34.70	-20.30	0.15	49.02	54.00	-4.98	-	-	182	269	V
			* 5.35037	35.66	RMS	34.70	-20.30	0.15	50.21	54.00	-3.79	-	-	182	269	V
			* 5.35001	43.64	Pk	34.70	-20.30	0.00	58.04	-	-	74.00	-15.96	67	144	H
			* 5.35037	45.73	Pk	34.70	-20.30	0.00	60.13	-	-	74.00	-13.87	67	144	H
802.11ac (VHT160)	5250 Upper	MIMO	* 5.35001	33.37	RMS	34.70	-20.30	0.15	47.92	54.00	-6.08	-	-	67	144	H
			* 5.35247	33.79	RMS	34.70	-20.30	0.15	48.34	54.00	-5.66	-	-	67	144	H
			* 5.35001	36.57	Pk	34.70	-20.30	0.00	50.97	-	-	74.00	-23.03	69	151	H
			* 5.35037	39.26	Pk	34.70	-20.30	0.00	53.66	-	-	74.00	-20.34	69	151	H
			* 5.35001	26.48	RMS	34.70	-20.30	0.21	41.09	54.00	-12.91	-	-	69	151	H
802.11ax (HE20)	5320	MIMO	* 5.35403	27.88	RMS	34.70	-20.30	0.21	42.49	54.00	-11.51	-	-	69	151	H
			* 5.35001	37.52	Pk	34.70	-20.30	0.00	51.92	-	-	74.00	-22.08	69	151	H
			* 5.36905	39.89	Pk	34.70	-20.30	0.00	54.29	-	-	74.00	-19.71	69	151	H
			* 5.35001	27.24	RMS	34.70	-20.30	0.39	42.03	54.00	-11.97	-	-	69	151	H
			* 5.4149	28.07	RMS	34.80	-20.20	0.39	43.06	54.00	-10.94	-	-	69	151	H
802.11ax (HE80)	5290	MIMO	* 5.35001	36.95	Pk	34.70	-20.30	0.00	51.35	-	-	74.00	-22.65	69	151	H
			* 5.37489	38.94	Pk	34.70	-20.20	0.00	53.44	-	-	74.00	-20.56	69	151	H
			* 5.35001	27.15	RMS	34.70	-20.30	0.15	41.70	54.00	-12.30	-	-	69	151	H
			* 5.35663	28.24	RMS	34.70	-20.30	0.15	42.79	54.00	-11.21	-	-	69	151	H
			* 5.35001	37.98	Pk	34.70	-20.30	0.00	52.38	-	-	74.00	-21.62	69	151	H
802.11ax (HE160)	5250 Upper	MIMO	* 5.37301	40.43	Pk	34.70	-20.30	0.00	54.83	-	-	74.00	-19.17	69	151	H
			* 5.35001	27.42	RMS	34.70	-20.30	0.15	41.97	54.00	-12.03	-	-	69	151	H
			* 5.36331	28.62	RMS	34.70	-20.30	0.15	43.17	54.00	-10.83	-	-	69	151	H
			* 5.35001	37.71	Pk	34.70	-20.30	0.00	52.11	-	-	74.00	-21.89	181	240	V
			* 5.36269	39.03	Pk	34.70	-20.30	0.00	53.43	-	-	74.00	-20.57	181	240	V
			* 5.35001	27.47	RMS	34.70	-20.30	0.15	42.02	54.00	-11.98	-	-	181	240	V
			* 5.36027	28.27	RMS	34.70	-20.30	0.15	42.82	54.00	-11.18	-	-	181	240	V
802.11ax (HE160) RU mode 484 Tone offset 66 U	5250 Upper	MIMO	* 5.35001	38.21	Pk	34.70	-20.30	0.00	52.61	-	-	74.00	-21.39	66	149	H
			* 5.35059	40.09	Pk	34.70	-20.30	0.00	54.49	-	-	74.00	-19.51	66	149	H
			* 5.35001	27.47	RMS	34.70	-20.30	0.12	41.99	54.00	-12.01	-	-	66	149	H
			* 5.35091	28.36	RMS	34.70	-20.30	0.12	42.88	54.00	-11.12	-	-	66	149	H
			* 5.35001	37.01	Pk	34.70	-20.30	0.00	51.41	-	-	74.00	-22.59	182	239	V
			* 5.35525	39.72	Pk	34.70	-20.30	0.00	54.12	-	-	74.00	-19.88	182	239	V
			* 5.35001	27.26	RMS	34.70	-20.30	0.12	41.78	54.00	-12.22	-	-	180	239	V
			* 5.35071	28.13	RMS	34.70	-20.30	0.12	42.65	54.00	-11.35	-	-	180	239	V

Note1. Pk - Peak detector, RMS - RMS detector

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 / 5260 MHz / 26T 0RU)



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Factor (dBm)	GHz_HF_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (m)	Height (cm)	Polarity
7.87131	41.65	PK-U	35.9	-29.9	0	47.65	-	-	-	-	68.2	-20.55	0	100	H
7.88559	41.33	PK-U	35.9	-29.8	0	47.33	-	-	-	-	68.2	-20.77	0	100	V
10.50269	52.77	PK-U	37.7	-25.4	0	65.07	-	-	-	-	68.2	-3.13	328	100	H
10.50342	52.35	PK-U	37.7	-25.4	0	64.65	-	-	-	-	68.2	-3.55	268	111	V
* 15.78079	38.99	PK-U	40.4	-23.1	0	54.29	-	-	74	-19.71	-	-	0	100	H
* 15.78172	25.23	ADR	40.4	-23.1	.12	42.65	54	-11.35	-	-	-	-	0	100	H
* 15.78156	37.94	PK-U	40.4	-23.1	0	55.24	-	-	74	-18.76	-	-	0	100	V
* 15.78006	25.21	ADR	40.4	-23.1	.12	42.63	54	-11.37	-	-	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

Note. The highest spurious listed except for the noise floor.

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

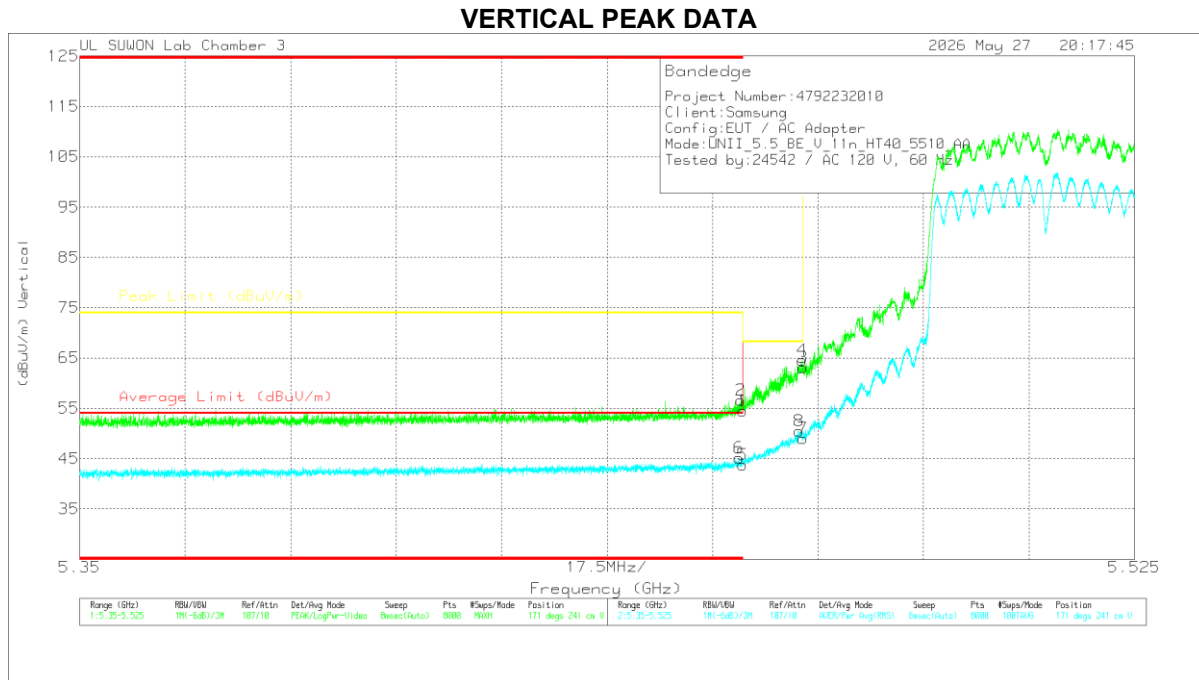
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5260	MIMO	7.889	40.93	PK-U	35.90	-29.80	0.00	47.03	-	-	-	-	68.20	-21.17	0	100	H
			7.889	42.38	PK-U	35.90	-29.80	0.00	48.48	-	-	-	-	68.20	-19.72	0	100	V
			10.519	42.20	PK-U	37.70	-25.60	0.00	54.30	-	-	-	-	68.20	-13.90	303	109	H
			10.516	42.32	PK-U	37.70	-25.50	0.00	54.52	-	-	-	-	68.20	-13.68	272	140	V
			* 15.77811	36.75	PK-U	40.40	-23.00	0.00	54.15	-	-	74.00	-19.85	-	-	0	100	H
			* 15.7803	25.13	ADR	40.40	-23.10	0.23	42.66	54.00	-11.34	-	-	-	-	0	100	H
			* 15.77972	37.12	PK-U	40.40	-23.10	0.00	54.42	-	-	74.00	-19.58	-	-	0	100	V
			* 15.78071	24.88	ADR	40.40	-23.10	0.23	42.41	54.00	-11.59	-	-	-	-	0	100	V
			7.933	41.54	PK-U	35.90	-29.70	0.00	47.74	-	-	-	-	68.20	-20.46	0	100	H
			7.956	41.04	PK-U	35.90	-29.70	0.00	47.24	-	-	-	-	68.20	-20.96	0	100	V
	5300	MIMO	* 10.60615	39.70	PK-U	37.80	-26.10	0.00	51.40	-	-	74.00	-22.60	-	-	327	104	H
			* 10.60299	27.10	ADR	37.80	-26.00	0.23	39.13	54.00	-14.87	-	-	-	-	327	104	H
			* 10.60169	39.38	PK-U	37.80	-26.00	0.00	51.18	-	-	74.00	-22.82	-	-	273	111	V
			* 10.60183	27.05	ADR	37.80	-26.00	0.23	39.08	54.00	-14.92	-	-	-	-	273	111	V
			* 15.8932	38.44	PK-U	40.60	-23.30	0.00	55.74	-	-	74.00	-18.26	-	-	0	100	H
			* 15.87675	25.71	ADR	40.60	-23.20	0.23	43.34	54.00	-10.66	-	-	-	-	0	100	H
			* 15.89839	38.59	PK-U	40.60	-23.30	0.00	55.89	-	-	74.00	-18.11	-	-	0	100	V
			* 15.89677	25.76	ADR	40.60	-23.30	0.23	43.29	54.00	-10.71	-	-	-	-	0	100	V
			7.988	41.24	PK-U	36.00	-29.60	0.00	47.64	-	-	-	-	68.20	-20.56	0	100	H
			7.956	41.34	PK-U	35.90	-29.70	0.00	47.54	-	-	-	-	68.20	-20.66	0	100	V
	5320	MIMO	* 10.6374	39.89	PK-U	37.80	-26.10	0.00	51.59	-	-	74.00	-22.41	-	-	325	100	H
			* 10.64325	27.53	ADR	37.80	-26.10	0.23	39.46	54.00	-14.54	-	-	-	-	325	100	H
			* 10.63635	39.52	PK-U	37.80	-26.20	0.00	51.12	-	-	74.00	-22.88	-	-	273	110	V
			* 10.6415	27.32	ADR	37.80	-26.10	0.23	39.25	54.00	-14.75	-	-	-	-	273	110	V
			* 15.97625	38.00	PK-U	40.70	-23.00	0.00	55.70	-	-	74.00	-18.30	-	-	0	100	H
			* 15.9373	25.32	ADR	40.70	-23.20	0.23	43.05	54.00	-10.95	-	-	-	-	0	100	H
			* 15.95065	38.08	PK-U	40.70	-23.10	0.00	55.68	-	-	74.00	-18.32	-	-	0	100	V
			* 15.969	25.30	ADR	40.70	-23.00	0.23	43.23	54.00	-10.77	-	-	-	-	0	100	V
			7.871	41.65	PK-U	35.90	-29.90	0.00	47.65	-	-	-	-	68.20	-20.55	0	100	H
			7.889	41.33	PK-U	35.90	-29.80	0.00	47.43	-	-	-	-	68.20	-20.77	0	100	V
802.11ax (HE20) RU mode 26 Tone offset 0 Spot-check	5260	MIMO	10.503	52.77	PK-U	37.70	-25.40	0.00	65.07	-	-	-	-	68.20	-3.13	328	100	H
			10.503	52.35	PK-U	37.70	-25.40	0.00	64.65	-	-	-	-	68.20	-3.55	268	111	V
			* 15.78079	36.99	PK-U	40.40	-23.10	0.00	54.29	-	-	74.00	-19.71	-	-	0	100	H
			* 15.78172	25.23	ADR	40.40	-23.10	0.12	42.65	54.00	-11.35	-	-	-	-	0	100	H
			* 15.78156	37.94	PK-U	40.40	-23.10	0.00	55.24	-	-	74.00	-18.76	-	-	0	100	V
			* 15.78006	25.21	ADR	40.40	-23.10	0.12	42.63	54.00	-11.37	-	-	-	-	0	100	V

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

11.3. TX ABOVE 1GHz 2Tx MODE IN THE 5.5 GHz BAND

BANDEDGE (WORST CASE: 802.11n HT40 / 5510 MHz)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	10dB_Path Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45998	39.7	PK	34.9	-20.1	0	54.5	-	-	74	-19.5	171	241	V
2	* 5.45965	41.78	PK	34.9	-20.1	0	56.58	-	-	74	-17.42	171	241	V
3	5.46998	48.28	PK	34.9	-20.1	0	63.08	-	-	68.2	-5.12	171	241	V
4	5.46995	49.82	PK	34.9	-20.1	0	64.62	-	-	68.2	-3.58	171	241	V
5	5.46998	28.73	RMS	34.9	-20.1	21	43.74	54	-10.26	-	-	171	241	V
6	* 5.45939	30.09	RMS	34.9	-20.1	21	45.1	54	-8.9	-	-	171	241	V
7	5.46998	34	RMS	34.9	-20.1	21	49.01	-	-	-	-	171	241	V
8	5.46941	35.55	RMS	34.9	-20.1	21	50.56	-	-	-	-	171	241	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - Peak detector

RMS - RMS detection

BANDEDGE TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result dBuV/m	AV Limit dBuV/m	AV Margin [dB]	PK Limit dBuV/m	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity		
802.11a	5500	MIMO	* 5.45998	38.89	Pk	34.90	-20.10	0.00	53.69	-	-	74.00	-20.31	176	238	V		
			* 5.44167	40.73	Pk	34.90	-20.20	0.00	55.43	-	-	74.00	-18.57	176	238	V		
			5.46998	39.12	Pk	34.90	-20.10	0.00	53.92	-	-	68.20	-14.28	176	238	V		
			5.46337	40.96	Pk	34.90	-20.20	0.00	55.66	-	-	68.20	-12.54	176	238	V		
			* 5.45998	28.86	RMS	34.90	-20.10	0.23	43.89	54.00	-10.11	-	-	176	238	V		
			* 5.4586	29.50	RMS	34.90	-20.10	0.23	44.53	54.00	-9.47	-	-	176	238	V		
			5.46998	29.02	RMS	34.90	-20.10	0.23	44.05	-	-	-	-	176	238	V		
			5.46908	29.90	RMS	34.90	-20.10	0.23	44.93	-	-	-	-	176	238	V		
			5.72500	41.38	Pk	35.00	-19.50	0.00	56.88	-	-	68.20	-11.32	183	248	V		
			5.72643	42.24	Pk	35.00	-19.50	0.00	57.74	-	-	68.20	-10.46	183	248	V		
802.11n (HT20)	5500	MIMO	* 5.45998	39.22	Pk	34.90	-20.10	0.00	54.02	-	-	74.00	-19.98	174	245	V		
			* 5.45075	41.01	Pk	34.90	-20.10	0.00	55.81	-	-	74.00	-18.19	174	245	V		
			5.46998	40.69	Pk	34.90	-20.10	0.00	55.49	-	-	68.20	-12.71	174	245	V		
			5.46854	43.26	Pk	34.90	-20.20	0.00	57.96	-	-	68.20	-10.24	174	245	V		
			* 5.45998	29.12	RMS	34.90	-20.10	0.11	44.03	54.00	-9.97	-	-	174	245	V		
			* 5.45876	30.20	RMS	34.90	-20.10	0.11	45.11	54.00	-8.89	-	-	174	245	V		
			5.46998	30.68	RMS	34.90	-20.10	0.11	45.59	-	-	-	-	174	245	V		
			5.46943	31.43	RMS	34.90	-20.10	0.11	46.34	-	-	-	-	174	245	V		
			5.72500	40.35	Pk	35.00	-19.50	0.00	55.85	-	-	68.20	-12.35	171	261	V		
			5.72710	41.89	Pk	35.00	-19.50	0.00	57.39	-	-	68.20	-10.81	171	261	V		
802.11n (HT40)	5510	MIMO	* 5.45998	39.57	Pk	34.90	-20.10	0.00	54.37	-	-	74.00	-19.63	71	121	H		
			* 5.45972	41.78	Pk	34.90	-20.10	0.00	56.58	-	-	74.00	-17.42	71	121	H		
			5.46998	49.10	Pk	34.90	-20.10	0.00	63.90	-	-	68.20	-4.30	71	121	H		
			5.46987	48.84	Pk	34.90	-20.10	0.00	63.64	-	-	68.20	-4.56	71	121	H		
			* 5.45998	29.38	RMS	34.90	-20.10	0.21	44.39	54.00	-9.61	-	-	71	121	H		
			* 5.45965	30.50	RMS	34.90	-20.10	0.21	45.51	54.00	-8.49	-	-	71	121	H		
			5.46998	34.93	RMS	34.90	-20.10	0.21	49.94	-	-	-	-	71	121	H		
			5.46974	35.76	RMS	34.90	-20.10	0.21	50.77	-	-	-	-	71	121	H		
			* 5.45998	39.70	Pk	34.90	-20.10	0.00	54.50	-	-	74.00	-19.50	171	241	V		
			* 5.45965	41.78	Pk	34.90	-20.10	0.00	56.58	-	-	74.00	-17.42	171	241	V		
			5.46998	48.28	Pk	34.90	-20.10	0.00	63.08	-	-	68.20	-5.12	171	241	V		
			5.46985	49.82	Pk	34.90	-20.10	0.00	64.62	-	-	68.20	-3.58	171	241	V		
			* 5.45998	28.73	RMS	34.90	-20.10	0.21	43.74	54.00	-10.26	-	-	171	241	V		
			* 5.45939	30.09	RMS	34.90	-20.10	0.21	45.10	54.00	-8.90	-	-	171	241	V		
			5.46998	34.00	RMS	34.90	-20.10	0.21	49.01	-	-	-	-	171	241	V		
			5.46941	35.55	RMS	34.90	-20.10	0.21	50.56	-	-	-	-	171	241	V		
			5670	MIMO	5.72500	37.97	Pk	35.00	-19.50	0.00	53.47	-	-	68.20	-14.73	164	252	V
					5.73538	40.33	Pk	35.00	-19.50	0.00	55.83	-	-	68.20	-12.37	164	252	V
802.11ac (VHT80)	5530	MIMO	* 5.45998	44.17	Pk	34.90	-20.10	0.00	58.97	-	-	74.00	-15.03	168	240	V		
			* 5.45926	45.91	Pk	34.90	-20.10	0.00	60.71	-	-	74.00	-13.29	168	240	V		
			5.46998	46.11	Pk	34.90	-20.10	0.00	60.91	-	-	68.20	-7.29	168	240	V		
			5.46930	48.04	Pk	34.90	-20.10	0.00	62.84	-	-	68.20	-5.36	168	240	V		
			* 5.45998	33.63	RMS	34.90	-20.10	0.15	48.58	54.00	-5.42	-	-	168	240	V		
			* 5.45959	34.31	RMS	34.90	-20.10	0.15	49.26	54.00	-4.74	-	-	168	240	V		
			5.46998	35.22	RMS	34.90	-20.10	0.15	50.17	-	-	-	-	168	240	V		
			5.46959	36.56	RMS	34.90	-20.10	0.15	51.51	-	-	-	-	168	240	V		
			5.72500	37.02	Pk	35.00	-19.50	0.00	52.52	-	-	68.20	-15.68	173	266	V		
			5.76910	39.35	Pk	35.00	-19.50	0.00	54.85	-	-	68.20	-13.35	173	266	V		
802.11ac (VHT160)	5570 Lower	MIMO	* 5.45998	44.56	Pk	34.90	-20.10	0.00	59.36	-	-	74.00	-14.64	175	241	V		
			* 5.44764	50.58	Pk	34.90	-20.10	0.00	65.38	-	-	74.00	-8.62	175	241	V		
			5.46998	45.11	Pk	34.90	-20.10	0.00	59.91	-	-	68.20	-8.29	175	241	V		
			5.46744	48.58	Pk	34.90	-20.20	0.00	63.28	-	-	68.20	-4.92	175	241	V		
			* 5.45998	33.59	RMS	34.90	-20.10	0.15	48.54	54.00	-5.46	-	-	175	241	V		
			* 5.45917	34.38	RMS	34.90	-20.10	0.15	49.33	54.00	-4.67	-	-	175	241	V		
			5.46998	34.21	RMS	34.90	-20.10	0.15	49.16	-	-	-	-	175	241	V		
			5.46996	35.20	RMS	34.90	-20.10	0.15	50.15	-	-	-	-	175	241	V		
			5.72501	39.81	Pk	35.00	-19.50	0.00	55.31	-	-	68.20	-12.89	171	258	V		
			5.72787	44.86	Pk	35.00	-19.50	0.00	60.36	-	-	68.20	-7.84	171	258	V		
802.11ax (HE20)	5500	MIMO	* 5.45998	36.76	Pk	34.90	-20.10	0.00	51.56	-	-	74.00	-22.44	176	252	V		
			* 5.42863	39.05	Pk	34.90	-20.20	0.00	53.75	-	-	74.00	-20.25	176	252	V		
			5.46998	35.97	Pk	34.90	-20.10	0.00	50.77	-	-	68.20	-17.43	176	252	V		
			5.46974	39.06	Pk	34.90	-20.10	0.00	53.86	-	-	68.20	-14.34	176	252	V		
			* 5.45998	26.56	RMS	34.90	-20.10	0.21	41.57	54.00	-12.43	-	-	176	252	V		
			* 5.45718	27.59	RMS	34.90	-20.10	0.21	42.60	54.00	-11.40	-	-	176	252	V		
			5.46998	27.43	RMS	34.90	-20.10	0.21	42.44	-	-	-	-	176	252	V		
			5.46696	27.47	RMS	34.90	-20.10	0.21	42.48	-	-	-	-	176	252	V		
			5.72500	36.56	Pk	35.00	-19.50	0.00	52.06	-	-	68.20	-16.14	168	252	V		
			5.79557	38.49	Pk	35.10	-19.50	0.00	54.09	-	-	68.20	-14.11	168	252	V		
802.11ax (HE40)	5510	MIMO	* 5.45998	35.37	Pk	34.90	-20.10	0.00	50.17	-	-	74.00	-23.83	176	252	V		
			* 5.45814	38.77	Pk	34.90	-20.10	0.00	53.57	-	-	74.00	-20.43	176	252	V		
			5.46998	36.67	Pk	34.90	-20.10	0.00	51.47	-	-	68.20	-16.73	176	252	V		
			5.46589	39.28	Pk	34.90	-20.10	0.00	54.08	-	-	68.20	-14.12	176	252	V		
			* 5.45998	26.13	RMS	34.90	-20.10	0.39	41.32	54.00	-12.68	-	-	176	252	V		
			* 5.44731	27.25	RMS	34.90	-20.10	0.39	42.44	54.00	-11.56	-	-	176	252	V		
			5.46998	26.84	RMS	34.90	-20.10	0.39	42.03	-	-	-	-	176	252	V		
			5.46941	27.59	RMS	34.90	-20.10	0.39	42.78	-	-	-	-	176	252	V		
			5.72500	36.55	Pk	35.00	-19.50	0.00	52.05	-	-	68.20	-16.15	168	252	V		
			5.79037	39.16	Pk	35.10	-19.50	0.00	54.76	-	-	68.20	-13.44	168	252	V		

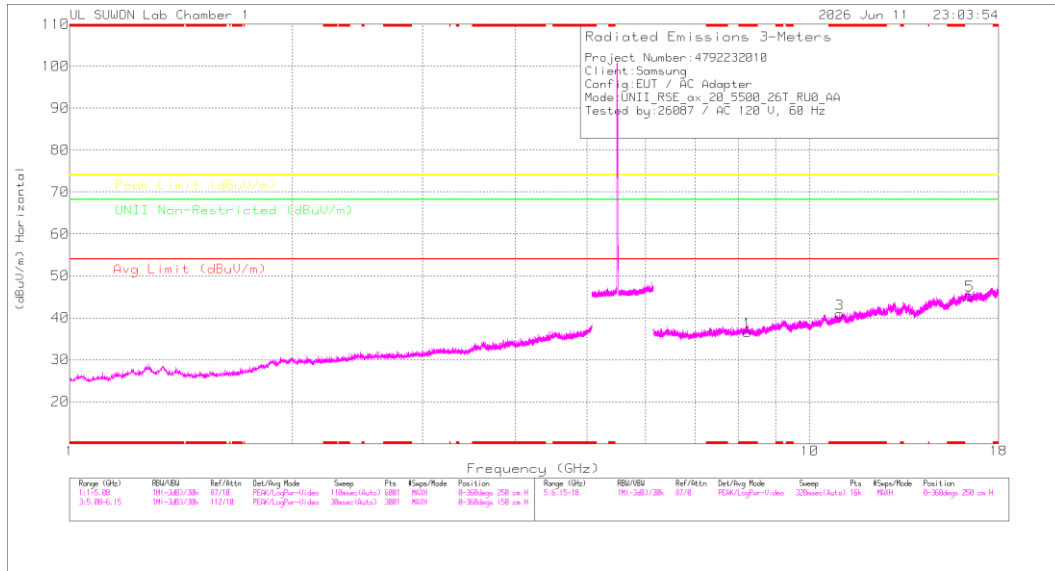
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit dBuV/m	AV Margin [dB]	PK Limit dBuV/m	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity	
802.11ax (HE80)	5530	MIMO	* 5.45998	36.96	Pk	34.90	-20.10	0.00	51.76	-	-	74.00	-22.24	176	252	V	
			* 5.45882	39.87	Pk	34.90	-20.10	0.00	54.67	-	-	74.00	-19.33	176	252	V	
			5.46998	37.28	Pk	34.90	-20.10	0.00	52.08	-	-	68.20	-16.12	176	252	V	
			5.46545	39.77	Pk	34.90	-20.10	0.00	54.57	-	-	68.20	-13.63	176	252	V	
			* 5.45998	27.48	RMS	34.90	-20.10	0.15	42.43	54.00	-11.57	-	-	176	252	V	
			* 5.44891	28.04	RMS	34.90	-20.10	0.15	42.99	54.00	-11.01	-	-	176	252	V	
			5.46998	28.14	RMS	34.90	-20.10	0.15	43.09	-	-	-	-	176	252	V	
			5.46956	28.64	RMS	34.90	-20.10	0.15	43.59	-	-	-	-	176	252	V	
			5.72500	35.99	Pk	35.00	-19.50	0.00	51.49	-	-	68.20	-16.71	168	252	V	
			5.72608	39.80	Pk	35.00	-19.50	0.00	55.30	-	-	68.20	-12.90	168	252	V	
802.11ax (HE160)	5570 Lower	MIMO	* 5.45998	38.06	Pk	34.90	-20.10	0.00	52.86	-	-	74.00	-21.14	108	127	H	
			* 5.44817	40.26	Pk	34.90	-20.10	0.00	55.06	-	-	74.00	-18.94	108	127	H	
			5.46998	37.61	Pk	34.90	-20.10	0.00	52.41	-	-	68.20	-15.79	108	127	H	
			5.46611	39.78	Pk	34.90	-20.10	0.00	54.58	-	-	68.20	-13.62	108	127	H	
			* 5.45998	28.36	RMS	34.90	-20.10	0.15	43.31	54.00	-10.69	-	-	108	127	H	
			* 5.45904	28.47	RMS	34.90	-20.10	0.15	43.42	54.00	-10.58	-	-	108	127	H	
			5.46998	28.67	RMS	34.90	-20.10	0.15	43.62	-	-	-	-	108	127	H	
			5.46943	28.81	RMS	34.90	-20.10	0.15	43.76	-	-	-	-	108	127	H	
			* 5.45998	37.14	Pk	34.90	-20.10	0.00	51.94	-	-	74.00	-22.06	176	252	V	
			* 5.43456	40.44	Pk	34.90	-20.20	0.00	55.14	-	-	74.00	-18.86	176	252	V	
			5.46998	38.26	Pk	34.90	-20.10	0.00	53.06	-	-	68.20	-15.14	176	252	V	
			5.46978	40.05	Pk	34.90	-20.10	0.00	54.85	-	-	68.20	-13.35	176	252	V	
			* 5.45998	27.68	RMS	34.90	-20.10	0.15	42.63	54.00	-11.37	-	-	176	252	V	
			* 5.45788	28.73	RMS	34.90	-20.10	0.15	43.68	54.00	-10.32	-	-	176	252	V	
			5.46998	27.86	RMS	34.90	-20.10	0.15	42.81	-	-	-	-	176	252	V	
			5.46388	29.14	RMS	34.90	-20.20	0.15	43.99	-	-	-	-	176	252	V	
			5.72501	36.09	Pk	35.00	-19.50	0.00	51.59	-	-	68.20	-16.61	168	252	V	
			5.77454	39.44	Pk	35.00	-19.50	0.00	54.94	-	-	68.20	-13.26	168	252	V	
	802.11ax (HE160) RU mode 996 Tone offset 67 RU	5570 Upper	MIMO	* 5.45998	38.42	Pk	34.90	-20.10	0.00	53.22	-	-	74.00	-20.78	110	117	H
				* 5.4483	40.18	Pk	34.90	-20.10	0.00	54.98	-	-	74.00	-19.02	110	117	H
5.46998				37.97	Pk	34.90	-20.10	0.00	52.77	-	-	68.20	-15.43	110	117	H	
5.46508				39.52	Pk	34.90	-20.10	0.00	54.32	-	-	68.20	-13.88	110	117	H	
* 5.45998				27.26	RMS	34.90	-20.10	0.12	42.18	54.00	-11.82	-	-	110	117	H	
* 5.45773				28.62	RMS	34.90	-20.10	0.12	43.54	54.00	-10.46	-	-	110	117	H	
5.46998				27.84	RMS	34.90	-20.10	0.12	42.76	-	-	-	-	110	117	H	
5.46374				29.20	RMS	34.90	-20.20	0.12	44.02	-	-	-	-	110	117	H	
* 5.45998				37.40	Pk	34.90	-20.10	0.00	52.20	-	-	74.00	-21.80	174	264	V	
* 5.45333				39.56	Pk	34.90	-20.10	0.00	54.36	-	-	74.00	-19.64	174	264	V	
5.46998				37.53	Pk	34.90	-20.10	0.00	52.33	-	-	68.20	-15.87	174	264	V	
5.46672				39.51	Pk	34.90	-20.10	0.00	54.31	-	-	68.20	-13.89	174	264	V	
* 5.45998				27.54	RMS	34.90	-20.10	0.12	42.46	54.00	-11.54	-	-	174	264	V	
* 5.45884				28.19	RMS	34.90	-20.10	0.12	43.11	54.00	-10.89	-	-	174	264	V	
5.46998				27.81	RMS	34.90	-20.10	0.12	42.73	-	-	-	-	174	264	V	
5.46821				28.55	RMS	34.90	-20.20	0.12	43.37	-	-	-	-	174	264	V	

Note1. Pk - Peak detector, RMS - RMS detector

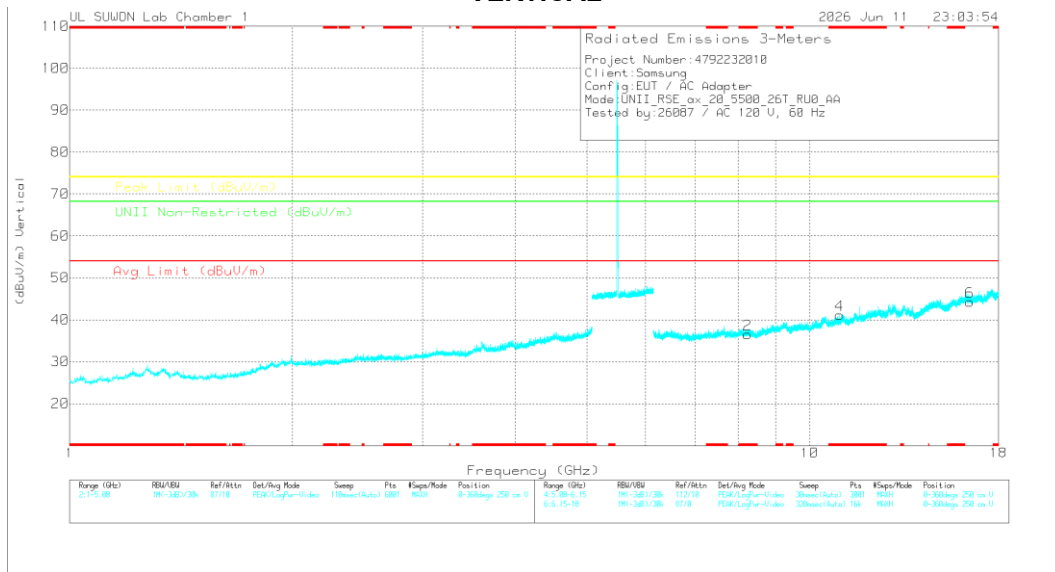
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 / 5500 MHz / 26T 0 RU)

HORIZONTAL



VERTICAL



Note. Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Factor (dBm)	GHz_HF_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Actual (dBi)	Height (cm)	Polarity
* 8.23572	40.48	PK-U	36.2	-29.4	0	47.28	-	-	74	-26.72	-	-	0	100	H
* 8.23576	41.12	PK-U	36.2	-29.4	0	47.32	-	-	74	-26.68	-	-	0	100	V
* 10.98271	45.01	PK-U	38	-25.8	0	57.21	-	-	74	-16.79	-	-	292	108	H
* 10.98298	28.65	ADR	38	-25.8	-12	40.97	54	-13.03	-	-	-	-	292	108	H
* 10.98297	43.66	PK-U	38	-25.8	0	55.86	-	-	74	-18.14	-	-	268	121	V
* 10.98303	27.84	ADR	38	-25.8	-12	40.16	54	-13.84	-	-	-	-	268	121	V
16.47357	37.36	PK-U	41.1	-22.5	0	55.96	-	-	-	-	68.2	-12.24	0	100	H
16.47152	37.79	PK-U	41.1	-22.4	0	56.49	-	-	-	-	68.2	-11.71	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5500	MIMO	* 8.25067	40.58	PK-U	36.20	-29.30	0.00	47.48	-	-	74.00	-26.52	-	-	0	100	H
			* 8.2534	40.64	PK-U	36.20	-29.20	0.00	47.64	-	-	74.00	-26.36	-	-	0	100	V
			* 11.00246	39.33	PK-U	38.10	-25.80	0.00	51.63	-	-	74.00	-22.37	-	-	290	116	H
			* 11.00212	27.05	ADR	38.10	-25.80	0.23	39.58	54.00	-14.42	-	-	-	-	290	116	H
			* 11.00066	38.75	PK-U	38.10	-25.90	0.00	50.95	-	-	74.00	-23.05	-	-	272	124	V
			* 10.9996	26.46	ADR	38.10	-25.90	0.23	38.89	54.00	-15.11	-	-	-	-	272	124	V
			16.501	37.56	PK-U	41.10	-22.40	0.00	56.26	-	-	-	-	68.20	-11.94	0	100	H
			16.499	37.19	PK-U	41.10	-22.40	0.00	55.89	-	-	-	-	68.20	-12.31	0	100	V
			* 8.37028	39.76	PK-U	36.20	-28.70	0.00	47.26	-	-	74.00	-26.74	-	-	0	100	H
			* 8.37245	39.89	PK-U	36.20	-28.70	0.00	47.39	-	-	74.00	-26.61	-	-	0	100	V
802.11a	5580	MIMO	* 11.15554	37.92	PK-U	38.20	-25.20	0.00	50.92	-	-	74.00	-23.08	-	-	295	275	H
			* 11.15604	25.51	ADR	38.20	-25.20	0.23	38.74	54.00	-15.26	-	-	-	-	295	275	H
			* 11.16224	38.00	PK-U	38.20	-25.30	0.00	50.90	-	-	74.00	-23.10	-	-	282	363	V
			* 11.15534	25.51	ADR	38.20	-25.20	0.23	38.74	54.00	-15.26	-	-	-	-	282	363	V
			16.738	36.74	PK-U	41.30	-22.10	0.00	55.94	-	-	-	-	68.20	-12.26	0	100	H
			16.742	36.82	PK-U	41.30	-22.20	0.00	55.92	-	-	-	-	68.20	-12.28	0	100	V
			8.552	40.31	PK-U	36.10	-28.70	0.00	47.71	-	-	-	-	68.20	-20.49	0	100	H
			8.548	40.26	PK-U	36.10	-28.70	0.00	47.66	-	-	-	-	68.20	-20.54	0	100	V
			* 11.40402	37.74	PK-U	38.20	-25.20	0.00	50.74	-	-	74.00	-23.26	-	-	334	168	H
			* 11.39873	25.04	ADR	38.20	-25.20	0.23	38.27	54.00	-15.73	-	-	-	-	334	168	H
802.11a	5700	MIMO	* 11.39713	37.58	PK-U	38.20	-25.10	0.00	50.68	-	-	74.00	-23.32	-	-	272	108	V
			* 11.39938	25.24	ADR	38.20	-25.20	0.23	38.47	54.00	-15.53	-	-	-	-	272	108	V
			17.098	36.73	PK-U	41.20	-22.10	0.00	55.83	-	-	-	-	68.20	-12.37	0	100	H
			17.102	36.69	PK-U	41.10	-22.10	0.00	55.69	-	-	-	-	68.20	-12.51	0	100	V
			8.579	39.48	PK-U	36.10	-28.50	0.00	47.08	-	-	-	-	68.20	-21.12	0	100	H
			8.581	40.25	PK-U	36.10	-28.40	0.00	47.95	-	-	-	-	68.20	-20.25	0	100	V
			* 11.43886	38.46	PK-U	38.30	-25.10	0.00	51.66	-	-	74.00	-22.34	-	-	287	101	H
			* 11.44041	25.91	ADR	38.30	-25.10	0.23	39.34	54.00	-14.66	-	-	-	-	287	101	H
			* 11.43887	38.31	PK-U	38.30	-25.10	0.00	51.51	-	-	74.00	-22.49	-	-	340	116	V
			* 11.43987	25.64	ADR	38.30	-25.10	0.23	39.07	54.00	-14.93	-	-	-	-	340	116	V
802.11ax (HE20) RU mode 26 Tone offset 0 Spot-check	5500	MIMO	17.158	37.31	PK-U	41.00	-21.90	0.00	56.41	-	-	-	-	68.20	-11.79	0	100	H
			17.161	36.71	PK-U	41.00	-21.90	0.00	55.81	-	-	-	-	68.20	-12.39	0	100	V
			* 8.23572	40.48	PK-U	36.20	-29.40	0.00	47.28	-	-	74.00	-26.72	-	-	0	100	H
			* 8.23676	41.12	PK-U	36.20	-29.40	0.00	47.92	-	-	74.00	-26.08	-	-	0	100	V
			* 10.98271	45.01	PK-U	38.00	-25.80	0.00	57.21	-	-	74.00	-16.79	-	-	292	108	H
			* 10.98298	28.65	ADR	38.00	-25.80	0.12	40.97	54.00	-13.03	-	-	-	-	292	108	H
			* 10.98297	43.66	PK-U	38.00	-25.80	0.00	55.86	-	-	74.00	-18.14	-	-	268	121	V
			* 10.98303	27.84	ADR	38.00	-25.80	0.12	40.16	54.00	-13.84	-	-	-	-	268	121	V
			16.474	37.35	PK-U	41.10	-22.50	0.00	55.96	-	-	-	-	68.20	-12.24	0	100	H
			16.472	37.79	PK-U	41.10	-22.40	0.00	56.49	-	-	-	-	68.20	-11.71	0	100	V

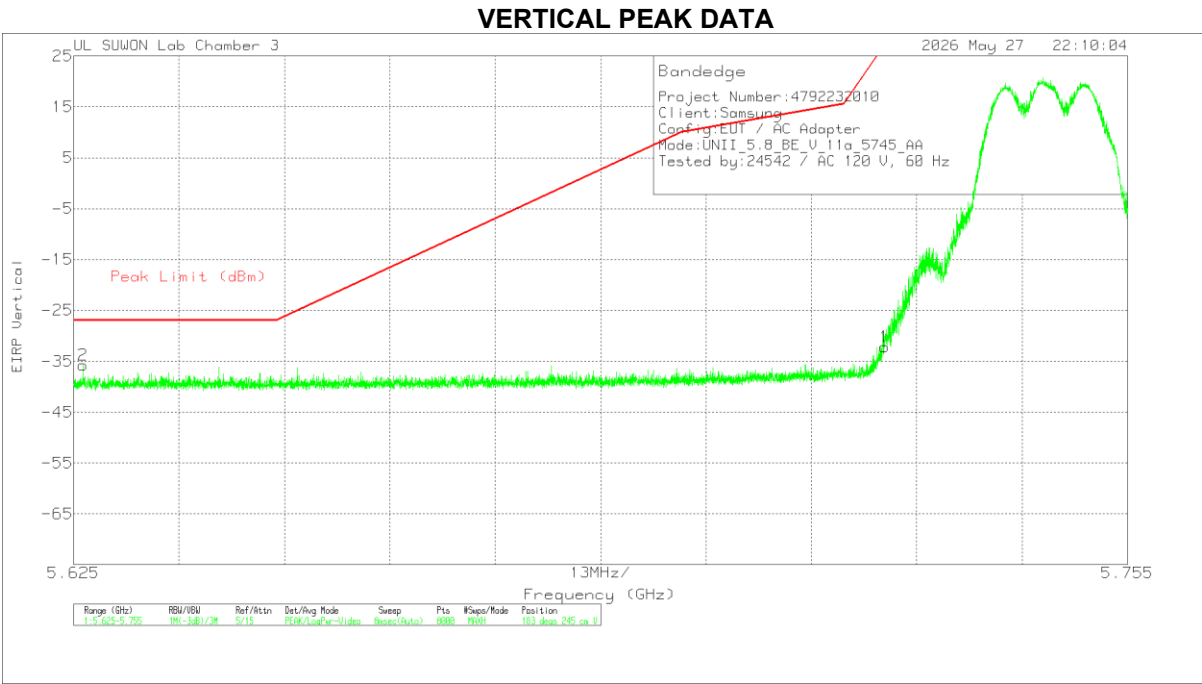
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Note3. Noise floor (802.11a, 5580 MHz minimum margin data)

11.4. TX ABOVE 1GHz 2Tx MODE IN THE 5.8 GHz BAND

BANDEDGE (WORST CASE: 802.11a / 5745 MHz)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	Antenna_Factor (dB/m)	10dB_Path Loss(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-59.31	Pk	34.9	-19.5	11.8	0	-32.11	27	-59.11	183	245	V
2	5.62615	-62.53	Pk	34.9	-19.9	11.8	0	-35.73	-27	-8.73	183	245	V

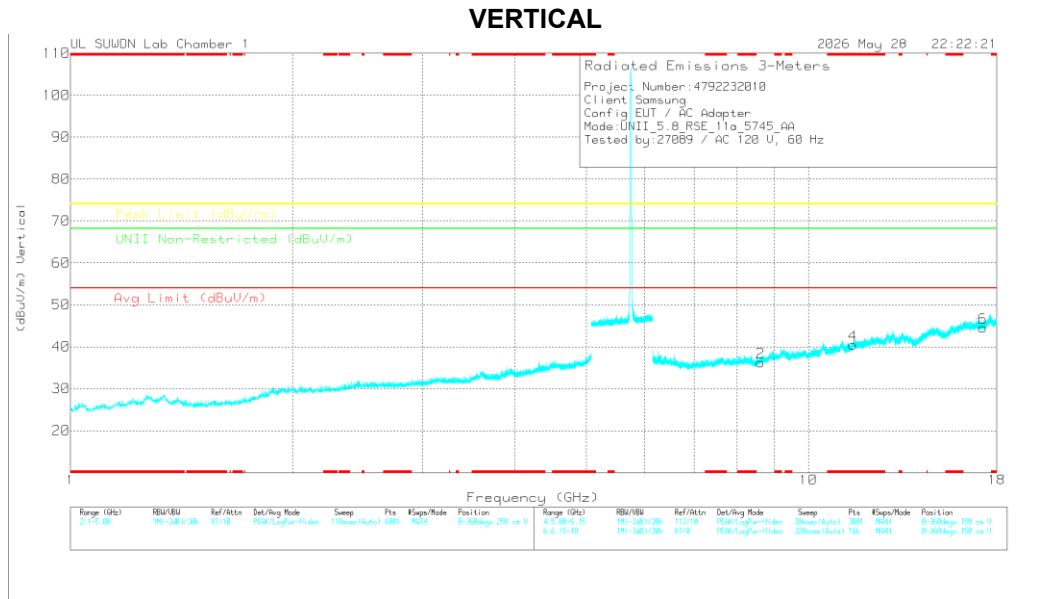
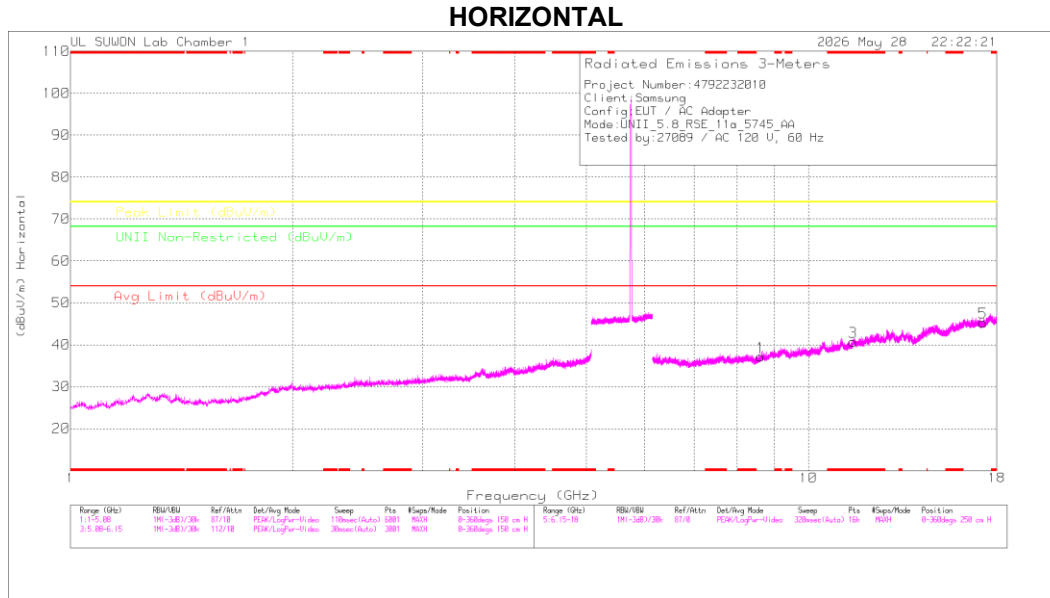
PK - Peak detector

BANDEDGE TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBm]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	Conv. F [dB]	DC Corr [dB]	Result [dBm]	PK Limit [dBm]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5745	MIMO	5.72500	-49.58	Pk	34.90	-19.50	11.80	0.00	-22.38	27.00	-49.38	109	101	H
			5.64744	-63.60	Pk	34.90	-19.80	11.80	0.00	-36.70	-27.00	-9.70	109	101	H
			5.72500	-59.31	Pk	34.90	-19.50	11.80	0.00	-32.11	27.00	-59.11	183	245	V
802.11n (HT20)	5745	MIMO	5.62615	-62.53	Pk	34.90	-19.90	11.80	0.00	-35.73	-27.00	-8.73	183	245	V
			5.72500	-54.16	Pk	34.90	-19.50	11.80	0.00	-26.96	27.00	-53.96	171	247	V
			5.62778	-63.40	Pk	34.90	-19.90	11.80	0.00	-36.60	-27.00	-9.60	171	247	V
802.11n (HT40)	5755	MIMO	5.72500	-61.14	Pk	34.90	-19.50	11.80	0.00	-33.94	27.00	-60.94	166	245	V
			5.62505	-63.55	Pk	34.90	-19.90	11.80	0.00	-36.75	-27.00	-9.75	166	245	V
802.11ac (VHT80)	5775 (Lower Side)	MIMO	5.72500	-61.68	Pk	34.90	-19.50	11.80	0.00	-34.48	27.00	-61.48	170	234	V
			5.64796	-63.83	Pk	34.90	-19.80	11.80	0.00	-36.93	-27.00	-9.93	170	234	V
802.11ac (VHT160)	5815 (Lower Side)	MIMO	5.72500	-63.26	Pk	34.90	-19.50	11.80	0.00	-36.06	27.00	-63.06	171	259	V
			5.64736	-62.95	Pk	34.90	-19.80	11.80	0.00	-36.05	-27.00	-9.05	171	259	V
802.11ax (HE20)	5745	MIMO	5.72500	-65.64	Pk	34.90	-19.50	11.80	0.00	-38.44	27.00	-65.44	171	258	V
			5.63701	-64.78	Pk	34.90	-19.80	11.80	0.00	-37.88	-27.00	-10.88	171	258	V
802.11ax (HE40)	5755	MIMO	5.72500	-65.59	Pk	34.90	-19.50	11.80	0.00	-38.39	27.00	-65.39	171	258	V
			5.63454	-64.71	Pk	34.90	-19.80	11.80	0.00	-37.81	-27.00	-10.81	171	258	V
802.11ax (HE80)	5775 (Lower Side)	MIMO	5.72500	-64.09	Pk	34.90	-19.50	11.80	0.00	-36.89	27.00	-63.89	171	258	V
			5.63330	-64.56	Pk	34.90	-19.80	11.80	0.00	-37.66	-27.00	-10.66	171	258	V
802.11ax (HE160)	5815 Lower	MIMO	5.72500	-67.43	Pk	34.90	-19.50	11.80	0.00	-40.23	27.00	-67.23	107	108	H
			5.64972	-64.68	Pk	34.90	-19.80	11.80	0.00	-37.78	-27.00	-10.78	107	108	H
			5.72500	-66.58	Pk	34.90	-19.50	11.80	0.00	-39.38	27.00	-66.38	171	258	V
			5.63608	-64.11	Pk	34.90	-19.80	11.80	0.00	-37.21	-27.00	-10.21	171	258	V
802.11ax (HE160) RU mode 484 Tone offset 65 L	5815 Lower	MIMO	5.72500	-61.13	Pk	34.90	-19.50	11.80	0.00	-33.93	27.00	-60.93	107	108	H
			5.63620	-65.26	Pk	34.90	-19.80	11.80	0.00	-38.36	-27.00	-11.36	107	108	H
			5.72500	-61.06	Pk	34.90	-19.50	11.80	0.00	-33.86	27.00	-60.86	178	235	V
			5.64202	-64.75	Pk	34.90	-19.80	11.80	0.00	-37.85	-27.00	-10.85	178	235	V

Note. Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5745 MHz)



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Factor (dBm)	GHz_HF_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Actual (dBi)	Height (cm)	Polarity
8.61215	39.77	PK-U	36.1	-28.1	0	47.77	-	-	-	-	68.2	-20.43	0	100	H
8.62911	39.61	PK-U	36.1	-28	0	47.71	-	-	-	-	68.2	-20.49	0	100	V
*11.48962	38.78	PK-U	38.3	-24.7	0	52.38	-	-	74	-21.62	-	-	261	117	H
*11.48937	26.08	ADR	38.3	-24.7	-23	39.91	54	-14.09	-	-	-	-	261	117	H
*11.49617	38.33	PK-U	38.3	-24.6	0	52.03	-	-	74	-21.97	-	-	280	101	V
*11.48557	25.69	ADR	38.3	-24.7	-23	39.52	54	-14.48	-	-	-	-	280	101	V
17.22582	36.56	PK-U	40.9	-21.4	0	56.06	-	-	-	-	68.2	-12.14	0	100	H
17.21527	36.61	PK-U	40.9	-21.4	0	56.11	-	-	-	-	68.2	-12.09	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5745	MIMO	8.612	39.77	PK-U	36.10	-28.10	0.00	47.77	-	-	-	-	68.20	-20.43	0	100	H
			8.629	39.61	PK-U	36.10	-28.00	0.00	47.71	-	-	-	-	68.20	-20.49	0	100	V
			*11.48962	38.78	PK-U	38.30	-24.70	0.00	52.38	-	-	74.00	-21.62	-	-	261	117	H
			*11.48937	26.08	ADR	38.30	-24.70	0.23	39.91	54.00	-14.09	-	-	-	-	261	117	H
			*11.49617	38.33	PK-U	38.30	-24.60	0.00	52.03	-	-	74.00	-21.97	-	-	280	101	V
			*11.48557	25.69	ADR	38.30	-24.70	0.23	39.52	54.00	-14.48	-	-	-	-	280	101	V
			17.226	36.56	PK-U	40.90	-21.40	0.00	56.06	-	-	-	-	68.20	-12.14	0	100	H
			17.215	36.61	PK-U	40.90	-21.40	0.00	56.11	-	-	-	-	68.20	-12.09	0	100	V
			8.678	39.48	PK-U	36.20	-27.90	0.00	47.78	-	-	-	-	68.20	-20.42	0	100	H
			8.677	39.27	PK-U	36.20	-28.00	0.00	47.47	-	-	-	-	68.20	-20.73	0	100	V
			*11.57221	37.69	PK-U	38.40	-24.90	0.00	51.19	-	-	74.00	-22.81	-	-	236	100	H
			*11.57008	25.47	ADR	38.40	-24.80	0.23	39.30	54.00	-14.70	-	-	-	-	236	100	H
	5785	MIMO	*11.572	37.76	PK-U	38.40	-24.90	0.00	51.26	-	-	74.00	-22.74	-	-	114	129	V
			*11.56994	25.32	ADR	38.40	-24.80	0.23	39.15	54.00	-14.85	-	-	-	-	114	129	V
			17.357	36.53	PK-U	40.90	-21.70	0.00	55.73	-	-	-	-	68.20	-12.47	0	100	H
			17.357	36.80	PK-U	40.90	-21.60	0.00	56.10	-	-	-	-	68.20	-12.10	0	100	V
			8.739	39.95	PK-U	36.20	-28.30	0.00	47.85	-	-	-	-	68.20	-20.35	0	100	H
			8.737	39.53	PK-U	36.20	-28.40	0.00	47.33	-	-	-	-	68.20	-20.87	0	100	V
			*11.64993	38.03	PK-U	38.40	-25.00	0.00	51.43	-	-	74.00	-22.57	-	-	236	101	H
			*11.64942	25.57	ADR	38.40	-25.00	0.23	39.20	54.00	-14.80	-	-	-	-	236	101	H
			*11.65141	37.59	PK-U	38.40	-25.10	0.00	50.89	-	-	74.00	-23.11	-	-	346	111	V
			*11.65056	25.34	ADR	38.40	-25.00	0.23	38.97	54.00	-15.03	-	-	-	-	346	111	V
			17.455	37.17	PK-U	40.90	-21.70	0.00	56.37	-	-	-	-	68.20	-11.83	0	100	H
			17.476	37.83	PK-U	40.90	-21.70	0.00	57.03	-	-	-	-	68.20	-11.17	0	100	V
802.11ax (HE20) RU mode 26 Tone offset 0 Spot-check	5745	MIMO	8.600	39.66	PK-U	36.10	-28.20	0.00	47.56	-	-	-	-	68.20	-20.64	0	100	H
			8.603	40.15	PK-U	36.10	-28.20	0.00	48.05	-	-	-	-	68.20	-20.15	0	100	V
			*11.47279	43.65	PK-U	38.30	-24.80	0.00	57.15	-	-	74.00	-16.85	-	-	267	106	H
			*11.47335	28.54	ADR	38.30	-24.80	0.12	42.16	54.00	-11.84	-	-	-	-	267	106	H
			*11.47243	43.08	PK-U	38.30	-24.80	0.00	56.58	-	-	74.00	-17.42	-	-	318	106	V
			*11.47322	27.66	ADR	38.30	-24.80	0.12	41.28	54.00	-12.72	-	-	-	-	318	106	V
			17.206	36.33	PK-U	40.90	-21.50	0.00	55.73	-	-	-	-	68.20	-12.47	0	100	H
			17.203	36.50	PK-U	40.90	-21.50	0.00	55.90	-	-	-	-	68.20	-12.30	0	100	V

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

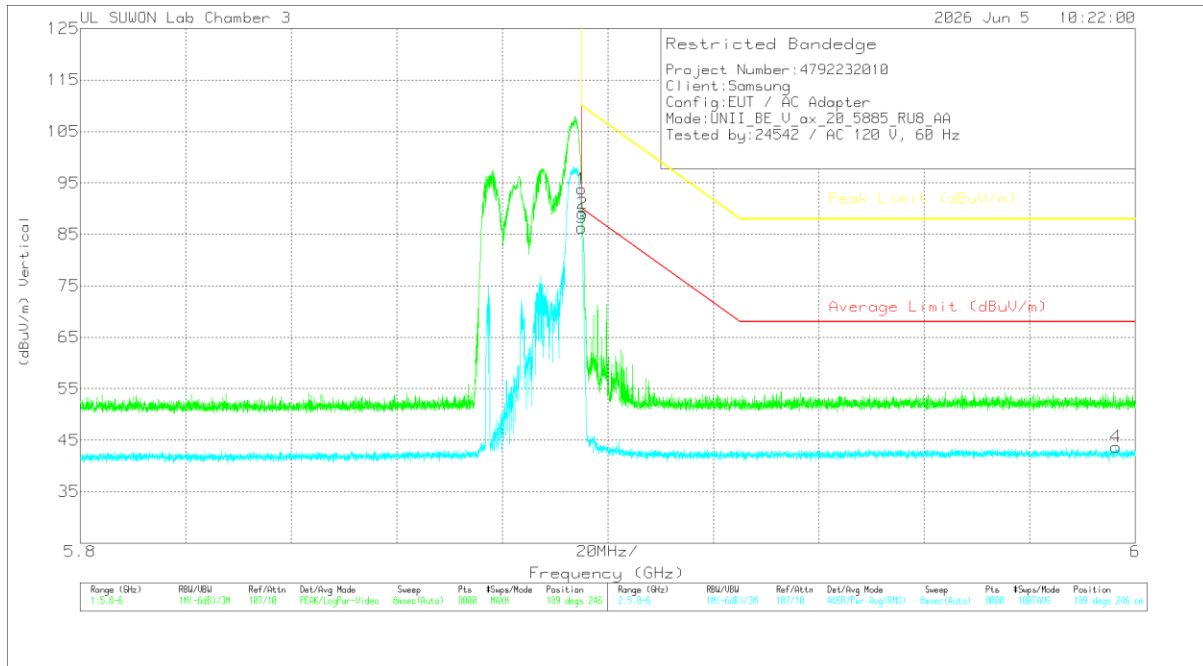
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Note3. Noise floor (802.11a, 5745 MHz minimum margin data)

11.5. TX ABOVE 1GHz 2Tx MODE IN THE 5.9 GHz BAND

BANDEDGE (WORST CASE: 802.11ax HE20 / 5885 MHz / 26T 8RU)

VERTICAL PEAK AND AVERAGE DATA



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	10dB_Path Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (feet)	Height (m)	Polarity
1	5.89501	77.88	Pk	35.4	-19.5	0	93.78	-	-	109.99	-16.21	189	246	V
2	5.89521	73.13	Pk	35.4	-19.5	0	89.03	-	-	109.84	-20.81	189	246	V
3	5.89501	70.29	RMS	35.4	-19.5	.12	86.31	89.99	-3.68	-	-	189	246	V
4	5.99635	27.19	RMS	35.7	-19.3	.12	43.71	68	-24.29	-	-	189	246	V

Pk - Peak detector
RMS - RMS detection

BANDEDGE TEST DATA

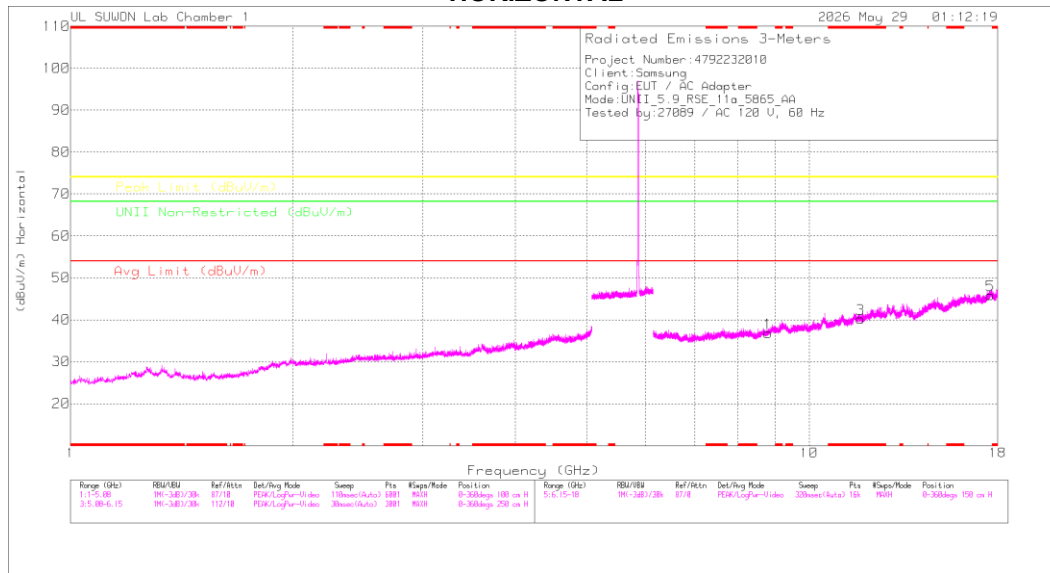
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dBm]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5885	MIMO	5.895	69.04	Pk	35.40	-19.50	0.00	84.94	-	-	109.99	-25.05	69	132	H
			5.900	66.14	Pk	35.40	-19.50	0.00	82.04	-	-	106.14	-24.10	69	132	H
			5.895	57.00	RMS	35.40	-19.50	0.23	73.13	89.99	-16.86	-	-	69	132	H
			5.895	57.20	RMS	35.40	-19.50	0.23	73.33	89.90	-16.57	-	-	69	132	H
			5.895	69.01	Pk	35.40	-19.50	0.00	84.91	-	-	109.99	-25.08	183	259	V
			5.899	68.67	Pk	35.40	-19.40	0.00	84.67	-	-	107.15	-22.48	183	259	V
			5.895	56.21	RMS	35.40	-19.50	0.23	72.34	89.99	-17.65	-	-	183	259	V
			5.899	55.02	RMS	35.40	-19.50	0.23	71.15	87.02	-15.87	-	-	183	259	V
802.11n (HT20)	5885	MIMO	5.895	66.36	Pk	35.40	-19.50	0.00	82.26	-	-	109.99	-27.73	192	257	V
			5.895	69.28	Pk	35.40	-19.50	0.00	85.18	-	-	109.94	-24.76	192	257	V
			5.895	52.22	RMS	35.40	-19.50	0.11	68.23	89.99	-21.76	-	-	192	257	V
			5.899	51.92	RMS	35.40	-19.40	0.11	68.03	87.35	-19.32	-	-	192	257	V
802.11n (HT40)	5875	MIMO	5.895	62.22	Pk	35.40	-19.50	0.00	78.12	-	-	109.99	-31.87	178	246	V
			5.908	57.12	Pk	35.40	-19.50	0.00	73.02	-	-	100.82	-27.80	178	246	V
			5.895	52.18	RMS	35.40	-19.50	0.21	68.29	89.99	-21.70	-	-	178	246	V
			5.908	44.97	RMS	35.40	-19.50	0.21	61.08	80.64	-19.56	-	-	178	246	V
802.11ac (VHT80)	5855	MIMO	5.895	58.85	Pk	35.40	-19.50	0.00	74.75	-	-	109.99	-35.24	184	247	V
			5.910	56.04	Pk	35.40	-19.40	0.00	72.04	-	-	99.34	-27.30	184	247	V
			5.895	49.79	RMS	35.40	-19.50	0.15	65.84	89.99	-24.15	-	-	184	247	V
			5.906	45.98	RMS	35.40	-19.40	0.15	62.13	81.87	-19.74	-	-	184	247	V
			5.895	55.81	Pk	35.40	-19.50	0.00	71.71	-	-	109.99	-38.28	181	247	V
802.11ac (VHT160)	5815 Upper	MIMO	5.910	53.91	Pk	35.40	-19.40	0.00	69.91	-	-	99.28	-29.37	181	247	V
			5.895	42.93	RMS	35.40	-19.50	0.15	58.98	89.99	-31.01	-	-	181	247	V
			5.928	30.24	RMS	35.50	-19.50	0.15	46.39	68.00	-21.61	-	-	181	247	V
			5.895	71.61	Pk	35.40	-19.50	0.00	87.51	-	-	109.99	-22.48	107	149	H
802.11ax (HE20)	5885	MIMO	5.895	63.73	Pk	35.40	-19.50	0.00	79.63	-	-	109.75	-30.12	107	149	H
			5.895	63.90	RMS	35.40	-19.50	0.21	80.01	89.99	-9.98	-	-	107	149	H
			5.976	26.73	RMS	35.70	-19.30	0.21	43.34	68.00	-24.66	-	-	107	149	H
			5.895	73.72	Pk	35.40	-19.50	0.00	89.62	-	-	109.99	-20.37	184	246	V
			5.895	72.75	Pk	35.40	-19.50	0.00	88.65	-	-	109.94	-21.29	184	246	V
			5.895	64.02	RMS	35.40	-19.50	0.21	80.13	89.99	-9.86	-	-	184	246	V
			5.979	26.78	RMS	35.70	-19.30	0.21	43.39	68.00	-24.61	-	-	184	246	V
			5.895	78.17	Pk	35.40	-19.50	0.00	94.07	-	-	109.99	-15.92	109	151	H
			5.895	73.74	Pk	35.40	-19.50	0.00	89.64	-	-	109.86	-20.22	109	151	H
			5.895	69.88	RMS	35.40	-19.50	0.12	85.90	89.99	-4.09	-	-	109	151	H
802.11ax (HE20) RU mode 26 Tone offset 8	5885	MIMO	5.969	27.13	RMS	35.60	-19.30	0.12	43.55	68.00	-24.45	-	-	109	151	H
			5.895	77.88	Pk	35.40	-19.50	0.00	93.78	-	-	109.99	-16.21	189	246	V
			5.895	73.13	Pk	35.40	-19.50	0.00	89.03	-	-	109.84	-20.81	189	246	V
			5.895	70.29	RMS	35.40	-19.50	0.12	86.31	89.99	-3.68	-	-	189	246	V
			5.996	27.19	RMS	35.70	-19.30	0.12	43.71	68.00	-24.29	-	-	189	246	V
			5.895	59.47	Pk	35.40	-19.50	0.00	75.37	-	-	109.99	-34.62	184	246	V
			5.909	54.28	Pk	35.40	-19.40	0.00	70.28	-	-	100.05	-29.77	184	246	V
			5.895	47.95	RMS	35.40	-19.50	0.39	64.24	89.99	-25.75	-	-	184	246	V
			5.978	26.78	RMS	35.70	-19.30	0.39	43.57	68.00	-24.43	-	-	184	246	V
			5.895	57.26	Pk	35.40	-19.50	0.00	73.16	-	-	109.99	-36.83	184	246	V
802.11ax (HE80)	5855	MIMO	5.903	58.84	Pk	35.40	-19.40	0.00	74.84	-	-	103.78	-28.94	184	246	V
			5.895	45.25	RMS	35.40	-19.50	0.15	61.30	89.99	-28.69	-	-	184	246	V
			5.961	27.13	RMS	35.60	-19.40	0.15	43.48	68.00	-24.52	-	-	184	246	V
			5.895	52.80	Pk	35.40	-19.50	0.00	68.70	-	-	109.99	-41.29	184	246	V
802.11ax (HE160)	5815 Upper	MIMO	5.977	38.32	Pk	35.70	-19.30	0.00	54.72	-	-	88.00	-33.28	184	246	V
			5.895	40.63	RMS	35.40	-19.50	0.15	56.68	89.99	-33.31	-	-	184	246	V
			5.961	27.22	RMS	35.60	-19.40	0.15	43.57	68.00	-24.43	-	-	184	246	V

Note1. PK: Maximum Peak / ADR - U-NII AD primary method, RMS average

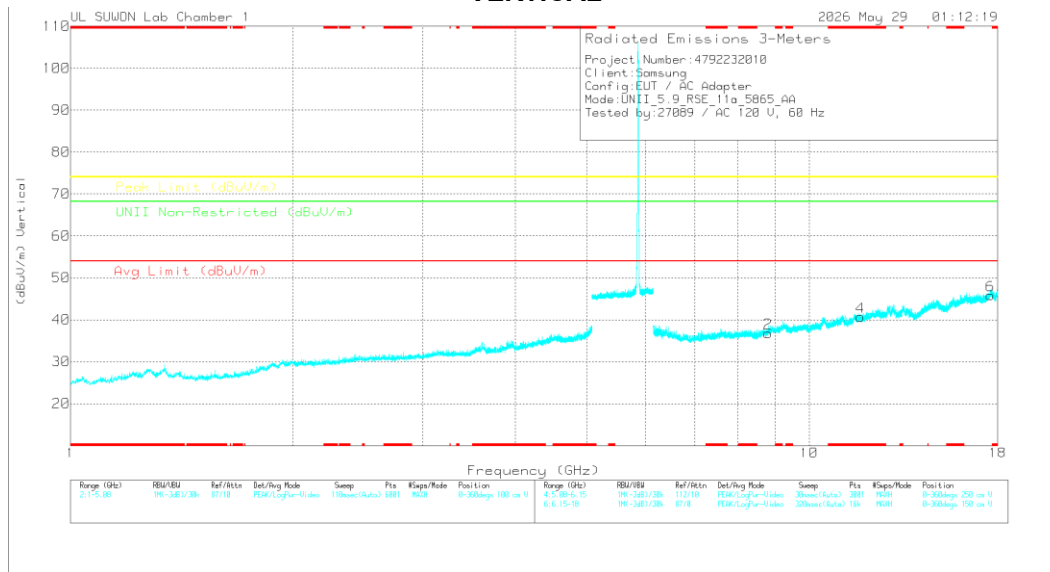
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5865 MHz)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Factor (dBm)	GHz_HF_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Actual (dBi)	Height (cm)	Polarity
8.78705	40.21	PK-U	36.3	-28.6	0	47.91	-	-	-	-	68.2	-20.29	0	100	H
8.79403	39.85	PK-U	36.3	-28.6	0	47.55	-	-	-	-	68.2	-20.65	0	100	V
*11.72885	38.51	PK-U	38.5	-24.7	0	52.31	-	-	74	-21.69	-	-	257	119	H
*11.72935	25.92	ADR	38.5	-24.7	-23	39.95	54	-14.05	-	-	-	-	257	119	H
*11.7359	38.08	PK-U	38.5	-24.6	0	51.98	-	-	74	-22.02	-	-	347	107	V
*11.73465	25.73	ADR	38.5	-24.6	-23	39.86	54	-14.14	-	-	-	-	347	107	V
17.58772	37.22	PK-U	41.1	-21.4	0	56.92	-	-	-	-	68.2	-11.28	0	100	H
17.58852	37.37	PK-U	41.1	-21.4	0	57.07	-	-	-	-	68.2	-11.13	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result dBuV/m	AV Limit dBuV/m	AV Margin [dB]	PK Limit dBuV/m	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5845	MIMO	8.786	40.29	PK-U	36.30	-28.70	0.00	47.89	-	-	-	-	68.20	-20.31	0	100	H
			8.777	39.68	PK-U	36.30	-28.70	0.00	47.28	-	-	-	-	68.20	-20.92	0	100	V
			* 11.6806	38.03	PK-U	38.50	-24.90	0.00	51.63	-	-	74.00	-22.37	-	-	237	111	H
			* 11.68975	26.11	ADR	38.50	-24.90	0.23	39.94	54.00	-14.06	-	-	-	-	237	111	H
			* 11.71255	37.88	PK-U	38.50	-24.70	0.00	51.68	-	-	74.00	-22.32	-	-	344	106	V
			* 11.6901	25.82	ADR	38.50	-24.90	0.23	39.65	54.00	-14.35	-	-	-	-	344	106	V
			17.533	37.37	PK-U	41.00	-21.70	0.00	56.67	-	-	-	-	68.20	-11.53	0	100	H
			17.543	37.50	PK-U	41.00	-21.60	0.00	56.90	-	-	-	-	68.20	-11.30	0	100	V
			8.787	40.21	PK-U	36.30	-28.60	0.00	47.91	-	-	-	-	68.20	-20.29	0	100	H
			8.794	39.85	PK-U	36.30	-28.60	0.00	47.55	-	-	-	-	68.20	-20.65	0	100	V
			* 11.72885	38.51	PK-U	38.50	-24.70	0.00	52.31	-	-	74.00	-21.69	-	-	257	119	H
			* 11.72935	25.92	ADR	38.50	-24.70	0.23	39.95	54.00	-14.05	-	-	-	-	257	119	H
	5865	MIMO	* 11.7359	38.08	PK-U	38.50	-24.60	0.00	51.88	-	-	74.00	-22.02	-	-	347	107	V
			* 11.73465	25.73	ADR	38.50	-24.60	0.23	39.86	54.00	-14.14	-	-	-	-	347	107	V
			17.588	37.22	PK-U	41.10	-21.40	0.00	56.92	-	-	-	-	68.20	-11.28	0	100	H
			17.589	37.37	PK-U	41.10	-21.40	0.00	57.07	-	-	-	-	68.20	-11.13	0	100	V
			8.821	39.54	PK-U	36.30	-28.40	0.00	47.44	-	-	-	-	68.20	-20.76	0	100	H
			8.836	40.03	PK-U	36.30	-28.50	0.00	47.83	-	-	-	-	68.20	-20.37	0	100	V
			* 11.75035	37.89	PK-U	38.50	-24.60	0.00	51.79	-	-	74.00	-22.21	-	-	0	100	H
			* 11.77062	37.75	PK-U	38.60	-24.60	0.00	51.75	-	-	74.00	-22.25	-	-	0	100	V
			17.632	37.94	PK-U	41.10	-21.10	0.00	57.94	-	-	-	-	68.20	-10.26	0	100	H
			17.646	37.30	PK-U	41.20	-21.10	0.00	57.40	-	-	-	-	68.20	-10.80	0	100	V
802.11ax (HE20) RU mode 26 Tone offset 0 Spot-check	5865	MIMO	8.784	40.56	PK-U	36.30	-28.60	0.00	48.26	-	-	-	-	68.20	-19.94	0	100	H
			8.783	40.71	PK-U	36.30	-28.60	0.00	48.41	-	-	-	-	68.20	-19.79	0	100	V
			* 11.71361	43.57	PK-U	38.50	-24.70	0.00	57.37	-	-	74.00	-16.63	-	-	237	109	H
			* 11.71333	27.73	ADR	38.50	-24.70	0.12	41.65	54.00	-12.35	-	-	-	-	237	109	H
			* 11.7134	40.97	PK-U	38.50	-24.70	0.00	54.77	-	-	74.00	-19.23	-	-	335	103	V
			* 11.71318	26.73	ADR	38.50	-24.70	0.12	40.65	54.00	-13.35	-	-	-	-	335	103	V
			17.565	37.39	PK-U	41.00	-21.40	0.00	56.99	-	-	-	-	68.20	-11.21	0	100	H
			17.565	37.02	PK-U	41.00	-21.40	0.00	56.62	-	-	-	-	68.20	-11.58	0	100	V

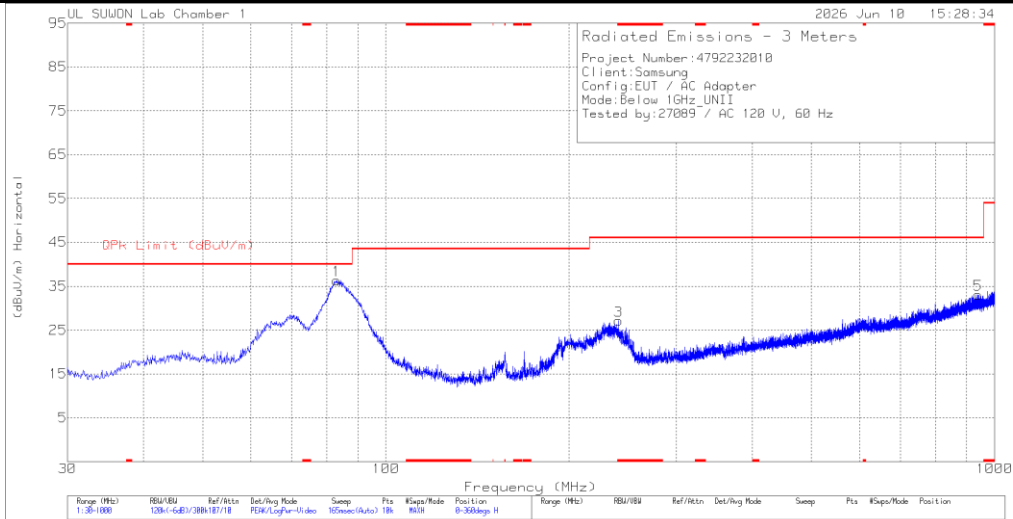
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

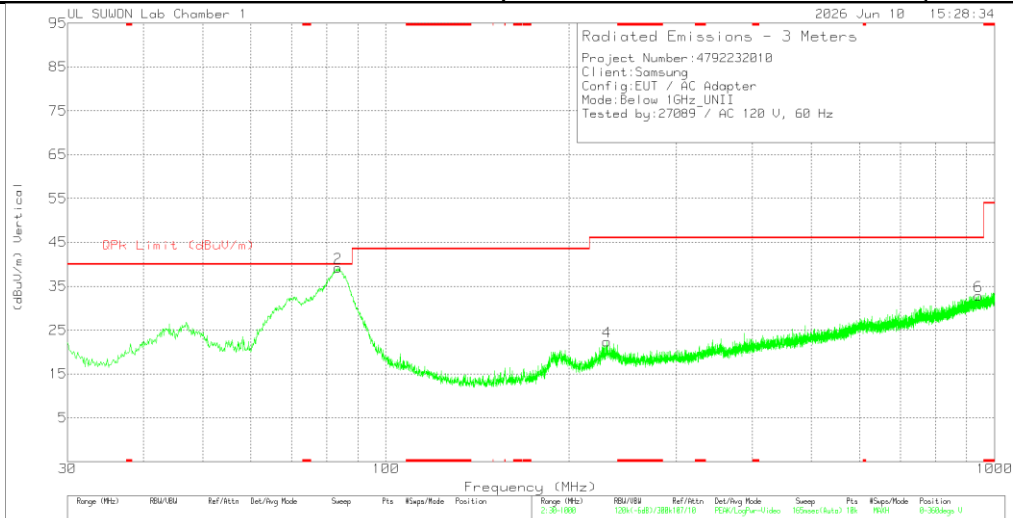
Note3. Noise floor (802.11a, 5885 MHz minimum margin data)

12. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	Below_1G_Path Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	82.962	53.63	Pk	13.2	-30.5	36.33	40	-3.67	0-360	100	H
3	* 241.072	38	Pk	18.1	-29	27.1	46.02	-18.92	0-360	100	H
5	938.793	30.31	Pk	28	-25.2	33.11	46.02	-12.91	0-360	300	H
2	83.447	56.4	Pk	13.3	-30.5	39.2	40	-8	0-360	100	V
4	230.596	33.77	Pk	17.6	-29	22.37	46.02	-23.65	0-360	100	V
6	941.994	29.94	Pk	28	-25.1	32.84	46.02	-13.18	0-360	300	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna_Factor (dB/m)	Below_1G_Path Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
82.962	51.59	Qp	13.2	-30.5	34.29	40	-5.71	162	220	H
83.447	54.09	Qp	13.3	-30.5	36.89	40	-3.11	168	144	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Qp - Quasi-Peak detector

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
IC RSS-GEN Clause 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	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.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

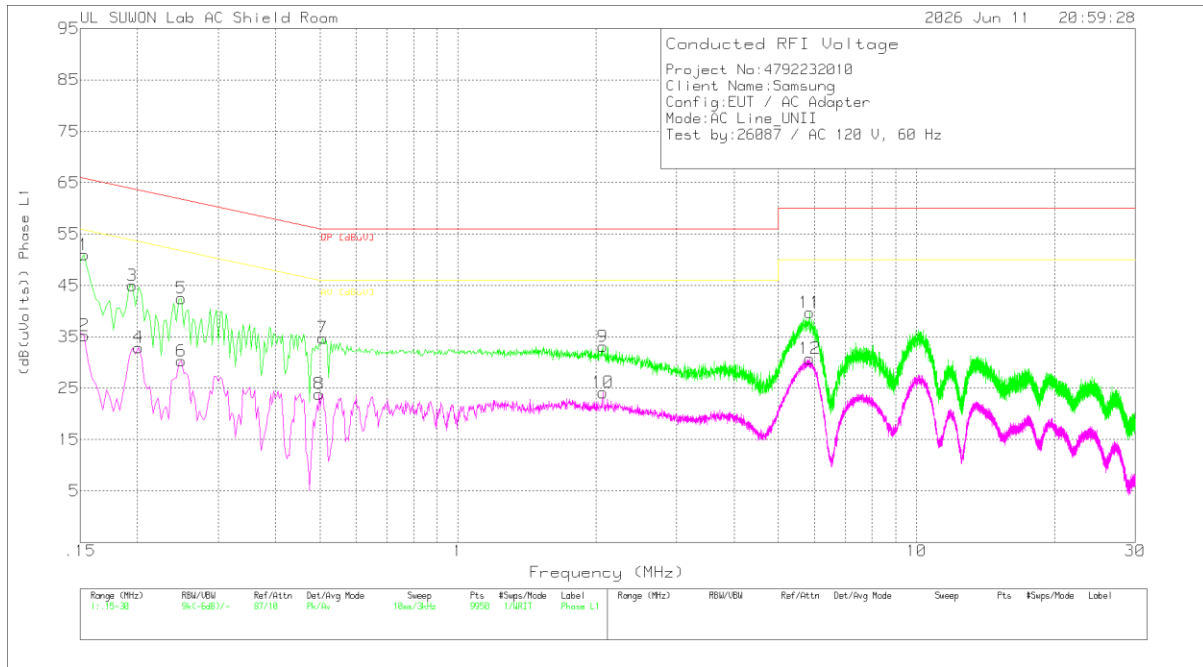
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

WORST EMISSIONS

LINE 1 DATA



Trace Markers

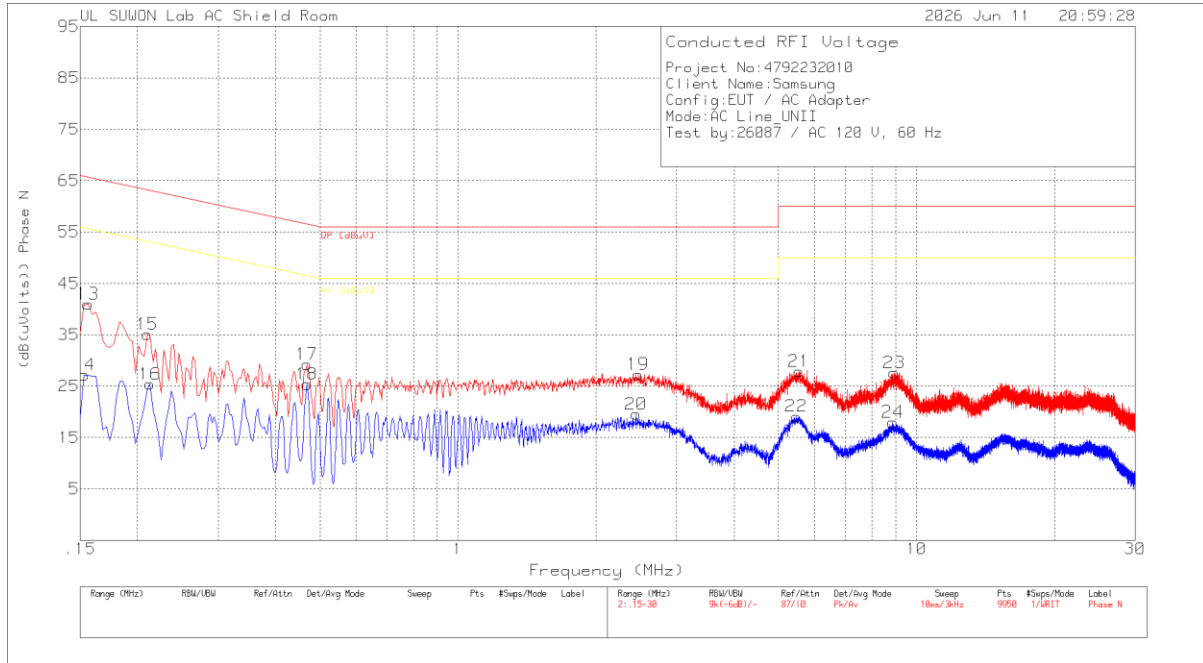
Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_L1 [dB]	Cable Loss [dB]	Corrected Reading (dB(uVolts))	QP [dBuV]	Margin (dB)	AV [dBuV]	Margin (dB)
1	.153	41.05	Pk	9.8	.1	50.95	65.84	-14.89	-	-
2	.153	25.34	Av	9.8	.1	35.24	-	-	55.84	-20.6
3	.195	34.96	Pk	9.9	.1	44.96	63.82	-18.86	-	-
4	.201	22.92	Av	9.9	.1	32.92	-	-	53.57	-20.65
5	.249	32.78	Pk	9.6	.1	42.48	61.79	-19.31	-	-
6	.249	20.61	Av	9.6	.1	30.31	-	-	51.79	-21.48
7	.507	24.77	Pk	9.9	.1	34.77	56	-21.23	-	-
8	.498	13.88	Av	9.9	.1	23.88	-	-	46.03	-22.15
9	2.07	23.32	Pk	9.7	.1	33.12	56	-22.88	-	-
10	2.07	14.36	Av	9.7	.1	24.16	-	-	46	-21.84
11	5.847	29.72	Pk	9.8	.2	39.72	60	-20.28	-	-
12	5.853	20.75	Av	9.8	.2	30.75	-	-	50	-19.25

Pk - Peak detector

Av - Average detection

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_N [dB]	Cable Loss [dB]	Corrected Reading (dB(uVolts))	QP [dBuV]	Margin (dB)	AV [dBuV]	Margin (dB)
13	.156	31.07	Pk	9.8	.1	40.97	65.67	-24.7	-	-
14	.153	17.3	Av	9.8	.1	27.2	-	-	55.84	-28.64
15	.21	25.19	Pk	9.8	.1	35.09	63.21	-28.12	-	-
16	.213	15.49	Av	9.8	.1	25.39	-	-	53.09	-27.7
17	.468	19.24	Pk	9.9	.1	29.24	56.55	-27.31	-	-
18	.468	15.38	Av	9.9	.1	25.38	-	-	46.55	-21.17
19	2.472	17.47	Pk	9.7	.1	27.27	56	-28.73	-	-
20	2.445	9.73	Av	9.7	.1	19.53	-	-	46	-26.47
21	5.541	17.87	Pk	9.8	.2	27.87	60	-32.13	-	-
22	5.469	9.12	Av	9.8	.2	19.12	-	-	50	-30.88
23	8.943	17.5	Pk	9.9	.2	27.6	60	-32.4	-	-
24	8.883	7.87	Av	9.9	.2	17.97	-	-	50	-32.03

Pk - Peak detector

Av - Average detection

14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. LIMITS

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. $\geq$ 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt that do not meet power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. (See Note 3)
Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

Table 6 – Long Pulse Radar Test Signal

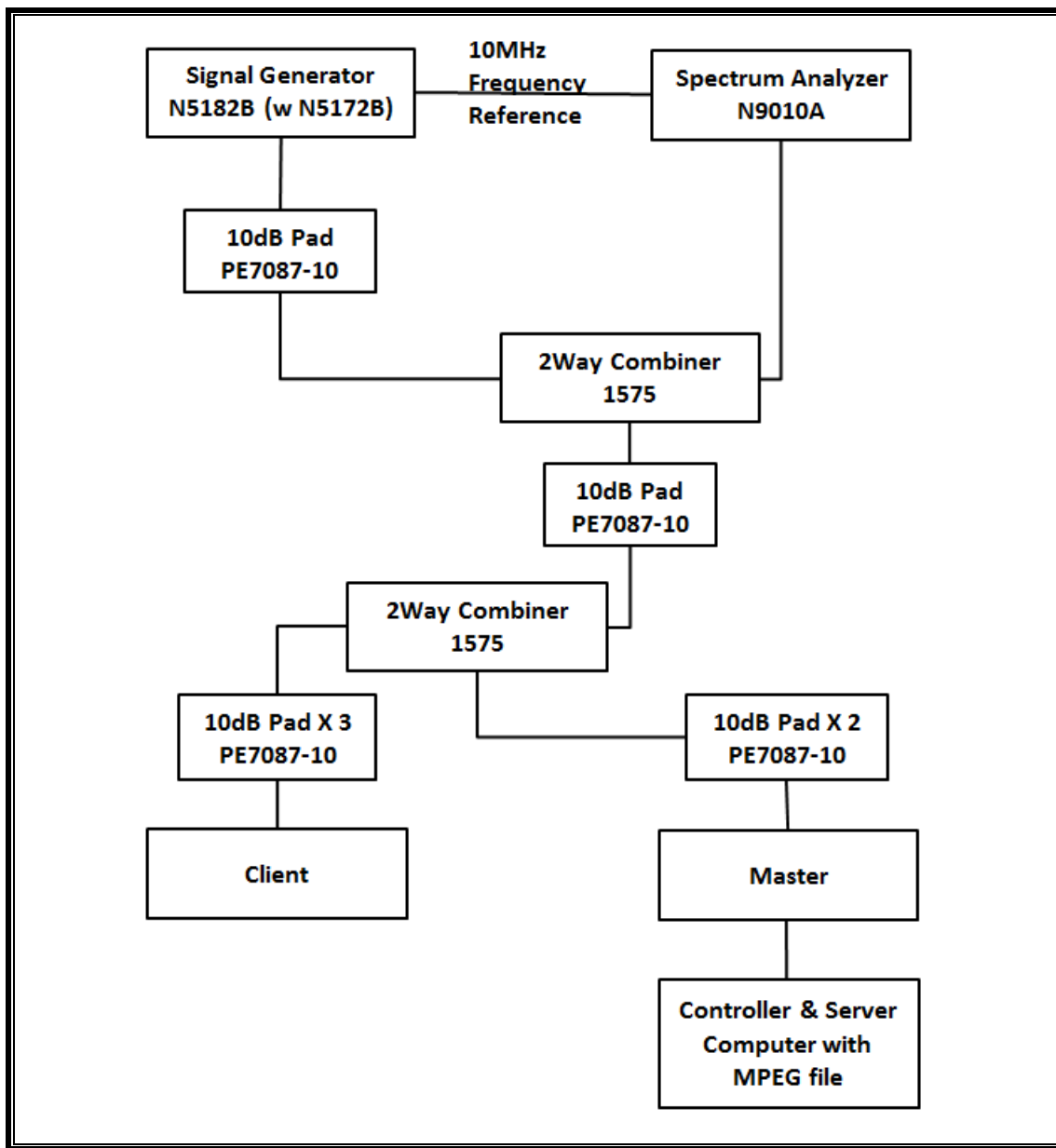
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

14.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the Keysite Signal Studio for Pulse Building as N5172B. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

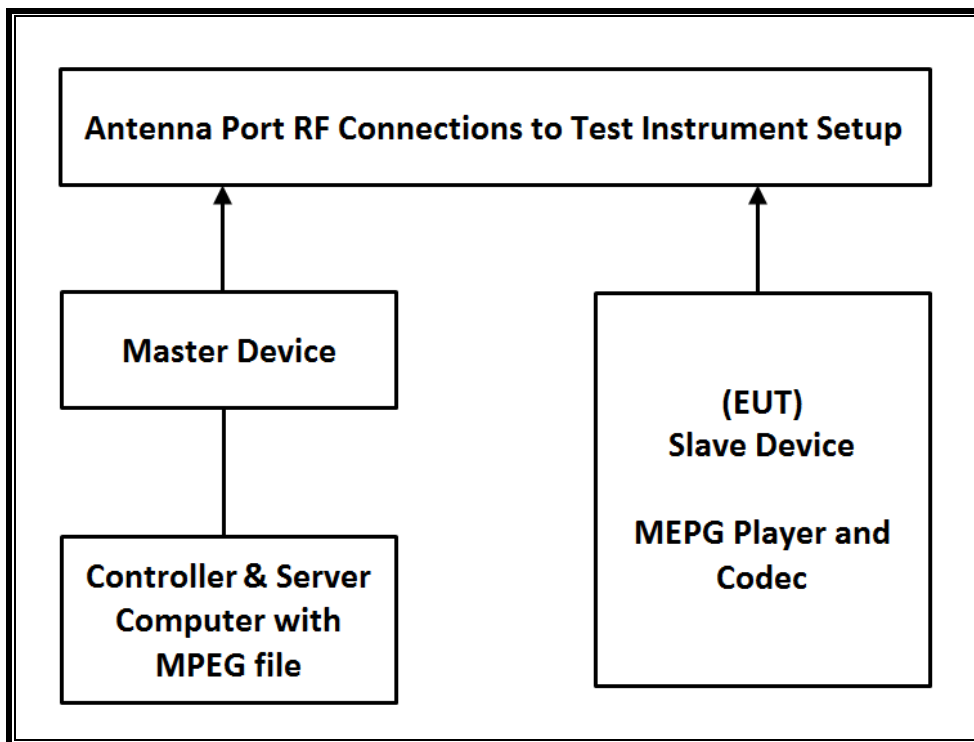
TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the DFS tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	S/N	Next Cal Due
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2027-01-07
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	2026-07-21
Combiner	WEINSCHTEL	WA1534	UL001	2027-01-06
Combiner	WEINSCHTEL	WA1534	UL003	2026-12-29

14.1.3. SETUP OF EUT

CONDUCTED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Wireless Access Point	ASUS	GT-AXE11000	M3IAJF200742	MSQ-RTAXJF00
Notebook PC (Controller/Server)	HP	HP EliteDesk 800 G1 TWR	CZC4125J25	DoC

14.1.4. DESCRIPTION OF EUT

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without Radar Detection.

The highest power level of the widest bandwidth (802.11ac VHT160) within these bands is 17.28 dBm in the 5250-5350 MHz band and 5470-5725 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -8.90 dBi for UNII 2A and -7.50 dBi for UNII 2C.

Gain of ANT2 : -6.10 dBi for UNII 2A and -5.60 dBi for UNII 2C.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required conducted threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chain connected to an antenna to perform radiated tests. WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11 architecture. 4 nominal channel bandwidth are implemented: 20 MHz, 40 MHz, 80 MHz and 160 MHz.

The software installed in the access point is 12.4(25d)JA1.

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

CHANNEL PUNCTURING(802.11ax)

This EUT supports channel puncturing but in DFS test channel puncturing was not enabled.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a ASUS Access Point, FCC ID: MSQ-RTAXJF00. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

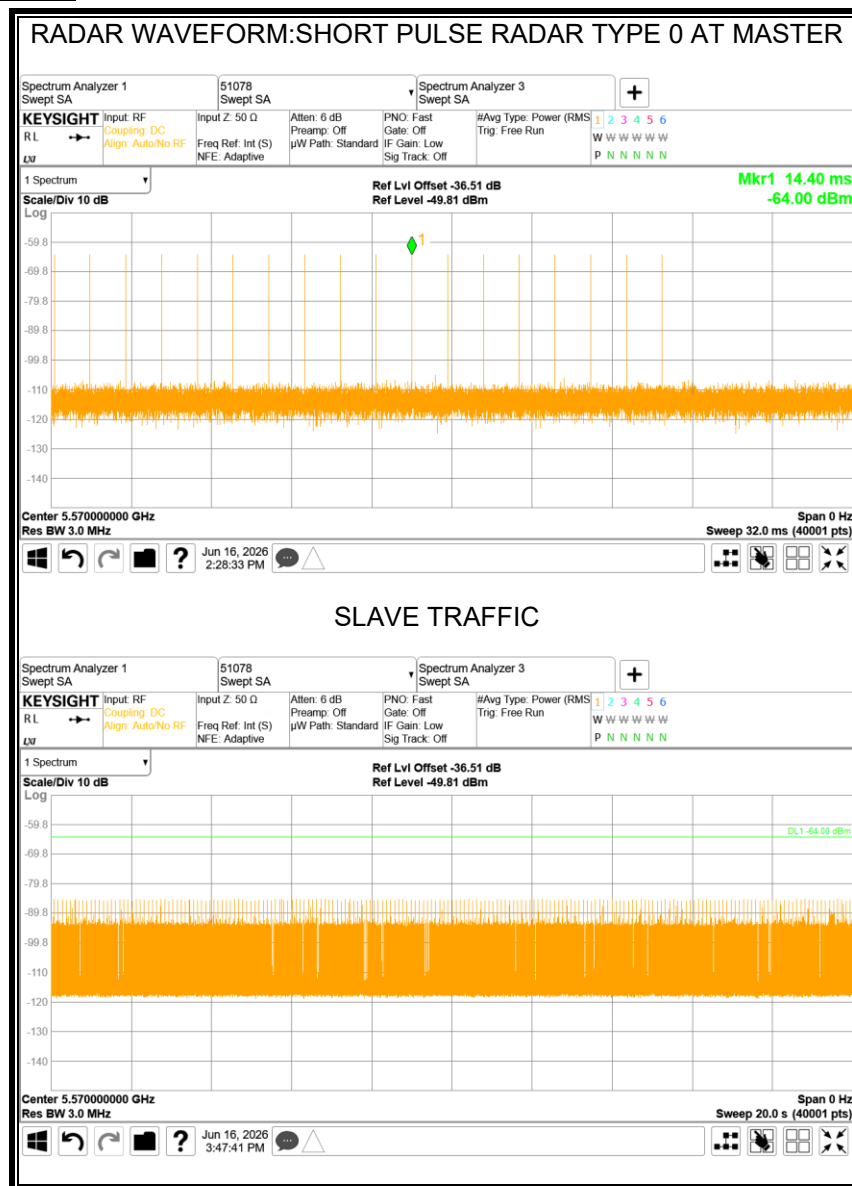
14.2. RESULTS FOR 160 MHz BANDWIDTH (UNII-2A & 2C BANDS)

14.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5570 MHz.

14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



14.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

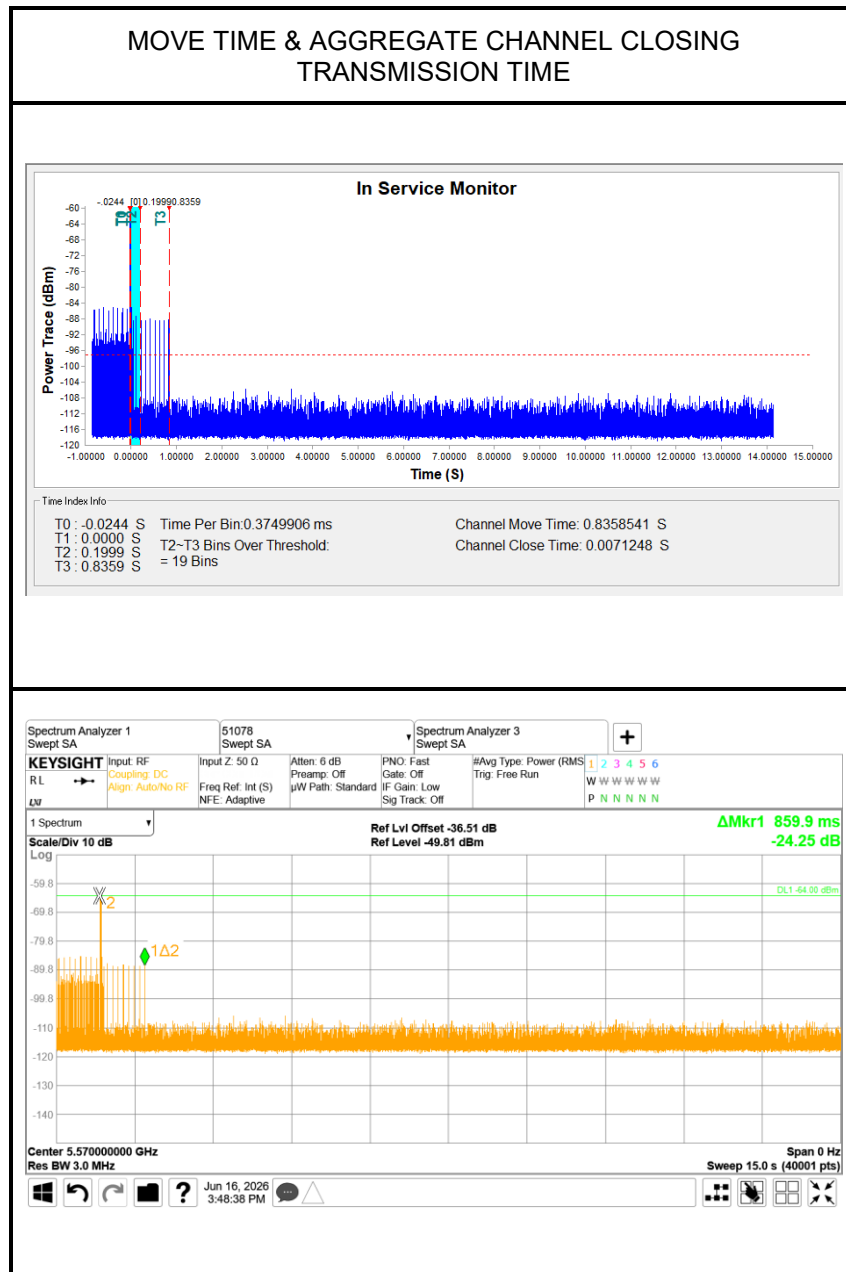
Channel Move Time (sec)	Limit (sec)
0.836	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
7.125	60

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

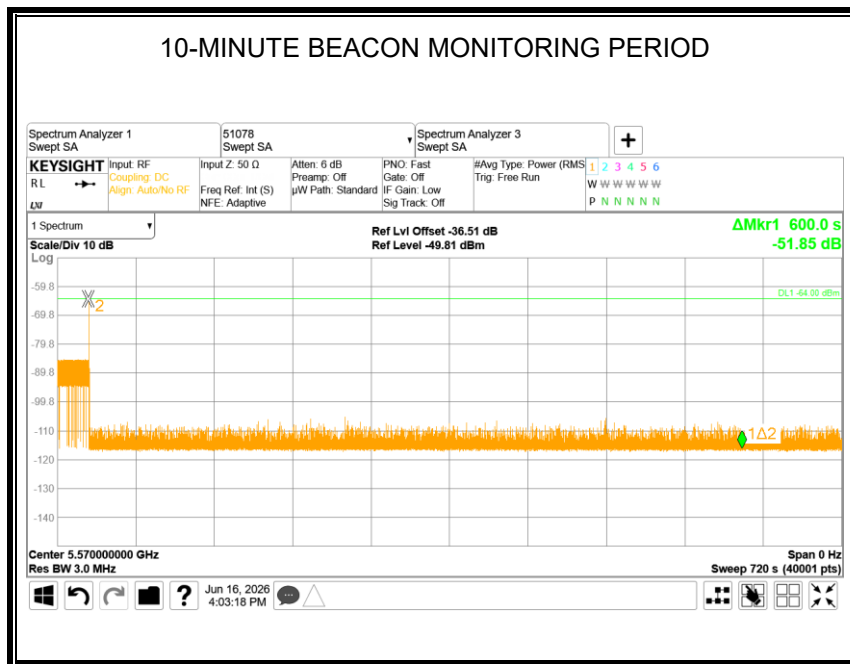
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.



END OF TEST REPORT