

CERTIFICATION TEST REPORT

Report Number. : S-4791706309-E8V2

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

Model : SM-L325U, SM-L325F

FCC ID : A3LSML325

EUT Description : WCDMA/LTE Smart Wearable + BT/BLE, DTS/UNII a/b/g/n

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

Date Of Issue:

2025-05-05

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2025-04-28	Initial issue	Jaejin Lee
V2	2025-05-05	Updated to address TCB's question	Jaejin Lee

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: WCDMA/LTE Smart Wearable + BT/BLE, DTS/UNII a/b/g/n

MODEL NUMBER: SM-L325U, SM-L325F

SERIAL NUMBER: R3AY100906N (CONDUCTED);
R3AY3003C9X, R3AY30039KX (RADIATED)

DATE TESTED: 2025-03-18 - 2025-04-28

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.

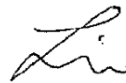
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL KOREA LTD. and all revisions are duly noted in the revisions section. Any alteration 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:



Jaejin 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 291074 D02 v01
7. ANSI C63.10-2020.

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:

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

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

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	0.69 dB
Power Spectral Density	1.40 dB
Time(Duty cycle and DFS)	0.60 %
Occupied Bandwidth	0.04 %
Conducted Disturbance, 0.15 to 30 MHz	1.84 dB
Radiated Disturbance, 9 kHz to 30 MHz	2.41 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.69 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.18 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 a WCDMA/LTE Smart Wearable + BT/BLE, DTS/UNII a/b/g/n.
This test report addresses the NII (WLAN) operational mode.

Representative model	Difference	Derivative model
		SM-L325F
SM-L325U	Hardware	Same
	Software	The UI has changed according to Service Provider

The model SM-L325U was used for final testing and is representative of the test results in this report.

WiFi operating mode

Frequency rage	Mode	ANT1
5GHz (5150 MHz ~ 5925 MHz)	802.11a SISO	TX/RX
	802.11n HT20 SISO	TX/RX

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 SISO	15.68	36.98
		802.11n(HT20) SISO	15.53	35.73
UNII-2A	5260 - 5320	802.11a SISO	15.56	35.97
		802.11n(HT20) SISO	15.57	36.06
UNII-2C	5500 - 5720	802.11a SISO	15.66	36.81
		802.11n(HT20) SISO	15.56	35.97
UNII-3	5745 - 5825	802.11a SISO	15.59	36.22
		802.11n(HT20) SISO	15.51	35.56
UNII-4	5845 - 5885	802.11a SISO	6.47	4.44
		802.11n(HT20) SISO	6.35	4.32

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]
UNII 1	5150 - 5250	-8.3
UNII 2A	5250 - 5350	-8.4
UNII 2C	5470 - 5725	-8.1
UNII 3	5725 - 5850	-9.1
UNII 4	5850 - 5925	-9.1

5.3. WORST-CASE CONFIGURATION AND MODE

The fundamentals of the EUT were investigated in three orthogonal orientations X, Y and Z on 1TX SISO mode. It was determined that Z orientation was the worst-case for 1TX SISO mode.

Worst case of antenna axis: Z

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

For Radiated spurious test, 802.11a 1TX mode has equal or higher output power and PSD results than other modes and therefore, it was set for full test. Spot-check was performed in 802.11n 1TX.

For Radiated band-edge test, 802.11a 1TX, 802.11n 1TX.

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

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

802.11a mode: 6 Mbps 1TX

802.11n HT20 mode: MCS0 1TX

5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA800	R37XBMJF8FBDKA	N/A
Wireless Charger	SAMSUNG	EP-OL300	-	-

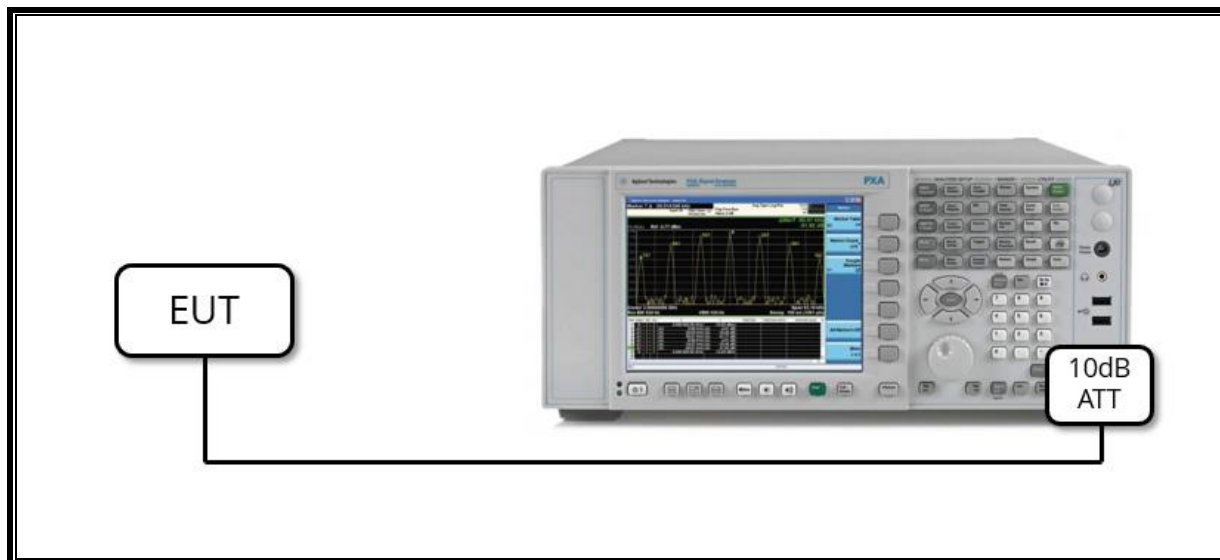
I/O CABLE

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	0.8 m	N/A

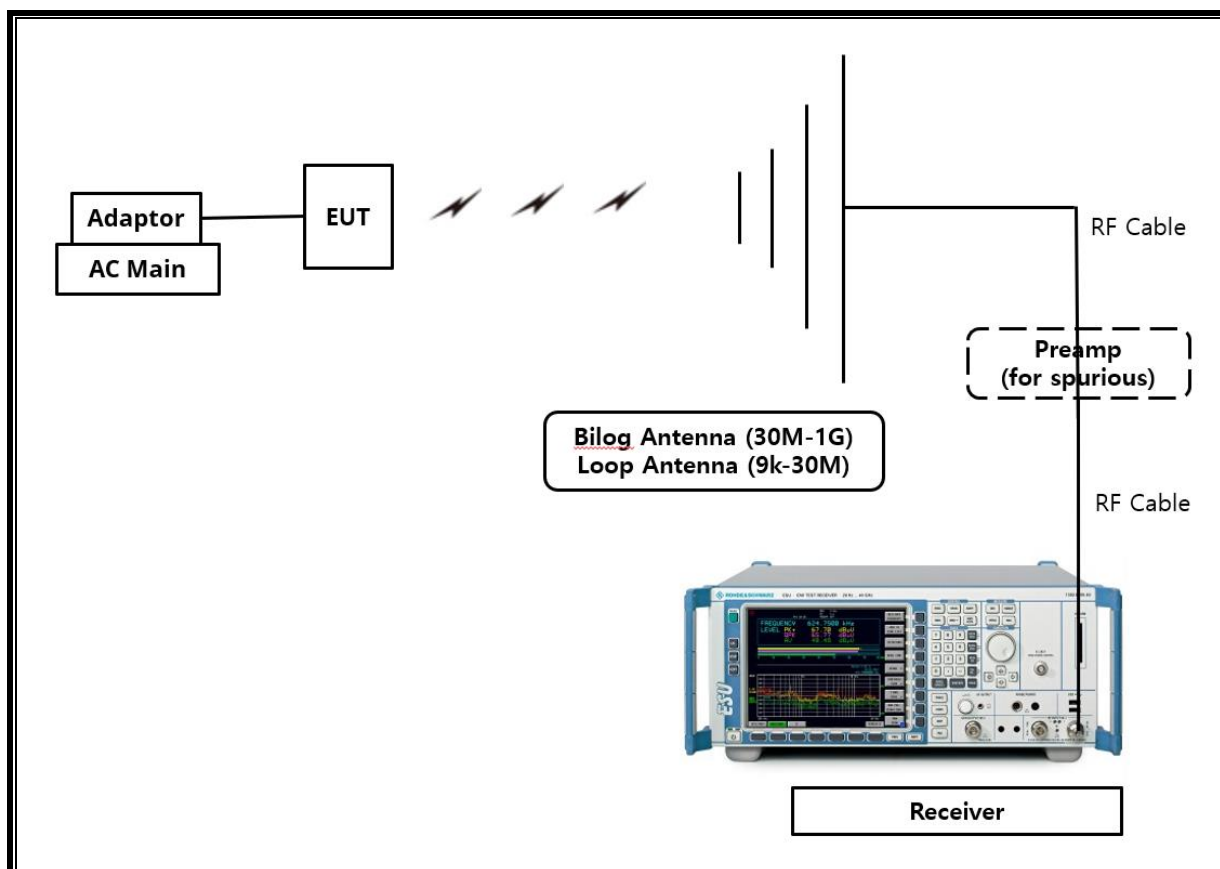
TEST SETUP

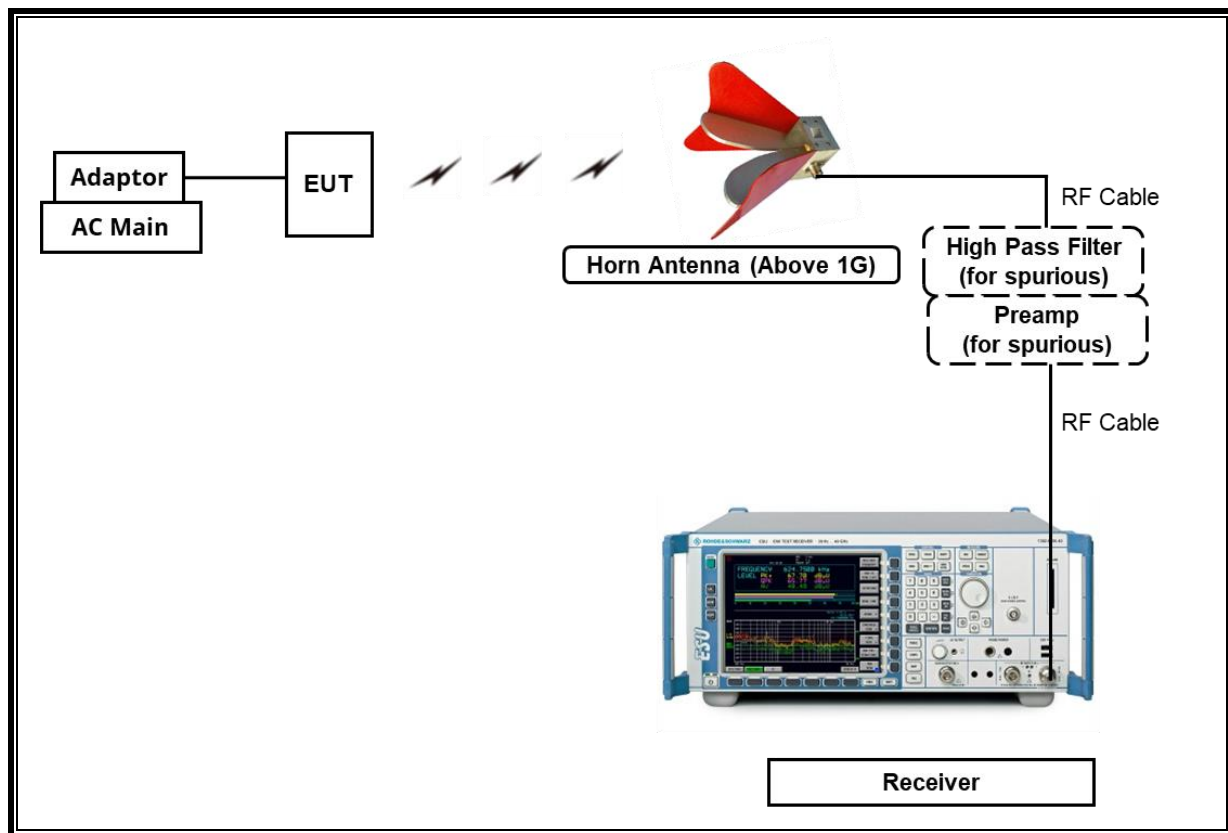
The EUT is a stand-alone unit during the tests.
Test software exercised the EUT to enable NII mode.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)





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	N/A
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2026-07-23
Preamplifier	ETS	3116C-PA	00168841	2025-07-25
Preamplifier, 1000 MHz	Sonoma	310N	341282	2025-07-22
Preamplifier, 18 GHz	B&Z Technologies, LLC	BZR-01001800-231040-181515	23576	2025-07-25
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2025-07-23
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2025-07-24
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2026-01-02
Power Supply	Agilent	E3640A	MY54286199	2025-07-24
Average Power Sensor	Agilent / HP	U2000A	MY54270007	2025-07-23
Average Power Sensor	Agilent / HP	U2000A	MY54260010	2025-07-23
Attenuator	PASTERNAK	PE7087-10	A001	2025-07-23
Attenuator	PASTERNAK	PE7087-10	A008	2025-07-23
Attenuator	PASTERNAK	PE7004-10	2	2025-07-23
Attenuator	PASTERNAK	PE7087-10	A009	2025-07-23
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2025-07-23
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2025-07-22
EMI Test Receive, 3 GHz	R&S	ESR 3	101832	2025-07-22
Notch Filter	Micro-Tronics	BRM50702-02	G037	2025-07-24
Notch Filter	Micro-Tronics	BRM50716-2	006	2025-07-23
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	020	2025-07-23
High Pass Filter 3GHz	Micro-Tronics	HPM17543	20	2025-07-23
High Pass Filter 6GHz	Micro-Tronics	HPS17542	009	2025-07-22
LISN	R&S	ENV216	101836	2025-07-22
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2025-09-07
Termination	WEINSCHL	M1406A	T09	2025-07-23
Attenuator	WEINSCHL	WA76-30-21	A015	2025-07-23
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 Band width (5.8GHz)	> 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 (5.150-5.250 5.250-5.350 & 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)

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 SISO	2.792	2.928	0.9536	95.36	0.21
802.11n(HT20) SISO	5.368	5.532	0.9704	97.04	0.13

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

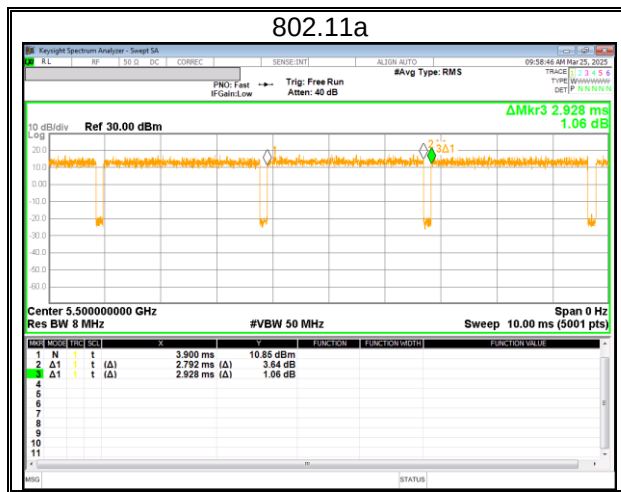
LIMITS

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.

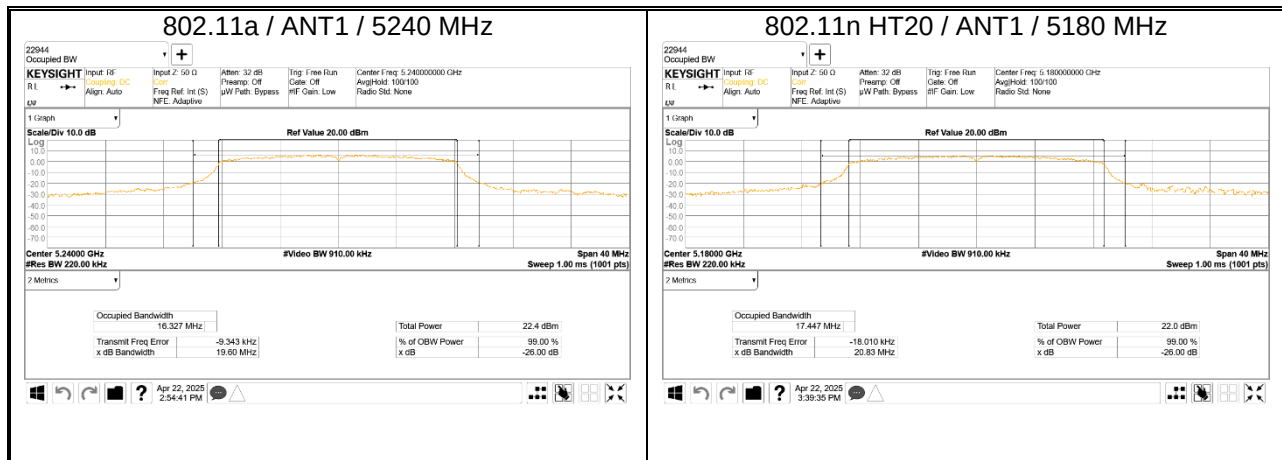
TEST PROCEDURE

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		ANT1
UNII-1 ^{Note}	36	5180	20.35	19.60	16.33
	40	5200	20.15		16.34
	48	5240	19.60		16.33
UNII-2A ^{Note}	52	5260	19.77	19.77	16.33
	60	5300	19.90		16.31
	64	5320	19.84		16.34
UNII-2C	100	5500	20.13	20.08	
	116	5580	20.08		
	140	5700	20.67		

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		ANT1
UNII-1 ^{Note}	36	5180	20.83	20.83	17.45
	40	5200	22.39		17.47
	48	5240	20.85		17.42
UNII-2A ^{Note}	52	5260	20.85	20.84	17.44
	60	5300	20.84		17.43
	64	5320	21.33		17.44
UNII-2C	100	5500	21.19	21.19	
	116	5580	21.30		
	140	5700	23.12		

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

9.2.3. STRADDLE CHANNEL

Mode	Channel	Center Freq. [MHz]	26 dB BW [MHz]	
			ANT1	
			UNII-2C	UNII-3
802.11a	Straddle	5720	15.71	5.16
802.11n HT20	Straddle	5720	15.82	6.33

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.

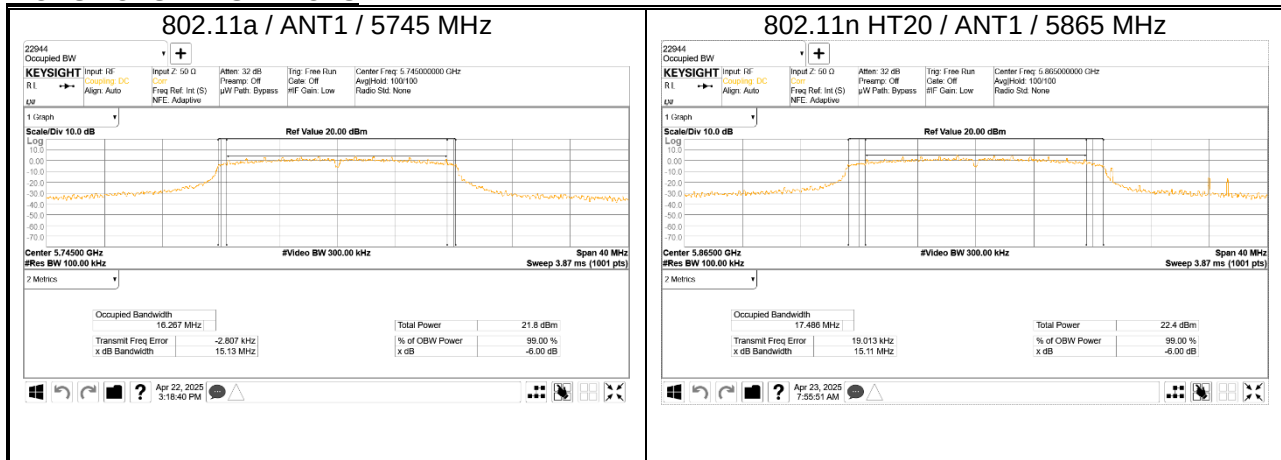
TEST PROCEDURE

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.

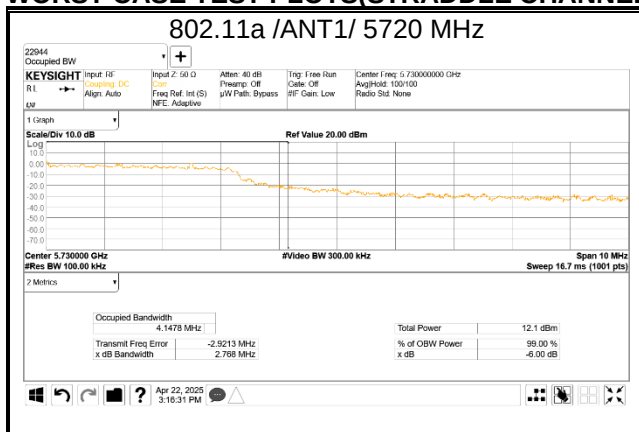
RESULTS

- Please refer to the next page

WORST CASE TEST PLOTS



WORST CASE TEST PLOTS(STRADDLE CHANNELS)



10.1.1. STRADDLE CHANNEL

Mode	Channel	Center Freq. [MHz]	6 dB BW [MHz]
			UNII-3
			ANT1
802.11a	Straddle	5720	2.768
802.11n HT20	Straddle	5720	2.897

10.1.2. UNII-3 BAND & 4 BAND

Mode	Channel	Center Freq. [MHz]	6 dB BW [MHz]	Worst	Minimum Limit [MHz]
			ANT1		
802.11a	149	5745	15.13	15.13	0.5
	157	5785	15.14		
	165	5825	15.14		
	169	5845	15.13		
	173	5865	15.14		
	177	5885	15.15		
802.11n HT20	149	5745	15.13	15.11	
	157	5785	15.14		
	165	5825	15.13		
	169	5845	15.12		
	173	5865	15.11		
	177	5885	15.14		

10.2. OUTPUT POWER AND PPSD

LIMITS

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

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]	ANT Gain [dBi]
UNII 1 5150 - 5250	-8.3
UNII 2A 5250 - 5350	-8.4
UNII 2C 5470 - 5725	-8.1
UNII 3 5725 - 5850	-9.1
UNII 4 5850 - 5925	-9.1

OUTPUT POWER AND PSD CALCULATION FORMULA

For OUTPUT POWER :

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

Average Power(dBm)(e.i.r.p.) (in case of UNII-4: added directional gain)
= Meas Power(dBm) + DCCF(dB) + Directional Gain(dBi)

For PSD :

PSD (conducted)
= Meas PSD + DCCF(dB)

PSD(e.i.r.p.) (in case of UNII-4: added directional gain)
= Meas PSD + DCCF(dB) + Directional Gain(dBi)

10.2.1. 802.11a MODE

Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]	Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1			
UNII-1	36	5180	15.53		15.53	23.98
	40	5200	15.39		15.39	
	48	5240	15.68		15.68	
UNII-2A	52	5260	15.47		15.47	23.96
	60	5300	15.51		15.51	
	64	5320	15.56		15.56	
UNII-2C	100	5500	15.48		15.48	23.98
	116	5580	15.62		15.62	
	140	5700	15.48		15.48	
UNII-2C&3	144 Straddle	5720	15.66		15.66	23.98 or 30.00
UNII-3	149	5745	15.46		15.46	30.00
	157	5785	15.41		15.41	
	165	5825	15.59		15.59	
UNII-3&4	169	5845	15.53		15.53	30.00
		5845	15.53	-9.10	6.43	30.00 _(e.i.r.p)
UNII-4	173	5865	15.57	-9.10	6.47	30.00 _(e.i.r.p)
	177	5885	15.43	-9.10	6.33	

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]	DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/ MHz]
			ANT1				
UNII-1	36	5180	5.09	0.21		5.30	11.00
	40	5200	5.11	0.21		5.32	
	48	5240	5.39	0.21		5.60	
UNII-2A	52	5260	5.41	0.21		5.62	11.00
	60	5300	5.15	0.21		5.36	
	64	5320	5.63	0.21		5.84	
UNII-2C	100	5500	5.32	0.21		5.53	11.00
	116	5580	5.47	0.21		5.68	
	140	5700	5.05	0.21		5.26	
UNII-2C&3	144 Straddle	5720	5.29	0.21		5.50	11.00 or 30.00/500kHz
UNII-3	149	5745	2.12	0.21		2.33	30.00/500kHz
	157	5785	2.44	0.21		2.65	
	165	5825	2.42	0.21		2.63	
UNII-3&4	169	5845	5.01	0.21		5.22	30.00/500kHz
		5845	5.01	0.21	-9.10	-3.88	14.00 _(e.i.r.p)
UNII-4	173	5865	5.19	0.21	-9.10	-3.70	14.00 _(e.i.r.p)
	177	5885	5.19	0.21	-9.10	-3.70	

10.2.2. 802.11n HT20 MODE

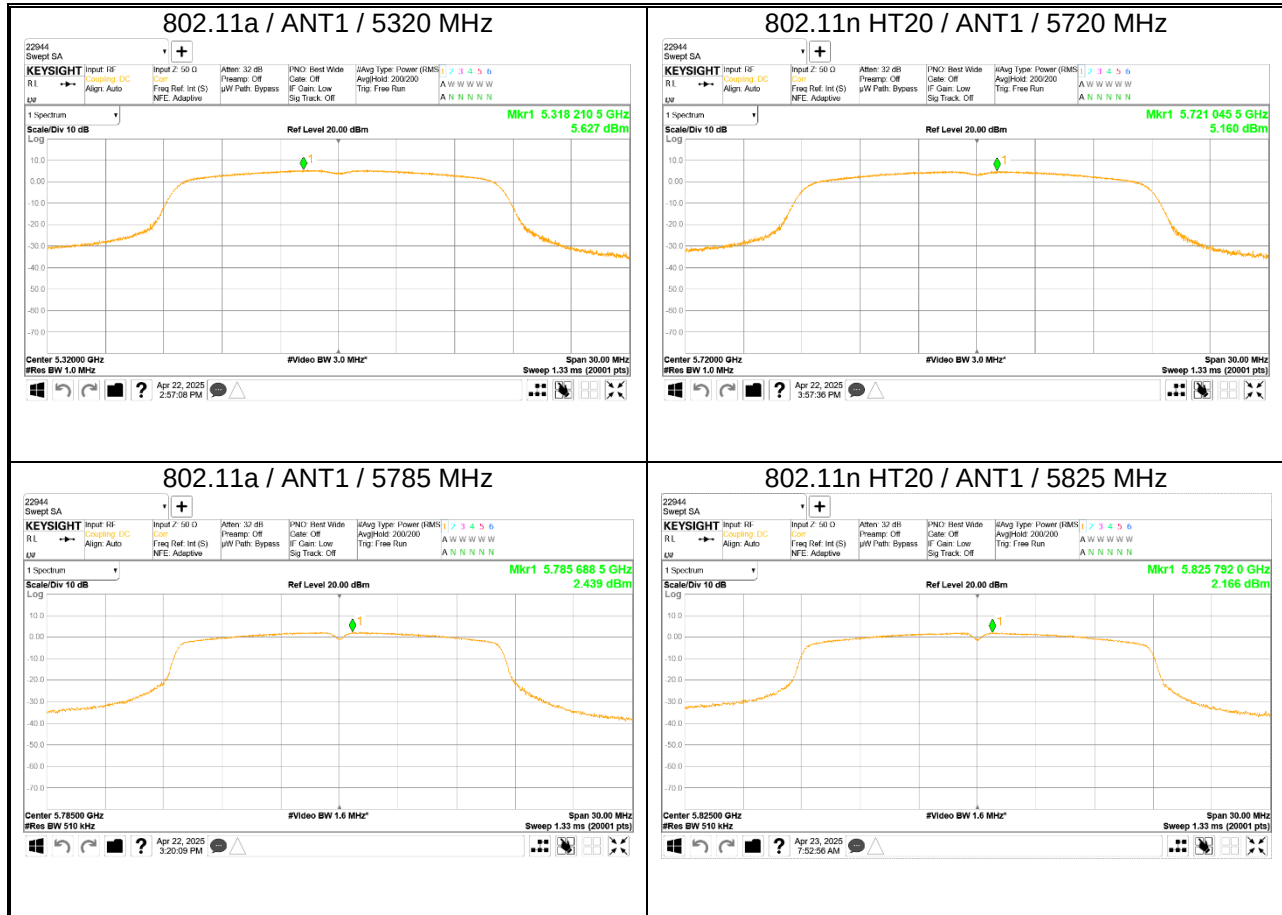
Output Power Results

Band	Channel	Center Freq. [MHz]	Average Power [dBm]	Direct. Gain [dBi]	Corr'd Power [dBm]	Limit [dBm]
			ANT1			
UNII-1	36	5180	15.47		15.47	23.98
	40	5200	15.33		15.33	
	48	5240	15.53		15.53	
UNII-2A	52	5260	15.42		15.42	23.98
	60	5300	15.35		15.35	
	64	5320	15.57		15.57	
UNII-2C	100	5500	15.51		15.51	23.98
	116	5580	15.37		15.37	
	140	5700	15.56		15.56	
UNII-2C&3	144 Straddle	5720	15.47		15.47	23.98 or 30.00
UNII-3	149	5745	15.42		15.42	30.00
	157	5785	15.39		15.39	
	165	5825	15.51		15.51	
UNII-3&4	169	5845	15.38		15.38	30.00
		5845	15.38	-9.10	6.28	30.00 _(e.i.r.p.)
UNII-4	173	5865	15.36	-9.10	6.26	30.00 _(e.i.r.p.)
	177	5885	15.45	-9.10	6.35	

PSD Results

Band	Channel	Center Freq. [MHz]	Meas PSD [dBm/MHz]	DCCF.	Direct. Gain [dBi]	Corr'd PSD [dBm]	Limit [dBm/MHz]
			ANT1				
UNII-1	36	5180	4.89	0.13		5.02	11.00
	40	5200	4.50	0.13		4.63	
	48	5240	4.92	0.13		5.05	
UNII-2A	52	5260	4.93	0.13		5.06	11.00
	60	5300	4.70	0.13		4.83	
	64	5320	5.09	0.13		5.22	
UNII-2C	100	5500	5.00	0.13		5.13	11.00
	116	5580	5.12	0.13		5.25	
	140	5700	4.97	0.13		5.10	
UNII-2C&3	144 Straddle	5720	5.16	0.13		5.29	11.00 or 30.00/500kHz
UNII-3	149	5745	2.04	0.13		2.17	30.00/500kHz
	157	5785	2.01	0.13		2.14	
	165	5825	2.17	0.13		2.30	
UNII-3&4	169	5845	4.75	0.13		4.88	30.00/500kHz
		5845	4.75	0.13	-9.10	-4.22	14.00 _(e.i.r.p.)
UNII-4	173	5865	5.14	0.13	-9.10	-3.83	14.00 _(e.i.r.p.)
	177	5885	4.82	0.13	-9.10	-4.15	

10.2.3. OUTPUT POWER AND 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 150 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.

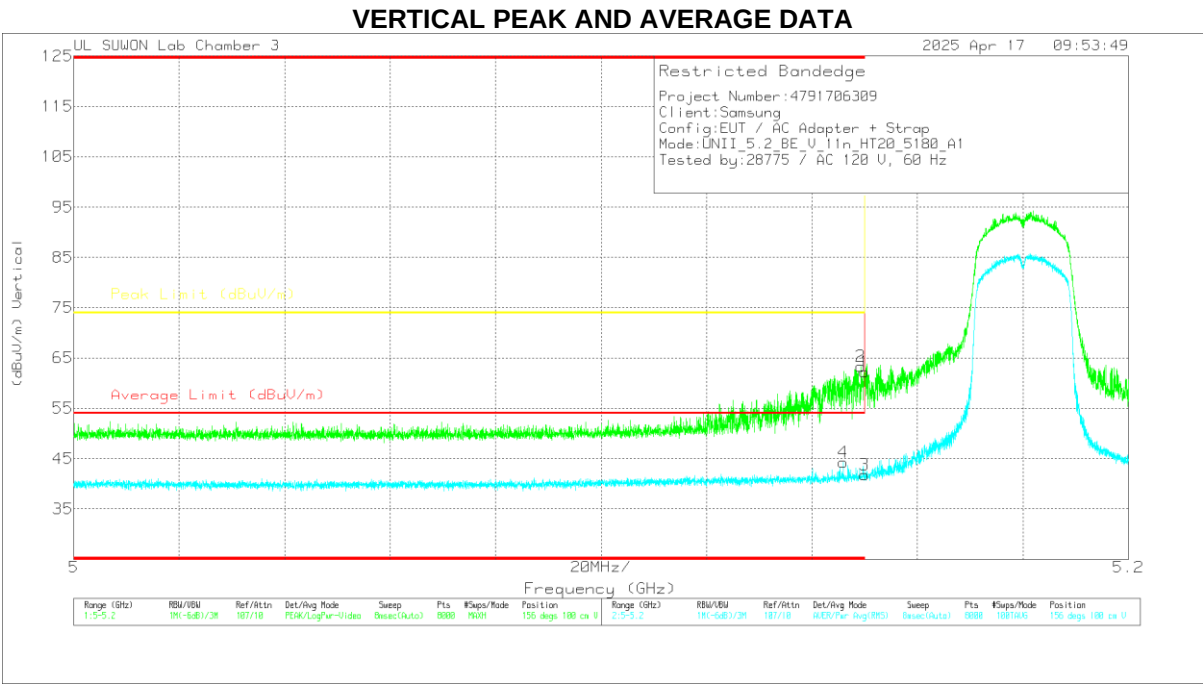
Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

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 1TX MODE IN THE 5.2GHz BAND

BANDEDGE (WORST CASE: 802.11n HT20 / 5180 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)	Acimuth (Degs)	Height (cm)	Polarity
1	* 5.14999	48.27	Pk	34.4	-20.5	0	62.17	-	-	74	-11.83	156	100	V
2	* 5.14922	49.44	Pk	34.4	-20.5	0	63.34	-	-	74	-10.66	156	100	V
3	* 5.14999	27.73	RMS	34.4	-20.5	.13	41.76	54	-12.24	-	-	156	100	V
4	* 5.14594	30.11	RMS	34.4	-20.4	.13	44.24	54	-9.76	-	-	156	100	V

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

Pk - Peak detector

RMS - RMS detection

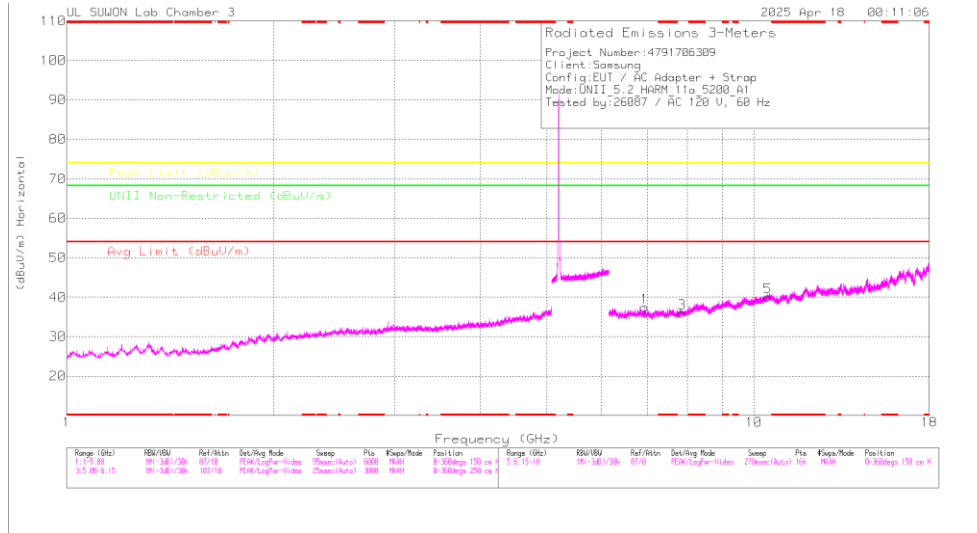
BANDEDGE TEST DATA

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	5180	ANT1	* 5.14999	43.81	Pk	34.40	-20.50	0.00	57.71	-	-	74.00	-16.29	152	113	H
			* 5.14174	46.02	Pk	34.40	-20.50	0.00	59.92	-	-	74.00	-14.08	152	113	H
			* 5.14999	26.71	RMS	34.40	-20.50	0.21	40.82	54.00	-13.18	-	-	152	113	H
			* 5.14929	29.14	RMS	34.40	-20.50	0.21	43.25	54.00	-10.75	-	-	152	113	H
			* 5.14999	43.18	Pk	34.40	-20.50	0.00	57.08	-	-	74.00	-16.92	224	221	V
			* 5.14354	45.52	Pk	34.40	-20.40	0.00	59.52	-	-	74.00	-14.48	224	221	V
			* 5.14999	28.03	RMS	34.40	-20.50	0.21	42.14	54.00	-11.86	-	-	224	221	V
			* 5.14914	29.38	RMS	34.40	-20.50	0.21	43.49	54.00	-10.51	-	-	224	221	V
			* 5.14999	44.51	Pk	34.40	-20.50	0.00	58.41	-	-	74.00	-15.59	152	113	H
			* 5.14379	48.20	Pk	34.40	-20.40	0.00	62.20	-	-	74.00	-11.80	152	113	H
802.11n (HT20)	5180	ANT1	* 5.14999	27.74	RMS	34.40	-20.50	0.13	41.77	54.00	-12.23	-	-	152	113	H
			* 5.14984	28.64	RMS	34.40	-20.50	0.13	42.67	54.00	-11.33	-	-	152	113	H
			* 5.14999	48.27	Pk	34.40	-20.50	0.00	62.17	-	-	74.00	-11.83	156	100	V
			* 5.14922	49.44	Pk	34.40	-20.50	0.00	63.34	-	-	74.00	-10.66	156	100	V
			* 5.14999	27.73	RMS	34.40	-20.50	0.13	41.76	54.00	-12.24	-	-	156	100	V
			* 5.14594	30.11	RMS	34.40	-20.40	0.13	44.24	54.00	-9.76	-	-	156	100	V

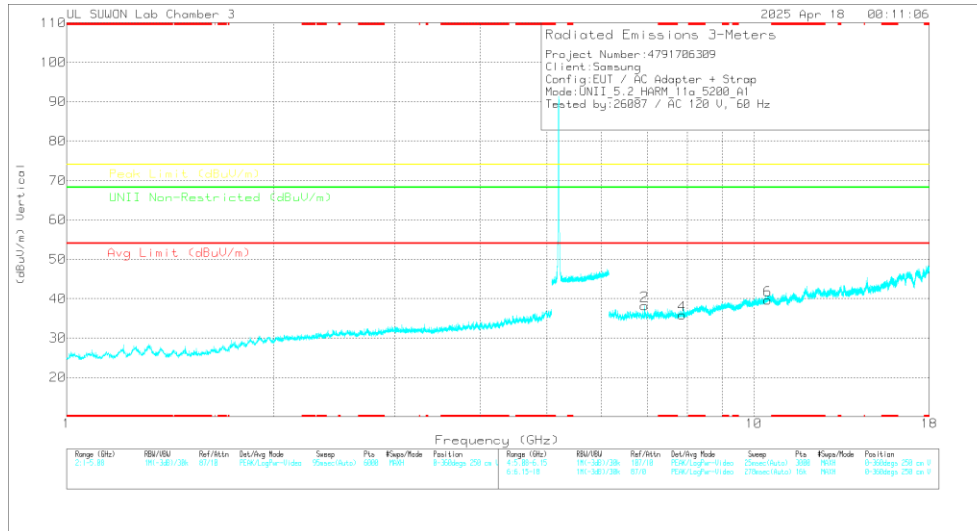
Note1. Pk - Peak detector, RMS - RMS detector

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

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5200 MHz)
5200 MHz HORIZONTAL



5200 MHz 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.

5200 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Factor (dBm)	ECM _{ref} Path Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Feet)	Height (m)	Priority
6.93367	37.12	PK-U	36	-26.4	0	46.72	-	-	-	-	68.2	-21.48	195	240	H
6.93384	37.57	PK-U	36	-26.4	0	47.17	-	-	-	-	68.2	-21.03	207	137	V
7.85509	34.34	PK-U	35.9	-24	0	45.24	-	-	-	-	68.2	-21.96	0	100	H
7.85168	34.9	PK-U	35.9	-23.9	0	45.9	-	-	-	-	68.2	-21.3	0	100	V
10.48422	33.52	PK-U	37.6	-20.8	0	50.32	-	-	-	-	68.2	-17.88	0	100	H
10.47974	33.33	PK-U	37.6	-20.9	0	50.03	-	-	-	-	68.2	-18.17	0	100	V

PK-U - U-NII: Maximum Peak

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

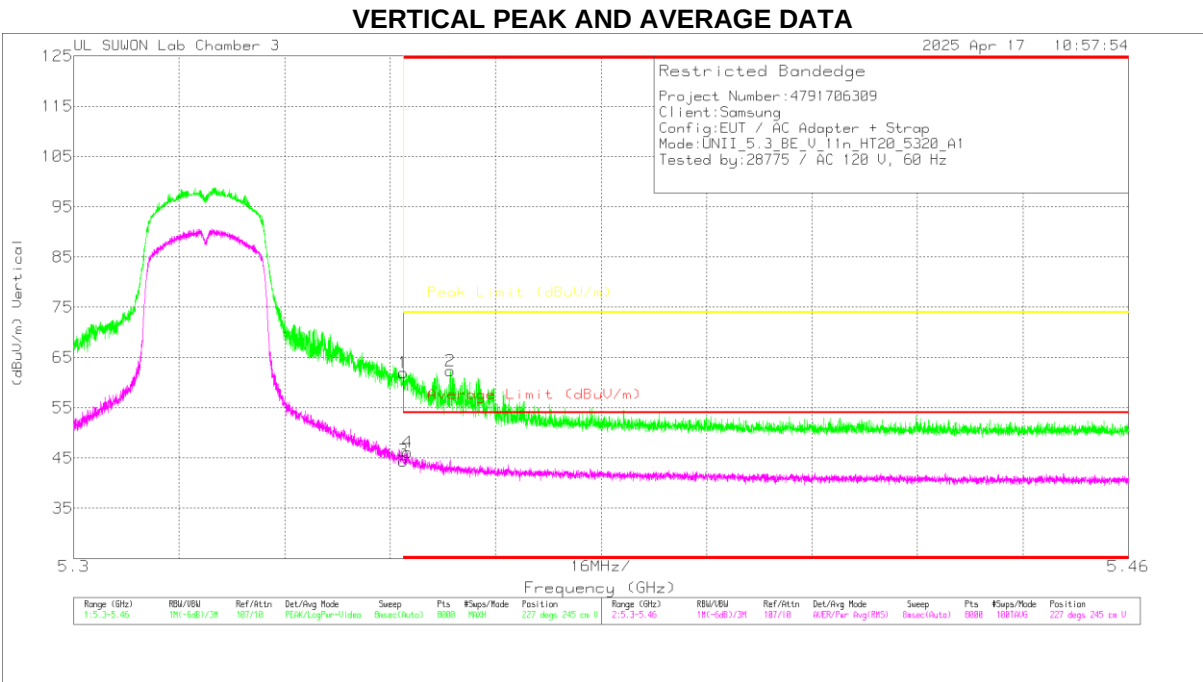
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5180	MIMO	6.907	37.29	PK-U	36.00	-26.50	0.00	46.79	-	-	-	-	68.20	-21.41	184	244	H
			6.907	38.43	PK-U	36.00	-26.50	0.00	47.93	-	-	-	-	68.20	-20.27	194	147	V
			7.768	34.95	PK-U	35.90	-24.50	0.00	46.35	-	-	-	-	68.20	-21.85	0	100	H
			7.769	34.75	PK-U	35.90	-24.50	0.00	46.15	-	-	-	-	68.20	-22.05	0	100	V
			10.358	33.38	PK-U	37.50	-20.80	0.00	50.08	-	-	-	-	68.20	-18.12	0	100	H
			10.360	33.11	PK-U	37.50	-20.80	0.00	49.81	-	-	-	-	68.20	-18.39	0	100	V
	5200	MIMO	6.934	37.12	PK-U	36.00	-26.40	0.00	46.72	-	-	-	-	68.20	-21.48	195	240	H
			6.934	37.57	PK-U	36.00	-26.40	0.00	47.17	-	-	-	-	68.20	-21.03	207	137	V
			7.857	34.34	PK-U	35.90	-24.00	0.00	46.24	-	-	-	-	68.20	-21.96	0	100	H
			7.862	34.90	PK-U	35.90	-23.90	0.00	46.90	-	-	-	-	68.20	-21.30	0	100	V
			10.484	33.52	PK-U	37.60	-20.80	0.00	50.32	-	-	-	-	68.20	-17.88	0	100	H
			10.480	33.33	PK-U	37.60	-20.90	0.00	50.03	-	-	-	-	68.20	-18.17	0	100	V
	5240	MIMO	6.986	36.31	PK-U	36.00	-26.00	0.00	46.31	-	-	-	-	68.20	-21.89	167	101	H
			6.987	36.99	PK-U	36.00	-26.00	0.00	46.99	-	-	-	-	68.20	-21.21	210	151	V
			7.856	34.57	PK-U	35.90	-24.00	0.00	46.47	-	-	-	-	68.20	-21.73	0	100	H
			7.855	34.31	PK-U	35.90	-24.00	0.00	46.21	-	-	-	-	68.20	-21.99	0	100	V
			10.482	33.52	PK-U	37.60	-20.90	0.00	50.22	-	-	-	-	68.20	-17.98	0	100	H
			10.481	33.29	PK-U	37.60	-20.90	0.00	49.99	-	-	-	-	68.20	-18.21	0	100	V
802.11n HT20 Spot-check	5180	MIMO	6.907	37.02	PK-U	36.00	-26.50	0.00	46.52	-	-	-	-	68.20	-21.68	160	104	H
			6.906	37.05	PK-U	36.00	-26.50	0.00	46.55	-	-	-	-	68.20	-21.65	204	108	V
			7.770	34.81	PK-U	35.90	-24.50	0.00	46.21	-	-	-	-	68.20	-21.99	0	100	H
			7.772	34.42	PK-U	35.90	-24.60	0.00	45.72	-	-	-	-	68.20	-22.48	0	100	V
			10.360	33.26	PK-U	37.50	-20.80	0.00	49.96	-	-	-	-	68.20	-18.24	0	100	H
			10.360	33.08	PK-U	37.50	-20.80	0.00	49.78	-	-	-	-	68.20	-18.42	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 1TX MODE IN THE 5.3GHz BAND

BANDEDGE (WORST CASE: 802.11n HT20 / 5320 MHz Upper)



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 (m)	Polarity
1	* 5.35001	47.39	PK	34.7	-20.1	0	61.98	-	-	74	-12.02	227	245	V
2	* 5.35715	47.9	PK	34.7	-20.2	0	62.4	-	-	74	-11.6	227	245	V
3	* 5.35001	29.73	RMS	34.7	-20.1	.13	44.46	54	-9.54	-	-	227	245	V
4	* 5.35063	31.52	RMS	34.7	-20.2	.13	46.15	54	-7.85	-	-	227	245	V

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

Pk - Peak detector

RMS - RMS detection

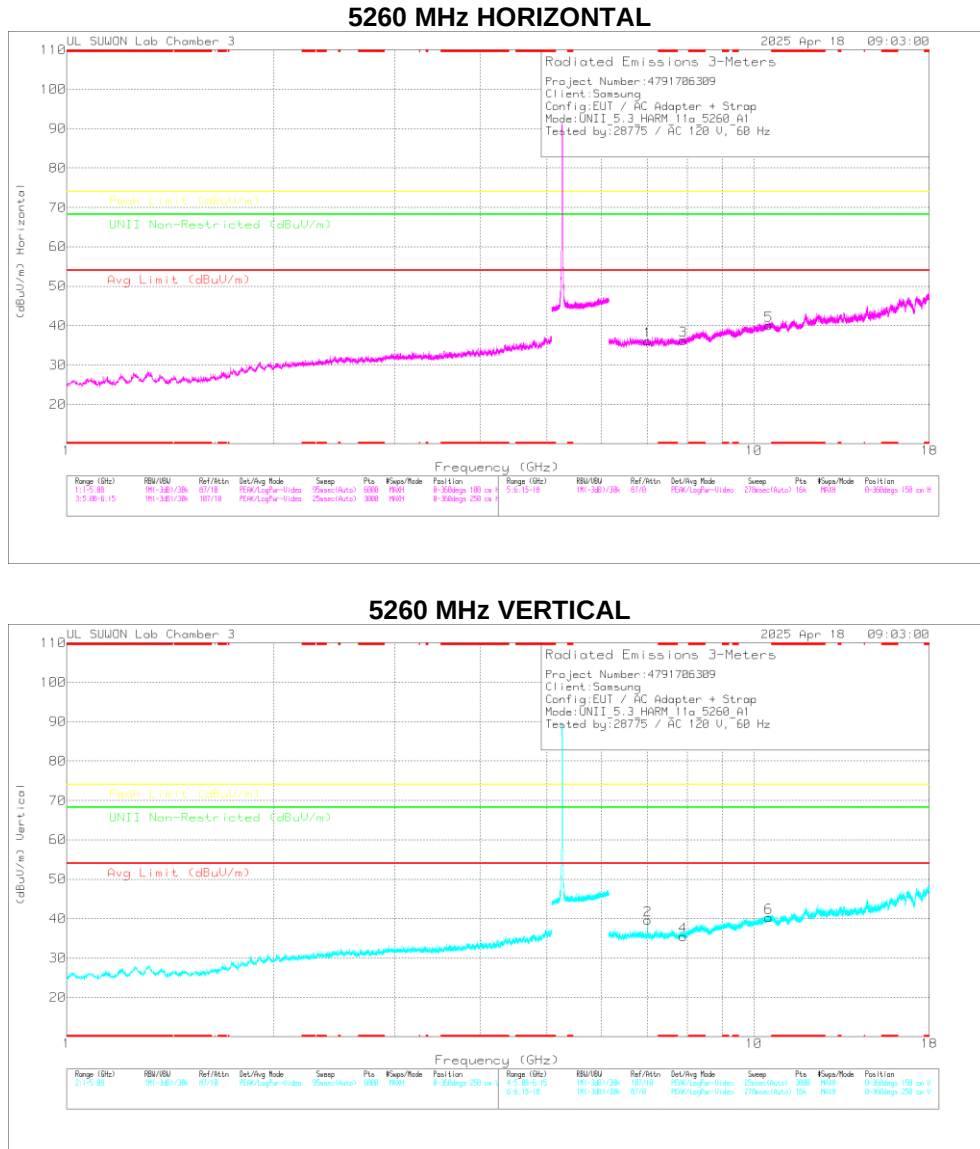
BANDEDGE TEST DATA

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	5320	ANT1	* 5.35001	42.99	Pk	34.70	-20.10	0.00	57.59	-	-	74.00	-16.41	135	100	H
			* 5.35201	43.86	Pk	34.70	-20.20	0.00	58.36	-	-	74.00	-15.64	135	100	H
			* 5.35001	28.16	RMS	34.70	-20.10	0.21	42.97	54.00	-11.03	-	-	135	100	H
			* 5.35003	28.67	RMS	34.70	-20.10	0.21	43.48	54.00	-10.52	-	-	135	100	H
			* 5.35001	41.60	Pk	34.70	-20.10	0.00	56.20	-	-	74.00	-17.80	205	187	V
			* 5.35213	42.72	Pk	34.70	-20.20	0.00	57.22	-	-	74.00	-16.78	205	187	V
			* 5.35001	28.36	RMS	34.70	-20.10	0.21	43.17	54.00	-10.83	-	-	205	187	V
			* 5.35107	29.54	RMS	34.70	-20.20	0.21	44.25	54.00	-9.75	-	-	205	187	V
			* 5.35001	46.08	Pk	34.70	-20.10	0.00	60.68	-	-	74.00	-13.32	141	106	H
			* 5.35155	46.13	Pk	34.70	-20.20	0.00	60.63	-	-	74.00	-13.37	141	106	H
802.11n (HT20)	5320	ANT1	* 5.35001	28.18	RMS	34.70	-20.10	0.13	42.91	54.00	-11.09	-	-	141	106	H
			* 5.35025	30.18	RMS	34.70	-20.10	0.13	44.91	54.00	-9.09	-	-	141	106	H
			* 5.35001	47.38	Pk	34.70	-20.10	0.00	61.98	-	-	74.00	-12.02	227	245	V
			* 5.35715	47.90	Pk	34.70	-20.20	0.00	62.40	-	-	74.00	-11.60	227	245	V
			* 5.35001	29.73	RMS	34.70	-20.10	0.13	44.46	54.00	-9.54	-	-	227	245	V
			* 5.35063	31.52	RMS	34.70	-20.20	0.13	46.15	54.00	-7.85	-	-	227	245	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: 802.11a / 5260 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.

5260 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Factor (dBm)	ISGhz_HP_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 (m)	Polarity
7.01332	36.12	PK-U	36	-25.8	0	46.32	-	-	-	-	68.2	-21.88	71	100	H
7.01315	37.1	PK-U	36	-25.8	0	47.9	-	-	-	-	68.2	-20.9	235	241	V
7.891	34.32	PK-U	35.9	-24	0	46.22	-	-	-	-	68.2	-21.98	0	100	H
7.89416	34.69	PK-U	35.9	-23.9	0	46.69	-	-	-	-	68.2	-21.51	0	100	V
10.52401	33.49	PK-U	37.6	-20.7	0	50.39	-	-	-	-	68.2	-17.81	0	100	H
10.51683	33.09	PK-U	37.6	-20.8	0	49.89	-	-	-	-	68.2	-18.31	0	100	V

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	5260	ANT1	7.013	36.12	PK-U	36.00	-25.80	0.00	46.32	-	-	-	-	68.20	-21.88	71	100	H
			7.013	37.10	PK-U	36.00	-25.80	0.00	47.30	-	-	-	-	68.20	-20.90	235	241	V
			7.891	34.32	PK-U	35.90	-24.00	0.00	46.22	-	-	-	-	68.20	-21.98	0	100	H
			7.894	34.69	PK-U	35.90	-23.90	0.00	46.69	-	-	-	-	68.20	-21.51	0	100	V
			10.524	33.49	PK-U	37.60	-20.70	0.00	50.39	-	-	-	-	68.20	-17.81	0	100	H
			10.517	33.09	PK-U	37.60	-20.80	0.00	49.89	-	-	-	-	68.20	-18.31	0	100	V
	5300	ANT1	7.067	35.99	PK-U	35.90	-25.90	0.00	45.99	-	-	-	-	68.20	-22.21	172	100	H
			7.067	36.85	PK-U	35.90	-25.90	0.00	46.85	-	-	-	-	68.20	-21.35	209	218	V
			7.955	34.82	PK-U	35.90	-24.20	0.00	46.52	-	-	-	-	68.20	-21.68	0	100	H
			7.951	34.93	PK-U	35.90	-24.20	0.00	46.63	-	-	-	-	68.20	-21.57	0	100	V
			* 10.60042	33.42	PK-U	37.70	-20.80	0.00	50.32	-	-	74.00	-23.68	-	-	0	100	H
			* 10.60223	33.37	PK-U	37.70	-20.80	0.00	50.27	-	-	74.00	-23.73	-	-	0	100	V
	5320	ANT1	7.097	35.46	PK-U	35.90	-26.10	0.00	45.26	-	-	-	-	68.20	-22.94	172	103	H
			7.093	36.27	PK-U	35.90	-26.00	0.00	46.17	-	-	-	-	68.20	-22.03	234	245	V
			7.976	34.56	PK-U	35.90	-24.20	0.00	46.26	-	-	-	-	68.20	-21.94	0	100	H
			7.983	34.43	PK-U	35.90	-24.20	0.00	46.13	-	-	-	-	68.20	-22.07	0	100	V
			* 10.64114	33.49	PK-U	37.70	-20.70	0.00	50.49	-	-	74.00	-23.51	-	-	0	100	H
			* 10.63799	33.53	PK-U	37.70	-20.70	0.00	50.53	-	-	74.00	-23.47	-	-	0	100	V

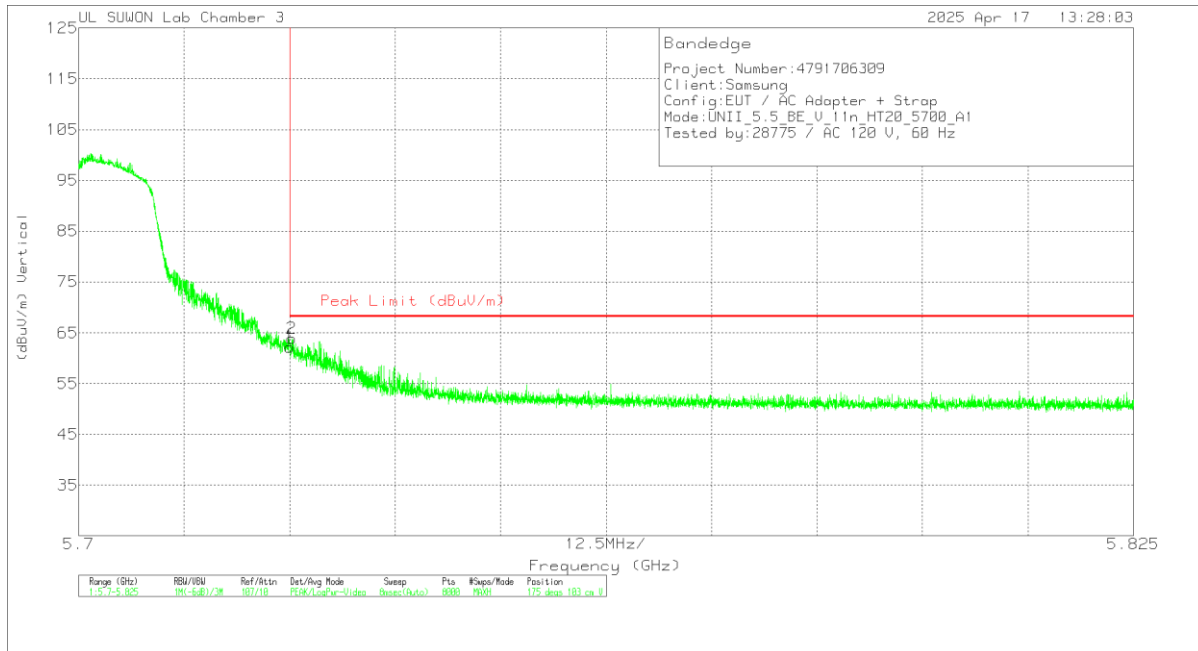
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

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

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

BANDEDGE (WORST CASE: 802.11n HT20 / 5700 MHz)

VERTICAL PEAK 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)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	46.72	Pk	35	-19.5	0	62.22	68.2	-5.98	175	103	V
2	5.72527	48.41	Pk	35	-19.5	0	63.91	68.2	-4.29	175	103	V

Pk - Peak detector

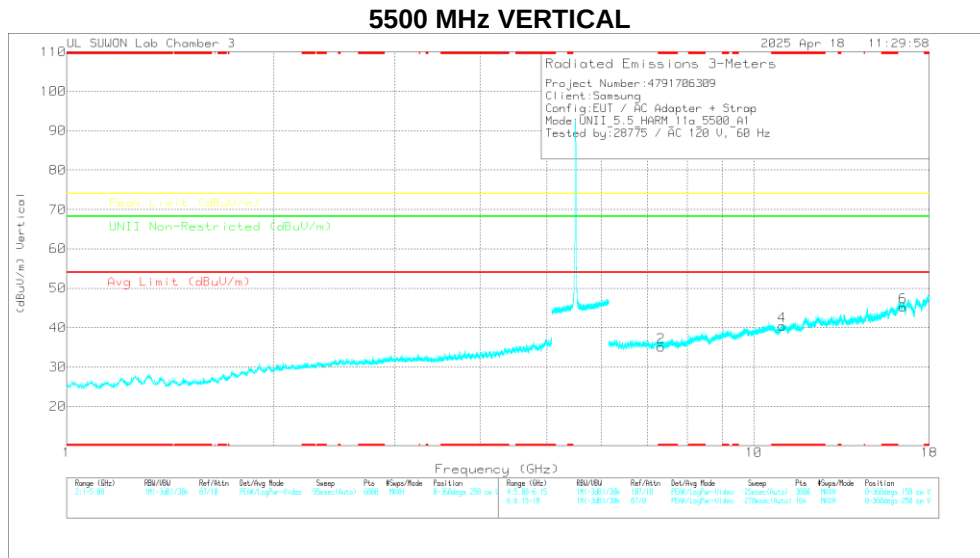
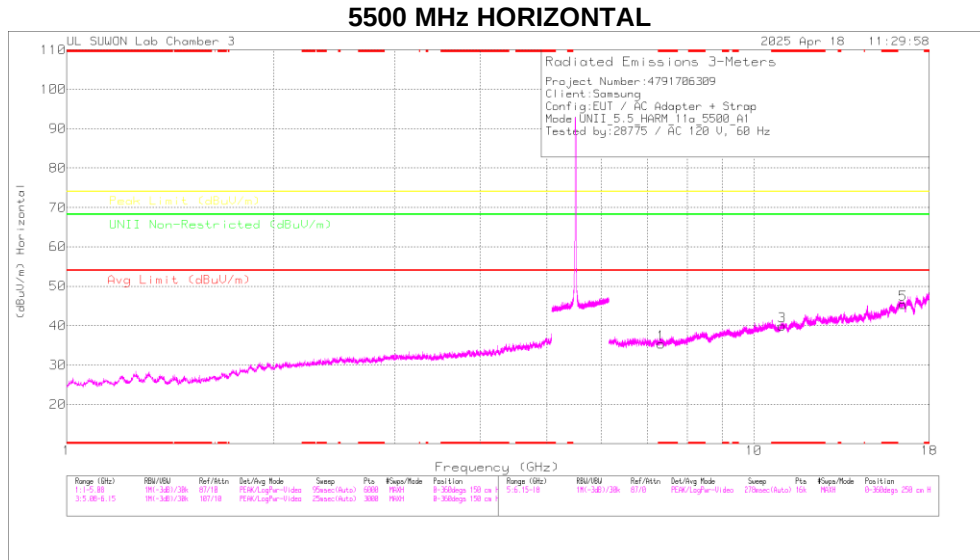
Bandedge Test Data

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	ANT 1	* 5.45998	37.02	Pk	34.90	-20.00	0.00	51.92	-	-	74.00	-22.08	142	117	H
			* 5.45405	39.86	Pk	34.90	-20.10	0.00	54.66	-	-	74.00	-19.34	142	117	H
			5.46998	39.94	Pk	34.90	-20.00	0.00	54.84	-	-	68.20	-13.36	142	117	H
			5.46880	41.59	Pk	34.90	-20.00	0.00	56.49	-	-	68.20	-11.71	142	117	H
			* 5.45998	26.49	RMS	34.90	-20.00	0.21	41.60	54.00	-12.40	-	-	142	117	H
			* 5.45891	27.41	RMS	34.90	-20.00	0.21	42.52	54.00	-11.48	-	-	142	117	H
			5.46998	27.37	RMS	34.90	-20.00	0.21	42.48	-	-	-	-	142	117	H
			5.46961	27.89	RMS	34.90	-20.00	0.21	43.00	-	-	-	-	142	117	H
			* 5.45998	37.66	Pk	34.90	-20.00	0.00	52.56	-	-	74.00	-21.44	173	134	V
			* 5.45819	40.48	Pk	34.90	-20.10	0.00	55.28	-	-	74.00	-18.72	173	134	V
			5.46998	42.90	Pk	34.90	-20.00	0.00	57.80	-	-	68.20	-10.40	173	134	V
			5.46871	44.06	Pk	34.90	-20.00	0.00	58.96	-	-	68.20	-9.24	173	134	V
			* 5.45998	26.17	RMS	34.90	-20.00	0.21	41.28	54.00	-12.72	-	-	173	134	V
			* 5.45305	27.58	RMS	34.90	-20.10	0.21	42.59	54.00	-11.41	-	-	173	134	V
			5.46998	27.82	RMS	34.90	-20.00	0.21	42.93	-	-	-	-	173	134	V
			5.46832	28.79	RMS	34.90	-20.00	0.21	43.90	-	-	-	-	173	134	V
	5700	ANT 1	5.72500	41.43	Pk	35.00	-19.50	0.00	56.93	-	-	68.20	-11.27	187	100	H
			5.72566	44.38	Pk	35.00	-19.50	0.00	59.88	-	-	68.20	-8.32	187	100	H
			5.72500	42.53	Pk	35.00	-19.50	0.00	58.03	-	-	68.20	-10.17	197	154	V
			5.72572	45.61	Pk	35.00	-19.50	0.00	61.11	-	-	68.20	-7.09	197	154	V
			5.45998	35.94	Pk	34.90	-20.00	0.00	50.84	-	-	74.00	-23.16	143	115	H
			* 5.44825	40.08	Pk	34.90	-20.10	0.00	54.88	-	-	74.00	-19.12	143	115	H
802.11n (HT20)	5500	ANT 1	5.46998	43.28	Pk	34.90	-20.00	0.00	58.18	-	-	68.20	-10.02	143	115	H
			5.46849	45.43	Pk	34.90	-20.00	0.00	60.33	-	-	68.20	-7.87	143	115	H
			* 5.45998	26.81	RMS	34.90	-20.00	0.13	41.84	54.00	-12.16	-	-	143	115	H
			* 5.45434	28.03	RMS	34.90	-20.10	0.13	42.96	54.00	-11.04	-	-	143	115	H
			5.46998	27.14	RMS	34.90	-20.00	0.13	42.17	-	-	-	-	143	115	H
			5.46335	27.87	RMS	34.90	-20.00	0.13	42.90	-	-	-	-	143	115	H
			* 5.45998	39.13	Pk	34.90	-20.00	0.00	54.03	-	-	74.00	-19.97	153	120	V
			* 5.45943	43.02	Pk	34.90	-20.00	0.00	57.92	-	-	74.00	-16.08	153	120	V
			5.46998	44.24	Pk	34.90	-20.00	0.00	59.14	-	-	68.20	-9.06	153	120	V
			5.46963	45.61	Pk	34.90	-20.00	0.00	60.51	-	-	68.20	-7.69	153	120	V
			* 5.45998	26.66	RMS	34.90	-20.00	0.13	41.69	54.00	-12.31	-	-	153	120	V
			* 5.45858	27.79	RMS	34.90	-20.00	0.13	42.82	54.00	-11.18	-	-	153	120	V
			5.46998	29.65	RMS	34.90	-20.00	0.13	44.68	-	-	-	-	153	120	V
			5.46921	30.07	RMS	34.90	-20.00	0.13	45.10	-	-	-	-	153	120	V
	5700	ANT 1	5.72500	45.20	Pk	35.00	-19.50	0.00	60.70	-	-	68.20	-7.50	184	100	H
			5.72596	46.89	Pk	35.00	-19.50	0.00	62.39	-	-	68.20	-5.81	184	100	H
			5.72500	46.72	Pk	35.00	-19.50	0.00	62.22	-	-	68.20	-5.98	175	103	V
			5.72527	48.41	Pk	35.00	-19.50	0.00	63.91	-	-	68.20	-4.29	175	103	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: 802.11a / 5500 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.

5500 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas. Reading (dBm)	Det	Antenna Factor (dBm)	SCNz_HP_Path Loss(dB)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Peak Limit (dBm)	Margin (dB)	UNII Non-Restricted (dBm)	Margin (dB)	Actuals (dBm)	Height (cm)	Polarity
* 7.33007	34.86	PK-U	35.8	-24.7	0	45.96	-	-	74	-28.04	-	-	0	100	H
* 7.33507	34.92	PK-U	35.8	-24.9	0	45.82	-	-	74	-28.18	-	-	0	100	V
* 10.99977	33.09	PK-U	38	-20.9	0	50.19	-	-	74	-23.81	-	-	0	100	H
* 10.99697	33.33	PK-U	38	-20.9	0	50.43	-	-	74	-23.57	-	-	0	100	V
16.50392	33.44	PK-U	41.6	-18.8	0	56.24	-	-	-	-	68.2	-11.96	0	100	H
16.49833	33.43	PK-U	41.6	-18.9	0	56.13	-	-	-	-	68.2	-12.07	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	5500	ANT1	* 7.33007	34.86	PK-U	35.80	-24.70	0.00	45.96	-	-	74.00	-28.04	-	-	0	100	H
			* 7.33607	34.92	PK-U	35.80	-24.90	0.00	45.82	-	-	74.00	-28.18	-	-	0	100	V
			* 10.99977	33.09	PK-U	38.00	-20.90	0.00	50.19	-	-	74.00	-23.81	-	-	0	100	H
			* 10.99697	33.33	PK-U	38.00	-20.90	0.00	50.43	-	-	74.00	-23.57	-	-	0	100	V
			16.504	33.44	PK-U	41.60	-18.80	0.00	56.24	-	-	-	-	68.20	-11.96	0	100	H
			16.498	33.43	PK-U	41.60	-18.90	0.00	56.13	-	-	-	-	68.20	-12.07	0	100	V
	5580	ANT1	* 7.43859	36.21	PK-U	35.70	-25.70	0.00	46.21	-	-	74.00	-27.79	-	-	0	100	H
			* 7.44025	35.63	PK-U	35.70	-25.70	0.00	45.63	-	-	74.00	-28.37	-	-	0	100	V
			* 11.16023	34.03	PK-U	38.10	-21.30	0.00	50.83	-	-	74.00	-23.17	-	-	0	100	H
			* 11.16497	33.97	PK-U	38.10	-21.20	0.00	50.87	-	-	74.00	-23.13	-	-	0	100	V
			16.742	32.64	PK-U	41.80	-18.20	0.00	56.24	-	-	-	-	68.20	-11.96	0	100	H
			16.737	32.31	PK-U	41.80	-18.30	0.00	55.81	-	-	-	-	68.20	-12.39	0	100	V
	5700	ANT1	* 7.59602	34.71	PK-U	35.80	-24.20	0.00	46.31	-	-	74.00	-27.69	-	-	0	100	H
			* 7.59793	34.95	PK-U	35.80	-24.20	0.00	46.55	-	-	74.00	-27.45	-	-	0	100	V
			* 11.39992	32.52	PK-U	38.10	-21.00	0.00	49.62	-	-	74.00	-24.38	-	-	0	100	H
			* 11.40406	32.58	PK-U	38.10	-21.00	0.00	49.68	-	-	74.00	-24.32	-	-	0	100	V
			17.099	30.82	PK-U	41.40	-17.50	0.00	54.72	-	-	-	-	68.20	-13.48	0	100	H
			17.096	31.18	PK-U	41.40	-17.50	0.00	55.08	-	-	-	-	68.20	-13.12	0	100	V
	5720	ANT1	* 7.62504	34.71	PK-U	35.80	-24.20	0.00	46.31	-	-	74.00	-27.69	-	-	0	100	H
			* 7.62417	34.88	PK-U	35.80	-24.20	0.00	46.48	-	-	74.00	-27.52	-	-	0	100	V
			* 11.43889	32.39	PK-U	38.20	-20.90	0.00	49.69	-	-	74.00	-24.31	-	-	0	100	H
			* 11.43893	32.77	PK-U	38.20	-20.90	0.00	50.07	-	-	74.00	-23.93	-	-	0	100	V
			17.158	31.79	PK-U	41.30	-17.40	0.00	55.69	-	-	-	-	68.20	-12.51	0	100	H
			17.161	31.51	PK-U	41.30	-17.30	0.00	55.51	-	-	-	-	68.20	-12.69	0	100	V

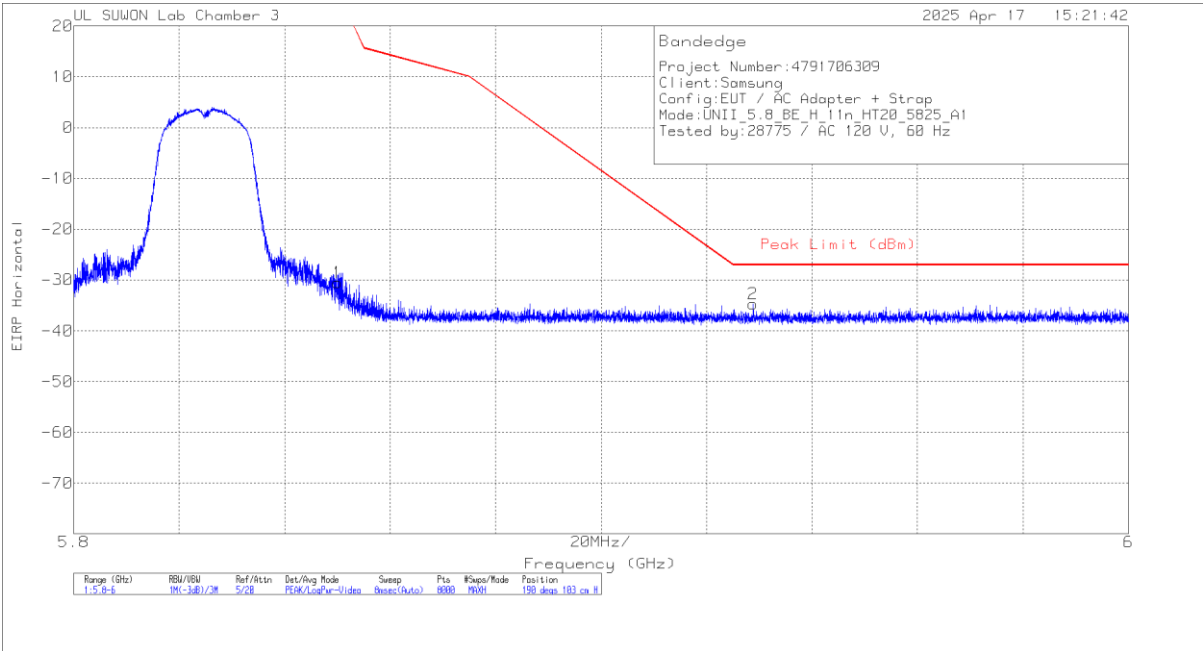
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

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

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

BANDEDGE (WORST CASE: 802.11n HT20 / 5825 MHz)

HORIZONTAL PEAK DATA



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	5.85001	-58.09	Pk	35.2	-19.4	11.8	0	-30.49	26.99	-57.48	190	103	H
2	5.92884	-62.65	Pk	35.5	-19.4	11.8	0	-34.75	-27	-7.75	190	103	H

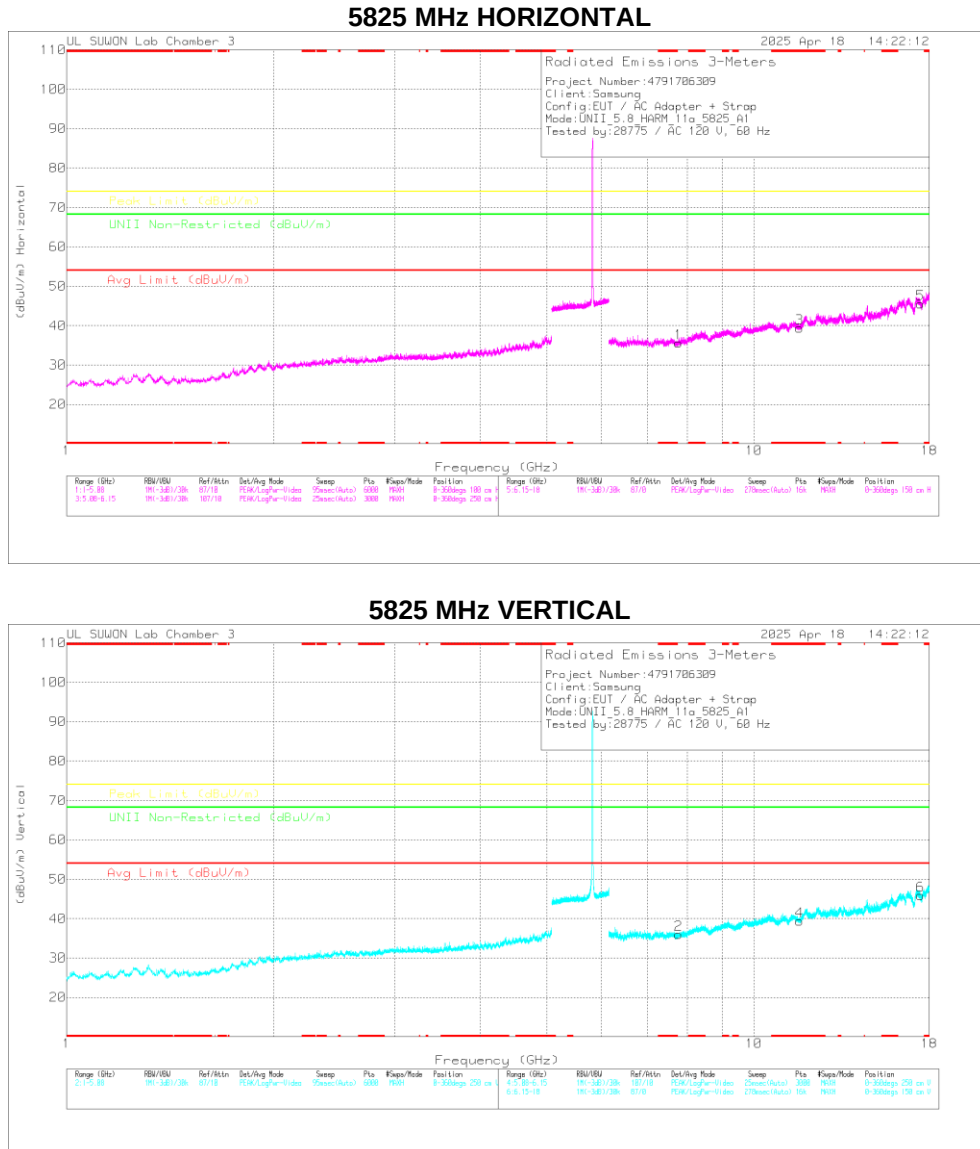
Pk - Peak detector

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	ANT1	5.72500	-59.74	Pk	34.90	-19.50	11.80	0.00	-32.54	27.00	-59.54	184	100	H
			5.63615	-65.52	Pk	34.90	-19.80	11.80	0.00	-38.62	-27.00	-11.62	184	100	H
			5.72500	-55.13	Pk	34.90	-19.50	11.80	0.00	-27.93	27.00	-54.93	176	106	V
			5.63818	-65.85	Pk	34.90	-19.80	11.80	0.00	-38.95	-27.00	-11.95	176	106	V
	5825	ANT1	5.85001	-61.83	Pk	35.20	-19.40	11.80	0.00	-34.23	26.99	-61.22	192	103	H
			5.96392	-62.84	Pk	35.60	-19.40	11.80	0.00	-34.84	-27.00	-7.84	192	103	H
			5.85001	-60.33	Pk	35.20	-19.40	11.80	0.00	-32.73	26.99	-59.72	198	165	V
			5.93929	-65.83	Pk	35.60	-19.40	11.80	0.00	-37.83	-27.00	-10.83	198	165	V
802.11n (HT20)	5745	ANT1	5.72500	-56.97	Pk	34.90	-19.50	11.80	0.00	-29.77	27.00	-56.77	182	100	H
			5.63324	-65.55	Pk	34.90	-19.90	11.80	0.00	-38.75	-27.00	-11.75	182	100	H
			5.72500	-52.64	Pk	34.90	-19.50	11.80	0.00	-25.44	27.00	-52.44	179	106	V
			5.64070	-65.08	Pk	34.90	-19.80	11.80	0.00	-38.18	-27.00	-11.18	179	106	V
	5825	ANT1	5.85001	-58.09	Pk	35.20	-19.40	11.80	0.00	-30.49	26.99	-57.48	190	103	H
			5.92884	-62.65	Pk	35.50	-19.40	11.80	0.00	-34.75	-27.00	-7.75	190	103	H
			5.85001	-54.27	Pk	35.20	-19.40	11.80	0.00	-26.67	26.99	-53.66	181	100	V
			5.97357	-64.98	Pk	35.60	-19.20	11.80	0.00	-36.78	-27.00	-9.78	181	100	V

Note. Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5825 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.

5825 MHz DATA

Radiated Emissions

Frequency (GHz)	Mean Reading (dBuV)	Det	Antenna Factor (dBm)	6GHz_HP_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 (m)	Polarity
7.76219	34.82	PK-U	35.9	-24.6	0	46.12	-	-	-	-	68.2	-22.08	53	178	H
7.77002	34.51	PK-U	35.9	-24.5	0	45.81	-	-	-	-	68.2	-22.29	176	101	V
* 11.69459	33.11	PK-U	38.3	-21.2	0	50.31	-	-	74	-23.69	-	-	0	100	H
* 11.64839	33.25	PK-U	38.3	-21.1	0	50.45	-	-	74	-23.54	-	-	0	100	V
17.47155	32.7	PK-U	41.1	-16.3	0	57.5	-	-	-	-	68.2	-10.7	0	100	H
17.47795	32.01	PK-U	41.2	-16.4	0	56.81	-	-	-	-	68.2	-11.39	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	ANT1	* 7.65504	35.06	PK-U	35.80	-24.70	0.00	46.16	-	-	74.00	-27.84	-	-	0	100	H
			* 7.65718	35.99	PK-U	35.80	-24.80	0.00	46.99	-	-	74.00	-27.01	-	-	0	100	V
			* 11.48878	33.33	PK-U	38.20	-21.10	0.00	50.43	-	-	74.00	-23.57	-	-	0	100	H
			* 11.49313	32.75	PK-U	38.20	-21.10	0.00	49.85	-	-	74.00	-24.15	-	-	0	100	V
			17.237	32.33	PK-U	41.10	-16.60	0.00	56.83	-	-	-	-	68.20	-11.37	0	100	H
			17.235	31.43	PK-U	41.10	-16.60	0.00	55.93	-	-	-	-	68.20	-12.27	0	100	V
	5785	ANT1	* 7.71768	34.89	PK-U	35.90	-25.00	0.00	45.79	-	-	74.00	-28.21	-	-	0	100	H
			* 7.7155	35.23	PK-U	35.90	-25.10	0.00	46.03	-	-	74.00	-27.97	-	-	0	100	V
			* 11.5741	33.80	PK-U	38.20	-21.10	0.00	50.90	-	-	74.00	-23.10	-	-	0	100	H
			* 11.56973	33.41	PK-U	38.20	-21.20	0.00	50.41	-	-	74.00	-23.59	-	-	0	100	V
			17.355	32.72	PK-U	41.10	-16.80	0.00	57.02	-	-	-	-	68.20	-11.18	0	100	H
			17.357	33.11	PK-U	41.10	-16.80	0.00	57.41	-	-	-	-	68.20	-10.79	0	100	V
	5825	ANT1	7.762	34.82	PK-U	35.90	-24.60	0.00	46.12	-	-	-	-	68.20	-22.08	53	178	H
			7.770	34.51	PK-U	35.90	-24.50	0.00	45.91	-	-	-	-	68.20	-22.29	176	101	V
			* 11.65459	33.11	PK-U	38.30	-21.10	0.00	50.31	-	-	74.00	-23.69	-	-	0	100	H
			* 11.64839	33.26	PK-U	38.30	-21.10	0.00	50.46	-	-	74.00	-23.54	-	-	0	100	V
			17.472	32.70	PK-U	41.10	-16.30	0.00	57.50	-	-	-	-	68.20	-10.70	0	100	H
			17.478	32.01	PK-U	41.20	-16.40	0.00	56.81	-	-	-	-	68.20	-11.39	0	100	V

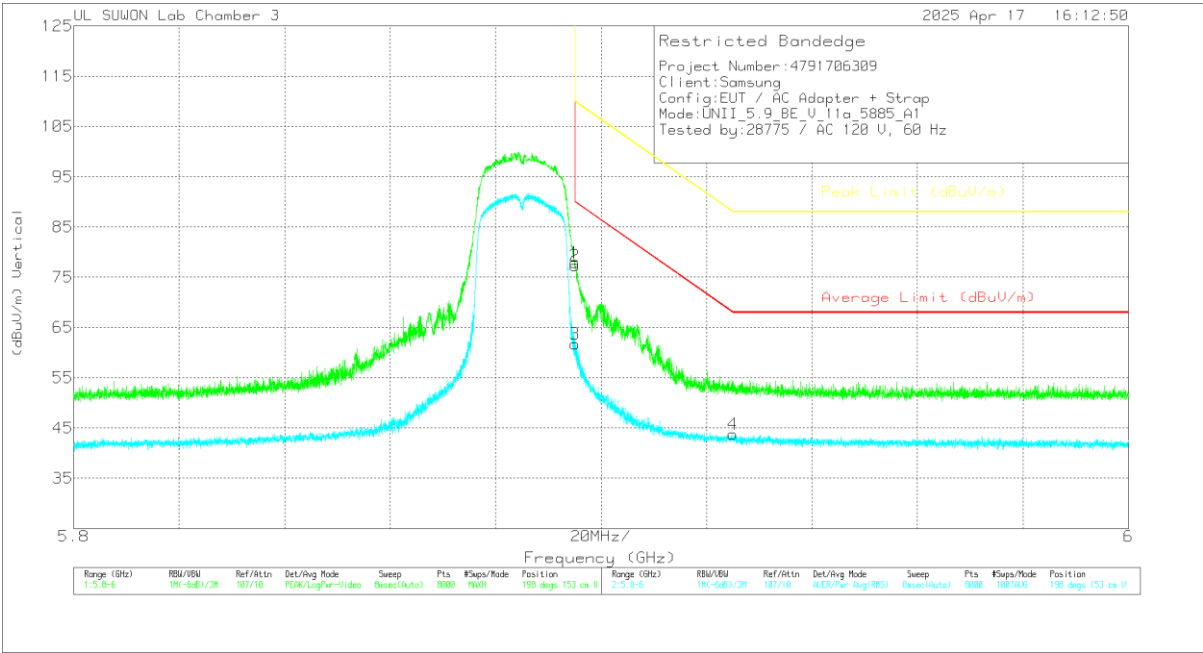
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

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

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

BANDEDGE (WORST CASE: 802.11a / 5885 MHz)

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)	Azimuth (Degs)	Height (cm)	Polarity
1	5.89501	61.53	PK	35.4	-19.4	0	77.93	-	-	109.99	-32.06	198	153	V
2	5.89511	61.25	PK	35.4	-19.4	0	77.25	-	-	109.92	-32.67	198	153	V
3	5.89501	45.52	RMS	35.4	-19.4	-21	61.73	89.99	-28.26	-	-	198	153	V
4	5.92504	27.49	RMS	35.5	-19.4	-21	43.8	68	-24.2	-	-	198	153	V

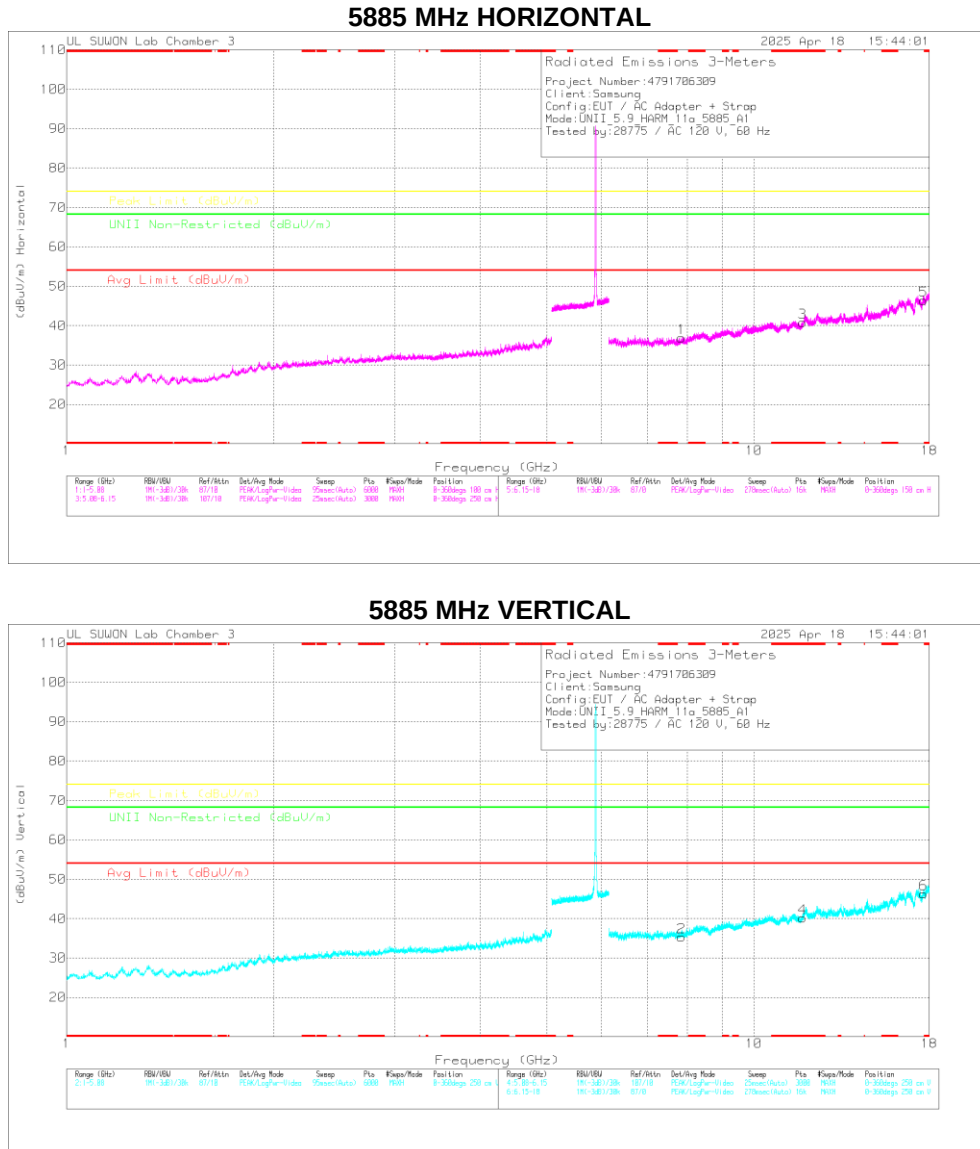
PK - Peak detector
RMS - RMS detection

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	5885	ANT1	5.895	59.70	Pk	35.40	-19.40	0.00	75.70	-	-	109.99	-34.29	187	108	H
			5.925	40.57	Pk	35.50	-19.40	0.00	56.67	-	-	88.14	-31.47	187	108	H
			5.895	40.78	RMS	35.40	-19.40	0.21	56.99	89.99	-33.00	-	-	187	108	H
			5.926	26.91	RMS	35.50	-19.40	0.21	43.22	68.00	-24.78	-	-	187	108	H
			5.895	61.93	Pk	35.40	-19.40	0.00	77.93	-	-	109.99	-32.06	198	153	V
			5.895	61.25	Pk	35.40	-19.40	0.00	77.25	-	-	109.92	-32.67	198	153	V
			5.895	45.52	RMS	35.40	-19.40	0.21	61.73	89.99	-28.26	-	-	198	153	V
			5.925	27.49	RMS	35.50	-19.40	0.21	43.80	68.00	-24.20	-	-	198	153	V
802.11n (HT20)	5885	ANT1	5.895	61.73	Pk	35.40	-19.40	0.00	77.73	-	-	109.99	-32.26	187	104	H
			5.925	40.94	Pk	35.50	-19.40	0.00	57.04	-	-	88.00	-30.96	187	104	H
			5.895	44.22	RMS	35.40	-19.40	0.13	60.35	89.99	-29.64	-	-	187	104	H
			5.926	26.87	RMS	35.50	-19.40	0.13	43.10	68.00	-24.90	-	-	187	104	H
			5.895	63.80	Pk	35.40	-19.40	0.00	79.80	-	-	109.99	-30.19	196	100	V
			5.895	64.67	Pk	35.40	-19.40	0.00	80.67	-	-	109.97	-29.30	196	100	V
			5.895	46.73	RMS	35.40	-19.40	0.13	62.86	89.99	-27.13	-	-	196	100	V
			5.926	27.45	RMS	35.50	-19.40	0.13	43.68	68.00	-24.32	-	-	196	100	V

Note. Pk - Peak detector, RMS - RMS detector

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5885 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.

5885 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas. Reading (dBuV)	Det	Antenna_Factor (dBm)	GHz_HP_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 (m)	Polarity
7.847	34.72	PK-U	35.9	-24.1	0	45.52	-	-	-	-	68.2	-21.68	124	110	H
7.84575	35.41	PK-U	35.9	-24.1	0	47.51	-	-	-	-	68.2	-20.69	212	259	V
*11.77006	33.7	PK-U	38.4	-21.2	0	50.9	-	-	74	-23.1	-	-	0	100	H
*11.76513	33.96	PK-U	38.4	-21.2	0	51.05	-	-	74	-22.94	-	-	0	100	V
17.65467	30.52	PK-U	41.3	-15.4	0	56.42	-	-	-	-	68.2	-11.78	0	100	H
17.65548	30.78	PK-U	41.3	-15.4	0	56.68	-	-	-	-	68.2	-11.52	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

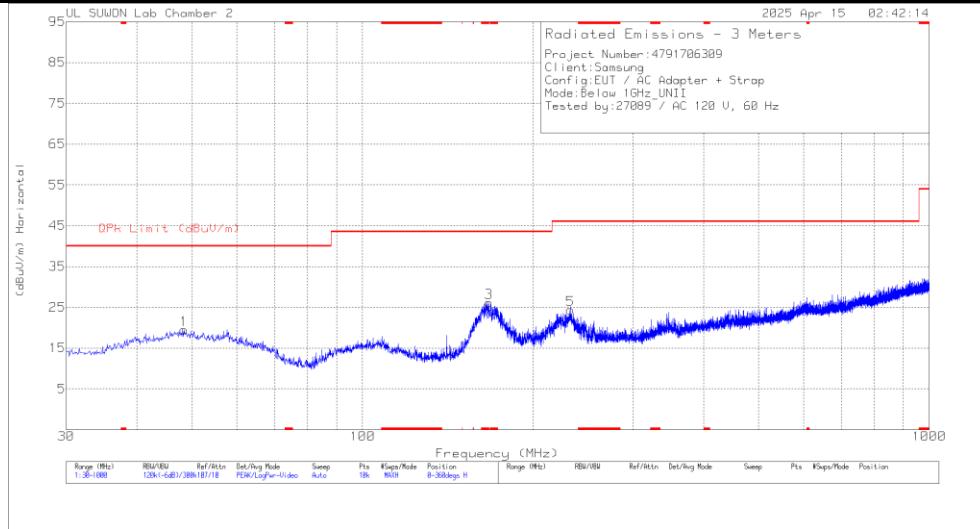
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	Loss [dB]	DC Corr [dB]	Result dBuV/m	AV Limit dBuV/m	AV Margin [dB]	PK Limit dBuV/m	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5845	ANT1	7.791	34.78	PK-U	35.90	-24.40	0.00	46.28	-	-	-	-	68.20	-21.92	0	100	H
			7.790	35.01	PK-U	35.90	-24.40	0.00	46.51	-	-	-	-	68.20	-21.69	0	100	V
			* 11.69035	33.54	PK-U	38.40	-21.10	0.00	50.84	-	-	74.00	-23.16	-	-	0	100	H
			* 11.69373	33.76	PK-U	38.40	-21.20	0.00	50.96	-	-	74.00	-23.04	-	-	0	100	V
			17.533	31.24	PK-U	41.20	-16.60	0.00	55.84	-	-	-	-	68.20	-12.36	0	100	H
			17.535	31.34	PK-U	41.20	-16.60	0.00	55.94	-	-	-	-	68.20	-12.26	0	100	V
	5865	ANT1	7.820	34.28	PK-U	35.90	-24.20	0.00	45.98	-	-	-	-	68.20	-22.22	132	104	H
			7.819	35.01	PK-U	35.90	-24.20	0.00	46.71	-	-	-	-	68.20	-21.49	204	250	V
			* 11.72791	33.63	PK-U	38.40	-21.40	0.00	50.63	-	-	74.00	-23.37	-	-	0	100	H
			* 11.72616	34.04	PK-U	38.40	-21.40	0.00	51.04	-	-	74.00	-22.96	-	-	0	100	V
			17.600	31.33	PK-U	41.30	-16.10	0.00	56.53	-	-	-	-	68.20	-11.67	0	100	H
			17.596	30.92	PK-U	41.30	-16.10	0.00	56.12	-	-	-	-	68.20	-12.08	0	100	V
	5885	ANT1	7.847	34.72	PK-U	35.90	-24.10	0.00	46.52	-	-	-	-	68.20	-21.68	124	110	H
			7.847	35.41	PK-U	35.90	-24.10	0.00	47.21	-	-	-	-	68.20	-20.99	212	299	V
			* 11.77008	33.70	PK-U	38.40	-21.20	0.00	50.90	-	-	74.00	-23.10	-	-	0	100	H
			* 11.76613	33.96	PK-U	38.40	-21.30	0.00	51.06	-	-	74.00	-22.94	-	-	0	100	V
			17.655	30.52	PK-U	41.30	-15.40	0.00	56.42	-	-	-	-	68.20	-11.78	0	100	H
			17.655	30.78	PK-U	41.30	-15.40	0.00	56.68	-	-	-	-	68.20	-11.52	0	100	V

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

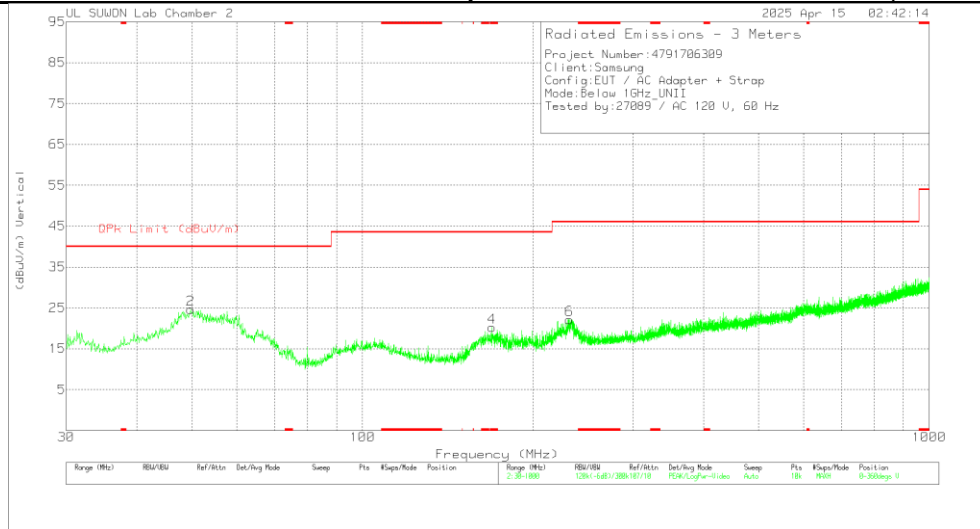
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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)	DC Corr (dB)	Corrected Reading (dBuV/m)	QPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	48.43	31.41	Pk	19.7	-31.6	0	19.51	40	-20.49	0-360	100	H
3	167.255	42.66	Pk	14.4	-30.9	0	26.16	43.52	-17.36	0-360	100	H
5	232.924	37.31	Pk	17.7	-30.6	0	24.41	46.02	-21.61	0-360	100	H
2	49.691	36.57	Pk	19.8	-31.7	0	24.67	40	-15.33	0-360	100	V
4	* 169.292	36.77	Pk	14.4	-30.9	0	20.27	43.52	-23.25	0-360	100	V
6	231.566	35.13	Pk	17.7	-30.7	0	22.13	46.02	-23.89	0-360	100	V

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

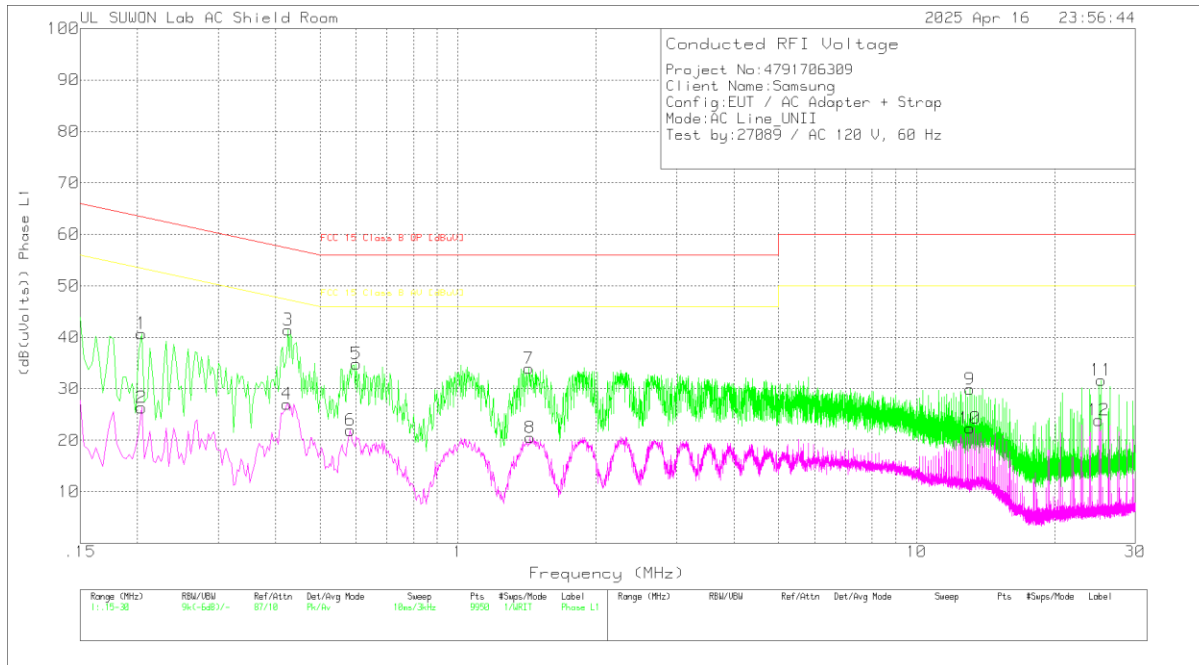
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

WORST EMISSIONS

LINE 1 DATA



Trace Markers

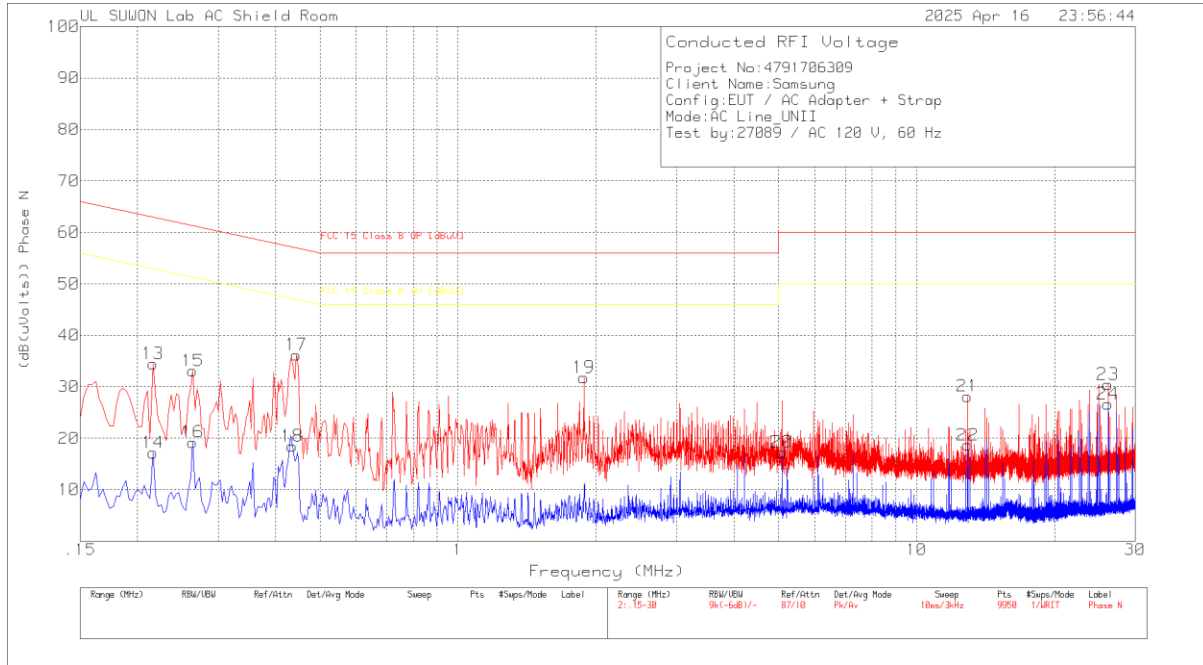
Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_Wit h EX_L1 [dB]	Cable Loss [dB]	Corrected Reading [dBuV]	FCC 15 Class B QP [dBuV]	Margin (dB)	FCC 15 Class B AV [dBuV]	Margin (dB)
1	.204	30.83	Pk	9.8	.1	40.73	63.45	-22.72	-	-
2	.204	16.44	Av	9.8	.1	26.34	-	-	53.45	-27.11
3	.426	31.53	Pk	9.8	.1	41.43	57.33	-15.9	-	-
4	.423	17.14	Av	9.8	.1	27.04	-	-	47.39	-20.35
5	.6	24.96	Pk	9.8	.1	34.86	56	-21.14	-	-
6	.582	12.05	Av	9.8	.1	21.95	-	-	46	-24.05
7	1.428	24.16	Pk	9.7	.1	33.96	56	-22.04	-	-
8	1.437	10.71	Av	9.7	.1	20.51	-	-	46	-25.49
9	13.071	19.63	Pk	10	.3	29.93	60	-30.07	-	-
10	13.071	12.05	Av	10	.3	22.35	-	-	50	-27.65
11	25.272	20.98	Pk	10.4	.3	31.68	60	-28.32	-	-
12	24.987	13.19	Av	10.4	.3	23.89	-	-	50	-26.11

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 [dBuV]	FCC 15 Class B QP [dBuV]	Margin (dB)	FCC 15 Class B AV [dBuV]	Margin (dB)
13	.216	24.57	Pk	9.8	.1	34.47	62.97	-28.5	-	-
14	.216	7.28	Av	9.8	.1	17.18	-	-	52.97	-35.79
15	.264	23.41	Pk	9.6	.1	33.11	61.3	-28.19	-	-
16	.264	9.53	Av	9.6	.1	19.23	-	-	51.3	-32.07
17	.444	26.28	Pk	9.8	.1	36.18	56.99	-20.81	-	-
18	.435	8.55	Av	9.8	.1	18.45	-	-	47.16	-28.71
19	1.881	22.01	Pk	9.7	.1	31.81	56	-24.19	-	-
20	5.085	7.27	Av	9.8	.2	17.27	-	-	50	-32.73
21	12.924	17.86	Pk	10	.3	28.16	60	-31.84	-	-
22	12.927	8.36	Av	10	.3	18.66	-	-	50	-31.34
23	26.148	19.53	Pk	10.6	.3	30.43	60	-29.57	-	-
24	26.148	15.76	Av	10.6	.3	26.66	-	-	50	-23.34

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 SISO 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) x (19 x 10 ⁶ PRI _{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

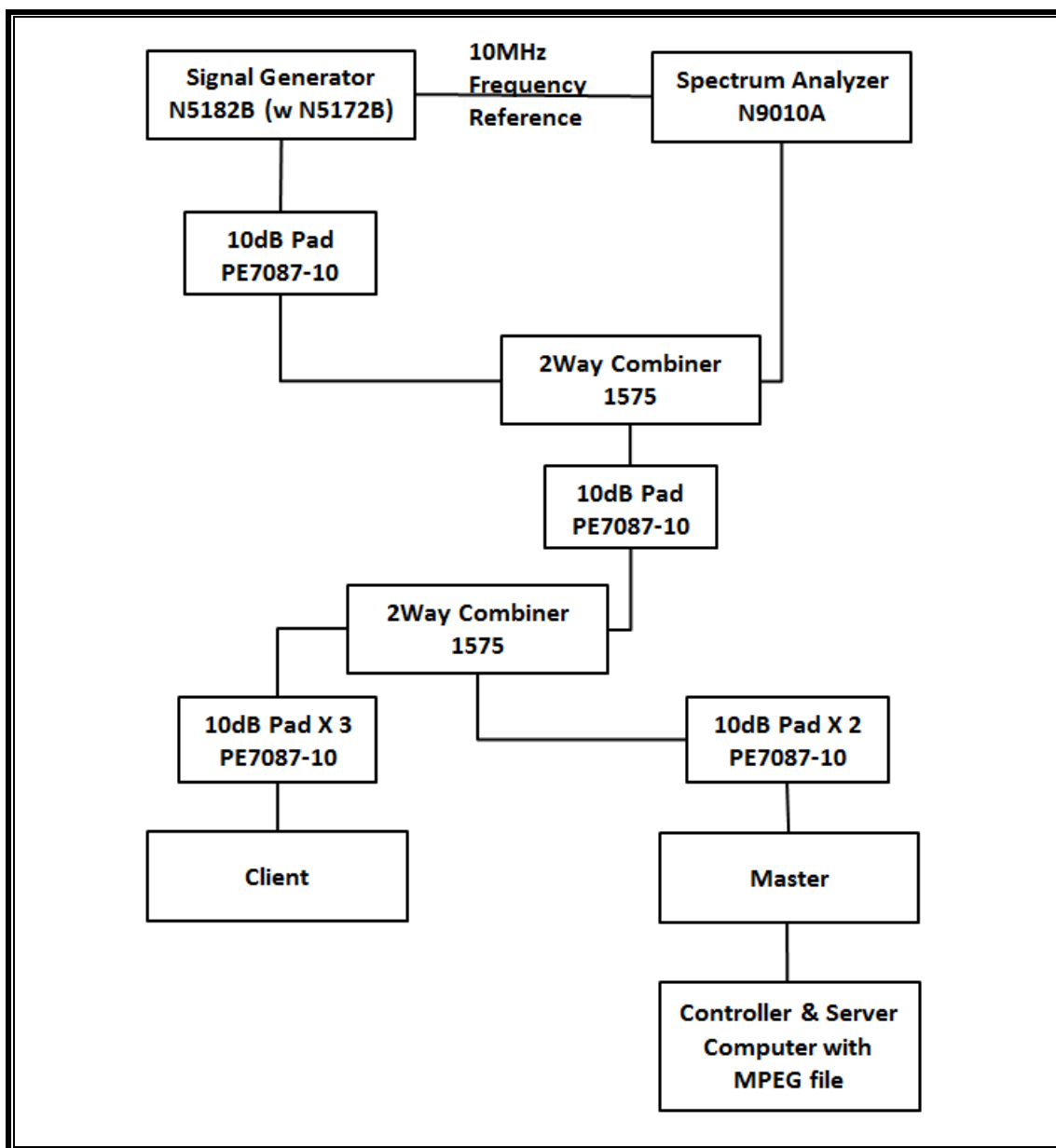
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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.

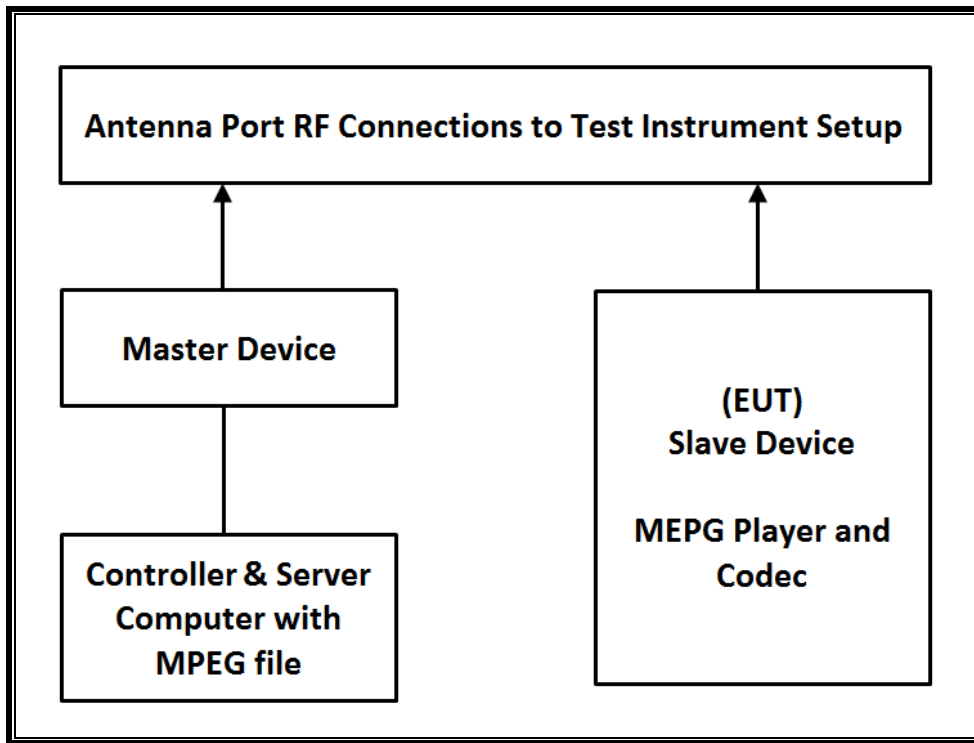
TEST AND MEASUREMENT EQUIPMENT

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	2026-01-02
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	2025-07-24
Combiner	WEINSCHEL	WA1534	UL001	2026-01-03
Combiner	WEINSCHEL	WA1534	UL003	2026-01-03

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	Cisco	AIR-CAP3702E-A-K9	FTX182276QX	LDK102087
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 (802.11n HT20) within these bands is 15.57 dBm in the 5250-5350 MHz band and 5470-5725 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -8.4 dBi for UNII 2A and -8.1 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. 1 nominal channel bandwidth are implemented: 20 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.

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

The Master Device is a Cisco Access Point, FCC ID: LDK102087. 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.

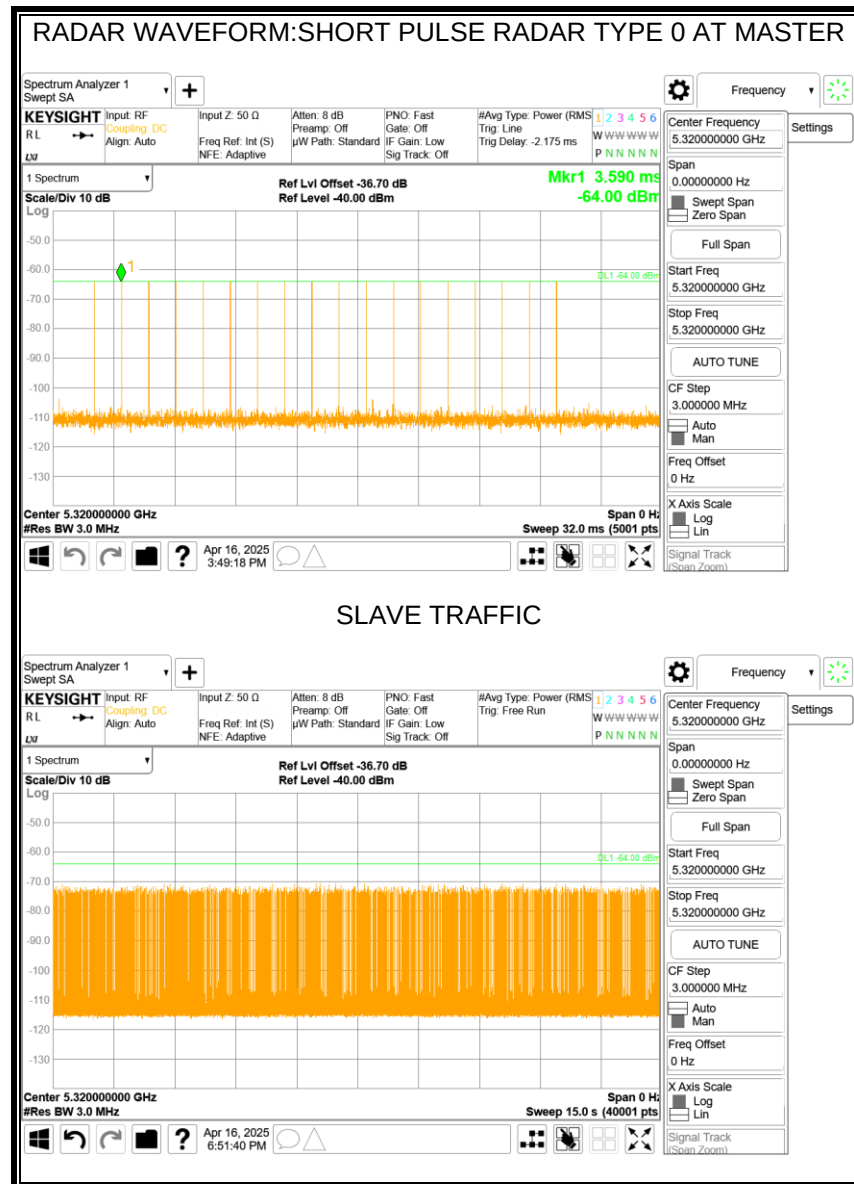
14.2. RESULTS FOR 20 MHz BANDWIDTH (UNII-2A BAND)

14.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5320 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

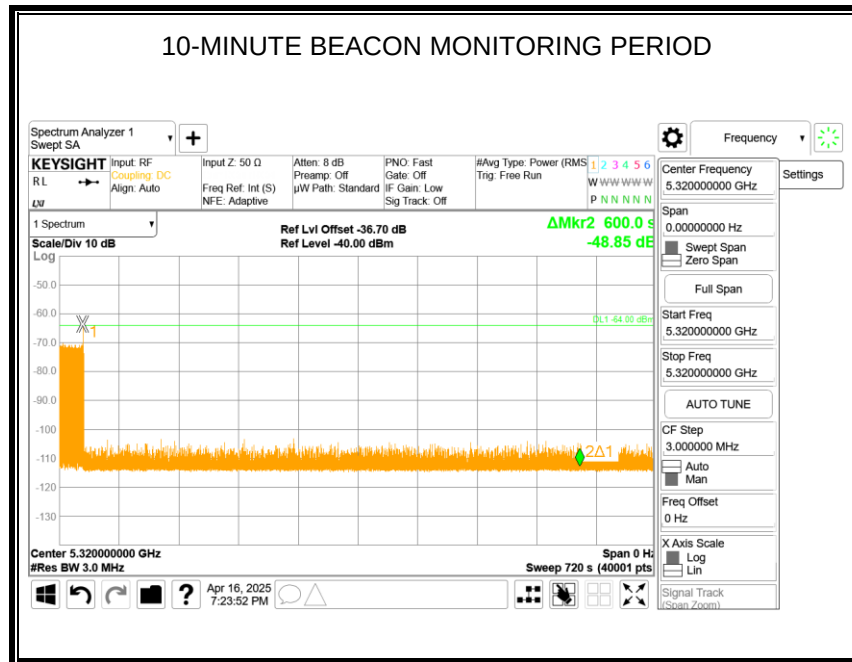
Channel Move Time (sec)	Limit (sec)
0.770	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
4.500	60

NON-OCCUPANCY PERIOD

RESULTS

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



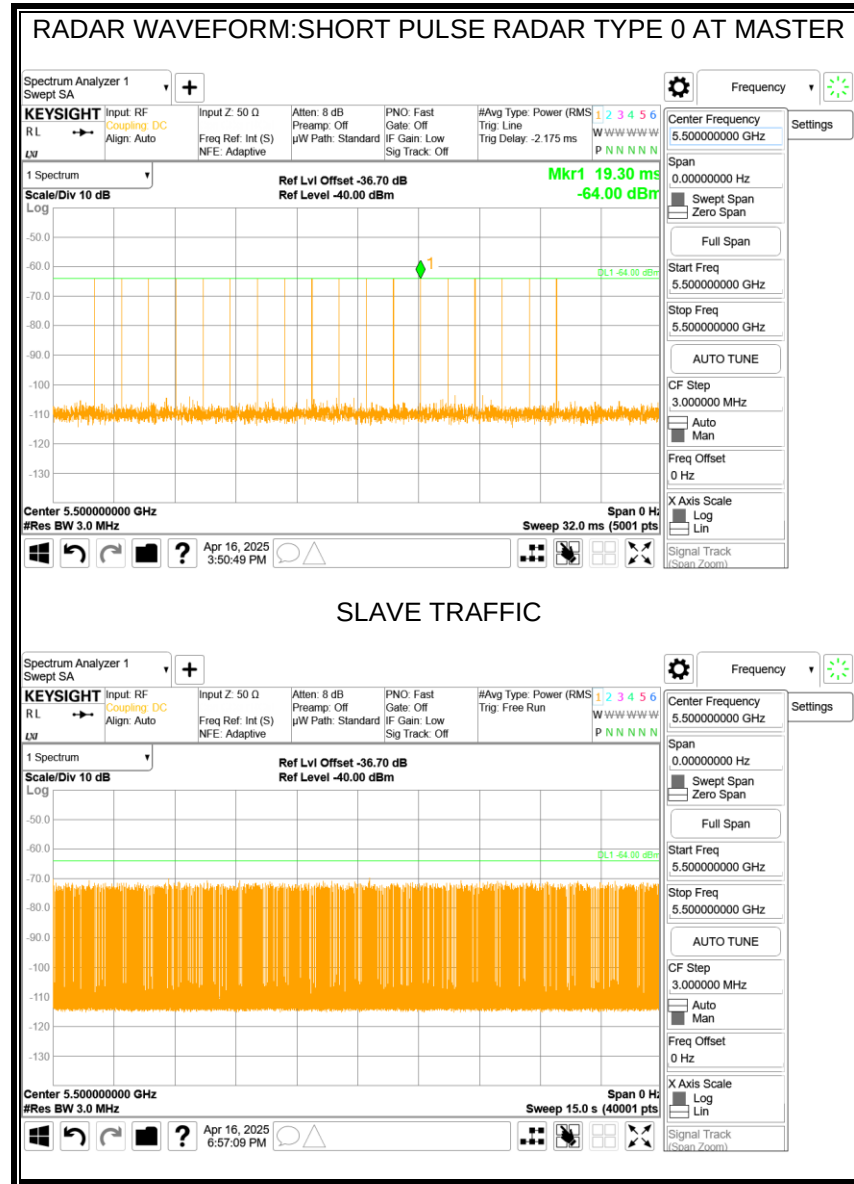
14.3. RESULTS FOR 20 MHz BANDWIDTH (UNII-2C BAND)

14.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5500 MHz.

14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



14.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.3.4. 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

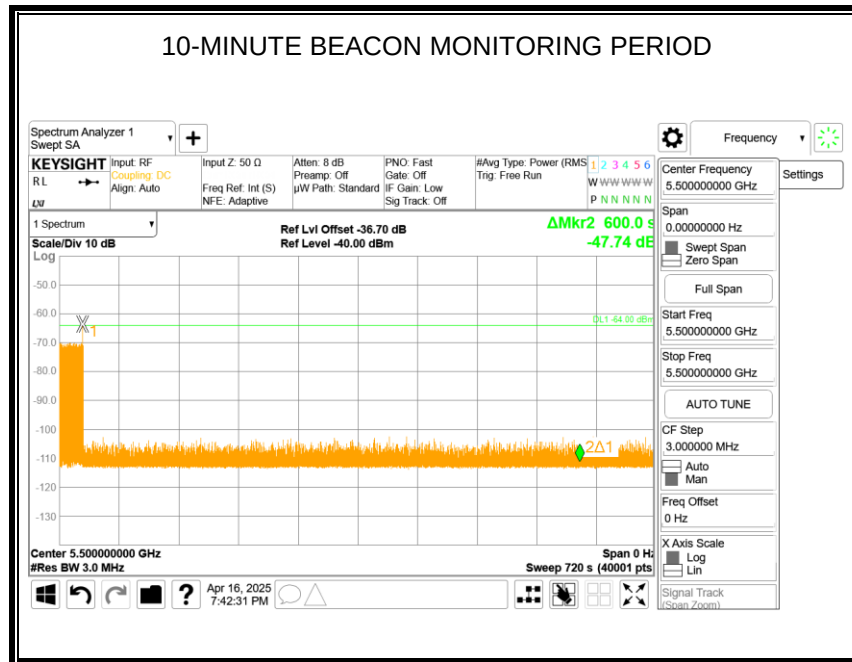
Channel Move Time (sec)	Limit (sec)
0.755	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
4.500	60

NON-OCCUPANCY PERIOD

RESULTS

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



END OF TEST REPORT