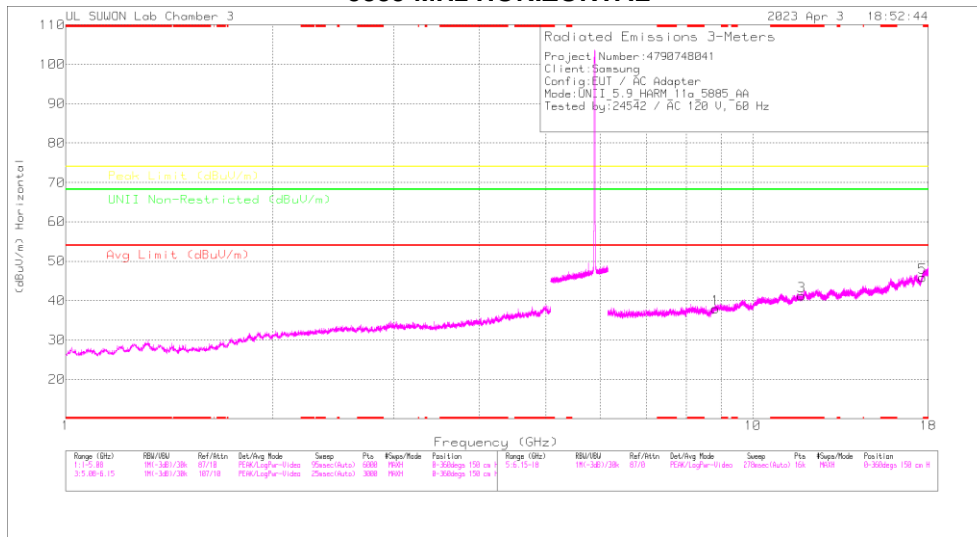
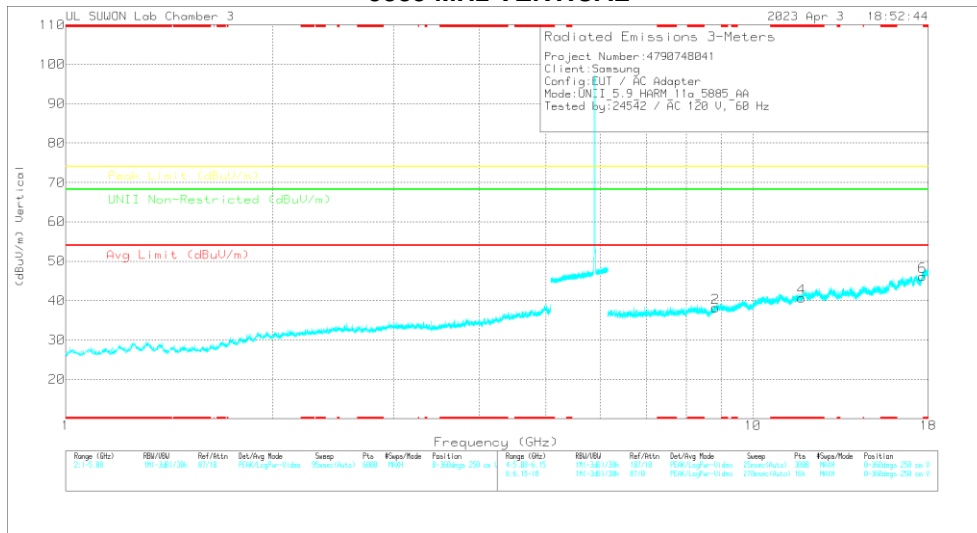


HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5885 MHz)

5885 MHz HORIZONTAL



5885 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.

5885 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas. Reading (dBuV)	Det.	317_0021857	6GHz_HPt(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)	Azimuth (Deg)	Height (cm)	Polarity
8.83409	34.48	PK-U	36.1	-22.4	0	48.18	-	-	-	-	68.2	-20.02	0	100	H
8.82122	34.85	PK-U	36.1	-22.2	0	48.75	-	-	-	-	68.2	-19.45	0	100	V
*11.77656	35.46	PK-U	35.5	-21.6	0	52.36	-	-	74	-21.64	-	-	0	100	H
*11.76728	34	PK-U	38.4	-21.4	0	51	-	-	74	-23	-	-	0	100	V
17.65955	31.2	PK-U	41.3	-15.9	0	56.6	-	-	-	-	68.2	-11.6	0	100	H
17.65626	30.49	PK-U	41.3	-16	0	55.79	-	-	-	-	68.2	-12.41	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	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	8.772	33.97	PK-U	36.10	-22.70	0.00	47.37	-	-	-	-	68.20	-20.83	360	100	H	
			8.770	33.97	PK-U	36.10	-22.70	0.00	47.37	-	-	-	-	68.20	-20.83	360	100	V	
			* 11.6897	34.62	PK-U	38.40	-21.50	0.00	51.52	-	-	74.00	-22.48	-	-	360	100	H	
			* 11.68525	34.13	PK-U	38.40	-21.40	0.00	51.13	-	-	74.00	-22.87	-	-	360	100	V	
			17.535	31.29	PK-U	41.20	-17.50	0.00	54.99	-	-	-	-	-	68.20	-13.21	360	100	H
			17.534	30.88	PK-U	41.20	-17.40	0.00	54.68	-	-	-	-	-	68.20	-13.52	360	100	V
	5865	MIMO	8.797	35.14	PK-U	36.10	-22.40	0.00	48.84	-	-	-	-	68.20	-19.36	0	100	H	
			8.799	34.21	PK-U	36.10	-22.40	0.00	47.91	-	-	-	-	68.20	-20.29	0	100	V	
			* 11.7311	34.94	PK-U	38.40	-21.50	0.00	51.84	-	-	74.00	-22.16	-	-	0	100	H	
			* 11.7326	34.64	PK-U	38.40	-21.40	0.00	51.64	-	-	74.00	-22.36	-	-	0	100	V	
			17.595	31.00	PK-U	41.30	-17.00	0.00	55.30	-	-	-	-	-	68.20	-12.90	0	100	H
			17.598	32.02	PK-U	41.30	-17.00	0.00	56.32	-	-	-	-	-	68.20	-11.88	0	100	V
	5885	MIMO	8.834	34.48	PK-U	36.10	-22.40	0.00	48.18	-	-	-	-	68.20	-20.02	0	100	H	
			8.821	34.85	PK-U	36.10	-22.20	0.00	48.75	-	-	-	-	68.20	-19.45	0	100	V	
			* 11.77656	35.46	PK-U	38.50	-21.60	0.00	52.36	-	-	74.00	-21.64	-	-	0	100	H	
			* 11.76758	34.00	PK-U	38.40	-21.40	0.00	51.00	-	-	74.00	-23.00	-	-	0	100	V	
			17.660	31.20	PK-U	41.30	-15.90	0.00	56.60	-	-	-	-	-	68.20	-11.60	0	100	H
			17.656	30.49	PK-U	41.30	-16.00	0.00	55.79	-	-	-	-	-	68.20	-12.41	0	100	V
802.11ax (HE20) 54RU Spot-check	5845	MIMO	8.767	33.95	PK-U	36.10	-22.70	0.00	47.35	-	-	-	-	68.20	-20.85	0	100	H	
			8.767	34.24	PK-U	36.10	-22.70	0.00	47.64	-	-	-	-	68.20	-20.56	0	100	V	
			* 11.69243	34.82	PK-U	38.40	-21.40	0.00	51.82	-	-	74.00	-22.18	-	-	0	100	H	
			* 11.68903	35.08	PK-U	38.40	-21.40	0.00	52.08	-	-	74.00	-21.92	-	-	0	100	V	
			17.535	31.01	PK-U	41.20	-17.50	0.00	54.71	-	-	-	-	-	68.20	-13.49	0	100	H
			17.538	31.04	PK-U	41.20	-17.50	0.00	54.74	-	-	-	-	-	68.20	-13.46	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

11.6. Spurious Emissions for Simultaneous Transmission

11.6.1. Worst test case RSDB condition

Case 1	2.4 GHz WLAN ANT1 + ANT2	5GHz WLAN ANT1 + ANT2
Mode	802.11b	802.11ax HE80
Channel	1	155
Frequency[MHz]	2462	5775
Tone	-	106T
RU	-	53RU
Data Rate	1 Mbps	MCS 0
Axis (Worst)	Y	
Foldable condition	Open	

Case 2	2.4 GHz WLAN ANT1 + ANT2	6GHz WLAN ANT1 + ANT2
Mode	802.11b	802.11a
Channel	1	181
Frequency[MHz]	2462	6855
Tone	-	106T
RU	-	53RU
Data Rate	1 Mbps	MCS 0
Axis (Worst)	Y	
Foldable condition	Open	

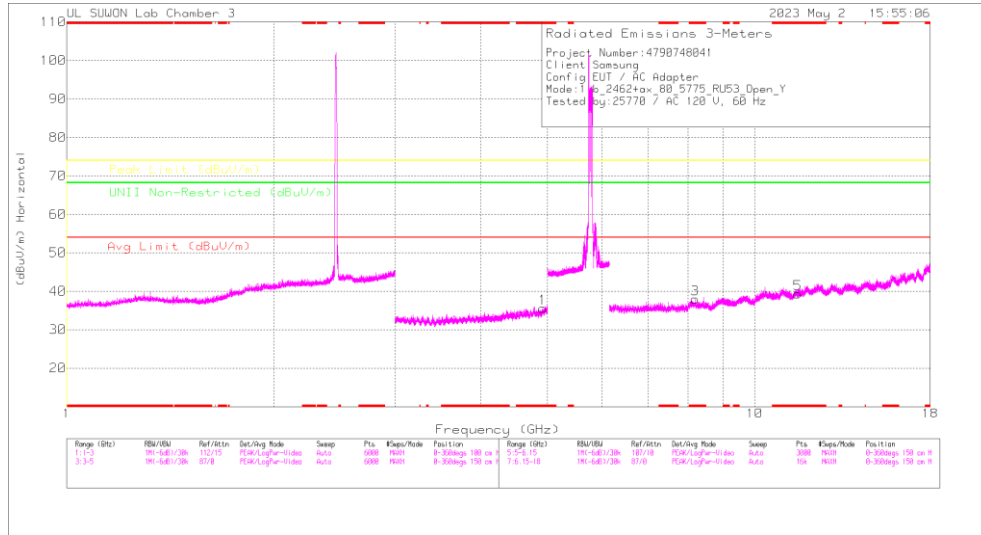
NOTE

The lowest margin condition among the channels and modes were selected for test. Low, mid, and high channels of 2.4GH WLAN were tested, and the worst case configuration & data were listed in the test report.

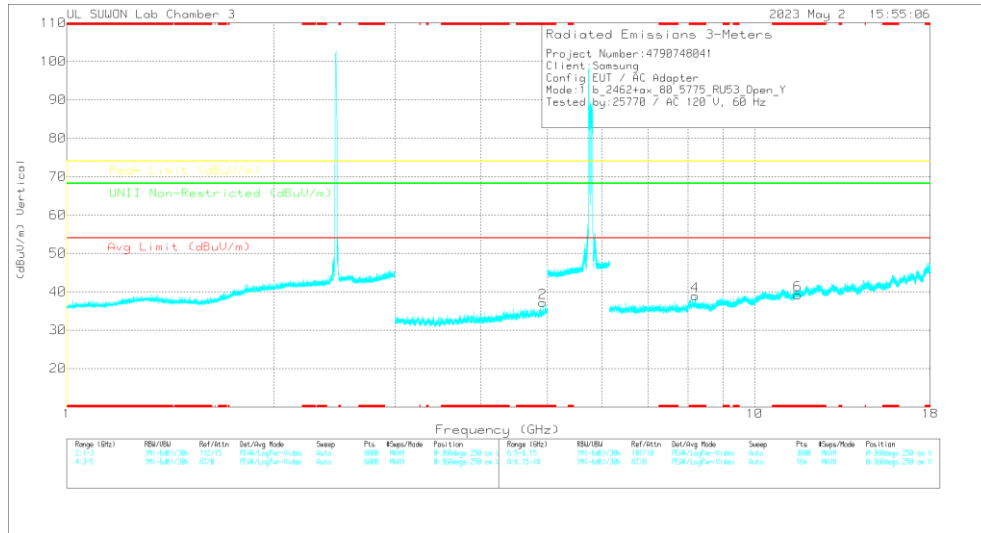
11.6.2. Test Results

Spurious emission for Simultaneous Transmission Case1. - Y axis / Open

HORIZONTAL



VERTICAL



Radiated Emissions

Frequency (GHz)	Main Reading (dBuV)	Det.	3117_0021867	6GHz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Lim (dBuV/m)	Margin (dB)	Peak Lim (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Admth (Degs)	Height (cm)	Polarity	
* 4.9241	39.26	PK2	34.2	-29.5	0	44.26	-	-	74	-29.44	-	-	-	57	108	H
* 4.92402	29.34	MAv1	34.2	-29.5	0	34.54	54	-19.36	-	-	-	-	-	57	108	H
* 4.9252	39.5	PK2	34.3	-29.5	0	44.9	-	-	74	-29.1	-	-	-	181	100	V
* 4.92392	28.85	MAv1	34.2	-29.5	0	34.15	54	-19.85	-	-	-	-	-	181	100	V

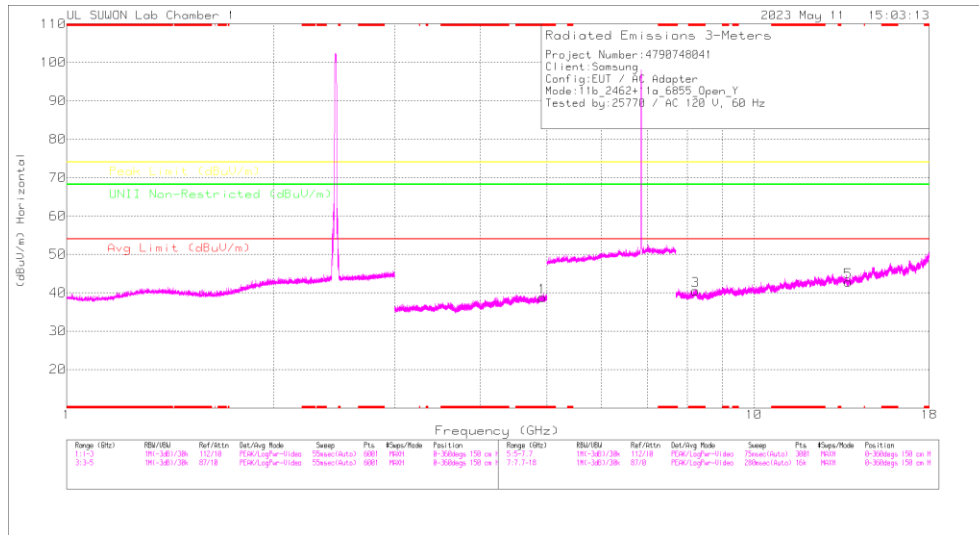
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak
 MAv1 - KDB558074 Option 1 Maximum RMS Average

Frequency (GHz)	Main Reading (dBuV)	Det.	3117_0021867	6GHz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Lim (dBuV/m)	Margin (dB)	Peak Lim (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Admth (Degs)	Height (cm)	Polarity	
* 8.20134	34.77	PK-U	36	-23.5	0	47.27	-	-	74	-26.73	-	-	-	202	327	H
* 8.2023	24.16	ADR	36	-23.6	0	36.56	54	-17.44	-	-	-	-	-	202	327	H
* 8.20255	36.27	PK-U	36	-23.6	0	48.67	-	-	74	-25.33	-	-	-	189	121	V
* 8.20331	25.16	ADR	36	-23.5	0	37.66	54	-16.34	-	-	-	-	-	189	121	V
* 11.55531	32.37	PK-U	38.2	-21.5	0	49.07	-	-	74	-24.83	-	-	-	0	100	H
* 11.55364	32.33	PK-U	38.2	-21.5	0	48.93	-	-	74	-25.07	-	-	-	0	100	V

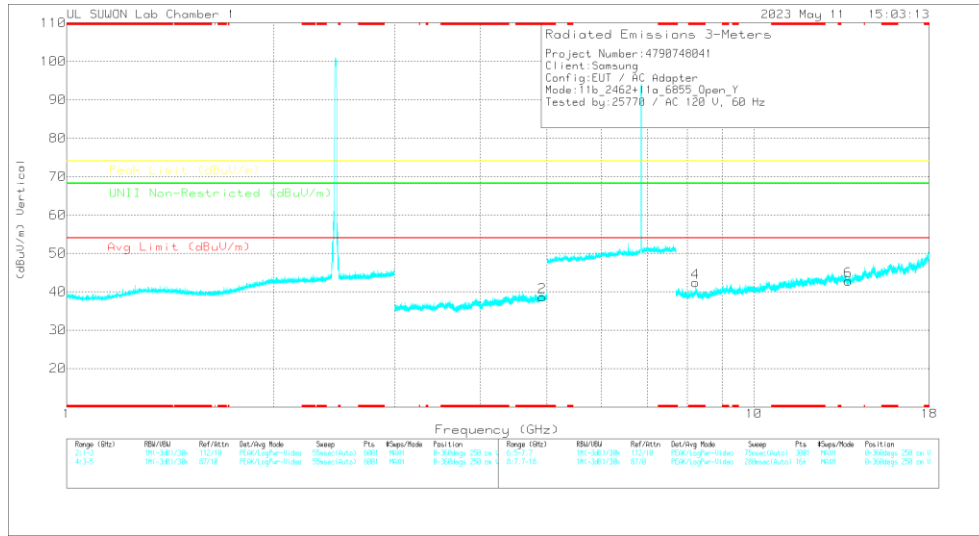
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK-U - U-NII: Maximum Peak
 ADR - U-NII AD primary method, RMS average

Case2. – Y axis / Open

HORIZONTAL



VERTICAL



Radiated Emissions

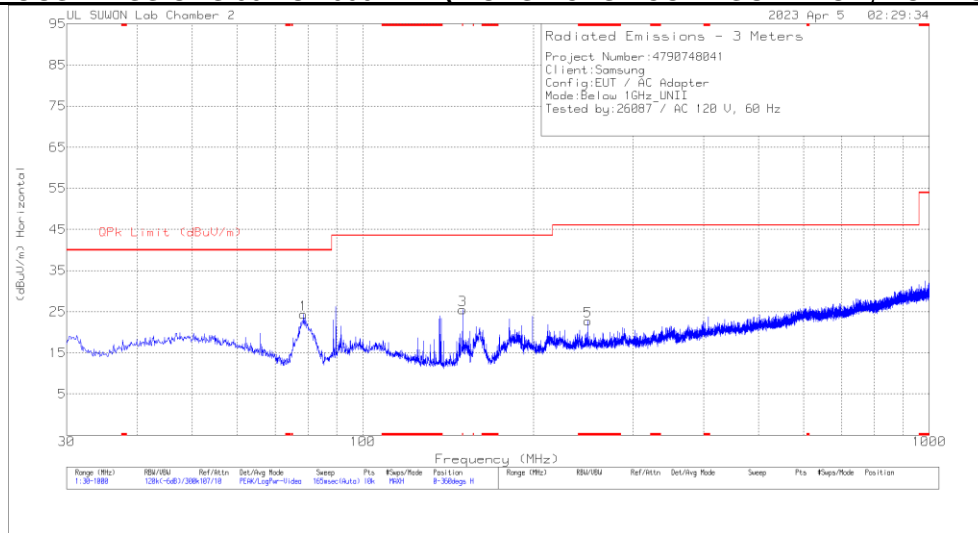
Frequency (GHz)	Meas Reading (dBuV)	Det	317_00168717	SGHz_LF1(B)	DTS Noise(B)	DC Cor (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
* 4.93203	47.25	PK2	34.2	-32.5	.6	0	49.55	-	-	74	-24.45	-	-	0	100	H
* 4.93104	47.29	PK2	34.2	-32.5	.6	0	49.59	-	-	74	-24.41	-	-	0	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK2 - KDB558074 Method: Maximum Peak

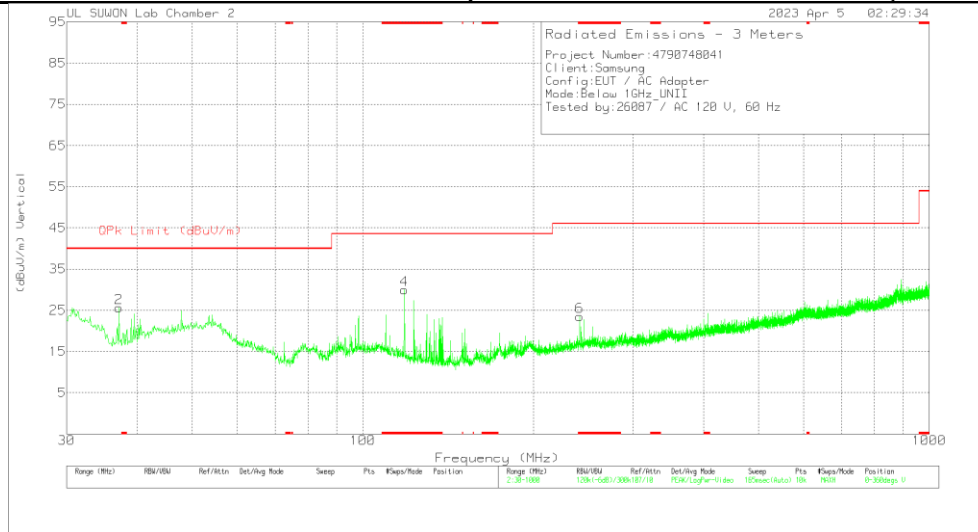
Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00168717	SGHz_HF1(B)	DC Cor (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity	
* 8.22585	43.2	PK-U	36.3	-28.2	0	51.3	-	-	74	-22.7	-	-	-	161	396	H
* 8.22599	30.95	ADR	36.3	-28.2	.15	39.2	54	-14.8	-	-	-	-	-	161	396	H
* 8.22592	43.38	PK-U	36.3	-28.2	0	51.49	-	-	74	-22.52	-	-	-	35	104	V
* 8.22584	33.51	ADR	36.3	-28.2	.15	41.76	54	-12.24	-	-	-	-	-	35	104	V
13.71322	39.91	PK-U	38.5	-24.3	0	54.11	-	-	-	-	68.2	-14.09	0	100	H	
13.71259	40.6	PK-U	38.5	-24.3	0	54.8	-	-	-	-	68.2	-13.4	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

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	VULB9163_749	Below_1G(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	OPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	78.597	42.98	Pk	12.8	-31.4	0	24.38	40	-15.62	0-360	100	H
3	* 149.989	42.48	Pk	14	-31	0	25.48	43.52	-18.04	0-360	200	H
5	* 249.414	34.63	Pk	18.6	-30.5	0	22.73	46.02	-23.29	0-360	100	H
2	37.081	39.85	Pk	17.6	-31.8	0	25.65	40	-14.35	0-360	100	V
4	* 118.464	45.41	Pk	15.8	-31.2	0	30.01	43.52	-13.51	0-360	100	V
6	* 241.46	35.77	Pk	18.3	-30.6	0	23.47	46.02	-22.55	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.

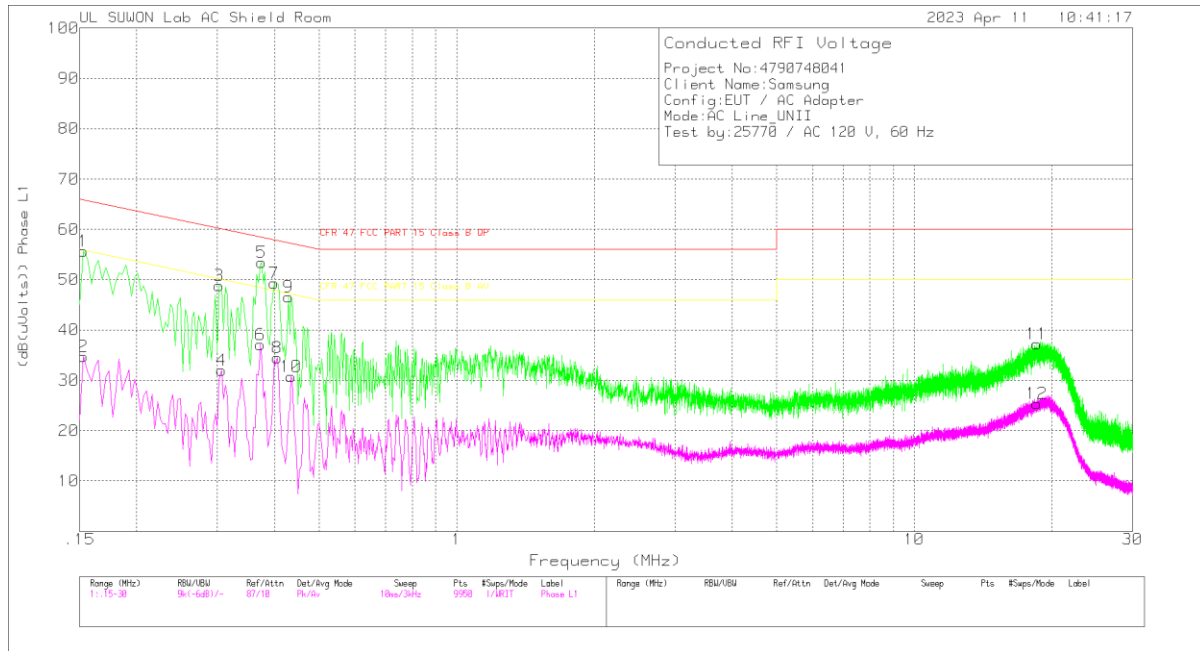
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
1	.153	45.79	Pk	9.8	.1	55.69	65.84	-10.15	-	-
2	.153	24.86	Av	9.8	.1	34.76	-	-	55.84	-21.08
3	.303	38.96	Pk	9.7	.2	48.86	60.16	-11.3	-	-
4	.306	22.06	Av	9.7	.2	31.96	-	-	50.08	-18.12
5	.375	43.43	Pk	9.8	.2	53.43	58.39	-4.96	-	-
6	.372	27.08	Av	9.8	.2	37.08	-	-	48.46	-11.38
7	.399	39.26	Pk	9.8	.2	49.26	57.87	-8.61	-	-
8	.405	24.51	Av	9.8	.2	34.51	-	-	47.75	-13.24
9	.429	36.6	Pk	9.8	.2	46.6	57.27	-10.67	-	-
10	.435	20.73	Av	9.8	.2	30.73	-	-	47.16	-16.43
11	18.525	26.69	Pk	10.1	.4	37.19	60	-22.81	-	-
12	18.522	14.92	Av	10.1	.4	25.42	-	-	50	-24.58

Pk - Peak detector

Av - Average detection

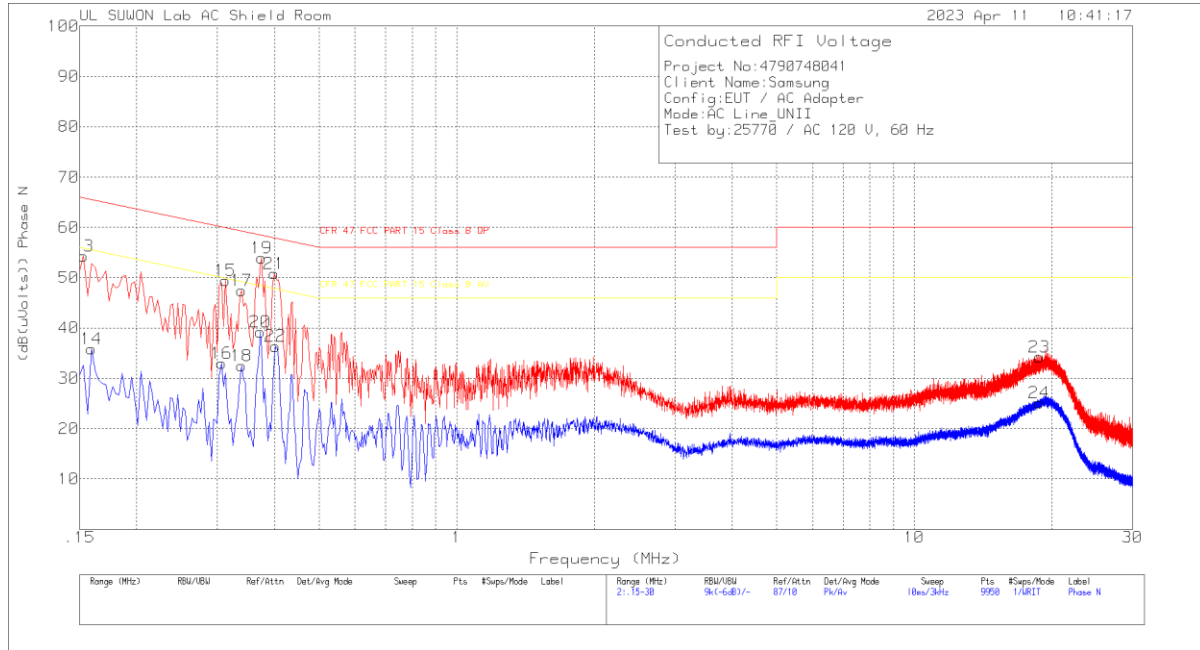
Quasi-Peak Emissions

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_L1[dB]	CABLELOS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.37425	40.12	Qp	9.8	.2	50.12	58.41	-8.29	-	-
.39975	37.41	Qp	9.8	.2	47.41	57.86	-10.45	-	-

Qp - Quasi-Peak detector

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOSS S(dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
13	.153	44.45	Pk	9.8	.1	54.35	65.84	-11.49	-	-
14	.159	25.94	Av	9.8	.1	35.84	-	-	55.52	-19.68
15	.312	39.5	Pk	9.7	.2	49.4	59.92	-10.52	-	-
16	.306	23.11	Av	9.7	.2	33.01	-	-	50.08	-17.07
17	.339	37.43	Pk	9.8	.2	47.43	59.23	-11.8	-	-
18	.339	22.52	Av	9.8	.2	32.52	-	-	49.23	-16.71
19	.375	43.89	Pk	9.8	.2	53.89	58.39	-4.5	-	-
20	.372	29.26	Av	9.8	.2	39.26	-	-	48.46	-9.2
21	.399	40.8	Pk	9.8	.2	50.8	57.87	-7.07	-	-
22	.402	26.41	Av	9.8	.2	36.41	-	-	47.81	-11.4
23	18.783	23.64	Pk	10.2	.4	34.24	60	-25.76	-	-
24	18.777	14.56	Av	10.2	.4	25.16	-	-	50	-24.84

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_With EX_N[dB]	CABLELOSS (dB)	Corrected Reading (dB(uVolts))	CFR 47 FCC PART 15 Class B QP	Margin (dB)	CFR 47 FCC PART 15 Class B AV	Margin (dB)
.37425	40.77	Qp	9.8	.2	50.77	58.41	-7.64	-	-
.37275	40.65	Qp	9.8	.2	50.65	58.44	-7.79	-	-
.39975	38.57	Qp	9.8	.2	48.57	57.86	-9.29	-	-

Qp - Quasi-Peak detector

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
<p>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.</p>	

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)
<p>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.</p>	

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

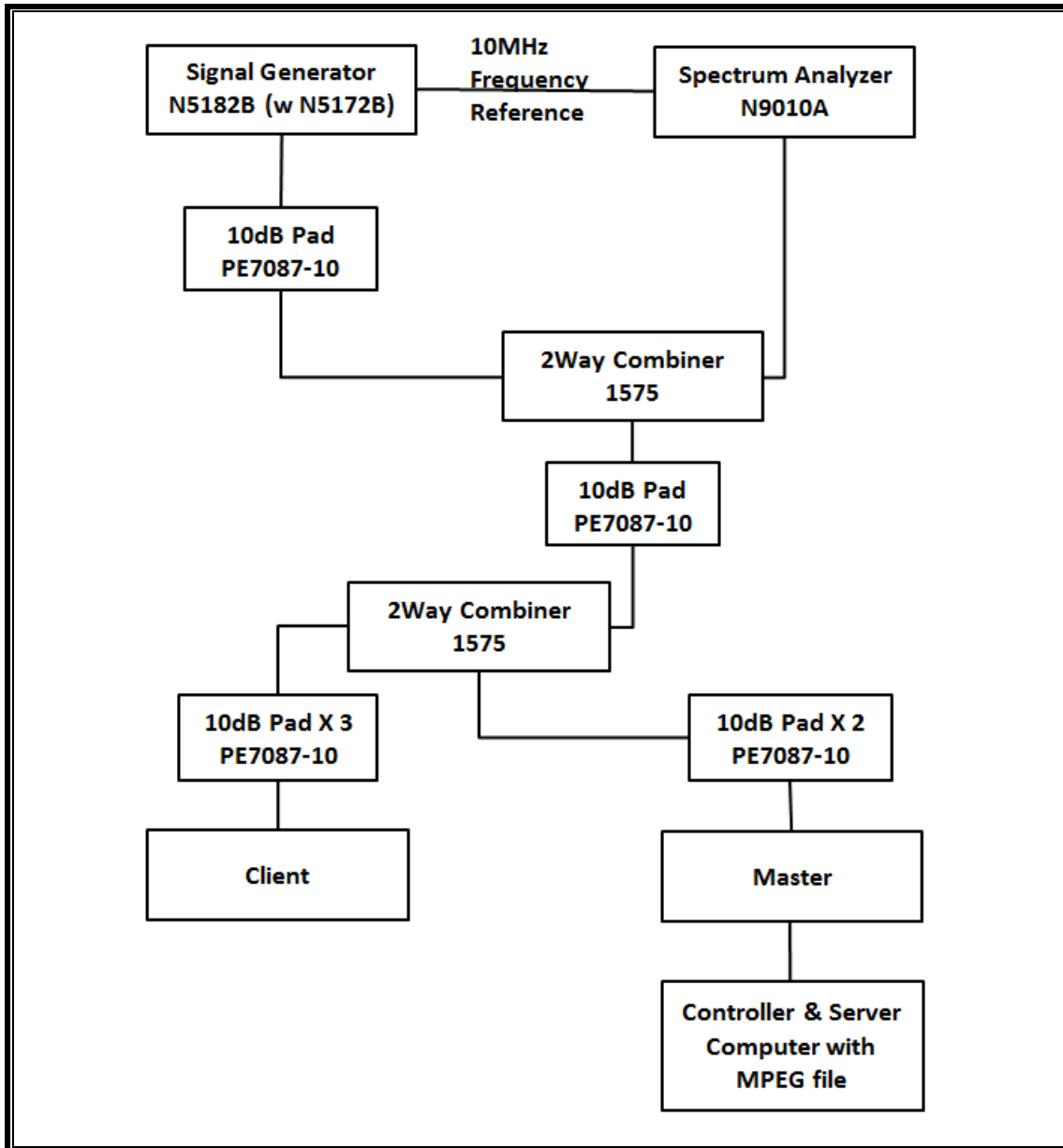
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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.

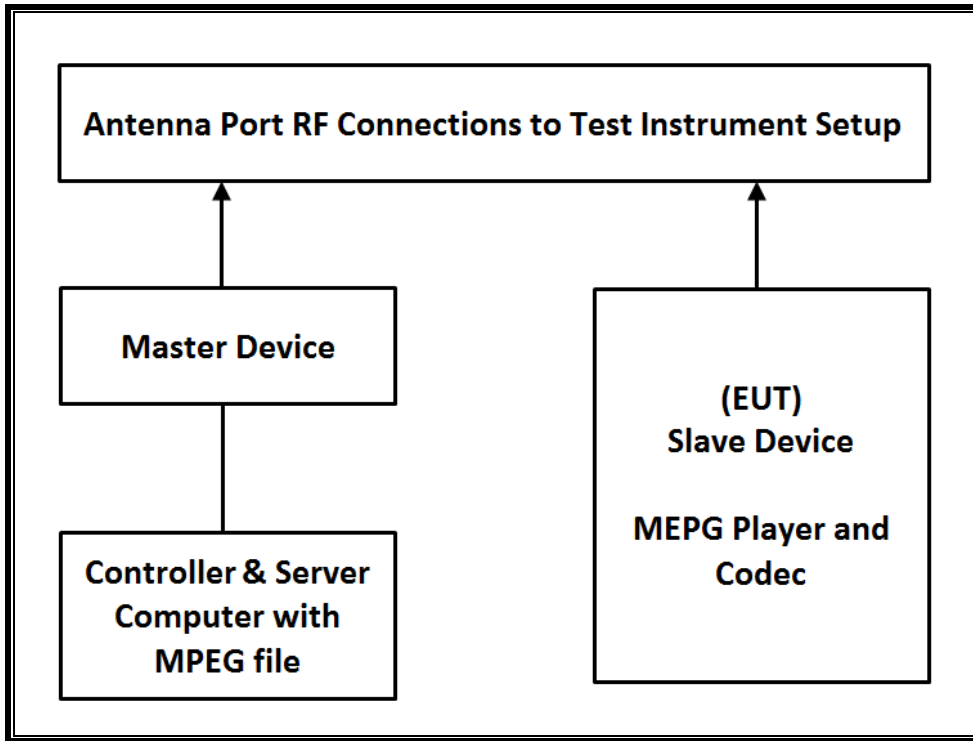
TEST AND MEASUREMENT EQUIPMENT

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, 7 GHz	Agilent / HP	N9010A	MY54200580	08-01-23
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	08-01-23
Combiner	WEINSCHTEL	WA1534	UL001	01-13-24
Combiner	WEINSCHTEL	WA1534	UL003	01-09-24

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 (802.11ac VHT80) within these bands is 17.08 dBm in the 5250-5350 MHz band and 17.04 dBm in the 5470-5725 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -3.88 dBi for UNII 2A and -3.59 dBi for UNII 2C.

Gain of ANT2 : -2.24 dBi for UNII 2A and -2.59 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. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 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 does not support channel puncturing.

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 80 MHz BANDWIDTH (UNII-2A BAND)

14.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5290 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

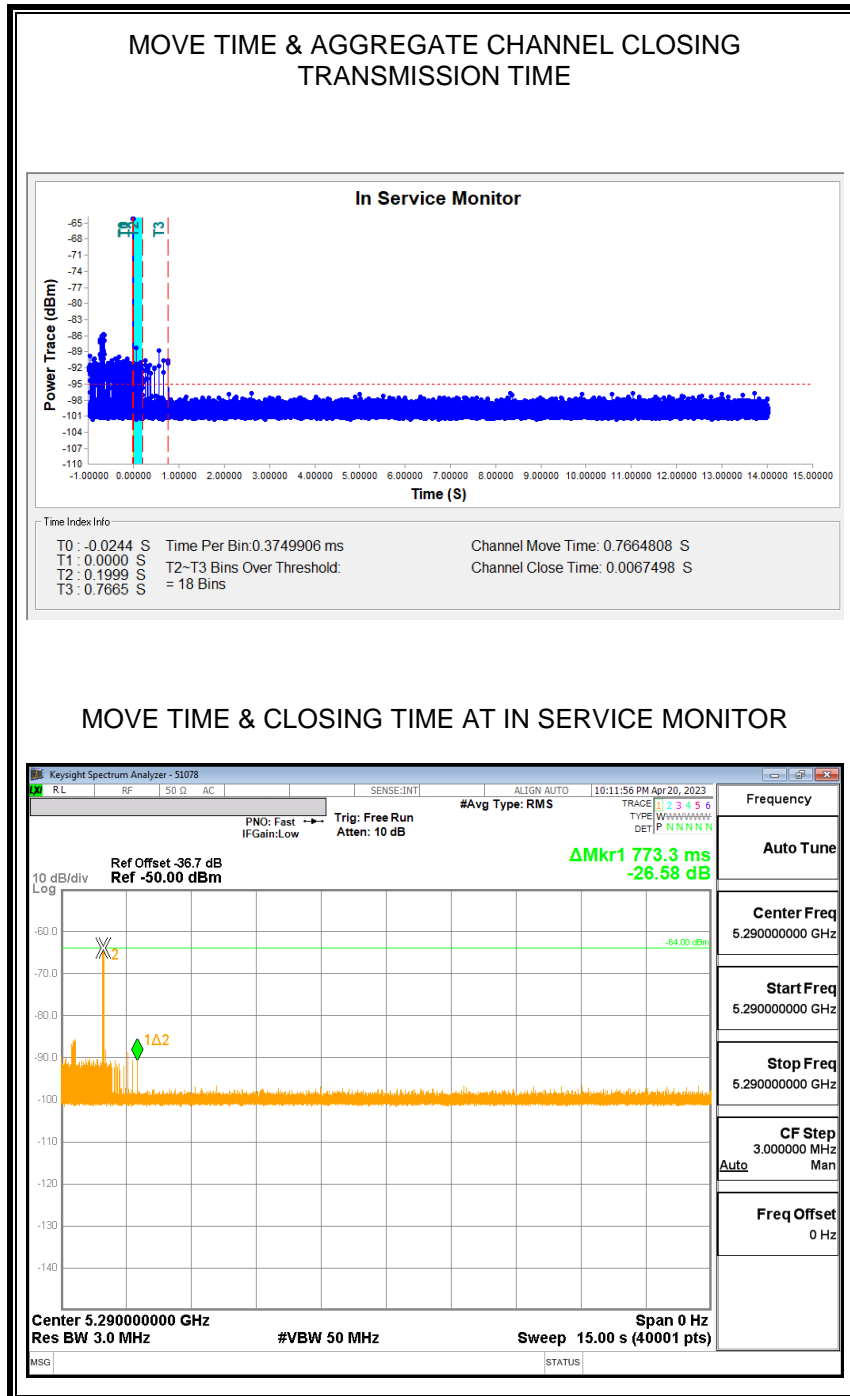
Channel Move Time (sec)	Limit (sec)
0.766	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
6.750	60

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

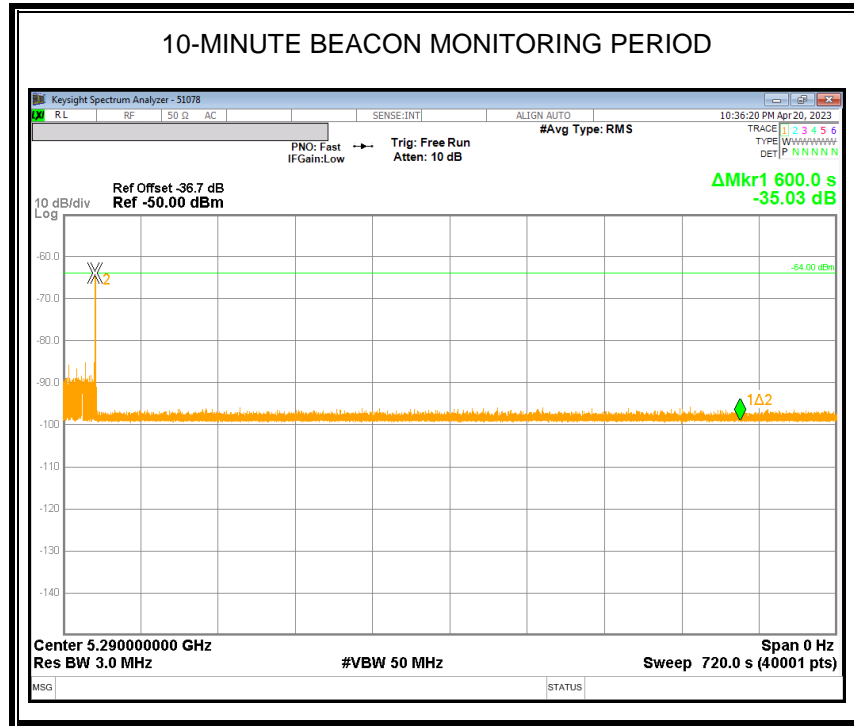
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

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



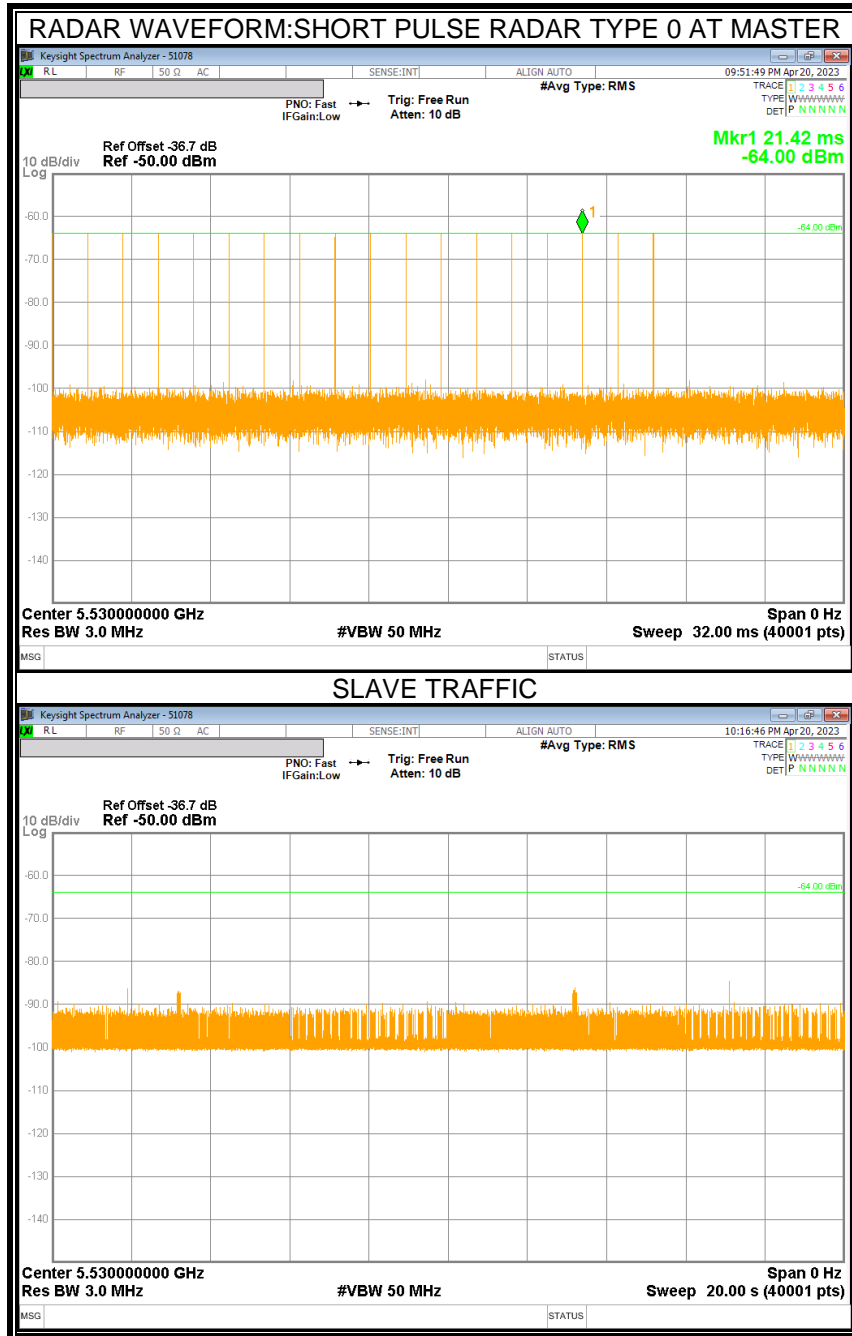
14.3. RESULTS FOR 80 MHz BANDWIDTH (UNII-2C BAND)

14.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5530 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

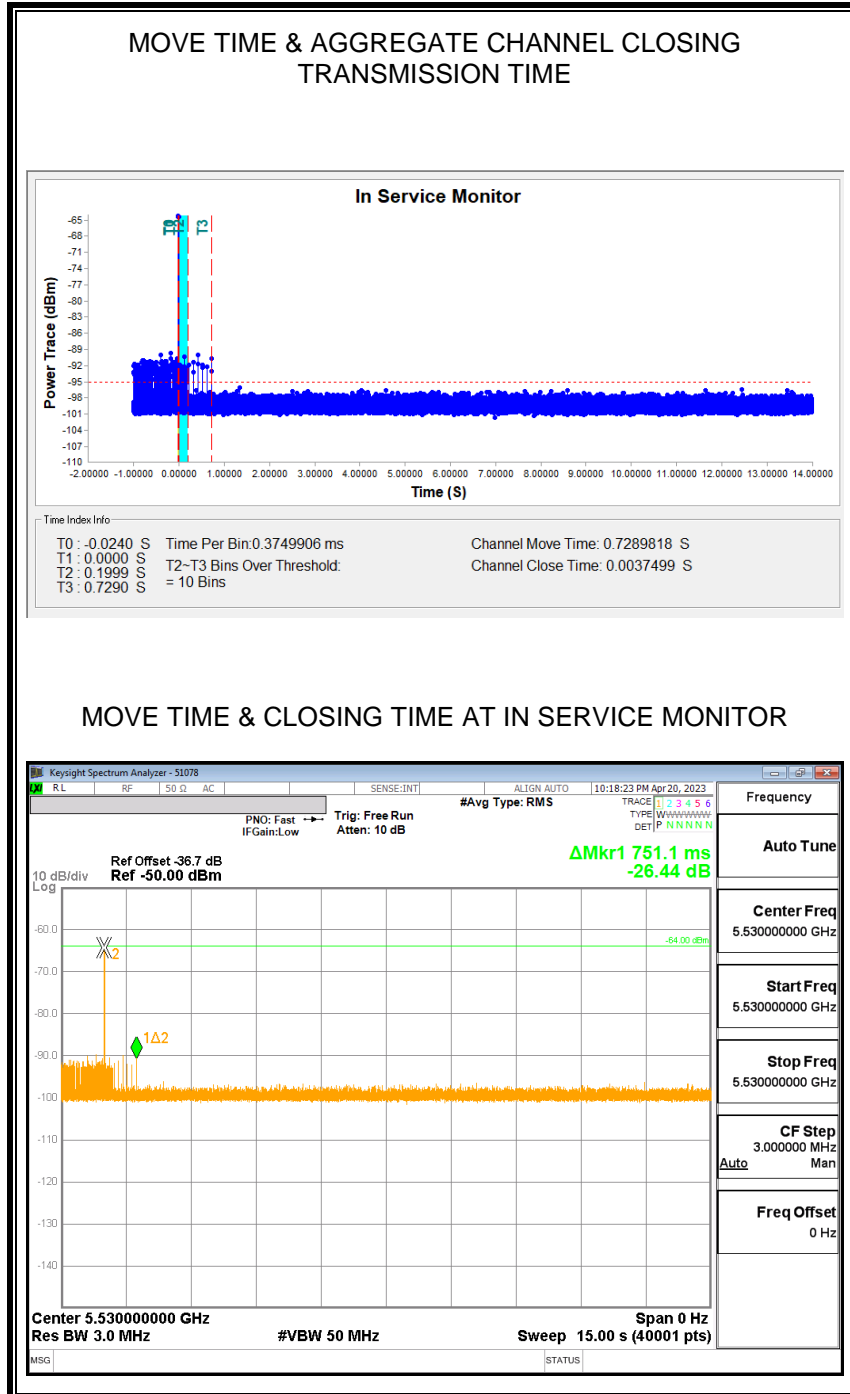
Channel Move Time (sec)	Limit (sec)
0.729	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
3.750	60

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

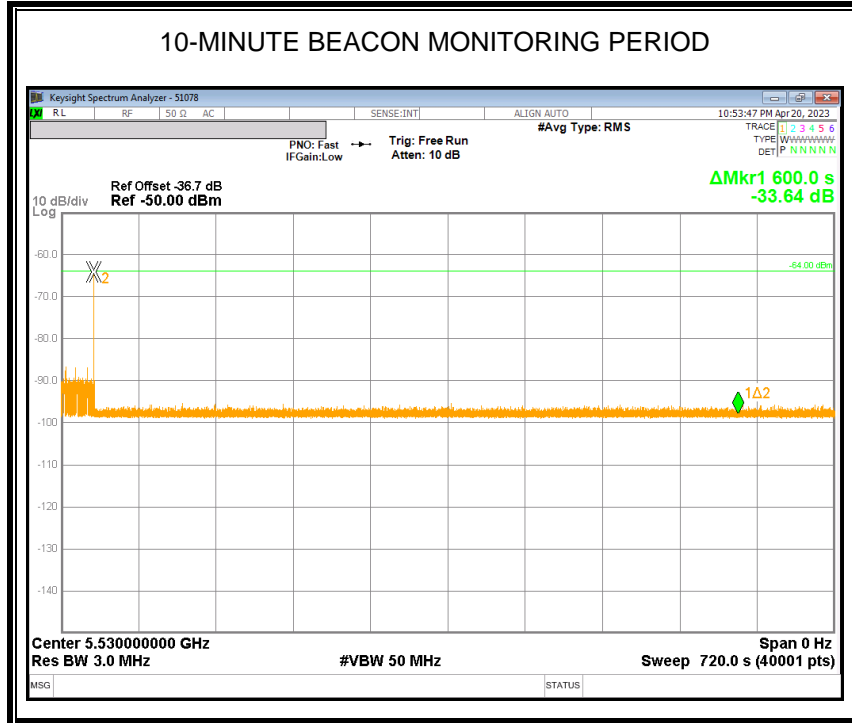
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

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

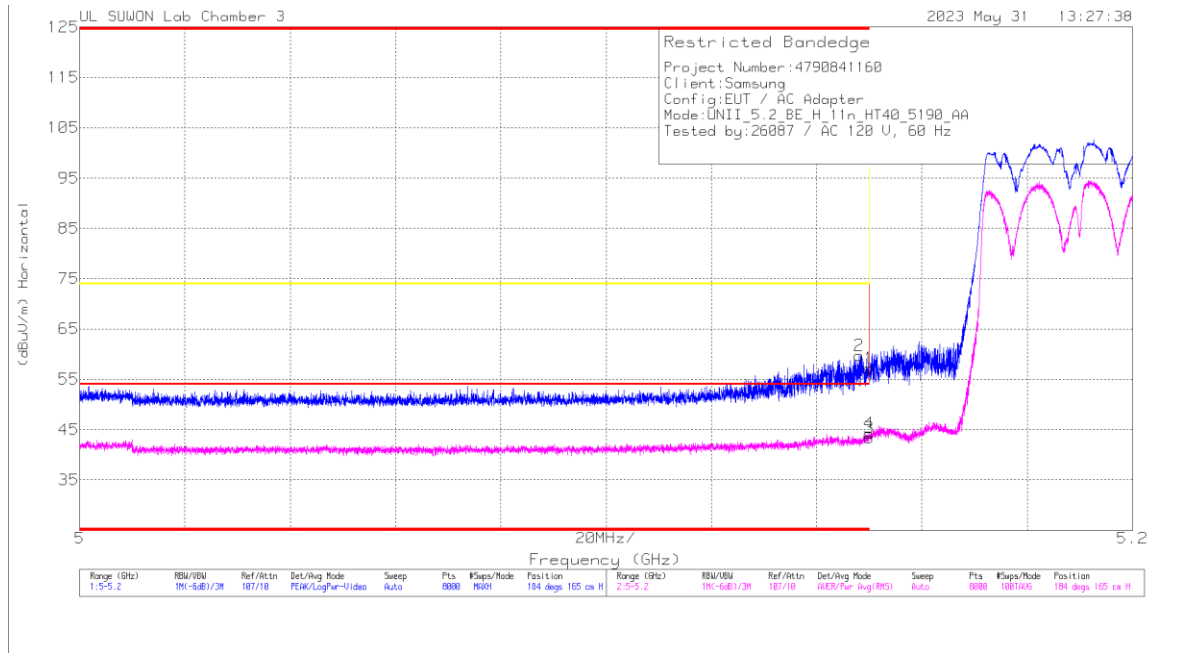


15. SPOT-CHECK THEST RESULT

2TX Antenna 1 + Antenna 2

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

5190 MHz HORIZONTAL



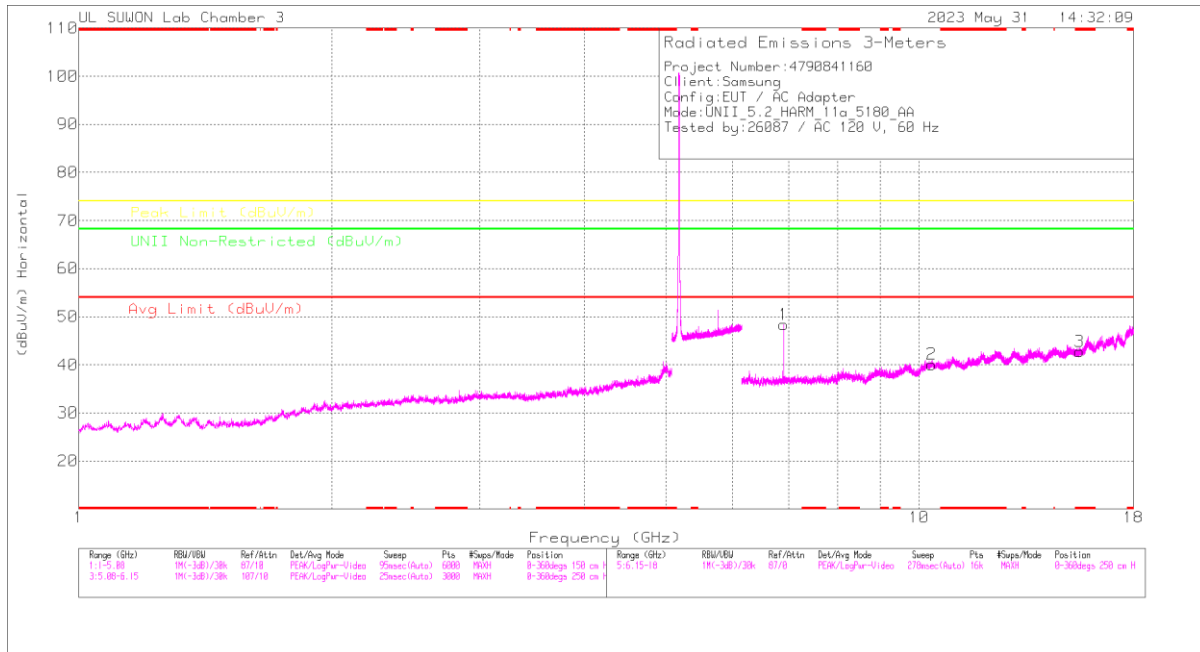
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	43.69	PK	34.4	-20.8	0	57.29	-	-	74	-16.71	184	165	H
2	* 5.14812	46.14	PK	34.4	-20.8	0	59.74	-	-	74	-14.26	184	165	H
3	* 5.14999	29.82	RMS	34.4	-20.8	0	43.42	54	-10.58	-	-	184	165	H
4	* 5.14994	30.73	RMS	34.4	-20.8	0	44.33	54	-9.67	-	-	184	165	H

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

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5180 MHz)

5180 MHz HORIZONTAL



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

Radiated Emissions

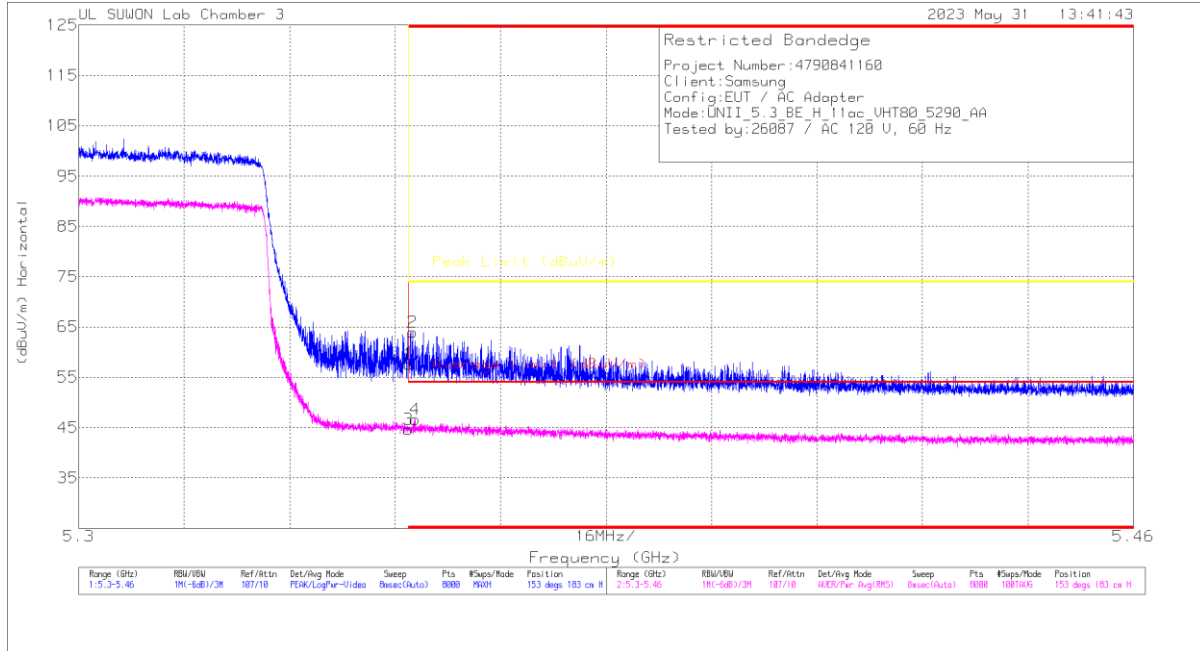
Frequency (GHz)	Meas Reading (dBuV/m)	Dir	3117_00218957	60Hz_HPA(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
6.90668	43.44	PK-U	36	-26.6	0	52.84	-	-	-	-	68.2	-15.36	176	197	H

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

2TX Antenna 1 + Antenna 2

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

5290 MHz HORIZONTAL



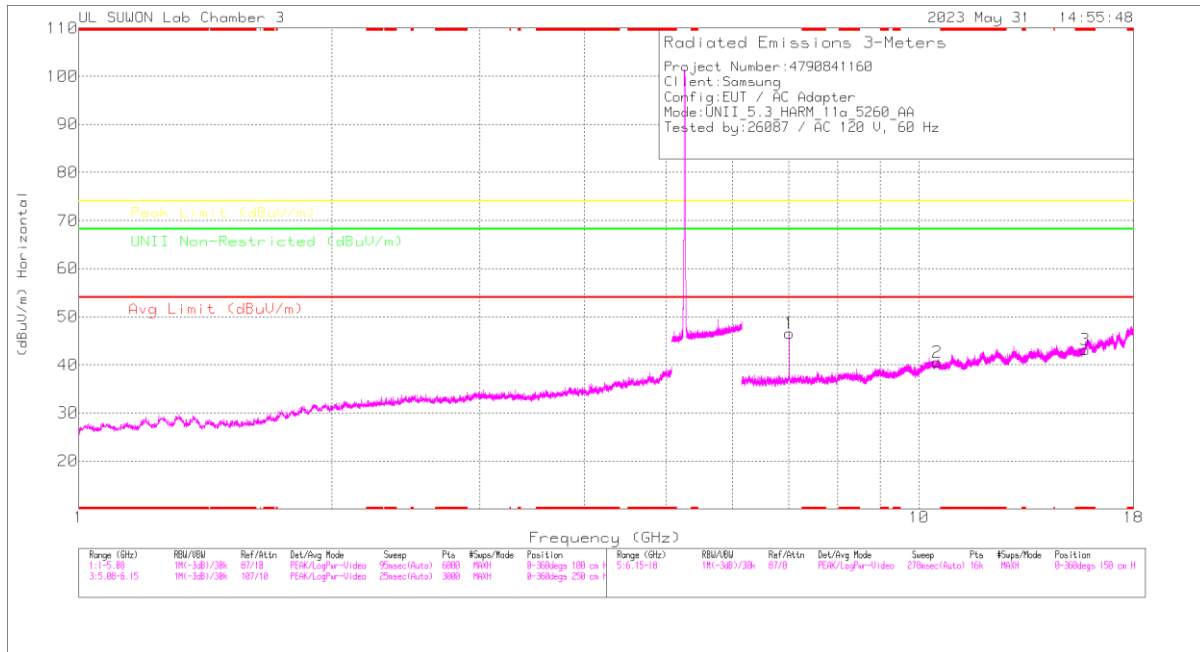
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	43.46	Pk	34.7	-20.5	0	57.66	-	-	74	-16.34	153	183	H
2	* 5.35065	49.82	Pk	34.7	-20.5	0	64.02	-	-	74	-9.98	153	183	H
3	* 5.35001	30.32	RMS	34.7	-20.5	.12	44.64	54	-9.36	-	-	153	183	H
4	* 5.35101	32.33	RMS	34.7	-20.5	.12	46.65	54	-7.35	-	-	153	183	H

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

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5260 MHz)

5260 MHz HORIZONTAL



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

Radiated Emissions

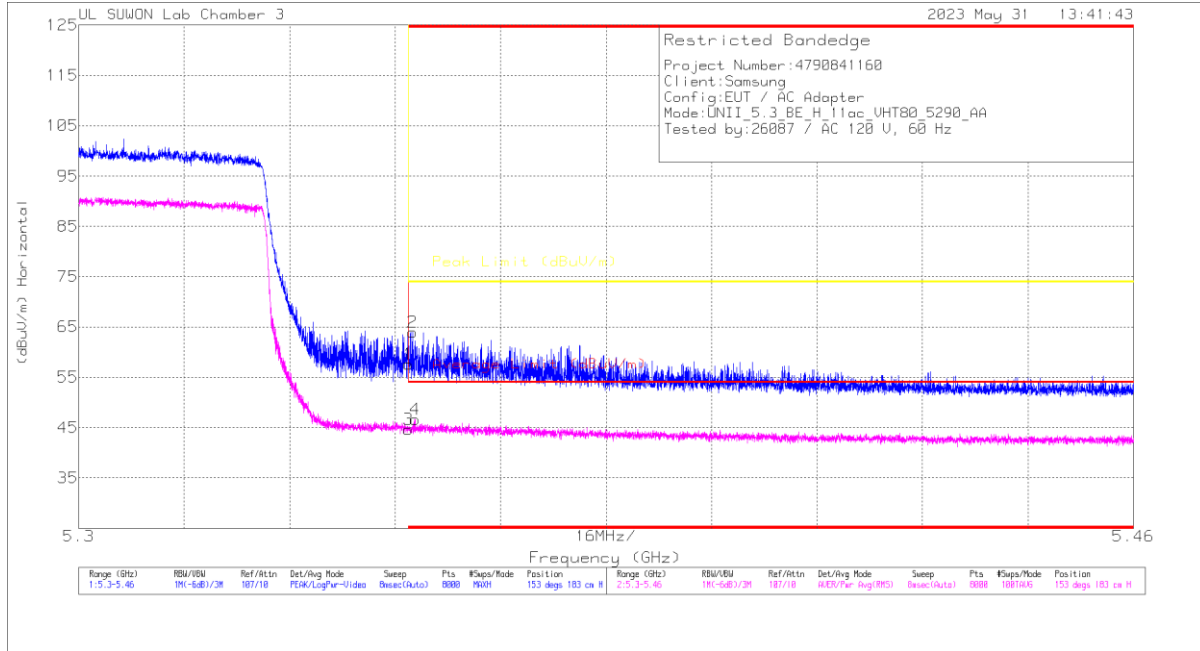
Frequency (GHz)	Meas Reading (dBuV/m)	Dir	3117_00218957	60Hz_HPA(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (m)	Polarity
7.01332	42.04	PK-U	36	-25.9	0	52.14	-	-	-	-	68.2	-16.06	217	214	H

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ac VHT160 / 5570 MHz)

5570 MHz HORIZONTAL



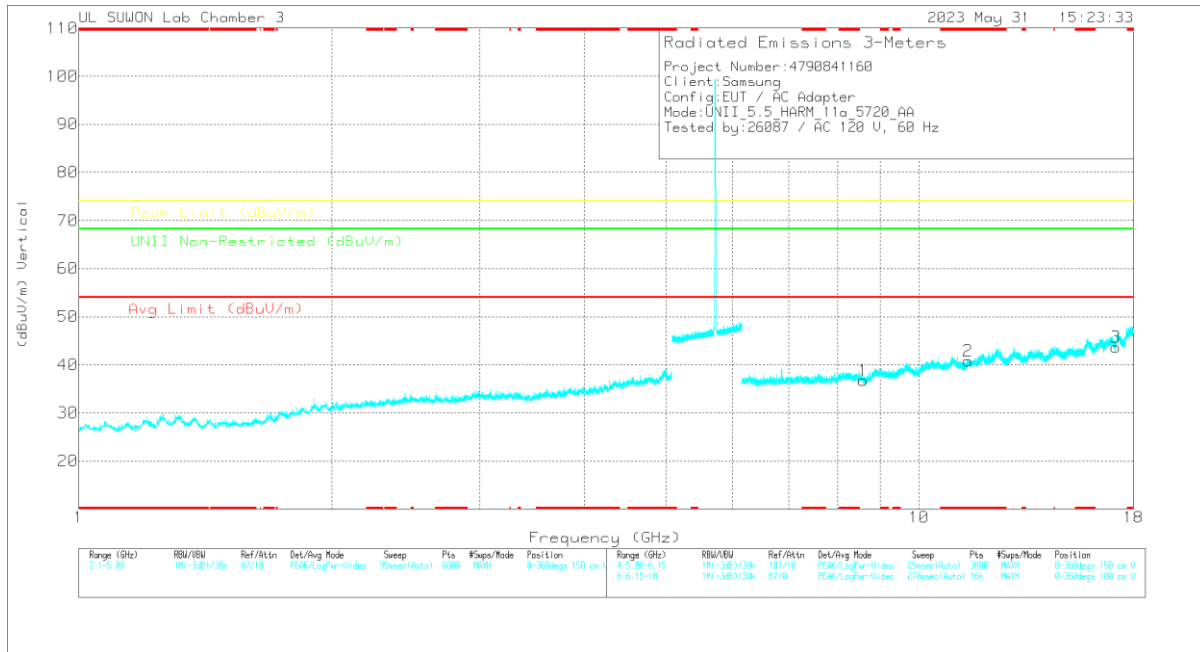
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	43	Pk	34.9	-20.4	0	57.5	-	-	74	-16.5	116	100	H
2	* 5.43812	46.21	Pk	34.9	-20.4	0	60.71	-	-	74	-13.29	116	100	H
3	5.46998	41.86	Pk	34.9	-20.3	0	56.46	-	-	68.2	-11.74	116	100	H
4	5.46458	44.31	Pk	34.9	-20.3	0	58.91	-	-	68.2	-9.29	116	100	H
5	* 5.45998	31.37	RMS	34.9	-20.4	-12	45.99	54	-8.01	-	-	116	100	H
6	* 5.45884	32.35	RMS	34.9	-20.4	-12	46.97	54	-7.03	-	-	116	100	H
7	5.46998	31.35	RMS	34.9	-20.3	-12	46.07	-	-	-	-	116	100	H
8	5.46759	32.81	RMS	34.9	-20.4	-12	47.43	-	-	-	-	116	100	H

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

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5720 MHz)

5720 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.

Radiated Emissions

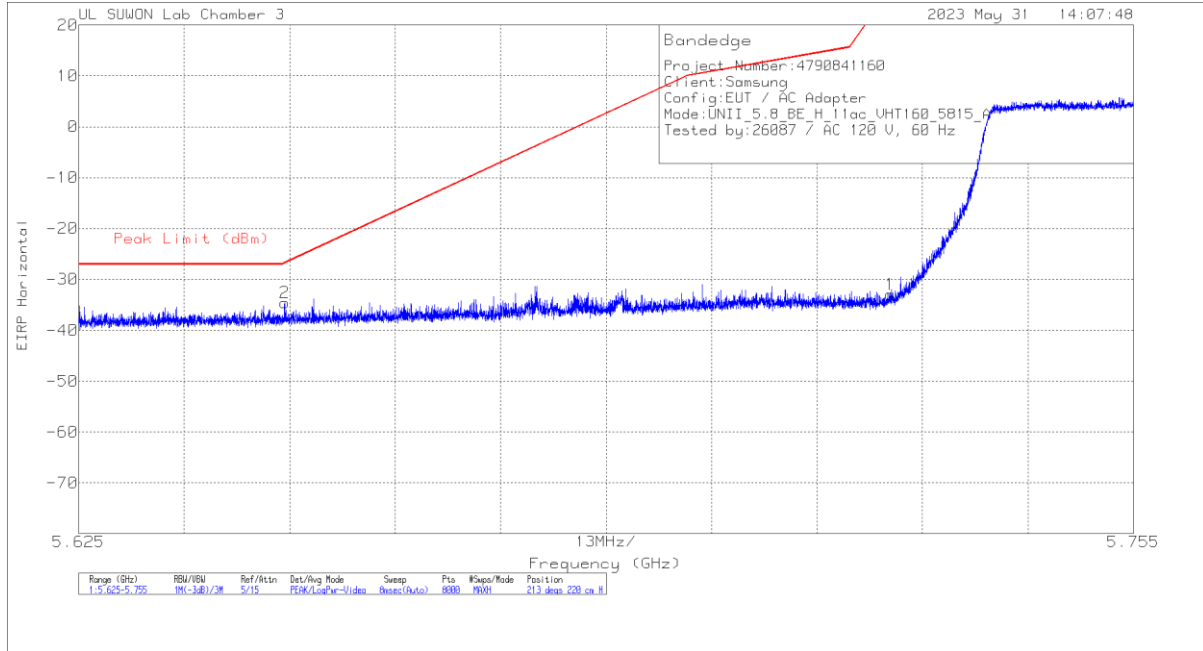
Frequency (GHz)	Mag. Reading (dBuV)	Det	317_00218957	6GHz_HFUSB	DC Cor (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
8.5861	34.51	PK-U	36	-23.1	0	47.61	-	-	-	-	68.2	-20.70	360	100	V

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ac VHT160 / 5815 MHz)

5815 MHz HORIZONTAL



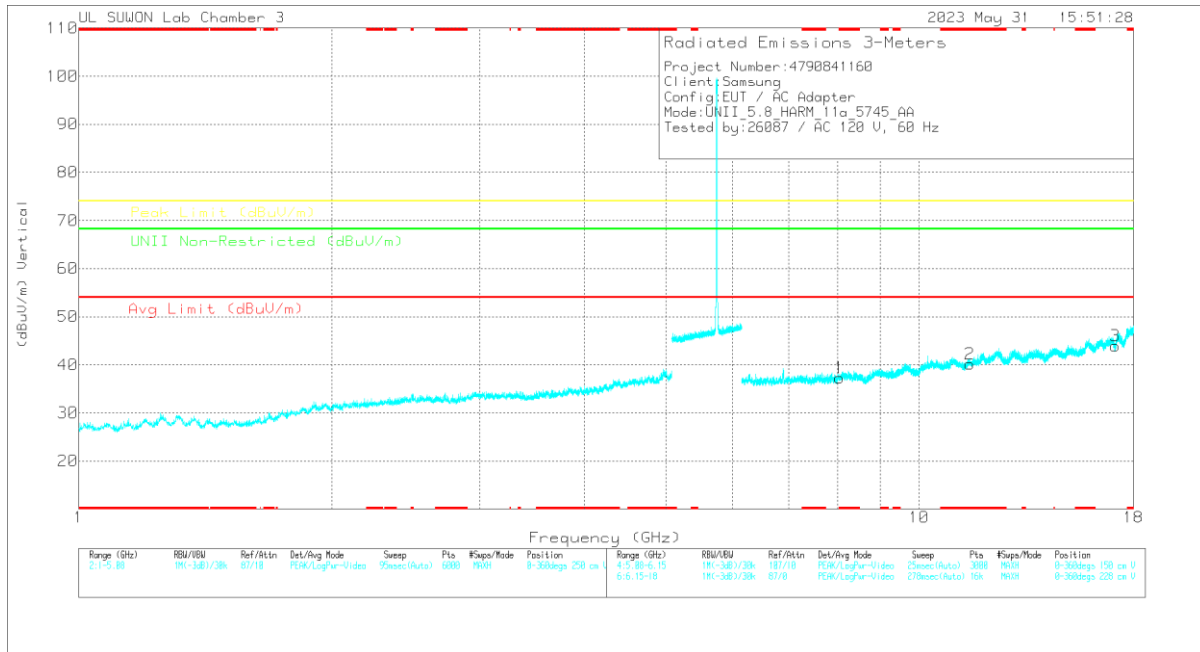
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00218957	10dB_ATT(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-59.92	Pk	34.9	-19.7	11.8	0	-32.92	27	-59.92	213	220	H
2	5.65037	-61.24	Pk	34.9	-20	11.8	0	-34.54	-26.73	-7.61	213	220	H

Pk - Peak detector

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

5745 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.

Radiated Emissions

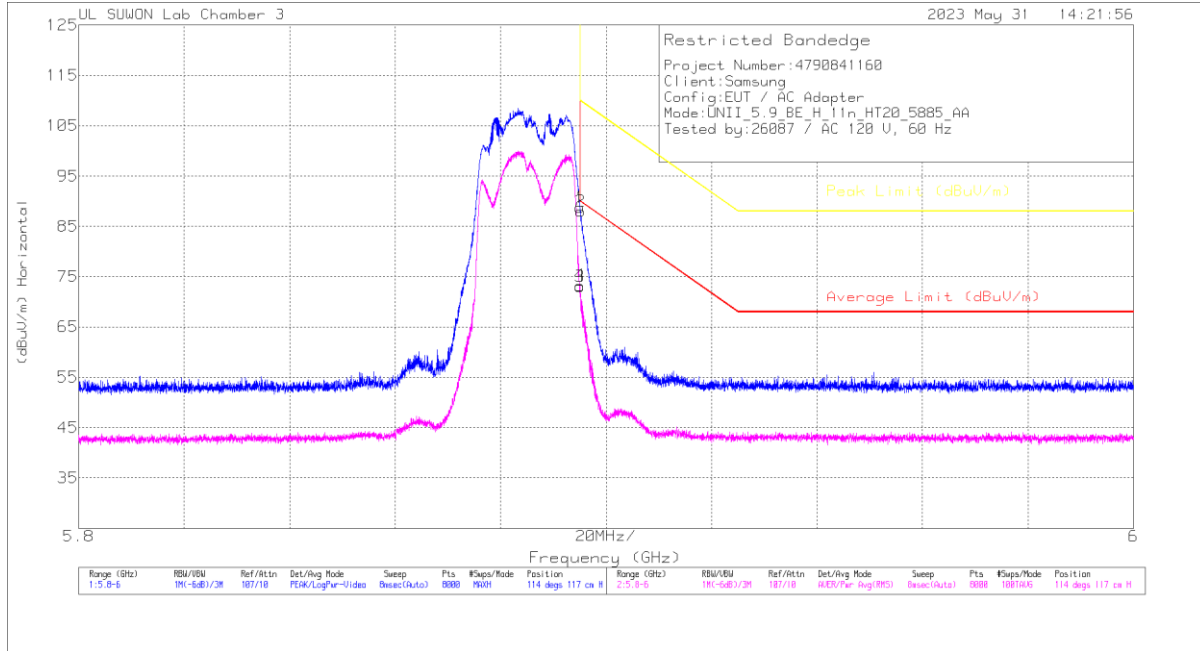
Frequency (GHz)	Main Reading (dBuV)	Det	3117_0021867	dBHz_HF(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.04621	36.59	PK-U	35.9	-24.3	0	47.89	-	-	74	-26.01	-	-	0	100	V
* 8.05007	24.59	ADR	35.9	-24.2	.17	36.46	54	-17.54	-	-	-	-	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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11n HT20 / 5885 MHz)

5885 MHz HORIZONTAL



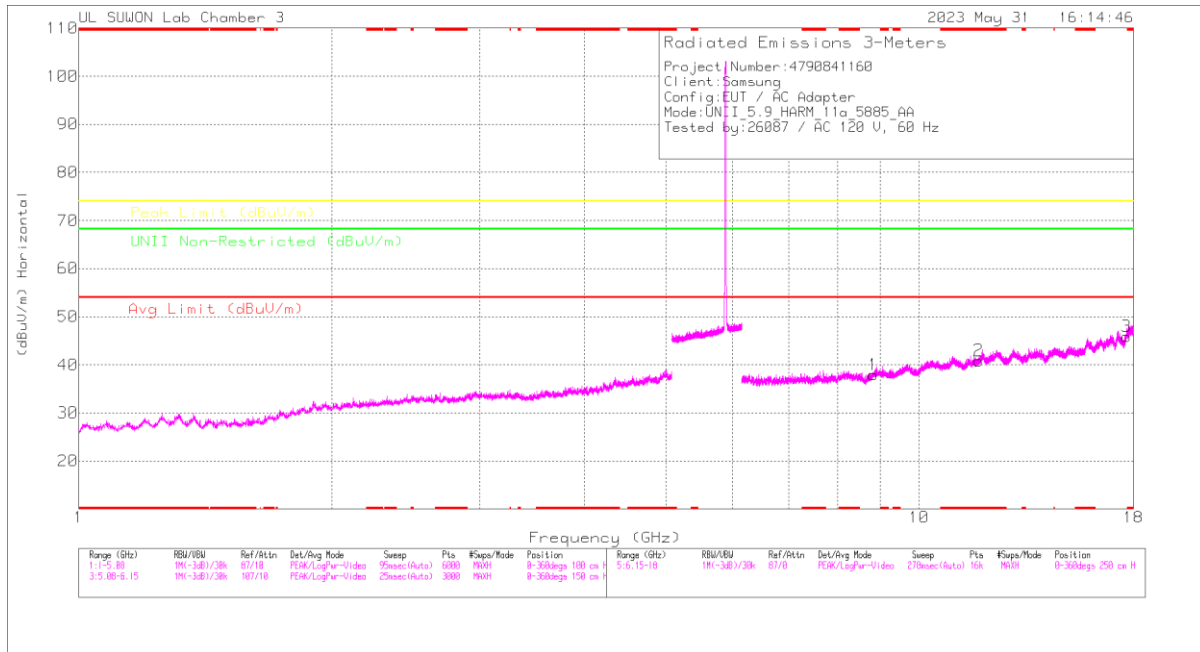
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBu)	Det	3117_00218957	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBu/m)	Average Limit (dBu/m)	Margin (dB)	Peak Limit (dBu/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.89501	72.81	PK		-19.5	0	88.71	-	-	109.99	-21.28	114	117	H
2	5.89514	72.17	PK		-19.5	0	88.07	-	-	109.9	-21.83	114	117	H
3	5.89501	57.18	RMS		-19.5	0	73.08	89.99	-16.91	-	-	114	117	H
4	5.89509	57.35	RMS		-19.5	0	73.25	89.94	-16.69	-	-	114	117	H

PK - Peak detector
 RMS - RMS detection

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

5885 MHz HORIZONTAL



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

Radiated Emissions

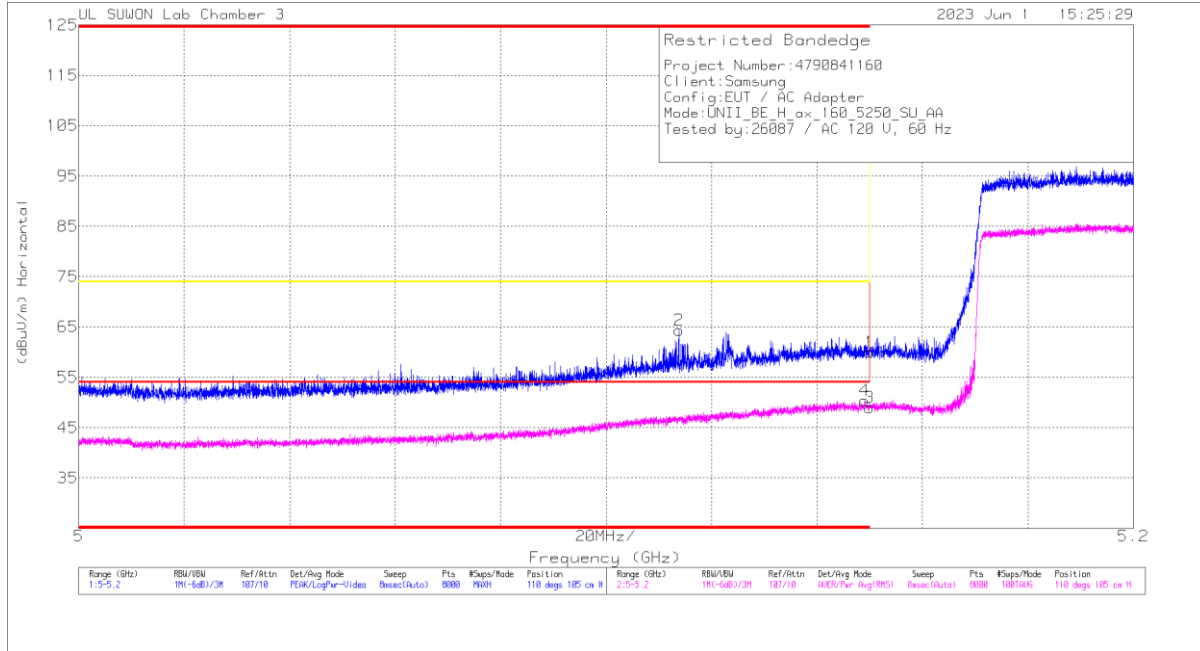
Frequency (GHz)	Meas Reading (dBuV)	Det	3117_00218607	40Hz_HF(0dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
17.64544	30.64	PK-U	41.3	-16.2	0	55.74	-	-	-	-	68.2	-12.46	0	100	H

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ax HE160 SU / 5250 MHz)

5250 MHz HORIZONTAL



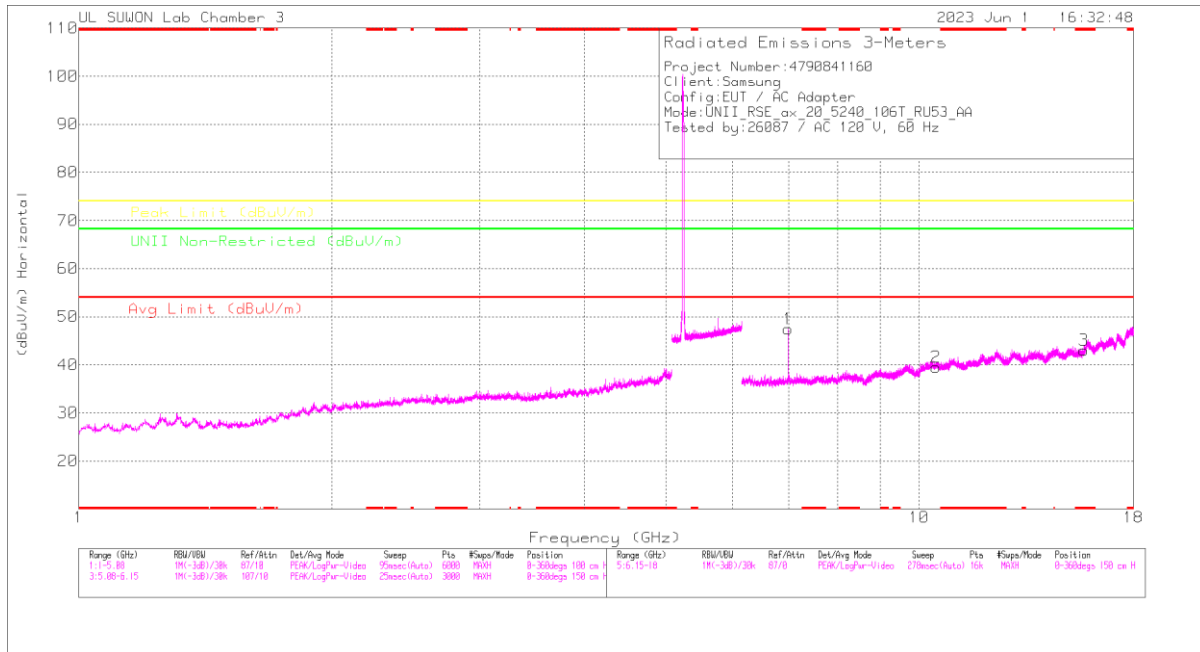
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	46.39	Pk		34.4	-20.8	0	59.99	-	74	-14.01	110	105	H
2	* 5.11381	50.89	Pk		34.3	-20.8	0	64.39	-	74	-9.61	110	105	H
3	* 5.14999	35.43	RMS		34.4	-20.8	0	49.03	54	-4.97	-	110	105	H
4	* 5.14907	36.83	RMS		34.4	-20.8	0	50.43	54	-3.57	-	110	105	H

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

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 106T RU53 / 5240MHz)

5240 MHz HORIZONTAL



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

Radiated Emissions

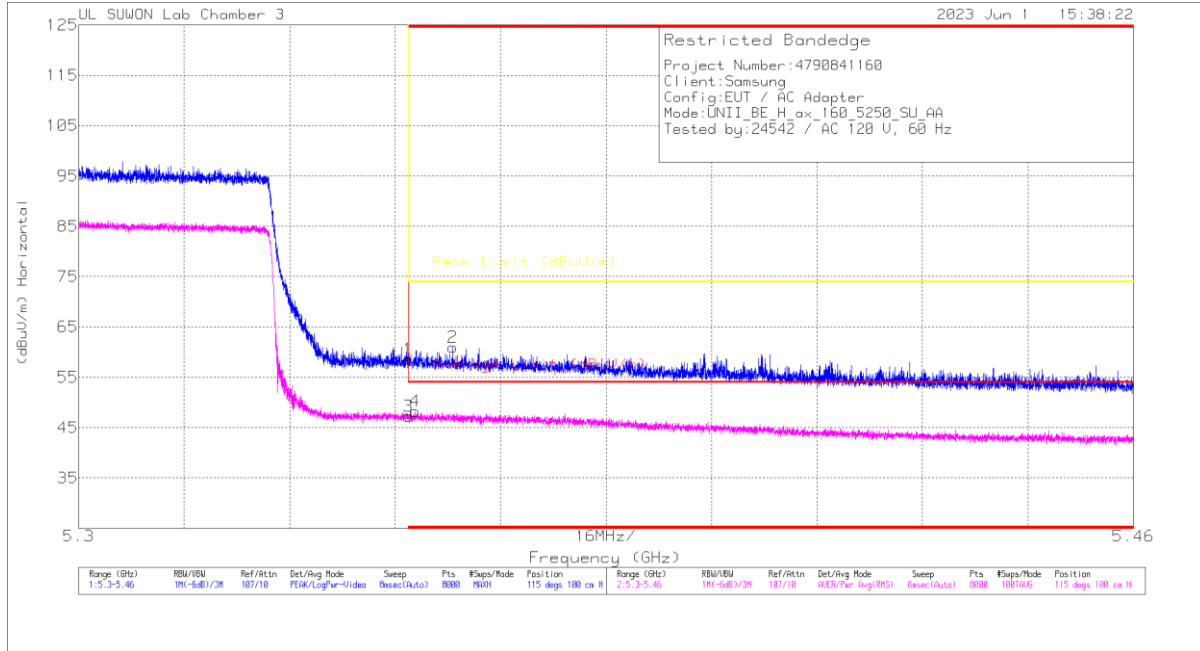
Frequency (GHz)	Max Reading (dBuV)	Det	3117_00218957	ISRC_H(FdB)	DC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
6.98663	41.91	PK-U	36	-26	0	51.91	-	-	-	-	68.2	-16.29	205	159	H

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ax HE160 SU / 5250 MHz)

5250 MHz HORIZONTAL



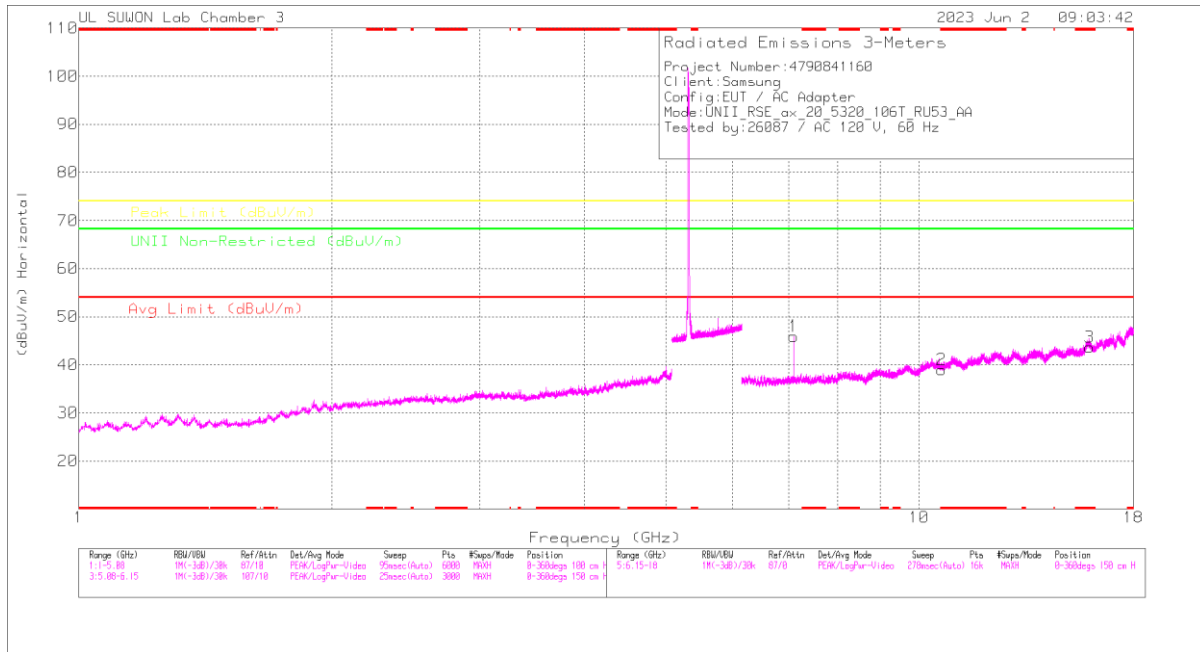
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(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	44.39	PK	34.7	-20.5	0	58.99	-	-	74	-15.41	115	100	H
2	* 5.35073	46.82	PK	34.7	-20.5	0	61.02	-	-	74	-12.98	115	100	H
3	* 5.35001	33.04	RMS	34.7	-20.5	0	47.24	54	-6.76	-	-	115	100	H
4	* 5.35105	34.09	RMS	34.7	-20.5	0	48.29	54	-5.71	-	-	115	100	H

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

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 106T RU53 / 5320MHz)

5320 MHz HORIZONTAL



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

Radiated Emissions

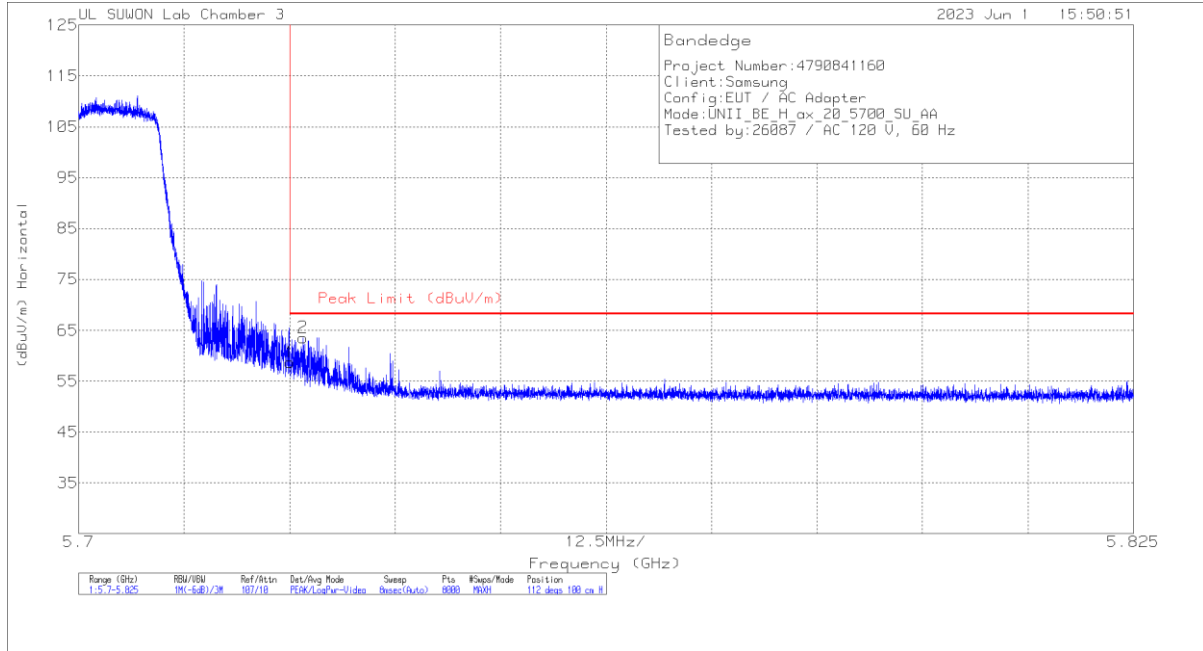
Frequency (GHz)	Mag. Reading (dBuV)	Det	317_00218957	6GHz HPUSB	DC Cor (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
7.0934	41.45	PK-U	35.9	-26.1	0	51.28	-	-	-	-	68.2	-16.92	215	258	H

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ax HE20 SU / 5700 MHz)

5700 MHz HORIZONTAL



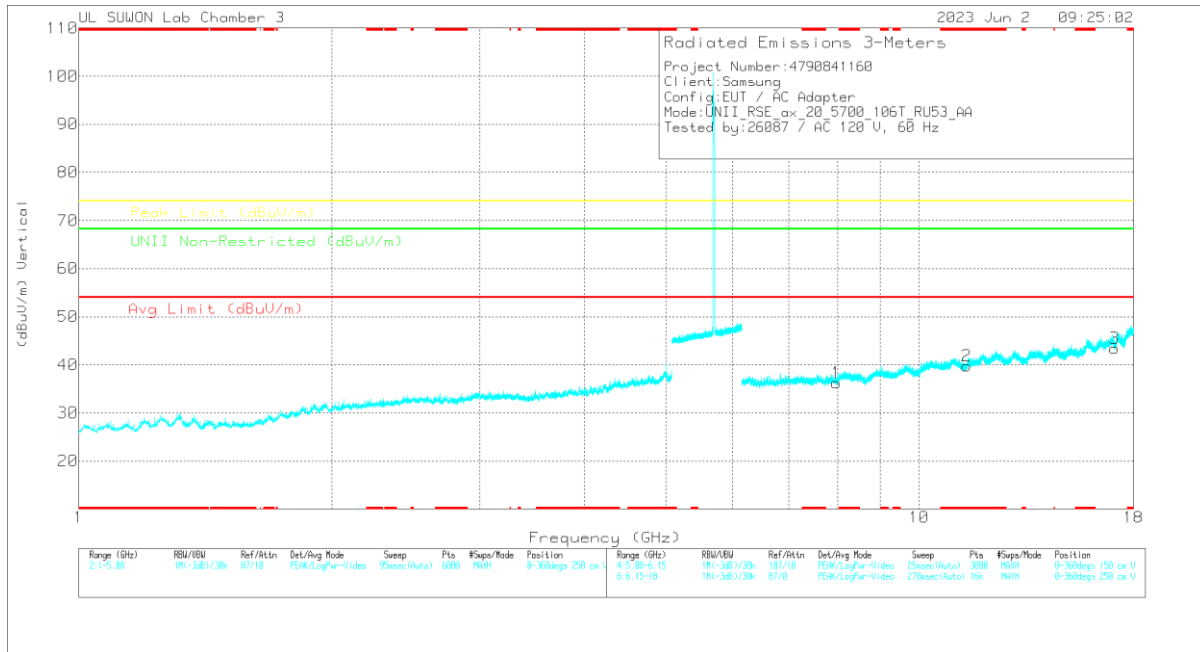
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00218957	10dB_ATT(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	43.41	Pk	35	-19.7	0	58.71	68.2	-9.49	112	100	H
2	5.72661	48.28	Pk	35	-19.7	0	63.58	68.2	-4.62	112	100	H

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 106T RU53 / 5700MHz)

5700 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.

Radiated Emissions

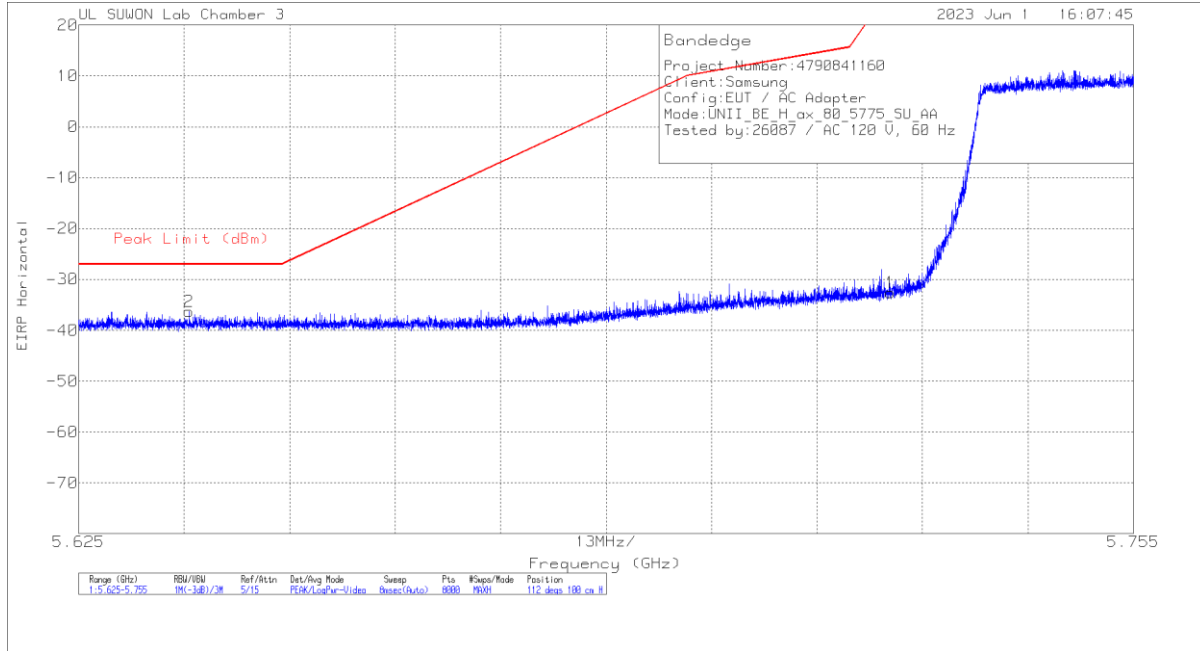
Frequency (GHz)	Max Reading (dBuV/m)	Det	3117_00218957	5GRN_HPt(B)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Deg)	Height (m)	Polarity
7.97301	35.34	PK-U	35.9	-24.4	0	46.84	-	-	-	-	68.2	-21.36	360	100	V

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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ax HE80 SU / 5775 MHz)

5775 MHz HORIZONTAL



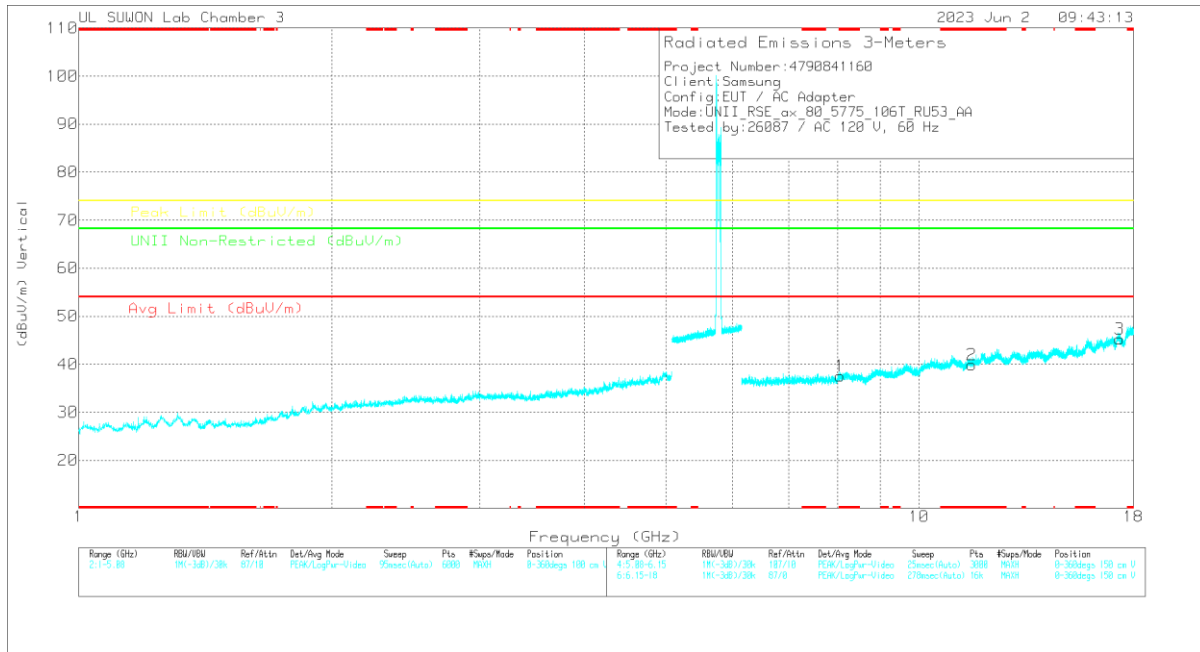
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	3117_00218957	10dB_ATT(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-59.65	Pk	34.9	-19.7	11.8	0	-32.65	27	-59.65	112	100	H
2	5.63859	-62.96	Pk	34.9	-20	11.8	0	-36.26	-27	-9.26	112	100	H

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE80 106T RU53 / 5775MHz)

5775 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.

Radiated Emissions

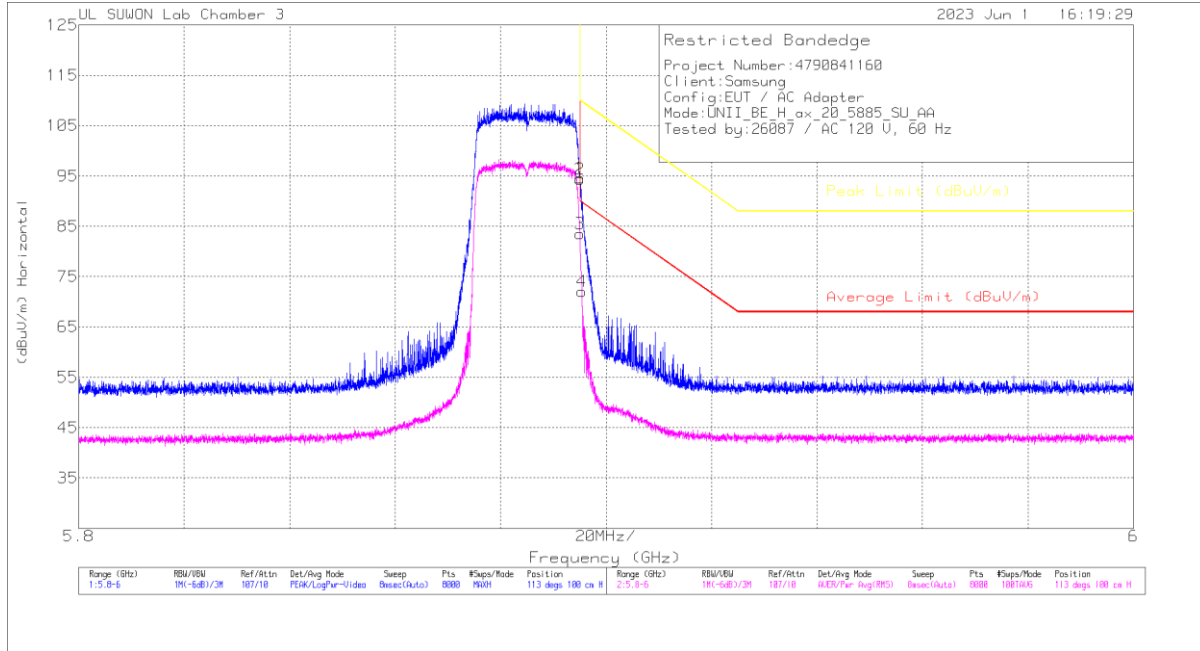
Frequency (GHz)	Mask Reading (dBm)	Det	3117_00218957	dBHz_HPI(dB)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Peak Limit (dBm)	Margin (dB)	UNII Non-Restricted (dBm)	Margin (dB)	Azimuth (Deg)	Height (cm)	Polarity
* 8.05827	36.28	PK-U	35.9	-24.2	0	47.06	-	-	74	-26.04	-	-	0	100	V
* 8.04835	24.59	ADR	35.9	-24.3	0	36.19	54	-17.81	-	-	-	-	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

2TX Antenna 1 + Antenna 2

BANDEDGE (WORST CASE : 802.11ax HE20 SU / 5885 MHz)

5885 MHz HORIZONTAL



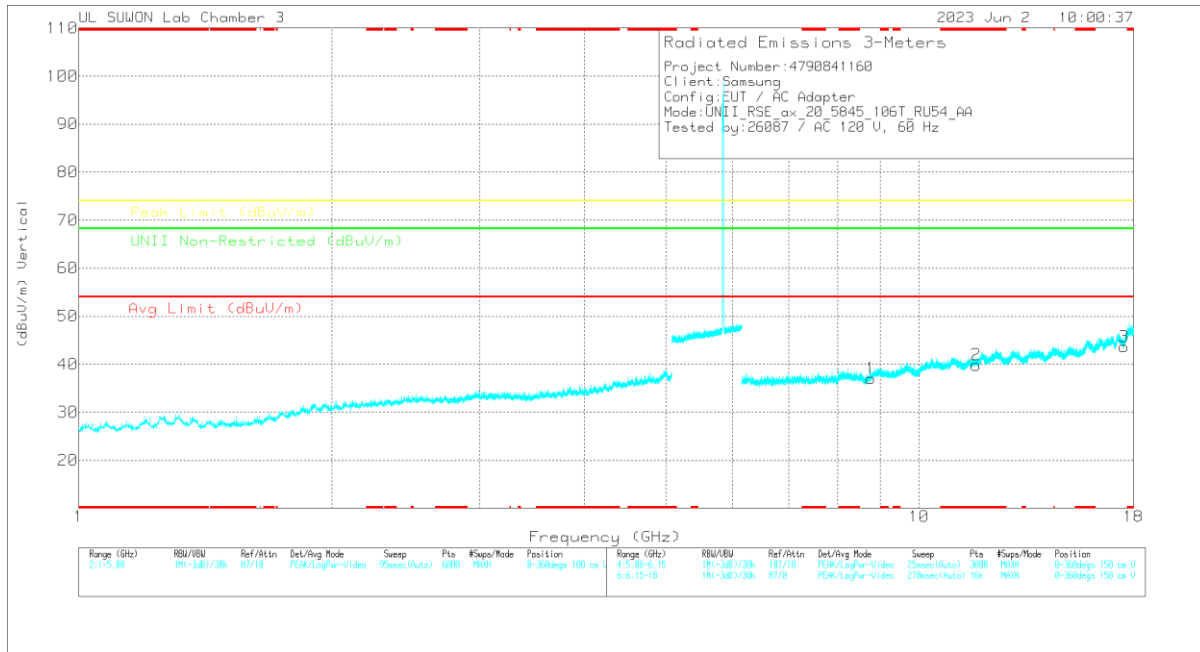
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117_00216057	10dB_ATT(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	78.75	PK	35.4	-19.5	0	94.65	-	-	109.99	-15.34	113	100	H
2	5.89509	78.44	PK	35.4	-19.5	0	94.34	-	-	109.84	-15.6	113	100	H
3	5.89501	67.66	RMS	35.4	-19.5	0	83.56	89.99	-6.43	-	-	113	100	H
4	5.89541	56.14	RMS	35.4	-19.5	0	72.04	89.7	-17.66	-	-	113	100	H

PK - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 106T RU54 / 5845MHz)

5845 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.

Radiated Emissions

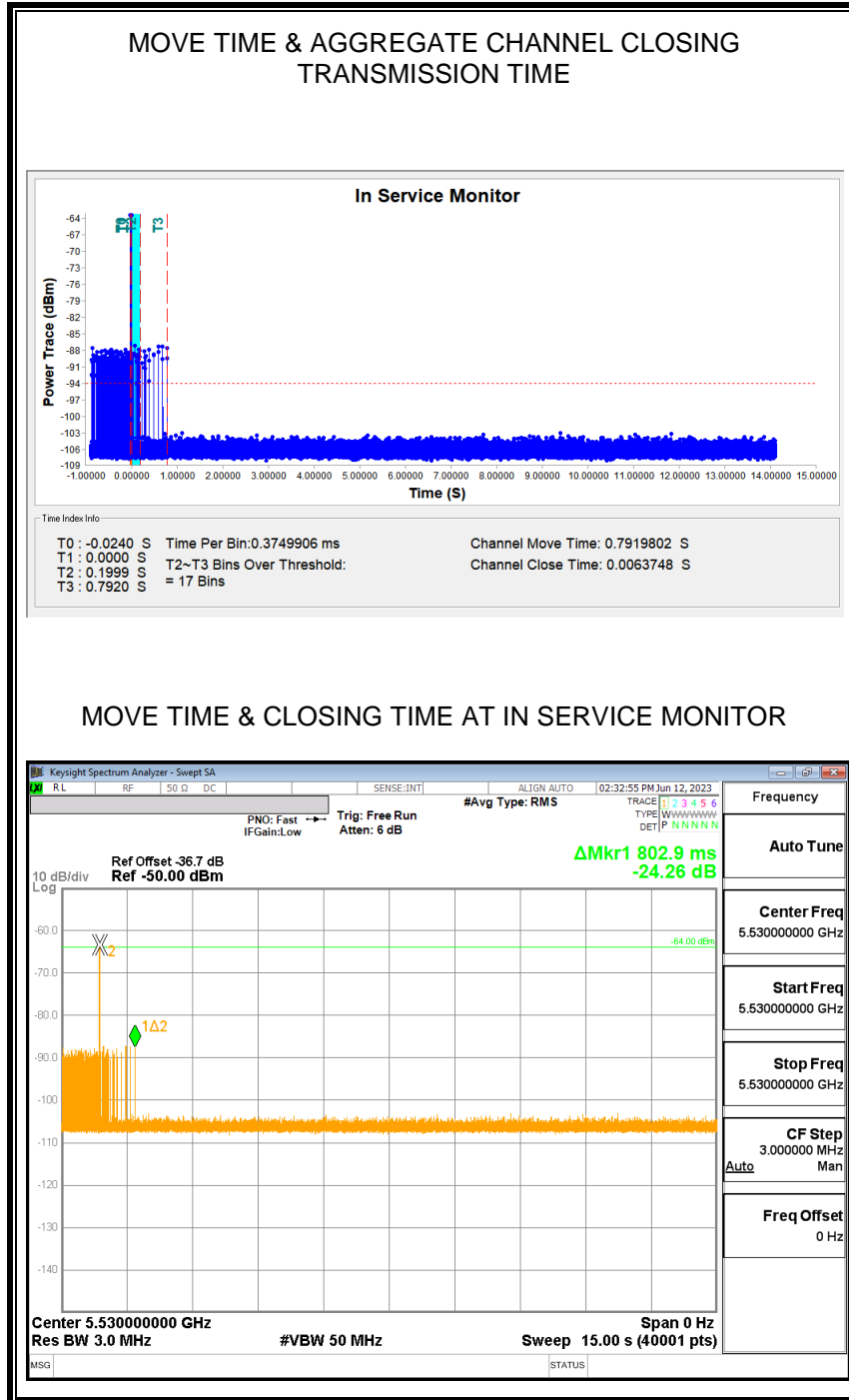
Frequency (GHz)	RBW/Res	Ref/Attn	Det/Avg Mode	Sweep	Flt	Excp/Mode	Position	Range (GHz)	RBW/Res	Ref/Attn	Det/Avg Mode	Sweep	Flt	Excp/Mode	Position
17.5441	10K-3dB/30k	0/10	PK-U	27Sec/Auto	300	None	0-300deg 100 cm V	6.6-15-18	10K-3dB/30k	0/10	PK-U	27Sec/Auto	300	None	0-300deg 100 cm V

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

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



END OF TEST REPORT