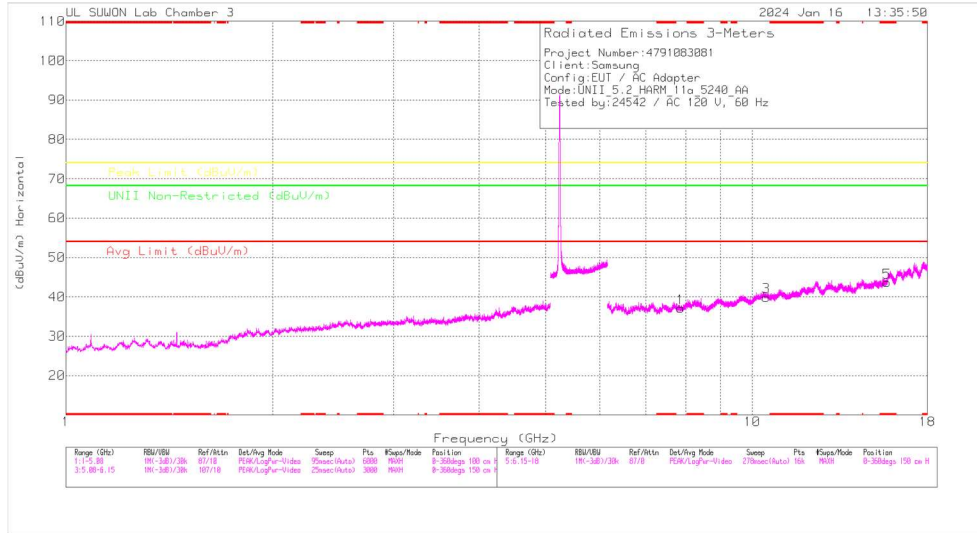
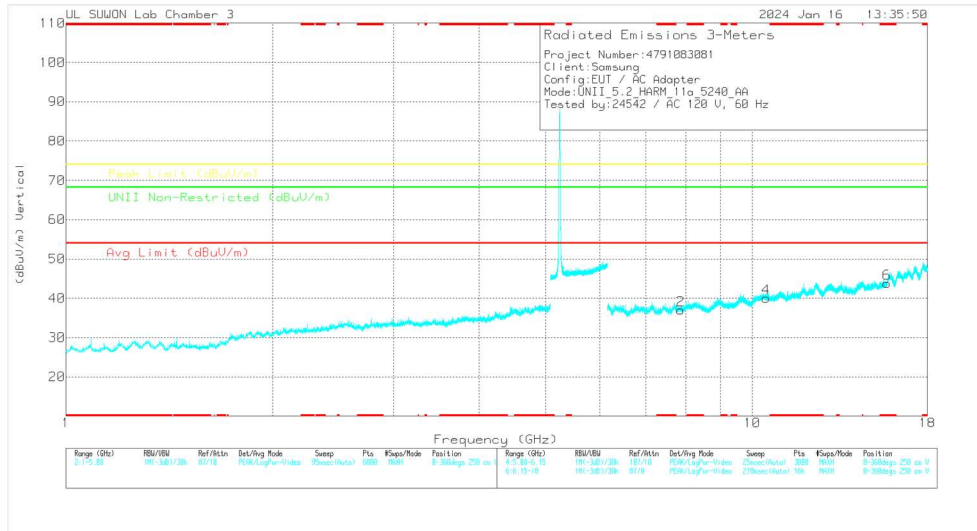


**HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5240 MHz)**  
**5240 MHz HORIZONTAL**



**5240 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.

**5240 MHz DATA**

**Radiated Emissions**

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Correction Factor(dBm)	Loss(dB)	DC Corr (dB)	Corrected Reading (dBm)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Admth (Days)	Height (m)	Priority
7.8638	35.69	PK-U	35.9	-24.5	0	47.09	-	-	-	-	68.2	-21.11	0	100	H
7.86912	36.08	PK-U	35.9	-24.5	0	47.46	-	-	-	-	68.2	-20.72	0	100	V
10.48257	34.09	PK-U	37.6	-21.2	0	50.49	-	-	-	-	68.2	-17.71	0	100	H
10.47968	33.8	PK-U	37.6	-21.2	0	50.2	-	-	-	-	68.2	-18	129	105	V
* 15.72238	35.49	PK-U	40.4	-20.6	0	55.29	-	-	74	-18.71	-	-	0	100	H
* 15.72422	34.72	PK-U	40.4	-20.6	0	54.52	-	-	74	-19.48	-	-	0	100	V
* 15.72238	22.95	ADR	40.4	-20.6	2	42.95	54	-11.05	-	-	-	-	0	100	H
* 15.72422	23.35	ADR	40.4	-20.6	2	43.35	54	-10.65	-	-	-	-	0	100	V

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

**HARMONICS AND SPURIOUS EMISSIONS TEST DATA**

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity	
802.11a	5180	MIMO	7.770	36.68	PK-U	35.90	-24.70	0.00	47.88	-	-	-	-	68.20	-20.32	0	100	H	
			7.769	36.65	PK-U	35.90	-24.60	0.00	47.95	-	-	-	-	-	68.20	-20.25	0	100	V
			10.362	35.77	PK-U	37.50	-21.00	0.00	52.27	-	-	-	-	-	68.20	-15.93	165	120	H
			10.358	35.57	PK-U	37.50	-21.00	0.00	52.07	-	-	-	-	-	68.20	-16.13	154	115	V
			* 15.53974	35.47	PK-U	40.10	-21.00	0.00	54.57	-	-	74.00	-19.43	-	-	-	0	100	H
			* 15.53912	34.87	PK-U	40.10	-21.00	0.00	53.97	-	-	74.00	-20.03	-	-	-	0	100	V
			* 15.53974	23.39	ADR	40.10	-21.00	0.20	42.69	-	-	54.00	-11.31	-	-	-	0	100	H
			* 15.53912	23.15	ADR	40.10	-21.00	0.20	42.45	-	-	54.00	-11.55	-	-	-	0	100	V
			7.802	36.49	PK-U	35.90	-24.60	0.00	47.79	-	-	-	-	-	-	68.20	-20.41	0	100
	7.805	36.36	PK-U	35.90	-24.60	0.00	47.66	-	-	-	-	-	-	68.20	-20.54	0	100	V	
	10.398	35.54	PK-U	37.50	-20.80	0.00	52.24	-	-	-	-	-	-	68.20	-15.96	161	118	H	
	10.402	35.78	PK-U	37.50	-20.90	0.00	52.38	-	-	-	-	-	-	68.20	-15.82	158	103	V	
	* 15.5991	34.53	PK-U	40.20	-20.80	0.00	53.93	-	-	74.00	-20.07	-	-	-	0	100	H		
	* 15.60442	34.73	PK-U	40.20	-20.80	0.00	54.13	-	-	74.00	-19.87	-	-	-	0	100	V		
	* 15.5991	23.55	ADR	40.20	-20.80	0.20	43.15	-	-	54.00	-10.85	-	-	-	0	100	H		
	* 15.60442	23.37	ADR	40.20	-20.80	0.20	42.97	-	-	54.00	-11.03	-	-	-	0	100	V		
	7.864	35.69	PK-U	35.90	-24.50	0.00	47.09	-	-	-	-	-	-	68.20	-21.11	0	100	H	
	7.865	36.08	PK-U	35.90	-24.50	0.00	47.48	-	-	-	-	-	-	68.20	-20.72	0	100	V	
	10.483	34.09	PK-U	37.60	-21.20	0.00	50.49	-	-	-	-	-	-	68.20	-17.71	0	100	H	
	10.480	33.80	PK-U	37.60	-21.20	0.00	50.20	-	-	-	-	-	-	68.20	-18.00	129	105	V	
	* 15.72238	35.49	PK-U	40.40	-20.60	0.00	55.29	-	-	74.00	-18.71	-	-	-	0	100	H		
	* 15.72422	34.72	PK-U	40.40	-20.60	0.00	54.52	-	-	74.00	-19.48	-	-	-	0	100	V		
	* 15.72238	22.95	ADR	40.40	-20.60	0.20	42.95	-	-	54.00	-11.05	-	-	-	0	100	H		
	* 15.72422	23.35	ADR	40.40	-20.60	0.20	43.35	-	-	54.00	-10.65	-	-	-	0	100	V		
	802.11ax (HE20) RU mode 26 Tone offset 8 Spot-Check	5240	MIMO	7.863	36.22	PK-U	35.90	-24.50	0.00	47.62	-	-	-	-	68.20	-20.58	0	100	H
	7.863			36.12	PK-U	35.90	-24.50	0.00	47.52	-	-	-	-	-	68.20	-20.68	0	100	V
	10.480			33.95	PK-U	37.60	-21.20	0.00	50.35	-	-	-	-	-	68.20	-17.85	179	103	H
10.480	33.99			PK-U	37.60	-21.20	0.00	50.39	-	-	-	-	-	68.20	-17.81	127	106	V	
* 15.72335	35.01			PK-U	40.40	-20.60	0.00	54.81	-	-	74.00	-19.19	-	-	-	0	100	H	
* 15.72035	35.23			PK-U	40.40	-20.50	0.00	55.13	-	-	74.00	-18.87	-	-	-	0	100	V	
* 15.72335	23.01			ADR	40.40	-20.60	0.20	43.01	-	-	54.00	-10.99	-	-	-	0	100	H	
* 15.72035	22.80			ADR	40.40	-20.50	0.20	42.95	-	-	54.00	-11.05	-	-	-	0	100	V	

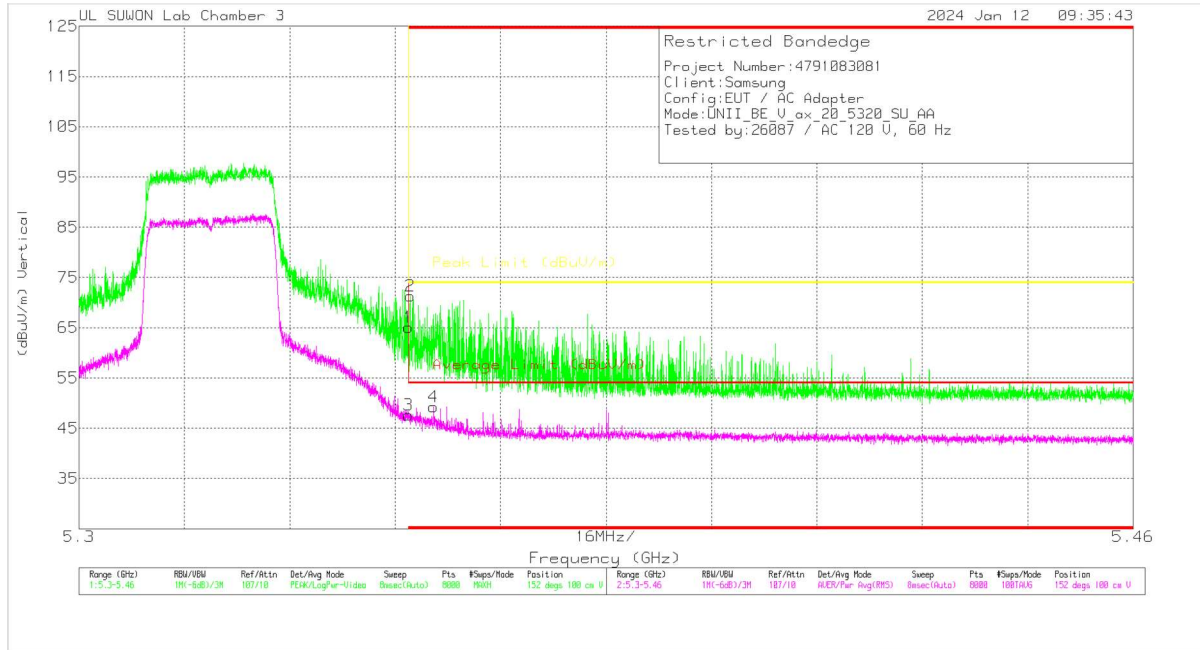
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

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

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

### BANDEDGE (WORST CASE: 802.11ax SU HE20 / 5320 MHz)

#### VERTICAL PEAK AND AVERAGE DATA



#### Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor (dBm)	Loss (dB)	DC Cor (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	50.78	PK	34.7	-20.4	0	65.08	-	-	74	-8.92	152	100	V
2	* 5.35025	56.99	PK	34.7	-20.4	0	71.29	-	-	74	-2.71	152	100	V
3	* 5.35001	33.07	RMS	34.7	-20.4	23	47.6	54	-6.4	-	-	152	100	V
4	* 5.35383	34.63	RMS	34.7	-20.3	23	49.26	54	-4.74	-	-	152	100	V

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

PK - Peak detector

RMS - RMS detection

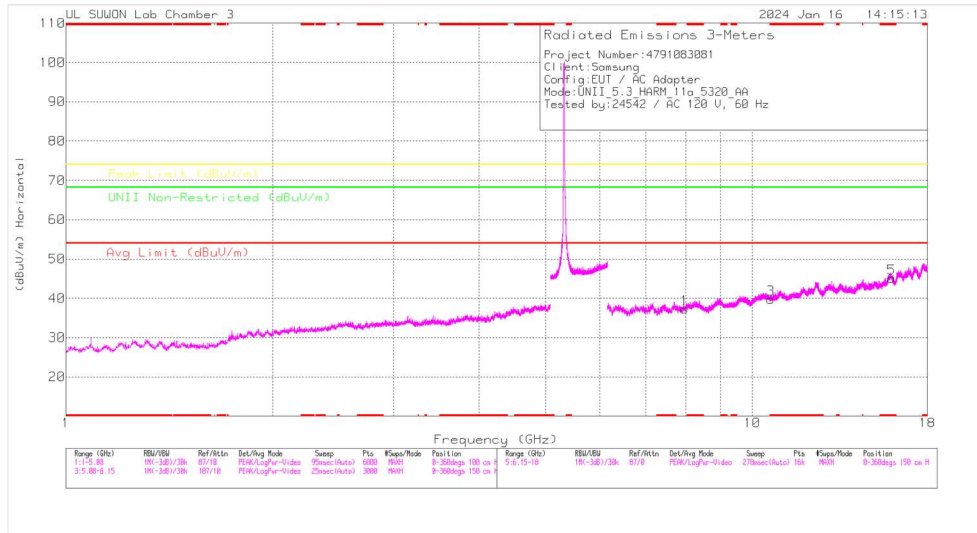
**BANDEDGE TEST DATA**

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/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	MIMO	* 5.35001	47.44	Pk	34.70	-20.40	0.00	61.74	-	-	74.00	-12.26	154	108	H
			* 5.35169	49.11	Pk	34.70	-20.30	0.00	63.51	-	-	74.00	-10.49	154	108	H
			* 5.35001	33.82	RMS	34.70	-20.40	0.20	48.32	54.00	-5.68	-	-	154	108	H
			* 5.35071	35.40	RMS	34.70	-20.40	0.20	49.90	54.00	-4.10	-	-	154	108	H
			* 5.35001	52.14	Pk	34.70	-20.40	0.00	66.44	-	-	74.00	-7.56	189	108	V
			* 5.35011	53.03	Pk	34.70	-20.40	0.00	67.33	-	-	74.00	-6.67	189	108	V
			* 5.35001	35.19	RMS	34.70	-20.40	0.20	49.69	54.00	-4.31	-	-	189	108	V
			* 5.35143	36.67	RMS	34.70	-20.30	0.20	51.27	54.00	-2.73	-	-	189	108	V
802.11n (HT20)	5320	MIMO	* 5.35001	51.10	Pk	34.70	-20.40	0.00	65.40	-	-	74.00	-8.60	214	108	H
			* 5.35035	54.35	Pk	34.70	-20.40	0.00	68.65	-	-	74.00	-5.35	214	108	H
			* 5.35001	31.11	RMS	34.70	-20.40	0.12	45.53	54.00	-8.47	-	-	214	108	H
			* 5.35051	34.04	RMS	34.70	-20.40	0.12	48.46	54.00	-5.54	-	-	214	108	H
			* 5.35001	53.71	Pk	34.70	-20.40	0.00	68.01	-	-	74.00	-5.99	194	340	V
			* 5.35073	54.60	Pk	34.70	-20.40	0.00	68.90	-	-	74.00	-5.10	194	340	V
			* 5.35001	30.53	RMS	34.70	-20.40	0.12	44.95	54.00	-9.05	-	-	194	340	V
			* 5.35123	31.78	RMS	34.70	-20.30	0.12	46.30	54.00	-7.70	-	-	194	340	V
802.11n (HT40)	5310	MIMO	* 5.35001	50.78	Pk	34.70	-20.40	0.00	65.08	-	-	74.00	-8.92	196	111	H
			* 5.36553	54.89	Pk	34.70	-20.30	0.00	69.29	-	-	74.00	-4.71	196	111	H
			* 5.35001	34.29	RMS	34.70	-20.40	0.09	48.68	54.00	-5.32	-	-	196	111	H
			* 5.35205	36.06	RMS	34.70	-20.30	0.09	50.55	54.00	-3.45	-	-	196	111	H
			* 5.35001	52.55	Pk	34.70	-20.40	0.00	66.85	-	-	74.00	-7.15	151	100	V
			* 5.36511	55.58	Pk	34.70	-20.30	0.00	69.98	-	-	74.00	-4.02	151	100	V
			* 5.35001	34.38	RMS	34.70	-20.40	0.09	48.77	54.00	-5.23	-	-	151	100	V
			* 5.35075	35.53	RMS	34.70	-20.40	0.09	49.92	54.00	-4.08	-	-	151	100	V
802.11ac (VHT80)	5290	MIMO	* 5.35001	44.21	Pk	34.70	-20.40	0.00	58.51	-	-	74.00	-15.49	155	104	H
			* 5.37177	52.48	Pk	34.70	-20.30	0.00	66.88	-	-	74.00	-7.12	155	104	H
			* 5.35001	31.64	RMS	34.70	-20.40	0.54	46.48	54.00	-7.52	-	-	155	104	H
			* 5.37741	35.08	RMS	34.80	-20.20	0.54	50.22	54.00	-3.78	-	-	155	104	H
			* 5.35001	49.23	Pk	34.70	-20.40	0.00	63.53	-	-	74.00	-10.47	141	107	V
			* 5.38177	55.32	Pk	34.80	-20.20	0.00	69.92	-	-	74.00	-4.08	141	107	V
			* 5.35001	34.60	RMS	34.70	-20.40	0.54	49.44	54.00	-4.56	-	-	141	107	V
			* 5.36137	35.78	RMS	34.70	-20.30	0.54	50.72	54.00	-3.28	-	-	141	107	V
802.11ax (HE20) SU mode	5320	MIMO	* 5.35001	44.40	Pk	34.70	-20.40	0.00	58.70	-	-	74.00	-15.30	151	110	H
			* 5.38635	51.37	Pk	34.70	-20.30	0.00	65.77	-	-	74.00	-8.23	151	110	H
			* 5.35001	32.09	RMS	34.70	-20.40	0.23	46.62	54.00	-7.38	-	-	151	110	H
			* 5.35057	32.79	RMS	34.70	-20.40	0.23	47.32	54.00	-6.68	-	-	151	110	H
			* 5.35001	50.78	Pk	34.70	-20.40	0.00	65.08	-	-	74.00	-8.92	152	100	V
			* 5.35025	56.99	Pk	34.70	-20.40	0.00	71.29	-	-	74.00	-2.71	152	100	V
			* 5.35001	33.07	RMS	34.70	-20.40	0.23	47.60	54.00	-6.40	-	-	152	100	V
			* 5.35383	34.63	RMS	34.70	-20.30	0.23	49.26	54.00	-4.74	-	-	152	100	V
802.11ax (HE40) SU mode	5310	MIMO	* 5.35001	46.21	Pk	34.70	-20.40	0.00	60.51	-	-	74.00	-13.49	151	131	H
			* 5.35505	48.63	Pk	34.70	-20.30	0.00	63.03	-	-	74.00	-10.97	151	131	H
			* 5.35001	30.73	RMS	34.70	-20.40	0.48	45.51	54.00	-8.49	-	-	151	131	H
			* 5.35271	31.82	RMS	34.70	-20.30	0.48	46.70	54.00	-7.30	-	-	151	131	H
			* 5.35001	52.42	Pk	34.70	-20.40	0.00	66.72	-	-	74.00	-7.28	153	100	V
			* 5.37741	55.74	Pk	34.80	-20.20	0.00	70.34	-	-	74.00	-3.66	153	100	V
			* 5.35001	34.77	RMS	34.70	-20.40	0.48	49.55	54.00	-4.45	-	-	153	100	V
			* 5.35043	36.42	RMS	34.70	-20.40	0.48	51.20	54.00	-2.80	-	-	153	100	V
802.11ax (HE80) SU mode	5290	MIMO	* 5.35001	43.46	Pk	34.70	-20.40	0.00	57.76	-	-	74.00	-16.24	153	111	H
			* 5.37733	47.13	Pk	34.80	-20.20	0.00	61.73	-	-	74.00	-12.27	153	111	H
			* 5.35001	30.10	RMS	34.70	-20.40	0.63	45.03	54.00	-8.97	-	-	153	111	H
			* 5.35091	31.71	RMS	34.70	-20.40	0.63	46.64	54.00	-7.36	-	-	153	111	H
			* 5.35001	46.71	Pk	34.70	-20.40	0.00	61.01	-	-	74.00	-12.99	155	102	V
			* 5.37757	53.16	Pk	34.80	-20.20	0.00	67.76	-	-	74.00	-6.24	155	102	V
			* 5.35001	32.20	RMS	34.70	-20.40	0.63	47.13	54.00	-6.87	-	-	155	102	V
			* 5.37765	35.13	RMS	34.80	-20.20	0.63	50.36	54.00	-3.64	-	-	155	102	V
802.11ax (HE80) RU mode 26 Tone offset 36	5290	MIMO	* 5.35001	41.23	Pk	34.70	-20.40	0.00	55.53	-	-	74.00	-18.47	153	107	H
			* 5.36593	52.06	Pk	34.70	-20.30	0.00	66.46	-	-	74.00	-7.54	153	107	H
			* 5.35001	30.80	RMS	34.70	-20.40	0.12	45.22	54.00	-8.78	-	-	153	107	H
			* 5.36589	34.99	RMS	34.70	-20.30	0.12	49.51	54.00	-4.49	-	-	153	107	H
			* 5.35001	38.95	Pk	34.70	-20.40	0.00	53.25	-	-	74.00	-20.75	154	100	V
			* 5.35051	49.26	Pk	34.70	-20.40	0.00	63.56	-	-	74.00	-10.44	154	100	V
			* 5.35001	28.30	RMS	34.70	-20.40	0.12	42.72	54.00	-11.28	-	-	154	100	V
			* 5.36667	29.87	RMS	34.70	-20.30	0.12	44.39	54.00	-9.61	-	-	154	100	V
802.11ax (HE80) RU mode 484 Tone offset 66	5290	MIMO	* 5.35001	49.13	Pk	34.70	-20.40	0.00	63.43	-	-	74.00	-10.57	155	107	H
			* 5.35183	51.92	Pk	34.70	-20.30	0.00	66.32	-	-	74.00	-7.68	155	107	H
			* 5.35001	32.26	RMS	34.70	-20.40	0.46	47.02	54.00	-6.98	-	-	155	107	H
			* 5.35405	33.07	RMS	34.70	-20.30	0.46	47.93	54.00	-6.07	-	-	155	107	H
			* 5.35001	49.83	Pk	34.70	-20.40	0.00	64.13	-	-	74.00	-9.87	152	105	V
			* 5.36815	56.38	Pk	34.70	-20.30	0.00	70.78	-	-	74.00	-3.22	152	105	V
			* 5.35001	33.23	RMS	34.70	-20.40	0.46	47.99	54.00	-6.01	-	-	152	105	V
			* 5.35125	35.17	RMS	34.70	-20.30	0.46	50.03	54.00	-3.97	-	-	152	105	V

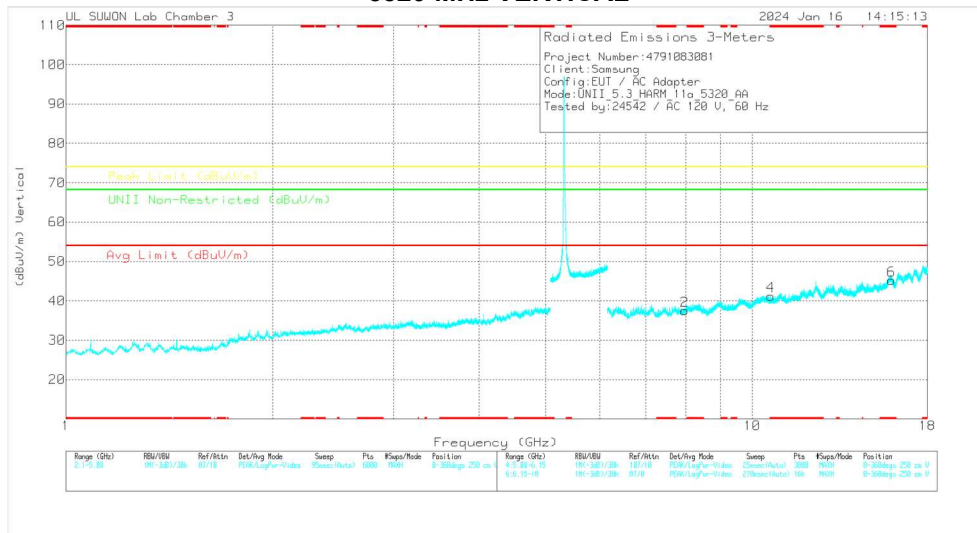
Note1. Pk - Peak detector, RMS - RMS detector  
 Note2. \* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

**HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5320 MHz)**

**5320 MHz HORIZONTAL**



**5320 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.

**5320 MHz DATA**

**Radiated Emissions**

Frequency (GHz)	Meas. Reading (dBuV)	Det	Antenna Correction Factor(dBm)	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)	Asymth (Deg)	Height (cm)	Polarity	
7.97582	36.76	PK-U	35.9	-24.4	0	48.26	-	-	-	-	68.2	-19.94	0	100	H	
7.98016	36.4	PK-U	35.9	-24.4	0	47.9	-	-	-	-	68.2	-20.3	0	100	V	
*10.63709	35.3	PK-U	37.7	-21.1	0	51.9	-	-	74	-22.1	-	-	-	164	H	
*10.63738	23.05	ADR	37.7	-21.1	2	38.85	54	-14.15	-	-	-	-	-	164	H	
*10.64128	34.73	PK-U	37.7	-21.1	0	51.33	-	-	74	-22.67	-	-	-	23	274	V
*10.6424	23.06	ADR	37.7	-21.1	2	39.86	54	-14.14	-	-	-	-	-	23	274	V
*15.96097	34.66	PK-U	40.9	-19.8	0	55.16	-	-	74	-18.24	-	-	-	0	100	H
*15.9579	34.74	PK-U	40.9	-19.7	0	55.04	-	-	74	-18.08	-	-	-	0	100	V
*15.96097	22.39	ADR	40.9	-19.8	2	43.69	54	-10.31	-	-	-	-	-	0	100	H
*15.9579	22.28	ADR	40.9	-19.7	2	43.68	54	-10.32	-	-	-	-	-	0	100	V

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

**HARMONICS AND SPURIOUS EMISSIONS TEST DATA**

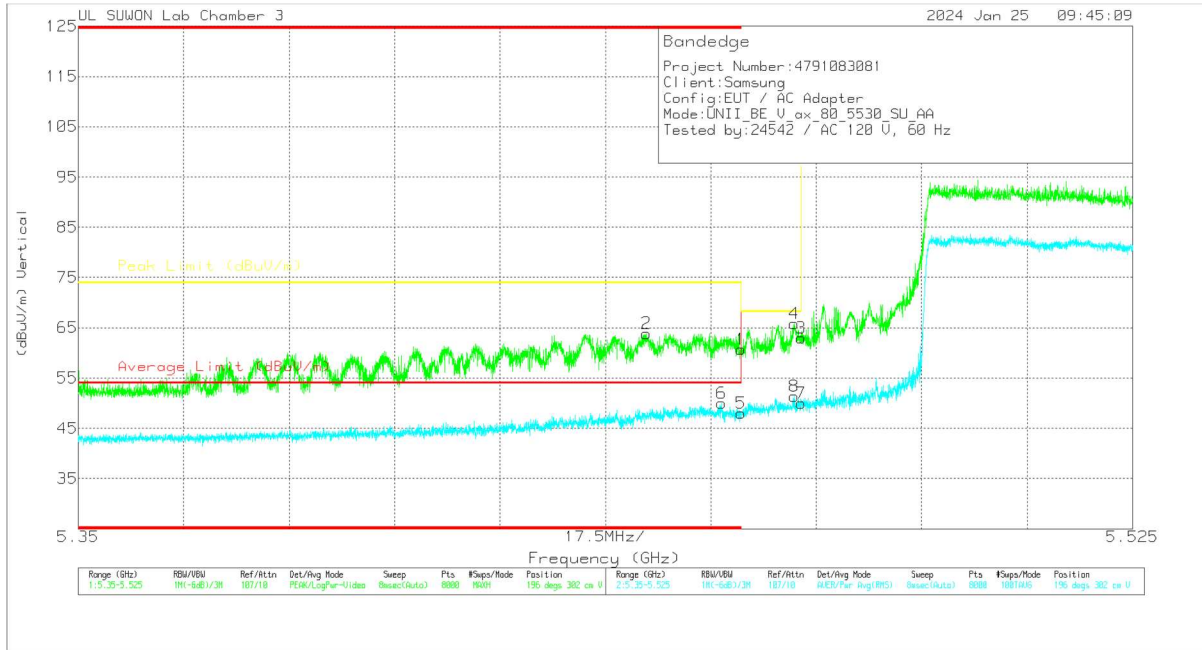
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5260	MIMO	7.888	36.44	PK-U	35.90	-24.50	0.00	47.84	-	-	-	-	68.20	-20.36	0	100	H
			7.892	36.62	PK-U	35.90	-24.50	0.00	48.02	-	-	-	-	68.20	-20.18	0	100	V
			10.521	34.98	PK-U	37.60	-21.10	0.00	51.48	-	-	-	-	68.20	-16.72	164	115	H
			10.521	35.10	PK-U	37.60	-21.10	0.00	51.60	-	-	-	-	68.20	-16.60	169	101	V
			*15.77981	34.66	PK-U	40.60	-20.50	0.00	54.76	-	-	74.00	-19.24	-	-	0	100	H
			*15.78445	34.81	PK-U	40.60	-20.50	0.00	54.91	-	-	74.00	-19.09	-	-	0	100	V
			*15.77981	22.85	ADR	40.60	-20.50	0.20	43.15	54.00	-10.85	-	-	-	-	0	100	H
			*15.78445	23.11	ADR	40.60	-20.50	0.20	43.41	54.00	-10.59	-	-	-	-	0	100	V
			7.954	36.52	PK-U	35.90	-24.40	0.00	48.02	-	-	-	-	-	68.20	-20.18	0	100
	7.955	36.87	PK-U	35.90	-24.40	0.00	48.37	-	-	-	-	-	68.20	-19.83	0	100	V	
	*10.60081	35.42	PK-U	37.70	-21.20	0.00	51.92	-	-	74.00	-22.08	-	-	164	113	H		
	*10.60155	23.42	ADR	37.70	-21.20	0.20	40.12	54.00	-13.88	-	-	-	-	164	113	H		
	*10.60068	34.61	PK-U	37.70	-21.20	0.00	51.11	-	-	74.00	-22.89	-	-	158	290	V		
	*10.60084	23.16	ADR	37.70	-21.20	0.20	39.86	54.00	-14.14	-	-	-	-	158	290	V		
	*15.90137	34.97	PK-U	40.80	-19.90	0.00	55.87	-	-	74.00	-18.13	-	-	0	100	H		
	*15.89615	35.17	PK-U	40.80	-19.90	0.00	56.07	-	-	74.00	-17.93	-	-	0	100	V		
	*15.90137	22.35	ADR	40.80	-19.90	0.20	43.45	54.00	-10.55	-	-	-	-	0	100	H		
	*15.89615	22.25	ADR	40.80	-19.90	0.20	43.35	54.00	-10.65	-	-	-	-	0	100	V		
	7.976	36.76	PK-U	35.90	-24.40	0.00	48.26	-	-	-	-	-	68.20	-19.94	0	100	H	
	7.980	36.40	PK-U	35.90	-24.40	0.00	47.90	-	-	-	-	-	68.20	-20.30	0	100	V	
	*10.63709	35.30	PK-U	37.70	-21.10	0.00	51.90	-	-	74.00	-22.10	-	-	164	111	H		
	*10.63738	23.05	ADR	37.70	-21.10	0.20	39.85	54.00	-14.15	-	-	-	-	164	111	H		
	*10.64128	34.73	PK-U	37.70	-21.10	0.00	51.33	-	-	74.00	-22.67	-	-	23	274	V		
	*10.6424	23.06	ADR	37.70	-21.10	0.20	39.86	54.00	-14.14	-	-	-	-	23	274	V		
	*15.96097	34.66	PK-U	40.90	-19.80	0.00	55.76	-	-	74.00	-18.24	-	-	0	100	H		
	*15.9579	34.74	PK-U	40.90	-19.70	0.00	55.94	-	-	74.00	-18.06	-	-	0	100	V		
	*15.96097	22.39	ADR	40.90	-19.80	0.20	43.69	54.00	-10.31	-	-	-	-	0	100	H		
*15.9579	22.28	ADR	40.90	-19.70	0.20	43.68	54.00	-10.32	-	-	-	-	0	100	V			
802.11ax (HE20) RU mode 26 Tone offset 8 Spot-Check	5260	MIMO	7.891	37.58	PK-U	35.90	-24.50	0.00	48.98	-	-	-	-	68.20	-19.22	0	100	H
			7.890	36.42	PK-U	35.90	-24.40	0.00	47.92	-	-	-	-	68.20	-20.28	0	100	V
			10.503	34.99	PK-U	37.60	-21.20	0.00	51.39	-	-	-	-	68.20	-16.81	11	281	H
			10.521	34.50	PK-U	37.60	-21.10	0.00	51.00	-	-	-	-	68.20	-17.20	129	106	V
			*15.77718	35.55	PK-U	40.60	-20.60	0.00	55.55	-	-	74.00	-18.45	-	-	0	100	H
			*15.78326	34.79	PK-U	40.60	-20.50	0.00	54.89	-	-	74.00	-19.11	-	-	0	100	V
			*15.77718	22.67	ADR	40.60	-20.60	0.20	43.07	54.00	-10.93	-	-	-	-	0	100	H
			*15.78326	22.96	ADR	40.60	-20.50	0.20	43.26	54.00	-10.74	-	-	-	-	0	100	V

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average  
 Note2. \* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

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

**BANDEDGE (WORST CASE: 802.11ax SU HE80 / 5530 MHz)**

**VERTICAL PEAK AND AVERAGE DATA**



**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Antenna Correction Factor (dBm)	Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.45998	45.98	Pk	34.9	-20.1	0	60.88	-	-	74	-13.32	196	302	V
2	* 5.44427	49.1	Pk	34.9	-20.1	0	63.9	-	-	74	-10.1	196	302	V
3	5.46998	48.28	Pk	34.9	-20.2	0	62.98	-	-	68.2	-5.22	196	302	V
4	5.46882	51.17	Pk	34.9	-20.2	0	65.87	-	-	68.2	-2.33	196	302	V
5	* 5.45998	32.53	RMS	34.9	-20.1	63	47.96	54	-6.04	-	-	196	302	V
6	* 5.45676	34.62	RMS	34.9	-20.2	63	49.95	54	-4.05	-	-	196	302	V
7	5.46998	34.62	RMS	34.9	-20.2	63	49.95	-	-	-	-	196	302	V
8	5.46888	36.01	RMS	34.9	-20.2	63	51.34	-	-	-	-	196	302	V

Pk - Peak detector  
 RMS - RMS detection

**BANDEDGE TEST DATA**

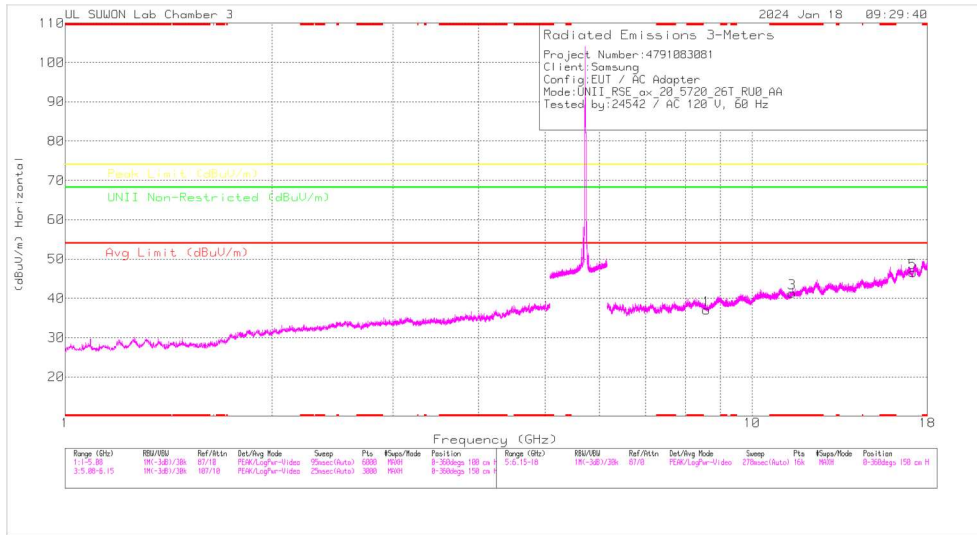
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5500	MIMO	* 5.45998	47.26	Pk	34.90	-20.10	0.00	62.06	-	-	74.00	-11.94	159	108	H
			* 5.45893	47.90	Pk	34.90	-20.10	0.00	62.70	-	-	74.00	-11.30	159	108	H
			5.46998	49.29	Pk	34.90	-20.20	0.00	63.99	-	-	68.20	-4.21	159	108	H
			5.46388	50.95	Pk	34.90	-20.20	0.00	65.65	-	-	68.20	-2.55	159	108	H
			* 5.45998	34.52	RMS	34.90	-20.10	0.20	49.52	54.00	-4.48	-	-	159	108	H
			* 5.45668	35.08	RMS	34.90	-20.20	0.20	49.98	54.00	-4.02	-	-	159	108	H
			5.46998	34.23	RMS	34.90	-20.20	0.20	49.13	-	-	-	-	159	108	H
			5.46969	36.23	RMS	34.90	-20.20	0.20	51.13	-	-	-	-	159	108	H
			* 5.45998	46.10	Pk	34.90	-20.10	0.00	60.90	-	-	74.00	-13.10	228	375	V
			* 5.45705	47.07	Pk	34.90	-20.10	0.00	61.87	-	-	74.00	-12.13	228	375	V
	5.46998	49.44	Pk	34.90	-20.20	0.00	64.14	-	-	68.20	-4.06	228	375	V		
	5.46722	50.98	Pk	34.90	-20.20	0.00	65.68	-	-	68.20	-2.52	228	375	V		
	* 5.45998	30.08	RMS	34.90	-20.10	0.20	45.08	54.00	-8.92	-	-	228	375	V		
	* 5.4597	31.03	RMS	34.90	-20.10	0.20	46.03	54.00	-7.97	-	-	228	375	V		
	5.46998	33.90	RMS	34.90	-20.20	0.20	48.80	-	-	-	-	228	375	V		
	5.46978	34.43	RMS	34.90	-20.20	0.20	49.33	-	-	-	-	228	375	V		
	5700	MIMO	5.72500	44.14	Pk	35.00	-19.80	0.00	59.34	-	-	68.20	-8.86	164	100	H
	5.72521	48.44	Pk	35.00	-19.80	0.00	63.64	-	-	68.20	-4.56	164	100	H		
	5.72500	43.72	Pk	35.00	-19.80	0.00	58.92	-	-	68.20	-9.28	170	100	V		
	5.72524	45.04	Pk	35.00	-19.80	0.00	60.24	-	-	68.20	-7.96	170	100	V		
802.11n (HT20)	5500	MIMO	* 5.45998	42.62	Pk	34.90	-20.10	0.00	57.42	-	-	74.00	-16.58	157	122	H
			* 5.45337	48.85	Pk	34.90	-20.10	0.00	63.65	-	-	74.00	-10.35	157	122	H
			5.46998	47.33	Pk	34.90	-20.20	0.00	62.03	-	-	68.20	-6.17	157	122	H
			5.46985	49.34	Pk	34.90	-20.20	0.00	64.04	-	-	68.20	-4.16	157	122	H
			* 5.45998	30.63	RMS	34.90	-20.10	0.12	45.55	54.00	-8.45	-	-	157	122	H
			* 5.44556	32.25	RMS	34.90	-20.10	0.12	47.17	54.00	-6.83	-	-	157	122	H
			5.46998	32.44	RMS	34.90	-20.20	0.12	47.26	-	-	-	-	157	122	H
			5.46989	33.81	RMS	34.90	-20.20	0.12	48.63	-	-	-	-	157	122	H
			* 5.45998	43.26	Pk	34.90	-20.10	0.00	58.06	-	-	74.00	-15.94	188	300	V
			* 5.45291	49.40	Pk	34.90	-20.10	0.00	64.20	-	-	74.00	-9.80	188	300	V
	5.46998	48.51	Pk	34.90	-20.20	0.00	63.21	-	-	68.20	-4.99	188	300	V		
	5.46355	49.72	Pk	34.90	-20.20	0.00	64.42	-	-	68.20	-3.78	188	300	V		
	* 5.45998	28.86	RMS	34.90	-20.10	0.12	43.78	54.00	-10.22	-	-	188	300	V		
	* 5.45795	30.99	RMS	34.90	-20.10	0.12	45.91	54.00	-8.09	-	-	188	300	V		
	5.46998	33.45	RMS	34.90	-20.20	0.12	48.27	-	-	-	-	188	300	V		
	5.46921	33.25	RMS	34.90	-20.20	0.12	48.07	-	-	-	-	188	300	V		
	5700	MIMO	5.72500	39.77	Pk	35.00	-19.80	0.00	54.97	-	-	68.20	-13.23	158	115	H
	5.72652	44.07	Pk	35.00	-19.80	0.00	59.27	-	-	68.20	-8.93	158	115	H		
	5.72500	48.14	Pk	35.00	-19.80	0.00	63.34	-	-	68.20	-4.86	169	100	V		
	5.72510	49.70	Pk	35.00	-19.80	0.00	64.90	-	-	68.20	-3.30	169	100	V		
802.11n (HT40)	5510	MIMO	* 5.45998	42.64	Pk	34.90	-20.10	0.00	57.44	-	-	74.00	-16.56	198	107	H
			* 5.45959	44.24	Pk	34.90	-20.10	0.00	59.04	-	-	74.00	-14.96	198	107	H
			5.46998	48.68	Pk	34.90	-20.20	0.00	63.38	-	-	68.20	-4.82	198	107	H
			5.46978	49.80	Pk	34.90	-20.20	0.00	64.50	-	-	68.20	-3.70	198	107	H
			* 5.45998	28.35	RMS	34.90	-20.10	0.09	43.24	54.00	-10.76	-	-	198	107	H
			* 5.44283	29.05	RMS	34.90	-20.10	0.09	43.94	54.00	-10.06	-	-	198	107	H
			5.46998	28.95	RMS	34.90	-20.20	0.09	43.74	-	-	-	-	198	107	H
			5.46983	30.33	RMS	34.90	-20.20	0.09	45.12	-	-	-	-	198	107	H
			* 5.45998	40.49	Pk	34.90	-20.10	0.00	55.29	-	-	74.00	-18.71	197	336	V
			* 5.45963	43.54	Pk	34.90	-20.10	0.00	58.34	-	-	74.00	-15.66	197	336	V
	5.46998	45.14	Pk	34.90	-20.20	0.00	59.84	-	-	68.20	-8.36	197	336	V		
	5.46954	48.36	Pk	34.90	-20.20	0.00	63.06	-	-	68.20	-5.14	197	336	V		
	* 5.45998	29.10	RMS	34.90	-20.10	0.09	43.99	54.00	-10.01	-	-	197	336	V		
	* 5.459	29.94	RMS	34.90	-20.10	0.09	44.83	54.00	-9.17	-	-	197	336	V		
	5.46998	29.82	RMS	34.90	-20.20	0.09	44.61	-	-	-	-	197	336	V		
	5.46994	31.70	RMS	34.90	-20.20	0.09	46.49	-	-	-	-	197	336	V		
	5670	MIMO	5.72500	39.66	Pk	35.00	-19.80	0.00	54.86	-	-	68.20	-13.34	155	124	H
	5.72503	43.16	Pk	35.00	-19.80	0.00	58.36	-	-	68.20	-9.84	155	124	H		
	5.72500	49.59	Pk	35.00	-19.80	0.00	64.79	-	-	68.20	-3.41	149	104	V		
	5.72758	50.23	Pk	35.00	-19.80	0.00	65.43	-	-	68.20	-2.77	149	104	V		
802.11ac (VHT80)	5530	MIMO	* 5.45998	42.87	Pk	34.90	-20.10	0.00	57.67	-	-	74.00	-16.33	156	122	H
			* 5.45372	48.01	Pk	34.90	-20.10	0.00	62.81	-	-	74.00	-11.19	156	122	H
			5.46998	42.52	Pk	34.90	-20.20	0.00	57.22	-	-	68.20	-10.98	156	122	H
			5.46840	47.29	Pk	34.90	-20.20	0.00	61.99	-	-	68.20	-6.21	156	122	H
			* 5.45998	31.48	RMS	34.90	-20.10	0.54	46.82	54.00	-7.18	-	-	156	122	H
			* 5.45871	32.30	RMS	34.90	-20.10	0.54	47.64	54.00	-6.36	-	-	156	122	H
			5.46998	31.11	RMS	34.90	-20.20	0.54	46.35	-	-	-	-	156	122	H
			5.46064	32.50	RMS	34.90	-20.20	0.54	47.74	-	-	-	-	156	122	H
			* 5.45998	44.22	Pk	34.90	-20.10	0.00	59.02	-	-	74.00	-14.98	198	333	V
			* 5.45348	47.66	Pk	34.90	-20.10	0.00	62.46	-	-	74.00	-11.54	198	333	V
	5.46998	43.69	Pk	34.90	-20.20	0.00	58.39	-	-	68.20	-9.81	198	333	V		
	5.46643	49.60	Pk	34.90	-20.20	0.00	64.30	-	-	68.20	-3.90	198	333	V		
	* 5.45998	29.63	RMS	34.90	-20.10	0.54	44.97	54.00	-9.03	-	-	198	333	V		
	* 5.45694	31.50	RMS	34.90	-20.10	0.54	46.84	54.00	-7.16	-	-	198	333	V		
	5.46998	30.59	RMS	34.90	-20.20	0.54	45.83	-	-	-	-	198	333	V		
	5.46490	32.21	RMS	34.90	-20.20	0.54	47.45	-	-	-	-	198	333	V		
	5610	MIMO	5.72500	46.05	Pk	35.00	-19.80	0.00	61.25	-	-	68.20	-6.95	196	111	H
	5.72893	48.15	Pk	35.00	-19.80	0.00	63.35	-	-	68.20	-4.85	196	111	H		
	5.72500	41.63	Pk	35.00	-19.80	0.00	56.83	-	-	68.20	-11.37	191	332	V		
	5.72843	45.30	Pk	35.00	-19.80	0.00	60.50	-	-	68.20	-7.70	191	332	V		



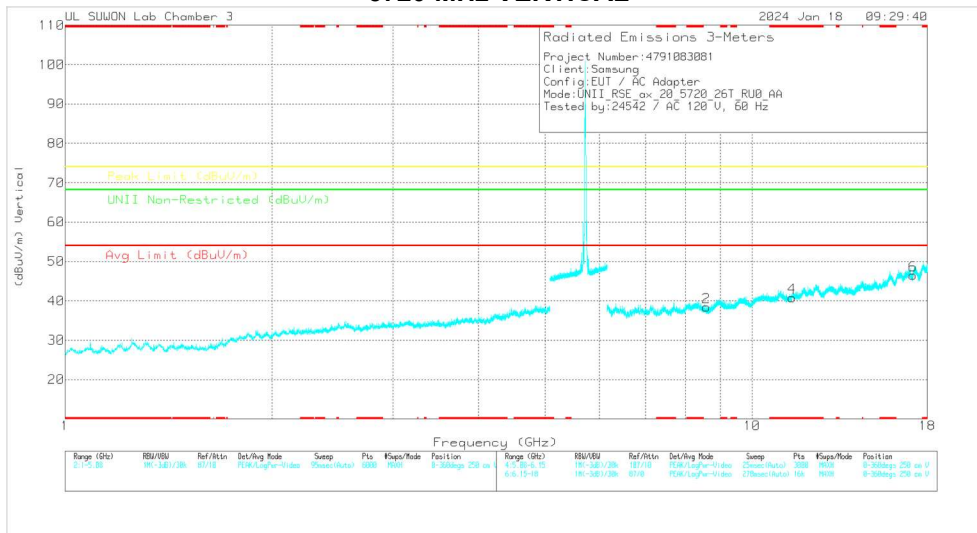
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity		
802.11ax (HE20) SU mode	5500	MIMO	* 5.45998	40.35	Pk	34.90	-20.10	0.00	55.15	-	-	74.00	-18.85	157	106	H		
			* 5.44954	45.67	Pk	34.90	-20.20	0.00	60.37	-	-	74.00	-13.63	157	106	H		
			5.46998	40.23	Pk	34.90	-20.20	0.00	54.93	-	-	68.20	-13.27	157	106	H		
			5.46197	48.96	Pk	34.90	-20.10	0.00	61.66	-	-	68.20	-6.54	157	106	H		
			* 5.45998	29.49	RMS	34.90	-20.20	0.23	46.52	54.00	-9.48	-	-	-	-	157	106	H
			* 5.43451	31.20	RMS	34.90	-20.20	0.23	46.13	54.00	-7.87	-	-	-	-	157	106	H
			5.46998	29.42	RMS	34.90	-20.20	0.23	44.35	-	-	-	-	-	-	157	106	H
			5.46274	30.97	RMS	34.90	-20.20	0.23	45.90	-	-	-	-	-	-	157	106	H
			* 5.45998	44.20	Pk	34.90	-20.10	0.00	59.00	-	-	74.00	-15.00	194	304	V		
			* 5.45696	47.53	Pk	34.90	-20.10	0.00	62.33	-	-	74.00	-11.67	194	304	V		
			5.46998	42.86	Pk	34.90	-20.20	0.00	57.56	-	-	68.20	-10.64	194	304	V		
			5.46508	50.99	Pk	34.90	-20.20	0.00	65.69	-	-	68.20	-2.51	194	304	V		
			* 5.45998	28.91	RMS	34.90	-20.10	0.23	43.94	54.00	-10.06	-	-	-	-	194	304	V
			* 5.45578	30.05	RMS	34.90	-20.20	0.23	44.98	54.00	-9.02	-	-	-	-	194	304	V
			5.46998	29.47	RMS	34.90	-20.20	0.23	44.40	-	-	-	-	-	-	194	304	V
			5.46952	30.68	RMS	34.90	-20.20	0.23	45.61	-	-	-	-	-	-	194	304	V
			5.72500	42.80	Pk	35.00	-19.80	0.00	58.00	-	-	68.20	-10.20	150	124	H		
			5.72503	50.11	Pk	35.00	-19.80	0.00	65.31	-	-	68.20	-2.89	150	124	H		
			5.72500	46.06	Pk	35.00	-19.80	0.00	61.26	-	-	68.20	-6.94	200	289	V		
			5.73469	50.56	Pk	35.00	-19.80	0.00	65.76	-	-	68.20	-2.44	200	289	V		
802.11ax (HE40) SU mode	5510	MIMO	* 5.45998	39.04	Pk	34.90	-20.10	0.00	53.84	-	-	74.00	-20.16	151	108	H		
			* 5.45399	42.21	Pk	34.90	-20.10	0.00	57.01	-	-	74.00	-16.99	151	108	H		
			5.46998	39.89	Pk	34.90	-20.20	0.00	54.59	-	-	68.20	-13.61	151	108	H		
			5.46967	42.59	Pk	34.90	-20.20	0.00	57.29	-	-	68.20	-10.91	151	108	H		
			* 5.45998	29.39	RMS	34.90	-20.10	0.48	44.67	54.00	-9.33	-	-	-	-	151	108	H
			* 5.43885	30.68	RMS	34.90	-20.10	0.48	45.96	54.00	-8.04	-	-	-	-	151	108	H
			5.46998	29.52	RMS	34.90	-20.20	0.48	44.70	-	-	-	-	-	-	151	108	H
			5.46455	30.70	RMS	34.90	-20.20	0.48	45.88	-	-	-	-	-	-	151	108	H
			* 5.45998	41.28	Pk	34.90	-20.10	0.00	56.08	-	-	74.00	-17.92	196	302	V		
			* 5.45515	46.46	Pk	34.90	-20.20	0.00	61.16	-	-	74.00	-12.84	196	302	V		
			5.46998	47.86	Pk	34.90	-20.20	0.00	62.56	-	-	68.20	-5.64	196	302	V		
			5.46858	49.97	Pk	34.90	-20.20	0.00	64.67	-	-	68.20	-3.53	196	302	V		
			* 5.45998	28.91	RMS	34.90	-20.10	0.48	44.19	54.00	-9.81	-	-	-	-	196	302	V
			* 5.45871	30.14	RMS	34.90	-20.10	0.48	45.42	54.00	-8.58	-	-	-	-	196	302	V
			5.46998	30.18	RMS	34.90	-20.20	0.48	45.36	-	-	-	-	-	-	196	302	V
			5.46801	31.85	RMS	34.90	-20.20	0.48	47.03	-	-	-	-	-	-	196	302	V
			5.72500	45.13	Pk	35.00	-19.80	0.00	60.33	-	-	68.20	-7.87	150	118	H		
			5.72518	47.66	Pk	35.00	-19.80	0.00	62.86	-	-	68.20	-5.34	150	118	H		
			5.72500	42.01	Pk	35.00	-19.80	0.00	57.21	-	-	68.20	-10.99	196	328	V		
			5.72675	47.79	Pk	35.00	-19.80	0.00	62.99	-	-	68.20	-5.21	196	328	V		
802.11ax (HE80) SU mode	5530	MIMO	* 5.45998	41.91	Pk	34.90	-20.10	0.00	56.71	-	-	74.00	-17.29	154	118	H		
			* 5.43397	45.93	Pk	34.90	-20.20	0.00	60.63	-	-	74.00	-13.37	154	118	H		
			5.46998	41.61	Pk	34.90	-20.20	0.00	56.31	-	-	68.20	-11.89	154	118	H		
			5.46127	45.55	Pk	34.90	-20.20	0.00	60.25	-	-	68.20	-7.95	154	118	H		
			* 5.45998	31.52	RMS	34.90	-20.10	0.63	46.95	54.00	-7.05	-	-	-	-	154	118	H
			* 5.45313	32.12	RMS	34.90	-20.10	0.63	47.55	54.00	-6.45	-	-	-	-	154	118	H
			5.46998	31.45	RMS	34.90	-20.20	0.63	46.78	-	-	-	-	-	-	154	118	H
			5.46889	32.52	RMS	34.90	-20.20	0.63	47.85	-	-	-	-	-	-	154	118	H
			* 5.45998	45.88	Pk	34.90	-20.10	0.00	60.68	-	-	74.00	-13.32	196	302	V		
			* 5.44427	49.10	Pk	34.90	-20.10	0.00	63.90	-	-	74.00	-10.10	196	302	V		
			5.46998	48.28	Pk	34.90	-20.20	0.00	62.98	-	-	68.20	-5.22	196	302	V		
			5.46882	51.17	Pk	34.90	-20.20	0.00	65.87	-	-	68.20	-2.33	196	302	V		
			* 5.45998	32.53	RMS	34.90	-20.10	0.63	47.96	54.00	-6.04	-	-	-	-	196	302	V
			* 5.45676	34.62	RMS	34.90	-20.20	0.63	49.95	54.00	-4.05	-	-	-	-	196	302	V
			5.46998	34.62	RMS	34.90	-20.20	0.63	49.95	-	-	-	-	-	-	196	302	V
			5.46889	36.01	RMS	34.90	-20.20	0.63	51.34	-	-	-	-	-	-	196	302	V
			5.72500	41.14	Pk	35.00	-19.80	0.00	56.34	-	-	68.20	-11.86	156	120	H		
			5.72893	44.73	Pk	35.00	-19.80	0.00	59.93	-	-	68.20	-8.27	156	120	H		
			5.72500	47.54	Pk	35.00	-19.80	0.00	62.74	-	-	68.20	-5.46	152	103	V		
			5.72877	50.51	Pk	35.00	-19.80	0.00	65.71	-	-	68.20	-2.49	152	103	V		
802.11ax (HE80) RU mode 26 Tone offset 0	5530	MIMO	* 5.45998	39.86	Pk	34.90	-20.10	0.00	54.66	-	-	74.00	-19.34	154	105	H		
			* 5.45392	42.79	Pk	34.90	-20.10	0.00	57.59	-	-	74.00	-16.41	154	105	H		
			5.46998	39.48	Pk	34.90	-20.20	0.00	54.18	-	-	68.20	-14.02	154	105	H		
			5.46512	45.93	Pk	34.90	-20.20	0.00	60.63	-	-	68.20	-7.57	154	105	H		
			* 5.45998	29.28	RMS	34.90	-20.10	0.12	44.20	54.00	-9.80	-	-	-	-	154	105	H
			* 5.45381	31.06	RMS	34.90	-20.10	0.12	45.98	54.00	-8.02	-	-	-	-	154	105	H
			5.46998	29.35	RMS	34.90	-20.20	0.12	44.17	-	-	-	-	-	-	154	105	H
			5.46517	30.50	RMS	34.90	-20.20	0.12	45.32	-	-	-	-	-	-	154	105	H
			* 5.45998	38.23	Pk	34.90	-20.10	0.00	53.03	-	-	74.00	-20.97	194	351	V		
			* 5.45403	41.31	Pk	34.90	-20.10	0.00	56.11	-	-	74.00	-17.89	194	351	V		
			5.46998	39.14	Pk	34.90	-20.20	0.00	53.84	-	-	68.20	-14.36	194	351	V		
			5.46987	47.18	Pk	34.90	-20.20	0.00	61.88	-	-	68.20	-6.32	194	351	V		
			* 5.45998	28.14	RMS	34.90	-20.10	0.12	43.06	54.00	-10.94	-	-	-	-	194	351	V
			* 5.45353	29.25	RMS	34.90	-20.10	0.12	44.17	54.00	-9.83	-	-	-	-	194	351	V
			5.46998	28.54	RMS	34.90	-20.20	0.12	43.36	-	-	-	-	-	-	194	351	V
			5.46786	29.37	RMS	34.90	-20.20	0.12	44.19	-	-	-	-	-	-	194	351	V
			* 5.45998	41.75	Pk	34.90	-20.10	0.00	56.55	-	-	74.00	-17.45	154	105	H		
			* 5.45206	48.01	Pk	34.90	-20.10	0.00	62.81	-	-	74.00	-11.19	154	105	H		
			5.46998	44.61	Pk	34.90	-20.20	0.00	59.31	-	-	68.20	-8.89	154	105	H		
			5.46709	46.02	Pk	34.90	-20.20	0.00	60.72	-	-	68.20	-7.48	154	105	H		
* 5.45998	29.66	RMS	34.90	-20.10	0.46	44.92	54.00	-9.08	-	-	-	-	154	105	H			
* 5.45838	31.06	RMS	34.90	-20.10	0.46	46.32	54.00	-7.68	-	-	-	-	154	105	H			
5.46998	30.43	RMS	34.90	-20.20	0.46	45.59	-	-	-	-	-	-	154	105	H			
5.46985	31.95	RMS	34.90															

**HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 0RU / 5720 MHz)**

**5720 MHz HORIZONTAL**



**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.

**5720 MHz DATA**

**Radiated Emissions**

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Correction Factor (dB)	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)	Asmth (Deg)	Height (m)	Polarity
8.58507	35.1	PK-U	36	-23.4	0	47.7	-	-	-	-	68.2	-20.5	0	100	H
8.58418	35.56	PK-U	36	-23.4	0	48.16	-	-	-	-	68.2	-20.04	0	100	V
*11.44003	33.63	PK-U	38.2	-21.3	0	50.33	-	-	74	-23.47	-	-	152	282	H
*11.43726	21.72	ADR	38.2	-21.3	-1	38.72	54	-15.28	-	-	-	-	152	252	H
*11.43614	33.64	PK-U	38.2	-21.3	0	50.34	-	-	74	-23.46	-	-	125	100	V
*11.43948	21.77	ADR	38.2	-21.3	-1	38.77	54	-15.23	-	-	-	-	125	100	V
17.16193	32.76	PK-U	41.3	-17.1	0	50.36	-	-	-	-	68.2	-11.24	0	100	H
17.16282	32.94	PK-U	41.3	-17.1	0	57.24	-	-	-	-	68.2	-10.96	0	100	V

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

**HARMONICS AND SPURIOUS EMISSIONS TEST DATA**

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5500	MIMO	* 8.25503	36.60	PK-U	36.00	-23.90	0.00	48.70	-	-	74.00	-25.30	-	-	0	100	H
			* 8.24743	36.15	PK-U	36.00	-23.80	0.00	48.35	-	-	74.00	-25.65	-	-	0	100	V
			* 10.99849	35.05	PK-U	38.00	-21.10	0.00	51.95	-	-	74.00	-22.05	-	-	164	111	H
			* 10.99822	23.11	ADR	38.00	-21.10	0.20	40.21	-	54.00	-13.79	-	-	-	164	111	H
			* 11.00079	34.36	PK-U	38.00	-21.00	0.00	51.36	-	-	74.00	-22.64	-	-	139	100	V
			* 11.00005	23.29	ADR	38.00	-21.10	0.20	40.39	-	54.00	-13.81	-	-	-	139	100	V
		16.503	33.57	PK-U	41.60	-18.80	0.00	56.37	-	-	-	-	68.20	-11.83	0	100	H	
		16.504	33.65	PK-U	41.60	-18.70	0.00	56.55	-	-	-	-	68.20	-11.65	0	100	V	
		* 8.3706	36.51	PK-U	36.00	-23.70	0.00	48.81	-	-	74.00	-25.19	-	-	0	100	H	
		* 8.37049	36.09	PK-U	36.00	-23.70	0.00	48.39	-	-	74.00	-25.61	-	-	0	100	V	
		* 11.16068	35.20	PK-U	38.10	-21.40	0.00	51.90	-	-	74.00	-22.10	-	-	0	100	H	
		* 11.15937	35.75	PK-U	38.10	-21.50	0.00	52.35	-	-	74.00	-21.65	-	-	147	106	V	
		* 11.15983	23.41	ADR	38.10	-21.50	0.20	40.21	-	54.00	-13.79	-	-	-	147	106	V	
		16.741	32.15	PK-U	41.80	-18.20	0.00	55.75	-	-	-	-	68.20	-12.45	0	100	H	
		16.742	32.84	PK-U	41.80	-18.20	0.00	56.44	-	-	-	-	68.20	-11.76	0	100	V	
		8.552	35.50	PK-U	36.00	-23.40	0.00	48.10	-	-	-	-	68.20	-20.10	0	100	H	
		8.551	35.30	PK-U	36.00	-23.40	0.00	47.90	-	-	-	-	68.20	-20.30	0	100	V	
		* 11.39979	33.44	PK-U	38.10	-21.30	0.00	50.24	-	-	74.00	-23.76	-	-	0	100	H	
		* 11.39464	33.31	PK-U	38.10	-21.30	0.00	50.11	-	-	74.00	-23.89	-	-	0	100	V	
		17.101	32.55	PK-U	41.40	-17.30	0.00	56.65	-	-	-	-	68.20	-11.55	0	100	H	
		17.102	32.43	PK-U	41.40	-17.30	0.00	56.53	-	-	-	-	68.20	-11.67	0	100	V	
		8.582	35.03	PK-U	36.00	-23.40	0.00	47.63	-	-	-	-	68.20	-20.57	0	100	H	
		8.581	34.90	PK-U	36.00	-23.40	0.00	47.50	-	-	-	-	68.20	-20.70	0	100	V	
		* 11.44027	33.47	PK-U	38.20	-21.30	0.00	50.37	-	-	74.00	-23.63	-	-	0	100	H	
		* 11.43958	33.33	PK-U	38.20	-21.30	0.00	50.23	-	-	74.00	-23.77	-	-	131	104	V	
		* 11.43975	21.79	ADR	38.20	-21.30	0.20	38.89	-	54.00	-15.11	-	-	-	131	104	V	
		14.301	35.88	PK-U	39.40	-22.90	0.00	52.38	-	-	-	-	68.20	-15.82	0	100	H	
		14.301	36.02	PK-U	39.40	-22.90	0.00	52.52	-	-	-	-	68.20	-15.68	0	100	V	
		8.585	35.10	PK-U	36.00	-23.40	0.00	47.70	-	-	-	-	68.20	-20.50	0	100	H	
		8.584	35.56	PK-U	36.00	-23.40	0.00	48.16	-	-	-	-	68.20	-20.04	0	100	V	
		* 11.44003	33.63	PK-U	38.20	-21.30	0.00	50.53	-	-	74.00	-23.47	-	-	152	282	H	
		* 11.43726	21.72	ADR	38.20	-21.30	0.10	38.72	-	54.00	-15.28	-	-	-	152	282	H	
		* 11.43614	33.64	PK-U	38.20	-21.30	0.00	50.54	-	-	74.00	-23.46	-	-	125	100	V	
		* 11.43948	21.77	ADR	38.20	-21.30	0.10	38.77	-	54.00	-15.23	-	-	-	125	100	V	
		17.162	32.76	PK-U	41.30	-17.10	0.00	56.96	-	-	-	-	68.20	-11.24	0	100	H	
		17.163	32.94	PK-U	41.30	-17.00	0.00	57.24	-	-	-	-	68.20	-10.96	0	100	V	

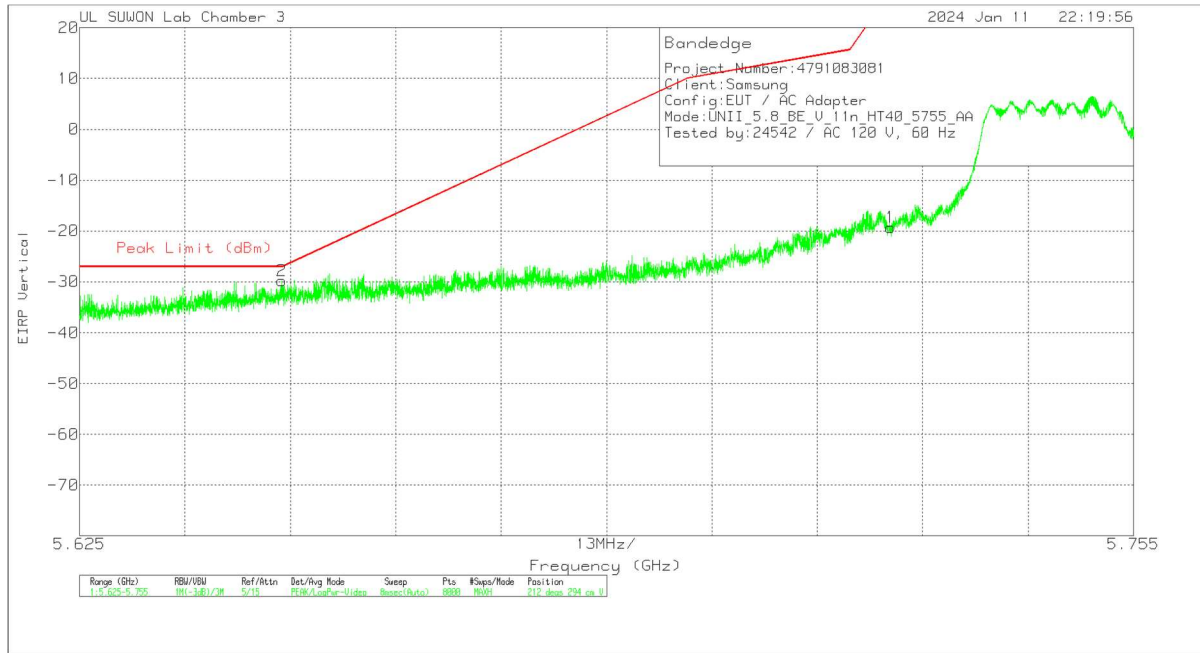
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

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

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

**BANDEDGE (WORST CASE: 802.11n HT40 / 5755 MHz)**

**VERTICAL PEAK DATA**



**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	Antenna Correction Factor (dBm)	Loss (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-46.24	Pk	34.9	-19.8	11.8	0	-19.34	-27	-46.34	212	294	V
2	5.64996	-56.61	Pk	34.9	-19.9	11.8	0	-29.81	-27	-2.81	212	294	V

Pk - Peak detector

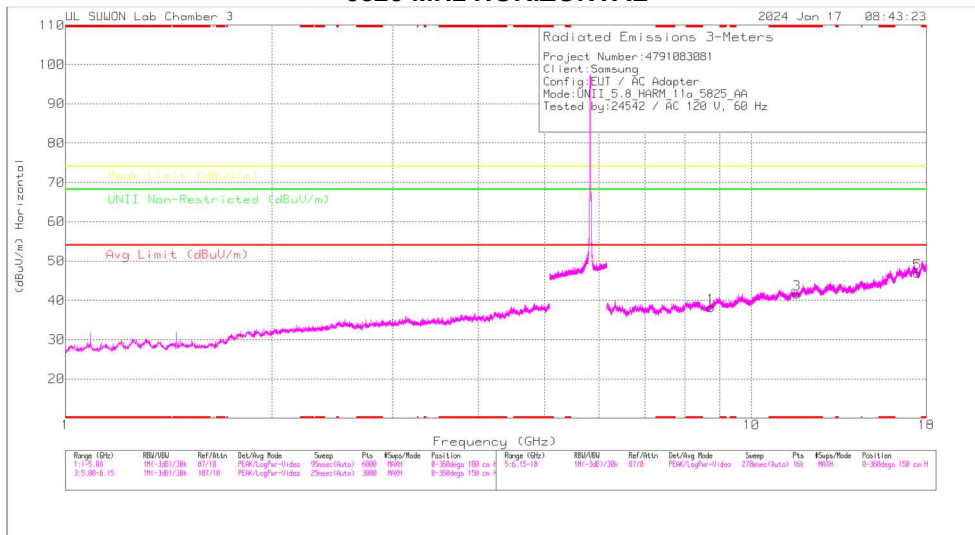
**BANDEDGE TEST DATA**

Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBm]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	Conv. F [dB]	DC Corr [dB]	Result [dBm]	PK Limit [dBm]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5745	MIMO	5.72500	-48.14	Pk	34.90	-19.80	11.80	0.00	-21.24	27.00	-48.24	148	115	H
			5.65026	-60.08	Pk	34.90	-19.90	11.80	0.00	-33.28	-26.81	-6.47	148	115	H
			5.72500	-48.74	Pk	34.90	-19.80	11.80	0.00	-21.84	27.00	-48.84	155	101	V
	5825	MIMO	5.64800	-62.58	Pk	34.90	-20.00	11.80	0.00	-35.88	-27.00	-8.88	155	101	V
			5.85001	-53.84	Pk	35.20	-19.60	11.80	0.00	-26.44	26.99	-53.43	159	100	H
			5.99840	-63.60	Pk	35.70	-19.20	11.80	0.00	-35.30	-27.00	-8.30	159	100	H
802.11n (HT20)	5745	MIMO	5.85001	-43.02	Pk	35.20	-19.60	11.80	0.00	-15.62	26.99	-42.61	153	100	V
			5.92917	-63.05	Pk	35.50	-19.40	11.80	0.00	-35.15	-27.00	-8.15	153	100	V
			5.72500	-45.40	Pk	34.90	-19.80	11.80	0.00	-18.50	27.00	-45.50	148	100	H
	5825	MIMO	5.64616	-61.37	Pk	34.90	-20.00	11.80	0.00	-34.67	-27.00	-7.67	148	100	H
			5.72500	-49.23	Pk	34.90	-19.80	11.80	0.00	-22.33	27.00	-49.33	194	307	V
			5.64104	-62.10	Pk	34.90	-20.00	11.80	0.00	-35.40	-27.00	-8.40	194	307	V
802.11n (HT40)	5755	MIMO	5.85001	-53.04	Pk	35.20	-19.60	11.80	0.00	-25.64	26.99	-52.63	150	110	H
			5.93489	-63.20	Pk	35.50	-19.40	11.80	0.00	-35.30	-27.00	-8.30	150	110	H
			5.85001	-56.12	Pk	35.20	-19.60	11.80	0.00	-28.72	26.99	-55.71	190	314	V
	5795	MIMO	5.93609	-62.62	Pk	35.50	-19.40	11.80	0.00	-34.72	-27.00	-7.72	190	314	V
			5.72500	-48.19	Pk	34.90	-19.80	11.80	0.00	-21.29	27.00	-48.29	161	108	H
			5.65167	-55.40	Pk	34.90	-20.00	11.80	0.00	-28.70	-25.76	-2.94	161	108	H
802.11ac (VHT80)	5775 (Lower Side)	MIMO	5.72500	-46.24	Pk	34.90	-19.80	11.80	0.00	-19.34	27.00	-46.34	212	294	V
			5.64996	-56.61	Pk	34.90	-19.90	11.80	0.00	-29.81	-27.00	-2.81	212	294	V
			5.85001	-54.25	Pk	35.20	-19.60	11.80	0.00	-26.85	26.99	-53.84	158	110	H
	5775 (Upper Side)	MIMO	5.94142	-62.69	Pk	35.60	-19.30	11.80	0.00	-34.59	-27.00	-7.59	158	110	H
			5.85001	-48.60	Pk	35.20	-19.60	11.80	0.00	-21.20	26.99	-48.19	152	105	V
			5.93902	-60.90	Pk	35.60	-19.40	11.80	0.00	-32.90	-27.00	-5.90	152	105	V
802.11ax (HE20) SU mode	5745	MIMO	5.72499	-56.54	Pk	34.80	-22.80	11.80	0.00	-32.74	26.97	-59.71	153	145	H
			5.65066	-60.07	Pk	34.60	-22.90	11.80	0.00	-36.57	-26.51	-10.06	153	145	H
			5.72499	-48.25	Pk	34.80	-22.80	11.80	0.00	-24.45	26.97	-51.42	145	100	V
	5825	MIMO	5.65098	-53.61	Pk	34.60	-22.90	11.80	0.00	-30.11	-26.27	-3.84	145	100	V
			5.85003	-57.21	Pk	34.90	-22.80	11.80	0.00	-33.31	26.94	-60.25	158	123	H
			5.97060	-63.55	Pk	35.10	-22.60	11.80	0.00	-39.25	-27.00	-12.25	158	123	H
802.11ax (HE40) SU mode	5755	MIMO	5.85003	-53.86	Pk	34.90	-22.80	11.80	0.00	-29.96	26.94	-56.90	150	111	V
			5.93833	-60.86	Pk	35.00	-22.70	11.80	0.00	-36.76	-27.00	-9.76	150	111	V
			5.72500	-45.44	Pk	34.90	-19.80	11.80	0.00	-18.54	27.00	-45.54	156	103	H
	5795	MIMO	5.64873	-59.69	Pk	34.90	-20.00	11.80	0.00	-32.99	-27.00	-5.99	156	103	H
			5.72500	-44.10	Pk	34.90	-19.80	11.80	0.00	-17.20	27.00	-44.20	196	308	V
			5.63568	-59.61	Pk	34.90	-19.90	11.80	0.00	-32.81	-27.00	-5.81	196	308	V
802.11ax (HE80) SU mode	5745	MIMO	5.85001	-52.86	Pk	35.20	-19.60	11.80	0.00	-25.46	26.99	-52.45	152	108	H
			5.97022	-62.98	Pk	35.60	-19.30	11.80	0.00	-34.88	-27.00	-7.88	152	108	H
			5.85001	-43.63	Pk	35.20	-19.60	11.80	0.00	-16.23	26.99	-43.22	195	314	V
	5795	MIMO	5.92562	-61.22	Pk	35.50	-19.40	11.80	0.00	-33.32	-27.00	-6.32	195	314	V
			5.72500	-47.41	Pk	34.90	-19.80	11.80	0.00	-20.51	27.00	-47.51	151	120	H
			5.64761	-61.13	Pk	34.90	-20.00	11.80	0.00	-34.43	-27.00	-7.43	151	120	H
802.11ax (HE40) RU mode	5755	MIMO	5.72500	-45.85	Pk	34.90	-19.80	11.80	0.00	-18.95	27.00	-45.95	198	307	V
			5.65061	-56.80	Pk	34.90	-19.90	11.80	0.00	-30.00	-26.55	-3.45	198	307	V
			5.85001	-54.28	Pk	35.20	-19.60	11.80	0.00	-26.88	26.99	-53.87	154	107	H
	5795	MIMO	5.92857	-63.05	Pk	35.50	-19.40	11.80	0.00	-35.15	-27.00	-8.15	154	107	H
			5.85001	-46.14	Pk	35.20	-19.60	11.80	0.00	-18.74	26.99	-45.73	198	298	V
			5.97505	-61.53	Pk	35.70	-19.30	11.80	0.00	-33.33	-27.00	-6.33	198	298	V
802.11ax (HE80) RU mode	5775 (Lower Side)	MIMO	5.72500	-58.10	Pk	34.90	-19.80	11.80	0.00	-31.20	27.00	-58.20	154	111	H
			5.64242	-62.32	Pk	34.90	-20.00	11.80	0.00	-35.62	-27.00	-8.62	154	111	H
			5.72500	-54.81	Pk	34.90	-19.80	11.80	0.00	-27.91	27.00	-54.91	198	307	V
	5775 (Upper Side)	MIMO	5.65118	-57.50	Pk	34.90	-20.00	11.80	0.00	-30.80	-26.13	-4.67	198	307	V
			5.85001	-56.88	Pk	35.20	-19.60	11.80	0.00	-29.48	26.99	-56.47	154	100	H
			5.98165	-62.90	Pk	35.70	-19.30	11.80	0.00	-34.70	-27.00	-7.70	154	100	H
802.11ax (HE40) 26 Tone offset 0	5755	MIMO	5.85001	-49.11	Pk	35.20	-19.60	11.80	0.00	-21.71	26.99	-48.70	194	314	V
			5.95677	-60.00	Pk	35.60	-19.30	11.80	0.00	-31.90	-27.00	-4.90	194	314	V
			5.72500	-60.25	Pk	34.90	-19.80	11.80	0.00	-33.35	27.00	-60.35	151	113	H
	5755 242 Tone offset 61	MIMO	5.65016	-63.24	Pk	34.90	-19.90	11.80	0.00	-36.44	-26.88	-9.56	151	113	H
			5.72500	-56.10	Pk	34.90	-19.80	11.80	0.00	-29.20	27.00	-56.20	194	322	V
			5.66324	-47.25	Pk	34.90	-19.90	11.80	0.00	-20.45	-17.20	-3.25	194	322	V
5755 242 Tone offset 61	MIMO	5.72500	-55.59	Pk	34.90	-19.80	11.80	0.00	-28.69	27.00	-55.69	151	112	H	
		5.64631	-63.28	Pk	34.90	-20.00	11.80	0.00	-36.58	-27.00	-9.58	151	112	H	
		5.72500	-50.10	Pk	34.90	-19.80	11.80	0.00	-23.20	27.00	-50.20	194	322	V	
5755 242 Tone offset 61	MIMO	5.64325	-59.71	Pk	34.90	-20.00	11.80	0.00	-33.01	-27.00	-6.01	194	322	V	

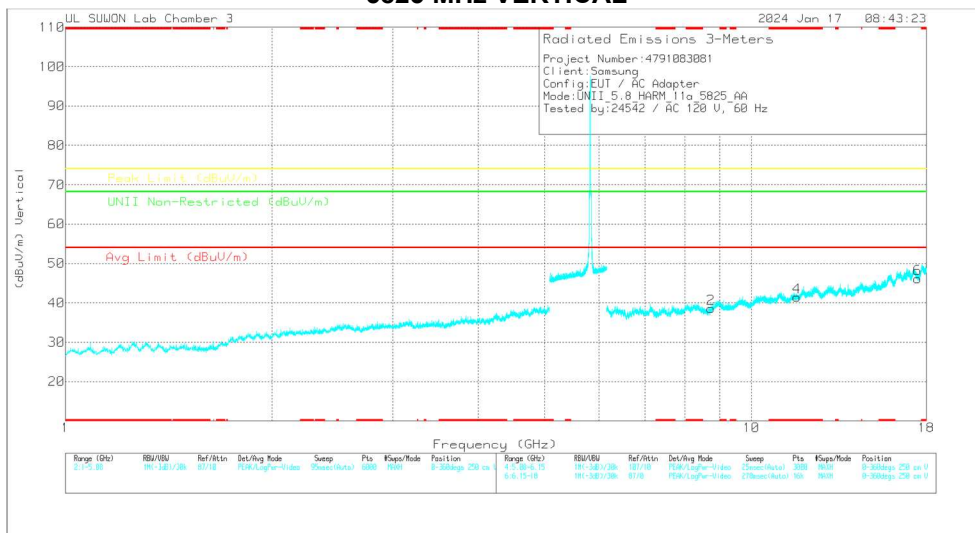
Note. Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5825 MHz)**

**5825 MHz HORIZONTAL**



**5825 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.

**5825 MHz DATA**

**Radiated Emissions**

Frequency (GHz)	Meas Reading (dBuV)	Det	Antenna Correction Factor(dBm)	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)	Asmth (Digits)	Height (m)	Polarity
8.73528	35.57	PK-U	36.1	-23.1	0	48.57	-	-	-	-	68.2	-19.63	0	100	H
8.73681	35.3	PK-U	36.1	-23.1	0	48.3	-	-	-	-	68.2	-19.9	0	100	V
*11.65363	35.83	PK-U	38.3	-21.6	0	52.83	-	-	74	-21.47	-	-	0	100	H
*11.64638	35.64	PK-U	38.3	-21.6	0	52.34	-	-	74	-21.56	-	-	131	101	V
*11.64996	24.15	ADR	38.3	-21.6	2	41.05	54	-12.95	-	-	-	-	131	101	V
17.48039	32.03	PK-U	41.2	-16.4	0	56.83	-	-	-	-	68.2	-11.37	0	100	H
17.48005	32.34	PK-U	41.2	-16.4	0	57.14	-	-	-	-	68.2	-11.06	0	100	V

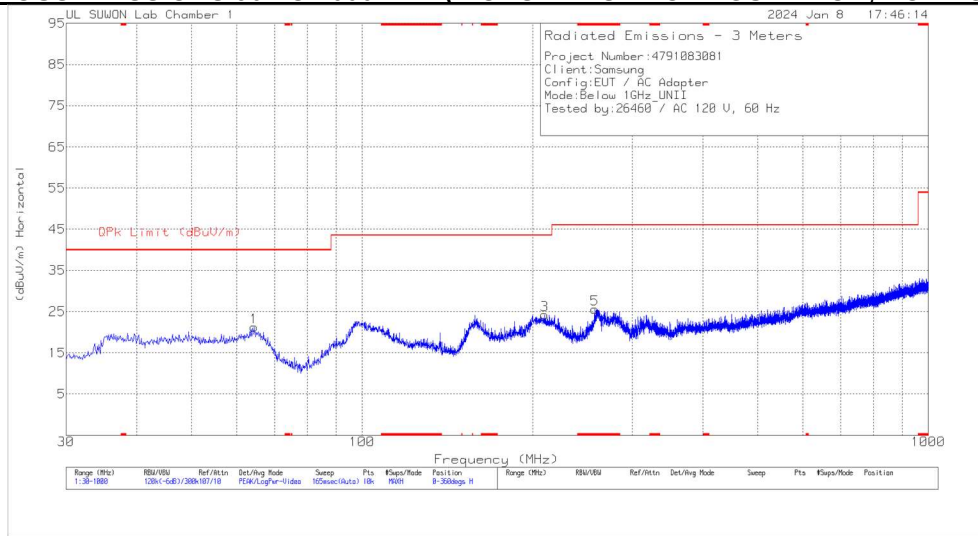
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 PK-U - U-NII: Maximum Peak  
 ADR - U-NII AD primary method, RMS average

**HARMONICS AND SPURIOUS EMISSIONS TEST DATA**

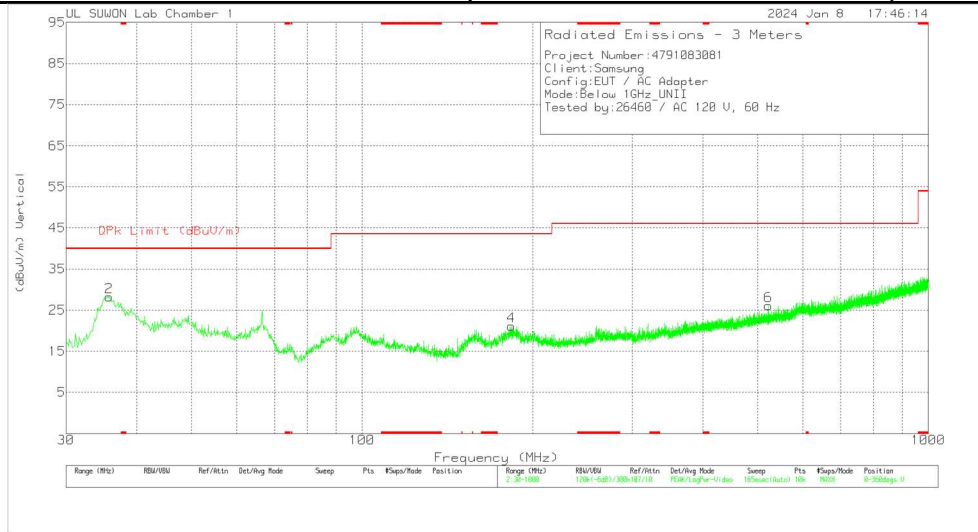
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity	
802.11a	5745	MIMO	8.618	35.44	PK-U	36.00	-23.40	0.00	48.04	-	-	-	-	68.20	-20.16	0	100	H	
			8.619	35.09	PK-U	36.00	-23.40	0.00	47.69	-	-	-	-	68.20	-20.51	0	100	V	
			*11.48924	33.31	PK-U	38.20	-21.40	0.00	50.11	-	-	74.00	-23.89	-	-	-	0	100	H
			*11.49011	33.66	PK-U	38.20	-21.40	0.00	50.46	-	-	74.00	-23.54	-	-	-	134	101	V
			*11.48931	22.23	ADR	38.20	-21.40	0.20	39.23	54.00	-14.77	-	-	-	-	-	134	101	V
			14.363	36.17	PK-U	39.50	-22.60	0.00	53.07	-	-	-	-	-	-	68.20	-15.13	0	100
	14.364	35.33	PK-U	39.50	-22.60	0.00	52.23	-	-	-	-	-	-	68.20	-15.97	0	100	V	
	8.677	35.25	PK-U	36.10	-23.20	0.00	48.15	-	-	-	-	-	-	68.20	-20.05	0	100	H	
	8.676	34.47	PK-U	36.10	-23.20	0.00	47.37	-	-	-	-	-	-	68.20	-20.83	0	100	V	
	*11.5716	34.16	PK-U	38.20	-21.50	0.00	50.86	-	-	74.00	-23.14	-	-	-	-	0	100	H	
	*11.56786	35.01	PK-U	38.20	-21.60	0.00	51.61	-	-	74.00	-22.39	-	-	-	-	138	101	V	
	*11.56981	23.49	ADR	38.20	-21.50	0.20	40.39	54.00	-13.61	-	-	-	-	-	-	138	101	V	
	14.462	36.46	PK-U	39.60	-22.10	0.00	53.96	-	-	-	-	-	-	68.20	-14.24	0	100	H	
	14.462	36.66	PK-U	39.60	-22.10	0.00	54.16	-	-	-	-	-	-	68.20	-14.04	0	100	V	
	8.735	35.57	PK-U	36.10	-23.10	0.00	48.57	-	-	-	-	-	-	68.20	-19.63	0	100	H	
	8.737	35.30	PK-U	36.10	-23.10	0.00	48.30	-	-	-	-	-	-	68.20	-19.90	0	100	V	
	*11.65363	35.83	PK-U	38.30	-21.60	0.00	52.53	-	-	74.00	-21.47	-	-	-	-	0	100	H	
	*11.64958	35.64	PK-U	38.30	-21.60	0.00	52.34	-	-	74.00	-21.66	-	-	-	-	131	101	V	
	*11.64996	24.15	ADR	38.30	-21.60	0.20	41.05	54.00	-12.95	-	-	-	-	-	-	131	101	V	
	17.480	32.03	PK-U	41.20	-16.40	0.00	56.83	-	-	-	-	-	-	68.20	-11.37	0	100	H	
	17.480	32.34	PK-U	41.20	-16.40	0.00	57.14	-	-	-	-	-	-	68.20	-11.06	0	100	V	
	8.737	35.28	PK-U	36.10	-23.10	0.00	48.28	-	-	-	-	-	-	68.20	-19.94	0	100	H	
	8.738	35.44	PK-U	36.10	-23.10	0.00	48.44	-	-	-	-	-	-	68.20	-19.76	0	100	V	
	*11.64671	35.52	PK-U	38.30	-21.60	0.00	52.22	-	-	74.00	-21.78	-	-	-	-	52	339	H	
*11.64597	23.23	ADR	38.30	-21.60	0.10	40.03	54.00	-13.97	-	-	-	-	-	-	52	339	H		
*11.64972	35.16	PK-U	38.30	-21.60	0.00	51.86	-	-	74.00	-22.14	-	-	-	-	153	106	V		
*11.65037	24.17	ADR	38.30	-21.60	0.10	40.97	54.00	-13.03	-	-	-	-	-	-	153	106	V		
17.475	31.52	PK-U	41.10	-16.30	0.00	56.32	-	-	-	-	-	-	68.20	-11.88	0	100	H		
17.479	31.57	PK-U	41.20	-16.40	0.00	56.37	-	-	-	-	-	-	68.20	-11.83	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 Correction Factor(dB/m)	Loss(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	QPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	64.435	34.96	Pk	17	-30.7	0	21.26	40	-18.74	0-360	300	H
3	209.935	37.2	PK	16.3	-29.2	0	24.3	43.52	-19.22	0-360	100	H
5	* 257.659	36.35	PK	18.1	-28.8	0	25.65	46.02	-20.37	0-360	100	H
2	35.723	42.53	PK	16.8	-31.1	0	28.23	40	-11.77	0-360	200	V
4	183.26	34.99	PK	15.5	-29.4	0	21.09	43.52	-22.43	0-360	300	V
6	521.499	30.89	PK	22.7	-27.5	0	26.09	46.02	-19.93	0-360	200	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.

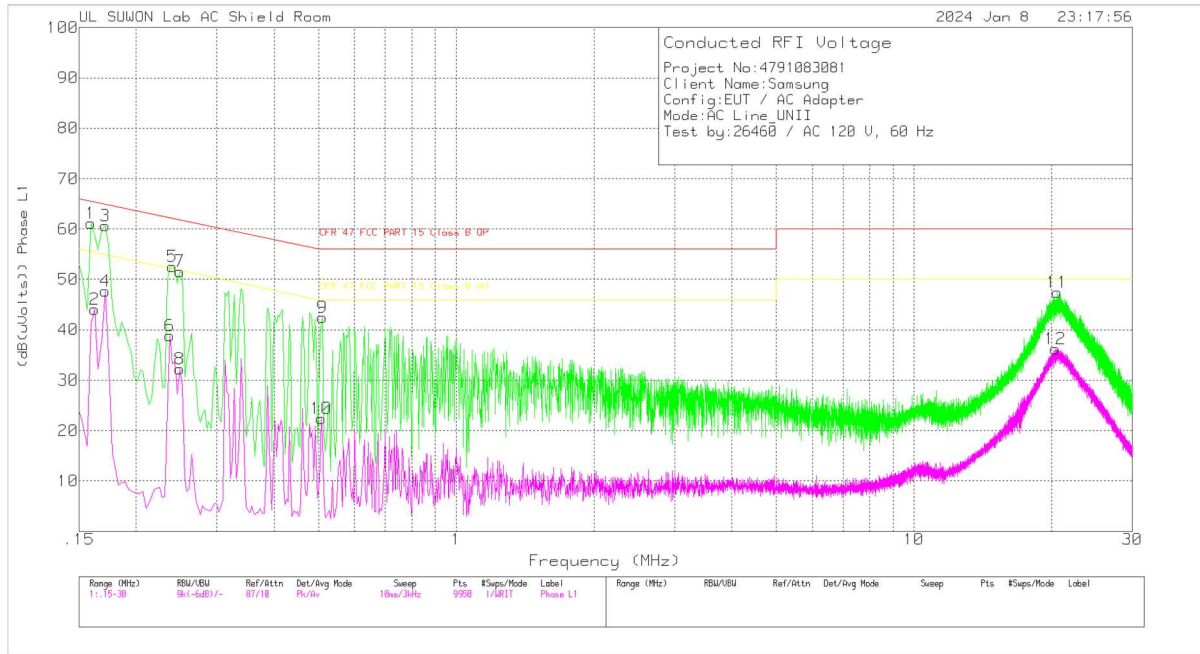
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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_AU TO_With EX_N[dB]	CABLELOS S[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
1	.159	51.56	Pk	9.5	.1	61.16	65.52	-4.36	-	-
2	.162	34.5	Av	9.5	.1	44.1	-	-	55.36	-11.26
3	.171	50.9	Pk	9.5	.2	60.6	64.91	-4.31	-	-
4	.171	37.95	Av	9.5	.2	47.65	-	-	54.91	-7.26
5	.24	42.88	Pk	9.5	.2	52.58	62.1	-9.52	-	-
6	.237	29.19	Av	9.5	.2	38.89	-	-	52.2	-13.31
7	.249	41.91	Pk	9.5	.2	51.61	61.79	-10.18	-	-
8	.249	22.58	Av	9.5	.2	32.28	-	-	51.79	-19.51
9	.51	32.66	Pk	9.6	.2	42.46	56	-13.54	-	-
10	.507	12.62	Av	9.6	.2	22.42	-	-	46	-23.58
11	20.583	37.41	Pk	9.6	.4	47.41	60	-12.59	-	-
12	20.388	26.26	Av	9.6	.4	36.26	-	-	50	-13.74

Pk - Peak detector

Av - Average detection

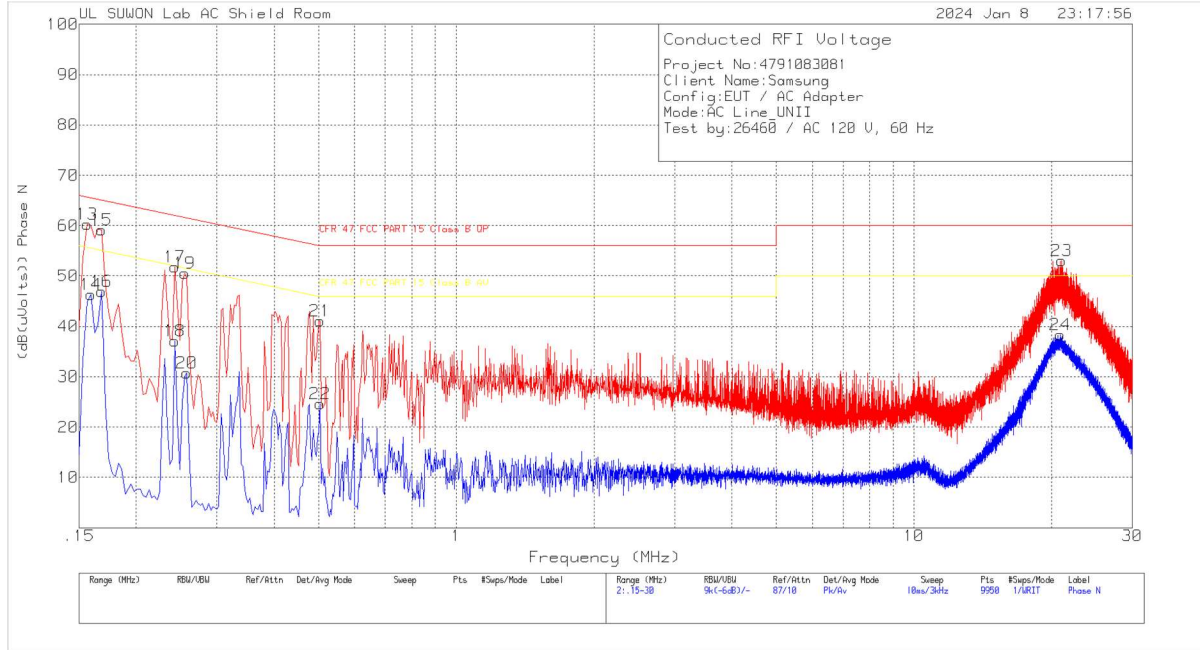
**Quasi-Peak Emissions**

Range 1: Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_AU TO_With EX_N[dB]	CABLELOS S[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
.15825	45.28	Qp	9.5	.1	54.88	65.56	-10.68	-	-
.17025	44.1	Qp	9.5	.2	53.8	64.95	-11.15	-	-
.24015	38.47	Qp	9.5	.2	48.17	62.09	-13.92	-	-

Qp - Quasi-Peak detector

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_AU TO_With EX_N[dB]	CABLELOS S[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
13	.156	50.67	Pk	9.5	.1	60.27	65.67	-5.4	-	-
14	.159	36.73	Av	9.5	.1	46.33	-	-	55.52	-9.19
15	.168	49.59	Pk	9.5	.1	59.19	65.06	-5.87	-	-
16	.168	37.35	Av	9.5	.1	46.95	-	-	55.06	-8.11
17	.243	42.07	Pk	9.5	.2	51.77	61.99	-10.22	-	-
18	.243	27.38	Av	9.5	.2	37.08	-	-	51.99	-14.91
19	.255	40.83	Pk	9.5	.2	50.53	61.59	-11.06	-	-
20	.258	21.05	Av	9.5	.2	30.75	-	-	51.5	-20.75
21	.504	31.33	Pk	9.6	.2	41.13	56	-14.87	-	-
22	.504	14.87	Av	9.6	.2	24.67	-	-	46	-21.33
23	20.997	42.91	Pk	9.7	.4	53.01	60	-6.99	-	-
24	20.901	28.37	Av	9.6	.4	38.37	-	-	50	-11.63

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_AU O_With EX_N[dB]	CABLELOS S[dB]	Corrected Reading (dB(uVolts))	47 CFR FCC PART 15 Class B QP (dB(uVolts))	Margin (dB)	47 CFR FCC PART 15 Class B AV (dB(uVolts))	Margin (dB)
.15615	45.5	Qp	9.5	.1	55.1	65.67	-10.57	-	-
.15825	45.57	Qp	9.5	.1	55.17	65.56	-10.39	-	-
.16725	44.82	Qp	9.5	.1	54.42	65.1	-10.68	-	-
20.9972	33.23	Qp	9.7	.4	43.33	60	-16.67	-	-

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><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna  <b>Note 2:</b> 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.  <b>Note 3:</b> 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><b>Note 1:</b> <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.  <b>Note 2:</b> 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.  <b>Note 3:</b> 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
<b>Note 1:</b> 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**

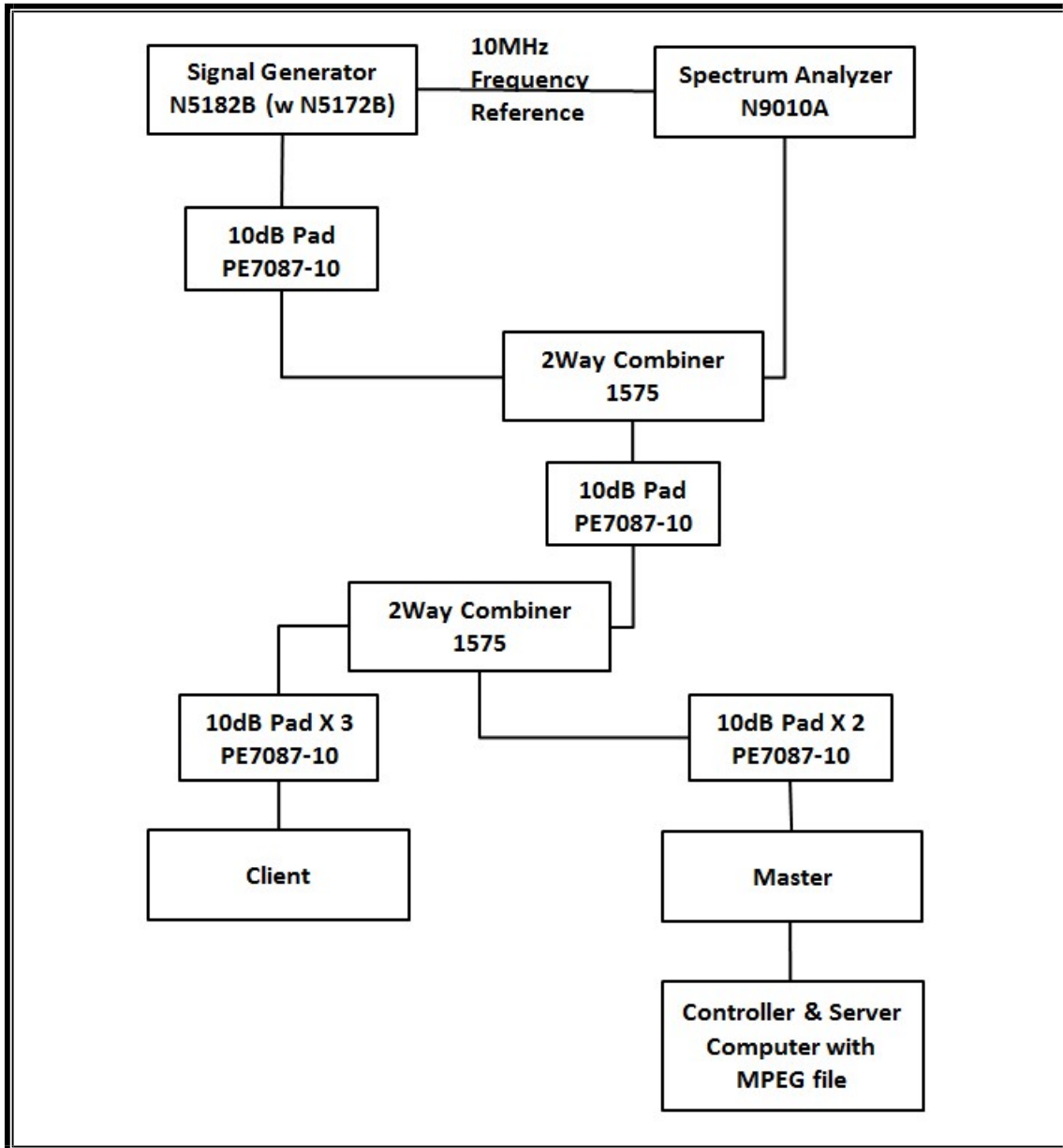
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

**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.

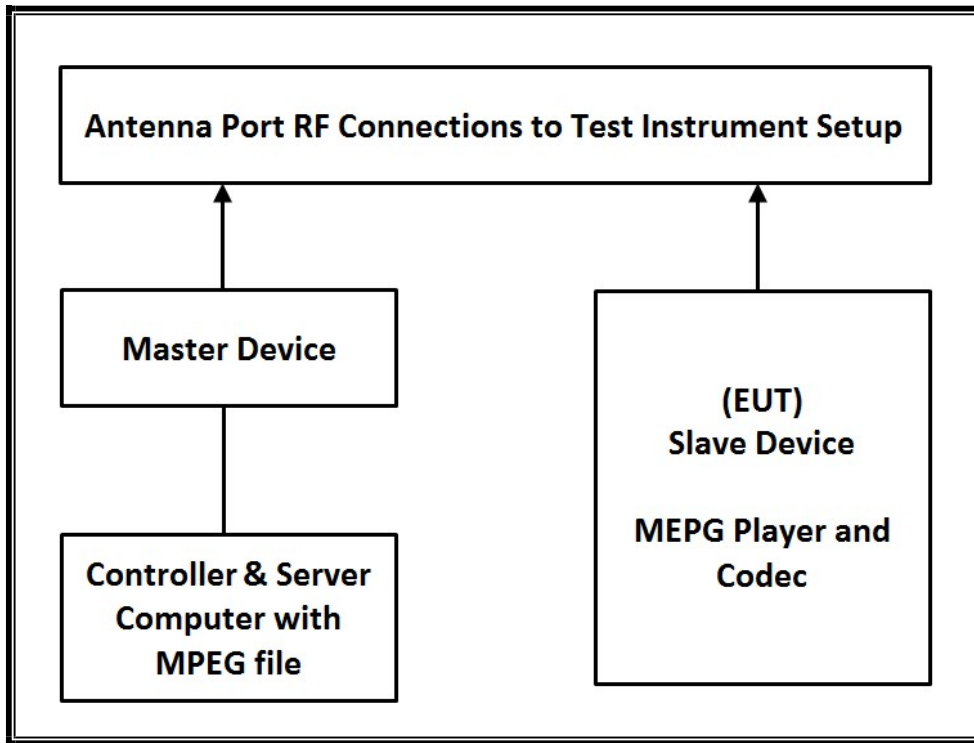
**TEST AND MEASUREMENT EQUIPMENT**

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	07-23-24
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	07-23-24
Combiner	WEINSCHTEL	WA1534	UL003	01-03-25
Combiner	WEINSCHTEL	WA1534	UL004	01-03-25

**14.1.3. SETUP OF EUT**

**CONDUCTED METHOD EUT TEST SETUP**



**SUPPORT EQUIPMENT**

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

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

#### **14.1.4. DESCRIPTION OF EUT**

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

The EUT is a Slave Device without Radar Detection.

The highest power level of the widest bandwidth (802.11ac VHT80) within these bands is 3.59 dBm in the 5250-5350 MHz band and 13.26 dBm in the 5470-5725 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -6.99 dBi for UNII 2A and -7.43 dBi for UNII 2C.

Gain of ANT2 : -7.12 dBi for UNII 2A and -7.29 dBi for UNII 2C.

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

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

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

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

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

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

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

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

## 14.2. RESULTS FOR 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

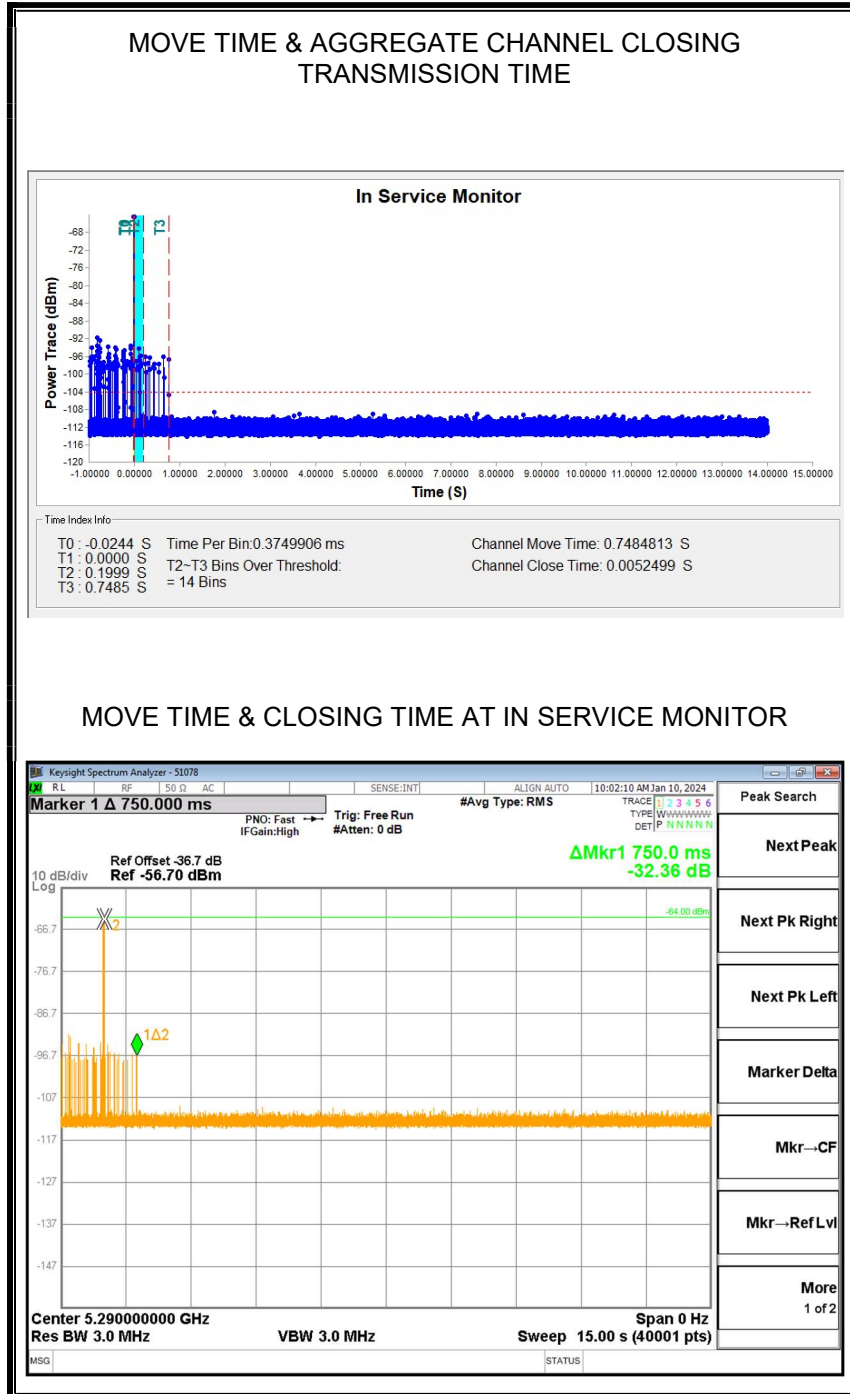
Channel Move Time (sec)	Limit (sec)
0.748	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
5.250	60

**MOVE TIME & CHANNEL CLOSING TIME**

**AGGREGATE CHANNEL CLOSING TRANSMISSION TIME**

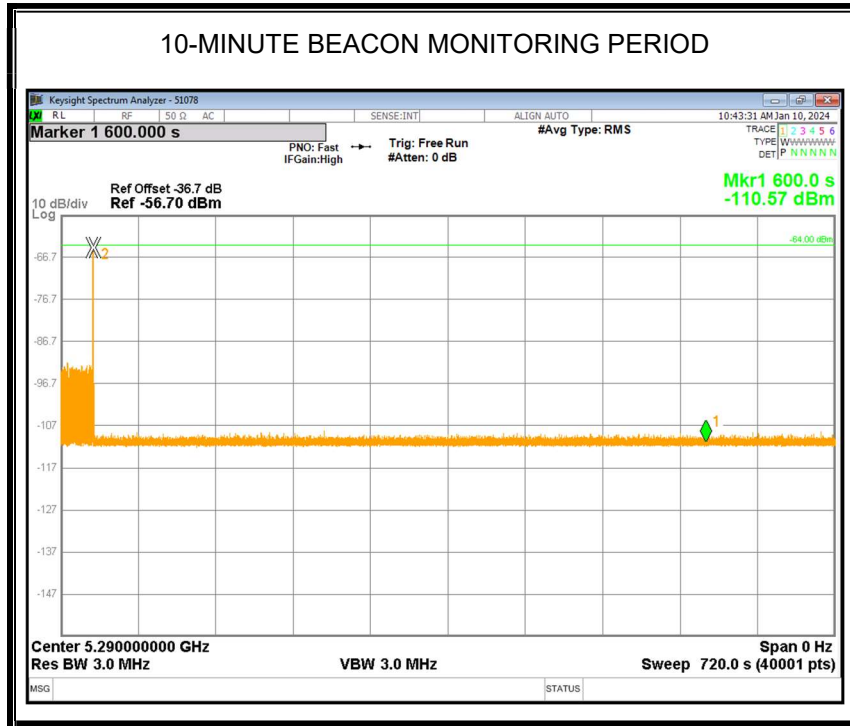
No transmissions are observed during the aggregate monitoring period.



**NON-OCCUPANCY PERIOD**

**RESULTS**

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



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

### 14.1.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5530 MHz.

### 14.1.2. RADAR WAVEFORM AND TRAFFIC

#### RADAR WAVEFORM





### 14.1.3. OVERLAPPING CHANNEL TESTS

#### RESULTS

These tests are not applicable.

### 14.1.4. 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

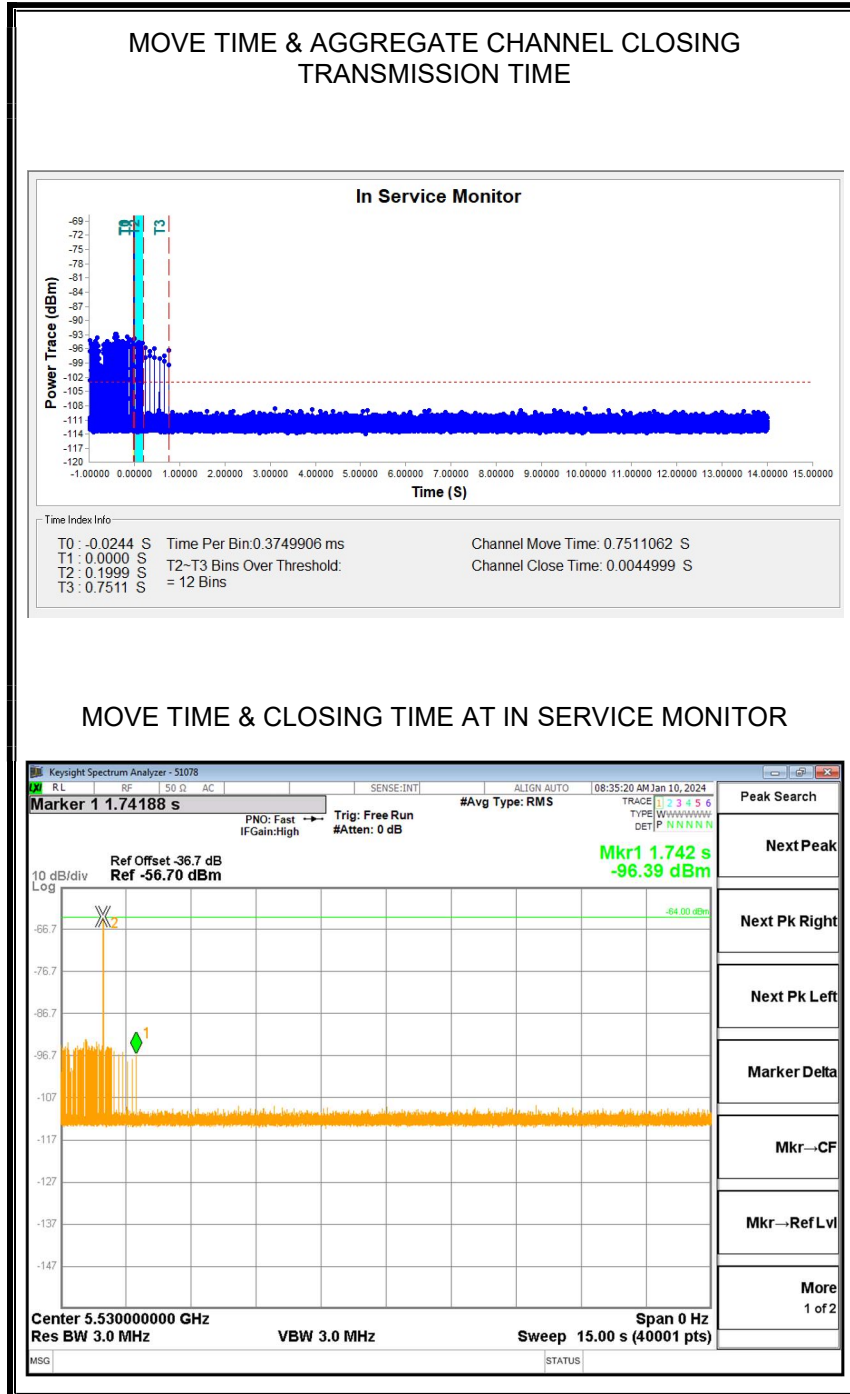
Channel Move Time (sec)	Limit (sec)
0.751	10

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

**MOVE TIME & CHANNEL CLOSING TIME**

**AGGREGATE CHANNEL CLOSING TRANSMISSION TIME**

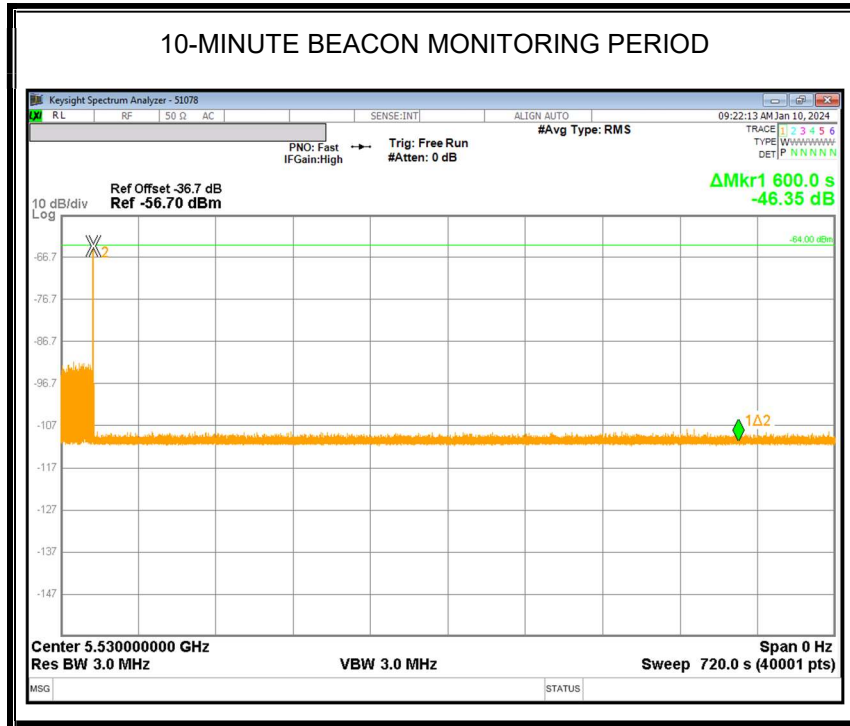
No transmissions are observed during the aggregate monitoring period.



**NON-OCCUPANCY PERIOD**

**RESULTS**

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



**END OF TEST REPORT**