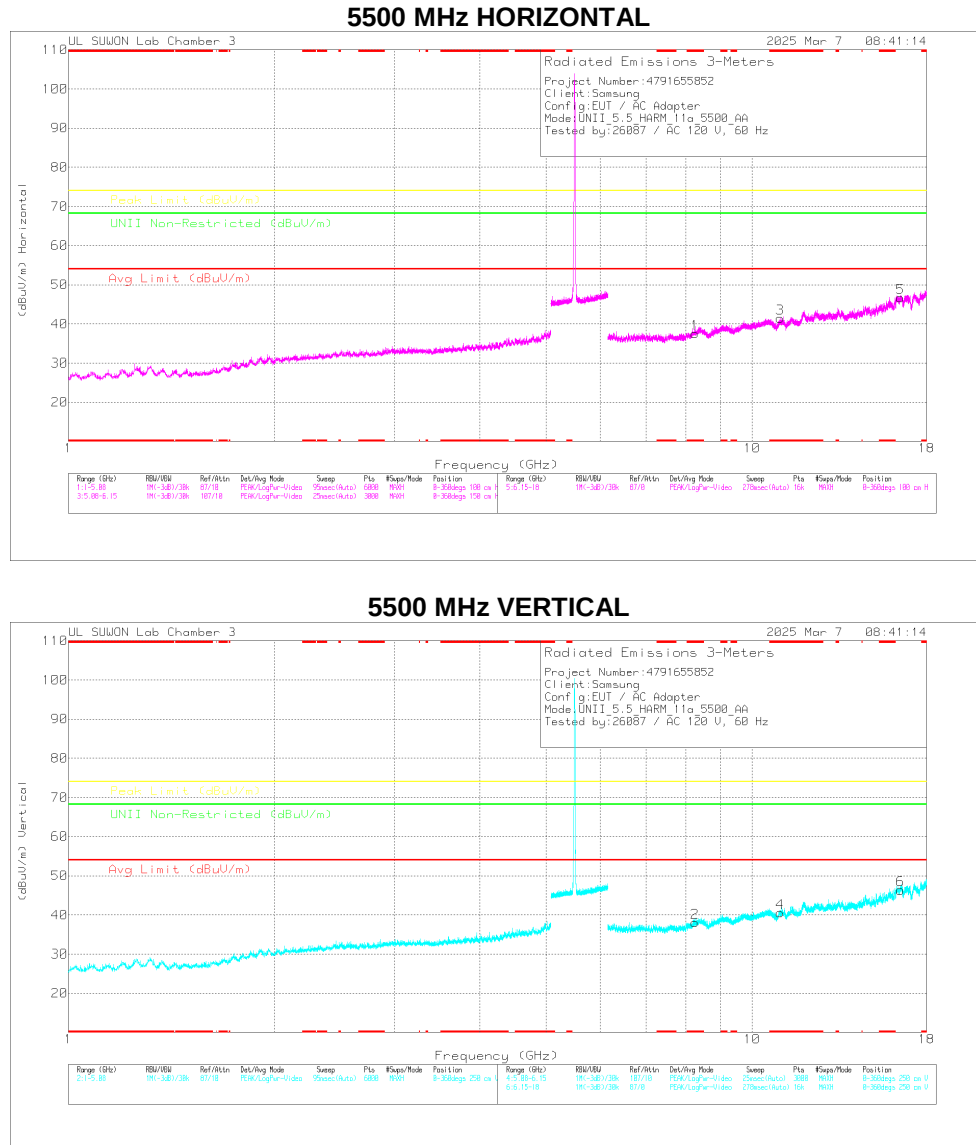


Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11ax (HE20) SU mode	5500	MIMO	* 5.45999	40.69	Pk	34.60	-23.40	0.00	51.89	-	-	74.00	-22.11	152	119	H
			* 5.45736	43.49	Pk	34.60	-23.40	0.00	54.69	-	-	74.00	-19.31	152	119	H
			5.46998	43.48	Pk	34.60	-23.30	0.00	54.78	-	-	68.20	-13.42	152	119	H
			5.46780	44.74	Pk	34.60	-23.40	0.00	55.94	-	-	68.20	-12.26	152	119	H
			* 5.45999	31.14	RMS	34.60	-23.40	0.00	42.34	54.00	-11.66	-	-	152	119	H
			* 5.45428	31.91	RMS	34.60	-23.50	0.00	43.01	54.00	-10.99	-	-	152	119	H
			5.46998	33.32	RMS	34.60	-23.30	0.00	44.62	-	-	-	-	152	119	H
			5.46935	33.65	RMS	34.60	-23.40	0.00	44.95	-	-	-	-	152	119	H
			* 5.45999	39.24	Pk	34.60	-23.40	0.00	50.44	-	-	74.00	-23.56	196	295	V
			* 5.43641	42.82	Pk	34.60	-23.50	0.00	53.92	-	-	74.00	-20.08	196	295	V
	5700	MIMO	5.46998	41.47	Pk	34.60	-23.30	0.00	52.77	-	-	68.20	-15.43	196	295	V
			5.46618	43.77	Pk	34.60	-23.40	0.00	54.97	-	-	68.20	-13.23	196	295	V
			* 5.45999	30.18	RMS	34.60	-23.40	0.00	41.38	54.00	-12.62	-	-	196	295	V
			* 5.45782	30.92	RMS	34.60	-23.40	0.00	42.12	54.00	-11.88	-	-	196	295	V
			5.46998	32.34	RMS	34.60	-23.30	0.00	43.64	-	-	-	-	196	295	V
			5.46972	32.25	RMS	34.60	-23.30	0.00	43.55	-	-	-	-	196	295	V
			5.72500	48.46	Pk	34.60	-23.10	0.00	59.96	-	-	68.20	-8.24	155	141	H
			5.72512	54.08	Pk	34.60	-23.10	0.00	65.58	-	-	68.20	-2.62	155	141	H
			5.72502	47.04	Pk	34.60	-23.10	0.00	58.54	-	-	68.20	-9.66	192	334	V
			5.72639	53.07	Pk	34.60	-23.10	0.00	64.57	-	-	68.20	-3.63	192	334	V
802.11ax (HE40) SU mode	5510	MIMO	* 5.45999	46.63	Pk	34.60	-23.40	0.00	57.83	-	-	74.00	-16.17	156	116	H
			* 5.45909	48.26	Pk	34.60	-23.40	0.00	59.46	-	-	74.00	-14.54	156	116	H
			5.46998	49.66	Pk	34.60	-23.30	0.00	60.96	-	-	68.20	-7.24	156	116	H
			5.46974	52.63	Pk	34.60	-23.30	0.00	63.93	-	-	68.20	-4.27	156	116	H
			* 5.45999	35.71	RMS	34.60	-23.40	0.00	46.91	54.00	-7.09	-	-	156	116	H
			* 5.45997	35.90	RMS	34.60	-23.40	0.00	47.00	54.00	-7.00	-	-	156	116	H
			5.46998	40.32	RMS	34.60	-23.30	0.00	51.62	-	-	-	-	156	116	H
			5.46983	40.46	RMS	34.60	-23.30	0.00	51.76	-	-	-	-	156	116	H
			* 5.45999	44.05	Pk	34.60	-23.40	0.00	55.25	-	-	74.00	-18.75	192	295	V
			* 5.45857	45.03	Pk	34.60	-23.40	0.00	56.23	-	-	74.00	-17.77	192	295	V
	5670	MIMO	5.46998	46.81	Pk	34.60	-23.30	0.00	58.11	-	-	68.20	-10.09	192	295	V
			5.46988	49.57	Pk	34.60	-23.30	0.00	60.87	-	-	68.20	-7.33	192	295	V
			* 5.45999	33.25	RMS	34.60	-23.40	0.00	44.45	54.00	-9.55	-	-	192	295	V
			* 5.45992	33.63	RMS	34.60	-23.40	0.00	44.83	54.00	-9.17	-	-	192	295	V
			5.46998	37.34	RMS	34.60	-23.30	0.00	48.64	-	-	-	-	192	295	V
			5.46994	37.76	RMS	34.60	-23.30	0.00	49.06	-	-	-	-	192	295	V
			5.72500	42.06	Pk	34.60	-23.10	0.00	53.56	-	-	68.20	-14.64	157	150	H
			5.72559	44.34	Pk	34.60	-23.10	0.00	55.84	-	-	68.20	-12.36	157	150	H
			5.72502	44.20	Pk	34.60	-23.10	0.00	55.70	-	-	68.20	-12.50	192	336	V
			5.72514	44.12	Pk	34.60	-23.10	0.00	55.62	-	-	68.20	-12.58	192	336	V
802.11ax (HE80) SU mode	5530	MIMO	* 5.45999	46.55	Pk	34.60	-23.40	0.00	57.75	-	-	74.00	-16.25	156	122	H
			* 5.4597	48.61	Pk	34.60	-23.40	0.00	59.81	-	-	74.00	-14.19	156	122	H
			5.46998	47.05	Pk	34.60	-23.30	0.00	58.35	-	-	68.20	-9.85	156	122	H
			5.46837	51.08	Pk	34.60	-23.40	0.00	62.28	-	-	68.20	-5.92	156	122	H
			* 5.45999	36.53	RMS	34.60	-23.40	0.00	47.73	54.00	-6.27	-	-	156	122	H
			* 5.45962	37.11	RMS	34.60	-23.40	0.00	48.31	54.00	-5.69	-	-	156	122	H
			5.46998	37.99	RMS	34.60	-23.30	0.00	49.29	-	-	-	-	156	122	H
			5.46979	38.58	RMS	34.60	-23.30	0.00	49.88	-	-	-	-	156	122	H
			* 5.45999	45.47	Pk	34.60	-23.40	0.00	56.67	-	-	74.00	-17.33	194	296	V
			* 5.45876	46.30	Pk	34.60	-23.40	0.00	57.50	-	-	74.00	-16.50	194	296	V
	5530	MIMO	5.46998	46.05	Pk	34.60	-23.30	0.00	57.35	-	-	68.20	-10.85	194	296	V
			5.46988	48.33	Pk	34.60	-23.30	0.00	59.63	-	-	68.20	-8.57	194	296	V
			* 5.45999	34.10	RMS	34.60	-23.40	0.00	45.30	54.00	-8.70	-	-	194	296	V
			* 5.45988	34.65	RMS	34.60	-23.40	0.00	45.85	54.00	-8.15	-	-	194	296	V
			5.46998	36.09	RMS	34.60	-23.30	0.00	47.39	-	-	-	-	194	296	V
			5.46979	36.80	RMS	34.60	-23.30	0.00	48.10	-	-	-	-	194	296	V
			5.72500	40.00	Pk	34.60	-23.10	0.00	51.50	-	-	68.20	-16.70	157	124	H
			5.79642	42.55	Pk	34.80	-23.00	0.00	54.35	-	-	68.20	-13.85	157	124	H
			5.72502	39.26	Pk	34.60	-23.10	0.00	50.76	-	-	68.20	-17.44	196	348	V
			5.79850	42.42	Pk	34.80	-23.00	0.00	54.22	-	-	68.20	-13.98	196	348	V

Note1. Pk - Peak detector, RMS - RMS detector

Note2. * - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5500 MHz)



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

5500 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas. Reading (dBuV)	Det	Antenna_Vol_Factor(dB)	ISM_Vol_Factor(dB)	OC Corr (dB)	Corrected Reading (dBuV)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Adm'dn (dB)	Height (cm)	Polarity
* 8.288	35.88	PK-U	36	-23.8	0	48.08	-	-	74	-25.92	-	-	0	100	H
* 8.24514	35.92	PK-U	36	-23.8	0	48.12	-	-	74	-25.88	-	-	0	100	V
* 10.9996	33.2	PK-U	36	-20.9	0	50.3	-	-	74	-23.7	-	-	0	100	H
* 11.00367	33.14	PK-U	36	-20.9	0	50.24	-	-	74	-23.76	-	-	0	100	V
16.50007	34.14	PK-U	41.6	-18.9	0	56.84	-	-	-	-	68.2	-11.36	0	100	H
16.50356	34.29	PK-U	41.6	-18.9	0	57.09	-	-	-	-	68.2	-11.11	0	100	V

* - indicates frequency in 47 CFR 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	* 8.248	35.88	PK-U	36.00	-23.80	0.00	48.08	-	-	74.00	-25.92	-	-	0	100	H
			* 8.24614	35.92	PK-U	36.00	-23.80	0.00	48.12	-	-	74.00	-25.88	-	-	0	100	V
			* 10.9996	33.20	PK-U	38.00	-20.90	0.00	50.30	-	-	74.00	-23.70	-	-	0	100	H
			* 11.00367	33.14	PK-U	38.00	-20.90	0.00	50.24	-	-	74.00	-23.76	-	-	0	100	V
			16.500	34.14	PK-U	41.60	-18.90	0.00	56.84	-	-	-	-	68.20	-11.36	0	100	H
			16.504	34.29	PK-U	41.60	-18.80	0.00	57.09	-	-	-	-	68.20	-11.11	0	100	V
			* 8.36942	35.83	PK-U	36.00	-23.80	0.00	48.23	-	-	74.00	-25.77	-	-	0	100	H
			* 8.37515	35.41	PK-U	36.00	-23.60	0.00	47.81	-	-	74.00	-26.19	-	-	0	100	V
	5580	MIMO	* 11.1591	33.69	PK-U	38.10	-21.30	0.00	50.49	-	-	74.00	-23.51	-	-	0	100	H
			* 11.16098	33.45	PK-U	38.10	-21.30	0.00	50.25	-	-	74.00	-23.75	-	-	0	100	V
			16.741	32.77	PK-U	41.80	-18.20	0.00	56.37	-	-	-	-	68.20	-11.83	0	100	H
			16.737	32.76	PK-U	41.80	-18.30	0.00	56.26	-	-	-	-	68.20	-11.94	0	100	V
			8.548	34.27	PK-U	36.00	-22.80	0.00	47.47	-	-	-	-	68.20	-20.73	0	100	H
			8.553	34.68	PK-U	36.00	-22.80	0.00	47.88	-	-	-	-	68.20	-20.32	0	100	V
			* 11.40548	32.64	PK-U	38.10	-21.10	0.00	49.64	-	-	74.00	-24.36	-	-	0	100	H
			* 11.39985	32.79	PK-U	38.10	-21.00	0.00	49.89	-	-	74.00	-24.11	-	-	0	100	V
	5700	MIMO	17.099	31.52	PK-U	41.40	-17.50	0.00	55.42	-	-	-	-	68.20	-12.78	0	100	H
			17.100	32.04	PK-U	41.40	-17.50	0.00	55.94	-	-	-	-	68.20	-12.26	0	100	V
			* 8.24922	41.56	PK-U	36.20	-29.40	0.00	48.36	-	-	74.00	-25.64	-	-	0	100	H
			* 8.25038	41.09	PK-U	36.20	-29.40	0.00	47.89	-	-	74.00	-26.11	-	-	0	100	V
			* 11.00179	38.62	PK-U	38.10	-25.50	0.00	51.22	-	-	74.00	-22.78	-	-	0	100	H
			* 10.99974	38.40	PK-U	38.10	-25.50	0.00	51.00	-	-	74.00	-23.00	-	-	0	100	V
			16.501	38.23	PK-U	41.10	-22.00	0.00	57.33	-	-	-	-	68.20	-10.87	0	100	H
			16.499	38.09	PK-U	41.10	-22.00	0.00	57.19	-	-	-	-	68.20	-11.01	0	100	V
802.11ax (HE20) RU mode 26 Tone offset 8	5500	MIMO																

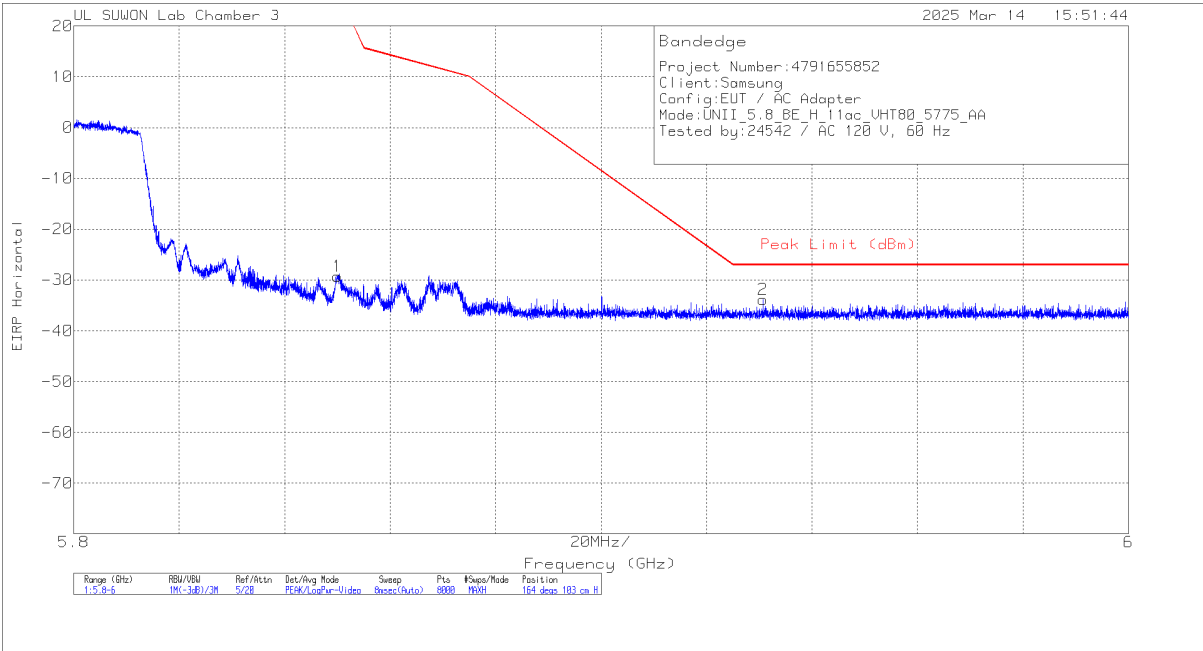
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

Note2. * - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

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

BANDEDGE (WORST CASE: 802.11ac VHT80 / 5775 MHz UPPER)

HORIZONTAL PEAK DATA



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	Antenna_957_F actor(dB/m)	10dB_Path Loss(dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85001	-56.85	Pk	35.2	-19.4	11.8	0	-29.25	26.99	-56.24	161	104	H
2	5.93069	-61.87	Pk	35.5	-19.3	11.8	0	-33.87	-27	-6.87	161	104	H

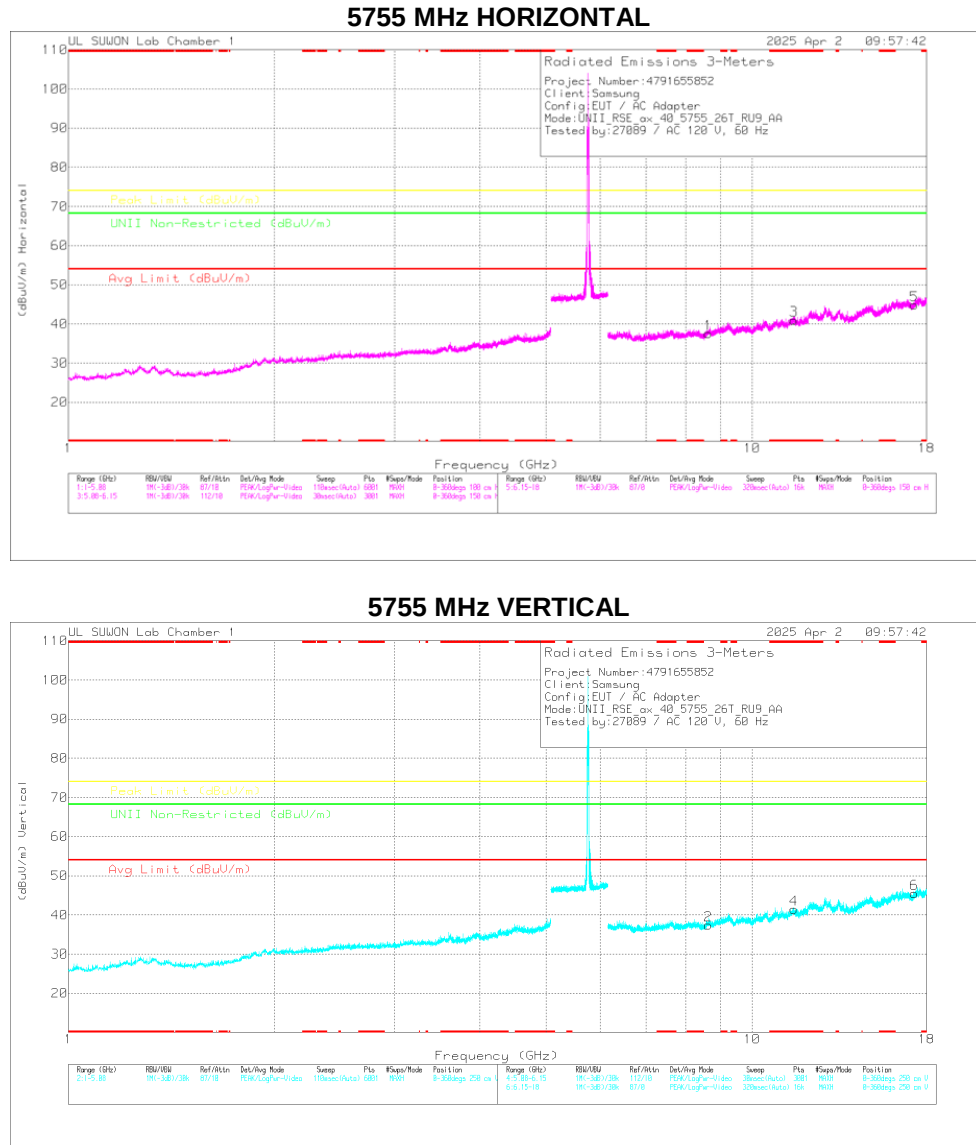
PK - Peak detector

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	-53.11	Pk	34.90	-19.50	11.80	0.00	-25.91	27.00	-52.91	157	125	H
			5.63573	-64.33	Pk	34.90	-19.90	11.80	0.00	-37.53	-27.00	-10.53	157	125	H
			5.72500	-60.65	Pk	34.90	-19.50	11.80	0.00	-33.45	27.00	-60.45	265	103	V
			5.63777	-64.98	Pk	34.90	-19.80	11.80	0.00	-38.08	-27.00	-11.08	265	103	V
	5825	MIMO	5.85001	-49.49	Pk	35.20	-19.40	11.80	0.00	-21.89	26.99	-48.88	164	103	H
			5.96695	-62.73	Pk	35.60	-19.30	11.80	0.00	-34.63	-27.00	-7.63	164	103	H
			5.85001	-53.11	Pk	35.20	-19.40	11.80	0.00	-25.51	26.99	-52.50	196	360	V
			5.96464	-65.12	Pk	35.60	-19.30	11.80	0.00	-37.02	-27.00	-10.02	196	360	V
802.11n (HT20)	5745	MIMO	5.72500	-48.04	Pk	34.90	-19.50	11.80	0.00	-20.84	27.00	-47.84	158	124	H
			5.63105	-63.68	Pk	34.90	-19.90	11.80	0.00	-36.88	-27.00	-9.88	158	124	H
			5.72500	-59.79	Pk	34.90	-19.50	11.80	0.00	-32.59	27.00	-59.59	264	103	V
			5.64608	-65.09	Pk	34.90	-19.80	11.80	0.00	-38.19	-27.00	-11.19	264	103	V
	5825	MIMO	5.85001	-51.33	Pk	35.20	-19.40	11.80	0.00	-23.73	26.99	-50.72	166	101	H
			5.95957	-62.50	Pk	35.60	-19.30	11.80	0.00	-34.40	-27.00	-7.40	166	101	H
			5.85001	-50.23	Pk	35.20	-19.40	11.80	0.00	-22.63	26.99	-49.62	198	362	V
			5.95444	-65.18	Pk	35.60	-19.30	11.80	0.00	-37.08	-27.00	-10.08	198	362	V
802.11n (HT40)	5755	MIMO	5.72500	-54.43	Pk	34.90	-19.50	11.80	0.00	-27.23	27.00	-54.23	158	125	H
			5.64702	-64.22	Pk	34.90	-19.80	11.80	0.00	-37.32	-27.00	-10.32	158	125	H
			5.72500	-52.65	Pk	34.90	-19.50	11.80	0.00	-25.45	27.00	-52.45	262	101	V
			5.63059	-64.40	Pk	34.90	-19.90	11.80	0.00	-37.60	-27.00	-10.60	262	101	V
	5795	MIMO	5.85001	-54.68	Pk	35.20	-19.40	11.80	0.00	-27.08	26.99	-54.07	164	103	H
			5.98860	-62.22	Pk	35.70	-19.30	11.80	0.00	-34.02	-27.00	-7.02	164	103	H
			5.85001	-59.21	Pk	35.20	-19.40	11.80	0.00	-31.51	26.99	-58.60	175	359	V
			5.98695	-65.18	Pk	35.70	-19.20	11.80	0.00	-36.88	-27.00	-9.88	175	359	V
802.11ac (VHT80)	5775 (Lower Side)	MIMO	5.72500	-60.37	Pk	34.90	-19.50	11.80	0.00	-33.17	27.00	-60.17	155	125	H
			5.63680	-64.21	Pk	34.90	-19.80	11.80	0.00	-37.31	-27.00	-10.31	155	125	H
			5.72500	-57.49	Pk	34.90	-19.50	11.80	0.00	-34.28	27.00	-57.28	262	101	V
			5.64770	-63.44	Pk	34.90	-19.80	11.80	0.00	-36.54	-27.00	-9.54	262	101	V
	5775 (Upper Side)	MIMO	5.85001	-56.85	Pk	35.20	-19.40	11.80	0.00	-29.25	26.99	-56.24	161	104	H
			5.93069	-61.87	Pk	35.50	-19.30	11.80	0.00	-33.87	-27.00	-6.87	161	104	H
			5.85001	-61.00	Pk	35.20	-19.40	11.80	0.00	-33.40	26.99	-60.39	174	359	V
			5.95992	-64.75	Pk	35.60	-19.30	11.80	0.00	-36.65	-27.00	-9.65	174	359	V
802.11ax (HE20) SU mode	5745	MIMO	5.72499	-37.57	Pk	34.60	-23.10	11.80	0.00	-14.27	26.97	-41.24	155	121	H
			5.64060	-64.10	Pk	34.50	-23.20	11.80	0.00	-41.00	-27.00	-14.00	155	121	H
			5.72499	-39.36	Pk	34.60	-23.10	11.80	0.00	-16.06	26.97	-43.03	197	301	V
			5.64543	-63.19	Pk	34.50	-23.20	11.80	0.00	-40.09	-27.00	-13.09	197	301	V
	5825	MIMO	5.85003	-44.67	Pk	34.80	-23.00	11.80	0.00	-21.07	26.94	-48.01	155	119	H
			5.98745	-63.76	Pk	35.00	-22.90	11.80	0.00	-39.86	-27.00	-12.86	155	119	H
			5.85003	-47.54	Pk	34.80	-23.00	11.80	0.00	-23.94	26.94	-50.88	200	275	V
			5.95213	-63.46	Pk	34.90	-22.90	11.80	0.00	-39.66	-27.00	-12.66	200	275	V
802.11ax (HE40) SU mode	5755	MIMO	5.72499	-50.18	Pk	34.60	-23.10	11.80	0.00	-26.88	26.97	-53.85	155	141	H
			5.64071	-62.42	Pk	34.50	-23.20	11.80	0.00	-39.32	-27.00	-12.32	155	141	H
			5.72499	-57.52	Pk	34.60	-23.10	11.80	0.00	-34.22	26.97	-61.19	263	100	V
			5.64617	-63.54	Pk	34.50	-23.20	11.80	0.00	-40.44	-27.00	-13.44	263	100	V
	5795	MIMO	5.85003	-61.67	Pk	34.80	-23.00	11.80	0.00	-38.07	26.94	-65.01	157	120	H
			5.95268	-62.76	Pk	34.90	-22.90	11.80	0.00	-38.96	-27.00	-11.96	157	120	H
			5.85003	-60.43	Pk	34.80	-23.00	11.80	0.00	-36.83	26.94	-63.77	199	281	V
			5.98598	-63.46	Pk	35.00	-22.90	11.80	0.00	-39.56	-27.00	-12.56	199	281	V
802.11ax (HE80) SU mode	5775 (Lower Side)	MIMO	5.72499	-50.94	Pk	34.60	-23.10	11.80	0.00	-27.64	26.97	-54.61	155	119	H
			5.65035	-62.32	Pk	34.60	-23.10	11.80	0.00	-39.02	-26.74	-12.28	155	119	H
			5.72499	-54.30	Pk	34.60	-23.10	11.80	0.00	-31.00	26.97	-57.97	197	301	V
			5.65020	-63.52	Pk	34.60	-23.10	11.80	0.00	-40.22	-26.85	-13.37	197	301	V
	5775 (Upper Side)	MIMO	5.85003	-59.95	Pk	34.80	-23.00	11.80	0.00	-36.35	26.94	-63.29	156	131	H
			5.93575	-63.35	Pk	34.90	-22.80	11.80	0.00	-39.45	-27.00	-12.45	156	131	H
			5.85003	-60.51	Pk	34.80	-23.00	11.80	0.00	-36.91	26.94	-63.85	199	282	V
			5.97125	-62.49	Pk	34.90	-22.80	11.80	0.00	-38.59	-27.00	-11.59	199	282	V

Note. Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 5755 MHz)



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

5755 MHz DATA

Radiated Emissions

Frequency (GHz)	Meas. Reading (dBuV)	Det.	Antenna Factor (dBm)	ISM_MF_Pain Loss(dB)	OC 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)	Adm'dn (dBm)	Height (m)	Polarity
8.63129	40.51	PK-U	36.1	-28.2	0	48.41	-	-	-	-	68.2	-19.79	0	100	H
8.63103	40.6	PK-U	36.1	-28.2	0	48.5	-	-	-	-	68.2	-19.7	0	100	V
* 11.51093	38.25	PK-U	38.3	-24.4	0	52.15	-	-	74	-21.85	-	-	0	100	H
* 11.50997	38.05	PK-U	38.3	-24.4	0	51.95	-	-	74	-22.05	-	-	0	100	V
17.26402	36.93	PK-U	40.9	-21.3	0	56.43	-	-	-	-	68.2	-11.77	0	100	H
17.26345	36.95	PK-U	40.9	-21.3	0	56.55	-	-	-	-	68.2	-11.65	0	100	V

* - indicates frequency in 47 CFR 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

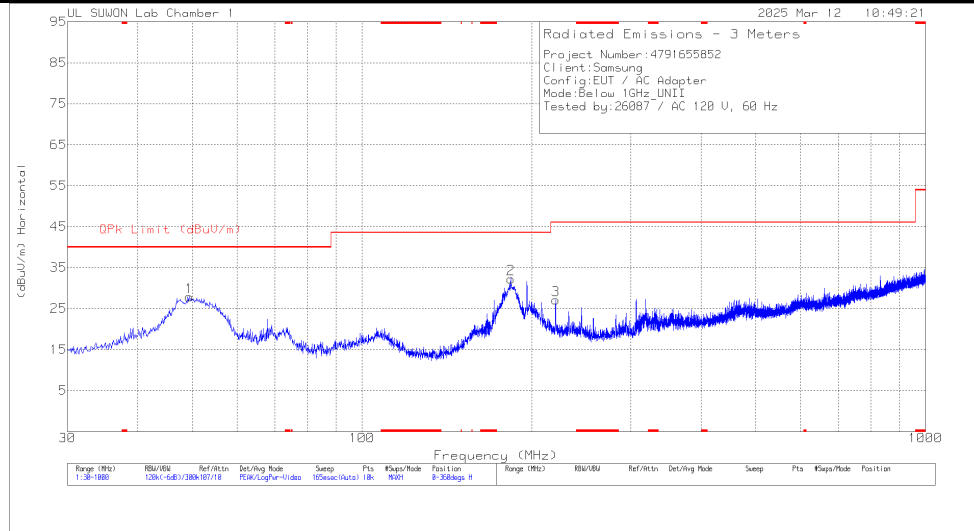
Mode	Freq. [MHz]	Antenna	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB(1/m)]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Non-Restricted [dBuV/m]	Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
802.11a	5745	MIMO	8.617	34.02	PK-U	36.00	-22.90	0.00	47.12	-	-	-	-	68.20	-21.08	0	100	H
			8.616	33.90	PK-U	36.00	-22.90	0.00	47.00	-	-	-	-	68.20	-21.20	0	100	V
			* 11.48698	33.30	PK-U	38.20	-21.10	0.00	50.40	-	-	74.00	-23.60	-	-	0	100	H
			* 11.48575	33.41	PK-U	38.20	-21.10	0.00	50.51	-	-	74.00	-23.49	-	-	0	100	V
			17.237	31.84	PK-U	41.10	-16.60	0.00	56.34	-	-	-	-	68.20	-11.86	0	100	H
			17.233	31.79	PK-U	41.10	-16.60	0.00	56.29	-	-	-	-	68.20	-11.91	0	100	V
	5785	MIMO	8.674	33.93	PK-U	36.10	-22.90	0.00	47.13	-	-	-	-	68.20	-21.07	0	100	H
			8.676	33.88	PK-U	36.10	-22.80	0.00	47.18	-	-	-	-	68.20	-21.02	0	100	V
			* 11.56746	33.88	PK-U	38.20	-21.30	0.00	50.78	-	-	74.00	-23.22	-	-	0	100	H
			* 11.57176	33.40	PK-U	38.20	-21.20	0.00	50.40	-	-	74.00	-23.60	-	-	0	100	V
			17.350	32.43	PK-U	41.10	-16.80	0.00	56.73	-	-	-	-	68.20	-11.47	0	100	H
			17.353	32.53	PK-U	41.10	-16.80	0.00	56.83	-	-	-	-	68.20	-11.37	0	100	V
	5825	MIMO	8.737	34.04	PK-U	36.10	-22.60	0.00	47.54	-	-	-	-	68.20	-20.66	0	100	H
			8.735	34.11	PK-U	36.10	-22.60	0.00	47.61	-	-	-	-	68.20	-20.59	0	100	V
			* 11.6528	33.64	PK-U	38.30	-21.10	0.00	50.84	-	-	74.00	-23.16	-	-	0	100	H
			* 11.65215	33.08	PK-U	38.30	-21.10	0.00	50.28	-	-	74.00	-23.72	-	-	0	100	V
			17.477	31.57	PK-U	41.20	-16.40	0.00	56.37	-	-	-	-	68.20	-11.83	0	100	H
			17.472	31.84	PK-U	41.10	-16.30	0.00	56.64	-	-	-	-	68.20	-11.56	0	100	V
802.11ax (HE40) RU mode 26 Tone offset 9 Spot-check	5755	MIMO	8.631	40.51	PK-U	36.10	-28.20	0.00	48.41	-	-	-	-	68.20	-19.79	0	100	H
			* 11.51093	38.25	PK-U	38.30	-24.40	0.00	52.15	-	-	74.00	-21.85	-	-	0	100	H
			* 11.5087	38.05	PK-U	38.30	-24.40	0.00	51.95	-	-	74.00	-22.05	-	-	0	100	V
			17.264	36.93	PK-U	40.90	-21.40	0.00	56.43	-	-	-	-	68.20	-11.77	0	100	H
			17.263	36.95	PK-U	40.90	-21.30	0.00	56.55	-	-	-	-	68.20	-11.65	0	100	V

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

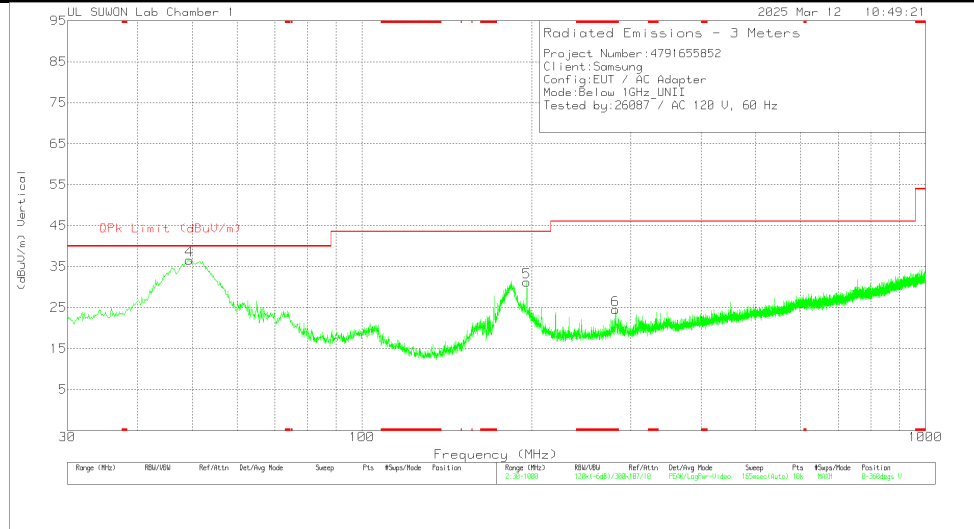
Note2. * - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

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_750_Factor(dB/m)	Below_1G_Path Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	49.4	38.98	Pk	19.8	-30.9	27.88	40	-12.12	0-360	300	H
2	183.842	46.08	Pk	15.6	-29.4	32.28	43.52	-11.24	0-360	100	H
3	220.605	39.12	Pk	17.1	-29.1	27.12	46.02	-18.9	0-360	100	H
4	49.4	47.67	Pk	19.8	-30.9	36.57	40	-3.43	0-360	200	V
5	196.064	43.13	Pk	17.4	-29.3	31.23	43.52	-12.29	0-360	200	V
6	* 281.812	34.43	Pk	18.7	-28.6	24.53	46.02	-21.49	0-360	200	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Antenna_750_Factor(dB/m)	Below_1G_Path Loss(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
49.4	35.55	Qp	19.8	-30.9	24.45	40	-15.55	214	145	V

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

Qp - Quasi-Peak detector

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
IC RSS-GEN Clause 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 [*]	56 to 46 [*]
0.5-5	56	46
5-30	60	50

^{*} Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

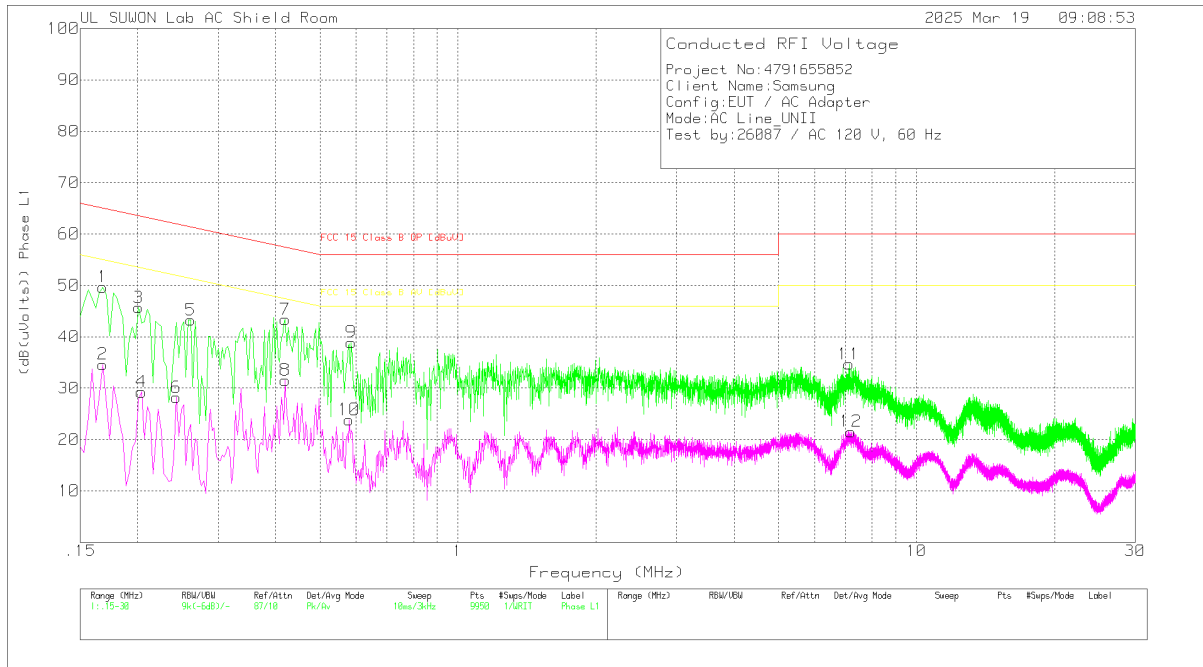
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

WORST EMISSIONS

LINE 1 DATA



Trace Markers

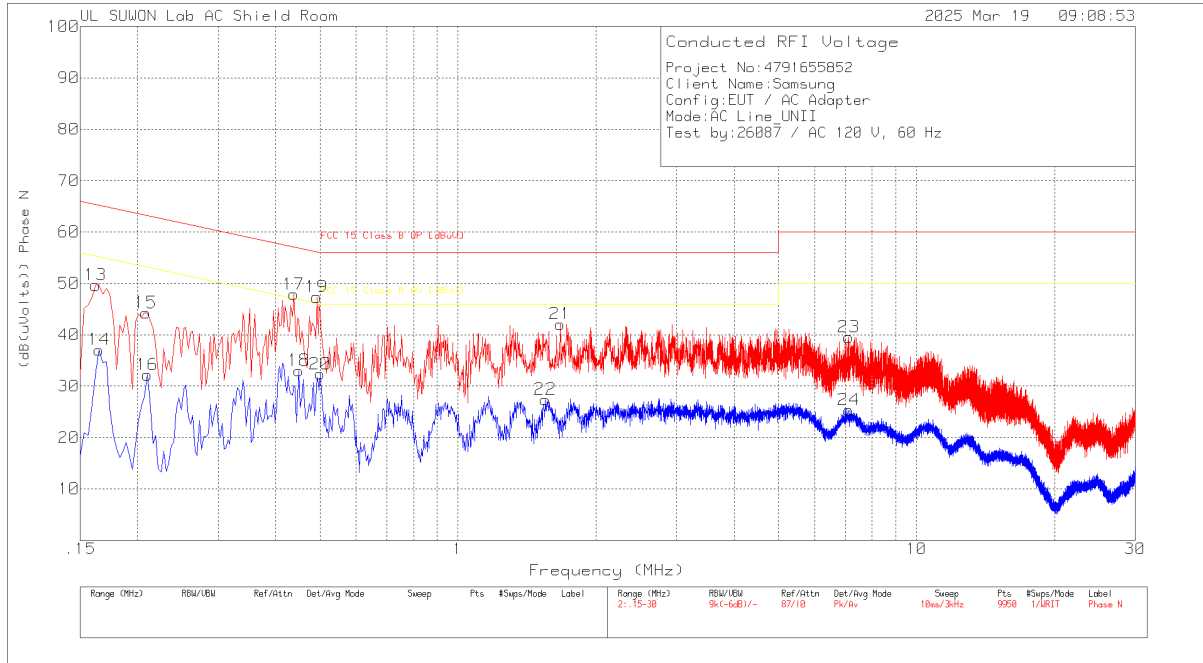
Range 1: Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_L1 [dB]	Cable Loss [dB]	Corrected Reading [dBuV]	FCC 15 Class B QP [dBuV]	Margin (dB)	FCC 15 Class B AV [dBuV]	Margin (dB)
1	.168	39.68	Pk	9.9	.1	49.68	65.06	-15.38	-	-
2	.168	24.63	Av	9.9	.1	34.63	-	-	55.06	-20.43
3	.201	35.8	Pk	9.8	.1	45.7	63.57	-17.87	-	-
4	.204	19.38	Av	9.8	.1	29.28	-	-	53.45	-24.17
5	.261	33.63	Pk	9.5	.1	43.23	61.4	-18.17	-	-
6	.243	18.5	Av	9.6	.1	28.2	-	-	51.99	-23.79
7	.42	33.56	Pk	9.7	.1	43.36	57.45	-14.09	-	-
8	.42	21.76	Av	9.7	.1	31.56	-	-	47.45	-15.89
9	.585	29.02	Pk	9.8	.1	38.92	56	-17.08	-	-
10	.579	13.94	Av	9.8	.1	23.84	-	-	46	-22.16
11	7.125	24.89	Pk	9.6	.2	34.69	60	-25.31	-	-
12	7.194	11.75	Av	9.6	.2	21.55	-	-	50	-28.45

Pk - Peak detector

Av - Average detection

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101836_N [dB]	Cable Loss [dB]	Corrected Reading [dBuV]	FCC 15 Class B QP [dBuV]	Margin (dB)	FCC 15 Class B AV [dBuV]	Margin (dB)
13	.162	39.79	Pk	9.8	.1	49.69	65.36	-15.67	-	-
14	.165	27.18	Av	9.8	.1	37.08	-	-	55.21	-18.13
15	.2085	34.46	Pk	9.7	.1	44.26	63.26	-19	-	-
16	.21	22.41	Av	9.7	.1	32.21	-	-	53.21	-21
17	.438	38.1	Pk	9.7	.1	47.9	57.1	-9.2	-	-
18	.45	23.23	Av	9.7	.1	33.03	-	-	46.88	-13.85
19	.492	37.46	Pk	9.8	.1	47.36	56.13	-8.77	-	-
20	.501	22.45	Av	9.8	.1	32.35	-	-	46	-13.65
21	1.671	32.39	Pk	9.6	.1	42.09	56	-13.91	-	-
22	1.551	17.7	Av	9.6	.1	27.4	-	-	46	-18.6
23	7.119	29.75	Pk	9.6	.2	39.55	60	-20.45	-	-
24	7.119	15.55	Av	9.6	.2	25.35	-	-	50	-24.65

Pk - Peak detector

Av - Average detection

Quasi-Peak Emissions

Range 2: Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101836_N [dB]	Cable Loss [dB]	Corrected Reading [dBuV]	FCC 15 Class B QP [dBuV]	Margin (dB)	FCC 15 Class B AV [dBuV]	Margin (dB)
.43875	32.59	Qp	9.7	.1	42.39	57.09	-14.7	-	-
.49275	32.89	Qp	9.8	.1	42.79	56.12	-13.33	-	-

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
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.	

Table 4: DFS Response requirement values

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

Table 5 – Short Pulse Radar Test Waveforms

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

Table 6 – Long Pulse Radar Test Signal

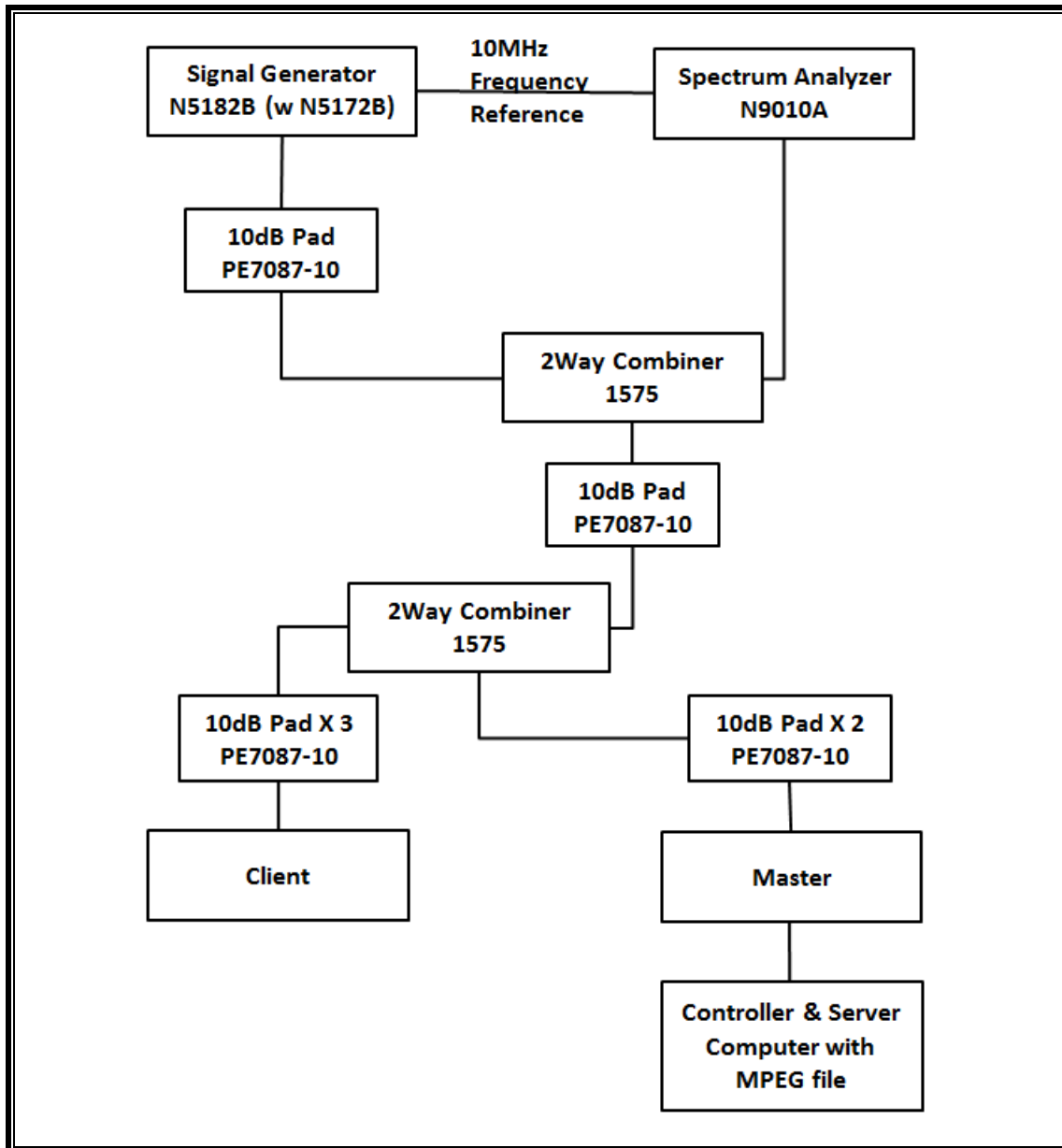
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

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

14.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

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

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

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

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

SYSTEM CALIBRATION

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

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

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

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

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

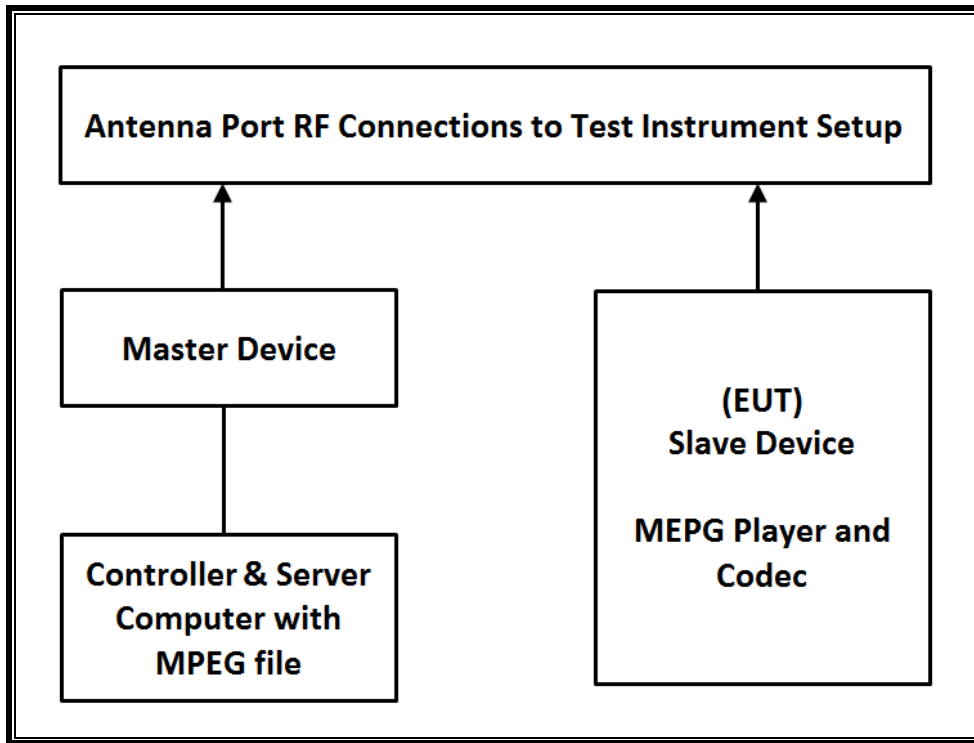
TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	S/N	Next Cal Due
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9030B	MY60070693	2026-01-02
Vector Signal Generator, 6GHz	Agilent / HP	N5182B	MY53051241	2025-07-24
Combiner	WEINSCHEL	WA1534	UL001	2026-01-03
Combiner	WEINSCHEL	WA1534	UL003	2026-01-03

14.1.3. SETUP OF EUT

CONDUCTED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

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

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Wireless Access Point	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 5470-5720 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 12.81 dBm in the 5250-5350 MHz band and 5470-5720 MHz band.

The antenna assembly utilized two antenna.

Gain of ANT1 : -6.35 dBi for UNII 2A and -5.31 dBi for UNII 2C.

Gain of ANT2 : -5.15 dBi for UNII 2A and -4.76 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. 3 nominal channel bandwidth 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 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.

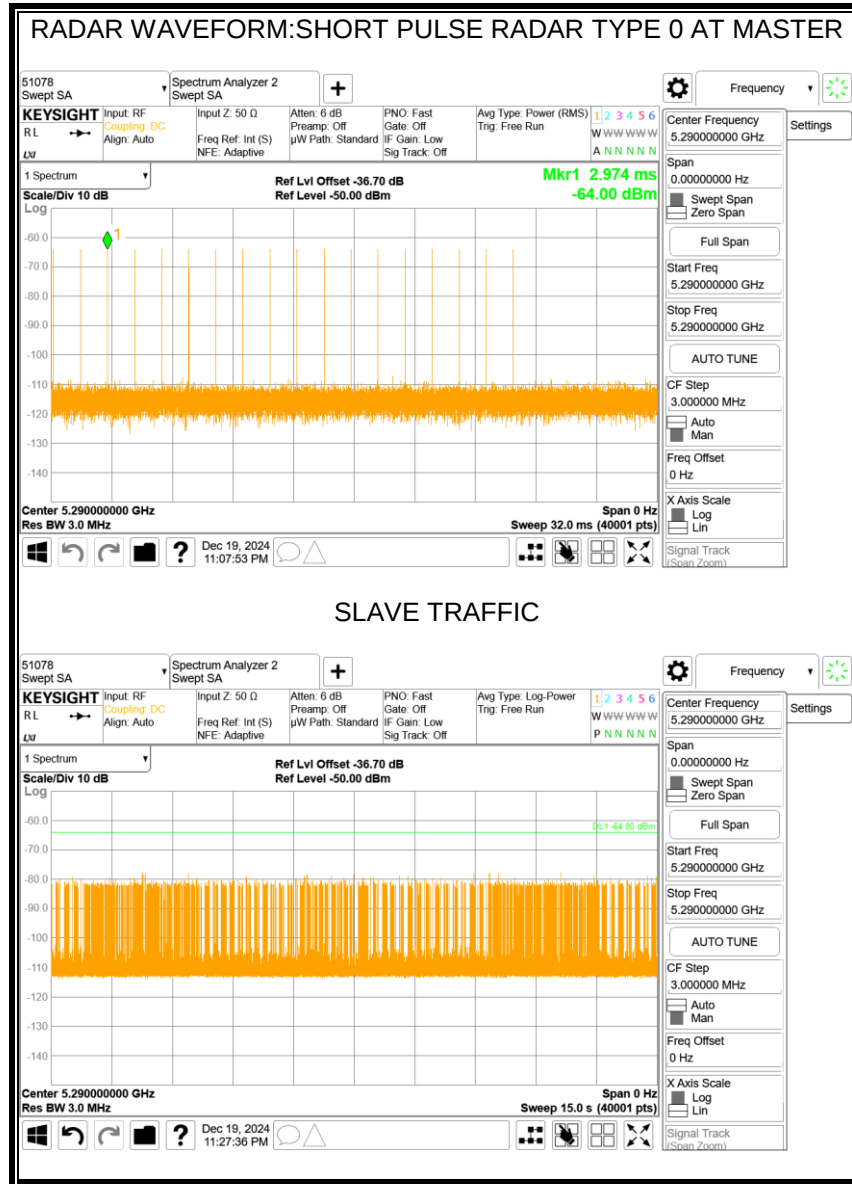
14.2. RESULTS FOR 80 MHz BANDWIDTH (UNII-2A BAND)

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

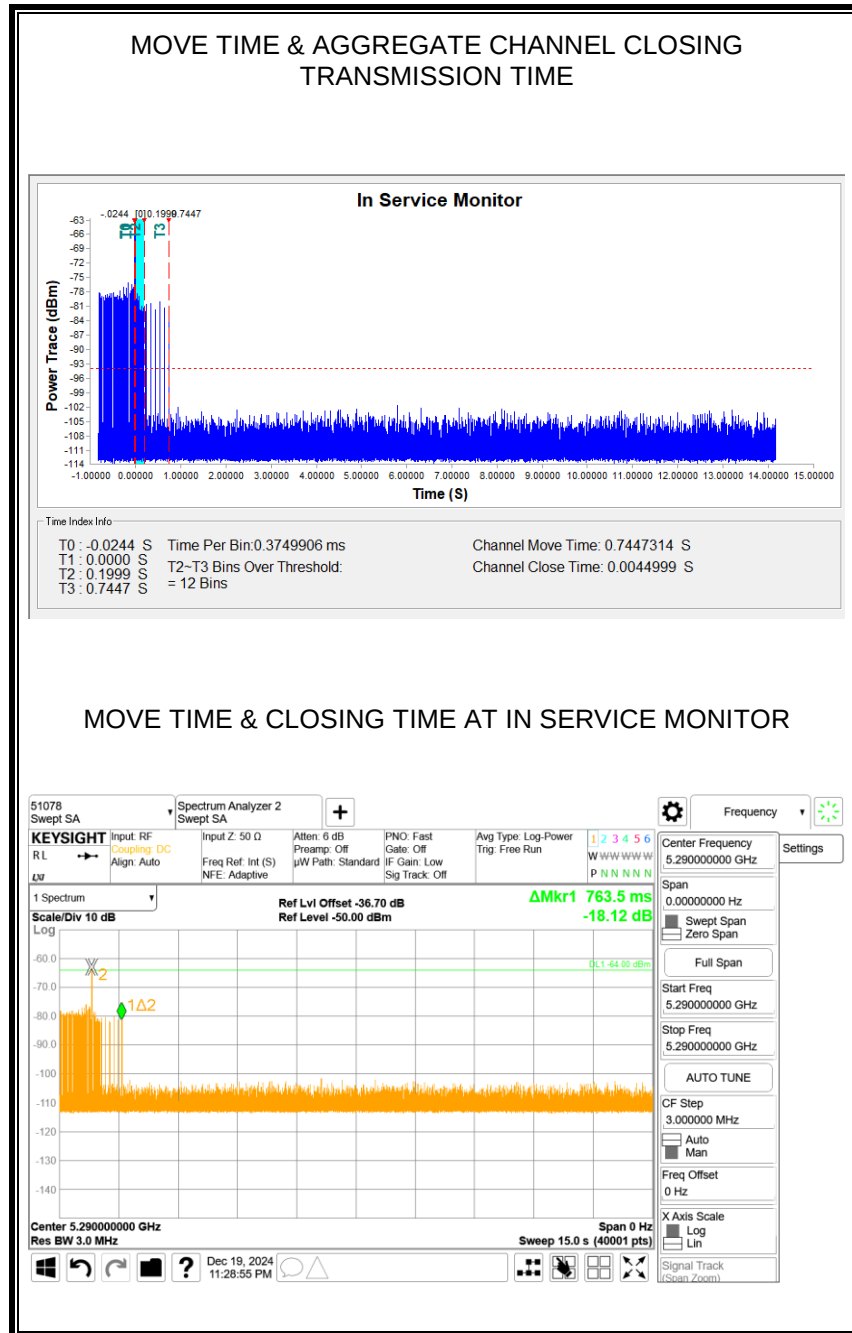
Channel Move Time (sec)	Limit (sec)
0.745	10

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

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

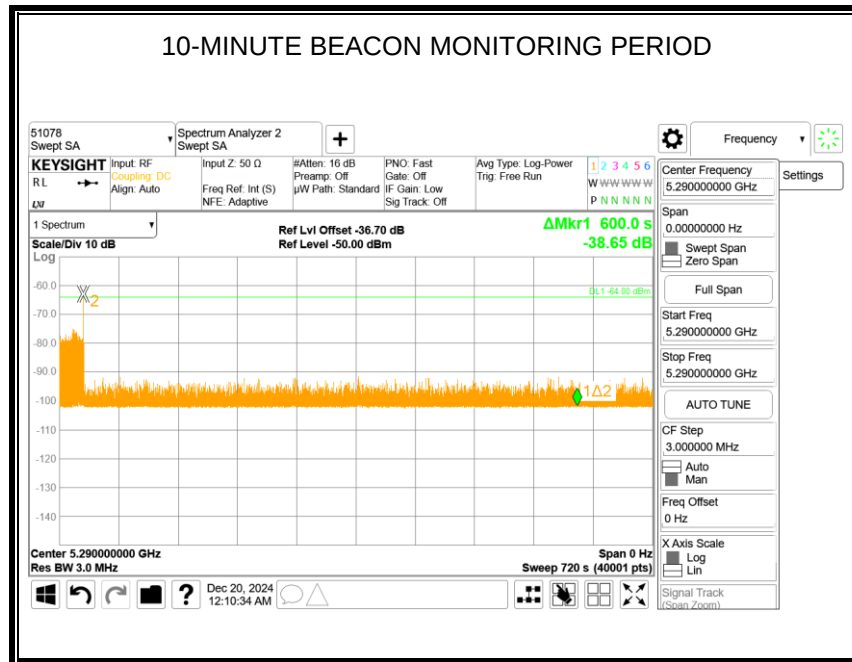
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

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



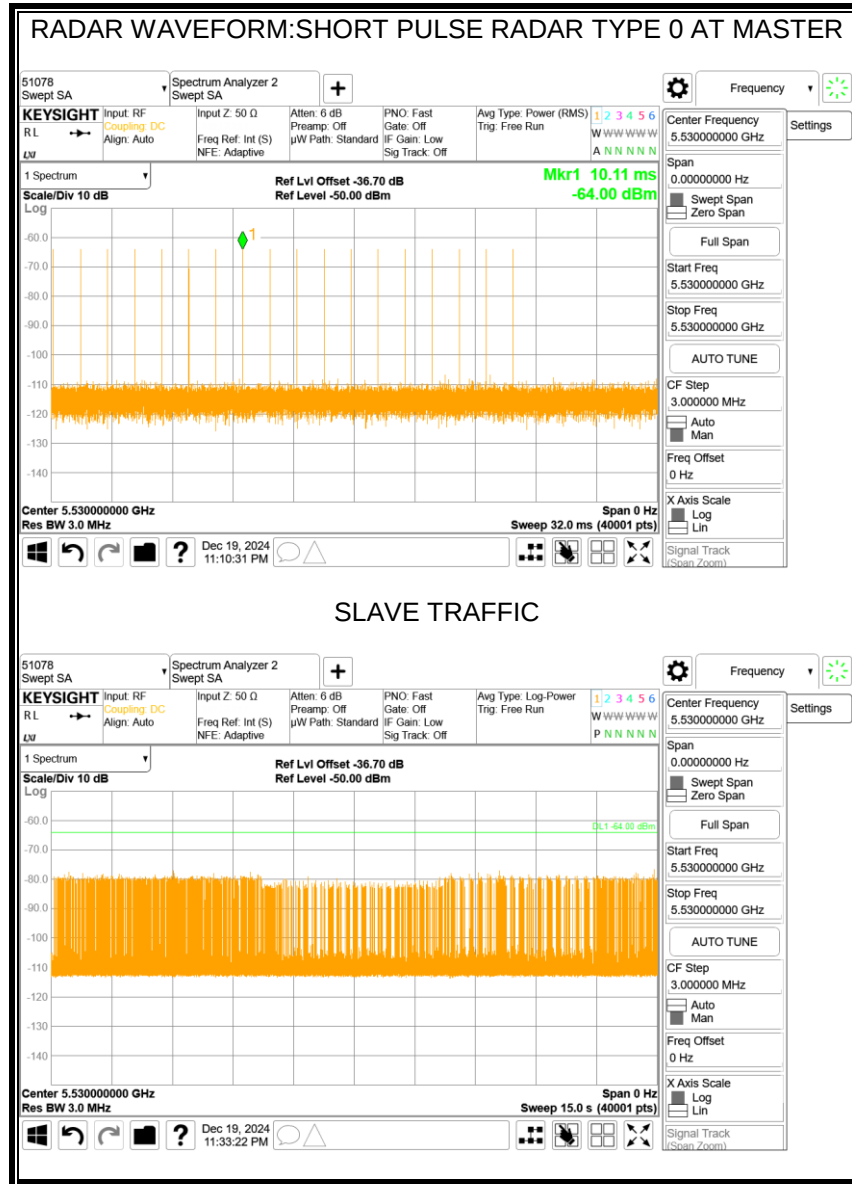
14.3. RESULTS FOR 80 MHz BANDWIDTH (UNII-2C BAND)

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

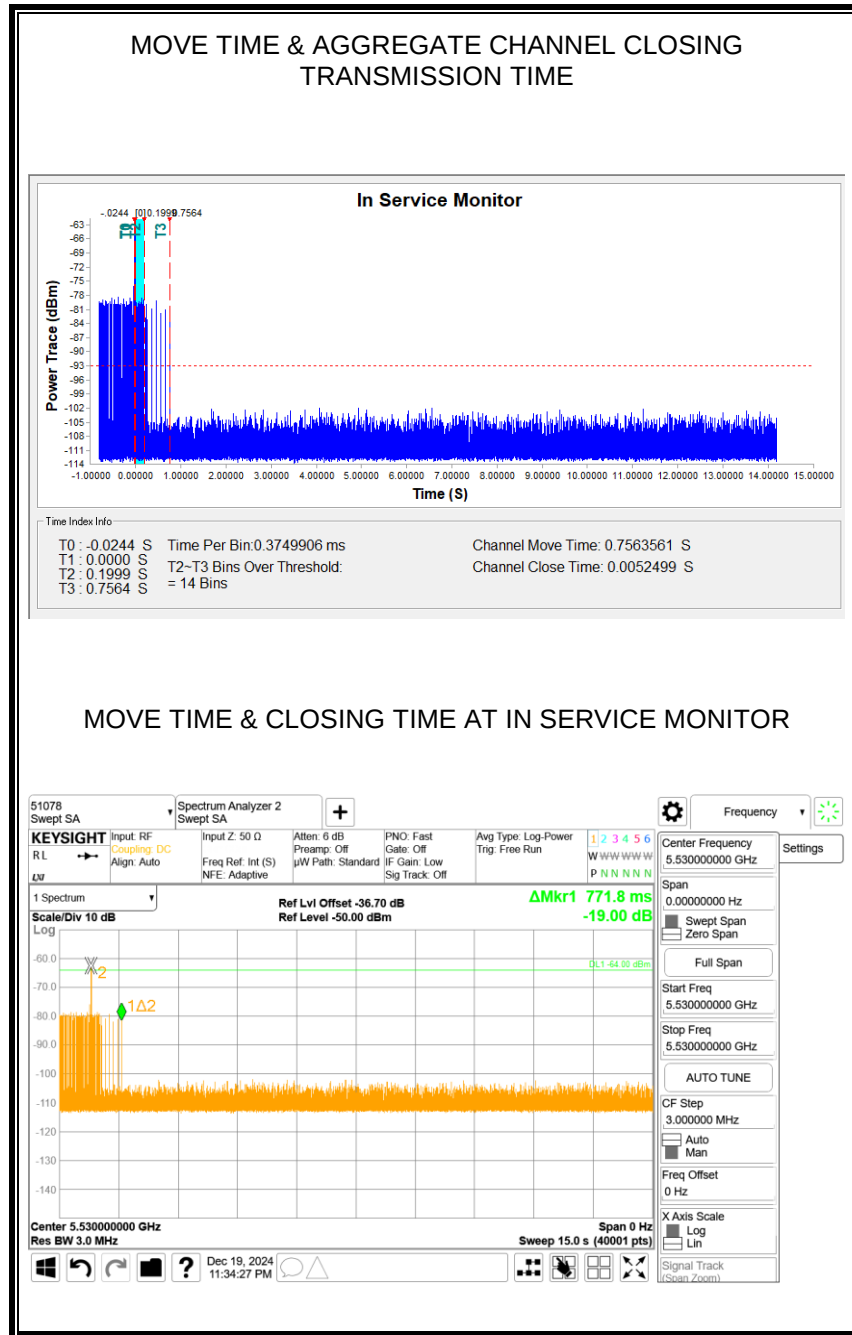
Channel Move Time (sec)	Limit (sec)
0.756	10

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

MOVE TIME & CHANNEL CLOSING TIME

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

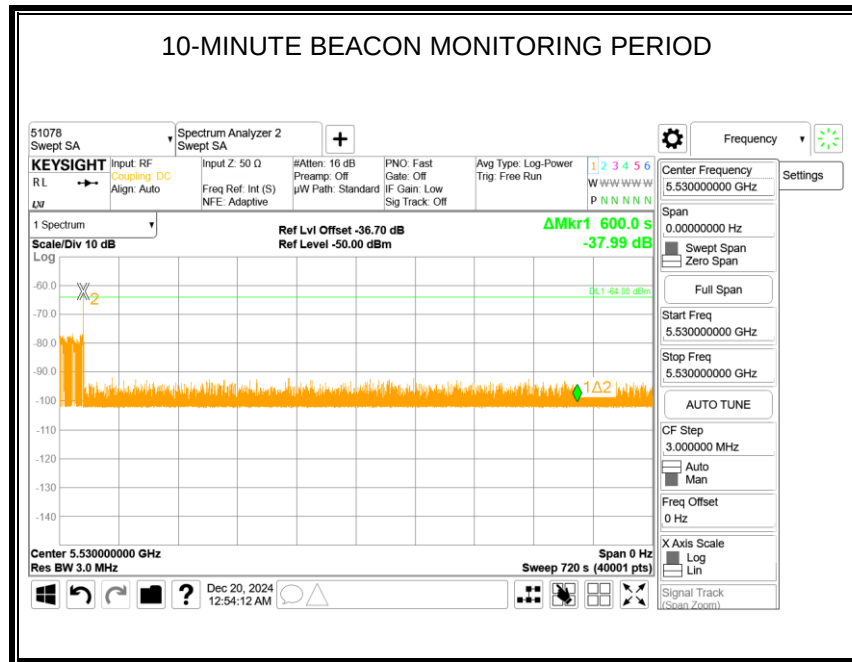
No transmissions are observed during the aggregate monitoring period.



NON-OCCUPANCY PERIOD

RESULTS

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



END OF TEST REPORT