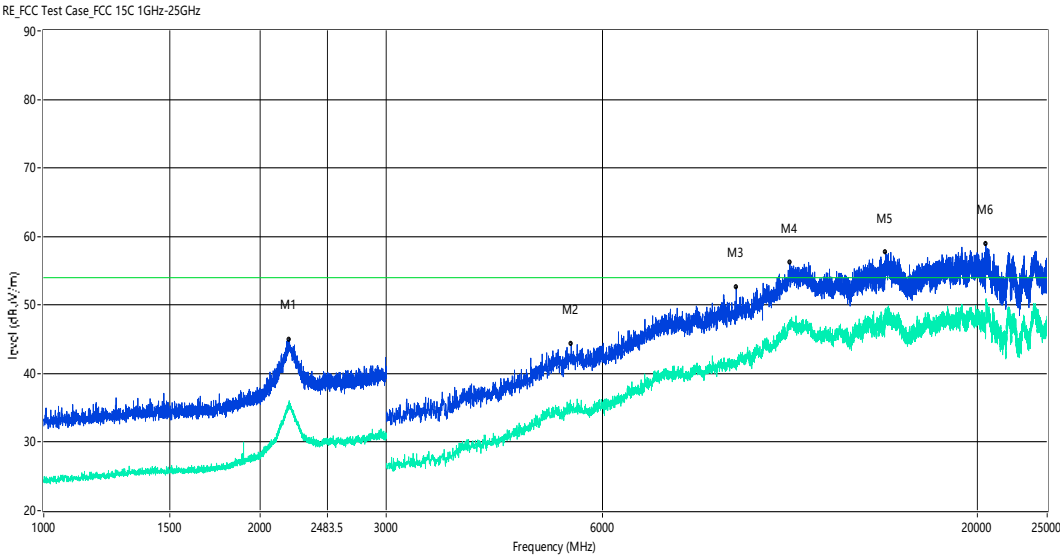
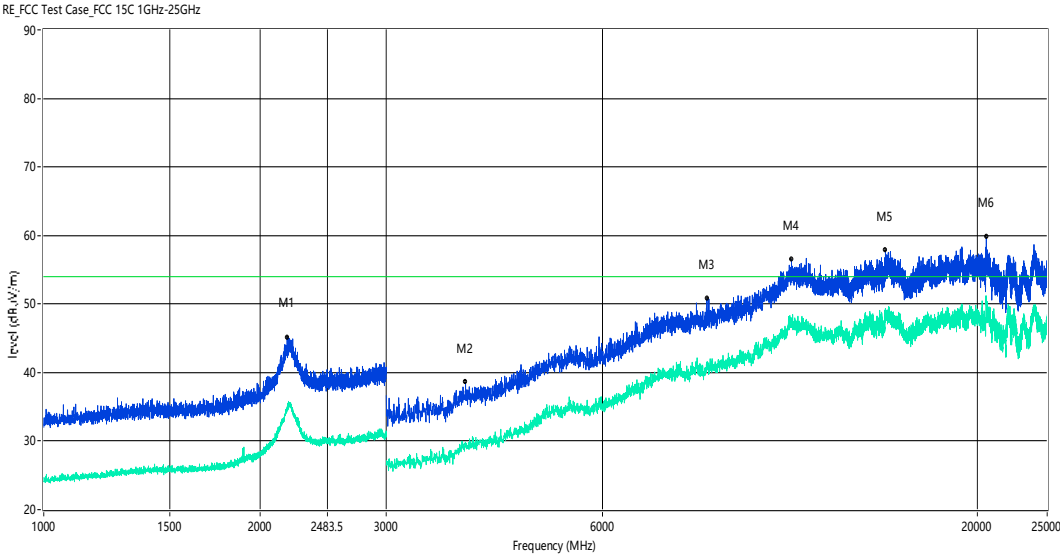
802.11 g CH High

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2196.500	35.40	-7.40	54.0	-18.60	AV	V	Pass
1	2196.500	45.01	-7.40	74.0	-28.99	Peak	V	Pass
2**	5430.000	35.51	-1.40	54.0	-18.49	AV	V	Pass
2	5430.000	44.38	-1.40	74.0	-29.62	Peak	V	Pass
3**	9220.000	41.38	5.09	54.0	-12.62	AV	V	Pass
3	9220.000	52.64	5.09	74.0	-21.36	Peak	V	Pass
4**	10955.000	46.95	10.79	54.0	-7.05	AV	V	Pass
4	10955.000	56.14	10.79	74.0	-17.86	Peak	V	Pass
5**	14886.250	49.29	12.45	54.0	-4.71	AV	V	Pass
5	14886.250	57.67	12.45	74.0	-16.33	Peak	V	Pass
6**	20541.000	49.92	14.09	54.0	-4.08	AV	V	Pass
6	20541.000	58.94	14.09	74.0	-15.06	Peak	V	Pass

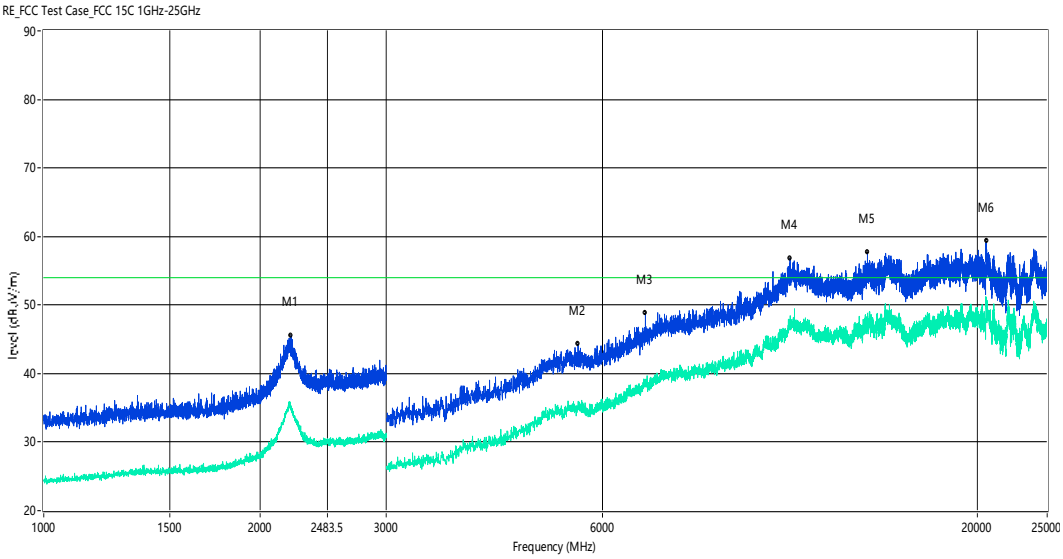
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2183.000	35.01	-8.11	54.0	-18.99	AV	H	Pass
1	2183.000	45.13	-8.11	74.0	-28.87	Peak	H	Pass
2**	3870.000	29.86	-8.14	54.0	-24.14	AV	H	Pass
2	3870.000	38.56	-8.14	74.0	-35.44	Peak	H	Pass
3**	8395.000	41.10	4.65	54.0	-12.90	AV	H	Pass
3	8395.000	50.79	4.65	74.0	-23.21	Peak	H	Pass
4**	11007.500	46.65	10.94	54.0	-7.35	AV	H	Pass
4	11007.500	56.46	10.94	74.0	-17.54	Peak	H	Pass
5**	14881.250	49.05	12.38	54.0	-4.95	AV	H	Pass
5	14881.250	57.85	12.38	74.0	-16.15	Peak	H	Pass
6**	20565.500	50.26	14.12	54.0	-3.74	AV	H	Pass
6	20565.500	59.76	14.12	74.0	-14.24	Peak	H	Pass

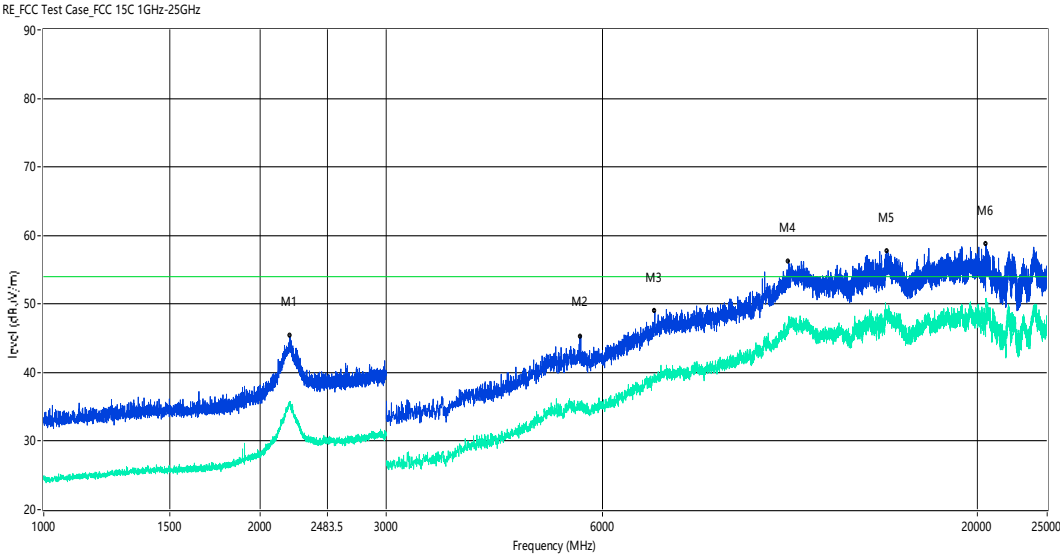
802.11 n(HT20) CH Low

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2210.500	34.94	-7.72	54.0	-19.06	AV	V	Pass
1	2210.500	45.55	-7.72	74.0	-28.45	Peak	V	Pass
2**	5550.000	35.36	-1.33	54.0	-18.64	AV	V	Pass
2	5550.000	44.33	-1.33	74.0	-29.67	Peak	V	Pass
3**	6890.000	38.99	3.09	54.0	-15.01	AV	V	Pass
3	6890.000	48.82	3.09	74.0	-25.18	Peak	V	Pass
4**	10957.500	47.35	10.80	54.0	-6.65	AV	V	Pass
4	10957.500	56.81	10.80	74.0	-17.19	Peak	V	Pass
5**	14045.000	47.16	11.32	54.0	-6.84	AV	V	Pass
5	14045.000	57.66	11.32	74.0	-16.34	Peak	V	Pass
6**	20563.751	50.79	14.12	54.0	-3.21	AV	V	Pass
6	20563.751	59.29	14.12	74.0	-14.71	Peak	V	Pass

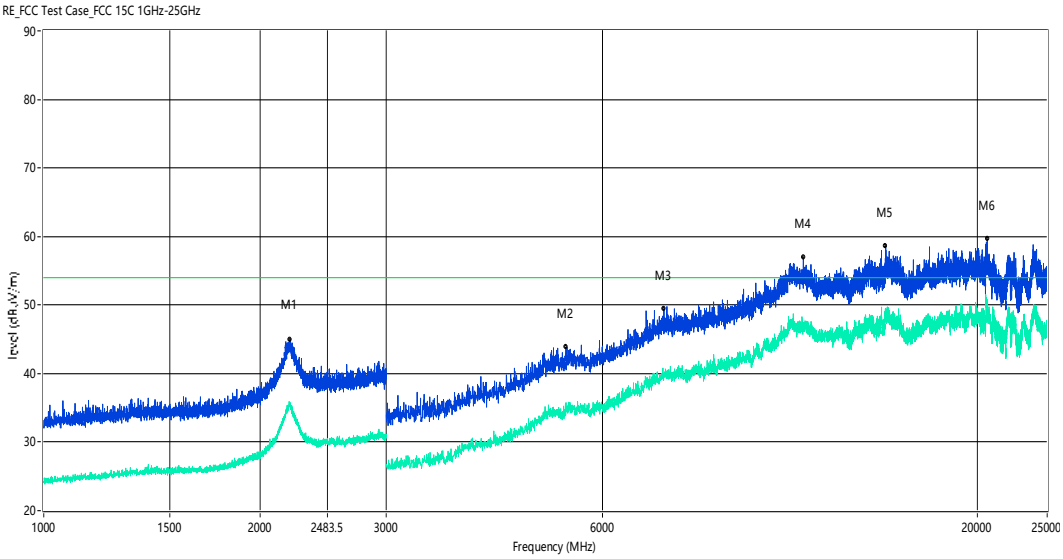
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2201.000	35.49	-7.26	54.0	-18.51	AV	H	Pass
1	2201.000	45.33	-7.26	74.0	-28.67	Peak	H	Pass
2**	5600.000	35.01	-1.11	54.0	-18.99	AV	H	Pass
2	5600.000	45.28	-1.11	74.0	-28.72	Peak	H	Pass
3**	7102.500	39.32	3.98	54.0	-14.68	AV	H	Pass
3	7102.500	48.92	3.98	74.0	-25.08	Peak	H	Pass
4**	10902.500	48.20	10.57	54.0	-5.80	AV	H	Pass
4	10902.500	56.22	10.57	74.0	-17.78	Peak	H	Pass
5**	14952.500	48.17	12.48	54.0	-5.83	AV	H	Pass
5	14952.500	57.68	12.48	74.0	-16.32	Peak	H	Pass
6**	20551.500	50.19	14.10	54.0	-3.81	AV	H	Pass
6	20551.500	58.74	14.10	74.0	-15.26	Peak	H	Pass

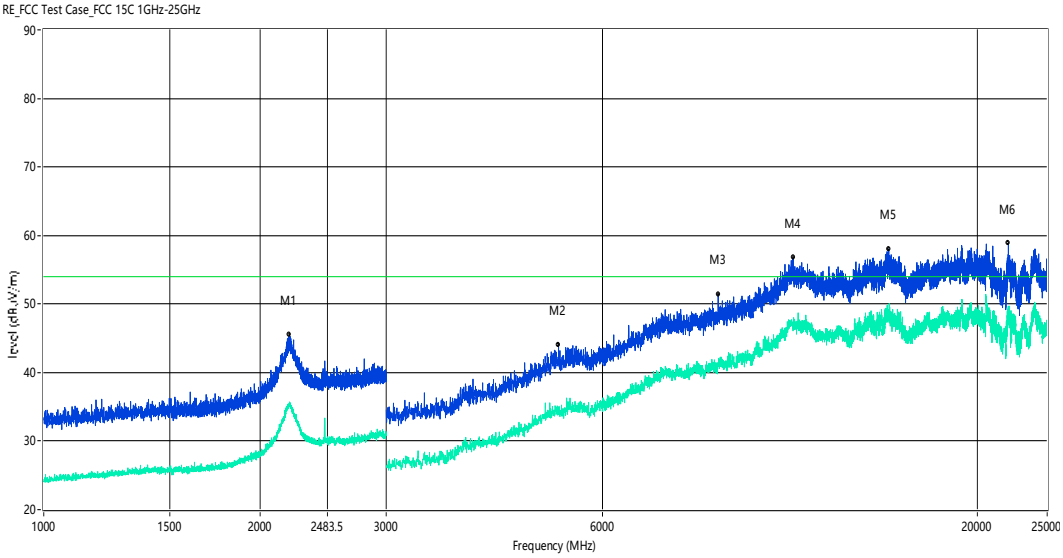
802.11 n(HT20) CH Middle

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2201.500	35.68	-7.28	54.0	-18.32	AV	V	Pass
1	2201.500	44.97	-7.28	74.0	-29.03	Peak	V	Pass
2**	5340.000	35.77	-1.82	54.0	-18.23	AV	V	Pass
2	5340.000	43.84	-1.82	74.0	-30.16	Peak	V	Pass
3**	7312.500	39.43	4.48	54.0	-14.57	AV	V	Pass
3	7312.500	49.47	4.48	74.0	-24.53	Peak	V	Pass
4**	11432.500	46.40	10.85	54.0	-7.60	AV	V	Pass
4	11432.500	56.88	10.85	74.0	-17.12	Peak	V	Pass
5**	14895.000	48.48	12.56	54.0	-5.52	AV	V	Pass
5	14895.000	58.62	12.56	74.0	-15.38	Peak	V	Pass
6**	20628.500	50.79	14.21	54.0	-3.21	AV	V	Pass
6	20628.500	59.64	14.21	74.0	-14.36	Peak	V	Pass

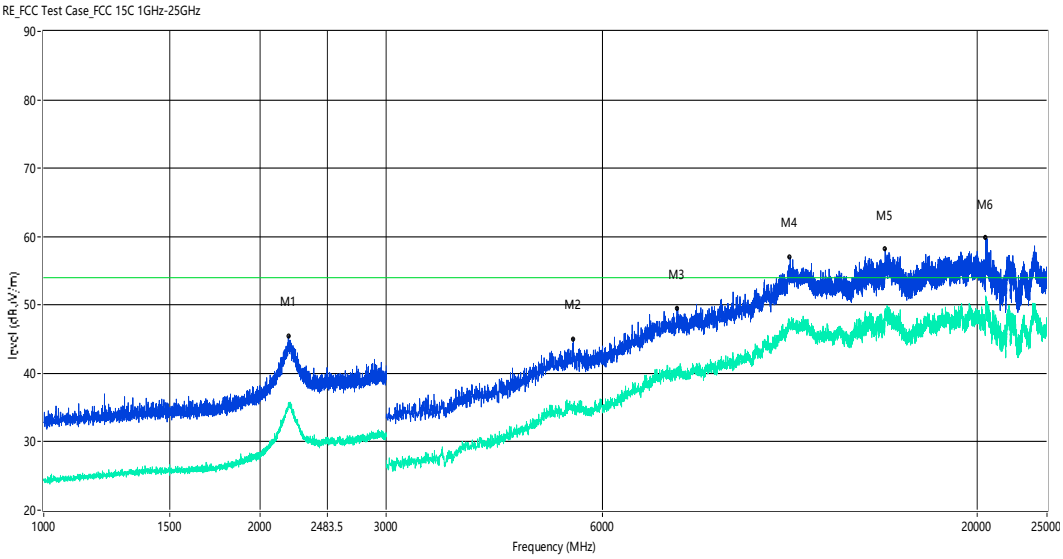
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2198.500	35.06	-7.29	54.0	-18.94	AV	H	Pass
1	2198.500	45.48	-7.29	74.0	-28.52	Peak	H	Pass
2**	5215.000	34.33	-1.87	54.0	-19.67	AV	H	Pass
2	5215.000	44.08	-1.87	74.0	-29.92	Peak	H	Pass
3**	8700.000	41.11	5.39	54.0	-12.89	AV	H	Pass
3	8700.000	51.44	5.39	74.0	-22.56	Peak	H	Pass
4**	11065.000	47.06	10.69	54.0	-6.94	AV	H	Pass
4	11065.000	56.73	10.69	74.0	-17.27	Peak	H	Pass
5**	15041.250	48.72	11.68	54.0	-5.28	AV	H	Pass
5	15041.250	58.04	11.68	74.0	-15.96	Peak	H	Pass
6**	22072.250	49.23	9.88	54.0	-4.77	AV	H	Pass
6	22072.250	58.83	9.88	74.0	-15.17	Peak	H	Pass

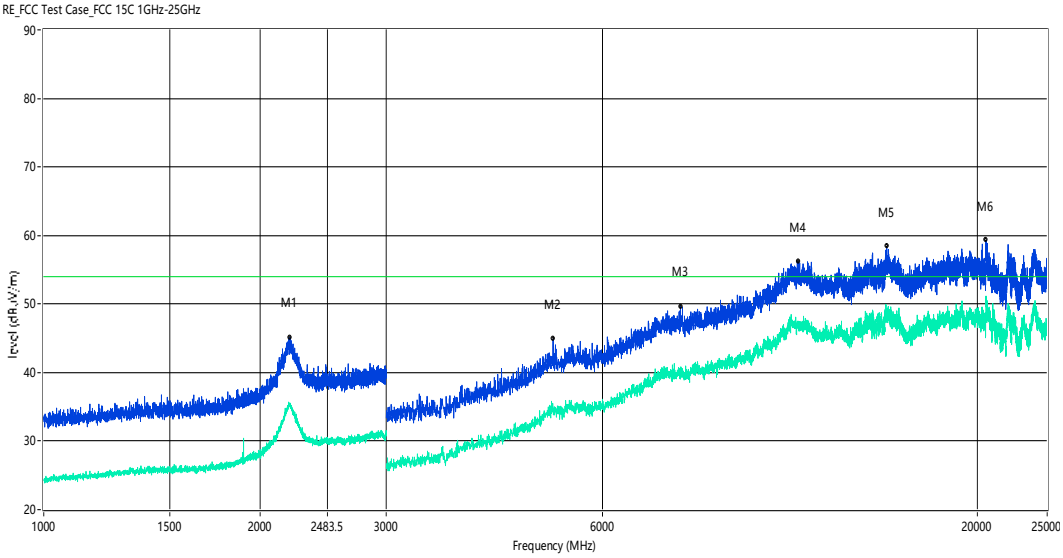
802.11 n(HT20) CH High

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2194.000	35.27	-7.53	54.0	-18.73	AV	V	Pass
1	2194.000	45.45	-7.53	74.0	-28.55	Peak	V	Pass
2**	5470.000	35.62	-1.49	54.0	-18.38	AV	V	Pass
2	5470.000	44.99	-1.49	74.0	-29.01	Peak	V	Pass
3**	7627.500	40.20	4.80	54.0	-13.80	AV	V	Pass
3	7627.500	49.50	4.80	74.0	-24.50	Peak	V	Pass
4**	10965.000	47.40	10.83	54.0	-6.60	AV	V	Pass
4	10965.000	57.00	10.83	74.0	-17.00	Peak	V	Pass
5**	14882.500	48.67	12.40	54.0	-5.33	AV	V	Pass
5	14882.500	58.18	12.40	74.0	-15.82	Peak	V	Pass
6**	20548.000	50.27	14.10	54.0	-3.73	AV	V	Pass
6	20548.000	59.80	14.10	74.0	-14.20	Peak	V	Pass

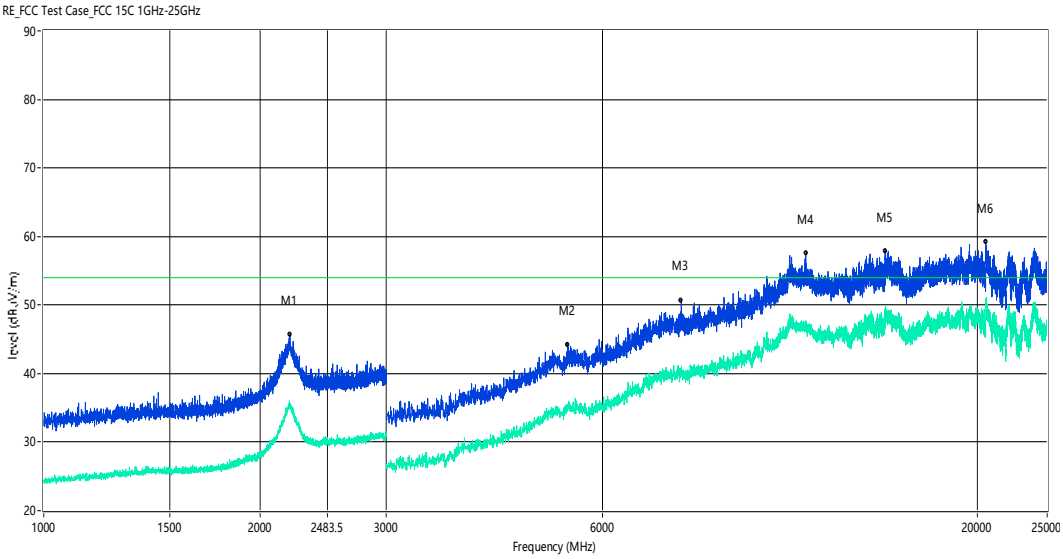
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2202.500	35.02	-7.33	54.0	-18.98	AV	H	Pass
1	2202.500	45.12	-7.33	74.0	-28.88	Peak	H	Pass
2**	5122.500	34.60	-1.84	54.0	-19.40	AV	H	Pass
2	5122.500	44.88	-1.84	74.0	-29.12	Peak	H	Pass
3**	7712.500	40.81	4.92	54.0	-13.19	AV	H	Pass
3	7712.500	49.65	4.92	74.0	-24.35	Peak	H	Pass
4**	11247.500	47.07	10.38	54.0	-6.93	AV	H	Pass
4	11247.500	56.17	10.38	74.0	-17.83	Peak	H	Pass
5**	14945.000	48.03	12.50	54.0	-5.97	AV	H	Pass
5	14945.000	58.39	12.50	74.0	-15.61	Peak	H	Pass
6**	20555.000	49.86	14.11	54.0	-4.14	AV	H	Pass
6	20555.000	59.29	14.11	74.0	-14.71	Peak	H	Pass

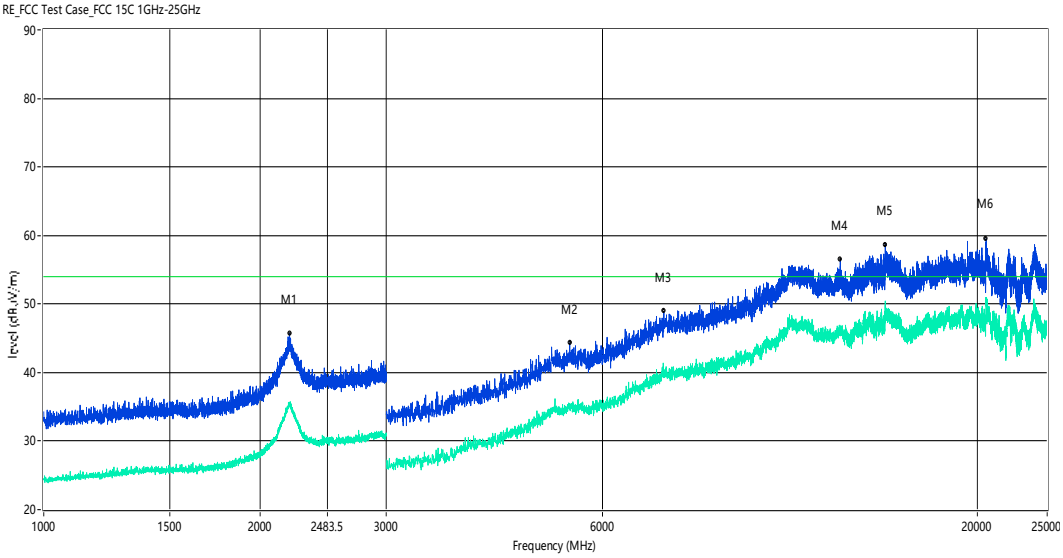
802.11 n(HT40) CH Low

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2203.000	35.33	-7.36	54.0	-18.67	AV	V	Pass
1	2203.000	45.68	-7.36	74.0	-28.32	Peak	V	Pass
2**	5372.500	34.66	-1.55	54.0	-19.34	AV	V	Pass
2	5372.500	44.24	-1.55	74.0	-29.76	Peak	V	Pass
3**	7730.000	40.45	4.74	54.0	-13.55	AV	V	Pass
3	7730.000	50.71	4.74	74.0	-23.29	Peak	V	Pass
4**	11525.000	46.65	10.90	54.0	-7.35	AV	V	Pass
4	11525.000	57.48	10.90	74.0	-16.52	Peak	V	Pass
5**	14877.500	48.29	12.33	54.0	-5.71	AV	V	Pass
5	14877.500	57.81	12.33	74.0	-16.19	Peak	V	Pass
6**	20532.251	50.42	14.08	54.0	-3.58	AV	V	Pass
6	20532.251	59.17	14.08	74.0	-14.83	Peak	V	Pass

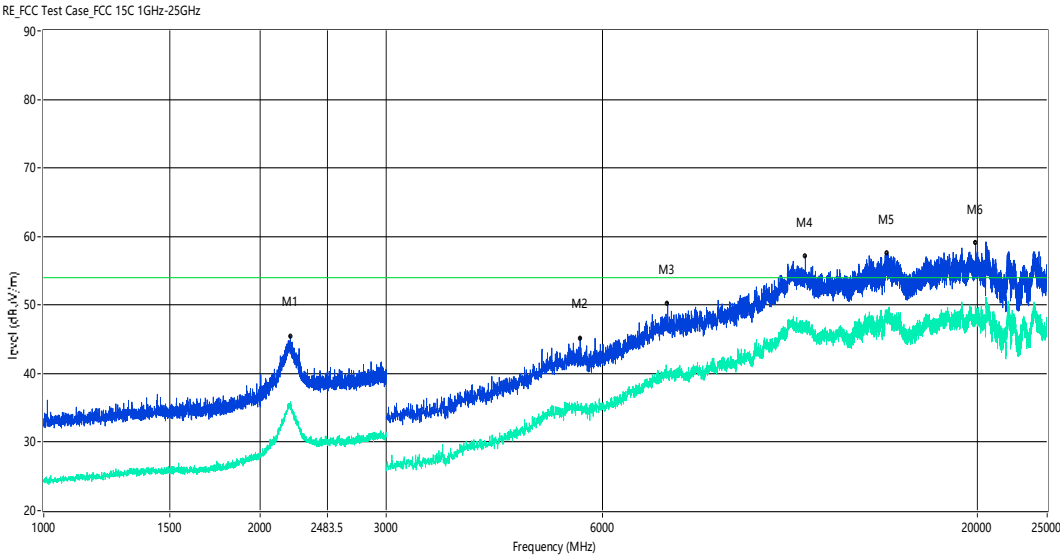
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2200.500	35.53	-7.23	54.0	-18.47	AV	H	Pass
1	2200.500	45.70	-7.23	74.0	-28.30	Peak	H	Pass
2**	5405.000	35.49	-1.34	54.0	-18.51	AV	H	Pass
2	5405.000	44.34	-1.34	74.0	-29.66	Peak	H	Pass
3**	7310.000	39.24	4.48	54.0	-14.76	AV	H	Pass
3	7310.000	48.93	4.48	74.0	-25.07	Peak	H	Pass
4**	12872.500	45.69	9.82	54.0	-8.31	AV	H	Pass
4	12872.500	56.46	9.82	74.0	-17.54	Peak	H	Pass
5**	14871.250	48.04	12.25	54.0	-5.96	AV	H	Pass
5	14871.250	58.67	12.25	74.0	-15.33	Peak	H	Pass
6**	20549.751	50.11	14.10	54.0	-3.89	AV	H	Pass
6	20549.751	59.54	14.10	74.0	-14.46	Peak	H	Pass

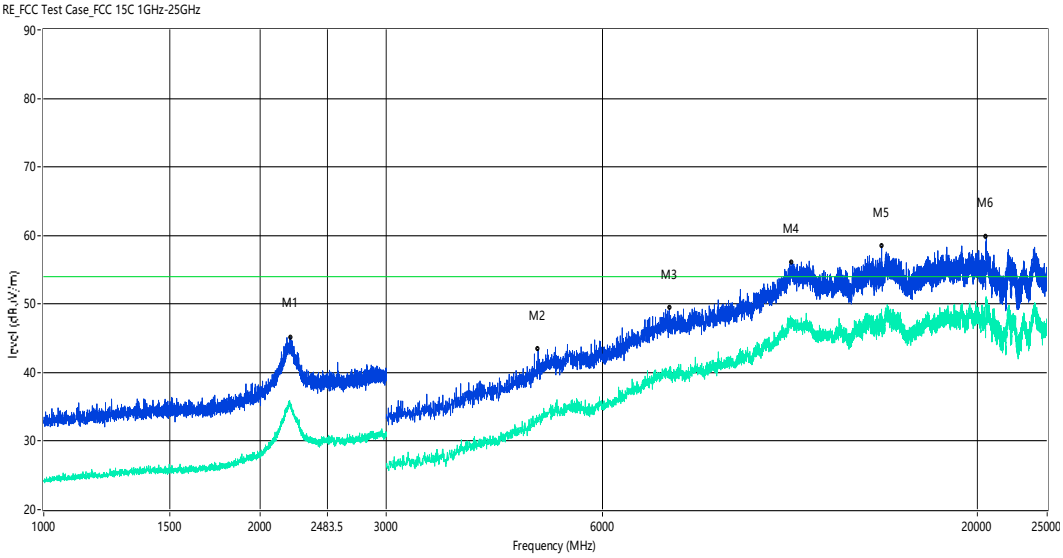
802.11 n(HT40) CH Middle

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2206.000	35.11	-7.50	54.0	-18.89	AV	V	Pass
1	2206.000	45.43	-7.50	74.0	-28.57	Peak	V	Pass
2**	5587.500	35.04	-1.17	54.0	-18.96	AV	V	Pass
2	5587.500	45.15	-1.17	74.0	-28.85	Peak	V	Pass
3**	7400.000	39.46	4.40	54.0	-14.54	AV	V	Pass
3	7400.000	50.13	4.40	74.0	-23.87	Peak	V	Pass
4**	11510.000	46.72	10.84	54.0	-7.28	AV	V	Pass
4	11510.000	57.10	10.84	74.0	-16.90	Peak	V	Pass
5**	14963.750	48.28	12.45	54.0	-5.72	AV	V	Pass
5	14963.750	57.56	12.45	74.0	-16.44	Peak	V	Pass
6**	19874.251	48.95	16.32	54.0	-5.05	AV	V	Pass
6	19874.251	59.00	16.32	74.0	-15.00	Peak	V	Pass

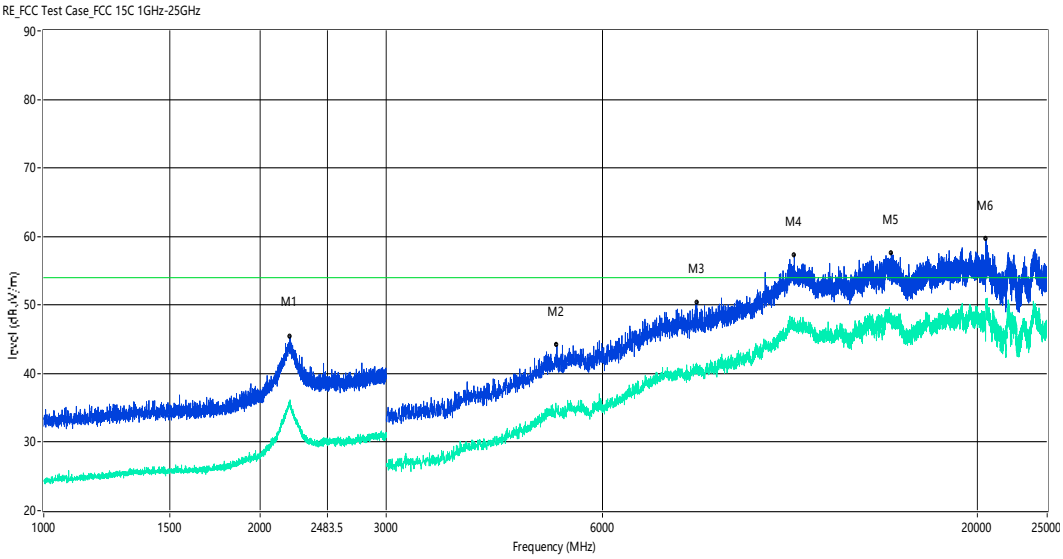
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2208.000	34.91	-7.60	54.0	-19.09	AV	H	Pass
1	2208.000	45.16	-7.60	74.0	-28.84	Peak	H	Pass
2**	4882.500	32.79	-3.62	54.0	-21.21	AV	H	Pass
2	4882.500	43.40	-3.62	74.0	-30.60	Peak	H	Pass
3**	7442.500	39.76	4.46	54.0	-14.24	AV	H	Pass
3	7442.500	49.42	4.46	74.0	-24.58	Peak	H	Pass
4**	11027.500	47.38	10.85	54.0	-6.62	AV	H	Pass
4	11027.500	55.98	10.85	74.0	-18.02	Peak	H	Pass
5**	14700.000	48.08	11.89	54.0	-5.92	AV	H	Pass
5	14700.000	58.46	11.89	74.0	-15.54	Peak	H	Pass
6**	20562.000	50.64	14.12	54.0	-3.36	AV	H	Pass
6	20562.000	59.81	14.12	74.0	-14.19	Peak	H	Pass

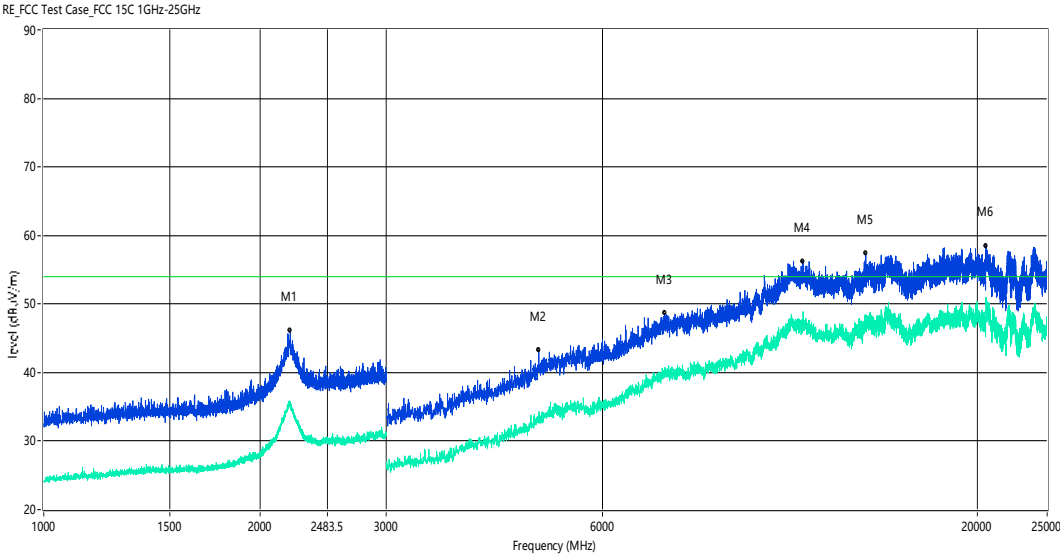
802.11 n(HT40) CH High

Vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2205.000	35.14	-7.45	54.0	-18.86	AV	V	Pass
1	2205.000	45.45	-7.45	74.0	-28.55	Peak	V	Pass
2**	5187.500	34.64	-1.82	54.0	-19.36	AV	V	Pass
2	5187.500	44.14	-1.82	74.0	-29.86	Peak	V	Pass
3**	8122.500	40.43	5.31	54.0	-13.57	AV	V	Pass
3	8122.500	50.31	5.31	74.0	-23.69	Peak	V	Pass
4**	11107.500	46.42	10.54	54.0	-7.58	AV	V	Pass
4	11107.500	57.19	10.54	74.0	-16.81	Peak	V	Pass
5**	15162.500	47.53	11.02	54.0	-6.47	AV	V	Pass
5	15162.500	57.56	11.02	74.0	-16.44	Peak	V	Pass
6**	20562.000	50.46	14.12	54.0	-3.54	AV	V	Pass
6	20562.000	59.63	14.12	74.0	-14.37	Peak	V	Pass

Horizontal

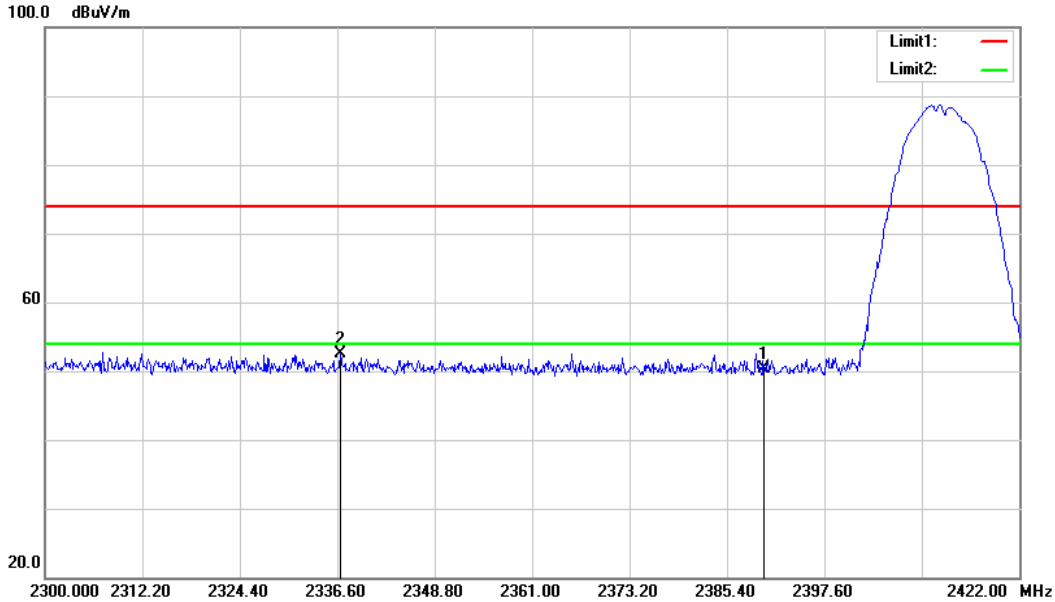


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2204.500	35.24	-7.43	54.0	-18.76	AV	H	Pass
1	2204.500	46.09	-7.43	74.0	-27.91	Peak	H	Pass
2**	4895.000	33.41	-3.51	54.0	-20.59	AV	H	Pass
2	4895.000	43.31	-3.51	74.0	-30.69	Peak	H	Pass
3**	7325.000	40.08	4.47	54.0	-13.92	AV	H	Pass
3	7325.000	48.65	4.47	74.0	-25.35	Peak	H	Pass
4**	11422.500	46.09	10.86	54.0	-7.91	AV	H	Pass
4	11422.500	56.22	10.86	74.0	-17.78	Peak	H	Pass
5**	13972.500	46.57	11.28	54.0	-7.43	AV	H	Pass
5	13972.500	57.34	11.28	74.0	-16.66	Peak	H	Pass
6**	20544.500	50.29	14.09	54.0	-3.71	AV	H	Pass
6	20544.500	58.51	14.09	74.0	-15.49	Peak	H	Pass

3.3.7 TEST RESULTS (BAND EDGE REQUIREMENTS)

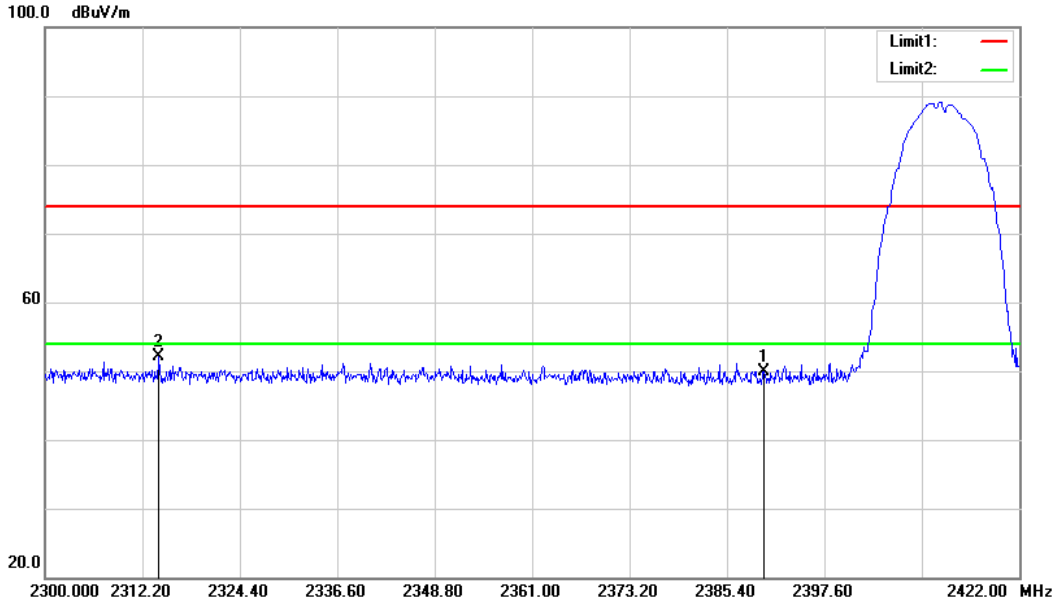
802.11 b CH Low

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	59.96	-9.74	50.22	74.00	-23.78	peak
2	2336.966	62.65	-10.13	52.52	74.00	-21.48	peak

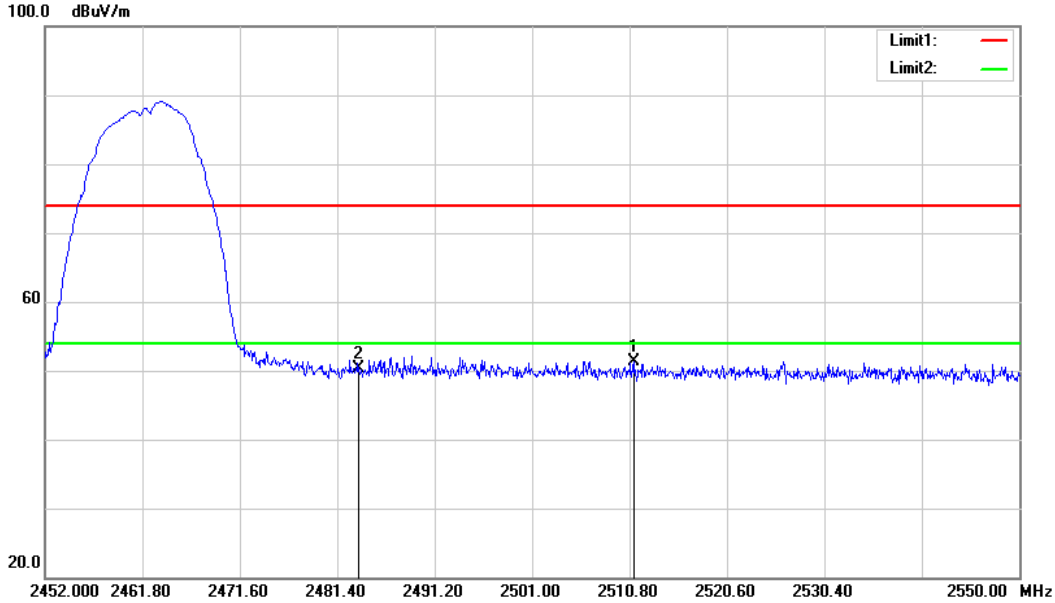
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	59.57	-9.74	49.83	74.00	-24.17	peak
2	2314.274	62.43	-10.29	52.14	74.00	-21.86	peak

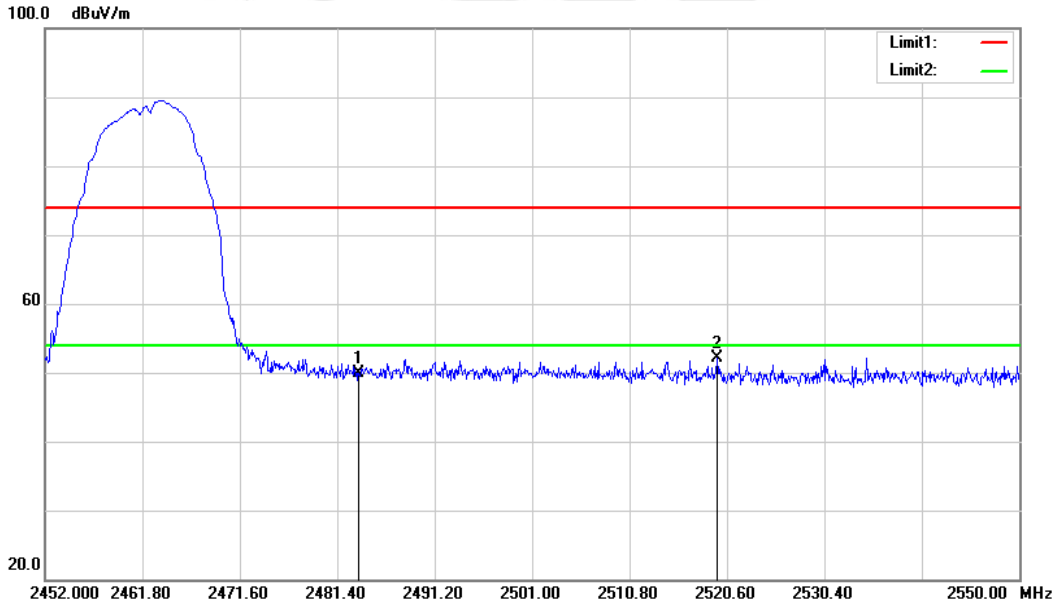
802.11 b CH High

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2511.192	60.78	-9.44	51.34	74.00	-22.66	peak
2	2483.500	59.89	-9.52	50.37	74.00	-23.63	peak

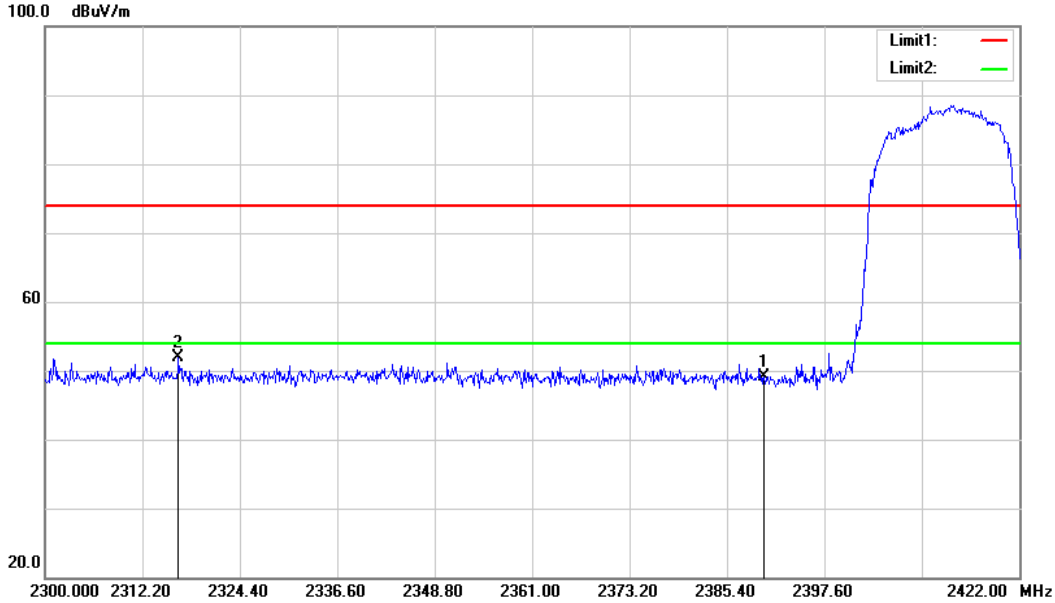
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	59.49	-9.52	49.97	74.00	-24.03	peak
2	2519.620	61.58	-9.40	52.18	74.00	-21.82	peak

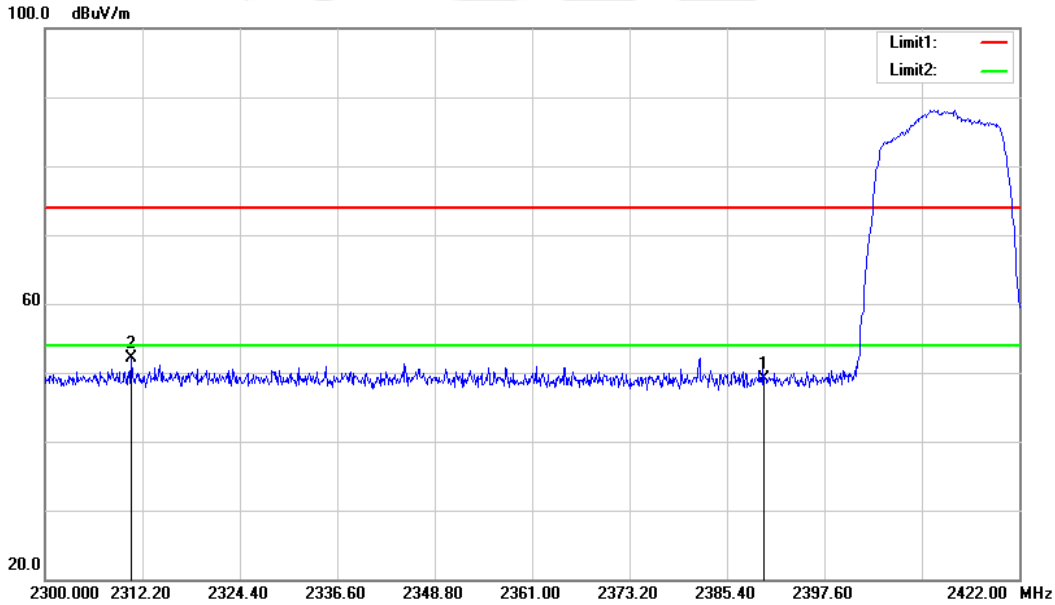
802.11 g CH Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.000	58.75	-9.74	49.01	74.00	-24.99	peak
2	2316.714	62.19	-10.27	51.92	74.00	-22.08	peak

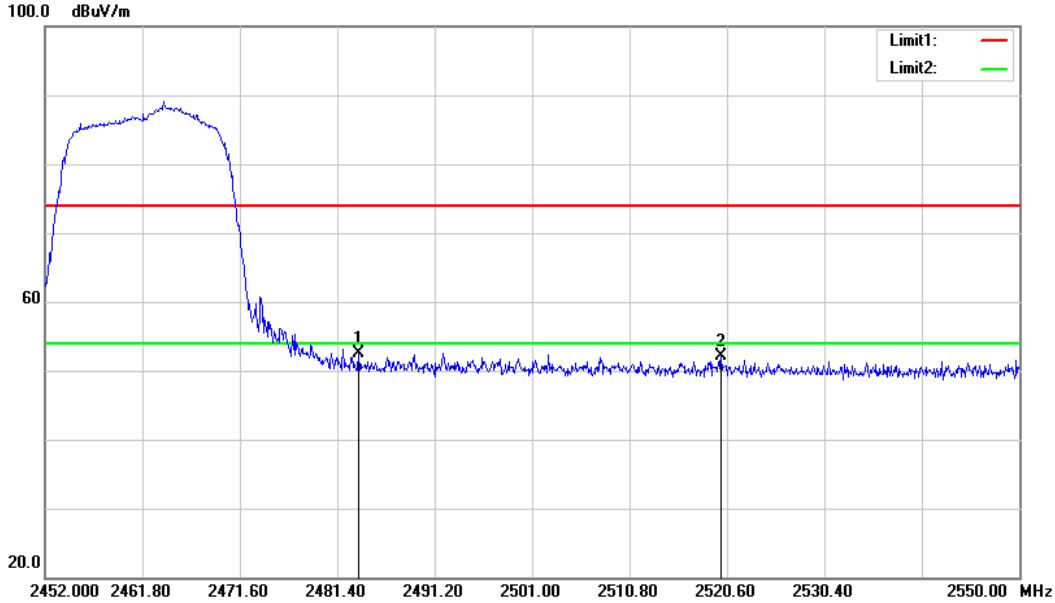
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.000	58.79	-9.74	49.05	74.00	-24.95	peak
2	2310.858	62.48	-10.32	52.16	74.00	-21.84	peak

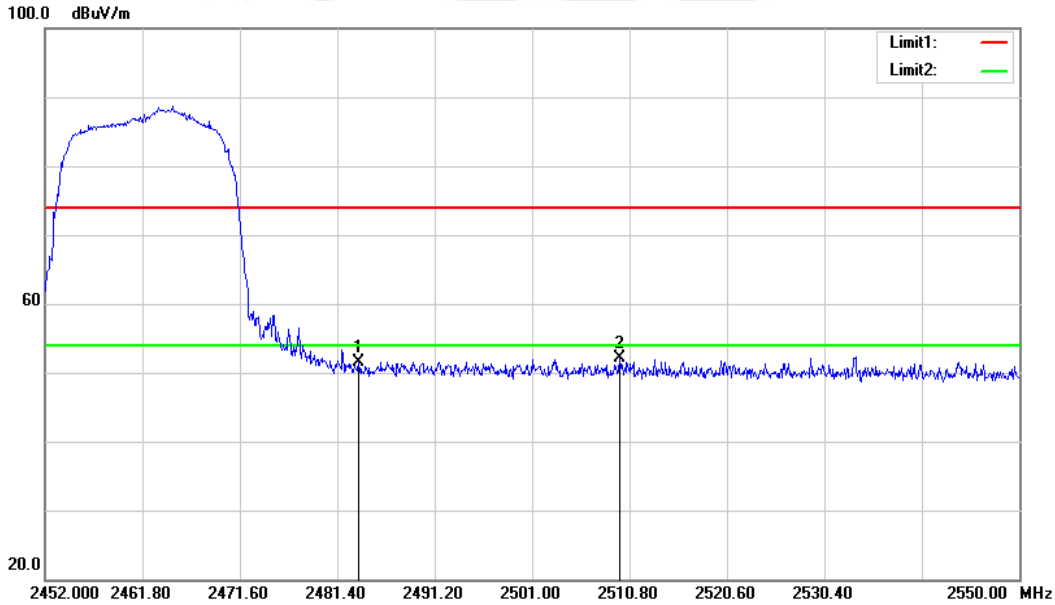
802.11 g CH High

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	61.93	-9.52	52.41	74.00	-21.59	peak
2	2520.012	61.51	-9.40	52.11	74.00	-21.89	peak

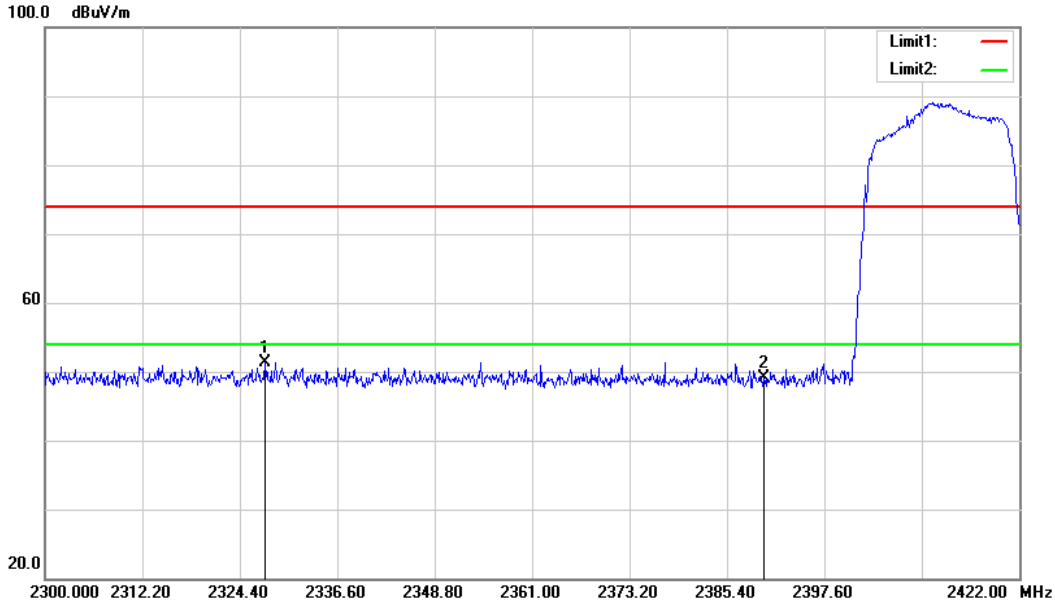
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	60.93	-9.52	51.41	74.00	-22.59	peak
2	2509.820	61.48	-9.44	52.04	74.00	-21.96	peak

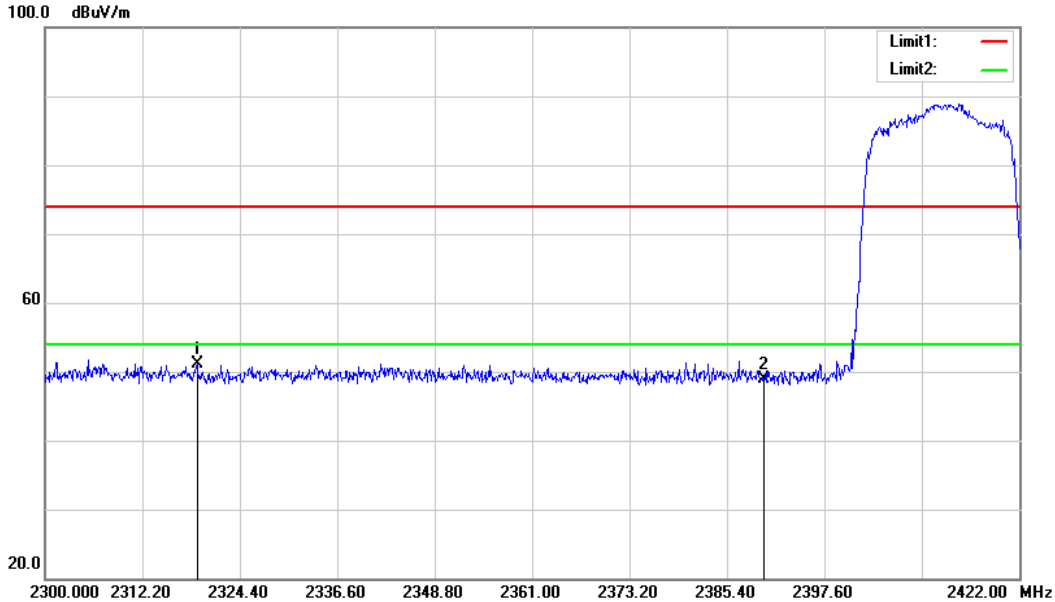
802.11 n(HT20) CH Low

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2327.572	61.59	-10.20	51.39	74.00	-22.61	peak
2	2390.000	58.87	-9.74	49.13	74.00	-24.87	peak

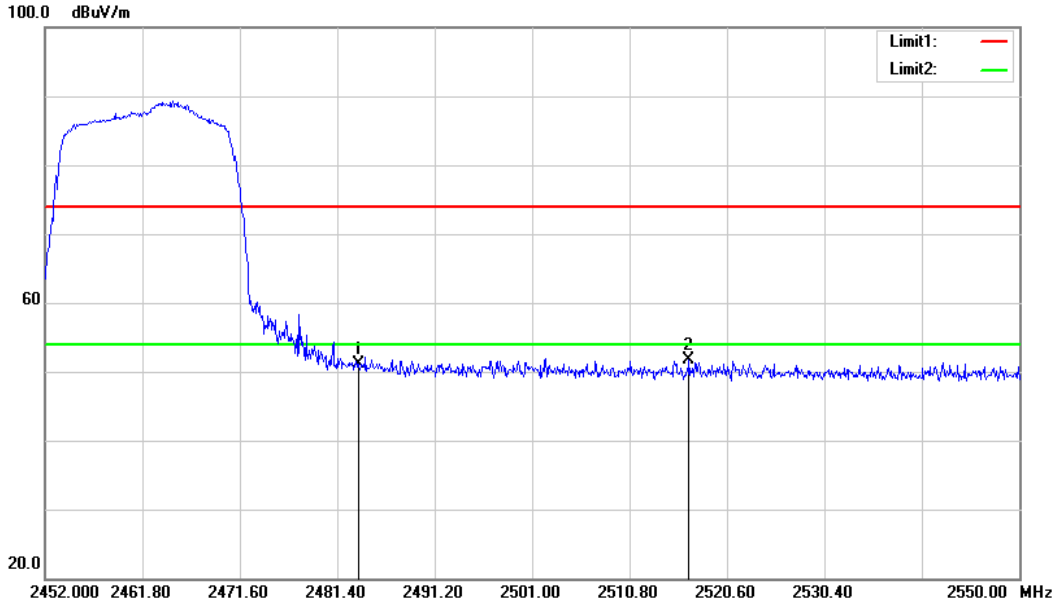
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2319.032	61.44	-10.27	51.17	74.00	-22.83	peak
2	2390.000	58.72	-9.74	48.98	74.00	-25.02	peak

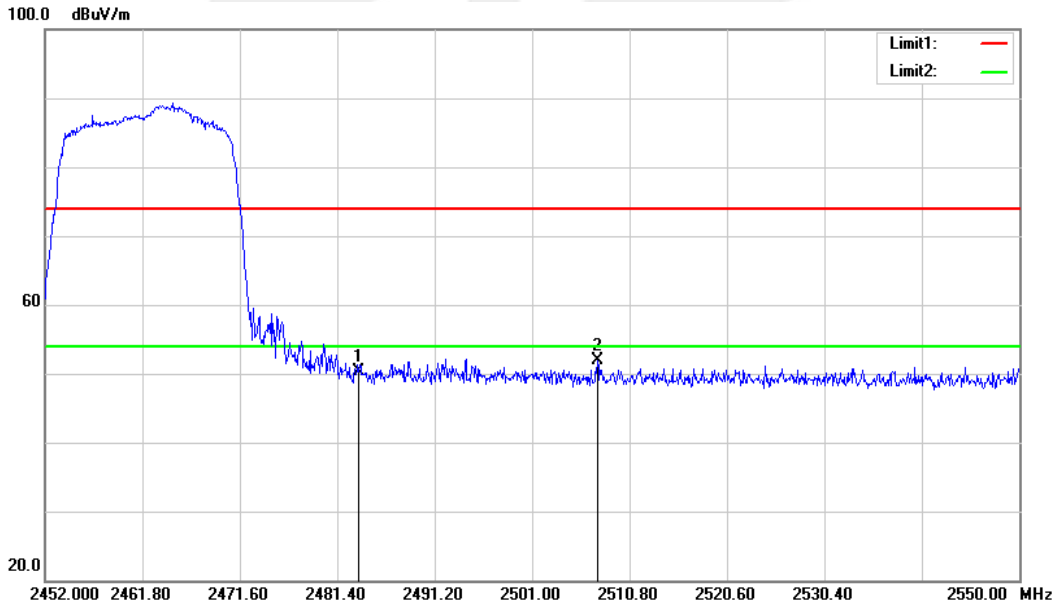
802.11 n(HT20) CH High

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	54.70	-3.52	51.18	74.00	-22.82	peak
2	2516.778	55.16	-3.41	51.75	74.00	-22.25	peak

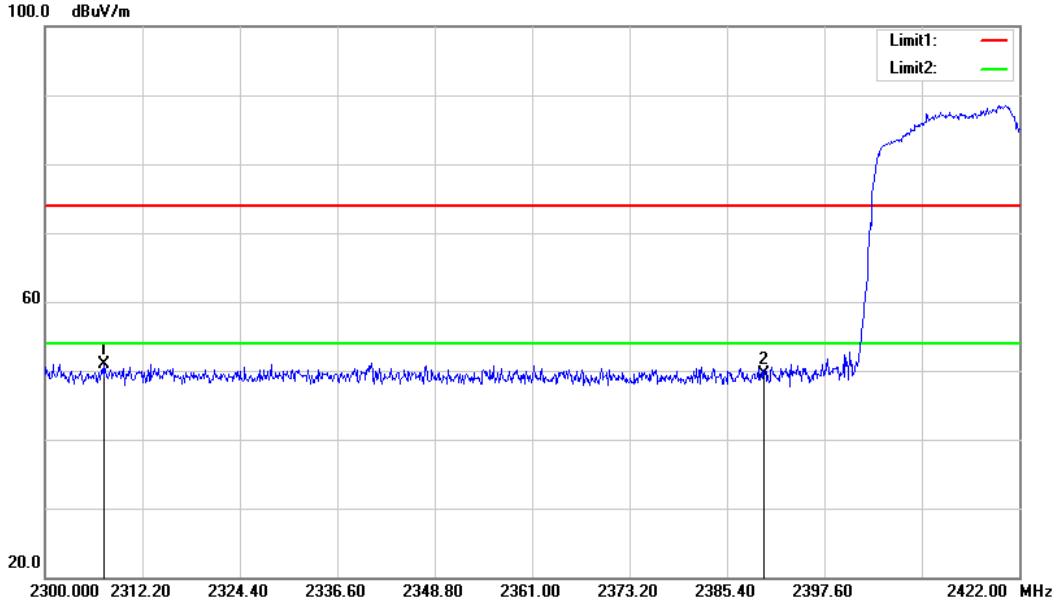
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	53.89	-3.52	50.37	74.00	-23.63	peak
2	2507.566	55.26	-3.45	51.81	74.00	-22.19	peak

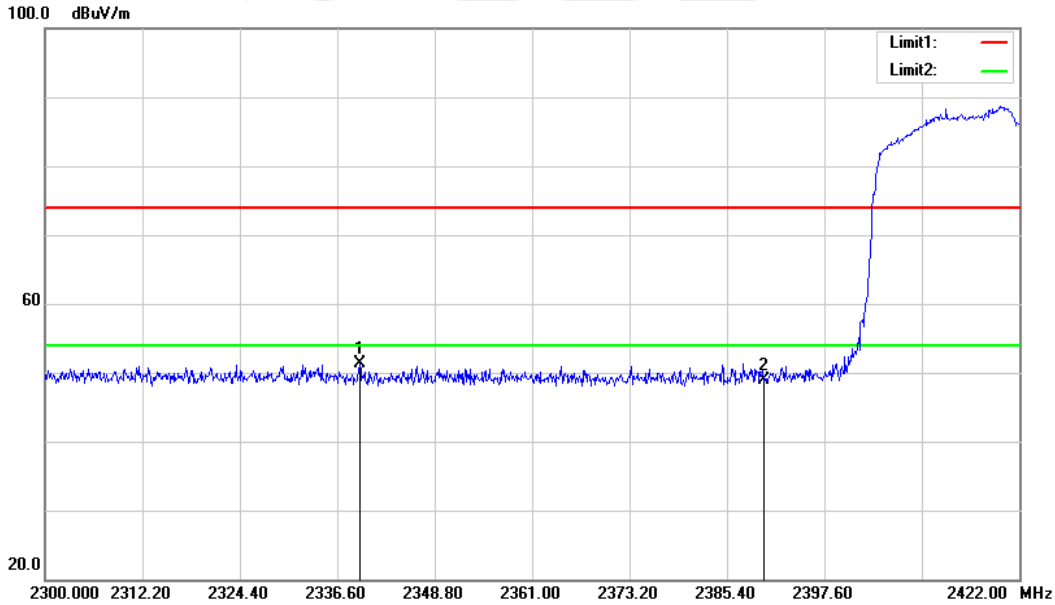
802.11 n(HT40) CH Low

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2307.442	61.22	-10.34	50.88	74.00	-23.12	peak
2	2390.000	59.27	-9.74	49.53	74.00	-24.47	peak

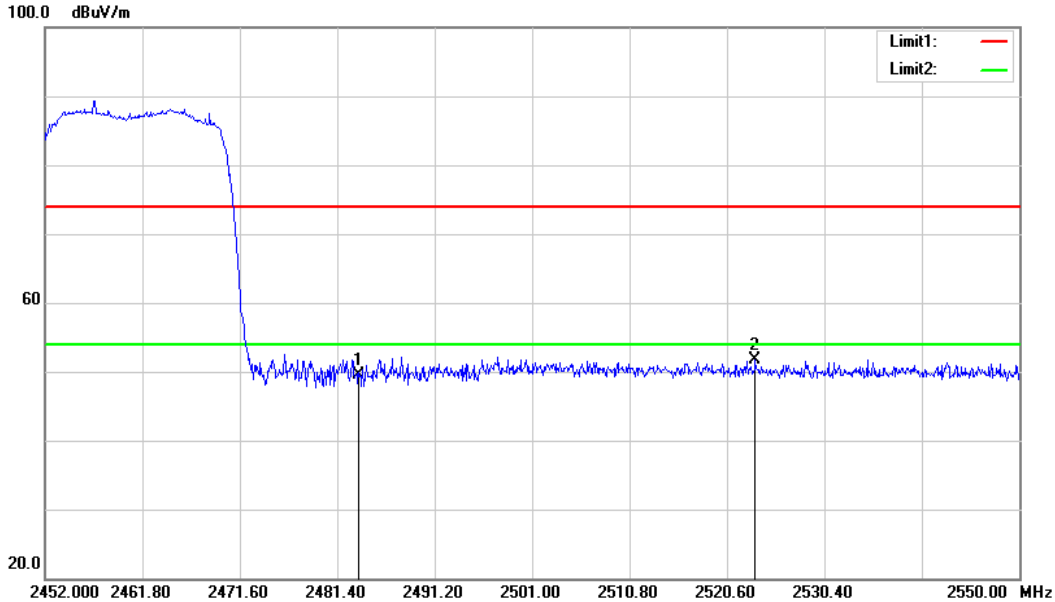
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2339.406	61.52	-10.12	51.40	74.00	-22.60	peak
2	2390.000	58.59	-9.74	48.85	74.00	-25.15	peak

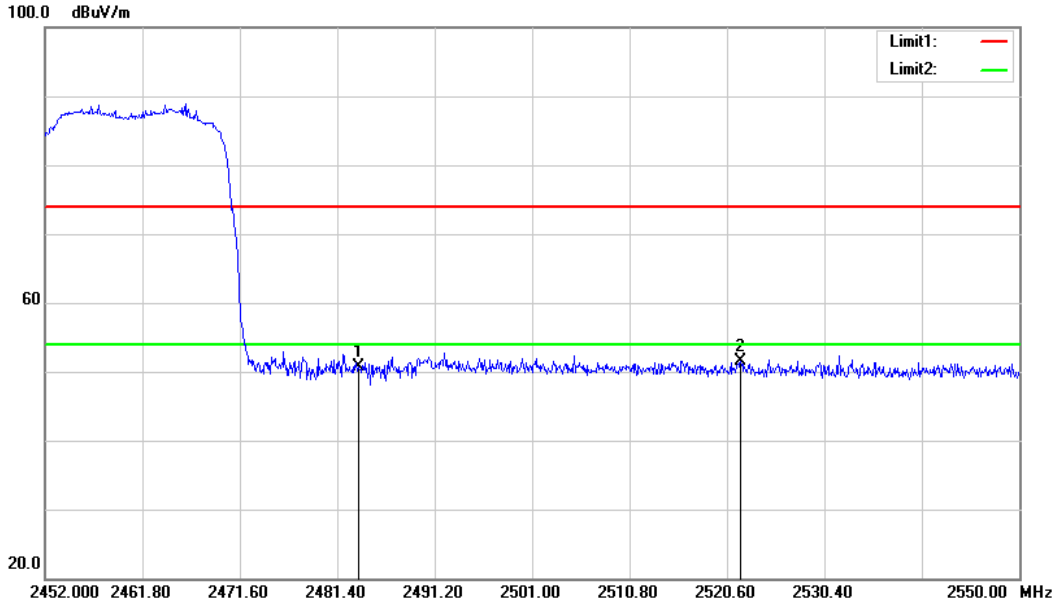
802.11 n(HT40) CH High

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	58.98	-9.52	49.46	74.00	-24.54	peak
2	2523.442	61.02	-9.38	51.64	74.00	-22.36	peak

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	60.21	-9.52	50.69	74.00	-23.31	peak
2	2521.972	60.80	-9.38	51.42	74.00	-22.58	peak

4 CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

According to FCC Part 15.247(d)and RSS-247 Clause 5.5, in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2300 to 2422 MHz Upper Band Edge: 2452to 2500 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP

The EUT which is powered by the Adapter, is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS

Temperature：	25℃	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Test Mode ：	TX 802.11b

CH Low

CH Middle

CH High

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
09:09:37 AM Mar 14, 2019
Ref Offset 0.5 dB
10 dB/div
Ref -0.06 dBm
Log
Mkr1 2.463 3 GHz
-10.057 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (40001 pts)
1 N 1 f 2.463 3 GHz -10.057 dBm
2 N 1 f 3.316 7 GHz -56.950 dBm
3 N 1 f 4.924 1 GHz -49.471 dBm
4 N 1 f 24.027 4 GHz -48.413 dBm

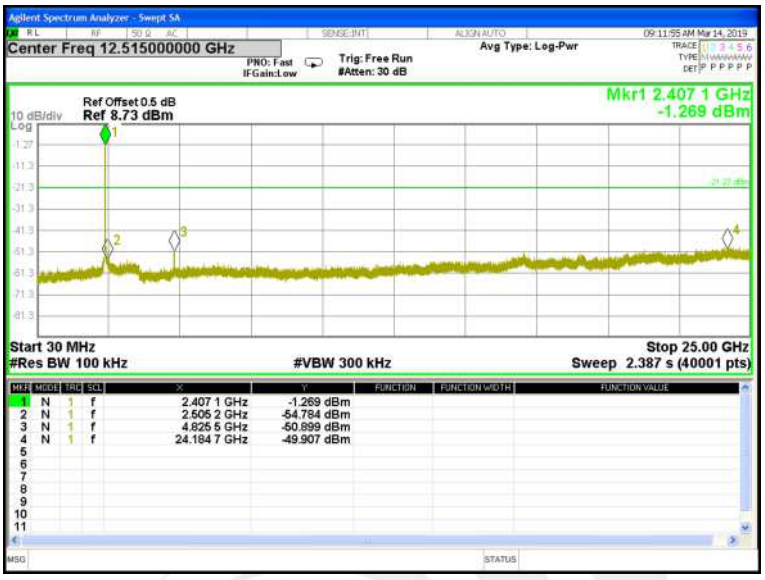
Band edge

CH Low

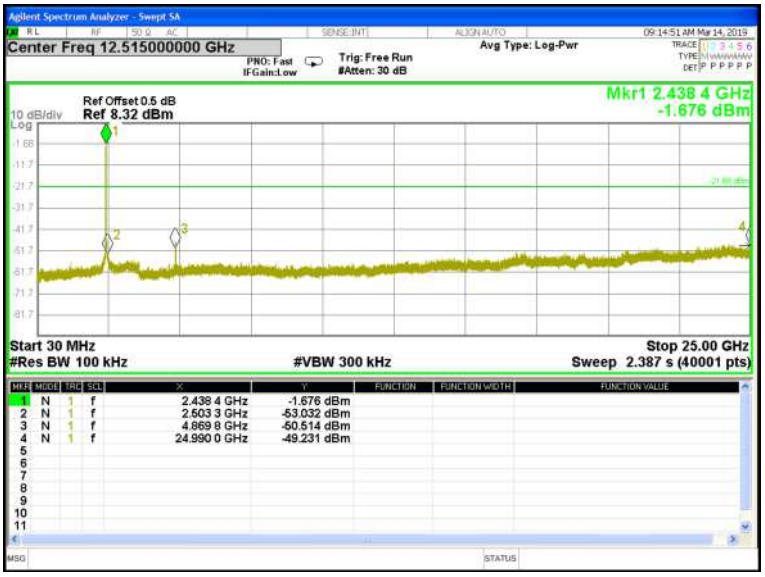
CH High

Temperature：	25℃	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Test Mode ：	TX 802.11g

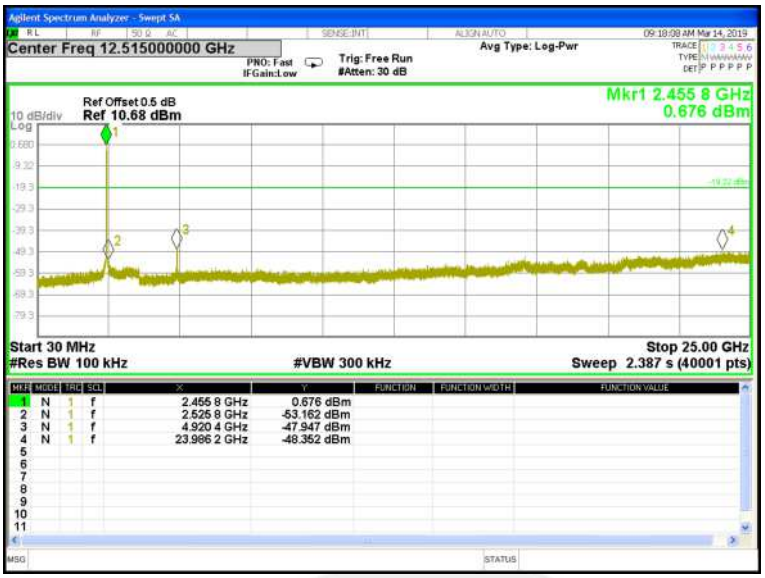
CH Low



CH Middle

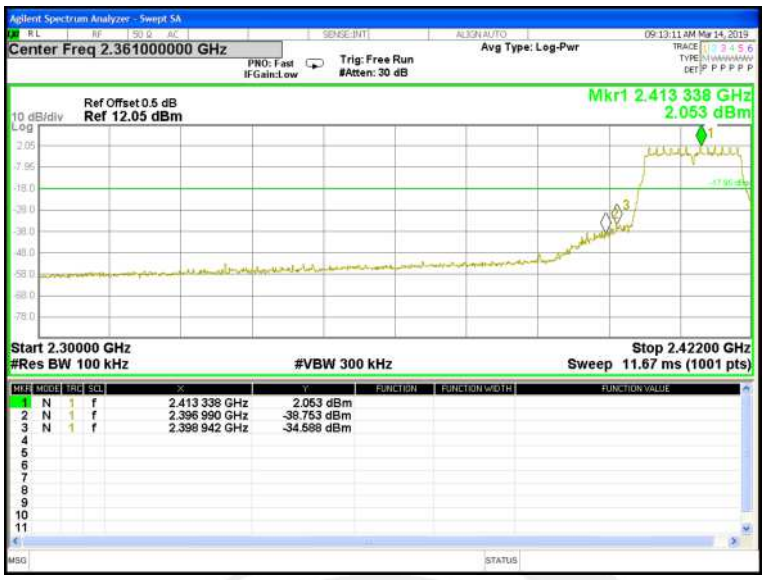


CH High

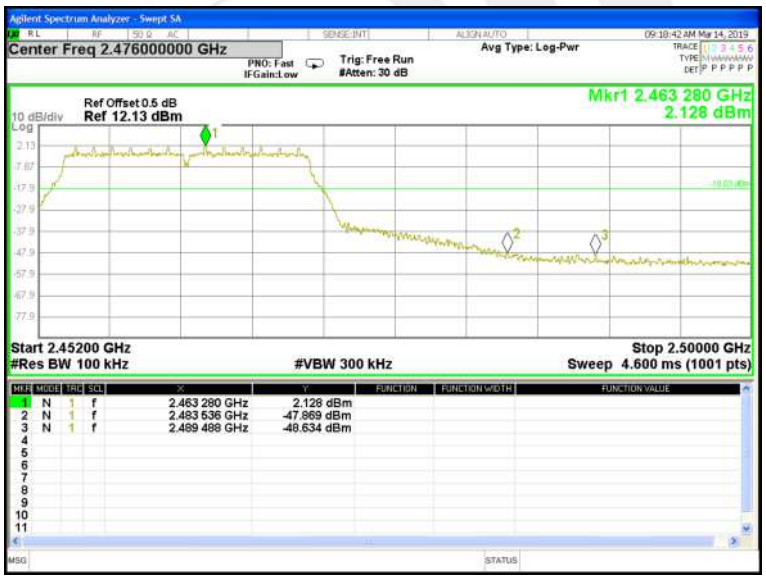

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
09:18:09 AM Mar 14, 2019
Ref Offset 0.5 dB
10 dB/div
Ref 10.68 dBm
Log
Mkr1 2.455 8 GHz
0.676 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (40001 pts)
1 N 1 f 2.455 8 GHz 0.676 dBm
2 N 1 f 2.525 8 GHz -53.162 dBm
3 N 1 f 4.920 4 GHz -47.947 dBm
4 N 1 f 23.986 2 GHz -48.352 dBm

Band edge

CH Low

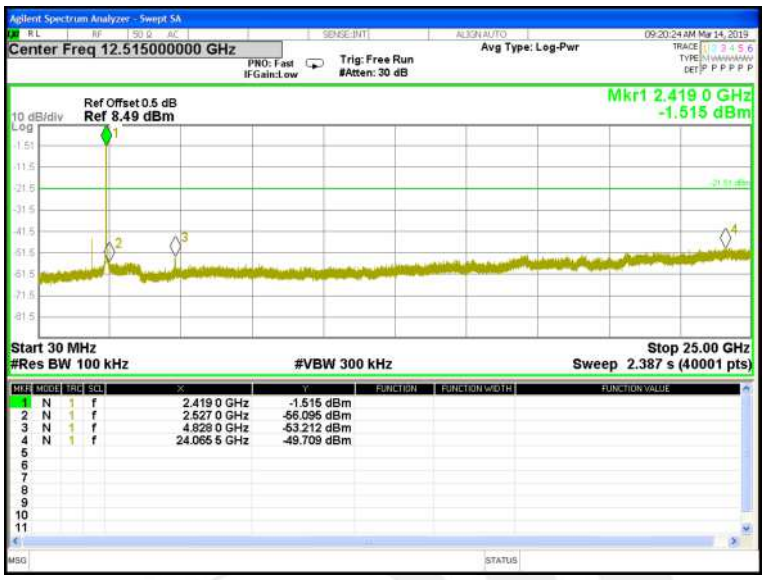


CH High

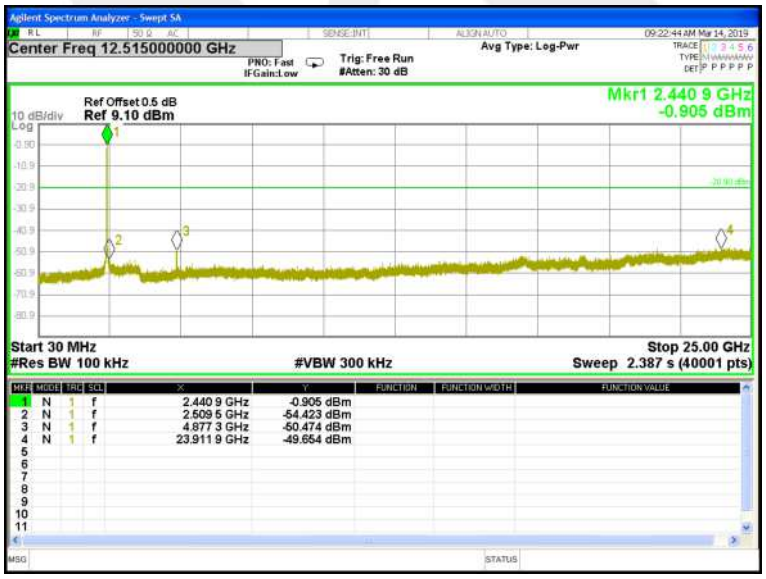


Temperature：	25℃	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Test Mode ：	TX 802.11n(HT20)

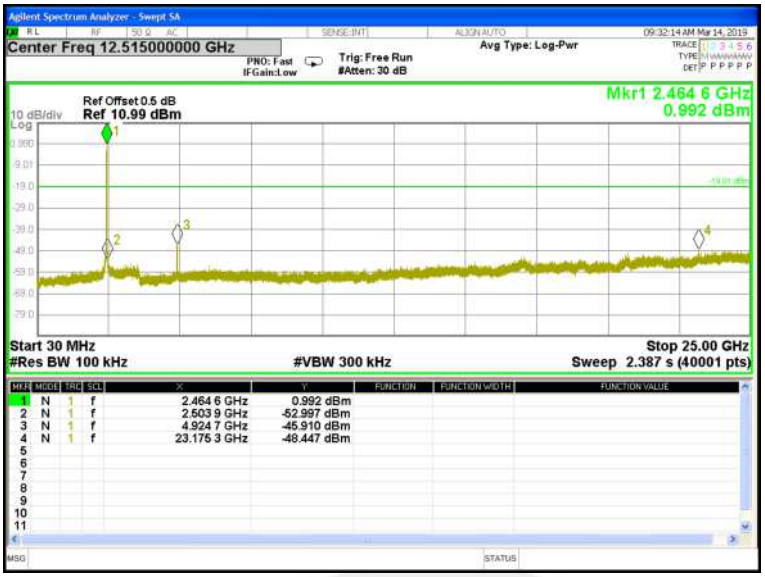
CH Low



CH Middle



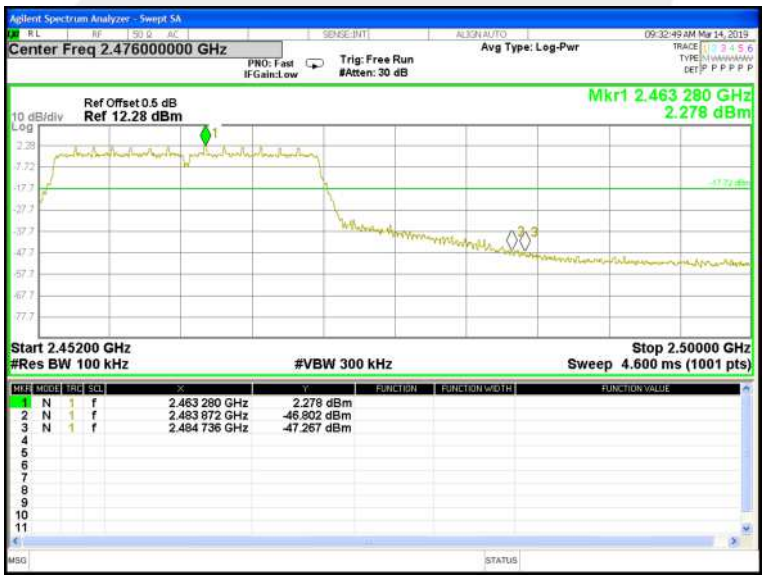
CH High


Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
09:32:14 AM Mar 14, 2019
Ref Offset 0.5 dB
10 dB/div
Ref 10.99 dBm
Log
Mkr1 2.464 6 GHz
0.992 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (40001 pts)
1 N 1 f 2.464 6 GHz 0.992 dBm
2 N 1 f 2.503 9 GHz -52.997 dBm
3 N 1 f 4.924 7 GHz -45.910 dBm
4 N 1 f 23.175 3 GHz -48.447 dBm

Band edge

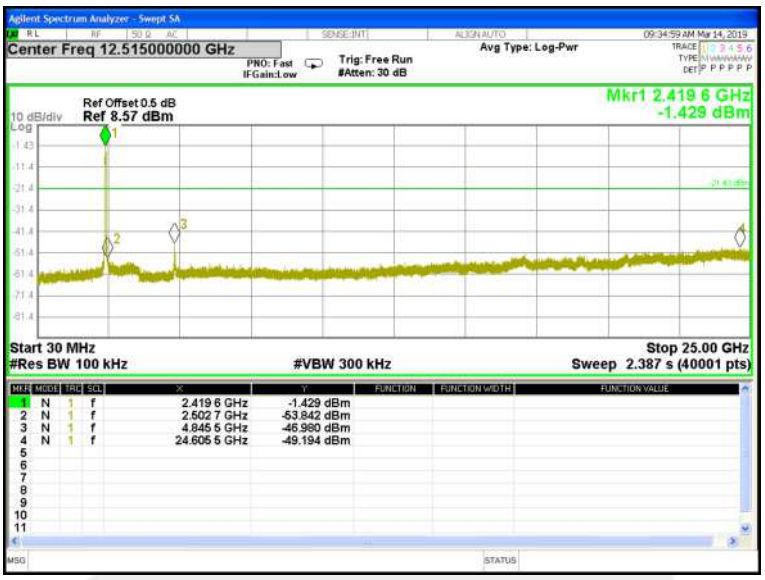
CH Low

CH High

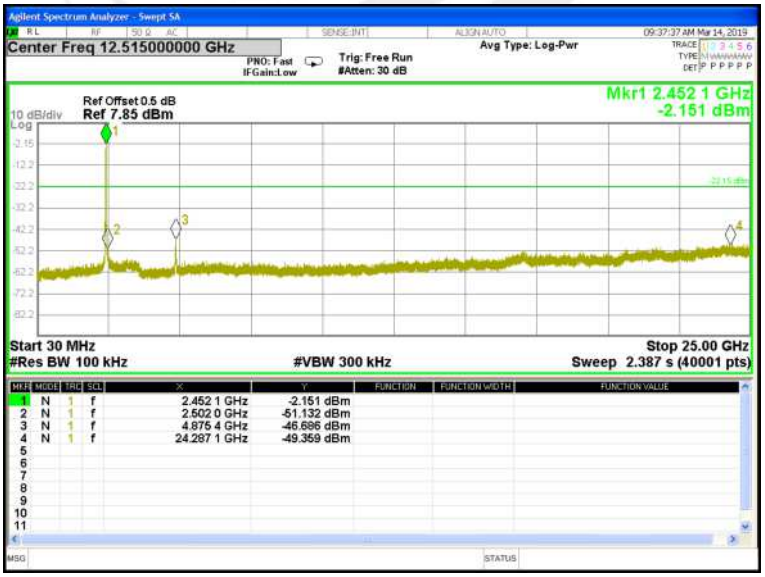


Temperature:	25 ℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11n(HT40)

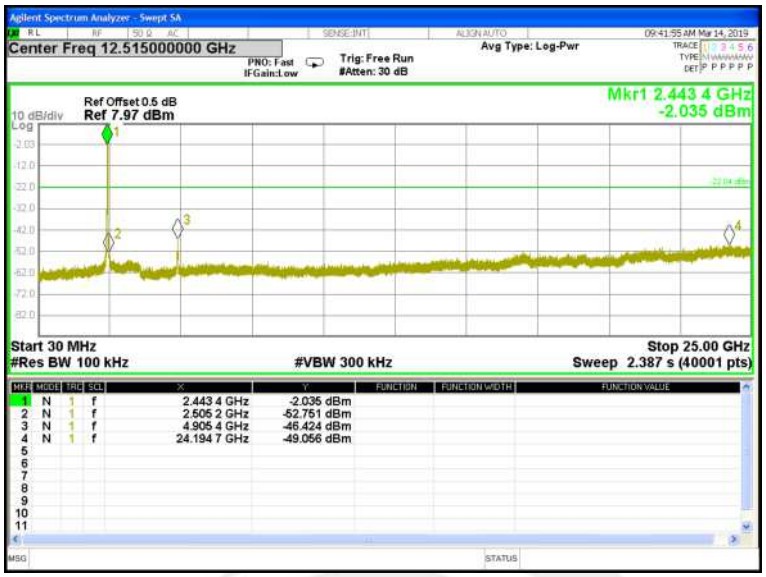
CH Low



CH Middle

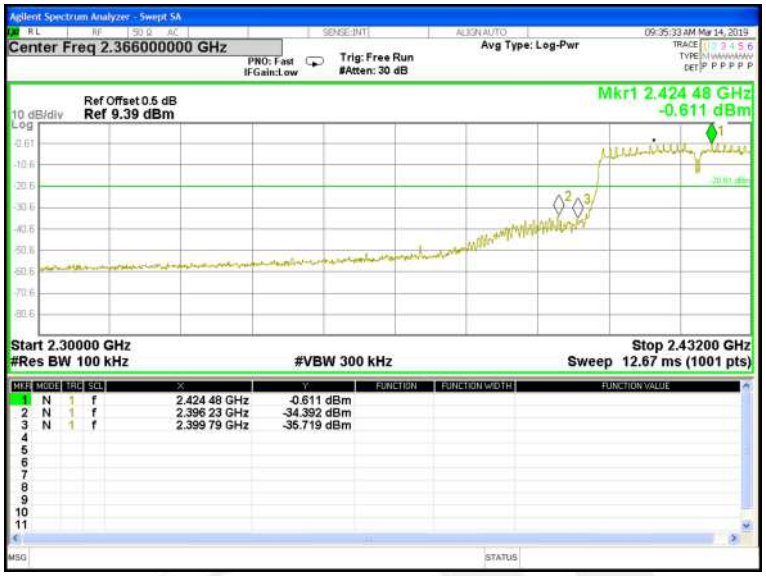


CH High


Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
09:41:55 AM Mar 14, 2019
Ref Offset 0.5 dB
10 dB/div
Ref 7.97 dBm
Log
Mkr1 2.443 4 GHz
-2.035 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (40001 pts)
1 N 1 f 2.443 4 GHz -2.035 dBm
2 N 1 f 2.505 2 GHz -52.751 dBm
3 N 1 f 4.905 4 GHz -46.424 dBm
4 N 1 f 24.194 7 GHz -49.056 dBm

Band edge

CH Low



CH High

5 POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247,Subpart C RSS-247 Issue 2				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e) RSS-247 Clause 5.2(b)	Power Spectral Density	≤8 dBm (RBW ≥3KHz)	2400-2483.5	PASS

5.2 TEST PROCEDURE

1) Set analyzer center frequency to DTS channel center frequency.
2) Set the span to 1.5 times the DTS channel bandwidth.
3) Set the 100 kHz ≥ RBW ≥3 kHz.
4) Set the VBW ≥ 3 x RBW.
5) Detector = peak.
6) Sweep time = auto couple.
7) Trace mode = max hold.
8) Allow trace to fully stabilize.
9) Use the peak marker function to determine the maximum amplitude level.
10) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

5.5 EUT OPERATION CONDITIONS

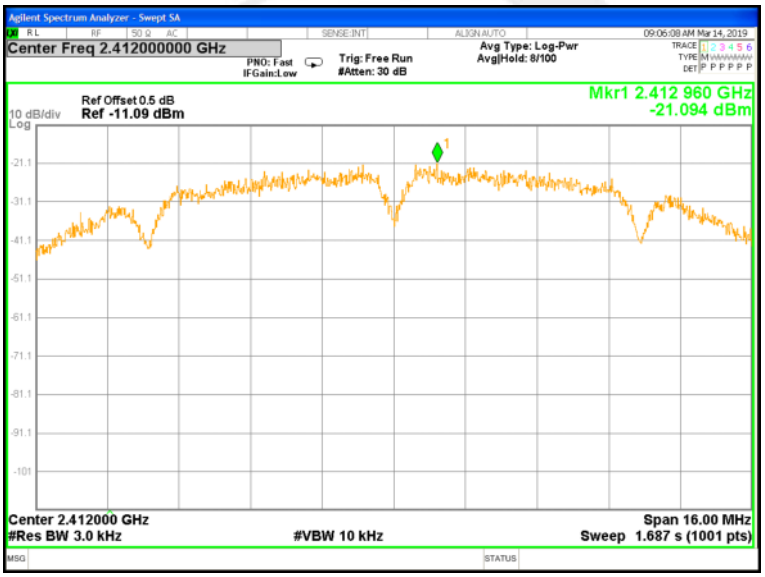
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS

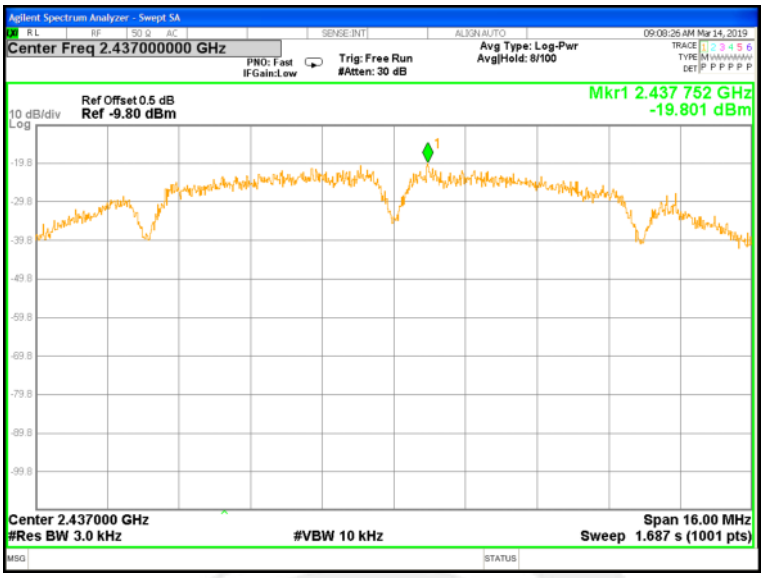
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11b

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
b mode (1 Mbps)	2412.00	-21.094	≤ 8.00	PASS
	2437.00	-19.801	≤ 8.00	PASS
	2462.00	-22.287	≤ 8.00	PASS

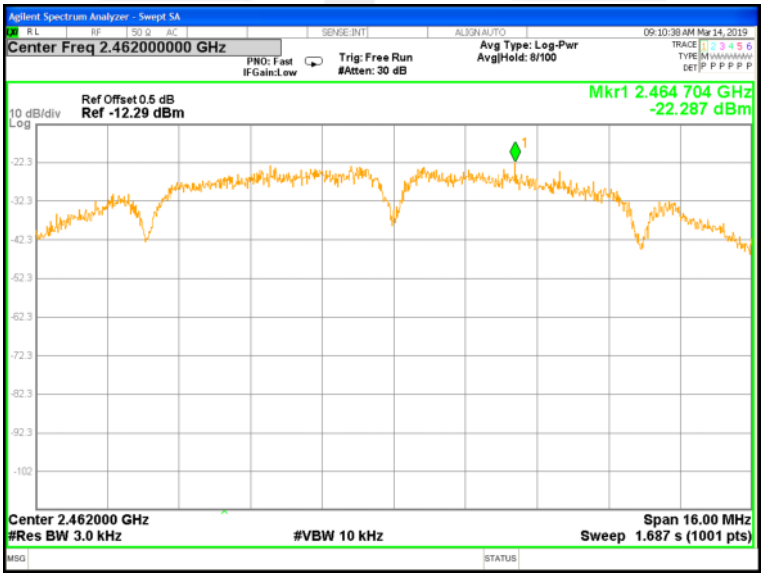
TX CH Low



TX CH Middle



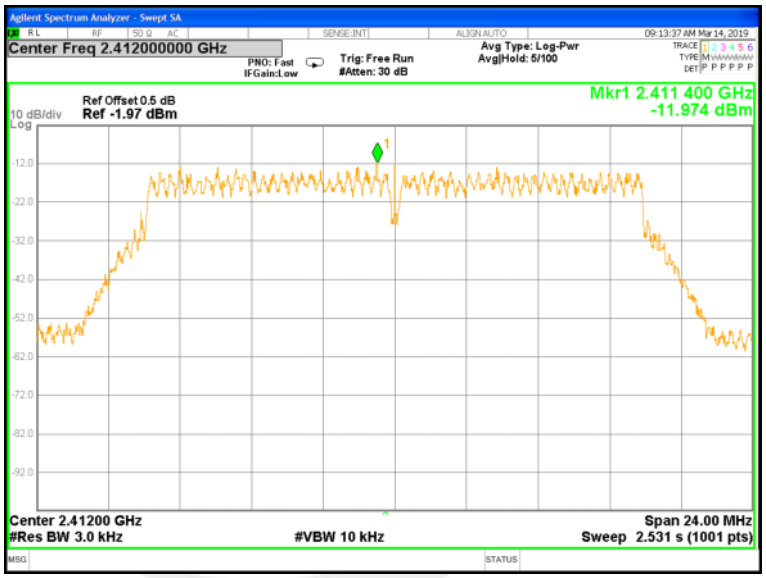
TX CH High



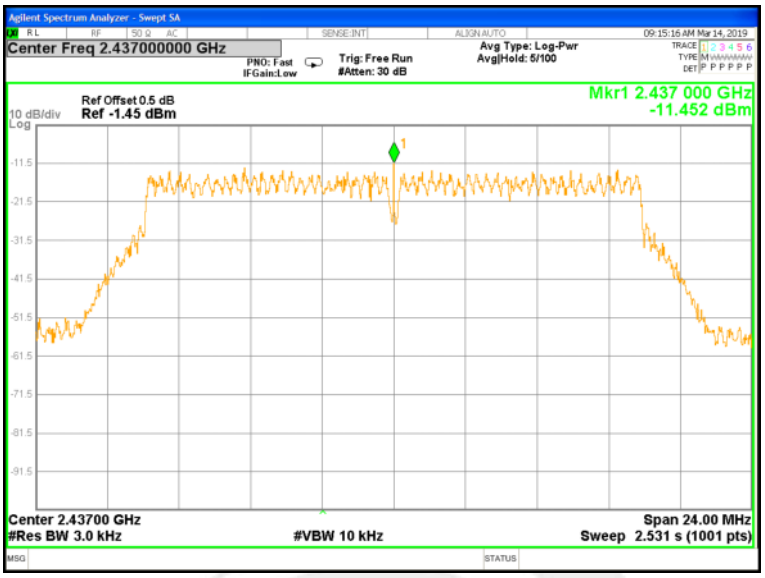
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11g

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
g mode (6 Mbps)	2412.00	-11.974	≤ 8.00	PASS
	2437.00	-11.452	≤ 8.00	PASS
	2462.00	-11.264	≤ 8.00	PASS

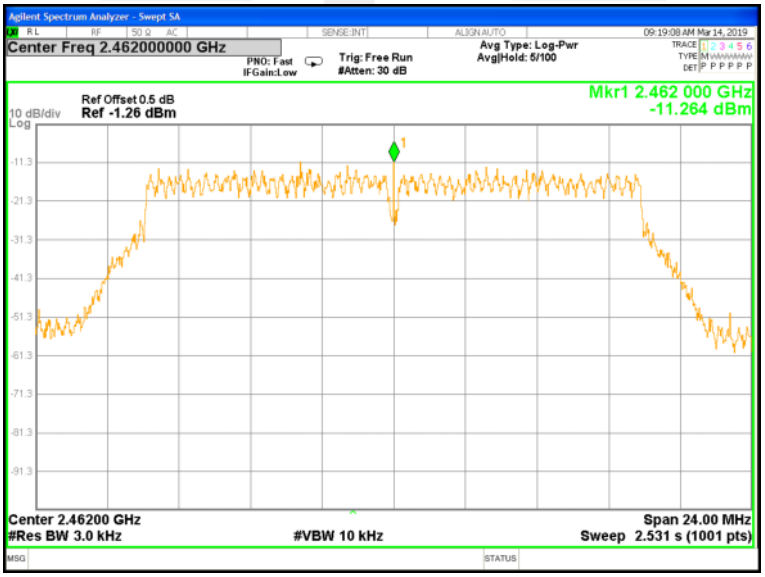
TX CH Low



TX CH Middle



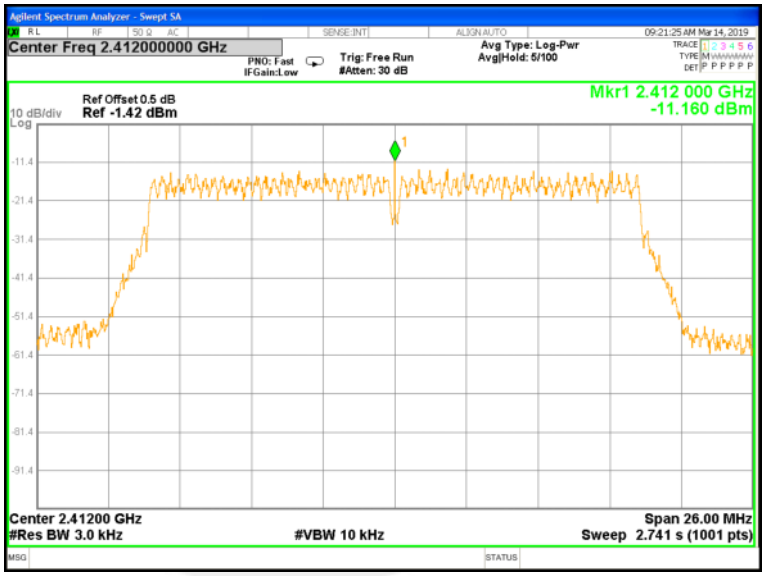
TX CH High



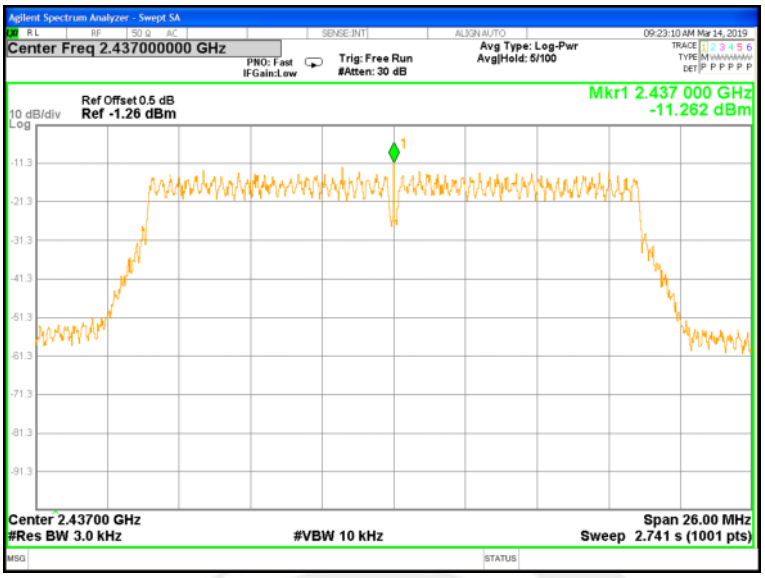
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11n(HT20)

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
n(HT20) mode (MCS0)	2412.00	-11.16	≤ 8.00	PASS
	2437.00	-11.262	≤ 8.00	PASS
	2462.00	-11.651	≤ 8.00	PASS

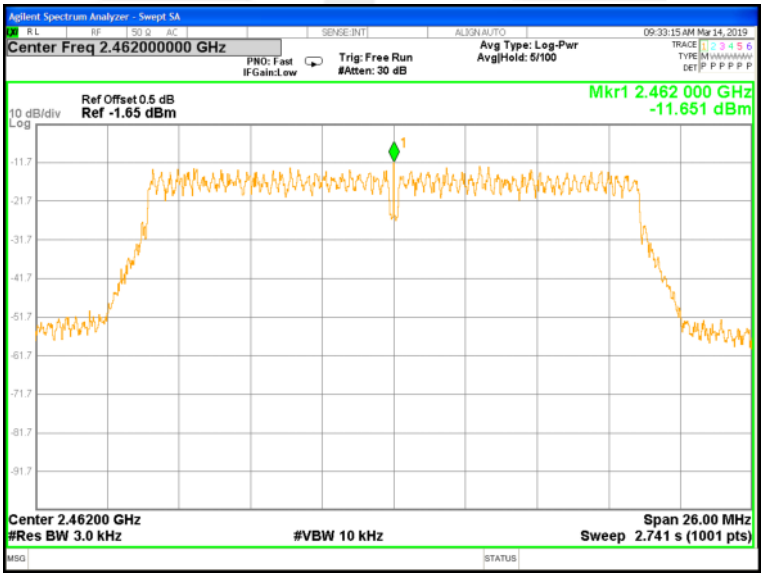
TX CH Low



TX CH Middle



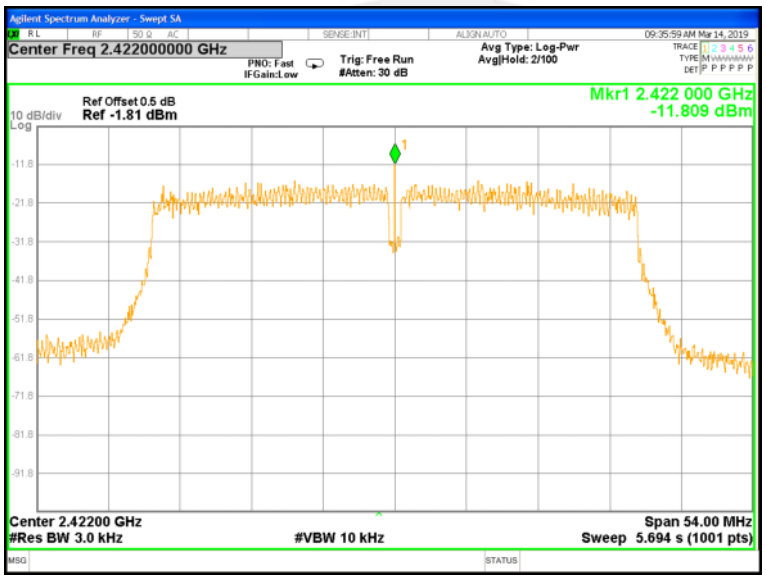
TX CH High



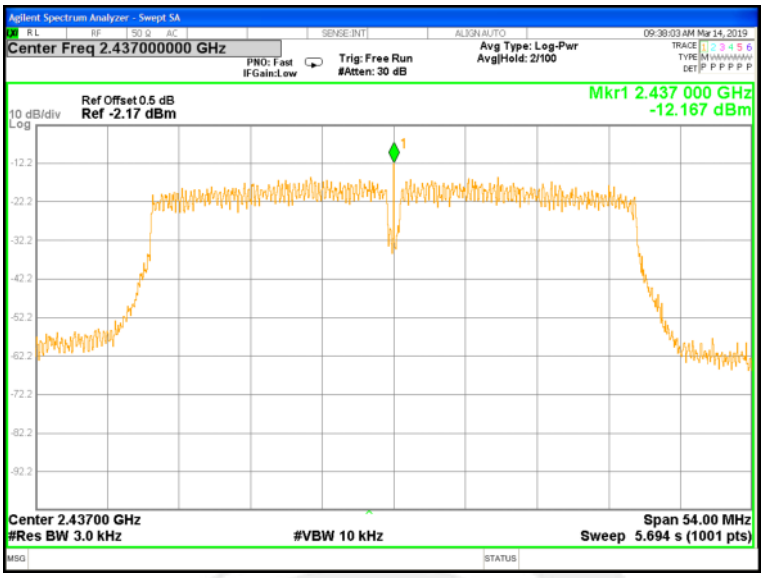
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11n(HT40)

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
n(HT40) mode (MCS0)	2422.00	-11.809	≤ 8.00	PASS
	2437.00	-12.167	≤ 8.00	PASS
	2452.00	-11.957	≤ 8.00	PASS

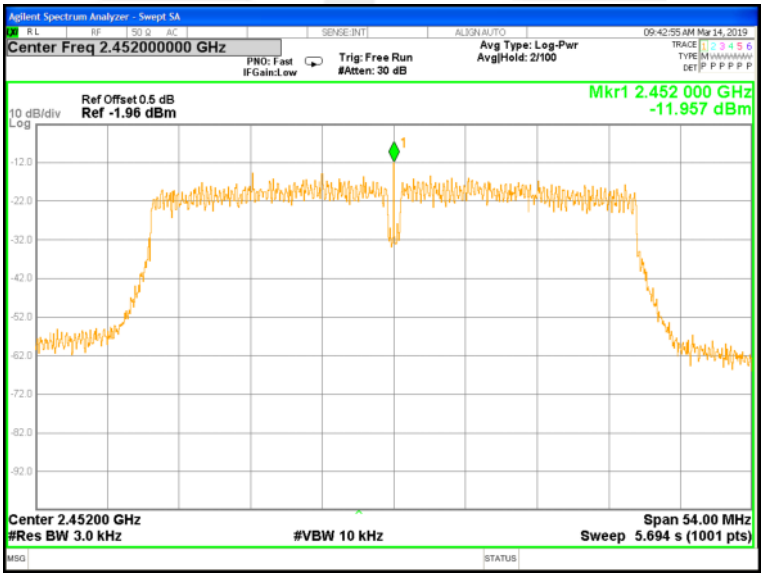
TX CH Low



TX CH Middle



TX CH High



6 BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C RSS-247 Issue 2 & RSS-Gen Issue 5				
Section	**Test Item**	**Limit**	**Frequency Range (MHz)**	**Result**
15.247(a)(2) RSS-247 Clause 5.2(b)	6dB Bandwidth	≥500KHz	2400-2483.5	PASS
RSS-Gen Clause 6.7	99%Bandwidth	-	2400-2483.5	PASS

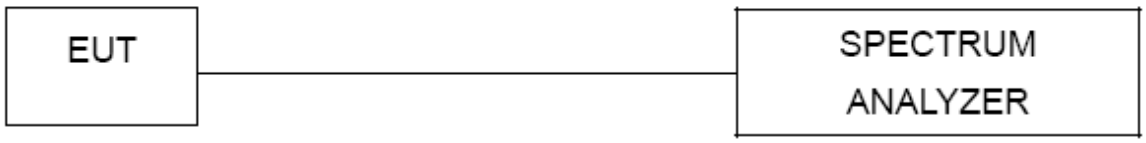
6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be≥6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

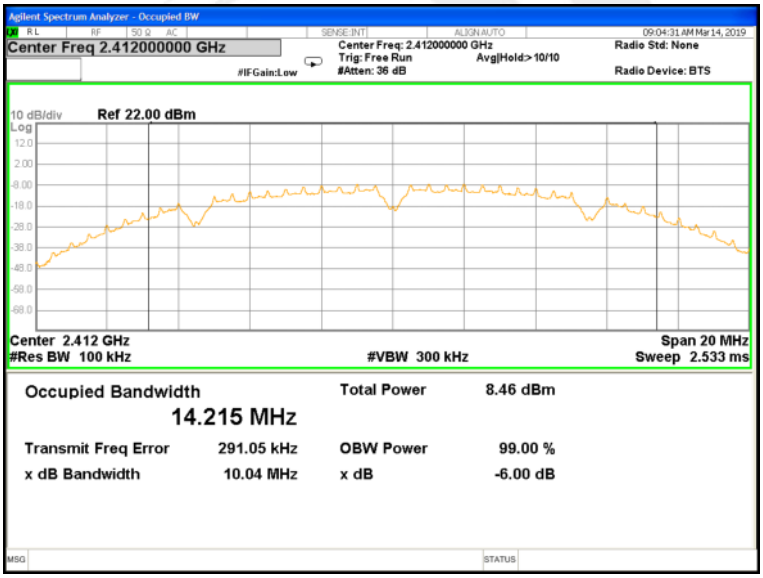
6.6 TEST RESULTS

Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11b

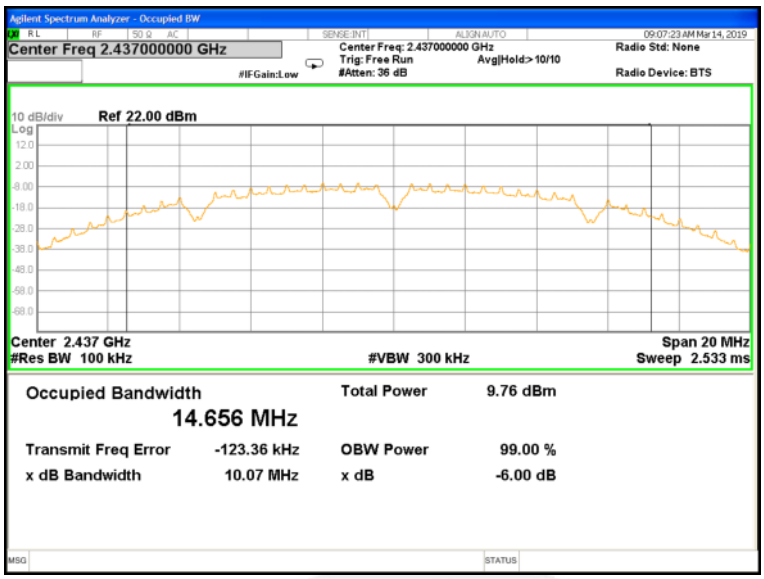
Remark: PEAK DETECTOR IS USED

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
b mode (1 Mbps)	2412.00	10.04	12.433	≥ 0.50	PASS
	2437.00	10.07	12.498	≥ 0.50	PASS
	2462.00	9.575	12.507	≥ 0.50	PASS

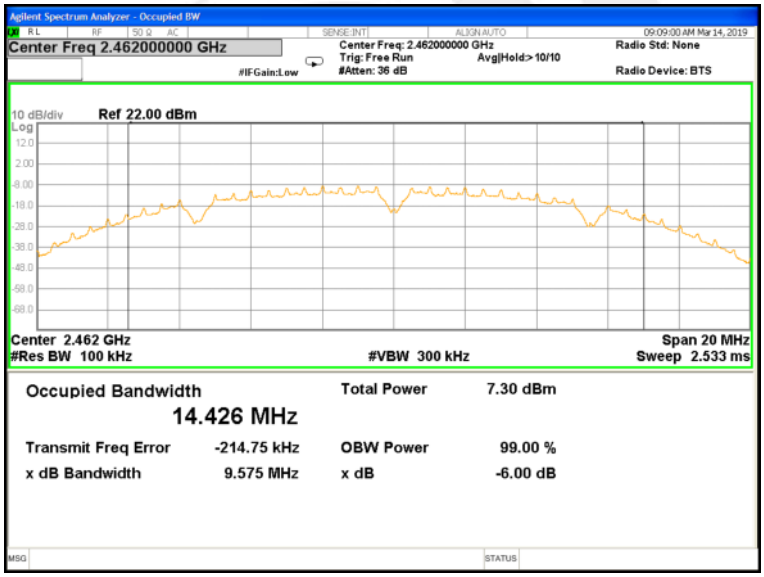
6dB Bandwidth TX CH Low



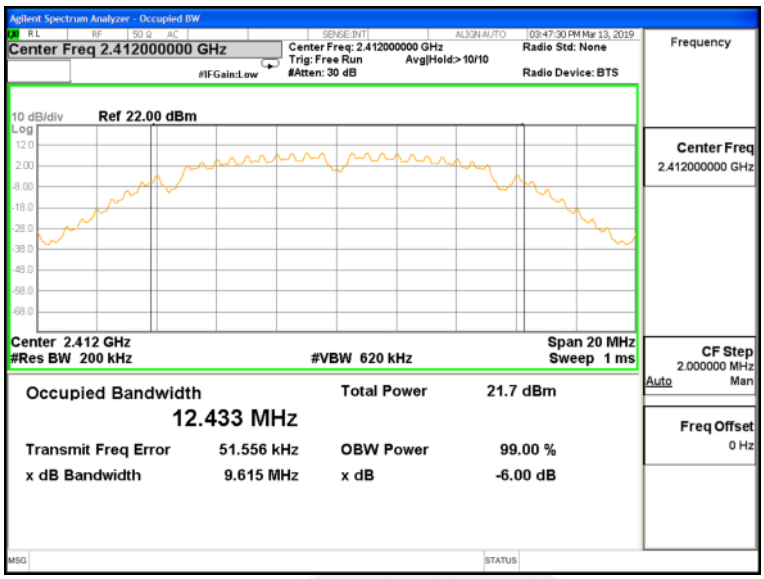
6dB Bandwidth TX CH Middle



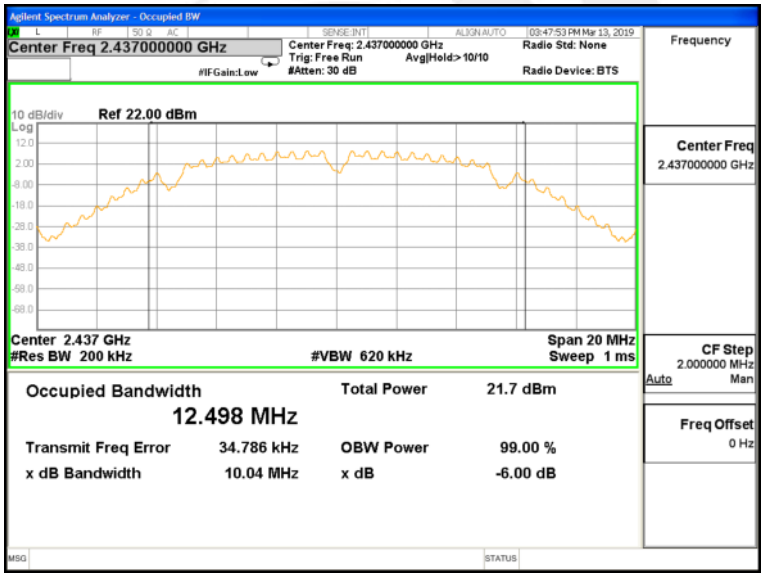
6dB Bandwidth TX CH High



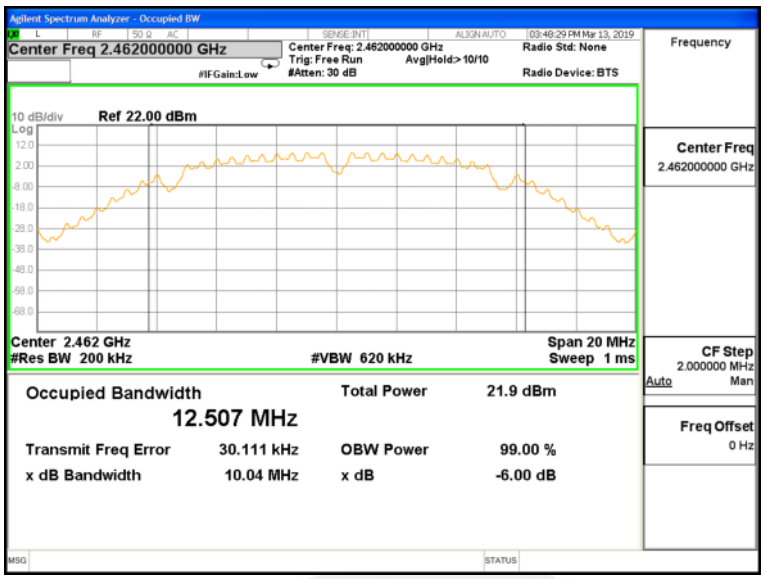
99% Bandwidth TX CH Low



99% Bandwidth TX CH Middle



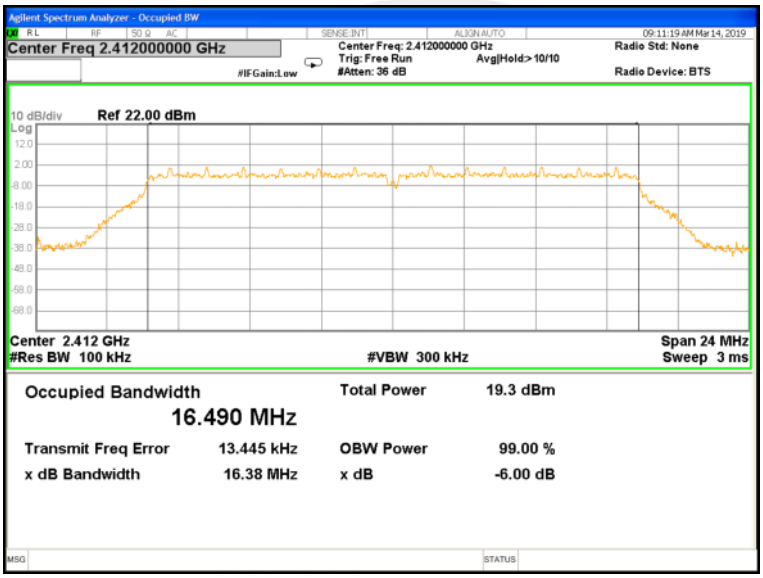
99% Bandwidth TX CH High



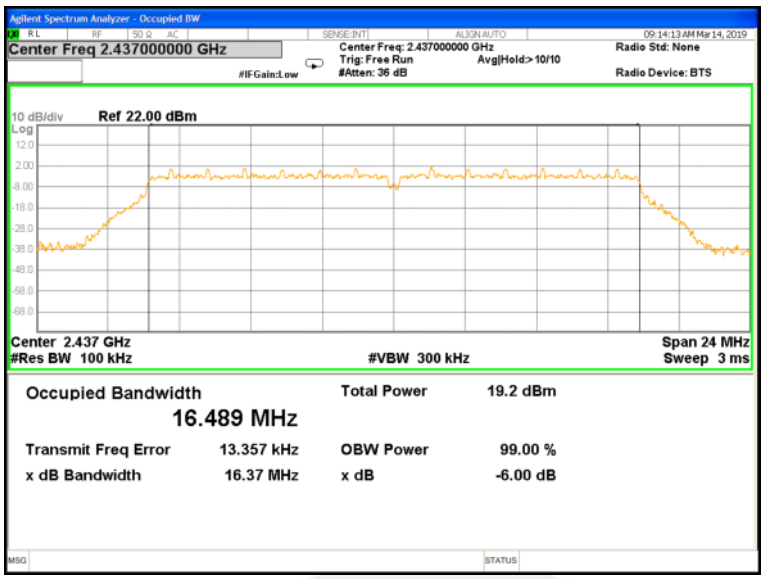
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11g

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
g mode (6 Mbps)	2412.00	16.38	16.502	≥ 0.50	PASS
	2437.00	16.37	16.503	≥ 0.50	PASS
	2462.00	16.38	16.501	≥ 0.50	PASS

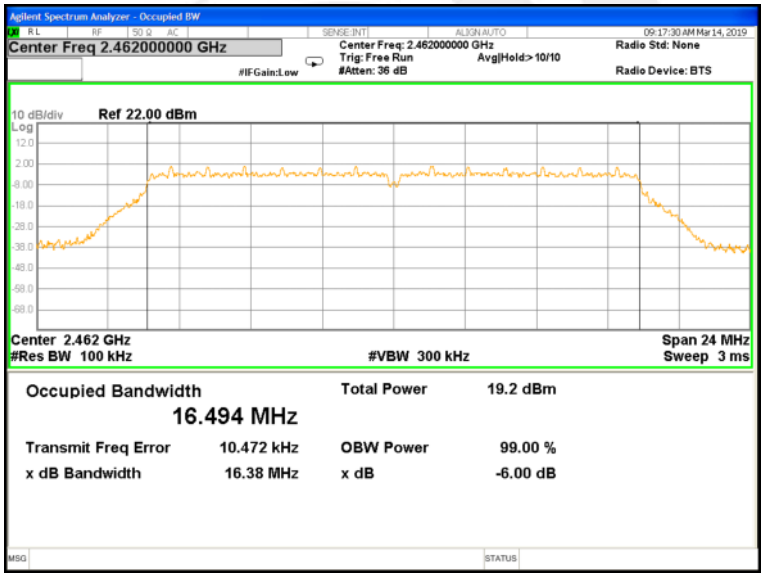
6dB Bandwidth TX CH Low



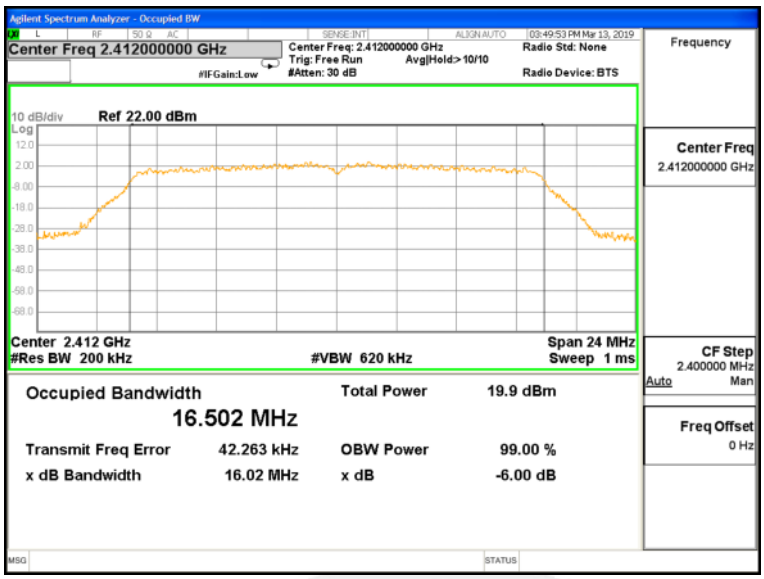
6dB Bandwidth TX CH Middle



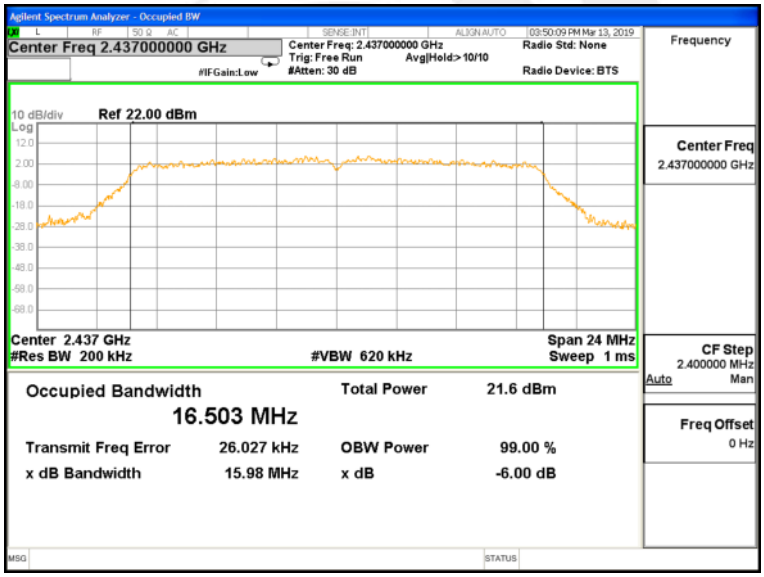
6dB Bandwidth TX CH High



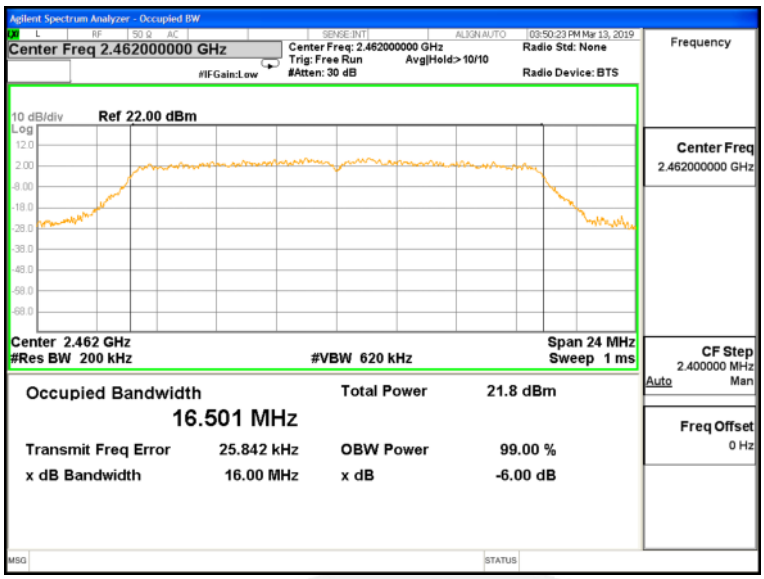
99% Bandwidth TX CH Low



99% Bandwidth TX CH Middle



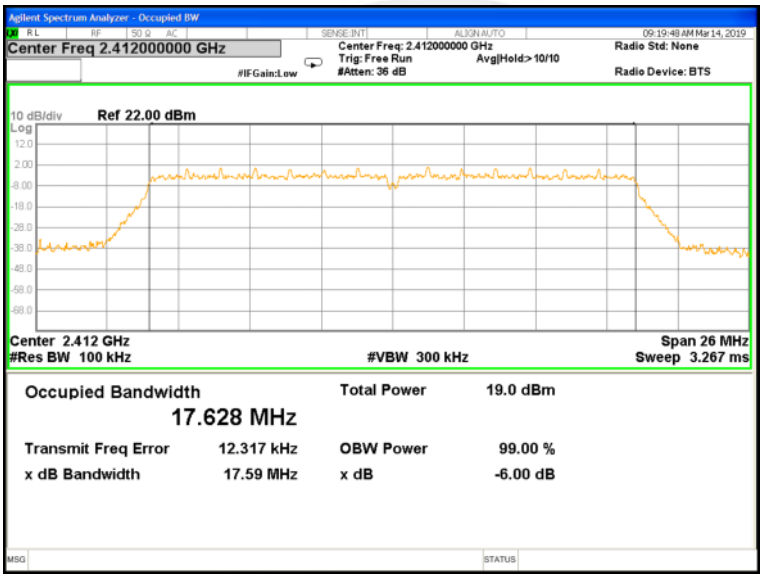
99% Bandwidth TX CH High



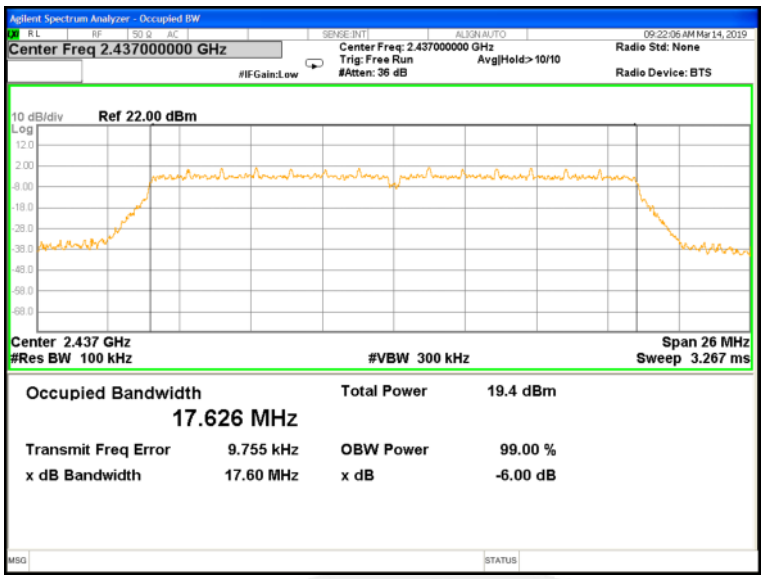
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11n(HT20)

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
n(HT20) mode (MCS0)	2412.00	17.59	17.547	≥ 0.50	PASS
	2437.00	17.60	17.580	≥ 0.50	PASS
	2462.00	17.59	17.564	≥ 0.50	PASS

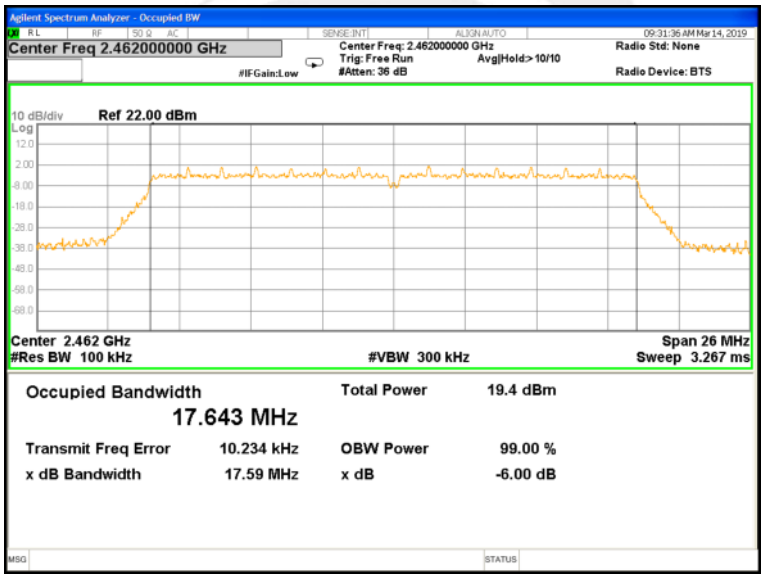
6dB Bandwidth TX CH Low



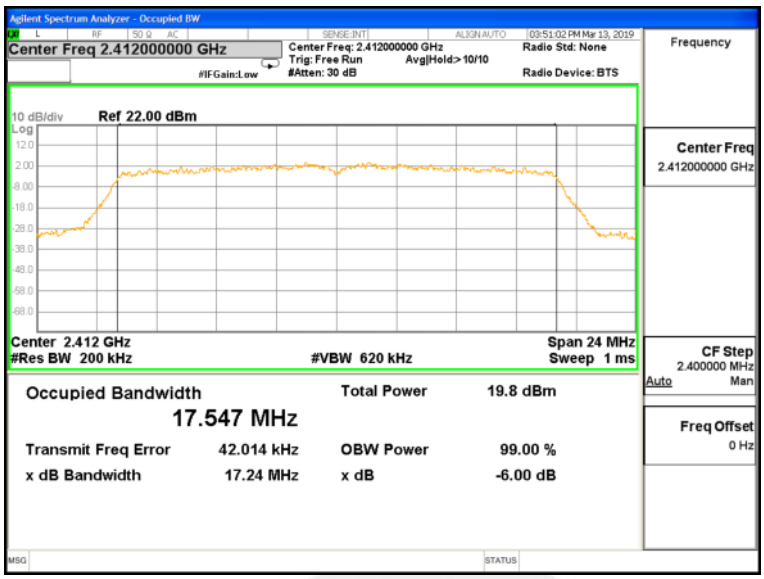
6dB Bandwidth TX CH Middle



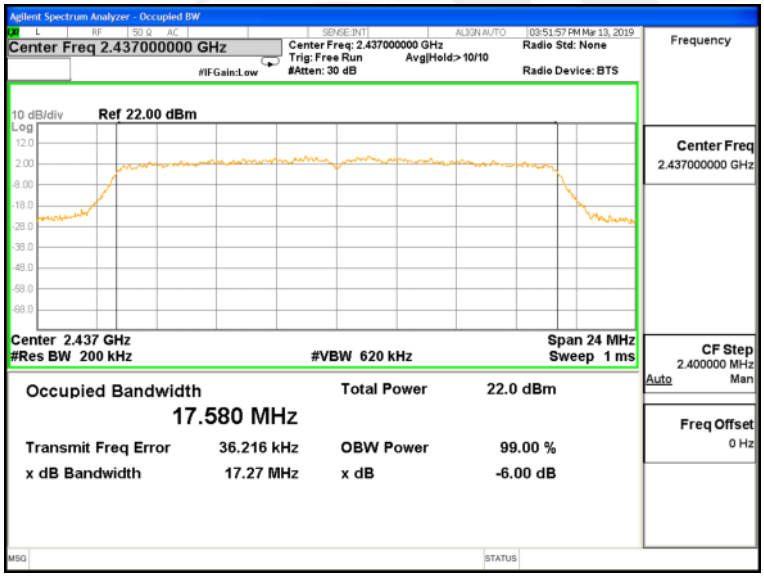
6dB Bandwidth TX CH High



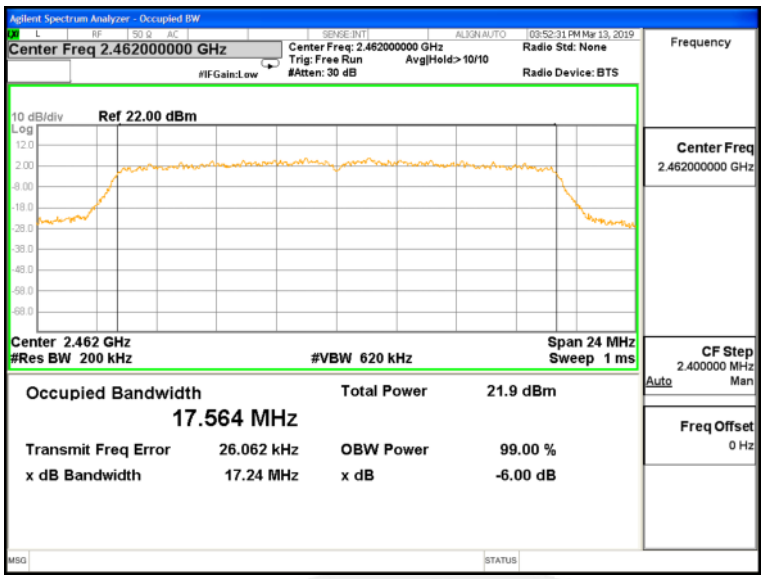
99% Bandwidth TX CH Low



99% Bandwidth TX CH Middle



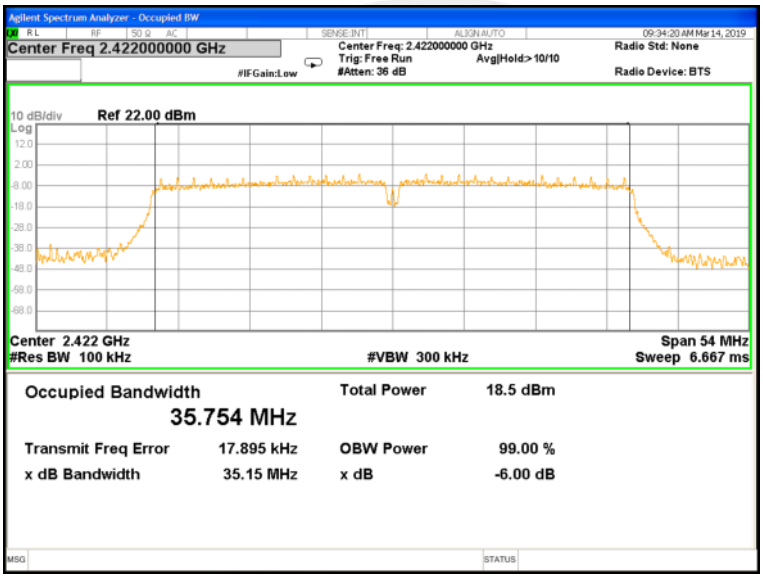
99% Bandwidth TX CH High



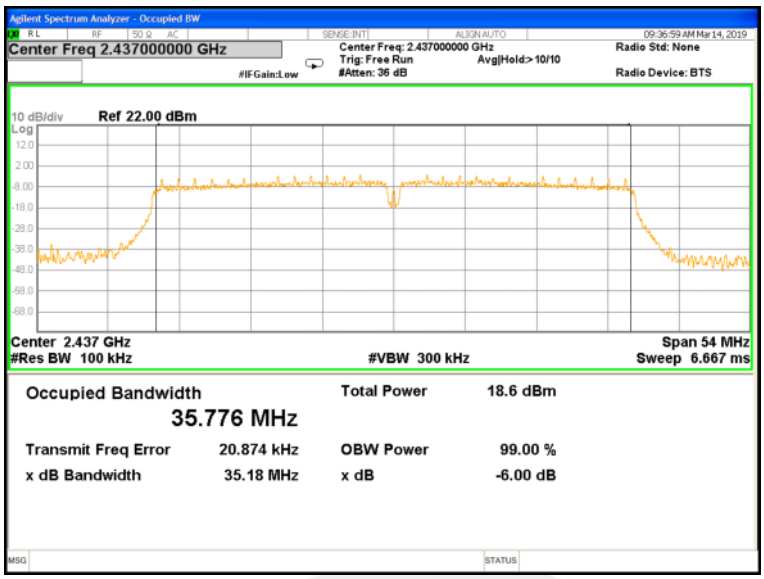
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX 802.11n(HT40)

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
n(HT40) mode (MCS0)	2422.00	35.15	35.802	≥ 0.50	PASS
	2437.00	35.18	35.805	≥ 0.50	PASS
	2452.00	35.18	35.816	≥ 0.50	PASS

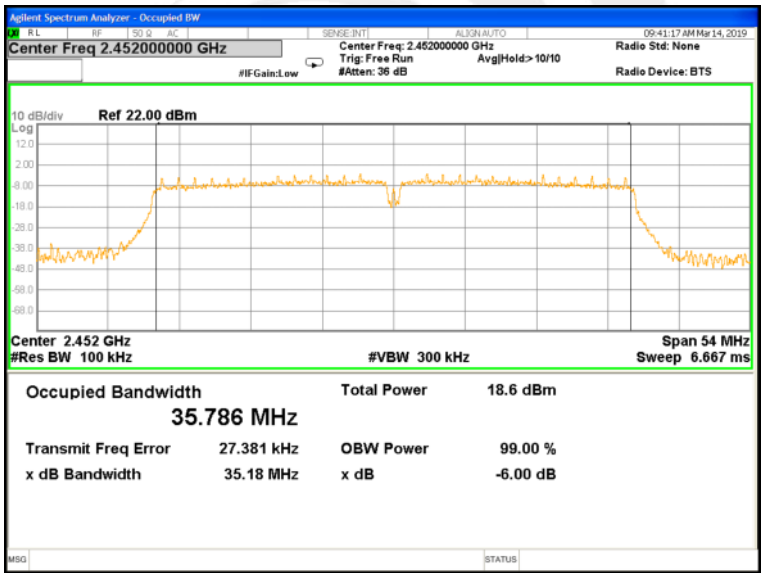
6dB Bandwidth TX CH Low



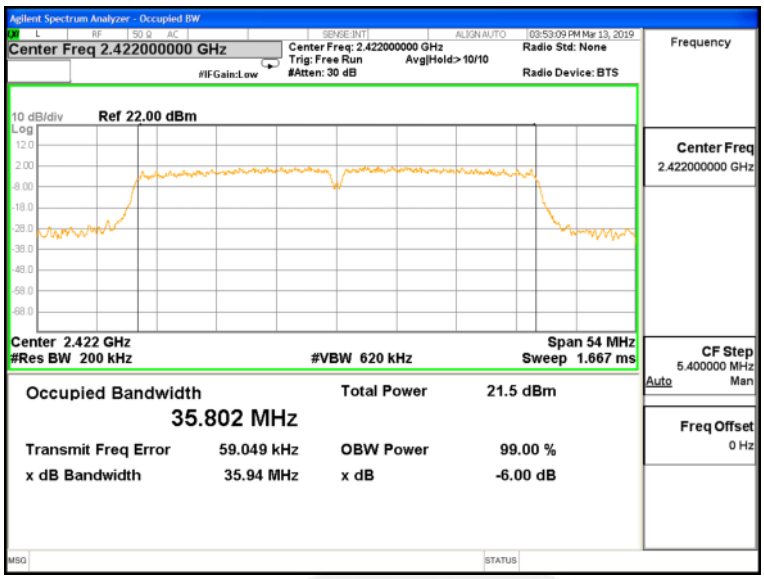
6dB Bandwidth TX CH Middle



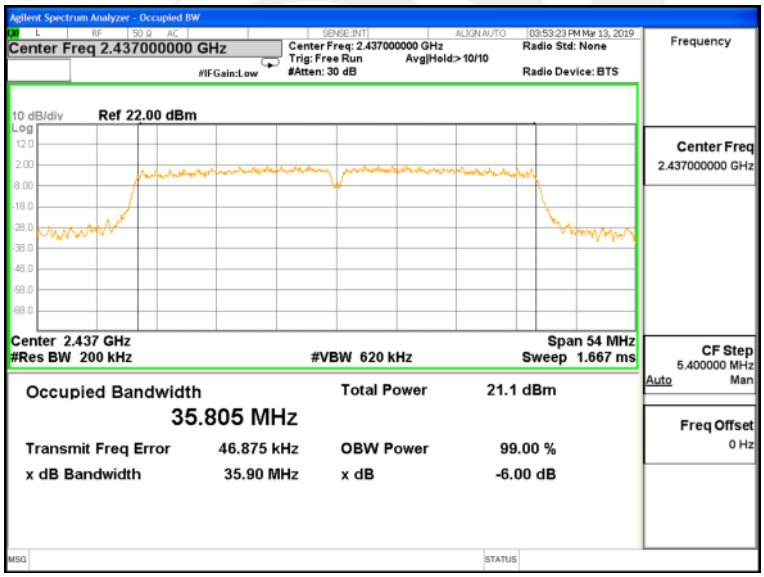
6dB Bandwidth TX CH High



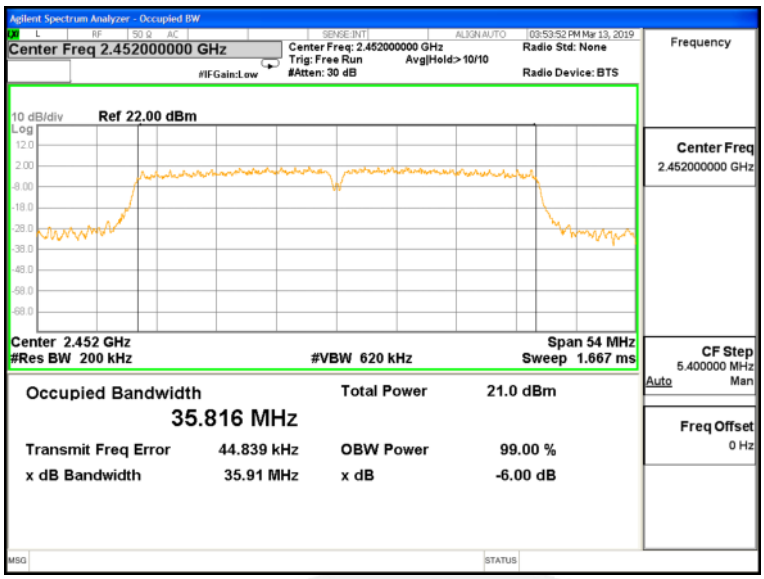
99% Bandwidth TX CH Low



99% Bandwidth TX CH Middle



99% Bandwidth TX CH High



7 PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247,Subpart C RSS-247 Issue 2				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3) RSS-247 Clause 5.4(d)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

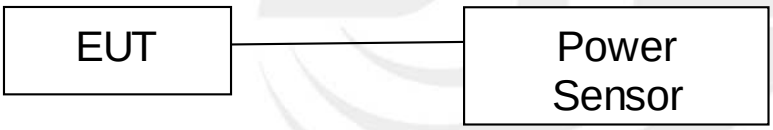
7.2 TEST PROCEDURE

a. The EUT was directly connected to the Power Sensor&PC

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Temperature :	25℃	Relative Humidity :	60%
Test Voltage :	AC 120V/60Hz		

TX 802.11 b (1 Mbps)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
Low	2412.00	16.42	14.43	30.00
Middle	2437.00	15.96	14.04	30.00
High	2462.00	15.77	13.86	30.00

TX 802.11 g (6 Mbps)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
Low	2412.00	20.61	13.86	30.00
Middle	2437.00	20.43	13.43	30.00
High	2462.00	19.95	13.11	30.00

TX 802.11 n(HT20) (MCS0)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
Low	2412.00	20.43	13.69	30.00
Middle	2437.00	20.11	13.16	30.00
High	2462.00	19.80	12.85	30.00

TX 802.11 n(HT40) (MCS0)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
Low	2422.00	19.65	13.36	30.00
Middle	2437.00	19.63	13.15	30.00
High	2452.00	19.43	12.60	30.00

Note:

1) The cable loss and antenna gain are taken into account in results.
2) Antenna gain(G): 0 dBi
3) The max. e.i.r.p = conducted power + antenna gain = 14.43 dBm

8 ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 and RSS-Gen Issue 5 requirement: For intentional device, according to 15.203 and RSS-Gen Issue 5: an intentional radiator shallbe designed to ensure that no antenna other than that furnished by the responsible partyshall be used with the device.

8.2 EUT ANTENNA

The EUT antenna is PCB Antenna. It comply with the standard requirement.

9.FREQUENCY STABILITY

9.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/-0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage,and for a variation in primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees.

9.2 TEST PROCEDURE

1.The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2.Turn the EUT on and couple its output to spectrum analyzer.
3.Turn the EUT off and set the chamber to the highest temperature specified.
4.Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize,turn the EUT on and measure the operating frequency after 2,5,and 10 minutes.
5.Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6.The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes.The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

9.3 TEST RESULT

Channel 06(2437MHz)

Voltage vs. Frequency Stability

Voltage vs. Frequency Stability Voltage(V)	Measurement Frequency(MHz)
5.75	2437.0022
5	2437.0019
4.25	2437.0013
Max.Deviation(MHz)	0.0022
Max.Deviation(ppm)	0.90

Rated working voltage:DC 5V

Temperature vs. Frequency Stability

Temperature(℃)	Measurement Frequency(MHz)
-30	2437.0031
-20	2437.0023
-10	2437.0023
0	2437.0023
10	2437.0028
20	2437.0024
30	2437.0029
40	2437.0022
50	2437.0024
Max.Deviation(MHz)	0.0031
Max.Deviation(ppm)	1.27

10 APPENDIX- PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※