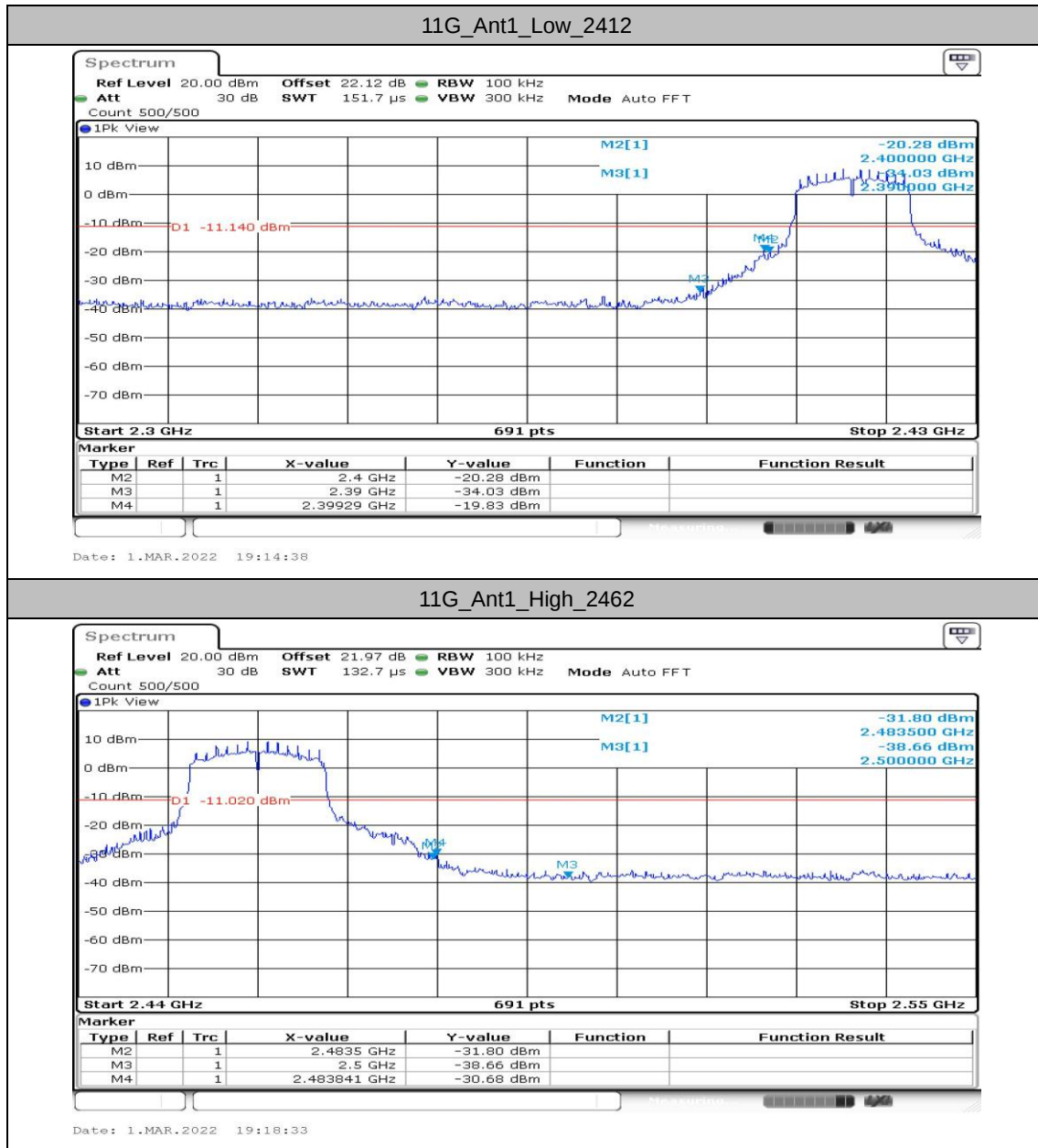
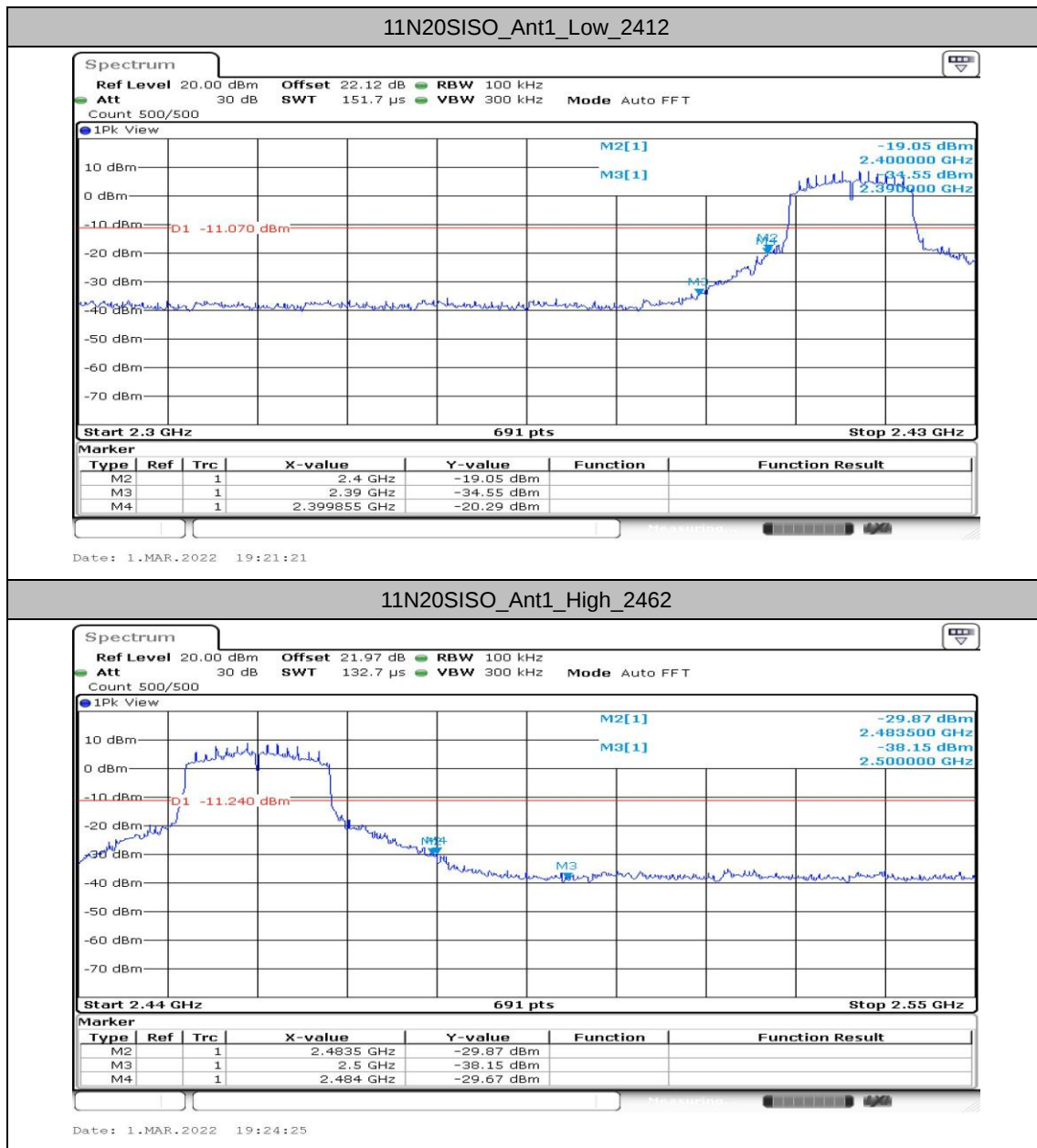
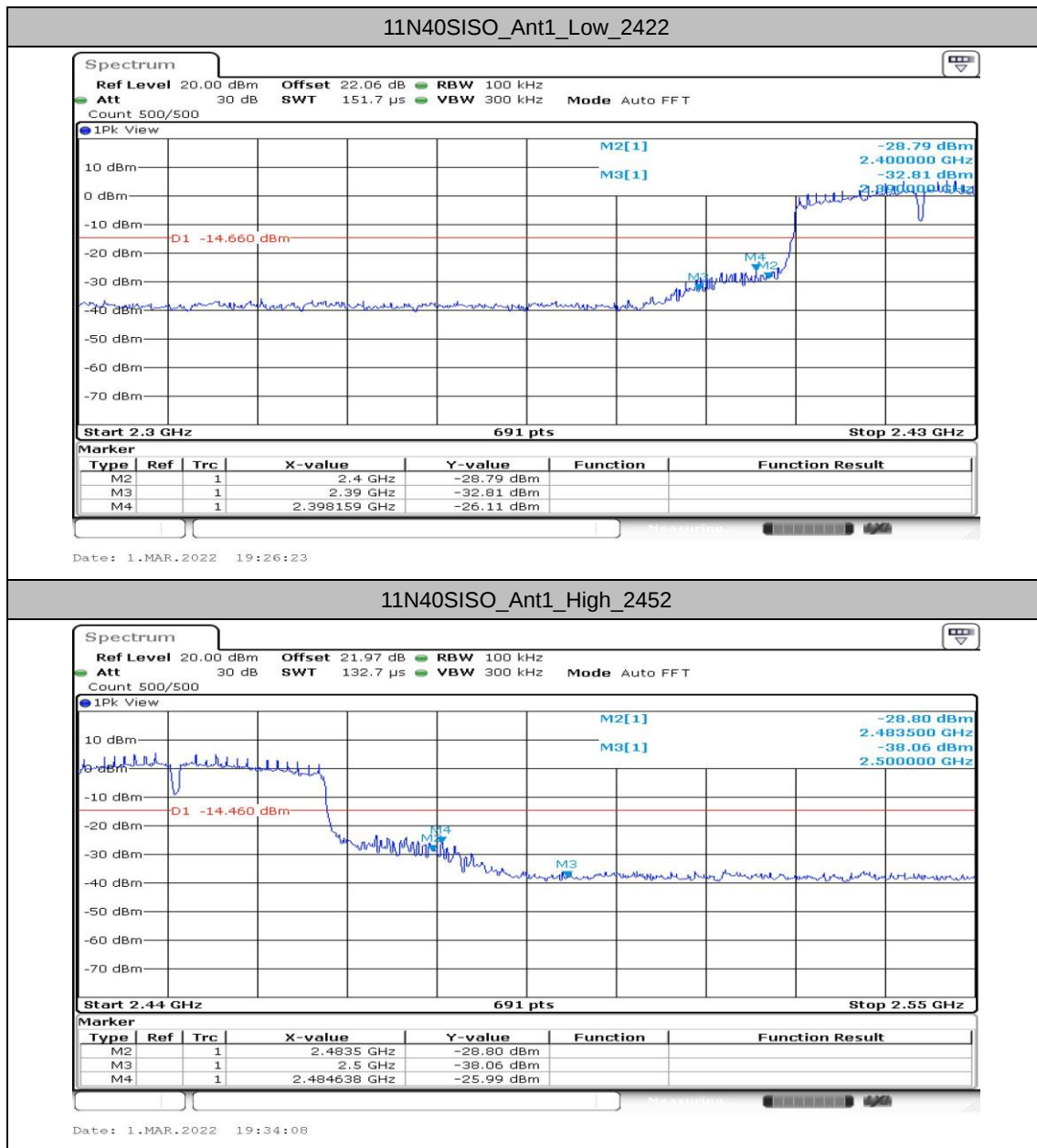










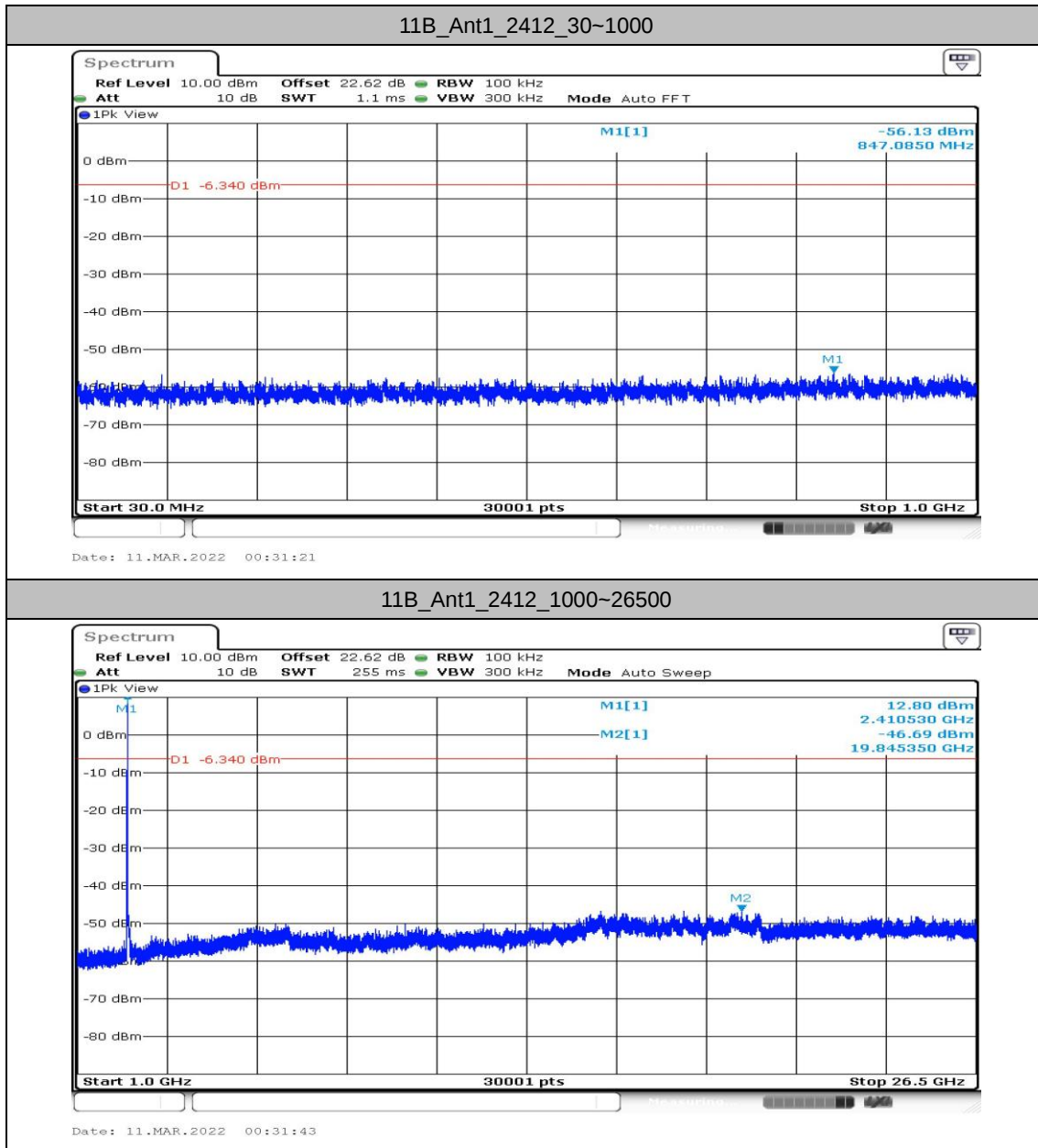
Conducted Spurious Emission

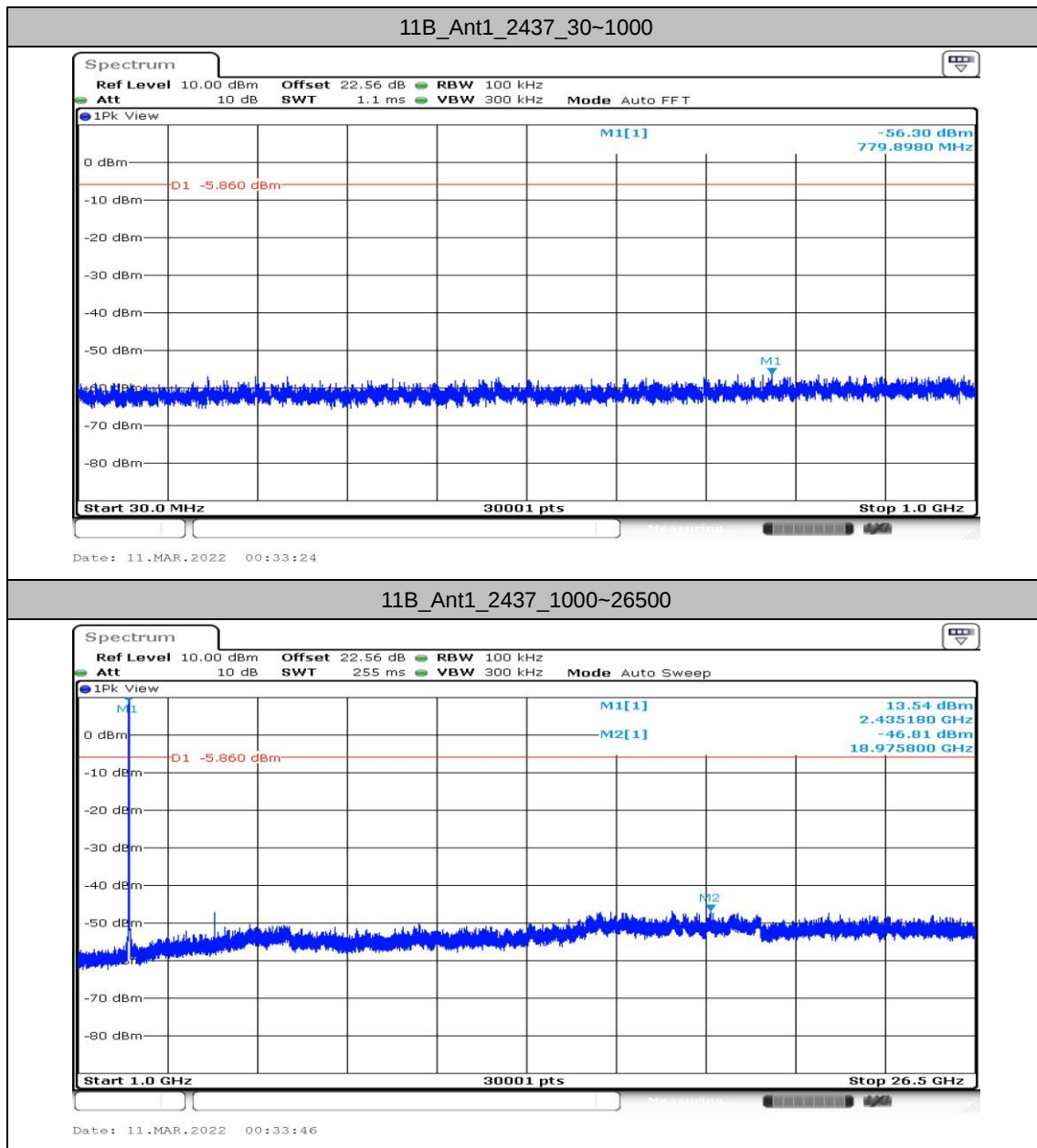
Test Result

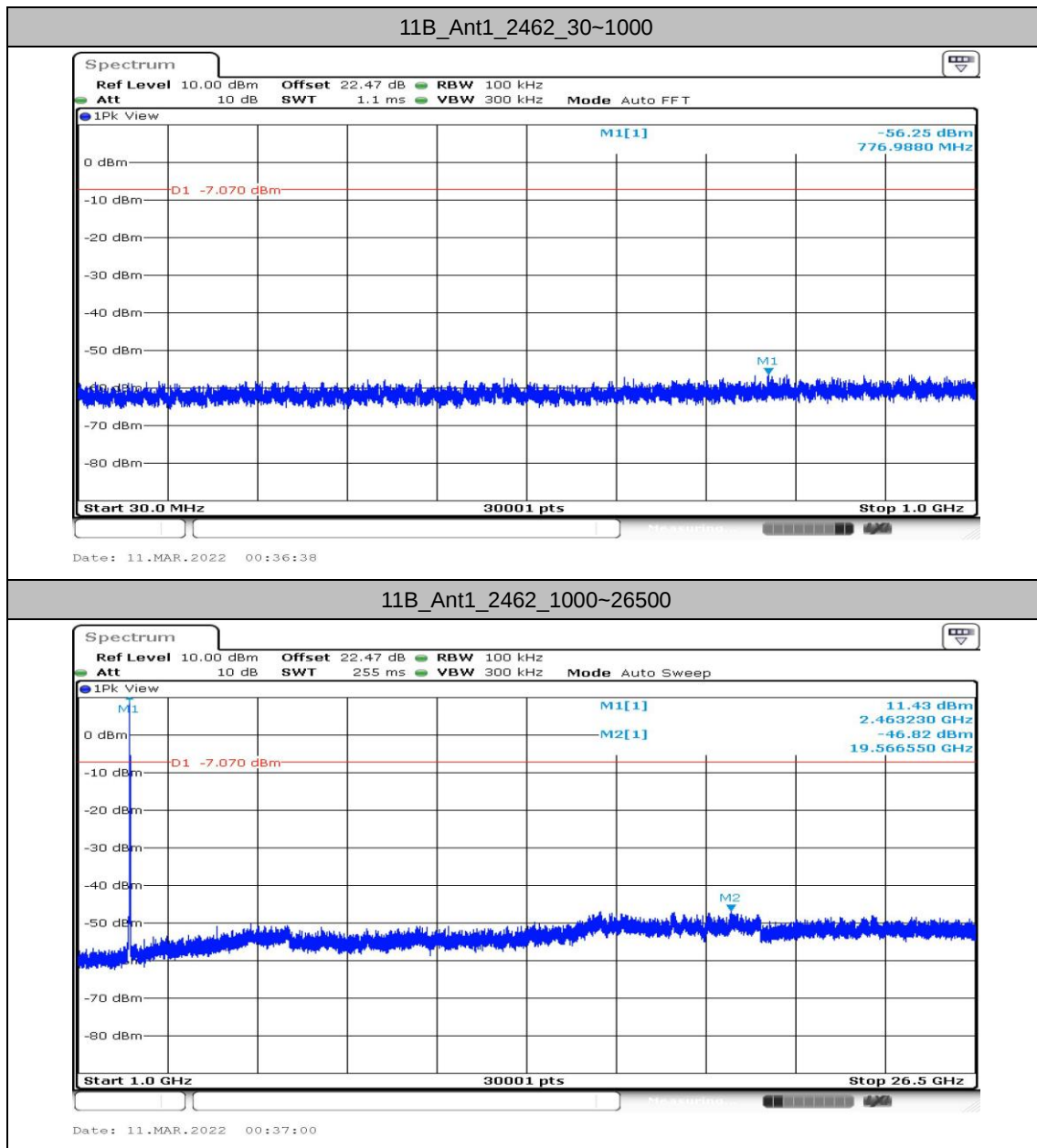
TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	13.66	-56.13	≤-6.34	PASS
			1000~26500	13.66	-46.69	≤-6.34	PASS
		2437	30~1000	14.14	-56.3	≤-5.86	PASS
			1000~26500	14.14	-46.81	≤-5.86	PASS
		2462	30~1000	12.93	-56.25	≤-7.07	PASS
			1000~26500	12.93	-46.82	≤-7.07	PASS
11G	Ant1	2412	30~1000	8.86	-56.36	≤-11.14	PASS
			1000~26500	8.86	-46.39	≤-11.14	PASS
		2437	30~1000	9.19	-56.47	≤-10.81	PASS
			1000~26500	9.19	-46.24	≤-10.81	PASS
		2462	30~1000	8.98	-56.11	≤-11.02	PASS
			1000~26500	8.98	-46.62	≤-11.02	PASS
11N20SISO	Ant1	2412	30~1000	8.93	-55.79	≤-11.07	PASS
			1000~26500	8.93	-46.08	≤-11.07	PASS
		2437	30~1000	9.45	-56.11	≤-10.55	PASS
			1000~26500	9.45	-46.51	≤-10.55	PASS
		2462	30~1000	8.76	-56.27	≤-11.24	PASS
			1000~26500	8.76	-46.57	≤-11.24	PASS
11N40SISO	Ant1	2422	30~1000	5.34	-54.9	≤-14.66	PASS
			1000~26500	5.34	-46.4	≤-14.66	PASS
		2437	30~1000	5.18	-56.08	≤-14.82	PASS
			1000~26500	5.18	-46.33	≤-14.82	PASS
		2452	30~1000	5.54	-54.78	≤-14.46	PASS
			1000~26500	5.54	-46.1	≤-14.46	PASS

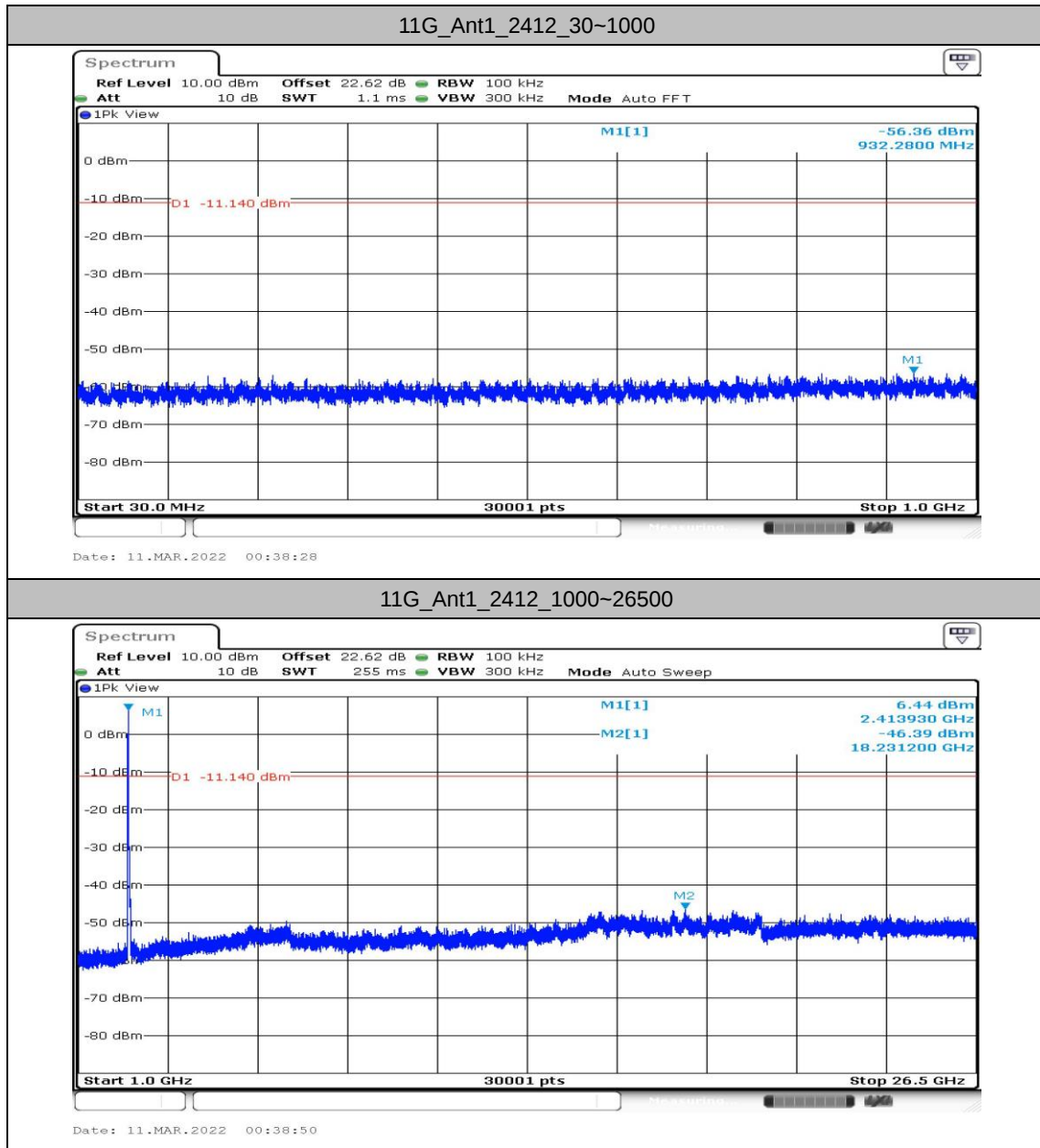


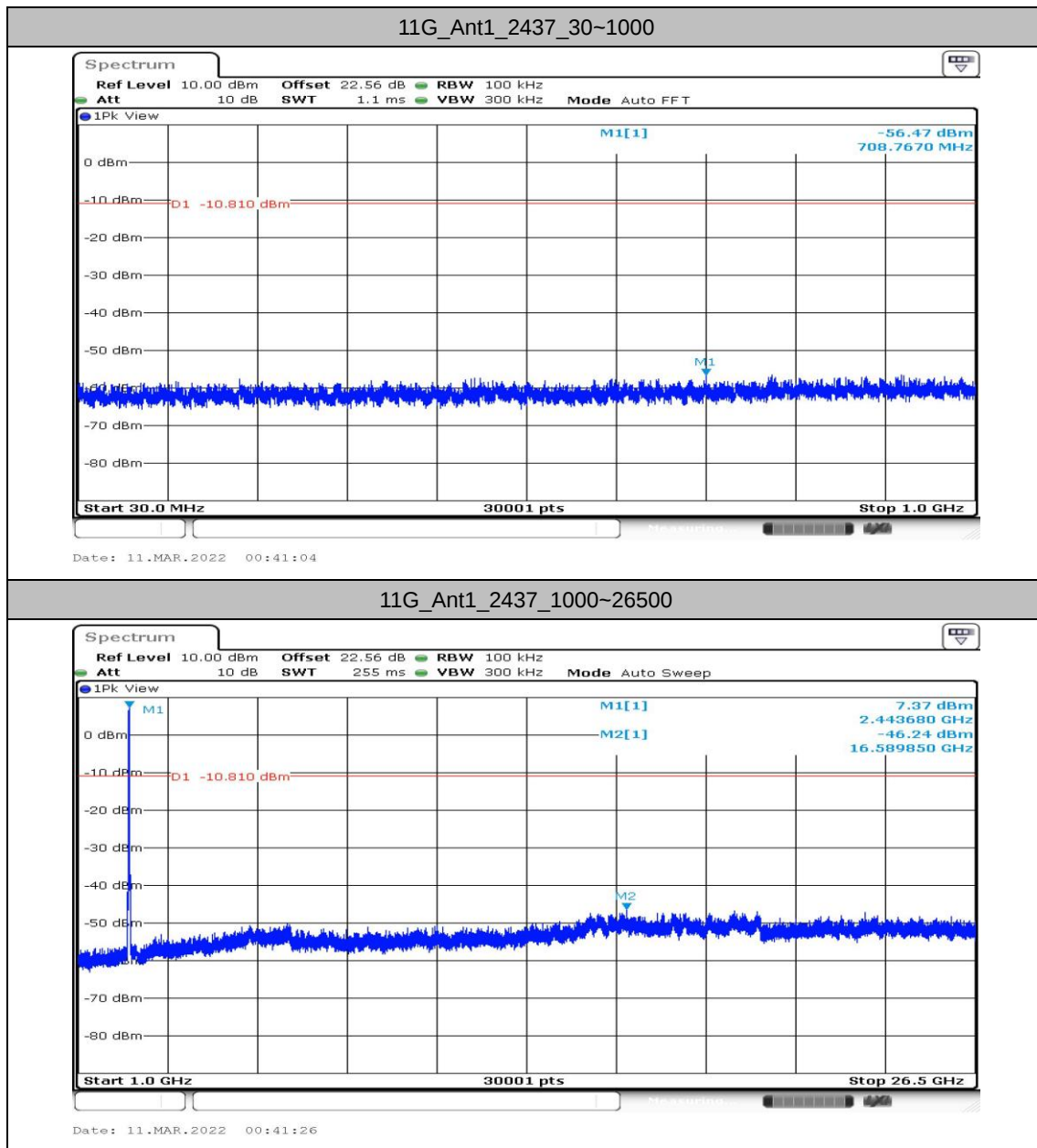
Test Graphs

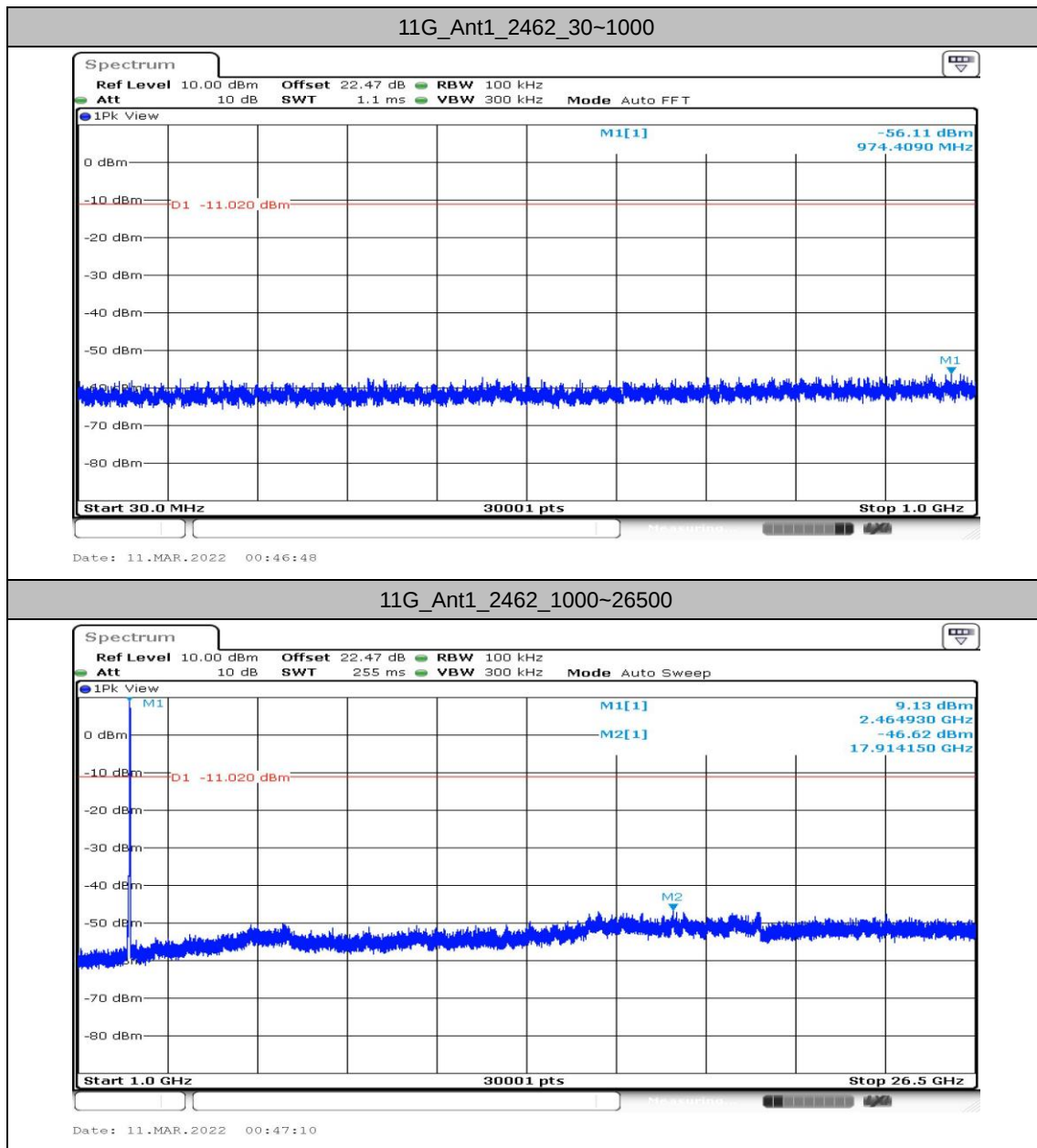


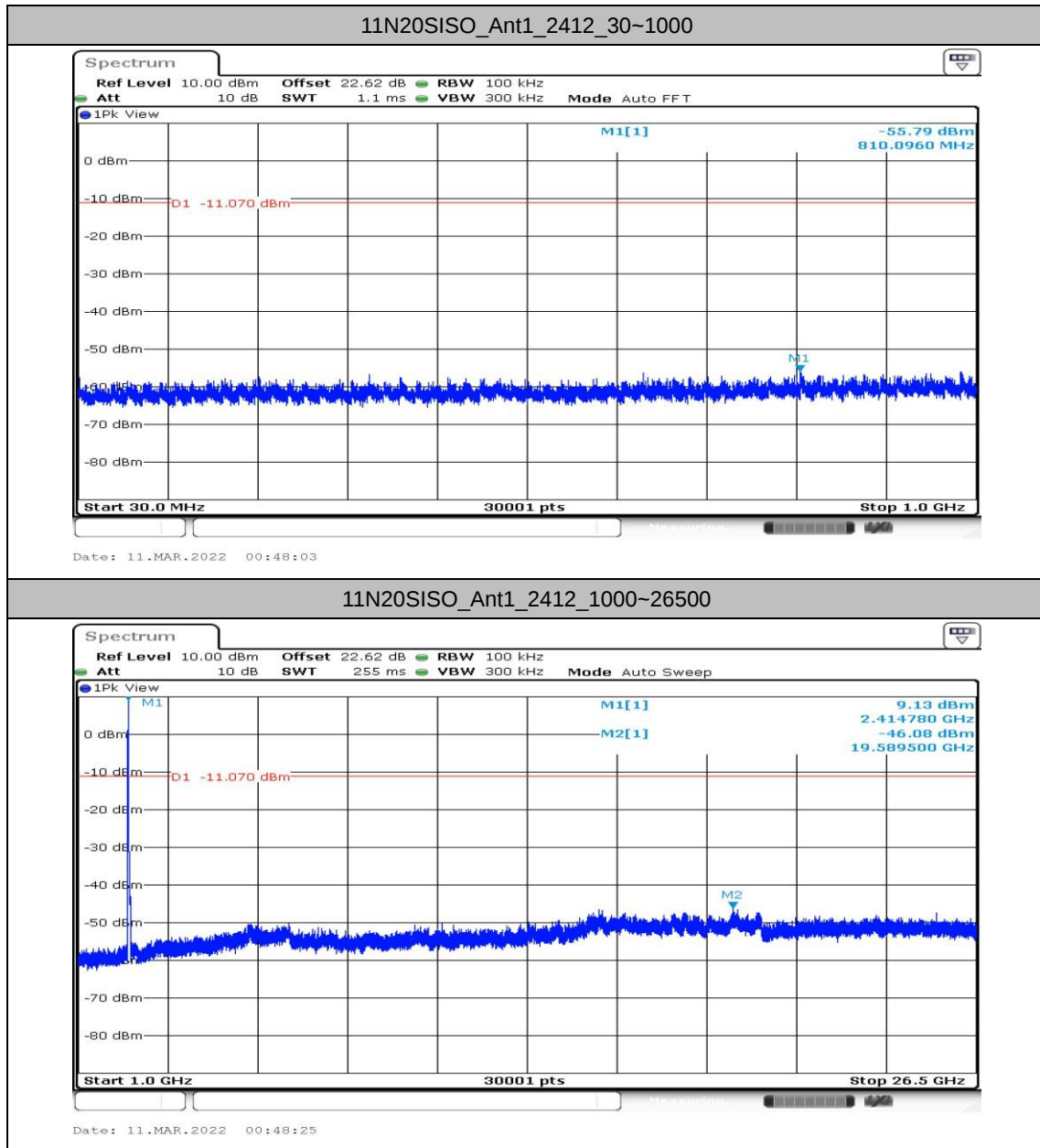


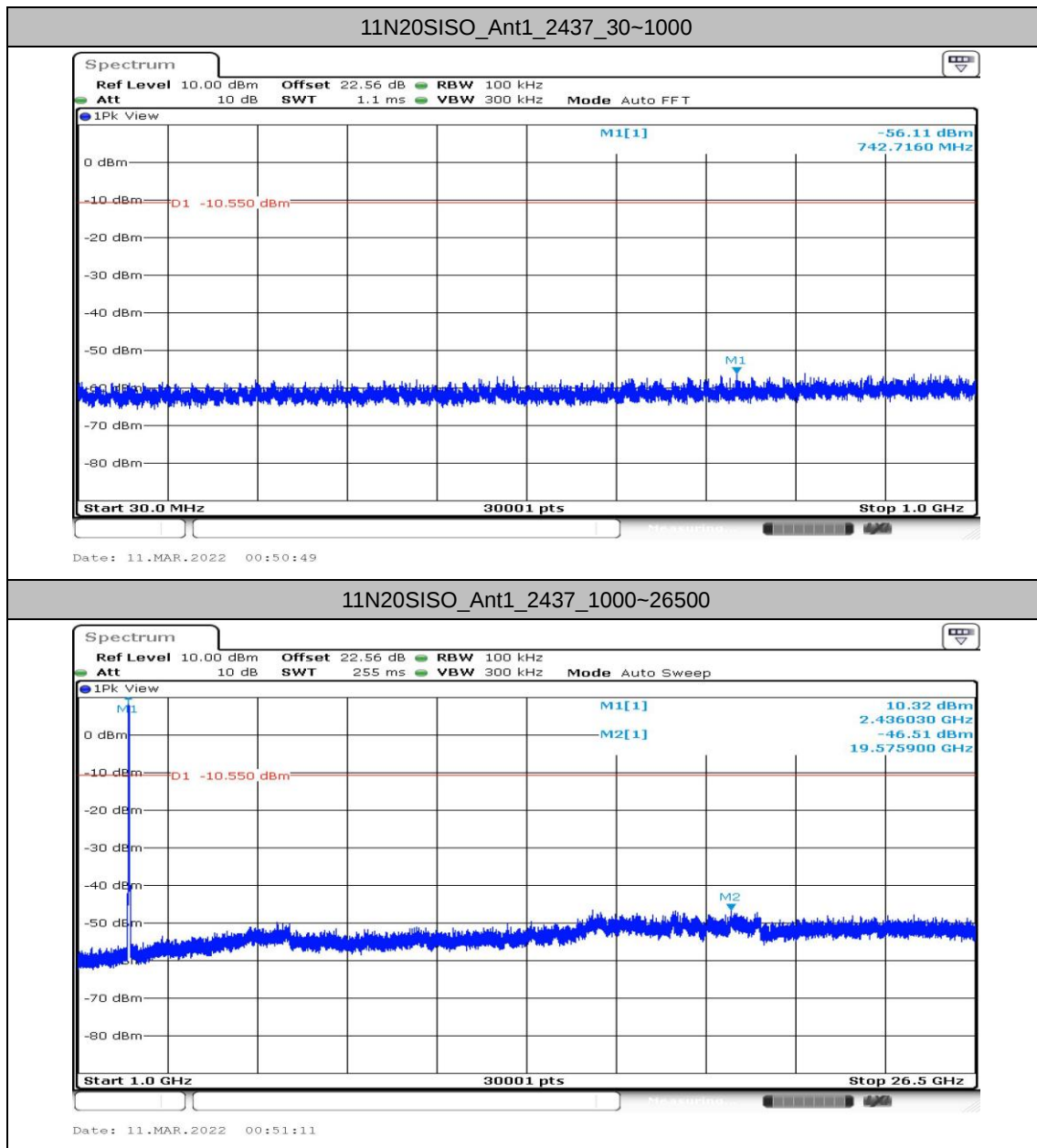


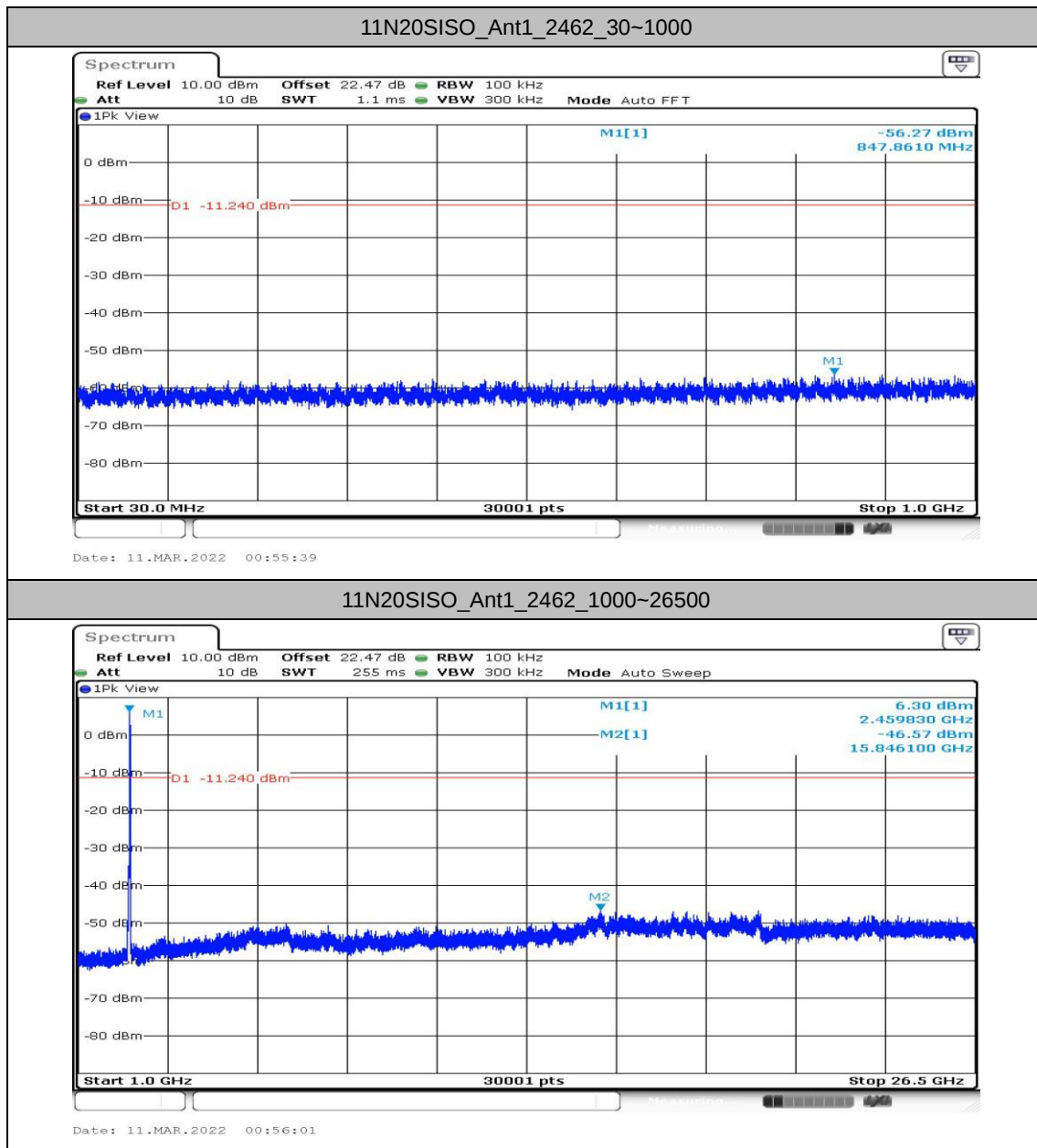


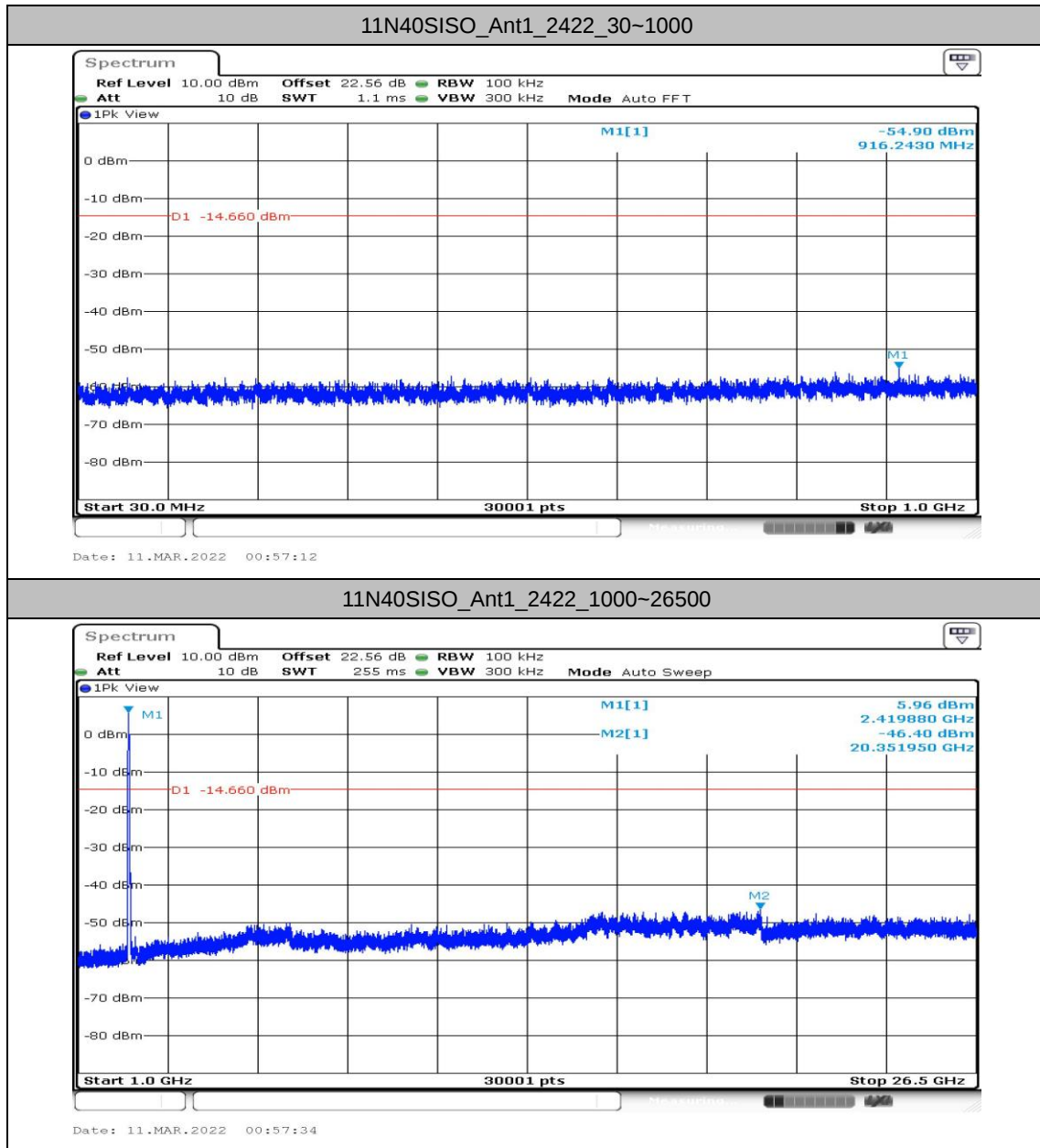


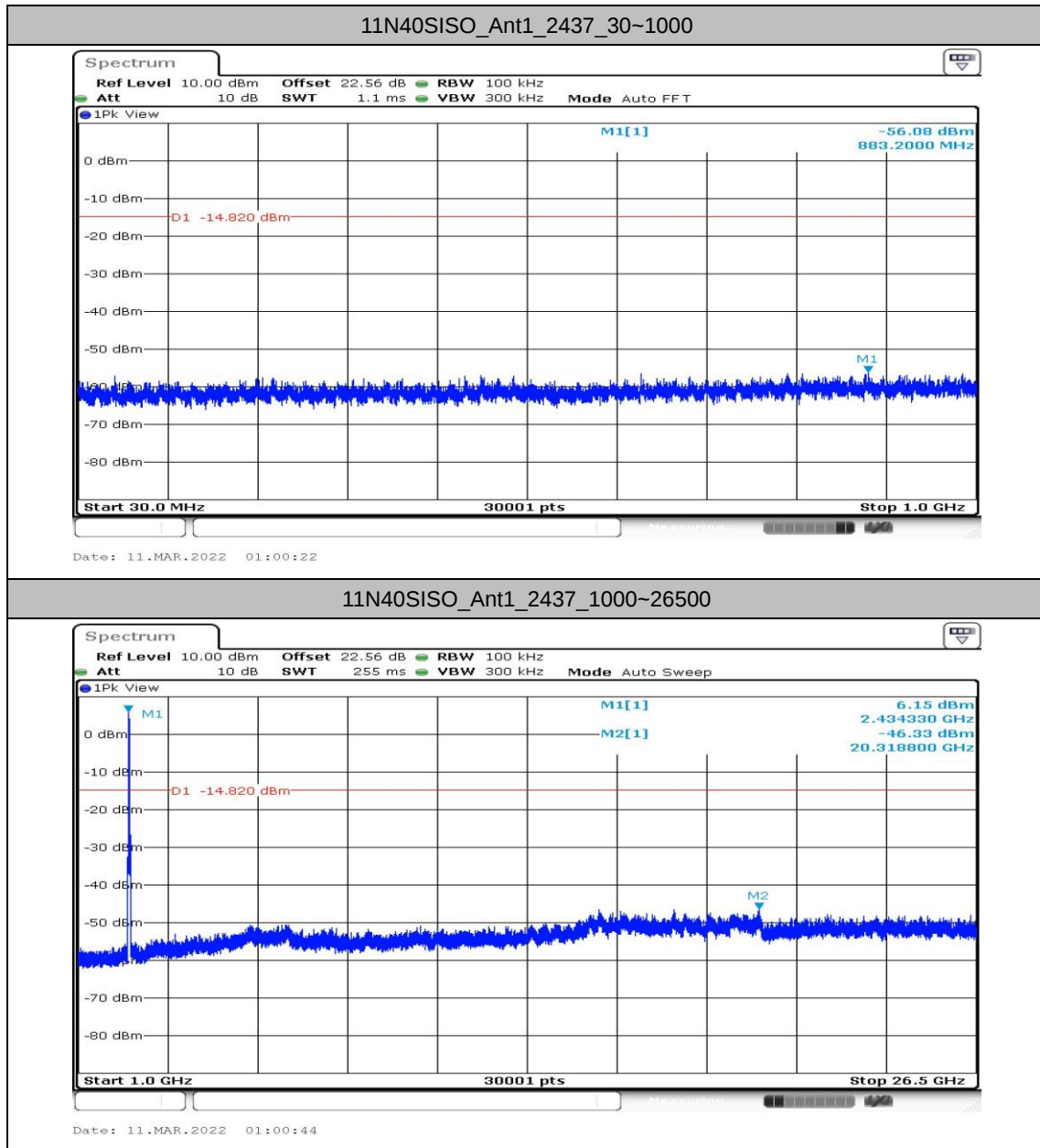


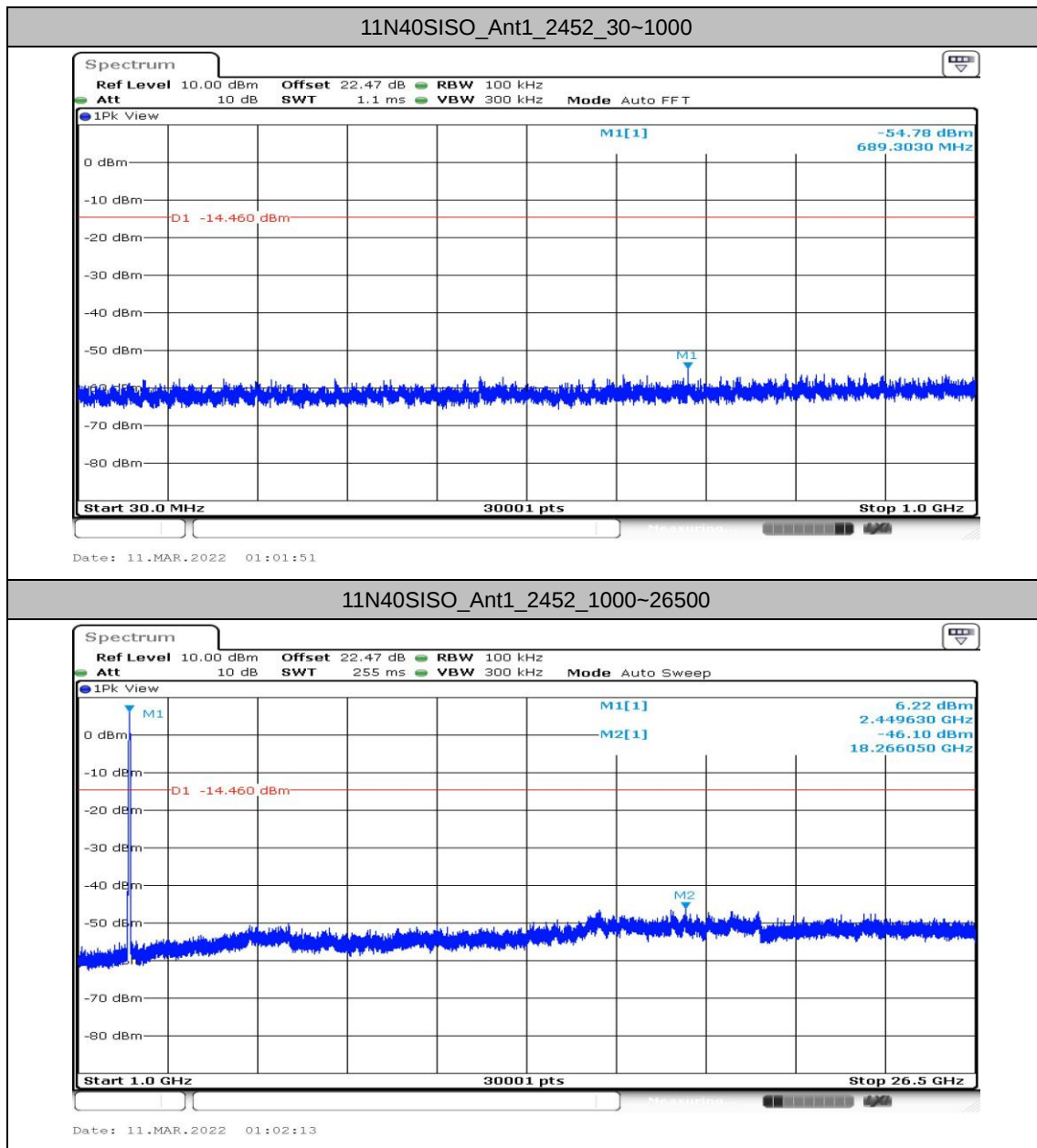














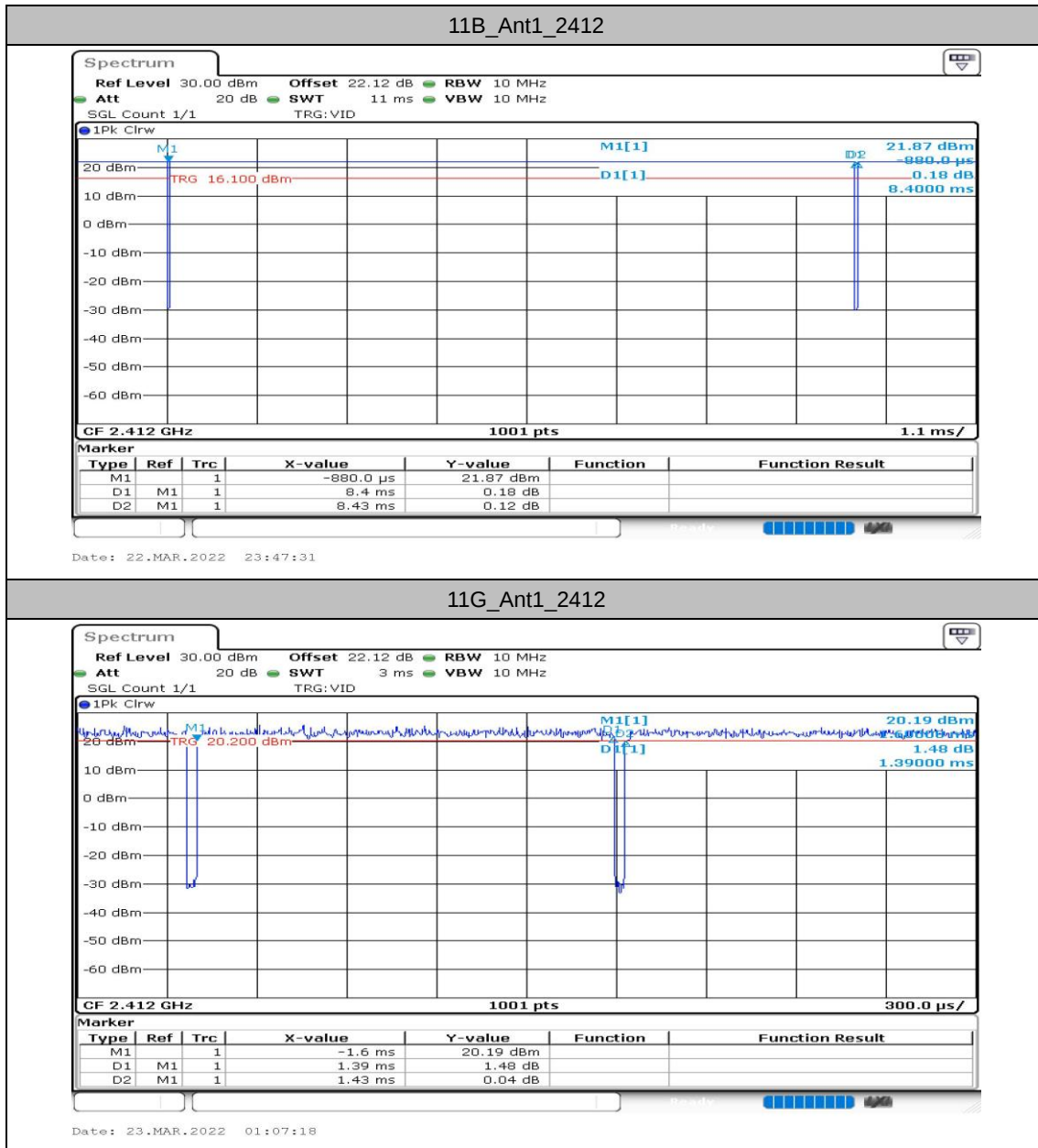
Duty Cycle

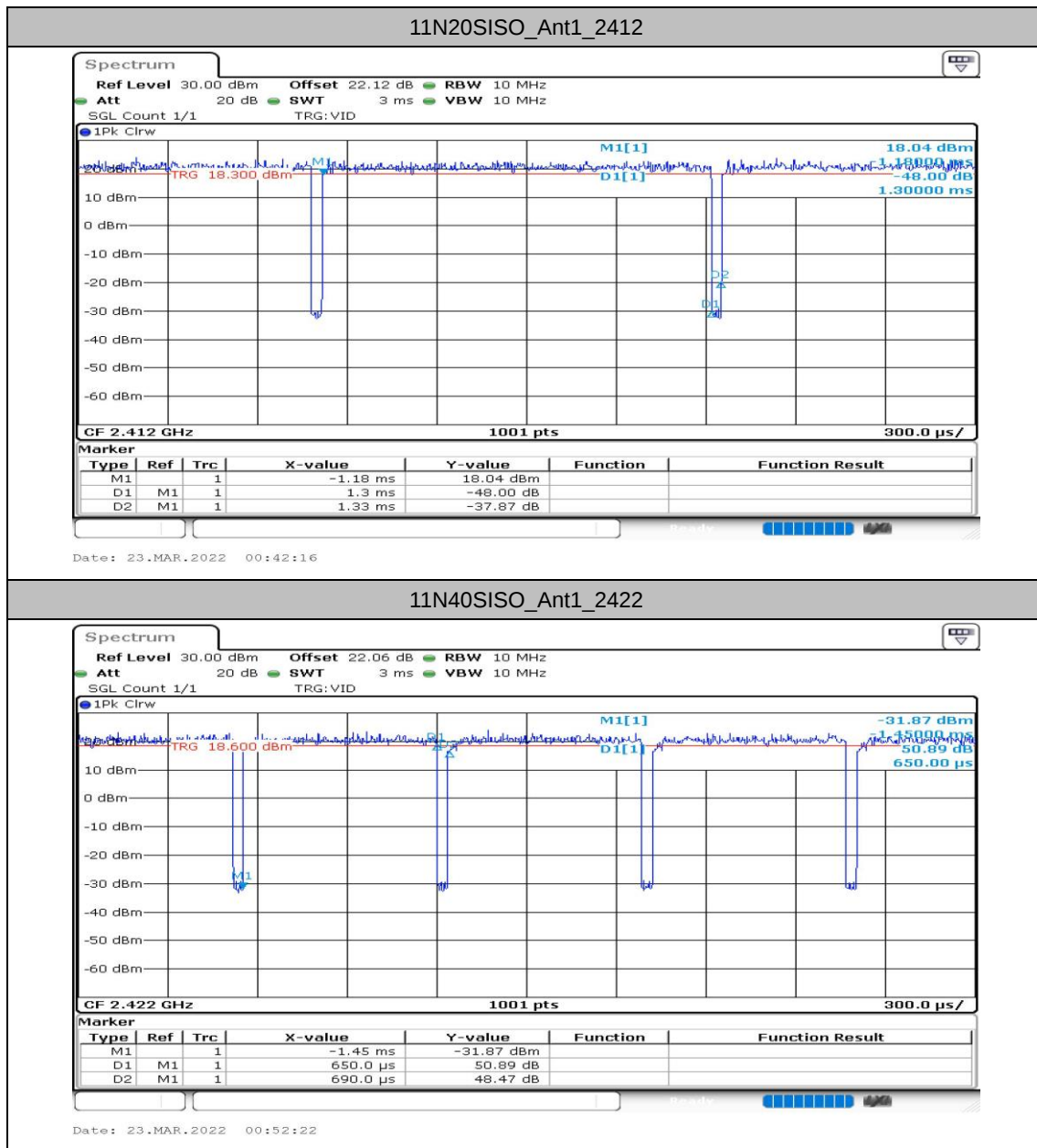
Test Result

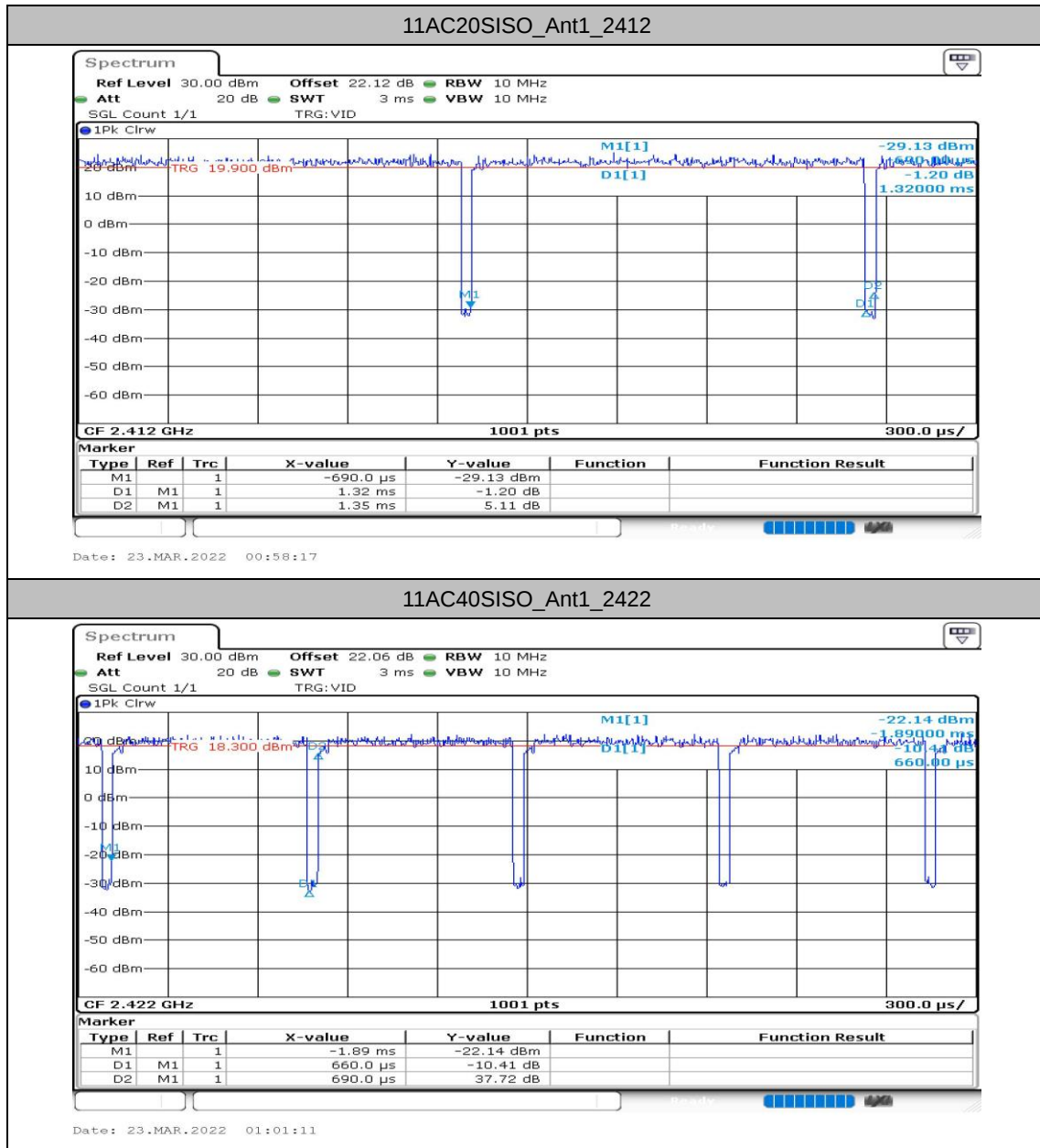
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Verdict
11B	Ant1	2412	8.40	8.43	99.64	---
11G	Ant1	2412	1.39	1.43	97.20	---
11N20SISO	Ant1	2412	1.30	1.33	97.74	---
11N40SISO	Ant1	2422	0.65	0.69	94.20	---
11AC20SISO	Ant1	2412	1.32	1.35	97.78	---
11AC40SISO	Ant1	2422	0.66	0.69	95.65	---



Test Graphs

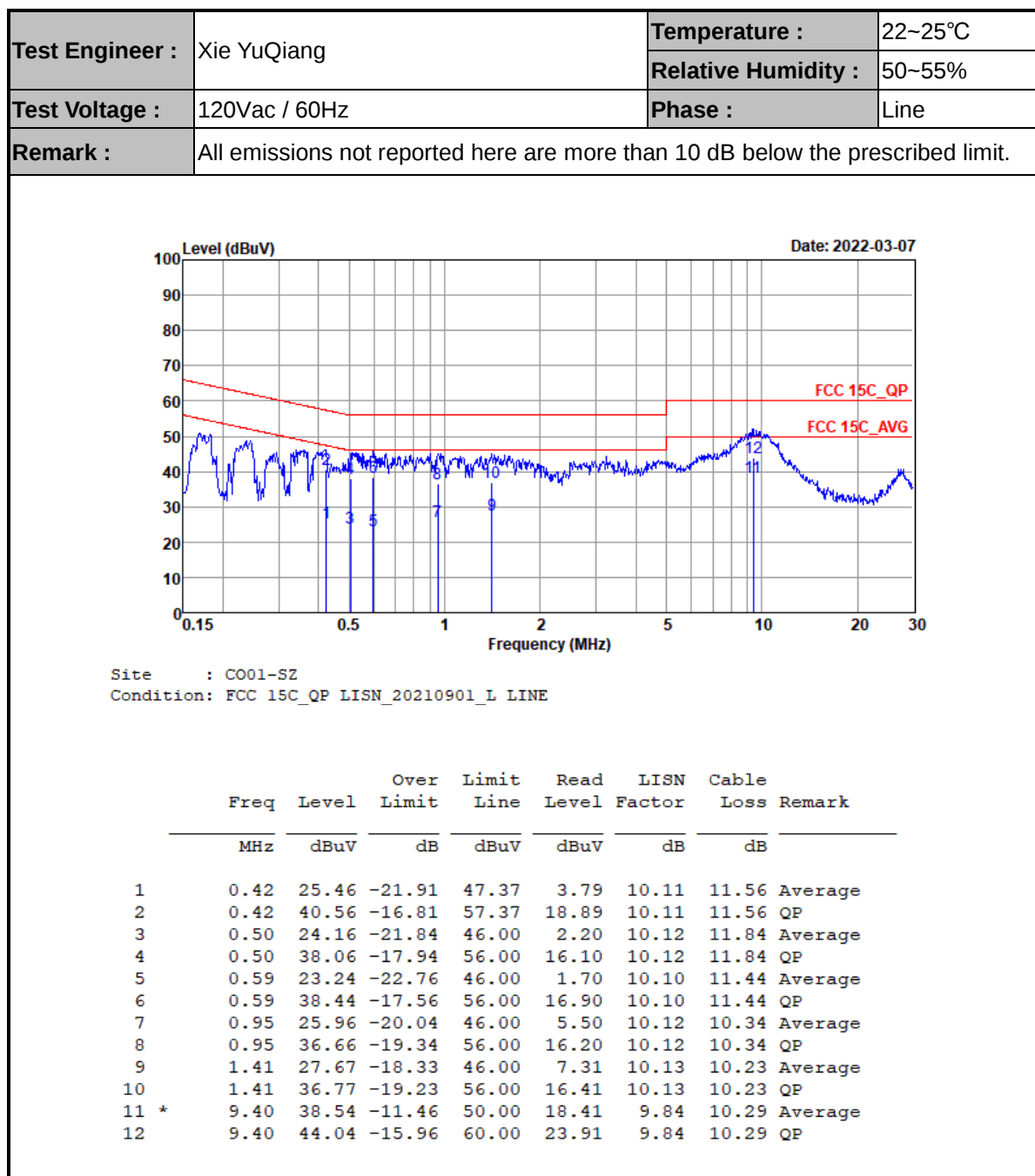






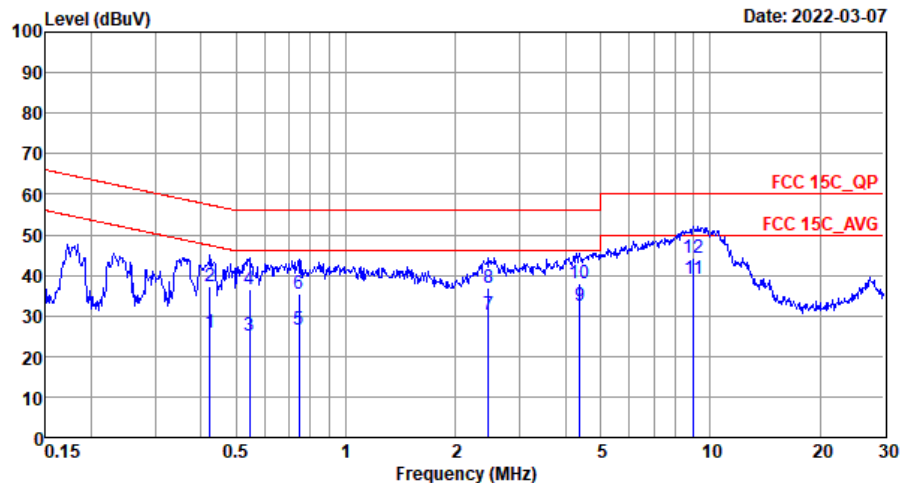


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Xie YuQiang	Temperature :	22~25°C
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15C_QP LISN 20210901_N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.42	25.95	-21.42	47.37	4.20	10.19	11.56	Average
2	0.42	37.35	-20.02	57.37	15.60	10.19	11.56	QP
3	0.54	25.17	-20.83	46.00	3.31	10.21	11.65	Average
4	0.54	36.37	-19.63	56.00	14.51	10.21	11.65	QP
5	0.74	26.55	-19.45	46.00	5.40	10.22	10.93	Average
6	0.74	35.25	-20.75	56.00	14.10	10.22	10.93	QP
7	2.46	30.39	-15.61	46.00	10.00	10.15	10.24	Average
8	2.46	36.79	-19.21	56.00	16.40	10.15	10.24	QP
9	4.38	32.38	-13.62	46.00	12.00	10.14	10.24	Average
10	4.38	37.98	-18.02	56.00	17.60	10.14	10.24	QP
11 *	9.01	39.19	-10.81	50.00	18.90	10.00	10.29	Average
12	9.01	44.39	-15.61	60.00	24.10	10.00	10.29	QP

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



Appendix C. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2387.38	55.88	-18.12	74	46.95	32	9.63	32.7	342	317	P	H
		2389.8	46.82	-7.18	54	37.88	32	9.64	32.7	342	317	A	H
		2412	110.08	-	-	101.02	32.1	9.66	32.7	342	317	P	H
		2412	108.4	-	-	99.34	32.1	9.66	32.7	342	317	A	H
		2389.06	56.3	-17.7	74	47.36	32	9.64	32.7	267	260	P	V
		2389.8	47.5	-6.5	54	38.56	32	9.64	32.7	267	260	A	V
		2412	111.79	-	-	102.73	32.1	9.66	32.7	267	260	P	V
		2412	110.15	-	-	101.09	32.1	9.66	32.7	267	260	A	V
802.11b CH 06 2437MHz		2329.18	54.91	-19.09	74	46.04	32	9.57	32.7	261	232	P	H
		2389.94	44.29	-9.71	54	35.35	32	9.64	32.7	261	232	A	H
		2437	109.22	-	-	99.93	32.3	9.69	32.7	261	232	P	H
		2437	107.41	-	-	98.12	32.3	9.69	32.7	261	232	A	H
		2486.49	54.1	-19.9	74	44.88	32.17	9.75	32.7	261	232	P	H
		2483.83	44.46	-9.54	54	35.24	32.17	9.75	32.7	261	232	A	H
		2368.38	54.25	-19.75	74	45.27	32.07	9.61	32.7	236	277	P	V
		2389.94	45.01	-8.99	54	36.07	32	9.64	32.7	236	277	A	V
		2437	112.99	-	-	103.7	32.3	9.69	32.7	236	277	P	V
		2437	111.3	-	-	102.01	32.3	9.69	32.7	236	277	A	V
		2485.16	54.96	-19.04	74	45.74	32.17	9.75	32.7	236	277	P	V
		2483.62	45.26	-8.74	54	36.04	32.17	9.75	32.7	236	277	A	V



802.11b CH 11 2462MHz		2462	108.47	-	-	99.22	32.23	9.72	32.7	289	231	P	H
		2462	106.8	-	-	97.55	32.23	9.72	32.7	289	231	A	H
		2485.24	55.54	-18.46	74	46.32	32.17	9.75	32.7	289	231	P	H
		2485	45.26	-8.74	54	36.04	32.17	9.75	32.7	289	231	A	H
		2462	112.13	-	-	102.88	32.23	9.72	32.7	289	269	P	V
		2462	110.42	-	-	101.17	32.23	9.72	32.7	289	269	A	V
		2483.96	56.53	-17.47	74	47.31	32.17	9.75	32.7	289	269	P	V
		2486.2	46.72	-7.28	54	37.5	32.17	9.75	32.7	289	269	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		4824	46.03	-27.97	74	52.31	33.85	12.01	52.14	-	-	P	H
		4824	45.92	-28.08	74	52.2	33.85	12.01	52.14	-	-	P	V
802.11b CH 06 2437MHz		4874	43.81	-30.19	74	50.14	33.73	12.04	52.1	-	-	P	H
		7311	46.58	-27.42	74	48.45	35.76	14.16	51.79	-	-	P	H
		4874	44.34	-29.66	74	50.67	33.73	12.04	52.1	-	-	P	V
		7311	47.18	-26.82	74	49.05	35.76	14.16	51.79	-	-	P	V
802.11b CH 11 2462MHz		4924	43.66	-30.34	74	49.95	33.7	12.07	52.06	-	-	P	H
		7386	47.16	-26.84	74	48.87	35.78	14.21	51.7	-	-	P	H
		4924	45.25	-28.75	74	51.54	33.7	12.07	52.06	-	-	P	V
		7386	47.51	-26.49	74	49.22	35.78	14.21	51.7	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2388.64	60.1	-13.9	74	51.16	32	9.64	32.7	304	317	P	H
		2389.8	47.36	-6.64	54	38.42	32	9.64	32.7	304	317	A	H
		2412	107	-	-	97.94	32.1	9.66	32.7	304	317	P	H
		2412	100.44	-	-	91.38	32.1	9.66	32.7	304	317	A	H
		2389.69	68.42	-5.58	74	69.37	27.8	4.91	33.66	111	244	P	V
		2389.90	48.38	-5.62	54	49.33	27.8	4.91	33.66	111	244	A	V
		2412	112.52	-	-	113.51	27.73	4.93	33.65	111	244	P	V
		2412	104.57	-	-	105.56	27.73	4.93	33.65	111	244	A	V
802.11g CH 06 2437MHz		2388.26	55.7	-18.3	74	46.76	32	9.64	32.7	100	232	P	H
		2389.94	46.29	-7.71	54	37.35	32	9.64	32.7	100	232	A	H
		2437	110.06	-	-	100.77	32.3	9.69	32.7	100	232	P	H
		2437	103.28	-	-	93.99	32.3	9.69	32.7	100	232	A	H
		2484.32	57.61	-16.39	74	48.39	32.17	9.75	32.7	100	232	P	H
		2483.83	46.2	-7.8	54	36.98	32.17	9.75	32.7	100	232	A	H
		2389.66	59.39	-14.61	74	50.45	32	9.64	32.7	260	288	P	V
		2389.94	46.53	-7.47	54	37.59	32	9.64	32.7	260	288	A	V
		2437	113.97	-	-	104.68	32.3	9.69	32.7	260	288	P	V
		2437	107.16	-	-	97.87	32.3	9.69	32.7	260	288	A	V
		2483.83	59.33	-14.67	74	50.11	32.17	9.75	32.7	260	288	P	V
		2483.62	46.82	-7.18	54	37.6	32.17	9.75	32.7	260	288	A	V



802.11g CH 11 2462MHz		2462	106.57	-	-	97.32	32.23	9.72	32.7	100	320	P	H
		2462	100	-	-	90.75	32.23	9.72	32.7	100	320	A	H
		2483.76	60.1	-13.9	74	50.88	32.17	9.75	32.7	100	320	P	H
		2484.32	46.56	-7.44	54	37.34	32.17	9.75	32.7	100	320	A	H
		2462	111.46	-	-	112.54	27.57	4.98	33.63	107	244	P	V
		2462	104.01	-	-	105.09	27.57	4.98	33.63	107	244	A	V
		2485.2	68.7	-5.3	74	69.8	27.53	4.99	33.62	107	244	P	V
		2483.8	45.21	-8.79	54	46.31	27.53	4.99	33.62	107	244	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 01 2412MHz		4824	44.76	-29.24	74	51.04	33.85	12.01	52.14	-	-	P	H
		4824	45.16	-28.84	74	51.44	33.85	12.01	52.14	-	-	P	V
802.11g CH 06 2437MHz		4874	44.21	-29.79	74	50.54	33.73	12.04	52.1	-	-	P	H
		7311	47.33	-26.67	74	49.2	35.76	14.16	51.79	-	-	P	H
		4874	44.33	-29.67	74	50.66	33.73	12.04	52.1	-	-	P	V
		7311	47.34	-26.66	74	49.21	35.76	14.16	51.79	-	-	P	V
802.11g CH 11 2462MHz		4924	44.59	-29.41	74	50.88	33.7	12.07	52.06	-	-	P	H
		7386	47.31	-26.69	74	49.02	35.78	14.21	51.7	-	-	P	H
		4924	45	-29	74	51.29	33.7	12.07	52.06	-	-	P	V
		7386	47.68	-26.32	74	49.39	35.78	14.21	51.7	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.59	60.49	-13.51	74	51.55	32	9.64	32.7	297	321	P	H
		2389.69	47.59	-6.41	54	38.65	32	9.64	32.7	297	321	A	H
		2412	105.74	-	-	96.68	32.1	9.66	32.7	297	321	P	H
		2412	99.36	-	-	90.3	32.1	9.66	32.7	297	321	A	H
		2389.90	67.74	-6.26	74	68.69	27.8	4.91	33.66	115	246	P	V
		2389.90	45.42	-8.58	54	46.37	27.8	4.91	33.66	115	246	A	V
		2412	109.24	-	-	110.23	27.73	4.93	33.65	115	246	P	V
		2412	101.64	-	-	102.63	27.73	4.93	33.65	115	246	A	V
802.11n HT20 CH 06 2437MHz		2386.44	59.49	-14.51	74	50.56	32	9.63	32.7	297	321	P	H
		2389.94	48.01	-5.99	54	39.07	32	9.64	32.7	297	321	A	H
		2437	114.58	-	-	105.29	32.3	9.69	32.7	297	321	P	H
		2437	107.38	-	-	98.09	32.3	9.69	32.7	297	321	A	H
		2485.3	59.6	-14.4	74	50.38	32.17	9.75	32.7	297	321	P	H
		2483.9	48.56	-5.44	54	39.34	32.17	9.75	32.7	297	321	A	H
		2386.44	61.65	-12.35	74	52.72	32	9.63	32.7	262	297	P	V
		2389.66	48.09	-5.91	54	39.15	32	9.64	32.7	262	297	A	V
		2437	113.84	-	-	104.55	32.3	9.69	32.7	262	297	P	V
		2437	107.26	-	-	97.97	32.3	9.69	32.7	262	297	A	V
		2484.95	59.41	-14.59	74	50.19	32.17	9.75	32.7	262	297	P	V
		2484.67	48.69	-5.31	54	39.47	32.17	9.75	32.7	262	297	A	V



802.11n HT20 CH 11 2462MHz		2462	108.53	-	-	99.28	32.23	9.72	32.7	327	321	P	H
		2462	102.64	-	-	93.39	32.23	9.72	32.7	327	321	A	H
		2483.84	63.13	-10.87	74	53.91	32.17	9.75	32.7	327	321	P	H
		2483.64	48.73	-5.27	54	39.51	32.17	9.75	32.7	327	321	A	H
		2462	110.23	-	-	111.31	27.57	4.98	33.63	107	246	P	V
		2462	102.27	-	-	103.35	27.57	4.98	33.63	107	246	A	V
		2483.64	67.66	-6.34	74	68.76	27.53	4.99	33.62	107	246	P	V
		2483.6	45.16	-8.84	54	46.26	27.53	4.99	33.62	107	246	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 01 2412MHz		4824	45.31	-28.69	74	51.59	33.85	12.01	52.14	-	-	P	H
		4824	44.97	-29.03	74	51.25	33.85	12.01	52.14	-	-	P	V
802.11n HT20 CH 06 2437MHz		4874	44.76	-29.24	74	51.09	33.73	12.04	52.1	-	-	P	H
		7311	46.63	-27.37	74	48.5	35.76	14.16	51.79	-	-	P	H
		4874	44.35	-29.65	74	50.68	33.73	12.04	52.1	-	-	P	V
		7311	46.84	-27.16	74	48.71	35.76	14.16	51.79	-	-	P	V
802.11n HT20 CH 11 2462MHz		4924	44.9	-29.1	74	51.19	33.7	12.07	52.06	-	-	P	H
		7386	46.51	-27.49	74	48.22	35.78	14.21	51.7	-	-	P	H
		4924	44.34	-29.66	74	50.63	33.7	12.07	52.06	-	-	P	V
		7386	47.72	-26.28	74	49.43	35.78	14.21	51.7	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2386.58	58.71	-15.29	74	49.78	32	9.63	32.7	232	307	P	H
		2389.8	47.91	-6.09	54	38.97	32	9.64	32.7	232	307	A	H
		2422	100.13	-	-	90.95	32.2	9.68	32.7	232	307	P	H
		2422	93.39	-	-	84.21	32.2	9.68	32.7	232	307	A	H
		2491.18	57.13	-16.87	74	47.97	32.1	9.76	32.7	232	307	P	H
		2491.81	47.71	-6.29	54	38.55	32.1	9.76	32.7	232	307	A	H
		2389.66	63.57	-10.43	74	64.52	27.8	4.91	33.66	110	244	P	V
		2389.94	48.37	-5.63	54	49.32	27.8	4.91	33.66	110	244	A	V
		2422	105.63	-	-	106.67	27.67	4.94	33.65	110	244	P	V
		2422	97.82	-	-	98.86	27.67	4.94	33.65	110	244	A	V
		2484.04	53.09	-20.91	74	54.19	27.53	4.99	33.62	110	244	P	V
		2483.69	40.76	-13.24	54	41.86	27.53	4.99	33.62	110	244	A	V
802.11n HT40 CH 06 2437MHz		2389.24	57.11	-16.89	74	48.17	32	9.64	32.7	294	301	P	H
		2389.94	47.77	-6.23	54	38.83	32	9.64	32.7	294	301	A	H
		2437	103.74	-	-	94.45	32.3	9.69	32.7	294	301	P	H
		2437	97.24	-	-	87.95	32.3	9.69	32.7	294	301	A	H
		2500	56.8	-17.2	74	47.63	32.1	9.77	32.7	294	301	P	H
		2483.76	47.54	-6.46	54	38.32	32.17	9.75	32.7	294	301	A	H
		2389.52	66.55	-7.45	74	67.5	27.8	4.91	33.66	109	246	P	V
		2389.94	48.73	-5.27	54	49.68	27.8	4.91	33.66	109	246	A	V
		2437	110.21	-	-	111.3	27.6	4.96	33.65	109	246	P	V
		2437	101.61	-	-	102.7	27.6	4.96	33.65	109	246	A	V
		2483.9	68.02	-5.98	74	69.12	27.53	4.99	33.62	109	246	P	V
		2483.5	47.06	-6.94	54	48.16	27.53	4.99	33.62	109	246	A	V



802.11n HT40 CH 09 2452MHz		2323.16	57.4	-16.6	74	48.54	32	9.56	32.7	294	301	P	H
		2387.7	47.53	-6.47	54	38.59	32	9.64	32.7	294	301	A	H
		2452	103.12	-	-	93.81	32.3	9.71	32.7	294	301	P	H
		2452	95.58	-	-	86.27	32.3	9.71	32.7	294	301	A	H
		2484.39	59.29	-14.71	74	50.07	32.17	9.75	32.7	294	301	P	H
		2483.83	48.57	-5.43	54	39.35	32.17	9.75	32.7	294	301	A	H
		2369.36	57.51	-16.49	74	48.57	32.03	9.61	32.7	232	256	P	V
		2387.28	47.59	-6.41	54	38.66	32	9.63	32.7	232	256	A	V
		2452	104.25	-	-	94.94	32.3	9.71	32.7	232	256	P	V
		2452	97.69	-	-	88.38	32.3	9.71	32.7	232	256	A	V
		2486	60.29	-13.71	74	51.07	32.17	9.75	32.7	232	256	P	V
		2484.53	48.96	-5.04	54	39.74	32.17	9.75	32.7	232	256	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		4844	45.02	-28.98	74	51.31	33.8	12.03	52.12	-	-	P	H
HT40		7266	46.81	-27.19	74	48.73	35.76	14.14	51.82	-	-	P	H
CH 03		4844	44.71	-29.29	74	51	33.8	12.03	52.12	-	-	P	V
2422MHz		7266	47.03	-26.97	74	48.95	35.76	14.14	51.82	-	-	P	V
802.11n		4874	44.73	-29.27	74	51.06	33.73	12.04	52.1	-	-	P	H
HT40		7311	47.53	-26.47	74	49.4	35.76	14.16	51.79	-	-	P	H
CH 06		4874	45.02	-28.98	74	51.35	33.73	12.04	52.1	-	-	P	V
2437MHz		7311	47.23	-26.77	74	49.1	35.76	14.16	51.79	-	-	P	V
802.11n		4904	44.13	-29.87	74	50.44	33.7	12.06	52.07	-	-	P	H
HT40		7356	47.9	-26.1	74	49.68	35.77	14.19	51.74	-	-	P	H
CH 09		4904	44.88	-29.12	74	51.19	33.7	12.06	52.07	-	-	P	V
2452MHz		7356	47.62	-26.38	74	49.4	35.77	14.19	51.74	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT40 LF		106.63	20.44	-23.06	43.5	37.29	15.87	2.47	35.19	-	-		H
		159.01	26.04	-17.46	43.5	39.24	19.31	2.59	35.1	-	-		H
		193.93	26.04	-17.46	43.5	41.78	16.63	2.73	35.1	-	-		H
		338.46	21.35	-24.65	46	32.29	20.74	3.22	34.9	-	-		H
		594.54	25.91	-20.09	46	30.87	25.69	3.86	34.51	-	-		H
		850.62	28.37	-17.63	46	30	28.61	4.06	34.3	-	-		H
		47.46	28.23	-11.77	40	40.86	20.27	2.17	35.07	-	-		V
		178.41	27.41	-16.09	43.5	41.66	18.19	2.66	35.1	-	-		V
		278.32	20.79	-25.21	46	33.42	19.27	3.04	34.94	-	-		V
		443.22	23.17	-22.83	46	31.55	23.03	3.3	34.71	-	-		V
		592.6	25.9	-20.1	46	30.91	25.65	3.85	34.51	-	-		V
		742.95	28.36	-17.64	46	31.15	27.72	3.9	34.41	-	-		V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<Simultaneous transmission>

2.4GHz 2400~2483.5MHz

WIFI 802.11N40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11N HT40 CH 09 2452MHz & LTE Band13	*	2343.46	55.29	-18.71	74	46.31	32.1	9.58	32.7	100	318	P	H
	*	2389.8	45.93	-8.07	54	36.99	32	9.64	32.7	100	318	A	H
		2452	101.2	-	-	91.89	32.3	9.71	32.7	100	318	P	H
		2452	94.4	-	-	85.09	32.3	9.71	32.7	100	318	A	H
		2483.97	58.53	-15.47	74	49.31	32.17	9.75	32.7	100	318	P	H
		2484.11	47.32	-6.68	54	38.1	32.17	9.75	32.7	100	318	A	H
	*	2345.14	55.26	-18.74	74	46.28	32.1	9.58	32.7	134	292	P	V
	*	2386.86	46	-8	54	37.07	32	9.63	32.7	134	292	A	V
		2452	103.82	-	-	94.51	32.3	9.71	32.7	134	292	P	V
		2452	96.65	-	-	87.34	32.3	9.71	32.7	134	292	A	V
		2484.53	59.83	-14.17	74	50.61	32.17	9.75	32.7	134	292	P	V
		2484.04	48.22	-5.78	54	39	32.17	9.75	32.7	134	292	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11N40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11N HT40 CH 09 2452MHz & LTE Band13		1564	46.16	-27.84	74	42.78	27.93	8.57	33.12	-	-	P	H
		2346	47.67	-26.33	74	38.68	32.1	9.59	32.7	-	-	P	H
		3128	44.31	-29.69	74	52.96	32.85	10.77	52.27	-	-	P	H
		4904	46.35	-27.65	74	52.66	33.7	12.06	52.07	-	-	P	H
		7356	47.61	-26.39	74	49.39	35.77	14.19	51.74	-	-	P	H
		1564	46.64	-27.36	74	43.26	27.93	8.57	33.12	-	-	P	V
		2346	47.81	-26.19	74	38.82	32.1	9.59	32.7	-	-	P	V
		3128	44.74	-29.26	74	53.39	32.85	10.77	52.27	-	-	P	V
		4904	45.78	-28.22	74	52.09	33.7	12.06	52.07	-	-	P	V
		7356	47.49	-26.51	74	49.27	35.77	14.19	51.74	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical



A calculation example for radiated spurious emission is shown as below:

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 00 2402MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)

2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

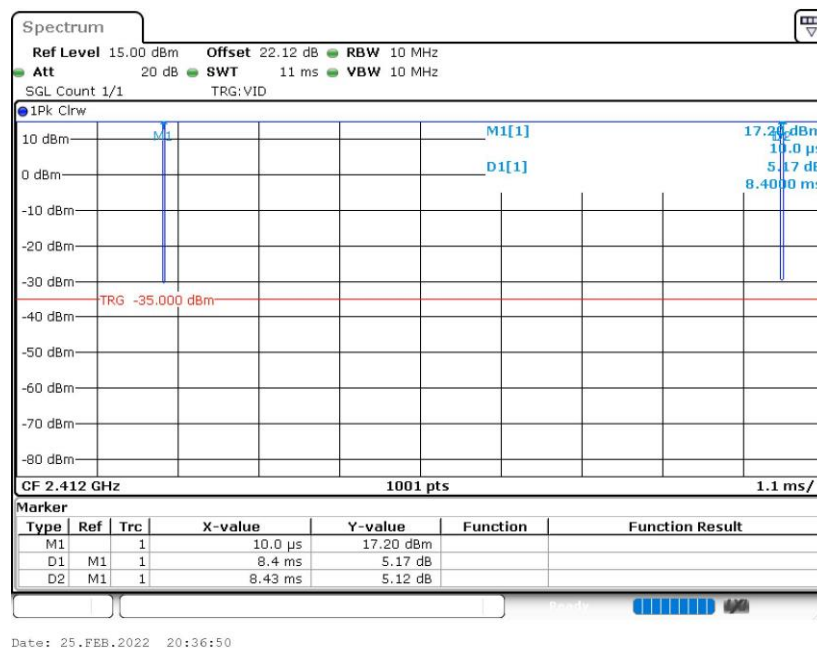
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

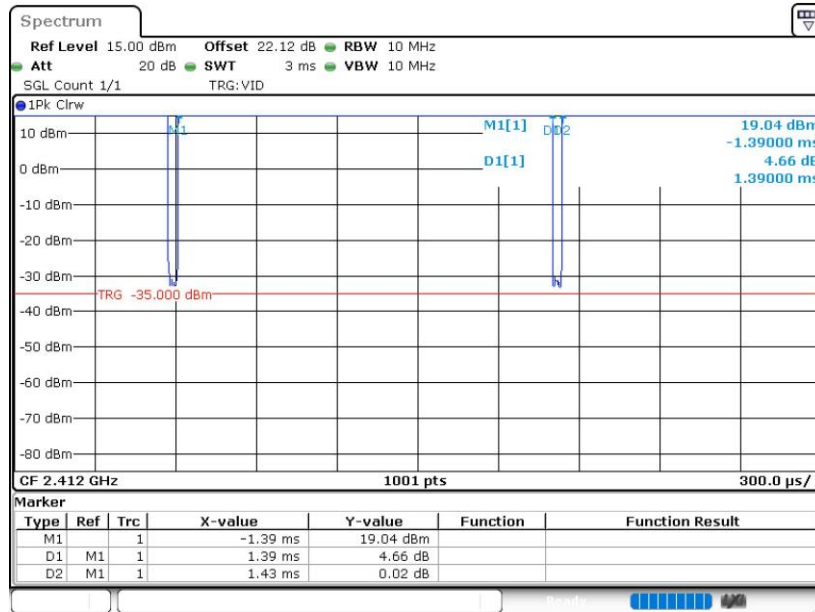
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	99.64	—	—	10Hz
802.11g	97.20	1.39	0.719	1KHz
802.11n HT20	97.74	1.3	0.769	1KHz
802.11n HT40	94.20	0.65	1.538	3KHz

802.11b

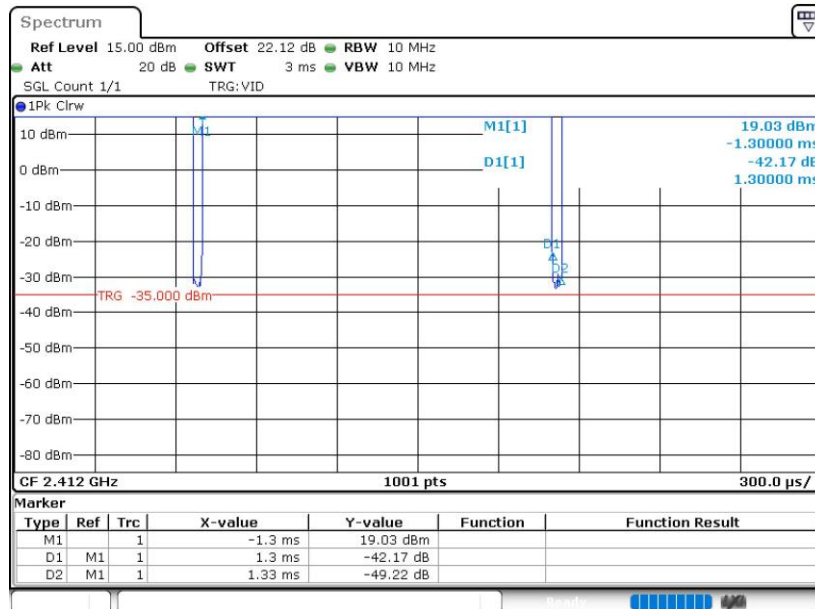


802.11g



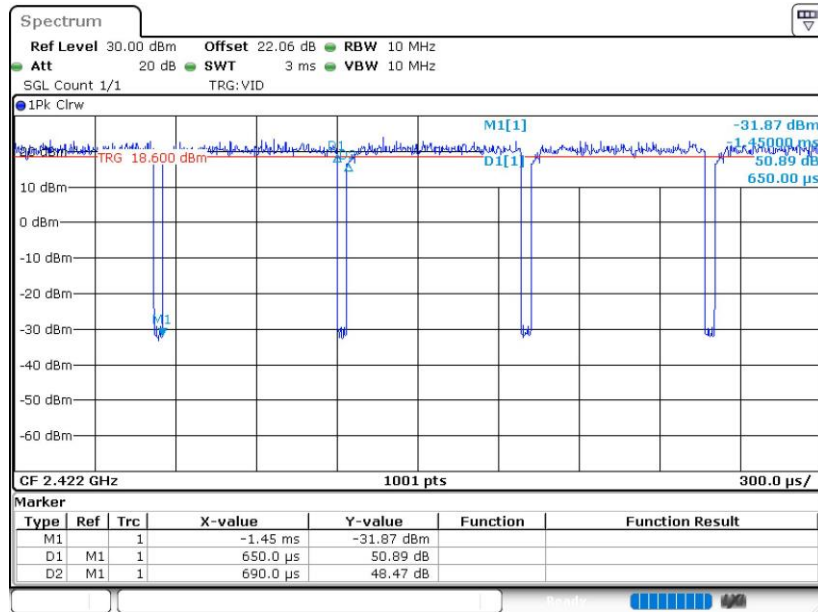
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802.11n HT20



Date: 25.FEB.2022 20:49:32

802.11n HT40



Date: 23.MAR.2022 00:52:22