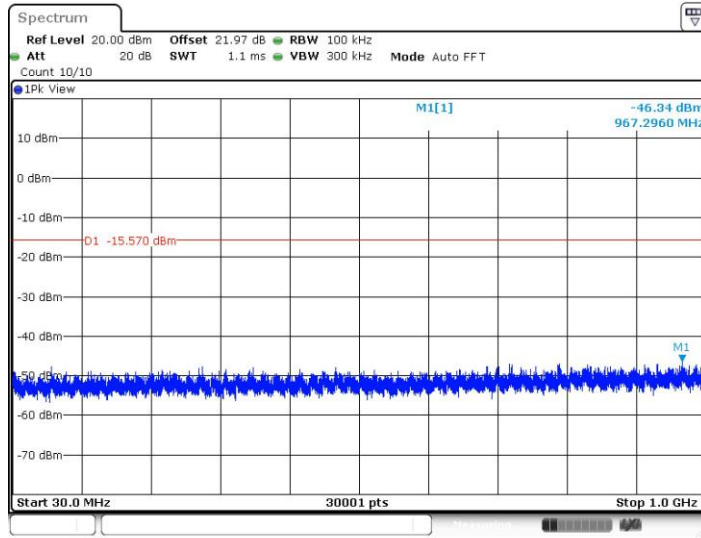


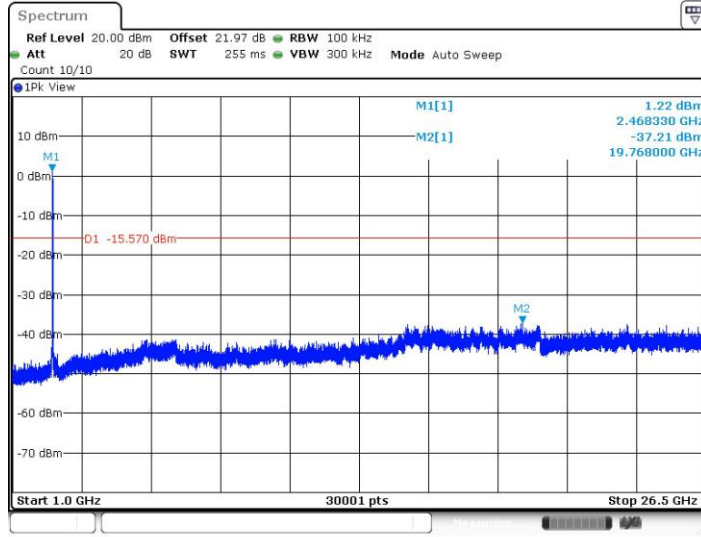


11G_Ant1_2462_30~1000



Date: 13.JUL.2022 12:36:42

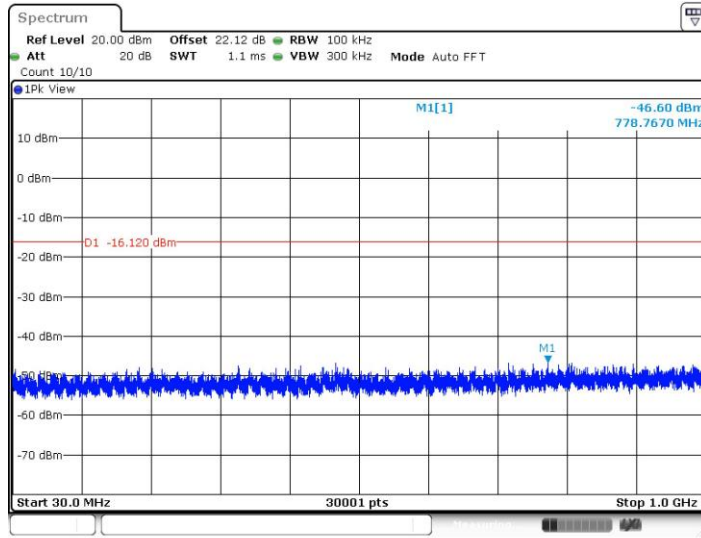
11G_Ant1_2462_1000~26500



Date: 13.JUL.2022 12:37:04

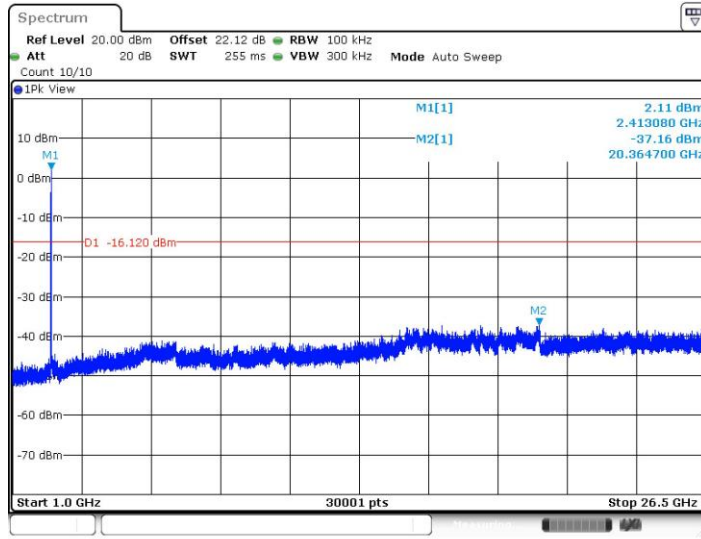


11N20SISO_Ant1_2412_30~1000



Date: 13.JUL.2022 12:38:11

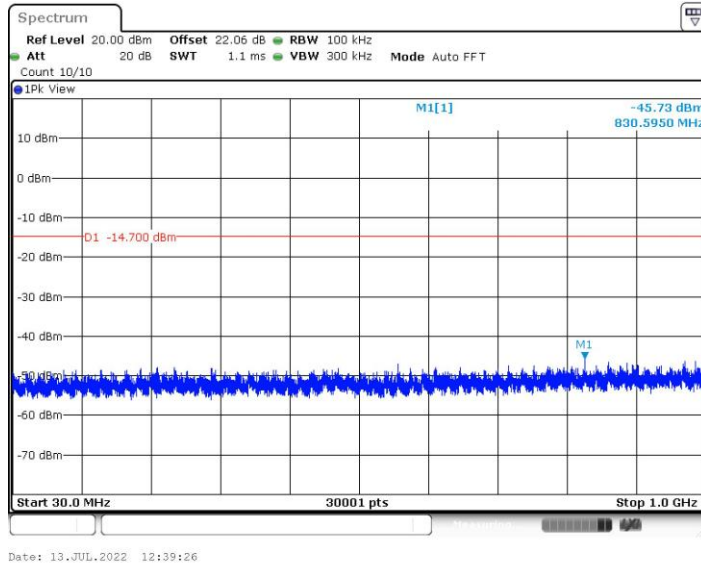
11N20SISO_Ant1_2412_1000~26500



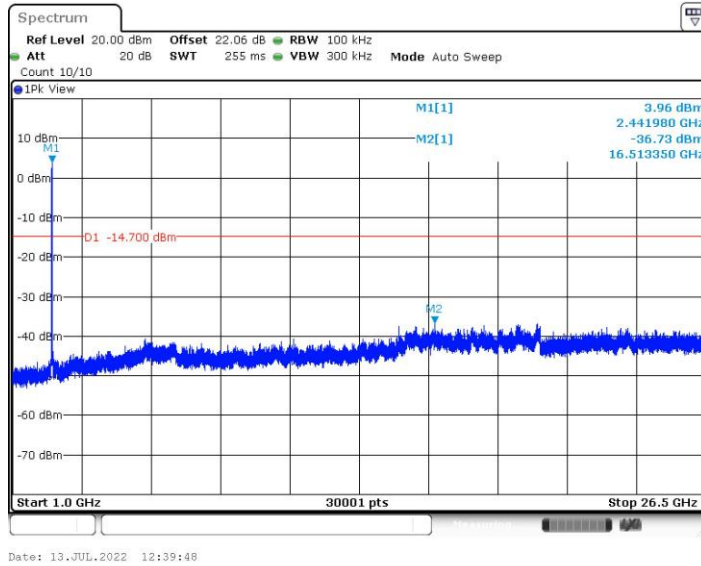
Date: 13.JUL.2022 12:38:33

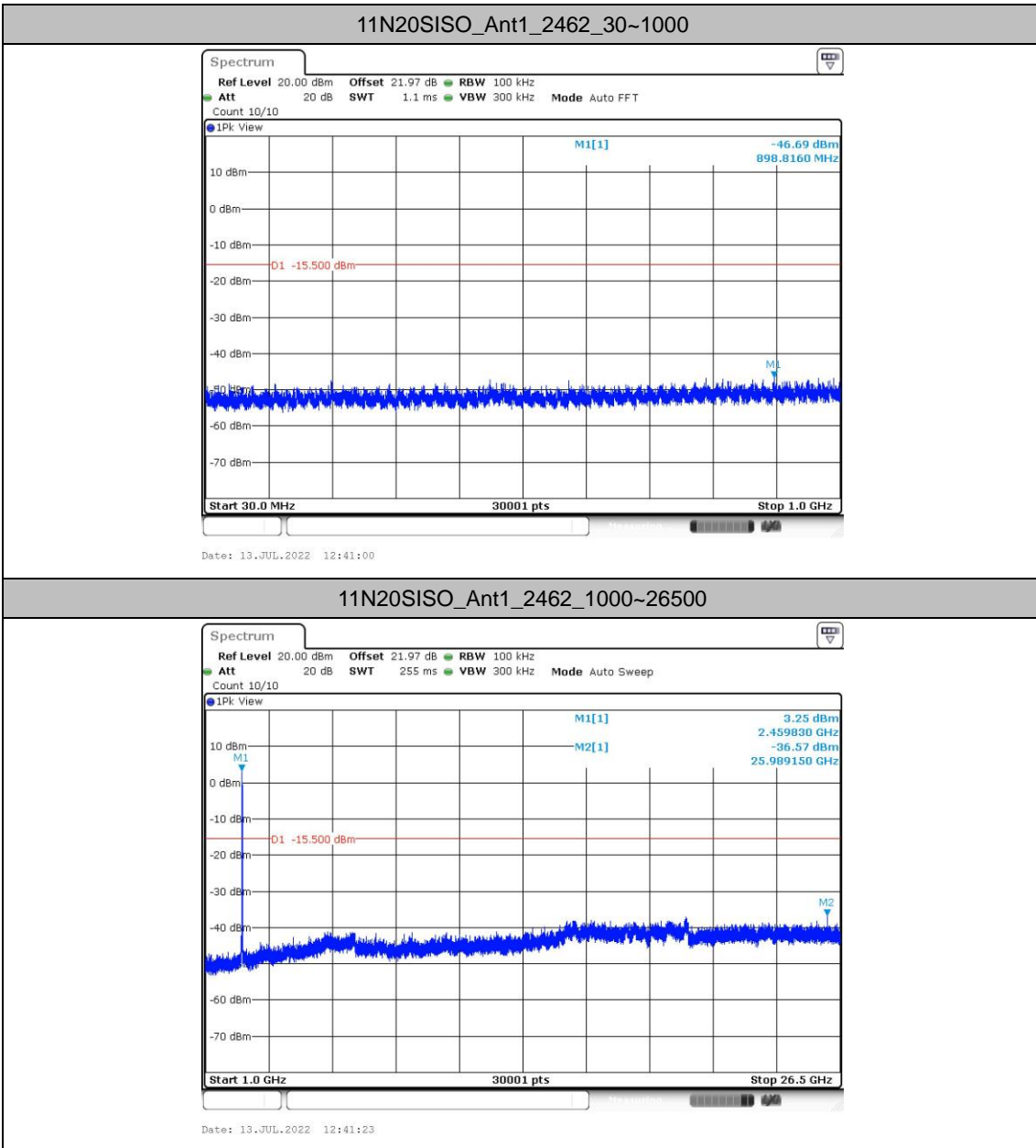


11N20SISO_Ant1_2437_30~1000



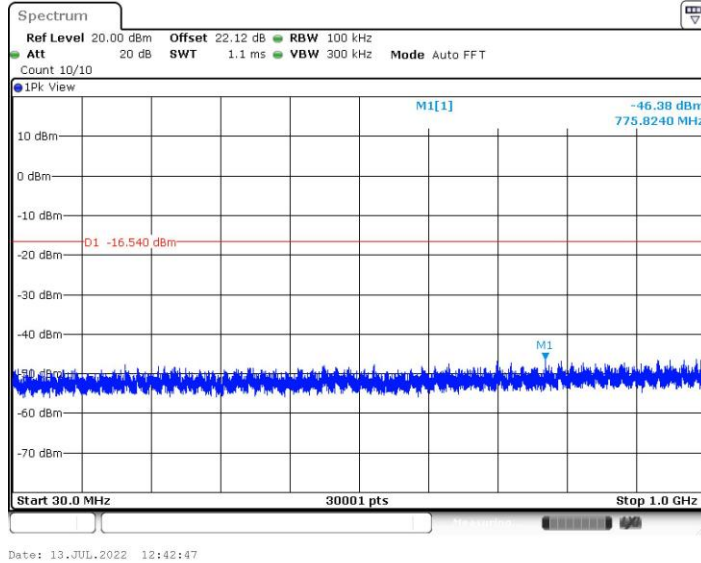
11N20SISO_Ant1_2437_1000~26500



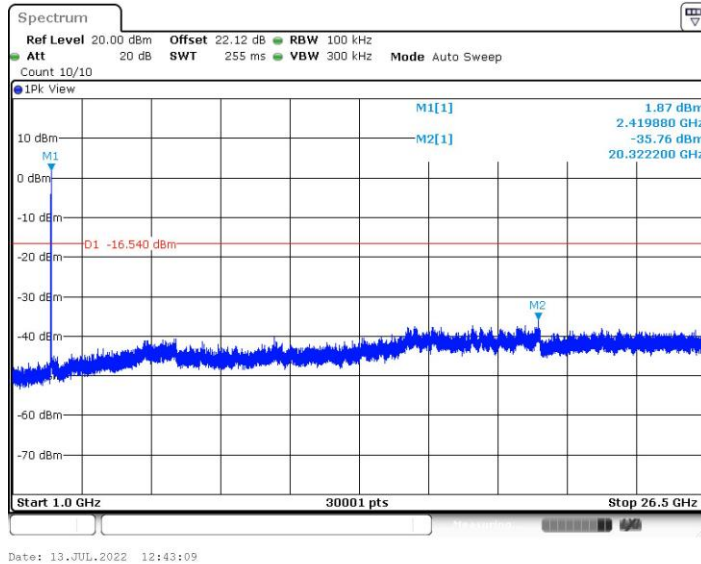




11AX20SISO_Ant1_2412_30~1000

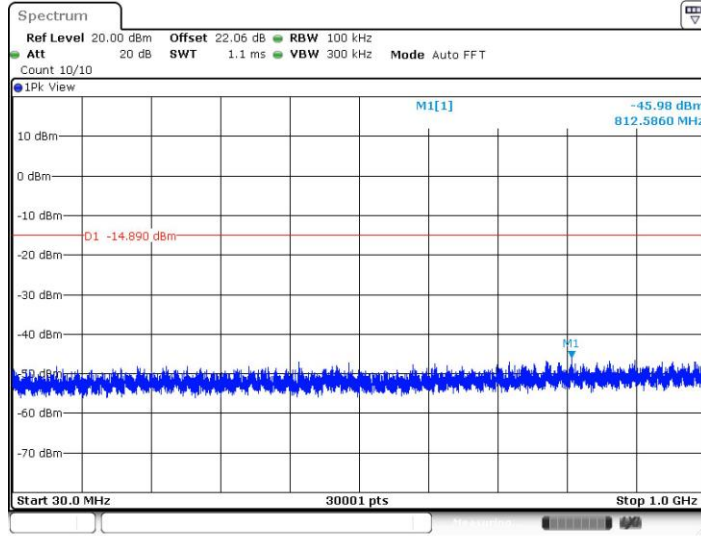


11AX20SISO_Ant1_2412_1000~26500



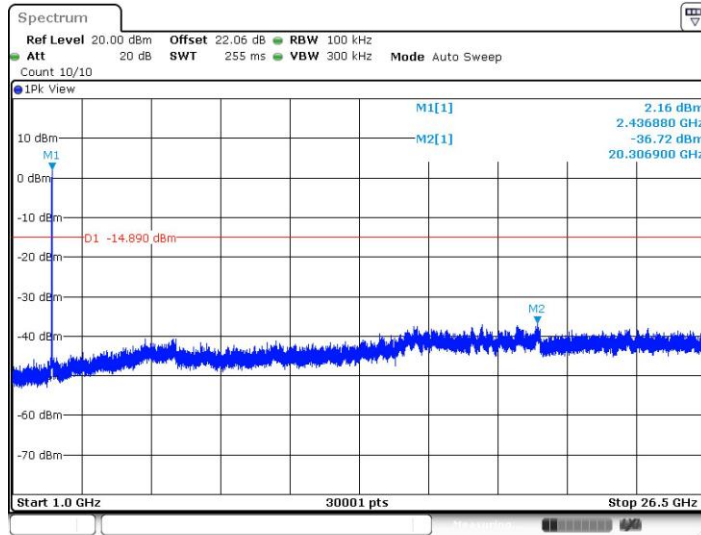


11AX20SISO_Ant1_2437_30~1000



Date: 13.JUL.2022 12:44:04

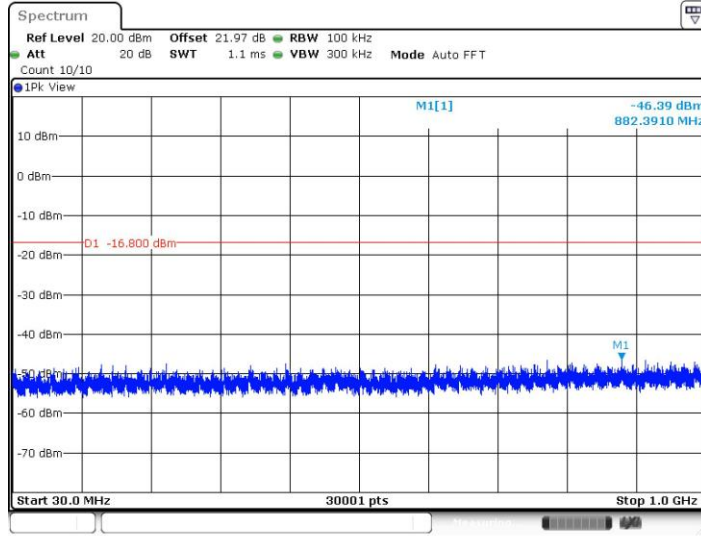
11AX20SISO_Ant1_2437_1000~26500



Date: 13.JUL.2022 12:44:26

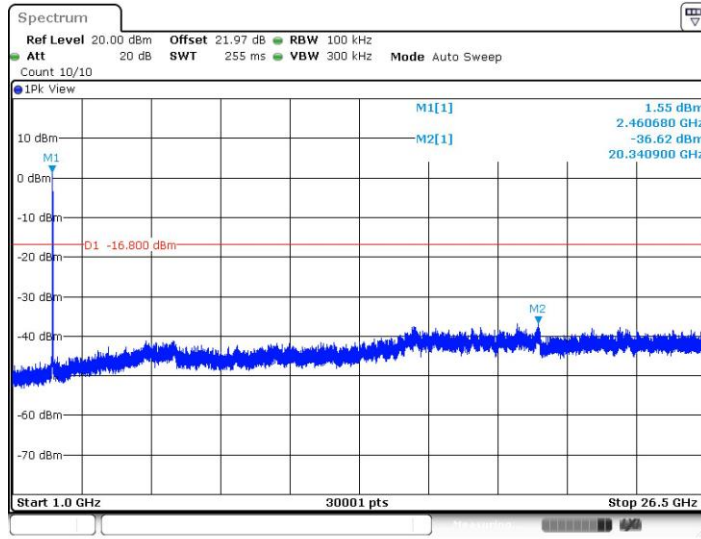


11AX20SISO_Ant1_2462_30~1000



Date: 13.JUL.2022 12:45:38

11AX20SISO_Ant1_2462_1000~26500



Date: 13.JUL.2022 12:46:00



Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Ru Size	Ru Index	Set Power	Peak power[dBm]	Conducted Limit[dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11AX20 MIMO	Ant1	2412	26Tone	RU0	13	23.23	≤30.00	20.23	≤36.00	PASS
			52Tone	RU37	16	24.89	≤30.00	21.89	≤36.00	PASS
			106Tone	RU53	14	24.06	≤30.00	21.06	≤36.00	PASS
	Ant1	2462	26Tone	RU8	13	23.43	≤30.00	20.43	≤36.00	PASS
			52Tone	RU40	16	25.36	≤30.00	22.36	≤36.00	PASS
			106Tone	RU54	14	24.28	≤30.00	21.28	≤36.00	PASS



Test Result Average

Test Mode	Antenna	Freq(MHz)	Ru Size	Ru Index	Set Power	Average power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Gain [dBi]
11AX20SISO	Ant1	2412	26Tone	RU0	13	12.88	95.28	0.21	13.09	-3.00
			52Tone	RU37	16	15.85	95.28	0.21	16.06	-3.00
			106Tone	RU53	14	14.05	95.28	0.21	14.26	-3.00
		2462	26Tone	RU8	13	13.18	95.28	0.21	13.39	-3.00
			52Tone	RU40	16	16.10	95.28	0.21	16.31	-3.00
			106Tone	RU54	14	14.07	95.28	0.21	14.28	-3.00



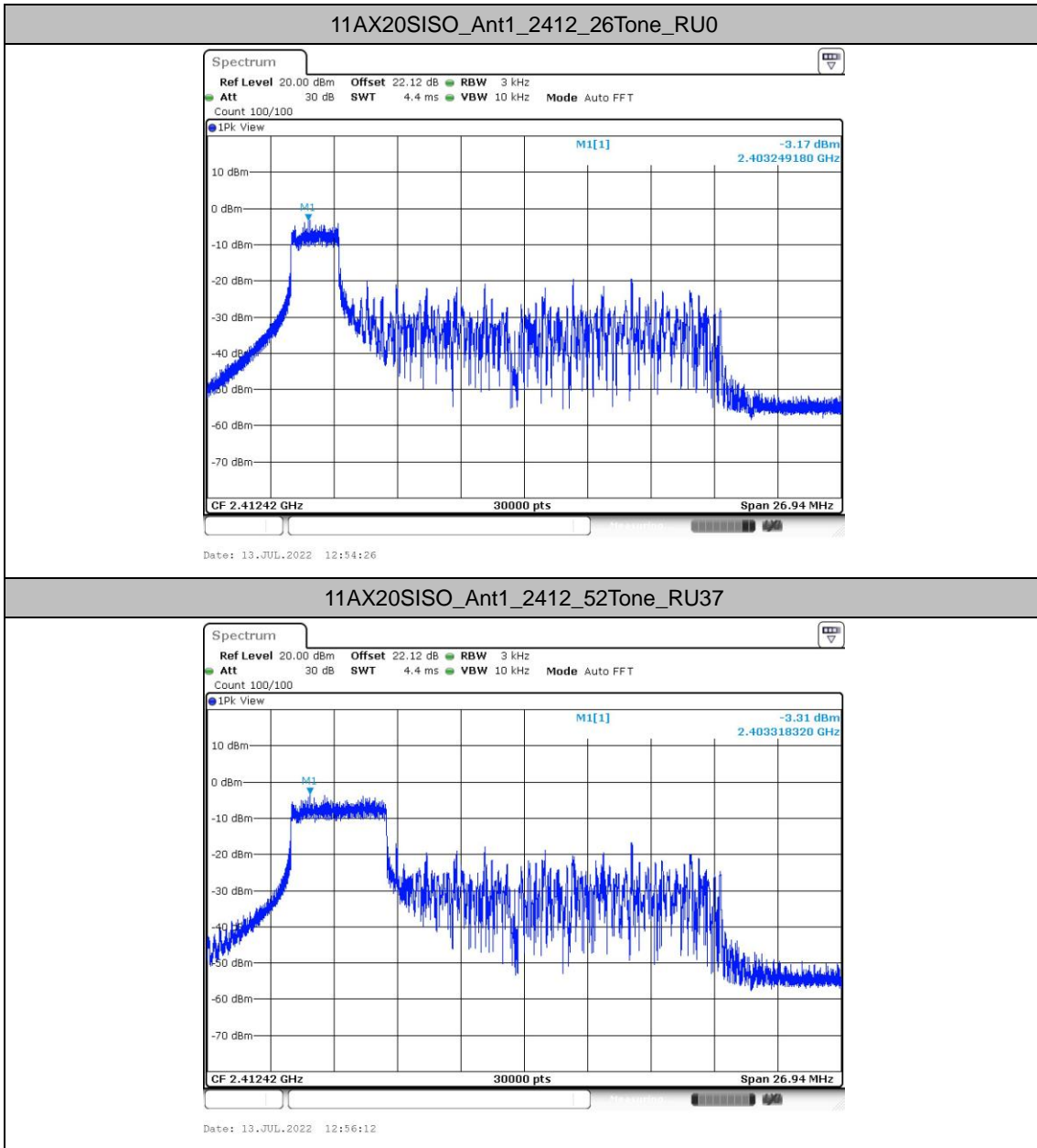
Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	RuSize	RuIndex	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11AX20SISO	Ant1	2412	26Tone	RU0	-3.17	≤8.00	PASS
			52Tone	RU37	-3.31	≤8.00	PASS
			106Tone	RU53	-7.18	≤8.00	PASS
		2462	26Tone	RU8	-3.19	≤8.00	PASS
			52Tone	RU40	-2.16	≤8.00	PASS
			106Tone	RU54	-7.76	≤8.00	PASS

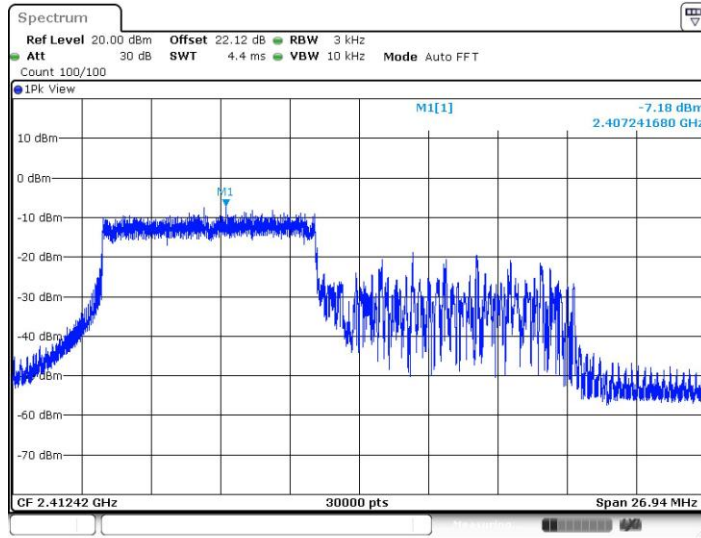


Test Graphs



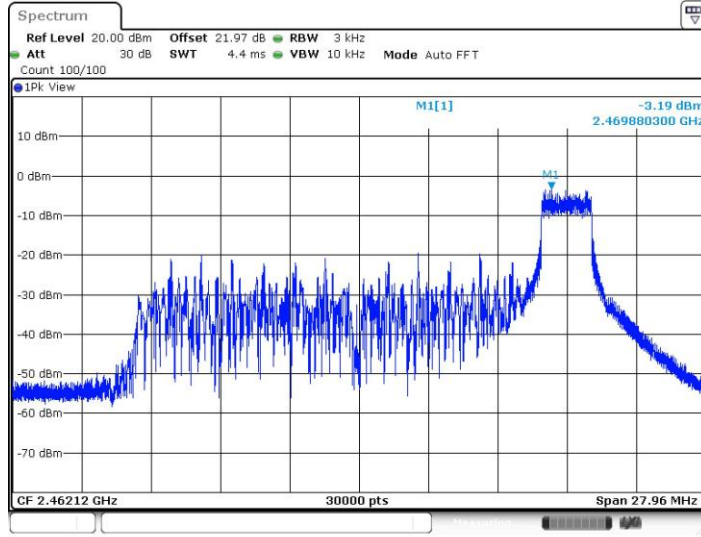


11AX20SISO_Ant1_2412_106Tone_RU53



Date: 13.JUL.2022 12:57:24

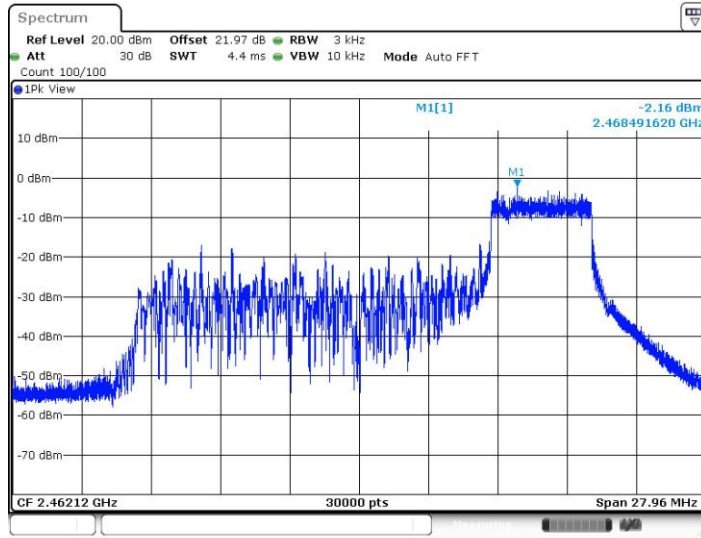
11AX20SISO_Ant1_2462_26Tone_RU8



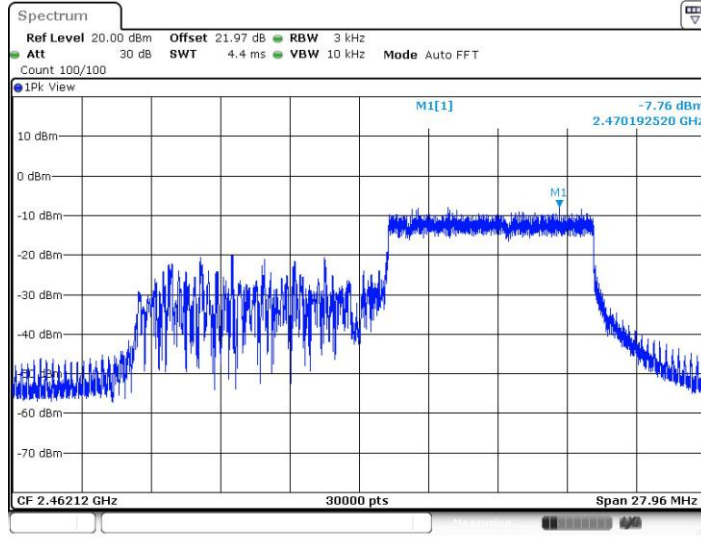
Date: 13.JUL.2022 12:59:01



11AX20SISO_Ant1_2462_52Tone_RU40



11AX20SISO_Ant1_2462_106Tone_RU54





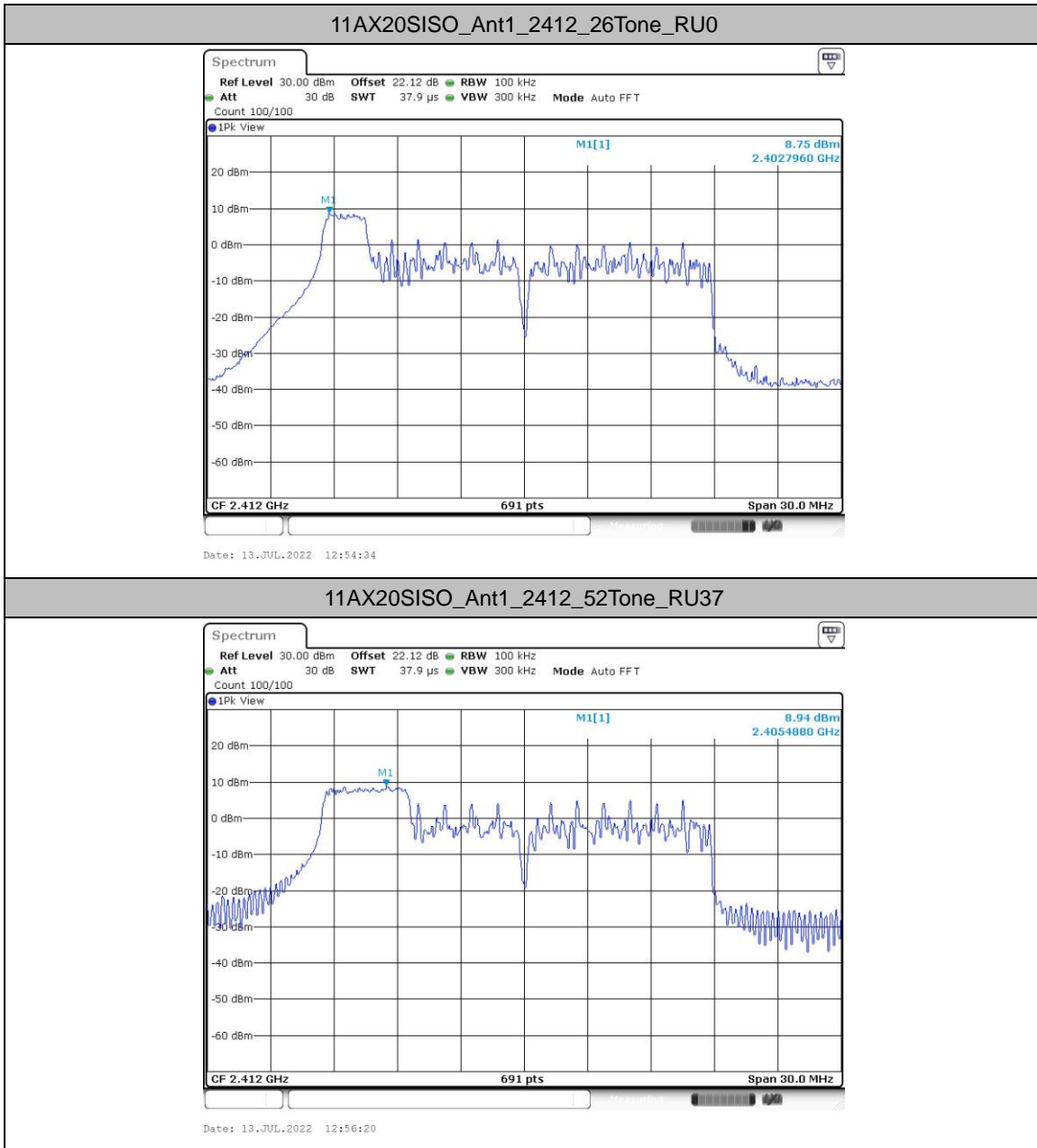
Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm/100KHz]
11AX20SISO	Ant1	2412	2402.80	8.75
			2405.49	8.94
			2410.00	4.64
		2462	2470.94	8.98
			2469.69	9.70
			2468.99	5.39

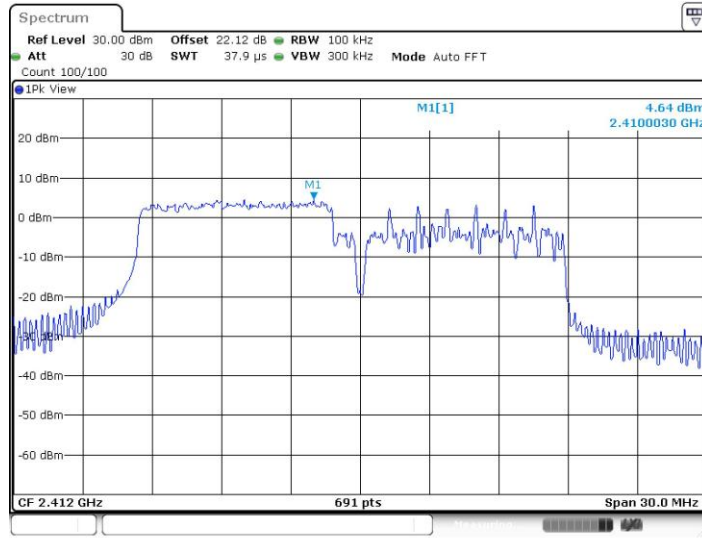


Test Graphs

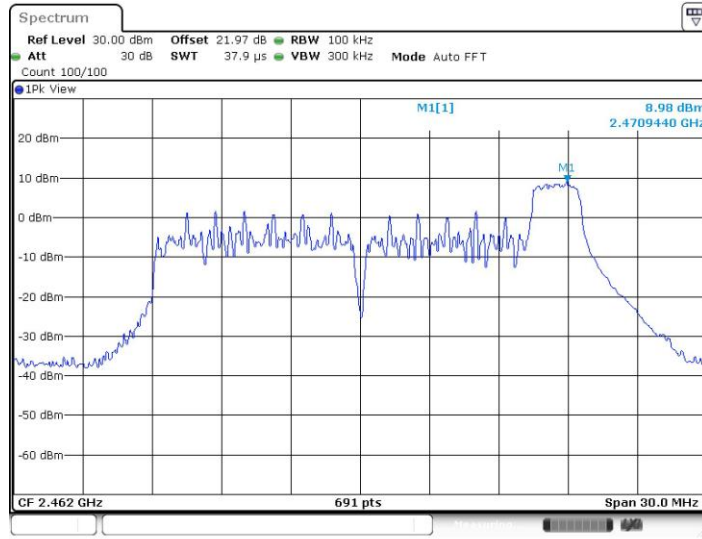




11AX20SISO_Ant1_2412_106Tone_RU53

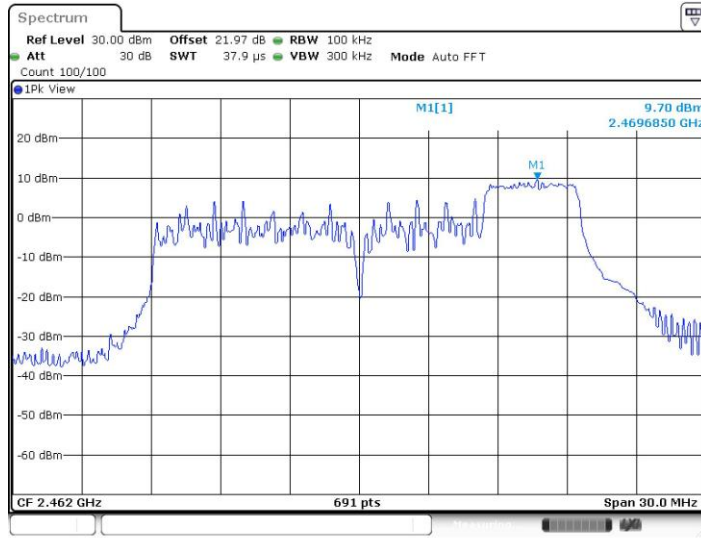


11AX20SISO_Ant1_2462_26Tone_RU8

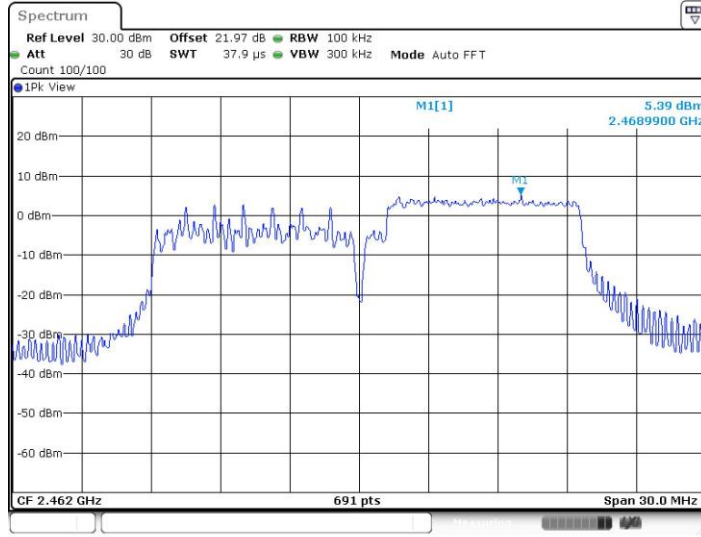




11AX20SISO_Ant1_2462_52Tone_RU40



11AX20SISO_Ant1_2462_106Tone_RU54





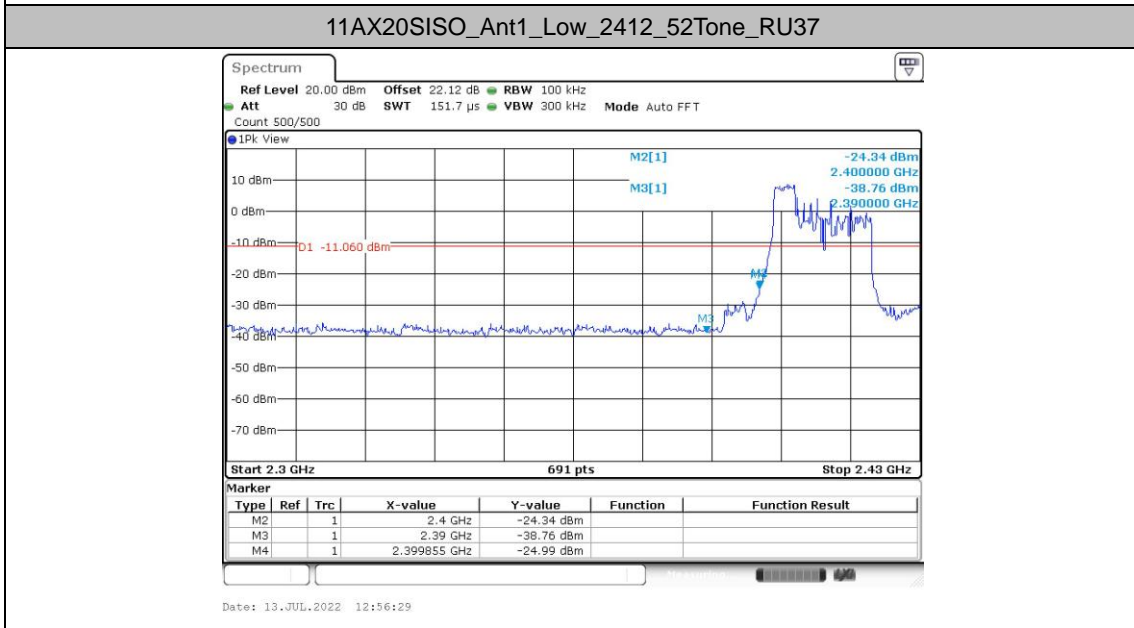
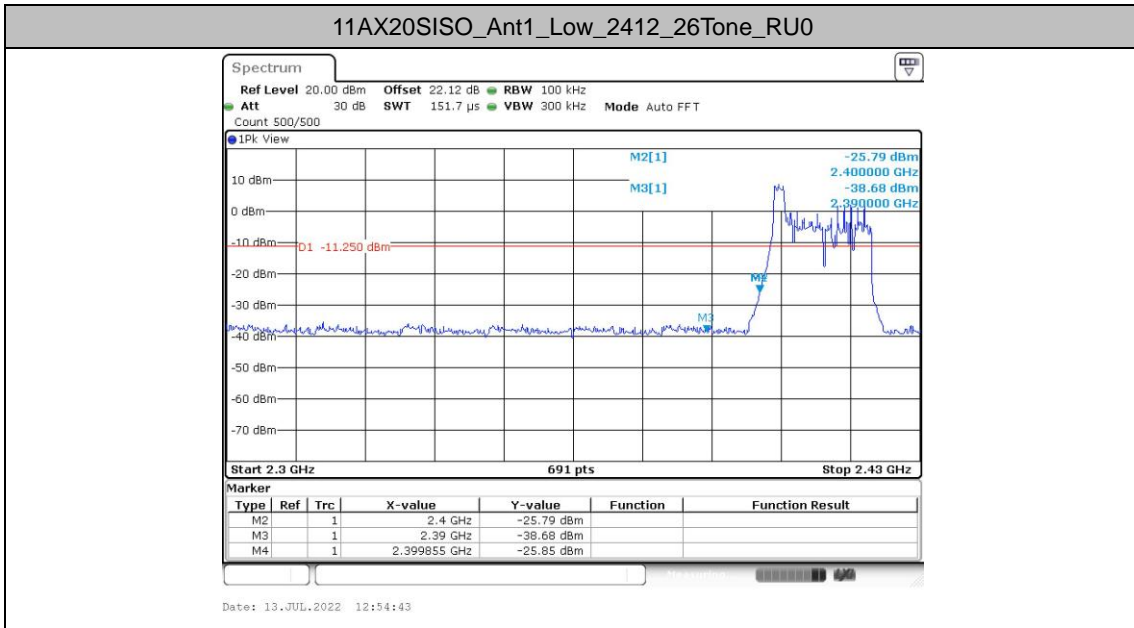
Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	Ru Size	Ru Index	RefLevel [dBm/100KHz]	Result [dBm/100KHz]	Limit [dBm/100KHz]	Verdict
11AX20SISO	Ant1	Low	2412	26Tone	RU0	8.75	-25.85	≤-11.25	PASS
				52Tone	RU37	8.94	-24.99	≤-11.06	PASS
				106Tone	RU53	4.64	-21.5	≤-15.36	PASS
		High	2462	26Tone	RU8	8.98	-35.1	≤-11.02	PASS
				52Tone	RU40	9.70	-34.77	≤-10.3	PASS
				106Tone	RU54	5.39	-35.09	≤-14.61	PASS

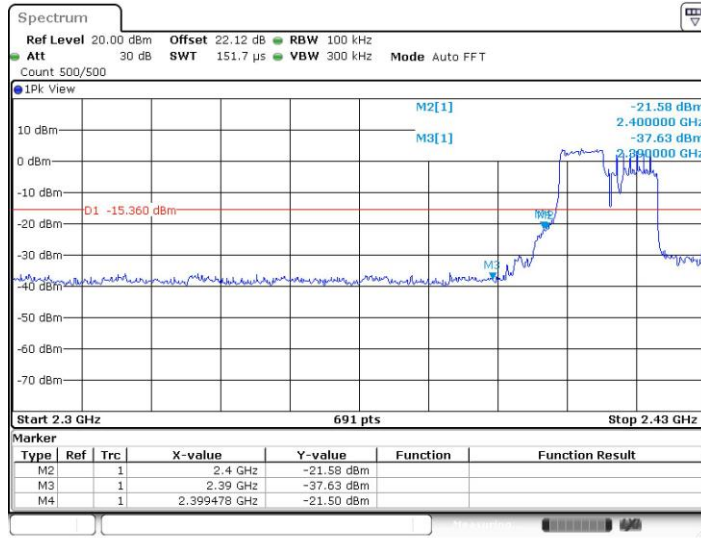


Test Graphs



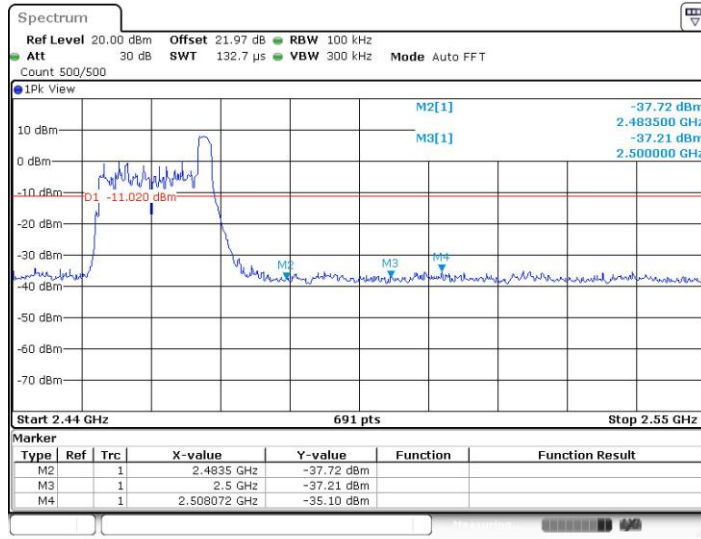


11AX20SISO_Ant1_Low_2412_106Tone_RU53



Date: 13.JUL.2022 12:57:44

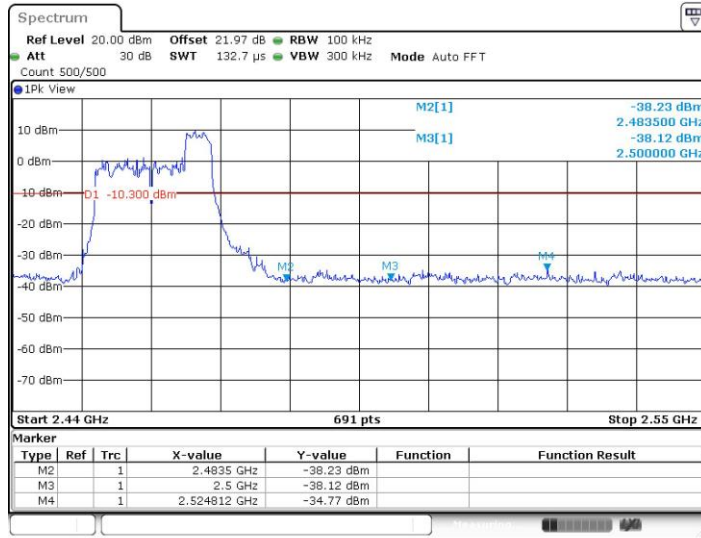
11AX20SISO_Ant1_High_2462_26Tone_RU8



Date: 13.JUL.2022 12:59:19

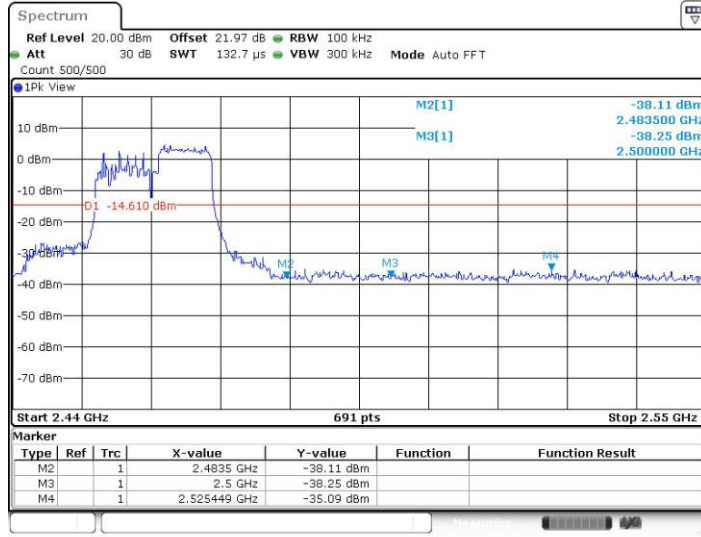


11AX20SISO_Ant1_High_2462_52Tone_RU40



Date: 13.JUL.2022 13:03:18

11AX20SISO_Ant1_High_2462_106Tone_RU54



Date: 13.JUL.2022 13:04:33



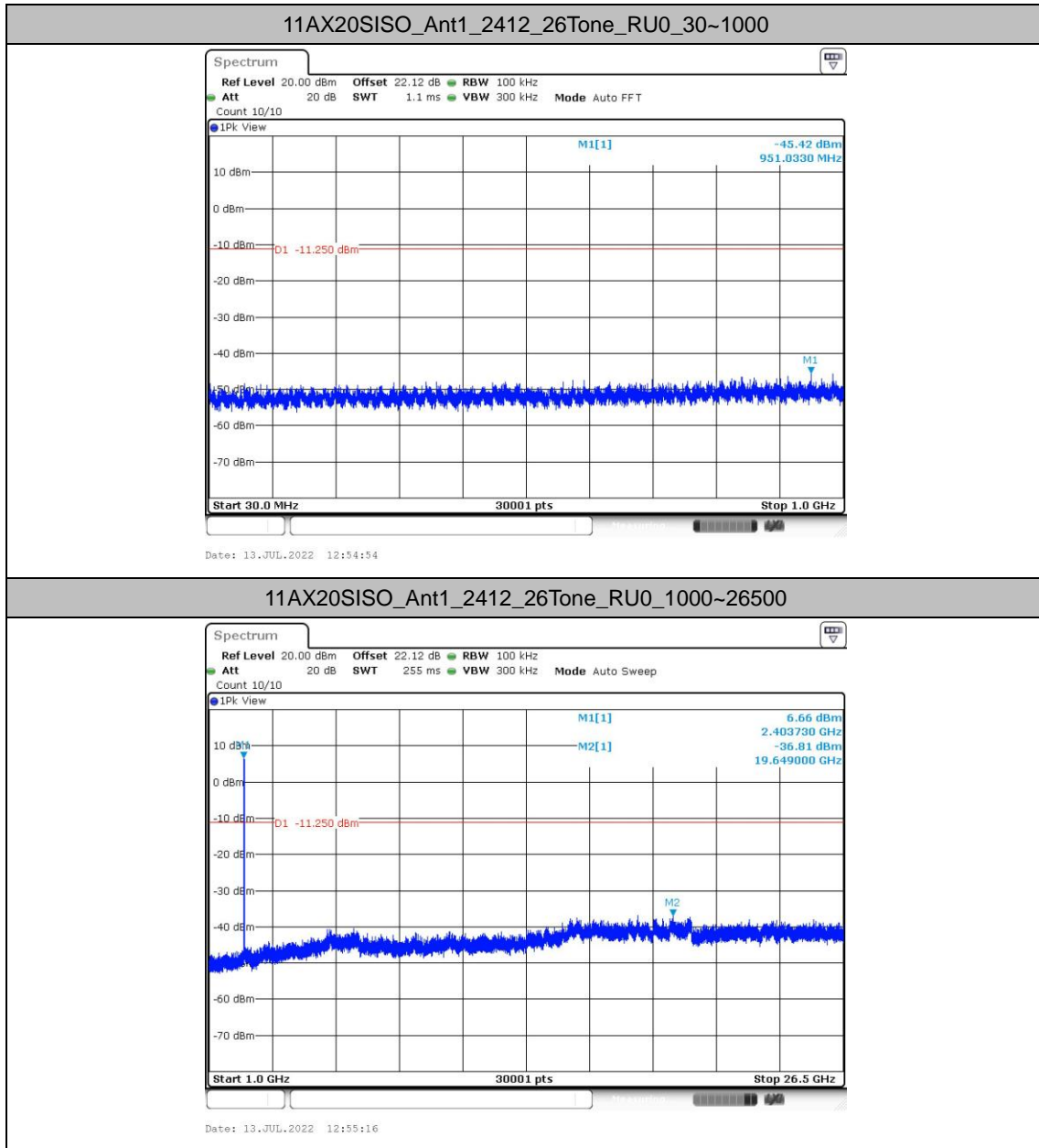
Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	Ru Size	Ru Index	FreqRange [Mhz]	RefLevel [dBm/100KHz]	Result [dBm/100KHz]	Limit [dBm/100KHz]	Verdict
11AX20SISO	Ant1	2412	26Tone	RU0	30~1000	8.75	-45.42	≤-11.25	PASS
				RU0	1000~26500	8.75	-36.81	≤-11.25	PASS
			52Tone	RU37	30~1000	8.94	-45.73	≤-11.06	PASS
				RU37	1000~26500	8.94	-37.10	≤-11.06	PASS
			106Tone	RU53	30~1000	4.64	-46.37	≤-15.36	PASS
				RU53	1000~26500	4.64	-36.83	≤-15.36	PASS
		2462	26Tone	RU8	30~1000	8.98	-45.96	≤-11.02	PASS
				RU8	1000~26500	8.98	-36.41	≤-11.02	PASS
			52Tone	RU40	30~1000	9.70	-46.19	≤-10.3	PASS
				RU40	1000~26500	9.70	-37.11	≤-10.3	PASS
			106Tone	RU54	30~1000	5.39	-46.54	≤-14.61	PASS
				RU54	1000~26500	5.39	-37.24	≤-14.61	PASS

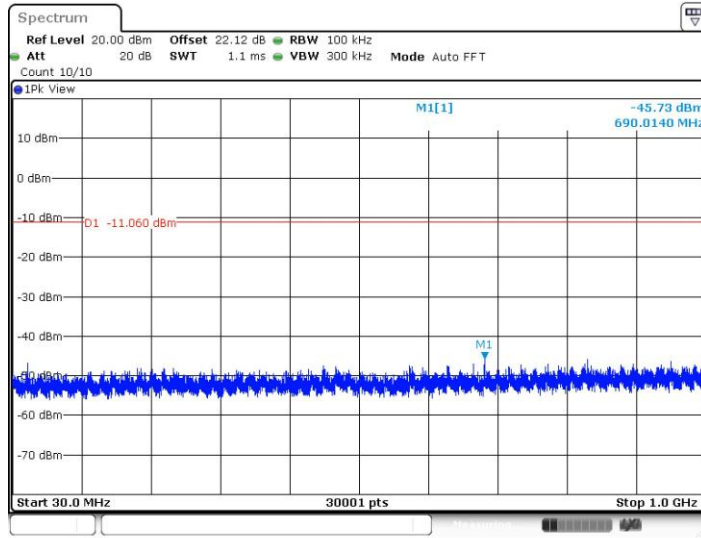


Test Graphs



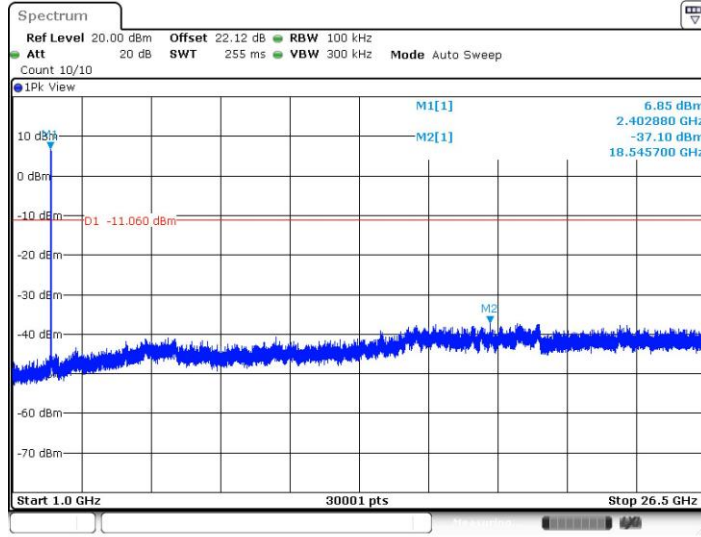


11AX20SISO_Ant1_2412_52Tone_RU37_30~1000



Date: 13.JUL.2022 12:56:40

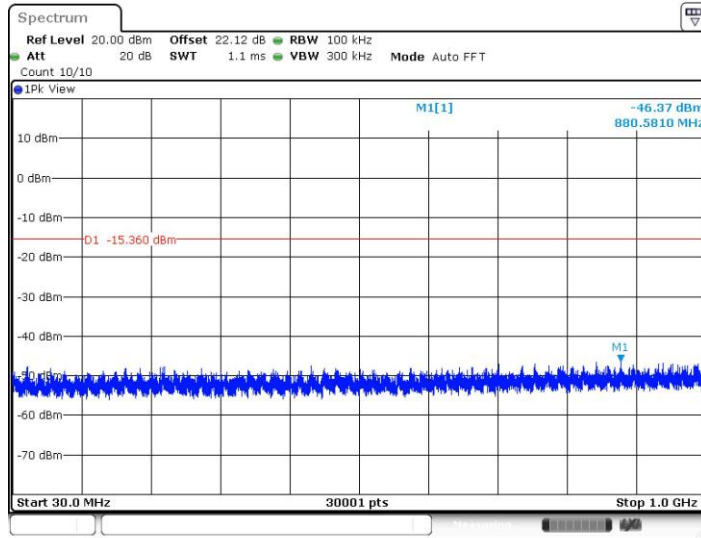
11AX20SISO_Ant1_2412_52Tone_RU37_1000~26500



Date: 13.JUL.2022 12:57:02

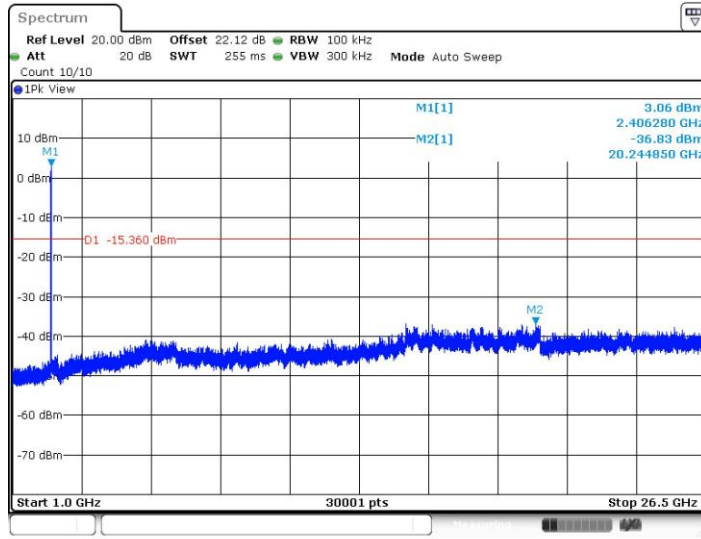


11AX20SISO_Ant1_2412_106Tone_RU53_30~1000



Date: 13.JUL.2022 12:57:55

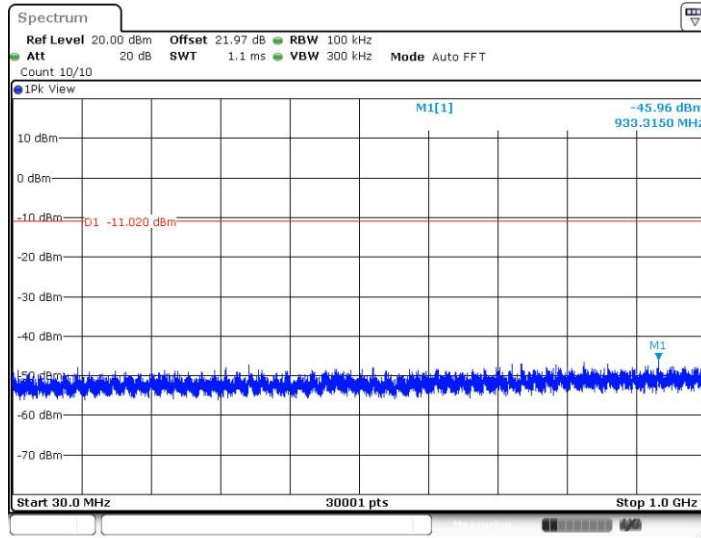
11AX20SISO_Ant1_2412_106Tone_RU53_1000~26500



Date: 13.JUL.2022 12:58:17

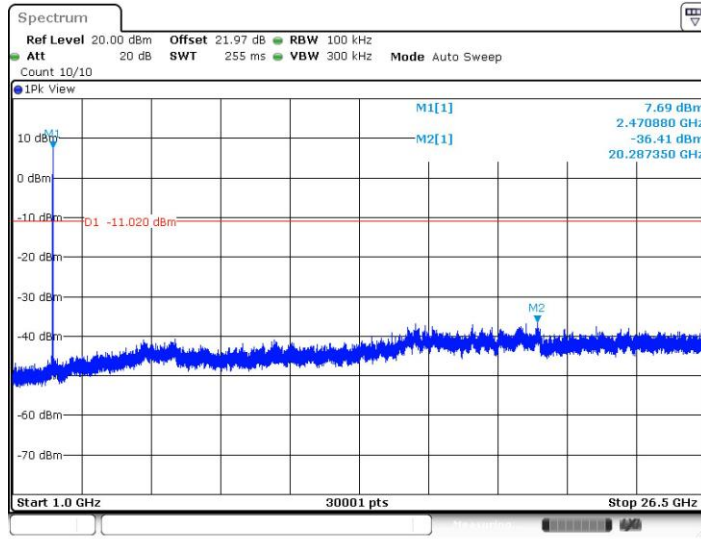


11AX20SISO_Ant1_2462_26Tone_RU8_30~1000



Date: 13.JUL.2022 12:59:29

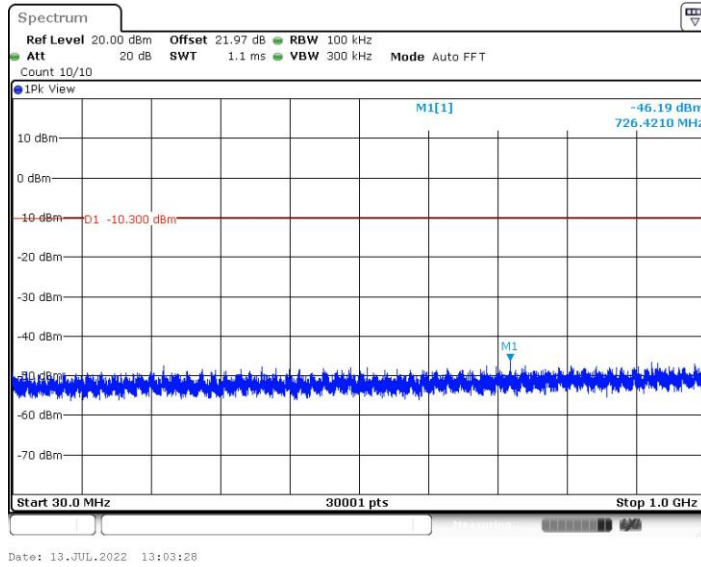
11AX20SISO_Ant1_2462_26Tone_RU8_1000~26500



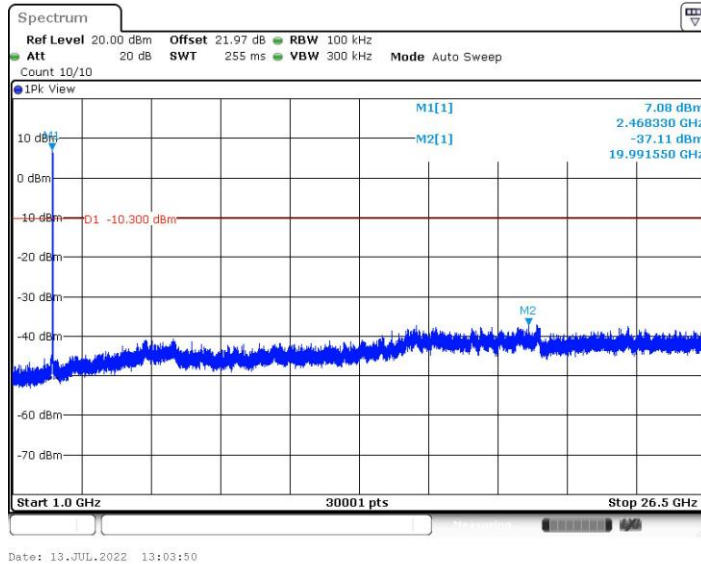
Date: 13.JUL.2022 12:59:51



11AX20SISO_Ant1_2462_52Tone_RU40_30~1000

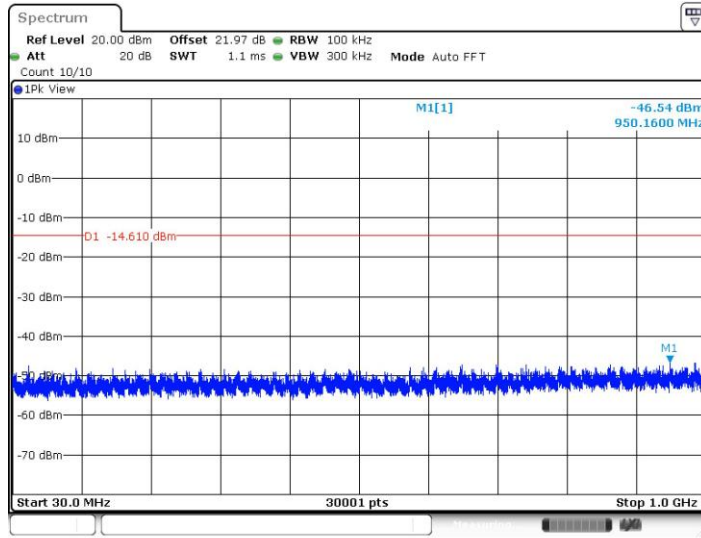


11AX20SISO_Ant1_2462_52Tone_RU40_1000~26500



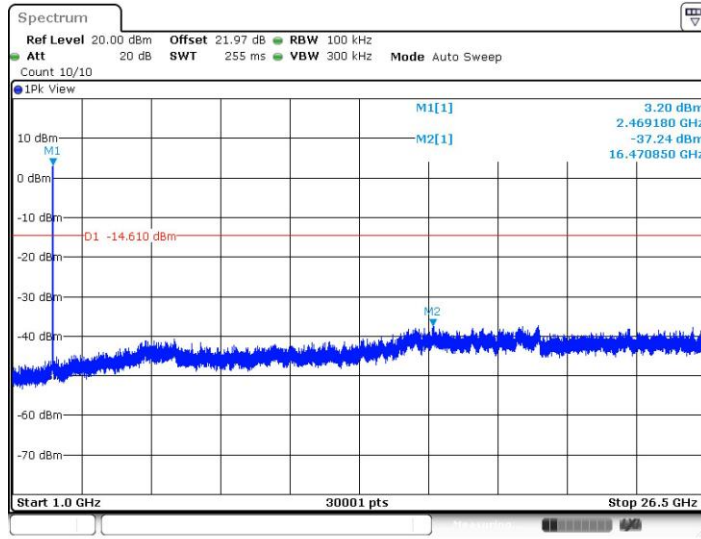


11AX20SISO_Ant1_2462_106Tone_RU54_30~1000



Date: 13.JUL.2022 13:04:44

11AX20SISO_Ant1_2462_106Tone_RU54_1000~26500

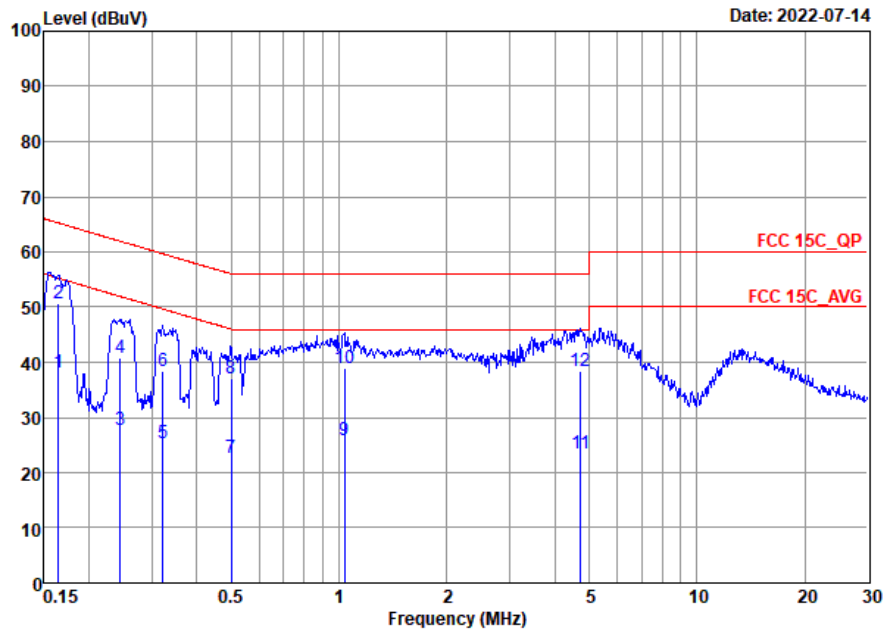


Date: 13.JUL.2022 13:05:06



Appendix B. AC Conducted Emission Test Results

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

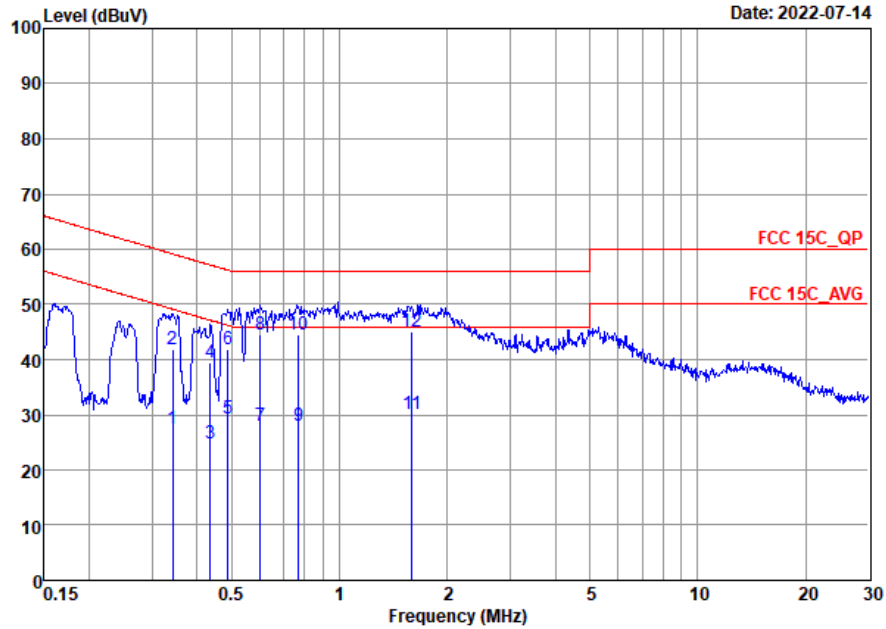


Site : CO01-SZ
 Condition: FCC 15C_QP LISN_20210901_L LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16	38.13	-17.12	55.25	17.30	10.20	10.63	Average
2 *	0.16	50.63	-14.62	65.25	29.80	10.20	10.63	QP
3	0.24	27.61	-24.34	51.95	6.90	10.18	10.53	Average
4	0.24	40.81	-21.14	61.95	20.10	10.18	10.53	QP
5	0.32	25.36	-24.30	49.66	4.20	10.12	11.04	Average
6	0.32	38.46	-21.20	59.66	17.30	10.12	11.04	QP
7	0.50	22.68	-23.33	46.01	0.70	10.12	11.86	Average
8	0.50	37.18	-18.83	56.01	15.20	10.12	11.86	QP
9	1.04	25.95	-20.05	46.00	5.60	10.12	10.23	Average
10	1.04	38.85	-17.15	56.00	18.50	10.12	10.23	QP
11	4.72	23.53	-22.47	46.00	3.30	9.99	10.24	Average
12	4.72	38.33	-17.67	56.00	18.10	9.99	10.24	QP



Test Engineer :	Lily Qiu	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	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.34	27.44	-21.69	49.13	6.11	10.17	11.16	Average
2	0.34	41.84	-17.29	59.13	20.51	10.17	11.16	QP
3	0.44	24.79	-22.36	47.15	3.00	10.19	11.60	Average
4	0.44	39.39	-17.76	57.15	17.60	10.19	11.60	QP
5	0.49	29.20	-16.99	46.19	7.20	10.19	11.81	Average
6	0.49	41.80	-14.39	56.19	19.80	10.19	11.81	QP
7	0.60	27.96	-18.04	46.00	6.30	10.24	11.42	Average
8	0.60	44.66	-11.34	56.00	23.00	10.24	11.42	QP
9	0.77	28.07	-17.93	46.00	7.00	10.21	10.86	Average
10	0.77	44.47	-11.53	56.00	23.40	10.21	10.86	QP
11	1.59	30.17	-15.83	46.00	9.70	10.23	10.24	Average
12 *	1.59	45.07	-10.93	56.00	24.60	10.23	10.24	QP

Note:

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



Appendix C. Radiated Spurious Emission

Test Engineer :	Reid Huang	Temperature :	24~25°C
		Relative Humidity :	48~49%



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2355.99	50.58	-23.42	74	45.63	31.7	5.51	32.26	208	341	P	H
		2387.385	39.86	-14.14	54	34.86	31.7	5.55	32.25	208	341	A	H
	*	2412	104.52	-	-	99.39	31.8	5.57	32.24	208	341	P	H
	*	2412	100.11	-	-	94.98	31.8	5.57	32.24	208	341	A	H
		2355.675	50.96	-23.04	74	46.01	31.7	5.51	32.26	270	34	P	V
		2387.28	39.73	-14.27	54	34.73	31.7	5.55	32.25	270	34	A	V
	*	2412	101.91	-	-	96.78	31.8	5.57	32.24	270	34	P	V
	*	2412	98.08	-	-	92.95	31.8	5.57	32.24	270	34	A	V
802.11b CH 06 2437MHz		2364.46	50.6	-23.4	74	45.64	31.7	5.51	32.25	208	346	P	H
		2389.24	39.79	-14.21	54	34.79	31.7	5.55	32.25	208	346	A	H
	*	2437	104.7	-	-	99.23	32	5.61	32.14	208	346	P	H
	*	2437	100.7	-	-	95.23	32	5.61	32.14	208	346	A	H
		2487.26	51.55	-22.45	74	45.77	32.07	5.66	31.95	208	346	P	H
		2485.23	40.64	-13.36	54	34.86	32.07	5.66	31.95	208	346	A	H
		2330.3	50.99	-23.01	74	46.16	31.63	5.47	32.27	291	357	P	V
		2389.8	39.58	-14.42	54	34.57	31.7	5.55	32.24	291	357	A	V
	*	2437	102.06	-	-	96.59	32	5.61	32.14	291	357	P	V
	*	2437	98.01	-	-	92.54	32	5.61	32.14	291	357	A	V
		2497.9	51.51	-22.49	74	45.58	32.1	5.68	31.85	291	357	P	V
		2498.6	40.46	-13.54	54	34.53	32.1	5.68	31.85	291	357	A	V



802.11b CH 11 2462MHz	*	2462	105.76	-	-	100.14	32.03	5.64	32.05	250	303	P	H
	*	2462	101.75	-	-	96.13	32.03	5.64	32.05	250	303	A	H
		2487.48	51.89	-22.11	74	46.11	32.07	5.66	31.95	250	303	P	H
		2486.28	41.04	-12.96	54	35.26	32.07	5.66	31.95	250	303	A	H
	*	2462	102.81	-	-	97.19	32.03	5.64	32.05	256	359	P	V
	*	2462	97.96	-	-	92.34	32.03	5.64	32.05	256	359	A	V
		2486.6	51.43	-22.57	74	45.65	32.07	5.66	31.95	256	359	P	V
		2488.8	40.68	-13.32	54	34.85	32.1	5.68	31.95	256	359	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)

Table with 14 columns: WIFI Ant. 1, Note, Frequency (MHz), Level (dBµV/m), Margin (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). Rows include data for CH 01 (2412MHz) and CH 06 (2437MHz).

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	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 01 2412MHz		2389.275	54.33	-19.67	74	49.33	31.7	5.55	32.25	264	300	P	H
		2389.905	44.23	-9.77	54	39.22	31.7	5.55	32.24	264	300	A	H
	*	2412	103.34	-	-	98.21	31.8	5.57	32.24	264	300	P	H
	*	2412	93.73	-	-	88.6	31.8	5.57	32.24	264	300	A	H
		2358.405	50.75	-23.25	74	45.8	31.7	5.51	32.26	292	333	P	V
		2387.175	40.92	-13.08	54	35.92	31.7	5.55	32.25	292	333	A	V
	*	2412	97.52	-	-	92.39	31.8	5.57	32.24	292	333	P	V
	*	2412	87.59	-	-	82.46	31.8	5.57	32.24	292	333	A	V
802.11g CH 06 2437MHz		2389.66	50.65	-23.35	74	45.65	31.7	5.55	32.25	122	298	P	H
		2388.4	41.17	-12.83	54	36.17	31.7	5.55	32.25	122	298	A	H
	*	2437	105.95	-	-	100.48	32	5.61	32.14	122	298	P	H
	*	2437	96.22	-	-	90.75	32	5.61	32.14	122	298	A	H
		2491.39	51.49	-22.51	74	45.66	32.1	5.68	31.95	122	298	P	H
		2483.76	42.53	-11.47	54	36.75	32.07	5.66	31.95	122	298	A	H
		2342.76	50.42	-23.58	74	45.49	31.7	5.49	32.26	291	360	P	V
		2375.8	40.67	-13.33	54	35.69	31.7	5.53	32.25	291	360	A	V
	*	2437	103.74	-	-	98.27	32	5.61	32.14	291	360	P	V
	*	2437	93.22	-	-	87.75	32	5.61	32.14	291	360	A	V
		2483.55	51.76	-22.24	74	45.98	32.07	5.66	31.95	291	360	P	V
	2487.75	41.69	-12.31	54	35.86	32.1	5.68	31.95	291	360	A	V	



802.11g CH 11 2462MHz	*	2462	105.59	-	-	99.97	32.03	5.64	32.05	284	298	P	H
	*	2462	94.81	-	-	89.19	32.03	5.64	32.05	284	298	A	H
		2483.84	57.28	-16.72	74	51.5	32.07	5.66	31.95	284	298	P	H
		2483.52	46.33	-7.67	54	40.55	32.07	5.66	31.95	284	298	A	H
	*	2462	103.17	-	-	97.55	32.03	5.64	32.05	290	48	P	V
	*	2462	93.14	-	-	87.52	32.03	5.64	32.05	290	48	A	V
		2483.8	58.02	-15.98	74	52.24	32.07	5.66	31.95	290	48	P	V
		2483.52	45.64	-8.36	54	39.86	32.07	5.66	31.95	290	48	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)

Table with 14 columns: WIFI Ant. 1, Note, Frequency (MHz), Level (dBµV/m), Margin (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). Rows include data for CH 01 (2412MHz), CH 06 (2437MHz), and CH 11 (2462MHz).



**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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		2389.38	57.72	-16.28	74	52.72	31.7	5.55	32.25	202	306	P	H
		2389.905	45.08	-8.92	54	40.07	31.7	5.55	32.24	202	306	A	H
	*	2412	103.54	-	-	98.41	31.8	5.57	32.24	202	306	P	H
	*	2412	92.9	-	-	87.77	31.8	5.57	32.24	202	306	A	H
		2388.54	56.05	-17.95	74	51.05	31.7	5.55	32.25	268	49	P	V
		2389.8	44.44	-9.56	54	39.43	31.7	5.55	32.24	268	49	A	V
	*	2412	103.11	-	-	97.98	31.8	5.57	32.24	268	49	P	V
	*	2412	91.8	-	-	86.67	31.8	5.57	32.24	268	49	A	V
802.11n HT20 CH 06 2437MHz		2384.48	51.3	-22.7	74	46.32	31.7	5.53	32.25	256	300	P	H
		2389.8	41.3	-12.7	54	36.29	31.7	5.55	32.24	256	300	A	H
	*	2437	105.87	-	-	100.4	32	5.61	32.14	256	300	P	H
	*	2437	94.97	-	-	89.5	32	5.61	32.14	256	300	A	H
		2485.79	52.05	-21.95	74	46.27	32.07	5.66	31.95	256	300	P	H
		2483.76	42.31	-11.69	54	36.53	32.07	5.66	31.95	256	300	A	H
		2371.88	50.66	-23.34	74	45.68	31.7	5.53	32.25	292	43	P	V
		2388.26	40.88	-13.12	54	35.88	31.7	5.55	32.25	292	43	A	V
	*	2437	102.63	-	-	97.16	32	5.61	32.14	292	43	P	V
	*	2437	92.87	-	-	87.4	32	5.61	32.14	292	43	A	V
		2495.8	51.77	-22.23	74	45.84	32.1	5.68	31.85	292	43	P	V
	2484.04	41.92	-12.08	54	36.14	32.07	5.66	31.95	292	43	A	V	



802.11n HT20 CH 11 2462MHz	*	2462	104.95	-	-	99.33	32.03	5.64	32.05	172	312	P	H
	*	2462	93.3	-	-	87.68	32.03	5.64	32.05	172	312	A	H
		2484.08	60.09	-13.91	74	54.31	32.07	5.66	31.95	172	312	P	H
		2483.56	47.13	-6.87	54	41.35	32.07	5.66	31.95	172	312	A	H
	*	2462	102.62	-	-	97	32.03	5.64	32.05	293	66	P	V
	*	2462	92.67	-	-	87.05	32.03	5.64	32.05	293	66	A	V
		2483.88	60.77	-13.23	74	54.99	32.07	5.66	31.95	293	66	P	V
		2483.6	46.36	-7.64	54	40.58	32.07	5.66	31.95	293	66	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. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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		4824	43.27	-30.73	74	58.66	33.8	8.71	57.9	-	-	P	H
		4824	42.58	-31.42	74	57.97	33.8	8.71	57.9	-	-	P	V
802.11n HT20 CH 06 2437MHz		4874	42.18	-31.82	74	57.56	33.73	8.79	57.9	-	-	P	H
		7311	45.2	-28.8	74	57.86	35.72	11.09	59.47	-	-	P	H
		4874	42.71	-31.29	74	58.09	33.73	8.79	57.9	-	-	P	V
		7311	45.13	-28.87	74	57.79	35.72	11.09	59.47	-	-	P	V
802.11n HT20 CH 11 2462MHz		4924	42.47	-31.53	74	57.77	33.7	8.9	57.9	-	-	P	H
		7386	45.17	-28.83	74	58.04	35.76	11.08	59.71	-	-	P	H
		4924	41.89	-32.11	74	57.19	33.7	8.9	57.9	-	-	P	V
		7386	44.47	-29.53	74	57.34	35.76	11.08	59.71	-	-	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 802.11 ax HE20 Full (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11ax HE20 Full CH 01 2412MHz		2388.645	56.2	-17.8	74	51.2	31.7	5.55	32.25	155	302	P	H
		2388.645	44.96	-9.04	54	39.96	31.7	5.55	32.25	155	302	A	H
	*	2412	104.64	-	-	99.51	31.8	5.57	32.24	155	302	P	H
	*	2412	92.99	-	-	87.86	31.8	5.57	32.24	155	302	A	H
		2389.695	56.05	-17.95	74	51.05	31.7	5.55	32.25	292	49	P	V
		2389.905	43.34	-10.66	54	38.33	31.7	5.55	32.24	292	49	A	V
	*	2412	103.19	-	-	98.06	31.8	5.57	32.24	292	49	P	V
	*	2412	88.82	-	-	83.69	31.8	5.57	32.24	292	49	A	V
802.11ax HE20 Full CH 06 2437MHz		2389.52	55.57	-18.43	74	50.57	31.7	5.55	32.25	100	300	P	H
		2388.68	43.06	-10.94	54	38.06	31.7	5.55	32.25	100	300	A	H
		2437	105.95	-	-	100.48	32	5.61	32.14	100	300	P	H
		2437	94.21	-	-	88.74	32	5.61	32.14	100	300	A	H
		2483.97	60.42	-13.58	74	54.64	32.07	5.66	31.95	100	300	P	H
		2483.62	47.66	-6.34	54	41.88	32.07	5.66	31.95	100	300	A	H
		2387.98	51.76	-22.24	74	46.76	31.7	5.55	32.25	293	20	P	V
		2389.94	41.57	-12.43	54	36.56	31.7	5.55	32.24	293	20	A	V
		2437	103.63	-	-	98.16	32	5.61	32.14	293	20	P	V
		2437	91.05	-	-	85.58	32	5.61	32.14	293	20	A	V
		2483.69	55.22	-18.78	74	49.44	32.07	5.66	31.95	293	20	P	V
	2483.55	43.68	-10.32	54	37.9	32.07	5.66	31.95	293	20	A	V	



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
8802.11ax HE20 Full CH 11 2462MHz	*	2462	103.75	-	-	99.84	32.03	5.64	33.76	109	299	P	H
	*	2462	89.86	-	-	85.95	32.03	5.64	33.76	109	299	A	H
		2484.08	58.95	-15.05	74	54.94	32.07	5.66	33.72	109	299	P	H
		2483.56	44.88	-9.12	54	40.87	32.07	5.66	33.72	109	299	A	H
	*	2462	98.16	-	-	94.25	32.03	5.64	33.76	276	112	P	V
	*	2462	85.42	-	-	81.51	32.03	5.64	33.76	276	112	A	V
		2484.28	54.97	-19.03	74	50.96	32.07	5.66	33.72	276	112	P	V
	2483.88	41.6	-12.4	54	37.59	32.07	5.66	33.72	276	112	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 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11ax HE20 Full		4824	43.41	-30.59	74	58.8	33.8	8.71	57.9	-	-	P	H
	CH 01	4824	43.43	-30.57	74	58.82	33.8	8.71	57.9	-	-	P	V
802.11ax HE20 Full		4874	43.96	-30.04	74	59.34	33.73	8.79	57.9	-	-	P	H
		7311	45.76	-28.24	74	58.42	35.72	11.09	59.47	-	-	P	H
	CH 06	4874	42.73	-31.27	74	58.11	33.73	8.79	57.9	-	-	P	V
	2437MHz	7311	45.86	-28.14	74	58.52	35.72	11.09	59.47	-	-	P	V
802.11ax HE20 Full		4924	42.83	-31.17	74	58.13	33.7	8.9	57.9	-	-	P	H
		7386	46.05	-27.95	74	58.92	35.76	11.08	59.71	-	-	P	H
	CH 11	4924	44.07	-29.93	74	59.37	33.7	8.9	57.9	-	-	P	V
	2462MHz	7386	45.85	-28.15	74	58.72	35.76	11.08	59.71	-	-	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 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11ax HE20 Partial 52/37 CH 01 2412MHz		2388.75	58.1	-15.9	74	54.71	31.7	5.55	33.86	100	94	P	H
		2388.435	47.15	-6.85	54	43.76	31.7	5.55	33.86	100	94	A	H
		2412	108.69	-	-	105.15	31.8	5.57	33.83	100	94	P	H
		2412	97.3	-	-	93.76	31.8	5.57	33.83	100	94	A	H
		2388.33	51.12	-22.88	74	47.73	31.7	5.55	33.86	287	10	P	V
		2389.905	41.38	-12.62	54	37.96	31.7	5.55	33.83	287	10	A	V
		2412	102.66	-	-	99.12	31.8	5.57	33.83	287	10	P	V
		2412	90.68	-	-	87.14	31.8	5.57	33.83	287	10	A	V
		2462	107.23	-	-	103.32	32.03	5.64	33.76	159	93	P	H
	2462	95.77	-	-	91.86	32.03	5.64	33.76	159	93	A	H	
802.11ax HE20 Partial 52/40 CH 11 2462MHz		2485.76	64.58	-9.42	74	60.57	32.07	5.66	33.72	159	93	P	H
		2483.6	47.1	-6.9	54	43.09	32.07	5.66	33.72	159	93	A	H
		2462	101.95	-	-	98.04	32.03	5.64	33.76	285	91	P	V
		2462	88.77	-	-	84.86	32.03	5.64	33.76	285	91	A	V
		2486.44	58.58	-15.42	74	54.57	32.07	5.66	33.72	285	91	P	V
		2483.56	42.74	-11.26	54	38.73	32.07	5.66	33.72	285	91	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 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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)
802.11ax HE20 Partial 52/37 CH 01 2412MHz		4824	42.3	-31.7	74	57.69	33.8	8.71	57.9	-	-	P	H
		4824	41.45	-32.55	74	56.84	33.8	8.71	57.9	-	-	P	V
802.11ax HE20 Partial 52/40 CH 11 2462MHz		4924	44	-30	74	59.3	33.7	8.9	57.9	-	-	P	H
		7386	44.48	-29.52	74	57.35	35.76	11.08	59.71	-	-	P	H
		4924	42.79	-31.21	74	58.09	33.7	8.9	57.9	-	-	P	V
		7386	45.51	-28.49	74	58.38	35.76	11.08	59.71	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz
2.4GHz WIFI 802.11ax HE20 (LF)

Table with 14 columns: WIFI, Note, Frequency, Level, Margin, Limit, Read, Antenna, Path, Preamp, Ant, Table, Peak, Pol. It contains 11 rows of test data for 2.4GHz WIFI 802.11ax HE20 LF and a Remark section at the bottom.



Co-location

802.11ax20 CH06 + Bluetooth Link + LTE Band 13

2.4 GHz 2390~2483.5MHz

(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)
802.11ax20 CH06 2437MHz & BT Normal Link & LTE Band13 Co-location		2389.52	66.24	-7.76	74	61.24	31.7	5.55	32.25	142	209	P	H
		2387	42.8	-11.2	54	37.8	31.7	5.55	32.25	142	209	A	H
	*	2437	110.08	-	-	104.61	32	5.61	32.14	142	209	P	H
	*	2437	94.27			88.8	32	5.61	32.14	142	209	A	H
		2483.69	68.63	-5.37	74	62.85	32.07	5.66	31.95	142	209	P	H
		2484.18	42.38	-11.62	54	36.6	32.07	5.66	31.95	142	209	A	H
		2389.1	52.23	-21.77	74	47.23	31.7	5.55	32.25	206	297	P	V
		2369.78	41.14	-12.86	54	36.16	31.7	5.53	32.25	206	297	A	V
	*	2437	104.53	-	-	99.06	32	5.61	32.14	206	297	P	V
	*	2434	90.05			84.7	31.9	5.59	32.14	206	297	A	V
		2484.46	52.7	-21.3	74	46.92	32.07	5.66	31.95	206	297	P	V
		2497.62	41.91	-12.09	54	35.98	32.1	5.68	31.85	206	297	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4 GHz 2390~2483.5MHz
(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)
802.11ax20 CH06 2437MHz & BT Normal Link & LTE Band13 Co-location		1555	45.26	-28.74	74	45.93	28.1	4.43	33.2	-	-	P	H
		2332.5	50.12	-23.88	74	45.29	31.63	5.47	32.27	-	-	P	H
		3110	40.58	-33.42	74	58.87	33	6.43	57.72	-	-	P	H
		4874	42.36	-31.64	74	57.74	33.73	8.79	57.9	-	-	P	H
		4960	43.38	-30.62	74	58.57	33.73	8.98	57.9	-	-	P	H
		7311	44.64	-29.36	74	57.3	35.72	11.09	59.47	-	-	P	H
		7440	44.25	-29.75	74	57.21	35.78	11.12	59.86	-	-	P	H
		1555	45.26	-28.74	74	45.93	28.1	4.43	33.2	-	-	P	H
		1555	45.51	-28.49	74	46.18	28.1	4.43	33.2	-	-	P	V
		2332.5	50.08	-23.92	74	45.25	31.63	5.47	32.27	-	-	P	V
		3110	40.85	-33.15	74	59.14	33	6.43	57.72	-	-	P	V
		4874	42.58	-31.42	74	57.96	33.73	8.79	57.9	-	-	P	
		4960	44.45	-29.55	74	59.64	33.73	8.98	57.9	-	-	P	V
		7311	44.49	-29.51	74	57.15	35.72	11.09	59.47	-	-	P	V
		7440	44.32	-29.68	74	57.28	35.78	11.12	59.86	-	-	P	V
	1555	45.51	-28.49	74	46.18	28.1	4.43	33.2	-	-	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 Margin line.
P/A	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
2412MHz													

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. Margin (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. Margin (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. Margin (dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

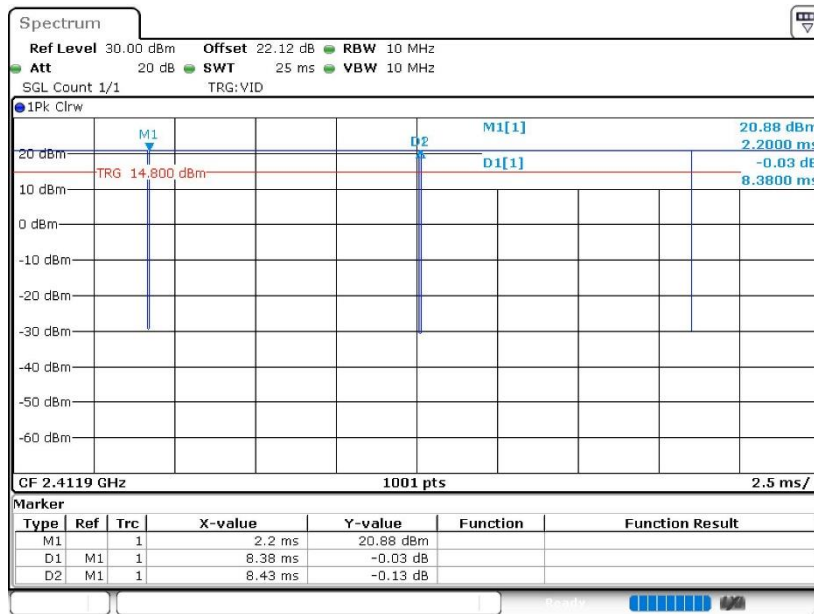
Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	99.41	-	-	10Hz
802.11g	97.20	1.39	0.72	1KHz
802.11n HT20	96.30	1.30	0.77	1KHz
802.11ax HE20	95.28	1.01	0.99	1KHz

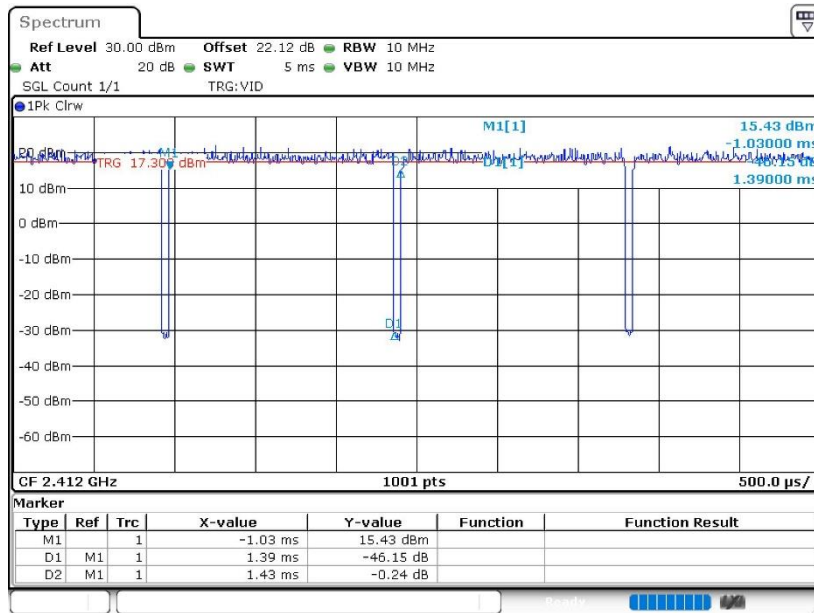
802.11b



Date: 1.JUL.2022 11:27:53

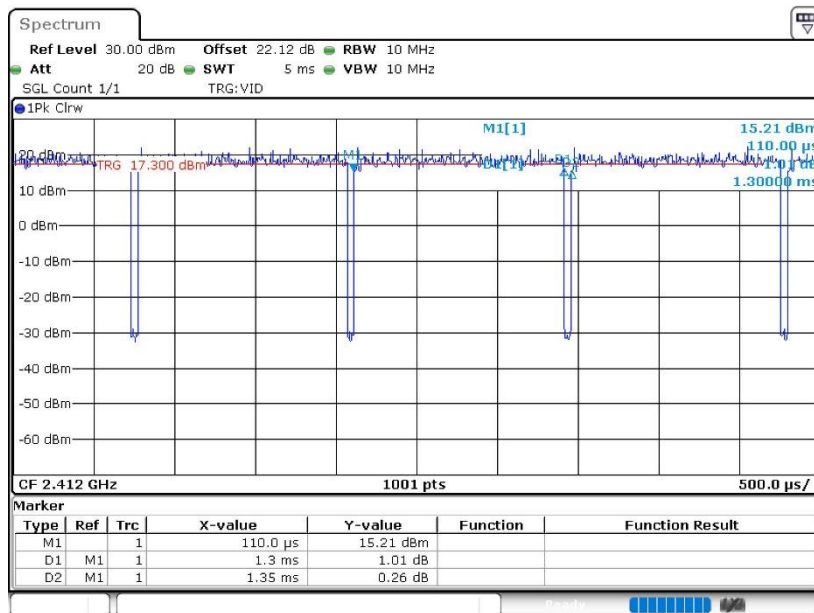


802.11g



Date: 1.JUL.2022 12:24:38

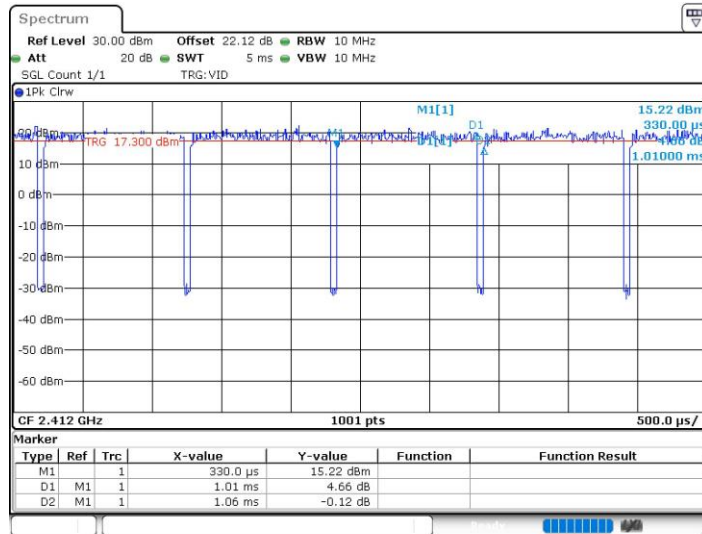
802.11n HT20



Date: 1.JUL.2022 12:31:40



802.11ax HE20



Date: 1.JUL.2022 12:35:55