2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

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)
2.4GHz 802.11b LF		30	18.59	-21.41	40	25.48	25.1	0.71	32.7	-	-	P	H
		95.96	18.69	-24.81	43.5	34.37	15.58	1.48	32.74	-	-	P	H
		150.28	19.29	-24.21	43.5	33.14	17.1	1.85	32.8	-	-	P	H
		288.99	19.39	-26.61	46	30.56	19.18	2.59	32.94	-	-	P	H
		827.34	27.18	-18.82	46	26.54	28.8	4.39	32.55	-	-	P	H
		942.77	28.26	-17.74	46	25.16	30.74	4.69	32.33	200	360	P	H
		51.34	30.27	-9.73	40	48.09	14.15	1.07	33.04	100	194	P	V
		95.96	25.93	-17.57	43.5	41.61	15.58	1.48	32.74	-	-	P	V
		196.84	21.8	-21.7	43.5	37.74	15.01	2.13	33.08	-	-	P	V
		607.15	24.01	-21.99	46	26.88	25.9	3.76	32.53	-	-	P	V
		756.53	26.2	-19.8	46	26.46	28.2	4.21	32.67	-	-	P	V
		928.22	27.18	-18.82	46	24.73	30.18	4.66	32.39	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Co-location

2.4GHz 2400~2483.5MHz

WIFI 802.11b & LTE 4 BW=20M (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)
802.11b CH 11 2462MHz		2491.24	56.12	-17.88	74	47.84	32.1	7.76	31.58	100	155	P	H
		2484.16	45.39	-8.61	54	37.12	32.12	7.73	31.58	100	155	A	H
	*	2462	101.3	-	-	93.07	32.13	7.7	31.6	100	155	P	H
	*	2460	97.38	-	-	89.15	32.13	7.7	31.6	100	155	A	H
		2494.6	56.16	-17.84	74	47.86	32.1	7.76	31.56	306	70	P	V
		2486.38	45.07	-8.93	54	36.8	32.12	7.73	31.58	306	70	A	V
	*	2462	98.24	-	-	90.01	32.13	7.7	31.6	306	70	P	V
	*	2460	94.22	-	-	85.99	32.13	7.7	31.6	306	70	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 & LTE 4 BW=20M (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)
802.11b CH 11 2462MHz		4926	42.98	-31.02	74	57.61	34.36	11.03	60.02	300	0	P	H
		7386	42.92	-31.08	74	53.98	35.92	13.55	60.53	300	0	P	H
		4926	44.35	-29.65	74	58.98	34.36	11.03	60.02	300	360	P	V
		7386	43.09	-30.91	74	54.15	35.92	13.55	60.53	300	360	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:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		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. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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)

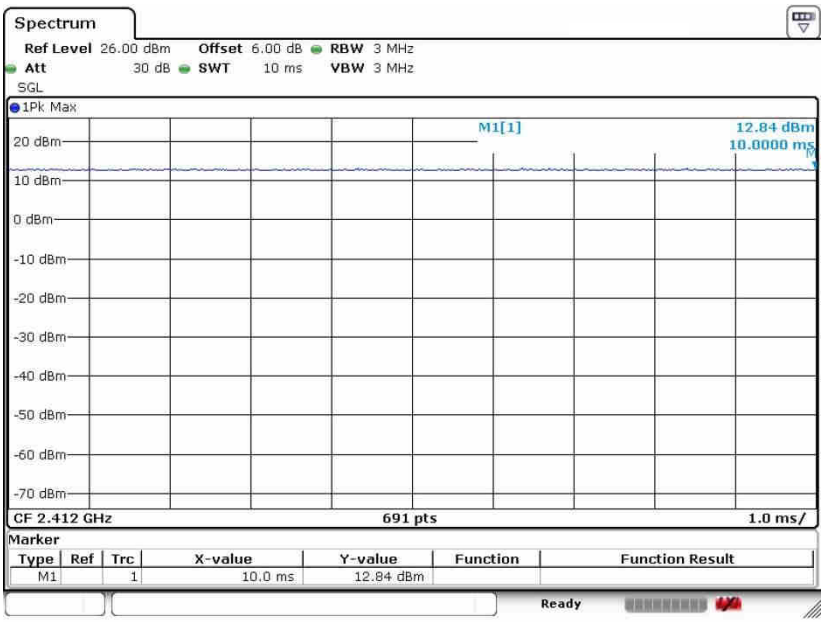
= -10.46(dB)

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

Appendix D. Duty Cycle Plots

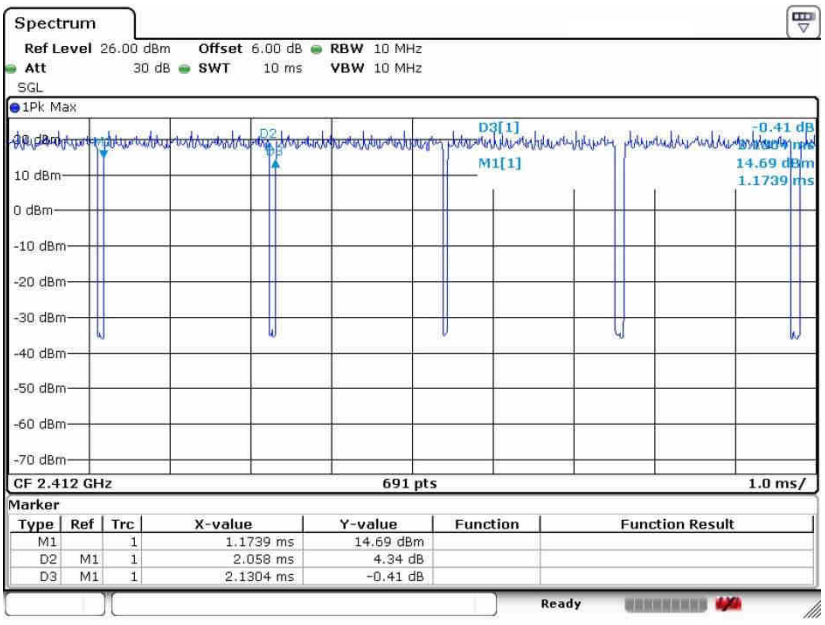
Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1	802.11b	100	-	-	10Hz
2	802.11g	92.99	2.058	0.486	0.51KHz
1+2(1)	802.11n HT20	93.31	1.920	0.521	0.56KHz
1+2(1)	802.11n HT40	86.09	0.942	1.062	1.1KHz

802.11b



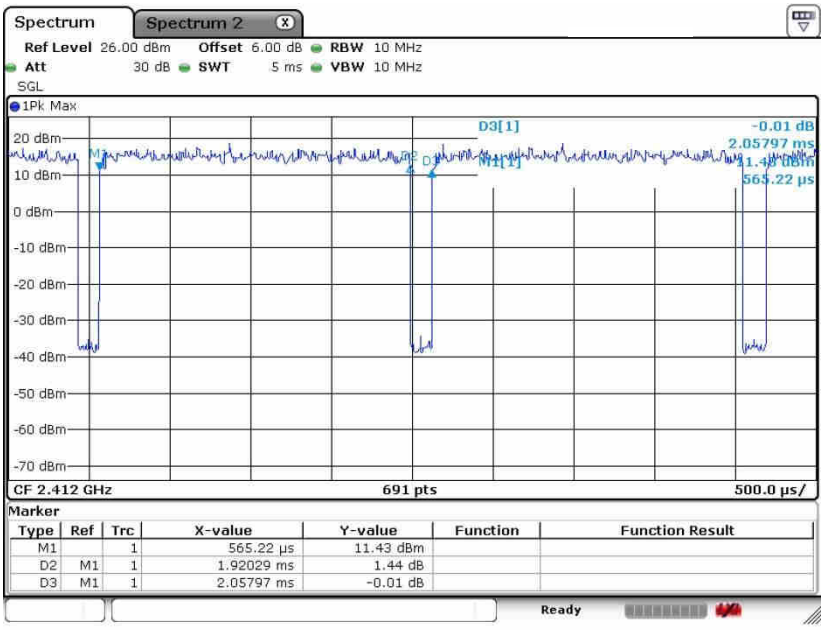
Date: 26.APR.2021 04:30:07

802.11g



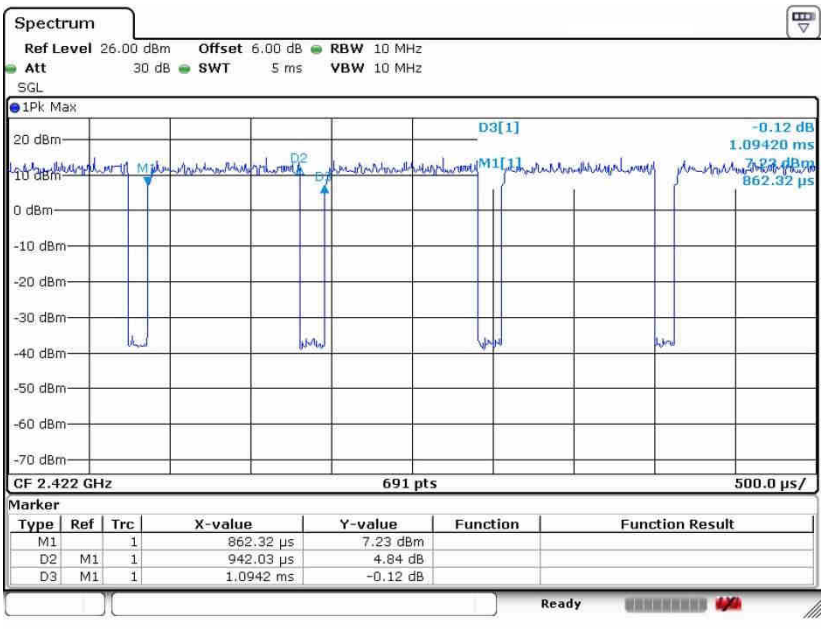
Date: 26.APR.2021 04:51:17

802.11n HT20



Date: 20.MAY.2021 18:24:45

802.11n HT40



Date: 12.MAY.2021 04:59:29