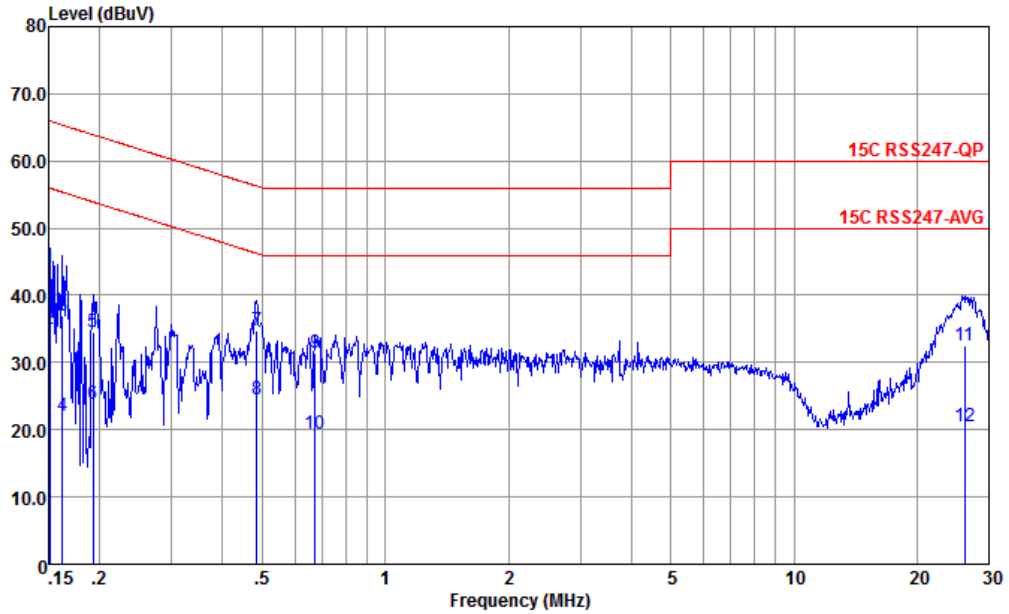




## Appendix B. AC Conducted Emission Test Results

Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

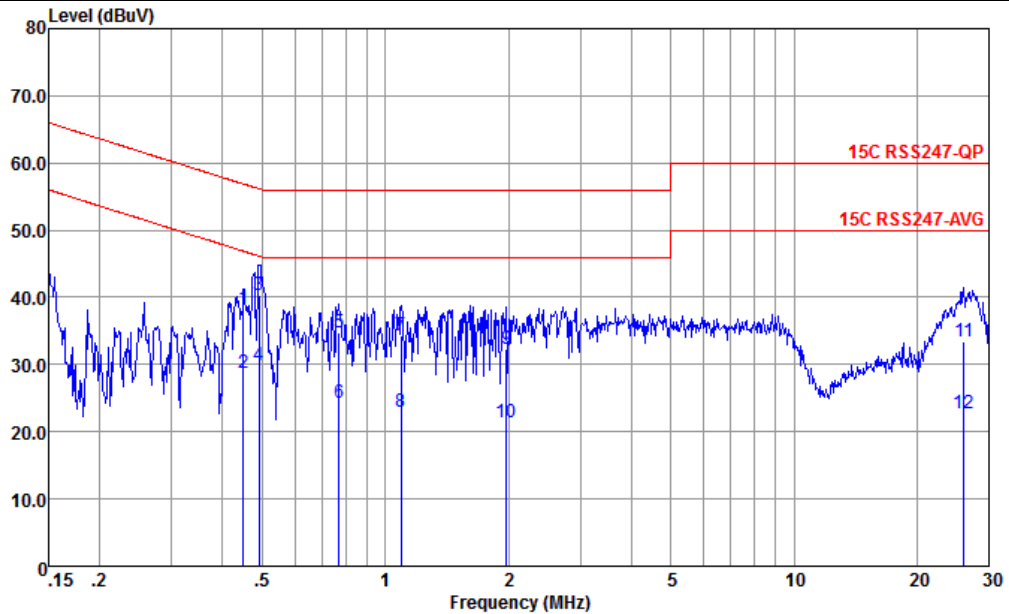


Site : CO01-KS  
 Condition : 15C RSS247-QP LISN-060105-LINE LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.151	44.05	-21.91	65.96	33.50	0.07	10.48	QP
2 *	0.151	35.05	-20.91	55.96	24.50	0.07	10.48	Average
3	0.162	37.10	-28.24	65.34	26.59	0.06	10.45	QP
4	0.162	22.00	-33.34	55.34	11.49	0.06	10.45	Average
5	0.192	34.60	-29.33	63.93	24.19	0.03	10.38	QP
6	0.192	23.90	-30.03	53.93	13.49	0.03	10.38	Average
7	0.484	34.82	-21.45	56.27	24.60	-0.02	10.24	QP
8	0.484	24.42	-21.85	46.27	14.20	-0.02	10.24	Average
9	0.672	31.35	-24.65	56.00	21.19	-0.08	10.24	QP
10	0.672	19.36	-26.64	46.00	9.20	-0.08	10.24	Average
11	26.139	32.44	-27.56	60.00	22.20	-0.34	10.58	QP
12	26.139	20.44	-29.56	50.00	10.20	-0.34	10.58	Average



Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS  
 Condition : 15C RSS247-QP LISN-060105-NEUTRAL NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.449	38.38	-18.51	56.89	28.20	-0.07	10.25	QP
2	0.449	28.68	-18.21	46.89	18.50	-0.07	10.25	Average
3 *	0.491	40.36	-15.78	56.14	30.20	-0.08	10.24	QP
4	0.491	29.76	-16.38	46.14	19.60	-0.08	10.24	Average
5	0.771	34.74	-21.26	56.00	24.60	-0.10	10.24	QP
6	0.771	24.34	-21.66	46.00	14.20	-0.10	10.24	Average
7	1.094	34.32	-21.68	56.00	24.20	-0.11	10.23	QP
8	1.094	23.02	-22.98	46.00	12.90	-0.11	10.23	Average
9	1.980	32.31	-23.69	56.00	22.20	-0.12	10.23	QP
10	1.980	21.41	-24.59	46.00	11.30	-0.12	10.23	Average
11	26.001	33.43	-26.57	60.00	23.20	-0.35	10.58	QP
12	26.001	22.83	-27.17	50.00	12.60	-0.35	10.58	Average

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

#### 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.
9+10		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2384.62	49.55	-24.45	74	46.69	32.31	7.1	36.55	100	346	P	H
		2386.18	39.08	-14.92	54	36.09	32.4	7.1	36.51	100	346	A	H
	*	2412	106.76	-	-	103.85	32.39	7.13	36.61	100	346	P	H
	*	2410	104.36	-	-	101.45	32.39	7.13	36.61	100	346	A	H
		2387.74	51.28	-22.72	74	48.29	32.4	7.1	36.51	151	81	P	V
		2386.18	44.49	-9.51	54	41.5	32.4	7.1	36.51	151	81	A	V
	*	2412	110.49	-	-	107.58	32.39	7.13	36.61	151	81	P	V
	*	2412	106.83	-	-	103.92	32.39	7.13	36.61	151	81	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.
9+10		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		4830	41.26	-32.74	74	62.27	34	10.25	65.26	300	0	P	H
		4830	41.43	-32.57	74	62.44	34	10.25	65.26	100	0	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)

Table with 14 columns: WIFI Ant. 9+10, 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). Includes a Remark section with two points.

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

Table with 14 columns: WIFI Ant. 9+10, 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). Includes a Remark section with two points.



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Band Edge @ 3m)

WIFI Ant. 9+10	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 )
802.11ax HE20 Full CH 01 2412MHz		2389.56	60.62	-13.38	74	57.63	32.4	7.1	36.51	220	348	P	H
		2389.95	47.67	-6.33	54	44.68	32.4	7.1	36.51	220	348	A	H
	*	2408	109.7	-	-	106.79	32.39	7.13	36.61	220	348	P	H
	*	2406	99.31	-	-	96.4	32.39	7.13	36.61	220	348	A	H
		2388.26	64.74	-9.26	74	61.75	32.4	7.1	36.51	111	105	P	V
	!	2389.95	49.41	-4.59	54	46.42	32.4	7.1	36.51	111	105	A	V
	*	2412	112.27	-	-	109.36	32.39	7.13	36.61	111	105	P	V
*	2412	102.39	-	-	99.48	32.39	7.13	36.61	111	105	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. 9+10	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 )
802.11ax HE20 Full CH 01 2412MHz		4830	40	-34	74	61.01	34	10.25	65.26	300	0	P	H
		4830	40.7	-33.3	74	61.71	34	10.25	65.26	100	0	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 106 (Band Edge @ 3m)

Table with 14 columns: WIFI Ant. 9+10, 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). Rows include test data for 802.11ax HE20 Partial 106/54 CH 11 2462MHz and a Remark section.



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE40 Full (Band Edge @ 3m)

WIFI Ant. 9+10	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 )
802.11ax HE40 Full CH 03 2422MHz		2389.69	61.62	-12.38	74	58.63	32.4	7.1	36.51	100	348	P	H
	!	2389.82	49.05	-4.95	54	46.06	32.4	7.1	36.51	100	348	A	H
	*	2412	106.23	-	-	103.32	32.39	7.13	36.61	100	348	P	H
	*	2410	95.6	-	-	92.69	32.39	7.13	36.61	100	348	A	H
		2484.58	50.48	-23.52	74	47.91	32.34	7.25	37.02	100	348	P	H
		2483.5	39.39	-14.61	54	36.82	32.34	7.25	37.02	100	348	A	H
		2389.3	61.72	-12.28	74	58.73	32.4	7.1	36.51	114	70	P	V
	!	2389.3	49.19	-4.81	54	46.2	32.4	7.1	36.51	114	70	A	V
	*	2412	99.24	-	-	96.33	32.39	7.13	36.61	114	70	A	V
	*	2410	108.54	-	-	105.63	32.39	7.13	36.61	114	70	P	V
		2488.36	50.39	-23.61	74	47.94	32.33	7.25	37.13	114	70	P	V
		2483.68	38.91	-15.09	54	36.34	32.34	7.25	37.02	114	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 802.11 ax HE40 Full (Harmonic @ 3m)

WIFI Ant. 9+10	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)
802.11ax		4845	40.72	-33.28	74	61.73	34	10.25	65.26	300	0	P	H
HE40 Full		7260	41.93	-32.07	74	59.96	35.75	12.72	66.5	300	0	P	H
CH 03		4845	40.39	-33.61	74	61.4	34	10.25	65.26	100	0	P	V
2422MHz		7260	41.02	-32.98	74	59.05	35.75	12.72	66.5	100	0	P	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz
2.4GHz WIFI 802.11g (LF)

Table with 14 columns: WIFI, Note, Frequency, Level, Over, Limit, Read, Antenna, Path, Preamp, Ant, Table, Peak, Pol. It contains 12 rows of test data for 2.4GHz WIFI 802.11g LF.

Remark
1. No other spurious found.
2. All results are PASS against limit line.



**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
9+10		( 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													
2412MHz		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)

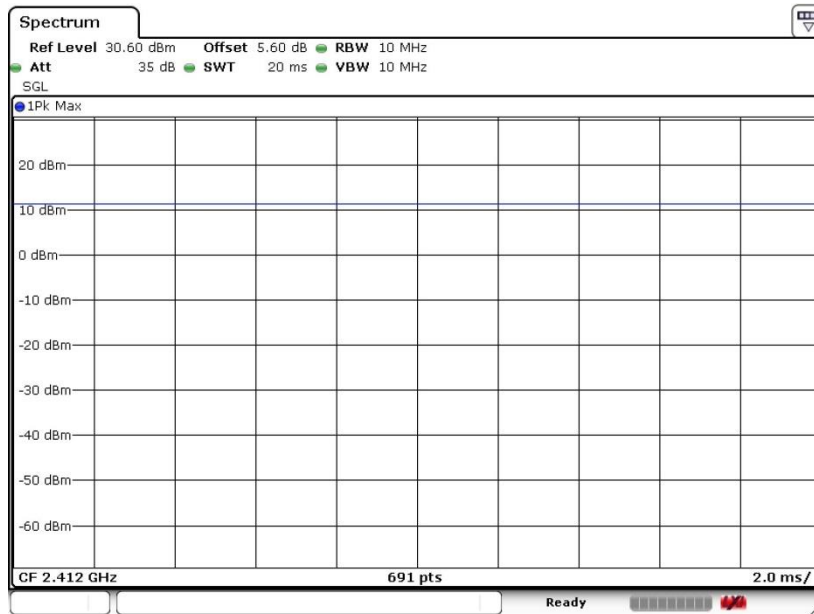
Both peak and average measured complies with the limit line, so test result is “PASS”.



### Appendix D. Duty Cycle Plots

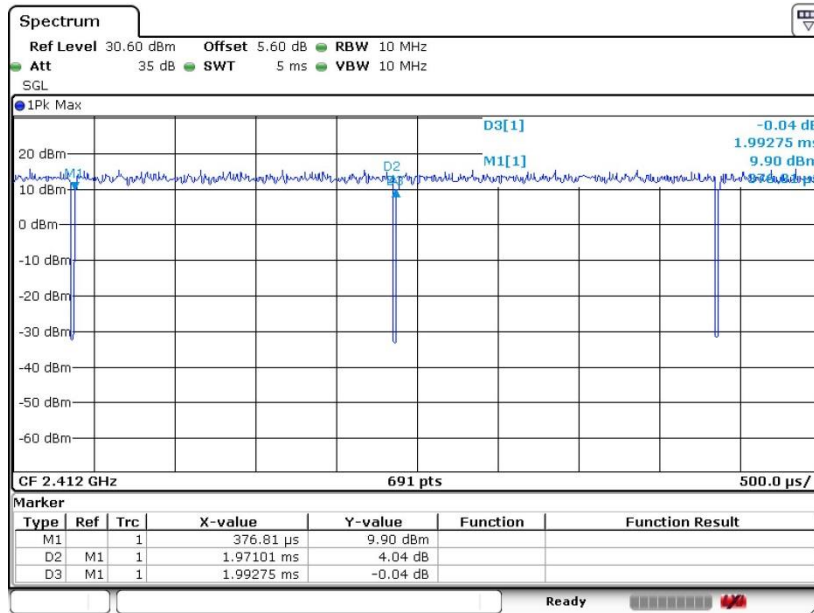
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
9+10	802.11b	100	-	-	10Hz
9+10	802.11g	98.91	-	-	10Hz
9+10	802.11ax HE20 - Full RU	100	-	-	10Hz
9+10	802.11ax HE20 - Partial RU26	100	-	-	10Hz
9+10	802.11ax HE20 - Partial RU52	100	-	-	10Hz
9+10	802.11ax HE20 - Partial RU106	100	-	-	10Hz
9+10	802.11ax HE40	100	-	-	10Hz

#### 802.11b

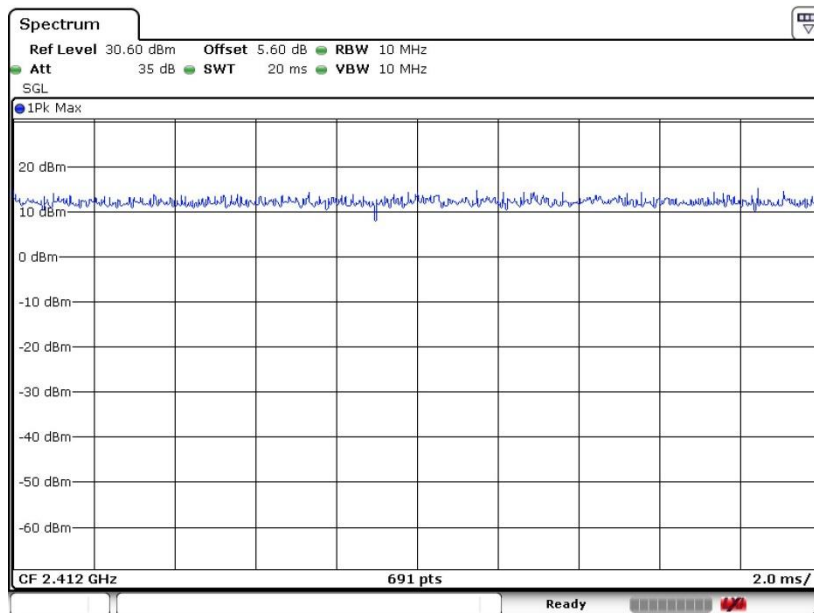




802.11g

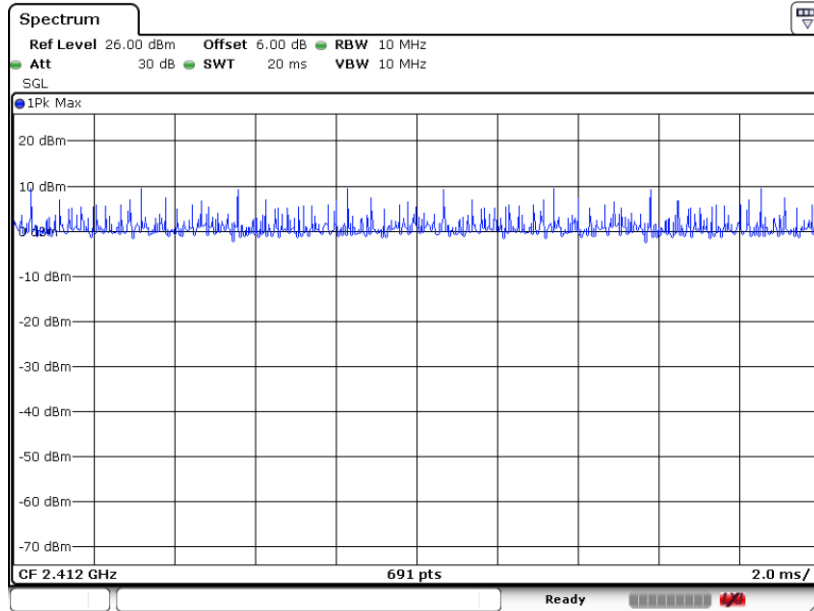


802.11ax HE20 – full RU

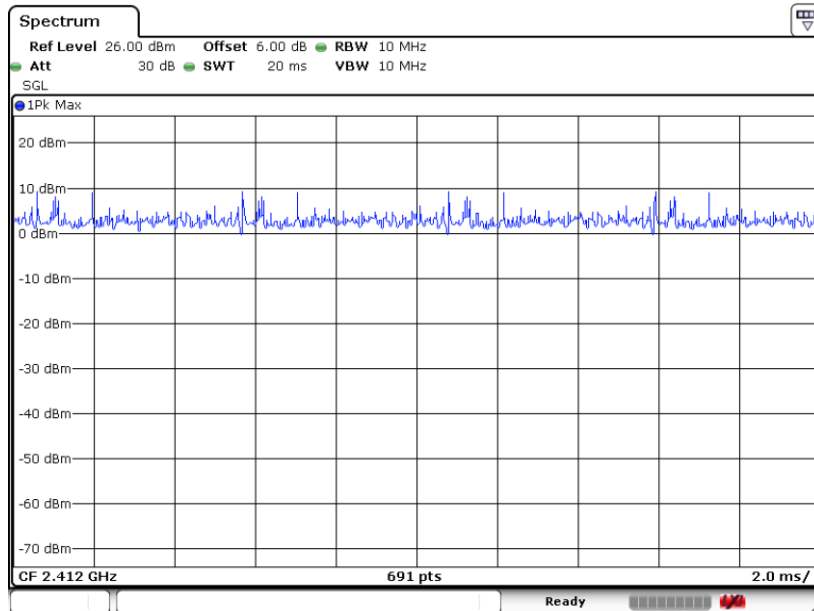




802.11ax HE20 – partial RU26

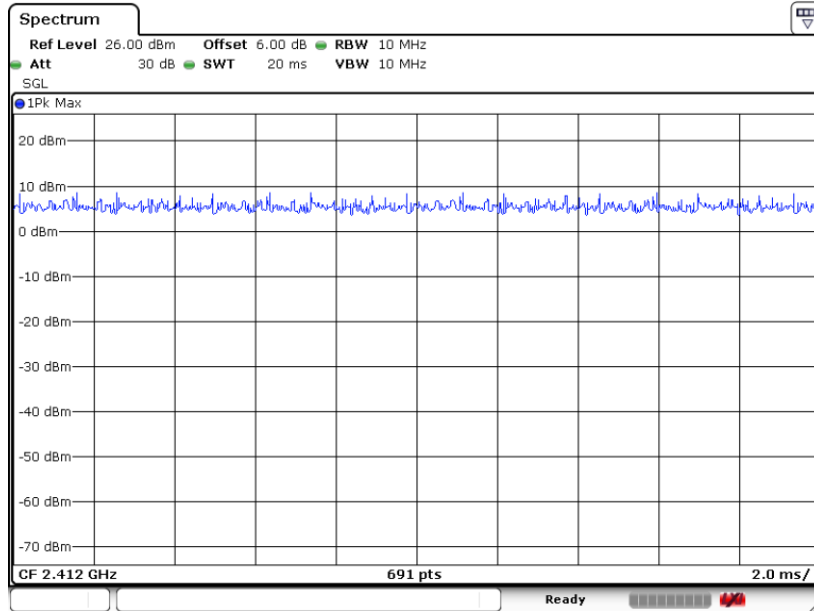


802.11ax HE20 – partial RU52





802.11ax HE20 – partial RU106



802.11ax HE40

