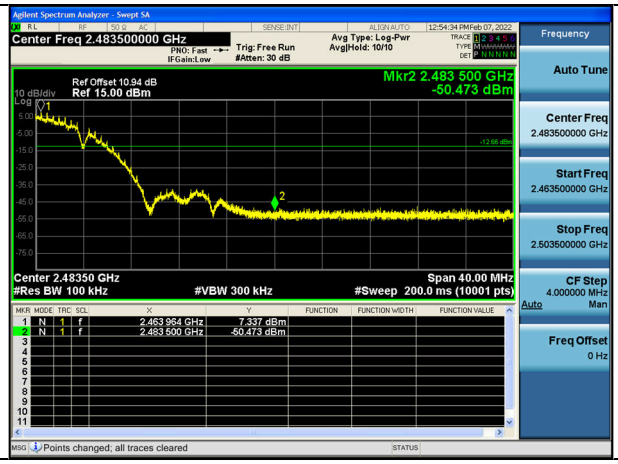
Band edge measurement

Test Mode: 802.11b



Test Mode:802.11b 2412MHz Chain0



Test Mode:802.11b 2462MHz Chain0

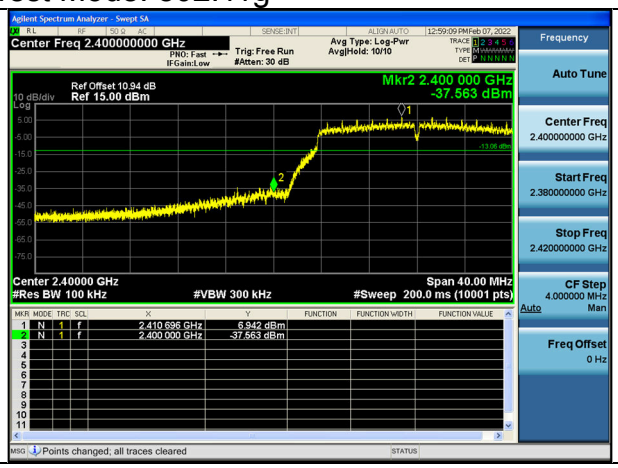


Test Mode:802.11b 2412MHz Chain1

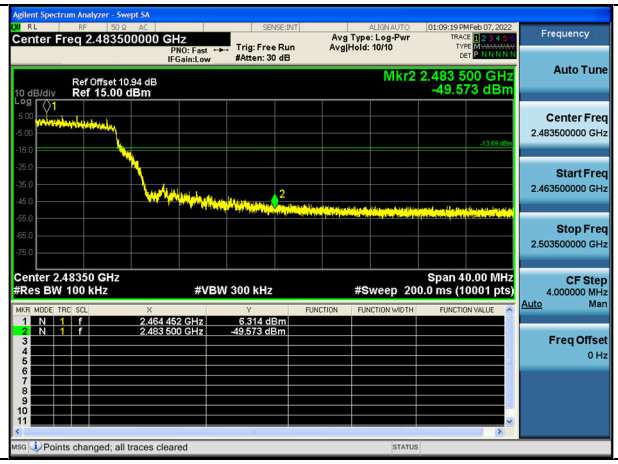


Test Mode:802.11b 2462MHz Chain1

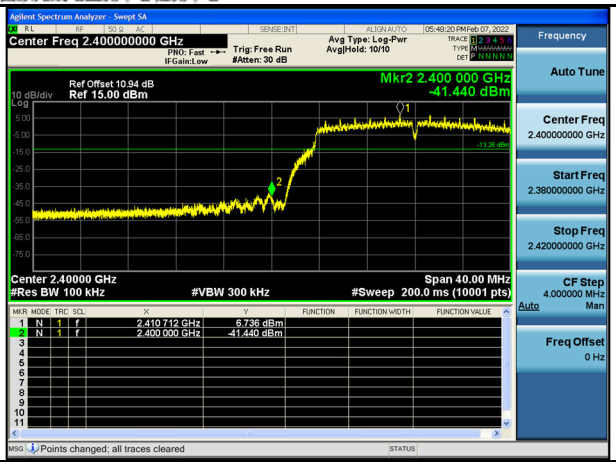
Test Mode: 802.11g



Test Mode:802.11g 2412MHz Chain0



Test Mode:802.11g 2462MHz Chain0

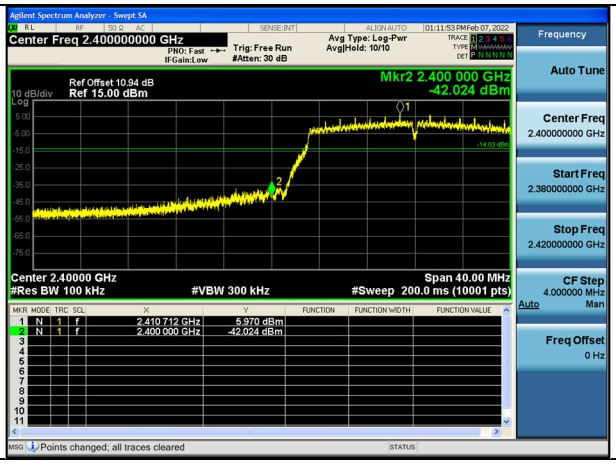


Test Mode:802.11g 2412MHz Chain1

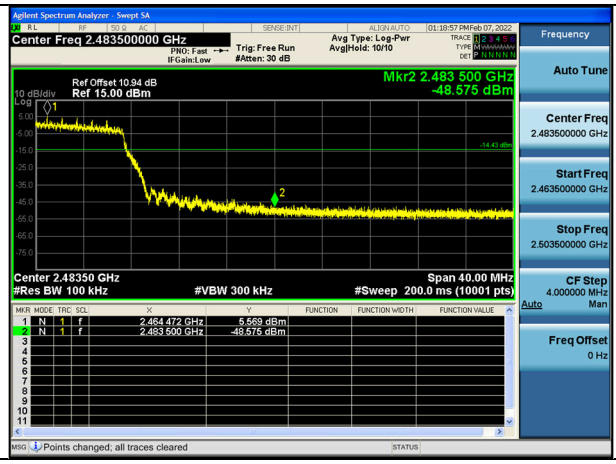


Test Mode:802.11g 2462MHz Chain1

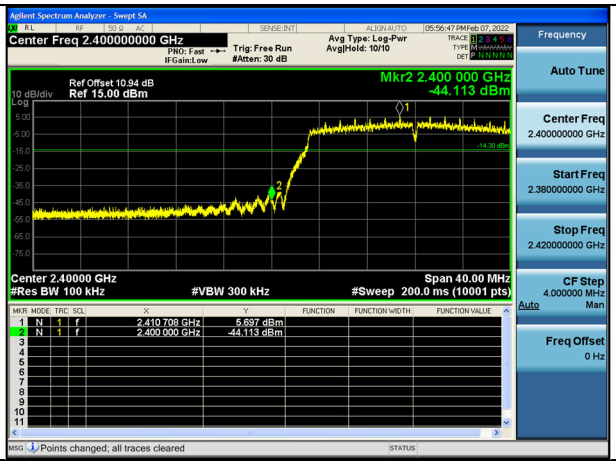
Test Mode: 802.11n HT20



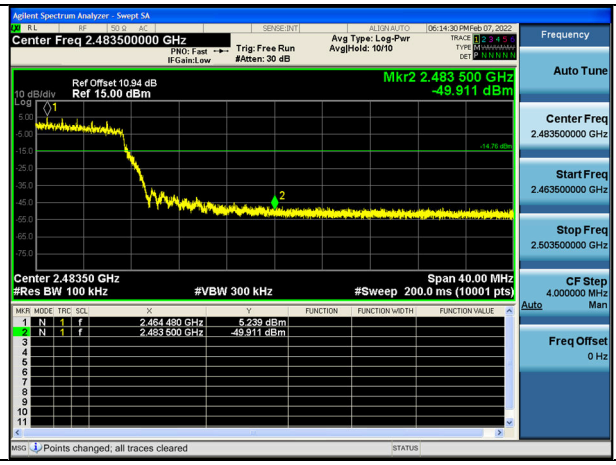
Test Mode:802.11n HT20 2412MHz Chain0



Test Mode:802.11n HT20 2462MHz Chain0

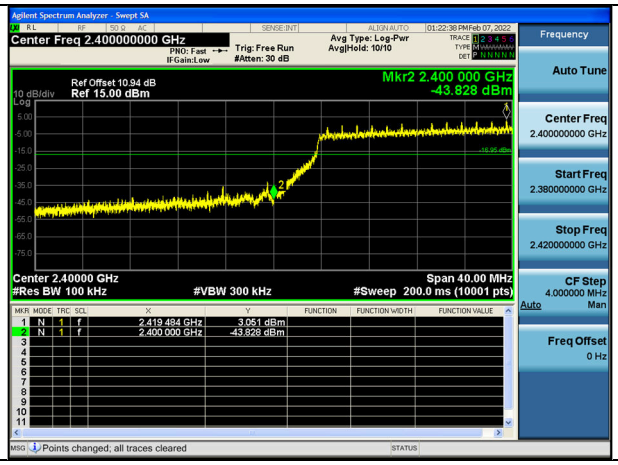


Test Mode:802.11n HT20 2412MHz Chain1

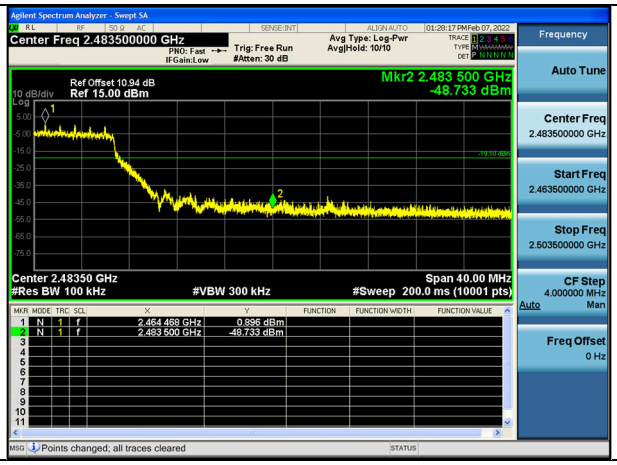


Test Mode:802.11n HT20 2462MHz Chain1

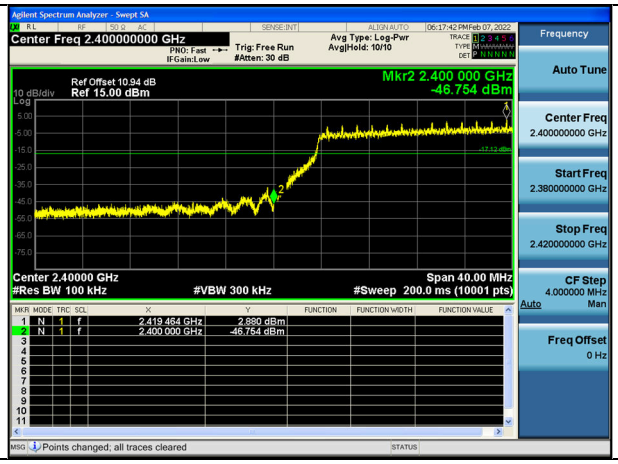
Test Mode: 802.11n HT40



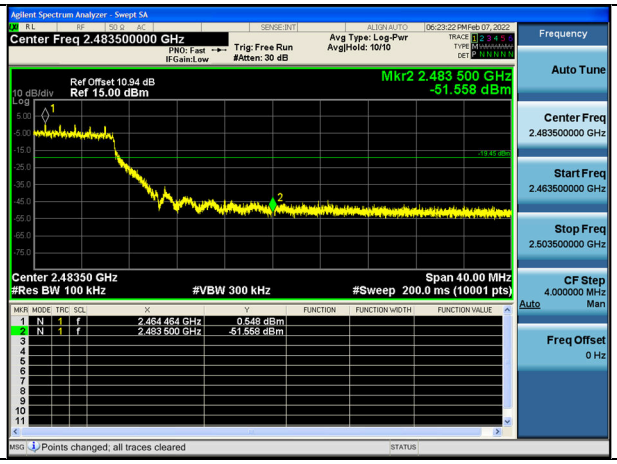
Test Mode:802.11n HT40 2422MHz Chain0



Test Mode:802.11n HT40 2452MHz Chain0



Test Mode:802.11n HT40 2422MHz Chain1



Test Mode:802.11n HT40 2452MHz Chain1

APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Emission Band Edge

Pre-tests are needed at the presence of different data rate.Data rate below means worst-case rate of each test item.Worst-case data rates are shown as following table.

Test Mode	Data Rate
802.11b	1Mbps
802.11g	6Mbps
802.11n HT20	MCS0(6.5 Mbps)
802.11n HT40	MCS0(13.5 Mbps)

We chose the Worst-modes are shown as following table:

Test Mode	Chain	Note
802.11b	Chain0	---
802.11g	Chain0	---
802.11n HT20	Chain0+ Chain1	---
802.11n HT40	Chain0+ Chain1	---

The measurement results are obtained as described below:
Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (90.7dBuV/m) = (56.70 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2412MHz.

Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan.

Note：There were no emissions above 18GHz found within 20dB of the limit. Thus the test result was not reported according to §15.31（o）

- 802.11b

Carrier Frequency (MHz): 2412
Channel No.: 1
Test Mode: 802.11b
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2412.0	56.70	90.70	N/A	N/A	8.90	25.10
2390.0	8.10	42.10	-31.90	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2412.0	49.80	83.80	N/A	N/A	8.90	25.10
2390.0	-5.60	28.40	-25.60	54.00	8.90	25.10

Carrier Frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11b
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2462.0	55.90	89.90	N/A	N/A	8.90	25.10
2483.5	7.90	41.90	-32.10	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level	Measure Level	Over Limit	Limit (dBuV/m)	Cable Loss	Antenna Factor

	(dBuV)	(dBuV/m)	(dB)		(dB)	(dB)
2462.0	49.00	83.00	N/A	N/A	8.90	25.10
2483.5	-5.30	28.70	-25.30	54.00	8.90	25.10

- 802.11g

Carrier Frequency (MHz): 2412
Channel No.: 1
Test Mode: 802.11g
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2412.0	56.60	90.60	N/A	N/A	8.90	25.10
2390.0	14.60	48.60	-25.40	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2412.0	48.50	82.50	N/A	N/A	8.90	25.10
2390.0	-2.80	31.20	-22.80	54.00	8.90	25.10

Carrier Frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11g
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2462.0	55.50	89.50	N/A	N/A	8.90	25.10
2483.5	14.50	48.50	-25.50	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2462.0	47.30	81.30	N/A	N/A	8.90	25.10
2483.5	6.80	40.80	-13.20	54.00	8.90	25.10

- 802.11n (HT20)

Carrier Frequency (MHz): 2412
Channel No.: 1
Test Mode: 802.11n (HT20)
Detector: Peak

Frequency	Reading	Measure	Over	Limit	Cable	Antenna

(MHz)	Level (dBuV)	Level (dBuV/m)	Limit (dB)	(dBuV/m)	Loss (dB)	Factor (dB)
2412.0	56.40	90.40	N/A	N/A	8.90	25.10
2390.0	11.50	45.50	-28.50	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2412.0	48.60	82.60	N/A	N/A	8.90	25.10
2390.0	7.70	41.70	-12.30	54.00	8.90	25.10

Carrier Frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11n (HT20)
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2462.0	56.70	90.70	N/A	N/A	8.90	25.10
2483.5	9.20	43.20	-30.80	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2462.0	51.90	85.90	N/A	N/A	8.90	25.10
2483.5	2.80	36.80	-17.20	54.00	8.90	25.10

- 802.11n (HT40)

Carrier Frequency (MHz): 2422
Channel No.: 3
Test Mode: 802.11n (HT40)
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2422.0	60.80	94.80	N/A	N/A	8.90	25.10
2390.0	35.40	69.40	-4.60	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2422.0	45.00	79.00	N/A	N/A	8.90	25.10
2390.0	19.40	53.40	-0.60	54.00	8.90	25.10

Carrier Frequency (MHz): 2452
Channel No.: 9
Test Mode: 802.11n (HT40)
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2452.0	62.00	96.00	N/A	N/A	8.90	25.10
2483.5	25.00	59.00	-15.00	74.00	8.90	25.10

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2452.0	47.00	81.00	N/A	N/A	8.90	25.10
2483.5	11.10	45.10	-8.90	54.00	8.90	25.10

Sample Calculations

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss. The measurement results are obtained as described below:

Below 1GHz：

QuasiPeak=Reading Value + A_{Rpl}

Above 1GHz:

MaxPeak=Reading MaxPeak + A_{Rpl}

OR

Average=Reading Average + A_{Rpl}

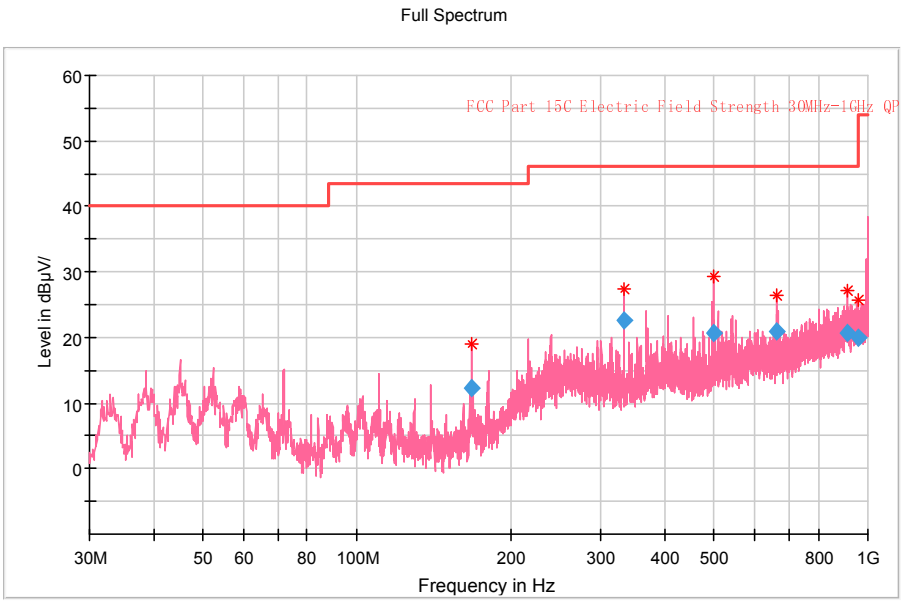
Sample calculation: (12.35 dBμV/m) = (35.15 dBμV) + (-22.80 dB/m), the corresponding frequency is 167.934MHz.

The worst case attitude：The mobile lay down.

- 802.11b

Spurious Radiated Emissions from 30MHz to 1GHz:

CH Middle (No.6)

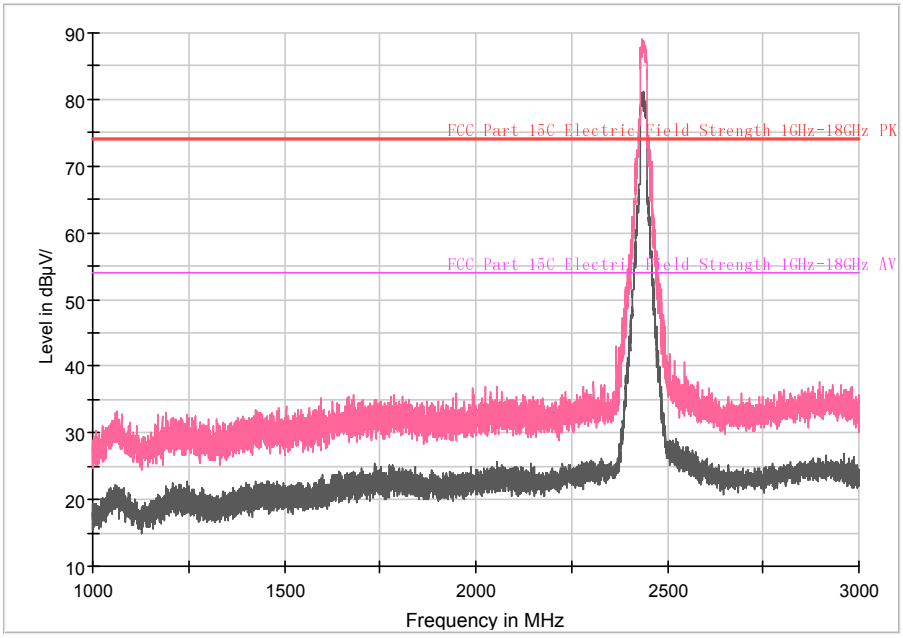


Frequency (MHz)	Reading (dBuV)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
167.934	35.15	12.35	43.50	31.15	-22.80	Vertical
333.028	38.20	22.60	46.00	23.40	-15.60	Vertical
498.025	31.73	20.63	46.00	25.37	-11.10	Vertical
663.992	28.43	21.03	46.00	24.97	-7.40	Vertical
911.342	23.18	20.68	46.00	25.32	-2.50	Vertical
959.745	22.48	19.98	46.00	26.02	-2.50	Vertical

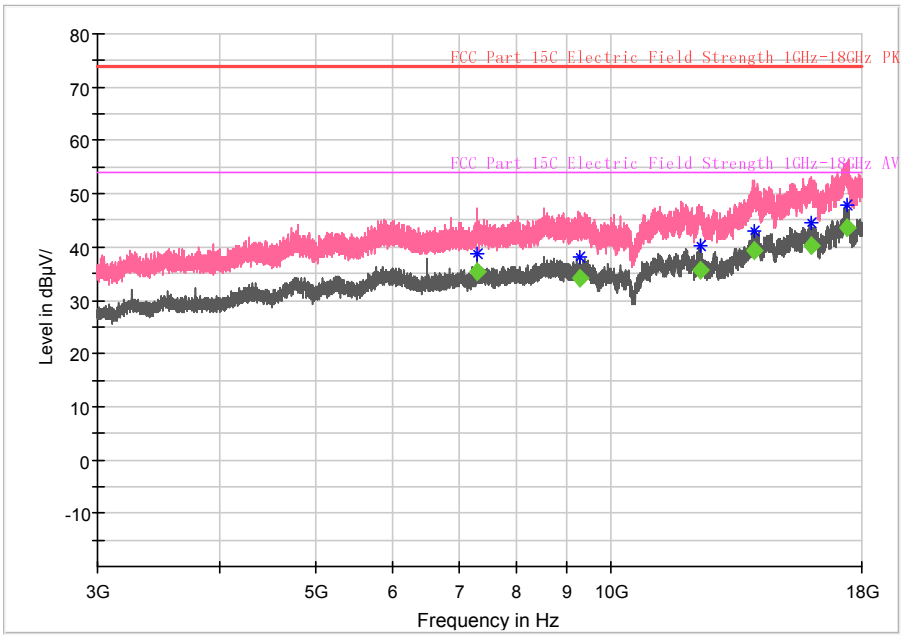
Spurious Radiated Emissions from 1GHz to 18GHz:

CH Middle (No.6)

Full Spectrum



Full Spectrum

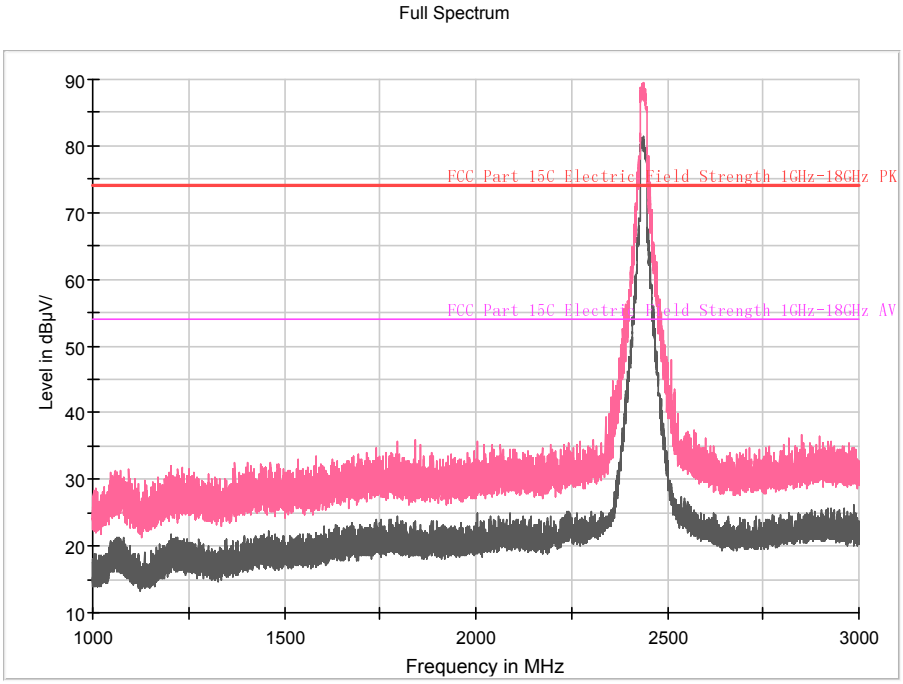


Frequency (MHz)	Reading MaxPeak	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity

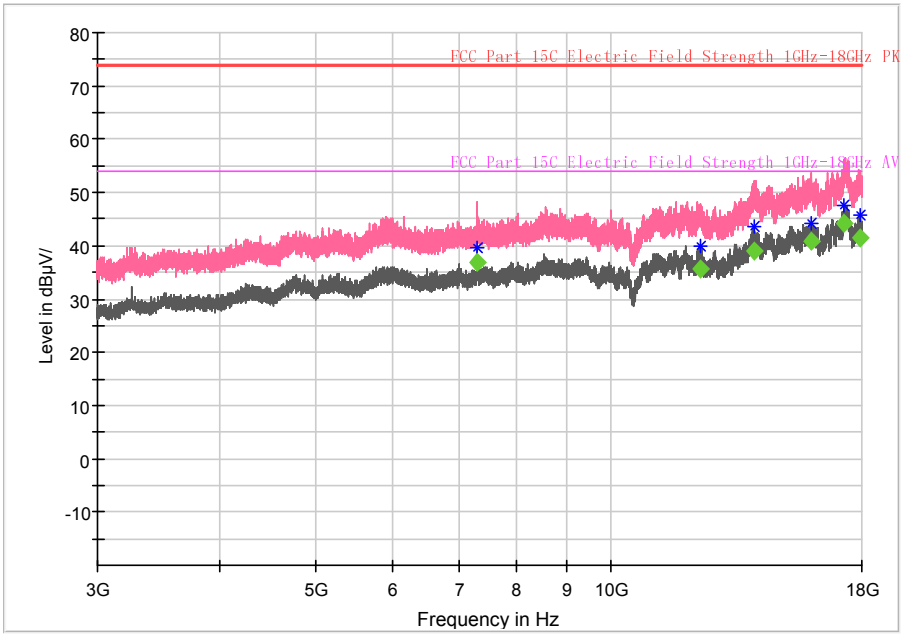
	(dBuV)							
7307.500	---	56.59	---	35.29	54.00	18.71	-21.30	Vertical
9302.000	---	53.86	---	34.16	54.00	19.84	-19.70	Vertical
12318.500	---	52.88	---	35.78	54.00	18.22	-17.10	Vertical
13988.500	---	52.88	---	39.18	54.00	14.82	-13.70	Vertical
16007.500	---	54.15	---	40.15	54.00	13.85	-14.00	Vertical
17398.500	---	55.12	---	43.62	54.00	10.38	-11.50	Vertical

- 802.11g

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.6)



Full Spectrum

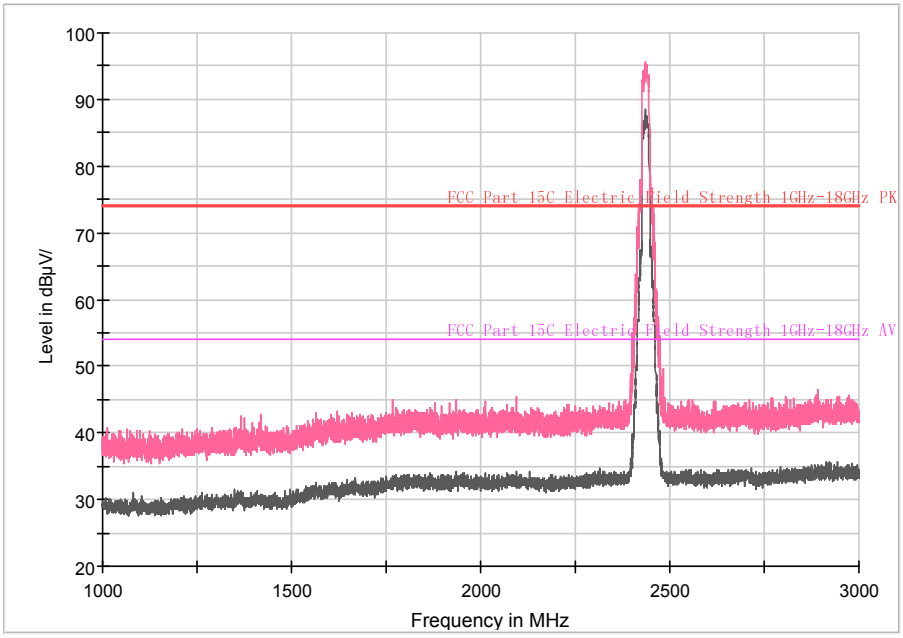


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
7312.500	---	58.10	---	36.80	54.00	17.20	-21.30	Vertical
12309.500	---	52.88	---	35.78	54.00	18.23	-17.10	Vertical
13983.500	---	52.82	---	39.12	54.00	14.88	-13.70	Vertical
15983.500	---	54.72	---	40.82	54.00	13.18	-13.90	Vertical
17286.500	---	55.91	---	44.31	54.00	9.69	-11.60	Vertical
17902.500	---	51.25	---	41.35	54.00	12.65	-9.90	Vertical

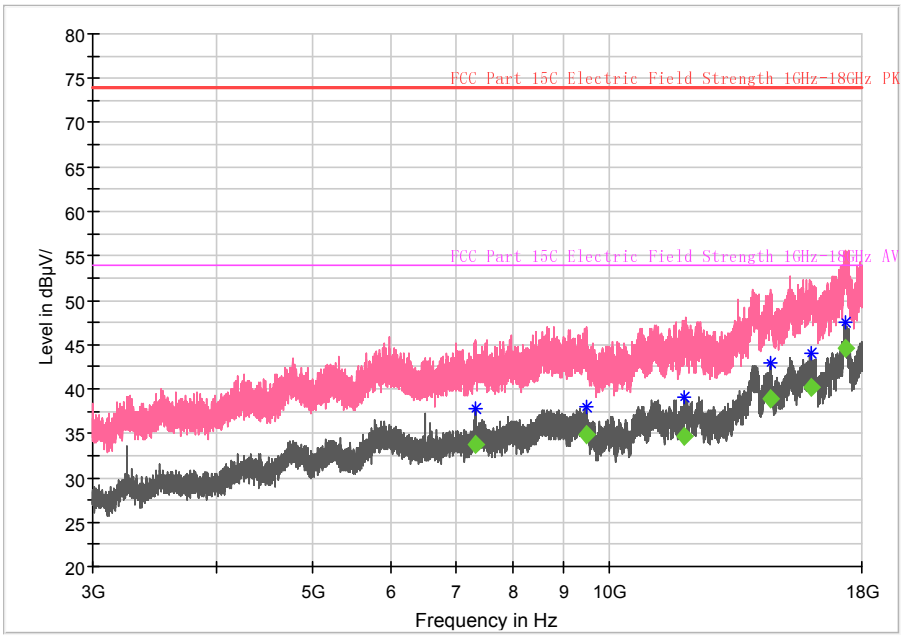
- 802.11n (HT20)

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.6)

Full Spectrum



Full Spectrum

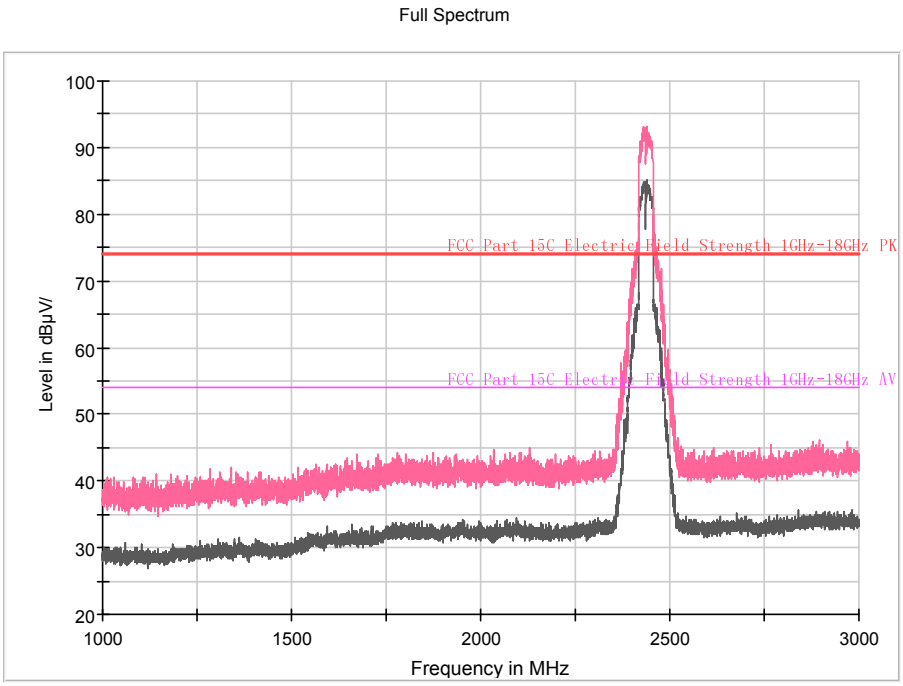


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
7321.500	---	55.02	---	33.82	54.00	20.18	-21.20	Vertical

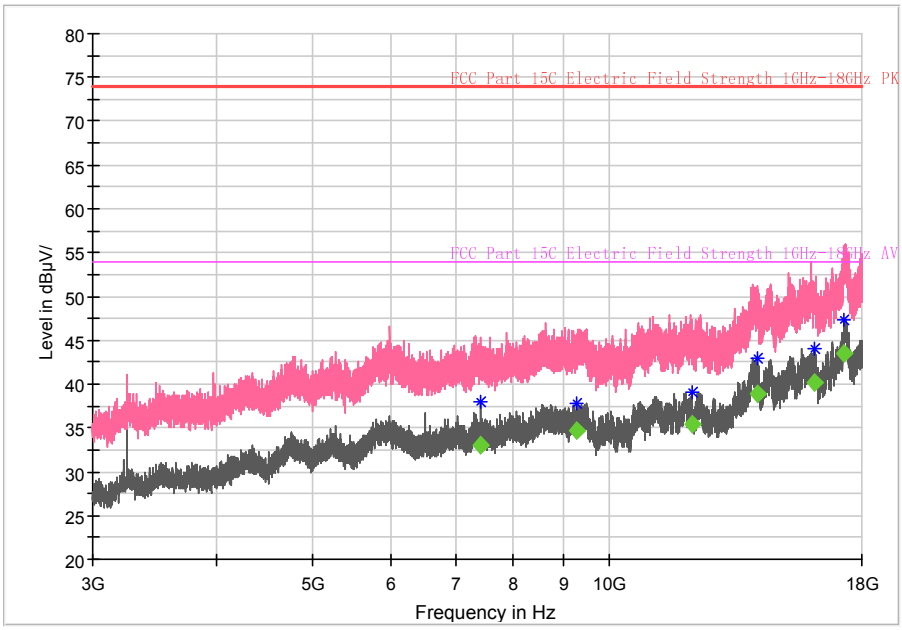
9466.000	---	54.48	---	34.78	54.00	19.22	-19.70	Vertical
11904.500	---	51.25	---	34.65	54.00	19.35	-16.60	Vertical
14568.500	---	52.39	---	38.99	54.00	15.01	-13.40	Vertical
15995.000	---	54.16	---	40.16	54.00	13.84	-14.00	Vertical
17314.500	---	56.11	---	44.61	54.00	9.39	-11.50	Vertical

- 802.11n (HT40)

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.6)

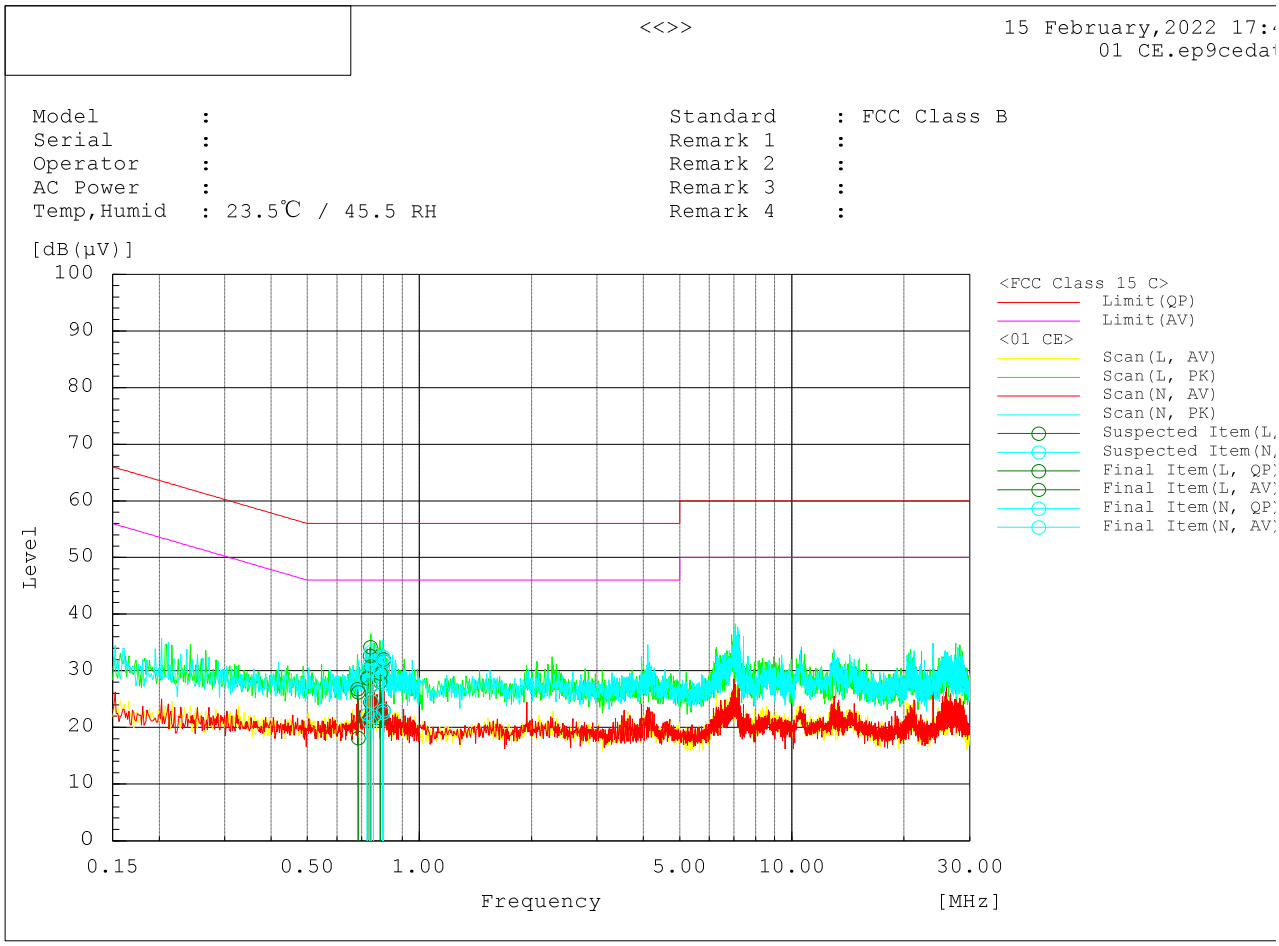


Full Spectrum



Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
7404.500	---	54.31	---	33.11	54.00	20.89	-21.20	Vertical
9261.000	---	54.37	---	34.67	54.00	19.33	-19.70	Vertical
12106.500	---	52.35	---	35.45	54.00	18.55	-16.90	Vertical
14093.000	---	52.56	---	38.86	54.00	15.14	-13.70	Vertical
16137.000	---	54.39	---	40.19	54.00	13.81	-14.20	Vertical
17264.500	---	55.11	---	43.51	54.00	10.49	-11.60	Vertical

AC Power line Conducted Emission



MEASUREMENT RESULT:

Range	Frequency	Line	Reading			Factor	Level			Limit	Limit			Margin			Pass/Fail
	MHz		dB(μV)			dB	dB(μV)			dB(μV)	dB(μV)			dB			
			QP	AV	PK		QP	AV	PK		QP	AV	PK	QP	AV	PK	
Band1	0.685	L	6.3	-1.8		19.9	26.2	18.1			56	46		29.8	27.9		Pass
Band1	0.727	L	8.9	1.3		19.8	28.7	21.1			56	46		27.3	24.9		Pass
Band1	0.736	L	12.9	1.9		19.8	32.7	21.7			56	46		23.3	24.3		Pass
Band1	0.739	L	14.4	4.7		19.8	34.2	24.5			56	46		21.8	21.5		Pass
Band1	0.785	L	9.8	1.9		19.8	29.6	21.7			56	46		26.4	24.3		Pass
Band1	0.8	L	11.9	3.2		19.8	31.7	23			56	46		24.3	23		Pass
Band1	0.724	N	10.3	2.5		19.8	30.1	22.3			56	46		25.9	23.7		Pass
Band1	0.736	N	11.5	1.1		19.8	31.3	20.9			56	46		24.7	25.1		Pass
Band1	0.743	N	13.6	4.8		19.8	33.4	24.6			56	46		22.6	21.4		Pass
Band1	0.753	N	10.2	2.1		19.8	30	21.9			56	46		26	24.1		Pass
Band1	0.801	N	12	3.3		19.8	31.8	23.1			56	46		24.2	22.9		Pass
Band1	0.798	N	12.7	2.7		19.8	32.5	22.5			56	46		23.5	23.5		Pass

---End of the test report---