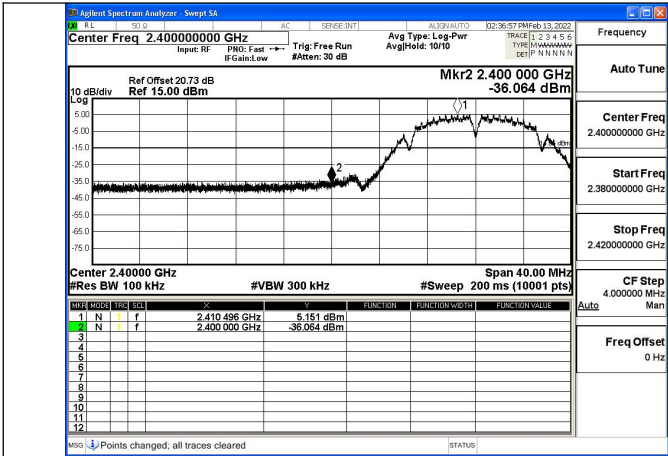
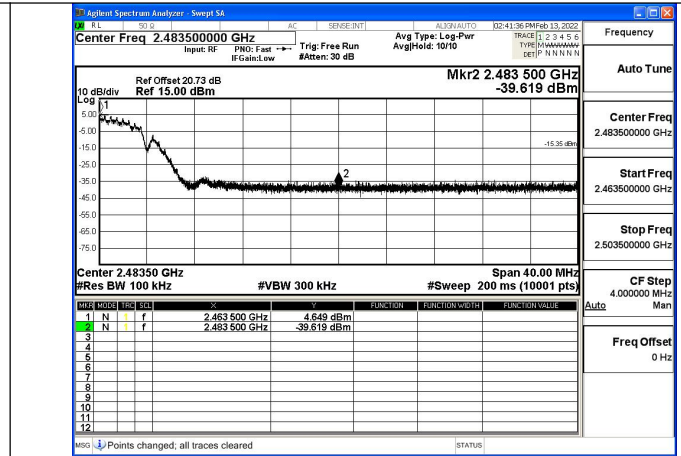


# Band edge measurement

Test Mode: 802.11b

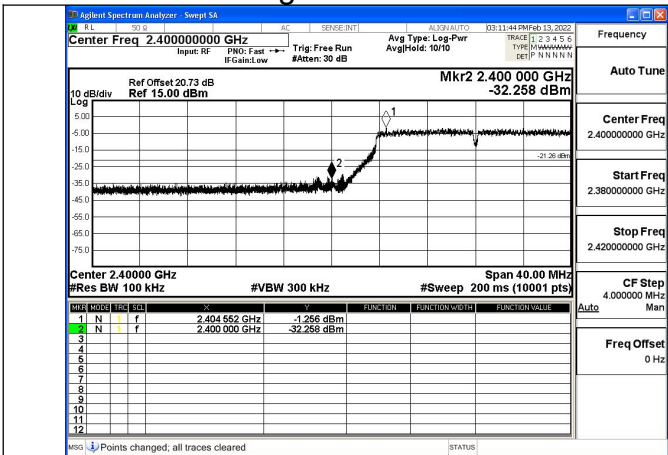


Test Mode:802.11b 2412MHz Chain0

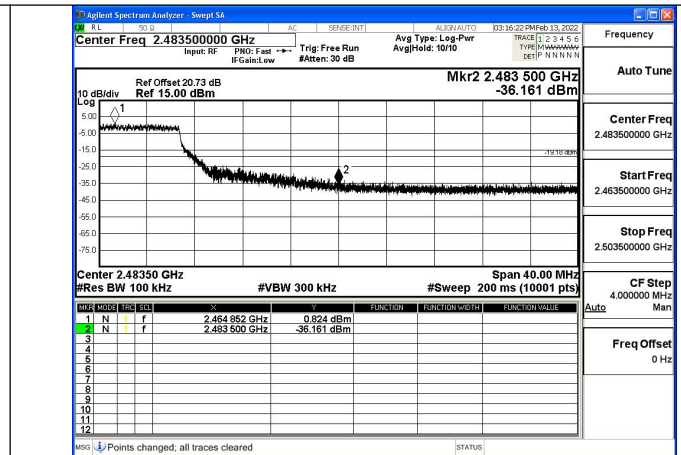


Test Mode:802.11b 2462MHz Chain0

# Test Mode: 802.11g

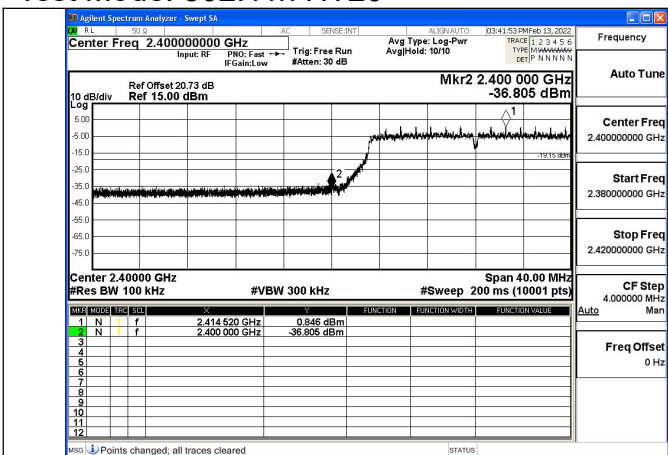


Test Mode:802.11g 2412MHz Chain0

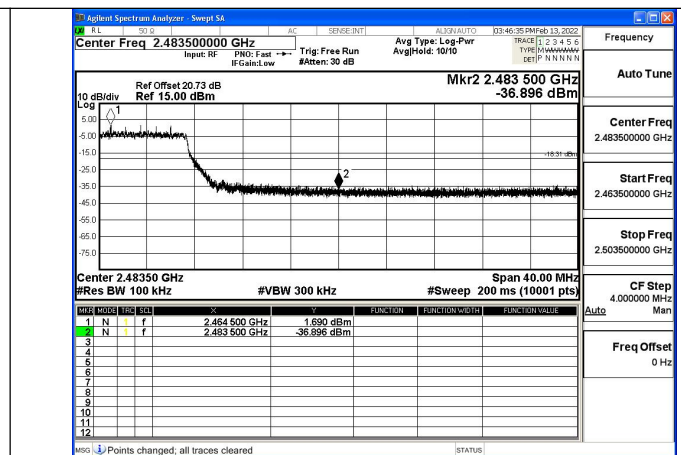


Test Mode:802.11g 2462MHz Chain0

# Test Mode: 802.11n HT20



Test Mode:802.11n HT20 2412MHz Chain0



Test Mode:802.11n HT20 2462MHz Chain0

## **APPENDIX B – TEST DATA OF RADIATED EMISSION**

### **Radiated Emission Band Edge**

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)

The measurement results contain the correction factor of the duty cycle.

The measurement results are obtained as described below:

Measure Level = Reading Level + Cable loss + Antenna factor  
Sample calculation: (90.20 dBuV/m) = (56.20 dBµV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2412MHz.

#### ● 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	56.20	90.20	N/A	N/A	8.90	25.10
2390.0	19.30	53.30	-20.70	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	44.90	78.90	N/A	N/A	8.90	25.10
2390.0	7.10	41.10	-12.90	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	59.30	93.30	N/A	N/A	8.90	25.10
2483.5	15.70	49.70	-24.30	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	47.20	81.20	N/A	N/A	8.90	25.10
2483.5	-2.10	31.90	-22.10	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	59.30	93.30	N/A	N/A	8.90	25.10
2390.0	17.30	51.30	-22.70	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	34.60	68.60	N/A	N/A	8.90	25.10
2390.0	-7.50	26.50	-27.50	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	50.90	84.90	N/A	N/A	8.90	25.10
2483.5	16.30	50.30	-23.70	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	35.40	69.40	N/A	N/A	8.90	25.10
2483.5	1.70	35.70	-18.30	54.00	8.90	25.10

● 802.11n (HT20)

Carrier Frequency (MHz): 2412

Channel No.: 1

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)
2412.0	53.30	87.30	N/A	N/A	8.90	25.10
2390.0	33.70	67.70	-6.30	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	35.40	69.40	N/A	N/A	8.90	25.10
2390.0	12.60	46.60	-7.40	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	59.50	93.50	N/A	N/A	8.90	25.10
2483.5	21.80	55.80	-18.20	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	37.20	71.20	N/A	N/A	8.90	25.10
2483.5	3.90	37.90	-16.10	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:  $(18.40 \text{ dB}\mu\text{V/m}) = (42.50 \text{ dB}\mu\text{V}) + (-24.10\text{dB/m})$ , the corresponding frequency is 31.997MHz.

The worst case attitude: The mobile lay down.

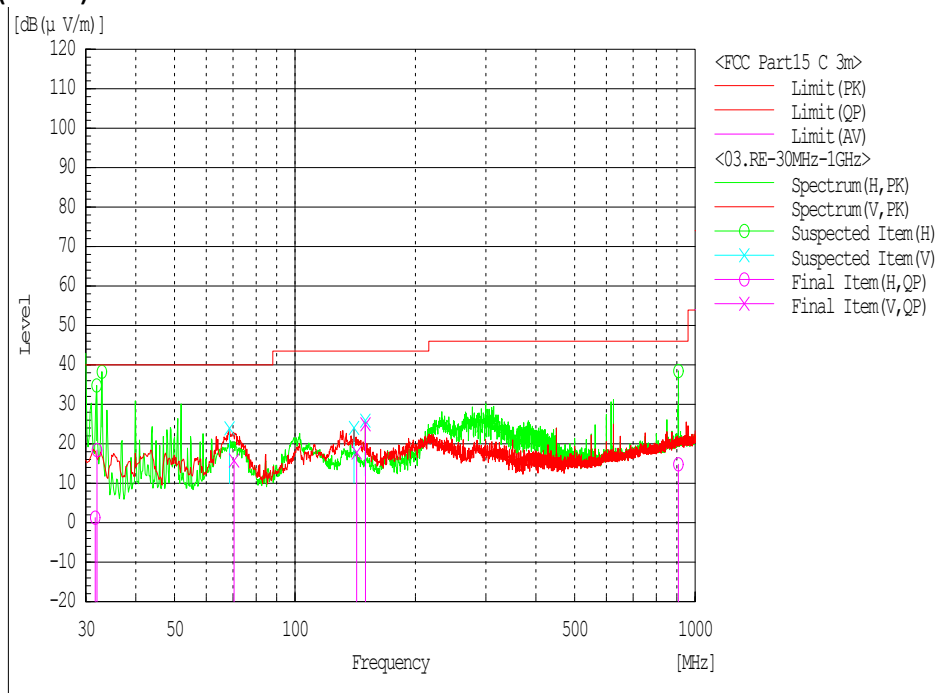
**Spurious Radiated Emissions below 30MHz:**

There were no emissions from 9kHz to 30MHz found within 20dB of the limit. Thus, the test result was not reported according to § 15.31 (o).

● **802.11b**

**Spurious Radiated Emissions from 30MHz to 1GHz:**

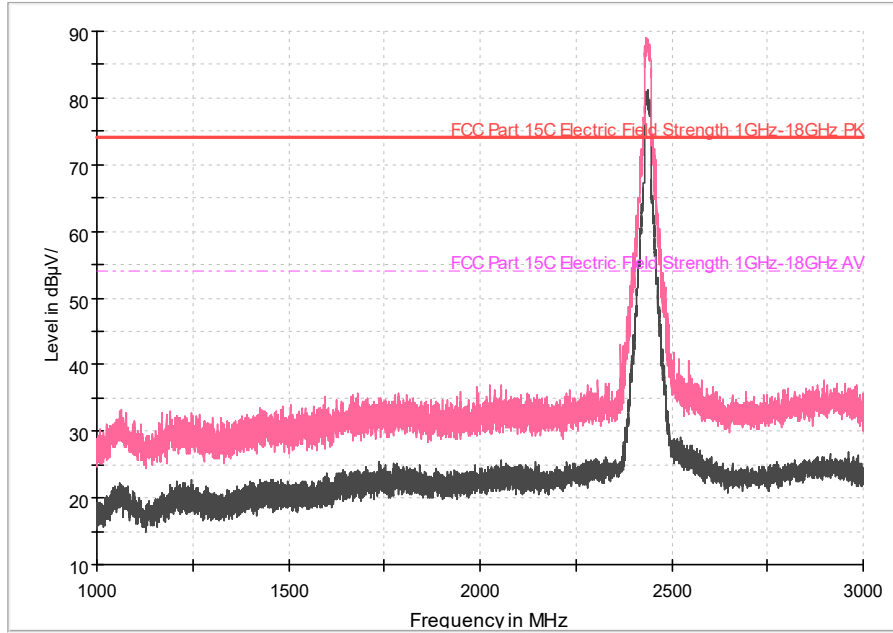
**CH Middle (No.6)**



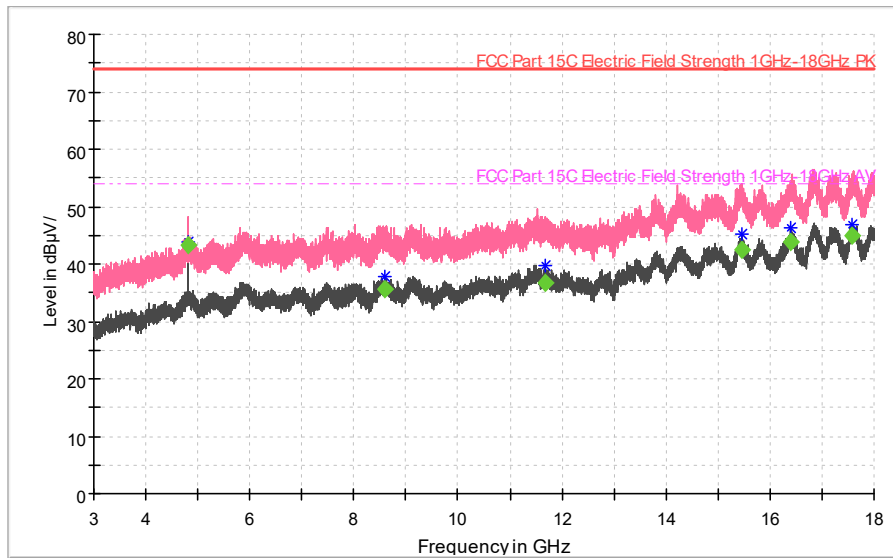
Frequency (MHz)	Reading (dBuV)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A <sub>Rpl</sub> (dB)	Polarity
31.997	42.5	18.4	40.0	21.6	-24.1	Vertical
31.676	25.4	1.30	40.0	38.7	-24.1	Vertical
70.434	40.8	15.8	40.0	24.2	-25.0	Vertical
142.578	43.9	17.8	43.5	25.7	-26.1	Vertical
149.993	51.1	25.0	43.5	18.5	-26.1	Vertical
908.017	22.9	14.8	46.0	31.2	-8.1	Vertical

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

Full Spectrum



Full Spectrum

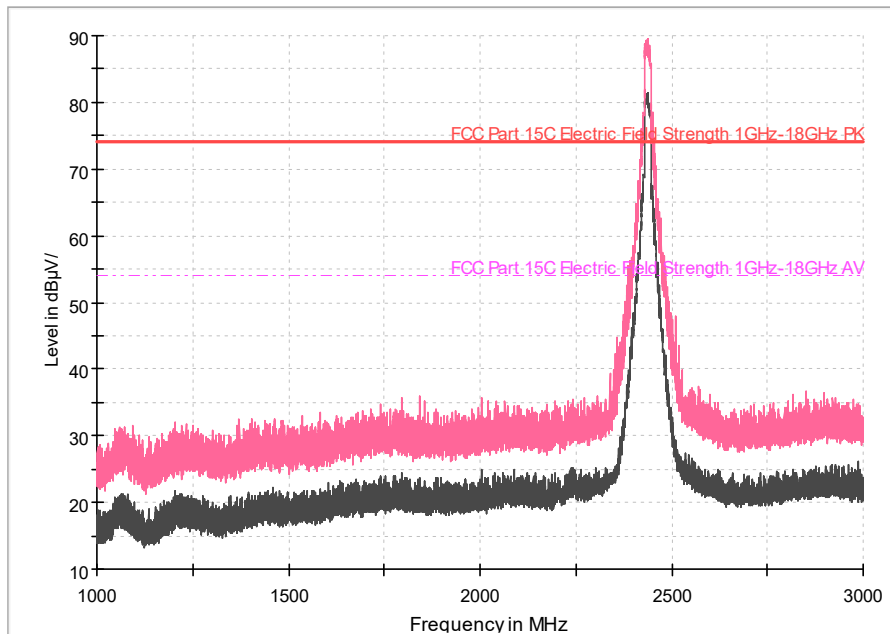




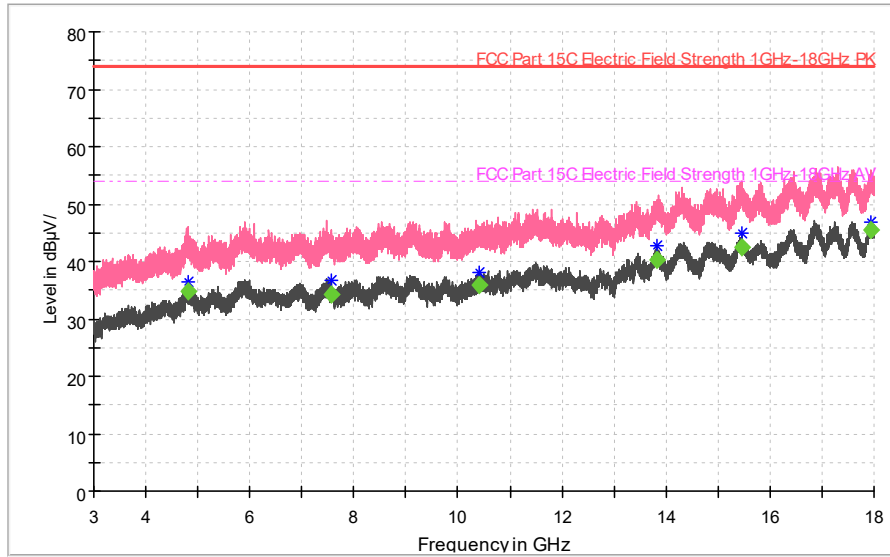
Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A <sub>Rpl</sub> (dB)	Polarity
4824.000	---	64.37	---	43.17	54.00	10.83	-21.20	Vertical
8605.500	---	55.66	---	35.56	54.00	18.44	-20.10	Vertical
11676.000	---	53.20	---	36.60	54.00	17.40	-16.60	Vertical
15446.500	---	55.99	---	42.49	54.00	11.51	-13.50	Vertical
16408.000	---	57.42	---	43.92	54.00	10.08	-13.50	Vertical
17566.500	---	56.26	---	45.06	54.00	8.94	-11.20	Vertical

● 802.11g  
Spurious Radiated Emissions from 1GHz to 18GHz:  
CH Middle (No.6)

Full Spectrum



Full Spectrum



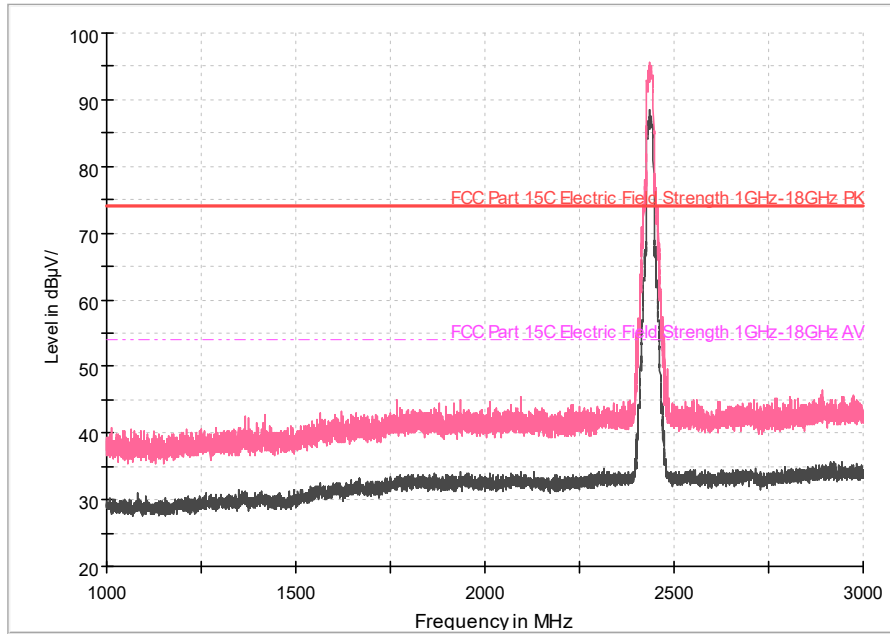
Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A <sub>Rpl</sub> (dB)	Polarity
4823.500	---	55.86	---	34.66	54.00	19.34	-21.20	Vertical
7563.500	---	55.29	---	34.19	54.00	19.81	-21.10	Vertical
10404.000	---	54.72	---	35.92	54.00	18.08	-18.80	Vertical
13811.500	---	54.24	---	40.24	54.00	13.76	-14.00	Vertical
15458.500	---	55.98	---	42.38	54.00	11.62	-13.60	Vertical
17940.000	---	55.17	---	45.47	54.00	8.53	-9.70	Vertical

● 802.11n (HT20)

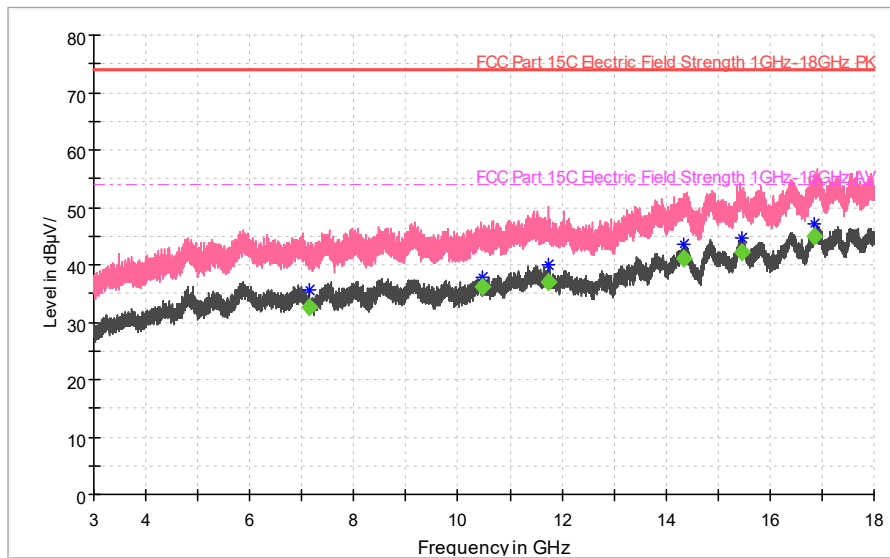
Spurious Radiated Emissions from 1GHz to 18GHz:

CH Middle (No.6)

Full Spectrum

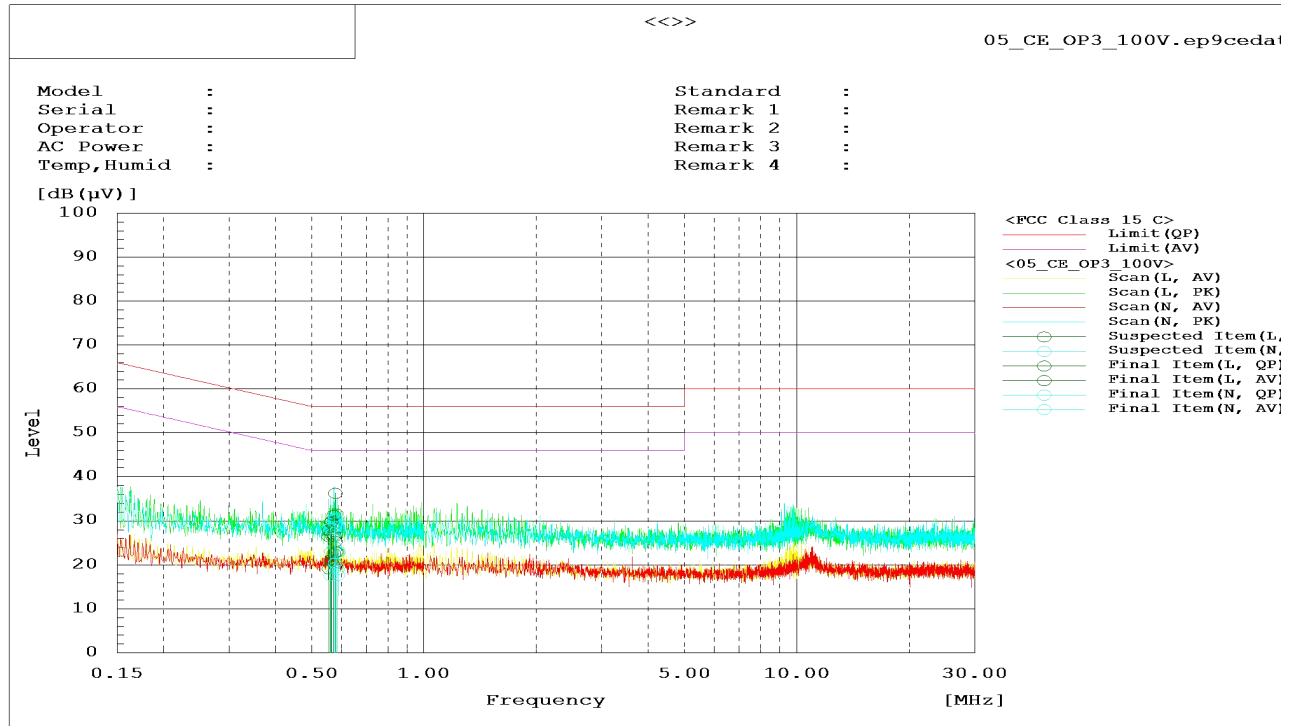


Full Spectrum



Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A <sub>Rpl</sub> (dB)	Polarity
7149.500	---	53.92	---	32.52	54.00	21.48	-21.40	Vertical
10472.000	---	54.86	---	36.06	54.00	17.94	-18.80	Vertical
11744.000	---	53.68	---	36.98	54.00	17.02	-16.70	Vertical
14352.500	---	54.52	---	41.12	54.00	12.88	-13.40	Vertical
15451.000	---	55.78	---	42.18	54.00	11.82	-13.60	Vertical
16864.000	---	57.42	---	45.02	54.00	8.98	-12.40	Vertical

## AC Power line Conducted Emission 100V

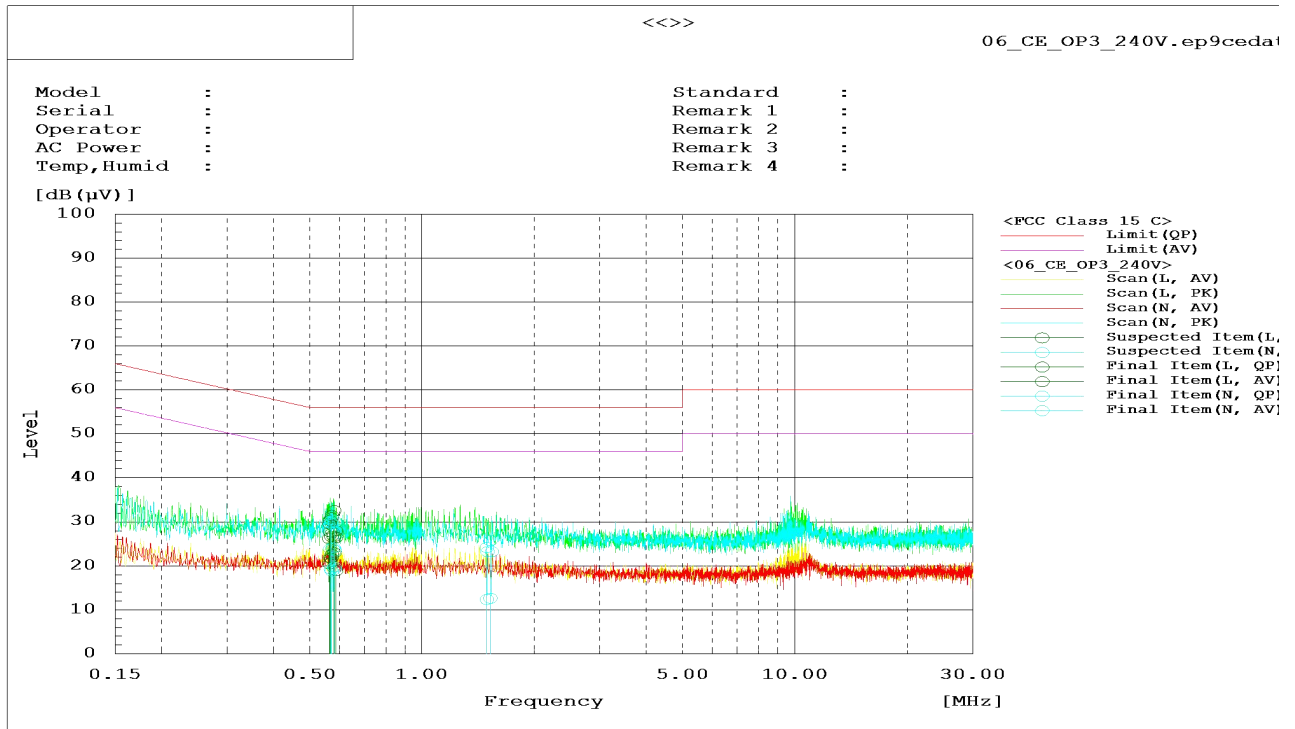


L+N Line

### MEASUREMENT RESULT:

Range	Frequency	Line	Reading		Factor	Level		Limit	Limit	Margin		Pass/Fail	
	MHz		dB(μV)			dB(μV)				dB			
Band1	0.56	N	8.5	-2.2	19.9	28.4	17.7		56	46	27.6	28.3	Pass
Band1	0.58	N	10.7	0.6	19.9	30.6	20.5		56	46	25.4	25.5	Pass
Band1	0.58	N	9.7	-0.5	19.9	29.6	19.4		56	46	26.4	26.6	Pass
Band1	0.58	N	10.4	0.5	19.9	30.3	20.4		56	46	25.7	25.6	Pass
Band1	0.59	N	8.2	-2.3	19.9	28.1	17.6		56	46	27.9	28.4	Pass
Band1	0.59	N	8.9	-0.9	19.9	28.8	19		56	46	27.2	27	Pass
Band1	0.56	L	8	-0.8	19.9	27.9	19.1		56	46	28.1	26.9	Pass
Band1	0.56	L	9.8	1.2	19.9	29.7	21.1		56	46	26.3	24.9	Pass
Band1	0.56	L	10	0.9	19.9	29.9	20.8		56	46	26.1	25.2	Pass
Band1	0.57	L	11.4	2.7	19.9	31.3	22.6		56	46	24.7	23.4	Pass
Band1	0.58	L	16.4	5.5	19.9	36.3	25.4		56	46	19.7	20.6	Pass
Band1	0.58	L	11.7	3	19.9	31.6	22.9		56	46	24.4	23.1	Pass

**240V**



**L+N Line**

**MEASUREMENT RESULT:**

Range	Frequency	Line	Reading		Factor	Level		Limit		Margin		Pass/Fail
	MHz		dB(μV)			dB(μV)		dB(μV)		dB		
Band1	0.566	L	10.4	1.9	19.9	30.3	21.8	56	46	25.7	24.2	Pass
Band1	0.563	L	9.7	0.6	19.9	29.6	20.5	56	46	26.4	25.5	Pass
Band1	0.572	L	11.6	2.7	19.9	31.5	22.6	56	46	24.5	23.4	Pass
Band1	0.571	L	11.1	1.9	19.9	31	21.8	56	46	25	24.2	Pass
Band1	0.58	L	12.7	3.1	19.9	32.6	23	56	46	23.4	23	Pass
Band1	0.588	L	8.1	-0.9	19.9	28	19	56	46	28	27	Pass
Band1	0.569	N	9.9	-0.6	19.9	29.8	19.3	56	46	26.2	26.7	Pass
Band1	0.571	N	9.6	-1	19.9	29.5	18.9	56	46	26.5	27.1	Pass
Band1	0.582	N	10.1	-0.1	19.9	30	19.8	56	46	26	26.2	Pass
Band1	0.581	N	10.4	-0.6	19.9	30.3	19.3	56	46	25.7	26.7	Pass
Band1	1.49	N	4.3	-7.5	19.9	24.2	12.4	56	46	31.8	33.6	Pass
Band1	1.524	N	5.8	-7.2	19.9	25.7	12.7	56	46	30.3	33.3	Pass

---End of the test report---