Band edge measurement

Test Mode: 802.11b

Test Mode:802.11b 2412MHz Chain0

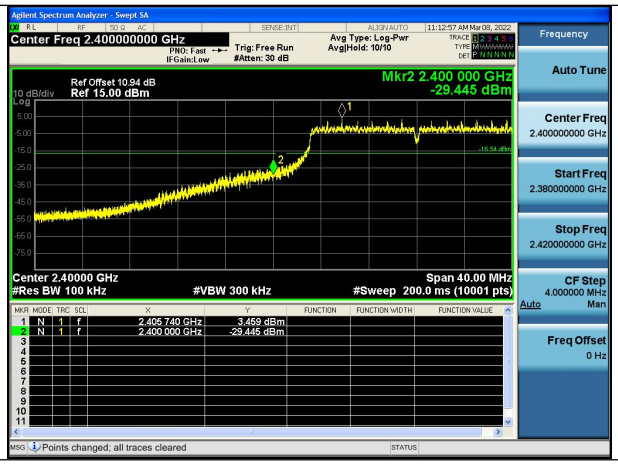
Test Mode:802.11b 2462MHz Chain0

Test Mode: 802.11g

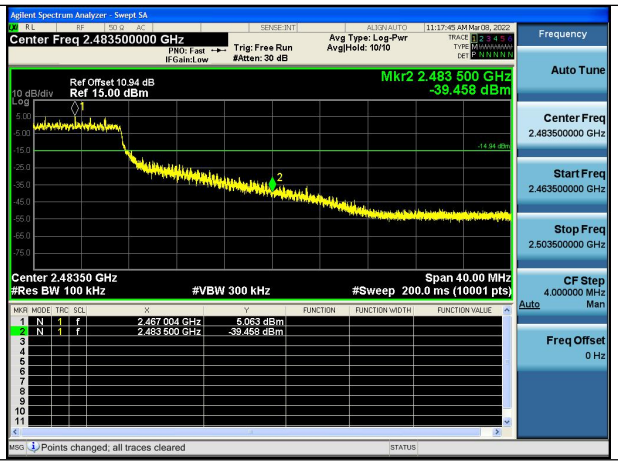
Test Mode:802.11g 2412MHz Chain0

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

The measurement results are obtained as described below:
Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (89.10 dBuV/m) = (55.10 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）
The measurement results contain the correction factor of the duty cycle.

- 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	55.10	89.10	N/A	N/A	8.90	25.10
2390.0	16.70	50.70	-23.30	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	44.20	78.20	N/A	N/A	8.90	25.10
2390.0	-6.10	27.90	-26.10	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	56.90	90.90	N/A	N/A	8.90	25.10
2483.5	6.60	40.60	-33.40	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	48.20	82.20	N/A	N/A	8.90	25.10
2483.5	-10.90	23.10	-30.90	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	39.60	73.60	N/A	N/A	8.90	25.10
2390.0	-7.30	26.70	-27.30	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	11.20	45.20	-28.80	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	38.60	72.60	N/A	N/A	8.90	25.10
2483.5	-3.20	30.80	-23.20	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	58.10	92.10	N/A	N/A	8.90	25.10
2390.0	29.70	63.70	-10.30	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	37.60	71.60	N/A	N/A	8.90	25.10
2390.0	10.60	44.60	-9.40	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	50.80	84.80	N/A	N/A	8.90	25.10
2483.5	23.70	57.70	-16.30	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	33.70	67.70	N/A	N/A	8.90	25.10
2483.5	5.90	39.90	-14.10	54.00	8.90	25.10

Sample Calculations

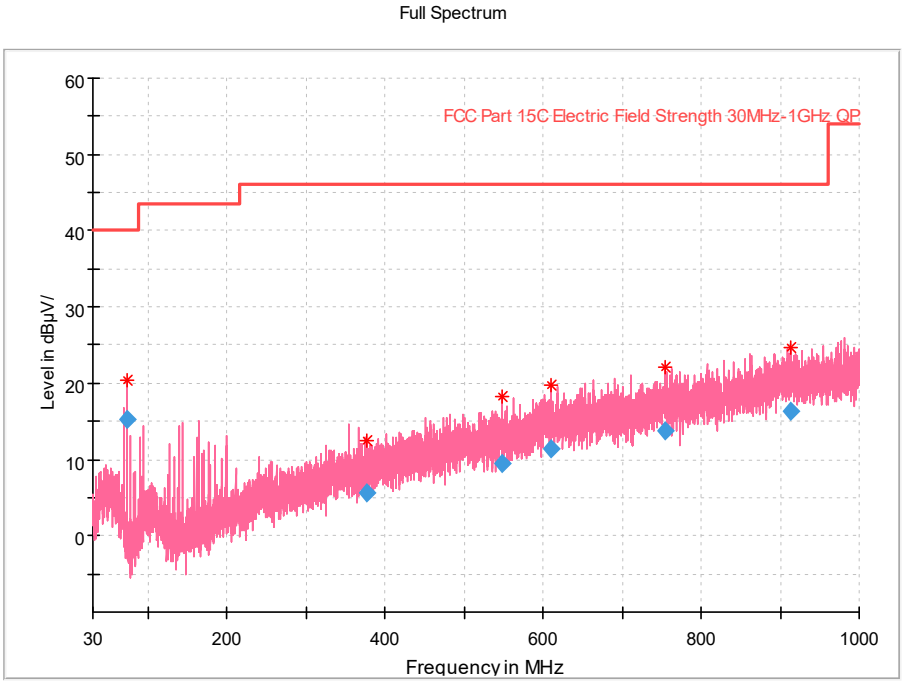
Determining Spurious Emissions Levels

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: (15.34 dBμV/m) = (40.34 dBμV) + -25.00 dB/m), the corresponding frequency is 74.232MHz.
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

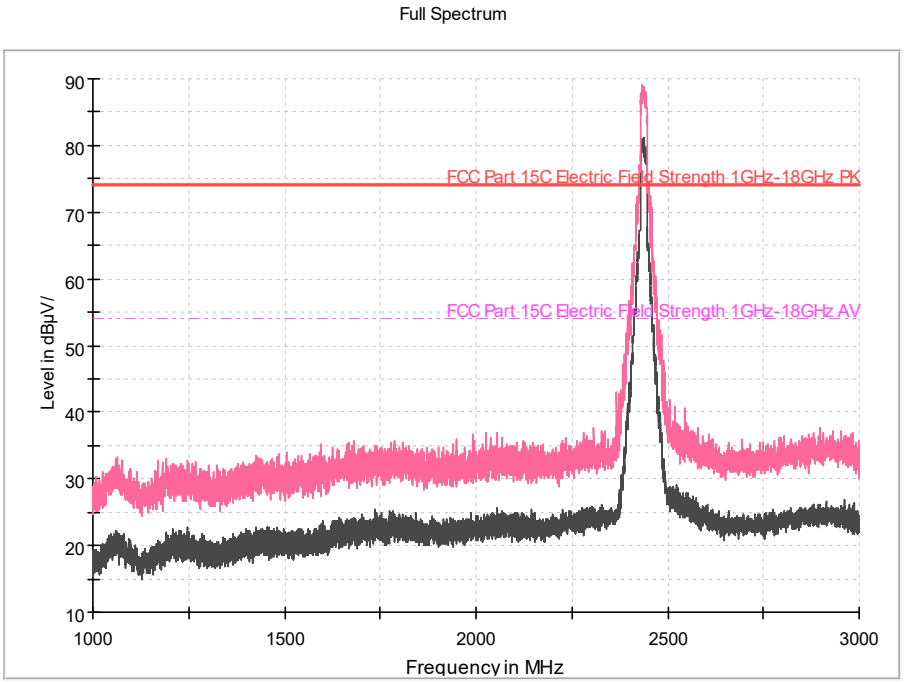
Spurious Radiated Emissions from 30MHz to 1GHz:
CH Middle (No.6)

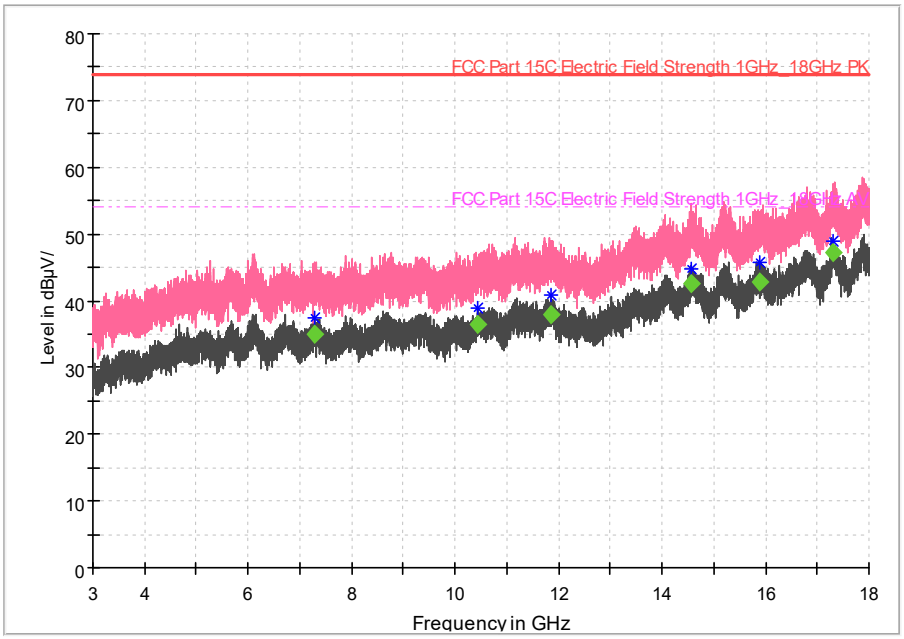


Frequency (MHz)	Reading (dBuV)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
74.232	40.34	15.34	40.00	24.66	-25.00	Vertical

376.872	20.23	5.73	46.00	40.27	-14.50	Vertical
548.174	19.53	9.43	46.00	36.57	-10.10	Vertical
609.769	19.57	11.47	46.00	34.53	-8.10	Vertical
754.881	18.99	13.69	46.00	32.31	-5.30	Vertical
913.282	18.89	16.29	46.00	29.71	-2.60	Vertical

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

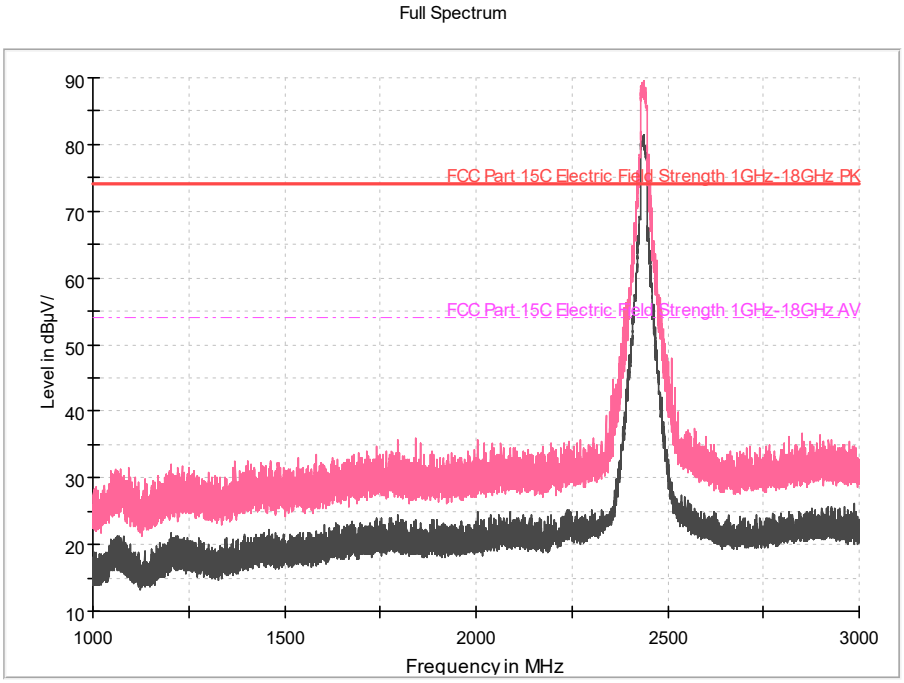


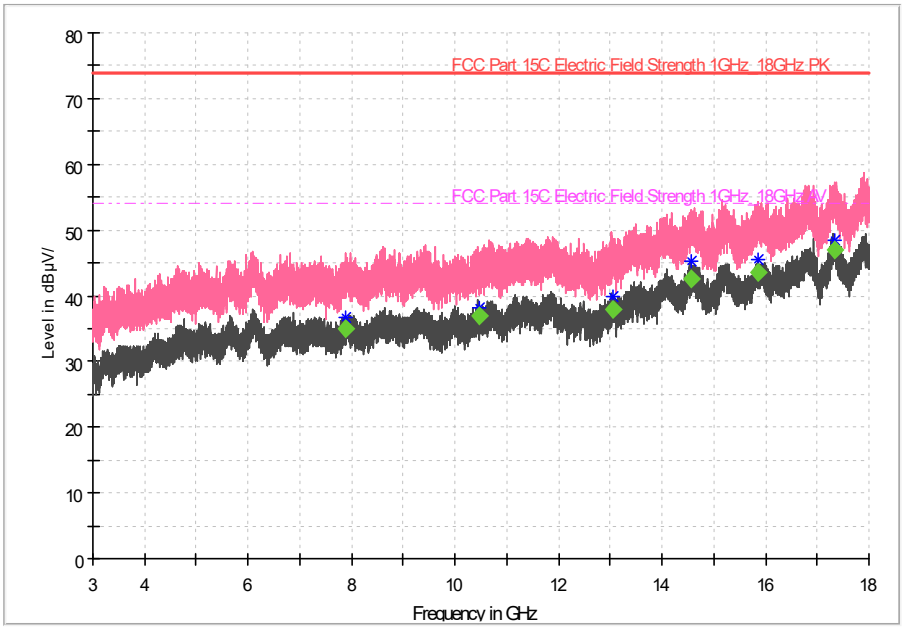


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
7282.500	#VALUE!	56.24	---	34.94	54.00	19.06	-21.30	Vertical
10437.500	#VALUE!	55.37	---	36.57	54.00	17.43	-18.80	Vertical
11864.000	#VALUE!	54.74	---	38.04	54.00	15.96	-16.70	Vertical
14577.000	#VALUE!	55.99	---	42.49	54.00	11.51	-13.50	Vertical
15897.000	#VALUE!	56.83	---	42.93	54.00	11.07	-13.90	Vertical
17305.500	#VALUE!	58.75	---	47.25	54.00	6.75	-11.50	Vertical

- 802.11g

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



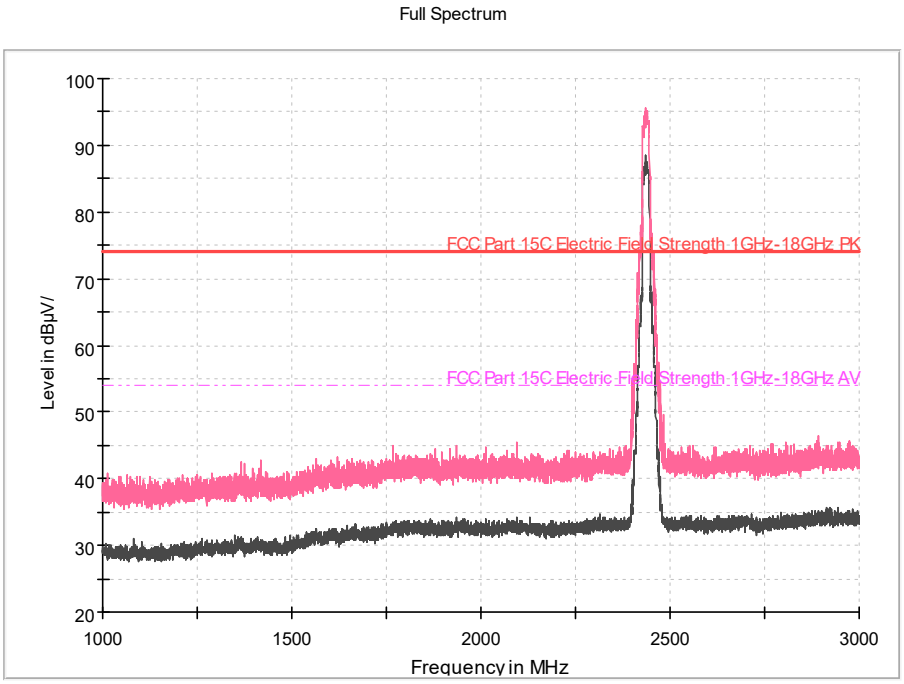


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity

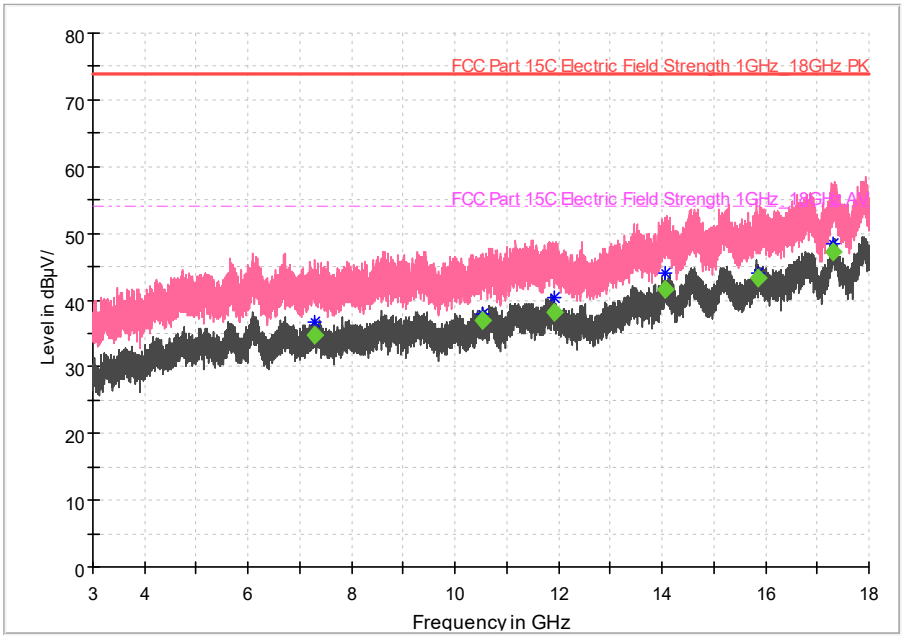
7888.500	---	56.13	---	35.03	54.00	18.97	-21.10	Vertical
10470.500	---	55.66	---	36.86	54.00	17.14	-18.80	Vertical
13054.000	---	53.91	---	37.81	54.00	16.19	-16.10	Vertical
14556.500	---	55.85	---	42.45	54.00	11.55	-13.40	Vertical
15860.000	---	57.51	---	43.61	54.00	10.39	-13.90	Vertical
17332.500	---	58.42	---	46.92	54.00	7.08	-11.50	Vertical

- 802.11n (HT20)

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

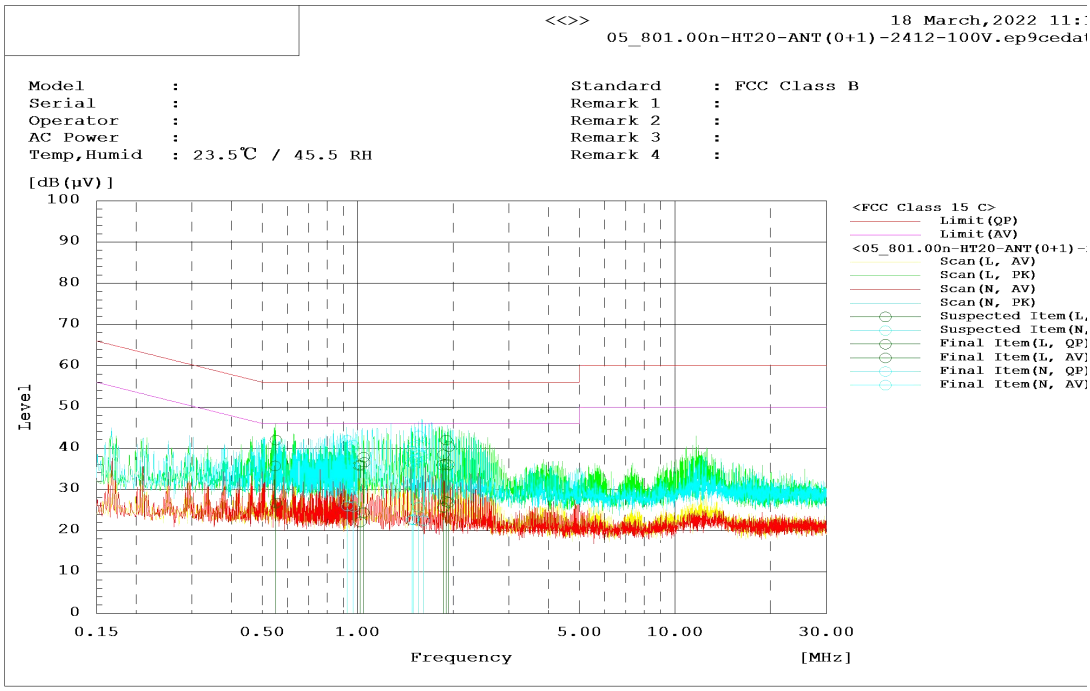


Full Spectrum



Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
7298.500	---	56.04	---	34.74	54.00	19.26	-21.30	Vertical
10521.500	---	55.79	---	36.99	54.00	17.01	-18.80	Vertical
11905.000	---	54.67	---	38.07	54.00	15.93	-16.60	Vertical
14069.500	---	55.20	---	41.50	54.00	12.50	-13.70	Vertical
15841.500	---	57.17	---	43.37	54.00	10.63	-13.80	Vertical
17302.500	---	58.79	---	47.29	54.00	6.71	-11.50	Vertical

AC Power line Conducted Emission
100V

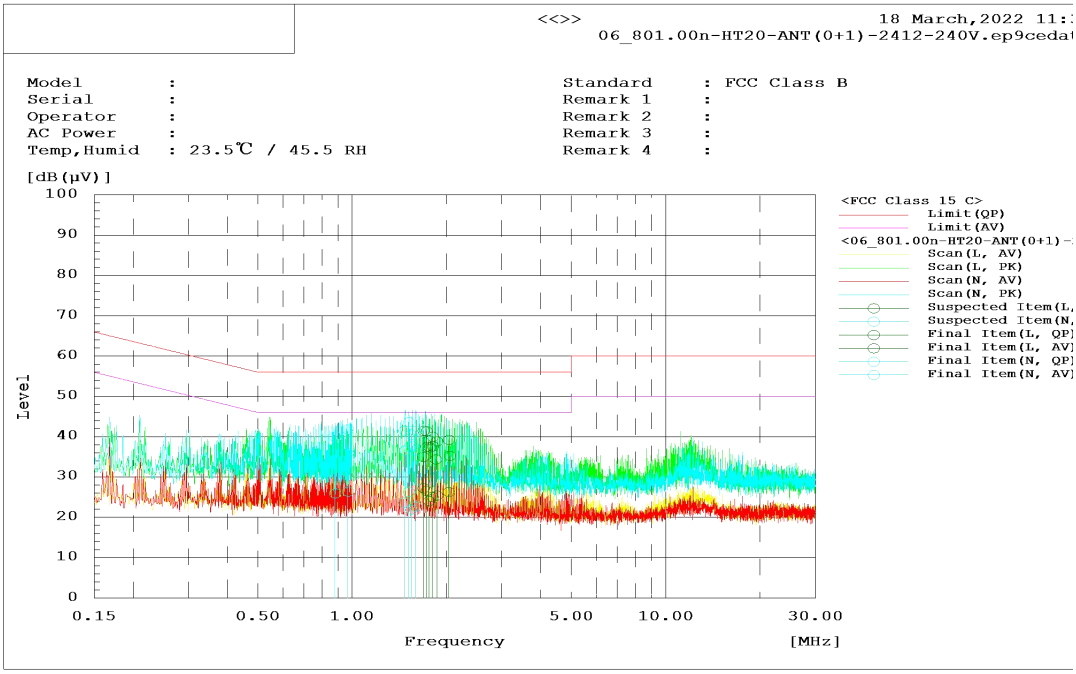


L+N Line

MEASUREMENT RESULT:

Range	Frequency	Line	Reading			Factor	Level			Limit	Limit			Margin			Pass/Fail
	MHz		dB(μV)			dB	dB(μV)			dB(μV)	dB(μV)			dB			
			QP	AV	PK		QP	AV	PK		QP	AV	PK	QP	AV	PK	
Band1	0.552	L	22.1	6.9		19.9	42	26.8			56	46		14	19.2		Pass
Band1	1.019	L	16	2.3		19.9	35.9	22.2			56	46		20.1	23.8		Pass
Band1	1.043	L	18	4.5		19.9	37.9	24.4			56	46		18.1	21.6		Pass
Band1	1.86	L	18.6	5.8		19.9	38.5	25.7			56	46		17.5	20.3		Pass
Band1	1.895	L	22.1	7.3		19.9	42	27.2			56	46		14	18.8		Pass
Band1	1.933	L	20.5	7		19.9	40.4	26.9			56	46		15.6	19.1		Pass
Band1	0.927	N	22.2	6.2		19.8	42	26			56	46		14	20		Pass
Band1	0.966	N	20.9	6		19.8	40.7	25.8			56	46		15.3	20.2		Pass
Band1	1.483	N	19.5	2.7		19.9	39.4	22.6			56	46		16.6	23.4		Pass
Band1	1.498	N	20.5	2.9		19.9	40.4	22.8			56	46		15.6	23.2		Pass
Band1	1.557	N	23.2	5.9		19.9	43.1	25.8			56	46		12.9	20.2		Pass
Band1	1.61	N	20.7	2.6		19.9	40.6	22.5			56	46		15.4	23.5		Pass

240V



L+N Line

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	0.881	N	20.3	6.1		19.8	40.1	25.9			56	46		15.9	20.1		Pass
Band1	0.969	N	22.1	6.6		19.8	41.9	26.4			56	46		14.1	19.6		Pass
Band1	1.466	N	21.7	3.8		19.9	41.6	23.7			56	46		14.4	22.3		Pass
Band1	1.515	N	23.7	6.4		19.9	43.6	26.3			56	46		12.4	19.7		Pass
Band1	1.543	N	20.6	2		19.9	40.5	21.9			56	46		15.5	24.1		Pass
Band1	1.591	N	21.6	2.8		19.9	41.5	22.7			56	46		14.5	23.3		Pass
Band1	1.689	L	21.6	7.3		19.9	41.5	27.2			56	46		14.5	18.8		Pass
Band1	1.725	L	21.4	6.7		19.9	41.3	26.6			56	46		14.7	19.4		Pass
Band1	1.757	L	19.3	4.2		19.9	39.2	24.1			56	46		16.8	21.9		Pass
Band1	1.801	L	20.1	5.2		19.9	40	25.1			56	46		16	20.9		Pass
Band1	1.862	L	19	5.6		19.9	38.9	25.5			56	46		17.1	20.5		Pass
Band1	2.028	L	19.4	6.4		19.9	39.3	26.3			56	46		16.7	19.7		Pass

---End of the test report---