

APPENDIX B – TEST DATA OF RADIATED EMISSION

Worst case(11a)

Radiated Emission Band Edge

The measurement results are obtained as described below:

Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (90.10 dBuV/m) = (43.20 dBμV) + (12.40 dB) + (34.50 dB), the corresponding frequency is 5180MHz.

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)

【5150-5250】

● 802.11a

Carrier Frequency (MHz): 5180

Channel No.: 36

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5180.0	44.14	91.04	N/A	N/A	12.40	34.50
5150.0	1.13	48.03	-25.97	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5180.0	33.47	80.37	N/A	N/A	12.40	34.50
5150.0	-11.64	35.26	-18.74	54.00	12.40	34.50

Carrier Frequency (MHz): 5240

Channel No.: 48

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5240.0	45.58	92.48	N/A	N/A	12.40	34.50
5250.0	30.61	77.51	3.51	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5240.0	35.48	82.38	N/A	N/A	12.40	34.50
5250.0	13.91	60.81	6.81	54.00	12.40	34.50

【5250-5350】

● 802.11a

Carrier Frequency (MHz): 5260

Channel No.: 52

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5260.0	44.51	91.41	N/A	N/A	12.40	34.50
5240.0	10.25	57.15	-16.85	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5260.0	33.48	80.38	N/A	N/A	12.40	34.50
5240.0	-4.92	41.98	-12.02	54.00	12.40	34.50

Carrier Frequency (MHz): 5320

Channel No.: 64

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5320.0	44.64	91.54	N/A	N/A	12.40	34.50
5340.0	11.73	58.63	-15.37	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5320.0	35.05	81.95	N/A	N/A	12.40	34.50
5340.0	-2.03	44.87	-9.13	54.00	12.40	34.50

【5470-5725】

● 802.11a

Carrier Frequency (MHz): 5500

Channel No.: 100

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5500.0	46.21	93.11	N/A	N/A	12.40	34.50
5480.0	15.54	62.44	-11.56	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5500.0	36.85	83.75	N/A	N/A	12.40	34.50
5480.0	-0.54	46.36	-7.64	54.00	12.40	34.50

Carrier Frequency (MHz): 5700

Channel No.: 140

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5700.0	45.70	92.6	N/A	N/A	12.40	34.50
5720.0	3.98	50.88	-23.12	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5700.0	34.94	81.84	N/A	N/A	12.40	34.50
5720.0	-7.75	39.15	-14.85	54.00	12.40	34.50

【5725-5850】

● 802.11a

Carrier Frequency (MHz): 5745

Channel No.: 149

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5745.0	43.17	90.07	N/A	N/A	12.40	34.50
5725.0	11.20	58.1	-15.90	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5745.0	36.21	83.11	N/A	N/A	12.40	34.50
5725.0	-3.33	43.57	-10.43	54.00	12.40	34.50

Carrier Frequency (MHz): 5825

Channel No.: 165

Test Mode: 802.11a

Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5825.0	44.67	91.57	N/A	N/A	12.40	34.50
5845.0	3.14	50.04	-23.96	74.00	12.40	34.50

Detector: Average

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
5825.0	33.44	80.34	N/A	N/A	12.40	34.50
5845.0	-8.98	37.92	-16.08	54.00	12.40	34.50

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: $(25.83 \text{ dB}\mu\text{V/m}) = (48.73 \text{ dB}\mu\text{V}) + (-22.90 \text{ dB/m})$, the corresponding frequency is 35.141MHz.

The worst case attitude: The mobile lay down.

Spurious Radiated Emissions below 30MHz and above 18G:

There were no emissions from 9kHz to 30MHz and above 18G found within 20dB of the limit. Thus, the test result was not reported according to §15.31 (o).

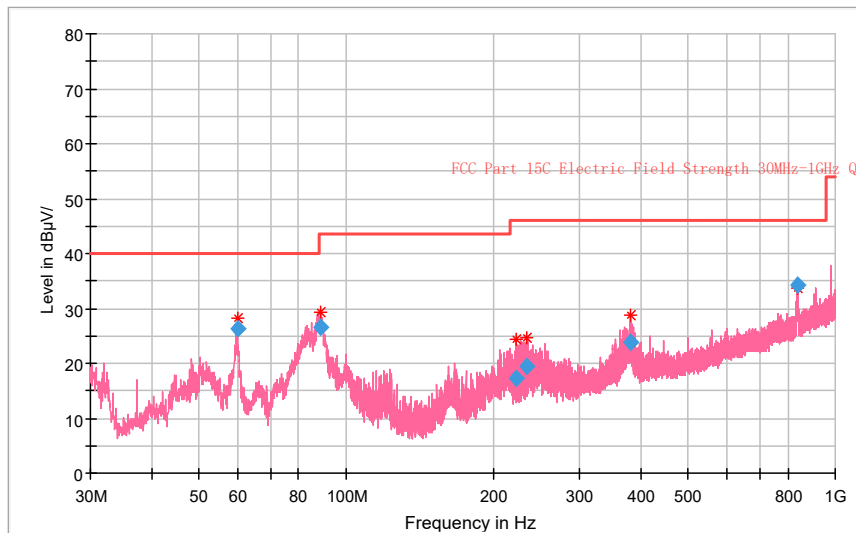
【5150~5250】

● 802.11a

Spurious Radiated Emissions from 30MHz to 1GHz:

CH Middle (No.44)

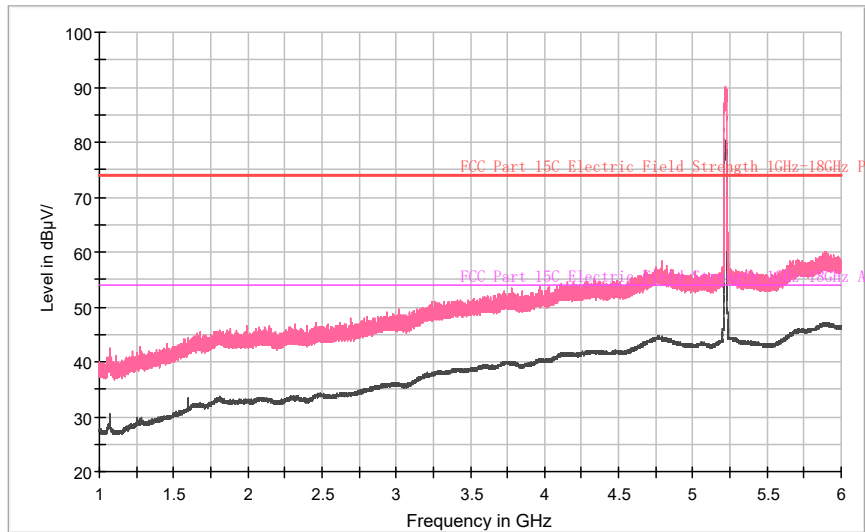
Full Spectrum



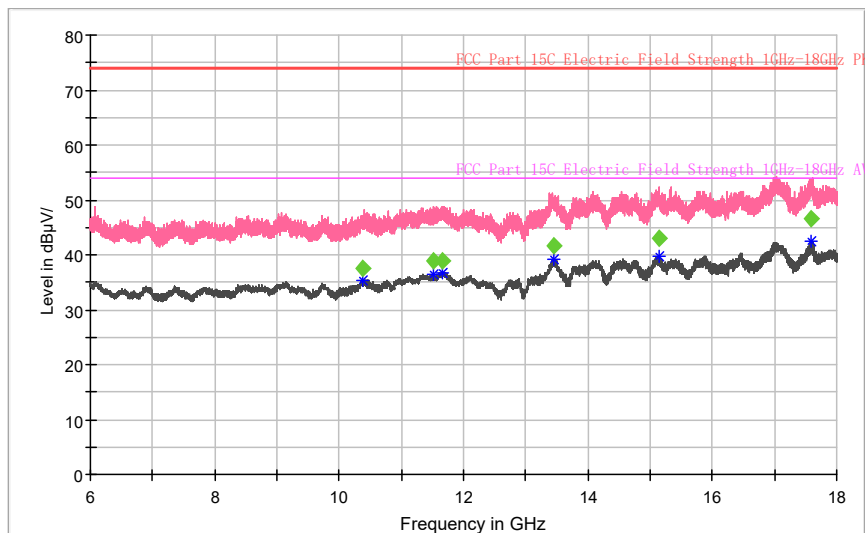
Frequency (MHz)	Reading (dBuV)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
59.973	47.00	26.2	40	13.8	-20.8	Vertical
88.588	50.41	26.61	43.5	16.89	-23.8	Vertical
222.3025	36.93	17.23	46	28.77	-19.7	Vertical
234.864	38.15	19.35	46	26.65	-18.8	Vertical
380.8005	38.18	23.88	46	22.12	-14.3	Vertical
840.4835	38.73	34.33	46	11.67	-4.4	Vertical

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.44)

Full Spectrum



Full Spectrum



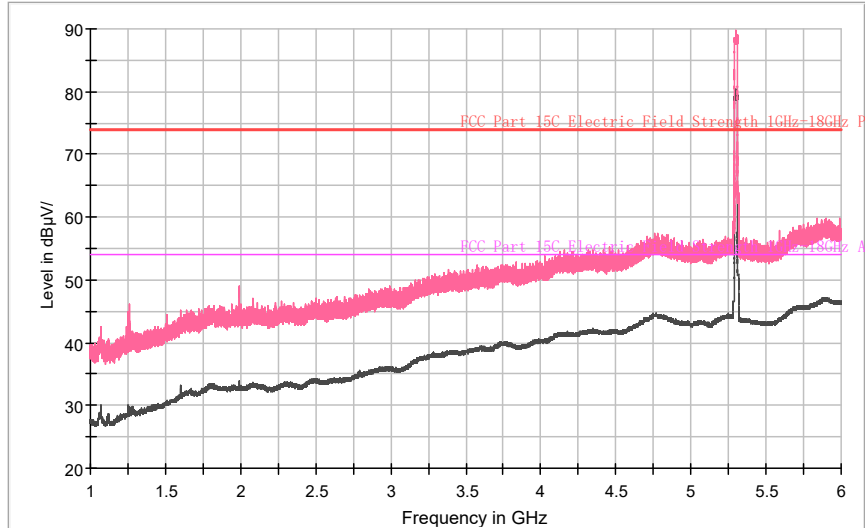
Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A _{Rpl} (dB)	Polarity
10388	---	56.75	---	37.55	54	16.45	-19.2	Vertical
11523.6	---	55.77	---	38.87	54	15.13	-16.9	Vertical
11670.4	---	55.72	---	38.82	54	15.18	-16.9	Vertical
13446.8	---	56.64	---	41.54	54	12.46	-15.1	Vertical
15151.6	---	57.13	---	43.03	54	10.97	-14.1	Vertical
17600.4	---	58.26	---	46.46	54	7.54	-11.8	Vertical

【5250~5350】

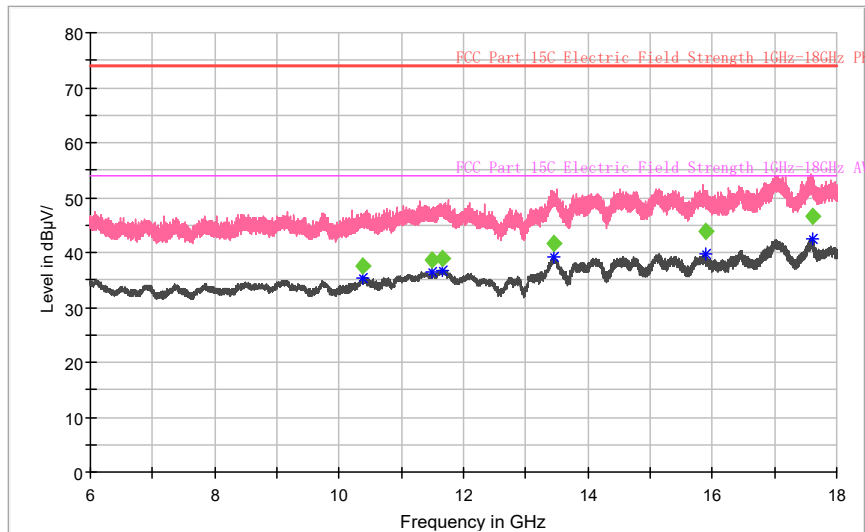
● 802.11a

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.60)

Full Spectrum



Full Spectrum



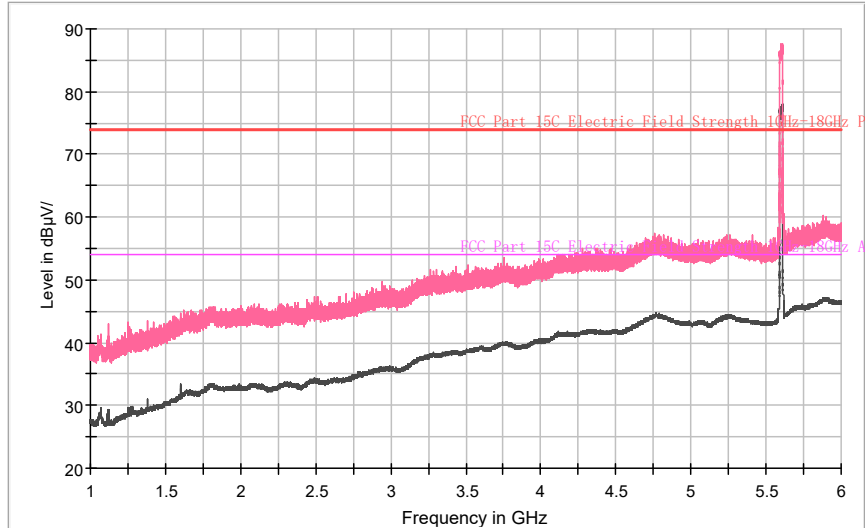
Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A _{Rpl} (dB)	Polarity
10385.6	---	56.74	---	37.54	54	16.46	-19.2	Vertical
11484.8	---	55.65	---	38.75	54	15.25	-16.9	Vertical
11668.8	---	55.73	---	38.83	54	15.17	-16.9	Vertical
13447.2	---	56.62	---	41.52	54	12.48	-15.1	Vertical
15884	---	58.21	---	43.71	54	10.29	-14.5	Vertical
17604.4	---	58.35	---	46.55	54	7.45	-11.8	Vertical

【5470~5725】

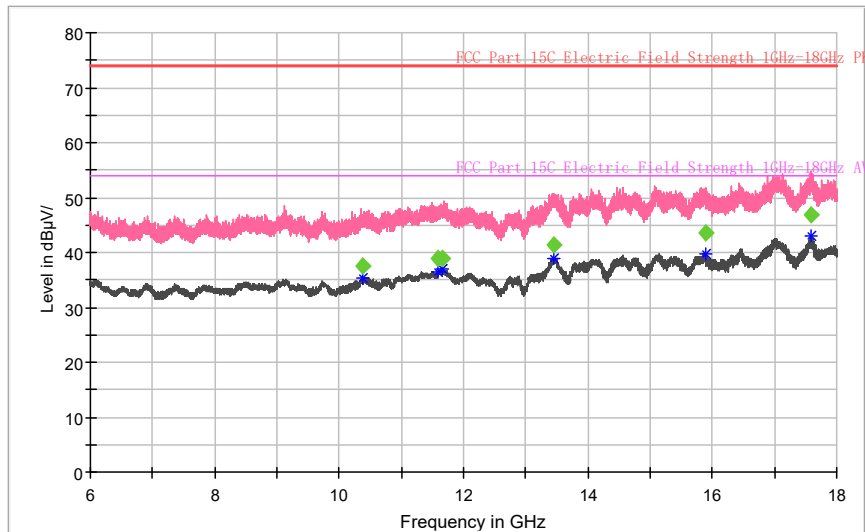
● 802.11a

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.120)

Full Spectrum



Full Spectrum



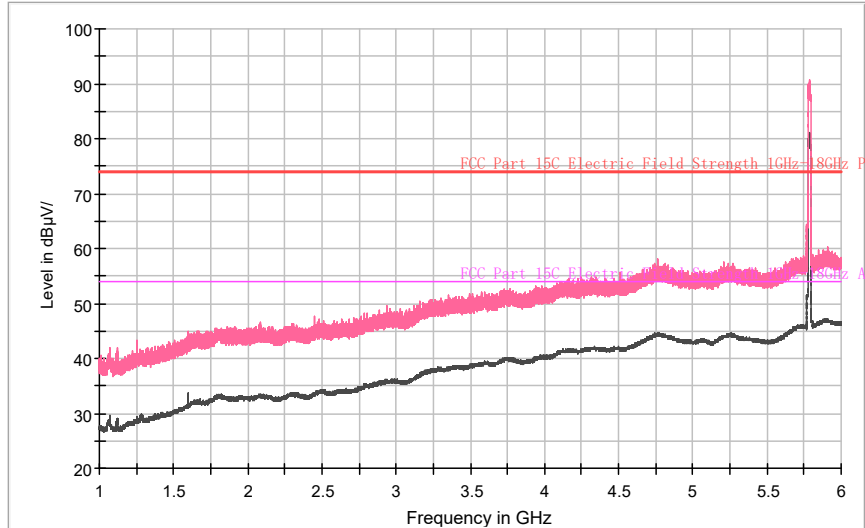
Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A _{Rpl} (dB)	Polarity
10383.2	---	56.72	---	37.52	54	16.48	-19.2	Vertical
11598.8	---	55.88	---	38.98	54	15.02	-16.9	Vertical
11669.2	---	55.79	---	38.89	54	15.11	-16.9	Vertical
13447.6	---	56.56	---	41.46	54	12.54	-15.1	Vertical
15884	---	58.16	---	43.66	54	10.34	-14.5	Vertical
17588.8	---	58.65	---	46.75	54	7.25	-11.9	Vertical

【5725~5850】

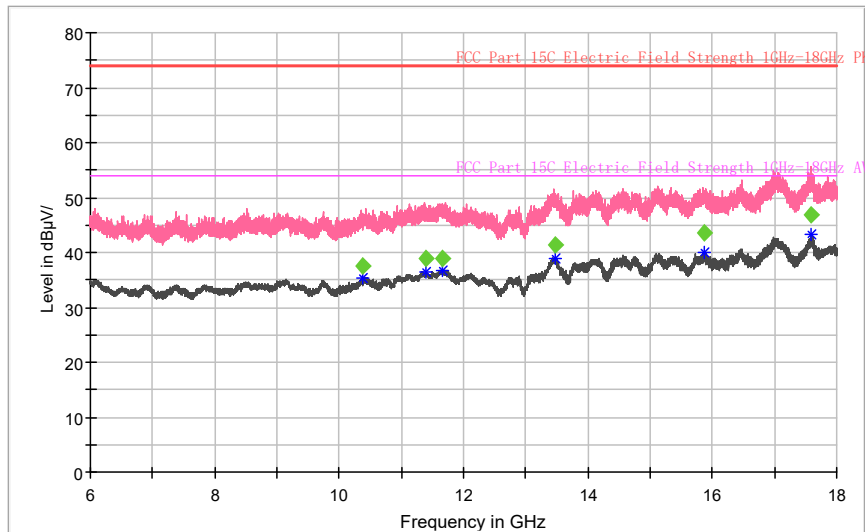
● 802.11a

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.157)

Full Spectrum

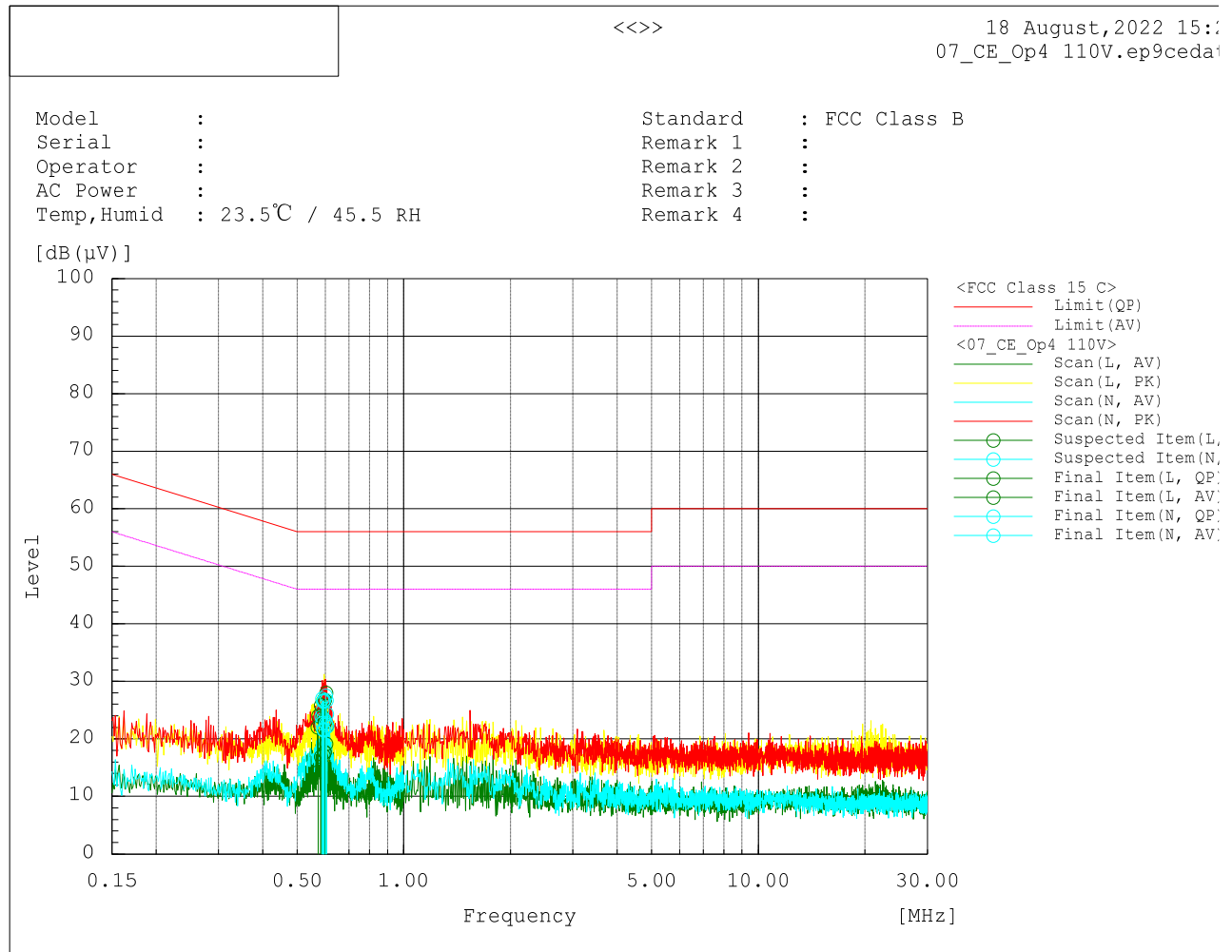


Full Spectrum



Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A _{Rpl} (dB)	Polarity
10389.2	---	56.79	---	37.59	54	16.41	-19.2	Vertical
11383.6	---	56.10	---	38.9	54	15.1	-17.2	Vertical
11669.6	---	55.74	---	38.84	54	15.16	-16.9	Vertical
13469.2	---	56.43	---	41.33	54	12.67	-15.1	Vertical
15874.4	---	57.98	---	43.48	54	10.52	-14.5	Vertical
17591.6	---	58.66	---	46.76	54	7.24	-11.9	Vertical

AC Power line Conducted Emission 100V

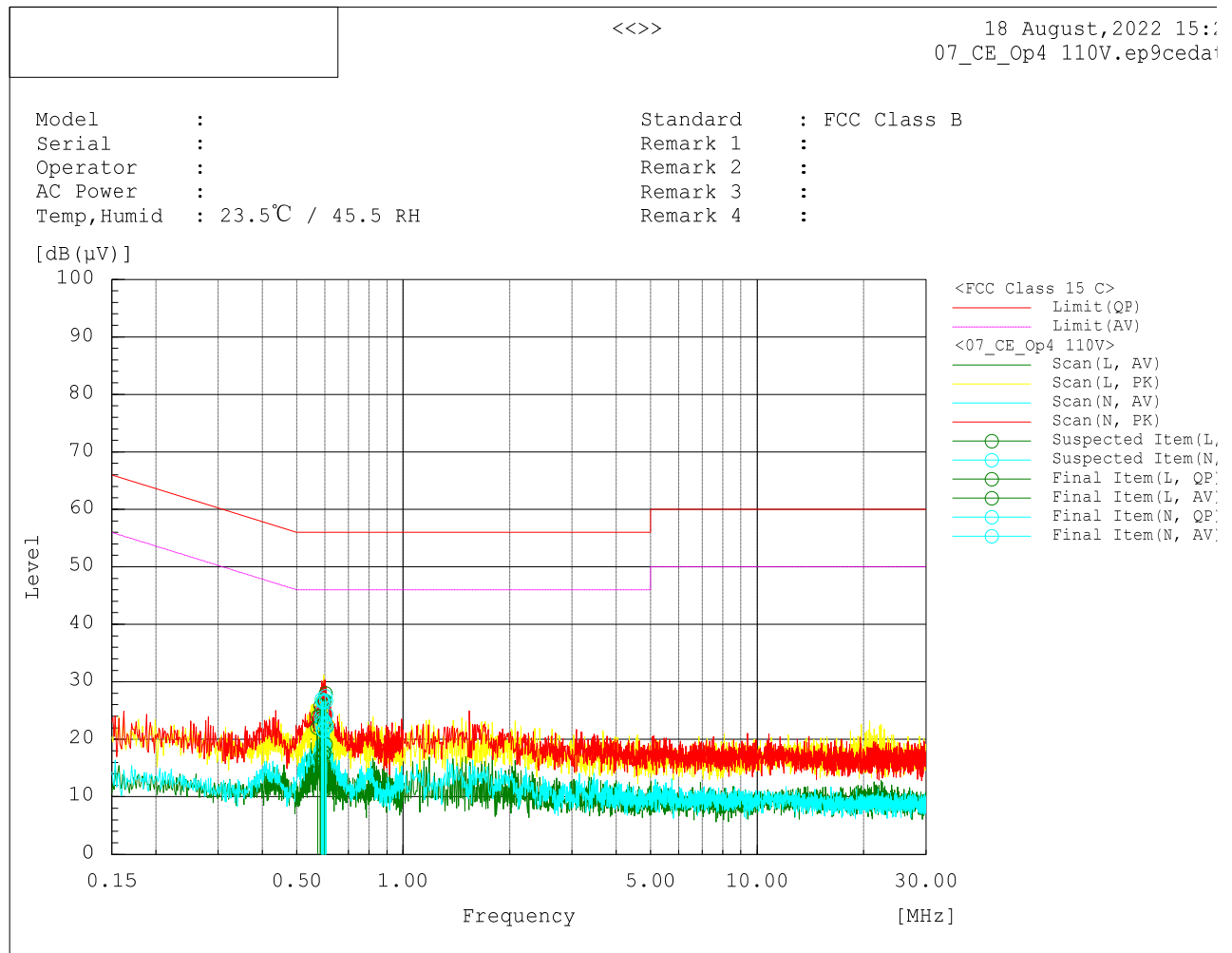


L+N Line

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	0.59	N	17	13		10	27	22.7			56	46		29	23.3		Pass		
Band1	0.59	N	16.5	12		10	26.5	21.7			56	46		29.5	24.3		Pass		
Band1	0.59	N	16.6	12		10	26.6	21.6			56	46		29.4	24.4		Pass		
Band1	0.59	N	16.7	12		10	26.7	21.5			56	46		29.3	24.5		Pass		
Band1	0.6	N	17.5	13		10	27.5	22.8			56	46		28.5	23.2		Pass		
Band1	0.6	N	16.7	13		10	26.7	22.5			56	46		29.3	23.5		Pass		
Band1	0.57	L	14	4.3		10	24	14.3			56	46		32	31.7		Pass		
Band1	0.58	L	15.8	6.9		10	25.8	16.9			56	46		30.2	29.1		Pass		
Band1	0.59	L	16.8	7.1		10	26.8	17.1			56	46		29.2	28.9		Pass		
Band1	0.6	L	16.7	7.7		10	26.7	17.7			56	46		29.3	28.3		Pass		
Band1	0.6	L	16.8	7.7		10	26.8	17.7			56	46		29.2	28.3		Pass		
Band1	0.6	L	18	9.2		10	28	19.2			56	46		28	26.8		Pass		

240V



L+N Line

MEASUREMENT RESULT:

Range	Frequency MHz	Line	Reading			Factor dB	Level			Limit dB(μV)	Limit			Margin			Pass/Fail
			dB(μV)				dB(μV)				dB(μV)			dB			
			QP	AV	PK		QP	AV	PK		QP	AV	PK	QP	AV	PK	
Band1	0.59	N	17	13		10	27	22.7			56	46		29	23.3		Pass
Band1	0.59	N	16.5	12		10	26.5	21.7			56	46		29.5	24.3		Pass
Band1	0.59	N	16.6	12		10	26.6	21.6			56	46		29.4	24.4		Pass
Band1	0.59	N	16.7	12		10	26.7	21.5			56	46		29.3	24.5		Pass
Band1	0.6	N	17.5	13		10	27.5	22.8			56	46		28.5	23.2		Pass
Band1	0.6	N	16.7	13		10	26.7	22.5			56	46		29.3	23.5		Pass
Band1	0.57	L	14	4.3		10	24	14.3			56	46		32	31.7		Pass
Band1	0.58	L	15.8	6.9		10	25.8	16.9			56	46		30.2	29.1		Pass
Band1	0.59	L	16.8	7.1		10	26.8	17.1			56	46		29.2	28.9		Pass
Band1	0.6	L	16.7	7.7		10	26.7	17.7			56	46		29.3	28.3		Pass
Band1	0.6	L	16.8	7.7		10	26.8	17.7			56	46		29.2	28.3		Pass
Band1	0.6	L	18	9.2		10	28	19.2			56	46		28	26.8		Pass

---The end of the test report---