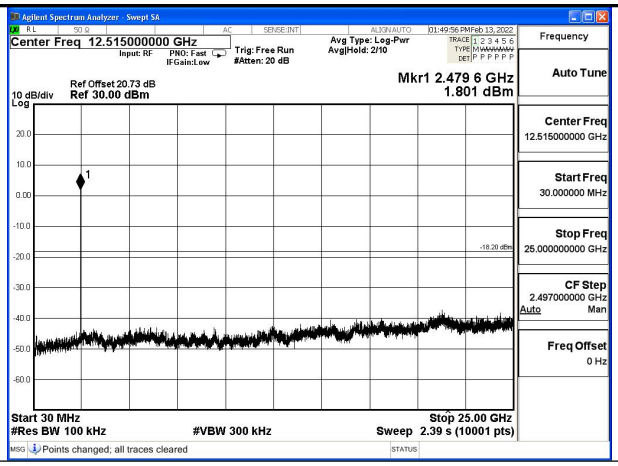
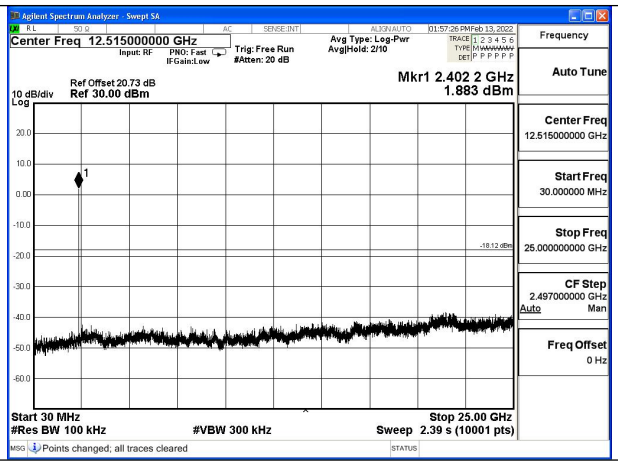
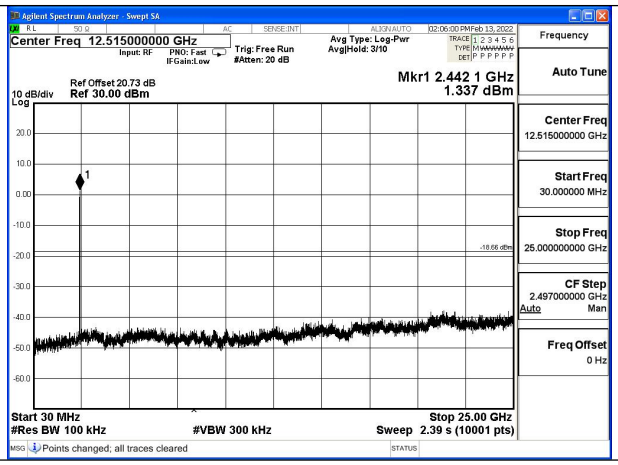


CH78(Hopping off)

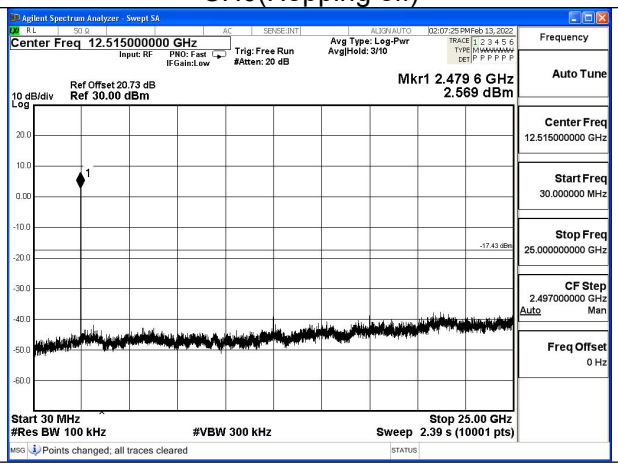
Test Mode: 8DPSK



CH0(Hopping off)



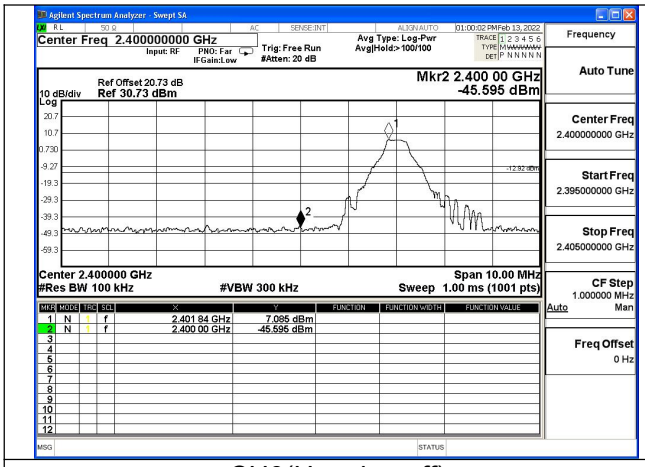
CH39(Hopping off)



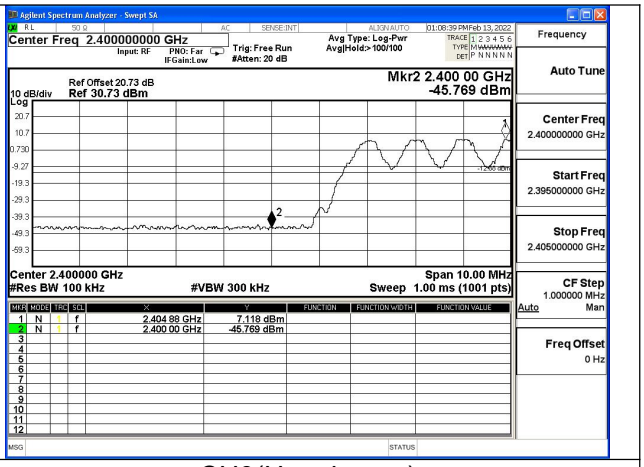
CH78(Hopping off)

7 Band Edge measurement

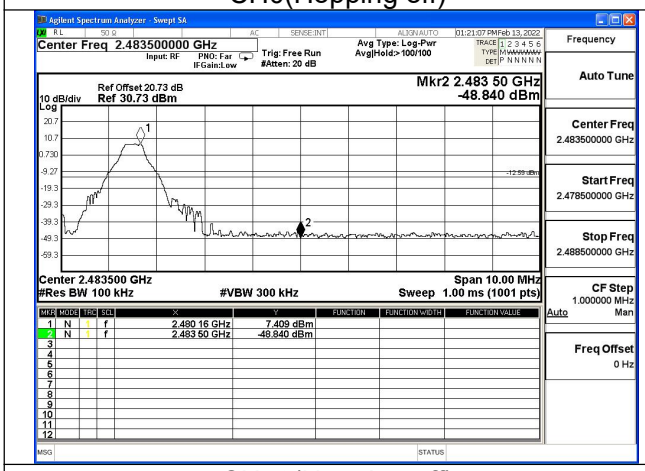
Test Mode: GFSK



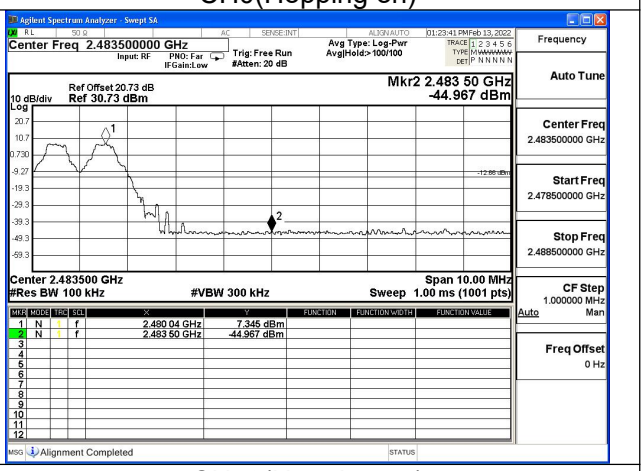
CH0(Hopping off)



CH0(Hopping on)

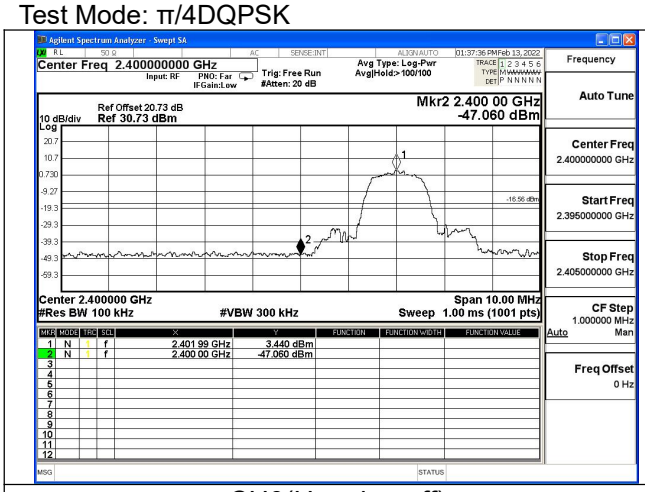


CH78(Hopping off)

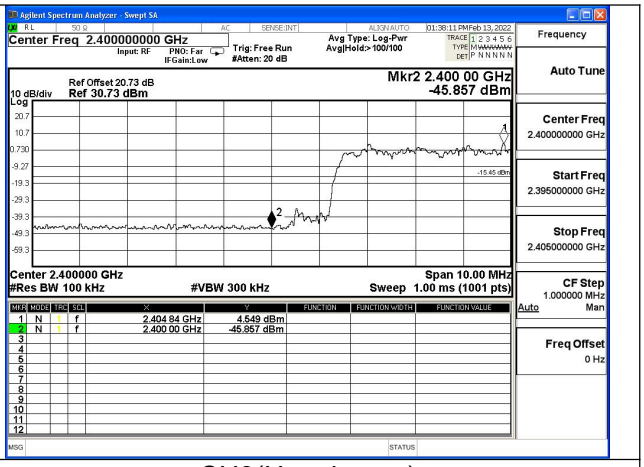


CH78(Hopping on)

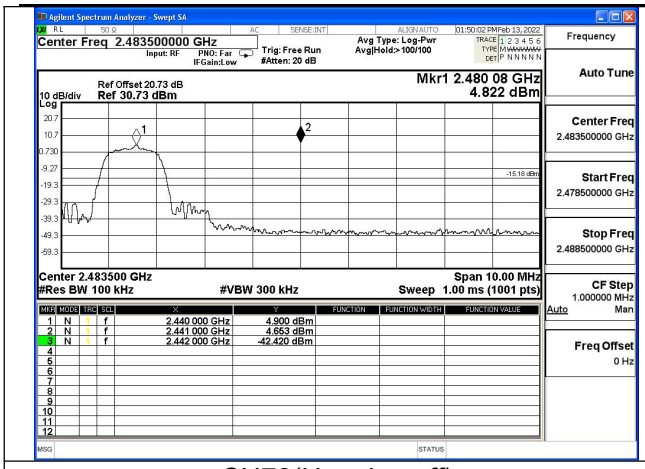
Test Mode: π/4DQPSK



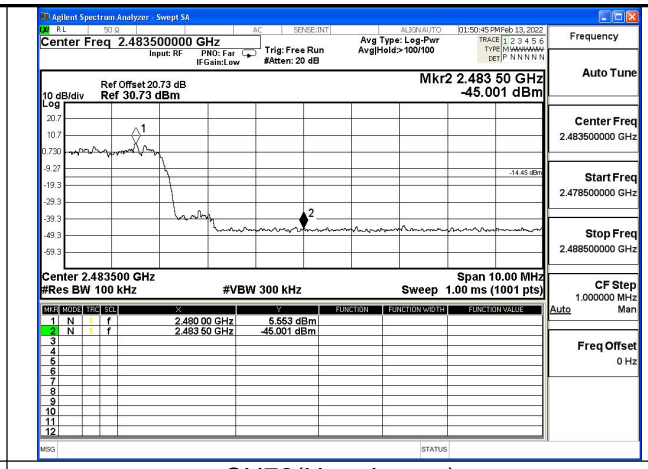
CH0(Hopping off)



CH0(Hopping on)

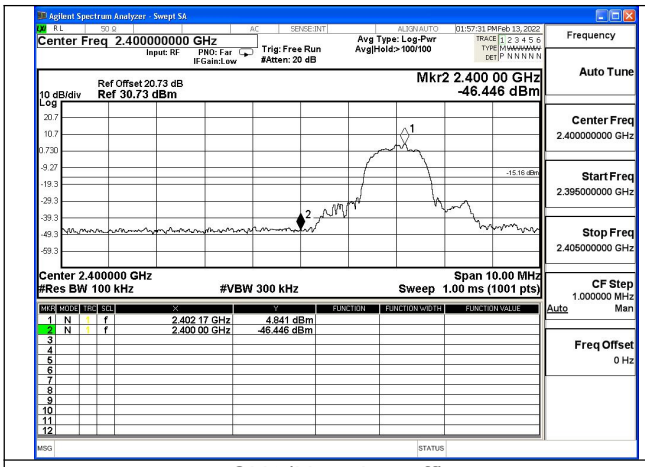


CH78(Hopping off)

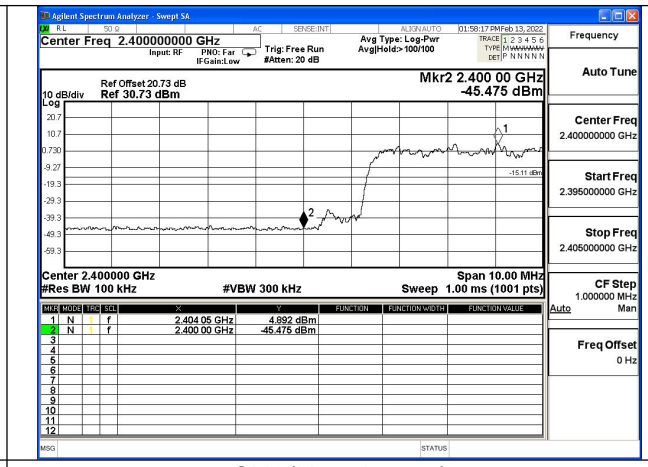


CH78(Hopping on)

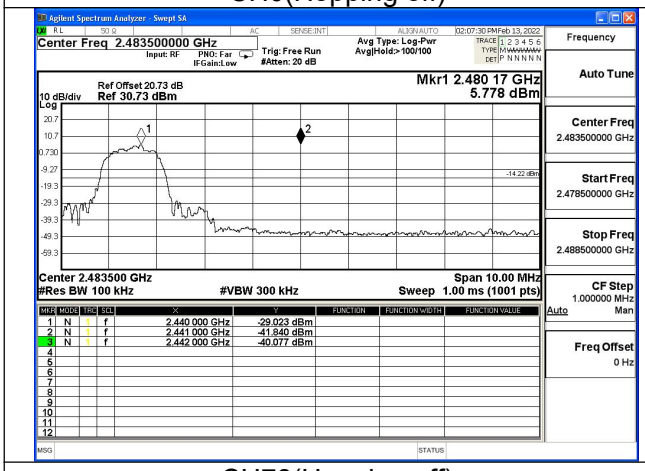
Test Mode: 8DPSK



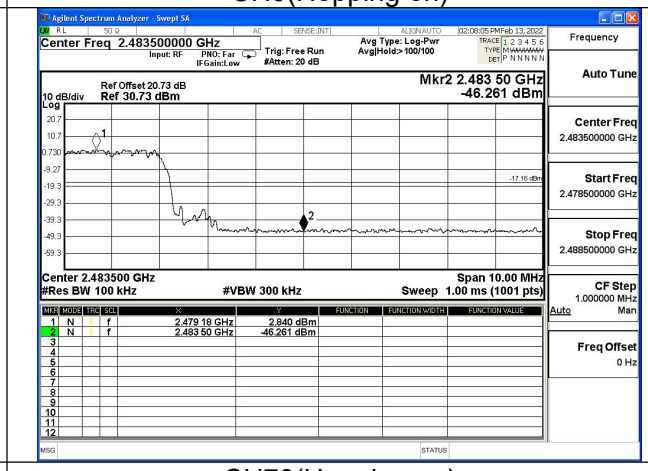
CH0(Hopping off)



CH0(Hopping on)



CH78(Hopping off)



CH78(Hopping on)

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 worst case attitude: The mobile lay down.
The measurement results are obtained as described below:
Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (87.50 dBuV/m) = (53.50 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2402MHz.

- BR-1Mbps

Carrier Frequency (MHz): 2402
Channel No.: 0
Test Mode: GFSK
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2402.0	53.50	87.50	N/A	N/A	8.90	25.10
2390.0	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)
2402.0	38.20	72.20	N/A	N/A	8.90	25.10
2390.0	-0.90	33.10	-20.90	54.00	8.90	25.10

Carrier Frequency (MHz): 2480
Channel No.: 78
Test Mode: GFSK
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2480.0	56.10	90.10	N/A	N/A	8.90	25.10
2483.5	9.60	43.60	-30.40	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)
2480.0	43.40	77.40	N/A	N/A	8.90	25.10
2483.5	-1.70	32.30	-21.70	54.00	8.90	25.10

- EDR-2Mbps

Carrier Frequency (MHz): 2402
Channel No.: 0
Test Mode: π/4DQPSK
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2402.0	59.20	93.20	N/A	N/A	8.90	25.10
2390.0	10.40	44.40	-29.60	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)
2402.0	43.70	77.70	N/A	N/A	8.90	25.10
2390.0	0.20	34.20	-19.80	54.00	8.90	25.10

Carrier Frequency (MHz): 2480
Channel No.: 78
Test Mode: π/4DQPSK
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2480.0	56.40	90.40	N/A	N/A	8.90	25.10
2483.5	14.70	48.70	-25.30	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)
2480.0	44.10	78.10	N/A	N/A	8.90	25.10
2483.5	-0.90	33.10	-20.90	54.00	8.90	25.10

- EDR-3Mbps

Carrier Frequency (MHz): 2402
Channel No.: 0
Test Mode: 8DPSK
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2402.0	56.40	90.40	N/A	N/A	8.90	25.10
2390.0	26.60	60.60	-13.40	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)
2402.0	39.40	73.40	N/A	N/A	8.90	25.10
2390.0	1.70	35.70	-18.30	54.00	8.90	25.10

Carrier Frequency (MHz): 2480
Channel No.: 78
Test Mode: 8DPSK
Detector: Peak

Frequency (MHz)	Reading Level (dBuV)	Measure Level (dBuV/m)	Over Limit (dB)	Limit (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB)
2480.0	57.40	91.40	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)
2480.0	35.90	69.90	N/A	N/A	8.90	25.10
2483.5	1.60	35.60	-18.40	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: (15.40 dBμV/m) = (36.90 dBμV) + (-21.50 dB/m), the corresponding frequency is 43.836MHz.

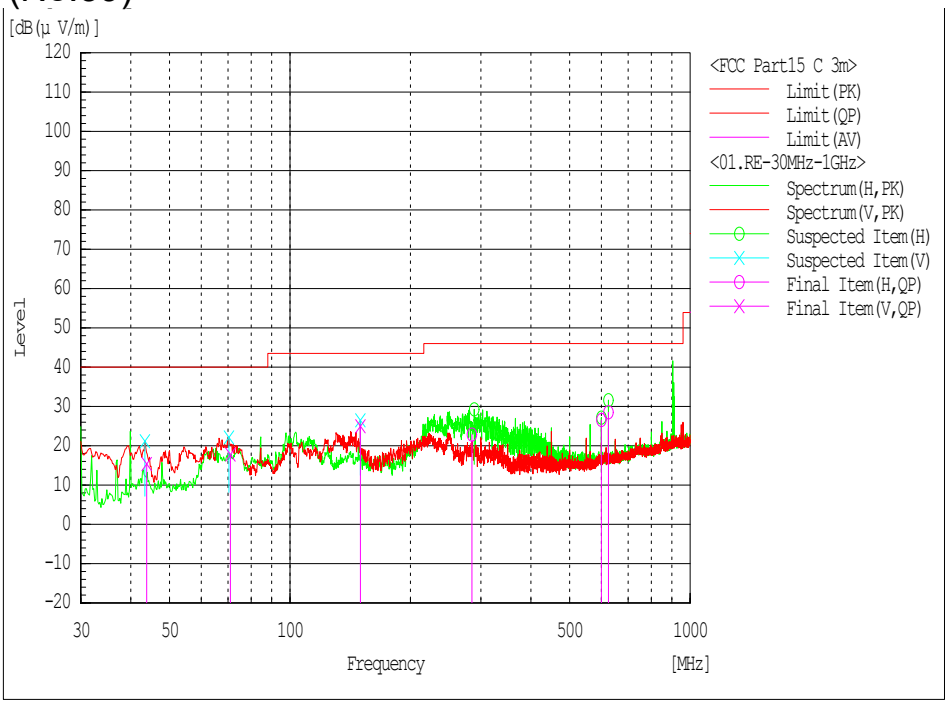
The worst case attitude：The mobile lay down.

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).

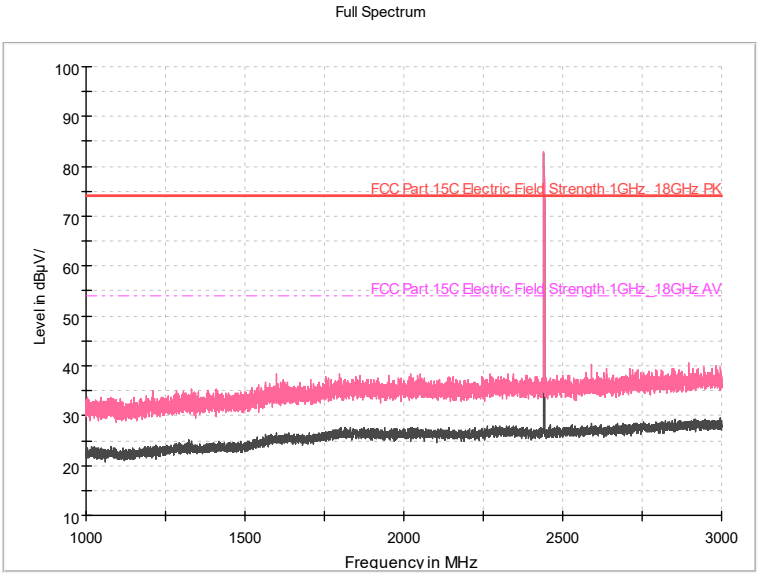
- BR-1Mbps

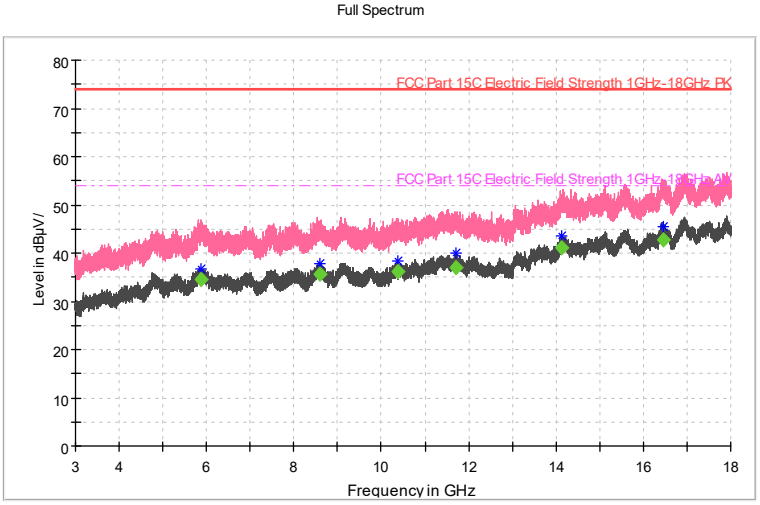
Spurious Radiated Emissions from 30MHz to 1GHz:
GFSK:
CH Middle (No.39)



Frequency (MHz)	Reading (dBuV)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
43.836	36.9	15.4	40.0	24.6	-21.5	Vertical
70.959	43.0	17.8	40.0	22.2	-25.2	Vertical
149.987	51.1	25.0	43.5	18.5	-26.1	Vertical
624.992	40.9	28.5	46.0	17.5	-12.4	Vertical
599.996	39.1	26.6	46.0	19.4	-12.5	Vertical
284.835	43.2	22.9	46.0	23.1	-20.3	Vertical

Spurious Radiated Emissions from 1GHz to 18GHz:
GFSK:
CH Middle (No.39)

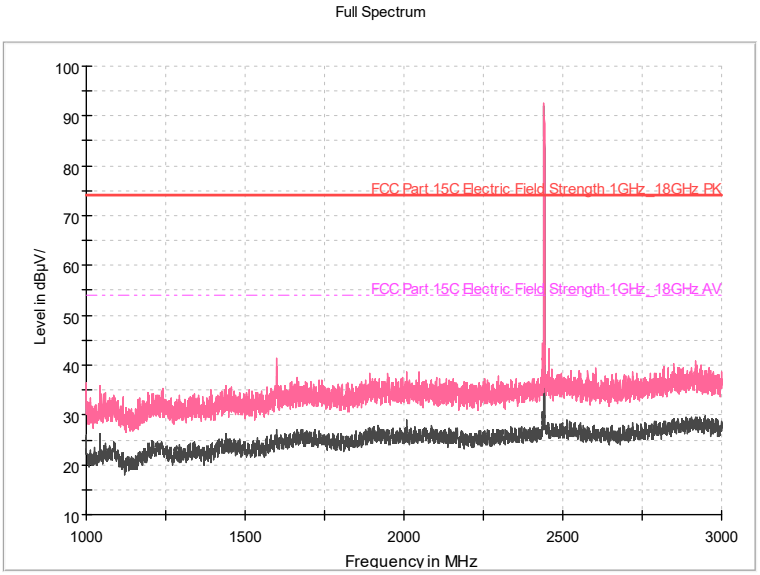


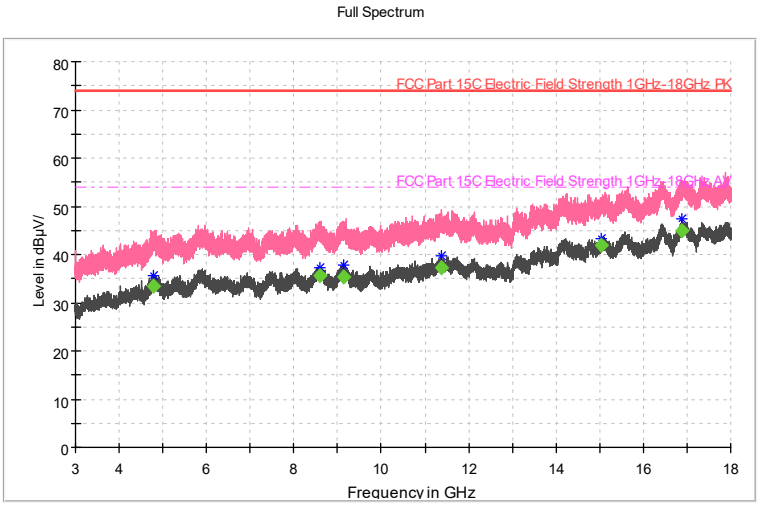


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
5860.500	---	54.49	---	34.49	54.00	19.51	-20.00	Vertical
8603.500	---	55.75	---	35.65	54.00	18.35	-20.10	Vertical
10365.500	---	54.93	---	36.03	54.00	17.97	-18.90	Vertical
11696.500	---	53.58	---	36.98	54.00	17.02	-16.60	Vertical
14120.000	---	54.56	---	40.96	54.00	13.04	-13.60	Vertical
16464.500	---	55.86	---	42.66	54.00	11.34	-13.20	Vertical

- EDR-2Mbps

Spurious Radiated Emissions from 1GHz to 18GHz:
π/4DQPSK:
CH Middle (No.39)

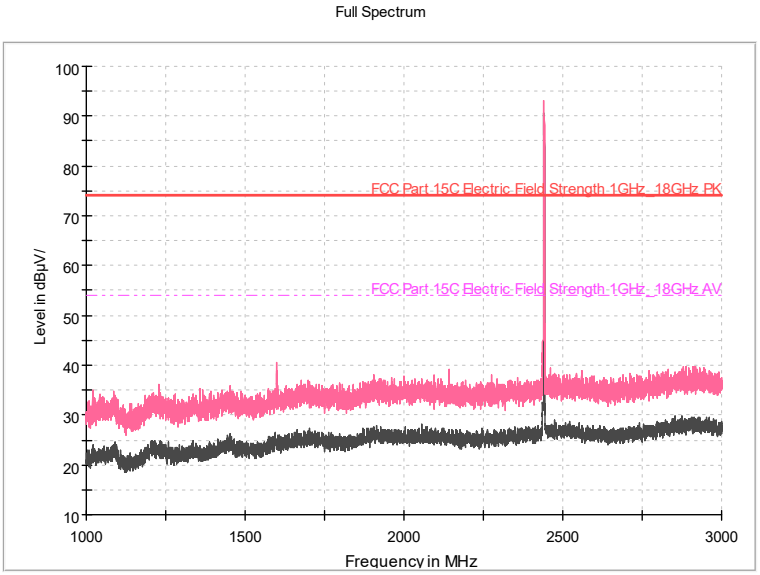


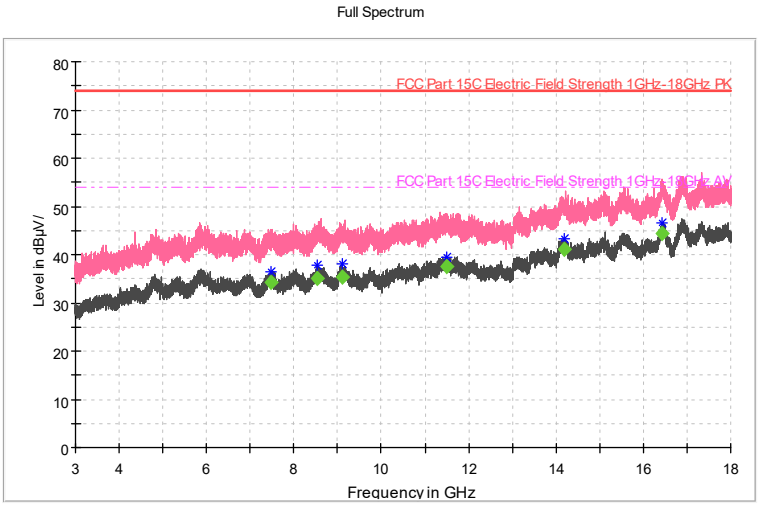


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
4796.000	---	54.37	---	33.37	54.00	20.63	-21.00	Vertical
8599.000	---	55.59	---	35.49	54.00	18.51	-20.10	Vertical
9140.000	---	55.40	---	35.40	54.00	18.60	-20.00	Vertical
11368.500	---	54.18	---	37.28	54.00	16.72	-16.90	Vertical
15047.000	---	55.28	---	41.98	54.00	12.02	-13.30	Vertical
16879.500	---	57.30	---	44.90	54.00	9.10	-12.40	Vertical

- EDR-3Mbps

Spurious Radiated Emissions from 1GHz to 18GHz:
8DPSK:
CH Middle (No.39)

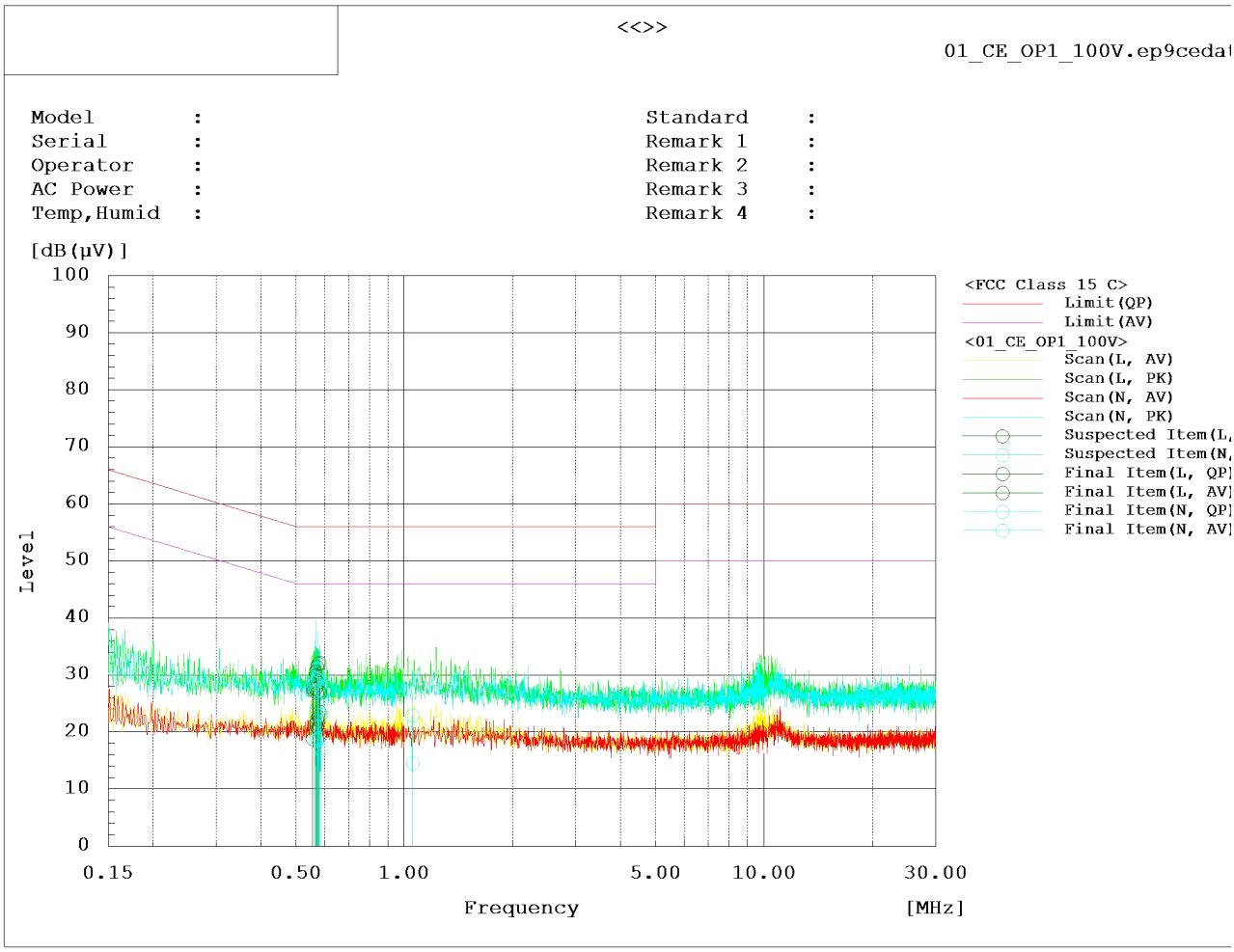




Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A_{Rpl} (dB)	Polarity
7478.500	---	55.33	---	34.23	54.00	19.77	-21.10	Vertical
8541.000	---	55.30	---	35.20	54.00	18.80	-20.10	Vertical
9103.000	---	55.24	---	35.24	54.00	18.76	-20.00	Vertical
11509.500	---	54.09	---	37.59	54.00	16.41	-16.50	Vertical
14183.500	---	54.82	---	41.22	54.00	12.78	-13.60	Vertical
16439.500	---	57.67	---	44.37	54.00	9.63	-13.30	Vertical

AC Power line Conducted Emission

100V

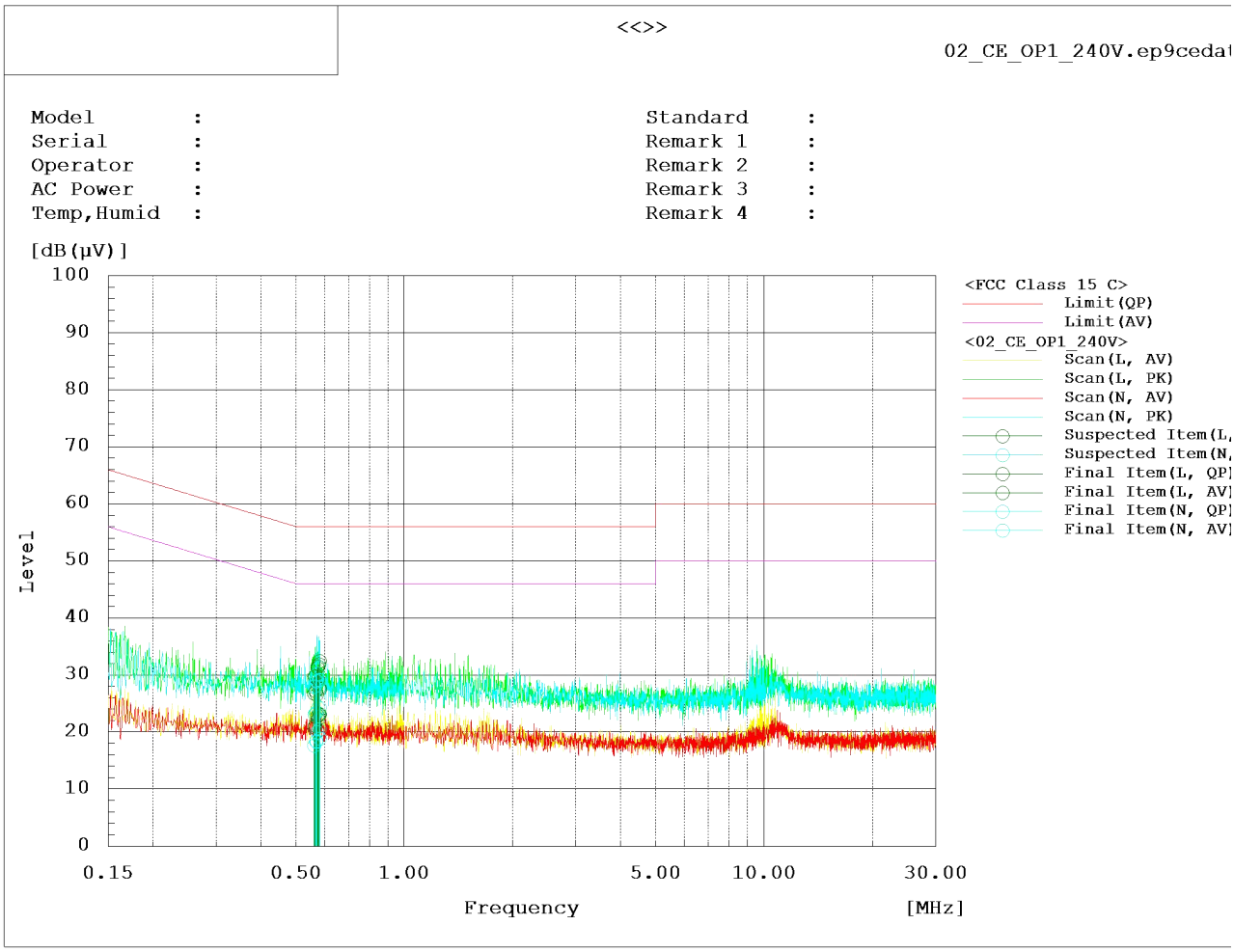


L+N Line

MEASUREMENT RESULT:

Range	Frequency	Line	Reading		Factor	Level		Limit	Limit		Margin		Pass/Fail
	MHz		dB(µV)		dB	dB(µV)		dB(µV)	dB(µV)		dB		
Band1	0.57	N	8.7	-1.3	19.9	28.6	18.6		56	46	27.4	27.4	Pass
Band1	0.57	N	9.3	-1.2	19.9	29.2	18.7		56	46	26.8	27.3	Pass
Band1	0.58	N	10.9	1.1	19.9	30.8	21		56	46	25.2	25	Pass
Band1	0.58	N	9.5	-1	19.9	29.4	18.9		56	46	26.6	27.1	Pass
Band1	0.59	N	7.4	-3	19.9	27.3	16.9		56	46	28.7	29.1	Pass
Band1	1.06	N	7.2	-5.4	19.9	27.1	14.5		56	46	28.9	31.5	Pass
Band1	0.56	L	7.8	-1.1	19.9	27.7	18.8		56	46	28.3	27.2	Pass
Band1	0.57	L	10	0.7	19.9	29.9	20.6		56	46	26.1	25.4	Pass
Band1	0.57	L	10.6	1.6	19.9	30.5	21.5		56	46	25.5	24.5	Pass
Band1	0.57	L	11.5	2.4	19.9	31.4	22.3		56	46	24.6	23.7	Pass
Band1	0.58	L	12.1	2.8	19.9	32	22.7		56	46	24	23.3	Pass
Band1	0.58	L	12.3	3.7	19.9	32.2	23.6		56	46	23.8	22.4	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			
Band1	0.56	L	9.9	0.9		19.9	29.8	20.8				56	46		26.2	25.2		Pass
Band1	0.56	L	9.9	1.3		19.9	29.8	21.2				56	46		26.2	24.8		Pass
Band1	0.57	L	11.4	3		19.9	31.3	22.9				56	46		24.7	23.1		Pass
Band1	0.57	L	11.7	2.4		19.9	31.6	22.3				56	46		24.4	23.7		Pass
Band1	0.58	L	12.5	3.2		19.9	32.4	23.1				56	46		23.6	22.9		Pass
Band1	0.58	L	12	3.2		19.9	31.9	23.1				56	46		24.1	22.9		Pass
Band1	0.56	N	8.1	-2.3		19.9	28	17.6				56	46		28	28.4		Pass
Band1	0.57	N	9.2	-1.6		19.9	29.1	18.3				56	46		26.9	27.7		Pass
Band1	0.57	N	9	-1.4		19.9	28.9	18.5				56	46		27.1	27.5		Pass
Band1	0.57	N	10.3	0.1		19.9	30.2	20				56	46		25.8	26		Pass
Band1	0.58	N	9.2	-1		19.9	29.1	18.9				56	46		26.9	27.1		Pass
Band1	0.58	N	11.5	0.6		19.9	31.4	20.5				56	46		24.6	25.5		Pass

---End of Test Report---