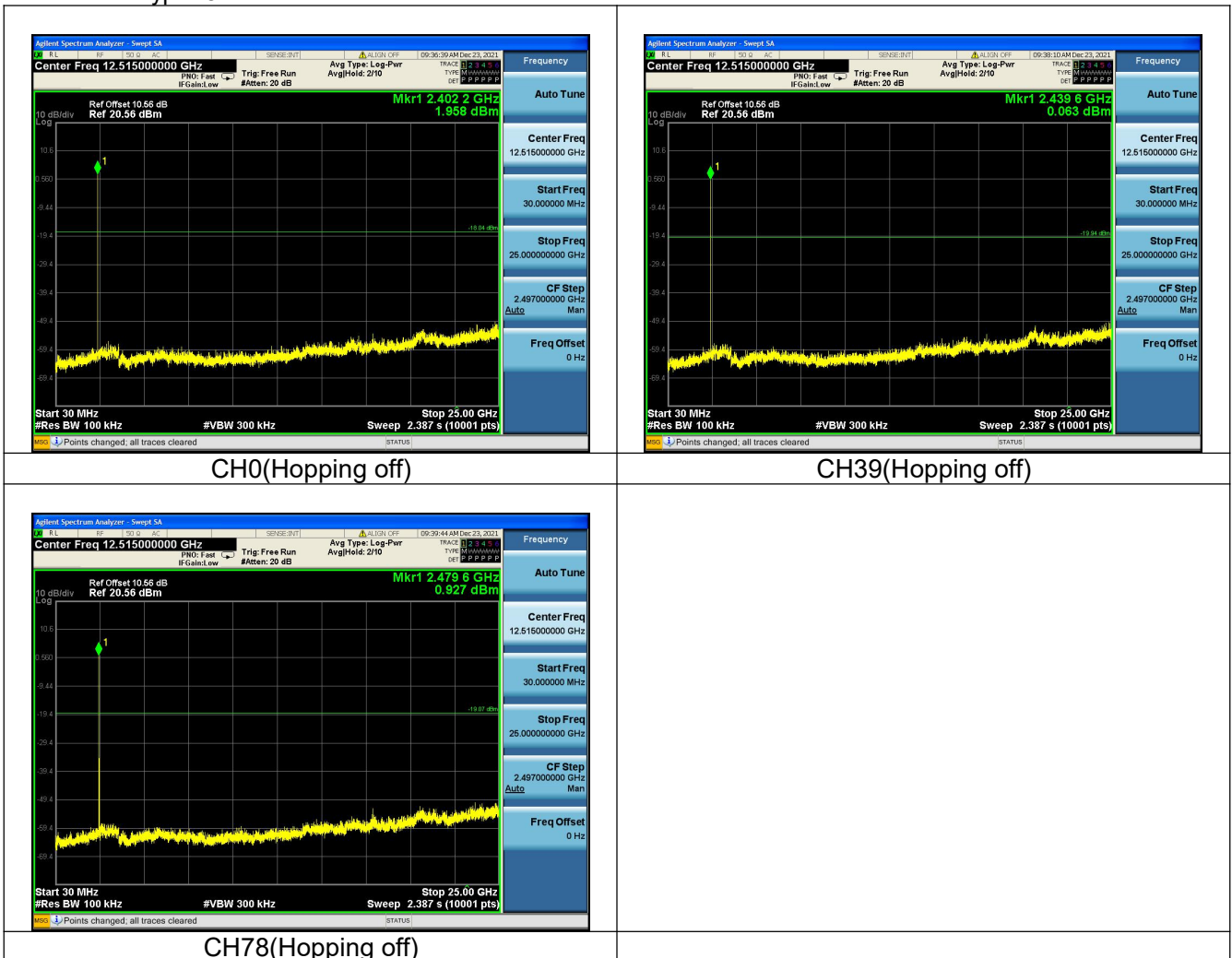


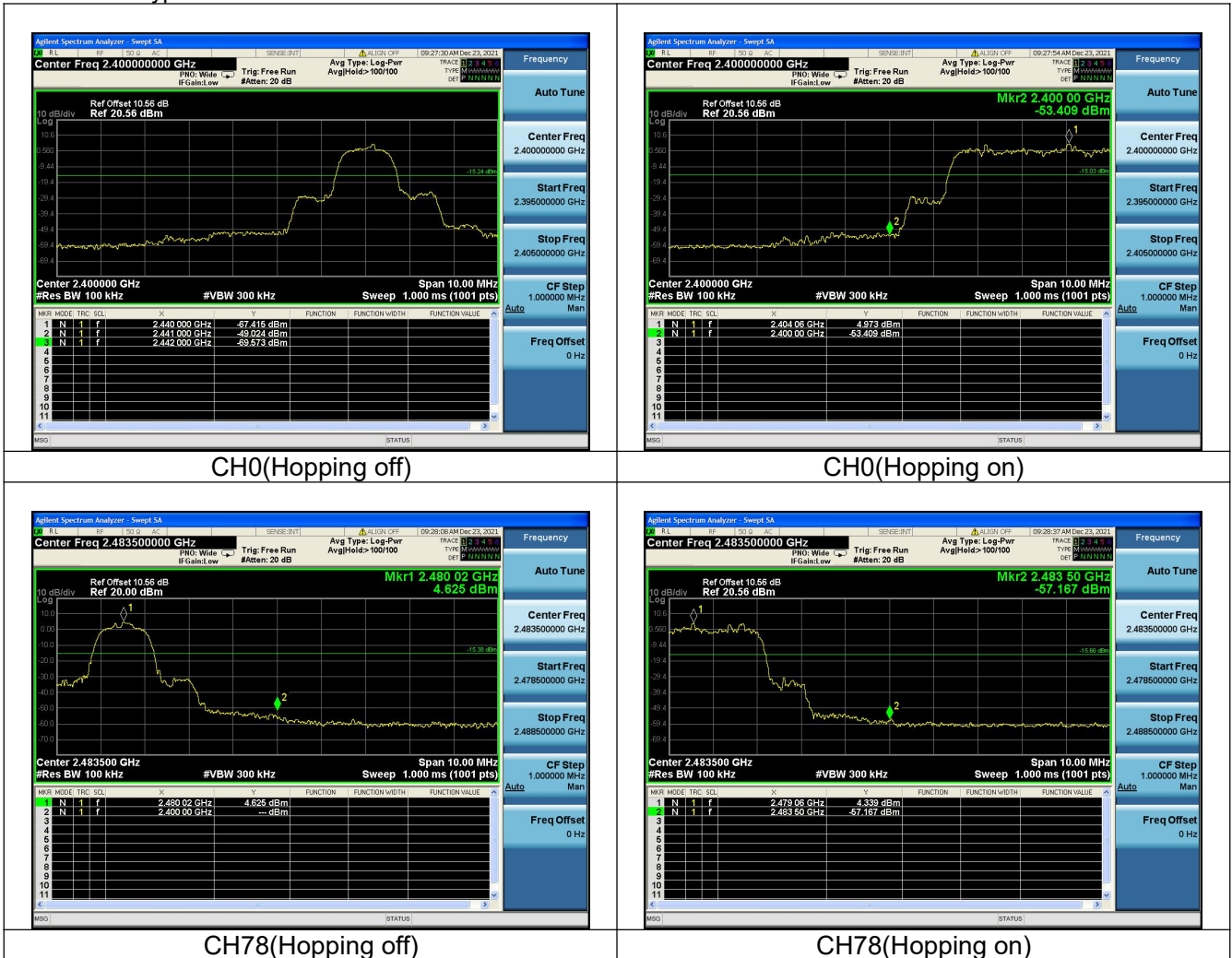
Modulation type: 8DPSK



**7 Band Edge measurement**  
Modulation type:GFSK



Modulation type:  $\pi/4$ DQPSK



Modulation type: 8DPSK



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

### **Radiated Emissions Band Edge-BT**

The measurement results are obtained as described below:

Measure Level = Reading Level + Cable loss + Antenna factor  
Sample calculation: (92.64 dBuV/m) = (58.64 dBuV) + (8.90 dB) + (25.10 dB/m), the corresponding frequency is 2402MHz.

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)

#### ● 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	58.64	92.64	N/A	N/A	8.90	25.10
2390.0	4.29	38.29	-35.71	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	56.01	90.01	N/A	N/A	8.90	25.10
2390.0	-9.40	24.60	-29.40	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	59.77	93.77	N/A	N/A	8.90	25.10
2483.5	14.20	48.20	-25.80	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)
2480.0	57.02	91.02	N/A	N/A	8.90	25.10
2483.5	-8.37	25.63	-28.37	54.00	8.90	25.10

● EDR-2Mbps

Carrier Frequency (MHz): 2402

Channel No.: 0

Test Mode:  $\pi/4$ DQPSK

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	56.49	90.49	N/A	N/A	8.90	25.10
2390.0	4.30	38.30	-35.70	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	50.71	84.71	N/A	N/A	8.90	25.10
2390.0	-9.09	24.91	-29.09	54.00	8.90	25.10

Carrier Frequency (MHz): 2480

Channel No.: 78

Test Mode:  $\pi/4$ DQPSK

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	57.15	91.15	N/A	N/A	8.90	25.10
2483.5	9.67	43.67	-30.33	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	52.19	86.19	N/A	N/A	8.90	25.10
2483.5	-5.84	28.16	-25.84	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	51.94	85.94	N/A	N/A	8.90	25.10
2390.0	3.76	37.76	-36.24	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	49.05	83.05	N/A	N/A	8.90	25.10
2390.0	-8.84	25.16	-28.84	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	49.68	83.68	N/A	N/A	8.90	25.10
2483.5	8.99	42.99	-31.01	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	41.01	75.01	N/A	N/A	8.90	25.10
2483.5	15.05	49.05	-4.95	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:

$$\text{QuasiPeak} = \text{Reading Value} + A_{Rpl}$$

Above 1GHz:

$$\text{MaxPeak} = \text{Reading MaxPeak} + A_{Rpl}$$

OR

$$\text{Average} = \text{Reading Average} + A_{Rpl}$$

Sample calculation:  $(3.82 \text{ dB}\mu\text{V/m}) = (24.62 \text{ dB}\mu\text{V}) + (-20.80 \text{ dB/m})$ , the corresponding frequency is 60.167MHz.

The worst case attitude: The mobile lay down.

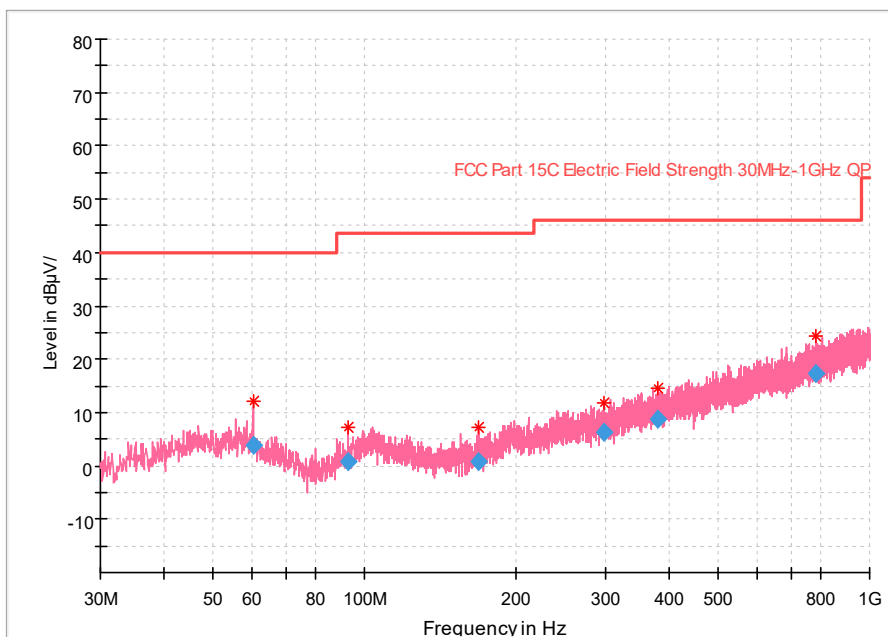
- BR-1Mbps

Spurious Radiated Emissions from 30MHz to 1GHz:

GFSK:

CH Middle (No.39)

Full Spectrum



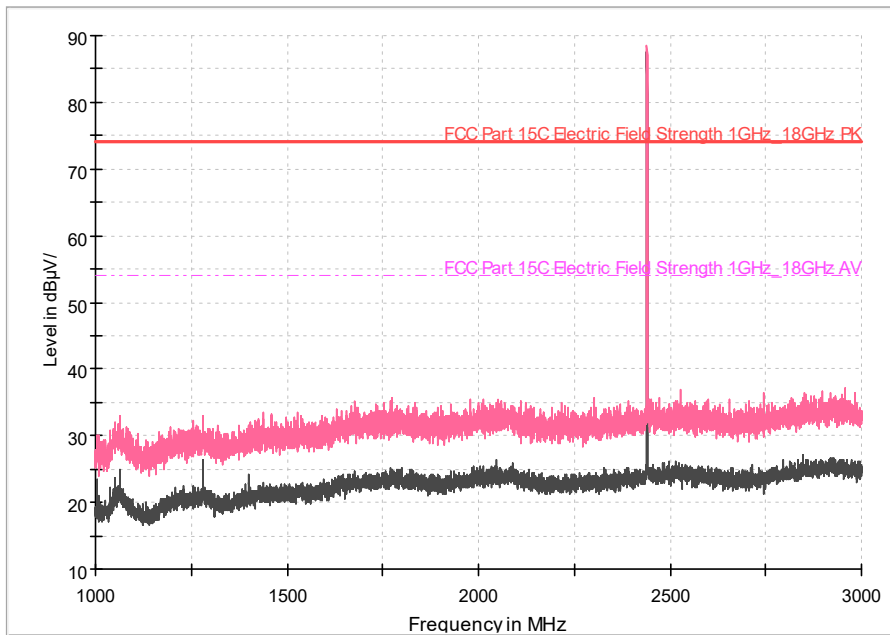
Frequency (MHz)	Reading (dBuV)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	$A_{Rpl}$ (dB)	Polarity
60.167	24.62	3.82	40.00	36.18	-20.80	Vertical
92.662	23.12	0.72	43.50	42.78	-22.40	Vertical
168.710	23.69	0.89	43.50	42.61	-22.80	Vertical



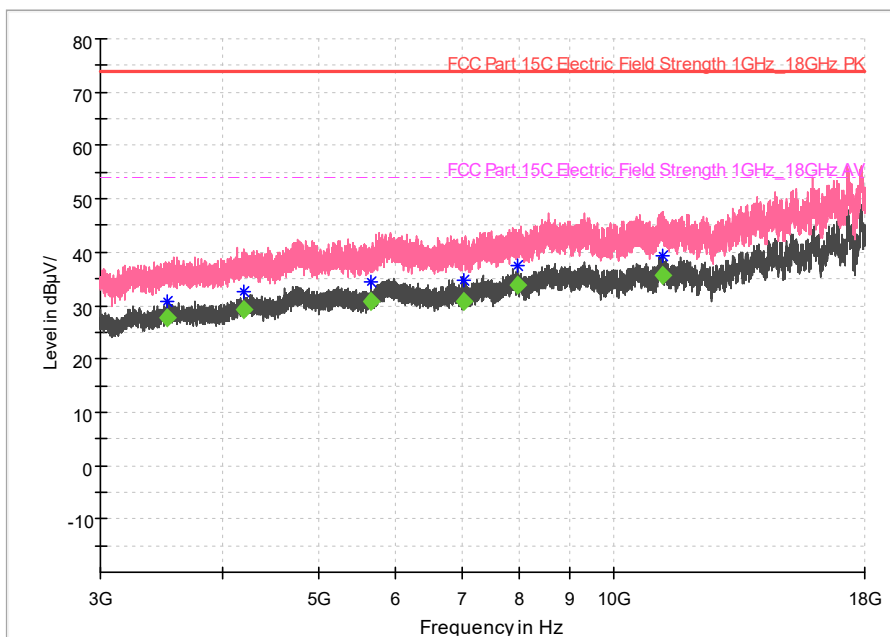
297.720	23.35	6.25	46.00	39.75	-17.10	Vertical
381.043	23.13	8.83	46.00	37.17	-14.30	Vertical
784.660	22.57	17.37	46.00	28.63	-5.20	Vertical

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

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
3513.000	---	52.94	---	27.84	54.00	26.16	-25.10	Vertical
4193.000	---	52.69	---	29.19	54.00	24.81	-23.50	Vertical
5662.500	---	51.98	---	30.88	54.00	23.12	-21.10	Vertical
7033.000	---	52.02	---	30.72	54.00	23.28	-21.30	Vertical
7979.500	---	54.83	---	33.73	54.00	20.27	-21.10	Vertical
11188.000	---	53.14	---	35.74	54.00	18.26	-17.40	Vertical

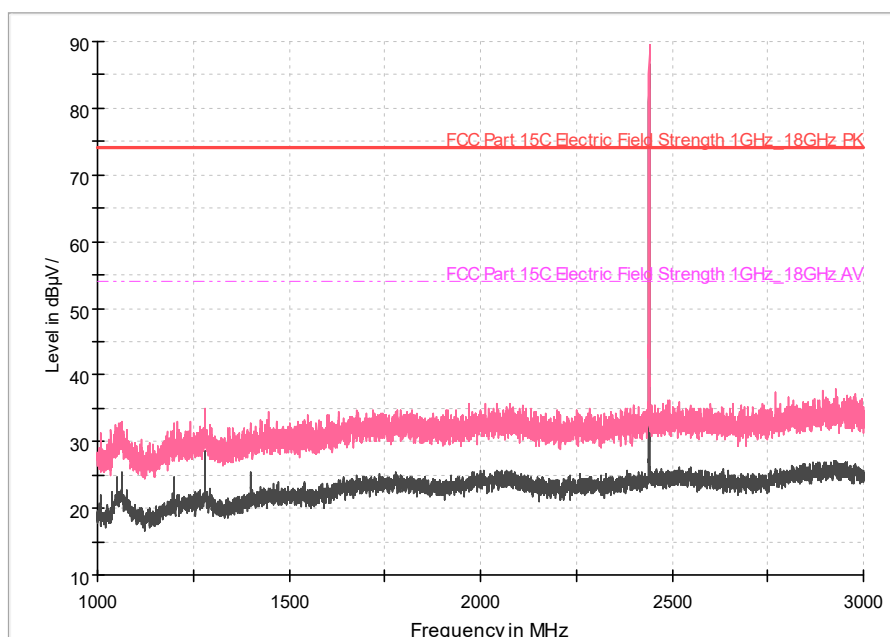
● EDR-2Mbps

Spurious Radiated Emissions from 1GHz to 18GHz:

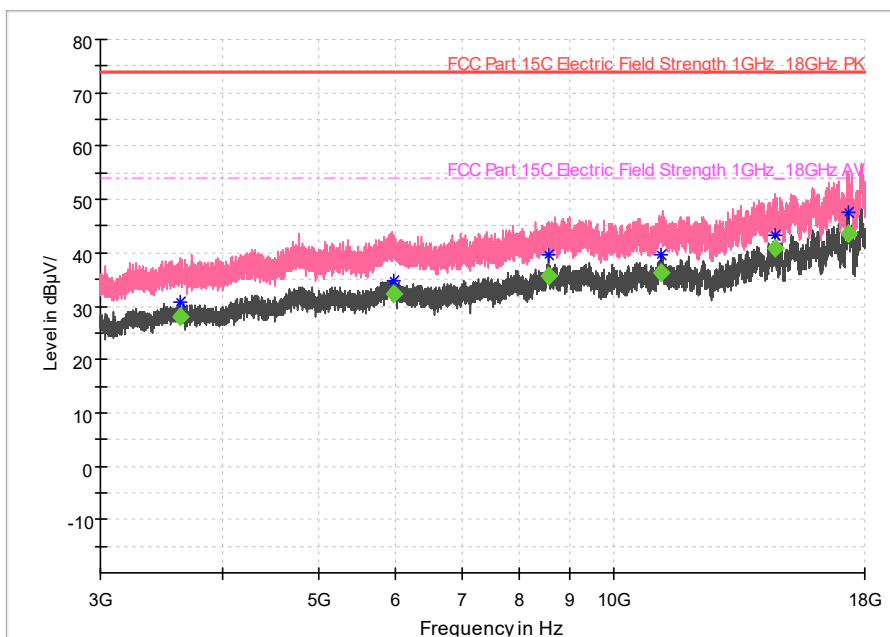
$\pi/4$ DQPSK:

CH Middle (No.39)

Full Spectrum



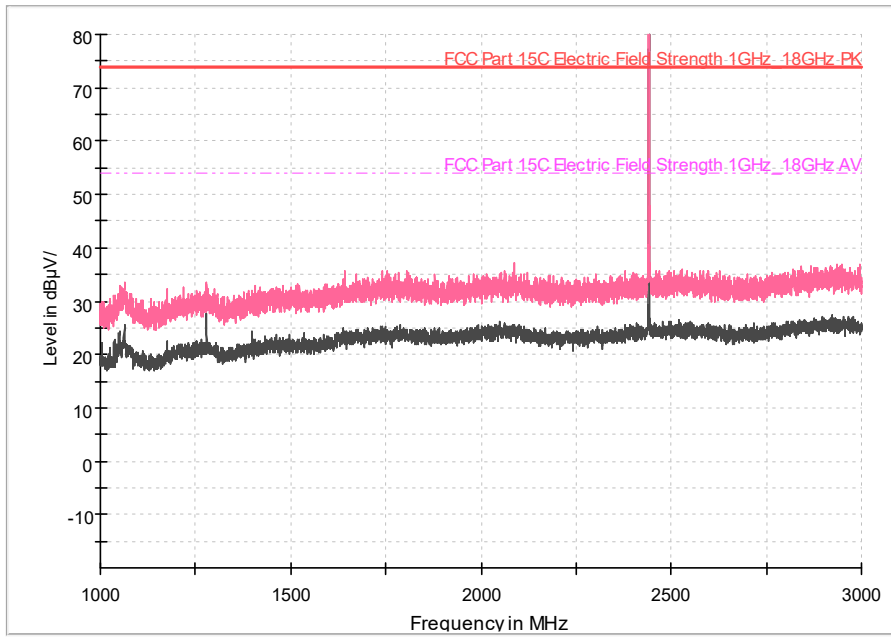
Full Spectrum



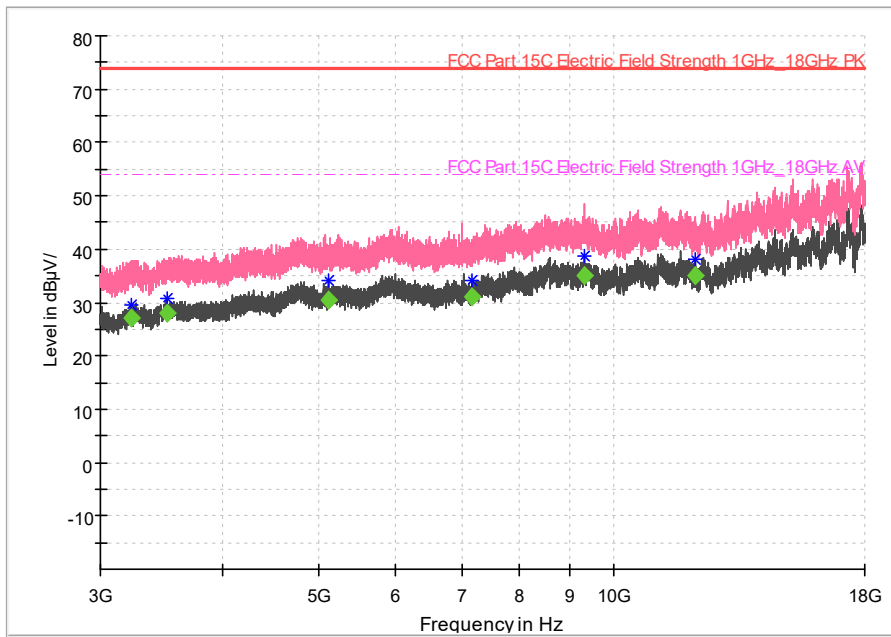
Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A <sub>Rpl</sub> (dB)	Polarity
3619.500	---	52.69	---	27.99	54.00	26.01	-24.70	Vertical
5971.500	---	52.36	---	32.16	54.00	21.84	-20.20	Vertical
8563.500	---	55.62	---	35.62	54.00	18.38	-20.00	Vertical
11173.000	---	53.60	---	36.20	54.00	17.80	-17.40	Vertical
14578.000	---	54.47	---	40.97	54.00	13.03	-13.50	Vertical
17321.000	---	55.11	---	43.61	54.00	10.39	-11.50	Vertical

- EDR-3Mbps  
Spurious Radiated Emissions from 1GHz to 18GHz:  
8DPSK:  
CH Middle (No.39)

Full Spectrum

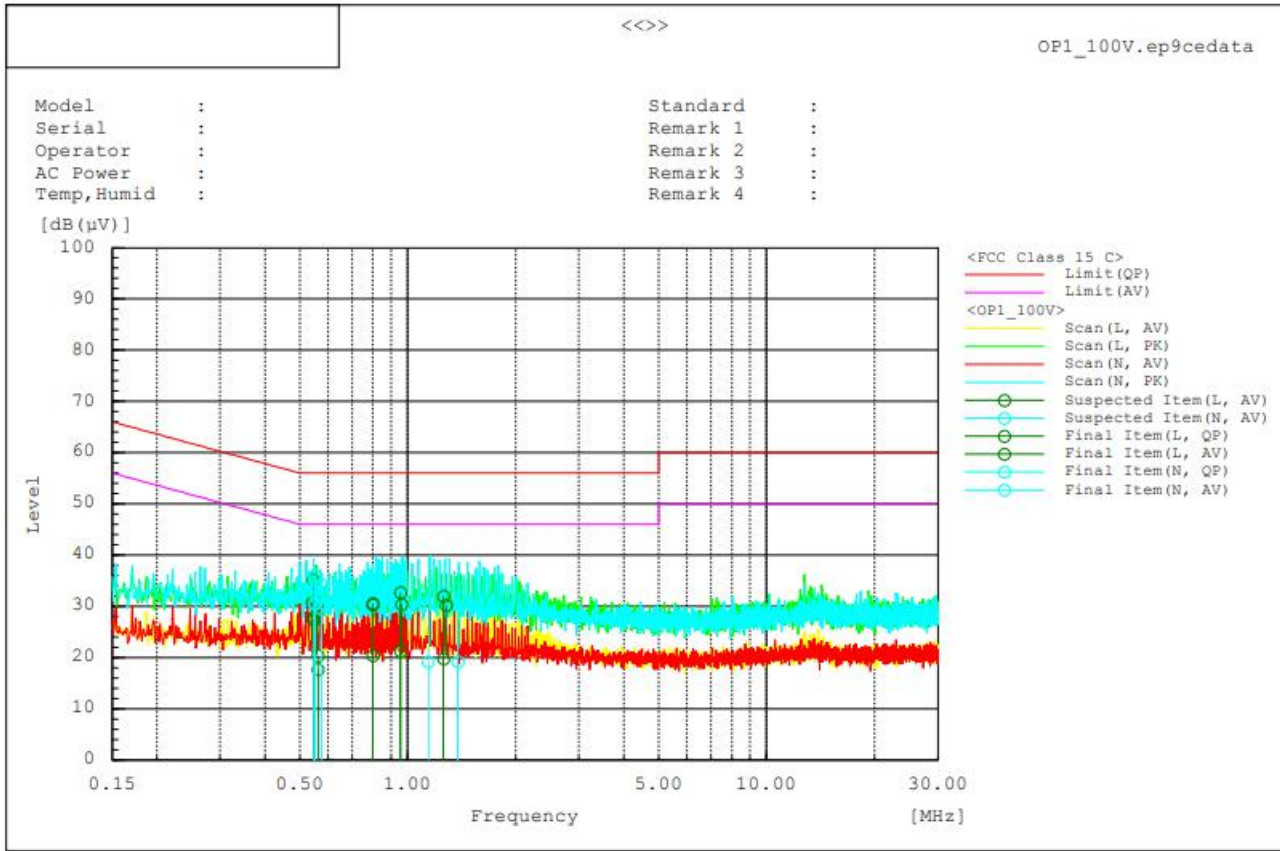


Full Spectrum

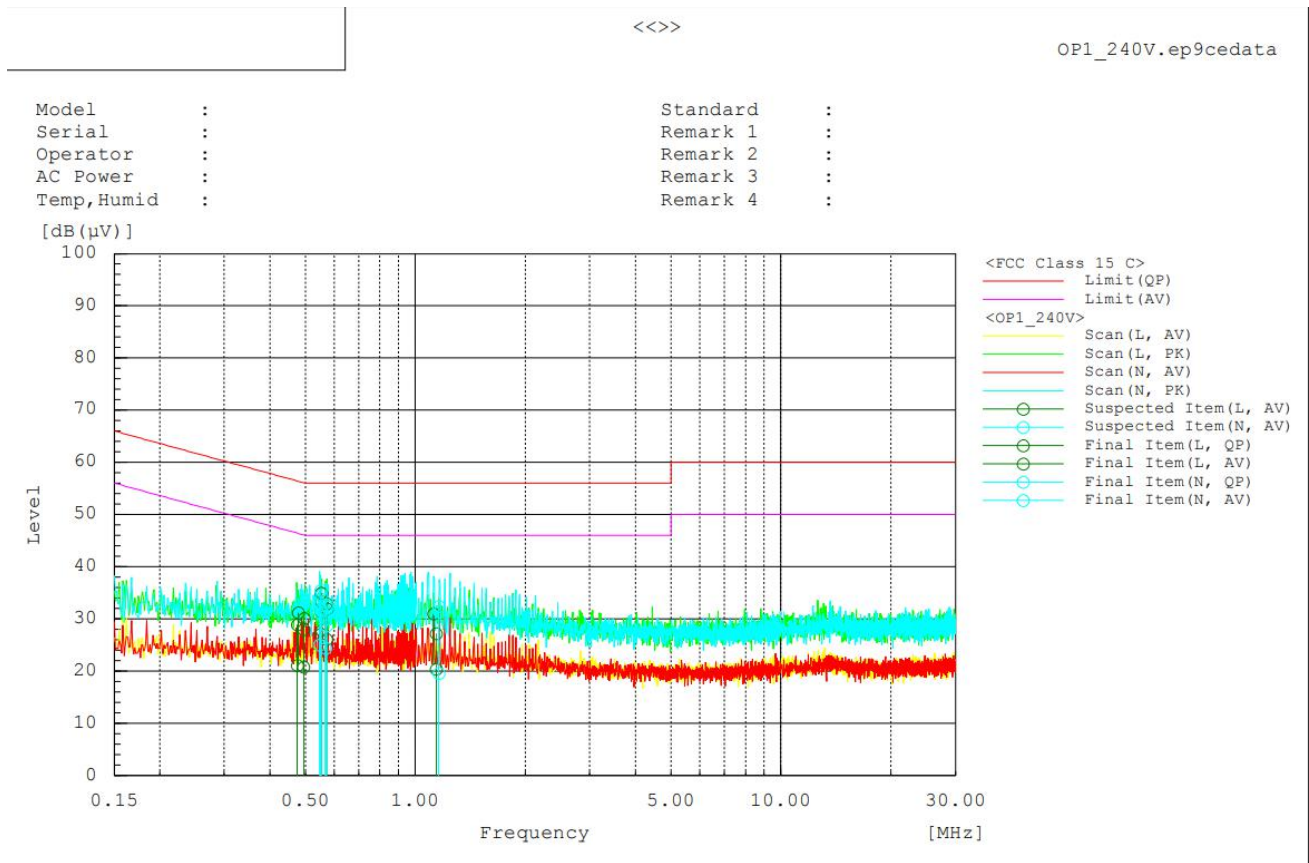


Frequency (MHz)	Reading MaxPeak (dBuV)	Reading Average (dBuV)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	A <sub>RPI</sub> (dB)	Polarity
3220.500	---	52.65	---	27.05	54.00	26.95	-25.60	Vertical
3509.000	---	53.06	---	27.96	54.00	26.04	-25.10	Vertical
5115.500	---	52.23	---	30.33	54.00	23.67	-21.90	Vertical
7156.500	---	52.43	---	31.03	54.00	22.97	-21.40	Vertical
9324.500	---	54.86	---	35.16	54.00	18.84	-19.70	Vertical
12091.500	---	51.81	---	35.01	54.00	18.99	-16.80	Vertical

AC Power line Conducted Emission



Range	Frequency MHz	Line	Reading			Factor	Level			Limit			Margin			Pass/Fail	
			QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK		
Band1	0.55	L	15.3	7.3		19.9	35.2	27.2			56	46		20.8	18.8		Pass
Band1	0.55	L	15.3	7.9		19.9	35.2	27.8			56	46		20.8	18.2		Pass
Band1	0.56	L	0.4	-2.2		19.9	20.3	17.7			56	46		35.7	28.3		Pass
Band1	0.8	L	10.7	0.6		19.8	30.5	20.4			56	46		25.5	25.6		Pass
Band1	0.96	L	12.9	1.4		19.8	32.7	21.2			56	46		23.3	24.8		Pass
Band1	1.26	L	12.1	-0.1		19.9	32	19.8			56	46		24	26.2		Pass
Band1	0.55	N	13	11		19.9	32.9	30.6			56	46		23.1	15.4		Pass
Band1	0.55	N	15.2	11		19.9	35.1	30.5			56	46		20.9	15.5		Pass
Band1	0.55	N	16	14		19.9	35.9	33.8			56	46		20.1	12.2		Pass
Band1	0.57	N	14.4	9.6		19.9	34.3	29.5			56	46		21.7	16.5		Pass
Band1	1.14	N	13.9	-0.7		19.9	33.8	19.2			56	46		22.2	26.8		Pass
Band1	1.38	N	13.6	-0.7		19.9	33.5	19.2			56	46		22.5	26.8		Pass



Range	Frequency	Line	Reading			Factor	Level			Limit			Margin			Pass/Fail	
			dB(μV)				dB(μV)			dB(μV)			dB				
	MHz		QP	AV	PK		QP	AV	PK		QP	AV	PK	QP	AV	PK	
Band1	0.55	N	13.1	5.1		19.9	33	25			56	46		23	21		Pass
Band1	0.55	N	14.8	12		19.9	34.7	31.6			56	46		21.3	14.4		Pass
Band1	0.55	N	15.5	11		19.9	35.4	31.2			56	46		20.6	14.8		Pass
Band1	0.57	N	10	4.4		19.9	29.9	24.3			56	46		26.1	21.7		Pass
Band1	0.57	N	12.7	8.8		19.9	32.6	28.7			56	46		23.4	17.3		Pass
Band1	1.16	N	12.5	-0.3		19.9	32.4	19.6			56	46		23.6	26.4		Pass
Band1	0.48	L	8.9	1.2		19.9	28.8	21.1			56.4	46.4		27.6	25.3		Pass
Band1	0.49	L	8.1	0.9		19.9	28	20.8			56.1	46.1		28.1	25.3		Pass
Band1	0.55	L	15	7.2		19.9	34.9	27.1			56	46		21.1	18.9		Pass
Band1	0.56	L	15	7.9		19.9	34.9	27.8			56	46		21.1	18.2		Pass
Band1	0.57	L	13	6.1		19.9	32.9	26			56	46		23.1	20		Pass
Band1	1.14	L	7.2	0.4		19.9	27.1	20.3			56	46		28.9	25.7		Pass

---End of Test Report---