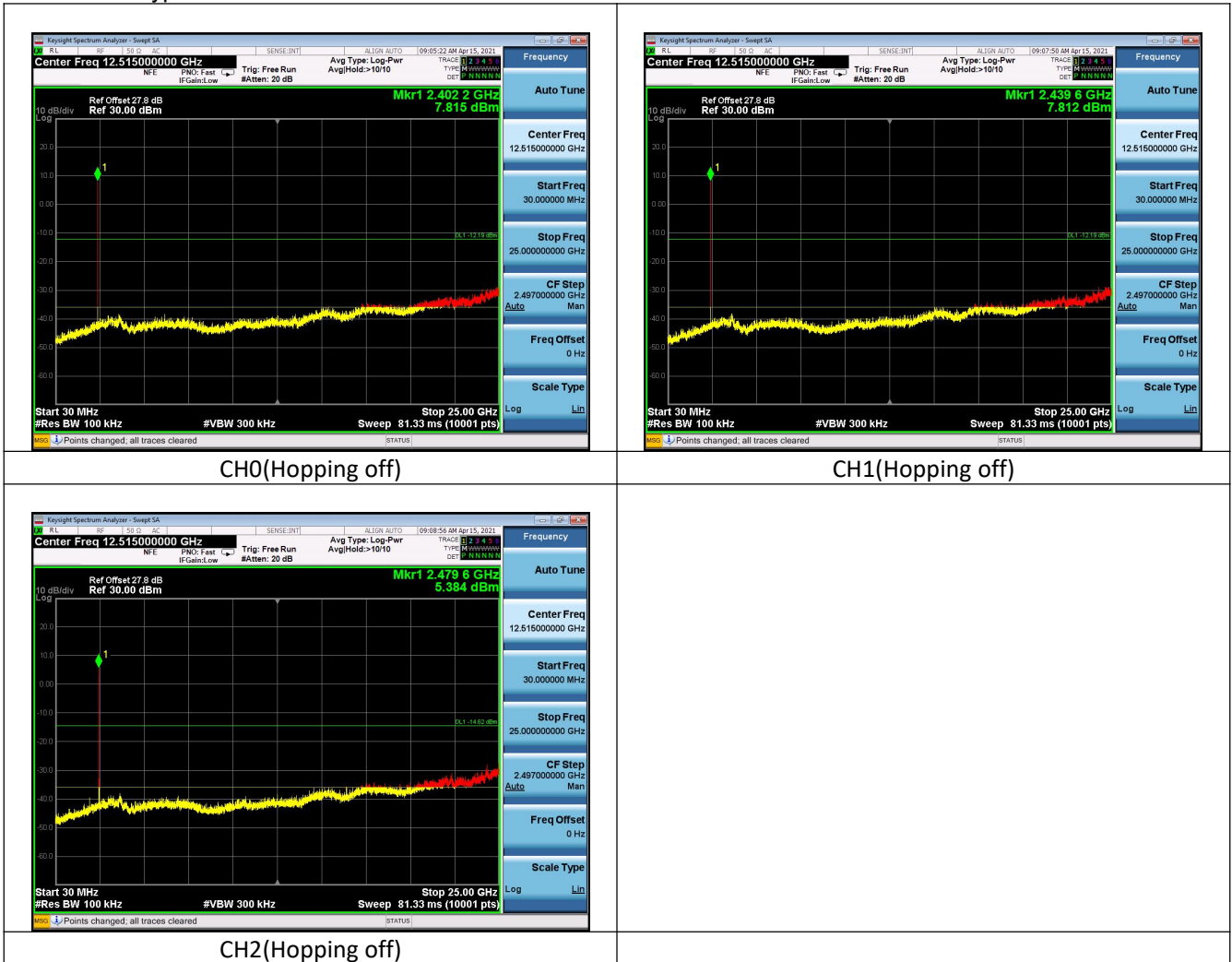


5 Conducted Out of band emission measurement

Modulation type:GFSK



Modulation type: $\pi/4$ DQPSK



CH0(Hopping off)



CH1(Hopping off)



CH2(Hopping off)

Modulation type: 8DPSK



CH0(Hopping off)



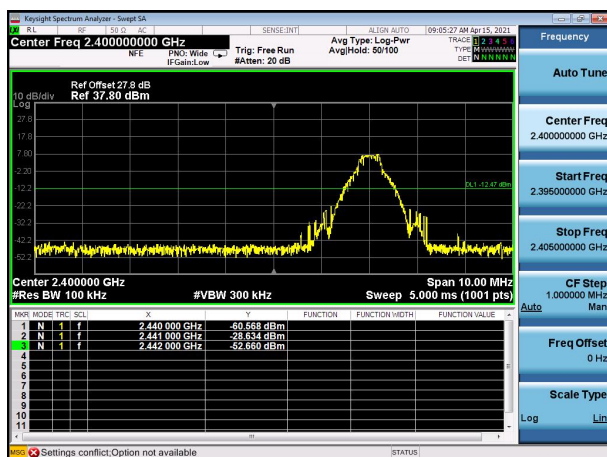
CH1(Hopping off)



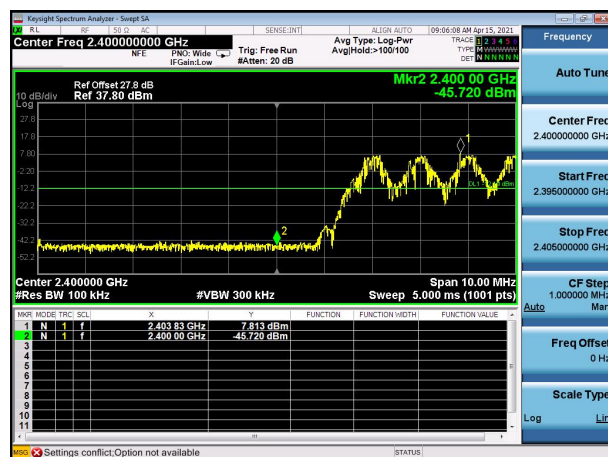
CH2(Hopping off)

6 Band Edge measurement

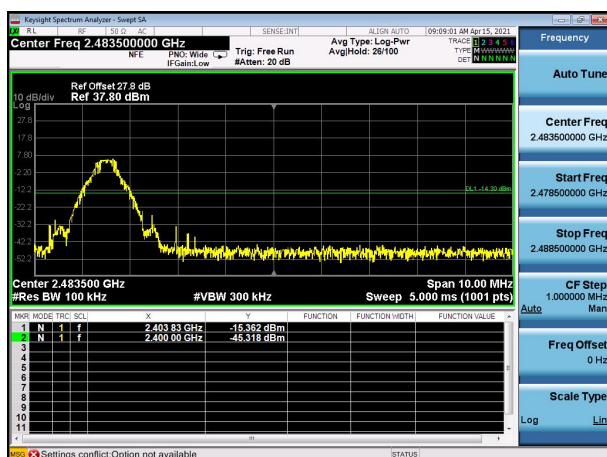
Modulation type:GFSK



CH0(Hopping off)



CH0(Hopping off)

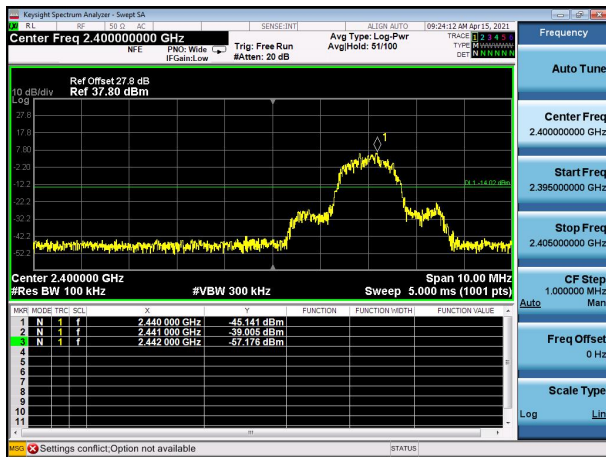


CH2(Hopping off)

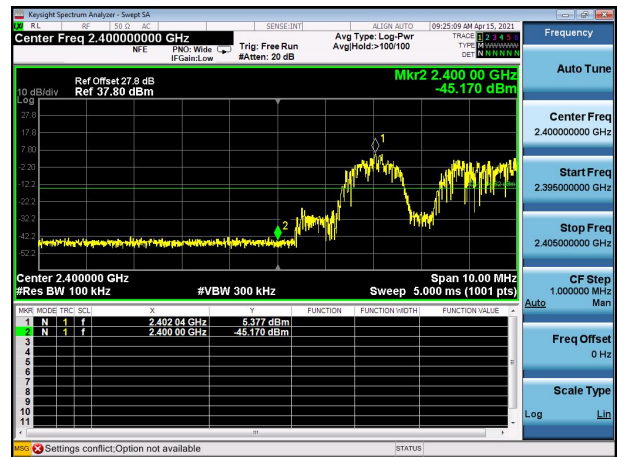


CH2(Hopping off)

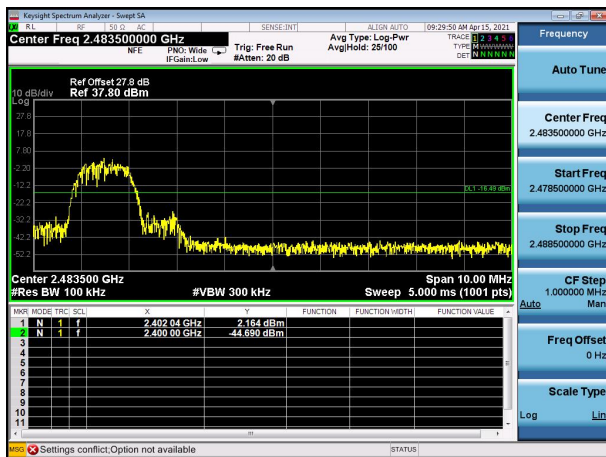
Modulation type: $\pi/4$ DQPSK



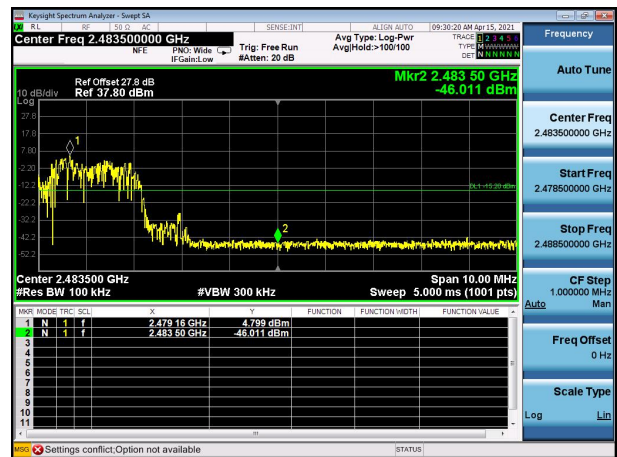
CH0(Hopping off)



CH0(Hopping off)

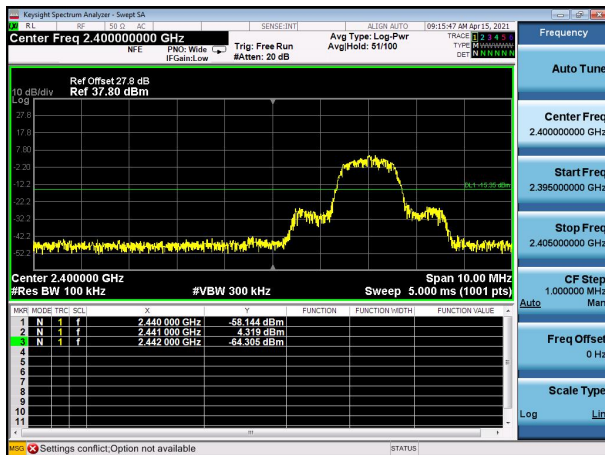


CH2(Hopping off)

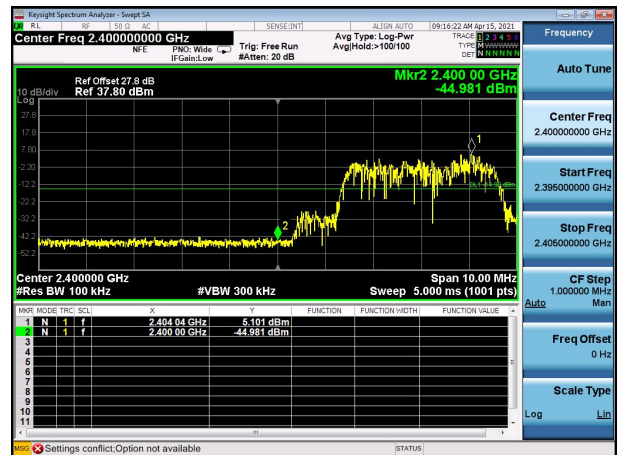


CH2(Hopping off)

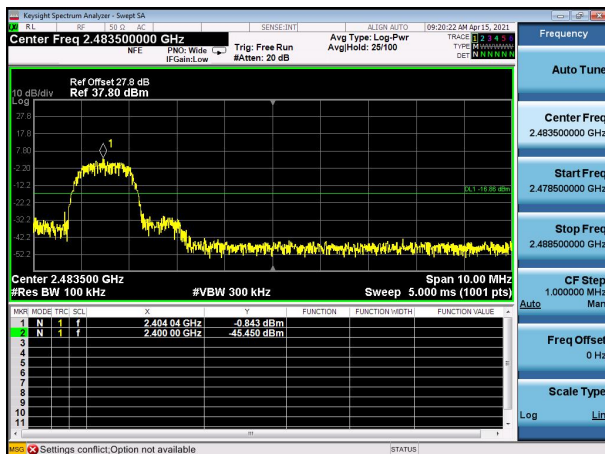
Modulation type: 8DPSK



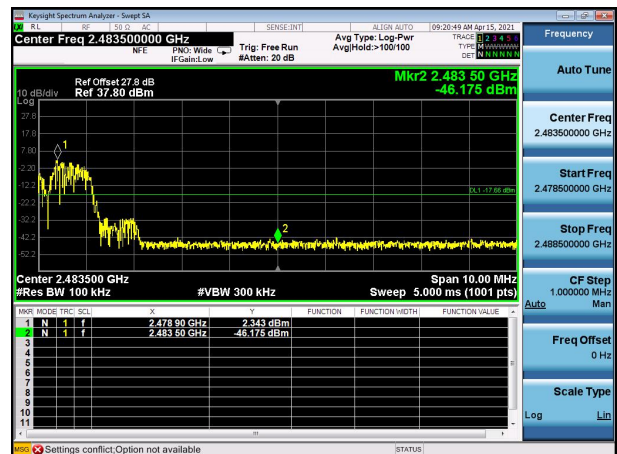
CH0(Hopping off)



CH0(Hopping off)



CH2(Hopping off)



CH2(Hopping off)

APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Emission Band Edge

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: (109.26 dBuV/m) = (75.26 dBμV) + (8.90 dB) + (25.10 1/m), the corresponding frequency is 2402MHz.

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	109.26	75.26	N/A	N/A	8.90	25.10
2	2390	46.46	12.46	-27.54	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	107.07	73.07	N/A	N/A	8.90	25.10
2	2390	45.52	11.52	-28.48	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	106.54	72.54	N/A	N/A	8.90	25.10
2	2390	41.31	7.31	-12.69	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	103.90	69.90	N/A	N/A	8.90	25.10
2	2390	40.10	6.10	-13.90	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	103.71	69.71	N/A	N/A	8.90	25.10
2	2483.5	45.94	11.94	-28.06	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	101.52	67.52	N/A	N/A	8.90	25.10
2	2483.5	44.94	10.94	-29.06	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	101.87	67.87	N/A	N/A	8.90	25.10
2	2483.5	40.10	6.10	-13.90	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	99.37	65.37	N/A	N/A	8.90	25.10
2	2483.5	39.47	5.47	-14.53	54.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: $\pi/4$ DQPSK
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	108.97	74.97	N/A	N/A	8.90	25.10
2	2390	46.57	12.57	-27.43	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: $\pi/4$ DQPSK
Polarity: Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	106.46	72.46	N/A	N/A	8.90	25.10
2	2390	44.94	10.94	-29.06	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: $\pi/4$ DQPSK
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	106.56	72.56	N/A	N/A	8.90	25.10
2	2390	41.98	7.98	-12.02	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: $\pi/4$ DQPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	104.04	70.04	N/A	N/A	8.90	25.10
2	2390	41.48	7.48	-12.52	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: $\pi/4$ DQPSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	103.31	69.31	N/A	N/A	8.90	25.10
2	2483.5	46.51	12.51	-27.49	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: $\pi/4$ DQPSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	101.25	67.25	N/A	N/A	8.90	25.10
2	2483.5	44.52	10.52	-29.48	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: $\pi/4$ DQPSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	101.47	67.47	N/A	N/A	8.90	25.10
2	2483.5	40.85	6.85	-13.15	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: $\pi/4$ DQPSK
Polarity: Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	99.02	65.02	N/A	N/A	8.90	25.10
2	2483.5	40.03	6.03	-13.97	54.00	8.90	25.10

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

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	108.75	74.75	N/A	N/A	8.90	25.10
2	2390	46.17	12.17	-27.83	74.00	8.90	25.10

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

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	105.87	71.87	N/A	N/A	8.90	25.10
2	2390	44.79	10.79	-29.21	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: 8DPSK
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	107.93	73.93	N/A	N/A	8.90	25.10
2	2390	40.31	6.31	-13.69	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2402	105.72	71.72	N/A	N/A	8.90	25.10
2	2390	38.83	4.83	-15.17	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	104.28	70.28	N/A	N/A	8.90	25.10
2	2483.5	46.97	12.97	-27.03	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	102.04	68.04	N/A	N/A	8.90	25.10
2	2483.5	46.73	12.73	-27.27	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	102.99	68.99	N/A	N/A	8.90	25.10
2	2483.5	40.80	6.80	-13.20	54.00	8.90	25.10

Carrier frequency (MHz): 2480

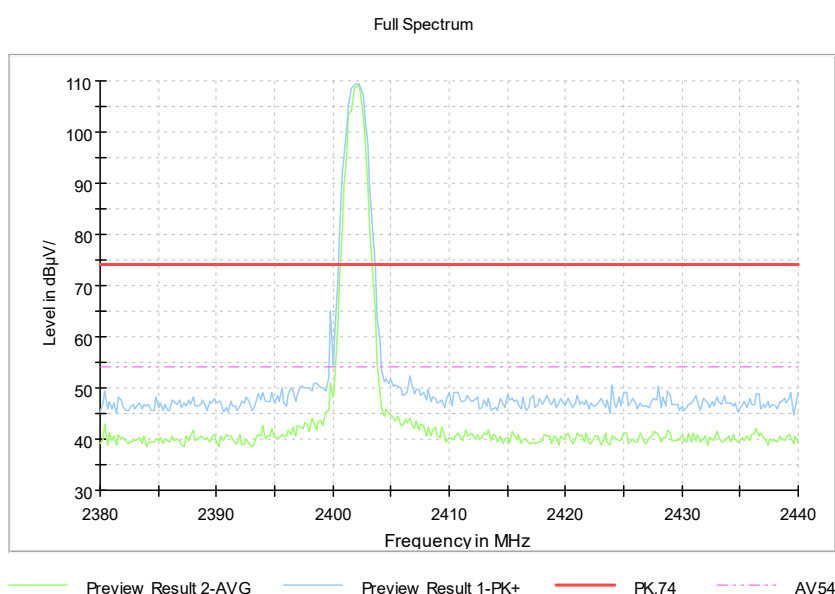
Channel No.:78

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (1/m)
1	2480	99.99	65.99	N/A	N/A	8.90	25.10
2	2483.5	40.49	6.49	-13.51	54.00	8.90	25.10



Comment

Radiated Emission Band Edge

Carrier frequency (MHz): 2402

Channel No.:0

Modulation type: GFSK

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:

Result= $P_{mea} + A_{Rpl}$

Sample calculation: (17.52 dBμV/m) = (36.02 dBμV/m) + (-18.5 dB), the corresponding frequency is 60.030500MHz.

The worst case attitude: The mobile lay down.

For GFSK

Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
60.030500	17.52	-18.5	36.02	Vertical	40.00
60.723000	17.76	-18.6	36.36	Vertical	40.00
60.758000	17.98	-18.7	36.68	Vertical	40.00
61.682000	17.04	-18.9	35.94	Vertical	40.00
62.389000	15.56	-19.1	34.66	Vertical	40.00
104.995000	20.61	-19.6	40.21	Vertical	43.50

For π/4DQPSK

Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
59.063000	16.09	-18.3	34.39	Vertical	40.00
60.030500	16.29	-18.5	34.79	Vertical	40.00
60.075500	16.43	-18.5	34.93	Vertical	40.00
98.513000	20.34	-19.2	39.54	Vertical	43.50
98.667000	19.96	-19.2	39.16	Vertical	43.50
104.050500	20.34	-19.5	39.84	Vertical	43.50

For 8DPSK

Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
61.079500	16.28	-18.7	34.98	Vertical	40.00
86.910500	15.96	-22.3	38.26	Vertical	40.00
88.209000	16.74	-21.8	38.54	Vertical	43.50
98.133500	20.05	-19.3	39.35	Vertical	43.50
100.362000	20.57	-19.1	39.67	Vertical	43.50
102.384500	20.39	-19.3	39.69	Vertical	43.50

For GFSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
61.699000	15.80	-18.9	34.70	Vertical	40.00
61.724500	15.81	-18.9	34.71	Vertical	40.00
87.581000	16.69	-22.0	38.69	Vertical	40.00
98.909500	20.94	-19.2	40.14	Vertical	43.50
98.924000	20.98	-19.2	40.18	Vertical	43.50
100.014000	20.87	-19.1	39.97	Vertical	43.50

For $\pi/4$ DQPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
87.250000	16.85	-22.2	39.05	Vertical	40.00
88.209000	16.81	-21.8	38.61	Vertical	43.50
97.443500	20.20	-19.4	39.60	Vertical	43.50
98.793000	20.86	-19.2	40.06	Vertical	43.50
99.877000	20.85	-19.1	39.95	Vertical	43.50
99.934000	20.82	-19.1	39.92	Vertical	43.50

For 8DPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
87.250000	16.88	-22.2	39.08	Vertical	40.00
98.824500	20.70	-19.2	39.90	Vertical	43.50
98.847500	20.74	-19.2	39.94	Vertical	43.50
98.890000	20.79	-19.2	39.99	Vertical	43.50
99.954500	20.77	-19.1	39.87	Vertical	43.50
101.135500	20.25	-19.2	39.45	Vertical	43.50

For GFSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
60.737500	16.32	-18.6	34.92	Vertical	40.00
60.758000	16.31	-18.7	35.01	Vertical	40.00
61.062500	15.74	-18.7	34.44	Vertical	40.00
98.875500	20.72	-19.2	39.92	Vertical	43.50
98.887500	20.75	-19.2	39.95	Vertical	43.50
101.161000	20.35	-19.2	39.55	Vertical	43.50

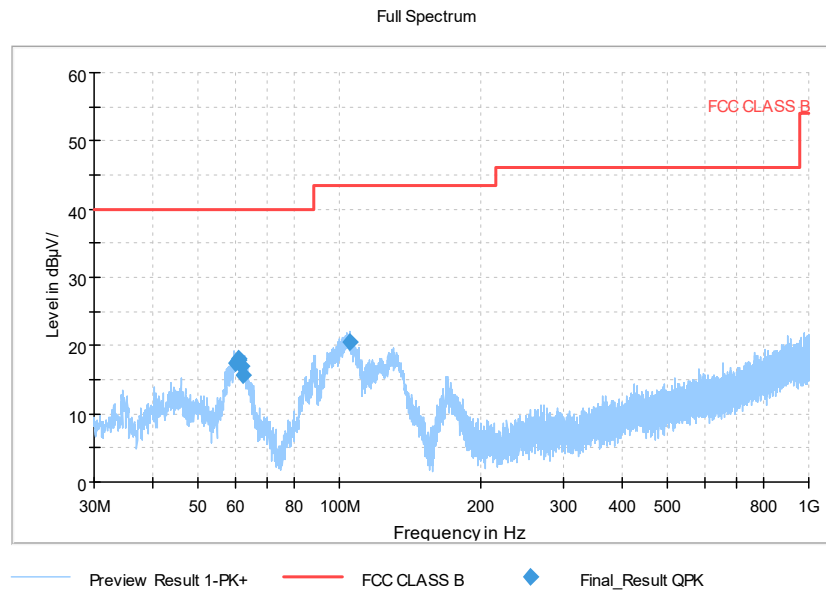
For $\pi/4$ DQPSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
97.435000	19.82	-19.4	39.22	Vertical	43.50
98.856000	20.84	-19.2	40.04	Vertical	43.50
98.879000	20.70	-19.2	39.90	Vertical	43.50
98.898500	20.79	-19.2	39.99	Vertical	43.50
98.921500	20.66	-19.2	39.86	Vertical	43.50
99.997000	20.72	-19.1	39.82	Vertical	43.50

For 8DPSK
Channel No.:78

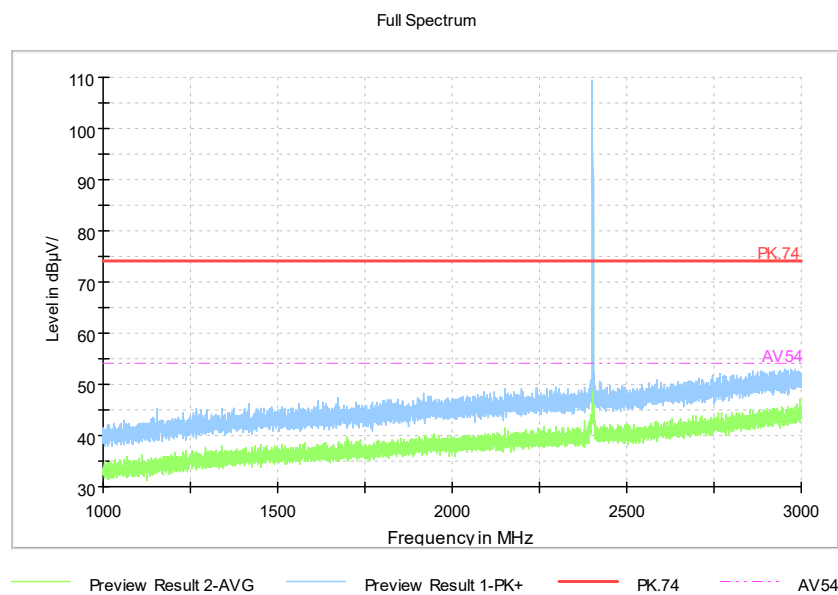
Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
59.411000	15.50	-18.3	33.80	Vertical	40.00
60.612500	16.02	-18.6	34.62	Vertical	40.00
87.581000	16.75	-22.0	38.75	Vertical	40.00
98.867000	20.74	-19.2	39.94	Vertical	43.50
99.974000	20.76	-19.1	39.86	Vertical	43.50
99.997000	20.80	-19.1	39.90	Vertical	43.50

Carrier frequency (MHz): 2402
Channel No.:0



Comment

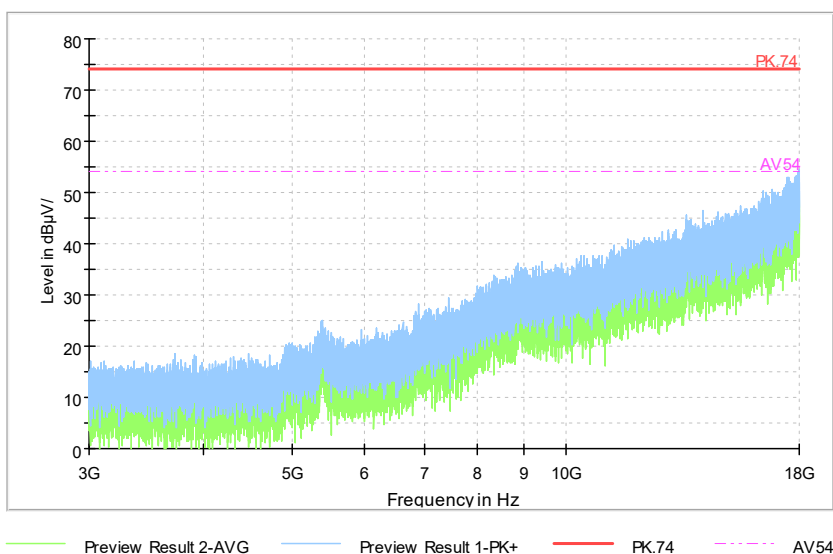
Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



Comment

Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK

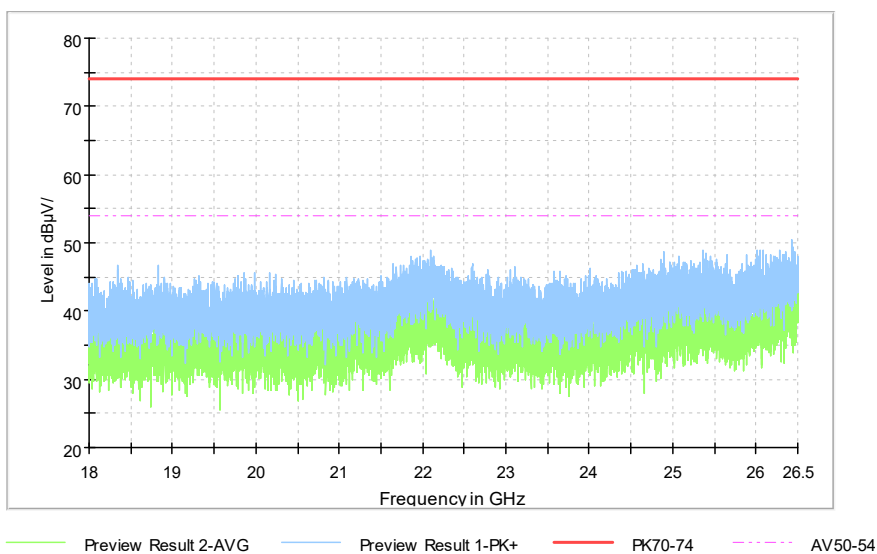
Full Spectrum



Comment

Frequency Range: 6GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

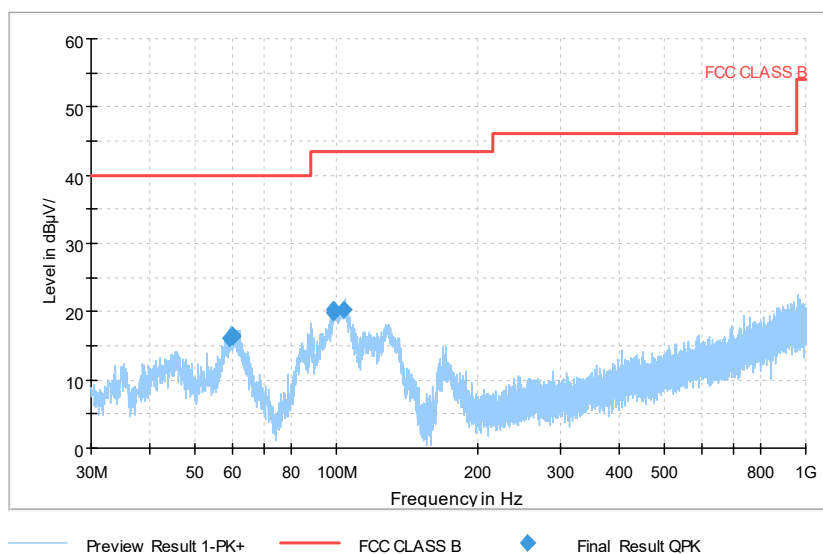
Full Spectrum



Comment

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK

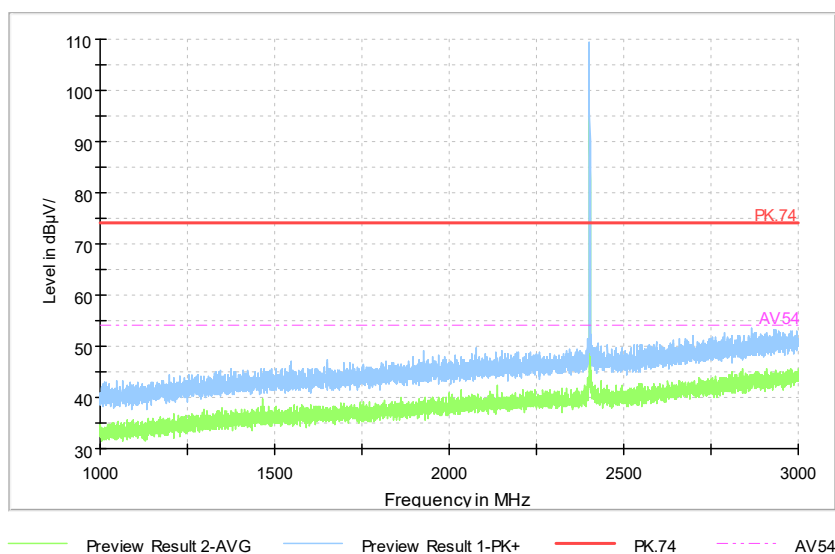
Full Spectrum



Comment

Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: $\pi/4$ DQPSK

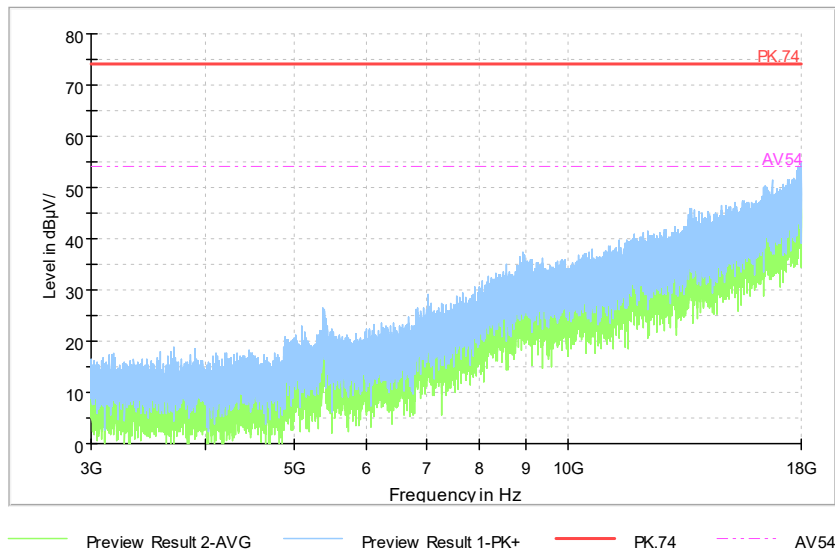
Full Spectrum



Comment

Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

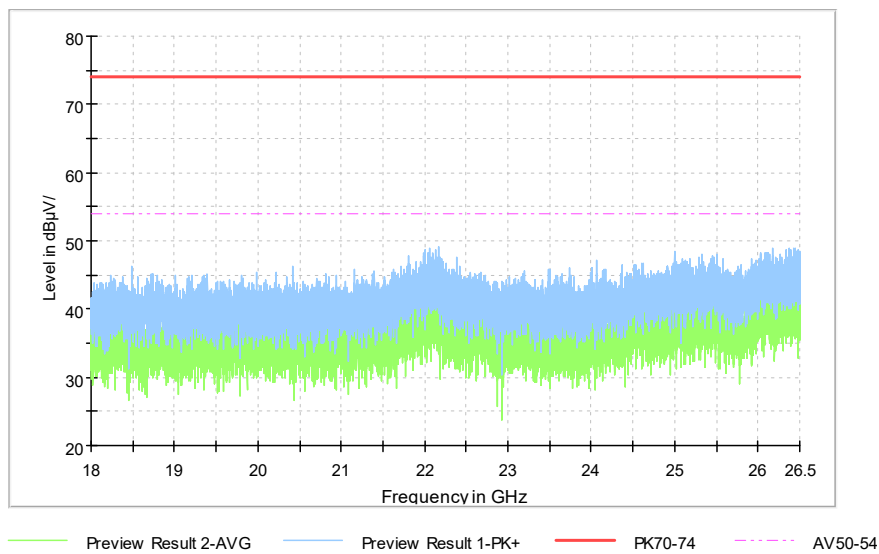
Full Spectrum



Comment

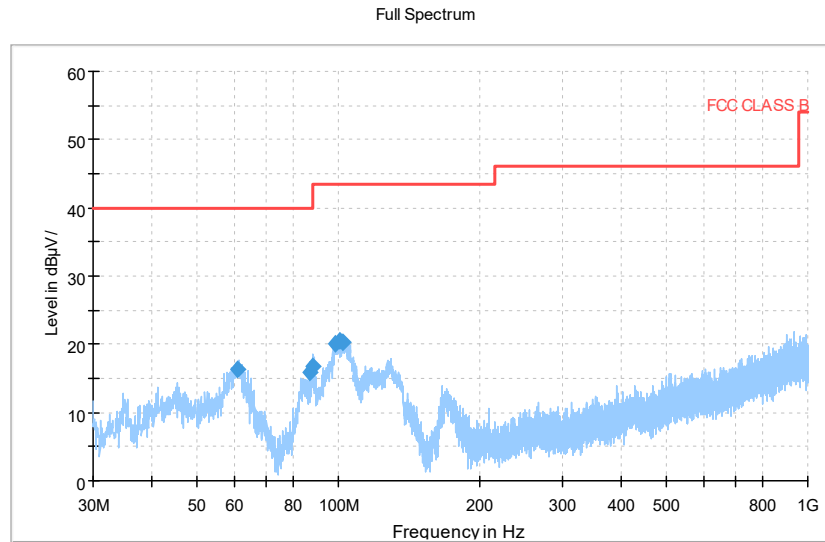
Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

Full Spectrum



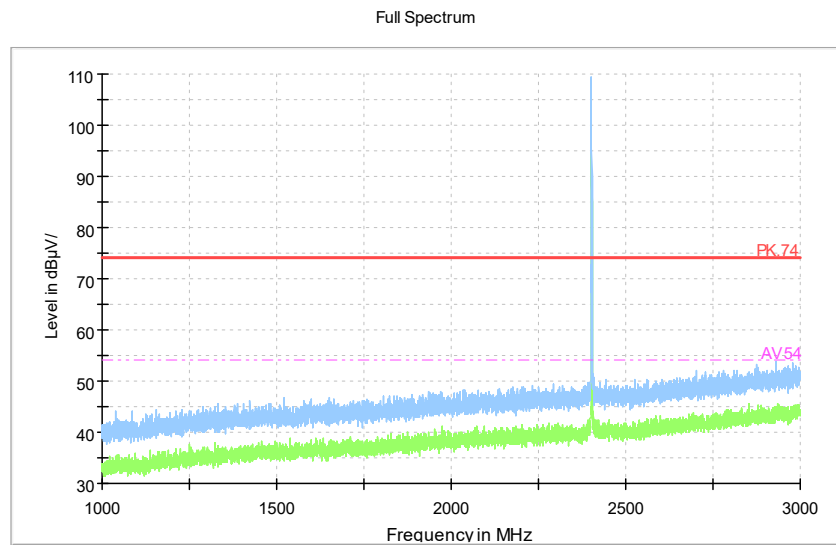
Comment

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK



Comment

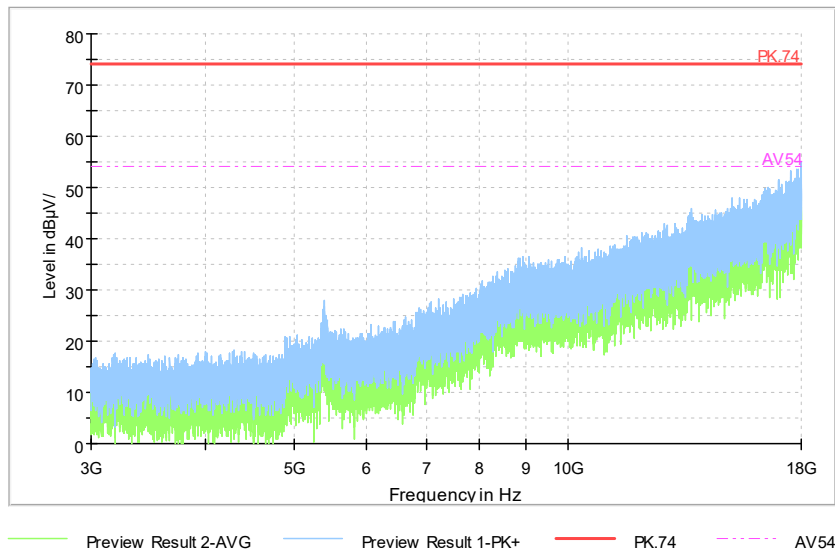
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: 8DPSK



Comment

Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

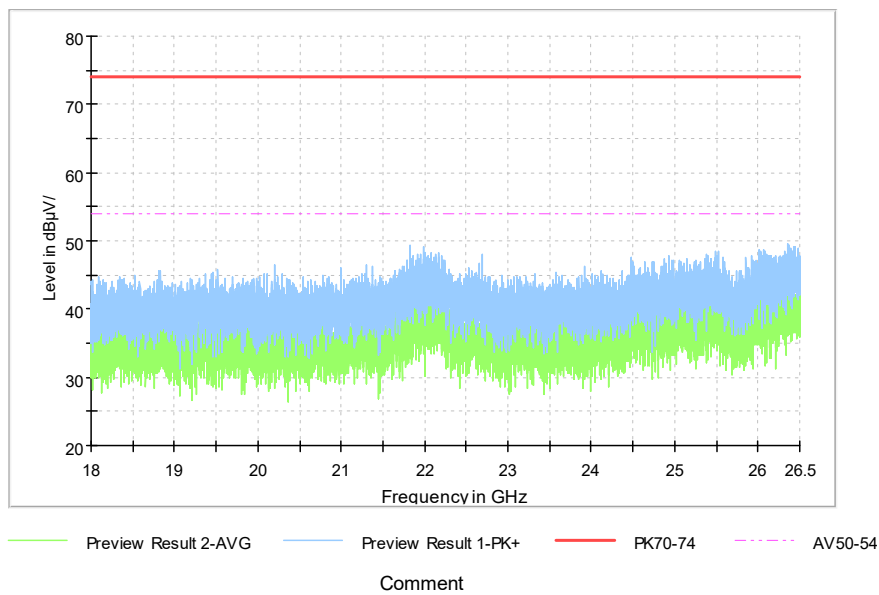
Full Spectrum



Comment

Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

Full Spectrum

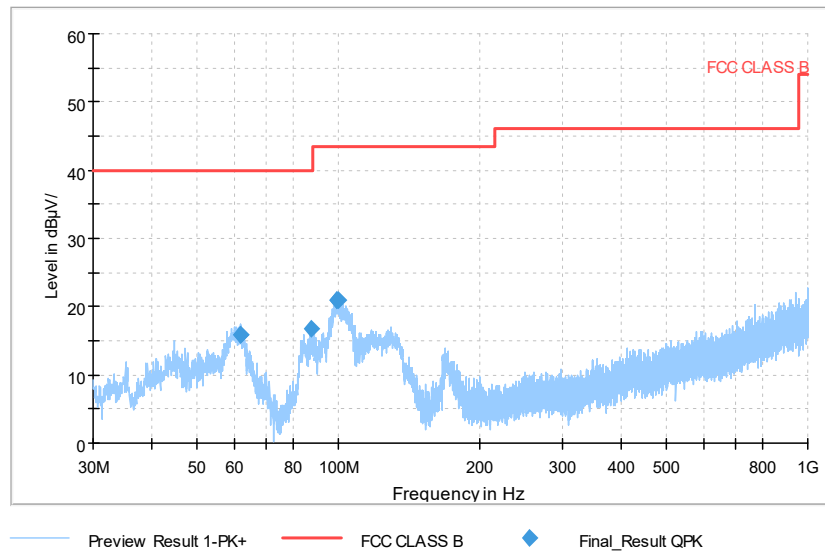


Comment

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

Carrier frequency (MHz): 2441
Channel No.:39

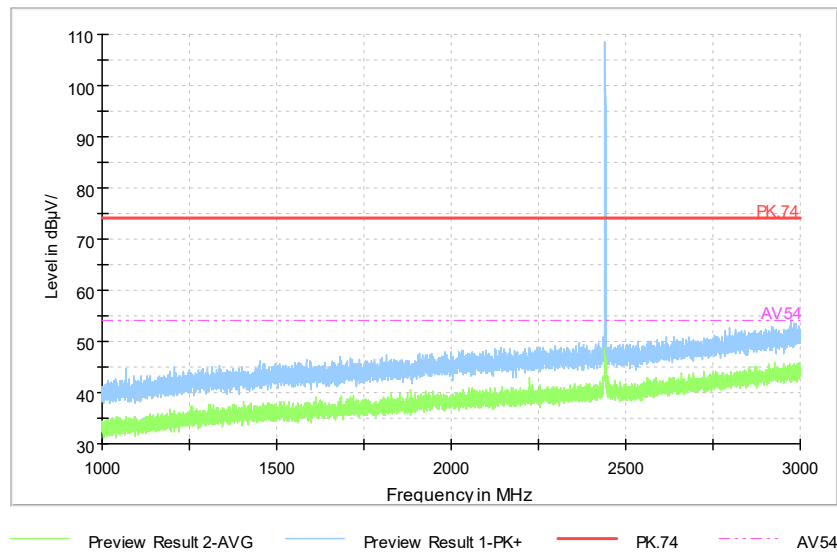
Full Spectrum



Comment

Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK

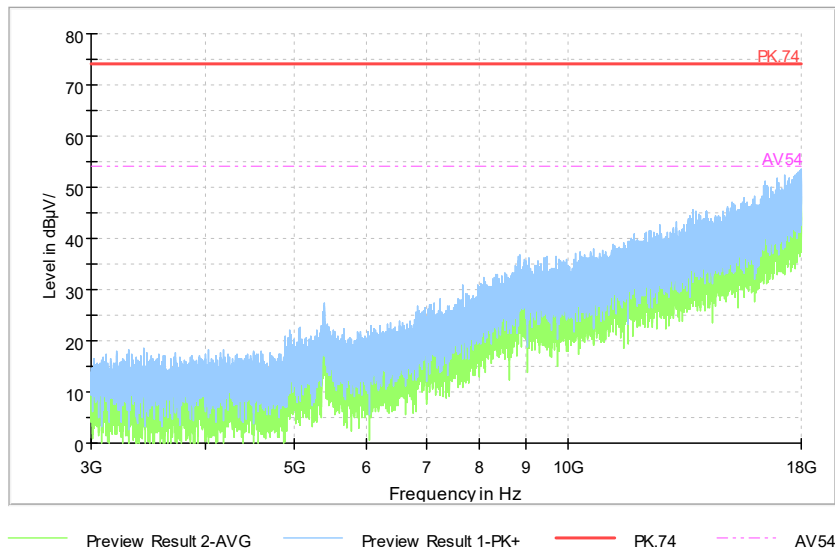
Full Spectrum



Comment

Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK

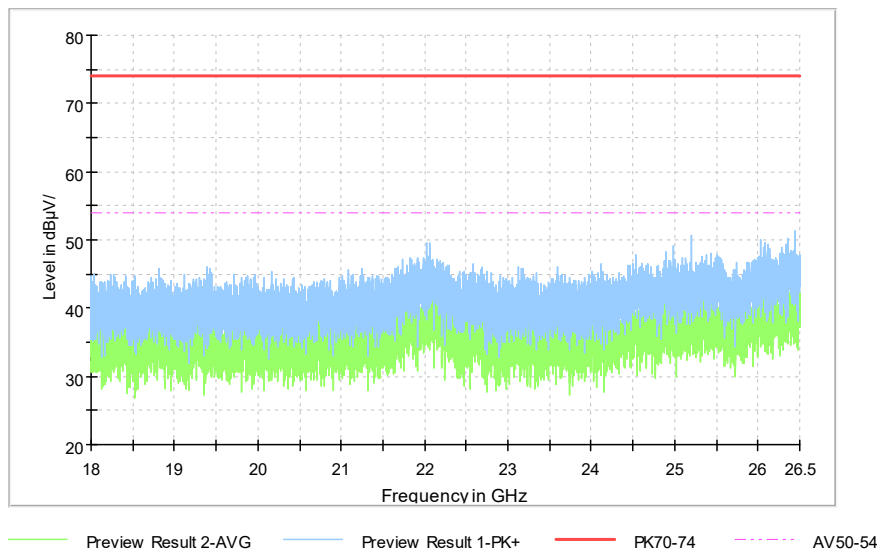
Full Spectrum



Comment

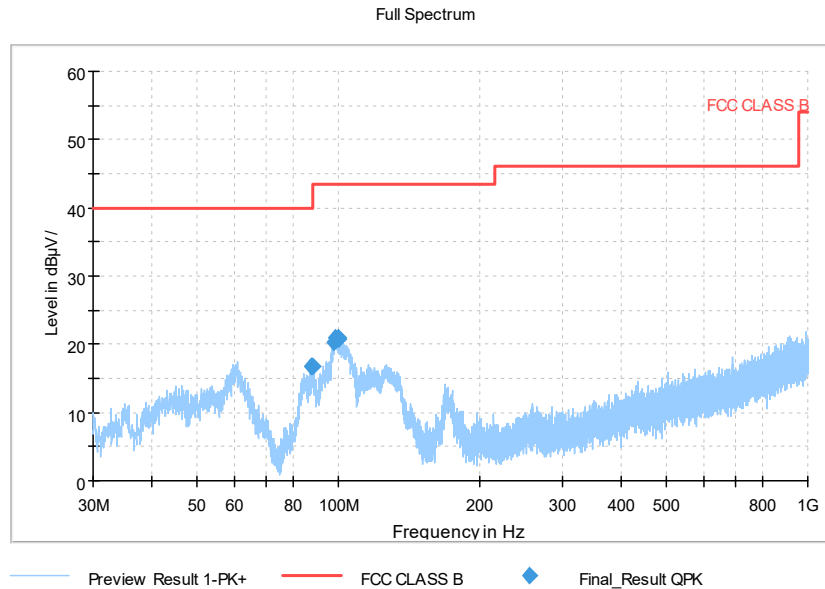
Frequency Range: 6GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

Full Spectrum



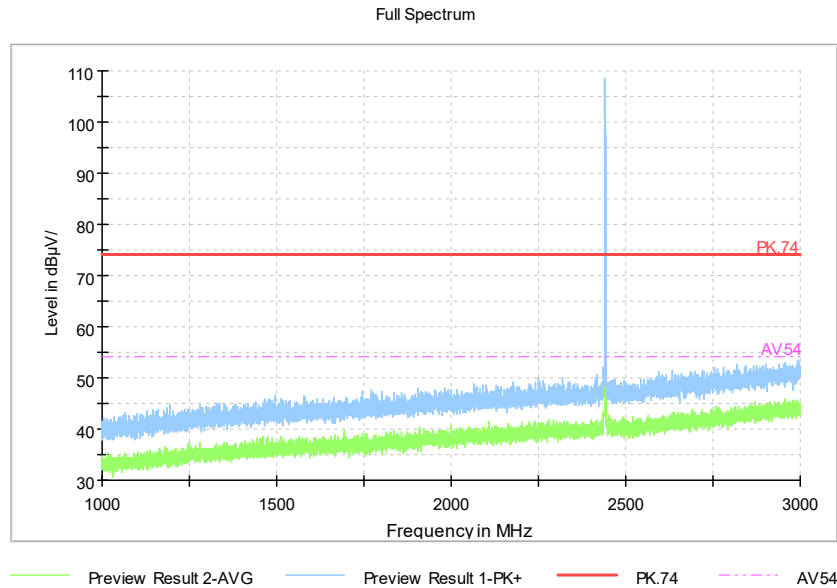
Comment

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK



Comment

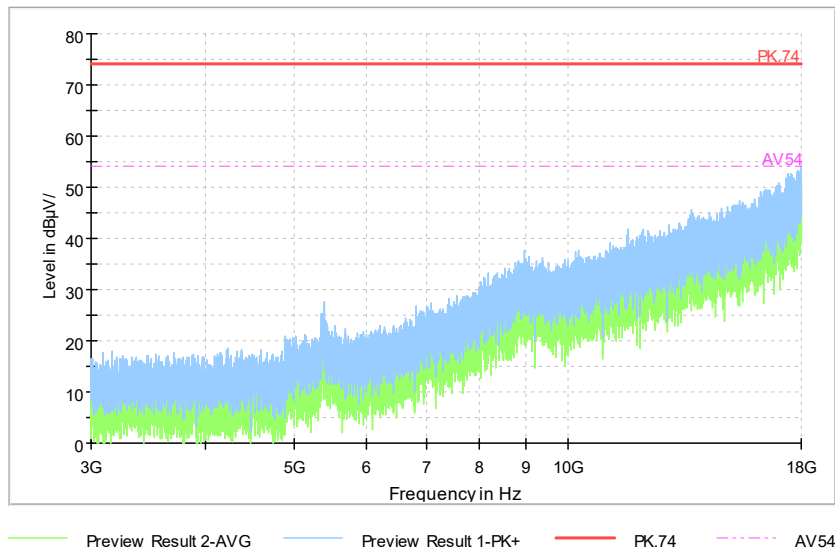
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: $\pi/4$ DQPSK



Comment

Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

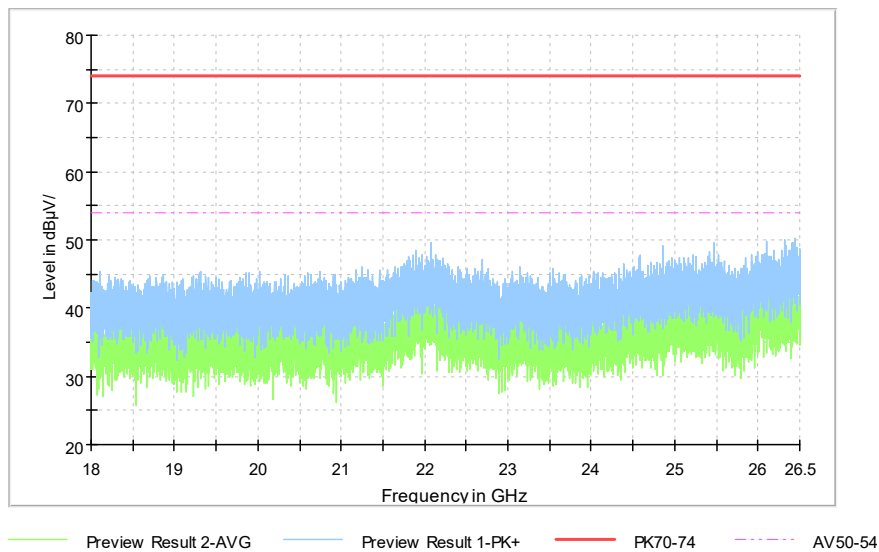
Full Spectrum



Comment

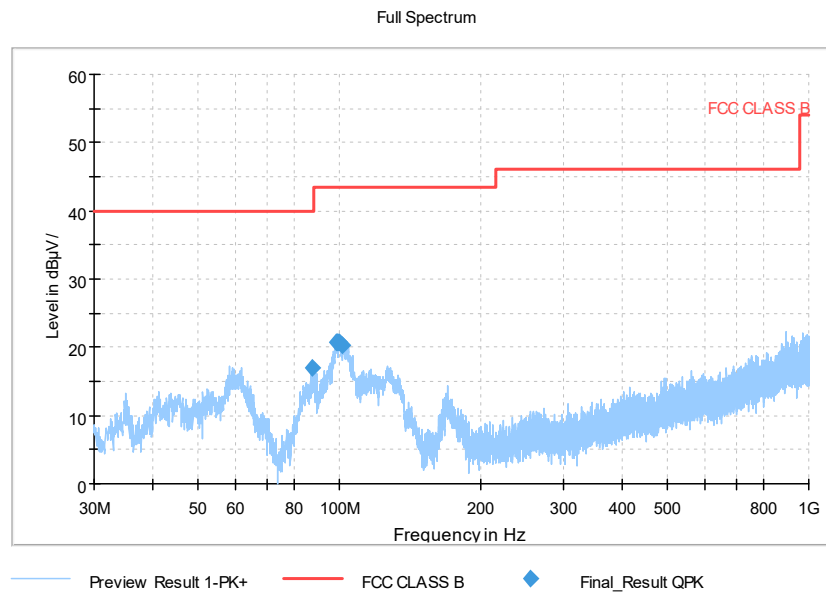
Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

Full Spectrum



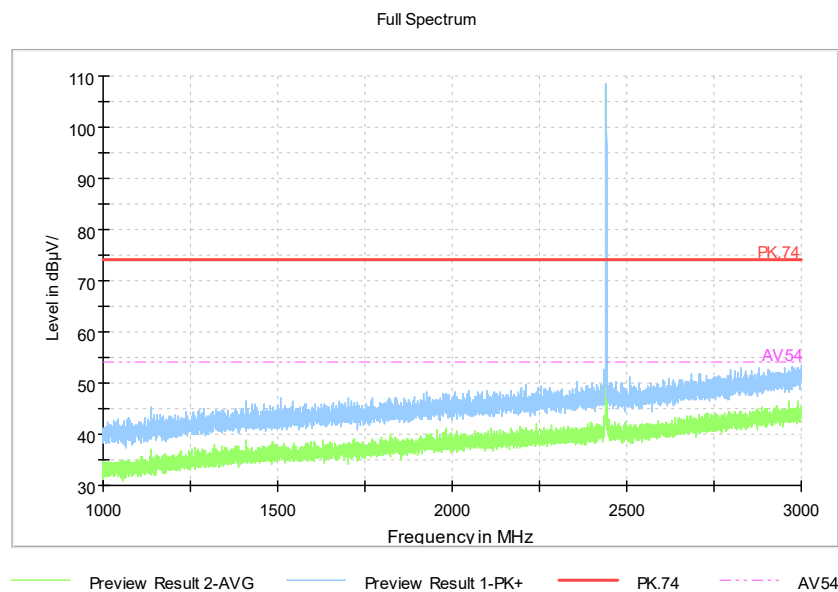
Comment

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK



Comment

Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: 8DPSK



Comment

Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK