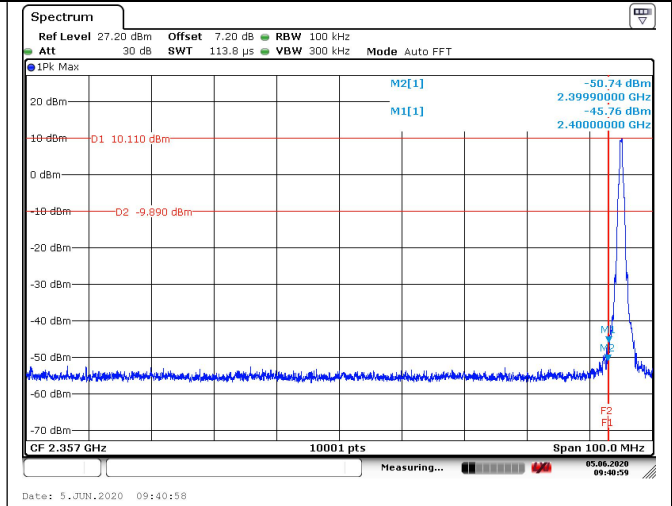
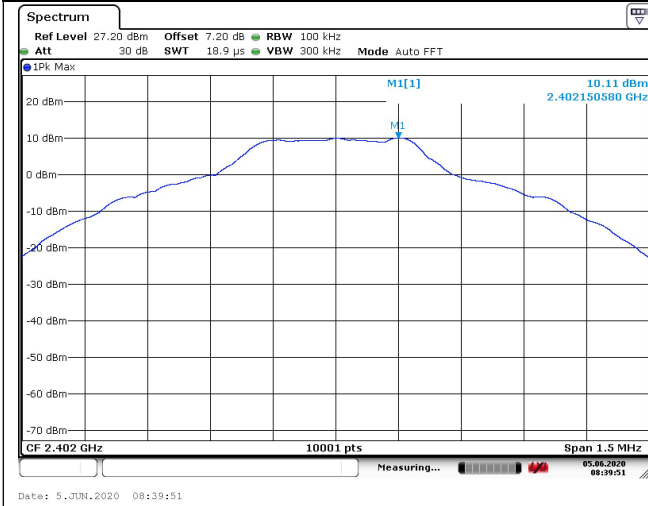


Band Edge measurement

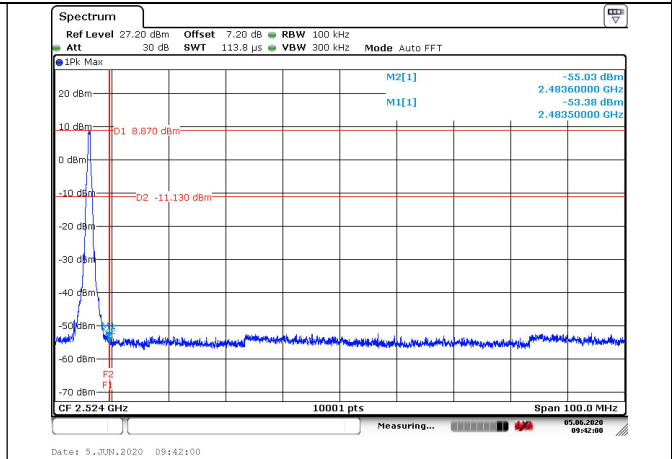
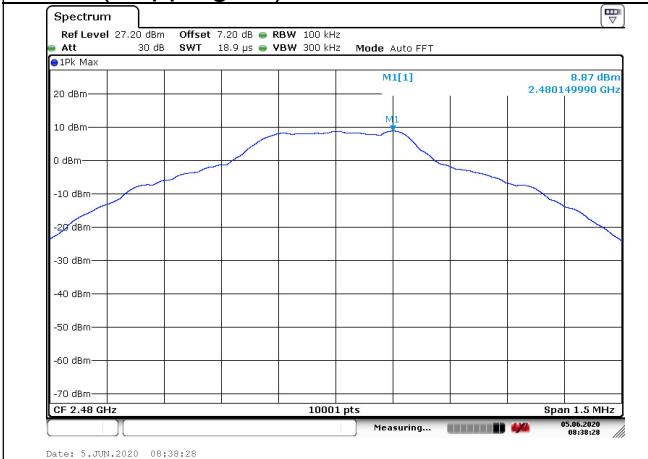
Offset 7.2dB = Attenuator 6dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1dB

GFSK

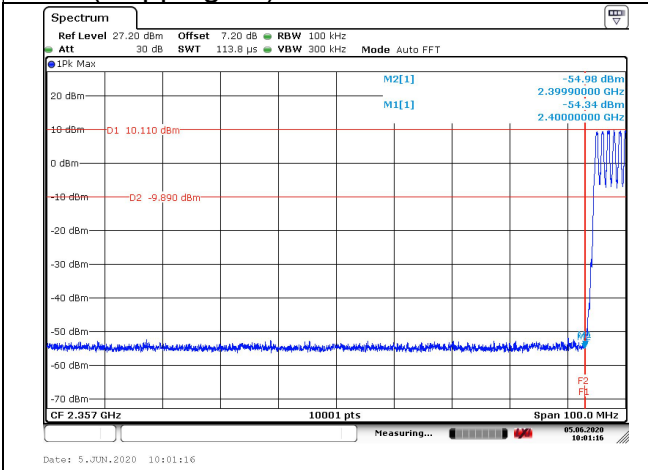
CH0 (Hopping off)



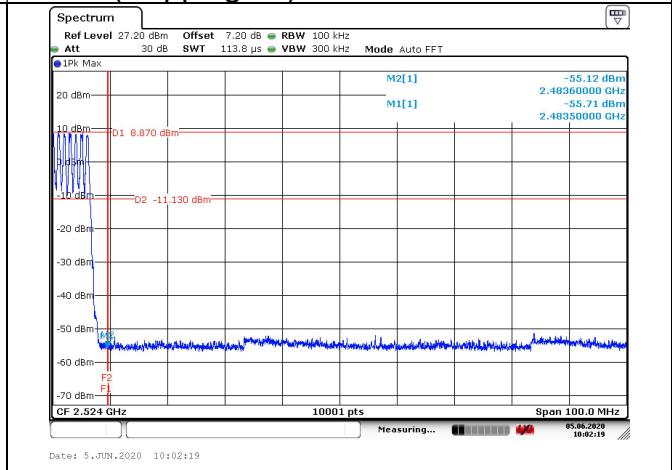
CH78(Hopping off)



CH0 (Hopping on)

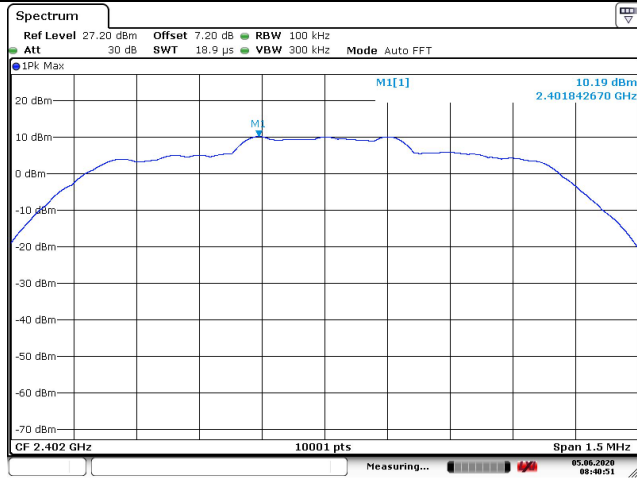


CH78 (Hopping on)

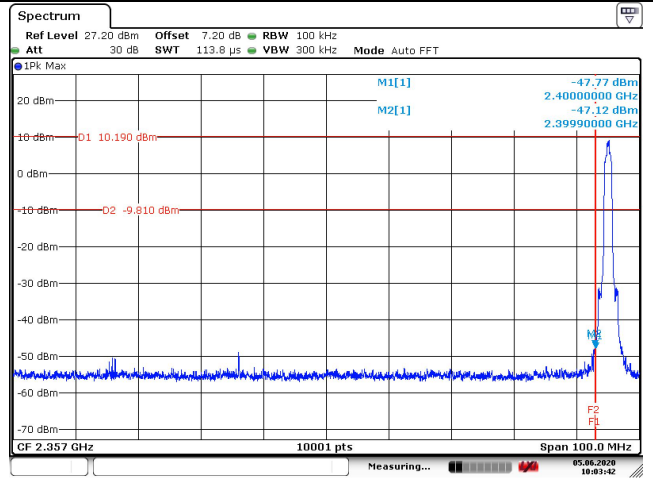


$\pi/4$ DQPSK

CH0 (Hopping off)

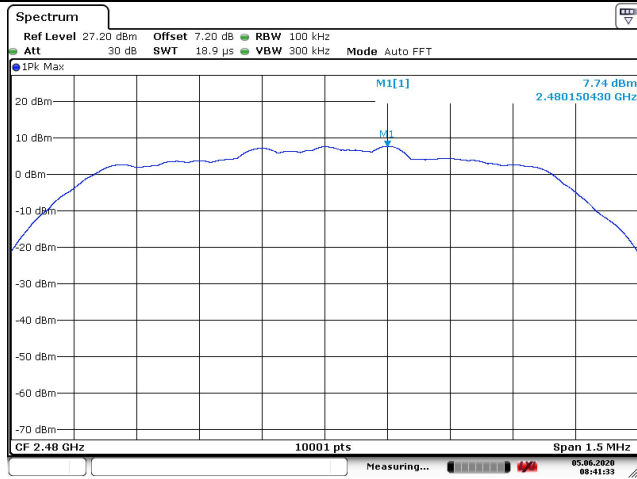


Date: 5 JUN.2020 08:40:50

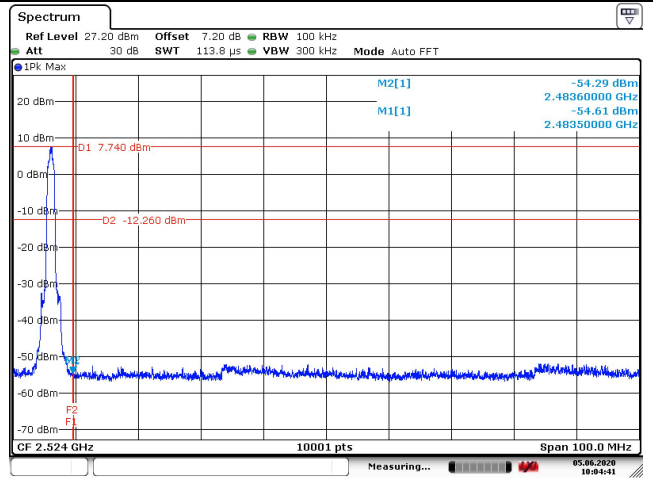


Date: 5 JUN.2020 10:03:41

CH78(Hopping off)

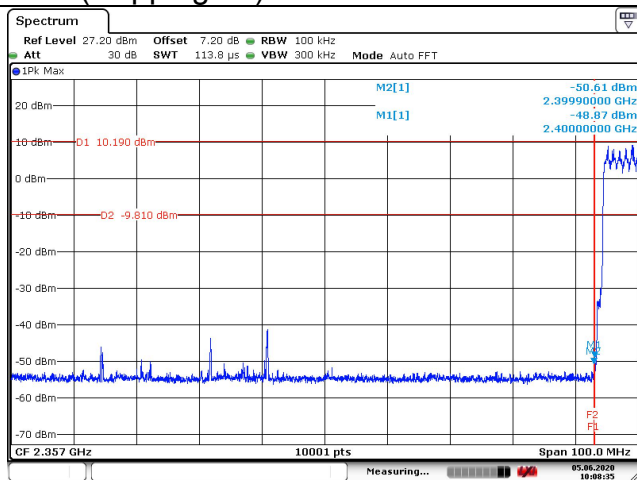


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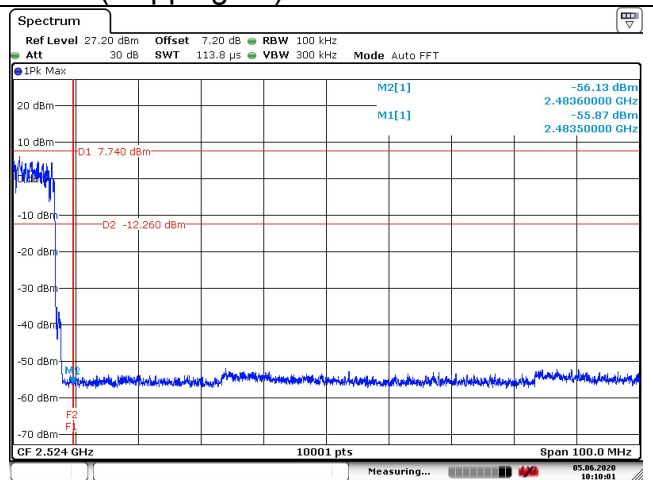
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CH0 (Hopping on)



Date: 5 JUN.2020 10:08:34

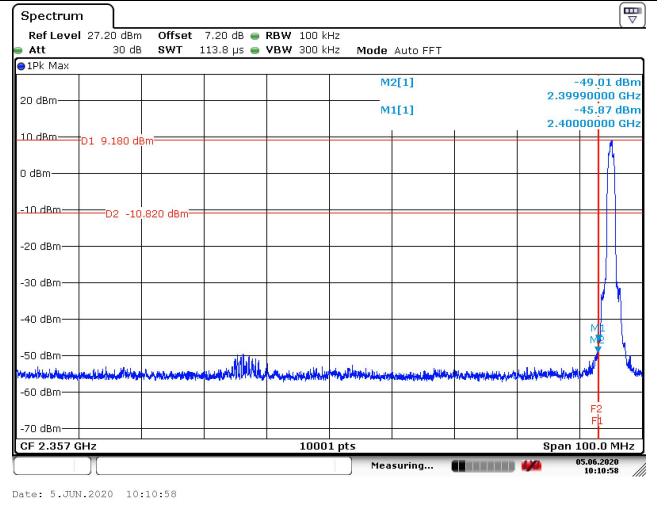
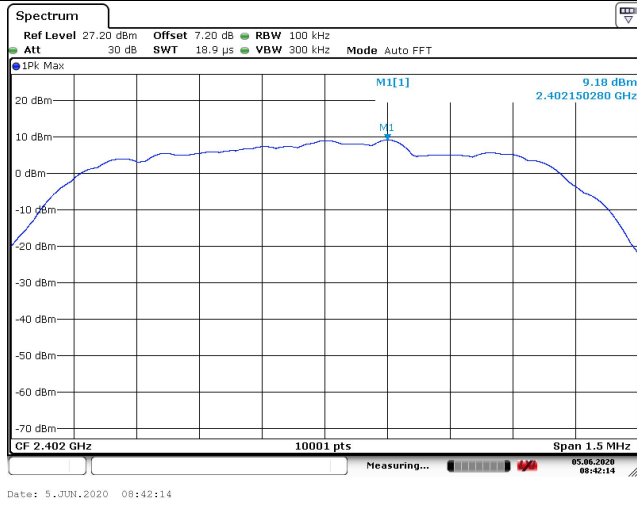
CH78 (Hopping on)



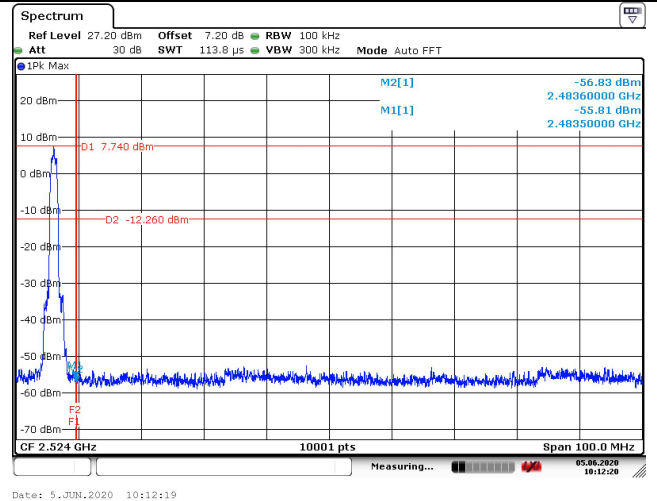
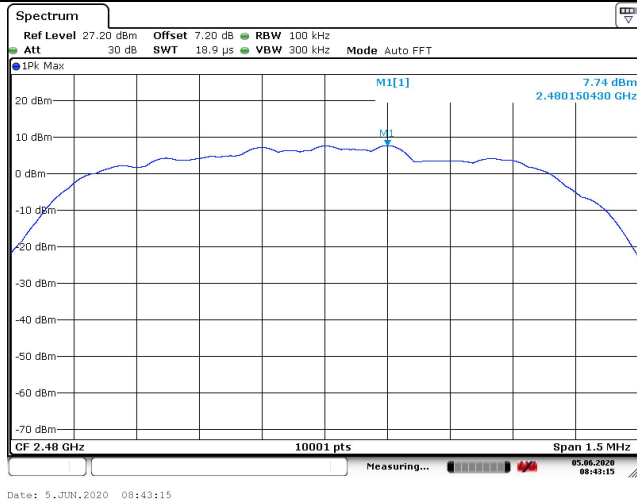
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8DPSK

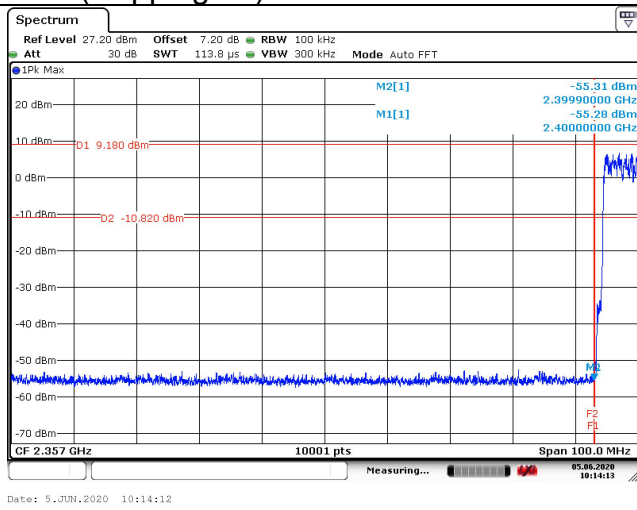
CH0 (Hopping off)



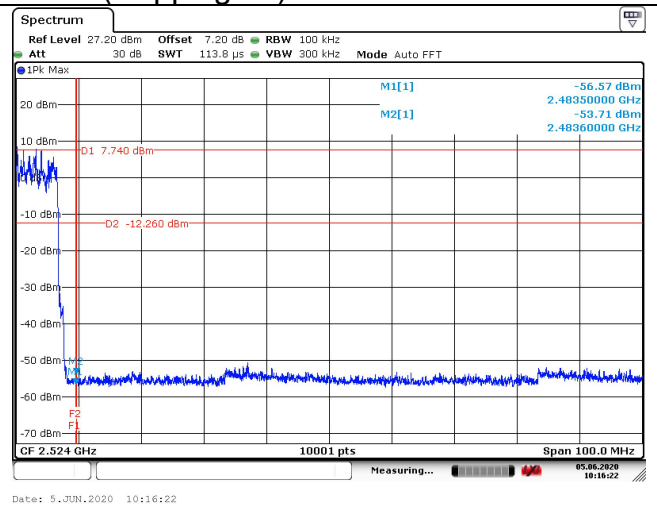
CH78(Hopping off)



CH0 (Hopping on)



CH78 (Hopping on)



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: (90.12 dBuV/m) = (56.12 dB μ V) + (8.90 dB) + (25.10 dB), 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 (dB)
1	2402	90.12	56.12	N/A	N/A	8.90	25.10
2	2390	38.24	4.24	-35.76	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 (dB)
1	2402	84.23	50.23	N/A	N/A	8.90	25.10
2	2390	32.20	-1.80	-41.80	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 (dB)
1	2402	84.23	50.23	N/A	N/A	8.90	25.10
2	2390	24.97	-9.03	-29.03	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 (dB)
1	2402	78.33	44.33	N/A	N/A	8.90	25.10
2	2390	24.30	-9.70	-29.70	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 (dB)
1	2480	90.71	56.71	N/A	N/A	8.90	25.10
2	2483.5	38.63	4.63	-35.37	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 (dB)
1	2480	84.69	50.69	N/A	N/A	8.90	25.10
2	2483.5	31.82	-2.18	-42.18	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 (dB)
1	2480	85.58	51.58	N/A	N/A	8.90	25.10
2	2483.5	25.34	-8.66	-28.66	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 (dB)
1	2480	82.47	48.47	N/A	N/A	8.90	25.10
2	2483.5	23.35	-10.65	-30.65	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 (dB)
1	2402	89.71	55.71	N/A	N/A	8.90	25.10
2	2390	37.26	3.26	-36.74	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 (dB)
1	2402	85.79	51.79	N/A	N/A	8.90	25.10
2	2390	32.87	-1.13	-41.13	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 (dB)
1	2402	84.28	50.28	N/A	N/A	8.90	25.10
2	2390	25.35	-8.65	-28.65	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	Reading Level	Over Limit	Limit (dBuV/m)	cable loss	antenna factor

		(dBuV/m)	(dBuV)	(dB)		(dB)	(dB)
1	2402	79.40	45.40	N/A	N/A	8.90	25.10
2	2390	23.31	-10.69	-30.69	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 (dB)
1	2480	88.28	54.28	N/A	N/A	8.90	25.10
2	2483.5	36.75	2.75	-37.25	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 (dB)
1	2480	84.35	50.35	N/A	N/A	8.90	25.10
2	2483.5	31.89	-2.11	-42.11	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 (dB)
1	2480	85.44	51.44	N/A	N/A	8.90	25.10
2	2483.5	24.54	-9.46	-29.46	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 (dB)
1	2480	79.38	45.38	N/A	N/A	8.90	25.10

2	2483.5	22.98	-11.02	-31.02	54.00	8.90	25.10
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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 (dB)
1	2402	88.70	54.70	N/A	N/A	8.90	25.10
2	2390	36.86	2.86	-37.14	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 (dB)
1	2402	84.72	50.72	N/A	N/A	8.90	25.10
2	2390	33.71	-0.29	-40.29	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 (dB)
1	2402	83.06	49.06	N/A	N/A	8.90	25.10
2	2390	24.95	-9.05	-29.05	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 (dB)
1	2402	79.49	45.49	N/A	N/A	8.90	25.10
2	2390	22.81	-11.19	-31.19	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 (dB)
1	2480	89.71	55.71	N/A	N/A	8.90	25.10
2	2483.5	37.45	3.45	-36.55	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 (dB)
1	2480	83.89	49.89	N/A	N/A	8.90	25.10
2	2483.5	33.43	-0.57	-40.57	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 (dB)
1	2480	81.10	47.10	N/A	N/A	8.90	25.10
2	2483.5	25.59	-8.41	-28.41	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 (dB)
1	2480	78.99	44.99	N/A	N/A	8.90	25.10
2	2483.5	23.07	-10.93	-30.93	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:

Result= P_{mea} + A_{Rpl}

Sample calculation: (31.03 dBμV/m) = (53.13 dBμV) + (-27.0 dB/m), the corresponding frequency is 71.935MHz.

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)
71.935	31.03	-22.1	53.13	Vertical	40.00
72.4175	30.74	-22.2	52.94	Vertical	40.00
74.144	30.59	-22.6	53.19	Vertical	40.00
74.4655	30.58	-22.7	53.28	Vertical	40.00
74.6545	30.51	-22.7	53.21	Vertical	40.00
75.513	29.92	-22.9	52.82	Vertical	40.00

For $\pi/4$ DQPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
72.0125	30.59	-22.1	52.69	Vertical	40.00
72.129	30.56	-22.1	52.66	Vertical	40.00
72.1555	30.88	-22.1	52.98	Vertical	40.00
72.477	30.52	-22.2	52.72	Vertical	40.00
74.514	30.04	-22.7	52.74	Vertical	40.00
75.2075	30.14	-22.8	52.94	Vertical	40.00

For 8DPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
70.8595	29.76	-21.8	51.56	Vertical	40.00
71.1625	29.24	-21.9	51.14	Vertical	40.00
71.3335	29.83	-21.9	51.73	Vertical	40.00
71.747	29.45	-22	51.45	Vertical	40.00
72.164	29.63	-22.1	51.73	Vertical	40.00
72.192	29.55	-22.1	51.65	Vertical	40.00

For GFSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
70.777	28.27	-21.8	50.07	Vertical	40.00
71.0135	25.59	-21.9	47.49	Vertical	40.00
71.251	28.43	-21.9	50.33	Vertical	40.00
71.5785	25.57	-22	47.57	Vertical	40.00
72.6175	28.52	-22.2	50.72	Vertical	40.00
74.6145	28.64	-22.7	51.34	Vertical	40.00

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

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
71.833	21.76	-22	43.76	Vertical	40.00
72.186	22.79	-22.1	44.89	Vertical	40.00
72.335	21.5	-22.2	43.7	Vertical	40.00
72.6225	22.84	-22.2	45.04	Vertical	40.00
75.661	19.2	-22.9	42.1	Vertical	40.00
75.7665	18.76	-23	41.76	Vertical	40.00

For 8DPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
124.6545	33.27	-20.9	54.17	Vertical	43.50
126.8005	33.35	-21.1	54.45	Vertical	43.50
127.0575	33.36	-21.1	54.46	Vertical	43.50
127.123	33.43	-21.1	54.53	Vertical	43.50
127.3085	33.42	-21.1	54.52	Vertical	43.50
127.4625	33.81	-21.1	54.91	Vertical	43.50

For GFSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
127.6275	33.57	-21.1	54.67	Vertical	43.50
127.8045	33.63	-21.1	54.73	Vertical	43.50
127.984	33.66	-21.1	54.76	Vertical	43.50
128.1015	33.6	-21.2	54.8	Vertical	43.50
128.1465	33.64	-21.2	54.84	Vertical	43.50
128.64	33.55	-21.2	54.75	Vertical	43.50

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

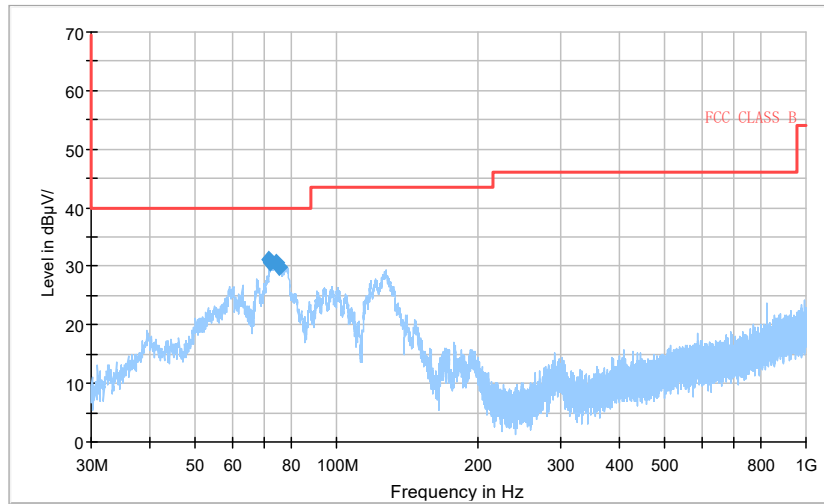
Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
127.2055	33.78	-21.1	54.88	Vertical	43.50
127.311	33.57	-21.1	54.67	Vertical	43.50
127.6735	33.64	-21.1	54.74	Vertical	43.50
128.446	33.8	-21.2	55	Vertical	43.50
128.475	33.64	-21.2	54.84	Vertical	43.50
128.532	33.56	-21.2	54.76	Vertical	43.50

For 8DPSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
72.911	30.91	-22.3	53.21	Vertical	40.00
125.645	33.61	-21	54.61	Vertical	43.50
125.6815	33.18	-21	54.18	Vertical	43.50
125.696	33.4	-21	54.4	Vertical	43.50
125.827	33.45	-21	54.45	Vertical	43.50
126.0125	33.04	-21	54.04	Vertical	43.50

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

Full Spectrum

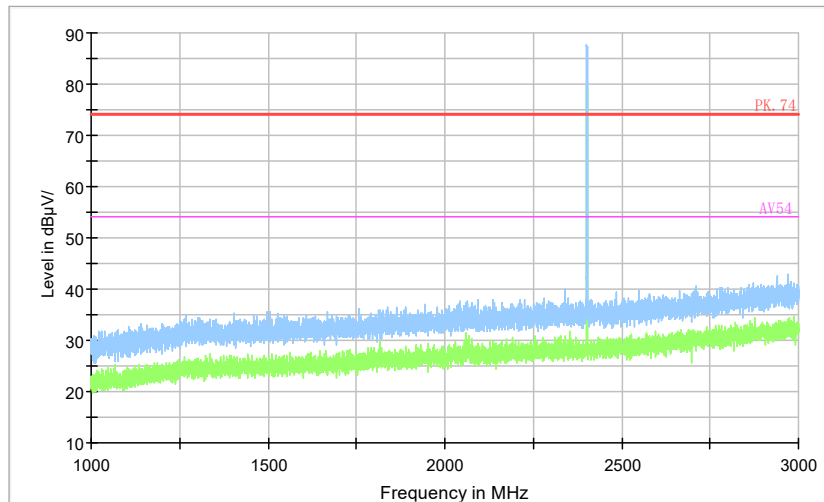


— Preview Result 1-PK+ — FCC CLASS B ◆ Final_Result QPK

Comment

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

Full Spectrum

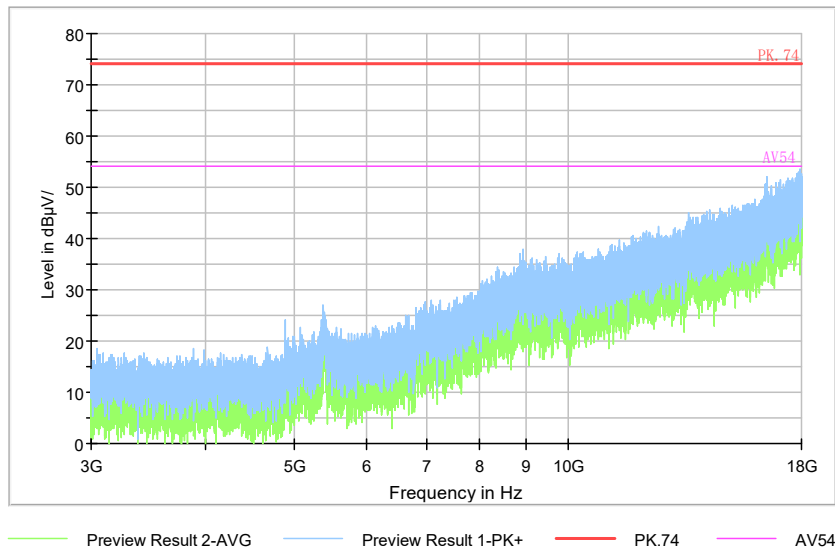


— Preview Result 2-AVG — Preview Result 1-PK+ — PK.74 — AV54

Comment

Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK

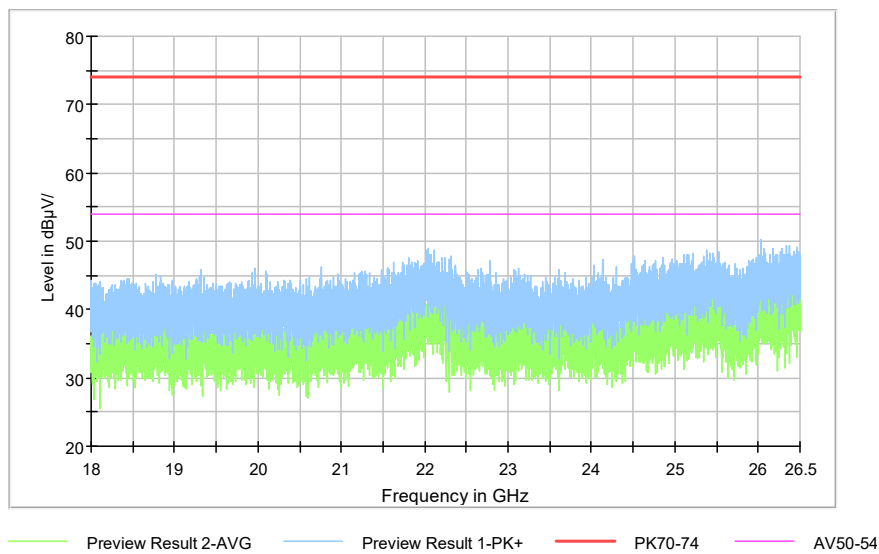
Full Spectrum



Comment

Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

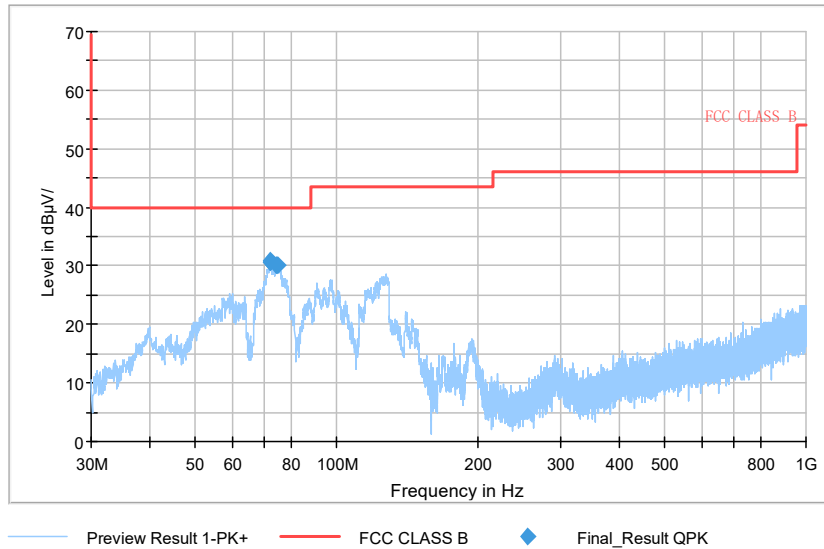
Full Spectrum



Comment

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

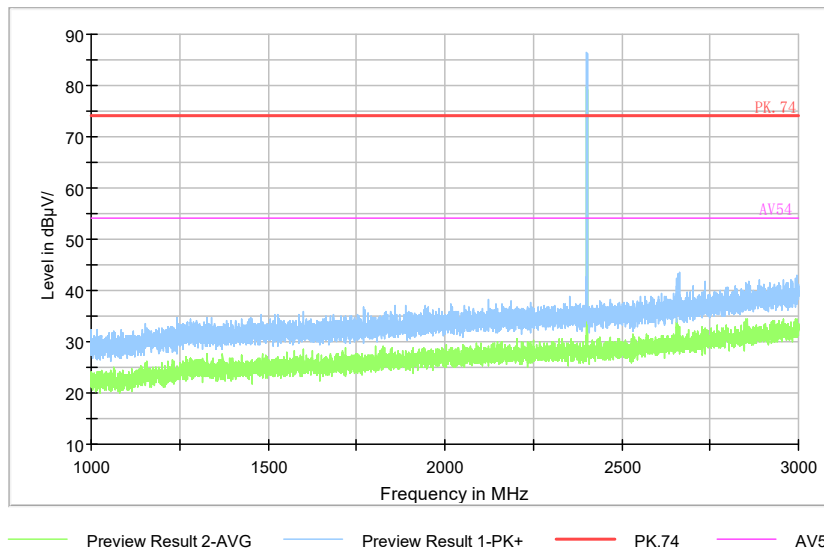
Full Spectrum



Comment

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

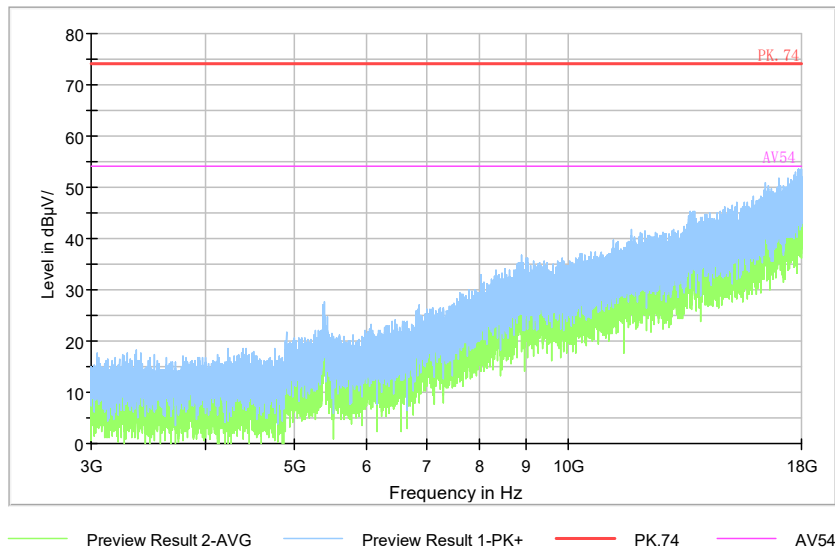
Full Spectrum



Comment

Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

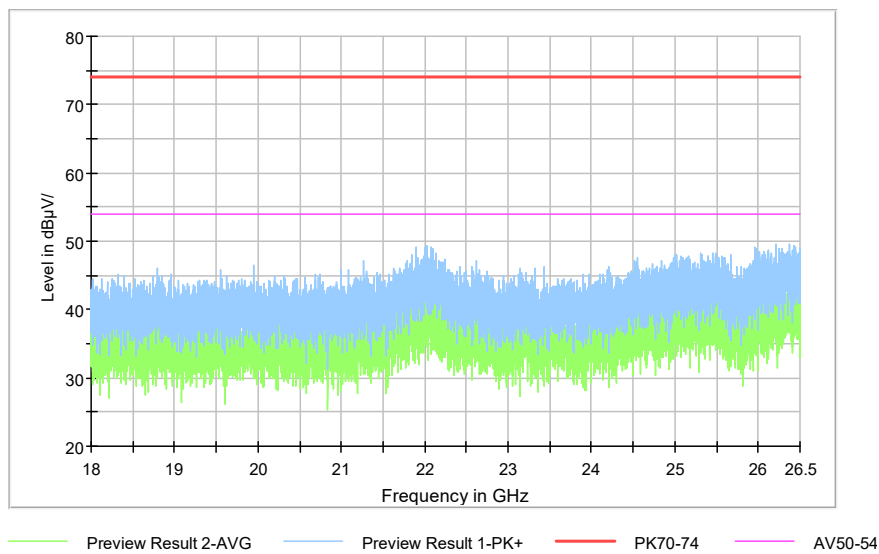
Full Spectrum



Comment

Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

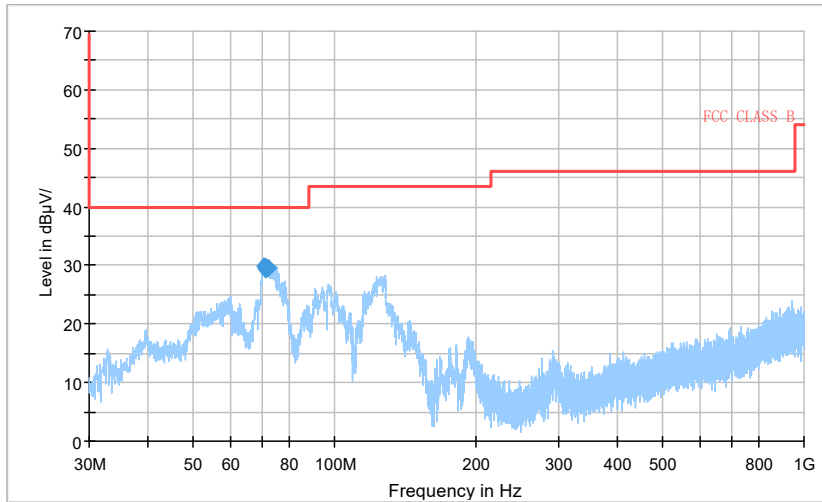
Full Spectrum



Comment

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

Full Spectrum

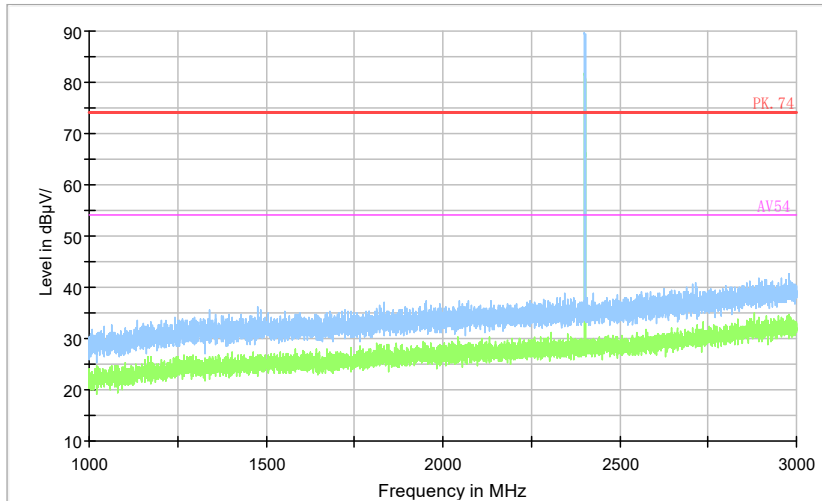


— Preview Result 1-PK+ — FCC CLASS B ◆ Final_Result QPK

Comment

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

Full Spectrum

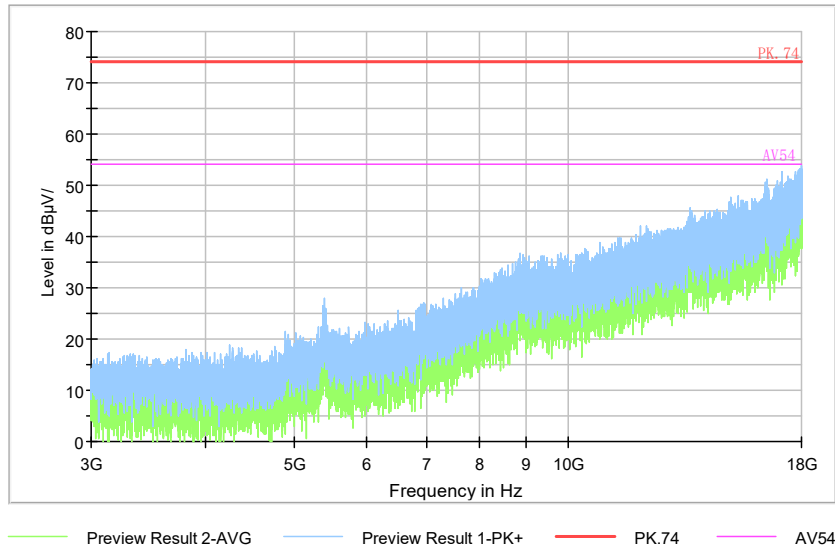


— Preview Result 2-AVG — Preview Result 1-PK+ — PK.74 — AV54

Comment

Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

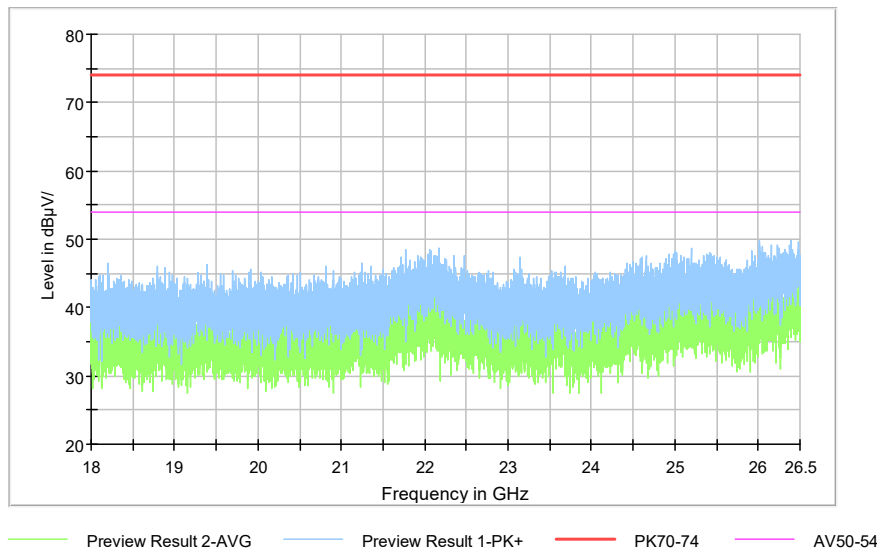
Full Spectrum



Comment

Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

Full Spectrum



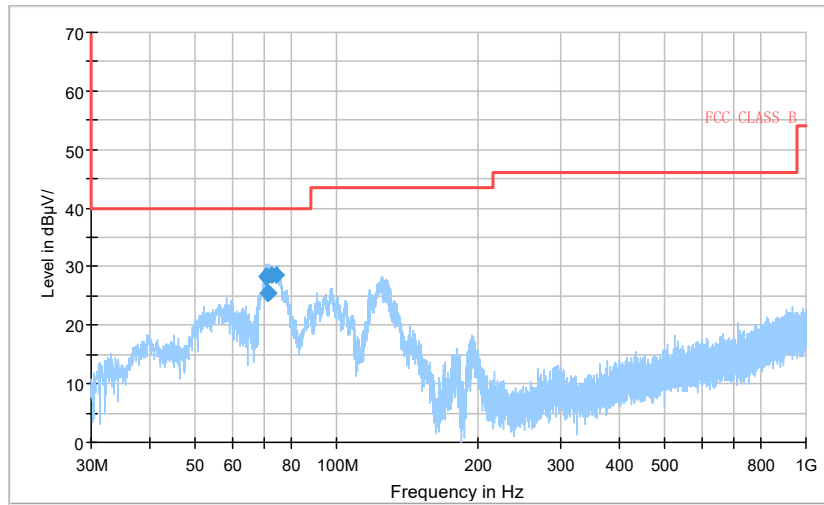
Comment

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

Carrier frequency (MHz): 2441

Channel No.:39

Full Spectrum

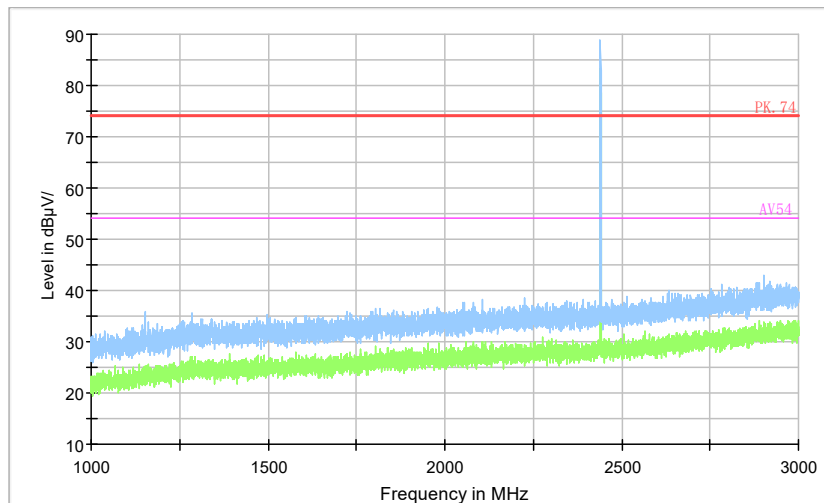


— Preview Result 1-PK+ — FCC CLASS B ◆ Final_Result QPK

Comment

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

Full Spectrum



— Preview Result 2-AVG — Preview Result 1-PK+ — PK.74 — AV54

Comment

Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK