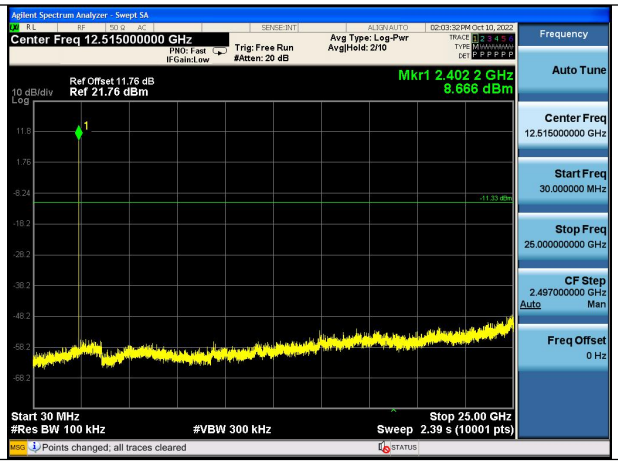
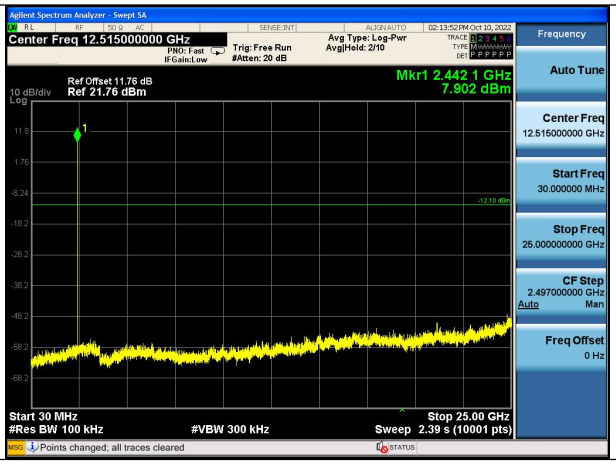
6 Conducted Out of band emission measurement

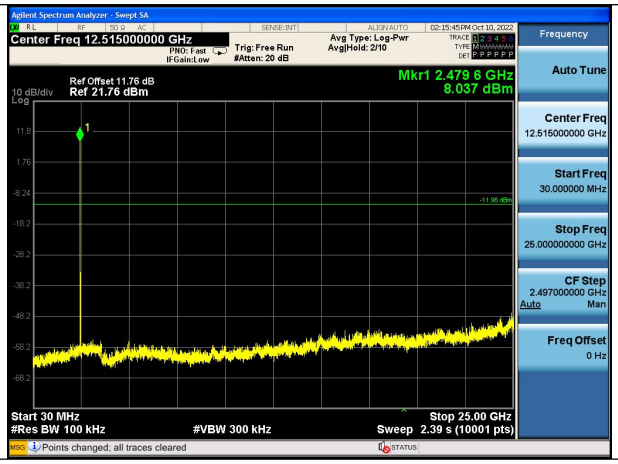
Test Mode: GFSK



CH0(Hopping off)

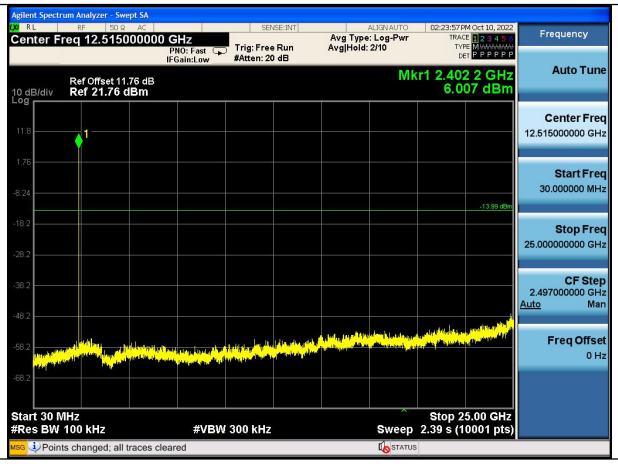


CH39(Hopping off)

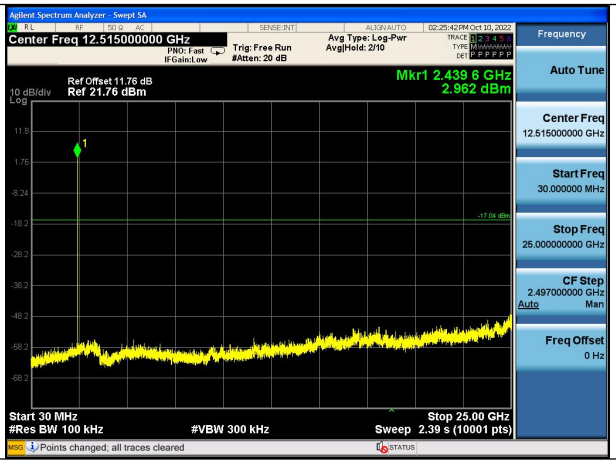


CH78(Hopping off)

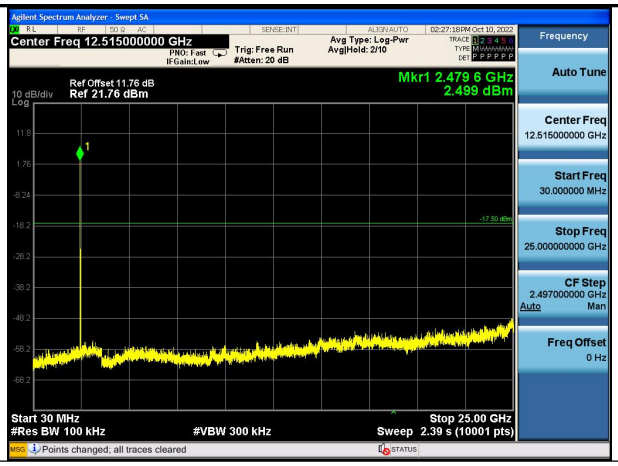
Test Mode: π/4DQPSK



CH0(Hopping off)

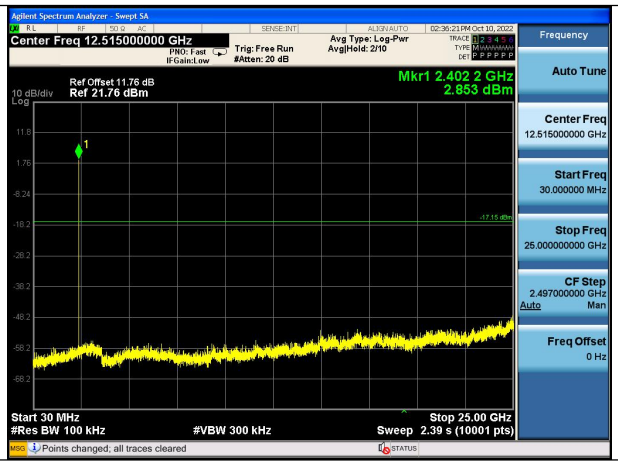


CH39(Hopping off)

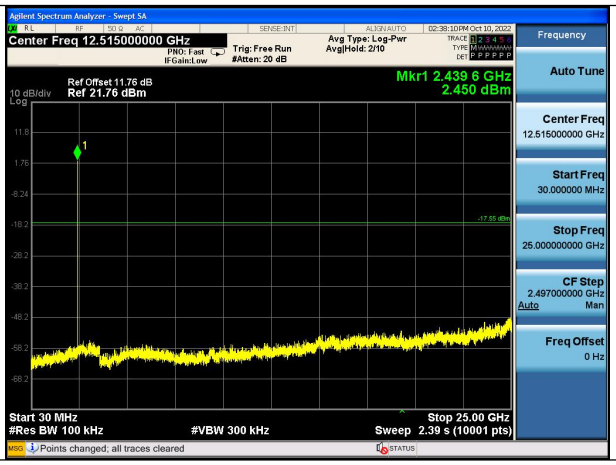


CH78(Hopping off)

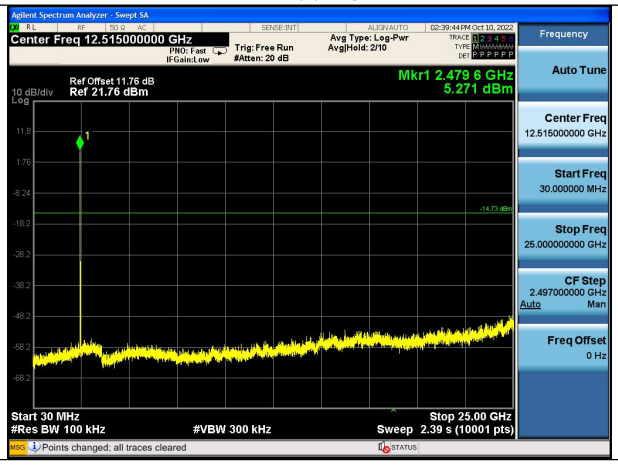
Test Mode: 8DPSK



CH0(Hopping off)



CH39(Hopping off)



CH78(Hopping off)

7 Band Edge measurement

Test Mode: GFSK

CH0(Hopping off)

CH0(Hopping on)

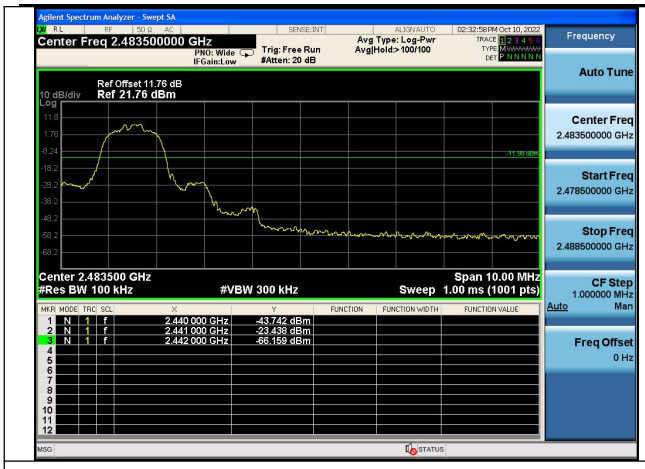
CH78(Hopping off)

CH78(Hopping on)

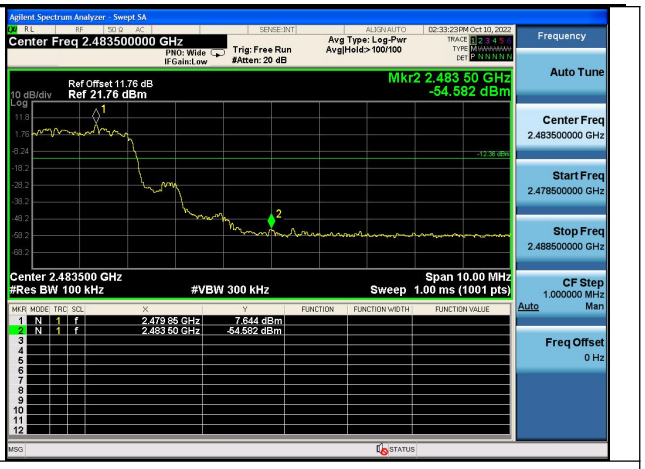
Test Mode: π/4DQPSK

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

Worst case(BT GFSK-DH5)

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: (89.30 dBuV/m) = (55.30 dBμV) + (8.90 dB) + (25.10 dB), 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）

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/m)
1	2402	94.78	60.78	N/A	N/A	8.90	25.10
2	2390	43.11	9.11	-30.89	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/m)
1	2402	92.43	58.43	N/A	N/A	8.90	25.10
2	2390	41.42	7.42	-32.58	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/m)
1	2402	92.85	58.85	N/A	N/A	8.90	25.10
2	2390	33.30	-0.70	-20.70	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/m)
1	2402	90.50	56.50	N/A	N/A	8.90	25.10
2	2390	31.37	-2.63	-22.63	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/m)
1	2480	89.30	55.30	N/A	N/A	8.90	25.10
2	2483.5	42.19	8.19	-31.81	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/m)
1	2480	86.58	52.58	N/A	N/A	8.90	25.10
2	2483.5	41.64	7.64	-32.36	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/m)
1	2480	87.15	53.15	N/A	N/A	8.90	25.10
2	2483.5	34.02	0.02	-19.98	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/m)
1	2480	84.44	50.44	N/A	N/A	8.90	25.10
2	2483.5	33.54	-0.46	-20.46	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: (30.73 dBμV/m) = (54.53 dBμV) + (-23.80 dB/m), the corresponding frequency is 30.097MHz.

The worst case attitude：The mobile lay down.

Spurious Radiated Emissions below 30MHz:

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

For GFSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
50.224500	22.44	-17.5	39.94	Vertical	40.00	17.56
96.542000	27.07	-19.8	46.87	Vertical	43.50	16.43
98.336500	28.95	-19.4	48.35	Vertical	43.50	14.55
195.724500	33.53	-19.4	52.93	Vertical	43.50	9.97
530.326000	16.44	-10.2	26.64	Vertical	46.00	29.56
937.532000	23.28	-2.8	26.08	Vertical	46.00	22.72

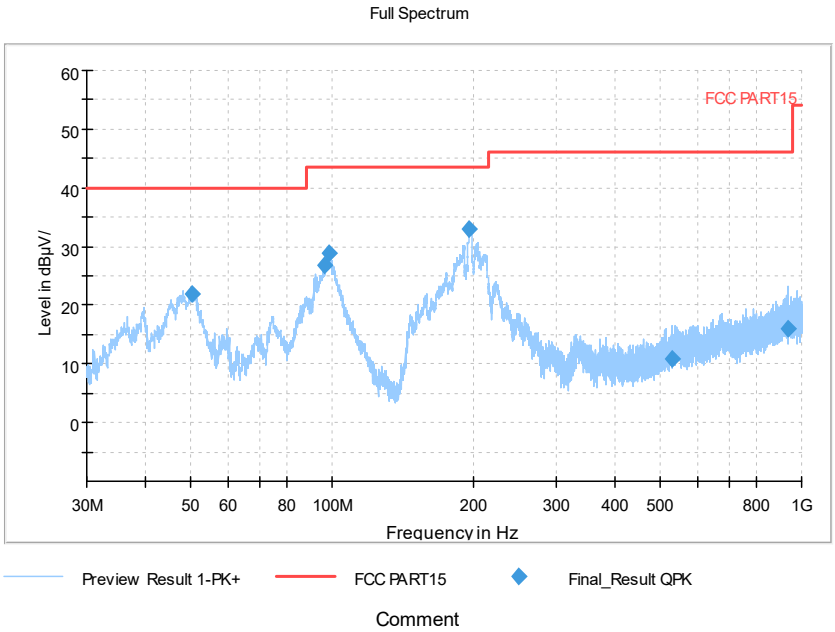
For GFSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
47.799500	23.03	-17.7	40.73	Vertical	40.00	16.97
96.396500	26.84	-19.9	46.74	Vertical	43.50	16.66
98.191000	29.31	-19.5	48.81	Vertical	43.50	14.19
195.288000	31.46	-19.4	50.86	Vertical	43.50	12.04
541.578000	16.24	-9.9	26.14	Vertical	46.00	29.76
927.541000	21.90	-2.9	24.80	Vertical	46.00	24.10

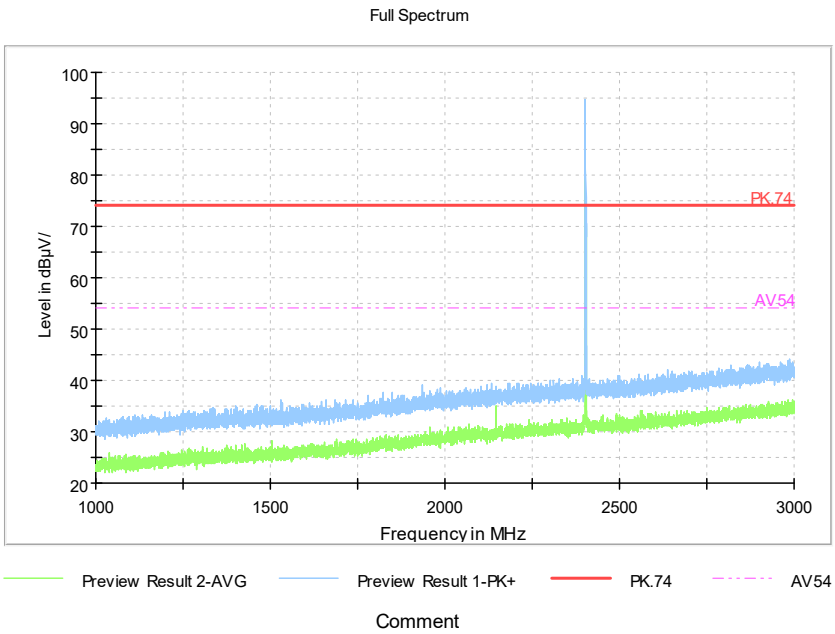
For GFSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
47.751000	23.23	-17.7	40.93	Vertical	40.00	16.77
96.542000	26.91	-19.8	46.71	Vertical	43.50	16.59
99.306500	28.73	-19.2	47.93	Vertical	43.50	14.77
198.101000	32.51	-19.3	51.81	Vertical	43.50	10.99
534.254500	16.58	-10.0	26.58	Vertical	46.00	29.42
939.326500	21.63	-2.8	24.43	Vertical	46.00	24.37

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

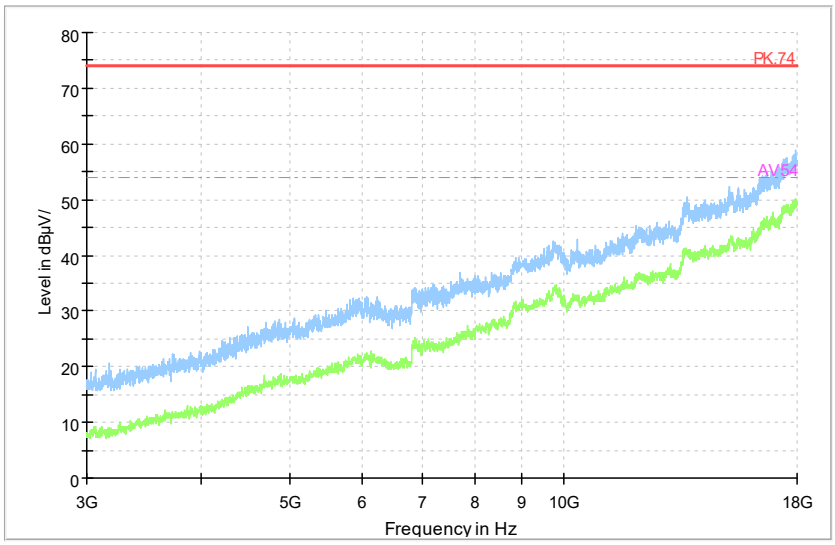


Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



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

Full Spectrum



Comment

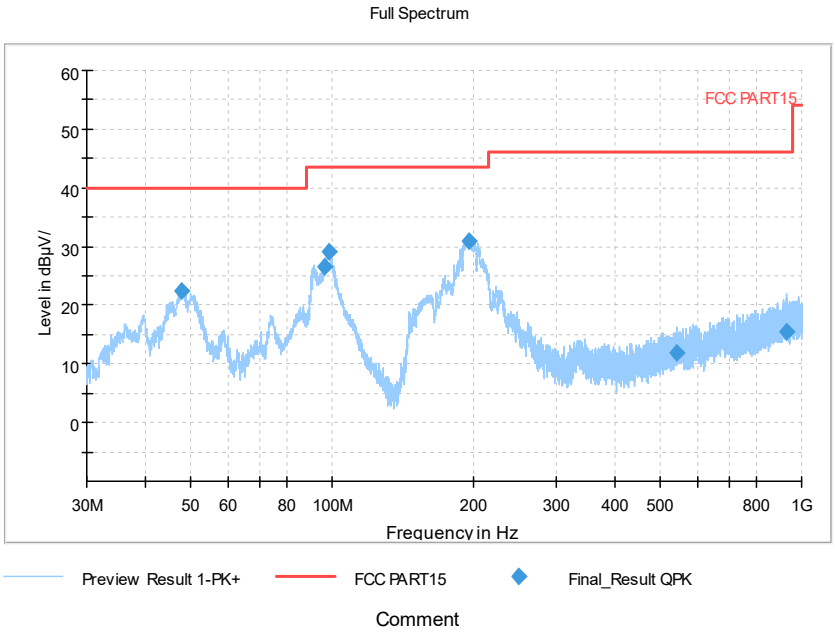
Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

Full Spectrum

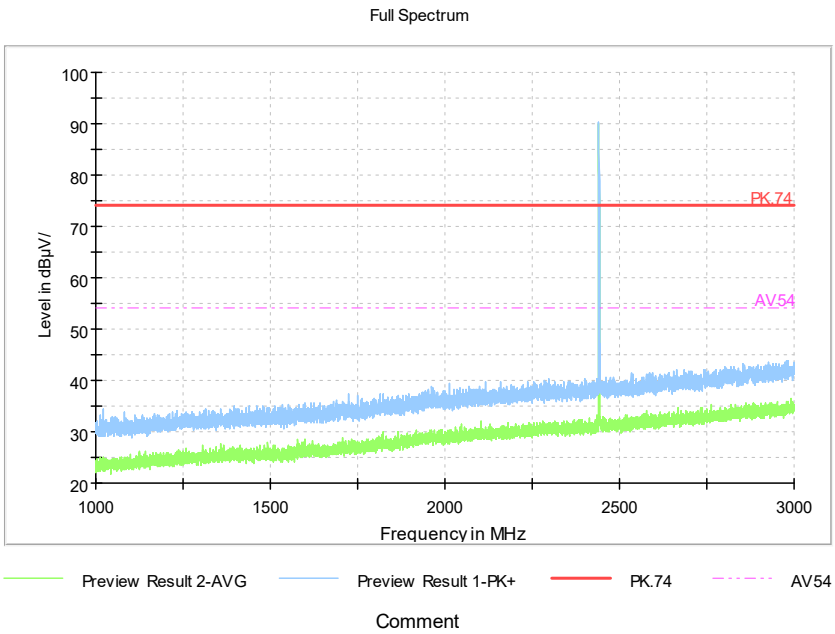
Comment

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

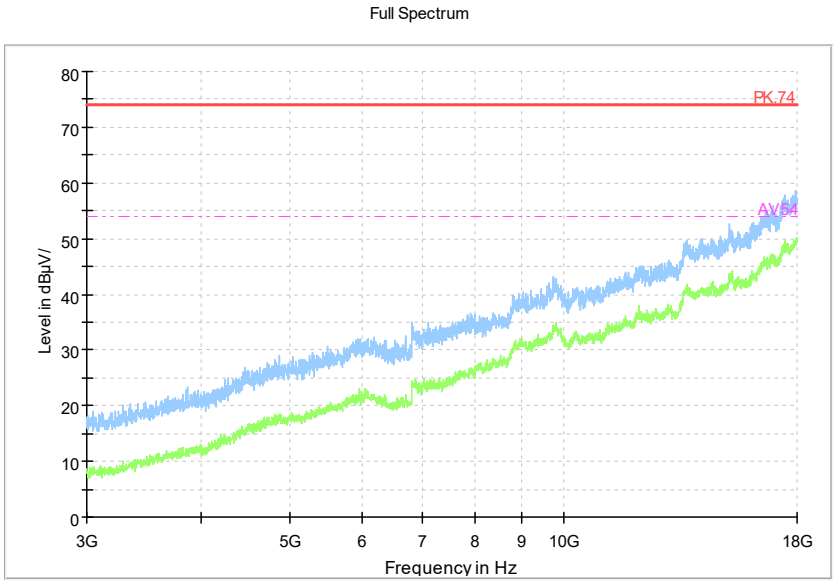
Carrier frequency (MHz): 2441
Channel No.:39



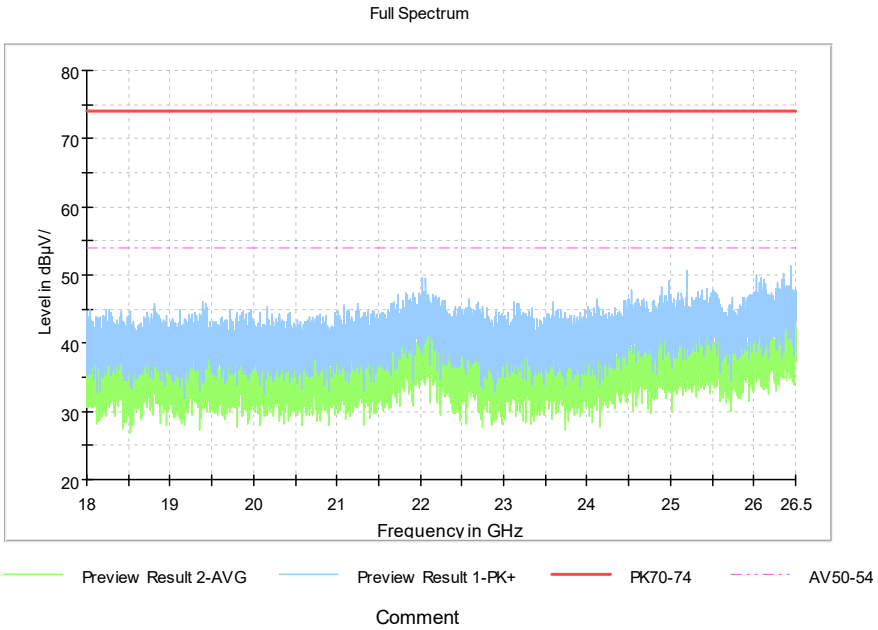
Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



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

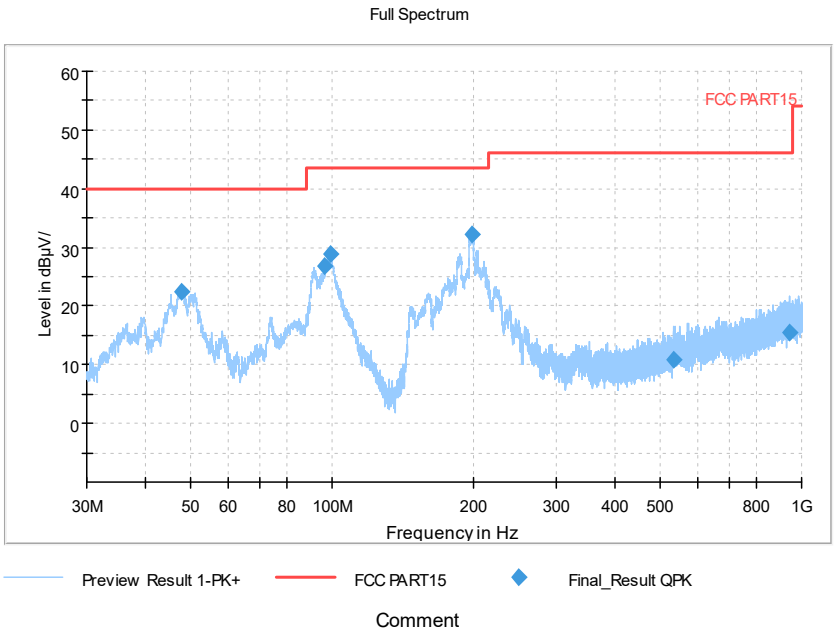


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

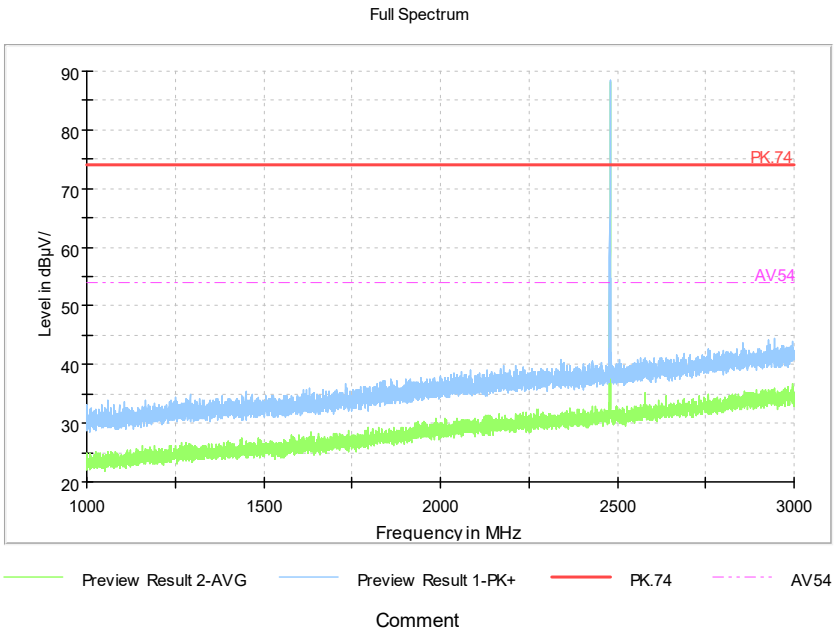


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK

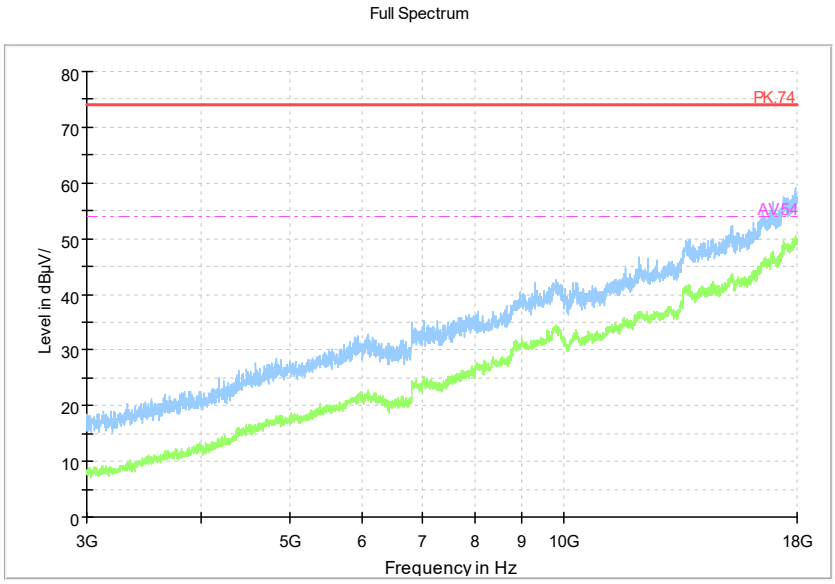
Carrier frequency (MHz): 2480
Channel No.:78



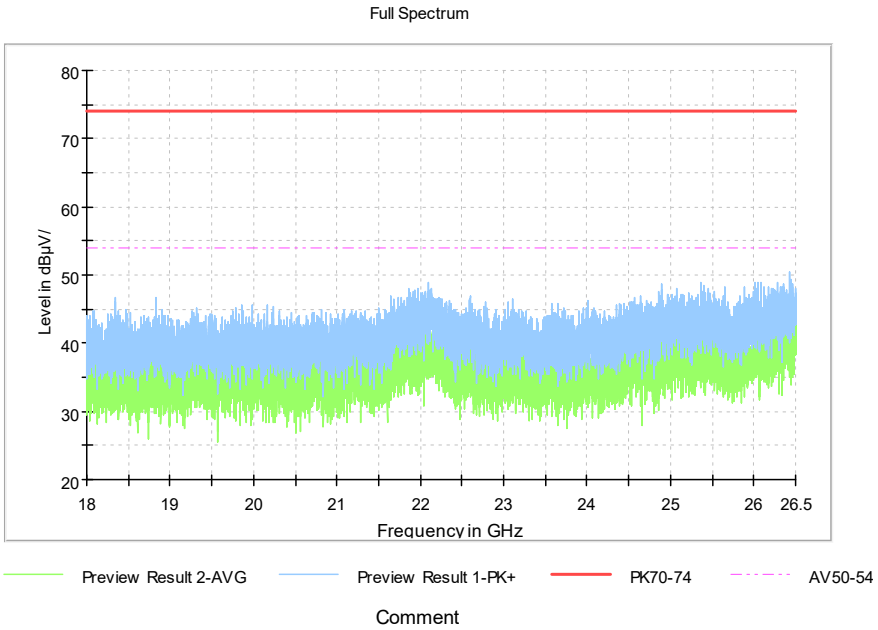
Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



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

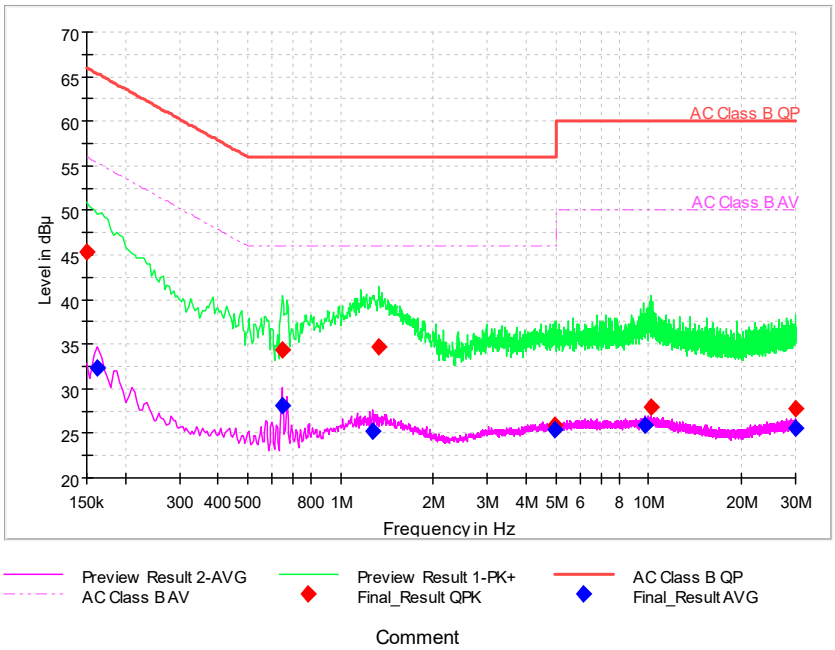


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



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

AC Power line Conducted Emission



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBµV)	Pmea Average (dBµV)
0.150000	45.39	---	66.00	20.61	L1	29.7	15.69	---
0.162793	---	32.34	55.32	22.98	N	29.7	---	2.64
0.644657	---	28.12	46.00	17.88	N	29.7	---	-1.58
0.648921	34.36	---	56.00	21.64	L1	29.7	4.66	---
1.271507	---	25.16	46.00	20.84	N	29.8	---	-4.64
1.331207	34.69	---	56.00	21.31	N	29.8	4.89	---
4.951586	---	25.35	46.00	20.65	L1	29.9	---	-4.55
4.985700	25.99	---	56.00	30.01	L1	29.9	-3.91	---
9.697736	---	25.92	50.00	24.08	N	29.9	---	-3.98
10.149750	27.98	---	60.00	32.02	N	29.9	-1.92	---
29.833693	---	25.60	50.00	24.40	L1	30.0	---	-4.40
30.000000	27.71	---	60.00	32.29	N	30.0	-2.29	---

---End of Test Report---