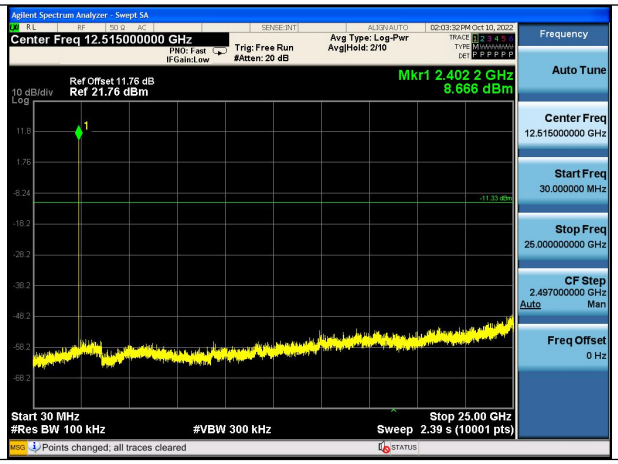
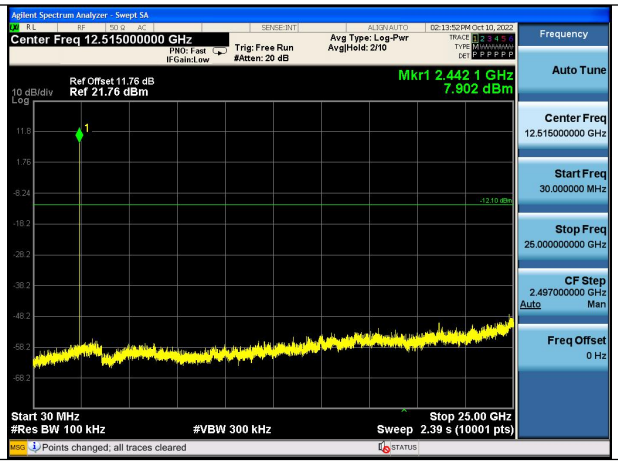
6 Conducted Out of band emission measurement

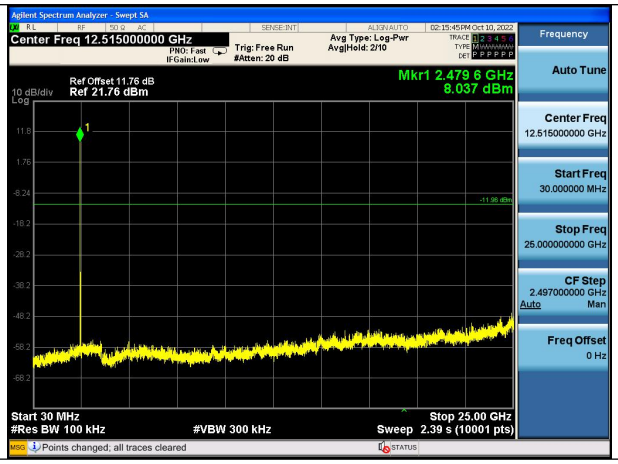
Test Mode: GFSK



CH0(Hopping off)

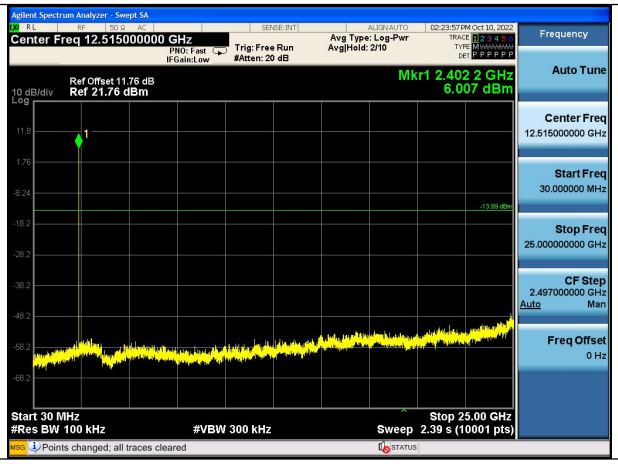


CH39(Hopping off)

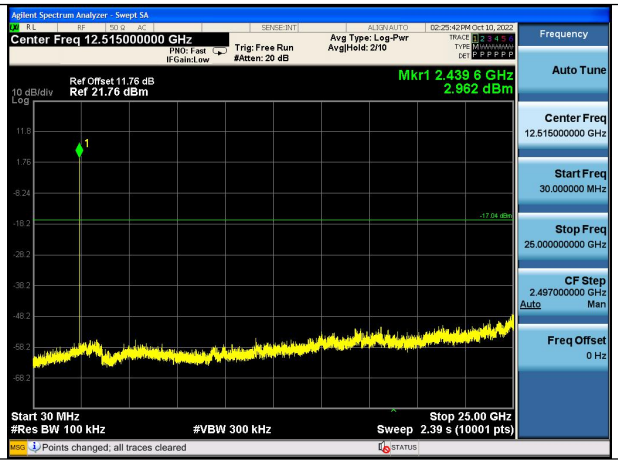


CH78(Hopping off)

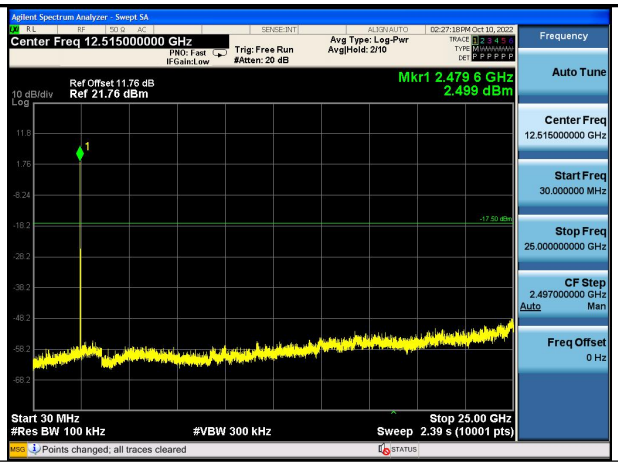
Test Mode: π/4DQPSK



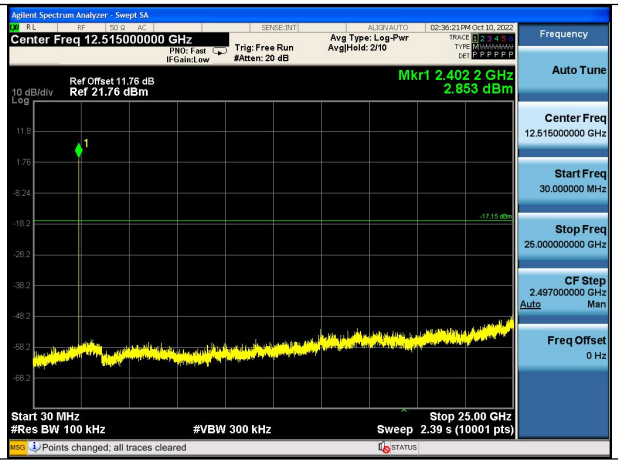
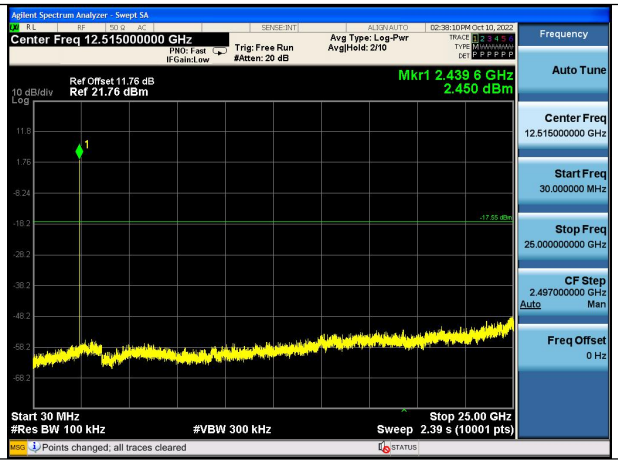
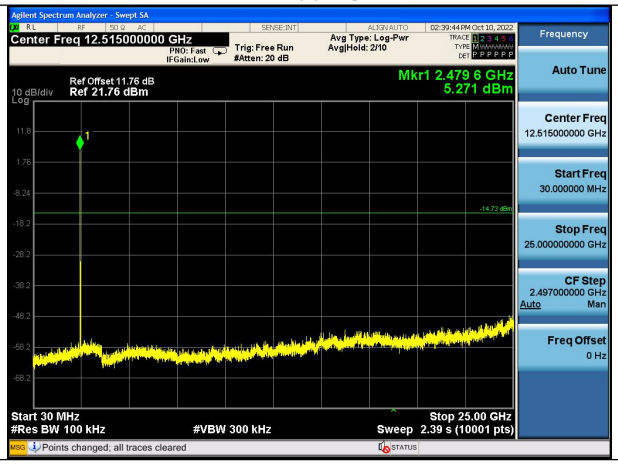
CH0(Hopping off)



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)

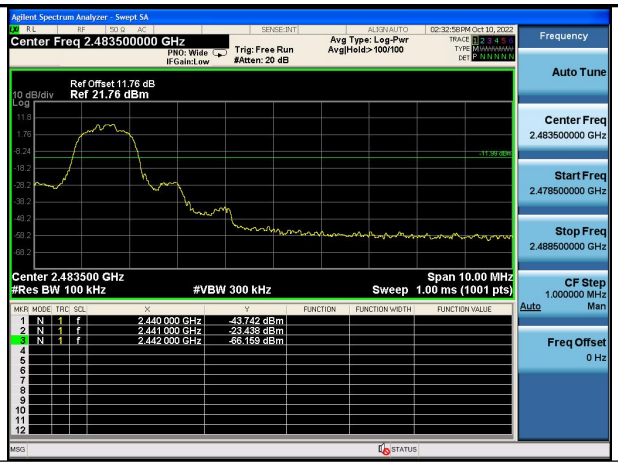
CH78(Hopping off)

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

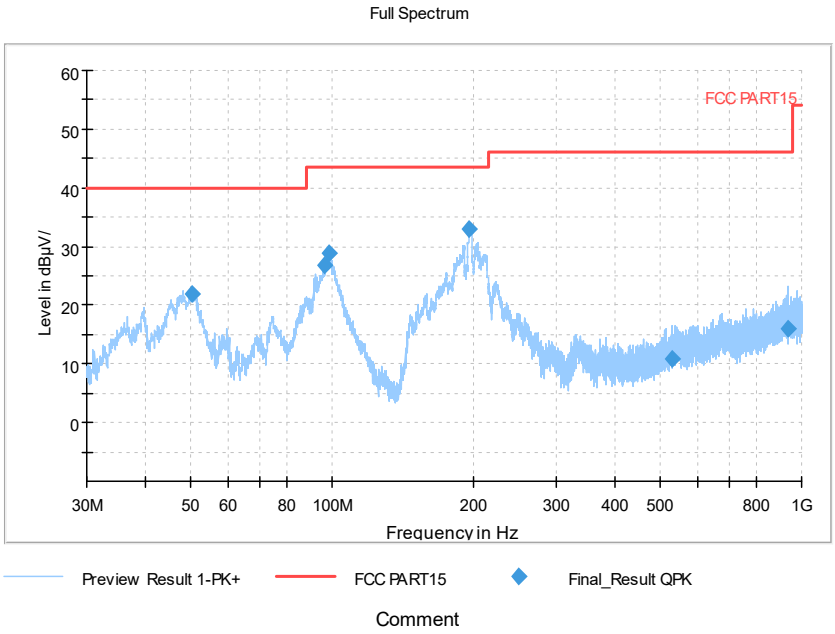
For GFSK
Channel No.:39

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

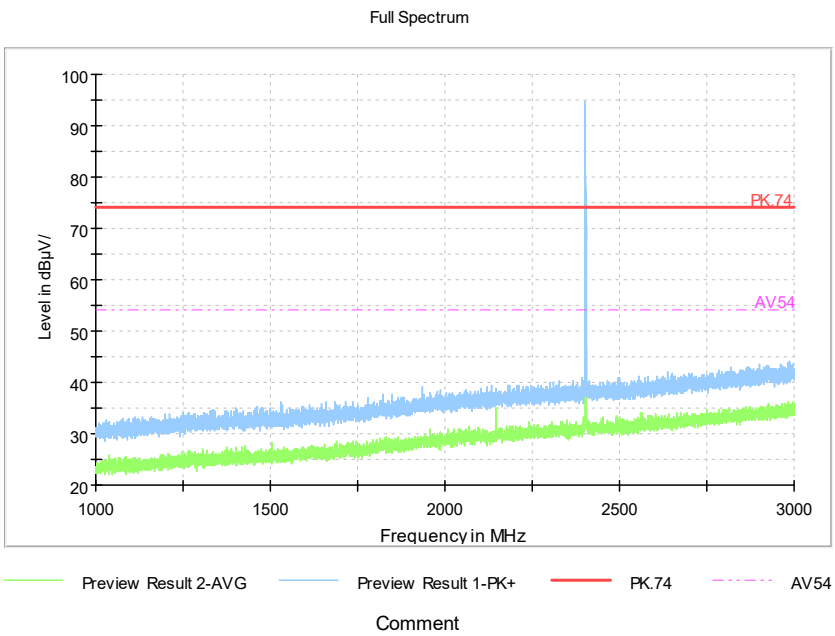
For GFSK
Channel No.:78

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

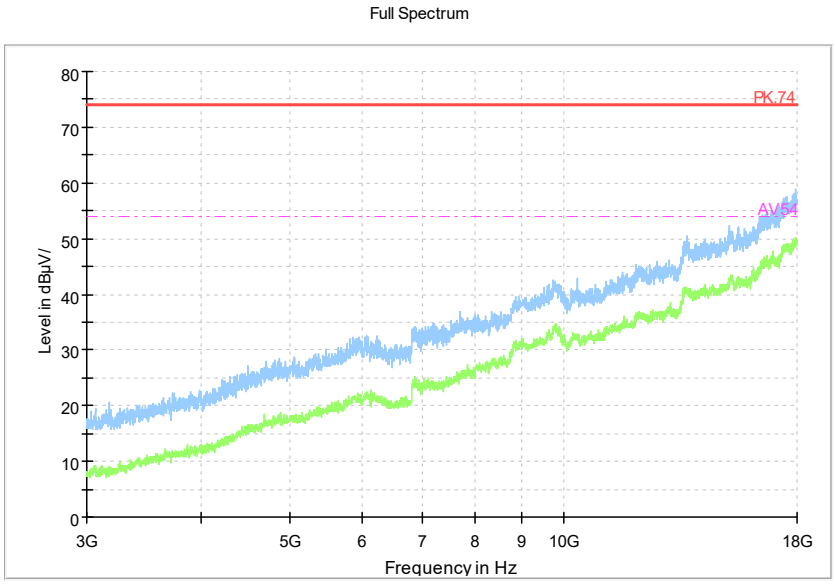
Carrier frequency (MHz): 2402
Channel No.:0



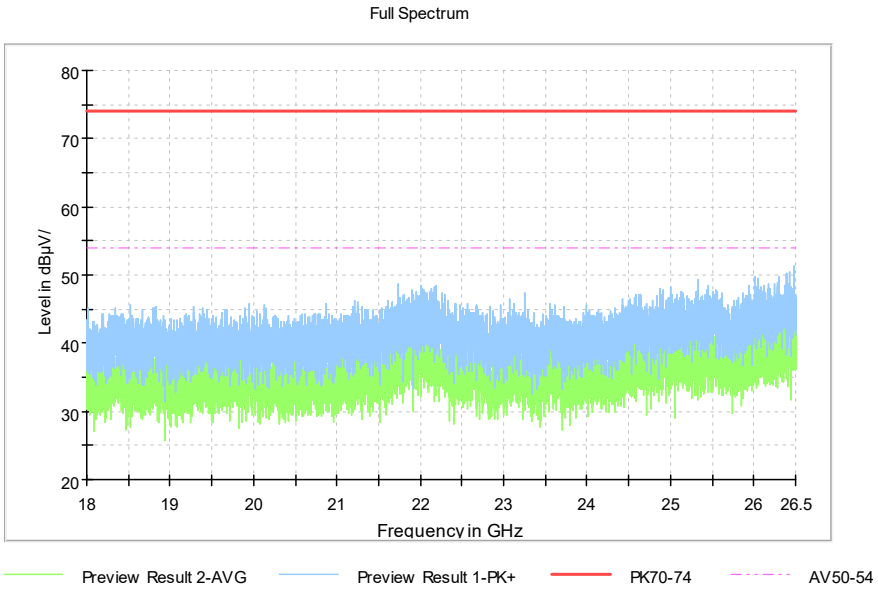
Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



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

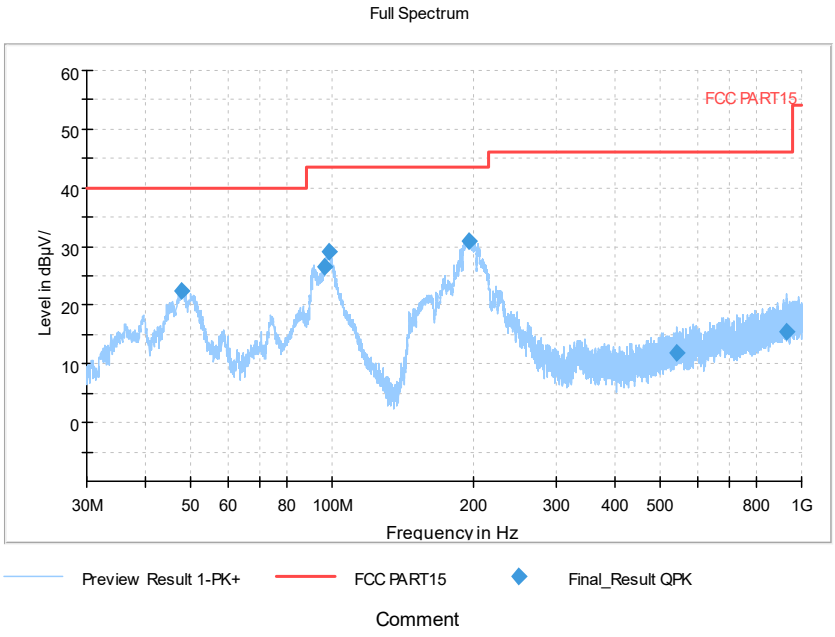


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

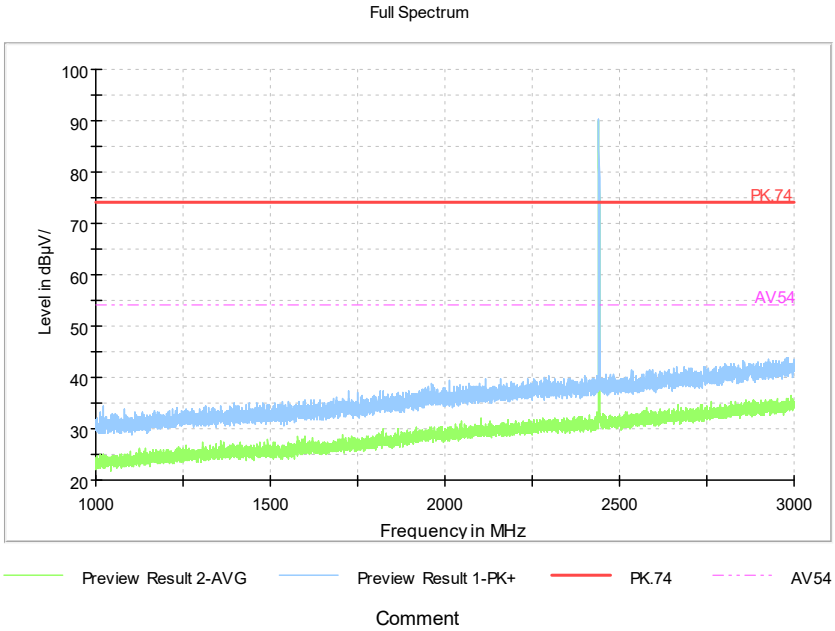


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK

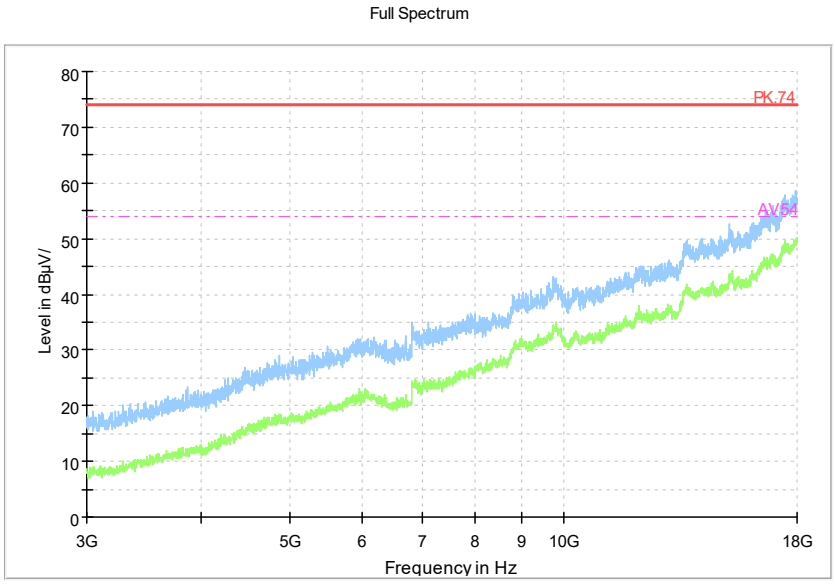
Carrier frequency (MHz): 2441
Channel No.:39



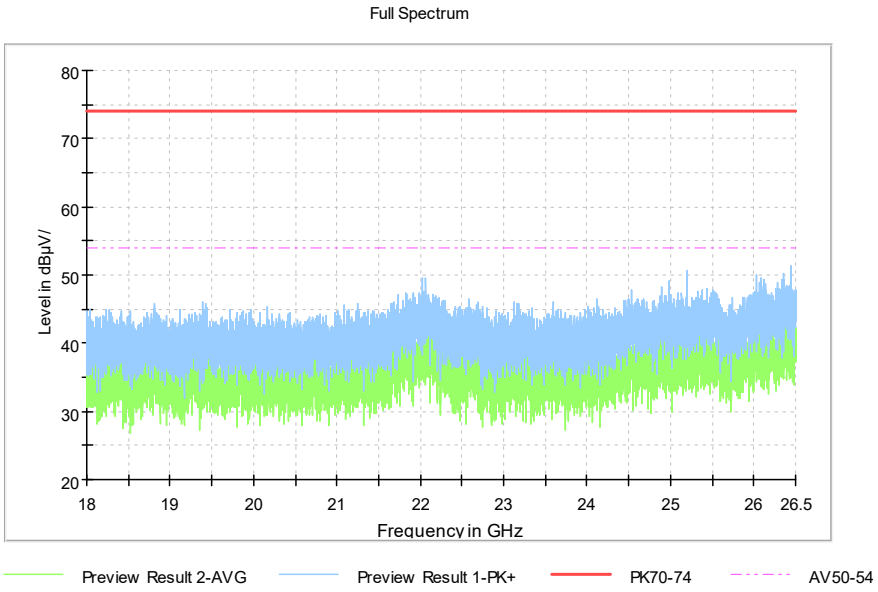
Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



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

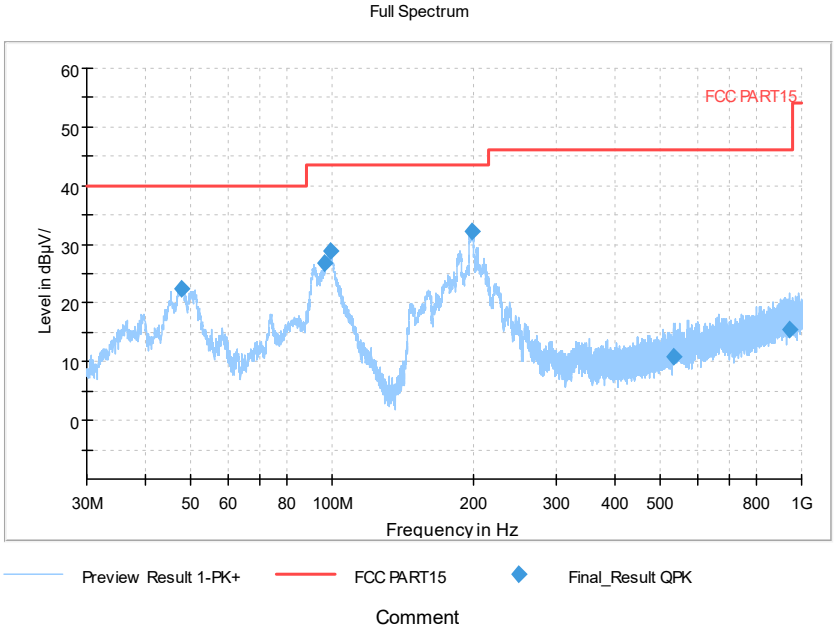


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

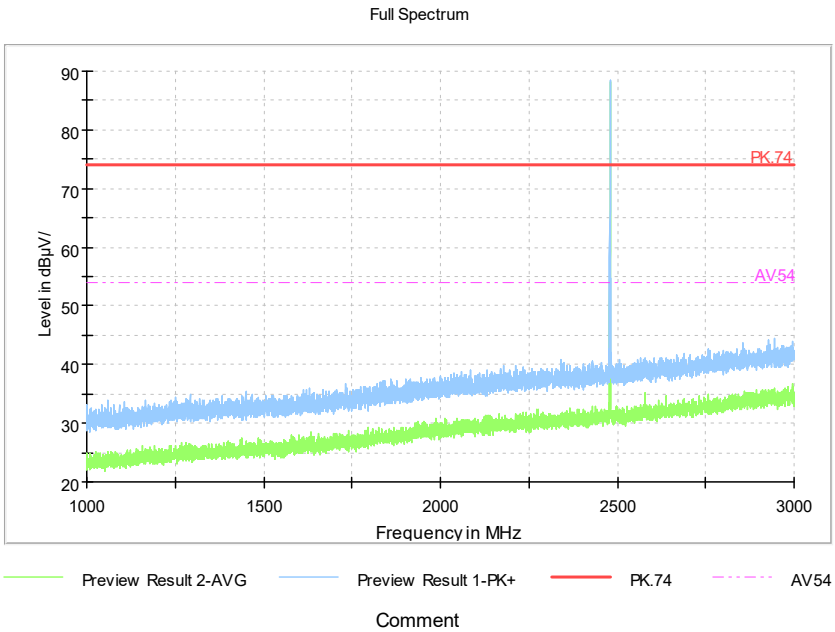


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK

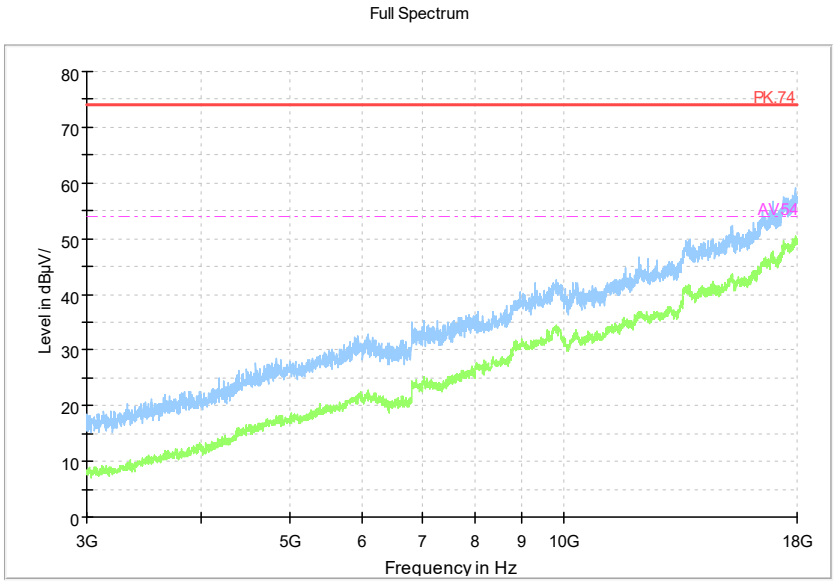
Carrier frequency (MHz): 2480
Channel No.:78



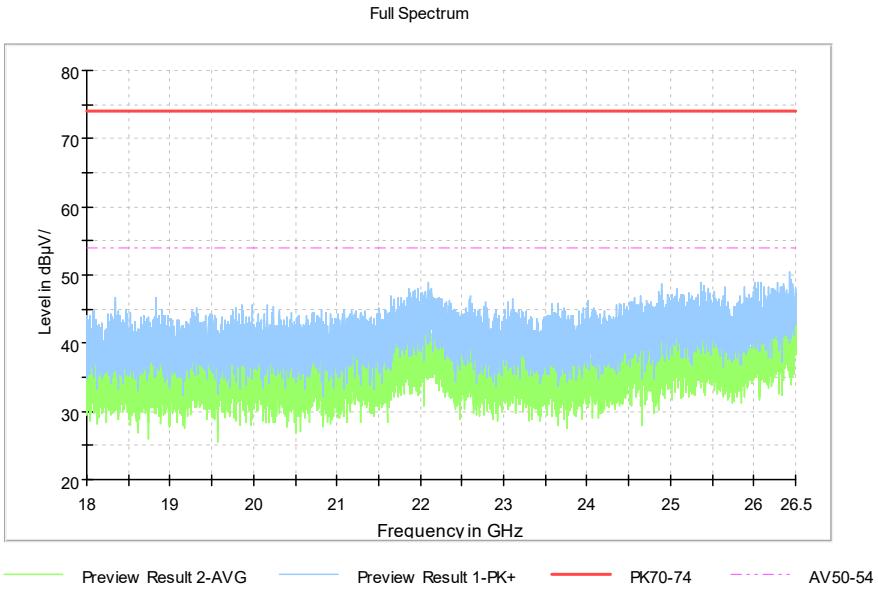
Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



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

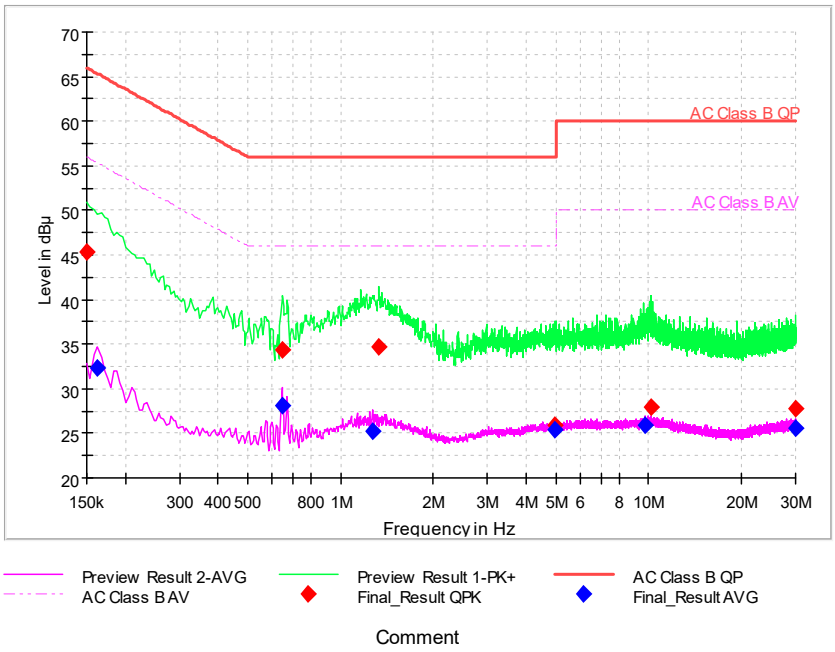


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



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---