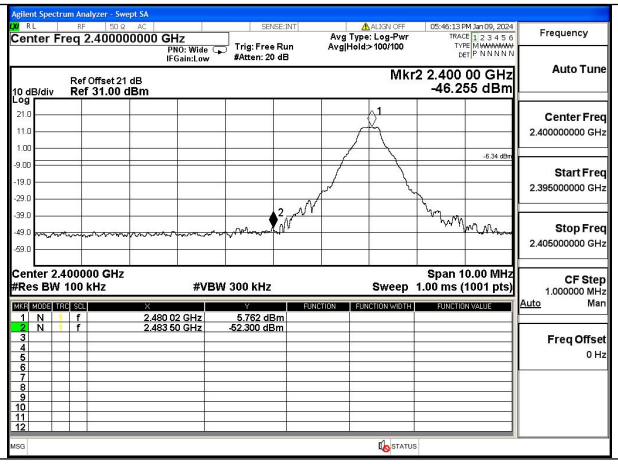
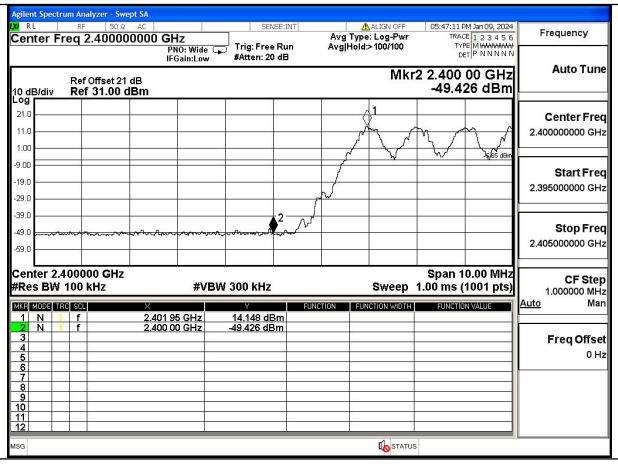
7 Band Edge measurement

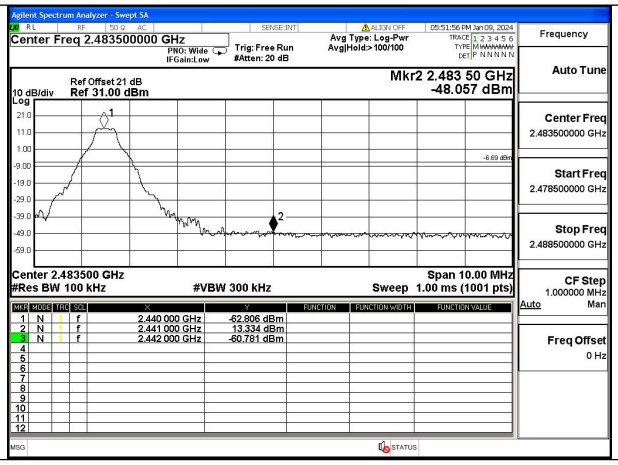
Test Mode: GFSK



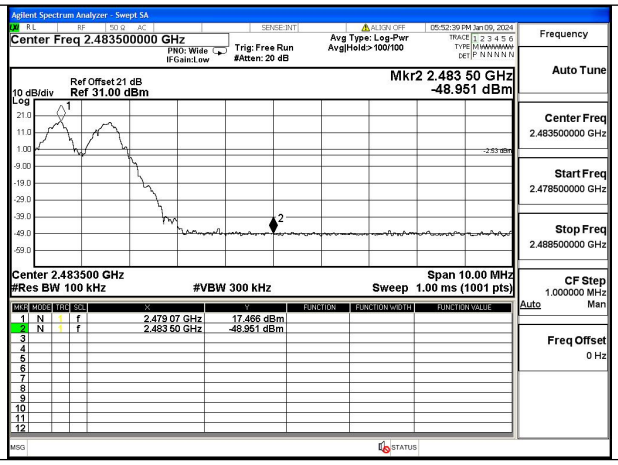
CH0(Hopping off)



CH0(Hopping on)

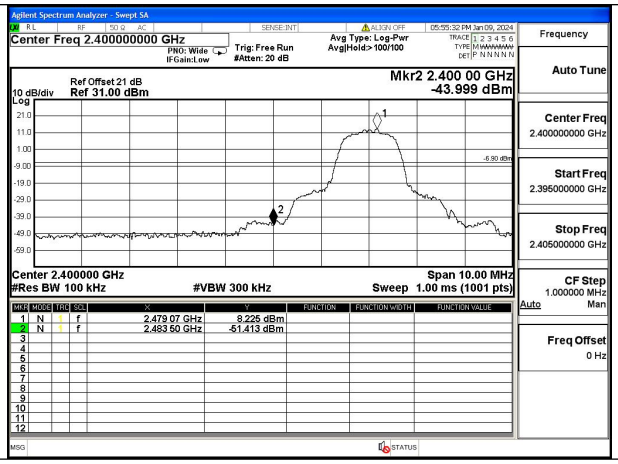


CH78(Hopping off)

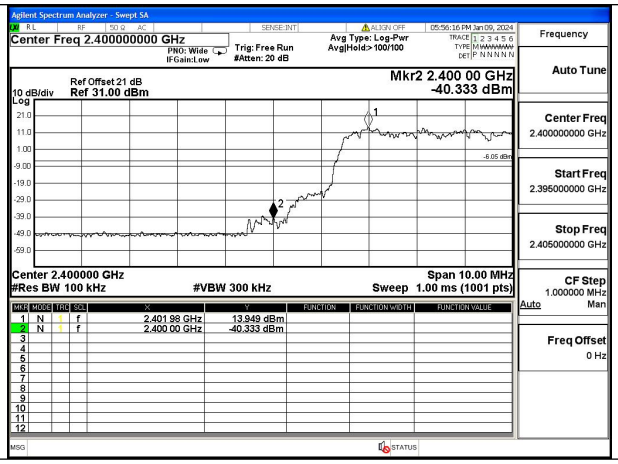


CH78(Hopping on)

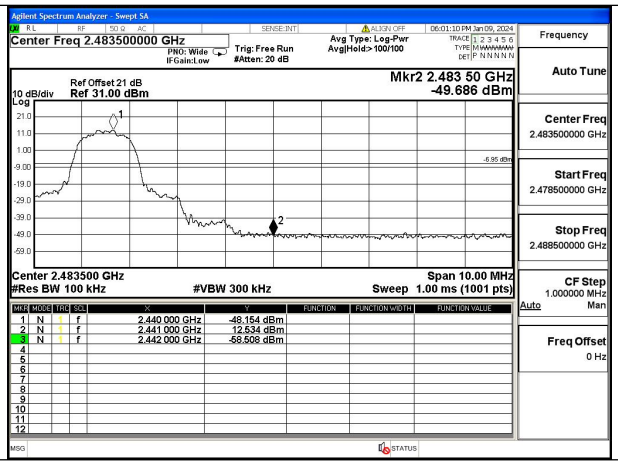
Test Mode: π/4DQPSK



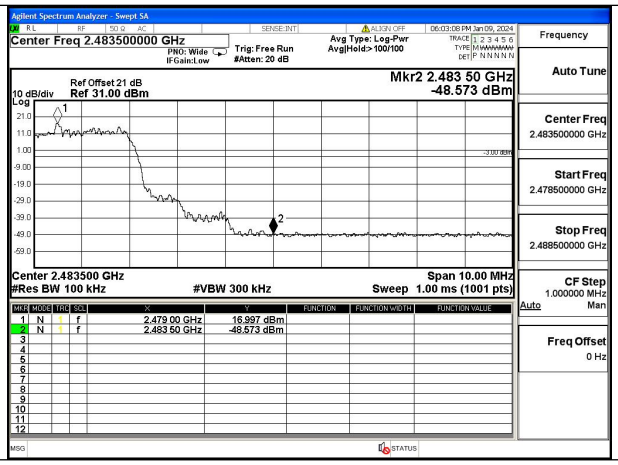
CH0(Hopping off)



CH0(Hopping on)

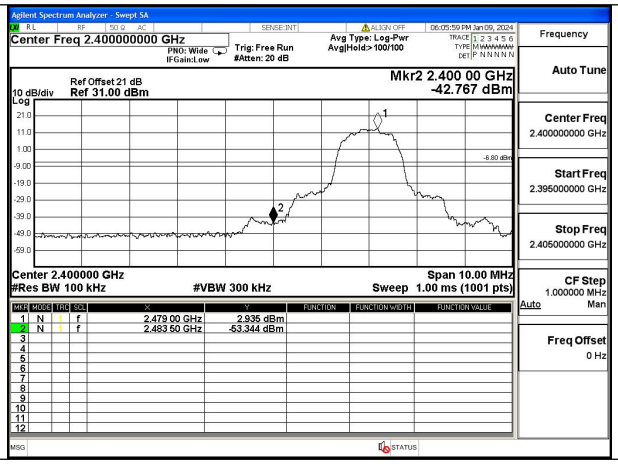


CH78(Hopping off)

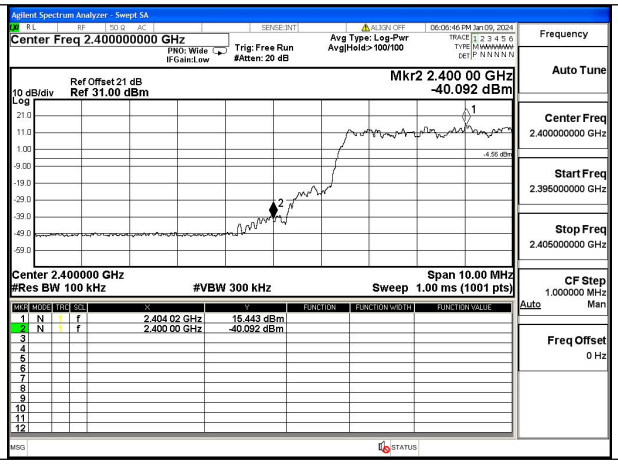


CH78(Hopping on)

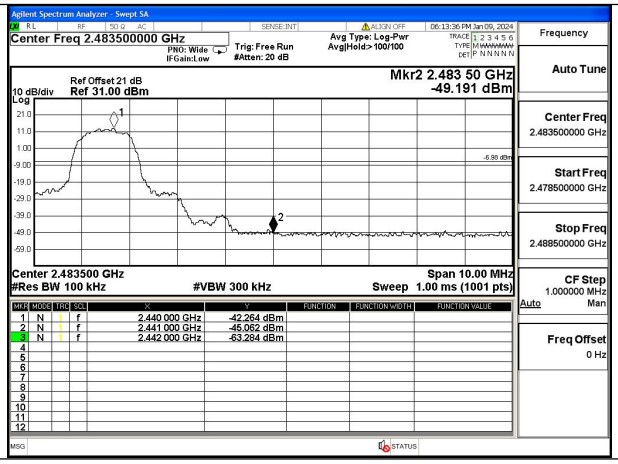
Test Mode: 8DPSK



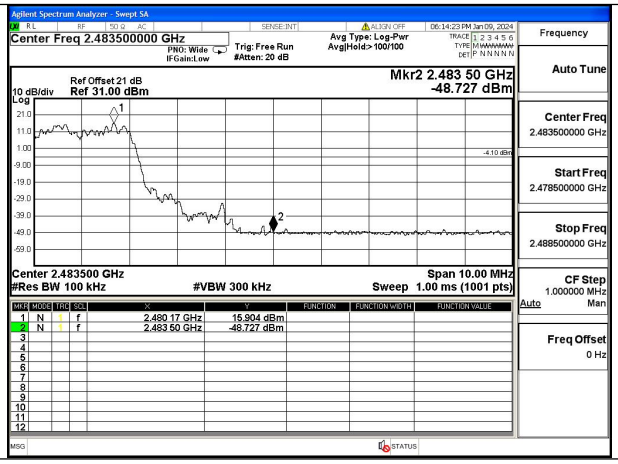
CH0(Hopping off)



CH0(Hopping on)



CH78(Hopping off)



CH78(Hopping on)

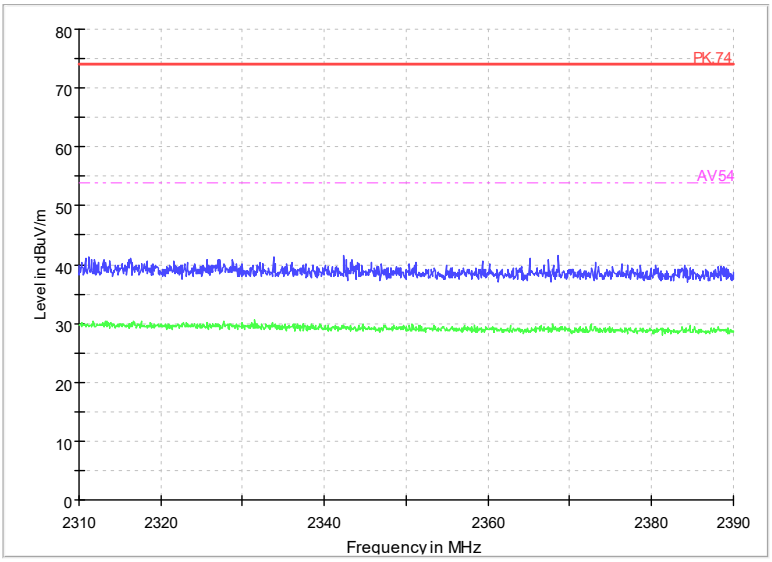
APPENDIX B – TEST DATA OF RADIATED EMISSION

Note：The worst channel results are reflected in the report.

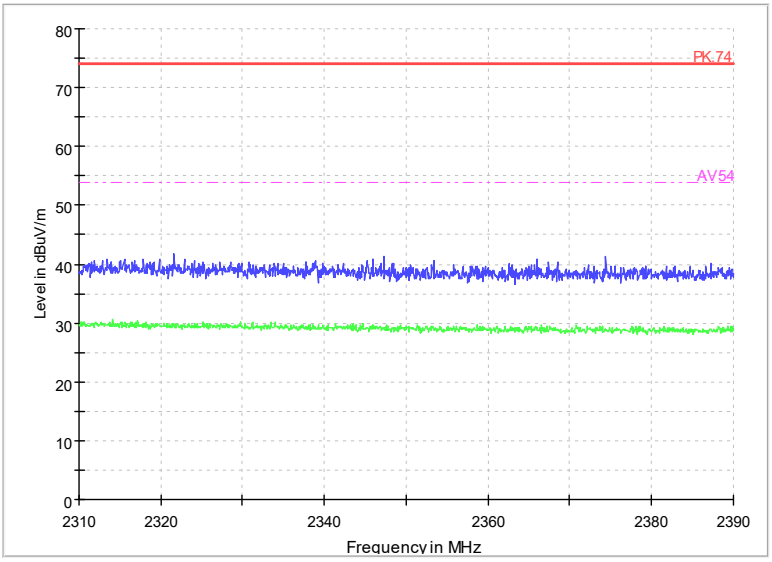
Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan.

Radiated Emission Band Edge

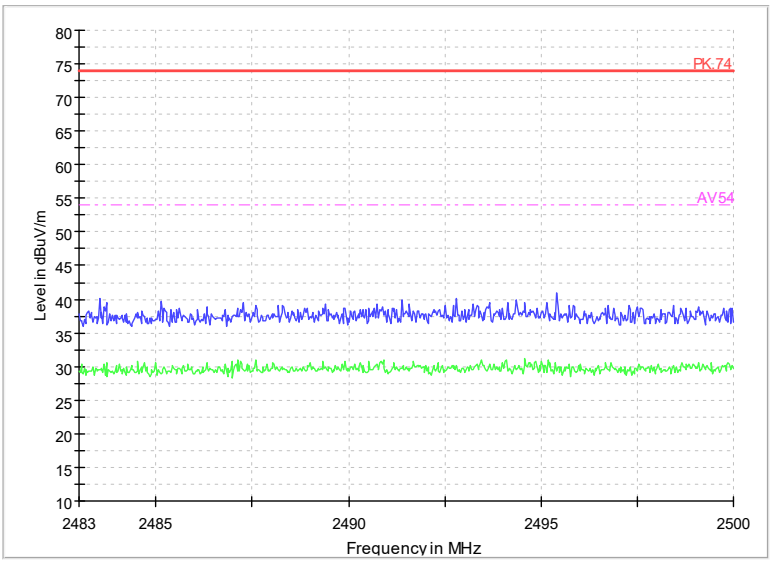
After comparison,the worst case attitude is EUT lay down



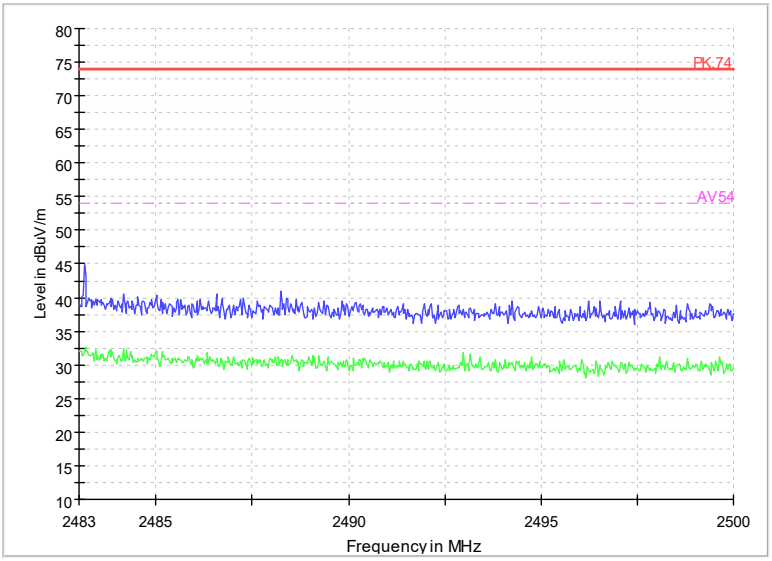
Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK
Polarity: Vertical



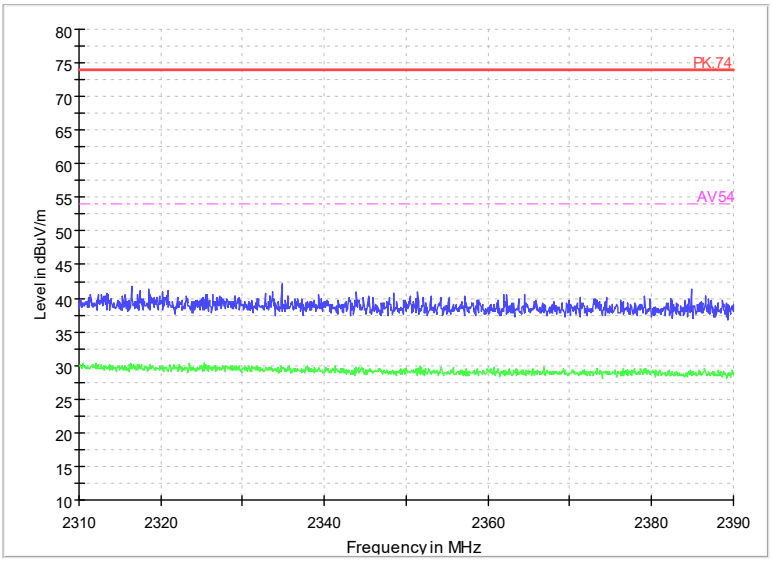
Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK
Polarity: Horizontal



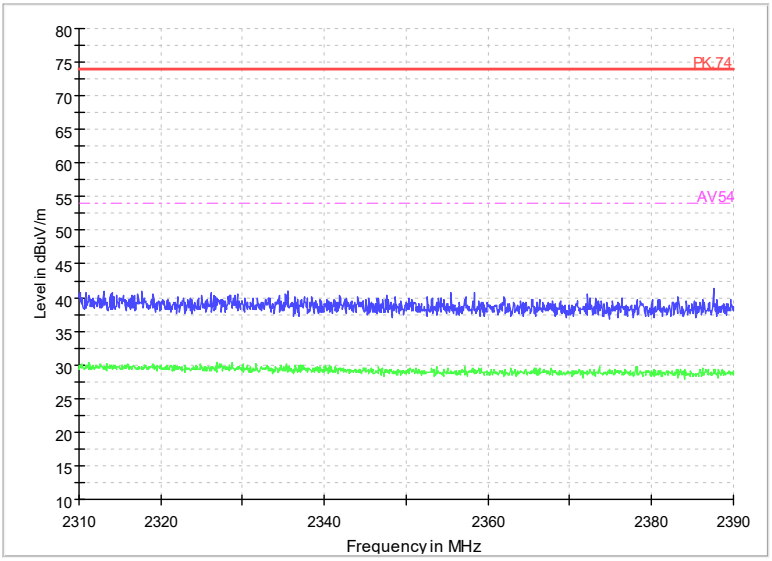
Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Vertical



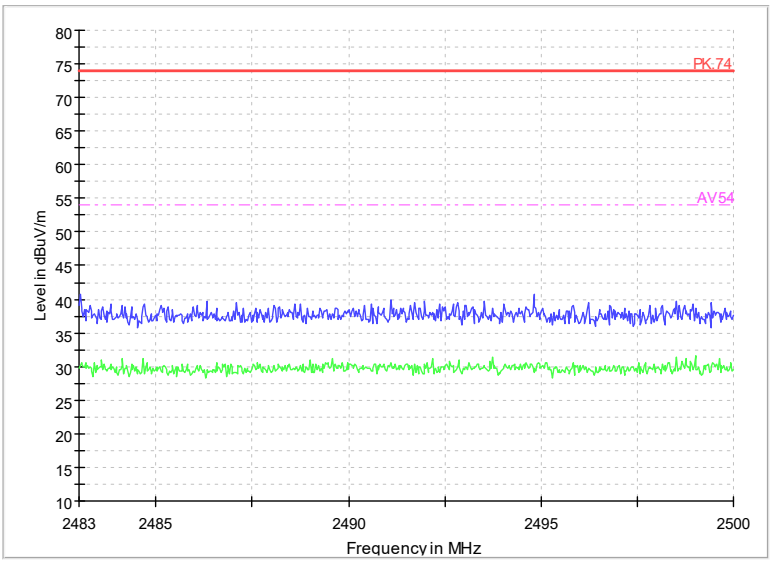
Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Horizontal



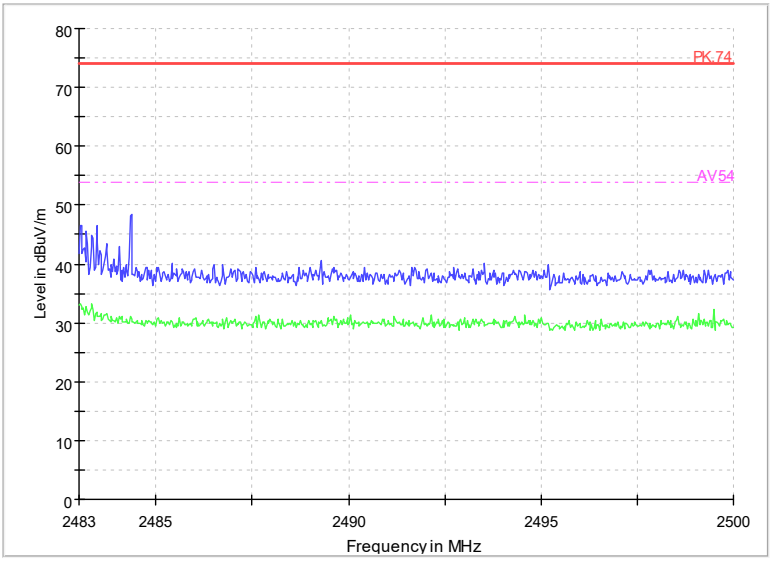
Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: π/4DQPSK
Polarity: Vertical



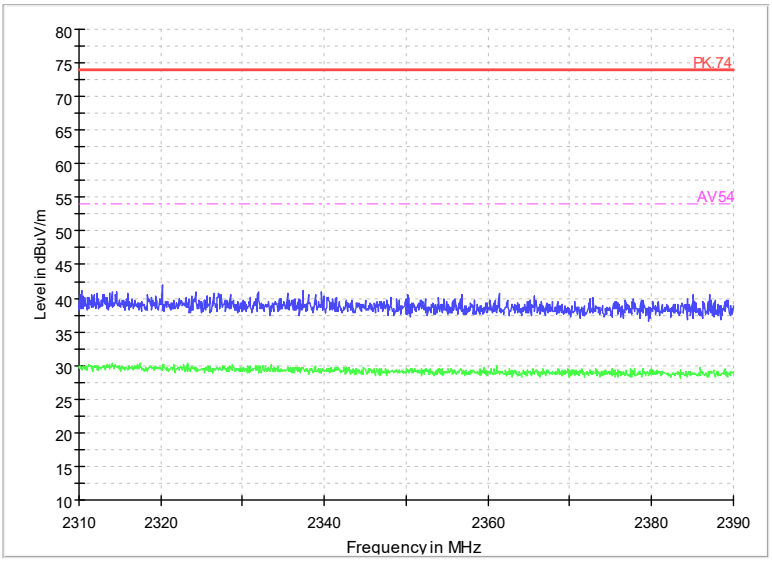
Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: π/4DQPSK
Polarity: Horizontal



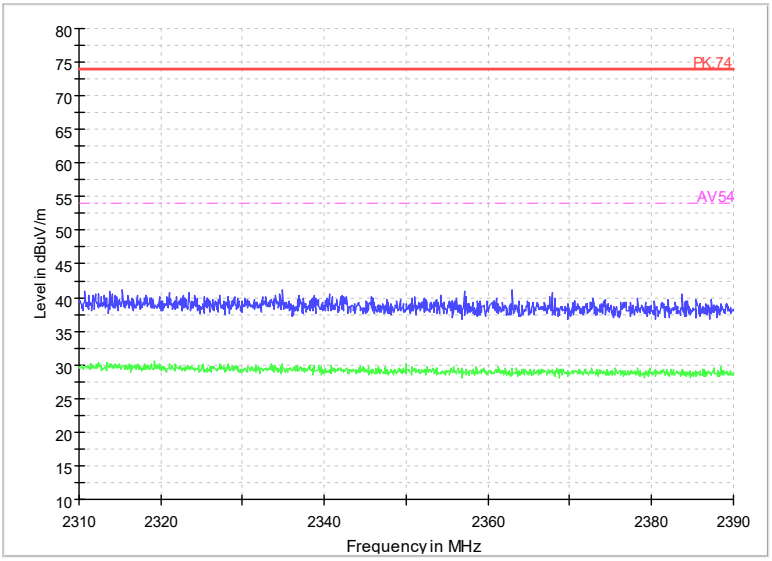
Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: π/4DQPSK
Polarity: Vertical



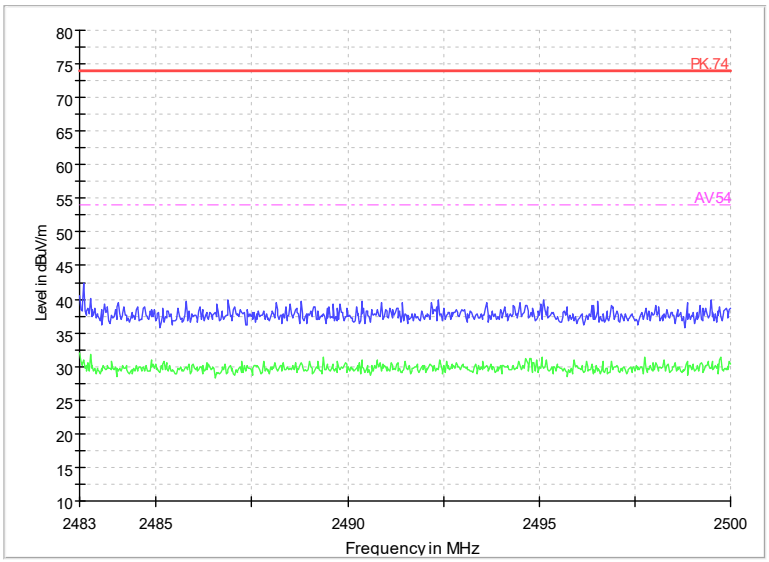
Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: π/4DQPSK
Polarity: Horizontal



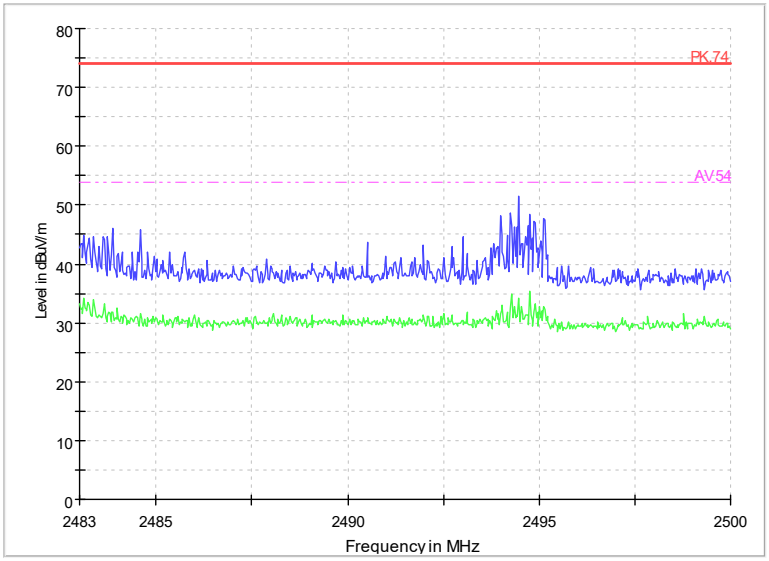
Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: 8DPSK
Polarity: Vertical



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



Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: 8DPSK
Polarity: Vertical



Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: 8DPSK
Polarity: Horizontal

Radiated Emission

Sample Calculations

After comparison,the worst case attitude is EUT lay down .
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: (4.65dBμV/m) = (24.15dBμV) + (-19.5dB/m), the corresponding frequency is35.0925MHz.

For GFSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
35.0925	4.65	-19.5	24.15	Vertical	40	35.35
85.581	4.68	-20.2	24.88	Vertical	40	35.32
105.466	5.63	-18.8	24.43	Vertical	43.5	37.87
274.6825	6.61	-16.6	23.21	Vertical	46	39.39
517.8615	12.5	-10.2	22.7	Vertical	46	33.5
893.2515	17.43	-3.5	20.93	Vertical	46	28.57

For π/4DQPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
46.0535	6.49	-18.4	24.89	Vertical	40	33.51
57.257	5.81	-19	24.81	Vertical	40	34.19
111.383	5.55	-19	24.55	Vertical	43.5	37.95
215.949	5.14	-18.4	23.54	Vertical	43.5	38.36
536.3885	12.62	-9.7	22.32	Vertical	46	33.38
893.0575	17.22	-3.5	20.72	Vertical	46	28.78

For 8DPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
44.1135	5.79	-18.4	24.19	Vertical	40	34.21
57.8875	5.64	-19	24.64	Vertical	40	34.36
110.995	5.31	-19	24.31	Vertical	43.5	38.19
202.175	4.53	-18.8	23.33	Vertical	43.5	38.97
532.169	12.53	-9.8	22.33	Vertical	46	33.47
942.382	17.72	-2.9	20.62	Vertical	46	28.28

For GFSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
51.34	6.66	-18.4	25.06	Vertical	40	33.34
58.033	6.21	-19	25.21	Vertical	40	33.79
102.5075	5	-18.7	23.7	Vertical	43.5	38.5
207.607	5.21	-18.6	23.81	Vertical	43.5	38.29
547.1555	12.77	-9.5	22.27	Vertical	46	33.23
948.7355	18.07	-2.8	20.87	Vertical	46	27.93

For π/4DQPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
38.9725	6.34	-18.8	25.14	Vertical	40	33.66
85.7265	4.66	-20.2	24.86	Vertical	40	35.34
98.676	5.91	-18.7	24.61	Vertical	43.5	37.59
290.833	7.48	-16.1	23.58	Vertical	46	38.52
492.399	11.7	-10.7	22.4	Vertical	46	34.3
933.9915	18.04	-3	21.04	Vertical	46	27.96

For 8DPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
39.8455	6.28	-18.6	24.88	Vertical	40	33.72
59.0515	5.74	-19.1	24.84	Vertical	40	34.26
110.3645	5.75	-18.9	24.65	Vertical	43.5	37.75
292.7245	7.21	-16	23.21	Vertical	46	38.79
507.725	11.98	-10.4	22.38	Vertical	46	34.02
943.255	18.07	-2.9	20.97	Vertical	46	27.93

For GFSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
33.7345	5.78	-19.7	25.48	Vertical	40	34.22
56.772	5.47	-18.9	24.37	Vertical	40	34.53
103.138	5.52	-18.7	24.22	Vertical	43.5	37.98
195.579	4.71	-19.1	23.81	Vertical	43.5	38.79
531.8295	12.85	-9.9	22.75	Vertical	46	33.15
875.258	16.99	-3.8	20.79	Vertical	46	29.01

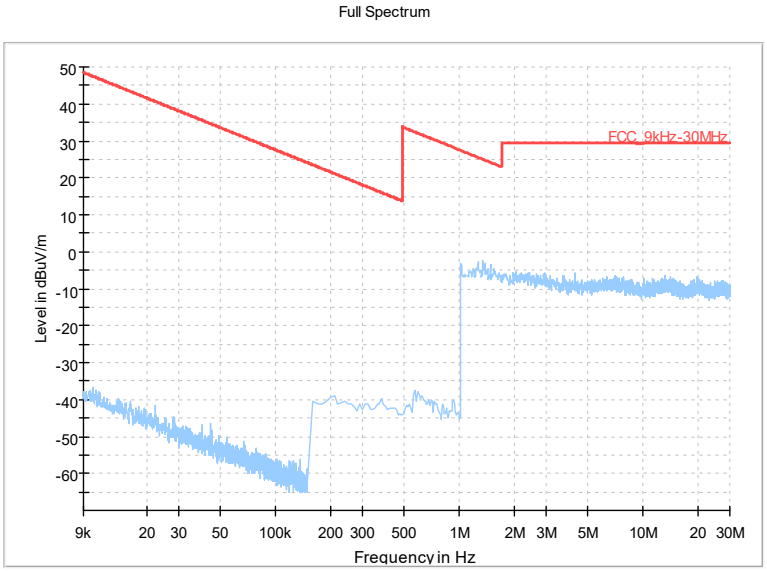
For π/4DQPSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
38.3905	6.11	-18.9	25.01	Vertical	40	33.89

58.712	5.96	-19.1	25.06	Vertical	40	34.04
101.295	4.5	-18.7	23.2	Vertical	43.5	39
303.6855	7.74	-15.7	23.44	Vertical	46	38.26
542.645	12.79	-9.6	22.39	Vertical	46	33.21
941.897	18.04	-2.9	20.94	Vertical	46	27.96

For 8DPSK
Channel No.:78

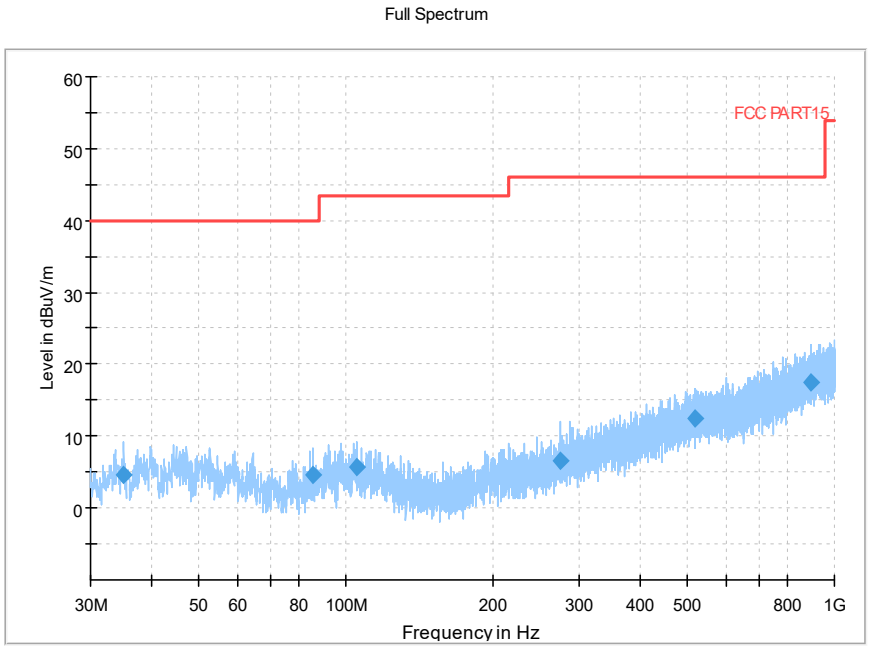
Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
51.534	6.62	-18.5	25.12	Vertical	40	33.38
59.003	5.61	-19.1	24.71	Vertical	40	34.39
98.482	5.77	-18.7	24.47	Vertical	43.5	37.73
298.981	7.3	-15.9	23.2	Vertical	46	38.7
548.4165	12.61	-9.4	22.01	Vertical	46	33.39
939.472	17.94	-2.9	20.84	Vertical	46	28.06



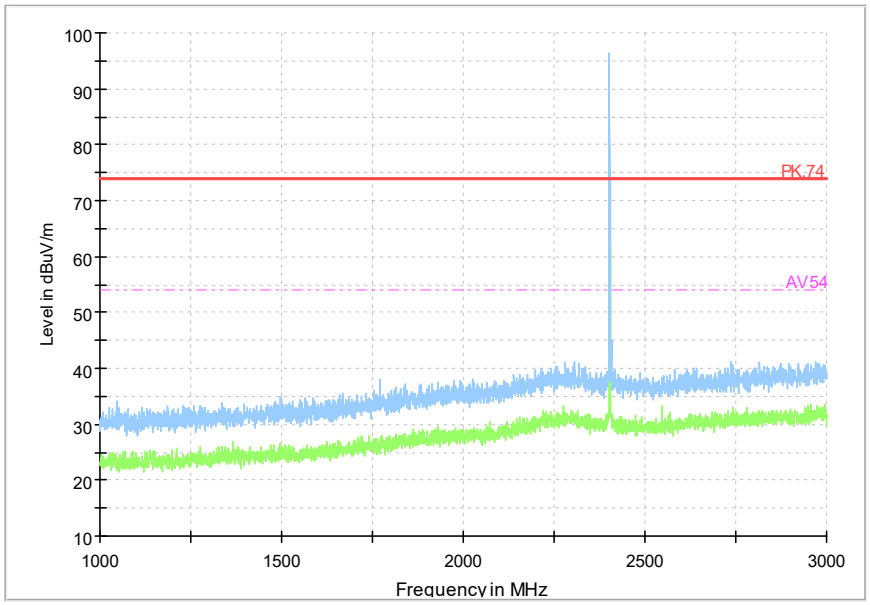
Frequency Range: 9kHz -30MHz
Detector: QP mode

Note：The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case.

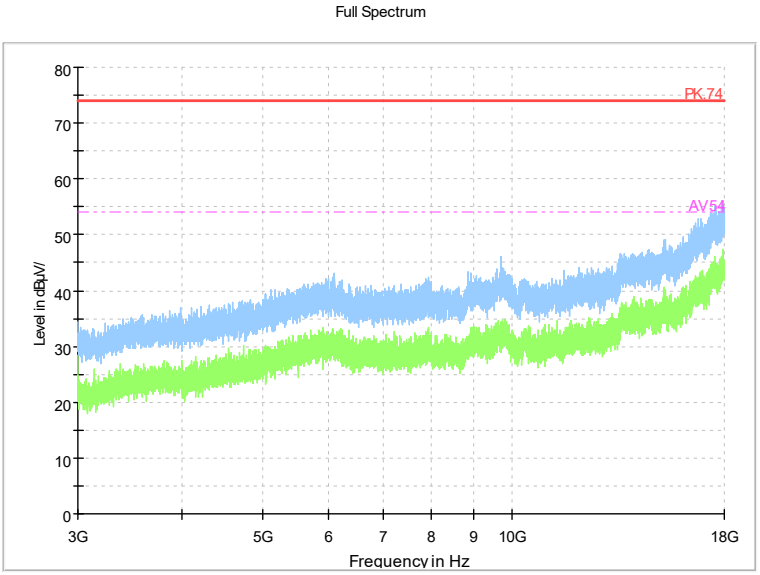
Carrier frequency (MHz): 2402
Channel No.:0



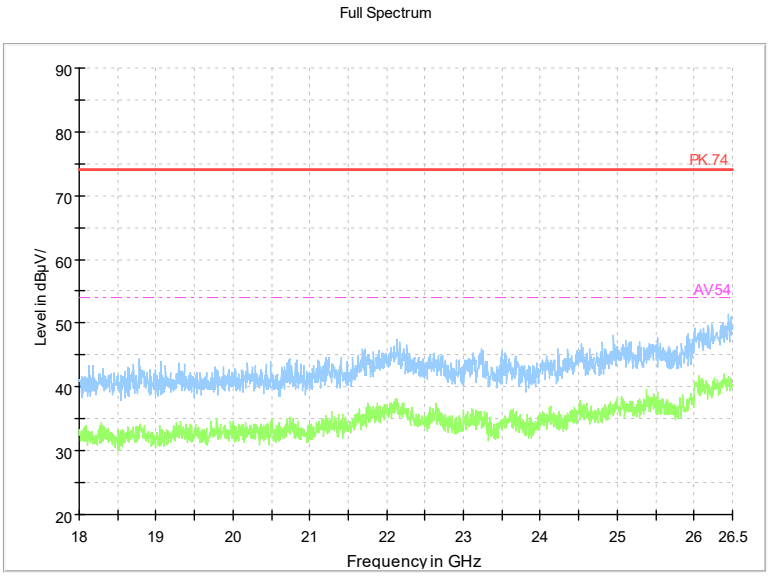
Frequency Range:30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: GFSK



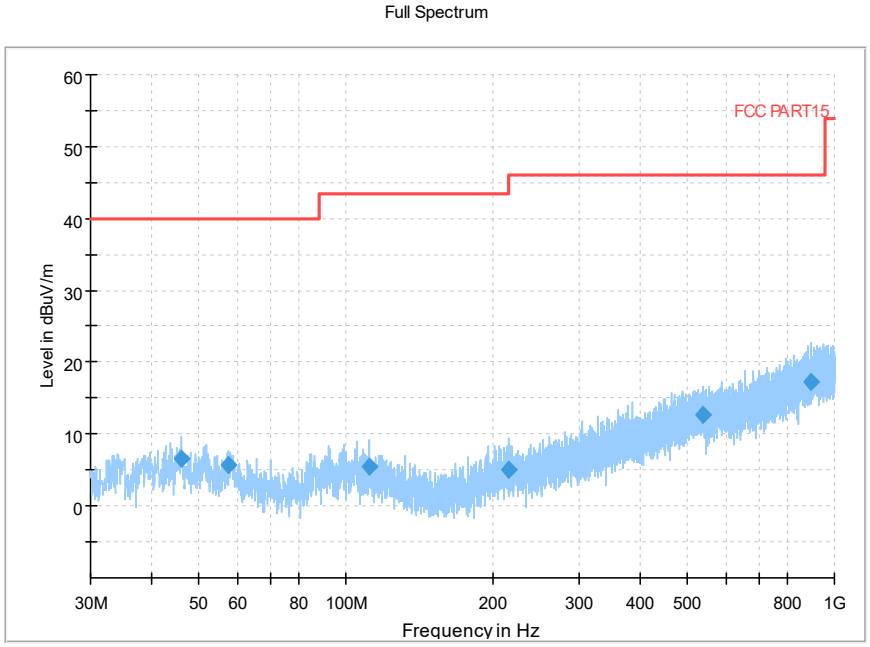
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK



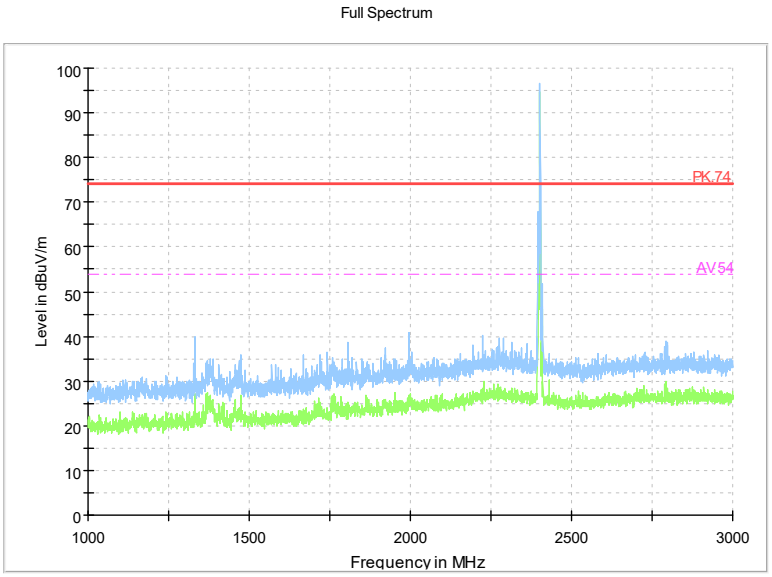
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



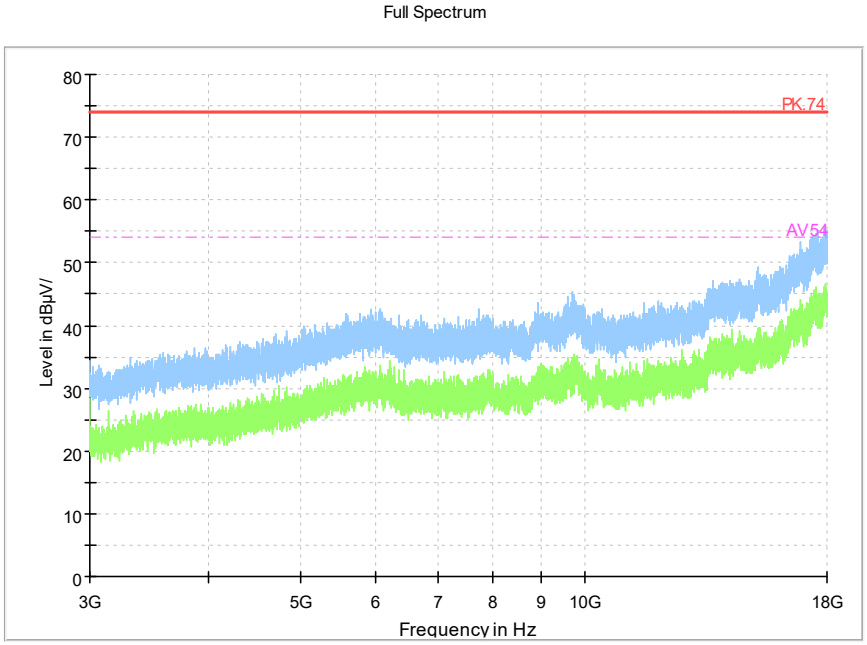
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK



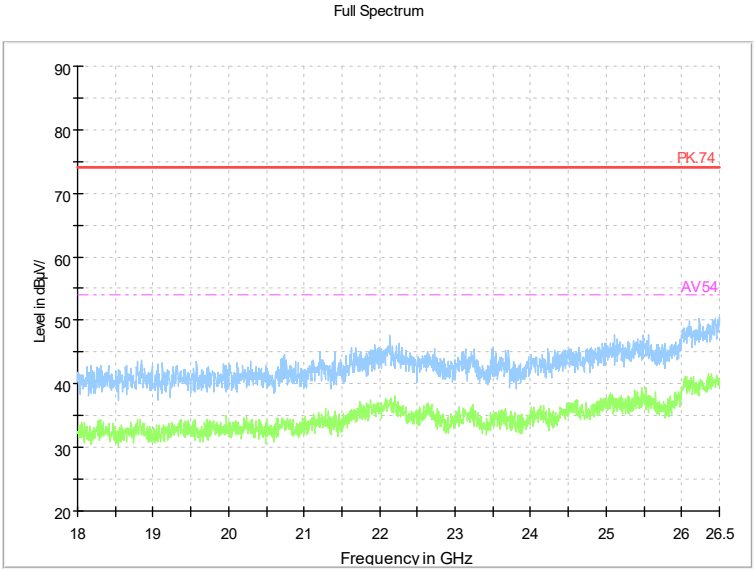
Frequency Range:30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



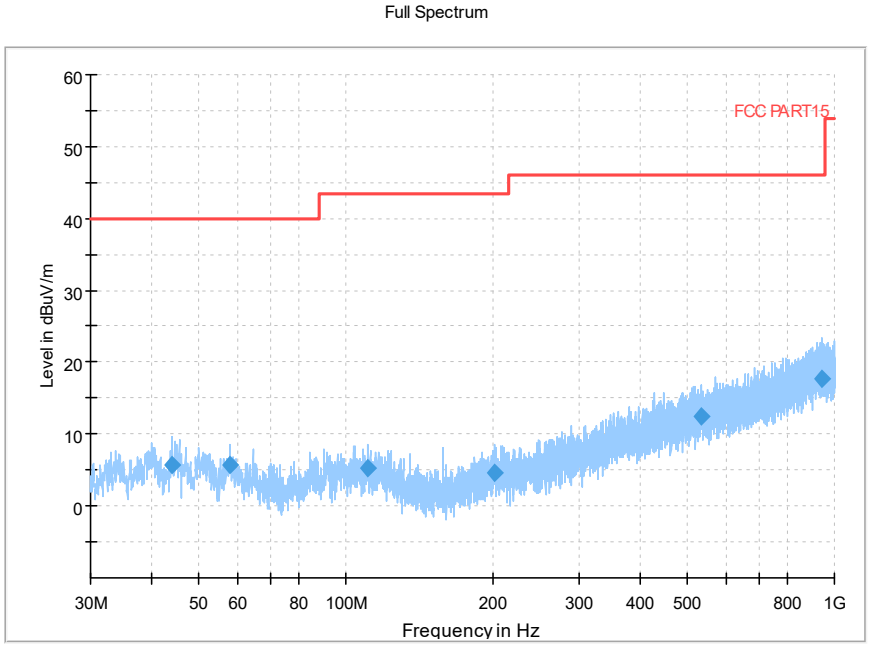
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



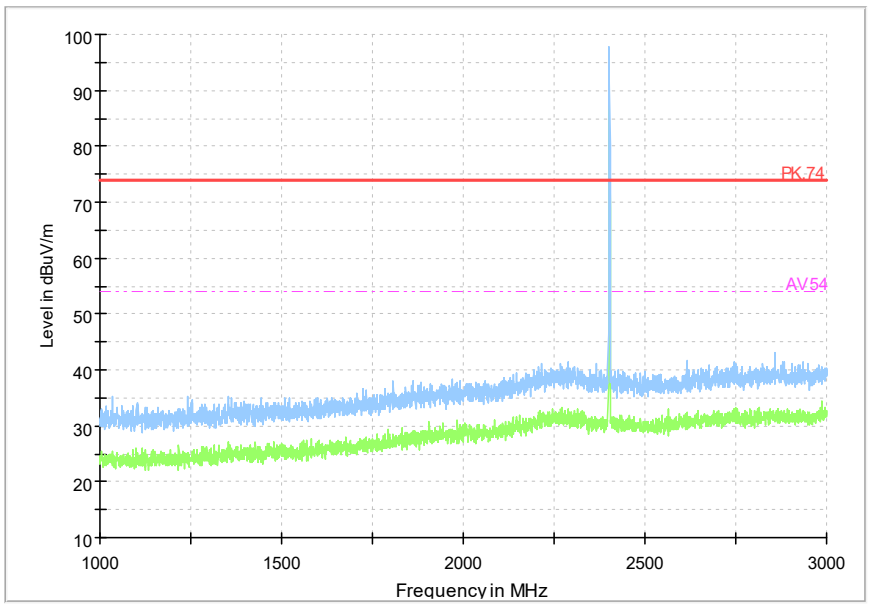
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



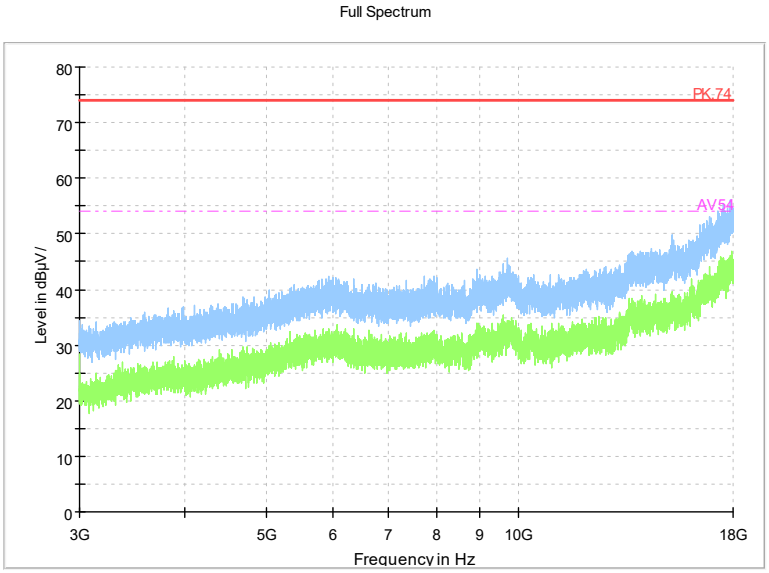
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



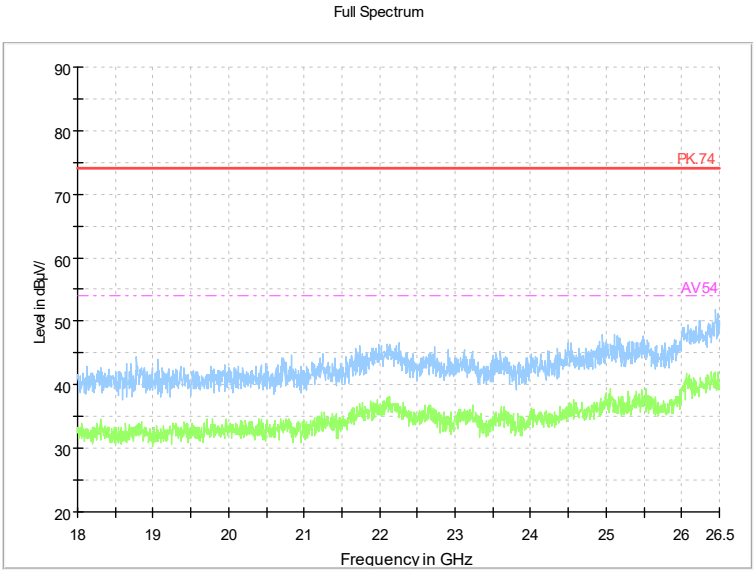
Frequency Range:30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK



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

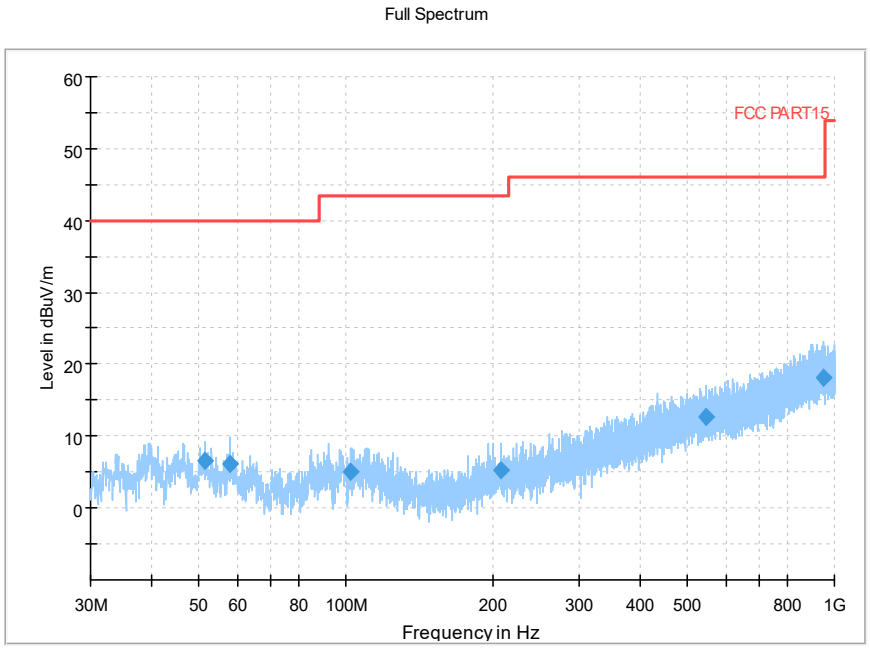


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

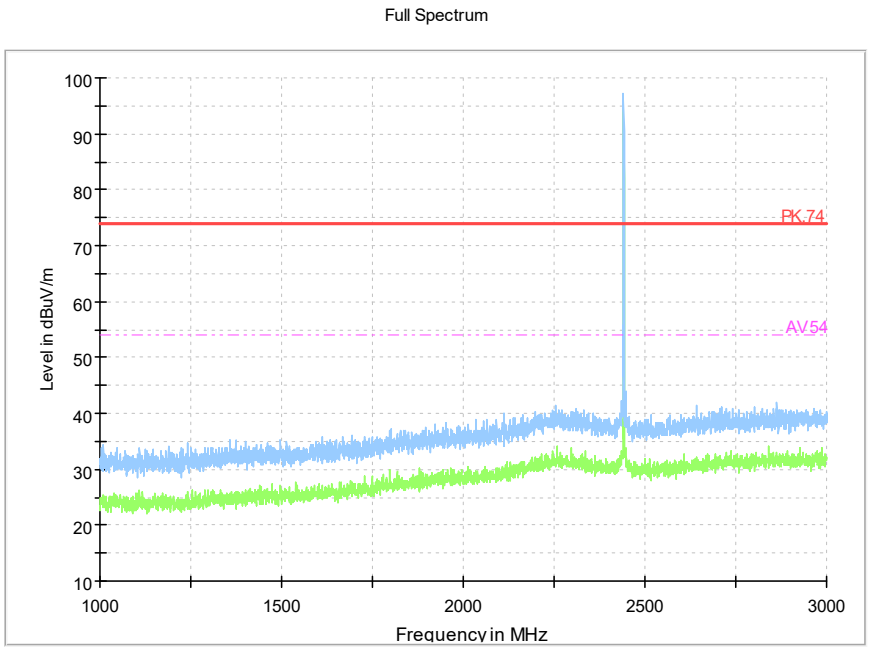


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

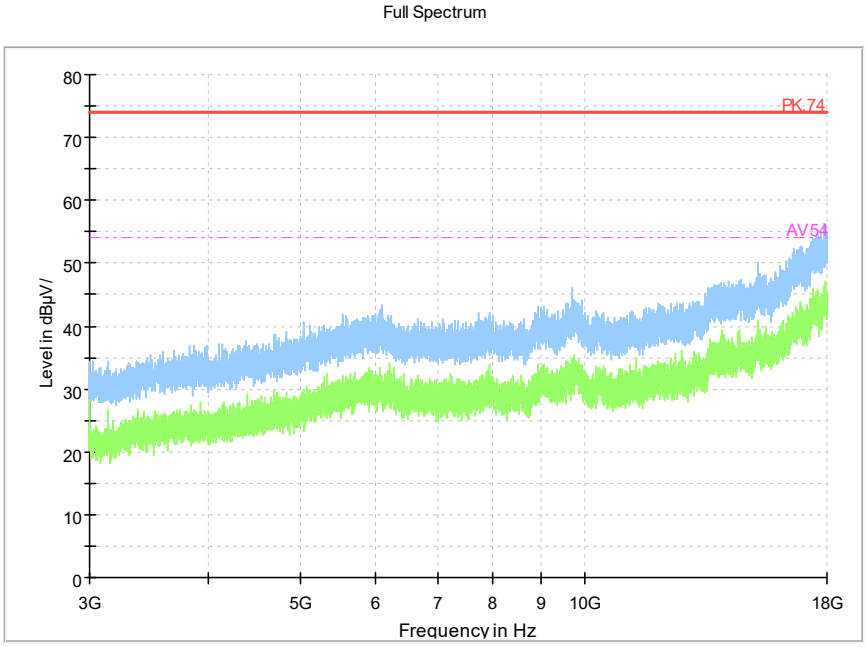
Carrier frequency (MHz): 2440
Channel No.:39



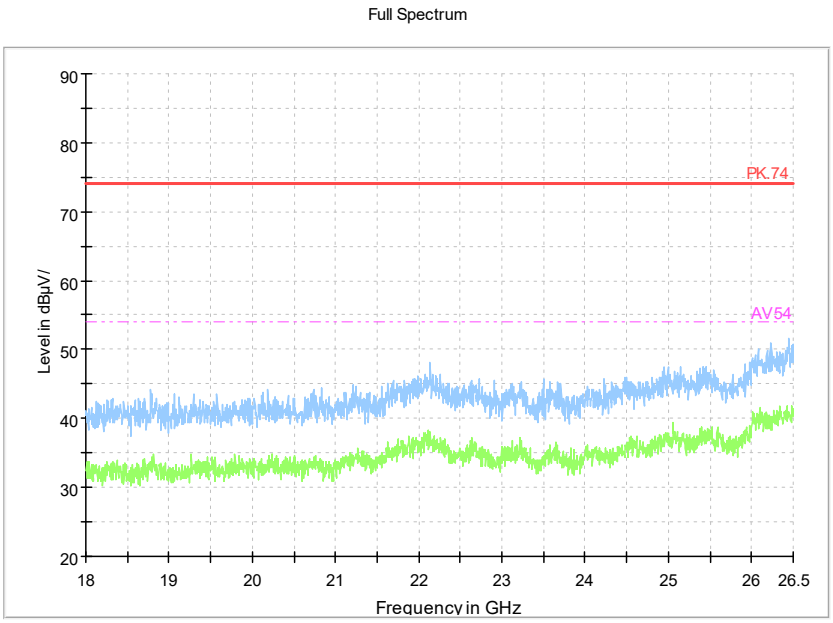
Frequency Range: 30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: GFSK



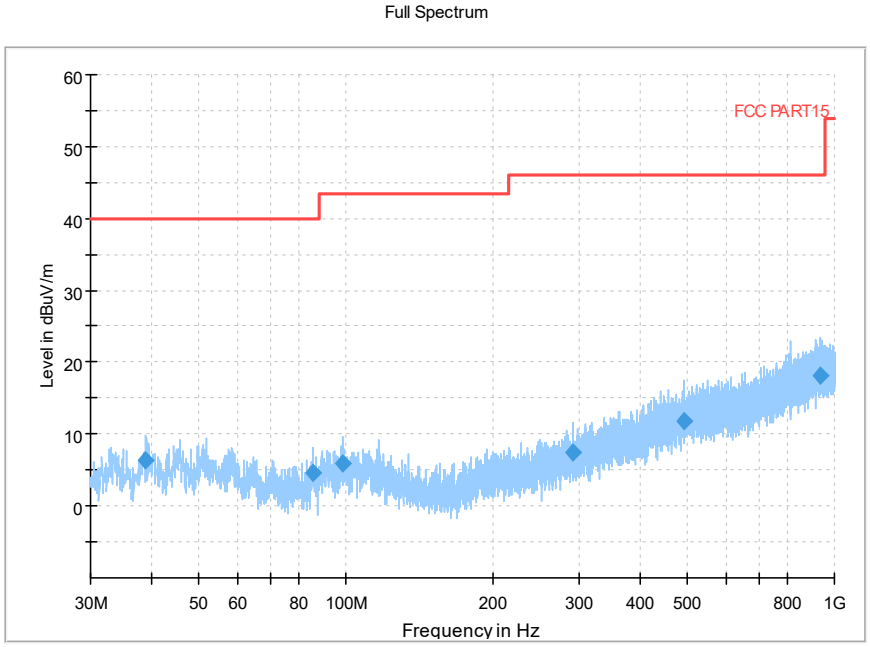
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK



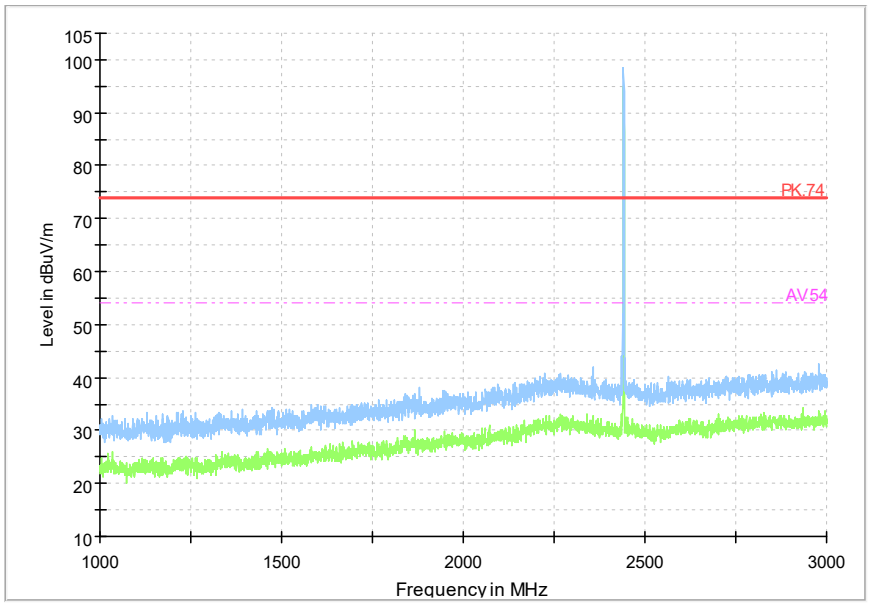
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



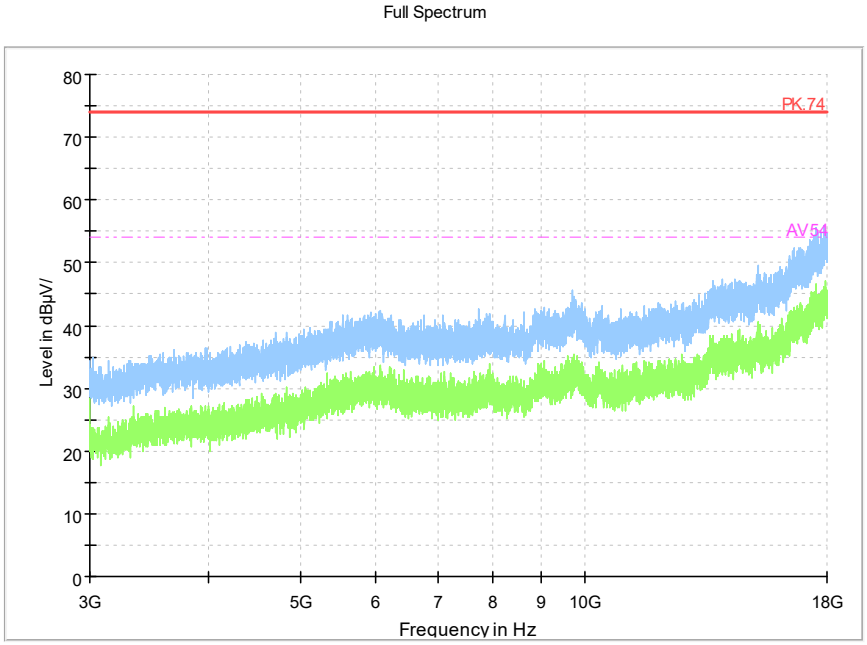
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK



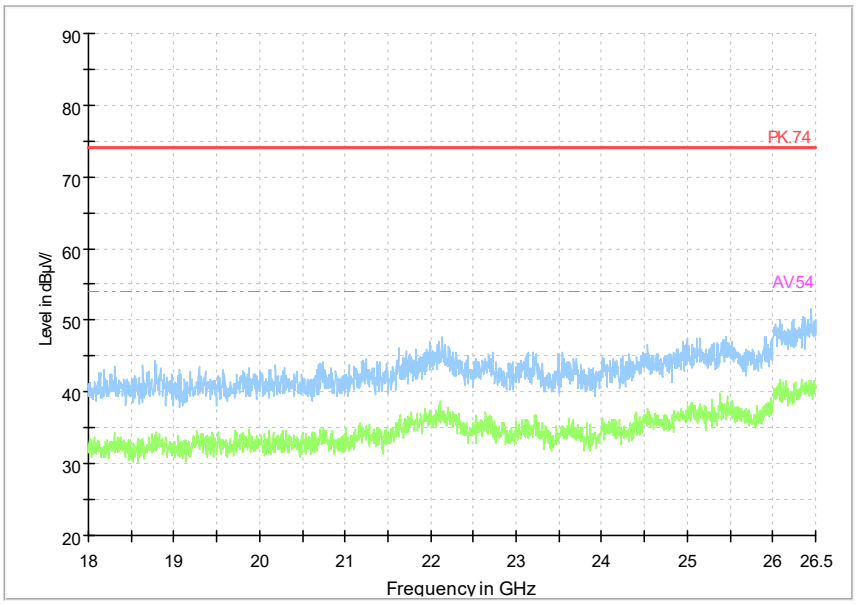
Frequency Range: 30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



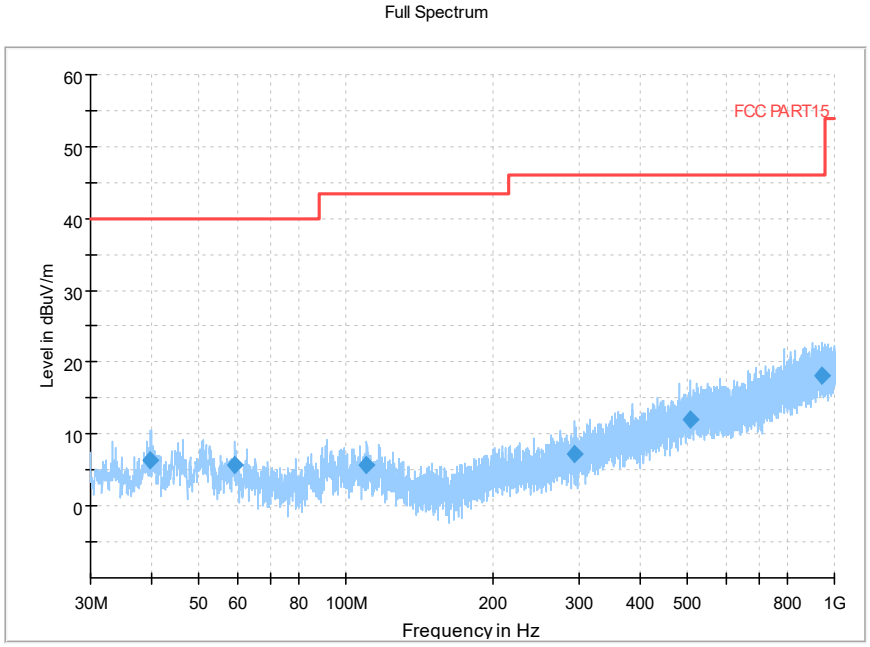
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



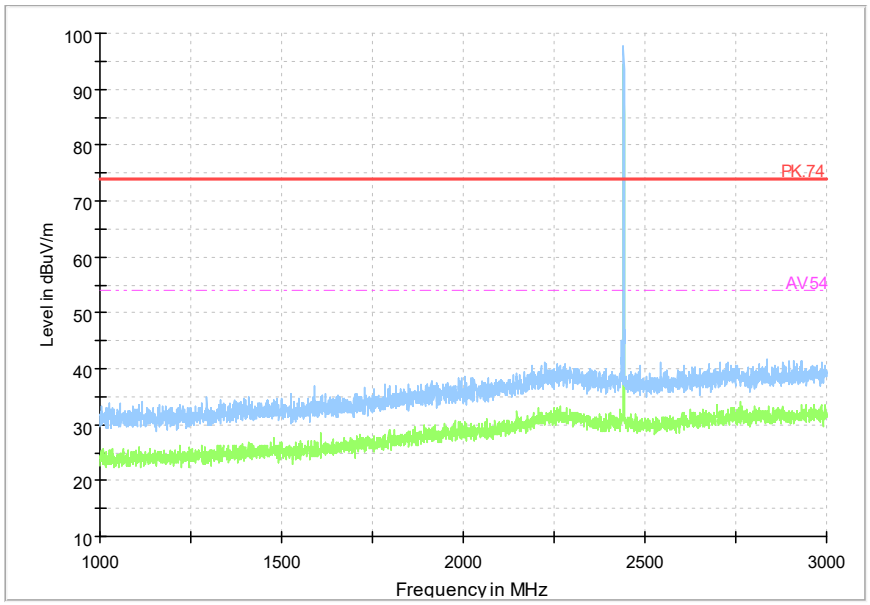
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



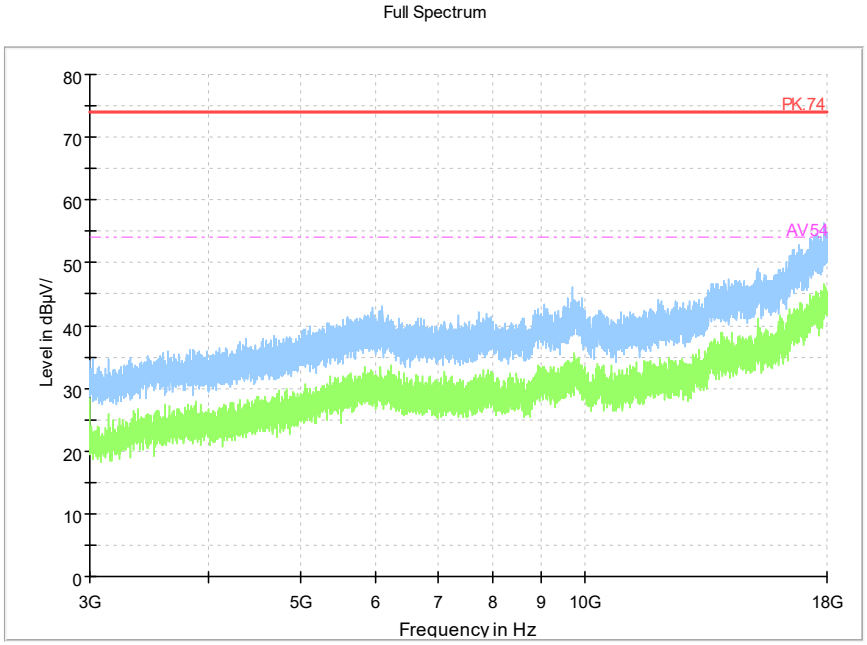
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



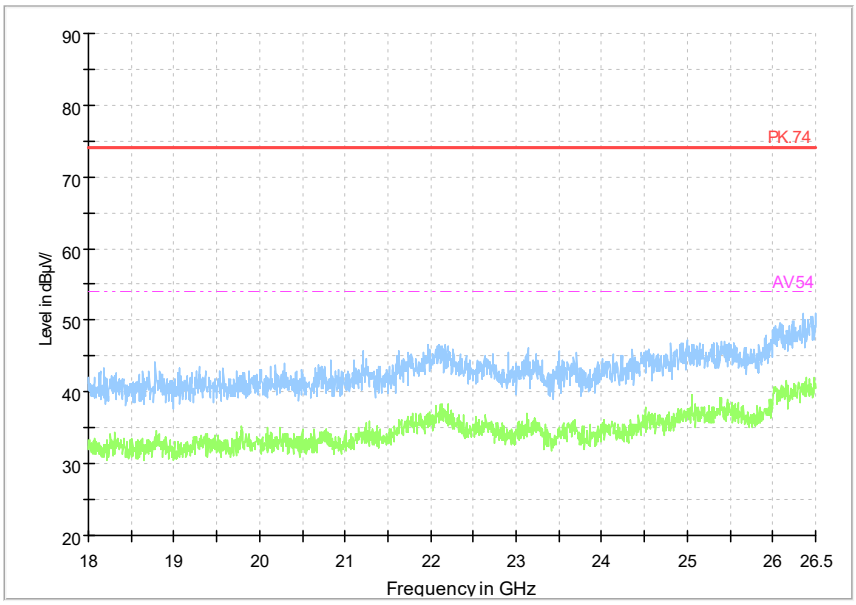
Frequency Range: 30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK



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

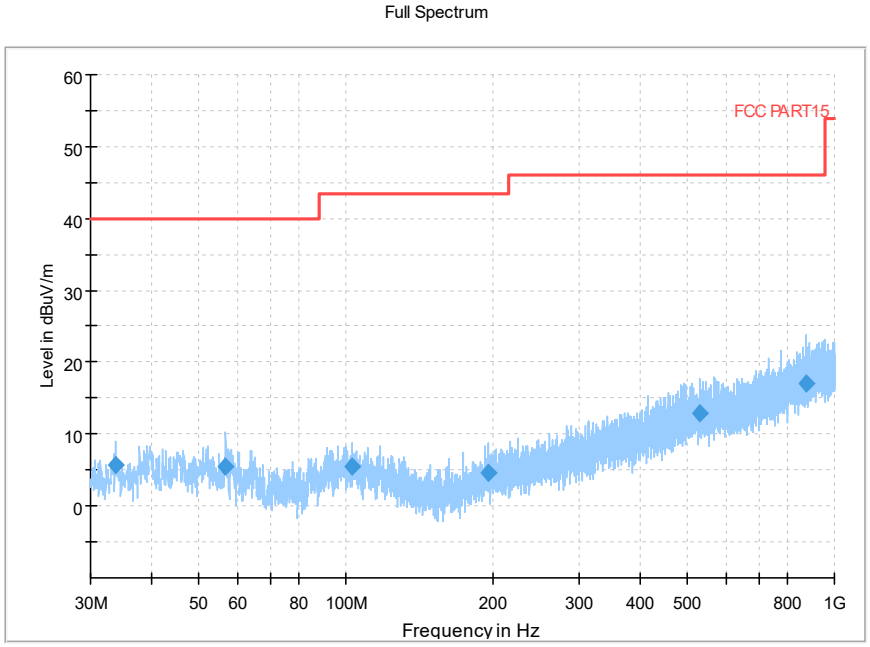


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

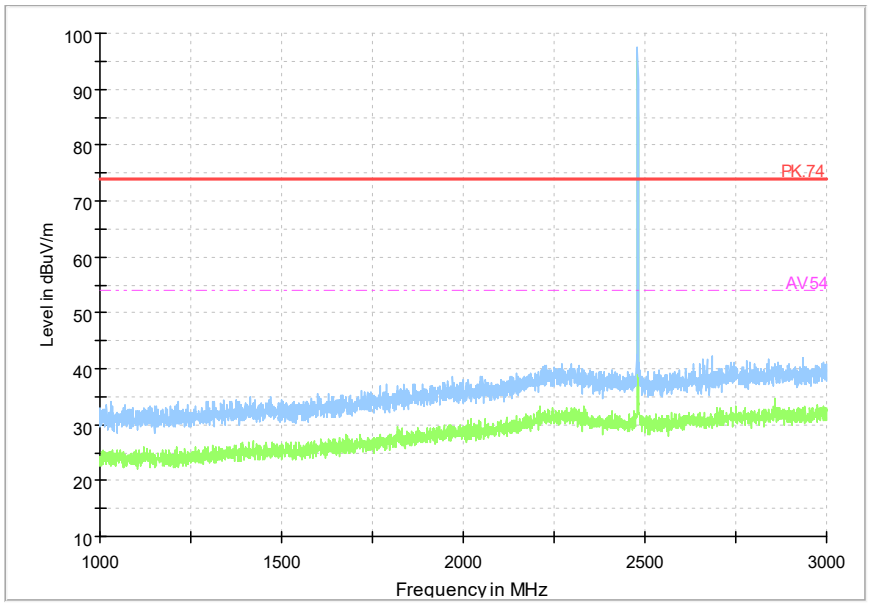


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

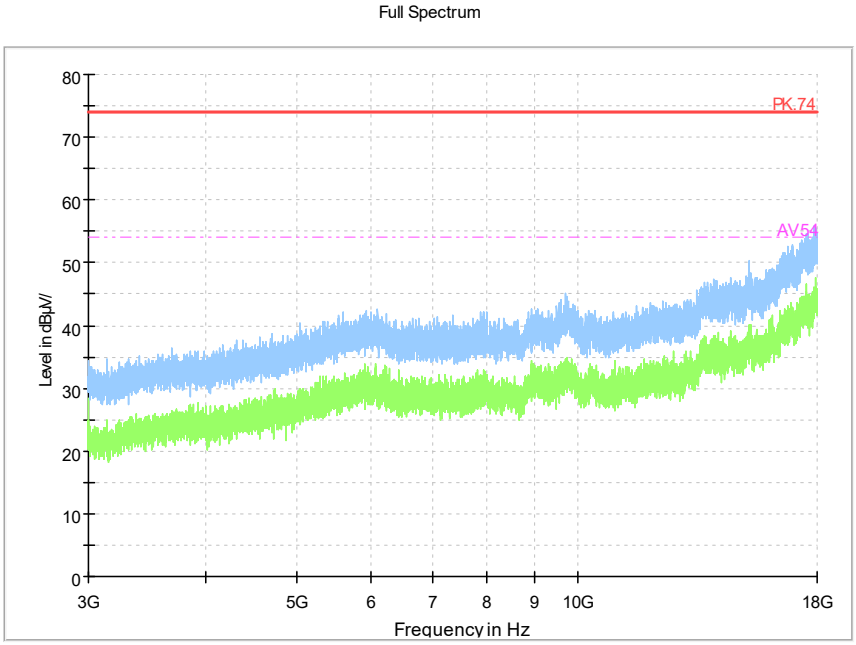
Carrier frequency (MHz): 2480
Channel No.:78



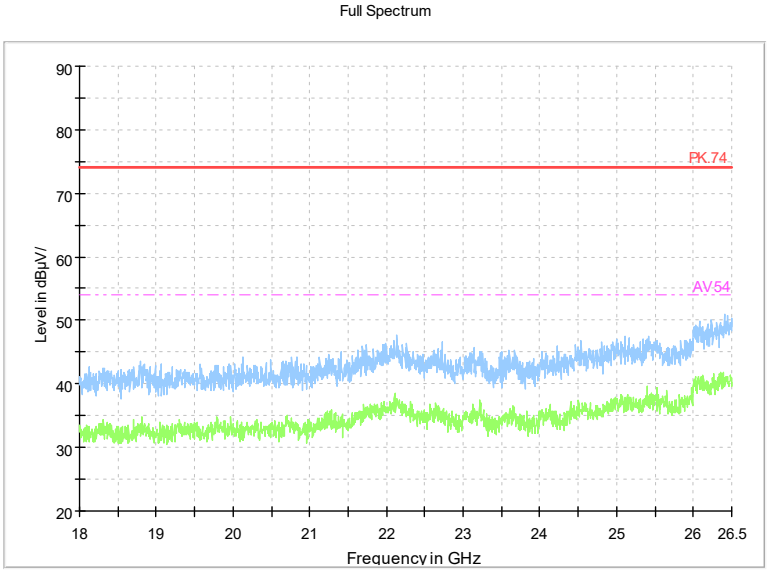
Frequency Range:30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: GFSK



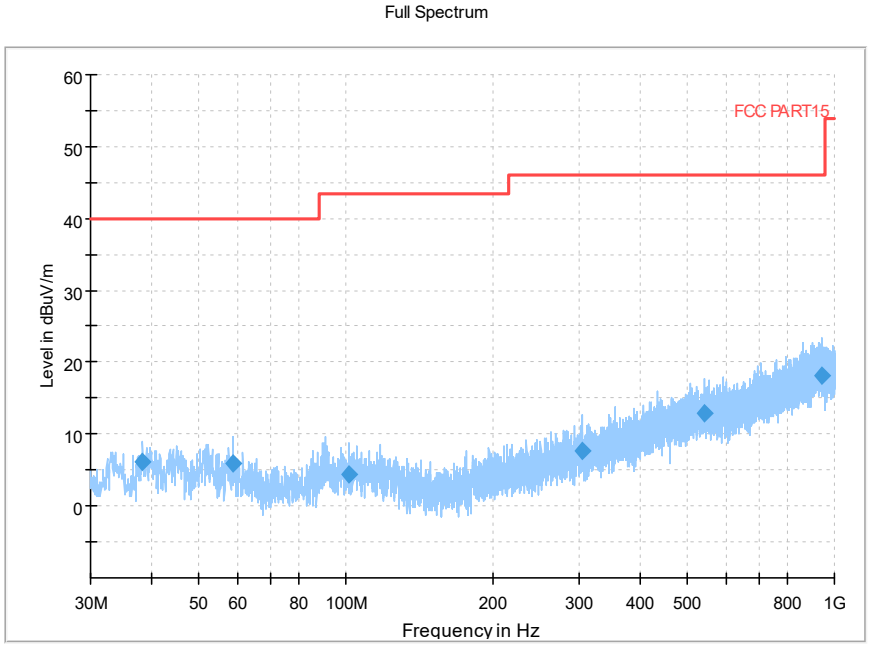
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK



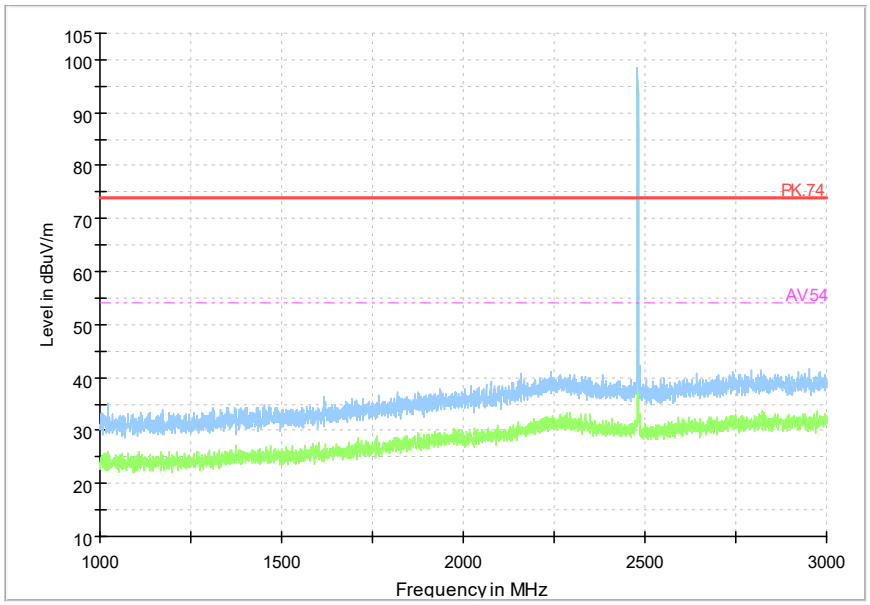
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



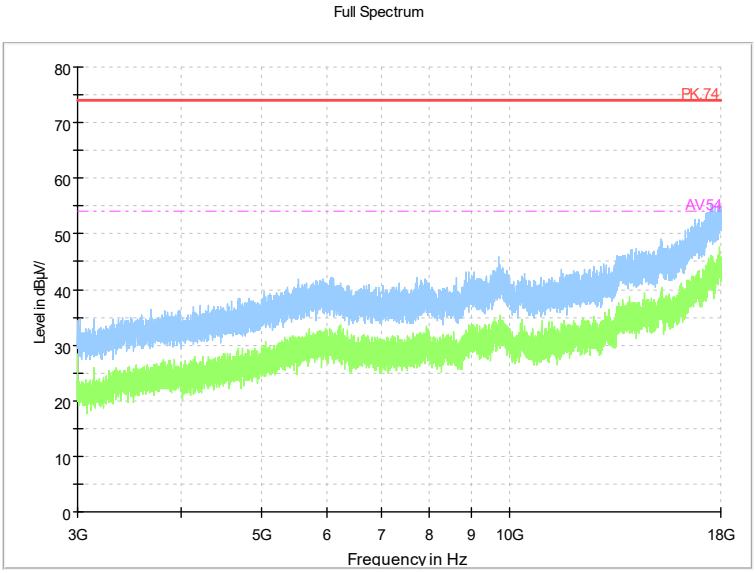
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK



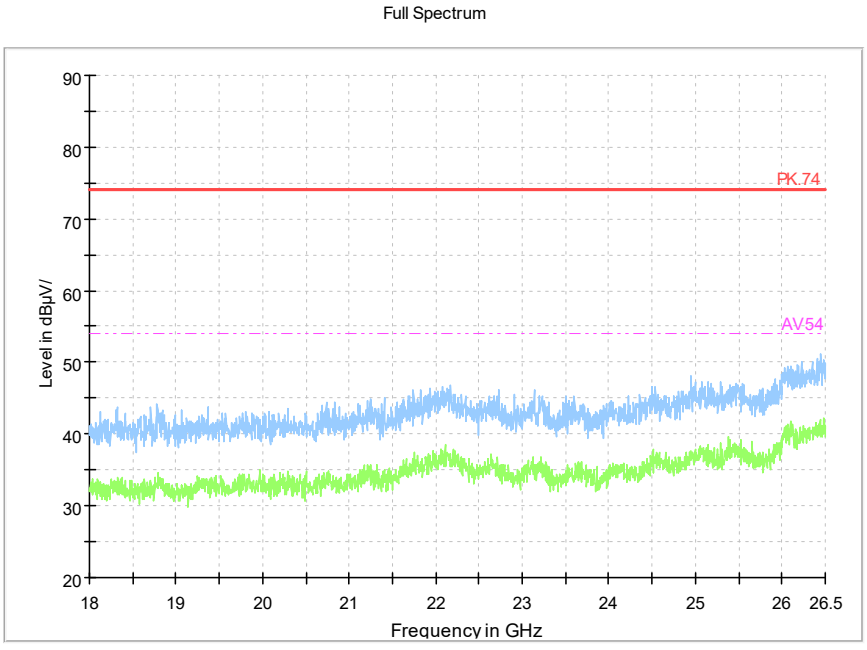
Frequency Range: 30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



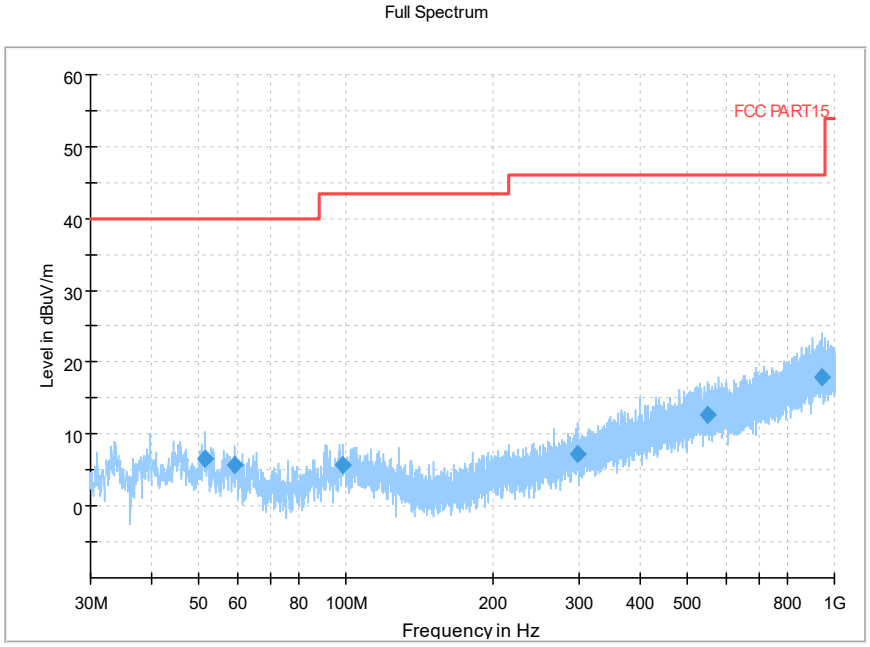
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



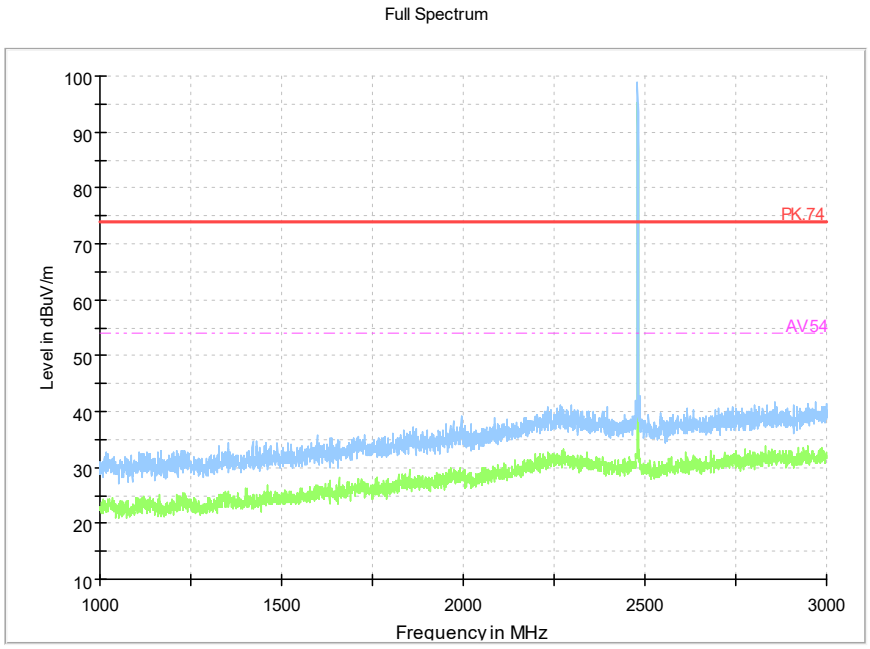
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



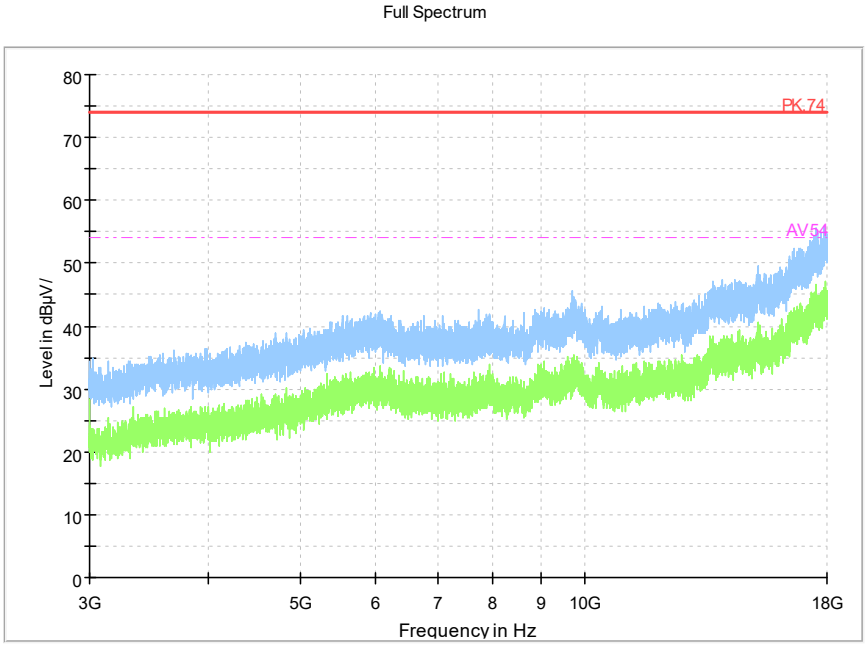
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



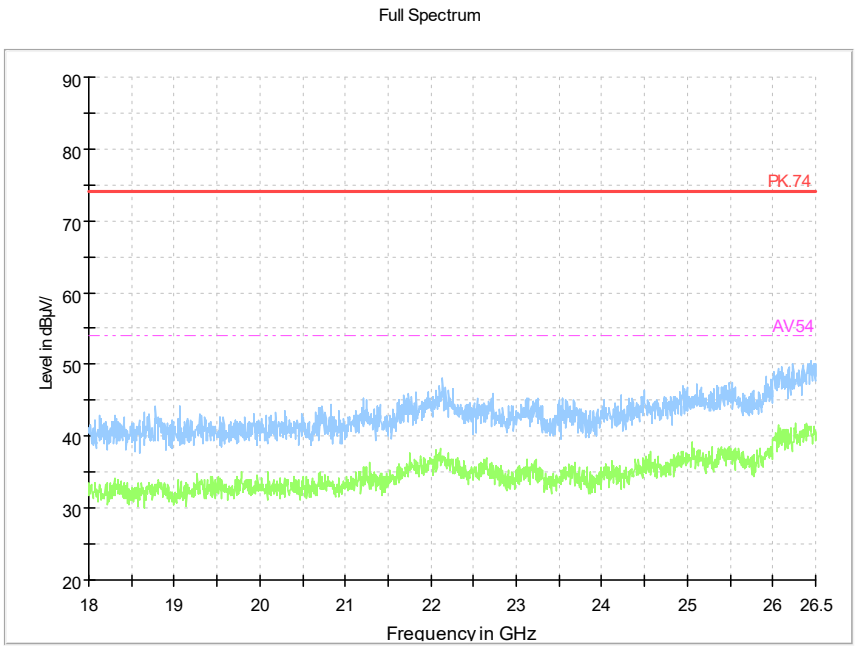
Frequency Range: 30MHz-1GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK



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



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



Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

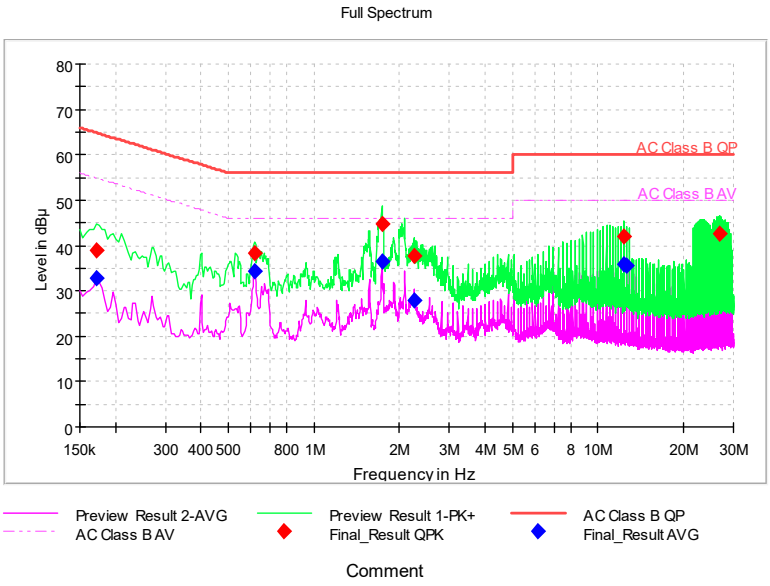
AC Power line Conducted Emission

A “reference path loss” Corr.(dB) is established and the L_{cable}+ATT+VDF is the attenuation of ” reference path loss”, and including the cable loss, the attenuation of the attenuator, the voltage division factor of AMN.

The measurement results are obtained as described below:

$P_{result}=P_{mea}$+ Corr.(dB)

Sample calculation: (32.87dBμV) = (3.17dBμV) + (29.7 dB), the corresponding frequency is0.17132MHz.



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBμV)	Pmea Average (dBμV)
0.17132	---	32.87	54.9	22.03	N	29.7	---	3.17
0.17132	38.83	---	64.9	26.07	L1	29.8	9.03	---
0.61907	38.3	---	56	17.7	N	29.7	8.6	---
0.61907	---	34.42	46	11.58	N	29.7	---	4.72
1.74058	---	36.45	46	9.55	L1	29.8	---	6.65
1.74058	44.73	---	56	11.27	L1	29.8	14.93	---
2.26509	37.8	---	56	18.2	L1	29.8	8	---
2.26509	---	27.85	46	18.15	L1	29.8	---	-1.95
12.3331	---	35.84	50	14.16	L1	30	---	5.84
12.3373	42.06	---	60	17.94	L1	30	12.06	---
12.6017	---	35.5	50	14.5	L1	30	---	5.5
26.8146	42.5	---	60	17.5	L1	30	12.5	---

---End of Test Report---