Test Mode: Coded 125K

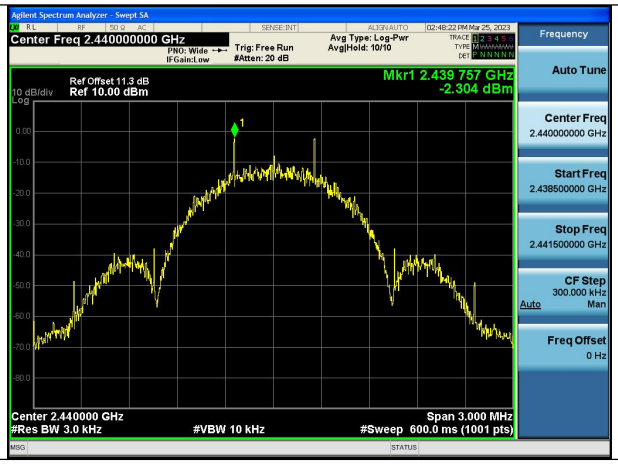
Test Mode:Coded 125K 2402MHz

Test Mode:Coded 125K 2440MHz

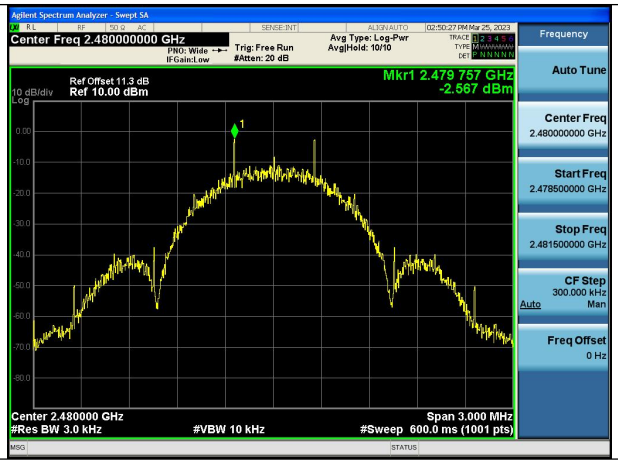
Test Mode:Coded 125K 2480MHz

Test Mode: Coded 500K

Test Mode:Coded 500K 2402MHz



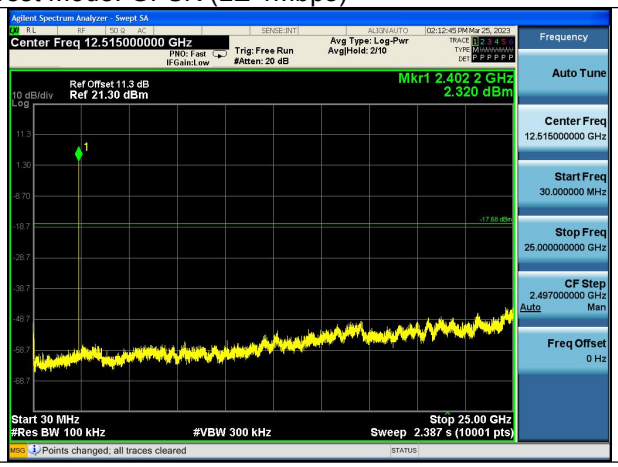
Test Mode:Coded 500K 2440MHz



Test Mode:Coded 500K 2480MHz

5 Conducted Out of band emission measurement

Test Mode: GFSK (LE 1Mbps)

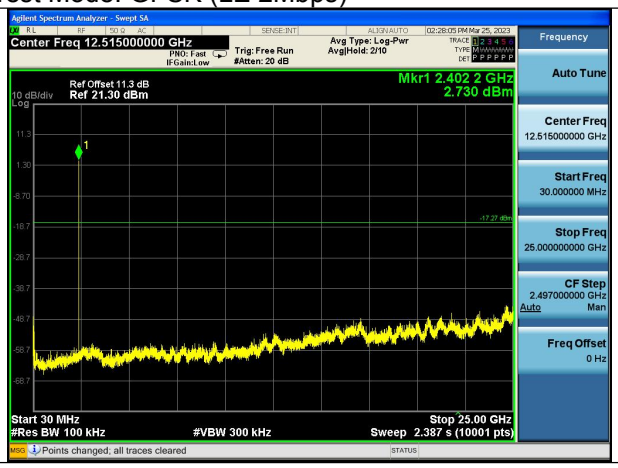


CH0

CH19

CH39

Test Mode: GFSK (LE 2Mbps)



CH0

CH19

	
CH39	

Test Mode: Coded 125K

	
CH0	CH19
	
CH39	

Test Mode: Coded 500K

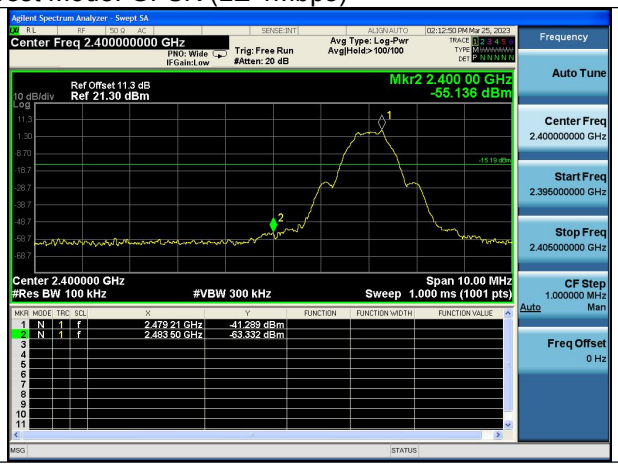
CH0

CH19

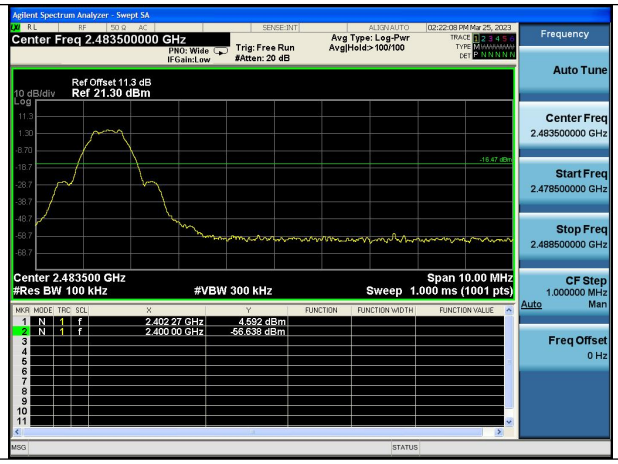
CH39

6 Band Edge measurement

Test Mode: GFSK (LE 1Mbps)



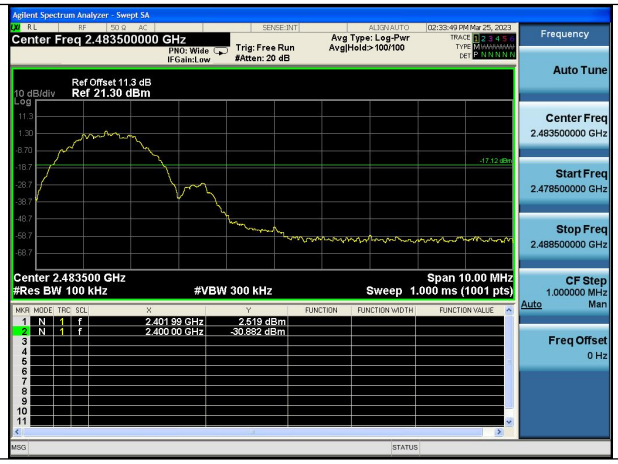
CH0



CH39

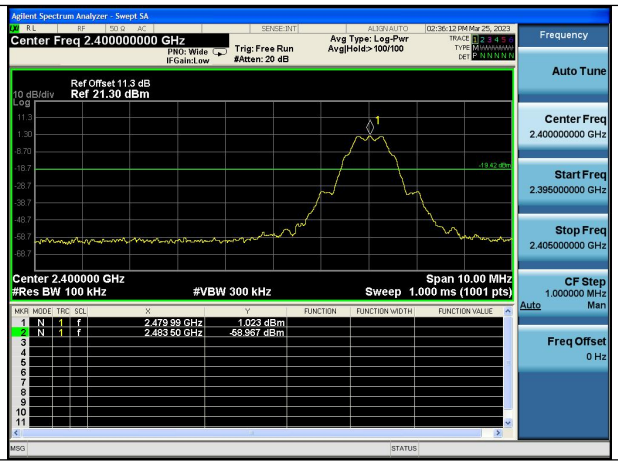
Test Mode: GFSK (LE 2Mbps)

CH0

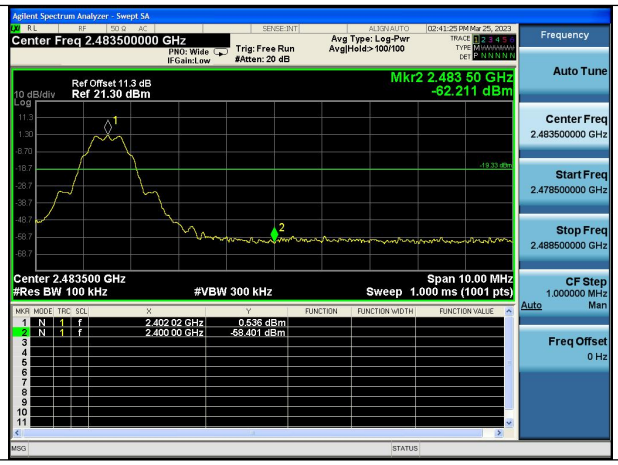


CH39

Test Mode: Coded 125K

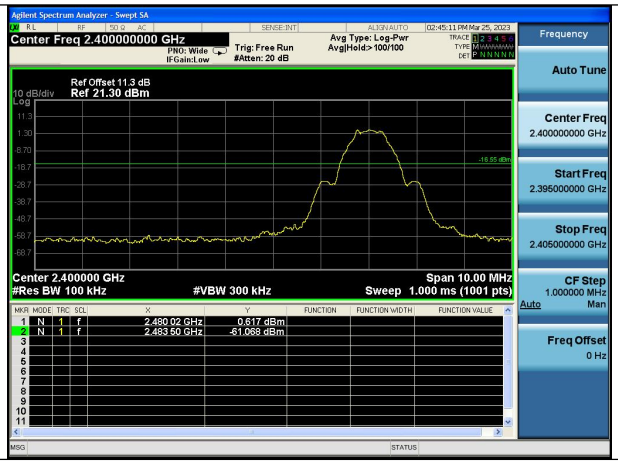
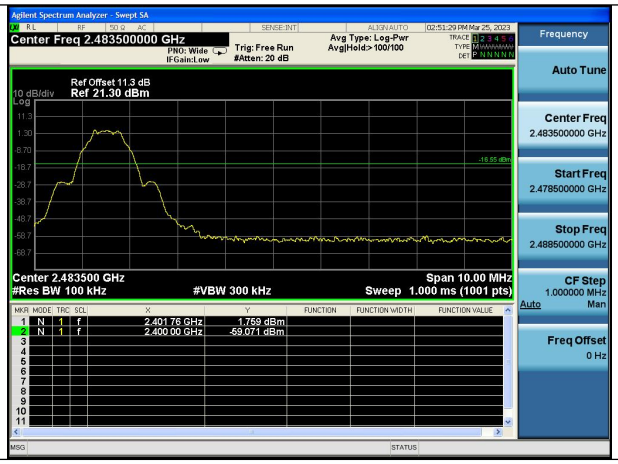


CH0



CH39

Test Mode: Coded 500K

	
CH0	CH39

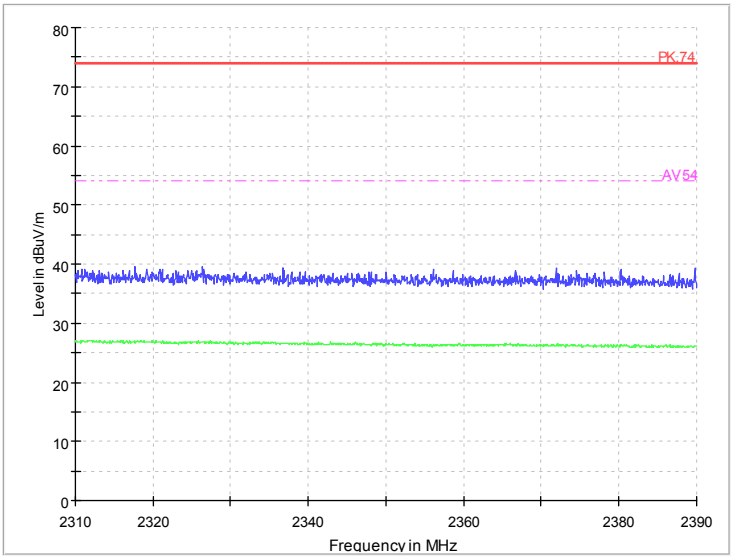
APPENDIX B – TEST DATA OF RADIATED EMISSION

Note1:Both horizontal and vertical polarizations of the antenna are set to make the measurement.

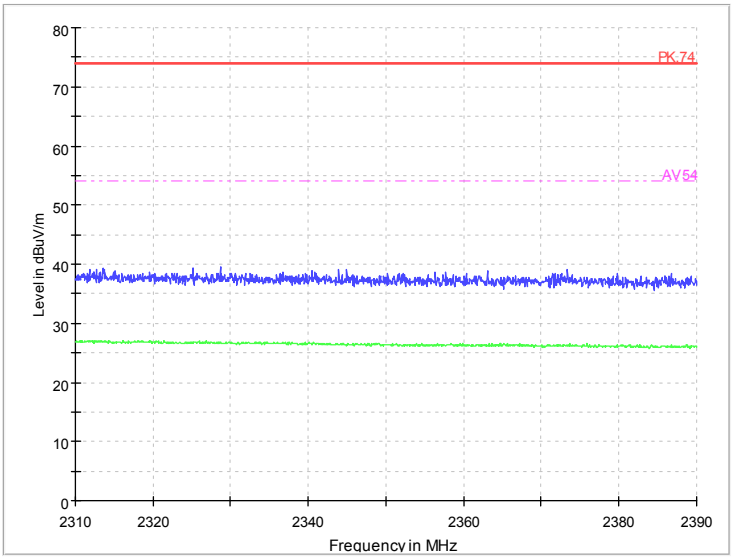
Note2:Because the test result is more than 20dB below the limit value, there was no point being taken

Radiated Emission Band Edge

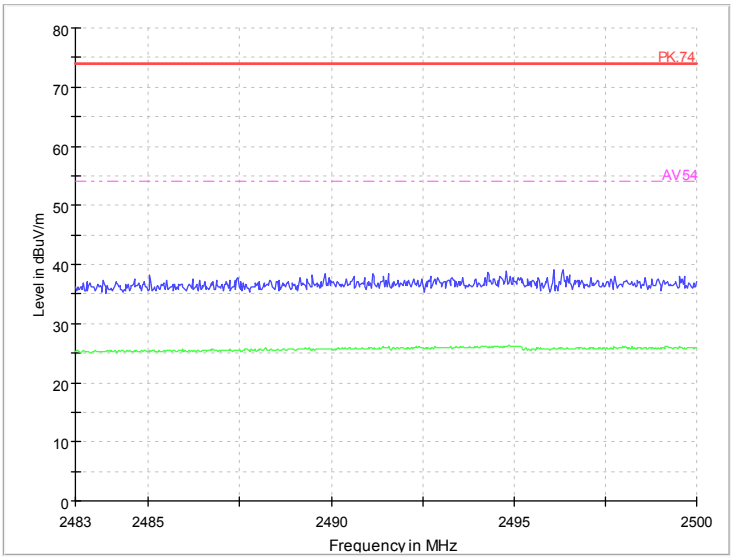
After comparison the worst case attitude is EUT vertical. The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case.



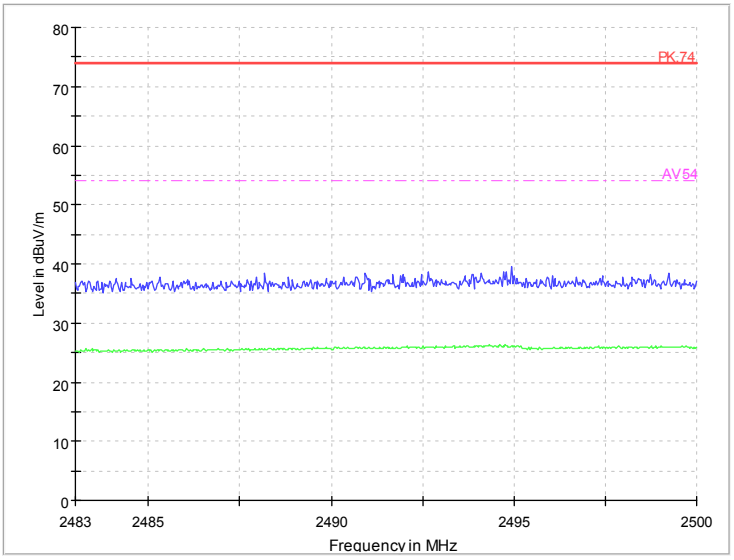
Radiated Emission Band Edge
Channel No.:0
Test Mode: GFSK (LE 1Mbps)
Polarization：V



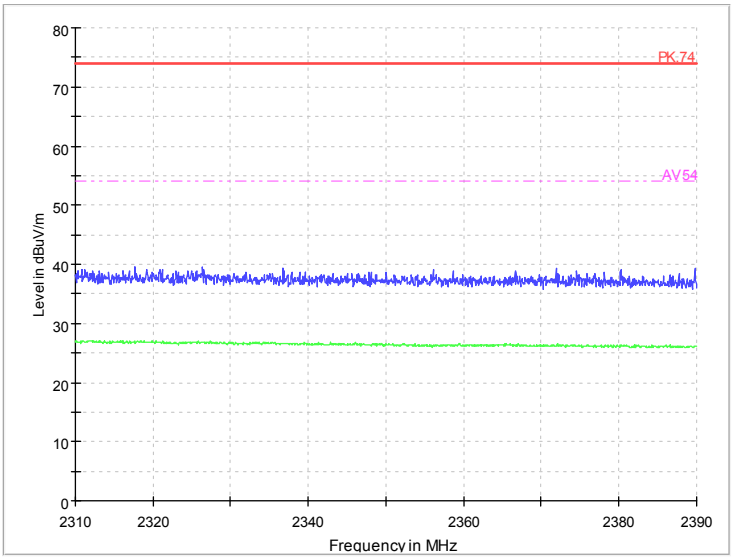
Radiated Emission Band Edge
Channel No.:0
Test Mode: GFSK (LE 1Mbps)
Polarization：H



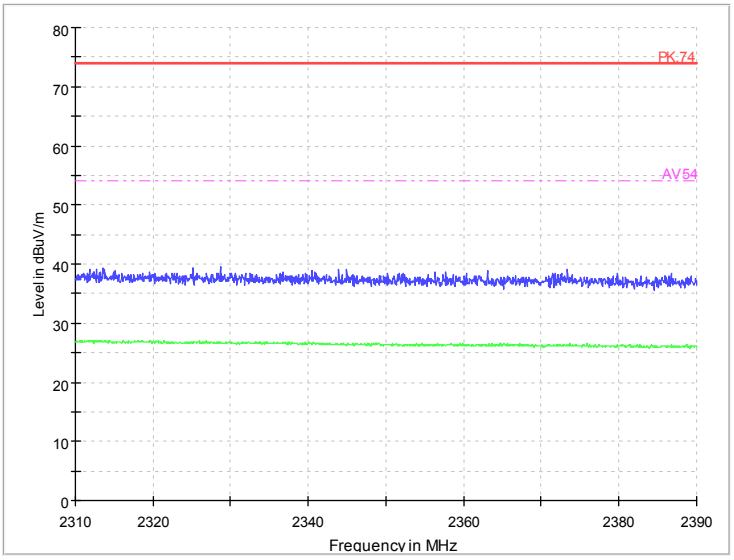
Radiated Emission Band Edge
Channel No.:39
Test Mode: GFSK (LE 1Mbps)
Polarization：V



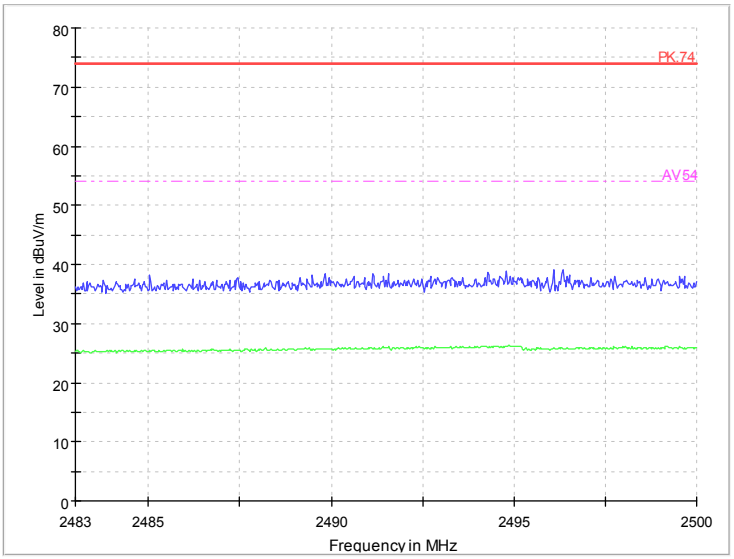
Radiated Emission Band Edge
Channel No.:39
Test Mode: GFSK (LE 1Mbps)
Polarization：H



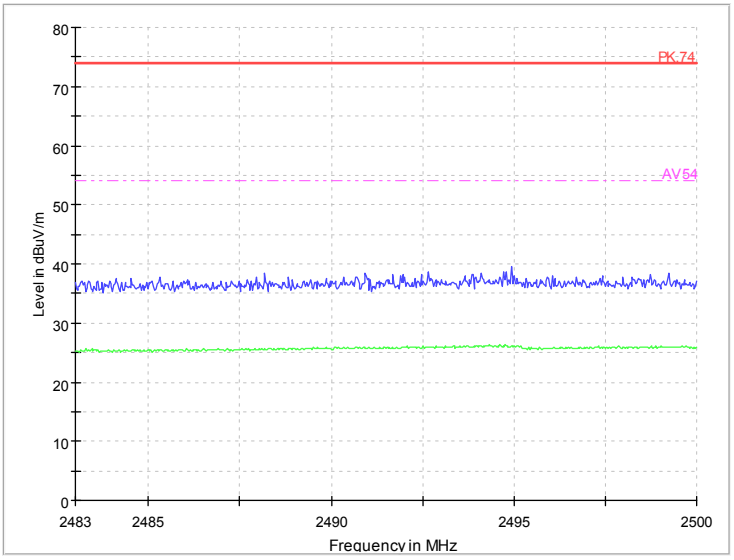
Radiated Emission Band Edge
Channel No.:0
Test Mode: GFSK (LE 2Mbps)
Polarization：V



Radiated Emission Band Edge
Channel No.:0
Test Mode: GFSK (LE 2Mbps)
Polarization：H



Radiated Emission Band Edge
Channel No.:39
Test Mode: GFSK (LE 2Mbps)
Polarization：V



Radiated Emission Band Edge
Channel No.:39
Test Mode: GFSK (LE 2Mbps)
Polarization：H

Test result

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: (3.63dBμV/m) = (-21.2dB/m) + (24.83dBuV), the corresponding frequency is30.194000MHz.
The worst case attitude: The Module lay down.

For GFSK (LE)
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	ARpl (dB/m)	Pmea (dBuV)	Polarity
30.194000	3.63	40.00	36.37	-21.2	24.83	Vertical
34.219500	6.07	40.00	33.93	-20.1	26.17	Vertical
65.599000	3.91	40.00	36.09	-20.7	24.61	Vertical
168.855500	2.74	43.50	40.76	-21.7	24.44	Vertical
523.487500	10.91	46.00	35.09	-10.3	21.21	Vertical
943.255000	16.50	46.00	29.50	-2.8	19.30	Vertical

Channel No.:19

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	ARpl (dB/m)	Pmea (dBuV)	Polarity
35.044000	3.21	40.00	36.79	-19.9	23.11	Vertical
59.488000	3.54	40.00	36.46	-18.8	22.34	Vertical
123.896000	3.24	43.50	40.26	-21.7	24.94	Vertical
194.754500	3.01	43.50	40.49	-19.4	22.41	Vertical
538.619500	11.49	46.00	34.51	-9.9	21.39	Vertical
946.068000	16.58	46.00	29.42	-2.8	19.38	Vertical

Channel No.:39

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	ARpl (dB/m)	Pmea (dBuV)	Polarity
52.310000	5.15	40.00	34.85	-17.8	22.95	Vertical
57.111500	4.71	40.00	35.29	-18.4	23.11	Vertical
105.126500	2.97	43.50	40.53	-19.4	22.37	Vertical
183.260000	3.11	43.50	40.39	-20.6	23.71	Vertical
523.730000	11.04	46.00	34.96	-10.3	21.34	Vertical
933.167000	16.55	46.00	29.45	-2.9	19.45	Vertical

For GFSK (LE 2M)
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	ARpl (dB/m)	Pmea (dBuV)	Polarity

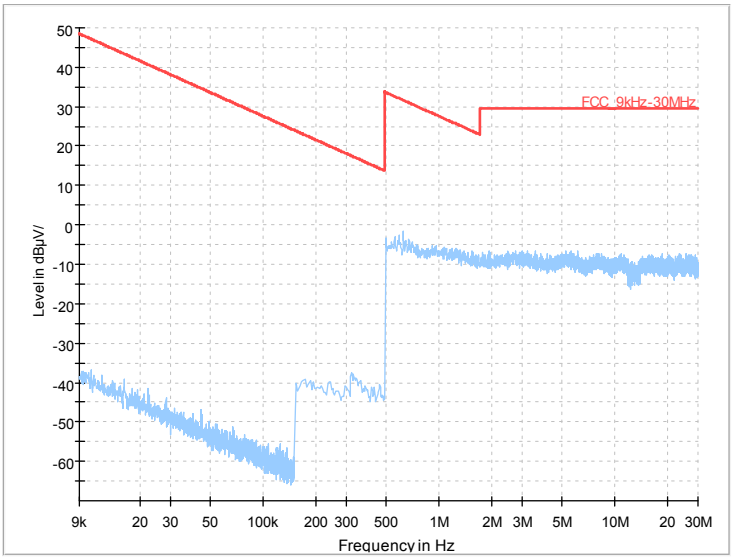
47.363000	3.48	40.00	36.52	-17.7	21.18	Vertical
57.014500	4.45	40.00	35.55	-18.4	22.85	Vertical
72.146500	0.17	40.00	39.83	-22.6	22.77	Vertical
136.700000	1.53	43.50	41.97	-22.7	24.23	Vertical
532.751000	11.47	46.00	34.53	-10.1	21.57	Vertical
923.079000	16.55	46.00	29.45	-3.0	19.55	Vertical

Channel No.:19

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	ARpl (dB/m)	Pmea (dBuV)	Polarity
44.356000	5.24	40.00	34.76	-18.0	23.24	Vertical
57.354000	4.42	40.00	35.58	-18.5	22.92	Vertical
142.568500	0.96	43.50	42.54	-22.7	23.66	Vertical
197.907000	2.35	43.50	41.15	-19.3	21.65	Vertical
546.428000	11.34	46.00	34.66	-9.8	21.14	Vertical
948.541500	16.57	46.00	29.43	-2.8	19.37	Vertical

Channel No.:39

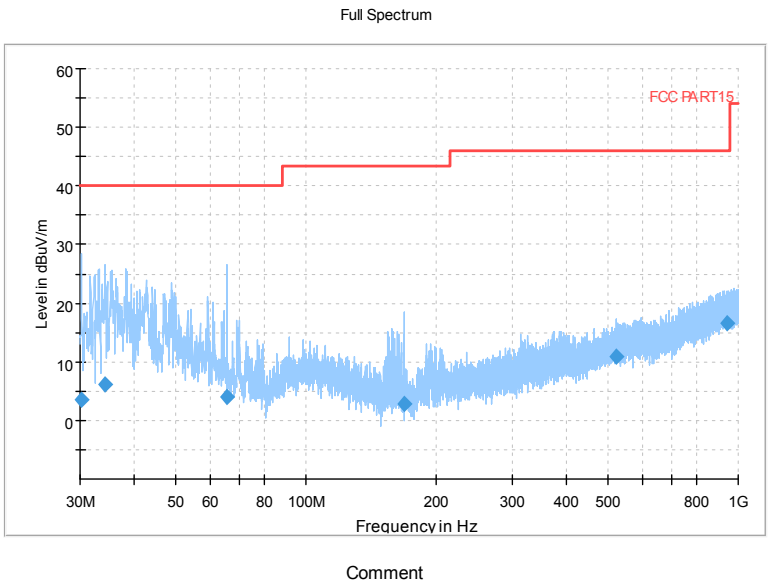
Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	ARpl (dB/m)	Pmea (dBuV)	Polarity
51.825000	6.32	40.00	33.68	-17.8	24.12	Vertical
59.973000	2.81	40.00	37.19	-18.8	21.61	Vertical
99.888500	4.09	43.50	39.41	-19.1	23.19	Vertical
195.239500	2.88	43.50	40.62	-19.4	22.28	Vertical
549.047000	11.22	46.00	34.78	-9.7	20.92	Vertical
947.038000	16.54	46.00	29.46	-2.8	19.34	Vertical



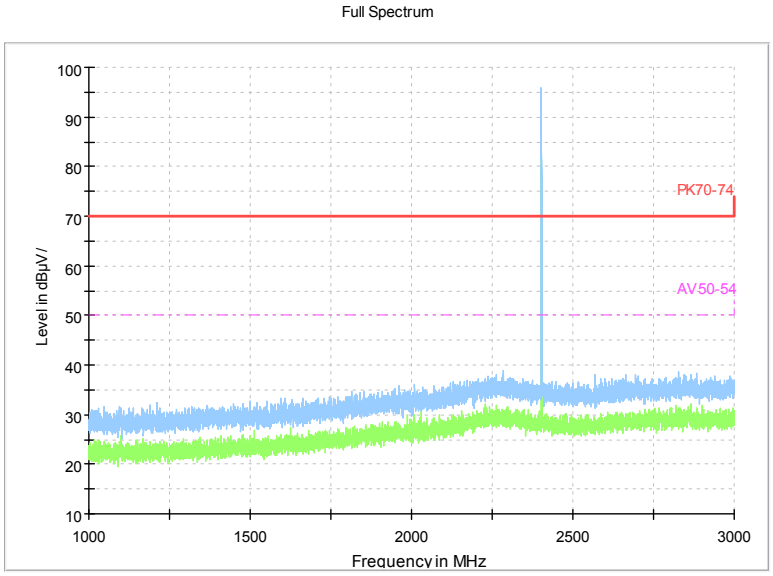
Frequency Range: 9kHz -30MHz
Detector: QP mode

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.

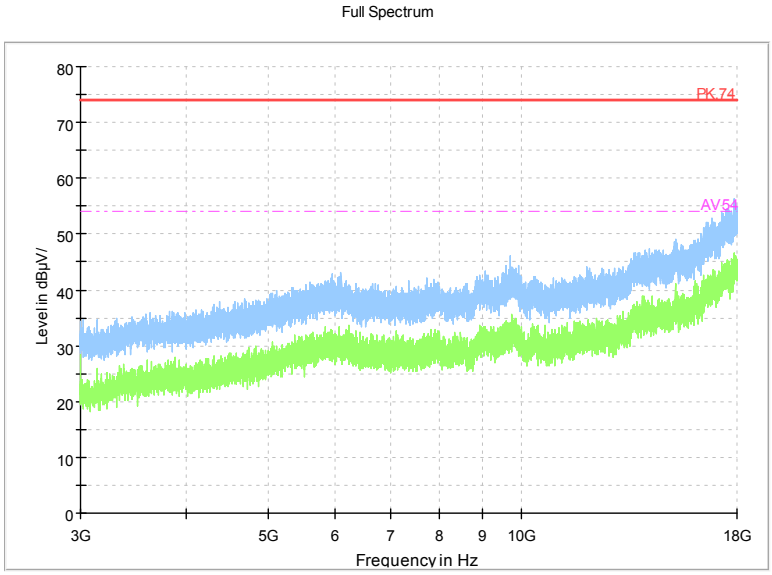
Channel No.:0



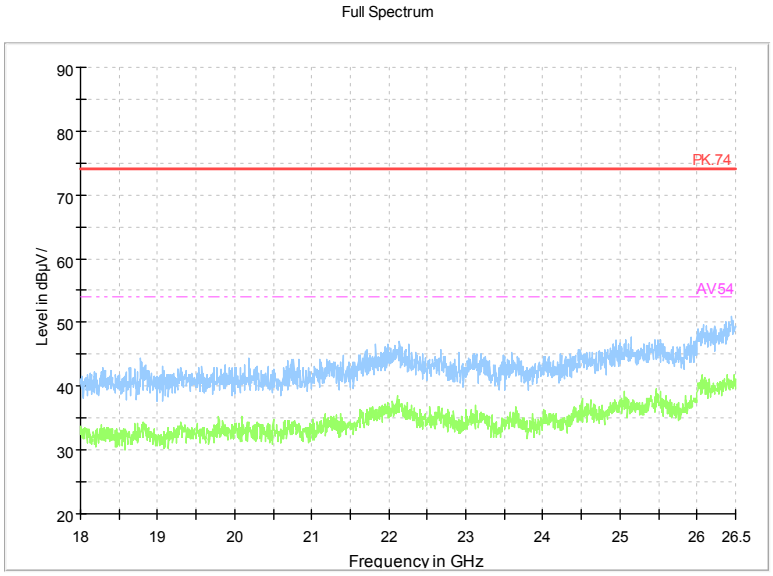
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE)



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

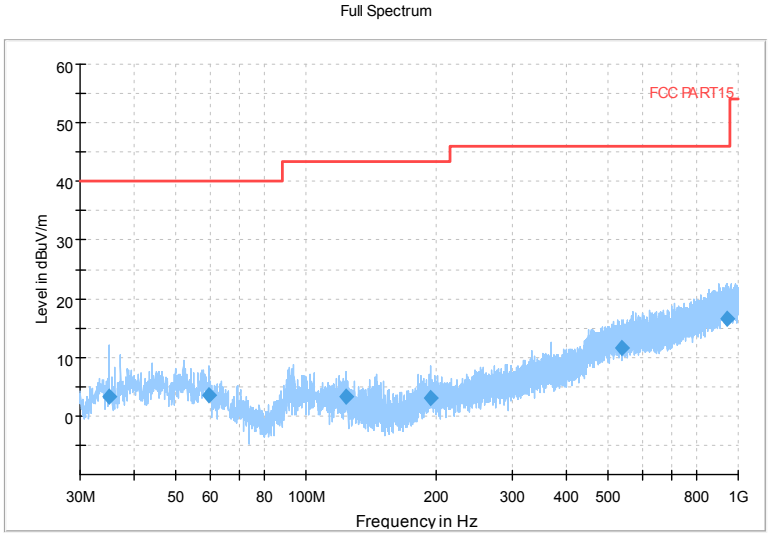


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

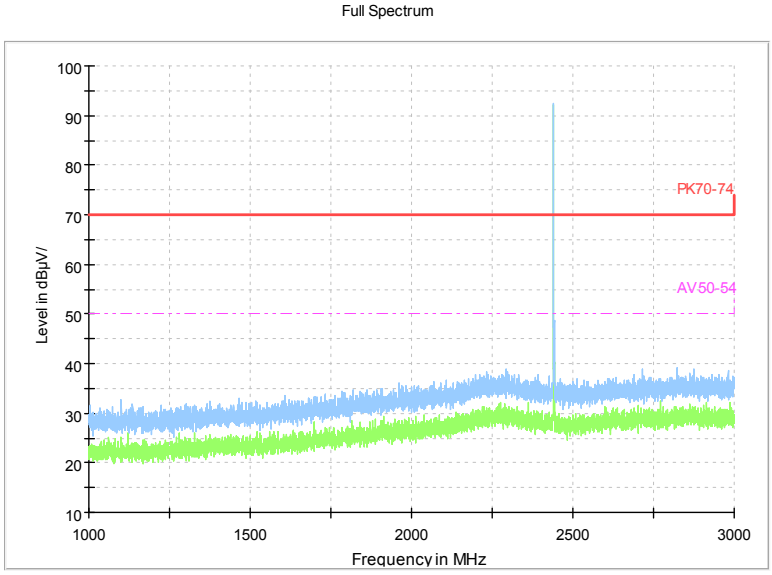


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

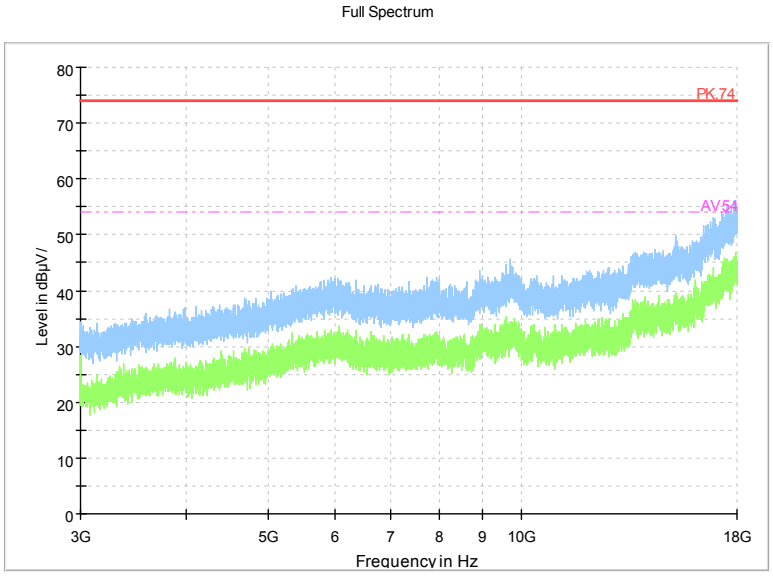
Channel No.:19



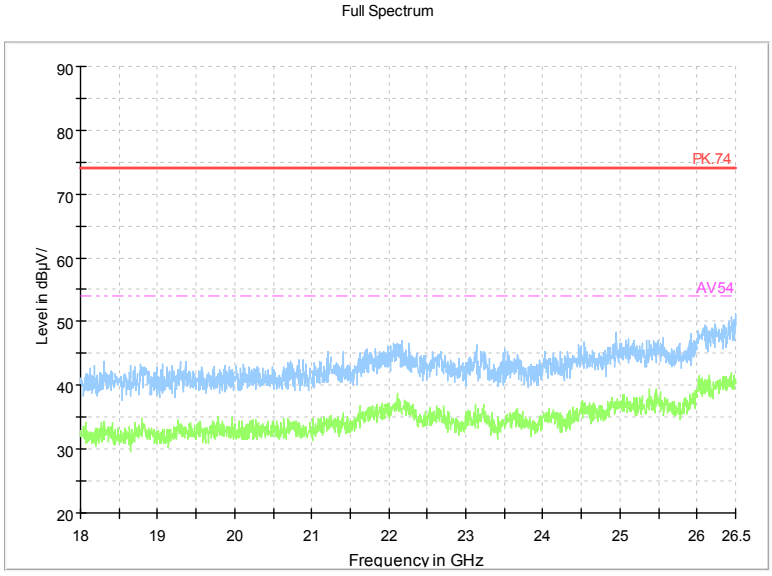
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE)



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

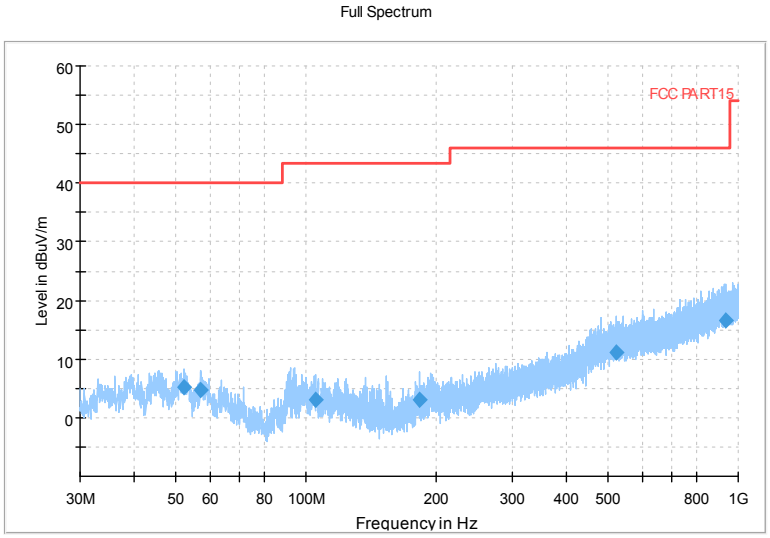


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)



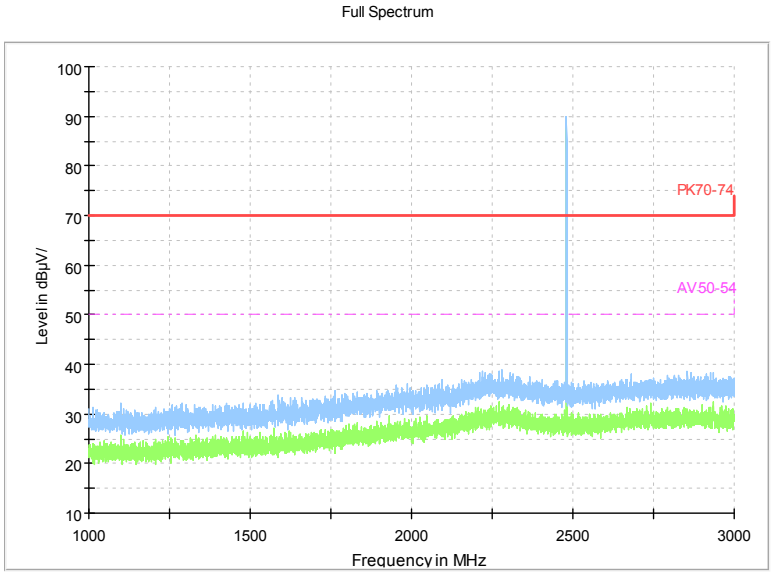
Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

Channel No.:39

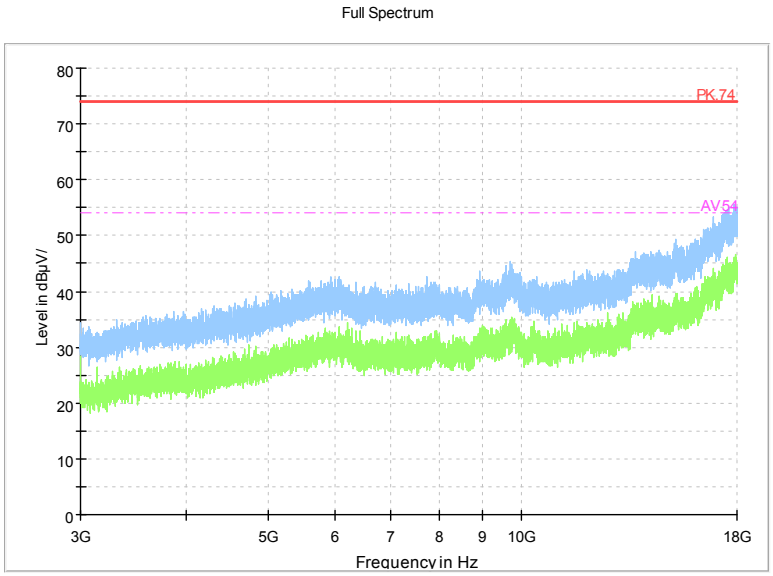


Comment

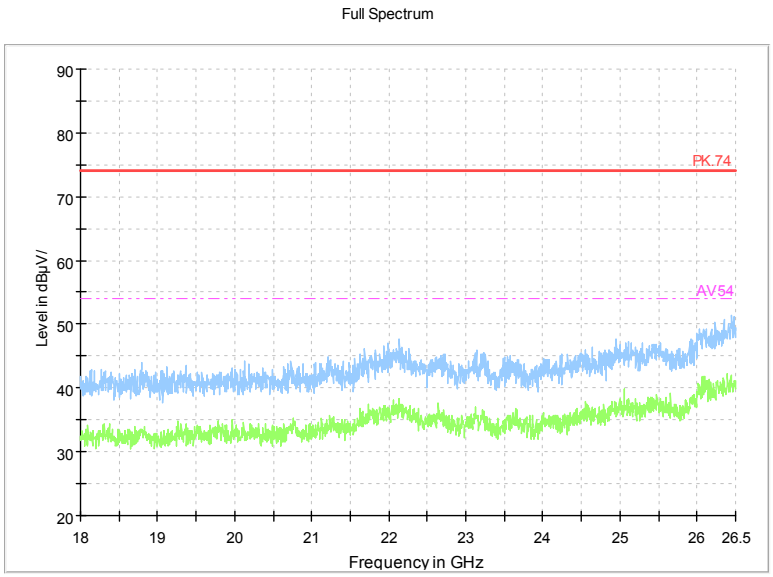
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE)



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

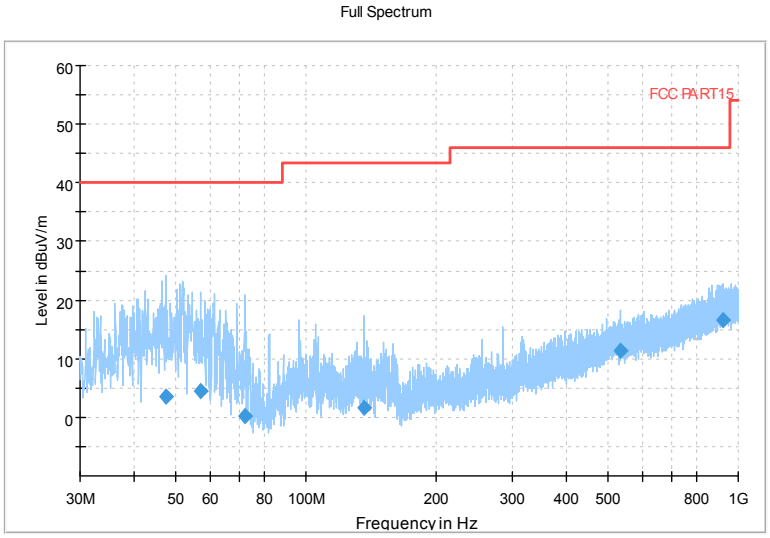


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

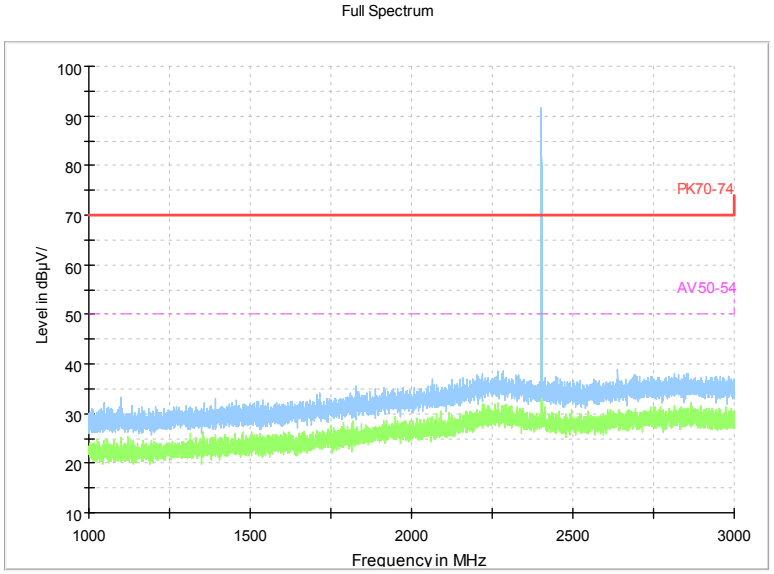


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

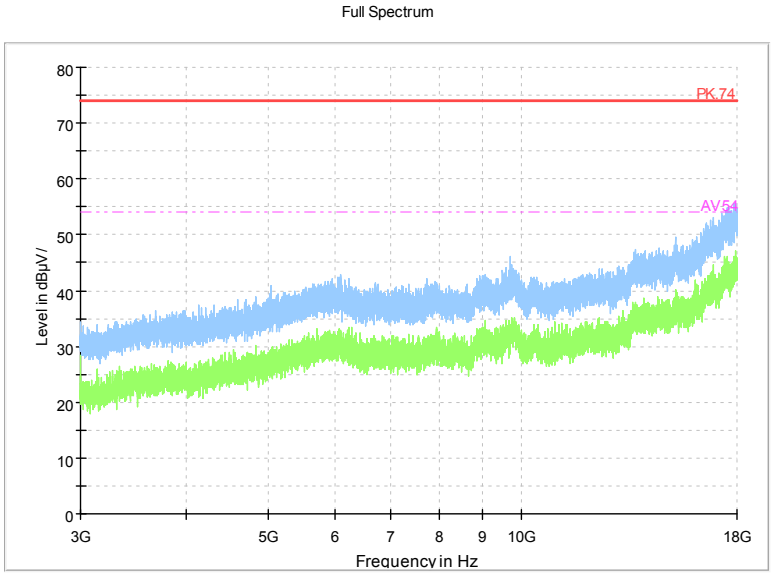
Channel No.:0



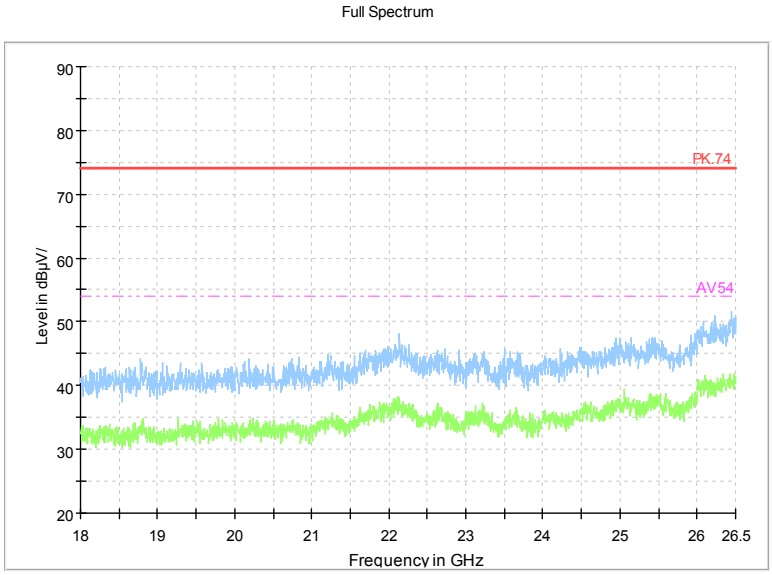
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK(LE 2M)



Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK(LE 2M)

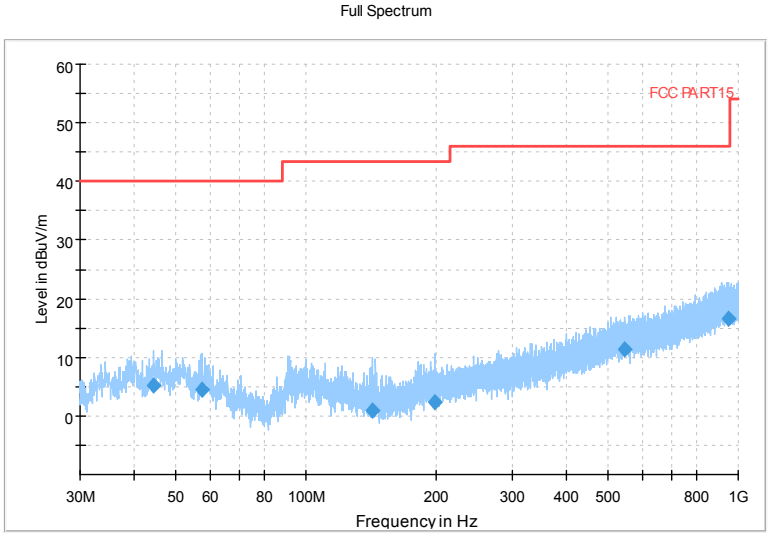


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK(LE 2M)

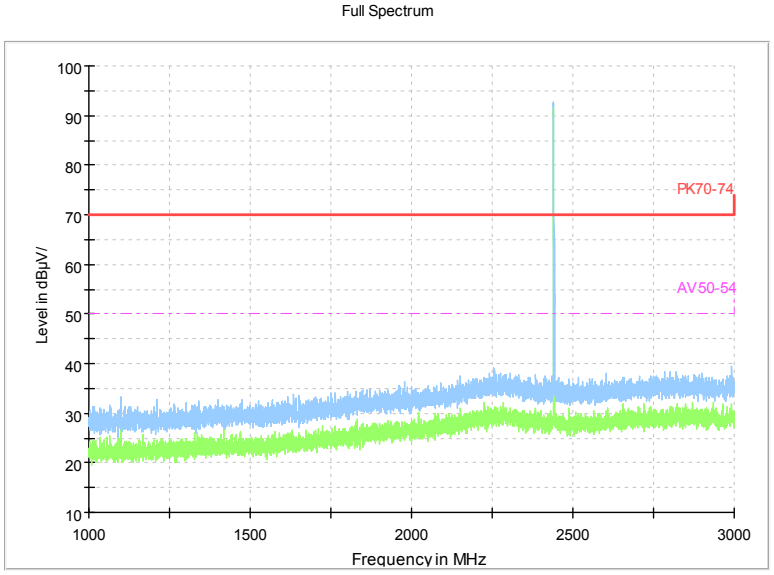


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2M)

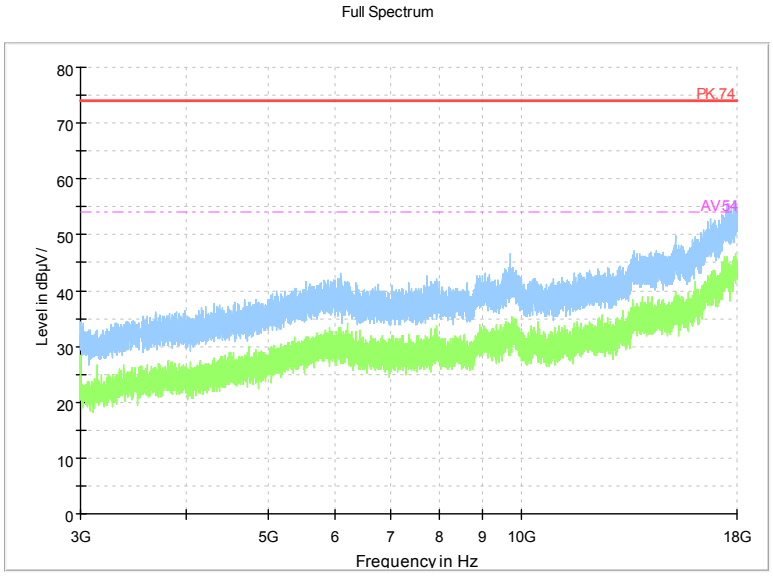
Channel No.:19



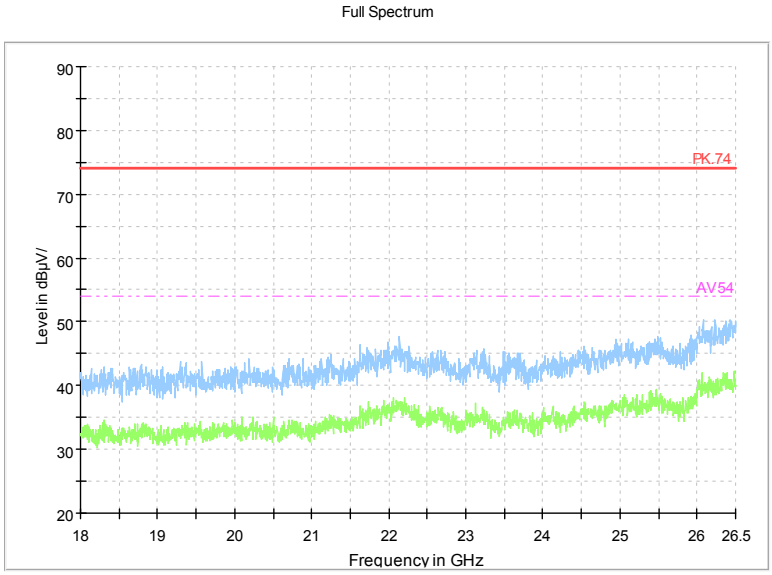
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK(LE 2M)



Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK(LE 2M)

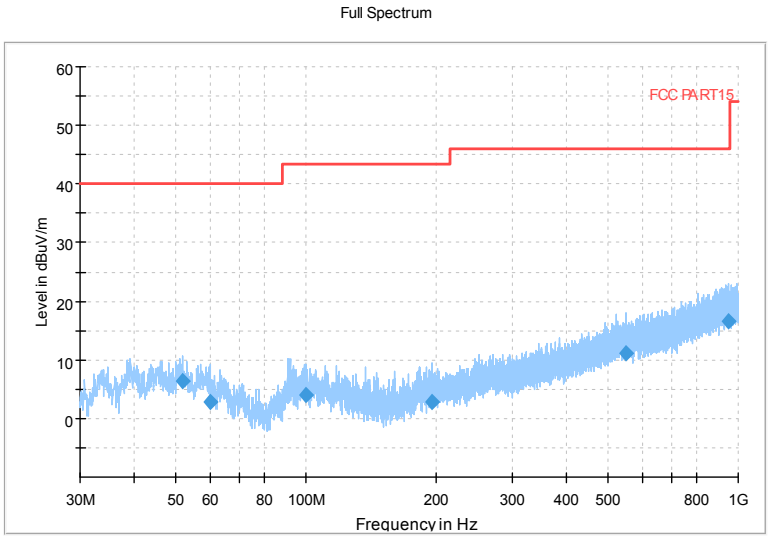


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK(LE 2M)

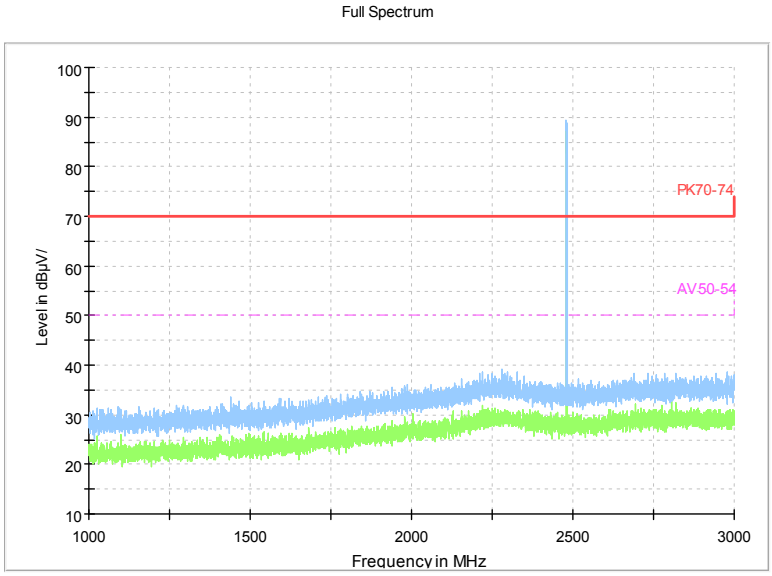


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK(LE 2M)

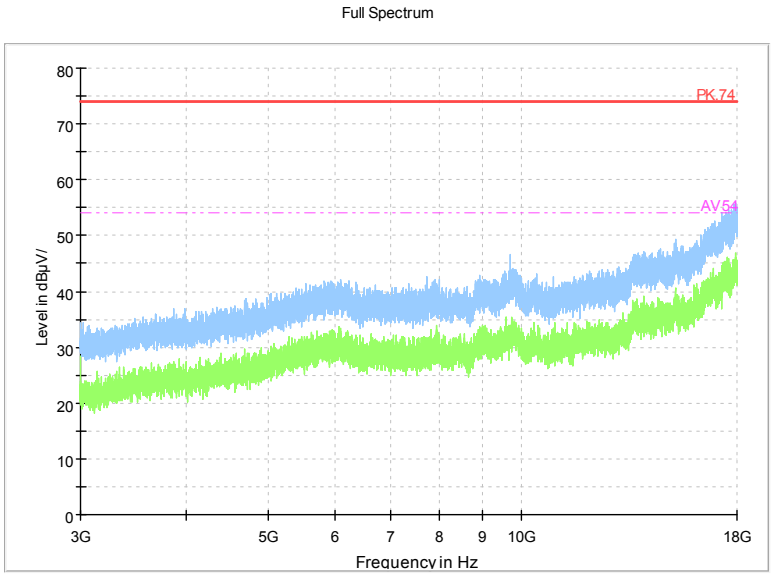
Channel No.:39



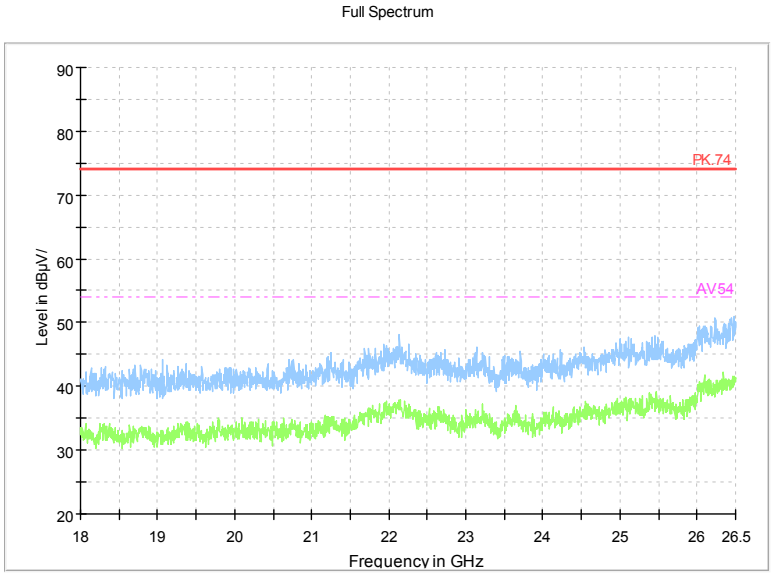
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 2M)



Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK(LE 2M)



Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2M)

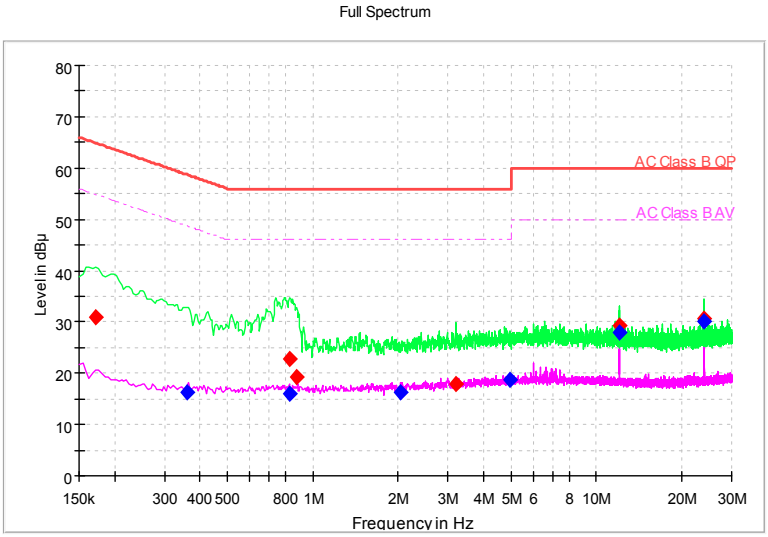


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2M)

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: (30.84dBμV) = (1.04dBμV) + (29.8 dB), the corresponding frequency is 0.171949MHz.



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	Quasi Peak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBμV)	Pmea Average (dBμV)
0.171949	30.84	---	64.87	34.02	L1	29.8	1.04	---
0.360706	---	16.14	48.71	32.58	L1	29.8	---	-13.66
0.826015	---	16.00	46.00	30.00	L1	29.8	---	-13.8
0.830404	22.80	---	56.00	33.20	L1	29.8	-7	---
0.878691	19.17	---	56.00	36.83	L1	29.8	-10.63	---
2.041963	---	16.39	46.00	29.61	L1	29.9	---	-13.51
3.205235	17.99	---	56.00	38.01	L1	29.9	-11.91	---
4.952338	---	18.81	46.00	27.19	L1	29.9	---	-11.09
12.041713	29.17	---	60.00	30.83	L1	30.0	-0.83	---
12.041713	---	27.97	50.00	22.03	N	30.0	---	-2.03
24.030000	---	30.15	50.00	19.85	N	30.0	---	0.15
24.030000	30.55	---	60.00	29.45	L1	30.0	0.55	---

---End of the test report---