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: (98.32 dBuV/m) = (64.32 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2402MHz.

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE)
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	98.32	64.32	N/A	N/A	8.90	25.10
2	2390	46.34	12.34	-27.66	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE)
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	92.57	58.57	N/A	N/A	8.90	25.10
2	2390	40.93	6.93	-33.07	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE)
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	85.74	51.74	N/A	N/A	8.90	25.10
2	2390	33.20	-0.80	-20.80	54.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE)
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	80.59	46.59	N/A	N/A	8.90	25.10
2	2390	31.34	-2.66	-22.66	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE)
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	97.27	63.27	N/A	N/A	8.90	25.10
2	2483.5	44.74	10.74	-29.26	74.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE)
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	93.47	59.47	N/A	N/A	8.90	25.10
2	2483.5	40.43	6.43	-33.57	74.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE)
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	84.65	50.65	N/A	N/A	8.90	25.10
2	2483.5	34.17	0.17	-19.83	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE)
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	81.04	47.04	N/A	N/A	8.90	25.10
2	2483.5	31.36	-2.64	-22.64	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: (20.22 dBμV/m) = (33.82 dBuV) + (-13.6 dB/m), the corresponding frequency is 30.400000MHz.
The worst case attitude: The mobile lay down.

For GFSK (LE)
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.400000	20.22	-13.6	33.82	Vertical	40.00
31.016667	18.68	-13.9	32.58	Vertical	40.00
34.404583	18.10	-15.5	33.6	Vertical	40.00
35.276667	16.78	-15.9	32.68	Vertical	40.00
35.664583	16.98	-16.0	32.98	Vertical	40.00
48.104167	26.42	-23.0	49.42	Vertical	40.00

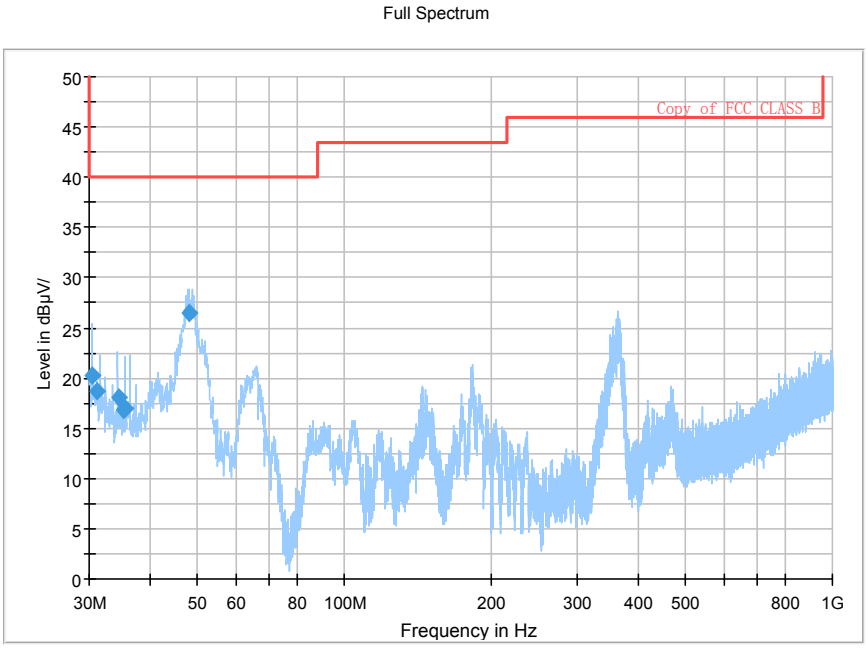
Channel No.:19

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.420000	20.49	-13.6	34.09	Vertical	40.00
30.467083	20.84	-13.6	34.44	Vertical	40.00
34.586667	18.83	-15.5	34.33	Vertical	40.00
34.602500	18.67	-15.6	34.27	Vertical	40.00
36.846667	17.16	-16.6	33.76	Vertical	40.00
48.086250	26.40	-23.0	49.4	Vertical	40.00

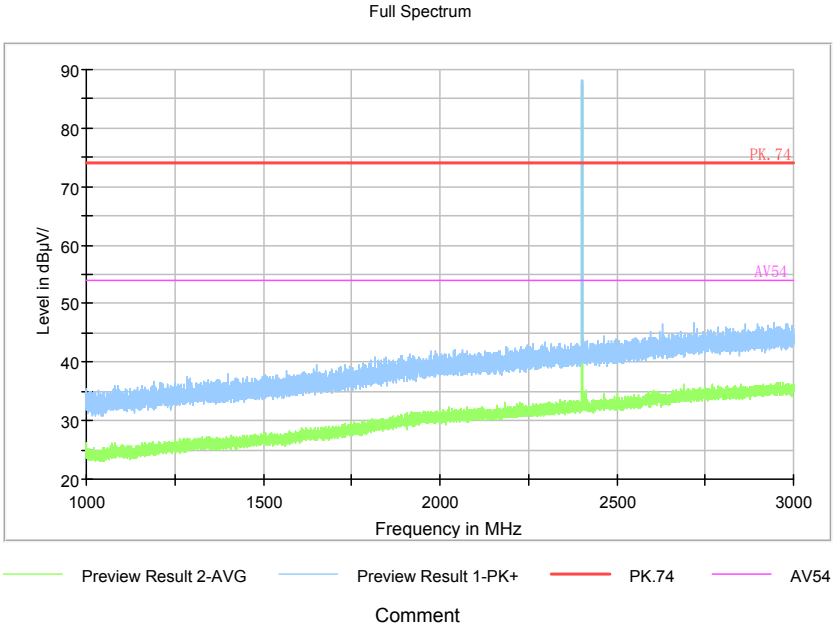
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.976250	19.13	-13.9	33.03	Vertical	40.00
35.398333	16.98	-15.9	32.88	Vertical	40.00
35.536250	17.17	-16.0	33.17	Vertical	40.00
48.813750	27.08	-23.4	50.48	Vertical	40.00
65.867917	18.92	-25.4	44.32	Vertical	40.00
363.963333	24.35	-16.2	40.55	Vertical	46.00

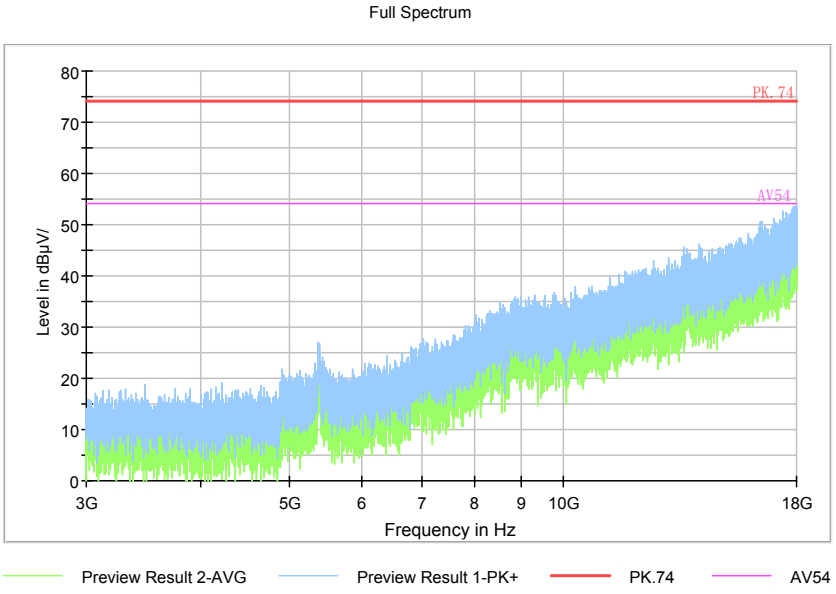
Channel No.:0



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



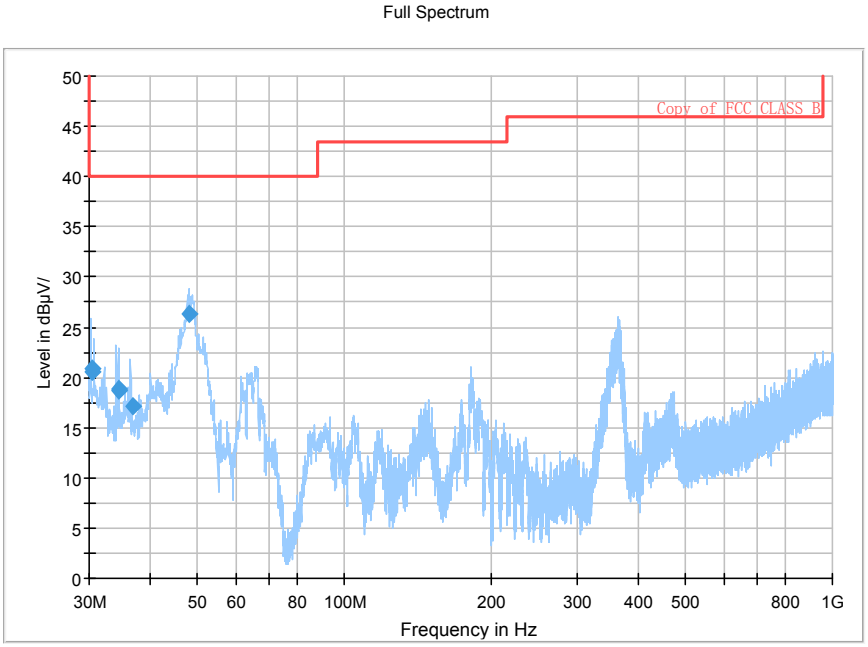
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)



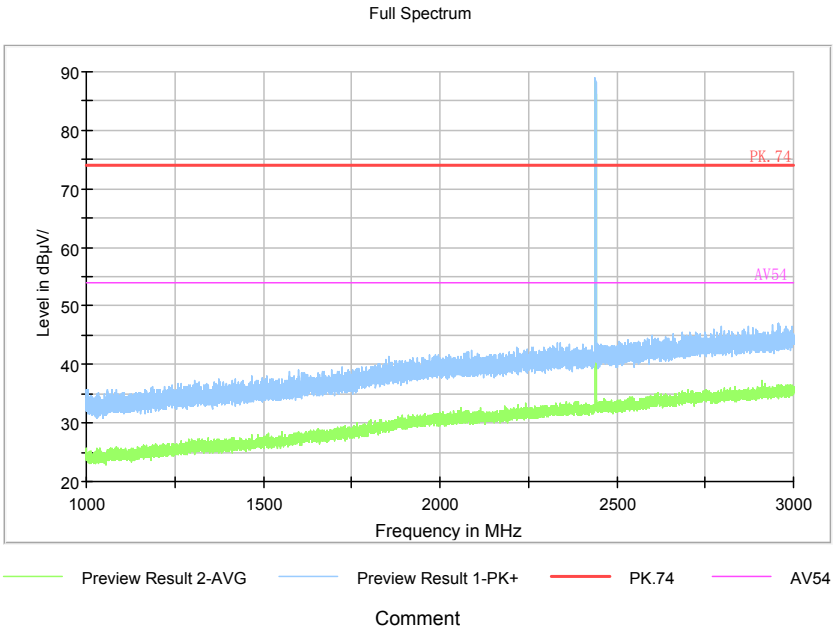
Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

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

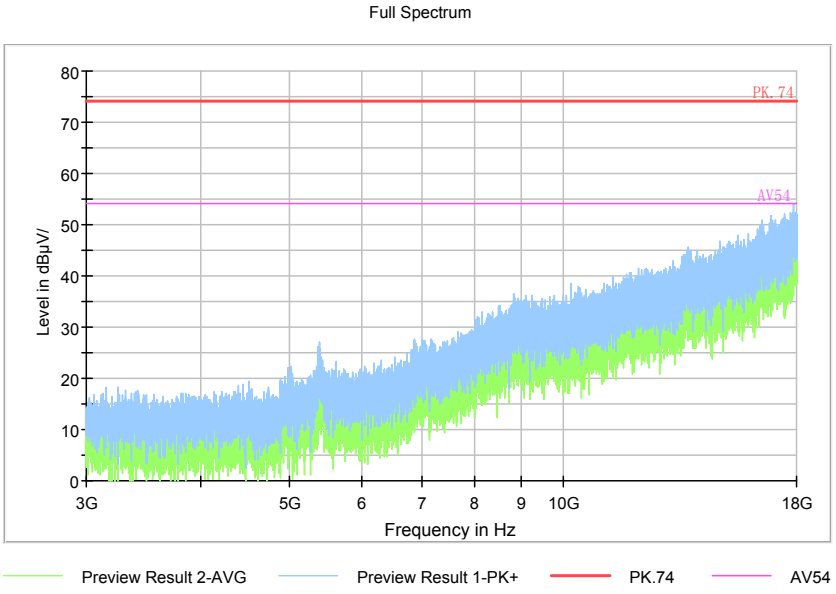
Channel No.:19



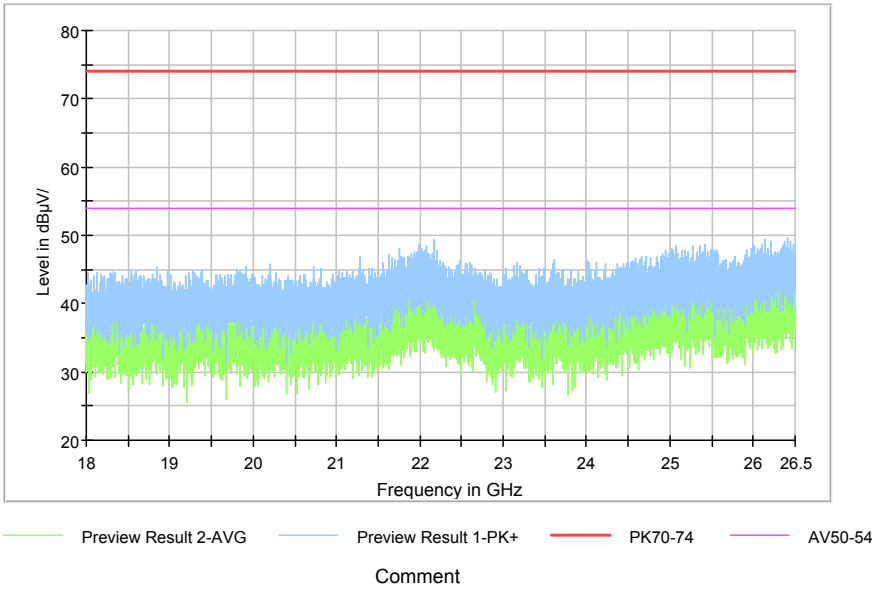
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE)



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

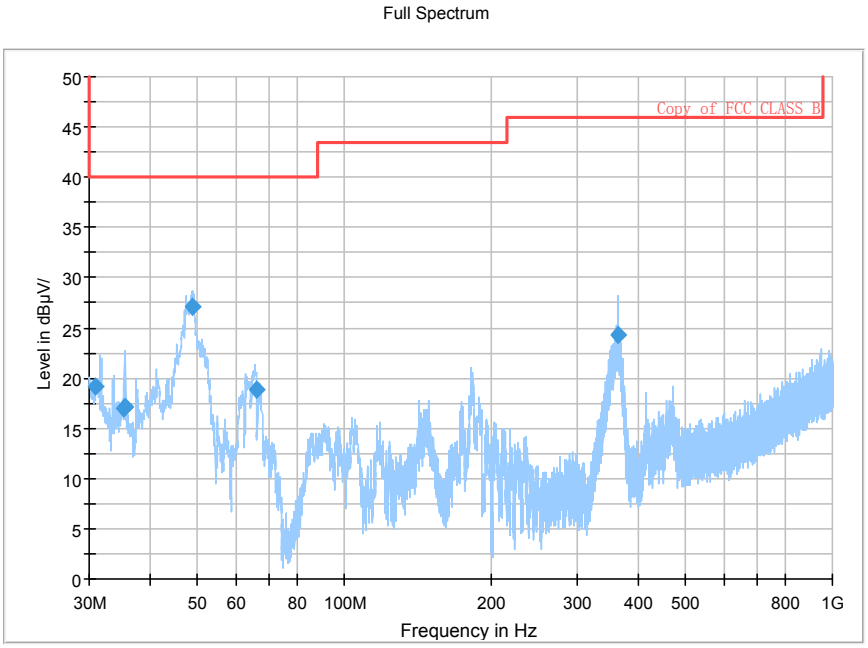


Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

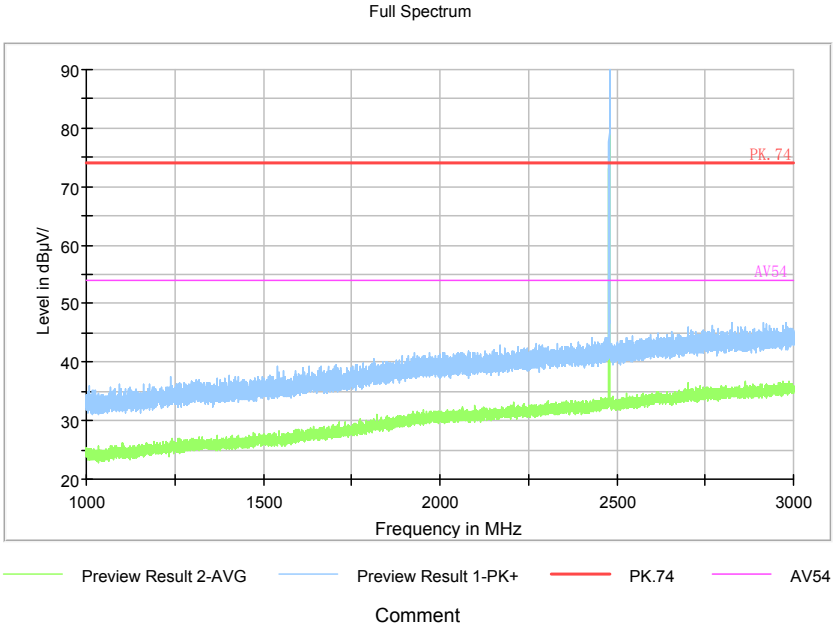


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

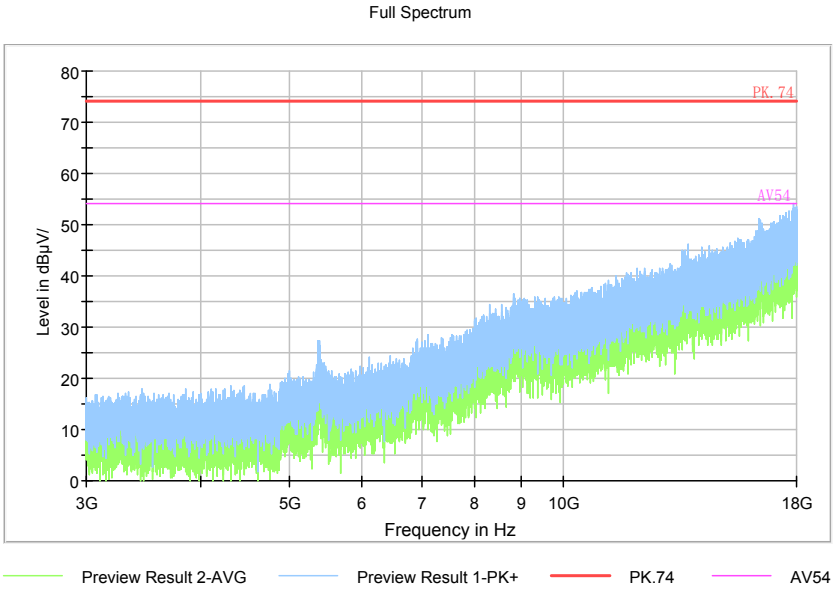
Channel No.:39



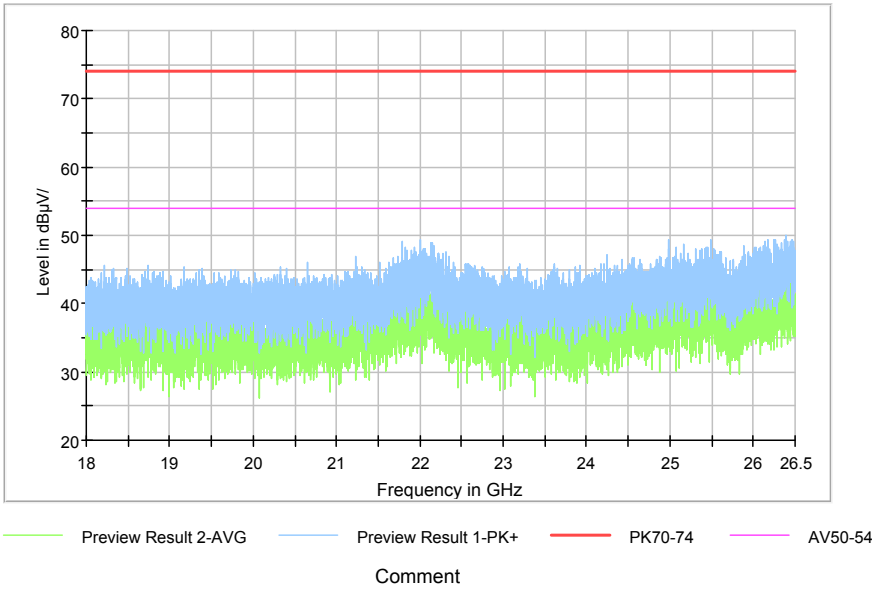
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE)



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)

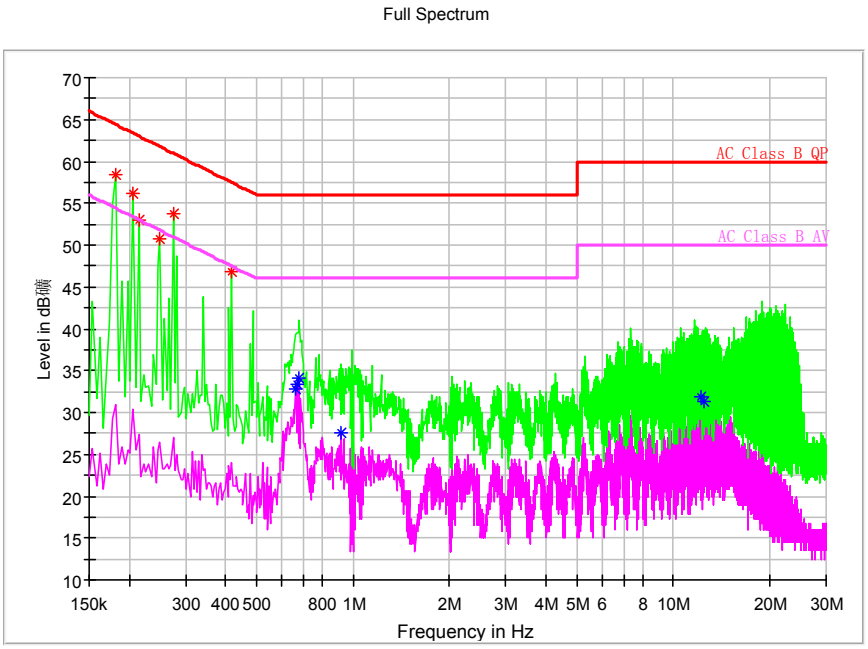


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE)

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: (58.49 dBμV) = (28.59 dBμV) + (29.9 dB), the corresponding frequency is 0.182000MHz.



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Pmea Quasi Peak (dBµV)	Pmea Average (dBµV)
0.182000	58.49	---	64.39	5.90	L1	29.9	28.59	---
0.206000	56.23	---	63.37	7.14	N	29.9	26.33	---
0.214000	52.91	---	63.05	10.14	N	29.9	23.01	---
0.250000	50.80	---	61.76	10.96	N	29.9	20.9	---
0.274000	53.71	---	61.00	7.29	N	29.9	23.81	---
0.418000	46.74	---	57.49	10.75	L1	30.0	16.74	---
0.662000	---	32.77	46.00	13.23	L1	30.0	---	2.77
0.670000	---	33.38	46.00	12.62	L1	30.0	---	3.38
0.678000	---	34.12	46.00	11.88	L1	30.0	---	4.12
0.922000	---	27.58	46.00	18.42	L1	29.9	---	-2.32
12.218000	---	31.87	50.00	18.13	L1	29.9	---	1.97
12.414000	---	31.28	50.00	18.72	L1	29.9	---	1.38

---End of Test Report---