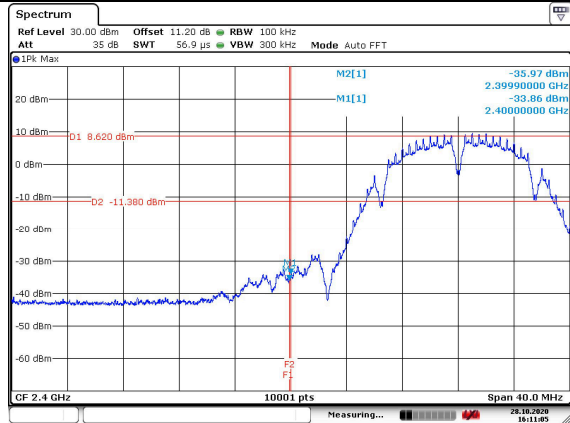


Band edge measurement (RF Conducted measurement)

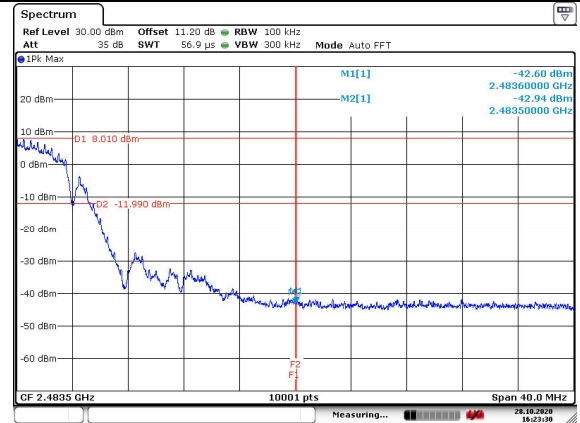
Offset 11.2dB = Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

802.11b

CH1

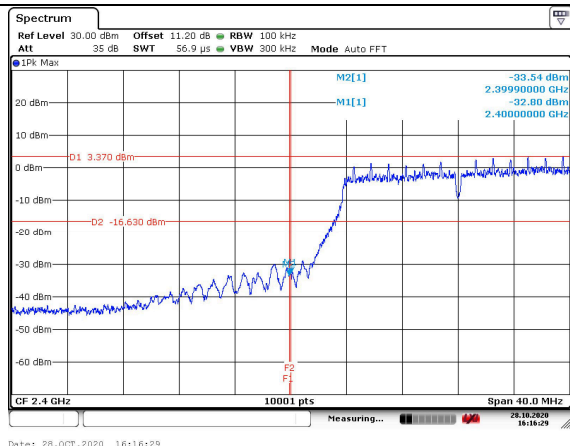


CH11

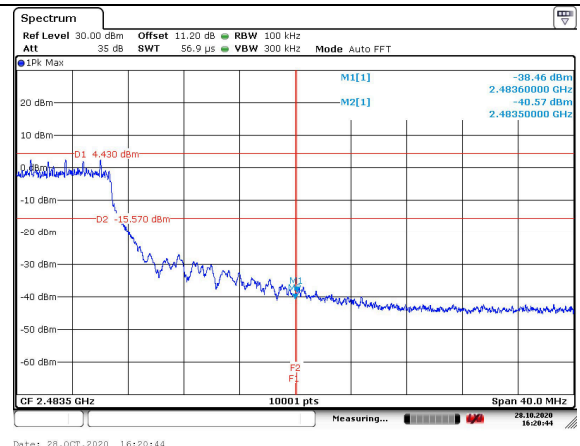


802.11g

CH1

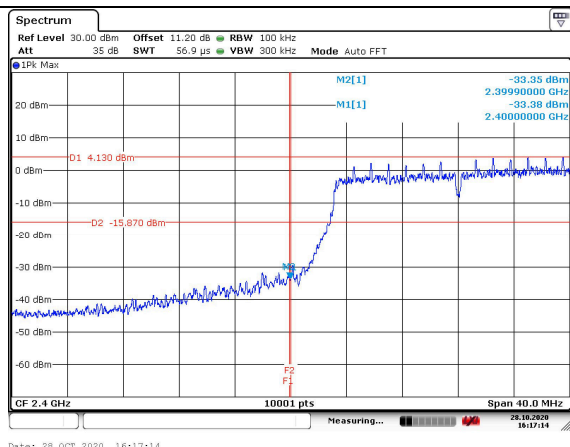


CH11

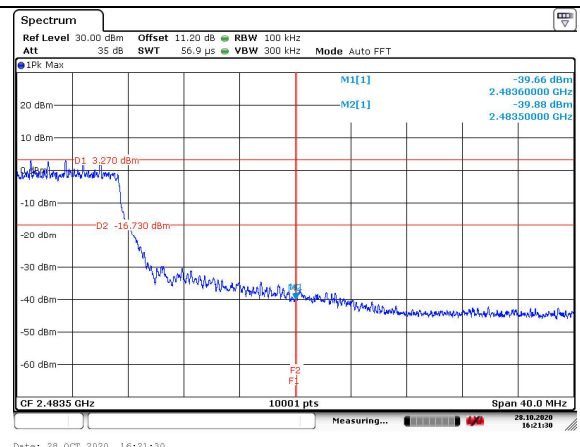


802.11n (HT20)

CH1



CH11



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: (100.56 dBuV/m) = (66.56 dBμV) + (8.90 dB) + (25.10 dB/m), the corresponding frequency is 2412MHz.

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

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	2412	100.56	66.56	N/A	N/A	8.90	25.10
2	2390	41.56	7.56	-32.44	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

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	2412	95.56	61.56	N/A	N/A	8.90	25.10
2	2390	40.63	6.63	-33.37	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

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	2412	97.17	63.17	N/A	N/A	8.90	25.10
2	2390	36.76	2.76	-17.24	54.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

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	2412	92.17	58.17	N/A	N/A	8.90	25.10
2	2390	35.87	1.87	-18.13	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
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	2462	100.21	66.21	N/A	N/A	8.90	25.10
2	2483.5	42.76	8.76	-31.24	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
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	2462	95.21	61.21	N/A	N/A	8.90	25.10
2	2483.5	42.71	8.71	-31.29	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
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	2462	96.29	62.29	N/A	N/A	8.90	25.10
2	2483.5	36.21	2.21	-17.79	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11b
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	2462	91.29	57.29	N/A	N/A	8.90	25.10
2	2483.5	34.26	0.26	-19.74	54.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11g

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	2412	103.30	69.30	N/A	N/A	8.90	25.10
2	2390	42.96	8.96	-31.04	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11g

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	2412	98.30	64.30	N/A	N/A	8.90	25.10
2	2390	41.81	7.81	-32.19	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11g

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	2412	94.12	60.12	N/A	N/A	8.90	25.10
2	2390	36.71	2.71	-17.29	54.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11g

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	2412	89.12	55.12	N/A	N/A	8.90	25.10
2	2390	35.22	1.22	-18.78	54.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11g

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	2462	102.20	68.20	N/A	N/A	8.90	25.10
2	2483.5	43.20	9.20	-30.80	74.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11g

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	2462	97.20	63.20	N/A	N/A	8.90	25.10
2	2483.5	39.90	5.90	-34.10	74.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11g

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	2462	92.11	58.11	N/A	N/A	8.90	25.10
2	2483.5	36.03	2.03	-17.97	54.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11g

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	2462	87.11	53.11	N/A	N/A	8.90	25.10
2	2483.5	35.96	1.96	-18.04	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
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	2412	103.27	69.27	N/A	N/A	8.90	25.10
2	2390	43.91	9.91	-30.09	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
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	2412	98.27	64.27	N/A	N/A	8.90	25.10
2	2390	43.61	9.61	-30.39	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
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	2412	95.68	61.68	N/A	N/A	8.90	25.10
2	2390	36.39	2.39	-17.61	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
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	2412	90.68	56.68	N/A	N/A	8.90	25.10
2	2390	35.40	1.40	-18.60	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
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	2462	102.46	68.46	N/A	N/A	8.90	25.10
2	2483.5	42.49	8.49	-31.51	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
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	2462	97.46	63.46	N/A	N/A	8.90	25.10
2	2483.5	39.77	5.77	-34.23	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
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	2462	94.80	60.80	N/A	N/A	8.90	25.10
2	2483.5	36.60	2.60	-17.40	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
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	2462	89.80	55.80	N/A	N/A	8.90	25.10
2	2483.5	35.31	1.31	-18.69	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.

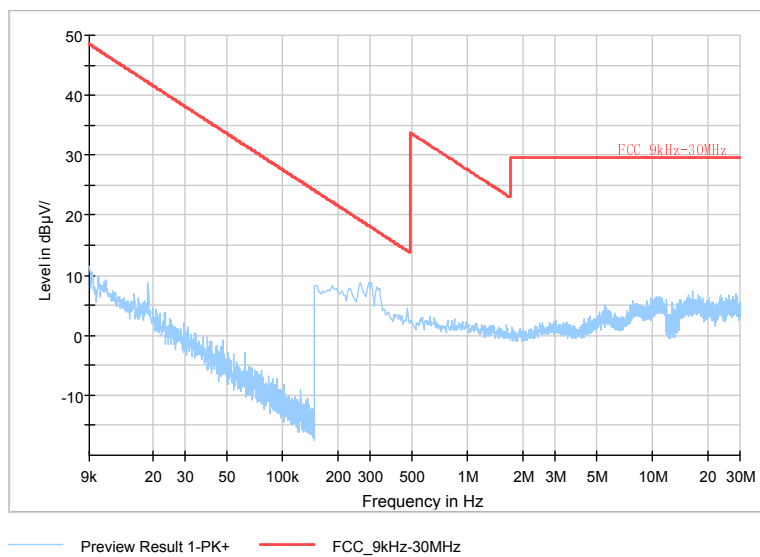
The measurement results are obtained as described below:

Result= $P_{mea} + A_{Rpl}$

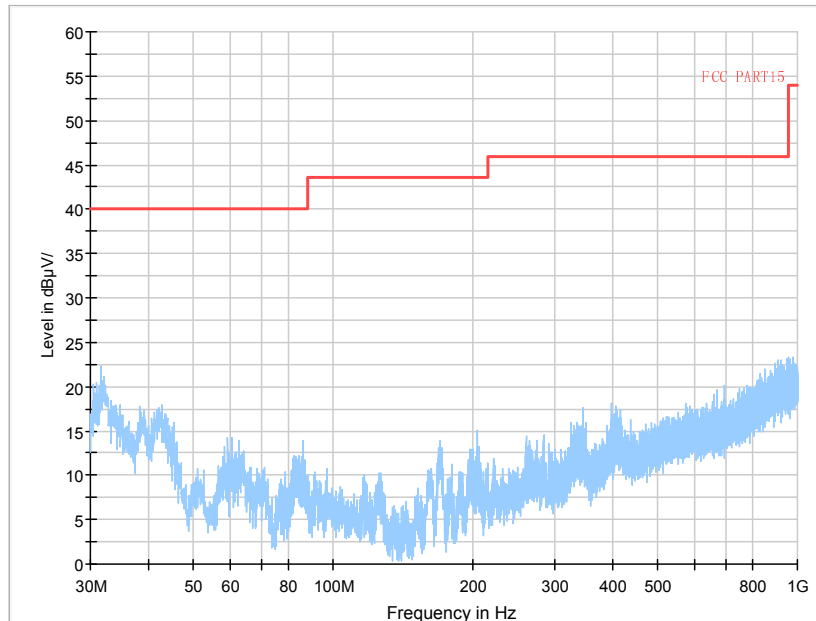
Sample calculation: $(25.55\text{dB}\mu\text{V/m}) = (-18.1\text{dB}) + (43.65\text{dB}\mu\text{V/m})$, the corresponding frequency is 40.445000MHz.

The worst case attitude: The mobile lay down.

Full Spectrum

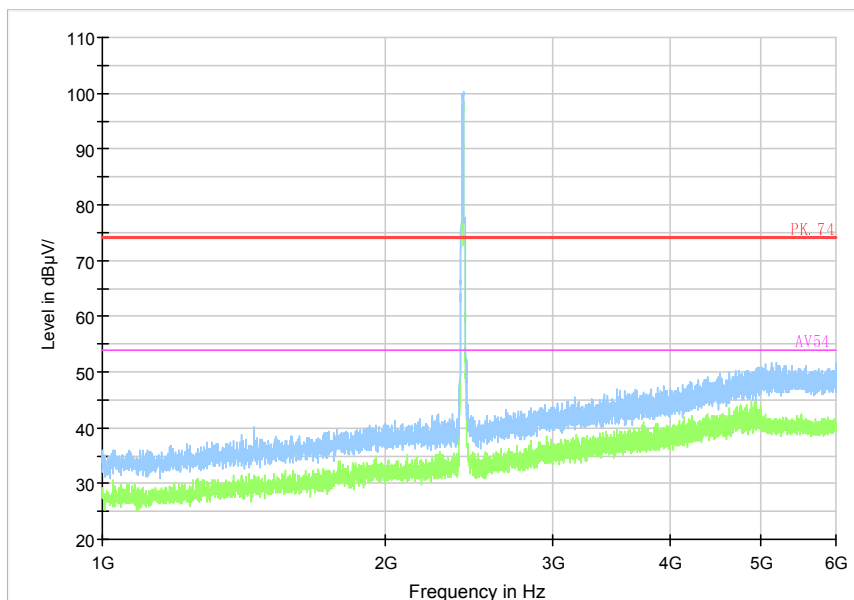


Carrier frequency (MHz): 2412
Channel No.:1

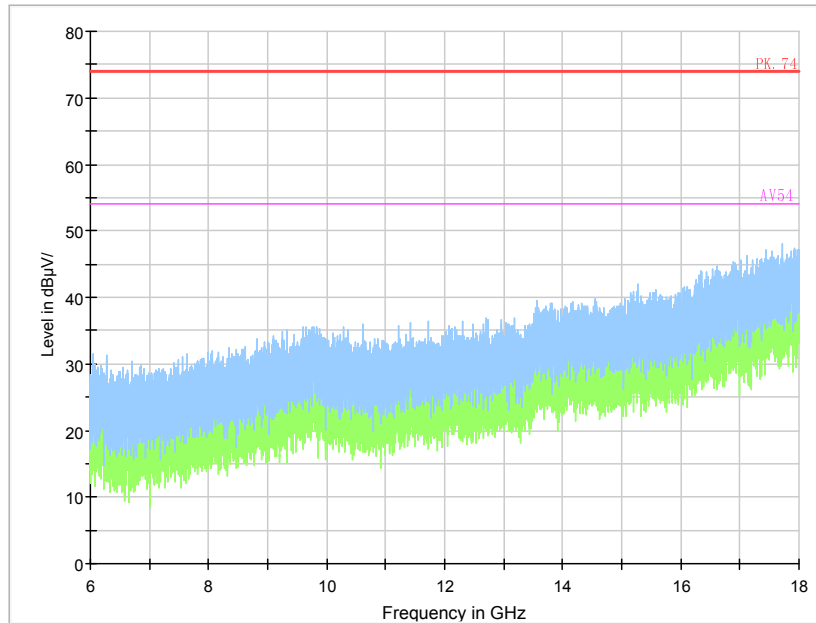


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11b

Full Spectrum

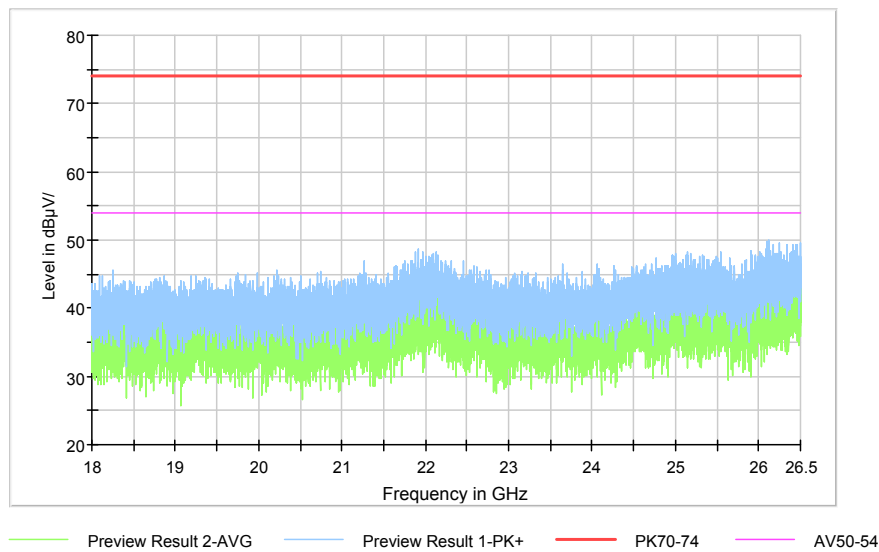


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11b



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

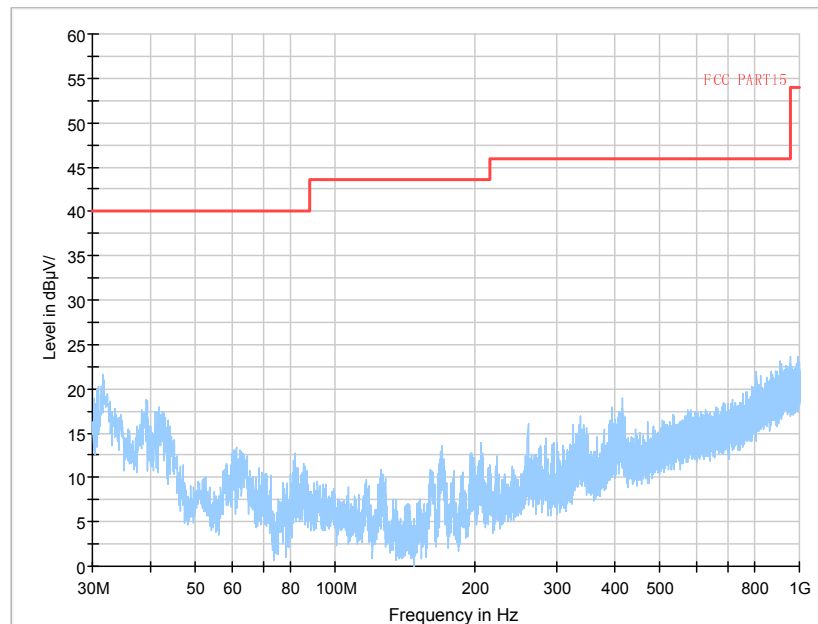
Full Spectrum



Comment

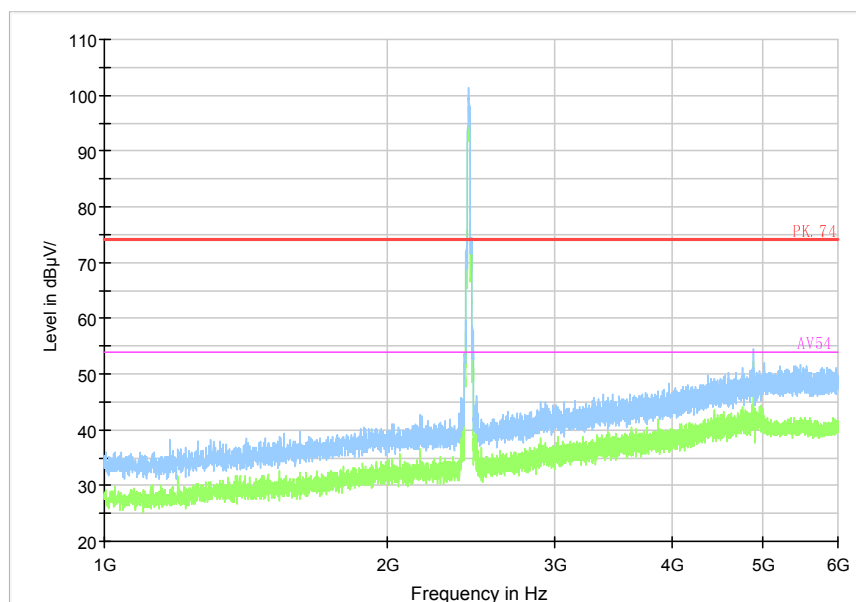
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

Carrier frequency (MHz): 2437
Channel No.:6

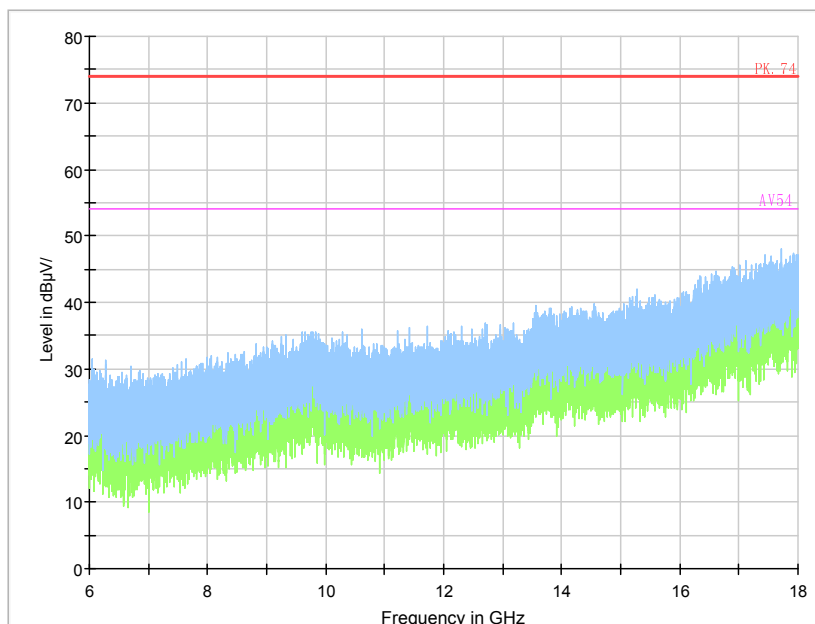


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11b

Full Spectrum

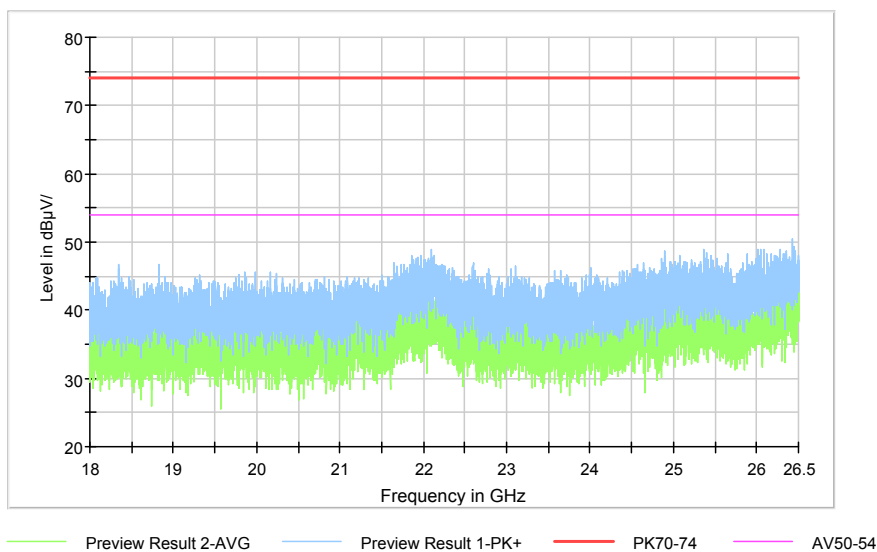


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11b



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

Full Spectrum

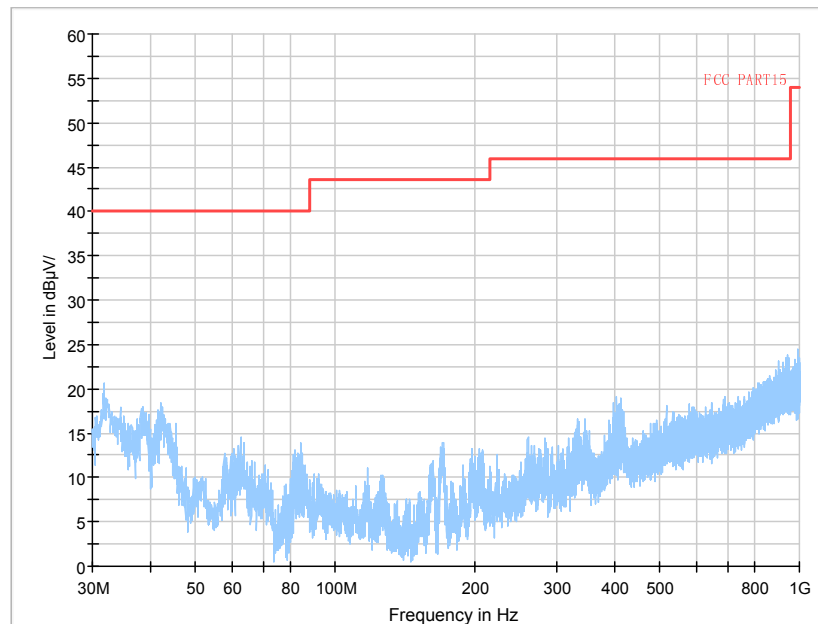


Preview Result 2-AVG Preview Result 1-PK+ PK70-74 AV50-54

Comment

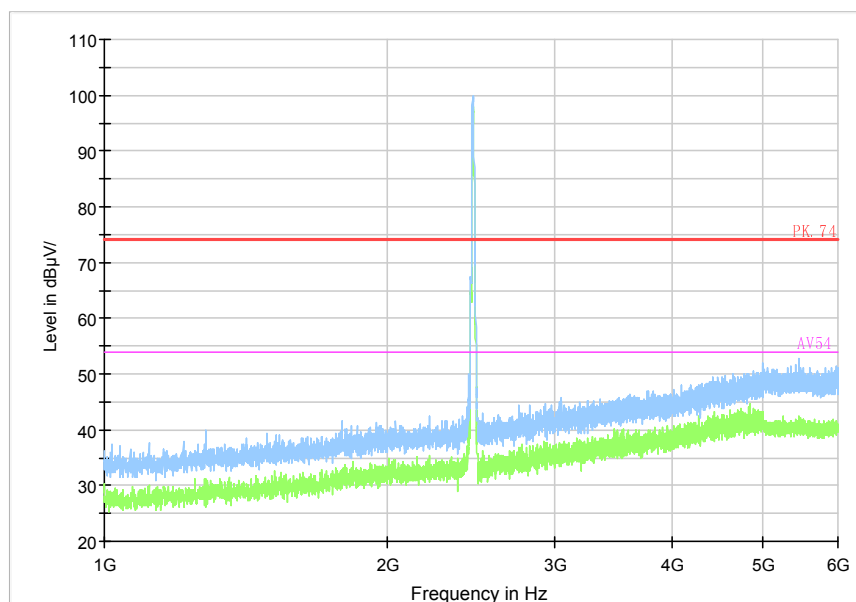
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

Carrier frequency (MHz): 2462
Channel No.:11

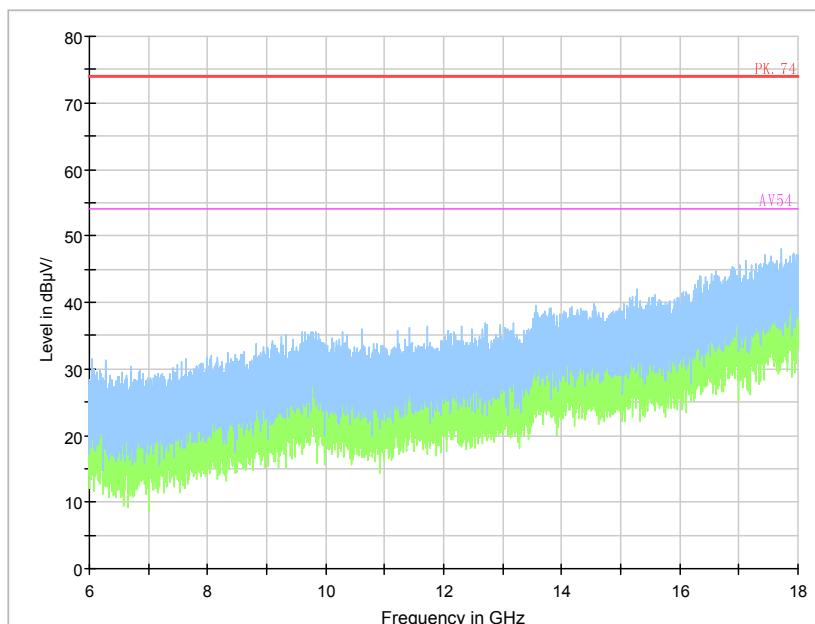


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11b

Full Spectrum

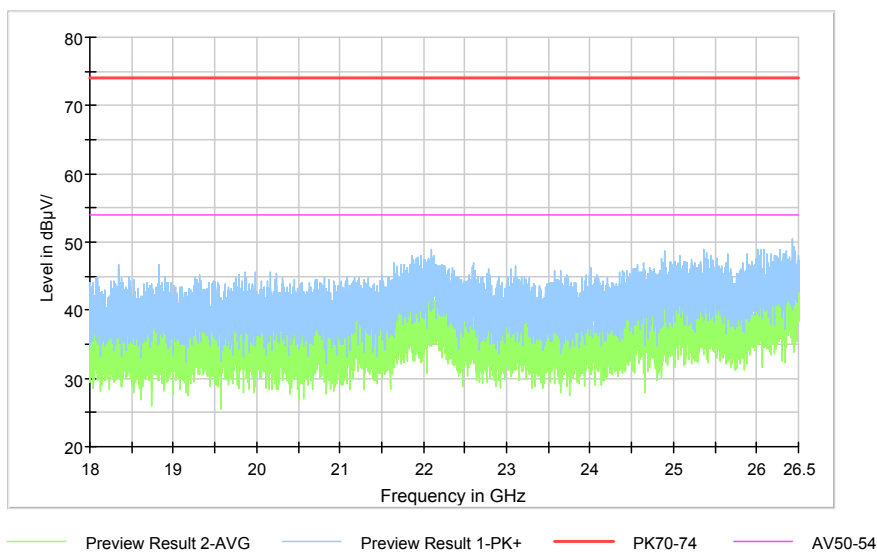


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11b



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

Full Spectrum

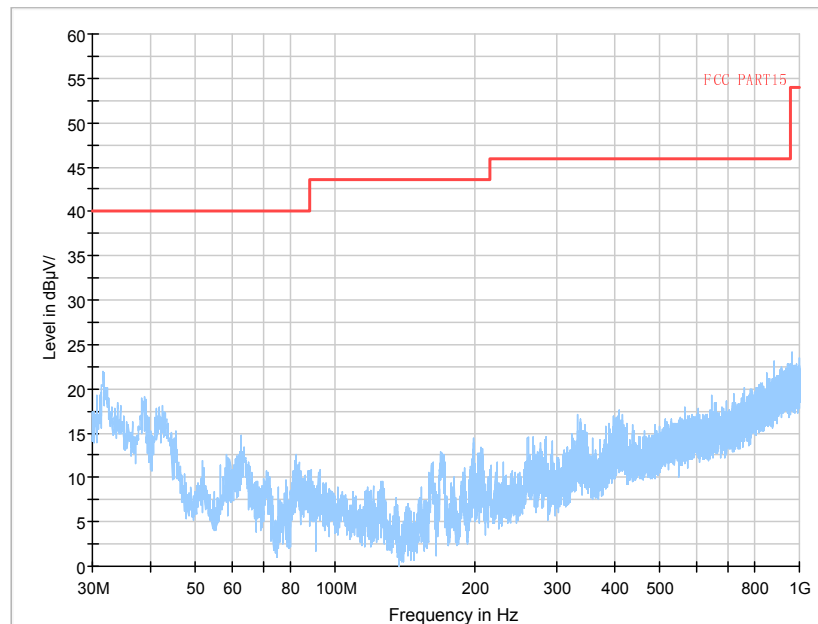


Preview Result 2-AVG Preview Result 1-PK+ PK70-74 AV50-54

Comment

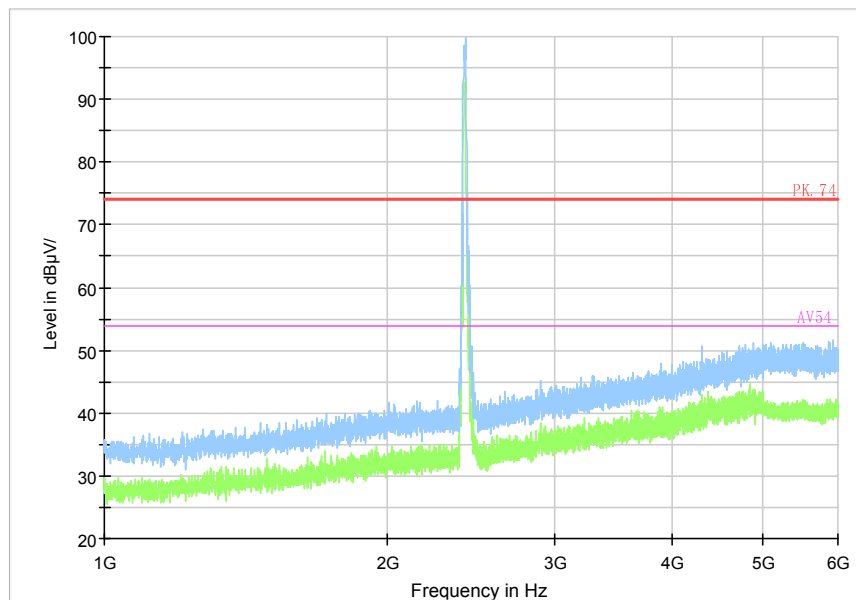
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

Carrier frequency (MHz): 2412
Channel No.:1

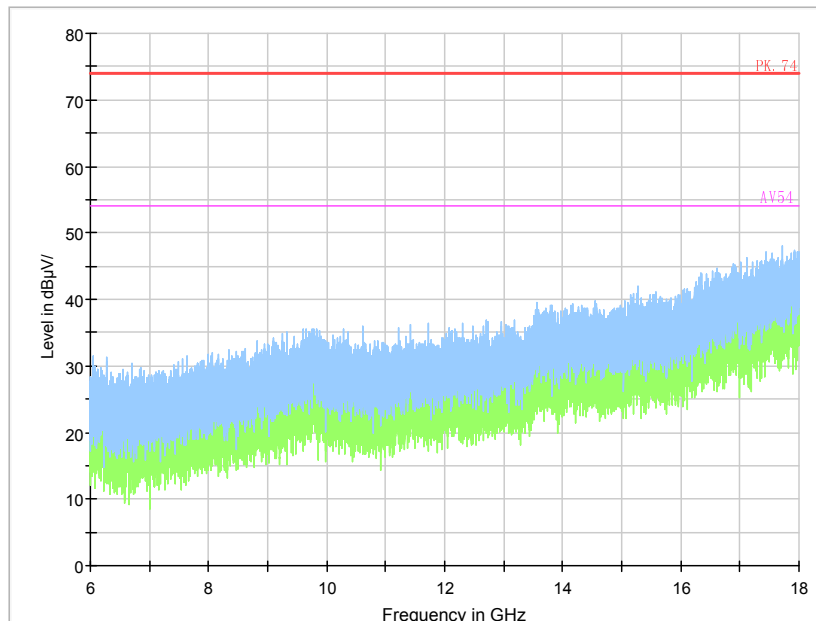


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11g

Full Spectrum

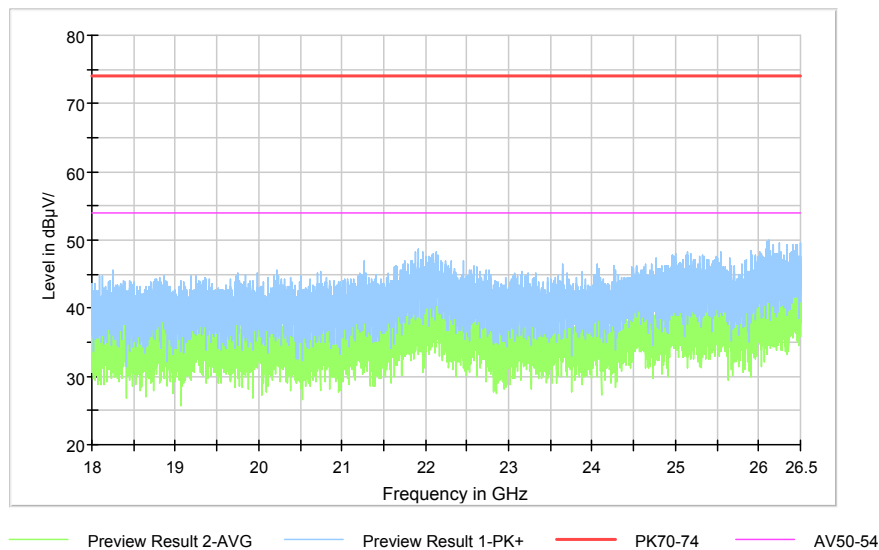


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11g



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11g

Full Spectrum

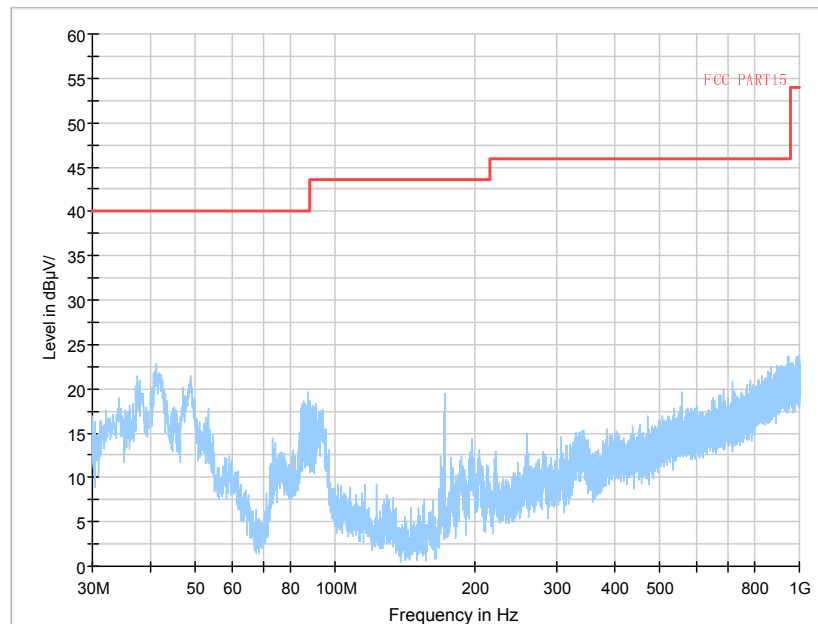


Preview Result 2-AVG Preview Result 1-PK+ PK70-74 AV50-54

Comment

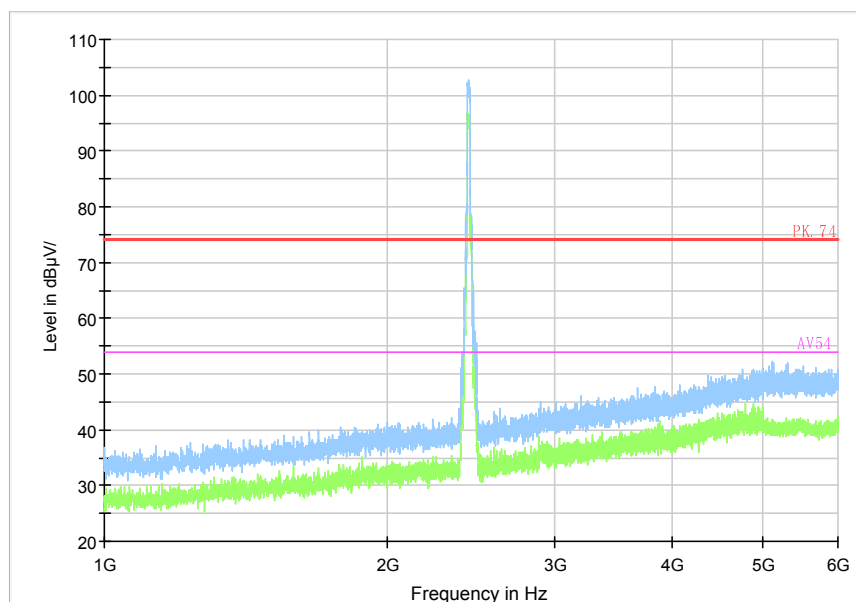
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11g

Carrier frequency (MHz): 2437
Channel No.:6

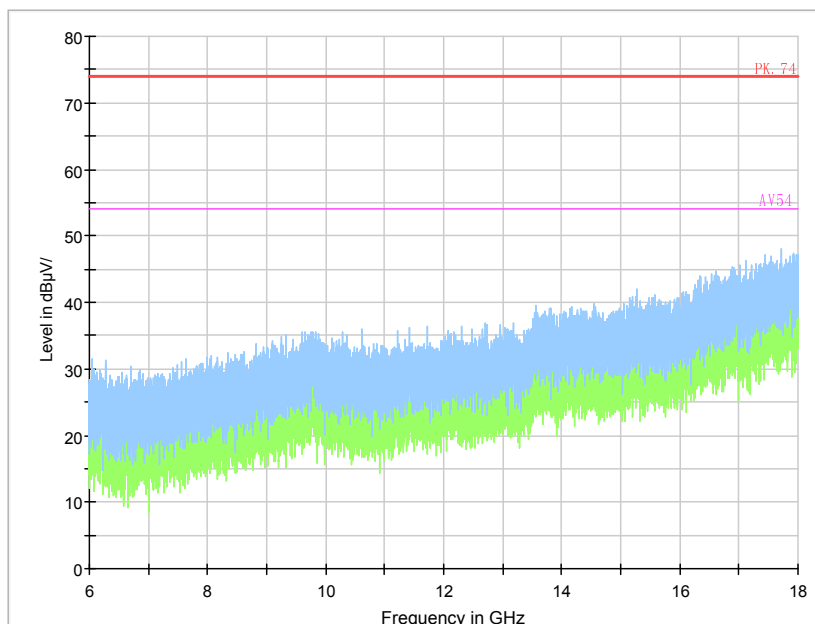


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11g

Full Spectrum

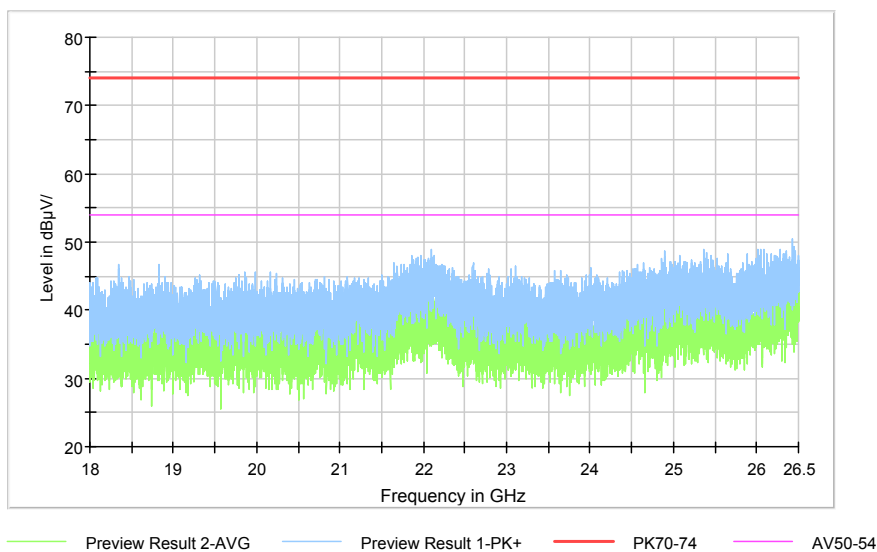


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11g



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11g

Full Spectrum

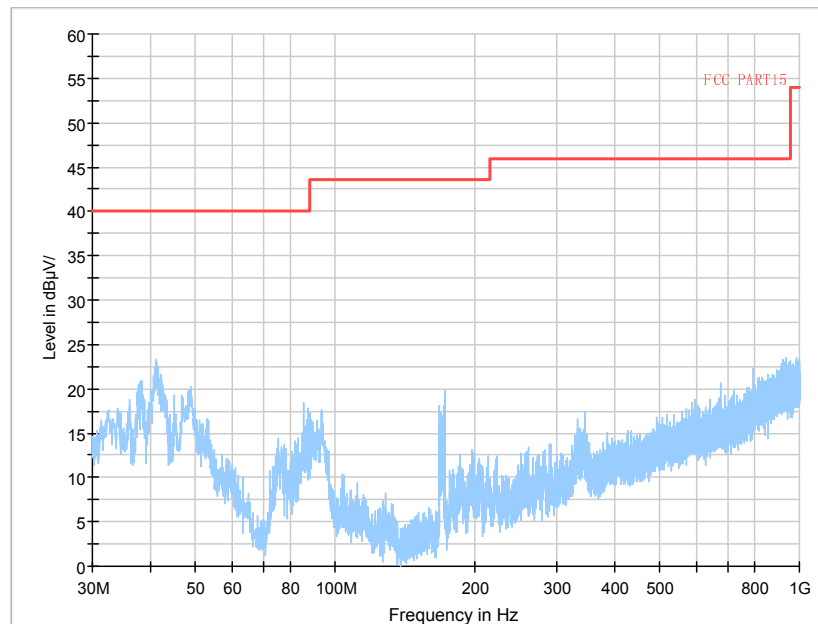


Preview Result 2-AVG Preview Result 1-PK+ PK70-74 AV50-54

Comment

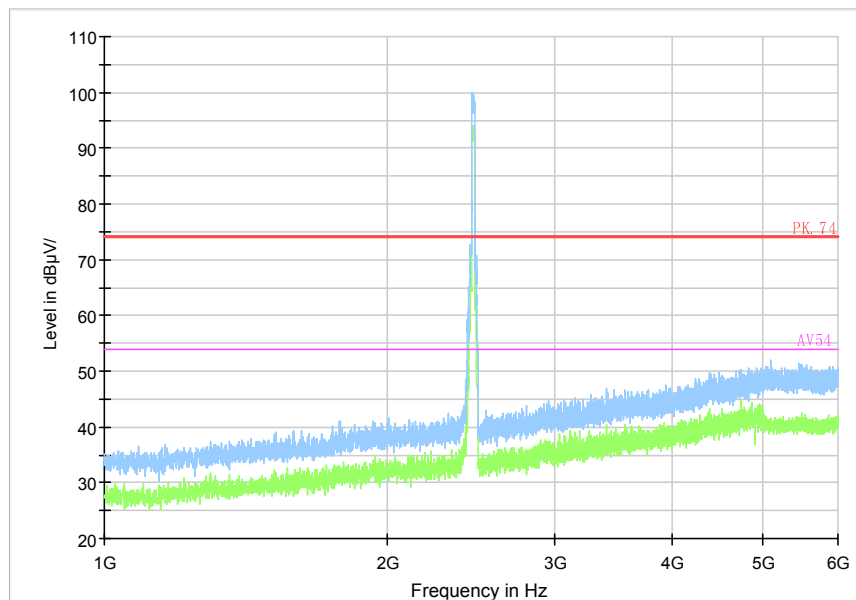
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11g

Carrier frequency (MHz): 2462
Channel No.:11

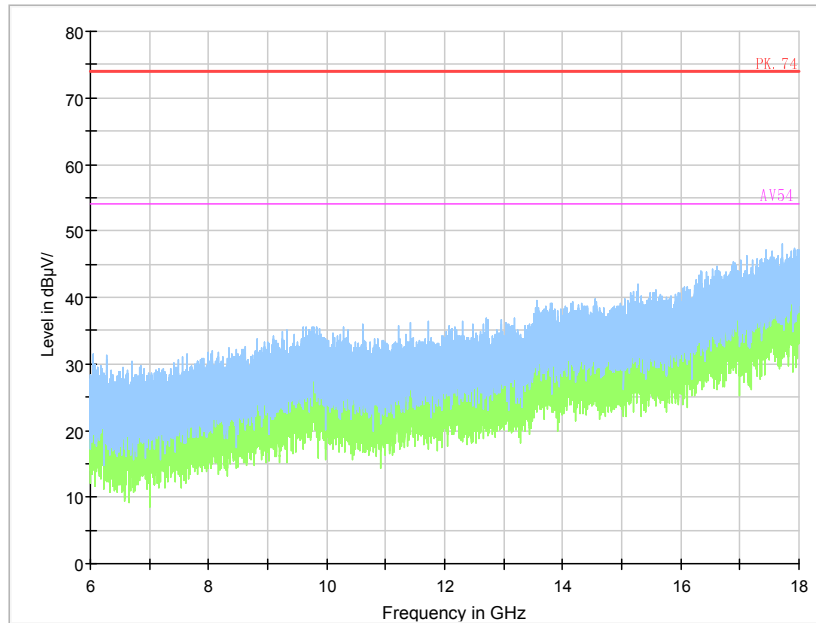


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11g

Full Spectrum

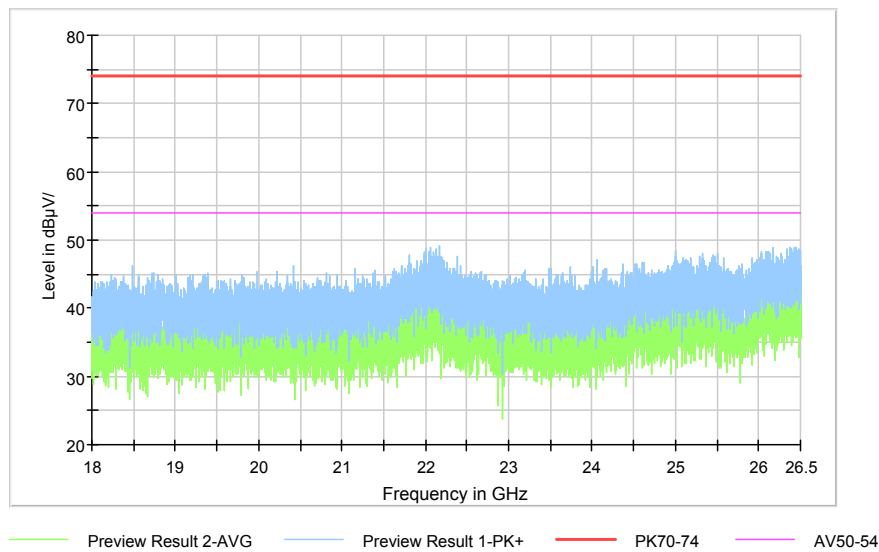


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11g



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11g

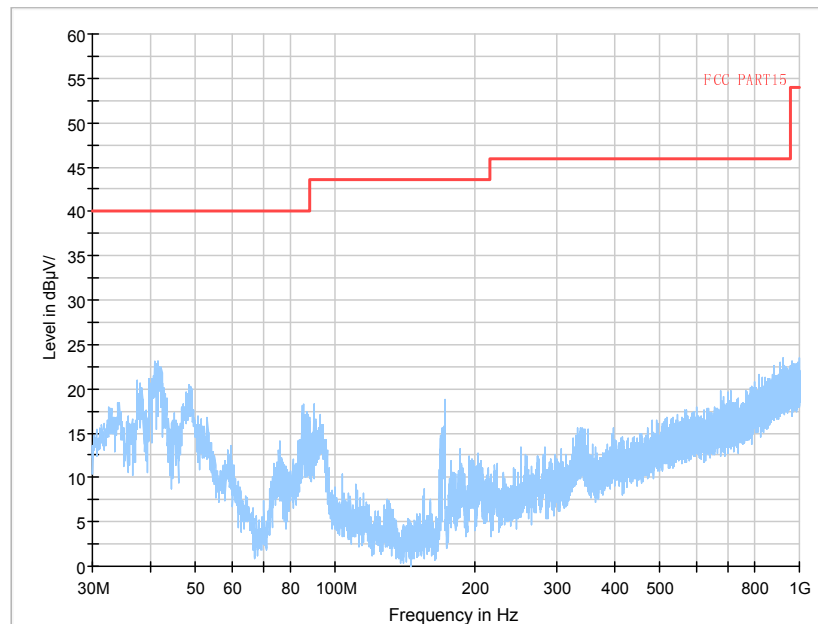
Full Spectrum



Comment

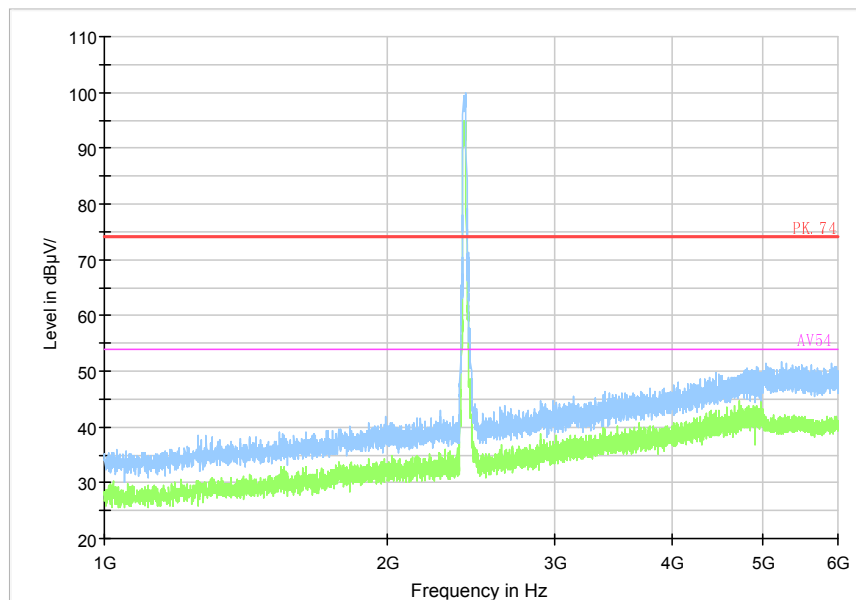
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11g

Carrier frequency (MHz): 2412
Channel No.:1

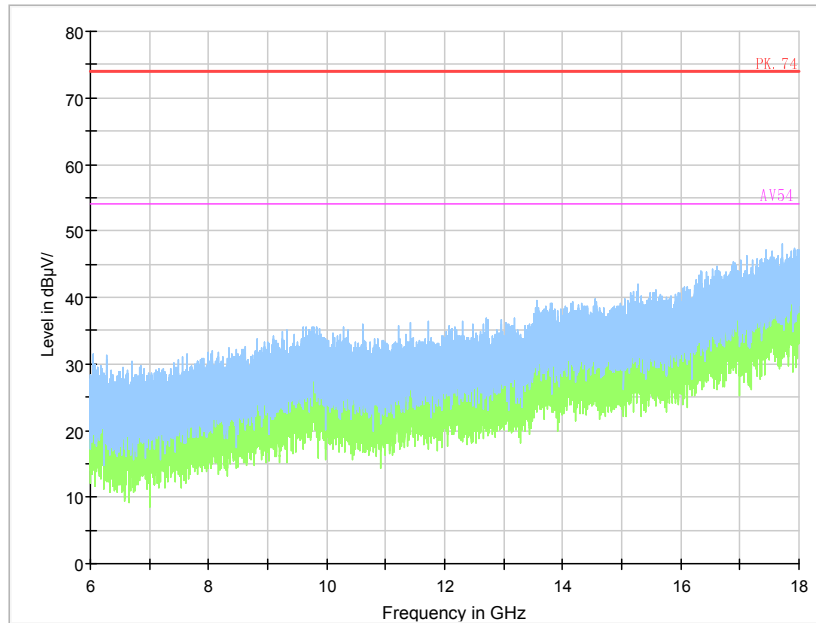


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11n(HT20)

Full Spectrum

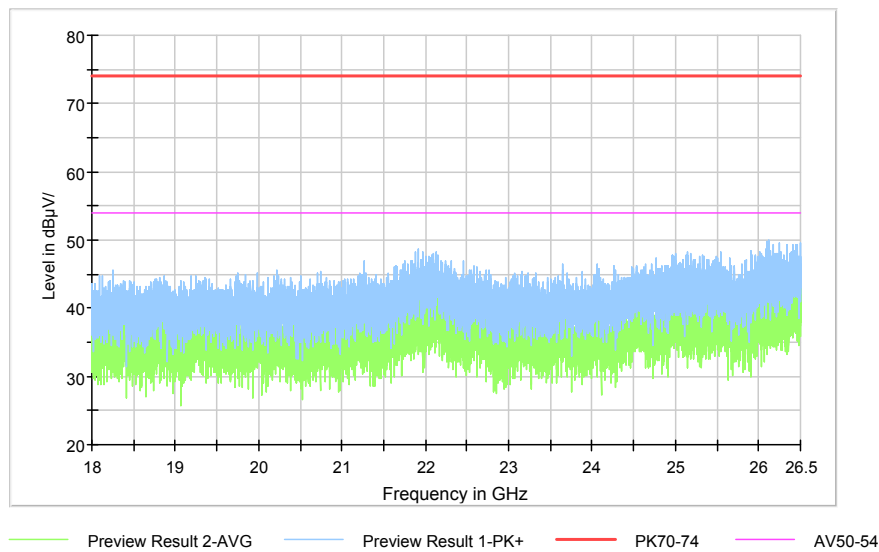


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)

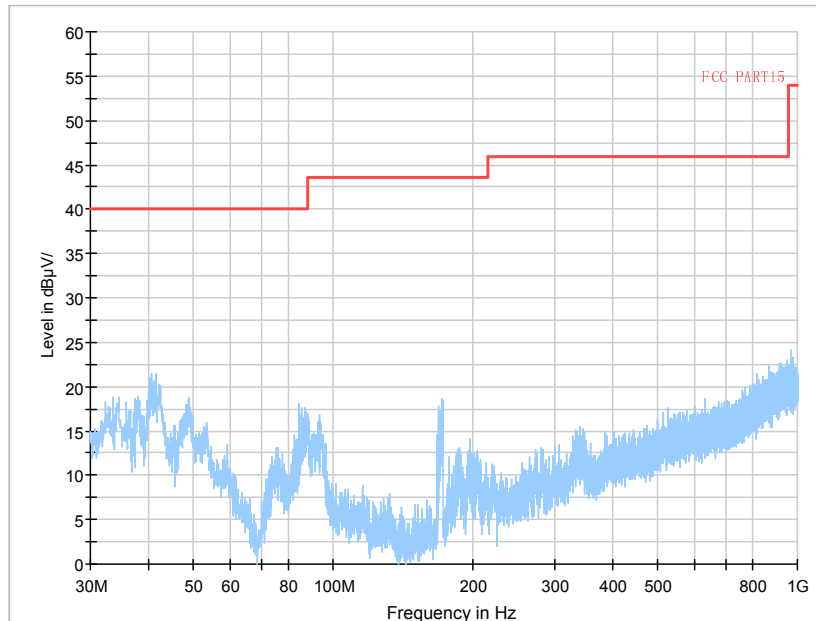
Full Spectrum



Comment

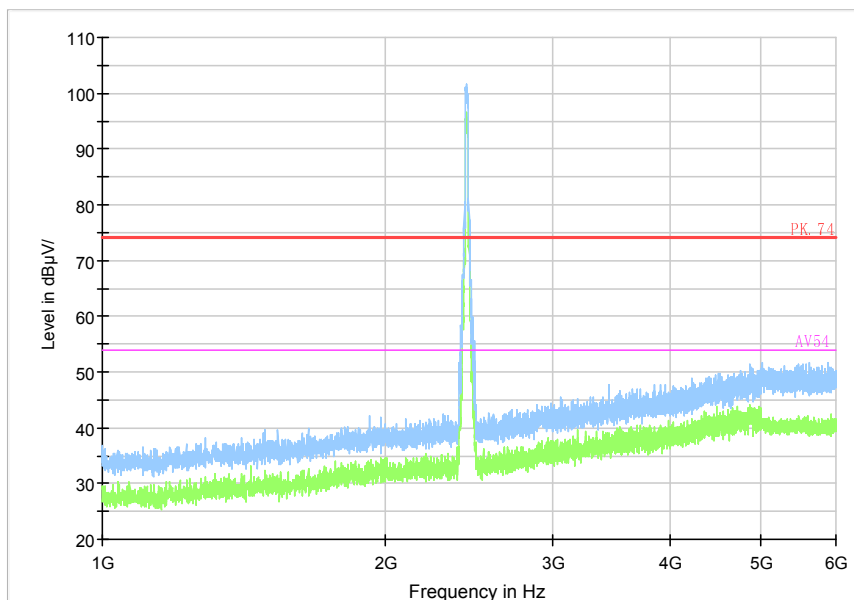
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)

Carrier frequency (MHz): 2437
Channel No.:6

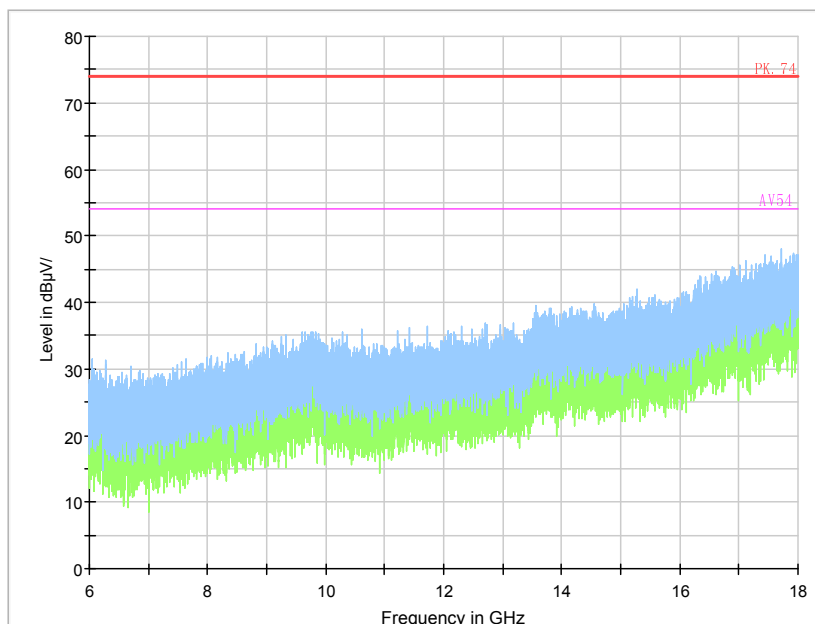


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11 n(HT20)

Full Spectrum

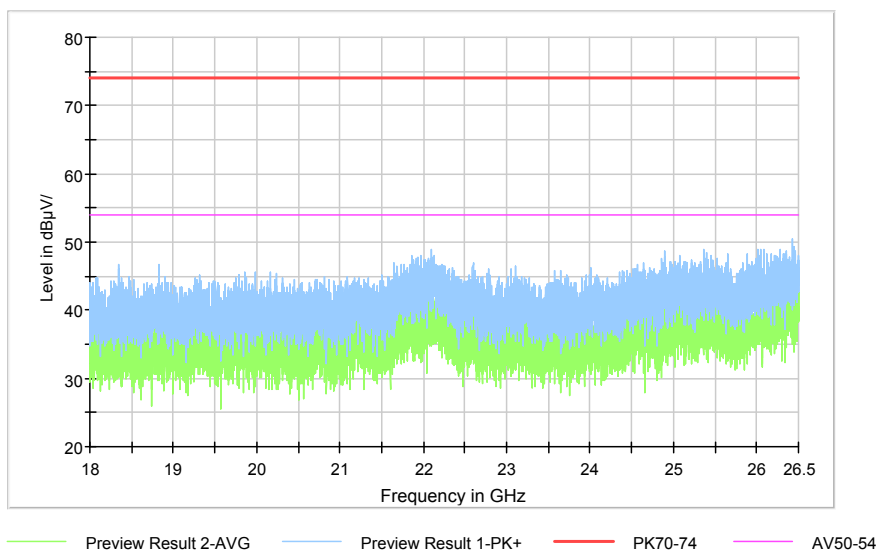


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)

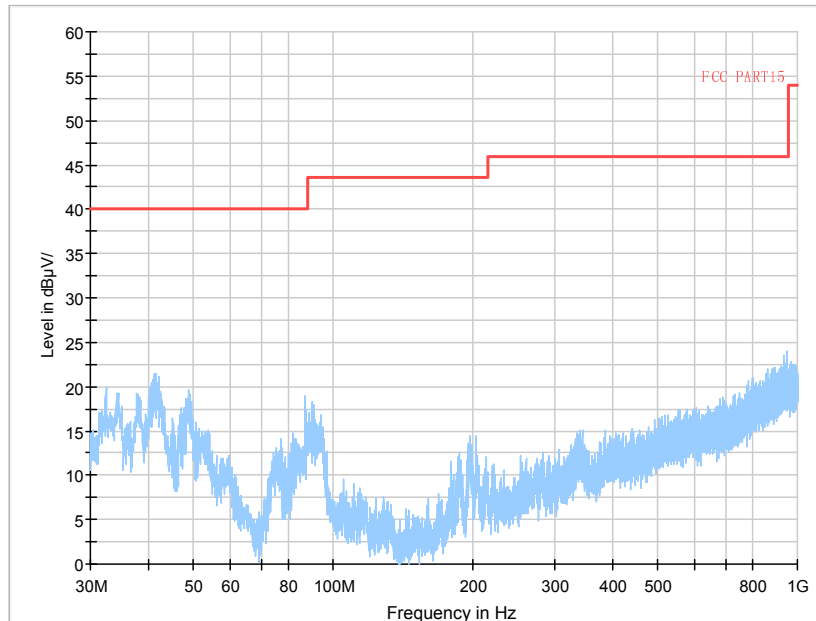
Full Spectrum



Comment

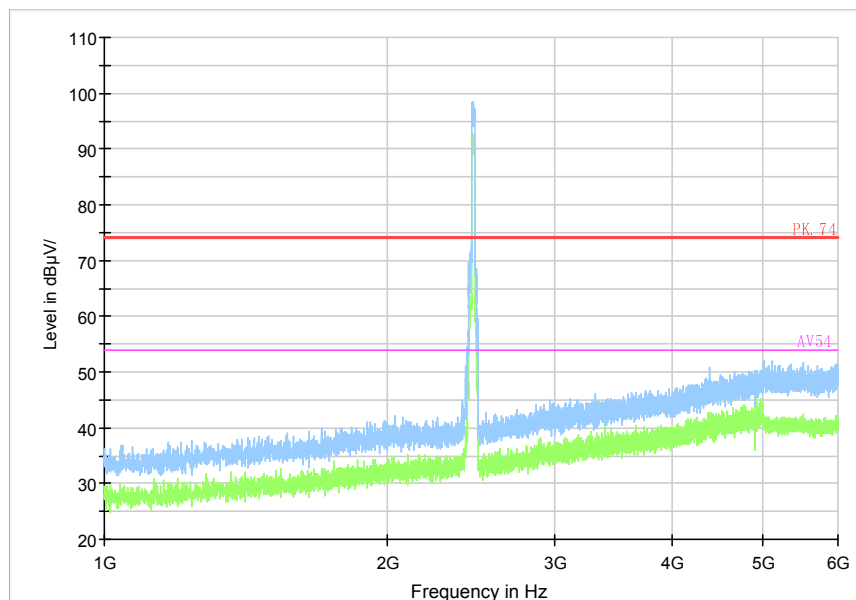
Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)

Carrier frequency (MHz): 2462
Channel No.:11

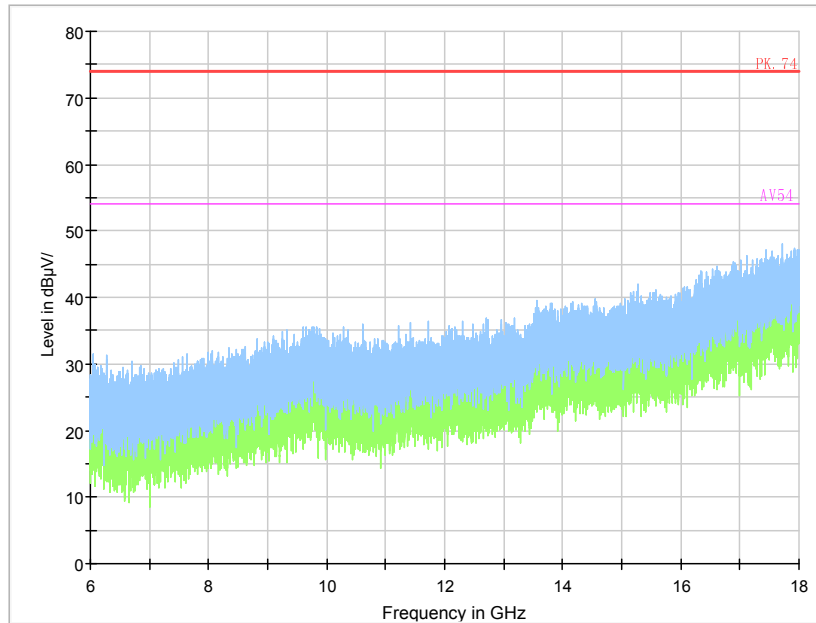


Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11 n(HT20)

Full Spectrum

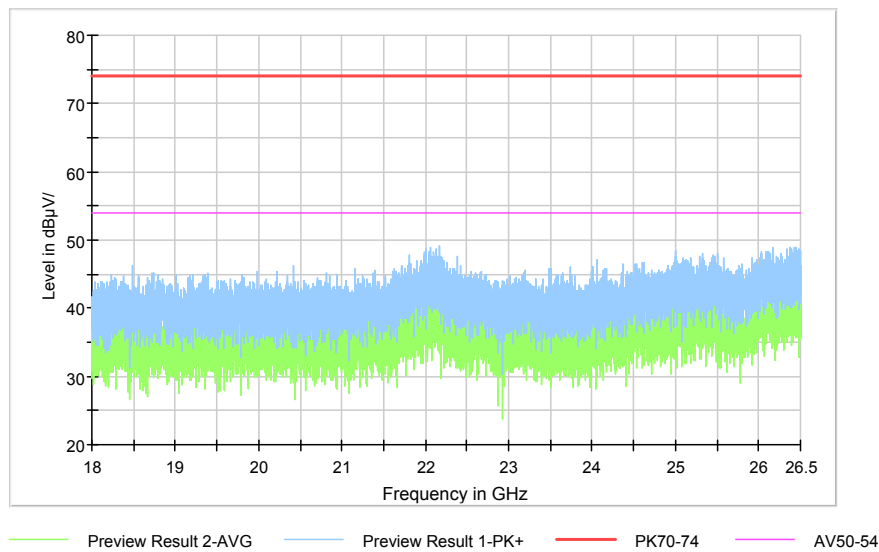


Frequency Range: 1GHz -6GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)



Frequency Range: 6GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)

Full Spectrum



Comment

Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11 n(HT20)

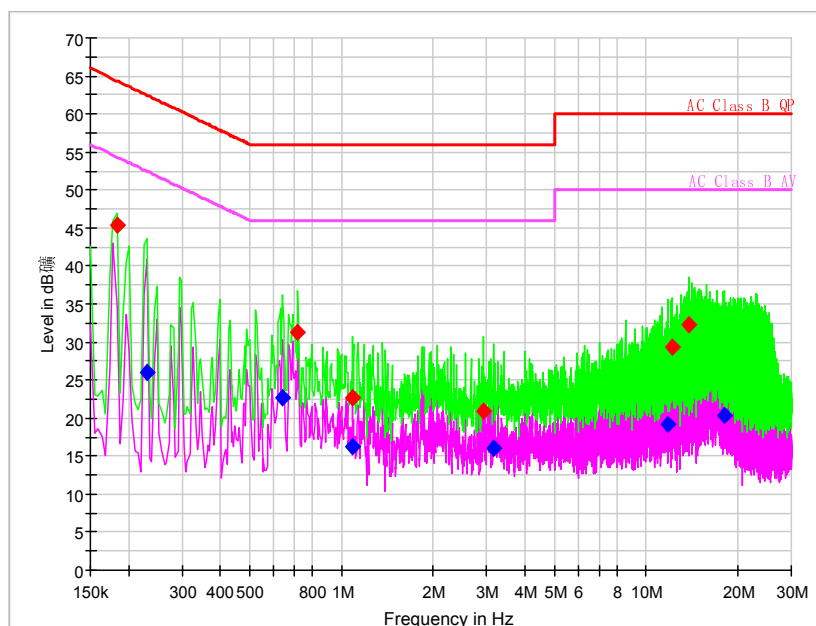
AC Power line Conducted Emission

A "reference path loss" Corr.(dB) is established and the $L_{\text{cable}} + \text{ATT} + \text{VDF}$ 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:

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

Sample calculation: $(45.39 \text{ dB}\mu\text{V}) = (15.79 \text{ dB}\mu\text{V}) + (29.6 \text{ dB})$, the corresponding frequency is 0.182648MHz.



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{mea} QuasiPeak (dBμV)	P _{mea} Average (dBμV)
0.182648	45.39	---	64.36	18.97	L1	29.6	15.79	---
0.229289	---	26.00	52.48	26.47	L1	29.6	---	-3.6
0.639727	---	22.67	46.00	23.33	L1	29.6	---	-6.93
0.719016	31.24	---	56.00	24.76	L1	29.6	1.64	---
1.087477	---	16.24	46.00	29.76	L1	29.7	---	-13.46
1.087477	22.67	---	56.00	33.33	L1	29.7	-7.03	---
2.929781	20.90	---	56.00	35.10	N	29.7	-8.8	---
3.158320	---	16.12	46.00	29.88	L1	29.7	---	-13.58
11.824148	---	19.18	50.00	30.82	L1	29.8	---	-10.62
12.141305	29.39	---	60.00	30.61	L1	29.8	-0.41	---
13.862344	32.28	---	60.00	27.72	L1	29.8	2.48	---
18.008695	---	20.28	50.00	29.72	N	29.8	---	-9.52

---End of Test Report---