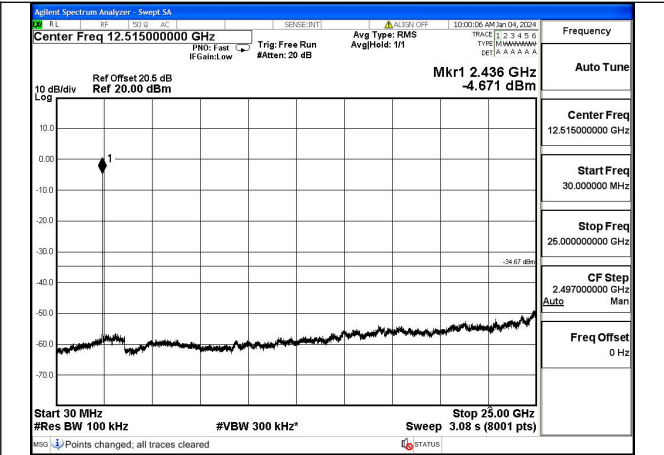


## Conducted Out of band emission measurement

Test Mode: 802.11b



Mode:802.11b Frequency:2412MHz Ant:Chain0



Mode:802.11b Frequency:2437MHz Ant:Chain0

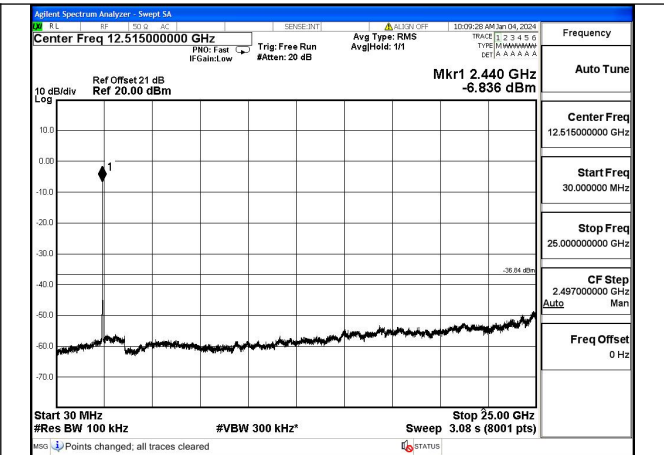


Mode:802.11b Frequency:2462MHz Ant:Chain0

Test Mode: 802.11g



Mode:802.11g Frequency:2412MHz Ant:Chain0



Mode:802.11g Frequency:2437MHz Ant:Chain0

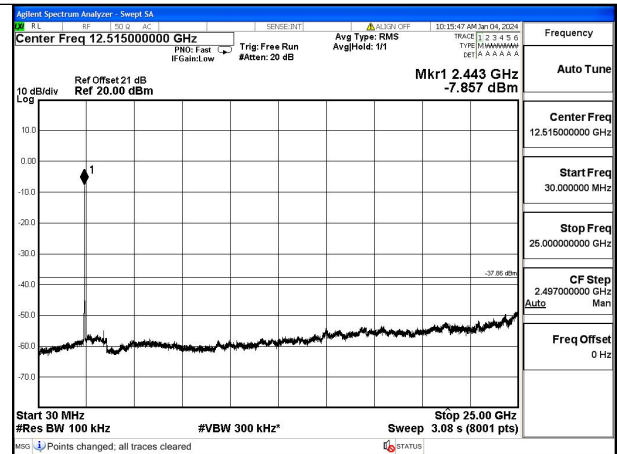


Mode:802.11g Frequency:2462MHz Ant:Chain0

Test Mode: 802.11n HT20



Mode:802.11n HT20 Frequency:2412MHz Ant:Chain0



Mode:802.11n HT20 Frequency:2437MHz Ant:Chain0



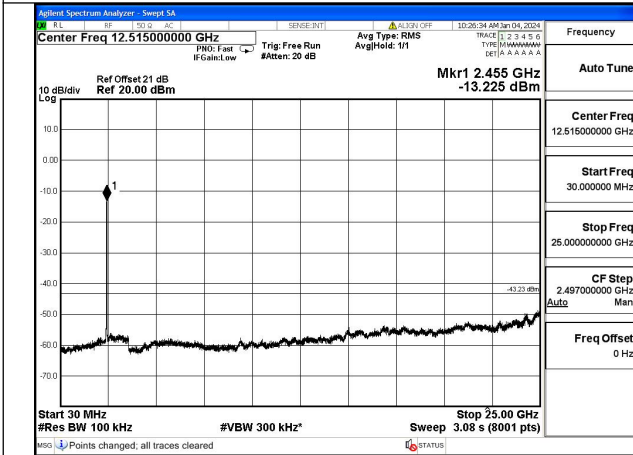
Mode:802.11n HT20 Frequency:2462MHz Ant:Chain0

Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:2422MHz Ant:Chain0

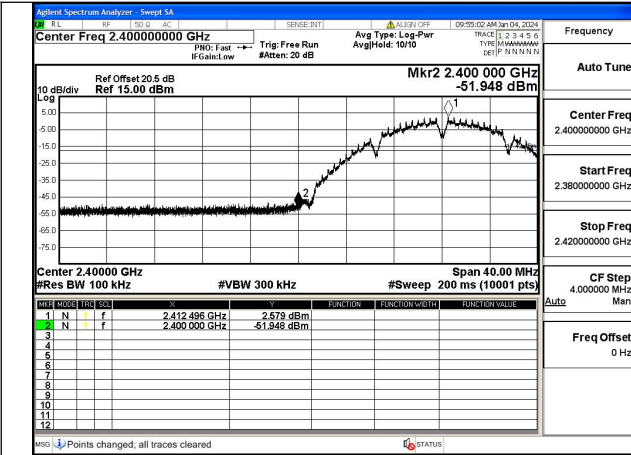
Mode:802.11n HT40 Frequency:2437MHz Ant:Chain0



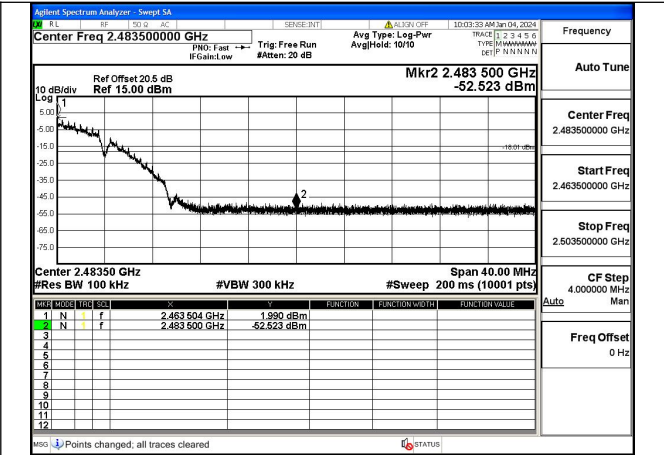
Mode:802.11n HT40 Frequency:2452MHz Ant:Chain0

# Band edge measurement

Test Mode: 802.11b

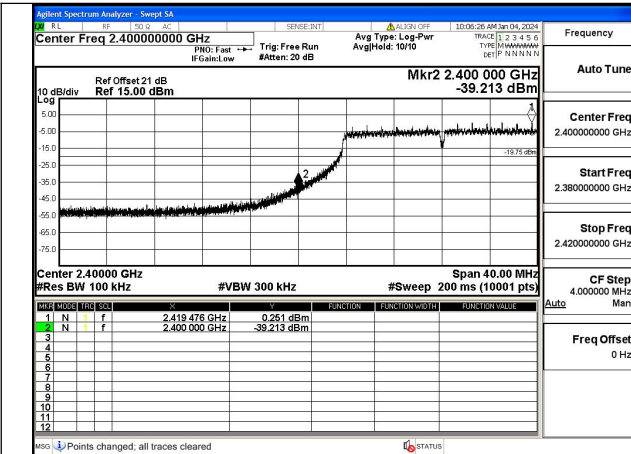


Mode:802.11b Frequency:2412MHz Ant:Chain0

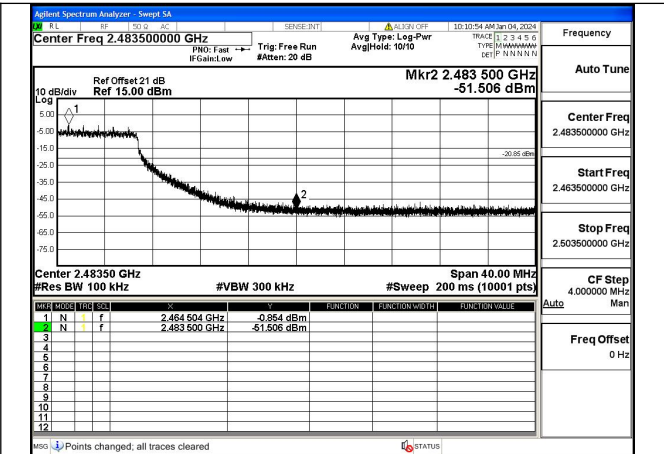


Mode:802.11b Frequency:2462MHz Ant:Chain0

Test Mode: 802.11g

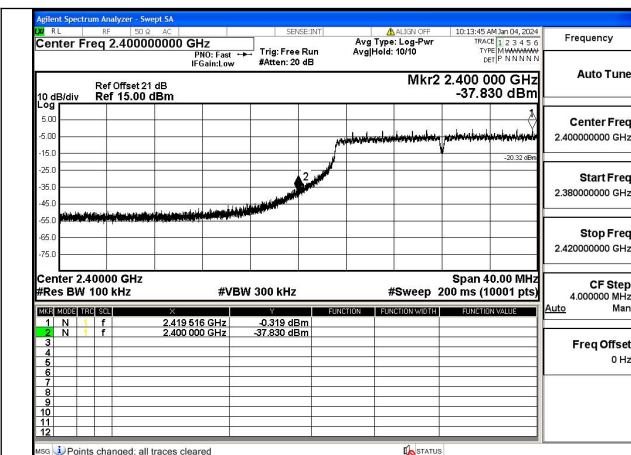


Mode:802.11g Frequency:2412MHz Ant:Chain0

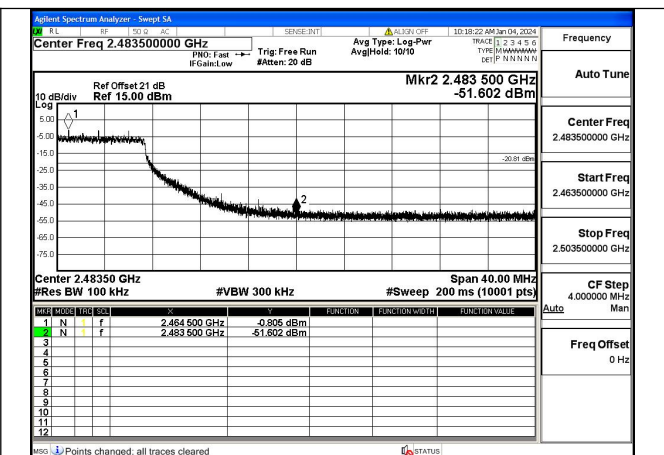


Mode:802.11g Frequency:2462MHz Ant:Chain0

Test Mode: 802.11n HT20

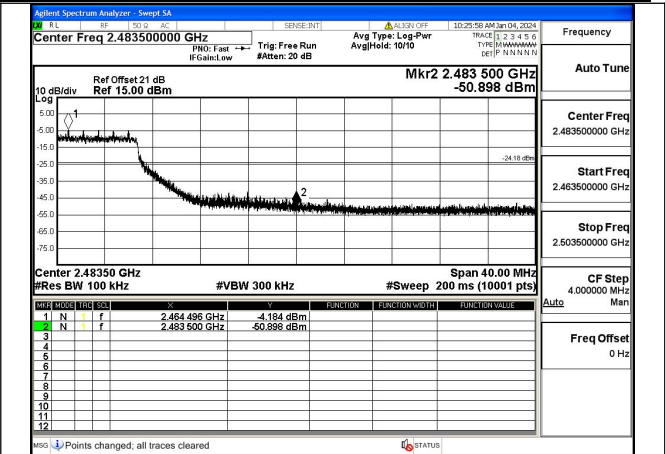
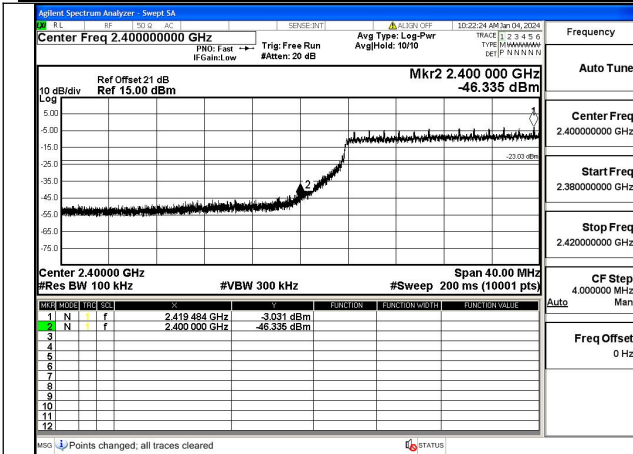


Mode:802.11n HT20 Frequency:2412MHz Ant:Chain0



Mode:802.11n HT20 Frequency:2462MHz Ant:Chain0

Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:2422MHz Ant:Chain0

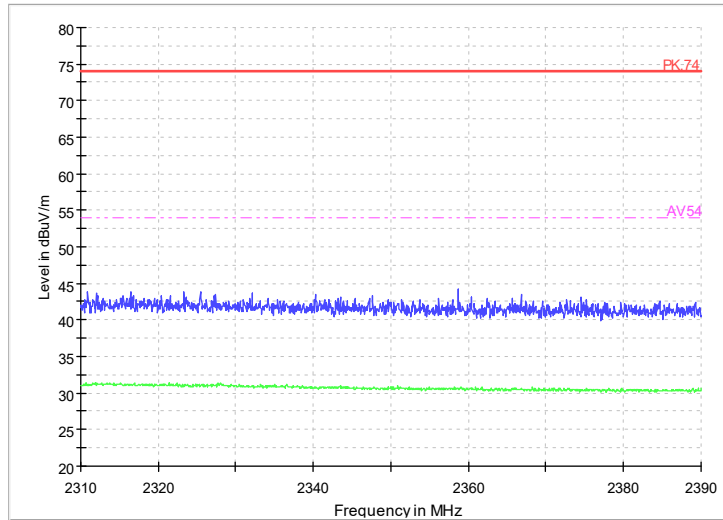
Mode:802.11n HT40 Frequency:2452MHz Ant:Chain0

## **APPENDIX B – TEST DATA OF RADIATED EMISSION**

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

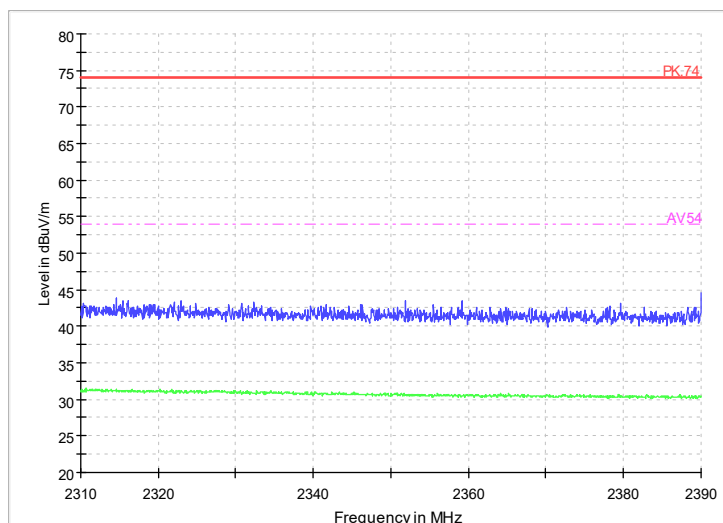
Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan

### **Radiated Emission Band Edge**



Comment

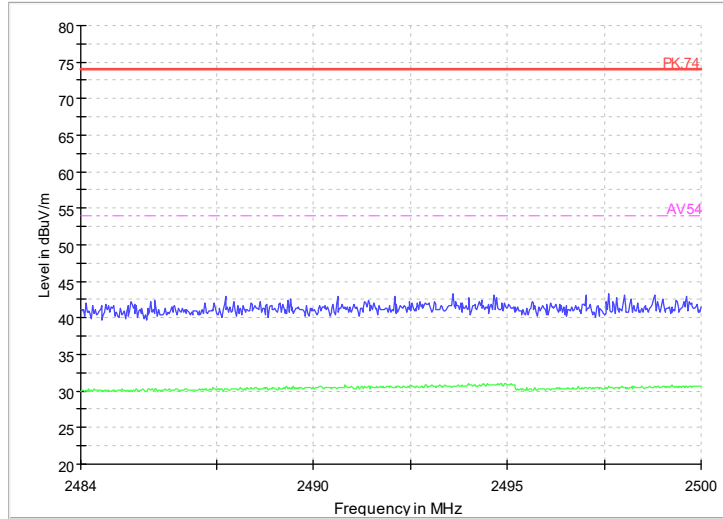
**Radiated Emission Band Edge**  
Channel No.:1  
Test Mode: 802.11b  
Polarization: V



Comment

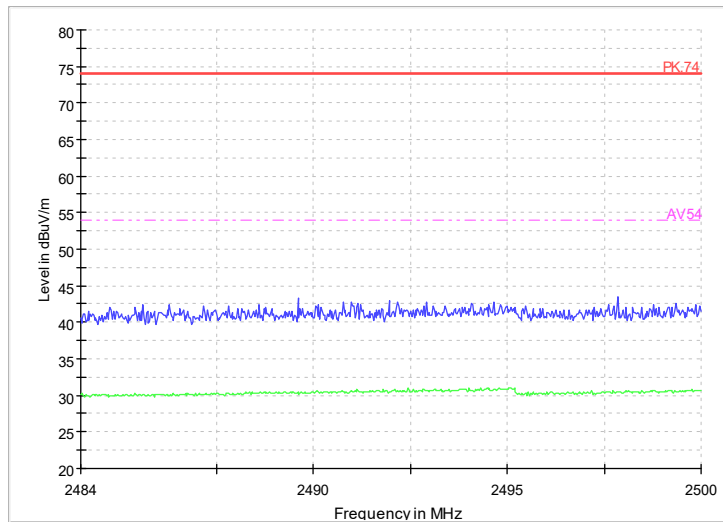
**Radiated Emission Band Edge**

Channel No.:1  
Test Mode: 802.11b  
Polarization: H



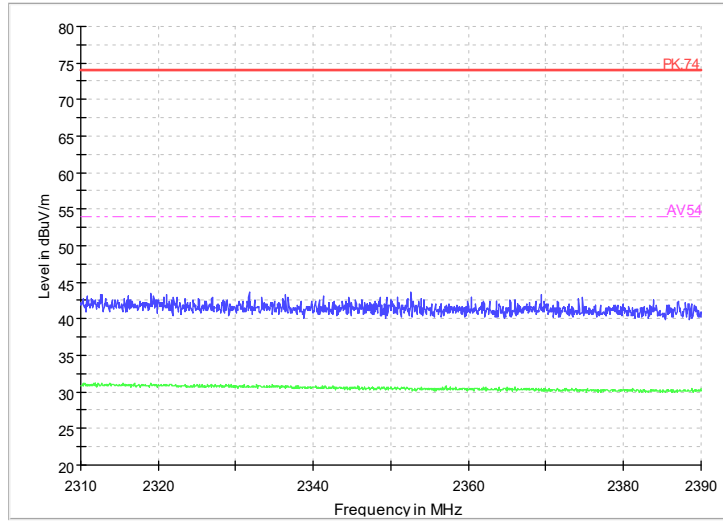
Comment

Radiated Emission Band Edge  
Channel No.:11  
Test Mode: 802.11b  
Polarization: V



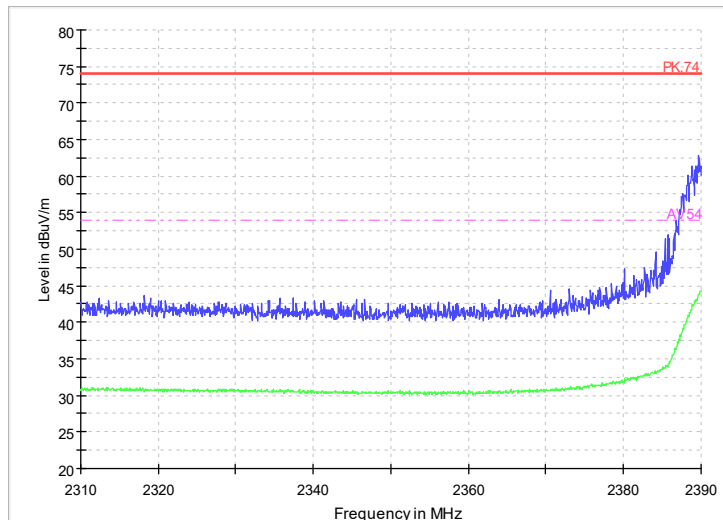
Comment

Radiated Emission Band Edge  
Channel No.:11  
Test Mode: 802.11b  
Polarization: H



Comment

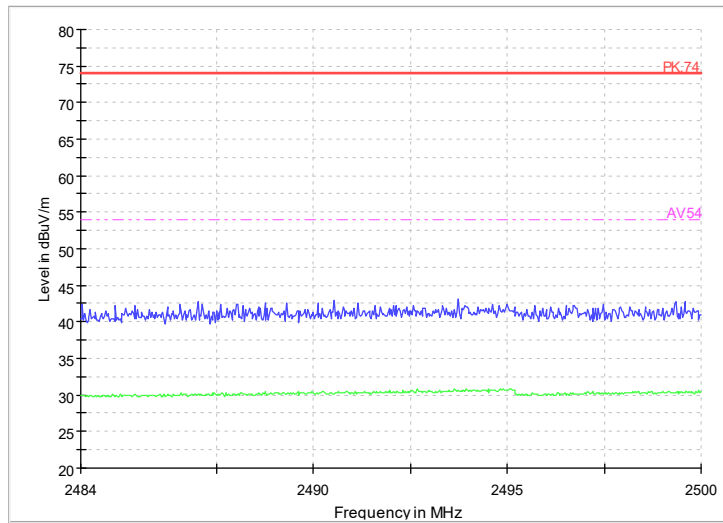
Radiated Emission Band Edge  
 Channel No.:1  
 Test Mode: 802.11g  
 Polarization: V



Comment

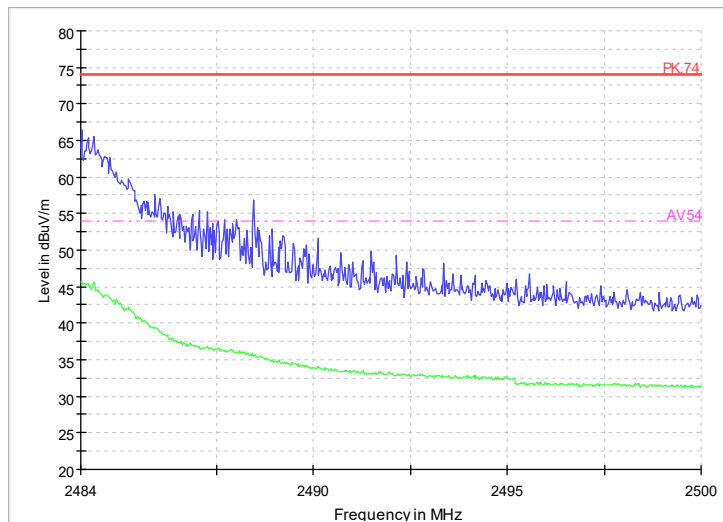
Radiated Emission Band Edge  
 Channel No.:1  
 Test Mode: 802.11g  
 Polarization: H





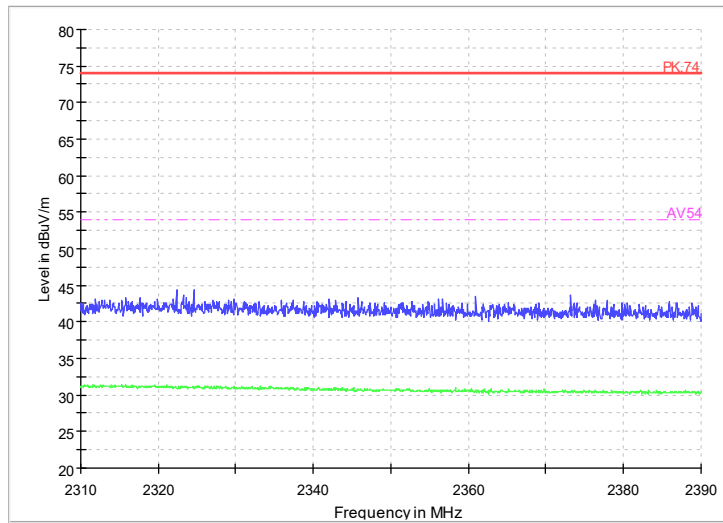
Comment

**Radiated Emission Band Edge**  
 Channel No.:11  
 Test Mode: 802.11g  
 Polarization: V



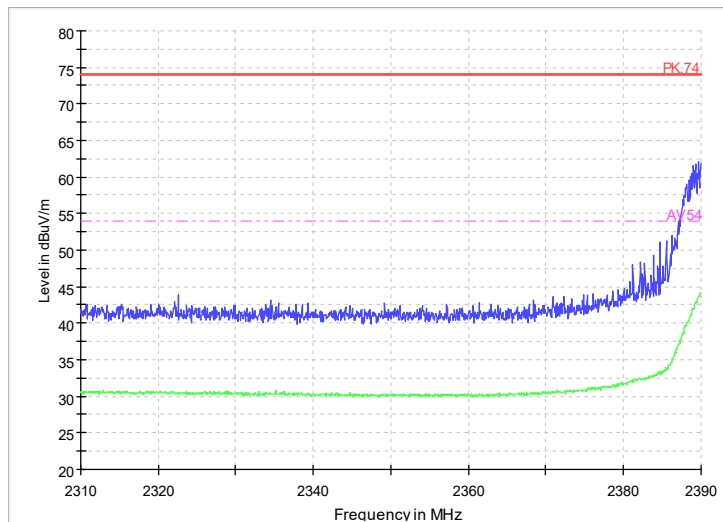
Comment

**Radiated Emission Band Edge**  
 Channel No.:11  
 Test Mode: 802.11g  
 Polarization: H



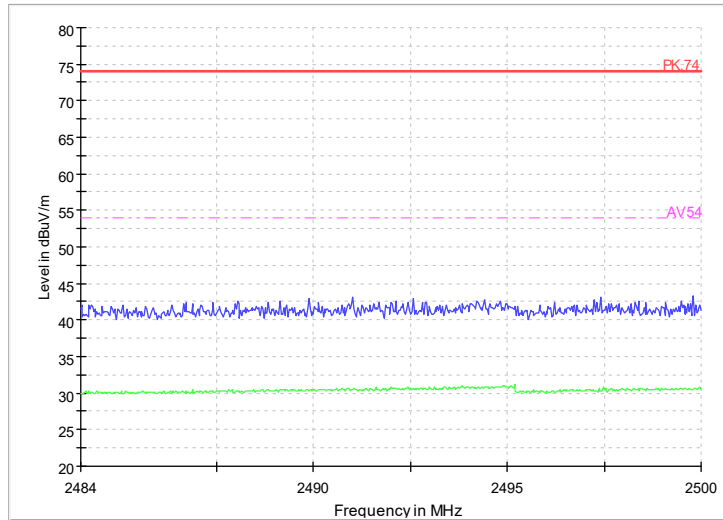
Comment

**Radiated Emission Band Edge**  
Channel No.:1  
Test Mode: 802.11n(HT20)  
Polarization: V



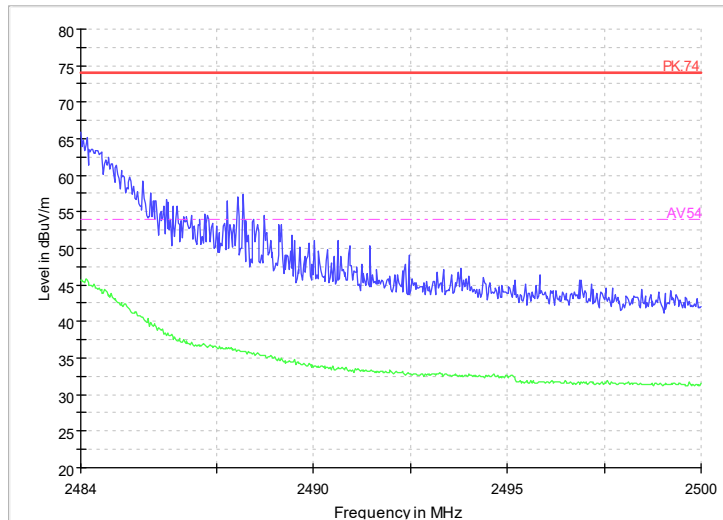
Comment

**Radiated Emission Band Edge**  
Channel No.:1  
Test Mode: 802.11n(HT20)  
Polarization: H



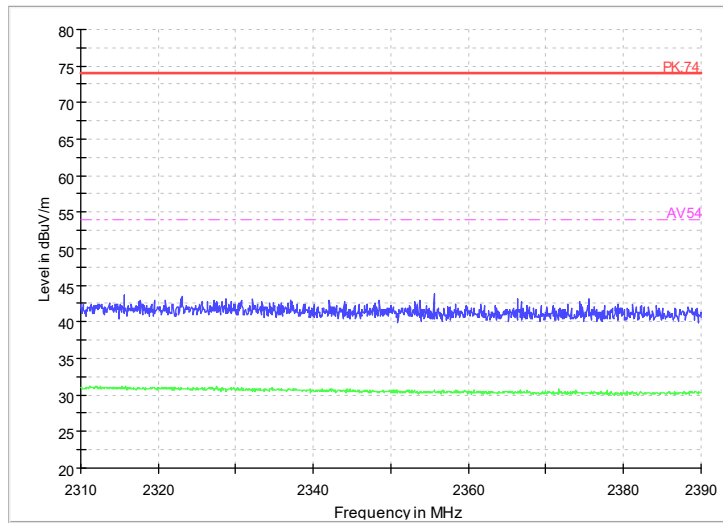
Comment

**Radiated Emission Band Edge**  
Channel No.:11  
Test Mode: 802.11n(HT20)  
Polarization: V



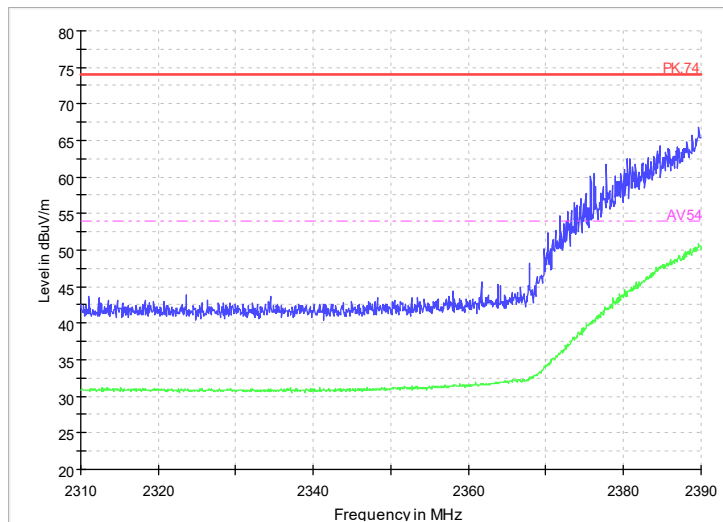
Comment

**Radiated Emission Band Edge**  
Channel No.:11  
Test Mode: 802.11n(HT20)  
Polarization: H



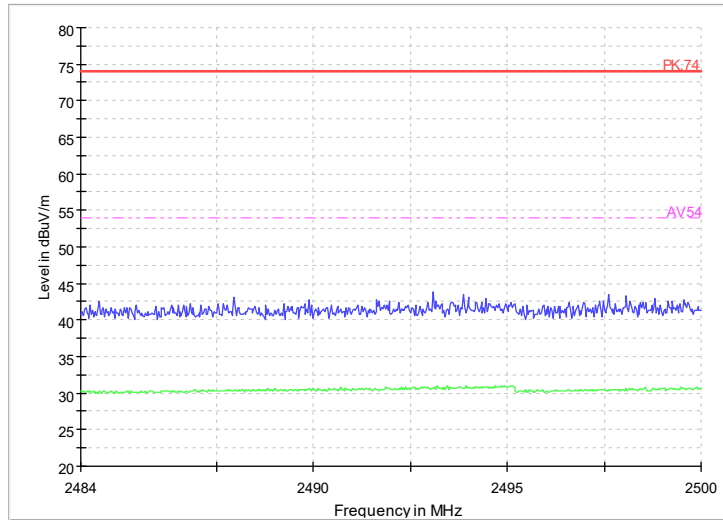
Comment

**Radiated Emission Band Edge**  
 Channel No.:3  
 Test Mode: 802.11n(HT40)  
 Polarization: V



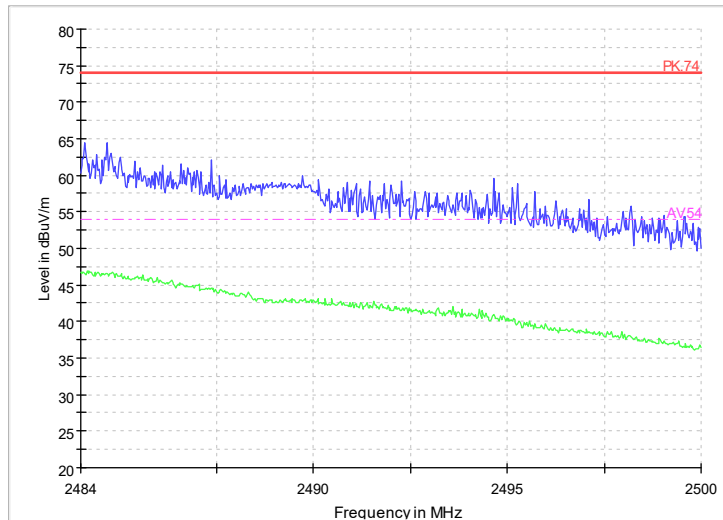
Comment

**Radiated Emission Band Edge**  
 Channel No.:3  
 Test Mode: 802.11n(HT40)  
 Polarization: H



Comment

**Radiated Emission Band Edge**  
Channel No.:9  
Test Mode: 802.11n(HT40)  
Polarization: V



Comment

**Radiated Emission Band Edge**  
Channel No.:9  
Test Mode: 802.11n(HT40)  
Polarization: H

**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:

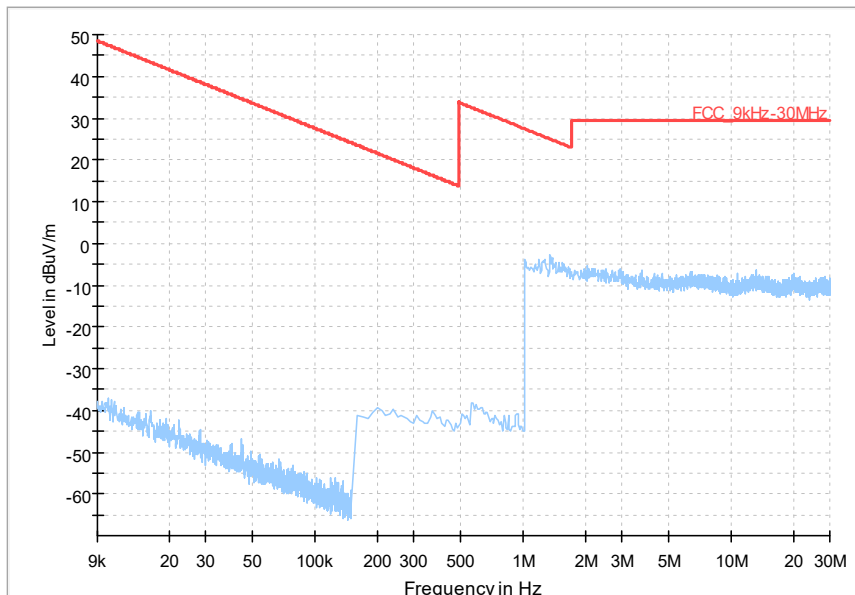
Result=  $P_{mea} + A_{Rpl}$

Sample calculation:  $(8.68dB\mu V/m) = (27.48dB\mu V) + (-18.8dB/m)$ , the corresponding frequency is 38.924000MHz.

For 802.11b Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
38.924000	8.68	-18.8	27.48	Vertical	40.00	31.32
59.245500	5.51	-19.2	24.71	Vertical	40.00	34.49
110.752500	5.92	-18.9	24.82	Vertical	43.50	37.58
269.105000	6.63	-16.7	23.33	Vertical	46.00	39.37
508.355500	12.12	-10.4	22.52	Vertical	46.00	33.88
929.820500	18.24	-3.0	21.24	Vertical	46.00	27.76

Full Spectrum

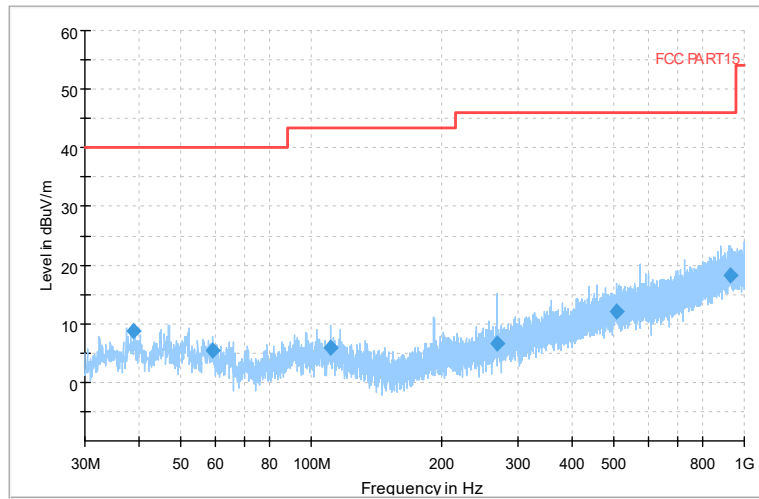


Frequency Range: 9kHz -30MHz  
Detector: QP mode

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): 2412  
 Channel No.:1

Full Spectrum

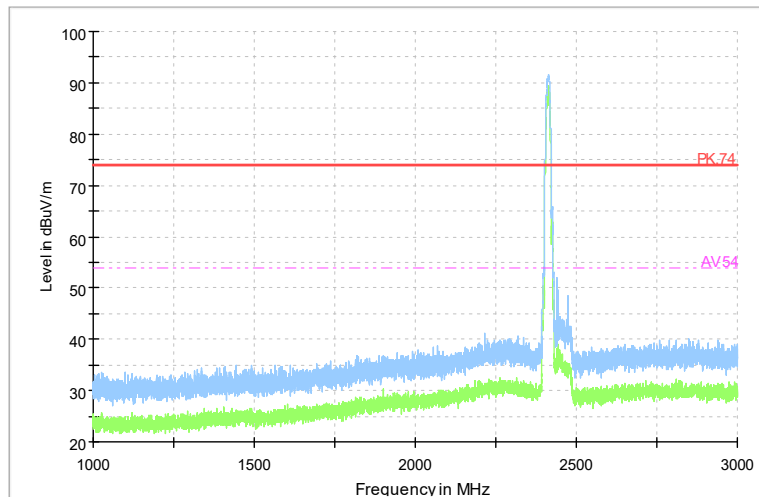


Comment

Frequency Range 30MHz -1GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11b

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.

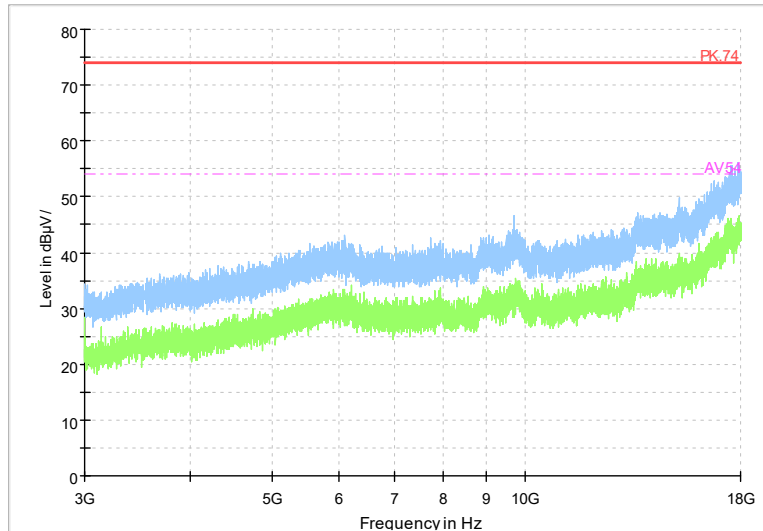
Full Spectrum



Comment

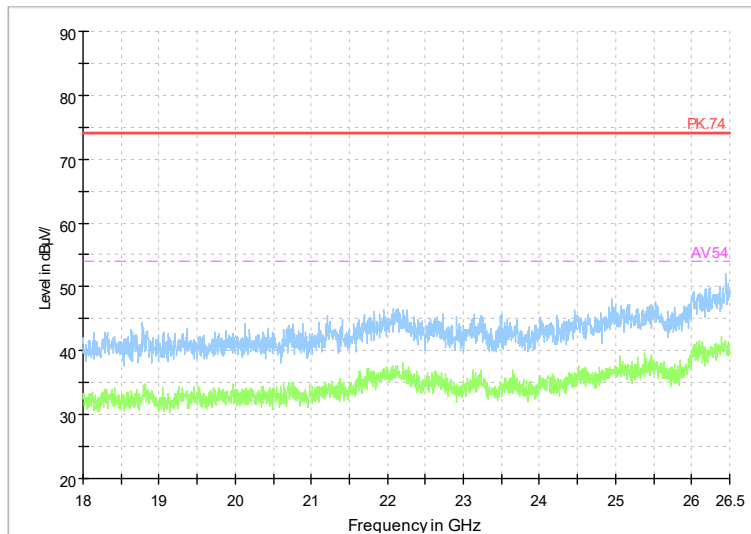
Frequency Range: 1GHz -3GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11b

Full Spectrum



Frequency Range: 3GHz -18GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11b

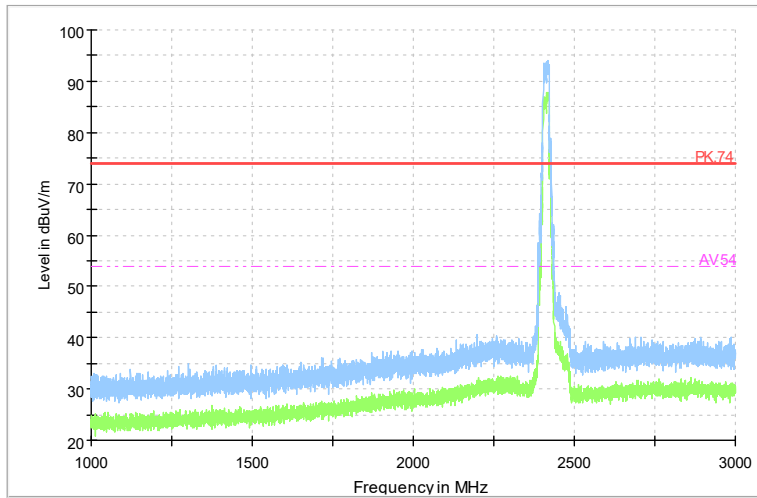
Full Spectrum



Frequency Range: 18GHz -26GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11b



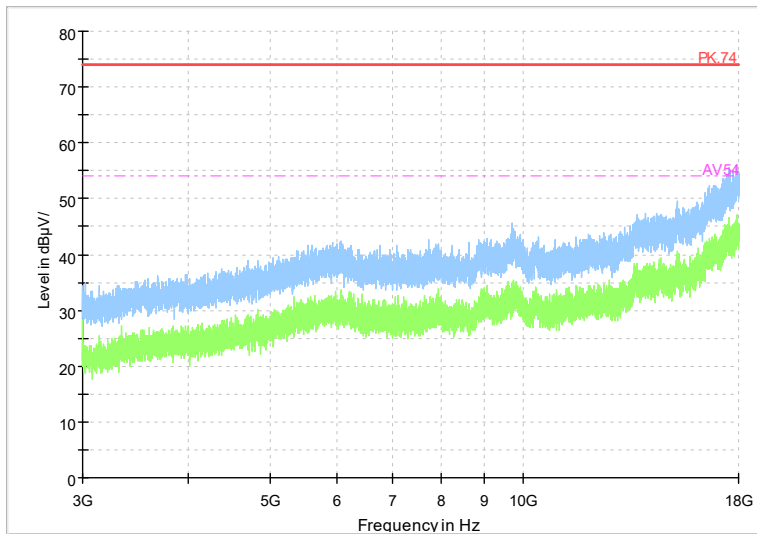
Full Spectrum



Comment

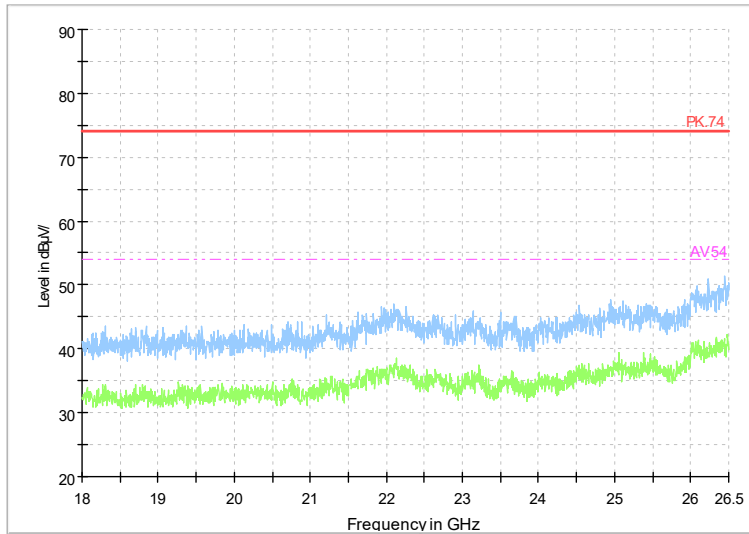
Frequency Range: 1GHz -3GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11g

Full Spectrum



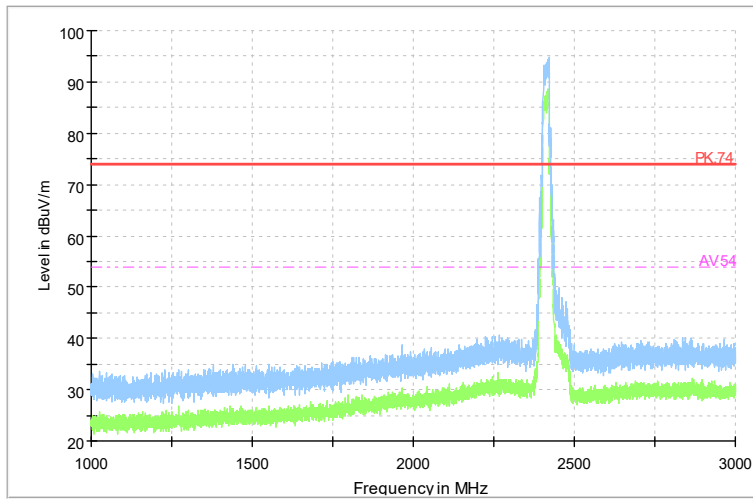
Frequency Range: 3GHz -18GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11g

Full Spectrum



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11g

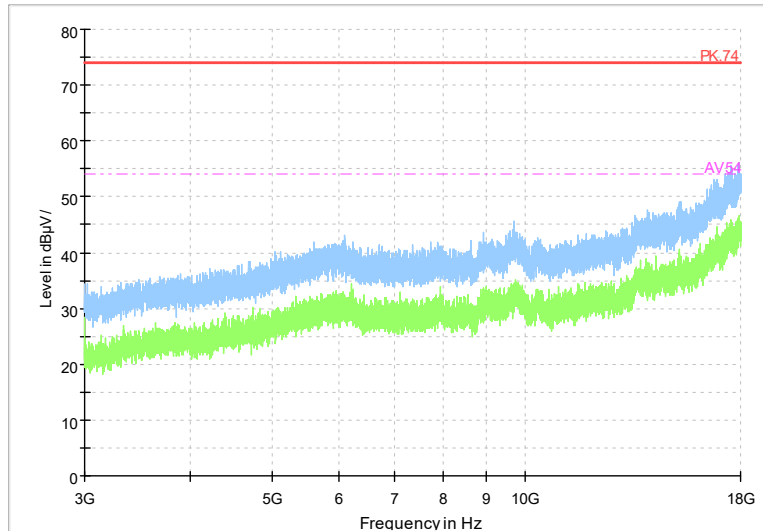
Full Spectrum



Comment

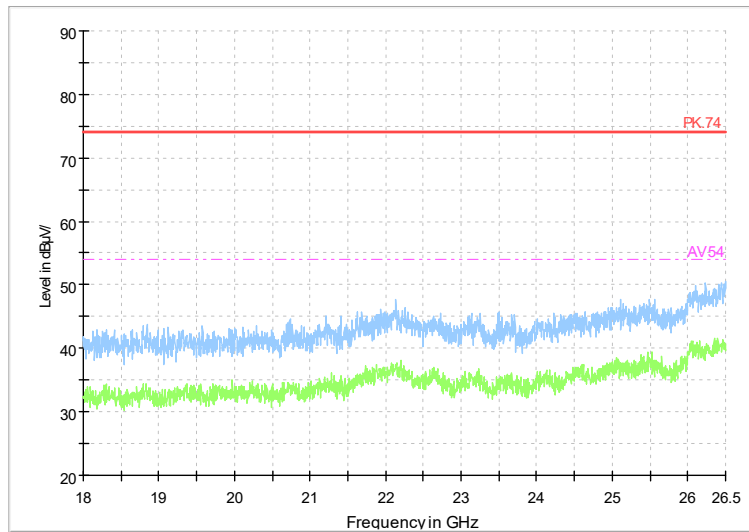
Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT20)

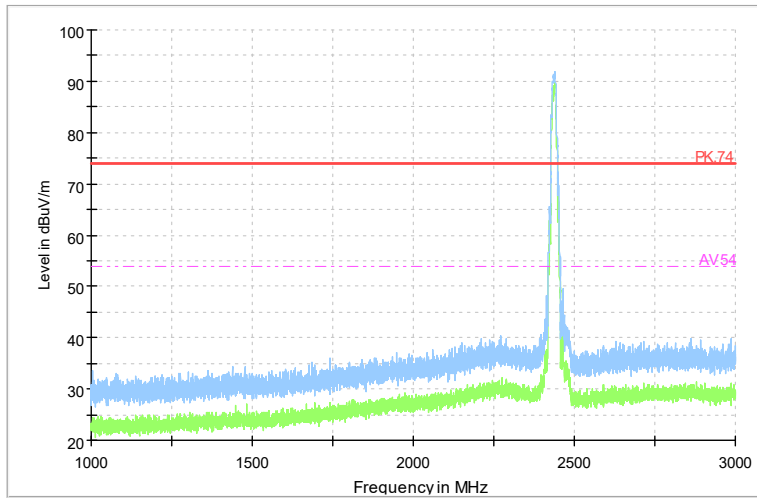
Full Spectrum



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT20)

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

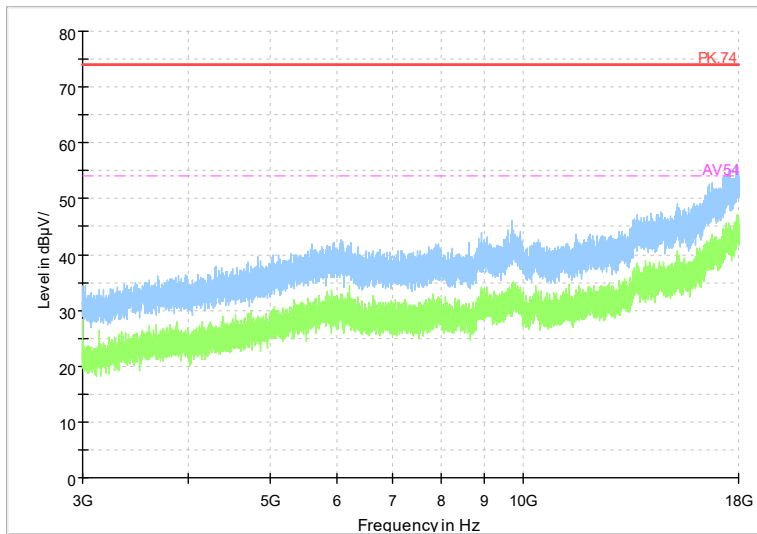
Full Spectrum



Comment

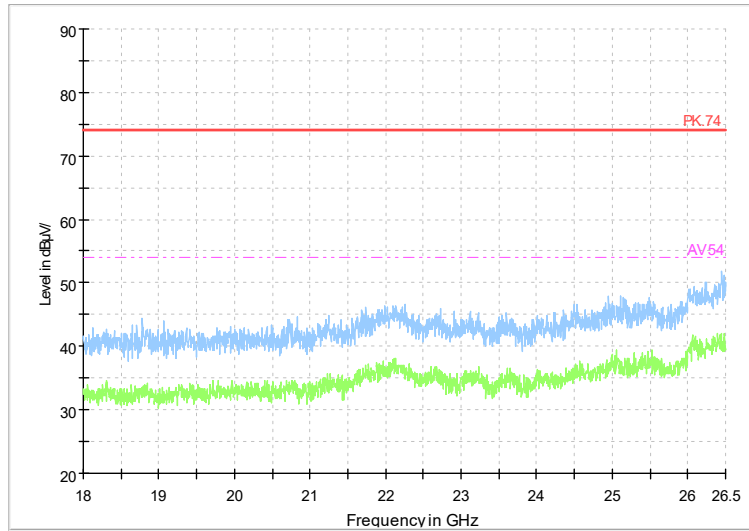
Frequency Range: 1GHz -3GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11b

Full Spectrum



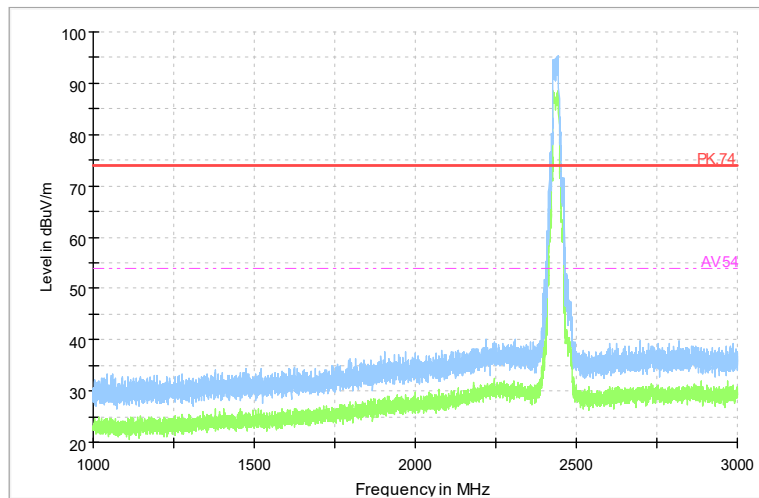
Frequency Range: 3GHz -18GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11b

Full Spectrum



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

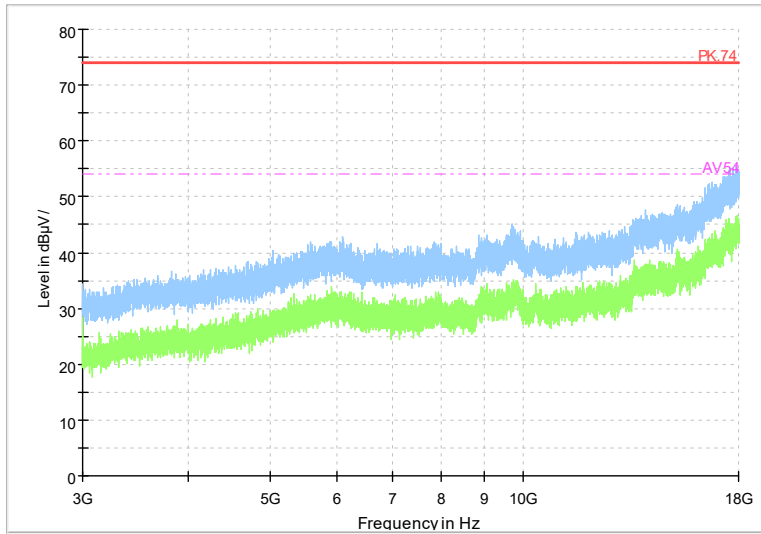
Full Spectrum



Comment

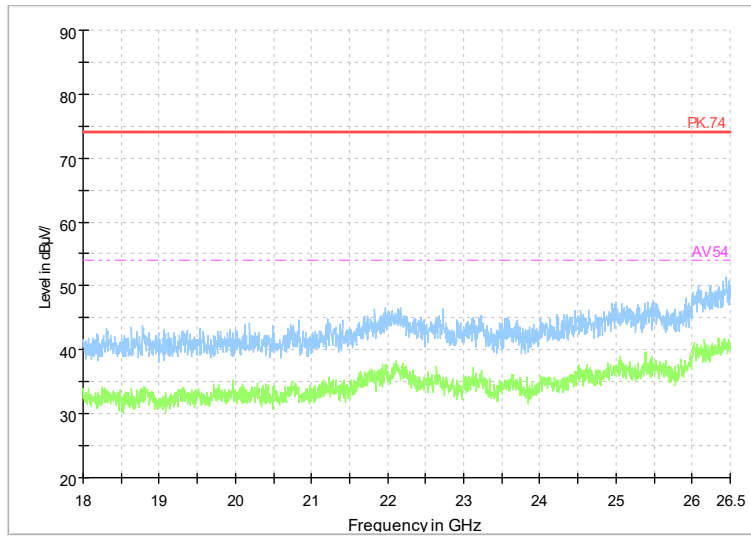
Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11g

Full Spectrum



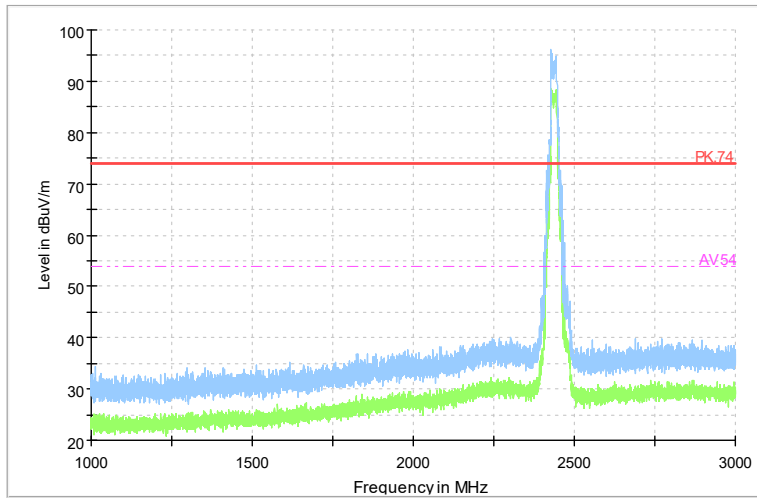
Frequency Range: 3GHz -18GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11g

Full Spectrum



Frequency Range: 18GHz -26GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11g

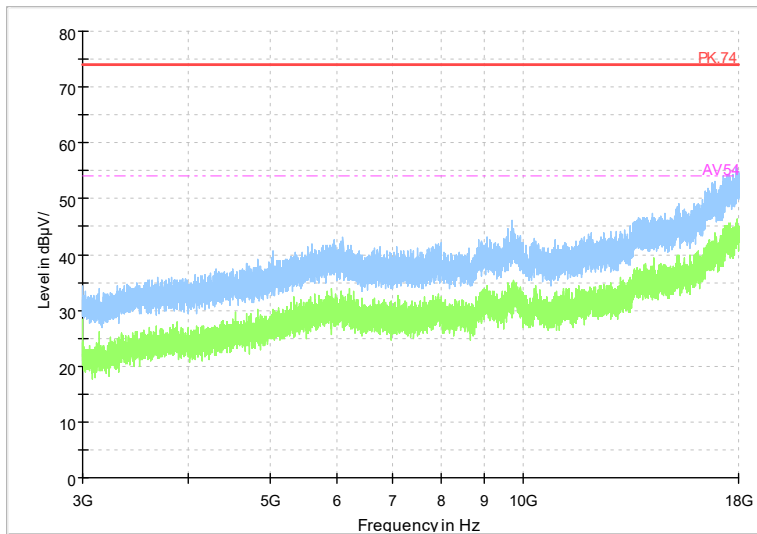
Full Spectrum



Comment

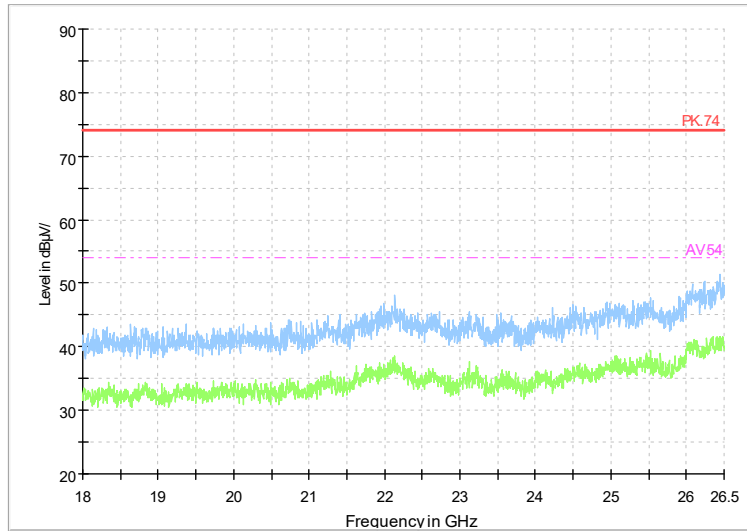
Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT20)

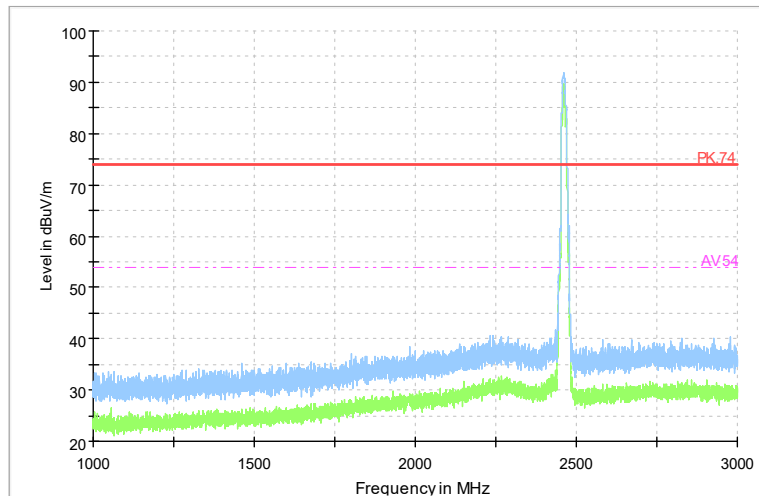
Full Spectrum



Frequency Range: 18GHz -26GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11n(HT20)

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

Full Spectrum

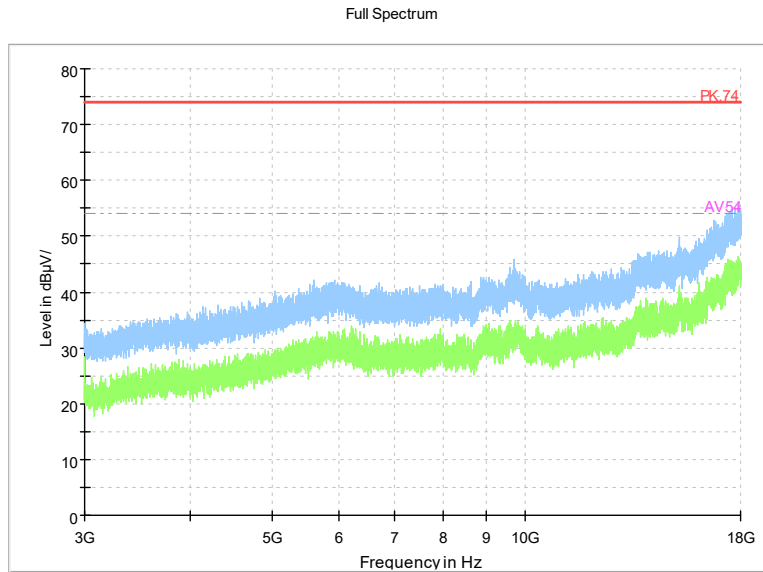


Comment

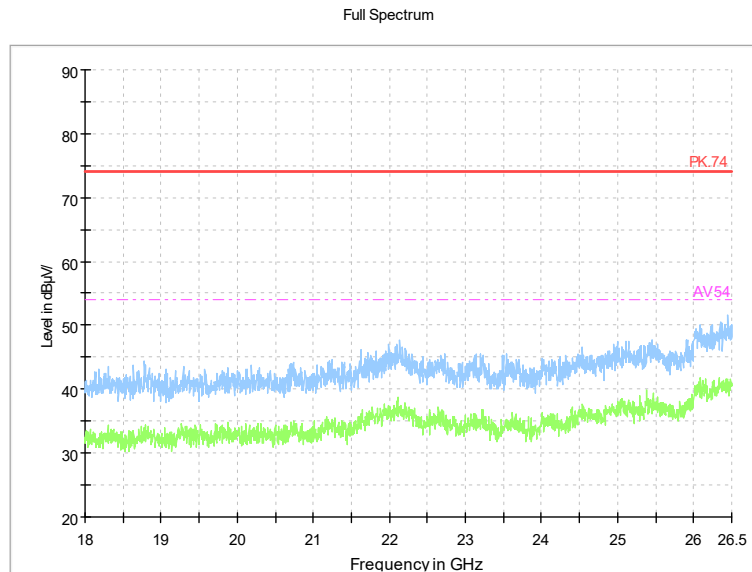
Frequency Range: 1GHz -3GHz



Detector: Av mode and PK mode  
Modulation type: 802.11b

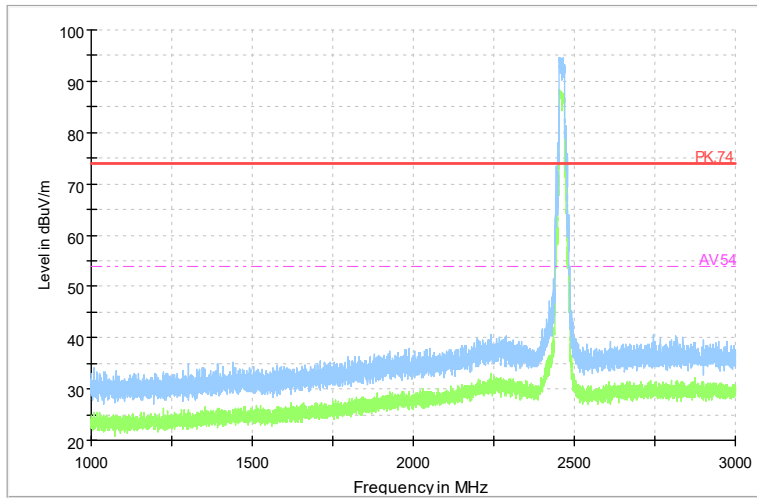


Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11b

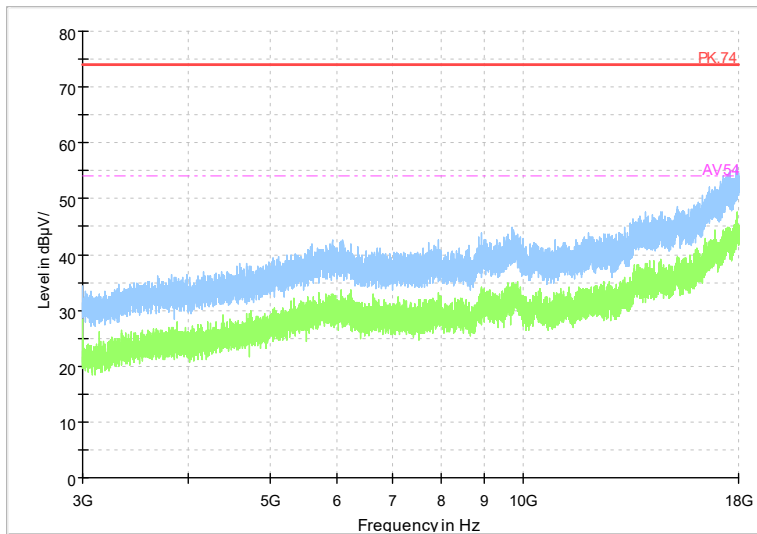
Full Spectrum



Comment

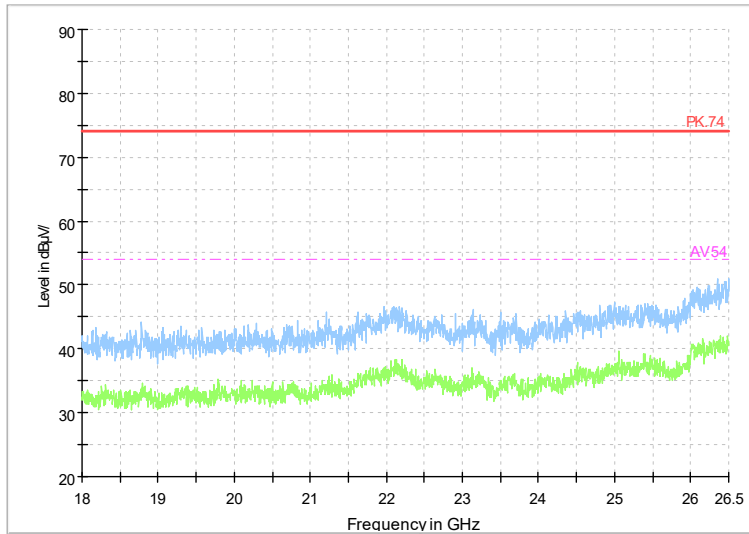
Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11g

Full Spectrum



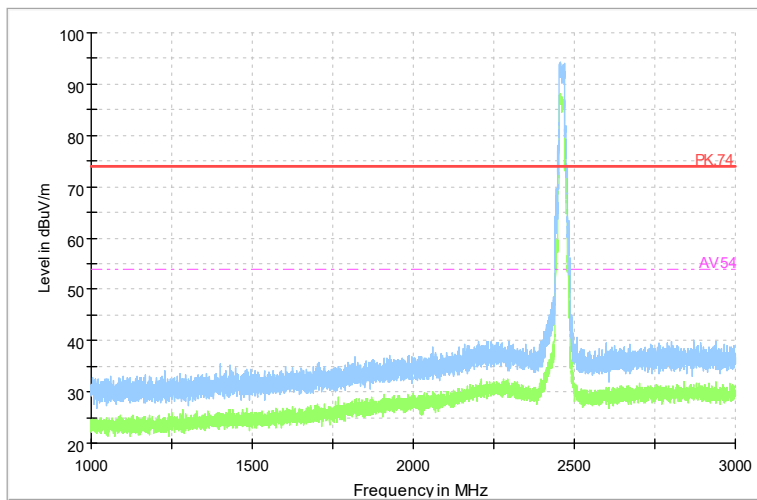
Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11g

Full Spectrum



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11g

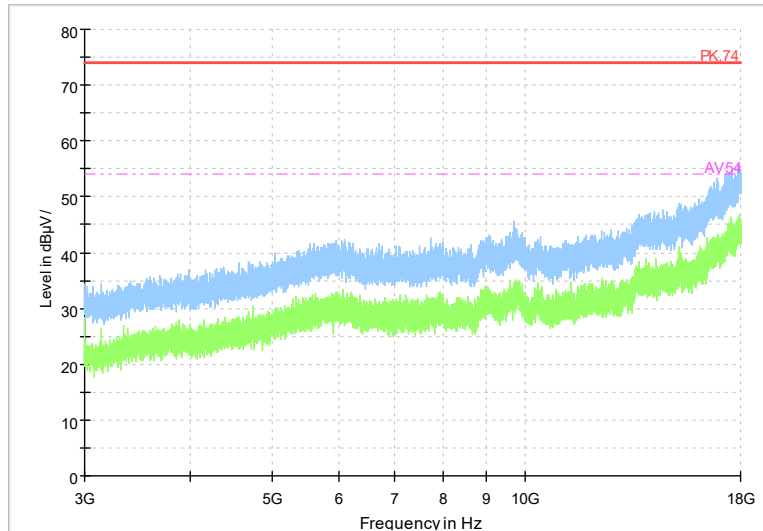
Full Spectrum



Comment

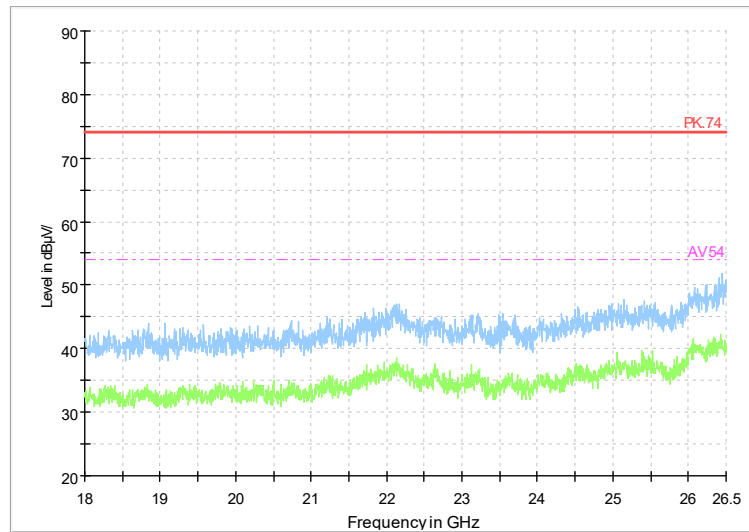
Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 3GHz -18GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11n(HT20)

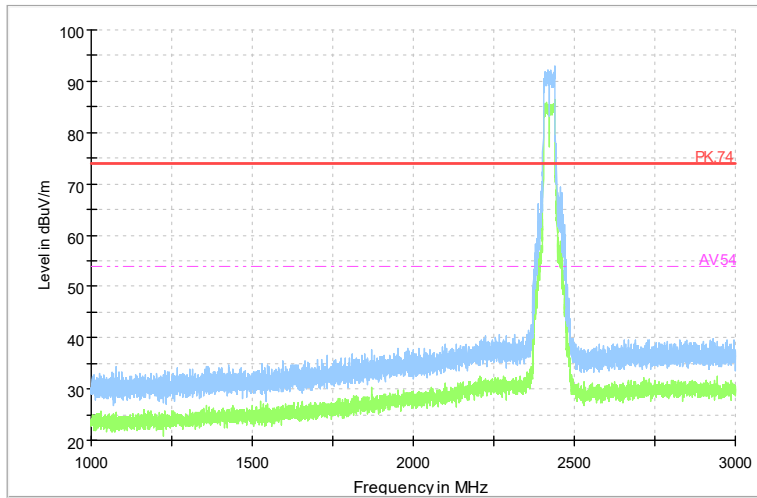
Full Spectrum



Frequency Range: 18GHz -26GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11n(HT20)

Carrier frequency (MHz): 2422  
 Channel No.:3

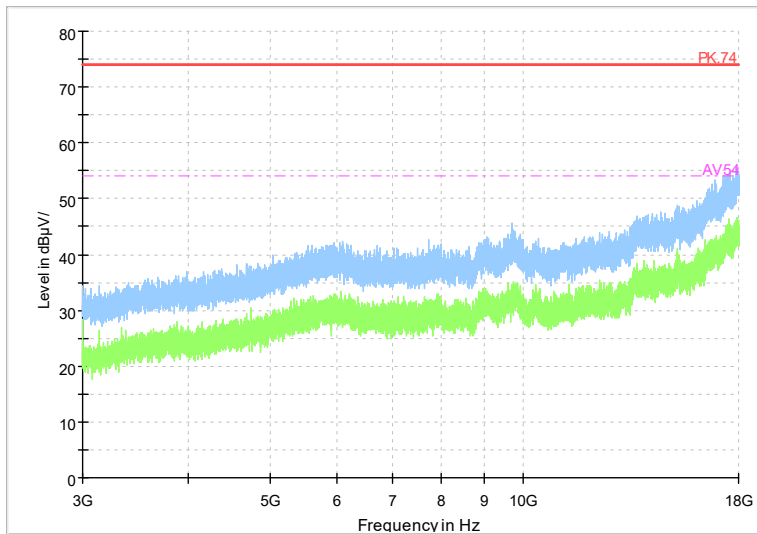
Full Spectrum



Comment

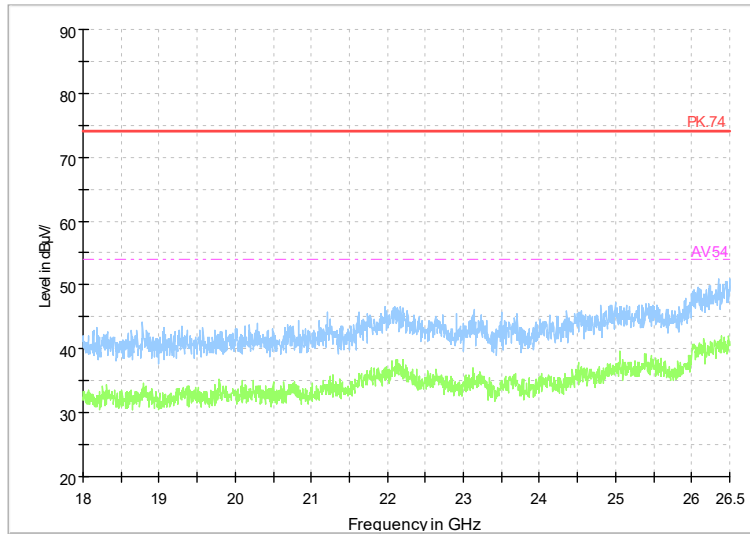
Frequency Range: 1GHz -3GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT40)

Full Spectrum



Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT40)

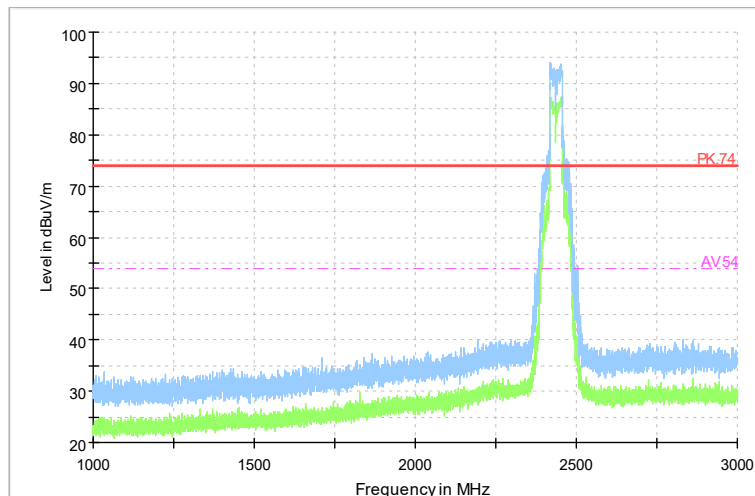
Full Spectrum



Frequency Range: 18GHz -26GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11n(HT40)

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

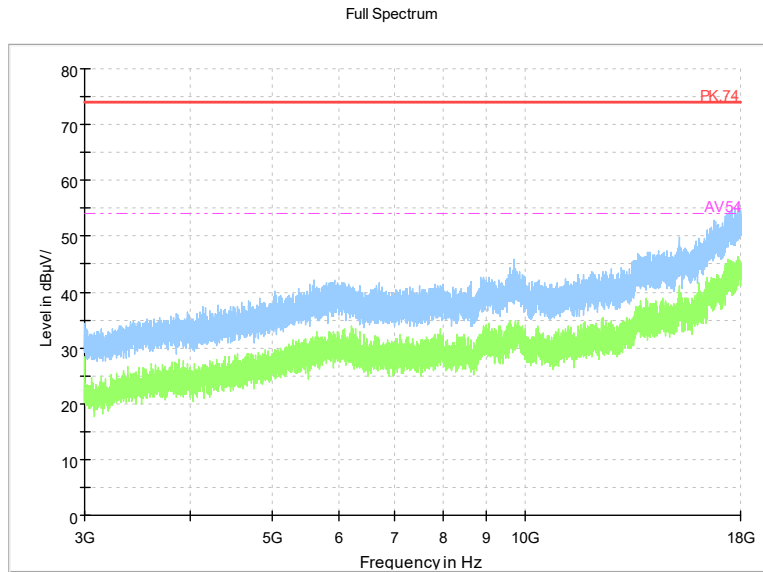
Full Spectrum



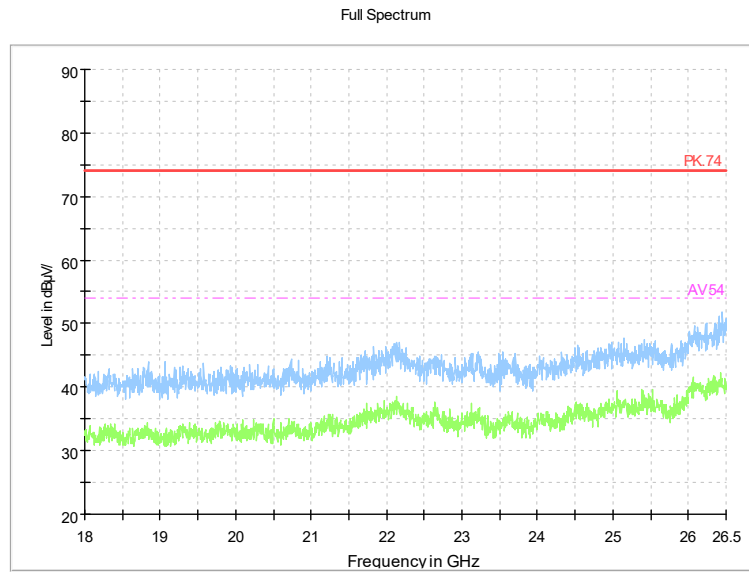
Comment

Frequency Range: 1GHz -3GHz

Detector: Av mode and PK mode  
Modulation type: 802.11n(HT40)



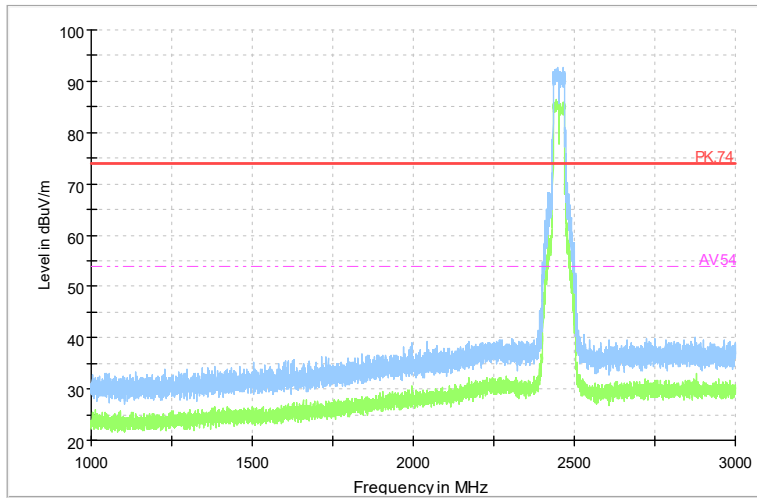
Frequency Range: 3GHz -18GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT40)



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT40)

Carrier frequency (MHz): 2452  
Channel No.:9

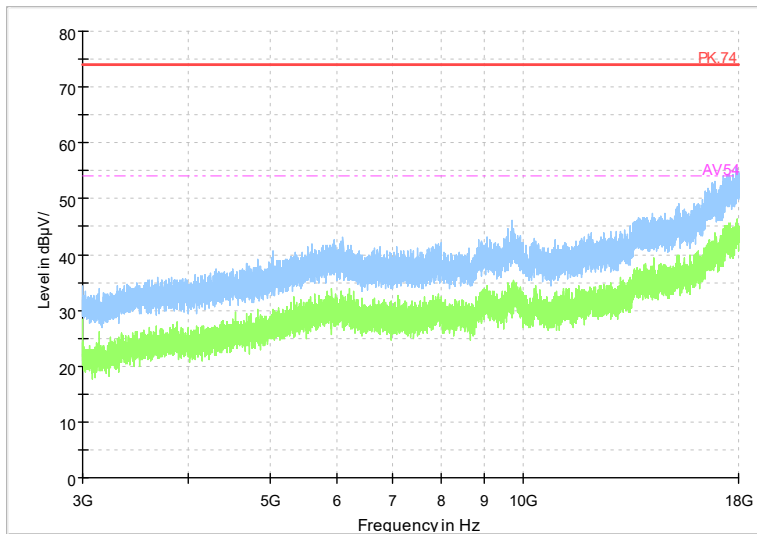
Full Spectrum



Comment

Frequency Range: 1GHz -3GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11n(HT40)

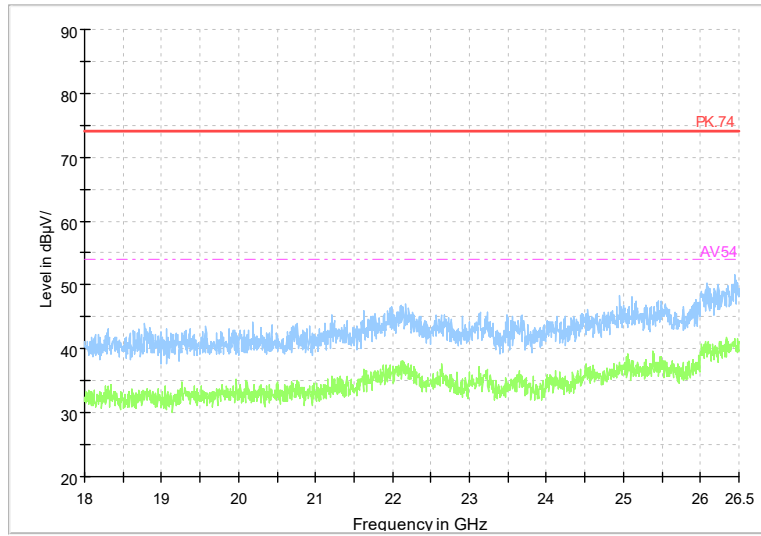
Full Spectrum



Frequency Range: 3GHz -18GHz  
 Detector: Av mode and PK mode  
 Modulation type: 802.11n(HT40)



Full Spectrum



Frequency Range: 18GHz -26GHz  
Detector: Av mode and PK mode  
Modulation type: 802.11n(HT40)

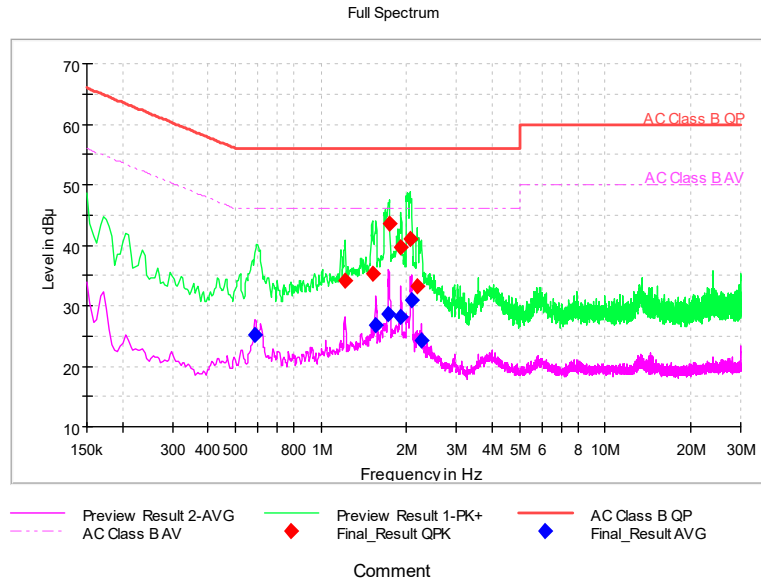
### AC Power line Conducted Emission

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:  $(25.07dB\mu V) = (-4.73dB\mu V) + (29.8 dB)$ , the corresponding frequency is 0.584957MHz.



### L+N Line

#### MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PmeaQuasiPeak (dBμV)	Pmea Average (dBμV)
0.584957	---	25.07	46.00	20.93	L1	29.8	---	-4.73
1.216072	34.12	---	56.00	21.88	L1	29.9	4.22	---
1.514572	35.24	---	56.00	20.76	L1	29.9	5.34	---
1.561479	---	26.76	46.00	19.24	L1	29.9	---	-3.14
1.732050	---	28.51	46.00	17.49	L1	29.9	---	-1.39
1.740579	43.66	---	56.00	12.34	L1	29.9	13.76	---
1.906886	---	28.05	46.00	17.95	L1	29.9	---	-1.85
1.911150	39.75	---	56.00	16.25	L1	29.9	9.85	---
2.051872	40.96	---	56.00	15.04	L1	29.9	11.06	---
2.081722	---	30.87	46.00	15.13	N	29.9	---	0.97
2.184064	33.26	---	56.00	22.74	L1	29.9	3.36	---
2.256557	---	24.25	46.00	21.75	N	29.9	---	-5.65

---End of Test Report---