Band edge measurement

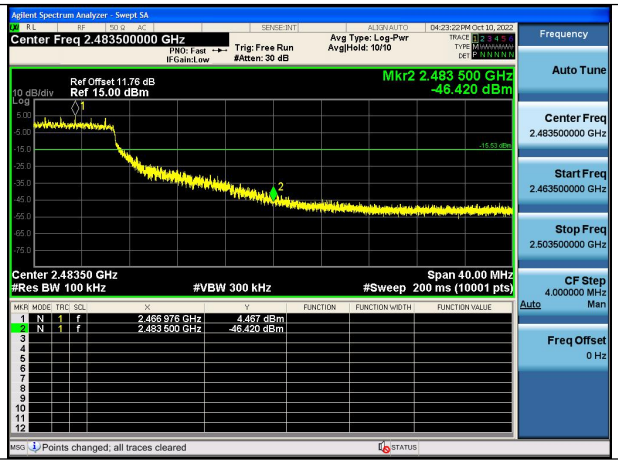
Test Mode: 802.11b

Test Mode:802.11b 2412MHz Chain0

Test Mode:802.11b 2462MHz Chain0

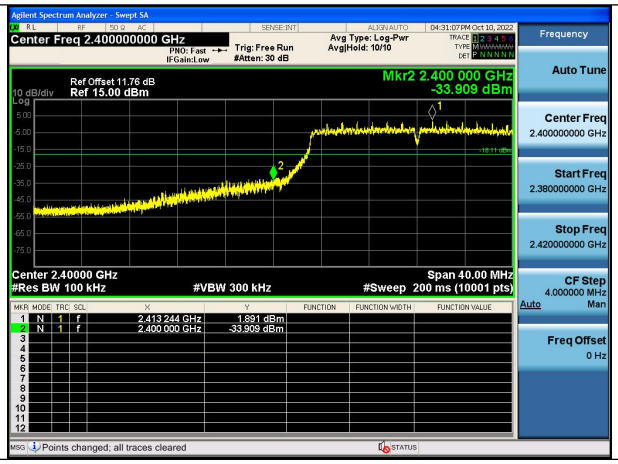
Test Mode: 802.11g

Test Mode:802.11g 2412MHz Chain0

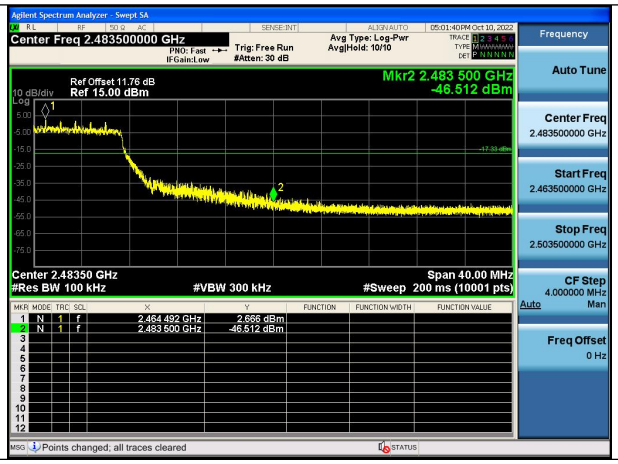


Test Mode:802.11g 2462MHz Chain0

Test Mode: 802.11n HT20



Test Mode:802.11n HT20 2412MHz Chain0



Test Mode:802.11n HT20 2462MHz Chain0

APPENDIX B – TEST DATA OF RADIATED EMISSION

Worst case(11b)

Radiated Emission Band Edge

The measurement results are obtained as described below:

Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (87.70 dBuV/m) = (53.70 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2412MHz.

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

Note：There were no emissions above 18GHz found within 20dB of the limit. Thus the test result was not reported according to §15.31（o）

The measurement results contain the correction factor of the duty cycle.

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 (1/m)
1	2412	95.52	61.52	N/A	N/A	8.90	25.10
2	2390	46.51	12.51	-27.49	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 (1/m)
1	2412	92.93	58.93	N/A	N/A	8.90	25.10
2	2390	44.71	10.71	-29.29	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	Reading Level	Over Limit	Limit (dBuv/m)	cable loss	antenna factor

		（dBuV/m)	(dBuV)	(dB)		(dB)	(1/m)
1	2412	92.05	58.05	N/A	N/A	8.90	25.10
2	2390	36.31	2.31	-17.69	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 (1/m)
1	2412	89.17	55.17	N/A	N/A	8.90	25.10
2	2390	34.68	0.68	-19.32	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 (1/m)
1	2462	96.46	62.46	N/A	N/A	8.90	25.10
2	2483.5	45.54	11.54	-28.46	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 (1/m)
1	2462	94.28	60.28	N/A	N/A	8.90	25.10
2	2483.5	43.88	9.88	-30.12	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 (1/m)
1	2462	92.86	58.86	N/A	N/A	8.90	25.10
2	2483.5	36.56	2.56	-17.44	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 (1/m)
1	2462	90.00	56.00	N/A	N/A	8.90	25.10
2	2483.5	35.57	1.57	-18.43	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:
Below 1GHz：
QuasiPeak=Reading Value + A_{Rpl}
Above 1GHz:
MaxPeak=Reading MaxPeak + A_{Rpl}
OR
Average=Reading Average + A_{Rpl}
Sample calculation: (17.45 dBμV/m) = (41.25 dBμV) + (-23.80 dB/m), the corresponding frequency is 148.437MHz.
The worst case attitude：The mobile lay down.

Spurious Radiated Emissions below 30MHz:
There were no emissions from 9kHz to 30MHz found within 20dB of the limit. Thus, the test result was not reported according to §15.31 (o).

For 802.11b Channel No.:1

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
47.993500	22.81	-17.7	40.51	Vertical	40.00	17.19
96.542000	26.92	-19.8	46.72	Vertical	43.50	16.58
98.142500	29.05	-19.5	48.55	Vertical	43.50	14.45
196.161000	32.38	-19.4	51.78	Vertical	43.50	11.12
527.173500	16.95	-10.3	27.25	Vertical	46.00	29.05
918.180500	21.24	-3.0	24.24	Vertical	46.00	24.76

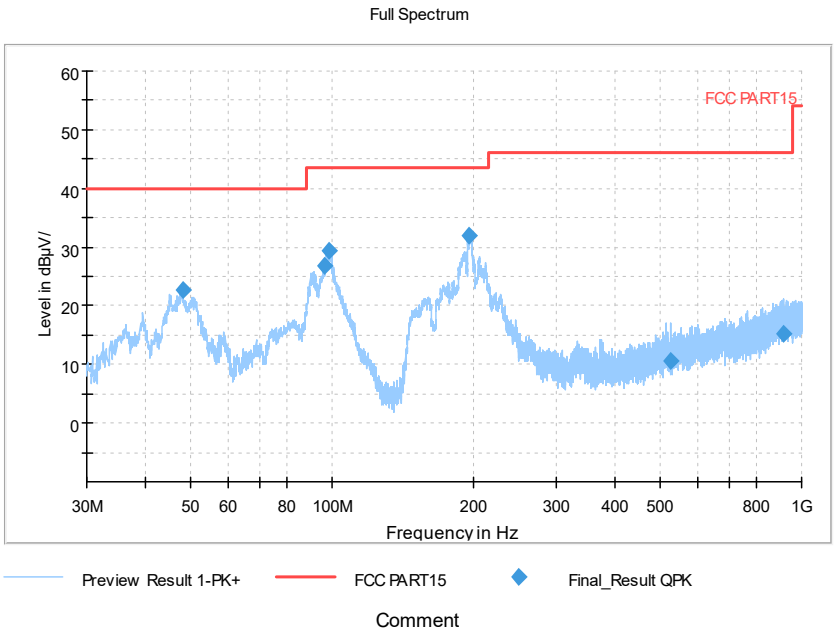
For 802.11b Channel No.:6

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
47.654000	22.87	-17.7	40.57	Vertical	40.00	17.13
96.251000	26.55	-19.9	46.45	Vertical	43.50	16.95
98.579000	29.74	-19.4	49.14	Vertical	43.50	13.76
195.627500	31.67	-19.4	51.07	Vertical	43.50	11.83
545.700500	16.22	-9.8	26.02	Vertical	46.00	29.78
932.488000	21.17	-2.9	24.07	Vertical	46.00	24.83

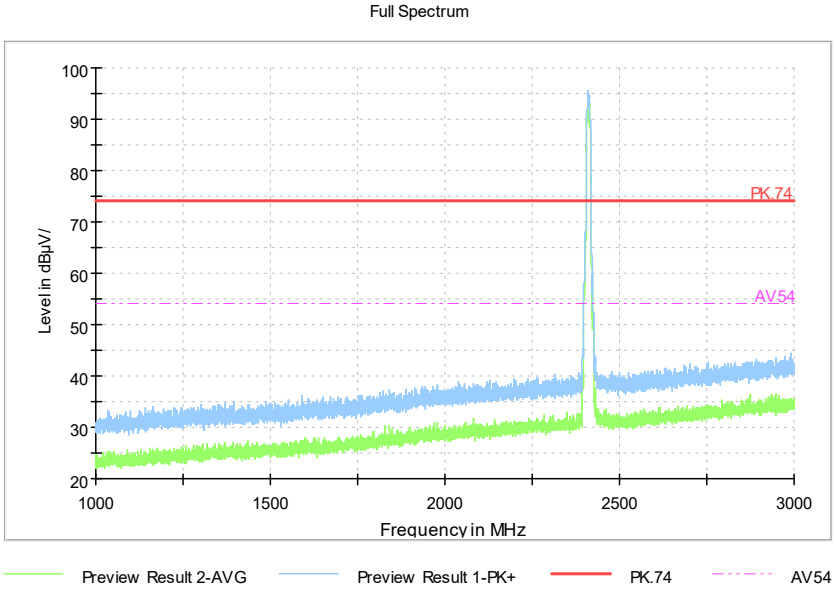
For 802.11b Channel No.:11

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
47.993500	22.63	-17.7	40.33	Vertical	40.00	17.37
96.542000	26.49	-19.8	46.29	Vertical	43.50	17.01
98.385000	29.64	-19.4	49.04	Vertical	43.50	13.86
195.676000	31.74	-19.4	51.14	Vertical	43.50	11.76
557.389000	15.87	-9.5	25.37	Vertical	46.00	30.13
953.246000	22.60	-2.7	25.30	Vertical	46.00	23.40

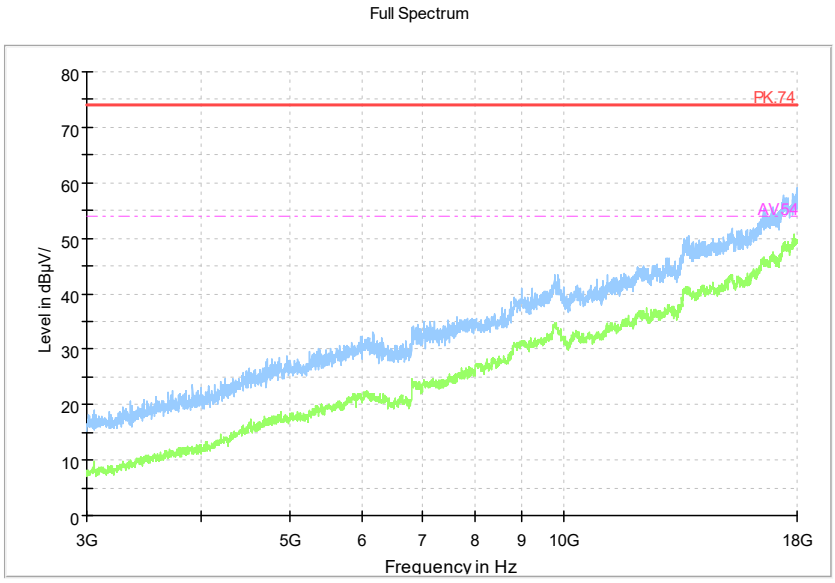
Carrier frequency (MHz): 2412
Channel No.:1



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



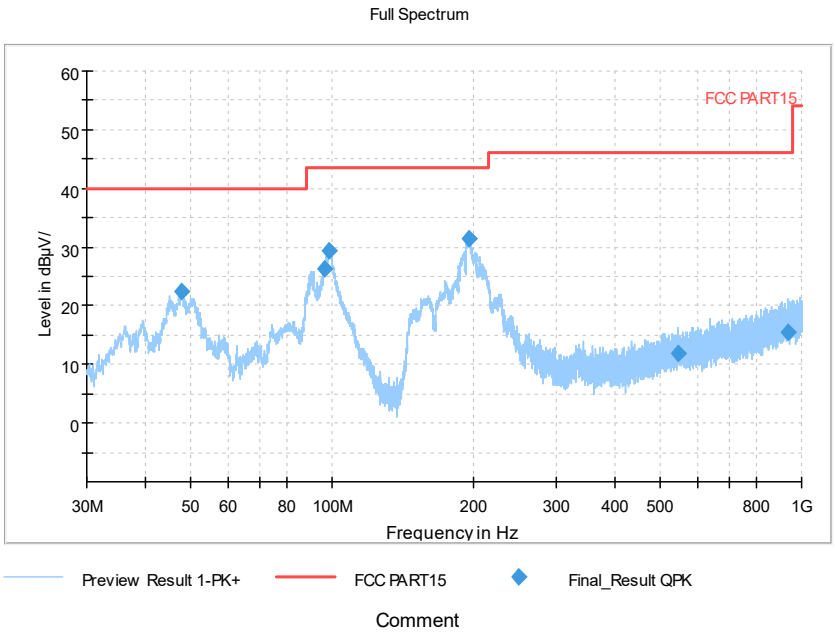
Frequency Range: 1GHz -3GHz
Detector: Av mode and PK mode
Modulation type: 802.11b



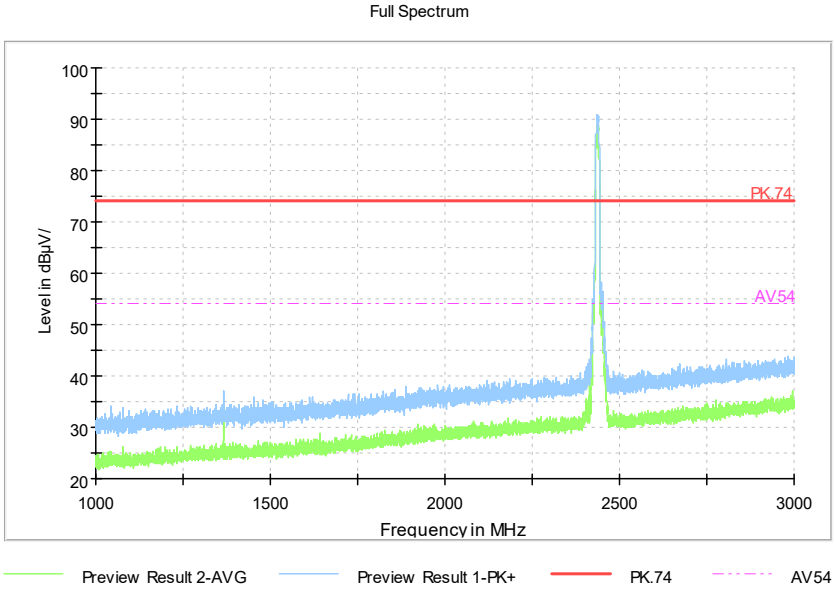
Frequency Range: 3GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

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

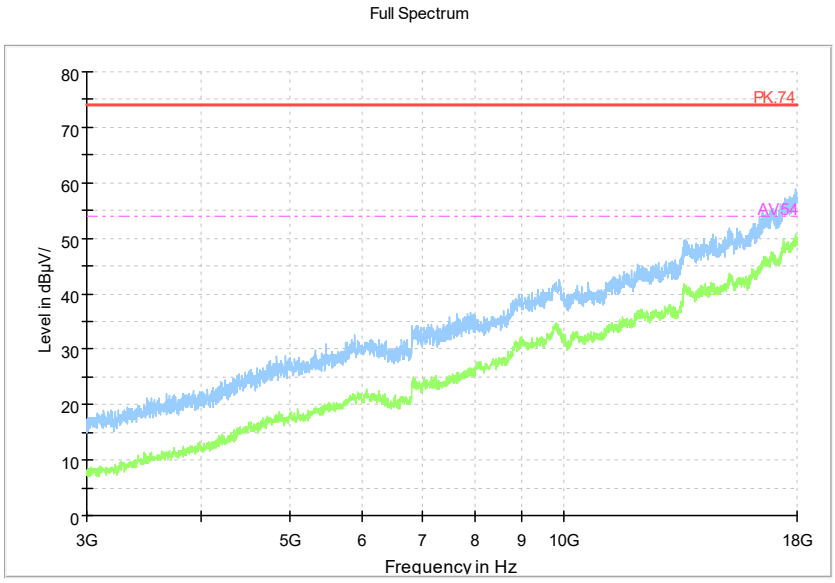
Carrier frequency (MHz): 2437
Channel No.:6



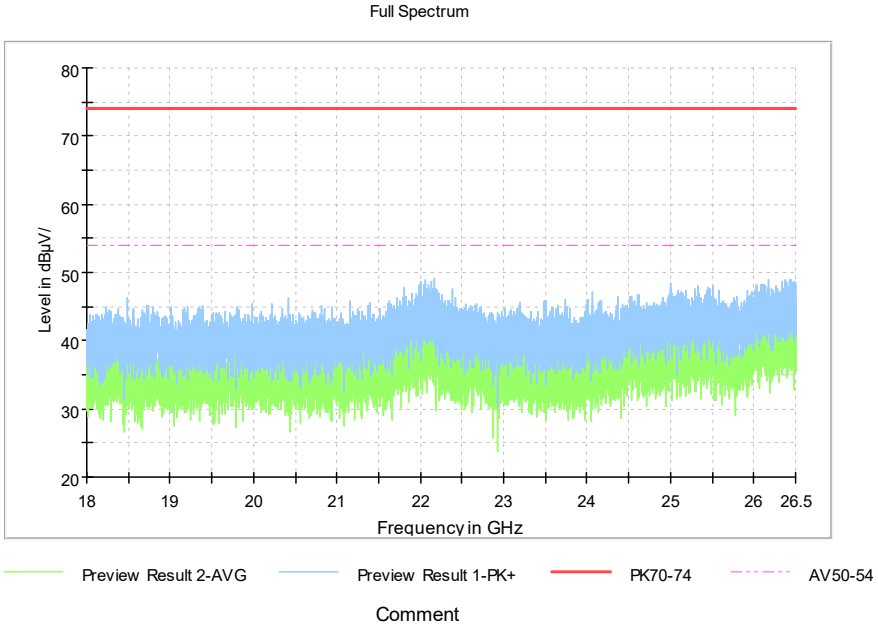
Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11b



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

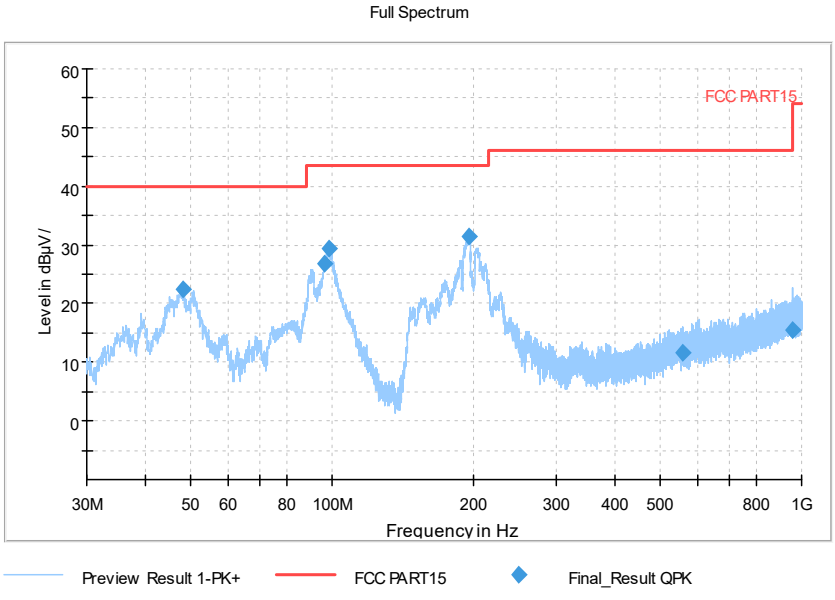


Frequency Range: 3GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

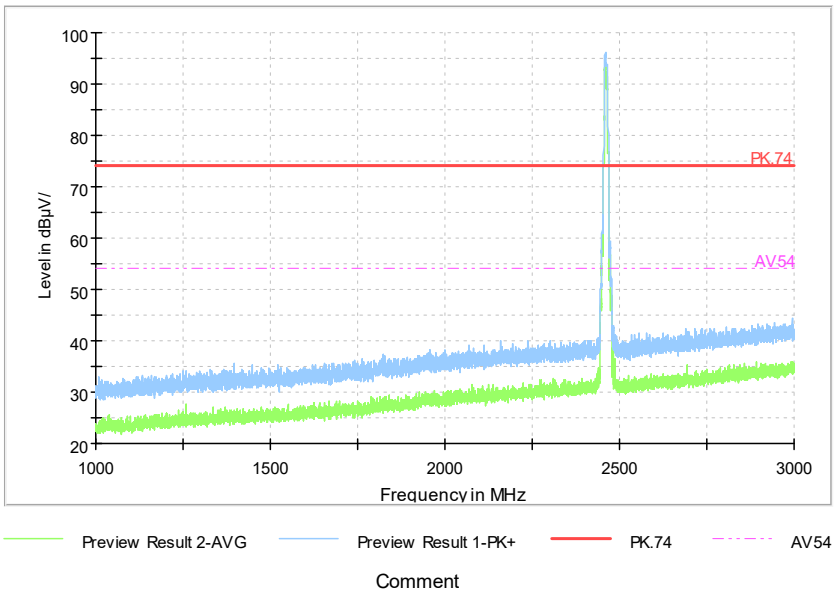


Frequency Range: 18GHz -25GHz
Detector: Av mode and PK mode
Modulation type: 802.11b

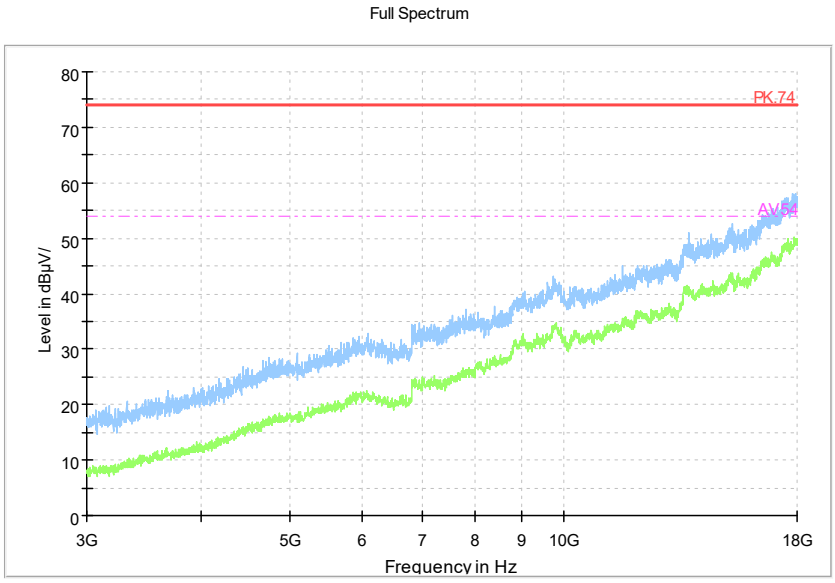
Carrier frequency (MHz): 2462
Channel No.:11



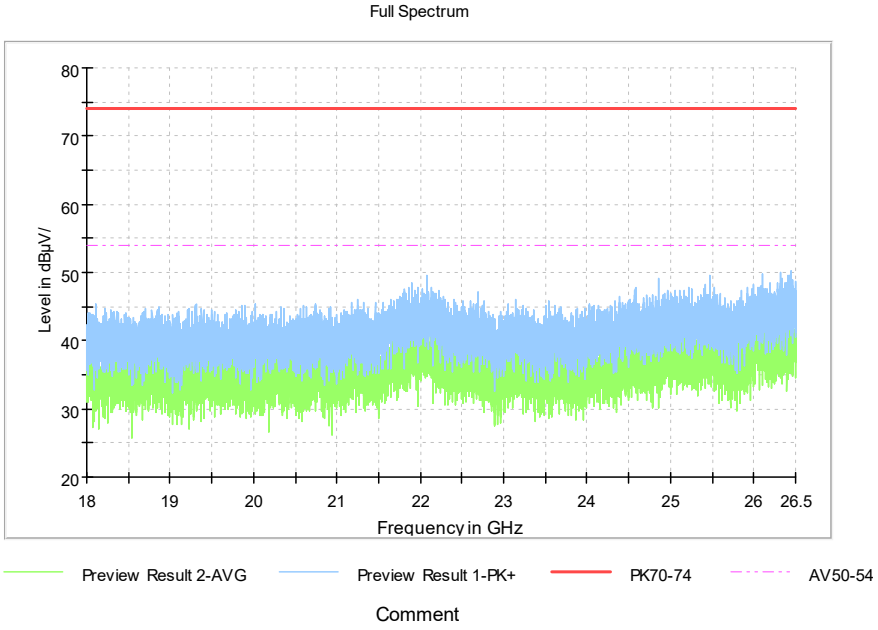
Frequency Range: 30MHz -1GHz
Detector: QP mode
Test Mode: 802.11b



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

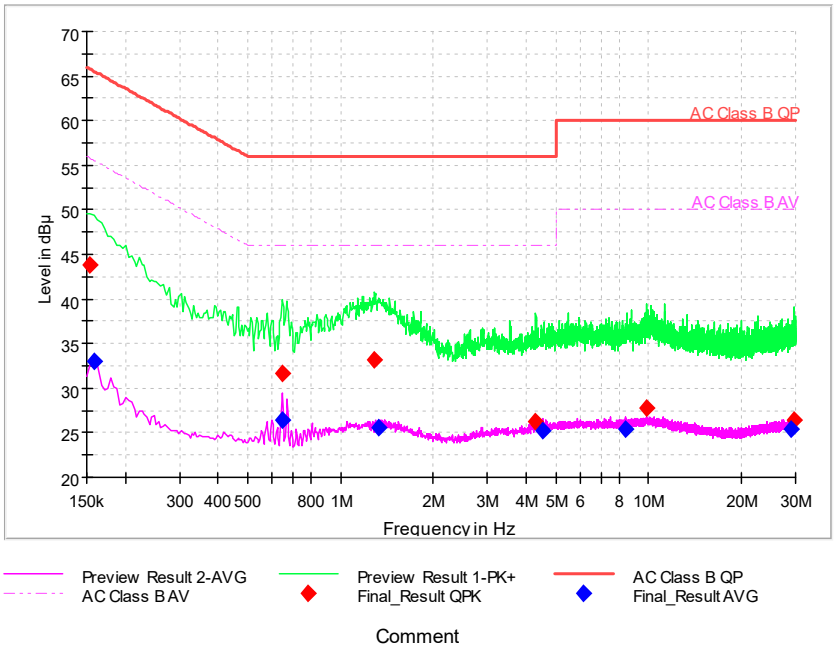


Frequency Range: 3GHz -18GHz
Detector: Av mode and PK mode
Modulation type: 802.11b



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

AC Power line Conducted Emission



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBµV)	Pmea Average (dBµV)
0.154264	43.75	---	65.77	22.02	N	29.7	14.05	---
0.158529	---	33.00	55.54	22.54	N	29.7	---	3.3
0.644657	---	26.44	46.00	19.56	N	29.7	---	-3.26
0.644657	31.69	---	56.00	24.31	L1	29.7	1.99	---
1.292829	33.20	---	56.00	22.80	N	29.8	3.4	---
1.322679	---	25.52	46.00	20.48	N	29.8	---	-4.28
4.307679	26.20	---	56.00	29.80	L1	29.8	-3.6	---
4.529421	---	25.17	46.00	20.83	L1	29.9	---	-4.73
8.439771	---	25.36	50.00	24.64	L1	29.9	---	-4.54
9.885364	27.78	---	60.00	32.22	N	29.9	-2.12	---
29.014950	---	25.40	50.00	24.60	N	30.0	---	-4.6
29.825164	26.34	---	60.00	33.66	N	30.0	-3.66	---

---End of the test report---