FCC TEST REPORT

According to

FCC Rules and Regulations Part 15 Subpart C

Applicant	:	Amped Wireless
Address	:	13089 Peyton Dr. #C307, Chino Hills CA 91709
Equipment	:	High Power Wireless-N 600mW Gigabit Dual Band Router
Model No.	:	R20000G
Trade Name	:	Amped Wireless
FCC ID	:	ZTT-R20000G

- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of **Cerpass Technology Corp.,** the test report shall not be reproduced except in full.
- The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

Contents

History of this test report

■ ORIGINAL.

☐ Additional attachment as following record:

Attachment No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE

According to

FCC Rules and Regulations

Part 15 Subpart C

Applicant	:	Amped Wireless
Address	:	13089 Peyton Dr. #C307, Chino Hills CA 91709
Equipment	:	High Power Wireless-N 600mW Gigabit Dual Band Router
Model No.	:	R20000G
FCC ID	:	ZTT-R20000G

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 2009, KDB558074 & KDB662911.** The equipment was ***passed*** the test performed according to **FCC Rules and Regulations Part 15 Subpart C (2010).**

The test was carried out on Jun. 22, 2012 at Cerpass Technology Corp.

Approved by:

Hill Chen
EMC/RF B.U. Assistant Manager

Tested by:

Ben Lu
Engineer

1. Report of Measurements and Examinations

1.1 List of Measurements and Examinations

FCC Rule	. Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. Conducted Emission	Pass
15.209 15.247(d)	. Radiated Emission	Pass
15.247(a)(2)	. 6dB Bandwidth	Pass
15.247(b)	. Maximum Peak Output Power	Pass
15.247(d)	. 100kHz Bandwidth of Frequency Band Edges	Pass
15.247(e)	. Power Spectral Density	Pass
1.1307 1.1310 2.1091 2.1093	. RF Exposure Compliance	Pass

2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

- Wireless Standard: 802.11a/b/g/n
- Frequency Band: 2.4GHz, 5.0GHz
- Wireless Speed: 2.4GHz: 300Mbps (Tx/Rx)
  5.0GHz: 300Mbps (Tx/Rx)
- Amplifier: Dual 2.4GHz 600mW Amplifiers
  Dual 5.0GHz Amplifiers
  Dual Low Noise Amplifier
- Wireless Sensitivity: -94dBm
- Wireless Output Power: Up to 29dBm
- Wireless Security: WEP, WPA, WPA2, WPA Mixed, WPS
- Processor Clock Speed: 620MHz
- Wireless Coverage Control: 15% - 100% Output Power
- Data Rate:
  2.4GHz: 802.11b: 11Mbps, 802.11g: 54Mbps, 802.11n HT20: 130Mbps, 802.11n HT40: 270Mbps
  5.0GHz: 802.11a: 54Mbps, 802.11an HT20: 130Mbps, 802.11an HT40: 270Mbps
- Antenna:
  -2 x Detachable High Gain
  Dual Band 2dBi (for 2.4GHz), 4dBi (for 5GHz) Antennas
  -2 x Reverse SMA Connector
- Ports:
  -4 x RJ45 10/100/1000 LAN ports
  -1 x RJ45 10/100/1000 WAN ports
  -USB 2.0 Port for Storage Devices
- Mounting: Wall, Stand or Desktop
- Warranty: 1 Year

2.2 Carrier Frequency of Channels

802.11b, 802.11g, 802.11n HT 20 (2412MHz~2462MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437	---	---

802.11n, HT 40 (2422MHz~2452MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
03	2422	07	2442
04	2427	08	2447
05	2432	09	2452
06	2437	---	---

802.11a, 802.11an HT 20 (5725MHz~5850MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
149	5745	161	5805
153	5765	165	5825
157	5785	---	---

802.11an HT 40 (5755MHz~5795MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
151	5755	159	5795
155	5775	---	---

2.3 Test Mode and Test Software

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
b. The complete test system included Notebook, Mouse and EUT for RF test.
c. An executive “MD TOOL” under XP was executed to keep transmitting and receiving data via Wireless.
d. The following test modes were performed for test:
   - 802.11b/g/n HT20: CH01: 2412MHz, CH06: 2437MHz, CH11: 2462MHz
   - 802.11n HT40: CH03: 2422MHz, CH06: 2437MHz, CH09: 2452MHz
   - 802.11a/ an HT20: CH149: 5745MHz, CH157: 5785MHz, CH165: 5825MHz
   - 802.11an HT40: CH151: 5755MHz, CH155: 5775MHz, CH159: 5795MHz

2.4 Description of Test System

Device	Manufacturer	Model No.	Description
Notebook	ASUS	A8J	Power Cable, Unshielding 1.8m
Mouse	Logitech	OF-2854	USB Cable, Shielding 1.85m

2.5 General Information of Test

Test Site :	Cerpass Technology Corp. 2F-11, No. 3, Yuan Qu St., (Nankang Software Park), Taipei, Taiwan 115, R.O.C.
Test Site Location (OATS2-SD) :	No.68-1, Shihbachongsi, Shihding Township, Taipei City 223, Taiwan, R.O.C.
FCC Registration Number :	TW1049, TW1061, 488071, 390316
IC Registration Number :	4934B-1, 4934D-1
VCCI Registration Number :	T-1173 for Telecommunication Test C-4139 for Conducted emission test R-3428 for Radiated emission test G-97 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30MHz Radiation: from 30MHz to 40,000MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.
Laboratory Accreditation	TAF Testing Laboratory 1439

2.6 Measurement Uncertainty

Measurement Item	Uncertainty
Radiated emission	±4.11dB
Peak Output Power(conducted)	±1.38dB
Peak Output Power(Radiated)	±1.70dB
Power Spectral Density	±1.39dB
Radiated emission(3m)	±4.11dB
Radiated emission(10m)	±3.89dB

3. Antenna Requirements

3.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

3.2 Antenna Construction and Directional Gain

802.11b/g/n:
ANT R, ANT L
Antenna Type: Dipole Antenna
Antenna Gain: 2 dBi

Note: Directional gain = GANT+10 log(N) dBi=2+10log(2)=5.01(dBi)

802.11a, an:
ANT R, ANT L
Antenna Type: Dipole Antenna
Antenna Gain: 4 dBi

Note: Directional gain = GANT+10 log(N) dBi=4+10log(2)=7.01(dBi)

4. Test of Conducted Emission

4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2009 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

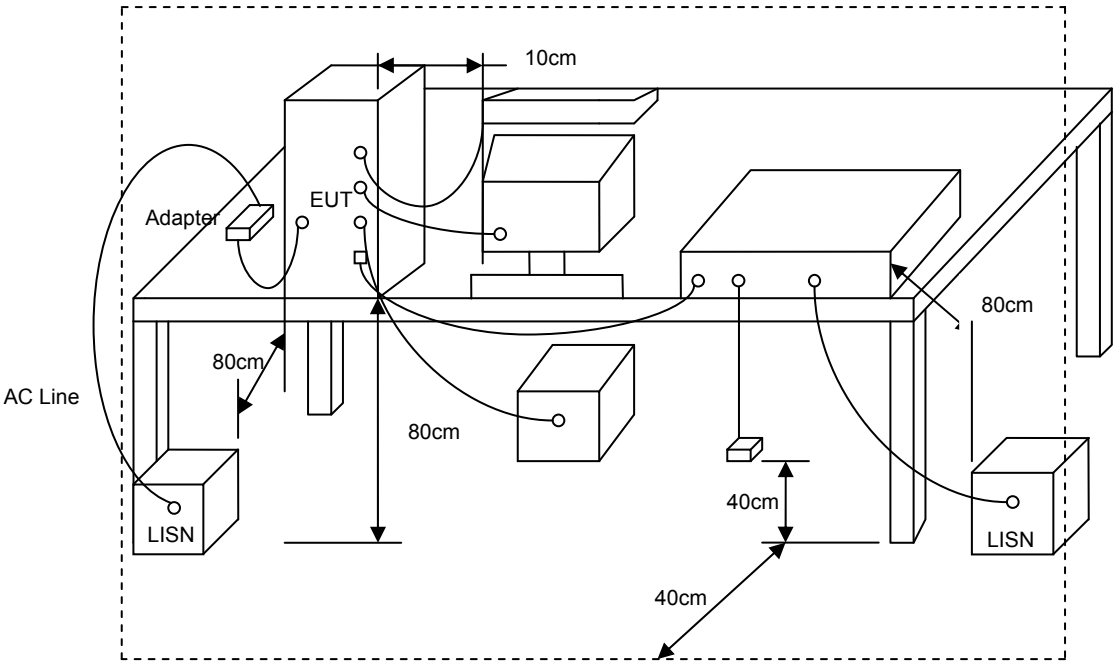
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

4.2 Test Procedures

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.3 Typical Test Setup

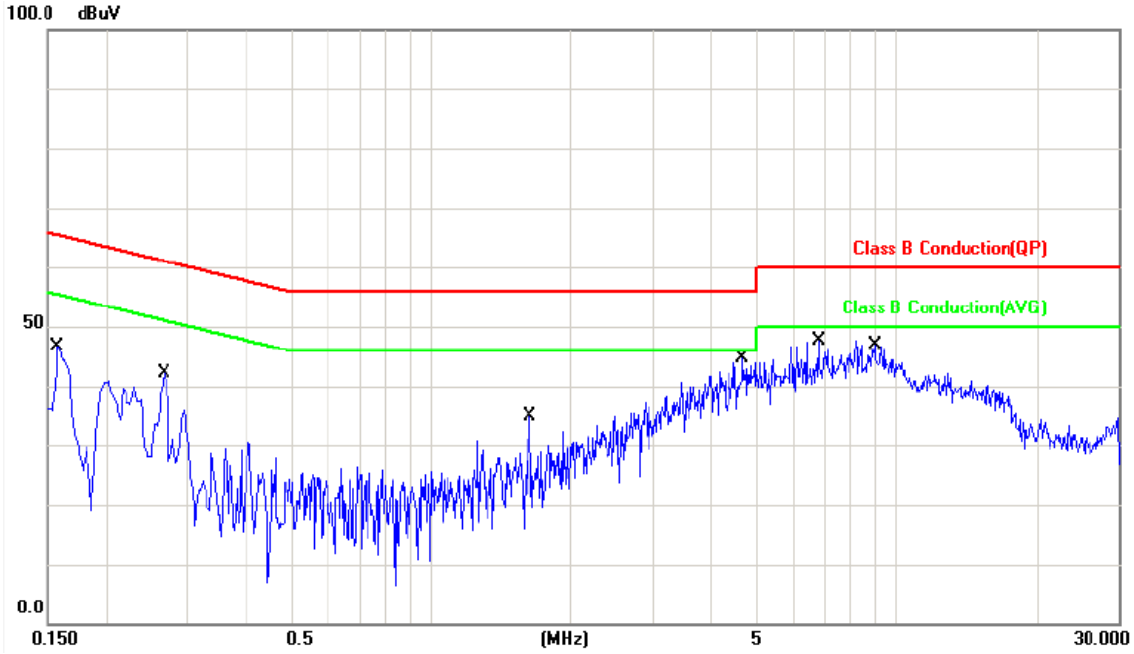


4.4 Measurement Equipment

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI	100443	2012/01/12	2013/01/11
LISN	Schwarzbeck	NSLK 8127	8127-516	2012/03/08	2013/03/07
LISN	Schwarzbeck	NSLK 8127	8127-568	2011/08/24	2012/08/23

4.5 Test Result and Data

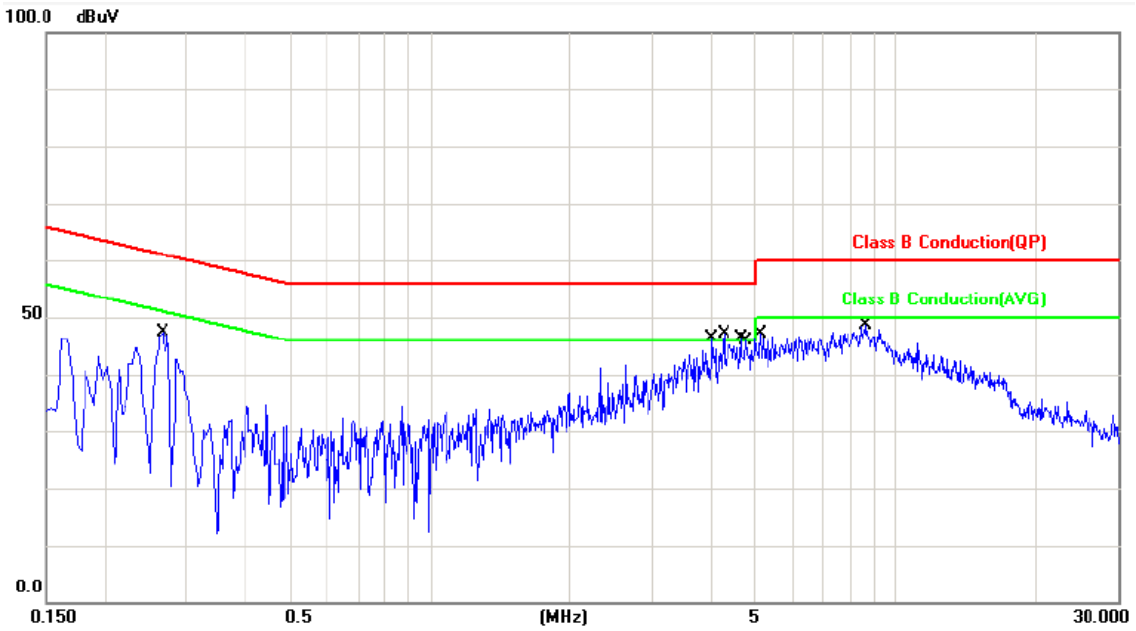
Power	:	From System	Pol/Phase	:	LINE
Test Mode 1	:	802.11g, CH1	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	0.08	40.68	40.76	65.56	-24.80	QP	P
2	0.1580	0.08	23.65	23.73	55.56	-31.83	AVG	P
3	0.2660	0.09	42.71	42.80	61.24	-18.44	QP	P
4	0.2660	0.09	34.77	34.86	51.24	-16.38	AVG	P
5	1.6340	0.20	23.45	23.65	56.00	-32.35	QP	P
6	1.6340	0.20	14.46	14.66	46.00	-31.34	AVG	P
7	4.6900	0.30	38.35	38.65	56.00	-17.35	QP	P
8	4.6900	0.30	26.64	26.94	46.00	-19.06	AVG	P
9	6.8100	0.36	38.19	38.55	60.00	-21.45	QP	P
10	6.8100	0.36	29.77	30.13	50.00	-19.87	AVG	P
11	8.9940	0.41	40.23	40.64	60.00	-19.36	QP	P
12	8.9940	0.41	32.77	33.18	50.00	-16.82	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit

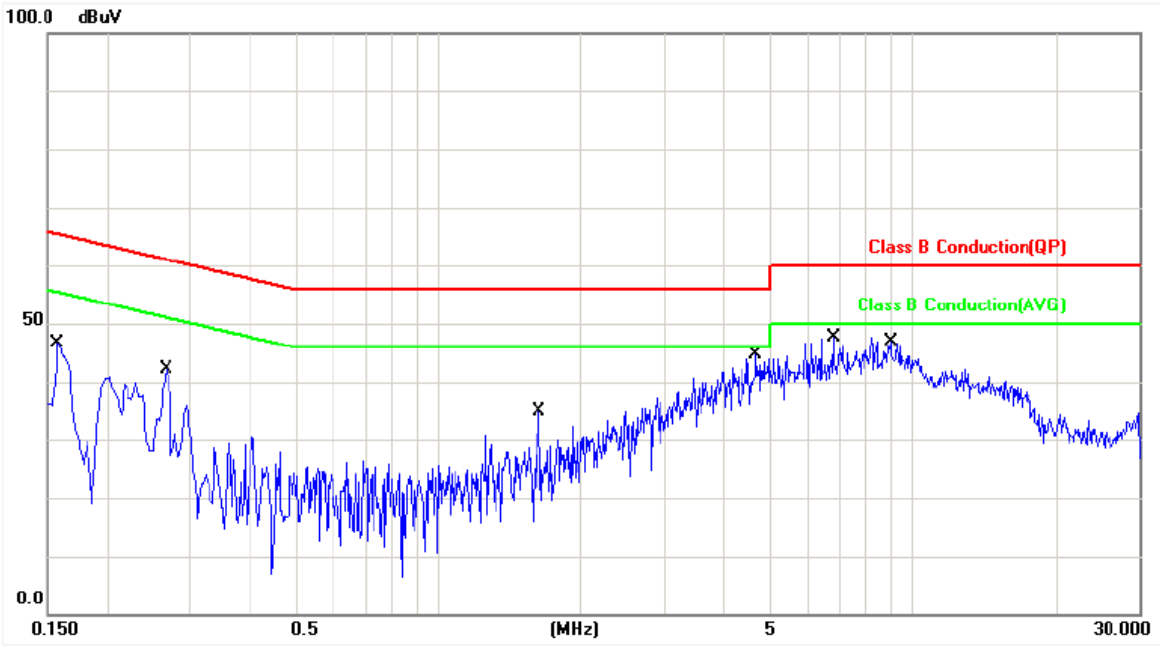
Power	:	From System	Pol/Phase	:	NEUTRAL
Test Mode 1	:	802.11g, CH1	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2660	0.11	45.67	45.78	61.24	-15.46	QP	P
2	0.2660	0.11	41.03	41.14	51.24	-10.10	AVG	P
3	4.0460	0.29	39.07	39.36	56.00	-16.64	QP	P
4	4.0460	0.29	28.98	29.27	46.00	-16.73	AVG	P
5	4.2780	0.30	39.65	39.95	56.00	-16.05	QP	P
6	4.2780	0.30	29.47	29.77	46.00	-16.23	AVG	P
7	4.6540	0.31	40.58	40.89	56.00	-15.11	QP	P
8	4.6540	0.31	30.02	30.33	46.00	-15.67	AVG	P
9	4.7900	0.32	40.02	40.34	56.00	-15.66	QP	P
10	4.7900	0.32	30.24	30.56	46.00	-15.44	AVG	P
11	5.1380	0.33	39.67	40.00	60.00	-20.00	QP	P
12	5.1380	0.33	29.84	30.17	50.00	-19.83	AVG	P
13	8.6420	0.41	41.79	42.20	60.00	-17.80	QP	P
14	8.6420	0.41	34.24	34.65	50.00	-15.35	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit

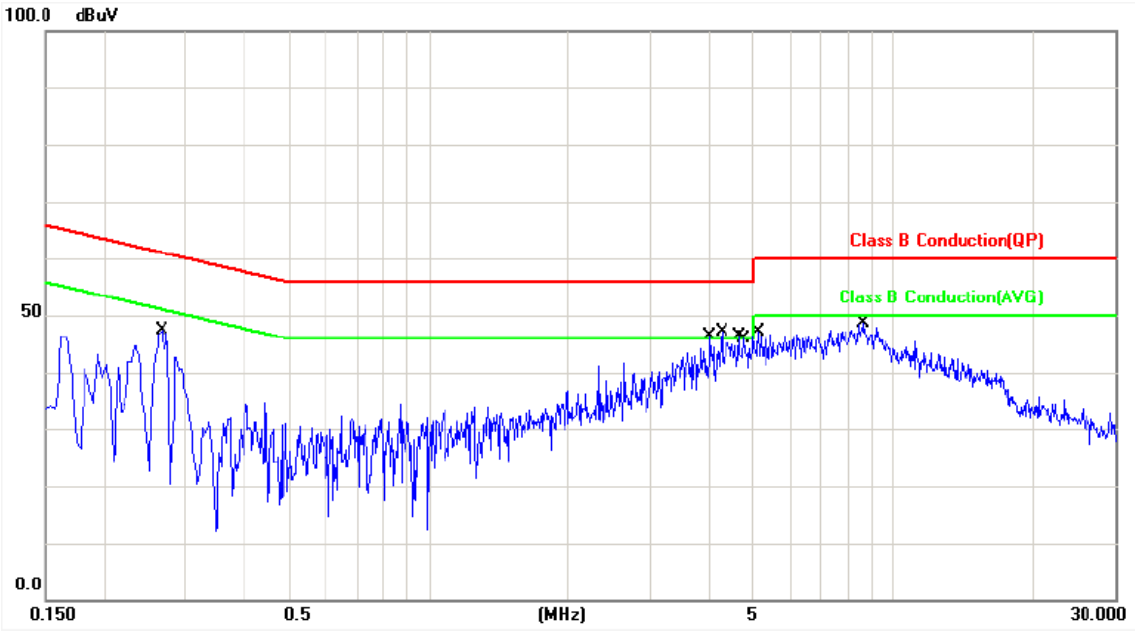
Power	:	From System	Pol/Phase	:	LINE
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	0.05	40.65	40.70	65.56	-24.86	QP	P
2	0.1580	0.05	23.58	23.63	55.56	-31.93	AVG	P
3	0.2660	0.05	42.66	42.71	61.24	-18.53	QP	P
4	0.2660	0.05	34.73	34.78	51.24	-16.46	AVG	P
5	1.6340	0.07	23.68	23.75	56.00	-32.25	QP	P
6	1.6340	0.07	14.38	14.45	46.00	-31.55	AVG	P
7	4.6900	0.10	38.32	38.42	56.00	-17.58	QP	P
8	4.6900	0.10	26.56	26.66	46.00	-19.34	AVG	P
9	6.8100	0.13	38.35	38.48	60.00	-21.52	QP	P
10	6.8100	0.13	30.20	30.33	50.00	-19.67	AVG	P
11	8.9940	0.16	40.63	40.79	60.00	-19.21	QP	P
12	8.9940	0.16	33.69	33.85	50.00	-16.15	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit

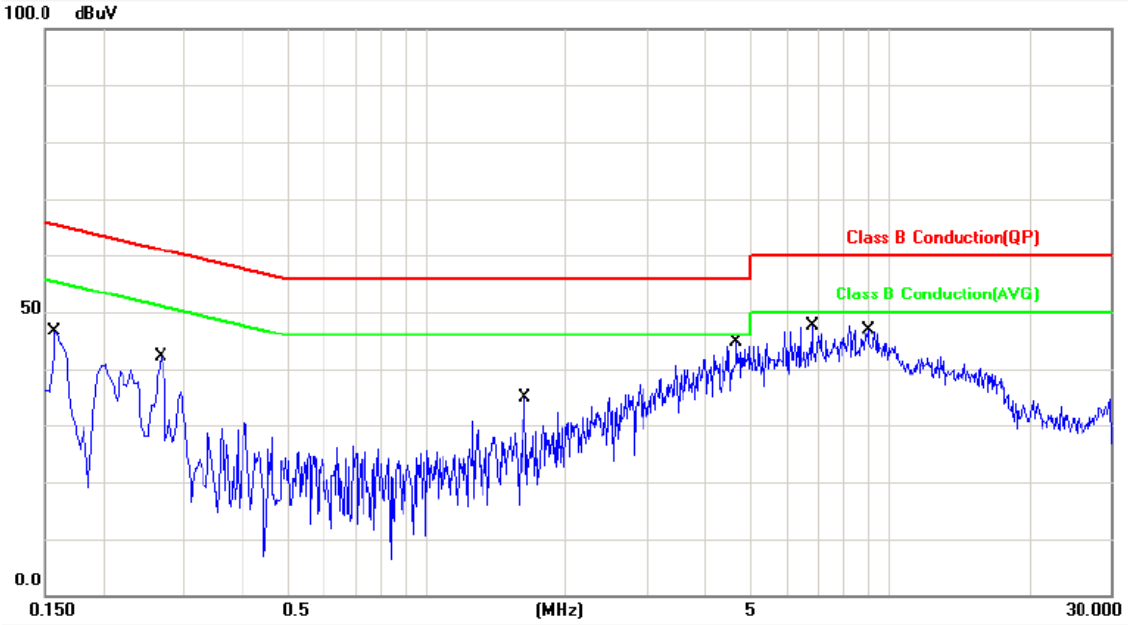
Power	:	From System	Pol/Phase	:	NEUTRAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2660	0.07	45.39	45.46	61.24	-15.78	QP	P
2	0.2660	0.07	41.91	41.98	51.24	-9.26	AVG	P
3	4.0460	0.10	39.68	39.78	56.00	-16.22	QP	P
4	4.0460	0.10	29.23	29.33	46.00	-16.67	AVG	P
5	4.2780	0.10	39.37	39.47	56.00	-16.53	QP	P
6	4.2780	0.10	29.56	29.66	46.00	-16.34	AVG	P
7	4.6540	0.11	40.43	40.54	56.00	-15.46	QP	P
8	4.6540	0.11	30.52	30.63	46.00	-15.37	AVG	P
9	4.7900	0.11	40.73	40.84	56.00	-15.16	QP	P
10	4.7900	0.11	30.68	30.79	46.00	-15.21	AVG	P
11	5.1380	0.12	40.54	40.66	60.00	-19.34	QP	P
12	5.1380	0.12	30.35	30.47	50.00	-19.53	AVG	P
13	8.6420	0.16	42.53	42.69	60.00	-17.31	QP	P
14	8.6420	0.16	34.30	34.46	50.00	-15.54	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit

Power	:	From System	Pol/Phase	:	LINE
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %

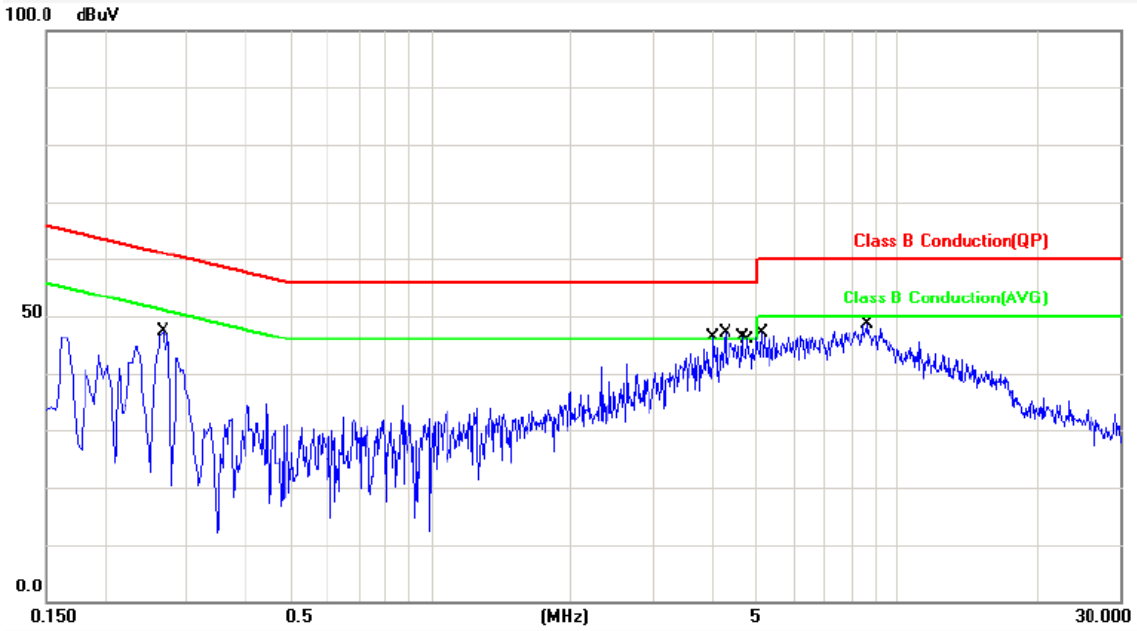


No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	0.05	40.60	40.65	65.56	-24.91	QP	P
2	0.1580	0.05	23.51	23.56	55.56	-32.00	AVG	P
3	0.2660	0.05	42.61	42.66	61.24	-18.58	QP	P
4	0.2660	0.05	34.42	34.47	51.24	-16.77	AVG	P
5	1.6340	0.07	23.34	23.41	56.00	-32.59	QP	P
6	1.6340	0.07	14.21	14.28	46.00	-31.72	AVG	P
7	4.6900	0.10	38.68	38.78	56.00	-17.22	QP	P
8	4.6900	0.10	26.87	26.97	46.00	-19.03	AVG	P
9	6.8100	0.13	38.35	38.48	60.00	-21.52	QP	P
10	6.8100	0.13	30.50	30.63	50.00	-19.37	AVG	P
11	8.9940	0.16	40.55	40.71	60.00	-19.29	QP	P
12	8.9940	0.16	33.35	33.51	50.00	-16.49	AVG	P

Note: Level = Reading + Factor

Margin = Level – Limit

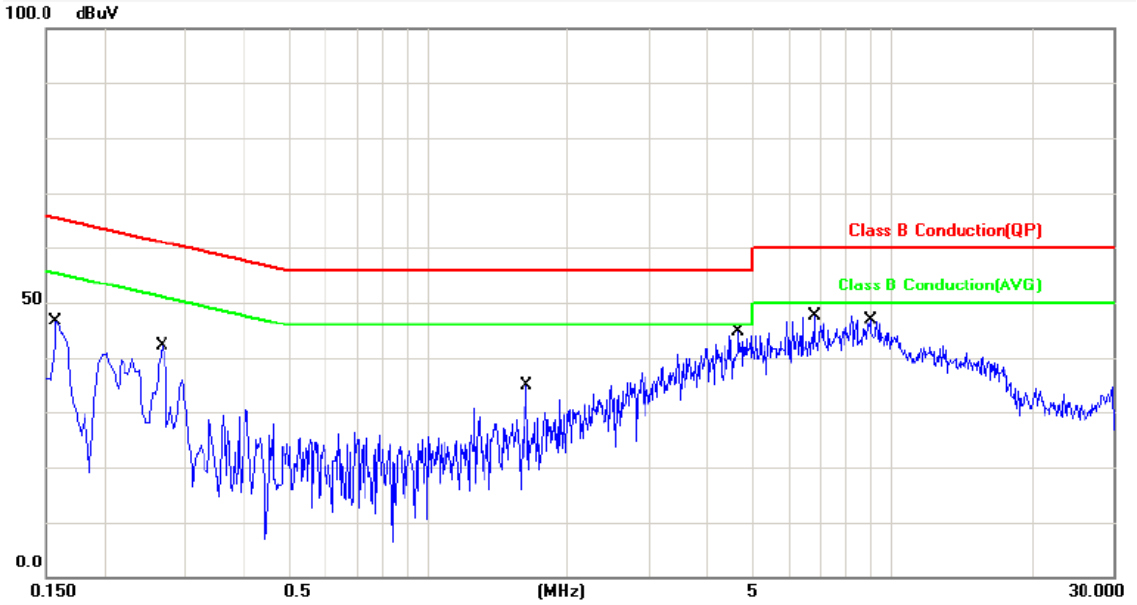
Power	:	From System	Pol/Phase	:	NEUTRAL
Test Mode 3	:	802.11n HT40, CH3	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2660	0.07	45.19	45.26	61.24	-15.98	QP	P
2	0.2660	0.07	41.58	41.65	51.24	-9.59	AVG	P
3	4.0460	0.10	39.06	39.16	56.00	-16.84	QP	P
4	4.0460	0.10	29.78	29.88	46.00	-16.12	AVG	P
5	4.2780	0.10	39.38	39.48	56.00	-16.52	QP	P
6	4.2780	0.10	29.52	29.62	46.00	-16.38	AVG	P
7	4.6540	0.11	40.67	40.78	56.00	-15.22	QP	P
8	4.6540	0.11	30.55	30.66	46.00	-15.34	AVG	P
9	4.7900	0.11	40.18	40.29	56.00	-15.71	QP	P
10	4.7900	0.11	30.33	30.44	46.00	-15.56	AVG	P
11	5.1380	0.12	39.99	40.11	60.00	-19.89	QP	P
12	5.1380	0.12	30.46	30.58	50.00	-19.42	AVG	P
13	8.6420	0.16	42.52	42.68	60.00	-17.32	QP	P
14	8.6420	0.16	33.95	34.11	50.00	-15.89	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit

Power	:	From System	Pol/Phase	:	LINE
Test Mode 4	:	802.11a, CH149	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %

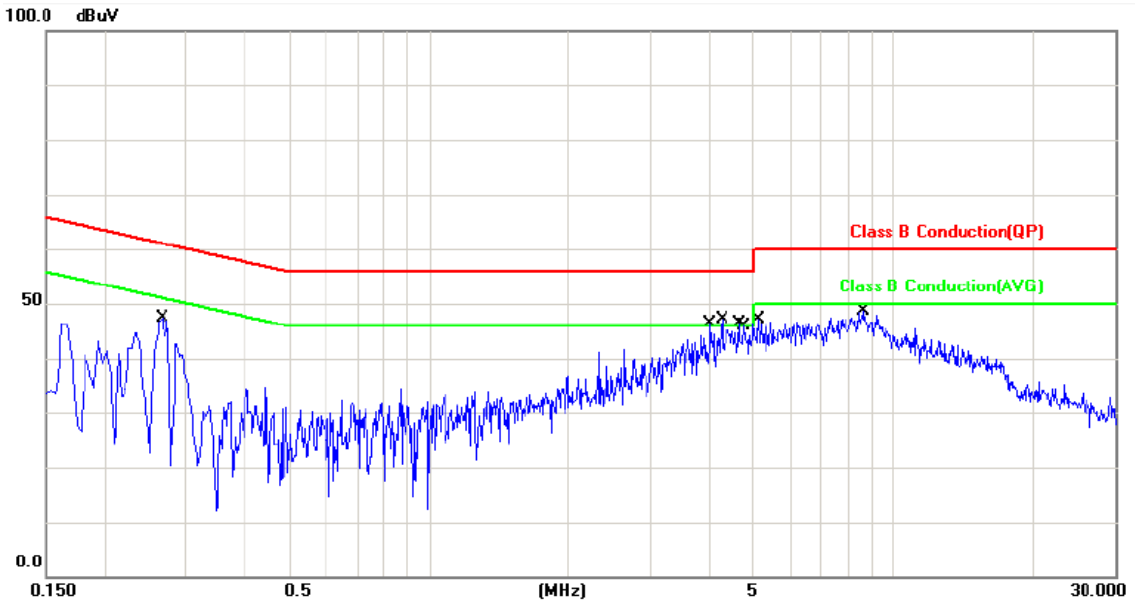


No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	0.05	40.65	40.70	65.56	-24.86	QP	P
2	0.1580	0.05	23.57	23.62	55.56	-31.94	AVG	P
3	0.2660	0.05	42.74	42.79	61.24	-18.45	QP	P
4	0.2660	0.05	34.42	34.47	51.24	-16.77	AVG	P
5	1.6340	0.07	23.23	23.30	56.00	-32.70	QP	P
6	1.6340	0.07	14.70	14.77	46.00	-31.23	AVG	P
7	4.6900	0.10	38.07	38.17	56.00	-17.83	QP	P
8	4.6900	0.10	26.77	26.87	46.00	-19.13	AVG	P
9	6.8100	0.13	38.49	38.62	60.00	-21.38	QP	P
10	6.8100	0.13	30.70	30.83	50.00	-19.17	AVG	P
11	8.9940	0.16	40.09	40.25	60.00	-19.75	QP	P
12	8.9940	0.16	33.63	33.79	50.00	-16.21	AVG	P

Note: Level = Reading + Factor

Margin = Level – Limit

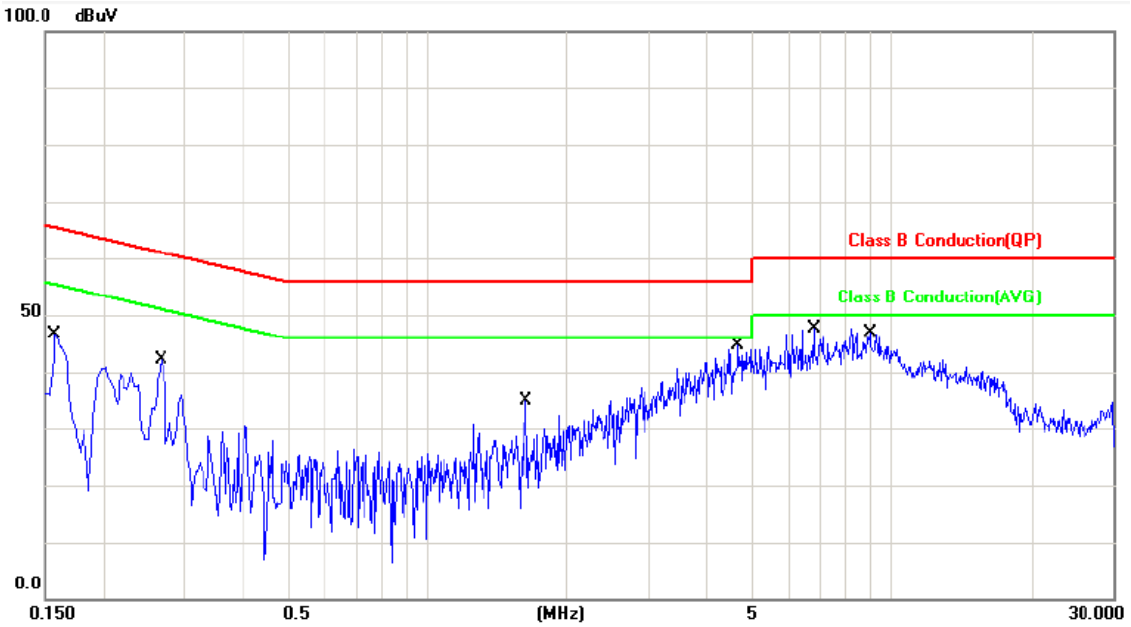
Power	:	From System	Pol/Phase	:	NEUTRAL
Test Mode 4	:	802.11a, CH149	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2660	0.07	45.50	45.57	61.24	-15.67	QP	P
2	0.2660	0.07	41.26	41.33	51.24	-9.91	AVG	P
3	4.0460	0.10	39.37	39.47	56.00	-16.53	QP	P
4	4.0460	0.10	29.32	29.42	46.00	-16.58	AVG	P
5	4.2780	0.10	39.78	39.88	56.00	-16.12	QP	P
6	4.2780	0.10	29.22	29.32	46.00	-16.68	AVG	P
7	4.6540	0.11	40.37	40.48	56.00	-15.52	QP	P
8	4.6540	0.11	30.24	30.35	46.00	-15.65	AVG	P
9	4.7900	0.11	40.30	40.41	56.00	-15.59	QP	P
10	4.7900	0.11	30.25	30.36	46.00	-15.64	AVG	P
11	5.1380	0.12	39.99	40.11	60.00	-19.89	QP	P
12	5.1380	0.12	30.06	30.18	50.00	-19.82	AVG	P
13	8.6420	0.16	42.35	42.51	60.00	-17.49	QP	P
14	8.6420	0.16	34.46	34.62	50.00	-15.38	AVG	P

Note: Level = Reading + Factor
Margin = Level – Limit

Power	:	From System	Pol/Phase	:	LINE
Test Mode 5	:	802.11an HT20, CH149	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %

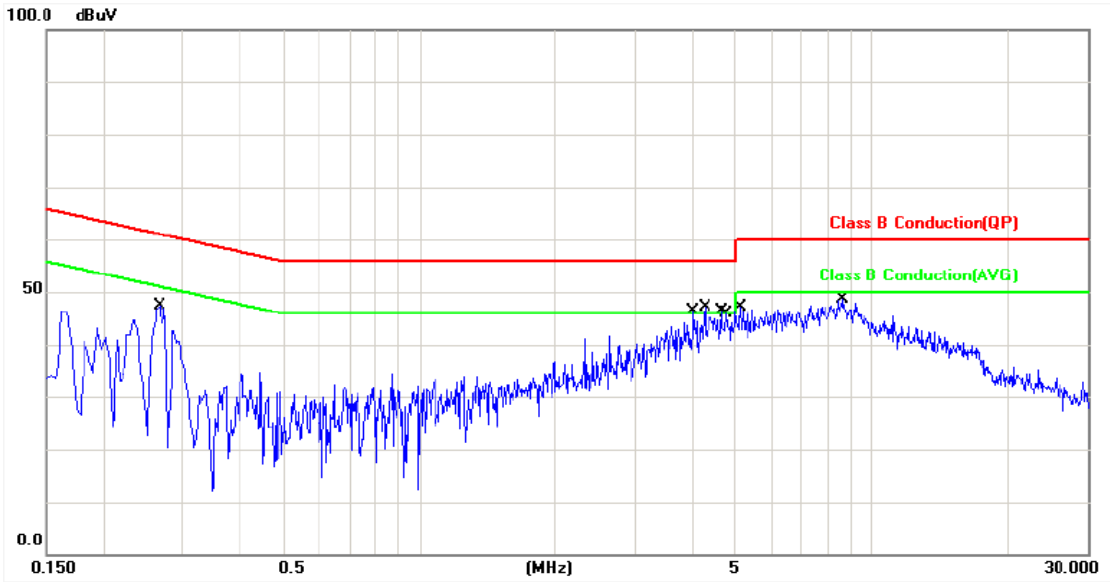


No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	0.05	40.71	40.76	65.56	-24.80	QP	P
2	0.1580	0.05	23.21	23.26	55.56	-32.30	AVG	P
3	0.2660	0.05	42.37	42.42	61.24	-18.82	QP	P
4	0.2660	0.05	34.31	34.36	51.24	-16.88	AVG	P
5	1.6340	0.07	23.41	23.48	56.00	-32.52	QP	P
6	1.6340	0.07	14.52	14.59	46.00	-31.41	AVG	P
7	4.6900	0.10	38.56	38.66	56.00	-17.34	QP	P
8	4.6900	0.10	26.67	26.77	46.00	-19.23	AVG	P
9	6.8100	0.13	37.99	38.12	60.00	-21.88	QP	P
10	6.8100	0.13	30.02	30.15	50.00	-19.85	AVG	P
11	8.9940	0.16	40.53	40.69	60.00	-19.31	QP	P
12	8.9940	0.16	33.08	33.24	50.00	-16.76	AVG	P

Note: Level = Reading + Factor

Margin = Level – Limit

Power	:	From System	Pol/Phase	:	NEUTRAL
Test Mode 5	:	802.11an HT20, CH149	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %

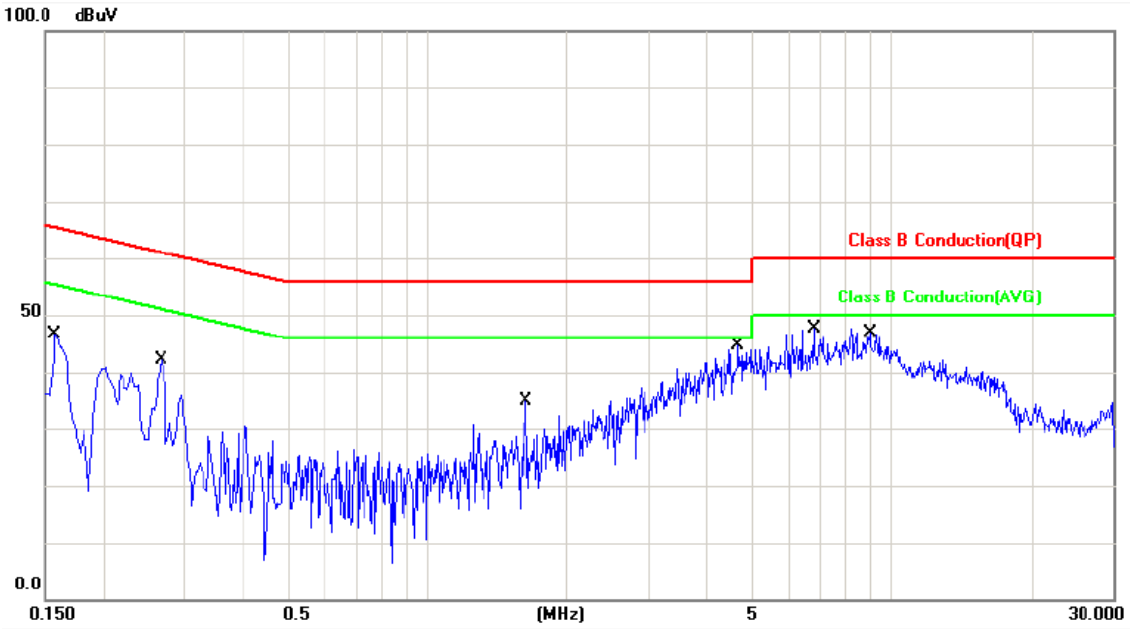


No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2660	0.07	45.50	45.57	61.24	-15.67	QP	P
2	0.2660	0.07	41.05	41.12	51.24	-10.12	AVG	P
3	4.0460	0.10	39.18	39.28	56.00	-16.72	QP	P
4	4.0460	0.10	29.23	29.33	46.00	-16.67	AVG	P
5	4.2780	0.10	39.32	39.42	56.00	-16.58	QP	P
6	4.2780	0.10	29.70	29.80	46.00	-16.20	AVG	P
7	4.6540	0.11	40.22	40.33	56.00	-15.67	QP	P
8	4.6540	0.11	30.28	30.39	46.00	-15.61	AVG	P
9	4.7900	0.11	40.40	40.51	56.00	-15.49	QP	P
10	4.7900	0.11	30.32	30.43	46.00	-15.57	AVG	P
11	5.1380	0.12	39.94	40.06	60.00	-19.94	QP	P
12	5.1380	0.12	29.98	30.10	50.00	-19.90	AVG	P
13	8.6420	0.16	42.13	42.29	60.00	-17.71	QP	P
14	8.6420	0.16	34.64	34.80	50.00	-15.20	AVG	P

Note: Level = Reading + Factor

Margin = Level – Limit

Power	:	From System	Pol/Phase	:	LINE
Test Mode 6	:	802.11an HT40, CH151	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %

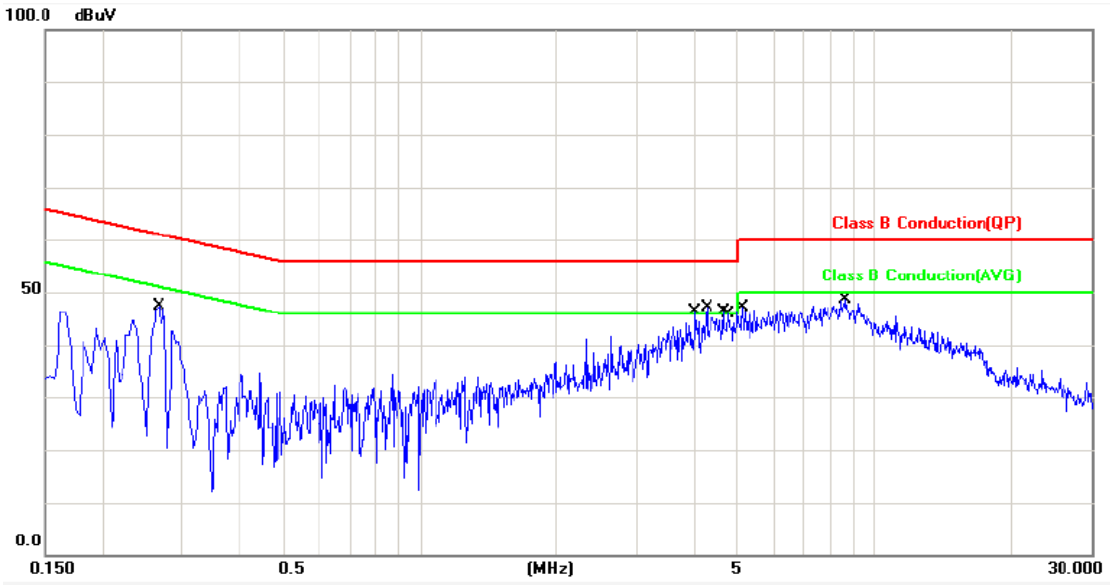


No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1580	0.05	40.28	40.33	65.56	-25.23	QP	P
2	0.1580	0.05	23.70	23.75	55.56	-31.81	AVG	P
3	0.2660	0.05	42.84	42.89	61.24	-18.35	QP	P
4	0.2660	0.05	34.79	34.84	51.24	-16.40	AVG	P
5	1.6340	0.07	23.26	23.33	56.00	-32.67	QP	P
6	1.6340	0.07	14.46	14.53	46.00	-31.47	AVG	P
7	4.6900	0.10	38.59	38.69	56.00	-17.31	QP	P
8	4.6900	0.10	26.73	26.83	46.00	-19.17	AVG	P
9	6.8100	0.13	38.31	38.44	60.00	-21.56	QP	P
10	6.8100	0.13	30.15	30.28	50.00	-19.72	AVG	P
11	8.9940	0.16	40.26	40.42	60.00	-19.58	QP	P
12	8.9940	0.16	33.50	33.66	50.00	-16.34	AVG	P

Note: Level = Reading + Factor

Margin = Level – Limit

Power	:	From System	Pol/Phase	:	NEUTRAL
Test Mode 6	:	802.11an HT40, CH151	Temperature	:	24 °C
Test Date	:	Jun. 22, 2012	Humidity	:	58 %



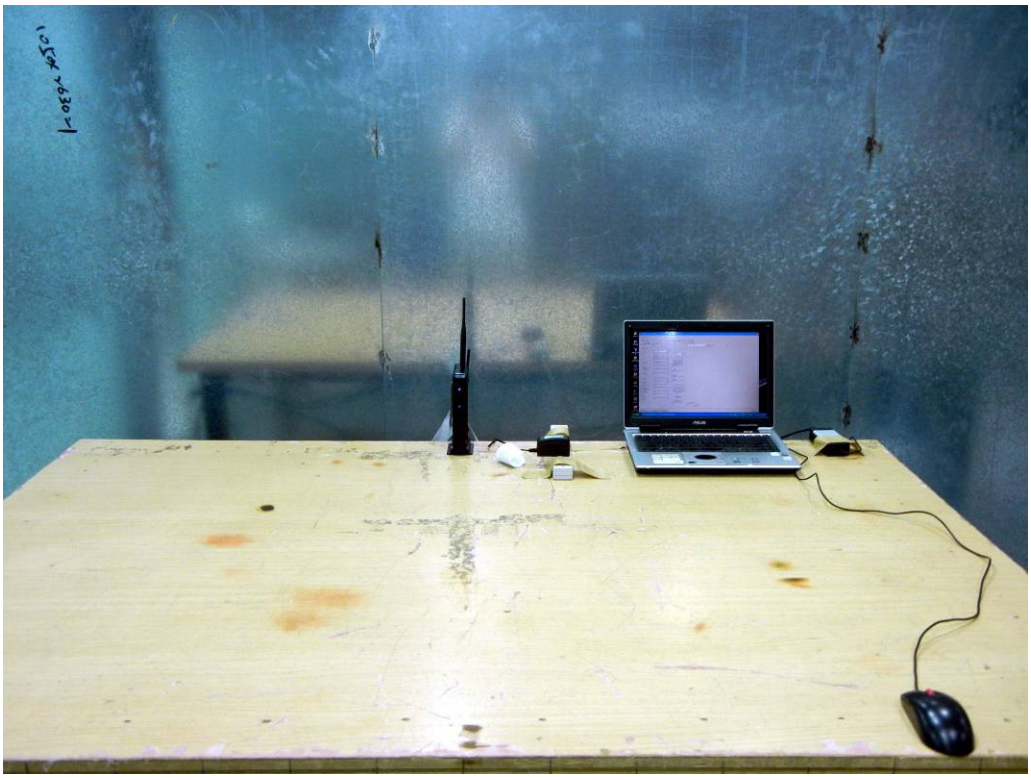
No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2660	0.07	45.56	45.63	61.24	-15.61	QP	P
2	0.2660	0.07	41.12	41.19	51.24	-10.05	AVG	P
3	4.0460	0.10	39.14	39.24	56.00	-16.76	QP	P
4	4.0460	0.10	29.19	29.29	46.00	-16.71	AVG	P
5	4.2780	0.10	39.58	39.68	56.00	-16.32	QP	P
6	4.2780	0.10	29.73	29.83	46.00	-16.17	AVG	P
7	4.6540	0.11	40.33	40.44	56.00	-15.56	QP	P
8	4.6540	0.11	30.28	30.39	46.00	-15.61	AVG	P
9	4.7900	0.11	40.25	40.36	56.00	-15.64	QP	P
10	4.7900	0.11	30.46	30.57	46.00	-15.43	AVG	P
11	5.1380	0.12	39.99	40.11	60.00	-19.89	QP	P
12	5.1380	0.12	30.23	30.35	50.00	-19.65	AVG	P
13	8.6420	0.16	41.98	42.14	60.00	-17.86	QP	P
14	8.6420	0.16	34.39	34.55	50.00	-15.45	AVG	P

Note: Level = Reading + Factor

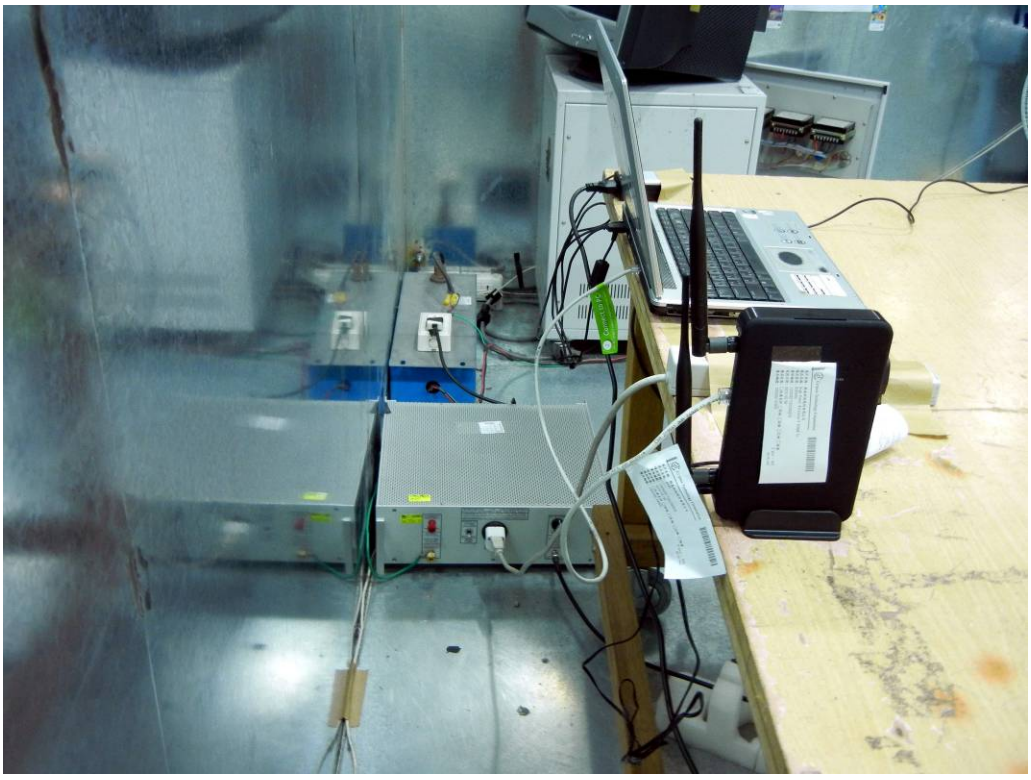
Margin = Level – Limit

4.6 Test Photographs

Front View



Rear View



5. Test of Radiated Emission

5.1 Test Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

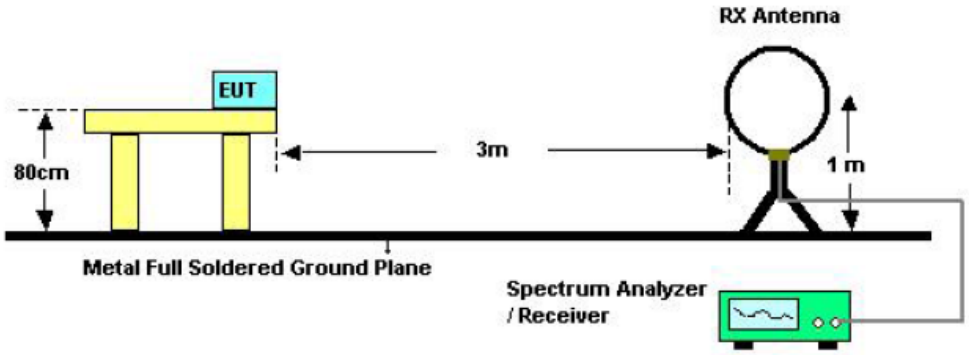
Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

5.2 Test Procedures

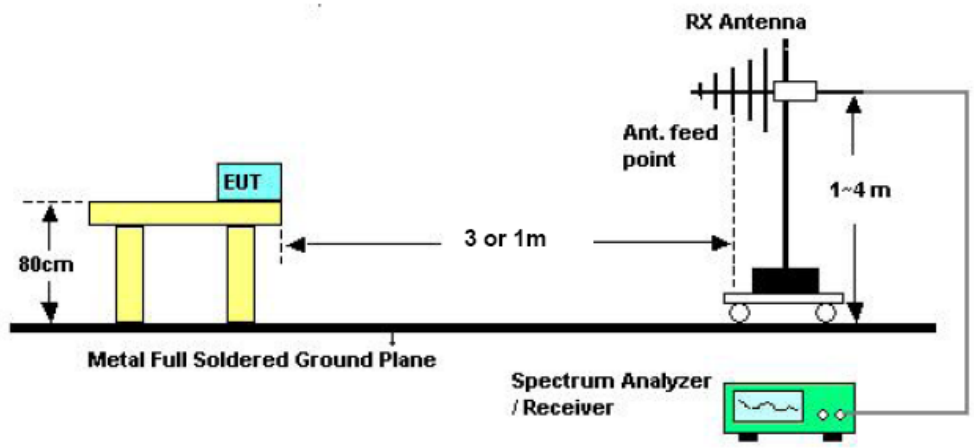
a. The EUT was placed on a rotatable table top 0.8 meter above ground.
b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
i. “Cone of radiation” has been considered to be 3dB bandwidth of the measurement antenna.

5.3 Typical Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.
Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

5.4 Measurement Equipment

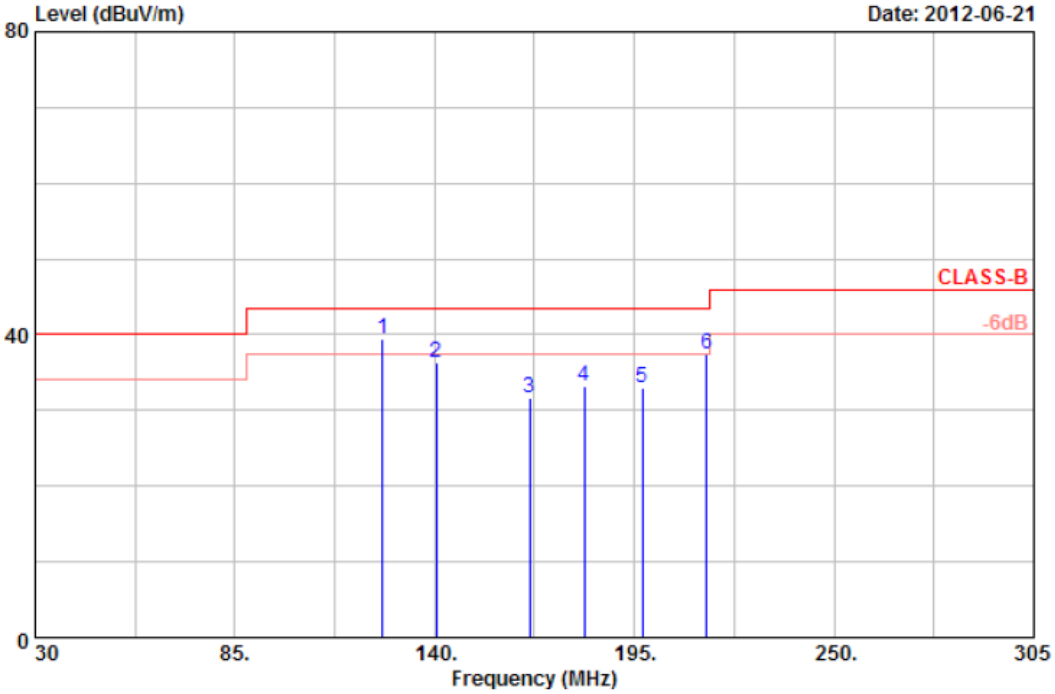
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Bilog Antenna	Schaffner	CBL6112B	2840	2012/03/23	2013/03/22
Amplifier	Agilent	8447D	2944A10593	2012/03/21	2013/03/20
Signal Generator	HP	8648B	3629U00612	2012/01/11	2013/01/10
EMI Receiver	SCHAFFNER	SCR3501	437	2011/09/28	2012/09/27
Spectrum Analyzer	R&S	FSP 3	100800	2012/03/03	2013/03/02
Spectrum Analyzer	R&S	FSP40	100047	2012/03/01	2013/02/28
Horn Antenna	EMCO	3115	31589	2012/03/01	2013/02/28
Preamplifier	Agilent	8449B	3008A01954	2012/02/29	2013/02/28
Loop Antenna	EMCO	6507	40855	2012/02/29	2013/02/28

5.5 Test Result and Data (9kHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

5.6 Test Result and Data (30MHz ~ 25GHz)

Power	:	From System		Pol/Phase	:	VERTICAL	
Test Mode 1	:	802.11g, CH1		Temperature	:	25 °C	
Memo	:			Humidity	:	65 %	

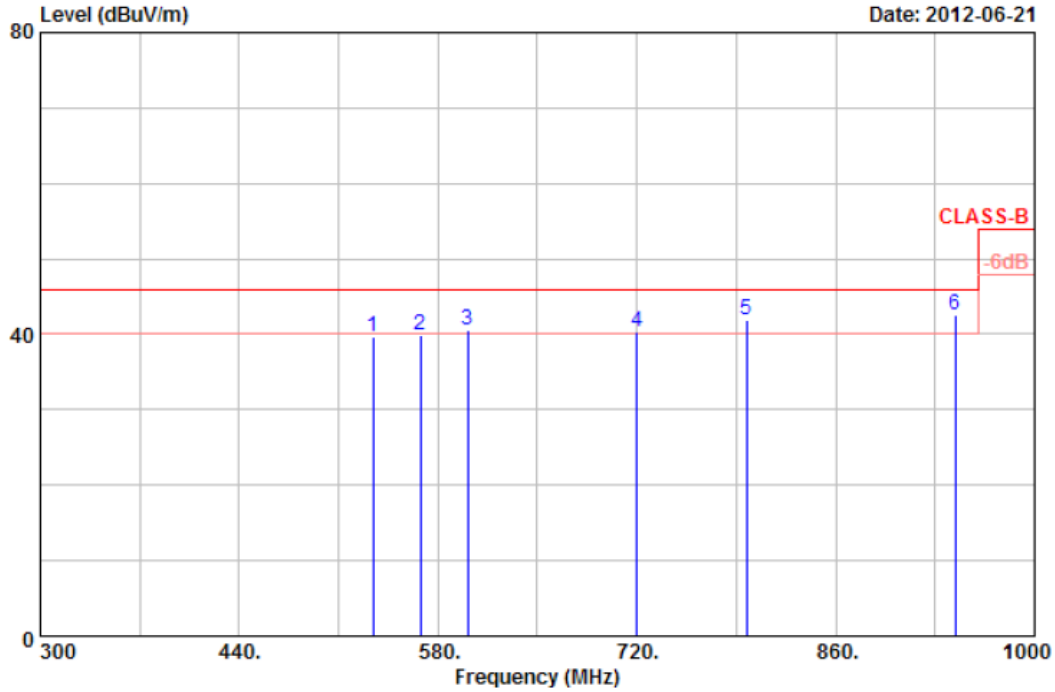


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	125.70	44.85	-5.38	39.47	43.50	-4.03	QP	100	0
2	140.55	44.12	-7.72	36.40	43.50	-7.10	Peak	100	0
3	166.13	41.88	-10.34	31.54	43.50	-11.96	Peak	100	0
4	181.25	40.38	-7.17	33.21	43.50	-10.29	Peak	100	0
5	197.20	44.50	-11.58	32.92	43.50	-10.58	Peak	100	0
6	214.80	44.35	-6.99	37.36	43.50	-6.14	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	From System	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

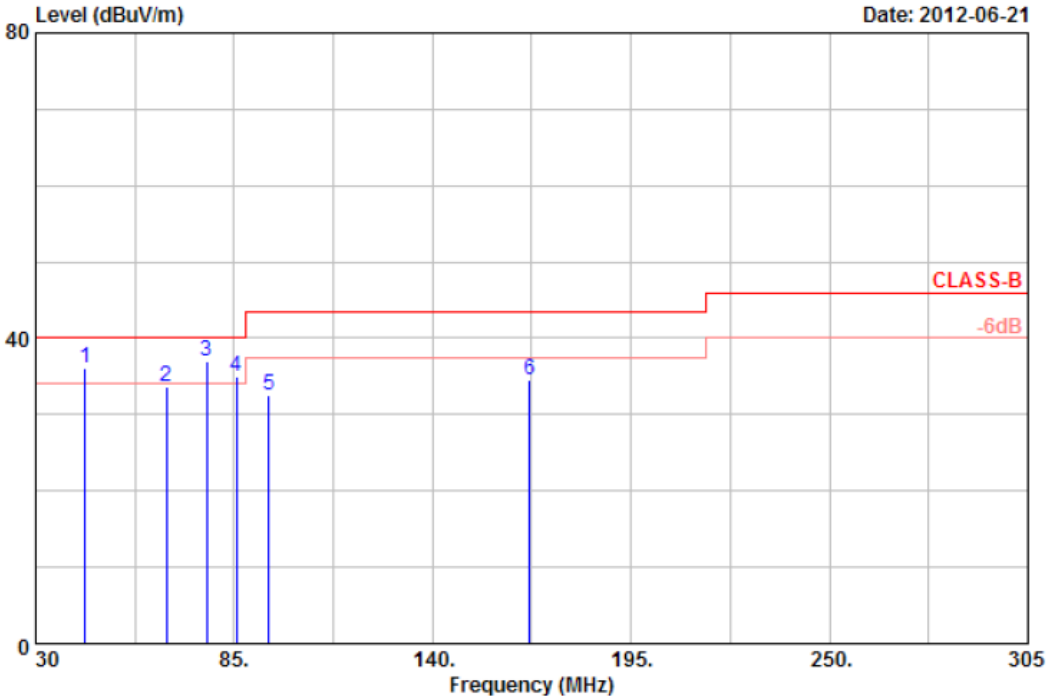


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	534.50	36.34	3.30	39.64	46.00	-6.36	Peak	100	0
2	567.40	32.85	7.11	39.96	46.00	-6.04	Peak	100	0
3	601.00	37.89	2.60	40.49	46.00	-5.51	QP	100	0
4	720.00	33.95	6.41	40.36	46.00	-5.64	QP	100	0
5	797.00	35.95	5.94	41.89	46.00	-4.11	QP	100	0
6	944.00	31.03	11.47	42.50	46.00	-3.50	QP	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

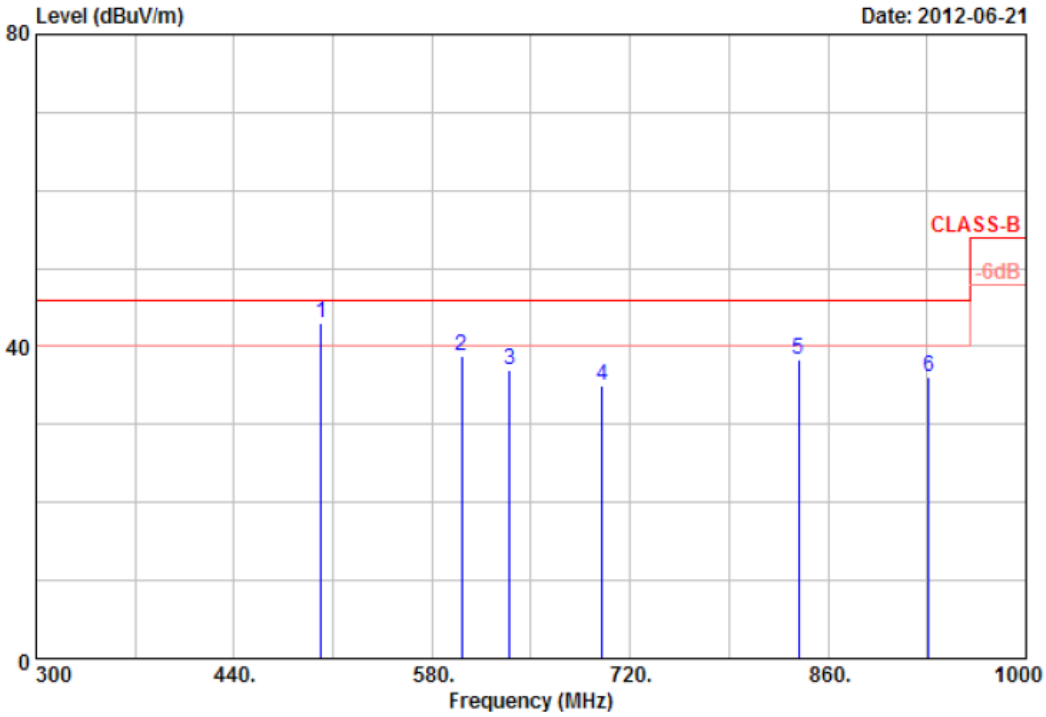


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	43.75	44.14	-8.03	36.11	40.00	-3.89	QP	100	0
2	66.30	53.69	-19.96	33.73	40.00	-6.27	Peak	100	0
3	77.30	56.73	-19.83	36.90	40.00	-3.10	QP	100	0
4	85.55	53.30	-18.30	35.00	40.00	-5.00	QP	100	0
5	94.63	51.00	-18.54	32.46	43.50	-11.04	Peak	100	0
6	166.95	48.78	-14.28	34.50	43.50	-9.00	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

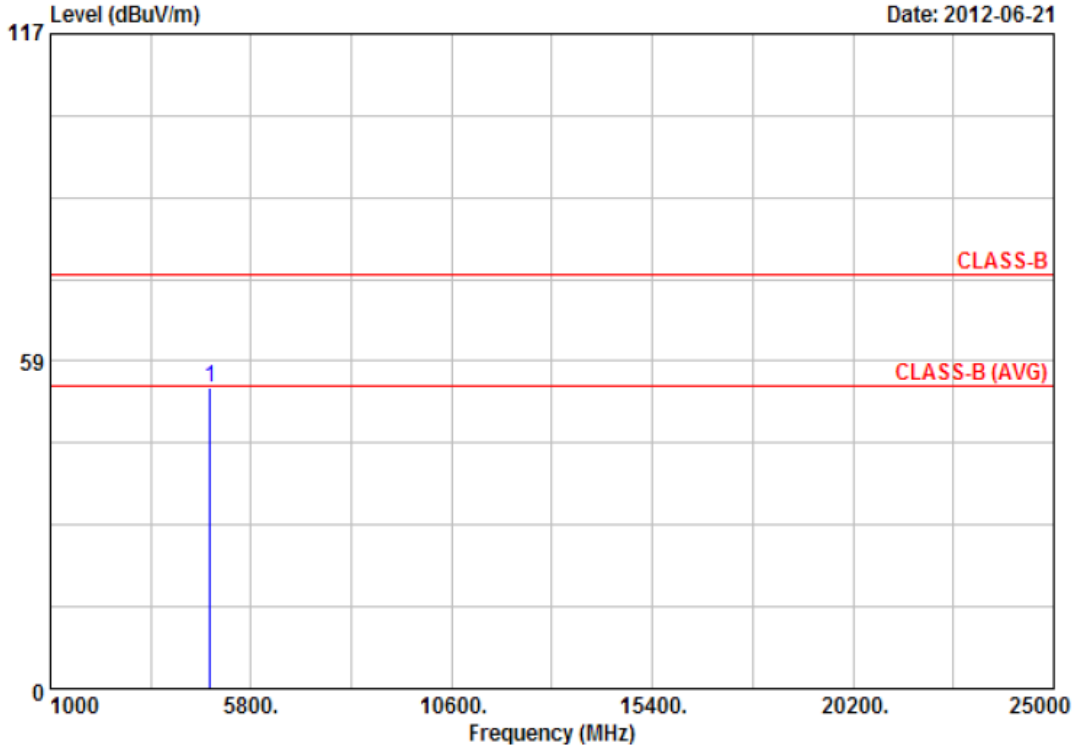


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	501.60	42.85	0.10	42.95	46.00	-3.05	QP	100	0
2	601.00	36.54	2.12	38.66	46.00	-7.34	Peak	100	0
3	634.60	33.67	3.25	36.92	46.00	-9.08	Peak	100	0
4	700.40	32.85	2.19	35.04	46.00	-10.96	Peak	100	0
5	839.00	29.64	8.66	38.30	46.00	-7.70	Peak	100	0
6	931.40	29.45	6.64	36.09	46.00	-9.91	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11b, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

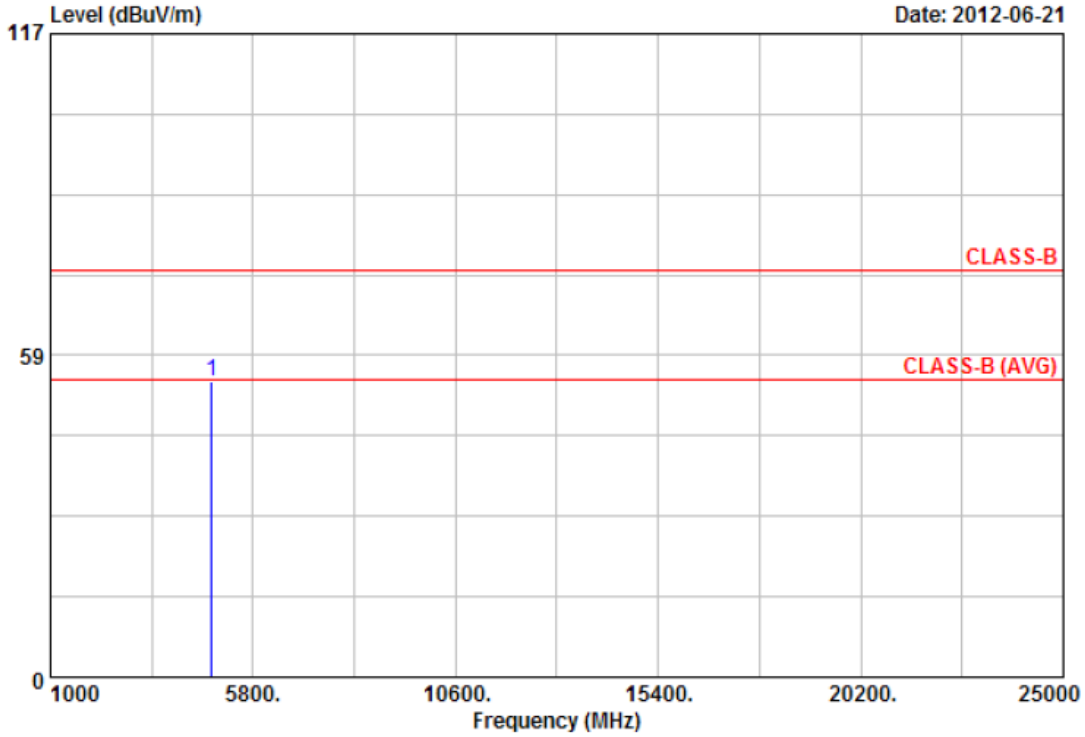


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4823.98	48.15	5.61	53.76	74.00	-20.24	Peak	100	286

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11b, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

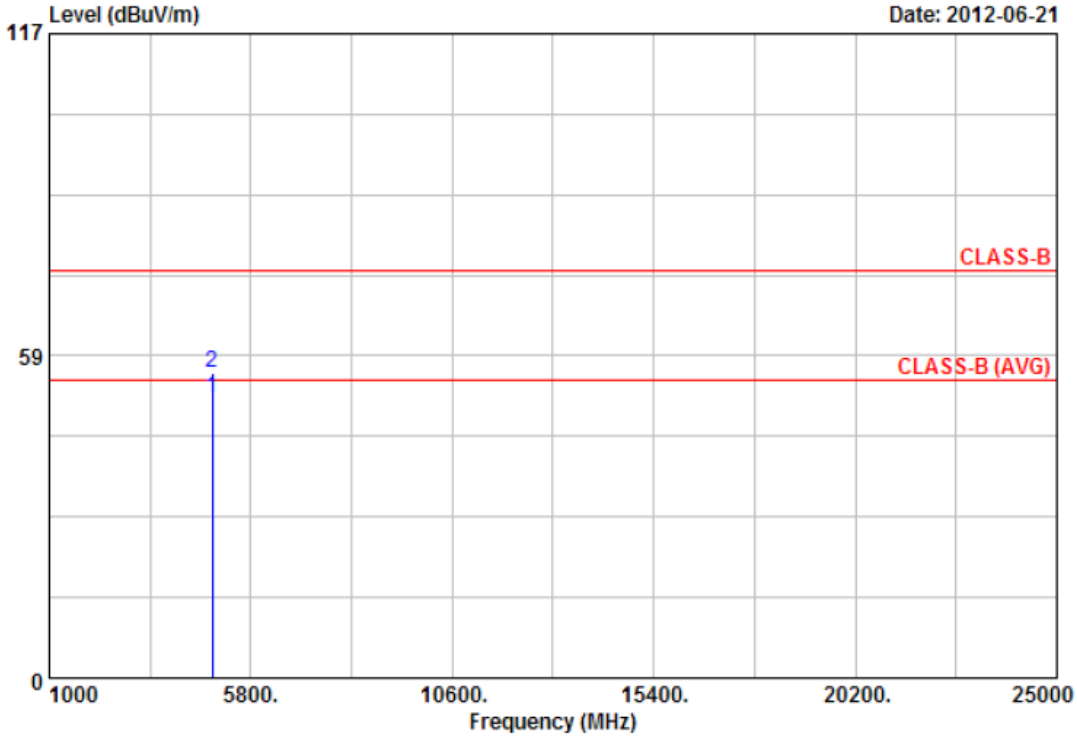


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4823.95	49.72	3.94	53.66	74.00	-20.34	Peak	100	286

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11b, CH6	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

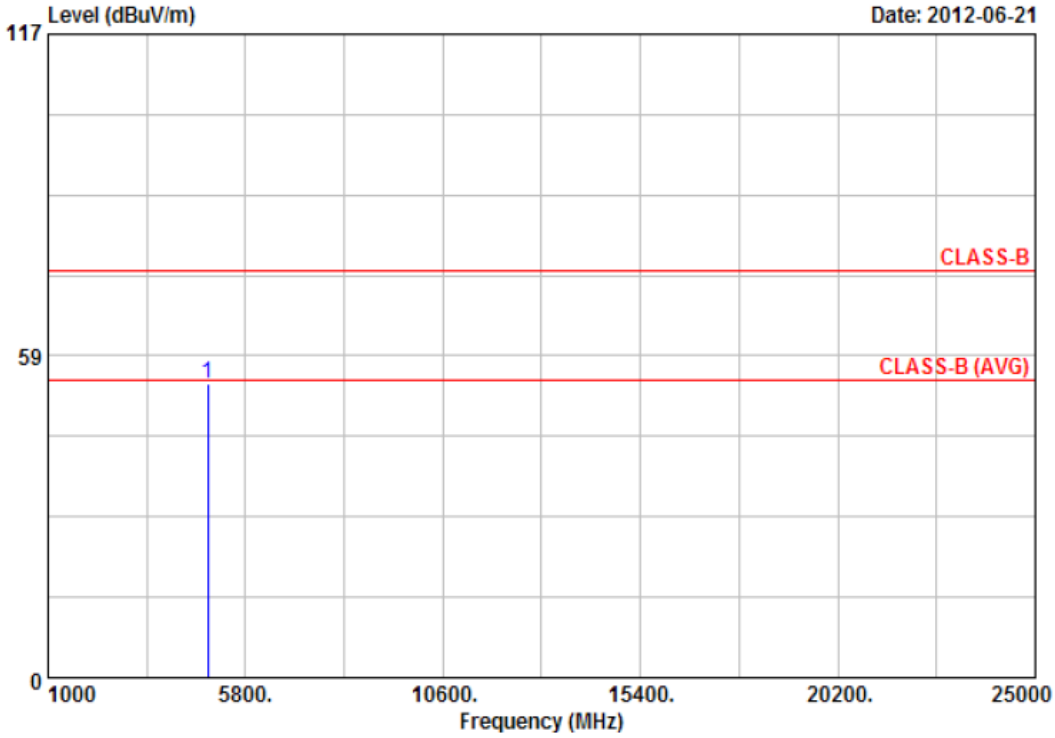


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4873.88	44.31	6.59	50.90	54.00	-3.10	Average	100	290
2	4873.88	48.85	6.59	55.44	74.00	-18.56	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11b, CH6	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

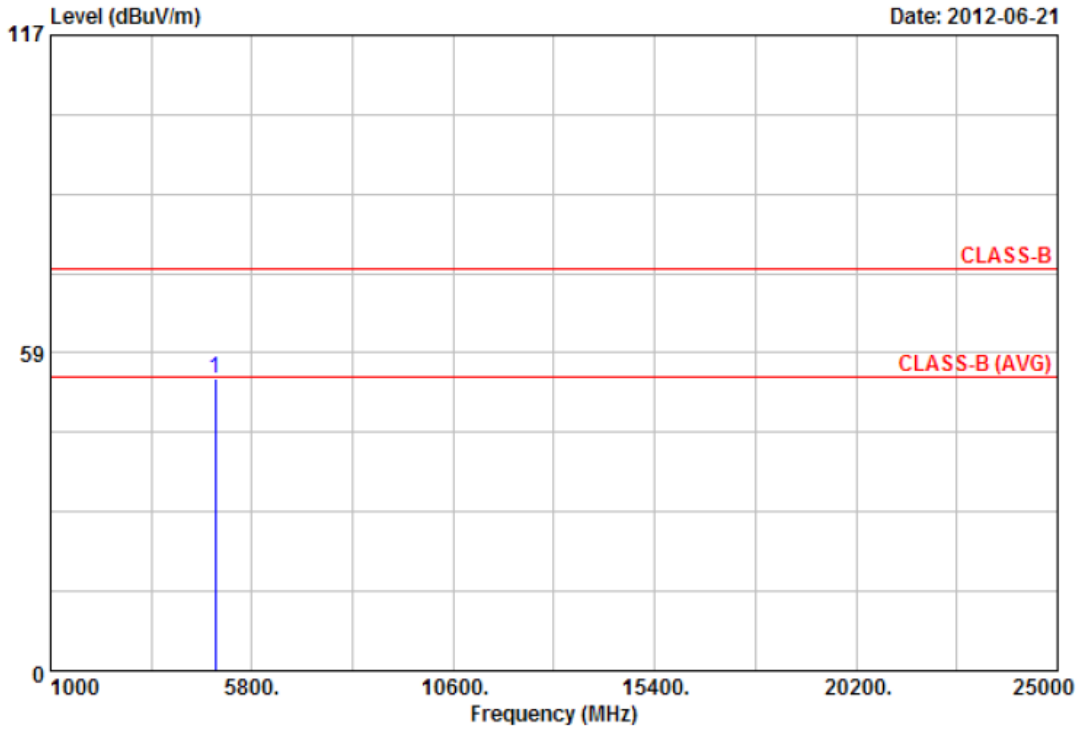


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.05	48.58	4.73	53.31	74.00	-20.69	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11b, CH11	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

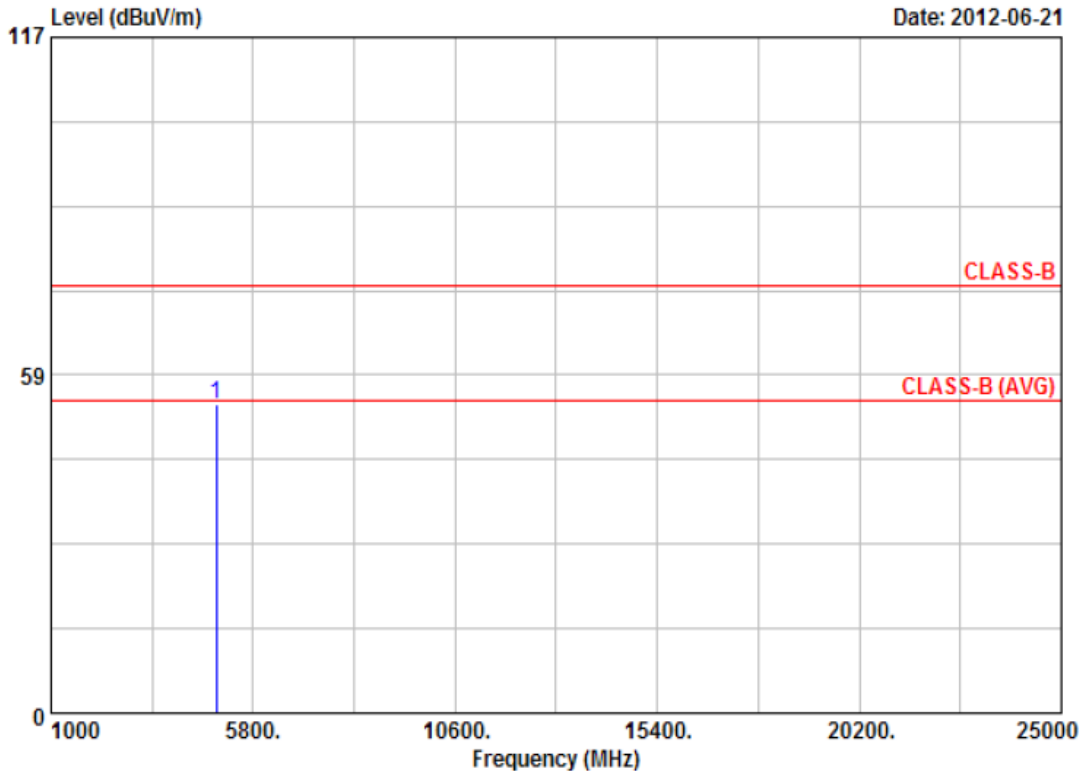


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4923.88	46.60	7.16	53.76	74.00	-20.24	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11b, CH11	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

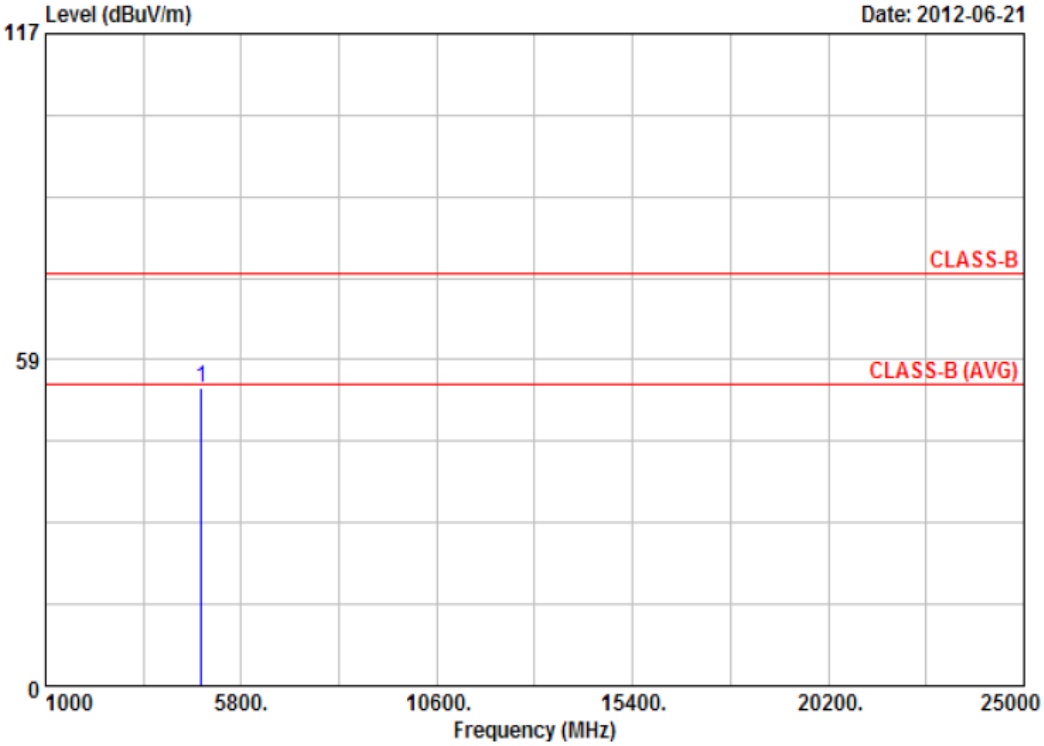


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.03	48.40	5.15	53.55	74.00	-20.45	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

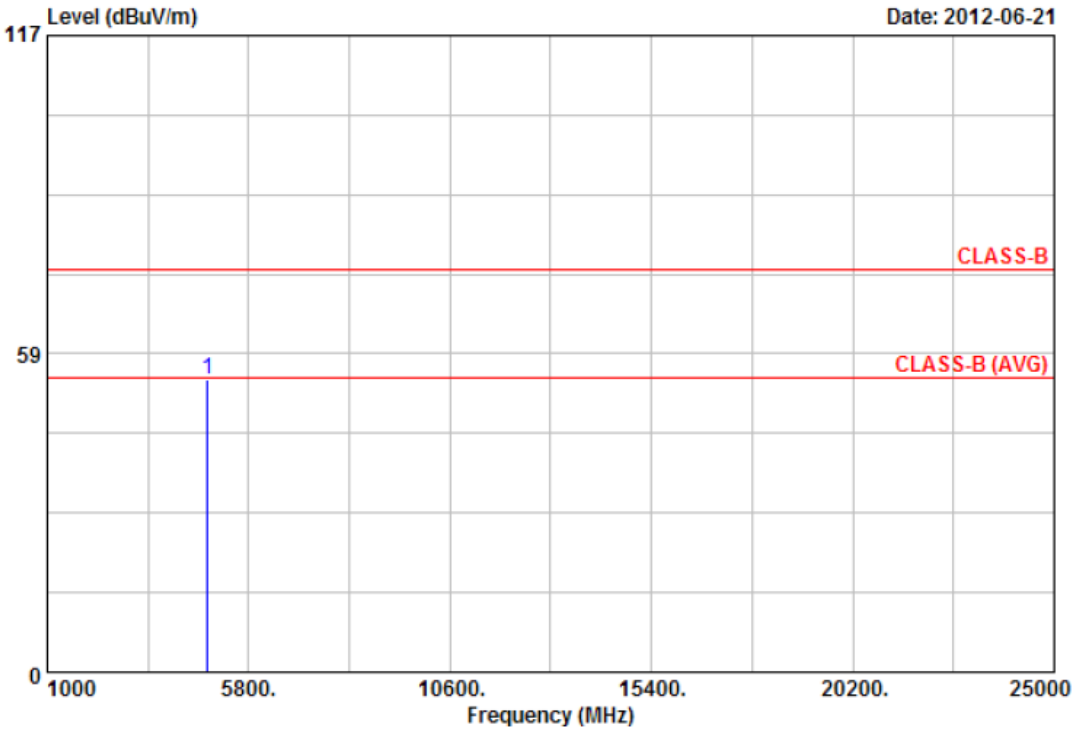


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4824.53	47.74	5.62	53.36	74.00	-20.64	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

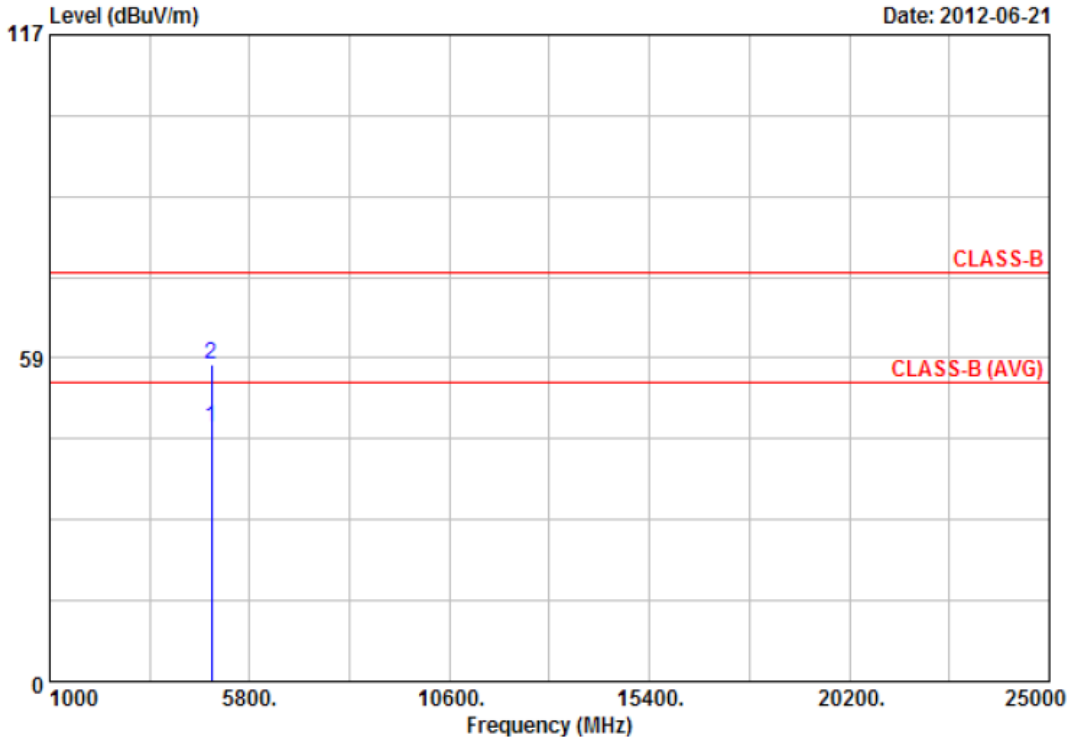


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4823.80	49.80	3.94	53.74	74.00	-20.26	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH6	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

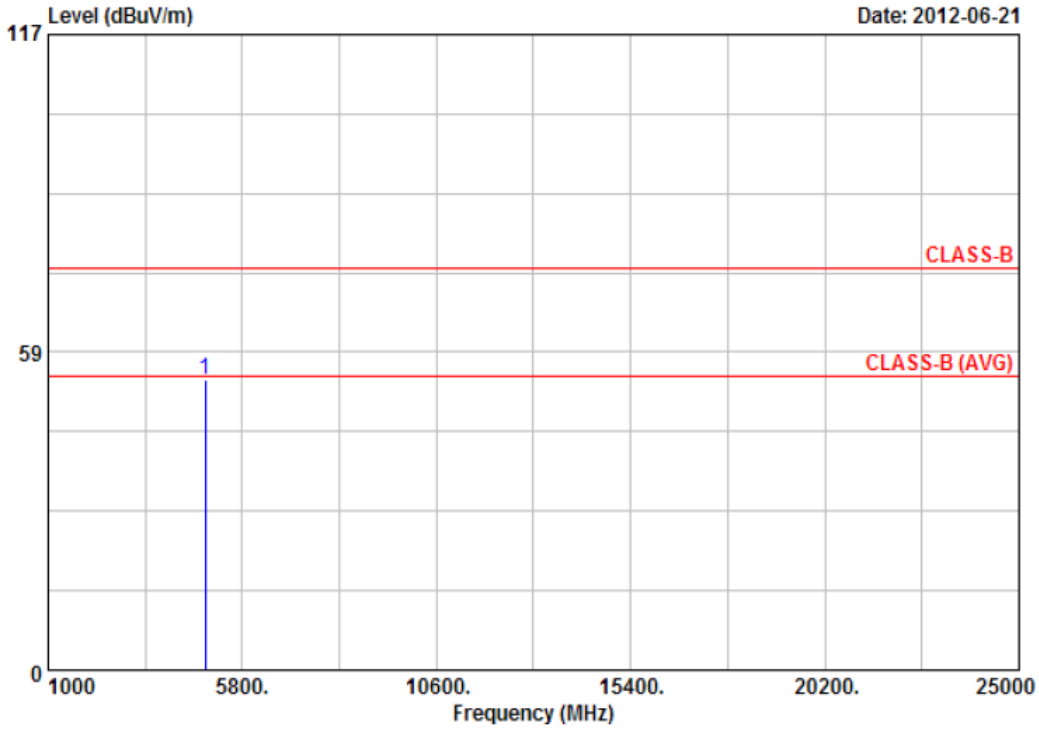


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4873.73	39.23	6.58	45.81	54.00	-8.19	Average	100	290
2	4873.73	50.93	6.58	57.51	74.00	-16.49	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH6	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

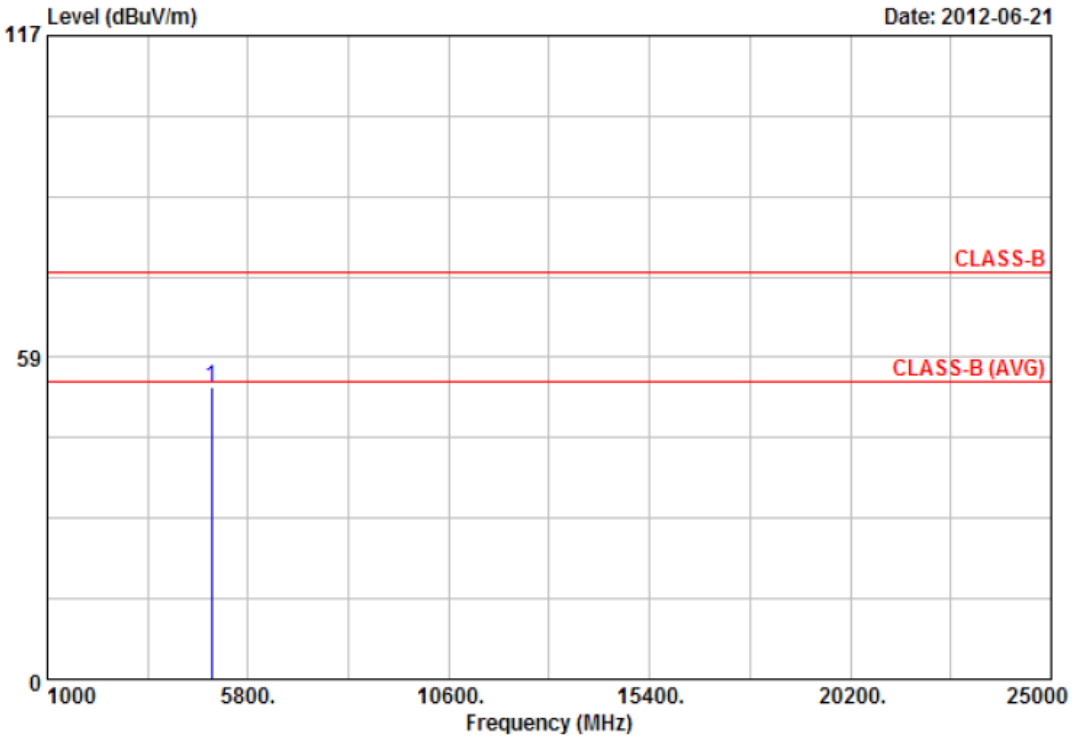


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4874.35	48.87	4.73	53.60	74.00	-20.40	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 1	:	802.11g, CH11	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

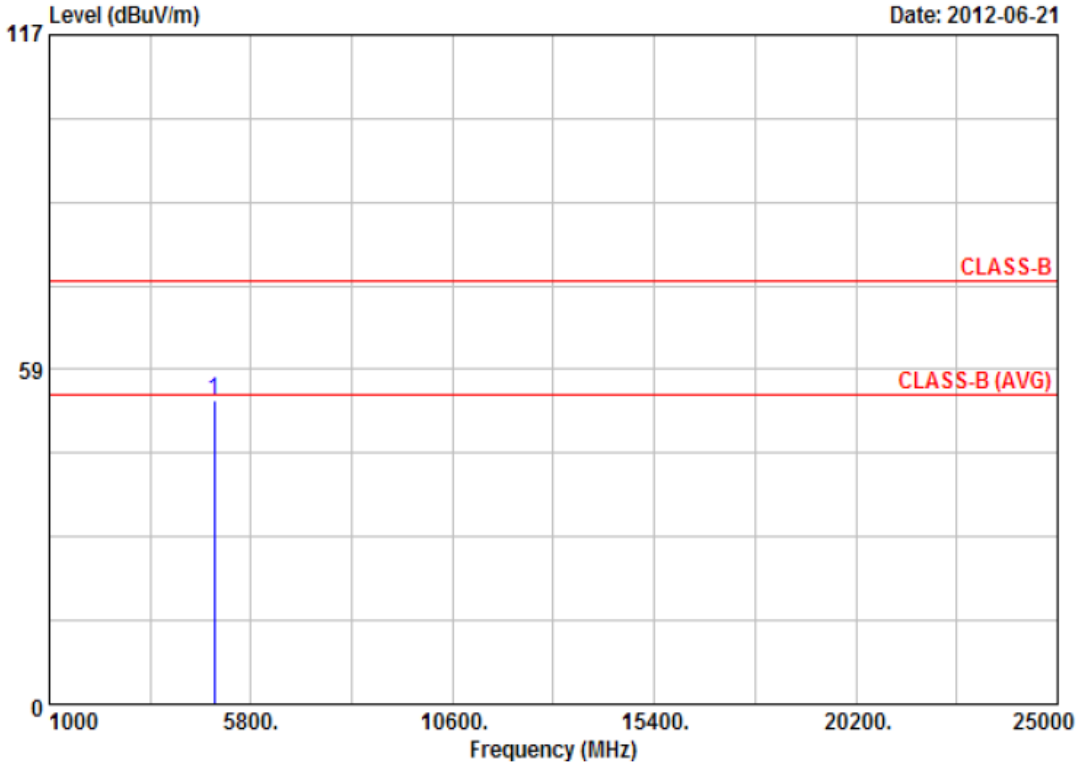


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4924.40	45.85	7.16	53.01	74.00	-20.99	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11g, CH11	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

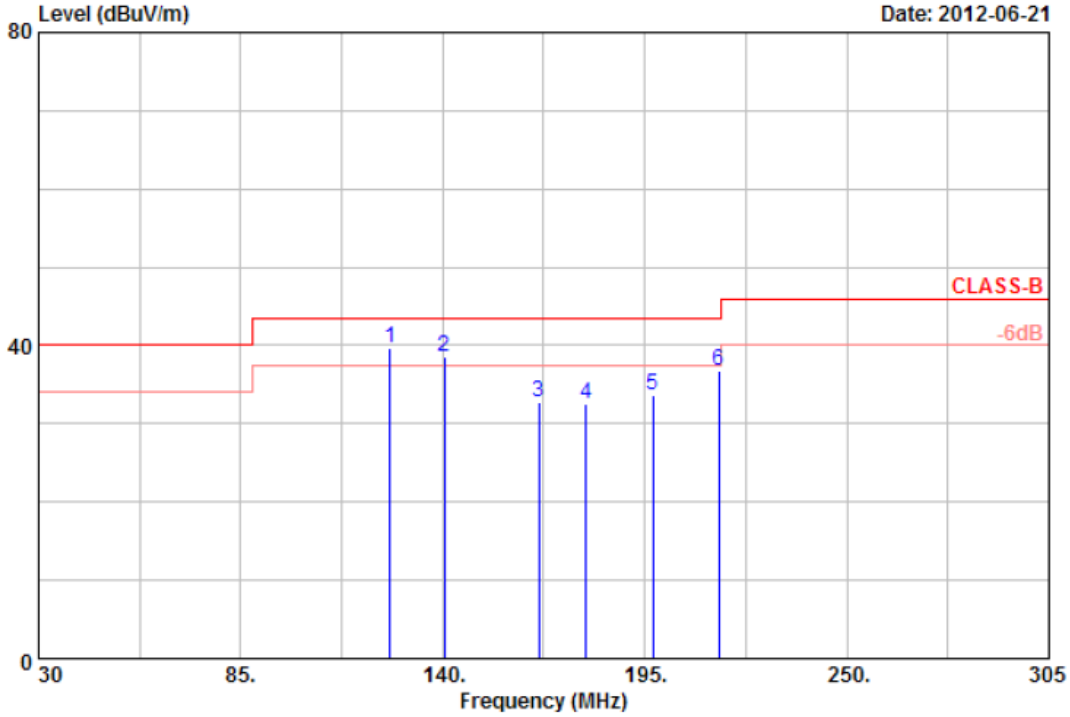


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4921.60	47.99	5.15	53.14	74.00	-20.86	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

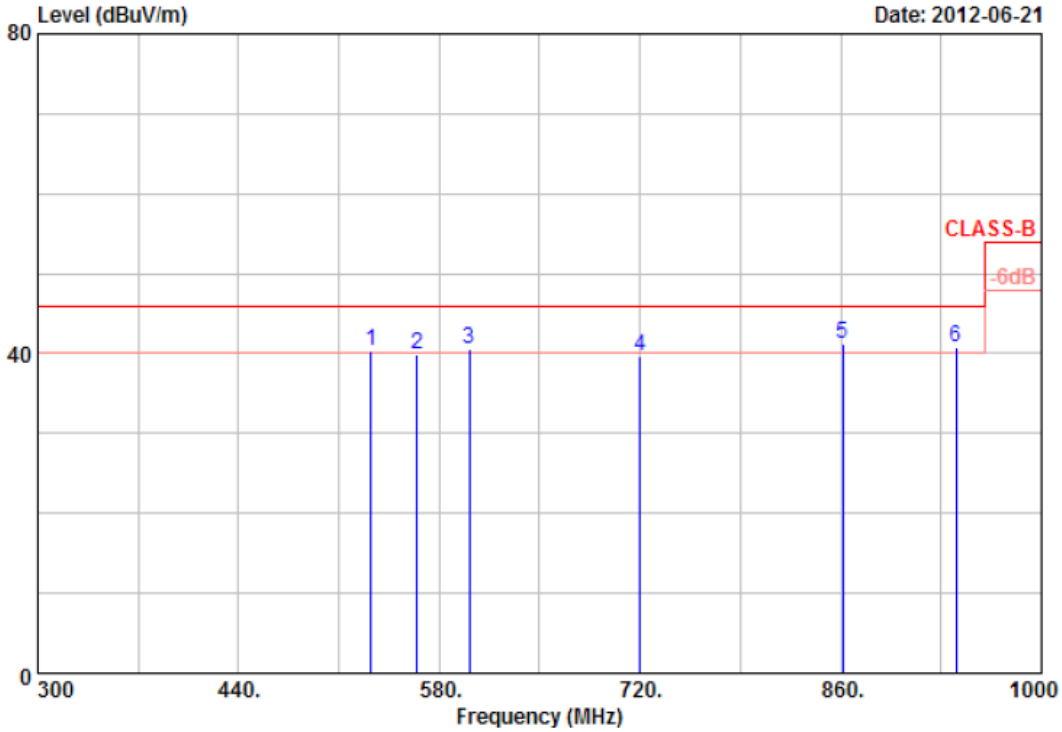


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	125.70	45.00	-5.38	39.62	43.50	-3.88	QP	100	0
2	140.55	46.36	-7.72	38.64	43.50	-4.86	QP	100	0
3	166.13	43.21	-10.34	32.87	43.50	-10.63	Peak	100	0
4	179.05	38.87	-6.31	32.56	43.50	-10.94	Peak	100	0
5	197.20	45.12	-11.58	33.54	43.50	-9.96	Peak	100	0
6	215.08	43.69	-6.82	36.87	43.50	-6.63	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

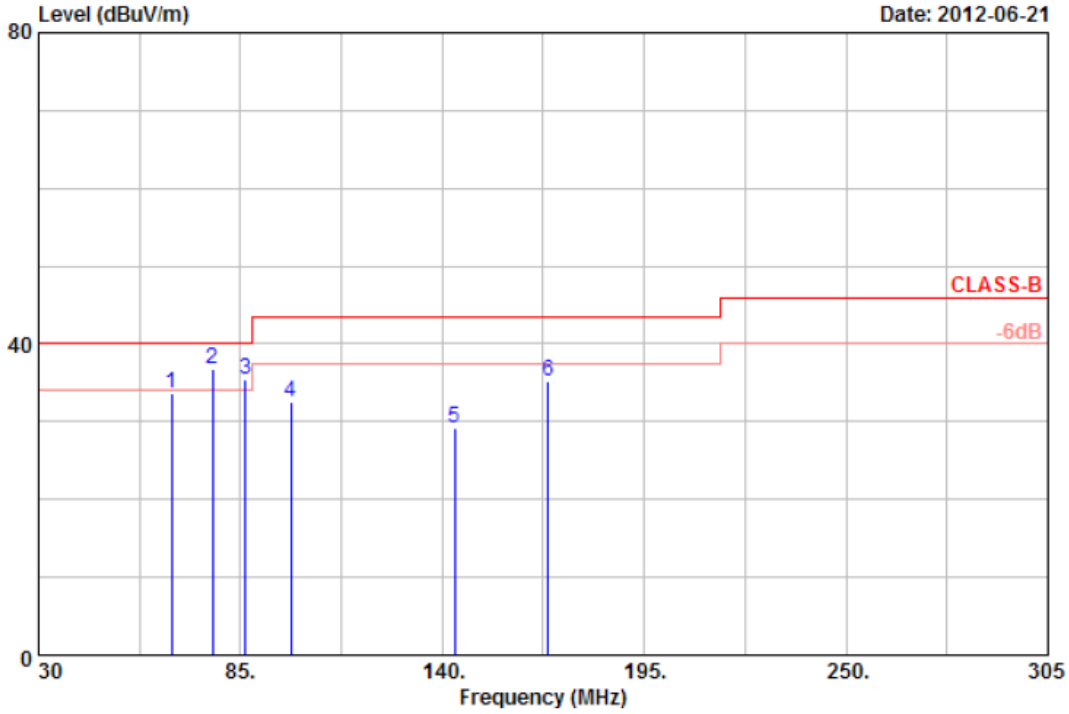


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	532.40	38.15	2.23	40.38	46.00	-5.62	QP	100	0
2	564.60	33.35	6.59	39.94	46.00	-6.06	Peak	100	0
3	601.00	37.93	2.60	40.53	46.00	-5.47	QP	100	0
4	720.00	33.33	6.41	39.74	46.00	-6.26	Peak	100	0
5	861.40	32.36	8.77	41.13	46.00	-4.87	QP	100	0
6	940.50	29.75	11.04	40.79	46.00	-5.21	QP	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

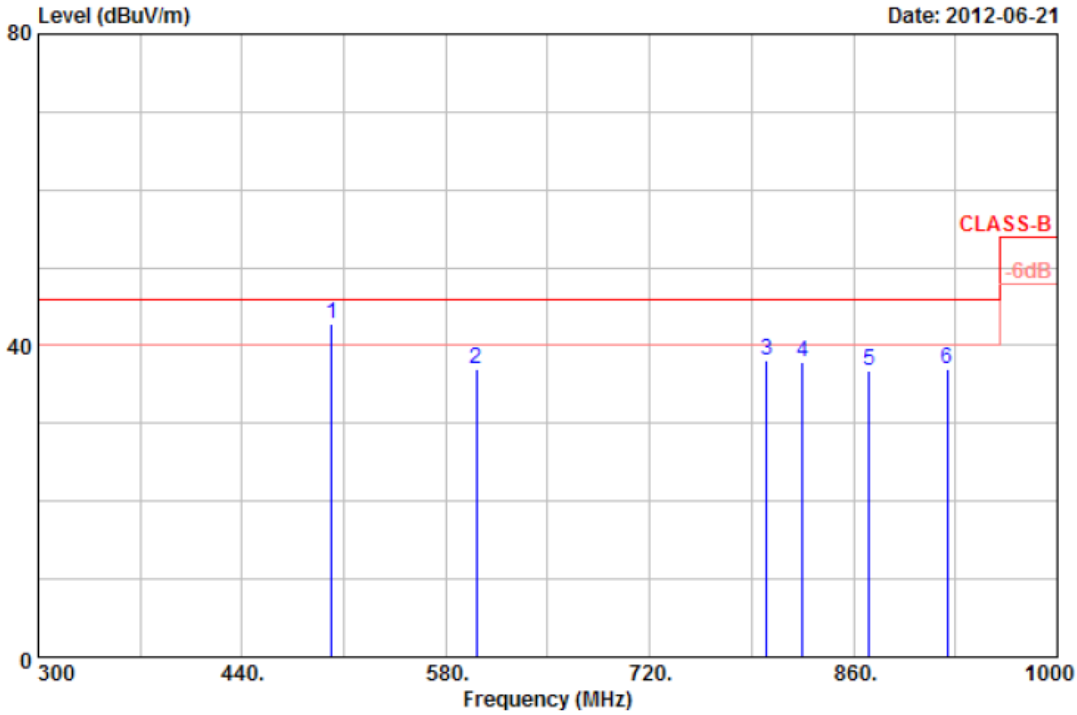


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	66.30	53.55	-19.96	33.59	40.00	-6.41	Peak	100	0
2	77.30	56.60	-19.83	36.77	40.00	-3.23	QP	100	0
3	86.38	53.83	-18.33	35.50	40.00	-4.50	QP	100	0
4	98.75	51.10	-18.65	32.45	43.50	-11.05	Peak	100	0
5	143.30	43.92	-14.65	29.27	43.50	-14.23	Peak	100	0
6	168.88	47.28	-12.17	35.11	43.50	-8.39	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

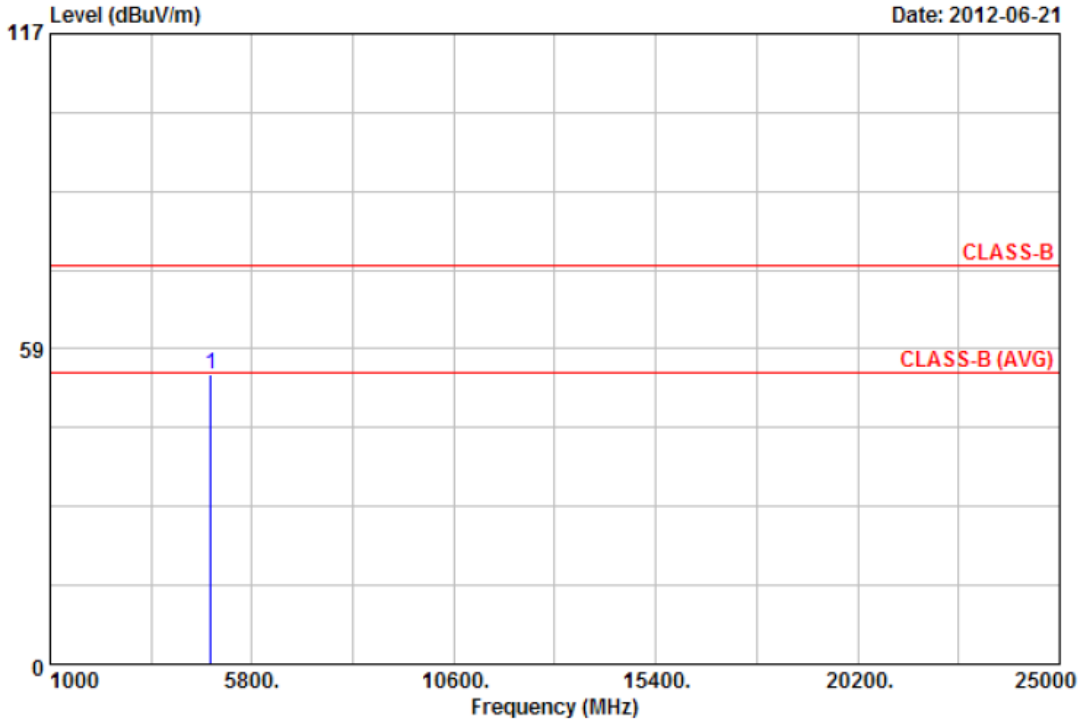


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	501.60	42.71	0.10	42.81	46.00	-3.19	QP	100	0
2	601.00	34.89	2.12	37.01	46.00	-8.99	Peak	100	0
3	800.50	32.02	6.14	38.16	46.00	-7.84	Peak	100	0
4	825.00	30.06	7.84	37.90	46.00	-8.10	Peak	100	0
5	870.50	31.91	4.80	36.71	46.00	-9.29	Peak	100	0
6	924.40	30.45	6.65	37.10	46.00	-8.90	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. All emission below 1GHz at 802.11b/g/n mode are all the same,so the 802.11g/n mode chosen as representative in final test.
5. According to technical experiences,all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40)was chosen as representative in final test.
6. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

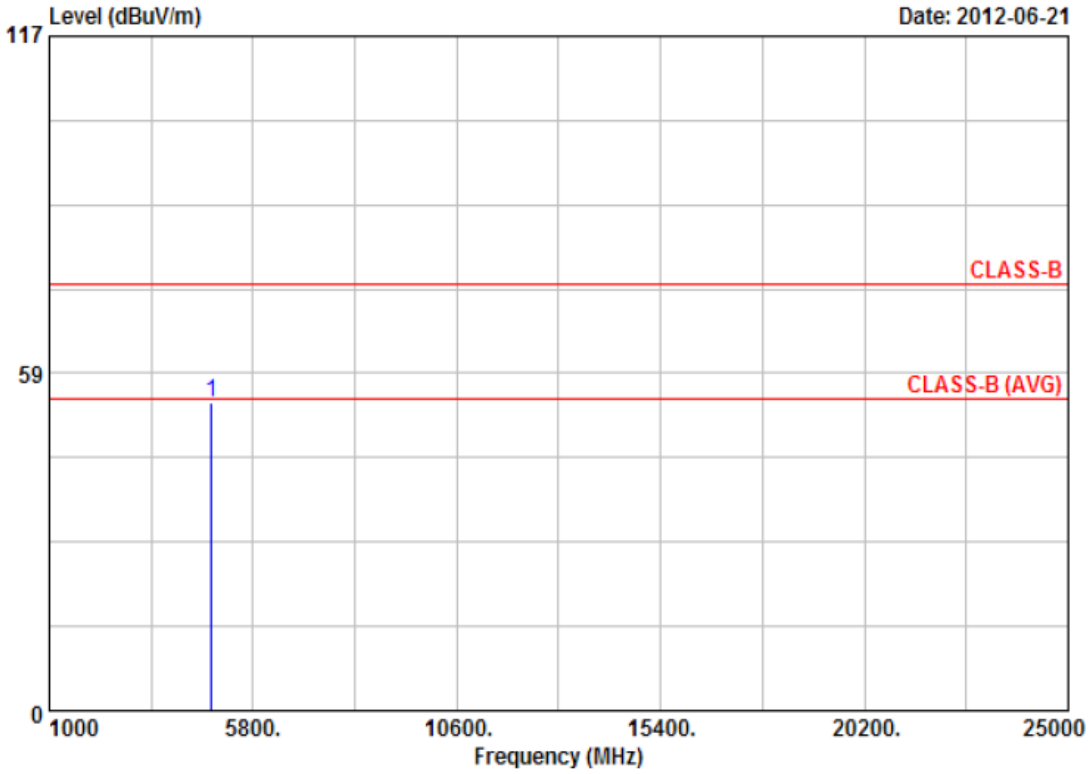


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4821.60	48.14	5.56	53.70	74.00	-20.30	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	HORIZONTAL
Test Mode 2	:	802.11n HT20, CH1	Temperature	:	25 °C
Memo	:		Humidity	:	65 %

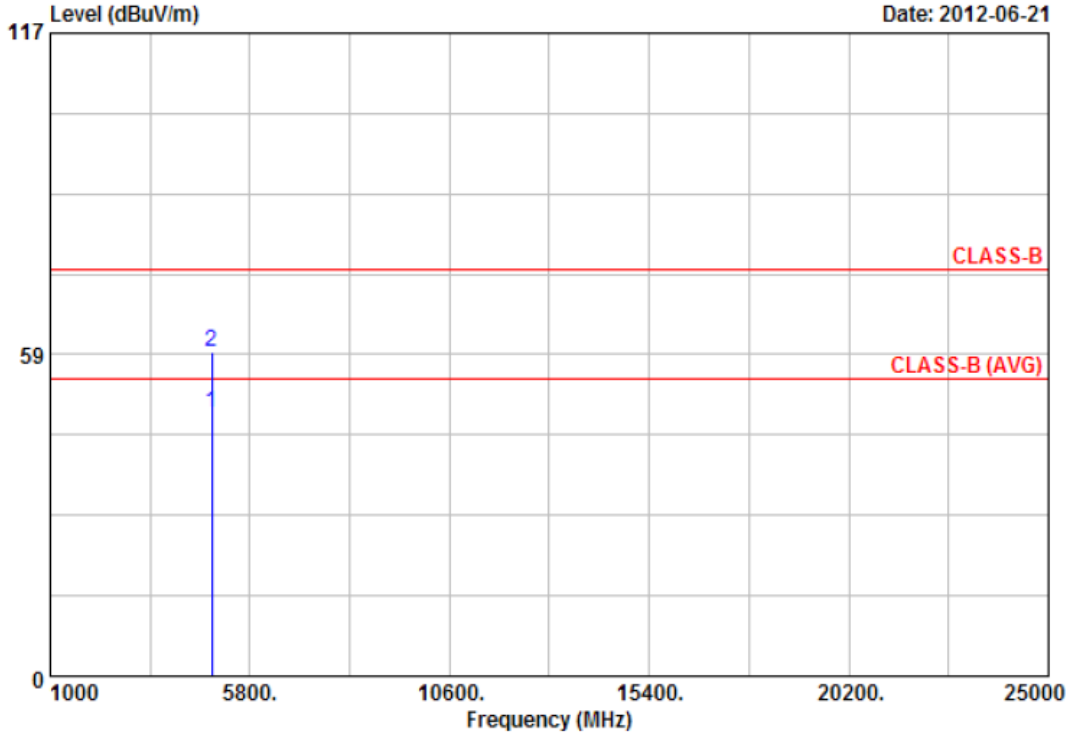


Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4823.95	49.41	3.94	53.35	74.00	-20.65	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

Power	:	FROM SYSTEM	Pol/Phase	:	VERTICAL
Test Mode 2	:	802.11n HT20, CH6	Temperature	:	25 °C
Memo	:		Humidity	:	65 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4873.58	41.19	6.58	47.77	54.00	-6.23	Average	100	290
2	4873.58	52.55	6.58	59.13	74.00	-14.87	Peak	100	290

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.