Test Report

FCC ID: 2AG3G-M618

Date of issue: Dec. 12, 2016

Sample Description:	Set Top Box
Model(s):	M618
Applicant:	Value Platforms Limited
Address:	Room213-214, 2/F, Sino Industrial Plaza, 9 Kai Cheung Road, Kowloon Bay, Hong Kong
Date of Test:	Nov. 26, 2016 to Dec. 12, 2016

Shenzhen Microtest Co., Ltd.
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Address: No.102A & 302A, East Block, Hengfang Industrial Park, Xingye Road, Xixiang, Bao'an District, Shenzhen, Guangdong, China

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Test Result Certification	
Applicant's name:	**Value Platforms Limited**
Address:	Room213-214, 2/F, Sino Industrial Plaza, 9 Kai Cheung Road, Kowloon Bay, Hong Kong
Manufacture's Name:	**Huizhou Tena Electronics Co., Ltd.**
Address:	No. 105 East New Road Dongjiang High-tech Industrial Park in Dongxing District, Zhongkai high tech Zone, Huizhou, Guangdong, China
Product name:	Set Top Box
Trademark:	Picazzo
Model name:	M618
Standards:	FCC Part 15.247
Test Procedure:	ANSI C63.10-2013 558074 D01 DTS Meas Guidance v03r05

This device described above has been tested by Shenzhen Toby Technology Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Tested by: David Chen

David Chen Dec. 12, 2016

Reviewed by: Leon Chen

Leon Chen Dec. 12, 2016

Approved by: Ares Liu

Ares Liu Dec. 12, 2016

Summary of Test Result

Item	FCC Part No.	Description of Test	Result
1	15.203	Antenna requirement	Pass
2	15.207	AC power line conducted emission	Pass
3	15.247(b)(3)	Maximum output power	Pass
4	15.247(a)(2)	6dB emission bandwidth	Pass
5	15.247(e)	Power spectral density (PSD)	Pass
8	15.247(d)	Band edge & conducted spurious emission	Pass
9	15.247(d), 15.205, 15.209	Radiated emission	Pass

1 General description

1.1 Feature of equipment under test (EUT)

Product name:	Set Top Box
Model name:	M618
Operating frequency range:	802.11b/g/n20:2412MHz~2462MHz, 802.11n40:2422MHz-2452MHz
WIFI feature:	☒802.11b ☒802.11g ☒802.11n20 ☒802.11n40
	For 802.11n20 and 802.11n40 mode, the EUT can transmit with two antennas simultaneously.
Modulation type:	DSSS, OFDM
Power source:	DC 5V from adapter
Adapter information:	Model:SYS1531-1205-W2 INPUT:AC100-240V, 1.0A MAX, 50-60Hz OUTPUT:5V-2.4A
Antenna designation:	ANT 1: Chip antenna (Antenna Gain: 2dBi) ANT 2: PIFA antenna (Antenna Gain: 2dBi)
Remark:	All the models above are identical in interior structure, electrical circuits and components; just model names and appearance are different for marking requirement.

1.2 Operation channel list

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	6	2437MHz	11	2462MHz
2	2417MHz	7	2442MHz	--	--
3	2422MHz	8	2447MHz	--	--
4	2427MHz	9	2452MHz	---	---
5	2432MHz	10	2457MHz	---	---

1.3 Test frequency channel

Channel	802.11b/g/n20	802.1n40
Low	2412MHz	2422MHz
Middle	2437MHz	2437MHz
High	2462MHz	2452MHz

1.4 EUT operation mode

During testing, RF test program provided by the manufacture to control the Tx operation followed the test requirement. The EUT is configured to transmit continuously (duty cycle > 98 %) at the maximum power control level.

1.5 Test conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 20ºC~30ºC
- Humidity: 30%~70%
- Atmospheric pressure: 98kPa~101kPa

1.6 Testing site

Test Site	Shenzhen Toby Technology Co., Ltd.
Test Site Location	1 A/F., Bldg.6, Yusheng Industrial Zone The National Road No.107 Xixiang Section 467, Shenzhen, Guangdong, China
FCC Registration No.:	811562
CNAS Registration No.:	CNAS L5813

1.7 Ancillary equipment list

Equipment	Model	S/N	Manufacturer	Certificate type
/	/	/	/	/

1.8 Measurement uncertainty

Measurement Uncertainty for a Level of Confidence of 95 %, U=2xUc(y)

RF frequency	1 x 10-7
RF power, conducted	± 1 dB
Conducted emission(150kHz~30MHz)	± 2.5 dB
Radiated emission(30MHz~1GHz)	± 4.2 dB
Radiated emission (above 1GHz)	± 4.3 dB
Temperature	±1 degree
Humidity	± 5 %

2 List of test equipment

For AC power line conducted emission:

Equipment	Manufacturer	Model	Serial No.	Calibration Due
LISN	R&S	ENV216	101313	2017.12.06
LISN	SCHWARZBECK	NNLK 8129	8129245	2017.12.25
Pulse Limiter	SCHWARZBECK	VTSD 9561F	9716	2017.12.25
Test Cable	N/A	N/A	C01	2017.12.06
EMI Test Receiver	R&S	ESCI	101160	2017.12.06

For Radiated emission:

Equipment	Manufacturer	Model	Serial No.	Calibration Due
Log-Bicon Antenna	MESS-ELEKTRONIK	VULB 9160	3058	2017.12.11
Horn Antenna	Schwarzbeck	BBHA 9120D	631	2017.12.05
Horn Antenna	Schwarzbeck	BBHA 9170	373	2017.12.05
Test Cable	United Microwave	57793	1m	2017.12.05
Test Cable	United Microwave	A30A30-5006	10m	2017.12.05
Microwave Pre_amplifier	Agilent	8449B	3008A01714	2017.12.05
Pre-Amplifier	Anritsu	MH648A	M09961	2017.12.05
EMI Test Receiver	R&S	ESPI-7	101318	2017.12.05
Spctrum analyzer	Agient	E4470B	MY41441082	2017.06.01

For RF conducted emission:

Equipment	Manufacturer	Model	Serial No.	Calibration Due
Spctrum analyzer	Agient	E4470B	MY41441082	2017.06.01
Power meter	Anritsu	ML2495A	1005002	2017.09.11
Power Senor	Anritsu	MA2411B	0917070	2017.09.11

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

3 Test Result

3.1 Conducted emission

3.1.1 Limit

Frequency (MHz)	Limit	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Note: Decreases with the logarithm of the frequency from 0.15MHz to 0.5MHz.

3.1.2 Test method

1. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/50uH of coupling impedance for the measuring instrument.

2. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

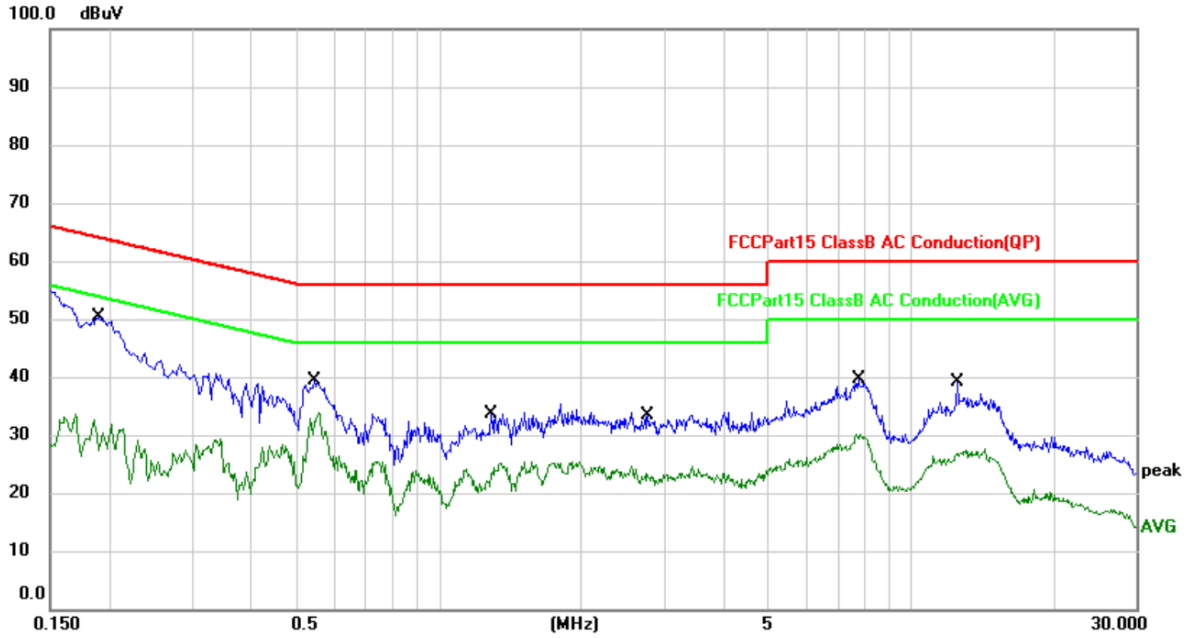
3. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

4. LISN is at least 80 cm from nearest part of EUT chassis.

5. The resolution bandwidth of EMI test receiver is set at 9 kHz.

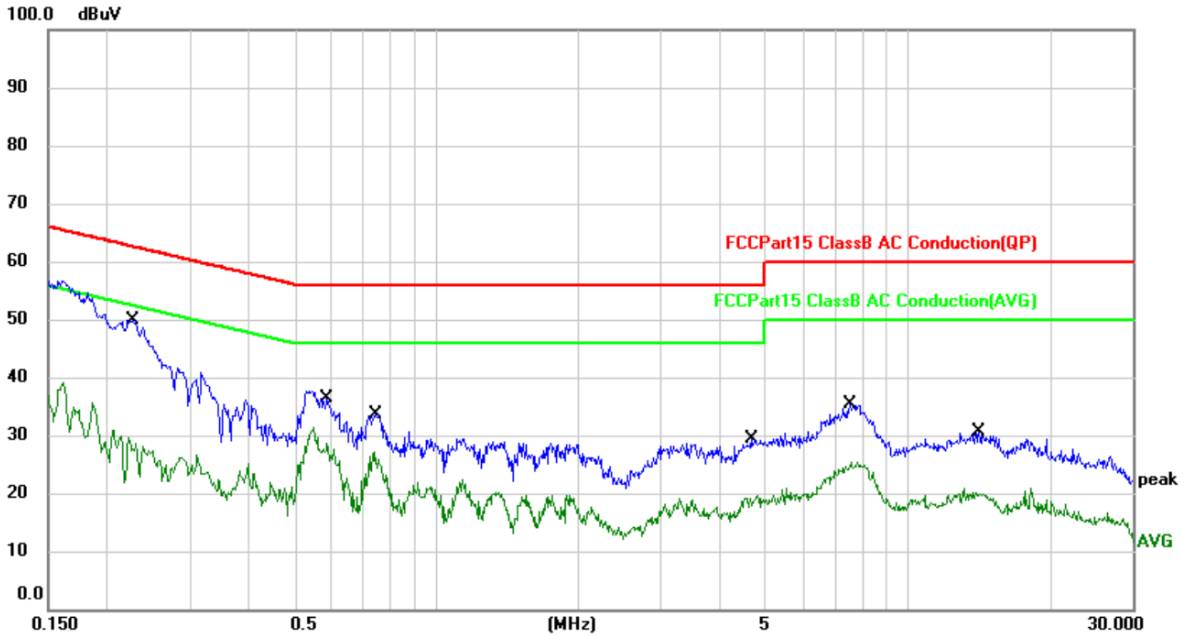
3.1.3 Test Result

Temperature:	25℃	Relative	55%
Pressure:	101kPa	Polarization:	L
Test voltage:	AC 120V/60Hz	Test mode:	Transmitting



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1894	50.34	-0.03	50.31	64.06	-13.75	QP	
2		0.1894	33.22	-0.03	33.19	54.06	-20.87	AVG	
3		0.5433	39.36	-0.03	39.33	56.00	-16.67	QP	
4	*	0.5433	35.70	-0.03	35.67	46.00	-10.33	AVG	
5		1.2882	33.69	-0.04	33.65	56.00	-22.35	QP	
6		1.2882	26.88	-0.04	26.84	46.00	-19.16	AVG	
7		2.7648	33.44	-0.04	33.40	56.00	-22.60	QP	
8		2.7648	26.40	-0.04	26.36	46.00	-19.64	AVG	
9		7.7278	39.76	-0.06	39.70	60.00	-20.30	QP	
10		7.7278	28.73	-0.06	28.67	50.00	-21.33	AVG	
11		12.5152	39.34	-0.14	39.20	60.00	-20.80	QP	
12		12.5152	28.78	-0.14	28.64	50.00	-21.36	AVG	

Temperature:	25℃	Relative	55%
Pressure:	101kPa	Polarization:	N
Test voltage:	AC 120V/60Hz	Test mode:	Transmitting



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.2268	50.00	-0.03	49.97	62.56	-12.59	QP	
2		0.2268	30.15	-0.03	30.12	52.56	-22.44	AVG	
3		0.5854	36.37	-0.03	36.34	56.00	-19.66	QP	
4		0.5854	30.27	-0.03	30.24	46.00	-15.76	AVG	
5		0.7429	33.58	-0.03	33.55	56.00	-22.45	QP	
6		0.7429	27.49	-0.03	27.46	46.00	-18.54	AVG	
7		4.6467	29.43	-0.06	29.37	56.00	-26.63	QP	
8		4.6467	20.37	-0.06	20.31	46.00	-25.69	AVG	
9		7.5258	35.39	-0.06	35.33	60.00	-24.67	QP	
10		7.5258	25.44	-0.06	25.38	50.00	-24.62	AVG	
11		14.1376	30.66	-0.16	30.50	60.00	-29.50	QP	
12		14.1376	26.62	-0.16	26.46	50.00	-23.54	AVG	

3.2 Antenna requirement

3.2.1 Requirement defined in FCC 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.2.2 EUT antenna description

The WIFI antennas of EUT are two permanently attached Chip antenna and PIFA antenna, the maximum gain of the chip antenna is 2dBi, and the maximum gain of the PIFA antenna is 2dBi. So the antennas meets the requirement of this part.

3.3 Maximum output power

3.3.1 Limits

Conducted output power limit is 1W (30dBm).

3.3.2 Test Method

The maximum conducted output power may be measured using a broadband RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

3.3.3 Test Result

Frequency (MHz)	Maximum peak output power (dBm)			Limit (dBm)
	ANT 1	ANT 2	Total Power	
802.11b				
2412	16.08	16.26	/	30
2437	16.17	16.14	/	
2462	16.23	16.30	/	
802.11g				
2412	15.34	15.34	/	30
2437	15.22	15.13	/	
2462	15.35	15.27	/	
802.11n20				
2412	11.22	11.32	14.28	30
2437	11.20	10.92	14.07	
2462	11.34	10.91	14.14	
802.11n40				
2422	10.44	10.38	13.42	30
2437	10.32	10.41	13.38	
2452	10.54	10.64	13.60	

3.4 6dB emission bandwidth

3.4.1 Limits

The minimum 6 dB bandwidth shall be at least 500 kHz.

3.4.2 Test method

Use the following spectrum analyzer settings:

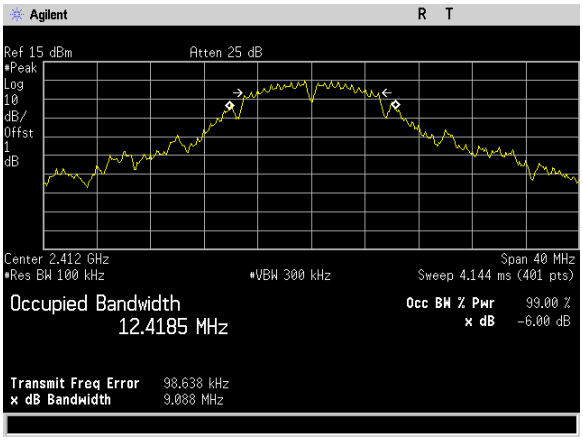
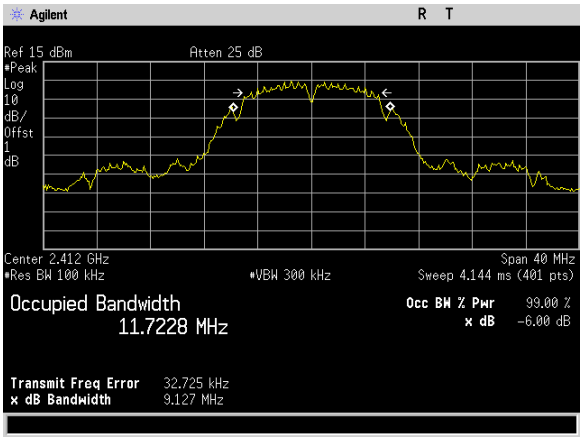
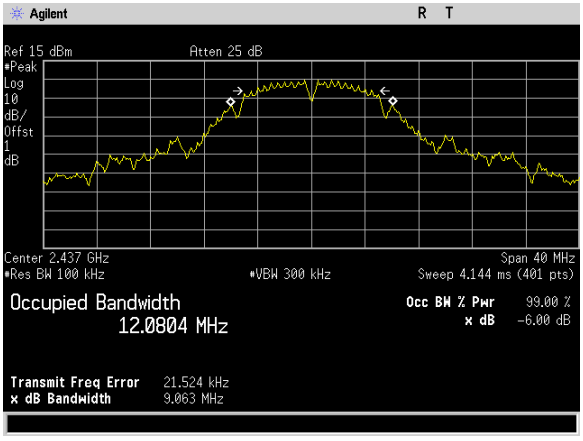
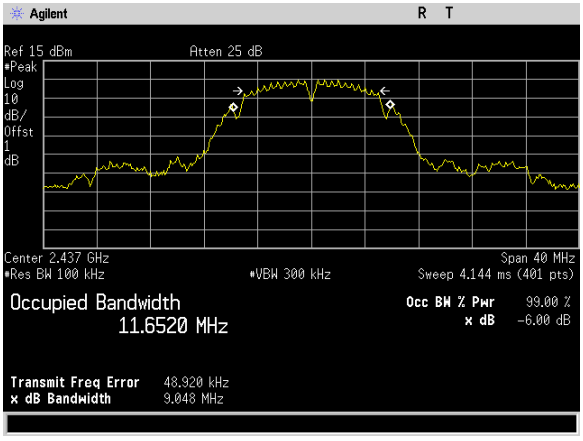
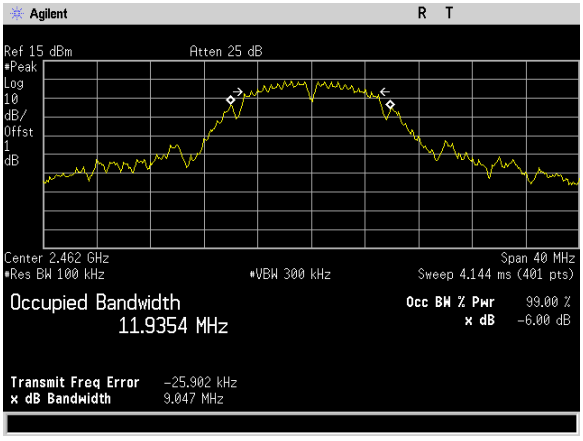
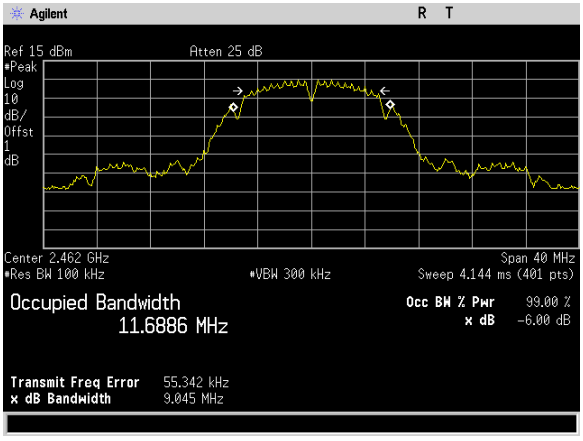
RBW = 100kHz
VBW ≥ 3RBW
Detector = peak
Trace mode = max hold
Sweep time = auto couple
Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.4.3 Test result

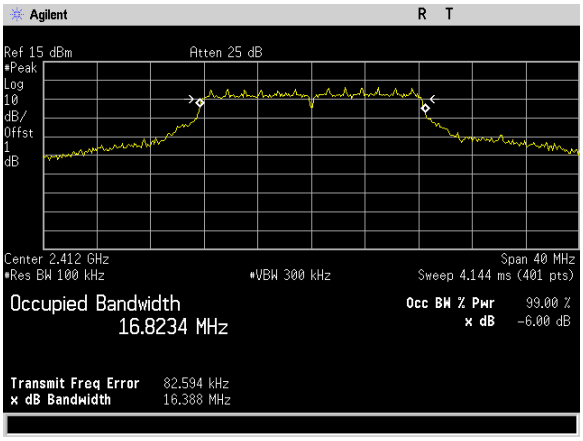
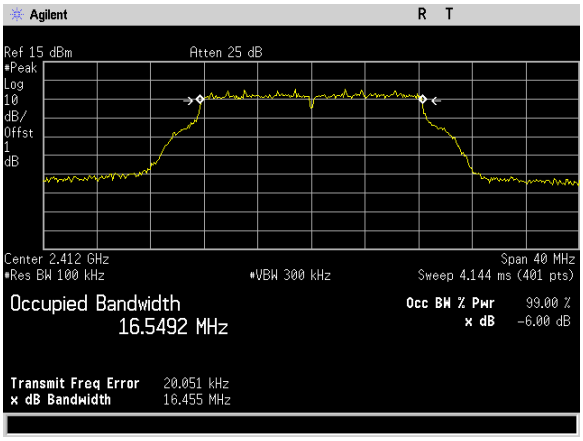
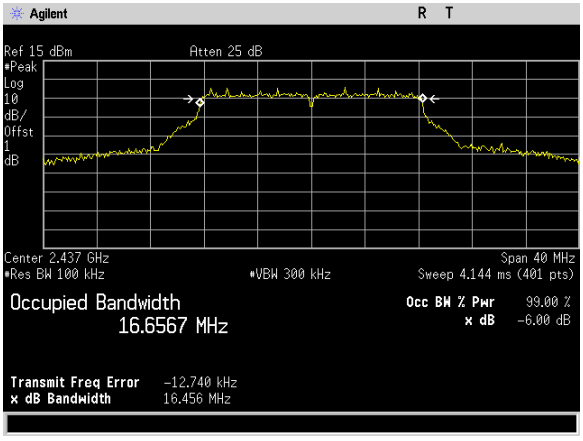
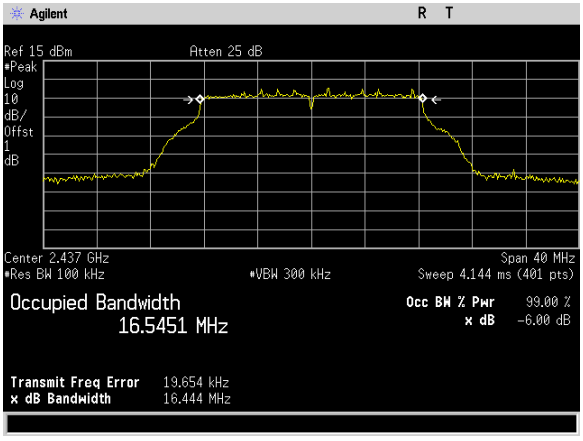
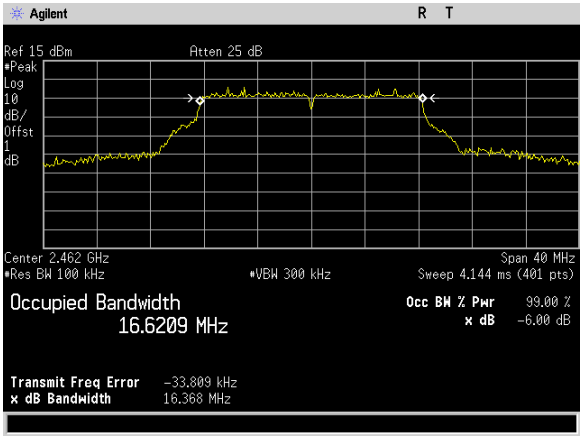
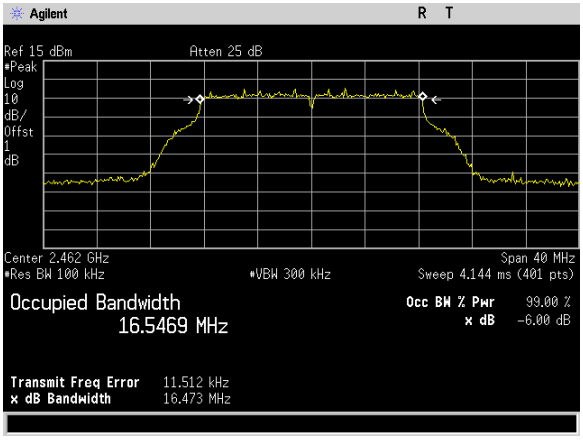
Frequency (MHz)	6dB emission bandwidth (MHz)		Limit
	ANT1	ANT2	
802.11b			
2412	9.088	9.127	500kHz
2437	9.063	9.048	
2462	9.047	9.045	
802.11g			
2412	16.388	16.455	500kHz
2437	16.456	16.444	
2462	16.368	16.473	
802.11n20			
2412	17.540	17.696	500kHz
2437	17.628	17.653	
2462	17.685	17.651	
802.11n40			
2422	36.364	36.331	500kHz
2437	36.628	36.444	
2452	36.638	36.480	

See the test plots on the next pages:

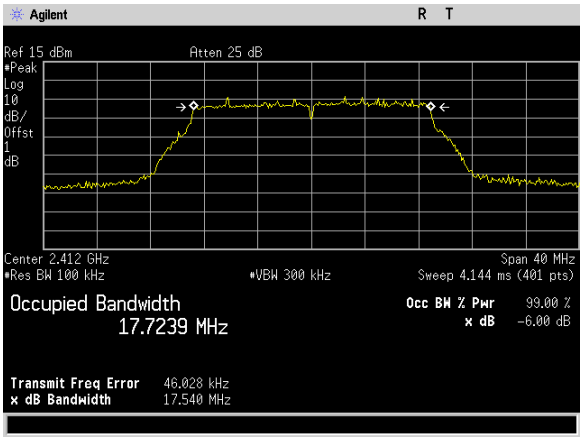
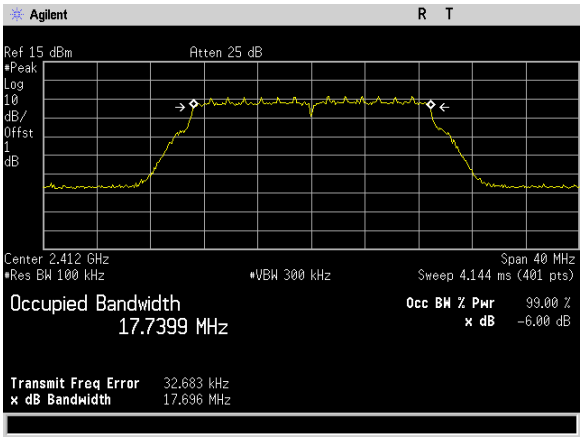
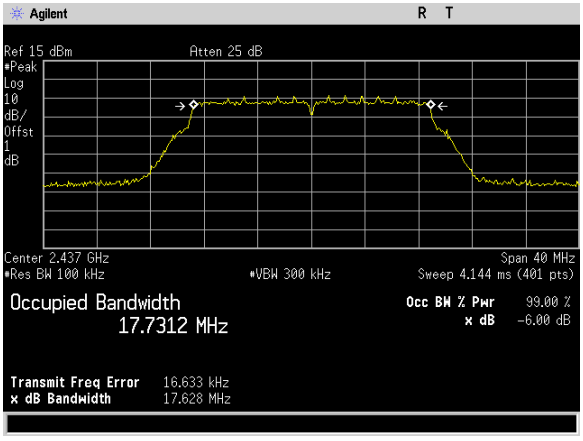
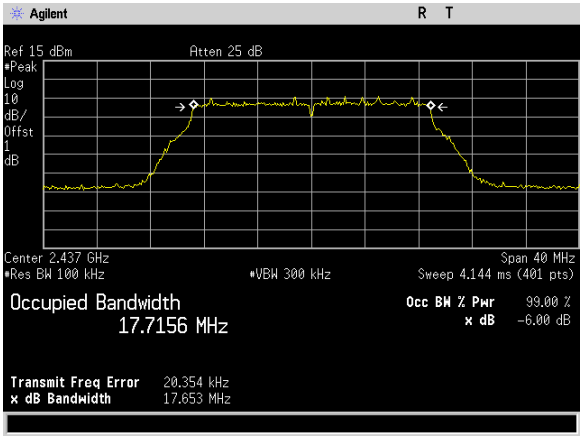
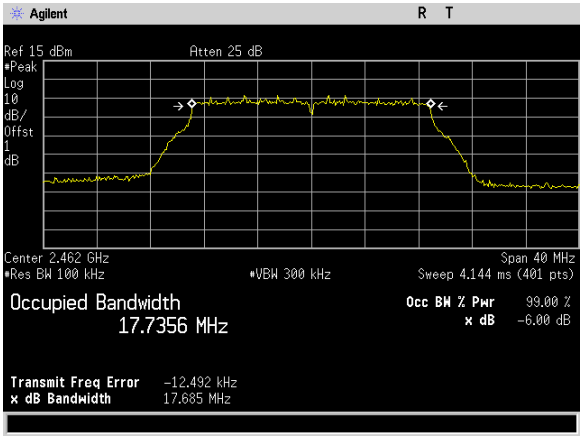
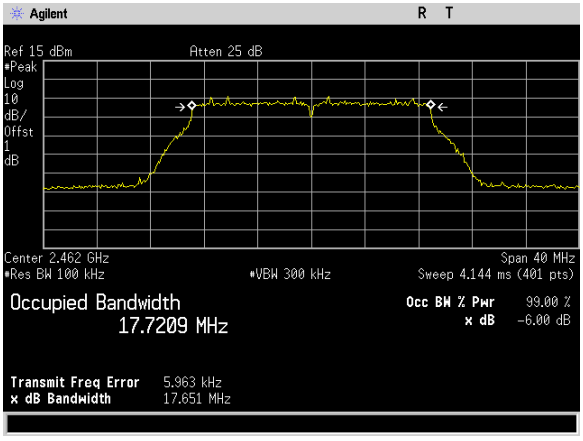
802.11b mode

2412MHz(ANT1)	2412MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2462MHz(ANT1)	2462MHz(ANT2)
	

802.11g mode

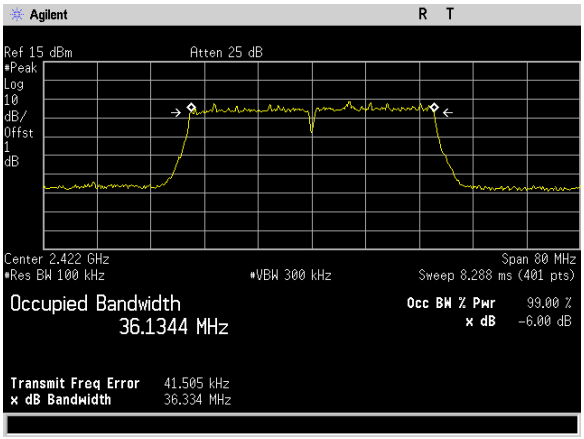
2412MHz(ANT1)	2412MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2462MHz(ANT1)	2462MHz(ANT2)
	

802.11n20 mode

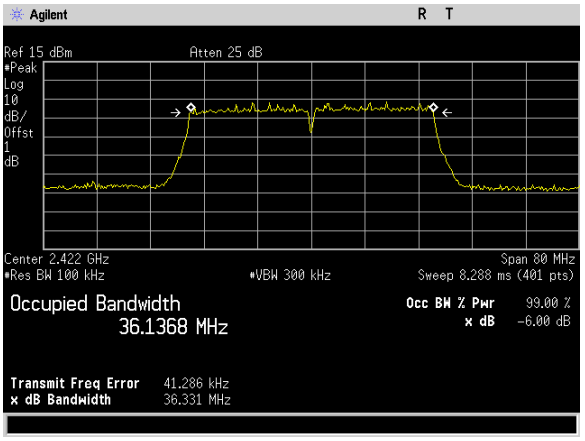
2412MHz(ANT1)	2412MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2462MHz(ANT1)	2462MHz(ANT2)
	

802.11n40 mode

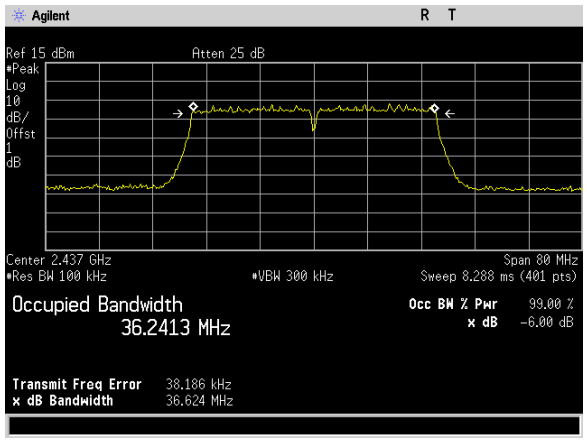
2422MHz(ANT1)



2422MHz(ANT2)



2437MHz(ANT1)



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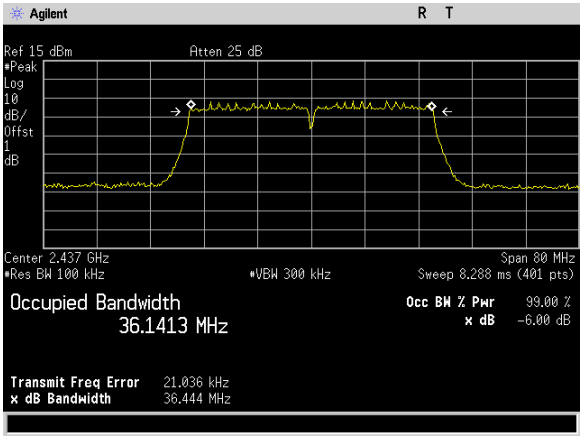
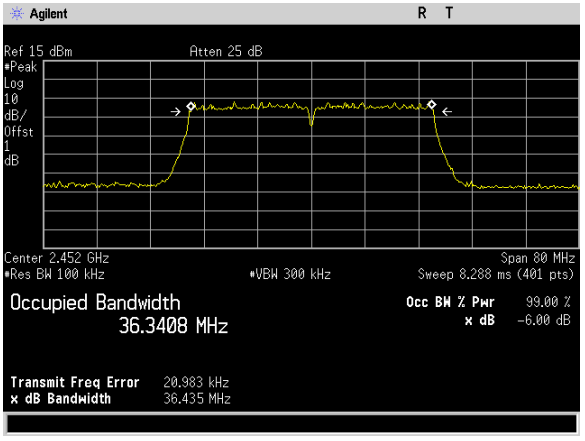


2452MHz(ANT1)



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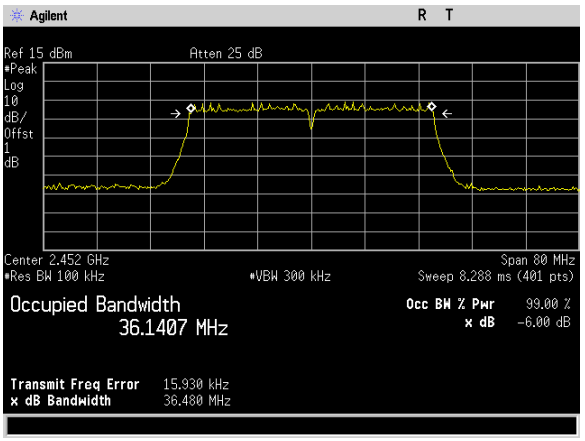


3.5 Power spectral density

3.5.1 Limits

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

3.5.2 Test method

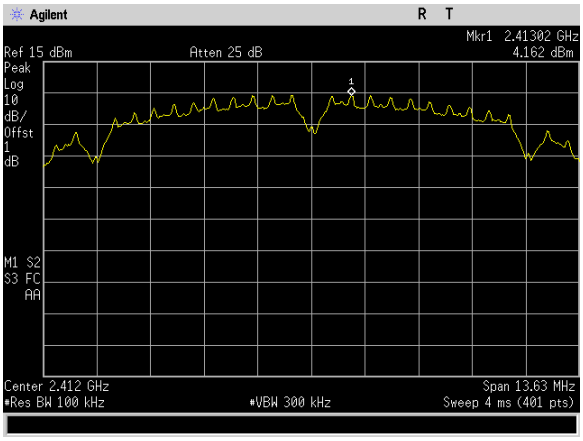
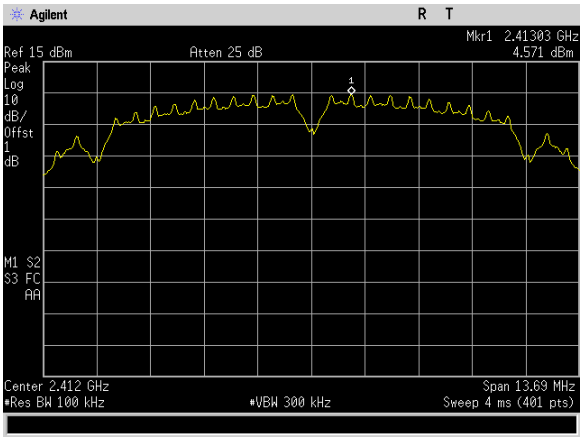
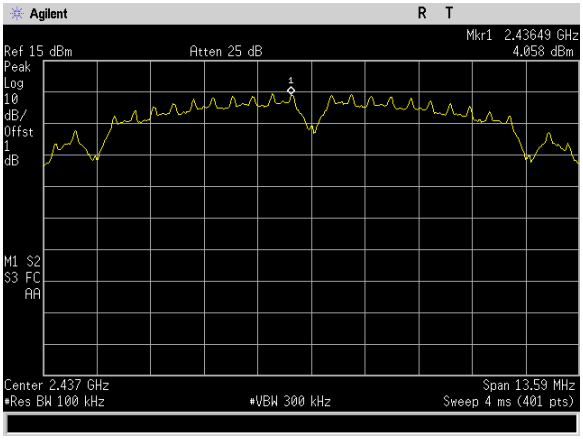
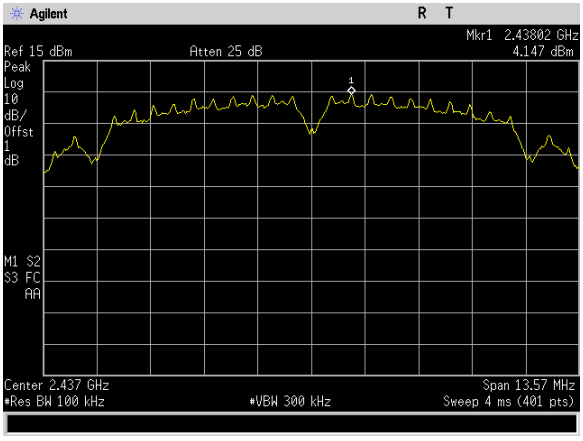
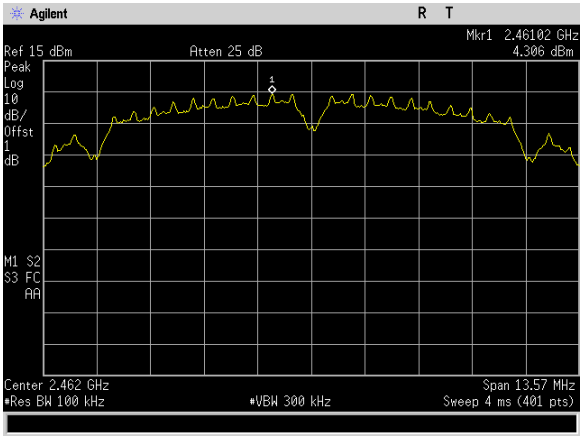
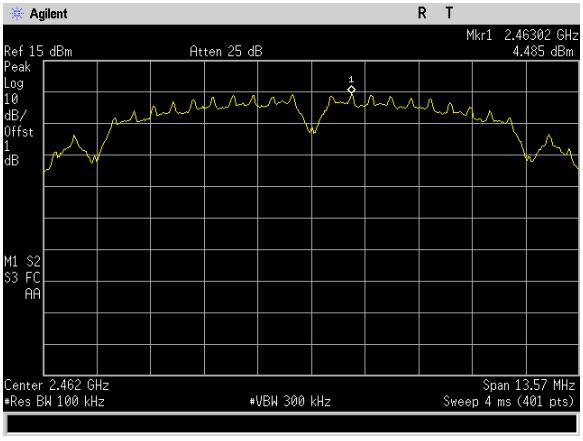
Span = 1.5 times DTS bandwidth (6dB emission bandwidth, see section 4.4)
RBW = 3kHz to 100kHz
VBW ≥ 3RBW
Detector = Peak
Sweep time = auto
Trace mode = max hold
Allow the trace to stabilize. Use the peak marker function to determine the maximum amplitude level within the RBW.

3.5.3 Test result

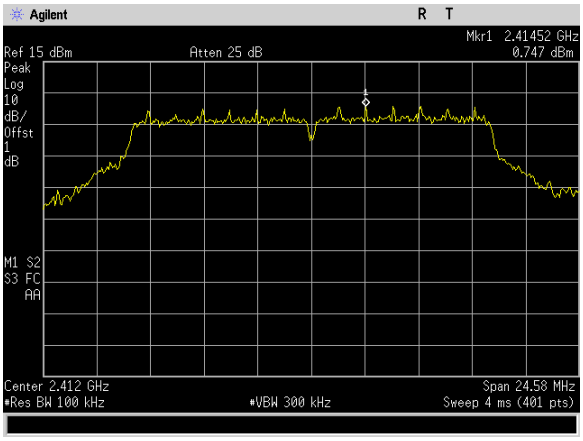
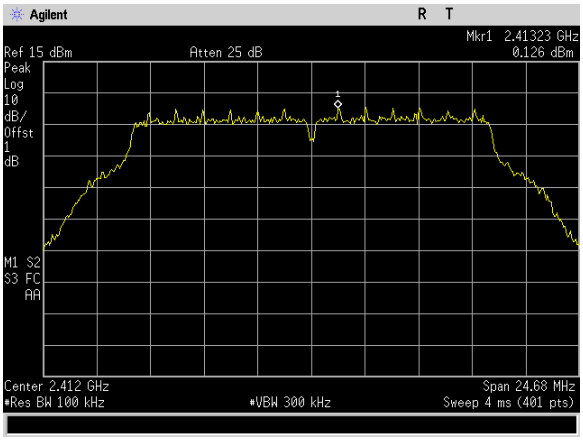
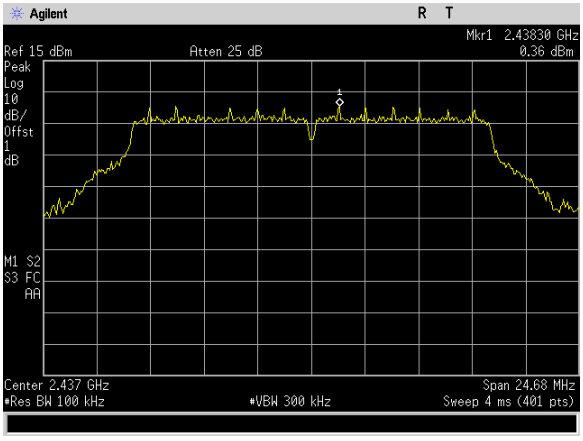
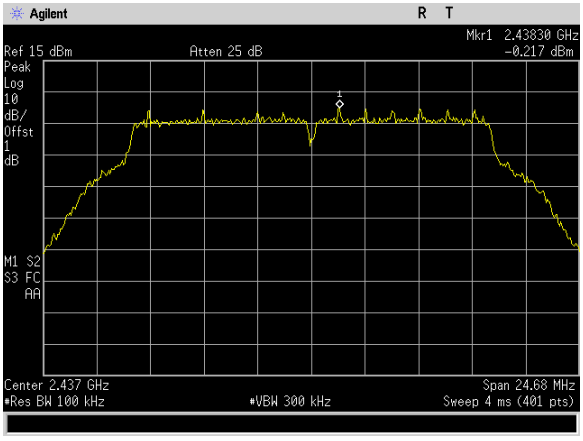
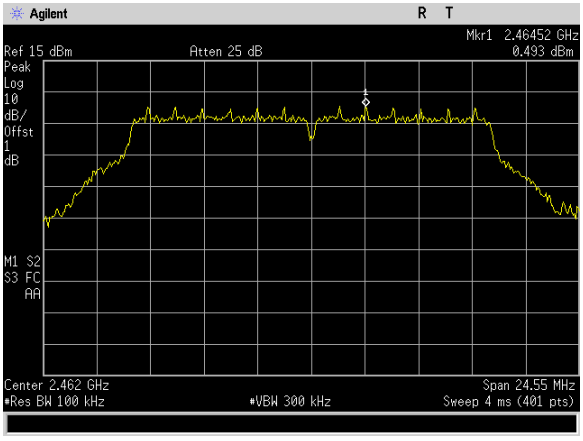
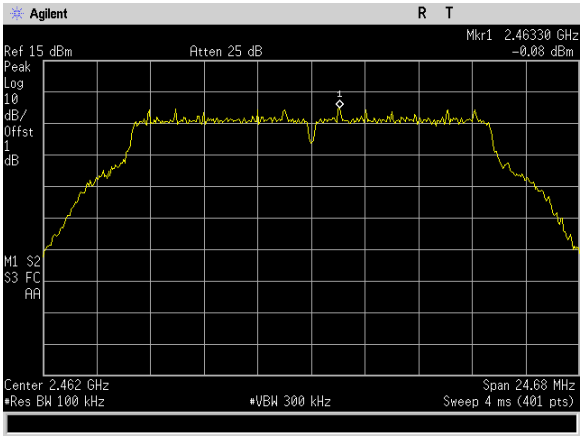
Frequency (MHz)	PSD (dBm/100kHz)			Limit (dBm/3kHz)
	ANT1	ANT2	Total	
802.11b				
2412	4.162	4.571	/	8
2437	4.058	4.147	/	
2462	4.306	4.485	/	
802.11g				
2412	0.747	0.126	/	8
2437	0.36	-0.217	/	
2462	0.493	-0.08	/	
802.11n20				
2412	-3.572	-3.714	-0.63	8
2437	-3.812	-4.364	-1.07	
2462	-3.507	-4.238	-0.85	
802.11n40				
2422	-6.227	-6.126	-3.17	8
2437	-6.455	-6.295	-3.36	
2452	-6.538	-6.016	-3.26	

See the test plots on the next pages:

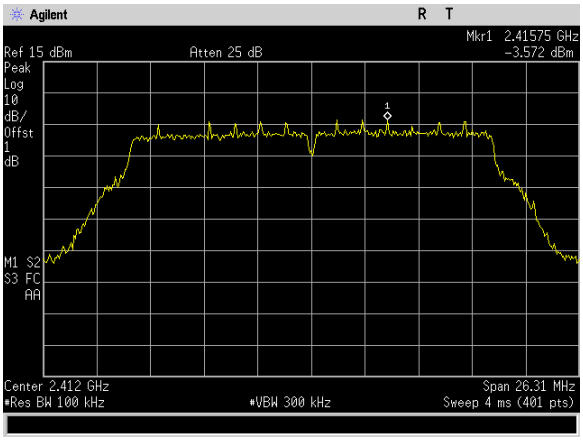
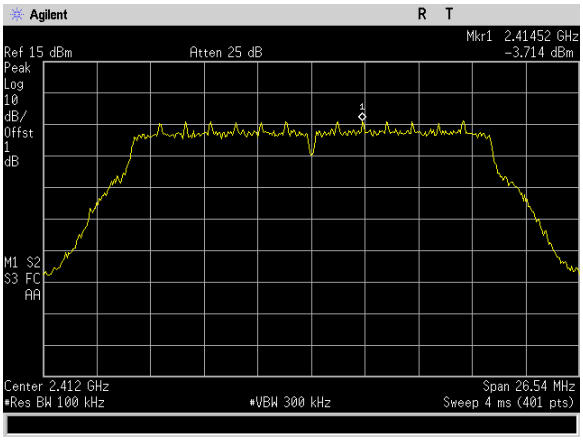
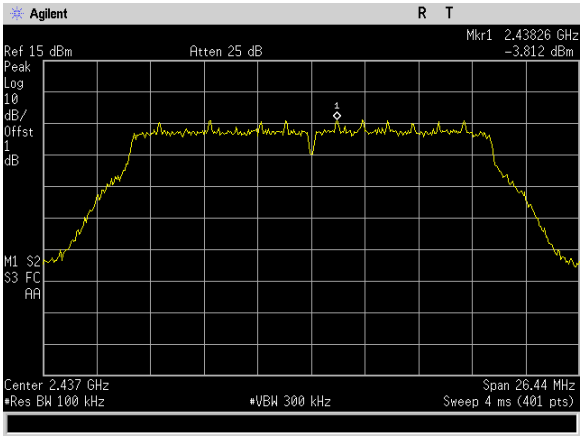
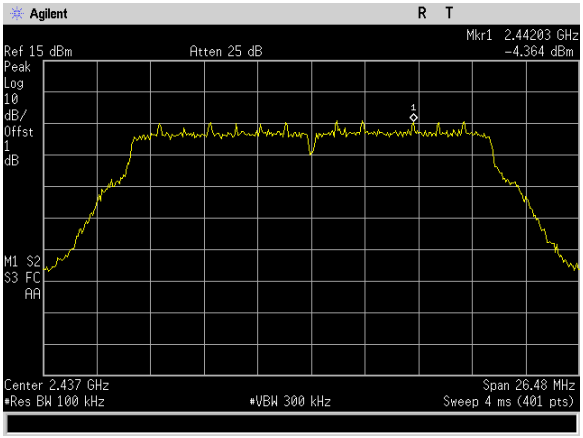
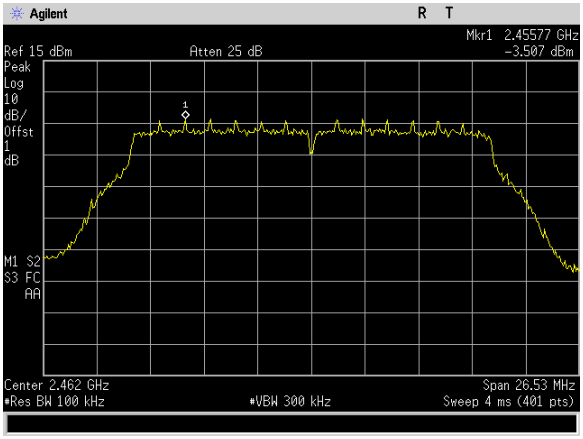
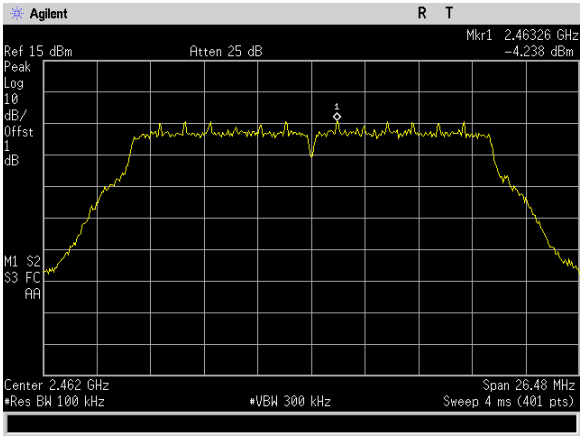
802.11b mode

2412MHz(ANT1)	2412MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2462MHz(ANT1)	2462MHz(ANT2)
	

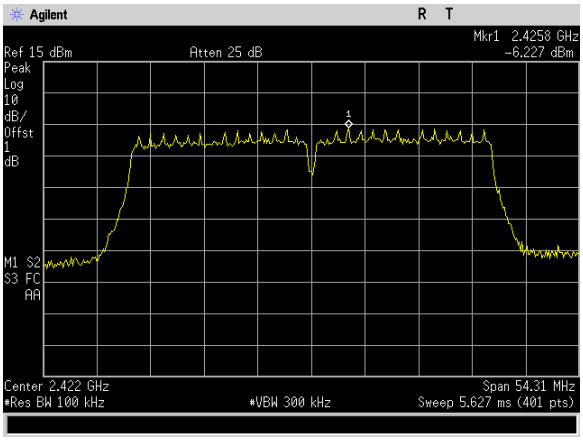
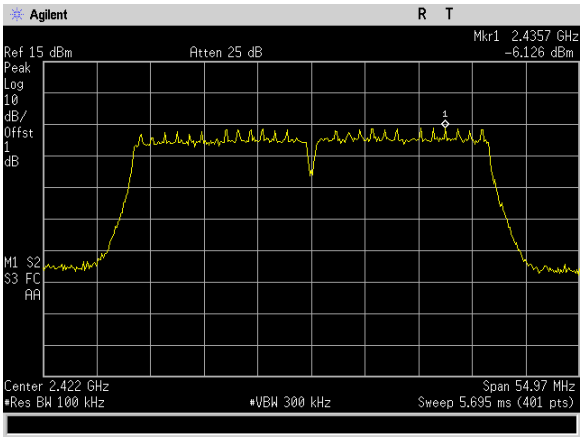
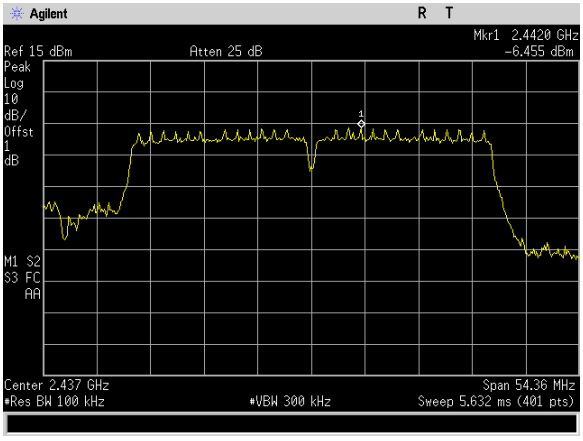
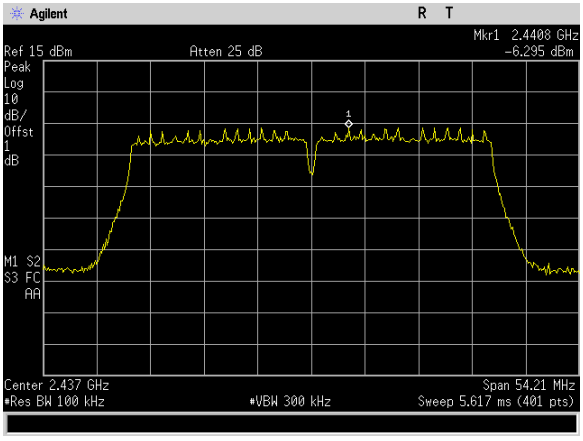
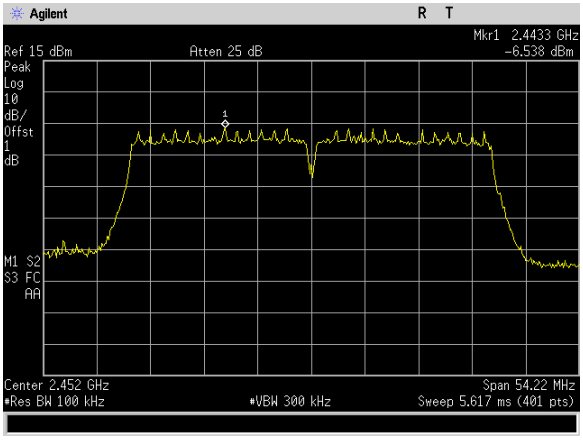
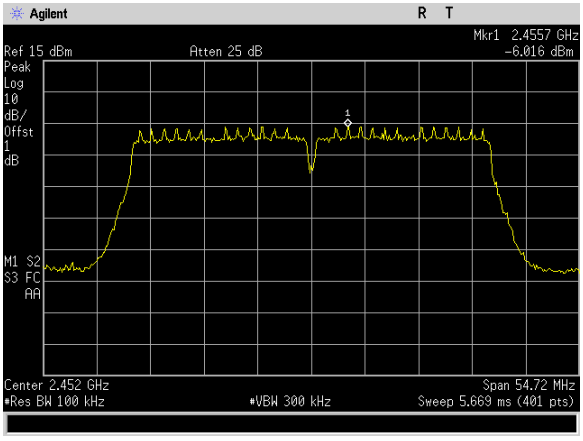
802.11g mode

2412MHz(ANT1)	2412MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2462MHz(ANT1)	2462MHz(ANT1)
	

802.11n20 mode

2412MHz(ANT1)	2412MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2462MHz(ANT1)	2462MHz(ANT1)
	

802.11n40 mode

2422MHz(ANT1)	2422MHz(ANT2)
	
2437MHz(ANT1)	2437MHz(ANT2)
	
2452MHz(ANT1)	2452MHz(ANT1)
	

3.6 Band edge

3.6.1 Limit

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30dB instead of 20dB.

3.6.2 Test method

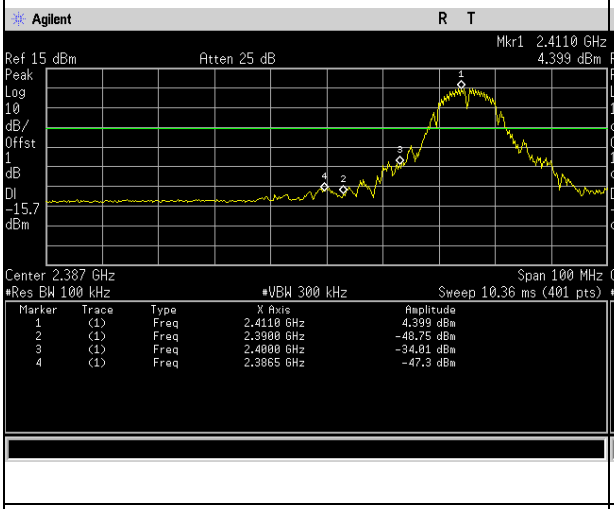
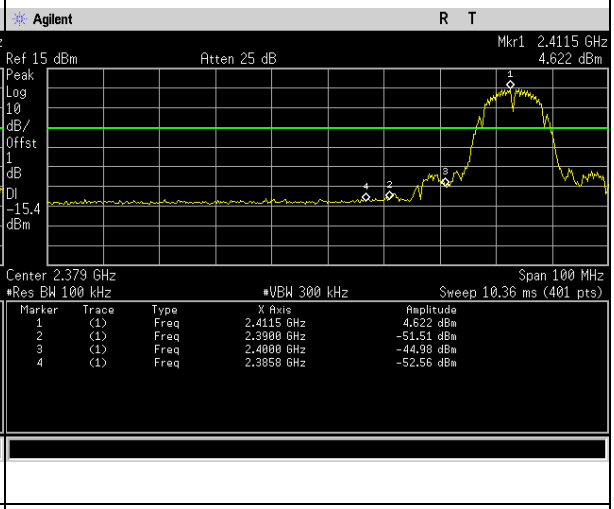
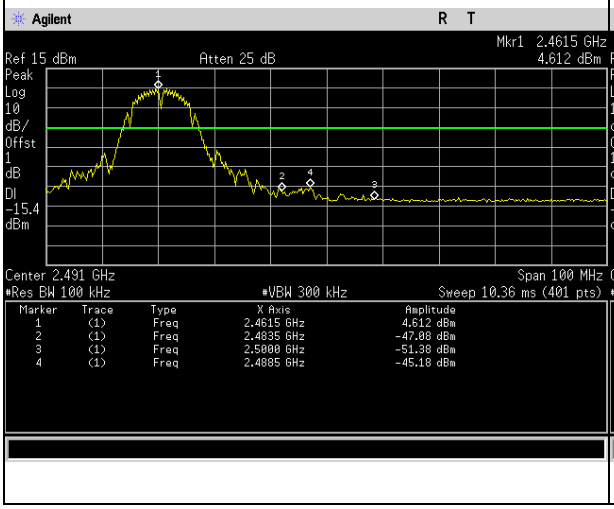
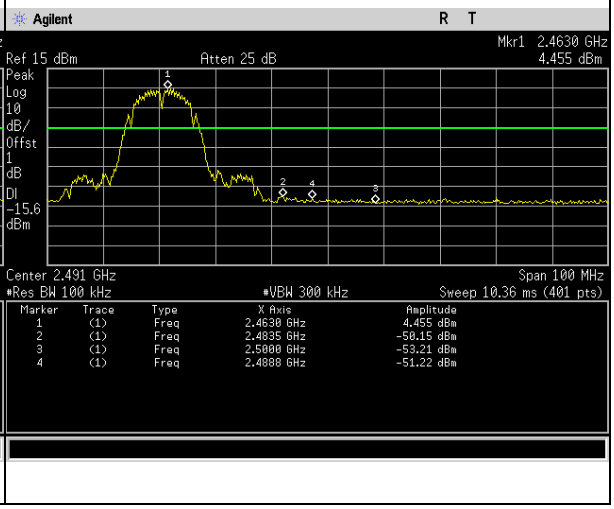
Use the following spectrum analyzer settings:

Set RBW = 100 kHz. VBW ≥ 3RBW. Detector = peak, Sweep time = auto couple, Trace mode = max hold.

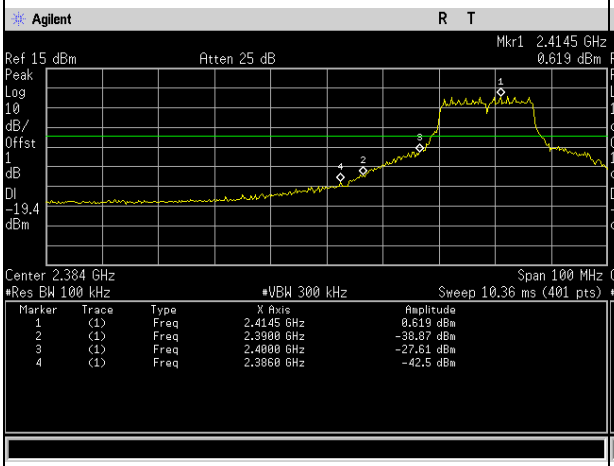
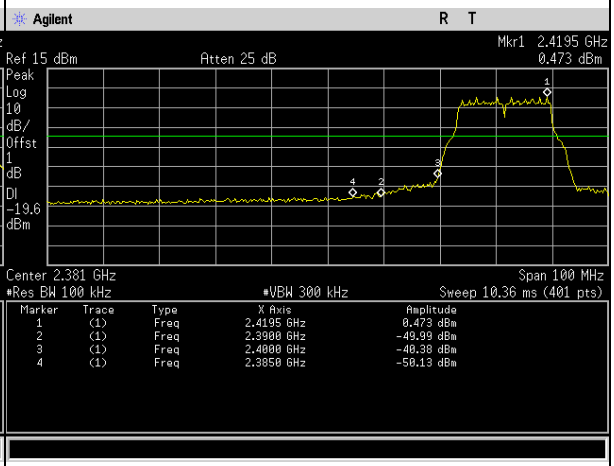
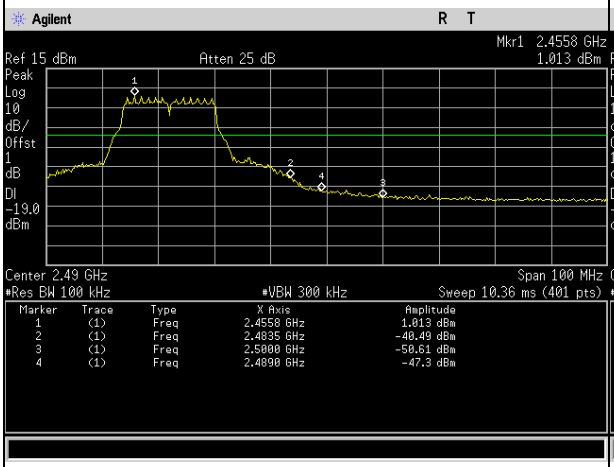
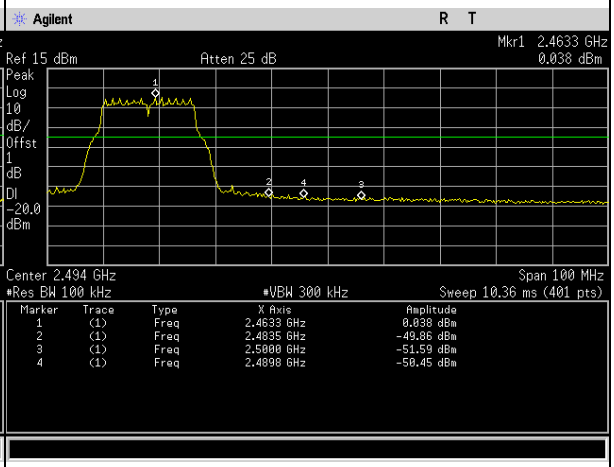
3.6.3 Test Result

Test plots as below:

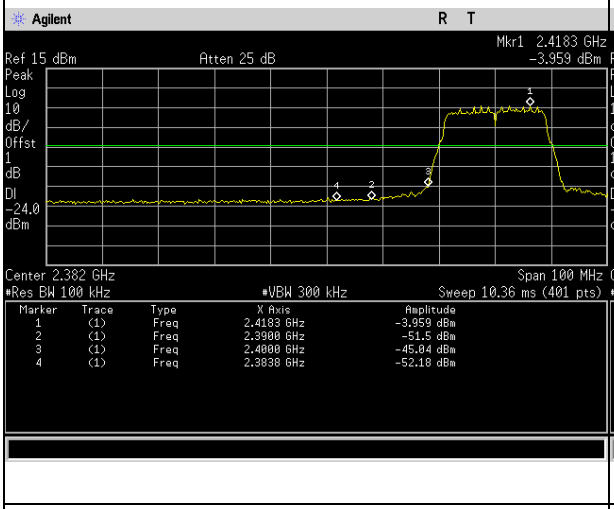
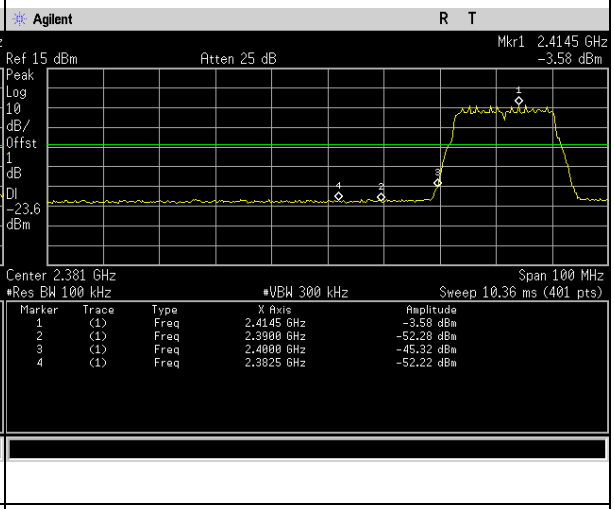
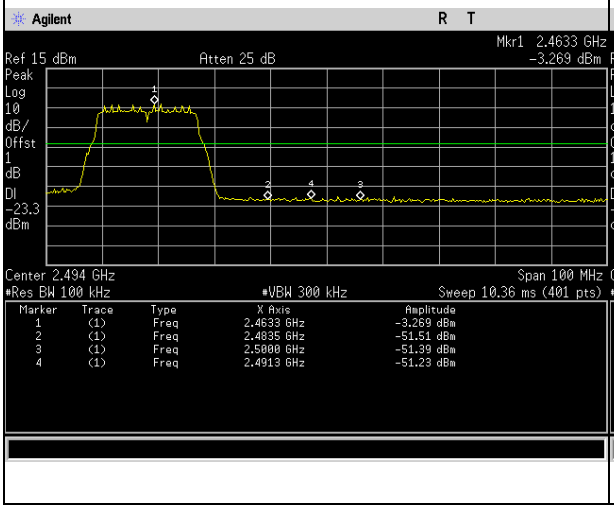
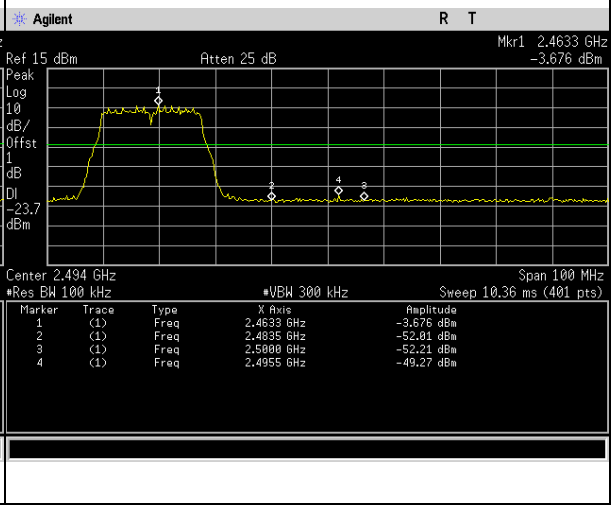
802.11b mode, Band edge

Low edge(ANT1)	Low edge(ANT2)
	
Up edge(ANT1)	Up edge(ANT2)
	

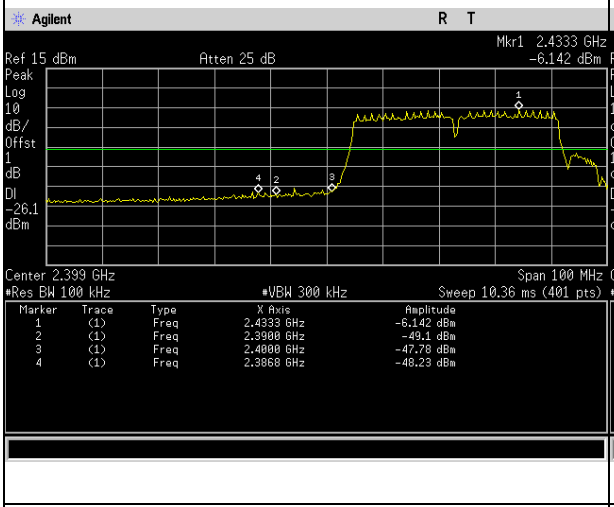
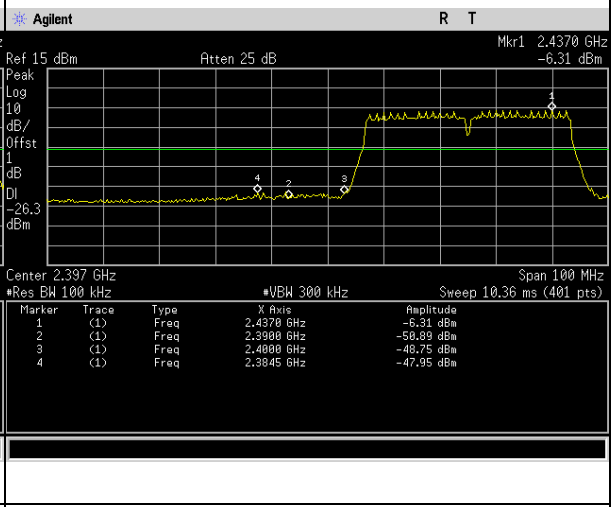
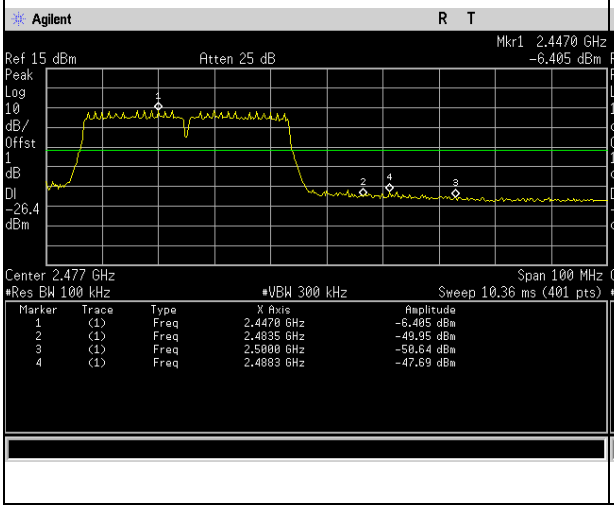
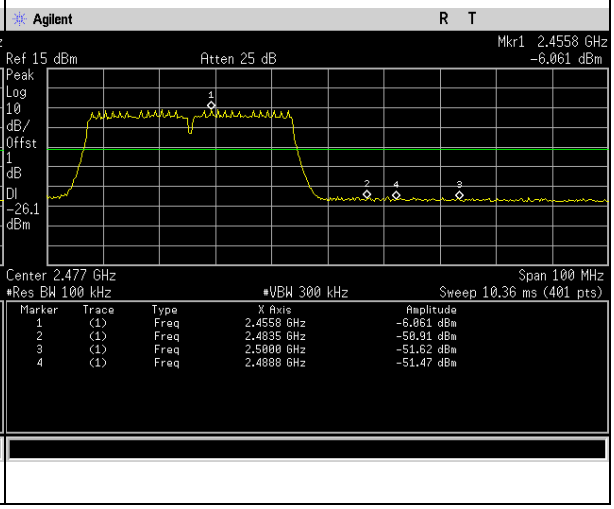
802.11g mode, Band edge

Low edge(ANT1)	Low edge(ANT2)
	
Up edge(ANT1)	**Up edge(ANT2)**
	

802.11n20 mode, Band edge

Low edge(ANT1)	Low edge(ANT2)
	
Up edge(ANT1)	Up edge(ANT2)
	

802.11n40 mode, Band edge

Low edge(ANT1)	Low edge(ANT2)
	
Up edge(ANT1)	Up edge(ANT2)
	

3.7 Radiated emission

3.7.1 Limit

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20dB. Attenuation below the general limits defined in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits defined in §15.209(a).

Radiated emission limits defined in FCC 15.209:

Frequency (MHz)	Field strength μV/m	Field strength dBμV/m	Detector	Measurement distance
30-88	100	40	QP	3m
88-216	150	43.5	QP	
216-960	200	46	QP	
960-1000	500	46	QP	
Above 1000	500	54	AV	
Above 1000	5000	74	PK	

Restricted bands defined in FCC 15.205:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

3.7.2 Test method

1. The EUT is placed on a turntable, which is 0.8m above ground plane for test frequency range blew 1GHz, and 1.5m above ground plane for test frequency range above 1GHz.

2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.

3. Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured, RBW = 1 MHz for f ≥ 1GHz, 100 kHz for f < 1 GHz, VBW ≥ RBW, Sweep = auto, Detector function = peak, Trace = max hold

4. Follow the guidelines in ANSI C63.4-2014 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

5. The peak level, once corrected, must comply with the limit specified in Section 15.209. Set the RBW = 1MHz, VBW = 3MHz, Detector = RMS for AV value, while maintaining all of the other instrument settings.

3.7.3 Test Result

Remark:
If the PK measured values lower than average mode limit, the EUT shall be deemed to meet average limits and then no additional average mode measurement performed.

802.11b: 2412MHz (ANT1)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	30.9	43.5	QP	Pass	Spurious emission
189.07	H	36.5	43.5	QP		Spurious emission
2390	V	50.55	74	PK		Restricted bands
2390	H	52.59	74	PK		Restricted bands
4824	V	56.7	74	PK		Restricted bands
4824	V	51.4	54	AVG		Restricted bands
4824	H	56.69	74	PK		Restricted bands
4824	H	50.58	54	AVG		Restricted bands
7236	V	51.62	74	PK		Spurious emission
7236	H	52.12	74	PK		Spurious emission
802.11b: 2437MHz (ANT1)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	29.8	43.5	QP	Pass	Spurious emission
189.07	H	35.7	43.5	QP		Spurious emission
4874	V	56.86	74	PK		Restricted bands
4874	V	51.55	54	AVG		Restricted bands
4874	H	57.11	74	PK		Restricted bands
4874	H	52.11	54	AVG		Restricted bands
7311	V	50.67	74	PK		Restricted bands
7311	H	52.55	74	PK		Restricted bands
802.11b: 2462MHz (ANT1)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	31.2	43.5	QP	Pass	Spurious emission
189.07	H	36.6	43.5	QP		Spurious emission
2483.5	V	51.4	74	PK		Restricted bands
2483.5	H	53.23	74	PK		Restricted bands
4924	V	56.48	74	PK		Restricted bands
4924	V	50.87	54	AVG		Restricted bands
4924	H	57.32	74	PK		Restricted bands
4924	H	51.57	54	AVG		Restricted bands
7386	V	50.94	74	PK		Restricted bands
7386	H	52.12	74	PK		Restricted bands

802.11b: 2412MHz (ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	31.6	43.5	QP	Pass	Spurious emission
189.07	H	37.7	43.5	QP		Spurious emission
2390	V	48.32	74	PK		Restricted bands
2390	H	50.75	74	PK		Restricted bands
4824	V	55.43	74	PK		Restricted bands
4824	V	51.05	54	AVG		Restricted bands
4824	H	56.69	74	PK		Restricted bands
4824	H	51.39	54	AVG		Restricted bands
7236	V	51.29	74	PK		Spurious emission
7236	H	52.84	74	PK		Spurious emission
802.11b: 2437MHz (ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	30.9	43.5	QP	Pass	Spurious emission
189.07	H	36.9	43.5	QP		Spurious emission
4874	V	56.58	74	PK		Restricted bands
4874	V	50.24	54	AVG		Restricted bands
4874	H	56.83	74	PK		Restricted bands
4874	H	50.86	54	AVG		Restricted bands
7311	V	50.31	74	PK		Restricted bands
7311	H	52.21	74	PK		Restricted bands
802.11b: 2462MHz (ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	32.2	43.5	QP	Pass	Spurious emission
189.07	H	37.5	43.5	QP		Spurious emission
2483.5	V	49.62	74	PK		Restricted bands
2483.5	H	51.67	74	PK		Restricted bands
4924	V	56.83	74	PK		Restricted bands
4924	V	50.62	54	AVG		Restricted bands
4924	H	57.31	74	PK		Restricted bands
4924	H	51.28	54	AVG		Restricted bands
7386	V	50.75	74	PK		Restricted bands
7386	H	51.82	74	PK		Restricted bands

802.11g: 2412MHz(ANT1)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	26.7	43.5	QP	Pass	Spurious emission
189.07	H	32.4	43.5	QP		Spurious emission
2390	V	59.47	74	PK		Restricted bands
2390	V	47.33	54	AVG		Restricted bands
2390	H	61.36	74	PK		Restricted bands
2390	H	48.85	54	AVG		Restricted bands
4824	V	51.84	74	PK		Restricted bands
4824	H	52.53	74	PK		Restricted bands
7236	V	48.55	74	PK		Spurious emission
7236	H	49.96	74	PK		Spurious emission
802.11g: 2437MHz(ANT1)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	25.8	43.5	QP	Pass	Spurious emission
189.07	H	30.9	43.5	QP		Spurious emission
4874	V	51.83	74	PK		Restricted bands
4874	H	51.19	74	PK		Restricted bands
7311	V	50.32	74	PK		Restricted bands
7311	H	51.65	74	PK		Restricted bands
802.11g: 2462MHz(ANT1)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
189.07	V	25.4	43.5	QP	Pass	Spurious emission
189.07	H	32.5	43.5	QP		Spurious emission
2483.5	V	58.41	74	PK		Restricted bands
2483.5	V	47.08	54	AVG		Restricted bands
2483.5	H	60.39	74	PK		Restricted bands
2483.5	H	48.55	54	AVG		Restricted bands
4924	V	50.09	74	PK		Restricted bands
4924	H	52.24	74	PK		Restricted bands
7386	V	50.02	74	PK		Restricted bands
7386	H	51.03	74	PK		Restricted bands

802.11g: 2412MHz(ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
145.35	V	26.7	43.5	QP	Pass	Spurious emission
145.35	H	32.4	43.5	QP		Spurious emission
2390	V	50.45	74	PK		Restricted bands
2390	H	51.78	74	PK		Restricted bands
4824	V	52.84	74	PK		Restricted bands
4824	H	52.53	74	PK		Restricted bands
7236	V	49.36	74	PK		Spurious emission
7236	H	50.53	74	PK		Spurious emission
802.11g: 2437MHz(ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
145.35	V	25.8	43.5	QP	Pass	Spurious emission
145.35	H	30.9	43.5	QP		Spurious emission
4874	V	51.98	74	PK		Restricted bands
4874	H	52.12	74	PK		Restricted bands
7311	V	50.01	74	PK		Restricted bands
7311	H	51.37	74	PK		Restricted bands
802.11g: 2462MHz(ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
145.35	V	25.4	43.5	QP	Pass	Spurious emission
145.35	H	32.5	43.5	QP		Spurious emission
2483.5	V	50.36	74	PK		Restricted bands
2483.5	H	50.68	74	PK		Restricted bands
4924	V	51.65	74	PK		Restricted bands
4924	H	52.24	74	PK		Restricted bands
7386	V	49.69	74	PK		Restricted bands
7386	H	50.75	74	PK		Restricted bands

802.11n20: 2412MHz(ANT1+ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
151.06	V	24.6	43.5	QP	Pass	Spurious emission
151.06	H	30.25	43.5	QP		Spurious emission
2390	V	50.56	74	PK		Restricted bands
2390	H	52.73	74	PK		Restricted bands
4824	V	49.83	74	PK		Restricted bands
4824	H	50.55	74	PK		Restricted bands
7236	V	48.12	74	PK		Spurious emission
7236	H	49.26	74	PK		Spurious emission
802.11n20: 2437MHz(ANT1+ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
151.06	V	23.5	43.5	QP	Pass	Spurious emission
151.06	H	29.4	43.5	QP		Spurious emission
4874	V	50.18	74	PK		Restricted bands
4874	H	50.69	74	PK		Restricted bands
7311	V	47.43	74	PK		Restricted bands
7311	H	48.64	74	PK		Restricted bands
802.11n20: 2462MHz(ANT1+ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
151.06	V	23.7	43.5	QP	Pass	Spurious emission
151.06	H	29.8	43.5	QP		Spurious emission
2483.5	V	51.95	74	PK		Restricted bands
2483.5	H	53.24	74	PK		Restricted bands
4924	V	49.23	74	PK		Restricted bands
4924	H	50.61	74	PK		Restricted bands
7386	V	47.49	74	PK		Restricted bands
7386	H	48.81	74	PK		Restricted bands

802.11n40: 2422MHz(ANT1+ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
151.06	V	22.1	43.5	QP	Pass	Spurious emission
151.06	H	28.9	43.5	QP		Spurious emission
2390	V	50.26	74	PK		Restricted bands
2390	H	51.73	74	PK		Restricted bands
4844	V	48.15	74	PK		Restricted bands
4844	H	48.08	74	PK		Restricted bands
7266	V	48.36	74	PK		Spurious emission
7266	H	49.64	74	PK		Spurious emission
802.11n40: 2437MHz(ANT1+ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
151.06	V	22.4	43.5	QP	Pass	Spurious emission
151.06	H	28.3	43.5	QP		Spurious emission
4874	V	48.29	74	PK		Restricted bands
4874	H	49.73	74	PK		Restricted bands
7311	V	48.29	74	PK		Restricted bands
7311	H	48.58	74	PK		Restricted bands
802.11n40: 2452MHz(ANT1+ANT2)						
Frequency	Ant. Polarization	Emission level	Limits	Detector	Result	Comment
(MHz)	H / V	dBμV/m	dBμV/m			
151.06	V	22.6	43.5	QP	Pass	Spurious emission
151.06	H	29.4	43.5	QP		Spurious emission
2483.5	V	51.05	74	PK		Restricted bands
2483.5	H	51.99	74	PK		Restricted bands
4904	V	49.64	74	PK		Restricted bands
4904	H	50.76	74	PK		Restricted bands
7356	V	48.83	74	PK		Restricted bands
7356	H	49.42	74	PK		Restricted bands

----END OF REPORT----