

FCC- TEST REPORTReport Number : **64.790.16.00720.01** Date of Issue: March 02, 2016Model : PDV1800Product Type : Panoramic View CameraApplicant : SHUOYING DIGITAL SCIENCE&TECHNOLOGY(CHINA)Co.,LtdAddress : NO.187,5th Binhai Road, Wenzhou, Zhejiang, ChinaProduction Facility : SHUOYING DIGITAL SCIENCE&TECHNOLOGY(CHINA)Co.,LtdAddress : NO.187,5th Binhai Road, Wenzhou, Zhejiang, ChinaTest Result : ☒ **Positive** ☐ **Negative**Total pages including
Appendices : 47

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13, Zhiheng Wisdomland Business Park,
Nantou Checkpoint Road 2, Nanshan District,
Shenzhen City, 518052,
P. R. China

FCC Registration No.: 502708

Telephone: 86 755 8828 6998
Fax: 86 755 828 5299

Test Site 2

Company name: Dongguan NTC Co., Ltd.
Building D, Gaosheng Science and Technology Park,
Hongtu Road, Nancheng District, Dongguan City, Guangdong, China

Telephone: 86 769 22022444
Fax: 86 769 22022799
FCC Registration No.: 665078

3 Description of the Equipment under Test

Description of the Equipment Under Test

Product:	Panoramic View Camera
Model no.:	PDV1800
FCC ID:	YGB-PDV1800
Options and accessories:	NIL
Rating:	3.7VDC, 1000mA (Supplied by Li-ion rechargeable battery) 5.0VDC, 1.5A (Charging by USB Port)
RF Transmission Frequency:	2412-2462MHz
No. of Operated Channel:	11
Modulation:	CCK, DQPSK, DBPSK for 802.11b QPSK,BPSK for 802.11g/n
Duty Cycle:	100%
Antenna Type:	Integral Antenna
Antenna Gain:	2dBi
Description of the EUT:	The Equipment Under Test (EUT) is a Panoramic View Camera with WIFI function operating at 2.4GHz

4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2015 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to KDB558074 DTS Measurement Guidance and ANSI C63.10 (2013).

5 Summary of Test Results

Technical Requirements				
FCC Part 15 Subpart C				
Test Condition		Pages	Test Result	Site
§15.207	Conducted emission AC power port	10	Pass	Site 2
§15.247(b)(1)	Conducted peak output power	13	Pass	Site 2
§15.247(e)	Power spectral density	20	Pass	Site 2
§15.247(a)(2)	6dB bandwidth	14	Pass	Site 2
§15.247(a)(1)	20dB bandwidth and 99% Occupied Bandwidth	--	--	N/A
§15.247(a)(1)	Carrier frequency separation	--	--	N/A
§15.247(a)(1)(ii i)	Number of hopping frequencies	--	--	N/A
§15.247(a)(1)(ii i)	Dwell Time	--	--	N/A
§15.247(d)	Spurious RF conducted emissions	26	Pass	Site 2
§15.247(d)	Band edge	32	Pass	Site 2
§15.247(d) & §15.209 & §15.203	Spurious radiated emissions for transmitter and receiver	36	Pass	Site 2
§15.203	Antenna requirement	See note 1	Pass	Site 2

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a permanently integral antenna, which gain is 2dBi. According to §15.203, it is considered sufficiently to comply with the provisions of this section.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: YGB-PDV1800, complies with Section 15.209, 15.247 of the FCC Part 15, Subpart C.

SUMMARY:

All tests according to the regulations cited on page 5 were

☒ - Performed

☐ - **Not** Performed

The Equipment under Test

☒ - **Fulfills** the general approval requirements.

☐ - **Does not** fulfill the general approval requirements.

Sample Received Date: February 22, 2016

Testing Start Date: February 22, 2016

Testing End Date: February 26, 2016

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

Reviewed by:

Prepared by:

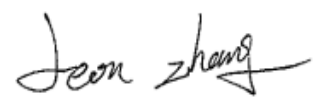
Tested by:



Cookies Bu
EMC Project Manager



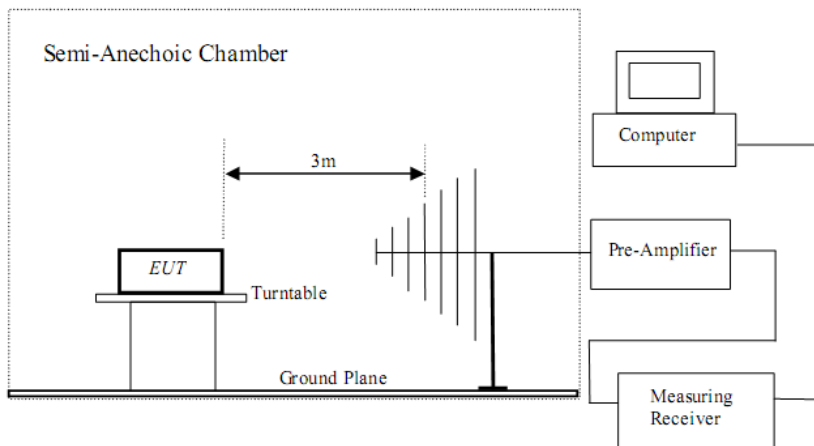
Aaron Lai
EMC Project Engineer



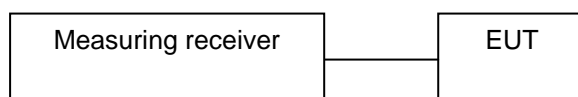
Leon Zhang
EMC Test Engineer

7 Test Setups

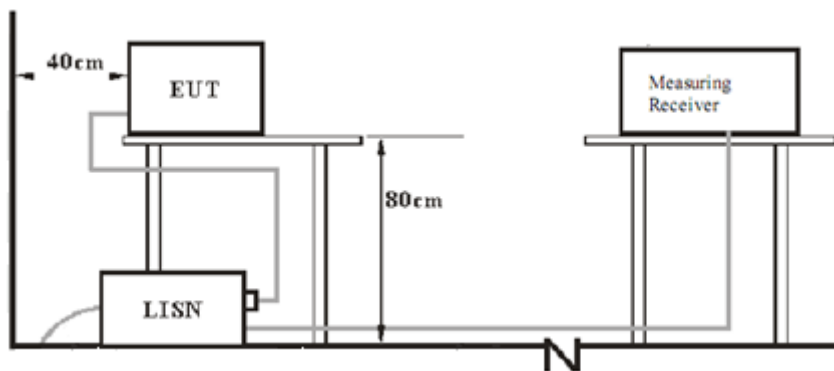
7.1 Radiated test setups



7.2 Conducted RF test setups



7.3 AC Power Line Conducted Emission test setups



8 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
---	---	---	---

Test software: SSCOM 32.EXE

The system was configured to channel 1, 6 and 11 for the test.

9 Technical Requirement

9.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

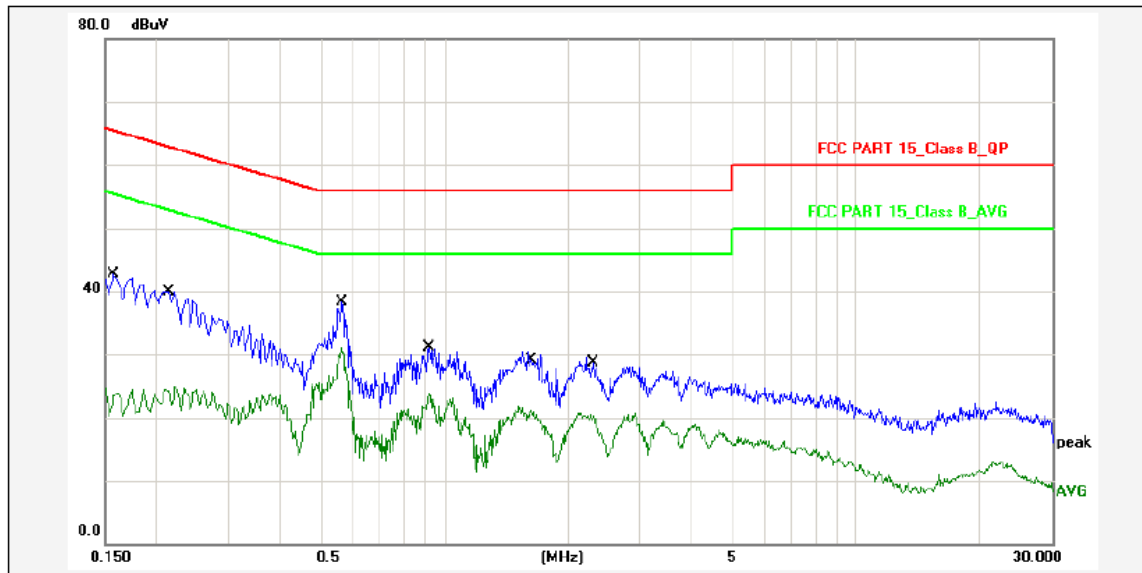
Limit

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linea

Conducted Emission

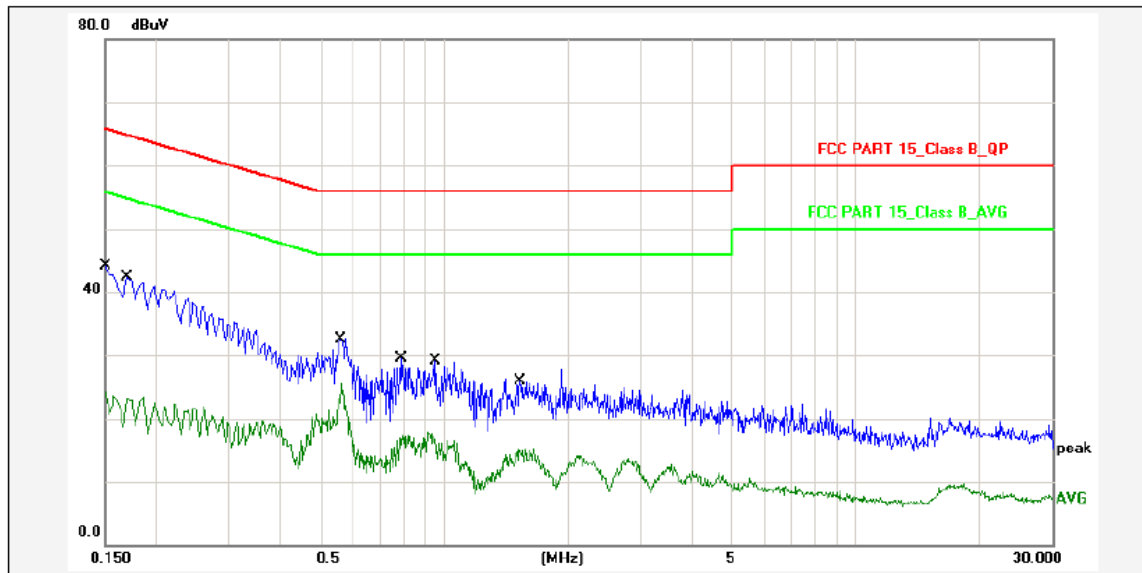
Product Type : Panoramic View Camera
 M/N : PDV1800
 Operating Condition : Charging & TX
 Test Specification : Live
 Comment : AC 120V/60Hz



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1580	10.80	29.80	40.60	65.56	-24.96	QP	P	
2	0.1580	10.80	11.90	22.70	55.56	-32.86	AVG	P	
3	0.2140	10.80	27.20	38.00	63.04	-25.04	QP	P	
4	0.2140	10.80	12.10	22.90	53.04	-30.14	AVG	P	
5	0.5660	10.80	25.50	36.30	56.00	-19.70	QP	P	
6	0.5660	10.80	18.40	29.20	46.00	-16.80	AVG	P	
7	0.9220	10.80	18.40	29.20	56.00	-26.80	QP	P	
8	0.9220	10.80	11.10	21.90	46.00	-24.10	AVG	P	
9	1.6300	10.80	17.80	28.60	56.00	-27.40	QP	P	
10	1.6300	10.80	8.20	19.00	46.00	-27.00	AVG	P	
11	2.2780	10.80	16.60	27.40	56.00	-28.60	QP	P	
12	2.2780	10.80	7.70	18.50	46.00	-27.50	AVG	P	

Conducted Emission

Product Type : Panoramic View Camera
 M/N : PDV1800
 Operating Condition : Charging & TX
 Test Specification : Neutral
 Comment : AC 120V/60Hz



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	10.80	31.40	42.20	65.99	-23.79	QP	P	
2	0.1500	10.80	11.50	22.30	55.99	-33.69	AVG	P	
3	0.1700	10.80	29.40	40.20	64.96	-24.76	QP	P	
4	0.1700	10.80	10.50	21.30	54.96	-33.66	AVG	P	
5	0.5660	10.80	20.00	30.80	56.00	-25.20	QP	P	
6	0.5660	10.80	12.70	23.50	46.00	-22.50	AVG	P	
7	0.7860	10.80	16.70	27.50	56.00	-28.50	QP	P	
8	0.7860	10.80	4.50	15.30	46.00	-30.70	AVG	P	
9	0.9580	10.80	16.40	27.20	56.00	-28.80	QP	P	
10	0.9580	10.80	4.90	15.70	46.00	-30.30	AVG	P	
11	1.5339	10.80	13.10	23.90	56.00	-32.10	QP	P	
12	1.5339	10.80	2.40	13.20	46.00	-32.80	AVG	P	

9.2 Conducted peak output power

Test Method

1. Use the following spectrum analyzer settings:
RBW > the 6 dB bandwidth of the emission being measured, VBW \geq 3RBW, Span \geq 3RBW
Sweep = auto, Detector function = peak, Trace = max hold.
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

Limits

According to §15.247 (b) (1), conducted peak output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤ 1	≤ 30

Test result as below table

802.11b

Frequency MHz	Conducted Peak Output Power dBm	Result
Top channel 2412MHz	6.89	Pass
Middle channel 2437MHz	7.12	Pass
Bottom channel 2462MHz	7.52	Pass

802.11g

Frequency MHz	Conducted Peak Output Power dBm	Result
Top channel 2412MHz	4.59	Pass
Middle channel 2437MHz	5.35	Pass
Bottom channel 2462MHz	5.54	Pass

802.11n20

Frequency MHz	Conducted Peak Output Power dBm	Result
Top channel 2412MHz	4.99	Pass
Middle channel 2437MHz	5.47	Pass
Bottom channel 2462MHz	5.63	Pass

9.3 6dB bandwidth

Test Method

1. Use the following spectrum analyzer settings:
RBW=100K, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
2. Use the automatic bandwidth measurement capability of an instrument, may be employed using the X dB bandwidth mode with X set to 6 dB, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.
3. Allow the trace to stabilize, record the X dB Bandwidth value.

Limit

Limit [kHz]

≥500

Test result

802.11b

Frequency MHz	6dB bandwidth MHz	Result
Top channel 2412MHz	10.128205128	Pass
Middle channel 2437MHz	10.236410246	Pass
Bottom channel 2462MHz	10.128205128	Pass

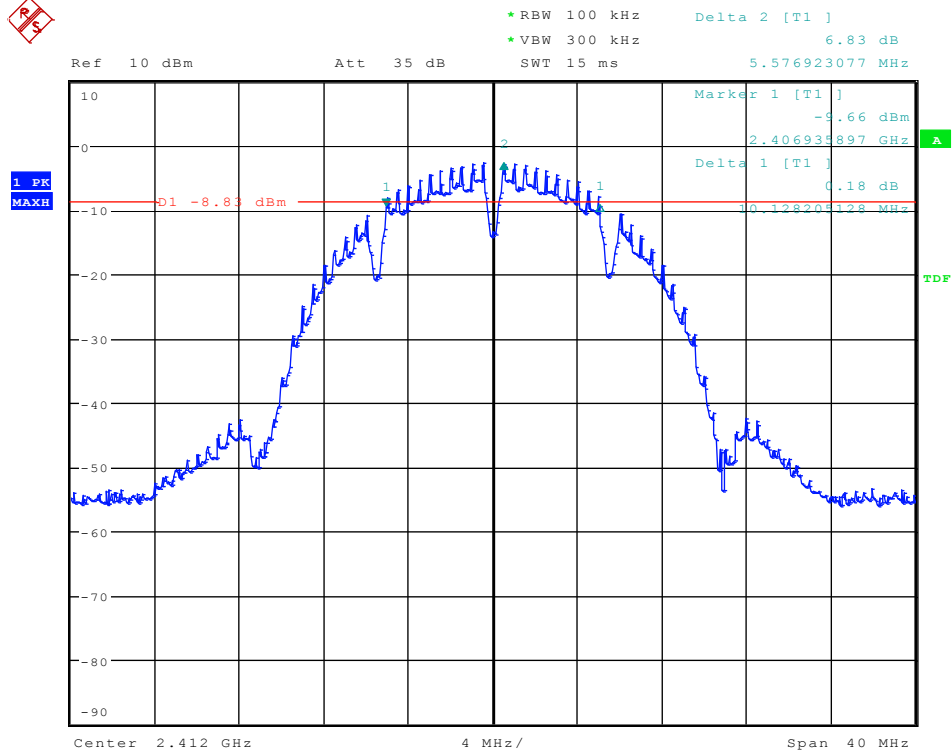
802.11g

Frequency MHz	6dB bandwidth MHz	Result
Top channel 2412MHz	16.474358974	Pass
Middle channel 2437MHz	16.474358974	Pass
Bottom channel 2462MHz	16.474358974	Pass

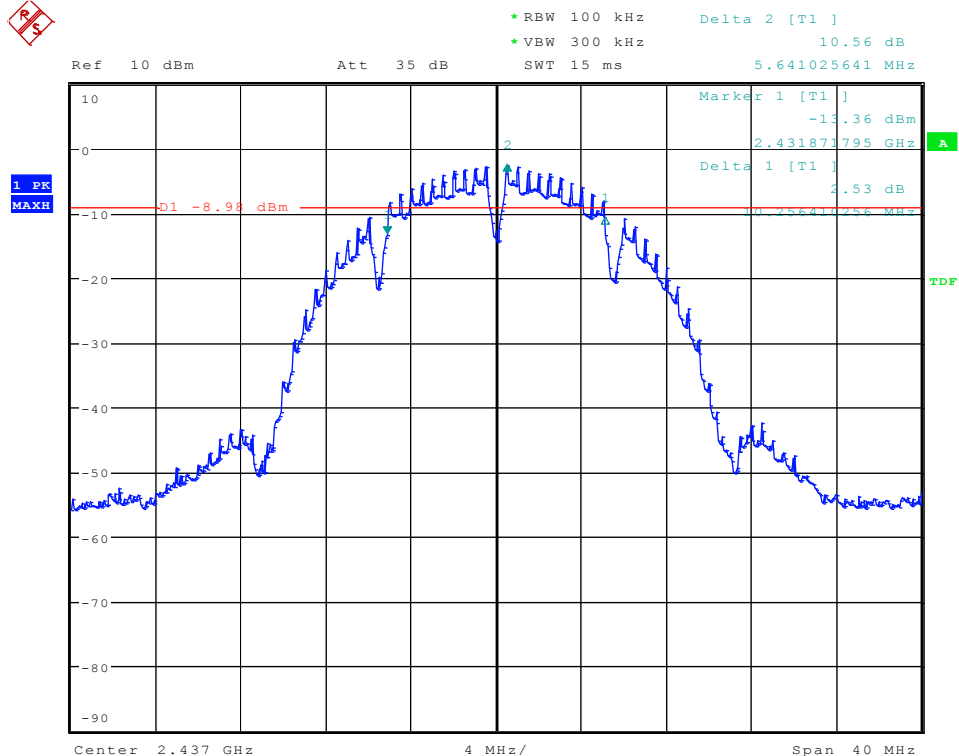
802.11n20

Frequency MHz	6dB bandwidth kHz	Result
Top channel 2412MHz	17.756410256	Pass
Middle channel 2437MHz	17.756410256	Pass
Bottom channel 2462MHz	17.692307692	Pass

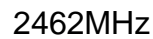
802.11b



2412MHz



2437MHz



* RBW 100 kHz
 * VBW 300 kHz
 Delta 2 [T1]
 7.12 dB
 Ref 10 dBm
 Att 35 dB
 SWT 15 ms
 13.205128205 MHz

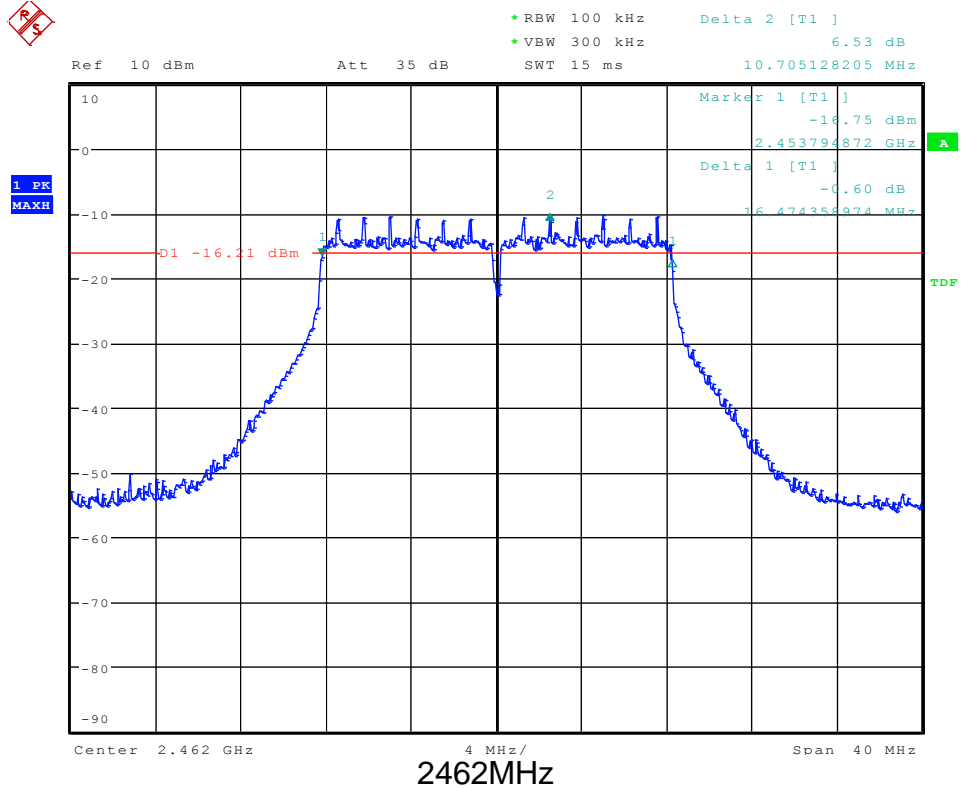
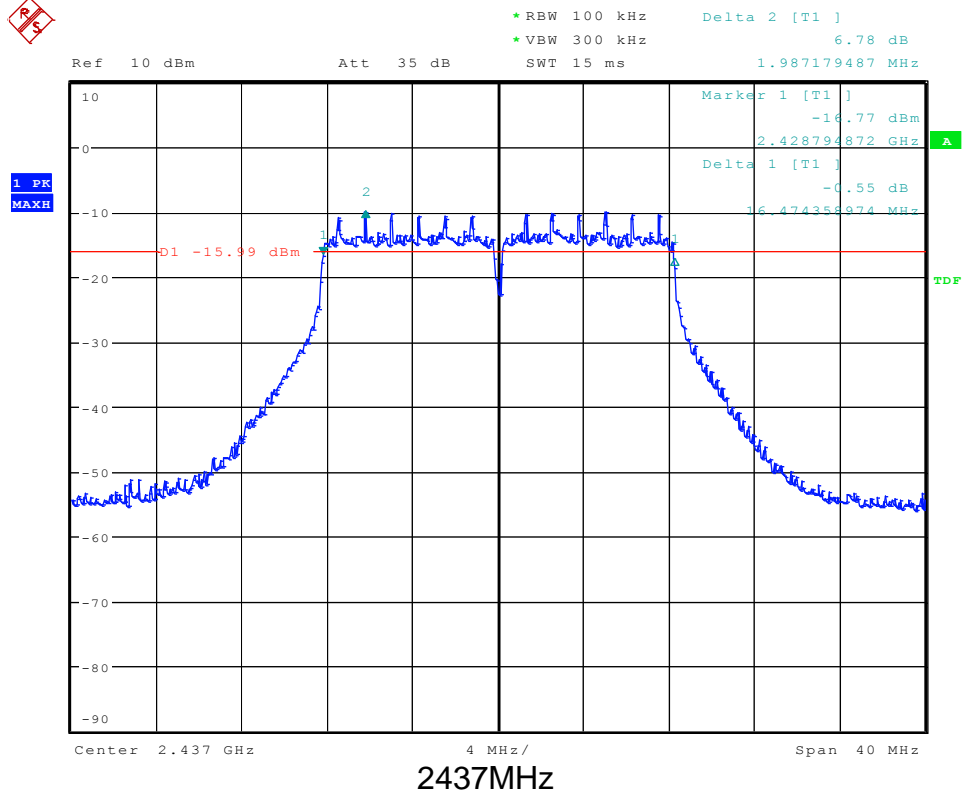
Marker 1 [T1]
 -18.65 dBm
 2.403794872 GHz
 Delta 1 [T1]
 0.35 dB
 16.474358974 MHz

D1 -17.93 dBm

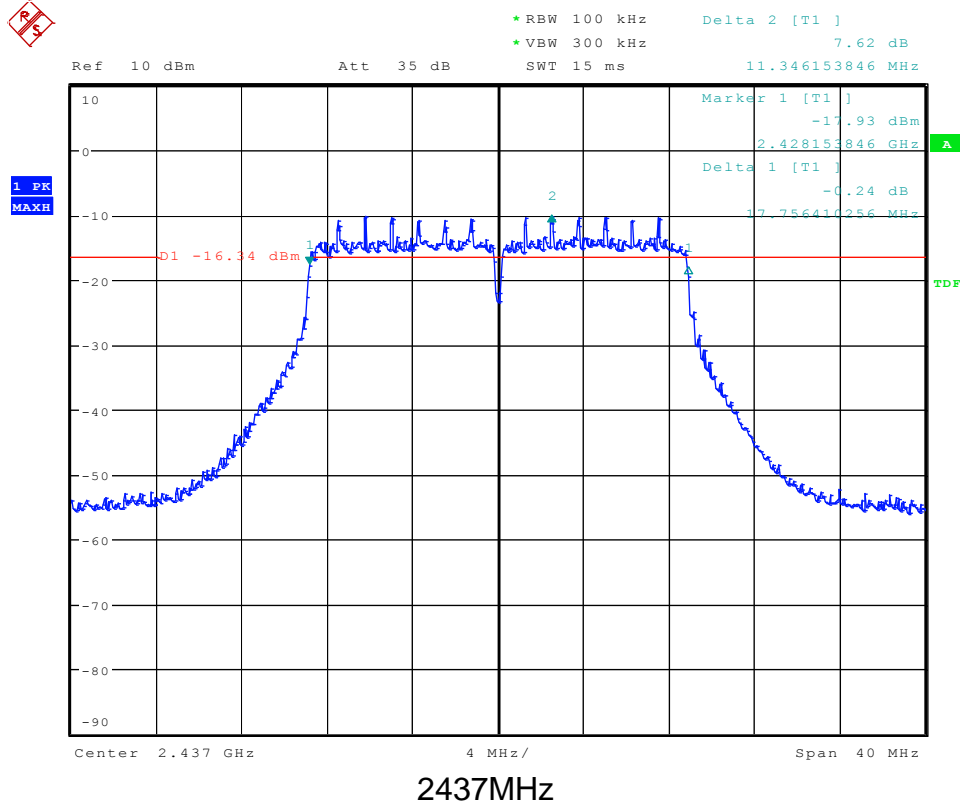
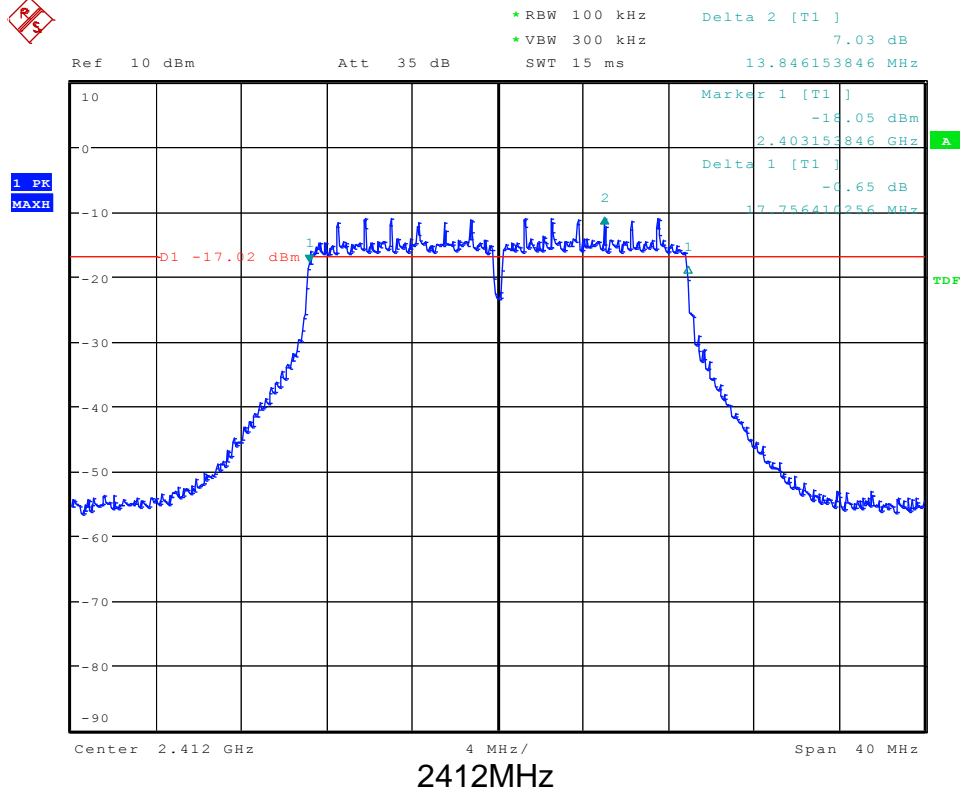
1 PK
 MAXH

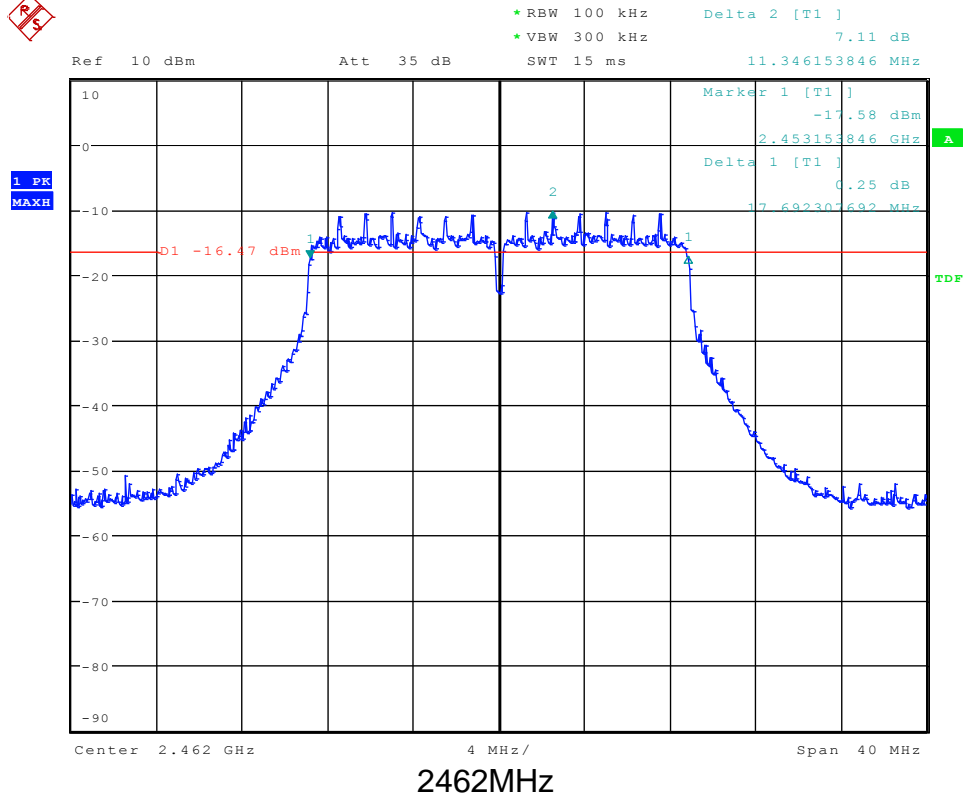
Center 2.412 GHz
 4 MHz/Div
 Span 40 MHz

2412MHz



802.11n20





9.4 Power spectral density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. Set analyzer center frequency to DTS channel center frequency.
RBW=3kHz, VBW≥3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
2. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
3. Repeat above procedures until other frequencies measured were completed.

Limit

Limit [dBm]

≤8

Test result

802.11b

Frequency MHz	Power spectral density dBm	Result
Top channel 2412MHz	-16.37	Pass
Middle channel 2437MHz	-16.17	Pass
Bottom channel 2462MHz	-15.90	Pass

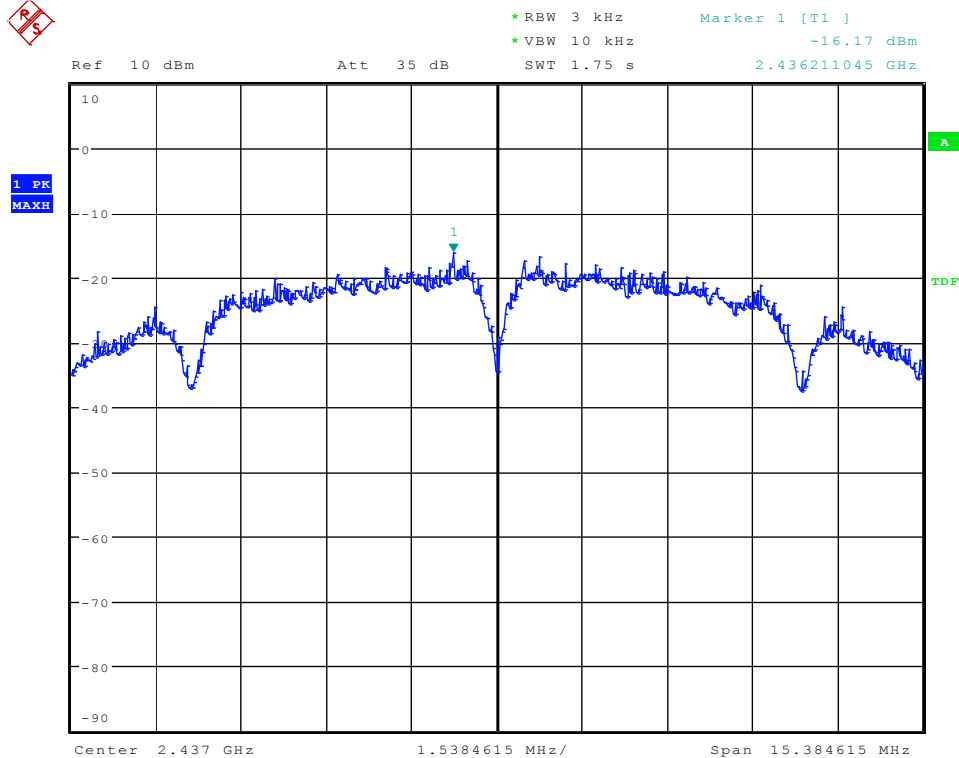
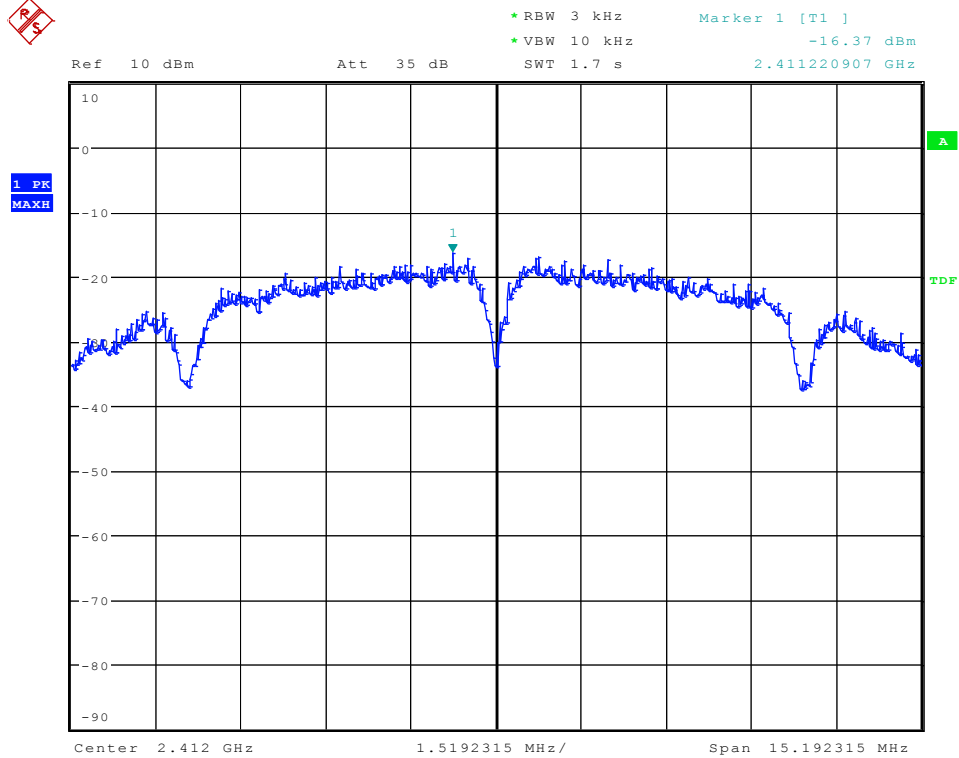
802.11g

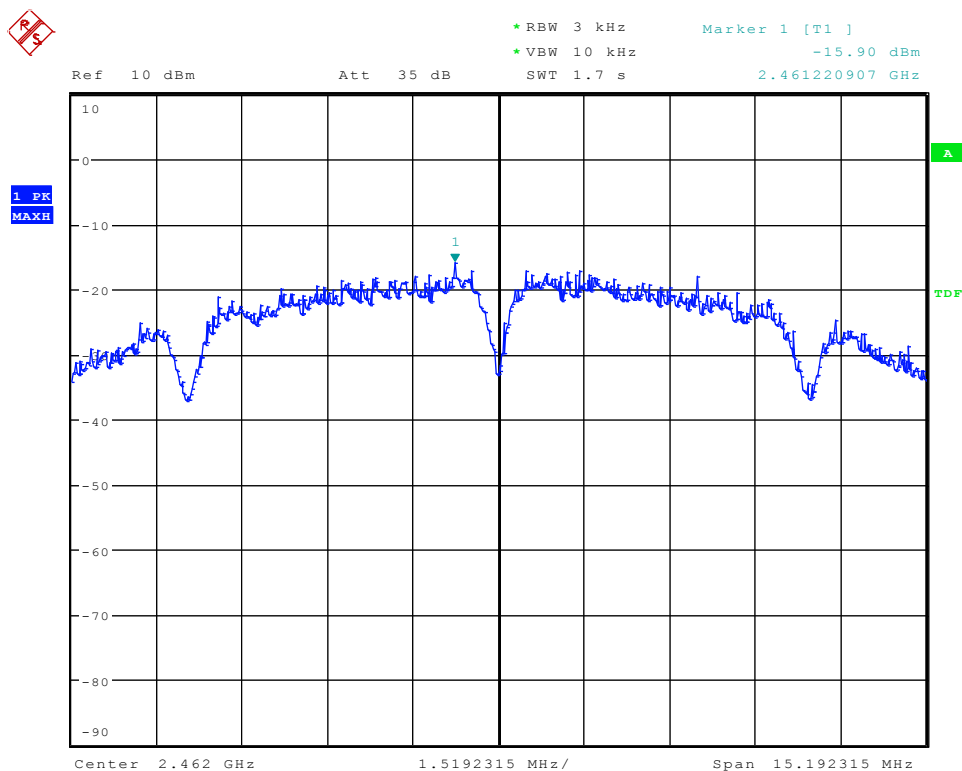
Frequency MHz	Power spectral density dBm	Result
Top channel 2412MHz	-25.61	Pass
Middle channel 2437MHz	-24.74	Pass
Bottom channel 2462MHz	-24.13	Pass

802.11n20

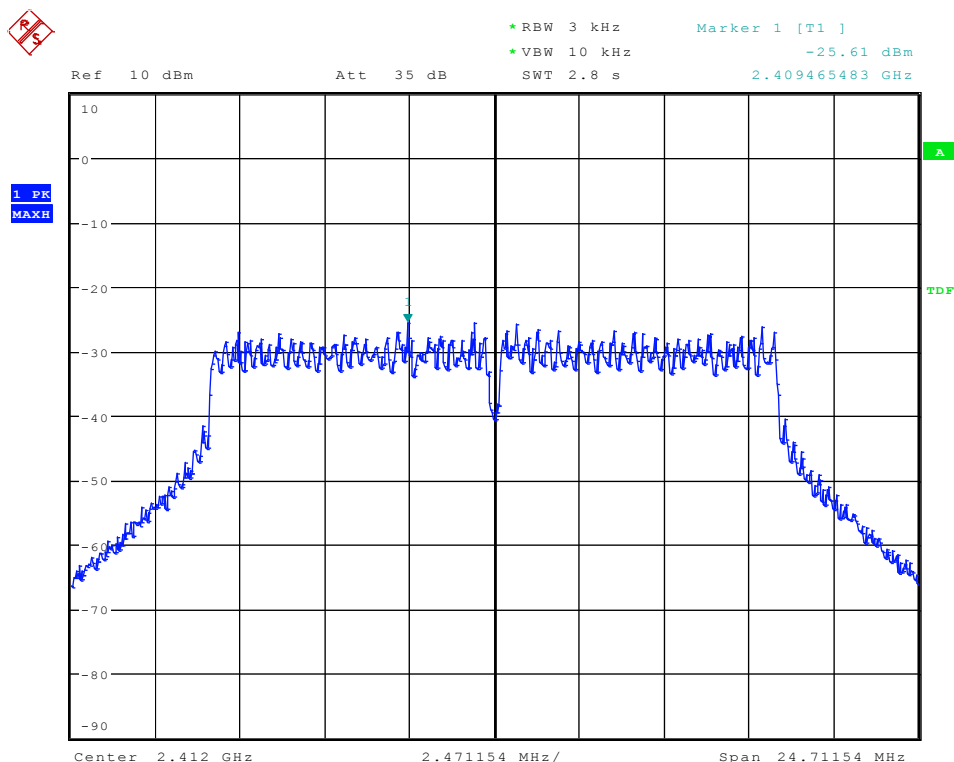
Frequency MHz	Power spectral density dBm	Result
Top channel 2412MHz	-24.14	Pass
Middle channel 2437MHz	-25.08	Pass
Bottom channel 2462MHz	-24.58	Pass

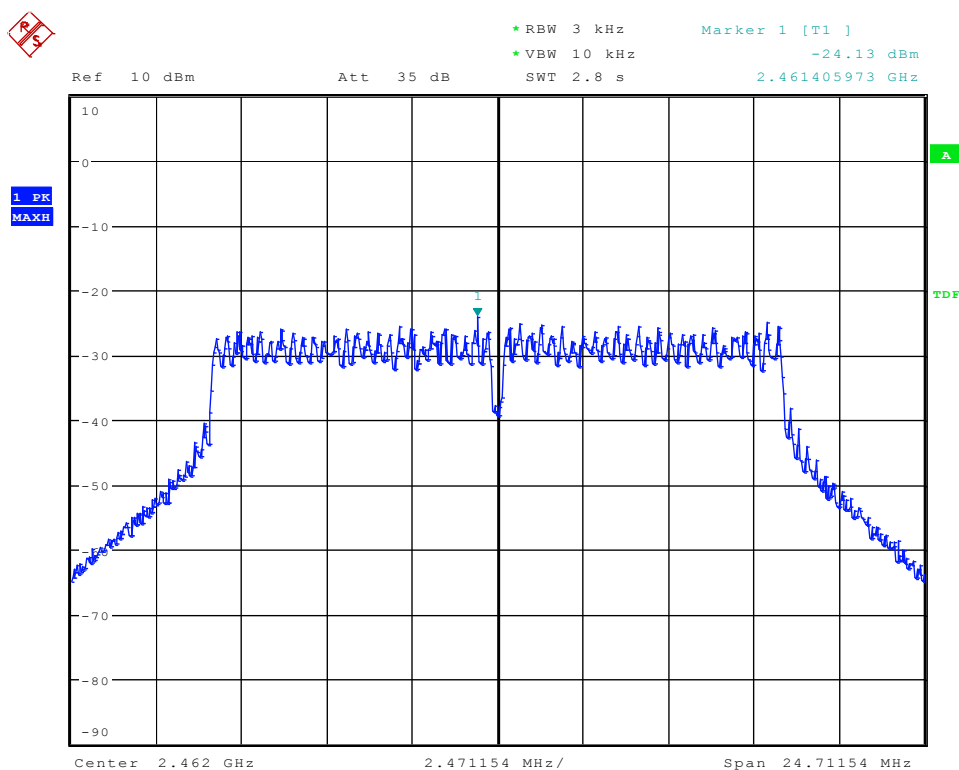
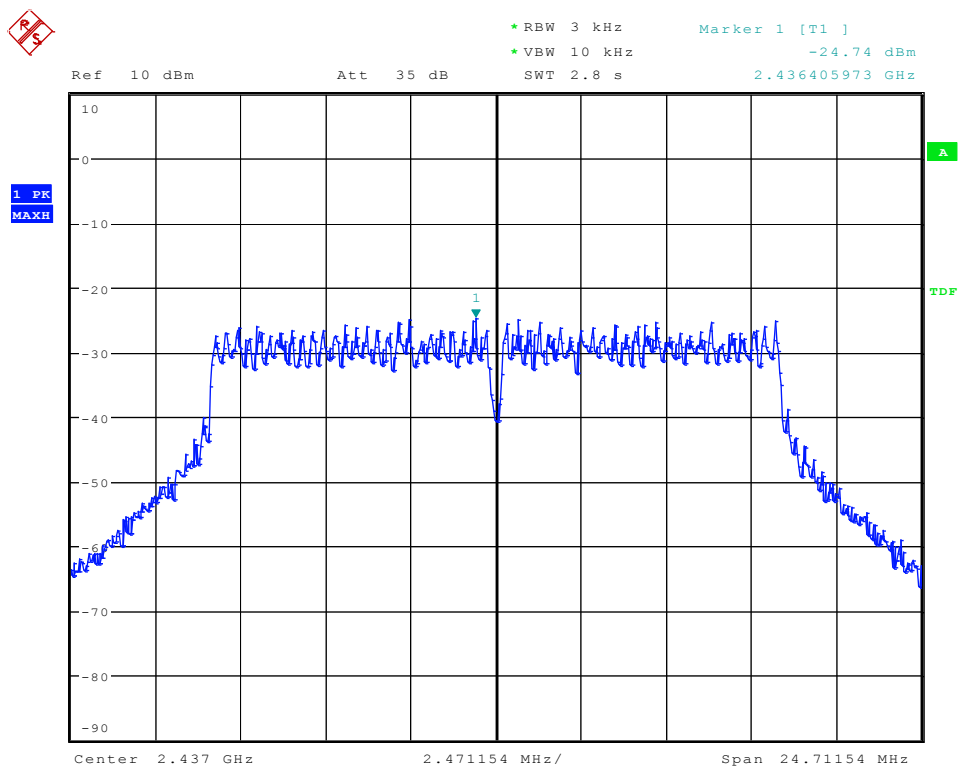
802.11b



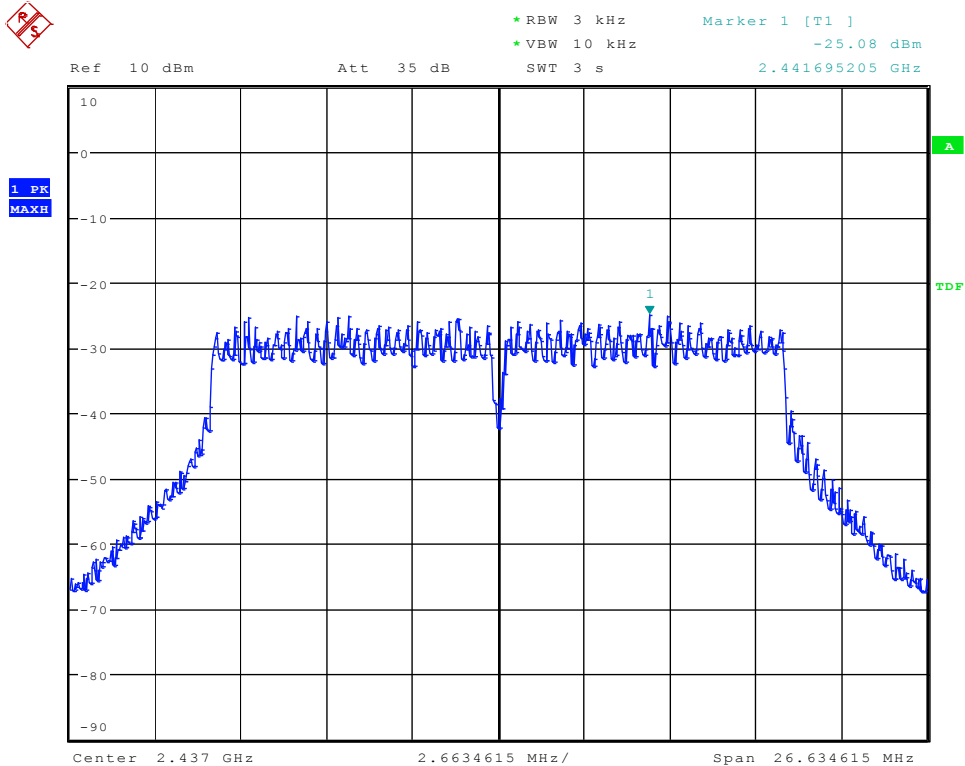
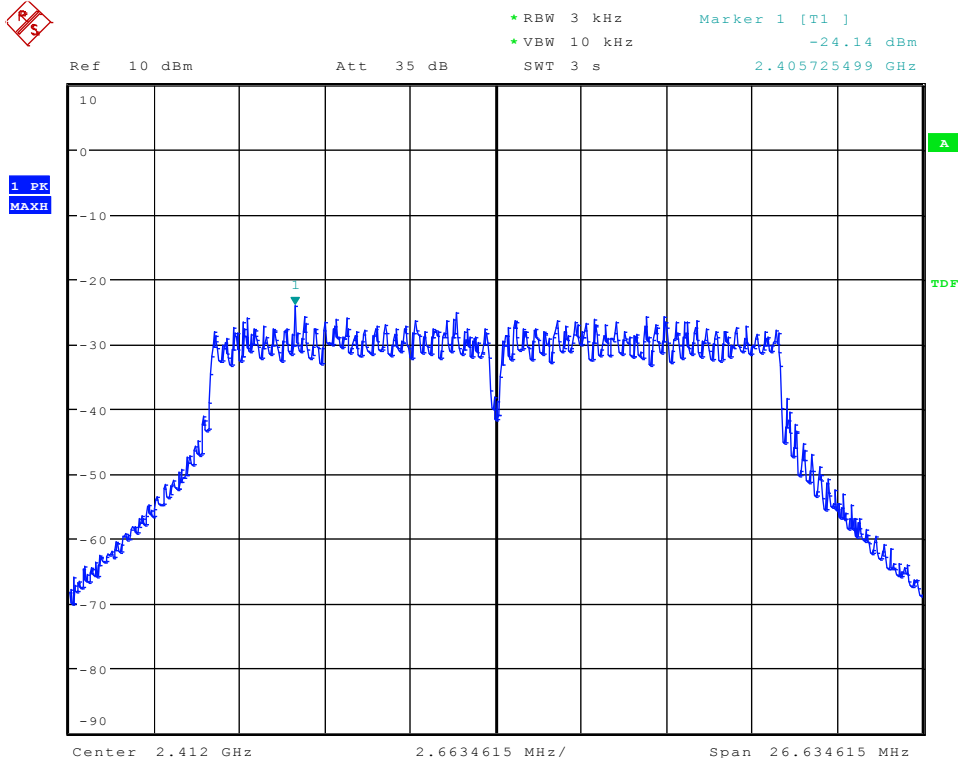


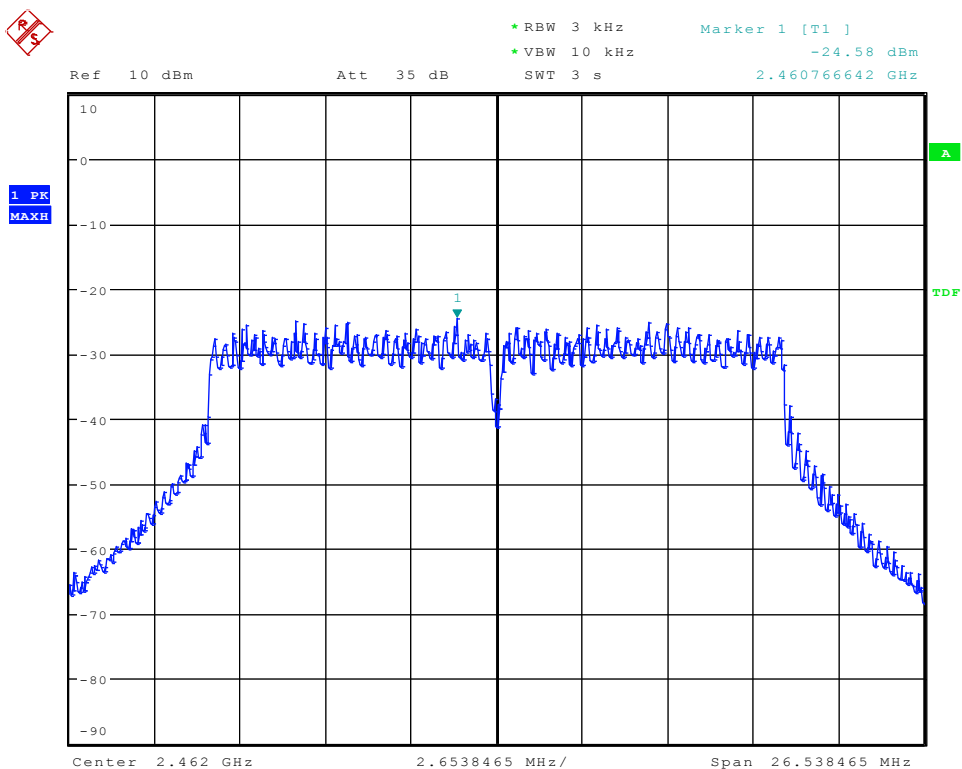
802.11g





802.11n20





9.5 Spurious RF conducted emissions

Test Method

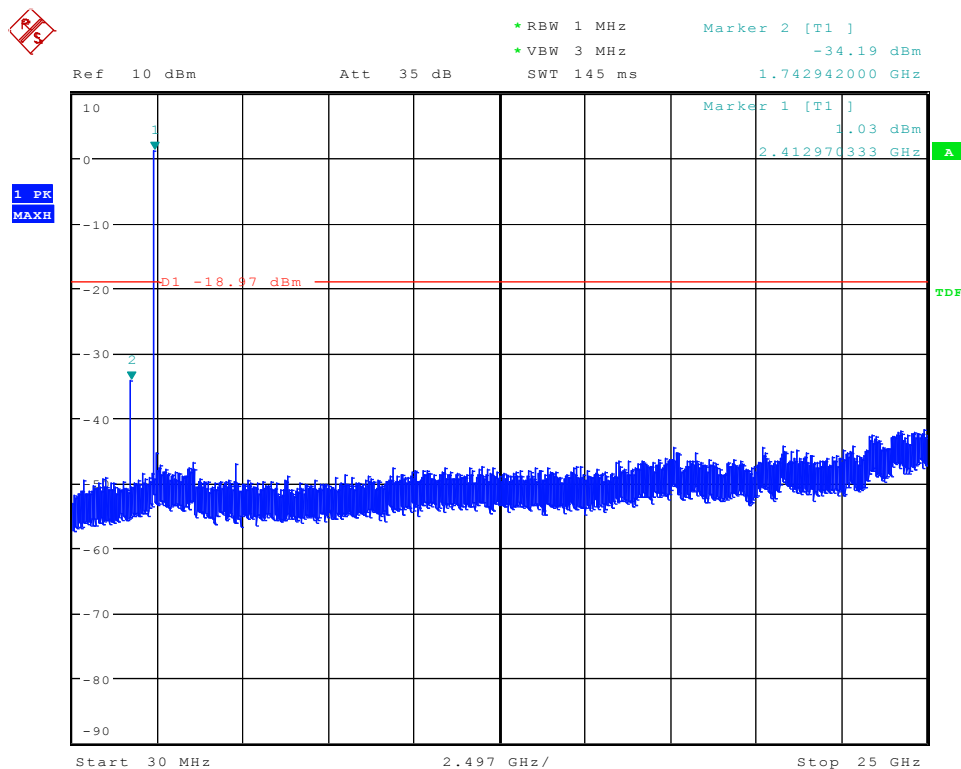
1. Establish a reference level by using the following procedure:
 - a. Set RBW=100 kHz. VBW \geq 3RBW. Detector =peak, Sweep time = auto couple, Trace mode = max hold.
 - b. Allow trace to fully stabilize, use the peak marker function to determine the maximum PSD level.
2. Use the maximum PSD level to establish the reference level.
 - a. Set the center frequency and span to encompass frequency range to be measured.
 - b. Use the peak marker function to determine the maximum amplitude level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements, report the three highest emissions relative to the limit.
3. Repeat above procedures until other frequencies measured were completed.

Limit

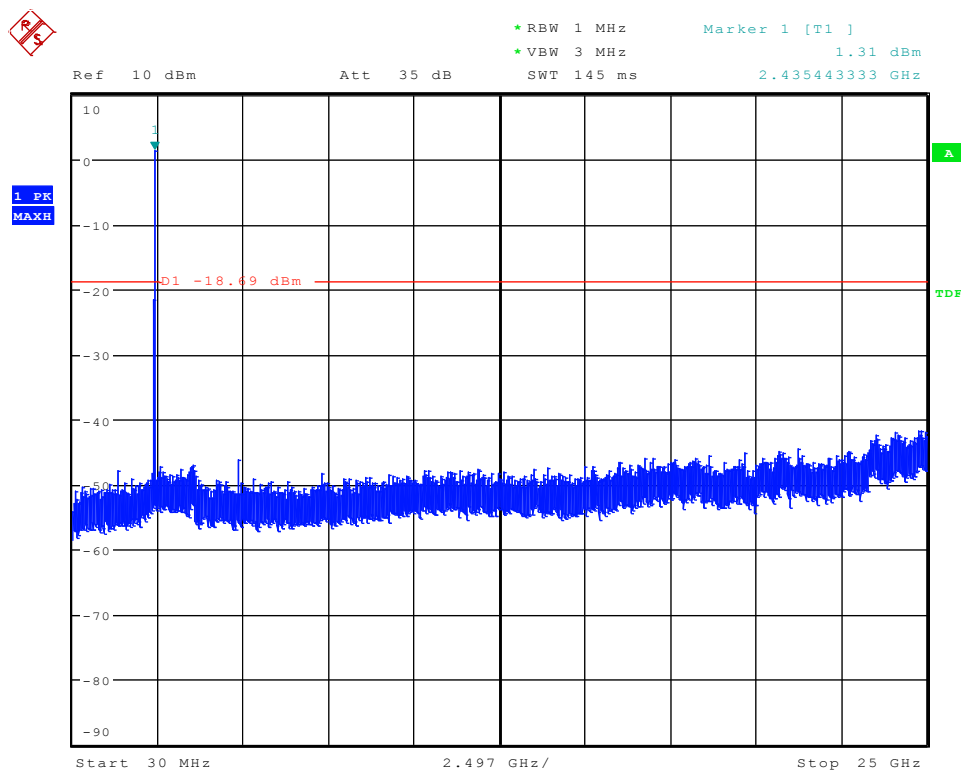
Frequency Range MHz	Limit (dBc)
30-25000	-20

Spurious RF conducted emissions

802.11b

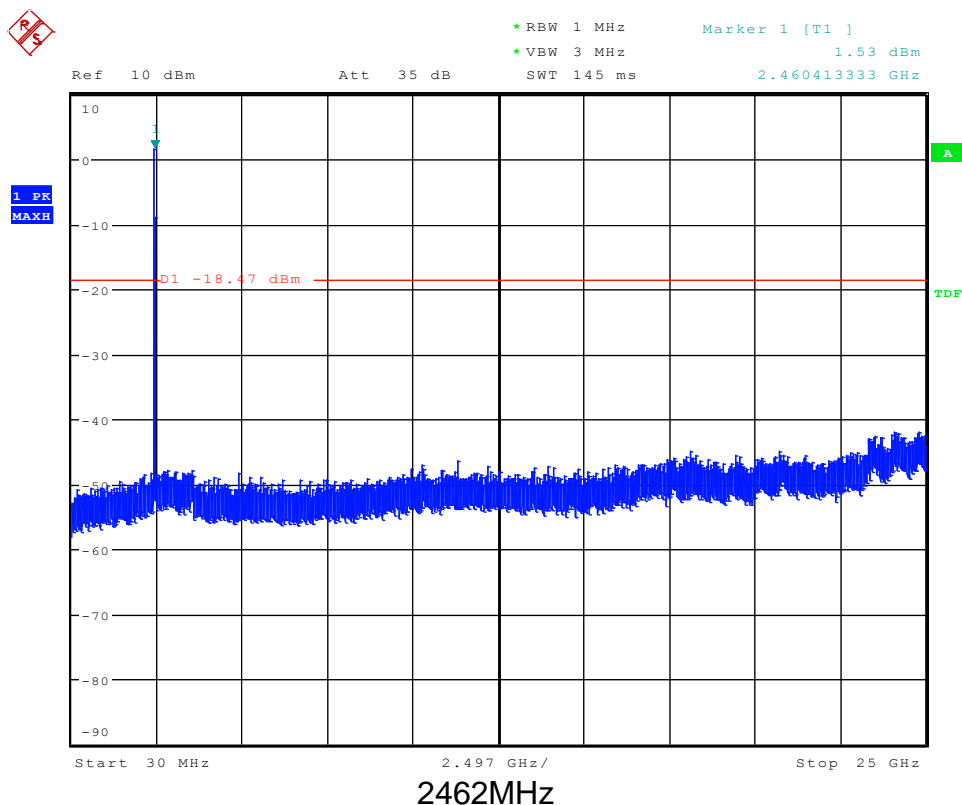


2412MHz

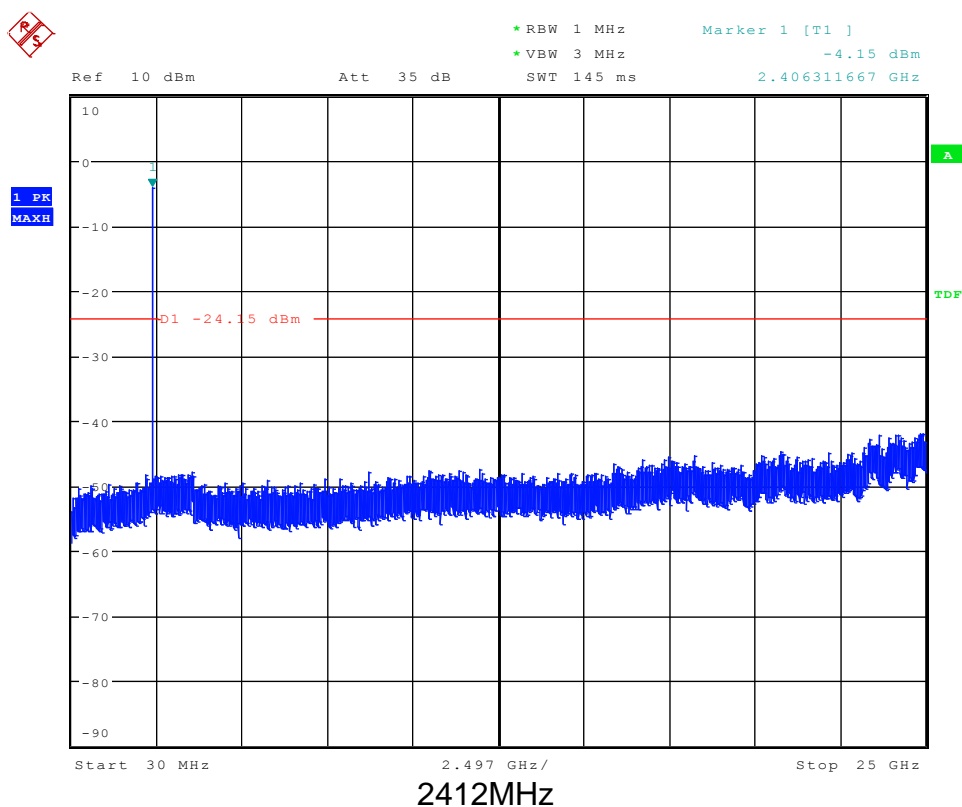


2437MHz

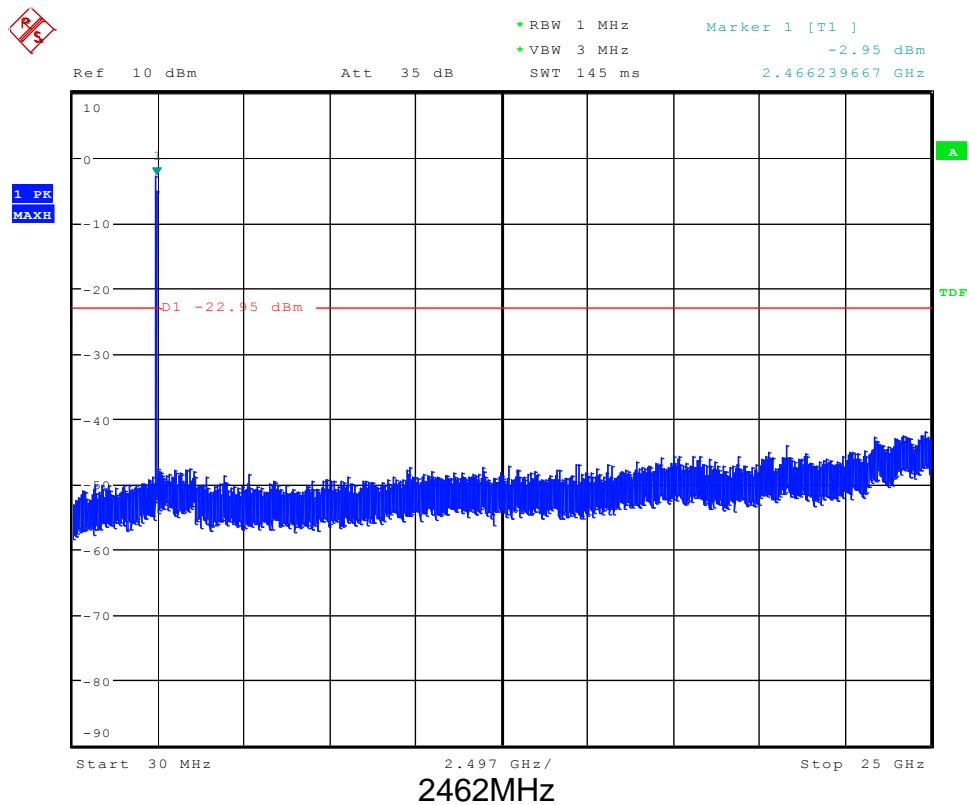
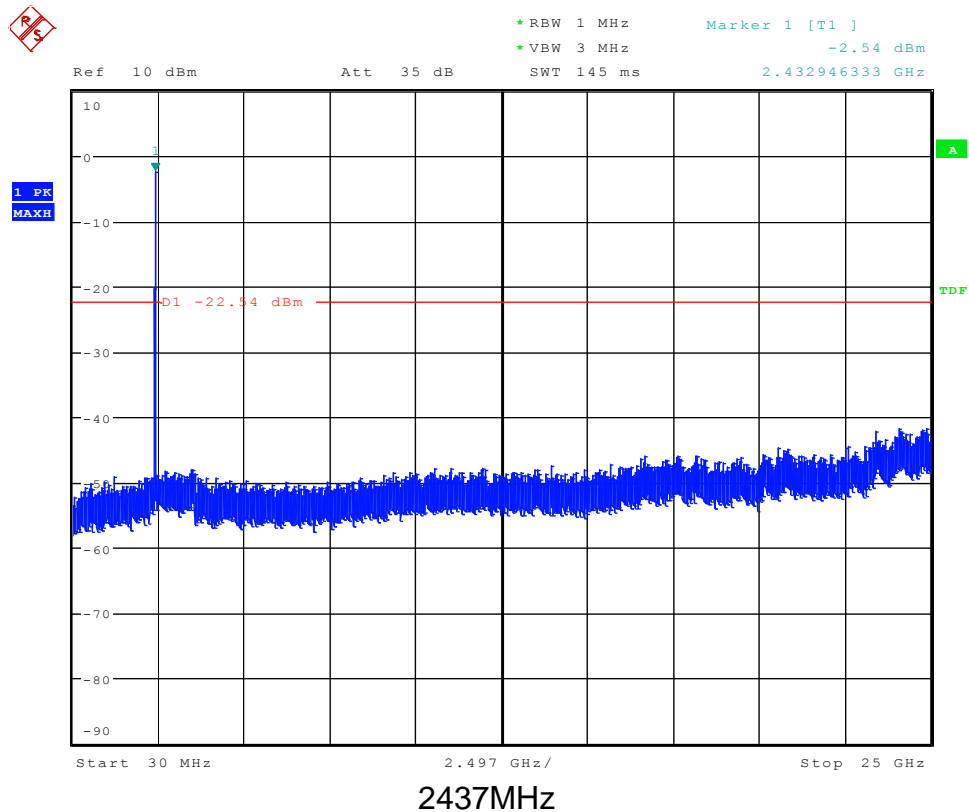
Spurious RF conducted emissions



802.11g

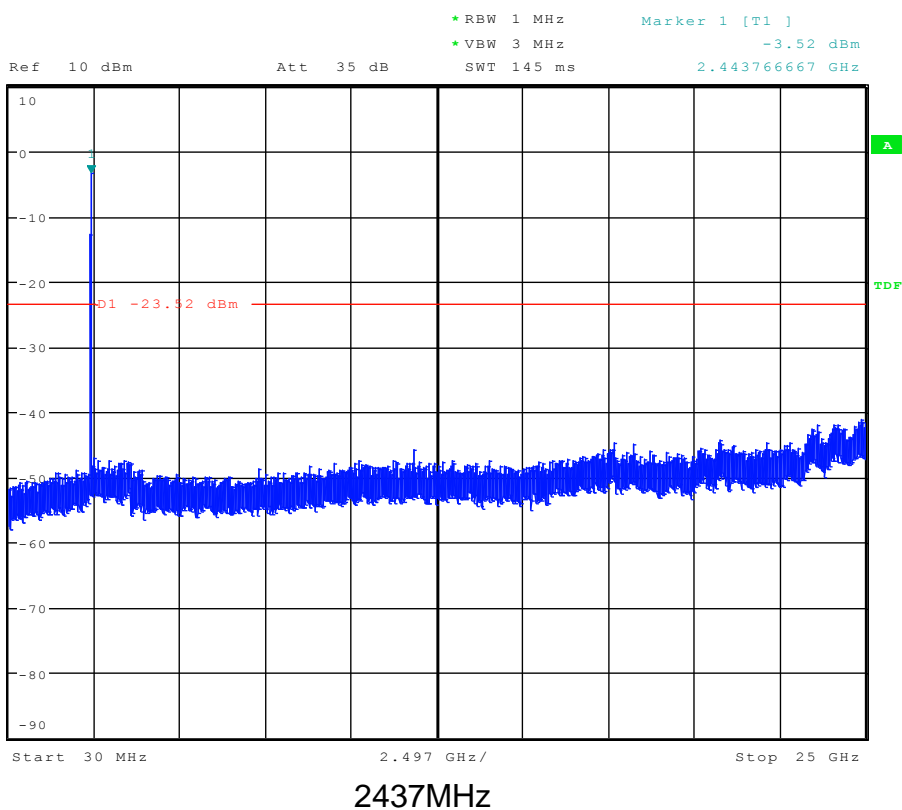
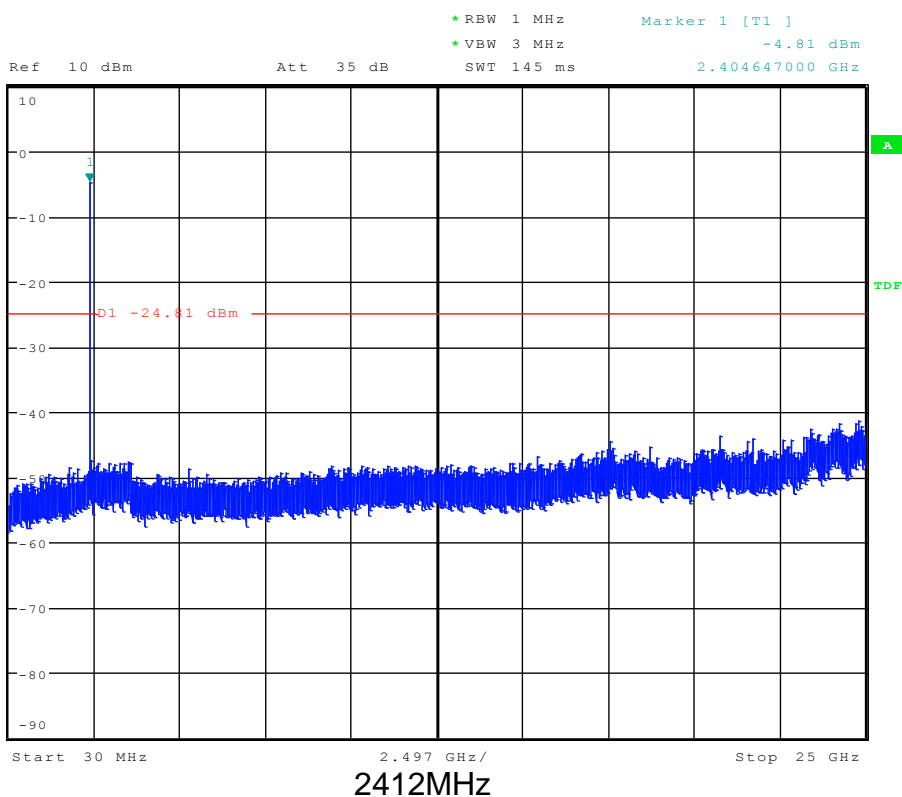


Spurious RF conducted emissions

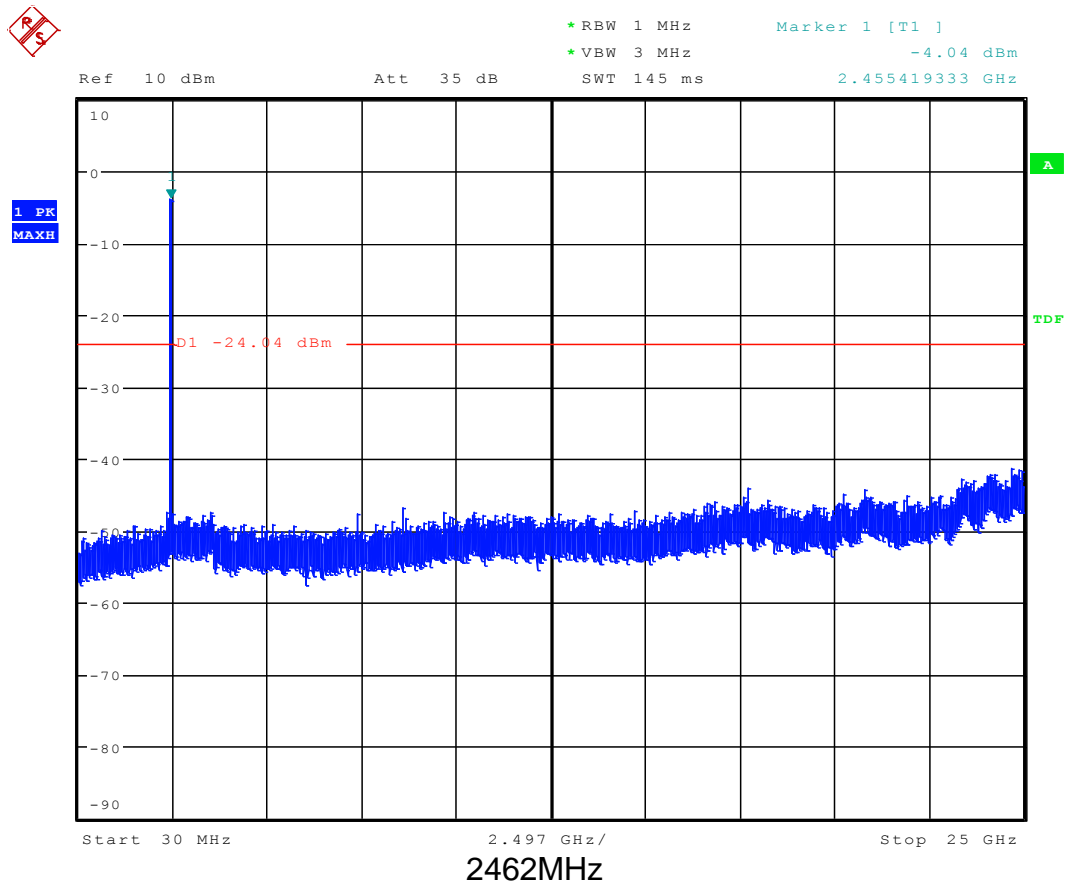


Spurious RF conducted emissions

802.11n20



Spurious RF conducted emissions



9.6 Band edge

Test Method

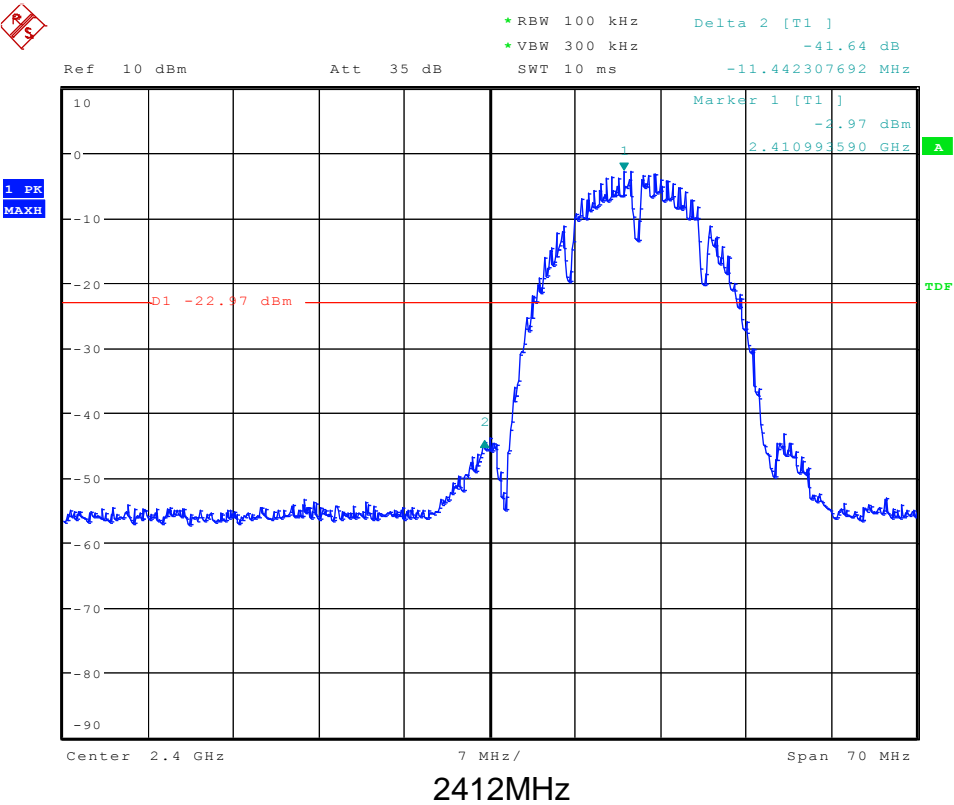
- 1 Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW \geq RBW, Sweep = auto, Detector function = peak, Trace = max hold.
- 2 Allow the trace to stabilize, use the peak and delta measurement to record the result.
- 3 The level displayed must comply with the limit specified in this Section.

Limit

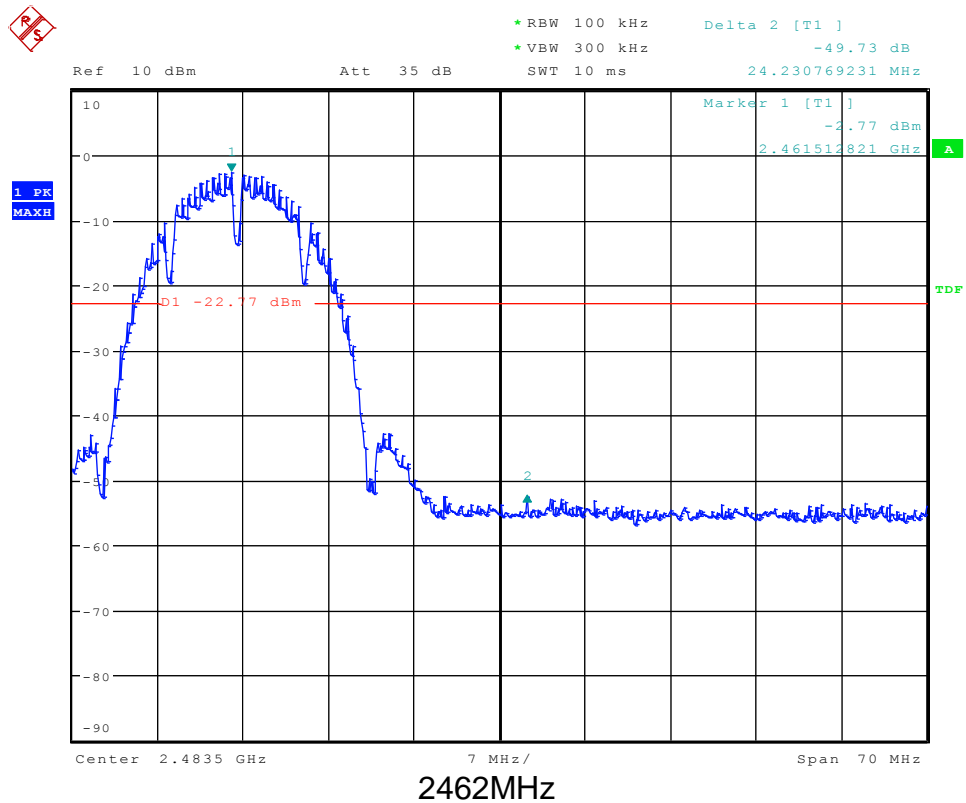
Frequency Range MHz	Limit (dBc)
30-25000	-20

Test result

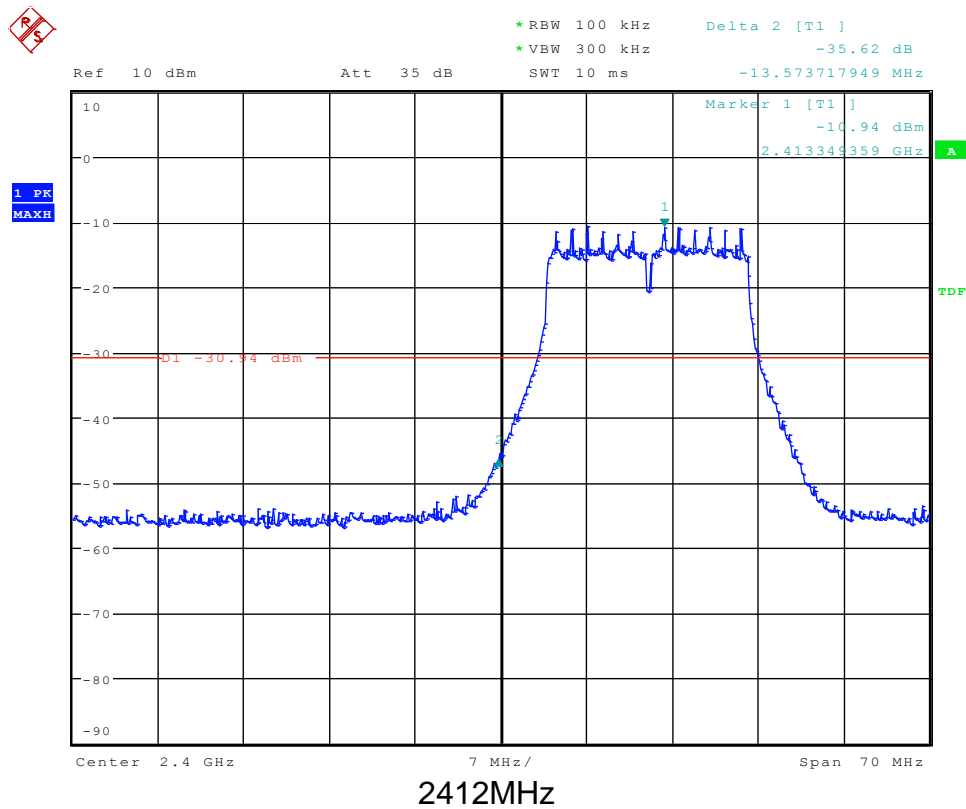
802.11b

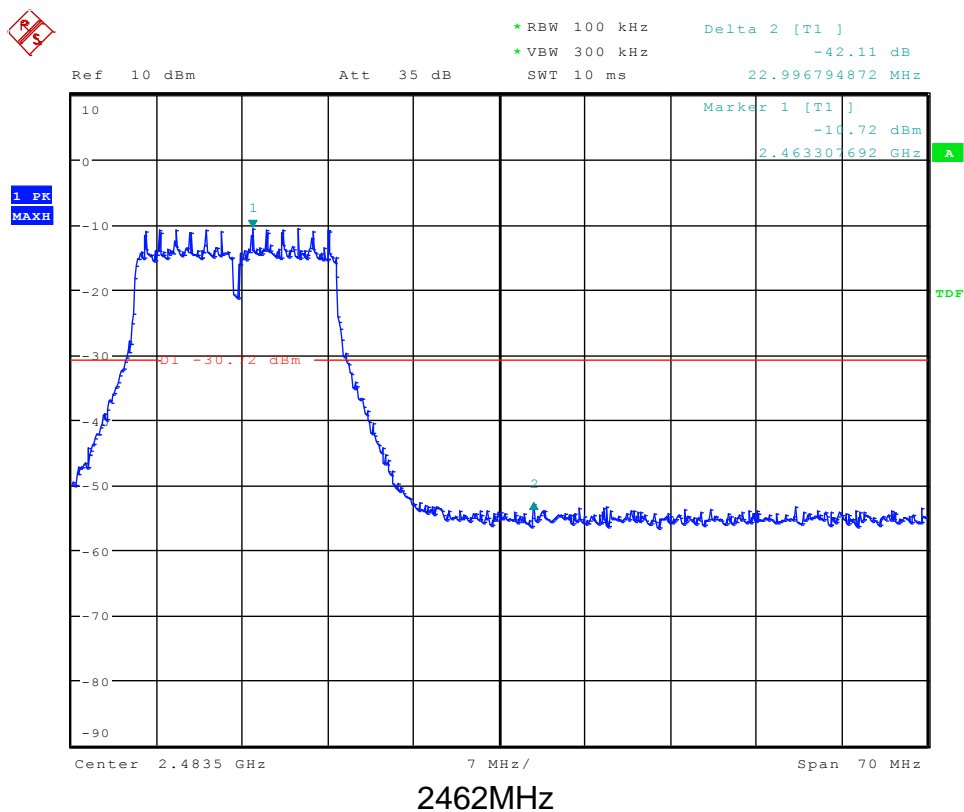


Band edge

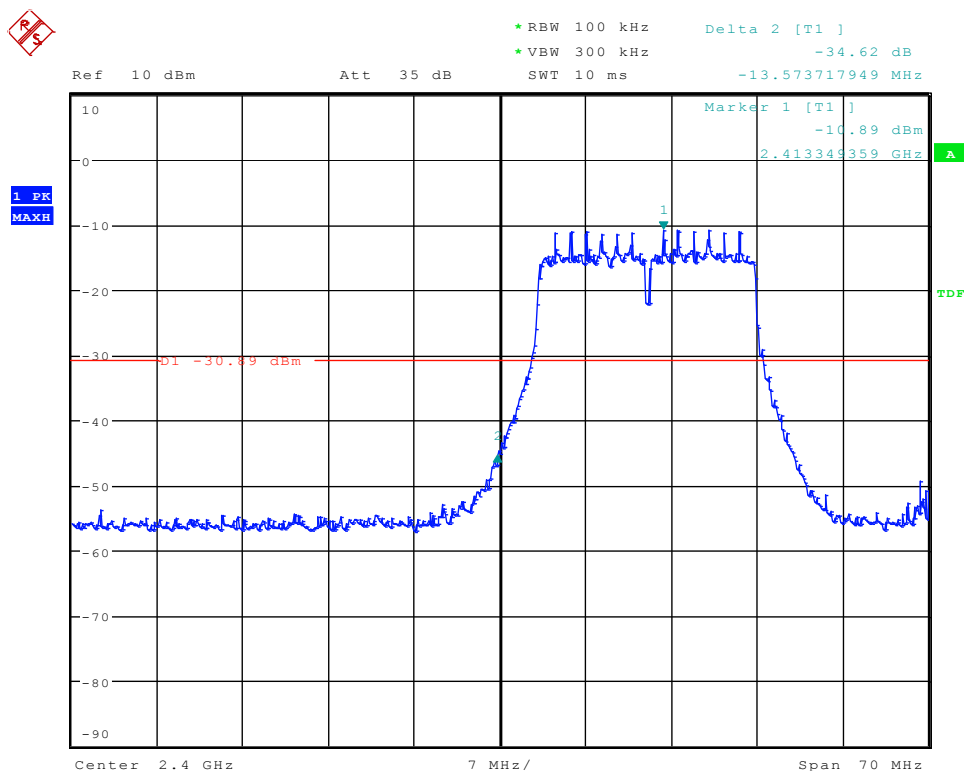


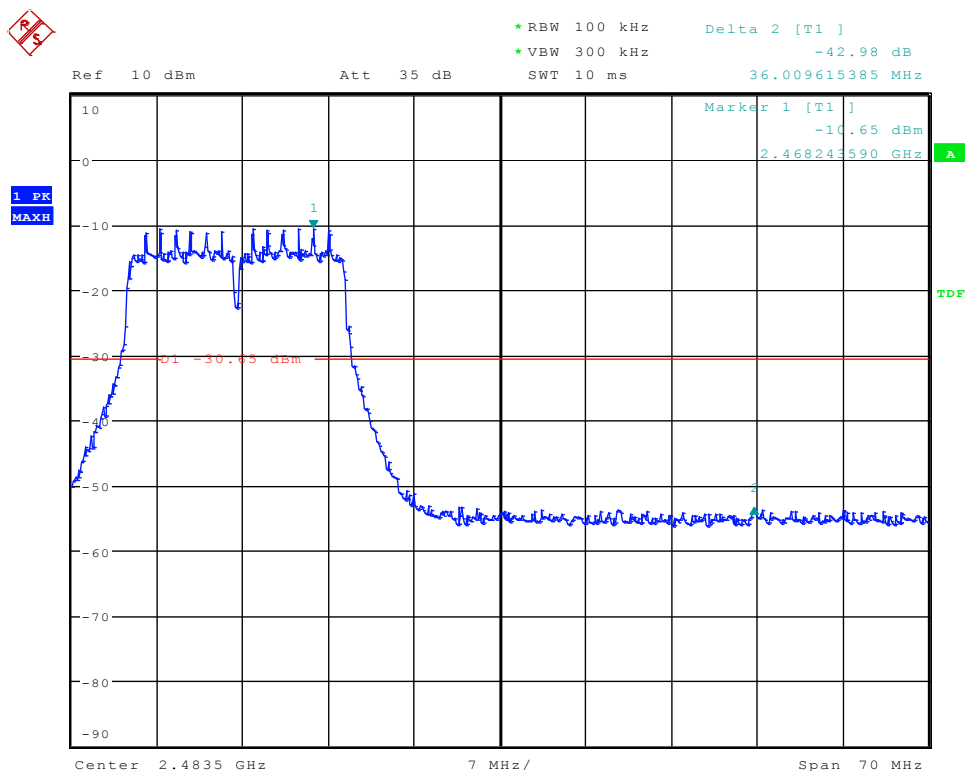
802.11g



Band edge

802.11n20



Band edge

2462MHz

9.7 Spurious radiated emissions for transmitter

Test Method

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
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 $f \geq 1\text{GHz}$, 100 kHz for $f < 1\text{GHz}$, VBW \geq RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Follow the guidelines in ANSI C63.4-2009 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. Set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the duty cycle per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{duty cycle}/100\text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Limit

According to part 15.247(d), the radio emission outside the operating frequency band 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. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength uV/m	Field Strength dBuV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Transmitting spurious emission test result as below:

802.11b

2412MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
594.54	37.70	Horizontal	46.00	QP	Pass
63.95	33.80	Vertical	40.00	QP	Pass

2412MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4824.00	53.71	Horizontal	74.00	PK	Pass
4824.00	43.69	Horizontal	54.00	AV	Pass
7236.00	55.56	Horizontal	74.00	PK	Pass
7236.00	43.12	Horizontal	54.00	AV	Pass
4824.00	50.38	Vertical	74.00	PK	Pass
4824.00	43.27	Vertical	54.00	AV	Pass
7236.00	53.96	Vertical	74.00	PK	Pass
7236.00	45.22	Vertical	54.00	AV	Pass

Remark:

- (1) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (duty cycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (2) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (3) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

2437MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2437MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4874.00	53.91	Horizontal	74.00	PK	Pass
4874.00	40.56	Horizontal	54.00	AV	Pass
7311.00	56.58	Horizontal	74.00	PK	Pass
7311.00	43.38	Horizontal	54.00	AV	Pass
4874.00	53.72	Vertical	74.00	PK	Pass
4874.00	42.62	Vertical	54.00	AV	Pass
7311.00	57.49	Vertical	74.00	PK	Pass
7311.00	43.38	Vertical	54.00	AV	Pass

Remark:

- (4) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (dutycycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (5) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (6) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

2462MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2462MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4924.00	53.06	Horizontal	74.00	PK	Pass
4924.00	38.73	Horizontal	54.00	AV	Pass
7386.00	54.56	Horizontal	74.00	PK	Pass
7386.00	43.39	Horizontal	54.00	AV	Pass
4924.00	51.18	Vertical	74.00	PK	Pass
4924.00	36.23	Vertical	54.00	AV	Pass
7386.00	52.23	Vertical	74.00	PK	Pass
7386.00	41.28	Vertical	54.00	AV	Pass

Remark:

- (1) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (dutycycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (2) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (3) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

802.11g

2412MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
		Horizontal		QP	Pass
		Vertical		QP	Pass

2412MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4824.00	52.68	Horizontal	74.00	PK	Pass
4824.00	38.39	Horizontal	54.00	AV	Pass
7236.00	56.98	Horizontal	74.00	PK	Pass
7236.00	43.13	Horizontal	54.00	AV	Pass
4824.00	53.20	Vertical	74.00	PK	Pass
4824.00	39.51	Vertical	54.00	AV	Pass
7236.00	55.37	Vertical	74.00	PK	Pass
7236.00	43.27	Vertical	54.00	AV	Pass

Remark:

- (7) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (duty cycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (8) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (9) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

2437MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2437MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4874.00	53.33	Horizontal	74.00	PK	Pass
4874.00	38.57	Horizontal	54.00	AV	Pass
7311.00	56.53	Horizontal	74.00	PK	Pass
7311.00	43.25	Horizontal	54.00	AV	Pass
4874.00	55.26	Vertical	74.00	PK	Pass
4874.00	40.56	Vertical	54.00	AV	Pass
7311.00	58.11	Vertical	74.00	PK	Pass
7311.00	45.26	Vertical	54.00	AV	Pass

Remark:

- (10) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (dutycycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (11) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (12) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

2462MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2462MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4924.00	53.02	Horizontal	74.00	PK	Pass
4924.00	38.66	Horizontal	54.00	AV	Pass
7386.00	57.38	Horizontal	74.00	PK	Pass
7386.00	46.52	Horizontal	54.00	AV	Pass
4924.00	52.81	Vertical	74.00	PK	Pass
4924.00	38.68	Vertical	54.00	AV	Pass
7386.00	57.13	Vertical	74.00	PK	Pass
7386.00	43.52	Vertical	54.00	AV	Pass

Remark:

- (4) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (dutycycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (5) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (6) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

802.11g

2412MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2412MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4824.00	52.69	Horizontal	74.00	PK	Pass
4824.00	40.13	Horizontal	54.00	AV	Pass
7236.00	54.76	Horizontal	74.00	PK	Pass
7236.00	45.11	Horizontal	54.00	AV	Pass
4824.00	53.27	Vertical	74.00	PK	Pass
4824.00	41.62	Vertical	54.00	AV	Pass
7236.00	55.07	Vertical	74.00	PK	Pass
7236.00	47.28	Vertical	54.00	AV	Pass

Remark:

- (13) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (duty cycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (14) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (15) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

2437MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2437MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4874.00	56.23	Horizontal	74.00	PK	Pass
4874.00	41.58	Horizontal	54.00	AV	Pass
7311.00	59.68	Horizontal	74.00	PK	Pass
7311.00	46.52	Horizontal	54.00	AV	Pass
4874.00	55.26	Vertical	74.00	PK	Pass
4874.00	40.57	Vertical	54.00	AV	Pass
7311.00	57.21	Vertical	74.00	PK	Pass
7311.00	45.13	Vertical	54.00	AV	Pass

Remark:

- (16) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (dutycycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (17) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (18) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

2462MHz (30MHz – 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
--	--	Horizontal	--	QP	Pass
--	--	Vertical	--	QP	Pass

2462MHz (Above 1GHz)

Frequency MHz	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
4924.00	51.82	Horizontal	74.00	PK	Pass
4924.00	37.65	Horizontal	54.00	AV	Pass
7386.00	56.47	Horizontal	74.00	PK	Pass
7386.00	42.16	Horizontal	54.00	AV	Pass
4924.00	52.51	Vertical	74.00	PK	Pass
4924.00	38.26	Vertical	54.00	AV	Pass
7386.00	56.29	Vertical	74.00	PK	Pass
7386.00	43.39	Vertical	54.00	AV	Pass

Remark:

- (7) QP Emission Level= Antenna Factor +Cable Loss + Reading
 PK Emission Level= Antenna Factor +Cable Loss - Amp. Factor + Reading
 AV Emission Level= PK Emission Level+20log (dutycycle) or set the RBW/VBW to be 1MHz/10Hz to read the level.
- (8) Data of measurement within 30-1000MHz frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.
- (9) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

10 Test Equipment List

List of Test Instruments

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Test Receiver	Rohde & Schwarz	ESCI7	100837	Nov. 22, 2016
Antenna	Schwarzbeck	VULB9162	9162-010	Nov. 25, 2016
Cable	Huber+Suhner	CBL2-NN-1M	22390001	Nov. 06, 2016
Cable	Huber+Suhner	CIL02	N/A	Nov. 06, 2016
RF Cable	Huber+Suhner	SF-104	MY16559/4	Mar. 06, 2016
Power Amplifier	HP	HP 8447D	1145A00203	Nov. 06, 2016
Horn Antenna	Schwarzbeck	BBHA9170	9170-372	Oct.22, 2016
Horn Antenna	Com-Power	AH-118	071078	Nov. 04, 2016
Loop antenna	Daze	ZA30900A	0708	Oct.09, 2016
Spectrum Analyzer	Rohde & Schwarz	FSU26	200409/026	Aug. 31, 2016
Pre-Amplifier	Agilent	8449B	3008A02964	Nov. 02, 2016
L.I.S.N.	Rohde & Schwarz	ENV 216	101317	Nov. 06, 2016
Temporary antenna connector	TESCOM	SS402	N/A	N/A
Power Meter	Anritsu	ML2495A	1139001	Nov. 04, 2016
Power Sensor	DARE	RPR 3006V	15I00041SN064	Dec. 28, 2016

C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth
- Power spectral density*
- Spurious RF conducted emissions
- Band edge

11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items	Extended Uncertainty
Radiation emission	$U=\pm 3.70\text{dB}$ (30MHz-25GHz)
Bandwidth	$\pm 1.42 \times 10^{-4}\%$
Power Spectral Density	$\pm 1.06\text{dB}$
Spurious RF conducted emissions	$\pm 2.51\text{dB}$
Output power test	$\pm 1.06\text{dB}$
Power density test	2.10 dB