

<b>Prüfbericht-Nr.:</b> <i>Test report no.:</i>	CN21UIMT(P15C-WiFi) 001	<b>Auftrags-Nr.:</b> <i>Order no.:</i>	238517977	Seite 1 von 30 Page 1 of 30
<b>Kunden-Referenz-Nr.:</b> <i>Client reference no.:</i>	N/A	<b>Auftragsdatum:</b> <i>Order date:</i>	2021-07-21	
<b>Auftraggeber:</b> <i>Client:</i>	Eve Systems LLC 100 Pine St., Suite 1250, San Francisco CA 94111 USA			
<b>Prüfgegenstand:</b> <i>Test item:</i>	Eve Outdoor Cam			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type no.:</i>	20ECA4101			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	FCC Part 15C Test report (WiFi 2.4GHz)			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	FCC 47CFR Part 15: Subpart C Section 15.247			
<b>Wareneingangsdatum:</b> <i>Date of sample receipt:</i>	2021-10-07			
<b>Prüfmuster-Nr.:</b> <i>Test sample no.:</i>	A003150447-001 A003140747-001			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	2021-11-08 - 2021-12-03			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	EMC/RF Taipei Testing Site			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	Taipei Testing Laboratories			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	Pass			
<b>zusammengestellt von:</b> <i>compiled by:</i>		<b>genehmigt von:</b> <i>authorized by:</i>		
<b>Datum:</b> <i>Date:</i>	2021-11-24	<b>Ausstellungsdatum:</b> <i>Issue date:</i>	2021-11-24	
<b>Stellung / Position:</b>	Senior Project Manager	<b>Stellung / Position:</b>	Senior Project Manager	
<b>Sonstiges / Other:</b>				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b>  <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				

## TEST SUMMARY

Report Section	FCC Clause	Test Item	Result
5.1.1	15.247(b) & 15.203	Antenna Requirement	Pass
5.1.2	15.247(b)(3)	Peak Output Power	Pass
5.1.3	15.247(a)(2)	6 dB Bandwidth	Pass
5.1.3	2.1049	99% Occupied Bandwidth	Pass
5.1.4	15.247(e)	Power Spectral Density	Pass
5.1.5	15.247(d)	Conducted Spurious Emissions and Band Edges	Pass
5.1.6	15.247(d) & 15.205 & 15.209	Radiated Spurious Emissions and Band Edges	Pass
5.2.1	15.207	Mains Conducted Emission	Pass

**Note:** Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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**APPENDIX A - TEST RESULT OF CONDUCTED**

**APPENDIX B - TEST RESULT OF RADIATED EMISSIONS & MAINS CONDUCTED EMISSION**

**APPENDIX SP - PHOTOGRAPHS OF TEST SETUP**

**APPENDIX EP - PHOTOGRAPHS OF EUT**

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## HISTORY OF THIS TEST REPORT

Report No.	Description	Date Issued
CN21UIMT(P15C-WiFi) 001	Original Release	2021-11-24

## 1. General Remarks

### 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

**Appendix A - Test Result of Conducted**

**Appendix B - Test Result of Radiated Emissions & Mains Conducted Emission**

**Appendix SP - Photographs of Test Setup**

**Appendix EP - Photographs of EUT**

### Applied Standard and Test Levels

Radio
FCC 47CFR Part 15: Subpart C Section 15.247
FCC 47CFR Part 2: Subpart J Section 2.1049
ANSI C63.10:2013
KDB 558074 D01 15.247 Meas Guidance v05r02

### 1.2 Decision Rule of Conformity

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

## 2. Test Sites

### 2.1 Test Laboratory

Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.  
Taipei City 105  
Taiwan (R.O.C.)

### 2.2 Test Facility

Taipei Testing Laboratories

No.458-18, Sec. 2, Fenliao Rd., Linkou Dist.,  
New Taipei City 244  
Taiwan (R.O.C.)  
FCC Registration No.: 226631  
ISED Registration No.: 25563

## 2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

All measurement uncertainty values are shown with a coverage factor of  $k=2$  to indicate a 95% level of confidence.

### Emission Measurement Uncertainty

Parameter	Uncertainty
Radiated Emission (9 kHz ~ 30 MHz)	$\pm 1.15$ dB
Radiated Emission (30 MHz ~ 200 MHz)	$\pm 1.32$ dB
Radiated Emission (200 MHz ~ 1 GHz)	$\pm 1.31$ dB
Radiated Emission (1 GHz ~ 18 GHz)	$\pm 1.53$ dB
Radiated Emission (18 GHz ~ 40 GHz)	$\pm 2.50$ dB
Mains Conducted Emission	$\pm 1.65$ dB



### 3. General Product Information

#### 3.1 Product Function and Intended Use

The EUT is a Eve Outdoor Cam. It contains a WLAN compatible module enabling the user to communicate data through a Wireless interface.

For details refer to the User Guide, Data Sheet and Circuit Diagram.

#### 3.2 System Details and Ratings

##### Basic Information of EUT

Item	EUT information
Kind of Equipment/Test Item	Eve Outdoor Cam
Type Identification	20ECA4101
FCC ID	SNE-ODC-001

##### Technical Specification of EUT

Item	EUT information
Operating Frequency	2412 MHz ~ 2462 MHz
Channel Spacing	5 MHz
Channel Number	802.11b/g/n HT20: 11
Data Rate	802.11b: 11.0 / 5.5 / 2.0 / 1.0 Mbps 802.11g: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11n: up to MCS7
Operation Voltage	5Vdc
Modulation	DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK, QPSK, 16QAM, 64QAM)
Maximum Output Power (mW)	802.11b: 114.55 802.11g: 432.51 802.11n HT20: 426.58
Antenna Information	Refer to 5.1.1
Accessory Device	Refer to 4.4

### **3.3 Noise Generating and Noise Suppressing Parts**

Refer to the Circuit Diagram.

### **3.4 Submitted Documents**

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

## 4. Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

The test modes were adapted accordingly in reference to the instructions for use.

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output expected by the customer and is going to be fixed on the firmware of the final end product.

#### Table for Parameters of Test Software Setting

802.11b		802.11g		802.11n HT20	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
1	19	1	10	1	10
6	20	2	19	2	18
9	20	6	21	6	21
10	18	9	17	8	15
11	15	10	11	9	11
-	-	11	10	10	10
-	-	-	-	11	9

### 4.2 Carrier Frequency and Channel

802.11b, 802.11g and 802.11n HT20:

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

### 4.3 Test Operation and Test Software

Setup for testing: Test samples are provided with a USB interface which makes it possible to control them through a test software installed on a notebook computer.

This software was running on the laptop computer connected to the EUT. It was used to enable the operation modes listed as below.

Test Software	Putty.exe
---------------	-----------

The samples were used as follows:

A003150447-001 for radiated test

A003140747-001 for conducted test

Full test was applied on all test modes, but only worst case was shown.

Modulation Mode	Tx Function
802.11b	1TX (SISO)
802.11g	1TX (SISO)
802.11n HT20	1TX (SISO)

EUT Configure Mode	Applicable To				Description
	Antenna Port Conducted Measurement	Radiated Spurious Emissions above 1 GHz	Radiated Spurious Emissions below 1 GHz	Mains Conducted Emission	
-	√	√	√	√	-

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when position on X-plane.
2. "-" means no effect.

#### Antenna Port Conducted Measurement

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11b	1 to 11	1, 6, 9, 10, 11	1.0
-	802.11g	1 to 11	1, 2, 6, 9, 10, 11	6.0
-	802.11n HT20	1 to 11	1, 2, 6, 8, 9, 10, 11	MCS0

#### Radiated Spurious Emissions (Above 1 GHz)

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11b	1 to 11	1, 6, 9, 10, 11	1.0
-	802.11g	1 to 11	1, 2, 6, 9, 10, 11	6.0
-	802.11n HT20	1 to 11	1, 2, 6, 8, 9, 10, 11	MCS0

**Radiated Spurious Emissions (Below 1 GHz)**

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11n HT20	1 to 11	6	MCS0

**Mains Conducted Emission**

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11n HT20	1 to 11	6	MCS0

**Test Condition**

Test Item	Ambient Temperature	Relative Humidity	Tested by
Conducted Measurement	22.1 °C	52 %	Stanislas Charles
Radiated Spurious Emissions above 1 GHz	23.1-25.1 °C	55-60 %	Ray Huang
Radiated Spurious Emissions below 1 GHz	23.1-25.1 °C	55-60 %	Ray Huang
Mains Conducted Emission	23.6-24.1 °C	49-52 %	Ray Huang

## 4.4 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

### Accessory of EUT

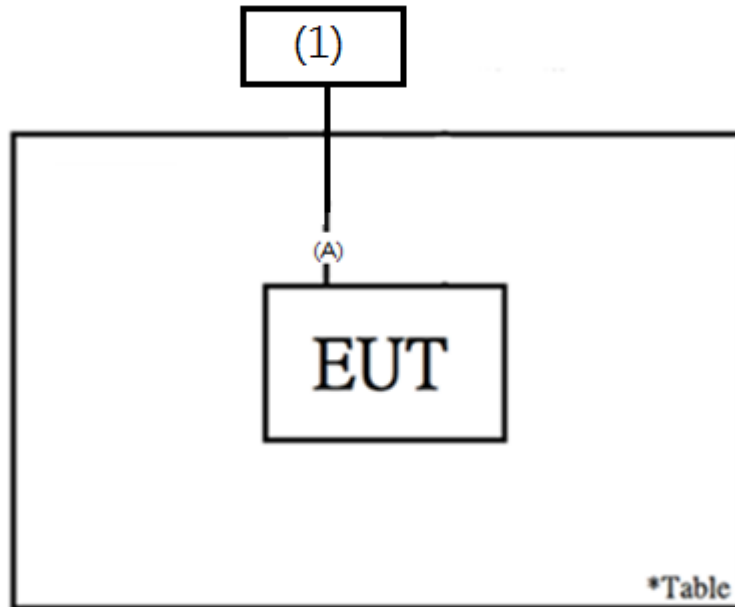
None.

### Support Unit

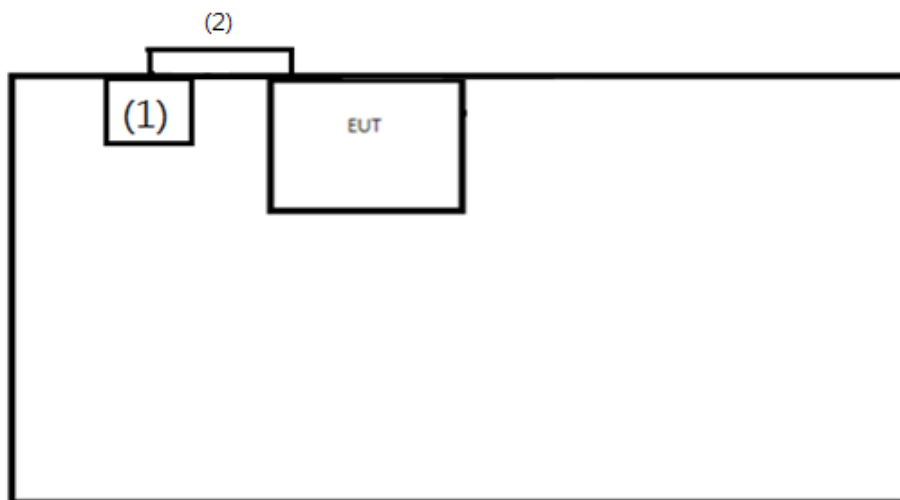
No.	Description	Brand	Model	S/N	Remark
Radiated Test					
A	USB Cable	-	-	-	200 cm non-shielded cable w/o core
1	adapter	ULLPOWER	ICP08C-05D-1000B	-	-
Mains Conducted Test					
1	USB Cable	TUV	TUV-01	-	200 cm non-shielded cable w/o core
2	adapter	ULLPOWER	ICP08C-05D-1000B	-	non-shielded cable w/o core

## 4.5 Test Setup Diagram

<Radiated Spurious Emissions mode>

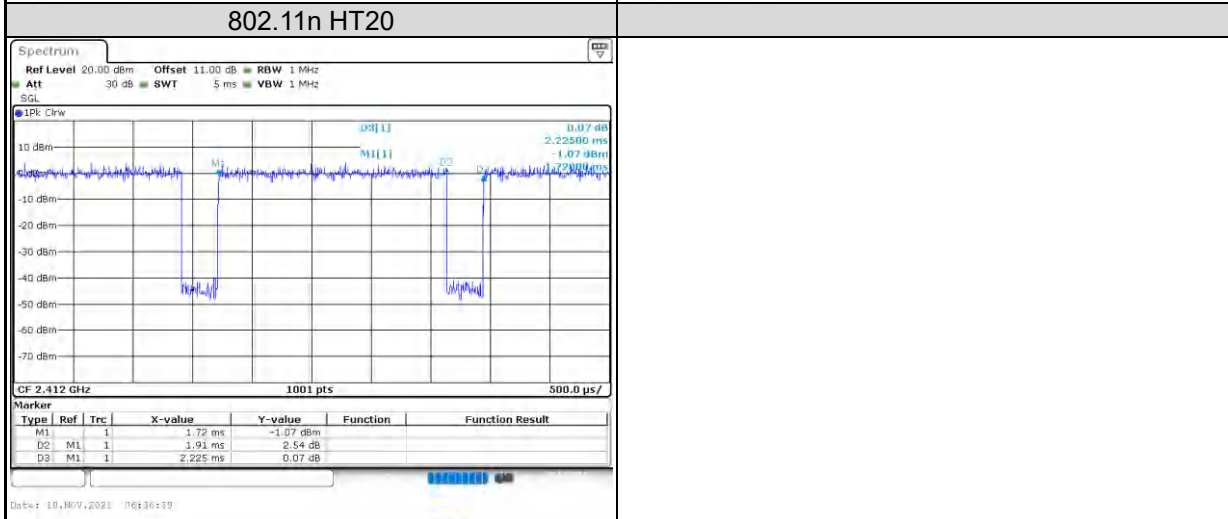
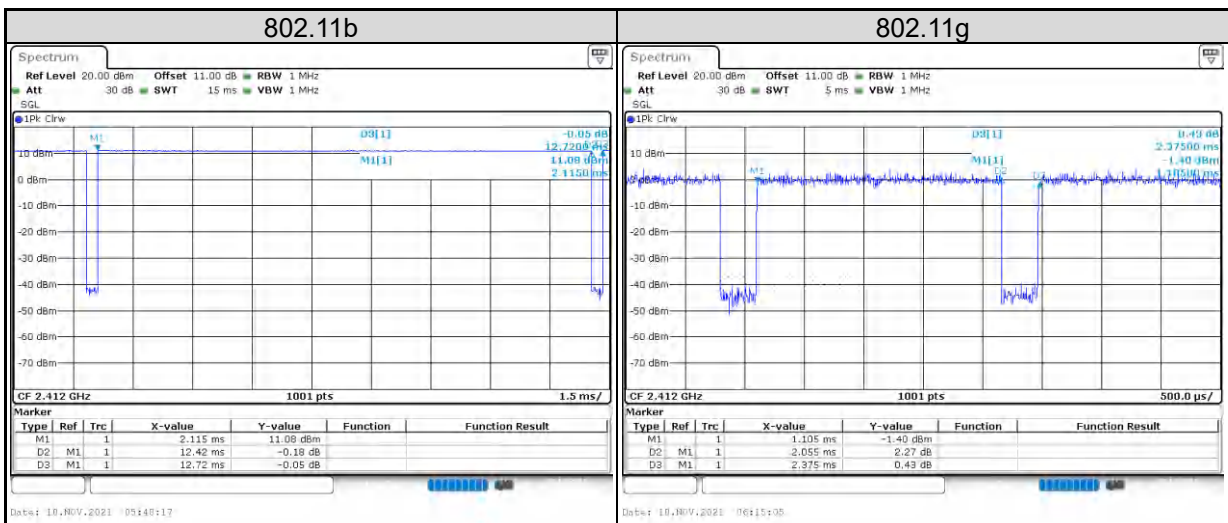


<Mains Conducted Emission mode>



## 4.6 Duty Cycle of Test Signal

Mode	On + Off Time (ms)	On Time (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	12.72	12.42	97.64	0.10
802.11g	2.375	2.055	86.53	0.63
802.11n HT20	2.225	1.91	85.84	0.66





## 5. Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**Requirement** Use of approved antennas only

According to the manufacturer declaration, the EUT has an antenna with a directional gain of 4.2 dBi. The antenna is a PCB antenna with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

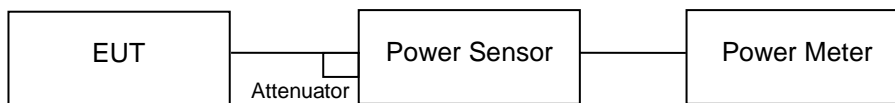
Refer to EUT photo for details.

### 5.1.2 Peak Output Power

**Limit** 1 watt (30 dBm)

**Kind of Test Site** Shielded room

#### Test Setup



#### Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Power Meter	Anritsu	ML2495A	1901008	2021/3/24	2022/3/23	2021/11/10	2021/11/10
Power Sensor	Anritsu	MA2411B	1725269	2021/3/24	2022/3/23	2021/11/10	2021/11/10

#### Test Procedures

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

**Test Result**
**Peak Output Power**
**<802.11b>**

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (dBm)
		(dBm)	(mW)	
1	2412	19.48	88.72	30
6	2437	20.59	114.55	30
9	2452	20.46	111.17	30
10	2457	18.46	70.15	30
11	2462	15.74	37.50	30

**<802.11g>**

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (dBm)
		(dBm)	(mW)	
1	2412	20.14	103.28	30
2	2417	25.32	340.41	30
6	2437	26.36	432.51	30
9	2452	25.18	329.61	30
10	2457	21.80	151.36	30
11	2462	20.46	111.17	30

**<802.11n HT20>**

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (dBm)
		(dBm)	(mW)	
1	2412	20.03	100.69	30
2	2417	25.12	325.09	30
6	2437	26.30	426.58	30
8	2447	24.57	286.42	30
9	2452	20.68	116.95	30
10	2457	20.08	101.86	30
11	2462	17.47	55.85	30

**Average Power**
**<802.11b>**

Channel	Channel Frequency (MHz)	Average Power	
		(dBm)	(mW)
1	2412	17.03	50.47
6	2437	17.95	62.37
9	2452	18.05	63.83
10	2457	16.11	40.83
11	2462	13.44	22.08

**<802.11g>**

Channel	Channel Frequency (MHz)	Average Power	
		(dBm)	(mW)
1	2412	8.50	7.08
2	2417	16.87	48.64
6	2437	19.39	86.90
9	2452	15.56	35.97
10	2457	10.11	10.26
11	2462	8.45	7.00

**<802.11n HT20>**

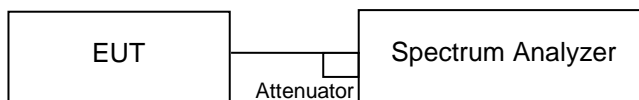
Channel	Channel Frequency (MHz)	Average Power	
		(dBm)	(mW)
1	2412	8.18	6.58
2	2417	15.64	36.64
6	2437	19.27	84.53
8	2447	13.86	24.32
9	2452	9.48	8.87
10	2457	8.18	6.58
11	2462	6.24	4.21

### 5.1.3 6 dB Bandwidth and 99% Occupied Bandwidth

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

**Kind of Test Site** Shielded room

#### Test Setup



#### Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Spectrum Analyzer	R&S	FSV40	101512	2021/1/29	2022/1/28	2021/11/10	2021/11/10

#### Test Procedure

- a. Set resolution bandwidth (RBW) = 100 kHz
- b. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- c. Trace mode = max hold.
- d. Sweep = auto couple.
- e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
- f. For 99% occupied bandwidth measurement, the transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to PEAK. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

#### Test Results

Please refer to Appendix A.

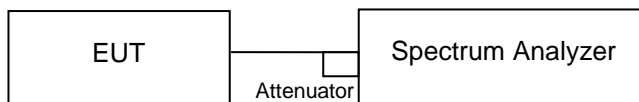
## 5.1.4 Power Spectral Density

### Limit

The power spectral density shall not be greater than 8 dBm in any 3 kHz band.

**Kind of Test Site**                      Shielded room

### Test Setup



### Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Spectrum Analyzer	R&S	FSV40	101512	2021/1/29	2022/1/28	2021/11/10	2021/11/10

### Test Procedure

- a. Set analyzer center frequency to DTS channel center frequency.
- b. Set the span to 1.5 times the DTS bandwidth.
- c. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- d. Set the VBW  $\geq 3 \times \text{RBW}$ .
- e. Detector = peak.
- f. Sweep time = auto couple.
- g. Trace mode = max hold.
- h. Allow trace to fully stabilize.
- i. Use the peak marker function to determine the maximum amplitude level within the RBW.

### Test Results

Please refer to Appendix A.

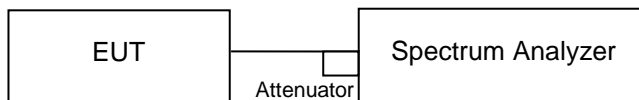
## 5.1.5 Conducted Spurious Emissions and Frequency Band Edges Measured in 100 kHz Bandwidth

### Limit

20 dB (below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.)

**Kind of Test Site**                      Shielded room

### Test Setup



### Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Spectrum Analyzer	R&S	FSV40	101512	2021/1/29	2022/1/28	2021/11/10	2021/12/03

### Test Procedure

Measurement procedure REF

1. Set the RBW = 100 kHz.
2. Set the VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

Measurement procedure OOBE

1. Set RBW = 100 kHz.
2. Set VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

### Test Results

Please refer to Appendix A.

## 5.1.6 Radiated Spurious Emissions and Band Edges

### Limit

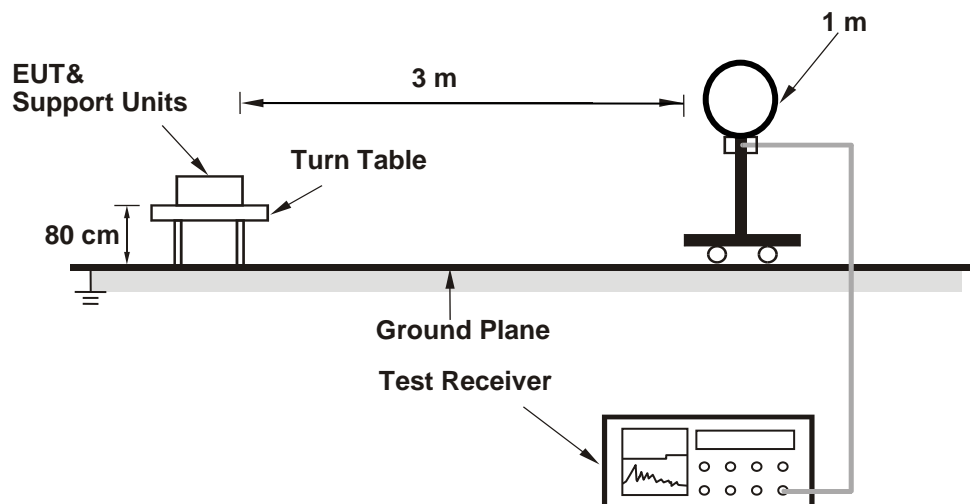
Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a).

Emissions radiated outside the restricted and authorized frequency bands must either comply with the radiated emission limits specified for the restricted bands or in §15.247(d).

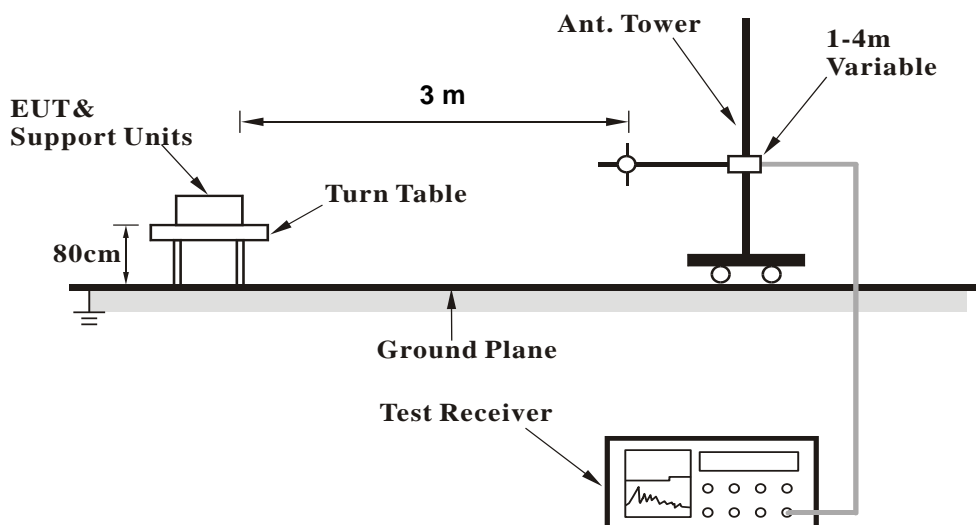
**Kind of Test Site**                      3m Semi-Anechoic Chamber

### Test Setup

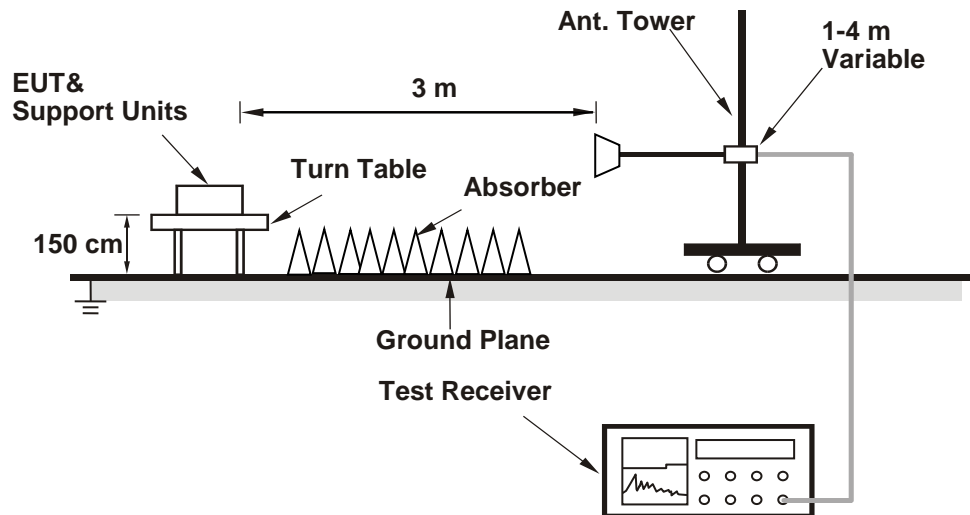
**<Radiated Emissions below 30 MHz>**



**<Radiated Emissions 30 MHz to 1 GHz>**





**<Radiated Emissions above 1 GHz>**


For the actual test configuration, please refer to the attached file (Test Setup Photo).

**Test Instruments**

Test Date: 2021/11/08 – 2021/12/11

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101509	2021/3/24	2022/3/23
Receiver	R&S	ESR7	102108	2021/3/17	2022/3/16
Bilog Antenna	SCHWARZBECK	VULB-9168	00950	2021/1/25	2022/1/24
Horn Antenna	ETS-Lindgren	3117	00218930	2020/12/1	2021/11/30
Horn Antenna	ETS-Lindgren	3117	00218929	2021/11/25	2022/11/24
LF-AMP	Agilent	8447D	2727A05146	2021/2/1	2022/1/31
HF-AMP + AC source	EMCI	EMC051845SE	980635	2021/2/1	2022/1/31
HF-AMP + AC source	EMCI	EMC184045SE	980656	2021/2/9	2022/2/8
Horn Antenna	SCHWARZBECK	BBHA 9170	00890	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104EA	800057/4EA	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104	802244/4	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104	MY37203/4	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	800897/2EA	2021/3/11	2022/3/10
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	800902/2EA	2021/3/11	2022/3/10
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	801026/2EA	2021/3/11	2022/3/10
Loop Antenna	SCHWARZBECK	FMZB1519B	00215	2021/9/17	2022/9/16

**Test Procedures****For Radiated Emissions below 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel (OPEN), perpendicular (CLOSE), and ground-parallel (GROUND) orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

## Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

**For Radiated Emissions above 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

## Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98 %) or 10 Hz (Duty cycle  $\geq 98$  %) for Average detection (AV) at frequency above 1 GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The Radiated Emissions testing was performed in the X(E1), Y(H) and Z(E2) axis orientation. The worst-case Axis orientation is recorded in this test report.

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**Test Results**

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)  
Level (dBuV/m) = Reading (dBuV) + Factor (dB/m)

Please refer to Appendix B.

## 5.2 Mains Emission

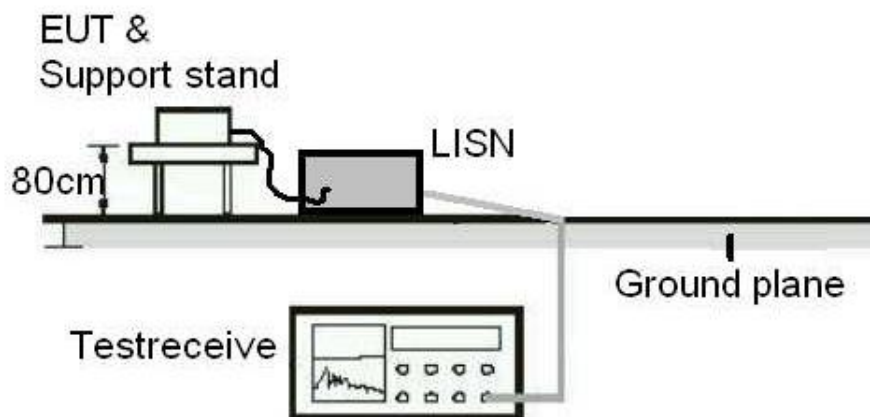
### 5.2.1 Mains Conducted Emission

#### Limit

Mains Conducted Emission as defined in §15.207 must comply with the mains conducted emission limits.

**Kind of Test Site**                      Shielded room

#### Test Setup



#### Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
RF Cable	N/A	N/A	EMC-003	2021/3/16	2022/3/15
Two-Line V-Network	Rohde & Schwarz	ENV216	101938	2021/9/23	2022/9/22

#### **Test Procedures**

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50 uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

#### **Test Results**

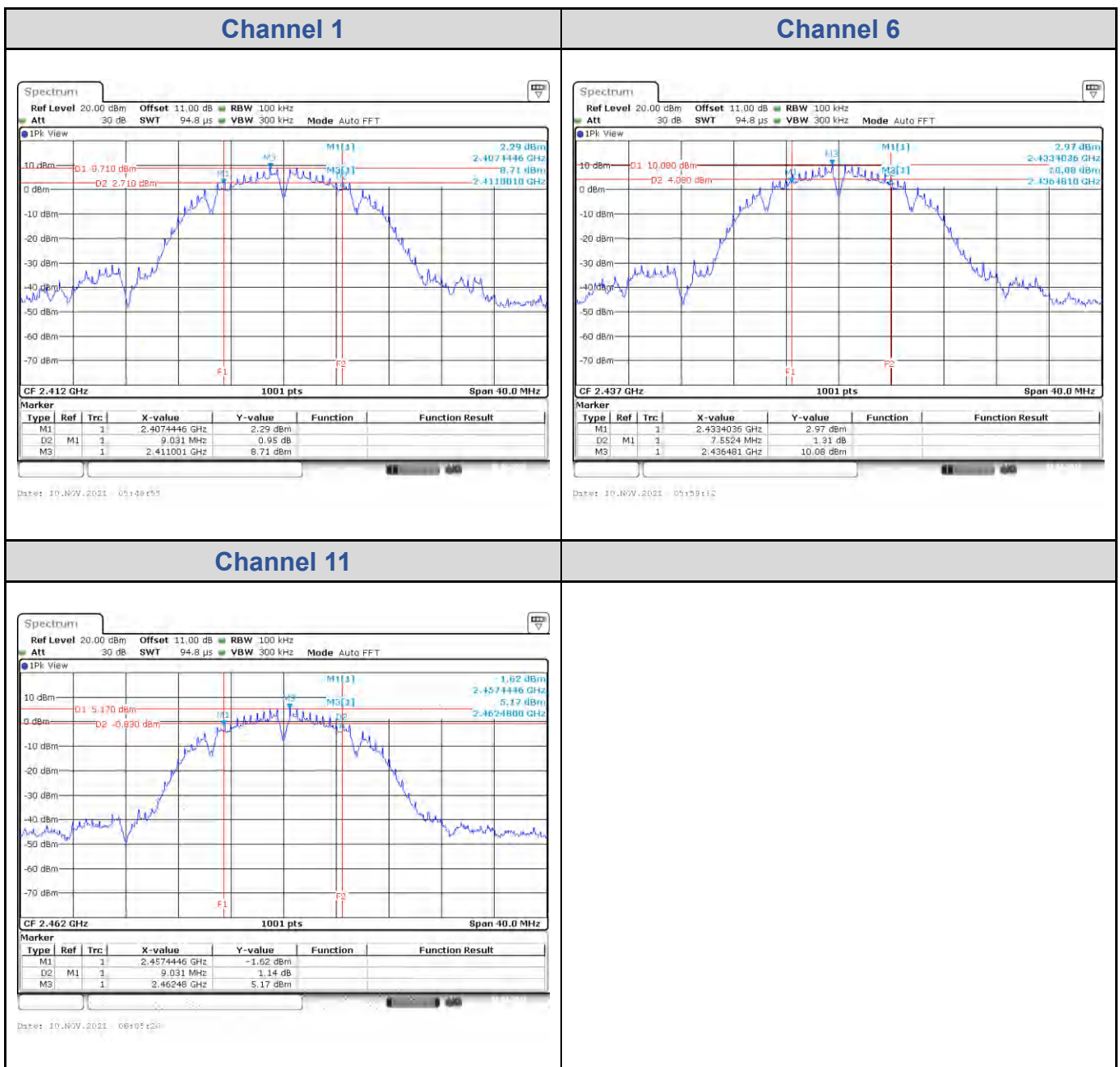
Please refer to Appendix B.

## Appendix A: Test Results of Conducted Test

### Test Result of 6 dB Bandwidth

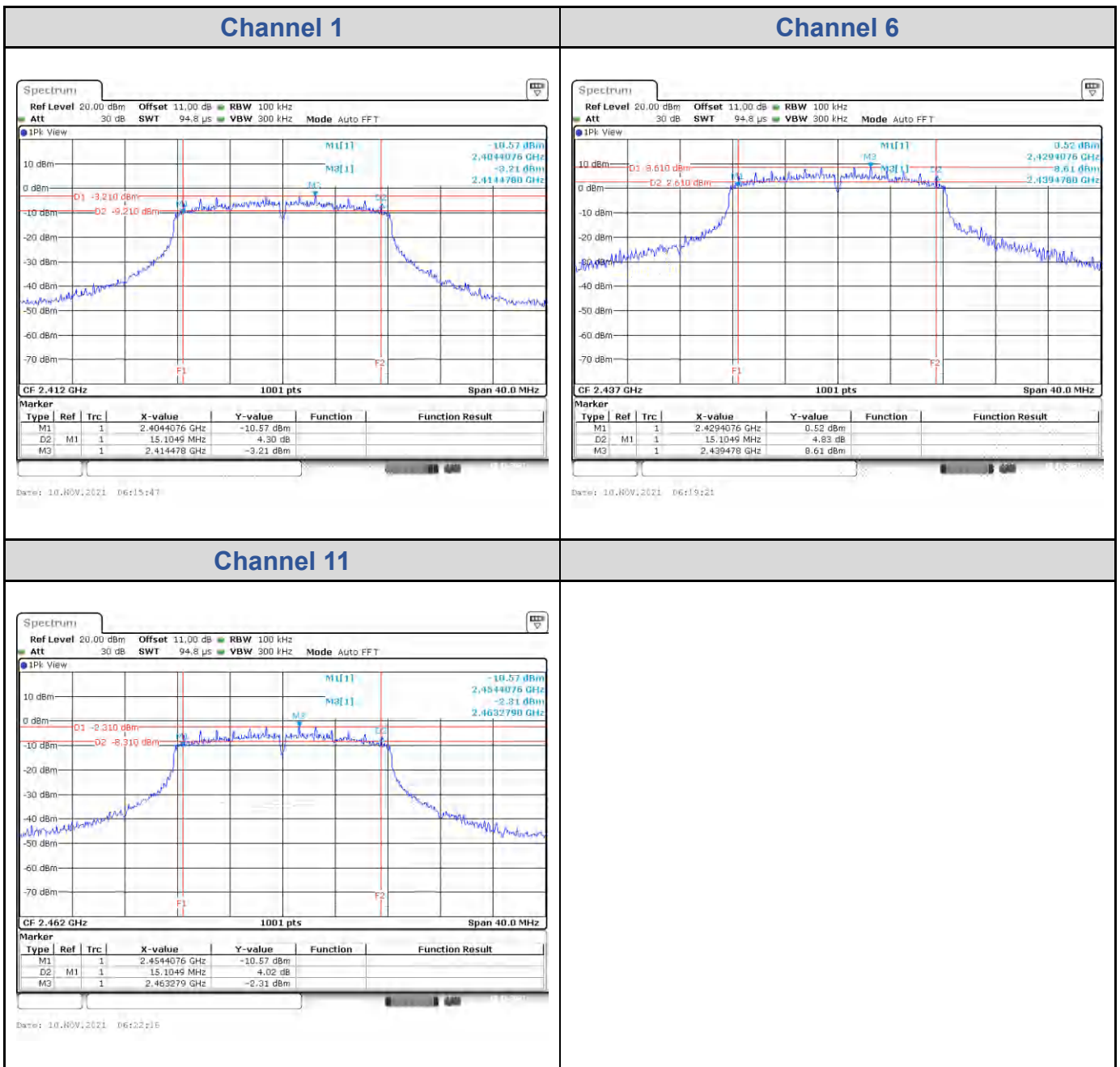
#### 802.11b

Channel	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
1	2412	9.03	> 0.5	Pass
6	2437	7.55	> 0.5	Pass
11	2462	9.03	> 0.5	Pass



**802.11g**

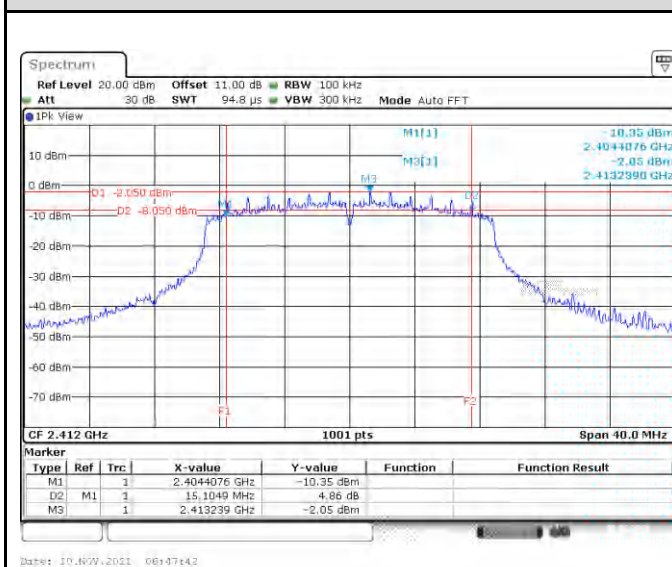
Channel	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
1	2412	15.10	> 0.5	Pass
6	2437	15.10	> 0.5	Pass
11	2462	15.10	> 0.5	Pass



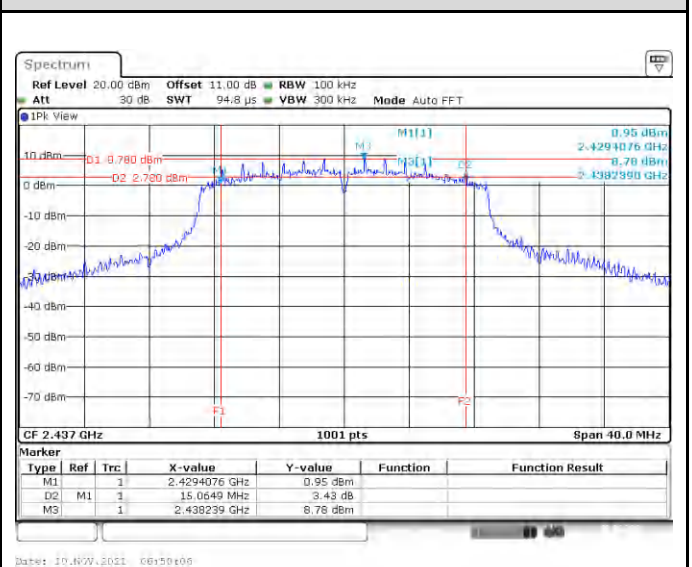


**802.11n HT20**

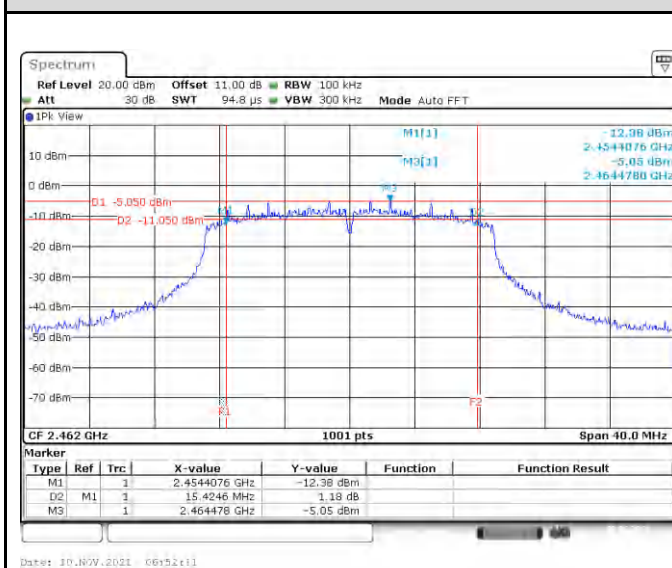
Channel	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
1	2412	15.10	> 0.5	Pass
6	2437	15.06	> 0.5	Pass
11	2462	15.42	> 0.5	Pass

**Channel 1**


Date: 10.NOV.2021 06:47:42

**Channel 6**


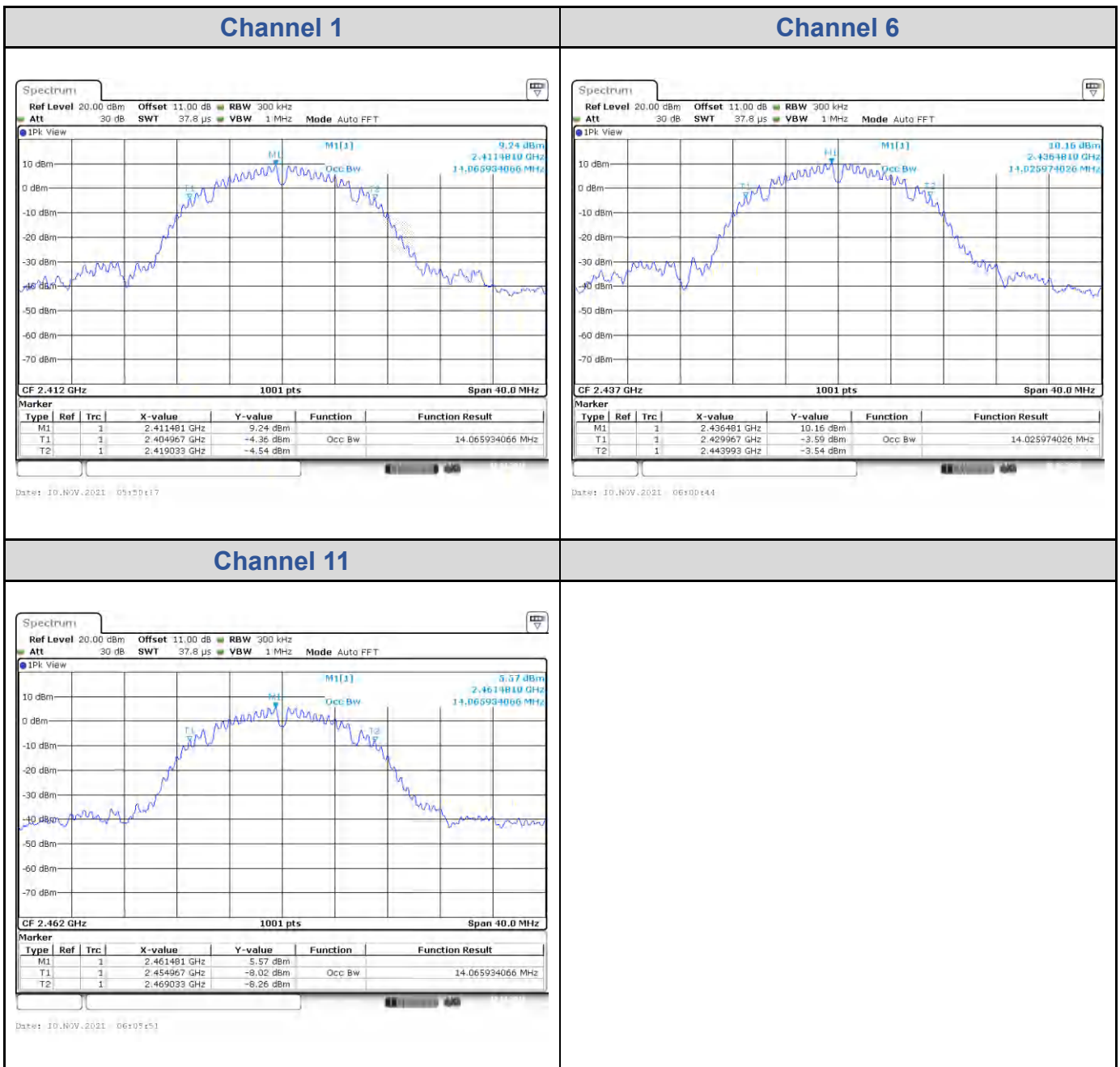
Date: 10.NOV.2021 06:50:06

**Channel 11**


Date: 10.NOV.2021 06:52:11

**Test Result of 99% Occupied Bandwidth**
**802.11b**

Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)
1	2412	14.07
6	2437	14.03
11	2462	14.07

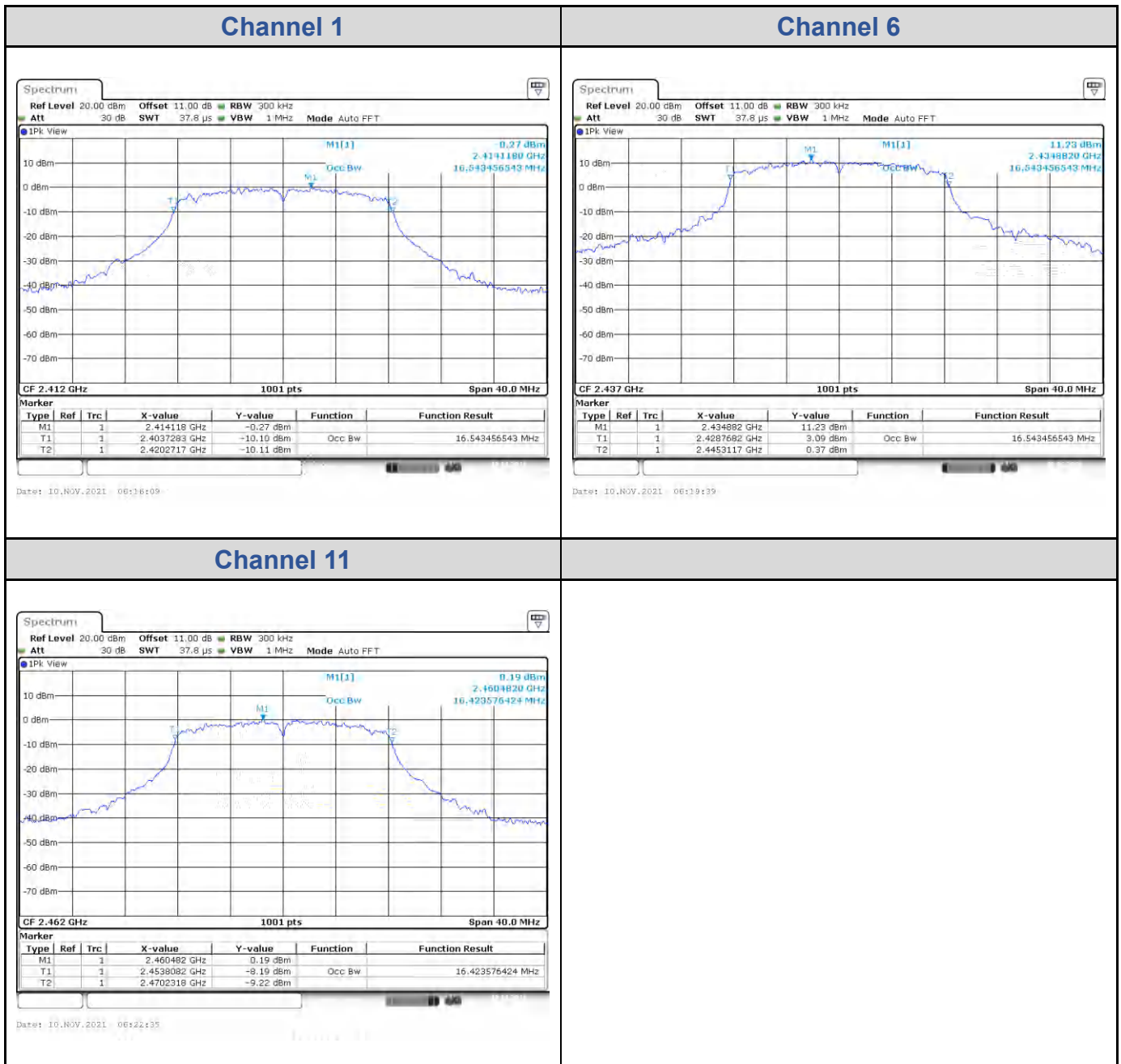


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**802.11g**

Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)
1	2412	16.54
6	2437	16.54
11	2462	16.42

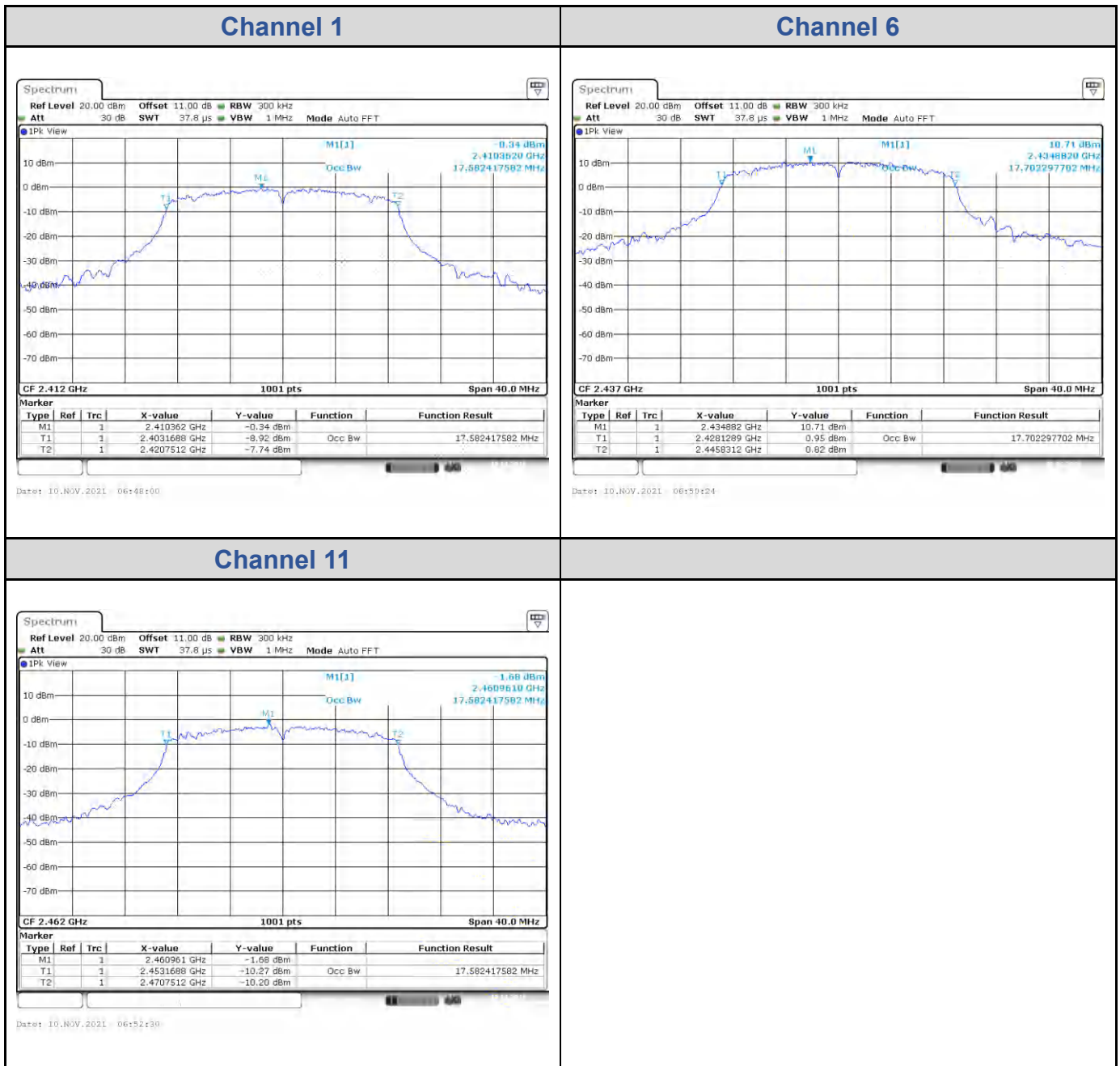


**Prüfbericht - Nr.:**

Test Report No.

**CN21ZSFT(RSS247-WiFi 2.4G) 001**
**802.11n HT20**

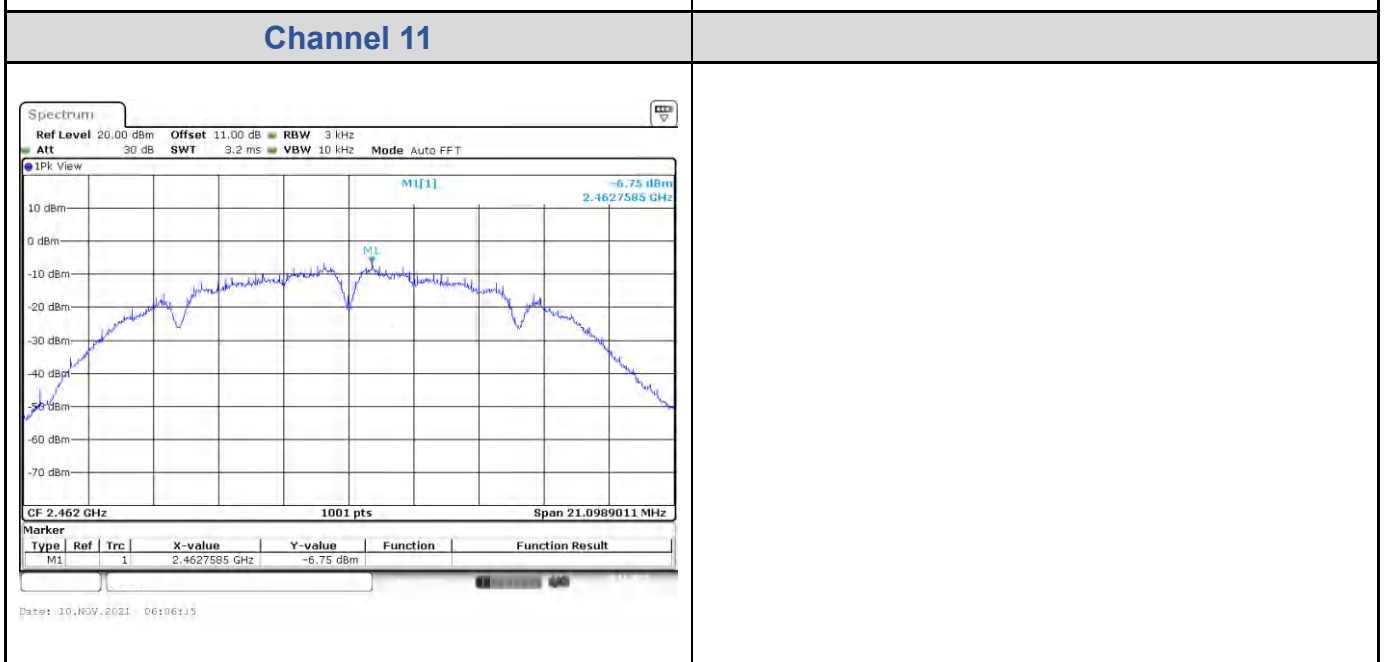
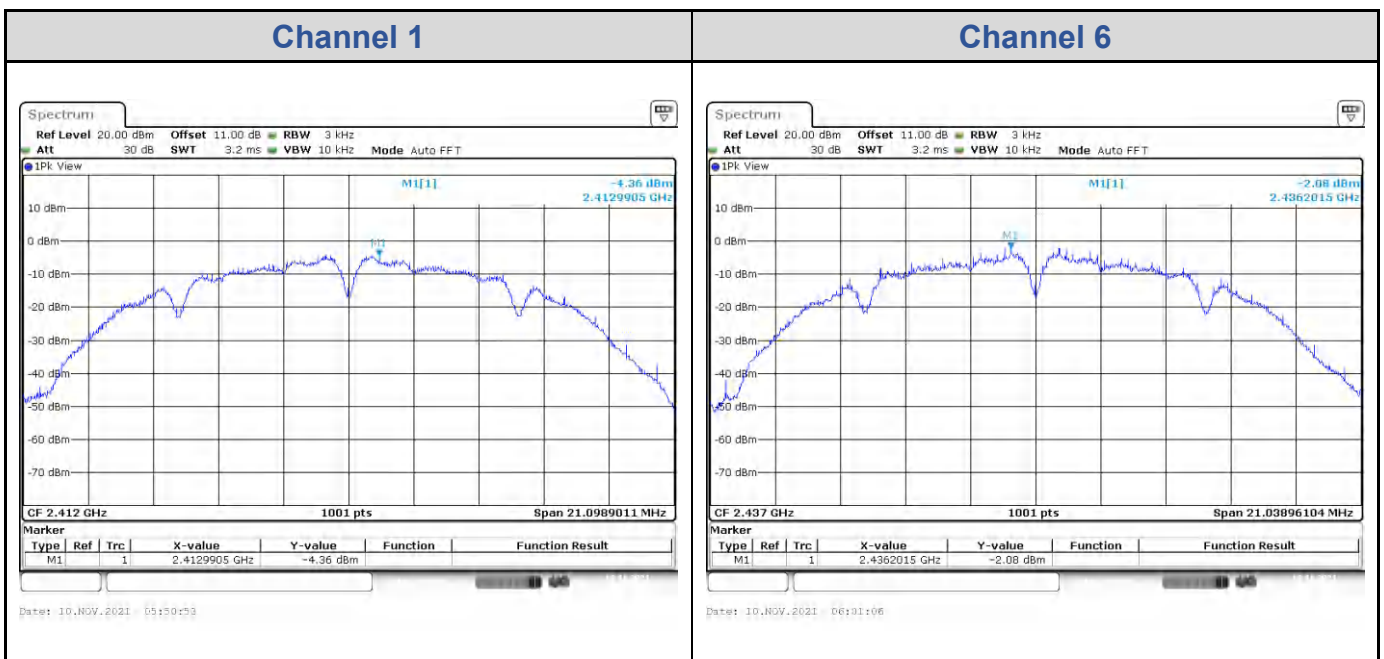
Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)
1	2412	17.58
6	2437	17.70
11	2462	17.58



## Test Result of Power Spectral Density

### 802.11b

Channel	Channel Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
1	2412	-4.36	8
6	2437	-2.08	8
11	2462	-6.75	8

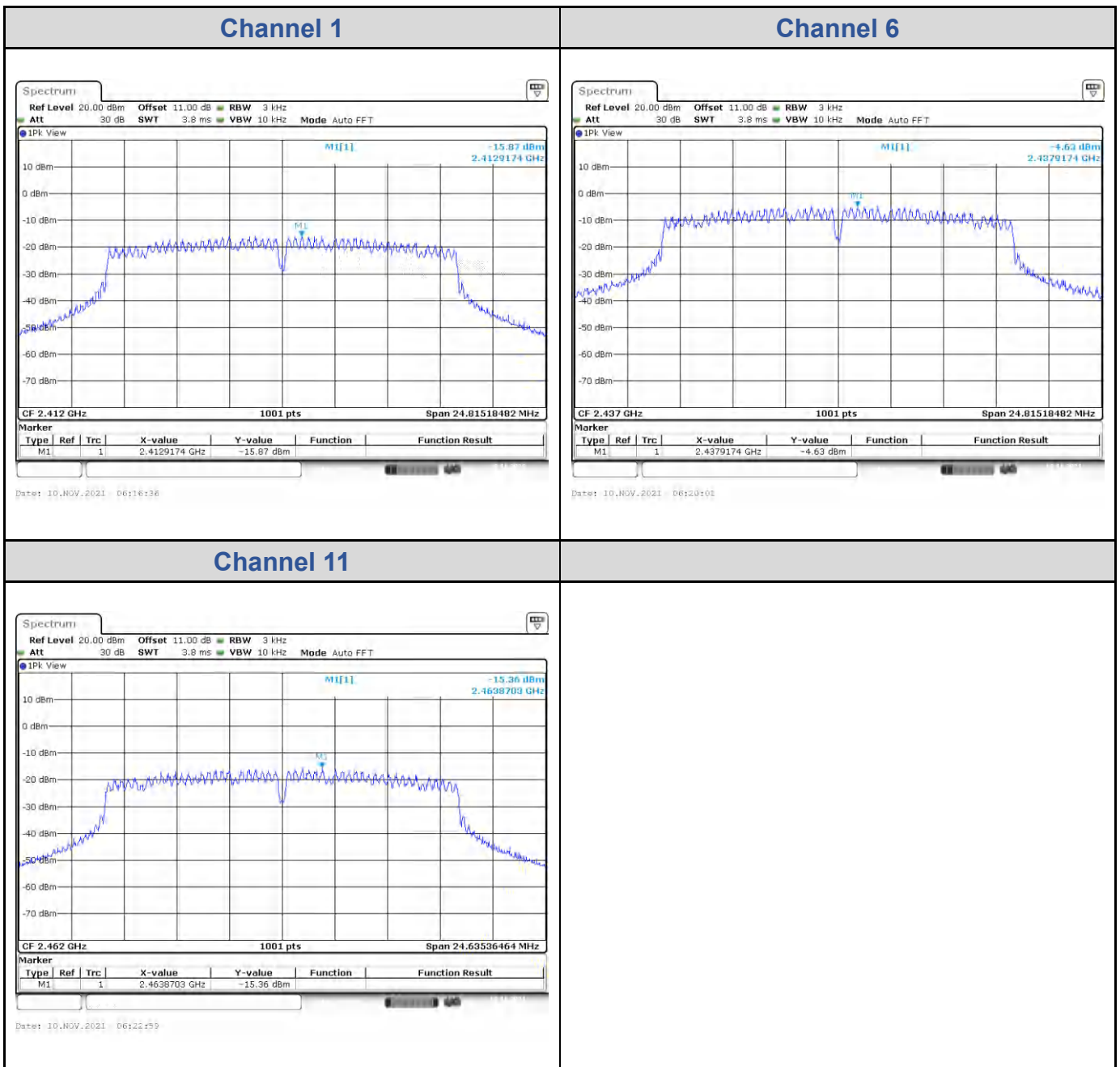


**Prüfbericht - Nr.:**

Test Report No.

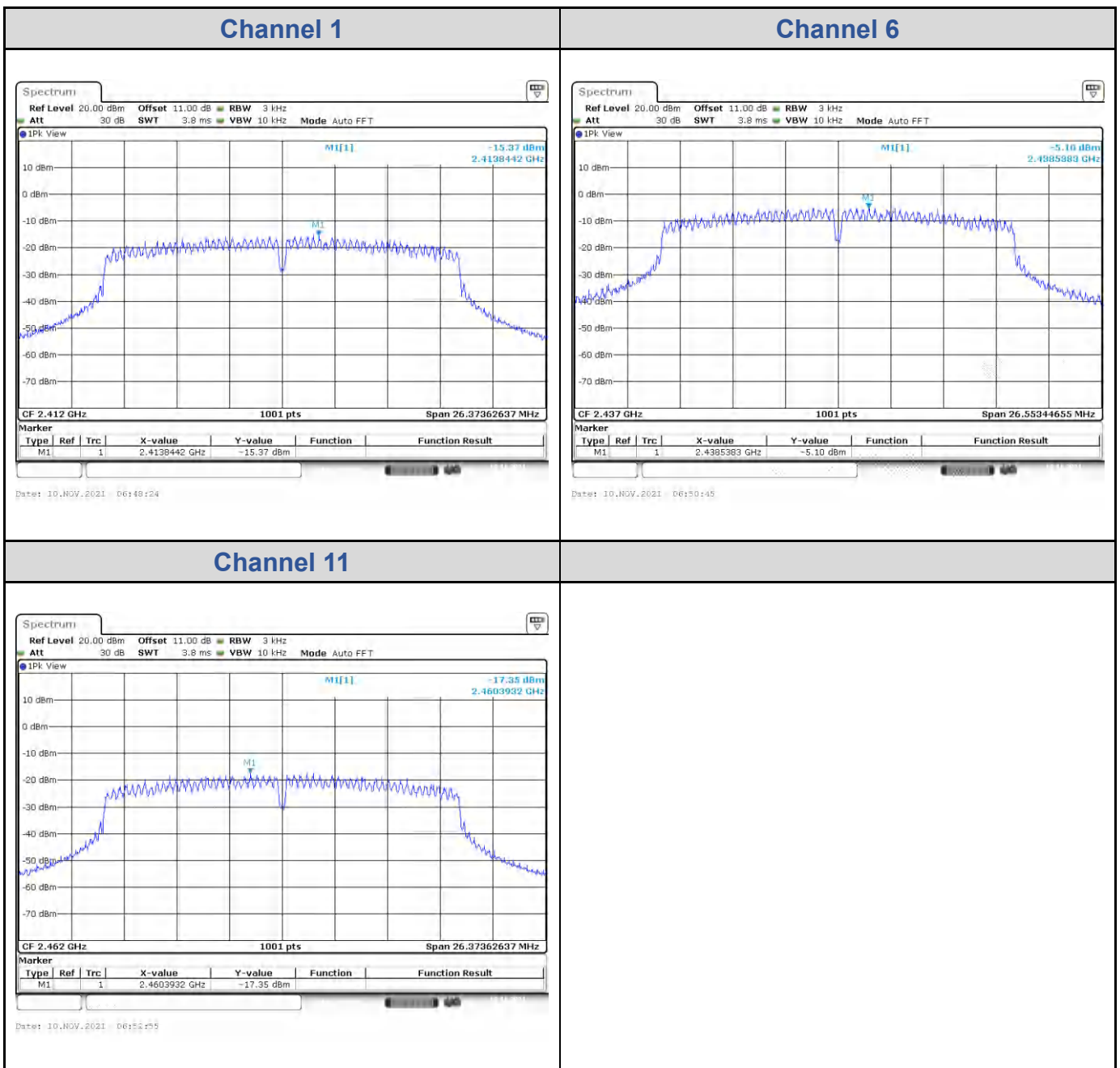
**CN21ZSFT(RSS247-WiFi 2.4G) 001**
**802.11g**

Channel	Channel Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
1	2412	-15.87	8
6	2437	-4.63	8
11	2462	-15.36	8



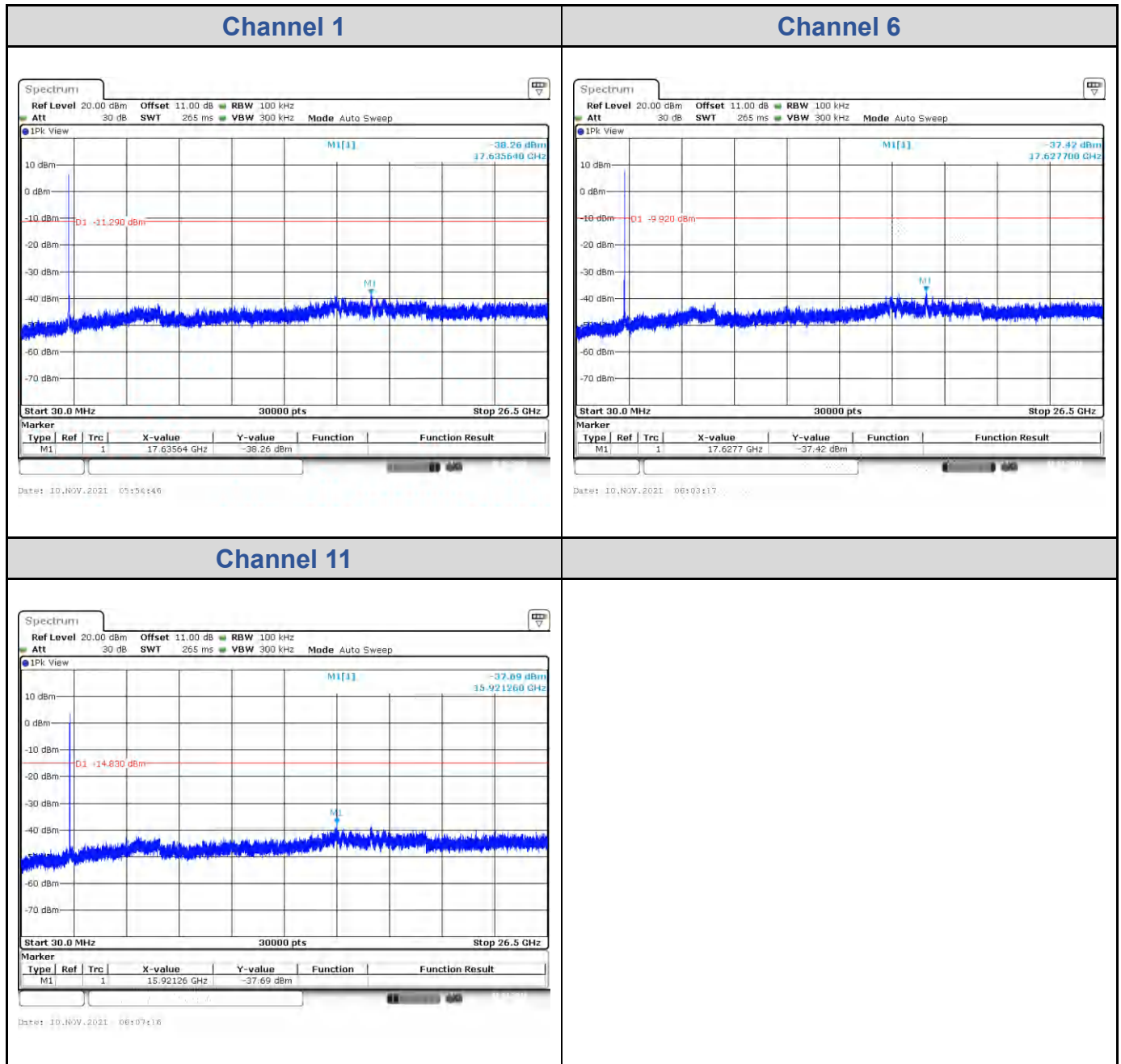
**802.11n HT20**

Channel	Channel Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3kHz)
1	2412	-15.37	8
6	2437	-5.10	8
11	2462	-17.35	8

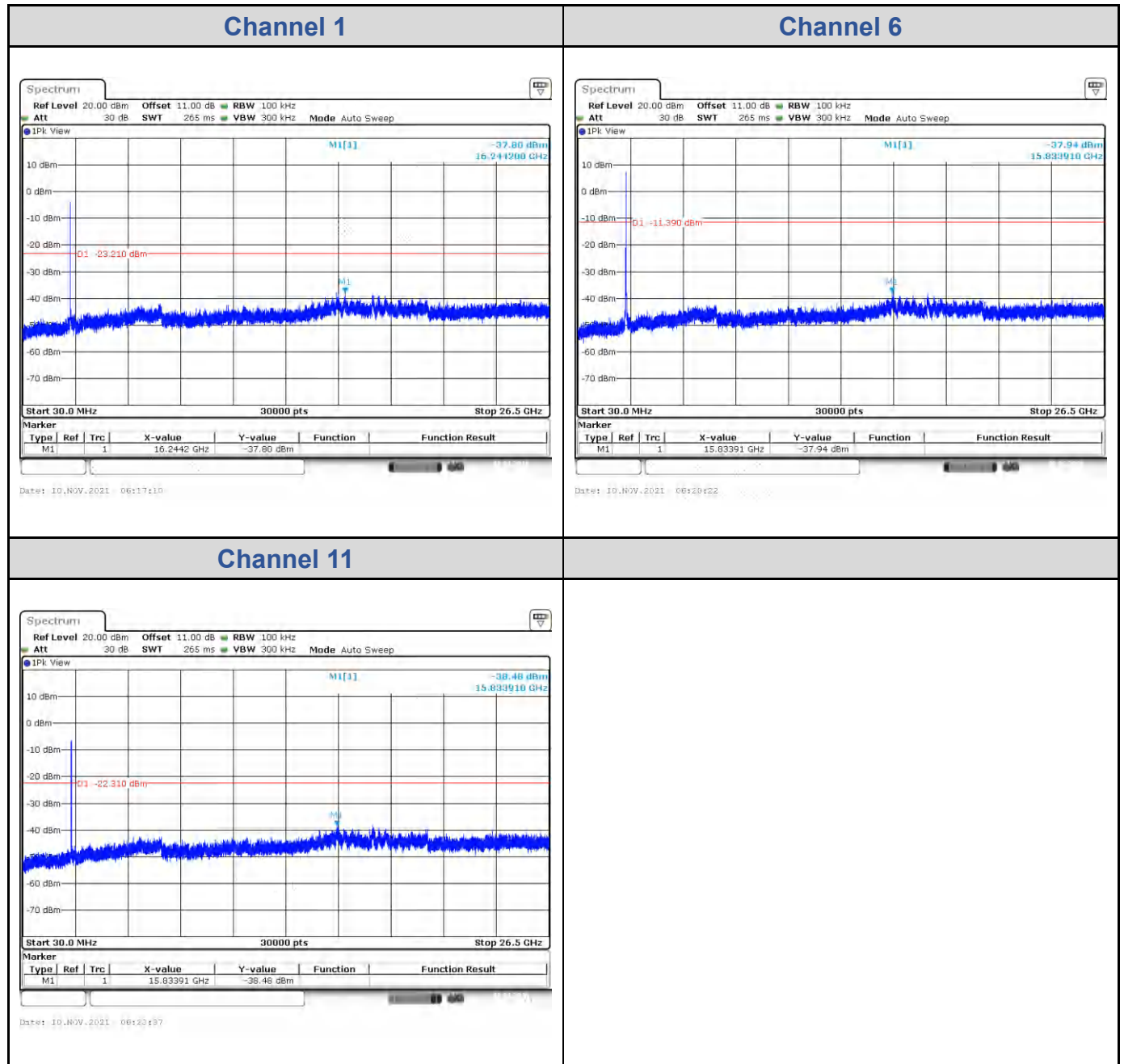


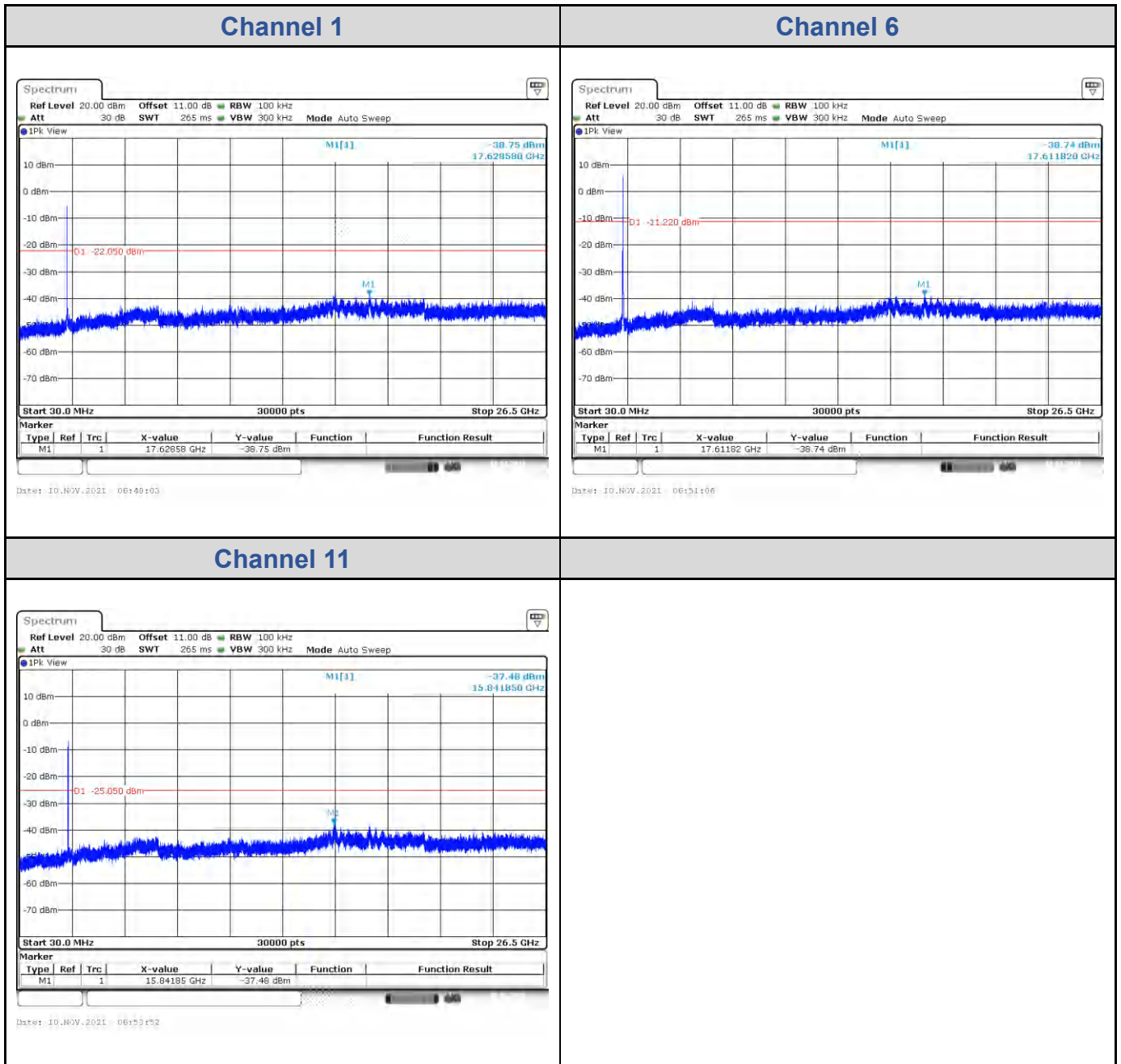
**Prüfbericht - Nr.:**

Test Report No.

**CN21ZSFT(RSS247-WiFi 2.4G) 001**
**Test Result of Conducted Spurious Emissions**
**802.11b**


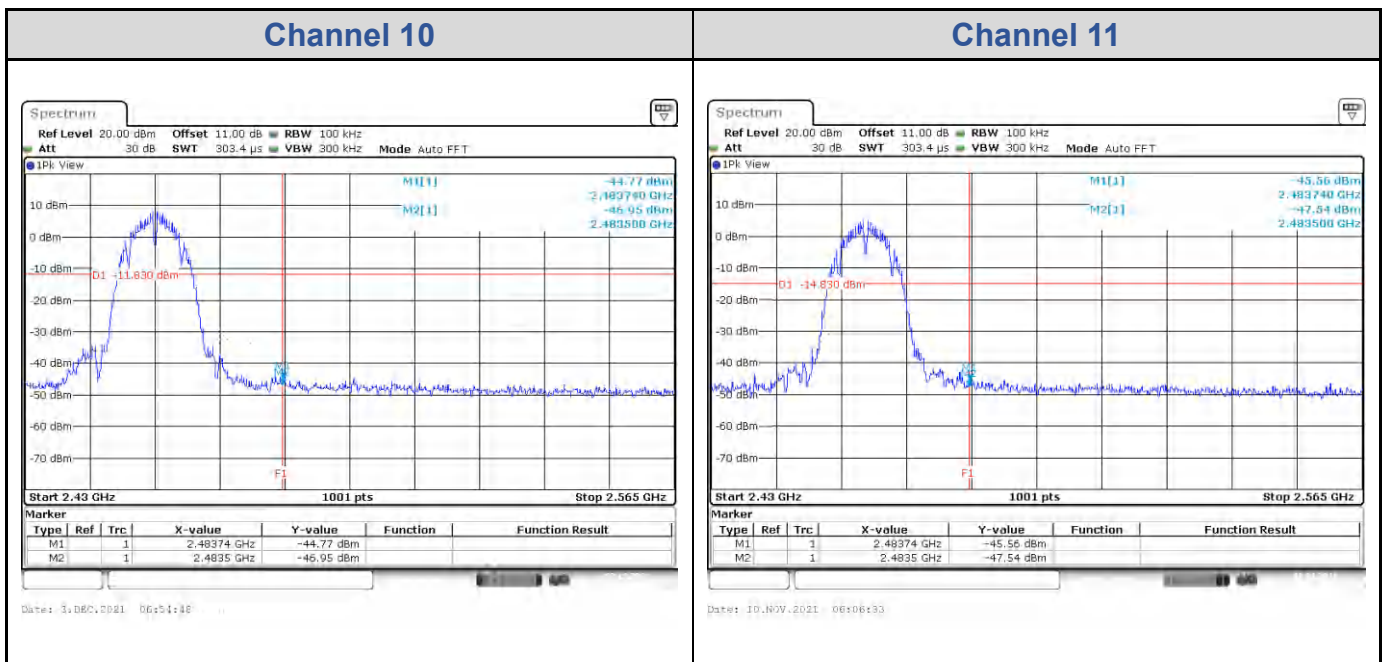
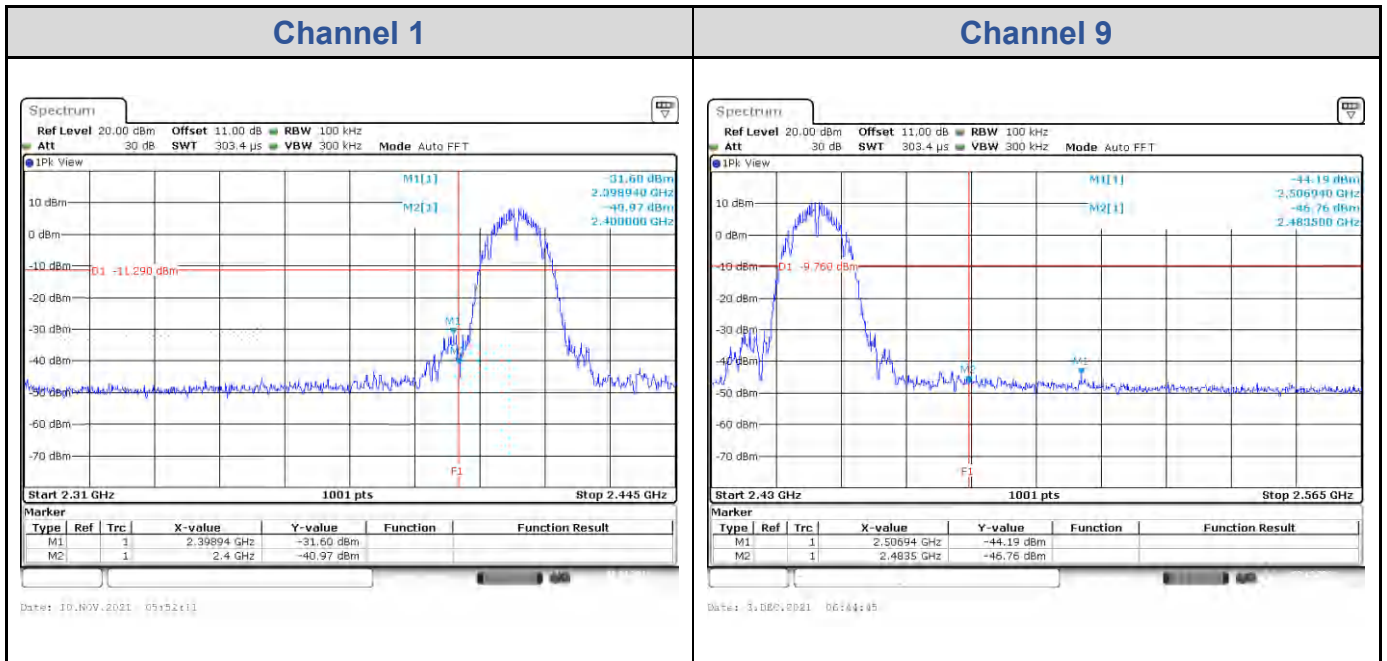


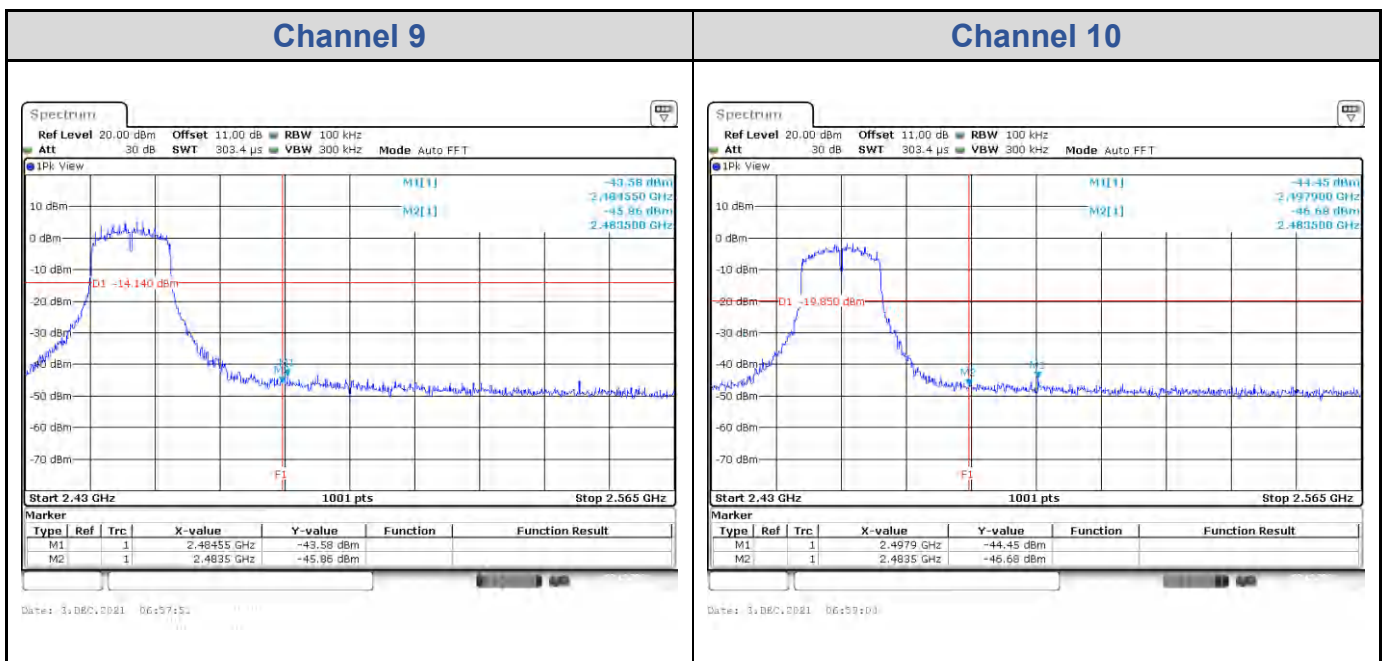
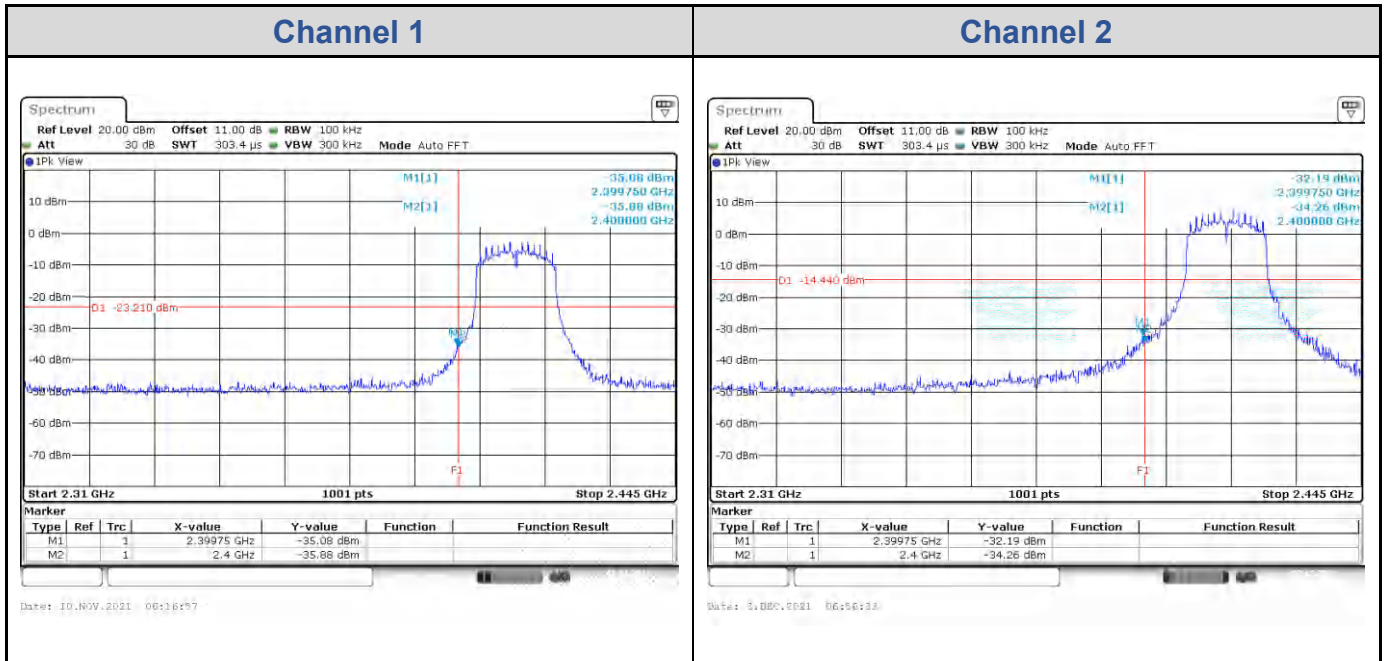
**802.11g**


**802.11n HT20**


## Test Result of Conducted Bandedge, Tx Mode

### 802.11b



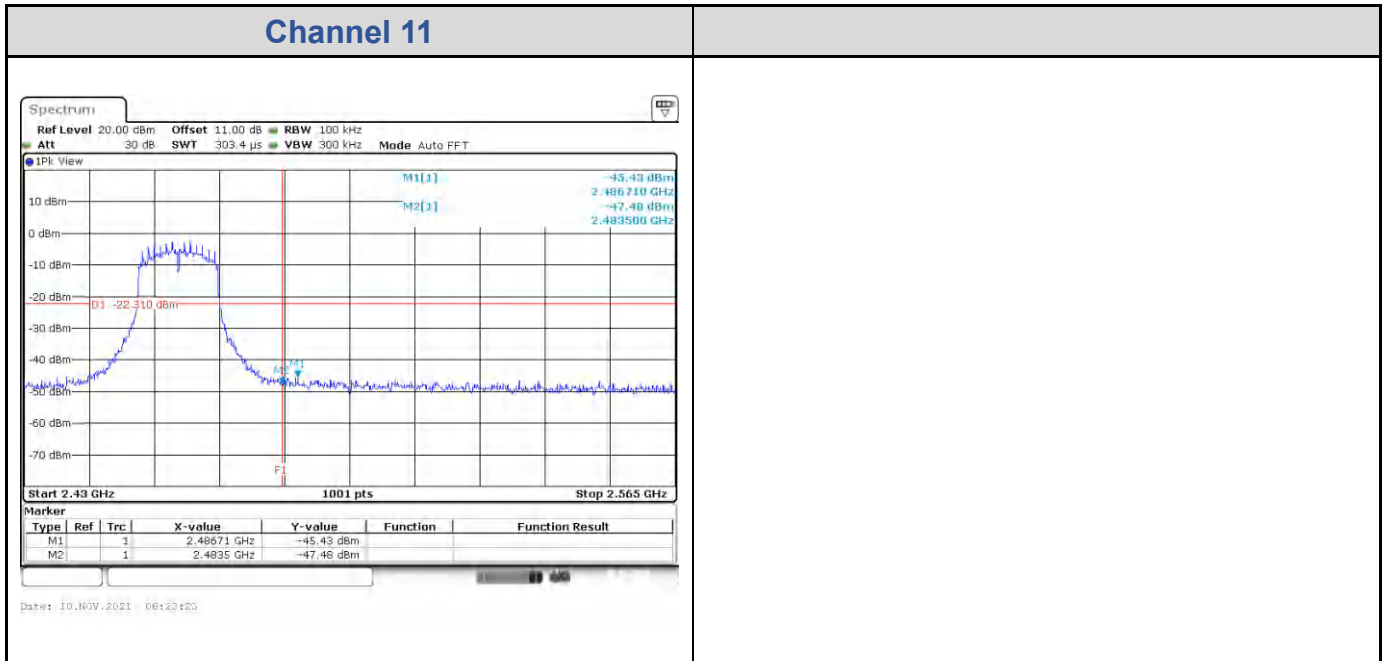
**802.11g**


Prüfbericht - Nr.:

Test Report No.

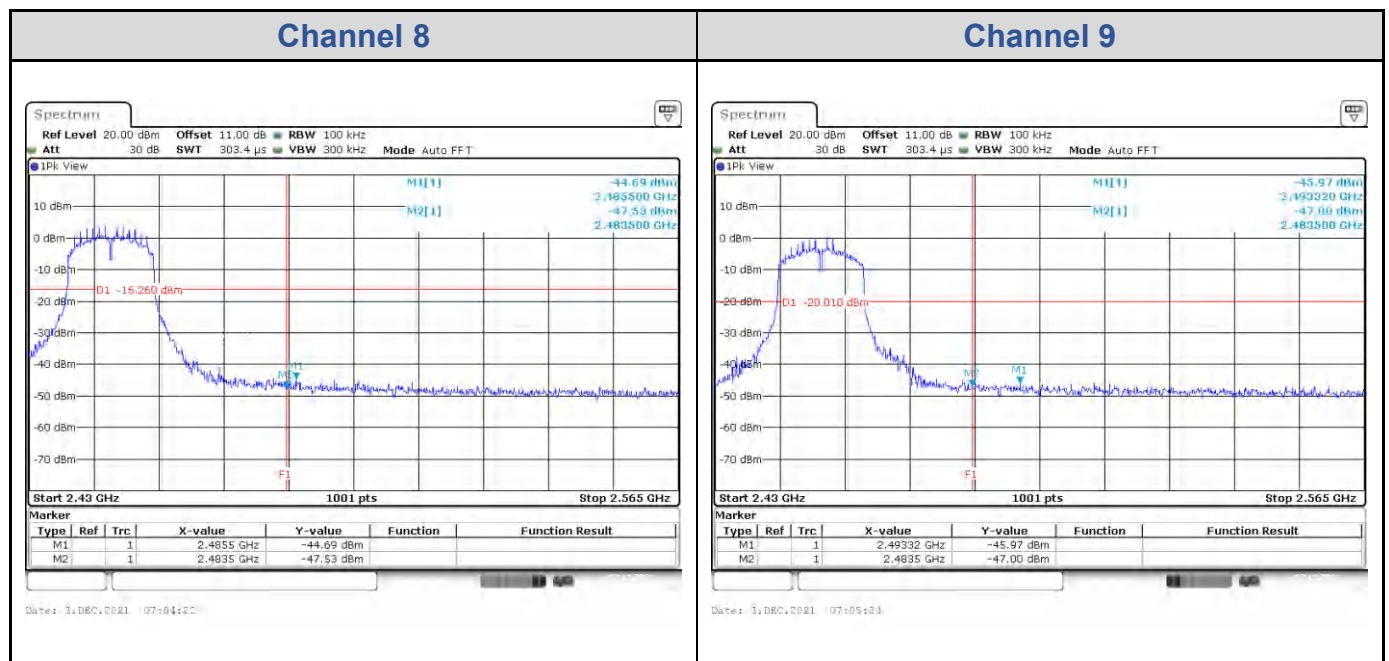
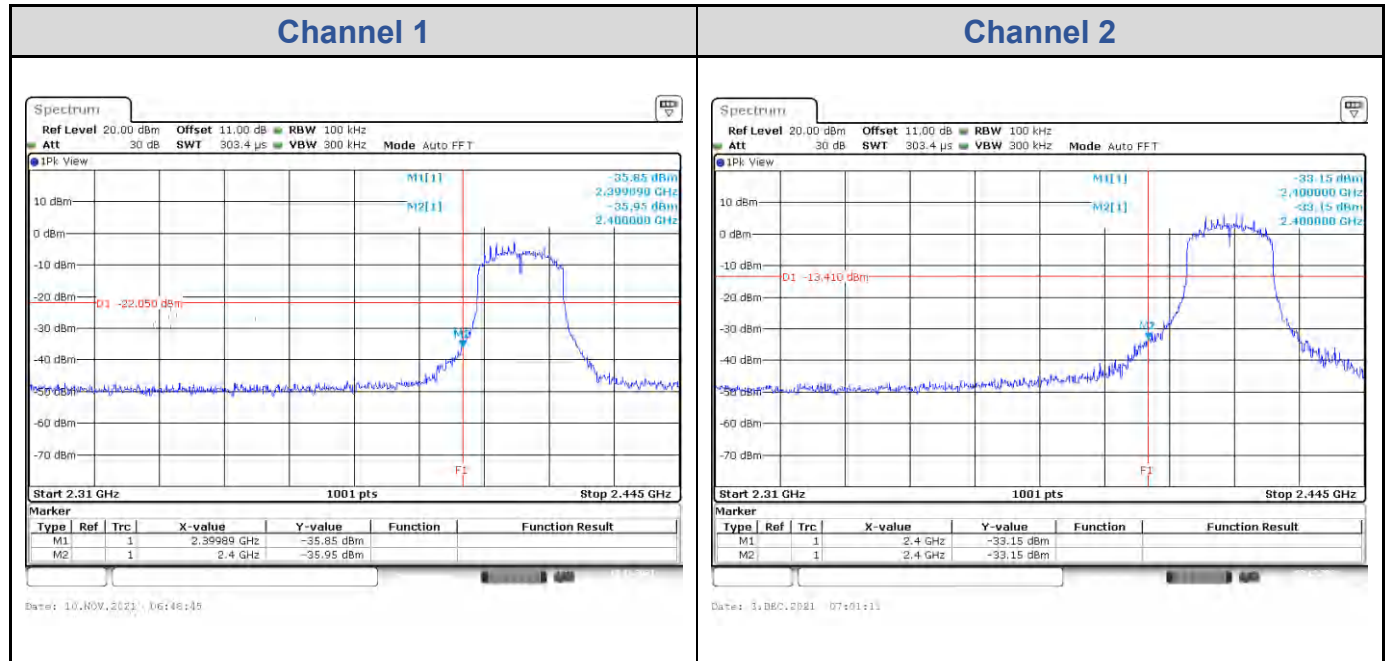
CN21ZSFT(RSS247-WiFi 2.4G) 001

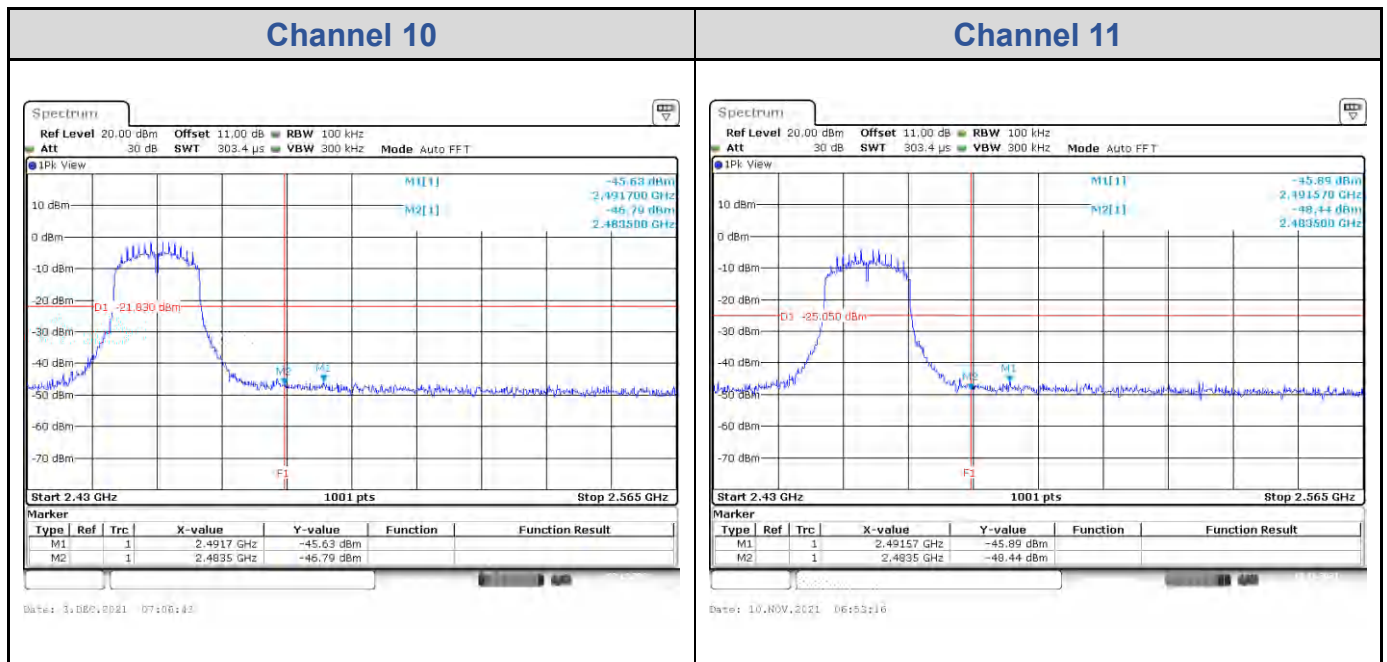
Channel 11



**Prüfbericht - Nr.:**

Test Report No.

**CN21ZSFT(RSS247-WiFi 2.4G) 001**
**802.11n HT20**




# Appendix B: Test Results of Radiated Spurious Emissions & Mains

## Conducted Emission Test

### Band Edges, 2.31GHz ~ 2.9GHz

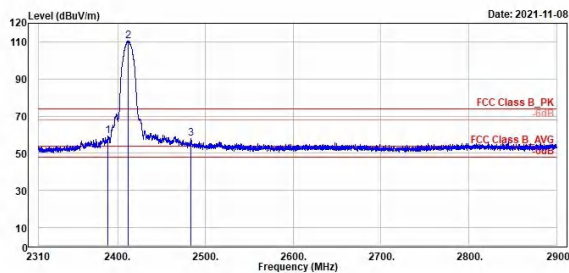
#### 802.11b

##### Channel 1 (Horizontal) Peak

##### Channel 1 (Vertical) Peak



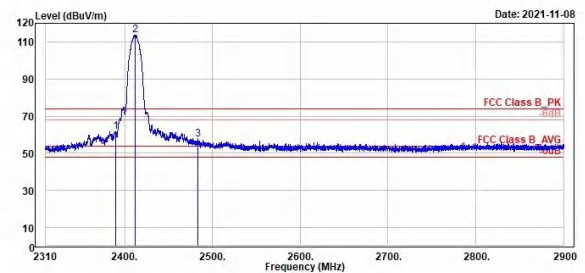
TUV Rheinland Taiwan Ltd.  
No. 458-18, Sec. 2, Fenliao, Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)  
Tel: +886-2172-1000 Fax: +886-2172-1322



1	2	3								
Level	Level	Level								
Factor	Factor	Factor								
Limit	Limit	Limit								
Over	Over	Over								
Line	Line	Line								
Limit	Limit	Limit								
APos	APos	APos								
TPos	TPos	TPos								
Remark	Remark	Remark								
Pol/Phase	Pol/Phase	Pol/Phase								
Note	Note	Note								
2389.06	59.24	21.71	37.53	74.00	-14.76	150	286	Peak	Horizontal	
2412.00	110.40	72.70	37.70	74.00	36.40	150	286	Peak	Horizontal	
2483.81	57.92	19.77	38.15	74.00	-16.08	150	286	Peak	Horizontal	



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1	2	3								
Level	Level	Level								
Factor	Factor	Factor								
Limit	Limit	Limit								
Over	Over	Over								
Line	Line	Line								
Limit	Limit	Limit								
APos	APos	APos								
TPos	TPos	TPos								
Remark	Remark	Remark								
Pol/Phase	Pol/Phase	Pol/Phase								
Note	Note	Note								
2389.09	61.63	24.09	37.54	74.00	-12.37	150	276	Peak	Vertical	
2412.00	113.47	75.77	37.70	74.00	39.47	150	276	Peak	Vertical	
2483.58	57.51	19.37	38.14	74.00	-16.49	150	276	Peak	Vertical	



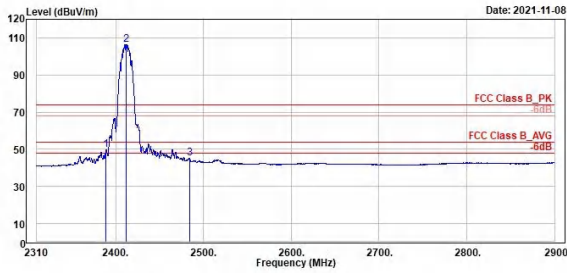
802.11b

Channel 1 (Horizontal) Average

Channel 1 (Vertical) Average



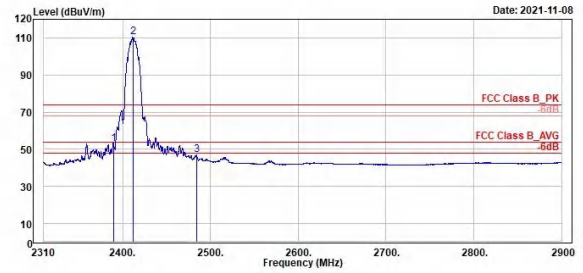
TUV Rheinland Taiwan Ltd.  
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note								
1	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg											
1	2389.38	49.57	12.03	37.54	54.00	-4.43	150	286	Average	Horizontal									
2	2412.00	106.42	66.72	37.70	54.00	52.42	150	286	Average	Horizontal									
3	2484.05	45.36	7.21	38.15	54.00	-8.64	150	286	Average	Horizontal									



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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note								
1	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg											
1	2389.41	52.92	15.38	37.54	54.00	-1.08	150	276	Average	Vertical									
2	2412.00	110.38	72.68	37.70	54.00	56.38	150	276	Average	Vertical									
3	2484.17	46.94	8.79	38.15	54.00	-7.06	150	276	Average	Vertical									

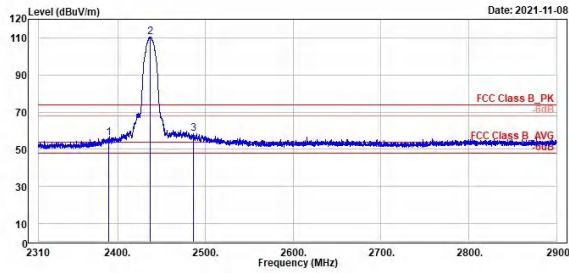
802.11b

Channel 6 (Horizontal) Peak

Channel 6 (Vertical) Peak



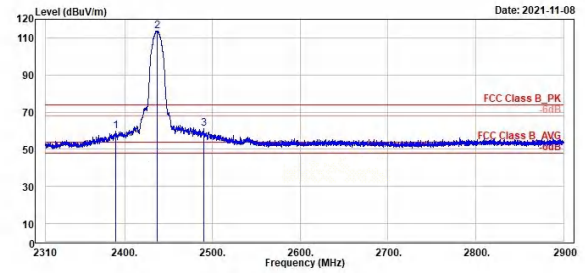
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1	2	3							
Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
2389.65	55.90	18.36	37.54	74.00	-18.10	150	285 Peak	Horizontal	
2437.00	118.49	72.61	37.88	74.00	36.49	150	285 Peak	Horizontal	
2486.06	58.42	28.27	38.15	74.00	-15.58	150	285 Peak	Horizontal	



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1	2	3							
Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
2389.65	59.70	22.16	37.54	74.00	-14.30	150	276 Peak	Vertical	
2437.00	113.79	75.91	37.88	74.00	39.79	150	276 Peak	Vertical	
2490.30	61.00	22.82	38.18	74.00	-13.00	150	276 Peak	Vertical	

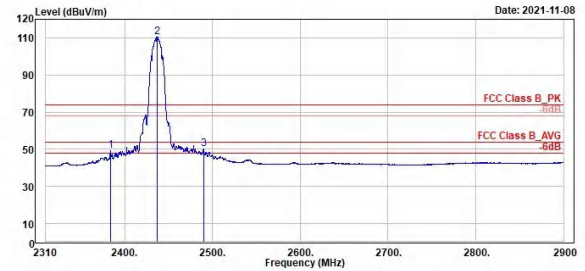
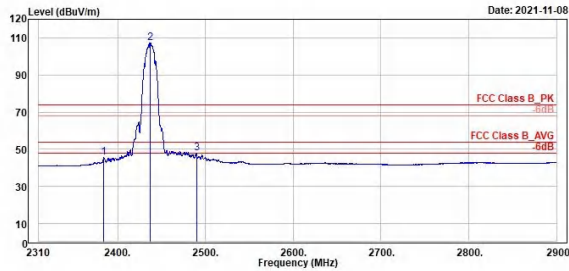
802.11b

Channel 6 (Horizontal) Average

Channel 6 (Vertical) Average

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TÜVRheinland  
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Tel: +886-2172-1000 Fax: +886-2172-1322



1	2	3								
MHz	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
2383.99	45.54	8.04	37.50	54.00	-8.46	150	285	Average	Horizontal	
2437.00	107.27	69.39	37.88	54.00	53.27	150	285	Average	Horizontal	
2489.83	47.71	9.53	38.18	54.00	-6.29	150	285	Average	Horizontal	

1	2	3								
MHz	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
2384.10	49.49	11.99	37.50	54.00	-4.51	150	276	Average	Vertical	
2437.00	110.57	72.69	37.88	54.00	56.57	150	276	Average	Vertical	
2489.95	50.19	12.01	38.18	54.00	-3.81	150	276	Average	Vertical	

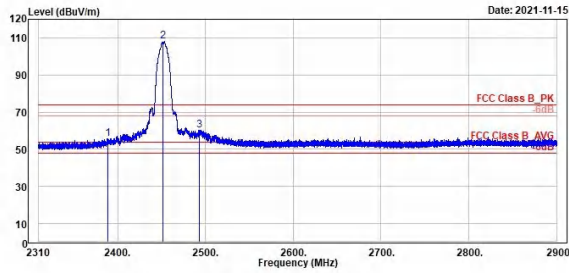
802.11b

Channel 9 (Horizontal) Peak

Channel 9 (Vertical) Peak



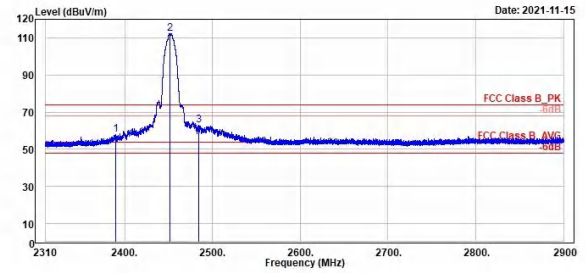
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2388.57	55.79	18.26	37.53	74.00	-18.21	181	0	Peak	Horizontal	
2 *	2452.00	107.96	69.98	37.98	74.00	33.96	181	0	Peak	Horizontal	
3	2493.56	60.41	22.22	38.19	74.00	-13.59	181	0	Peak	Horizontal	



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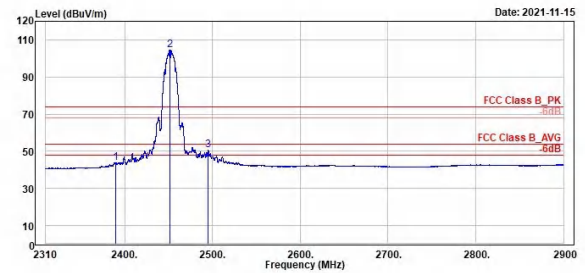
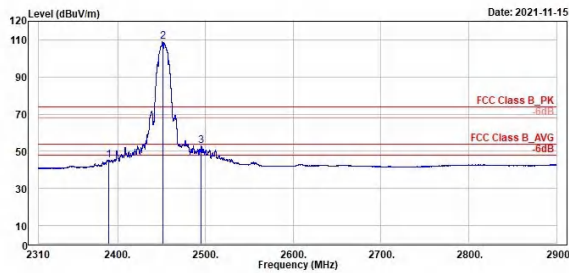


Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2389.55	57.82	20.28	37.54	74.00	-16.18	150	0	Peak	Vertical	
2 *	2452.00	112.36	74.38	37.98	74.00	38.36	150	0	Peak	Vertical	
3	2484.02	62.83	24.68	38.15	74.00	-11.17	150	0	Peak	Vertical	

802.11b

Channel 9 (Horizontal) Average

Channel 9 (Vertical) Average



Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.89	45.39	7.85	37.54	54.00	-8.61	150	360 Average	Vertical
2 *	2452.00	108.86	79.88	37.98	54.00	54.86	150	360 Average	Vertical
3 !	2495.16	53.08	14.88	38.20	54.00	-0.92	150	360 Average	Vertical

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.69	43.92	6.38	37.54	54.00	-10.08	181	0 Average	Horizontal
2 *	2452.00	104.57	66.59	37.98	54.00	50.57	181	0 Average	Horizontal
3 !	2495.26	50.65	12.45	38.20	54.00	-3.35	181	0 Average	Horizontal

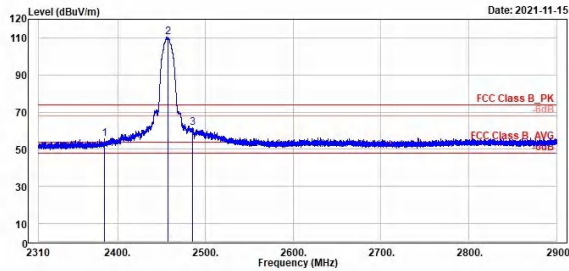
802.11b

Channel 10 (Horizontal) Peak

Channel 10 (Vertical) Peak



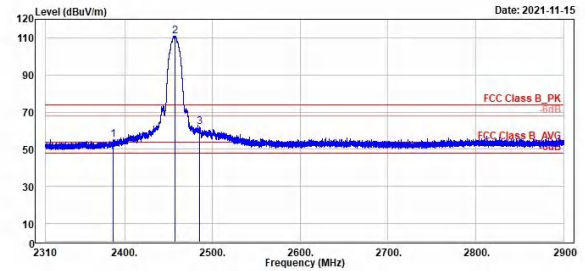
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1	2	3	4	5	6	7	8	9	10	11	12
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note		
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2384.62	55.52	18.01	37.51	74.00	-18.48	181	360 Peak	Horizontal			
2457.00	118.25	72.24	38.01	74.00	36.25	181	360 Peak	Horizontal			
2485.30	61.68	23.53	38.15	74.00	-12.32	181	360 Peak	Horizontal			



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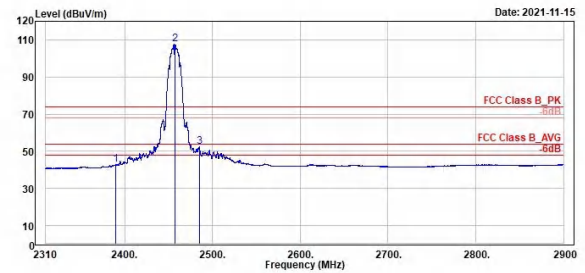
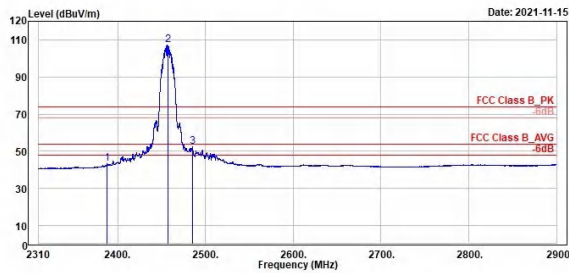


1	2	3	4	5	6	7	8	9	10	11	12
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note		
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2386.94	55.24	17.72	37.52	74.00	-18.76	150	360 Peak	Vertical			
2457.00	118.97	72.96	38.01	74.00	36.97	150	360 Peak	Vertical			
2485.65	61.87	23.72	38.15	74.00	-12.13	150	360 Peak	Vertical			

802.11b

Channel 10 (Horizontal) Average

Channel 10 (Vertical) Average



1	2	3									
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2388.23	43.29	5.76	37.53	54.00	-10.71	181	360	Average	Horizontal	
2 *	2457.00	107.10	69.09	38.01	54.00	53.10	181	360	Average	Horizontal	
3 !	2485.23	52.53	14.38	38.15	54.00	-1.47	181	360	Average	Horizontal	

1	2	3									
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2389.93	42.93	5.39	37.54	54.00	-11.07	150	360	Average	Vertical	
2 *	2457.00	107.04	69.03	38.01	54.00	53.04	150	360	Average	Vertical	
3 !	2485.23	52.46	14.31	38.15	54.00	-1.54	150	360	Average	Vertical	

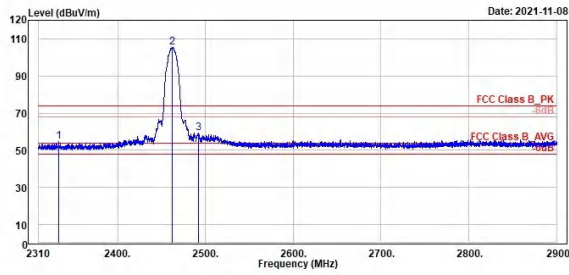
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Channel 11 (Horizontal) Peak

Channel 11 (Vertical) Peak



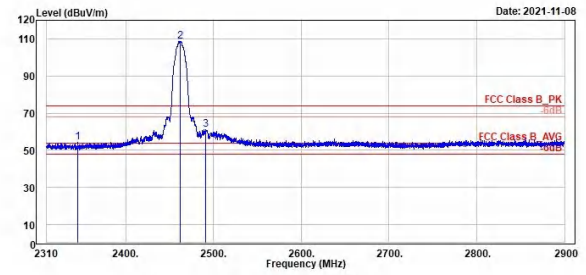
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Peak	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2333.25	54.57	17.36	37.21	74.00	-19.43	150	286	Peak	Horizontal		
2 *	2462.00	105.55	67.51	38.04	74.00	31.55	150	286	Peak	Horizontal		
3	2492.43	59.36	21.17	38.19	74.00	-14.64	150	286	Peak	Horizontal		



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Peak	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2345.64	54.47	17.23	37.24	74.00	-19.53	150	292	Peak	Vertical		
2 *	2462.00	108.66	70.62	38.04	74.00	34.66	150	292	Peak	Vertical		
3	2491.48	61.30	23.11	38.19	74.00	-12.70	150	292	Peak	Vertical		



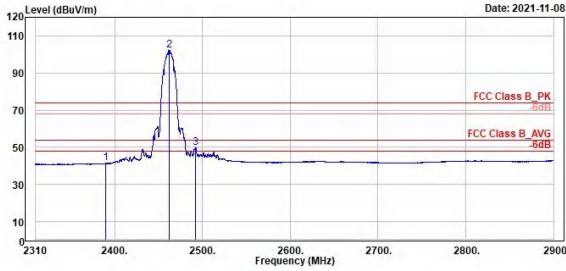
802.11b

Channel 11 (Horizontal) Average

Channel 11 (Vertical) Average



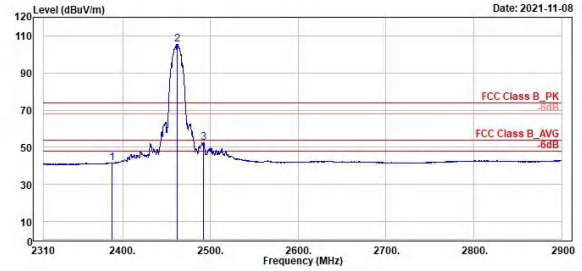
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note									
	dBuV/m	dBuV	dB/m	dB	dBuV/m	dB	cm	deg												
2389.53	41.29	3.75	37.54	54.00	-12.71	150	286	Average	Horizontal											
2462.00	102.24	64.20	38.04	54.00	48.24	150	286	Average	Horizontal											
2492.55	49.67	11.48	38.19	54.00	-4.33	150	286	Average	Horizontal											



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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note									
	dBuV/m	dBuV	dB/m	dB	dBuV/m	dB	cm	deg												
2387.64	41.68	4.15	37.53	54.00	-12.32	150	292	Average	Vertical											
2462.00	105.51	67.47	38.04	54.00	51.51	150	292	Average	Vertical											
2492.19	52.43	14.24	38.19	54.00	-1.57	150	292	Average	Vertical											

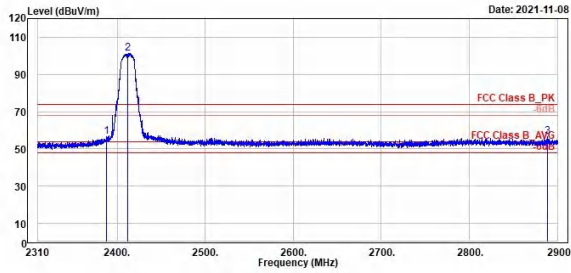
802.11g

Channel 1 (Horizontal) Peak

Channel 1 (Vertical) Peak



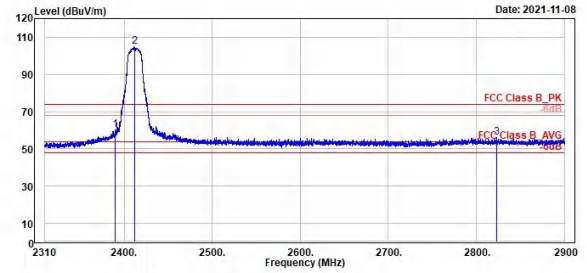
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2388.35	56.42	18.89	37.53	74.00	-17.58	150	286 Peak	Horizontal
2 *	2412.00	101.27	63.57	37.70	74.00	27.27	150	286 Peak	Horizontal
3	2888.67	56.37	17.84	38.53	74.00	-17.63	150	286 Peak	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2390.00	60.28	22.74	37.54	74.00	-13.72	150	275 Peak	Vertical
2 *	2412.00	104.90	67.20	37.70	74.00	30.90	150	275 Peak	Vertical
3	2823.06	56.11	17.81	38.30	74.00	-17.89	150	275 Peak	Vertical

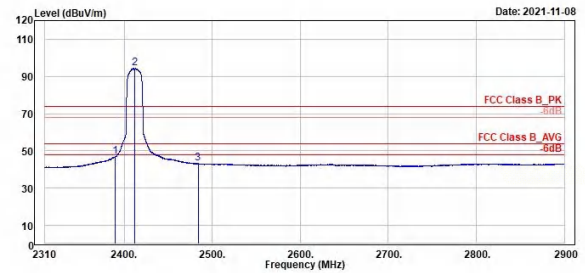
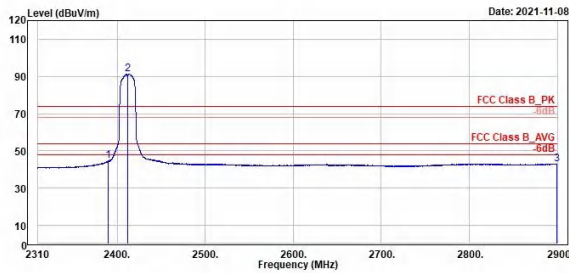
802.11g

Channel 1 (Horizontal) Average

Channel 1 (Vertical) Average

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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2398.00	44.51	6.97	37.54	54.00	-9.49	150	286 Average	Horizontal
2 *	2412.00	91.38	53.68	37.70	54.00	37.38	150	286 Average	Horizontal
3	2898.94	43.06	4.47	38.59	54.00	-10.94	150	286 Average	Horizontal

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.77	47.06	9.52	37.54	54.00	-6.94	150	275 Average	Vertical
2 *	2412.00	94.29	56.59	37.70	54.00	40.29	150	275 Average	Vertical
3	2483.93	43.32	5.17	38.15	54.00	-10.68	150	275 Average	Vertical

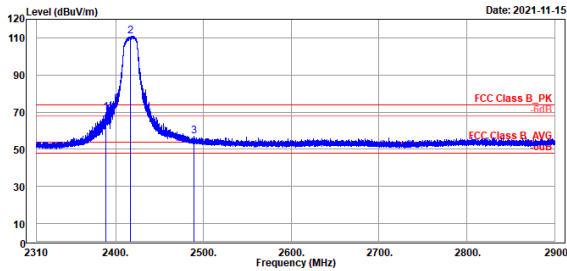
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Channel 2 (Horizontal) Peak

Channel 2 (Vertical) Peak



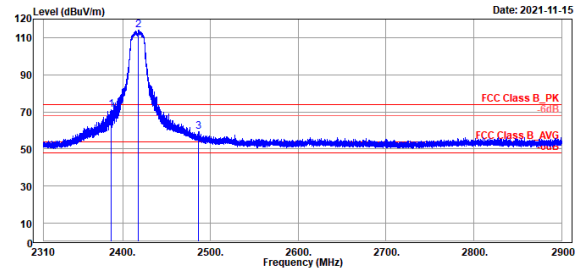
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2388.68	69.79	32.26	37.53	74.00	-4.21	175	360	Peak	Horizontal	
2	2417.00	111.10	73.37	37.73	74.00	37.10	175	360	Peak	Horizontal	
3	2488.87	56.94	18.76	38.18	74.00	-17.06	175	360	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2386.67	71.28	33.76	37.52	74.00	-2.72	150	0	Peak	Vertical	
2	2417.69	114.19	76.45	37.74	74.00	40.19	150	0	Peak	Vertical	
3	2486.38	59.16	21.00	38.16	74.00	-14.84	150	0	Peak	Vertical	

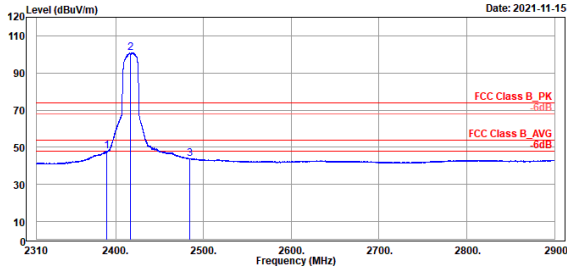
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Channel 2 (Horizontal) Average

Channel 2 (Vertical) Average



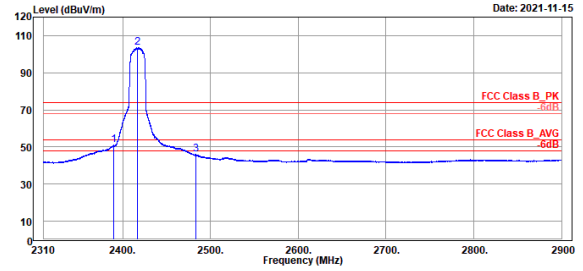
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note	
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2390.00	47.05	10.31	37.54	54.00	-6.15	175	360	Average	Horizontal
2	2417.00	101.06	63.33	37.73	54.00	47.06	175	360	Average	Horizontal
3	2483.98	44.00	5.85	38.15	54.00	-10.00	175	360	Average	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note	
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.93	50.94	13.40	37.54	54.00	-3.06	150	0	Average	Vertical
2	2417.00	103.64	65.91	37.73	54.00	49.64	150	0	Average	Vertical
3	2483.84	45.86	7.71	38.15	54.00	-8.14	150	0	Average	Vertical

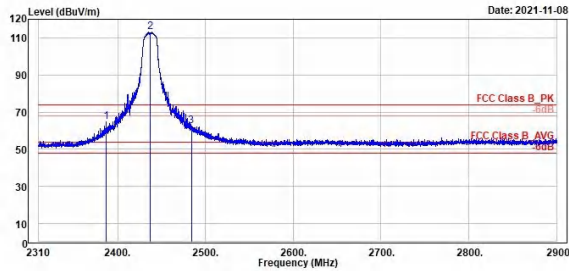
802.11g

Channel 6 (Horizontal) Peak

Channel 6 (Vertical) Peak



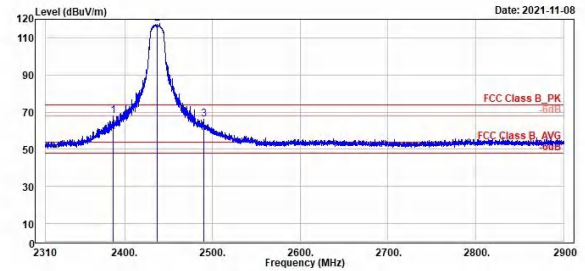
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1	2	3							
Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
2387.17	64.75	27.23	37.52	74.00	-9.25	150	286 Peak	Horizontal	
2437.00	113.04	75.16	37.88	74.00	39.04	150	286 Peak	Horizontal	
2483.93	62.70	24.55	38.15	74.00	-11.30	150	286 Peak	Horizontal	



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1	2	3							
Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
2387.41	67.82	30.30	37.52	74.00	-6.18	150	274 Peak	Vertical	
2437.00	117.60	79.72	37.88	74.00	43.60	150	274 Peak	Vertical	
2490.07	66.36	28.18	38.18	74.00	-7.64	150	274 Peak	Vertical	

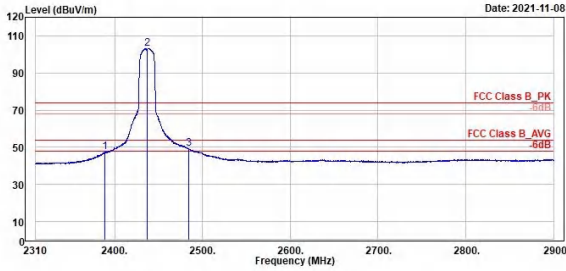
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Channel 6 (Horizontal) Average

Channel 6 (Vertical) Average



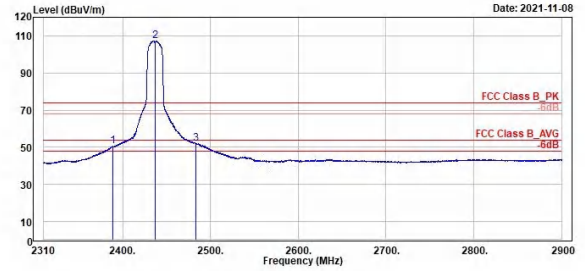
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1	2	3							
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2389.38	47.41	9.87	37.54	54.00	-6.59	150	286 Average	Horizontal	
2437.00	103.38	65.42	37.88	54.00	49.38	150	286 Average	Horizontal	
2484.29	49.36	11.21	38.15	54.00	-4.64	150	286 Average	Horizontal	



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1	2	3							
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2388.59	50.50	12.97	37.53	54.00	-3.50	150	274 Average	Vertical	
2437.00	107.48	69.52	37.88	54.00	53.48	150	274 Average	Vertical	
2483.58	51.97	13.83	38.14	54.00	-2.03	150	274 Average	Vertical	

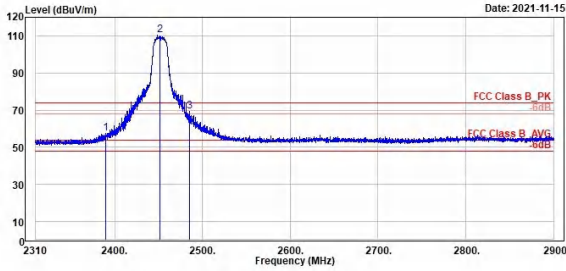
802.11g

Channel 9 (Horizontal) Peak

Channel 9 (Vertical) Peak



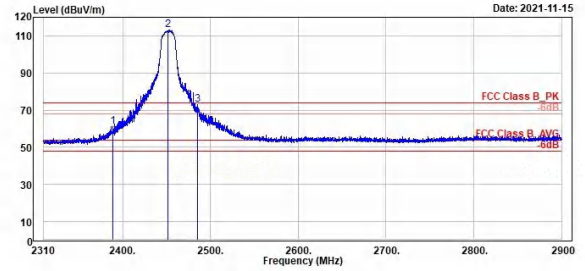
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1	2	3								
MHz	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
2390.00	57.51	19.97	37.54	74.00	-16.49	175	360	Peak	Horizontal	
2452.00	118.32	72.34	37.98	74.00	36.32	175	360	Peak	Horizontal	
2485.11	69.28	31.13	38.15	74.00	-4.72	175	360	Peak	Horizontal	



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1	2	3								
MHz	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
2389.06	61.18	23.65	37.53	74.00	-12.82	150	360	Peak	Vertical	
2452.00	113.27	75.29	37.98	74.00	39.27	150	360	Peak	Vertical	
2485.47	73.21	35.06	38.15	74.00	-0.79	150	360	Peak	Vertical	



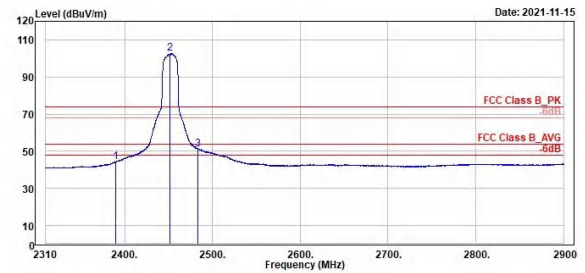
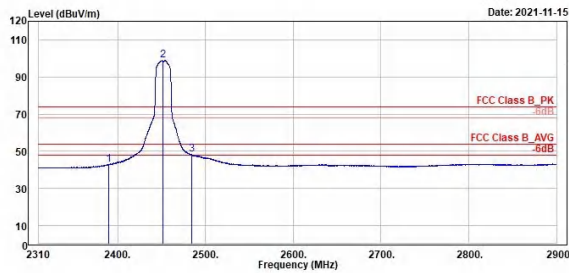
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Channel 9 (Horizontal) Average

Channel 9 (Vertical) Average

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1	2	3								
MHz	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
2389.65	42.96	5.42	37.54	54.00	-11.04	175	360	Average	Horizontal	
2452.00	98.85	60.87	37.98	54.00	44.85	175	360	Average	Horizontal	
2484.17	48.23	10.08	38.15	54.00	-5.77	175	360	Average	Horizontal	

1	2	3								
MHz	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
2390.00	44.42	6.88	37.54	54.00	-9.58	150	360	Average	Vertical	
2452.00	102.71	64.73	37.98	54.00	48.71	150	360	Average	Vertical	
2483.70	51.32	13.18	38.14	54.00	-2.68	150	360	Average	Vertical	

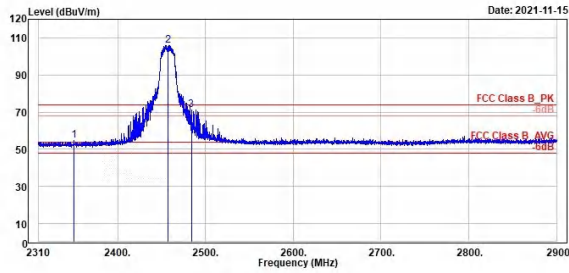
802.11g

Channel 10 (Horizontal) Peak

Channel 10 (Vertical) Peak



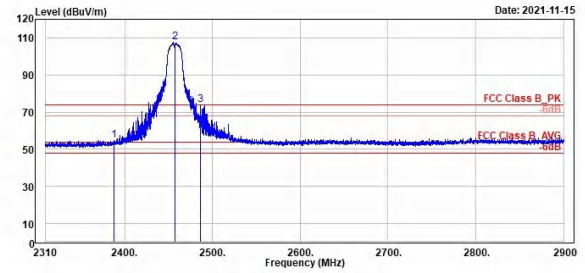
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Peak	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2358.12	54.01	17.55	37.26	74.00	-19.19	175	360	Peak	Horizontal		
2 *	2457.00	106.00	67.99	38.01	74.00	32.00	175	360	Peak	Horizontal		
3 !	2483.93	71.29	33.14	38.15	74.00	-2.71	175	360	Peak	Horizontal		



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Peak	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2387.00	54.96	17.43	37.53	74.00	-19.04	150	360	Peak	Vertical		
2 *	2457.00	107.49	69.48	38.01	74.00	33.49	150	360	Peak	Vertical		
3 !	2486.65	73.75	35.59	38.16	74.00	-0.25	150	360	Peak	Vertical		

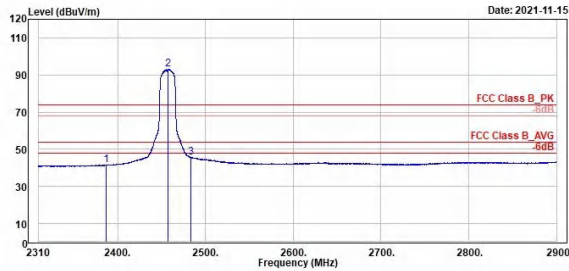
802.11g

Channel 10 (Horizontal) Average

Channel 10 (Vertical) Average



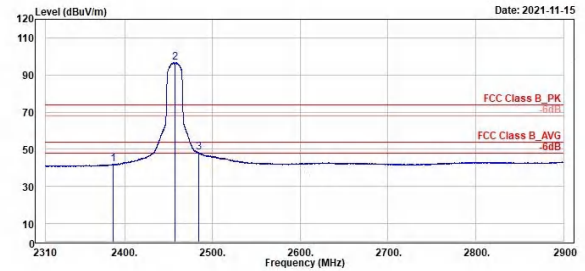
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note	
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2387.17	41.54	4.02	37.52	54.00	-12.46	175	360	Average	Horizontal
2 *	2457.00	93.01	55.00	38.01	54.00	39.01	175	360	Average	Horizontal
3	2483.70	45.71	7.57	38.14	54.00	-8.29	175	360	Average	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note	
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2386.50	41.97	4.45	37.52	54.00	-12.03	150	360	Average	Vertical
2 *	2457.00	96.68	58.67	38.01	54.00	42.68	150	360	Average	Vertical
3 !	2484.64	48.23	10.88	38.15	54.00	-5.77	150	360	Average	Vertical

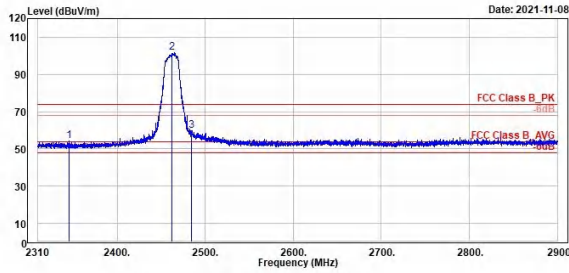
802.11g

Channel 11 (Horizontal) Peak

Channel 11 (Vertical) Peak



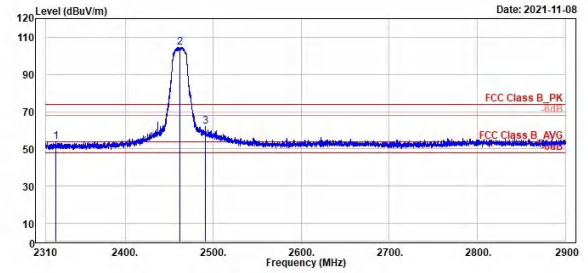
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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2345.52	54.46	17.22	37.24	74.00	-19.54	150	287	Peak	Horizontal	
2 *	2462.00	101.71	63.67	38.04	74.00	27.71	150	287	Peak	Horizontal	
3	2484.88	59.96	21.81	38.15	74.00	-14.04	150	287	Peak	Horizontal	



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2320.97	53.99	16.83	37.16	74.00	-20.01	150	274	Peak	Vertical	
2 *	2462.00	104.69	66.65	38.04	74.00	30.69	150	274	Peak	Vertical	
3	2491.37	62.08	23.89	38.19	74.00	-11.92	150	274	Peak	Vertical	

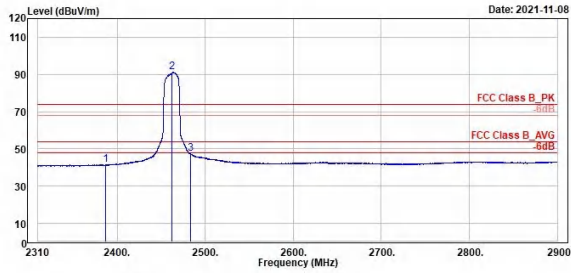
802.11g

Channel 11 (Horizontal) Average

Channel 11 (Vertical) Average



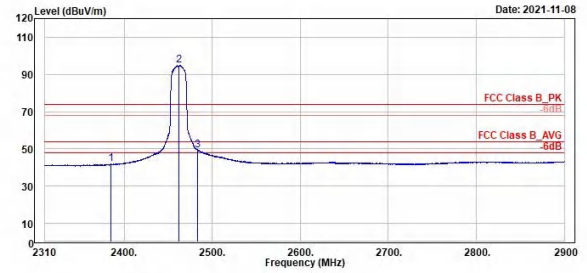
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2387.17	41.53	4.01	37.52	54.00	-12.47	150	287 Average	Horizontal
2 *	2462.00	91.12	53.08	38.04	54.00	37.12	150	287 Average	Horizontal
3	2483.46	47.44	9.30	38.14	54.00	-6.56	150	287 Average	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2384.81	41.84	4.33	37.51	54.00	-12.16	150	274 Average	Vertical
2 *	2462.00	94.76	56.72	38.04	54.00	40.76	150	274 Average	Vertical
3 !	2483.46	49.35	11.21	38.14	54.00	-4.65	150	274 Average	Vertical

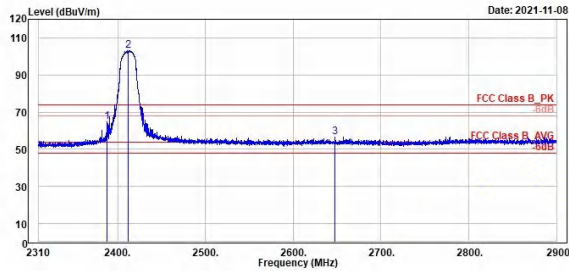
802.11n HT20

Channel 1 (Horizontal) Peak

Channel 1 (Vertical) Peak



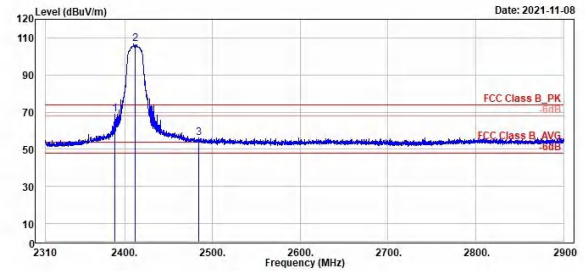
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2387.88	64.97	27.44	37.53	74.00	-9.03	150	285	Peak	Horizontal	
2 *	2412.80	103.11	65.41	37.70	74.00	29.11	150	285	Peak	Horizontal	
3	2647.24	56.58	18.57	38.01	74.00	-17.42	150	285	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2388.82	68.75	31.22	37.53	74.00	-5.25	150	275	Peak	Vertical	
2 *	2412.80	106.68	68.58	37.70	74.00	32.68	150	275	Peak	Vertical	
3	2484.76	56.17	18.82	38.15	74.00	-17.83	150	275	Peak	Vertical	

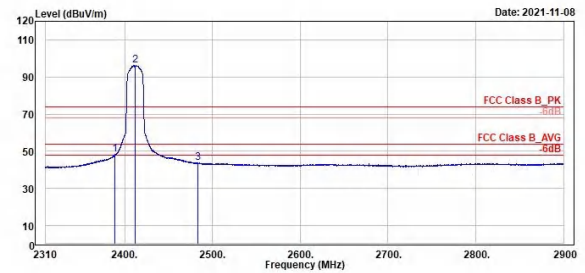
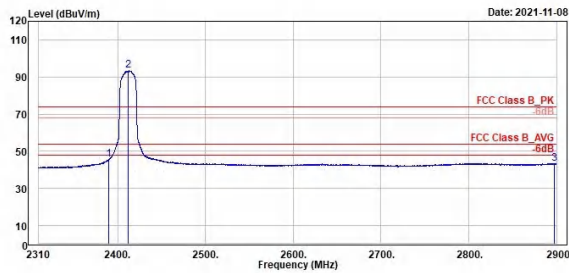
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Channel 1 (Horizontal) Average

Channel 1 (Vertical) Average

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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2390.00	45.46	7.92	37.54	54.00	-8.54	150	285 Average	Horizontal
2 *	2412.00	93.39	55.69	37.70	54.00	39.39	150	285 Average	Horizontal
3	2896.93	43.49	4.91	38.58	54.00	-10.51	150	285 Average	Horizontal

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.10	48.20	18.66	37.54	54.00	-5.80	150	275 Average	Vertical
2 *	2412.00	96.24	58.54	37.70	54.00	42.24	150	275 Average	Vertical
3	2483.81	43.74	5.59	38.15	54.00	-10.26	150	275 Average	Vertical

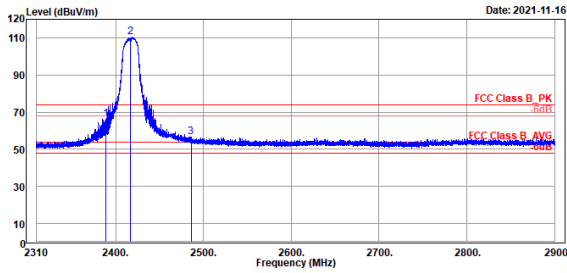
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Channel 2 (Horizontal) Peak

Channel 2 (Vertical) Peak



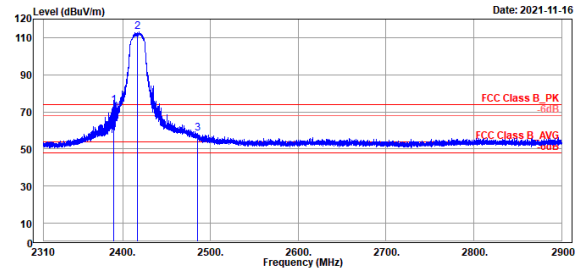
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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.38	66.29	28.75	37.54	74.00	-7.71	177	360	Peak	Horizontal	
2 *	2417.00	118.28	72.55	37.73	74.00	36.28	177	360	Peak	Horizontal	
3	2485.88	56.59	18.44	38.15	74.00	-17.41	177	360	Peak	Horizontal	



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.71	73.27	35.73	37.54	74.00	-0.73	160	0	Peak	Vertical	
2 *	2417.00	112.98	75.25	37.73	74.00	38.98	160	0	Peak	Vertical	
3	2485.05	58.44	20.29	38.15	74.00	-15.56	160	0	Peak	Vertical	



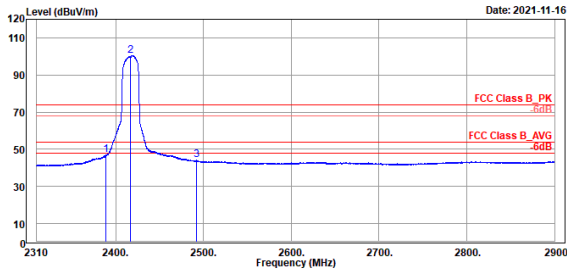
802.11n HT20

Channel 2 (Horizontal) Average

Channel 2 (Vertical) Average



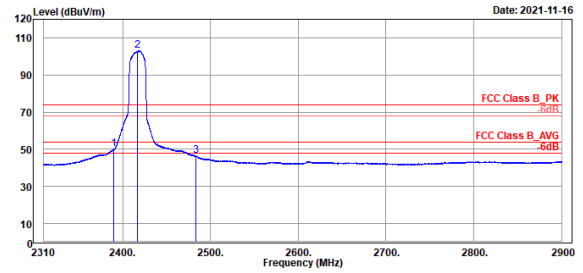
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.12	46.83	9.30	37.53	54.00	-7.17	177	360 Average	Horizontal	
2 *	2417.00	109.60	62.87	37.73	54.00	46.60	177	360 Average	Horizontal	
3	2491.90	44.12	5.93	38.19	54.00	-9.88	177	360 Average	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.95	50.20	12.66	37.54	54.00	-3.80	160	0 Average	Vertical	
2 *	2417.00	102.95	65.22	37.73	54.00	48.95	160	0 Average	Vertical	
3	2483.46	46.36	8.22	38.14	54.00	-7.64	160	0 Average	Vertical	

802.11n HT20

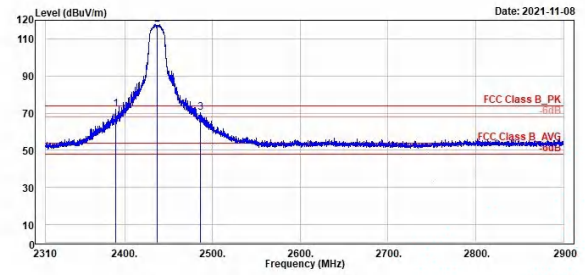
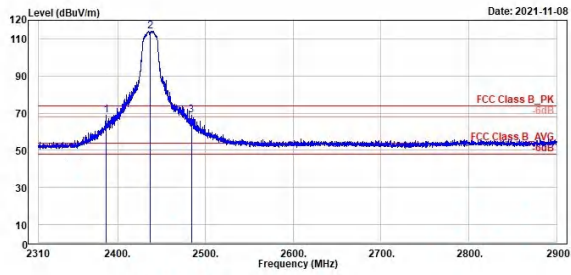
Channel 6 (Horizontal) Peak

Channel 6 (Vertical) Peak



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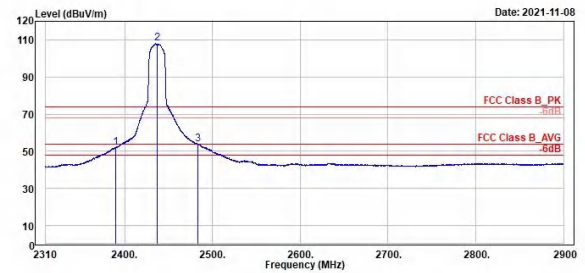
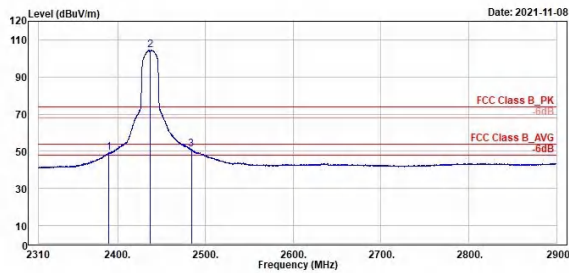
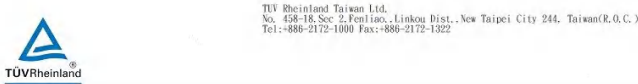
Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2387.29	68.74	31.22	37.52	74.00	-5.26	150	286	Peak	Horizontal	
2	2437.00	114.26	76.38	37.88	74.00	40.26	150	286	Peak	Horizontal	
3	2483.93	68.98	30.83	38.15	74.00	-5.02	150	286	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.77	72.00	34.46	37.54	74.00	-2.00	151	274	Peak	Vertical	
2	2437.00	117.72	79.84	37.88	74.00	43.72	151	274	Peak	Vertical	
3	2486.41	70.23	32.07	38.16	74.00	-3.77	151	274	Peak	Vertical	

802.11n HT20

Channel 6 (Horizontal) Average

Channel 6 (Vertical) Average



Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1   2389.53	49.06	11.52	37.54	54.00	-4.94	150	286 Average	Horizontal	
2 * 2437.00	104.58	66.70	37.88	54.00	50.58	150	286 Average	Horizontal	
3   2483.93	50.98	12.83	38.15	54.00	-3.02	150	286 Average	Horizontal	

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1   2389.77	52.16	14.62	37.54	54.00	-1.84	151	274 Average	Vertical	
2 * 2437.00	107.96	70.08	37.88	54.00	53.96	151	274 Average	Vertical	
3   2483.70	53.82	15.68	38.14	54.00	-0.18	151	274 Average	Vertical	

802.11n HT20

Channel 8 (Horizontal) Peak

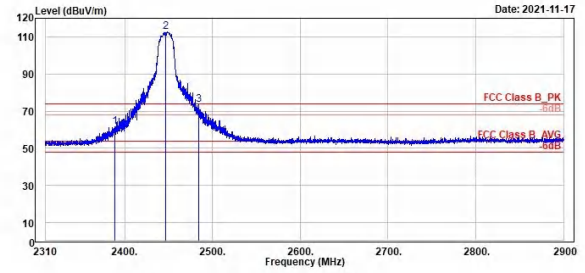
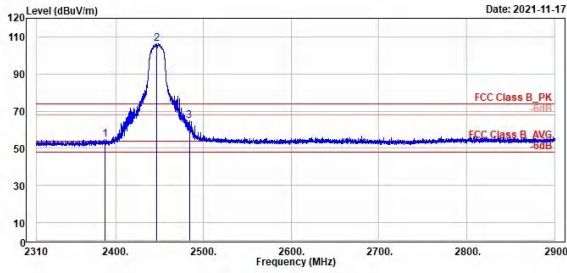
Channel 8 (Vertical) Peak



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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2387.53	54.68	17.15	37.53	74.00	-19.32	231	45	Peak	Horizontal
2 *	2447.00	106.35	66.40	37.95	74.00	32.35	231	45	Peak	Horizontal
3	2483.93	64.61	26.46	38.15	74.00	-9.39	231	45	Peak	Horizontal

Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2388.47	61.71	24.18	37.53	74.00	-12.29	113	360	Peak	Vertical
2 *	2447.00	112.75	74.00	37.95	74.00	38.75	113	360	Peak	Vertical
3 !	2484.64	73.40	35.25	38.15	74.00	-0.60	113	360	Peak	Vertical

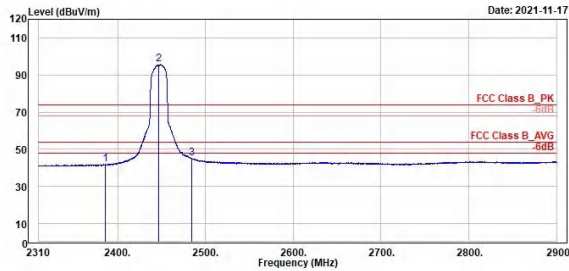
802.11n HT20

Channel 8 (Horizontal) Average

Channel 8 (Vertical) Average



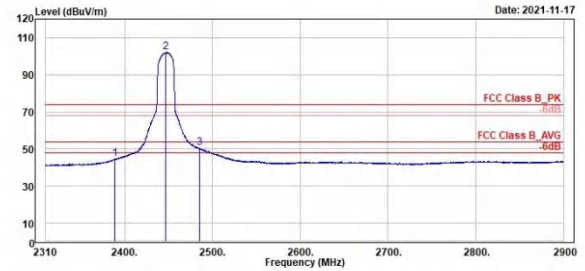
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2385.87	41.91	4.39	37.52	54.00	-12.09	231	45	Average	Horizontal	
2 *	2447.80	95.77	57.82	37.95	54.00	41.77	231	45	Average	Horizontal	
3	2484.48	45.29	7.14	38.15	54.00	-8.71	231	45	Average	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2388.59	44.71	7.18	37.53	54.00	-9.29	113	360	Average	Vertical	
2 *	2447.80	102.36	64.41	37.95	54.00	48.36	113	360	Average	Vertical	
3 !	2484.99	50.47	12.32	38.15	54.00	-3.53	113	360	Average	Vertical	

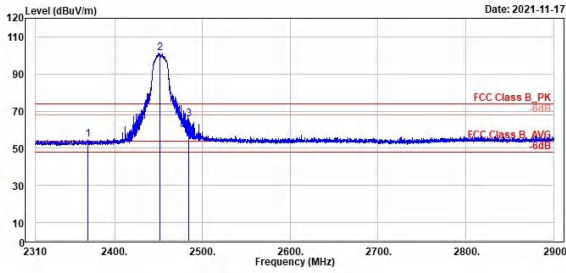
802.11n HT20

Channel 9 (Horizontal) Peak

Channel 9 (Vertical) Peak



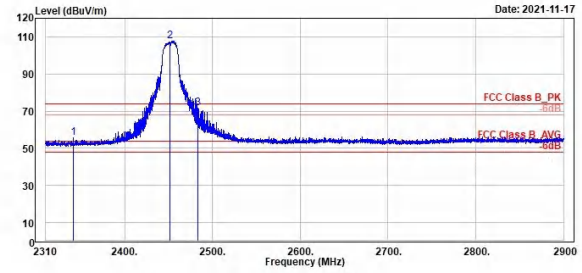
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2370.06	54.54	17.14	37.40	74.00	-19.46	100	49	Peak	Horizontal	
2 *	2452.00	101.08	63.10	37.98	74.00	27.08	100	49	Peak	Horizontal	
3	2484.88	65.86	27.71	38.15	74.00	-8.14	100	49	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2341.27	55.61	18.38	37.23	74.00	-18.39	100	0	Peak	Vertical	
2 *	2452.00	107.86	69.68	37.98	74.00	33.86	100	0	Peak	Vertical	
3 !	2483.70	71.43	33.29	38.14	74.00	-2.57	100	0	Peak	Vertical	

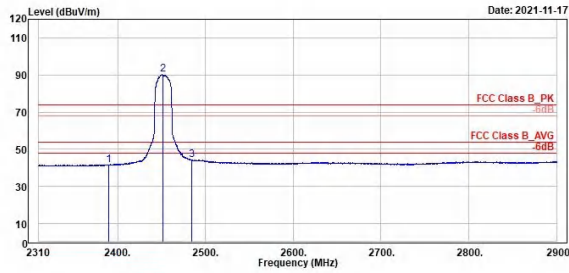
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Channel 9 (Horizontal) Average

Channel 9 (Vertical) Average



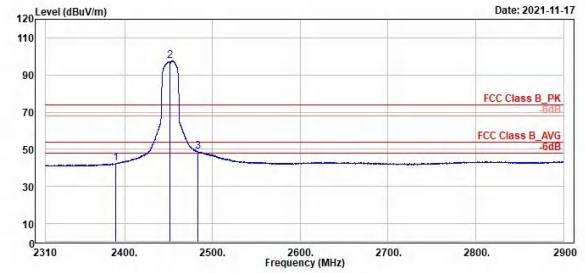
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.53	41.71	4.17	37.54	54.00	-12.29	100	49 Average	Horizontal
2 *	2452.00	90.14	52.16	37.98	54.00	36.14	100	49 Average	Horizontal
3	2484.17	44.47	6.32	38.15	54.00	-9.53	100	49 Average	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.77	42.39	4.85	37.54	54.00	-11.61	100	0 Average	Vertical
2 *	2452.00	97.61	59.63	37.98	54.00	43.61	100	0 Average	Vertical
3 !	2483.46	48.74	10.60	38.14	54.00	-5.26	100	0 Average	Vertical

802.11n HT20

Channel 10 (Horizontal) Peak

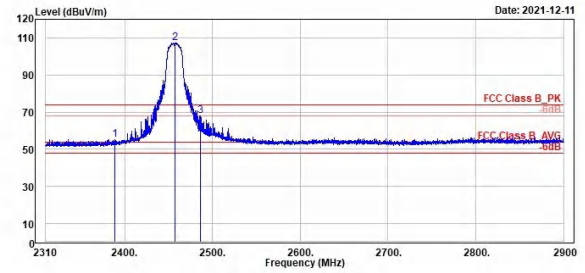
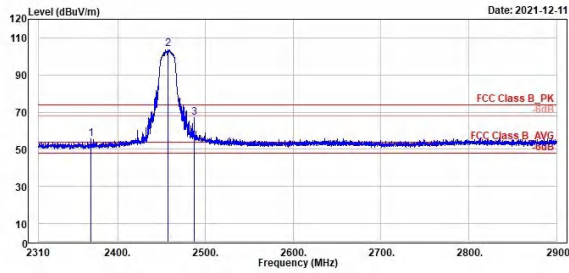
Channel 10 (Vertical) Peak



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2369.71	55.75	18.35	37.40	74.00	-18.25	100	306	Peak	Horizontal	
2 *	2457.00	103.97	65.96	38.01	74.00	29.97	100	306	Peak	Horizontal	
3	2487.35	67.10	28.93	38.17	74.00	-6.90	100	306	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.06	55.35	17.82	37.53	74.00	-18.65	148	266	Peak	Vertical	
2 *	2457.00	107.15	69.14	38.01	74.00	33.15	148	266	Peak	Vertical	
3 !	2486.41	68.15	29.99	38.16	74.00	-5.85	148	266	Peak	Vertical	



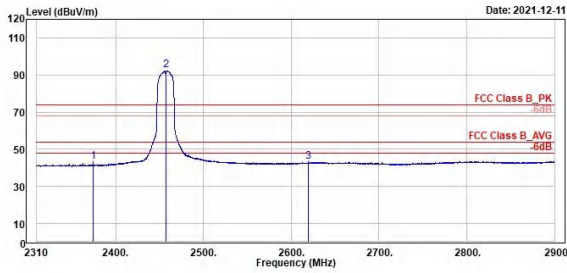
802.11n HT20

Channel 10 (Horizontal) Average

Channel 10 (Vertical) Average



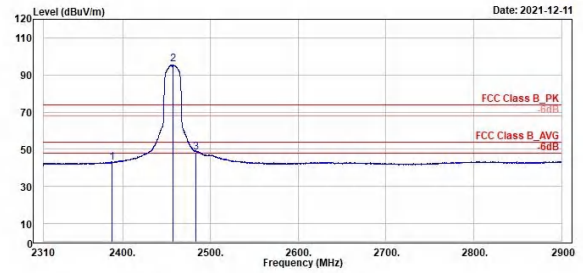
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1	2	3
Level	Level	Level
Factor	Factor	Factor
Limit	Limit	Limit
Over	Over	Over
APos	APos	APos
TPos	TPos	TPos
Remark	Remark	Remark
Pol/Phase	Pol/Phase	Pol/Phase
Note	Note	Note
2374.78	2457.00	2619.16
43.34	92.04	43.57
5.91	54.83	5.54
37.43	38.01	38.03
54.00	54.00	54.00
-10.66	38.84	-10.43
100	100	100
306	306	306
Average	Average	Average
Horizontal	Horizontal	Horizontal



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1	2	3
Level	Level	Level
Factor	Factor	Factor
Limit	Limit	Limit
Over	Over	Over
APos	APos	APos
TPos	TPos	TPos
Remark	Remark	Remark
Pol/Phase	Pol/Phase	Pol/Phase
Note	Note	Note
2387.53	2457.00	2483.58
43.11	95.98	48.33
5.58	57.97	10.19
37.53	38.01	38.14
54.00	54.00	54.00
-10.89	41.98	-5.67
148	148	148
266	266	266
Average	Average	Average
Vertical	Vertical	Vertical

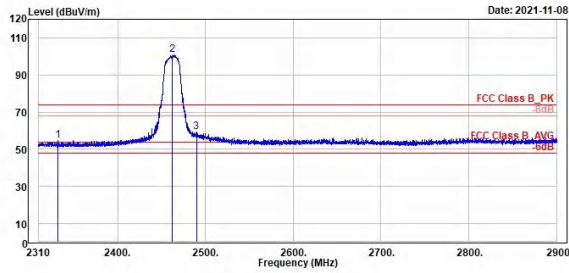
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Channel 11 (Horizontal) Peak

Channel 11 (Vertical) Peak



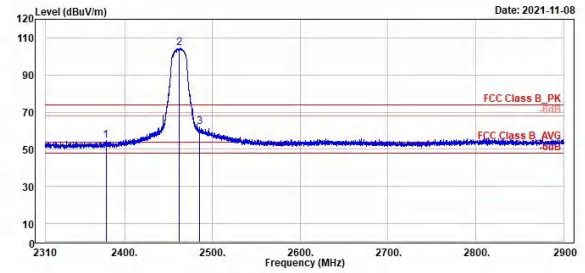
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2332.38	54.83	17.63	37.20	74.00	-19.17	150	286	Peak	Horizontal	
2 *	2462.08	109.83	62.79	38.04	74.00	26.83	150	286	Peak	Horizontal	
3	2489.71	59.51	21.33	38.18	74.00	-14.49	150	286	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2378.79	54.74	17.28	37.46	74.00	-19.26	150	274	Peak	Vertical	
2 *	2462.08	104.55	66.51	38.04	74.00	30.55	150	274	Peak	Vertical	
3	2485.23	61.85	23.71	38.15	74.00	-12.14	150	274	Peak	Vertical	

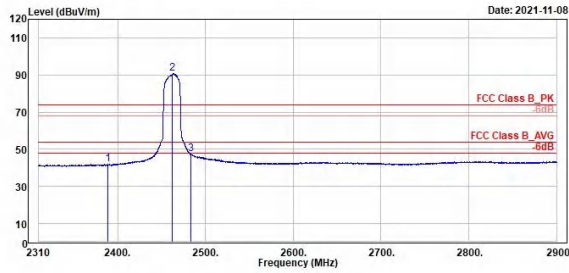
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Channel 11 (Horizontal) Average

Channel 11 (Vertical) Average



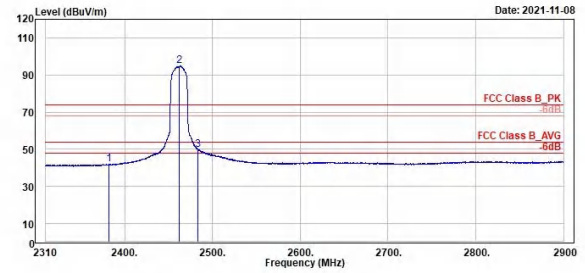
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note								
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2388.94	41.89	4.27	37.53	54.00	-12.20	150	286	Average	Horizontal										
2462.00	90.66	52.62	38.04	54.00	36.66	150	286	Average	Horizontal										
2483.58	47.35	9.21	38.14	54.00	-6.65	150	286	Average	Horizontal										



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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note								
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2382.45	42.89	4.61	37.48	54.00	-11.91	150	274	Average	Vertical										
2462.00	94.82	56.78	38.04	54.00	40.82	150	274	Average	Vertical										
2483.46	49.82	11.68	38.14	54.00	-4.18	150	274	Average	Vertical										

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

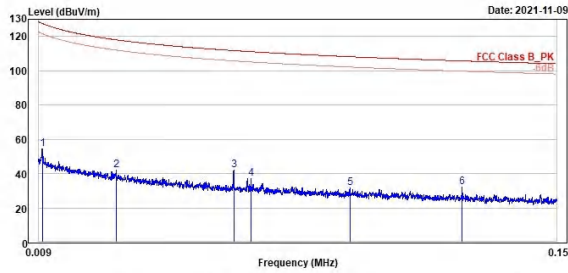
802.11n20

Channel 6 (Close) 9kHz~150kHz

Channel 6 (Close) 150kHz~30MHz



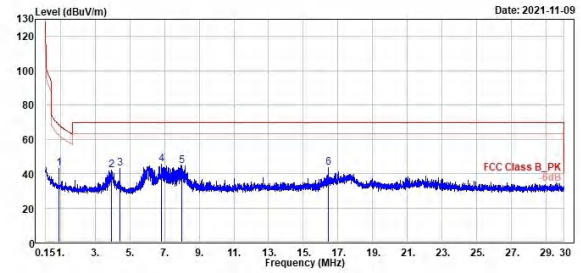
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	54.48	34.54	19.94	127.58	-73.10	100	246 QP	Close
2	0.03	41.91	21.64	20.27	118.01	-76.10	100	35 QP	Close
3	0.06	41.99	21.74	20.25	111.73	-69.74	100	232 QP	Close
4	0.07	37.02	16.78	20.24	111.10	-74.08	100	359 QP	Close
5	0.09	31.58	11.38	20.20	108.16	-76.58	100	170 QP	Close
6	0.12	32.09	11.91	20.18	105.71	-73.62	100	186 QP	Close



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.93	42.82	22.74	20.08	68.27	-25.45	100	171 QP	Close
2	3.94	42.04	21.61	20.23	69.50	-27.46	100	235 QP	Close
3	4.43	42.77	22.52	20.25	69.50	-26.73	100	121 QP	Close
4	6.82	45.52	25.22	20.30	69.50	-23.98	100	13 QP	Close
5	7.99	44.53	24.19	20.34	69.50	-24.97	100	13 QP	Close
6	16.44	43.27	22.68	20.59	69.50	-26.23	100	29 QP	Close

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

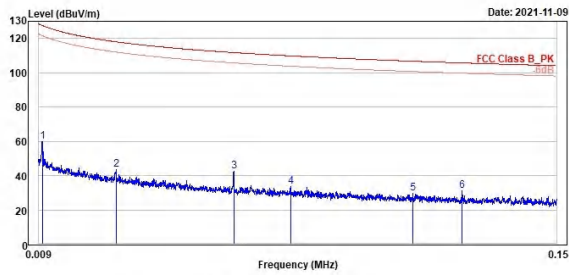
802.11n20

Channel 6 (Open) 9kHz~150kHz

Channel 6 (Open) 150kHz~30MHz



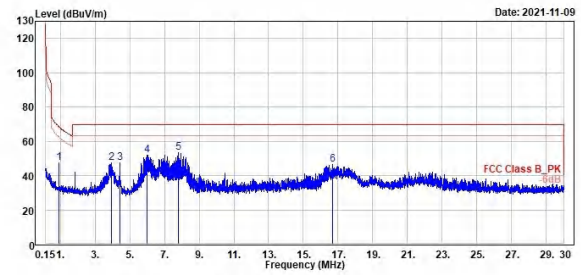
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	60.03	40.09	19.94	127.57	-67.54	100	151 QP	Open
2	0.03	43.27	23.00	20.27	118.01	-74.74	100	349 QP	Open
3	0.06	42.71	22.46	20.25	111.73	-69.02	100	13 QP	Open
4	0.08	33.84	13.62	20.22	109.80	-75.96	100	97 QP	Open
5	0.11	29.51	9.32	20.19	106.70	-77.19	100	201 QP	Open
6	0.12	31.38	11.20	20.18	105.71	-74.33	100	343 QP	Open



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.93	47.48	27.40	20.00	68.27	-20.79	100	107 QP	Open
2	3.94	47.51	27.28	20.23	69.50	-21.99	100	113 QP	Open
3	4.43	47.59	27.34	20.25	69.50	-21.91	100	302 QP	Open
4	5.98	52.01	31.74	20.27	69.50	-17.49	100	310 QP	Open
5	7.80	53.19	32.85	20.34	69.50	-16.31	100	62 QP	Open
6	16.67	46.55	25.95	20.60	69.50	-22.95	100	270 QP	Open

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

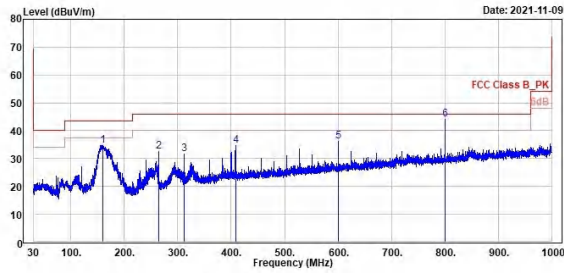
802.11n20

Channel 6 (Horizontal)

Channel 6 (Vertical)



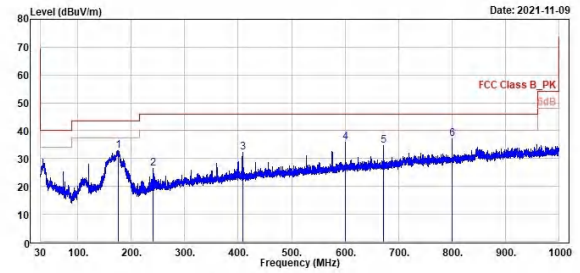
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Line	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	159.01	34.01	40.59	-5.78	43.50	-8.69	200	253 QP	Horizontal	
2	263.96	32.41	38.40	-5.99	46.00	-13.59	100	59 QP	Horizontal	
3	311.98	31.59	35.99	-4.40	46.00	-14.41	100	67 QP	Horizontal	
4	408.01	34.72	37.50	-2.78	46.00	-11.28	200	89 QP	Horizontal	
5	600.07	36.07	35.74	0.33	46.00	-9.93	200	339 QP	Horizontal	
6 !	800.00	44.04	40.89	3.15	46.00	-1.96	100	9 QP	Horizontal	



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Line	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	175.79	32.85	39.46	-6.61	43.50	-10.65	100	114 QP	Vertical	
2	240.01	26.58	33.24	-6.66	46.00	-19.42	200	201 QP	Vertical	
3	408.01	32.13	34.91	-2.78	46.00	-13.87	100	129 QP	Vertical	
4	600.07	35.98	35.65	0.33	46.00	-10.02	100	252 QP	Vertical	
5	672.04	34.82	33.59	1.23	46.00	-11.18	100	96 QP	Vertical	
6	800.00	37.12	33.97	3.15	46.00	-8.88	100	108 QP	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

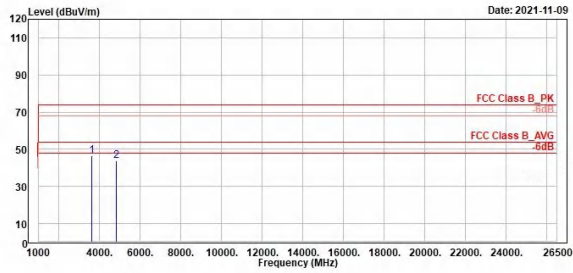
802.11b

Channel 1 (Horizontal)

Channel 1 (Vertical)



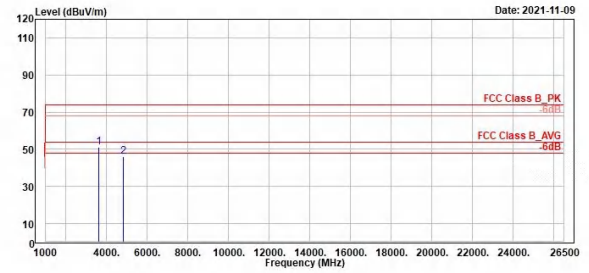
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3618.00	46.69	57.70	-11.10	74.00	-27.40	200	313 Peak	Horizontal	
2	4824.00	43.59	52.60	-9.21	74.00	-30.41	300	301 Peak	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3618.00	51.09	62.19	-11.10	74.00	-22.91	200	296 Peak	Vertical	
2	4824.00	46.08	55.29	-9.21	74.00	-27.92	200	298 Peak	Vertical	

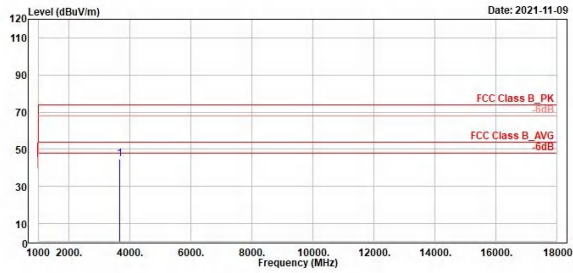
802.11b

Channel 6 (Horizontal)

Channel 6 (Vertical)



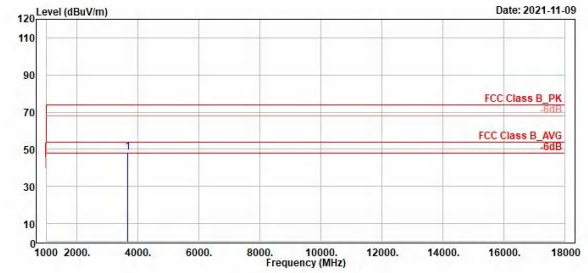
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1	3655.50	44.81	55.75	-10.94	74.00	-29.19	200	331	Peak	Horizontal
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1	3655.50	48.41	59.35	-10.94	74.00	-25.59	300	268	Peak	Vertical
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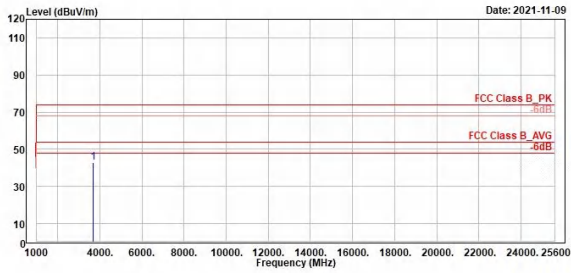
802.11b

Channel 11 (Horizontal)

Channel 11 (Vertical)



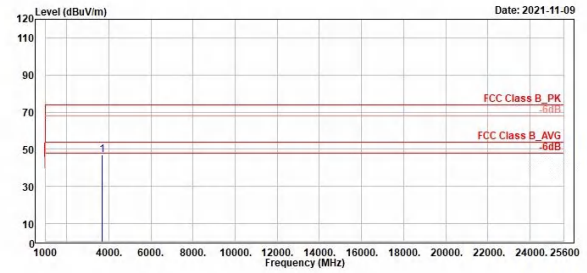
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 3693.00	42.74	53.66	-10.92	74.00	-31.26	300	352	Peak	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 3693.00	47.17	58.09	-10.92	74.00	-26.83	200	296	Peak	Vertical	

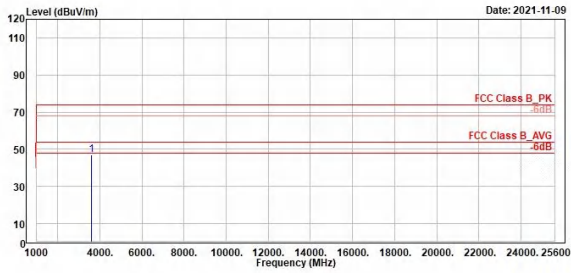
802.11g

Channel 1 (Horizontal)

Channel 1 (Vertical)



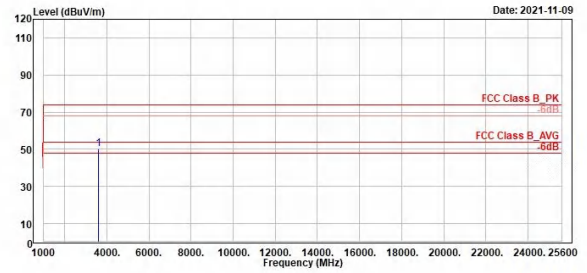
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3618.00	46.99	58.09	-11.10	74.00	-27.01	200	288 Peak	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3618.00	50.06	61.16	-11.10	74.00	-23.94	200	296 Peak	Vertical	

802.11g

Channel 6 (Horizontal)

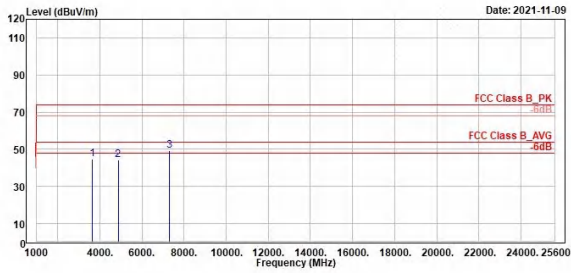
Channel 6 (Vertical)



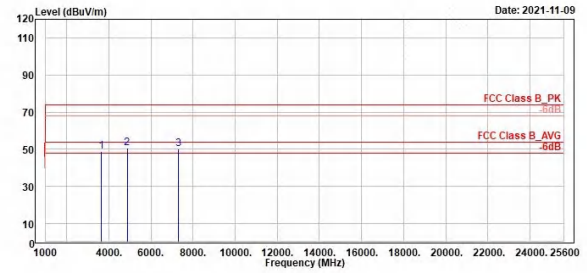
TUV Rheinland Taiwan Ltd.  
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Line	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	3655.58	44.72	55.66	-10.94	74.00	-29.28	280	247	Peak	Horizontal	
2	4874.00	44.41	53.55	-9.14	74.00	-29.59	380	301	Peak	Horizontal	
3	7311.00	49.46	55.86	-6.40	74.00	-24.54	280	291	Peak	Horizontal	



Line	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	3655.58	48.68	59.54	-10.94	74.00	-25.40	150	254	Peak	Vertical	
2	4874.00	50.64	59.78	-9.14	74.00	-23.36	150	263	Peak	Vertical	
3	7311.00	50.34	56.74	-6.40	74.00	-23.66	150	274	Peak	Vertical	

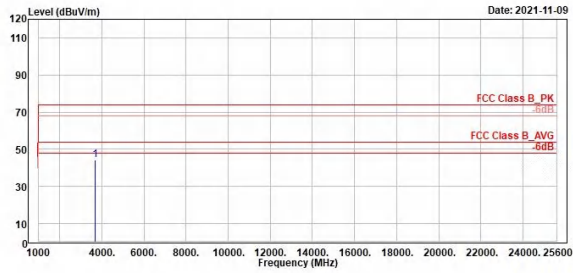
802.11g

Channel 11 (Horizontal)

Channel 11 (Vertical)



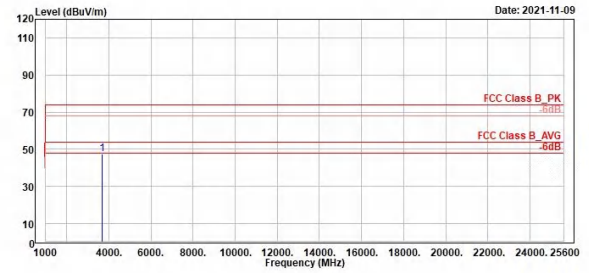
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3693.00	44.03	54.95	-10.92	74.00	-29.97	200	216 Peak	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3693.00	47.49	58.41	-10.92	74.00	-26.51	200	286 Peak	Vertical	

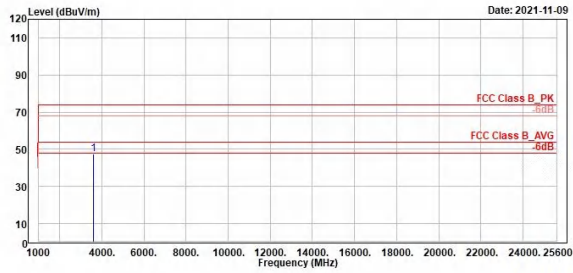
802.11n HT20

Channel 1 (Horizontal)

Channel 1 (Vertical)



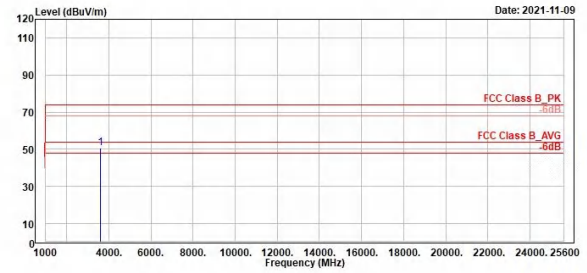
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3618.00	47.31	58.41	-11.10	74.00	-26.69	200	281 Peak	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3618.00	50.45	61.55	-11.10	74.00	-23.55	200	248 Peak	Vertical	

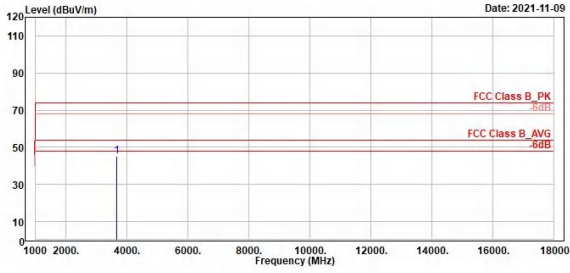
802.11n HT20

Channel 6 (Horizontal)

Channel 6 (Vertical)



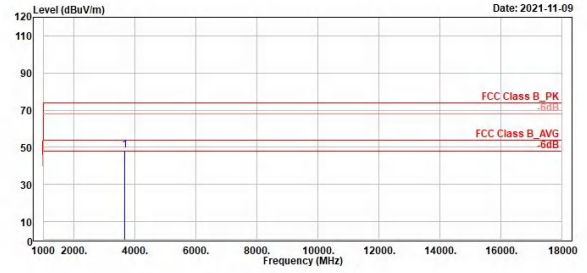
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3655.50	45.21	56.15	-10.94	74.00	-28.79	150	333 Peak	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	3655.50	48.38	59.32	-10.94	74.00	-25.62	200	289 Peak	Vertical	

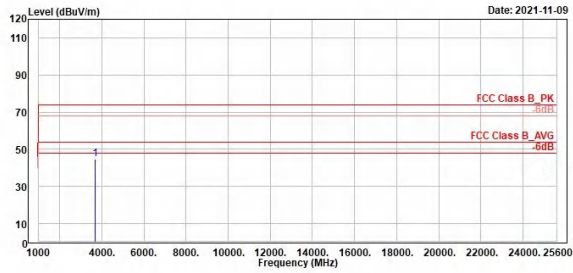
802.11n HT20

Channel 11 (Horizontal)

Channel 11 (Vertical)



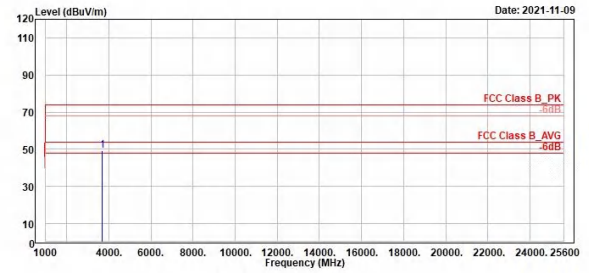
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 3693.00	44.63	55.55	-10.92	74.00	-29.37	200	208	Peak	Horizontal	



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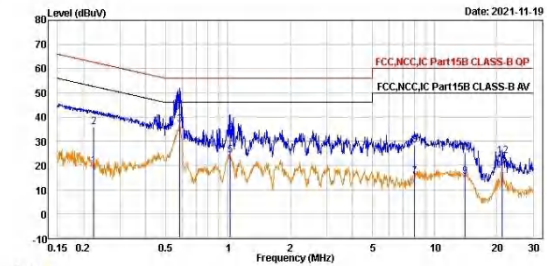
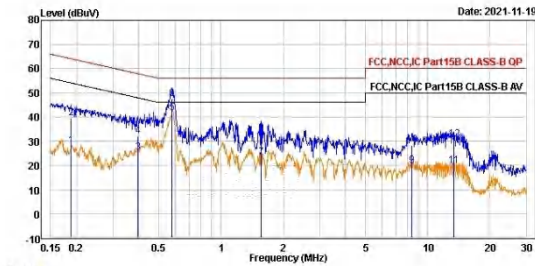
Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 3693.00	49.27	60.19	-10.92	74.00	-24.73	200	289	Peak	Vertical	

Mains Conducted Emission, 150kHz ~ 30MHz

Worst Band

Channel 6 (Line)

Channel 6 (Neutral)



Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dB)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.19	28.02	18.41	9.61	54.10	-26.08	Average	line1	
2	0.19	39.62	30.01	9.61	64.10	-24.48	QP	line1	
3	0.40	25.31	15.69	9.62	47.93	-22.62	Average	line1	
4	0.40	31.95	22.33	9.62	57.93	-25.98	QP	line1	
5	0.58	41.75	32.13	9.62	46.00	-4.25	Average	line1	
6	0.58	47.32	37.70	9.62	56.00	-8.68	QP	line1	
7	1.56	23.36	13.72	9.64	46.00	-22.64	Average	line1	
8	1.56	33.29	23.65	9.64	56.00	-22.71	QP	line1	
9	8.37	19.62	9.91	9.71	50.00	-30.38	Average	line1	
10	8.37	28.42	18.71	9.71	60.00	-31.58	QP	line1	
11	13.38	19.64	9.91	9.73	50.00	-30.36	Average	line1	
12	13.38	30.60	20.87	9.73	60.00	-29.40	QP	line1	

Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dB)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.22	19.81	10.22	9.59	52.65	-32.84	Average	neutral	
2	0.22	35.98	26.39	9.59	62.65	-26.67	QP	neutral	
3	0.58	36.71	27.11	9.60	46.00	-9.29	Average	neutral	
4	0.58	44.92	35.32	9.60	56.00	-11.08	QP	neutral	
5	1.02	24.26	14.66	9.60	46.00	-21.74	Average	neutral	
6	1.02	33.22	23.62	9.60	56.00	-22.78	QP	neutral	
7	8.01	15.16	5.44	9.72	50.00	-34.84	Average	neutral	
8	8.01	28.21	18.49	9.72	60.00	-31.79	QP	neutral	
9	13.99	15.46	5.69	9.77	50.00	-34.54	Average	neutral	
10	13.99	25.10	15.33	9.77	60.00	-34.90	QP	neutral	
11	21.16	17.60	7.80	9.80	50.00	-32.40	Average	neutral	
12	21.16	23.85	14.05	9.80	60.00	-36.15	QP	neutral	