

FCC Radio Test Report

FCC ID: 2AW9NYK-MH-701A

Original Grant

Report No. : TB-FCC174363
Applicant : Shenzhen Yifei Technology Co., Ltd
Equipment Under Test (EUT)
EUT Name : Ultrasonic Humidifier
Model No. : YK-MH-701A
Series Model No. : N/A
Brand Name : YOKEKON
Receipt Date : 2020-07-31
Test Date : 2020-07-31 to 2020-08-10
Issue Date : 2020-08-13
Standards : FCC Part 15, Subpart C (15.247)
Test Method : ANSI C63.10: 2013
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC and IC requirements

Test/Witness Engineer :

Garen

Engineer Supervisor :

Ivan Su

Engineer Manager :

Ray Lai



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

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Revision History

Report No.	Version	Description	Issued Date
TB-FCC174363	Rev.01	Initial issue of report	2020-08-13

1. General Information about EUT

1.1 Client Information

Applicant	:	Shenzhen Yifei Technology Co., Ltd
Address	:	808-A, No.43, Lixin Road, Danzhutou Community, Nanwan Street, Longgang District, Shenzhen City, Guangdong Province, China
Manufacturer	:	Zhongshan Qiantu Electric Appliance Co., Ltd
Address	:	No.7 of Xinfu Road, Xiaoli Community, Dongfeng Town, Zhongshan city(First Floor), China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Ultrasonic Humidifier	
Models No.	:	YK-MH-701A	
Model Difference	:	N/A	
Sample ID	:	20200724-02-01#	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz
		Number of Channel:	802.11b/g/n(HT20):11 channels see note(3)
		RF Output Power:	802.11b: 16.06dBm 802.11g: 14.81dBm 802.11n (HT20): 14.48dBm
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM)
		Antenna Gain:	3dBi PCB Antenna
Power Rating	:	Input: AC 110-120V, 50/60Hz.	
Software Version	:	V1.0.0	
Hardware Version	:	YK-013K-ZNE	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

Note:

- (1) This Test Report is FCC Part 15.247 for 802.11b/g/n, the test procedure follows the FCC KDB 558074 D01 DTS Meas Guidance v05.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

(3) Channel List:

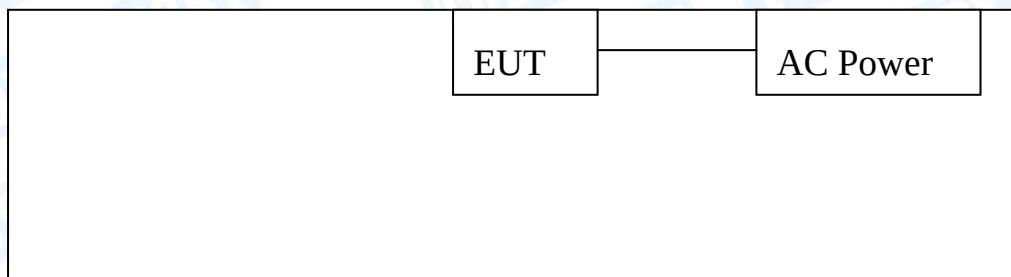
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

Note: CH 01~CH 11 for 802.11b/g/n(HT20)

(4) The Antenna information about the equipment is provided by the applicant.

1.3 Block Diagram Showing the Configuration of System Tested

TX Mode



1.4 Description of Support Units

Equipment Information				
Name	Model	FCC ID/VOC	Manufacturer	Note
----	----	----	----	

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test	
Final Test Mode	Description
Mode 1	AC power supply +TX B Mode

For Radiated Test	
Final Test Mode	Description
Mode 2	AC power supply + TX Mode B Mode Channel 01/06/11
Mode 3	AC power supply +TX Mode G Mode Channel 01/06/11
Mode 4	AC power supply +TX Mode N(HT20) Mode Channel 01/06/11
Note : (1)The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab. (2) For the Conducted Emission and Radiated test used the 20200724-02-01#. For the RF Conduction test used the 20200724-02-01#.	

Note:

- (1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.
According to ANSI C63.10 standards, the measurements are performed at the highest, Middle, lowest available channels, and the worst case data rate as follows:
802.11b Mode: CCK (1 Mbps)
802.11g Mode: OFDM (6 Mbps)
802.11n (HT20) Mode: MCS 0 (6.5 Mbps)
- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is mobile unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel&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 power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN.

Test Software Version	ESP_RF_test_tool_v2.3.exe		
Channel	CH 01	CH 06	CH 11
IEEE 802.11b DSSS	17	17	17
IEEE 802.11g OFDM	17	17	17
IEEE 802.11n (HT20)	17	17	17
Test Software Version	v2.3		

1.7 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	± 3.42 dB ± 3.42 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	± 4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	± 4.40 dB
Radiated Emission	Level Accuracy: Above 1000MHz	± 4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01. FCC Accredited Test Site Number: 854351.

IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.

2. Test Summary

FCC Part 15 Subpart C(15.247)/ RSS 247 Issue 2				
Standard Section FCC	Test Item	Test Sample(s)	Judgment	Remark
15.203	Antenna Requirement	20200724-02-01#	PASS	N/A
15.207	Conducted Emission	20200724-02-01#	PASS	N/A
15.205	Restricted Bands	20200724-02-01#	PASS	N/A
15.247(a)(2)	6dB Bandwidth	20200724-02-01#	PASS	N/A
15.247(b)	Peak Output Power	20200724-02-01#	PASS	N/A
15.247(e)	Power Spectral Density	20200724-02-01#	PASS	N/A
15.247(d)	Band Edge	20200724-02-01#	PASS	N/A
15.247(d)& 15.209	Transmitter Radiated Spurious Emission	20200724-02-01#	PASS	N/A
Note: “/” for no requirement for this test item. N/A is an abbreviation for Not Applicable.				

Test Software

Test Item	Test Software	Manufacturer	Version No.
Conducted Emission	EZ-EMC	EZ	CDI-03A2
Radiation Emission	EZ-EMC	EZ	FA-03A2RE
RF Conducted Measurement	MTS-8310	MWRFTest	V2.0.0.0

3. Test Equipment

Conducted Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 12, 2020	Jul. 11, 2021
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 12, 2020	Jul. 11, 2021
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 12, 2020	Jul. 11, 2021
LISN	Rohde & Schwarz	ENV216	101131	Jul. 12, 2020	Jul. 11, 2021
Radiation Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 12, 2020	Jul. 11, 2021
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 12, 2020	Jul. 11, 2021
Spectrum Analyzer	Rohde & Schwarz	FSVR	1311.006K40-10094 5-DH	Feb. 09, 2020	Feb. 08, 2021
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 07, 2020	Mar. 06, 2021
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar.03, 2020	Mar. 02, 2021
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 07, 2020	Mar. 06, 2021
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar.03, 2020	Mar. 02, 2021
Horn Antenna	ETS-LINDGREN	BBHA 9170	BBHA9170582	Mar. 07, 2020	Mar. 06, 2021
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Mar.02, 2020	Mar. 01, 2021
Pre-amplifier	Sonoma	310N	185903	Jul. 26, 2020	Jul. 25, 2021
Pre-amplifier	HP	8449B	3008A00849	Mar.02, 2020	Mar. 01, 2021
Pre-amplifier	SKET	LNPA_1840G-50	SK201904032	Jul. 26, 2020	Jul. 25, 2021
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 07, 2020	Mar. 06, 2021
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 12, 2020	Jul. 11, 2021
Spectrum Analyzer	Rohde & Schwarz	ESCI	100010/007	Jul. 12, 2020	Jul. 11, 2021
MXA Signal Analyzer	Agilent	N9020A	MY49100060	Sep. 16, 2019	Sep. 15, 2020
Vector Signal Generator	Agilent	N5182A	MY50141294	Sep. 16, 2019	Sep. 15, 2020
Analog Signal Generator	Agilent	N5181A	MY50141953	Sep. 16, 2019	Sep. 15, 2020
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO26	Sep. 16, 2019	Sep. 15, 2020
	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO29	Sep. 16, 2019	Sep. 15, 2020
	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO31	Sep. 16, 2019	Sep. 15, 2020
	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO33	Sep. 16, 2019	Sep. 15, 2020

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

FCC Part 15.207

4.1.2 Test Limit

Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

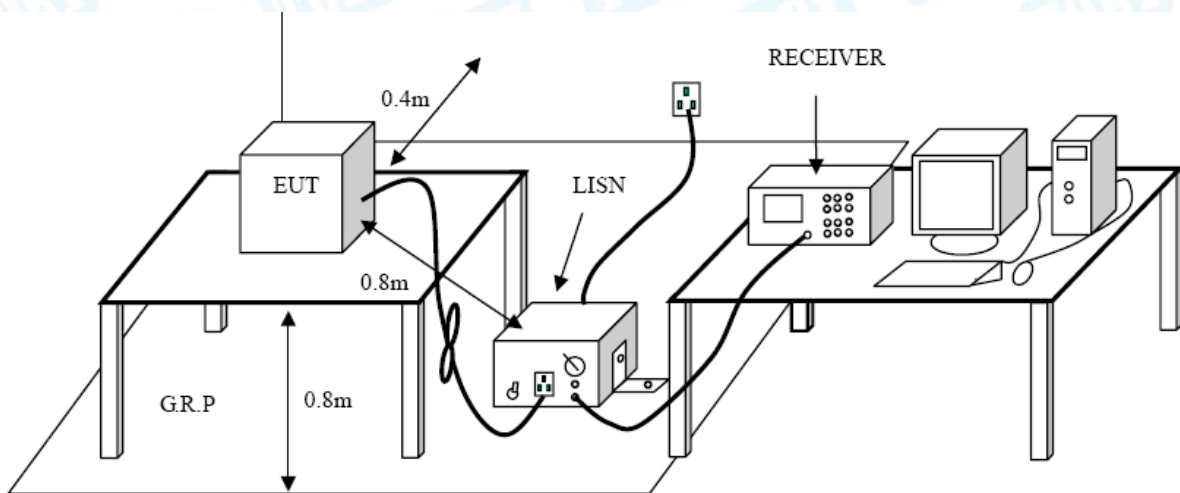
Notes:

(1) *Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequencies.

(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

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

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

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

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

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Data

Please refer to the Attachment A.

5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard

FCC Part 15.209

5.1.2 Test Limit

Radiated Emission Limits (9 kHz~1000 MHz)

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

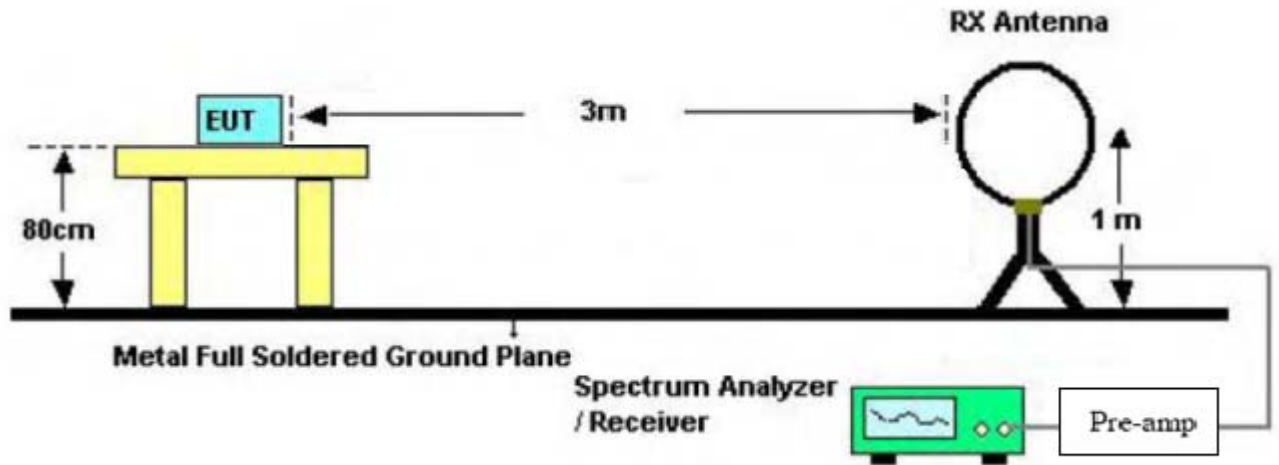
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance of 3m (dBuV/m)	
	Peak	Average
Above 1000	74	54

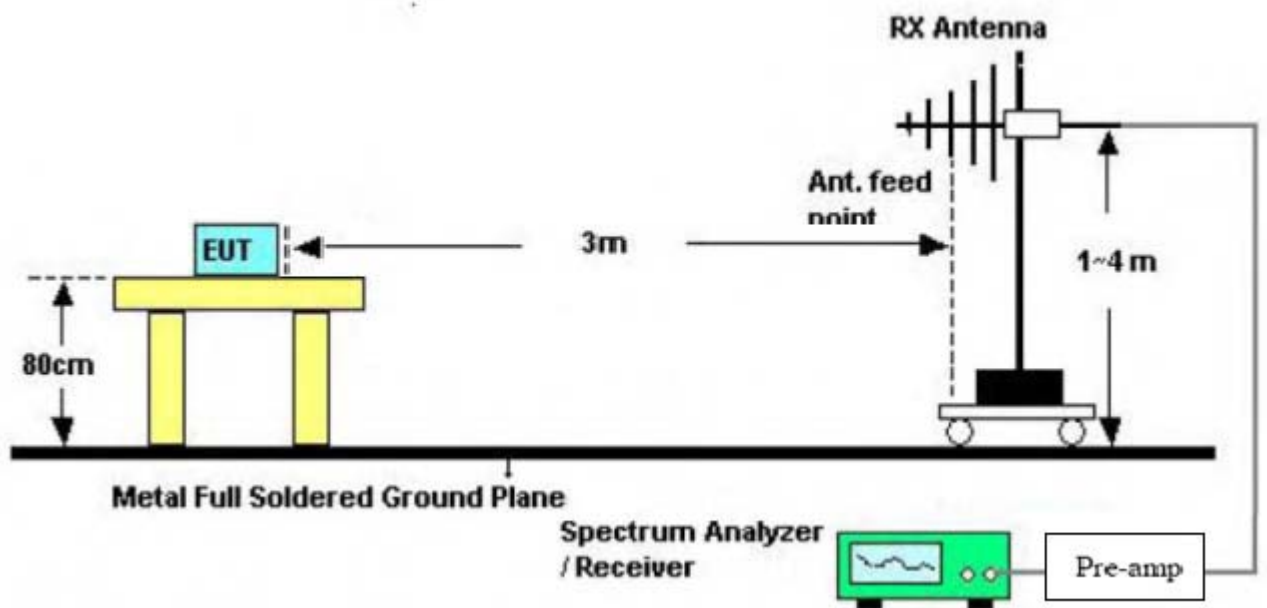
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

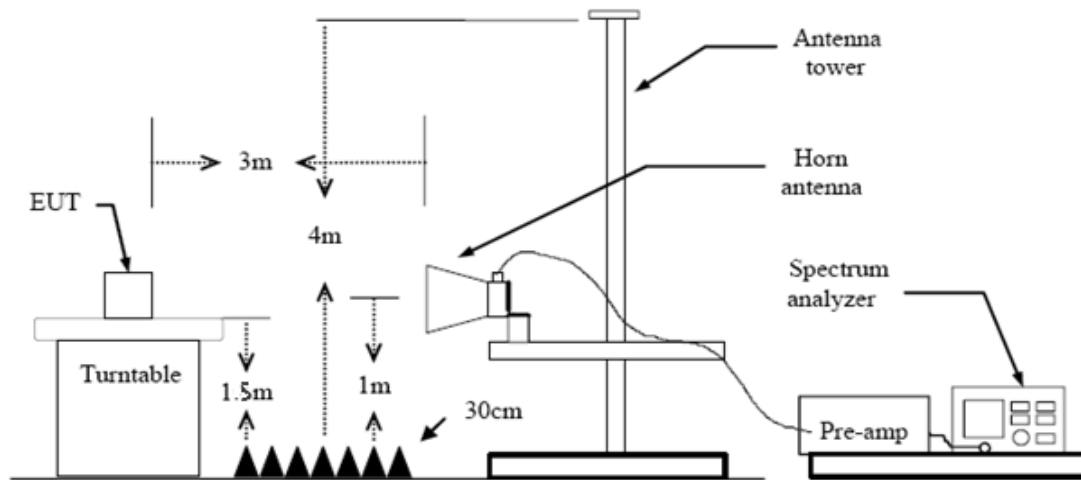
5.2 Test Setup



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

- (1) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency Below 1GHz. The EUT was placed on a rotating 0.8m high above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

5.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

5.5 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Please refer to the Attachment B.

6. Restricted Bands Requirement

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.247(d)

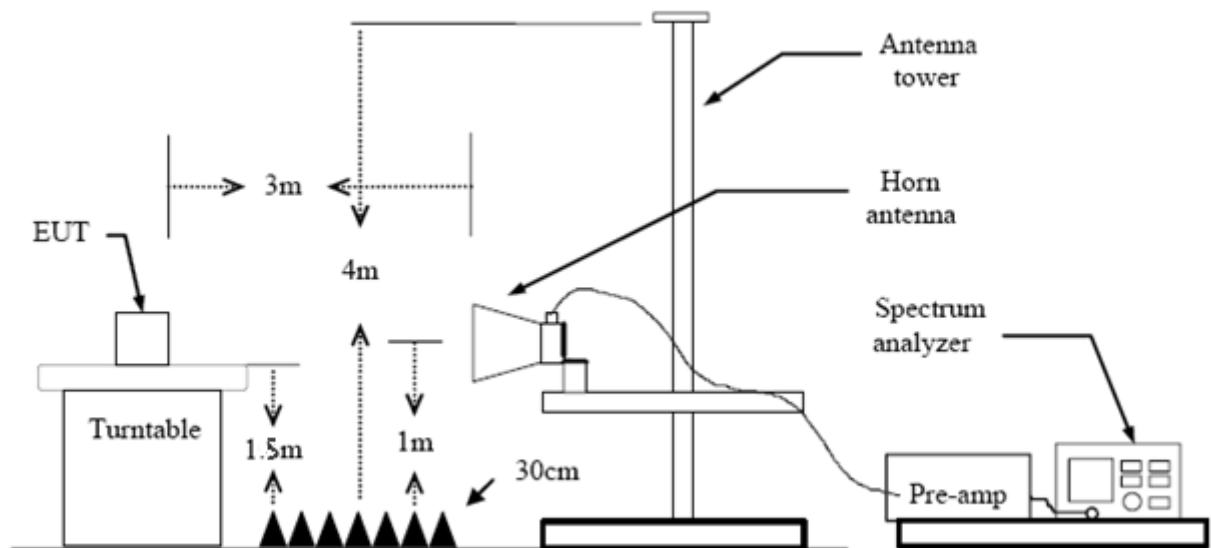
FCC Part 15.209

FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency Band (MHz)	Distance of 3m (dBuV/m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency below 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

Please refer to the Attachment C.

7. Bandwidth Test

7.1 Test Standard and Limit

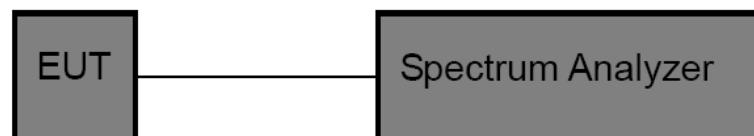
7.1.1 Test Standard

FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Bandwidth	≥ 500 KHz (6dB bandwidth)	2400~2483.5

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.
- (3)Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Digital photo framesdle and high channel for the test.

7.5 Test Data

Please refer to the Attachment D.

8. Peak Output Power Test

8.1 Test Standard and Limit

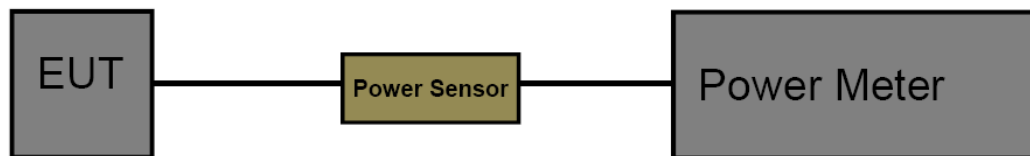
8.1.1 Test Standard

FCC Part 15.247 (b)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

8.2 Test Setup



8.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v05. The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.

8.5 Test Data

Please refer to the Attachment E.

9. Power Spectral Density Test

9.1 Test Standard and Limit

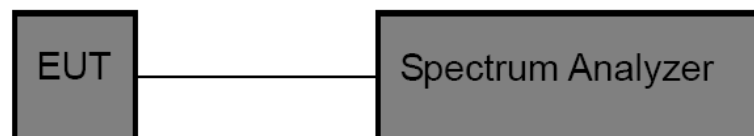
9.1.1 Test Standard

FCC Part 15.247 (e)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

9.2 Test Setup



9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequency.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz
- (5) Set the VBW to: 10 kHz
- (6) Detector: peak
- (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

9.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Digital photo framesdle and high channel for the test.

9.5 Test Data

Please refer to the Attachment F.

10. Antenna Requirement

10.1 Standard Requirement

10.1.1 Standard

FCC Part 15.203

10.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2 Antenna Connected Construction

The gains of the antenna used for transmitting is 3dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

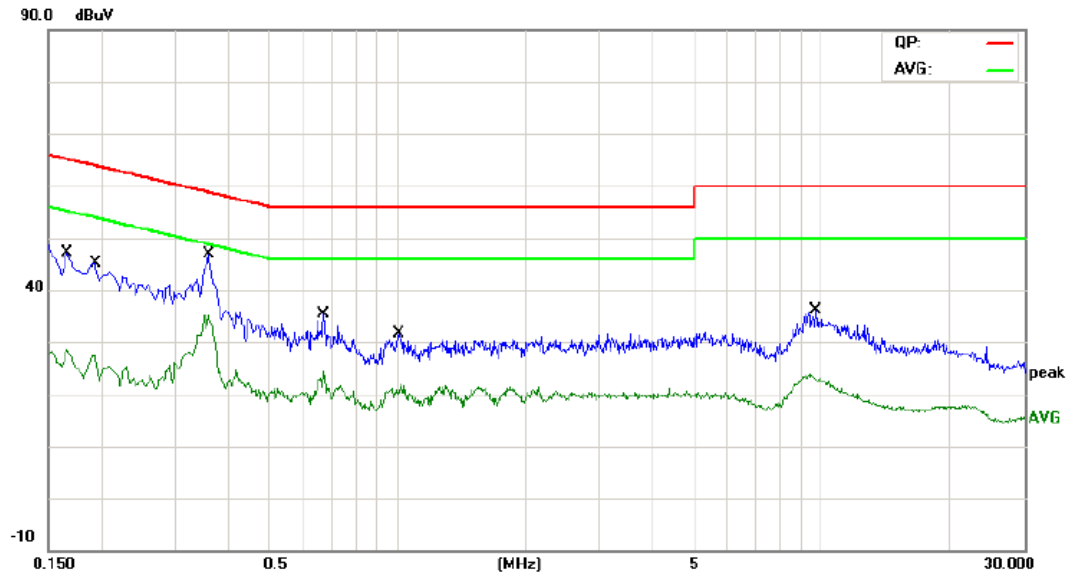
Result

The EUT antenna is a PCB Antenna. It complies with the standard requirement.

Antenna Type
☒ Permanent attached antenna
☐ Unique connector antenna
☐ Professional installation antenna

Attachment A-- Conducted Emission Test Data

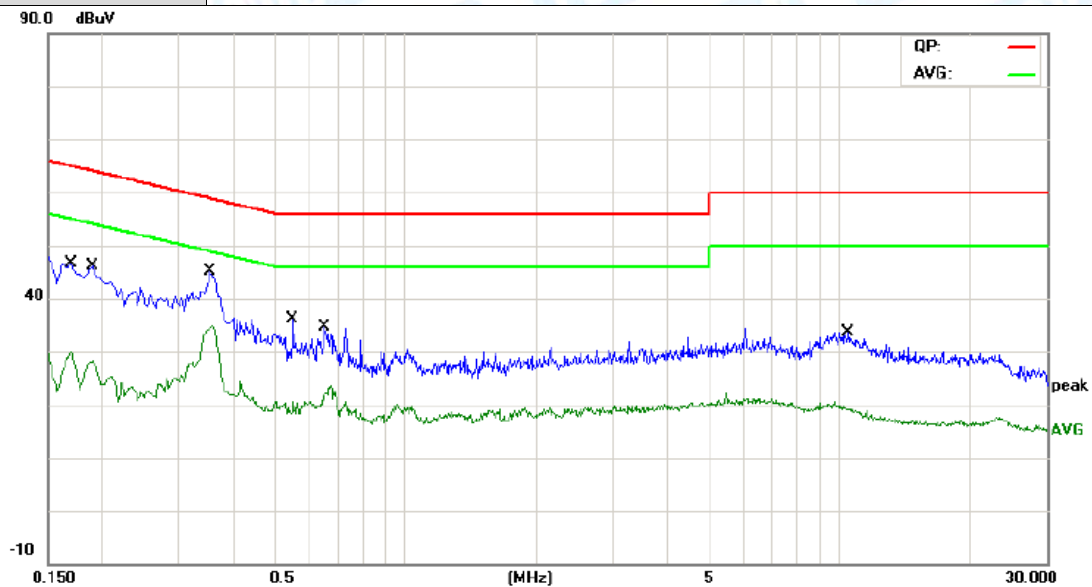
Temperature:	26 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Terminal:	Line		
Test Mode:	Charging with TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1660	34.18	9.78	43.96	65.15	-21.19	QP
2		0.1660	17.40	9.78	27.18	55.15	-27.97	AVG
3		0.1940	32.01	9.78	41.79	63.86	-22.07	QP
4		0.1940	15.66	9.78	25.44	53.86	-28.42	AVG
5		0.3580	30.22	9.83	40.05	58.77	-18.72	QP
6	*	0.3580	23.84	9.83	33.67	48.77	-15.10	AVG
7		0.6700	17.97	9.85	27.82	56.00	-28.18	QP
8		0.6700	12.74	9.85	22.59	46.00	-23.41	AVG
9		1.0100	16.55	9.66	26.21	56.00	-29.79	QP
10		1.0100	10.98	9.66	20.64	46.00	-25.36	AVG
11		9.6580	18.26	9.82	28.08	60.00	-31.92	QP
12		9.6580	12.55	9.82	22.37	50.00	-27.63	AVG

Emission Level= Read Level+ Correct Factor

Temperature:	26 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Terminal:	Neutral		
Test Mode:	Charging with TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1700	34.03	9.62	43.65	64.96	-21.31	QP
2		0.1700	17.04	9.62	26.66	54.96	-28.30	AVG
3		0.1900	32.25	9.58	41.83	64.03	-22.20	QP
4		0.1900	16.14	9.58	25.72	54.03	-28.31	AVG
5		0.3540	30.13	9.73	39.86	58.87	-19.01	QP
6	*	0.3540	23.34	9.73	33.07	48.87	-15.80	AVG
7		0.5500	15.73	9.78	25.51	56.00	-30.49	QP
8		0.5500	8.42	9.78	18.20	46.00	-27.80	AVG
9		0.6540	18.39	9.77	28.16	56.00	-27.84	QP
10		0.6540	11.76	9.77	21.53	46.00	-24.47	AVG
11		10.4900	15.90	9.86	25.76	60.00	-34.24	QP
12		10.4900	8.45	9.86	18.31	50.00	-31.69	AVG

Emission Level= Read Level+ Correct Factor

Attachment B-- Radiated Emission Test Data

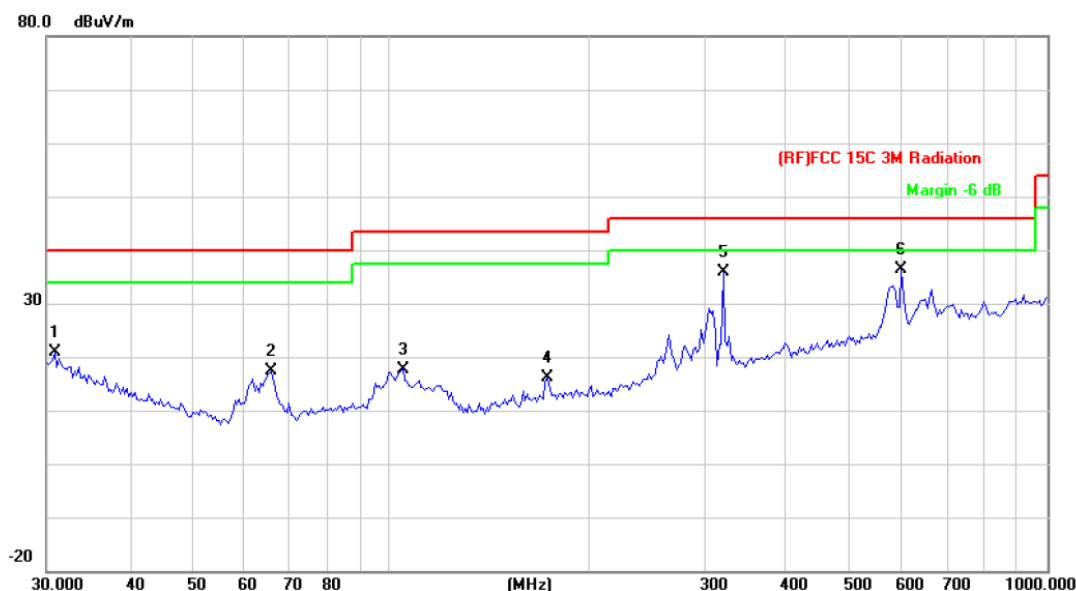
9KHz~30MHz

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

30MHz~1GHz

Temperature:	23.5℃	Relative Humidity:	40%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worst case is reported.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		30.8535	34.45	-13.64	20.81	40.00	-19.19	QP
2		65.8031	41.26	-23.94	17.32	40.00	-22.68	QP
3		104.5361	40.04	-22.29	17.75	43.50	-25.75	QP
4		173.2051	36.42	-20.37	16.05	43.50	-27.45	QP
5		321.0608	51.11	-15.32	35.79	46.00	-10.21	QP
6	*	599.3212	44.51	-8.18	36.33	46.00	-9.67	QP

*:Maximum data x:Over limit !:over margin

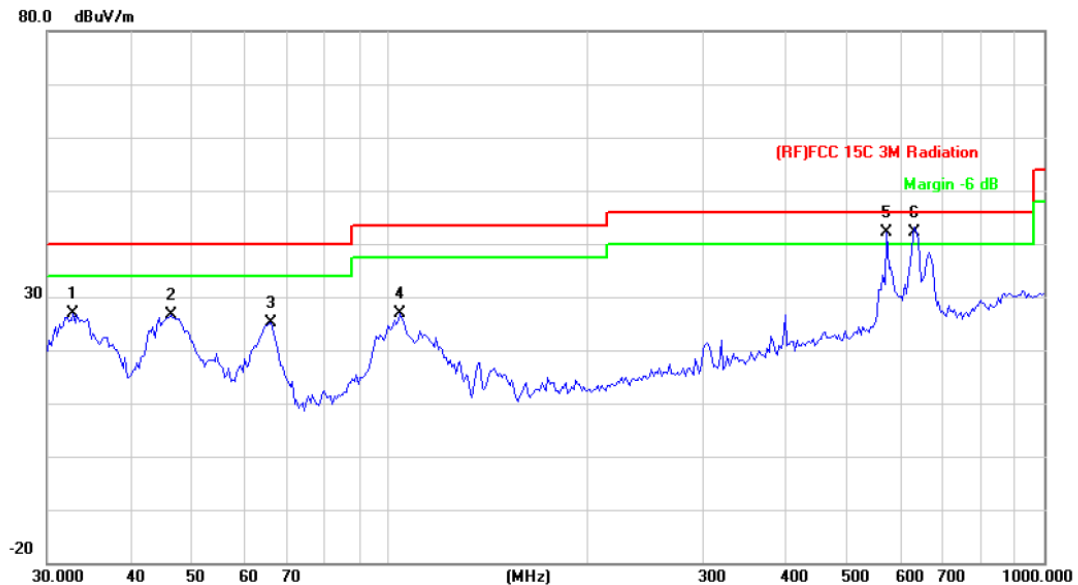
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Temperature:	23.5℃	Relative Humidity:	40%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worst case is reported.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		32.8637	42.02	-15.17	26.85	40.00	-13.15	QP
2		46.3402	48.85	-22.12	26.73	40.00	-13.27	QP
3		65.8031	49.15	-23.94	25.21	40.00	-14.79	QP
4		103.8055	49.11	-22.26	26.85	43.50	-16.65	QP
5	!	574.6258	50.53	-8.50	42.03	46.00	-3.97	QP
6	*	633.9073	50.14	-7.94	42.20	46.00	-3.80	QP

*:Maximum data x:Over limit !:over margin

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Above 1GHz

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4823.790	47.82	15.65	63.47	74.00	-10.53 peak
2	*	4823.790	33.86	15.65	49.51	54.00	-4.49 AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4824.090	48.57	15.65	64.22	74.00	-9.78	peak
2	*	4825.218	33.82	15.66	49.48	54.00	-4.52	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.630	48.38	15.88	64.26	74.00	-9.74	peak
2	*	4874.630	33.70	15.88	49.58	54.00	-4.42	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.546	48.41	15.88	64.29	74.00	-9.71	peak
2	*	4874.546	33.71	15.88	49.59	54.00	-4.41	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.882	48.51	16.11	64.62	74.00	-9.38	peak
2	*	4924.882	33.84	16.11	49.95	54.00	-4.05	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		4923.142	48.64	16.10	64.74	74.00	-9.26	peak
2	*	4923.142	33.87	16.10	49.97	54.00	-4.03	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4°C	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.142	48.90	15.65	64.55	74.00	-9.45	peak
2	*	4823.142	34.10	15.65	49.75	54.00	-4.25	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4°C	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		4823.676	48.83	15.65	64.48	74.00	-9.52	peak
2	*	4823.676	34.04	15.65	49.69	54.00	-4.31	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2437MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.184	48.13	15.87	64.00	74.00	-10.00	peak
2	*	4873.184	33.74	15.87	49.61	54.00	-4.39	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2437MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.936	48.08	15.88	63.96	74.00	-10.04	peak
2	*	4874.936	33.70	15.88	49.58	54.00	-4.42	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4923.796	48.19	16.10	64.29	74.00	-9.71
2	*	4923.796	34.05	16.10	50.15	54.00	-3.85

peak	AVG
------	-----

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.288	48.83	16.10	64.93	74.00	-9.07	peak
2	*	4924.288	33.89	16.10	49.99	54.00	-4.01	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX n(HT20) Mode 2412MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
1		4823.880	47.88	15.65	63.53	74.00	-10.47
2	*	4823.880	33.49	15.65	49.14	54.00	-4.86

Detector	peak
AVG	

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX n(HT20) Mode 2412MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		4823.670	48.50	15.65	64.15	74.00	-9.85 peak
2	*	4825.356	33.54	15.66	49.20	54.00	-4.80 AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX n(HT20) Mode 2437MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.202	48.44	15.88	64.32	74.00	-9.68	peak
2	*	4875.260	33.80	15.89	49.69	54.00	-4.31	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX n(HT20) Mode 2437MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		4872.506	48.53	15.87	64.40	74.00	-9.60	peak
2	*	4875.080	33.81	15.89	49.70	54.00	-4.30	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX n(HT20) Mode 2462MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4925.014	48.21	16.11	64.32	74.00	-9.68	peak
2	*	4925.014	33.68	16.11	49.79	54.00	-4.21	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX n(HT20) Mode 2462MHz		
Remark:	No report for the emission which more than 15dB below the prescribed limit.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		4923.634	48.22	16.10	64.32	74.00	-9.68	peak
2	*	4923.634	33.85	16.10	49.95	54.00	-4.05	AVG

Remark:

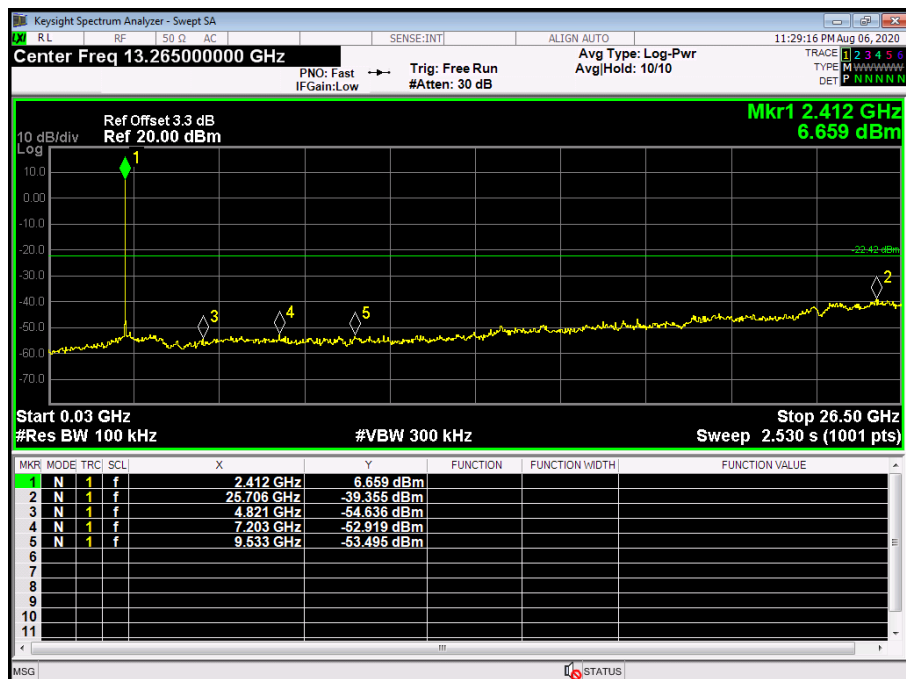
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

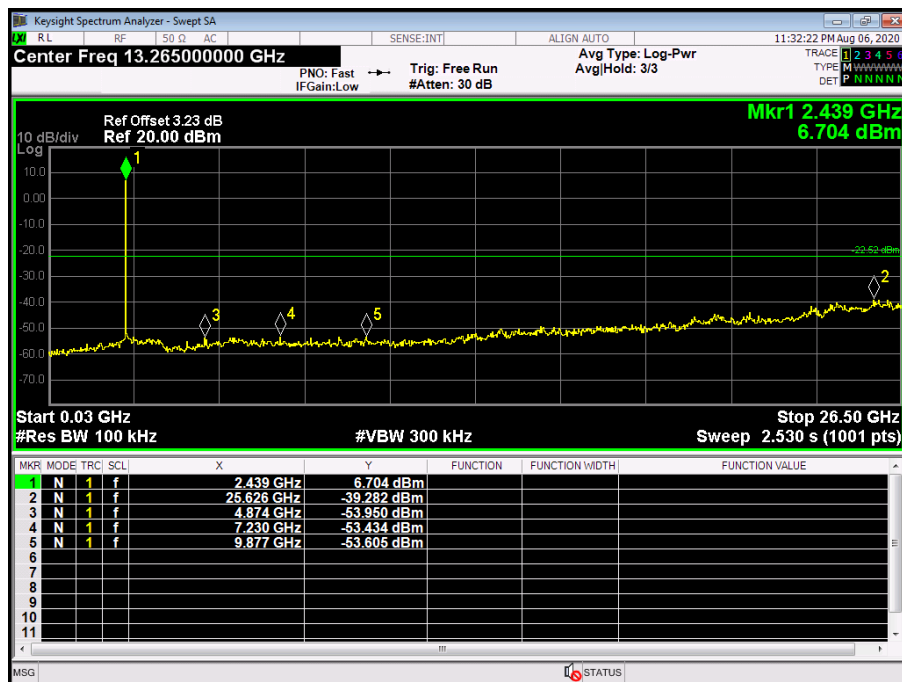
Conducted RF Spurious Emission Test Data

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX B Mode		
Remark:	This report only shall the worst case mode for TX IEEE 802.11b.		

2412 MHz**0.03GHz-25GHz**

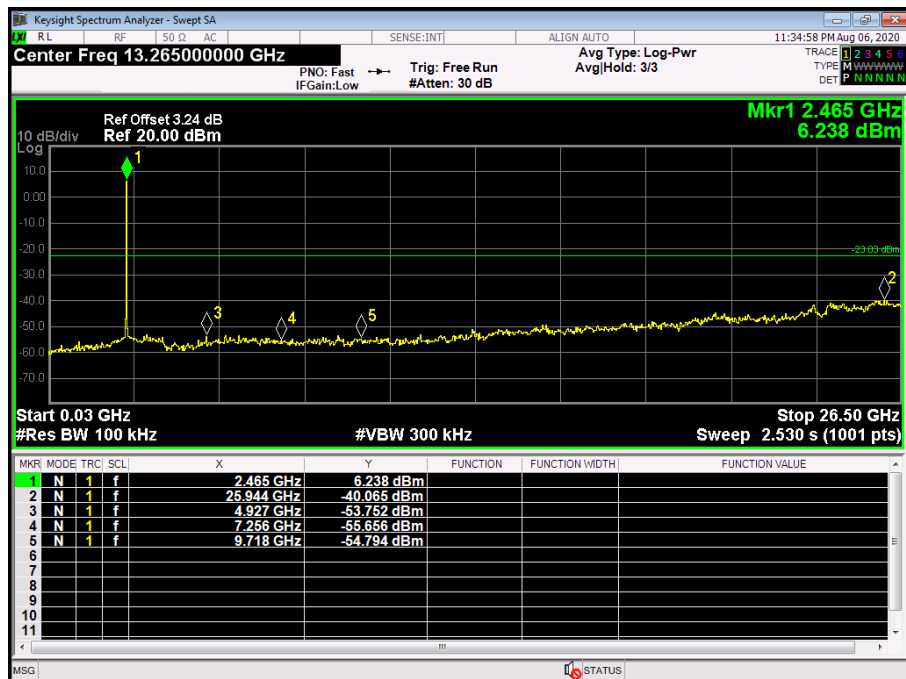
2437 MHz

0.03GHz-25GHz



2462 MHz

0.03GHz-25GHz



Attachment C-- Restricted Bands Requirement and Band-edge Test Data

(1) Radiation Test

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHZ		
Remark:	Only show the worst case.		

120.0 dBuV/m

70

(RF) FCC PART 15C (PEAK)

(RF) FCC PART 15C (AVG)

20.0

2236.00 2256.00 2276.00 2296.00 2316.00 2336.00 2356.00 2376.00 2396.00 2436.00 MHz

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2332.000	53.04	5.39	58.43	74.00	-15.57	peak
2		2332.000	43.35	5.39	48.74	54.00	-5.26	AVG
3		2390.000	50.03	5.53	55.56	74.00	-18.44	peak
4		2390.000	40.05	5.53	45.58	54.00	-8.42	AVG
5	*	2411.200	99.51	5.58	105.09	Fundamental Frequency		AVG
6	X	2413.200	109.47	5.58	115.05	Fundamental Frequency		peak

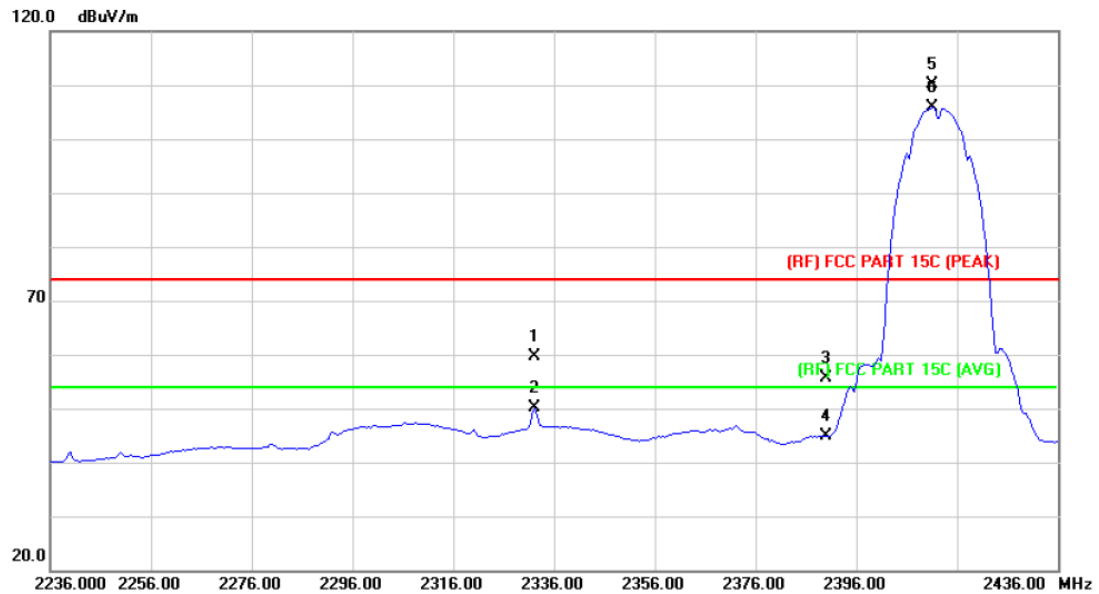
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only show the worst case.		

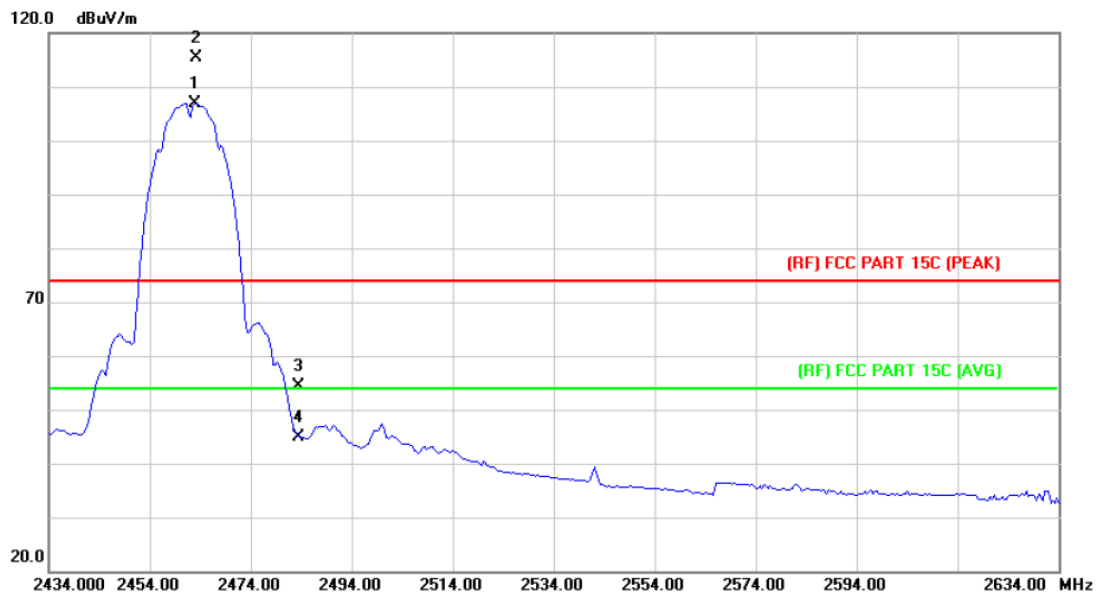


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2332.000	54.22	5.39	59.61	74.00	-14.39	peak
2		2332.000	44.70	5.39	50.09	54.00	-3.91	AVG
3		2390.000	49.99	5.53	55.52	74.00	-18.48	peak
4		2390.000	39.29	5.53	44.82	54.00	-9.18	AVG
5	X	2411.200	104.64	5.58	110.22	Fundamental Frequency		peak
6	*	2411.200	100.37	5.58	105.95	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	Only show the worst case.		

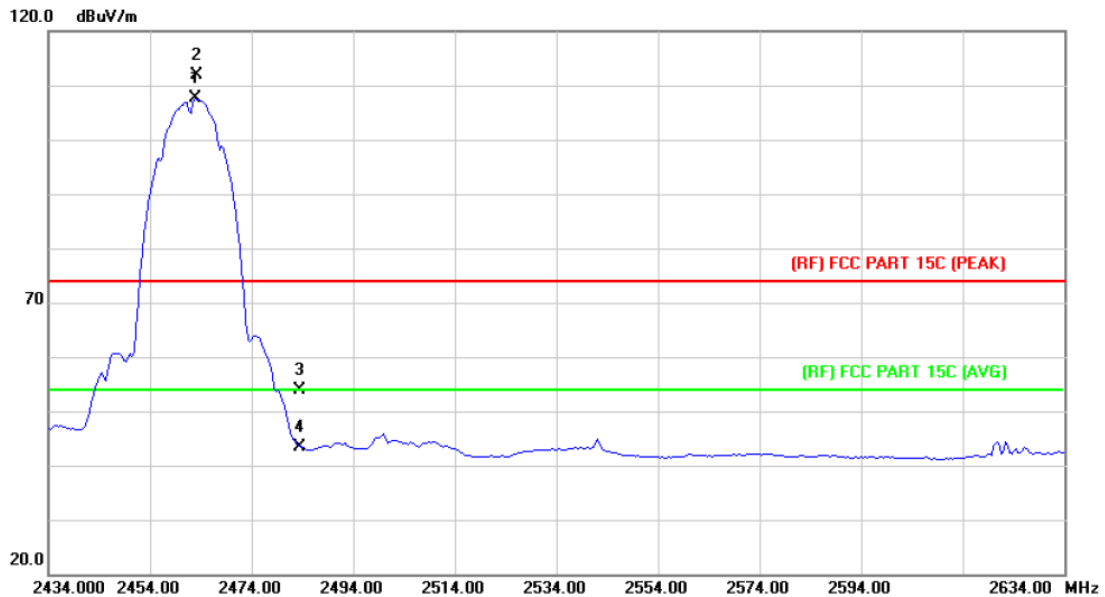


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2462.800	101.22	5.70	106.92	Fundamental Frequency		peak
2	*	2463.200	109.62	5.70	115.32	Fundamental Frequency		peak
3		2483.500	48.69	5.75	54.44	74.00	-19.56	peak
4		2483.500	39.16	5.75	44.91	54.00	-9.09	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHZ		
Remark:	Only show the worst case.		

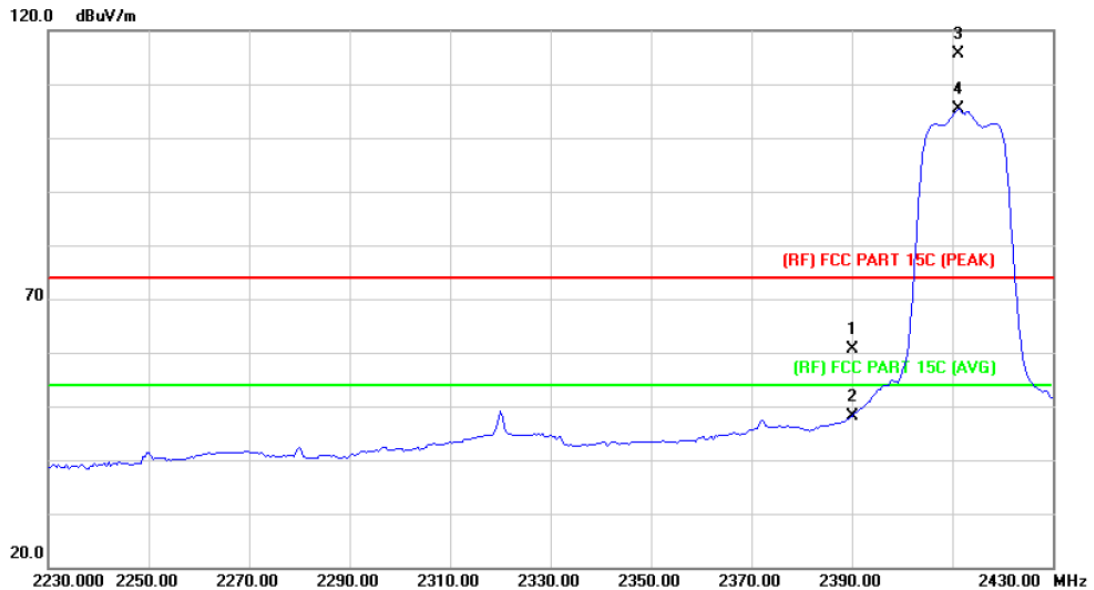


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2462.800	101.82	5.70	107.52	Fundamental Frequency		AVG
2	X	2463.200	106.14	5.70	111.84	Fundamental Frequency		peak
3		2483.500	48.01	5.75	53.76	74.00	-20.24	peak
4		2483.500	37.69	5.75	43.44	54.00	-10.56	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	Only show the worst case.		

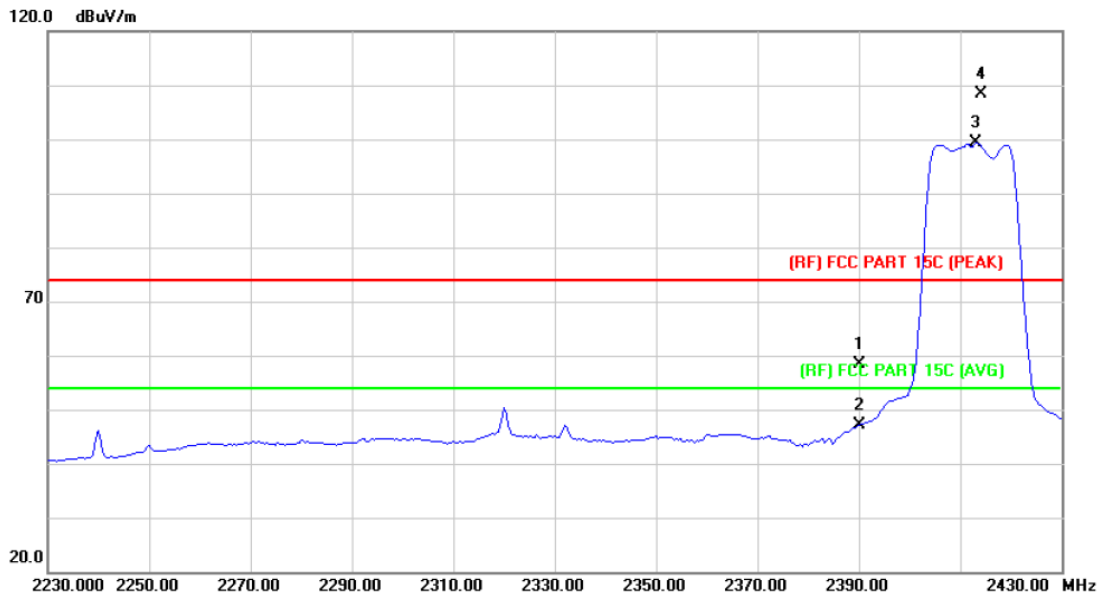


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	55.05	5.53	60.58	74.00	-13.42	peak
2		2390.000	42.67	5.53	48.20	54.00	-5.80	AVG
3	X	2411.200	110.15	5.58	115.73	Fundamental Frequency		peak
4	*	2411.200	99.71	5.58	105.29	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	Only show the worst case.		

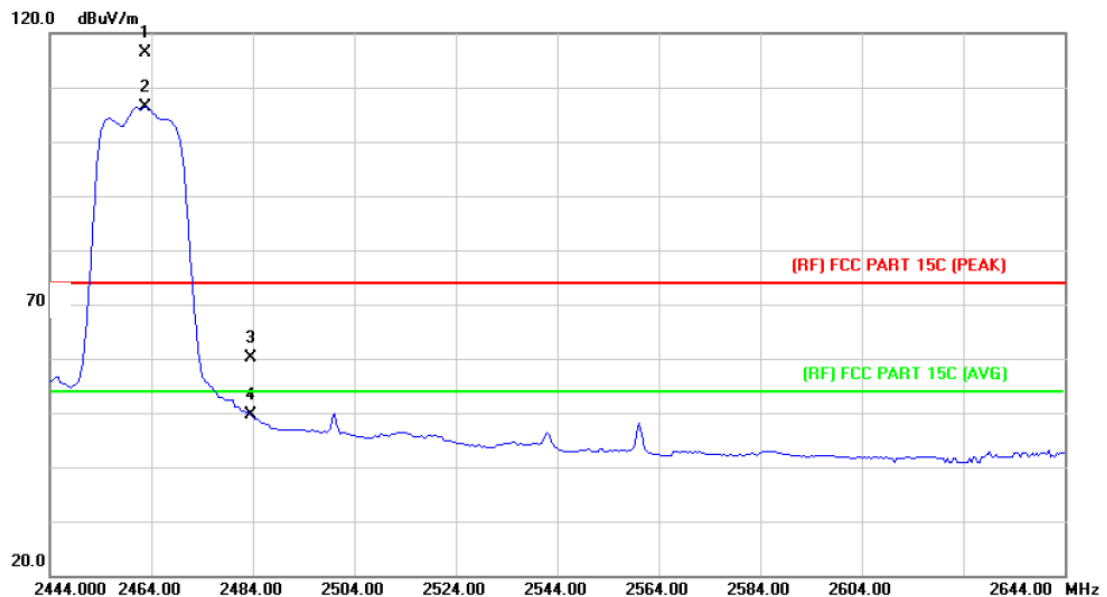


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	52.74	5.53	58.27	74.00	-15.73	peak
2		2390.000	41.55	5.53	47.08	54.00	-6.92	AVG
3	*	2413.200	93.74	5.58	99.32	Fundamental Frequency		AVG
4	X	2414.000	102.89	5.59	108.48	Fundamental Frequency		peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	Only show the worst case.		

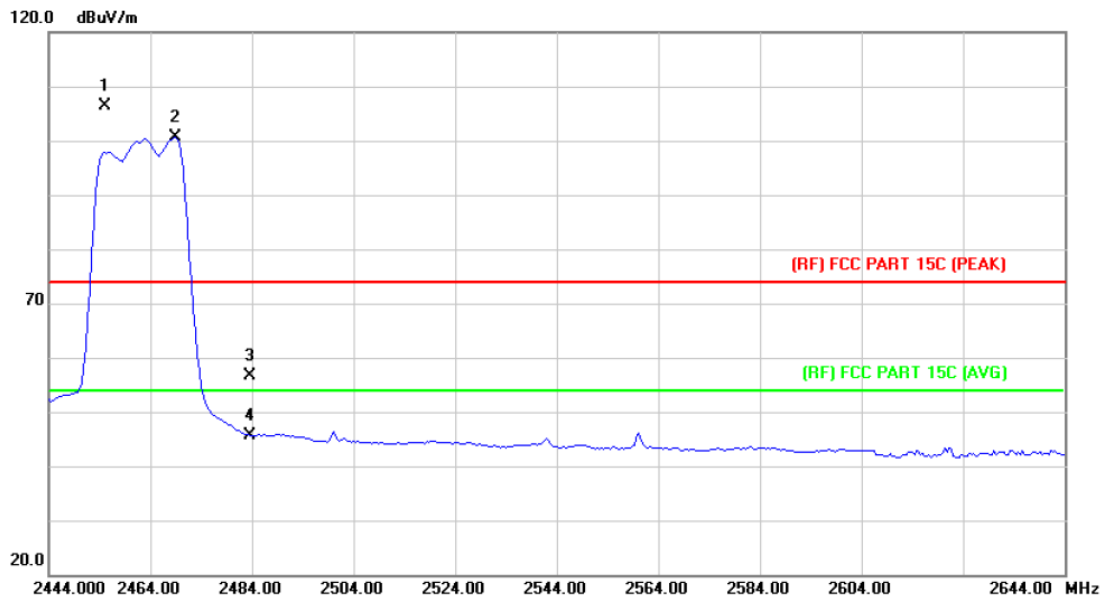


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2462.800	110.61	5.70	116.31	Fundamental Frequency		peak
2	*	2462.800	100.78	5.70	106.48	Fundamental Frequency		AVG
3		2483.500	54.36	5.75	60.11	74.00	-13.89	peak
4		2483.500	43.77	5.75	49.52	54.00	-4.48	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2455.200	100.66	5.69	106.35	Fundamental Frequency		peak
2	*	2468.800	94.80	5.71	100.51	Fundamental Frequency		AVG
3		2483.500	50.89	5.75	56.64	74.00	-17.36	peak
4		2483.500	39.92	5.75	45.67	54.00	-8.33	AVG

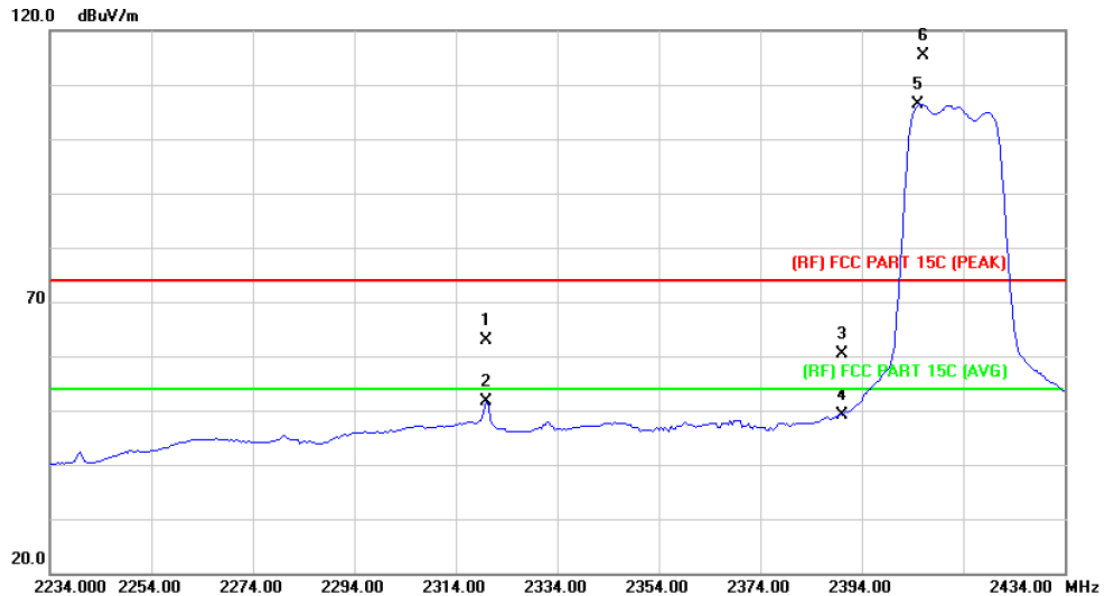
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	N/A		

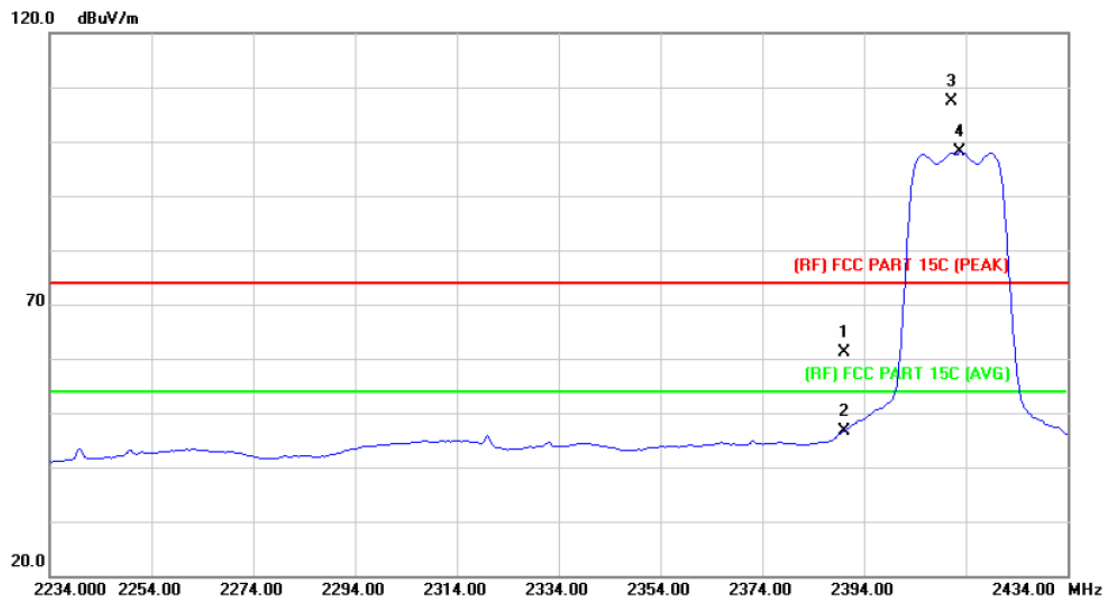


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2320.000	57.49	5.37	62.86	74.00	-11.14	peak
2		2320.000	46.36	5.37	51.73	54.00	-2.27	AVG
3		2390.000	54.84	5.53	60.37	74.00	-13.63	peak
4		2390.000	43.67	5.53	49.20	54.00	-4.80	AVG
5	*	2405.200	100.90	5.57	106.47	Fundamental Frequency		AVG
6	X	2406.000	109.86	5.57	115.43	Fundamental Frequency		peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	N/A		

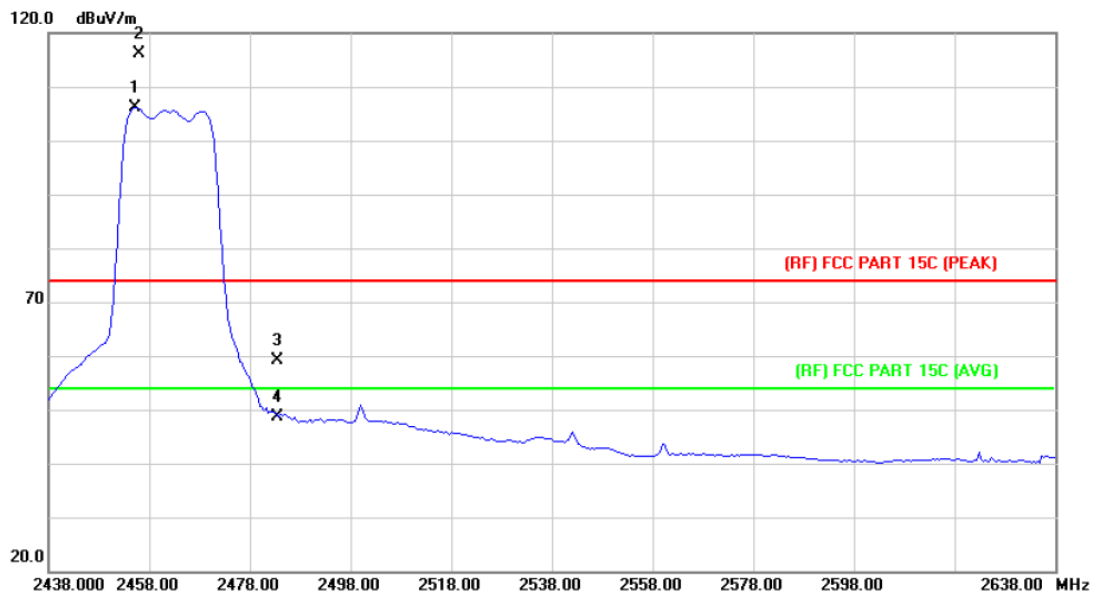


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	55.68	5.53	61.21	74.00	-12.79	peak
2		2390.000	41.17	5.53	46.70	54.00	-7.30	AVG
3	X	2411.200	101.78	5.58	107.36	Fundamental Frequency		peak
4	*	2412.800	92.46	5.58	98.04	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	N/A		

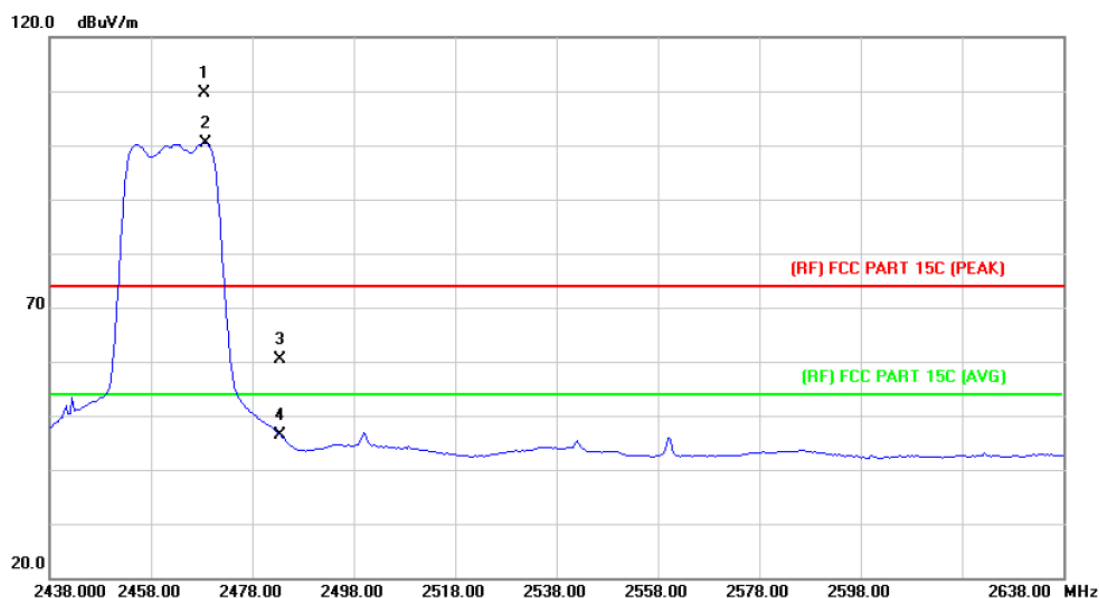


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2455.200	100.53	5.69	106.22	Fundamental Frequency		AVG
2	X	2456.000	110.47	5.69	116.16	Fundamental Frequency		peak
3		2483.500	53.49	5.75	59.24	74.00	-14.76	peak
4		2483.500	42.77	5.75	48.52	54.00	-5.48	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	23.4℃	Relative Humidity:	35%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHZ		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2468.400	103.94	5.72	109.66	Fundamental Frequency		peak
2	*	2468.800	94.71	5.71	100.42	Fundamental Frequency		AVG
3		2483.500	54.69	5.75	60.44	74.00	-13.56	peak
4		2483.500	40.61	5.75	46.36	54.00	-7.64	AVG

Remark:

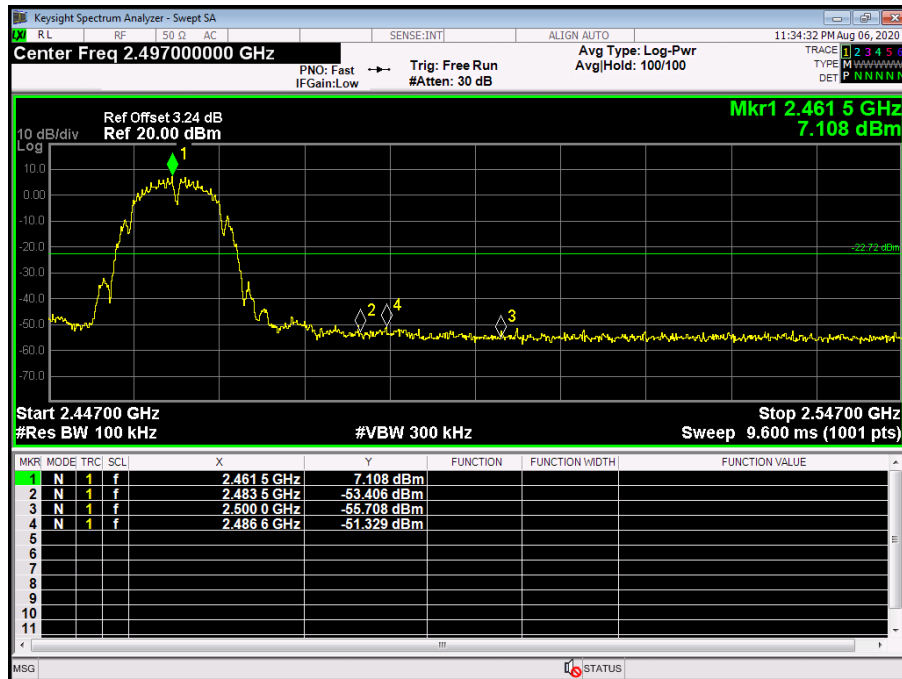
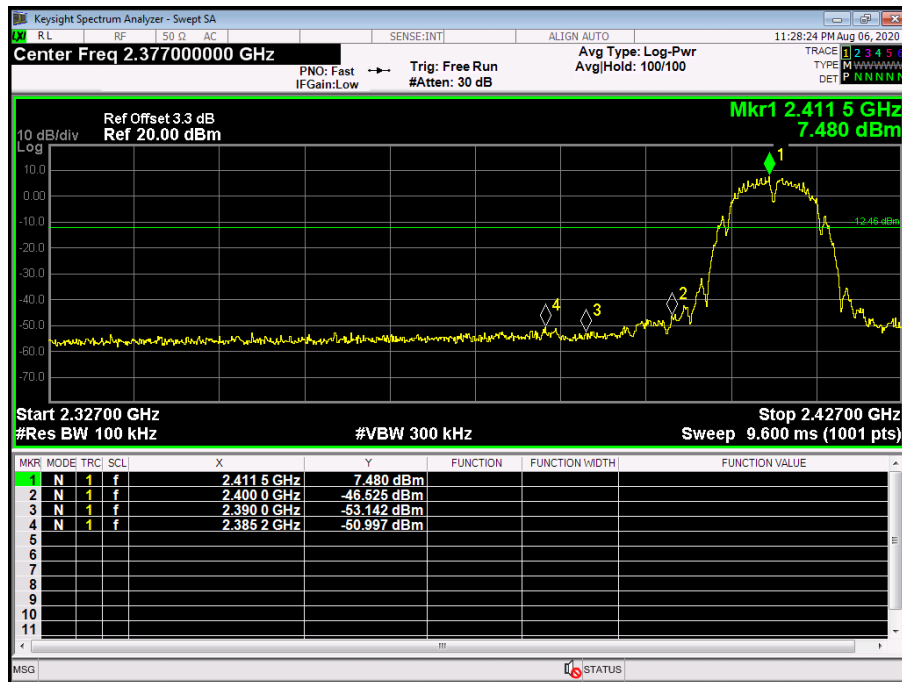
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)

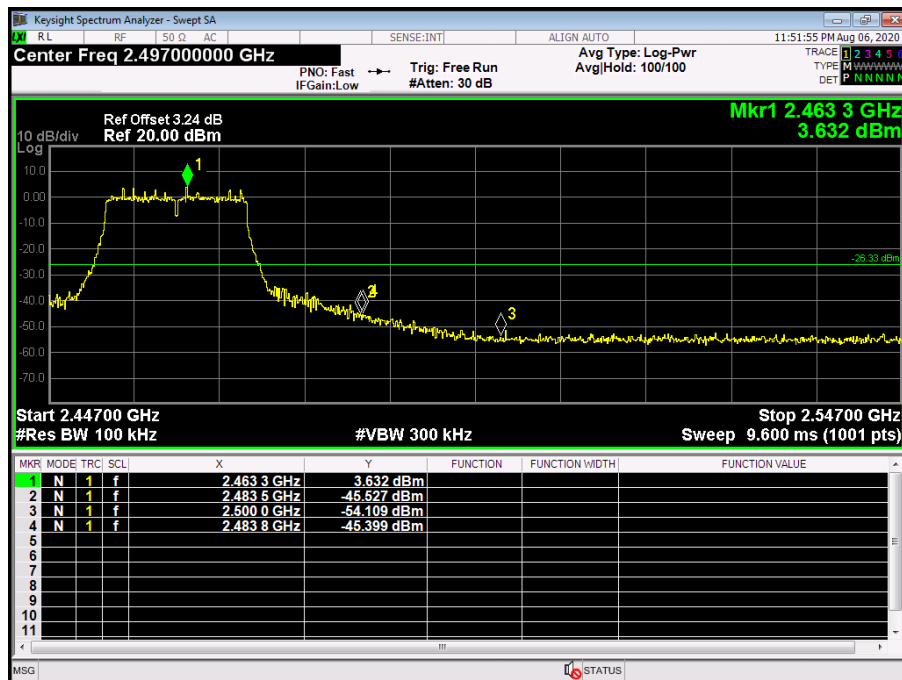
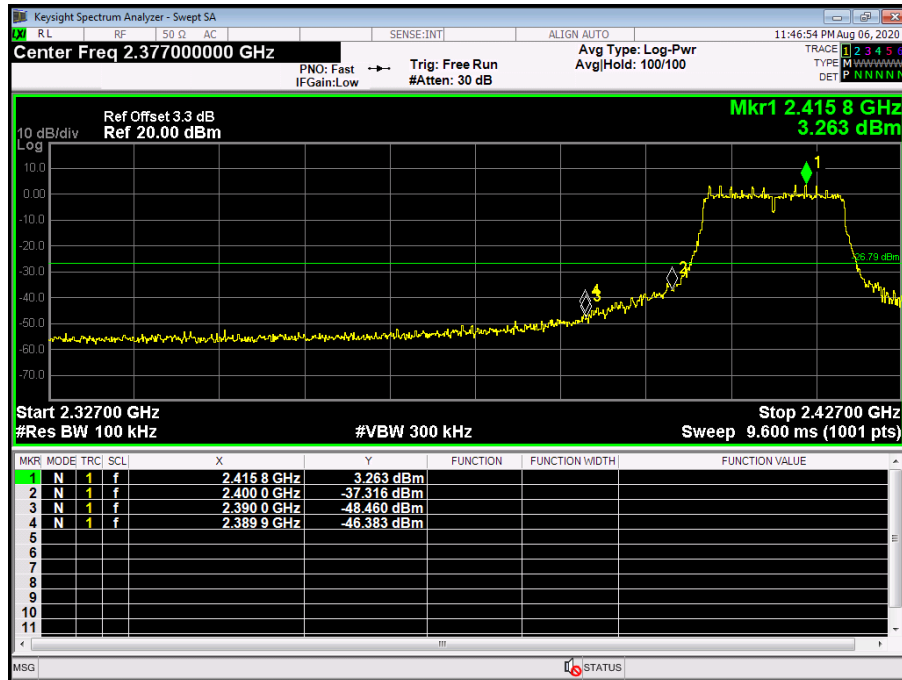
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

(2) Conducted Test

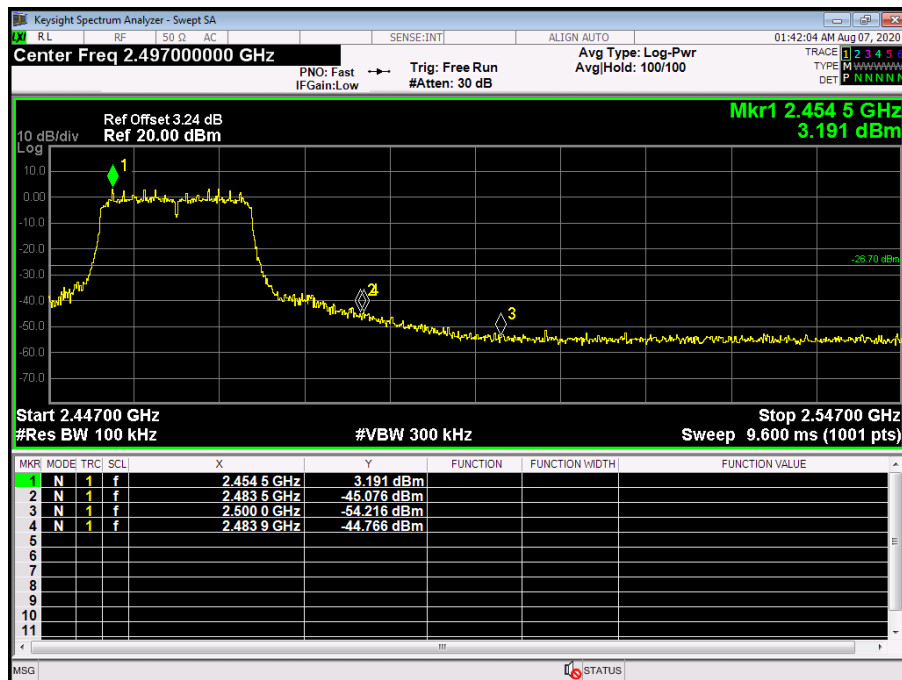
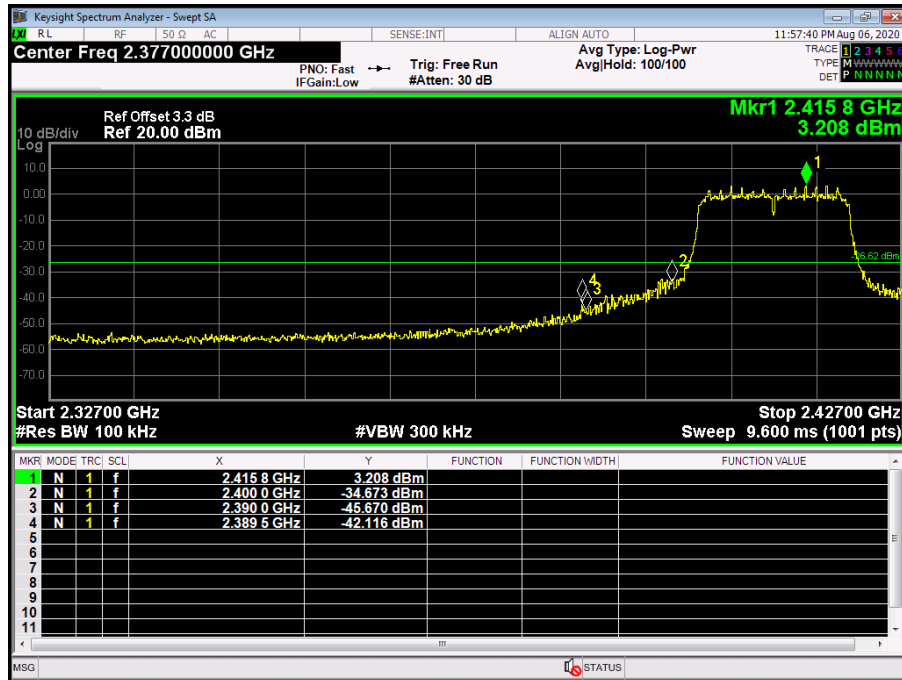
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz		
Remark:	The EUT is programmed in continuously transmitting mode		



Attachment D-- Bandwidth Test Data

Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11B Mode		
Channel frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	
2412	7.986	>=0.5	
2437	8.307		
2462	8.054		

802.11B Mode

2412 MHz

Keysight Spectrum Analyzer - Occupied BW

RL

RF

50 dB

AC

SENSE:INT

ALIGN: AUTO

11:27:11 PM Aug 06, 2020

Center Freq 2.412000000 GHz

Center Freq: 2.412000000 GHz

Radio Std: None

#FGain: Low

Trig: Free Run

Avg/Hold: 100/100

#Atten: 30 dB

Radio Device: BTS

Ref Offset 3.3 dB

Ref 23.30 dBm

Mkr3 2.415985 GHz

2.5896 dBm

10 dB/div

Log

13.3

3.30

-6.70

-16.7

-26.7

-36.7

-46.7

-56.7

-66.7

Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 40 MHz

Sweep 4 ms

Occupied Bandwidth

10.421 MHz

Total Power

22.9 dBm

Transmit Freq Error

-8.073 kHz

% of OBW Power

99.00 %

x dB Bandwidth

7.986 MHz

x dB

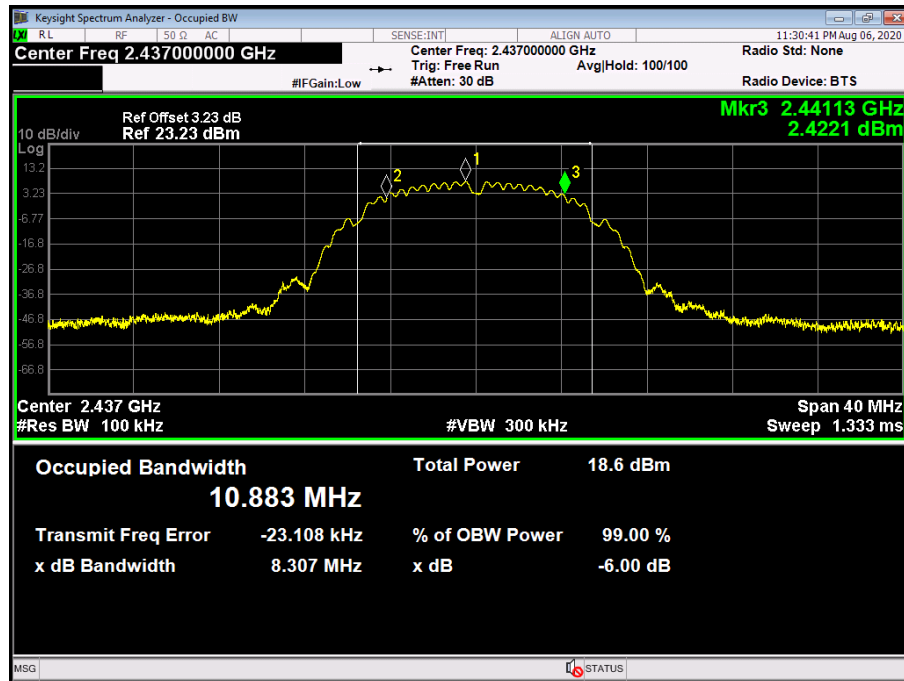
-6.00 dB

MSG

STATUS

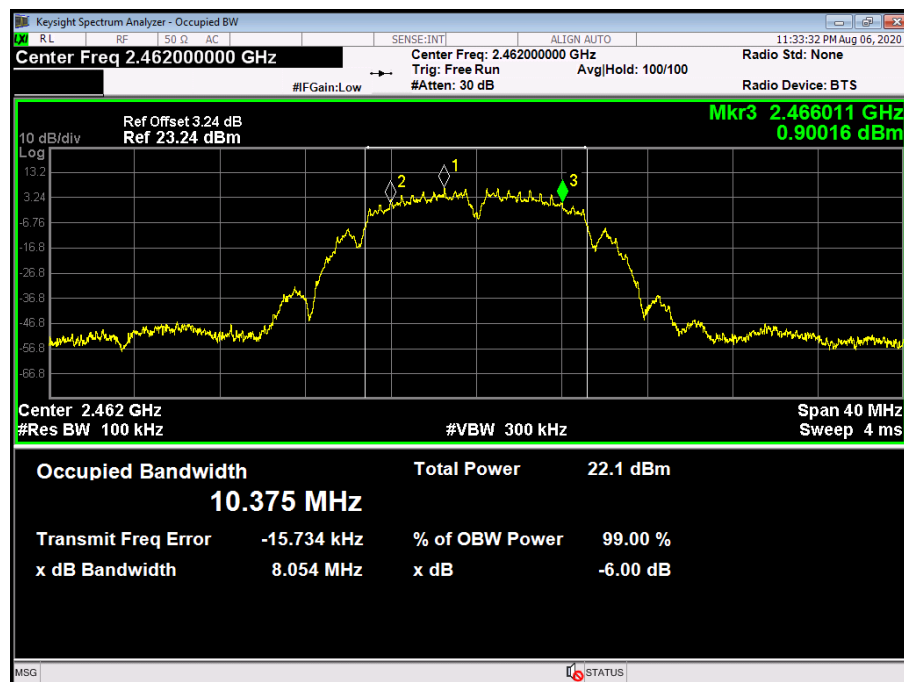
802.11B Mode

2437 MHz



802.11B Mode

2462 MHz



Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11G Mode		
Channel frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	
2412	16.390	>=0.5	
2437	16.45		
2462	16.43		
802.11G Mode			
2412 MHz			

Keysight Spectrum Analyzer - Occupied BW

RL

RF

50 Ω

AC

SENSE:INT

ALIGN AUTO

11:44:29 PM Aug 06, 2020

Center Freq 2.412000000 GHz

Center Freq: 2.412000000 GHz

Trig: Free Run

Avg/Hold: 100/100

Radio Std: None

#FGain: Low

#Atten: 30 dB

Radio Device: BTS

Ref Offset 3.3 dB

Ref 23.30 dBm

Mkr3 2.420215 GHz

1.2651 dBm

10 dB/div

Log

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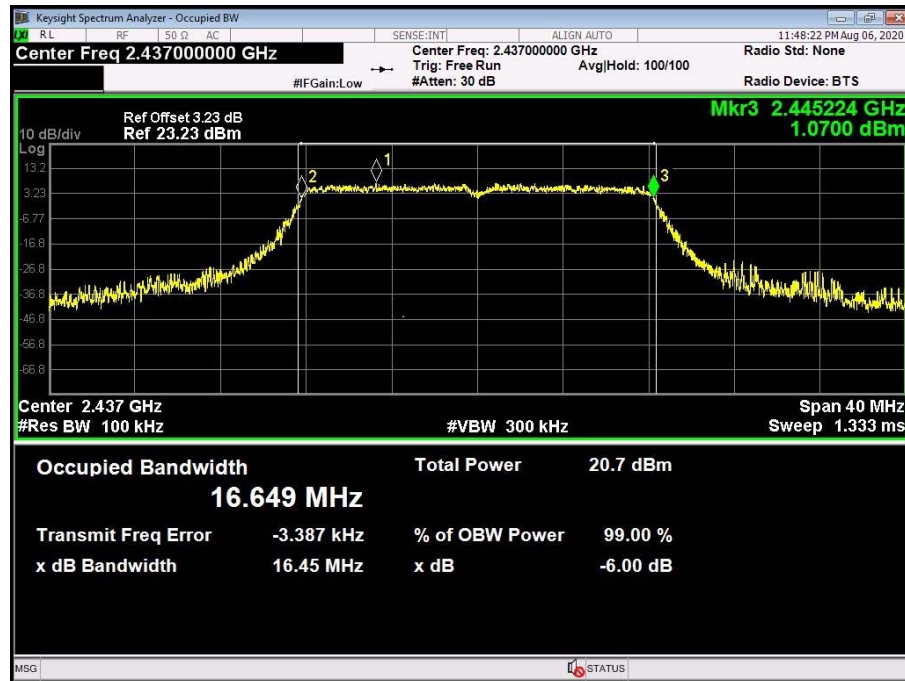
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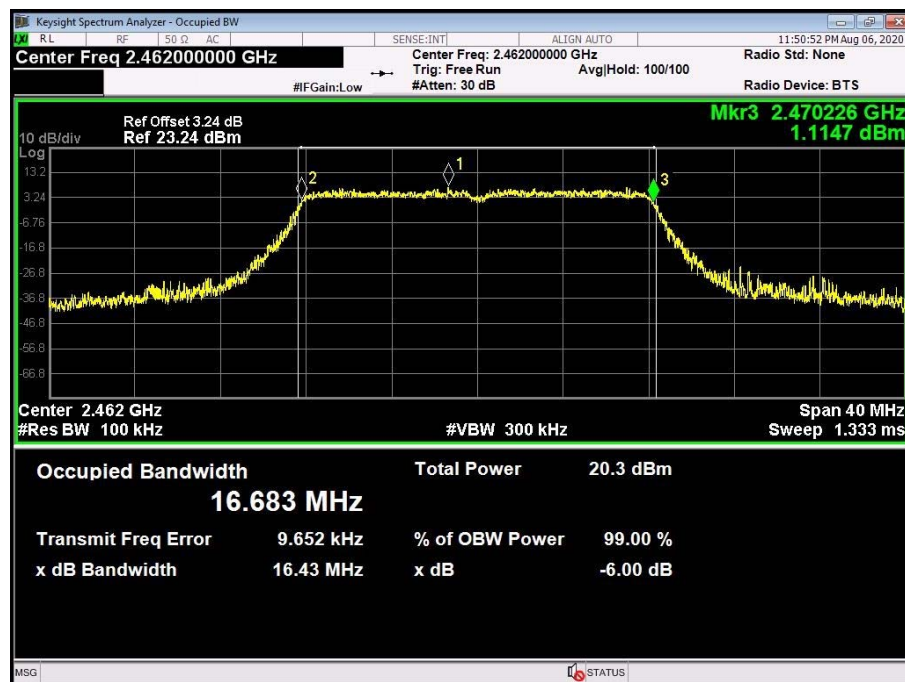
802.11G Mode

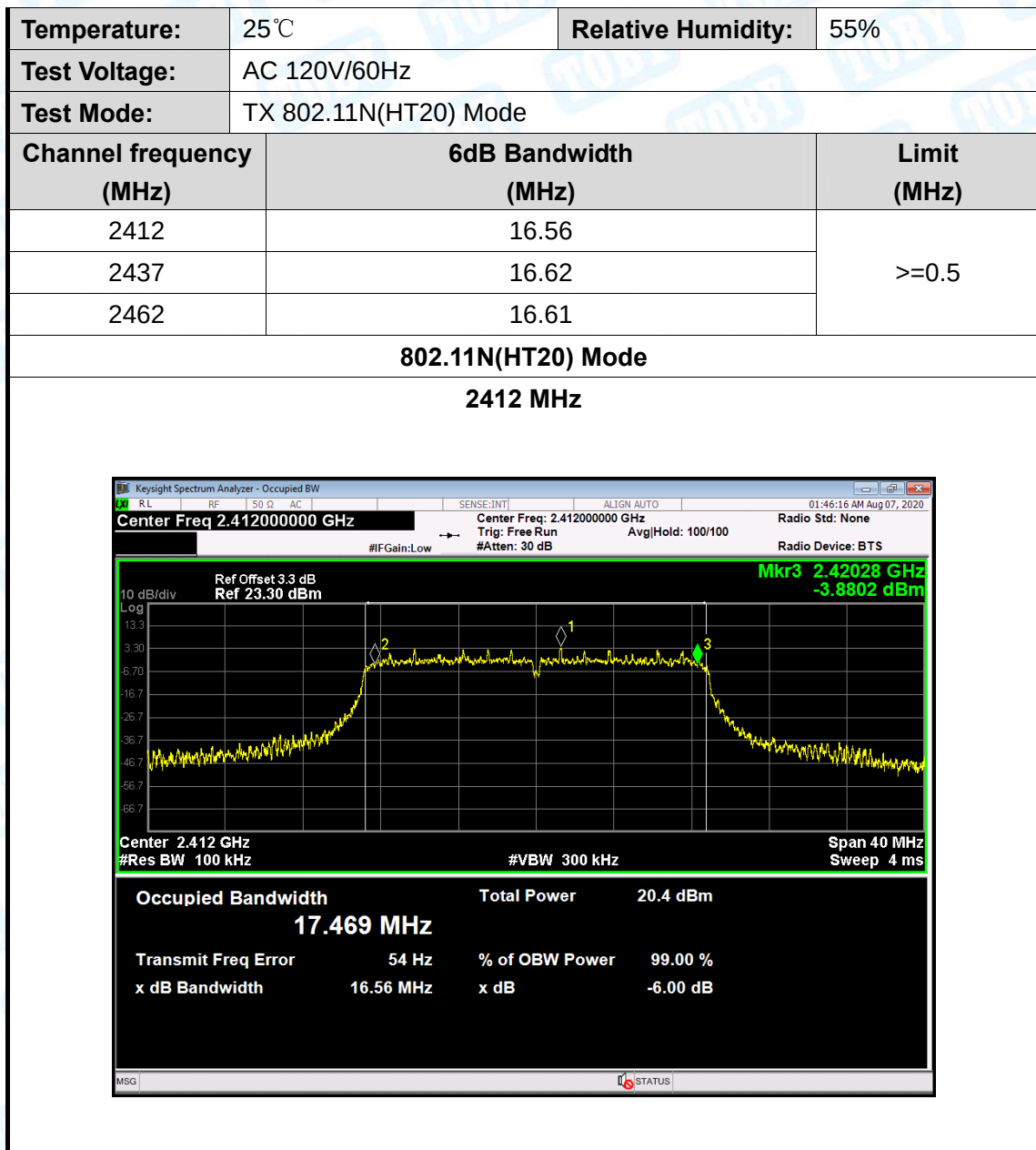
2437 MHz



802.11G Mode

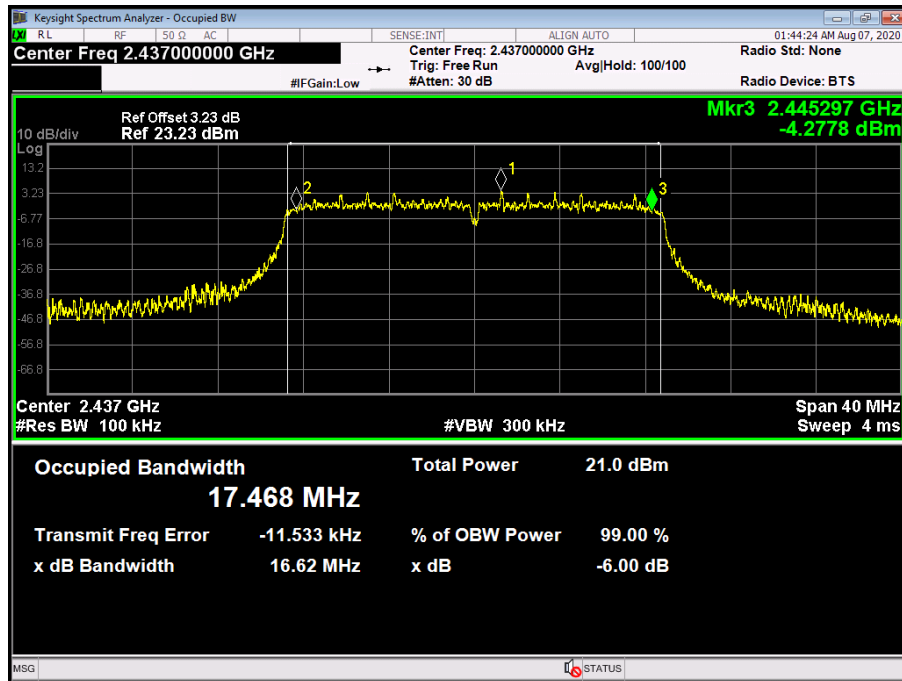
2462 MHz





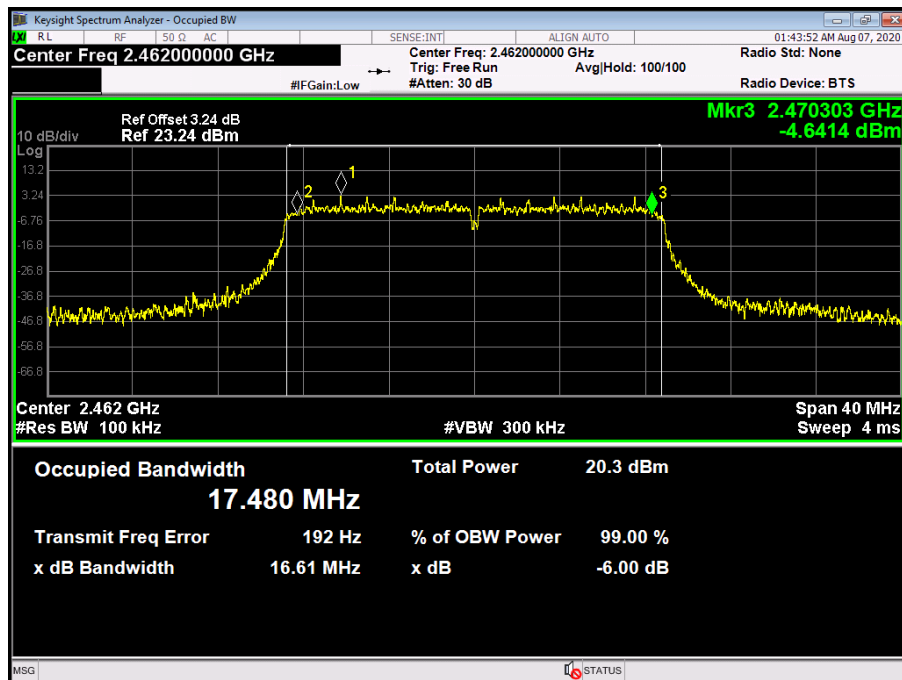
802.11N(HT20) Mode

2437 MHz



802.11N(HT20) Mode

2462 MHz

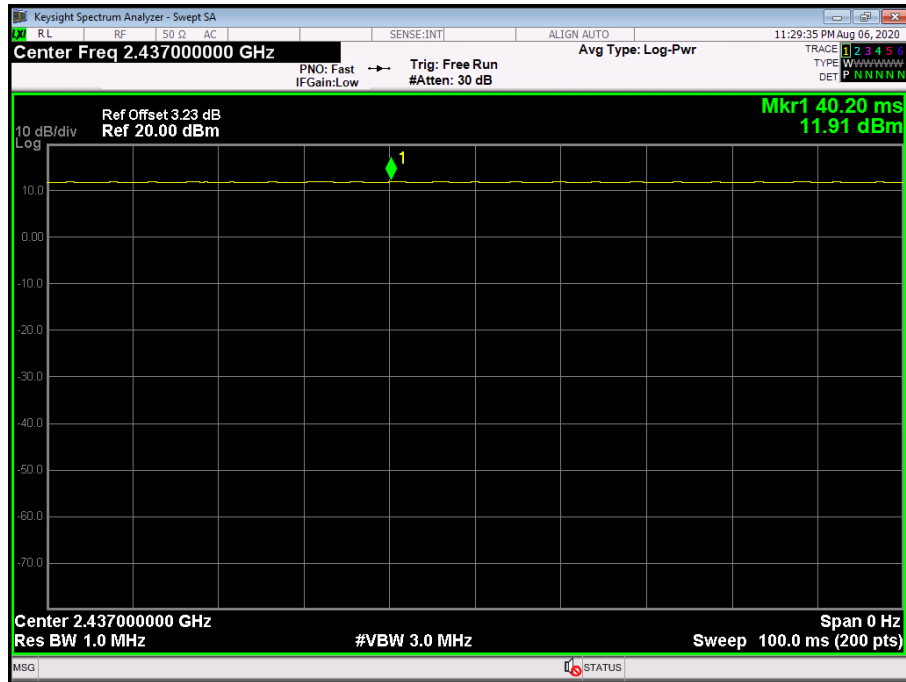


Attachment E-- Peak Output Power Test Data

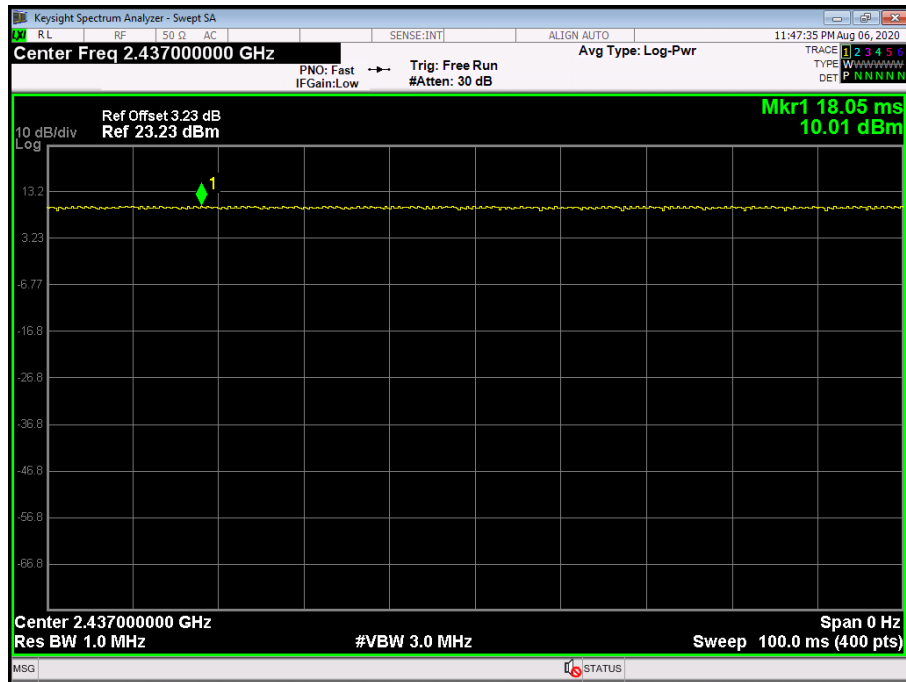
Test Conditions:		Continuous Transmitting Mode	
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
802.11b	2412	16.06	30
	2437	15.40	
	2462	14.99	
802.11g	2412	14.49	
	2437	14.81	
	2462	14.27	
802.11n (HT20)	2412	14.10	
	2437	14.48	
	2462	14.00	
Result: PASS			

Duty Cycle		
Mode	Channel frequency (MHz)	Test Result
802.11b	2412	>98%
	2437	
	2462	
802.11g	2412	
	2437	
	2462	
802.11n (HT20)	2412	
	2437	
	2462	
Please see below plots		

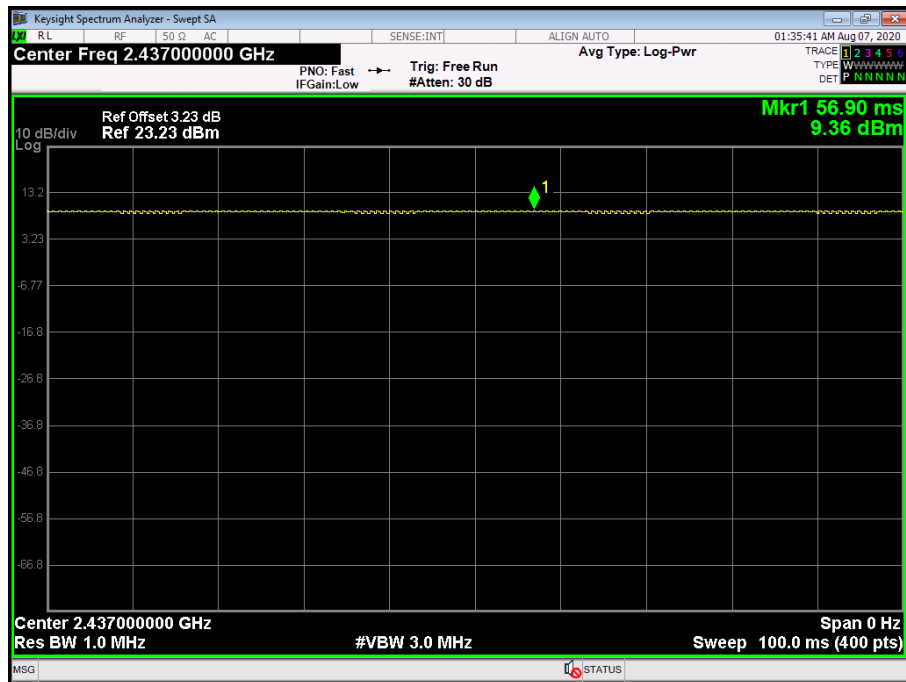
802.11 B Mode 2437 MHz



802.11 G Mode 2437 MHz

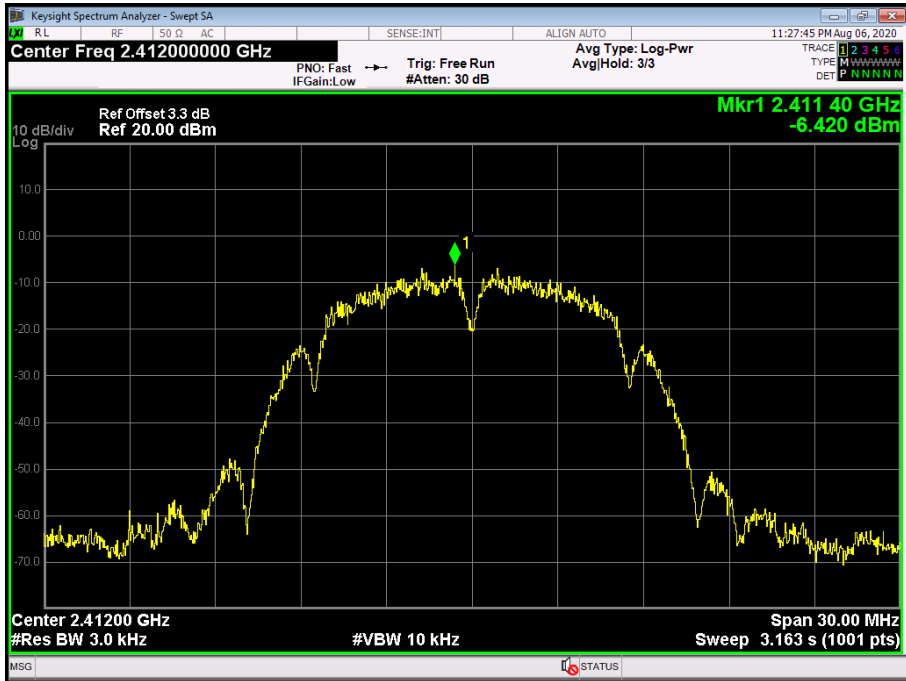


802.11 N20 Mode 2437 MHz



Attachment F-- Power Spectral Density Test Data

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11B Mode		
Channel Frequency (MHz)	Power Density (dBm/3 kHz)	Limit (dBm/3 kHz)	
2412	-6.420	8	
2437	-7.348		
2462	-7.335		
802.11B Mode			
2412 MHz			



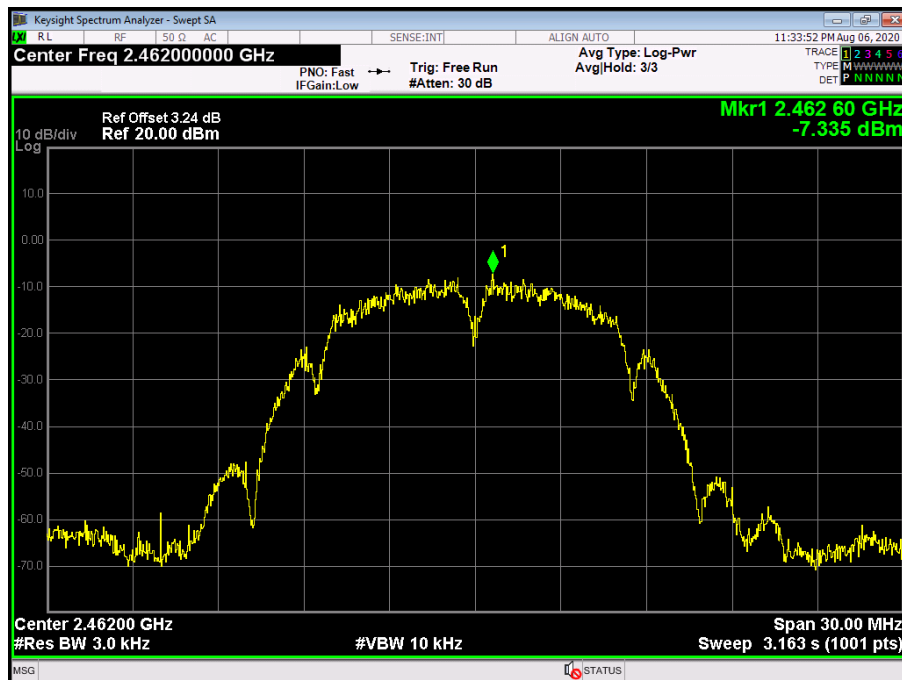
802.11B Mode

2437 MHz

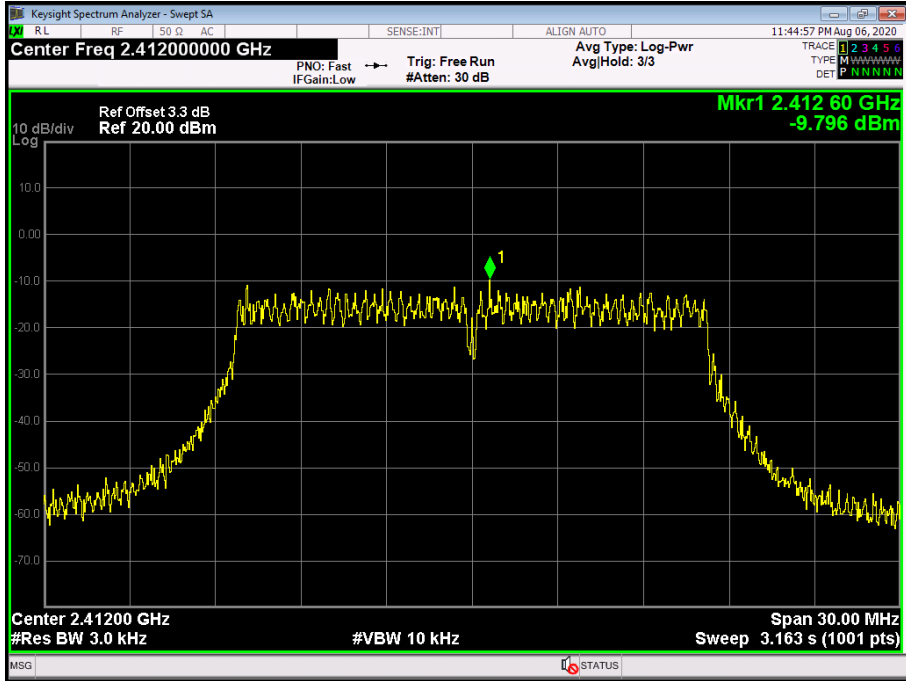


802.11B Mode

2462 MHz

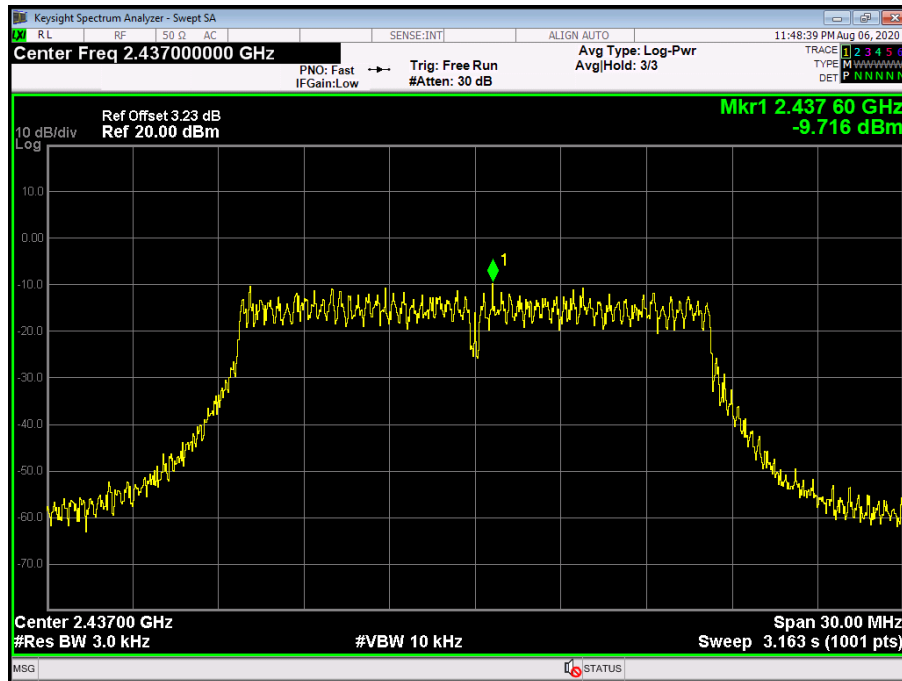


Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11G Mode		
Channel Frequency (MHz)	Power Density (dBm/3 kHz)	Limit (dBm/3 kHz)	
2412	-9.796	8	
2437	-9.716		
2462	-9.882		
802.11G Mode			
2412 MHz			



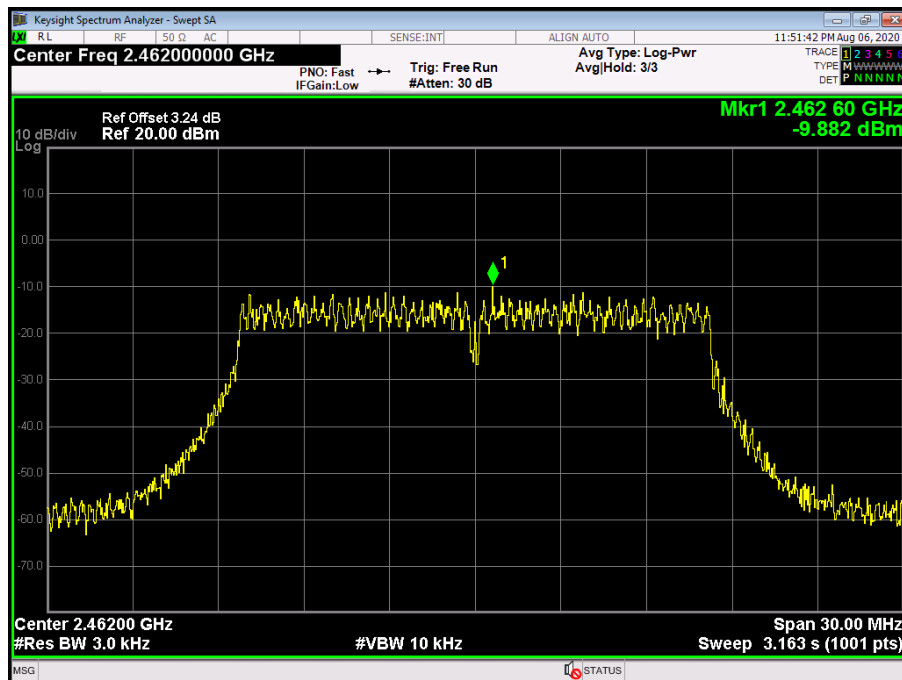
802.11G Mode

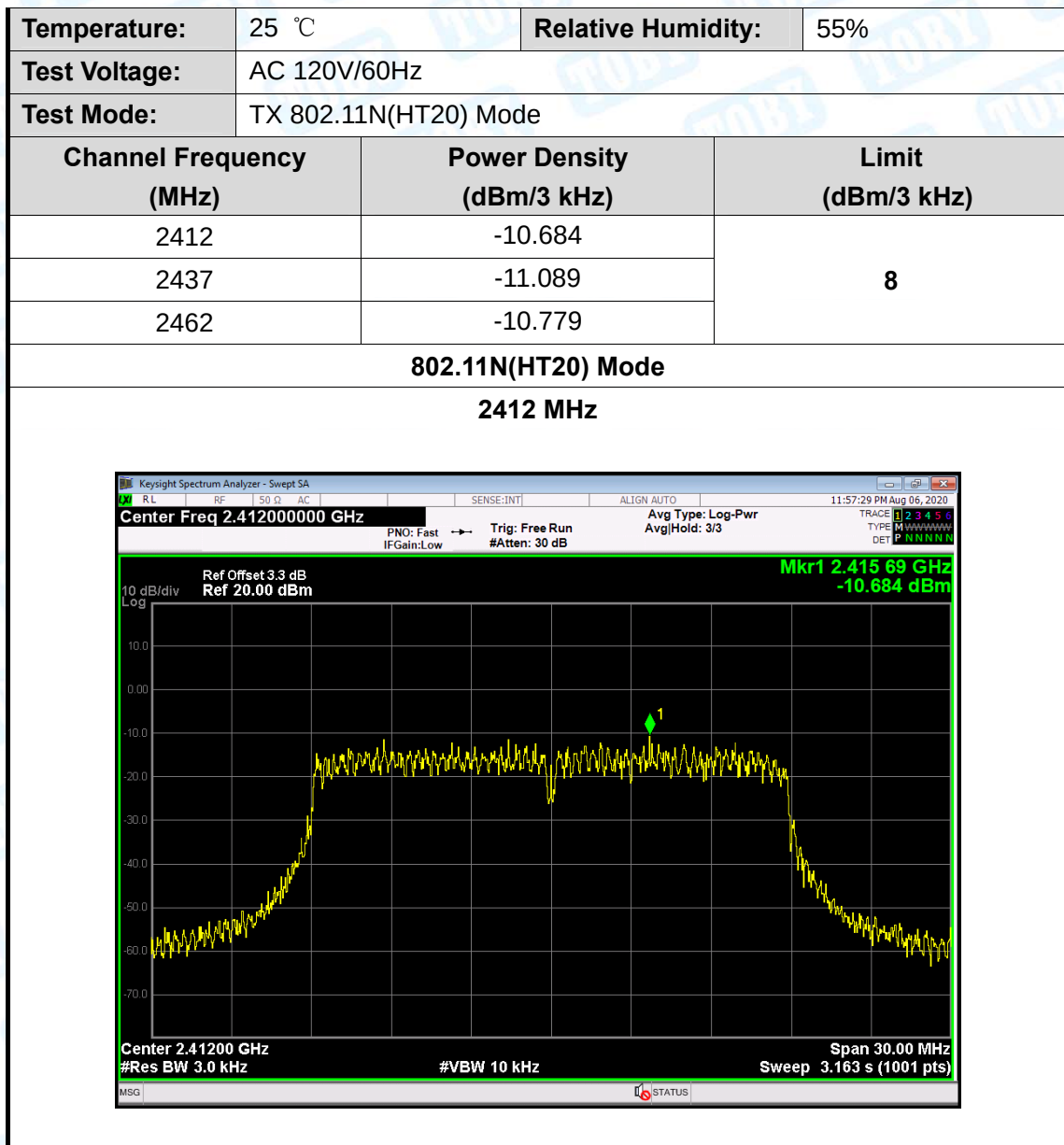
2437 MHz



802.11G Mode

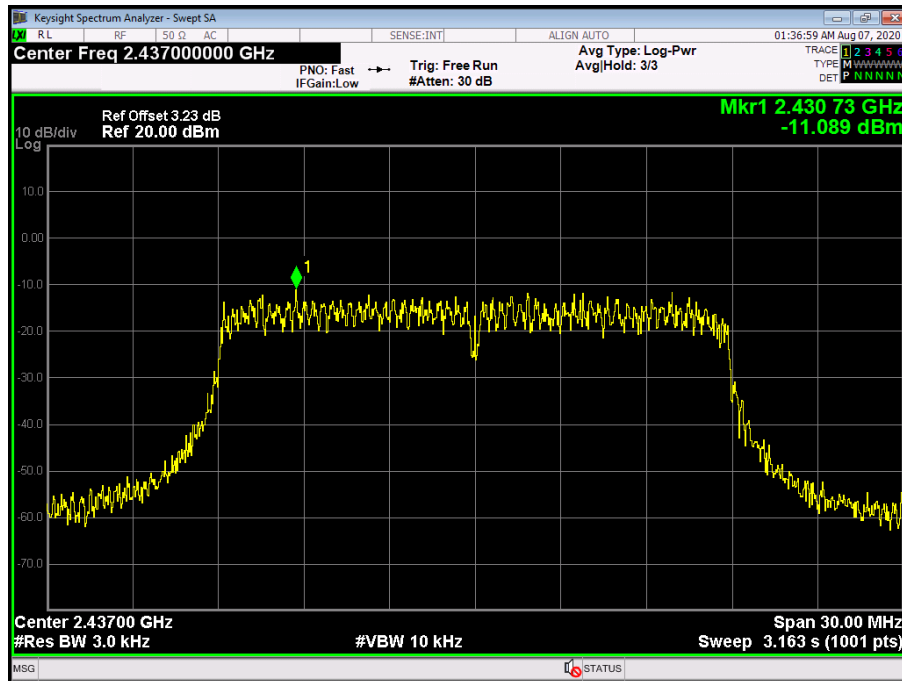
2462 MHz





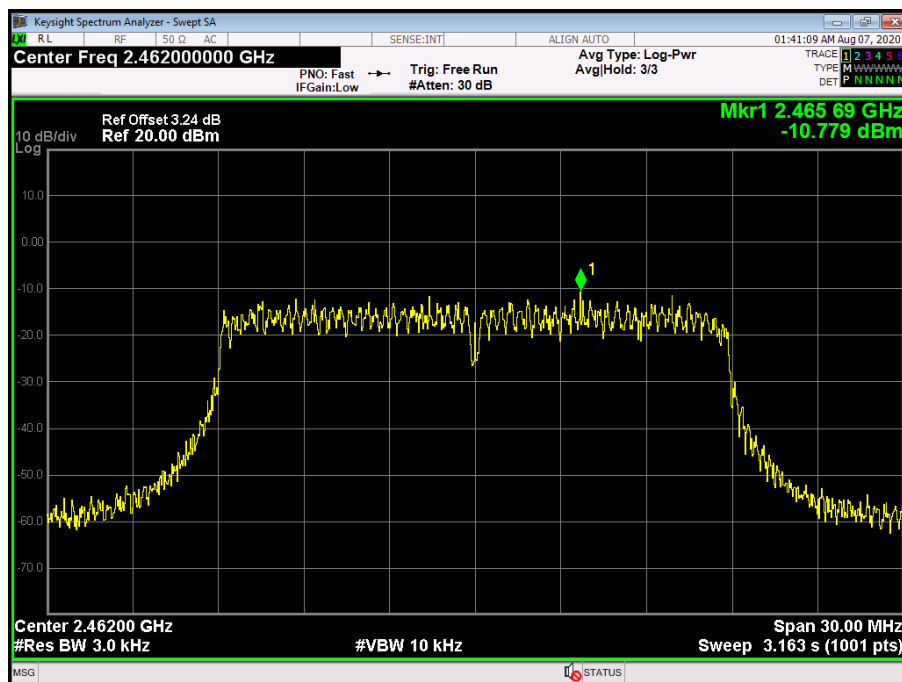
802.11N(HT20) Mode

2437 MHz



802.11N(HT20) Mode

2462 MHz



-----END OF REPORT-----