FCC Radio Test Report

FCC ID: 2AZDA-EK-WI4023

Original Grant

Report No.	:	TB-FCC178959
Applicant	:	Shenzhen EastKame Technology Co., Ltd.
Equipment Under Test (EUT)		
EUT Name	:	Wifi touch switch
Model No.	:	EK-WI4023
Series Model No.	:	(Please see the page of 6)
Brand Name	:	N/A
Sample ID	:	TBBJ-20210301-06-1#& TBBJ-20210301-06-2#
Receipt Date	:	2021-03-03
Test Date	:	2021-03-03 to 2021-03-18
Issue Date	:	2021-03-18
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	:	Seven Wu
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.

1 A/F., Building.6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an, Shenzhen, Guangdong, China
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Revision History

Report No.	Version	Description	Issued Date
TB-FCC178959	Rev.01	Initial issue of report	2021-03-18

1. General Information about EUT

1.1 Client Information

Applicant	:	Shenzhen EastKame Technology Co., Ltd.
Address	:	3F, No.15, Furong Road, second Industrial Zone, Tantou, Songgang town, Baoan, Shenzhen, China
Manufacturer	:	Shenzhen EastKame Technology Co., Ltd.
Address	:	3F, No.15, Furong Road, second Industrial Zone, Tantou, Songgang town, Baoan, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Wifi touch switch	
Models No.	:	See the Note (3)	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is the model name.	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz
		Number of Channel:	802.11b/g/n(HT20):11 channels **see note(4)**
		RF Output Power:	802.11b:7.413dBm 802.11g: 5.819dBm 802.11n (HT20): 5.398dBm
		Antenna Gain:	2.5 dBi PCB Antenna
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n:OFDM(BPSK,QPSK,16QAM,64QAM)
		Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n: 65/58.5/ 52/39/26/19.5/13/6.5 Mbps
Power Rating	:	Input: 100-250V	
Software Version	:	1.0	
Hardware Version	:	EU4K WIFI RF V1	

Note:

(1) This Test Report is FCC Part 15.247 for 802.11b/g/n, the test procedure follows the FCC KDB 558074 D01 v05r02 and.

(2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

(3) Model List:

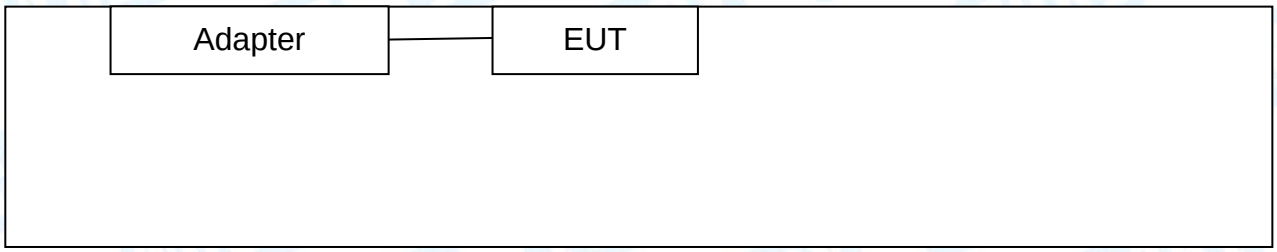
Mode(s)
EK-WI4023, EK-WI1011, EK-WI1012, EK-WI1013, EK-WI2011, EK-WI2012, EK-WI2013, EK-WI3011, EK-WI3012, EK-WI3013, EK-WI4011, EK-WI4012, EK-WI4013, EK-WI4014, EK-WI4021, EK-WI4022, EK-WI4024, EK-WI4025, EK-WI4026, EK-WI01, EK-WI02, EK-DY4011, EK-DY4021, EK-DY4025, EK-RS4011, EK-RS4021, EK-RS4025, EK-KX4011, EK-KX4012, EK-KX4013, EK-KX4014, EK-KX4021, EK-KX4022, EK-KX4023, EK-KX4024, EK-KX4025, EK-KX4026

(4) 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)					

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

1.3 Block Diagram Showing the Configuration of System Tested



1.4 Description of Support Units

Equipment Information				
Name	**Model**	**FCC ID/VOC**	**Manufacturer**	**Used "√"**
Adapter	-----	----	HUAWEI	√
Cable Information				
Number	**Shielded Type**	**Ferrite Core**	**Length**	**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	Charging+TX B Mode
For Radiated and RF Conducted Test	
Final Test Mode	**Description**
Mode 2	TX Mode B Mode Channel 01/06/11
Mode 3	TX Mode G Mode Channel 01/06/11
Mode 4	TX Mode N(HT20) Mode Channel 01/06/11
Note : The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

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 considered a Mobile device; 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: MP819xVC		
	Test Mode: Continuously transmitting		
Mode	**Data Rate**	**Channel**	**Parameters**
802.11b	CCK/ 1Mbps	01	default
	CCK/ 1Mbps	06	default
	CCK/ 1Mbps	11	default
802.11g	OFDM/ 6Mbps	01	default
	OFDM/ 6Mbps	06	default
	OFDM/ 6Mbps	11	default
802.11n(HT20)	MCS 0	01	default
	MCS 0	06	default
	MCS 0	11	default

1.7 Measurement Uncertainty

The reported uncertainty of measurement y ± 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	±3.50 dB ±3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	±4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	±4.20 dB

1.8 Test Facility

The testing was performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at: 1/F.,Building 6, Rundongsheng Industrial Zone, Longzhu, 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: 2017 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 17025：2017 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)

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

2. Test Summary

FCC Part 15 Subpart C(15.247)				
Standard Section FCC	Test Item	Test Sample(s)	Judgment	Remark
15.203	Antenna Requirement	TBBJ-20210301-06-2#	PASS	N/A
15.207	Conducted Emission	TBBJ-20210301-06-2#	PASS	N/A
15.205	Restricted Bands	TBBJ-20210301-06-2#	PASS	N/A
15.247(a)(2)	6dB Bandwidth	TBBJ-20210301-06-2#	PASS	N/A
15.247(b)	Peak Output Power	TBBJ-20210301-06-2#	PASS	N/A
15.247(e)	Power Spectral Density	TBBJ-20210301-06-2#	PASS	N/A
15.247(d)	Band Edge	TBBJ-20210301-06-2#	PASS	N/A
15.247(d)&15.209	Transmitter Spurious Emission	TBBJ-20210301-06-2#	PASS	N/A
Note: "/" for no requirement for this test item. N/A is an abbreviation for Not Applicable.				

3. 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

4. Test Equipment

Conducted Emission Test					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 06, 2020	Jul. 05, 2021
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 06, 2020	Jul. 05, 2021
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 06, 2020	Jul. 05, 2021
LISN	Rohde & Schwarz	ENV216	101131	Jul. 06, 2020	Jul. 05, 2021
Radiation Emission Test					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 06, 2020	Jul. 05, 2021
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 06, 2020	Jul. 05, 2021
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jul. 06, 2020	Jul. 05, 2021
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar.01, 2020	Feb. 28, 2022
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar.01, 2020	Feb. 28, 2022
Horn Antenna	ETS-LINDGREN	BBHA 9170	BBHA9170582	Mar.01, 2020	Feb. 28, 2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jul. 07, 2020	Jul. 06, 2021
Pre-amplifier	Sonoma	310N	185903	Feb.25, 2020	Feb. 24, 2022
Pre-amplifier	HP	8449B	3008A00849	Feb.25, 2020	Feb. 24, 2022
Pre-amplifier	SKET	LNPA_1840G-50	SK201904032	Feb.25, 2020	Feb. 24, 2022
Cable	HUBER+SUHNER	100	SUCOFLEX	Feb.25, 2020	Feb. 24, 2022
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. 06, 2020	Jul. 05, 2021
Spectrum Analyzer	Rohde & Schwarz	ESPI	100010/007	Jul. 06, 2020	Jul. 05, 2021
MXA Signal Analyzer	Agilent	N9020A	MY49100060	Sep. 11, 2020	Sep. 10, 2021
Vector Signal Generator	Agilent	N5182A	MY50141294	Sep. 11, 2020	Sep. 10, 2021
Analog Signal Generator	Agilent	N5181A	MY50141953	Sep. 11, 2020	Sep. 10, 2021
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO26	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO29	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO31	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO33	Sep. 11, 2020	Sep. 10, 2021

5. Conducted Emission Test

5.1 Test Standard and Limit

5.1.1Test Standard

FCC Part 15.207

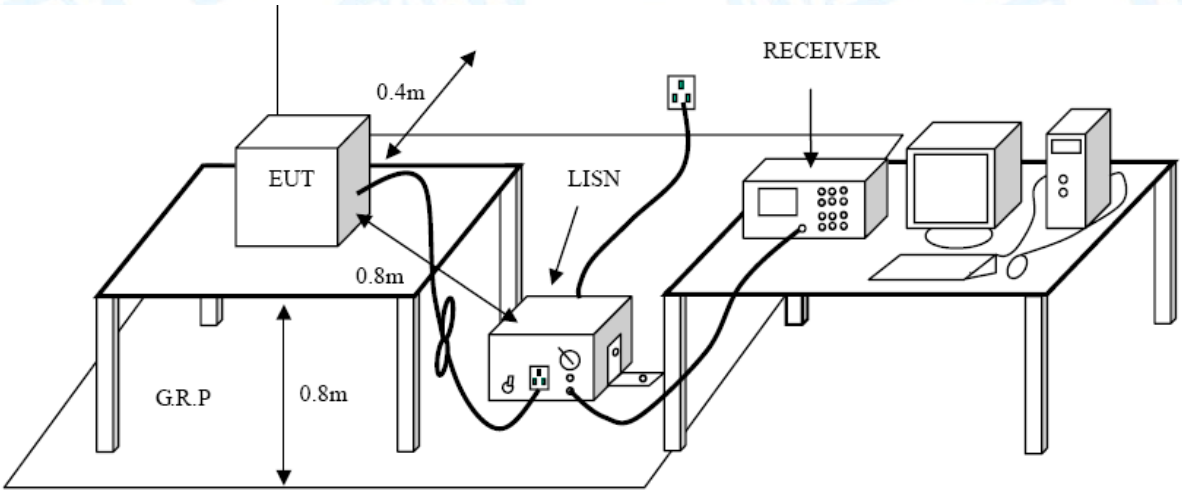
5.1.2 Test Limit

Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	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.

5.2 Test Setup



5.3 Test Procedure

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

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

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

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

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

5.4 Deviation From Test Standard

No deviation

5.5 EUT Operating Mode

Please refer to the description of test mode.

5.6 Test Data

Please refer to the Attachment A.

6. Radiated Emission Test

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.209

6.1.2 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)

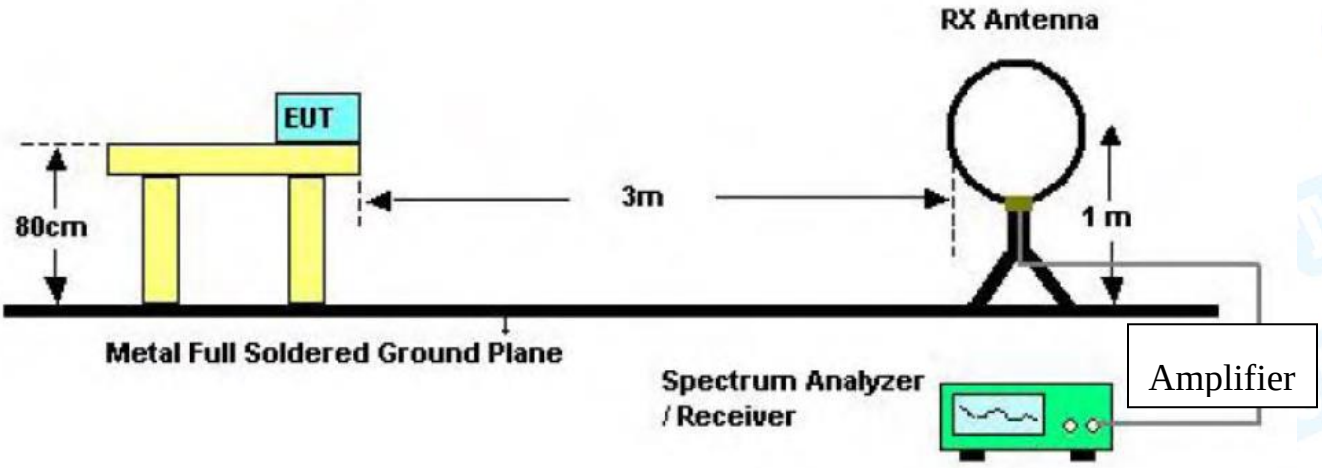
Frequency (MHz)	Distance of 3m (dBuV/m)	
	Peak	Average
Above 1000	74	54

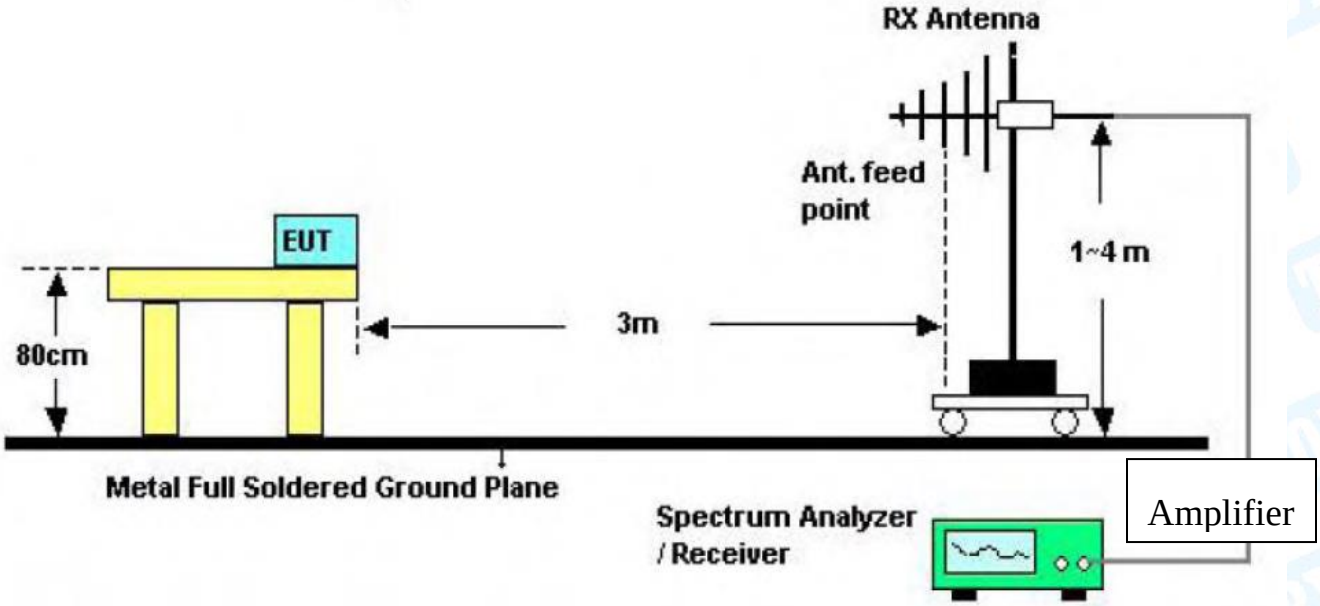
Note:

(1) The tighter limit applies at the band edges.

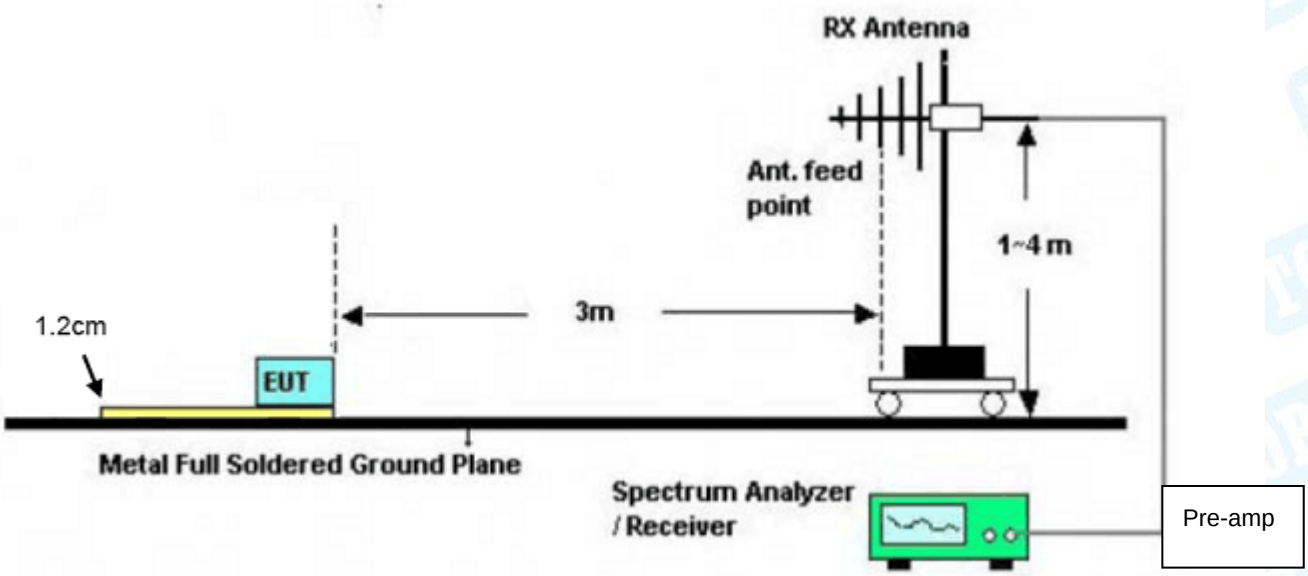
(2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

6.2 Test Setup

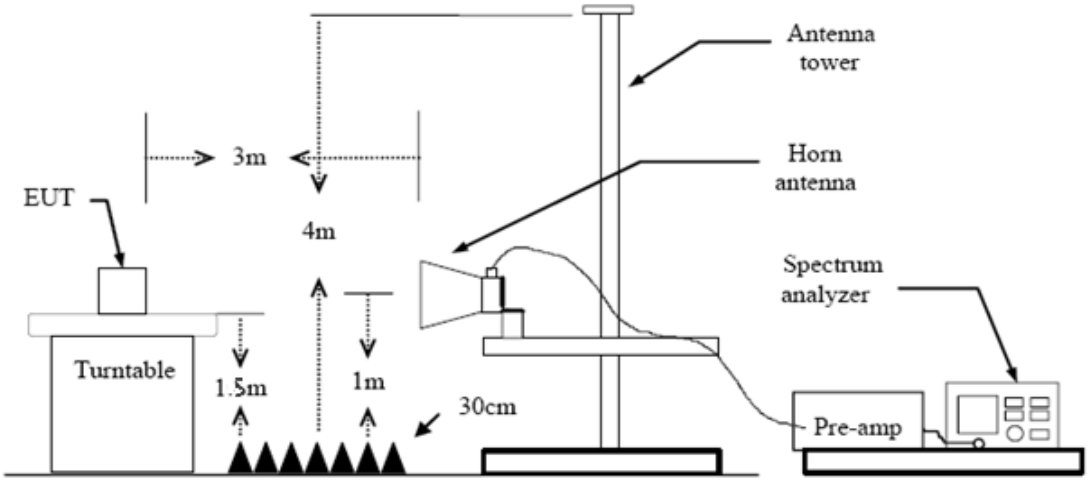




Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

6.3 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. 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 Deviation From Test Standard

No deviation

6.5 EUT Operating Condition

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

6.6 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.

7. Restricted Bands Requirement

7.1 Test Standard and Limit

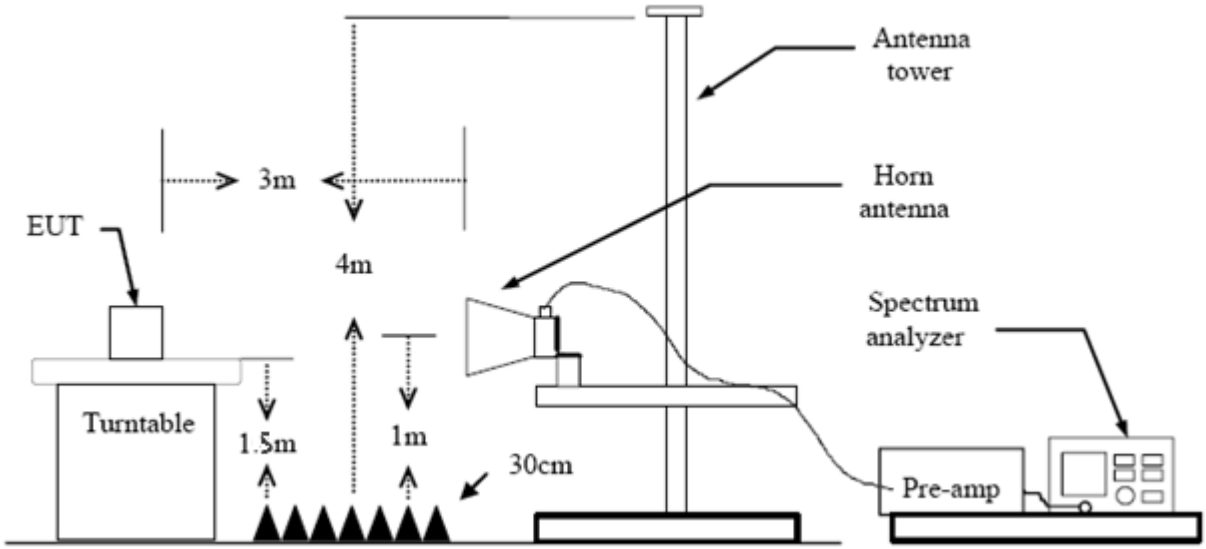
7.1.1 Test Standard

FCC Part 15.247(d)
FCC Part 15.209
FCC Part 15.205

7.1.2 Test Limit

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

7.2 Test Setup



7.3 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.

7.4 Deviation From Test Standard

No deviation

7.5 EUT Operating Condition

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

7.6 Test Data

Please refer to the Attachment C.

8. Bandwidth Test

8.1 Test Standard and Limit

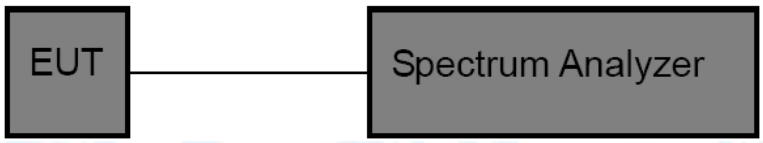
8.1.1 Test Standard

FCC Part 15.247 (a)(2)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	**Limit**	**Frequency Range(MHz)**
Bandwidth	>=500 KHz (6dB bandwidth)	2400~2483.5

8.2 Test Setup



8.3 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.

8.4 Deviation From Test Standard

No deviation

8.5 EUT Operating Condition

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

8.6 Test Data

Please refer to the Attachment D.

9. Peak Output Power Test

9.1 Test Standard and Limit

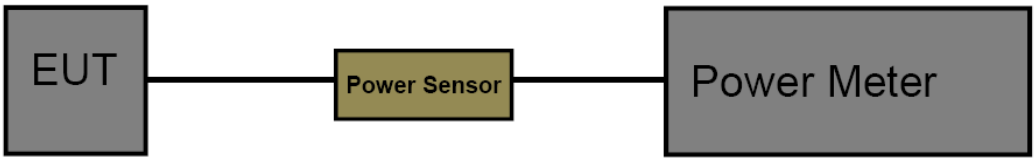
9.1.1 Test Standard

FCC Part 15.247 (b)

9.1.2 Test Limit

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

9.2 Test Setup



9.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 v05r02.
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.

9.4 Deviation From Test Standard

No deviation

9.5 EUT Operating Condition

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

9.6 Test Data

Please refer to the Attachment E.

10. Power Spectral Density Test

10.1 Test Standard and Limit

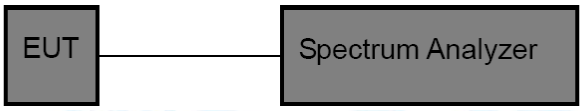
10.1.1 Test Standard

FCC Part 15.247 (e)

10.1.2 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

10.2 Test Setup



10.3 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 D01 v05r02.

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
(2) Set analyser centre frequency to DTS channel centre 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.

10.4 Deviation From Test Standard

No deviation

10.5 EUT Operating Condition

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

10.6 Test Data

Please refer to the Attachment F.

11. Antenna Requirement

11.1 Standard Requirement

11.1.1 Standard

FCC Part 15.203

11.1.2 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.

11.2 Deviation From Test Standard

No deviation

11.3 Antenna Connected Construction

The gains of the antenna used for transmitting is 2.5 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

Result

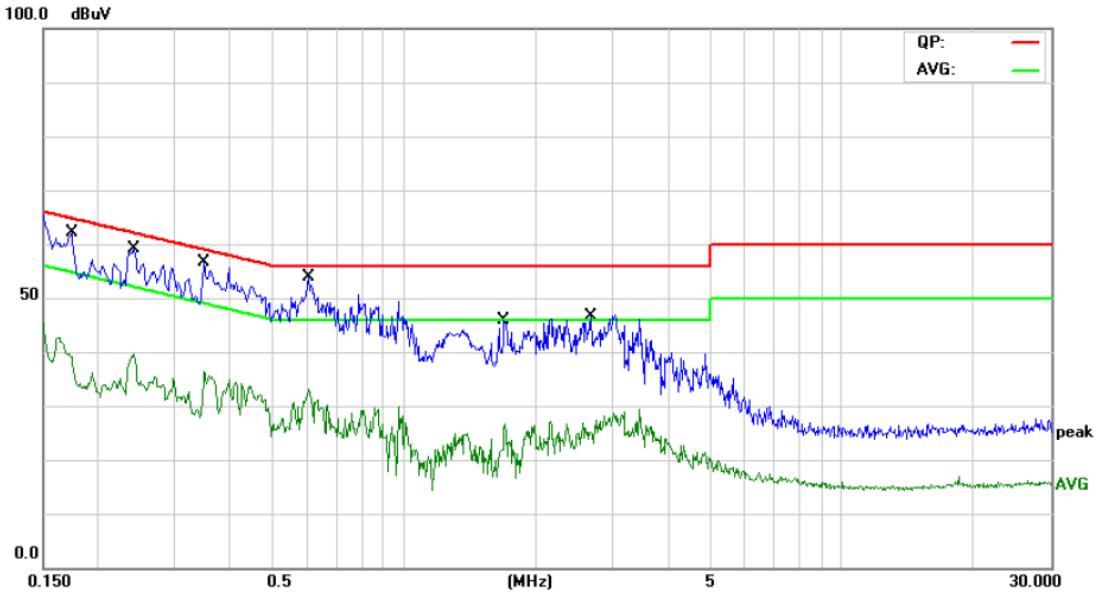
The EUT antenna is a PCB Antenna. It complies with the standard requirement.

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

Attachment A-- Conducted Emission Test Data

Remark: All channels have been tested and Shows only the worst channels.

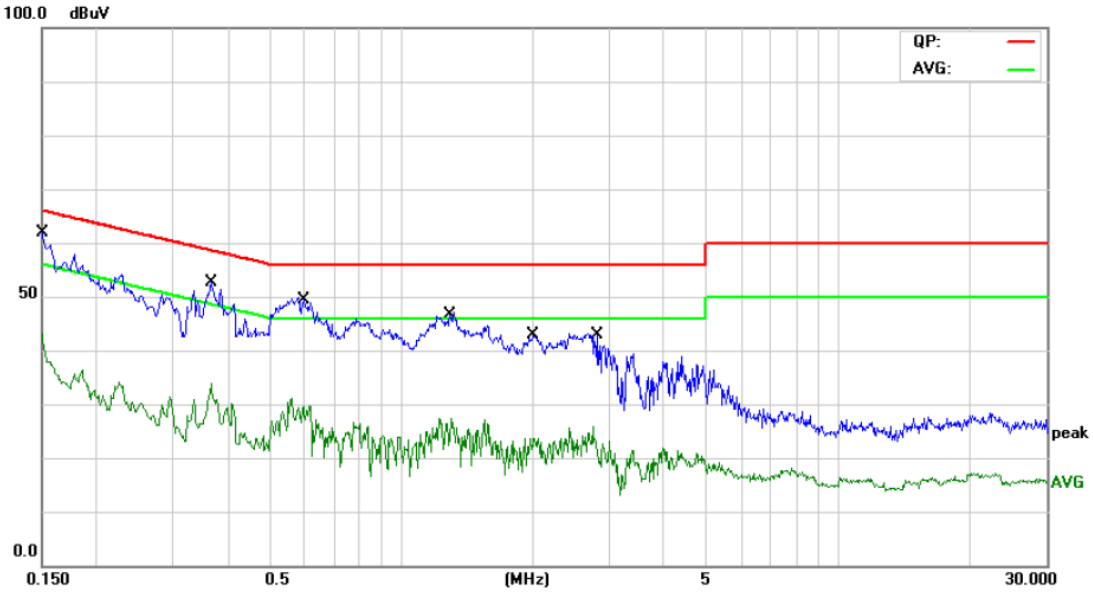
Temperature:	24.5℃	**Relative Humidity:**	44%
Test Voltage:	AC 120V/60Hz		
Terminal:	Line		
Test Mode:	Mode 1		
Remark:	Only worst case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1739	48.53	9.70	58.23	64.77	-6.54	QP
2		0.1739	32.19	9.70	41.89	54.77	-12.88	AVG
3	*	0.2419	47.42	9.70	57.12	62.03	-4.91	QP
4		0.2419	29.81	9.70	39.51	52.03	-12.52	AVG
5		0.3499	43.51	9.70	53.21	58.96	-5.75	QP
6		0.3499	26.57	9.70	36.27	48.96	-12.69	AVG
7		0.6059	38.86	9.70	48.56	56.00	-7.44	QP
8		0.6059	23.45	9.70	33.15	46.00	-12.85	AVG
9		1.6979	32.39	9.73	42.12	56.00	-13.88	QP
10		1.6979	16.86	9.73	26.59	46.00	-19.41	AVG
11		2.6779	33.68	9.84	43.52	56.00	-12.48	QP
12		2.6779	17.45	9.84	27.29	46.00	-18.71	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Temperature:	24.5℃	**Relative Humidity:**	44%
Test Voltage:	AC 120V/60Hz		
Terminal:	Neutral		
Test Mode:	Mode 1		
Remark:	Only worst case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1499	48.43	9.80	58.23	66.00	-7.77	QP
2		0.1499	33.23	9.80	43.03	56.00	-12.97	AVG
3		0.3660	42.65	9.80	52.45	58.59	-6.14	QP
4		0.3660	23.97	9.80	33.77	48.59	-14.82	AVG
5		0.5980	36.32	9.80	46.12	56.00	-9.88	QP
6		0.5980	22.33	9.80	32.13	46.00	-13.87	AVG
7		1.2940	41.44	9.80	51.24	56.00	-4.76	QP
8		1.2940	21.53	9.80	31.33	46.00	-14.67	AVG
9	*	2.0059	42.85	9.80	52.65	56.00	-3.35	QP
10		2.0059	21.90	9.80	31.70	46.00	-14.30	AVG
11		2.8179	41.61	9.80	51.41	56.00	-4.59	QP
12		2.8179	22.63	9.80	32.43	46.00	-13.57	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Attachment B-- Radiated Emission Test Data

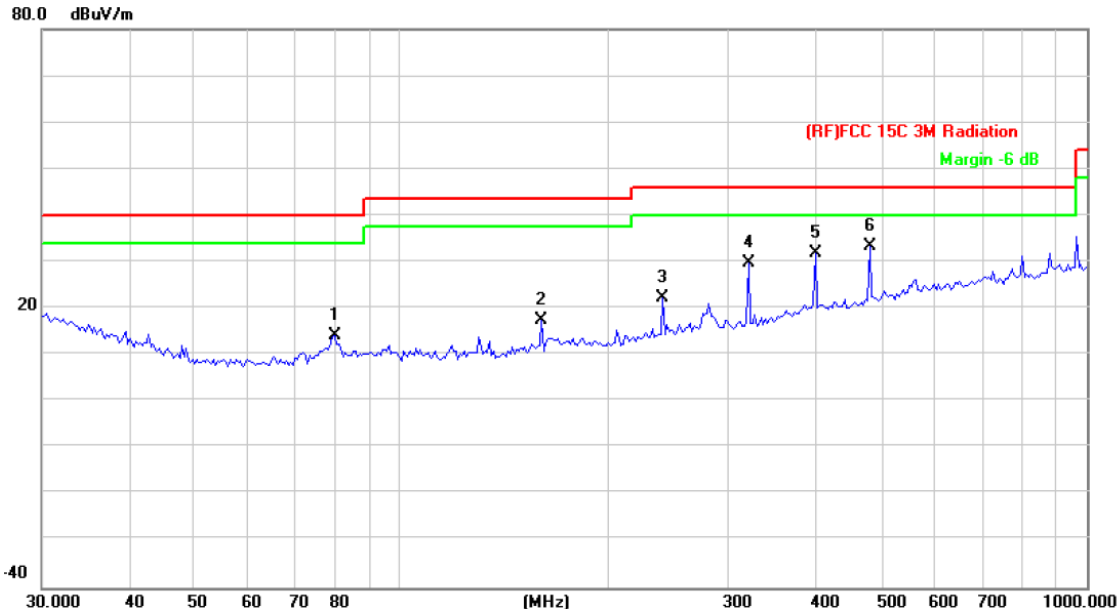
9KHz~30MHz

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:	23.6℃	**Relative Humidity:**	44%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worst case is reported.		

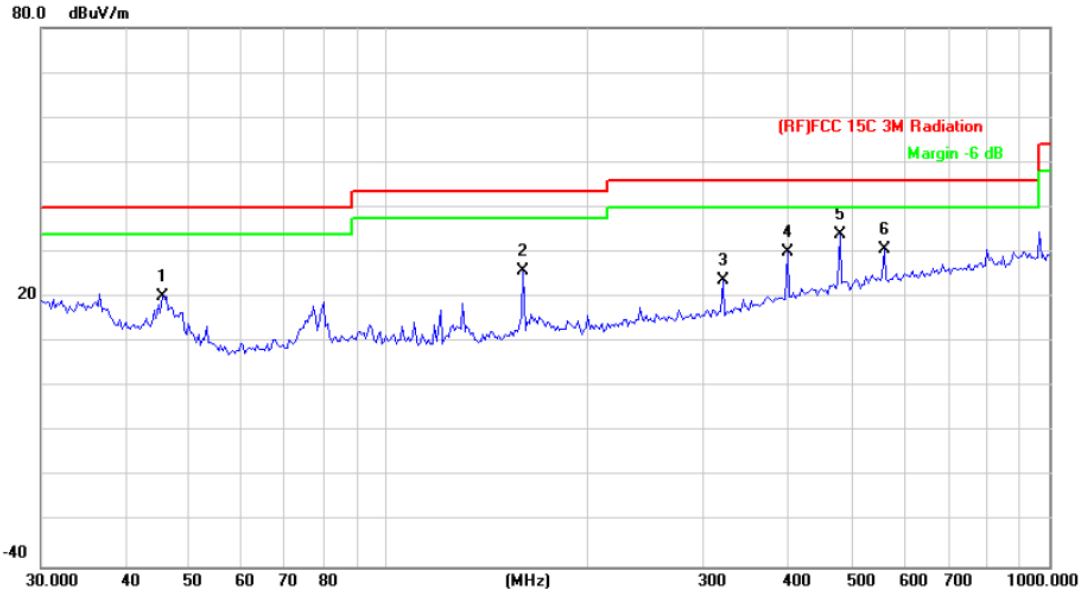


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		80.0806	36.69	-22.46	14.23	40.00	-25.77	peak
2		160.3456	38.24	-20.79	17.45	43.50	-26.05	peak
3		240.8304	39.84	-17.72	22.12	46.00	-23.88	peak
4		321.0608	45.39	-15.60	29.79	46.00	-16.21	peak
5		401.8385	44.11	-12.28	31.83	46.00	-14.17	peak
6	*	482.2156	44.43	-10.99	33.44	46.00	-12.56	peak

*: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:	23.6℃	**Relative Humidity:**	44%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worst case is reported.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		45.6948	41.92	-21.65	20.27	40.00	-19.73	peak
2		160.3456	46.71	-20.79	25.92	43.50	-17.58	peak
3		321.0608	39.26	-15.60	23.66	46.00	-22.34	peak
4		401.8385	42.26	-12.28	29.98	46.00	-16.02	peak
5	*	482.2156	44.97	-10.99	33.98	46.00	-12.02	peak
6		562.6624	39.28	-8.77	30.51	46.00	-15.49	peak

*: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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission which more than 20dB 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	*	4824.022	32.32	13.16	45.48	54.00	-8.52	AVG
2		4824.112	41.95	13.16	55.11	74.00	-18.89	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission which more than 20dB 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		4823.768	43.07	13.16	56.23	74.00	-17.77	peak
2	*	4823.900	32.19	13.16	45.35	54.00	-8.65	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission which more than 20dB 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		4873.882	44.80	13.53	58.33	74.00	-15.67	peak
2	*	4873.974	37.05	13.53	50.58	54.00	-3.42	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission which more than 20dB 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		4873.970	45.65	13.53	59.18	74.00	-14.82	peak
2	*	4874.162	37.93	13.53	51.46	54.00	-2.54	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission which more than 20dB 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	*	4923.952	36.39	13.89	50.28	54.00	-3.72	AVG
2		4924.002	44.34	13.89	58.23	74.00	-15.77	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission which more than 20dB 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		4924.016	41.63	13.89	55.52	74.00	-18.48	peak
2	*	4924.084	35.49	13.89	49.38	54.00	-4.62	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	No report for the emission which more than 20dB 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	*	4823.794	28.90	13.16	42.06	54.00	-11.94	AVG
2		4824.392	42.59	13.16	55.75	74.00	-18.25	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	No report for the emission which more than 20dB 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		4823.676	42.71	13.16	55.87	74.00	-18.13	peak
2	*	4823.826	28.98	13.16	42.14	54.00	-11.86	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2437MHz		
Remark:	No report for the emission which more than 20dB 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		4873.710	42.23	13.53	55.76	74.00	-18.24	peak
2	*	4874.126	29.17	13.53	42.70	54.00	-11.30	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2437MHz		
Remark:	No report for the emission which more than 10dB below the prescribed limit. Only show the worst case ANT. A.		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.124	29.10	13.53	42.63	54.00	-11.37	AVG
2		4874.344	42.47	13.53	56.00	74.00	-18.00	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	No report for the emission which more than 20dB 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	*	4923.504	31.14	13.89	45.03	54.00	-8.97	AVG
2		4923.624	45.69	13.89	59.58	74.00	-14.42	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:	23.7℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	No report for the emission which more than 20dB 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	*	4923.524	46.86	13.89	60.75	74.00	-13.25	peak
2		4923.538	31.11	13.89	45.00	74.00	-29.00	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:	23.7℃	**Relative Humidity:**	43%
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 20dB 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		4823.908	42.88	13.16	56.04	74.00	-17.96	peak
2	*	4823.960	28.92	13.16	42.08	54.00	-11.92	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:	23.7℃	**Relative Humidity:**	43%
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 20dB 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		4823.654	43.02	13.16	56.18	74.00	-17.82	peak
2	*	4823.698	29.04	13.16	42.20	54.00	-11.80	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:	23.7℃	**Relative Humidity:**	43%
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 20dB 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		4873.874	42.55	13.53	56.08	74.00	-17.92	peak
2	*	4874.478	29.10	13.53	42.63	54.00	-11.37	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:	23.7℃	**Relative Humidity:**	43%
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 20dB 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	*	4874.316	29.15	13.53	42.68	54.00	-11.32	AVG
2		4874.460	43.01	13.53	56.54	74.00	-17.46	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:	23.7℃	**Relative Humidity:**	43%
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 20dB 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	*	4923.504	31.38	13.89	45.27	54.00	-8.73	AVG
2		4924.176	46.94	13.89	60.83	74.00	-13.17	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:	23.7℃	**Relative Humidity:**	43%
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 20dB below the prescribed limit.		

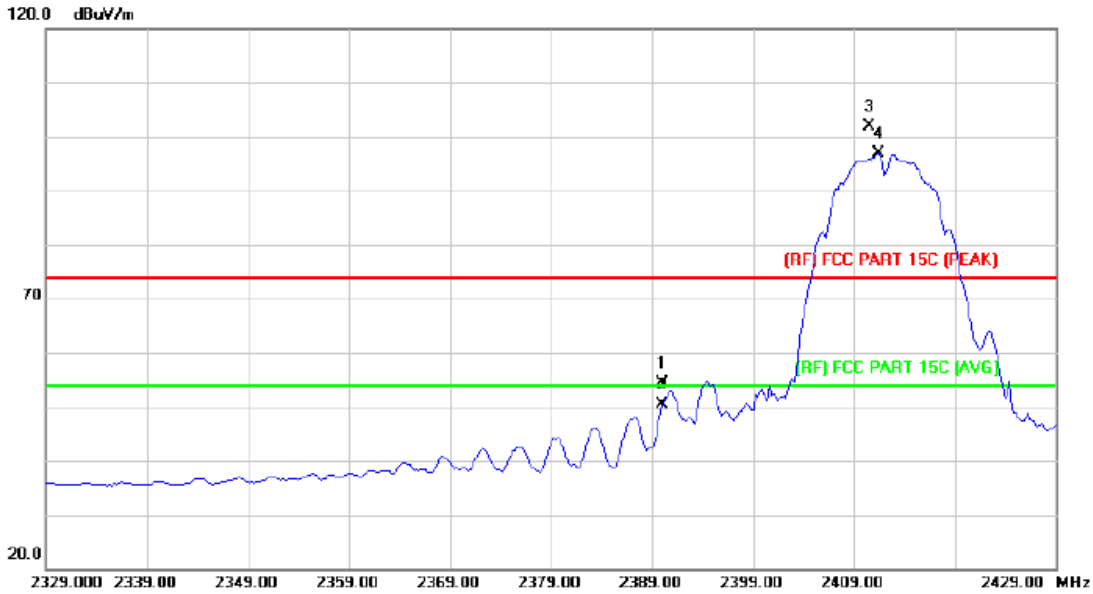
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.594	31.46	13.89	45.35	54.00	-8.65	AVG
2		4924.242	46.71	13.89	60.60	74.00	-13.40	peak

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)

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

(1) Radiation Test

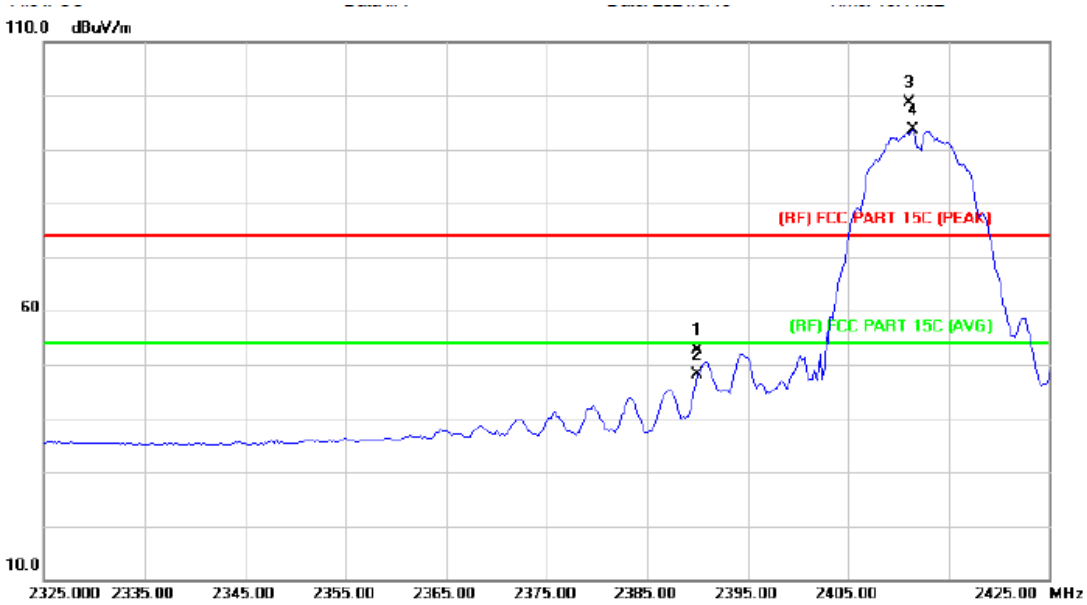
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	53.06	1.28	54.34	74.00	-19.66	peak
2		2390.000	49.14	1.28	50.42	54.00	-3.58	AVG
3	X	2410.600	100.56	1.38	101.94	Fundamental Frequency		peak
4	*	2411.400	95.43	1.39	96.82	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)

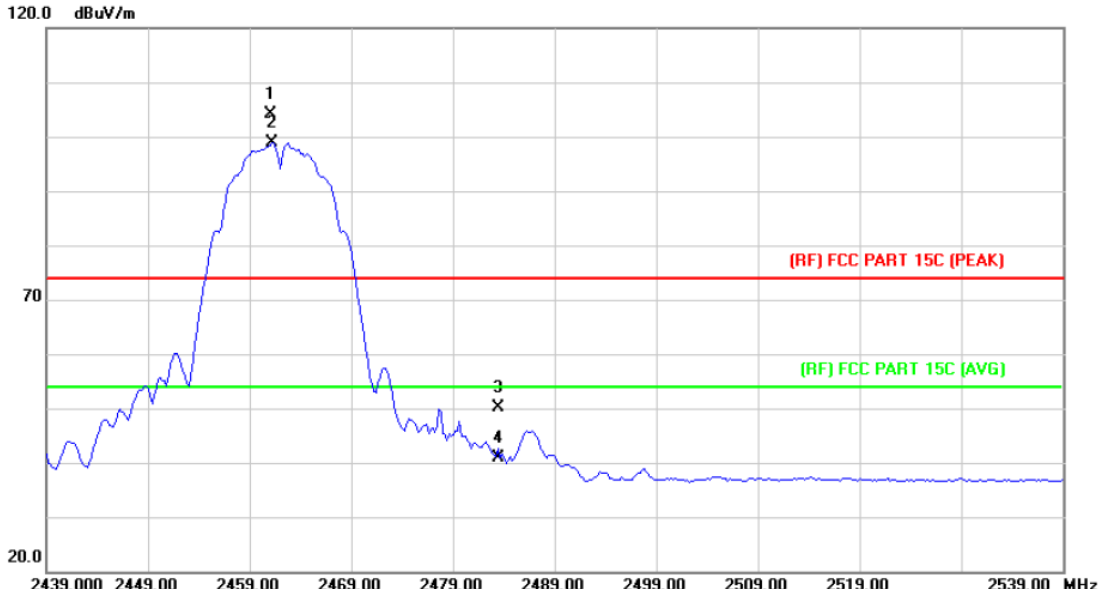
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	51.38	1.28	52.66	74.00	-21.34	peak
2		2390.000	46.78	1.28	48.06	54.00	-5.94	AVG
3	X	2411.000	97.33	1.38	98.71	Fundamental Frequency		peak
4	*	2411.400	92.15	1.39	93.54	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)

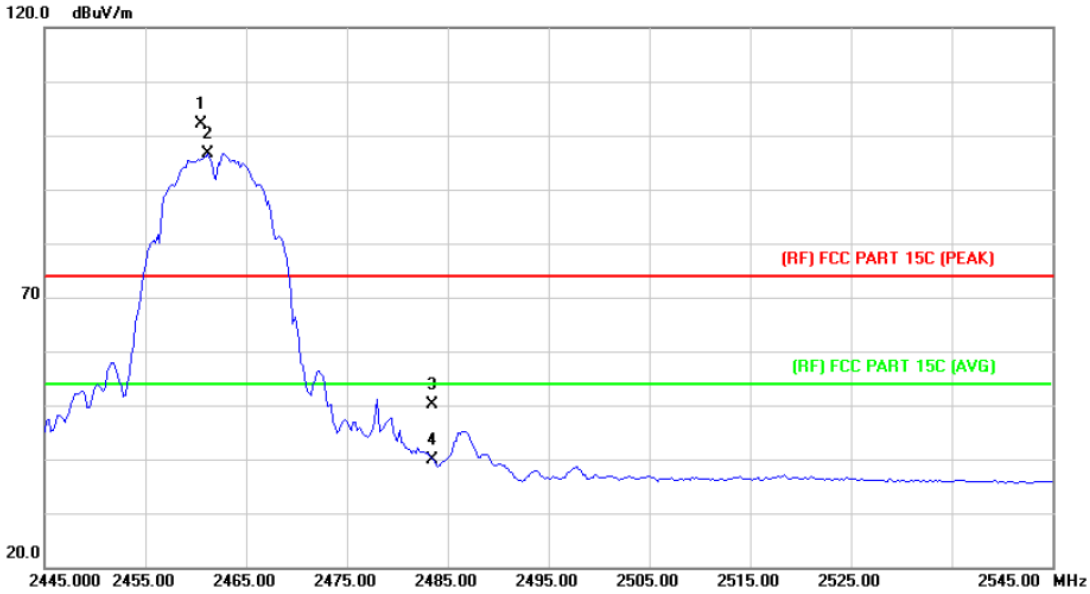
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2461.000	102.34	1.72	104.06	Fundamental Frequency		peak
2	*	2461.200	97.08	1.73	98.81	Fundamental Frequency		AVG
3		2483.500	48.21	1.88	50.09	74.00	-23.91	peak
4		2483.500	38.95	1.88	40.83	54.00	-13.17	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)

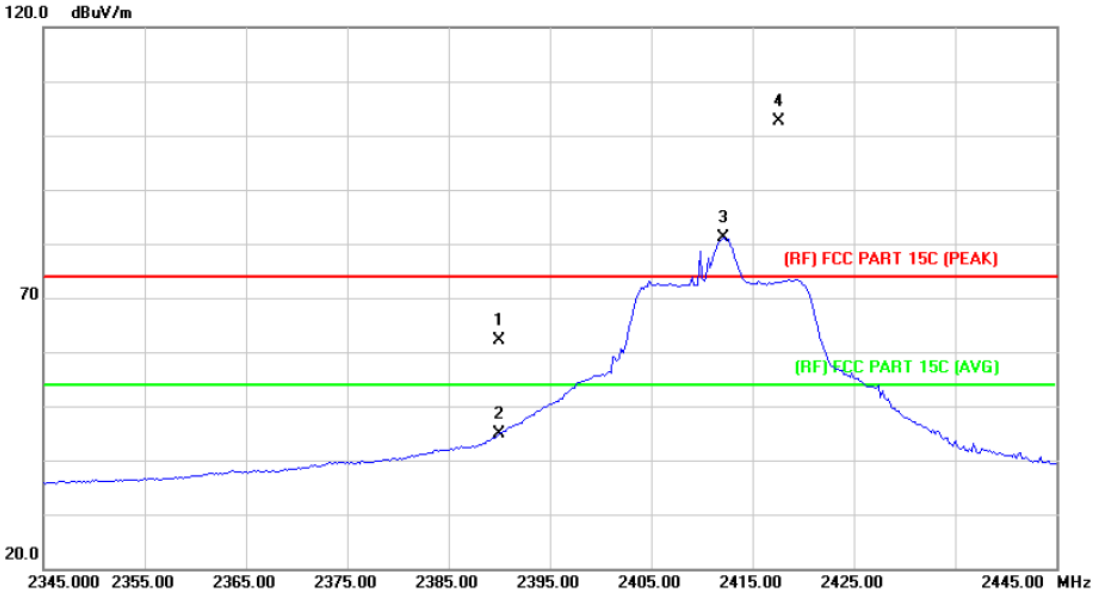
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2460.600	100.34	1.72	102.06	Fundamental Frequency		peak
2	*	2461.200	95.00	1.73	96.73	Fundamental Frequency		AVG
3		2483.500	48.23	1.88	50.11	74.00	-23.89	peak
4		2483.500	37.97	1.88	39.85	54.00	-14.15	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)

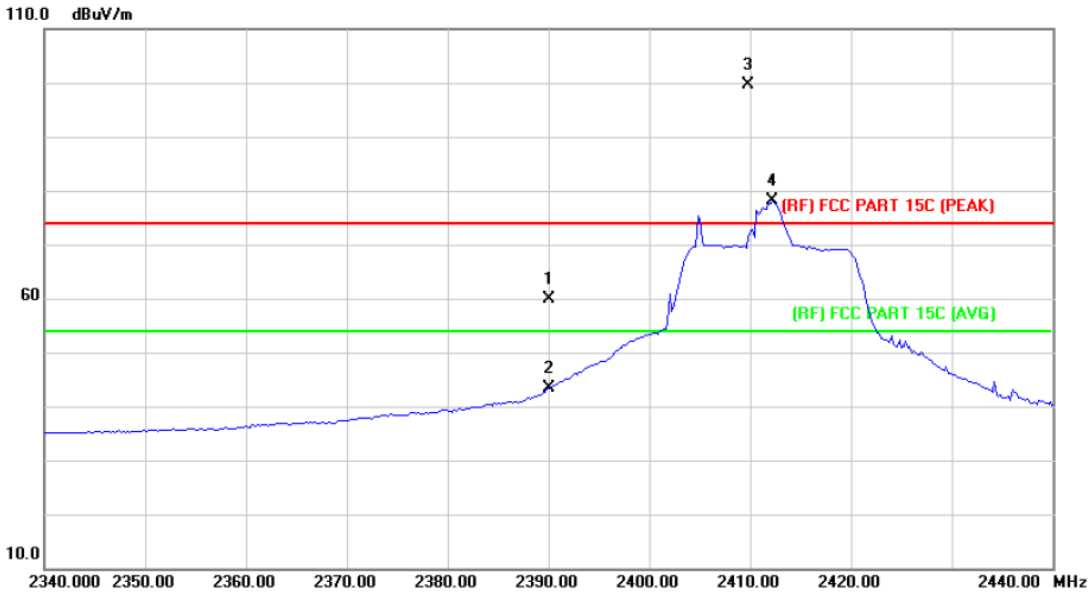
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	60.84	1.28	62.12	74.00	-11.88	peak
2		2390.000	43.48	1.28	44.76	54.00	-9.24	AVG
3	X	2412.200	79.77	1.39	81.16	Fundamental Frequency		AVG
4	*	2417.600	101.23	1.44	102.67	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)

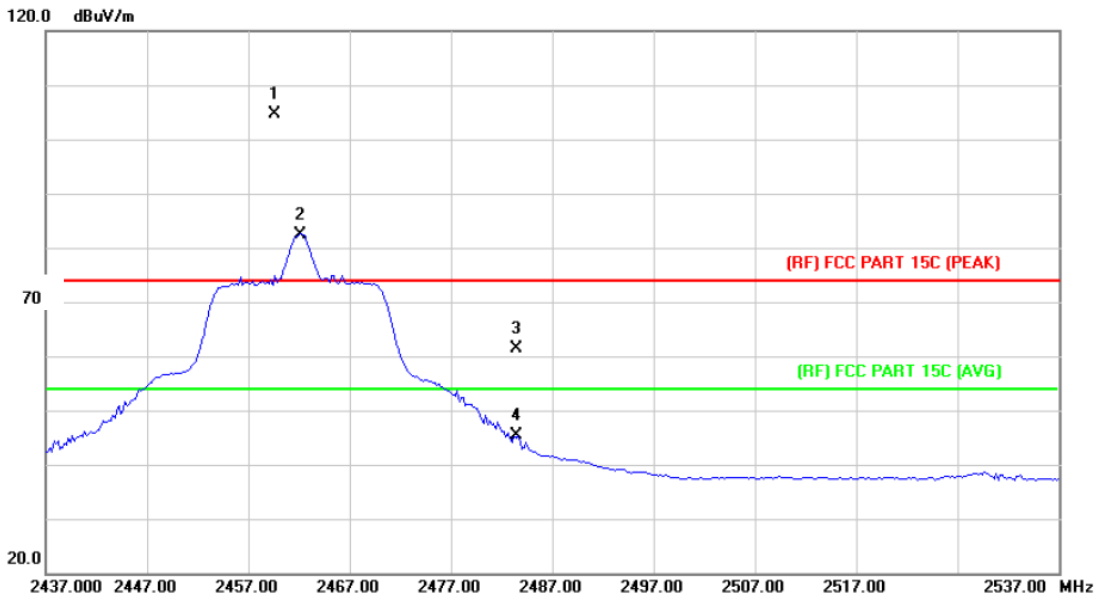
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	58.59	1.28	59.87	74.00	-14.13	peak
2		2390.000	42.05	1.28	43.33	54.00	-10.67	AVG
3	*	2409.800	98.20	1.38	99.58	Fundamental Frequency		peak
4	X	2412.200	76.70	1.39	78.09	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)

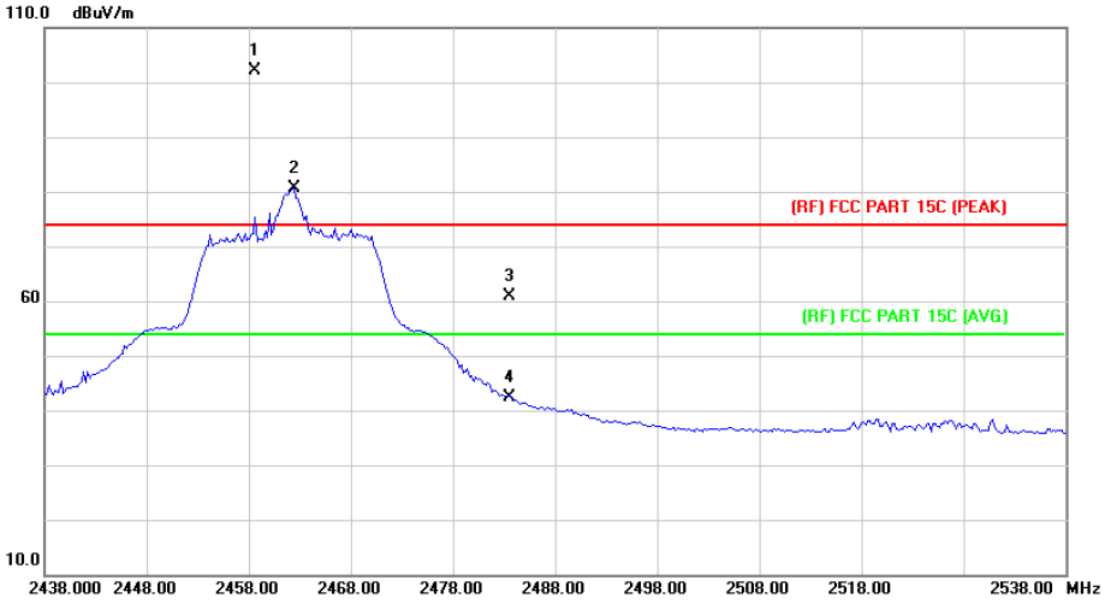
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2459.600	102.95	1.72	104.67	Fundamental Frequency		peak
2	X	2462.200	80.77	1.73	82.50	Fundamental Frequency		AVG
3		2483.500	59.41	1.88	61.29	74.00	-12.71	peak
4		2483.500	43.39	1.88	45.27	54.00	-8.73	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)

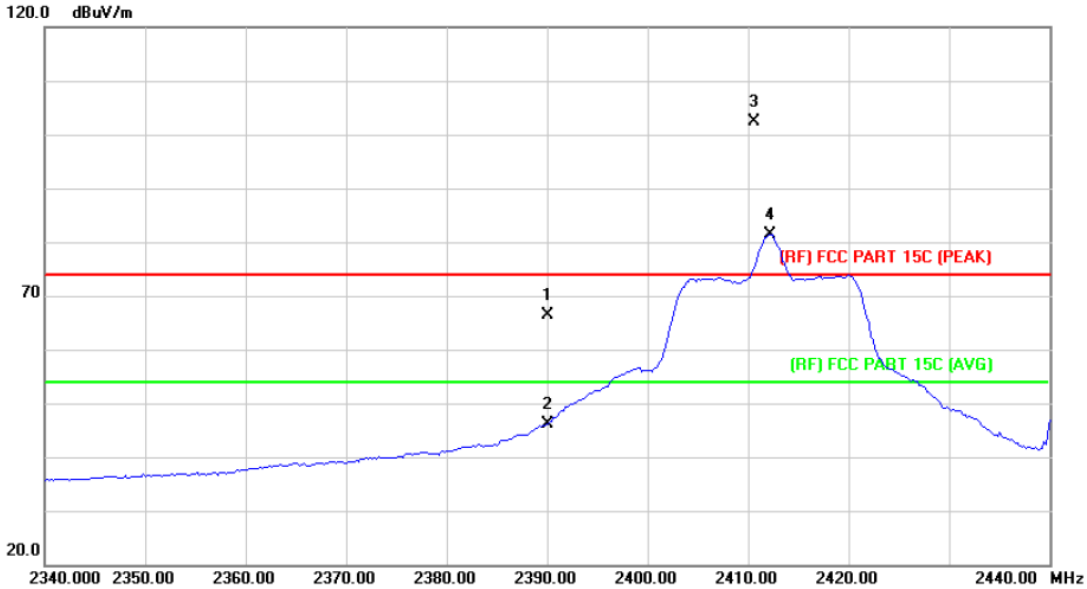
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz ANT. A+ANT. B		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2458.600	100.31	1.70	102.01	Fundamental Frequency		peak
2	X	2462.400	78.79	1.73	80.52	Fundamental Frequency		AVG
3		2483.500	59.09	1.88	60.97	74.00	-13.03	peak
4		2483.500	40.62	1.88	42.50	54.00	-11.50	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)

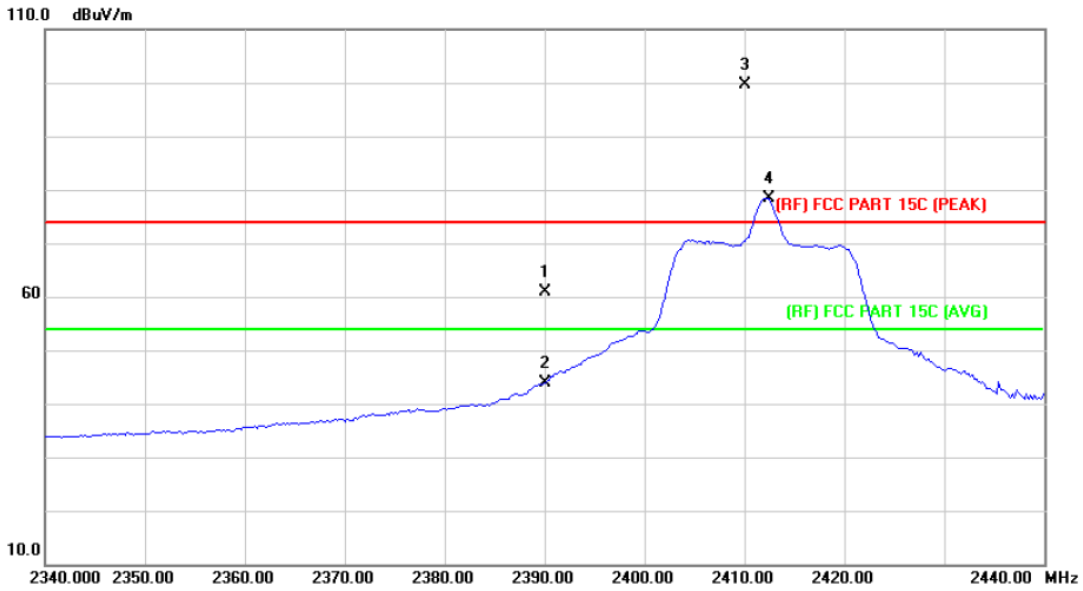
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	65.19	1.28	66.47	74.00	-7.53	peak
2		2390.000	44.74	1.28	46.02	54.00	-7.98	AVG
3	*	2410.600	101.11	1.38	102.49	Fundamental Frequency		peak
4	X	2412.200	80.10	1.39	81.49	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)

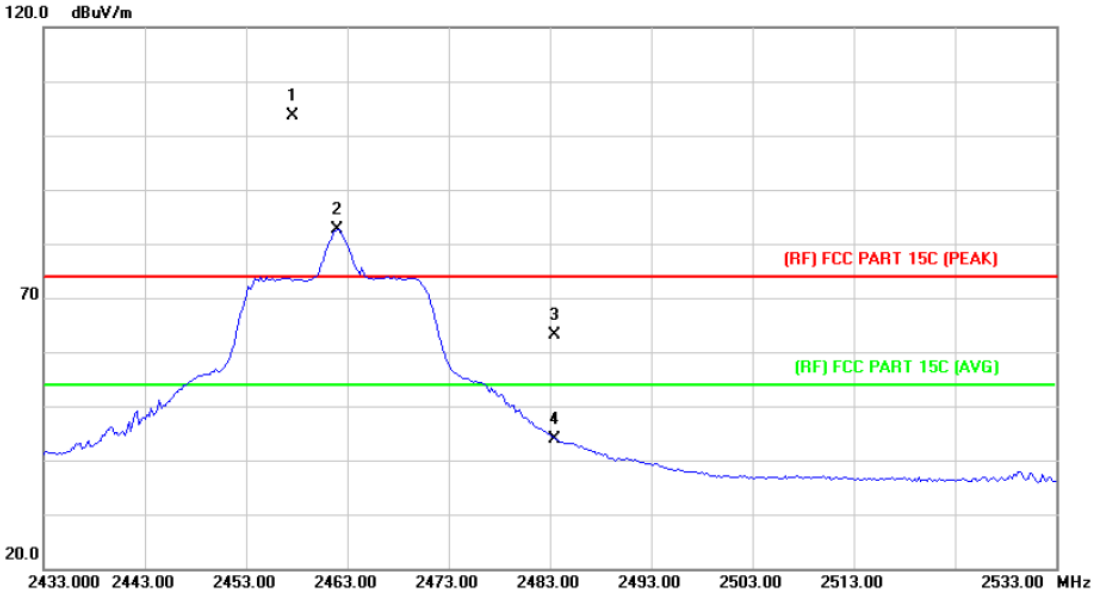
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	59.65	1.28	60.93	74.00	-13.07	peak
2		2390.000	42.56	1.28	43.84	54.00	-10.16	AVG
3	*	2410.000	98.22	1.38	99.60	Fundamental Frequency		peak
4	X	2412.400	77.03	1.39	78.42	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)

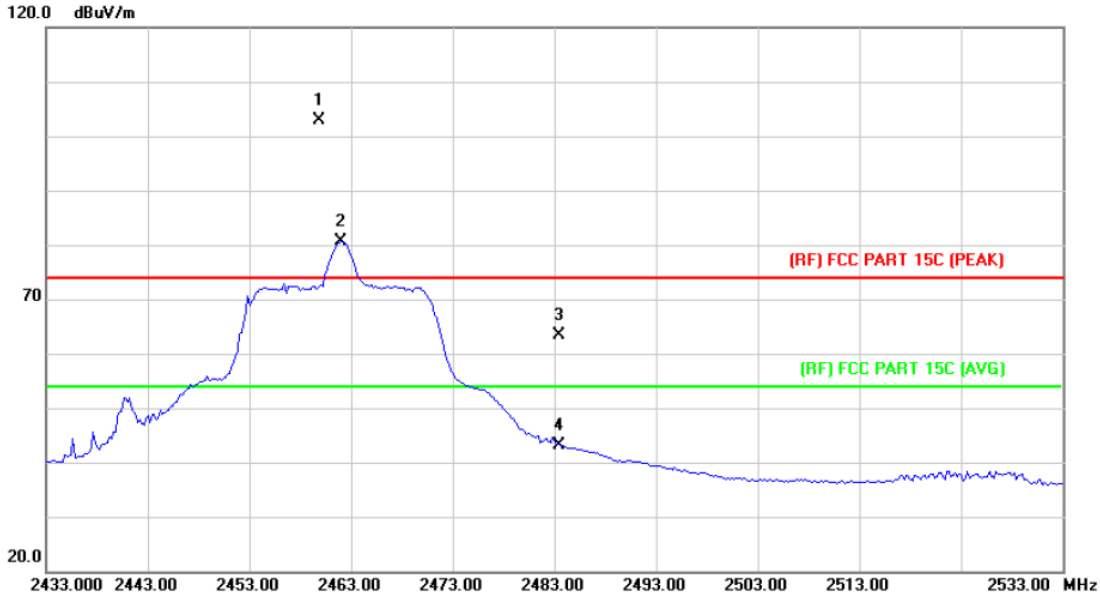
Temperature:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	Only show the worst case.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2457.600	101.97	1.70	103.67	Fundamental Frequency		peak
2	X	2462.000	80.88	1.73	82.61	Fundamental Frequency		AVG
3		2483.500	61.18	1.88	63.06	74.00	-10.94	peak
4		2483.500	41.99	1.88	43.87	54.00	-10.13	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:	23.5℃	**Relative Humidity:**	43%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	Only show the worst case.		

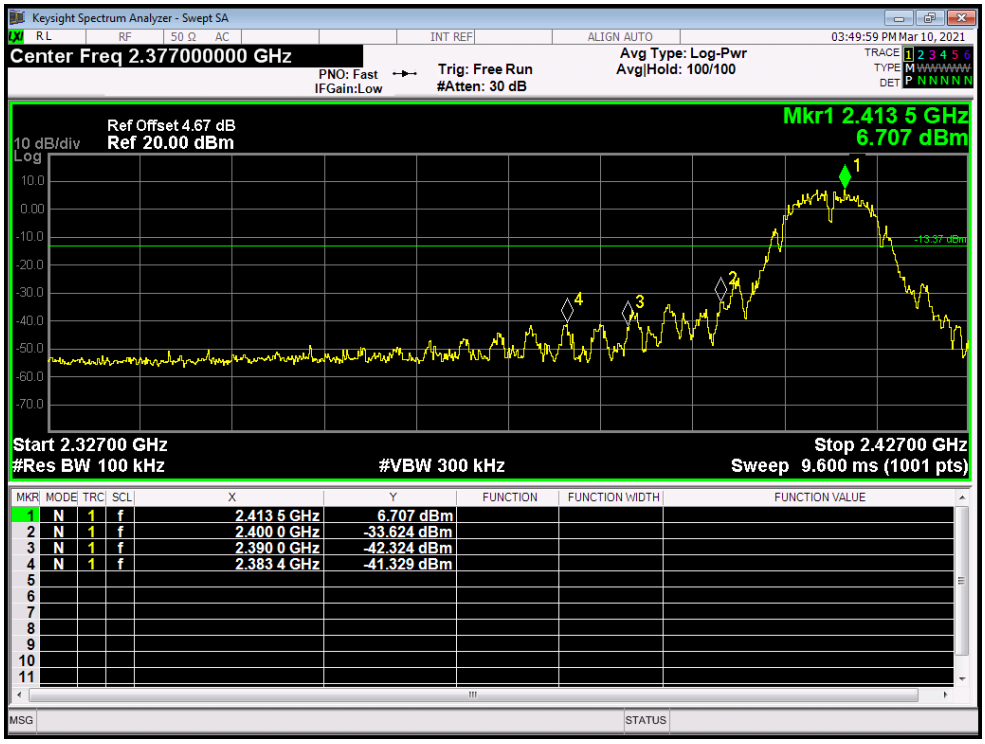


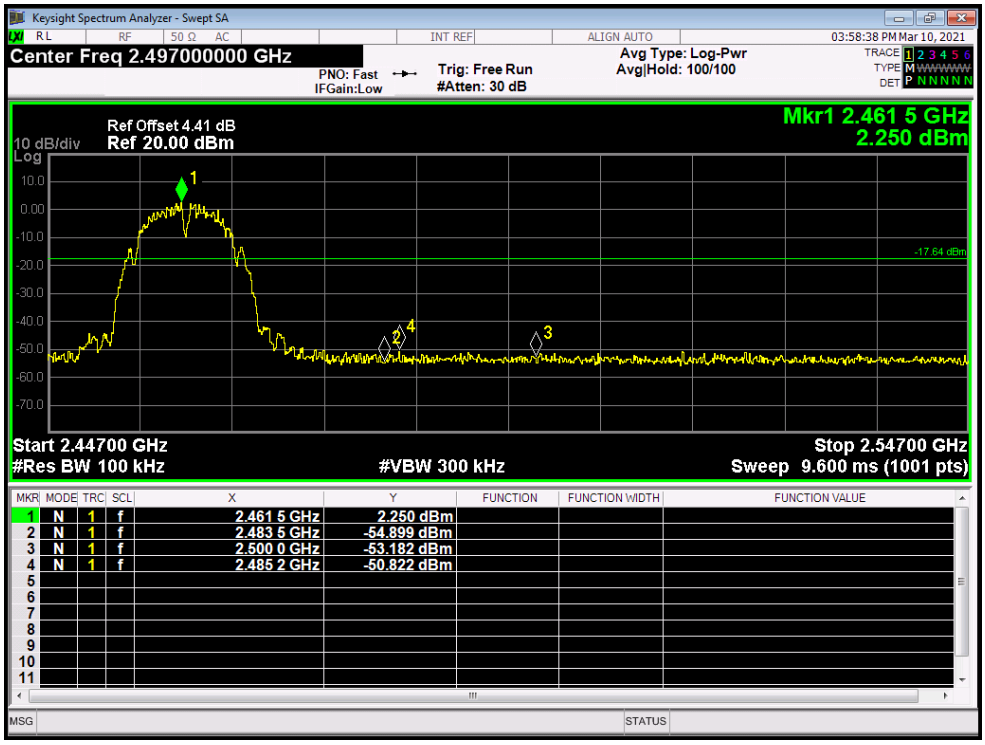
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2459.800	101.10	1.72	102.82	Fundamental Frequency		peak
2	X	2462.000	78.92	1.73	80.65	Fundamental Frequency		AVG
3		2483.500	61.47	1.88	63.35	74.00	-10.65	peak
4		2483.500	41.30	1.88	43.18	54.00	-10.82	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)

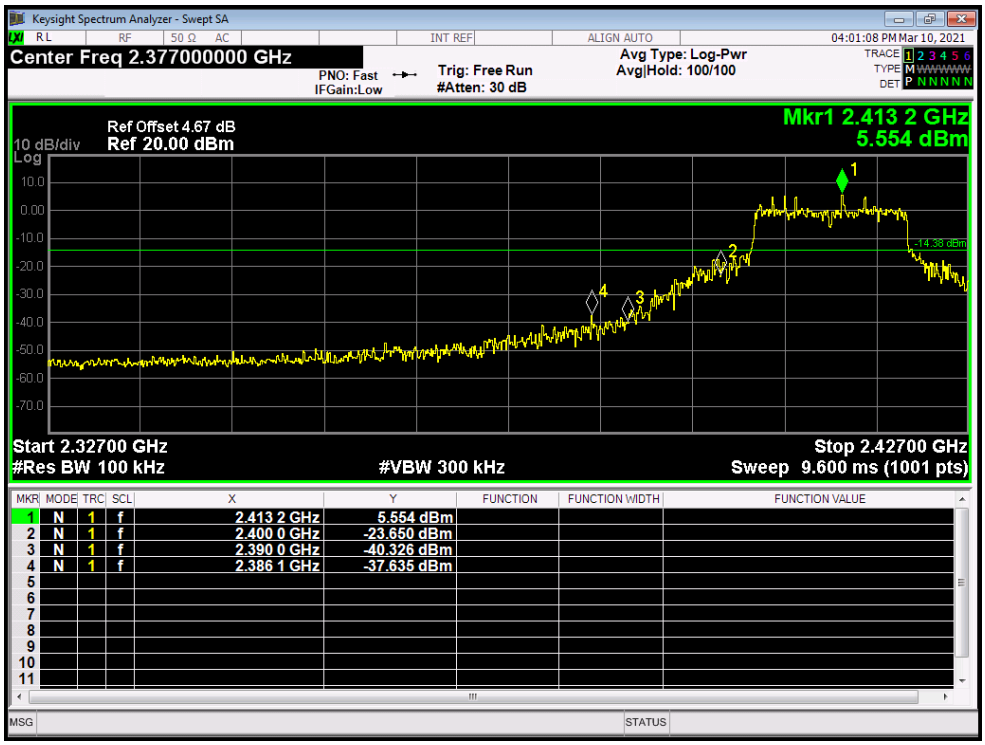
(2) Conducted Test

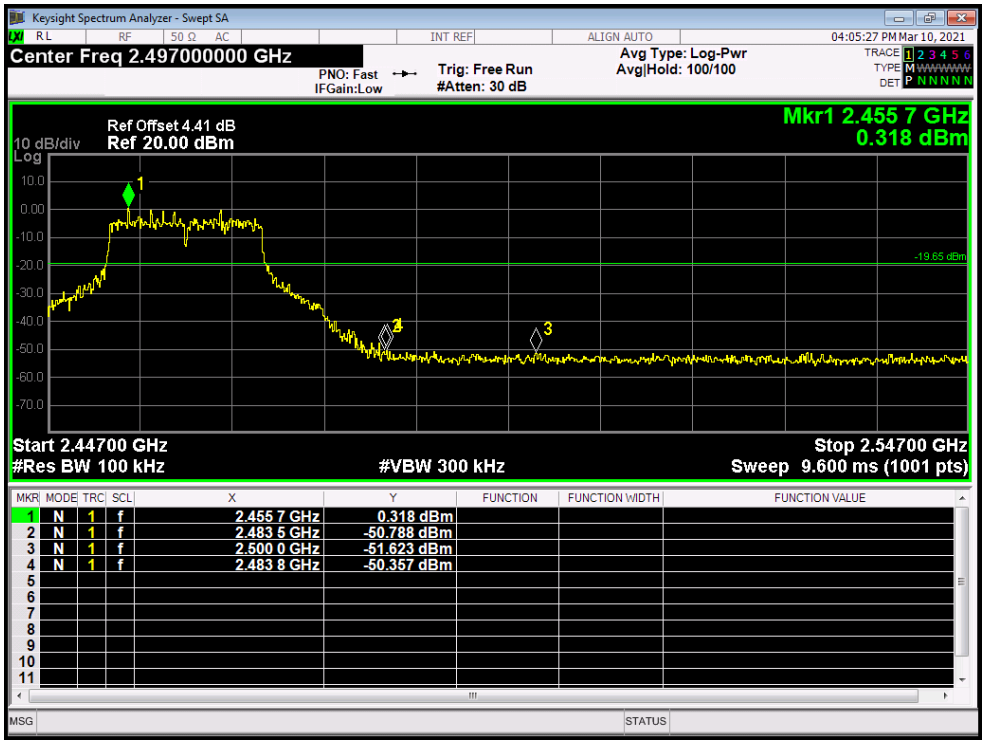
Temperature:	25℃	**Relative Humidity:**	55%
Test Voltage:	AC 120V/60HZ		
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz		
Remark:	The EUT is programmed in continuously transmitting mode		



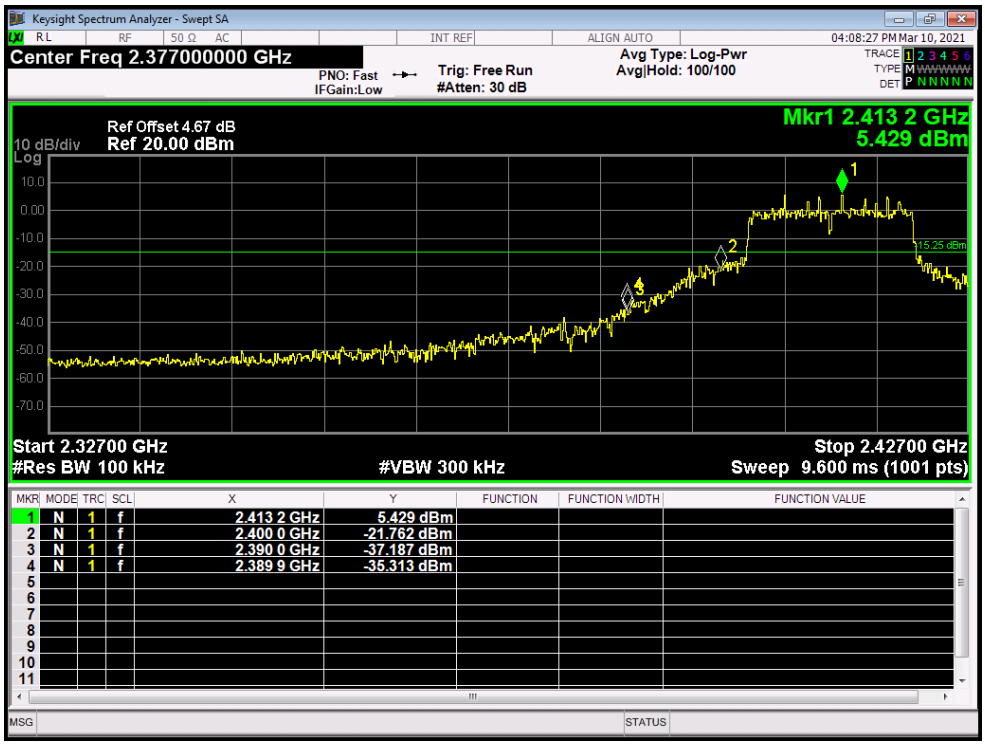


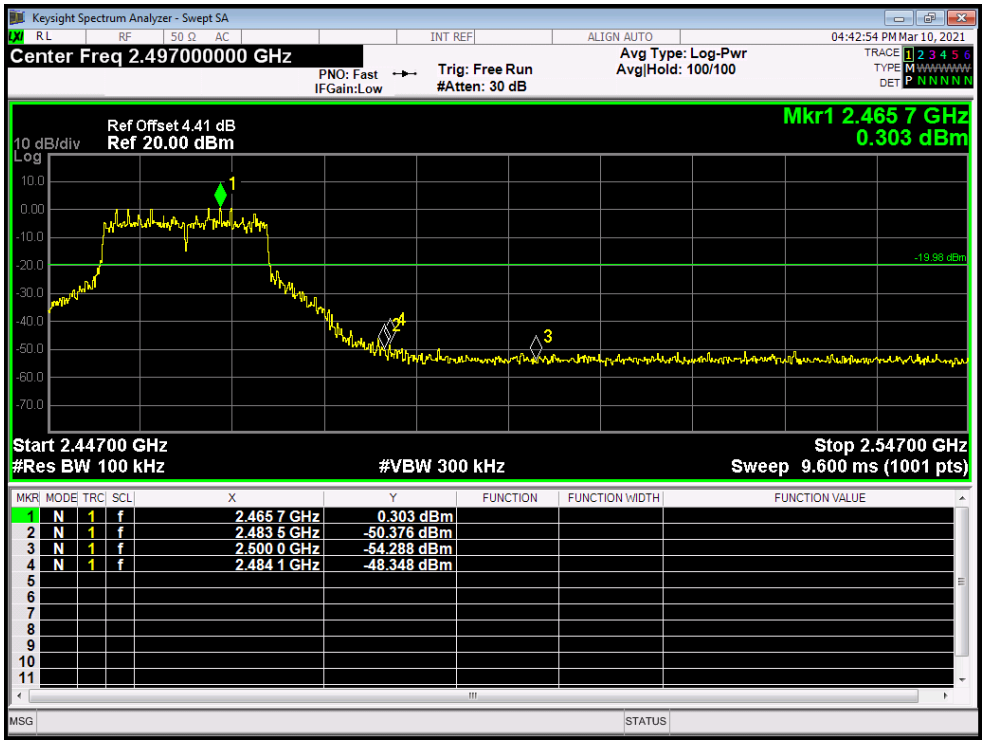
Temperature:	25℃	**Relative Humidity:**	55%
Test Voltage:	AC 120V/60HZ		
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz		
Remark:	The EUT is programmed in continuously transmitting mode		





Temperature:	25℃	**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		





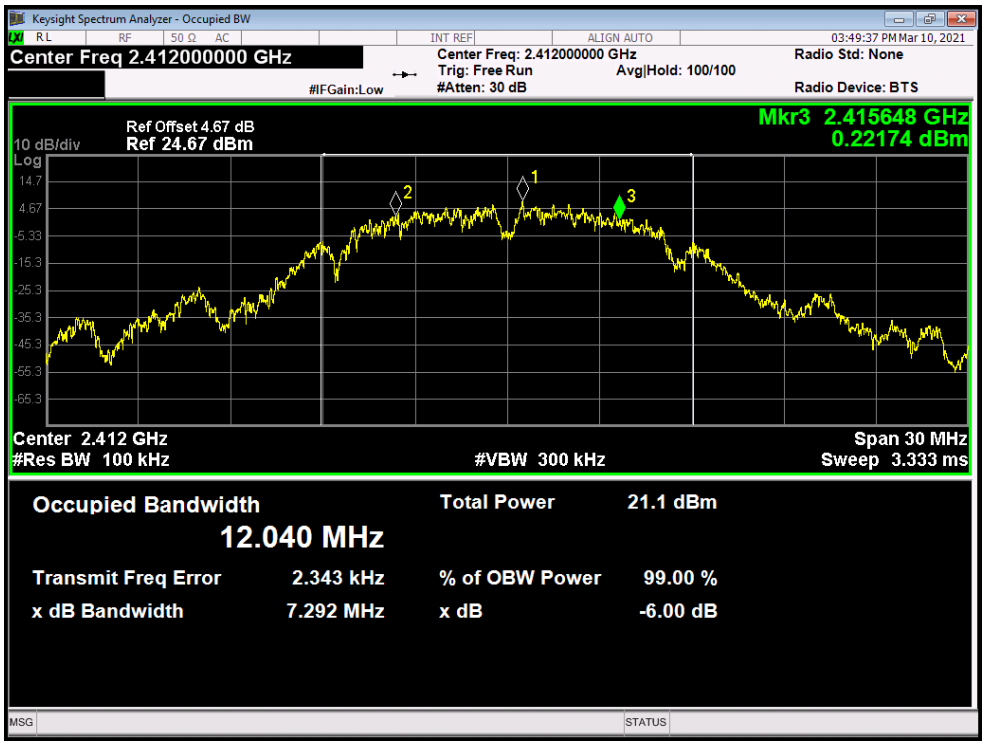
Attachment D-- Bandwidth Test Data

Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Test Mode:	TX 802.11B Mode		

Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	7.292	/	>=0.5
2437	9.059	/	
2462	8.092	/	

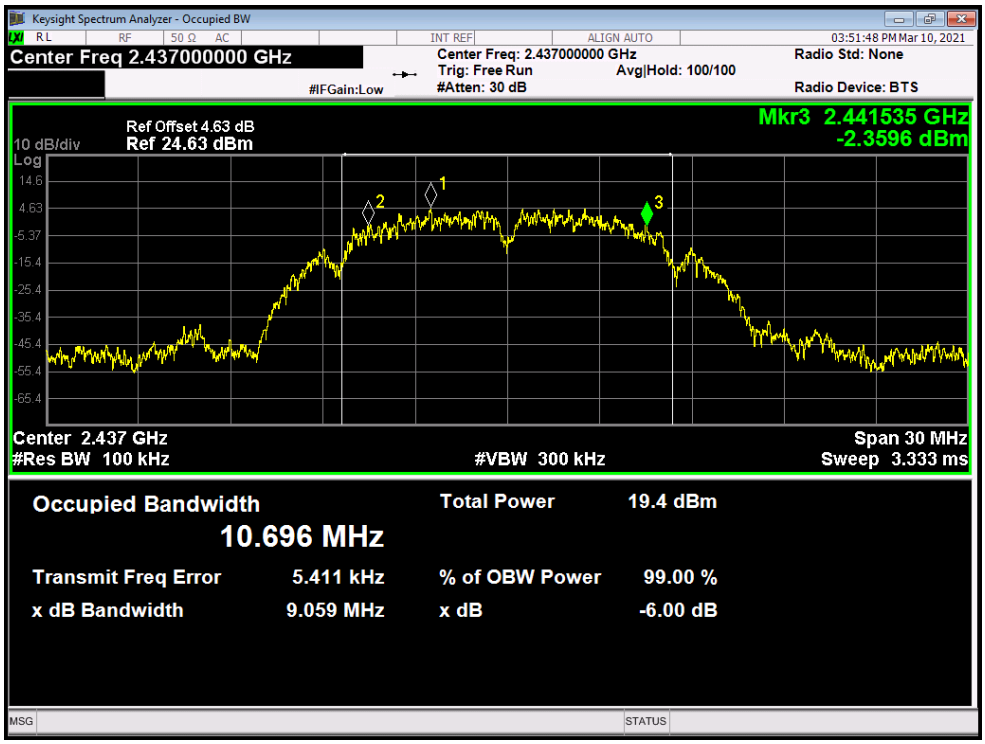
802.11B Mode

2412 MHz



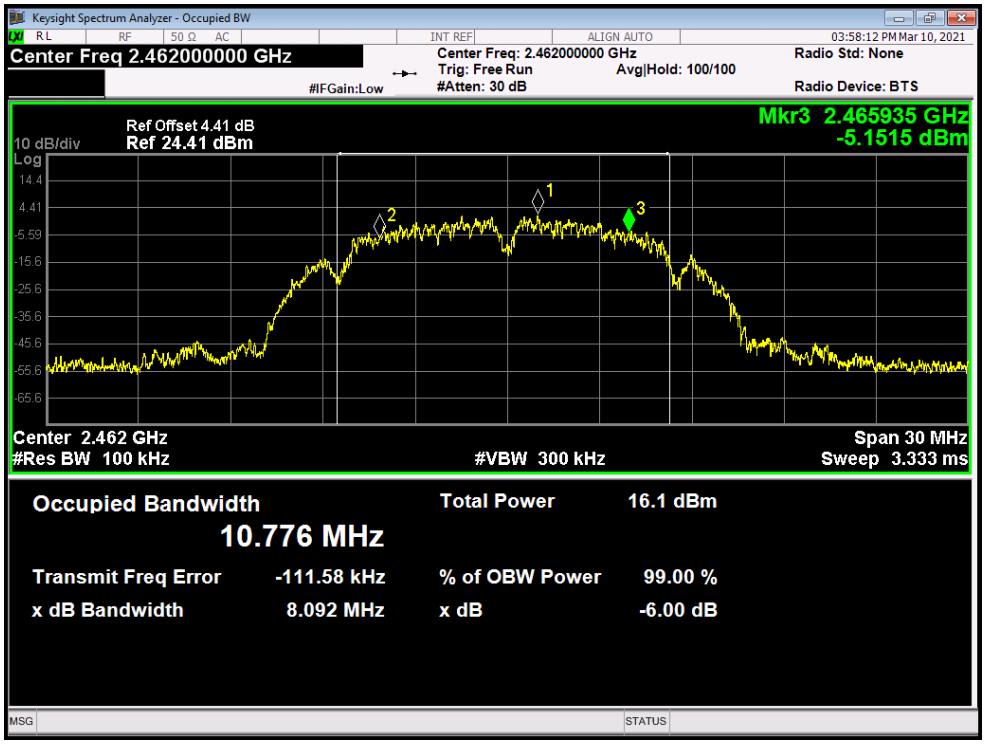
802.11B Mode

2437 MHz



802.11B Mode

2462 MHz

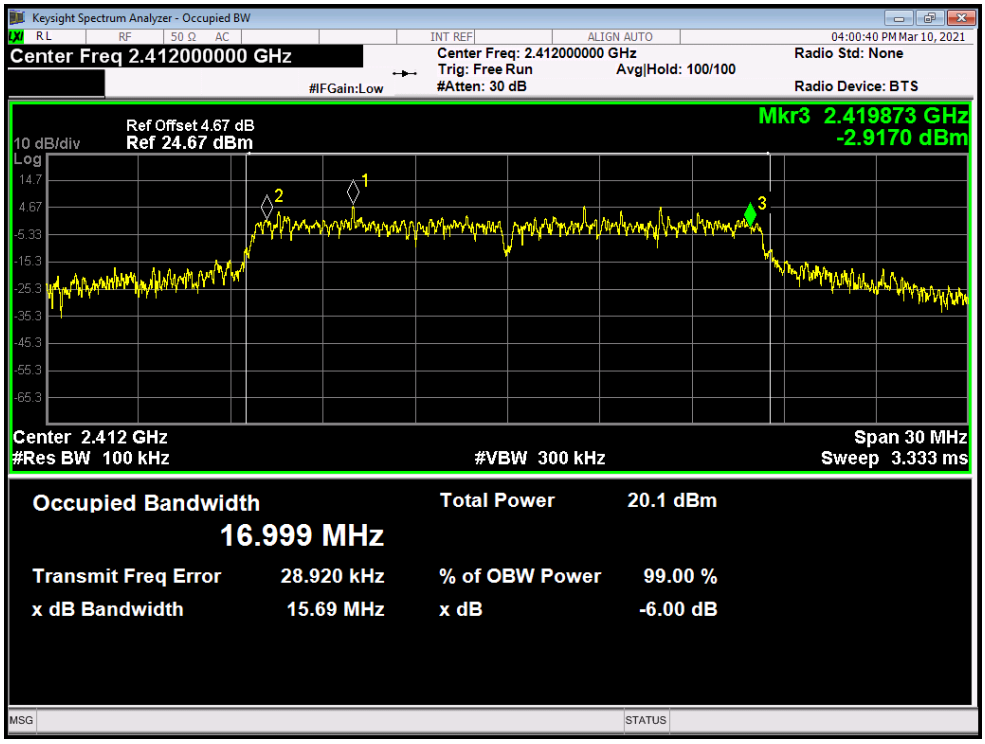


Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Test Mode:	TX 802.11G Mode		

Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	15.69	/	>=0.5
2437	16.15	/	
2462	16.01	/	

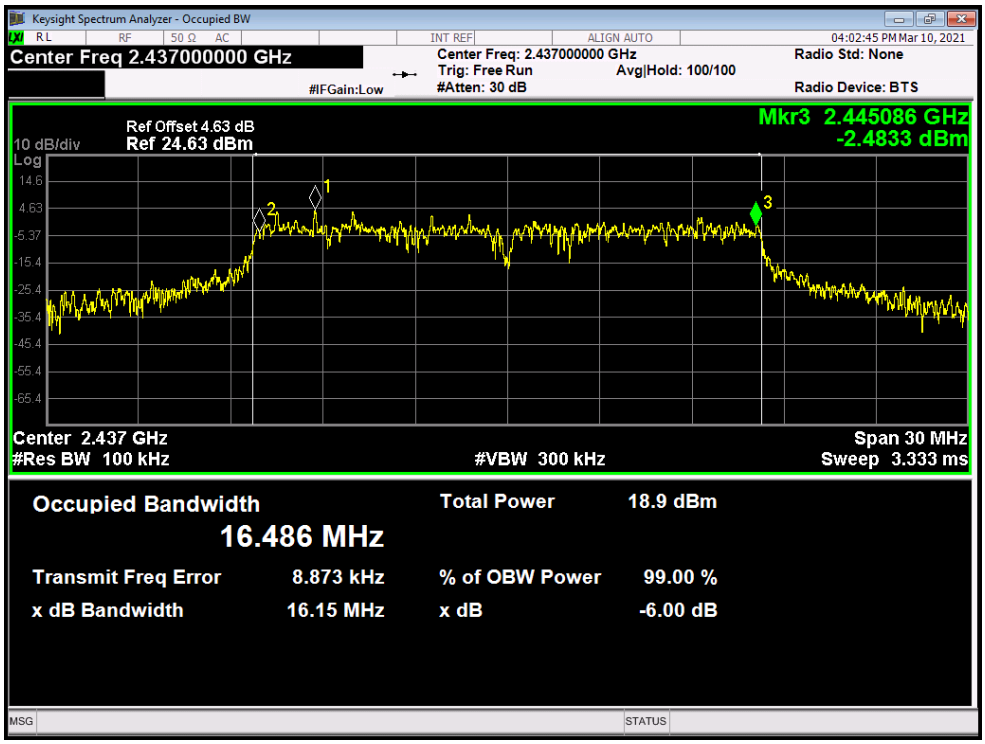
802.11G Mode

2412 MHz



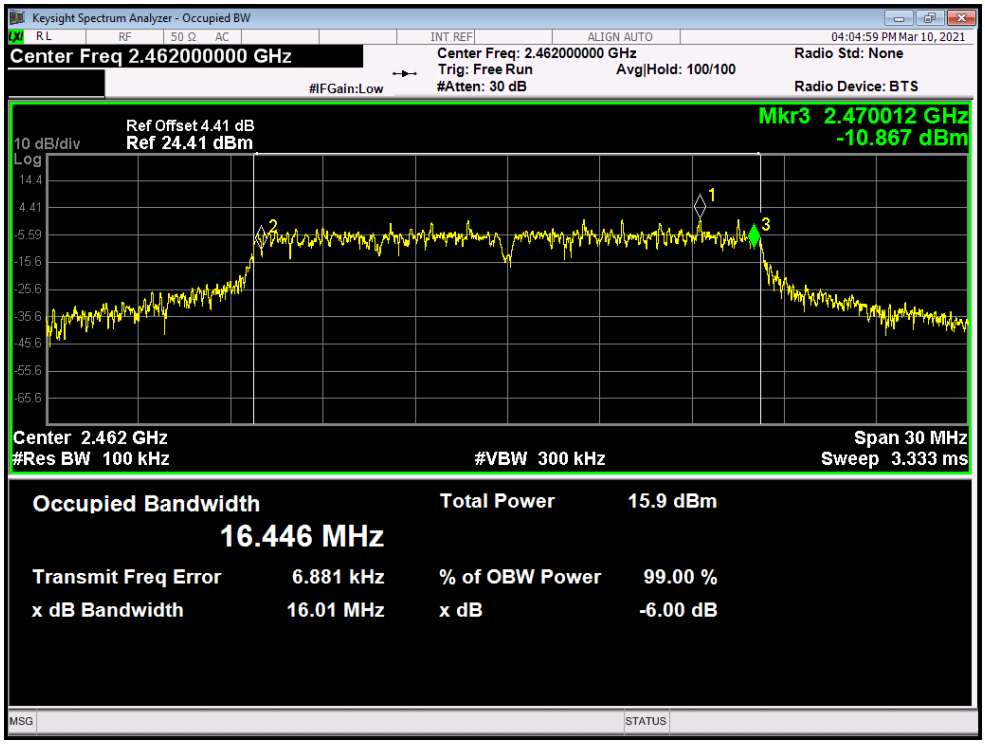
802.11G Mode

2437 MHz



802.11G Mode

2462 MHz

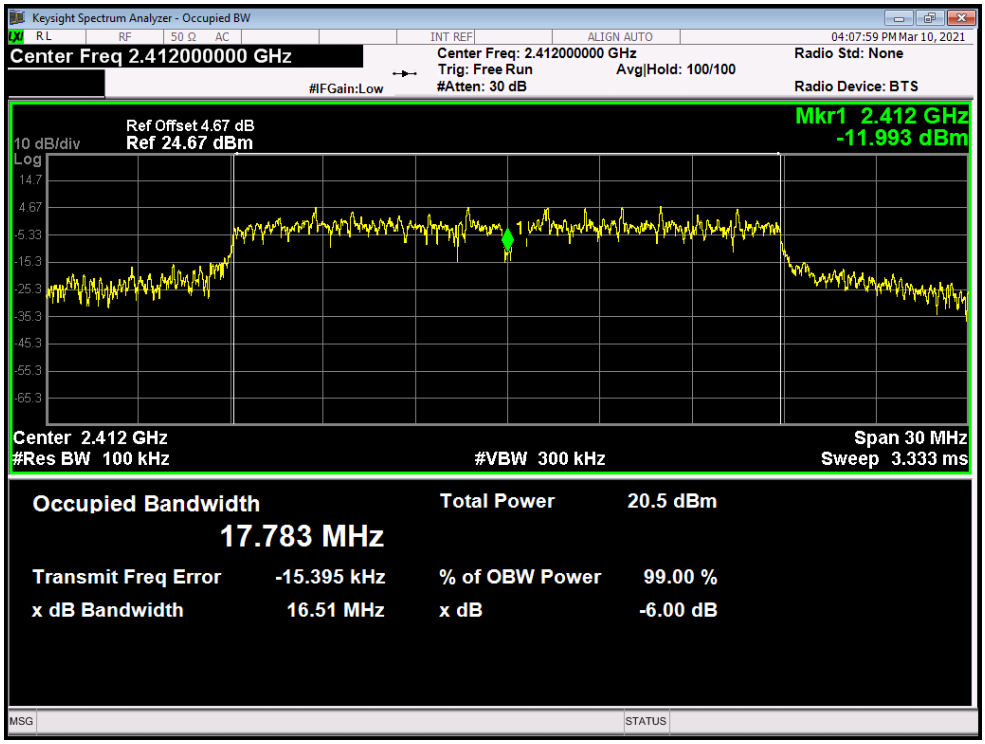


Temperature:	25℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Test Mode:	TX 802.11N(HT20) Mode		

Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	16.51	/	>=0.5
2437	17.57	/	
2462	17.19	/	

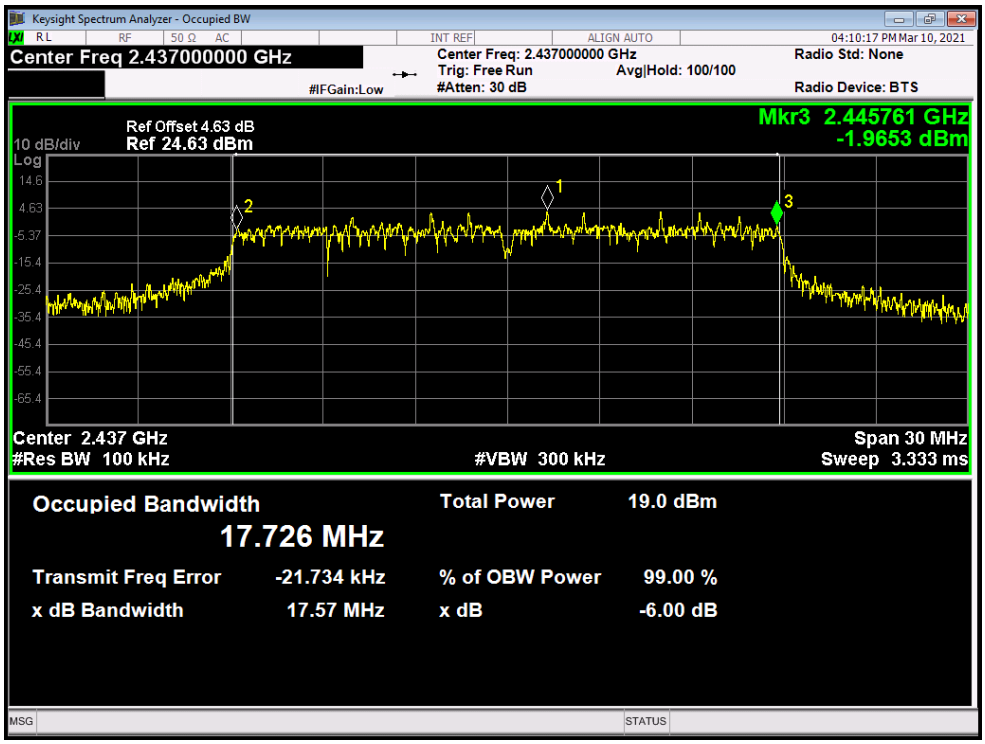
802.11N(HT20) Mode

2412 MHz



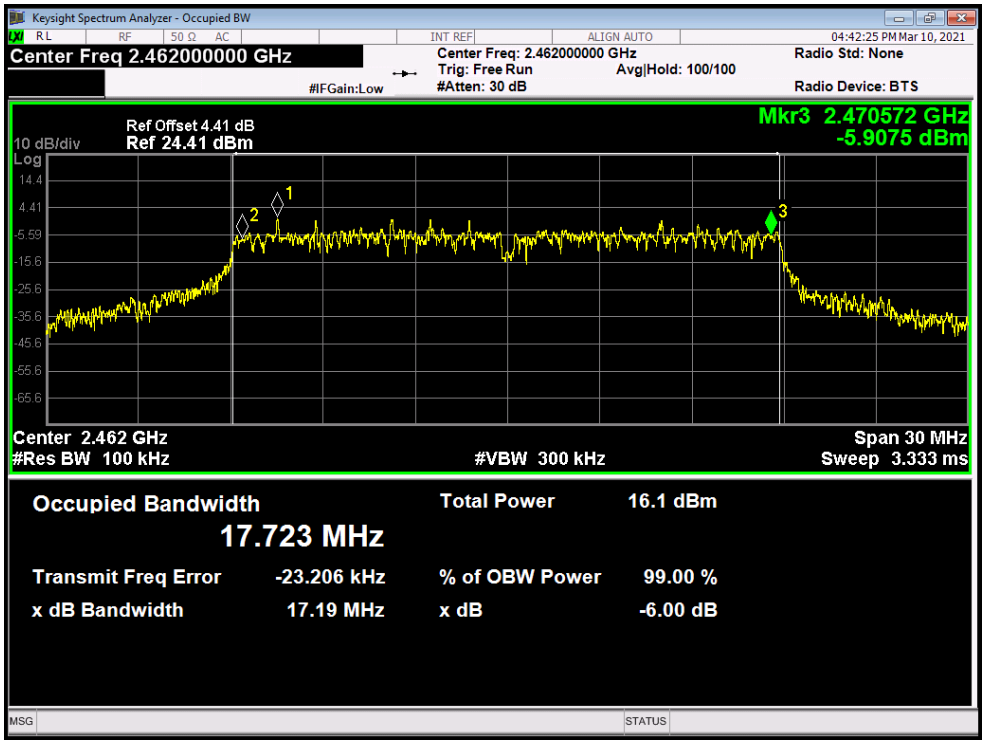
802.11N(HT20) Mode

2437 MHz



802.11N(HT20) Mode

2462 MHz



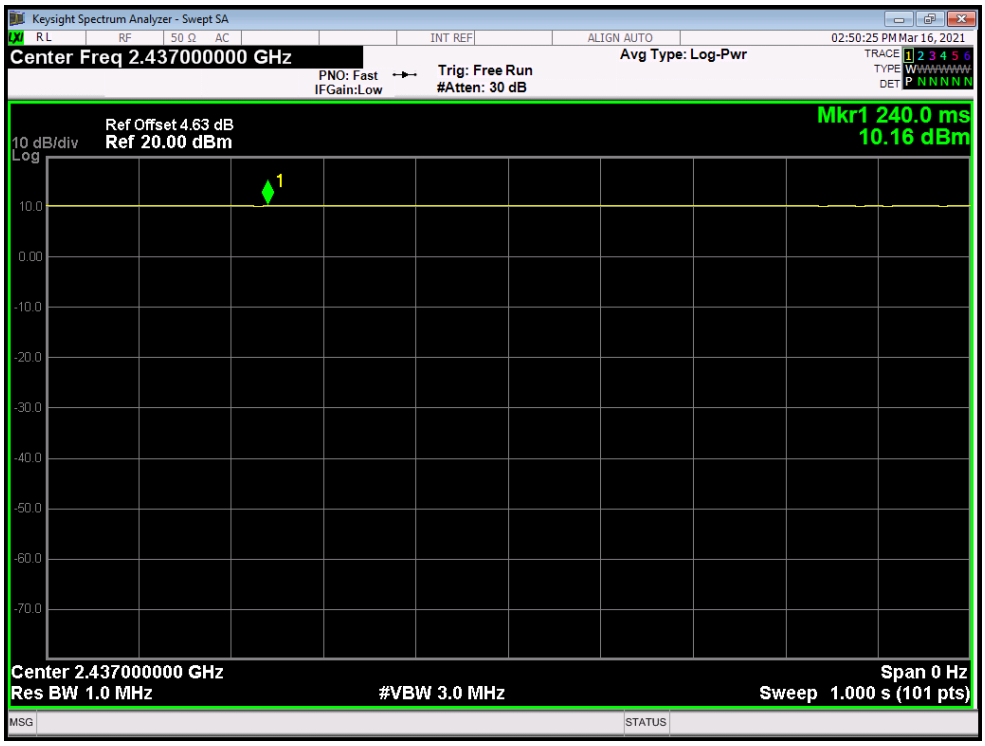
Attachment E-- Peak Output Power Test Data

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120/60Hz		

Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
802.11b	2412	7.413	30
	2437	4.587	
	2462	1.777	
802.11g	2412	5.819	
	2437	4.445	
	2462	1.733	
802.11n (HT20)	2412	5.398	
	2437	4.154	
	2462	1.538	
Result: PASS			

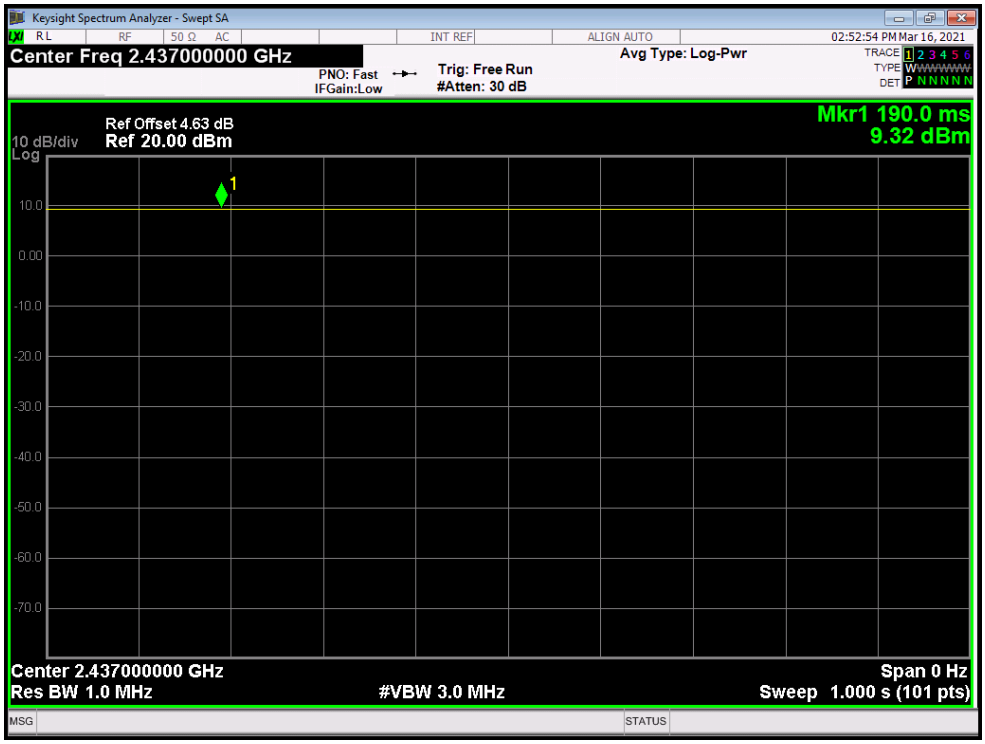
Duty Cycle		
Mode	Channel frequency (MHz)	Test Result
802.11b	2412	>98%
	2437	
	2462	
802.11g	2412	
	2437	
	2462	
802.11n (HT20)	2412	
	2437	
	2462	
Please see below plots.		

802.11 B Mode 2437 MHz



802.11 G Mode 2437 MHz

802.11 N(HT20) Mode 2437 MHz



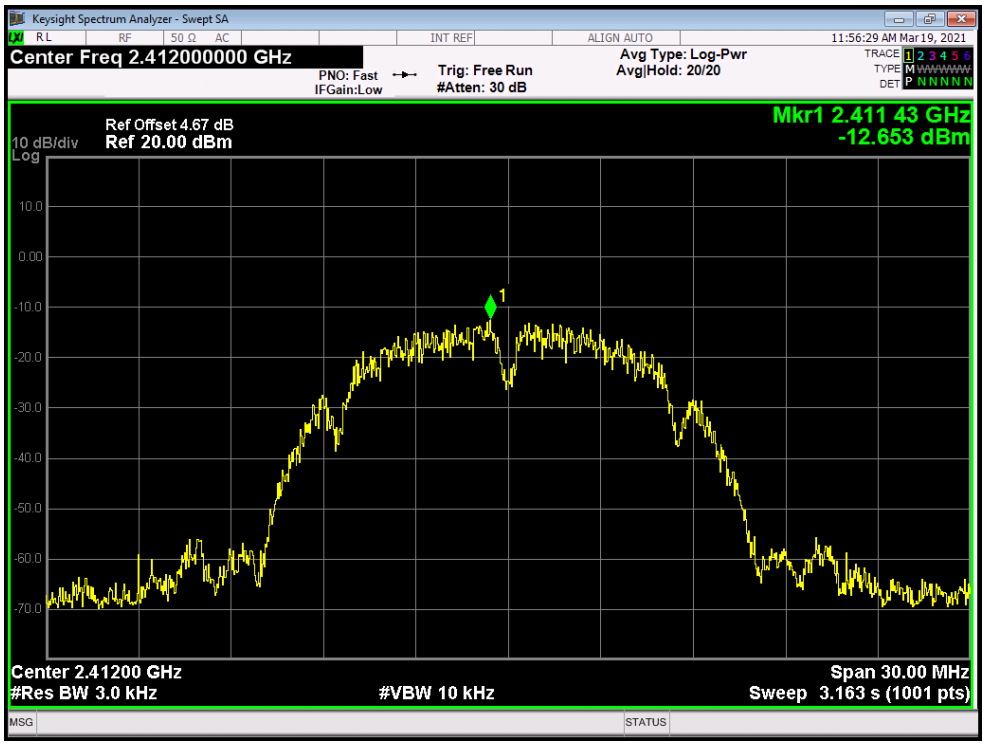
Attachment F-- Power Spectral Density Test Data

Temperature:	25 ℃	**Relative Humidity:**	55%
Test Voltage:	AC 120V/60 HZ		
Test Mode:	TX 802.11B Mode		

Channel Frequency (MHz)	Power Density (dBm/3 kHz)	Limit (dBm/3 kHz)
2412	-12.653	8
2437	-13.225	
2462	-11.189	

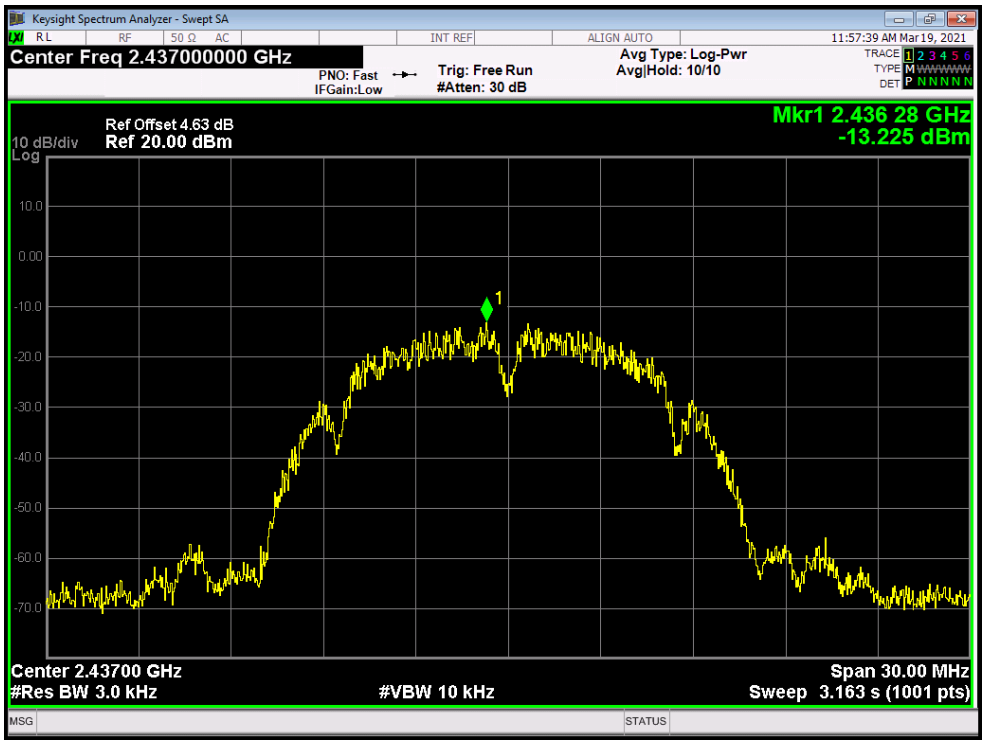
802.11B Mode

2412 MHz



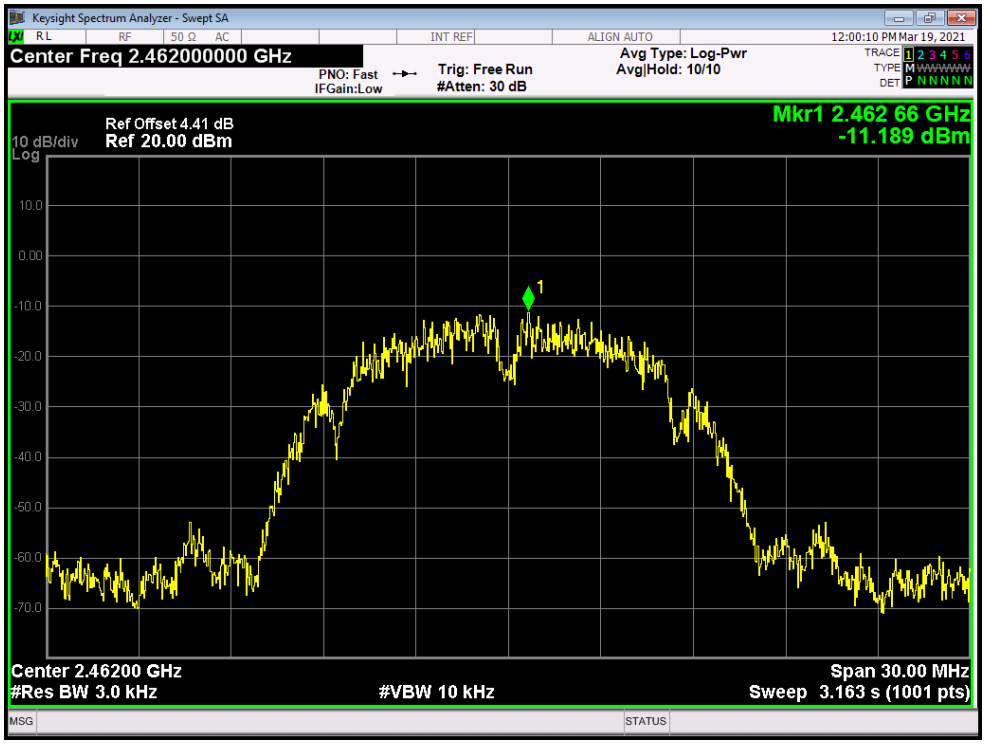
802.11B Mode

2437 MHz



802.11B Mode

2462 MHz

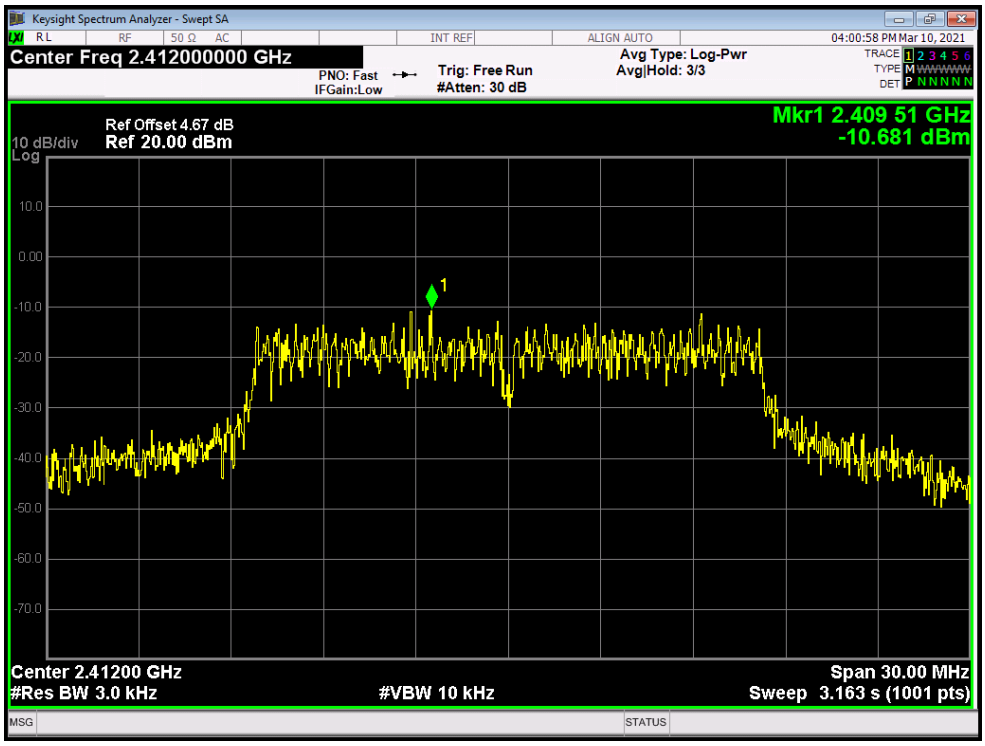


Temperature:	25 ℃	Temperature:	25 ℃
Test Voltage:	AC 120V/60 HZ		
Test Mode:	TX 802.11G Mode		

Channel Frequency (MHz)	Power Density (dBm/3 kHz)	Limit (dBm/3 kHz)
2412	-10.681	8
2437	-12.168	
2462	-15.736	

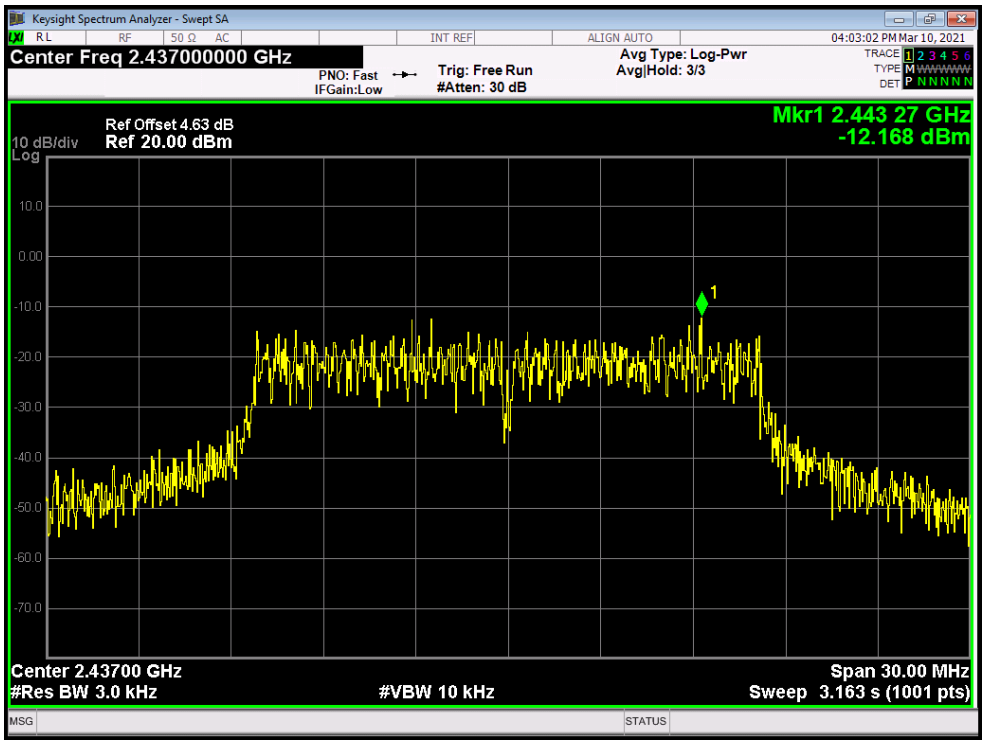
802.11G Mode

2412 MHz



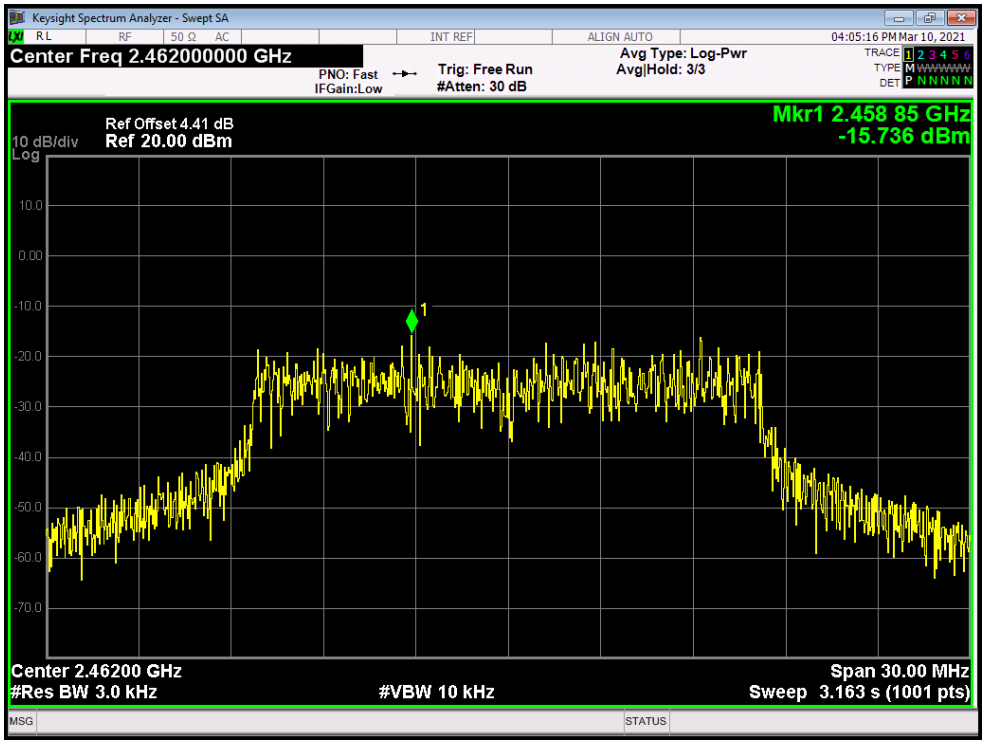
802.11G Mode

2437 MHz



802.11G Mode

2462 MHz

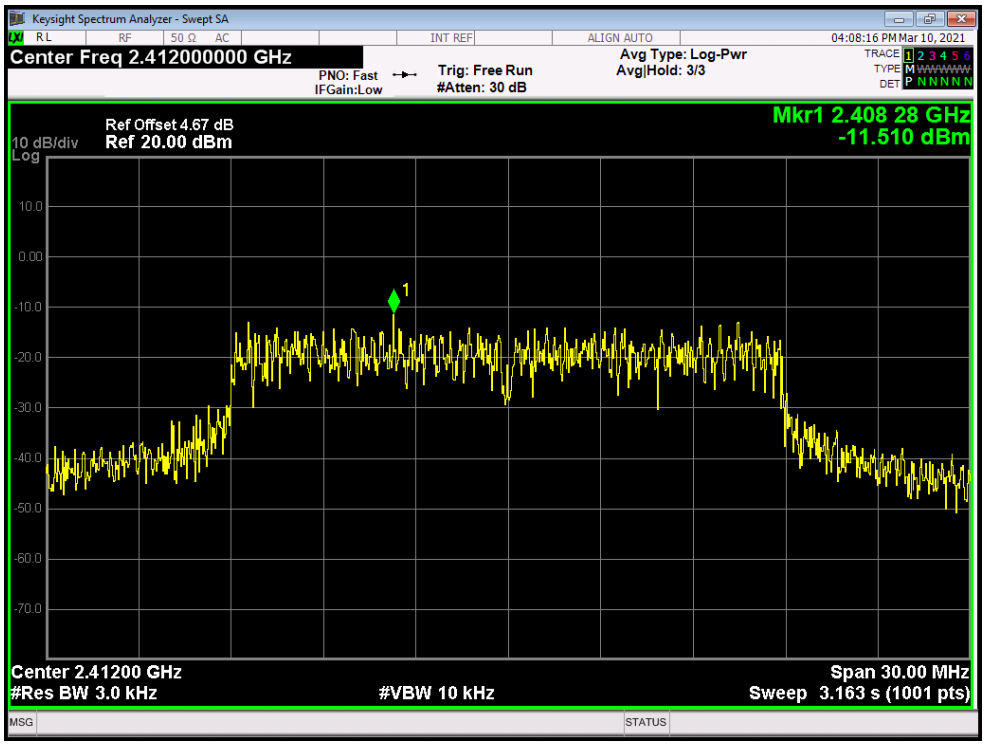


Temperature:	25 ℃	Temperature:	25 ℃
Test Voltage:	AC 120V/60 HZ		
Test Mode:	TX 802.11N(HT20) Mode		

Channel Frequency (MHz)	Power Density (dBm/3 kHz)	Limit (dBm/3 kHz)
2412	-11.51	8
2437	-13.947	
2462	-17.018	

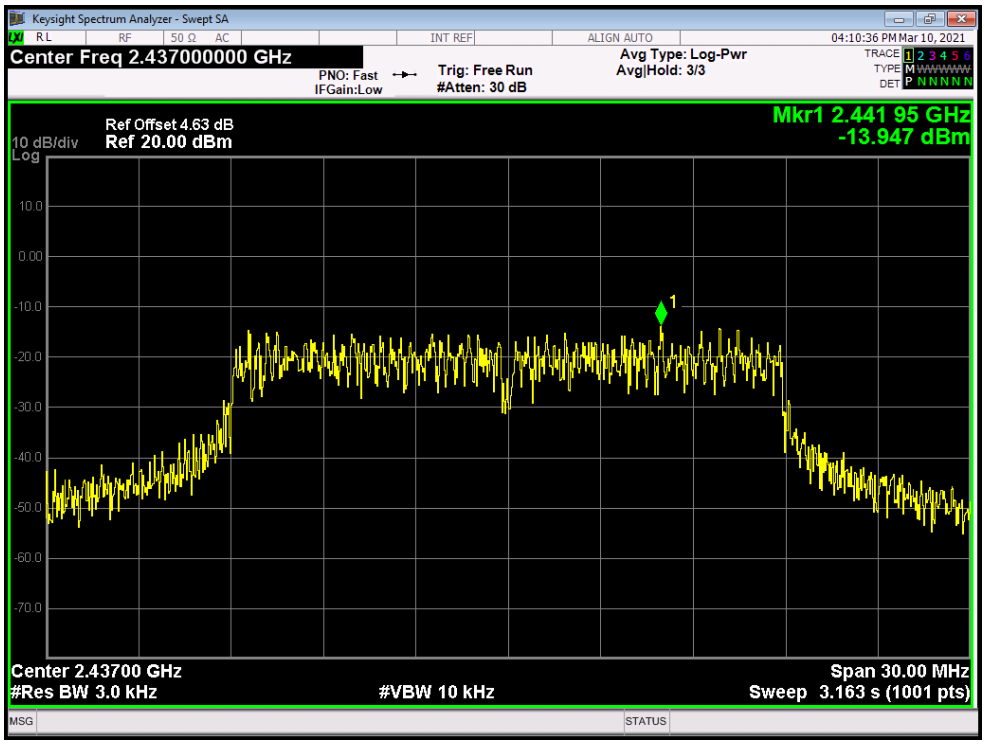
802.11N(HT20) Mode

2412 MHz



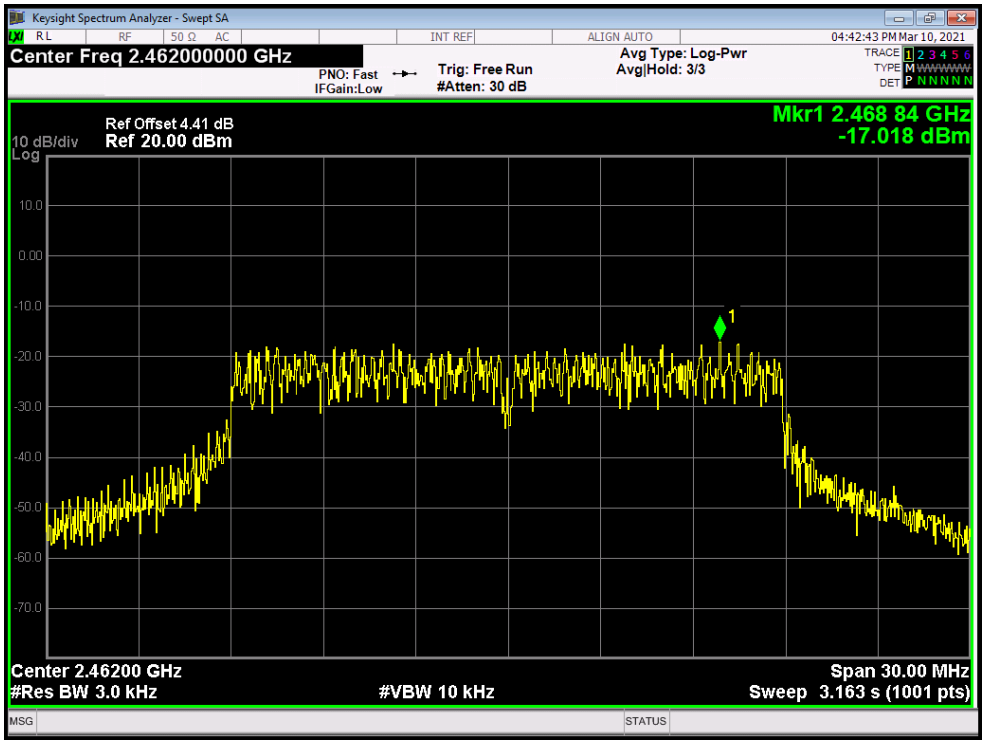
802.11N(HT20) Mode

2437 MHz



802.11N(HT20) Mode

2462 MHz



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