

Shenzhen Toby Technology Co., Ltd.

Report No.: TB-FCC159998

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FCC Radio Test Report FCC ID: 2AKBP-Q6

Original Grant

Report No. TB-FCC159998

Shenzhen Hysiry Technology Co., Ltd. **Applicant**

Equipment Under Test (EUT)

EUT Name SMART LAMP

Model No. Q6

Series Model No. Q3

HUSIRU **Brand Name**

2018-05-24 **Receipt Date**

2018-05-25 to 2018-06-12 Test Date

Issue Date 2018-06-13

Standards FCC Part 15, Subpart C (15.247: 2017)

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 :

Test/Witness Engineer :

Approved& **Authorized**

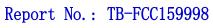


This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-074-1. 0

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Revision History

Report No.	Version	Description	Issued Date
TB-FCC159998	Rev.01	Initial issue of report	2018-06-13



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1. General Information about EUT

1.1 Client Information

Applicant : Shenzhen Hysiry Technology Co., Ltd.		Shenzhen Hysiry Technology Co., Ltd.	
Address : Room 406, Fourth floor, Buliding 1, Area D, Huameiju Decorati Materials City, Xinhu Road, Xin'an street, Bao'an District, Sher		Room 406, Fourth floor, Buliding 1, Area D, Huameiju Decoration Materials City, Xinhu Road, Xin'an street, Bao'an District, Shenzhen	
Manufacturer		Shenzhen Hysiry Technology Co., Ltd.	
Address		Room 406, Fourth floor, Buliding 1, Area D, Huameiju Decoration Materials City, Xinhu Road, Xin'an street, Bao'an District, Shenzhen	

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	SMART LAMP			
Models No.	:	Q6, Q3			
Model Different	:	All models are the same PCB layout interior structure and electrical circuits, The only difference is model name for power.			
		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: 17.80dBm 802.11g: 16.47dBm 802.11n (HT20): 14.97dBm		
Product	:	Antenna Gain:	1dBi PCB Antenna		
Description		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:up to 150Mbps		
Power Supply	:	AC Voltage supplied			
Power Rating	:	Input: AC 100~250V,50/ 60Hz			
Software Version	:	N/A			
Hardware Version	:	N/A			
Connecting I/O Port(S)	:	Please refer to the User's Manual			



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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 v04.

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



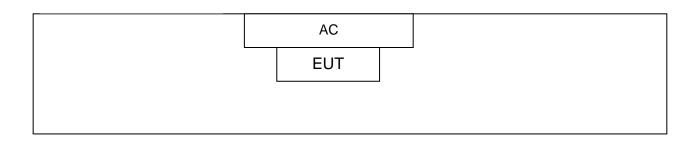
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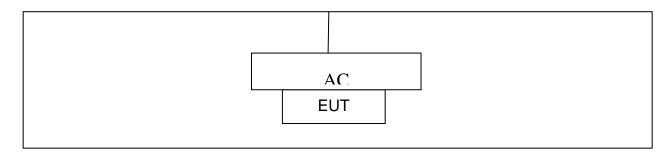
(3) Channel List:

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





1.4 Description of Support Units

The EUT has been tested as an independent unit.

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.



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For Conducted Test			
Final Test Mode	Description		
Mode 1	Normal Working with TX B Mode		

For Radiated 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:

(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 portable 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.



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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		SecureCRT.exe	
Channel	CH 01	CH 06	CH 11
IEEE 802.11b DSSS	15	40	50
IEEE 802.11g OFDM	4	35	40
IEEE 802.11n (HT20)	252	25	30

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})
	Level Accuracy:	
Conducted Emission	9kHz~150kHz	±3.42 dB
	150kHz to 30MHz	±3.42 dB
Dedicted Emission	Level Accuracy:	. 4 CO dD
Radiated Emission	9kHz to 30 MHz	±4.60 dB
Dedicted Emission	Level Accuracy:	. 4 40 dD
Radiated Emission	30MHz to 1000 MHz	±4.40 dB
Dedicted Emission	Level Accuracy:	. 4 20 dB
Radiated Emission	Above 1000MHz	±4.20 dB



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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.

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.



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2. Test Summary

FCC Part 15 Subpart C(15.247)/ RSS 247 Issue 2					
Standa	rd Section	Test Item	ludamont	Domork	
FCC	IC	rest item	Judgment	Remark	
15.203	/	Antenna Requirement	PASS	N/A	
15.207	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A	
15.205	RSS-GEN 7.2.2	Restricted Bands	PASS	N/A	
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A	
15.247(b)	RSS 247 5.4 (4)	Peak Output Power	PASS	N/A	
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A	
15.247(d) RSS 247 5.5		Band Edge	PASS	N/A	
15.247(d)& 15.209	RSS 247 5.5	Transmitter Radiated Spurious Emission	PASS	N/A	

N/A is an abbreviation for Not Applicable.



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3. Test Equipment

Conducted Emiss	ion Test				
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 20, 2017	Jul. 19, 2018
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 20, 2017	Jul. 19, 2018
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 20, 2017	Jul. 19, 2018
LISN	Rohde & Schwarz	ENV216	101131	Jul. 20, 2017	Jul. 19, 2018
Radiation Emission	n Test				
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 20, 2017	Jul. 19, 2018
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 20, 2017	Jul. 19, 2018
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar.16, 2018	Mar. 15, 2019
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar.16, 2018	Mar. 15, 2019
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar.16, 2018	Mar. 15, 2019
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar.16, 2018	Mar. 15, 2019
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jul. 03, 2017	Jul. 02, 2018
Pre-amplifier	Sonoma	310N	185903	Mar.17, 2018	Mar. 16, 2019
Pre-amplifier	HP	8449B	3008A00849	Mar.17, 2018	Mar. 16, 2019
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar.17, 2018	Mar. 16, 2019
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna Conducto	ed Emission				
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 20, 2017	Jul. 19, 2018
Spectrum Analyzer	Rohde & Schwarz	ESCI	100010/007	Jul. 20, 2017	Jul. 19, 2018
MXA Signal Analyzer	Agilent	N9020A	MY49100060	Oct. 26, 2017	Oct. 25, 2018
Vector Signal Generator	Agilent	N5182A	MY50141294	Oct. 26, 2017	Oct. 25, 2018
Analog Signal Generator	Agilent	N5181A	MY50141953	Oct. 26, 2017	Oct. 25, 2018
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO26	Oct. 26, 2017	Oct. 25, 2018
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO29	Oct. 26, 2017	Oct. 25, 2018
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO31	Oct. 26, 2017	Oct. 25, 2018
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO33	Oct. 26, 2017	Oct. 25, 2018



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4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1Test Standard FCC Part 15.207

4.1.2 Test Limit

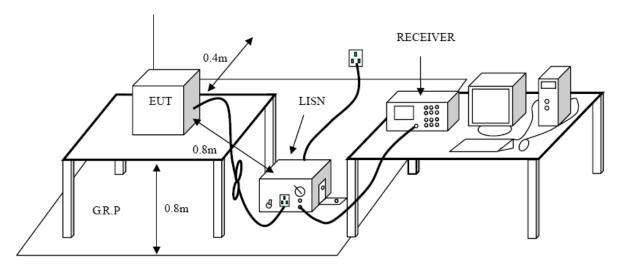
Conducted Emission Test Limit

Fraguency	Maximum RF Lii	ne Voltage (dBμV)
Frequency	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.



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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.



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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)

Itu	ulated Ellission Ellints (3 Ki iz	- 1000 Wil 12)
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	Distance of 3m	(dBuV/m)
(MHz)	Peak	Average
Above 1000	74	54

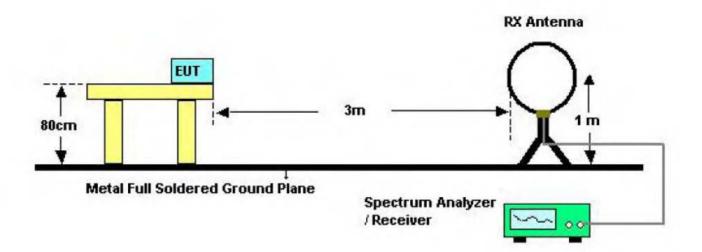
Note:

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

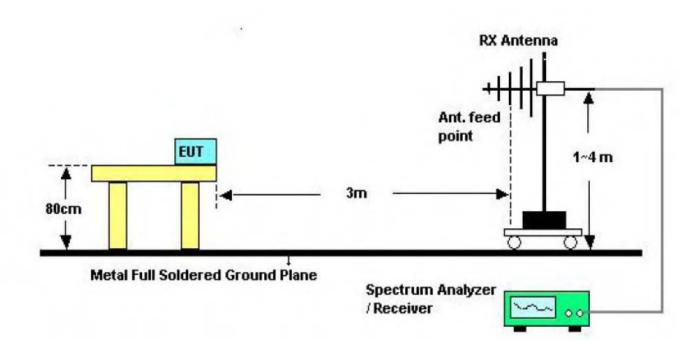


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5.2 Test Setup



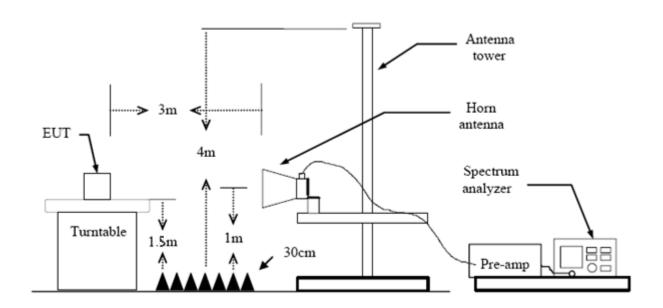
Below 30MHz Test Setup



Below 1000MHz Test Setup



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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. 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.



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(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.



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6. Restricted Bands Requirement

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.247(d)

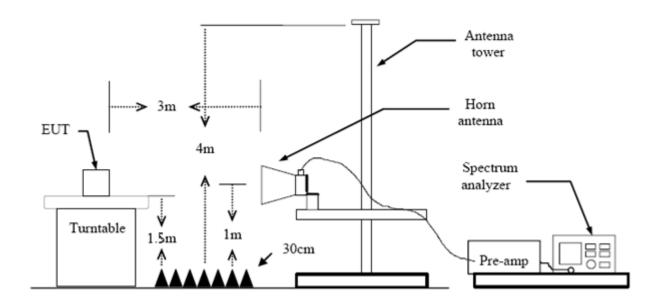
FCC Part 15.209

FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency	Distance of 3	3m (dBuV/m)
Band (MHz)	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.



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(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.



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7. Bandwidth Test

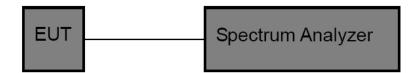
7.1 Test Standard and Limit

7.1.1 Test Standard FCC Part 15.247 (a)(2)

7.1.2 Test Limit

F(CC Part 15 Subpart C(15.2	47)
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.



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8. Peak Output Power Test

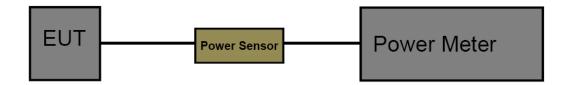
8.1 Test Standard and Limit

8.1.1 Test Standard FCC Part 15.247 (b)

8.1.2 Test Limit

FCC	Part 15 Subpart C(15.247	7)
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 v04. 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.



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9. Power Spectral Density Test

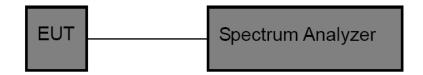
9.1 Test Standard and Limit

9.1.1 Test Standard FCC Part 15.247 (e)

9.1.2 Test Limit

FC	CC Part 15 Subpart C(15.2	47)
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 v04.

- (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.



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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 1dBi, 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.

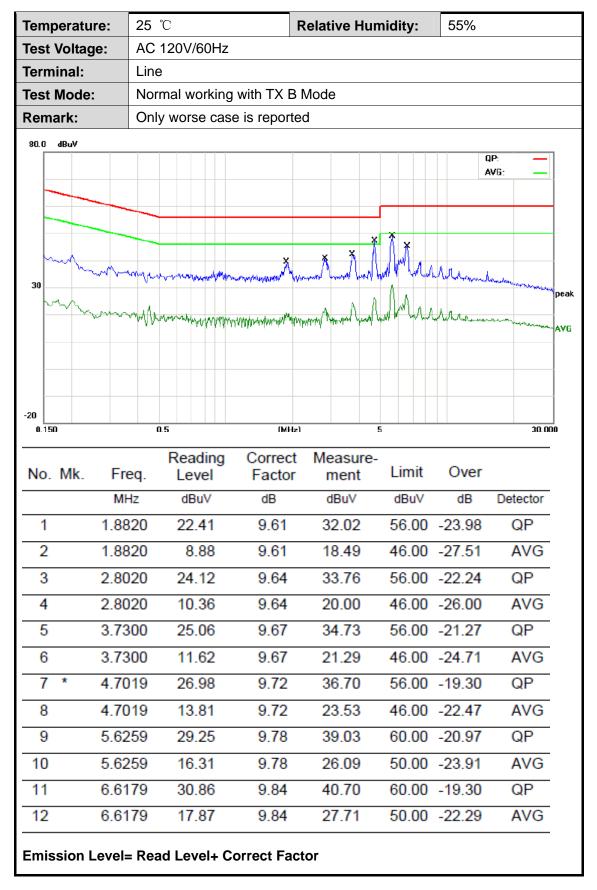
Antenna Type
Unique connector antenna
Professional installation antenna

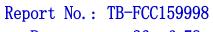




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Attachment A-- Conducted Emission Test Data

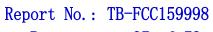






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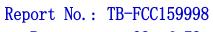
emperature:	25 ℃		Relative H	umidity:	55%	
est Voltage:	AC 120V/60H	Z				
Terminal:	Neutral					
Test Mode:	Normal working	ng with TX B I	Mode			
Remark:	Only worse ca	ase is reporte	d			
30 dBuV	m Marketen may had	Mary Andrews Service of Mary S			X	QP: —AVG: —
0.150	0.5	(MHz)		5		30.0
	Reading req. Level	Correct Factor	Measure- ment	Limit	Over	Detector
	340 24.24	9.66	33.90	56.00 -		Detector
	340 24.24	9.66	21.09		24.91	AVG
						QP
	580 24.78 580 12.78	9.71	34.49	56.00 -		AVG
		9.71	22.49	46.00 -		
	380 25.85	9.86	35.71	56.00 -		QP
	380 14.41	9.86	24.27	46.00 -		AVG
	660 26.43	10.04	36.47	60.00 -		QP
	660 15.72	10.04	25.76	50.00 -		AVG
	900 32.25	10.21	42.46	60.00 -		QP
10 6.5	900 22.13	10.21	32.34	50.00 -	17.66	AVG
11 9.5	580 21.28	10.25	31.53	60.00 -	28.47	QP
11 9.5						AVG





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Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 240V/50Hz	Relative Haimaity.	3070
Terminal:	Line		
Test Mode:	Normal working with T	X B Mode	
Remark:	Only worse case is rep		
80.0 dBuV			
30	WM Malladad Myalada Malada Mal	ΛΛ.	AVG:
0.150	0.5	(MHz) 5	30.000
No. Mk. Fre	Reading Corr eq. Level Fac		Over
MH	łz dBuV dB	dBuV dBuV	dB Detector
1 2.85	80 23.65 9.6	33.29 56.00 -2	2.71 QP
2 2.85	80 8.66 9.6	34 18.30 46.00 -2	7.70 AVG
3 3.80	60 23.88 9.6	33.55 56.00 -2	2.45 QP
4 3.80	60 9.62 9.6	7 19.29 46.00 -2	6.71 AVG
5 4.84	20 26.48 9.7	73 36.21 56.00 -1	9.79 QP
6 4.84	20 10.09 9.7	73 19.82 46.00 -2	6.18 AVG
7 * 6.70	20 30.44 9.8	40.28 60.00 -1	9.72 QP
8 6.70	20 18.08 9.8	34 27.92 50.00 -2	2.08 AVG
9 7.60	60 30.35 9.9	0 40.25 60.00 -1	9.75 QP
10 7.60	60 18.65 9.9	0 28.55 50.00 -2	1.45 AVG
11 8.62	20 26.70 9.9	6 36.66 60.00 -2	3.34 QP
12 8.62	20 15.18 9.9	6 25.14 50.00 -2	4.86 AVG
Emission Levels	= Read Level+ Correct	Factor	





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remper	ature:	25 °C	C		Relative	Humidity	: 55%	1
Test Vo	ltage:	AC 2	240V/50Hz					
Termina	al:	Neut	ral					
Test Mo	de:	Norn	nal working	with TX B N	/lode			
Remark	4	Only	worse cas	e is reported	d			
80.0 dBu	v							QP: —
								AVG:
		_						
	۸ ا			Ť	, ¥	_ * Î	×	
20	4 mm	and the same	man depression in the second	epperdonomers All was	man Shand Som	Mary Call Lands	When	don
30						^ ^ A A A A	0	and the same of th
WW	d _{e-t} wysypsylyth yl lyth	May A Alapa	YMANINAPANINAPANINA	Whitemarker	una Tarra Taria	1 mm of man	4 Min	Mhara
			·					- Common of
0.150		0.9	5	(MHz)		5		30.000
No. M	k En	eq.	Reading Level	Correct Factor	Measure ment	- Limit	Over	
INO. IVI	MI		dBuV	dB	dBuV	dBuV	dB	Detector
1	1.93		23.36	9.61	32.97		-23.03	QP
<u> </u>								AVG
2	1.93		7.30	9.61	16.91		-29.09	
3	3.81		24.15	9.71	33.86		-22.14	QP
4	3.81		10.88	9.71	20.59	46.00		AVG
5	5.74	160	23.79	10.05	33.84	60.00	-26.16	QP
6	5.74	160	12.53	10.05	22.58	50.00	-27.42	AVG
7 *	6.63	300	31.14	10.22	41.36	60.00	-18.64	QP
	6.63	300	20.60	10.22	30.82	50.00	-19.18	AVG
8	7.00	900	26.79	10.28	37.07	60.00	-22.93	QP
8	7.68					50.00	00.07	AVG
	7.69		16.65	10.28	26.93	50.00	-23.07	AVG
9		900	16.65 19.35	10.28 10.28	26.93		-30.37	QP



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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:	25 ℃			Relative Hu	imidity:	55%	
Test Voltage:	AC 120	V/60HZ					
Ant. Pol.	Horizon						
Test Mode:	TX B M	ode 2412N	/lHz				
Remark:	Only wo	orse case is	s reported				
80.0 dBuV/m							
					(RF)FCC	15C 3M Radia	ntion n -6 dB
				15.0	.6	Maryir	1 -8 UB
		* *	3 X.		Mary Mary	h	
30		7	and My	~~/	My My	$\mathbb{W}_{\mathbb{N}}$	
	/					Munus	Way war
. No	ノコンコレ						
william white the same	' \ <i>M</i>						
M. M. Market	' \ <i>\</i>						
W Many Market	· \/						
- Programme	· \/						
-20							
-20 30.000 40 50	60 70	80	(MHz)	300	400	500 600 7	00 1000.00
			(MHz)	300 Measure-	400	500 600 7	00 1000.00
30.000 40 50		80 Reading Level			400 Limit	500 600 7 Over	00 1000.00
30.000 40 50 No. Mk. Fr	F	Reading	Correct	Measure-			
30.000 40 50 No. Mk. Fr	F eq. Hz	Reading Level	Correct Factor	Measure- ment	Limit	Over	Detector
No. Mk. Fr	eq. Hz 248	Reading Level	Correct Factor	Measure- ment	Limit dBuV/m	Over	Detector
No. Mk. Fr	eq. Hz 248 3468	Reading Level dBuV 57.97	Correct Factor dB/m -22.10	Measure- ment dBuV/m 35.87	Limit dBuV/m 40.00	Over dB -4.13	Detector QP QP
No. Mk. Fr M 1 * 87.7 2 ! 111.3 3 178.7	eq. Hz 248 3468	Reading Level dBuV 57.97 60.62 55.65	Correct Factor dB/m -22.10 -22.42 -20.24	Measure- ment dBuV/m 35.87 38.20 35.41	Limit dBuV/m 40.00 43.50 43.50	Over dB -4.13 -5.30 -8.09	Detector QP QP QP
No. Mk. Fr Mi 1 * 87.7 2 ! 111.3 3 178.7 4 252.9	eq. Hz 248 3468 1327	Reading Level dBuV 57.97 60.62 55.65 56.33	Correct Factor dB/m -22.10 -22.42 -20.24 -17.12	Measure- ment dBuV/m 35.87 38.20 35.41 39.21	Limit dBuV/m 40.00 43.50 43.50 46.00	Over dB -4.13 -5.30 -8.09 -6.79	Detector QP QP QP QP
No. Mk. Fr M 1 * 87.7 2 ! 111.3 3 178.7	eq. Hz 248 3468 1327 9482	Reading Level dBuV 57.97 60.62 55.65	Correct Factor dB/m -22.10 -22.42 -20.24	Measure- ment dBuV/m 35.87 38.20 35.41	Limit dBuV/m 40.00 43.50 43.50	Over dB -4.13 -5.30 -8.09	Detector QP QP QP QP



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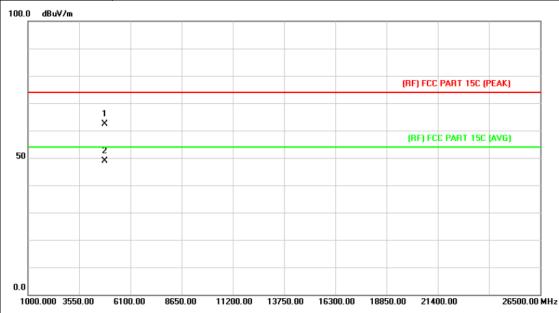
Temperature:	25 ℃	Relative H	lumidity: 55%						
Test Voltage:	AC 120V/60HZ		,						
Ant. Pol.	Vertical	Vertical							
Test Mode:	TX B Mode 2412M	ИHz							
Remark:	Only worse case is	s reported							
80.0 dBu∀/m	80.0 dBuV/m								
			(RF)FCC 15C 3M	Radiation Margin -6 dB					
		5	s X						
	1 3 X	* * *	My My						
30		which will	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~						
Mrmman.		V V	7	gh-houseman a					
	W								
30.000 40 50	60 70	(MHz)	300 400 500 6	00 700 1000.000					
	Donalis a	O							
No. Mk. Fre	Reading (eq. Level	Correct Measur Factor ment	1.1	/er					
MI		dB/m dBuV/n		IB Detector					
1 56.0	007 56.02	-23.92 32.10	40.00 -7	.90 QP					
2 87.7	248 52.79	-22.10 30.69	40.00 -9	.31 QP					
3 112.1	305 56.83	-22.41 34.42	2 43.50 -9	.08 QP					
4 139.3	613 57.28	-22.48 34.80	43.50 -8	.70 QP					
5 247.6	819 57.28 ·	-17.31 39.97	7 46.00 -6	.03 QP					
6 * 284.9	9767 59.09 ·	-16.49 42.60	46.00 -3	.40 QP					
		_							
*:Maximum data	x:Over limit !:over margin	n							
									
Emission Level= Read Level+ Correct Factor									



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Above 1GHz

Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	AC 120V/60HZ				
Ant. Pol.	Horizontal				
Test Mode:	TX B Mode 2412MHz				
Remark:	No report for the emission which more than 10 dB below the prescribed				
	limit.				

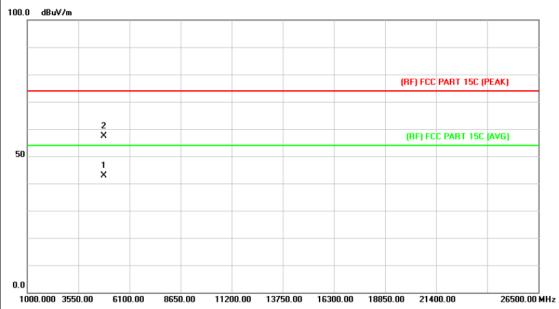


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4828.060	47.89	14.58	62.47	74.00	-11.53	peak
2	*	4828.640	34.36	14.58	48.94	54.00	-5.06	AVG

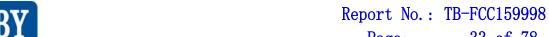


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Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission w prescribed limit.	hich more than 10 dB	below the



No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4826.840	28.34	14.57	42.91	54.00	-11.09	AVG
2		4827.400	42.81	14.57	57.38	74.00	-16.62	peak



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Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission	which more than 10 dE	B below the
	prescribed limit.		

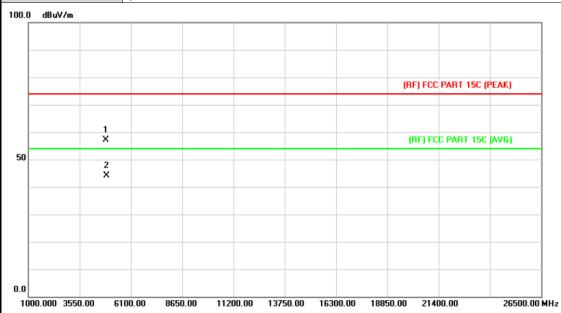


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4871.780	47.73	14.84	62.57	74.00	-11.43	peak
2	*	4878.680	34.78	14.89	49.67	54.00	-4.33	AVG



Report No.: TB-FCC159998
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Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2437MHz					
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					

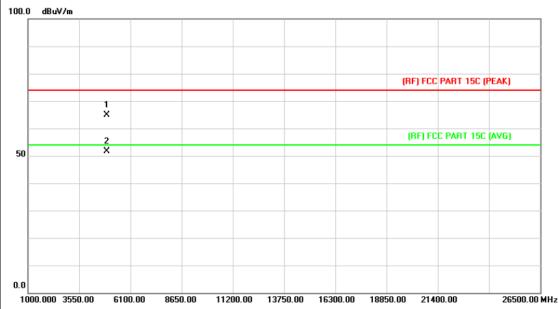


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4872.560	42.40	14.85	57.25	74.00	-16.75	peak
2	*	4878.920	29.19	14.89	44.08	54.00	-9.92	AVG



Report No.: TB-FCC159998
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Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Horizontal					
Test Mode:	TX B Mode 2462MHz					
Remark:	Pemark: No report for the emission which more than 10 dB below the					
	prescribed limit.					
100.0 10.111						



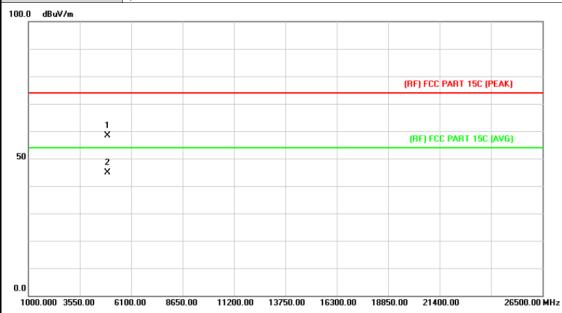
No.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.160	49.61	15.17	64.78	74.00	-9.22	peak
2	*	4923.640	36.42	15.17	51.59	54.00	-2.41	AVG



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Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60HZ	AC 120V/60HZ						
Ant. Pol.	Vertical							
Test Mode:	TX B Mode 2462MHz							
Remark:	No report for the emission which more than 10 dB below the prescribed limit.							
100.0 dBuV/m								

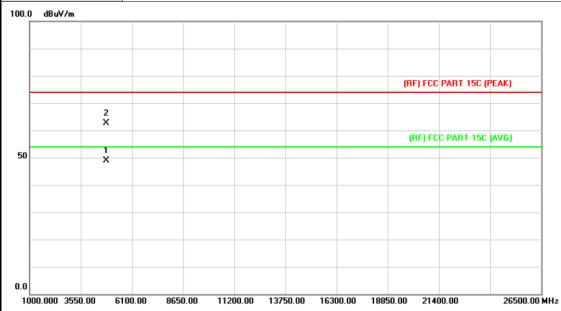


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4922.080	43.26	15.16	58.42	74.00	-15.58	peak
2	*	4928.360	29.72	15.21	44.93	54.00	-9.07	AVG

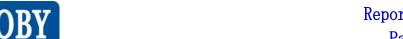


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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX G Mode 2412MHz						
Remark:	No report for the emission prescribed limit.	which more than 10 dE	B below the				

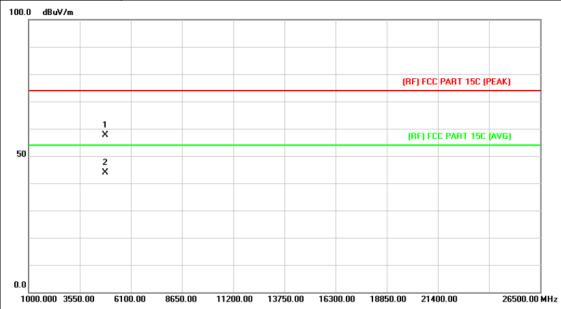


No.	Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4828.680	34.36	14.58	48.94	54.00	-5.06	AVG
2		4828.800	48.00	14.58	62.58	74.00	-11.42	peak

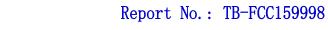


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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX G Mode 2412MHz						
Remark:	No report for the emission which more than 10 dB below the						
	prescribed limit.	prescribed limit.					
100.0 40.44-							



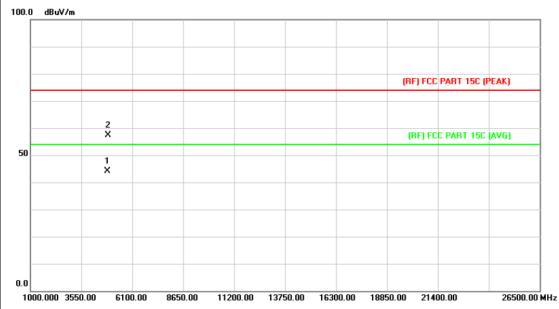
No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4824.740	43.00	14.55	57.55	74.00	-16.45	peak
2	*	4829.000	29.28	14.58	43.86	54.00	-10.14	AVG





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Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Horizontal					
Test Mode:	TX G Mode 2437MHz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					
1 *** ***						

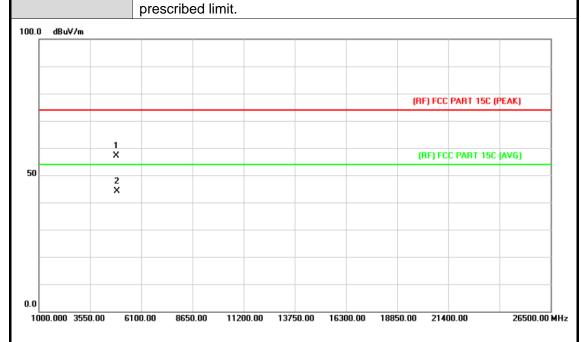


No.	Mk	. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4875.700	29.14	14.87	44.01	54.00	-9.99	AVG
2		4877.500	42.57	14.88	57.45	74.00	-16.55	peak



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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Vertical						
Test Mode:	TX G Mode 2437MHz	TX G Mode 2437MHz					
Remark:	No report for the emission which more than 10 dB below the						



No.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.020	42.29	14.86	57.15	74.00	-16.85	peak
2	*	4878.800	29.22	14.89	44.11	54.00	-9.89	AVG



Report No.: TB-FCC159998
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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX G Mode 2462MHz						
Remark:	No report for the emission prescribed limit.	which more than 10 dE	3 below the				

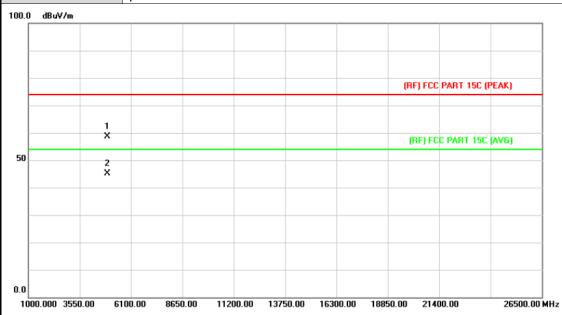


No.	М	k.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4	924.300	36.42	15.17	51.59	54.00	-2.41	AVG
2		4	928.100	49.46	15.20	64.66	74.00	-9.34	peak



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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX G Mode 2462MHz						
Remark:	No report for the emission prescribed limit.	which more than 10 dE	3 below the				

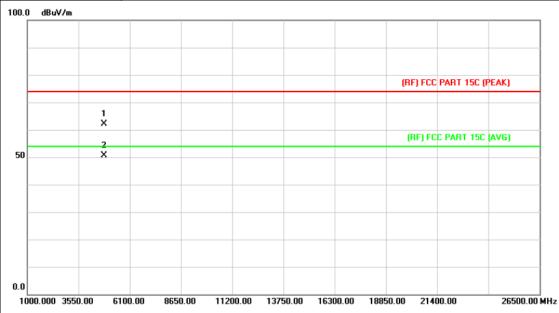


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4927.500	43.33	15.19	58.52	74.00	-15.48	peak
2	*	4928.000	29.83	15.20	45.03	54.00	-8.97	AVG



Report No.: TB-FCC159998
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Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Horizontal					
Test Mode:	TX N(HT20) Mode 2412MI	Hz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					



No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4820.780	47.52	14.53	62.05	74.00	-11.95	peak
2	*	4824.560	36.15	14.55	50.70	54.00	-3.30	AVG



Report No.: TB-FCC159998

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Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Vertical					
Test Mode:	TX N(HT20) Mode 2412MI	Hz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					



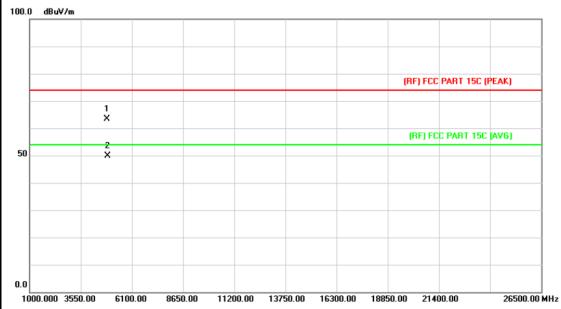
No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4826.760	42.26	14.57	56.83	74.00	-17.17	peak
2	*	4828.800	29.44	14.58	44.02	54.00	-9.98	AVG



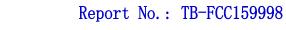
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1		
-	MA	RV
	LU	TT
	100	

Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Horizontal					
Test Mode:	TX N(HT20) Mode 2437MI	Нz				
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					



No.	Ν	Лk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	•	4875.180	48.39	14.87	63.26	54.00	9.26	AVG
2		•	4876.880	34.90	14.88	49.78	74.00	-24.22	peak





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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Vertical						
Test Mode:	TX N(HT20) Mode 2437Mi	Нz					
Remark:	No report for the emission	which more than 10 dB	B below the				
	prescribed limit.						
100 a . In . II.							



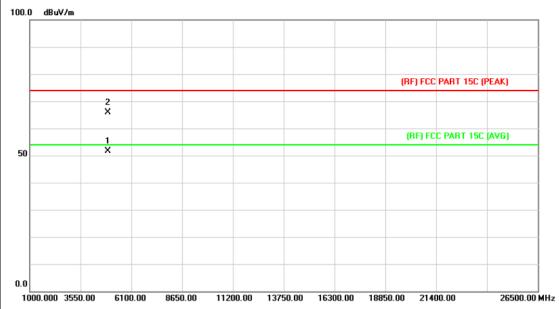
No.	Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4869.040	29.11	14.82	43.93	54.00	-10.07	AVG
2		4873.200	41.92	14.86	56.78	74.00	-17.22	peak



Report No.: TB-FCC159998

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Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60HZ					
Ant. Pol.	Horizontal					
Test Mode:	TX N(HT20) Mode 2462MH	Z				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					
prosoned min.						

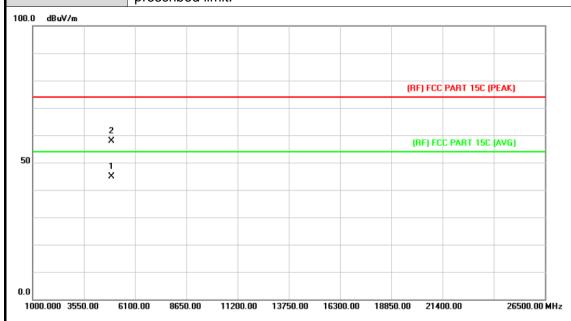


No.	Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4924.240			51.63	54.00	-2.37	AVG
2		4924.540	50.82	15.17	65.99	74.00	-8.01	peak

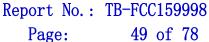


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Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60HZ						
Ant. Pol.	Vertical						
Test Mode:	TX N(HT20) Mode 2462MH	Z					
Remark:	No report for the emission was prescribed limit.	No report for the emission which more than 10 dB below the					



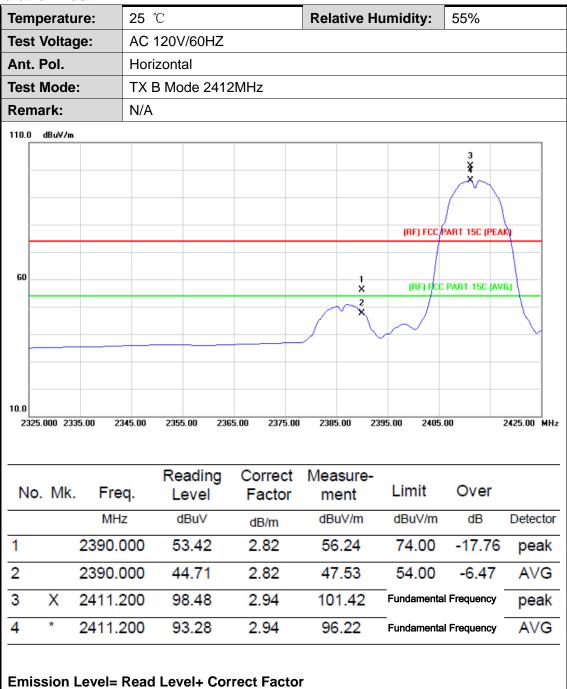
No	. M	lk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4	919.840	29.80	15.15	44.95	54.00	-9.05	AVG
2		4	924.400	42.74	15.17	57.91	74.00	-16.09	peak

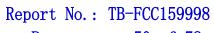




Attachment C-- Restricted Bands Requirement Test Data

(1) Radiation Test

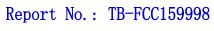






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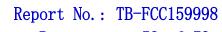
Iem	peratu	ıre:	25	$^{\circ}$ C			F	Relati	ve Hu	midity	: :	55%	
Test	Volta	ge:	AC	120V/60)HZ								
Ant.	Pol.		Vert	ical									
Test	Mode	:	TXI	3 Mode	2412	:MHz							
Rem	ark:		N/A										
110.0	dBuV/m												
												3 1 ×	
												\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
\vdash							+			(BF) FCC F	/ PART 15C (PEA	uk)
											1		
60												DIDT 450 (4)	
									× 2	Н	11100	PART 15C (AV	/GJ \
									×		$/ \parallel$		
	_						_						$\overline{}$
							+						
10.0	5.000 23	25.00 3	2345.00	2355.00	236	5.00 237	75.00	2385	inn 2	395.00	2405.	nn	2425.00 MI
				Readi		Corre		Mea	sure-		it	Over	
No) Mk	Fre	on.	Love	7	F 54 (*1 (nr.	m	ant	Lim			
No). Mk			Leve		Facto	or		ent	Limi		dB	Dotosto
		MH	łz	dBu\	/	dB/m	or	dBu	ıV/m	dBu\	//m	dB	Detecto
1	X	MH 2411.	lz 200	dBu\ 93.4	4	dB/m 2.94	or	dВ:	ıV/m 5.38	dBu\ _ Fundam	//m nental	Frequency	AVG
1		MH	lz 200	dBu\	4	dB/m	or	dВ:	ıV/m	dBu\	//m nental		
		MH 2411.	1z 200 000	dBu\ 93.4	4	dB/m 2.94	or —	96 48	ıV/m 5.38	dBu\ Fundam	//m nental	Frequency	AVG





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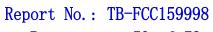
Tem	perati	ure:	25	$^{\circ}$ C				Relat	tive H	lumic	lity:	55%	%		
	t Volta		AC	120V	/60HZ	,									
Ant.	Pol.		Hori	zonta	ıl										
Test	Mode) :	TXI	З Мос	de 246	62MH	Z								
Ren	nark:		N/A												
120.0	dBuV/r	n													_
70		ž X		W	3 X								15C (PE.		
20.0 24	50.000 24	460.00 2	470.00	2480.	.00 2	490.00	2500.0	00 251	0.00	2520.00	0 25	30.00		2550.00	MHz
No	o. Mk	. Fre	a		ading vel		orrect		asure ent		imit		over		
	J. 1VIII.	MHz	•		BuV				uV/m		BuV/n		dB	Dete	ctor
1	X	2461.0			2.15		B/m 5.26		5.41					pe	
	*												equency		
2		2461.0			.00		.26		0.26				equency		
										7	74.00				
4		2483.5	500	37	.76	3	.41	41	1.17	5	54.00) -	12.83	A۷	/G
	ssion	2483.5 2483.5 Level=	500	37		3		41	1.10		74.00 54.00		22.90 12.83		





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ıemp	eratu	re:	25 °	Č			R	elati	ve Hu	ımidit	y:	55%		
Test \	/oltag	je:	AC 1	120V/6	0HZ						•			
Ant. F	Pol.		Verti	ical										
Test N	Mode		TX E	3 Mode	e 2462	2MHz								
Rema	rk:		N/A											
120.0	dBu∀/m													
70		1 %2 %			4 * 3 *							PART 15C		
20.0 2447.	000 249	57.00 24	67.00	2477.00	D 248	97.00 24 9	7.00	2507.	00 2	2517.00	2527	.00	25	547.00 MH
No.	Mk.	Fre	-	Read Lev	/el	Corre Facto	or	me	sure- ent ıV/m	Lir	mit suV/m	Ove dB		Detecto
No.	Mk.		Z	Lev	/el uV	Facto	or	dBu	ent	Lir dB	uV/m			Detecto
1		MHz	z 600	Lev	vel uV 5.08	Facto dB/m	or	dBu	ent ıV/m	Lir dB Funda	iuV/m mental	dB	:у	
	*	MHz 2460.6	z 600 000	dBi	vel uV .08 13	dB/m 3.26	or	106 102	ent iV/m 6.34	Lir dB Funda Funda	iuV/m mental	dB	y ·	peak





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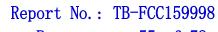
Tem	perat	ure:	25 °	C		Relat	ive Hu	ımidity:	55%	
Test	t Volta	age:	AC 1	20V/60	HZ					
Ant.	. Pol.		Horiz	zontal						
Test	t Mod	e:	TX G	Mode	2412MHz					
Ren	nark:		N/A							
100.0	dBu∀/	m								
								X 3		
								(RF) FCC	PART 15C (PE	AK)
								4		
						1 X		(BF) FC	C PART 15C A	VG)
50										
						2		-/		
-			+							
0.0	31.000 2	341 00 2	351.00	2361.00	2371.00 23	381.00 2391	1 00 2	401.00 241	1.00	2431.00 MH
No	o. Mk	. Fre	q .	Readii Leve			sure-	Limit	Over	
140				dBuV		-ID:	ıV/m	dBuV/m	dB	Detector
-		MHz	7	ubuv	dB/m	aBu	4 4 / 1111	uDu v/III		
		мна 2390.0		56.49	dD/III	'	.31	74.00	-14.69	peak
1			000		9 2.82	59			-14.69 -15.70	<u> </u>
1 2 3	*	2390.0	000	56.49	9 2.82	59	.31	74.00 54.00		





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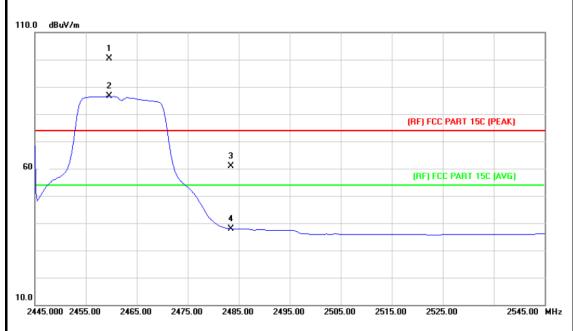
Tem	perati	ıre:	25	,C		Relative I	Humidity:	55%	
Test	Volta	ge:	AC	120V/60HZ					
Ant.	Pol.		Vert	ical					
Test	Mode) :	TX (G Mode 241	2MHz				
Rem	ark:		N/A						
100.0	dBuV/π	1	•						
								4 ×	
								3	
							(RF) FCC	PART 15C (PE	AK)
						1 ×	— — — — — — — — — — — — — — — — — — —	}	
50							(HF) FLI	C PART 15C (A	(6)
30						2			
	_		-						
-									
0.0									
233	0.000 23	40.00 23	350.00	2360.00 23	370.00 2380.00	2390.00	2400.00 2410	.00	2430.00 MH
				Reading	Correct	Measure-			
No	. Mk	. Fre	q.	Level	Factor	ment	Limit	Over	
		MH	Z	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.0	000	56.69	2.82	59.51	74.00	-14.49	peak
_		2390.0	000	37.59	2.82	40.41	54.00	-13.59	AVG
2	*	2413.4	100	76.72	2.95	79.67	Fundamental I	Frequency	AVG
3							_	_	



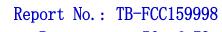


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Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		



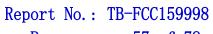
No.	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2459.600	97.17	3.26	100.43	Fundamental	Frequency	peak
2	*	2459.600	83.26	3.26	86.52	— Fundamenta	Frequency	AVG
3		2483.500	57.54	3.41	60.95	74.00	-13.05	peak
4		2483.500	34.49	3.41	37.90	54.00	-16.10	AVG





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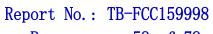
Test Vo Ant. Po Test M Remar		ge:	AC	120V	//60H	ΗZ											
Test M	ol.																
			Vert	ical													
Remar	ode	:	TX (Э Мо	de 2	2462	2MH	z									
	k:		N/A														
110.0 dB	uV/m																
			2 X														
			-														
																	-
													(RF) FC	C PAF	T 15C (PE	AK)	-
		1					3 X										
60																	
		/			$\overline{}$								(RF) F	CC PA	RT 15C (A	VG)	-
						V.	4										
							×			_							
																	-
10.0 2441.00	0 245	1.00 24	61.00	2471	00	240	1.00	2491	nn	3E0.	1.00	2511.0	0 35	21.00		2541	 00 MH
					adin	ıa	Co	rrec	t	Mea	sure) <u> </u>					
No. I	Иk.	Fre	q.		evel	•		acto			ent		imit		Over		
		MHz	7	di	BuV		d	B/m		dB	uV/m	(dBuV/n	n	dB	De	tecto
1 >	(2455.6	00	63	3.60		3	.23		66	3.83	Fui	ndamen	tal Fr	equency	/	١٧G
2 *	1	2462.2	200	98	3.21		3	.27		10	1.48	Fu	ndamen	tal Fr	equency	p	eak
3		2483.5	500	63	3.10		3	.41		66	3.51		74.00)	-7.49	p	eak
4		2483.5	00	35	5.57		3	.41		38	3.98		54.00)	-15.02	2 /	٩٧G





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Tem	perat	ure:	25 °	C		Rela	tive H	umidity:	55%	
Tes	t Volta	age:	AC 1	20V/60	HZ					
Ant	. Pol.		Horiz	zontal						
Tes	t Mod	e:	TX N	I(HT20)	Mode 2412MI	∃z				
Ren	nark:		N/A							
100.0	dBuV/i	n								
								X		
								(RF) FCC	PART 15C (PEA	ıK)
								4		
-						1 X		(RF) FCC	PART 15C (AV	/G)
50								,		
						2				
						×				
-										
0.0	31.000 2	241.00 20	51.00	2361.00	2371.00 2381.0	0 2391	00 24	101.00 2411	00	2431.00 MH
No	o. Mk	. Fre	q .	Readir Level		Meas me		Limit	Over	
				dBuV	dB/m	dBu	V/m	dBuV/m	dB	Detector
		MHz	-	uDu v	ub/III	ubu				
1		2390.0		55.99	GD/III	58.	.81	74.00	-15.19	peak
			000		2.82	58.	.81	74.00 54.00	-15.19 -15.63	peak AVG
1 2 3	*	2390.0	000	55.99	2.82	58 38			-15.63	





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Tem	perat	ure:	25 °	C			F	Relative H	lumidity:	55%		
Test	Volta	ge:	AC	120V/	/60HZ							
Ant.	Pol.		Vert	ical								-
Test	Mode) :	1XT	N(HT2	20) Mo	de 2412l	ИHz	,				-
Rem	ark:		N/A									
100.0	dBuV/n	n								3		7
										×		
									(RF) F	CC PART 15C (P	EAK)	
										4		1
							-	<u> </u>	(RF)	FCC PART 15C (AVG)	$\frac{1}{2}$
50											\	1
								^ 2				
						+						
												1
												1
0.0	0.000 23	340.00 23	350.00	2360.	00 23	70.00 238	30.00	2390.00	2400.00 2	410.00	2430.00	_ MI
				Rea	ading	Corre	ct	Measure)-			
No	. Mk	. Fre	q.		vel	Facto		ment	Limit	Over		
		MH	Z	dE	Bu∨	dB/m		dBuV/m	dBuV	m dB	Dete	cto
1		MH: 2390.0			3u∨ 5.96	dB/m 2.82		dBuV/m 59.78	dBu√/			
			000	56						0 -14.2	2 pe	aŀ
1 2 3	*	2390.0	000	56 36	.96	2.82		59.78	74.0 54.0	0 -14.2	2 pe 5 A\	ak /G



TOBY

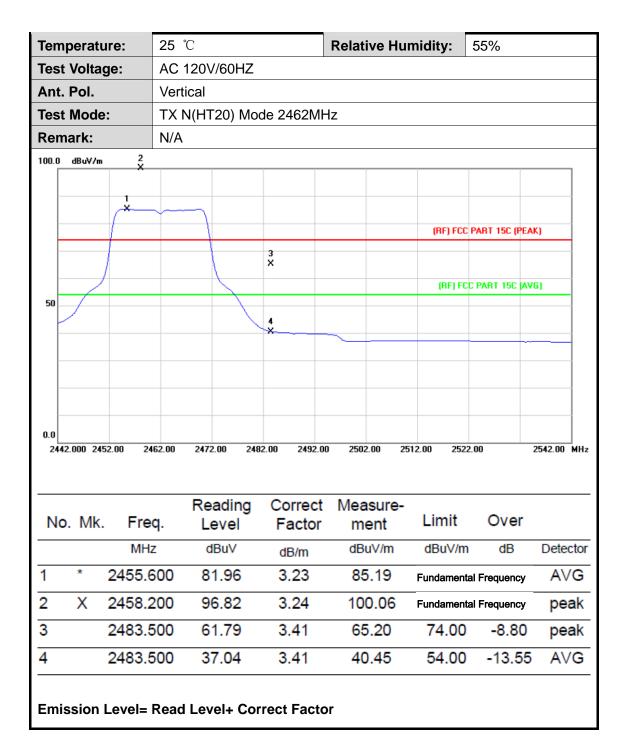
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Temperatu	re:	25 ℃			Relative H	lumidity:	55%	
Test Voltag	e:	AC 120	0V/60HZ					
Ant. Pol.		Horizo	ntal					
Test Mode:		TX N(F	HT20) M	ode 2462MF	Ηz			
Remark:		N/A						
110.0 dBuV/m								
	2 X							
	^							
	1 X							
			\downarrow			(RF) FCC	PART 15C (PEA	K)
60			\perp	3 X		(DE) EC	PART 15C (AV	(C)
						(nr) rc	FANT 15C (AV	<u> </u>
				4				
				×			_	
10.0 2442.000 245	2.00 24	62.00 2	472.00 2	482.00 2492.0	0 2502.00	2512.00 2522	.00	2542.00 MF
) Oadina	Correct	Measure-			
No. Mk.	Fre		Reading Level	Factor	ment	Limit	Over	
	MHz	<u> </u>	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detecto
1 *	2459.4	LOO	81.59	3.25	84.84	— Fundamental	Frequency	AVG
	2459.8		96.26	3.26	99.52	Fundamenta		peak
3	2483.5	500	56.38	3.41	59.79	74.00	-14.21	peak
	2483.5	.00	34.19	3.41	37.60	54.00	-16.40	AVG





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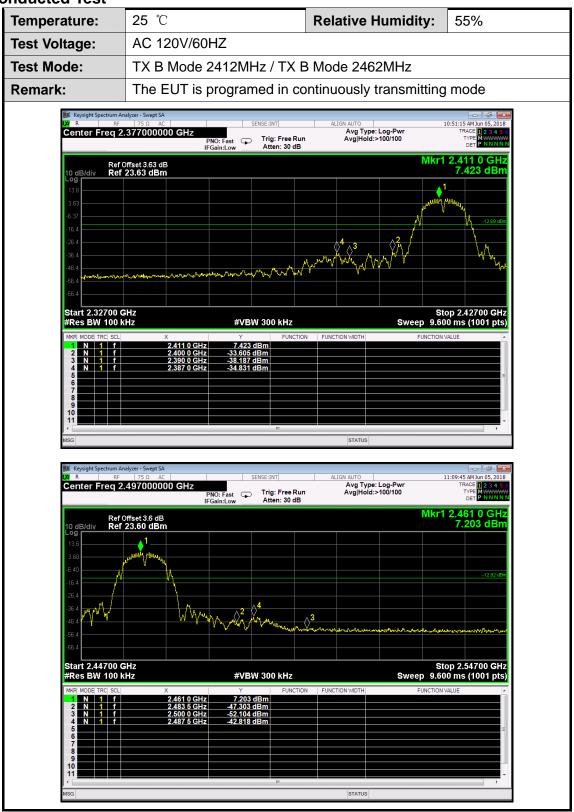


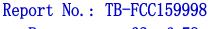




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(2) Conducted Test







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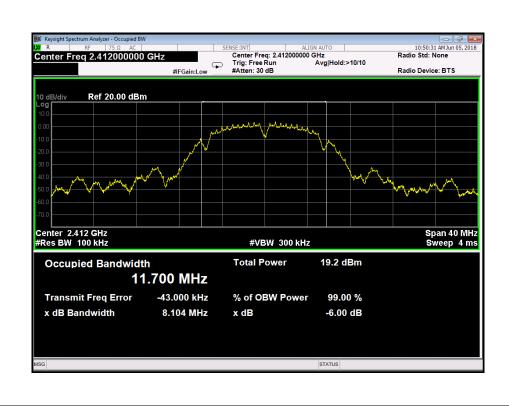


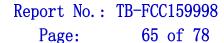
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Attachment D-- Bandwidth Test Data

Temperature:	25 ℃		Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ			
Test Mode:	TX 802.11B Mode			
Channel frequency 6dB Bandwidth		99% Bandwidth	Limit	
(MHz)		(MHz)	(MHz)	(MHz)
		<u> </u>	' '	` '
2412		8.104	11.700	,
2412 2437		. ,	,	>=0.5
		8.104	11.700	

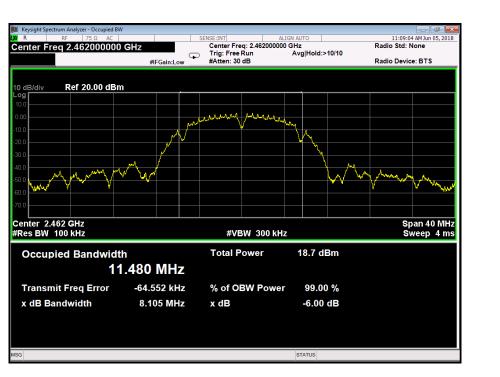
802.11B Mode

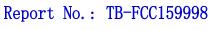






802.11B Mode 2437 MHz Center Freq 2.437000000 GHz Radio Device: BTS #IFGain:Low Ref 20.00 dBm Center 2.437 GHz #Res BW 100 kHz Span 40 MHz Sweep 4 ms #VBW 300 kHz **Total Power** 19.3 dBm **Occupied Bandwidth** 11.692 MHz **Transmit Freq Error** -39.260 kHz % of OBW Power 99.00 % 8.545 MHz x dB Bandwidth x dB -6.00 dB 802.11B Mode 2462 MHz 11:09:04 AM Jun 05, 2018 Radio Std: None

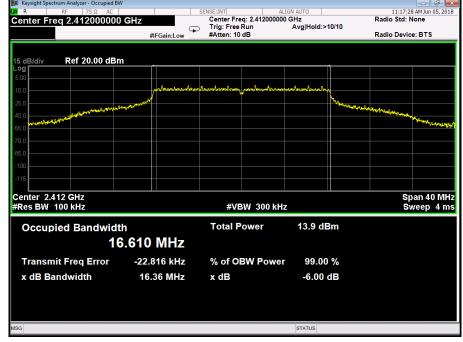


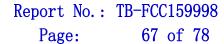




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Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	AC 120V/60HZ			
Test Mode:	TX 802.11G Mode			
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit	
(MHz)	(MHz)	(MHz)	(MHz)	
2412	16.36	16.610		
2437	16.33	16.557	>=0.5	
2462	16.34 16.568			
	802.11G I	Mode		
	2412 M	lHz		
Keysight Spectrum An (XX) R RF Center Freq 2.	75 Ω AC SENSE:INT	2.412000000 GHz Radio	11:17:28 AM Jun 05, 2018 Std: None	







802.11G Mode 2437 MHz SENSE:INT| ALIGN AUTO
Center Freq: 2.437000000 GHz
Trig: Free Run Avg|Hold:>10/10
#Atten: 10 dB Center Freq 2.437000000 GHz Radio Device: BTS #IFGain:Low Ref 20.00 dBm Center 2.437 GHz #Res BW 100 kHz Span 40 MHz Sweep 4 ms #VBW 300 kHz **Total Power** 13.0 dBm **Occupied Bandwidth** 16.557 MHz **Transmit Freq Error** -18.913 kHz % of OBW Power 99.00 % 16.33 MHz x dB Bandwidth x dB -6.00 dB 802.11G Mode 2462 MHz 11:28:57 AM Jun 05, 2018 Radio Std: None SENSE:INT ALIGN AUTO
Center Freq: 2.462000000 GHz
Trig: Free Run Avg|Hold:>10/10
#Atten: 10 dB Center Freq 2.462000000 GHz Radio Device: BTS #IFGain:Low Ref 20.00 dBm

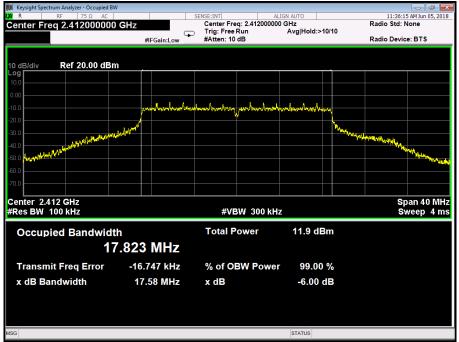
#FGaint.ow #Aften: 10 dB Radio Device: BTS Radio D

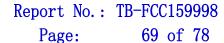




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Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	AC 120V/60HZ			
Test Mode:	TX 802.11N(HT20) Mode			
Channel frequence	y 6dB Bandwidth	99% Bandwidth	Limit	
(MHz)	(MHz)	(MHz)	(MHz)	
2412	17.58	17.823		
2437	17.59	17.790	>=0.5	
2462	17.58	17.782		
	802.11N(HT	20) Mode		
	2412 N	1Hz		
Keysight Spectrum Ana	lyzer - Occupied BW			
LXI R RF	75 Ω AC SENSE:INT 412000000 GHz Center Free	: 2.412000000 GHz Radio	11:36:15 AM Jun 05, 2018 Std: None	
Trig: Free Run Avg Hold:>10/10 #FGain:Low #Atten: 10 dB			Device: BTS	







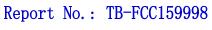
2437 MHz NSE:INT| ALIGN AUTO

Center Freq: 2.437000000 GHz

Trig: Free Run Avg|Hold:>10/10

#Atten: 10 dB Center Freq 2.437000000 GHz Radio Device: BTS #IFGain:Low Ref 20.00 dBm Center 2.437 GHz #Res BW 100 kHz Span 40 MHz Sweep 4 ms #VBW 300 kHz **Total Power** 12.0 dBm **Occupied Bandwidth** 17.790 MHz **Transmit Freq Error** -15.296 kHz % of OBW Power 99.00 % 17.59 MHz x dB Bandwidth x dB -6.00 dB 802.11N(HT20) Mode 2462 MHz 11:43:09 AM Jun 05, 2018 Radio Std: None Center Freq 2.462000000 GHz Radio Device: BTS #IFGain:Low Ref 20.00 dBm

802.11N(HT20) Mode



TOBY

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Attachment E-- Peak Output Power Test Data

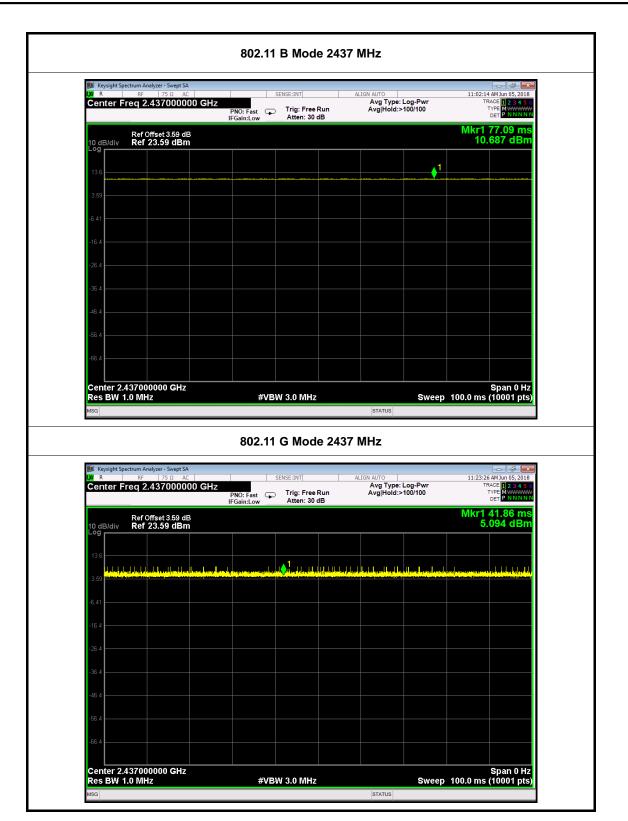
Test Condition	ns:	Continuous transmitting Mode				
Temperature:		25 °C Relative Humidi		Relative Humidity:	55%	
Test Voltage:		AC 120V/60HZ				
Mode	С	hannel frequency (MHz)	Tes	t Result (dBm)	Limit (dBm)	
		2412		17.80		
802.11b		2437		17.72		
		2462		17.19		
		2412		16.47		
802.11g		2437		15.91	30	
		2462		15.53		
000 44		2412		14.76		
802.11n (HT20)		2437		14.97		
(11120)		2462	14.49			
		Resu	ılt: F	PASS		

Duty Cycle			
Mode	Channel frequency (MHz)	Test Result	
	2412		
802.11b	2437		
	2462		
	2412		
802.11g	2437	>98%	
	2462		
000.44	2412		
802.11n (HT20)	2437		
	2462		



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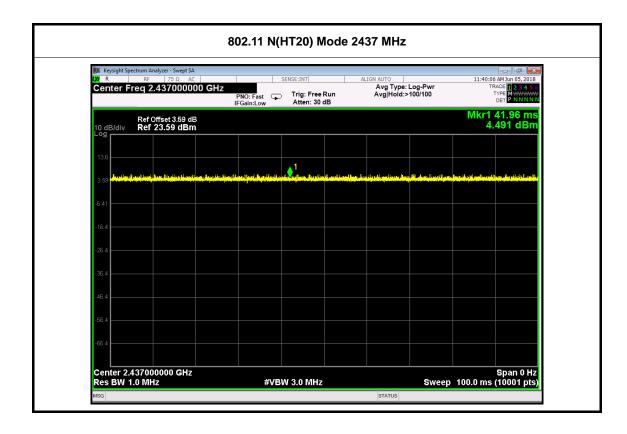








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Span 16.21 MHz Sweep 1.709 s (10001 pts)





Center 2.412000 GHz #Res BW 3.0 kHz

Attachment F-- Power Spectral Density Test Data

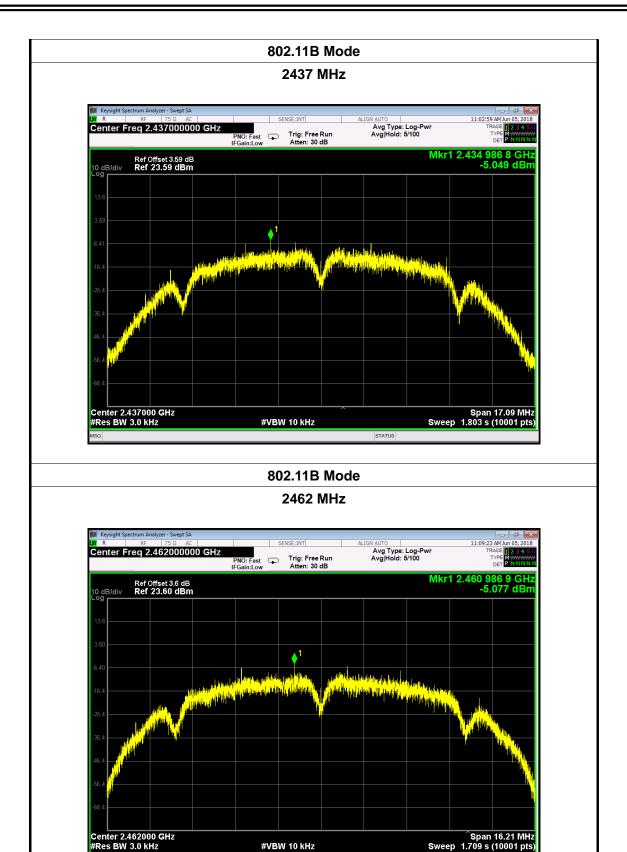
Temperature:	25 ℃ Relative Hu		e Humidity:	55%		
Test Voltage:	AC 120V/	60HZ				
Test Mode:	TX 802.11	B Mode				
Channel Freq	uency	Power	Density		Limit	
(MHz)		(dBm	/3 kHz)		(dBm/3kHz)	
2412		-5	.108			
2437		-5	.049		8	
2462		-5.077				
_	L	802.11	B Mode			
		241	2 MHz			
Keysight Spectrum A	nalyzer - Swept SA 75 Ω AC	SENSE:INT	ALIGN	AUTO	10:50:56 AM Jun 05, 2018	
Center Freq 2	2.412000000 GHz	PNO: Fast 🔾 Trig: F		Avg Type: Log-Pwr Avg Hold: 5/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET PNNNNN	
10 dB/div Ref	Offset 3.63 dB 23.63 dBm			Mkr1	2.409 985 4 GHz -5.108 dBm	
Log						
13.6						
3.63		▲1				
-6.37						
			لىدىغا بىرىل غا ھى ا	data to the		

#VBW 10 kHz









#VBW 10 kHz



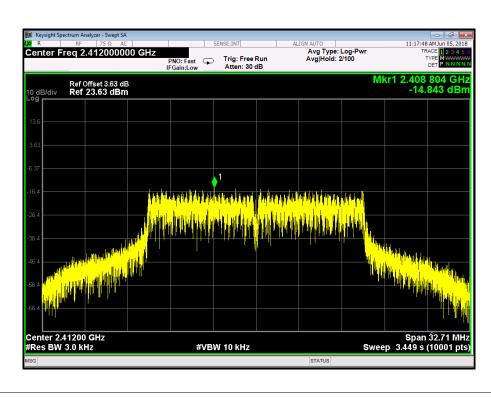
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Temperature:	25 ℃	Temperature:	25 ℃
Test Voltage:	AC 120V/60HZ		

X 802.11G Mode
)

Channel Frequency	Power Density	Limit
(MHz)	(dBm/3 kHz)	(dBm/3kHz)
2412	-14.843	
2437	-15.511	8
2462	-15.918	

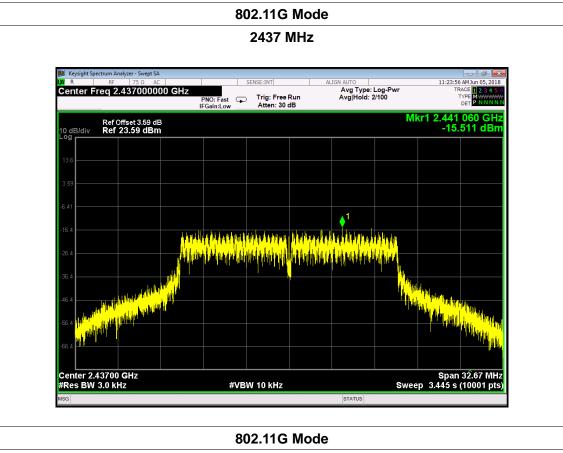
802.11G Mode

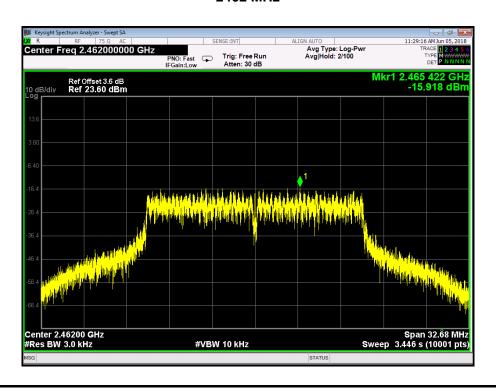




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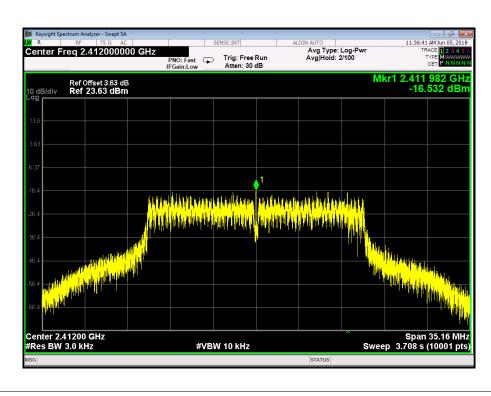




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Temperature:	25 ℃		Temperatur	e:	25 ℃
Test Voltage:	AC 120V/	AC 120V/60HZ			
Test Mode:	TX 802.1	TX 802.11N(HT20) Mode			
Channel Frequency		Power Density			Limit
(MHz)	(MHz) (dBm/3 kHz)			(dBm/3kHz)	
2412 -16.5		-16.532	2		
2437		-16.500			8
2462		-17.358	3		

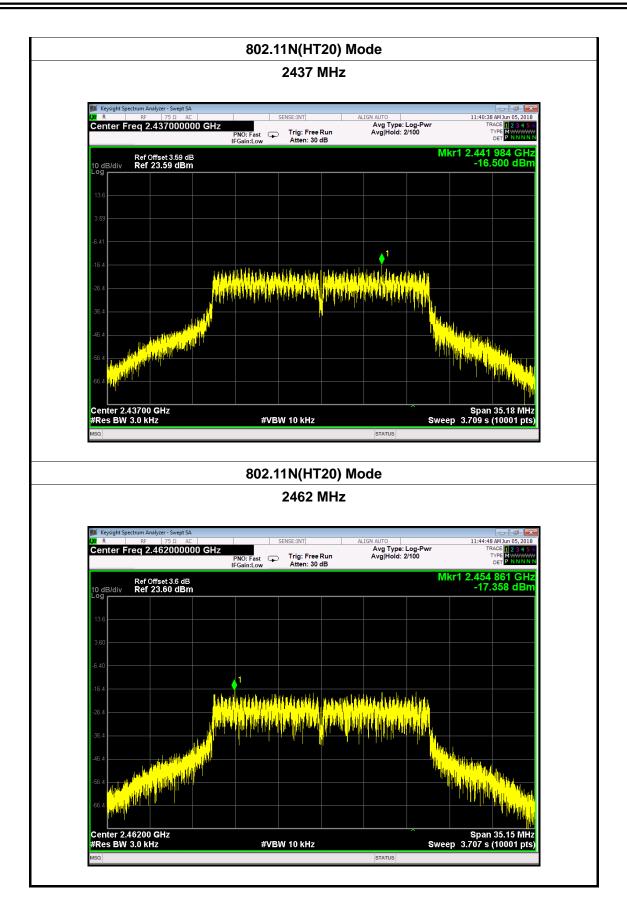
802.11N(HT20) Mode





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----END OF REPORT----