

Shenzhen Toby Technology Co., Ltd.

Report No.: TB-FCC140201 Page: 1 of 86

FCC Radio Test Report FCC ID: 2ABES-GURUBOOK5

Original Grant

Report No. : TB-FCC140201

Applicant: Pathway Innovations and Technologies, Inc.

Equipment Under Test (EUT)

EUT Name: Gurubook 5/MID

Model No. : Gurubook 5

Series Model : Gurubook 8, Gurubook 12, Gurubook 13, Gurubook 16

No.

Brand Name : HoverCam

Receipt Date : 2014-08-18

Test Date : 2014-08-19 to 2014-09-05

Issue Date : 2014-09-10

Standards: FCC Part 15, Subpart C (15.247:2013)

Test Method : ANSI C63.4:2003

Conclusions : PASS

In the configuration tested, the EUT complied with the standards specified above,

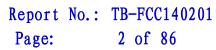
The EUT technically complies with the FCC and IC requirements

Test/Witness Engineer :

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





Contents

COI	NTENTS	2
1.	GENERAL INFORMATION ABOUT EUT	4
	1.1 Client Information	4
	1.2 General Description of EUT (Equipment Under Test)	4
	1.3 Block Diagram Showing the Configuration of System Tested	5
	1.4 Description of Support Units	5
	1.5 Description of Test Mode	6
	1.6 Description of Test Software Setting	6
	1.7 Test Facility	7
2.	TEST SUMMARY	8
3.	CONDUCTED EMISSION TEST	9
	3.1 Test Standard and Limit	9
	3.2 Test Setup	9
	3.3 Test Procedure	9
	3.4 Test Equipment Used	10
	3.5 EUT Operating Mode	10
	3.6 Test Data	10
4.	RADIATED EMISSION TEST	14
	4.1 Test Standard and Limit	14
	4.2 Test Setup	15
	4.3 Test Procedure	16
	4.4 EUT Operating Condition	16
	4.5 Test Equipment	
	4.6 Test Data	
5.	RESTRICTED BANDS REQUIREMENT	44
	5.1 Test Standard and Limit	44
	5.2 Test Setup	44
	5.3 Test Procedure	44
	5.4 EUT Operating Condition	
	5.5 Test Equipment	
	5.6 Test Data	45
6.	BANDWIDTH TEST	66
	6.1 Test Standard and Limit	66
	6.2 Test Setup	
	6.3 Test Procedure	
	6.4 EUT Operating Condition	
	6.5 Test Equipment	
	6.6 Test Data	
7.	PEAK OUTPUT POWER TEST	75



Page: 3 of 86

	7.1 Test Standard and Limit	75
	7.2 Test Setup	75
	7.3 Test Procedure	
	7.4 EUT Operating Condition	75
	7.5 Test Equipment	75
	7.6 Test Data	
8.	POWER SPECTRAL DENSITY TEST	77
	8.1 Test Standard and Limit	77
	8.2 Test Setup	77
	8.3 Test Procedure	77
	8.4 EUT Operating Condition	77
	8.5 Test Equipment	
	8.6 Test Data	
9.	ANTENNA REQUIREMENT	86
	9.1 Standard Requirement	86
	9.2 Antenna Connected Construction	86
	9.3 Result	86



Page: 4 of 86

1. General Information about EUT

1.1 Client Information

Applicant: Pathway Innovations and Technologies, Inc.

Address : 9833 Pacific Heights Blvd., Suite D, San Diego, CA 92121

Manufacturer: ShenZhen KerunVisual Technology Co., LTD.

Address: 6th Floor Building 2, District 2, South Honghualing Industrial Zone,

No.1213 Liuxian Road, Nanshan Branch, Shenzhen City,

Guangdong, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Gurubook 5/MID			
Models No.	:	Gurubook 5, Gurubook 8, Gurubook 12, Gurubook 13, Gurubook 16			
Model	:	All the other models are identical in the same PCB layout, interior structure and			
Difference		electrical circuits, The only difference is model name for commercial purpose.			
		Operation Frequency:			
		802.11b/g/n(HT20): 2412MHz~2462MHz			
		802.11b/g/n(HT40): 2422			
Product		Number of Channel:	802.11b/g/n(HT20):11 channels see note(3)		
Description	:		802.11b/g/n(HT40): 7 channels see note(3)		
		RF Output Power:	802.11b: 9.80 dBm		
			802.11g: 9.46 dBm		
			802.11n (HT20): 9.36 dBm		
		802.11n (HT40): 8.30 dBm			
		Antenna Gain: 0 dBi (FPC Antenna)			
		Modulation Type: 802.11b: DSSS (CCK, QPSK, BPSK)			
		802.11g: OFDM			
			802.11n: OFDM		
		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	:	DC power supplied by AC	C/DC Adapter		
		DC Voltage supplied from Li-Polymer battery.			
Power Rating	:				
		Input: AC 100~240V 50/60Hz 0.35A Output: DC 5V 2A			
		DC 3.7V 2800mAh from Li-ion battery			
Connecting	:	The equipent have USB p	port for link with PC.		
I/O Port(S)		Please refer to the User's Manual			
Note: The equipment with Bluetooth and Wifi(802.11b/g/n) function, Bluetooth have test comply with					



Page: 5 of 86

FCC Part 15C Rules. More detailed features description, please refer to the manufacturer's specifications or the User's Manual.

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 v03r02.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- (3) Antenna information provided by the applicant.
- (4) Channel List:

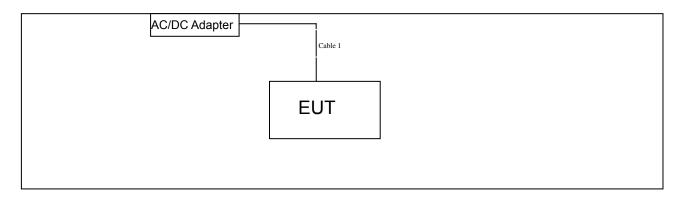
CH 01~CH 11 for 802.11b/g/n(HT20)

CH 03~CH 09 for 802.11b/g/n(HT40)

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		

1.3 Block Diagram Showing the Configuration of System Tested

TX Mode



1.4 Description of Support Units

Equipment Information						
Name Model S/N Manufacturer Used "√"						
1		1	/	/		
	Cable Information					
Number	Number Shielded Type Ferrite Core Length Note					
Cable 1	NO	NO	1.0M	Accessories		



Page: 6 of 86

1.5 Description of Test Mode

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

For Conducted Test			
Final Test Mode Description			
Mode 1	AC Charging with TX B Mode		

For Radiated Test				
Final Test Mode	Description			
Mode 3	TX Mode B Mode Channel 01/06/11			
Mode 4	TX Mode G Mode Channel 01/06/11			
Mode 5 TX Mode N(HT20) Mode Channel 01/0				
Mode 6 TX Mode N(HT40) 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 C63.4 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) 802.11n (HT40) Mode: MCS 0 (13 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 unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

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



Page: 7 of 86

Test Software Version	Test Program: Mediatek Connectivity Combo Tool v1.5.apk			
Channel	CH 01	CH 06	CH 11	
IEEE 802.11b DSSS	DEF	DEF	DEF	
IEEE 802.11g OFDM	DEF	DEF	DEF	
IEEE 802.11n (HT20)	DEF	DEF	DEF	
Channel	CH 03	CH 06	CH 09	
IEEE 802.11n (HT40)	DEF	DEF	DEF	

1.7 Test Facility

The testing was 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.

FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

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.



Page: 8 of 86

2. Test Summary

FCC Part 15 Subpart C(15.247)/RSS-210: 2010					
Standaı	rd Section	Test Item	ludamont	Remark	
FCC	IC	rest item	Judgment	Remark	
15.203	1	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-210	6dB Bandwidth	PASS	N/A	
	A.8.2(a)	Cab banaman	17100		
15.247(b)	RSS-210	Peak Output Power	PASS	N/A	
13.247(0)	A.8.4(4)	Feak Output Fower	PASS	IN/A	
45.047(a)	RSS-210	Dower Chaptral Daneity	DACC	NI/A	
15.247(e)	A.8.2(b)	Power Spectral Density	PASS	N/A	
45.047(4)	RSS-210	Transmitter Radiated Spurious	DACC	NI/A	
15.247(d)	Annex 8 (A8.5)	Emission	PASS	N/A	
4E 047(d)	RSS-210	Antenna Conducted	DAGG	NI/A	
15.247(d)	Annex 8 (A8.5)	Spurious Emission	PASS	N/A	

Note: "/" for no requirement for this test item.

N/A is an abbreviation for Not Applicable.



Page: 9 of 86

3. Conducted Emission Test

3.1 Test Standard and Limit

3.1.1Test Standard FCC Part 15.207

3.1.2 Test Limit

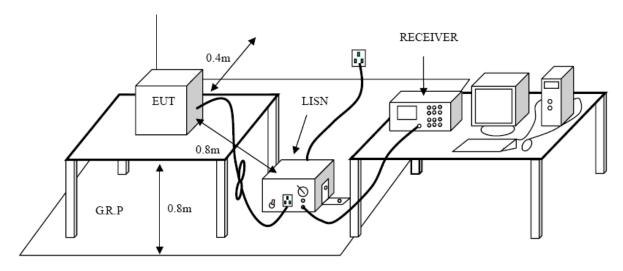
Conducted Emission Test Limit

Eraguanav	Maximum RF Line 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.

3.2 Test Setup



3.3 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.



Page: 10 of 86

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.

3.4 Test Equipment Used

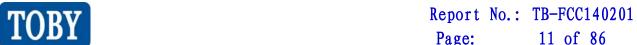
Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test	ROHDE&		400004	Aug. 09. 2014	Aug. 07, 2015
Receiver	SCHWARZ	ESCI	100321	Aug. 08, 2014	Aug. 07, 2015
50ΩCoaxial	Anritsu	MP59B	X10321	Aug. 08, 2014	Aug. 07, 2015
Switch	Aiiiisu	MESSE	X10321	Aug. 08, 2014	Aug. 07, 2015
L.I.S.N	Rohde & Schwarz	ENV216	101131	Aug. 08, 2014	Aug. 07, 2015
L.I.S.N	SCHWARZBECK	NNBL 8226-2	8226-2/164	Aug. 08, 2014	Aug. 07, 2015

3.5 EUT Operating Mode

Please refer to the description of test mode.

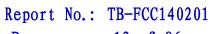
3.6 Test Data

Please see the next page.



Page: 11 of 86

EUT: Gurubook 5/MID Model Name :		el Name :	GURUBOOK5			
Temperature:25 °CRelative Humidity:55%						
Test Voltage: AC 120V/60 Hz						
Terminal: Line						
Test Mode: AC Charging with TX B Mode						
Remark: Only worst case is reported						
90.0 dBuV						
40		perlanged apply to the personal property of the second of	1984 Wegash Maybridge & Mary San Brack ag to	PE AVG: — peak		
0.150	0.5	(MHz)	5	30.000		
No. Mk. Fre	q. Level Fa	ctor ment	Limit Ove			
MHz		B dBuV	dBuV dB	Detector Comment		
1 0.186		.99 34.36				
2 0.186		.99 14.99	54.21 -39.22			
3 0.281		.02 29.30	60.76 -31.46			
4 0.281		.02 15.42				
5 * 0.389		.02 36.41				
6 0.389		.02 23.30				
7 1.050		.06 25.80				
8 1.050		.06 15.17				
9 1.738	30 17.16 10	.06 27.22	56.00 -28.78	3 QP		
10 1.738	30 7.73 10	.06 17.79	46.00 -28.21	I AVG		
11 6.922	20 10.41 10	.06 20.47	60.00 -39.53	3 QP		
12 6.922	20 1.07 10	.06 11.13	50.00 -38.87	7 AVG		
*:Maximum data x:Over limit !:over margin Emission Level= Read Level+ Correct Factor						





Page: 12 of 86

EUT:	Gurubook 5/M	ID	Model I	Name :		GURUBOO	DK5
Temperature:	25 ℃		Relative	e Humic	dity:	55%	
Test Voltage:	AC 120V/60 H	Z					
Terminal:	Neutral						
Test Mode:	AC Charging v	vith TX B N	/lode				
Remark:	Only worst cas	se is report	ed				
90.0 dBuV							
						QP: AVG:	
40 X	×	×					
1 VV/MVW	was promounted in	hay happen he mighty	particle of the last of the la	bold to the of			, bitto
My my	M man whole		1,1	A STATE OF THE PARTY OF THE PAR	discharge of the feet	heralamak operarabetel	W 1
Market	a to Thankar . Pr	and the land of the same	April and the second of the second of the second	(And the second of the second	plen mynneddensa	Mult	peak
							AVG
-10 0.150	0.5	(MHz	:)	5			30.000
No. Mk. Fred			Measure-	Limit	Over		
No. Mk. Fred	<u> </u>	Factor dB	ment dBuV	dBuV	dB	Detector	Comment
1 * 0.170		9.96	37.96	64.96		QP	Comment
2 0.170		9.96	22.64	54.96		AVG	
3 0.274		10.02	27.40	60.99		QP	
4 0.274		10.02	11.86	50.99		AVG	
5 0.542		10.04	26.21		-29.79		
6 0.542		10.04	15.34	46.00		AVG	
7 0.798		10.10	28.15	56.00		QP	
8 0.798		10.10	18.73	46.00		AVG	
9 1.085		10.06	27.85	56.00		QP	
10 1.085		10.06	18.21	46.00		AVG	
11 1.822		10.06	26.11	56.00		QP	
12 1.822		10.06	17.74		-28.26	AVG	
*:Maximum data x:Ove	r limit !:over margin	_					



Page: 13 of 86



Page: 14 of 86

4. Radiated Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard FCC Part 15.209

4.1.2 Test Limit

Radiated Emission Limits (9kHz~1000MHz)

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	Class A (dBuV	/m)(at 3 M)	Class B (dBuV/m)(at 3 M)		
(MHz)	Peak	Average	Peak	Average	
Above 1000	80	60	74	54	

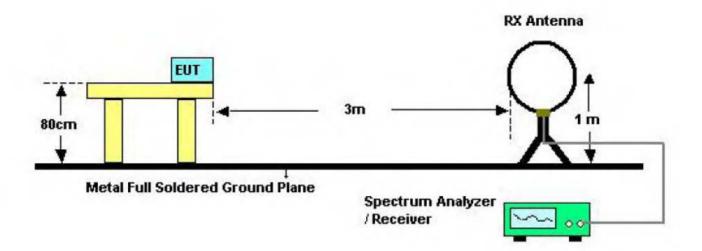
Note:

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

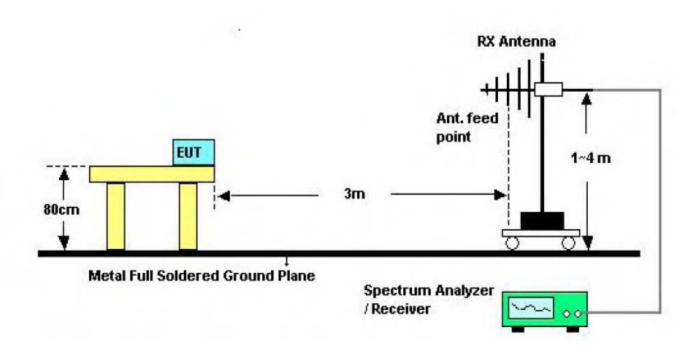


Page: 15 of 86

4.2 Test Setup



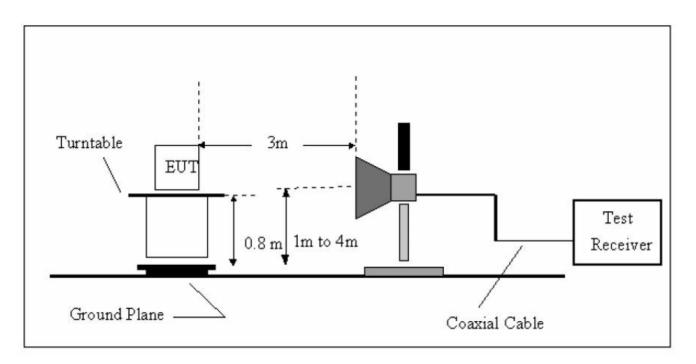
Below 30MHz Test Setup



Below 1000MHz Test Setup







Above 1GHz Test Setup

4.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above the ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (3) 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.
- (4) 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.
- (5) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (6) 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.
- (7) For the actual test configuration, please see the test setup photo.

4.4 EUT Operating Condition

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



Page: 17 of 86

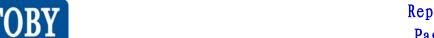
4.5 Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Mar. 20, 2014	Mar. 19, 2015
Spectrum Analyzer	Rohde & Schwarz	FSP30	DE25181	Aug. 08, 2014	Aug. 07, 2015
EMI Test Receiver	Rohde & Schwarz	ESCI	101165	Aug. 08, 2014	Aug. 07, 2015
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 07, 2014	Mar.06, 2015
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 07, 2014	Mar.06, 2015
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 07, 2014	Mar.06, 2015
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 07, 2014	Mar.06, 2015
Pre-amplifier	HP	11909A	185903	Mar. 07, 2014	Mar.06, 2015
Pre-amplifier	HP	8447B	3008A00849	Mar. 07, 2014	Mar.06, 2015
Cable	HUBER+SUHNE R	100	SUCOFLEX	Mar. 07, 2014	Mar.06, 2015
Signal Generator	Rohde & Schwarz	SML03	IKW682-054	Feb. 11, 2014	Feb.10, 2015
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A

4.6 Test Data

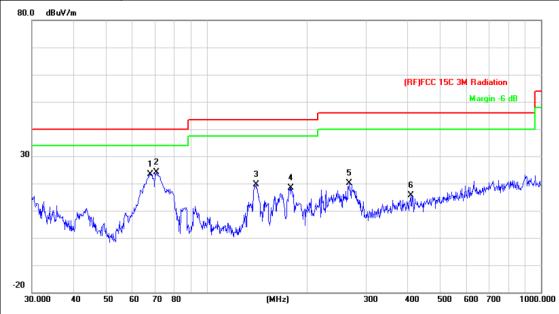
Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Test data please refer the following pages.



Report No.: TB-FCC140201 Page: 18 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Horizontal					
Test Mode:	TX B Mode 2412MHz					
Remark:	Only worst case is reported					



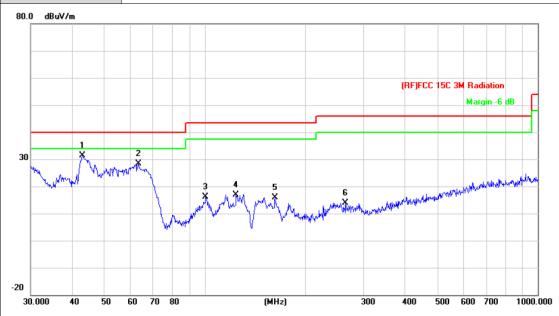
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		67.9129	47.14	-23.80	23.34	40.00	-16.66	peak
2	*	70.8315	47.80	-23.59	24.21	40.00	-15.79	peak
3		140.3421	41.53	-21.95	19.58	43.50	-23.92	peak
4		178.7584	39.05	-20.64	18.41	43.50	-25.09	peak
5		266.6089	37.84	-17.76	20.08	46.00	-25.92	peak
6		407.5145	28.37	-12.84	15.53	46.00	-30.47	peak

^{*:}Maximum data x:Over limit !:over margin



Page: 19 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2412MHz	TX B Mode 2412MHz				
Remark:	Only worst case is report	Only worst case is reported				



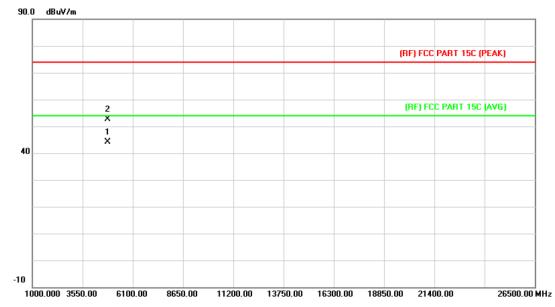
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	42.8998	52.88	-21.39	31.49	40.00	-8.51	peak
2		63.3132	52.68	-24.22	28.46	40.00	-11.54	peak
3		100.5806	38.01	-21.82	16.19	43.50	-27.31	peak
4		124.1330	39.36	-22.37	16.99	43.50	-26.51	peak
5		162.6106	36.55	-20.68	15.87	43.50	-27.63	peak
6		264.7457	31.72	-17.80	13.92	46.00	-32.08	peak

^{*:}Maximum data x:Over limit !:over margin



Report No.: TB-FCC140201
Page: 20 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Horizontal					
Test Mode:	TX B Mode 2412MHz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					

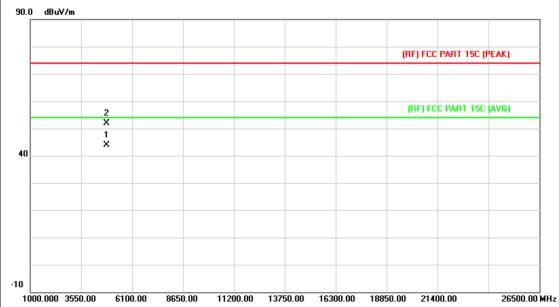


	No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4824.012	30.55	13.56	44.11	54.00	-9.89	AVG
2	2		4824.364	39.17	13.56	52.73	74.00	-21.27	peak



Page: 21 of 86

EUT:	Gurubook 5/MID	GURUBOOK5				
Temperature:	25 ℃ Relative Humidity:		55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2412MHz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					

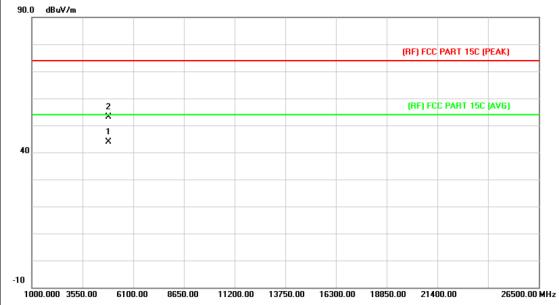


No	. Mk	. Freq.		Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4824.009	30.33	13.56	43.89	54.00	-10.11	AVG
2		4824.159	38.38	13.56	51.94	74.00	-22.06	peak



Page: 22 of 86

EUT:	Gurubook 5/MID Model Name : GURUB		GURUBOOK5		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	AC 120V/60 Hz				
Ant. Pol.	Horizontal				
Test Mode:	TX B Mode 2437MHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.				
prescribed innit.					

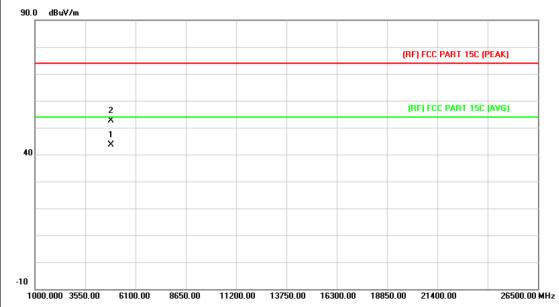


No	o. N	Лk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4	4873.456	30.01	13.86	43.87	54.00	-10.13	AVG
2		•	4873.987	39.16	13.86	53.02	74.00	-20.98	peak



Page: 23 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2437MHz					
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					

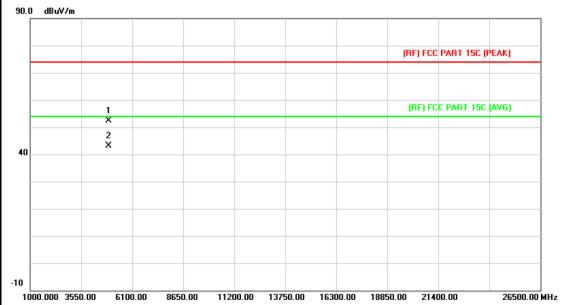


N	lo.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4874.001	29.89	13.86	43.75	54.00	-10.25	AVG
2			4874.310	38.83	13.86	52.69	74.00	-21.31	peak



Page: 24 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK		GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Horizontal	Horizontal				
Test Mode:	TX B Mode 2462MHz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					
processes mine.						

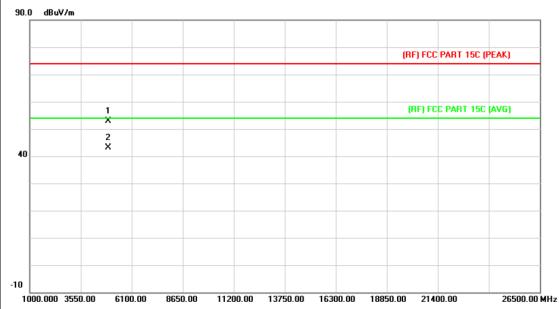


N	o. M	k. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.148	38.18	14.15	52.33	74.00	-21.67	peak
2	*	4923.674	28.96	14.15	43.11	54.00	-10.89	AVG



Page: 25 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	AC 120V/60 Hz				
Ant. Pol.	Vertical				
Test Mode:	TX B Mode 2462MHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.				

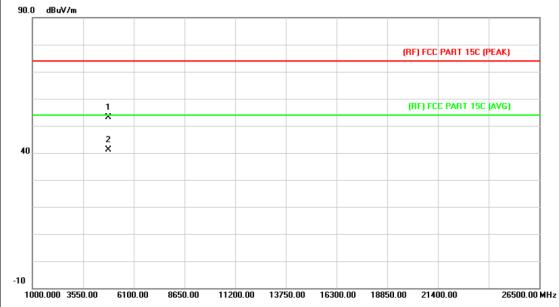


No	. Mk	. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.147	38.66	14.15	52.81	74.00	-21.19	peak
2	*	4923.611	29.00	14.15	43.15	54.00	-10.85	AVG



Report No.: TB-FCC140201
Page: 26 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	AC 120V/60 Hz				
Ant. Pol.	Horizontal				
Test Mode:	TX G Mode 2412MHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.				

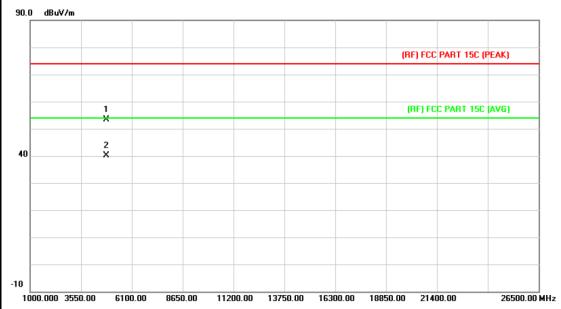


No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.271	39.52	13.56	53.08	74.00	-20.92	peak
2	*	4823.612	27.46	13.56	41.02	54.00	-12.98	AVG



Page: 27 of 86

EUT:	Gurubook 5/MID Model Name : GUR		GURUBOOK5		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	AC 120V/60 Hz				
Ant. Pol.	Vertical				
Test Mode:	TX G Mode 2412MHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.				

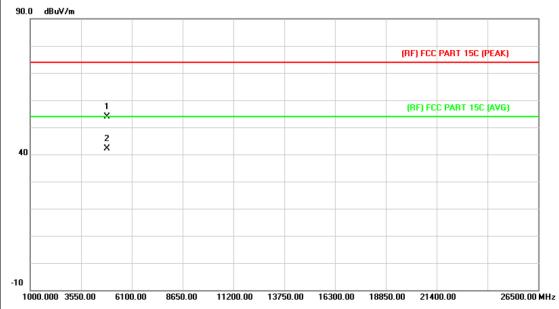


N	10.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4823.484	39.86	13.56	53.42	74.00	-20.58	peak
2		*	4823.697	26.69	13.56	40.25	54.00	-13.75	AVG



Page: 28 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK5						
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Horizontal						
Test Mode:	TX G Mode 2437MHz						
Remark:	No report for the emissio prescribed limit.	n which more than 10 c	IB below the				

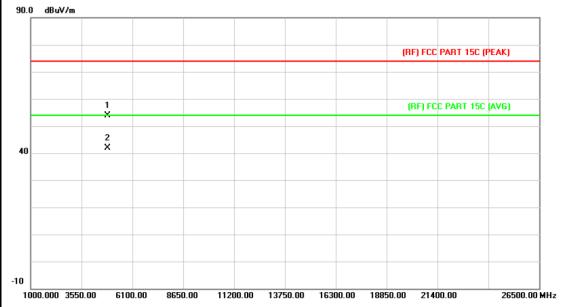


No	o. Mł	c. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.193	40.01	13.86	53.87	74.00	-20.13	peak
2	*	4873.671	28.23	13.86	42.09	54.00	-11.91	AVG



Page: 29 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX G Mode 2437MHz						
Remark:	No report for the emissio prescribed limit.	n which more than 10 c	IB below the				

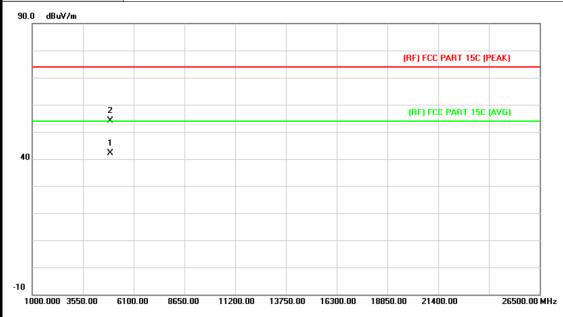


No	o. Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.674	39.90	13.86	53.76	74.00	-20.24	peak
2	*	4873.687	27.96	13.86	41.82	54.00	-12.18	AVG



Report No.: TB-FCC140201 Page: 30 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Horizontal					
Test Mode:	TX G Mode 2462MHz					
Remark:	No report for the emissio	No report for the emission which more than 10 dB below the				
	prescribed limit.					

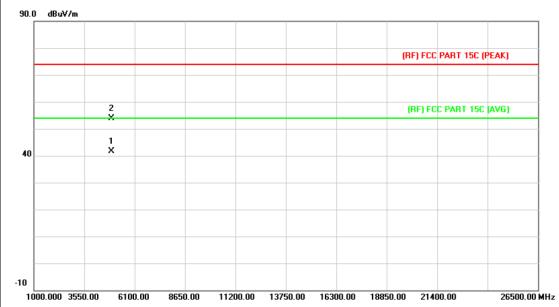


No	o. Mk	. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.126	27.97	14.15	42.12	54.00	-11.88	AVG
2		4923.148	39.86	14.15	54.01	74.00	-19.99	peak



Report No.: TB-FCC140201 Page: 31 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK5						
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX G Mode 2462MHz						
Remark:	No report for the emissio prescribed limit.	n which more than 10 c	IB below the				

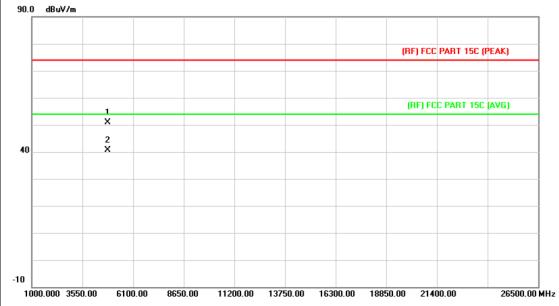


No	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.428	27.54	14.15	41.69	54.00	-12.31	AVG
2		4923.670	39.83	14.15	53.98	74.00	-20.02	peak



Page: 32 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK5						
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT20) Mode 2412N	ИНz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						

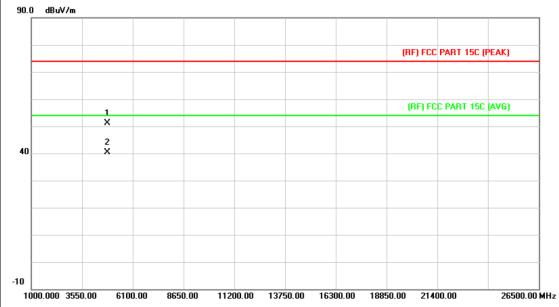


No	. Mk	. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.173	37.25	13.56	50.81	74.00	-23.19	peak
2	*	4823.354	27.00	13.56	40.56	54.00	-13.44	AVG



Page: 33 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz				
Ant. Pol.	Vertical	Vertical				
Test Mode:	TX N(HT20) Mode 2412N	ИHz				
Remark:	No report for the emissio prescribed limit.	No report for the emission which more than 10 dB below the prescribed limit.				

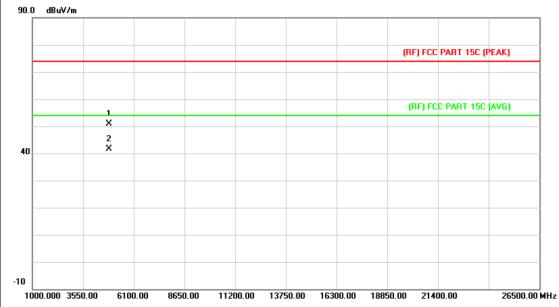


No	. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.764	37.55	13.56	51.11	74.00	-22.89	peak
2	*	4823.831	26.76	13.56	40.32	54.00	-13.68	AVG



Page: 34 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
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 10 dB below the prescribed limit.						

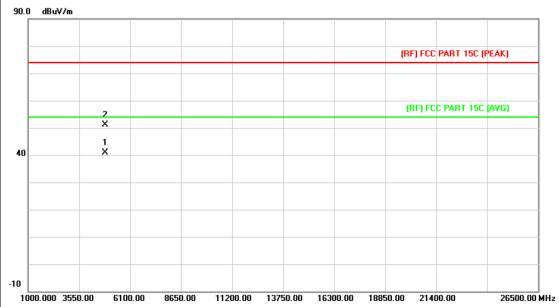


No	o. Mł	c. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.128	37.10	13.86	50.96	74.00	-23.04	peak
2	*	4873.684	27.86	13.86	41.72	54.00	-12.28	AVG

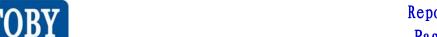


Page: 35 of 86

EUT:	Gurubook 5/MID Model Name :		GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
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 10 dB below the prescribed limit.						
prescribed littile.							

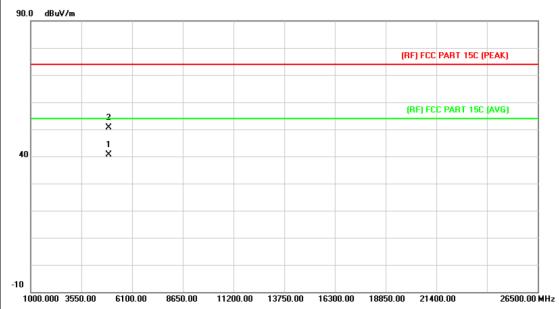


N	No.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4873.345	26.96	13.86	40.82	54.00	-13.18	AVG
2			4873.654	37.17	13.86	51.03	74.00	-22.97	peak



Report No.: TB-FCC140201
Page: 36 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
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 10 dB below the prescribed limit.						

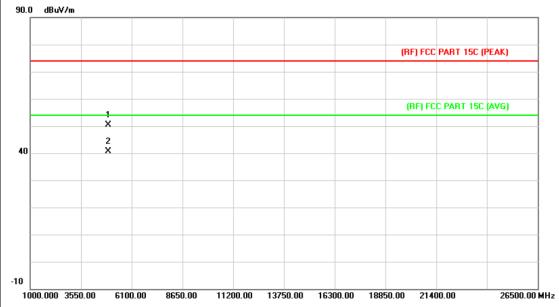


N	lo.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	,	*	4923.646			40.61	54.00	-13.39	AVG
2			4923.751	36.40	14.15	50.55	74.00	-23.45	peak



Page: 37 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK5						
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz						
Ant. Pol.	Vertical						
Test Mode:	TX N(HT20) Mode 2462N	ИHz					
Remark: No report for the emission which more than 10 dB below the prescribed limit.							

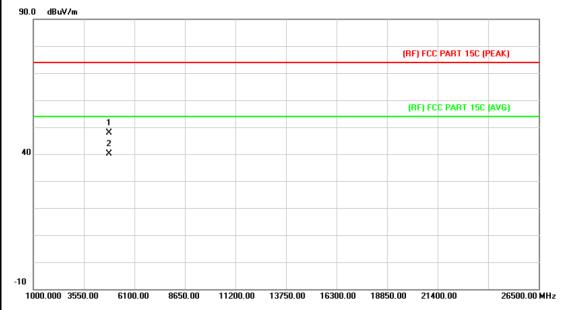


1	Vo.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4923.501	36.21	14.15	50.36	74.00	-23.64	peak
2		*	4923.603	26.59	14.15	40.74	54.00	-13.26	AVG



Page: 38 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT40) Mode 2422N	ИНz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						

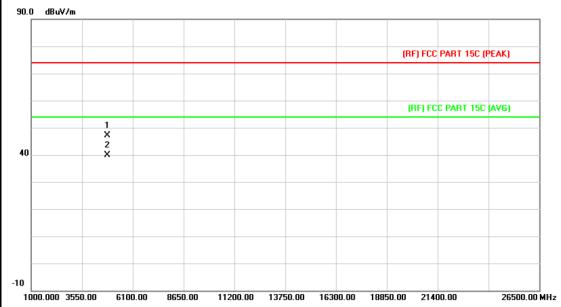


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.369	34.22	13.56	47.78	74.00	-26.22	peak
2	*	4823.654	26.56	13.56	40.12	54.00	-13.88	AVG



Page: 39 of 86

Gurubook 5/MID	Model Name :	GURUBOOK5				
25 ℃	Relative Humidity:	55%				
AC 120V/60 Hz	AC 120V/60 Hz					
Vertical						
TX N(HT40) Mode 2422N	ИНz					
No report for the emission which more than 10 dB below the prescribed limit.						
	25 ℃ AC 120V/60 Hz Vertical TX N(HT40) Mode 2422N No report for the emissio	25 °C Relative Humidity: AC 120V/60 Hz Vertical TX N(HT40) Mode 2422MHz No report for the emission which more than 10 co				

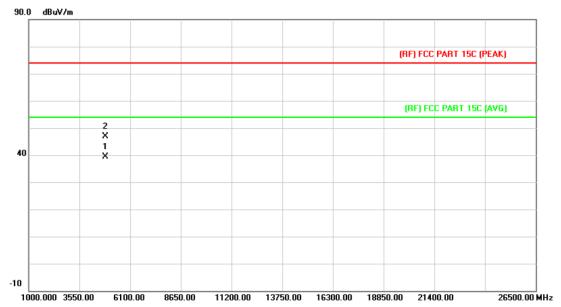


N	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.398	33.49	13.56	47.05	74.00	-26.95	peak
2	*	4824.354	26.28	13.56	39.84	54.00	-14.16	AVG



Page: 40 of 86

EUT:	Gurubook 5/MID	GURUBOOK5					
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Horizontal						
Test Mode:	TX N(HT40) Mode 2437N	ИНz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						
Production							

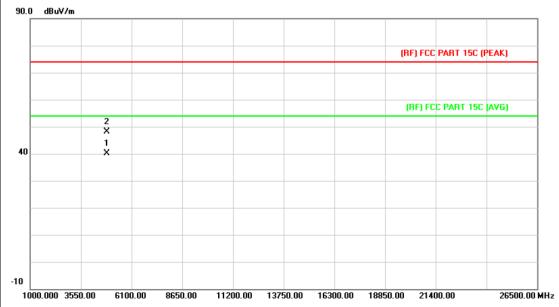


	No.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4873.647	25.48	13.86	39.34	54.00	-14.66	AVG
2	2		4873.762	33.01	13.86	46.87	74.00	-27.13	peak



Page: 41 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Vertical					
Test Mode:	TX N(HT40) Mode 2437N	ИHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					

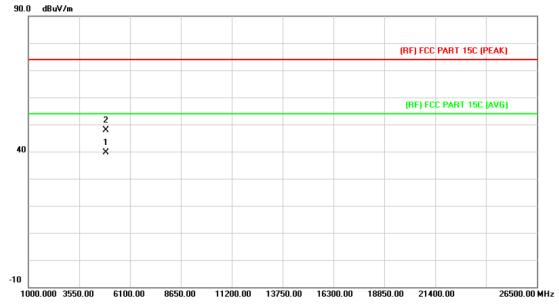


No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.124			40.06	54.00	-13.94	AVG
2		4874.145	34.27	13.86	48.13	74.00	-25.87	peak



Page: 42 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT40) Mode 2452N	ИНz					
Remark:	No report for the emission which more than 10 dB below the						
	prescribed limit.						

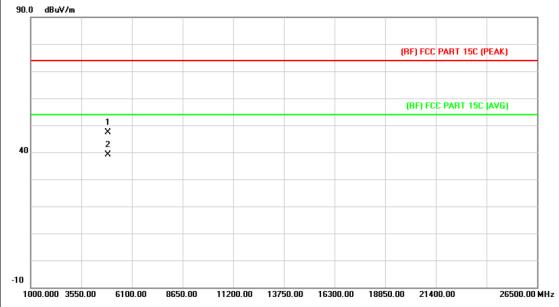


N	o. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4903.124	25.55	14.03	39.58	54.00	-14.42	AVG
2		4903.742	33.82	14.03	47.85	74.00	-26.15	peak



Page: 43 of 86

EUT:	Gurubook 5/MID Model Name : GURUBOOK5					
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Vertical					
Test Mode:	TX N(HT40) Mode 2452N	ИHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					



Ν	10.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4903.614	33.31	14.03	47.34	74.00	-26.66	peak
2	,	*	4903.644	25.02	14.03	39.05	54.00	-14.95	AVG



Page: 44 of 86

5. Restricted Bands Requirement

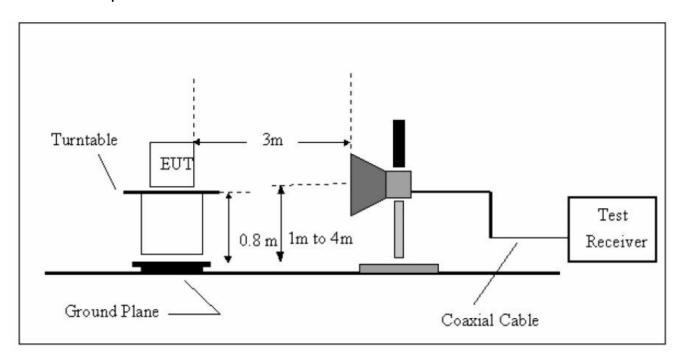
5.1 Test Standard and Limit

5.1.1 Test Standard FCC Part 15.209 FCC Part 15.205

5.1.2 Test Limit

Restricted Frequency	Class B (dBuV/m)(at 3 M)				
Band (MHz)	Peak	Average			
2310 ~2390	74	54			
2483.5 ~2500	74	54			

5.2 Test Setup



5.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 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) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (3) 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.
- (4) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit



Report No.: TB-FCC140201
Page: 45 of 86

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.

- (5) (5) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (6) 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.
- (7) For the actual test configuration, please see the test setup photo.

5.4 EUT Operating Condition

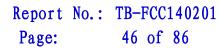
The Equipment Under Test was set to Continual Transmitting in maximum power.

5.5 Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Mar. 20, 2014	Mar. 19, 2015
Spectrum Analyzer	Rohde & Schwarz	FSP30	DE25181	Aug. 08, 2014	Aug. 07, 2015
EMI Test Receiver	Rohde & Schwarz	ESCI	101165	Aug. 08, 2014	Aug. 07, 2015
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 07, 2014	Mar.06, 2015
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 07, 2014	Mar.06, 2015
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 07, 2014	Mar.06, 2015
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 07, 2014	Mar.06, 2015
Pre-amplifier	HP	11909A	185903	Mar. 07, 2014	Mar.06, 2015
Pre-amplifier	HP	8447B	3008A00849	Mar. 07, 2014	Mar.06, 2015
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 07, 2014	Mar.06, 2015
Signal Generator	Rohde & Schwarz	SML03	IKW682-054	Feb. 11, 2014	Feb.10, 2015
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A

5.6 Test Data

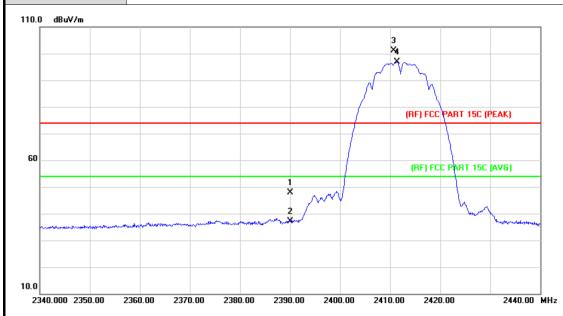
Please see the next page.





(1) Radiation Test

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
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		2390.000	47.14	0.77	47.91	74.00	-26.09	peak
2		2390.000	36.36	0.77	37.13	54.00	-16.87	AVG
3	Χ	2410.700	100.28	0.86	101.14	Fundamenta	l Frequency	peak
4	*	2411.400	95.90	0.86	96.76	Fundamenta	l Frequency	AVG



EUT: Gurubook 5/MID Model Name: GURUBOOK5

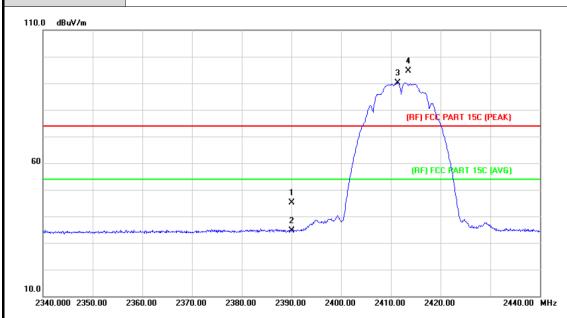
Temperature: 25 °C Relative Humidity: 55%

Test Voltage: AC 120V/60 Hz

Ant. Pol. Vertical

Test Mode: TX B Mode 2412MHz

Remark: N/A



No.	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	44.41	0.77	45.18	74.00	-28.82	peak
2		2390.000	33.74	0.77	34.51	54.00	-19.49	AVG
3	*	2411.400	89.33	0.86	90.19	Fundamenta	I Frequency	AVG
4	Χ	2413.500	93.87	0.86	94.73	Fundamenta	I Frequency	peak



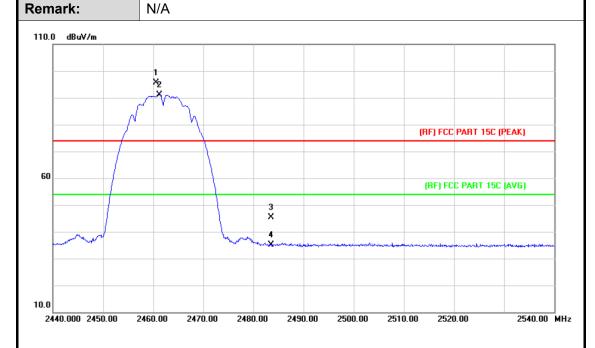
EUT: Gurubook 5/MID Model Name: GURUBOOK5

Temperature: 25 °C Relative Humidity: 55%

Test Voltage: AC 120V/60 Hz

Ant. Pol. Horizontal

Test Mode: TX B Mode 2462MHz

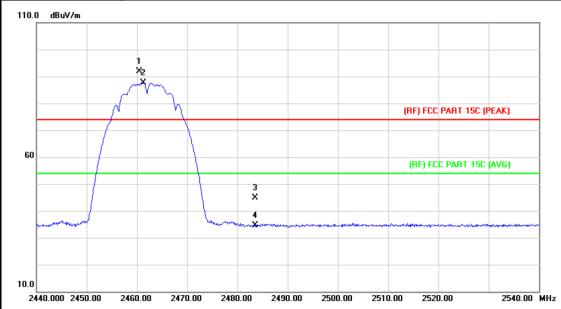


1	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		X	2460.600	94.55	1.06	95.61	Fundamenta	I Frequency	peak
2		*	2461.300	90.10	1.07	91.17	Fundamenta	I Frequency	AVG
3			2483.500	44.32	1.17	45.49	74.00	-28.51	peak
4			2483.500	33.86	1.17	35.03	54.00	-18.97	AVG



49 of 86 Page:

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz					
Ant. Pol.	Vertical						
Test Mode:	TX B Mode 2462MHz						
Remark:	N/A						

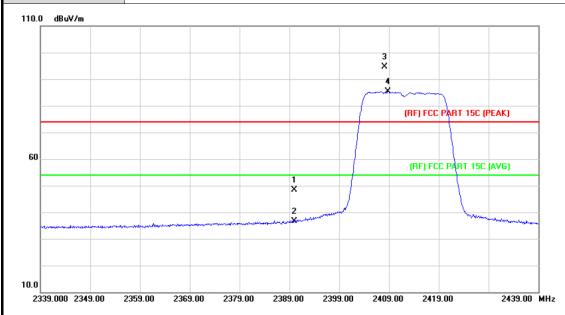


			Dooding	Corroot	Magaura			
No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2460.500	90.89	1.06	91.95	Fundamental	Frequency	peak
2	*	2461.300	86.52	1.07	87.59	Fundamental	Frequency	AVG
3		2483.500	43.70	1.17	44.87	74.00	-29.13	peak
4		2483.500	33.52	1.17	34.69	54.00	-19.31	AVG



Page: 50 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		



No	. Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	47.73	0.77	48.50	74.00	-25.50	peak
2		2390.000	35.77	0.77	36.54	54.00	-17.46	AVG
3	Χ	2408.200	93.66	0.85	94.51	Fundamental	l Frequency	peak
4	*	2408.800	84.54	0.85	85.39	Fundamental	Frequency	AVG



TX G Mode 2412MHz

EUT: Gurubook 5/MID Model Name : GURUBOOK5

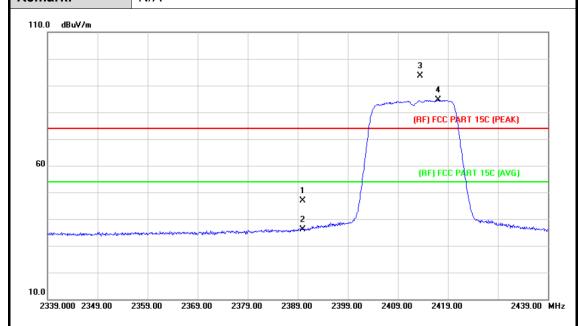
Temperature: 25 ℃ Relative Humidity: 55%

Test Voltage: AC 120V/60 Hz

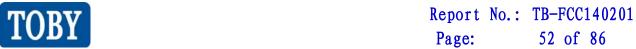
Ant. Pol. Vertical

Remark: N/A

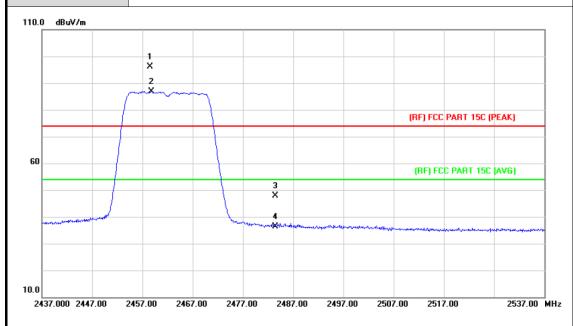
Test Mode:



N	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	46.06	0.77	46.83	74.00	-27.17	peak
2		2390.000	35.37	0.77	36.14	54.00	-17.86	AVG
3	Х	2413.500	92.84	0.86	93.70	Fundamental Frequency		peak
4	*	2417.000	83.66	0.88	84.54	Fundamental	Frequency	AVG



EUT: Model Name: Gurubook 5/MID **GURUBOOK5** Temperature: **25** ℃ **Relative Humidity:** 55% **Test Voltage:** AC 120V/60 Hz Ant. Pol. Horizontal **Test Mode:** TX G Mode 2462MHz Remark: N/A

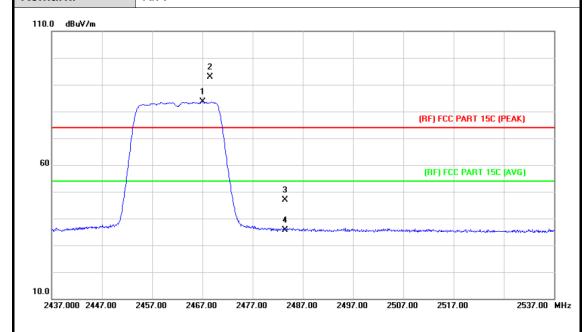


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2458.600	95.19	1.06	96.25	Fundamental	Frequency	peak
2	*	2458.800	85.88	1.06	86.94	Fundamenta	al Frequency	AVG
3		2483.500	46.62	1.17	47.79	74.00	-26.21	peak
4		2483.500	35.25	1.17	36.42	54.00	-17.58	AVG

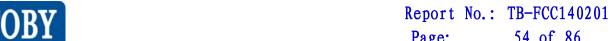


53 of 86 Page:

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		

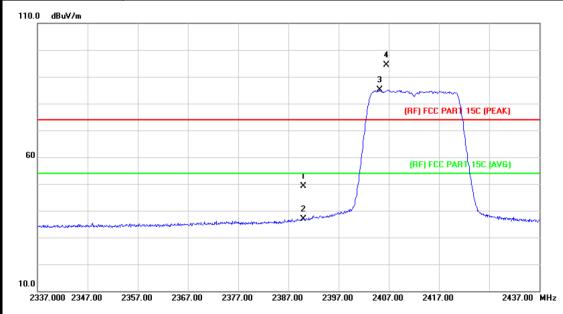


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2467.100	82.50	1.10	83.60	Fundamental	Frequency	AVG
2	Χ	2468.500	91.71	1.11	92.82	Fundamental	Frequency	peak
3		2483.500	45.61	1.17	46.78	74.00	-27.22	peak
4		2483.500	34.36	1.17	35.53	54.00	-18.47	AVG



54 of 86 Page:

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	55%					
Test Voltage:	AC 120V/60 Hz						
Ant. Pol.	Horizontal						
Test Mode:	TX N(HT20) Mode 2412MHz						
Remark:	N/A						

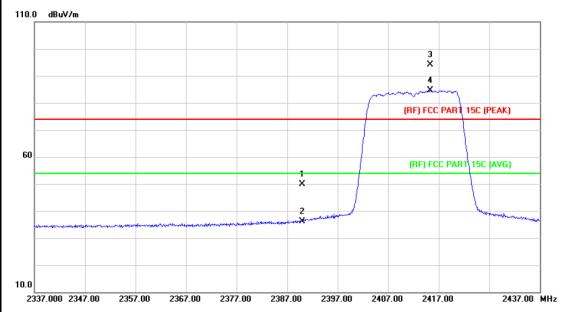


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	48.44	0.77	49.21	74.00	-24.79	peak
2		2390.000	36.12	0.77	36.89	54.00	-17.11	AVG
3	*	2405.200	84.22	0.84	85.06	Fundamenta	l Frequency	AVG
4	Χ	2406.600	93.52	0.84	94.36	Fundamenta	l Frequency	peak



Page: 55 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60 Hz						
Ant. Pol.	Vertical						
Test Mode:	TX N(HT20) Mode 2412N	ИНz					
Remark:	N/A						



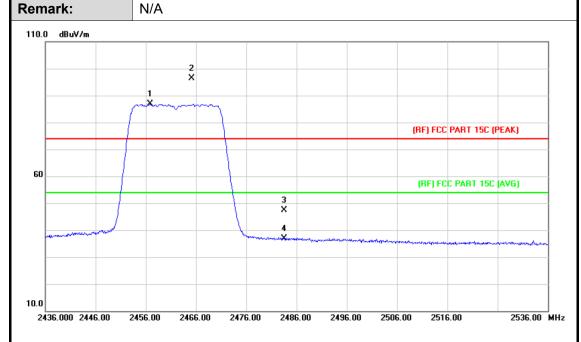
N	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	49.19	0.77	49.96	74.00	-24.04	peak
2		2390.000	35.47	0.77	36.24	54.00	-17.76	AVG
3	Х	2415.300	93.16	0.88	94.04	Fundamenta	I Frequency	peak
4	*	2415.300	83.71	0.88	84.59	Fundamenta	l Frequency	AVG



EUT: **Model Name:** Gurubook 5/MID **GURUBOOK5** Temperature: **25** ℃ **Relative Humidity:** 55% **Test Voltage:** AC 120V/60 Hz Ant. Pol. Horizontal

TX N(HT20) Mode 2462MHz N/A

Test Mode:

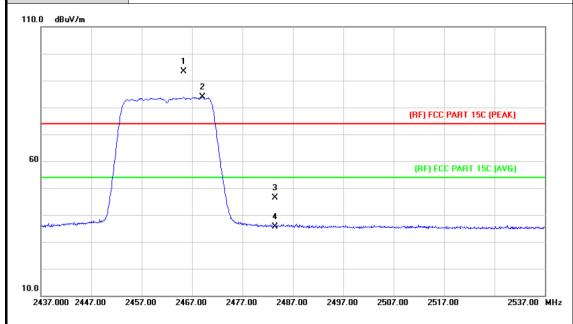


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2456.900	85.85	1.05	86.90	Fundamental	Frequency	AVG
2	Χ	2465.200	95.28	1.09	96.37	Fundamental	Frequency	peak
3		2483.500	46.26	1.17	47.43	74.00	-26.57	peak
4		2483.500	35.63	1.17	36.80	54.00	-17.20	AVG



Report No.: TB-FCC140201 Page: 57 of 86

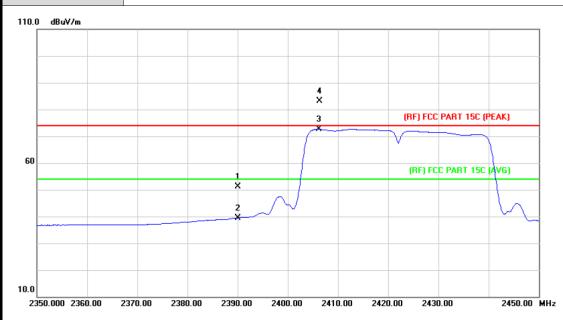
EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃ Relative Humidity: 55%					
Test Voltage:	AC 120V/60 Hz					
Ant. Pol.	Vertical					
Test Mode:	TX N(HT20) Mode 2462MHz					
Remark:	N/A					



No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2465.300	92.17	1.09	93.26	Fundamenta	l Frequency	peak
2	*	2469.100	82.69	1.11	83.80	Fundamenta	l Frequency	AVG
3		2483.500	45.15	1.17	46.32	74.00	-27.68	peak
4		2483.500	34.53	1.17	35.70	54.00	-18.30	AVG



EUT: **Model Name:** Gurubook 5/MID **GURUBOOK5** Temperature: **25** ℃ **Relative Humidity:** 55% **Test Voltage:** AC 120V/60 Hz Ant. Pol. Horizontal **Test Mode:** TX N(HT40) Mode 2422MHz 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		2390.000	50.30	0.77	51.07	74.00	-22.93	peak
2		2390.000	38.63	0.77	39.40	54.00	-14.60	AVG
3	*	2406.200	71.86	0.84	72.70	Fundamental Frequency		AVG
4	Χ	2406.300	82.36	0.84	83.20	Fundamenta	l Frequency	peak



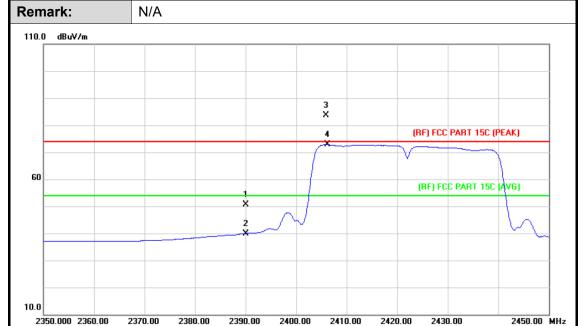
EUT: Gurubook 5/MID Model Name: GURUBOOK5

Temperature: 25 °C Relative Humidity: 55%

Test Voltage: AC 120V/60 Hz

Ant. Pol. Vertical

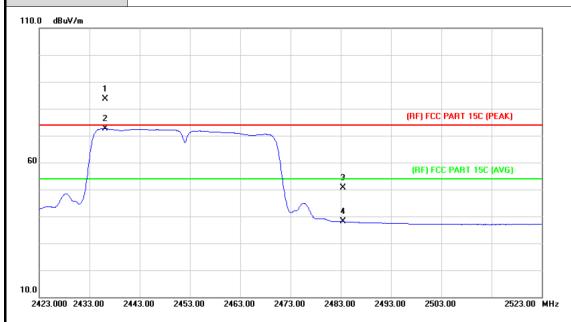
Test Mode: TX N(HT40) Mode 2422MHz



No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	49.81	0.77	50.58	74.00	-23.42	peak
2		2390.000	39.11	0.77	39.88	54.00	-14.12	AVG
3	Χ	2405.900	82.81	0.84	83.65	Fundamenta	l Frequency	peak
4	*	2406.200	72.05	0.84	72.89	Fundamenta	I Frequency	AVG



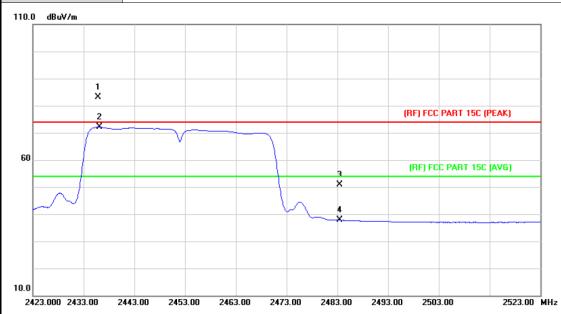
EUT: **Model Name:** Gurubook 5/MID **GURUBOOK5** Temperature: **25** ℃ **Relative Humidity:** 55% **Test Voltage:** AC 120V/60 Hz Horizontal Ant. Pol. **Test Mode:** TX N(HT40) Mode 2452MHz Remark: N/A



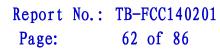
No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2436.200	82.64	0.97	83.61	Fundamenta	Frequency	peak
2	*	2436.200	71.76	0.97	72.73	Fundamenta	Frequency	AVG
3		2483.500	49.47	1.17	50.64	74.00	-23.36	peak
4		2483.500	36.87	1.17	38.04	54.00	-15.96	AVG



EUT: **Model Name:** Gurubook 5/MID **GURUBOOK5** Temperature: **25** ℃ **Relative Humidity:** 55% **Test Voltage:** AC 120V/60 Hz Vertical Ant. Pol. **Test Mode:** TX N(HT40) Mode 2452MHz Remark: N/A



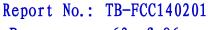
No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2435.900	82.07	0.97	83.04	Fundamental	Frequency	peak
2	*	2436.100	71.20	0.97	72.17	Fundamenta	Frequency	AVG
3		2483.500	49.69	1.17	50.86	74.00	-23.14	peak
4		2483.500	36.62	1.17	37.79	54.00	-16.21	AVG





(2) Co

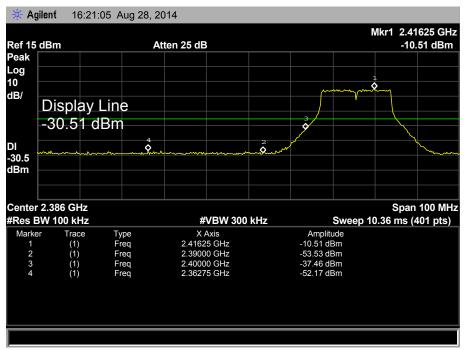
:	Gurubook !	5/MID	Model	Name :	GURUBOOK		
perature:	25 ℃		Relativ	e Humidity	r: 55%		
Voltage:	AC 120V/6	0 Hz					
: Mode:	TX B Mode	TX B Mode 2412MHz / TX B Mode 2462MHz					
nark:	The EUT is	programe	d in continue	ously transr	nitting mode		
* Agilent	16:14:14 Aug 28	3, 2014					
Ref 15 dBm		Atten 25 dB			Mkr1 2.41150 GHz -1.361 dBm		
Peak		Atten 25 ub			-1.301 dBill		
Log 10					man man		
dB/					Maria V Maria		
Dis	olay Line			3	\		
-21.	36 dBm			, Š	\\rho_\(\rho_\)		
DI			4 • • •	2	─		
-21.4 dBm							
иыш							
Center 2.381 #Res BW 100		#\/1	3W 300 kHz	Swoo	Span 100 MHz ep 10.36 ms (401 pts)		
	race Type	X Ax		Amplitude	:p 10.36 ms (401 pts)		
1							
2	(1) Freq	2.41150		-1.361 dBm -53 95 dBm			
2 3 4	(1) Freq (1) Freq (1) Freq (1) Freq	2.41150 2.39000 2.40000 2.38450	GHz GHz	-1.361 dBm -53.95 dBm -35.81 dBm -52.41 dBm			
2 3 4	(1) Freq (1) Freq (1) Freq (1) Freq (1) Freq	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm	Mkr1 2.46150 GHz		
Agilent Ref 15 dBm	(1) Freq (1) Freq	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm	Mkr1 2.46150 GHz -1.011 dBm		
Agilent Ref 15 dBm Peak	(1) Freq (1) Freq	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm			
Agilent Ref 15 dBm Peak Log 10	(1) Freq (1) Freq	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm			
Agilent Ref 15 dBm Peak Log 10 dB/	(1) Freq (1) Freq	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm			
# Agilent Ref 15 dBm Peak Log 10 dB/	(1) Freq (1) Freq 16:17:23 Aug 28	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm			
# Agilent Ref 15 dBm Peak Log 10 dB/	(1) Freq (1) Freq	2.39000 2.40000 2.38450	GHz GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm			
Agilent Ref 15 dBm Peak Log 10 dB/ Dist	(1) Freq (1) Freq 16:17:23 Aug 28	2.39000 2.40000 2.38450	GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm			
Ref 15 dBm Peak Log 10 dB/ Disp -21	(1) Freq (1) Freq 16:17:23 Aug 28	2.39000 2.40000 2.38450	GHz GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm			
Agilent Ref 15 dBm Peak Log 10 dB/ Disp -21.0	(1) Freq (1) Freq 16:17:23 Aug 28	2.39000 2.40000 2.38450	GHz GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm			
Agilent Ref 15 dBm Peak Log 10 dB/ Disp -21.0 dBm	16:17:23 Aug 28 olay Line 05 dBm	2.39000 2.40000 2.38450	GHz GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm	-1.011 dBm		
Agilent Ref 15 dBm Peak Log 10 dB/ Disp -21.0	16:17:23 Aug 28 olay Line 05 dBm	2.39000 2.40000 2.38450	GHz GHz GHz SHz SW 300 kHz	-53.95 dBm -35.81 dBm -52.41 dBm			
Agilent Ref 15 dBm Peak Log 10 dB/ Disp -21.0 dBm Center 2.491 #Res BW 100	16:17:23 Aug 28 16:17:23 Aug 28 Olay Line 05 dBm GHz kHz Tace Type	2.39000 2.40000 2.38450	GHz GHz GHz GHz GHZ GHZ GHZ GHZ GHZ GHZ GHZ GHZ GHZ GHZ	-53.95 dBm -35.81 dBm -52.41 dBm	-1.011 dBm		
Agilent Ref 15 dBm Peak Log 10 dB/ Disp -21.0 dBm Center 2.491 #Res BW 100 Marker 1 2	olay Line 05 dBm GHz Irace Type (1) Freq (1) Freq (1) Freq (1) Freq	2.39000 2.40000 2.38450 3, 2014 Atten 25 dB	GHz GHz GHz GHz GHz GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm -52.41 dBm -52.74 dBm	-1.011 dBm		
Agilent Ref 15 dBm Peak Log 10 dB/ Disp -21.0 dBm Center 2.491 #Res BW 100 Marker 1 2	olay Line O5 dBm GHz kHz Trace Type (1) Freq	2.39000 2.40000 2.38450 3, 2014 Atten 25 dB	GHz GHz GHz GHz GHz	-53.95 dBm -35.81 dBm -52.41 dBm -52.41 dBm	-1.011 dBm		

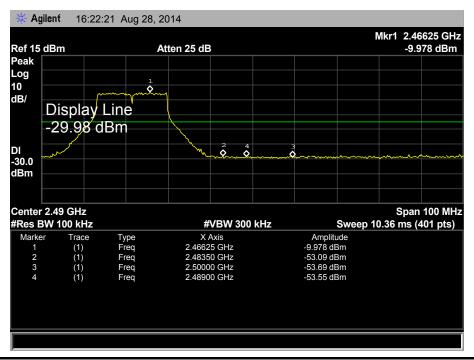




Page: 63 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz					
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz					
Remark:	The EUT is programed in	continuously transmitt	ing mode			









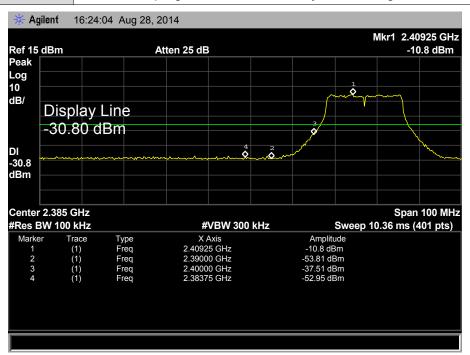
EUT: Gurubook 5/MID Model Name: GURUBOOK5

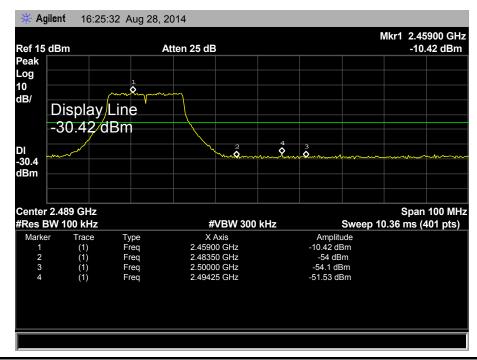
Temperature: 25 °C Relative Humidity: 55%

Test Voltage: AC 120V/60 Hz

Test Mode: TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz

Remark: The EUT is programed in continuously transmitting mode









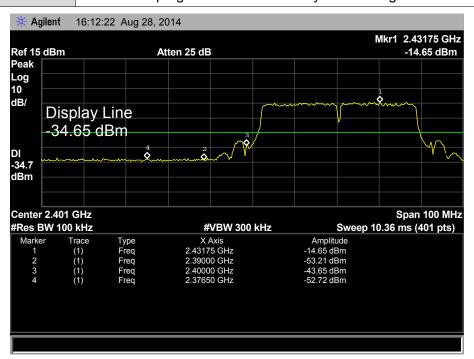
EUT: Gurubook 5/MID Model Name : GURUBOOK5

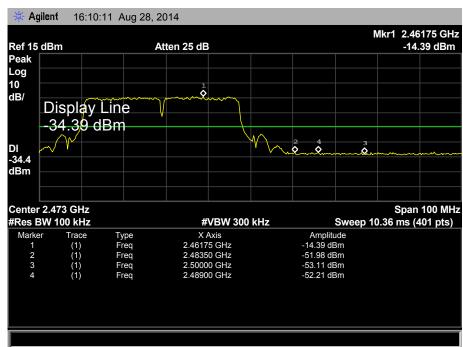
Temperature: 25 ℃ Relative Humidity: 55%

Test Voltage: AC 120V/60 Hz

Test Mode: TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz

Remark: The EUT is programed in continuously transmitting mode







Page: 66 of 86

6. Bandwidth Test

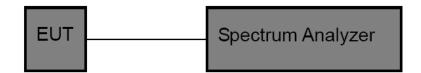
6.1 Test Standard and Limit

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

6.1.2 Test Limit

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

6.2 Test Setup



6.3 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.

6.4 EUT Operating Condition

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

6.5 Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Mar. 20, 2014	Mar. 19, 2015



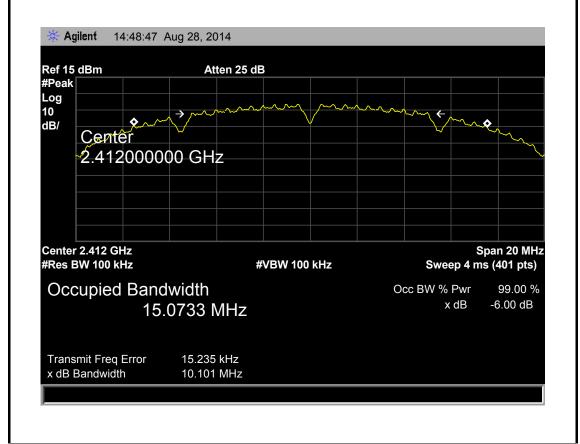
Page: 67 of 86

6.6 Test Data

EUT: Gurubook 5/MID		Model Name :	GURUBOOK5		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	AC 120V/60 Hz				
Test Mode: TX 802.11B Mode					
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit		
(MHz)	(MHz)	(MHz)	(MHz)		
2412	10.101	15.0733			
2437	10.103	15.0558	>=0.5		
2462	10.090	15.0720			
000 44D May 4a					

802.11B Mode

2412 MHz







Center 2.462 GHz

#Res BW 100 kHz

Transmit Freq Error

x dB Bandwidth

Occupied Bandwidth

15.0720 MHz

13.848 kHz

10.090 MHz

802.11B Mode 2437 MHz Agilent 14:52:39 Aug 28, 2014 Ref 15 dBm Atten 25 dB #Peak Log 10 **\$**~~ **A** dB/ Center 2.437000000 GHz Center 2.437 GHz Span 20 MHz #Res BW 100 kHz **#VBW 100 kHz** Sweep 4 ms (401 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 15.0558 MHz Transmit Freq Error x dB Bandwidth 8.964 kHz 10.103 MHz 802.11B Mode 2462 MHz Agilent 14:53:25 Aug 28, 2014 Ref 15 dBm #Peak Atten 25 dB Log 10 **\$** dB/ Center 2.462000000 GHz

#VBW 100 kHz

Span 20 MHz

99.00 % -6.00 dB

Sweep 4 ms (401 pts)

Occ BW % Pwr

x dB

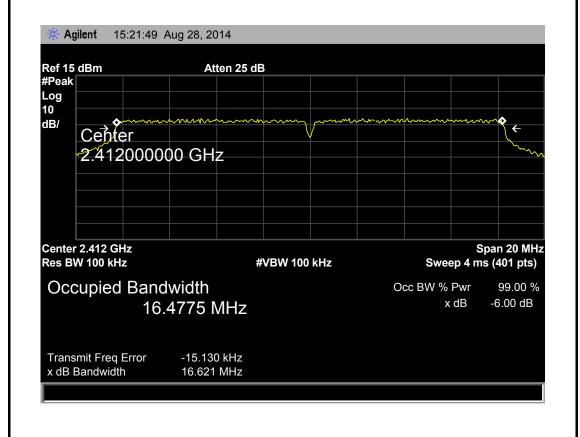




EUT: Gurubook 5/MID **GURUBOOK5 Model Name:** Temperature: 25 ℃ **Relative Humidity:** 55% Test Voltage: AC 120V/60 Hz **Test Mode:** TX 802.11G Mode **Channel frequency** 6dB Bandwidth 99% Bandwidth Limit (MHz) (MHz) (MHz) (MHz) 16.621 16.4775 2412 2437 16.581 16.4640 >=0.5 2462 16.622 16.4873

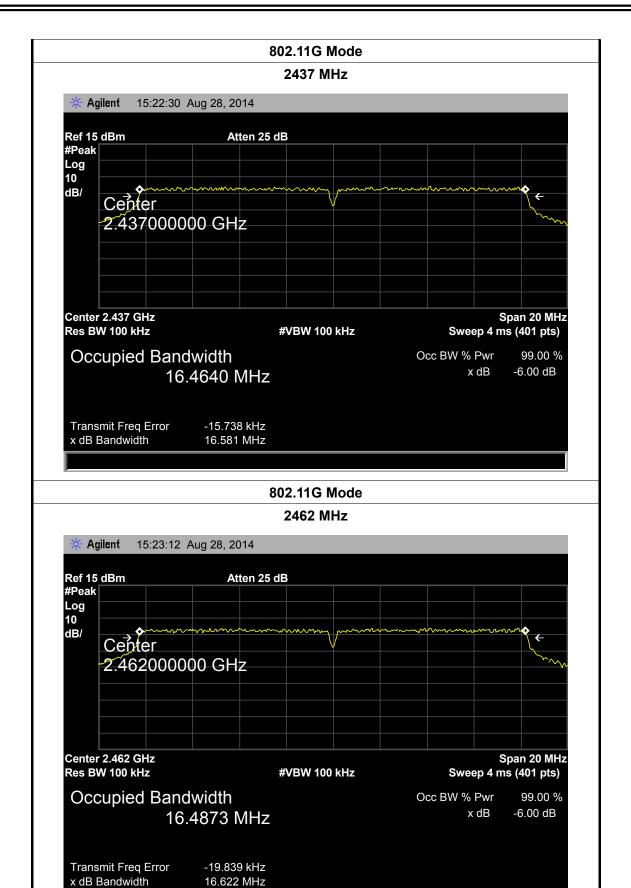
802.11G Mode

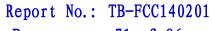
2412 MHz











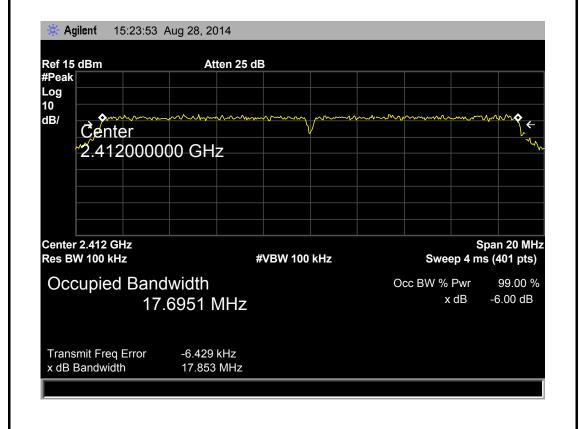


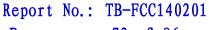
Page: 71 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60 Hz	AC 120V/60 Hz				
Test Mode:	TX 802.11N(HT20) Mode)				
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit			
(MHz)	(MHz)	(MHz)	(MHz)			
2412	17.853	17.6951				
2437	17.856	17.7063	>=0.5			
2462	17.854	17.6952	1			
802.11N(HT20) Mode						

302.11N(HT20) Mod

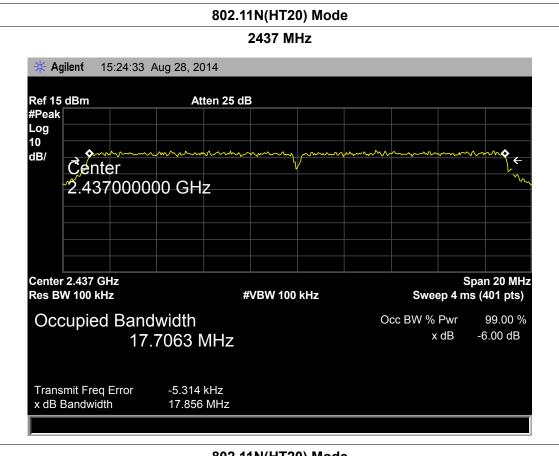
2412 MHz





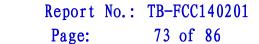


Page: 72 of 86



802.11N(HT20) Mode 2462 MHz

Agilent 15:25:07 Aug 28, 2014 Ref 15 dBm #Peak Atten 25 dB Log 10 dB/ Çenter ².462000000 GHz Center 2.462 GHz Span 20 MHz Res BW 100 kHz **#VBW 100 kHz** Sweep 4 ms (401 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 17.6952 MHz Transmit Freq Error -3.629 kHz x dB Bandwidth 17.854 MHz

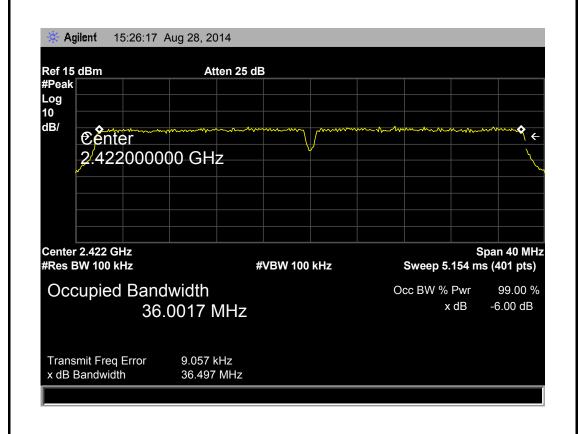




EUT:Gurubook 5/MIDModel Name :GURUBOOK5Temperature:25 °CRelative Humidity:55%Test Voltage:AC 120V/60 HzTest Mode:TX 802.11N(HT40) Mode

lest wode.	17. 002. 1114(11140) Wode			
Channel frequence	y 6dB Bandwidth	99% Bandwidth	Limit	
(MHz)	(MHz)	(MHz)	(MHz)	
2422	36.497	36.0017		
2437	36.506	36.0008	>=0.5	
2452	36.513	36.0079		

802.11N(HT40) Mode







802.11N(HT40) Mode 2437 MHz Agilent 15:26:54 Aug 28, 2014 Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ **E**enter 2.437000000 GHz Center 2.437 GHz Span 40 MHz #Res BW 100 kHz **#VBW 100 kHz** Sweep 5.154 ms (401 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 36.0008 MHz Transmit Freq Error x dB Bandwidth 4.855 kHz 36.506 MHz 802.11N(HT40) Mode 2452 MHz Agilent 15:27:39 Aug 28, 2014 Ref 15 dBm #Peak Atten 25 dB Log 10 dB/ **Center** 2.452000000 GHz Center 2.452 GHz Span 40 MHz #Res BW 100 kHz **#VBW 100 kHz** Sweep 5.154 ms (401 pts)

Occupied Bandwidth

Transmit Freq Error

x dB Bandwidth

36.0079 MHz

6.293 kHz

36.513 MHz

Occ BW % Pwr

x dB

99.00 % -6.00 dB



Page: 75 of 86

7. Peak Output Power Test

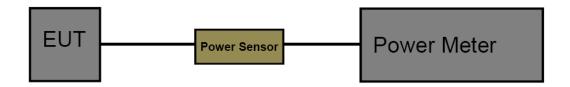
7.1 Test Standard and Limit

7.1.1 Test Standard FCC Part 15.247 (b)

7.1.2 Test Limit

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

7.2 Test Setup



7.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v03r02.

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.

7.4 EUT Operating Condition

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

7.5 Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Power Meter	Anritsu	ML2495A	25406005	Dec. 20, 2013	Dec. 19, 2014
Power Sensor	Anritsu	ML2411B	25406005	Dec. 20, 2013	Dec. 19, 2014

7.6 Test Data



Page: 76 of 86

EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60 HZ		
Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
	2412	9.75	
802.11b	2437	9.79	
	2462	9.80	
802.11g	2412	9.42	
	2437	9.46	
	2462	9.38	20
000 44	2412	9.36	30
802.11n	2437	9.32	
(HT20)	2462	9.27	
000 44	2422	8.06	
802.11n (⊔T40)	2437	8.17	
(HT40)	2452	8.30	



Page: 77 of 86

8. Power Spectral Density Test

8.1 Test Standard and Limit

8.1.1 Test Standard FCC Part 15.247 (e)

8.1.2 Test Limit

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

8.2 Test Setup



8.3 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 v03r02.

- (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.

8.4 EUT Operating Condition

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



Page: 78 of 86

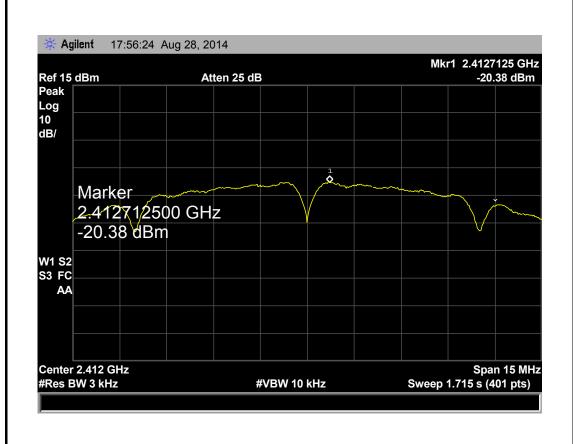
8.5 Test Equipment

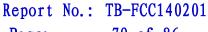
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Mar. 20, 2014	Mar. 19, 2015

8.6 Test Data

EUT:	Gurubook 5/MID Me		Model Name		GURUBOOK5
Temperature:	25 ℃		Relative Hum	idity:	55%
Test Voltage:	AC 120V/	60 HZ			
Test Mode:	TX 802.11B Mode				
Channel Frequency	Channel Frequency Power Density			Limit (dBm)	
(MHz)	(MHz) (3 kHz/dBm)				
2412		-20.38			
2437 -20		.28		8	
2462	-20.27				
802.11B Mode					

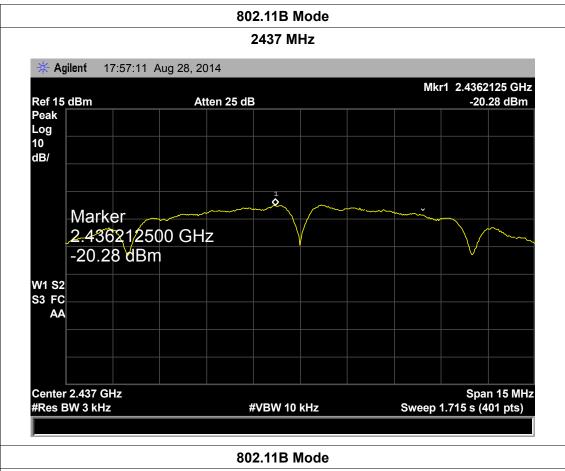








Page: 79 of 86



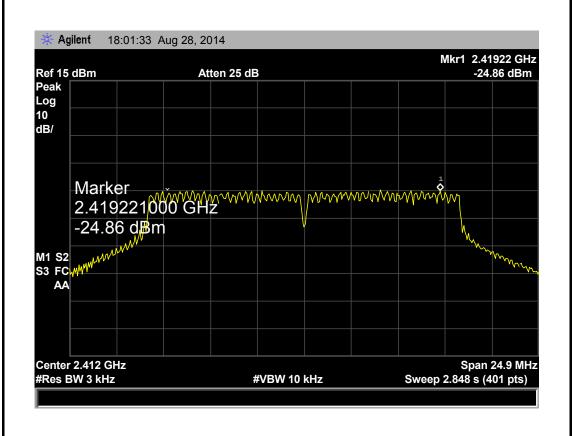


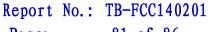


EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5	
Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	AC 120V/60 HZ			
Test Mode:	TX 802.11G Mode			

1001 1110 1101	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	O 111040		
Channel Frequency		Power Density	Limit (dBm)	
(MHz)		(3 kHz/dBm)		
2412		-24.86		
2437		-24.81	8	
2462		-24.92		

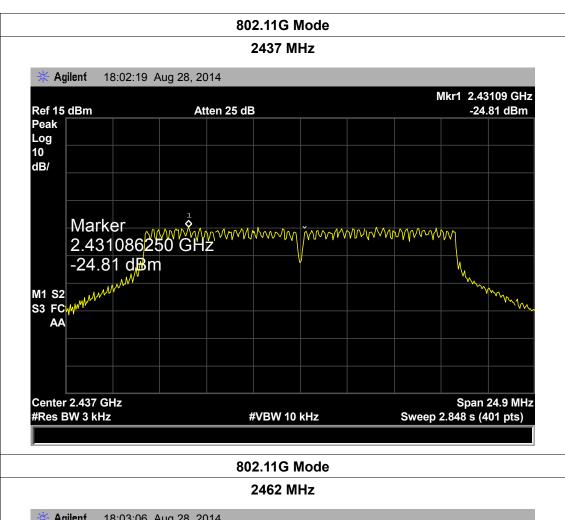
802.11G Mode







Page: 81 of 86



Agilent 18:03:06 Aug 28, 2014 Mkr1 2.46642 GHz -24.92 dBm Ref 15 dBm Atten 25 dB Peak Log 10 dB/ Maryman Marker 2.466419750 GHz -24.92 dBm M1 S2 S3 FC AA Center 2.462 GHz Span 24.9 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 2.848 s (401 pts)



EUT: Gurubook 5/MID Model Name : GURUBOOK5

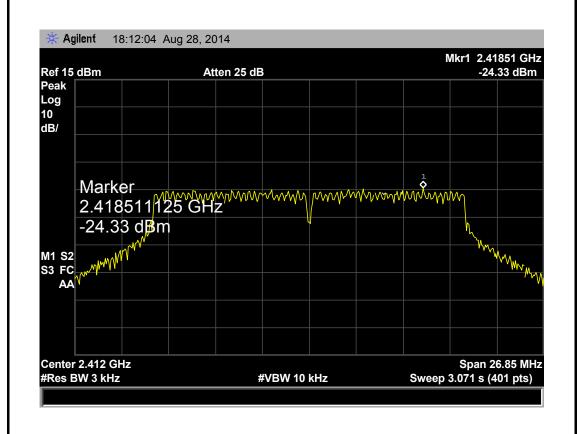
Temperature: 25 ℃ Relative Humidity: 55%

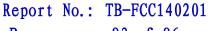
Test Voltage: AC 120V/60 HZ

Test Mode: TX 802.11N(HT20) Mode

Channel Frequency	Power Density	Limit (dBm)
(MHz)	(3 kHz/dBm)	
2412	-24.33	
2437	-24.35	8
2462	-24.10	

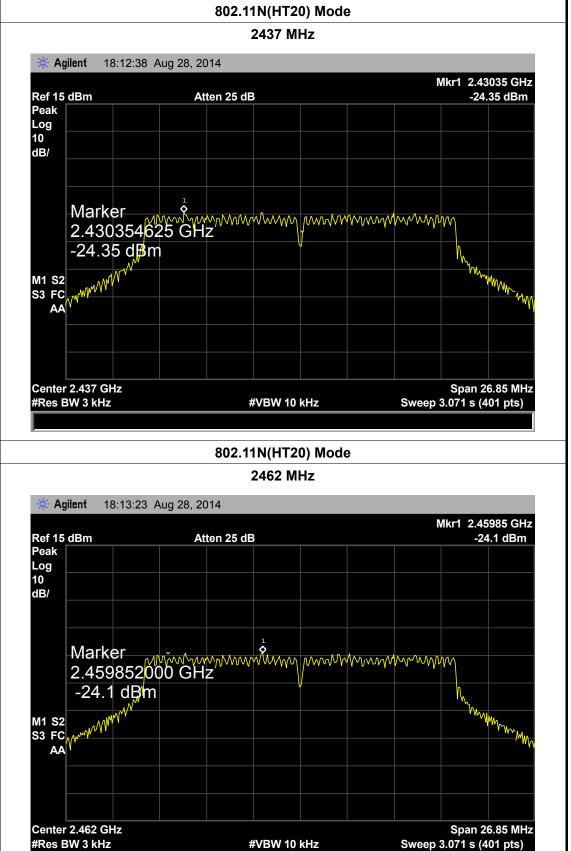
802.11N(HT20) Mode

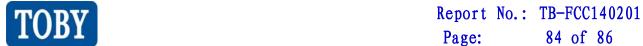






Page: 83 of 86

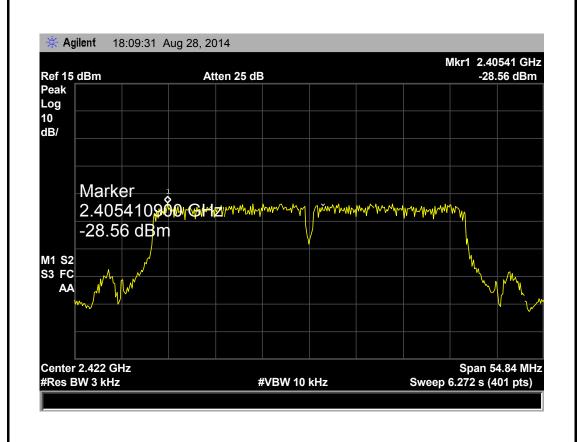


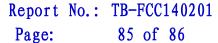


EUT:	Gurubook 5/MID	Model Name :	GURUBOOK5	
Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	AC 120V/60 HZ			
Test Mode:	TX 802 11N(HT40) Mode			

Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)
2422	-28.56	
2437	-27.58	8
2452	-26.75	

802.11N(HT40) Mode







Center 2.452 GHz

#Res BW 3 kHz

802.11N(HT40) Mode 2437 MHz Agilent 18:10:26 Aug 28, 2014 Mkr1 2.45359 GHz -27.58 dBm Ref 15 dBm Atten 25 dB Peak Log 10 dB/ Marker 2.453589/100/GHZ//// Market Ma -27.58 dBm M1 S2 S3 FC AA Span 54.84 MHz Center 2.437 GHz #Res BW 3 kHz #VBW 10 kHz Sweep 6.272 s (401 pts) 802.11N(HT40) Mode 2452 MHz Agilent 18:11:08 Aug 28, 2014 Mkr1 2.45981 GHz -26.75 dBm Atten 25 dB Ref 15 dBm Peak Log 10 dB/ Marker The same of the sa 2.459814**700**16Hzh -26.75 dBm M1 S2 S3 FC

#VBW 10 kHz

Span 54.84 MHz

Sweep 6.272 s (401 pts)



Page: 86 of 86

9. Antenna Requirement

9.1 Standard Requirement

9.1.1 Standard FCC Part 15.203

9.1.2 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.

9.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 0dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

9.3 Result

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