

FCC Test Report

Product Name	Notebook
Model No	EF20EA
FCC ID.	WL6-EF2BC40EA3

Applicant	ELITEGROUP COMPUTER SYSTEMS CO., LTD.
Address	No.239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan

Date of Receipt	Sep. 01, 2015
Issue Date	Oct. 08, 2015
Report No.	1590121R-RFUSP26V00
Report Version	V1.0
Iac-MRA	sting Laboratory 3023

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Test Report

Issue Date: Oct. 08, 2015 Report No.: 1590121R-RFUSP26V00



Product Name	Notebook	
Applicant	ELITEGROUP COMPUTER SYSTEMS CO., LTD.	
Address	No.239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan	
Manufacturer	Elitegroup Computer Systems(SIP) CO., LTD.	
Model No.	EF20EA	
FCC ID.	WL6-EF2BC40EA3	
EUT Rated Voltage	AC 100-240V, 50-60Hz	
EUT Test Voltage	AC 120V/60Hz	
Trade Name	ECS	
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2014	
	ANSI C63.4: 2014, ANSI C63.10: 2013	
	KDB 558074 D01 DTS Meas Guidance v03r03	
Test Result	Complied	

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Approved By

(Director / Vincent Lin)



TABLE OF CONTENTS

De	Description		
1.	GENERAL INFORMATION	5	
1.1.	EUT Description	5	
1.2.	Operational Description		
13	Tested System Details	8	
1.5.	Configuration of Tested System	8	
1.4.	EUT Everoise Software	Q	
1.5.	Test Facility		
2.	Conducted Emission	10	
21	Test Equipment	10	
2.2	Test Setun	10	
2.2.	Limits		
2.5.	Tast Procedure		
2.4.	Uncertainty		
2.3.	The Description of Conducted Emission		
2.0.	Test Result of Conducted Emission		
3.	Peak Power Output	14	
3.1.	Test Equipment		
3.2.	Test Setup		
3.3.	Limits		
3.4	Test Procedure	14	
3 5	Uncertainty	14	
3.6.	Test Result of Peak Power Output		
4.	Radiated Emission		
4.1.	Test Equipment		
4.2.	Test Setup		
43	Limits	20	
<u>4</u> <u>4</u>	Test Procedure	20	
1.1.	Uncertainty	22	
4.6.	Test Result of Radiated Emission		
5.	RF antenna conducted test		
5.1.	Test Equipment		
5.2.	Test Setup		
53	Limits	39	
54	Test Procedure	39	
5 5	Uncertainty	39	
5.6.	Test Result of RF antenna conducted test		
6.	Band Edge	44	
6.1.	Test Equipment		
6.2	Test Setun	ΔΔ	
63	Limits	۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰	
6.J	Test Procedure	45 15	
0. 4 . 6.5	Uncertainty		
0.J.	Tagt Degult of Dond Edge		
0.0.	Icsi Result of Dalia Eage		

7.	Occupied Bandwidth	66
7.1.	Test Equipment	
7.2.	Test Setup	
7.3.	Limits	
7.4.	Test Procedure	
7.5.	Uncertainty	
7.6.	Test Result of Occupied Bandwidth	
8.	Power Density	75
8.1.	Test Equipment	
8.2.	Test Setup	
8.3.	Limits	
8.4.	Test Procedure	
8.5.	Uncertainty	
8.6.	Test Result of Power Density	
9.	EMI Reduction Method During Compliance Testing	84

- Attachment 1: EUT Test Photographs
- Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Notebook
Trade Name	ECS
Model No.	EF20EA
FCC ID.	WL6-EF2BC40EA3
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 150Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK)
	802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
Power Adapter	MFR: APD, M/N: WA-24Q12FU
	Input: AC 100-240V, 50-60Hz, 0.7A
	Output: DC 12V, 2A
	Cable Out: Non-Shielded, 1.5m
Contain Module	AMPAK / AP6234

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	JEM	13B130-FW4070 (Main)	PIFA Antenna	1.39dBi For 2.4GHz
2	WGT	13B130-FW4050 (Main)	PIFA Antenna	2.77dBi for 2.4 GHz

- 1. The antenna of EUT conforms to FCC 15.203.
- 2. Only the higher gain antenna was tested and recorded in this report.

802.11b/g/n-20MHz Center Frequency of Each Channel:

0		1 2					
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		
802.11n-40M	Hz Center Fre	equency of Ead	ch Channel:				
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

- 1. The EUT is a Notebook with a built-in WLAN and Bluetooth transceiver, this report for WLAN.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
- Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \$\cdot 802.11g is 6Mbps \$\cdot 802.11n(20M-BW) is 7.2Mbps and 802.11n(40M-BW) is 15Mbps)
- 5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Monitor	DELL	U2410f	CN-082WXD-72872-2	Non-Shielded, 1.8m
				3E-ACDL	
2	USB Keyboard	Logitech	Y-UR83	SY853UK	N/A
3	Earphone	Dr.AV	CD-806B	N/A	N/A
4	USB Mouse	DELL	MO56UOA	G0Y02ERZ	N/A

Signal Cable Type		Signal cable Description
А	HDMI Cable	Non-Shielded, 1.8m
В	Keyboard Cable	Non-Shielded, 1.8m
С	Earphone Cable	Non-Shielded, 1.2m
D	Mouse Cable	Non-Shielded, 1.8m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown on 1.4
- (2) Execute "WL 1.0" program on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start the continuous transmission.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from

QuieTek Corporation's Web Site: <u>http://www.quietek.com/chinese/about/certificates.aspx?bval=5</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <u>http://www.quietek.com/</u>

Site Description:	File on
	Federal Communications Commission
	FCC Engineering Laboratory
	7435 Oakland Mills Road
	Columbia, MD 21046
	Registration Number: 92195
Site Name:	Quietek Corporation
Site Address:	No.5-22, Ruishukeng,
	Linkou Dist. New Taipei City 24451,
	Taiwan, R.O.C.
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	E-Mail : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

2. Conducted Emission

2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
Х	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2015	
Х	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2015	Peripherals
Х	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2015	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2015	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2015	
	No.1 Shielded Room				

Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit						
Frequency	Limits					
MHz	QP	AVG				
0.15 - 0.50	66-56	56-46				
0.50-5.0	56	46				
5.0 - 30	60	50				

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product	:	Notebook
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	dBµV	dB	dBµV
Line 1					
Quasi-Peak					
0.158	9.761	36.720	46.482	-19.289	65.771
0.369	9.768	32.940	42.708	-17.035	59.743
0.795	9.801	19.590	29.391	-26.609	56.000
4.716	9.984	24.010	33.994	-22.006	56.000
13.404	10.123	12.720	22.843	-37.157	60.000
26.638	10.183	11.420	21.603	-38.397	60.000
Average					
0.158	9.761	32.750	42.512	-13.259	55.771
0.369	9.768	31.890	41.658	-8.085	49.743
0.795	9.801	18.350	28.151	-17.849	46.000
4.716	9.984	17.010	26.994	-19.006	46.000
13.404	10.123	3.800	13.923	-36.077	50.000
26.638	10.183	4.190	14.373	-35.627	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.

2. "means the worst emission level.

3. Measurement Level = Reading Level + Correct Factor

Product	:	Notebook
Test Item	:	Conducted Emission Test
Power Line	:	Line 2
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency	Correct	Reading Measuremen		Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	dBµV	dB	dBµV
Line 2					
Quasi-Peak					
0.158	9.761	37.510	47.272	-18.499	65.771
0.365	9.767	34.520	44.287	-15.570	59.857
0.771	9.799	17.710	27.509	-28.491	56.000
4.853	9.986	23.220	33.206	-22.794	56.000
9.150	10.093	15.480	25.573	-34.427	60.000
28.068	10.413	12.500	22.913	-37.087	60.000
Average					
0.158	9.761	32.800	42.562	-13.209	55.771
0.365	9.767	25.560	35.327	-14.530	49.857
0.771	9.799	16.330	26.129	-19.871	46.000
4.853	9.986	18.070	28.056	-17.944	46.000
9.150	10.093	8.660	18.753	-31.247	50.000
28.068	10.413	4.700	15.113	-34.887	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2015
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2015
Note:				
1.	All equipments are	calibrated with trac	eable calibrations. Each calibra	ation is traceable to the
	national or internat	ional standards.		

2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 D01 DTS Meas Guidance v03r02 section 9.1.2 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product	:	Notebook
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Average Power For different Data Rate (Mbps)			Peak Power	Required	D k	
Channel No (MH	(MHz)	1	2	5.5	11	1	Limit	Kesult
			Measur	ement Lev	vel (dBm)			
01	2412	16.19				19.11	<30dBm	Pass
06	2437	16.24	16.16	16.07	15.99	19.17	<30dBm	Pass
11	2462	15.88				18.89	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss



Product	:	Notebook
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

			Average Power							Peak	Required	
	Frequency		For different Data Rate (Mbps) Power							Power		
Channel No	(MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
			Measurement Level (dBm)									
01	2412	14.96								21.28	<30dBm	Pass
06	2437	15.05	14.98	14.91	14.83	14.77	14.68	14.6	14.53	21.44	<30dBm	Pass
11	2462	14.91								21.57	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss



Product	:	Notebook
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

	F		Average PowerPeakFor different Data Rate (Mbps)Power							Peak Power		
Channel No	(MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Limit	Result
			Measurement Level (dBm)									
01	2412	14.08								21.13	<30dBm	Pass
06	2437	14.2	14.13	14.07	13.98	13.92	13.86	16.79	13.71	21.52	<30dBm	Pass
11	2462	14.08								21.51	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss



Product	:	Notebook
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

		Average Power							Peak			
	Frequency		For different Data Rate (Mbps) Power							Required	I	
Channel No	(MHz)	15	30	45	60	90	120	135	150	15	Limit	Result
			Measurement Level (dBm)									
03	2422	13.7					-			21.51	<30dBm	Pass
06	2437	14.04	13.98	13.93	13.85	13.76	13.68	13.62	13.57	20.37	<30dBm	Pass
09	2452	12.85								21.44	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep., 2015
	Х	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun., 2015
	Х	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun., 2015
	Х	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun., 2015
	Х	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun., 2015

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
CB # 8	Х	Spectrum Analyzer	R&S	FSP40/ 100339	Oct., 2015
	Х	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar., 2015
	Х	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan., 2015
	Х	Horn Antenna	TRC	AH-0801/95051	Aug., 2015
	Х	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan., 2015
	X Pre-Amplifier		MITEQ	JS41-001040000-58-5P/153945	Jul., 2015
	Х	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul., 2015

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz





Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits



Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength $(dB\mu V/m) = 20 \log E$ field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product	:	Notebook
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency	Correct	Correct Reading Measu		Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4824.000	2.428	44.230	46.659	-27.341	74.000
7236.000	9.177	40.150	49.327	-24.673	74.000
9648.000	10.019	39.770	49.790	-24.210	74.000
Average Detector:					
Vertical					
Peak Detector:					
4824.000	2.836	43.920	46.757	-27.243	74.000
7236.000	9.676	39.580	49.256	-24.744	74.000
9648.000	10.556	39.250	49.807	-24.193	74.000

Average Detector:

--

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Notebook					
Test Item	: Harmoni	ic Radiated Emis	sion Data			
Test Site	: No.3 OA	ATS				
Test Mode	: Mode 1:	Transmit (802.11	lb 1Mbps) (2437 MH	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$	
Horizontal						
Peak Detector:						
4874.000	2.076	44.490	46.567	-27.433	74.000	
7311.000	9.512	39.410	48.922	-25.078	74.000	
9748.000	9.630	38.910	48.540	-25.460	74.000	
Average Detector:						
Vertical						
Peak Detector:						
4874.000	2.532	42.540	45.072	-28.928	74.000	
7311.000	10.089	39.290	49.379	-24.621	74.000	
9748.000	10.266	38.630	48.897	-25.103	74.000	

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Notebook					
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OA	ATS				
Test Mode	: Mode 1:	Transmit (802.11	lb 1Mbps) (2462 MH	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$	
Horizontal						
Peak Detector:						
4924.000	2.191	44.380	46.571	-27.429	74.000	
7386.000	10.373	38.650	49.024	-24.976	74.000	
9848.000	9.964	38.680	48.644	-25.356	74.000	
Average Detector:						
Vertical						
Peak Detector:						
4924.000	2.805	43.620	46.425	-27.575	74.000	
7386.000	11.180	38.350	49.530	-24.470	74.000	
9848.000	10.801	39.060	49.861	-24.139	74.000	

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4824.000	2.428	42.230	44.659	-29.341	74.000
7236.000	9.177	38.670	47.847	-26.153	74.000
9648.000	10.019	39.700	49.720	-24.280	74.000
Average Detector:					
Vertical					
Peak Detector:					
4824.000	2.836	42.880	45.717	-28.283	74.000
7236.000	9.676	38.580	48.256	-25.744	74.000
9648.000	10.556	38.220	48.777	-25.223	74.000

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Notebook						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 2:	Transmit (802.11	lg 6Mbps) (2437 MH	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBµV	$dB\mu V/m$	dB	dBµV/m		
Horizontal							
Peak Detector:							
4874.000	2.076	43.220	45.297	-28.703	74.000		
7311.000	9.512	39.050	48.562	-25.438	74.000		
9748.000	9.630	38.790	48.420	-25.580	74.000		
Average Detector:							
Vertical							
Peak Detector:							
4874.000	2.532	42.670	45.202	-28.798	74.000		
7311.000	10.089	39.140	49.229	-24.771	74.000		
9748.000	10.266	38.270	48.537	-25.463	74.000		

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Notebook							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OA	ATS						
Test Mode	: Mode 2:	Transmit (802.11	lg 6Mbps) (2462 MH	z)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level	-				
MHz	dB	dBµV	dBµV/m	dB	dBµV/m			
Horizontal								
Peak Detector:								
4924.000	35.627	42.670	45.202	-28.798	74.000			
7386.000	41.330	39.140	49.229	-24.771	74.000			
9848.000	42.198	38.270	48.537	-25.463	74.000			
Average Detector:								
Vertical								
Peak Detector:								
4924.000	2.805	43.305	46.110	-27.890	74.000			
7386.000	11.180	36.940	48.120	-25.880	74.000			
9848.000	10.801	37.219	48.020	-25.980	74.000			

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	dBµV/m	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4824.000	2.428	44.191	46.620	-27.380	74.000
7236.000	9.177	39.563	48.740	-25.260	74.000
9648.000	10.019	37.120	47.140	-26.860	74.000
Average Detector:					
Vertical					
Peak Detector:					
4824.000	2.836	42.703	45.540	-28.460	74.000
7236.000	9.676	38.214	47.890	-26.110	74.000
9648.000	10.556	36.423	46.980	-27.020	74.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

:	Notebook
:	Harmonic Radiated Emission Data
:	No.3 OATS
:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)
	: : :

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4874.000	2.076	43.773	45.850	-28.150	74.000
7311.000	9.512	39.398	48.910	-25.090	74.000
9748.000	9.630	37.620	47.250	-26.750	74.000
Average Detector:					
Vertical					
Peak Detector:					
4874.000	2.532	42.050	44.582	-29.418	74.000
7311.000	10.089	37.990	48.079	-25.921	74.000
9748.000	10.266	38.300	48.567	-25.433	74.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4924.000	2.191	43.750	45.941	-28.059	74.000
7386.000	10.373	38.180	48.554	-25.446	74.000
9848.000	9.964	39.010	48.974	-25.026	74.000
Average Detector:					
Vertical					
Peak Detector:					
4924.000	2.805	43.510	46.315	-27.685	74.000
7386.000	11.180	38.120	49.300	-24.700	74.000
9848.000	10.801	39.340	50.141	-23.859	74.000

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Notebook
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2422MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4844.000	2.280	42.770	45.051	-28.949	74.000
7266.000	9.106	38.260	47.366	-26.634	74.000
9688.000	9.663	39.580	49.243	-24.757	74.000
Average Detector:					
Vertical					
Peak Detector:					
4844.000	2.707	42.310	45.018	-28.982	74.000
7266.000	9.626	39.060	48.686	-25.314	74.000
9688.000	10.284	40.210	50.494	-23.506	74.000

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Test Item Test Site Test Mode	 Notebook Harmonic Ra No.3 OATS Mode 4: Trar 	Notebook Harmonic Radiated Emission Data No.3 OATS Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBµV	dBµV/m	dB	$dB\mu V/m$		
Horizontal							
Peak Detector:							
4874.000	2.076	42.520	44.597	-29.403	74.000		
7311.000	9.512	38.610	48.122	-25.878	74.000		
9748.000	9.630	39.390	49.020	-24.980	74.000		
Average Detector	:						
Vertical							
Peak Detector:							
4874.000	2.532	41.650	44.182	-29.818	74.000		
7311.000	10.089	39.340	49.429	-24.571	74.000		
9748.000	10.266	39.990	50.257	-23.743	74.000		

Note:

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	Product : Notebook							
Test Item	: Harmon	ic Radiated Emis	sion Data					
Test Site	 No.3 OATS Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2452 MHz) 							
Test Mode								
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBµV	$dB\mu V/m$	dB	dBµV/m			
Horizontal								
Peak Detector:								
4904.000	2.000	42.450	44.451	-29.549	74.000			
7356.000	10.308	38.536	48.844	-25.156	74.000			
9808.000	9.850	38.934	48.784	-25.216	74.000			
Average Detector:								
Vertical								
Peak Detector:								
4904.000	2.513	42.931	45.445	-28.555	74.000			
7356.000	11.022	39.098	50.120	-23.880	74.000			
9808.000	10.512	40.059	50.571	-23.429	74.000			

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- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Notebook								
Test Item	: General Radiated Emission Data								
Test Site	: No.3 OATS								
Test Mode	: Mode 1	: Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$				
Horizontal									
119.240	-7.291	37.933	30.643	-12.857	43.500				
359.800	-0.226	36.129	35.903	-10.097	46.000				
462.620	3.589	22.347	25.936	-20.064	46.000				
580.960	3.466	23.421	26.887	-19.113	46.000				
802.120	6.356	30.501	36.857	-9.143	46.000				
988.360	7.541	28.451	35.992	-18.008	54.000				

Vertical					
119.240	-3.571	31.018	27.448	-16.052	43.500
255.040	-5.089	23.922	18.833	-27.167	46.000
359.800	-1.316	31.339	30.023	-15.977	46.000
499.480	-0.199	29.395	29.195	-16.805	46.000
802.120	2.966	27.704	30.670	-15.330	46.000
996.120	-1.323	29.803	28.480	-25.520	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.

Product	:	Notebook
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
103.720	-8.230	34.461	26.230	-17.270	43.500
357.860	-0.719	32.697	31.978	-14.022	46.000
499.480	1.991	30.714	32.704	-13.296	46.000
600.360	3.472	25.572	29.044	-16.956	46.000
800.180	6.417	27.366	33.783	-12.217	46.000
939.860	6.750	23.011	29.761	-16.239	46.000
Vertical					
43.580	-10.919	38.177	27.258	-12.742	40.000
179.380	-0.824	24.556	23.732	-19.768	43.500
363.680	0.079	25.967	26.046	-19.954	46.000
542.160	1.855	22.361	24.216	-21.784	46.000
813.760	2.886	28.272	31.158	-14.842	46.000
949.560	3.156	25.698	28.854	-17.146	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.

Product	:	Notebook
Test Item	:	General Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
99.840	-9.873	38.049	28.176	-15.324	43.500
359.800	-0.226	32.601	32.375	-13.625	46.000
499.480	1.991	30.740	32.730	-13.270	46.000
648.860	1.744	23.681	25.425	-20.575	46.000
817.640	6.716	22.725	29.441	-16.559	46.000
968.960	7.356	23.198	30.554	-23.446	54.000
T 7 /• 1					
Vertical					
202.660	-5.573	22.973	17.401	-26.099	43.500
363.680	0.079	25.960	26.039	-19.961	46.000
499.480	-0.199	28.797	28.597	-17.403	46.000
612.000	1.943	25.452	27.394	-18.606	46.000
844.800	2.462	24.445	26.907	-19.093	46.000
951.500	3.083	26.832	29.915	-16.085	46.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.
| Product | : | Notebook |
|-----------|---|---|
| Test Item | : | General Radiated Emission Data |
| Test Site | : | No.3 OATS |
| Test Mode | : | Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz) |

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
99.840	-9.873	39.735	29.862	-13.638	43.500
299.660	-4.751	31.876	27.125	-18.875	46.000
363.680	0.189	30.285	30.474	-15.526	46.000
540.220	3.499	23.212	26.711	-19.289	46.000
800.180	6.417	30.853	37.270	-8.730	46.000
924.340	6.589	22.147	28.736	-17.264	46.000
Vertical					
113.420	-3.709	32.200	28.491	-15.009	43.500
247.280	-5.519	24.373	18.854	-27.146	46.000
396.660	-2.039	23.721	21.682	-24.318	46.000
515.000	0.081	22.641	22.722	-23.278	46.000
802.120	2.966	31.347	34.313	-11.687	46.000
963.140	3.581	24.526	28.107	-25.893	54.000

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.

5. **RF** antenna conducted test

5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Uncertainty

The measurement uncertainty

Conducted is defined as ± 1.27 dB

5.6. Test Result of RF antenna conducted test

Product	:	Notebook
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



Note: The above test pattern is synthesized by multiple of the frequency range.

Product : Notebook



- **RF** Antenna Conducted Spurious Test Item : Test Site
 - No.3 OATS :

Test Mode Mode 2: Transmit (802.11g 6Mbps) :

Channel 01 (2412MHz)









Note: The above test pattern is synthesized by multiple of the frequency range.



Product	:	Notebook
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel 01 (2412MHz)





Channel 11 (2462MHz)



Note: The above test pattern is synthesized by multiple of the frequency range.



Product	:	Notebook
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel 01 (2422MHz)



Channel 04 (2437MHz)



Channel 07 (2452MHz)



Note: The above test pattern is synthesized by multiple of the frequency range.



6. Band Edge

6.1. Test Equipment

RF Radiated Measurement:

The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
CB # 8	Х	Spectrum Analyzer	R&S	FSP40/ 100339	Oct., 2015
	Х	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar., 2015
	Х	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan., 2015
	Х	Horn Antenna	TRC	AH-0801/95051	Aug., 2015
	Х	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan., 2015
	Х	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul., 2015
	Χ	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul., 2015

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

6.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz



6.6. **Test Result of Band Edge**

Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
01 (Peak)	2385.400	31.492	28.779	60.270	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	26.849	58.358	74.00	54.00	Pass
01 (Peak)	2400.000	31.561	41.585	73.146			
01 (Peak)	2411.000	31.630	75.505	107.135			
01 (Average)	2386.800	31.497	19.342	50.839	74.00	54.00	Pass
01 (Average)	2390.000	31.509	15.869	47.378	74.00	54.00	Pass
01 (Average)	2400.000	31.561	36.326	67.887			
01 (Average)	2411.400	31.634	71.429	103.063			

Figure Channel 01:



Figure Channel 01:

Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto. 2.
- Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. 3.
- "*", means this data is the worst emission level. 4.
- Measurement Level = Reading Level + Correct Factor. 5.
- The average measurement was not performed when the peak measured data under the limit of average 6. detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channal Na	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
01 (Peak)	2385.800	30.935	28.613	59.548	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	25.531	56.446	74.00	54.00	Pass
01 (Peak)	2400.000	30.912	41.338	72.250			
01 (Peak)	2411.000	30.942	76.144	107.086			
01 (Average)	2387.000	30.929	18.970	49.899	74.00	54.00	Pass
01 (Average)	2390.000	30.915	15.926	46.841	74.00	54.00	Pass
01 (Average)	2400.000	30.912	36.404	67.316			
01 (Average)	2411.200	30.944	72.164	103.108			

Figure Channel 01:

VERTICAL (Peak)





VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 - Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(WITIZ)	(uB)	(αρμν)	(ubµ v/m)	(ubµ v/m)	(ubµ v/m)	
11 (Peak)	2460.900	32.011	74.486	106.497			
11 (Peak)	2483.500	32.182	24.607	56.789	74.00	54.00	Pass
11 (Peak)	2487.700	32.213	27.647	59.861	74.00	54.00	Pass
11 (Average)	2461.300	32.014	70.561	102.575			
11 (Average)	2483.500	32.182	14.453	46.635	74.00	54.00	Pass
11 (Average)	2487.300	32.211	18.237	50.448	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)





Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.

- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
11 (Peak)	2460.900	31.283	74.380	105.663			
11 (Peak)	2483.500	31.435	25.520	56.955	74.00	54.00	Pass
11 (Peak)	2487.900	31.465	27.513	58.978	74.00	54.00	Pass
11 (Average)	2461.300	31.286	70.301	101.587			
11 (Average)	2483.500	31.435	14.447	45.882	74.00	54.00	Pass
11 (Average)	2487.700	31.463	18.105	49.569	74.00	54.00	Pass

Figure Channel 11:

VERTICAL (Peak)



Figure Channel 11:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHZ)	(dB)	(αΒμν)	$(dB\mu V/m)$	(dBµV/m)	(aBµV/m)	
01 (Peak)	2390.000	31.509	40.168	71.677	74.00	54.00	Pass
01 (Peak)	2400.000	31.561	52.731	84.292			
01 (Peak)	2411.200	31.632	75.390	107.022			
01 (Average)	2390.000	31.509	22.414	53.923	74.00	54.00	Pass
01 (Average)	2400.000	31.561	31.340	62.901			
01 (Average)	2411.000	31.630	60.959	92.589			

Figure Channel 01:

Horizontal (Peak)



Figure Channel 01:

Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: $RBW = \hat{1}MHz$, $VBW = \hat{3}MHz$, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel NO.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
01 (Peak)	2390.000	30.915	39.608	70.523	74.00	54.00	Pass
01 (Peak)	2400.000	30.912	50.618	81.530			
01 (Peak)	2412.000	30.950	76.724	107.673			
01 (Average)	2390.000	30.915	21.959	52.874	74.00	54.00	Pass
01 (Average)	2400.000	30.912	31.295	62.207			
01 (Average)	2411.400	30.945	61.569	92.514			

Figure Channel 01:

VERTICAL (Peak)





VERTICAL (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.

- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
11 (Peak)	2462.100	32.020	76.312	108.332			
11 (Peak)	2483.500	32.182	40.187	72.369	74.00	54.00	Pass
11 (Average)	2461.100	32.013	61.005	93.018			
11 (Average)	2483.500	32.182	21.169	53.351	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)









- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Decult
	(MHz)	(dB)	(dBµV)	(dBµV/m)	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
11 (Peak)	2461.700	31.288	74.783	106.071			
11 (Peak)	2483.500	31.435	40.362	71.797	74.00	54.00	Pass
11 (Average)	2460.900	31.283	60.576	91.859			
11 (Average)	2483.500	31.435	20.849	52.284	74.00	54.00	Pass



VERTICAL (Peak)





VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
01 (Peak)	2389.400	31.507	41.374	72.881	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	40.467	71.976	74.00	54.00	Pass
01 (Peak)	2400.000	31.561	50.690	82.251			
01 (Peak)	2410.000	31.624	74.540	106.164			
01 (Average)	2390.000	31.509	20.300	51.809	74.00	54.00	Pass
01 (Average)	2400.000	31.561	27.234	58.795			
01 (Average)	2411.200	31.632	59.684	91.316			



Horizontal (Peak)





Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2389.200	30.919	41.850	72.769	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	40.079	70.994	74.00	54.00	Pass
01 (Peak)	2400.000	30.912	51.686	82.598			
01 (Peak)	2411.000	30.942	75.275	106.217			
01 (Average)	2390.000	30.915	20.217	51.132	74.00	54.00	Pass
01 (Average)	2400.000	30.912	27.333	58.245			
01 (Average)	2411.200	30.944	60.442	91.386			

Figure Channel 01:

VERTICAL (Peak)





VERTICAL (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.

- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHZ)	(dB)	(dBµV)	(dBµv/m)	(abµv/m)	(авµv/m)	
11 (Peak)	2461.900	32.018	73.975	105.994			
11 (Peak)	2483.500	32.182	39.347	71.529	74.00	54.00	Pass
11 (Peak)	2485.100	32.194	41.051	73.245	74.00	54.00	Pass
11 (Average)	2460.900	32.011	59.480	91.491			
11 (Average)	2483.500	32.182	19.321	51.503	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)



Figure Channel 11:

Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

- 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Dogult
	(MHz)	(dB)	(dBµV)	(dBµV/m)	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
11 (Peak)	2459.900	31.276	73.929	105.205			
11 (Peak)	2483.500	31.435	40.054	71.489	74.00	54.00	Pass
11 (Average)	2461.100	31.285	61.425	92.709			
11 (Average)	2483.500	31.435	21.256	52.691	74.00	54.00	Pass



VERTICAL (Peak)





VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



:	Notebook
:	Band Edge Data
:	No.3 OATS
:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)
	:

Channal Ma	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBµV)	(dBµV/m)	(dBµV/m)	$(dB\mu V/m)$	Result
03 (Peak)	2389.200	31.506	42.267	73.773	74.00	54.00	Pass
03 (Peak)	2390.000	31.509	40.453	71.962	74.00	54.00	Pass
03 (Peak)	2400.000	31.561	45.821	77.382			
03 (Peak)	2420.200	31.701	70.811	102.512			
03 (Average)	2390.000	31.509	22.278	53.787	74.00	54.00	Pass
03 (Average)	2400.000	31.561	24.281	55.842			
03 (Average)	2420.200	31.701	53.618	85.319			

Figure Channel 03:

Horizontal (Peak)



Figure Channel 03:

Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
03 (Peak)	2390.000	30.915	42.543	73.458	74.00	54.00	Pass
03 (Peak)	2400.000	30.912	45.822	76.734			
03 (Peak)	2420.200	31.005	71.563	102.568			
03 (Average)	2390.000	30.915	23.043	53.958	74.00	54.00	Pass
03 (Average)	2400.000	30.912	25.092	56.004			
03 (Average)	2424.200	31.033	56.919	87.951			

Figure Channel 03:

VERTICAL (Peak)





VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.

 - 4. "*", means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2450.100	31.928	69.988	101.917			
09 (Peak)	2483.500	32.182	41.600	73.782	74.00	54.00	Pass
09 (Average)	2450.100	31.928	52.935	84.864			
09 (Average)	2483.500	32.182	19.295	51.477	74.00	54.00	Pass

Figure Channel 09:

Horizontal (Peak)





Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.

- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
09 (Peak)	2453.500	31.232	69.705	100.937			
09 (Peak)	2483.500	31.435	41.660	73.095	74.00	54.00	Pass
09 (Average)	2453.700	31.234	52.545	83.778			
09 (Average)	2483.500	31.435	19.075	50.510	74.00	54.00	Pass

Figure Channel 09:

VERTICAL (Peak)



Figure Channel 09:

VERTICAL (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
2412	40.20	>20	PASS
2462	59.24	>20	PASS

🚺 Key	sight Spe	ctrum (Analyzer - Sv	vept SA								
Cent	ter Fr	req (50 s	00000 GH	z	SEI	NSE:INT	Avg Typ	ALIGN AUTO	07:25:56 P	E 1 2 3 4 5 6	Frequency
10 dE	Vidiv	Ref	Offset 0.	5 dB	VO: Fast G	#Atten: 3	0 dB	Avginou	Mkr1 2	.410 99: 7.7	2 5 GHz 61 dBm	Auto Tune
10.5 0.500												Center Freq 2.40000000 GHz
-19.5 -29.5 -39.5						. white	₩.		Wy			Start Freq 2.35000000 GHz
-49.5 -59.5 -69.5		*****			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				¥ ا		honeror	Stop Freq 2.45000000 GHz
Cent #Res	ter 2.4 s BW	4000 100	0 GHz kHz		#VBV	V 300 kHz		S	weep 10	Span 1 .67 ms (4	00.0 MHz 0001 pts)	CF Step 10.000000 MHz <u>Auto</u> Man
1 2 3 4 5 6 7 8 9 10 11				2.410 992 1	5 GHz 0 GHz	7.761 di -32.439 di	3m 3m					Freq Offset 0 Hz
MSG									STATUS	i i		

2462MHz





Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
2412	30.72	>20	PASS
2462	39.21	>20	PASS

🗱 Keysight Spectrum Analyzer - Swept SA	- 2 -
RF 50 Ω AC SENSE:INT ALIGN AUTO 07:26:32 PM Oct 08, 2013 Center Freq 2.400000000 GHz Tria: Fran Pure Avg Type: Log-Pwr TRACE [1:2345	Frequency
PNO: Fast THE REAL AVEING TO DET PINNIN IFGain:Low #Atten: 30 dB	Auto Tune
Ref Offset 0.5 dB Mkr1 2.413 235 0 GH2 10 dB/div Ref 20.50 dBm 4.668 dBm	
	Center Fred
0500	2.400000000 GHz
9.50	1
-195	Start Freq 2 35000000 GHz
	2.00000000000
	Stop Freq
69.5	2.45000000 GHz
Center 2.40000 GHz Span 100.0 MH	CF Step
#Res BW 100 kHz #VBW 300 kHz Sweep 10.67 ms (40001 pts	10.000000 MHz
MKR MKR MODE FUNCTION FUNCTION WIDTH FUNCTION VALUE A 1 N 1 f 2.413 235 0 GHz 4.668 dBm FUNCTION FUNCTION WIDTH FUNCT	
2 N 1 f 2.400 000 00 GHz -26.055 dBm	Freq Offset
	0 Hz
9 10 10 10 10 10 10 10 10 10 10 10 10 10	
	·
MSG STATUS	

2412MHz

arkor 1 2 4	50 Q		17	s	ENSE:INT		ALIGN AUTO	07:33:33 P	MOct 08, 2015 CE 1 2 3 4 5 6	Peak Search
arter 12.4	0527000	PI IFC	NO: Fast Sain:Low	Trig: Fre #Atten:	ee Run 30 dB	Avg Hold:	>100/100	TY D	PE MWWWWW ET P NNNNN	NextBook
Ref 0 dB/div Re	f Offset 0.5 f 20.50 d	dB Bm					Mkr1 2	.463 27 4.8	0 0 GHz 18 dBm	NextPeak
0.5			1							Next Pk Right
.50		- January	accided a							
9.5 9.5	منبود المالي			US BOARD	2					Next Pk Left
9.5	p				No. of the local diversity of	-	-			
9.5										Marker Delta
onter 2.4835	50 GHz							Span 1	00.0 MHz	
Res BW 100	kHz		#VE	300 kH	z	S'	weep 10	.67 ms (4	0001 pts)	Mkr→CF
1 N 1 f 2 N 1 f		2.463 270 2.483 500	0 GHz 0 GHz	4.818 c	iBm IBm			Ponen		
5 5			_							Mkr⊸RefLvl
6 7 8					_				— i	More
					_					1 of 2
<u>0</u> 1										

2462MHz

and the

- -

Notebook
Band Edge Data
No.3 OATS
Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
2412	32.31	>20	PASS
2462	42.30	>20	PASS

🊺 Keysigh	nt Spectre	um Ar	alyzer - S	wept SA													
Center	r Fre	RF q 2.	50 s	2 AC	00 GH	Ηz		SE7	NSE:1	INT	Avg T	ype:	LIGN AUTO	07:30:56 P	MOct 08, 2015 ≥ 1 2 3 4 5 6		Frequency
10 dB(d)	iv I	Ref	offset 0 20.50	.5 dB	P IF	NO: Fast Gain:Lov	, G	#Atten: 3	0 dE	3	Avgine	010.2	Mkr1 2	.413 27 3.8	0 0 GHz 27 dBm		Auto Tune
10.5 0.500			20.00							فلأطر	∳ ¹	×4	١				Center Freq 2.40000000 GHz
-19.5							ففنتجعه	matrix detection	2				Maddania	New York Street of the second	Media landa		Start Freq 2.350000000 GHz
-49.5 ++++++++++++++++++++++++++++++++++++	<u>ليانينين</u>																Stop Freq 2.45000000 GHz
Center #Res B	2.40 3W 10	000 00 k	GHz Hz			#\	/BW	300 kHz		FLING	TION	Sv	veep 10	Span 1 .67 ms (4	00.0 MHz 0001 pts)	Į	CF Step 10.000000 MHz Auto Man
1 N 2 N 3 4 5 6 7 8		f 1		2.4	13 270 3 000 0	0 GHz 0 GHz		3.827 df -28.485 df	Bm Bm	PUNC		FUNC		FUNCTI			Freq Offset 0 Hz
9 10 11 1								Ħ				_	STATUS				

2412MHz

Peak Search	07:33:04 PM Oct 08, 2015 TRACE 1 2 3 4 5 6 TYPE M	LIGN AUTO Log-Pwr >100/100	Avg Ty Avg Hol	Run	Trig: Free	lz	AC	50 Q 5328000	er 1 2.40	<mark>»</mark> Mark
Next Peak	463 280 0 GHz 3.540 dBm	Mkr1 2.4) dB	#Atten: 30	Sain:Low	idB Bro	Offset 0.6	Ref	0 48
Next Pk Right						1	abelation and a	20.30 (og 10.5 .500
Next Pk Left				2				ليبتلين	فللفيطعدان	9.5 - 19.5 - 19.5 -
Marker Delta	at the strength of the place which design	Arini inda di ka								.9.5 '9.5 '9.5
Mkr→CF	Span 100.0 MHz 67 ms (40001 pts)	weep 10.0	ICTION 1		/ 300 kHz	#VBV		0 GHz kHz	r 2.4835 BW 100	ent Res
Mkr→RefLvl				3m 3m	3.540 dE -38.763 dB) GHz) GHz	2.463 280 2.483 500			1 2 3 4 5
More 1 of 2										0 7 8 9 0
	,	STATUS								sg

2462MHz

🗱 Keysight Spectrum Analyzer - Swept SA



Product	:	Notebook
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
2422	36.71	>20	PASS
2452	38.38	>20	PASS

2422MHz

🊺 Keysight Sp	ectrum Analyzer -	Swept SA								- 2 -
or Center F	req 2.400	000000 GH	z	SET	NSE:INT	Avg Type	ALIGN AUTO	07:31:34 P	MOct 08, 2015	Frequency
10 dB/div	Ref Offset	0.5 dB 0 dBm	O: Fast G	#Atten: 3	0 dB	Auginoid	Mkr1 2	.424 522 -0.2	2 5 GHz 74 dBm	Auto Tune
10.5 0.500					مليلوليلم	فأمل لماما	م الماسانين الم	والمحاجل والمحاجز والمح		Center Freq 2.400000000 GHz
-19.5 -29.5 -39.5		الافتيار ور	anter anter anter		2		¥		-	Start Freq 2.35000000 GHz
-49.5 -59.5 -69.5	1,50,000,000,000,000,000,000,000,000,000									Stop Freq 2.45000000 GHz
Center 2. #Res BW	40000 GHz 100 kHz	×	#VBV	V 300 kHz	FUN	S	weep 10	Span 1 .67 ms (4	00.0 MHz 0001 pts)	CF Step 10.000000 MHz Auto Man
1 N 2 N 3 4 5 6		2.424 522 5 2.400 000 00	GHz	-0.274 dE -36.950 dE	3m 3m					Freq Offset 0 Hz
7 8 9 10 11									, •	
MSG							STATU	6		

2452MHz

🊺 Keysight Sp	ectrum Analyze	r - Swept SA				_		_		
🗭 Center F	^{R∉} req 2.48	50 Ω AC 3500000	GHz	Si Triat Fr	ENSE:INT	Avg Type	ALIGN AUTO	07:32:42 Pf TRAC	E 1 2 3 4 5 6	Frequency
10 dB(div	Ref Offs	et 0.5 dB	PNO: Fast IFGain:Low	#Atten:	30 dB	Auginola	Mkr1 2	.454 520 -0.2	0 0 GHz	Auto Tune
10.5 0.500	hindun laine	hey politiki, i	بسالنبية							Center Freq 2.483500000 GHz
-19.5 -29.5 -39.5		v		-	2	KİMANANILLI				Start Freq 2.433500000 GHz
-49.5 -59.5 -69.5								etteni ayılarin dir		Stop Freq 2.533500000 GHz
Center 2. #Res BW	48350 GI 100 kHz	łz	#V	BW 300 KH	z	s	weep 10	Span 1 .67 ms (4	00.0 MHz 0001 pts)	CF Step 10.000000 MHz Auto Man
MXX MODE T 1 N 2 N 3 4 5 6 6 7 8 9 9 9 10 11 11		× 2.454 5 2.483 5	20 0 GHz 00 0 GHz	* -0.257 d -38.639 d	IBm IBm	NCTION FUN	NOTION WADTH	FUNCTION		Freq Offset
MSG							STATUS			

7. Occupied Bandwidth

7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2014; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

 \pm 150Hz

7.6. Test Result of Occupied Bandwidth

Product	:	Notebook
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	8100	>500	Pass
06	2437	8100	>500	Pass
11	2462	8200	>500	Pass

Figure Channel 01:

Agilen	it Spec	ctrum	і Апа	alyzer - Swe	ept SA								
(XI RI Cen	ter	Fre	RF q 2	50 Ω 2.41200	AC		SEI		Avg Typ	ALIGN AUTO e: Log-Pwr	03:33:08 PI TRA TY	4 Sep 02, 2015 E 1 2 3 4 5 6 FE MWWWWW	Frequency
			Ref	Offset 0.5	iFC 5 dB	NU: Fast G Gain:Low	#Atten: 3) dB		Mkr	2 2.407	95 GHz	Auto Tune
10 di Loa	B/div		Ref	f 20.50 d	1Bm				1		Z.:	27 aBm	
10.5							2 mann	Lunan .	3			2.72 dBm	Center Freq
-9.50						ہمر	pv -		LA.				2.41200000 GH2
-19.5 -29.5					M. NOV	w				Man -			Start Freq 2.387000000 GHz
-39.5 -49.5	w	لم	~	$\sqrt{\sqrt{1}}$	VW V				Ŷ	V W	Mrsm	Japa Japa	
-59.5			+								Ý	w	Stop Freq 2.437000000 GHz
-69.5													
Cen #Re:	ter 2 s B\	2.41 N 1	20 00	0 GHz kHz		#VBV	V 300 kHz			Sweep 4	5 Span .800 ms (0.00 MHz 1001 pts)	CF Step 5.000000 MHz
MKR	MODE	TRC	SCL		×		Y 0.70 dl	FUN	CTION FL	JNCTION WIDTH	FUNCTI	DN VALUE	<u>Auto</u> Man
2 3 4	N N	1	f f		2.412 5 2.407 9 2.416 0	5 GHz 5 GHz 5 GHz	2.27 d 2.62 d	3m 3m 3m					Freq Offset 0 Hz
6 7		_											
9 10													
11 <												<u>×</u>	
MSG										STATUS	5		



							_						
Agilen	it Spec	trum /	Analyzer	- Swep	t SA								
XI R	L		RF	50 Ω	AC		SE	ENSE:INT		ALIGN AUTO	03:38:18 Pf	Ч Sep 02, 2015	_
Cen	ter	Frec	2.43	7000	000 GH	IZ NO: Fast (Trig: Fre	e Run	Avg T	'ype: Log-Pwr	TRAC	CE 1 2 3 4 5 6 PE MWWWWW	Frequency
					IFO	Gain:Low	#Atten: \$	30 dB			D	ET PINNNNN	
		_								Mk	r2 2 432	95 GHz	Auto Tune
10 d	B/div	R	ef Offse ef 20.	50 dl	dB Bm						2.	55 dBm	
LOG							(\ 1					
10.5							MARK	Mugas	$\langle \rangle$			2.73 dBm	Center Fred
0.500							Nound	¥ ····	WV4				2.437000000 GH
-9.50			-				J		$-\lambda_{-}$				
10 E						J _	'						
-15.5					~	Ast			لم ا	.n. h.			Start Free
-29.5					1. M	₩				way why and	- 4		2.412000000 GH
-39.5			10 100	. М	wy			_		U VM	MA MA		
.49.5	wy	J.	how	γ'							v / v v v	la sel	
-40.0	4	V ^{or}										and mar	Stop Free
-59.5													2 462000000 CH
-69.5													2.40200000 011
Cen	ter 2	2.437	'00 GH	z							Span 5	0.00 MHz	CF Step
#Re	s BV	V 10	0 kHz			#VB	W 300 kH	Z		Sweep	4.800 ms (1001 pts)	5.000000 MH
MKB	MODE	TRCI S	CL		Х		Y		FUNCTION	FUNCTION WIDT	H FUNCTIO	N VALLIE	<u>Auto</u> Mar
1	Ν	1	f		2.436 5	0 GHz	8.73 c	lBm					
2	Ν	1	f		2.432 9	5 GHz	2.55 c	IBm					
3	N	1	F		2.441 0	5 GHz	2.35 c	IBm					Frequise
5													0 H:
6													
7													
9		-											
10													
11			_									~	
٢												>	
MSG										STAT	US		

Figure Channel 06:

Figure Channel 11:





:	Notebook
:	Occupied Bandwidth Data
:	No.3 OATS
:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)
	:

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	15150	>500	Pass
06	2437	15150	>500	Pass
11	2462	15200	>500	Pass

Figure Channel 01:

Agilen	it Spe	ctrun	n Ana	alyzer - Sw	ept SA											
Cen	ter	Fre	RF q 2	50 Ω 2.41200	AC 00000 G	Hz		SEM		Avg	Туре	ALIGNAUTO :: Log-Pwr	03:48:47 P	M Sep 02, 20: CE 1 2 3 4 5	15 5 6	Frequency
10 di	B/div	,	Ref Ref	Offset 0.4	5 dB dBm	PNO: Fast FGain:Low	, -	#Atten: 30) dB			Mkr	2 2.404 -1.	40 GH 99 dBr	z n	Auto Tune
Log 10.5 0.500 -9.50							2	-l-loden) ³ ``[-0.37 dt	<u>Əm</u>	Center Freq 2.412000000 GHz
-19.5 -29.5 -39.5	-	wh	دمري	wyouthand	M-naphala	ndr ^{ad}					h _b	Philipping	*WyAllonaullyme	marthy	~	Start Freq 2.387000000 GHz
-49.5 -59.5 -69.5																Stop Freq 2.437000000 GHz
Cen #Re	ter : s B\	2.41 N 1	120 00	0 GHz kHz		#V	вw	300 kHz			(Sweep 4	Span 5 .800 ms (0.00 MH 1001 pt	lz s)	CF Step 5.000000 MHz
MKF 1 2 3 4 5	N N N N	1 1 1	f f f		× 2.413 2.404 2.419	25 GHz 40 GHz 55 GHz		5.63 df -1.99 df -0.46 df	3m 3m 3m	FUNCTION	FUN	ICTION WIDTH	FUNCTI	DN VALUE	• • • • • • • • • • • • • • • • • • •	Freq Offset 0 Hz
6 7 8 9 10 11								II.							>	
MSG												STATUS	5			



										-				
Agilent S	Spectru	m Ana	ılyzer - Sw	ept SA										
Cente	er Fr	_{RF} eq 2	50 Ω 2.4370	AC 00000 G	GHz		SEN	ISE:INT	Avg	, Type	LIGNAUTO	03:53:23P	M Sep 02, 2015 CE 1 2 3 4 5 6	Frequency
					PNO: Fast IFGain:Low	, -	#Atten: 30	dB				D		
10 dB/	/div	Ref Ref	Offset 0. 20.50	5 dB dBm							Mkr	2 2.429 -1.	40 GHz 91 dBm	
Log 10.5 -					—,	,—		1		3				Center Freq
0.500 -		-			,	┉╟┉╟┯	all and and the second	on Lord	hort-on X	- ۲			-0.25 dBm	2.437000000 GHz
-9.50 -										h				
-29.5 -			Mannak	howhown	YAN					M	munnum	www.	10 June 1	Start Freq
-39.5 🙀	-	WINIP			_								- www.slymany	2.4 12000000 0112
-49.5 -														Stop Freq
-69.5 -														2.462000000 GHz
Centé	er 2 <i>4</i>	370	0 GHz									Snan 5	0 00 MHz	CE Stan
#Res	BW	100	kHz		#V	BW 3	800 kHz			s	Sweep 4	.800 ms (1001 pts)	5.000000 MHz
	DDE TRI	SCI f		× 2.438	25 GHz		Y 5.75 dE	3m	UNCTION	FUN	CTION WIDTH	FUNCTI	DN VALUE	Auto Man
2 N 3 N	N 1 N 1	f f		2.429 2.444	40 GHz 55 GHz		-1.91 dE -0.26 dE	3m 3m						Freq Offset
4													=	0 Hz
7														
9 10														
11 <													>	
MSG											STATUS	5		

Figure Channel 06:

Figure Channel 11:

Agilent Spect	rum Analyzer - Swep	ot SA						
LXI RL	RF 50 Ω	AC	SENSE:	INT	ALIGN AUTO	04:00:06 PM	Sep 02, 2015	Fraguanay
Center F	req 2.46200	0000 GHz		Avg Type	∋:Log-Pwr	TRACE	123456	Frequency
		PNO: Fast IFGain:Low	#Atten: 30 dE	un B		DET	PNNNN	A
10 dB/div	Ref Offset 0.5 Ref 20.50 d	dB Bm			Mkr	2 2.454 4 -2.3	l0 GHz 3 dBm	
10.5		¢2	and a looker				-0.76 dBm	Center Freq
-9.50								2.40200000 0112
-19.5		and Walk work		"Me	MANNA MANNA	monteren		Start Freq
-39.5	down white where a second					A A A A A A A A A A A A A A A A A A A	WWWWWWWW	2.437000000 GHz
-49.5								Stop Freq
-69.5								2.487000000 GHz
Center 2 #Res BW	.46200 GHz / 100 kHz	#VI	BW 300 kHz		Sweep 4.	Span 50 800 ms (1	.00 MHz 001 pts)	CF Step 5.000000 MHz
MKR MODE 1	TRC SCL	× 2.463 25 GHz	5.24 dBm	FUNCTION FU	NCTION WIDTH	FUNCTION	I VALUE	Auto
2 N 3 N 4	1 f 1 f	2.454 40 GHz 2.469 60 GHz	-2.33 dBm -2.83 dBm					Freq Offset 0 Hz
6 7 9								
9 10								
11 <			Ш	ļ ļ			×	
MSG					STATUS			



Product	:	Notebook
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	15200	>500	Pass
06	2437	15200	>500	Pass
11	2462	15150	>500	Pass

Figure Channel 01:

Agiler	nt Spe	ctrun	n Ana	ılyzer - Sw	ept SA													
K R Cen	L Iter	Fre	RF q 2	50 Ω 2.41200	AC 00000	GH	z		SE			Avg T	уре	LIGNAUTO	04:04:35P TRA	M Sep 02, 20 CE 1 2 3 4 ! PF M MANAN	15 5 6	Frequency
10 d	B/div	,	Ref Ref	Offset 0.	5 dB d B m	PN IFG	0: Fast ain:Lov	k (#Atten: 3	0 dB	•			Mkr	2 2.404 -2.	40 GH 71 dBi	iz m	Auto Tune
Log 10.5 0.500 -9.50								2 	h, Andre Are		1 •••••		3			-1.10 d	Bm	Center Freq 2.412000000 GHz
-19.5 -29.5 -39.5	<mark>ويويدان</mark>	Maria	- Andrew	within	menalut	uhun	-						L V	an labor milliona	intration of the second second	Wwwww	Aug	Start Freq 2.387000000 GHz
-49.5 -59.5 -69.5																		Stop Freq 2.437000000 GHz
Cen #Re	ter : s Bi	2.41 N 1	20 00	0 GHz kHz			#\	/BW	300 kHz	2			5	Sweep 4	Span 5 .800 ms (0.00 MH 1001 pt	lz s)	CF Step 5.000000 MHz
MKR 1 2 3 4 5 6 7 8 9 10 11		1 1 1 1	SOL f f		× 2.4' 2.4'	13 25 04 40 19 60	GHz GHz GHz		4.90 d -2.71 d -2.98 d	Bm Bm Bm	FUNG		FUN		FUNCTI	DN VALUE		Freq Offset 0 Hz
MSG														STATUS	;			1



			8			
Agilent Spect	rum Analyzer - Swej	pt SA				
LXI RL	RF 50 Ω	AC	SENSE:INT	ALIGNAUTO	04:24:05 PM Sep 02, 2015	F actorian and
Center F	reg 2.43700	0000 GHz		Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
		PNO: Fast	Trig: Free Run		TYPE MWWWWWW	
		IFGain:Low	#Atten: 30 dB		DEILE MANANA	
				Mkr	2 2 429 40 GH7	Auto Tune
	Ref Offset 0.5	dB			-2 99 dBm	
10 dB/div	Ref 20.50 d	BM			-2.55 GDIII	
			1 1			
10.5		▲2		03		Center Freq
0.500			mounter production	abarter to y	-1.78 dBm	2.437000000 GHz
0.50		prove		- many		
-9.50		1				
-19.5						Ctort From
20.5		multorether		ังสารที่เป็นที่หางเกม	Aboline	StartFrey
-25.5	shanna www.				and a have been and and and and and and and and and an	2.412000000 GHz
-39.5 -39.5	90 V					
-49.5						
-0.0						Stop Freg
-59.5						2 462000000 CU-
-69.5						2.462000000 GH2
Center 2	43700 GHz				Spap 50 00 MHz	05.04+**
#Bac BM	100 612	#\/B1	M 300 KH2	Sween 4	200 mc (1001 ntc)	CF Step
Thes Div	TOO KITZ	#¥D	W JOO KIIZ	Sweep 4	.800 ms (100 ms)	5.000000 MHZ
MKR MODE T	RC SCL	X	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N '	f	2.438 30 GHz	4.22 dBm			
2 N '	1 f	2.429 40 GHz	-2.99 dBm			
<u> 3 N</u>	1 f	2.444 60 GHz	-2.86 dBm			FreqOffset
4						0 Hz
6						
7						
8						
9						
10						
11					<u> </u>	
MSG				STATUS		

Figure Channel 06:

Figure Channel 11:

Agilent Spec	trum Anal	yzer - Swep	ot SA								
(x/ RL Center	 Freq 2.	50 Ω 462000	AC 0000 GH	z	SEI		Avg Typ	ALIGNAUTO e: Log-Pwr	04:32:20 PI TRA	M Sep 02, 2015 CE 1 2 3 4 5 6	Frequency
	Ref C	Offset 0.5	dB	10: Fast ∟ Gain:Low	#Atten: 3	0 dB		45 GHz	Auto Tune		
10 dB/div Log 10.5 0.500		20.50 a	Bm	2 production	al _{al} and a	1 1	3				Center Freq 2.462000000 GHz
-19.5 -29.5 -39.5	why provident	www.	www.dat.lah					bonning hand	allow warry and	Norther Rolling	Start Freq 2.437000000 GHz
-49.5 -59.5 -69.5											Stop Freq 2.487000000 GHz
Center 2 #Res Bi	2.46200 N 100 k	GHz Hz		#VBI	V 300 kHz			Sweep 4	Span 5 .800 ms (0.00 MHz 1001 pts)	CF Step 5.000000 MHz
MXG MODE 1 N 2 N 3 N 4 5 6 7 7 8 9 10 10 11	TRC SCL 1 f 1 f 1 f		× 2.463 20 2.454 40 2.469 60	5 GHz 5 GHz D GHz	¥ 4.87 dl -1.25 dl -3.57 dl	Bm Bm Bm Bm		UNCTION WIDTH	FUNCTI		Freq Offset 0 Hz
MSG								STATUS	8	>	

Product	:	Notebook
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35200	>500	Pass
06	2437	35300	>500	Pass
09	2452	35300	>500	Pass

Figure Channel 03:

Agilent Spec	trum Analyzer - Sv	wept SA								
Center F	RF 50	Ω AC 000000 GH	z	SENS		Avg Type	ALIGNAUTO : Log-Pwr	04:36:38 P	M Sep 02, 2015 CE 1 2 3 4 5 6 PF M 4444444	Frequency
PN0: Fast #Atten: 30 dB Mkr2 2.404 4 GHz Ref Offset 0.5 dB -4.55 dBm -4.55 dBm										Auto Tune
10.5 0.500				A makel and a failed of the	∕∖¹ ™ ¹ 1 ¹ 1.1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1				-3.65 dBm	Center Freq 2.422000000 GHz
-19.5 -29.5 -39.5	And the first full of the first of the second se	<mark>nghipingat janya na Biblan</mark> ati	/				h-internationalises	honder and the local	hpthyl mage	Start Freq 2.372000000 GHz
-49.5 -59.5 -69.5										Stop Freq 2.472000000 GHz
Center 2.42200 GHz Span 100.0 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)										CF Step 10.000000 MHz
MKR MODE 1 N 2 N 3 N 4 5 6 7 7 8 9 10 11	TRC SCL 1 f 1 f 1 f	× 2.424 § 2.404 4 2.439 §	5 GHz 4 GHz 5 GHz	Y 2.35 dBr -4.55 dBr -3.87 dBr	FUN n n 			FUNCTI		Freq Offset


					0						
Agilent Sp	pectrum A	nalyzer - S	wept SA								
LXI RL	F	.F 50	Ω AC		SEI	VSE:INT		ALIGN AUTO	04:40:56 PI	4 Sep 02, 2015	F actoria and
Cente	r Freq	2.4370	000000 G	Hz	1	_	Avg Type	e: Log-Pwr	TRA	CE 1 2 3 4 5 6	Frequency
				PNO: Fast 🖵	Trig: Free	e Run			TY	PEM WWWWWW FTPNNNN	
			I	FGain:Low	#Atten: 30	1 98			0		Auto Tuno
								Mk	r2 2.41	Auto Tune	
	D	of 20 50	dBm						-4.	88 dBm	
Log		20.30		1			1				
10.5						1					Contor From
10.0				•2		$ \rangle$					Center Freq
0.500				• • • • • • • • • • • • • • • • • • •	J. L. Lol July	ل السليم المالية الم				-3.88 dBm	2.437000000 GHz
-9.50				ويستعد المهال الم							
						ĺ	1				
-19.5				1			1				Start Freg
-29.5		4.	A CONTRACTOR				· · · · ·	"Million and	Hallon - 41 -		2 297000000 CH-
	-	A for the second								which the way	2.367000000 GH2
-39.5 📈	LADY CONTRACT										
-49.5				-							
50 E											Stop Freq
-59.5											2.487000000 GHz
-69.5											
Cente	r 2.437	00 GHz							Span 1	00.0 MHz	CE Sten
#Res E	BW 100) kHz		#VBW	300 kHz		-	Sweep 9	.600 ms (1001 pts)	10.000000 MHz
										,	Auto Man
MKR MOD	DE TRC SO	1	×		Y	FUN	ICTION FUN	ICTION WIDTH	FUNCTI	ON VALUE	<u>/ (ato</u>)
1 N	1 f	_	2.439	95 GHz	2.12 dl	Bm					
2 N			2.41	4 GHZ	-4.88 di	3m					Eron Offect
			2.404		-0.47 ui	5111					i i cq onsci
5										=	0 Hz
6											
7											
8	+										
9	+ +										
11										~	
<					ш	,	1				
MSG								STATUS			
Wad								STATUS	·		

Figure Channel 09:

Agilen	it Spec	trum	Ana	lyzer - Sv	wept S	A															
Cen	ter	Fre	RF q 2	50 s 2.4520	Ω A 000	⊂ 00 G	Hz		_	Tri	SEN	NSE:II	nt	Avg	Туре	ALIGN AUTO : Log-Pwr	04:45:	24 PM TRAC	4 Sep 02, 20 E 1 2 3 4 5 E M MAAAAA	15 5 6	Frequency
10 d	B/div	F	Ref Ref	Offset 0	.5 dE	u s n	FGai): Fast in:Lov	v V	#At	ten: 30	dB				Mk	r2 2.4	434 -4.4	4 GH	iz n	Auto Tune
Log 10.5 0.500 -9.50									_₽ ∧ _₽ Ϳ.,		Julita	Ŷ	1 	سلم لهر	3 1				-3.86 d	Bm	Center Freq 2.452000000 GHz
-19.5 -29.5 -39.5	Martin	ليوني. المراجعين	mM	straphyrul	an a	a berta karala										horthousedwayedda	helen and the second	1.hrsh	whyhilatallia	~~	Start Freq 2.402000000 GHz
-49.5 -59.5 -69.5																					Stop Freq 2.502000000 GHz
Cen #Re	ter 2 s BV	2.45 V 10	200 00	0 GHz kHz				#V	вw	300	kHz			•	ę	Sweep 9	Spa .600 m	n 1 1s (00.0 MH 1001 pt	iz s)	CF Step 10.000000 MHz Auto Man
1 2 3 4 5 6 7 8 9 10 11 <						× 2.454 2.434 2.469	450	GHz GHz GHz		2	. <u>14 dE</u> . <u>58 dE</u> . <u>00 dE</u>	3m 3m 3m	FUNC				FUI		DN VALUE		Freq Offset 0 Hz
MSG																STATUS	5				

8. **Power Density**

8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.5. Uncertainty

 \pm 1.27 dB

8.6. Test Result of Power Density

Product	:	Notebook
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	7.860	< 8dBm	Pass
06	2437	7.850	< 8dBm	Pass
11	2462	7.710	< 8dBm	Pass

Figure Channel 01:

Agilen	it Spectru	m Analyzer	- Swep	ot SA								
الا Cen	ter Fr	^{RF} eq 2.41	50 Ω 2000	AC 0000 G	Hz	SEN		Avg Type	ALIGNAUTO : Log-Pwr	03:34:17 PM TRAC	4 Sep 02, 2015 E 1 2 3 4 5 6	Frequency
10 di	3/div	Ref Offse Ref 20.	et 0.5 d 50 di	dB 3m	NO: Wide 🕞 Gain:Low	#Atten: 30) dB		Mkr1	2.412 9 7.	96 GHz 86 dBm	Auto Tune
Log 10.5				A	n n	m	m	Δ_Λ	0			Center Freq 2.412000000 GHz
0.500 -9.50		mh	And	lun /m					hum have	hand		Start Freq 2.405925000 GHz
-19.5 -29.5												Stop Freq 2.418075000 GHz
-39.5 -49.5												CF Step 1.215000 MHz <u>Auto</u> Man
-59.5												Freq Offset 0 Hz
-69.5 Cen	ter 2.4	12000 G	Hz							Span 1	2.15 MHz	
#Re MSG	s BW 6	68 kHz			#VBW	1 300 kHz			Sweep 2	2.467 ms (s	1001 pts)	



					5		annei	00.			
Agiler	it Spectru	ım Analyzer - Swe	pt SA								
LXI R	L	RF 50 Ω	AC		SEM	ISE:INT		ALIGNAUTO	03:39:43 PM	Sep 02, 2015	
Cen	ter Fr	eq 2.43700	0000 GH	z]	_	Avg Type	: Log-Pwr	TRAC	E123456	Frequency
			PN	i0: Wide 🖵	#Atten: 30	e Run)dB			DE		
			IFC	am.cow	#ritectil of	- 40		Maland		Auto Tune	
		Ref Offset 0.5	dB					IVIKE	Z.435 4	93 GHZ	
10 dl	3/div	Ref 20.50 d	IBm						7.0	so abm	
209											
10.5				1							Center Freq
10.5				•							2.437000000 GHz
			. n .A	And	rowh	how	And	0			
0.500		Anna	Spont work	~~~		1	~~~	(margar	4 million	n	
		A			V	Ý					Start Freq
-9.50	L J	۴								<u> </u>	2.430925000 GHz
	~w									w.	
-19.5											
10.0											Stop Freq
											2.443075000 GHz
-29.5											
											05.04++
-39.5											1 215000 MHZ
											Auto Man
-49.5											
-59.5											Freq Offset
00.0											0 Hz
-69.5											
Can	tor 2 A	37000 CHz	I	1		I	1	1	Snan 1	2 15 MHz	
ue⊓ #Re	s BM (62 kHz		#VBM	300 kHz			Sween 3	3 000 ms (2.13 WF12 1001 nts)	
ance		VE 1111E			500 MIZ						
MSG								STATU	S		

Figure Channel 11:





:	Notebook
:	Power Density Data
:	No.3 OATS
:	Mode 2: Transmit (802.11g 6Mbps)
	: : : :

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	5.260	< 8dBm	Pass
06	2437	5.630	< 8dBm	Pass
11	2462	5.840	< 8dBm	Pass

gilent Spectr	um Analyzer - Swe	ept SA								
RL	RF 50 Ω	AC O	-	SEM	ISE:INT	A	ALIGN AUTO	03:49:07 PM	4 Sep 02, 2015	Frequency
enter F	req 2.41200	0000 GF	IZ NO:East] Trig: Free	Run	Avgiype	: Log-Pwr	TY	E M WWWW	
		IFO	Gain:Low	#Atten: 30	dB			DE		
	Ref Offset 0.5	dB					Mkr	1 2.413 2	95 GHz	Auto Tune
) dB/div	Ref 20.50 d	IBm						5.1	26 dBm	
^{,g} [
										Center Free
U.5					6 1−					2.412000000 GH
		A A	n A	Amer	was la	ΛЛ	ΑΛ			
500	wh	n month	and progen for	ALL R. W.	1	How was	al property	the los		Start From
	/***									2 400637500 CH
.50								կ		2.400637500 GH2
	محمي							- h		
9.5	a. M								ավ Նա նաև հրդա	Stop Free
Mr. Www	N .104								MA AIAN	2.423362500 GH
9.5										
9.5										2 272500 MH
										Auto Mar
9.5										
										E
9.5										FreqOffset
										0 H2
.9.5										
enter 2.4	41200 GHZ		#\/D\M	200 64-			Swoon	Span 2	2./3 MHz	
KES DW			#VDVV	JUU KHZ			aweep	2.200 ms (iou i pisj	
ŝG							STAT	US		



					- 15		ammer	00.			
Agiler	it Spectru	n Analyzer - Swo	ept SA								
LXI R	L	RF 50 Ω	AC		SEN	ISE:INT		ALIGN AUTO	03:53:44 PN	1 Sep 02, 2015	F arment
Cen	ter Fre	eq 2.43700	00000 GH	z]	_	Avg Type: Log-Pwr			E 1 2 3 4 5 6	Frequency
			P	NO:Fast 🖵	Trig: Free #Atten: 30	e Run)dB			DE		
			154	34111.2.0₩	#rittern. et			Miland	0.420.0	EA CUL	Auto Tune
		Ref Offset 0.5	5 dB					WIKF			
10 di	3/div	Ref 20.50 d	dBm						э.	os abm	
LVg											
											Center Freq
10.5						▲ ¹					2.437000000 GHz
					Λ.	۸.	A				
0.500		ll N.	- Around	marcont	mariliniting	mm	Howwww	feel barandly.	hud		
		NM 4 W	1		6	Į.			- www. www.		Start Freq
-9.50											2.425637500 GHz
0.00		8							۲ <u>۱</u>		
		J.							۱ ^۱ ۷	м	
-19.5		1 ¹¹								Mr. VIr.	Stop Freq
	WWW	N								CALL/MAR	2.448362500 GHz
-29.5	-										
-39.5											CF Step
											2.272500 MHz
10 F											<u>Auto</u> Man
-49.5											
											Fred Offset
-59.5									-		
											0 HZ
-69.5											
Cen	ter 2.43	3700 GHz							Span 2	2.73 MHz	
#Re	s BW 1	00 kHz		#VBW	300 kHz			Sweep 2	2.200 ms (1001 pts)	
MSG								STATU	s		
								olato			

Figure Channel 11:

Agile	nt Spectru	m Analyzer - Sw	rept SA								
(X) R Cer	ter Fr	RF 50 Ω eq 2.46200	AC 00000 GH	lz	SEI		Avg Type	ALIGN AUTO : Log-Pwr	04:00:27 Pf TRAC	4 Sep 02, 2015	Frequency
10 d	B/div	Ref Offset 0.9	5 dB d B m	NO: Fast (Gain:Low	#Atten: 30) dB		Mkr1	2.463 2 5.	54 GHz 84 dBm	Auto Tune
10.5						 1-					Center Freq 2.462000000 GHz
0.500 -9.50		John	Month	www.	And bowing	provid lason	Arway	⊶∿∽≁∿∽	mlm		Start Freq 2.450600000 GHz
-19.5	Ymrywl	nt							N _r	Winner	Stop Freq 2.473400000 GHz
-39.5											CF Step 2.280000 MHz <u>Auto</u> Man
-49.5 -59.5											Freq Offset 0 Hz
-69.5											
Cen #Re	iter 2.4 s BW /	6200 GHz 100 kHz		#VBW	300 kHz		:	Sweep 2	Span 2 2.200 ms (2.80 MHz 1001 pts)	

Product	:	Notebook
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	4.770	< 8dBm	Pass
06	2437	4.830	< 8dBm	Pass
11	2462	4.860	< 8dBm	Pass

Figure Channel 01:	Figure	Channel	01:
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Center Fr	RF 50 Ω ea 2.41200	AC		OFF						
		0000 GH	z			Avg Type	ALIGNAUTO : Log-Pwr	04:04:57 PM TRAC	E 1 2 3 4 5 6	Frequency
10 dB/div	Ref Offset 0.5 Ref 20.50 d	dB IBm	NO: Fast ⊂ ⊢ Gain:Low	#Atten: 30) dB		Mkr	1 2.413 2 4.	54 GHz 77 dBm	Auto Tune
10.5					1−					Center Freq 2.412000000 GHz
-9.50	ronth	man	waterout	monton	prover the work	Amerikan	Ann	while any w		Start Freq 2.400600000 GHz
-19.5 -29.5	<i>p</i>								monter	Stop Freq 2.423400000 GHz
-39.5										CF Step 2.280000 MHz <u>Auto</u> Man
-59.5										Freq Offset 0 Hz
-69.5 Center 2.4 #Res BW 1	1200 GHz 100 kHz		#VBW	300 kHz			Sweep	Span 2 2.200 ms (2.80 MHz 1001 pts)	



					- 15		iamici	00.			
Agiler	nt Spectrur	n Analyzer - Sw	ept SA								
lxi r	L	RF 50 Ω	AC		SEN	ISE:INT		ALIGN AUTO	04:24:26 PM	1 Sep 02, 2015	Erequency
Cer	nter Fre	eq 2.43700	<u>00000 GH و0000</u> ۱۴۱	 Z NO: Fast 🖵 Gain:Low	Run dB	Avg Type	e: Log-Pwr	TRAC TYF DE	E 1 2 3 4 5 6 E M WWWW T P N N N N N	requency	
10 d	B/div	Ref Offset 0.9 Ref 20.50 (5 dB dBm					Mkr1	2.438 2	77 GHz 83 dBm	Auto Tune
Log 10.5						1 1					Center Freq 2.437000000 GHz
0.500		mante	March	natural	worklam	panalina	Mun tim	Anna	mbury		Start Freq
-9.50											2.425600000 GHz
-19.5	havh	<i>J</i> [*]								Mapping	Stop Freq 2.448400000 GHz
-39.5											CF Step 2.280000 MHz <u>Auto</u> Man
-59.5											Freq Offset 0 Hz
-69.5											
Center 2.43700 GHz Span 22.80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.200 ms (1001 pts)											
MSG								STATUS	3		

Figure Channel 11:

Agiler	Agilent Spectrum Analyzer - Swept SA													
Cer	ter Fr	RF 50 Ω eq 2.46200	AC 00000 GH	lz	SEr		Avg Type	ALIGN AUTO : Log-Pwr	04:32:41 PM TRAC	4 Sep 02, 2015 E 1 2 3 4 5 6	Frequency			
10 d	Ref Offset 0.5 dB Mkr1 2.463 250 GHz 10 dB/div Ref 20.50 dBm													
Log 10.5						1-					Center Freq 2.462000000 GHz			
0.500 -9.50		provalu	Mound	nntnamh	wabara	pr. Arright or of the	A human freed	Am	mhom		Start Freq 2.450637500 GHz			
-19.5	hur	~ ~								U Vunnavunna	Stop Freq 2.473362500 GHz			
-39.5											CF Step 2.272500 MHz <u>Auto</u> Man			
-49.5											Freq Offset 0 Hz			
-69.5 Cen #Re	ter 2.4 s BW 1	6200 GHz 100 kHz		#VBW	300 kHz			Sweep :	Span 2 2.200 ms (2.73 MHz 1001 pts)				
MSG								STATU	IS		[<u>.</u>]			

Product	:	Notebook
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
03	2422	2.350	< 8dBm	Pass
06	2437	2.150	< 8dBm	Pass
09	2452	2.150	< 8dBm	Pass

Agiler	nt Spectru	m Analyzer - Sw	ept SA								
Cen	ter Fr	RF 50Ω eq 2.42200	AC 00000 GH	lz	SEI		Avg Type	ALIGN AUTO : Log-Pwr	04:36:59 PM TRAC	4 Sep 02, 2015 E 1 2 3 4 5 6	Frequency
10 di	B/div	Ref Offset 0.9 Ref 20.50 (odB dBm	NO: Fast (Gain:Low	#Atten: 30) dB		Mk	Auto Tune		
10.5						♦ ¹					Center Freq 2.422000000 GHz
0.500 -9.50		plur	hollowhole	ann halan ha	whenter	montend	halanta	ohadanlah	whenter		Start Freq 2.395600000 GHz
-19.5 -29.5	allinger all	www.								Mullmonupi	Stop Freq 2.448400000 GHz
-39.5 -49.5											CF Step 5.280000 MHz <u>Auto</u> Man
-59.5											Freq Offset 0 Hz
-69.5 Cen #Re	ter 2.4: s BW 1	2200 GHz 00 kHz		#VBW	/ 300 kHz			Sweep (Span 5 5.067 ms (2.80 MHz 1001 pts)	
MSG								STATU	S		



_					8							
Agiler	nt Spectru	m Analyzer - Sw	ept SA									
L XI R	L	RF 50 Ω	AC		SEM	ISE:INT		ALIGN AUTO	04:41:16 F	M Sep 02, 2015	F arana and	
Cen	ter Fr	eq 2.43700	00000 GH	z]	_	Avg Type	: Log-Pwr	TRA	CE 1 2 3 4 5 6	Frequency	
			Р	NO: Fast 🖵	Trig: Free	Run			1			
			15	Jain:Low								
		Ref Offset 0.	1 2.439	49 GHz	Auto Tulic							
10 dl	0 dB/div Ref 20.50 dBm 2.15 dBm											
Log												
											Center Frea	
10.5											2 43700000 GHz	
						▲1					2.407000000 0112	
						📍						
0.500				0.1.0.	hanner	www.	1.6.6	1.1.1.4			04 + F	
			A HAM HAMAN	rowellinghaptho	1141.4.	www.	and happing have	and work was been a	olunte		StartFreq	
-9.50		- Prove	vn .								2.410525000 GHz	
40.5									1 1			
-19.5											Stop Freq	
		1 1 -							"N	والمرائد وبالتربية	2.463475000 GHz	
-29.5	w. ahmretal	A MARTIN							9	mather the second s		
	which is the											
20.5											CF Step	
-39.5											5.295000 MHz	
											<u>Auto</u> Man	
-49.5									-			
-59.5											Freq Offset	
											0 Hz	
-69.5												
Cen	ter 2.4	3700 GHz							Span 🗄	52.95 MHz		
#Re	s BW 1	00 kHz		#VBW	300 kHz			Sweep 5	6.067 ms	(1001 pts)		
MSG								STATU	s			

Figure Channel 09:

_					8						
Agile	nt Spectru	ım Analyzer - !	Swept SA								
LXI R	L	RF 50	Ω AC		SEM	SE:INT		ALIGN AUTO	04:45:44 Pf	4 Sep 02, 2015	_
Cer	nter Fr	ea 2.452	000000 G	Hz			Avg Type	: Log-Pwr	TRAC	E123456	Frequency
				NO: Fast 🕞	🚽 Trig: Free	Run			TY		
			IF	Gain:Low	#Atten: 30)dB			D		
		-						Mkr	1 2.454	54 GHz	Auto Tune
10 -	D / alia	Ref Unset	U.5 dB						2	15 dBm	
Log	Biaiv	Rei 20.50	JUBIII	-						ie ubiii	
1 0											A
											Center Freq
10.5						-					2.452000000 GHz
						≜ !					
0.500						.					
			1 C. A. And	marcharlasta	how when the	monthe	Manhallow	alynem 1	n 1		Start Fred
		المر	What have					- Why	Musha		2 425525000 CH
-9.50											2.425525000 GH2
-19.5											
10.0		1 2							1 4		Stop Freq
									W.L.	have been a set	2.478475000 GHz
-29.5	hhlen	hin the								addi officiation of the	
	ľ										
39.6											CF Step
-35.5											5.295000 MHz
											<u>Auto</u> Man
-49.5											
50 E											Freq Offset
-30.3											0 Hz
-69.5											
Cen	nter 2.4	5200 GHz							Span 5	2.95 MHz	
#Re	s BW	100 kHz		#VBW	300 kHz		:	Sweep 5	.067 ms (1001 pts)	
MEG	_							OT ATL	,	,	
MSG								STATUS			

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.