FCC Test Report

Product Name	TABLET PC
Model No.	PM-522
FCC ID.	2ABTU-PM-522

Applicant	RuggON Corporation
Address	3F., No.129, Minquan Rd., Xindian Dist., New Taipei City 23141, Taiwan

Date of Receipt	July. 08, 2014
Issued Date	Aug. 11, 2014
Report No.	1470210R-RFUSP73V00
Report Version	V1.0



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 of the equipment and evaluated measurement uncertainty herein.

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Test Report

Issued Date: Aug. 11, 2014 Report No.: 1470210R-RFUSP73V00



Product Name	TABLET PC		
Applicant	RuggON Corporation		
Address	3F., No.129, Minquan Rd., Xindian Dist., New Taipei City 23141, Taiwan		
Manufacturer	Ubiqconn Technology,Inc.		
Model No.	PM-522		
FCC ID.	2ABTU-PM-522		
EUT Rated Voltage	AC 100-240V, 50-60Hz		
EUT Test Voltage	AC 120V/ 60Hz		
Trade Name	RuggON		
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2013		
	ANSI C63.10: 2009		
Test Result	Complied		

Documented By

:

:

:

Genie Chang

(Senior Adm. Specialist / Genie Chang)

Tested By

Jemy Isai

(Engineer / Jerry Tsai)

Approved By

(Director/Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	TABLET PC	
Trade Name	RuggON	
Model No.	PM-522	
FCC ID.	2ABTU-PM-522	
Frequency Range	2402 – 2480MHz	
Channel Number	79	
Type of Modulation	FHSS: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps)	
Antenna Type	PCB Antenna	
Channel Control	Auto	
Antenna Gain	Refer to the table "Antenna List"	
Power Adapter	MFR: FSP, M/N: FSP065-REB	
	Input: 100-240Vac, 50-60 Hz, 1.5A	
	Output: 19Vdc, 3.42A	
	Cable Out: Non-Shielded, 1.6m, with one ferrite core bonded.	
Contain Module	Intel / 3160HMW	

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WIESON	GY196C098-081 (Main)	PCB Antenna	3.24dBi for 2.4 GHz
		GY196C098-082 (Aux)		

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

Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

- 1. The EUT is a TABLET PC with a built-in WLAN
 Bluetooth and NFC transceiver, this report for Bluetooth.
- 2. These tests were conducted on a sample for the purpose of demonstrating compliance of Bluetooth transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
- 3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 4. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
- 5. Bluetooth operation was evaluated at both 1Mb/s and 3Mb/s data rates. 2Mb/s data rate was found, through pre-testing, to produce emissions similar to those for 3Mb/s.

Test Mode	Mode 1: Transmit - 1Mbps (GFSK)
	Mode 2: Transmit - 3Mbps (8DPSK)

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)	Keyboard	Dell	SK-8175	MY-0W217F-71619-092-0492-A01	N/A
(2)	USB Mouse	Logitech	M-U0003	LZ024HR	N/A
(3)	Earphone	AIWA	N/A	N/A	N/A
(4)	USB to LAN	RuggON	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
А	Keyboard Cable	Shielded, 1.8m
В	Mouse Cable	Shielded, 1.8m
С	Earphone Cable	Non-Shielded, 1.2m
D	LAN Cable	Non-Shielded, 1.6m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4.
- (2) Execute software "DRTU-v1.7.3.859" on the EUT
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

	-	
Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	30-65
Barometric pressure (mbar)	860-1060	950-1000

Ambient conditions in the laboratory:

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/tw/ctg/cts/accreditations.htm</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
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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., 2013	
Х	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2014	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2014	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2014	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2014	
	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



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

2.3. Limits

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and Peripherals 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 refer 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 the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.

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

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product	:	TABLET PC
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK) (2441MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.193	9.650	38.270	47.920	-16.851	64.771
0.275	9.655	24.110	33.765	-28.664	62.429
0.474	9.665	24.110	33.775	-22.968	56.743
0.654	9.675	33.340	43.015	-12.985	56.000
1.029	9.696	26.320	36.016	-19.984	56.000
2.947	9.797	21.290	31.087	-24.913	56.000
Average					
0.193	9.650	28.350	38.000	-16.771	54.771
0.275	9.655	8.720	18.375	-34.054	52.429
0.474	9.665	14.330	23.995	-22.748	46.743
0.654	9.675	25.630	35.305	-10.695	46.000
1.029	9.696	16.490	26.186	-19.814	46.000
2.947	9.797	10.530	20.327	-25.673	46.000

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	: TABLET PC				
Test Item	: Conducted Emission Test				
Power Line	: Line 2				
Test Mode	: Mode 2: Tr	ansmit - 3Mbps	(8DPSK) (2441MHz)	
		_			
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.205	9.661	35.220	44.881	-19.548	64.429
0.283	9.664	24.490	34.154	-28.046	62.200
0.396	9.661	22.260	31.921	-27.050	58.971
0.611	9.673	32.840	42.513	-13.487	56.000
0.826	9.695	29.430	39.125	-16.875	56.000
1.416	9.727	26.320	36.047	-19.953	56.000
Average					
0.205	9.661	26.850	36.511	-17.918	54.429
0.283	9.664	15.540	25.204	-26.996	52.200
0.396	9.661	14.480	24.141	-24.830	48.971
0.611	9.673	24.310	33.983	-12.017	46.000
0.826	9.695	19.390	29.085	-16.915	46.000
1.416	9.727	14.770	24.497	-21.503	46.000

- 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, 2014
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2014

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

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

3.2. Test Setup



3.3. Limit

The maximum peak power shall be less 1Watt.

3.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

 \pm 1.27 dB

3.6. Test Result of Peak Power Output

Product	:	TABLET PC
Test Item	:	Peak Power Output
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

Channel No.	Frequency Measurement		Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	5.75	1 Watt= 30 dBm	Pass
Channel 39	2441.00	5.73	1 Watt= 30 dBm	Pass
Channel 78	2480.00	5.79	1 Watt= 30 dBm	Pass

Product	:	TABLET PC
Test Item	:	Peak Power Output
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Channel No.	Frequency	Measurement	Required Limit	Result
	(MHz)	(dBm)		
Channel 00	2402.00	0.42	1 Watt= 30 dBm	Pass
Channel 39	2441.00	0.43	1 Watt= 30 dBm	Pass
Channel 78	2480.00	0.47	1 Watt= 30 dBm	Pass

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	Site # 3 X Loop Antenna T		Teseq	HLA6120 / 26739	Jul., 2014
	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2014
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

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

4.2. Test Setup

Below 1GHz



Above 1GHz



4.3. Limits

General Radiated Emission 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 Limits						
Frequency MHz	uV/m @3m	dBµV/m@3m				
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: 1. RF Voltage $(dB\mu V) = 20 \log RF$ Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 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, 2009 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 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

Product	: TABLET PC					
Test Item	: Harmonic Radiated Emission					
Test Site	: No.3 OATS					
Test Mode	: Mode 1:	Transmit - 1Mbp	os (GFSK)(2402MHz))		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$	
Horizontal						
Peak Detector:						
4804.000	2.511	43.980	46.490	-27.510	74.000	
7206.000	9.511	41.580	51.091	-22.909	74.000	
9608.000	10.394	40.400	50.794	-23.206	74.000	
Average						
Detector:						
Vertical						
Peak Detector:						
4804.000	2.923	44.840	47.762	-26.238	74.000	
7206.000	9.988	41.090	51.079	-22.921	74.000	
9608.000	10.847	40.900	51.747	-22.253	74.000	
Average						
Detector:						

4.6. Test Result of Radiated Emission

- 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	: TABLET PC				
Test Item	: Harmonic Radiated Emission				
Test Site	: No.3 OA	ATS			
Test Mode	: Mode 1:	: Transmit - 1Mbp	os (GFSK)(2441MHz))	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4882.000	2.025	44.480	46.505	-27.495	74.000
7323.000	9.762	40.480	50.241	-23.759	74.000
9764.000	9.682	40.260	49.941	-24.059	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4882.000	2.488	45.520	48.008	-25.992	74.000
7323.000	10.375	40.930	51.304	-22.696	74.000
9764.000	10.315	40.430	50.745	-23.255	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	: TABLET PC				
Test Item	Harmonic Radiated Emission				
Test Site	: No.3 OA	ТS			
Test Mode	: Mode 1:	Transmit - 1Mbp	s (GFSK)(2480MHz)	1	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	dBµV/m
Horizontal					
Peak Detector:					
4960.000	2.582	44.560	47.142	-26.858	74.000
7440.000	10.555	39.500	50.055	-23.945	74.000
9920.000	10.206	39.450	49.656	-24.344	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4960.000	3.398	45.980	49.379	-24.621	74.000
7440.000	11.214	39.030	50.244	-23.756	74.000
9920.000	11.245	39.900	51.145	-22.855	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	: TABLET PC					
Test Item	: Harmonic Radiated Emission					
Test Site	: No.3 OA	ATS				
Test Mode	: Mode 2	: Transmit - 3Mbp	os (8DPSK)(2402MH	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:						
4804.000	2.511	45.660	48.170	-25.830	74.000	
7206.000	9.511	41.450	50.961	-23.039	74.000	
9608.000	10.394	40.180	50.574	-23.426	74.000	
Average						
Detector:						
Vertical						
Peak Detector:						
4804.000	2.923	46.240	49.162	-24.838	74.000	
7206.000	9.988	41.030	51.019	-22.981	74.000	
9608.000	10.847	40.340	51.187	-22.813	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	: TABLET PC					
Test Item	: Harmonic Radiated Emission					
Test Site	: No.3 OA	: No.3 OATS				
Test Mode	: Mode 2:	Transmit - 3Mbp	os (8DPSK) (2441MH	[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:						
4882.000	2.025	47.270	49.295	-24.705	74.000	
7323.000	9.762	40.730	50.491	-23.509	74.000	
9764.000	9.682	40.170	49.851	-24.149	74.000	
Average						
Detector:						
Vertical						
Peak Detector:						
4882.000	2.488	47.930	50.418	-23.582	74.000	
7323.000	10.375	40.810	51.184	-22.816	74.000	
9764.000	10.315	40.600	50.915	-23.085	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	: TABLET PC				
Test Item	: Harmonic Radiated Emission				
Test Site	: No.3 OA	ATS			
Test Mode	: Mode 2:	Transmit - 3Mbp	os (8DPSK) (2480MH	[z)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBµV	$dB\mu V/m$	dB	dBµV/m
Horizontal					
Peak Detector:					
4960.000	2.582	45.970	48.552	-25.448	74.000
7440.000	10.555	39.000	49.555	-24.445	74.000
9920.000	10.206	39.880	50.086	-23.914	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4960.000	3.398	48.180	51.579	-22.421	74.000
7440.000	11.214	38.730	49.944	-24.056	74.000
9920.000	11.245	40.190	51.435	-22.565	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	: TABLET PC					
	Test Item	: General Radiated Emission					
	Test Site	: No.3 OATS					
	Test Mode	: Mode 1:	Transmit - 1Mbp	s (GFSK) (2441MHz	z)		
	Frequency	Correct	Reading	Measurement	Margin	Limit	
		Factor	Level	Level			
_	MHz	dB	dBµV	dBµV/m	dB	dBµV/m	
	Horizontal						
	192.960	-10.095	37.936	27.841	-15.659	43.500	
	365.620	0.382	33.608	33.990	-12.010	46.000	
	499.480	1.991	24.754	26.744	-19.256	46.000	
	633.340	1.530	28.111	29.641	-16.359	46.000	
	800.180	6.417	26.122	32.539	-13.461	46.000	
	965.080	7.222	23.214	30.436	-23.564	54.000	
	Vertical						
	43.580	-10.919	41.525	30.606	-9.394	40.000	
	175.500	-1.842	28.226	26.384	-17.116	43.500	
	363.680	0.079	25.089	25.168	-20.832	46.000	
	540.220	2.169	23.944	26.113	-19.887	46.000	
	784.660	2.736	25.663	28.399	-17.601	46.000	
	922.400	3.200	23.774	26.974	-19.026	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	: TABLET PC					
Test Item	: General Radiated Emission					
Test Site	: No.3 OATS					
Test Mode	: Mode 2	: Transmit - 3Mbp	s (8DPSK) (2441MH	[z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
 MHz	dB	dBµV	$dB\mu V/m$	dB	dBµV/m	
Horizontal						
119.240	-7.291	32.599	25.309	-18.191	43.500	
225.940	-9.647	41.201	31.554	-14.446	46.000	
365.620	0.382	33.053	33.435	-12.565	46.000	
466.500	3.156	25.636	28.792	-17.208	46.000	
701.240	2.759	27.617	30.376	-15.624	46.000	
928.220	7.230	22.988	30.218	-15.782	46.000	
Vertical						
43.580	-10.919	41.391	30.472	-9.528	40.000	
177.440	-1.248	27.496	26.248	-17.252	43.500	
381.140	0.816	24.068	24.884	-21.116	46.000	
606.180	2.246	23.728	25.974	-20.026	46.000	
782.720	2.757	24.405	27.162	-18.838	46.000	
930.160	3.830	23.571	27.401	-18.599	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.

5. **RF Antenna Conducted Test**

5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

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

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

5.2. Test Setup



5.3. Limits

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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 measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

5.5. Uncertainty

± 150Hz

5.6. Test Result of RF Antenna Conducted Test

Product	:	TABLET PC
Test Item	:	RF Antenna Conducted Test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

Channel 00 (2402MHz) 30MHz-25GHz



Channel 39 (2441MHz) 30MHz-25GHz



Channel 78 (2480MHz) 30MHz-25GHz



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

Product	:	TABLET PC
Test Item	:	RF Antenna Conducted Test
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Channel 00 (2402MHz) 30MHz-25GHz



Channel 39 (2441MHz) 30MHz-25GHz



Channel 78 (2480MHz) 30MHz-25GHz



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

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

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

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

RF Radiated Measurement:

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

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
	Х	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2014
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments 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 Conducted Measurement



RF Radiated Measurement:

Above 1GHz



6.3. Limit

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)).

6.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2009 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

6.5. Uncertainty

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

6.6. Test Result of Band Edge

Product	:	TABLET PC
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level [dB	Emission Level	Detector
Pole	[MHz]	[dB/m]	μV]	$[dB \mu V/m]$	
Horizontal	2402	33.755	66.29	100.044	Peak
Horizontal	2402	33.755	53.45	87.204	Average
Vertical	2402	32.241	63.73	95.971	Peak
Vertical	2402	33.755	51.51	85.264	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBµV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2341.8	100.044	53.11	46.934	74.000	Peak
Horizontal	2342	87.204	50.06	37.144	54.000	Average
Vertical	2341.8	95.971	53.11	42.861	74.000	Peak
Vertical	2342	85.264	50.06	35.204	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements

per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Agilen	t Spec	trum	1 Ana	alyze	r - Sw	ept S	A						1.5									2440		
LXI RL	-		RF		50 Ω	A						SENSE	INT			ALIGN	IAUTO	05:07:	57 PN	1 Aug 05	5,2014	Fr	requency	٦
Cen	ter	Fre	qź	2.39	9000	000	00 C	GHz PNO IFGai	: Fast (n:Low	₽	Trig: F #Atten	ree R : 30 d	un B	A	vgTyp	oe: Log	-Pwr		TYP DE	E 1 2 3 E M WM T P N N	456 //////		equency	_
10 dE	3/div	1	Ref	20	.00	dBn	n						Mkr4 2.400 0 GH -28.23 dBr					SHz Bm		Auto Tune				
10.0 0.00 -10.0														Â	1							(2.39	Center Free 0000000 GH	q
-20.0 -30.0 -40.0	\Diamond^3											2	. In Mark	4 -	I In							2.34	Start Free	q
-50.0 -60.0 -70.0	A. C. MA	7,2-195		-Aller	9449. ⁴ 70		цу , " (-	dir-rishe	dar of Salara)	Lange Bay	an a		Bolon Anos		2		-Ingenergy	and the second	-			2.44	Stop Fre 0000000 GH	q
Cent #Res	ter 2 s BV	2.39 V 1.	000 0 N	0 G /IHz	Hz				#VB	w	1.0 MI	Span 100.0 MHz) MHz #Sweep 500 ms (1001 pts)					10	CF Step 0.000000 MH	p					
	N	TRC 1	f				× 2.40	0210	GHz		4.66	dBn	FUN	CTION		UNCTION	IWIDTH	FUN	ICTIO	n valui		<u>Auto</u>	Mai	n
2 3 4 5 6	N N	1	f f				2.39	000 118 000	GHZ GHZ GHZ		-50.12 -48.45 -28.23	dBrr dBrr	1 1 1										Freq Offse 0 H	st Iz
7 8 9 10 11																								
MSG	_																STATUS	;						

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Agilent Spect	rum Analyze	er - Swept SA								
Center F	^{RF} req 2.3	50 Q AC 90000000 C	GHz	SENSE:	INT A	g Type:	ALIGNAUTO Log-Pwr	05:07:22 PI TRAC	Aug 05, 2014	Frequency
10 dB/div	Ref 20).00 dBm	PNO: Fast (4 IFGain:Low	#Atten: 30 dE	3		Mk	r4 2.400 -48.3	0 0 GHz 33 dBm	Auto Tune
10.0 0.00 -10.0						8				Center Freq 2.390000000 GHz
-20.0 -30.0 -40.0					4-					Start Freq 2.340000000 GHz
-50.0 -60.0 -70.0				2						Stop Freq 2.440000000 GHz
Center 2 #Res BW	.39000 G 1.0 MH	SHz z	#VBV	V 10 Hz			Sweep	Span 1 7.80 s (00.0 MHz 1001 pts)	CF Step 10.000000 MHz
MKB MODE 1 N 2 N 3 N 4 N 5 6	FE SCL 1 f 1 f 1 f 1 f	× 2.40 2.39 2.34 2.40	02 0 GHz 00 0 GHz 12 0 GHz 10 0 GHz	-9.43 dBm -62.77 dBm -59.49 dBm -48.33 dBm		FUN	CTION WIDTH	FUNCTIO		Auto Man FreqOffset 0 Hz
7 8 9 10 11 12										
MSG							STATUS			

Product	:	TABLET PC
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
Pole	[MHz]	[dB/m]	[dB μ V]	[dB(uV/m)]	
Horizontal	2480	33.941	72.29	106.231	Peak
Horizontal	2480	33.941	58.68	92.621	Average
Vertical	2480	32.568	70.99	103.558	Peak
Vertical	2480	32.568	57.37	89.938	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBμV/m)Band EdgeΔ (dB)Field Strength (dBμV/m)		Limit (dBµV/m)	Detector	
Horizontal	2485	106.231	43.94	62.291	74.000	Peak
Horizontal	2483.5	92.621	50.75	41.871	54.000	Average
Vertical	2485	103.558	43.94	59.618	74.000	Peak
Vertical	2483.5	89.938	50.75	39.188	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Agilent Spectrum Analyzer - Sw	rept SA				
Center Freq 2.4835	2 AC 00000 GHz	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	05:24:59 PM Aug 05, 2014 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00	PNO: Fast G IFGain:Low	#Atten: 30 dB	Mk	r3 2.485 0 GHz -39.43 dBm	Auto Tune
10.0 0.00 -10.0					Center Freq 2.483500000 GHz
-20.0 -30.0 -40.0		3			Start Freq 2.433500000 GHz
-50.0	ar <u>an stand an </u>				Stop Freq 2.533500000 GHz
Center 2.48350 GHz #Res BW 1.0 MHz	#VB\	V 1.0 MHz	#Sweep	Span 100.0 MHz 500 ms (1001 pts)	CF Step 10.000000 MHz
1 N 1 f 2 N 1 f 3 N 1 f 4	2,480 1 GHz 2,483 5 GHz 2,485 0 GHz	4.51 dBm 41.98 dBm -39.43 dBm			Freq Offset 0 Hz
MSG			STATUS	3	

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - Swept SA				
	SENSE:INT	ALIGNAUTO Ava Type: Log-Pwr	05:24:26 PM Aug 05, 2014 TRACE 1 2 3 4 5 6	Frequency
PNO: Fast C	┘ Trig: Free Run #Atten: 30 dB	Mk	TYPE MWWWW DET P N N N N r2 2.483 5 GHz -60 22 dBm	Auto Tune
	1			Center Freq 2.483500000 GHz
-20.0				Start Freq 2.433500000 GHz
-70.0	2 ²			Stop Freq 2.533500000 GHz
Center 2.48350 GHz #Res BW 1.0 MHz #VBW	10 Hz	Sweep	Span 100.0 MHz 7.80 s (1001 pts)	CF Step 10.000000 MHz <u>Auto</u> Man
1 N 1 f 2.480.0 GHz 2 N 1 f 2.483.5 GHz 3	-9.47 dBm -60.22 dBm			Freq Offset 0 Hz
MSG		STATUS		

Product	:	TABLET PC
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
Pole	[MHz]	[dB/m]	[dB μ V]	[dB μ V/m]	
Horizontal	2402	33.755	59.49	93.244	Peak
Horizontal	2402	33.755	46.23	79.984	Average
Vertical	2402	32.241	55.334	87.575	Peak
Vertical	2402	33.755	38.704	72.458	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBµV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2387.4	93.244	46.11	47.134	74.000	Peak
Horizontal	2341.9	79.984	45.36	34.624	54.000	Average
Vertical	2387.4	87.575	46.11	41.465	74.000	Peak
Vertical	2341.9	72.458	45.36	27.098	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Agilent Spectrum Analyzer - Swept SA				
LXI RL RF 50Ω AC	SENSE:INT	ALIGN AUTO	05:37:09 PM Aug 05, 2014	Frequency
Center Freq 2.390000000 GHz	Trig: Free Run	Avg Type: Log-Pwr	TYPE MWWWWWW	riequeney
IFGain:Low	#Atten: 30 dB		DET P N N N N N	
		Mk	r4 2,400 0 GHz	Auto Tune
10 dB/div Ref 20.00 dBm		(however)	-32.63 dBm	
10.0				Contor From
0.00		$ \land^{1} $		Center Freq
10.00		X		2.39000000 GHZ
-10.0				
-20.0		4		Start Fred
-30.0				2 34000000 GHz
-40.0	<u>3</u> ,2			2.04000000 0112
-50.0	- Anno -	1 4 Longinger and	Carry and the second states of the second	
-60.0				Stop Freg
70.0				2.440000000 GHz
10.0				
Center 2.39000 GHz			Span 100.0 MHz	
#Res BW 1.0 MHz #VBW	V 1.0 MHz	#Sweep	500 ms (1001 pts)	CF Step
MKBI MODEL TBCI SCL	Y FI	INCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man
1 N 1 f 2.402 0 GHz	-3.03 dBm			
2 N 1 f 2.390 0 GHz	-50.18 dBm			
4 N 1 f 2.400 0 GHz	-32.63 dBm			Freq Offset
5				0 Hz
7				
8				
9				
11				
MSG		STATUS		

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - Sw	vept SA					
Center Freq 2.3900	2 AC 00000 GHz	SENSE:INT	Avg Type	LIGNAUTO	05:36:34 PM Aug 05, 2014 TRACE 1 2 3 4 5 6 TYPE MIMANANAN	Frequency
10 dB/div Ref 20.00	IFGain:Low	#Atten: 30 dB		Mk	^{ретр NNNN} r4 2.400 0 GHz -45.60 dBm	Auto Tune
10.0 0.00 -10.0			1			Center Freq 2.39000000 GHz
-20.0 -30.0 -40.0			4			Start Freq 2.340000000 GHz
-50.0 -60.0 -70.0		2				Stop Freq 2.440000000 GHz
Center 2.39000 GHz #Res BW 1.0 MHz	#VBV	V 10 Hz		Sweep	Span 100.0 MHz 7.80 s (1001 pts)	CF Step 10.000000 MHz
MKR MODE TrC Scl. 1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f 5 6 6 7	× 2.402 0 GHz 2.390 0 GHz 2.341 9 GHz 2.400 0 GHz	-17.40 dBm -62.81 dBm -62.76 dBm -45.60 dBm		NCTION WIDTH	FUNCTION VALUE	Freq Offset
6 9 10 11 12 MSG				STATUS		

Product	:	TABLET PC
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Fundamental Filed Strength

Antenna	Frequency	Correction Factor	Reading Level	Emission Level	Detector
		[ub/iii]			
Horizontal	2480	33.941	64.427	98.368	Peak
Horizontal	2480	33.941	47.146	81.087	Average
Vertical	2480	33.941	62.389	96.330	Peak
Vertical	2480	33.941	45.466	79.407	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBµV/m)	Δ (dB)	Band Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Detector
Horizontal	2485.1	98.368	36.46	61.908	74.000	Peak
Horizontal	2483.5	81.087	44.11	36.977	54.000	Average
Vertical	2485.1	96.330	36.46	59.870	74.000	Peak
Vertical	2483.5	79.407	44.11	35.297	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Agilent Spectrum Analyzer - Sw	ept SA				
Center Freq 2.48350	AC 00000 GHz	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	05:52:10 PM Aug 05, 2014 TRACE 1 2 3 4 5 6	Frequency
10 dB(div _ Ref 20 00 (PNO: Fast (_, IFGain:Low	#Atten: 30 dB	Mk	r3 2.485 1 GHz -38.75 dBm	Auto Tune
					Center Freq 2.483500000 GHz
-20.0 -30.0 -40.0		3			Start Freq 2.433500000 GHz
-50.0		Na uglagon,	942 434-94 634 9 <u>4 64 99</u>	9	Stop Freq 2.533500000 GHz
Center 2.48350 GHz #Res BW 1.0 MHz	#VBV	V 1.0 MHz	#Sweep	Span 100.0 MHz 500 ms (1001 pts)	CF Step 10.000000 MHz Auto Man
1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 6 - - - 7 - - - 8 - - - 9 - - - 11 - - - 12 - - -	2,480 0 GHz 2,483 5 GHz 2,485 1 GHz	-2.28 dBm -42.87 dBm -38.75 dBm			Freq Offset
MSG			STATUS	3	

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - S	Swept SA				
Center Freq 2.483	Ω AC 500000 GHz		ALIGNAUTO Avg Type: Log-Pwr	05:51:38 PM Aug 05, 201 TRACE 1 2 3 4 5	Frequency
10 dB/div Ref 20.00	PN0: Fast ⊂ IFGain:Low	#Atten: 30 dB	Mł	r2 2.483 5 GHz -60.86 dBm	Auto Tune
10.0 0.00 -10.0		1			Center Free 2.483500000 GH:
-20.0 -30.0 -40.0					Start Free 2.433500000 GH:
-50.0 -60.0 -70.0		2			Stop Fred 2.533500000 GH2
Center 2.48350 GHz #Res BW 1.0 MHz	#VB	W 10 Hz	Swee	Span 100.0 MH 7.80 s (1001 pts	CF Step 10.000000 MH
MKR MODE TRC SCL	× 2.480 0 GHz	-16.75 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Mar
2 N 1 f 3 4 5 6	2.483 5 GHz	-60.86 dBm			Freq Offse
7 8 9 10 11					
12 MSG			STATU	5	<u> </u>

7. Channel Number

7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

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

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

7.2. Test Setup



7.3. Limit

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 hopping frequencies.

7.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

7.5. Uncertainty

N/A

7.6. Test Result of Channel Number

TABLET PC
Channel Number
No.3 OATS
Mode 1: Transmit - 1Mbps (GFSK)

Frequency Range	Measurement	Required Limit	Result	
(MHz)	(Hopping Channel)	(Hopping Channel)	Result	
$2402 \sim 2480$	79	>75	Pass	

2402-2421MHz

2422-2441MHz

Aglient Spectrum Analyzer - Swept SA			Aglient Spectrum Analyzer - Swept SA	
Center Freq 2.411500000 GHz	AVG Type: Log-Pwr TRACT 123456 TVF MWWWWW	Frequency	Center Freq 2.431500000 GHz	Frequency
10 dB/div Ref 20.00 dBm	Mkr2 2.421 00 GHz 3.49 dBm	Auto Tune	Immune Affen: 30 dB ref://www.m Jo db/dv Ref 2.0.00 dBm 3.44 dBm	Auto Tune
		Center Freq 2.411500000 GHz		Center Freq 431500000 GHz
200 Y V V V V V V V V V V V V V V V V V V		Start Freq 2.401500000 GHz	200 200 <td>Start Freq 421500000 GHz</td>	Start Freq 421500000 GHz
40.0 40.0 -70.0		Stop Freq 2.421500000 GHz	- 400 ireq ann GHz	Stop Freq .441500000 GHz
Start 2.40150 GHz #Res BW 100 kHz #VBW 100 kHz	Stop 2.42150 GHz Sweep 2.47 ms (1001 pts)	CF Step 2.000000 MHz	Start 2.42150 GHz Stop 2.44150 GHz itep #Res BW 100 kHz #VBW 100 kHz Sweep 2.47 ms (1001 pts)	CF Step 2.000000 MHz
NUE MODE TE State X FU FU 1 N 1 f 2.402 00 GHz 2.83 dBm 2 N 1 f 2.402 00 GHz 3.49 dBm	NCTION FUNCTION WIDTH FUNCTION VALUE	<u>Auto</u> Man	Man MXR V RUNCTION RUNCTION WIDTH RUNCTION WIDTH </th <th>o Man</th>	o Man
3 4 6 5		Freq Offset 0 Hz	Tset 3	Freq Offset 0 Hz
7 8 9 10				
11 12 MSC	STATUS			

2442-2461MHz

2462-2480MHz

Agilant Spectrum Analyzer - Swept SA			Agilant Spectrum Analyzer - Swept SA	
M RF SD & AC SENSEDUT ALIGNAUTO Center Freq 2.451500000 GHz Avg Type: Log-Pwr Avg Type: Log-Pwr	05:31:00 FM Aug 05, 2014 IKA05 1 2:14 5 6	Frequency	VI RF SD (A, AC) SENSED/T ALIGNAUTO D53/H/M/M005, 2014 Center Freq 2.471500000 GHz Avg Type: Log-Pwr INADE [2/214.5 h] Frequencies	uency
PRO: hast to Trig Free Run If Constance of dB Mkr2	2.461 00 GHz	Auto Tune	PROTING THE FREE RUN INTERVIEW AND	uto Tune
		Center Freq 2.451500000 GHz	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	iter Freq 10000 GHz
-nn -nn -nn	2	Start Freq 2.441500000 GHz	q ann tz ann tz ann	tart Freq 10000 GHz
	2	Stop Freq 2.461500000 GHz	9 000	top Freq 10000 GHz
Start 2.44159 GHz S #Res BW 100 kHz #VBW 100 kHz Sweep 2. Contrast net best a start start and start st	Stop 2.46150 GHz .47 ms (1001 pts)	CF Step 2.000000 MHz uto Man	Stop 2.48150 GHz Stop 2.48150 GHz 2.00 #Res BW 100 kHz #VBW 100 kHz Sweep 2.47 ms (100 Hz) 2.00 Res BW 100 kHz #VBW 100 kHz Sweep 2.47 ms (100 Hz) 2.00	CF Step 0000 MHz Man
N I		Freq Offset 0 Hz	1 1 1 1 7 2.482.00 GHz 3.37 dBm 0000 9 N 1 7 2.480.00 GHz 3.39 dBm 1 1 Free 12 S	e q Offset 0 Hz
12				

Product	:	TABLET PC
Test Item	:	Channel Number
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

Frequency Range	Measurement	Required Limit	Result		
(MHz)	(Hopping Channel)	(Hopping Channel)			
$2402\sim 2480$	79	>75	Pass		

2402-2421MHz

2422-2441MHz

Agilant Spectrum Analyzer - Swept SA		Agilant Spectrum Analyzer - Swept SA	
Center Freq 2.411500000 GHz Add Series Transform Augor, 2 Center Freq 2.411500000 GHz Transform Augor, 2 Transform Augor, 2 Aug Type: Leg-Pwr Transform Augor, 2	Frequency	M RF 50 (p) Ac SERVSED/(T) ALIGNAUTO D0:03:321M Aug 05, 20.4 FI Center Freq 2.431500000 GHz Avg Type: Log-Pwr INVL12 [12:14-5:6 FI	Frequency
PNO: Fast C 179, Free Run If Collect over #Attain: 30 dB veriP NNN	NN Auto Tune	PNO: Fast C Fig. Free Run If Coinci way #Atten: 30 dB vei P NNNN	Auto Tune
Mkr2 2.421 00 Gł 10 dB/div Ref 20.00 dBm -6.59 dB	m	Mkr2 2.441 00 GHz - 10 dB/div Ref 20.00 dBm -4.59 dBm	Auto Tune
	2 Center Freq 2.411500000 GHz		Center Freq 131500000 GHz
-000 -000 -00	Start Freq 2.401500000 GHz	2.42 2.42 2.100	Start Freq 121500000 GHz
wu	Stop Freq 2.421500000 GHz	400 244 7 AU	Stop Freq 41500000 GHz
Start 2.40150 GHz Stop 2.42150 G #Res BW 100 kHz #VBW 100 kHz Sweep 2.47 ms (1001 p	HZ (S) CF Step 2.000000 MHz	Start 2.42150 GHz Stop 2.44150 GHz #Res BW 100 kHz #VBW 100 kHz Sweep 2.47 ms (1001 pts)	CF Step 2.000000 MHz
MOLMER HE ST X Y HINCHIN UNCENVIOL	Auto Man	n Mail Maile and Auto	. Men
1 N 1 f 240200 GHz -7.35 dBm 2 N 1 f 2.42100 GHz -8.69 dBm		- 1 N 1 f 2.422.00 GHz 4.25 dBm 2 N 1 f 2.441 00 GHz 4.59 dBm	
4 5	Freq Offset		Freq Offset 0 Hz
6 7		6 7	
8	4	8	
MSG STATUS		MSG STATUS	

2442-2461MHz

2462-2480MHz

Agilar	it Spec	trum A	alyzer S	wept SA										Aglie	int Spec	rum An	alyzer Sv	ept SA									
Cen	ıter l	Freq	2.451	500000	GHz	Tria	Free Ba	an 1	Avg Typ	e: Log-Pwr	INSTRUCTOR TRA T	MAag15,2014 67 1 2 3 4 5 6 97 M	Frequency	Cei	nter I	req	2.4715	00000 G	Hz	Trig: Fr	e Bun	Avg Typ	e: Log-Pwr) ארודאר (דה/ ד	MAG(15,21) 07 1 2 3 4 5 07 MWWW	Frequency	′
					PNO: Fast IFGaIn:Low	#Att	en: 30 dE	3			1	et I'NNNN N							PNO: Faed (HGalin:Low	#Atten:	30 dB				PNNN	N Auto T	
10 d	B/dlv	Re	f 20.00	dBm						Mkr	2 2.461 -7.	00 GHz 14 dBm	Autorune	10 0	B/dlv	Rei	r 20.00	dBm					Mki	2 2.480 -8	00 GH 68 dBr	n Autor	une
10.0	Q1	_	فررامه	home	Sal and you	ray many	- Magar	m	. المسمي جاسالهم		man	, P	Center Freq 2.451500000 GHz	101		and a		on the second	ny My v			mm	mun	an an	↓ ²	Center # 2.471500000	Freq GHz
20.0 30.0 40.0	╞			+	+								Start Freq 2.441500000 GHz	20.1 20.1 40.1	u u u					-	-					Start F 2.461500000	Freq GHz
-50 N -60 N -70 N				_	_								Stop Freq 2.461500000 GHz	-50 (-50 (-70 (n n											Stop F 2.481500000	Freq GHz
Star #Re	t 2.4 s BV	4150 V 100	GHz kHz		#VI	BW 100	kHz			Sweep	Stop 2.4 2.47 ms	6150 GHz (1001 pts)	CF Step 2.000000 MHz	Sta #Re	rt 2.4 es BW	6150 / 100	GHz kHz		#VE	W 100 kH	z		Sweep	Stop 2.4 2.47 ms	8150 GH (1001 pt	z CF § 2.000000	step MHz
1	N N N	152 50 1 f 1 f		2.44 2.45	2 00 GHz 1 00 GHz	-7. -7.	98 dBm 14 dBm	PUNCT	TION FL	UNCTION WIDTH	FUNCT	ON VALUE	Auto Man	1	N N N	1 f 1 f		2.462 2.480	00 GHz 00 GHz	4.66 -8.68	dBm dBm	NCTION	UNCTION WIDTH	FUNCT	ION VALUE	Auto	Man
3 4 6	_	-							_				Freq Offset 0 Hz	346		-										FreqO	¶set 0 Hz
5 7 8 9														7													-
10 11 12														10 11 12													
MSG										STATUS	s		10	MEC									STATU	5			

8. Channel Separation

8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

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

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

8.2. Test Setup



8.3. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

8.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

8.5. Uncertainty

± 150Hz

8.6. Test Result of Channel Separation

Product	:	TABLET PC
Test Item	:	Channel Separation
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)

	Fraguanau	Measurement	Limit	Limit of (2/3)*20dB		
Channel No.	(MHz)	Level	(1-11-2)	Dondwidth (kUz)	Result	
	(MHZ)	(kHz)	(кпz)	Bandwidun (KFIZ)		
00	2402	1000	>25 kHz	746.7	Pass	
39	2441	1000	>25 kHz	746.7	Pass	
78	2480	1000	>25 kHz	746.7	Pass	

NOTE: The 20dB Bandwidth is refer to section 10.

Agilent Spectrum Analyzer - Swept SA					
LX/RL RF 50Ω AC	SENSE:I	NT ALIG	GNAUTO 05:15:01 P	M Aug 05, 2014	Frequency
Center Freq 2.402000000 GHz PNO: N IFGain	Vide Trig: Free Ru Low #Atten: 30 dB	Avg Type: Lo n	>g-Pwr TRAC TYF DE	2E 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	requercy
10 dB/div Ref 20.00 dBm			Mkr2 2.403 3.0	00 GHz 05 dBm	Auto Tune
10.0 0.00 -10.0	1	2			Center Free 2.402000000 GH
-20.0			1		Start Fre 2.397000000 GH
-50.0 -60.0			- al mander A	Williamson	Stop Fre 2.407000000 GH
Center 2.402000 GHz #Res BW 100 kHz	#VBW 100 kHz	#S1	Span 1 weep 500 ms (0.00 MHz 1001 pts)	CF Ste 1.000000 MH
MKR MODE TRC SCL X 1 N 1 f 2.402 00 G 2 N 1 f 2.403 00 G	Hz 3.04 dBm	FUNCTION FUNCTIO	ON WIDTH FUNCTIO	DN VALUE	<u>Auto</u> Ma
3 1 2.40000 4 5 6					Freq Offse 0 H
7 8 9 10 11					
12			STATUS		

Channel 00 2402MHz

Agilent Spec	ctrum Analyzer	- Swept SA		e e e	12	89		and a second		
LXI RL	RF	50 Ω AC		SEN	ISE:INT		ALIGN AUTO	05:22:56 PM	4 Aug 05, 2014	Frequency
Center	Freq 2.44	1000000	GHz PNO: Wide IFGain:Low	Trig: Free #Atten: 30	Run dB	Avg Type	e: Log-Pwr	TRAC TYF DE	E 1 2 3 4 5 6 E MWWWWW T P N N N N N	Trequency
10 dB/div	Ref 20.	00 dBm					Mkr	2 2.442 3.4	00 GHz 16 dBm	Auto Tune
10.0 0.00 -10.0					,1 \	2				Center Freq 2.441000000 GHz
-20.0 -30.0 -40.0										Start Freq 2.436000000 GHz
-50.0 -60.0 -70.0		much Weinsteile	Alline alline					Wolldwine and	Dessed will be	Stop Freq 2.446000000 GHz
Center 2 #Res BV	2.441000 G N 100 kHz	iHz	#VE	W 100 kHz	FUIN	INTIN	#Sweep	Span 1 500 ms ('	0.00 MHz 1001 pts)	CF Step 1.000000 MHz Auto Man
1 N 2 N	1 f 1 f	2.4 2.4	41 00 GHz 42 00 GHz	3.64 dE 3.46 dE	lm Im					
3 4 5 6 7 8 9										Freq Offset 0 Hz
11 12 MSG							STATUS			

Channel 39 2441MHz

Channel 78 2480 MHz

Agiler	it Spe	ctrur	n Ana	alyzer - Sw	ept SA								
Cen	L Iter	Fre	RF Pq 2	50 Ω 2.48000	AC 00000 GI	Hz	SE Tria: Ero		Avg T	ALIGNAUTO ype: Log-Pwr	05:31:38 P TRAC	M Aug 05, 2014 E 1 2 3 4 5 6	Frequency
10 d	IFGain:Low #Atten: 30 dB Det IP NNNN Mkr1 2.479 00 GHz 3.64 dBm 3.64 dBm 3.64 dBm											Auto Tune	
10.0 0.00 -10.0						1		2					Center Freq 2.480000000 GHz
-20.0 -30.0 -40.0						W			W.				Start Freq 2.475000000 GHz
-50.0 -60.0 -70.0	4 .	mba	n I N	www.alling.gh	- Hard And Harden				Law of the	her Myseles and Street	Miningal	hammen	Stop Freq 2.485000000 GHz
Cen #Re	iter : s B\ MODE	2.48 N 1	800 00	00 GHz kHz	×	#VB	W 100 kHz	F	FUNCTION	#Sweep	Span 1 500 ms (0.00 MHz 1001 pts)	CF Step 1.000000 MHz <u>Auto</u> Man
1 2 3 4 5 6 7 8 9 10 11 12	N		f		2.479 (2.480 (00 GHz	3.64 d 3.75 d	Bm Bm 					Freq Offset 0 Hz
MSG										STATU	s		

Product	:	TABLET PC
Test Item	:	Channel Separation
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)

	Fraquanay	Measurement	Limit	Limit of (2/3)*20dB	
Channel No.	(MHz)	Level	(1,11,2)	Dondwidth (1247)	Result
	(IVITIZ)	(kHz)	(кпz)	Bandwidtii (KHZ)	
00	2402	1000	>25 kHz	940.0	Pass
39	2441	1000	>25 kHz	946.7	Pass
78	2480	1000	>25 kHz	940.0	Pass

NOTE: The 20dB Bandwidth is refer to section 10.

Channel 00 2402MHz

Agilent Spectrum Analyzer - Sw	ept SA										
RE RF 50 Ω Center Freq 2.40200	AC 00000 GHz	SENSE:INT	Avg Type	ALIGNAUTO : Log-Pwr	05:42:45 PI TRAC	M Aug 05, 2014	Frequency				
10 dB/div Ref 20.00 (IFGain:Low #Atten: 30 dB DET IP NNNNN Mkr2 2.403 00 GHz -5.32 dBm -5.32 dBm										
Log 10.0 0.00 -10.0		1	2				Center Fred 2.402000000 GH2				
-20.0 -30.0 -40.0				10			Start Fred 2.397000000 GH;				
-50.0				wa har	g	instantikan	Stop Free 2.407000000 GH:				
Center 2.402000 GHz #Res BW 100 kHz	#VBI	W 100 kHz	FUNCTION FU	#Sweep	Span 1 500 ms (0.00 MHz 1001 pts) IN VALUE	CF Step 1.000000 MH: <u>Auto</u> Mar				
1 N 1 f 2 N 1 f 3	2.402 00 GHz 2.403 00 GHz	-4.94 dBm -5.32 dBm				_	Freq Offse 0 H:				
7 8 9 10 11 12											
MSG				STATUS	;						

Agilent Spectrum Analyzer - Swept SA	iya iya			
LX/RL RF 50Ω AC	SENSE:INT	ALIGN AUTO	05:49:52 PM Aug 05, 2014	Frequency
Center Freq 2.441000000 GHz	Taim Fuel Dam	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
PNO: Wide 🖵 IEGain:Low	#Atten: 30 dB		DET P N N N N N	
I Guilleow		Milent		Auto Tune
Control Address State State State State		IVIKE	2 2.442 00 GHZ	
10 dB/div Ref 20.00 dBm			-4.26 dBm	
10.0				
10.0	<u>ہ</u> 1	2		Center Freq
0.00		9		2.441000000 GHz
-10.0	proving	mar all		
20.0	1			
-20.0	/			Start Freq
-30.0				2 436000000 GHz
-40.0				
-50.0		Vh	1	
CO O as an user and a stranger and and a stranger and and a stranger		The	monthly and and when the	Stop Fred
-60.0				Stopried
-70.0				2.446000000 GHz
Center 2.441000 GHz			Span 10.00 MHz	CE Sten
#Res BW 100 kHz #VBW	100 kHz	#Sweep	500 ms (1001 pts)	1 000000 MHz
MKR MODE TRC SCL X	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man
1 N 1 f 2.441 00 GHz	-4.31 dBm			
2 N 1 f 2.442 00 GHz	-4.26 dBm			
				Freq Offset
5				0 Hz
6				
9				
10				
MSG		STATUS		

Channel 39 2441MHz

Channel 78 2480 MHz

Agilent Spectr	um Analyzer - Sw	ept SA							
Center F	RF 50 Ω req 2.48000	AC 00000 GHz	SEN:	SE:INT	Avg Type	ALIGNAUTO : Log-Pwr	05:58:19P TRAC	M Aug 05, 2014 E 1 2 3 4 5 6	Frequency
10 dB/div	Ref 20.00 (PNO: Wide IFGain:Low dBm	#Atten: 30	dB		Mkr	₀ 1 2.479 -6.	00 GHz 94 dBm	Auto Tune
Log 10.0 0.00 -10.0			n 1	2					Center Freq 2.48000000 GHz
-20.0 -30.0 -40.0					10				Start Freq 2.475000000 GHz
-50.0 -60.0	and the second descent for the second s	undrawn a c			" the game	monte		hermon	Stop Freq 2.485000000 GHz
Center 2. #Res BW	480000 GHz 100 kHz	#VE	3W 100 kHz	FUNCTI	DN FUI	#Sweep	Span 1 500 ms (0.00 MHz 1001 pts) IN VALUE	CF Step 1.000000 MHz <u>Auto</u> Man
1 N 1 2 N 1 3 - - 4 - - 5 - - 6 - - 7 - - 8 - - 9 - 10		2.479 00 GHz 2.480 00 GHz	-6.94 dB -4.12 dB	m					Freq Offset 0 Hz
11 12 MSG						STATUS			

9. Dwell Time

9.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

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

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

9.2. Test Setup



9.3. Limit

The dwell time shall be the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

9.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

9.5. Uncertainty

± 25msec

9.6. Test Result of Dwell Time

Product	:	TABLET PC
Test Item	:	Dwell Time
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK) (Channel 00,39,78 –DH5)

Frequency (MHz)	Time slot length (ms)	Hopping of Number	Sweep time (ms)	Duty cycle	Dwell Time (Sec)	Limit (Sec)	Result
2402	2.880	13	50	0.75	0.300	0.4	Pass
2441	2.880	13	50	0.75	0.300	0.4	Pass
2480	2.890	13	50	0.75	0.301	0.4	Pass

Duty cycle =((Time slot length(ms)*Hopping of Number) / Sweep time (ms)

Dwell time = (Duty cycle / 79) * (79*0.4)

CH 00 Time Interval between hops

CH 00 Transmission Time

Agilant	Spectrum	a Amalyz	er - Swe	pt SA													Agile	ent Sp	pectrum /	malyzer -	Swept SA										
Cent	er Fre	RF q 2.4	0200	AC 0000	GH	z		S Trie: Ex	SENSE:	NT .	Avg Ty	ALIGNAUT	0 05 F	ELL:S7 P	M Aug 05, 2014	Frequency	Cer	nte	r Freq	2.402	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0) GHz		SENSE	A In	lvg Type:	LIGNAUT	o jo r	D: L2: 3GP IKAU	M Aug 05, 2014	Frequency
					PN IFGa	0: Fast C rincl ow	• ,	Atten:	30 dB	ï				U	P NNNNN	Auto Tune	PNO: hast Hags read and read within the read of the r									Auto Tune					
10 dB ^{Log} [(div	Ref 20	0.00 d	IBm	_		_		_			-					10 c Log	aBid	div R	ef 20.0	0 dBm		_	2 . 2					3.	71 dBm	
1U.U		L	_						_		L.	L_	4			Center Freq 2.402000000 GHz	10.0 0.00 10.0			ľ			Î								Center Freq 2.402000000 GHz
0.00 10.0																Start Freq 2.402000000 GHz	-2017 -3017 -4017	n n n													Start Freq 2.402000000 GHz
20.0 30.0																Stop Freq 2.402000000 GHz	90.0 00.0 70.0	.u .u .u	مر <i>دادو</i> ريك				_	det south			-	angeriske	,I		Stop Freq 2.402000000 GHz
4U.U		++		ļ			+					+				CF Step 1.000000 MHz	Cei Res	nter s B)	r 2.402 W 1.0 I	00000 VIHz	0 GHz	#	VBW	1.0 MHz		s	weep	10.0	S Dms (span 0 Hz 1001 pts)	CF Step 1.000000 MHz
90.0		+		U-	L.		+	U-	∄	-			-L			<u>Auto</u> Man	-1 -1	N			×	1.050 m	8	3.71 dBm	TENSION	N TIN	U I N WD		TINCI	IN VALUE	<u>Auto</u> Man
ບບັນ	į,	,		p.	"1	ų	+	v	n		- Per	4	-	"		Freq Offset 0 Hz	4 5 6	Ň				4.800 m	8	3.71 dBm							Freq Offset 0 Hz
10,0																	7 8 9											+			
Cent Res I	er 2.40 BW 1.0	2000 MHz	000 G	Hz		#VB	W 1	.0 MH	z			Sweep	50.00	S ms(pan 0 Hz 1001 pts)		11 12											-			
MS9 STATUS								MSG										STAT	us												

CH39 Time Interval between hops

CH 39Transmission Time

Agileni Specifium Analyzer - Swepi SA		Agilant Spectrum Analyzar - Swept SA	
Center Freq 2.441000000 GHz SENSEDNT ALIGNAUTO	IKAUS 1 2014 5 6 Frequency	Center Freq 2.441000000 GHz SEISEDVT ALIGNAUTO 07:21:2017M Aug05, 21	Frequency
PRO: Fast Trig: Free Run Il Content www SAtten: 30 dB	uer PNNNNN Auto Tun	PRO: 1-32 C Trig: Free Run International Statem 20 CB International Statem 20 CB MARIA - 20 CB International Statem 20 CB MARIA - 20 CB CB International Statem 20 CB MARIA - 20 CB CB MARIA - 20 CB CB MARIA - 20 CB CB	S Auto Tune
	Center Fre 2.441000000 GH		Center Freq 2.441000000 GHz
100	Start Fre 2.441000000 GF		Start Freq 2.441000000 GHz
200	Stop Fre 2.441000000 GH		Stop Freq 2.441000000 GHz
	CF Ste 1.000000 MH Auto Ma	tep Center 24+100000 042 Res BW 1.0 MHz #VBW 1.0 MHz Sweep 10.00 ms (1001 pr 44-1 022 (1024 0114 (223) 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CF Step 1.000000 MHz <u>Auto</u> Man
	Freq Offso	2 N 1 Z 200 ms 4.24 dBm 24 dBm 3140 ms 4.37 dBm 3140 ms 4.37 dBm 3140 ms 3140 ms 4.37 dBm 3140 ms 3140 ms	Freq Offset
/////	Snan û Hz	6 7 9 9	
Res BW 1.0 MHz #VBW 1.0 MHz Sweep 5	0.00 ms (1001 pts)	12 Anno Anno Anno Anno Anno Anno Anno Ann	1

CH 78 Time Interval between hops

CH 78 Transmission Time

Aglia	it Spec	trum An	alyzer 9	wept SA																Aglie	nt Spec	trum An	naly	zer - Swept SA												
Cer	L nter F	Freq	2.4800	00000	0 GH	z		Trig: F	ta Nea	i sini Run		Avg Typ	ALICN CLOG	-Pwr	jisza	9:4798 TRACI TVB	47ca(15, 1 2 3 4	21114	Frequency	Cer	nter	Freq	2.4	48000000	0 GI	Hz	, I,	i sins Irio: Fran P		A	/g Тур	e: Log-Pwr	o)⊷ r	TRACE	23450	Frequency
					IFG	0: Fied aln:Lov	w	#Atter	n: 30 d	B						nr.	T	NNN	Auto 7.000						IH IH	NO: Fied Galn:Low	2	Atten: 30 c	B					DFT I	NNNNN	8
10 d	B/div	Re	f 20.00	dBm															Auto Tune	10 d	B/dlv	Re	: f 2	20.00 dBm		_							Mki	r3 6.5 4.47	60 m s 'dBm	Auto Tune
202	Γ																		Center Freq	10.0					Ó	1			Ø	2	¢³					Center Freq
10.0									1.				١.						2.49000000 GHz	-10.0																2.490000000 GHz
0.00	\vdash	₩				_	\mathbb{H}			+	++-		++			+		+		20.0		_		_	_	<u> </u>	_		_	_	_		_	_	+	
-10.0																			2.48000000 GHz	30.0	⊢	-			+	-	+		-	+	+	-	+	-		2.480000000 GHz
																				40.0					1						1					
-20.0						-				+	++-		Ħ					Η	Stop Freq	-60.0				ni fin	w,				5	rekipri	41				hadala	Stop Freq
-30.0										-			\square					+	2.480000000 GHz	-7N N	⊢	-				-	+			+			+		_	2.480000000 GHz
.40.0					- 11			IJ				- []							CF Step	Cer	ter 2	2.4800	000	0000 GHz										Spa	n û Hz	CE Step
-																			1.000000 MHz	Res	BW	1.U M	1112	z	_	#1	BW 1.	U MHZ				sweep	10.00	ms (10	U1 pts)	1.000000 MHz
-50 N		U I	U.	IJ.	J			Į,			U.	IJ							Hate Man	1	N	1 t			2.8	310 ms		4.49 dBr	n				<u> </u>	Ponchan		<u>Auto</u> man
-60.0		r	~	1			"	71	1		1	4	"	ſ		Ĩ		~	Freq Offset	â	N	1 È	t		6.6	560 ms		4.47 dBr	n		-		-			Freq Offset
																			0 Hz	6																0 Hz
-70 N																				7																
Cer	L_	4800	nnnn	GH7												5	nan O	H7		9 10																
Res	BW	1.0 M	Hz	- 12		#V	/BW	1.0 M	Hz				Swee	ep 54	0.00 r	ns (1	1001	ots)		11 12																
MSG														STATUS					-	MSG												STAT	US			-

Note:

The dwell times of the packet type of DH1, DH3, and DH5 are tested. Only the worst case is shown on the report.

Product	:	TABLET PC
Test Item	:	Dwell Time
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK) (Channel 00,39,78 –DH5)

Frequency (MHz)	Time slot length (ms)	Hopping of Number	Sweep time (ms)	Duty cycle	Dwell Time (Sec)	Limit (Sec)	Result
2402	2.890	13	50	0.75	0.301	0.4	Pass
2441	2.890	13	50	0.75	0.301	0.4	Pass
2480	2.890	14	50	0.81	0.324	0.4	Pass

Duty cycle =((Time slot length(ms)*Hopping of Number) / Sweep time (ms)

Dwell time = (Duty cycle /79) * (79*0.4)

CH 00 Time Interval between hops

Center Freq 2.402000000 GHz Nito Freq 1.402000000 GHz Nito Freq 1.402000000 GHz Nito Freq 1.402000000 GHz Nito Freq 1.402000000 GHz Avg Type: Log-Pwr Frequency Avg Type: Log-Pw Frequency TYPE WE Auto Tur Auto Tur Mkr3 4.400 m -4.45 dBn 10 di Log Ref 20.00 dBm Ref 20.00 d Center Free 402000000 GH Center Fre __2 ť Start Free Start Fre rt" 2000000 Gł 240 فيديدونهم Stop Free 2.402000000 GH Stop Free 2.402000000 GH CF Step 1.000000 MHz Mar Center 2.402000000 GH; Res BW 1.0 MHz Span 0 Hz Sweep 10.00 ms (1001 pts) CF Step #VBW 1.0 MHz 1.00 -4.46 dBn -3.84 dBn -4.46 dBn 3.540 ms Freq Offse Freq Offsel Span 0 Hz Sweep 50.00 ms (1001 pts) Center 2.402000 Res BW 1.0 MHz #VBW 1.0 MHz

CH39 Time Interval between hops

CH 39Transmission Time

CH 00 Transmission Time

Aglis	int Spo	ctrum /	Analyz	er Sw	ept SA																	Aglier	nt Spec	trum An	alyze	r Swep	it SA													
Cei	nter	Freq	2.4	4100	0000	0 GH	lz .	1	_{Tr}	ia:Ere	e Ru	NI]	Avg	л Туре:	Log-F	Pwr	(th:4)	SELIPM TRACE TVPE	Aug 15, 201 1 2 3 4 5	Frequer	ency	Cer	nter	Freq	2.44	41000	000 G	Hz		Tria: Fre	e Bun	A	vg Тур	e: Log-Pw) (tza	TRACE 1	ињ, 2014 2034 50		Frequency	
10 4	1B/div	, R	ef 2	0.00 (j₿m	IH	NO: 1 Sain:U	Low	έA.	tten: 3	0 dB							0.00	PNNNN	Auto	to Tune	10 d	B/dlv	Re	f 20	.00 di	Bm	-NU: La Gain:Lo	a (_b .) w	#Atten: \$	0 dB				Mkr	3 6.72 -3.94	0 ms dBm		Auto Tur	ne
101																				Cente 2.4410000	ter Freq 000 GHz	100 100 0.00					1	d <u>1</u>				2²	•	3		_	7	2	Center Fre 441000000 GH	eq Hz
000 -100	, T		ſ	7		ſ	1		ſ	7		1		7	<u> </u>	7		ſ		2.4410000	art Freq 000 GHz	20.0 30.0 40.0	\vdash	-								+				+		2	Start Fre .441000000 GH	eq Hz
-20 r																				Sto 2.4410000	op Freq 000 GHz	-50 n -50 n -70 n					计公共分析					Mine	-m				no	2	Stop Fre 441000000 GF	eq Hz
-40.0						ļ									ļ				ļ	C 1.0000	CF Step	Cen Res	nter 2 BW	2.4410 1.0 M	0000 1Hz	00 GI	Hz	#\	/BW	1.0 MH;	2			Sweep	10.00 n	Spai ns (100	n û Hz 11 pts)		CF Ste 1.000000 MH	;p Hz
-50 0				ų		ι	ĮŲ		Ļ.			V		Ļ	5	5	l			Auto	Man	1 2	N N	1 t 1 t			2:	970 ms 860 ms		-3.94 c -3.42 c	iBm iBm	PUNCTION		UNCTION WIDT	H FL	NETION VA	LUE		<u>o</u> M2	an
-60.0																				Freq	¶ Off set 0 Hz	4	N	1 t	-		6.	/20 ms		-3.94 (18m		+		+				Freq Offs 0 H	et Hz
-7N f																						7 8 9		+							-									
Cer Res	nter s BW	2.441	000 MHz	000 C	Hz		;	¢γΒ₩	/ 1.0	MHz	2			s	wee	p 50).00 n	Sp ns (1	an 0 H: 001 pts	z ;)		10 11 12																		
MSG															5	TATUS						MEG												STAT	US					

CH 78 Time Interval between hops

CH 78 Transmission Time

Agiler	it Spectri	um An	alyzer	Swep	t SA																	Agila	ant Sp	pectrum	Anal	lyzer - Sw	vept SA	l.												
Cen	ter Fr	eq	2.48	NI 0 0000	0000	GHz			 Trin	:2 N	ta :iNi Dun		Avg	Туре	Log-	Pwr) teres	TRAC TVR	4 Acapille, 2	5.6	Frequency	Ce	RL nte	r Fre	q 2	.4800	0000	00 GH	lz		i : Tria Eas	- Due	1	Avg Ty	ALICALADIA ALICALADIA ALICALADIA	n je r	NANACIEN TRACI TVR	Aug 16,200	114 5 G	Frequency
						PNC IFG8	I: Faed In:Low	8	#Atte	n: 30	dB							nr	TINNN	INN								PN IFG	i0: Fied alm:Low	2	#Atten:	io dB					DF.	PNNNN	N N	
10 d	B/div	Ref	f 20.0	00 dl	3m																Auto I une	10 (dB/d	ilv F	Ref	20.00	dBm	1								Mł	(r3 6. -3.6	380 m 5 dBr	m	Auto I une
10.0																					Center Freq 2.480000000 GHz	10	, , ,		-		-		<u>_</u>					2	3					Center Freq 2.480000000 GHz
0.00		+		-	70			-		_	·			-					, /·····	-	Start Fren	-101 201	U		t		Ħ									-		$ \rightarrow$	╊	Start Fren
-10.0	╟─	╢	-	+	+	+	-	╫	-	+	+			+			╢	_		╢	2.480000000 GHz	30.1 40.1	U		T		Π		1					-						2.480000000 GHz
-20.0	╟	╫				+	-	╫		+							╢	-		Η	Stop Freq	-50 (-60 (n					-s-fagist-					ŀ	egney				ļ	۳ľ	Stop Freq
-30.0		++	-	+	++-		-	++	-	+		-	+					-		Η	2.48000000 GH2	-701	۱Ľ																ᆂ	2.48000000 GH2
-40.0	H			H	H		ł	H		Н	ł		ł				11		II.		CF Step 1.000000 MHz	Ce Re:	nter s B1	r 2.48 W 1.0	000 MH	0000 (Iz	GHz		#V	BW	1.0 MH	z			Sweep	10.00	S 0 ms (1	pan 0 H 001 pt	lz 5)	CF Step 1.000000 MHz
-50 0	4	U	Į			l			ļ		Ļ		ļ			Ų	ų			ļ	<u>Auto</u> Man	1	N	(1) 1 1	t t		>	3.13 5.02	30 ms 20 ms		-3.65 -3.07	iBm iBm	FUNCT	ION F	UNCTION WID	я	FUNCTIO	IVALUE		A <u>uto</u> Man
-60.0	ľ		'	"										·		1			,,	1	Freq Offset 0 Hz	3 4 6	Ň	1	t			6.8	90 ms		-3.65	Bm								Freq Offset 0 Hz
-7N N																						6 7 8																	╢	
Cen Res	ter 2.4	800 .0 M	0000 Hz	10 GI	lz		#V	BW 1	1.0 N	1H2		_		s	wee	n 50	0.00 r	S ns (pan 0 1001 r	Hz Its)		9 10 11 12		+	+				-			+		+		+			+	
MEG														_		STATUS					1	MSG										-			STAT	US				

Note:

The dwell times of the packet type of DH1, DH3, and DH5 are tested. Only the worst case is shown on the report.

10. Occupied Bandwidth

10.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

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

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

10.2. Test Setup



10.3. Limits

N/A

10.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

10.5. Uncertainty

± 150Hz

10.6. Test Result of Occupied Bandwidth

Product	:	TABLET PC
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)(2402MHz)

Channel	No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00		2402	1140		NA

Figure Channel 00:

Agilent Spe	ctrum An	alyzer - Swe	ept SA								
Center	Freq 2	50 Ω 2.40200	AC 0000 GH	lz	SE Tria: Free		Avg Typ	ALIGNAUTO e: Log-Pwr	05:06:48P TRAC	M Aug 05, 2014 E 1 2 3 4 5 6	Frequency
10 dB/div	/ Ref	f 20.00 c	IFC IBm	lO: Wide (Gain:Low	#Atten: 30) dB		Mkr	₀ 2 2.401 -16.	41 GHz 17 dBm	Auto Tune
10.0					A2						Center Freq 2.402000000 GHz
-20.0 -30.0 -40.0			1			X	h			-15.41 dBm	Start Freq 2.397000000 GHz
-50.0 -60.0	n of all	Agana Mar	mmar	Jm 1 M				En man	Mmson	www.awd	Stop Freq 2.407000000 GHz
Center #Res B	2.4020 W 100	00 GHz kHz	× 2 402 1	#VB	N 100 kHz	FUN	ICTION FU	Sweep	Span 1 1.27 ms (FUNGIN	0.00 MHz 1001 pts) IN VALUE	CF Step 1.000000 MHz <u>Auto</u> Man
2 N 3 N 4 5 6	1 f 1 f		2.401 4 2.402 5	1 GHz 5 GHz	-16.17 dl -15.81 dl	3m 3m					Freq Offset 0 Hz
10 10 11 12											
MSG								STATUS	;		

:	TABLET PC
:	Occupied Bandwidth Data
:	No.3 OATS
:	Mode 1: Transmit - 1Mbps (GFSK)(2441MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
39	2441	1130		NA

Figure Channel 39:

Agiler	nt Spe	ctrur	n An	alyzer - S	wept	SA											190				
LXI R	L	_	RF	50	Ω	AC		_		SE	ENSE:IN	IT	A	T	ALIGN AUTO)	05:16:16	M Aug (05,2014	Fre	auencv
Cen	iter	Fre	eq 2	2.4410	000	000	PNO IFGa	: Wide in:Low	Ģ	Trig: Fre #Atten: 3	e Run 0 dB	i	Avg	Type	. Log-rwr		TY E	PE MW ET P N	3456 WWWW NNNN		
10 d	B/div	,	Ref	f 20.00	dB	m									Mk	r2	2.440 -16.	42 (09 c	GHz IBm		Auto Tune
Log 10.0 0.00 -10.0										²		⊘ ³						-15	5.83 dBm	Ce 2.4410	enter Freq 000000 GHz
-20.0 -30.0 -40.0									ſ	v		L	h						/	2.4360	Start Freq 000000 GHz
-50.0 -60.0 -70.0	aleneo de	-00 ⁰ -00	mark	mont.	5m	7.VV~~~^	M	1~*~~						ww.	hally	m.	A. M.	hade	2 Carrie	2.4460	Stop Freq 000000 GHz
Cen #Re	s Bl	2.44 W 1	410 00	00 GH: kHz	z			#VE	3W	100 kHz	<u>.</u>				Sweep	1.	Span ′ 27 ms	10.00 (1001	MHz pts)	1.0	CF Step
MKE 1	N	TRC 1	SCL f			×	1 15	GHz		4.17 d	Bm	FUN	CTION	FU	NCTION WIDT	H	FUNCT	ION VALI	JE	<u>Auto</u>	Man
3 4 5 6	N	1	f			2.44	1 55	GHz		-16.00 d	Bm									F	r eq Offset 0 Hz
7 8 9 10																					
11 12 MSG					_		_		_					t	STATU	US		_			

Product	:	TABLET PC
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit - 1Mbps (GFSK)(2480MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
78	2480	1140		NA

Figure Channel 78:

Agilen	t Spe	ctrur	m An	alyzer - Swe	ept SA		10			2.97					
LXI RI	L	-	RF	50 Ω	AC			SENSE:I	NT	0	ALIGN AU	JTO	05:23:54 P	M Aug 05, 2014	Frequency
Cen	ter	Fre	q 7	2.48000	10000 G	HZ NO: Wide	Trig: F	ree Ru	n	Avgi	уре. Log-P	wr	TY	с 123456 Е М ИМИМИ	
					, ji	Gain:Low	#Atter	: 30 dB					D		
											M	lkr	2 2.479	41 GHz	Auto Tune
10 dE	3/div		Ref	20.00 0	1Bm								-16.3	30 dBm	
LOG								1							
10.0								A							Center Freq
0.00			+				. 2	f	. 3						2.48000000 GHz
-10.0									\checkmark					-15.47 dBm	
-20.0			-				1								Otort From
-30.0	_		-				1		1			_			Start Freq
-40.0							A -		4	No					2.475000000 GHZ
-50.0					0	A.	N			× 1-20		n°.		1	
-60.0			in w	Mman a	Mural	www.mar				ad	maria	nr L	manna	margaret	Stop Freg
70.0	dary.	man (p)		S-SCORE											2 485000000 GHz
-70.0															2.4000000000112
Cen	ter	2.48	800	00 GHz		*22	20	0		0	<i>11</i> -		Span 1	0.00 MHz	
#Re	s Bl	N 1	00	kHz		#VE	3W 100 k	Hz			Swee	ep '	1.27 ms (1001 pts)	CF Step
MKBL	MODE	TRO	l sci		X	1	Y		FUN	CTION	FUNCTION W	IDTH	FUNCTIO		Auto Man
1	Ν	1	f		2.480	14 GHz	4.5	3 dBm							
2	N	1	f		2.479	41 GHz	-16.30) dBm				_			
4	IN	-		0	2.400		-10.9								Freq Offset
5		_										_			0 Hz
7		_													
8								_	_			_			
10	-	_						-				-			
11															
12	-														
MSG											ST	ATUS			

Product	:	TABLET PC
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK) (2402MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	1630		NA

Figure Channel 00:

Agilen	it Spe	ctrun	n An	alyzer - Sw	ept SA								
LXI R	L		RF	50 Ω	AC		S	ENSE:INT		ALIGN AUTO	05:35:59 P	M Aug 05, 2014	Frequency
Cen	iter	Fre	q	2.40200	00000 G	6Hz PNO: Wide C FGain:Low	Trig: Fre #Atten: 3	e Run 10 dB	Avg T	ype: Log-Pwr	TRAC TYI DI	CE 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	Trequency
10 di	B/div		Rei	f 20.00 (dBm					Mkr	2 2.401 -25.	17 GHz 20 dBm	Auto Tune
10.0 0.00 -10.0							am	() ¹					Center Freq 2.402000000 GHz
-20.0 -30.0 -40.0							* ²					-24.43 dBm	Start Freq 2.397000000 GHz
-50.0 -60.0 -70.0	سم _و مد	99.00					×				and her wat you and	mannet	Stop Freq 2.407000000 GHz
Cen #Re	ter : s Bl	2.40 N 1	020 00	00 GHz kHz		#VB	W 100 kHz	<u>.</u>		Sweep	Span 1 1.27 ms (0.00 MHz 1001 pts)	CF Step 1.000000 MHz
MKR 1	N	180	f		2 402	14 GHz	1430	Bm	UNCTION	FUNCTION WIDTH	FUNCTI	JN VALUE	<u>Auto</u> Man
2 3 4 5 6 7 8 9	NN	1	f		2.402 2.401 2.402	17 GHz 80 GHz	-24.74 c	IBm IBm					Freq Offset 0 Hz
10 11 12 MSG										STATUS			

Product	:	TABLET PC
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK) (2441MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
39	2441	1630		NA

Figure Channel 39:

Agilent Spectrum Analyzer - Swept SA	a an an			
XIRL RF 50Ω AC	SENSE:INT	ALIGN AUTO	05:43:43 PM Aug 05, 2014	Frequency
Center Freq 2.441000000 GHz PNO: Wid IFGain:Lo	Trig: Free Run w #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWWW DET P N N N N N	Trequency
10 dB/div Ref 20.00 dBm		Mkr	2 2.440 17 GHz -24.86 dBm	Auto Tune
10.0 0.00 -10.0				Center Freq 2.441000000 GHz
-20.0			-23.99 dbm	Start Freq 2.436000000 GHz
-80.0 -60.0 -70.0		and the second s	and the second and the second	Stop Freq 2.446000000 GHz
Center 2.441000 GHz #Res BW 100 kHz #\ MXS M000 TRC SCL X 1 N 1 f 2.44115 GHz	/BW 100 kHz	Sweep	Span 10.00 MHz 1.27 ms (1001 pts) FUNCTION VALUE	CF Step 1.000000 MHz <u>Auto</u> Man
2 N 1 f 2.440 17 GHz 3 N 1 f 2.441 80 GHz 4 5 5 6 6 7 7 7	-24.86 dBm -24.18 dBm			Freq Offset 0 Hz
8 9 10 11 12 12				
MSG		STATUS		

Product	:	TABLET PC
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit - 3Mbps (8DPSK)(2480MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
78	2480	1630		NA

Figure Channel 78:

Agilent Spectrum Analyzer - Swept SA												
LXI RL		RF	50 Ω	AC OOOO CL	1		ENSE:INT	Δυα Τι		05:51:06 P	M Aug 05, 2014	Frequency
PNO: Wide C							Trig: Free Run		And The rod-rai			
				IFC	Gain:Low	#Atten:	30 dB			D		
Mkr2 2.479 17 GHz											Autorune	
10 dB/div Ref 20.00 dBm -24.08 dBm												
10.0							~					Center Fred
0.00							1					2 48000000 GHz
-10.0						and	my					2.40000000 0112
20.0						▲2	X	<u>`</u> 3				
-20.0		-				7	+)	(_		-23.73 abm	Start Freq
-30.0						1		1				2.475000000 GHz
-40.0						ł		1			1	
-50.0	and a			n. mon	ward	<u></u>		a v Same	month	2023 S	- apend	
-60.0 🚗	per .	-94	Low Dug of the							Mara A.o	- (m) (9' 9 -)	StopFreq
-70.0								-				2.485000000 GHz
Center	r 2 / S	200	00 GHz			26				Snan 1	0.00 MHz	
#Res E	#Res BW 100 kHz #VBW 100 kHz Sween 1.27 ms (1001 nts)											
		eei l		~		~	1	INCTION		EUMOTI		1.000000 MHz
1 N	1	f		2.480 1	5 GHz	-3.73	dBm	JACTION	TONCTION WIDTH	Tonen	JN VALUE	Auto Mali
2 N	1	f	_	2.479 1	7 GHz	-24.68	dBm dBm					
4 V	1			2.400 0		-23.90						Freq Offset
5	-											0 Hz
7												
8	-											
10												
11					-							
MSG STATUS												

11. EMI Reduction Method During Compliance Testing

No modification was made during testing.