FCC Test Report

Product Name	AerialCast
Model No	WN4507L
FCC ID.	PPQ-WN4507L

Applicant	Lite-On Technology Corp.
Address	4F, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.

Date of Receipt	Nov. 05, 2013
Issue Date	Nov. 27, 2013
Report No.	13B0101R-RFUSP27V00
Report Version	V1.0
	TAE



The test results relate only to the samples tested.

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Test Report Certification

Issue Date: Nov. 27, 2013 Report No.: 13B0101R-RFUSP27V00



Product Name	AerialCast	
Applicant	Lite-On Technology Corp.	
Address	4F, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.	
Manufacturer	1. Lite-On Technology (Changzhou) Co., Ltd.	
	2. DONG GUAN G-COM COMPUTER CO., LTD	
Model No.	WN4507L	
EUT Rated Voltage	DC 5V by USB	
EUT Test Voltage	AC 120V/60Hz	
Trade Name	acer	
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012	
	ANSI C63.4: 2003, ANSI C63.10: 2009, KDB 558074	
Test Result	Complied	

The test results relate only to the samples tested.

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Genie Chang

(Senior Adm. Specialist / Genie Chang)

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Approved By

(Director / Vincent Lin)

TABLE OF CONTENTS

De	scription	Page
1.	GENERAL INFORMATION	5
1.1.	EUT Description	5
1.2.	Operational Description	
1.3.	Tested System Details	
1.4.	Configuration of Tested System	
1.4.	EUT Exercise Software	
1.5. 1.6.	Test Facility	
2.	Conducted Emission	
2.1.	Test Equipment	
2.2.	Test Setup	
2.3.	Limits	
2.4.	Test Procedure	
2.5.	Uncertainty	
2.6.	Test Result of Conducted Emission	
3.	Maximum Conducted Power	16
3.1.	Test Equipment	
3.2.	Test Setup	
3.3.	Limits	
3.4.	Test Procedure	
3.5.	Uncertainty	
3.6.	Test Result of Maximum Conducted Power	
4.	Radiated Emission	
4 1		
4.1.	Test Equipment	
4.2.	Test Setup	
4.3.	Limits	
4.4.	Test Procedure	
4.5.	Uncertainty	
4.6.	Test Result of Radiated Emission	
5.	RF Antenna conducted test	55
5.1.	Test Equipment	
5.2.	Test Setup	
5.3.	Limits	
5.4.	Test Procedure	
5.5.	Uncertainty	
5.6.	Test Result of RF antenna conducted test	
6.	Band Edge	75
6.1.	Test Equipment	75
6.2.	Test Setup	
6.2. 6.3.	*	
	Limits	
6.4.	Test Procedure	
6.5.	Uncertainty	
6.6.	Test Result of Band Edge	79

7.	Occupied Bandwidth	
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	
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	147

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

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	AerialCast	
Trade Name	acer	
Model No.	WN4507L	
FCC ID.	PPQ-WN4507L	
Frequency Range	802.11b/g/n-20MHz:2412-2462MHz,802.11n-40MHz:2422-2452MHz	
	802.11a/n-20MHz:5745-5825MHz ,802.11n-40MHz:5755-5795MHz	
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7	
	802.11a/n-20MHz: 5, n-40MHz: 2	
Data Speed	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps	
Channel separation	802.11b/g/n-20MHz: 5 MHz, 802.11a/n-20MHz: 20MHz	
	802.11n-40MHz: 40MHz	
Type of Modulation	n 802.11b:DSSS, DBPSK, DQPSK, CCK	
	802.11a/g/n: OFDM, BPSK, QPSK, 16QAM, 64QAM	
Antenna Type	Printed on PCB	
Antenna Gain	Refer to the table "Antenna List"	
Channel Control	Auto	
HDMI Cable	Shielded, 0.1m	
USB Cable	Shielded, 0.8m	
Power Adapter	MFR: PCD, M/N: DSA-5PFK-05 FUS	
	Input: AC 100V-240V~50/60Hz	
	Output: DC 5V, 1A	

Antenna List

No.	Manufacturer	Part No.	Peak Gain	Note
1	Lite-On	Dongle	Printed on PCB	1.13dBi for 2.4GHz
				2.70dBi for 5.725~5.850GHz

Note: The antenna of EUT is conform to FCC 15.203

802.11b/g/n-20MHz Center Frequency of Each Channel: 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 802.11a/n-20MHz Center Working Frequency of Each Channel: Channel Frequency Channel Frequency Channel Frequency Channel Frequency Channel 149: 5745 MHz Channel 153: 5765 MHz Channel 157: 5785 MHz Channel 161: 5805 MHz Channel 165: 5825 MHz

802.11n-40MHz (2.4G Band) Center Working Frequency of Each Channel:

Channel Frequency Channel Frequency Channel Frequency Channel Frequency Channel 1: 2422 MHz Channel 2: 2427 MHz 2437 MHz Channel 3: 2432 MHz Channel 4: Channel 5: 2442 MHz Channel 6: 2447 MHz Channel 7: 2452 MHz

802.11n-40MHz (5G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency
---------	-----------	---------	-----------

Channel 151: 5755 MHz Channel 159: 5795 MHz

- 1. This device is an AerialCast with a built-in WLAN transceiver.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \$802.11a/g is 6Mbps \$802.11n(20M-BW) is 14.4Mbps and \$ 802.11n(40M-BW) is 30Mbps).
- 4. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11b is chain B \$ 802.11g is chain B \$ 802.11a is chain B)
- 5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11a/b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
- 6. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)	
	Mode 2: Transmit (802.11g 6Mbps)	
	Mode 3: Transmit - 802.11a 6Mbps	
	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)	
	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)	
	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)	
Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)		

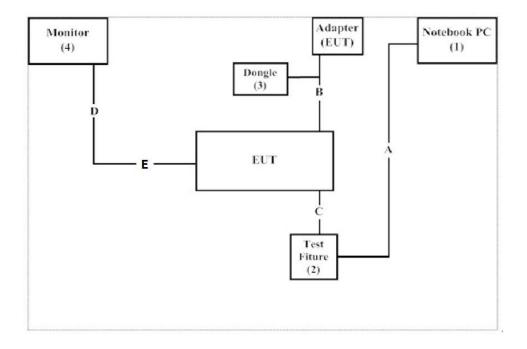
1.3. Tested System Details

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

Pro	duct	Manufacturer	Model No.	Serial No.	Power Cord
(1)	Notebook PC	lenovo	Think PAD X60	N/A	Non-Shielded, 0.8m
(2)	Test Fixture	LITE ON	N/A	N/A	N/A
(3)	FLASH	Transcend	JetFlash110	155422-2931	N/A
(4)	Monitor	Dell	ST232QLF	CN-QM2NN6-72872-22I-C9WS	Non-Shielded, 1.8m

	Signal Cable Type	Signal cable Description
А	USB Cable	Non-Shielded, 1.0m
В	USB Cable	Non-Shielded, 0.8m
С	Signal Cable	Non-Shielded, 0.05m
D	HDMI Extender Cable	Shielded, 1.0m
E	HDMI Cable	Shielded, 0.1m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown on 1.4
- (2) Execute "Tera Term v4.67" program on the Notebook PC.
- (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/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
Site Address:	No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
	Lin-Kou Shiang, Taipei,
	Taiwan, R.O.C.
	TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
	E-Mail : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

2. Conducted Emission

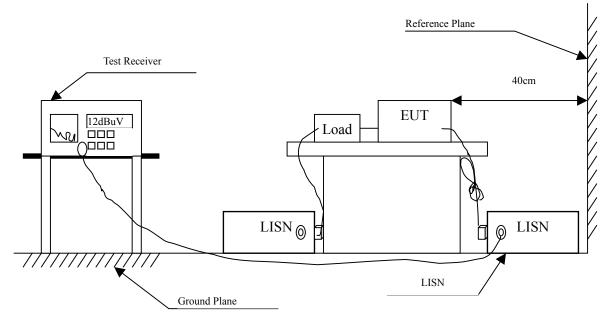
2.1. Test Equipment

	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., 2013	Peripherals
Х	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2013	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2013	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2013	
	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 (dBuV) 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 C63.10: 2009 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	:	AerialCast
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.396	9.708	31.570	41.278	-17.693	58.971
0.459	9.710	24.290	34.000	-23.171	57.171
0.591	9.716	24.640	34.356	-21.644	56.000
0.900	9.731	18.870	28.601	-27.399	56.000
1.216	9.745	20.650	30.395	-25.605	56.000
5.334	9.830	23.280	33.110	-26.890	60.000
Average					
0.396	9.708	25.040	34.748	-14.223	48.971
0.459	9.710	15.730	25.440	-21.731	47.171
0.591	9.716	16.240	25.956	-20.044	46.000
0.900	9.731	11.160	20.891	-25.109	46.000
1.216	9.745	12.170	21.915	-24.085	46.000
5.334	9.830	14.480	24.310	-25.690	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 Test Item Power Line	: AerialCa : Conduct : Line 2	ast ed Emission Test			
Test Mode		Transmit - 802.1	1n-40BW_30Mbps(2	.4G Band) (2437M	MHz)
Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.275	9.682	27.510	37.192	-25.237	62.429
0.404	9.688	33.700	43.388	-15.355	58.743
0.689	9.701	25.440	35.141	-20.859	56.000
1.060	9.728	20.980	30.708	-25.292	56.000
4.685	9.820	24.560	34.380	-21.620	56.000
17.509	9.990	25.960	35.950	-24.050	60.000
Average					
0.275	9.682	20.930	30.612	-21.817	52.429
0.404	9.688	29.480	39.168	-9.575	48.743
0.689	9.701	20.070	29.771	-16.229	46.000
1.060	9.728	14.360	24.088	-21.912	46.000
4.685	9.820	17.130	26.950	-19.050	46.000
17.509	9.990	15.250	25.240	-24.760	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

Product Test Item	AerialCastConducted Emission Test				
Power Line	: Line 1				
Test Mode	: Mode 7:	Transmit - 802.11	In-40BW_30Mbps(5	G Band) (5755M	Hz)
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.400	9.708	32.750	42.458	-16.399	58.857
0.463	9.711	23.950	33.661	-23.396	57.057
0.634	9.718	24.940	34.658	-21.342	56.000
0.849	9.728	19.930	29.658	-26.342	56.000
1.064	9.738	22.300	32.038	-23.962	56.000
1.732	9.778	19.850	29.628	-26.372	56.000
Average					
0.400	9.708	24.710	34.418	-14.439	48.857
0.463	9.711	14.560	24.271	-22.786	47.057
0.634	9.718	15.540	25.258	-20.742	46.000
0.849	9.728	9.480	19.208	-26.792	46.000
1.064	9.738	11.620	21.358	-24.642	46.000
1.732	9.778	10.870	20.648	-25.352	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

Product Test Item		ast ted Emission Test			
Power Line Test Mode	: Line 2 : Mode 7	· Transmit - 802 11	In-40BW 30Mbps(5	G Band) (5755M	Hz)
Test Widde	. Wode /	. 11ansint - 002.1		o Dana) (57551VI	112)
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.201	9.679	24.330	34.009	-30.534	64.543
0.302	9.683	27.640	37.323	-24.334	61.657
0.365	9.686	33.960	43.646	-16.211	59.857
0.486	9.692	24.920	34.612	-21.788	56.400
0.759	9.714	26.610	36.324	-19.676	56.000
17.099	9.980	28.390	38.370	-21.630	60.000
Average					
0.201	9.679	16.720	26.399	-28.144	54.543
0.302	9.683	22.560	32.243	-19.414	51.657
0.365	9.686	29.660	39.346	-10.511	49.857
0.486	9.692	20.210	29.902	-16.498	46.400
0.759	9.714	21.620	31.334	-14.666	46.000
17.099	9.980	18.020	28.000	-22.000	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. Maximum Conducted Power

3.1. Test Equipment

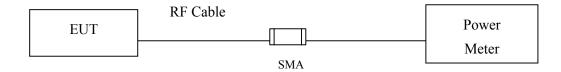
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2013
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2013
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013
N T /				

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.

3.2. Test Setup



3.3. Limits

The maximum average power shall be less 1 Watt. (Section 15.247 (b)(3))

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 section 9.1.3 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Maximum Conducted Power

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

CHAIN A

Channel No	Frequency	For d	Average ifferent Da	Required	Result			
Channel No	(MHz)	1 2 5.5 11 1					Limit	Kesun
			Measur					
01	2412	16.09	16.09 18.25					Pass
06	2437	15.98	15.72	15.6	15.38	18.24	<30dBm	Pass
11	2462	15.26				18.22	<30dBm	Pass

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

CHAIN B

Channel No	Frequency	For d	Average ifferent Da	e Power ata Rate (N	Peak Power	Required	Result	
	(MHz)	1	2	Limit	Kesun			
			Measur					
01	2412	16.23				18.47	<30dBm	Pass
06	2437	16.58	16.13	16.02	15.91	18.92	<30dBm	Pass
11	2462	16.08				18.27	<30dBm	Pass

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

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

CHAIN	IA

				Peak								
	Frequency	For different Data Rate (Mbps) Powe									Required	
Channel No	(MHz)	6									Limit	Result
	Measurement Level (dBm)											
01	2412	14.91								24.07	<30dBm	Pass
06	2437	15.10	15.05	15	14.88	14.71	14.57	14.51	14.44	24.34	<30dBm	Pass
11	2462	14.02								24.15	<30dBm	Pass

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

CHAIN B

			г		•	e Power		`		Peak		
Channel No	Frequency	6	For different Data Rate (Mbps) 6 9 12 18 24 36 48					54	Power 6	Required Limit	Result	
	(MHz)	0 9 12 18 24 50 48 54 0 Measurement Level (dBm)										
01	2412	15.18								24.64	<30dBm	Pass
06	2437	15.29	15.18	15.05	14.92	14.87	14.74	14.69	14.55	24.51	<30dBm	Pass
11	2462	15.04		-		-				24.26	<30dBm	Pass

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

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

	Frequency		F	or diffe	Average erent Da			5)		Peak Power	Required		
Channel No	(MHz)	6	6 9 12 18 24 36 48 54 6								Limit	Result	
	Measurement Level (dBm)												
149	5745	13.29								22.60	<30dBm	Pass	
157	5785	13.07	13.01	12.92	12.88	12.8	12.74	12.68	12.61	22.57	<30dBm	Pass	
165	5825	13.2								22.87	<30dBm	Pass	

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

CHAIN B

	F actoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and Factoria and		F	Peak Power	Demined							
Channel No	Frequency (MHz)	6								Required Limit	Result	
	Measurement Level (dBm)											
149	5745	14.17								23.84	<30dBm	Pass
157	5785	14.16	14.08	13.99	13.84	13.72	13.65	13.54	13.51	24.06	<30dBm	Pass
165	5825	14.15		-					-	23.93	<30dBm	Pass

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

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

			Average Power									
	Frequency		F	or diffe	erent Da	ata Rate	e (Mbps	s)		Power		
Channel No	(MHz)	14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	14.4		
		Measurement Level (dBm)										
01	2412	13.84		-	-		-	-		21.89		
06	2437	14.01	13.9	13.82	13.74	13.69	13.55	13.47	13.33	22.16		
11	2462	13.99								22.02		

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

CHAIN B

			Average Power										
	Frequency		F	or diffe	erent Da	ata Rate	e (Mbps	s)		Power			
Channel No	(MHz)	14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	14.4			
01	2412	14.07		-				-		22.13			
06	2437	14.02	13.82	13.77	13.71	13.64	13.59	13.49	13.4	22.06			
11	2462	14.03								22.09			

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

CHAIN A+B

Channel	Frequency	Data Rata	Chain A Power	Chain B Power	Chain A+B Power	Limit	Result
	(MHz)	(Mbps)	(dBm)	(dBm)	(dBm)	(dBm)	
1	2412	14.4	21.89	22.13	25.02	<30dBm	Pass
6	2437	14.4	22.16	22.06	25.12	<30dBm	Pass
11	2462	14.4	22.02	22.09	25.07	<30dBm	Pass

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

			Average Power								
	Frequency		For different Data Rate (Mbps)								
Channel No	(MHz)	30	60	90	120	180	240	270	300	30	
		Measurement Level (dBm)									
3	2422	13.02		-	-			-		20.71	
6	2437	13.16	13.08	12.99	12.84	12.76	12.69	12.61	12.58	22.21	
9	2452	12.99		-						21.94	

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

CHAIN B

			Average Power								
	Frequency		For different Data Rate (Mbps)								
Channel No	(MHz)	30	60	90	120	180	240	270	300	30	
		Measurement Level (dBm)									
3	2422	13.25								22.14	
6	2437	13.03	12.91	12.87	12.81	12.75	12.69	12.61	12.54	22.11	
9	2452	13.17								22.24	

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

CHAIN A+B

Channel	Frequency	Data Rata	Chain A Power	Chain B Power	Chain A+B Power	Limit	Result
	(MHz)	(Mbps)	(dBm)	(dBm)	(dBm)	(dBm)	
3	2422	30	20.71	22.14	24.49	<30dBm	Pass
6	2437	30	22.21	22.11	25.17	<30dBm	Pass
9	2452	30	21.94	22.24	25.10	<30dBm	Pass

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

	Fraguaray		Average Power								
			For different Data Rate (Mbps)								
Channel No	Frequency (MHz)	14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	14.4	
		Measurement Level (dBm)									
149	5745	12.29								22.42	
157	5785	12.38	12.22	12.14	12.06	11.98	11.82	11.77	11.65	22.44	
165	5825	12.12								22.45	

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

CHAIN B

			Average Power								
	Fraguanov		F	or diffe	erent Da	ata Rate	e (Mbps	s)		Power	
Channel No Frequency (MHz)		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	14.4	
		Measurement Level (dBm)									
149	5745	12.21	-				-	-		22.58	
157	5785	12.07	11.94	11.81	11.75	11.67	11.59	11.52	11.47	22.21	
165	5825	12.28								22.07	

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

CHAIN A+B

Channel	Frequency	Data Rata	Chain A Power	Chain B Power	Chain A+B Power	Limit	Result
	(MHz)	(Mbps)	(dBm)	(dBm)	(dBm)	(dBm)	
149	5745	14.4	22.42	22.58	25.51	<30dBm	Pass
157	5785	14.4	22.44	22.21	25.34	<30dBm	Pass
165	5825	14.4	22.45	22.07	25.27	<30dBm	Pass

Product	:	AerialCast
Test Item	:	Maximum Conducted Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

			Average Power								
	Frequency		For different Data Rate (Mbps)								
Channel No	Frequency (MHz)	30	60	90	120	180	240	270	300	30	
			Measurement Level (dBm)								
151	5755	11.03								19.87	
159	5795	11.11	11.08	11	10.97	10.84	10.77	10.71	10.69	20.02	

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

CHAIN B

			Average Power								
	Frequency		For different Data Rate (Mbps)								
Channel No Frequency (MHz)		30	60	90	120	180	240	270	300	30	
		Measurement Level (dBm)									
151	5755	11.01								20.81	
159	5795	11.21	11.14	11.08	10.99	10.91	10.84	10.74	10.69	20.35	

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

CHAIN A+B

Channel	Frequency	Data Rata	Chain A Power	Chain B Power	Chain A+B Power	Limit	Result
	(MHz)	(Mbps)	(dBm)	(dBm)	(dBm)	(dBm)	
151	5755	30	19.87	20.81	23.38	<30dBm	Pass
159	5795	30	20.02	20.35	23.20	<30dBm	Pass

4. Radiated Emission

4.1. Test Equipment

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2013
	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	Х	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2013
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2013
	Х	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

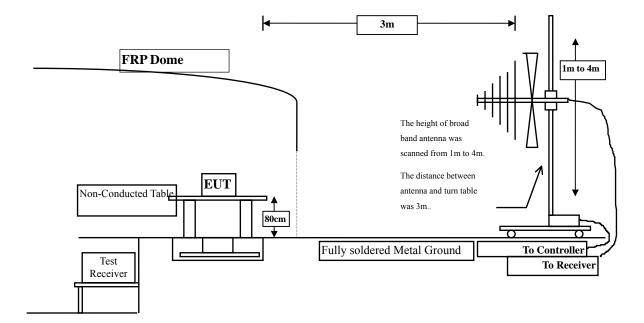
The following test equipment are used during the radiated emission test:

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

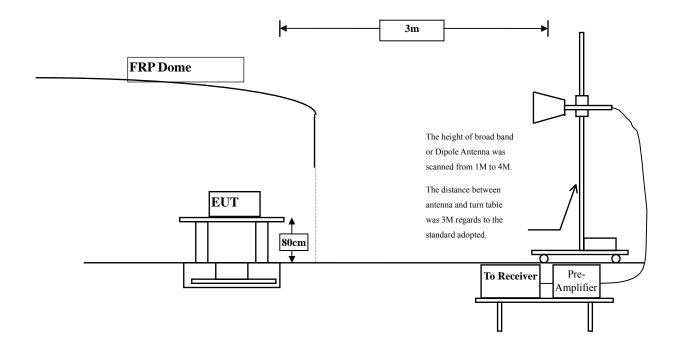
2. The test instruments marked with "X" are used to measure the final test results.

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 30dB 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	Measurement distance				
	(microvolts/meter)	(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 $(dBuV/m) = 20 \log E$ field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 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 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 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: 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 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	:	AerialCast
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	42.720	45.981	-28.019	74.000
7236.000	10.650	37.010	47.660	-26.340	74.000
9648.000	13.337	36.600	49.936	-24.064	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4824.000	6.421	39.590	46.011	-27.989	74.000
7236.000	11.495	37.130	48.625	-25.375	74.000
9648.000	13.807	36.730	50.536	-23.464	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	: AerialCast						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 1:	Transmit (802.11	b 1Mbps) (2437 MHz	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	45.130	48.167	-25.833	74.000		
7311.000	11.795	36.240	48.034	-25.966	74.000		
9748.000	12.635	37.780	50.415	-23.585	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4874.000	5.812	40.000	45.811	-28.189	74.000		
7311.000	12.630	36.510	49.139	-24.861	74.000		
9748.000	13.126	37.420	50.546	-23.454	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 Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps) (2462 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4924.000	2.858	40.770	43.627	-30.373	74.000	
7386.000	12.127	36.210	48.338	-25.662	74.000	
9848.000	12.852	37.100	49.953	-24.047	74.000	
Average						
Detector:						
Vertical Peak Detector:						
4924.000	5.521	39.020	44.540	-29.460	74.000	
7386.000	13.254	35.800	49.054	-24.946	74.000	
9848.000	13.367	37.300	50.667	-23.333	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 Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2412MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4824.000	3.261	40.080	43.341	-30.659	74.000	
7236.000	10.650	37.060	47.710	-26.290	74.000	
9648.000	13.337	37.260	50.596	-23.404	74.000	
Average						
Detector:						
Vertical						
Peak Detector:						
4824.000	6.421	38.750	45.171	-28.829	74.000	
7236.000	11.495	37.110	48.605	-25.395	74.000	
9648.000	13.807	36.980	50.786	-23.214	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	: AerialCast						
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	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	41.920	44.957	-29.043	74.000		
7311.000	11.795	36.970	48.764	-25.236	74.000		
9748.000	12.635	37.440	50.075	-23.925	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4874.000	5.812	38.470	44.281	-29.719	74.000		
7311.000	12.630	36.190	48.819	-25.181	74.000		
9748.000	13.126	37.720	50.846	-23.154	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 Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2462 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4924.000	2.858	37.840	40.697	-33.303	74.000	
7386.000	12.127	36.090	48.218	-25.782	74.000	
9848.000	12.852	37.120	49.973	-24.027	74.000	
Average						
Detector:						
Vertical						
Peak Detector:						
4924.000	5.521	37.800	43.320	-30.680	74.000	
7386.000	13.254	35.960	49.214	-24.786	74.000	
9848.000	13.367	37.470	50.837	-23.163	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 Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 3: Transmit - 802.11a 6Mbps (5745 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
11490.000	17.106	47.890	64.997	-9.003	74.000	
Average						
Detector:						
11490.000	17.106	34.770	51.877	-2.123	54.000	
Vertical Peak Detector:						
11490.000	18.034	42.060	60.095	-13.905	74.000	
Average						
Detector:						
11490.000	18.034	28.640	46.675	-7.325	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.

Product Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 3: Transmit - 802.11a 6Mbps (5785 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
11570.000	16.809	48.270	65.079	-8.921	74.000	
Average						
Detector:						
11570.000	16.809	35.180	51.989	-2.011	54.000	
Vertical						
Peak Detector:						
11570.000	17.698	41.050	58.748	-15.252	74.000	
Average Detector:						
11570.000	17.698	27.340	45.038	-8.962	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.

Product	: AerialC	ast					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 3: Transmit - 802.11a 6Mbps (5825 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11650.000	16.158	49.460	65.618	-8.382	74.000		
Average							
Detector:							
11650.000	16.158	35.810	51.968	-2.032	54.000		
Vertical							
Peak Detector:							
11650.000	17.274	35.380	52.655	-21.345	74.000		
A verage							

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 Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz) 						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	3.261	47.160	50.421	-23.579	74.000		
7236.000	10.650	37.680	48.330	-25.670	74.000		
9648.000	13.337	37.100	50.436	-23.564	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4824.000	6.421	41.160	47.581	-26.419	74.000		
7236.000	11.495	37.770	49.265	-24.735	74.000		
9648.000	13.807	37.750	51.556	-22.444	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	: AerialCa	ast					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OA	: No.3 OATS					
Test Mode	: Mode 4:	Transmit - 802.1	1n-20BW_14.4Mbps	(2.4G Band)			
	(2437 M	IHz)					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	49.110	52.147	-21.853	74.000		
7311.000	11.795	36.140	47.934	-26.066	74.000		
9748.000	12.635	37.500	50.135	-23.865	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4874.000	5.812	38.210	44.021	-29.979	74.000		
7311.000	12.630	35.900	48.529	-25.471	74.000		
9748.000	13.126	37.510	50.636	-23.364	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 Test Item Test Site Test Mode	: No.3 OA	c Radiated Emiss TS Transmit - 802.1	sion Data 1n-20BW_14.4Mbpse	(2.4G Band)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level	-	
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	48.130	50.987	-23.013	74.000
7386.000	12.127	35.960	48.088	-25.912	74.000
9848.000	12.852	37.420	50.273	-23.727	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4924.000	5.521	37.300	42.820	-31.180	74.000
7386.000	13.254	36.090	49.344	-24.656	74.000
9848.000	13.367	37.460	50.827	-23.173	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:AerialCastTest Item:Harmonic Radiated Emission Data

QuieTer				Report No.: 13B01	01R-RFUSP27V00
Test Site Test Mode	: No.3 O/ : Mode 5		1n-40BW_30Mbps(2	2.4G Band) (2422)	MHz)
Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4844.000	3.171	42.910	46.081	-27.919	74.000
7266.000	11.162	36.940	48.102	-25.898	74.000
9688.000	12.964	37.440	50.405	-23.595	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4844.000	6.178	37.440	43.618	-30.382	74.000
7266.000	11.982	36.750	48.732	-25.268	74.000
9688.000	13.507	37.440	50.948	-23.052	74.000
Average					
Detector:					
7311.000	11.795	36.610	48.404	-5.596	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.

Product	:	AerialCast
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)
		(2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	45.500	48.537	-25.463	74.000
7311.000	11.795	35.730	47.524	-26.476	74.000
9748.000	12.635	37.950	50.585	-23.415	74.000
Average					
Detector:					
Vertical					
Peak Detector:					
4874.000	5.812	40.510	46.321	-27.679	74.000
7311.000	12.630	36.360	48.989	-25.011	74.000
9748.000	13.126	37.350	50.476	-23.524	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.

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Product Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2452 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level	-		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
4904.000	2.914	40.590	43.505	-30.495	74.000	
7356.000	11.995	36.200	48.194	-25.806	74.000	
9808.000	12.475	37.140	49.615	-24.385	74.000	
Average						
Detector:						
Vertical Peak Detector:						
4904.000	5.530	37.780	43.311	-30.689	74.000	
7356.000	13.005	36.130	49.134	-24.866	74.000	
9808.000	12.901	37.150	50.051	-23.949	74.000	
Average	12.701	57.150	50.051	<u>~</u> J.)¬)	71.000	
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 Test Item Test Site Test Mode	: No.3 OA	ic Radiated Emiss	sion Data 1n-20BW_14.4Mbps	(5G Band) (5745)	MHz)
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level	-	
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11490.000	17.106	45.930	63.037	-10.963	74.000
Average					
Detector:					
11490.000	17.106	31.270	48.377	-5.623	54.000
Vertical					
Peak Detector:					
11490.000	18.034	36.280	54.315	-19.685	74.000
Average					
Detector:					
11490.000	18.034	22.360	40.395	-13.605	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.

Product Test Item Test Site Test Mode	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5785 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal Peak Detector: 11570.000	16.809	45.910	62.719	-11.281	74.000	
Average Detector: 11570.000	16.809	31.100	47.909	-6.091	54.000	
Vertical Peak Detector: 11570.000	17.698	36.060	53.758	-20.242	74.000	

Detector:

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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	: AerialC	ast				
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 6	: Transmit - 802.1	1n-20BW_14.4Mbps	(5G Band)		
	(5825 N	1Hz)				
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
11650.000	16.158	44.840	60.998	-13.002	74.000	
Average						
Detector:						
11650.000	16.158	29.980	46.138	-7.862	54.000	
Vertical						
Peak Detector:						
11650.000	17.274	34.900	52.175	-21.825	74.000	

Detector:

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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	: No.3 OAT	Radiated Emiss	sion Data 1n-40BW_30Mbps(5)	G Band) (5755M	Hz)
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11510.000	17.124	36.740	53.864	-20.136	74.000
Average Detector: 					
Vertical Peak Detector: 11510.000	18.081	35.560	53.641	-20.359	74.000

Detector:

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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	 AerialCast Harmonic Radiated Emission Data No.3 OATS Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band) (5795 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal Peak Detector: 11590.000 Average	16.701	36.460	53.160	-20.840	74.000	
Detector: Vertical Peak Detector: 11590.000	17.567	36.030	53.596	-20.404	74.000	
11390.000	17.307	30.030	33.370	-20.404	/4.000	

Detector:

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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	 AerialCast General Radiated Emission Data No.3 OATS Mode 1: Transmit (802.11b 1Mbps) (2437 MHz) 					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
66.860	-12.355	47.200	34.845	-5.155	40.000	
159.980	-11.775	41.732	29.957	-13.543	43.500	
227.880	-8.969	43.402	34.434	-11.566	46.000	
328.760	-4.609	40.434	35.825	-10.175	46.000	
408.300	-2.866	38.904	36.038	-9.962	46.000	
546.040	3.570	26.346	29.915	-16.085	46.000	
Vertical						
123.120	-3.921	34.810	30.889	-12.611	43.500	
165.800	-7.719	35.848	28.129	-15.371	43.500	
363.680	-2.393	34.757	32.364	-13.636	46.000	
452.920	-6.306	37.861	31.555	-14.445	46.000	
571.260	-5.526	40.024	34.499	-11.501	46.000	
720.640	-0.099	32.576	32.477	-13.523	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 Test Item Test Site Test Mode	 AerialCast General Radiated Emission Data No.3 OATS Mode 2: Transmit (802.11g 6Mbps) (2437 MHz) 				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
109.540	-7.488	37.241	29.753	-13.747	43.500
152.220	-10.135	39.105	28.970	-14.530	43.500
262.800	-5.013	46.893	41.880	-4.120	46.000
334.580	-3.901	37.152	33.251	-12.749	46.000
478.140	-0.291	35.110	34.819	-11.181	46.000
602.300	4.287	30.715	35.002	-10.998	46.000
Vertical					
117.300	-3.106	31.047	27.941	-15.559	43.500
202.660	-7.739	36.420	28.681	-14.819	43.500
288.020	-8.189	38.947	30.758	-15.242	46.000
480.080	-4.359	35.615	31.256	-14.744	46.000
600.360	-2.833	29.686	26.853	-19.147	46.000
780.780	3.060	24.490	27.550	-18.450	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	: AerialCast							
Test Item	: General	: General Radiated Emission Data						
Test Site	: No.3 O	ATS						
Test Mode	: Mode 3	: Transmit - 802.1	la 6Mbps (5785MHz					
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
107.600	-7.058	40.172	33.114	-10.386	43.500			
183.260	-12.294	48.458	36.164	-7.336	43.500			
245.340	-6.346	43.022	36.676	-9.324	46.000			
326.820	-4.548	42.097	37.550	-8.450	46.000			
385.020	-1.350	38.931	37.581	-8.419	46.000			
664.380	2.062	33.851	35.913	-10.087	46.000			
Vertical								
189.080	-10.969	34.725	23.756	-19.744	43.500			
280.260	-8.717	41.468	32.751	-13.249	46.000			
369.500	-2.868	33.945	31.077	-14.923	46.000			
489.780	-3.080	41.425	38.345	-7.655	46.000			
615.880	-1.905	40.888	38.983	-7.017	46.000			
759.440	2.532	36.049	38.581	-7.419	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 Test Item Test Site Test Mode		No.3 OATS	ated Emission Data nsmit - 802.11n-20B	3W_14.4Mbps(2.4G	Band) (2437 MH	z)
	Frequency		Correct	Reading	Measurement	Margin	Limit
			Factor	Level	Level		
-	MHz		dB	dBuV	dBuV/m	dB	dBuV/m
	Horizontal						
	167.740		-10.799	40.909	30.110	-13.390	43.500
	322.940		-4.442	41.649	37.207	-8.793	46.000
	390.840		-1.849	35.791	33.942	-12.058	46.000
	540.220		2.551	29.626	32.177	-13.823	46.000
	600.360		3.977	29.617	33.594	-12.406	46.000
	664.380	664.380 2.062		34.053	36.115	-9.885	46.000
	Vertical						
	140.580		-6.241	44.367	38.126	-5.374	43.500
	247.280		-8.042	37.420	29.377	-16.623	46.000
	359.800		-3.810	37.426	33.616	-12.384	46.000
	478.140		-4.431	39.321	34.890	-11.110	46.000
	610.060		-1.579	32.514	30.935	-15.065	46.000
	753.620		3.187	30.999	34.186	-11.814	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 Test Item Test Site Test Mode	 AerialCast General Radiated Emission Data No.3 OATS Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2437 MHz) 				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
107.600	-7.058	41.789	34.731	-8.769	43.500
161.920	-11.626	43.314	31.689	-11.811	43.500
245.340	-6.346	45.411	39.065	-6.935	46.000
334.580	-3.901	42.053	38.152	-7.848	46.000
480.080	-0.329	39.853	39.524	-6.476	46.000
809.880	5.049	30.851	35.900	-10.100	46.000
Vertical					
128.940	-4.128	30.754	26.626	-16.874	43.500
214.300	-8.101	35.170	27.069	-16.431	43.500
338.460	-4.265	35.809	31.544	-14.456	46.000
435.460	-8.800	37.771	28.971	-17.029	46.000
528.580	-0.462	30.912	30.450	-15.550	46.000
720.640	-0.099	30.791	30.692	-15.308	46.000

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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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.

Product Test Item Test Site Test Mode	: No.3 O.	Radiated Emission ATS : Transmit - 802.11	n Data n-20BW_14.4Mbps((5G Band)	
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
175.500	-10.017	43.182	33.164	-10.336	43.500
251.160	-5.745	44.605	38.860	-7.140	46.000
322.940	-4.442	43.149	38.707	-7.293	46.000
423.820	-3.167	39.091	35.924	-10.076	46.000
549.920	2.943	34.107	37.050	-8.950	46.000
697.360	3.171	34.543	37.714	-8.286	46.000
Vertical					
169.680	-8.728	38.692	29.964	-13.536	43.500
239.520	-8.581	41.791	33.211	-12.789	46.000
328.760	-5.099	43.962	38.863	-7.137	46.000
421.880	-9.024	45.250	36.226	-9.774	46.000
487.840	-3.132	42.248	39.116	-6.884	46.000
610.060	-1.579	27.153	25.574	-20.426	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.
- The average measurement was not performed when the peak measured data under the limit of average 6. 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 Test Item Test Site Test Mode	 AerialCast General Radiated Emission Data No.3 OATS Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band) (5755MHz) 				
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
119.240	-9.621	40.750	31.129	-12.371	43.500
169.680	-10.508	35.417	24.909	-18.591	43.500
239.520	-6.851	43.022	36.172	-9.828	46.000
326.820	-4.548	41.617	37.070	-8.930	46.000
383.080	-1.164	40.177	39.013	-6.987	46.000
600.360	3.977	31.756	35.733	-10.267	46.000
Vertical					
159.980	-6.185	37.434	31.249	-12.251	43.500
229.820	-8.512	46.964	38.452	-7.548	46.000
346.220	-3.093	41.611	38.518	-7.482	46.000
454.860	-5.499	23.729	18.229	-27.771	46.000
534.400	-0.571	32.879	32.308	-13.692	46.000
761.380	2.335	33.663	35.998	-10.002	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

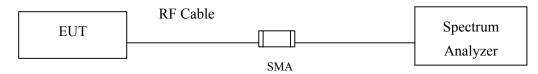
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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 30 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.

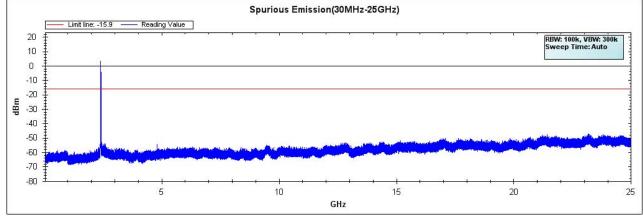
5.5. Uncertainty

The measurement uncertainty Conducted is defined as ± 1.27 dB

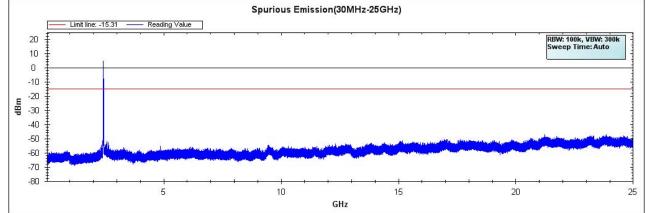
5.6. Test Result of RF antenna conducted test

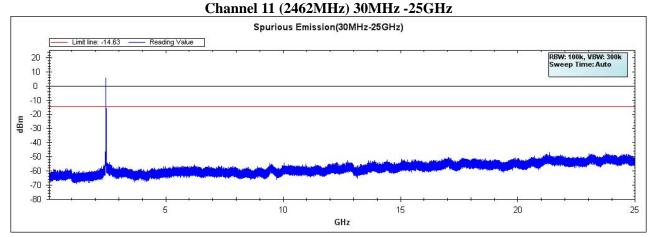
Product	:	AerialCast
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel 01 (2412MHz) 30MHz-25GHz



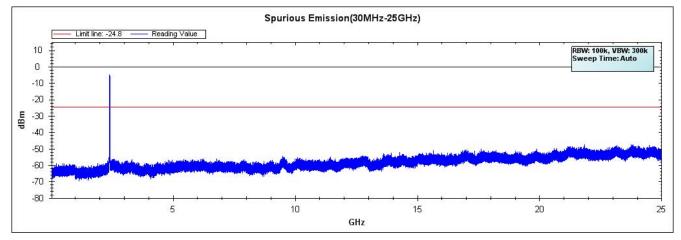




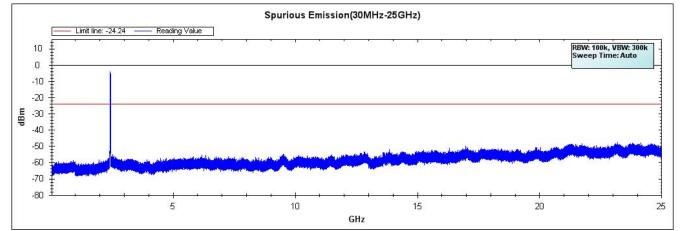


Product	:	AerialCast
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

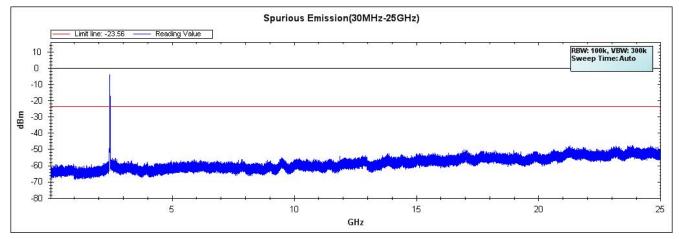
Channel 01 (2412MHz) 30MHz -25GHz



Channel 06 (2437MHz) 30MHz -25GHz

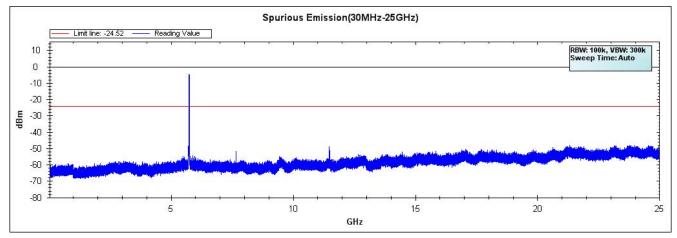


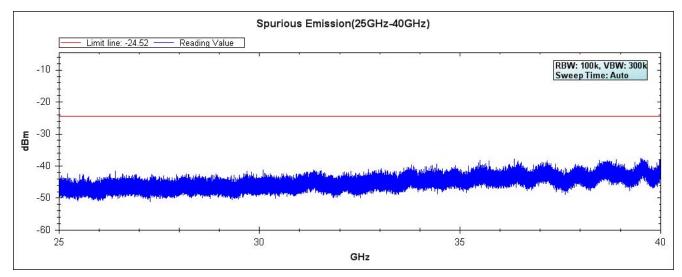




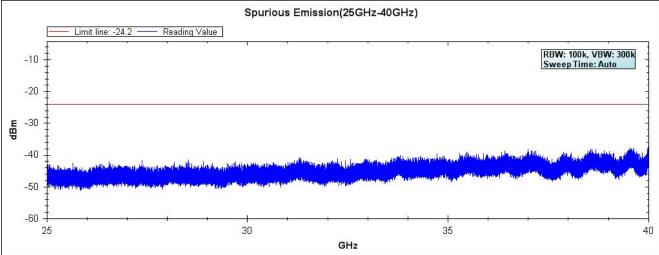
Product	:	AerialCast
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

Channel 149 (5745MHz) 30MHz -40GHz





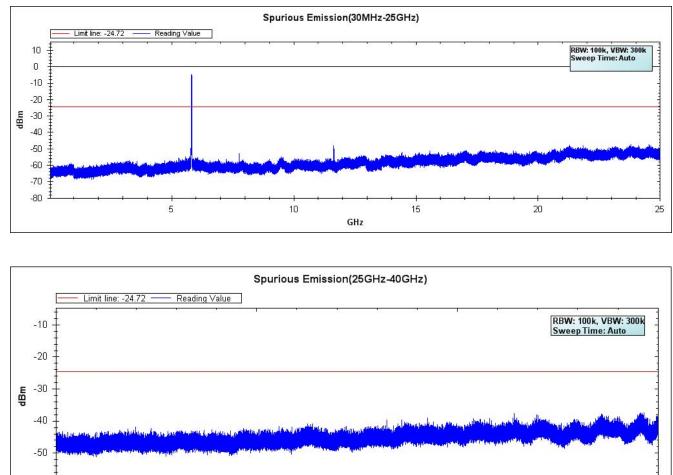
Spurious Emission(30MHz-25GHz) Limit line: -24.2 Reading Value RBW: 100k, VBW: 300k Sweep Time: Auto 10 0 -10 -20 dBm -30 -40 -50 ‡ -60 -70 -80 5 10 15 20 25 GHz



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

Channel 157 (5785MHz) 30MHz -40GHz Spurious Emission(30MHz-25GHz)

-60 1 25



GHz

35

40

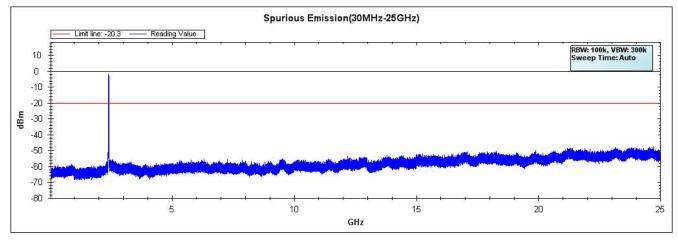
Channel 165 (5825MHz) 30MHz -40GHz

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

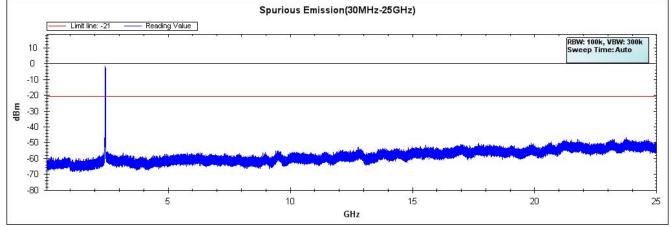
30

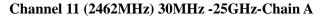
:	AerialCast
:	RF Antenna Conducted Spurious
:	No.3 OATS
:	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)
	•

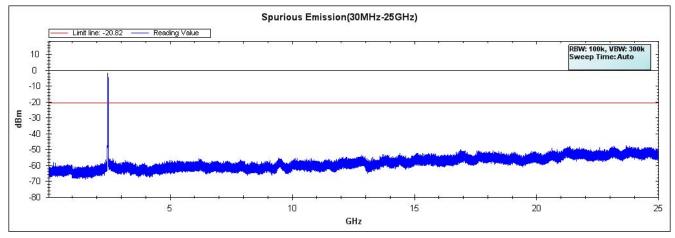
Channel 01 (2412MHz) 30MHz -25GHz-Chain A



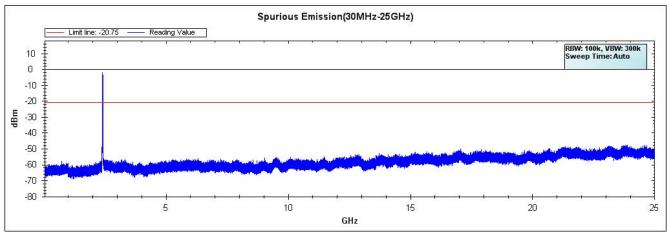


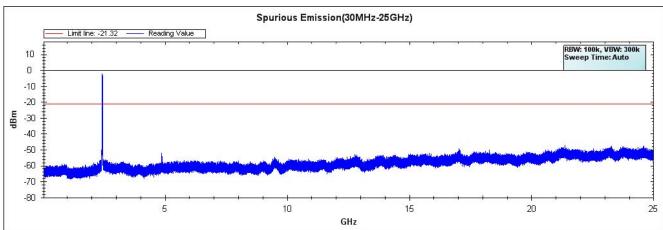


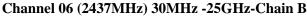


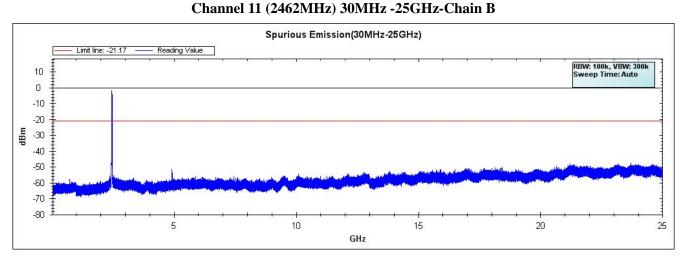


Channel 01 (2412MHz) 30MHz -25GHz-Chain B





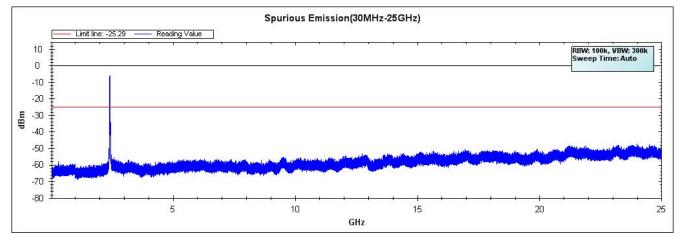


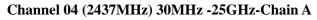


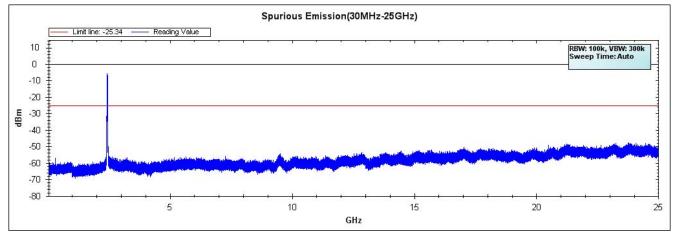
QuieTer

Product	:	AerialCast
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

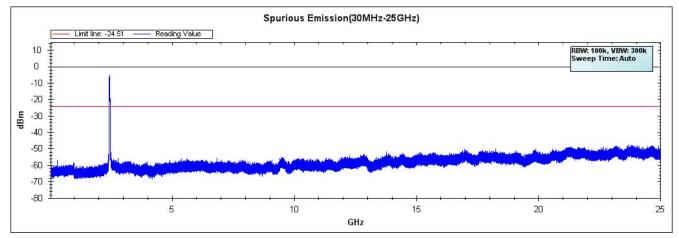
Channel 01 (2422MHz) 30MHz -25GHz-Chain A



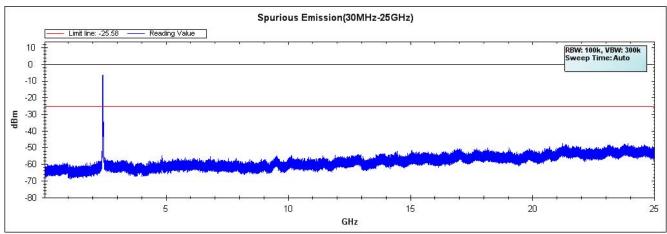


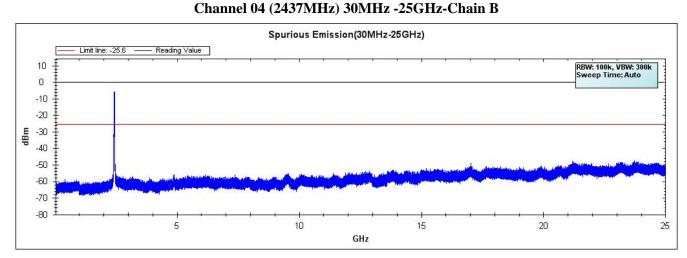


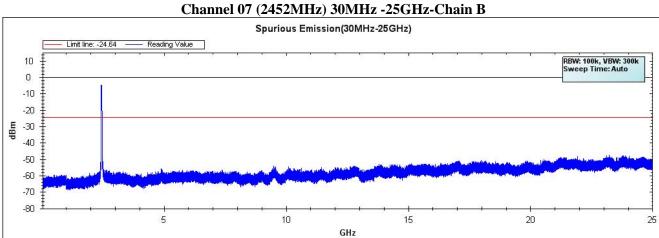
Channel 07 (2452MHz) 30MHz -25GHz-Chain A



Channel 01 (2422MHz) 30MHz -25GHz-Chain B

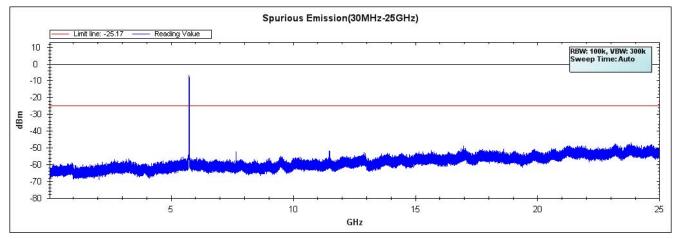


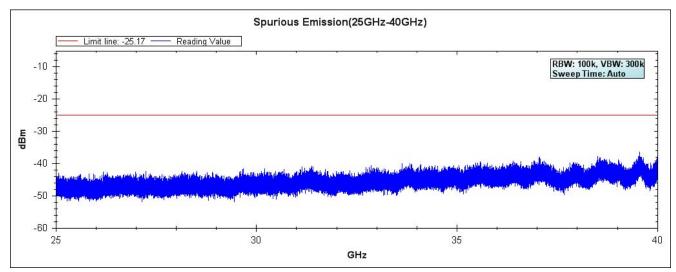


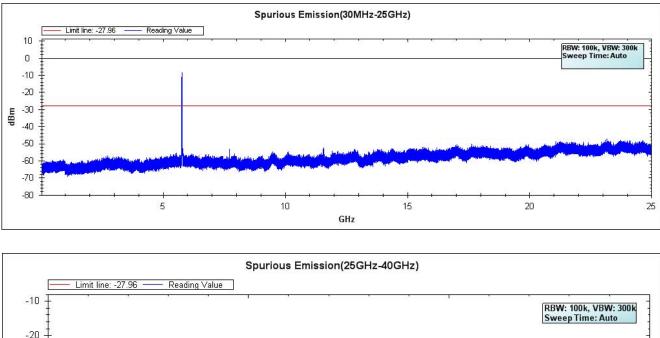


Product	:	AerialCast
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

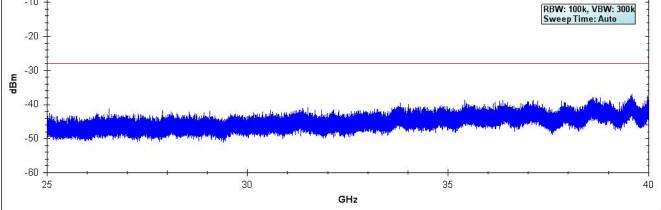
Channel 49 (5745MHz) 30MHz -40GHz-Chain A



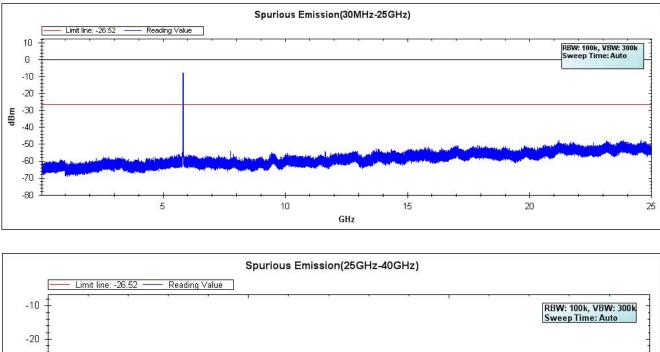




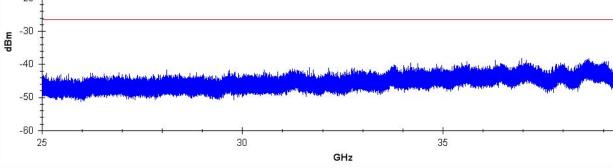
Channel 157 (5785MHz) 30MHz -40GHz-Chain A

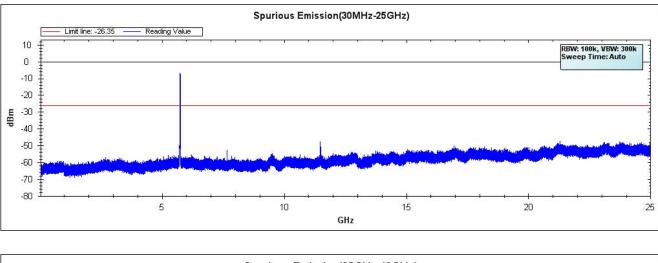


40

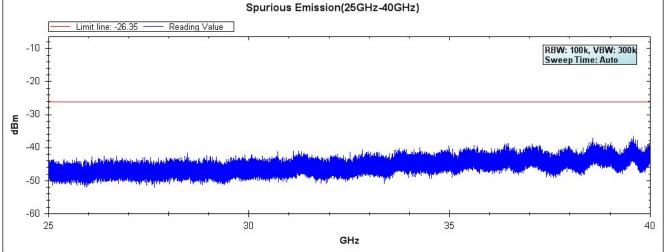


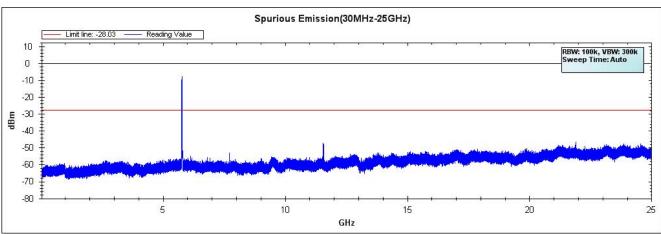
Channel 165 (5825MHz) 30MHz -40GHz-Chain A



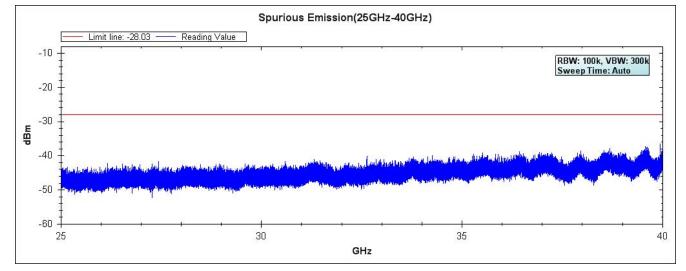


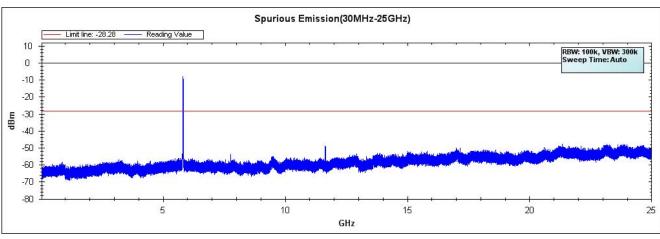
Channel 149 (5745MHz) 30MHz -40GHz-Chain B



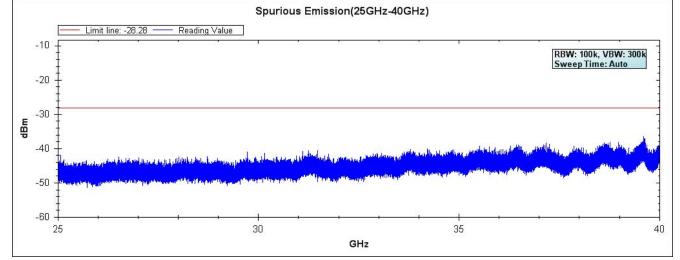


Channel 157 (5785MHz) 30MHz -40GHz-Chain B



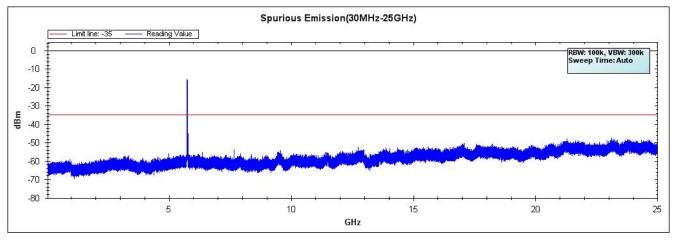


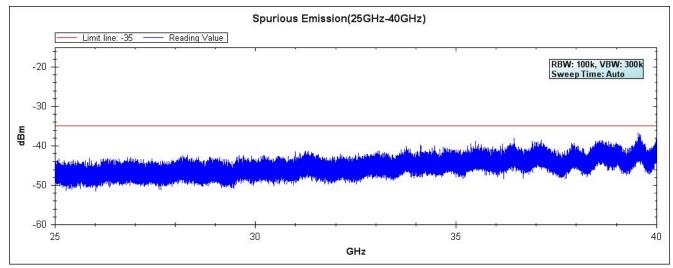
Channel 165 (5825MHz) 30MHz -40GHz-Chain B

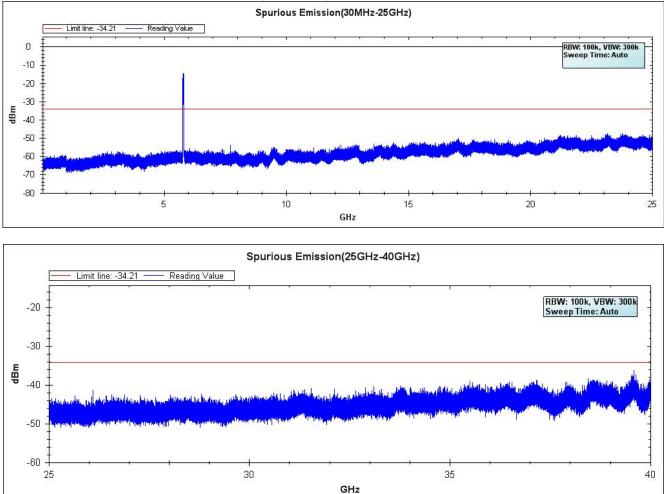


Product	:	AerialCast
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

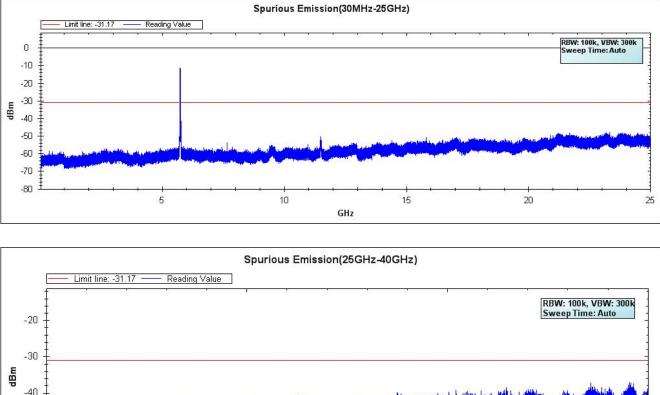
Channel 151 (5755MHz) 30MHz -40GHz-Chain A



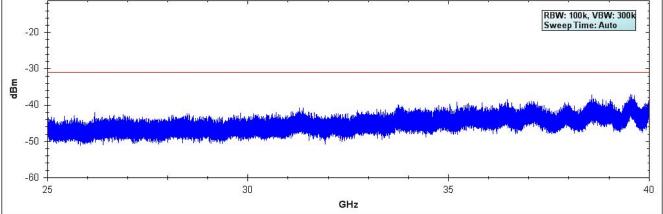




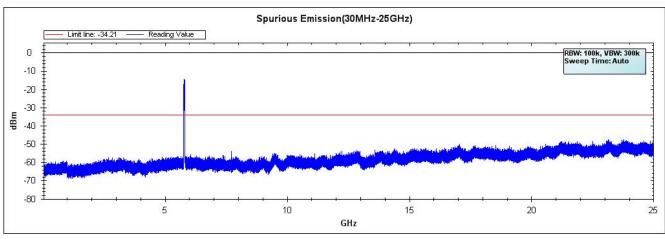
Channel 159 (5795MHz) 30MHz -40GHz-Chain A



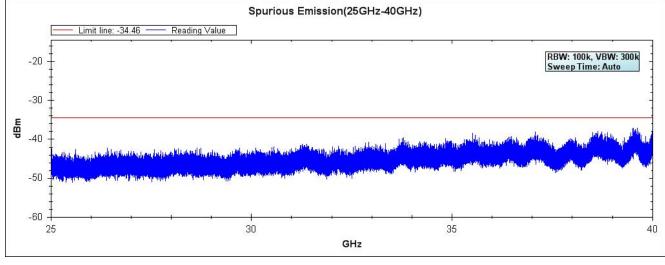
Channel 151 (5755MHz) 30MHz -40GHz-Chain B



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



Channel 159 (5795MHz) 30MHz -40GHz-Chain B



S

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, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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.

RF Radiated Measurement:

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

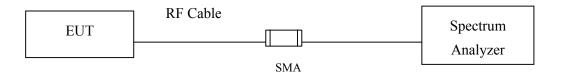
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2013
	X Pre-Amplifier		QTK	AP-180C / CHM_0906076	Sep., 2013
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Х	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

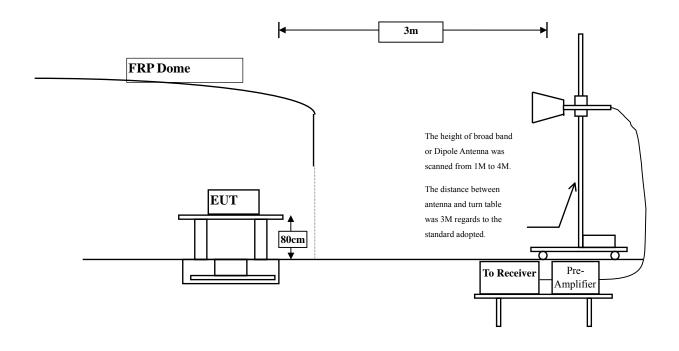
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 30dB 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, 2009 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 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.

6.5. Uncertainty

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

6.6. Test Result of Band Edge

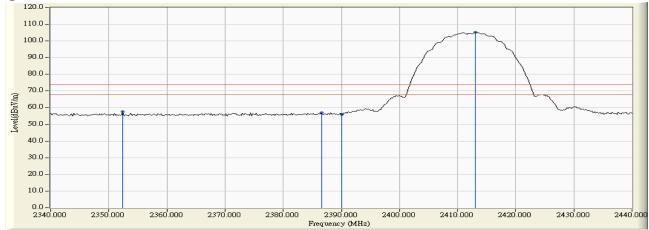
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Degult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2352.400	31.361	26.070	57.432	74.00	54.00	Pass
01 (Peak)	2386.600	31.496	25.544	57.040	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	24.624	56.133	74.00	54.00	Pass
01 (Peak)	2413.000	31.646	73.522	105.168			
01 (Average)	2390.000	31.509	13.084	44.593	74.00	54.00	Pass
01 (Average)	2411.400	31.634	69.750	101.384			

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 = 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	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2365.000	31.031	25.739	56.770	74.00	54.00	Pass
01 (Peak)	2384.800	30.939	25.521	56.460	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	23.871	54.786	74.00	54.00	Pass
01 (Peak)	2413.000	30.956	65.377	96.333			
01 (Average)	2390.000	30.915	12.295	43.210	74.00	54.00	Pass
01 (Average)	2412.800	30.955	61.583	92.538			

Figure Channel 01:

Vertical (Peak)

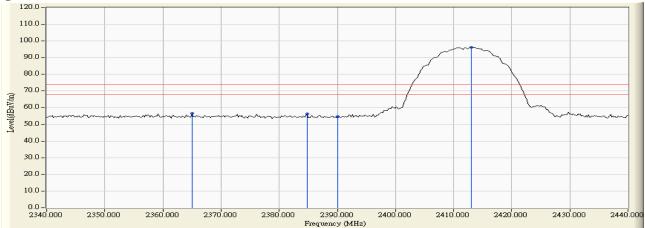
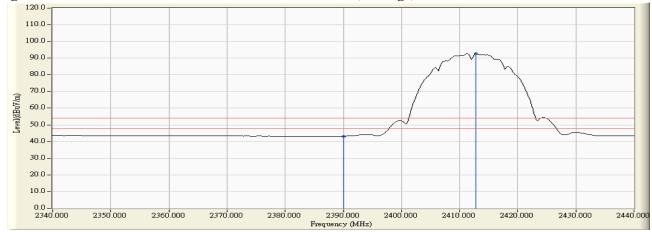


Figure Channel 01:

Vertical (Average)



- 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	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2462.900	32.026	72.782	104.808			
11 (Peak)	2483.500	32.182	24.487	56.669	74.00	54.00	Pass
11 (Peak)	2488.900	32.223	25.531	57.754	74.00	54.00	Pass
11 (Average)	2461.300	32.014	69.171	101.185			
11 (Average)	2483.500	32.182	13.816	45.998	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)

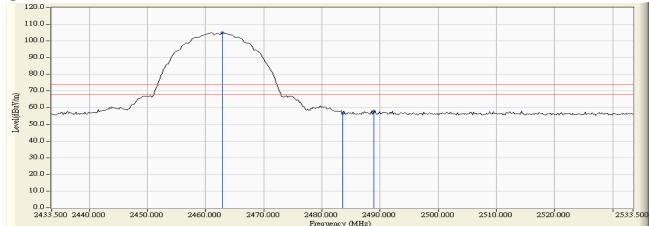


Figure Channel 11:

Horizontal (Average)



- 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	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2462.900	31.296	65.202	96.498			
11 (Peak)	2483.500	31.435	24.017	55.452	74.00	54.00	Pass
11 (Peak)	2487.900	31.465	25.308	56.773	74.00	54.00	Pass
11 (Average)	2461.300	31.286	61.577	92.863			
11 (Average)	2483.500	31.435	12.554	43.989	74.00	54.00	Pass

Figure Channel 11:

Vertical (Peak)

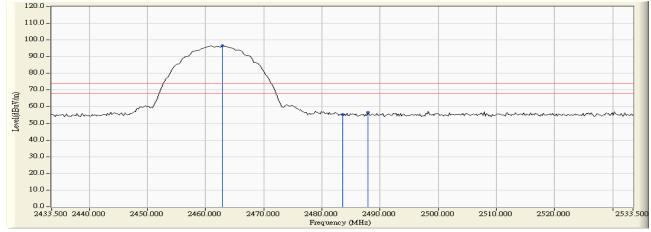


Figure Channel 11:





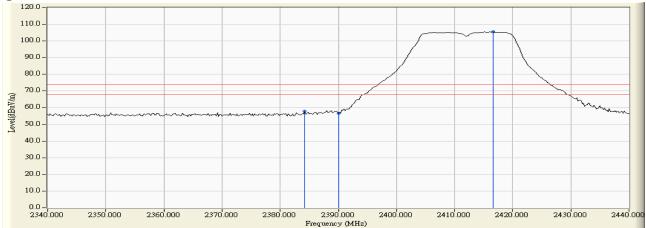
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

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

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2384.200	31.486	26.451	57.937	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	25.270	56.779	74.00	54.00	Pass
01 (Peak)	2416.600	31.674	73.708	105.381			
01(Average)	2390.000	31.509	13.905	45.414	74.00	54.00	Pass
01(Average)	2416.400	31.672	64.979	96.651			

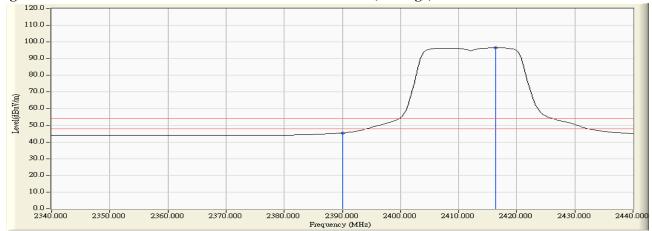
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



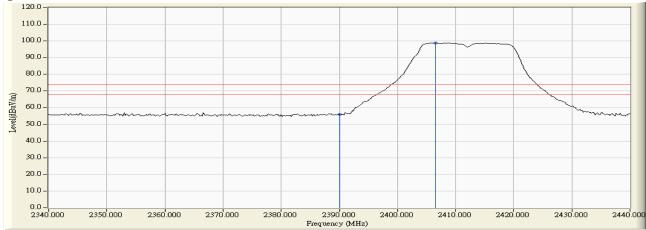
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

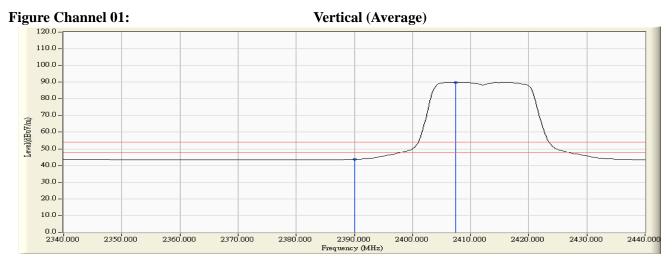
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	25.076	55.991	74.00	54.00	Pass
01 (Peak)	2406.600	30.930	67.936	98.866			
01 (Average)	2390.000	30.915	12.805	43.720	74.00	54.00	Pass
01 (Average)	2407.400	30.932	58.984	89.916			

Figure Channel 01:

Vertical (Peak)





- 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.

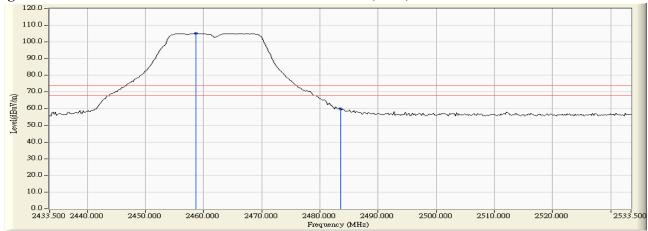


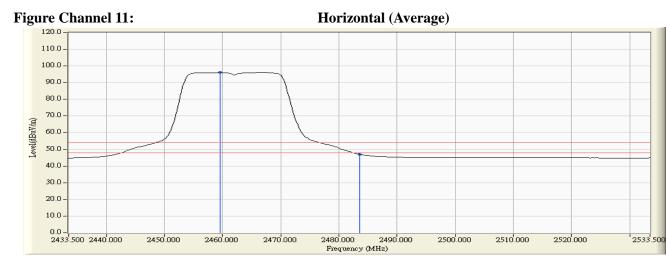
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2458.700	31.994	73.133	105.127			
11 (Peak)	2483.500	32.182	27.656	59.838	74.00	54.00	Pass
11 (Average)	2459.500	32.001	64.119	96.119			
11 (Average)	2483.500	32.182	14.893	47.075	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)





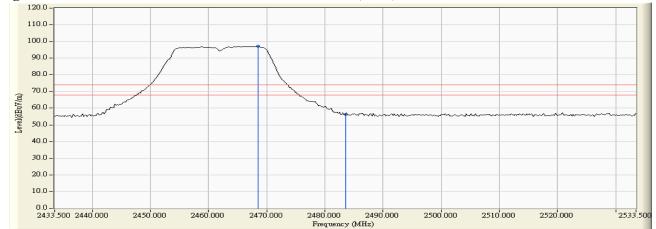
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

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

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2468.500	31.334	65.687	97.021			
11 (Peak)	2483.500	31.435	24.830	56.265	74.00	54.00	Pass
11 (Average)	2467.300	31.326	56.655	87.981			
11 (Average)	2483.500	31.435	12.904	44.339	74.00	54.00	Pass

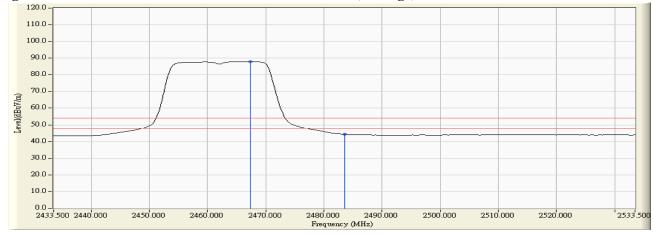
Figure Channel 11:

Vertical (Peak)





Vertical (Average)



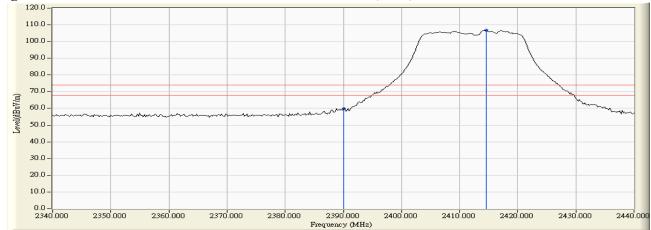
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

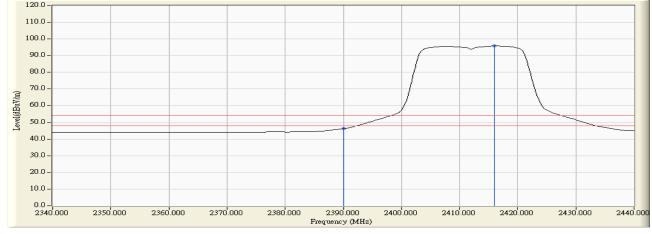
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	28.405	59.914	74.00	54.00	Pass
01 (Peak)	2414.600	31.659	75.035	106.693			
01 (Average)	2390.000	31.509	14.706	46.215	74.00	54.00	Pass
01 (Average)	2416.000	31.670	64.275	95.944			

Figure Channel 01:

Horizontal (Peak)







- 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.

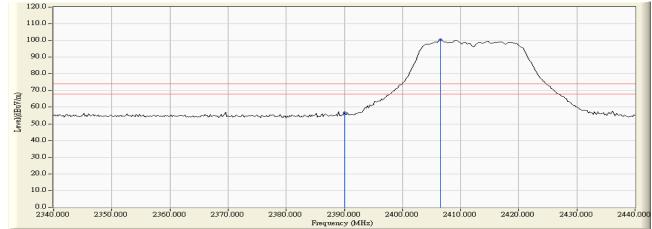


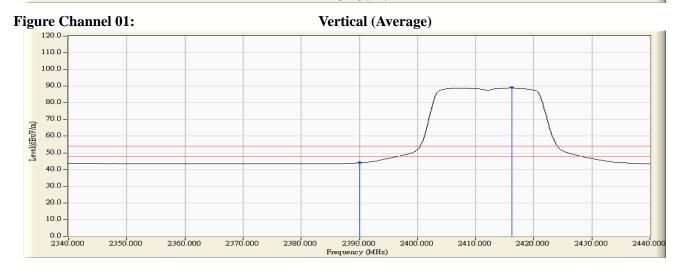
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	25.672	56.587	74.00	54.00	Pass
01 (Peak)	2406.600	30.930	69.424	100.354			
01 (Average)	2390.000	30.915	13.083	43.998	74.00	54.00	Pass
01 (Average)	2416.200	30.978	58.010	88.988			

Figure Channel 01:

Vertical (Peak)





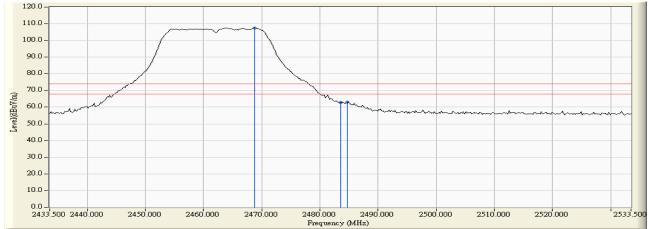
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

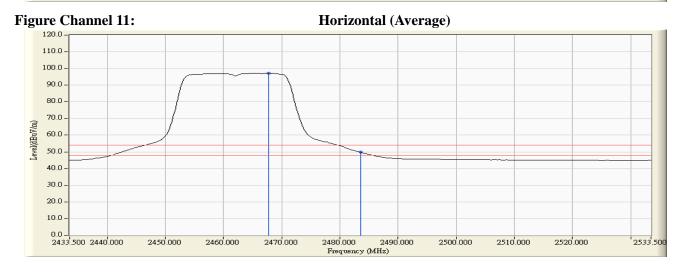
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2468.700	32.070	75.442	107.512			
11 (Peak)	2483.500	32.182	30.475	62.657	74.00	54.00	Pass
11 (Peak)	2484.700	32.192	30.934	63.125	74.00	54.00	Pass
11 (Average)	2467.700	32.063	65.127	97.189			
11 (Average)	2483.500	32.182	17.587	49.769	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)





- 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.

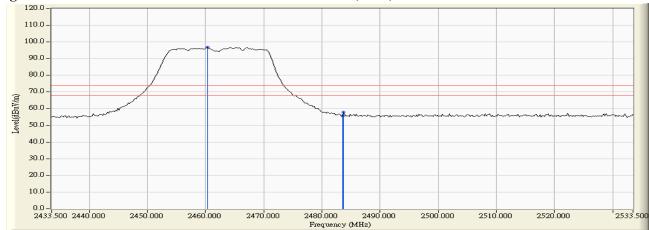


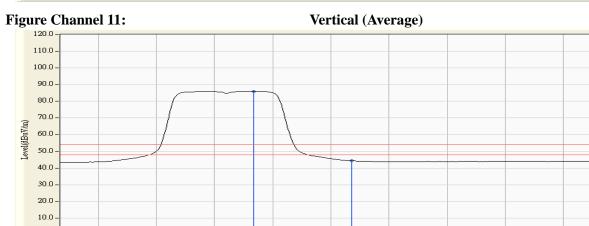
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2460.300	31.278	65.428	96.707			
11 (Peak)	2483.500	31.435	24.094	55.529	74.00	54.00	Pass
11 (Peak)	2483.700	31.437	26.351	57.788	74.00	54.00	Pass
11 (Average)	2466.700	31.322	54.675	85.997			
11 (Average)	2483.500	31.435	12.904	44.339	74.00	54.00	Pass

Figure Channel 11:

Vertical (Peak)





Note:

0.0 - 2433.500 2440.000

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

2480.000

2480.000 2490.000 Frequency (MHz)

2500.000

2510.000

2520.000

2533.500

- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. 3.

2470.000

"*", means this data is the worst emission level. 4.

2450.000

5. Measurement Level = Reading Level + Correct Factor.

2460.000

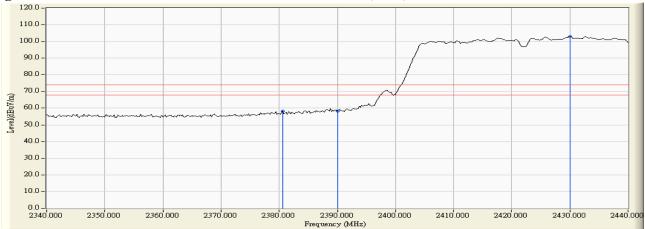
The average measurement was not performed when the peak measured data under the limit of average 6. detection.

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
0 (Peak)	2380.600	31.473	26.872	58.345	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	26.675	58.184	74.00	54.00	Pass
01 (Peak)	2430.000	31.776	71.166	102.942			
01 (Average)	2390.000	31.509	15.534	47.043	74.00	54.00	Pass
01 (Average)	2432.800	31.798	60.333	92.130			

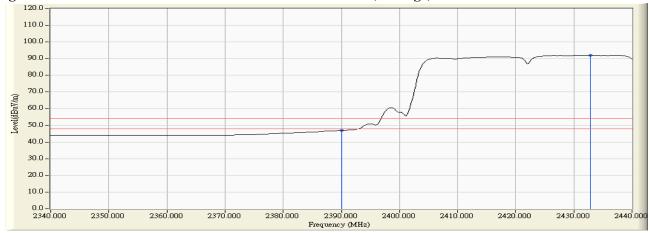
Figure Channel 01:

Horizontal (Peak)





Horizontal (Average)



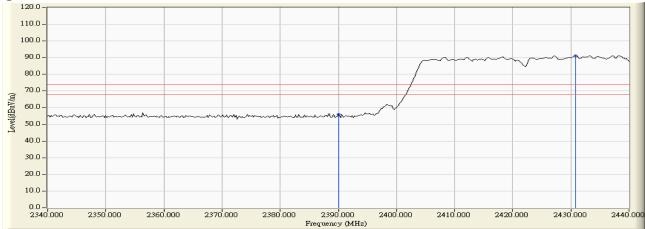
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

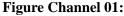
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	24.932	55.847	74.00	54.00	Pass
01 (Peak)	2430.800	31.077	60.120	91.197			
01 (Average)	2390.000	30.915	12.673	43.588	74.00	54.00	Pass
01 (Average)	2438.000	31.125	49.552	80.678			

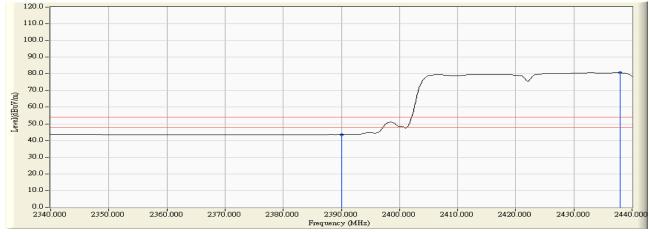
Figure Channel 01:

Vertical (Peak)





Vertical (Average)



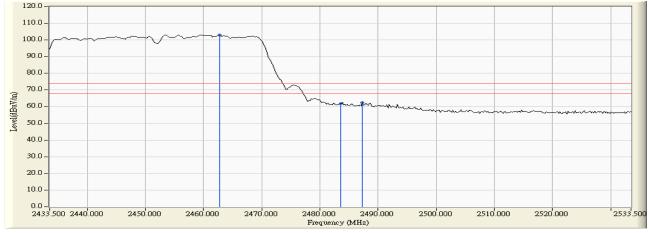
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

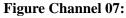
Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
07 (Peak)	2462.700	32.025	70.898	102.923			
07 (Peak)	2483.500	32.182	29.442	61.624	74.00	54.00	Pass
07 (Peak)	2487.300	32.211	30.079	62.290	74.00	54.00	Pass
07 (Average)	2461.300	32.014	60.559	92.573			
07 (Average)	2483.500	32.182	17.095	49.277	74.00	54.00	Pass

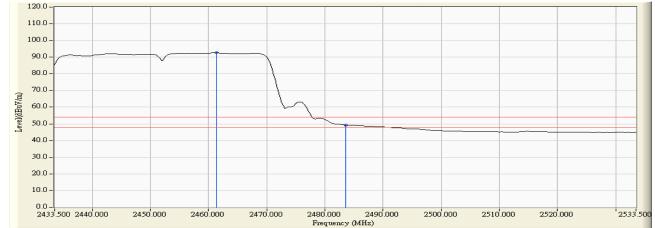
Figure Channel 07:

Horizontal (Peak)





Horizontal (Average)



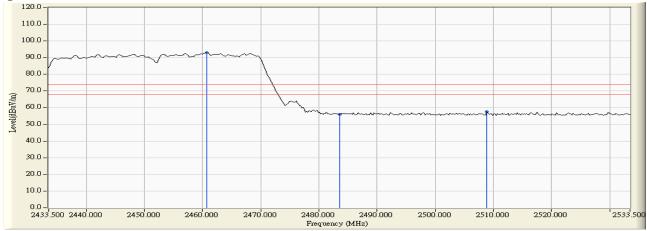
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level =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

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
07 (Peak)	2460.700	31.281	61.729	93.010			
07 (Peak)	2483.500	31.435	24.618	56.053	74.00	54.00	Pass
07 (Peak)	2508.900	31.544	25.974	57.519	74.00	54.00	Pass
07 (Average)	2461.100	31.285	50.836	82.120			
07 (Average)	2483.500	31.435	12.983	44.418	74.00	54.00	Pass

Figure Channel 07:

Vertical (Peak)





Vertical (Average)



- 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	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5745	45.09	>30	PASS

RL RF 50 Ω	AC	SENSE:INT	ALIGN AUTO	04:59:33 AMNov 12, 2013	
enter Freq 5.72500	0000 GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
) dB/div Ref 20.00 d			Mk	r2 5.725 0 GHz -52.03 dBm	Auto Tun
Pg 0.0 .00 0.0			1		Center Fre 5.725000000 GF
0.0		2		-26.94 dBm	Start Fre 5.675000000 GH
0.0 0.0 <mark>* 10 10 10 10 10 10 10 10 10 10 10 10 10 </mark>	a popular a popular de la constante de	amount when		Tallingson Mary Mayor Superior	Stop Fr 5.775000000 GI
enter 5.72500 GHz Res BW 100 kHz	#VB\ ×	V 1.0 MHz	#Sweep	Span 100.0 MHz 500 ms (1001 pts) EUNCTION VALUE	CF Ste 10.000000 MI Auto Mi
1 N 1 f 2 N 1 f 3 4 5 6 7 7	5.749 2 GHz 5.725 0 GHz	-6.94 dBm -52.03 dBm			Freq Offs
8 9 0 1					

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5825	48.53	>30	PASS

RL RF 50Ω A	C	SENSE:INT	ALIGN AUTO	05:03:00 AMNov 12, 2013	-
enter Freq 5.8500000	00 GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
dB/div Ref 20.00 dBr	n		Mk	r2 5.850 0 GHz -54.75 dBm	Auto Tur
0.0 0.0 0.0	1				Center Fre 5.850000000 GR
0.0	-	2		-26.22 dBm	Start Fr 5.80000000 G
0.0 0.0 0.0		Topologia and	entering and and a state of a state	יויים מערכים או איז און אויים מערכי ג'וייני איז איז איז איז איז איז איז איז איז אי	Stop Fr 5.90000000 G
enter 5.85000 GHz Res BW 100 kHz	#VBW	/ 1.0 MHz	#Sweep	Span 100.0 MHz 500 ms (1001 pts)	CF Sto 10.000000 M Auto M
1 N 1 f 2 N 1 f 3 4	5.829 2 GHz 5.850 0 GHz	-6.22 dBm -54.75 dBm		FONCTION VALUE	FreqOffs
5 6 7 8 9 0					0
1					

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5745	46.01	>30	PASS

RL RF 50 \$	wept SA Ω AC	SENSE:INT	ALIGN AUTO	05:04:22 AMNov 12, 2013	_
enter Freq 5.7250			Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Frequency
0 dB/div Ref 20.00	dBm		Mk	r2 5.725 0 GHz -52.50 dBm	Auto Tun
og 10.0 0.00					Center Fre 5.725000000 GH
0.0		2		-26.50 dBm	Start Fr 5.675000000 GI
0.0 0.0 مع <mark>الي معالمي تمر</mark> 0.0	Kdu a most a constructive state a state to	adole and a service and a service and		Construction of the second sec	Stop Fr 5.775000000 G
enter 5.72500 GHz Res BW 100 kHz	#VB	SW 1.0 MHz	#Sweep	Span 100.0 MHz 500 ms (1001 pts) cunction value	CF Sto 10.000000 M Auto M
1 N 1 f 2 N 1 f 3 4 5 5 6 7	5.748 2 GHz 5.725 0 GHz	-6.49 dBm -52.50 dBm			Freq Offs

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5745	40.40	>30	PASS

RL RF 50 \$	2 AC	SENSE:INT	ALIGN AUTO	05:05:10 AMNov 12, 2013	_
enter Freq 5.7250	00000 GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
0 dB/div Ref 20.00	dBm		Mk	r2 5.725 0 GHz -48.49 dBm	Auto Tur
og 10.0					Center Fre
00			1		5.725000000 G
J.O J.O					Otort Er
0.0		2		-28.09 dBm	Start Fr 5.675000000 G
0.0		Langerty work of the state		North Martin Charles	04 E-
).0	المحطاة خنيفة بعد الم ليمة محدث المالغ مع				Stop Fr 5.775000000 G
enter 5.72500 GHz Res BW 100 kHz	#VBI	W 1.0 MHz	#Sweep	Span 100.0 MHz 500 ms (1001 pts)	CF St 10.000000 M
R MODE TRO SCL 1 N 1 f	× 5.742 9 GHz	-8.09 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> N
2 N 1 f 3	5.725 0 GHz	-48.49 dBm			Freq Offs 0
5	6				
5 5 7					
4 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7					

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5825	51.28	>30	PASS

RL RF	50 Ω AC	SENSE:I	ALIO ALIO	GNAUTO 05:06:28 A	MNov 12, 2013	-
enter Freq 5.85	0000000 GHz PNO: Fas IFGain:Lo		Avg Type: Lo	TY	2E 1 2 3 4 5 6 PE MWWWWW ET P N N N N N	Frequency
dB/div Ref 20.	00 dBm			Mkr2 5.850 -56.	0 0 GHz 76 dBm	Auto Tun
	Artine morten provintigener					Center Fre 5.85000000 GH
0.0	1	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			-25.48 dBm	Start Fre 5.80000000 GI
0.0 0.0 0.0		2-	*****	a luuha kalena seksii	Slav opu o dost	Stop Fr 5.90000000 GI
enter 5.85000 GH Res BW 100 kHz		/BW 1.0 MHz		weep 500 ms (CF Ste 10.000000 M
KR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.828 1 GHz 5.850 0 GHz		FUNCTION FUNCTION	ON WIDTH FUNCTIO		i <u>to</u> M
3 4 5 3						Freq Offs 0
8						
9 0 1						

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5825	46.25	>30	PASS

RL RF 50	Swept SA IΩ AC	SE	NSE:INT	ALIGN	UTO 05:07:22 A	MNov 12, 2013	
enter Freq 5.850	000000 GHz	ast 🕞 Trig: Fre	e Run	Avg Type: Log-	Pwr TRAC TYI	CE 123456 PE MWWWWW ET P N N N N N	Frequency
dB/div Ref 20.00	0 dBm				Mkr2 5.85 -53.	0 0 GHz 28 dBm	Auto Tun
	1						Center Fre 5.85000000 GH
0.0		And and	2			-27.03 dBm	Start Fre 5.80000000 GH
0.0		To help the party	mantheman	soulda ski se	ng i ya da a sa a sa a sa a sa a sa a sa a s	ata lefenda yana di statistik	Stop Fre 5.900000000 GR
enter 5.85000 GHz Res BW 100 kHz	#	VBW 1.0 MHz			eep 500 ms (CF Ste 10.000000 MI
KR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.821 7 GH 5.850 0 GH			ON FUNCTION		ON VALUE	<u>Auto</u> M
3 4 5 6							Freq Offs 0
7 8 9 0 1							

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5755	42.87	>30	PASS

RL RF 50 Ω	AC	SENSE:INT	ALIGN AUTO	05:08:38 AMNov 12, 2013	-
enter Freq 5.72500	DOOOO GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
dB/div Ref 20.00 d	dBm		Mkr	2 5.725 00 GHz -52.64 dBm	Auto Tur
P9 0.0 .00 0.0			مر بالمراجع المراجع الم	~	Center Fre 5.725000000 GH
0.0		2 1		-29.77 dBm	Start Fre 5.65000000 GH
0.0 0.0 <mark>J^{eong}erale Calender Statesterner</mark> 0.0	ane we are and a sugressive security	and the second second second		" harrow we	Stop Fr 5.800000000 Gi
enter 5.72500 GHz Res BW 100 kHz		V 1.0 MHz	•	Span 150.0 MHz 500 ms (1001 pts) EUNNIONVAUE	CF Ste 15.000000 M
KR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.756 35 GHz 5.725 00 GHz	-9.77 dBm -52.64 dBm	UNCTION FUNCTION WIDTH	FONCTION VALUE	<u>Auto</u> M
3 4 5 6					Freq Offs 0
7					
B					

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5755	38.32	>30	PASS

RL RF 50 Ω	AC	SENSE:INT	ALIGN AUTO	05:09:55 AMNov 12, 2013	-
enter Freq 5.72500	DOOOO GHz PNO: Fast G IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Frequency
0 dB/div Ref 20.00	dBm		Mkr	2 5.725 00 GHz -50.84 dBm	Auto Tun
0.0 0.0 0.00					Center Fre 5.725000000 GH
		2			Start Fre 5.650000000 GH
0.0 0.0 <mark>אינאיל אינטער אינער אינער 0.0</mark>	an al landa sanaatii ana bara karanda	Wellin-Berthermer aller		Mannahala	Stop Fr 5.80000000 G
enter 5.72500 GHz Res BW 100 kHz	#VB\	N 1.0 MHz	#Sweep	Span 150.0 MHz 500 ms (1001 pts)	CF Ste 15.000000 MI Auto Mi
1 N 1 f 2 N 1 f 3	5.763 10 GHz 5.725 00 GHz	-12.52 dBm -50.84 dBm			Freq Offs 01
9					

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5795	48.09	>30	PASS

RL RF	- Swept SA 50 Ω AC	SENSE:INT	ALIGN AUTO	05:11:12 AMNov 12, 2013	_
enter Freq 5.85	0000000 GHz PNO: Fast IFGain:Low	Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
dB/div Ref 20.	00 dBm		Mkr	2 5.850 00 GHz -58.27 dBm	Auto Tur
0.0 0.00 0.00	phila alice				Center Fre 5.85000000 Gi
0.0	deres and			-30.18 dBm	Start Fr 5.775000000 G
0.0 0.0 0.0	Valen	2	unditionalon, Adapt Junglado Hilorya	an dispit dy tak a far far an an an an an a	Stop Fr 5.925000000 G
enter 5.85000 GH Res BW 100 kHz	#VI	BW 1.0 MHz	•	Span 150.0 MHz 500 ms (1001 pts)	CF Sto 15.000000 M
MODE TRC SQL 1 N 1 f 2 N 1 f 3	× 5.796 30 GHz 5.850 00 GHz	-10.18 dBm -58.27 dBm	UNCTION FUNCTION WIDTH		Auto M Freq Offs 0
6 7 8 9					
0 1 2					

Product	:	AerialCast
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5795	47.34	>30	PASS

RL RF 50 G	AC	SENSE:INT	ALIGN AUTO	05:12:06 AMNov 12, 2013	Francisco
enter Freq 5.8500	DOOOOO GHz PNO: Fast C IFGain:Low	➡ Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
dB/div Ref 20.00	dBm		Mkr	2 5.850 00 GHz -58.76 dBm	Auto Tur
29 0.0 00 0.0	1				Center Fr 5.85000000 Gi
0.0	- MA			31.42 dBm	Start Fr 5.775000000 G
).0 .0 .0	Understand	2-	ممكوم والمراجع	אין איניאין אינאיין אי	Stop Fr 5.925000000 G
enter 5.85000 GHz tes BW 100 kHz R MODE TRE SCL	#VB	W 1.0 MHz	#Sweep	Span 150.0 MHz 500 ms (1001 pts) cunction value	CF Sto 15.000000 M Auto M
1 N 1 F 2 N 1 F 3 4	6.803 20 GHz 5.850 00 GHz	-11.42 dBm -58.76 dBm			Freq Offs
5 6 7 8					0
9					

7. Occupied Bandwidth

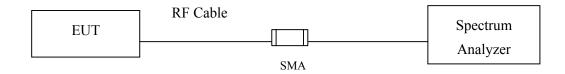
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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 C63.10, 2009; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 1-5% of the emission bandwidth, VBW≥3*RBW

7.5. Uncertainty

 \pm 150Hz

7.6. Test Result of Occupied Bandwidth

:	AerialCast
:	Occupied Bandwidth Data
:	No.3 OATS
:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)
	:

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	10200	>500	Pass

Figure Channel 1:

	AC	SENSE:INT	ALIGN AUTO	11:19:59 PM Nov 08, 2013	Frequency
enter Freq 2.41200	00000 GHz	Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
	PNO: Fast IFGain:Low	#Atten: 30 dB		DET P N N N N N	
dB/div Ref 20.00 (dBm		Mkr	2 2.406 90 GHz -3.98 dBm	Auto Tur
9 g 0.0		1			Center Fre
.00		2 min mun	3	-1.91 dBm	2.412000000 G
0.0	and a second		1 May		2.4120000000
0.0	الممر الم		- Ma		Start Fr
0.0		·			2.387000000 G
0.0	parray (proven	Address of T	2.387000000 G
D.O JAMAN Malter and Mar	¥ ¥		- V \	a man multiplant	
	-			- Will And Lynner	Stop Fr
1.0	×				2.437000000 G
2.0				Spap 50 00 MHz	2.437000000 G
enter 2.41200 GHz Res BW 100 kHz	#VE	300 kHz	Sweep	Span 50.00 MHz 4.80 ms (1001 pts)	CF St
enter 2.41200 GHz	#VE		Sweep 4	4.80 ms (1001 pts)	CF Sto 5.000000 M
enter 2.41200 GHz Res BW 100 kHz G MODE TRE SCL	× 2.411 50 GHz	¥ 4.09 dBm		4.80 ms (1001 pts)	CF Sto 5.000000 M
enter 2.41200 GHz Res BW 100 kHz G MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f	×	Y F		4.80 ms (1001 pts)	CF Sto 5.000000 M <u>Auto</u> M
enter 2.41200 GHz Res BW 100 kHz G MODE TEC SCU 1 N 1 f 2 N 1 f 3 N 1 f 4 I	× 2.411 50 GHz 2.406 90 GHz	4 <u>.09 dBm</u> -3.98 dBm		4.80 ms (1001 pts)	CF Str 5.000000 M <u>Auto</u> M Freq Offs
enter 2.41200 GHz Res BW 100 kHz 6 M006 TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 5 6 5	× 2.411 50 GHz 2.406 90 GHz	4 <u>.09 dBm</u> -3.98 dBm		4.80 ms (1001 pts)	CF Str 5.000000 M <u>Auto</u> M Freq Offs
enter 2.41200 GHz Res BW 100 kHz E MODE TRC SCL 1 N 1 f 2 N 1 f	× 2.411 50 GHz 2.406 90 GHz	4 <u>.09 dBm</u> -3.98 dBm		4.80 ms (1001 pts)	2.43700000 G CF Ste 5.00000 M <u>Auto</u> M Freq Offs 0
Image: constraint of the second state of th	× 2.411 50 GHz 2.406 90 GHz	4 <u>.09 dBm</u> -3.98 dBm		4.80 ms (1001 pts)	CF Str 5.000000 M <u>Auto</u> M Freq Offs
Image: constraint of the second sec	× 2.411 50 GHz 2.406 90 GHz	4 <u>.09 dBm</u> -3.98 dBm		4.80 ms (1001 pts)	CF Str 5.000000 M <u>Auto</u> M Freq Offs

Product	:	AerialCast
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	10200	>500	Pass

Figure Channel 6:

RL RF	50 Ω AC	SENS	E:INT	ALIGN AUTO 1	1:29:13 PM Nov 08, 2013	
enter Freq 2.4	137000000 GHz PNO: Fa IFGain:L		lun	e: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
) dB/div Ref 2	0.00 dBm	ow watten. oo t		Mkr2 2	.431 90 GHz -3.46 dBm	Auto Tur
0.0 0.0 0.0		2 and 1	mennen 3		-1.29 dBm	Center Fro 2.437000000 Gi
	an annound		North Andrews	Varma -	min	Start Fr 2.412000000 G
0.0 0.0 0.0						Stop Fr 2.462000000 G
enter 2.43700 (Res BW 100 kH	z #	VBW 300 kHz		Sweep 4.8	Span 50.00 MHz 0 ms (1001 pts)	CF St 5.000000 M
KR MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f	× 2.436 50 GH 2.431 90 GH 2.442 10 GH	z -3.46 dBı	n n	NCTION WIDTH	FUNCTION VALUE	Auto M Freq Offs
4 5 6 7						0
8 9 0						
2						

:	AerialCast
:	Occupied Bandwidth Data
:	No.3 OATS
:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)
	:

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	10200	>500	Pass

Figure Channel 11:

gilent Spectrum Analyzer - Swej					r
RL RF 50 Ω Center Freq 2.46200	AC 0000 GHz PN0: Fast C	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	11:36:28 PMNov 08, 2013 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
0 dB/div Ref 20.00 di	IFGain:Low	#Atten: 30 dB	Mkr	2 2.456 90 GHz -2.69 dBm	Auto Tur
og 10.0 0.00	لاسمع	2 1	Mag 3	-0.53 dBm	Center Fre 2.462000000 GH
0.0	manay		- No man	a mana	Start Fr 2.437000000 G
0.0 0.0	(¥		(the mentioned	Stop Fr 2.487000000 G
enter 2.46200 GHz Res BW 100 kHz G MODE TRO SCI	#VBW	300 kHz	Sweep	Span 50.00 MHz 4.80 ms (1001 pts) FUNCTION VALUE	CF Ste 5.000000 M Auto M
1 N 1 f 2 N 1 f 3 N 1 f 4 5 5 6	2.462 50 GHz 2.456 90 GHz 2.467 10 GHz	5.47 dBm -2.69 dBm -2.18 dBm			Freq Offs
7 8 9 9 9 0 0 1 1 2 2 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
G			STATUS	3	

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16650	>500	Pass

Figure Channel 1:

RL RF 50 Ω		SENSE:INT	ALIGN AUTO	11:48:51 PM Nov 08, 2013	Energy and The
enter Freq 2.41200		Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
	PNO: Fast G IFGain:Low	#Atten: 30 dB		DET P N N N N N	
dB/div Ref 20.00 d	lBm		Mkr	2 2.403 70 GHz -10.85 dBm	Auto Tu
0.0			-		Center Fr
0	2	an and an and a second	June 3	-10.76 dBm	2.412000000 G
.0			¥		
.0	- War				Start Fr 2.387000000 G
.0	A ADULTY ADULTY		Willow Conner	Mul way gene	2.387000000 G
0 minter market 10 10 minuter 100 minuter				Mun and and and and and	Stop Fr
					2.437000000 G
enter 2.41200 GHz				Onen 50.00 Mili-	
es BW 100 kHz	#VBI	V 300 kHz	Sweep	Span 50.00 MHz 4.80 ms (1001 pts)	CF St 5.000000 M
R MODE TRC SCL	×		UNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto N
N 1 f N 1 f	2.416 15 GHz 2.403 70 GHz	-4.76 dBm -10.85 dBm			-
N 1 f	2.420 35 GHz	-14.47 dBm			Freq Off
					0
2					
			STATUS		

Product	:	AerialCast
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16650	>500	Pass

Figure Channel 6:

RL RF 50 \$	2 AC	SENSE:INT	ALIGN AUTO	11:56:30 PM Nov 08, 2013	-
enter Freq 2.4370	00000 GHz PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWWWW DET P N N N N N	Frequency
) dB/div Ref 20.00			Mkr	2 2.428 70 GHz -10.35 dBm	Auto Tur
P9 0.0 .00 0.0	¢2	and the second s	3	-10.17 dBm	Center Fre 2.437000000 GF
0.0	and the second s			What my and my and my and	Start Fro 2.412000000 Gi
0.0 0.0 0.0				want walk	Stop Fr 2.462000000 G
enter 2.43700 GHz Res BW 100 kHz	#VB	W 300 kHz		Span 50.00 MHz 4.80 ms (1001 pts)	CF Sto 5.000000 M
KR MODE TRC SCL 1 N 1 f 2 N 1 f	× 2.441 15 GHz 2.428 70 GHz	-4.17 dBm -10.35 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> M
3 N 1 f 4 5 6 8	2.445 35 GHz	-13.86 dBm			Freq Offs 0
7 8 9 0 1					
2					

Product	:	AerialCast
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16650	>500	Pass

Figure Channel 11:

gilent Spectrum Analyzer - Sv RL RF 50 Center Freq 2.4620	Ω AC	SENSE:I	Avg Type n	ALIGNAUTO	12:05:52 AMI TRACE TYPE	Nov 09, 2013 1 2 3 4 5 6 M WWWWW P N N N N N	Frequency
0 dB/div Ref 20.00	IFGain:Low	#Atten: 30 dB		Mkr	2 2.453 7	The second s	Auto Tun
og 10.0 0.00	2 ••••••	anter the state of	3			-9.52 dBm	Center Fre 2.462000000 GH
20.0 30.0 40.0	No Challenger and and			Margare Marker	Markey as		Start Fre 2.437000000 GH
00.0 40.0 50.0 40.0 50.0 40.0 40.0 40.0					more and a source of the sourc	un muter	Stop Fre 2.487000000 GF
enter 2.46200 GHz Res BW 100 kHz KR MODE TRC SCL	#VE	300 kHz	FUNCTION FU	Sweep 4	Span 50. 4.80 ms (10	001 pts)	CF Ste 5.000000 MI Auto M
1 N 1 f 2 N 1 f 3 N 1 f 4 5 6	2.466 15 GHz 2.453 70 GHz 2.470 35 GHz	-3.51 dBm -9.70 dBm -13.19 dBm					Freq Offs 01
7 8 9 9 10 1 2 2							
g I I I I I I I I I I I I I I I I I I I			j.	STATUS			