

Product Name	Push2TV
Model No	PTV2000
FCC ID	PY310400146

Applicant	.pplicant NETGEAR, Inc.	
Address	350 East Plumeria Drive, San Jose, CA 95134, USA	

Date of Receipt	Oct. 20, 2010
Issued Date	Nov. 25, 2010
Report No.	10A309R-RFUS46V01
Report Version	V1.0

The test results relate only to the samples tested.

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Test Report Certification

Issued Date: Nov. 25, 2010 Report No.: 10A309R-RFUS46V01



Product Name	Push2TV	
Applicant	NETGEAR, Inc.	
Address	350 East Plumeria Drive, San Jose, CA 95134, USA	
Manufacturer	Maintek Computer (Suzhou) Co., Ltd.	
Model No.	PTV2000	
FCC ID.	PY310400146	
EUT Rated Voltage	AC 100-240V, 50-60Hz	
EUT Test Voltage	AC 120V/60Hz	
Trade Name	NETGEAR	
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2009	
	ANSI C63.4: 2003	NVLAP Lab Code: 200533-0
Test Result	Complied	

The Test Results relate only to the samples tested.

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Push2TV	
Trade Name	NETGEAR	
FCC ID.	PY310400146	
Model No.	PTV2000	
Frequency Range	802.11a/n-20MHz: 5180-5240MHz; 802.11n-40MHz: 5190-5230MHz	
Number of Channels	802.11a/n-20MHz: 4; 802.11n-40MHz: 2	
Data Rate	802.11a: 6 - 54Mbps	
	802.11n: up to 300Mbps	
Channel Control	Auto	
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM	
Antenna type	Dipole	
Antenna Gain	Refer to the table "Antenna List"	
Power Adapter (1)	MFR : LEADER, M/N : MT12-Y120100-A1	
	Input : AC 100-120V, 60Hz, 0.3A	
	Output : DC 12V, 1A	
	Cable out : Non-Shielded, 1.8m	
Power Adapter (2)	MFR : PIE, M/N : T012LF1209	
	Input : AC 100-120V, 50/60Hz, 0.5A	
	Output : DC 12V, 1A	
	Cable out: Non-Shielded, 1.8m	
Contain Module	Ralink / RT3572	

Antenna List

Nc	. Manufacturer	Part No.	Peak Gain
1	WHA YU	C1336S510041-A (Main)	5.88 dBi in 5GHz
		C1336S510042-A (Aux)	

Note: The antenna of EUT is conform to FCC 15.203

802.11a/n-20MHz Center Working Frequency of Each Channel:

ChannelFrequencyChannelFrequencyChannelFrequencyChannelChannel 36:5180 MHzChannel 40:5200 MHzChannel 44:5220 MHzChannel 48:5240 MHz

802.11n-40MHz Center Working Frequency of Each Channel:

Channel Frequency Channel Frequency

Channel 38: 5190 MHz Channel 46: 5230 MHz

- 1. This device is a Push2TV with a built-in 2.4GHz and 5GHz WLAN transceiver, this report for 5GHz.
- 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. (802.11a is 6Mbps, 802.11n-20BW is 13Mbps and 802.11n-40BW are 27Mbps)
- 3. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

1.2. Operational Description

The EUT is a Push2TV with a built-in 2.4GHz and 5GHz WLAN transceiver. This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps and the device of RF carrier is DBPSK, DQPSK and CCK (IEEE 802.11b). The device provided of eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11a/g).

The device provided of eight kinds of transmitting speed 13,26,39,52,78,104,117 and 130Mbps in 802.11n(20BW) mode and 27,54,81,108,162,216,243 and 270Mbps(40BW) the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11n), the IEEE 802.11n is Multiple In, Multiple Out" (MIMO) technology.

The device adapts direct sequence spread spectrum modulation. The antenna provides diversity function to improve the receiving function and the antennas to support 2(Transmit) \times 2(Receive) MIMO technology.

Intel Wireless Display allows consumers to use their HDTV as a huge, remote screen for their laptop. With Intel Wireless Display, consumers can connect their laptop to their TV and enjoy and share their personal media collections, latest YouTube videos, downloaded or streamed movies, music, or a variety of other Internet content from the comfort of their couch.

Intel Wireless Display requires the following key elements:

- •Push 2 TV adapter. The adapter receives Wi-Fi signals from the laptop, translates the signals into an image, and sends the image to the TV.
- •A laptop computer with Intel Wireless Display installed. This will be used to manage the connection to the TV through the adapter.

Test Mode	Mode 1: Transmit (802.11a-6Mbps)
	Mode 2: Transmit (802.11n-20BW 13Mbps)
	Mode 3: Transmit (802.11n-40BW 27Mbps)

NOTE: In n-20 and n-40 mode the power combiner is used, the factor of combiner is 10dB and offset it in test instrument.

1.3. Tested System Datails

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)	Monitor	SONY	PVM-14M2U	2105742	Non-Shielded, 1.8m

Signal Cable Type		Signal cable Description	
А	RCA Cable	Non-Shielded, 1.5m	
В	HDMI Cable	Shielded, 1.0m	

1.4. Configuration of tested System



1.5. EUT Exercise Software

- (1) Connect EUT and Notebook via RS-232 Cable.
- (2) Execute Telnet program on the Notebook.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous transmission.
- (5) Remove notebook and RS232 cable, Setup the EUT as shown in Section 1.4.
- (6) 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

Accreditation on NVLAP NVLAP Lab Code: 200533-0





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FCC Accreditation Number: TW1014



2. Conducted Emission

2.1. Test Equipment

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

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2010	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2010	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2010	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2010	
5	No.1 Shielded Roor	n		N/A	

Note: All equipments are calibrated every one year.

2.2. Test Setup



2.3. Limits

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

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

2.4. Test Procedure

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

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

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

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product	:	Push2TV
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 3: Transmit (802.11n-40BW 27Mbps) (5190MHz)
		-(Adapter: MT12-Y120100-A1)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.166	9.746	46.420	56.165	-9.378	65.543
0.248	9.677	38.190	47.867	-15.333	63.200
0.275	9.659	40.490	50.149	-12.280	62.429
0.627	9.630	39.250	48.880	-7.120	56.000
0.970	9.670	37.330	47.000	-9.000	56.000
4.345	9.700	31.800	41.500	-14.500	56.000
Average					
0.166	9.746	33.960	43.705	-11.838	55.543
0.248	9.677	22.830	32.507	-20.693	53.200
0.275	9.659	28.130	37.789	-14.640	52.429
0.627	9.630	26.110	35.740	-10.260	46.000
0.970	9.670	22.960	32.630	-13.370	46.000
4.345	9.700	18.190	27.890	-18.110	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	:	Push2TV
Test Item	:	Conducted Emission Test
Power Line	:	Line 2
Test Mode	:	Mode 3: Transmit (802.11n-40BW 27Mbps) (5190MHz)
		-(Adapter: MT12-Y120100-A1)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.170	9.743	46.560	56.303	-9.126	65.429
0.295	9.662	38.650	48.312	-13.545	61.857
0.396	9.650	40.030	49.680	-9.291	58.971
0.513	9.640	40.540	50.180	-5.820	56.000
0.630	9.650	40.300	49.950	-6.050	56.000
0.978	9.670	37.170	46.840	-9.160	56.000
Average					
0.170	9.743	34.310	44.053	-11.376	55.429
0.295	9.662	25.170	34.832	-17.025	51.857
0.396	9.650	29.100	38.750	-10.221	48.971
0.513	9.640	25.820	35.460	-10.540	46.000
0.630	9.650	23.180	32.830	-13.170	46.000
0.978	9.670	20.070	29.740	-16.260	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	:	Push2TV
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 3: Transmit (802.11n-40BW 27Mbps) (5190MHz)
		-(Adapter: T012LF1209)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.150	9.766	33.860	43.626	-22.374	66.000
0.181	9.724	43.030	52.754	-12.360	65.114
0.275	9.659	32.770	42.429	-20.000	62.429
0.334	9.650	28.400	38.050	-22.693	60.743
0.373	9.650	31.730	41.380	-18.249	59.629
0.548	9.640	23.500	33.140	-22.860	56.000
Average					
0.150	9.766	19.840	29.606	-26.394	56.000
0.181	9.724	28.140	37.864	-17.250	55.114
0.275	9.659	18.240	27.899	-24.530	52.429
0.334	9.650	9.580	19.230	-31.513	50.743
0.373	9.650	11.790	21.440	-28.189	49.629
0.548	9.640	6.680	16.320	-29.680	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	:	Push2TV				
Test Item	:	Conducted	Emission Test			
Power Line	:	Line 2				
Test Mode	:	Mode 3: Tra	ansmit (802.11	n-40BW 27Mbps) (5	190MHz)	
		-(Adapter: 7	F012LF1209)			
Frequency	Cor	rect	Reading	Measurement	Margin	Limit
	Fac	etor	Level	Level		
MHz	ď	В	dBuV	dBuV	dB	dBuV
LINE 2						

\mathbf{n}	 	n.

Quasi-Peak					
0.185	9.727	46.640	56.368	-8.632	65.000
0.232	9.695	34.760	44.455	-19.202	63.657
0.283	9.666	31.370	41.036	-21.164	62.200
0.326	9.660	32.190	41.850	-19.121	60.971
0.599	9.647	19.830	29.477	-26.523	56.000
0.888	9.670	21.830	31.500	-24.500	56.000
Average					
0.185	9.727	29.680	39.408	-15.592	55.000
0.232	9.695	15.250	24.945	-28.712	53.657
0.283	9.666	15.660	25.326	-26.874	52.200
0.326	9.660	10.740	20.400	-30.571	50.971
0.599	9.647	3.590	13.237	-32.763	46.000
0.888	9.670	12.410	22.080	-23.920	46.000

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

3. Peak Transmit Power

3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2010
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2010
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
Х	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010
• •				

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

26dBc Occupied Bandwidth





3.3. Limits

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QuieTek

- (1) For the band 5.15-5.25 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (2) For the band 5.25-5.35 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.825 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W or 17 dBm + 10log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

3.4. Test Procedur

As an alternative to DA 02-2138, the EUT peak power was measured with a peak power meter employing a video bandwidth greater than 6dB BW of the emission under test. Peak output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of DA 02-2138, and provides more accurate measurements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Transmit Power

Product	:	Push2TV
Test Item	:	Peak Transmit Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)

Cable loss=1dB		Peak Power Output								
		Data Rate (Mbps)								
Channel No.	Frequency (MHz)	6	9	12	18	24	36	48	54	Required Limit
36	5180	12.52								<17dBm
44	5220	12.05	12.01	12	11.95	11.9	11.84	11.83	11.7	<17dBm
48	5240	12.8								<17dBm

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

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	Result	
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
36	5180	19.7	12.52	17	16.94	Pass

26dBc Occupied Bandwidth:

🗩 Agilent Spe	ctrum Analyzer - Occupied	BW			-		
Center F	50 Ω req 5.180000000 Input: RF Ref 20 dBm) GHz Cente #IFGain:Low #Atte	SENSE:INT er Freq: 5.180000000 GH: Free Run Avg Ho n: 20 dB	ALIGN AUTO z bid:>10/10	D3:33:46 A Radio Std: Radio Dev	MNov 06, 2010 None ice: BTS	Freq / Channel
Log 10 -10 -20 -30 -40 -50 -60	www						Center Frec 5.180000000 GHz
Center 5 #Res BW	.18 GHz 300 kHz		VBW 1 MHz		Spa #Sweep	n 50 MHz 500 ms	CF Step 5.000000 MH; <u>Auto</u> Mar
Occu	pied Bandwidtl 16						
Transmit Freq Error-32790 Hzx dB Bandwidth19.70 MHz			OBW Power 9 x dB -26		9.00 % 00 dB		
ISG				STATUS	;		

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	Result	
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
44	5220	19.64	12.05	17	16.93	Pass

26dBc Occupied Bandwidth:

🅦 Agilent Spe	ectrum Analyzer - Occupied	I BW					
Center F	50 Ω req 5.220000000 Input: RF Ref 20 dBm) GHz #IFGain:Low	SENSE:INT Freq: 5.220000000 GHz ree Run Avg Ho : 20 dB	ALIGN AUTO Id:>10/10	03:34:12 A Radio Std: Radio Dev	MNov 06, 2010 None ice: BTS	Freq / Channel
10 0 -10 -20			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Center Fred 5.220000000 GH2
-30 -40 -50 -60	Vine management			former	- Marina	hry Valetor of marked	
-70 Center 5. #Res BW	.22 GHz 300 kHz	#	VBW 1 MHz		Spa #Sweep	n 50 MHz 5 500 ms	CF Step 5.000000 MH <u>Auto</u> Mar
Occu	pied Bandwidt 16	^h 5.584 MHz	Total Power	Total Power 18.66			
Transr x dB B	nit Freq Error andwidth	-5503 Hz 19.64 MHz	OBW Power 5 x dB -2		99.00 % -26.00 dB		
MSG				STATUS			1

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	Result	
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
48	5240	20.01	12.8	17	17.01	Pass

26dBc Occupied Bandwidth:

💴 Agilent Sp	ectrum Analyzer - Occupie	d BW						
Center F	50 Ω Freq 5.24000000 Input: RF Ref 20 dBm	0 GHz Center #IFGain:Low #Atten:	SENSE:INT Freq: 5.240000000 GHz ree Run Avg Hol 20 dB	ALIGN AUTO 03:34; Radio : d:>10/10 Radio	56 AMNov 06, 2010 Std: None Device: BTS	Freq / Channel		
10 0 -10		mmmm	m			Center Freq 5.240000000 GHz		
-30 -40 , , , , , , , , , , , , , , , , , , ,	~~~~~							
-70 Center { #Res BW	5.24 GHz / 300 kHz	#\	/BW 1 MHz	S #Swo	pan 50 MHz eep 500 ms	CF Step 5.000000 MHz <u>Auto</u> Mar		
Occu	Occupied Bandwidth Total Power 20.32 dBm 16.656 MHz							
Trans x dB I	mit Freq Error Bandwidth	-9692 Hz 20.01 MHz	OBW Power x dB	99.00 % -26.00 dB				
MSG				STATUS				

Product	:	Push2TV
Test Item	:	Peak Transmit Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 13Mbps)

Cable loss=1dB		Peak Power Output								
			Data Rate (Mbps)							
Channel No.	Frequency (MHz)	13	26	39	52	78	104	117	130	Required Limit
			Measurement Level (dBm)							
36	5180	12.85								<17dBm
44	5220	12.77	12.75	12.72	12.71	12.69	12.65	12.62	12.54	<17dBm
48	5240	12.61								<17dBm

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

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	Result	
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
36	5180	19.64	12.85	17	16.93	Pass

26dBc Occupied Bandwidth:

🅦 Agilent Sp	pectrum Analyzer - Occupie	d BW							
Sweep 1	50 Ω Time 500 ms Input: RF Ref 20 dBm	AC Ce Tr #IFGain:Low #A	sense:INT enter Freq: 5.1800 ig: Free Run tten: 20 dB	00000 GHz Avg Holo Ext Gain	ALIGN AUTO d:>10/10 i: -10.50 dB	D3:23:32 / Radio Std Radio Dev	AMNov 06, 2010 I: None vice: BTS	Trac	e/Detector
Log 10 0		- pomme	m	m					Clear Write
-10 -20 -30					hora	0			Average
-40 -50 -60	and the second				· · · · ·	tor the minut	and the state of the second		Max Hold
-70 Center 4 #Res BW	5.18 GHz V 300 kHz		#VBW 1 MH			Spa #Swee	an 50 MHz p 500 ms		Min Hold
Occu	ipied Bandwidt 17	^h ′.548 MH z	Total I	ower	21.4	1 dBm		Auto	Detector Peak▶ <u>Man</u>
Trans x dB l	mit Freq Error Bandwidth	22.330 kHz 19.64 MHz	OBW I x dB	Power	99 -26	9.00 % .00 dB			
MSG					STATUS	6			

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	t Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
44	5220	19.7	12.77	17	16.94	Pass

26dBc Occupied Bandwidth:

🗾 Agilent Spectrum	n Analyzer - Occupied	BW		3.9				
Center Freq	Ω 5.220000000 Input: RF Ref 20 dBm	AI FGain:Low	C SENSE:INT Center Freq: 5.2200 Trig: Free Run #Atten: 20 dB	000000 GHz Avg Holo Ext Gain	ALIGN AUTO d:>10/10 :: -10.50 dB	D3:24:02 / Radio Std Radio Dev	MNov 06, 2010 : None /ice: BTS	Freq / Channel
10 0 -10				hund				Center Free 5.220000000 GH:
-20 -30 -40	would be the second second second second				- Constrained		unsuritien of another	
-60								CF Step
Center 5.22 C #Res BW 300	GHZ 0 kHz		#VBW 1 M	Hz		Spa #Sweej	n 50 MHz p 500 ms	Auto Mar
Occupied	d Bandwidth 17	า ′.473 M⊦	Total Z	Power	20.90) dBm		
Transmit F x dB Band	Freq Error Iwidth	-15274 19.70 M	Hz OBW Hz x dB	Power	99 -26.	9.00 % 00 dB		
MSG					STATUS			

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	Result	
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
48	5240	19.58	12.61	17	16.92	Pass

26dBc Occupied Bandwidth:

🏴 Agilent Spect	rum Analyzer - Occupied	I BW						
Center Fre	50 Ω 2 q 5.240000000 Input: RF Ref 20 dBm) GHz #IFGain:Low	SENSE:INT Center Freq: 5.240 Trig: Free Run #Atten: 20 dB	0000000 GHz Avg Hol Ext Gair	ALIGNAUTO d:>10/10 n: -10.50 dB	D3:24:29 / Radio Std Radio De	AMNov 06, 2010 I: None vice: BTS	Freq / Channel
10 0 -10			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	min				Center Fred 5.240000000 GH;
-20 -30 -40	Here ber bere and a second				hree	A Lengingon to	and the france with	
-60								CF Step
Center 5.2 #Res BW 3	4 GHz 300 kHz	• . •	#VBW 1 M	IHz		Spa #Swee	an 50 MHz p 500 ms	5.000000 MH2 <u>Auto</u> Mar
Occupi	ed Bandwidt 17	^h ′.550 M⊦	Total	Power	20.53	3 dBm		
Transmi x dB Ba	it Freq Error ndwidth	17.183 k 19.58 M	Hz OBW Hz x dB	Power	91 -26.	9.00 % .00 dB		
MSG					STATUS	5		1

Product	:	Push2TV
Test Item	:	Peak Transmit Power
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 27Mbps)

Cable	Peak Power Output									
Channel No.	Frequency (MHz)	27	54	81	108	162	216	243	270	Required Limit
		Measurement Level (dBm)								
38	5190	12.5								<17dBm
46	5230	12.8	12.78	12.76	12.71	12.68	12.65	12.63	12.54	<17dBm

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

Channel No	Frequency Range	26dB Bandwidth	26dBOutputandwidthPower		Output Power Limit			
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)			
38	5190	39.11	12.5	17	19.92	Pass		

26dBc Occupied Bandwidth:

🅦 Agilent Spe	ectrum Analyzer - Occupied	BW				-		
Center F	50 Ω req 5.190000000 Input: RF Ref 20 dBm	AC GHZ #IFGain:Low	SENSE:INT Center Freq: 5.1900 rig: Free Run Atten: 20 dB	00000 GHz Avg Hold: Ext Gain:	ALIGNAUTO >10/10 -10.50 dB	D3:27:06 / Radio Std Radio Dev	MNov 06, 2010 : None /ice: BTS	Freq / Channel
Log 10 -10 -20 -30 -40 -40 -50	Janda Anna ang ang ang ang ang ang ang ang ang	w w w	renew frequences			tylywarneyd	and the project of the second	Center Frec 5.19000000 GH:
-60 -70 Center 5 #Res BW	.19 GHz 300 kHz		#VBW 1 MH	łz		Spar #Swee	n 100 MHz p 500 ms	CF Step 10.000000 MH: <u>Auto</u> Mar
Occu	pied Bandwidth 35	n 5.705 MHz	Total F	ower	22.22	2 dBm		
Transı x dB E	nit Freq Error Bandwidth	-17192 H 39.11 MH	z OBW F z x dB	ower	99 -26.	9.00 % 00 dB		
MSG					STATUS	-		

Channel No	Frequency Range	26dB Bandwidth	Output Power	Outpu	t Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	dBm+10log(BW)	
46	5230	39.27	12.8	17	19.94	Pass

26dBc Occupied Bandwidth:

D Ag	ilent Spectrum	Analyzer - (Occupied BW								
Cen	ter Freq	Ω 5.23000 Ing Ref 20 d	00000 Gi out: RF #IFC	HZ Gain:Low	Center F Center F Trig: Fre #Atten: 2	INSE:INT req: 5.2300 e Run 0 dB	00000 GHz Avg Holo Ext Gain	ALIGN AUTO d:>10/10 :: -10.50 dB	D3:27:28 A Radio Std Radio Dev	MNov 06, 2010 : None rice: BTS	Freq / Channel
Log 10 -10 -20 -30 -40 -50	and the set of the set	Adreshaperafindearre	algorit of		en de Norantes Manag				Thill and the second		Center Freq 5.23000000 GHz
-50 -70 Cen #Re	ter 5.23 C s BW 300	SHz) kHz d Band	width	70.64	#VE	BW 1 MH Total F	lz Power	21.63	Span #Sweej 3 dBm	100 MHz 5 500 ms	CF Step 10.000000 MHz <u>Auto</u> Man
T X MSG	ransmit F dB Band	Freq Err Iwidth	35.6 or	78 IVII -43873 39.27 N	⊣z AHz	OBW F x dB	ower	99 -26.	9.00 % 00 dB		

4. Peak Power Spectral Density

4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
Х	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

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. The power combiner is used for measure 11n mode.

4.2. Test Setup



4.3. Limits

- (4) For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (5) For the band 5.25-5.35 GHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (6) For the band 5.725-5.825 GHz, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

4.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

4.5. Uncertainty

± 1.27 dB

4.6. Test Result of Peak Power Spectral Density

Product	:	Push2TV
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	2.360	<4	Pass
44	5220	1.517	<4	Pass
48	5240	2.746	<4	Pass

DAgilent Spectrum Analyzer - Swept SA				
ୟା ୍ରର Center Freq 5.180000000 Gi		ALIGNAUTO (#Avg Type: Pwr(RMS)	02:25:17 AM Nov 06, 2010 TRACE 1 2 3 4 5 6	Frequency
Input: RF PI	io: Fast C Ing: Free Run Sain:Low Atten: 30 dB	Mkr1 5.	178 550 GHz 2.360 dBm	Auto Tune
10.0	▲ ¹			Center Freq 5.180000000 GHz
-10.0	harrier and a start and the strand and a start and a start and a start and a start a start a start a start a st	the week year bridge week as a low of the		Start Freq 5.167500000 GHz
-20.0			- What	Stop Freq 5.192500000 GHz
-40.0			And	CF Step 2.500000 MHz <u>Auto</u> Man
-60.0				Freq Offset 0 Hz
Center 5.18000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	\$ #Sweep 50	Span 25.00 MHz 10 ms (1001 pts)	

Channel 36:



💴 Agilent Spectrum Analyzer - Swept SA				
Center Freq 5.22000000) GHz	NSE:INT ALIGN #Avg Type: Pwr	AUTO 02:27:08 AM Nov 06, 2010 (RMS) TRACE 1 2 3 4 5 6 TRACE 1 2 3 4 5 6	Frequency
Input: RF	PN0: Fast C Ing: Free IFGain:Low Atten: 30	dB M	Ikr1 5.219 200 GHz 1.517 dBm	Auto Tune
10.0				Center Freq 5.220000000 GHz
-10.0				Start Freq 5.207500000 GHz
-20.0				Stop Freq 5.232500000 GHz
-40.0			Northern Control of Co	CF Step 2.500000 MHz <u>Auto</u> Man
-60.0				Freq Offset 0 Hz
Center 5.22000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	#Sw	Span 25.00 MHz eep 500 ms (1001 pts)	
MSG			STATUS	

Channel 44:

Channel 48:

D Agilent	t Spectrum Analyzer -	Swept SA	-	- 10	15					
Cente	50 Ω r Freg 5.2400)00000 GI	Hz	: SEr	NSE:INT	#Avg Typ	ALIGNAUTO e: Pwr(RMS	02:28:37 A	MNov 06, 2010 E 1 2 3 4 5 6	Frequency
	- Ir	nput: RF PN IFG	IO: Fast 😱 ain:Low	⁴ Trig: Free Atten: 30	dB	Avg Hold:	>100/100 Mkr1	5.238 2	00 GHz	Auto Tune
10 dB/d	liv Ref 20.00	dBm			-			2.7	46 dBm	
10.0 —				▲ 1						Center Freq 5.240000000 GHz
0.00		a de Little aler ditte	en.Benerskapi, p.p., 4784	haina at they w	_{አይ} ሎምላቶት የጉጉህ	**************************************	_{พระ} แะระ ^เ ราสำราชรู	March 1		Start Freq 5.227500000 GHz
-20.0 —								<u> </u>		Stop Freq 5.252500000 GHz
-40.0	Altralite and a second s								W In the local	CF Step 2.500000 MHz <u>Auto</u> Man
-50.0 —										Freq Offset 0 Hz
-70.0 Center #Res E	r 5.24000 GHz 3W 1.0 MHz		#VBW	3.0 MHz			#Sweep	Span 2 500 ms (5.00 MHz 1001 pts)	
MSG	normen – oddy (Mitrieta'') (odder) ¹		6000-6000-2006				STATUS	5		

Product	:	Push2TV
Test Item	:	Peak Power Spectral Density
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 13Mbps)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	3.751	<4	Pass
44	5220	2.500	<4	Pass
48	5240	2.422	<4	Pass

Channel 36:

🗩 Agilent Spectrum Anal	lyzer - Swept SA								
<mark>μ</mark> 50 Ω Preamp Gain -1	10.50 dB	A	C SENSE	E:INT	¥Avg Type	ALIGN AUTO : Pwr(RMS)	02:50:18 A	MNov 06, 2010 E 1 2 3 4 5 6	External Gain
10 dB/div Ref 20	Input: RF	PNO: Fast 🖵 IFGain:Low	¹ Trig: Free R Atten: 20 dB	lun / 3 I	Avg Hold:> Ext Gain: -	100/100 10.50 dB Mkr1	5.179 3 3.7	25 GHz 51 dBm	ExtPreamp -10.50 dB
10.0			1						MS 0.00 dB
-10.0	production and the second	and and the set of the	and a second	at to 1 year a more all out	**************************************	ally ber and the second	A North Street Street		BTS 0.00 dB
-20.0								<u>\</u>	
-40.0								"Ry drugspage	
-60.0									
Center 5.18000 G	Hz						Span 2	5.00 MHz	
#Res BW 1.0 MH	z	#VBW	3.0 MHz		1	Sweep status	500 ms (1001 pts)	



DAgilent Spectrum Analyzer - Swej	pt SA			
Center Freq 5.220000	AC SEN	SE:INT ALIGN AUTO #Avg Type: Pwr(RMS	03:01:32 AM Nov 06, 2010 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBr	RF PNO: Fast Trig: Free IFGain:Low Atten: 20 여 개	Run Avg Hold>100/100 BE Ext Gain: -10.50 dB Mkr1	5.218 850 GHz 2.500 dBm	Auto Tune
10.0	1			Center Freq 5.220000000 GHz
-10.0				Start Freq 5.207500000 GHz
-20.0				Stop Freq 5.232500000 GHz
-40.0 -50.0			- Manuta	CF Step 2.500000 MHz <u>Auto</u> Man
-60.0				Freq Offset 0 Hz
Center 5.22000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	#Sweep	Span 25.00 MHz 500 ms (1001 pts)	

Channel 44:

Channel 48:



Push2TV
Peak Power Spectral Density
No.3 OATS
Mode 3: Transmit (802.11n-40BW 27Mbps)

Channel No.	Frequency	Measurement Level	Required Limit	Result
	(MHz)	(dBm)	(dBm)	Result
38	5190	1.114	<4	Pass
46	5230	0.079	<4	Pass

Channel 38:

D Agi	lent Spectrum Ar	alyzer - Swept	SA					50	1		
<mark>IXI</mark> Snai	50 Ω n 50 0000			AC SE	NSE:INT	#Avg Tvp	ALIGNAUTO e: Pwr(RMS	03:11:38 / TRA	MNov 06, 2010		Span
opu	11 00.0000	Input: R	F PNO: Fast C IFGain:Low	Atten: 20	e Run ⊧dB	Avg Hold: Ext Gain:	>100/100 -10.50 dB	TY D			Span
10 dE	3/div Ref (20.00 dBm	18				Mkr	1 5.192 1.1	25 GHz 14 dBm	5	0.0000000 MHz
Log											
10.0											
					♦ ¹	2 28					
0.00		Marking Working	amad and and a second	Lough the play of the	and the second states of the	a the providence of the	an hala have been a far an have	Howay			
-10.0		/									Full Span
										<u> </u>	
-20.0						-		$\left \right $	÷		
								\			Zero Span
-30.0	ື້								1h.		
-40.0	AND	~							What we		
	мт –								"Thursday		Last Span
-50.0											
-60.0											
-70.0											
										0	Signal Track
Cent	ter 5.19000	GHz			1	1		Span 5	0.00 MHz	0.5	(Span Zoom)
#Res	s BW 1.0 M	Hz	#VB	N 3.0 MHz			#Sweep	500 ms (1001 pts)	U	011
MSG							STATUS				



💭 Agilent Spectrum Analyzer - Sw	ept SA				
<mark>μ</mark> 50 Ω Center Freg. 5 230000		SENSE:INT #Av	ALIGNAUTO g Type: Pwr(RMS)	03:12:55 AM Nov 06, 2010 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dE	RF PNO: Fast Trig: F IFGain:Low Atten:	reeRun Ανε :20 dB Ext	Hold:>100/100 Gain: -10.50 dB Mkr1	5.221 60 GHz 0.079 dBm	Auto Tune
10.0					Center Freq 5.230000000 GHz
-10.0	and all and a star of the second s	m provension and	[⋏] ┶╌ [┲] ┝⋎९ଌୗ [┲] ╋र _╈ ┝ _┍ ┱╕╋╪ _╈ ┲ _{┍╕} ╋	server and the server	Start Freq 5.205000000 GHz
-20.0					Stop Freq 5.255000000 GHz
-40.0				New Market	CF Step 5.000000 MHz <u>Auto</u> Man
-60.0					Freq Offset 0 Hz
Center 5.23000 GHz #Res BW 1.0 MHz	#VBW 3.0 MI	Hz	#Sweep	Span 50.00 MHz 500 ms (1001 pts)	

Channel 46:
5. Peak Excursion

5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
Х	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

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. The power combiner is used for measure 11n mode.

5.2. Test Setup

Conduction Power Measurement



5.3. Limits

The ratio of the peak excursion of the modulation envelope (measured suing a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

5.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

5.5. Uncertainty

± 1.27 dB

5.6. Test Result of Peak Excursion

Product	:	Push2TV
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	4 67	<13	Pass
44	5220	2.59	<13	Pass
48	5240	6.74	<13	Pass

Channel 36:

💴 Agilent Spectrum Analyzer - Swept	t SA		
Marker 2 5.1763750000		IT ALIGNAUTO 03:47:50 AM Nov 06, 2010 #Avg Type: Pwr(RMS) TRACE 12 3 4 5 6	Marker
Input: R	RF PNO: Fast Trig: Free Run IFGain:Low Atten: 30 dB	Avg Hold: 46/100	Select Marker
10 dB/div Ref 20.00 dBm	n	Mkr2 5.176 375 GHz 4.702 dBm	2
10.0		- MARINA MARY (L. J. APP WITH LA J	
-10.0		The second matter allowed and allo	Normal
-20.0		· · · · · · · · · · · · · · · · · · ·	
-30.0 Muditiles.		المعالية المالية المعالية معالية	Delta
-50.0			
-60.0			Fixed⊳
-70.0			
Center 5.18000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	Span 25.00 MHz #Sweep 500 ms (1001 pts)	
MKR MODE TRC SCL	X Y	FUNCTION FUNCTION WIDTH FUNCTION VALUE	Off
1 N 1 f 5. 2 N 2 f 5.	.175 325 GHz 9.376 dBm .176 375 GHz 4.702 dBm		
<u>3</u> <u>4</u> 5			Properties►
6 7			
8			More
			1 of 2
MSG	I	STATUS	



DAgilent Spectro	ım Analyzer - Swept SA					
Marker 2 5	^{50 Ω} .216550000000 (GHz AC :	SENSE:INT #Avg T	ALIGNAUTO ype: Pwr(RMS)	03:48:56 AM Nov 06, 201 TRACE 1 2 3 4 5	6 Select Marker
	Input: RF I	PNO: Fast Trig: Fr Gain:Low Atten: 3	eeRun Avg Ho 30 dB	old: 78/100	DET P S N N N	N N
10 dB/div F	Ref 20.00 dBm			Mkr2 5.	216 550 GHz 6.235 dBm	Marker 1
10.0	The second second	1 2 	Logician Press	and an and the second second	<u>~</u>	Marker 2
-10.0	Laway Market Market				TUNNIN	
-20.0 -30.0					10 ANNA	Marker 3
-40.0 -50.0						
-60.0						Marker 4
Center 5.22	000 GHz				Span 25.00 MH:	z
#Res BW 1.0	0 MHz	#VBW 3.0 MH	Z FUNCTION	#Sweep 50	00 ms (1001 pts	Marker 5
1 N 1 2 N 2	f 5.215 3 f 5.216 5	50 GHz 8.826 50 GHz 6.235	dBm dBm			
3 4 5 6						Marker 6
7 8	· · · · · · · · · · · · · · · · · · ·					More
10 11 12						1 of 2
MSG		J		STATUS		

Channel 44:

Channel 48:

D Agile	ent S	pectr	ım An	alyzer -	Swept S	A										
₩ Mark	ker	2 5	50 Ω .23	90500	00000)0 G	Hz	AC	SE		#	Avg Typ	ALIGNAUTO	03:49:37 / TRA	AM Nov 06, 2010 CE 1 2 3 4 5 6	Peak Search
10 dB	3/div	F	Ref 2	In 20.00 (d Bm	PN IFG	10: Fast Sain:Low	, , ,	Atten: 30) dB		adluoic	Mkr2	5.239 (2.9	50 GHz 34 dBm	NextPeak
Log - 10.0 - 0.00 -				all the star	1999. La constante da const La constante da const	 ******	Vəqistravə	61 411640-		an water at	in hile when	۵). ۱۹۹۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰	NAJINAL-TARA	HALL THE REAL		Next Right
-20.0 = -30.0 = -40.0 =		<u>h</u> lli		μ										THE REAL PROPERTY AND A DECEMBER OF A DECEMB	Non the second	Next Left
-50.0 - -60.0 - -70.0 -																Marker Delta
Cent #Res MXB M	ter 5 8 BV 1005	5.24 V 1.	000 0 Mi	GHz Iz	×	34 350	#V	BW :	3.0 MHz Y 9.673 d	Bm	FUNCTIO	N FL	#Sweep	Span 2 500 ms FUNDI	25.00 MHz (1001 pts) on value	Mkr→CF
2 3 4 5 6	N	2	f		5.23	39 050	0 GHz		2.934 d	Bm						Mkr→RefLvl
8 9 10 11 12																More 1 of 2
MSG													STATUS			U

Product	:	Push2TV
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 13Mbps)

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	5.73	<13	Pass
44	5220	5.19	<13	Pass
48	5240	7.77	<13	Pass

Channel 36:

D Ag	ilent S	pect	rum	Analyzer -	Swept SA									
₩ Mar	ker	2 :	50 s	797250	000000	GHz	AC	SE	ENSE:INT	#Avg	ALIGNAUTO Type: Pwr(RMS)	03:56:15 A	MNov 06, 2010 E 1 2 3 4 5 6	Peak Search
10 d	B/div		Ref	30.00	dBm	PNO: Fast FGain:Lov	N N	Atten: 30	e Run)dB	Ext G	ain: -10.50 dB Mkr2	5.179 7 6.4	25 GHz 44 dBm	Next Peak
Log 20.0 10.0 0.00				North Water	want to another	and step on the	polo-frajklar	1	2	and an a state of the	URADO TO TO ANTINO WARD	Whatthey		Next Right
-10.0 -20.0 -30.0	WHIT!	A	A	P									A ANTONIA ANTONIA	Next Left
-40.0 -50.0 -60.0														Marker Delta
Cen #Re MKE	ter (sB) MODE	5.18 N 1	300 .0 N SEL	0 GHz /IHz	× 5.178 1	#V	BW :	3.0 MHz Y 12.171 d	IBm	UNCTION	#Sweep	Span 2 500 ms (5.00 MHz 1001 pts) INVALUE	Mkr→CF
2 3 4 5 6 7	N	2	f		5.1797	725 GHz		6.444 d	IBm					Mkr→RefLvl
8 9 10 11 12														More 1 of 2
MSG											STATUS			



💴 Agilent Spectrum Analyzer - Sv	wept SA			
Marker 2 5.21907500	AC SENSE:INT	ALIGNAUTO 0 #Avg Type: Pwr(RMS)	03:56:59 AM Nov 06, 2010 TRACE 1 2 3 4 5 6	Peak Search
Inpu	ut: RF PNO: Fast C Thy. Free Run IFGain:Low Atten: 30 dB	Ext Gain: -10.50 dB	219 075 GHz	Next Peak
10 dB/div Ref 30.00 dl	Bm		6.570 dBm	Next Right
0.00	LAGATING AND	and a survey of the survey of	174 miles	
-20.0 -20.0 -30.0			North State	Next Left
-50.0				Marker Delta
Center 5.22000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	S #Sweep 50	Span 25.00 MHz 0 ms (1001 pts)	Mkr→CF
1 N 1 f 2 N 2 f	5.218 275 GHz 11.764 dBm 5.219 075 GHz 6.570 dBm			
3 4 5 6 7				Mkr→RefLvl
8 9 10 11 12 12				More 1 of 2
MSG		STATUS		

Channel 44:

Channel 48:

🗊 Agilent Spe	ctrum Analyz	zer - Swept SA		- 22						
Marker 2	^{50 Ω}	75000000	GHz	AC SEN		#Avg T	ALIGNAUTO ype: Pwr(RMS)	03:57:35 A	MNov 06, 2010 E 1 2 3 4 5 6	Peak Search
10 dB/div	Ref 30.	Input: RF	PNO: Fast G IFGain:Low	Atten: 30 o	IB	Ext Ga	in: -10.50 dB Mkr2 :	5.240 1 3.6	75 GHz 73 dBm	Next Peak
20.0 20.0 10.0 0.00		the milling of the second	New Calling and Call	1	2 Aprillion	un the many	ŇſŧŀŧŔŗſĿſĸŧĸŦŢŀŦĿĸŦĬŧſſĸŧĸ	Harris Marker		Next Right
-10.0 -20.0 -30.0	WIN THE REAL PROPERTY OF							A.	AN ANTAN	Next Left
-40.0 -50.0 -60.0										Marker Delta
Center 5. #Res BW MKR MODE TR 1 N 1	24000 GH 1.0 MHz	1z 5.238	#VB\ 300 GHz	V 3.0 MHz 11.440 dB	m Fu	INCTION	#Sweep :	Span 2 500 ms (FUNCTI	5.00 MHz 1001 pts) IN VALUE	Mkr→CF
2 N 2 3 4 5 6 7	! f	5.240	175 GHz	3.673 dB	<u>m</u>					Mkr→RefLvl
8 9 10 11 12										More 1 of 2
MSG							STATUS			

Product	:	Push2TV
Test Item	:	Peak Excursion
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 27Mbps)

Channal Na	Frequency	Measurement Level	Required Limit	Degult
Channel No.	(MHz)	(dB)	(dB)	Kesult
38	5190	9.08	<13	Pass
46	5230	9.67	<13	Pass

Channel 38:

💴 Agilent Spe	ctrum Analy	zer - Swept SA	-		12	254				
Marker 2	^{50 Ω}	50000000 0	GHz	AC SENS	E:INT	#Avg Typ	ALIGNAUTO e: Pwr(RMS)	04:02:51 A TRAC	MNov 06, 2010	Peak Search
10 dB/div	Ref 30.	Input: RF F IF 00 dBm	PNO: Fast 🕞 Gain:Low	Atten: 30 d	B	Ext Gain	:-10.50 dB Mkr2	5.189 0.7	95 GHz 98 dBm	Next Peak
20.0 10.0		and the second	1	Tarman and the former) γιγλοφημαλγι	and the former and the	Walt Broken from a	Charles and a star		Next Right
-10.0 -20.0 -30.0	o de la companya de							- A	the second second	Next Left
-40.0 -50.0 -60.0										Marker Delta
Center 5.7 #Res BW	19000 GH 1.0 MHz C SCL	اz 5.183 (#VBW	/ 3.0 MHz Y 9.882 dBr	FUN	ICTION FU	#Sweep :	Span 5 500 ms (0.00 MHz 1001 pts) IN VALUE	Mkr→CF
2 N 2 3 4 5 6	f	5.189 \$	95 GHz	0.798 dBr	n					Mkr→RefLvi
7 8 9 10 11 12										More 1 of 2
MSG							STATUS			



D Agilent S	pectrum /	nalyzer - Swept S	٨						
₩ Marker	50 Ω 2 5.22	2985000000	0 GHz	AC SENSE:	INT #Avg]	ALIGNAUTO Type: Pwr(RMS)	04:03:59 A TRAC	MNov 06, 2010 E 1 2 3 4 5 6	Marker
		Input: RF	PNO: Fast 🕞 IFGain:Low	Trig: Free Ru Atten: 30 dB	n Avg H ExtGa	old: 93/100 tin: -10.50 dB	DE	PSNNNN	Select Marker
10 dB/div	Ref	30.00 dBm				Mkr2	5.229 -0.92	85 GHz 23 dBm	2
20.0									Norma
0.00		and the second the second second	and the fact of the second	2.1	Wert of the Part of the state of the second s	ANT THE RATE OF THE PARTY OF T	Part we		
-10.0		/					Å.	ALM.	Delta
-30.0	THE R							WHI AN CONTRACT	205899101684
-40.0									Fixed⊳
-60.0									
Center : #Res BV	5.23000 N 1.0 N) GHz 1Hz	#VBW	/ 3.0 MHz		#Sweep :	Span 5 500 ms (0.00 MHz 1001 pts)	Off
MKE MODE	TRC SCL 1 f	× 5.2	227 00 GHz	Y 8.742 dBm	FUNCTION	FUNCTION WIDTH	FUNCTIO	IN VALUE	
2 N 3 4	2 f	5.2	229 85 GHz	-0.923 dBm					Broportion
5									Properues
8 9									More
10 11 12									1 of 2
MSG			м. 			STATUS			

Channel 46:

6. Radiated Emission

6.1. Test Equipment

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

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 3	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2010
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2010
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	Х	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Χ	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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.

6.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



6.3. Limits

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

FCC Part 15 Subpart C Paragraph 15.209(a) Limits						
Frequency MHz	uV/m @3m	dBuV/m@3m				
30-88	100	40				
88-216	150	43.5				
216-960	200	46				
Above 960	500	54				

Remarks: E field strength $(dBuV/m) = 20 \log E$ field strength (uV/m)

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to FCC Public Notice DA 02-2138 test procedure for compliance to FCC 47CFR 15. 407 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 C63.4:2003 on radiated measurement.

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

Radiated emission measurements below 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 30MHz - 10th Harmonic of fundamental was investigated.

6.5. Uncertainty

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

6.6. **Test Result of Radiated Emission**

Product	: Push2TV	V					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OA	ATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5180MHz	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10360.000	12.930	36.630	49.560	-24.440	74.000		
15540.000	*	*	*	*	74.000		
20720.000	*	*	*	*	74.000		
25900.000	*	*	*	*	74.000		
31080.000	*	*	*	*	74.000		
36260.000	*	*	*	*	74.000		
Average							
Detector:							
10360.000	*	*	*	*	54.000		
15540.000	*	*	*	*	54.000		
20720.000	*	*	*	*	54.000		
25900.000	*	*	*	*	54.000		
31080.000	*	*	*	*	54.000		
36260.000	*	*	*	*	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	: Push2TV	/					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5180MHz	z)			
			. / `				
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Vertical							
Peak Detector:							
10360.000	13.724	36.820	50.544	-23.456	74.000		
15540.000	*	*	*	*	74.000		
20720.000	*	*	*	*	74.000		
25900.000	*	*	*	*	74.000		
31080.000	*	*	*	*	74.000		
36260.000	*	*	*	*	74.000		
Average							
Detector:							
10360.000	*	*	*	*	54.000		
15540.000	*	*	*	*	54.000		
20720.000	*	*	*	*	54.000		
25900.000	*	*	*	*	54.000		
31080.000	*	*	*	*	54.000		
36260.000	*	*	*	*	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	: Push2TV					
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 1: Transmit (802.11a-6Mbps) (5220MHz)					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector:						
10440.000	13.322	36.660	49.982	-24.018	74.000	
15600.000	*	*	*	*	74.000	
20800.000	*	*	*	*	74.000	
26000.000	*	*	*	*	74.000	
31200.000	*	*	*	*	74.000	
36400.000	*	*	*	*	74.000	
Average						
Detector:						
10440.000	*	*	*	*	54.000	
15600.000	*	*	*	*	54.000	
20800.000	*	*	*	*	54.000	
26000.000	*	*	*	*	54.000	
31200.000	*	*	*	*	54.000	
36400.000	*	*	*	*	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	: Push2TV	Ι				
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5220MHz	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Vertical						
Peak Detector:						
10440.000	14.245	36.860	51.105	-22.895	74.000	
15600.000	*	*	*	*	74.000	
20800.000	*	*	*	*	74.000	
26000.000	*	*	*	*	74.000	
31200.000	*	*	*	*	74.000	
36400.000	*	*	*	*	74.000	
Average						
Detector:						
10440.000	*	*	*	*	54.000	
15600.000	*	*	*	*	54.000	
20800.000	*	*	*	*	54.000	
26000.000	*	*	*	*	54.000	
31200.000	*	*	*	*	54.000	
36400.000	*	*	*	*	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	: Push2TV						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 1: Transmit (802.11a-6Mbps) (5240MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10480.000	13.693	36.570	50.264	-23.736	74.000		
15720.000	*	*	*	*	74.000		
20960.000	*	*	*	*	74.000		
26200.000	*	*	*	*	74.000		
31440000	*	*	*	*	74.000		
36680.000	*	*	*	*	74.000		
Average							
Detector:							
10480.000	*	*	*	*	54.000		
15720.000	*	*	*	*	54.000		
20960.000	*	*	*	*	54.000		
26200.000	*	*	*	*	54.000		
31440000	*	*	*	*	54.000		
36680.000	*	*	*	*	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	: Push2TV	/				
Test Item	: Harmonic Radiated Emission Data					
Test Site	: No.3 OATS					
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5240MHz	z)		
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Vertical						
Peak Detector:						
10480.000	14.620	36.110	50.731	-23.269	74.000	
15720.000	*	*	*	*	74.000	
20960.000	*	*	*	*	74.000	
26200.000	*	*	*	*	74.000	
31440000	*	*	*	*	74.000	
36680.000	*	*	*	*	74.000	
Average						
Detector:						
10480.000	*	*	*	*	54.000	
15720.000	*	*	*	*	54.000	
20960.000	*	*	*	*	54.000	
26200.000	*	*	*	*	54.000	
31440000	*	*	*	*	54.000	
36680.000	*	*	*	*	54.000	

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

Product	: Push2TV	V					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	• Mode 2: Transmit (802 11n-20BW 13Mbns) (5180MHz)						
10001110000			202 (* 10110pb) (e	1001111)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
10360.000	12.930	36.770	49.700	-24.300	74.000		
15540.000	*	*	*	*	74.000		
20720.000	*	*	*	*	74.000		
25900.000	*	*	*	*	74.000		
31080.000	*	*	*	*	74.000		
36260.000	*	*	*	*	74.000		
Average							
Detector:							
10360.000	*	*	*	*	54.000		
15540.000	*	*	*	*	54.000		
20720.000	*	*	*	*	54.000		
25900.000	*	*	*	*	54.000		
31080.000	*	*	*	*	54.000		
36260.000	*	*	*	*	54.000		

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

Product	: Push2TV	V						
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 2:	Transmit (802.11	n-20BW 13Mbps) (5	180MHz)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Vertical								
Peak Detector:								
10360.000	13.724	37.450	51.174	-22.826	74.000			
15540.000	*	*	*	*	74.000			
20720.000	*	*	*	*	74.000			
25900.000	*	*	*	*	74.000			
31080.000	*	*	*	*	74.000			
36260.000	*	*	*	*	74.000			
Average								
Detector:								
10360.000	*	*	*	*	54.000			
15540.000	*	*	*	*	54.000			
20720.000	*	*	*	*	54.000			
25900.000	*	*	*	*	54.000			
31080.000	*	*	*	*	54.000			
36260.000	*	*	*	*	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	: Push2T	V						
Test Item	: Harmon	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS							
Test Mode	: Mode 2: Transmit (802.11n-20BW 13Mbps) (5220MHz)							
		× ×	1 / (,				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10440.000	13.322	36.580	49.902	-24.098	74.000			
15660.000	*	*	*	*	74.000			
20880.000	*	*	*	*	74.000			
26100.000	*	*	*	*	74.000			
31320.000	*	*	*	*	74.000			
36540.000	*	*	*	*	74.000			
Average								
Detector:								
10440.000	*	*	*	*	54.000			
15660.000	*	*	*	*	54.000			
20880.000	*	*	*	*	54.000			
26100.000	*	*	*	*	54.000			
31320.000	*	*	*	*	54.000			
36540.000	*	*	*	*	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	: Push2T	V						
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 2: Transmit (802.11n-20BW 13Mbps) (5220MHz)							
		X	1 / (,				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Vertical								
Peak Detector:								
10440.000	14.245	36.960	51.205	-22.795	74.000			
15660.000	*	*	*	*	74.000			
20880.000	*	*	*	*	74.000			
26100.000	*	*	*	*	74.000			
31320.000	*	*	*	*	74.000			
36540.000	*	*	*	*	74.000			
Average								
Detector:								
10440.000	*	*	*	*	54.000			
15660.000	*	*	*	*	54.000			
20880.000	*	*	*	*	54.000			
26100.000	*	*	*	*	54.000			
31320.000	*	*	*	*	54.000			
36540.000	*	*	*	*	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	: Push2T	V						
Test Item	: Harmon	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS							
Test Mode	: Mode 2: Transmit (802.11n-20BW 13Mbps) (5240MHz)							
		× ×	1 / (,				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10480.000	13.693	36.710	50.404	-23.596	74.000			
15720.000	*	*	*	*	74.000			
20960.000	*	*	*	*	74.000			
26200.000	*	*	*	*	74.000			
31440.000	*	*	*	*	74.000			
36680.000	*	*	*	*	74.000			
Average								
Detector:								
10480.000	*	*	*	*	54.000			
15720.000	*	*	*	*	54.000			
20960.000	*	*	*	*	54.000			
26200.000	*	*	*	*	54.000			
31440.000	*	*	*	*	54.000			
36680.000	*	*	*	*	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	: Push2TV	V						
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 2:	Transmit (802.11	1n-20BW 13Mbps) (5240MHz)	240MHz)				
			2 / 1					
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Vertical								
Peak Detector:								
10480.000	14.620	36.970	51.591	-22.409	74.000			
15720.000	*	*	*	*	74.000			
20960.000	*	*	*	*	74.000			
26200.000	*	*	*	*	74.000			
31440.000	*	*	*	*	74.000			
36680.000	*	*	*	*	74.000			
Average								
Detector:								
10480.000	*	*	*	*	54.000			
15720.000	*	*	*	*	54.000			
20960.000	*	*	*	*	54.000			
26200.000	*	*	*	*	54.000			
31440.000	*	*	*	*	54.000			
36680.000	*	*	*	*	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	: Push2TV	V						
Test Item	: Harmon	: Harmonic Radiated Emission Data						
Product : Push: Test Item : Harm Test Site : No.3 Test Mode : Mode Frequency Correct Factor MHz dB MHz Horizontal Feak Detector: 10380.000 10380.000 12.939 15570.000 15570.000 * 20760.000 20760.000 * 36330.000 Average Verage Verage Detector: 10380.000 * 10380.000 * 20760.000 31140.000 * 20760.000 31140.000 * 36330.000 31140.000 * 36330.000	: No.3 OA	ATS						
Test Mode	: Mode 3:	Transmit (802.11	n-40BW 27Mbps) (5	190MHz)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
10380.000	12.939	36.960	49.899	-24.101	74.000			
15570.000	*	*	*	*	74.000			
20760.000	*	*	*	*	74.000			
25950.000	*	*	*	*	74.000			
31140.000	*	*	*	*	74.000			
36330.000	*	*	*	*	74.000			
Average								
Detector:								
10380.000	*	*	*	*	54.000			
15570.000	*	*	*	*	54.000			
20760.000	*	*	*	*	54.000			
25950.000	*	*	*	*	54.000			
31140.000	*	*	*	*	54.000			
36330.000	*	*	*	*	54.000			

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1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.

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

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

4. Measurement Level = Reading Level + Correct Factor.

5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.

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

7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	: Push2TV	V						
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 3: Transmit (802.11n-40BW 27Mbps) (5190MHz)							
	Juct:Push2TV: Item:Harmonic Radiated Emission Data: Site:No.3 OATS: Mode:Mode 3: Transmit (802.11n-40BW 27Mbps) (5190MFyCorrectReadingyCorrectReadingMeasurementMailFactorLevelLevelLeveldBdBuVdBuV/mdBuV/mo13.79636.42050.216-230***0***0***0***0***0***0***0***0*** </td <td></td> <td></td>							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Vertical								
Peak Detector:								
10380.000	13.796	36.420	50.216	-23.784	74.000			
15570.000	*	*	*	*	74.000			
20760.000	*	*	*	*	74.000			
25950.000	*	*	*	*	74.000			
31140.000	*	*	*	*	74.000			
36330.000	*	*	*	*	74.000			
Average								
Detector:								
10380.000	*	*	*	*	54.000			
15570.000	*	*	*	*	54.000			
20760.000	*	*	*	*	54.000			
25950.000	*	*	*	*	54.000			
31140.000	*	*	*	*	54.000			
36330.000	*	*	*	*	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	: Push2TV	V							
Test Item	: Harmon	Harmonic Radiated Emission Data							
Test Site : No.3 OATS									
Test Mode	: Mode 3:	: Mode 3: Transmit (802.11n-40BW 27Mbps) (5230MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
Peak Detector:									
10460.000	13.508	36.650	50.158	-23.842	74.000				
15690.000	*	*	*	*	74.000				
20920.000	*	*	*	*	74.000				
26150.000	*	*	*	*	74.000				
31380.000	*	*	*	*	74.000				
36610.000	*	*	*	*	74.000				
Average									
Detector:									
10460.000	*	*	*	*	54.000				
15690.000	*	*	*	*	54.000				
20920.000	*	*	*	*	54.000				
26150.000	*	*	*	*	54.000				
31380.000	*	*	*	*	54.000				
36610.000	*	*	*	*	54.000				

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

Product	: Push2TV	V							
Test Item	: Harmonic Radiated Emission Data								
Test Site	: No.3 OATS								
Test Mode	: Mode 3:	Mode 3: Transmit (802.11n-40BW 27Mbps) (5230MHz)							
		· · · · · · · · · · · · · · · · · · ·							
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Vertical									
Peak Detector:									
10460.000	14.433	36.310	50.743	-23.257	74.000				
15690.000	*	*	*	*	74.000				
20920.000	*	*	*	*	74.000				
26150.000	*	*	*	*	74.000				
31380.000	*	*	*	*	74.000				
36610.000	*	*	*	*	74.000				
Average									
Detector:									
10460.000	*	*	*	*	54.000				
15690.000	*	*	*	*	54.000				
20920.000	*	*	*	*	54.000				
26150.000	*	*	*	*	54.000				
31380.000	*	*	*	*	54.000				
36610.000	*	*	*	*	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	: Push2TV							
Test Item	: General Radiated Emission							
Test Site	Test Site : No.3 OATS							
Test Mode	Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)							
	-(Adapter	: MT12-Y12010	0-A1)					
Frequency	Correct	Reading	Measurement	Margin	Limit			
1 5	Factor	Level	Level	e				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector								
101.780	-7.141	28.533	21.392	-22.108	43.500			
326.820	-4.548	41.569	37.022	-8.978	46.000			
544.100	3.512	24.334	27.846	-18.154	46.000			
604.240	4.770	25.197	29.967	-16.033	46.000			
674.080	2.799	31.502	34.301	-11.699	46.000			
928.220	6.893	24.512	31.405	-14.595	46.000			
Vertical								
Peak Detector								
101.780	-0.021	30.093	30.071	-13.429	43.500			
165.800	-7.719	34.814	27.095	-16.405	43.500			
332.640	-4.914	40.467	35.553	-10.447	46.000			
685.720	2.319	24.780	27.098	-18.902	46.000			
829.280	2.864	26.185	29.049	-16.951	46.000			
961.200	7.260	30.260	37.520	-16.480	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	: Push2TV							
Test Item	: General Radiated Emission							
Test Site	Test Site : No.3 OATS							
Test Mode	e : Mode 2: Transmit (802.11n-20BW 13Mbps) (5220MHz)							
	-(Adapte	er: MT12-Y12010	0-A1)					
Frequency	Correct	Reading	Measurement	Margin	Limit			
requency	Eastor	Laval	Laval	margin	Linnt			
NU	Pacioi			ID				
MHZ	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector								
165.800	-11.079	32.524	21.445	-22.055	43.500			
328.760	-4.609	42.065	37.456	-8.544	46.000			
606.180	4.666	24.547	29.213	-16.787	46.000			
676.020	2.911	28.170	31.081	-14.919	46.000			
833.160	5.643	25.660	31.302	-14.698	46.000			
961.200	6.450	32.019	38.469	-15.531	54.000			
Vertical								
Peak Detector								
101.780	-0.021	28.852	28.830	-14.670	43.500			
332.640	-4.914	40.427	35.513	-10.487	46.000			
540.220	0.121	24.052	24.173	-21.827	46.000			
689.600	2.538	23.631	26.169	-19.831	46.000			
823.460	3.462	24.512	27.975	-18.025	46.000			
961.200	7.260	30.137	37.397	-16.603	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	: Push2TV							
Test Item	: General Radiated Emission							
Test Site	Site : No.3 OATS							
Test Mode	Mode : Mode 3: Transmit (802.11n-40BW 27Mbps) (5190MHz)							
	-(Adapte	r: MT12-Y12010	0-A1)					
Fraguanay	Correct	Deading	Maaguramant	Morgin	Limit			
riequency		Reading	Measurement	Margin	Linin			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector								
136.700	-10.363	38.246	27.883	-15.617	43.500			
233.700	-8.619	37.475	28.856	-17.144	46.000			
307.420	-3.301	44.495	41.194	-4.806	46.000			
398.600	-2.268	44.196	41.928	-4.072	46.000			
480.080	-0.329	32.805	32.476	-13.524	46.000			
961.200	6.450	31.841	38.291	-15.709	54.000			
Vertical								
Peak Detector								
136.700	-5.143	39.322	34.179	-9.321	43.500			
229.820	-8.512	37.398	28.886	-17.114	46.000			
303.540	-6.794	46.772	39.978	-6.022	46.000			
480.080	-4.359	35.233	30.874	-15.126	46.000			
755.560	3.281	21.973	25.254	-20.746	46.000			
961.200	7.260	29.379	36.639	-17.361	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	: Push2TV				
Test Item	: General Radiated Emission				
Test Site	: No.3 OATS				
Test Mode	: Mode 1:	Transmit (802.11	a-6Mbps) (5220MHz	z)	
	-(Adapte	er: T012LF1209)			
Frequency	Correct	Reading	Measurement	Margin	Limit
1 2	Factor	Level	Level	C	
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
130.880	-10.159	35.922	25.763	-17.737	43.500
305.480	-2.929	47.100	44.171	-1.829	46.000
398.600	-2.268	41.938	39.670	-6.330	46.000
480.080	-0.329	34.019	33.690	-12.310	46.000
606.180	4.666	23.647	28.313	-17.687	46.000
961.200	6.450	35.971	42.421	-11.579	54.000
Vertical					
Peak Detector					
57.160	-4.403	33.758	29.355	-10.645	40.000
130.880	-4.239	41.360	37.121	-6.379	43.500
220.120	-8.840	36.424	27.584	-18.416	46.000
305.480	-6.809	50.579	43.770	-2.230	46.000
359.800	-3.810	33.854	30.044	-15.956	46.000
480.080	-4.359	34.879	30.520	-15.480	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.

Product	: Push2TV					
Test Item	: General Radiated Emission					
Test Site	: No.3 OATS					
Test Mode	: Mode 2:	Transmit (802.11	n-20BW 13Mbps) (52	220MHz)		
	-(Adapter: T012LF1209)					
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
Peak Detector						
130.880	-10.159	35.966	25.807	-17.693	43.500	
303.540	-3.074	47.389	44.315	-1.685	46.000	
400.540	-2.276	41.448	39.172	-6.828	46.000	
470.380	1.226	31.696	32.922	-13.078	46.000	
544.100	3.512	25.991	29.503	-16.497	46.000	
961.200	6.450	36.495	42.945	-11.055	54.000	
Vertical						
Peak Detector						
57.160	-4.403	33.520	29.117	-10.883	40.000	
128.940	-4.128	42.435	38.307	-5.193	43.500	
216.240	-8.317	36.130	27.813	-18.187	46.000	
303.540	-6.794	50.260	43.466	-2.534	46.000	
468.440	-4.725	40.694	35.969	-10.031	46.000	
961.200	7.260	34.577	41.837	-12.163	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	: Push2TV						
Test Item	: General Radiated Emission						
Test Site	: No.3 OATS						
Test Mode	: Mode 3:	Transmit (802.11	n-40BW 27Mbps) (5	190MHz)			
	-(Adapte	er: T012LF1209)	1 / (,			
	` •	,					
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal	Horizontal						
Peak Detector							
130.880	-10.159	35.629	25.470	-18.030	43.500		
218.180	-10.619	33.996	23.376	-22.624	46.000		
299.660	-3.585	47.203	43.618	-2.382	46.000		
400.540	-2.276	41.600	39.324	-6.676	46.000		
458.740	0.833	30.768	31.601	-14.399	46.000		
961.200	6.450	37.159	43.609	-10.391	54.000		
Vertical							
Peak Detector							
61.040	-4.316	33.287	28.971	-11.029	40.000		
130.880	-4.239	41.347	37.108	-6.392	43.500		
307.420	-6.821	49.506	42.685	-3.315	46.000		
396.660	-4.356	33.986	29.630	-16.370	46.000		
480.080	-4.359	34.553	30.194	-15.806	46.000		
961.200	7.260	34.378	41.638	-12.362	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.

7. Band Edge

7.1. 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, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
Х	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

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. The power combiner is used for measure 11n mode.

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., 2010
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2010
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	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.

7.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



7.3. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

	FCC Part 15 Subpart C Paragraph 15.209 Limits				
	Frequency MHz	uV/m @3m	dBuV/m@3m 40		
	30-88	100			
	88-216	150	43.5		
216-960		200	46		
	Above 960	500	54		

Remarks : 1. RF Voltage $(dBuV) = 20 \log RF$ Voltage (uV)

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

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

7.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

7.5. Uncertainty

- \pm 3.8 dB below 1GHz
- ± 3.9 dB above 1GHz
7.6. Test Result of Band Edge

Product	:	Push2TV
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)-Channel 36

Fundamental Filed Strength

Antenna	Frequency	Reading Level	Correction Factor	Emission Level	Detector
Pole	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	
Horizontal	5180	33.382	68.72	102.102	Peak
Horizontal	5180	33.382	58.91	92.292	Average
Vertical	5180	35.489	58.46	93.949	Peak
Vertical	5180	35.489	48.19	83.679	Average

Note: 1:Spectrum Analyzer setting:

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

Average detector: RBW=1MHz, VBW=30Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	5149.5	102.102	47.523	54.579	Peak
Horizontal	5127.8	92.292	51.03	41.262	Average
Vertical	5149.5	93.949	47.523	46.426	Peak
Vertical	5127.8	83.679	51.03	32.649	Average

Note:

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

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

D Agi	ilent Sp	ectrum	Analyzer -	Swept SA						.		
	ter F	50 rea	Ω 5 1500	00000	2H7	AC	SENSE:INT	Avg T	ALIGNAUTO	11:01:02 / TRA	MNov 08, 2010	Frequency
Con		icq	0.1000	nput: RF	PNO: Fast (FGain:Low	Trig: F #Atten	ree Run : 20 dB	AvgiHo	5id:>100,100	TY D		Auto Tuno
10 di	Mkr3 5.149 5 GHz 10 dB/div Ref 10.00 dBm -46.267 dBm											Auto Tune
Log 0.00 -10.0 -20.0												Center Freq 5.150000000 GHz
-30.0 -40.0 -50.0	munitur	and a factor	Cill ^{(hardung} ab)	- Harman and Martin	haranguraran all	مهدار المعالية المحالية المحال	3-	All Alexandren	d'80 ⁶		Mar Marinda Curry	Start Freq 5.100000000 GHz
-70.0 -70.0 -80.0												Stop Freq 5.20000000 GHz
Cen #Re	ter 5. s BW	.1500 100	00 GHz kHz		#VE	W 1.0 M	Hz		#Sweep	Span 1 500 ms (00.0 MHz 1001 pts)	CF Step 10.000000 MHz
MKB 1 2	MODE T N N	RC SC 1 f 1 f		× 5.18 5.15	2 1 GHz 0 0 GHz	1.256 -46,883	dBm dBm	UNCTION	FUNCTION WIDTH	FUNCTI	DN VALUE	<u>Auto</u> Man
3 4 5 6	Ň	1 f		5.14	95 GHz	-46.267	'dBm					Freq Offset 0 Hz
7 8 9 10 11 12												
MSG		_	•		I,				STATUS	3		

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

🗊 Agilent	Spectru	m Analyz	er - Swept SA									
Cente	r Frec	οΩ 5.15	50000000 C	GHz	AC SEN	SE:INT	Avg Type Avg/Hold	ALIGNAUTO e: Log-Pwr · 26/100	11:35:52 A TRA	MNov 08, 2010 CE 1 2 3 4 5 6 PE M 444444	Frequency	
10 dB/d	Det IP P NNN IFGain:Low #Atten: 20 dB 0 dB/div Ref 10.00 dBm -57.964 dBm											
0.00								- Abouts Marena	1 1		Center Freq 5.15000000 GHz	
-30.0				,3		2	and a stand			W Mannakaraya	Start Freq 5.100000000 GHz	
-60.0 -70.0 -80.0						and the second second					Stop Freq 5.20000000 GHz	
Center #Res E	5.150 3W 10	000 GH 0 kHz	z ×	#VB	W 10 Hz	FUN	NCTION FU	Sweep	Span 1 78.0 s (00.0 MHz (1001 pts) INVALUE	CF Step 10.000000 MHz <u>Auto</u> Man	
2 N 3 N 4 5		F	5.150 5.150 5.12	7 8 GHz	-62.378 dB -57.964 dB	m m					Freq Offset 0 Hz	
7 8 9 10 11 12												
MSG								STATUS	3			

Product	:	Push2TV
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)-Channel 48

Test Frequency	Measurement Level (20dB BW)	Limit	Result
(MHz)	(MHz)	(MHz)	
5240	5249.00	<5250	PASS

NOTE: Accordance with 15.215 requirement.

D Ag	ilent S	Spect	rum /	Analyzer -	Swept SA		255							500			
⊯ Cer	nter	Fre	50Ω ¢q∶	5.2400	00005	GHz	A		NSE:I	VT	#Avg	Гуре	ALIGNAUTO : Pwr(RMS	01:25:)	06 PMN	ov 12, 2010 L 2 3 4 5 6	Frequency
			D-6	Ir	nput: RF	PNO: Fas IFGain:Lo	st ↔→ w	Atten: 30	e Run) dB	1	Avgin	010:	Mkr	2 5.24	DET 9		Auto Tune
10 d Log 10.0 0.00			Ret	20.00		^	produce print	يەر بەر بەر بەر بەر بەر بەر بەر بەر بەر ب) h	merconner			-20			Center Freq 5.240000005 GHz
-20.0 -30.0 -40.0			nunda	partiflicity										* Unerstand	mulan	-24.70 dBm	Start Frec 5.215000005 GHz
-50.0 -60.0 -70.0																- WWW.	Stop Fred 5.265000005 GHz
Cer #Re	nter ISB1	5.24 W 3) GHz (Hz	×	#\	vвw	1.0 MHz		FUN	CTION	7 FUN	#Sweep	Spar 500 m	n 50. s (10	00 MHz 01 pts) /400	CF Step 5.000000 MHz Auto Mar
1 3 4 5 6 7 8 9 10 11 12	N N		f		5.24 5.249	1 <u>90 GHz</u> 9 00 GHz		-2.470 d -25.602 d	Bm Bm								Freq Offset
MSG													STATUS	;			1

Product	:	Push2TV
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 13Mbps) -Channel 36

Fundamental Filed Strength

Antenna	Frequency	Reading Level	Correction Factor	Emission Level	Detector
Pole	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	
Horizontal	5180	33.382	69.51	102.892	Peak
Horizontal	5180	33.382	58.03	91.412	Average
Vertical	5180	35.489	60.78	96.269	Peak
Vertical	5180	35.489	49.53	85.019	Average

Note: 1:Spectrum Analyzer setting:

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

Average detector: RBW=1MHz, VBW=30Hz

Band Edge Test Data

Antenna Pole	Test Frequency	Fundamental	Δ (dB)	Band Edge Field Strength	Detector
	(MHz)	(dBuV/m)		(dBuV/m)	
Horizontal	5147.5	102.892	40.5	62.392	Peak
Horizontal	5128	91.412	48.61	42.802	Average
Vertical	5147.5	96.269	40.5	55.769	Peak
Vertical	5128	85.019	48.61	36.409	Average

Note:

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

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

D Agi	lent S	pecti	rum A	nalyzer	- Swept	SA						199		,		
الا Cen	ter	Fre	50 Ω	5.150	0000	00 G	Hz	AC	SE	NSE:INT	#Avg	Туре	ALIGNAUTO : Log-Pwr	01:44:27 F TRA	M Nov 08, 2010	Frequency
	Input: Kr PNO: Past C IFGain:Low) dB	Ext G	3ain: -	10.50 dB Mk	r3 5.14	T 5 GHz	Auto Tune
10 di Log	3/div		Ref	30.00	dBm									-27.	73 dBm *	
10.0													m	m		5.15000000 GHz
-10.0									2			1				Start Freq
-20.0 -30.0	فطرست	يمتحلهم	14.0990	ohalida sag	and the second	He was by	-	Bugheland	and makes	2	montenante	and			C. Million Marchen	5.100000000 GHz
-40.0 -50.0																Stop Freq
-60.0		- 4 -												0		5.20000000 GHz
ucen #Re	s BV	N 1.	.0 N	IHz			#VE	BW 1	1.0 MHz			7	#Sweep	500 ms (100.0 MH2 1001 pts)	CF Step 10.000000 MHz
MKR 1 2	N N N	1 1 1	f f		>	5.178 5.150	1 GHz 0 GHz		Y 12.765 d -29.31 d	Bm 3m	FUNCTION	FUN	CTION WIDTH	FUNCTI	DN VALUE	<u>Auto</u> Man
3 4 5	N	1	f			5.147	5 GHz		-27.73 dl	Зm						Freq Offset 0 Hz
6 7 8			5													
9 10 11																
MSG													STATUS			

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

D Ag	ilent S	Spect	rum	Analyzer	- Swep	t SA													
⊯ Cer	nter	Fre	50 ⊊ €q	2 5.150	0000	000 G	Hz	AC	SE	NSE:IN	IT	#Avg	/ Type	LIGNAUTO	01:41	:20 PI TRAC	4 Nov 08, 20 E 1 2 3 4 5	010 5 6	Frequency
10 d	B/div	,	Ref	20.00) dBn	RF ΡΙ ΙΕΟ	NO: Fast Gain:Lov	N N	#Atten: 30	0 dB		Ext G	ain: -	10.50 dB Mk	(r3 5. -4	DE 128 15.2	B 0 GH	iz m	Auto Tune
Log 10.0 0.00 -10.0															1	1	*	_	Center Freq 5.150000000 GHz
-20.0 -30.0 -40.0							3			2								-	Start Freq 5.100000000 GHz
-50.0 -60.0 -70.0																			Stop Freq 5.200000000 GHz
Cer #Re MKE	nter: sB1 MODE N	5.1: W 1	500 .0 M Set	0 GHz /IHz		× 5.179	#V 0 GHz	BW	10 Hz Y 3.33 d	Bm	FUNC	CTION	FUN	Sweet	Spa 5 7.80	IN 1 IS (1 NCIII	00.0 MH 1001 pt N VALUE	Hz (S)	CF Step 10.000000 MHz <u>Auto</u> Man
2 3 4 5 6 7 8 9 10 11 12	N N	1	f			5.150 5.128	0 GHz 0 GHz		47.40 di 45.28 di	Bm									Freq Offset 0 Hz
MSG														STATU	5				

Product	:	Push2TV
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 13Mbps)-Channel 48

Test Frequency	Measurement Level (20dB BW)	Limit	Result
(MHz)	(MHz)	(MHz)	
5240	5249.25	<5250	PASS

NOTE: Accordance with 15.215 requirement.

D Agi	ilent S	ipect	rum	Analyzer -	Swept SA	-	- 00			255				
₩ Cen	ter	Fre	ء 50 q¢	5.2400	00000 G	Hz	AC S	ENSE:IN	JT .	#Avg T	ALIGNAUTO ype: Pwr(RMS	02:37:17 F	M Nov 08, 2010	Frequency
				In	put: RF P IF	NO: Fast G Gain:Low	#Atten:	se Rur 30 dB	1	Ext Ga	in: -10.50 dB	D	ETSPNNNN	Auto Tupo
10 di	B/div	,	Ref	20.00	dBm						Mkr	2 5.249 -23	25 GHz 42 dBm	Auto Turie
Log 10.0								1					*	Center Fred
0.00			-			- and the second	white the second	mar	Marshing	man				5.240000000 GHz
-10.0	-		+		2	1	A PROCESS	¥			2			
-20.0						1					X.		-zi ai umu	Start Freq
-40.0			_		M AV	1								5.215000000 GHz
-50.0	Normal A	-	-	Mar and a start of the	Many Have			-			- Vi Lemma	UL AND AND AND A	And white the states	
-60.0			+		-									Stop Freq
-70.0														5.265000000 GHz
Cen #Re	ter : s Bl	5.24 N 3	400 00	0 GHz kHz		#VB	N 1.0 MH	z			#Sweep	Span 5 500 ms (0.00 MHz 1001 pts)	CF Step
MKR	MODE	TRC	SCL		×		Y		FUNC	TION	FUNCTION WIDTH	FUNCTI	DN VALUE	Auto Man
1	N N	1	f		<u>5.240 4</u> 5.249 2	5 GHz 5 GHz	-1.51	dBm dBm						
3														Freq Offset
5														0 Hz
7			·	8										
9 10														
11 12														
MSG											STATUS	5		

Product	:	Push2TV
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 27Mbps) -Channel 38

Fundamental Filed Strength

Antenna	Frequency	Reading Level	Correction Factor	Emission Level	Detector
Pole	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	
Horizontal	5190	33.345	67.21	100.555	Peak
Horizontal	5190	33.345	56.08	89.425	Average
Vertical	5190	35.515	58.61	94.126	Peak
Vertical	5190	35.515	47.34	82.856	Average

Note: 1:Spectrum Analyzer setting:

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

Average detector: RBW=1MHz, VBW=30Hz

Band Edge Test Data

Antenna Pole	Test Frequency	Fundamental	Δ (dB)	Band Edge Field Strength	Detector	
	(MHz)	(dBuV/m)		(dBuV/m)		
Horizontal	5134.4	100.555	37.28	63.275	Peak	
Horizontal	5150	89.425	39.07	50.355	Average	
Vertical	5134.4	94.126	37.28	56.846	Peak	
Vertical	5150	82.856	39.07	43.786	Average	

Note:

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

Band Edge field Strength = $F - \Delta$

F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Image: State of the s	💴 Agilent Spec	trum Analyze	er - Swept SA								
Control Disput. RF PHO: Fast IFGain:Low Trig: Free Run #Atten: 40 dB Ext Gain: -10.50 dB Interpretain Auto Tune 10 dB/div Ref 30.00 dBm -27.32	🕅 Center Fr	50Ω eq. 5.15	000000 6	↓ ≥Hz	C SENS	E:INT	#Avg Tvp	ALIGNAUTO e: Log-Pwr	01:59:10 P	MNov 08, 2010	Frequency
Log 1 * Center Freq 5.15000000 GHz 000 3 2 5 <td< td=""><td>10 dB/div</td><td>Ref 30.0</td><td>0 dBm</td><td>PNO: Fast 🖵 Gain:Low</td><td>Trig: Free l #Atten: 40</td><td>Run dB</td><td>Ext Gain:</td><td>-10.50 dB Mkr</td><td>3 5.134 -27.3</td><td>40 GHz 32 dBm</td><td>Auto Tune</td></td<>	10 dB/div	Ref 30.0	0 dBm	PNO: Fast 🖵 Gain:Low	Trig: Free l #Atten: 40	Run dB	Ext Gain:	-10.50 dB Mkr	3 5.134 -27.3	40 GHz 32 dBm	Auto Tune
10.0 20.0 3 2 1 5 5.07500000 GHz 40.0 30.0 30.0 30.0 50.0 5.07500000 GHz 50.0 60.0 40.0 40.0 40.0 5.07500000 GHz 50.0 5.225000000 GHz FRes BW 1.0 MHz #VBW 1.0 MHz #Sweep 500 ms (1001 pts) 5.225000000 GHz 5.225000000 GHz Main Model Tack Sci. X YBW 1.0 MHz #Sweep 500 ms (1001 pts) 15.00000 MHz Main Model Tack Sci. X YBW 1.0 MHz #Sweep 500 ms (1001 pts) 15.00000 MHz Main Model Tack Sci. X YBW 1.0 MHz #Sweep 500 ms (1001 pts) 15.00000 MHz Main Model Tack Sci. X YBW 1.0 MHz #Sweep 500 ms (1001 pts) 15.00000 MHz Main Model Tack Sci. X YBW 1.0 MHz #Sweep 500 ms (1001 pts) 15.00000 MHz Main Model Tack Sci. X YBW 1.0 MHz YBW 1.0 MHz Freq Offset 3 N 1 f 5.134 40 GHz -27.32 dBm -40.0 -40.0 -40.0 6	20.0 10.0 0.00							-	2 ¹	*	Center Freq 5.150000000 GHz
400	-10.0 -20.0 -30.0	eliteration de la constante		uto-cato-and	3	2 an and the state of the state	am			honorouteda	Start Freq 5.075000000 GHz
Center 5.15000 GHz Span 150.0 MHz CF Step 15.00000 MHz #Res BW 1.0 MHz #VBW 1.0 MHz #Sweep 500 ms (1001 pts) Auto 1 N 1 f 5.197 85 GHz 9.96 dBm 9.96 dBm Auto Mat 2 N 1 f 5.197 85 GHz 9.96 dBm FUNCTION VALUE Auto Mat 3 N 1 f 5.150 00 GHz -28.95 dBm Freq Offset 0 Hz 4 Freq Offset 0 Hz 6 0 Hz 7 0 Hz 9	-40.0 -50.0 -60.0										Stop Freq 5.225000000 GHz
1 N 1 f 5.197 85 GHz 9.96 dBm 2 N 1 f 5.160 00 GHz -28.96 dBm -28.96 dBm	Center 5.1 #Res BW	15000 GH: 1.0 MHz	z ×	#VBW	1.0 MHz	1 FUNI	CTION FU	#Sweep	Span 1 500 ms (50.0 MHz 1001 pts)	CF Step 15.000000 MHz Auto Man
	1 N 1 2 N 1 3 N 1 4 5 6 6 7 8 9 10 11 11 12		5.197 5.150 5.134	85 GHz 00 GHz 40 GHz	9.96 dB -28.95 dB -27.32 dB	m m m					Freq Offset 0 Hz

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

D Agi	ilent S	ipect	rum	Analyzer -	Swept SA								
<mark>⊮</mark> Cen	iter	Fre	ء 50 q	2 5.1500	00000	GHz	AC SE	NSE:INT	#Avg	ALIGNAUTO	02:00:28 P	MNov 08, 2010	Frequency
10 dl	B/div	,	Ref	In 5 30.00	dBm	PNO: Fast FGain:Low	#Atten: 4	0 dB	Ext G	ain: -10.50 dB Mk	r2 5.150 -40.:	00 GHz 27 dBm	Auto Tune
Log 20.0 10.0 0.00										1		*	Center Freq 5.15000000 GHz
-10.0 -20.0 -30.0								2-					Start Freq 5.075000000 GHz
-40.0 -50.0 -60.0													Stop Freq 5.225000000 GHz
Cen #Re	iter : s B\ MODE	5.1: N 1	500 .0 P	0 GHz /IHz	X	#VI	BW 10 Hz		FUNCTION	Swee	Span 1 p 11.7 s (50.0 MHz 1001 pts) IN VALUE	CF Step 15.000000 MHz Auto Man
1 2 3 4 5 6 7 8 9 10 11 12	N	1	f		5.187 5.150	05 GHz 00 GHz	-1.20 d -40.27 d	Bm Bm 					Freq Offset
MSG										STATU	IS		

Product	:	Push2TV
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 13Mbps)-Channel 48

Test Frequency	Measurement Level (20dB BW)	Limit	Result
(MHz)	(MHz)	(MHz)	
5230	5248.70	<5250	PASS

NOTE: Accordance with 15.215 requirement.

D Agilent	Spect	rum /	nalyzer - S	wept SA							80.		
₩ Center	r Fre	50 Ω eq :	5.23000	00000 G	Hz	AC	SEI	NSE:INT	#Avg	ALIGNAUTO Fype: Pwr(RMS	02:45:39	PM Nov 08, 2010	Frequency
			Inp	out: RF PI IFC	NO: Fast Sain:Low	₩A	tten: 30	dB	Ext Ga	ain: -10.50 dB			Auto Tune
10 dB/di	iv	Ref	20.00 d	IBm							-27	87 GHZ .90 dBm	
10.0		+					1					*	Center Freq
0.00		-			ma	- Roman and		horas and the	hanking the man				5.230000000 GHz
-10.0					ſ		1			2		-23.05 dBm	
-30.0					1					X		20.00 4011	Start Freq
-40.0		+	1.201	hall the	<u> </u>				_	m)			5.18000000 GHz
-50.0	and the second second	Processile (and the state of the second	A-well-well-						V UMPTELING	a and a second	and an and a second second	Stop Fred
-60.0													5.280000000 GHz
Center	5 23	2000									Snan	100.0 MHz	
#Res B	SW 3	00 I	KHZ		#VE	3W 1.0	MHz			#Sweep	500 ms	(1001 pts)	CF Step 10 000000 MHz
		SCL		×	3 CH2		Y 3.05 di	i Zm	INCTION	FUNCTION WIDTH	FUNCT	ION VALUE	<u>Auto</u> Man
2 N	1	f		5.248	7 GHz	-2	7.90 di	Bm					
4								_					Freq Offset
6								_					
8													
10 11													
MSG										STATU	3		

8. Frequency Stability

8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010

Note:

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

8.2. Test Setup



8.3. Limits

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified

8.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

8.5. Uncertainty

± 150 Hz

8.6. Test Result of Frequency Stability

Product	:	Push2TV
Test Item	:	Frequency Stability
Test Site	:	Temperature Chamber
Test Mode	:	Carrier Wave (for 802.11a/n-20MHz/40MHz Channel) - Begining

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
	Vnom (120)V	36	5180.00	5180.0010	-0.0010
		38	5190.00	5190.0075	-0.0075
Tnom (20) °C		40	5200.00	5200.0085	-0.0085
		46	5230.00	5230.0015	-0.0015
		48	5240.00	5240.0085	-0.0085
	Vnom (120)V	36	5180.00	5180.0125	-0.0125
		38	5190.00	5190.0089	-0.0089
Tnom (40) °C		40	5200.00	5200.0097	-0.0097
		46	5230.00	5230.0150	-0.0150
		48	5240.00	5240.0150	-0.0150
	Vnom (120)V	36	5180.00	5180.0120	-0.0120
		38	5190.00	5190.0095	-0.0095
Tnom (0) °C		40	5200.00	5200.0070	-0.0070
		46	5230.00	5230.0100	-0.0100
		48	5240.00	5240.0085	-0.0085

Product	:	Push2TV
Test Item	:	Frequency Stability
Test Site	:	Temperature Chamber
Test Mode	:	Carrier Wave (for 802.11a/n-20MHz/40MHz Channel) - AFTER 2Min

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
	Vnom (120)V	36	5180.00	5180.0085	-0.0085
		38	5190.00	5190.0014	-0.0014
Tnom (20) °C		40	5200.00	5220.0095	-0.0095
		46	5230.00	5230.0100	-0.0100
		48	5240.00	5240.0018	-0.0018
	Vnom (120)V	36	5180.00	5180.0103	-0.0103
		38	5190.00	5190.0106	-0.0106
Tnom (40) °C		40	5200.00	5220.0092	-0.0092
		46	5230.00	5230.0100	-0.0100
		48	5240.00	5240.0085	-0.0085
	Vnom (120)V	36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0092	-0.0092
Tnom (0) °C		40	5200.00	5220.0036	-0.0036
		46	5230.00	5230.0041	-0.0041
		48	5240.00	5240.0001	-0.0001

Product	:	Push2TV
Test Item	:	Frequency Stability
Test Site	:	Temperature Chamber
Test Mode	:	Carrier Wave (for 802.11a/n-20MHz/40MHz Channel) - AFTER 5Min

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
	Vnom (120)V	36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0105	-0.0105
Tnom (20) °C		40	5200.00	5220.0095	-0.0095
		46	5230.00	5230.0100	-0.0100
		48	5240.00	5240.0101	-0.0101
	Vnom (120)V	36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0089	-0.0089
Tnom (40) °C		40	5200.00	5220.0062	-0.0062
		46	5230.00	5230.0100	-0.0100
		48	5240.00	5240.0041	-0.0041
	Vnom (120)V	36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0089	-0.0089
Tnom (0) °C		40	5200.00	5220.0095	-0.0095
		46	5230.00	5230.0028	-0.0028
		48	5240.00	5240.0310	-0.0310

Product	:	Push2TV
Test Item		Eroqueney Sto

Test Item:Frequency StabilityTest Site:Temperature Chamber

Test Mode :

Carrier Wave (for 802.11a/n-20MHz/40MHz Channel) - AFTER 10Min

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
	Vnom (120)V	36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0089	-0.0089
Tnom (20) °C		40	5200.00	5220.0019	-0.0019
		46	5230.00	5230.0100	-0.0100
		48	5240.00	5240.0102	-0.0102
	Vnom (120)V	36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0100	-0.0100
Tnom (40) °C		40	5200.00	5220.0095	-0.0095
		46	5230.00	5230.0101	-0.0101
		48	5240.00	5240.0103	-0.0103
		36	5180.00	5180.0100	-0.0100
		38	5190.00	5190.0104	-0.0104
Tnom (0) °C	Vnom (120)V	40	5200.00	5220.0094	-0.0094
		46	5230.00	5230.0102	-0.0102
		48	5240.00	5240.0103	-0.0103

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs