



MEASUREMENT REPORT

FCC Part 15B

FCC ID: O9C-BJNGAFB0005
APPLICANT: Hewlett Packard Company
Application Type: Certification
Product: Unified Wired-WLAN Walljack
Model No.: BJNGA-FB0005, JH048A
Brand Name: HP
FCC Classification: FCC Class B Digital Device (JBP)
FCC Rule Part(s): FCC Part 15 Subpart B
Test Procedure(s): ANSI C63.4: 2009
Test Date: Sep. 15 ~ 24, 2014

Reviewed By : Robin Wu
(Robin Wu)
Approved By : Marlin Chen
(Marlin Chen)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2009. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date
1409RSU02704	Rev. 01	Initial report	09-25-2014

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§2.1033 General Information

Applicant:	Hewlett Packard Company
Applicant Address:	153 Taylor Street Littleton Massachusetts, United States 01460-1407
Manufacturer:	Hewlett Packard Company
Manufacturer Address:	153 Taylor Street Littleton Massachusetts, United States 01460-1407
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT FCC Registration No.:	809388
Model No.:	BJNGA-FB0005, JH048A
FCC ID:	O9C-BJNGAFB0005
Test Device Serial No.:	N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering
FCC Classification:	FCC Class B Digital Device (JBP)
Date(s) of Test:	Sep. 15 ~ 24, 2014
Test Report S/N:	1409RSU02704

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.
- MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (11384A-1).
- MRT facility is an IC registered (11384A-1) test laboratory with the site description on file at Industry Canada.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.

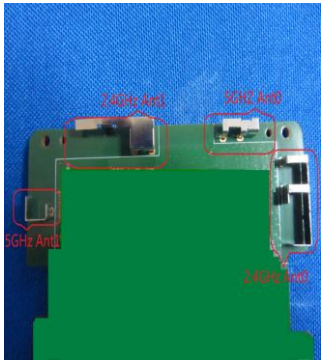


2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Unified Wired-WLAN Walljack
Model No.	BJNGA-FB0005, JH048A
Power Type	48Vdc, 0.63A (or POE input)
Frequency Range	<p><u>For 2.4G Band:</u> 802.11b/g/n: 2412 ~ 2462 MHz</p> <p><u>For 5.0G Band:</u> 802.11a/n/ac: 5150 ~ 5350MHz 5470 ~ 5725MHz 5725 ~ 5850MHz</p>
Type of Modulation	802.11b: DSSS 802.11g/a/n/ac: OFDM
Adapter	Brand Name: DVE M/N: DSA-42D-48 2 480063 P/N: JD055B Input: 100-240V ~ 50/60Hz 1.2A Output: +48V ~ 0.63A

2.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Manufacturer	Model	Tx Paths	Max Peak Gain (dBi)	Directional Gain (dBi)	
						For Power	For PSD
	2.4	Lite-On Technology Corp.	WP388-FN EVT2	2	Ant 0: 2.7 Ant 1: 3.3	6.02	6.02
	5.2				Ant 0: 4.6 Ant 1: 4.2		
	5.5			Ant 0: 4.9 Ant 1: 4.4	7.66	7.66	
	5.8			Ant 0: 5.0 Ant 1: 5.4			8.21

Note: The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

2.3. Device Capabilities

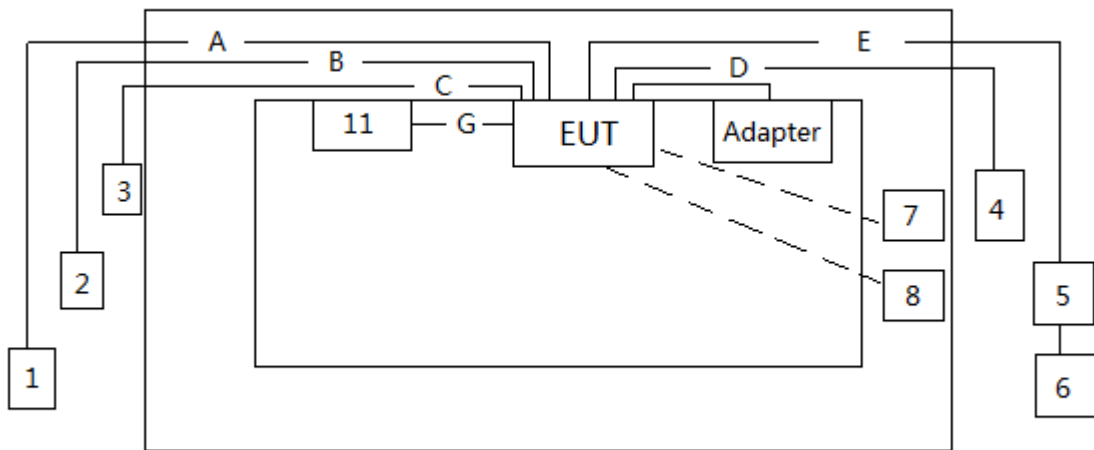
This device contains the following capabilities:

2.4G&5GHz (DTS/UNII)

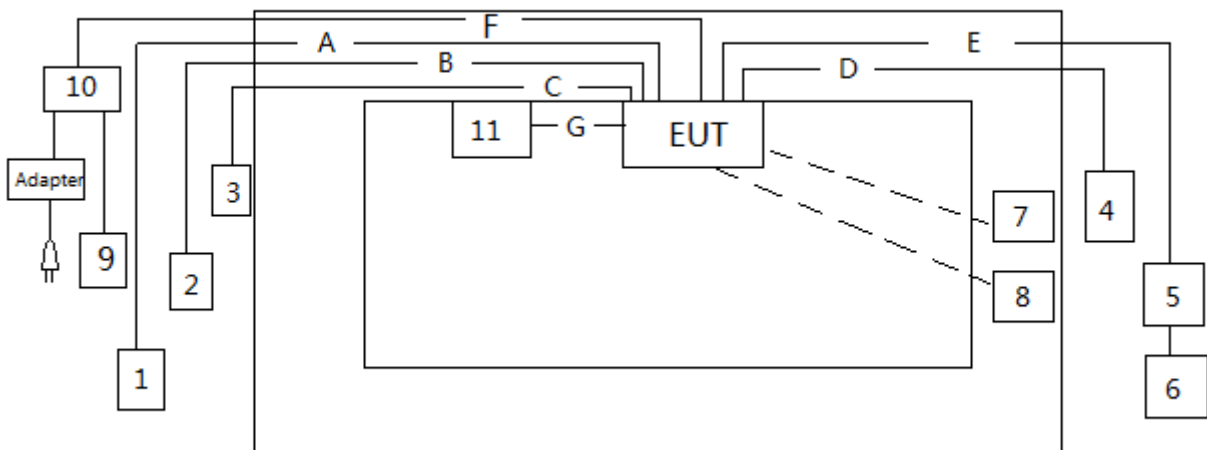
2.4. Test Configuration

The Unified Wired-WLAN Walljack FCC ID: O9C-BJNGAFB0005 was tested per the guidance FCC Part 15 Subpart B: 2013 and ANSI C63.4: 2009 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

Connection Diagram (Mode 1: Powered by Adapter)



Connection Diagram (Mode 2: Powered by POE)



Signal Cable Type		Signal cable Description			
A	LAN Cable	Non-shielding, >10m			
B	LAN Cable	Non-shielding, >10m			
C	LAN Cable	Non-shielding, >10m			
D	LAN Cable	Non-shielding, >10m			
E	LAN Cable	Non-shielding, >10m			
F	LAN Cable	Non-shielding, >10m			
G	USB Cable	Shielding, 0.1m			
Product	Manufacturer	Model No.	Serial No.	Power Cord	
1	Personal Computer	DELL	Vostro270	N/A	Non-Shielded, 1.8m
2	Personal Computer	DELL	Vostro270	N/A	Non-Shielded, 1.8m
3	Personal Computer	DELL	Vostro270	N/A	Non-Shielded, 1.8m
4	Personal Computer	DELL	Vostro270	N/A	Non-Shielded, 1.8m
5	Walljack	HP	HP417	N/A	N/A
6	Personal Computer	DELL	Vostro270	N/A	Non-Shielded, 1.8m
7	Notebook	Lenovo	E430c	MP-4CFX213/10	Non-Shielded, 1.8m
8	Notebook	Lenovo	X201	3626AM3	Non-Shielded, 1.8m
9	Personal Computer	DELL	Vostro270	N/A	Non-Shielded, 1.8m
10	POE	H3C	WA2600 Indoor POE Injector (EWPAM1NPOE)	N/A	N/A
11	iPod	Apple	A1373	CC4MHABN4RW	N/A

Note 1: When we configured the EUT set-up, the console port didn't connect some peripherals, which was used to do software upgrade for the professional installers.

Note 2: For the test mode 2, we tested the POE's AC adapter port for conducted emission.

2.5. Test Software

Not applicable.

2.6. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.7. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(a)(5).

Please see attachment for FCC ID label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical Equipment in the Range of 9kHz to 40GHz (ANSI C63.4-2009) was used in the measurement of the **Unified Wired-WLAN Walljack FCC ID: O9C-BJNGAFB0005**.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150 kHz to 30 MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or resolution, clock or data exchange speed, scrolling H pattern to the EUT and/or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. Line conducted emissions test results are shown in Section 6.2.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30 MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30 MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 0.8 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, mode of operation, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB beam-width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	101209	1 year	2014/11/08
Two-Line V-Network	R&S	ENV216	101683	1 year	2014/11/08
Two-Line V-Network	R&S	ENV216	101684	1 year	2014/11/08
Temperature/ Meter Humidity	Anymetre	TH101B	SR2-01	1 year	2014/11/15

Radiated Emission

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	E4447A	MY45300136	1 year	2014/11/18
Preamplifier	MRT	AP01G18	1310002	1 year	2014/10/07
Loop Antenna	Schwarzbeck	FMZB1519	1519-041	1 year	2014/11/24
TRILOG Antenna	Schwarzbeck	VULB9162	9162-047	1 year	2014/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	1 year	2014/11/24
Broadband Horn Antenna	Schwarzbeck	BBHA9170	9170-549	1 year	2014/12/11
Temperature/Humidity Meter	Anymetre	TH101B	AC1-01	1 year	2014/11/15

5. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 150kHz~30MHz: ± 3.5 dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): Horizontal: 30MHz~1GHz: 4.07dB 1GHz~18GHz: 4.16 dB Vertical: 30MHz~1GHz: 4.18 dB 1GHz~18GHz: 4.76 dB

6. TEST RESULT

6.1. Summary

Company Name: Hewlett Packard Company
FCC ID: O9C-BJNGAFB0005
FCC Classification: FCC Class B Digital Device (JBP)
Test Mode: Communication

FCC Part Section(s)	Test Description	Test Result
15.107	Conducted Emissions	Pass
15.109	Radiated Emissions	Pass

6.2. Conducted Emission Measurement

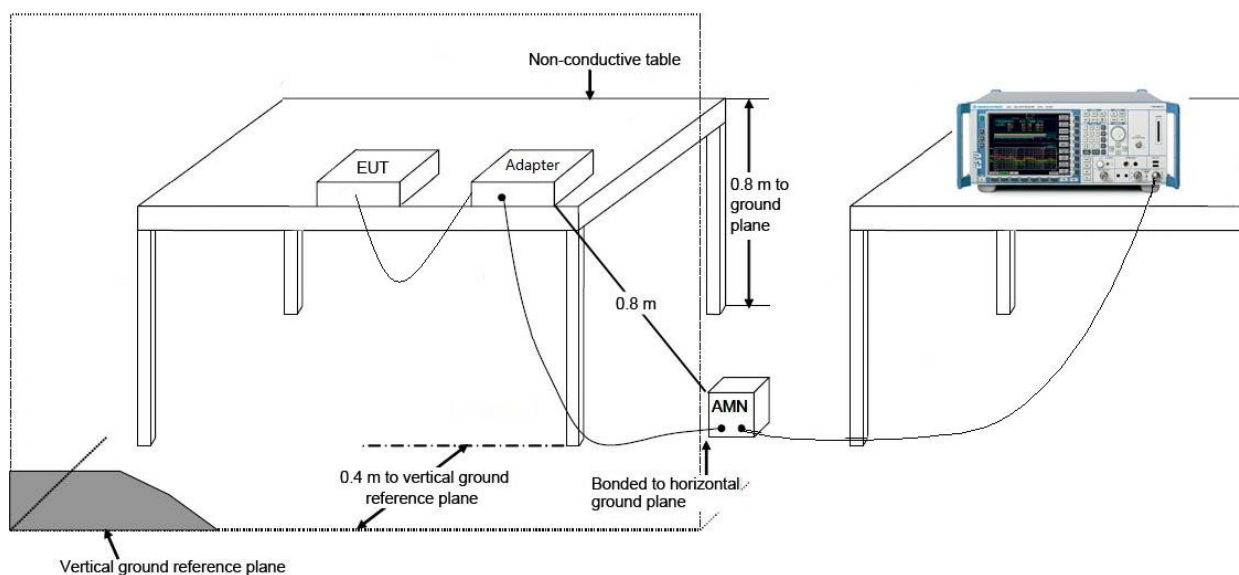
6.2.1. Test Limit

FCC Part 15.107 Limits		
Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

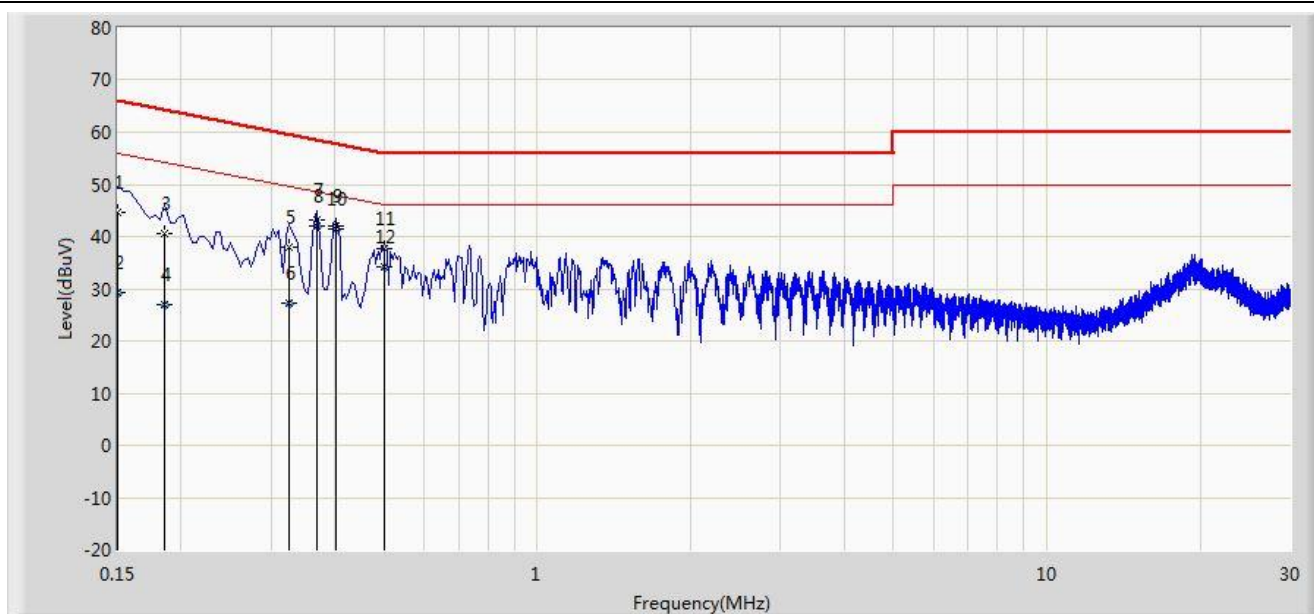
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.2.2. Test Setup



6.2.3. Test Result of Conducted Emissions

Engineer: Roy Cheng	
Site: SR2	Time: 2014/09/17 - 20:08
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 1 : Communication (Powered by Adapter)	

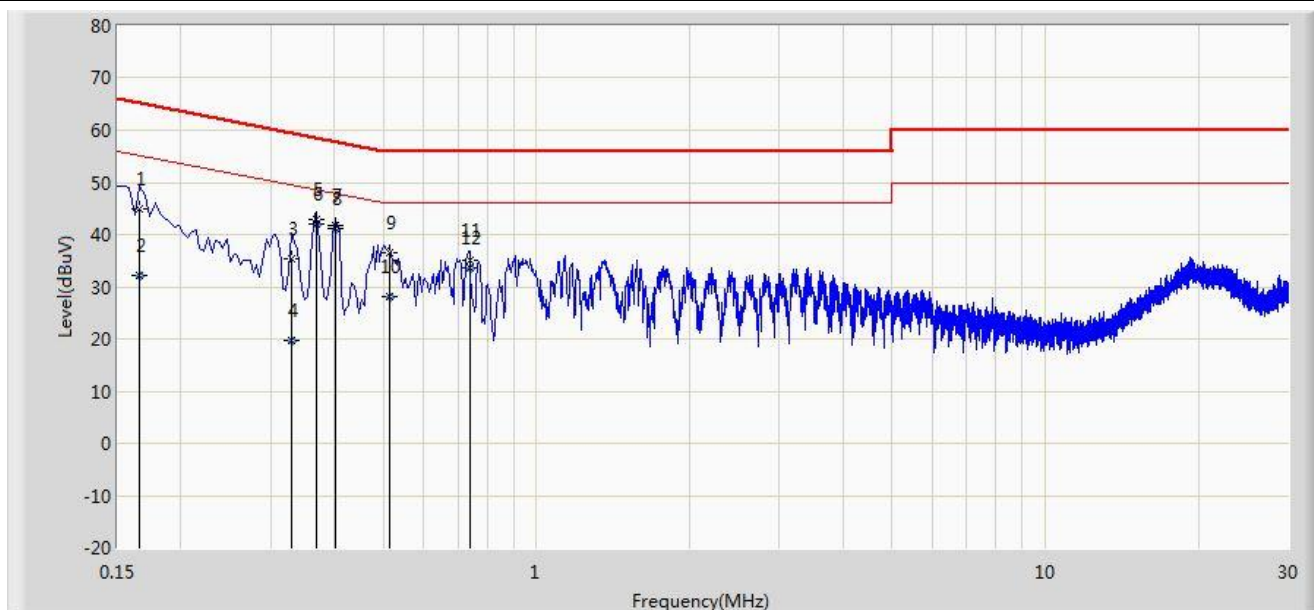


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	44.686	33.518	-21.314	66.000	11.168	QP
2			0.150	29.138	17.970	-26.862	56.000	11.168	AV
3			0.186	40.644	30.606	-23.569	64.213	10.039	QP
4			0.186	27.008	16.969	-27.206	54.213	10.039	AV
5			0.326	38.087	28.062	-21.466	59.552	10.025	QP
6			0.326	27.325	17.300	-22.228	49.552	10.025	AV
7			0.370	43.054	32.993	-15.447	58.501	10.061	QP
8		*	0.370	42.140	32.078	-6.361	48.501	10.061	AV
9			0.402	42.120	32.033	-15.692	57.812	10.087	QP
10			0.402	41.437	31.350	-6.375	47.812	10.087	AV
11			0.502	37.695	27.538	-18.305	56.000	10.157	QP
12			0.502	34.125	23.968	-11.875	46.000	10.157	AV

Note: Measure Level (dBuV) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Engineer: Roy Cheng	
Site: SR2	Time: 2014/09/17 - 20:20
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 1 : Communication (Powered by Adapter)	

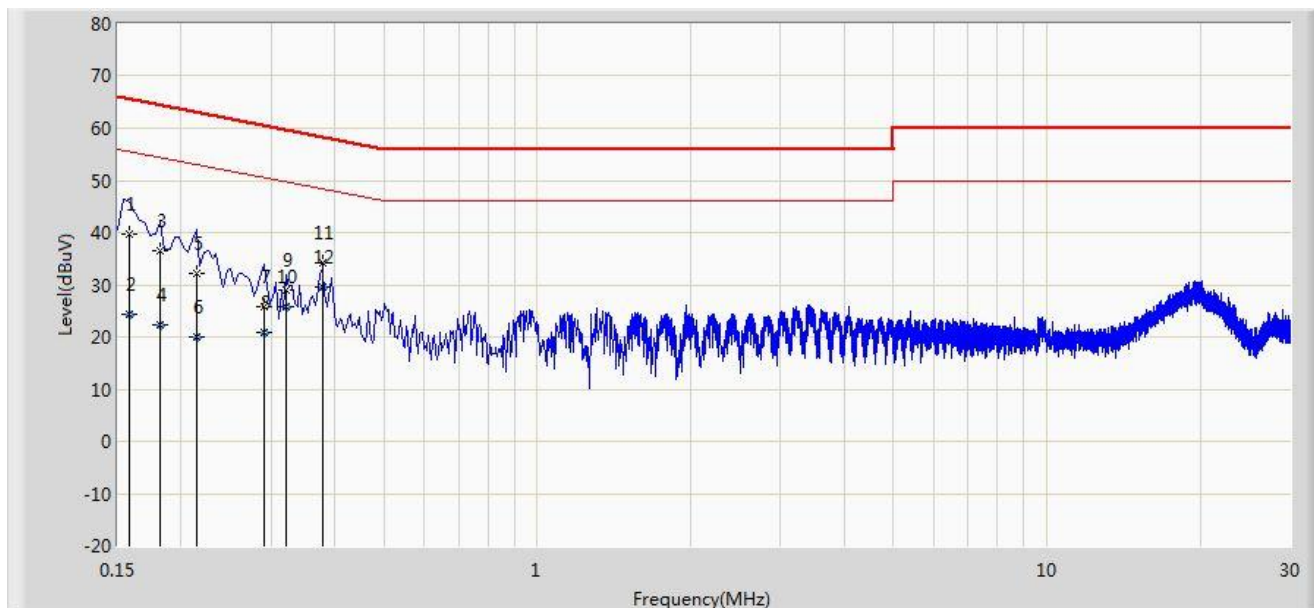


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.166	44.917	34.846	-20.241	65.158	10.071	QP
2			0.166	32.300	22.229	-22.858	55.158	10.071	AV
3			0.330	35.493	25.434	-23.958	59.451	10.060	QP
4			0.330	19.649	9.589	-29.802	49.451	10.060	AV
5			0.370	42.896	32.806	-15.605	58.501	10.090	QP
6		*	0.370	41.915	31.825	-6.586	48.501	10.090	AV
7			0.402	41.653	31.539	-16.159	57.812	10.114	QP
8			0.402	41.024	30.910	-6.788	47.812	10.114	AV
9			0.514	36.560	26.384	-19.440	56.000	10.176	QP
10			0.514	28.159	17.983	-17.841	46.000	10.176	AV
11			0.738	35.144	25.090	-20.856	56.000	10.054	QP
12			0.738	33.753	23.699	-12.247	46.000	10.054	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Engineer: Roy Cheng	
Site: SR2	Time: 2014/09/22 - 15:07
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 2 : Communication (Powered by POE)	

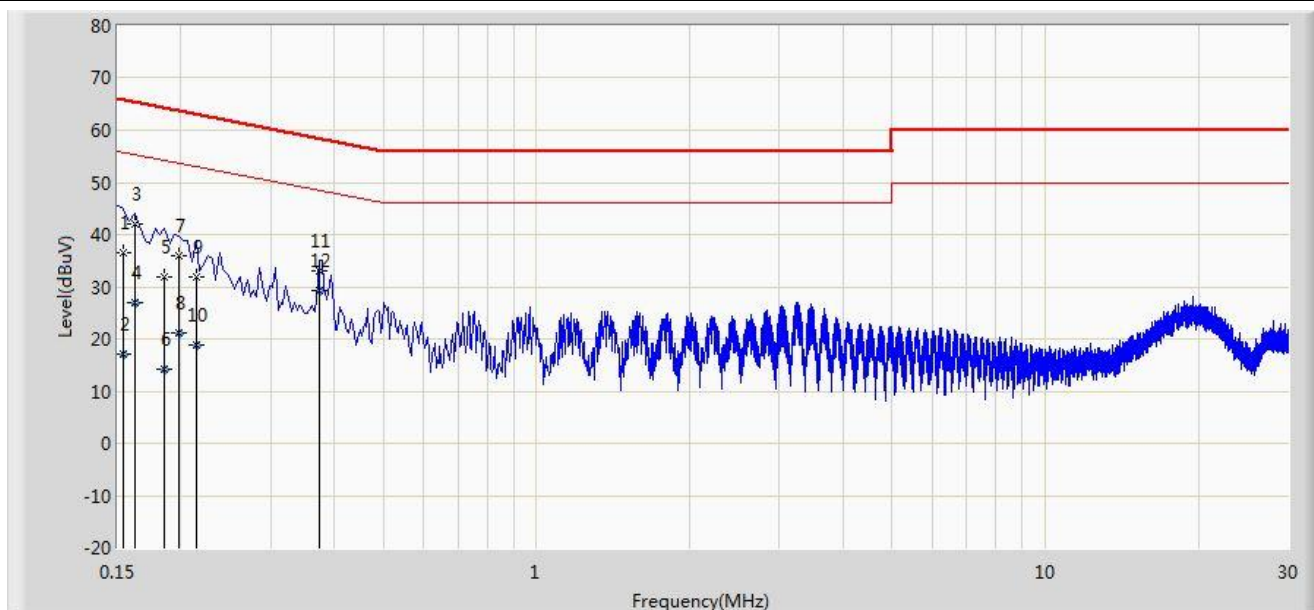


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.158	39.603	29.292	-25.965	65.568	10.311	QP
2			0.158	24.396	14.085	-31.173	55.568	10.311	AV
3			0.182	36.419	26.370	-27.975	64.394	10.048	QP
4			0.182	22.301	12.253	-32.092	54.394	10.048	AV
5			0.214	32.312	22.355	-30.737	63.049	9.957	QP
6			0.214	20.036	10.079	-33.013	53.049	9.957	AV
7			0.290	25.679	15.682	-34.846	60.524	9.996	QP
8			0.290	20.951	10.955	-29.573	50.524	9.996	AV
9			0.322	29.024	19.002	-30.631	59.655	10.022	QP
10			0.322	25.924	15.902	-23.731	49.655	10.022	AV
11			0.378	34.135	24.068	-24.188	58.323	10.067	QP
12		*	0.378	29.629	19.562	-18.694	48.323	10.067	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Engineer: Roy Cheng	
Site: SR2	Time: 2014/09/22 - 15:20
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 2 : Communication (Powered by POE)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.154	36.663	25.947	-29.119	65.781	10.716	QP
2			0.154	17.141	6.426	-38.640	55.781	10.716	AV
3			0.162	42.135	32.057	-23.226	65.361	10.078	QP
4			0.162	27.041	16.962	-28.320	55.361	10.078	AV
5			0.186	31.990	21.954	-32.224	64.213	10.035	QP
6			0.186	14.201	4.166	-40.012	54.213	10.035	AV
7			0.198	35.935	25.921	-27.759	63.694	10.015	QP
8			0.198	21.153	11.138	-32.541	53.694	10.015	AV
9			0.214	32.024	22.036	-31.025	63.049	9.988	QP
10			0.214	18.928	8.940	-34.120	53.049	9.988	AV
11			0.374	32.963	22.870	-25.449	58.412	10.093	QP
12		*	0.374	29.136	19.043	-19.276	48.412	10.093	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

6.3. Radiated Emission Measurement

6.3.1. Test Limit

FCC Part 15.109 Limits		
Frequency (MHz)	Distance (m)	Level (dB μ V/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

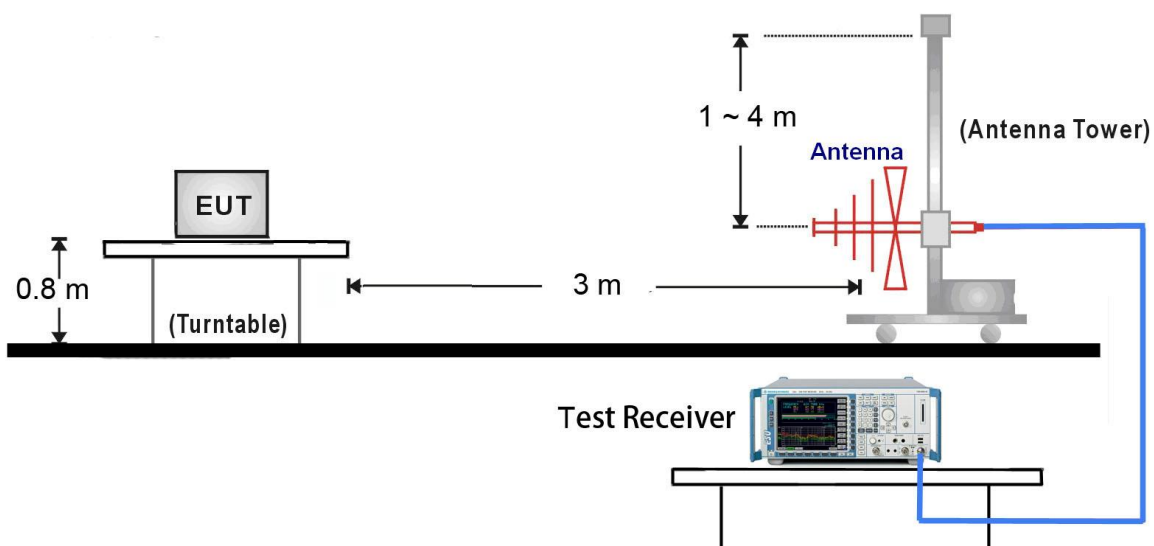
Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

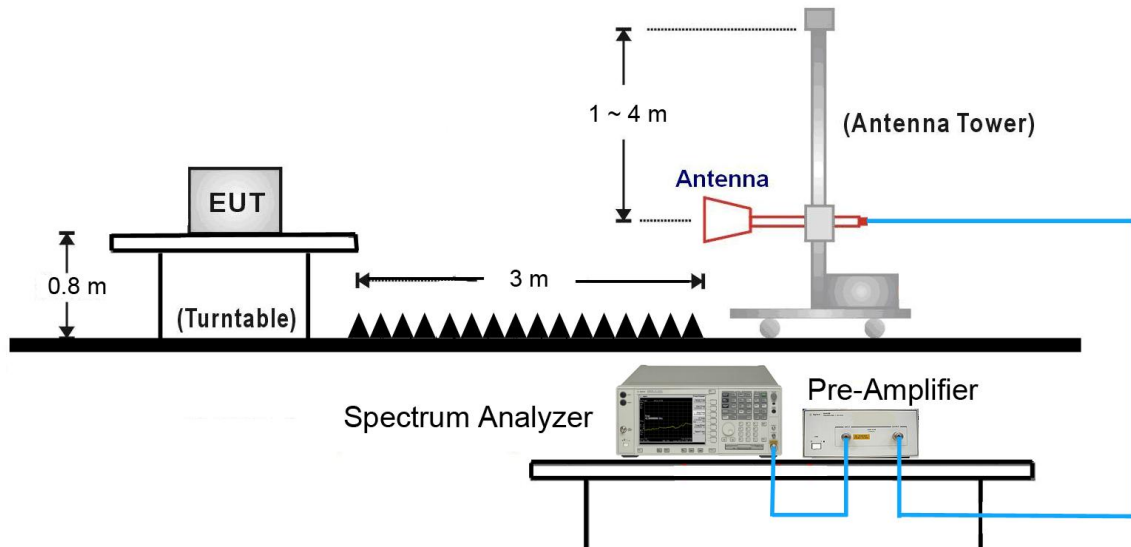
Note 3: E field strength (dB μ V/m) = 20 log E field strength (uV/m)

6.3.2. Test Setup

30MHz ~ 1GHz Test Setup:

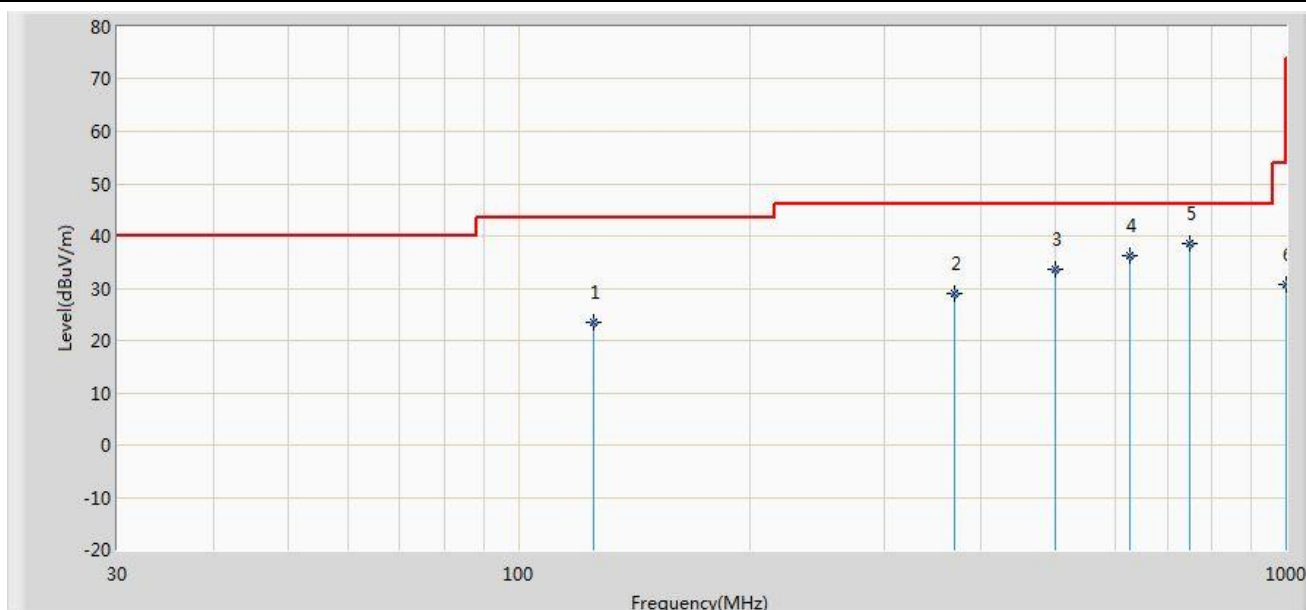


1GHz ~18GHz Test Setup:



6.3.3. Test Result of Radiated Emissions

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:25
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 1 : Communication (Powered by Adapter)	

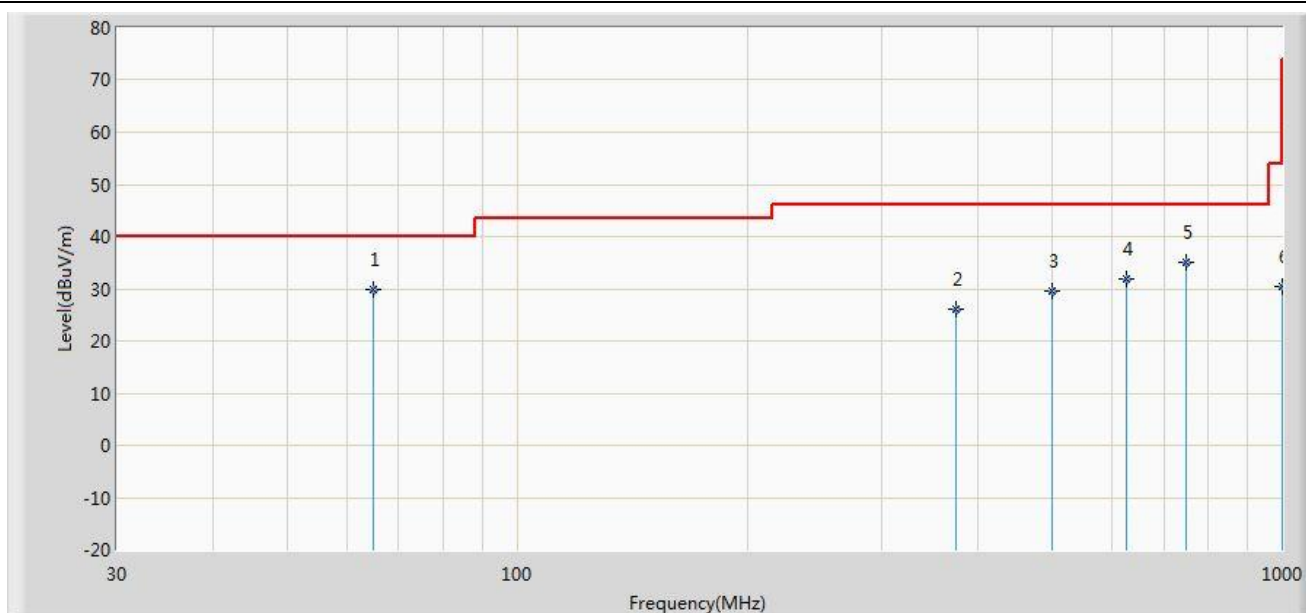


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			125.021	23.503	13.244	-19.997	43.500	10.259	QP
2			370.250	29.062	13.400	-16.938	46.000	15.662	QP
3			500.000	33.677	15.935	-12.323	46.000	17.742	QP
4			625.020	36.274	16.552	-9.726	46.000	19.722	QP
5		*	750.001	38.599	17.070	-7.401	46.000	21.529	QP
6			1000.000	30.802	6.574	-23.198	54.000	24.228	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:25
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 1 : Communication (Powered by Adapter)	

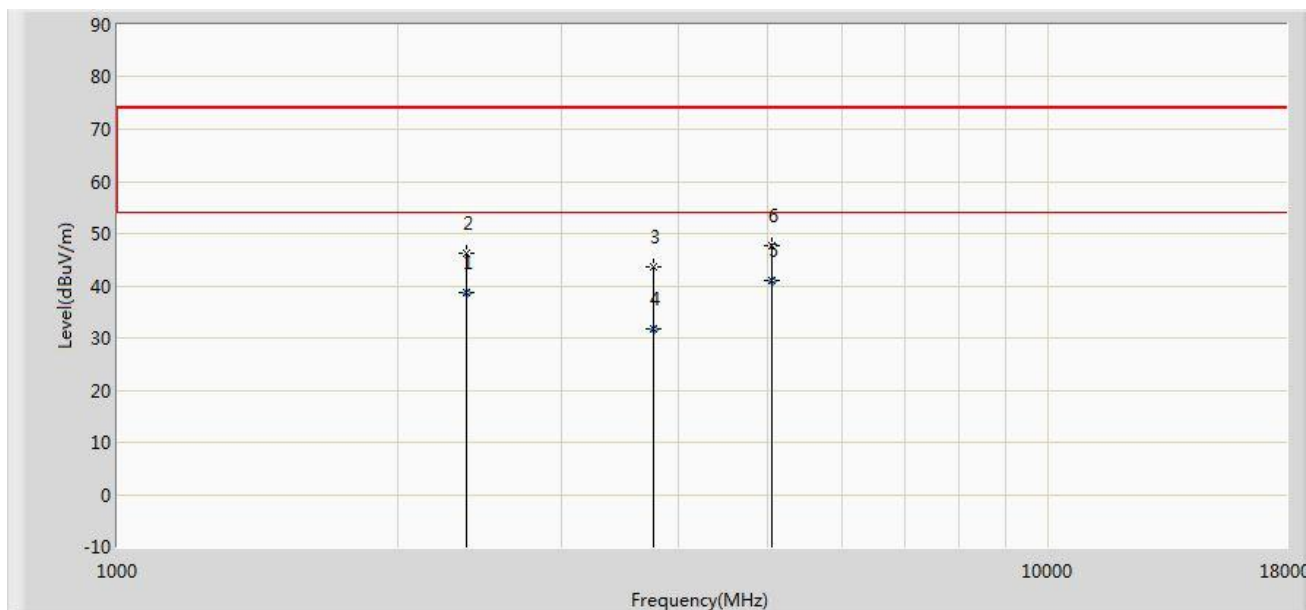


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	64.880	29.910	17.530	-10.090	40.000	12.380	QP
2			375.022	25.977	10.245	-20.023	46.000	15.732	QP
3			500.010	29.604	11.862	-16.396	46.000	17.742	QP
4			625.200	31.744	12.020	-14.256	46.000	19.724	QP
5			750.000	35.049	13.520	-10.951	46.000	21.529	QP
6			1000.000	30.453	6.225	-23.547	54.000	24.228	QP

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:24
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 1 : Communication (Powered by Adapter)	

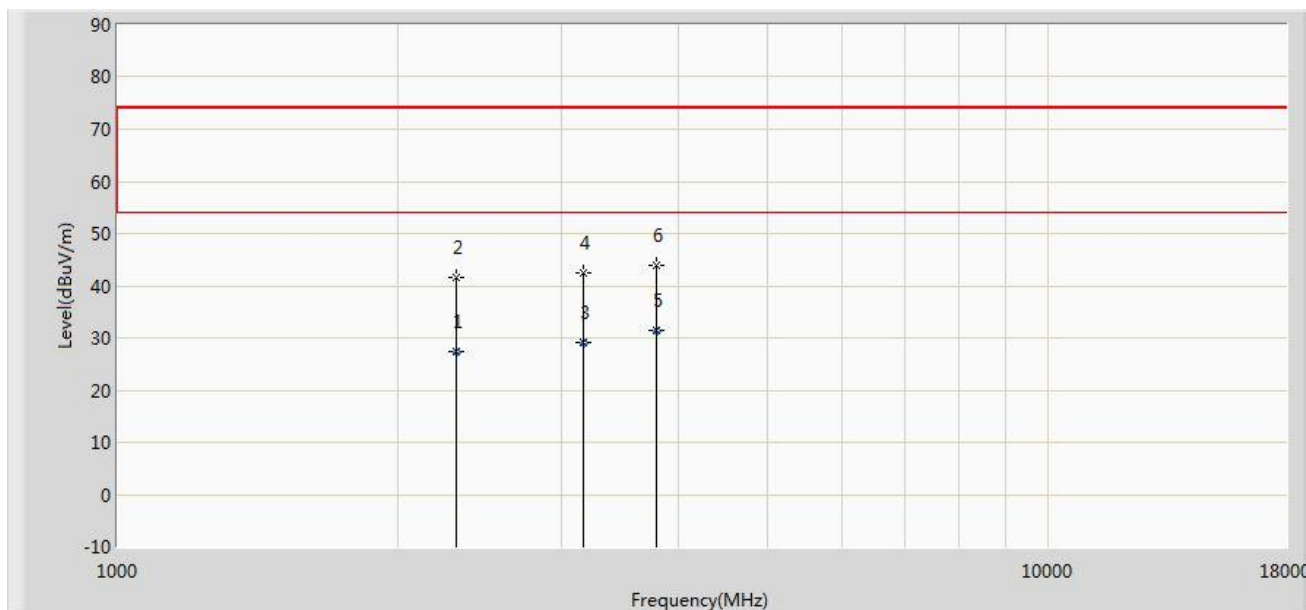


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2368.220	38.605	35.840	-15.395	54.000	2.765	AV
2			2368.500	46.262	43.497	-27.738	74.000	2.765	PK
3			3771.000	43.738	39.567	-30.262	74.000	4.171	PK
4			3771.240	31.712	27.540	-22.288	54.000	4.172	AV
5		*	5054.427	41.007	33.980	-12.993	54.000	7.027	AV
6			5054.500	47.686	40.659	-26.314	74.000	7.027	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:24
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 1 : Communication (Powered by Adapter)	

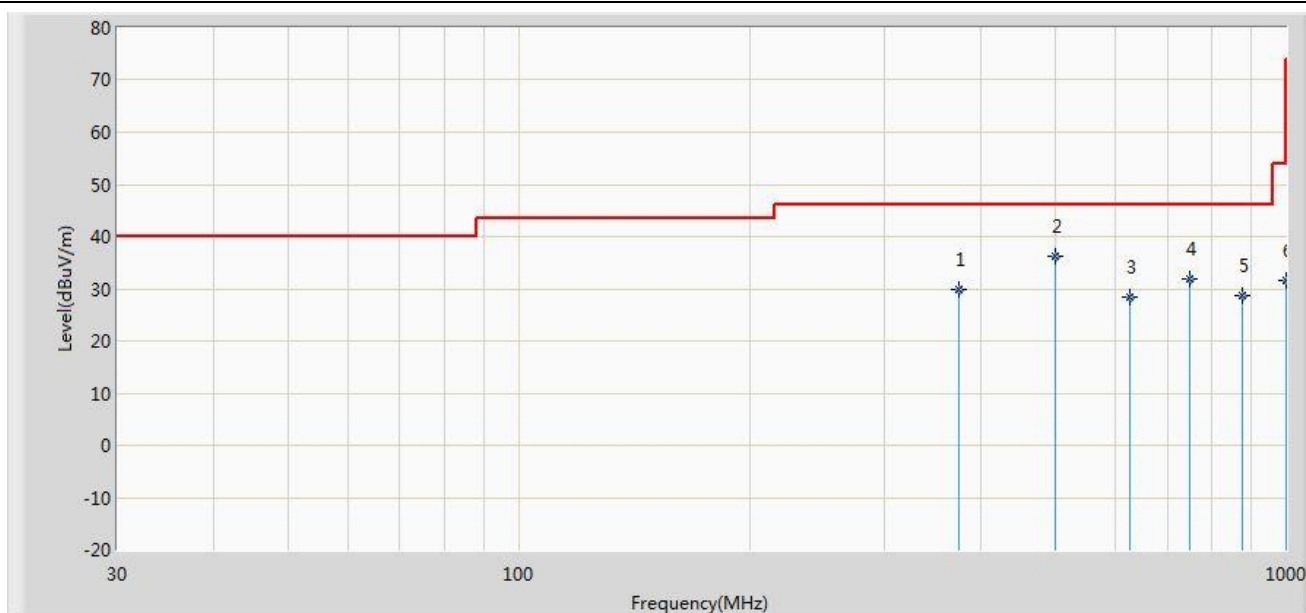


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2308.940	27.411	24.410	-26.589	54.000	3.001	AV
2			2309.000	41.690	38.689	-32.310	74.000	3.001	PK
3			3167.450	29.082	25.470	-24.918	54.000	3.612	AV
4			3167.500	42.594	38.982	-31.406	74.000	3.613	PK
5		*	3796.448	31.583	27.380	-22.417	54.000	4.203	AV
6			3796.500	43.832	39.628	-30.168	74.000	4.203	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:26
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 2 : Communication (Powered by POE)	

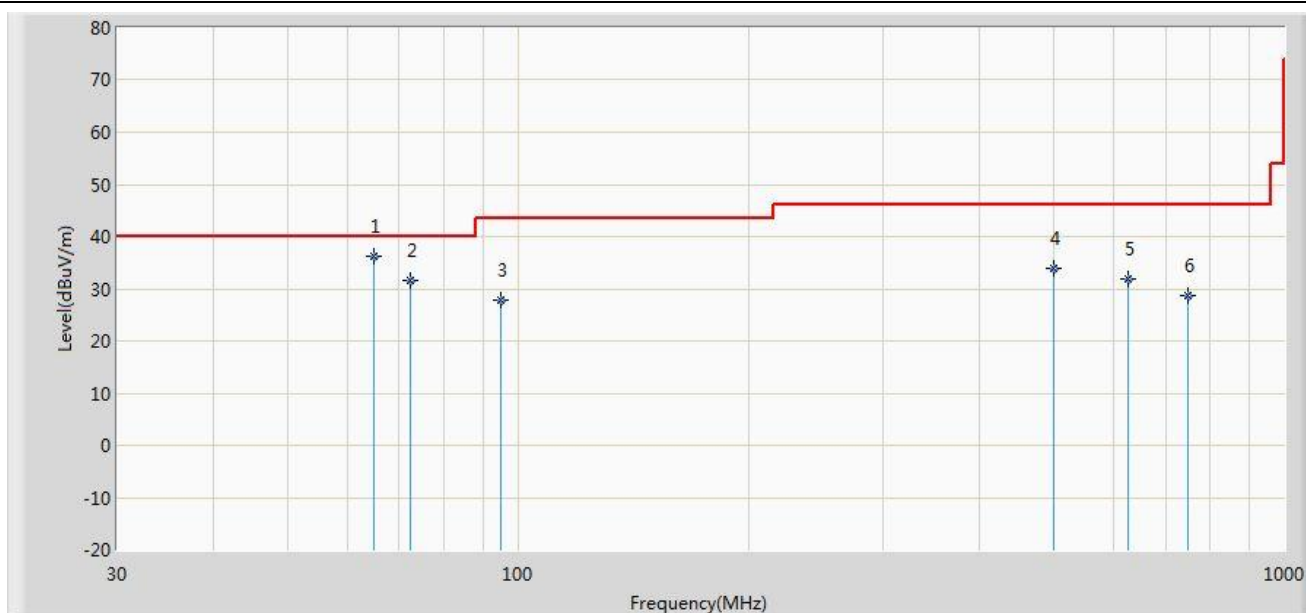


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			375.001	29.995	14.263	-16.005	46.000	15.732	QP
2		*	500.000	36.265	18.523	-9.735	46.000	17.742	QP
3			625.010	28.372	8.650	-17.628	46.000	19.722	QP
4			750.002	31.783	10.254	-14.217	46.000	21.529	QP
5			875.011	28.609	5.472	-17.391	46.000	23.137	QP
6			1000.000	31.678	7.450	-22.322	54.000	24.228	QP

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:26
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 2 : Communication (Powered by POE)	

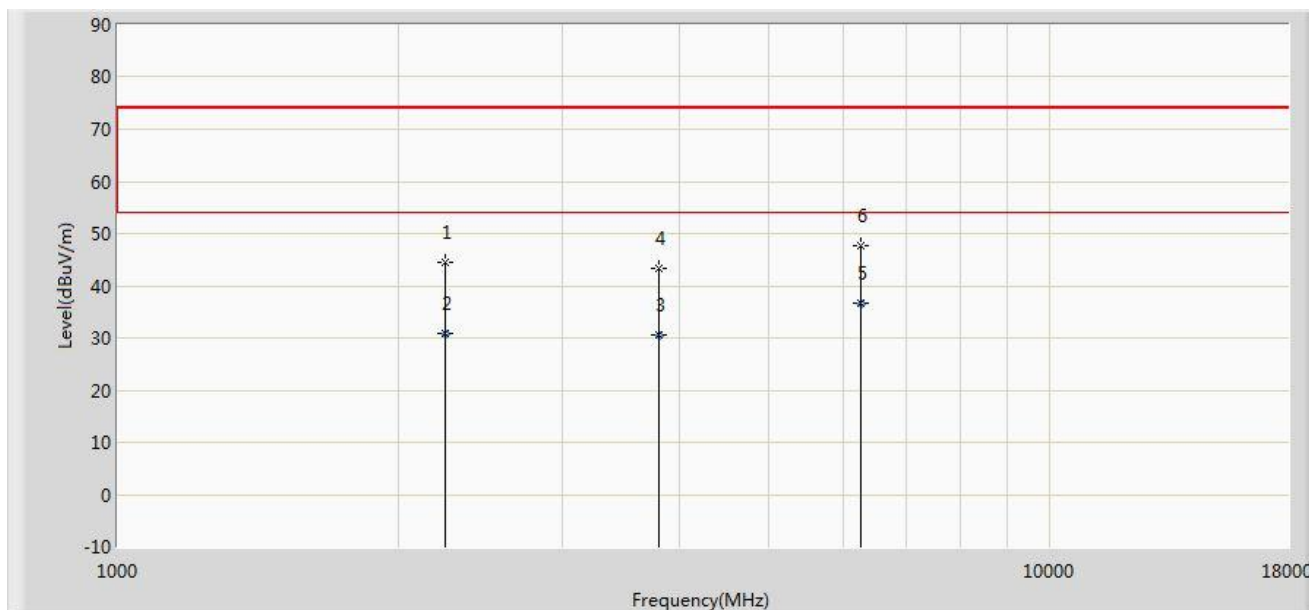


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	64.800	36.306	23.900	-3.694	40.000	12.406	QP
2			72.536	31.654	21.554	-8.346	40.000	10.099	QP
3			95.011	27.818	15.726	-15.682	43.500	12.092	QP
4			500.002	33.992	16.250	-12.008	46.000	17.742	QP
5			625.023	31.746	12.024	-14.254	46.000	19.722	QP
6			750.001	28.794	7.265	-17.206	46.000	21.529	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:24
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 2 : Communication (Powered by POE)	

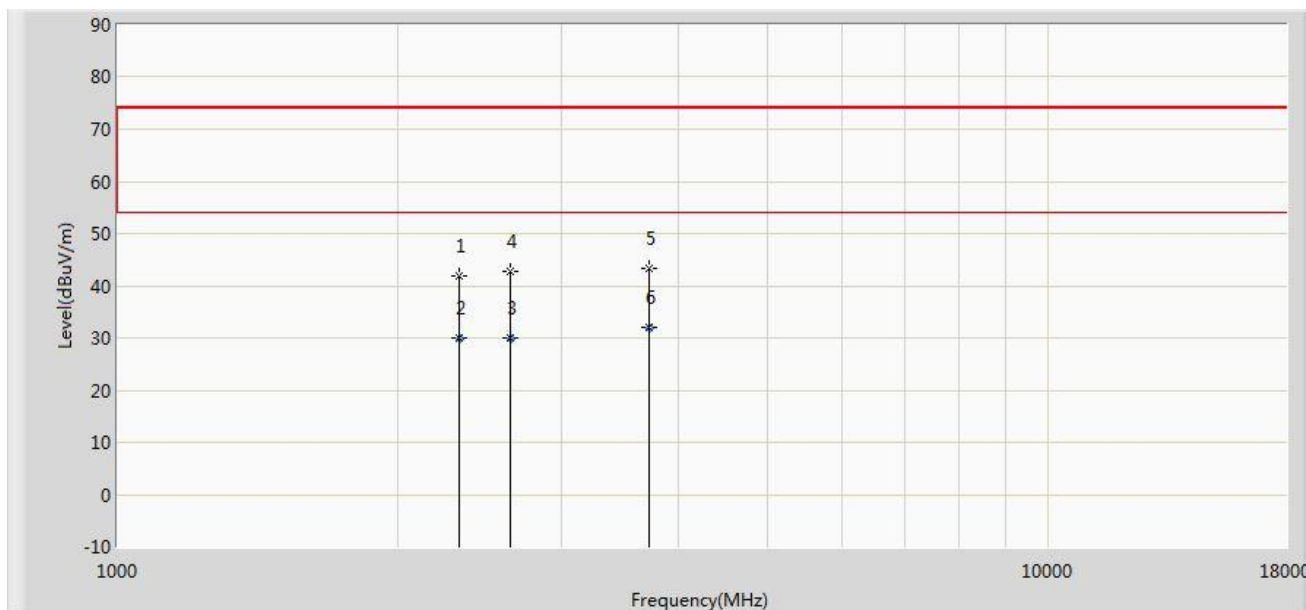


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2249.500	44.443	41.349	-29.557	74.000	3.094	PK
2			2249.680	30.963	27.870	-23.037	54.000	3.094	AV
3			3813.477	30.600	26.360	-23.400	54.000	4.240	AV
4			3813.500	43.295	39.055	-30.705	74.000	4.240	PK
5		*	6269.978	36.635	27.040	-17.365	54.000	9.595	AV
6			6270.000	47.663	38.068	-26.337	74.000	9.595	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB).

Engineer: Roy Cheng	
Site: AC1	Time: 2014/09/22 - 10:24
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Unified Wired-WLAN Walljack	Power: AC 120V/60Hz
Mode 2 : Communication (Powered by POE)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2326.000	41.751	38.826	-32.249	74.000	2.925	PK
2			2326.050	29.894	26.970	-24.106	54.000	2.924	AV
3			2640.447	30.094	27.080	-23.906	54.000	3.013	AV
4			2640.500	42.688	39.675	-31.312	74.000	3.013	PK
5			3720.000	43.455	39.385	-30.545	74.000	4.070	PK
6		*	3720.140	31.930	27.860	-22.070	54.000	4.070	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB).

7. CONCLUSION

The data collected relate only the item(s) tested and show that the **Unified Wired-WLAN Walljack FCC ID: O9C-BJNGAFB0005** has been tested to comply with the requirements specified in §15.107 and §15.109 of the FCC Rules.

_____ The End _____