Report No: CCIS12120030302

FCC REPORT

Applicant:	Deliberant LLC
Address of Applicant:	138 Mountain Brook Dr Canton, GA 30115 United States

Equipment Under Test (EUT)

Product Name:	Broadband Digital Transmission System
Model No.:	APC Button,APC Button AF
FCC ID:	UB8-APCBTTN2
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B: 2011
Date of sample receipt:	14 Dec.,2012
Date of Test:	18 Dec.,2012 to 14 Jan.,2013
Date of report issued:	16 Jan.,2013
Test Result :	Pass *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	16 Jan.,2013	*Original*

Prepared by: Lisa chen ***Date:*** 16 Jan.,2013

Report Clerk

Reviewed by: Wimer zhang ***Date:*** 16 Jan.,2013

Project Engineer

3 Contents

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4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part15.107	Pass
Readiated Emissions	Part15.109	Pass

Pass: The EUT complies with the essential requirements in the standard.

5 General Information

5.1 Client Information

Applicant:	Deliberant LLC
Address of Applicant:	138 Mountain Brook Dr Canton, GA 30115 United States
Manufacturer/ Factory:	Deliberant LLC
Address of Manufacturer /Factory:	138 Mountain Brook Dr Canton, GA 30115 United States

5.2 General Description of E.U.T.

Product Name:	Broadband Digital Transmission System
Model No.:	APC Button ,APC Button AF
AC adapter:	Adapter for model APC Button Model:GRT-180100 Input:100-240V AC,50/60Hz 0.27A Output:5V DC MAX700mA Adapter for model APC Button AF Model:GRT-480050 Input:100-240V AC,50/60Hz Output:5V DC MAX500mA
Remark:	The model APC Button and model APC Button AF have same RF electric circuit, IC, antenna type and antenna Gain etc, the only differences between them are adapter and power management circuits.

5.3 Operating Modes

Operating mode	Detail description
LAN mode	Connect the EUT to PC over POE with" ping" command

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
HP	Printer	P1007	VNFP409729	DoC
HP	PC	Pro 2000MT	N/A	DoC
HP	MONITOR	CompaqLE1851WL	515682-070	DoC
HP	KEYBOARD	SK-2880	434820-AA2	DoC
HP	MOUSE	MOC5UO	N/A	DoC

5.5 Deviation from Standards

None

5.6 Abnormalities from Standard Conditions

None.

5.7 Other Information Requested by the Customer

None.

5.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC —Registration No.:** 817957

China Certification & Inspection Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012

● **Industry Canada (IC)**

The 3m Semi-anechoic chamber of China Certification & Inspection Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

5.9 Test Location

All tests were performed at:

China Certification & Inspection Services Co., Ltd.
Address: 1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China
Tel: 0755-23118282
Fax: 0755-23116366

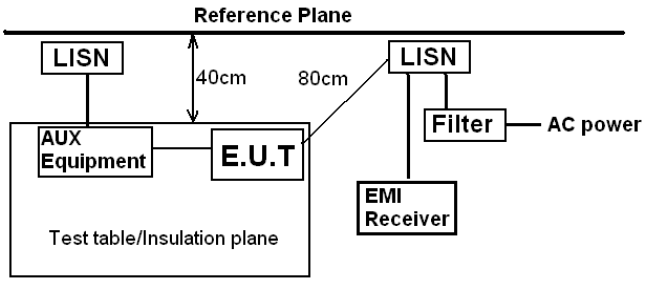
6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	June 09 2012	June 08 2013
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 04 2012	June 03 2013
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	May 30 2012	May 30 2013
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
5	Coaxial Cable	CCIS	N/A	CCIS0016	Apr. 01 2012	Mar. 31 2013
6	Coaxial Cable	CCIS	N/A	CCIS0017	Apr. 01 2012	Mar. 31 2013
7	Coaxial cable	CCIS	N/A	CCIS0018	Apr. 01 2012	Mar. 31 2013
8	Coaxial Cable	CCIS	N/A	CCIS0019	Apr. 01 2012	Mar. 31 2013
9	Coaxial Cable	CCIS	N/A	CCIS0087	Apr. 01 2012	Mar. 31 2013
10	Amplifier(10kHz-1.3GHz)	HP	8447D	CCIS0003	Apr. 01 2012	Mar. 31 2013
11	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	June 09 2012	June 08 2013
12	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Apr. 01 2012	Mar. 31 2013
13	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2012	Mar. 29 2013
14	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A
15	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A
16	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP	CCIS0023	May. 29 2012	May. 28 2013
17	EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	Apr 01 2012	Mar. 31 2013
18	Loop antenna	Laplace instrument	RF300	EMC0701	Aug. 12 2012	Aug. 11 2013

Conducted Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal. Due date (dd-mm-yy)**
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	June 09 2012	June 08 2013
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	May 25 2012	May 24 2013
3	LISN	CHASE	MN2050D	CCIS0074	Apr 01 2012	Mar. 31 2013
4	Coaxial Cable	CCIS	N/A	CCIS0086	Apr. 01 2012	Mar. 31 2013
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

7 Test results and Measurement Data

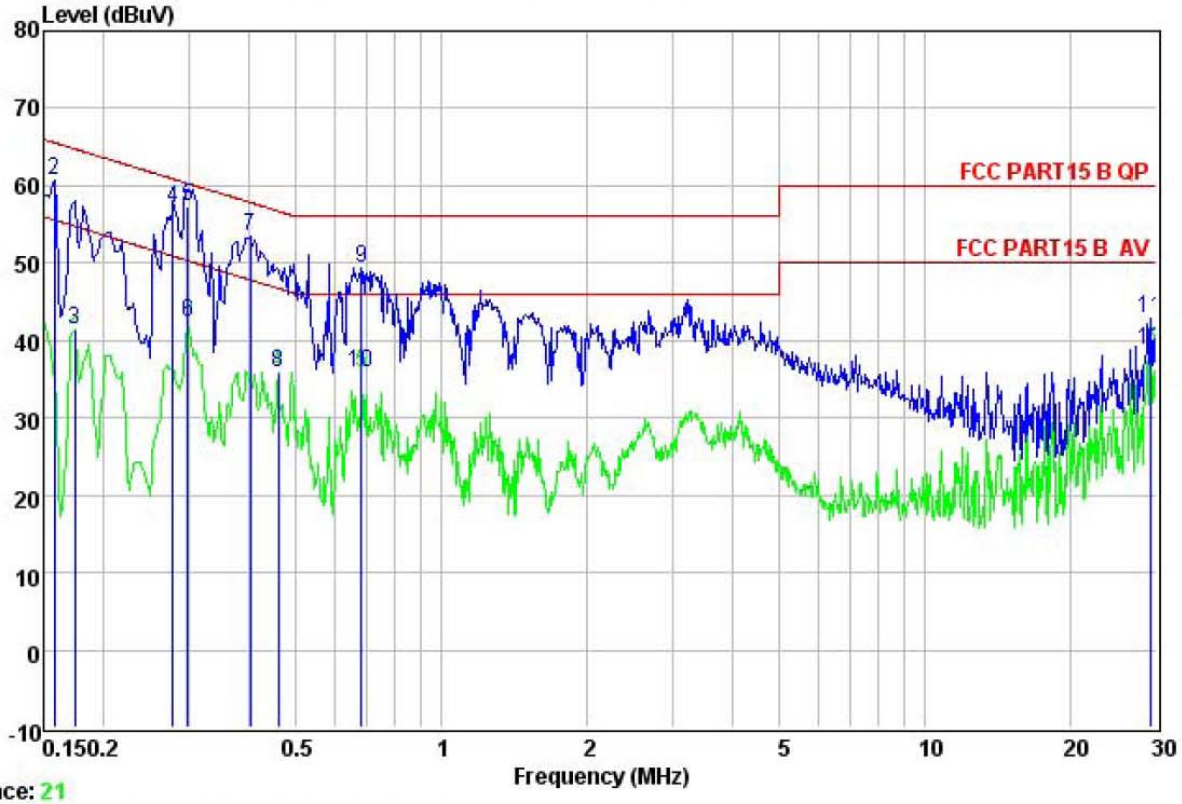
7.1 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107
Test Method:	ANSI C63.4:2003
Test Frequency Range:	150kHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9kHz, VBW=30kHz
Limit:	<table><tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBμV)</td></tr><tr><td>Quasi-peak</td><td>Average</td></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>0.5-30</td><td>60</td><td>50</td></tr></table>
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. 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). 3. 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.
Test environment:	Temp.: 23 °C Humid.: 56% Press.: 1 01kPa
Measurement Record:	Uncertainty: 3.28dB
Test Instruments:	Refer to section 6 for details
Test mode:	Pre-scan all test mode in the section 5.3, and found the bleow mode which it is worse case mode.
Test results:	Pass

Measurement data:

APC Button

Line:

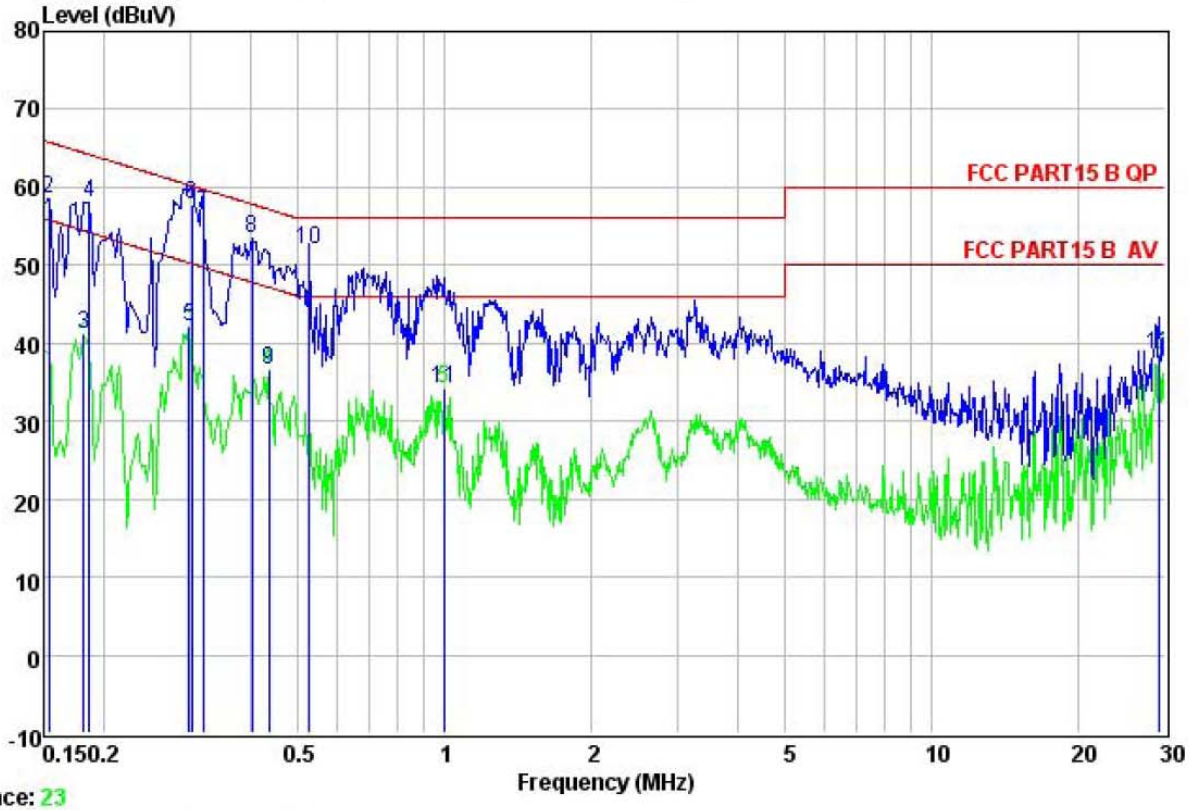


Trace: 21

Site : CCIS Conducted Test Site
Condition : FCC PART15 B QP LISN LINE
Job. no : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button
Test Mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 ℃ Huni:56% Atmos:101KPa
Test Engineer: Winner

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	31.64	10.25	0.79	42.68	56.00	-13.32	Average
2	0.158	49.65	10.24	0.79	60.68	65.56	-4.88	QP
3	0.174	30.42	10.23	0.77	41.42	54.77	-13.35	Average
4	0.277	46.20	10.25	0.74	57.19	60.90	-3.71	QP
5	0.299	46.40	10.26	0.74	57.40	60.28	-2.88	QP
6	0.299	31.41	10.26	0.74	42.41	50.28	-7.87	Average
7	0.402	42.51	10.28	0.72	53.51	57.81	-4.30	QP
8	0.459	24.85	10.27	0.75	35.87	46.71	-10.84	Average
9	0.683	38.36	10.19	0.77	49.32	56.00	-6.68	QP
10	0.683	24.91	10.19	0.77	35.87	46.00	-10.13	Average
11	29.216	31.25	10.84	0.87	42.96	60.00	-17.04	QP
12	29.216	26.95	10.84	0.87	38.66	50.00	-11.34	Average

Neutral:



Site : CCIS Conducted Test Site
Condition : FCC PART15 B QP LISN NEUTRAL
Job. no : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button
Test Mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 ℃ Huni:56% Atmos:101KPa
Test Engineer: Winner

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	28.13	10.27	0.79	39.19	56.00	-16.81	Average
2	0.154	47.57	10.27	0.79	58.63	65.78	-7.15	QP
3	0.182	30.03	10.24	0.77	41.04	54.42	-13.38	Average
4	0.186	47.07	10.24	0.76	58.07	64.20	-6.13	QP
5	0.299	31.14	10.24	0.74	42.12	50.28	-8.16	Average
6	0.302	46.80	10.24	0.74	57.78	60.19	-2.41	QP
7	0.318	45.60	10.24	0.74	56.58	59.75	-3.17	QP
8	0.402	42.38	10.26	0.72	53.36	57.81	-4.45	QP
9	0.435	25.59	10.27	0.73	36.59	47.15	-10.56	Average
10	0.527	40.90	10.26	0.76	51.92	56.00	-4.08	QP
11	0.994	23.13	10.20	0.87	34.20	46.00	-11.80	Average
12	29.216	26.88	10.83	0.87	38.58	50.00	-11.42	Average

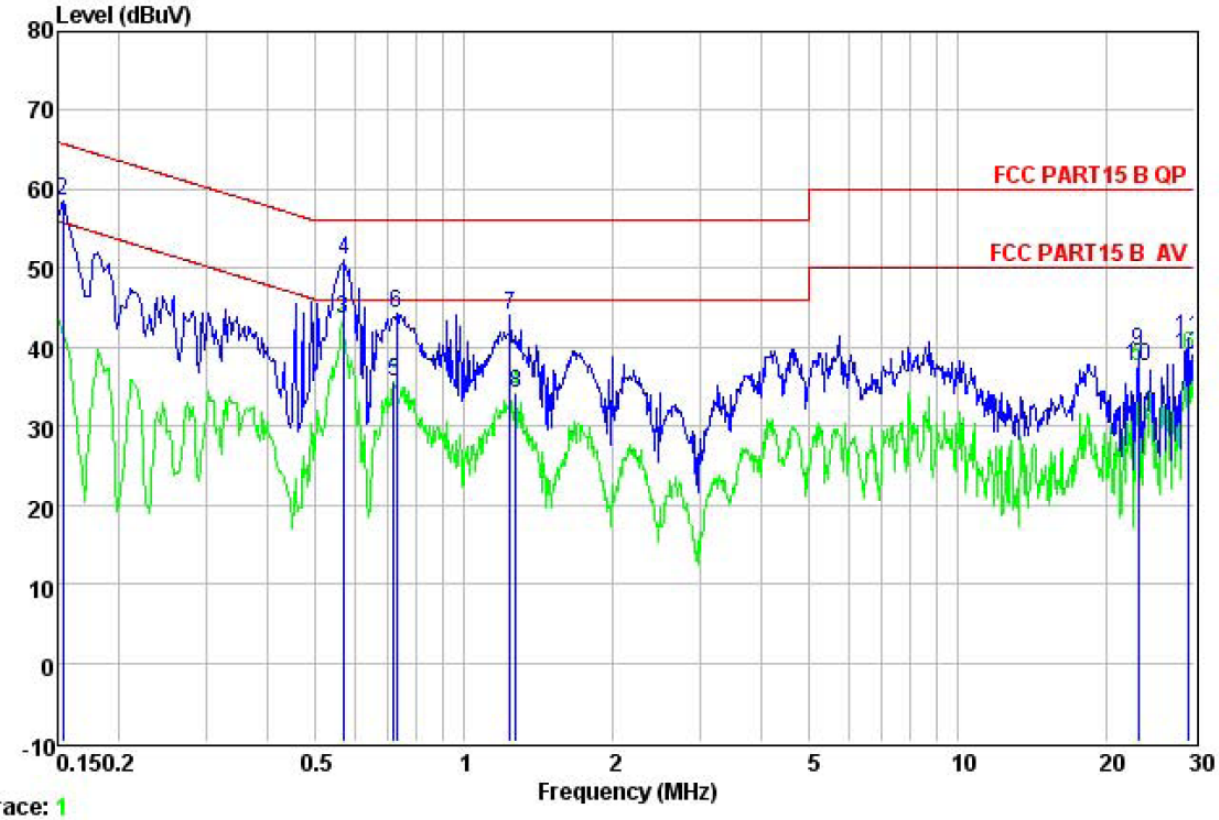
Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

APC Button AF

Line:

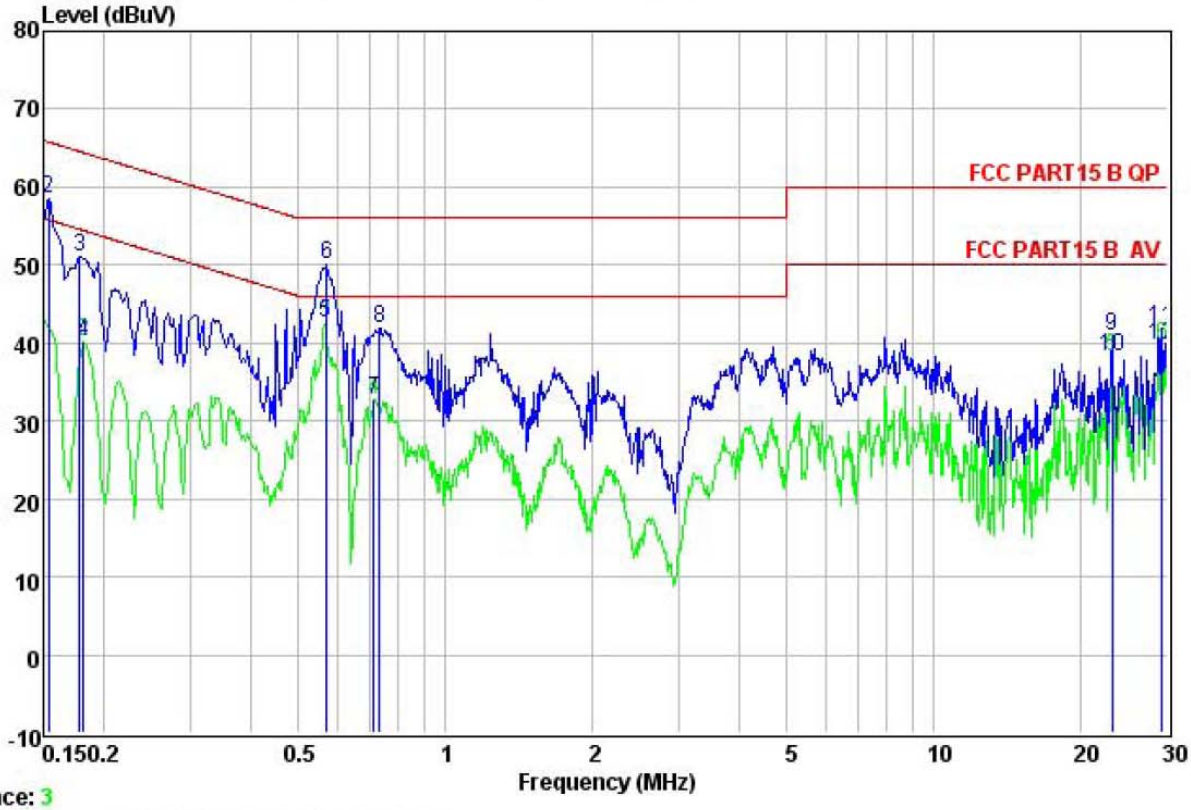


Trace: 1

Site : CCIS Conducted Test Site
Condition : FCC PART15 B QP LISN LINE
Job. no : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button AF
Test Mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 'C Huni:56% Atmos:101KPa
Test Engineer: Winner

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	32.59	10.25	0.79	43.63	56.00	-12.37	Average
2	0.154	47.37	10.25	0.79	58.41	65.78	-7.37	QP
3	0.567	32.46	10.24	0.76	43.46	46.00	-2.54	Average
4	0.570	40.13	10.24	0.76	51.13	56.00	-4.87	QP
5	0.720	24.73	10.18	0.77	35.68	46.00	-10.32	Average
6	0.727	33.29	10.18	0.78	44.25	56.00	-11.75	QP
7	1.236	33.22	10.23	0.69	44.14	56.00	-11.86	QP
8	1.269	23.25	10.23	0.66	34.14	46.00	-11.86	Average
9	23.140	28.21	10.47	0.89	39.57	60.00	-20.43	QP
10	23.140	26.06	10.47	0.89	37.42	50.00	-12.58	Average
11	29.216	29.36	10.84	0.87	41.07	60.00	-18.93	QP
12	29.216	27.37	10.84	0.87	39.08	50.00	-10.92	Average

Neutral:



Trace: 3

Site : CCIS Conducted Test Site
Condition : FCC PART15 B QP LISN NEUTRAL
Job. no : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button AF
Test Mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 'C Huni:56% Atmos:101KPa
Test Engineer: Winner

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	31.90	10.27	0.79	42.96	56.00	-13.04	Average
2	0.154	47.56	10.27	0.79	58.62	65.78	-7.16	QP
3	0.178	40.04	10.25	0.77	51.06	64.59	-13.53	QP
4	0.182	29.30	10.24	0.77	40.31	54.42	-14.11	Average
5	0.567	31.61	10.23	0.76	42.60	46.00	-3.40	Average
6	0.570	39.14	10.23	0.76	50.13	56.00	-5.87	QP
7	0.712	21.86	10.16	0.77	32.79	46.00	-13.21	Average
8	0.731	30.94	10.16	0.78	41.88	56.00	-14.12	QP
9	23.140	29.51	10.48	0.89	40.88	60.00	-19.12	QP
10	23.140	27.01	10.48	0.89	38.38	50.00	-11.62	Average
11	29.216	30.08	10.83	0.87	41.78	60.00	-18.22	QP
12	29.216	28.00	10.83	0.87	39.70	50.00	-10.30	Average

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

7.2 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109
Test Method:	ANSI C63.4:2003
Test Frequency Range:	30MHz to 6000MHz
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver setup:

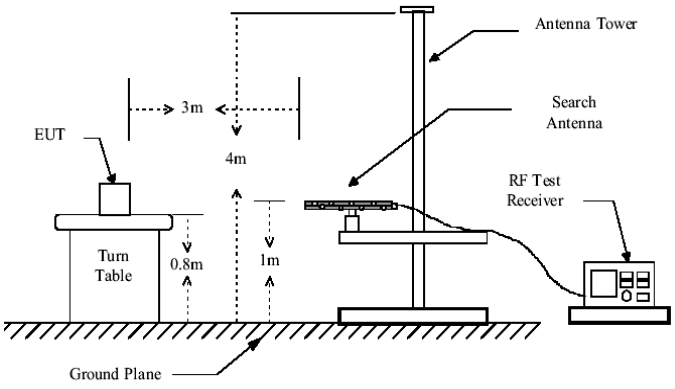
Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
Above 1GHz	Peak	1MHz	3MHz	Peak Value
	Peak	1MHz	10Hz	Average Value

Limit:

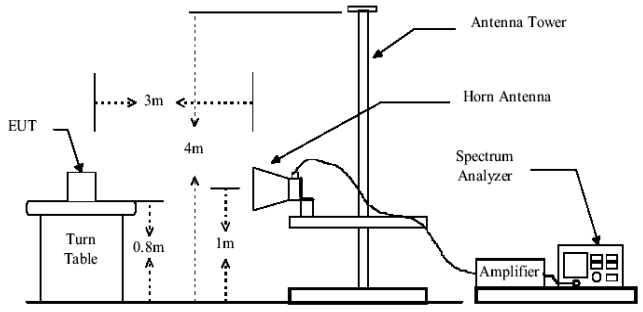
Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Test setup:

Below 1GHz



Above 1GHz



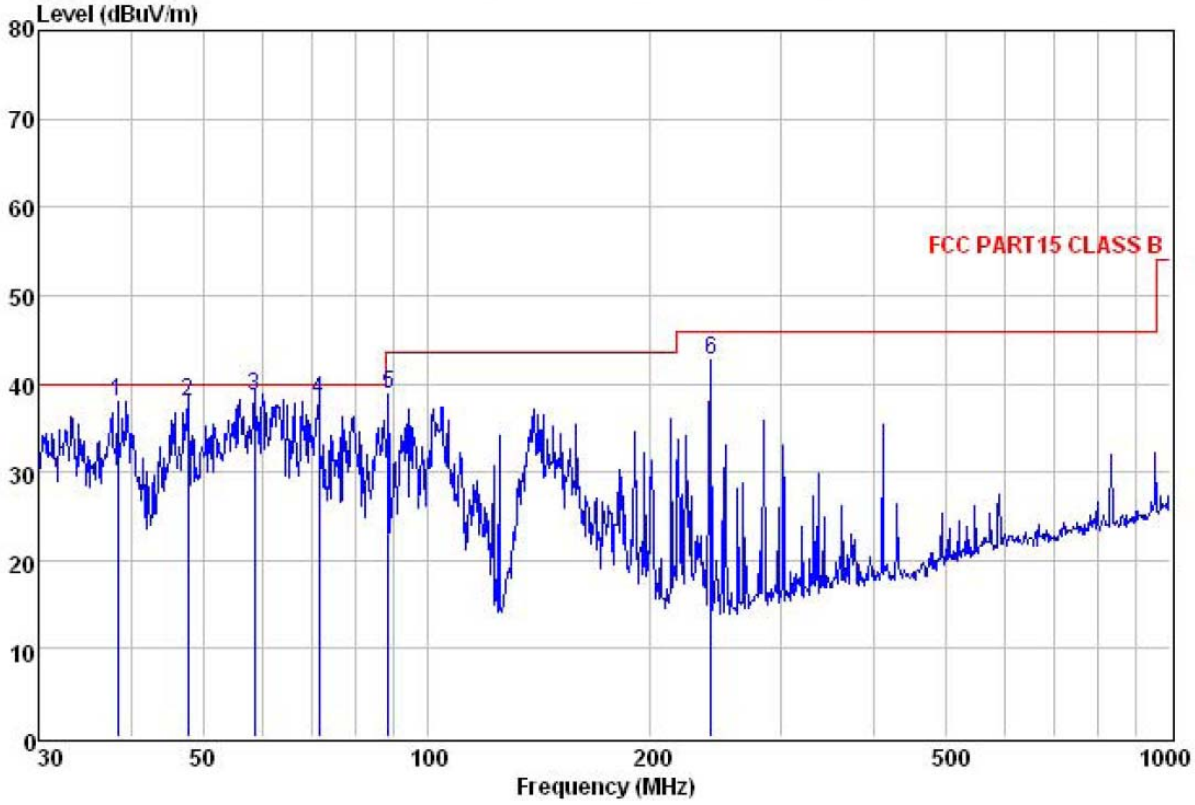
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Measurement Record:	Uncertainty: 4.88dB
Test Instruments:	Refer to section 6 for details
Test mode:	Pre-scan all test mode in the section 5.3, and found the bleow mode which it is worse case mode.
Test results:	Passed

Measurement Data

APC Button

Below 1GHz

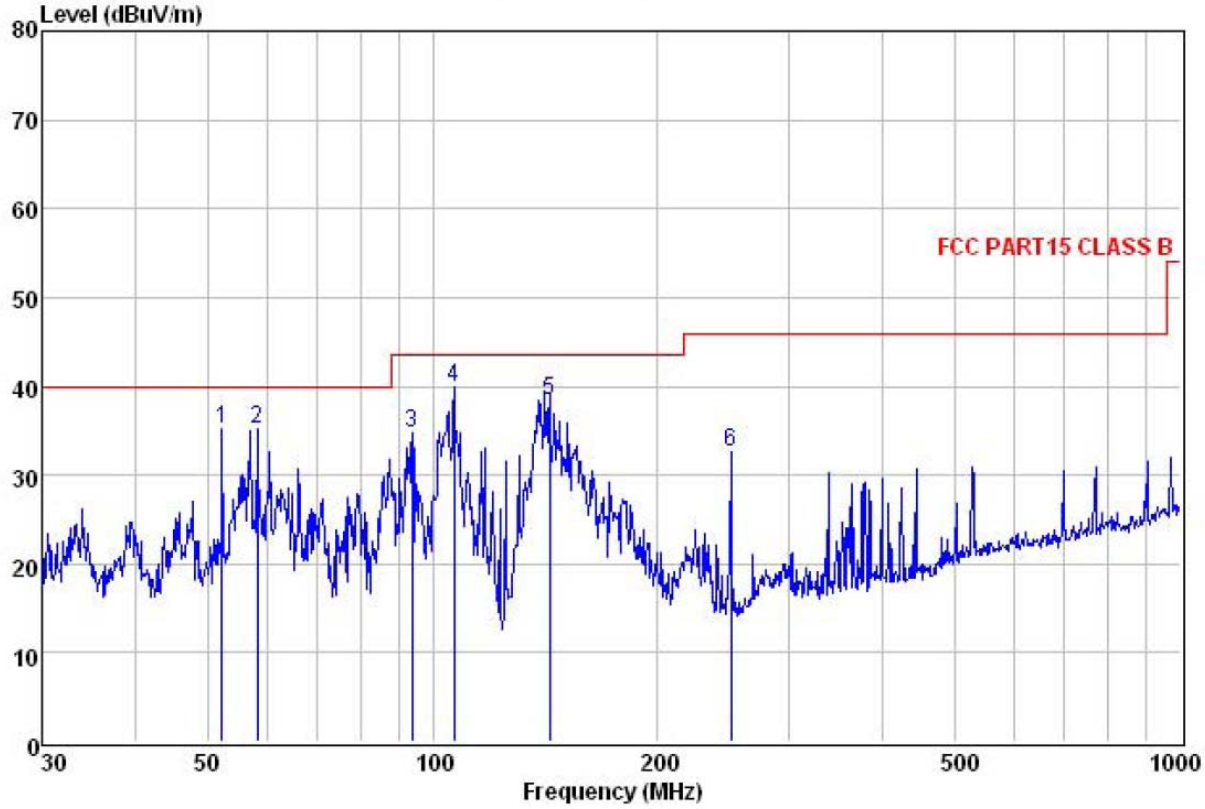
Vertical:



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) VERTICAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25°C Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	38.346	50.73	13.15	1.18	27.10	37.96	40.00	-2.04	QP
2	47.659	51.28	13.39	1.27	28.06	37.88	40.00	-2.12	QP
3	58.613	53.43	12.79	1.37	29.09	38.50	40.00	-1.50	QP
4	71.581	58.47	8.39	1.56	30.14	38.28	40.00	-1.72	QP
5	88.652	55.51	11.47	2.00	30.08	38.90	43.50	-4.60	QP
6	240.830	57.50	12.09	2.82	29.64	42.77	46.00	-3.23	QP

Horizontal:

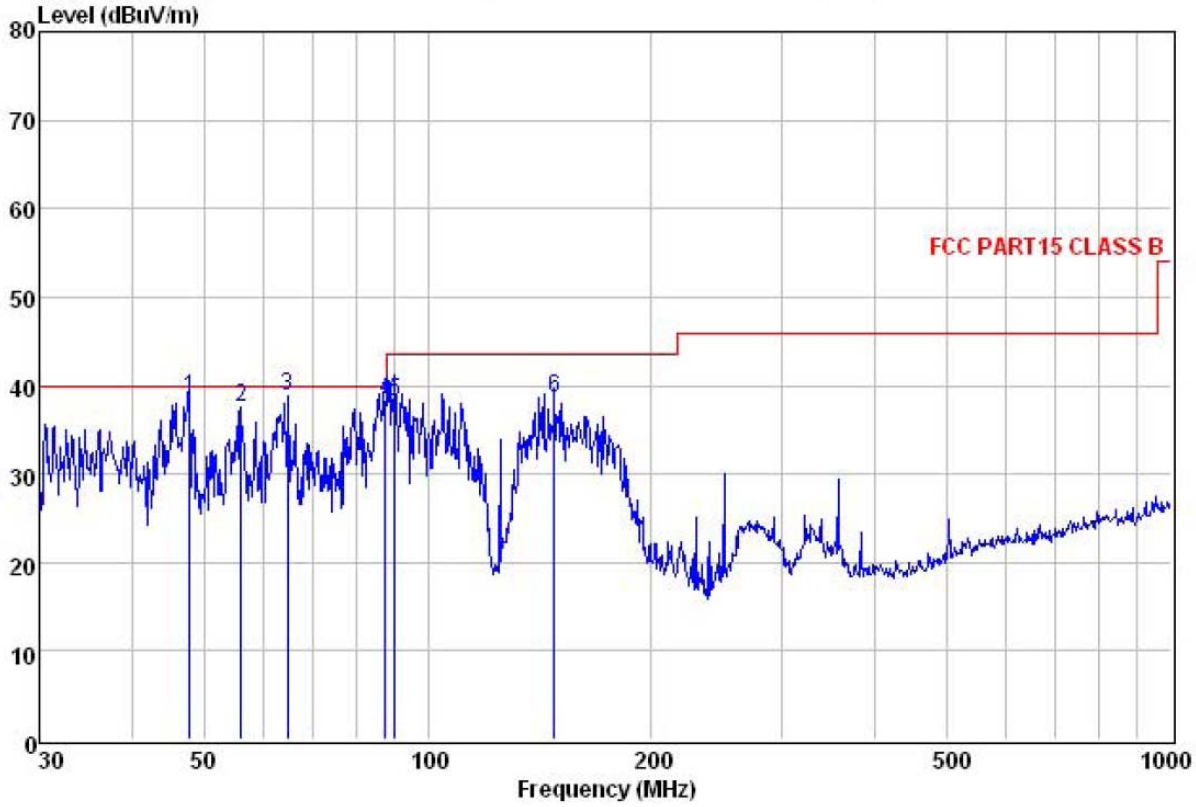


Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) HORIZONTAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25℃ Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	52.208	49.28	13.16	1.29	28.50	35.23	40.00	-4.77	QP
2	58.203	50.03	12.81	1.37	29.05	35.16	40.00	-4.84	QP
3	93.768	50.14	12.58	2.02	30.08	34.66	43.50	-8.84	QP
4	106.759	55.31	12.54	2.02	29.95	39.92	43.50	-3.58	QP
5	143.326	57.00	8.22	2.44	29.33	38.33	43.50	-5.17	QP
6	250.301	47.23	12.07	2.81	29.60	32.51	46.00	-13.49	QP

APC Button AF

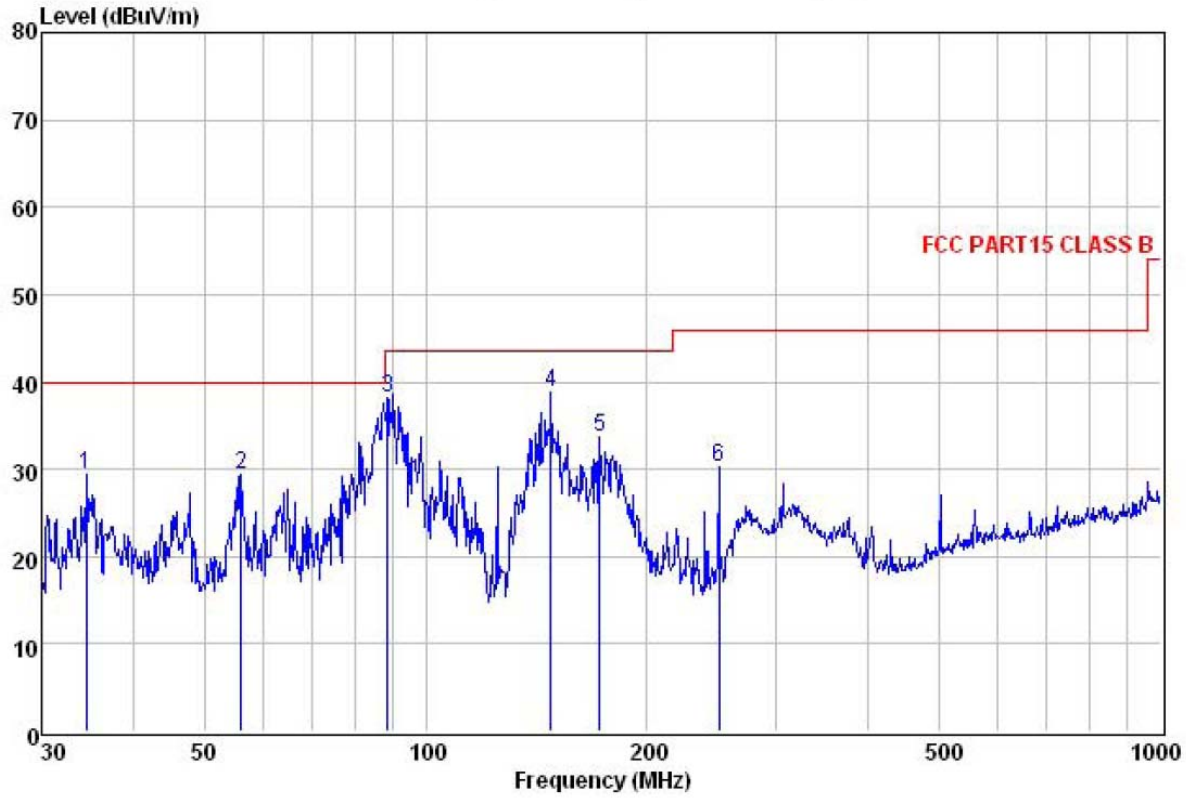
Vertical:



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) VERTICAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button AF
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25°C Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	47.826	52.10	13.38	1.27	28.08	38.67	40.00	-1.33	QP
2	56.001	52.01	12.97	1.36	28.85	37.49	40.00	-2.51	QP
3	64.659	56.16	10.84	1.38	29.66	38.72	40.00	-1.28	QP
4	87.725	55.43	11.18	1.96	30.08	38.49	40.00	-1.51	QP
5	90.220	54.15	11.99	2.03	30.07	38.10	43.50	-5.40	QP
6	147.921	57.20	8.24	2.50	29.26	38.68	43.50	-4.82	QP

Horizontal:



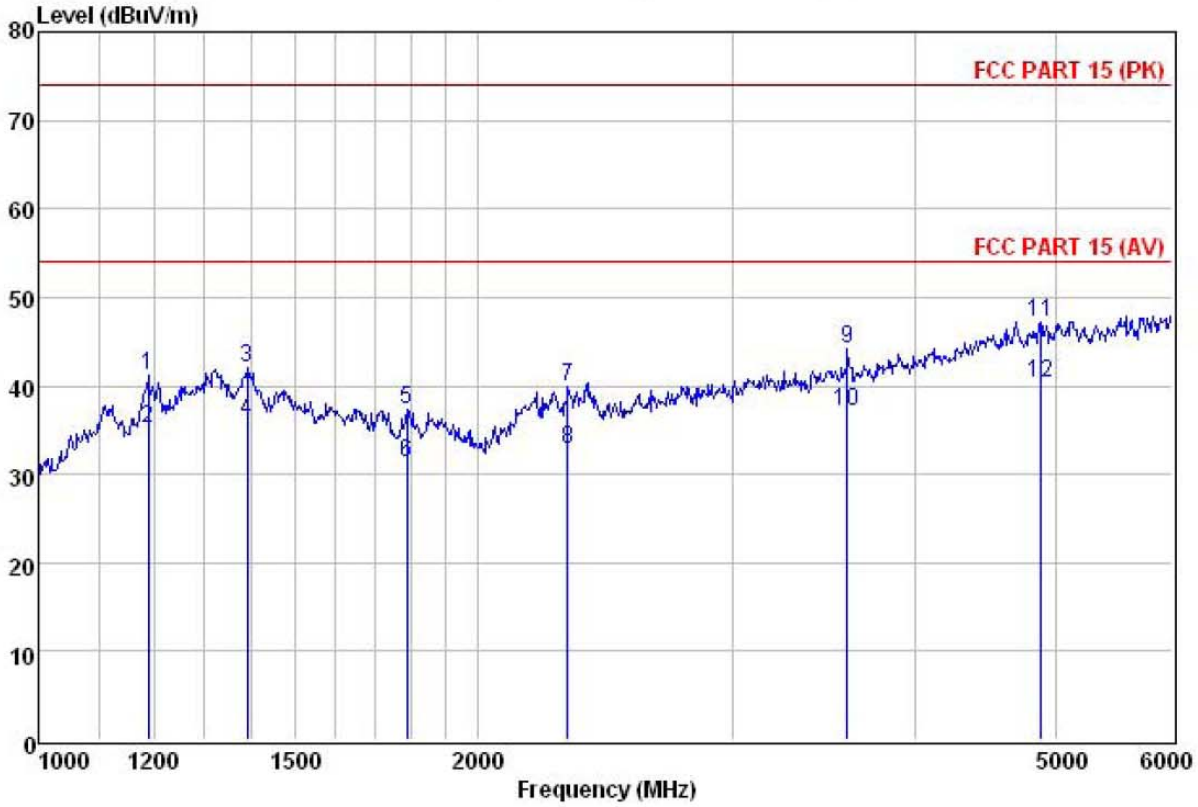
Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) HORIZONTAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button AF
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25'C Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	34.517	42.71	12.30	1.04	26.75	29.30	40.00	-10.70	QP
2	56.001	43.85	12.97	1.36	28.85	29.33	40.00	-10.67	QP
3	88.652	54.88	11.47	2.00	30.08	38.27	43.50	-5.23	QP
4	147.921	57.26	8.24	2.50	29.26	38.74	43.50	-4.76	QP
5	172.599	50.04	9.16	2.68	28.17	33.71	43.50	-9.79	QP
6	250.301	44.95	12.07	2.81	29.60	30.23	46.00	-15.77	QP

APC Button

Above 1GHz

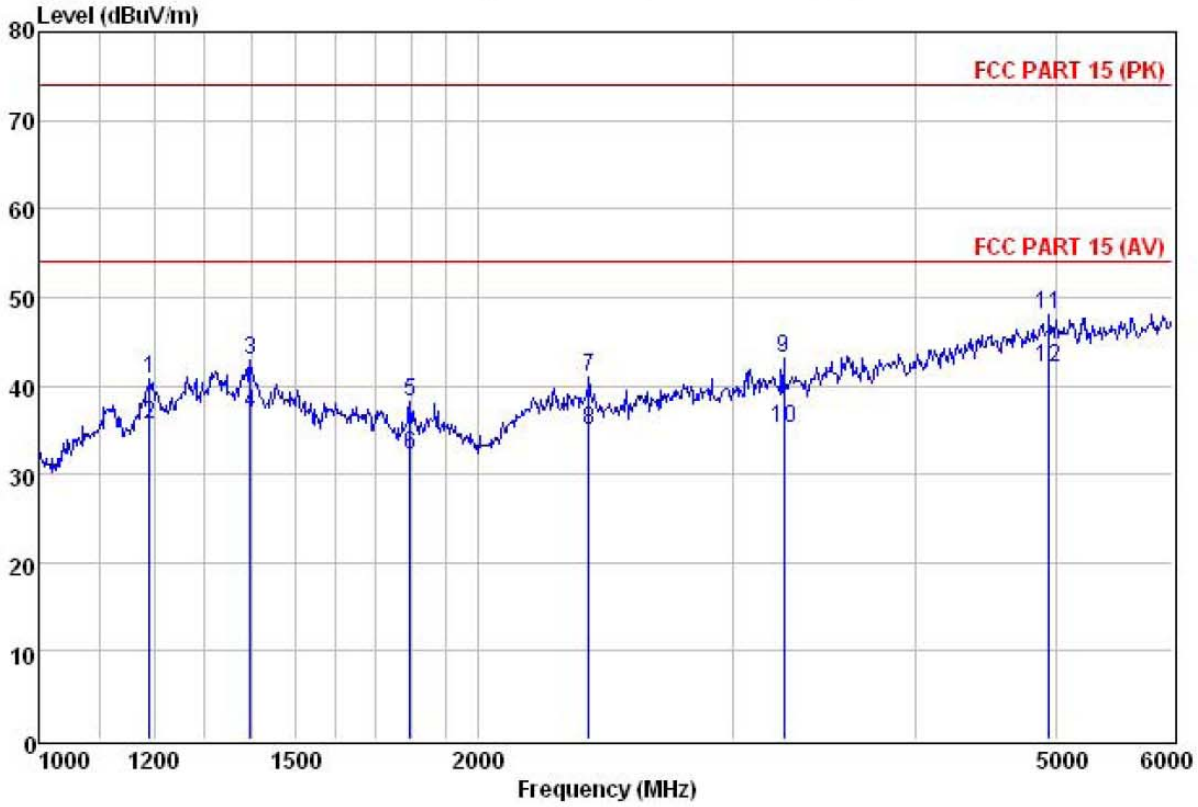
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(>1GHZ) HORIZONTAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25°C Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1189.557	32.44	24.88	2.59	18.65	41.26	74.00	-32.74	Peak
2	1189.557	26.44	24.88	2.59	18.65	35.26	54.00	-18.74	Average
3	1390.389	35.01	25.50	2.87	21.39	41.99	74.00	-32.01	Peak
4	1390.389	29.01	25.50	2.87	21.39	35.99	54.00	-18.01	Average
5	1790.088	37.72	25.27	3.31	28.98	37.32	74.00	-36.68	Peak
6	1790.088	31.72	25.27	3.31	28.98	31.32	54.00	-22.68	Average
7	2309.758	38.42	27.98	3.75	30.33	39.82	74.00	-34.18	Peak
8	2309.758	31.42	27.98	3.75	30.33	32.82	54.00	-21.18	Average
9	3592.271	37.82	29.16	4.95	27.75	44.18	74.00	-29.82	Peak
10	3592.271	30.82	29.16	4.95	27.75	37.18	54.00	-16.82	Average
11	4875.384	33.77	31.57	5.91	24.01	47.24	74.00	-26.76	Peak
12	4875.384	26.77	31.57	5.91	24.01	40.24	54.00	-13.76	Average

Vertical:

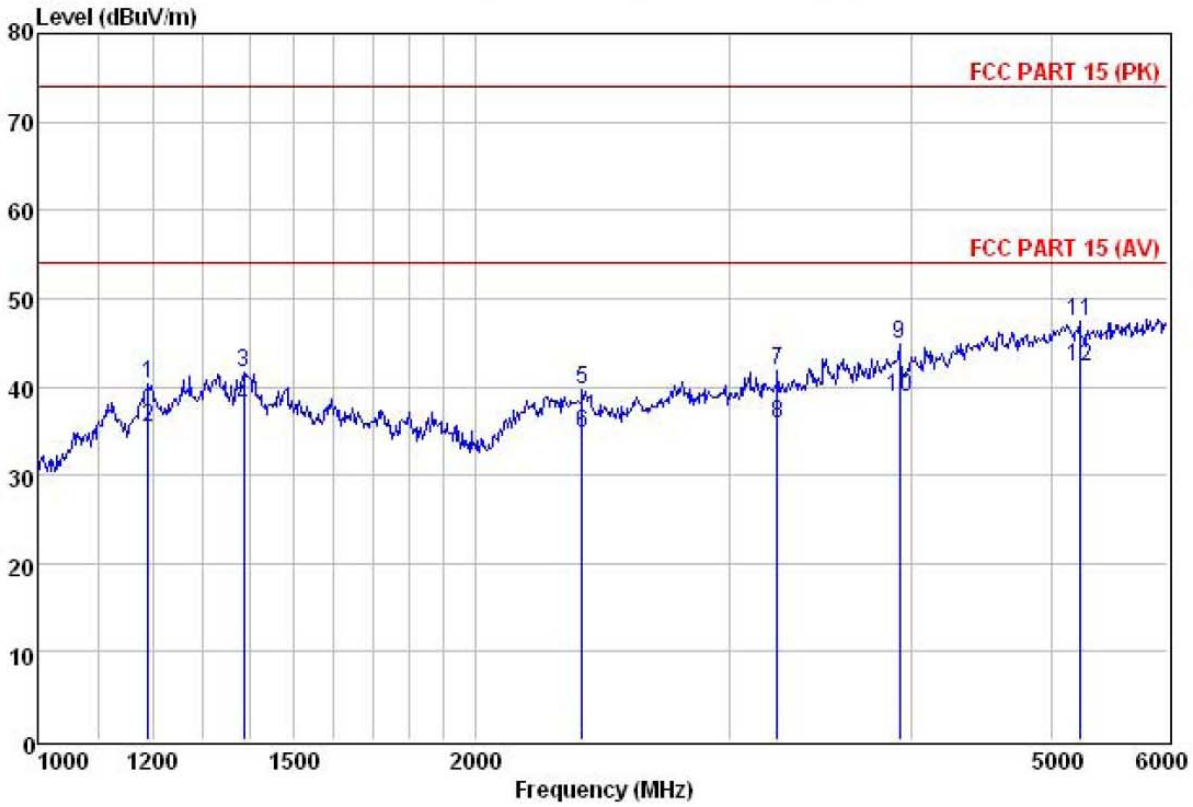


Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(>1GHZ) VERTICAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25'C Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1192.173	31.83	24.88	2.59	18.65	40.65	74.00	-33.35	Peak
2	1192.173	26.83	24.88	2.59	18.65	35.65	54.00	-18.35	Average
3	1396.513	35.98	25.40	2.87	21.39	42.86	74.00	-31.14	Peak
4	1396.513	29.98	25.40	2.87	21.39	36.86	54.00	-17.14	Average
5	1797.971	38.86	25.27	3.31	29.20	38.24	74.00	-35.76	Peak
6	1797.971	32.86	25.27	3.31	29.20	32.24	54.00	-21.76	Average
7	2387.152	39.62	27.58	3.81	30.10	40.91	74.00	-33.09	Peak
8	2387.152	33.62	27.58	3.81	30.10	34.91	54.00	-19.09	Average
9	3246.938	38.90	28.54	4.62	28.91	43.15	74.00	-30.85	Peak
10	3246.938	30.90	28.54	4.62	28.91	35.15	54.00	-18.85	Average
11	4940.083	34.30	31.64	5.95	23.94	47.95	74.00	-26.05	Peak
12	4940.083	28.30	31.64	5.95	23.94	41.95	54.00	-12.05	Average

APC Button AF

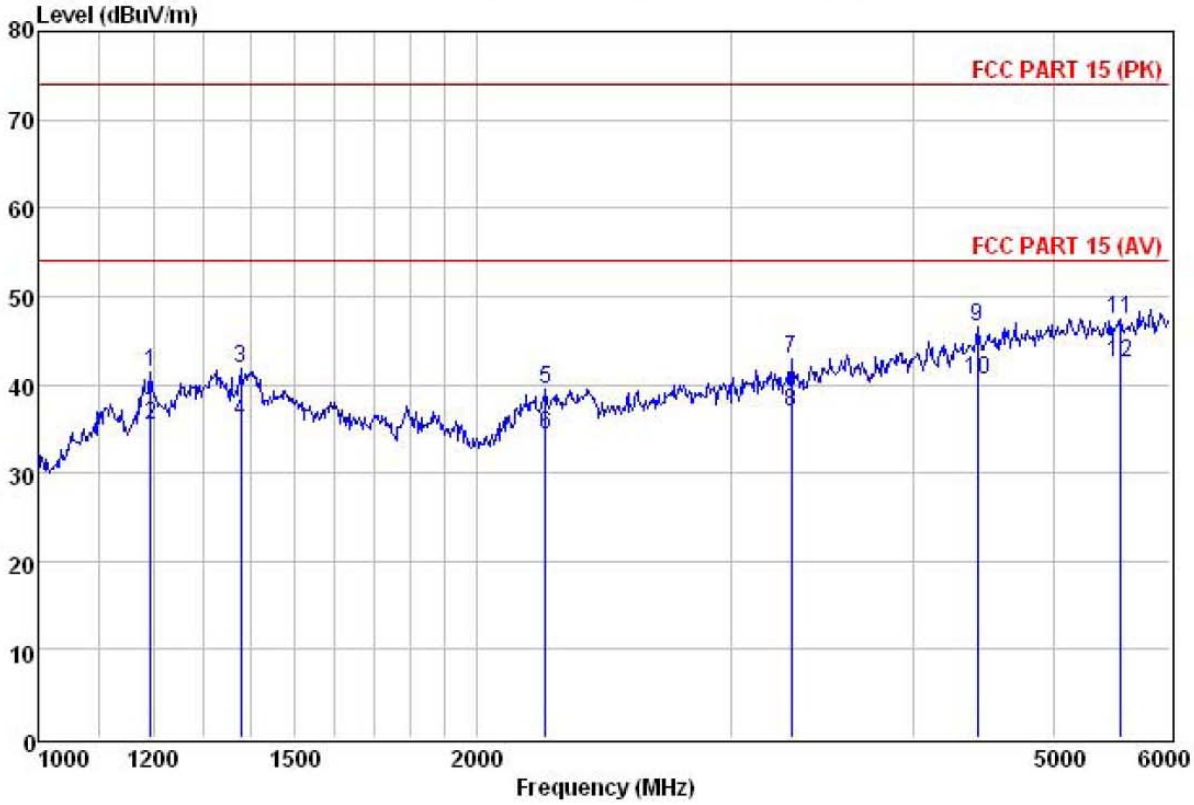
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(>1GHZ) HORIZONTAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button AF
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25℃ Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1192.173	31.60	24.88	2.59	18.65	40.42	74.00	-33.58	Peak
2	1192.173	26.60	24.88	2.59	18.65	35.42	54.00	-18.58	Average
3	1387.338	34.68	25.50	2.86	21.39	41.65	74.00	-32.35	Peak
4	1387.338	30.68	25.50	2.86	21.39	37.65	54.00	-16.35	Average
5	2371.468	38.40	27.65	3.80	30.15	39.70	74.00	-34.30	Peak
6	2371.468	33.40	27.65	3.80	30.15	34.70	54.00	-19.30	Average
7	3232.701	37.53	28.62	4.62	29.00	41.77	74.00	-32.23	Peak
8	3232.701	31.53	28.62	4.62	29.00	35.77	54.00	-18.23	Average
9	3922.282	36.73	29.77	5.23	26.83	44.90	74.00	-29.10	Peak
10	3922.282	30.73	29.77	5.23	26.83	38.90	54.00	-15.10	Average
11	5219.037	33.24	31.83	6.12	23.86	47.33	74.00	-26.67	Peak
12	5219.037	28.24	31.83	6.12	23.86	42.33	54.00	-11.67	Average

Vertical:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(>1GHZ) VERTICAL
Job No. : 303RF
EUT : Broadband Digital Transmission System
Model : APC Button AF
Test mode : Data transmission mode
Power Rating : AC 120V/60Hz
Environment : Temp:25°C Huni:55% Atmos:101Kpa
Test Engineer: Winner

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1194.796	32.47	24.88	2.59	18.65	41.29	74.00	-32.71	Peak
2	1194.796	26.47	24.88	2.59	18.65	35.29	54.00	-18.71	Average
3	1378.223	34.51	25.50	2.84	21.12	41.73	74.00	-32.27	Peak
4	1378.223	28.51	25.50	2.84	21.12	35.73	54.00	-18.27	Average
5	2234.873	38.27	28.00	3.69	30.55	39.41	74.00	-34.59	Peak
6	2234.873	33.27	28.00	3.69	30.55	34.41	54.00	-19.59	Average
7	3297.264	38.45	28.35	4.66	28.61	42.85	74.00	-31.15	Peak
8	3297.264	32.45	28.35	4.66	28.61	36.85	54.00	-17.15	Average
9	4426.110	35.06	30.60	5.62	24.72	46.56	74.00	-27.44	Peak
10	4426.110	29.06	30.60	5.62	24.72	40.56	54.00	-13.44	Average
11	5550.207	32.84	32.09	6.31	23.81	47.43	74.00	-26.57	Peak
12	5550.207	27.84	32.09	6.31	23.81	42.43	54.00	-11.57	Average

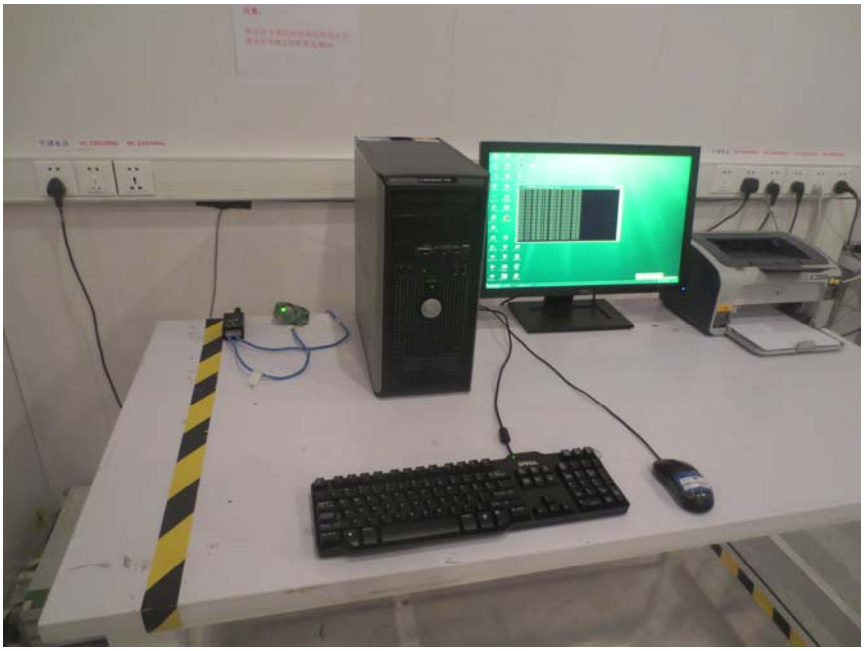
8 Test Setup Photo

APC Button

Radiated Emission - Below 1GHz

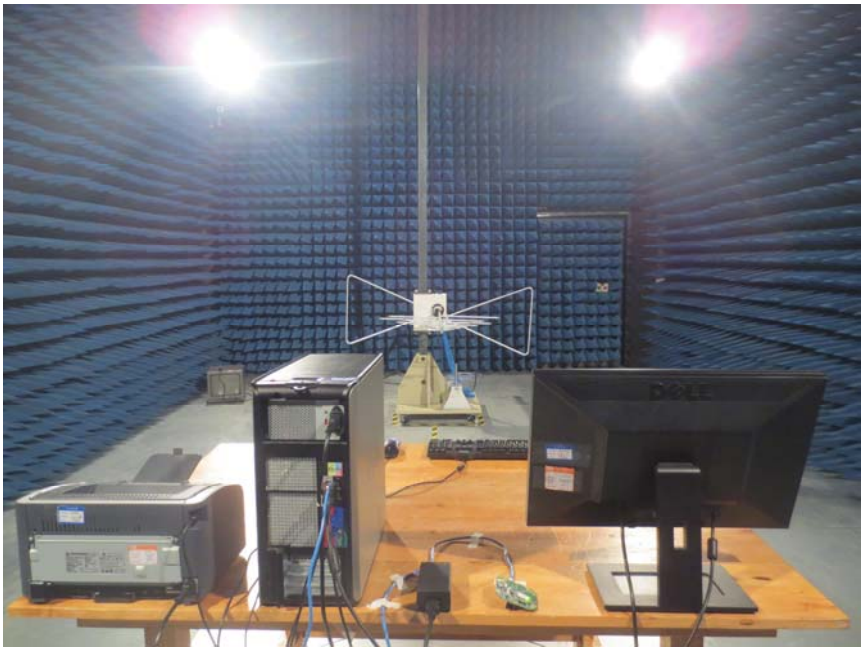
Above 1GHz

Conducted Emission



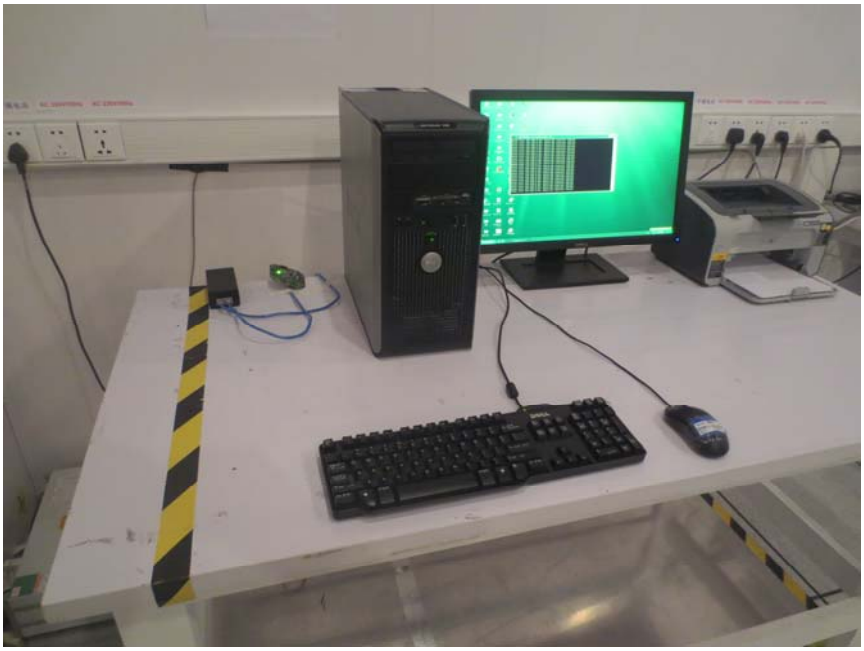
APC Button AF

Radiated Emission - Below 1GHz



Above 1GHz

Conducted Emission



9 EUT Constructional Details

Reference to the test report No. CCIS12120030301

------End of report------