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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C
REQUIREMENT T

OF

21.5" Android Commercial Tablet

MODEL No.: PD215T8-SC

Trademark: N/A

FCC ID: 2AFI3- PD215T8

REPORT NO: ES150626381E2

ISSUE DATE: August 07, 2015

Prepared for

NINGBO PLUS AND POPSCREENS ELECTRONIC TECHNOLOGY CO., LTD.

#7 HONGDA ROAD, HONG TANG INDUSTRIAL ZONE A, JIANGBEI DISTRICT,
NINGBO, ZHEJIANG PROVINCE, CHINA

Prepared by

SHENZHEN EMTEK CO., LTD

Bldg 69, Majialong Industry Zone, Nanshan District,
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VERIFICATION OF COMPLIANCE

Applicant	:	NINGBO PLUS AND POPSCREENS ELECTRONIC TECHNOLOGY CO., LTD. #7 Hongda Road, Hong Tang Industrial Zone A, Jiangbei District, Ningbo, Zhejiang Province, China
Manufacturer	:	NINGBO PLUS AND POPSCREENS ELECTRONIC TECHNOLOGY CO., LTD. #7 Hongda Road, Hong Tang Industrial Zone A, Jiangbei District, Ningbo, Zhejiang Province, China
Product Description	:	21.5" Android Commercial Tablet
Brand Name	:	N/A
Model Number	:	PD215T8-SC
File Number	:	ES150626381E2
Date of Test:	:	July 06, 2015 to July 22, 2015

We hereby certify that:

The above equipment was tested by SHENZHEN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10-2015 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247.

The test results of this report relate only to the tested sample identified in this report.

Date of Test : July 06, 2015 to July 22, 2015

Prepared by : Jack Li/Editor

Reviewer : Joe Xia/Supervisor

Approve & Authorized Signer : Lisa Wang/Manager

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 Product Description

The NINGBO PLUS AND POPSCREENS ELECTRONIC TECHNOLOGY CO., LTD., Model: PD215T8-SC (referred to as the EUT in this report) The EUT is an short range, lower power transmitter. It is designed by way of utilizing the following modulation achieves the system operating.

A). Operation Frequency: 2402-2480MHz
B). Modulation: GFSK
C). Number of Channel: 40
D). Channel space: 2MHz
E). Measured RF Output Power: -6.59dBm (0.22mW)
F). Antenna Type: Dipole antenna
F). Antenna GAIN: 2 dBi
H). ower Supply: INPUT AC 100-240V, 50/60Hz 1.7A
OUTPUT 12V,5A

Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454		

Note:
1. Test of channel was included the lowest 2402MHz, middle 2442MHz and highest frequency 2480MHz in highest data rate and to perform the test, then record on this report.

1.2 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.10-2013. Radiated testing was performed at an antenna to EUT distance 3 meters.

Tested in accordance with FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02 for compliance to FCC 47CFR 15.247 requirements.

1.3 Special Accessories

Not available for this EUT intended for grant.

1.4 Equipment Modifications

Not available for this EUT intended for grant.

1.5 Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2013.10.29
The certificate is valid until 2016.10.28
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2006(identical to ISO/IEC17025: 2005)
The Certificate Registration Number is L2291

Accredited by TUV Rheinland Shenzhen 2010.5.25
The Laboratory has been assessed according to the requirements ISO/IEC 17025

Accredited by FCC, April 17, 2014
The Certificate Registration Number is 406365.

Accredited by Industry Canada, March 5, 2010
The Certificate Registration Number is 4480A-2.

Name of Firm : SHENZHEN EMTEK CO., LTD

Site Location : Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous transmission application.

2.2 EUT Exercise

The Transmitter was operated in the transmission operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

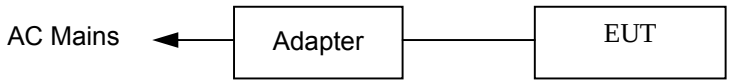
2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this LED lamp (EUT) was rotated through three orthogonal axes according to the requirements in section 6.4, section 6.5 and section 6.6 of ANSI C63.10-2013

2.4 Configuration of Tested System



2.5 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	21.5" Android Commercial Tablet	N/A	PD215T8-SC	2AFI3- PD215T8	N/A	EUT
\	\	\	\	\	\	\

Note:

1. Unless otherwise denoted as EUT in『Remark』column, device(s) used in tested system is a support equipment.

3. Description of Test Modes

The EUT has been tested under its typical operating condition. Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting. Only the worst case data were reported.

The EUT has been associated with peripherals pursuant to ANSI C63.10-2013 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

For Radiated: The EUT's antenna was pre-tested under the following modes:

Test Mode	Description
Mode A	X-Y axis
Mode B	Y-Z axis
Mode C	X-Z axis

From the above modes, the worst case was found in Mode A. Therefore only the test data of the mode was recorded in this report.

The details of test channels and bandwidth were for RF conductive measurement.

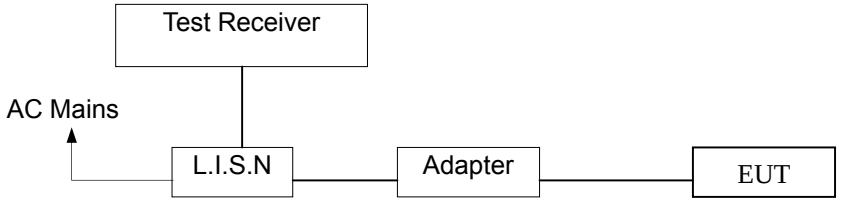
1. For lowest channel : 2402MHz(Channel 00)
2. For middle channel : 2440MHz(Channel 19)
3. For highest channel: 2480MHz(Channel 39)

4. Conducted Emissions Test

4.1 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the three highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

4.2 Test SET-UP (Block Diagram of Configuration)



4.3 Measurement Equipment Used

Conducted Emission Test Site					
Equipment Type	**MFR**	**Model Number**	**Serial Number**	**Last Cal.**	**Cal due.**
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/16/2015	05/15/2016
L.I.S.N.	Rohde & Schwarz	ENV216	101161	05/16/2015	05/15/2016
L.I.S.N.	Schwarzbeck	NNLK8129	8129203	05/17/2015	05/15/2016
50Ω Coaxial Switch	Anritsu	MP59B	M20531	N/A	N/A
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	05/17/2015	05/15/2016

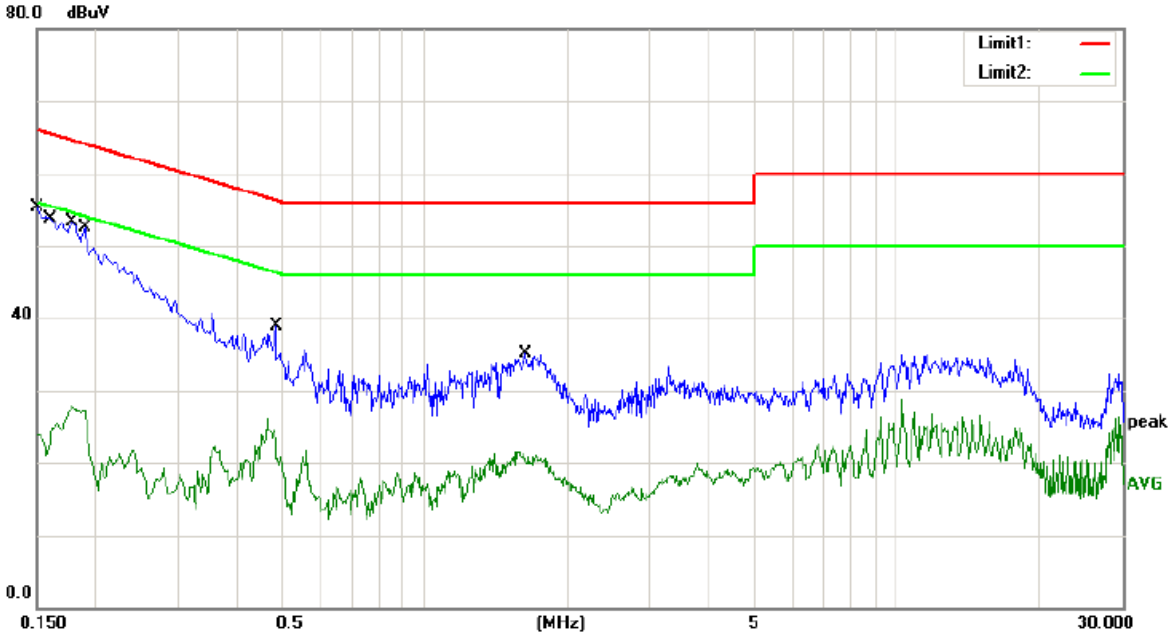
4.4 Conducted Emission Limit

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0
NOTE1-The lower limit shall apply at the transition frequencies. NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

4.5 Measurement Result

Pass.
Please refer to the following data.

RJ45-ETHO



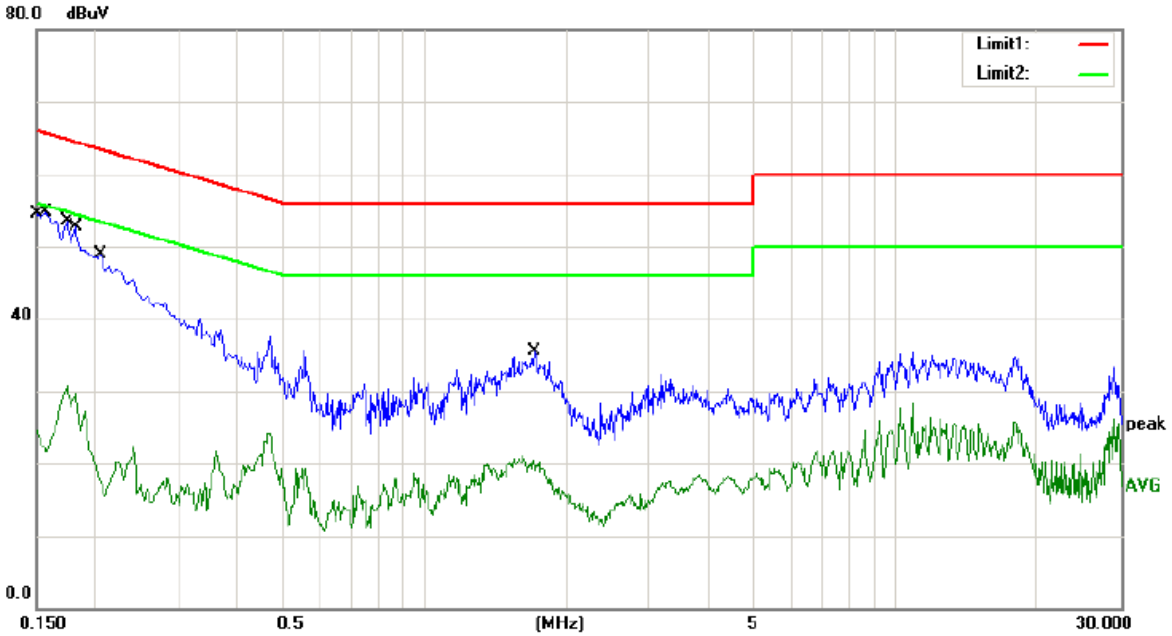
Site site #1 Phase: *L1* Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	36.80	11.00	47.80	66.00	-18.20	QP	
2		0.1500	12.50	11.00	23.50	56.00	-32.50	AVG	
3		0.1620	35.60	11.00	46.60	65.36	-18.76	QP	
4		0.1620	13.90	11.00	24.90	55.36	-30.46	AVG	
5	*	0.1780	38.50	11.00	49.50	64.58	-15.08	QP	
6		0.1780	18.20	11.00	29.20	54.58	-25.38	AVG	
7		0.1900	33.70	11.00	44.70	64.04	-19.34	QP	
8		0.1900	12.60	11.00	23.60	54.04	-30.44	AVG	
9		0.4820	21.90	11.00	32.90	56.30	-23.40	QP	
10		0.4820	11.20	11.00	22.20	46.30	-24.10	AVG	
11		1.6300	19.10	11.00	30.10	56.00	-25.90	QP	
12		1.6300	9.60	11.00	20.60	46.00	-25.40	AVG	



Site site #1 Phase: N Temperature: 22

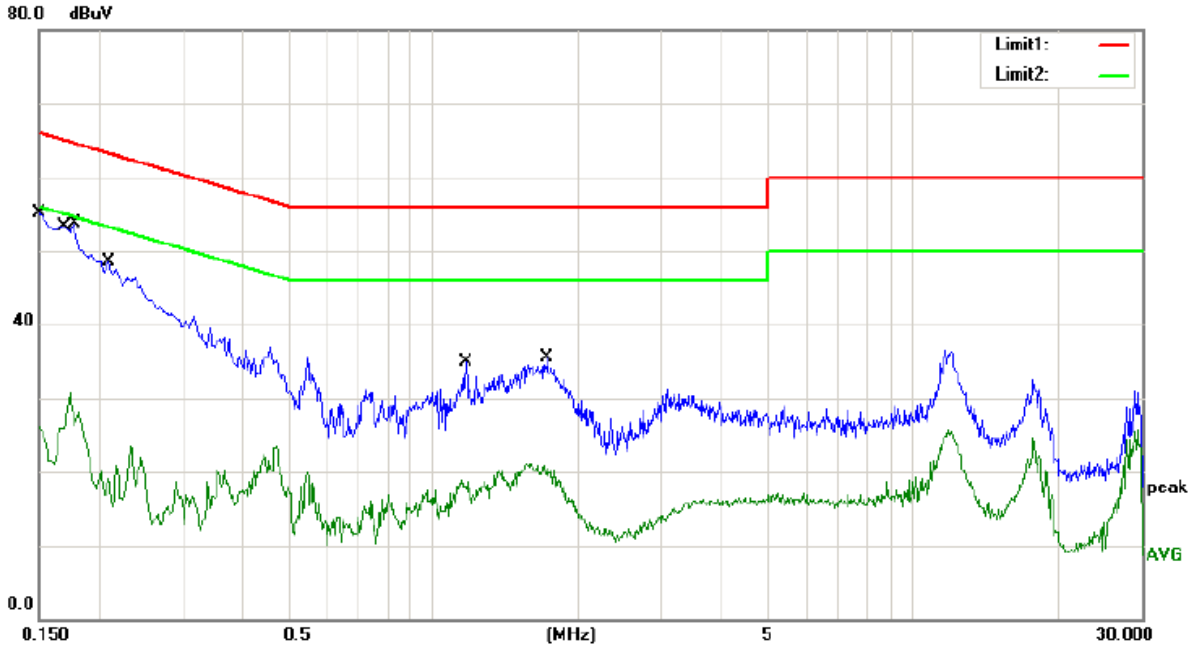
Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	36.70	11.00	47.70	66.00	-18.30	QP	
2		0.1500	13.70	11.00	24.70	56.00	-31.30	AVG	
3		0.1580	35.70	11.00	46.70	65.57	-18.87	QP	
4		0.1580	10.70	11.00	21.70	55.57	-33.87	AVG	
5	*	0.1740	36.00	11.00	47.00	64.77	-17.77	QP	
6		0.1740	19.00	11.00	30.00	54.77	-24.77	AVG	
7		0.1820	35.30	11.00	46.30	64.39	-18.09	QP	
8		0.1820	18.00	11.00	29.00	54.39	-25.39	AVG	
9		0.2060	29.40	11.00	40.40	63.37	-22.97	QP	
10		0.2060	6.20	11.00	17.20	53.37	-36.17	AVG	
11		1.7100	19.10	11.00	30.10	56.00	-25.90	QP	
12		1.7100	8.10	11.00	19.10	46.00	-26.90	AVG	

HDMI Output



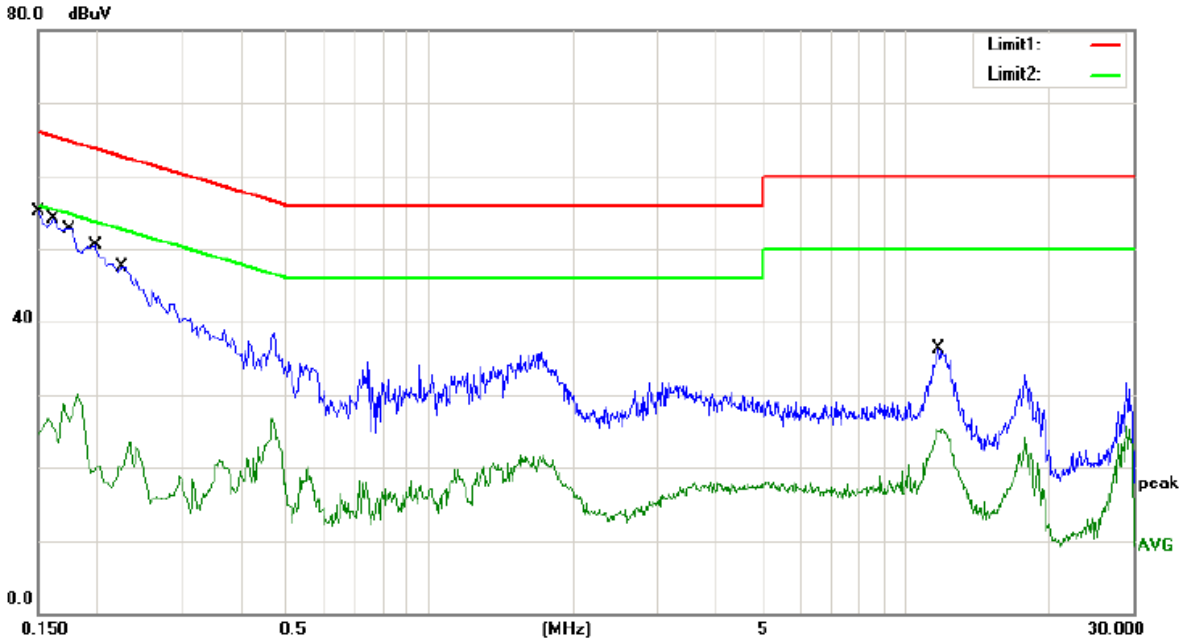
Site site #1 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	36.80	11.00	47.80	66.00	-18.20	QP	
2		0.1500	15.00	11.00	26.00	56.00	-30.00	AVG	
3		0.1700	35.70	11.00	46.70	64.96	-18.26	QP	
4		0.1700	14.90	11.00	25.90	54.96	-29.06	AVG	
5	*	0.1780	36.10	11.00	47.10	64.58	-17.48	QP	
6		0.1780	16.00	11.00	27.00	54.58	-27.58	AVG	
7		0.2100	29.20	11.00	40.20	63.21	-23.01	QP	
8		0.2100	8.00	11.00	19.00	53.21	-34.21	AVG	
9		1.1700	16.70	11.00	27.70	56.00	-28.30	QP	
10		1.1700	6.60	11.00	17.60	46.00	-28.40	AVG	
11		1.7340	18.70	11.00	29.70	56.00	-26.30	QP	
12		1.7340	9.40	11.00	20.40	46.00	-25.60	AVG	



Site site #1 Phase: *L1* Temperature: 22

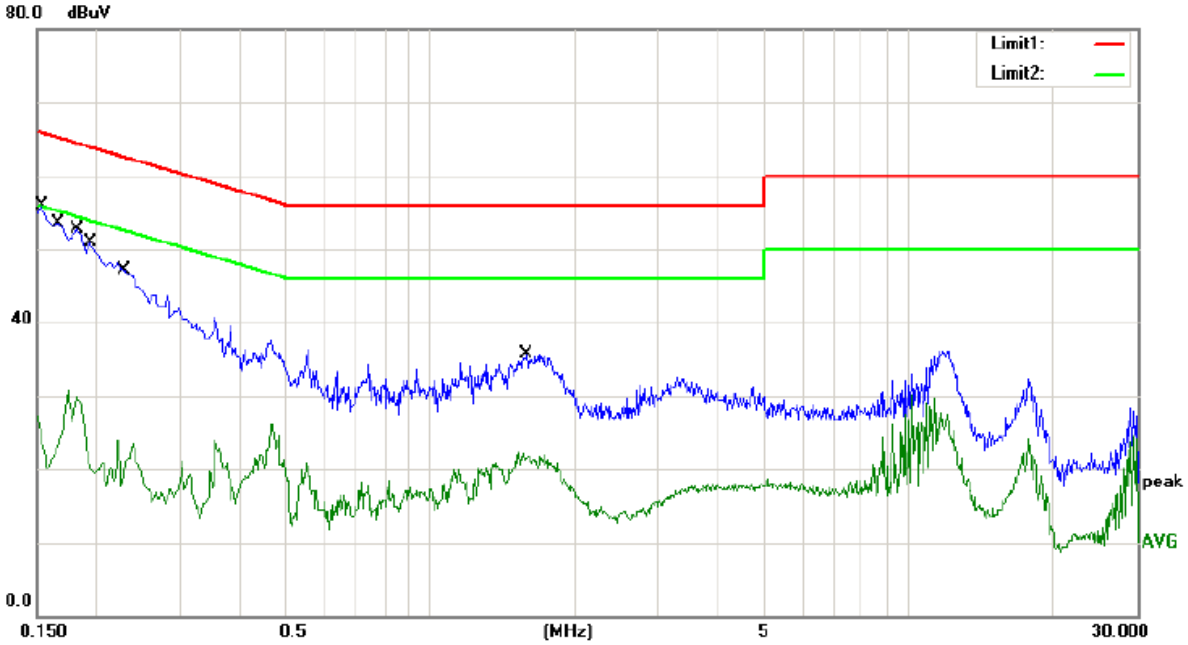
Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	37.00	11.00	48.00	66.00	-18.00	QP	
2		0.1500	13.70	11.00	24.70	56.00	-31.30	AVG	
3		0.1620	35.80	11.00	46.80	65.36	-18.56	QP	
4		0.1620	12.20	11.00	23.20	55.36	-32.16	AVG	
5	*	0.1750	36.20	11.00	47.20	64.72	-17.52	QP	
6		0.1750	15.60	11.00	26.60	54.72	-28.12	AVG	
7		0.1980	31.00	11.00	42.00	63.69	-21.69	QP	
8		0.1980	8.50	11.00	19.50	53.69	-34.19	AVG	
9		0.2260	28.40	11.00	39.40	62.60	-23.20	QP	
10		0.2260	8.70	11.00	19.70	52.60	-32.90	AVG	
11		11.6880	19.90	11.00	30.90	60.00	-29.10	QP	
12		11.6880	13.70	11.00	24.70	50.00	-25.30	AVG	

USB Playing



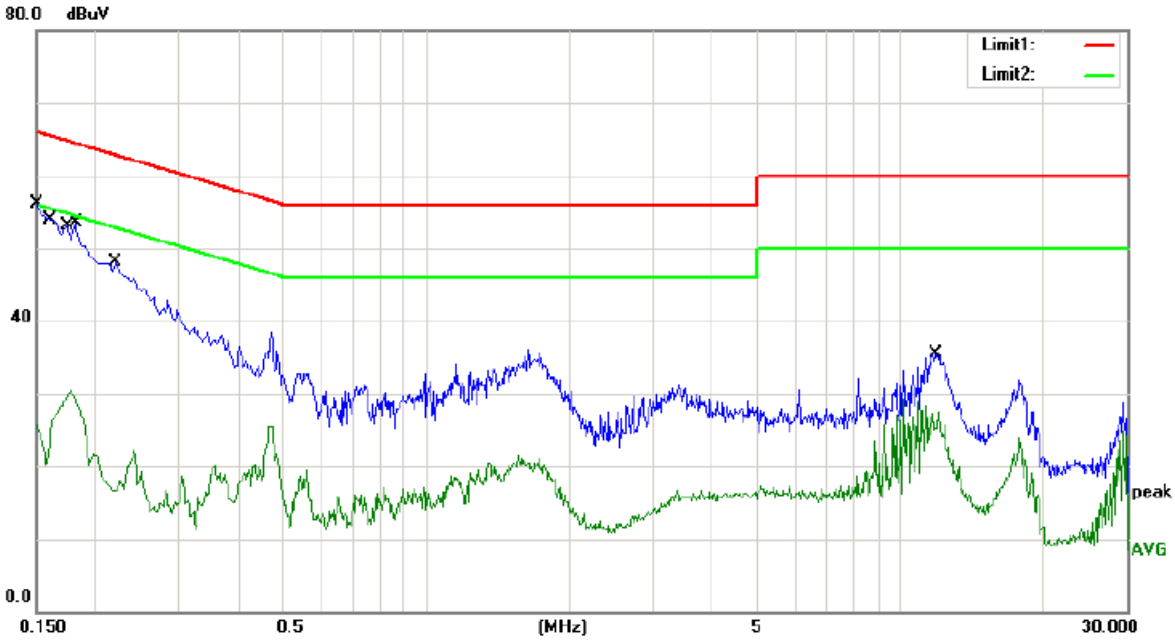
Site site #1 Phase: *L1* Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1540	36.70	11.00	47.70	65.78	-18.08	QP	
2		0.1540	12.90	11.00	23.90	55.78	-31.88	AVG	
3		0.1660	36.30	11.00	47.30	65.16	-17.86	QP	
4		0.1660	12.10	11.00	23.10	55.16	-32.06	AVG	
5	*	0.1820	35.70	11.00	46.70	64.39	-17.69	QP	
6		0.1820	18.70	11.00	29.70	54.39	-24.69	AVG	
7		0.1940	31.90	11.00	42.90	63.86	-20.96	QP	
8		0.1940	9.20	11.00	20.20	53.86	-33.66	AVG	
9		0.2316	28.00	11.00	39.00	62.39	-23.39	QP	
10		0.2316	10.20	11.00	21.20	52.39	-31.19	AVG	
11		1.5900	19.50	11.00	30.50	56.00	-25.50	QP	
12		1.5900	10.40	11.00	21.40	46.00	-24.60	AVG	



Site site #1 Phase: N Temperature: 22

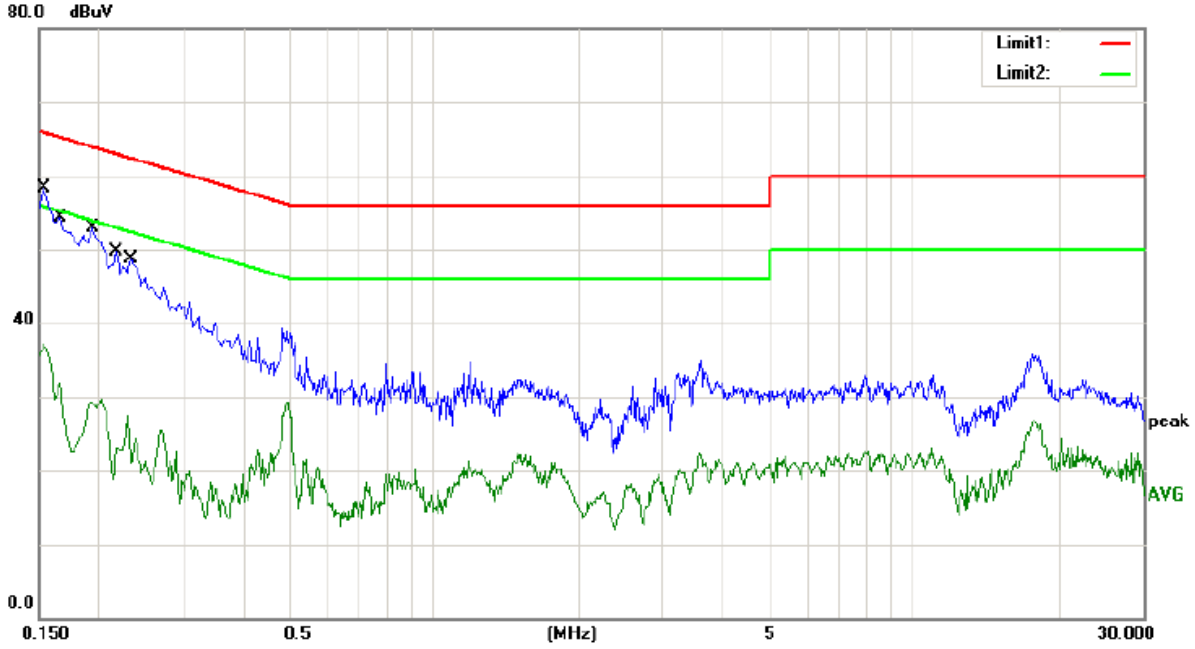
Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	36.70	11.00	47.70	66.00	-18.30	QP	
2		0.1500	14.60	11.00	25.60	56.00	-30.40	AVG	
3		0.1620	35.30	11.00	46.30	65.36	-19.06	QP	
4		0.1620	15.30	11.00	26.30	55.36	-29.06	AVG	
5	*	0.1740	36.00	11.00	47.00	64.77	-17.77	QP	
6		0.1740	16.20	11.00	27.20	54.77	-27.57	AVG	
7		0.1820	35.20	11.00	46.20	64.39	-18.19	QP	
8		0.1820	17.90	11.00	28.90	54.39	-25.49	AVG	
9		0.2220	28.30	11.00	39.30	62.74	-23.44	QP	
10		0.2220	5.70	11.00	16.70	52.74	-36.04	AVG	
11		11.9200	19.40	11.00	30.40	60.00	-29.60	QP	
12		11.9200	14.40	11.00	25.40	50.00	-24.60	AVG	

HDMI OUTPUT



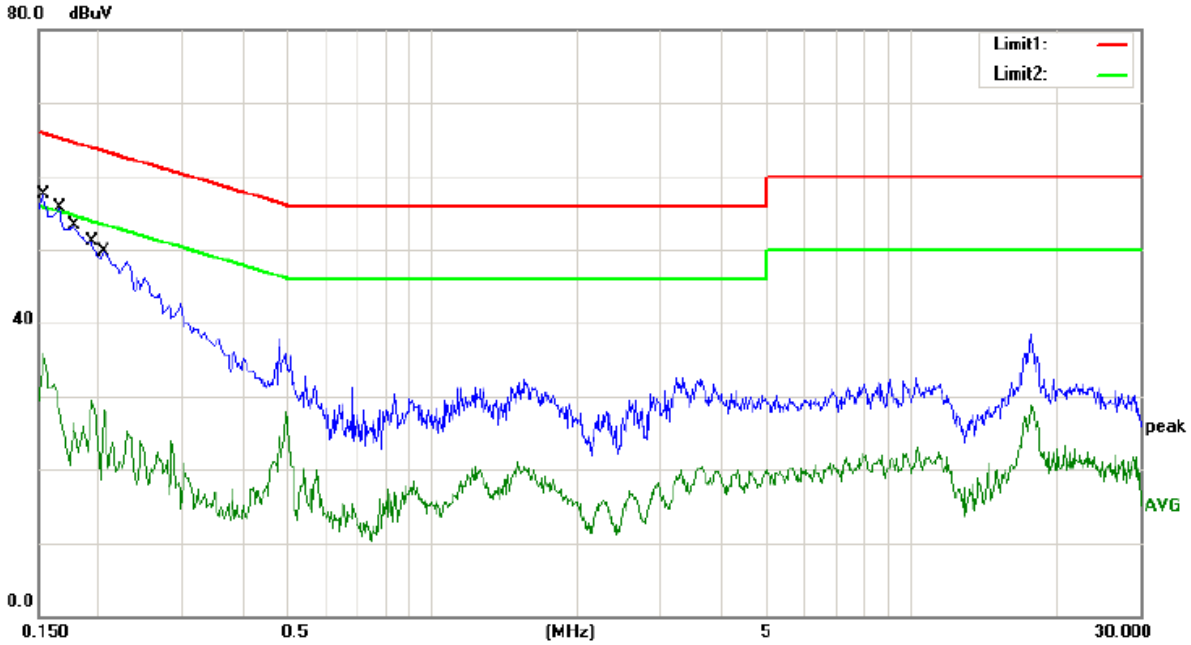
Site site #1 Phase: L1 Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 240V/60Hz Humidity: 44 %

Mode: HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	44.60	11.00	55.60	66.00	-10.40	QP	
2		0.1500	24.60	11.00	35.60	56.00	-20.40	AVG	
3	*	0.1540	47.30	11.00	58.30	65.78	-7.48	QP	
4		0.1540	26.00	11.00	37.00	55.78	-18.78	AVG	
5		0.1660	43.30	11.00	54.30	65.16	-10.86	QP	
6		0.1660	21.00	11.00	32.00	55.16	-23.16	AVG	
7		0.1940	41.90	11.00	52.90	63.86	-10.96	QP	
8		0.1940	18.20	11.00	29.20	53.86	-24.66	AVG	
9		0.2180	38.70	11.00	49.70	62.89	-13.19	QP	
10		0.2180	12.00	11.00	23.00	52.89	-29.89	AVG	
11		0.2340	37.60	11.00	48.60	62.31	-13.71	QP	
12		0.2340	10.10	11.00	21.10	52.31	-31.21	AVG	



Site site #1 Phase: N Temperature: 22

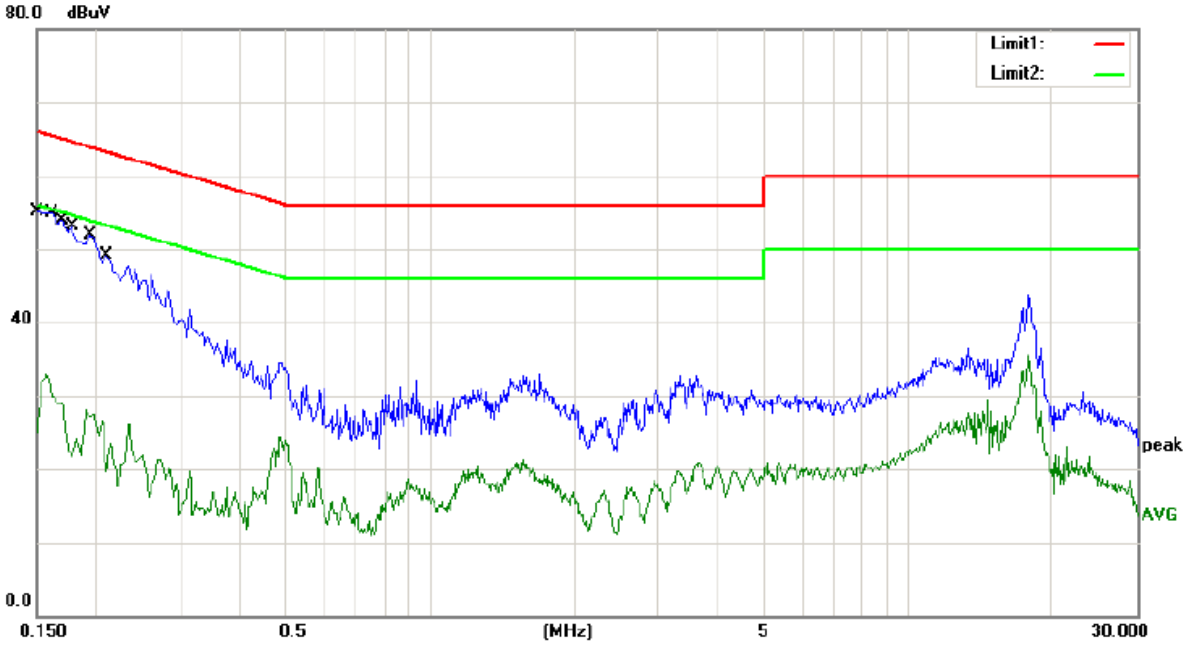
Limit: (CE)FCC PART 15 class B_QP Power: AC 240V/60Hz Humidity: 44 %

Mode: HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	44.60	11.00	55.60	66.00	-10.40	QP	
2		0.1500	18.50	11.00	29.50	56.00	-26.50	AVG	
3	*	0.1540	46.50	11.00	57.50	65.78	-8.28	QP	
4		0.1540	24.70	11.00	35.70	55.78	-20.08	AVG	
5		0.1660	44.70	11.00	55.70	65.16	-9.46	QP	
6		0.1660	16.90	11.00	27.90	55.16	-27.26	AVG	
7		0.1780	42.30	11.00	53.30	64.58	-11.28	QP	
8		0.1780	14.60	11.00	25.60	54.58	-28.98	AVG	
9		0.1940	40.00	11.00	51.00	63.86	-12.86	QP	
10		0.1940	18.30	11.00	29.30	53.86	-24.56	AVG	
11		0.2060	38.60	11.00	49.60	63.37	-13.77	QP	
12		0.2060	17.10	11.00	28.10	53.37	-25.27	AVG	

USB Playing



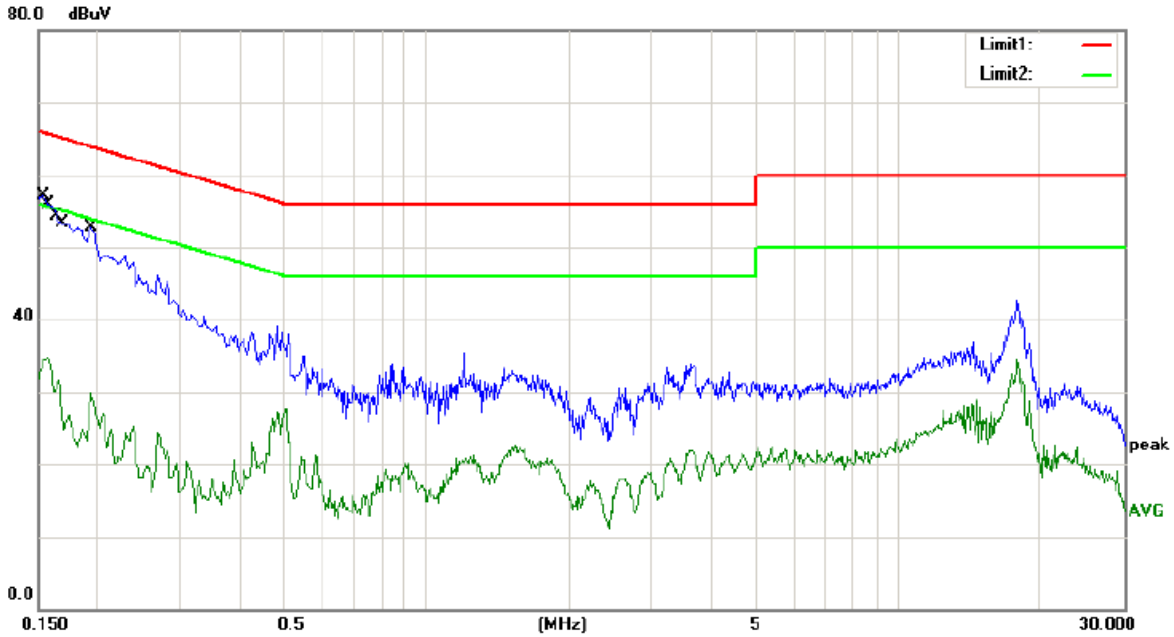
Site site #1 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 240V/60Hz Humidity: 44 %

Mode: USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	44.10	11.00	55.10	66.00	-10.90	QP	
2		0.1500	14.00	11.00	25.00	56.00	-31.00	AVG	
3	*	0.1620	43.90	11.00	54.90	65.36	-10.46	QP	
4		0.1620	18.90	11.00	29.90	55.36	-25.46	AVG	
5		0.1700	42.90	11.00	53.90	64.96	-11.06	QP	
6		0.1700	18.10	11.00	29.10	54.96	-25.86	AVG	
7		0.1780	42.00	11.00	53.00	64.58	-11.58	QP	
8		0.1780	11.00	11.00	22.00	54.58	-32.58	AVG	
9		0.1940	40.90	11.00	51.90	63.86	-11.96	QP	
10		0.1940	16.20	11.00	27.20	53.86	-26.66	AVG	
11		0.2100	38.00	11.00	49.00	63.21	-14.21	QP	
12		0.2100	8.70	11.00	19.70	53.21	-33.51	AVG	



Site site #1 Phase: *L1* Temperature: 22

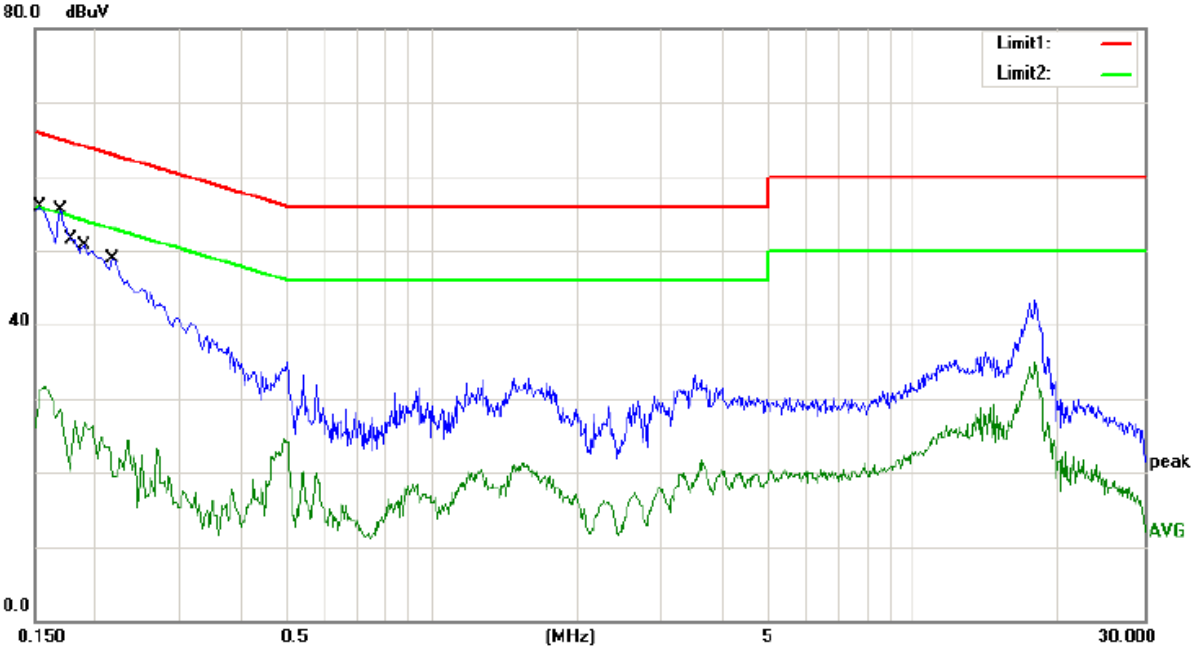
Limit: (CE)FCC PART 15 class B_QP Power: AC 240V/60Hz Humidity: 44 %

Mode: USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	45.70	11.00	56.70	66.00	-9.30	QP	
2		0.1500	20.90	11.00	31.90	56.00	-24.10	AVG	
3	*	0.1540	46.10	11.00	57.10	65.78	-8.68	QP	
4		0.1540	23.40	11.00	34.40	55.78	-21.38	AVG	
5		0.1590	44.70	11.00	55.70	65.52	-9.82	QP	
6		0.1590	22.50	11.00	33.50	55.52	-22.02	AVG	
7		0.1660	42.50	11.00	53.50	65.16	-11.66	QP	
8		0.1660	20.60	11.00	31.60	55.16	-23.56	AVG	
9		0.1720	42.20	11.00	53.20	64.86	-11.66	QP	
10		0.1720	14.90	11.00	25.90	54.86	-28.96	AVG	
11		0.1940	41.60	11.00	52.60	63.86	-11.26	QP	
12		0.1940	18.60	11.00	29.60	53.86	-24.26	AVG	

RJ45-ETHO



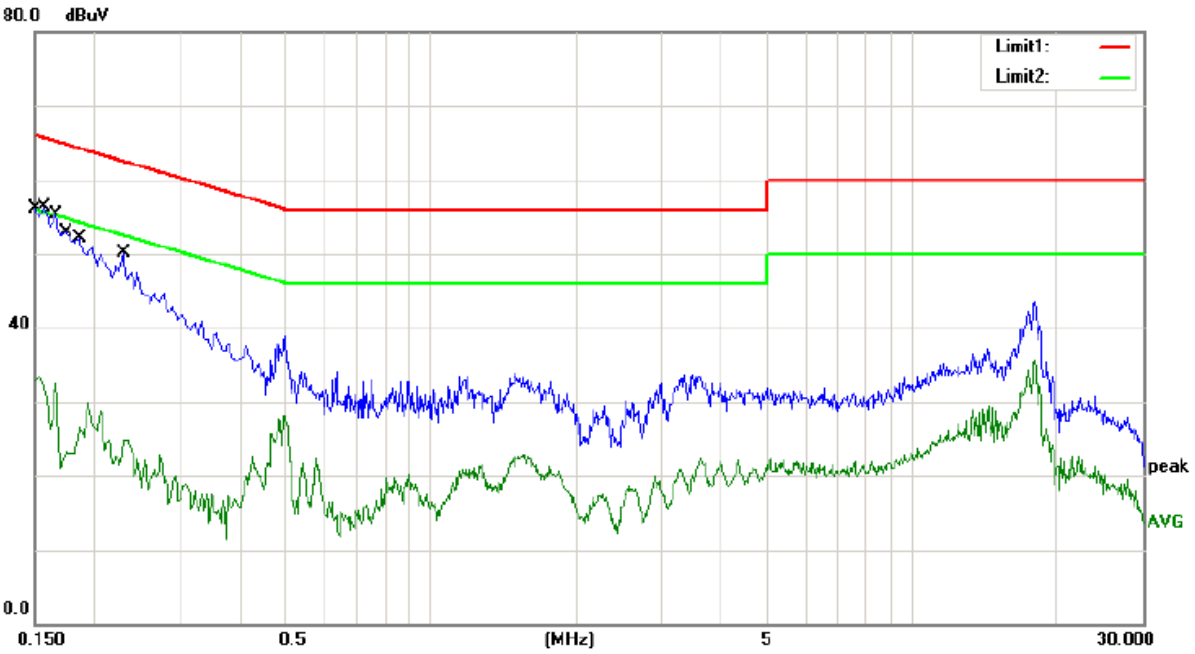
Site site #1 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 240V/60Hz Humidity: 44 %

Mode: RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	44.40	11.00	55.40	66.00	-10.60	QP	
2		0.1500	15.00	11.00	26.00	56.00	-30.00	AVG	
3		0.1540	44.90	11.00	55.90	65.78	-9.88	QP	
4		0.1540	20.20	11.00	31.20	55.78	-24.58	AVG	
5	*	0.1700	44.50	11.00	55.50	64.96	-9.46	QP	
6		0.1700	17.50	11.00	28.50	54.96	-26.46	AVG	
7		0.1806	40.50	11.00	51.50	64.46	-12.96	QP	
8		0.1806	13.60	11.00	24.60	54.46	-29.86	AVG	
9		0.1900	39.70	11.00	50.70	64.04	-13.34	QP	
10		0.1900	15.80	11.00	26.80	54.04	-27.24	AVG	
11		0.2180	37.80	11.00	48.80	62.89	-14.09	QP	
12		0.2180	8.50	11.00	19.50	52.89	-33.39	AVG	



Site site #1 Phase: *L1* Temperature: 22

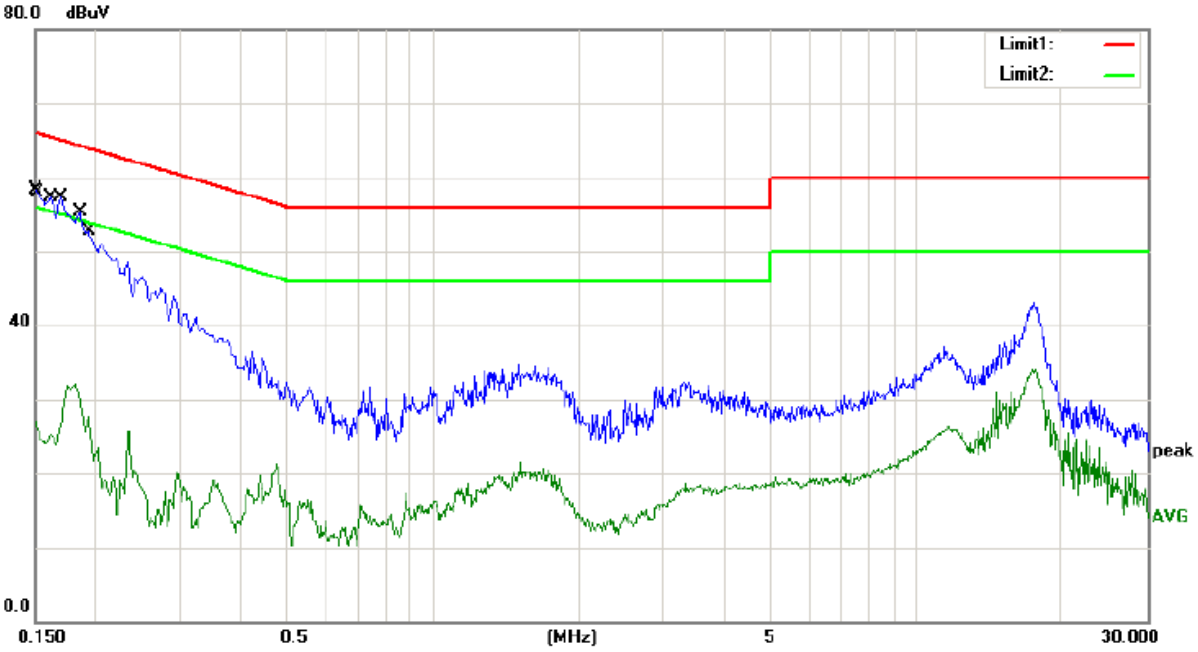
Limit: (CE)FCC PART 15 class B_QP Power: AC 240V/60Hz Humidity: 44 %

Mode: RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	45.00	11.00	56.00	66.00	-10.00	QP	
2		0.1500	21.80	11.00	32.80	56.00	-23.20	AVG	
3	*	0.1580	45.30	11.00	56.30	65.57	-9.27	QP	
4		0.1580	20.60	11.00	31.60	55.57	-23.97	AVG	
5		0.1660	44.20	11.00	55.20	65.16	-9.96	QP	
6		0.1660	21.50	11.00	32.50	55.16	-22.66	AVG	
7		0.1758	41.40	11.00	52.40	64.68	-12.28	QP	
8		0.1758	12.10	11.00	23.10	54.68	-31.58	AVG	
9		0.1864	40.50	11.00	51.50	64.20	-12.70	QP	
10		0.1864	15.40	11.00	26.40	54.20	-27.80	AVG	
11		0.2300	39.00	11.00	50.00	62.45	-12.45	QP	
12		0.2300	13.90	11.00	24.90	52.45	-27.55	AVG	

BLE TX Mode:



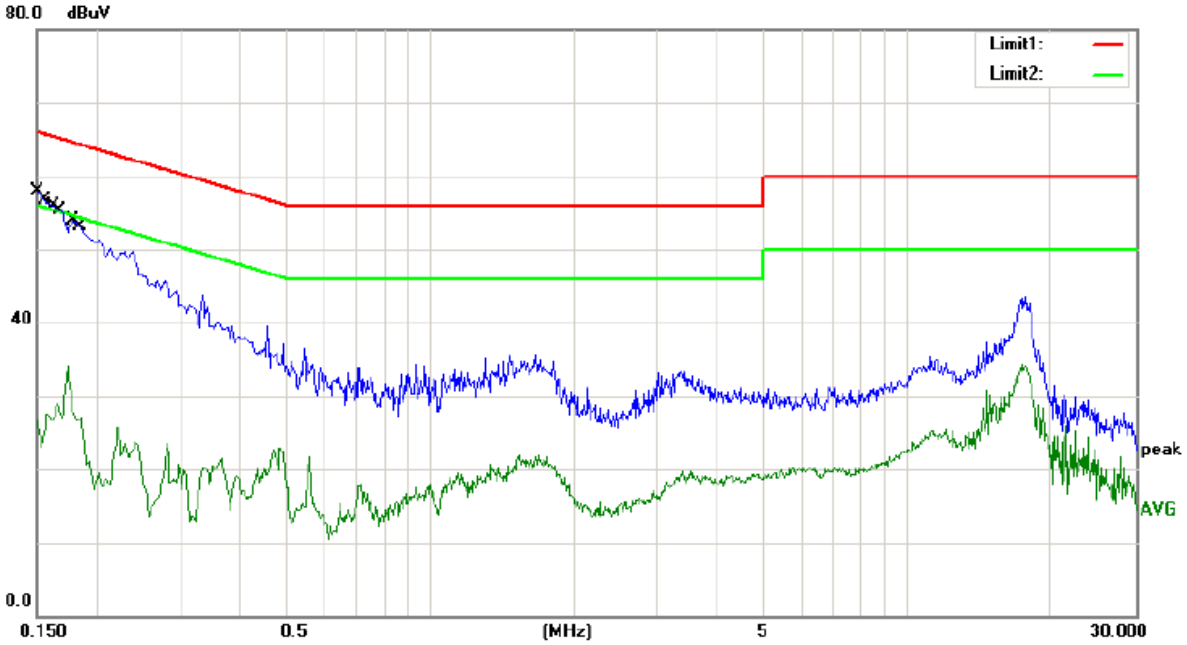
Site site #1 Phase: *L1* Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: BLE(2402MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	47.20	11.00	58.20	66.00	-7.80	QP	
2		0.1500	16.00	11.00	27.00	56.00	-29.00	AVG	
3		0.1540	46.30	11.00	57.30	65.78	-8.48	QP	
4		0.1540	13.50	11.00	24.50	55.78	-31.28	AVG	
5		0.1620	46.30	11.00	57.30	65.36	-8.06	QP	
6		0.1620	14.20	11.00	25.20	55.36	-30.16	AVG	
7	*	0.1700	46.30	11.00	57.30	64.96	-7.66	QP	
8		0.1700	15.70	11.00	26.70	54.96	-28.26	AVG	
9		0.1860	44.20	11.00	55.20	64.21	-9.01	QP	
10		0.1860	18.30	11.00	29.30	54.21	-24.91	AVG	
11		0.1940	41.60	11.00	52.60	63.86	-11.26	QP	
12		0.1940	16.00	11.00	27.00	53.86	-26.86	AVG	



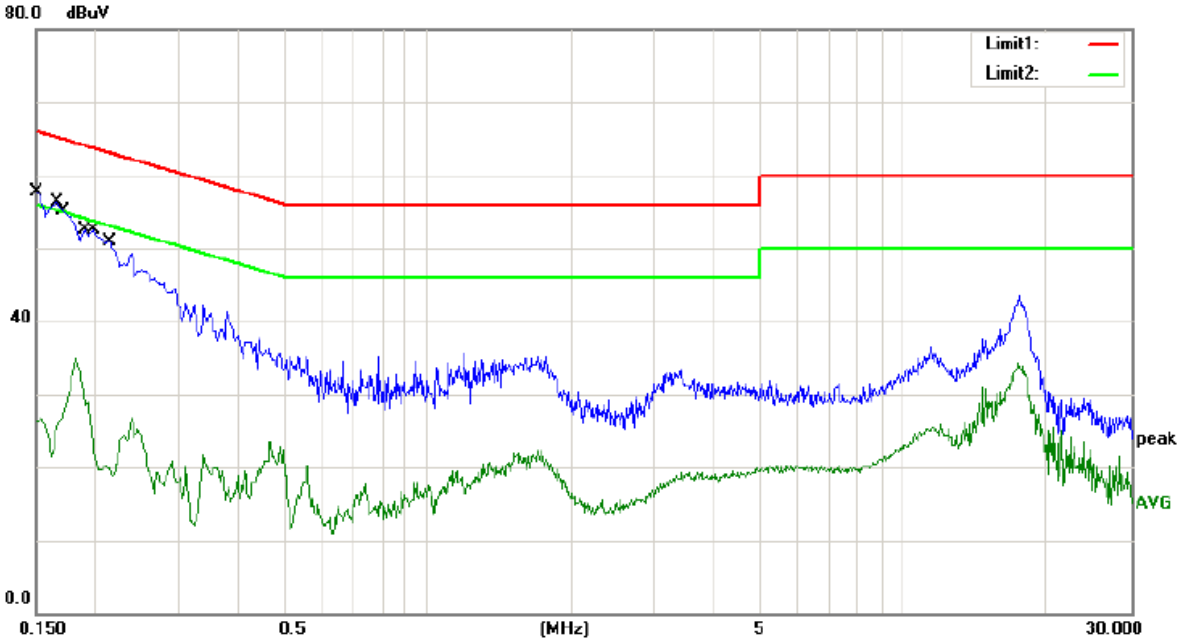
Site site #1 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: BLE(2402MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	46.90	11.00	57.90	66.00	-8.10	QP	
2		0.1500	15.60	11.00	26.60	56.00	-29.40	AVG	
3		0.1580	45.30	11.00	56.30	65.57	-9.27	QP	
4		0.1580	16.40	11.00	27.40	55.57	-28.17	AVG	
5		0.1641	44.60	11.00	55.60	65.25	-9.65	QP	
6		0.1641	16.90	11.00	27.90	55.25	-27.35	AVG	
7		0.1685	44.20	11.00	55.20	65.03	-9.83	QP	
8		0.1685	16.70	11.00	27.70	55.03	-27.33	AVG	
9		0.1780	42.80	11.00	53.80	64.58	-10.78	QP	
10		0.1780	17.00	11.00	28.00	54.58	-26.58	AVG	
11		0.1864	41.70	11.00	52.70	64.20	-11.50	QP	
12		0.1864	15.50	11.00	26.50	54.20	-27.70	AVG	



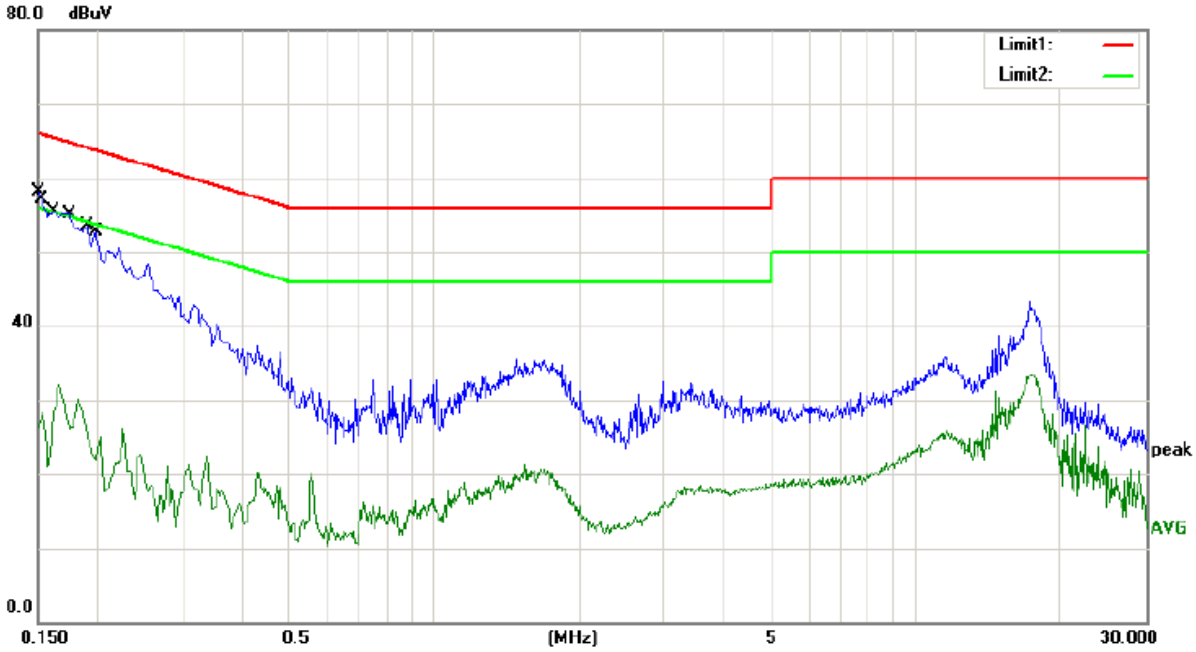
Site site #1 Phase: *N* Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: BLE(2440MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	46.70	11.00	57.70	66.00	-8.30	QP	
2		0.1500	15.20	11.00	26.20	56.00	-29.80	AVG	
3		0.1660	45.30	11.00	56.30	65.16	-8.86	QP	
4		0.1660	14.70	11.00	25.70	55.16	-29.46	AVG	
5		0.1731	43.70	11.00	54.70	64.81	-10.11	QP	
6		0.1731	17.40	11.00	28.40	54.81	-26.41	AVG	
7		0.1900	41.50	11.00	52.50	64.04	-11.54	QP	
8		0.1900	17.50	11.00	28.50	54.04	-25.54	AVG	
9		0.1997	41.00	11.00	52.00	63.62	-11.62	QP	
10		0.1997	10.50	11.00	21.50	53.62	-32.12	AVG	
11		0.2140	39.90	11.00	50.90	63.05	-12.15	QP	
12		0.2140	8.80	11.00	19.80	53.05	-33.25	AVG	



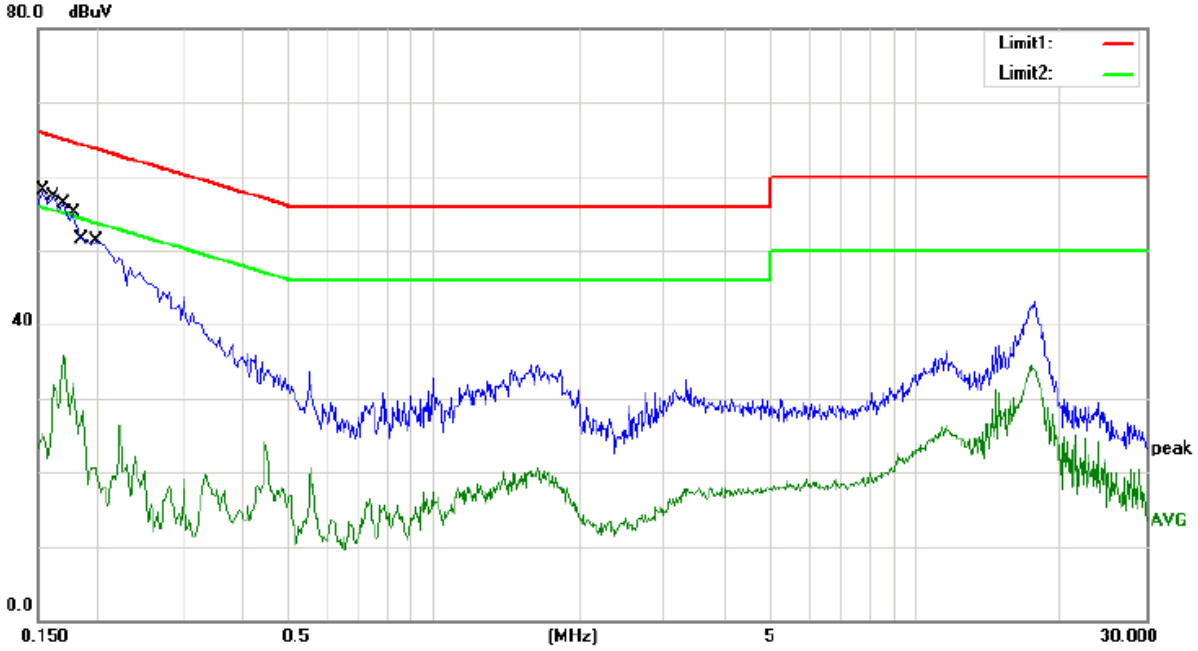
Site site #1 Phase: *L1* Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: BLE(2440MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	47.10	11.00	58.10	66.00	-7.90	QP	
2		0.1500	15.20	11.00	26.20	56.00	-29.80	AVG	
3		0.1548	45.10	11.00	56.10	65.74	-9.64	QP	
4		0.1548	15.70	11.00	26.70	55.74	-29.04	AVG	
5		0.1620	44.40	11.00	55.40	65.36	-9.96	QP	
6		0.1620	17.30	11.00	28.30	55.36	-27.06	AVG	
7		0.1740	44.10	11.00	55.10	64.77	-9.67	QP	
8		0.1740	15.20	11.00	26.20	54.77	-28.57	AVG	
9		0.1900	42.50	11.00	53.50	64.04	-10.54	QP	
10		0.1900	14.10	11.00	25.10	54.04	-28.94	AVG	
11		0.1980	41.70	11.00	52.70	63.69	-10.99	QP	
12		0.1980	11.30	11.00	22.30	53.69	-31.39	AVG	



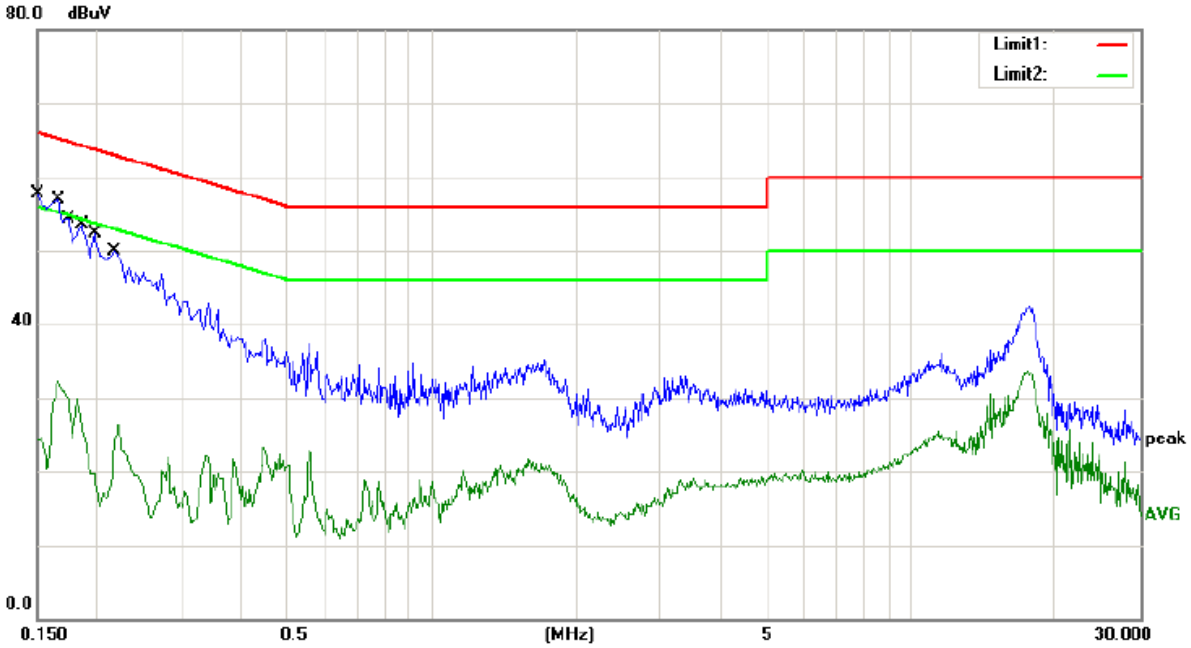
Site site #1 Phase: L1 Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: BLE(2480MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1540	47.00	11.00	58.00	65.78	-7.78	QP	
2		0.1540	14.30	11.00	25.30	55.78	-30.48	AVG	
3		0.1620	46.30	11.00	57.30	65.36	-8.06	QP	
4		0.1620	20.80	11.00	31.80	55.36	-23.56	AVG	
5		0.1700	45.30	11.00	56.30	64.96	-8.66	QP	
6		0.1700	24.80	11.00	35.80	54.96	-19.16	AVG	
7		0.1780	44.10	11.00	55.10	64.58	-9.48	QP	
8		0.1780	19.90	11.00	30.90	54.58	-23.68	AVG	
9		0.1874	40.40	11.00	51.40	64.15	-12.75	QP	
10		0.1874	14.00	11.00	25.00	54.15	-29.15	AVG	
11		0.1980	40.20	11.00	51.20	63.69	-12.49	QP	
12		0.1980	9.10	11.00	20.10	53.69	-33.59	AVG	



Site site #1 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 44 %

Mode: BLE(2480MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	46.60	11.00	57.60	66.00	-8.40	QP	
2		0.1500	13.20	11.00	24.20	56.00	-31.80	AVG	
3	*	0.1660	45.90	11.00	56.90	65.16	-8.26	QP	
4		0.1660	21.20	11.00	32.20	55.16	-22.96	AVG	
5		0.1740	43.40	11.00	54.40	64.77	-10.37	QP	
6		0.1740	17.70	11.00	28.70	54.77	-26.07	AVG	
7		0.1860	42.40	11.00	53.40	64.21	-10.81	QP	
8		0.1860	14.70	11.00	25.70	54.21	-28.51	AVG	
9		0.1980	41.20	11.00	52.20	63.69	-11.49	QP	
10		0.1980	7.90	11.00	18.90	53.69	-34.79	AVG	
11		0.2180	38.80	11.00	49.80	62.89	-13.09	QP	
12		0.2180	13.30	11.00	24.30	52.89	-28.59	AVG	

5. Radiated Emission Test

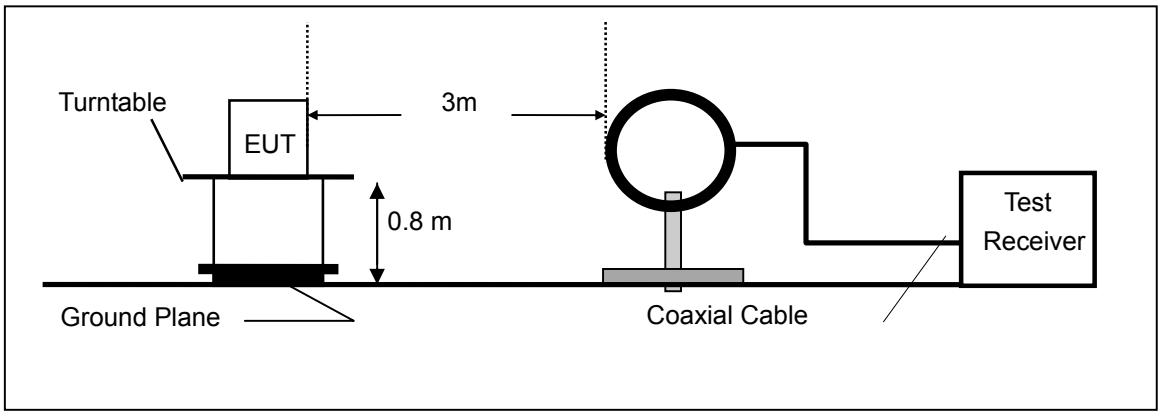
5.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured was complete.

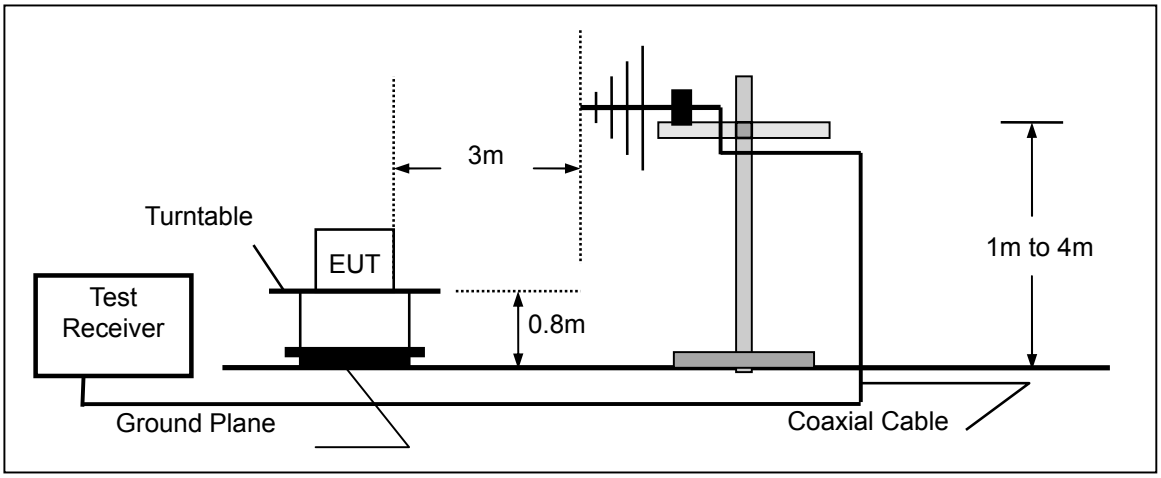
The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector (RBW=100kHz, VBW=300kHz) and all final readings of measurement from Test Receiver are Quasi-Peak values(Quasi Peak detector used with a bandwidth of 120 kHz).
The frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

5.2 Test SET-UP (Block Diagram of Configuration)

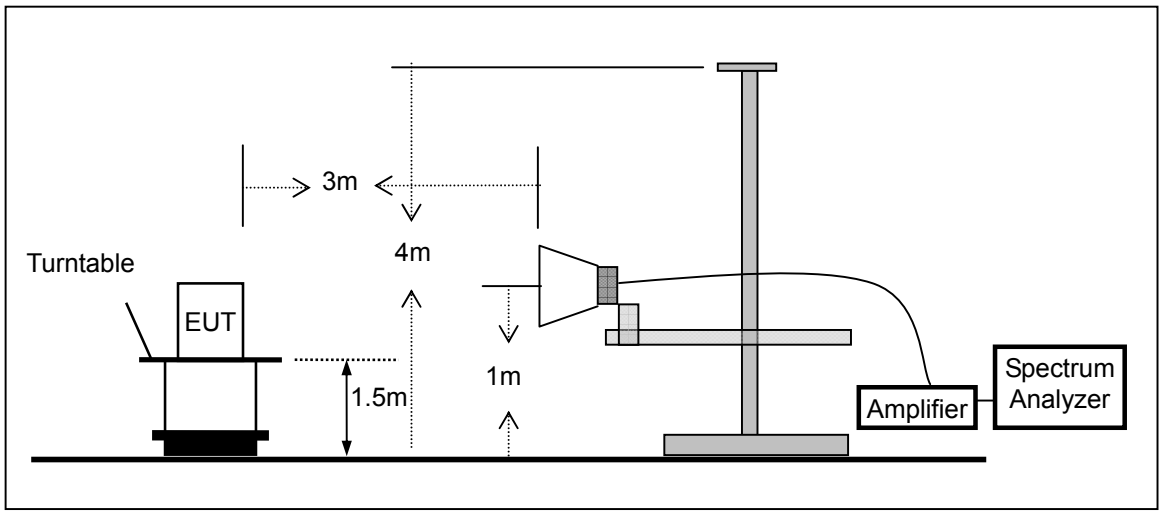
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



5.3 Measurement Equipment Used

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/16/2015	1 Year
2.	Pre-Amplifier	HP	8447D	2944A07999	05/16/2015	1 Year
3.	Pre-Amplifier	A.H.	PAM-0126	1415261	05/16/2015	1 Year
4.	Bilog Antenna	Schwarzbeck	VULB9163	142	05/16/2015	1 Year
5.	Loop Antenna	Schwarzbeck	FMZB 1519	1519-012	05/16/2015	1 Year
6.	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	05/16/2015	1 Year
7.	Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/16/2015	1 Year
8.	Cable	Schwarzbeck	AK9513	ACRX1	05/16/2015	1 Year
9.	Cable	Rosenberger	N/A	FP2RX2	05/16/2015	1 Year
10.	Cable	Schwarzbeck	AK9513	CRPX1	05/16/2015	1 Year
11.	Cable	Schwarzbeck	AK9513	CRRX2	05/16/2015	1 Year

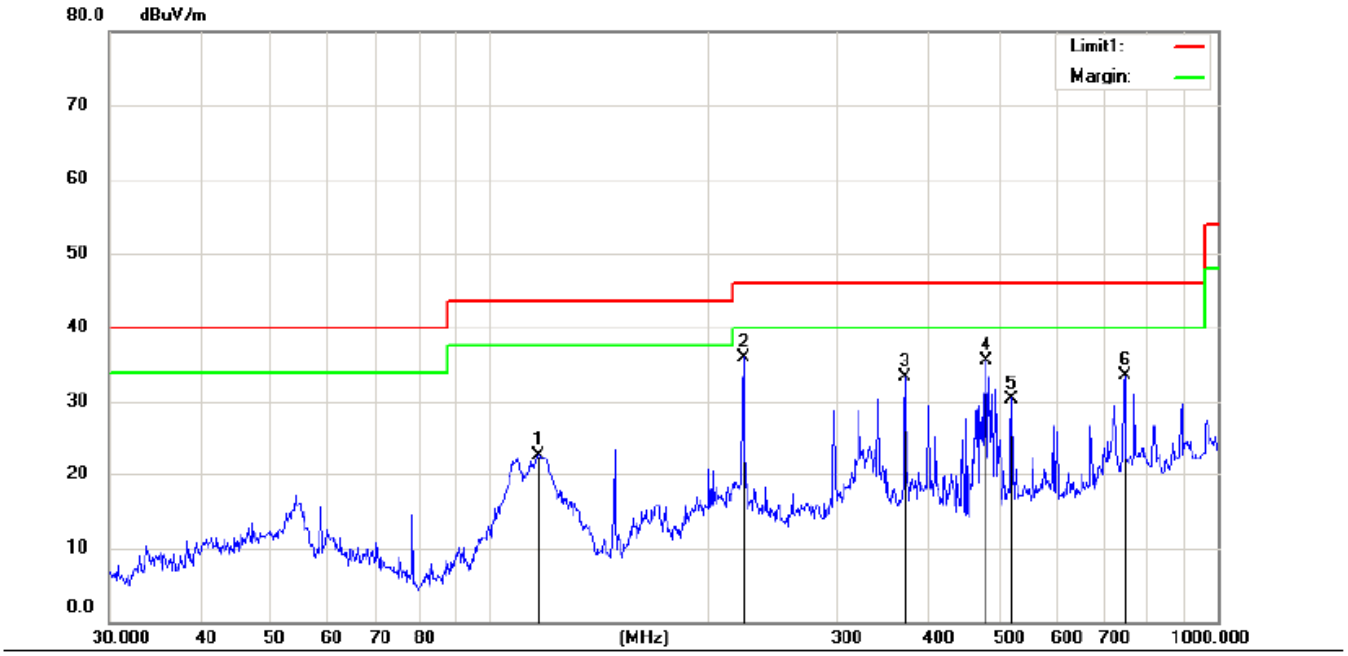
5.4 Radiated emission limit

Frequency (MHz)	Field strength μV/m	Distance(m)	Field strength at 3m dBμV/m
0.009~0.490	2400/F(KHz)	300	/
0.490~1.705	2400/F(KHz)	30	/
1.705~30.0	30	30	/
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

5.5 Measurement Result

(For range 9KHz~30MHz, The measured value is really too low to be recorded.)

30M-1GHz:



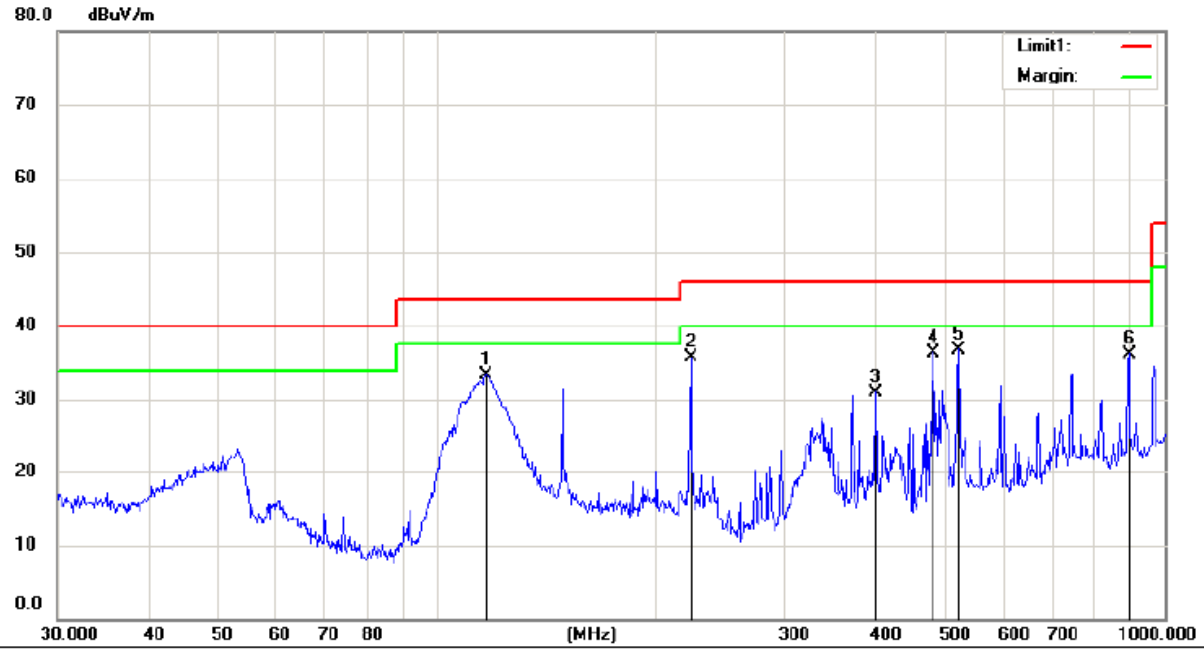
Site site #1 Polarization: *Horizontal* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:BLE(2402MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		116.5401	45.73	-22.93	22.80	43.50	-20.70	QP			
2	*	222.9502	58.00	-22.00	36.00	46.00	-10.00	QP			
3		372.0045	50.66	-17.36	33.30	46.00	-12.70	QP			
4		480.5276	50.69	-15.19	35.50	46.00	-10.50	QP			
5		520.8882	43.76	-13.36	30.40	46.00	-15.60	QP			
6		744.8661	42.38	-8.88	33.50	46.00	-12.50	QP			



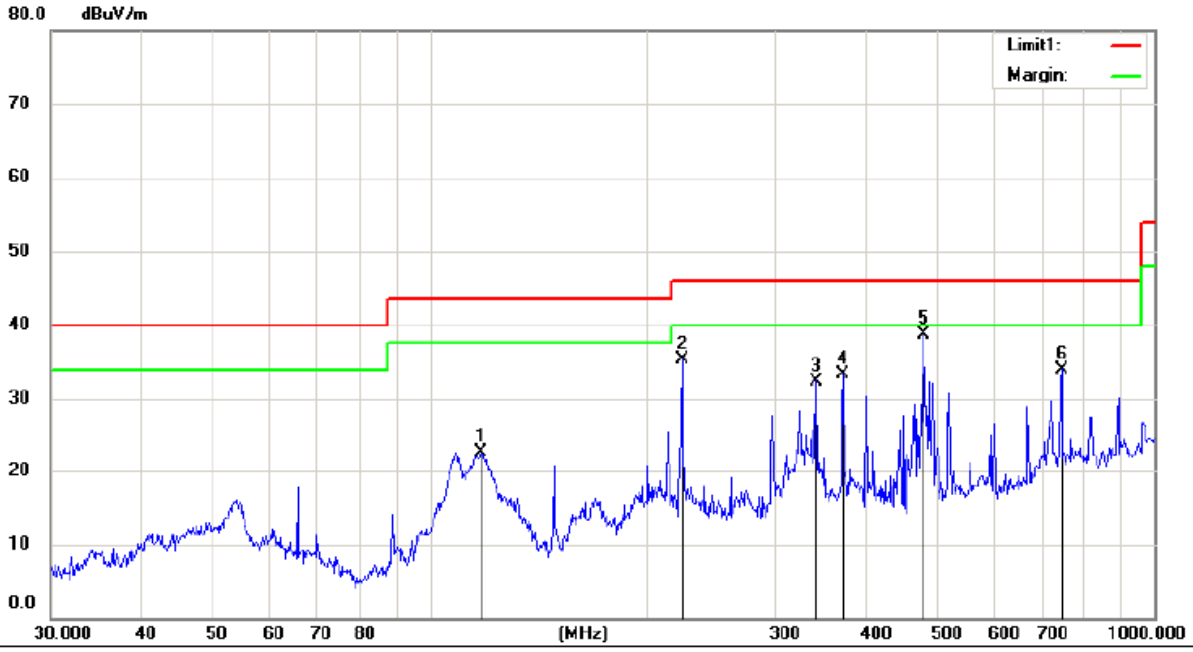
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:BLE(2402MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		116.5401	56.33	-22.93	33.40	43.50	-10.10	QP			
2		222.9502	57.70	-22.00	35.70	46.00	-10.30	QP			
3		400.4320	48.51	-17.51	31.00	46.00	-15.00	QP			
4		480.5276	51.59	-15.19	36.40	46.00	-9.60	QP			
5	*	520.8882	50.16	-13.36	36.80	46.00	-9.20	QP			
6		893.8567	43.06	-6.86	36.20	46.00	-9.80	QP			



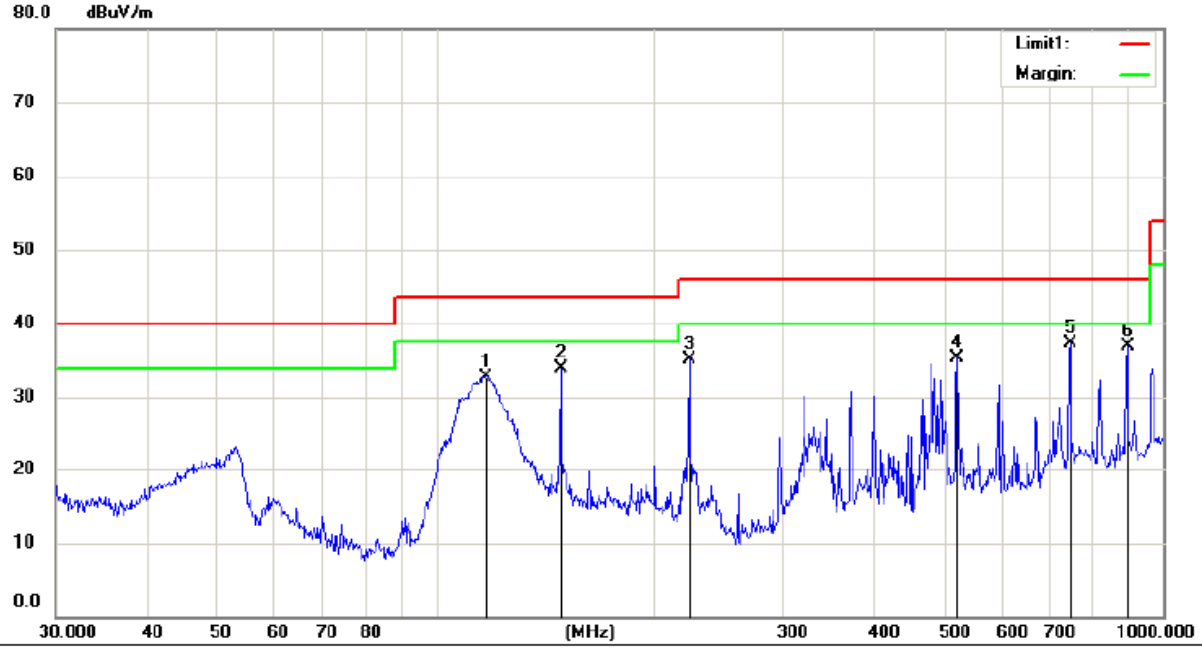
Site site #1 Polarization: *Horizontal* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:BLE(2440MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		117.7725	45.86	-23.16	22.70	43.50	-20.80	QP			
2		222.9502	57.30	-22.00	35.30	46.00	-10.70	QP			
3		341.9786	50.10	-17.70	32.40	46.00	-13.60	QP			
4		372.0045	50.66	-17.36	33.30	46.00	-12.70	QP			
5	*	480.5276	53.89	-15.19	38.70	46.00	-7.30	QP			
6		744.8661	42.88	-8.88	34.00	46.00	-12.00	QP			



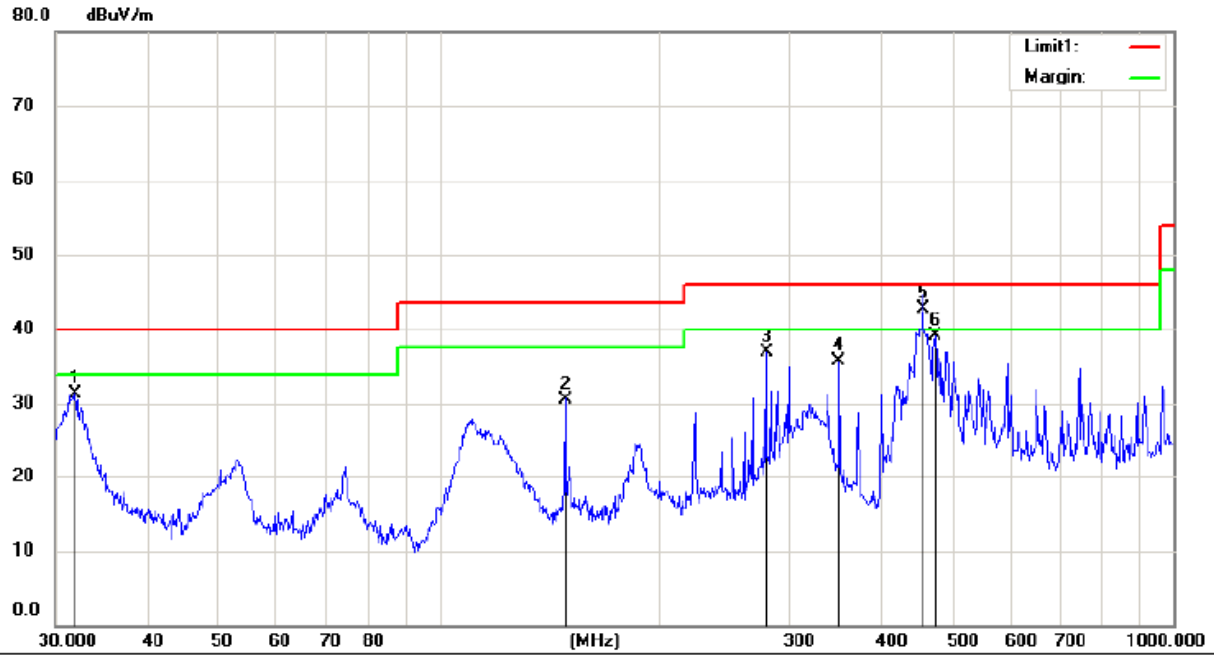
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:BLE(2440MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		117.3603	55.88	-23.08	32.80	43.50	-10.70	QP			
2		148.4410	59.09	-25.19	33.90	43.50	-9.60	QP			
3		222.9502	57.20	-22.00	35.20	46.00	-10.80	QP			
4		520.8882	48.76	-13.36	35.40	46.00	-10.60	QP			
5	*	744.8661	46.18	-8.88	37.30	46.00	-8.70	QP			
6		893.8567	43.86	-6.86	37.00	46.00	-9.00	QP			



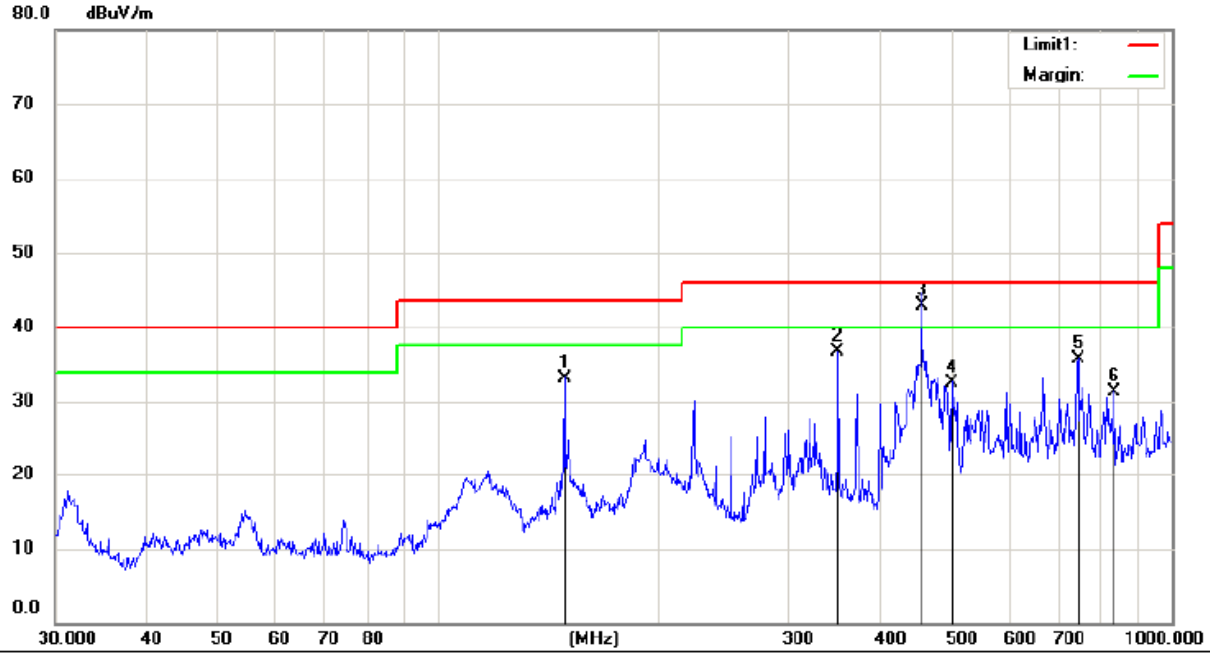
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:BLE(2480MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.9546	54.68	-23.28	31.40	40.00	-8.60	QP			
2		148.4410	55.79	-25.19	30.60	43.50	-12.90	QP			
3		279.0436	56.30	-19.40	36.90	46.00	-9.10	QP			
4		350.4768	53.99	-18.29	35.70	46.00	-10.30	QP			
5	*	455.9057	59.09	-16.39	42.70	46.00	-3.30	QP			
6		473.8347	55.08	-15.98	39.10	46.00	-6.90	QP			



Site site #1 Polarization: ***Horizontal*** Temperature: 20 C

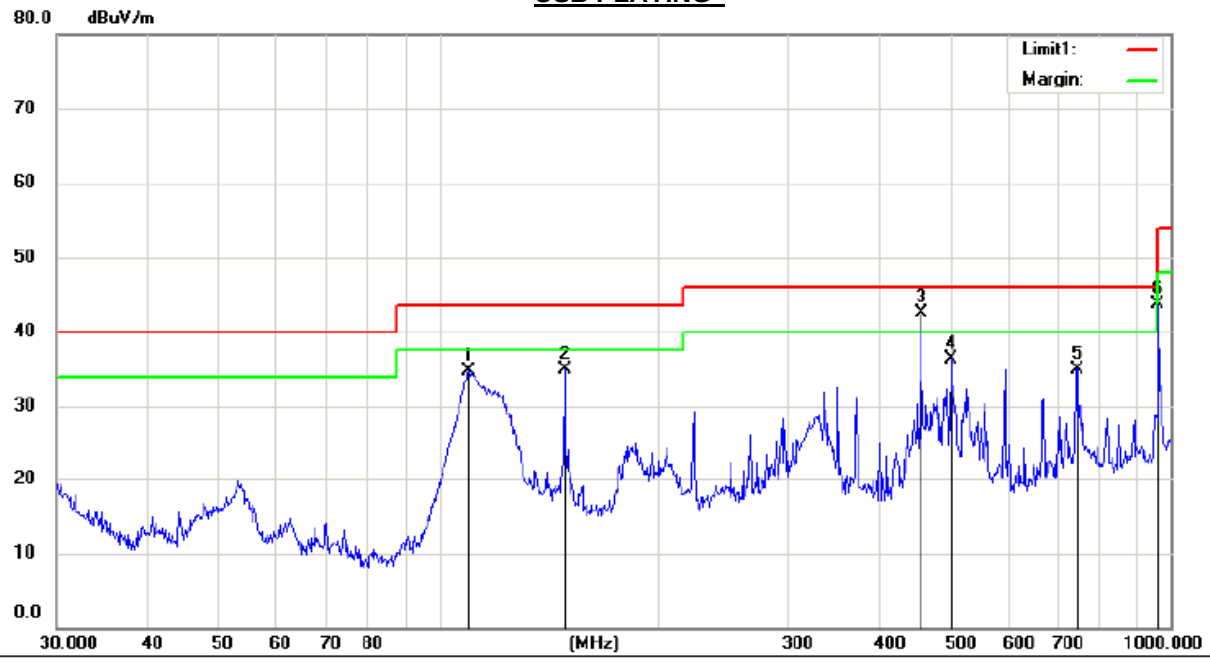
Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:BLE(2480MHz)

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		148.4410	58.39	-25.19	33.20	43.50	-10.30	QP			
2		350.4768	54.99	-18.29	36.70	46.00	-9.30	QP			
3	*	455.9057	59.29	-16.39	42.90	46.00	-3.10	QP			
4		501.1790	47.48	-14.88	32.60	46.00	-13.40	QP			
5		744.8661	44.68	-8.88	35.80	46.00	-10.20	QP			
6		836.2443	40.19	-8.79	31.40	46.00	-14.60	QP			

USB PLAYING



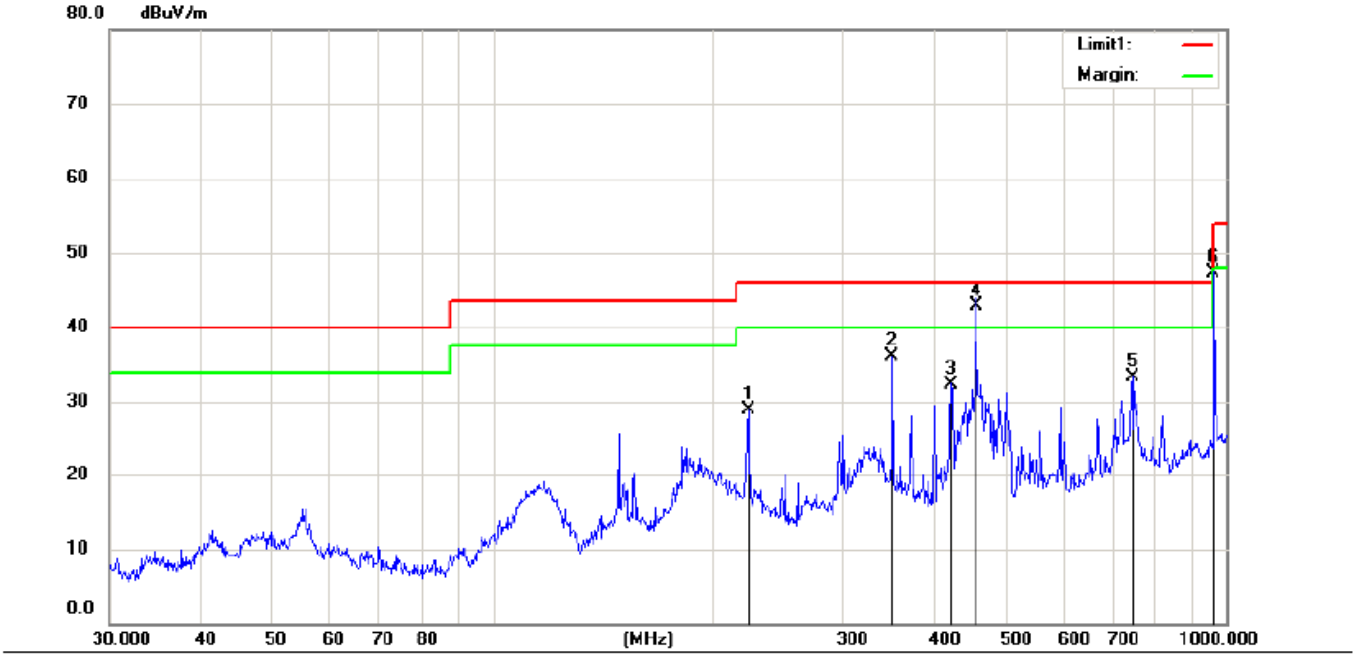
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		109.7960	56.53	-21.83	34.70	43.50	-8.80	QP			
2		148.4410	60.09	-25.19	34.90	43.50	-8.60	QP			
3	*	455.9058	58.89	-16.39	42.50	46.00	-3.50	QP			
4		501.1790	51.28	-14.88	36.40	46.00	-9.60	QP			
5		744.8661	43.88	-8.88	35.00	46.00	-11.00	QP			
6		962.1621	49.97	-6.27	43.70	54.00	-10.30	QP			



Site site #1 Polarization: ***Horizontal*** Temperature: 20 C

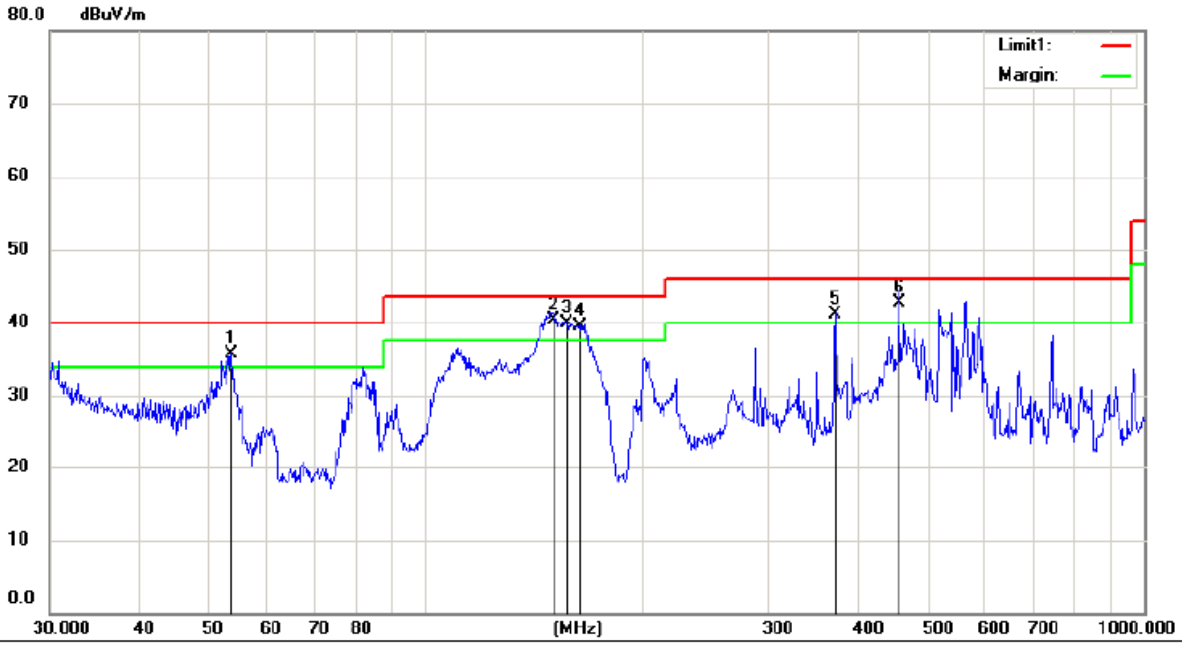
Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		222.9502	50.90	-22.00	28.90	46.00	-17.10	QP			
2		350.4768	54.39	-18.29	36.10	46.00	-9.90	QP			
3		422.0577	49.08	-16.68	32.40	46.00	-13.60	QP			
4	*	455.9057	59.29	-16.39	42.90	46.00	-3.10	QP			
5		744.8661	42.28	-8.88	33.40	46.00	-12.60	QP			
6		962.1623	53.67	-6.27	47.40	54.00	-6.60	QP			

HDMI Output



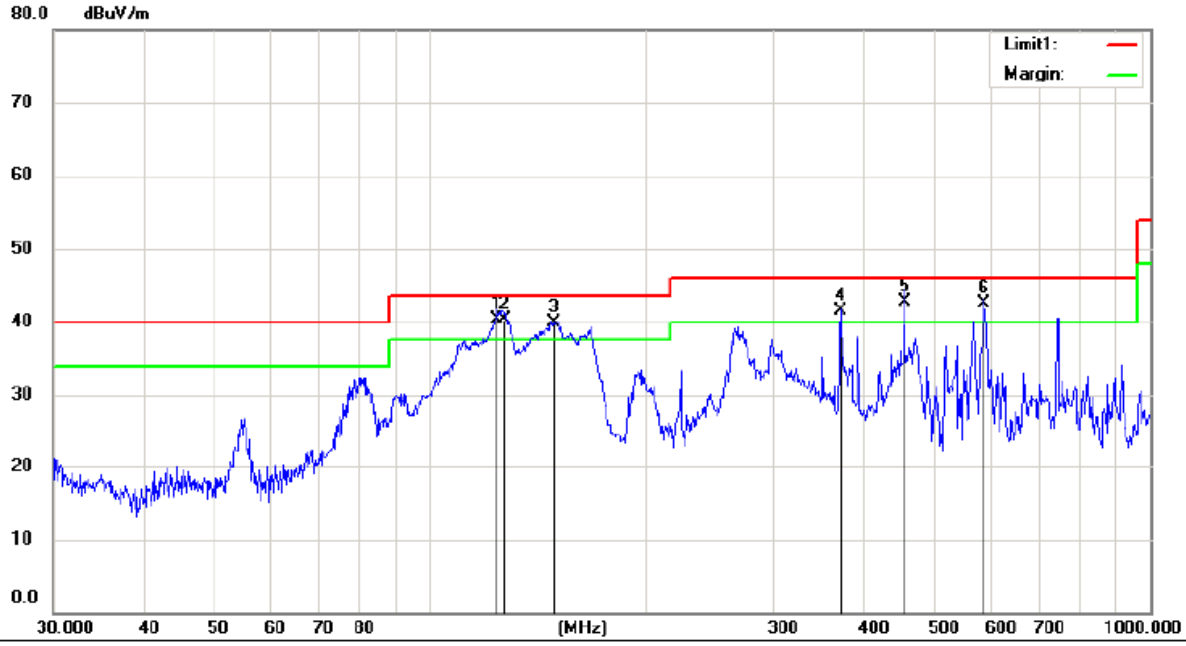
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	53.6931	55.35	-19.55	35.80	40.00	-4.20	QP			
2	*	150.5377	65.16	-24.86	40.30	43.50	-3.20	QP			
3	!	157.5587	65.45	-25.55	39.90	43.50	-3.60	QP			
4	!	164.3301	65.15	-25.55	39.60	43.50	-3.90	QP			
5	!	372.0045	58.56	-17.36	41.20	46.00	-4.80	QP			
6	!	455.9057	59.19	-16.39	42.80	46.00	-3.20	QP			



Site site #1 Polarization: ***Horizontal*** Temperature: 20 C

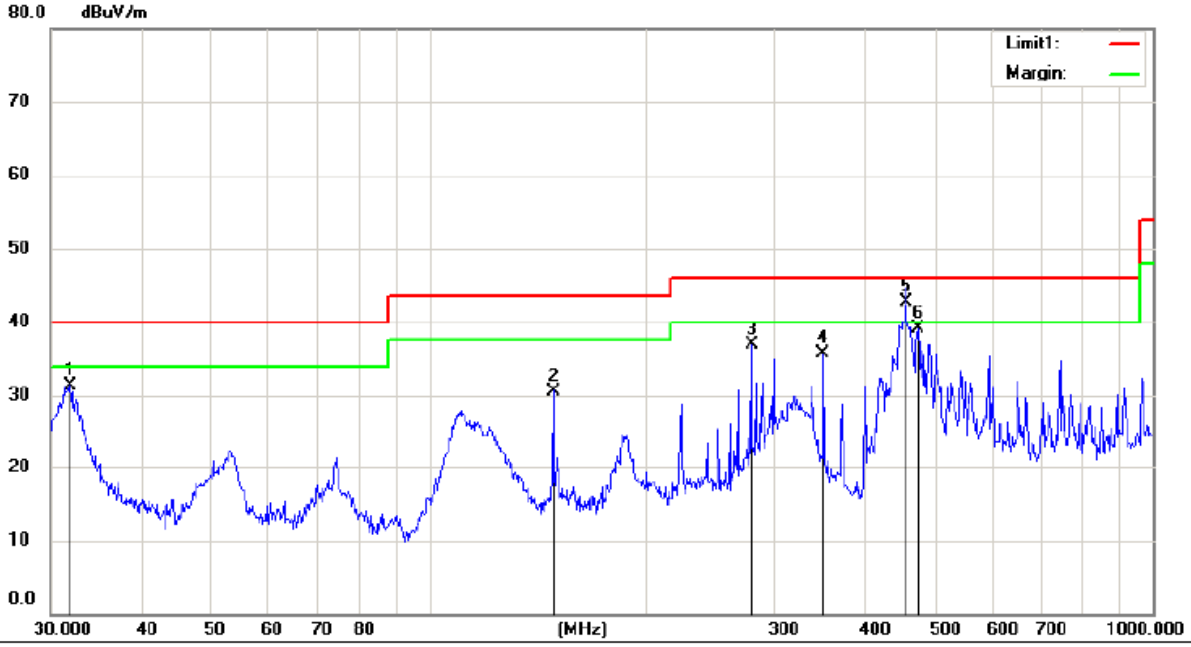
Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	124.1330	64.31	-23.91	40.40	43.50	-3.10	QP			
2	!	126.7723	64.70	-24.40	40.30	43.50	-3.20	QP			
3	!	148.9624	64.95	-25.05	39.90	43.50	-3.60	QP			
4	!	372.0045	58.96	-17.36	41.60	46.00	-4.40	QP			
5	!	455.9057	59.19	-16.39	42.80	46.00	-3.20	QP			
6	!	588.9050	54.54	-11.94	42.60	46.00	-3.40	QP			

RJ45-ETHO



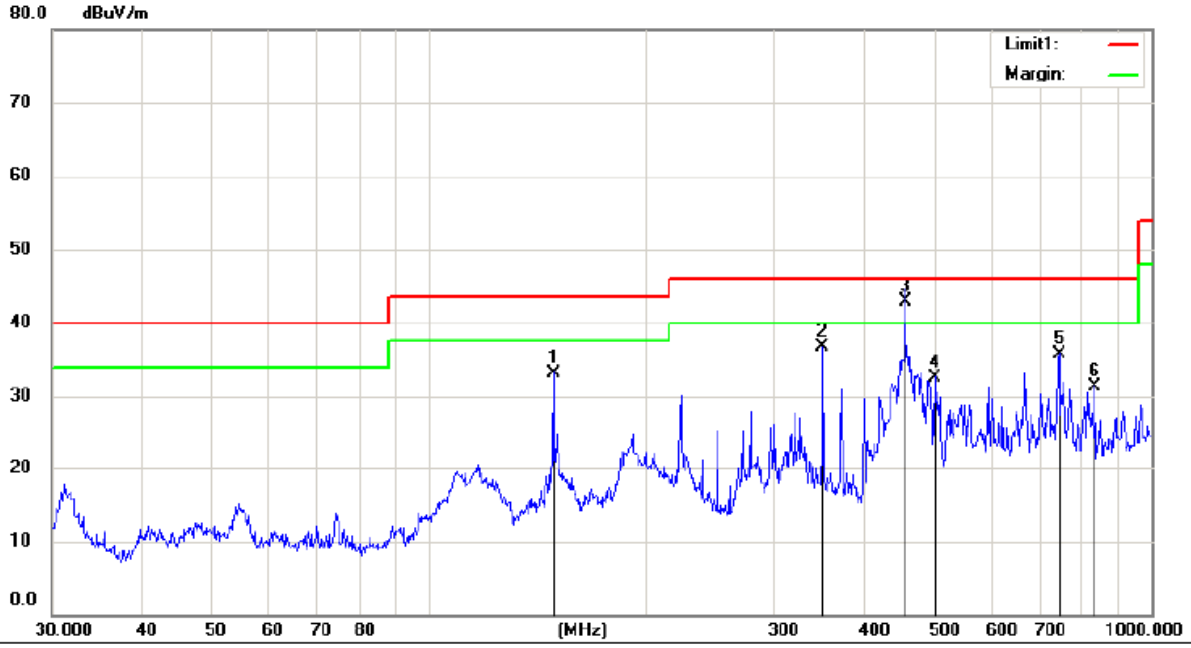
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.9546	54.68	-23.28	31.40	40.00	-8.60	QP			
2		148.4410	55.79	-25.19	30.60	43.50	-12.90	QP			
3		279.0436	56.30	-19.40	36.90	46.00	-9.10	QP			
4		350.4768	53.99	-18.29	35.70	46.00	-10.30	QP			
5	*	455.9057	59.09	-16.39	42.70	46.00	-3.30	QP			
6		473.8347	55.08	-15.98	39.10	46.00	-6.90	QP			



Site site #1 Polarization: *Horizontal* Temperature: 20 C

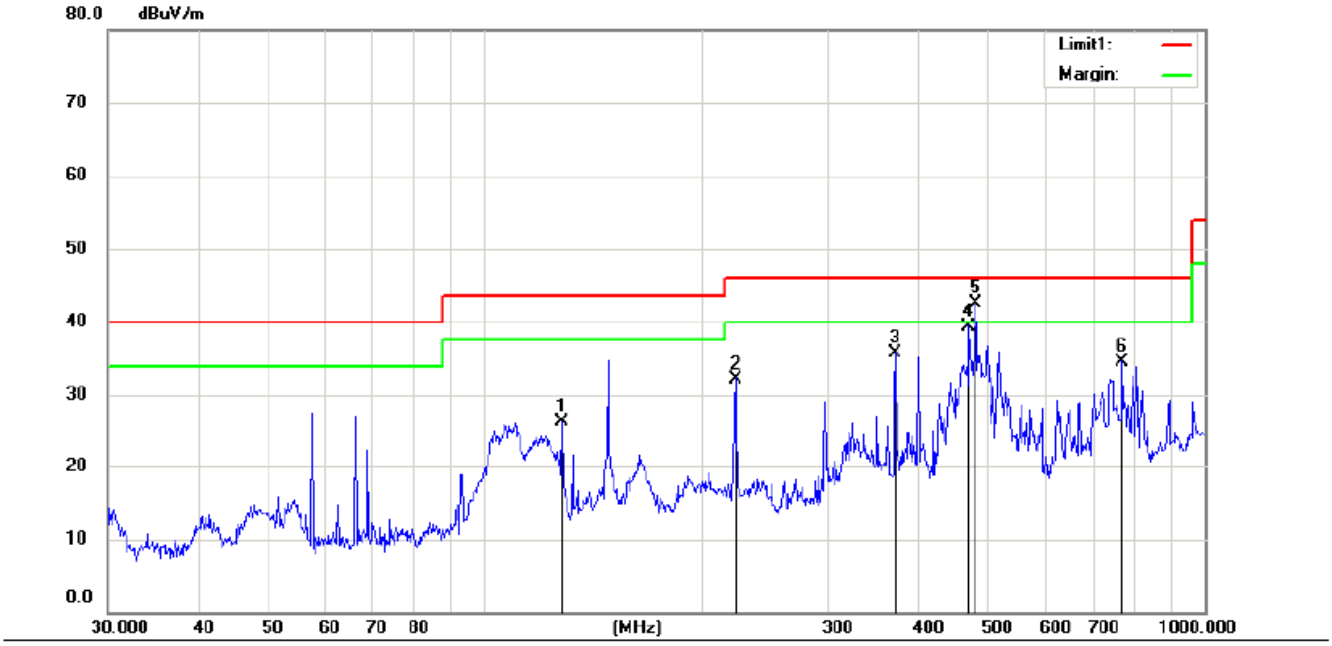
Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 52 %

Mode:RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		148.4410	58.39	-25.19	33.20	43.50	-10.30	QP			
2		350.4768	54.99	-18.29	36.70	46.00	-9.30	QP			
3	*	455.9057	59.29	-16.39	42.90	46.00	-3.10	QP			
4		501.1790	47.48	-14.88	32.60	46.00	-13.40	QP			
5		744.8661	44.68	-8.88	35.80	46.00	-10.20	QP			
6		836.2443	40.19	-8.79	31.40	46.00	-14.60	QP			

RJ45-ETHO



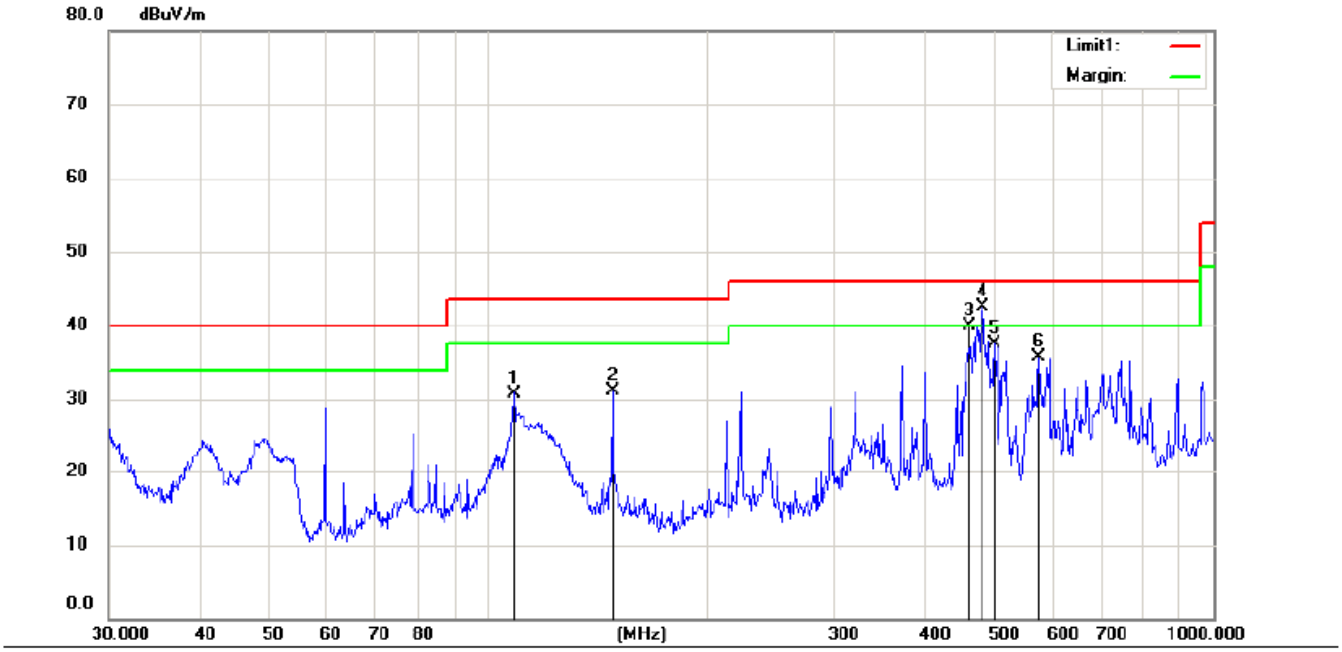
Site site #1 Polarization: *Horizontal* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 240V/60Hz Humidity: 52 %

Mode:RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		128.1130	51.02	-24.72	26.30	43.50	-17.20	QP			
2		222.9502	54.20	-22.00	32.20	46.00	-13.80	QP			
3		372.0045	53.16	-17.36	35.80	46.00	-10.20	QP			
4		470.5232	55.80	-16.40	39.40	46.00	-6.60	QP			
5	*	480.5276	57.69	-15.19	42.50	46.00	-3.50	QP			
6		768.7481	42.86	-8.26	34.60	46.00	-11.40	QP			



Site site #1 Polarization: *Vertical* Temperature: 20 C

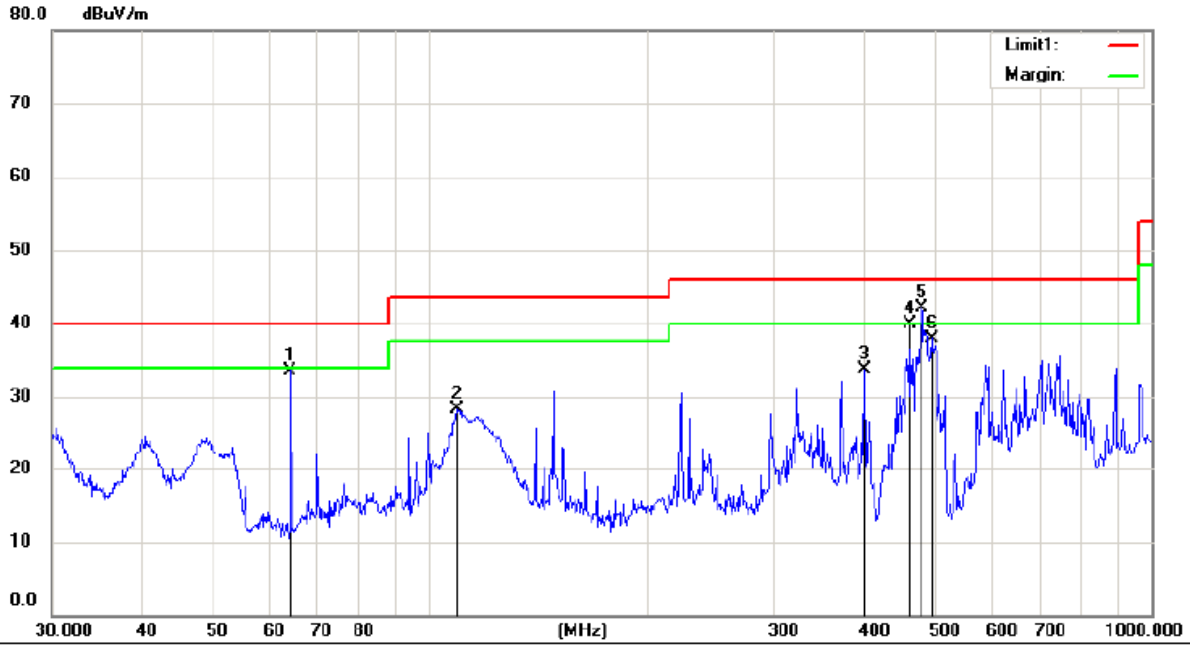
Limit: FCC Part15 Class B 3M Radiation Power: AC 240V/60Hz Humidity: 52 %

Mode:RJ45-ETHO

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		108.6470	52.49	-21.69	30.80	43.50	-12.70	QP			
2		148.4410	56.29	-25.19	31.10	43.50	-12.40	QP			
3		460.7271	55.86	-15.96	39.90	46.00	-6.10	QP			
4	*	480.5276	57.64	-15.19	42.45	46.00	-3.55	QP			
5		499.4246	52.42	-14.98	37.44	46.00	-8.56	QP			
6		574.6258	47.58	-11.81	35.77	46.00	-10.23	QP			

HDMI OUTPUT



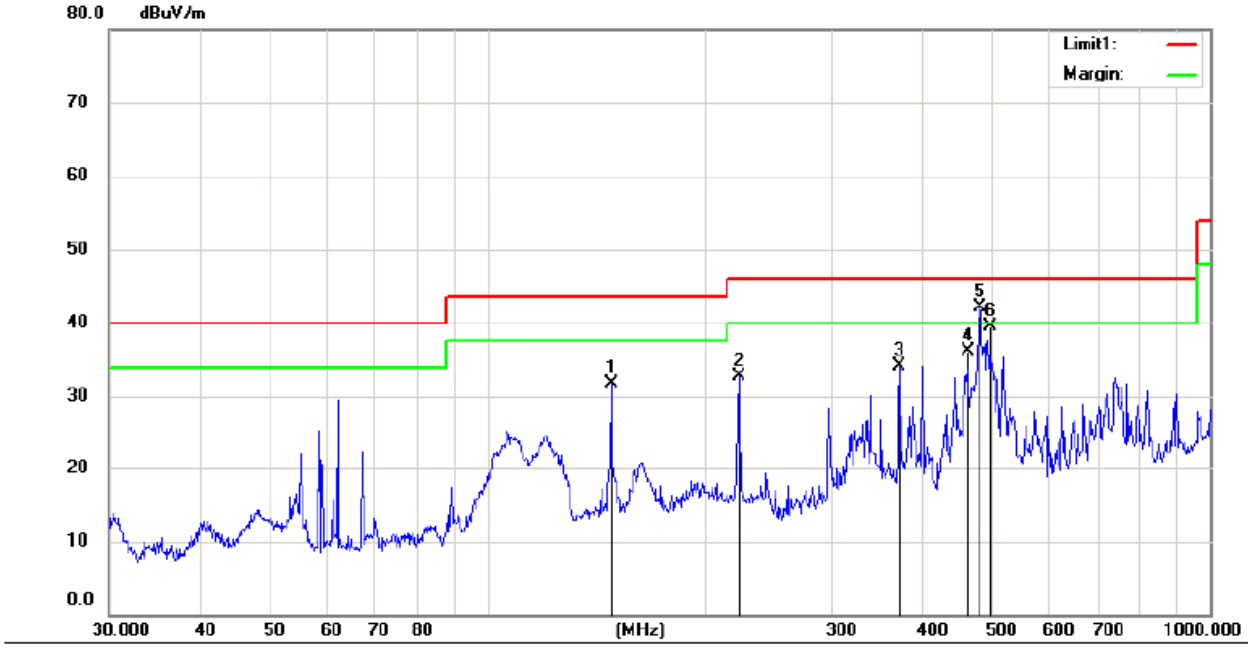
Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 240V/60Hz Humidity: 52 %

Mode:HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		64.2074	56.24	-22.64	33.60	40.00	-6.40	QP			
2		109.0286	50.02	-21.72	28.30	43.50	-15.20	QP			
3		400.4320	51.21	-17.51	33.70	46.00	-12.30	QP			
4		462.3455	56.04	-16.04	40.00	46.00	-6.00	QP			
5	*	480.5276	57.29	-15.19	42.10	46.00	-3.90	QP			
6		495.9344	52.97	-14.97	38.00	46.00	-8.00	QP			



Site site #1 Polarization: *Horizontal* Temperature: 20 C

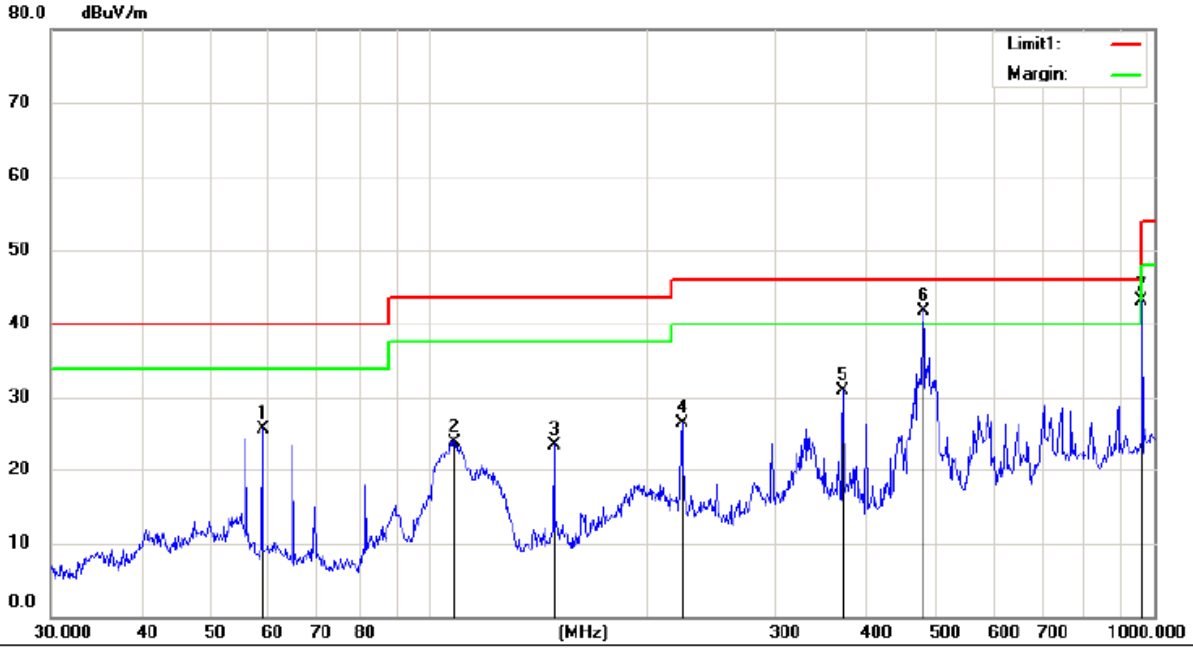
Limit: FCC Part15 Class B 3M Radiation Power: AC 240V/60Hz Humidity: 52 %

Mode:HDMI Output

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		148.4410	56.99	-25.19	31.80	43.50	-11.70	QP			
2		222.9502	54.70	-22.00	32.70	46.00	-13.30	QP			
3		372.0045	51.46	-17.36	34.10	46.00	-11.90	QP			
4		462.3455	52.14	-16.04	36.10	46.00	-9.90	QP			
5	*	480.5276	57.29	-15.19	42.10	46.00	-3.90	QP			
6		497.6765	54.49	-14.99	39.50	46.00	-6.50	QP			

USB Playing



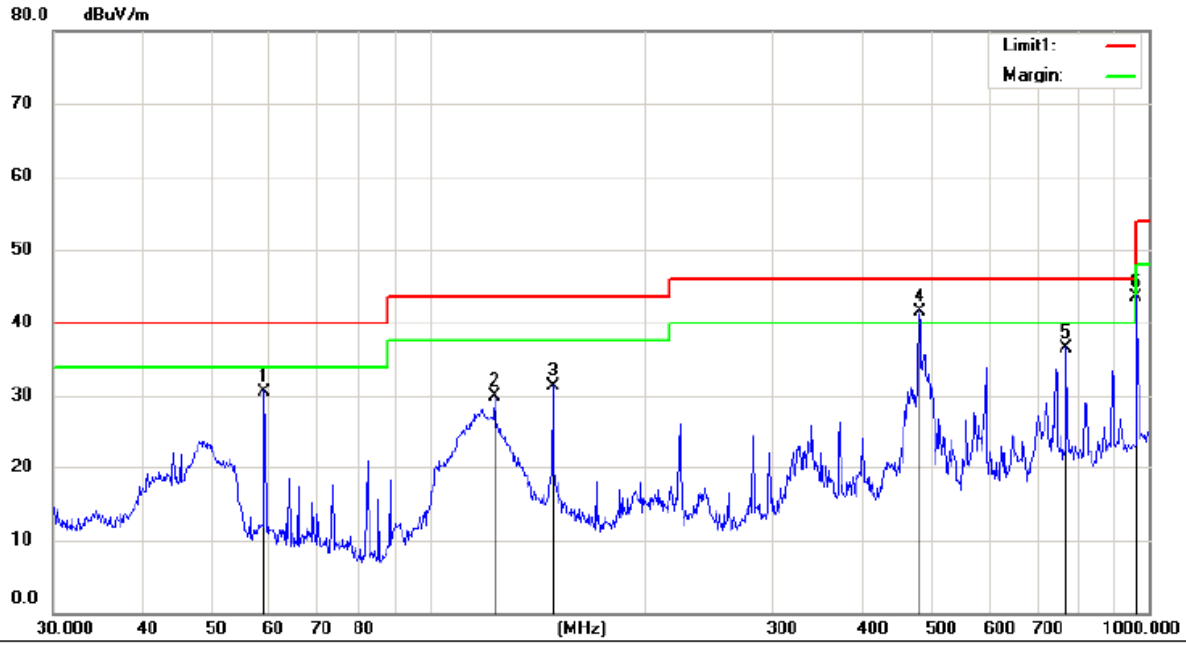
Site site #1 Polarization: *Horizontal* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 240V/60Hz Humidity: 52 %

Mode:USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		58.8185	47.29	-21.59	25.70	40.00	-14.30	QP			
2		108.2667	45.64	-21.64	24.00	43.50	-19.50	QP			
3		148.4410	48.79	-25.19	23.60	43.50	-19.90	QP			
4		222.9502	48.50	-22.00	26.50	46.00	-19.50	QP			
5		372.0045	48.26	-17.36	30.90	46.00	-15.10	QP			
6	*	480.5276	56.99	-15.19	41.80	46.00	-4.20	QP			
7		962.1621	49.37	-6.27	43.10	54.00	-10.90	QP			



Site site #1 Polarization: *Vertical* Temperature: 20 C

Limit: FCC Part15 Class B 3M Radiation Power: AC 240V/60Hz Humidity: 52 %

Mode:USB Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		59.0251	52.23	-21.63	30.60	40.00	-9.40	QP			
2		123.2655	53.74	-23.84	29.90	43.50	-13.60	QP			
3		148.4410	56.59	-25.19	31.40	43.50	-12.10	QP			
4	*	480.5276	56.79	-15.19	41.60	46.00	-4.40	QP			
5		768.7481	44.86	-8.26	36.60	46.00	-9.40	QP			
6		962.1621	49.87	-6.27	43.60	54.00	-10.40	QP			

Above 1000MHz:

Test Date :	07/21/2015	Temperature :	24 ℃
Test Result:	Pass	Humidity :	54 %
Test By:	KY		

TX Mode (CH00: 2402MHz)							
Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	(H/V)	PK	AV	PK	AV	PK	AV
4802.00	V	63.38	44.85	74.00	54.00	-10.62	-9.15
7204.00	V	61.77	43.97	74.00	54.00	-12.23	-10.03
9609.00	V	61.84	43.17	74.00	54.00	-12.16	-10.83
12008.00	V	59.69	42.40	74.00	54.00	-14.31	-11.60
14413.00	V	58.76	40.57	74.00	54.00	-15.24	-13.43
4805.00	H	62.65	46.12	74.00	54.00	-11.35	-7.88
7204.00	H	61.49	45.09	74.00	54.00	-12.51	-8.91
9609.00	H	60.20	43.77	74.00	54.00	-13.80	-10.23
12008.00	H	59.21	43.37	74.00	54.00	-14.79	-10.63
14410.00	H	58.51	41.70	74.00	54.00	-15.49	-12.30

TX Mode (CH19: 2440MHz)							
Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	(H/V)	PK	AV	PK	AV	PK	AV
4882.00	H	62.94	44.05	74.00	54.00	-11.06	-9.95
7324.00	H	61.77	43.69	74.00	54.00	-12.23	-10.31
9769.00	H	61.69	42.56	74.00	54.00	-12.31	-11.44
12208.00	H	60.41	41.90	74.00	54.00	-13.59	-12.10
14653.00	H	59.40	40.25	74.00	54.00	-14.60	-13.75
4885.00	V	64.21	45.48	74.00	54.00	-9.79	-8.52
7324.00	V	63.34	44.65	74.00	54.00	-10.66	-9.35
9769.00	V	62.09	43.36	74.00	54.00	-11.91	-10.64
12208.00	V	61.57	42.96	74.00	54.00	-12.43	-11.04
14650.00	V	59.59	41.43	74.00	54.00	-14.41	-12.57

TX Mode (CH39: 2480MHz)							
Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	(H/V)	PK	AV	PK	AV	PK	AV
4958.00	H	63.29	45.41	74.00	54.00	-10.71	-8.59
7438.00	H	61.81	43.84	74.00	54.00	-12.19	-10.16
9921.00	H	61.61	42.86	74.00	54.00	-12.39	-11.14
12398.00	H	60.14	42.31	74.00	54.00	-13.86	-11.69
14881.00	H	58.60	41.05	74.00	54.00	-15.40	-12.95
4961.00	V	64.72	44.46	74.00	54.00	-9.28	-9.54
7438.00	V	63.16	43.09	74.00	54.00	-10.84	-10.91
9921.00	V	61.92	43.03	74.00	54.00	-12.08	-10.97
12398.00	V	61.79	41.80	74.00	54.00	-12.21	-12.20
14878.00	V	59.81	40.04	74.00	54.00	-14.19	-13.96

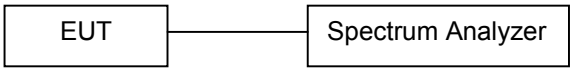
Other harmonics emissions are lower than 20dB below the allowable limit.

6. 6dB Bandwidth Measurement

6.1 Measurement Procedure

The EUT was operating in hopping mode or could be controlled its channel. Print out the test result from the spectrum by hard copy function.

6.2 Test SET-UP (Block Diagram of Configuration)



6.3 Measurement Equipment Used

Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	ESCI	10017	08/01/2014	08/01/2015

6.4 Limit

The minimum 6dB bandwidth shall be at least 500kHz.

6.5 Measurement Results

The following table is the setting of spectrum analyzer.

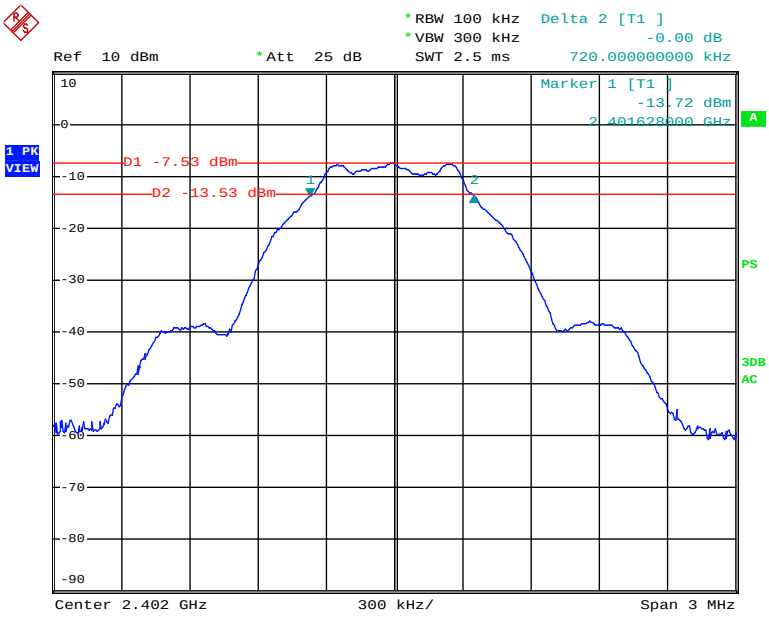
Attenuation	Auto
RB	100KHz
VB	300KHz
Detector	Peak
Trace	Max hold

Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	07/18/2015
Test By:	CX	Temperature :	20 ℃
Test Result:	Pass	Humidity :	54 %

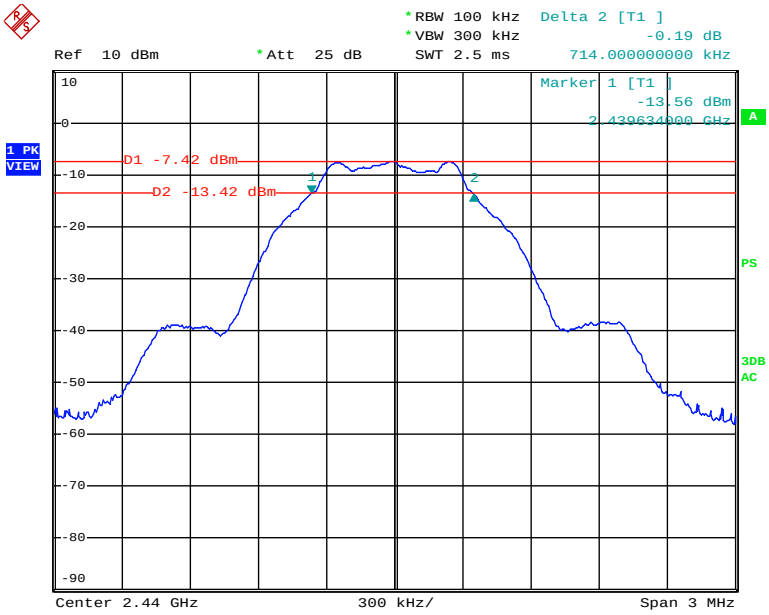
Channel number	Channel frequency (MHz)	Measurement level (KHz)	Required Limit (KHz)
00	2402	720	>500
19	2440	714	>500
39	2480	708	>500

Channel 00:



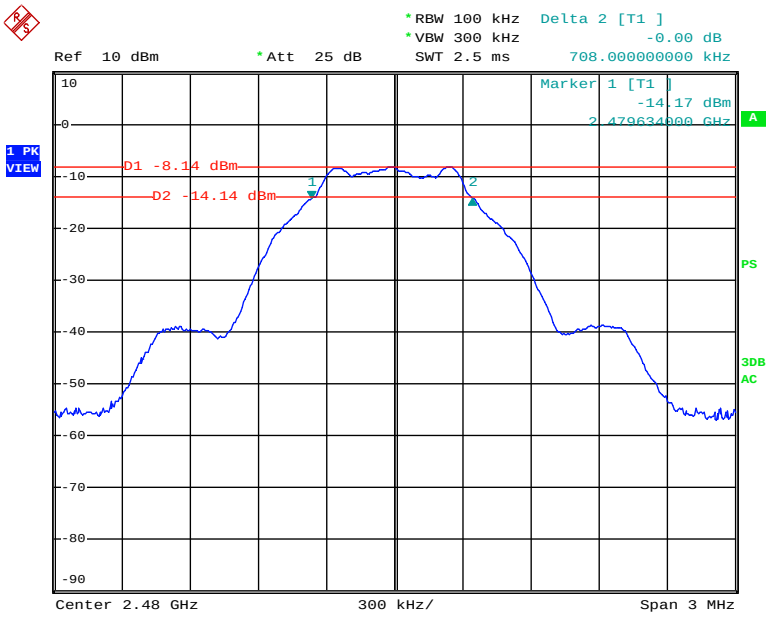
Date: 18.JUL.2015 04:00:44

Channel 19:



Date: 18.JUL.2015 04:01:51

Channel 39:



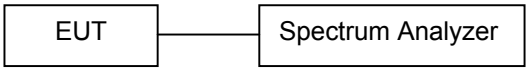
Date: 18.JUL.2015 04:03:12

7. Maximum Peak Output Power Test

7.1 Measurement Procedure

a. The Transmitter output (antenna port) was connected to the spectrum Analyzer.
b. Turn on the EUT and then record the peak power value.
c. Repeat above procedures on all channels needed to be tested.

7.2 Test SET-UP (Block Diagram of Configuration)



7.3 Measurement Equipment Used

Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	ESCI	10017	08/01/2014	08/01/2015

7.4 Peak Power output limit

The maximum peak power shall be less 1Watt.

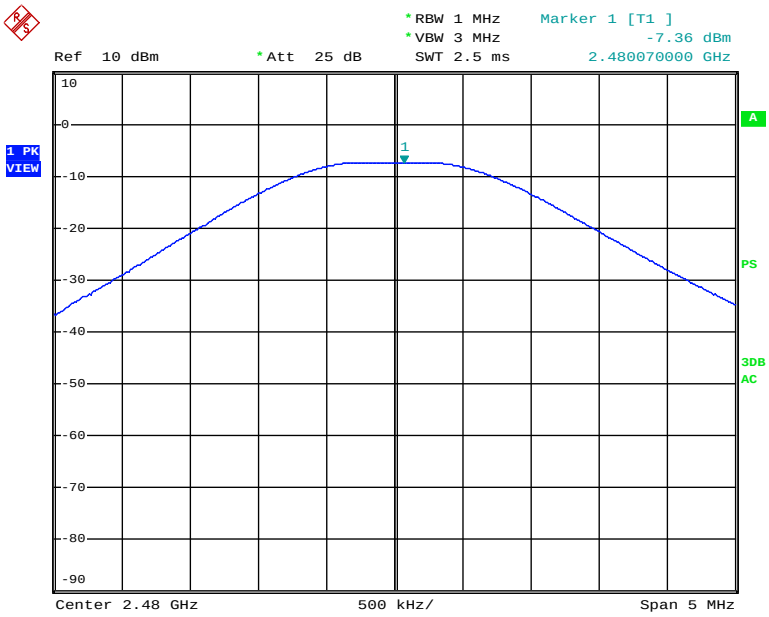
7.5 Measurement Results

Refer to attached data chart.

Spectrum Detector:	PK	Test Date:	07/18/2015
Test By:	CX	Temperature:	20 ℃
Test Result:	Pass	Humidity:	54 %

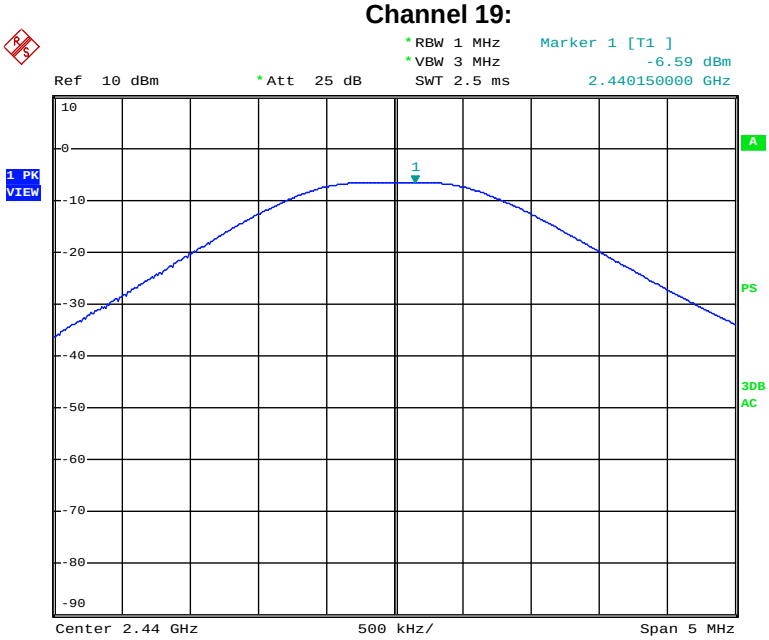
Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power output(mW)	Peak Power Limit(W)	Pass/Fail
00	2402	-7.36	0.18	1W(30dBm)	Pass
20	2440	-6.59	0.22	1W(30dBm)	Pass
39	2480	-6.75	0.21	1W(30dBm)	Pass

Channel 00:



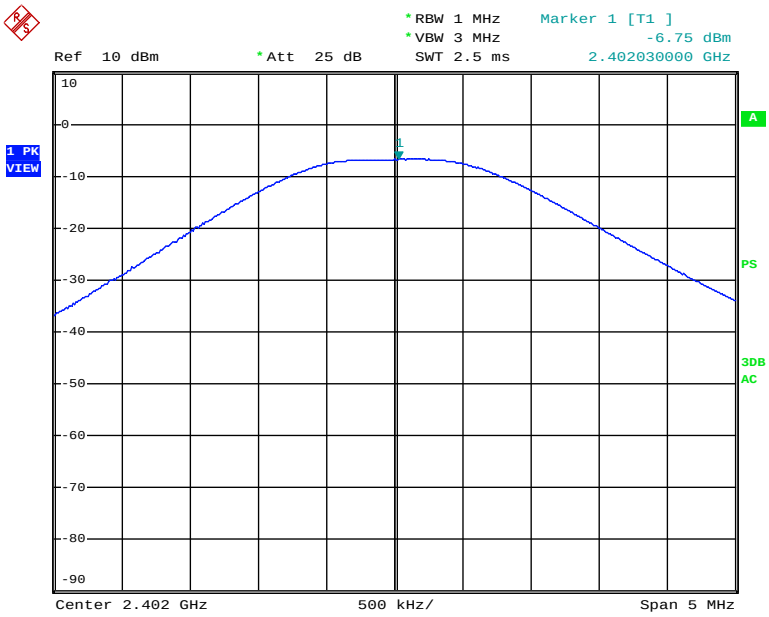
Date: 18.JUL.2015 04:03:58

Channel 19:



Date: 18.JUL.2015 04:04:29

Channel 39:



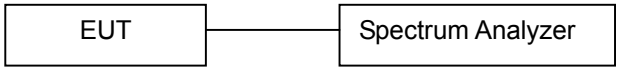
Date: 18.JUL.2015 04:04:50

8. Power Spectral Density Measurement

8.1 Measurement Procedure

The EUT was operating in Bluetooth mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

8.2 Test SET-UP (Block Diagram of Configuration)



8.3 Measurement Equipment Used

Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	ESCI	10017	08/01/2014	08/01/2015

8.4 Measurement Procedure

a. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
b. Set to the maximum power setting and enable the EUT transmit continuously.
c. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW)=3 kHz. Video bandwidth VBW =10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
d. Detector =Peak, Sweep time =Auto couple, Trace mode =Max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
e. Measure and record the results in the test report.
f. The Measured power density (dBm)/ 100KHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

8.5 Measurement Results

The following table is the setting of spectrum analyzer.

Spectrum analyzer	Setting
Attenuation	Auto
Span Frequency	Set the span to 1.5 times the DTS bandwidth.
RB	3KHz
VB	10KHz
Detector	Peak
Trace	Max hold
Sweep Time	Automatic

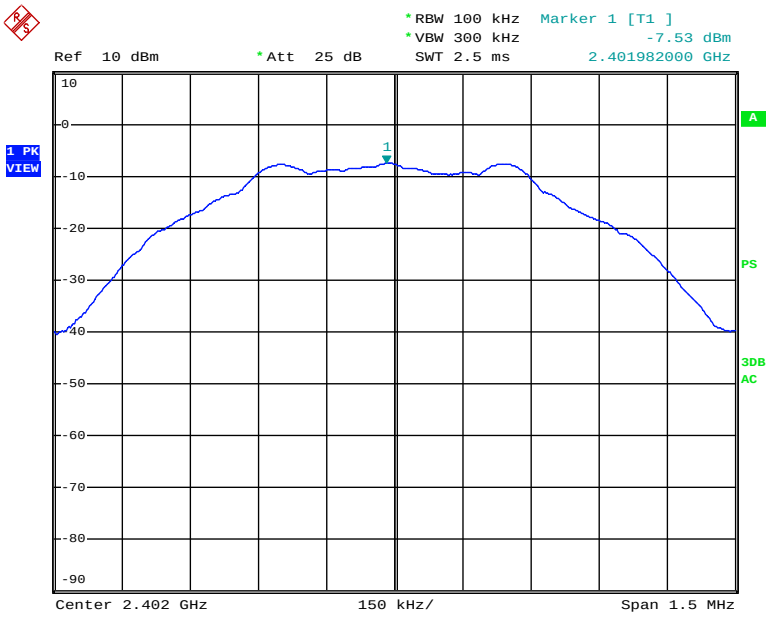
Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	07/18/2015
Test By:	CX	Temperature :	20 ℃
Test Result:	Pass	Humidity :	54 %

Channel number	Channel frequency (MHz)	Measurement level (dBm)		Required Limit (dBm/3kHz)	Pass/Fail
		PSD/100kHz	PSD/3kHz		
00	2402	-7.53	-22.13	8	Pass
20	2440	-7.37	-21.98	8	Pass
39	2480	-8.14	-22.69	8	Pass

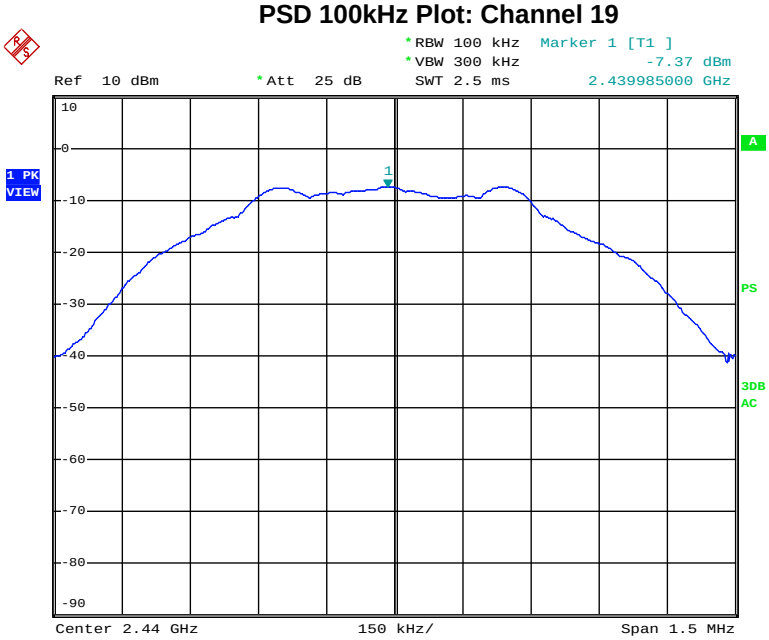
Note:
1. Measured power density(dBm) has offset with cable loss.
2. The measured power density(dBm)/100KHz is reference level and used as 20dBc down for Conducted Band Edges and Conducted Spurious Emission limit line.

PSD 100kHz Plot: Channel 00



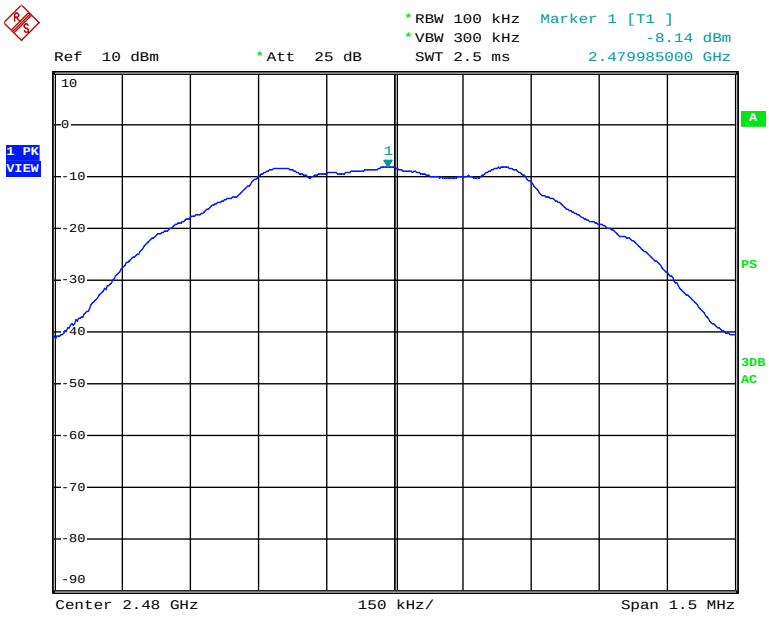
Date: 18.JUL.2015 04:08:55

PSD 100kHz Plot: Channel 19



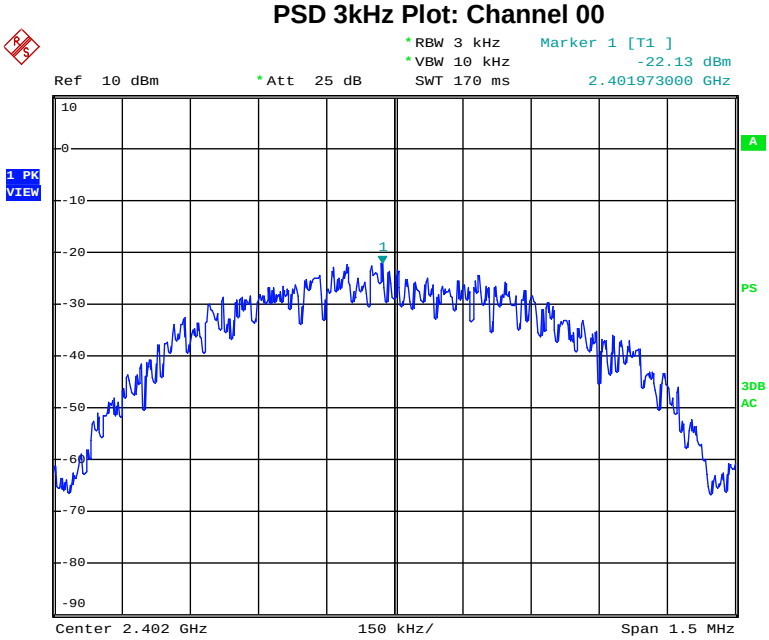
Date: 18.JUL.2015 04:09:23

PSD 100kHz Plot: Channel 39



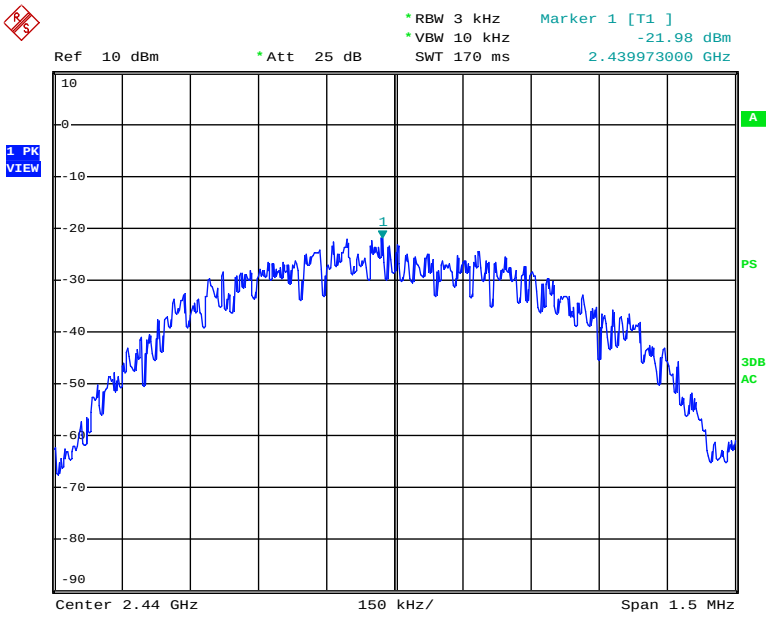
Date: 18.JUL.2015 04:09:55

PSD 3kHz Plot: Channel 00



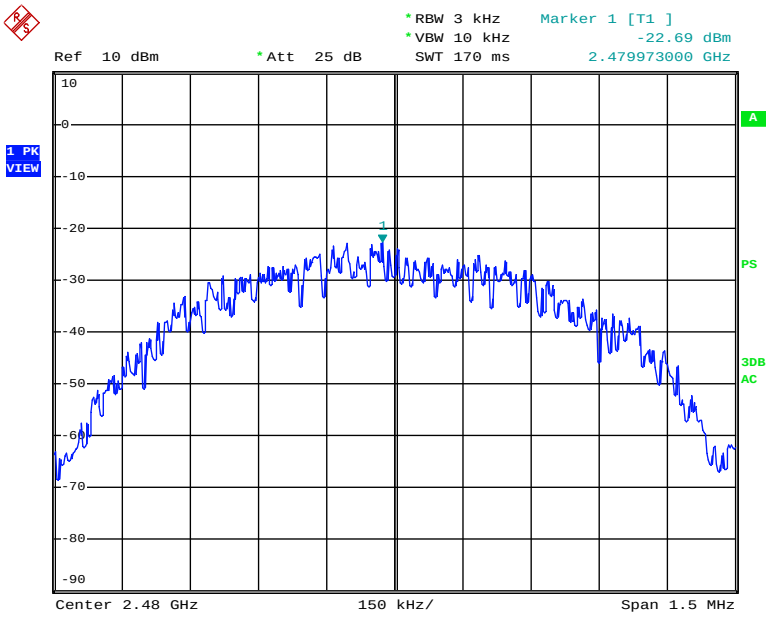
Date: 18.JUL.2015 04:10:32

PSD 3kHz Plot: Channel 19



Date: 18.JUL.2015 04:11:06

PSD 3kHz Plot: Channel 39



Date: 18.JUL.2015 04:11:36

9. Band Edge Test

9.1 Measurement Procedure

(A) Conducted method:

a. The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100KHz. The video bandwidth is set to 300KHz.
b. The spectrum from 30MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.
c. Preliminary tests on individual chains, and on all chains with a combiner, were performed. The worst-case configuration was with a combiner, therefore final test were preformed with all chains feeding a combiner.

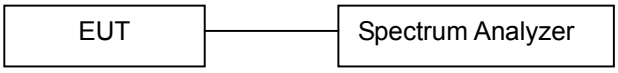
(B) Radiated method:

a. The EUT was Operating in hopping mode or could be controlled its channel. Printed out test result from the spectrum by hard copy function.
b. The EUT was placed on a turn table which is 0.8m above ground plane.
c. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
d. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
e. Repeat above procedures until all frequency measured were complete.

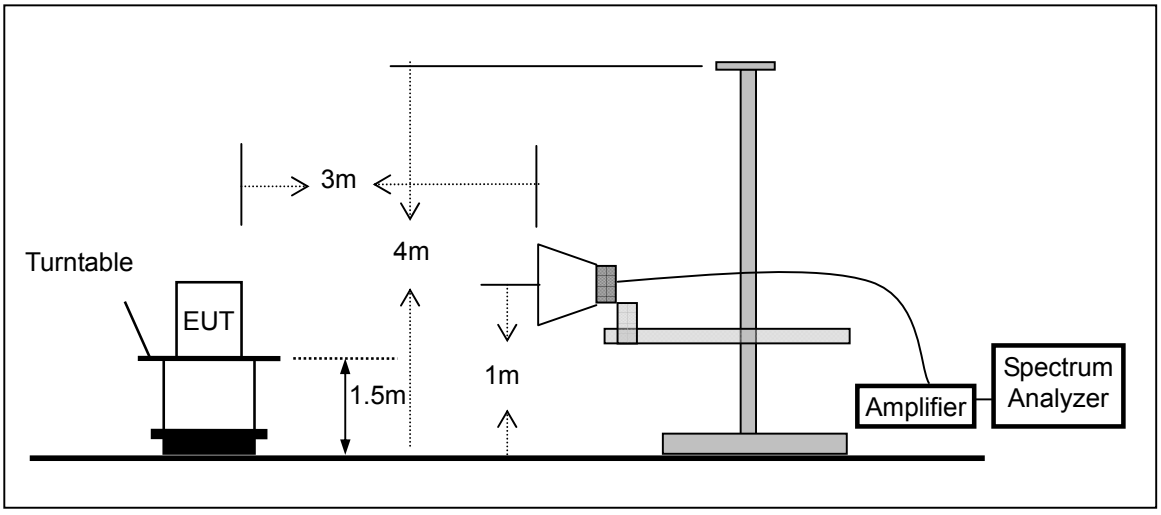
(Peak measurement: Peak detector, RBW=1MHz, VBW=3MHz, Sweep=Auto
Average measurement: Peak detector, RBW=1MHz, VBW=10Hz, Sweep=Auto)

9.2 Test SET-UP (Block Diagram of Configuration)

Conducted method:



Radiated method:



9.3 Measurement Equipment Used

Conducted method: Same as 6.3 Channel Separation Measurement.
Radiated method: Same as 5.3 Radiated Emission Measurement.

9.4 Measurement Results

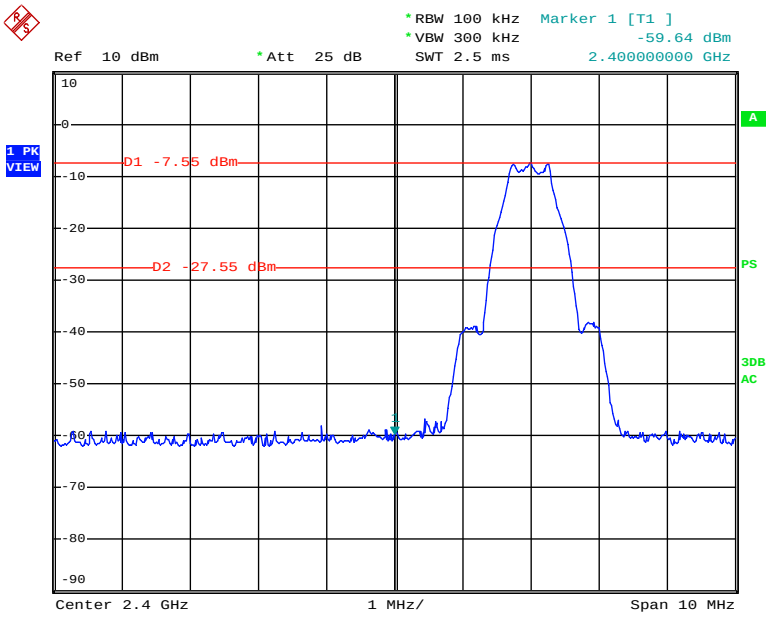
Pass
Refer to attached data chart.

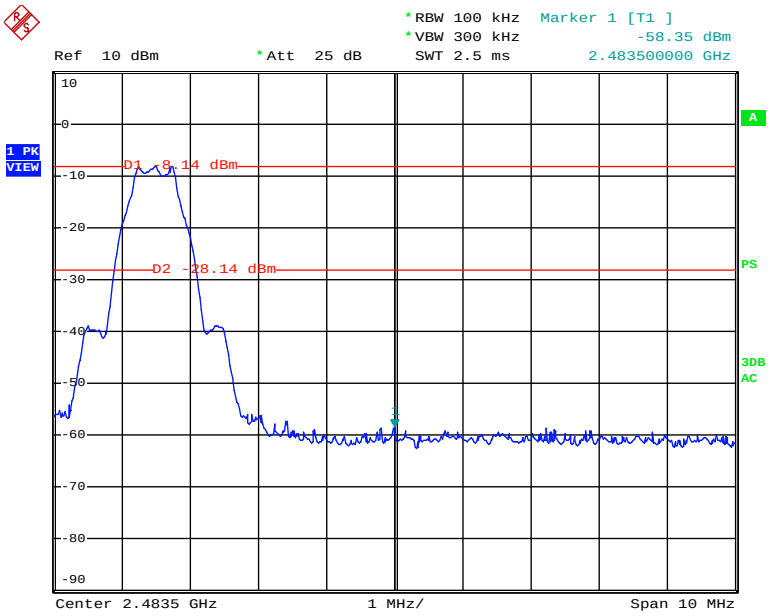
(A) Conducted method:

Spectrum Detector:	PK	Test Date :	07/18/2015
Test By:	CX	Temperature :	20 ℃
Test Result:	Pass	Humidity :	54 %

Frequency (MHz)	Peak Power Output(dBm)	Emission read Value(dBm)	Result of Band edge(dBc)	Band edge Limit(dBc)
2400.00	-1.41	-53.65	50.39	>20dBc
2483.50	-2.92	-55.36	52.44	>20dBc

Test Plot:





(B) Radiated method:

Frequency (MHz)	Antenna polarization (H/V)	Emission (dBuV/m)		Band edge Limit (dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
2390.00	H	63.74	45.30	74.00	54.00	-10.26	-8.70
2390.00	V	59.90	42.30	74.00	54.00	-14.10	-11.70
2484.50	H	48.36	30.50	74.00	54.00	-25.64	-23.50
2484.50	V	47.32	30.30	74.00	54.00	-26.68	-23.70

10. Antenna Application

10.1 Antenna requirement

The EUT'S antenna is met the requirement of FCC part 15C section 15.203 and 15.240.

FCC part 15C section 15.247 requirements:
Systems operating in the 2402-2480MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

10.2 Result

The EUT'S antenna is dipole antenna, and the antenna can't be replaced by the user, which in accordance to section 15.203, please refer to the internal photos. The antenna's gain is 2dBi and meets the requirement.

---The End---