FCC Part 15B
Measurement and Test Report

For

Shenzhen WeDo Century Industrial Co., Ltd

3rd Building, 6th, QingNing Road, QingHu Village. LongHua,

ShenZhen, 518109, China

FCC ID: 2AC9AHD6I

Test Rule(s):	FCC Part 15 Subpart B
Product Description:	Smart TV Box
Tested Model:	HD6i
Report No.:	STR16108087I-4
Tested Date:	2016-11-19 to 2016-11-29
Issued Date:	2016-11-30
Tested By:	Rode Liu / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	Jandy So / PSQ Manager

Prepared By:

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Shenzhen WeDo Century Industrial Co., Ltd
Address of applicant:	3rd Building, 6th, QingNing Road, QingHu Village. LongHua, ShenZhen, 518109, China
Manufacturer:	Shenzhen WeDo Century Industrial Co., Ltd
Address of manufacturer:	3rd Building, 6th, QingNing Road, QingHu Village. LongHua, ShenZhen, 518109, China

General Description of EUT	
Product Name:	Smart TV Box
Trade Name:	TVPRO
Model No.:	HD6i
Adding Model(s):	Roomie
Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model HD6i, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	Adapter DC 5V
Rated Current:	2A
Rated Power:	/
Power Adapter Model:	MO50200W111 Input:100-240V, 50/60Hz, 0.35A; Output: 5V/2A
Lowest Internal Frequency:	32.768kHz
Highest Internal Frequency:	1.8GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Shenzhen WeDo Century Industrial Co., Ltd in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. 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 our files and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	TF Card playing	Insert TF card, HDMI output, connected USB mose and earphone, “Ping” with PC, Running with software “EMCTest” and display a pattern of a full screen of scrolling letter-H characters
TM2	U Disk playing	Insert U Disk, HDMI output, connected USB mose and earphone, “Ping” with PC, Running with software “EMCTest” and display a pattern of a full screen of scrolling letter-H characters
TM3	/	/
TM4	/	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
AC cable	1.0	Unshielded	Without Core
RJ45	1.2	Unshielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Display	DELL	U2410f	50642P246601H(B) ZL
Notebook	ISUS	X42J	
Mouse	Dell	M120	

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
HDMI cable	1.0	Unshielded	Without Core

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2016-06-04	2017-06-03
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2016-06-04	2017-06-03
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2016-06-04	2017-06-03
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2016-06-04	2017-06-03
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2016-06-04	2017-06-03
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2016-06-04	2017-06-03
SEMT-1042	Horn Antenna	ETS	3117	00086197	2016-06-04	2017-06-03
SEMT-1121	Horn Antenna	ETS	3116B	00088203	2016-06-04	2017-06-03
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2016-06-04	2017-06-03
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2016-06-04	2017-06-03
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2016-06-04	2017-06-03
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2016-06-04	2017-06-03

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.107 (a)	Conducted Emissions	Compliant
§ 15.109 (a)	Radiated Emissions	Compliant

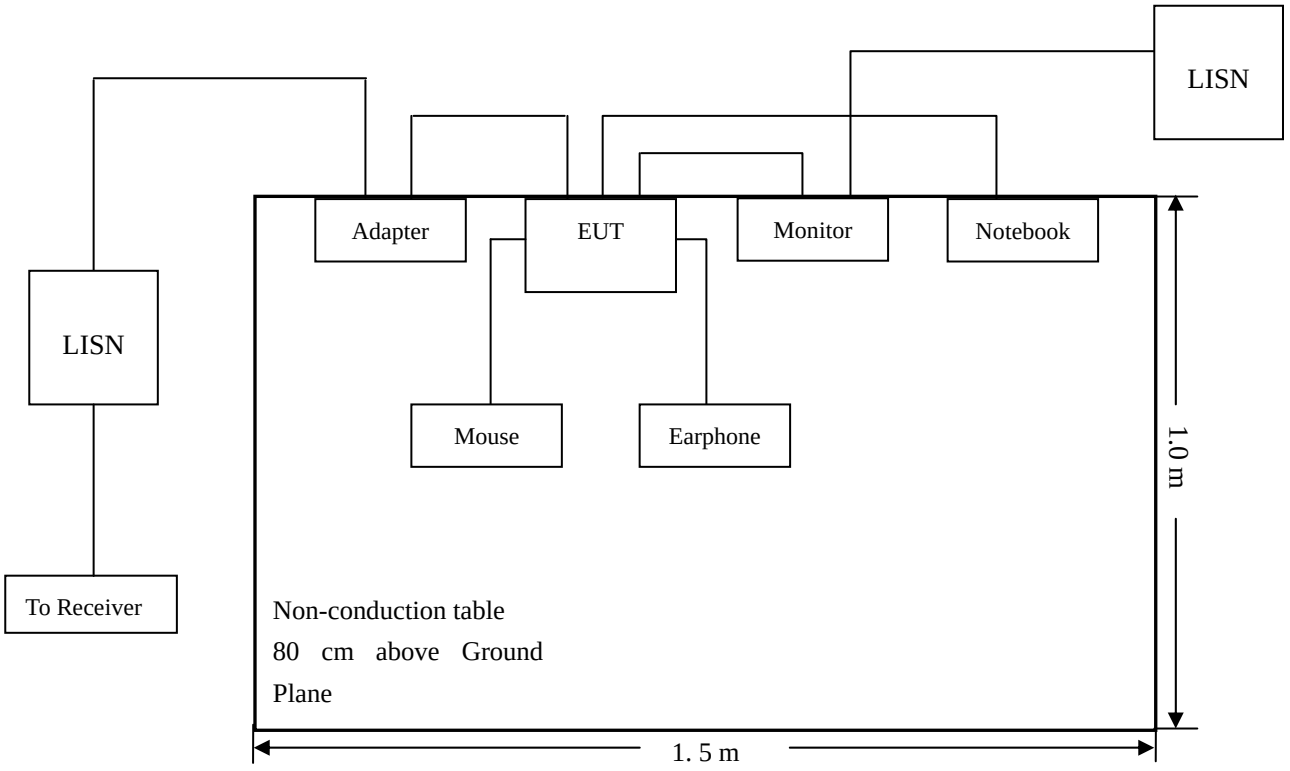
N/A: not applicable

3. Conducted Emissions

3.1 Test Procedure

Test is conducting under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.2 Basic Test Setup Block Diagram



3.3 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.4 Summary of Test Results/Plots

According to the data in section 3.5, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

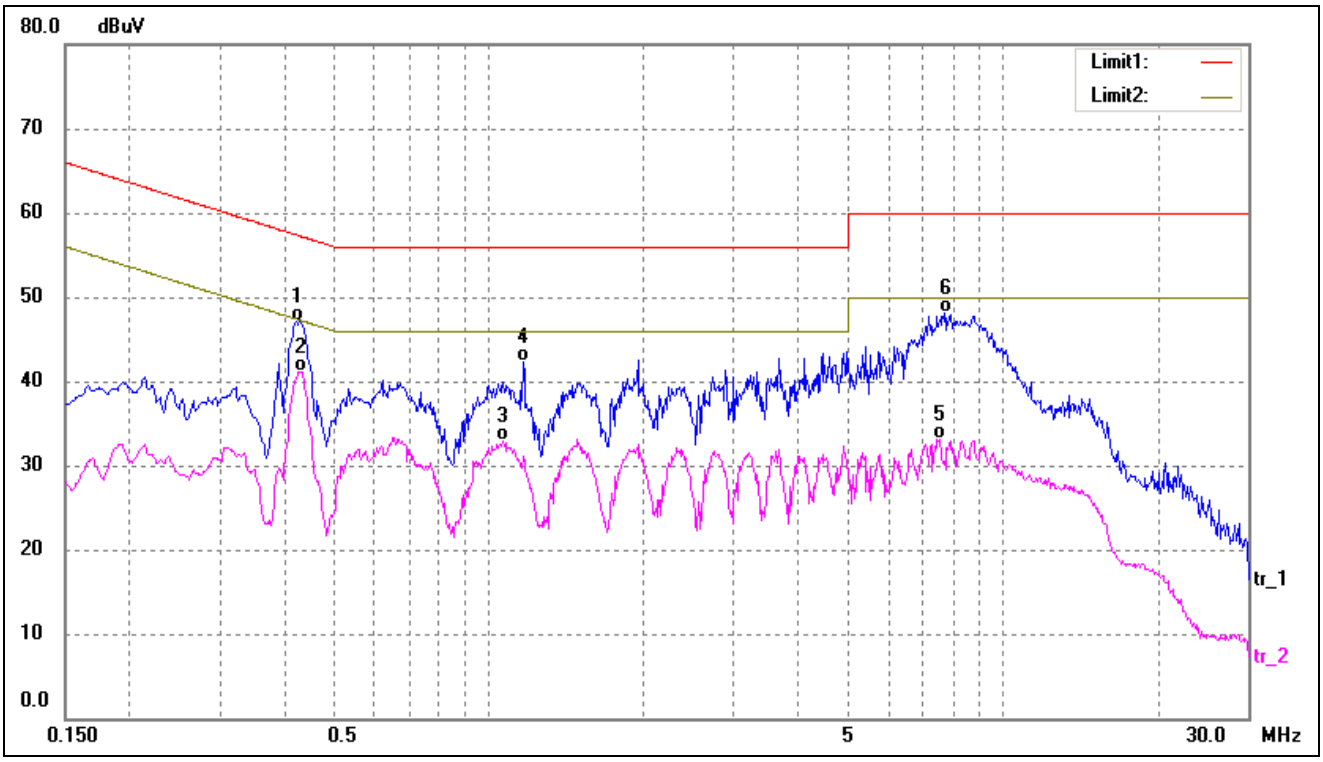
-5.98 dB at **0.4340 MHz** in the **Neutral at TM1**, **AVG** detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

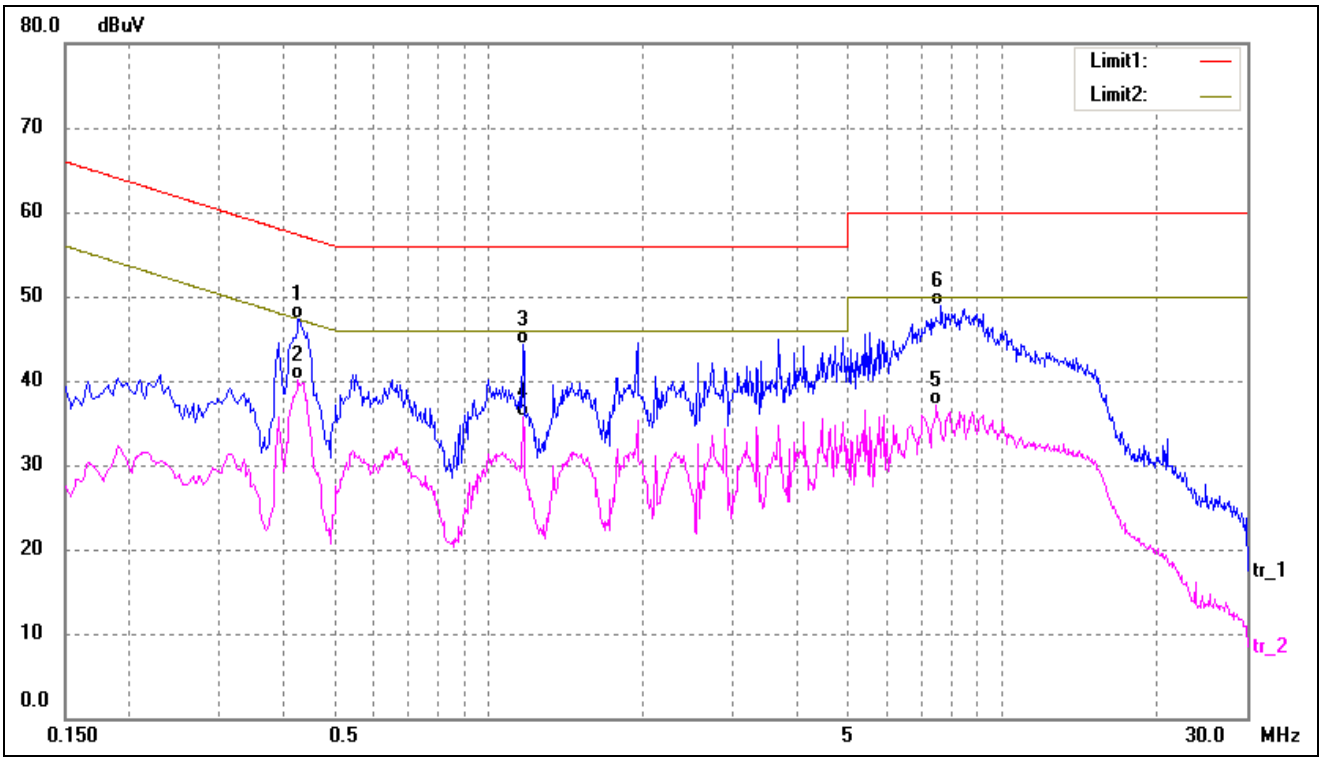
EUT: *Smart TV Box*
Tested Model: *HD6i*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.4220	37.33	9.80	47.13	57.41	-10.28	QP
2*	0.4340	31.40	9.80	41.20	47.18	-5.98	AVG
3	1.0660	23.11	9.76	32.87	46.00	-13.13	AVG
4	1.1700	32.51	9.76	42.27	56.00	-13.73	QP
5	7.5340	23.55	9.59	33.14	50.00	-16.86	AVG
6	7.7020	38.57	9.58	48.15	60.00	-11.85	QP

Test Specification: *Line*

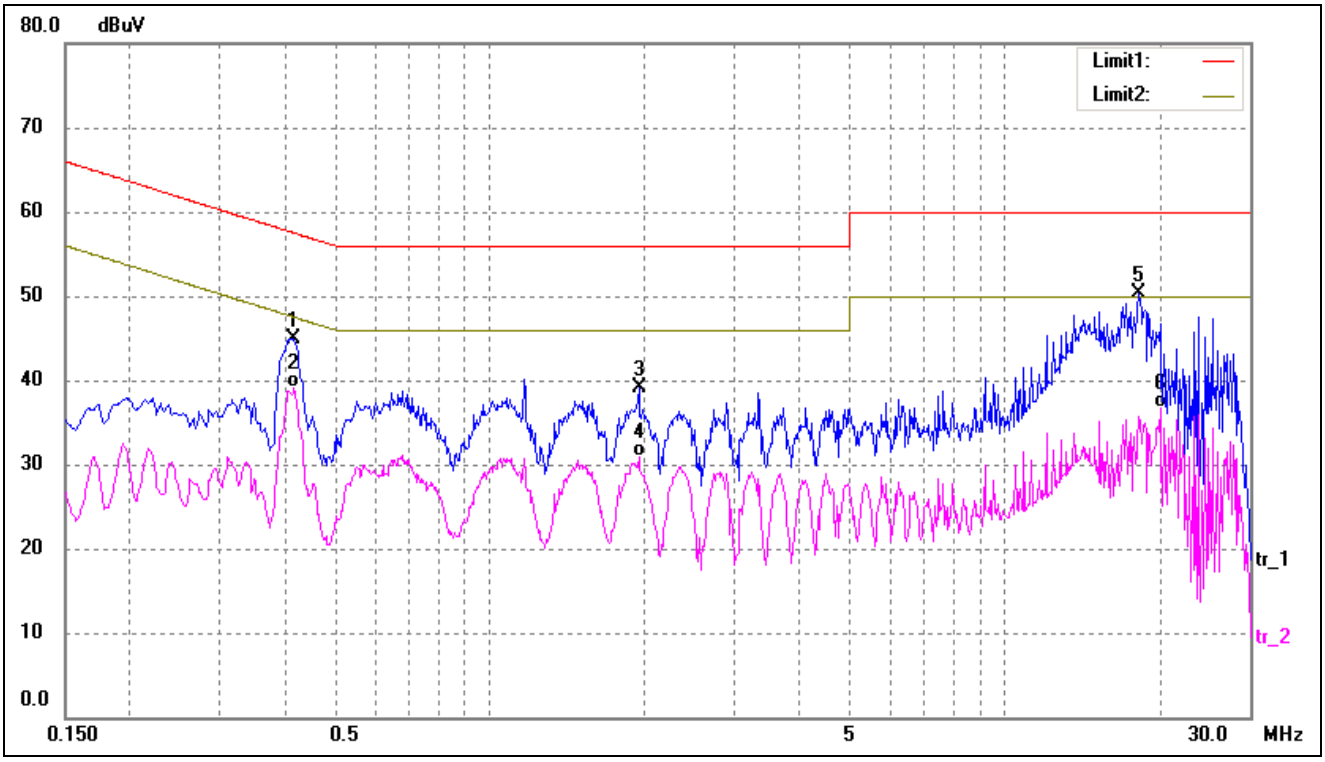


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.4260	37.53	9.80	47.33	57.33	-10.00	QP
2*	0.4260	30.25	9.80	40.05	47.33	-7.28	AVG
3	1.1700	34.61	9.76	44.37	56.00	-11.63	QP
4	1.1700	26.02	9.76	35.78	46.00	-10.22	AVG
5	7.4660	27.42	9.59	37.01	50.00	-12.99	AVG
6	7.6100	39.25	9.59	48.84	60.00	-11.16	QP

Plot of Conducted Emissions Test Data

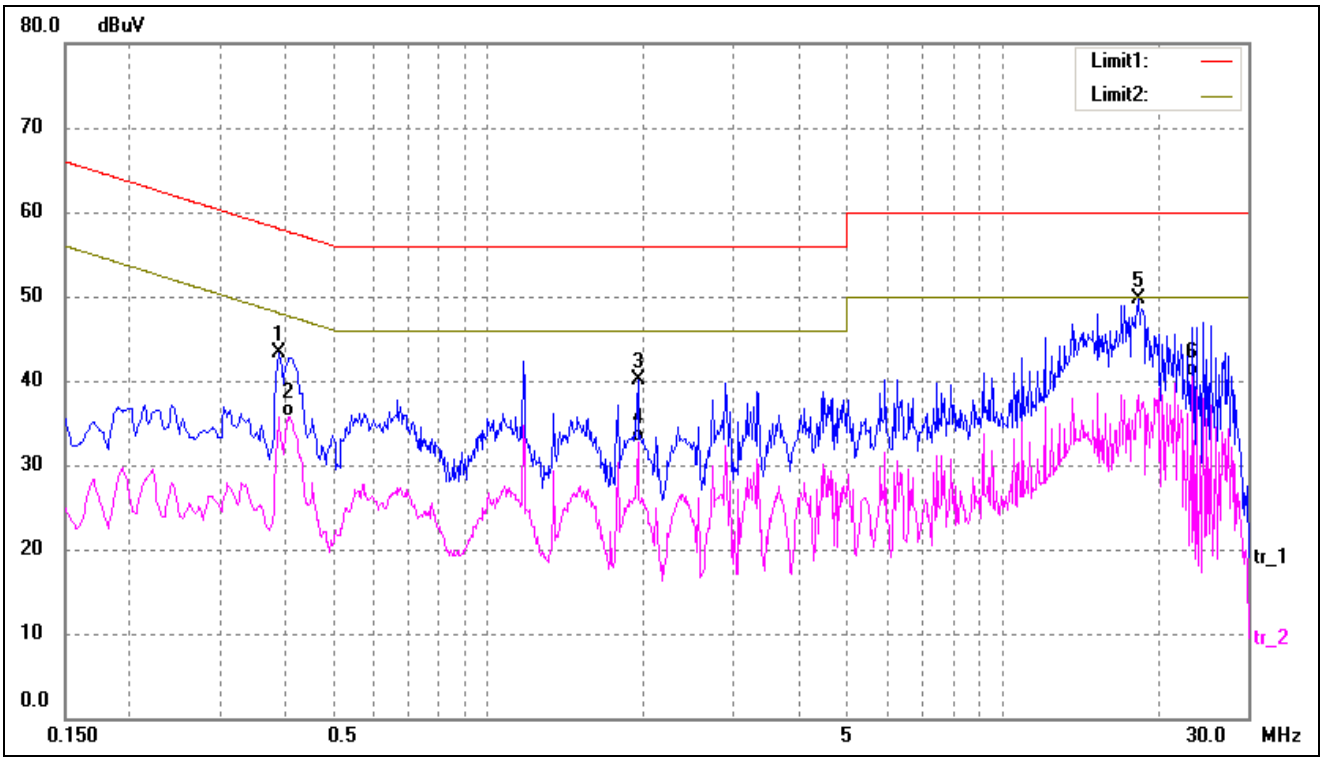
EUT: *Smart TV Box*
Tested Model: *HD6i*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.4180	35.07	9.80	44.87	57.49	-12.62	peak
2*	0.4180	29.26	9.80	39.06	47.49	-8.43	AVG
3	1.9500	29.37	9.74	39.11	56.00	-16.89	peak
4	1.9500	21.09	9.74	30.83	46.00	-15.17	AVG
5	18.2779	40.61	9.66	50.27	60.00	-9.73	peak
6	20.1140	27.11	9.68	36.79	50.00	-13.21	AVG

Test Specification: *Line*

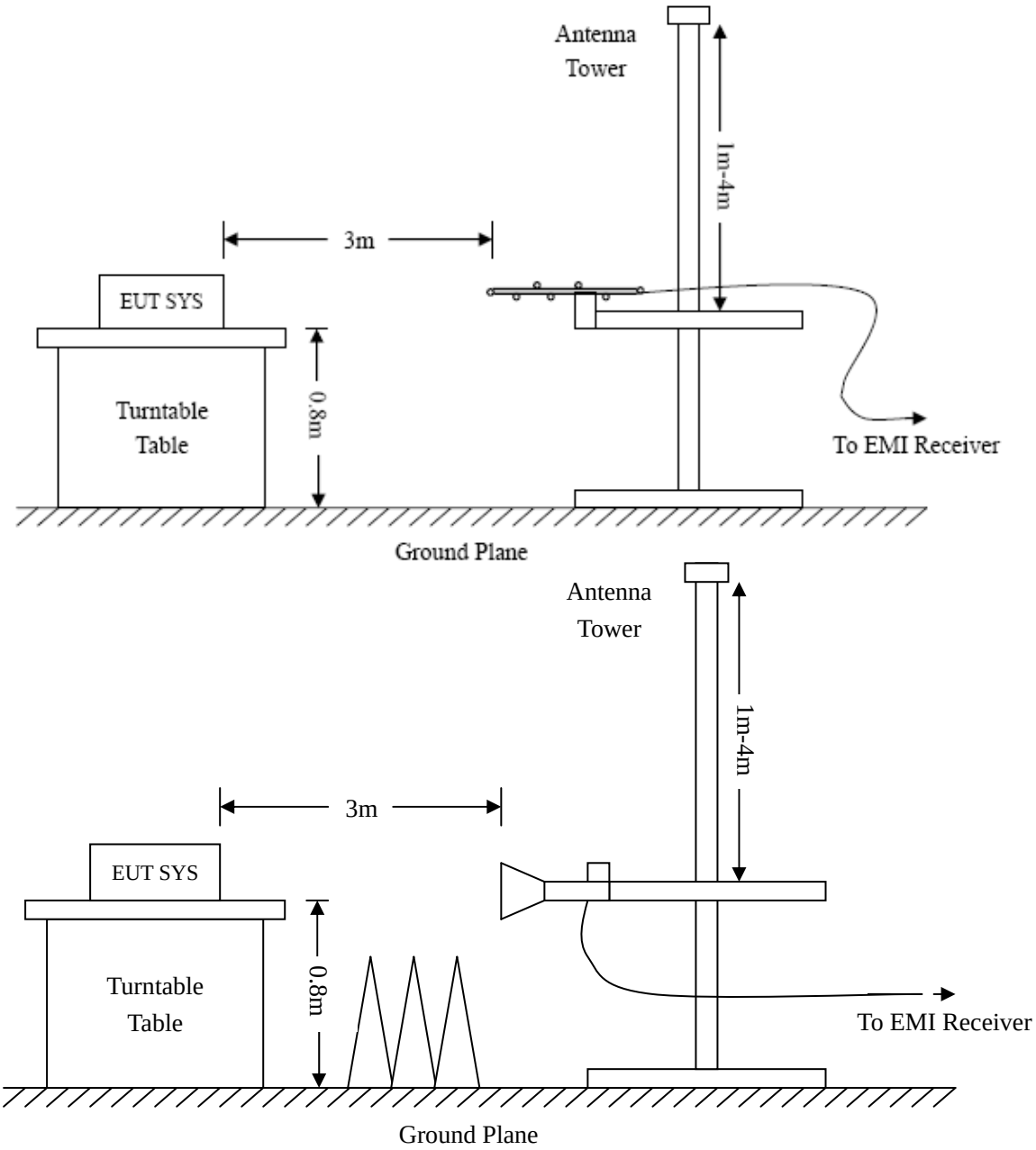


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.3900	33.50	9.80	43.30	58.06	-14.76	peak
2	0.4099	25.87	9.80	35.67	47.65	-11.98	AVG
3	1.9499	30.36	9.74	40.10	56.00	-15.90	peak
4	1.9499	23.03	9.74	32.77	46.00	-13.23	AVG
5	18.3858	39.96	9.66	49.62	60.00	-10.38	peak
6*	23.4020	30.79	9.69	40.48	50.00	-9.52	AVG

4. Radiated Emissions

4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.109 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.



4.2 Test Receiver Setup

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15.109(a) Limit

4.4 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.5 Summary of Test Results/Plots

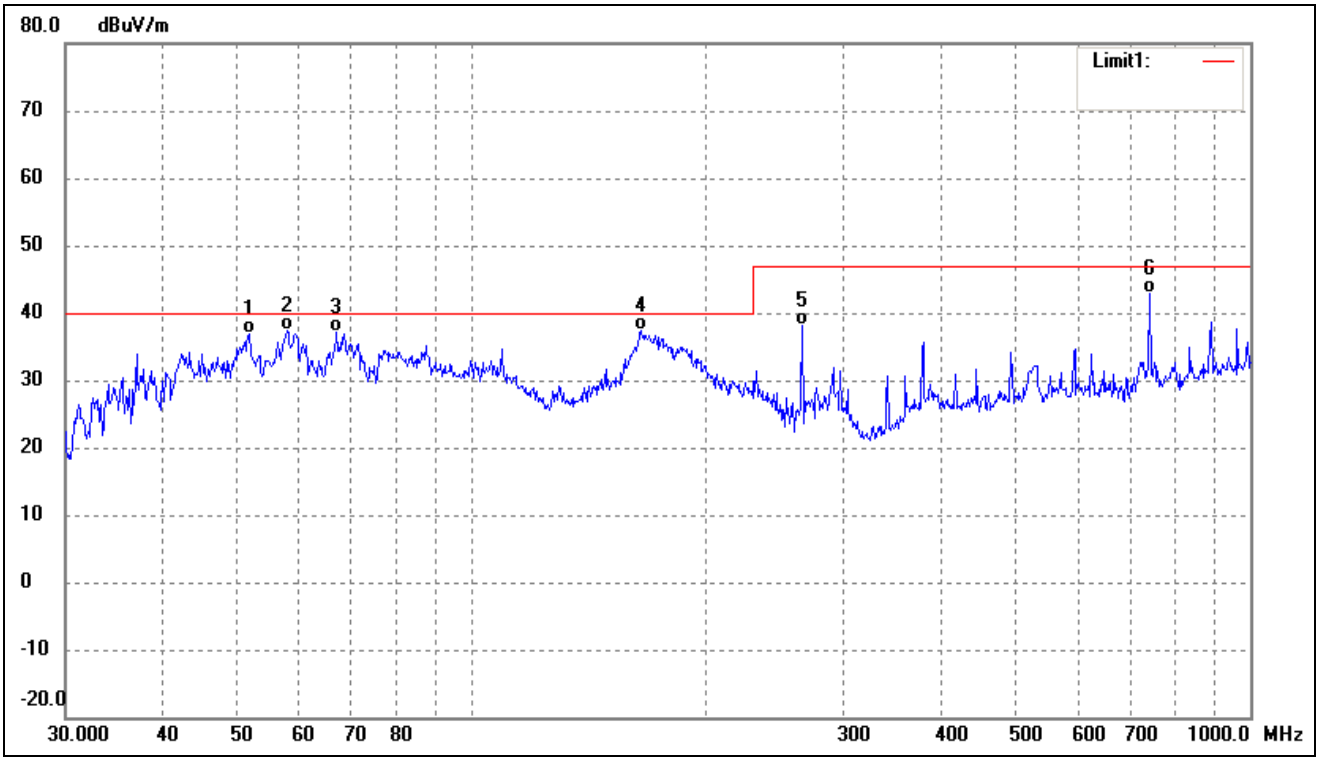
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-2.55 dB at **33.2111 MHz** in the **Vertical** polarization at TM2, **30MHz** to **12.75 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

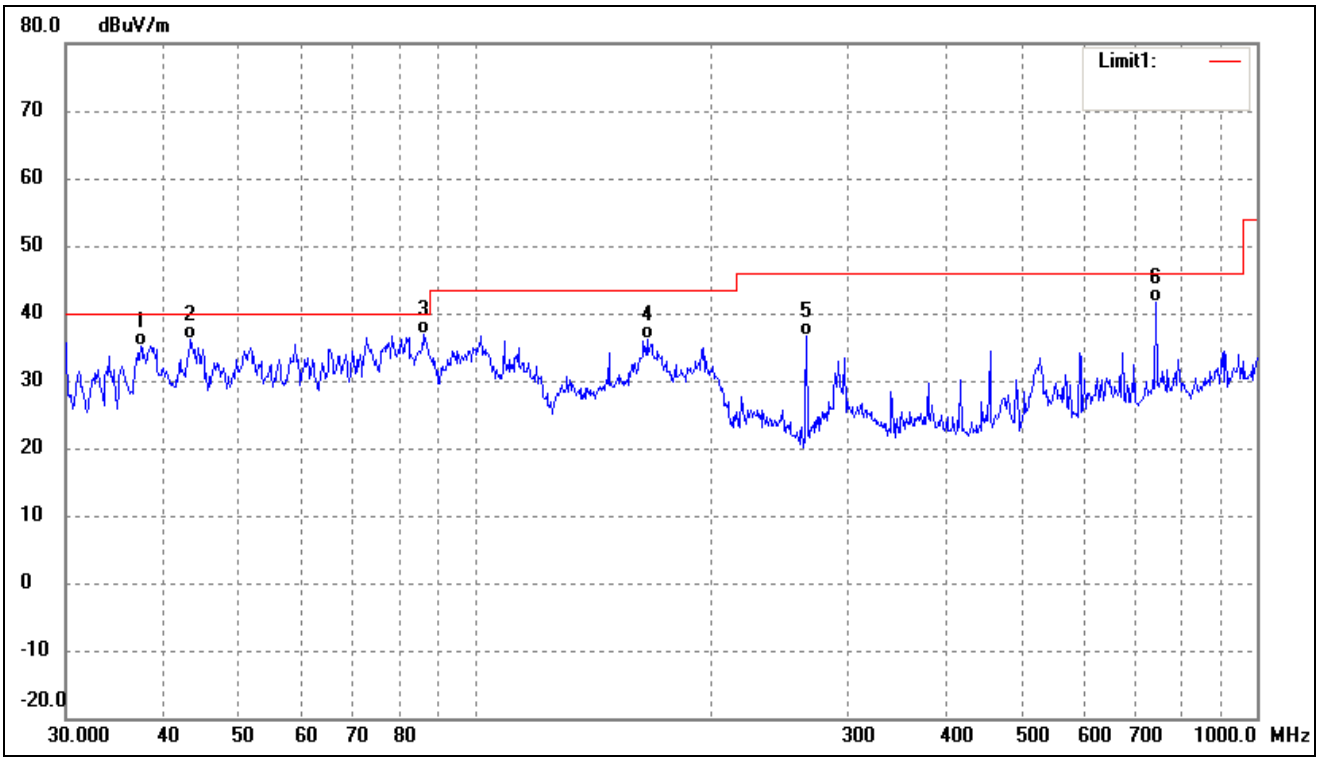
EUT: *Smart TV Box*
Tested Model: *HD6i*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	51.6615	47.72	-10.88	36.84	40.00	-3.16	58	150	QP
2	57.7961	48.90	-11.54	37.36	40.00	-2.64	326	100	QP
3	66.9668	50.97	-13.86	37.11	40.00	-2.89	29	120	QP
4	164.9074	52.11	-14.84	37.27	40.00	-2.73	209	100	QP
5	265.6757	48.07	-9.91	38.16	47.00	-8.84	359	200	QP
	742.2586	44.02	-1.04	42.98	47.00	-4.02	256	100	QP

Test Specification: *Vertical*

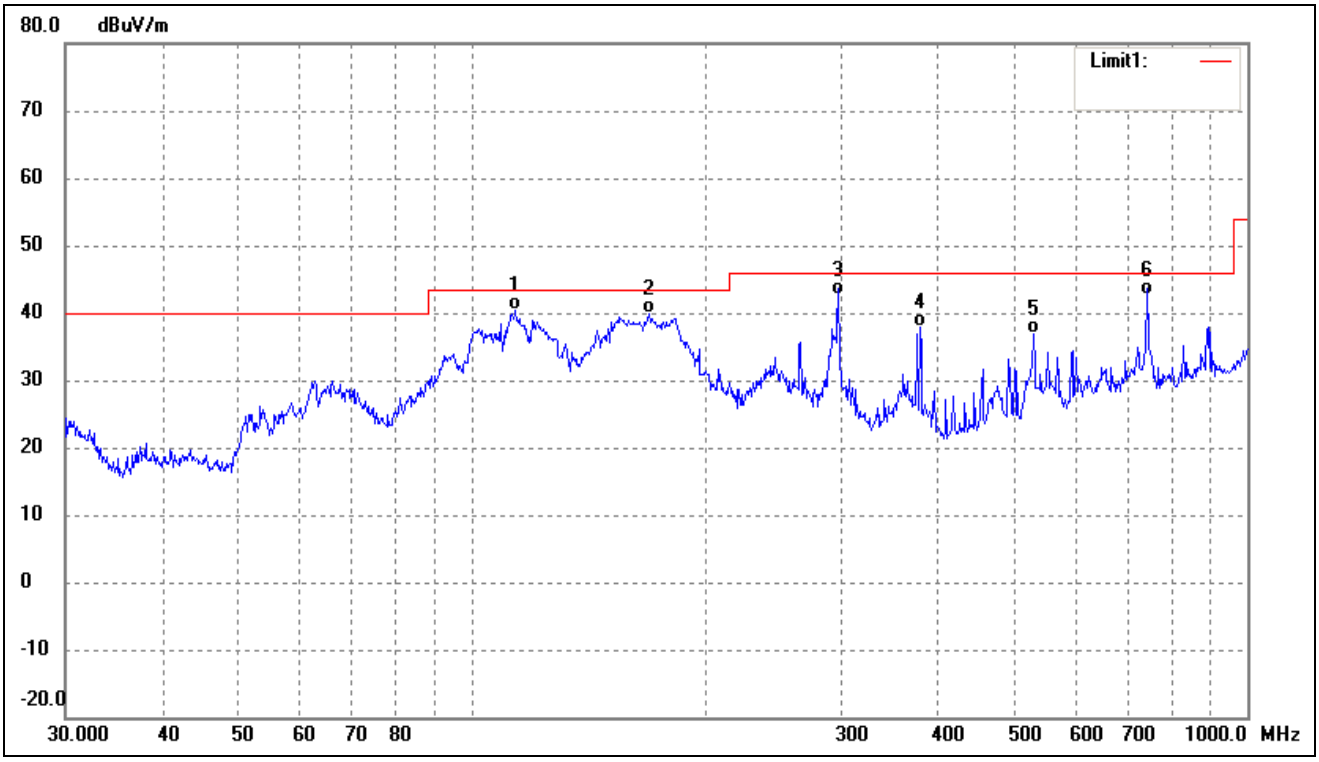


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	37.4164	46.14	-11.00	35.14	40.00	-4.86	51	100	QP
2	43.3534	46.55	-10.43	36.12	40.00	-3.88	308	100	QP
3	85.8983	52.28	-15.48	36.80	40.00	-3.20	120	100	QP
4	166.0680	50.96	-14.79	36.17	43.50	-7.33	359	100	QP
5	265.6757	46.52	-9.91	36.61	46.00	-9.39	359	100	QP
	742.2586	42.73	-1.04	41.69	46.00	-4.31	261	100	QP

Plot of Radiated Emissions Test Data

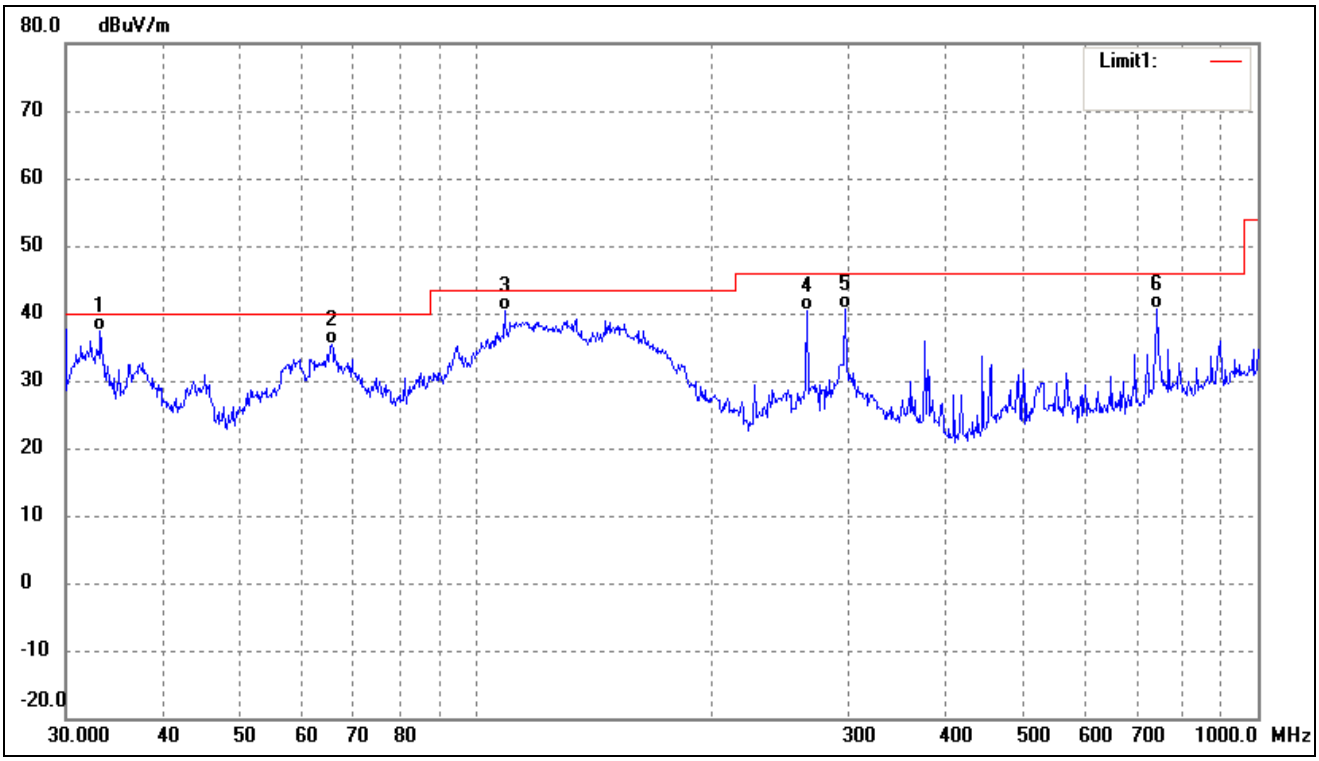
EUT: *Smart TV Box*
Tested Model: *HD6i*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	114.1137	53.34	-13.02	40.32	43.50	-3.18	236	150	QP
2	169.5989	54.48	-14.64	39.84	43.50	-3.66	17	100	QP
3	297.2241	52.23	-9.72	42.51	46.00	-3.49	45	120	QP
4	378.5842	45.02	-7.06	37.96	46.00	-8.04	65	100	QP
5	530.1014	42.71	-5.88	36.83	46.00	-9.17	151	200	QP
	742.2586	43.58	-1.04	42.54	46.00	-3.46	35	100	QP

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	33.2111	49.41	-11.96	37.45	40.00	-2.55	145	100	QP
2	65.5725	50.43	-15.12	35.31	40.00	-4.69	36	100	QP
3	109.0284	52.89	-12.44	40.45	43.50	-3.05	217	100	QP
4	265.6757	50.26	-9.91	40.35	46.00	-5.65	51	100	QP
5	297.2241	50.24	-9.72	40.52	46.00	-5.48	48	100	QP
	742.2586	41.58	-1.04	40.54	46.00	-5.46	125	100	QP

Note: Testing is carried out with frequency rang 30MHz to the 12.75GHz, which above 12.75GHz are attenuated more than 20 dB below the permissible value and are not showed in the test report.

******* END OF REPORT *******