

FCC Part 15B

Measurement and Test Report

For

UrbanHello

13 rue Saint Antoine 75004 Paris France

FCC ID: 2AK6RUH05

Test Rule(s):	<u>FCC Part 15 Subpart B</u>
Product Description:	<u>REMI</u>
Tested Model:	<u>UH05xxxxx</u>
Report No.:	<u>STR17028021I-4</u>
Tested Date:	<u>2017-03-07 to 2017-05-15</u>
Issued Date:	<u>2017-05-16</u>
Tested By:	<u>Neil Wong / Engineer</u>
Reviewed By:	<u>Silin Chen / EMC Manager</u>
Approved & Authorized By:	<u>Jandy So / PSQ Manager</u>
Prepared By:	

Neil Wong

Silin Chen

Jandy So

Shenzhen SEM.Test Technology Co., Ltd.

1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C. (518101)

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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.

TABLE OF CONTENTS

1. GENERAL INFORMATION	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
1.2 TEST STANDARDS.....	4
1.3 TEST METHODOLOGY	4
1.4 TEST FACILITY	4
1.5 EUT SETUP AND OPERATION MODE	5
1.6 MEASUREMENT UNCERTAINTY	5
1.7 TEST EQUIPMENT LIST AND DETAILS	6
2. SUMMARY OF TEST RESULTS	7
3. CONDUCTED EMISSIONS	8
3.1 TEST PROCEDURE.....	8
3.2 BASIC TEST SETUP BLOCK DIAGRAM.....	8
3.3 ENVIRONMENTAL CONDITIONS	8
3.4 SUMMARY OF TEST RESULTS/PLOTS	8
3.5 CONDUCTED EMISSIONS TEST DATA.....	9
4. RADIATED EMISSIONS	15
4.1 TEST PROCEDURE.....	15
4.2 TEST RECEIVER SETUP	16
4.3 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	16
4.4 ENVIRONMENTAL CONDITIONS	16
4.5 SUMMARY OF TEST RESULTS/PLOTS	16

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: UrbanHello
Address of applicant: 13 rue Saint Antoine 75004 Paris France

Manufacturer: Maxway Technology Co., Ltd
Address of manufacturer: Building4, Section A, 3rd industrial zone of Tangtou, Shiyao Town, Bao'an district, Shenzhen, Guangdong 518108, China

General Description of EUT	
Product Name:	REMI
Trade Name:	UrbanHello
Model No.:	UH05xxxxx
Adding Model(s):	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 5.0V
Rated Current:	1A
Rated Power:	5W
Power Adapter Model:	Adapter 1(black): YW1200M I/P: AC 100-240V, 50/60Hz, 0.2A; O/P: DC 5V, 1.2A
	Adapter 2(white): A062-0501000IU I/P: AC 100-240V, 50/60Hz, 0.3A; O/P: DC 5V, 1000mA
Lowest Internal Frequency	38.4MHz
Highest Internal Frequency:	38.4MHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the UrbanHello 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	Charging & playing	Connect to U Disk
TM2	downloading	Connect to PC

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB cable	1.2	Unshielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

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

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	$\pm 2.88\text{dB}$
Transmitter Spurious Emissions	Radiated	$\pm 5.1\text{dB}$

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-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

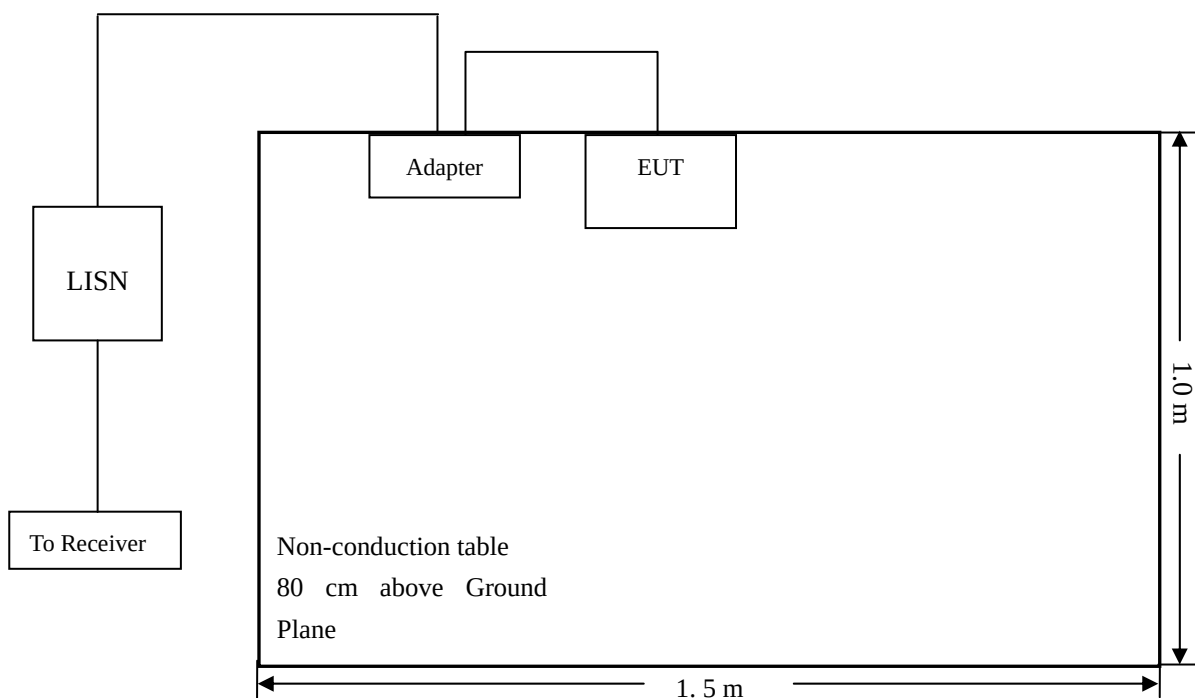
N/A: not applicable

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 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

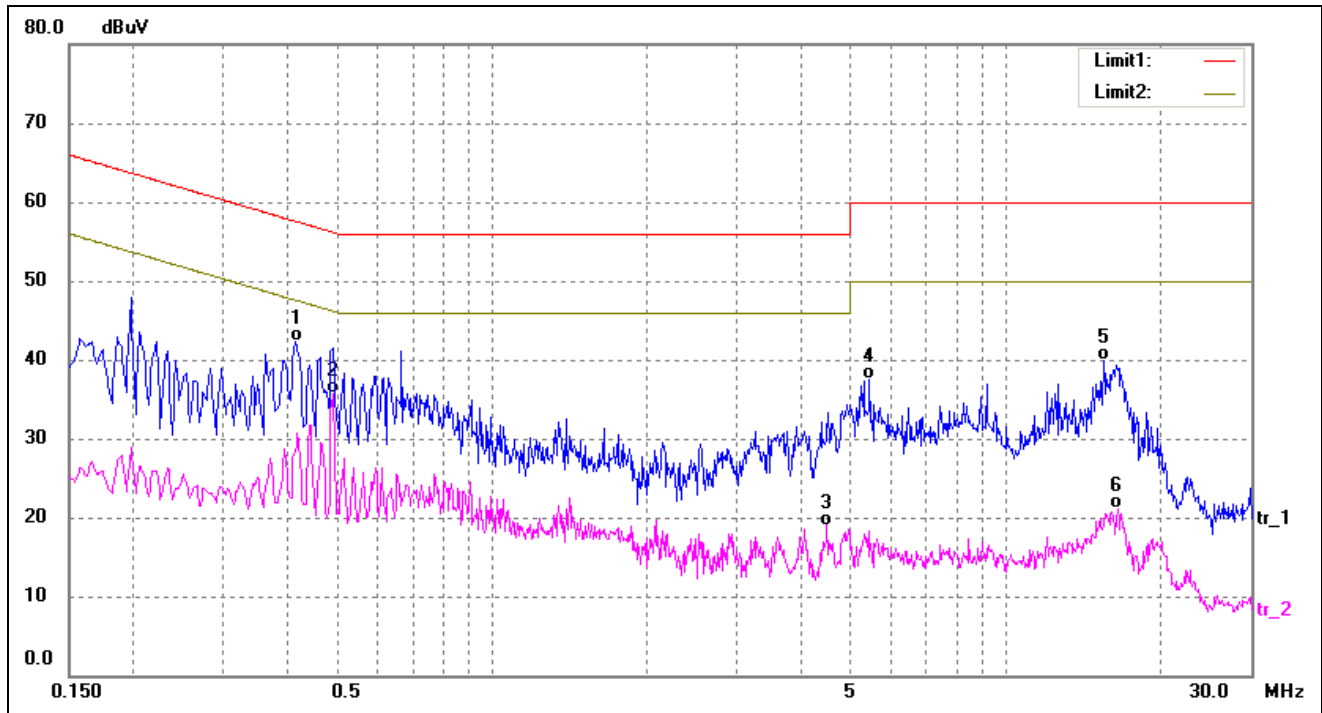
-4.82 dB at 0.4900 MHz in the Line mode, Average detector, TM1 mode 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

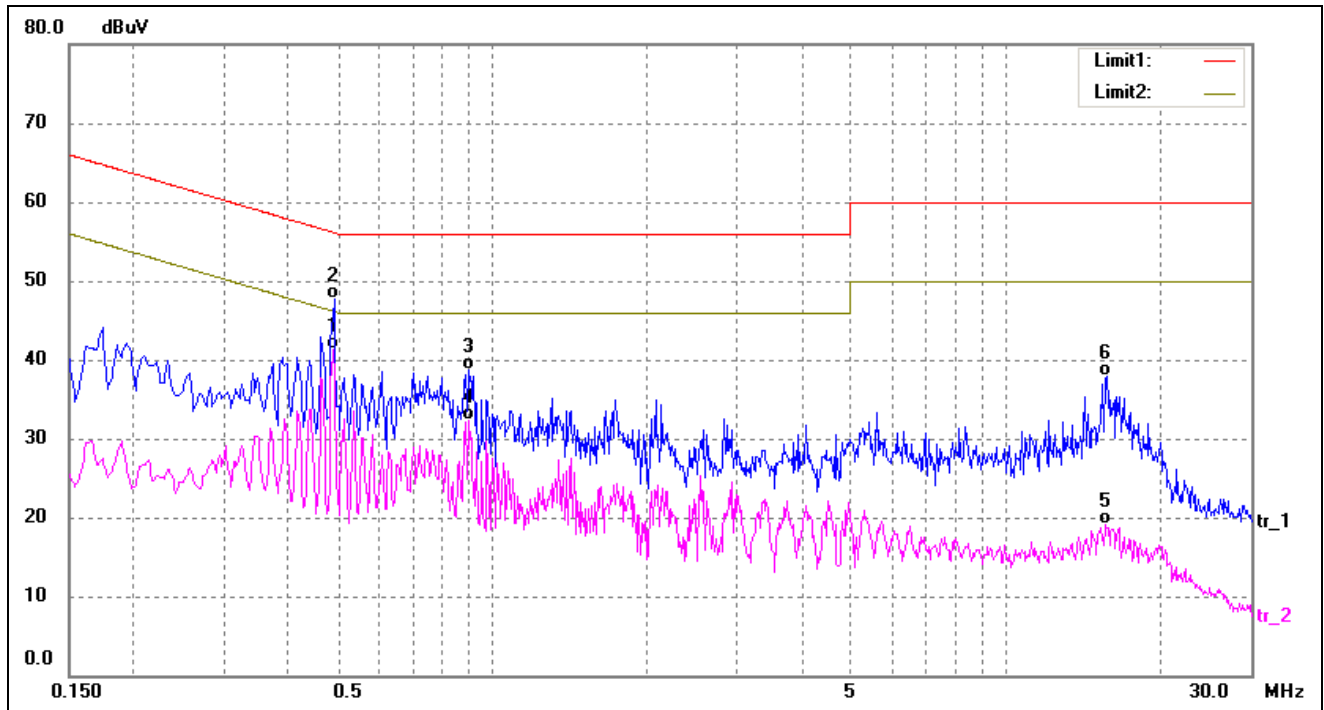
EUT: REMI
Tested Model: UH05xxxxx
Operating Condition: TM1 (adapter: YW1200M)
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.4140	32.42	9.80	42.22	57.57	-15.35	QP
2*	0.4900	25.95	9.80	35.75	46.17	-10.42	AVG
3	4.4980	9.33	9.67	19.00	46.00	-27.00	AVG
4	5.4460	27.91	9.65	37.56	60.00	-22.44	QP
5	15.5100	30.34	9.62	39.96	60.00	-20.04	QP
6	16.5500	11.52	9.63	21.15	50.00	-28.85	AVG

Test Specification: Line

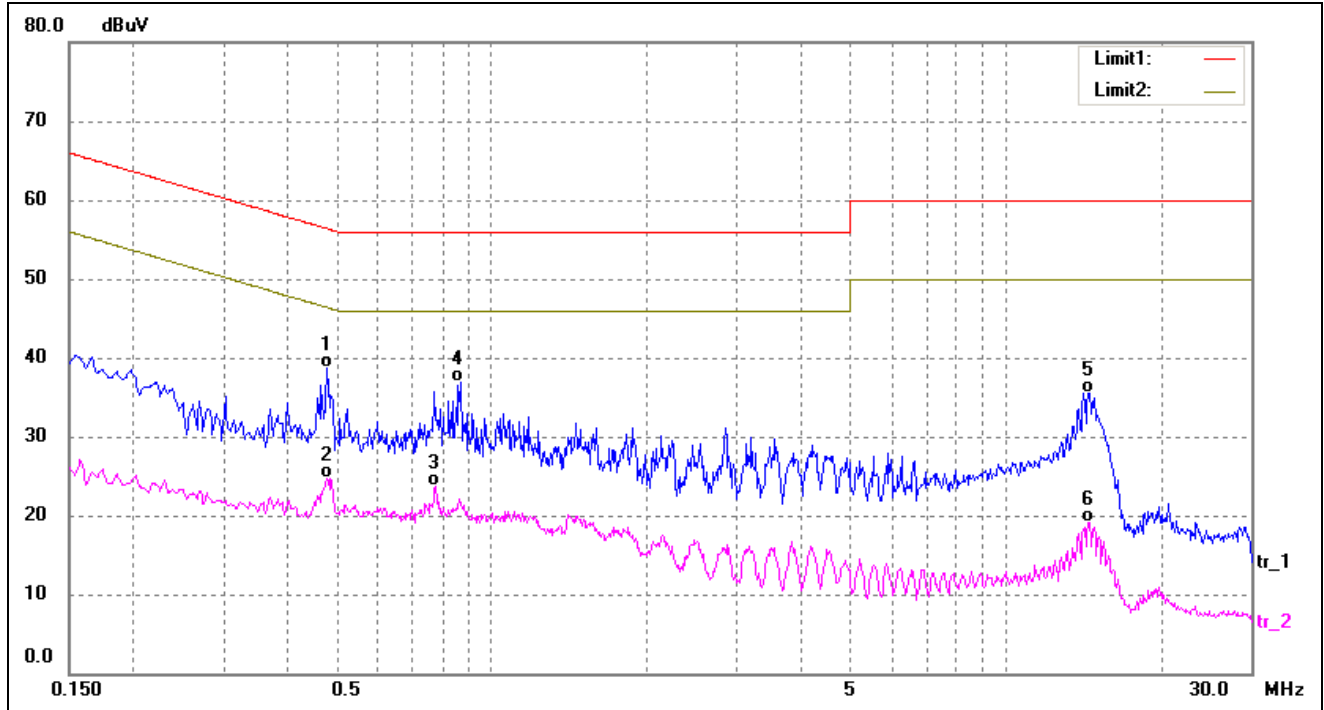


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.4900	31.55	9.80	41.35	46.17	-4.82	AVG
2	0.4940	37.81	9.80	47.61	56.10	-8.49	QP
3	0.9020	29.01	9.77	38.78	56.00	-17.22	QP
4	0.9020	22.51	9.77	32.28	46.00	-13.72	AVG
5	15.6820	9.57	9.62	19.19	50.00	-30.81	AVG
6	15.7260	28.35	9.62	37.97	60.00	-22.03	QP

Plot of Conducted Emissions Test Data

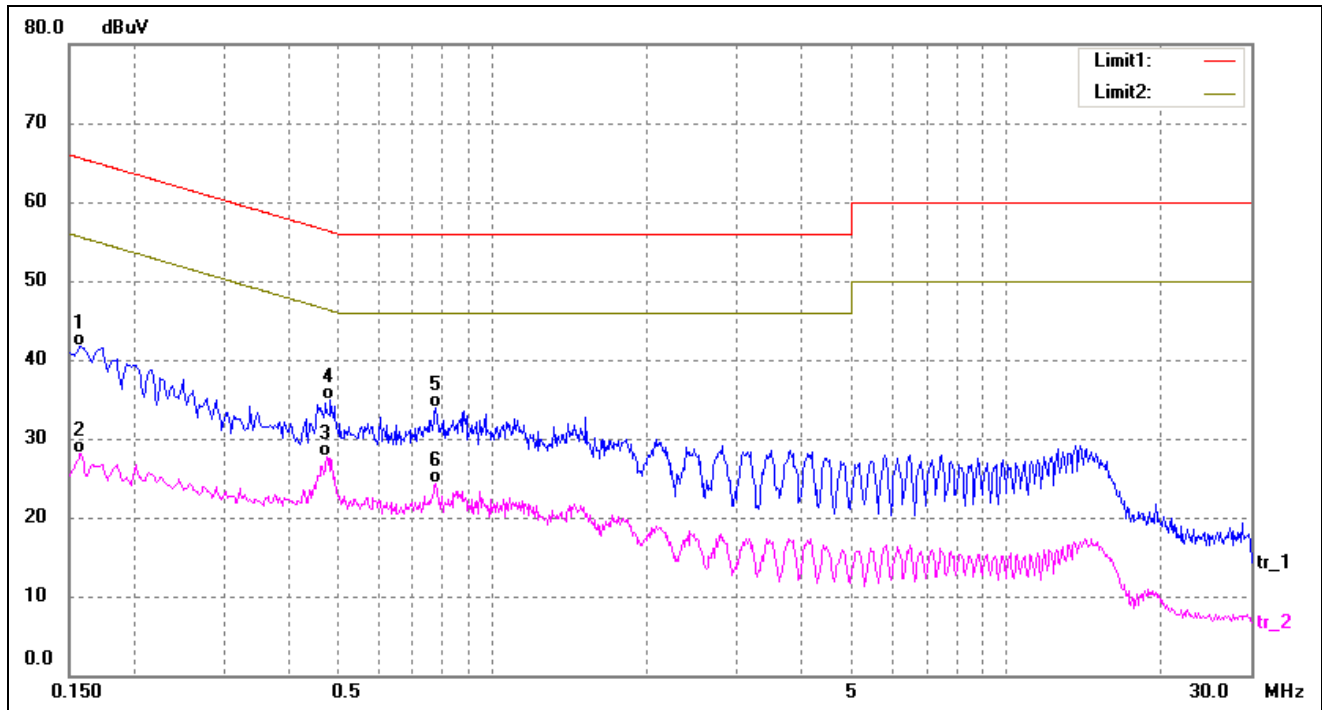
EUT: REMI
Tested Model: UH05xxxxx
Operating Condition: TM1 (adapter: A062-0501000IU)
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.4780	28.90	9.80	38.70	56.37	-17.67	QP
2	0.4780	14.93	9.80	24.73	46.37	-21.64	AVG
3	0.7780	13.90	9.78	23.68	46.00	-22.32	AVG
4	0.8700	27.06	9.77	36.83	56.00	-19.17	QP
5	14.4980	25.99	9.60	35.59	60.00	-24.41	QP
6	14.4980	9.54	9.60	19.14	50.00	-30.86	AVG

Test Specification: Line

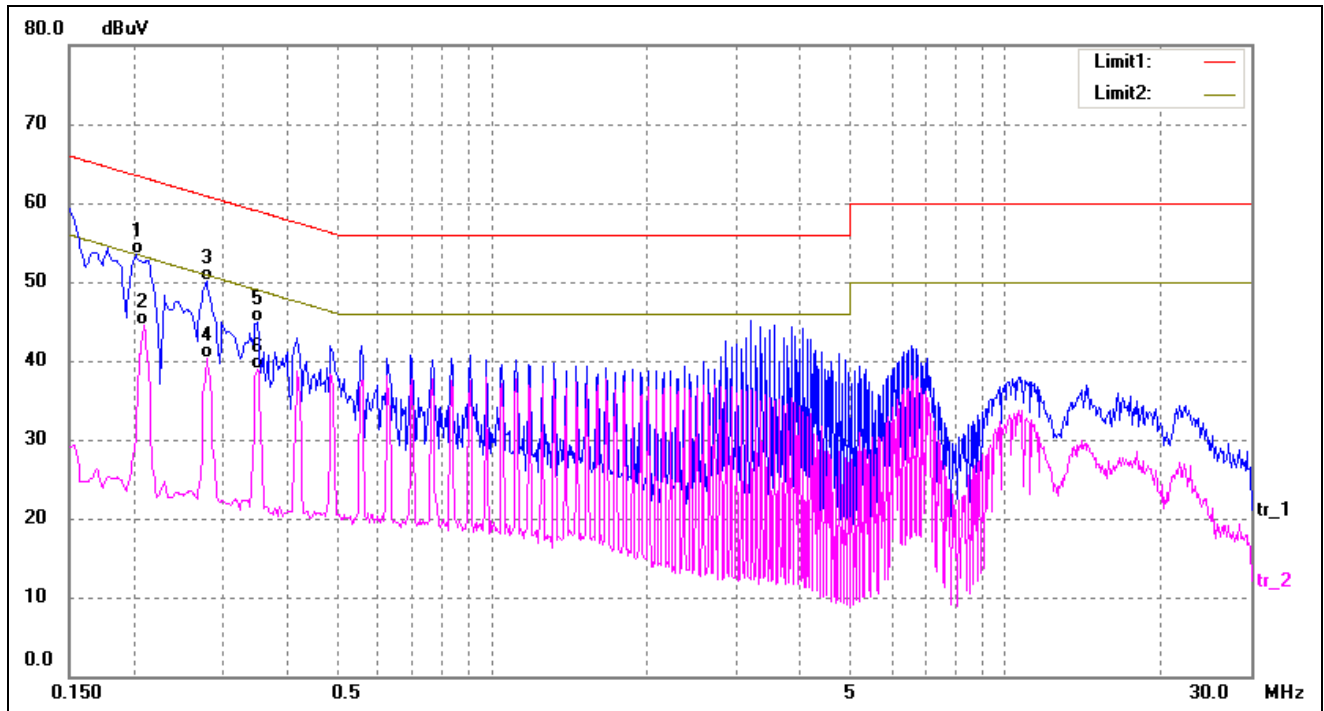


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	31.91	9.84	41.75	65.57	-23.82	QP
2	0.1580	18.34	9.84	28.18	55.57	-27.39	AVG
3*	0.4780	17.97	9.80	27.77	46.37	-18.60	AVG
4	0.4860	25.04	9.80	34.84	56.24	-21.40	QP
5	0.7780	24.13	9.78	33.91	56.00	-22.09	QP
6	0.7780	14.50	9.78	24.28	46.00	-21.72	AVG

Plot of Conducted Emissions Test Data

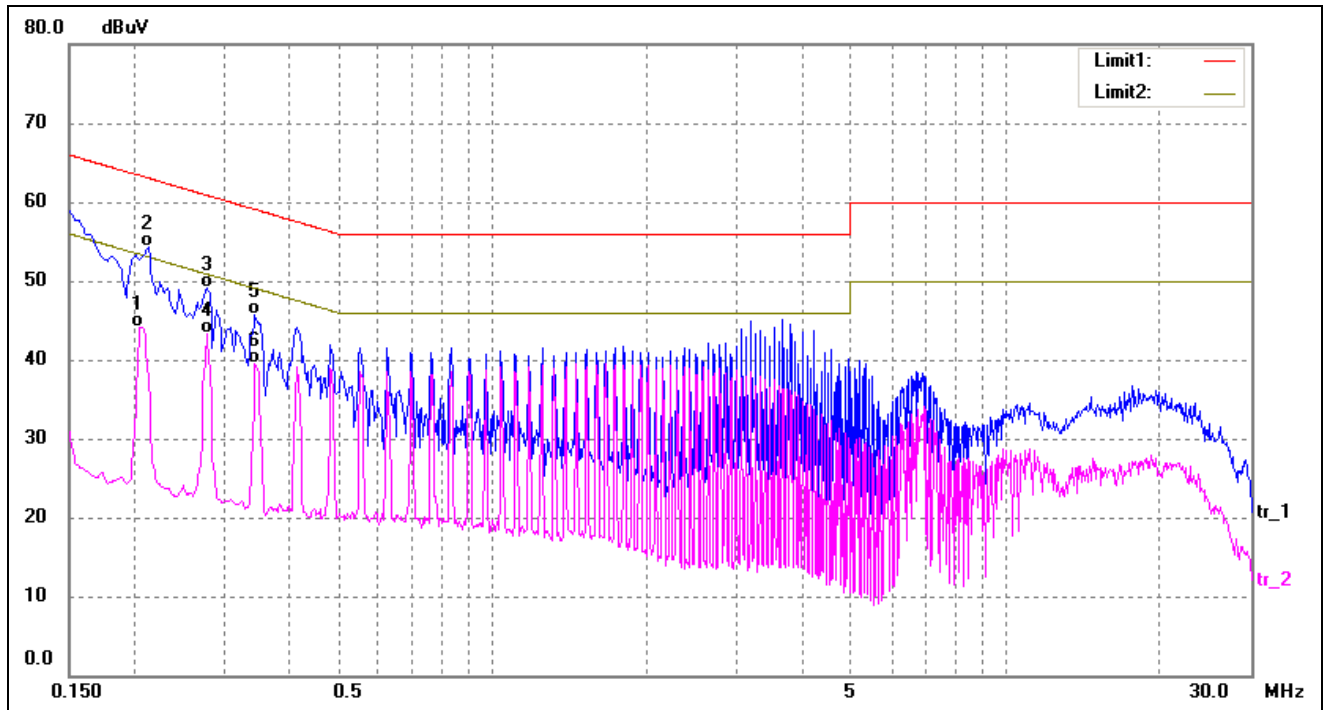
EUT: REMI
Tested Model: UH05xxxxx
Operating Condition: TM2
Comment: USB 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2020	43.63	9.80	53.43	63.53	-10.10	QP
2*	0.2100	34.78	9.80	44.58	53.21	-8.63	AVG
3	0.2780	40.29	9.80	50.09	60.88	-10.79	QP
4	0.2780	30.50	9.80	40.30	50.88	-10.58	AVG
5	0.3500	35.06	9.80	44.86	58.96	-14.10	QP
6	0.3500	29.18	9.80	38.98	48.96	-9.98	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2060	34.37	9.80	44.17	53.37	-9.20	AVG
2	0.2140	44.46	9.80	54.26	63.05	-8.79	QP
3	0.2780	39.38	9.80	49.18	60.88	-11.70	QP
4*	0.2780	33.50	9.80	43.30	50.88	-7.58	AVG
5	0.3460	35.97	9.80	45.77	59.06	-13.29	QP
6	0.3460	29.65	9.80	39.45	49.06	-9.61	AVG

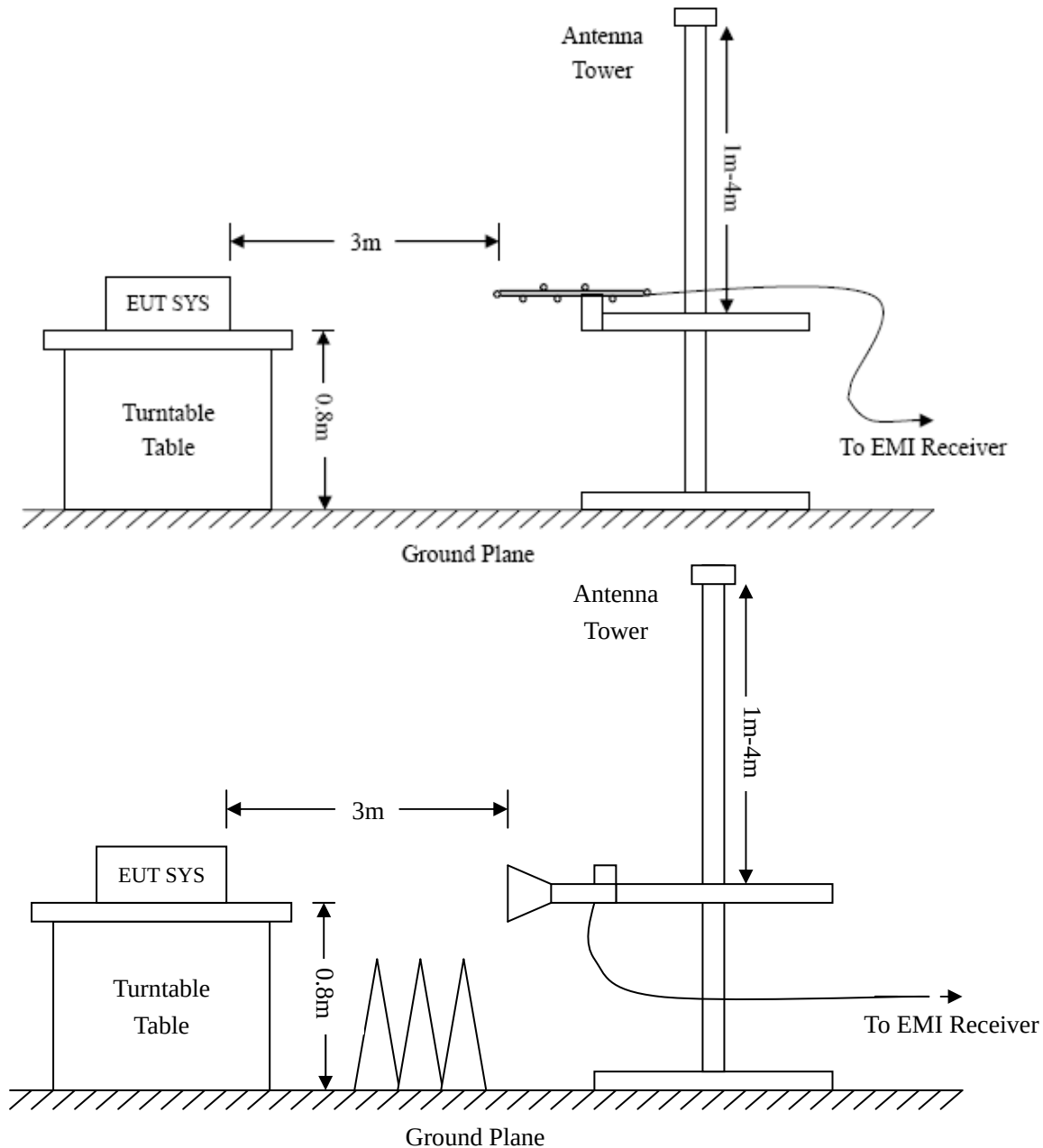
4. Radiated Emissions

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

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.4 Environmental Conditions

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

4.5 Summary of Test Results/Plots

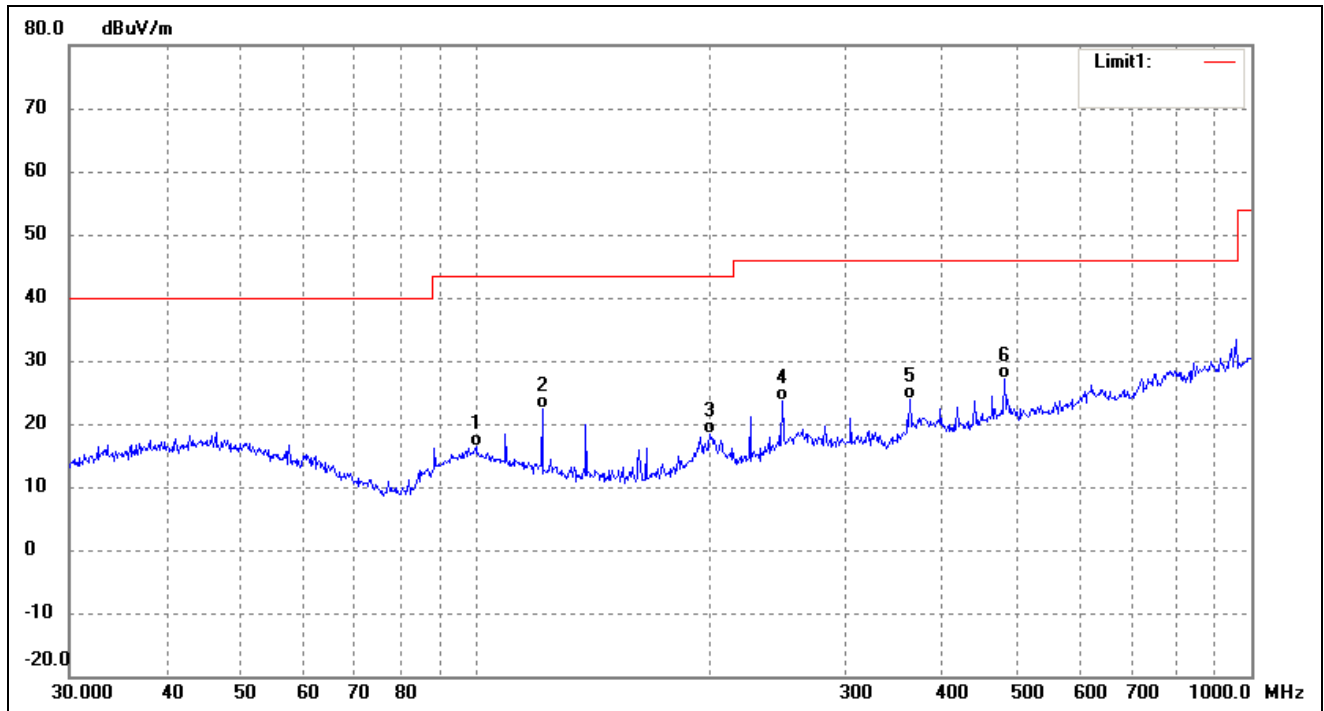
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-2.50 dB at 240.8304 MHz in the Horizontal polarization, TM2 mode, 30 MHz to 1 GHz, 3Meters

Plot of Radiated Emissions Test Data

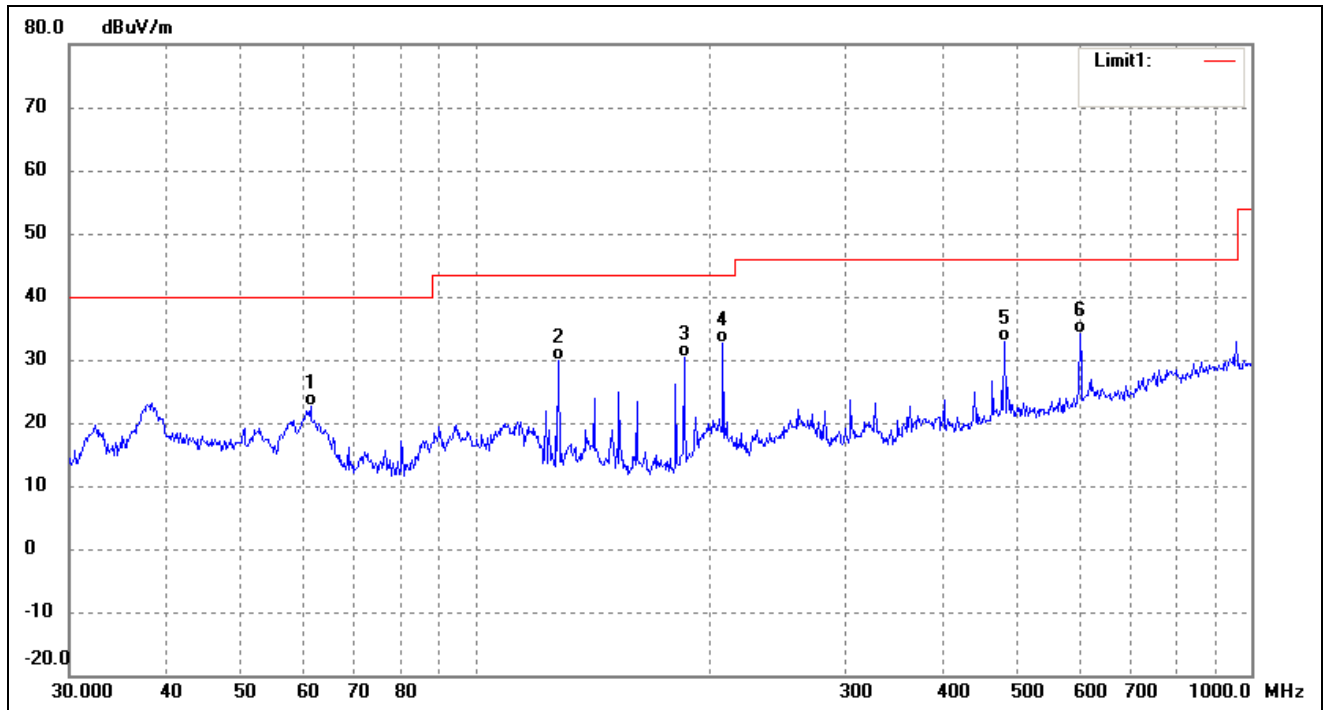
EUT: REMI
Tested Model: UH05xxxxx
Operating Condition: TM1 (adapter: YW1200M)
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	100.2286	27.72	-11.43	16.29	43.50	-27.21	283	100	QP
2	121.9755	36.13	-13.81	22.32	43.50	-21.18	97	100	QP
3	200.6881	29.89	-11.63	18.26	43.50	-25.24	228	100	QP
4	248.5519	34.25	-10.57	23.68	46.00	-22.32	114	100	QP
5	362.9844	31.64	-7.76	23.88	46.00	-22.12	52	100	QP
6	480.5276	32.45	-5.36	27.09	46.00	-18.91	139	100	QP

Test Specification: Vertical

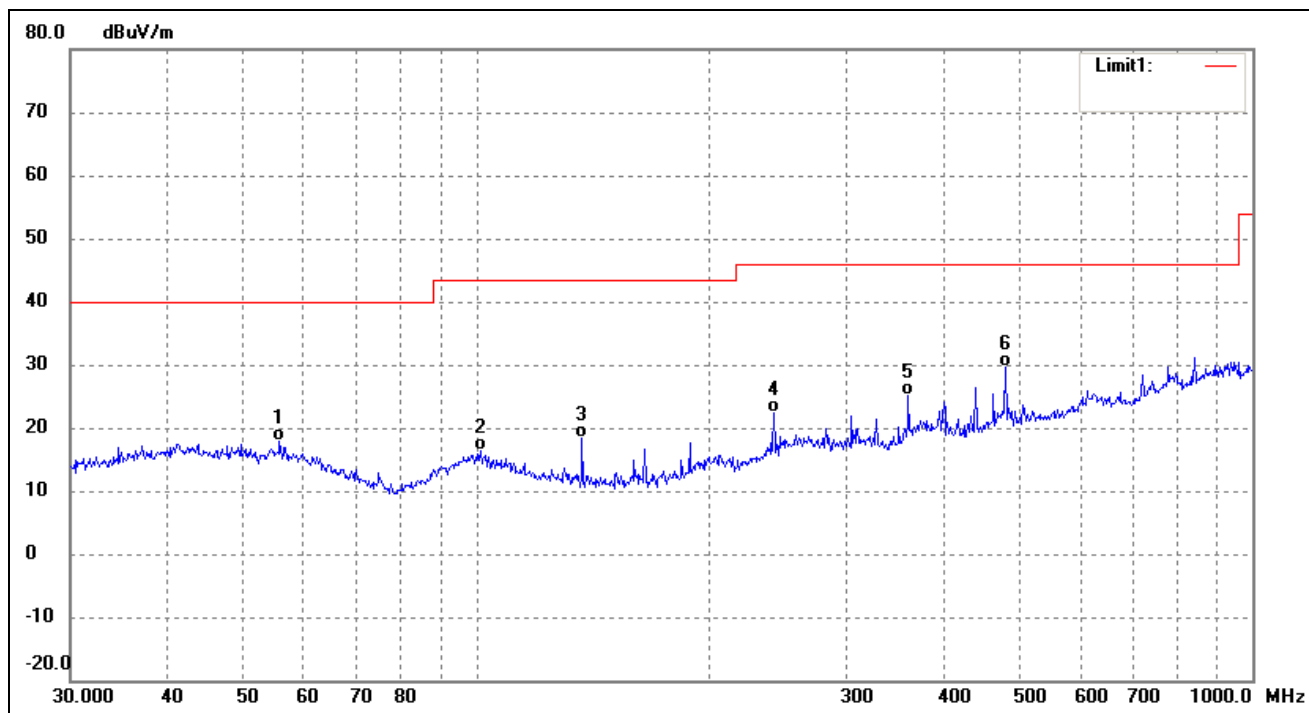


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	61.3463	36.58	-14.03	22.55	40.00	-17.45	214	100	QP
2	128.1130	44.02	-14.15	29.87	43.50	-13.63	96	100	QP
3	185.7882	43.83	-13.46	30.37	43.50	-13.13	172	100	QP
4	208.5803	44.50	-11.98	32.52	43.50	-10.98	107	100	QP
5	480.5276	38.26	-5.36	32.90	46.00	-13.10	122	100	QP
6	601.4265	38.41	-4.20	34.21	46.00	-11.79	186	100	QP

Plot of Radiated Emissions Test Data

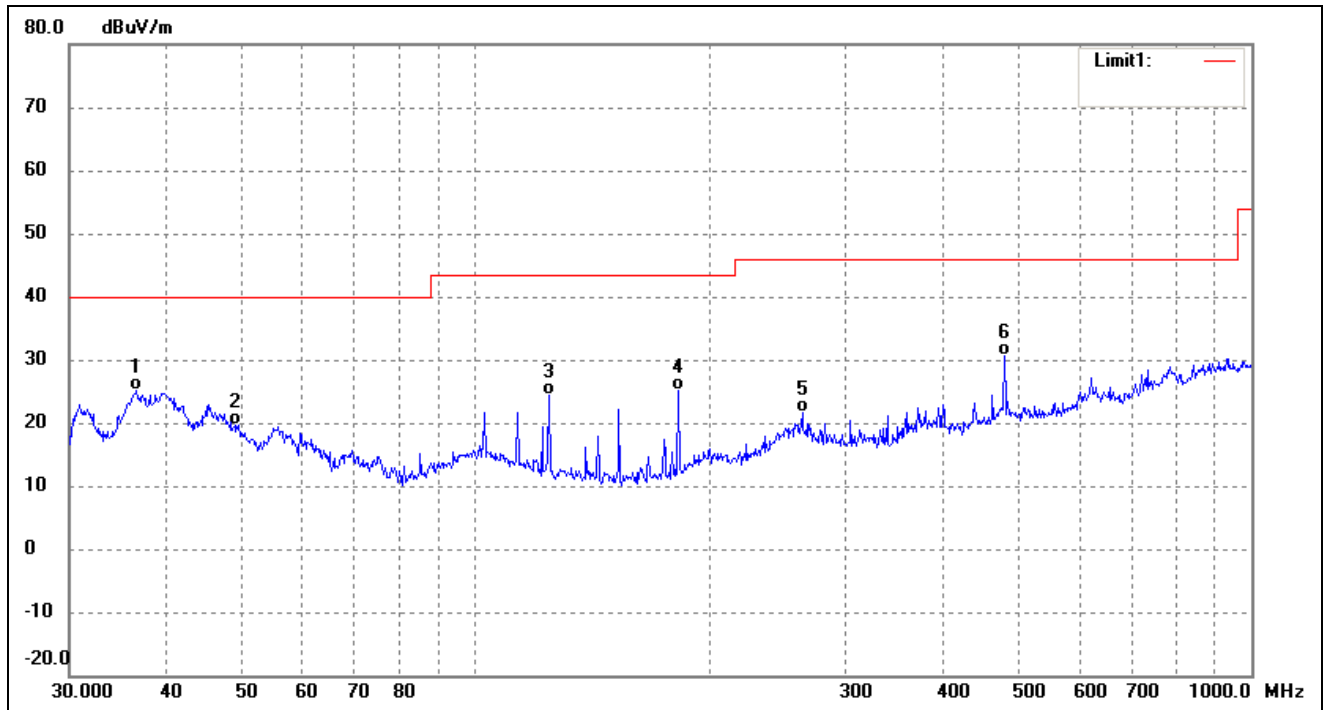
EUT: REMI
Tested Model: UH05xxxxx
Operating Condition: TM1 (adapter: A062-0501000IU)
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	55.8047	29.25	-11.33	17.92	40.00	-22.08	164	100	QP
2	101.2885	27.89	-11.55	16.34	43.50	-27.16	96	100	QP
3	136.9392	33.11	-14.63	18.48	43.50	-25.02	136	100	QP
4	241.6763	33.15	-10.88	22.27	46.00	-23.73	126	100	QP
5	360.4477	33.03	-7.88	25.15	46.00	-20.85	79	100	QP
6	480.5276	34.94	-5.36	29.58	46.00	-16.42	233	100	QP

Test Specification: Vertical

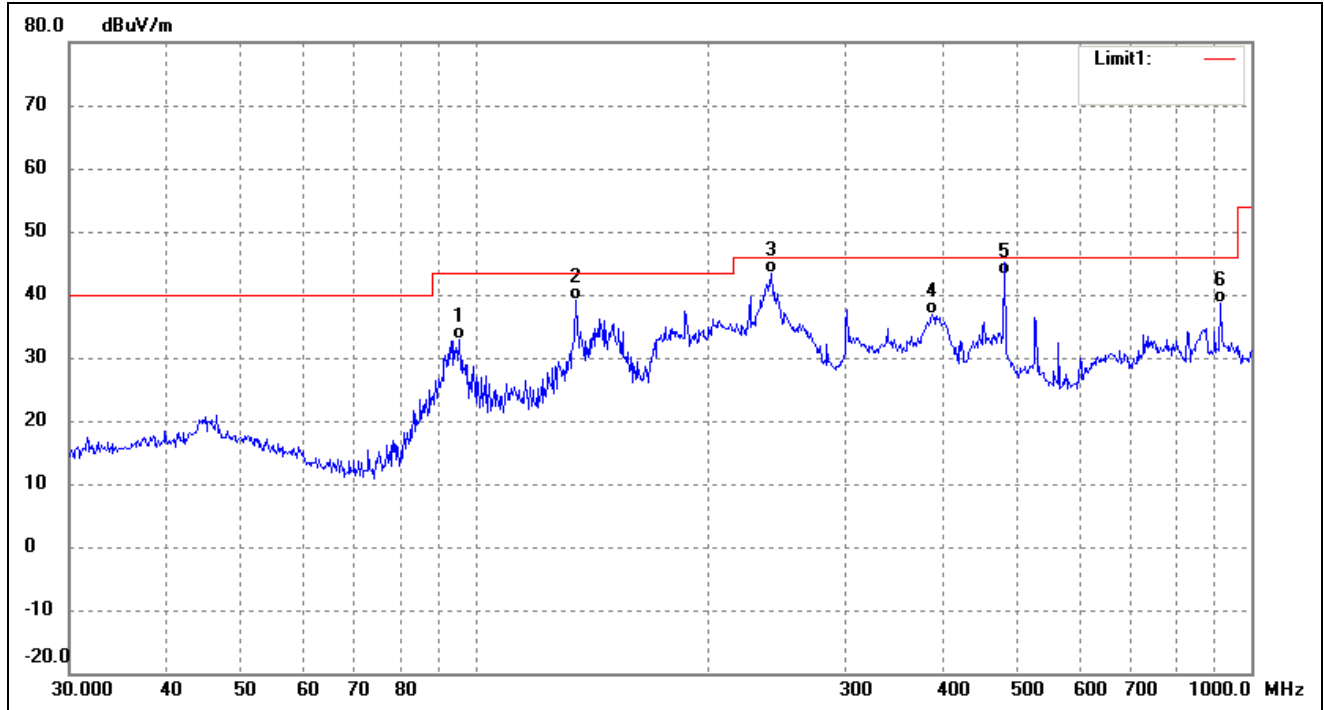


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	36.6375	36.28	-11.18	25.10	40.00	-14.90	73	100	QP
2	49.0145	30.01	-10.41	19.60	40.00	-20.40	112	100	QP
3	124.5690	38.26	-13.95	24.31	43.50	-19.19	102	100	QP
4	182.5592	38.99	-13.88	25.11	43.50	-18.39	120	100	QP
5	263.8190	31.60	-9.96	21.64	46.00	-24.36	152	100	QP
6	480.5276	36.10	-5.36	30.74	46.00	-15.26	194	100	QP

Plot of Radiated Emissions Test Data

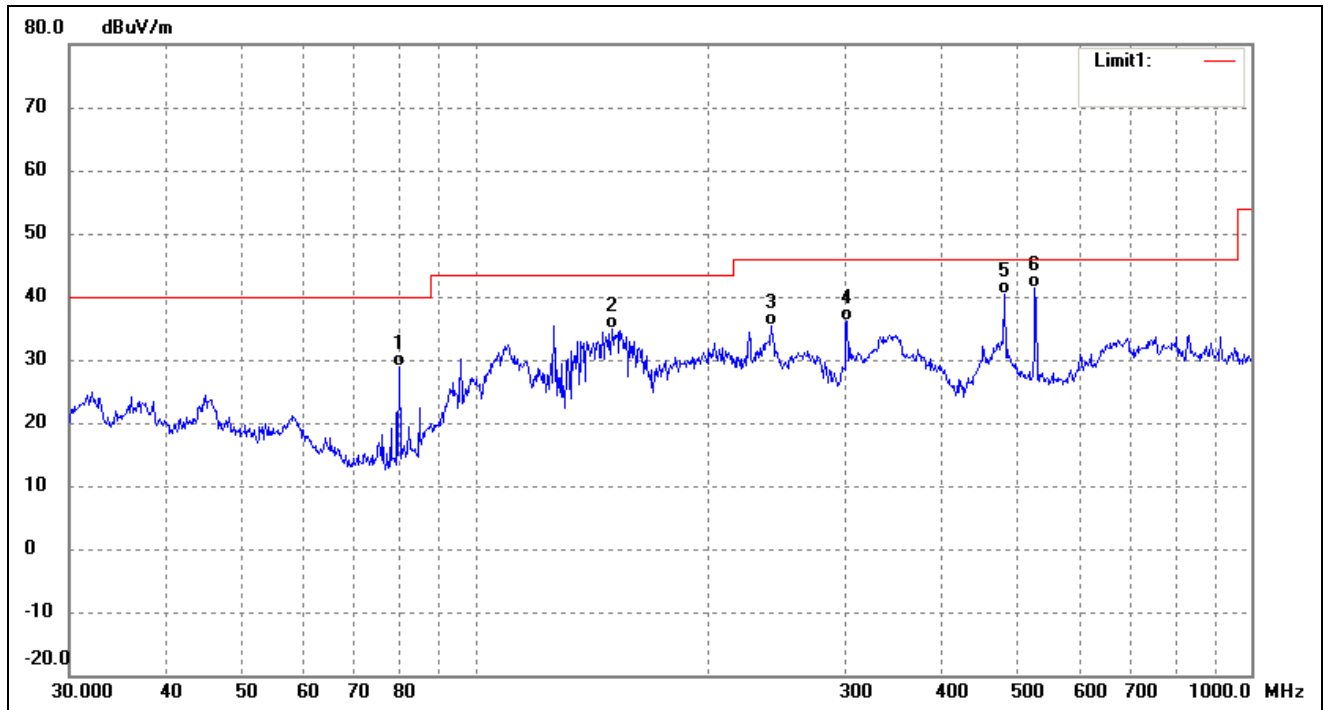
EUT: REMI
Tested Model: UH05xxxxx
Operating Condition: TM2
Comment: USB 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	95.4270	45.21	-12.42	32.79	43.50	-10.71	134	100	QP
2	134.5592	53.64	-14.50	39.14	43.50	-4.36	269	100	QP
3	240.8304	54.43	-10.93	43.50	46.00	-2.50	78	100	QP
4	387.9920	44.00	-7.24	36.76	46.00	-9.24	230	100	QP
5	480.5276	48.44	-5.36	43.08	46.00	-2.92	173	100	QP
6	912.8620	36.91	1.63	38.54	46.00	-7.46	188	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	79.8003	46.95	-18.10	28.85	40.00	-11.15	152	100	QP
2	150.0108	49.93	-14.95	34.98	43.50	-8.52	100	100	QP
3	240.8304	46.38	-10.93	35.45	46.00	-10.55	86	100	QP
4	301.4224	45.77	-9.75	36.02	46.00	-9.98	235	100	QP
5	480.5276	45.77	-5.36	40.41	46.00	-5.59	75	100	QP
6	526.3967	47.28	-5.93	41.35	46.00	-4.65	197	100	QP

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