

FCC Part 15B Measurement and Test Report

For

Lanco Global Systems (Caribbean), Inc

PO Box 191771 San Juan, PR

FCC ID: 2ACMXINDIPAD9G

Test Rule(s): FCC Part 15 Subpart B

Product Description: Tablet PC

Tested Model: INDIPAD9G

Report No.: STR14068303I-4

Tested Date: 2014-06-20 to 2014-07-14

Issued Date: 2014-07-14

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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: Lanco Global Systems (Caribbean), Inc
Address of applicant: PO Box 191771 San Juan, PR

Manufacturer: Shenzhen Alldocube Technology and Science Co., Ltd
Address of manufacturer: 4F 17Building PingShan Industrial park LiuXian Road,
XiLi Town ShenZhen China

General Description of EUT	
Product Name:	Tablet PC
Trade Name:	e-jam
Model No.:	INDIPAD9G
Adding Model(s):	/
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	DC 5V
Rated Current:	2A
Rated Power:	/
Power Adapter Model:	FJ-SW0502000UU
Lowest Internal Frequency:	32.768KHz
Highest Internal Frequency:	1.0GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Lanco Global Systems (Caribbean), Inc 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 C63.4-2003, 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 Adapter
TM2	Downloading	Connect to PC

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Earphone cable	1.2	Unshielded	Without Core
USB Cable	0.8	Unshielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook Computer	Lenovo	20007	EB12648265

Special Cable List and Details

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

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 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.2 Test Equipment List and Details

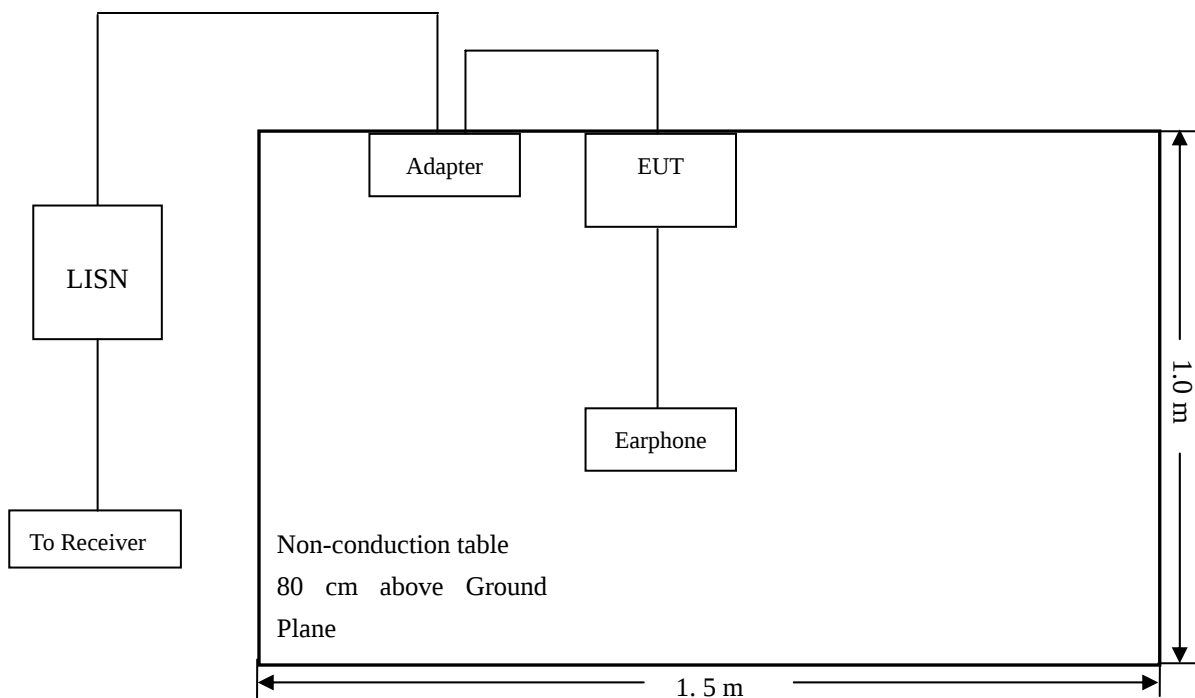
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2014-05-28	2015-05-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2014-05-28	2015-05-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2014-05-28	2015-05-27

3.3 Test Procedure

Test is conducting under the description of ANSI C63.4-2003, 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.

Note: Base on the calibrated result, for the impedance characteristic and insertion loss, the effect shall be ignored from the placed multiple outlet power strip between the device and LISN.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

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

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

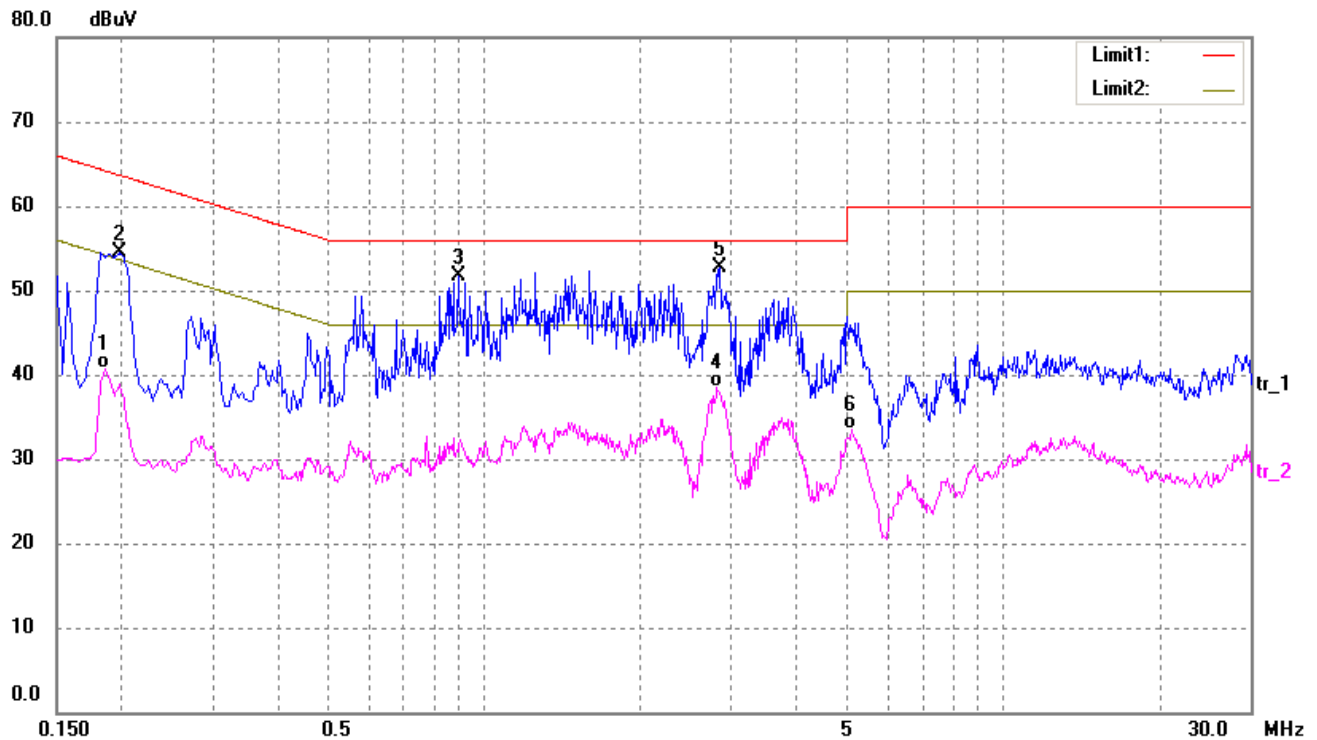
-2.15 dB at 2.8980 MHz in the **Line, Peak** detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

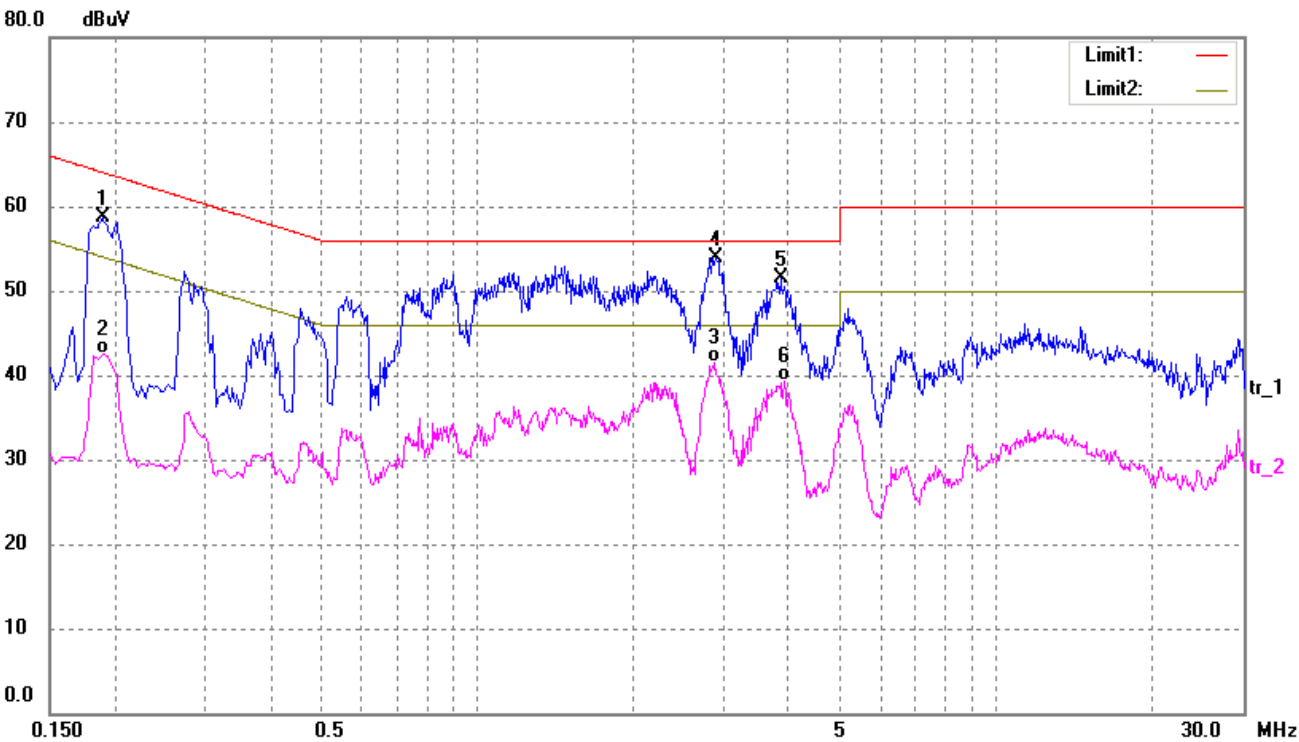
EUT: Tablet PC
 Tested Model: INDIPAD9G
 Operating Condition: AC 120V/60Hz; Adapter DC 5V/2A
 Comment: Charging & Playing

Test Specification: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1860	31.28	9.50	40.78	54.21	-13.43	AVG
2	0.1980	44.99	9.50	54.49	63.69	-9.20	peak
3	0.8900	41.76	9.89	51.65	56.00	-4.35	peak
4	2.8140	28.55	10.00	38.55	46.00	-7.45	AVG
5	2.8420	42.73	10.00	52.73	56.00	-3.27	peak
6	5.1180	23.47	10.00	33.47	50.00	-16.53	AVG

Test Specification: Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1900	49.12	9.50	58.62	64.04	-5.42	peak
2	0.1900	33.05	9.50	42.55	54.04	-11.49	AVG
3	2.8820	31.57	10.00	41.57	46.00	-4.43	AVG
4	2.8980	43.85	10.00	53.85	56.00	-2.15	peak
5	3.8420	41.52	10.00	51.52	56.00	-4.48	peak
6	3.9060	29.24	10.00	39.24	46.00	-6.76	AVG

Plot of Conducted Emissions Test Data

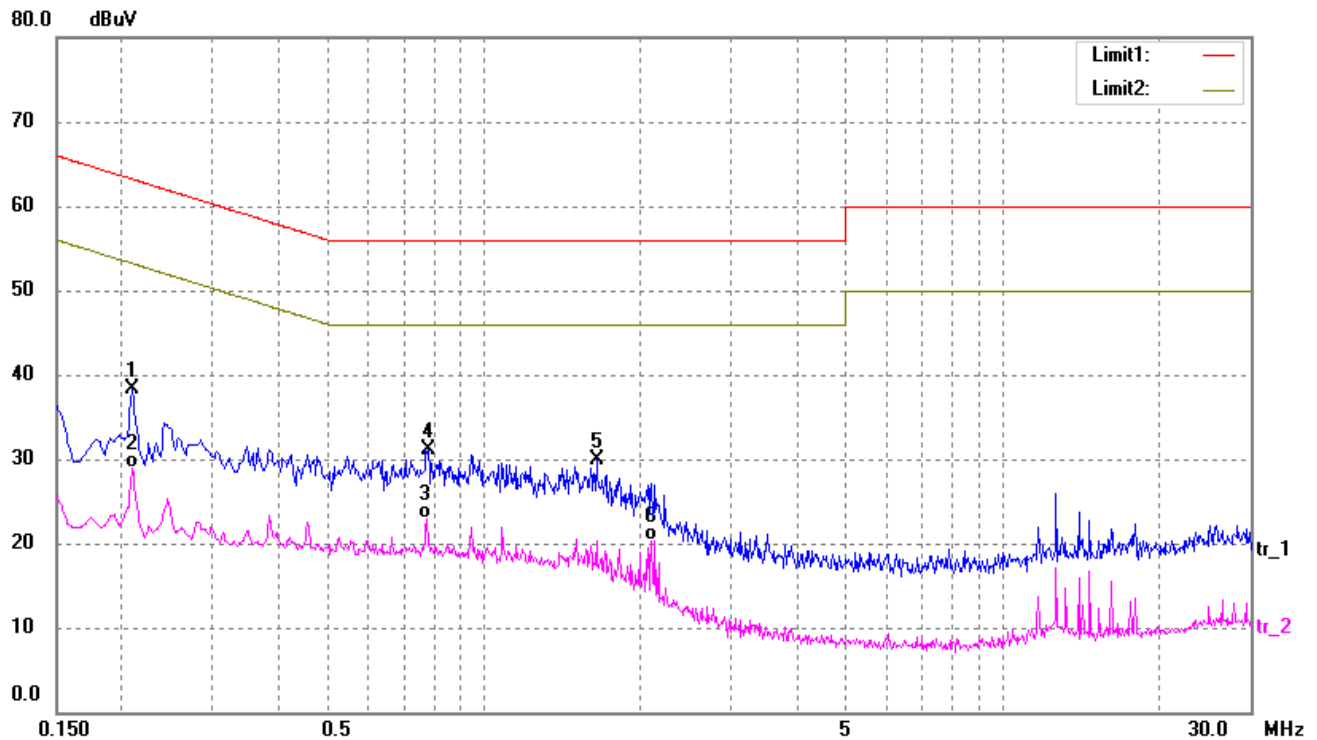
EUT: Tablet PC

Tested Model: INDIPAD9G

Operating Condition: AC 120V/60Hz; USB DC 5V

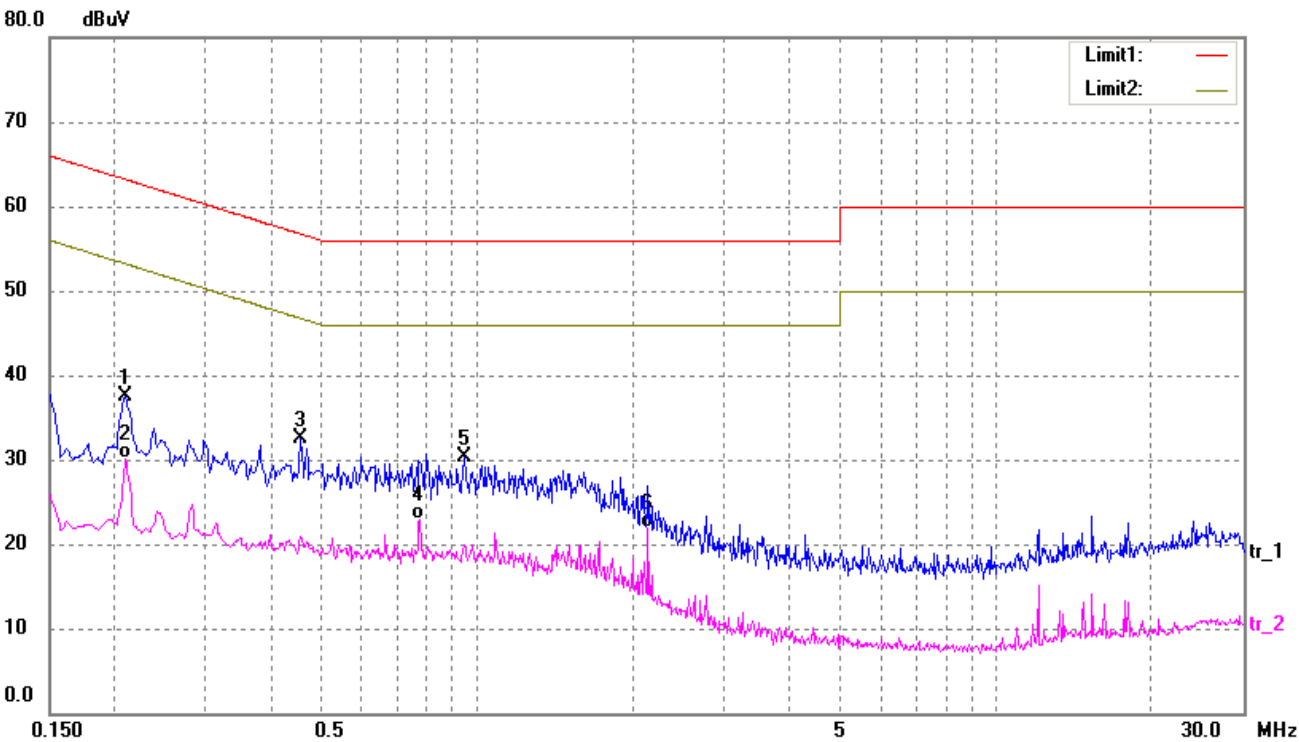
Comment: Downloading

Test Specification: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2100	28.71	9.50	38.21	63.21	-25.00	peak
2	0.2100	19.46	9.50	28.96	53.21	-24.25	AVG
3	0.7780	13.07	9.78	22.85	46.00	-23.15	AVG
4	0.7820	21.38	9.78	31.16	56.00	-24.84	peak
5	1.6460	19.94	10.00	29.94	56.00	-26.06	peak
6	2.1020	10.38	10.00	20.38	46.00	-25.62	AVG

Test Specification: Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2100	28.06	9.50	37.56	63.21	-25.65	peak
2	0.2100	20.63	9.50	30.13	53.21	-23.08	AVG
3	0.4580	23.00	9.50	32.50	56.73	-24.23	peak
4	0.7780	13.06	9.78	22.84	46.00	-23.16	AVG
5	0.9460	20.28	9.95	30.23	56.00	-25.77	peak
6	2.1380	11.81	10.00	21.81	46.00	-24.19	AVG

4. Radiated Emissions

4.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

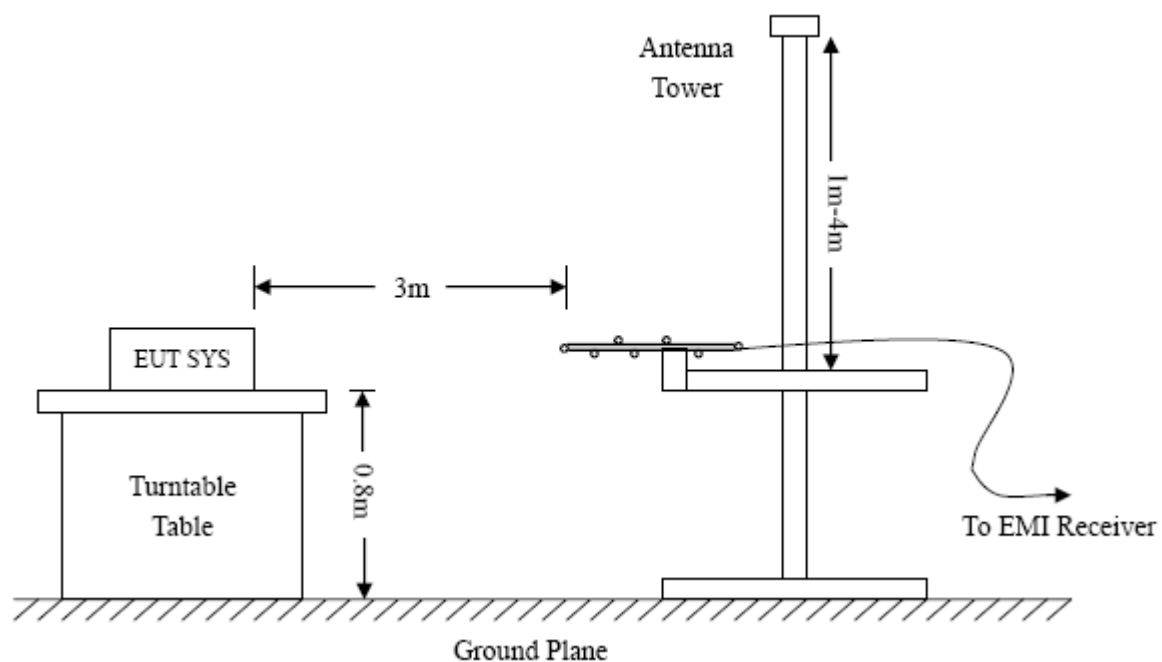
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2014-05-28	2015-05-27

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 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.



4.4 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

4.5 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:

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

4.6 Environmental Conditions

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

4.7 Summary of Test Results/Plots

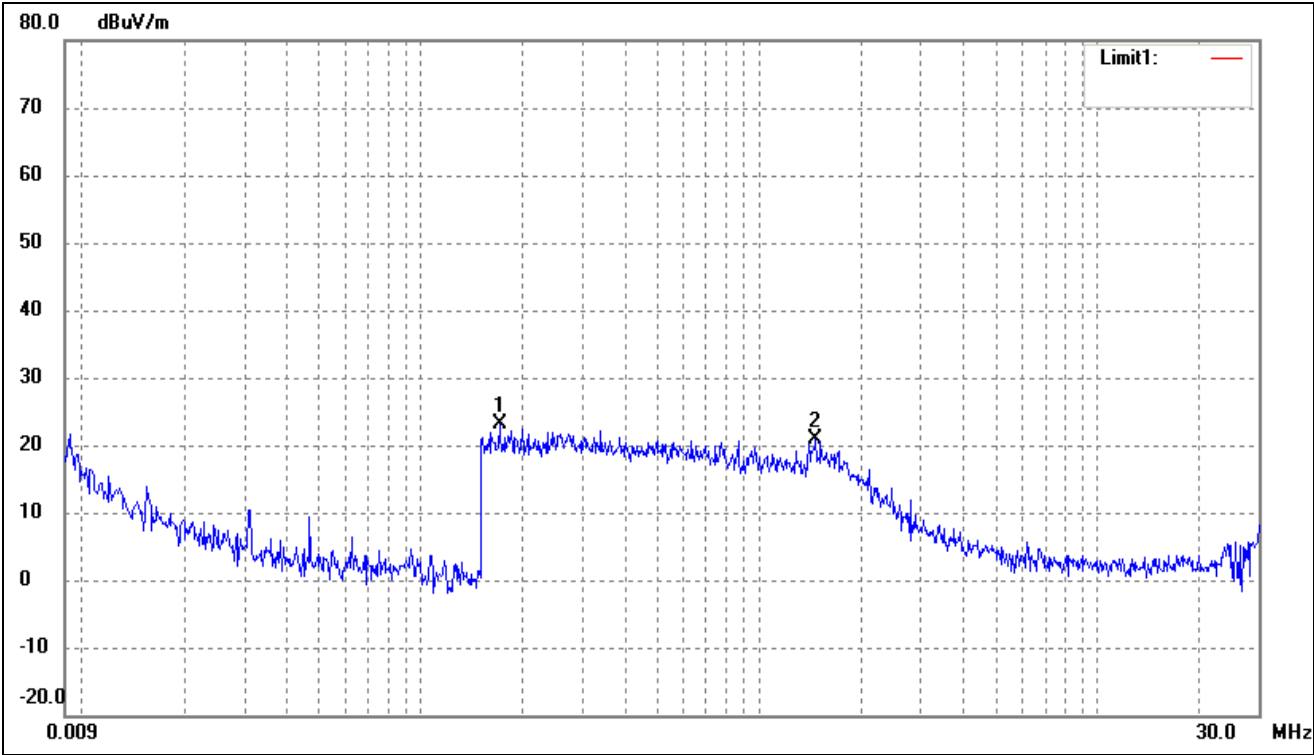
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

**-1.54 dB at 207.8501 MHz in the Horizontal polarization, Charging & Playing mode, 9 kHz to 6 GHz,
3Meters**

Plot of Radiated Emissions Test Data (9kHz~30MHz)

EUT: Tablet PC
Tested Model: INDIPAD9G
Operating Condition: AC 120V/60Hz; Adapter DC 5V/2A
Comment: Charging & Playing

Test Specification:

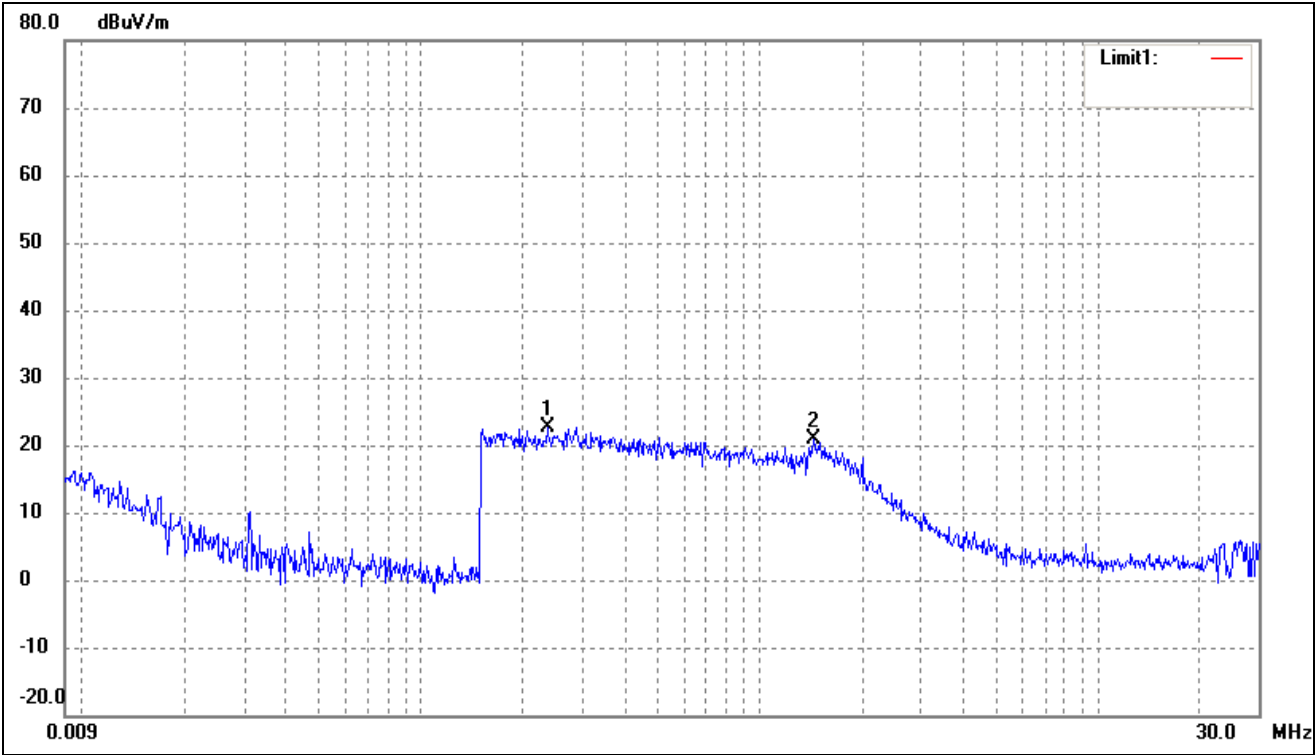


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	0.1711	3.52	19.63	23.15	102.94	-79.79	154	100	peak
2	1.4638	7.61	13.19	20.80	64.29	-43.49	108	100	peak

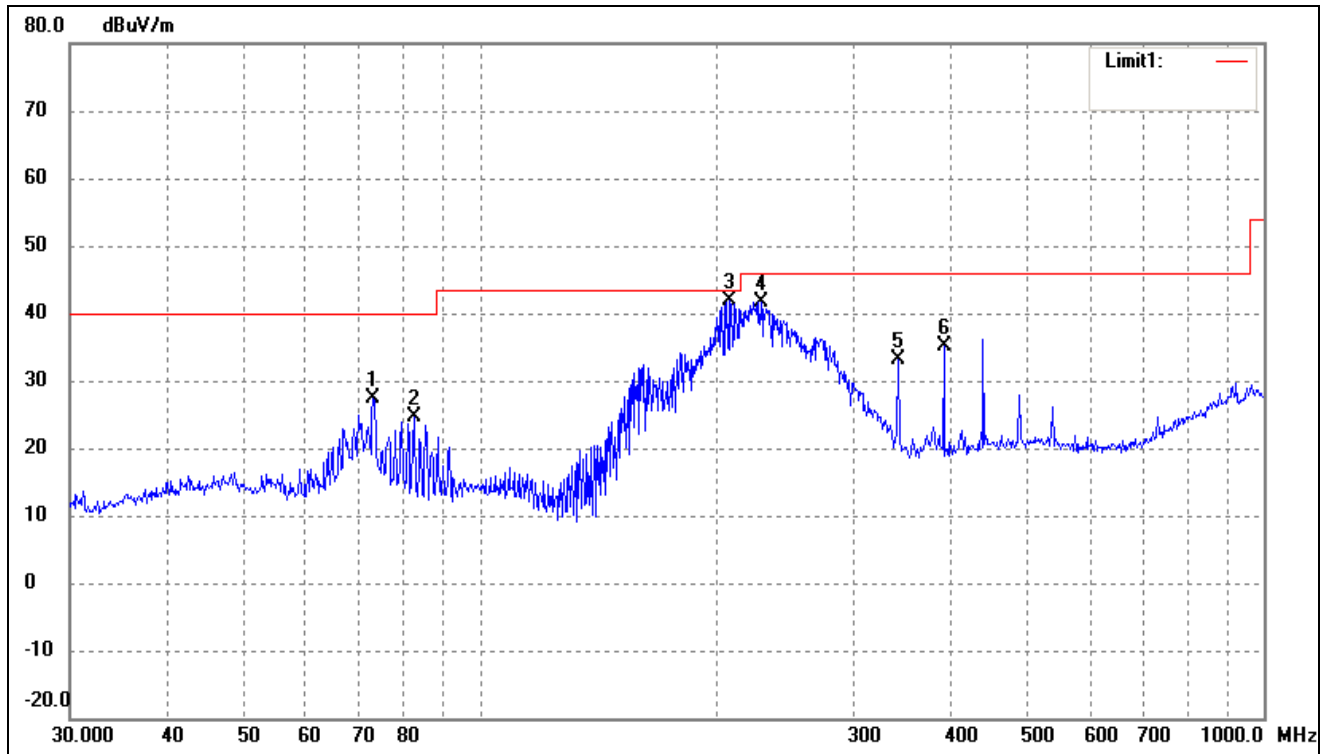
Plot of Radiated Emissions Test Data (9kHz~30MHz)

EUT: Tablet PC
Tested Model: INDIPAD9G
Operating Condition: AC 120V/60Hz; Adapter DC 5V/2A
Comment: Downloading

Test Specification:

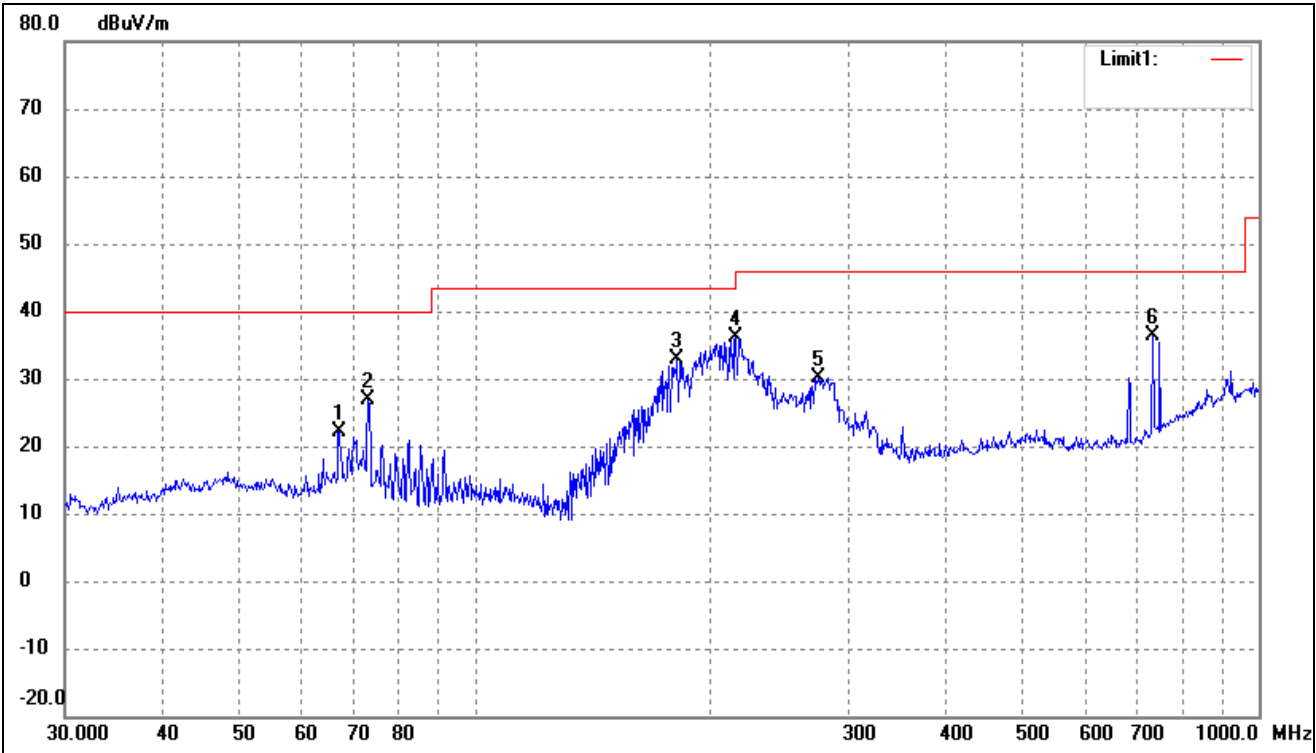


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	0.2353	3.15	19.56	22.71	100.17	-77.46	254	100	peak
2	1.4483	7.58	13.19	20.77	64.39	-43.62	116	100	peak

Plot of Radiated Emissions Test Data*EUT:* Tablet PC*Tested Model:* INDIPAD9G*Operating Condition:* AC 120V/60Hz; Adapter DC 5V/2A*Comment:* Charging & Playing*Test Specification:* Horizontal

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	73.1025	40.01	-12.65	27.36	40.00	-12.64	58	150	peak
2	82.3589	37.73	-13.03	24.70	40.00	-15.30	326	100	peak
3	207.8501	50.96	-9.00	41.96	43.50	-1.54	29	150	peak
4	228.4904	50.08	-8.43	41.65	46.00	-4.35	209	100	peak
5	341.9787	37.48	-4.44	33.04	46.00	-12.96	178	100	peak
6	390.7226	38.30	-3.24	35.06	46.00	-10.94	359	200	peak

Test Specification: Vertical

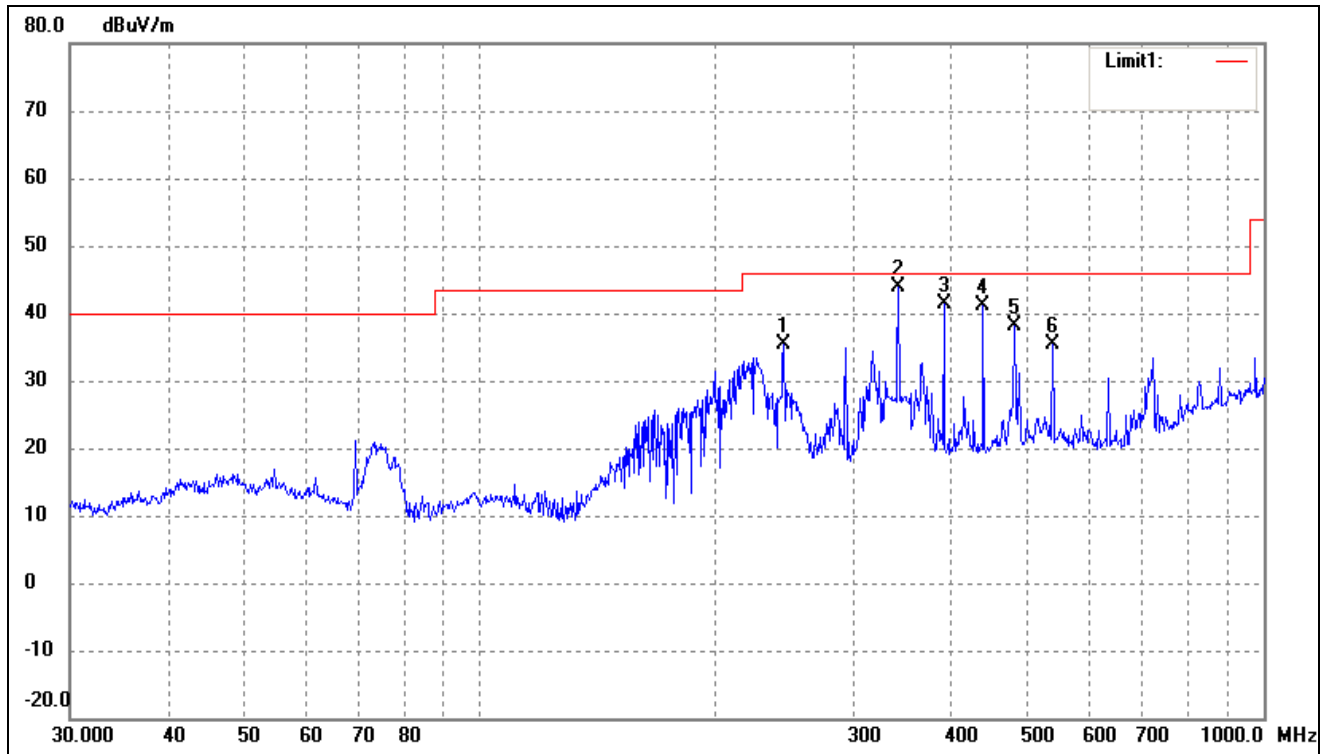


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	67.2022	32.74	-10.51	22.23	40.00	-17.77	51	100	peak
2	73.1025	39.57	-12.65	26.92	40.00	-13.08	308	100	peak
3	181.2834	43.79	-11.00	32.79	43.50	-10.71	120	100	peak
4*	215.2678	45.18	-8.95	36.23	43.50	-7.27	359	100	peak
5	274.1939	36.97	-6.84	30.13	46.00	-15.87	145	100	peak
6	731.9203	35.95	0.36	36.31	46.00	-9.69	195	100	peak

Plot of Radiated Emissions Test Data

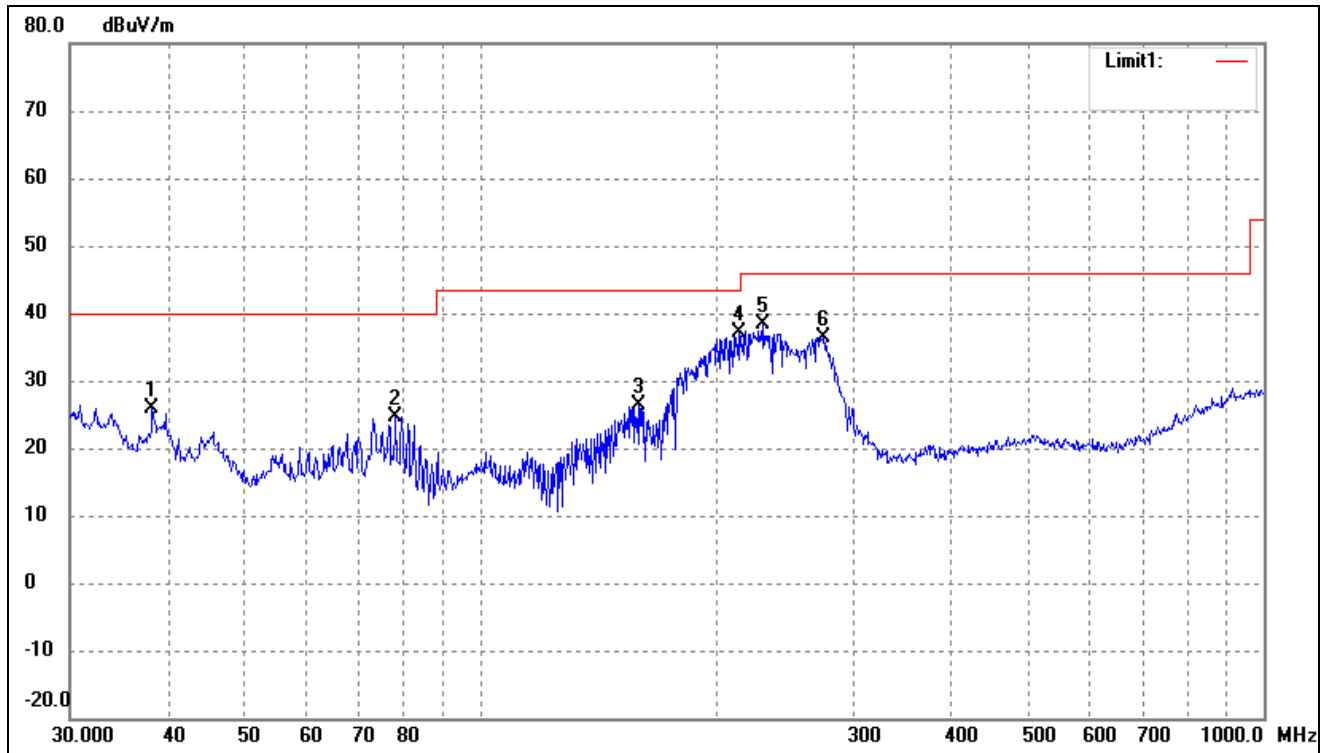
EUT: Tablet PC
 Tested Model: INDIPAD9G
 Operating Condition: AC 120V/60Hz; Adapter DC 5V/2A
 Comment: Downloading

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	244.2321	43.03	-7.66	35.37	46.00	-10.63	158	150	peak
2	341.9787	48.20	-4.44	43.76	46.00	-2.24	226	100	peak
3	390.7226	44.66	-3.24	41.42	46.00	-4.58	129	150	peak
4	438.6554	43.51	-2.28	41.23	46.00	-4.77	109	100	peak
5	480.5276	39.69	-1.55	38.14	46.00	-7.86	178	100	peak
6	537.5891	36.60	-1.30	35.30	46.00	-10.70	259	200	peak

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	38.2120	34.75	-8.80	25.95	40.00	-14.05	51	100	peak
2	78.1389	38.05	-13.53	24.52	40.00	-15.48	308	100	peak
3	159.2251	38.82	-12.38	26.44	43.50	-17.06	120	100	peak
4	213.7634	45.99	-8.96	37.03	43.50	-6.47	359	100	peak
5	230.0985	46.82	-8.35	38.47	46.00	-7.53	195	100	peak
6	274.1939	43.33	-6.84	36.49	46.00	-9.51	359	100	peak

Remark:

Testing is carried out with frequency rang 9kHz to the 6GHz, The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this part.

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