TESTING LABORATORY
CERTIFICATE #4820.01

FCC PART 15B

TEST REPORT

For

BLU Products, Inc.

10814 NW 33rd St # 100 Doral, FL 33172,USA

FCC ID: YHLBLUC7

Report Type: Original Report	**Product Type:** Mobile Phone
Test Engineer	Walker Chen, Asa Chen, Jalon Liu
Report Number:	RSZ201120003-00C
Report Date:	2020-12-28
Reviewed By:	Ivan Cao Assistant Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:		Mobile Phone
EUT Model:		C7
Highest Operation Frequency:		2480 MHz
Rated Input Voltage:		DC 3.85 V from battery or DC 5V from adapter
Adapter Information	**Model:**	US-CR-1500
	Input:	100-240Vac 50/60Hz 0.3A
	Output:	5.0Vdc 1.5A
Serial Number:		RSZ201120003-RF-S1
EUT Received Date:		2020.11.20
EUT Received Status:		Good

Objective

This report is prepared on behalf of ***BLU Products, Inc.*** in accordance with FCC Part 15B Part 2, Part J, and Part 15, Subpart A and B of the Federal Communications Commission's rules.

The objective is to determine the compliance of EUT with: FCC Part 15B.

Related Submittal(s)/Grant(s)

FCC Part 22H, 24E PCE submissions with FCC ID: YHLBLUC7
FCC Part 15C DSS,DTS submissions with FCC ID: YHLBLUC7

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.

Measurement Uncertainty

Parameter	Measurement Uncertainty
Unwanted Emissions, radiated	30M~200MHz: 4.58 dB for Horizontal, 4.59 dB for Vertical 200M~1GHz: 4.83 dB for Horizontal, 5.85 dB for Vertical 1G~6GHz: 4.45 dB, 6G~13GHz: 5.23 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

This report cannot be reproduced except in full, without prior written approval of the Company.

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk "★".

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in Downloading mode.

EUT Exercise Software

The software "Winthrax.exe" was used during test.

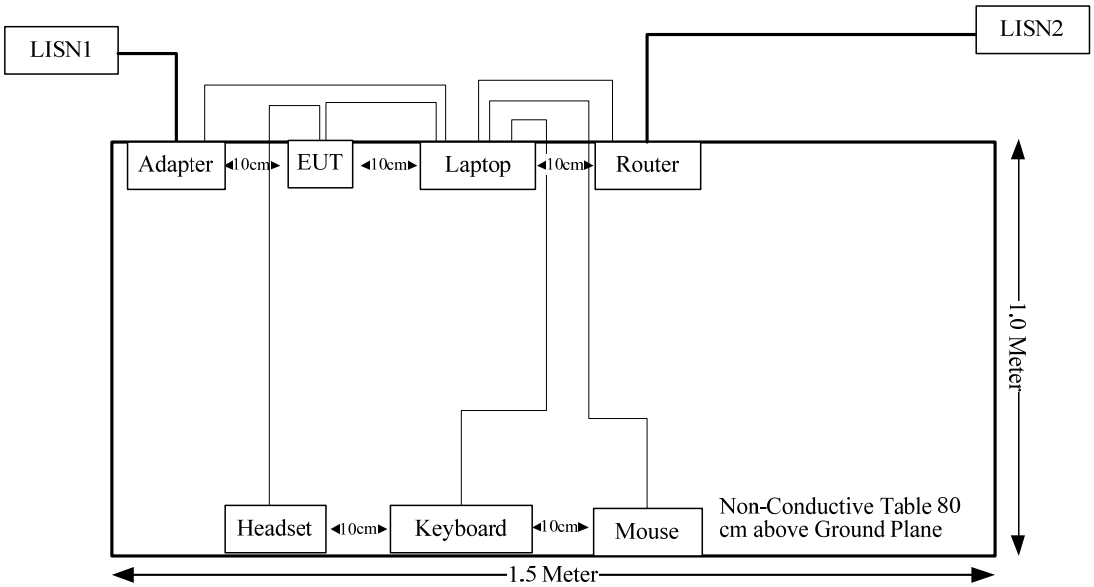
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
ThinkPad	Laptop	E450	PF-0MR8KV 16/08
DELL	Laptop	PP11L	QDS-BRCM1017
TOTO Link	Wireless Router	LR1200	190924004S1
DELL	Mouse	MO56UOA	F0Y02P7Y
DELL	Keyboard	L100	CNORH656658907BL05DC
zioncom	Wireless Router	A3700R	200622002S1
Lenovo	Notebook	G510	CB04060626

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	No	No	1.5	USB Port of Laptop	Keyboard
USB Cable	No	No	1.5	USB Port of Laptop	Mouse
Network Cable	No	No	10	Router	Laptop
USB Cable	No	No	1.5	USB Port of Laptop	EUT
Earphone Cable	No	No	1.15	EUT	Earphone

Block Diagram of Test Setup



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted emissions					
R&S	LISN	ENV 216	101614	2020-09-12	2021-09-12
R&S	EMI Test Receiver	ESCI	101121	2020-07-07	2021-07-07
MICRO-COAX	Coaxial Cable	C-NJNJ-50	C-0200-01	2020-09-05	2021-09-05
R&S	Test Software	EMC32	Version 9.10.00	N/A	N/A
Radiated emissions Below 1GHz					
Sunol Sciences	Antenna	JB3	A060611-2	2020-08-25	2023-08-25
R&S	EMI Test Receiver	ESCI	100224	2020-09-12	2021-09-12
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-02	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2020-09-24	2021-09-24
Sonoma	Amplifier	310N	185914	2020-10-13	2021-10-13
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Radiated emissions Above 1GHz					
TDK RF	Horn Antenna	HRN-0118	130 084	2018-10-12	2021-10-12
R&S	Spectrum Analyzer	FSP 38	100478	2020-07-07	2021-07-07
HUBER+SUHNER	Coaxial Cable	SUCOFLEX 126EA	MY369/26/26EA	2020-09-25	2021-09-25
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2020-09-05	2021-09-05
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Environmental Conditions

Test Item:	Conducted emissions	Radiated emissions (Below 1GHz)	Radiated emissions (Above 1GHz)
Temperature:	23.5℃	25.3 ℃	22.3℃
Relative Humidity:	64%	37%	34%
ATM Pressure:	101.0kPa	101.0kPa	102.0kPa
Tester:	Walker Chen	Asa Chen	Jalon Liu
Test Date:	2020-12-11	2020-12-11	2020-12-16

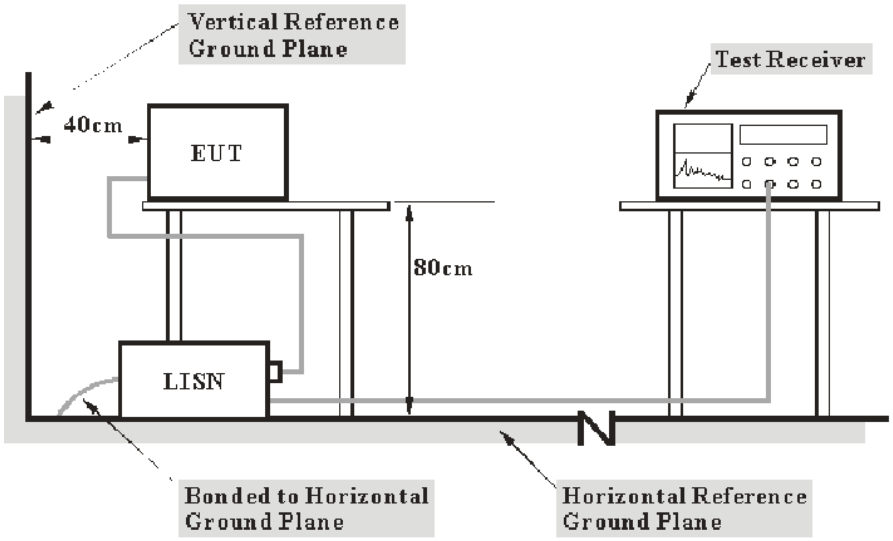
SUMARY OF TEST RESULTS

FCC Part 15B

Clause	Description of Test	Test Result
§15.107	Conducted emissions	Compliance
§15.109	Radiated emissions	Compliance

FCC PART 15B §15.107 – CONDUCTED EMISSIONS

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter was connected to the main LISN with a 120 V/60 Hz AC power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter or EUT was connected to the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT. The report shall list the six emissions with the smallest margin relative to the limit, unless the margin is greater than 20 dB.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result (QuasiPeak or Average) = Meter Reading + Corr.

Note:
Corr. = Cable loss + Factor of coupling device

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Result

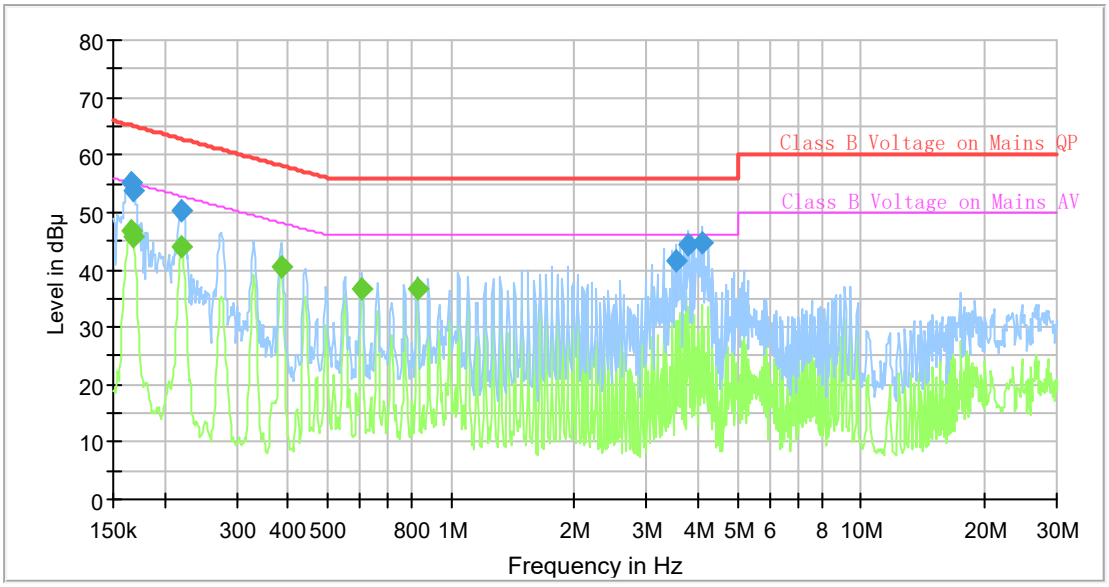
Test Data

Test mode: Downloading

Test Result: Compliance, *Please refer to following table and plots:*

Please refer to following table and plots:

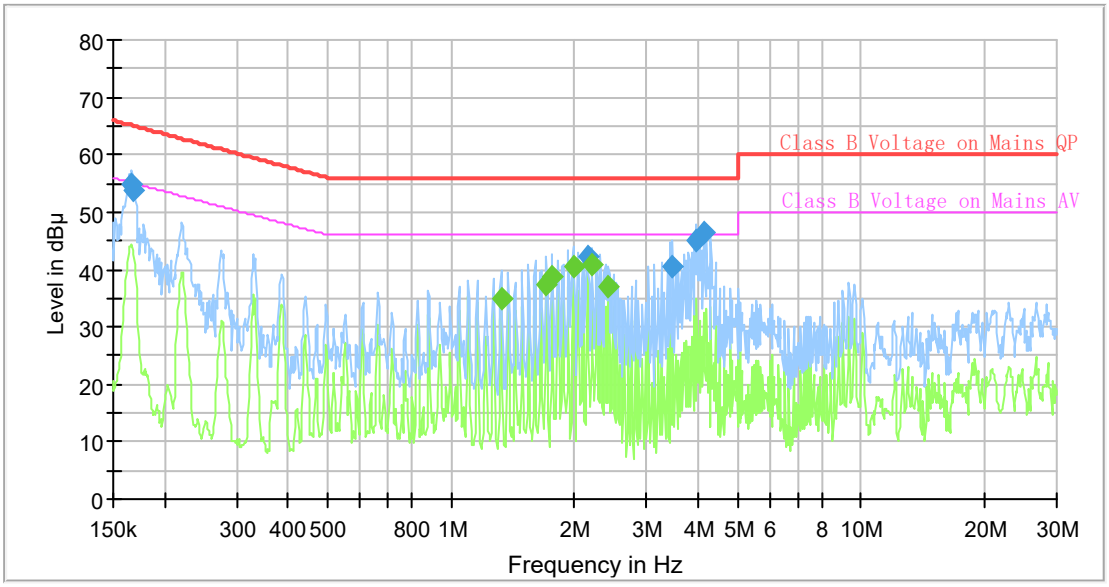
Port:	L
Test Mode:	Downloading
Power Source:	AC 120V/60Hz



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.165734	---	46.97	55.17	8.20	9.000	L1	9.6
0.165734	55.31	---	65.17	9.86	9.000	L1	9.6
0.167396	---	45.74	55.09	9.35	9.000	L1	9.6
0.167396	53.89	---	65.09	11.20	9.000	L1	9.6
0.220231	---	44.05	52.81	8.76	9.000	L1	9.6
0.220231	50.19	---	62.81	12.62	9.000	L1	9.6
0.385014	---	40.67	48.17	7.50	9.000	L1	9.6
0.606162	---	36.75	46.00	9.25	9.000	L1	9.6
0.825818	---	36.59	46.00	9.41	9.000	L1	9.7
3.525400	41.48	---	56.00	14.52	9.000	L1	9.7
3.799262	44.32	---	56.00	11.68	9.000	L1	9.7
4.074029	44.86	---	56.00	11.14	9.000	L1	9.7

Port: N
Test Mode: Downloading
Power Source: AC 120V/60Hz



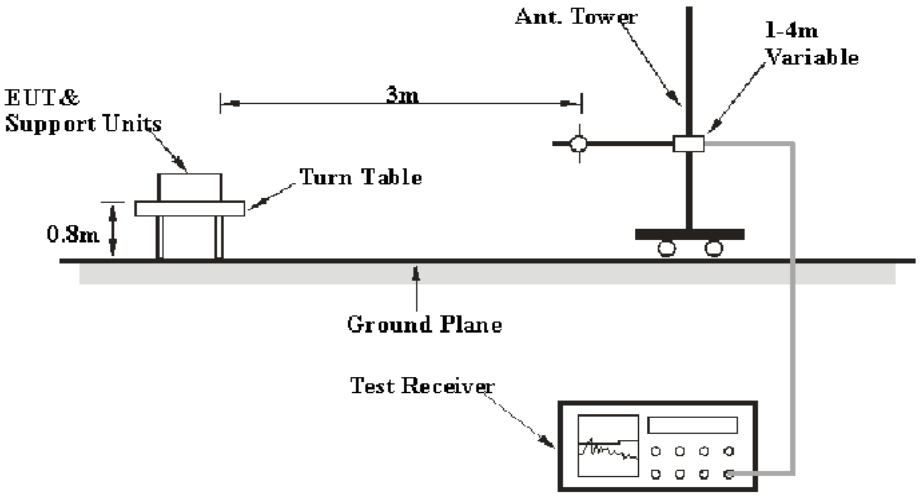
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.166563	54.76	---	65.13	10.37	9.000	N	9.6
0.167396	53.84	---	65.09	11.25	9.000	N	9.6
1.326356	---	35.04	46.00	10.96	9.000	N	9.6
1.710525	---	37.45	46.00	8.55	9.000	N	9.6
1.762486	---	38.90	46.00	7.10	9.000	N	9.6
1.986604	---	40.69	46.00	5.31	9.000	N	9.6
2.151633	42.43	---	56.00	13.57	9.000	N	9.6
2.205965	---	40.74	46.00	5.26	9.000	N	9.6
2.425234	---	37.18	46.00	8.82	9.000	N	9.6
3.473043	40.49	---	56.00	15.51	9.000	N	9.6
3.973689	45.18	---	56.00	10.82	9.000	N	9.6
4.135446	46.47	---	56.00	9.53	9.000	N	9.6

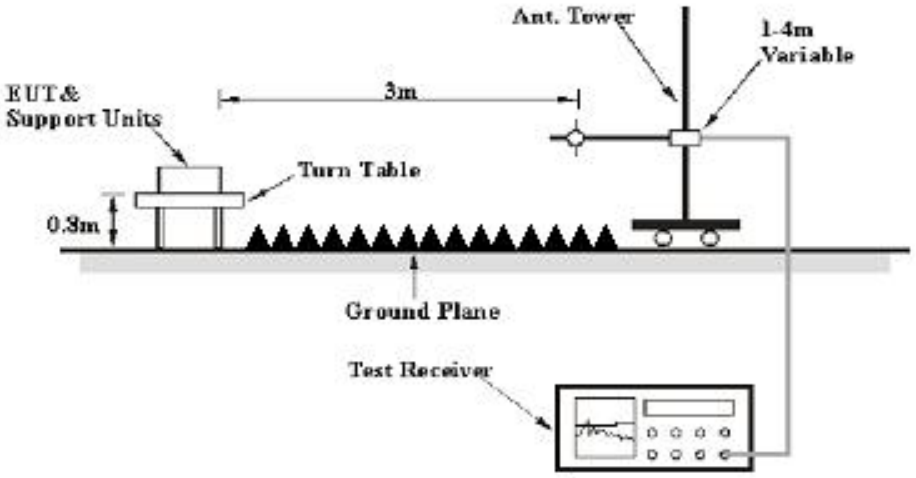
FCC PART 15B §15.109 – RADIATED EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed at the 3 meters distance, above 1GHz were performed at the 3 meters, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 13 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	Reduced video bandwidth	/	AVG

Test Procedure

During the radiated emissions, the adapter was connected to the first AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Meter Reading+ Corrected

Corrected = Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation
is as follows:

Margin = Limit – Result

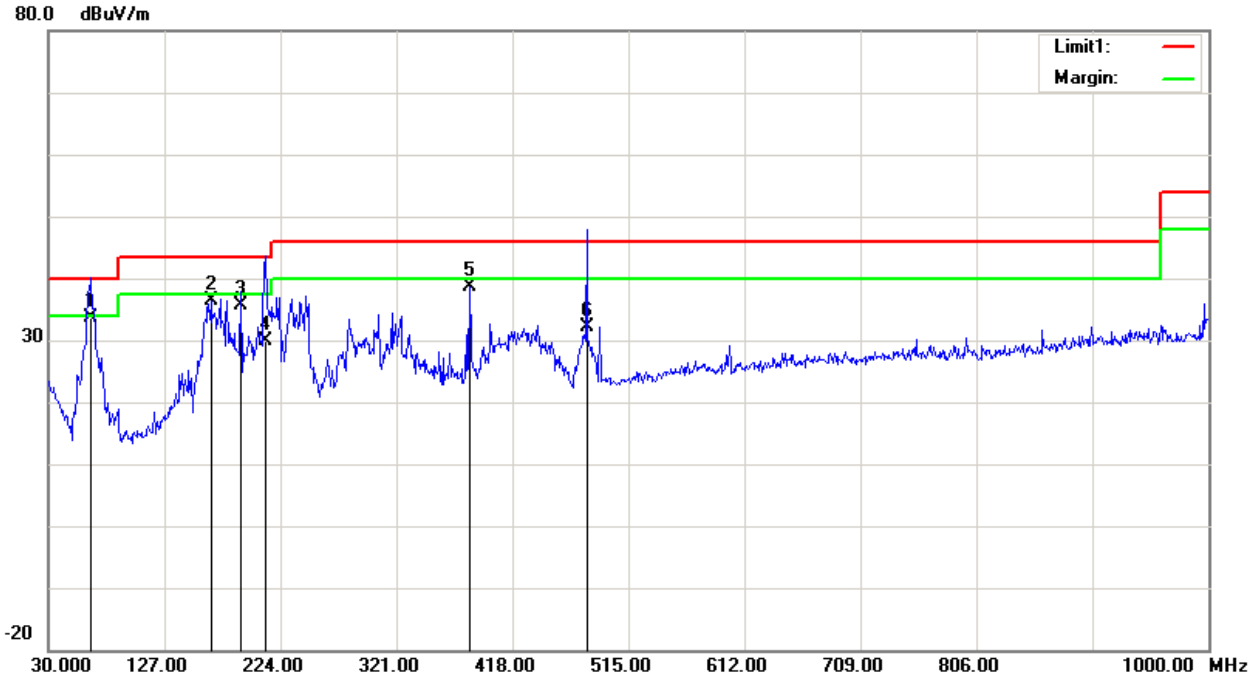
Test Data

Please refer to following table and plots:

Test Mode: Downloading

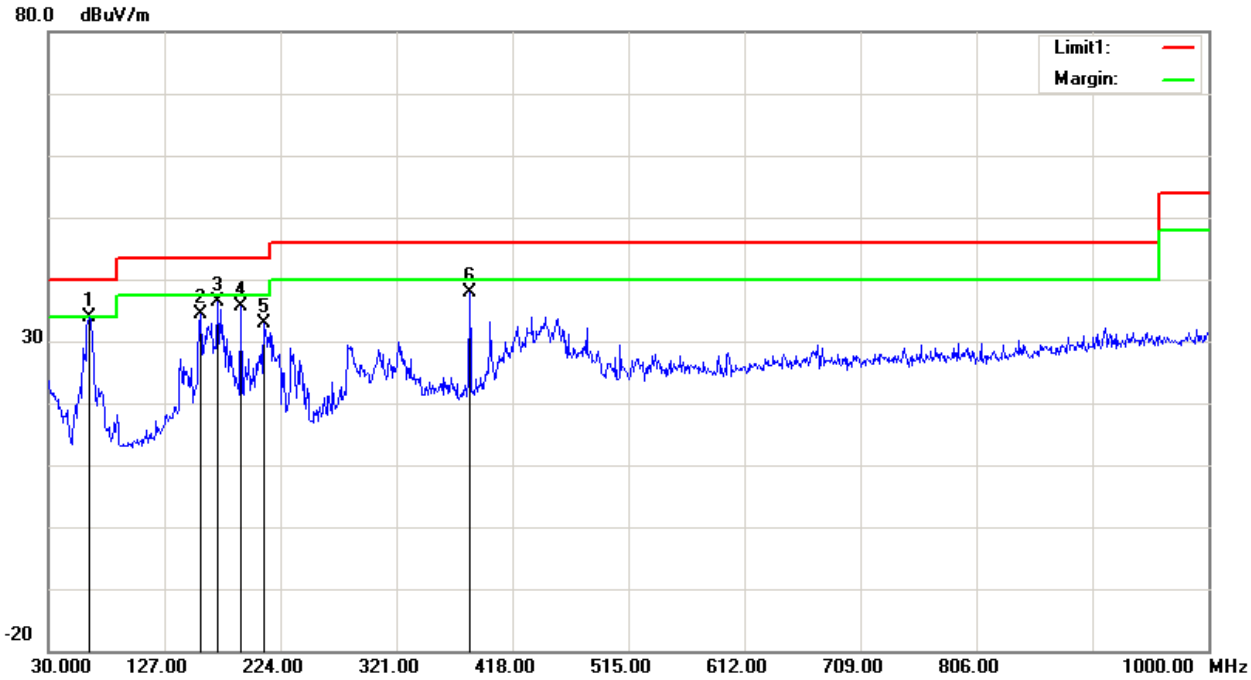
Please refer to following table and plots:

Condition:	**FCC Part 15B Class B**	**Polarization:**	**Horizontal**
Model:	**C7**	**Power:**	**AC 120V/60Hz**
Test Mode:	**Downloading**	**Distance:**	3m



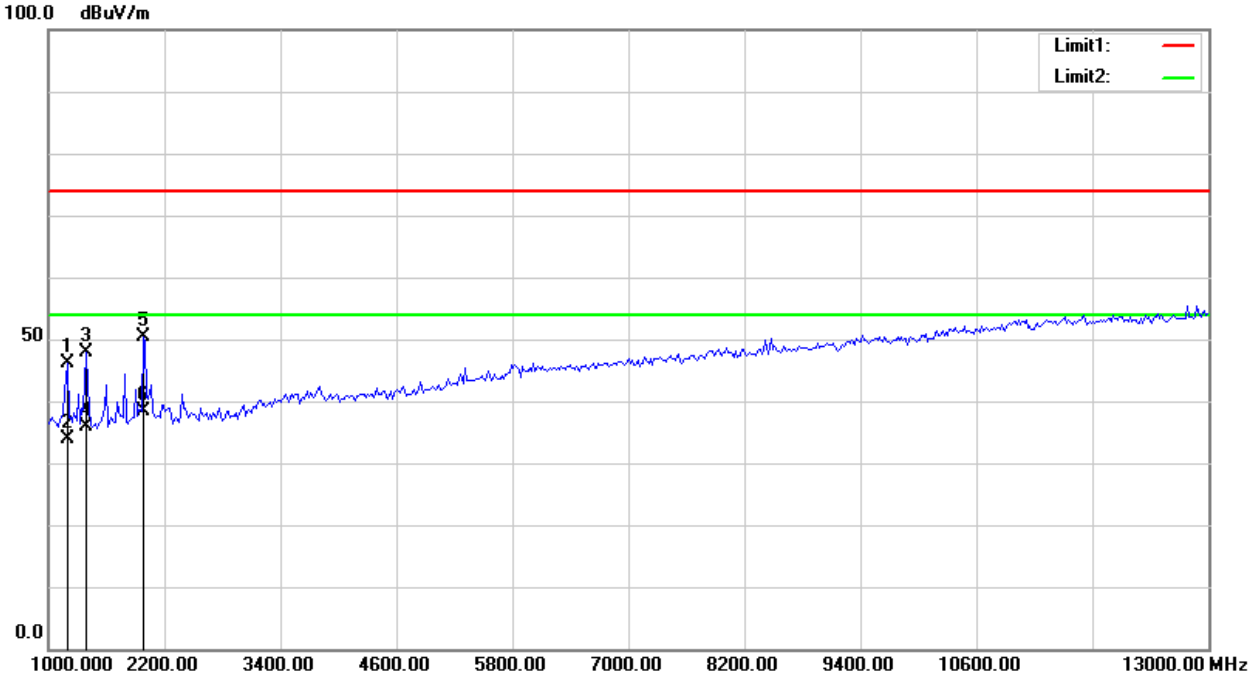
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	65.8900	50.05	QP	-16.43	33.62	40.00	6.38
2	165.8000	45.96	peak	-9.56	36.40	43.50	7.10
3	191.0200	46.11	QP	-10.49	35.62	43.50	7.88
4	211.3900	41.09	QP	-11.11	29.98	43.50	13.52
5	382.1100	44.49	peak	-5.80	38.69	46.00	7.31
6	480.0800	35.94	QP	-3.82	32.12	46.00	13.88

Condition:	**FCC Part 15B Class B**	**Polarization:**	**Vertical**
Model:	**C7**	**Power:**	**AC 120V/60Hz**
Test Mode:	**Downloading**	**Distance:**	3m



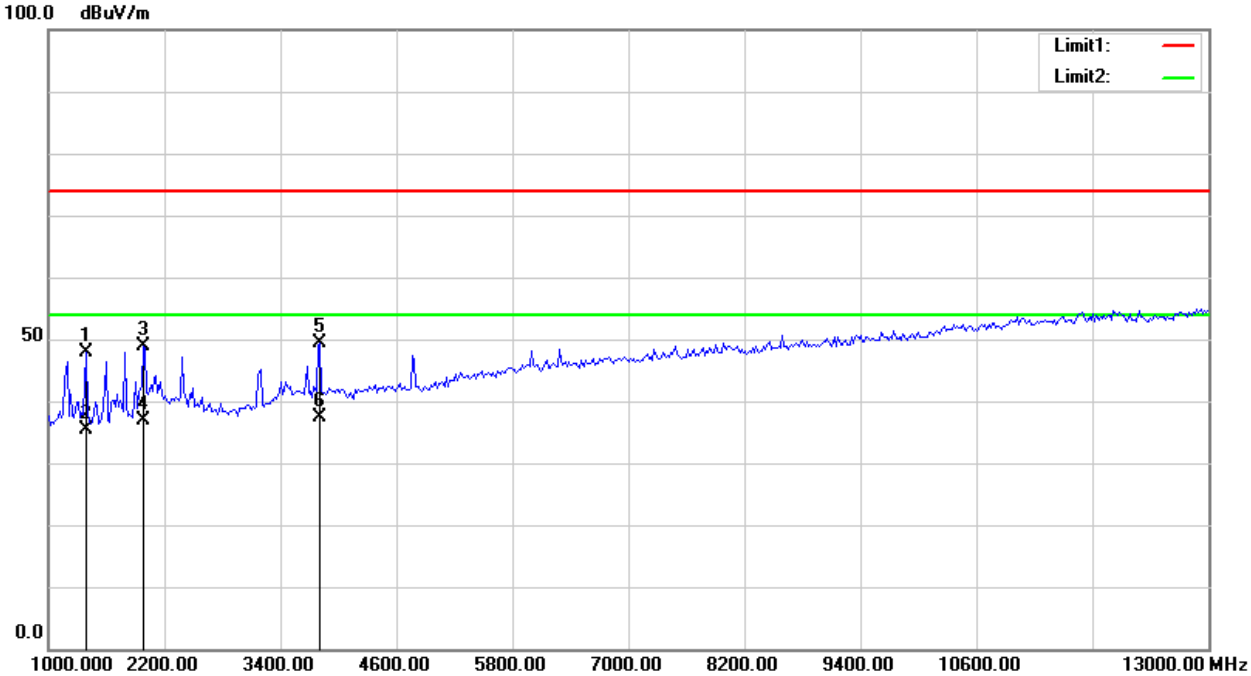
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	63.9500	50.37	peak	-16.46	33.91	40.00	6.09
2	157.0700	43.64	peak	-9.37	34.27	43.50	9.23
3	171.6200	45.87	peak	-9.47	36.40	43.50	7.10
4	191.0200	46.19	peak	-10.49	35.70	43.50	7.80
5	210.4200	44.01	peak	-11.22	32.79	43.50	10.71
6	382.1100	43.71	peak	-5.80	37.91	46.00	8.09

Condition:	**FCC Part 15B Class B Peak**	**Polarization:**	**Horizontal**
Model:	**C7**	**Power:**	**AC 120V/60Hz**
Test Mode:	**Downloading**	**Distance:**	3m



No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1192.308	49.15	peak	-3.13	46.02	74.00	27.98
2	1192.308	37.06	AVG	-3.13	33.93	54.00	20.07
3	1384.615	49.96	peak	-2.05	47.91	74.00	26.09
4	1384.615	37.87	AVG	-2.05	35.82	54.00	18.18
5	1980.769	51.88	peak	-1.54	50.34	74.00	23.66
6	1980.769	39.85	AVG	-1.54	38.31	54.00	15.69

Condition:	**FCC Part 15B Class B**	**Polarization:**	**Vertical**
Model:	**C7**	**Power:**	**AC 120V/60Hz**
Test Mode:	**Downloading**	**Distance:**	3m



No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1384.615	49.95	peak	-2.05	47.90	74.00	26.10
2	1384.615	37.43	AVG	-2.05	35.38	54.00	18.62
3	1980.769	50.45	peak	-1.54	48.91	74.00	25.09
4	1980.769	38.36	AVG	-1.54	36.82	54.00	17.18
5	3807.692	45.26	peak	4.13	49.39	74.00	24.61
6	3807.692	33.21	AVG	4.13	37.34	54.00	16.66

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