FCC PART 15B, CLASS B

TEST REPORT

For

DDM Brands LLC

2323 NW, 82ND Ave. Doral, Florida, U.S.A 33122

FCC ID: A4J5M

Report Type:	**Product Type:**
Original Report	3G Mobile phone

Report Number:	RSZ160919002-00A
Report Date:	2016-10-17
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *DDM Brands LLC's* product, model number: *5M (FCC ID: A4J5M)* or the "EUT" in this report was a *3G Mobile phone,* which was measured approximately: 143 mm (L) × 73 mm (W) × 8 mm (H), rated with input voltage: DC 3.8 V battery or DC 5.0 V from adapter. The highest operational frequency is 2480MHz.

Adapter Information:
Model: ZHY-NU050100FCC01
Input: AC 100-240V, 50-60Hz, 0.2A
Output: DC 5.0V, 1.0A

Note: For the product, series model AM5M2L043, AC5M2L043, 5M2 and 5M are identical schematics, the differences between them is just the model number due to marketing purpose and different shell (front appearance). 5M was selected for fully testing, which was explained in the attached product similarity declaration letter.

**All measurement and test data in this report was gathered from production sample serial number: 1603285 (Assigned by BACL, Kunshan).The EUT supplied by the applicant was received on 2016-09-19.*

Objective

This test report is prepared on behalf of *DDM Brands LLC i*n accordance with Part 2-Subpart J, Part 15-Subparts A, B of the Federal Communication Commissions rules.

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

Related Submittal(s)/Grant(s)

FCC Part 15.247 DSS, Part 15.247 DTS and Part 22H/24E PCE submissions with FCC ID: A4J5M.

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.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		±3.26 dB
Radiated emission	30MHz~1GHz	±5.91dB
	Above 1G	±4.92dB

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the Chenghu Lake Road, Kunshan Development Zone No.248,Kunshan, Jiangsu, China

Test site at Bay Area Compliance Laboratories Corp. (Kunshan) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 06, 2014. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 815570. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a manufacturer testing fashion.

EUT operation mode: Downloading (data transfer with computer)

EUT Exercise Software

"BurnIn test v5.3" exercise software was used.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

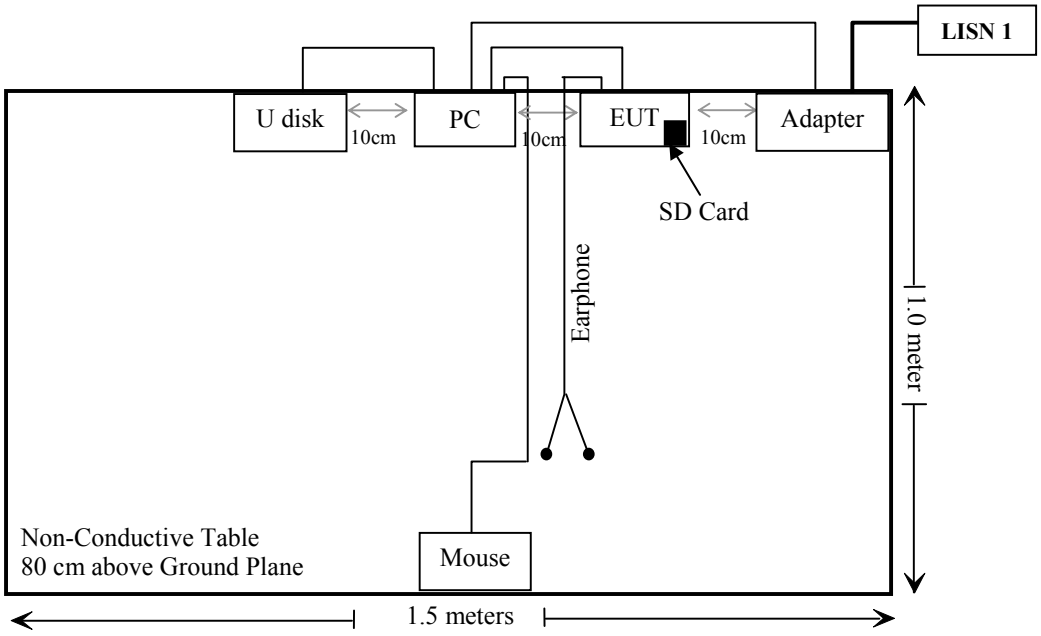
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	PC	E6410	GYXJ3A00 JSD2
DELL	Mouse	MOC5UO	G1900NKD
DELL	Adapter	E6410	10912240373
Kingston	U disk	4 GB	N/A

External I/O Cable

Cable Description	Length (m)	From/Port	To
Un-Shielding Detachable USB Cable	0.5	PC	U disk
Un-Shielding Detachable USB Cable	1.5	PC	Mouse
Un-shielding Detachable USB Cable	1.0	EUT	PC
Un-shielding Detachable AC Cable	0.9	Adapter	LISN 1
Un-shielding Un-detachable DC Cable	0.9	Adapter	PC

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
AC Line Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESCS30	934115/007	2015-11-12	2016-11-11
Rohde & Schwarz	LISN	ESH3-Z5	862770/011	2015-11-12	2016-11-11
Rohde & Schwarz	LISN	ESH3-Z5	892239/018	2016-06-23	2017-06-22
Rohde & Schwarz	Pulse limiter	ESH3-Z2	879940/0058	2016-06-19	2017-06-18
MICRO-COAX	Coaxial line	UFB-293B-1-0480-50X50	97F0173	2016-09-01	2017-09-01
Rohde & Schwarz	CE Test software	EMC 32	V 09.10.0	NCR	NCR
Radiated Emission Test					
Sonoma Instrunent	Amplifier	330	171377	2016-09-16	2017-09-16
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2015-11-12	2016-11-11
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2015-11-07	2016-11-06
ETS	Horn Antenna	3115	6229	2015-11-07	2016-11-06
EMCO	Horn Antenna	3116	9510-2384	2015-11-07	2016-11-06
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2015-11-12	2016-11-11
Mini	Pre-amplifier	ZVA-183-S+	857001418	2016-09-16	2017-09-16
R&S	Auto test Software	EMC32	V 09.10.0	NCR	NCR
BACL	RF cable	KS-LAB-012	KS-LAB-012	2015-12-15	2016-12-15

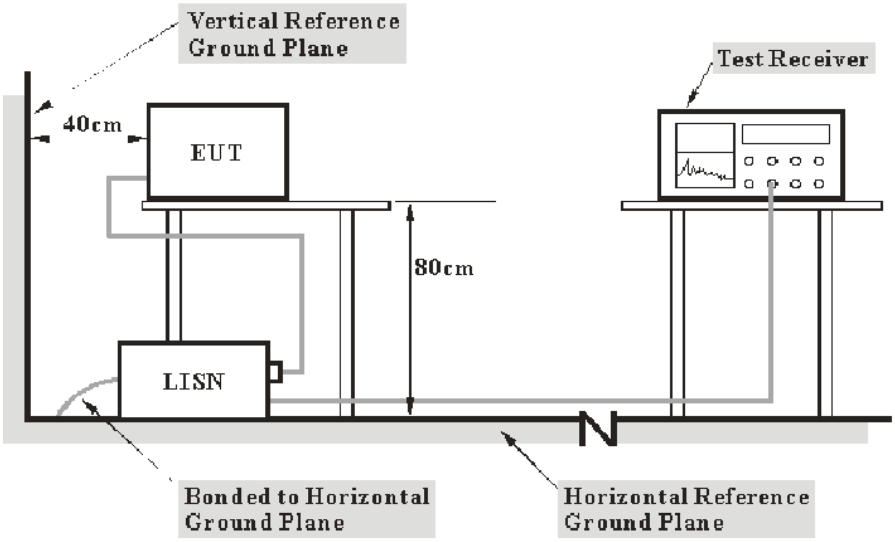
*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI)

FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Applicable Standard

According to FCC §15.107

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 measurement procedure of EUT setup is according with per ANSI C63.4-2014. The related limit was specified in FCC Part 15.107 Class B.

The spacing between the peripherals was 10 cm.

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 host PC was connected to the first LISN and the other relevant equipments were conncected to the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

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

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN/ISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation

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 – Corrected Amplitude

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.107,

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level is in compliance with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL., $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

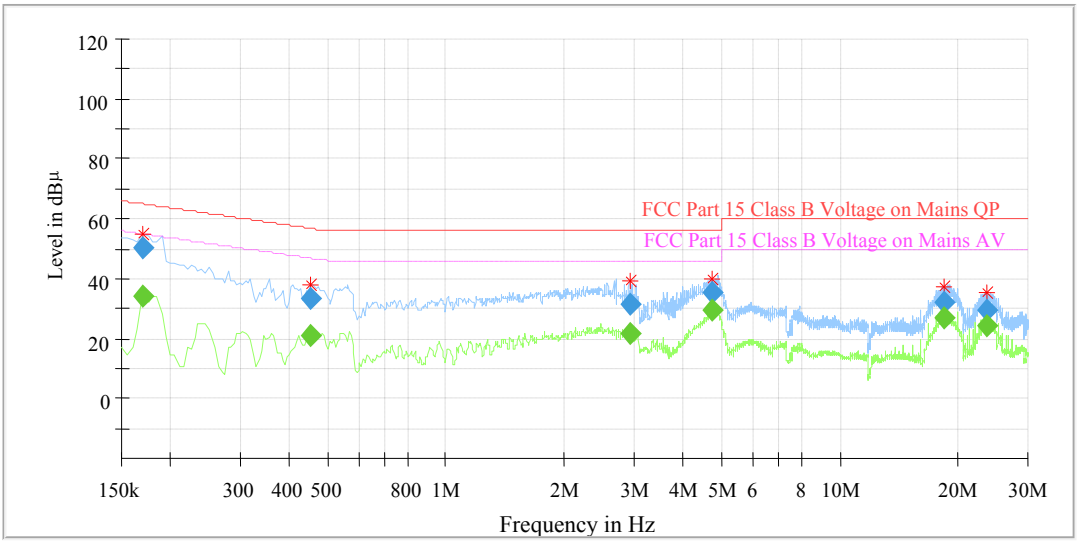
Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Ada Yu on 2016-10-06.

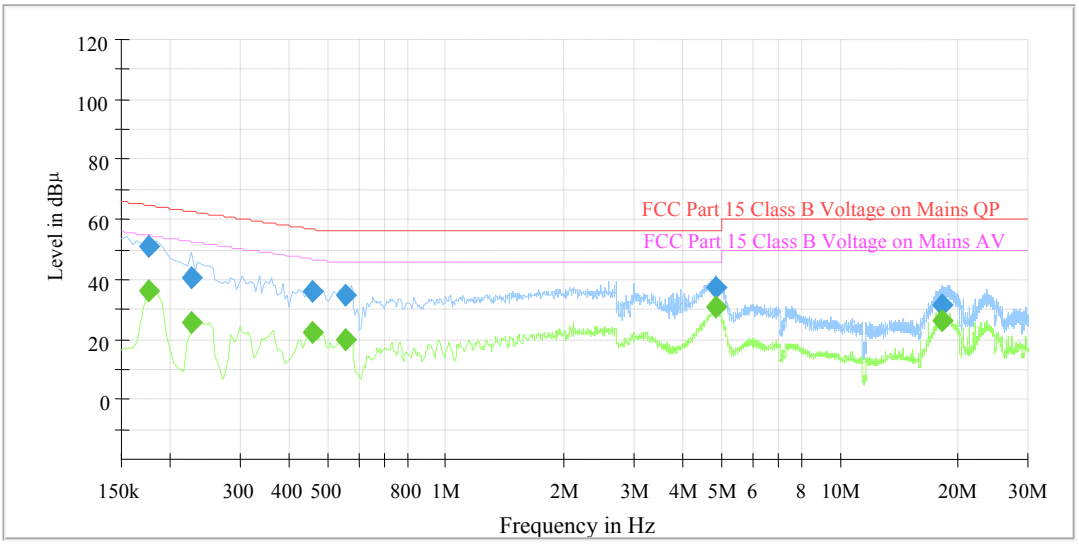
EUT Operation Mode: Downloading

AC 120V/60 Hz, Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.170000	---	34.50	9.000	L1	10.3	20.46	54.96	Compliance
0.170000	50.52	---	9.000	L1	10.3	14.44	64.96	Compliance
0.455000	---	21.05	9.000	L1	10.3	25.73	46.78	Compliance
0.455000	33.41	---	9.000	L1	10.3	23.37	56.78	Compliance
2.920000	---	21.86	9.000	L1	10.4	24.14	46.00	Compliance
2.920000	31.35	---	9.000	L1	10.4	24.65	56.00	Compliance
4.725000	---	29.78	9.000	L1	10.5	16.22	46.00	Compliance
4.725000	35.47	---	9.000	L1	10.5	20.53	56.00	Compliance
18.430000	---	27.11	9.000	L1	10.5	22.89	50.00	Compliance
18.430000	32.19	---	9.000	L1	10.5	27.81	60.00	Compliance
23.530000	---	24.09	9.000	L1	10.5	25.91	50.00	Compliance
23.530000	29.44	---	9.000	L1	10.5	30.56	60.00	Compliance

AC 120V/60 Hz, Neutral



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.175000	---	36.46	9.000	N	10.3	18.26	54.72	Compliance
0.175000	51.21	---	9.000	N	10.3	13.51	64.72	Compliance
0.225000	---	25.86	9.000	N	10.3	26.77	52.63	Compliance
0.225000	40.31	---	9.000	N	10.3	22.32	62.63	Compliance
0.460000	---	22.15	9.000	N	10.3	24.54	46.69	Compliance
0.460000	35.99	---	9.000	N	10.3	20.70	56.69	Compliance
0.555000	---	19.95	9.000	N	10.3	26.05	46.00	Compliance
0.555000	34.97	---	9.000	N	10.3	21.03	56.00	Compliance
4.825000	---	31.08	9.000	N	10.6	14.92	46.00	Compliance
4.825000	37.30	---	9.000	N	10.6	18.70	56.00	Compliance
18.260000	---	26.17	9.000	N	10.5	23.83	50.00	Compliance
18.260000	31.50	---	9.000	N	10.5	28.50	60.00	Compliance

Note:
1) Correction Factor =LISN VDF (Voltage Division Factor) + Cable Loss + Transient Limiter Attenuation
2) Corrected Amplitude = Reading + Correction Factor
3) Margin = Limit – Corrected Amplitude

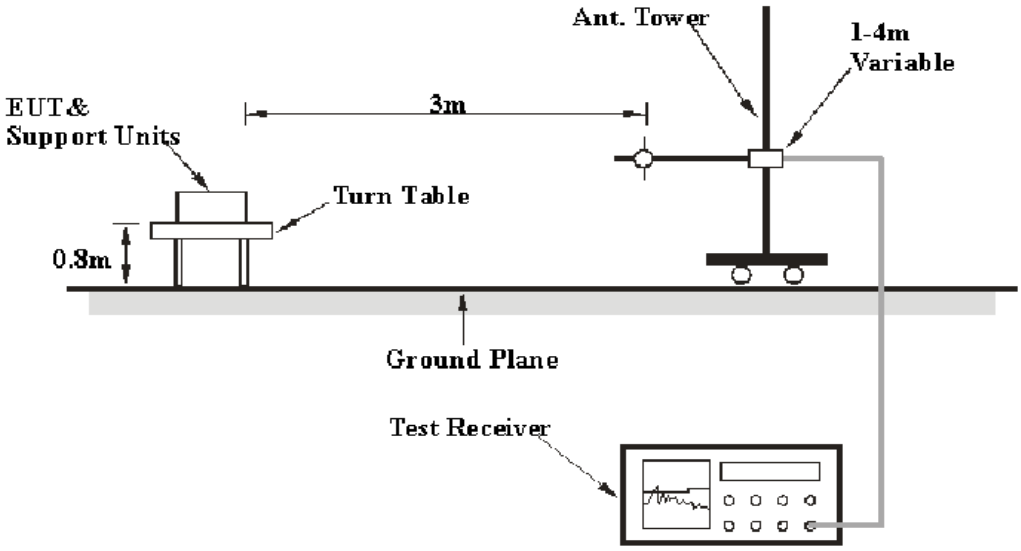
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

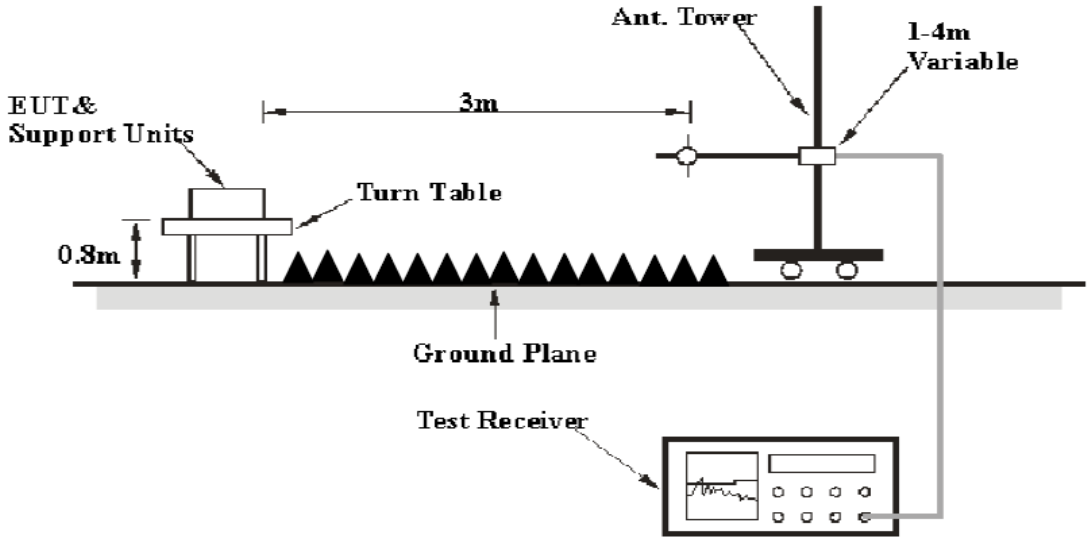
FCC §15.109

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 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 spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 12.4 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	Detector
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

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

All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

Corrected Amplitude & Margin Calculation

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

Corrected Amplitude = Meter Reading + 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 – Corrected Amplitude

Test Results Summary

According to the data in the following table, the EUT complied with the FCC §15.109 Class B,

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level is in compliance with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL, $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Ada Yu on 2016-10-07.

EUT Operation Mode: Downloading

30MHz- 12.4 GHz:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor （dB/m）	Corrected Amplitude (dBuV/m)	FCC Part 15B	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H / V)			Limit (dBuV/m)	Margin (dB)
35.29	33.17	QP	133	1.2	V	-7.71	25.46	40.	14.54
37.40	36.24	QP	350	1.0	V	-8.83	27.41	40	12.59
42.76	37.00	QP	115	1.1	V	-11.92	25.08	40	14.92
654.85	28.30	QP	114	1.0	V	-3.61	24.69	46	21.31
802.18	28.58	QP	0	2.3	H	-1.57	27.01	46	18.99
897.97	27.15	QP	243	1.3	H	-0.87	26.28	46	19.72
1334.79	56.15	PK	105	1.6	V	-4.38	51.77	74	22.23
1334.79	39.24	Ave.	105	1.6	V	-4.38	34.86	54	19.14
1752.34	58.54	PK	156	1.5	V	-5.03	53.51	74	20.49
1752.34	41.76	Ave.	156	1.5	V	-5.03	36.73	54	17.27

Note:
1) Correction Factor=Antenna factor (RX) + cable loss – amplifier factor
2) Corrected Amplitude = Correction Factor + Reading
3) Margin = Limit - Corrected Amplitude

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