

FCC PART 15.247

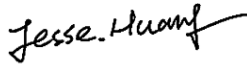
TEST REPORT

For

Autel Intelligent Tech. Corp., Ltd.

6th - 10th Floor, Bldg. B1, Zhiyuan, Xueyuan Rd., Xili, Nanshan Shenzhen China

FCC ID: WQ8MAXISYSMS906BT

Report Type: Original Report	Product Type: MaxiSys MS906BT
Report Number: RSZ161102002-00B	
Report Date: 2016-12-25	
Jesse Huang 	
Reviewed By: Manager	
Prepared By: Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 www.baclcorp.com.cn	

Note: This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
MEASUREMENT UNCERTAINTY	4
TEST FACILITY	4
SYSTEM TEST CONFIGURATION.....	5
DESCRIPTION OF TEST CONFIGURATION	5
EQUIPMENT MODIFICATIONS	5
EUT EXERCISE SOFTWARE	5
SUPPORT EQUIPMENT LIST AND DETAILS	6
EXTERNAL I/O CABLE.....	6
BLOCK DIAGRAM OF TEST SETUP	6
SUMMARY OF TEST RESULTS.....	7
TEST EQUIPMENT LIST	8
FCC§15.247 (i), §1.1307 (b) (1) & §2.1093 – RF EXPOSURE	9
APPLICABLE STANDARD	9
TEST RESULT	9
FCC §15.203 - ANTENNA REQUIREMENT.....	10
APPLICABLE STANDARD	10
ANTENNA CONNECTOR CONSTRUCTION	10
FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS	11
APPLICABLE STANDARD	11
EUT SETUP.....	11
EMI TEST RECEIVER SETUP.....	11
TEST PROCEDURE	11
CORRECTED FACTOR & MARGIN CALCULATION	12
TEST RESULTS SUMMARY	12
TEST DATA	12
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS.....	15
APPLICABLE STANDARD	15
EUT SETUP	15
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	16
TEST PROCEDURE	16
CORRECTED AMPLITUDE & MARGIN CALCULATION	16
TEST RESULTS SUMMARY	16
TEST DATA	17

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Autel Intelligent Tech. Corp., Ltd.*'s product, model number: *MS906BT (FCC ID: WQ8MAXISYSMS906BT)* in this report is a *MaxiSys MS906BT*, which was measured approximately: 270.8mm (L) * 176.0mm (W) * 36.0mm (H), rated with input voltage: DC3.7V battery or DC 12V from adapter.

Adapter information:

Model: GFP361DA-1230-1

Input: AC100-240V~50/60Hz, 1.2A

Output: DC 12V, 3A

** All measurement and test data in this report was gathered from production sample serial number: 1603601 (Assigned by BACL, Kunshan). The EUT supplied by the applicant was received on 2016-11-02.*

Objective

This report is prepared on behalf of *Autel Intelligent Tech. Corp., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A, B and C of the Federal Communication Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Related Submittal(s)/Grant(s)

FCC Part 15B JBP submissions with FCC ID: WQ8MAXISYSMS906BT.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

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
RF conducted test with spectrum		± 0.9 dB
RF Output Power with Power meter		± 0.5 dB
Radiated emission	30MHz~1GHz	± 5.91 dB
	Above 1G	± 4.92 dB
Occupied Bandwidth		± 0.5 kHz
Temperature		± 1.0 °C
Humidity		$\pm 6\%$

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 C63.10-2013.

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

For 802.11b, 802.11g and 802.11n-HT20 mode, 13 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442	/	/

For 802.11b, 802.11g, 802.11n-HT20 mode, EUT was tested with Channel 1, 7 and 13

Equipment Modifications

No modification was made to the EUT tested.

EUT Exercise Software

The device was tested with 100% duty cycle and the worst case was performed as below:

802.11b: Data rate: 1 Mbps, power level: Default

802.11g: Data rate: 6 Mbps, power level: Default

802.11n-HT20: Data rate: MCS0, power level: Default

Pre-scan with all the data rates, the above data rate is the worst case for Wi-Fi test.

Support Equipment List and Details

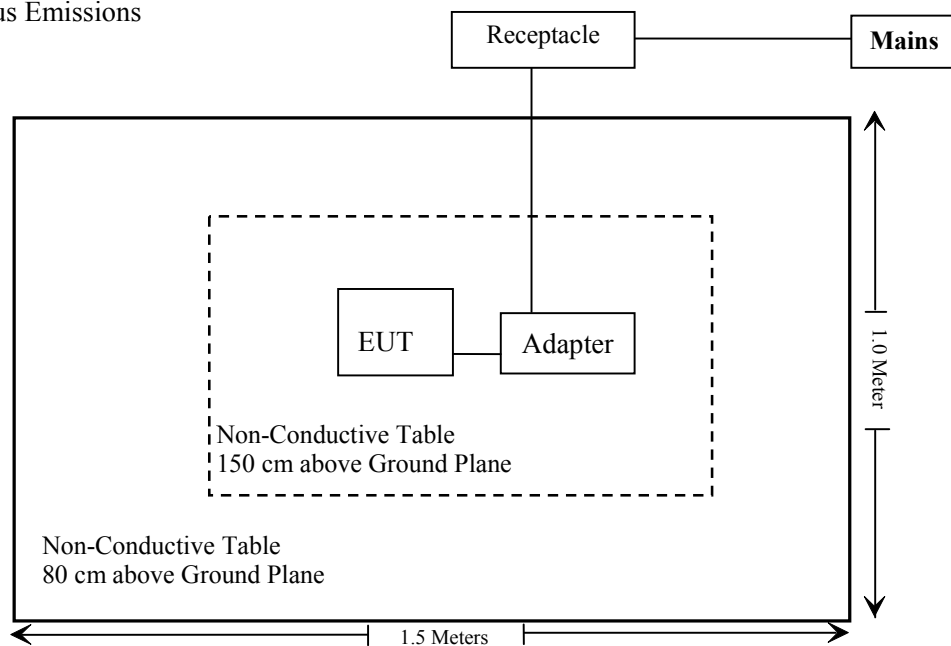
Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

Cable Description	Length (m)	From Port	To
Un-shielding Detachable AC Power Cable	1.3	EUT	Adapter
Unshielded Un-detachable AC cable	1.0	Receptacle	Mains

Block Diagram of Test Setup

For Spurious Emissions



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1307 (b) (1)& §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliance*
§15.247(b)(3)	Maximum Conducted Output Power	Compliance*
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliance*
§15.247(e)	Power Spectral Density	Compliance*

Note: * The EUT is the same product as the EUT (Model: MS906TS, FCC ID: WQ8MAXISYSMS906TS), but the different is the tire pressure function was removed. So the different tested data between them is “§15.205, §15.209, §15.247(d) Spurious Emissions”, and other test data are referred to FCC ID: WQ8MAXISYSMS906TS granted on 2016-08-31, report No.: RSZ151116007-00B, which was tested by Bay Area Compliance Laboratories Corp.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
AC Line Conducted test					
Rohde & Schwarz	EMI Test Receiver	ESCS30	834115/007	2016-11-25	2017-11-25
Rohde & Schwarz	LISN	ESH3-Z5	862770/011	2016-10-10	2017-10-10
Rohde & Schwarz	Pulse limiter	ESH3-Z2	879940/0058	2016-06-18	2017-06-17
MICRO-COAX	Coaxial line	UFB-293B-1-0480-50X50	97F0173	2016-09-08	2017-09-08
Rohde & Schwarz	CE Test software	EMC 32	V 09.10.0	NCR	NCR
Radiation test					
Sonoma Instrument	Amplifier	330	171377	2016-12-12	2017-12-12
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2016-11-25	2017-11-25
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2016-01-09	2019-01-08
Narda	Pre-amplifier	AFS42-00101800	2001270	2016-09-08	2017-09-08
EMCO	Horn Antenna	3116	9510-2384	2015-11-07	2018-11-06
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2016-11-25	2017-11-25
ETS	Horn Antenna	3115	9311-4159	2016-01-11	2019-01-10
R&S	Auto test Software	EMC32	V 09.10.0	NCR	NCR
haojintech	Coaxial Cable	Cable-1	001	2016-12-12	2017-12-12
haojintech	Coaxial Cable	Cable-2	002	2016-12-12	2017-12-12
haojintech	Coaxial Cable	Cable-3	003	2016-12-12	2017-12-12
MICRO-COAX	Coaxial Cable	Cable-4	004	2016-12-12	2017-12-12
MICRO-COAX	Coaxial Cable	Cable-5	005	2016-12-12	2017-12-12

* **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§15.247 (i), §1.1307 (b) (1) & §2.1093 – RF EXPOSURE

Applicable Standard

FCC§1.1307 and §2.1093.

Test Result

Compliance, please refer to the SAR report: RSZ161102002-20.

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has one internal antenna arrangement which was permanently attached and the antenna gain is 1.45dBi, fulfill the requirement of this section. Please refer to the EUT photos.

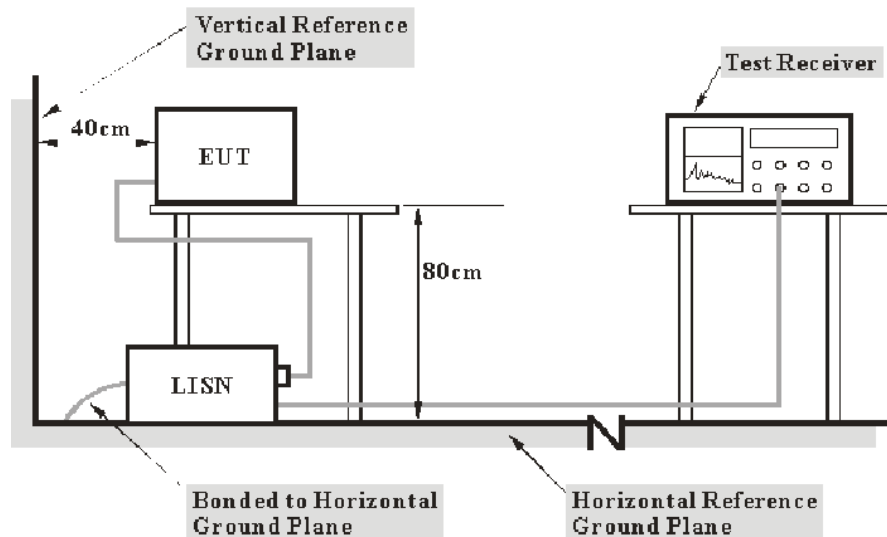
Result: Compliance.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

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 C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

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 adapter was connected to the outlet of the LISN.

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

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

Corrected Factor & Margin Calculation

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

$$\text{Correction Factor} = \text{LISN VDF} + \text{Cable Loss} + \text{Transient Limiter Attenuation}$$

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

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

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

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.

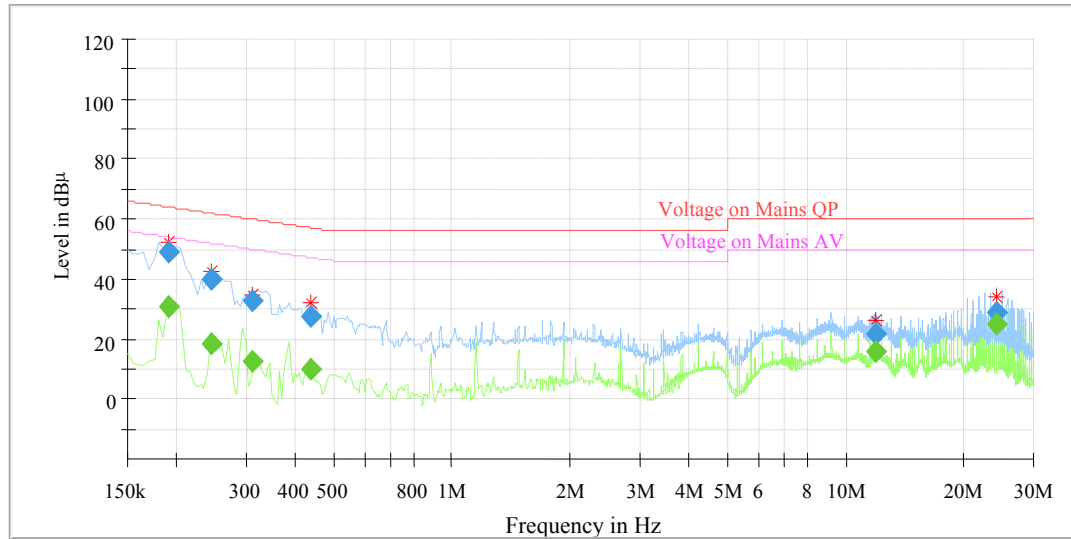
Test Data

Environmental Conditions

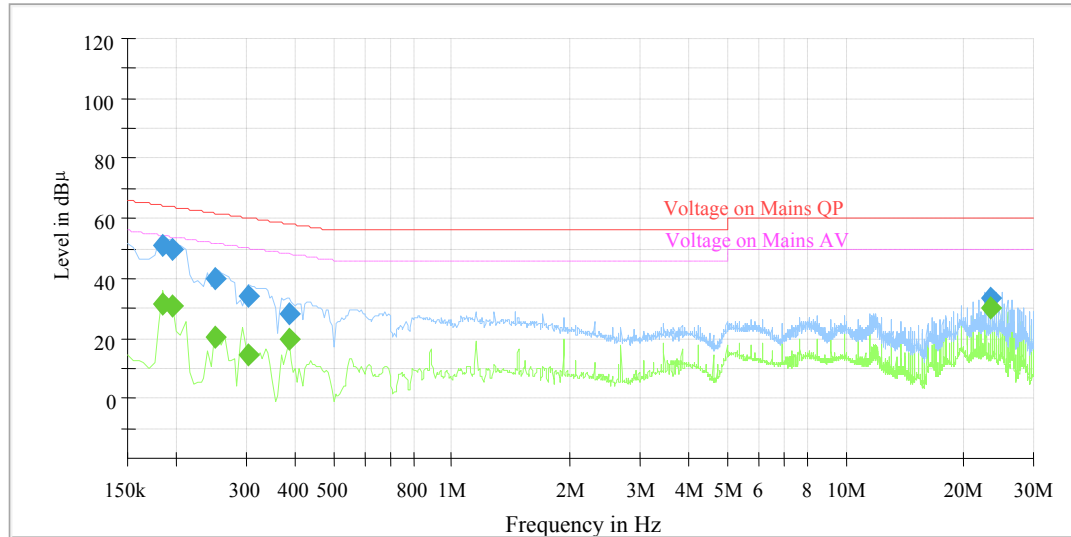
Temperature:	23 °C
Relative Humidity:	48 %
ATM Pressure:	101.0 kPa

The testing was performed by Layne Li on 2016-12-13.

EUT operation mode: Transmitting & Charging

Wi-Fi Mode:**AC 120V/60 Hz, Line:**

Frequency (MHz)	QuasiPeak (dBμV)	Average (dB μ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.190000	---	30.50	9.000	L1	10.3	23.54	54.04	Compliance
0.190000	49.31	---	9.000	L1	10.3	14.73	64.04	Compliance
0.245000	---	18.44	9.000	L1	10.3	33.48	51.92	Compliance
0.245000	39.92	---	9.000	L1	10.3	22.00	61.92	Compliance
0.310000	---	12.52	9.000	L1	10.3	37.45	49.97	Compliance
0.310000	33.02	---	9.000	L1	10.3	26.95	59.97	Compliance
0.440000	---	9.73	9.000	L1	10.3	37.33	47.06	Compliance
0.440000	27.34	---	9.000	L1	10.3	29.72	57.06	Compliance
11.965000	---	15.49	9.000	L1	10.4	34.51	50.00	Compliance
11.965000	21.56	---	9.000	L1	10.4	38.44	60.00	Compliance
24.185000	---	24.87	9.000	L1	10.5	25.13	50.00	Compliance
24.185000	29.08	---	9.000	L1	10.5	30.92	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
0.185000	---	31.51	9.000	N	10.3	22.75	54.26	Compliance
0.185000	51.07	---	9.000	N	10.3	13.19	64.26	Compliance
0.195000	---	30.47	9.000	N	10.3	23.35	53.82	Compliance
0.195000	49.44	---	9.000	N	10.3	14.38	63.82	Compliance
0.250000	---	20.44	9.000	N	10.3	31.32	51.76	Compliance
0.250000	40.13	---	9.000	N	10.3	21.63	61.76	Compliance
0.305000	---	14.20	9.000	N	10.3	35.91	50.11	Compliance
0.305000	34.33	---	9.000	N	10.3	25.78	60.11	Compliance
0.385000	---	19.45	9.000	N	10.3	28.72	48.17	Compliance
0.385000	28.36	---	9.000	N	10.3	29.81	58.17	Compliance
23.425000	---	30.23	9.000	N	10.5	19.77	50.00	Compliance
23.425000	33.16	---	9.000	N	10.5	26.84	60.00	Compliance

Note:

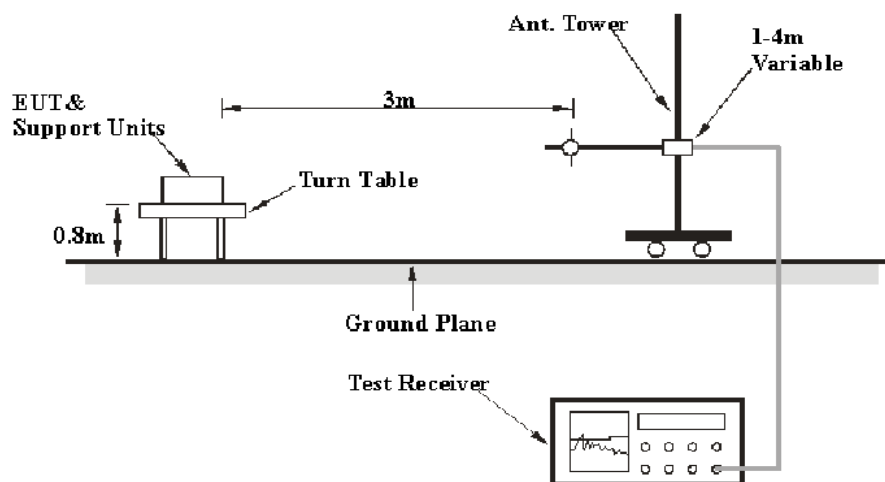
- 1) Corrected Amplitude = Reading + Correction Factor
- 2) Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation
- 3) Margin = Limit – Corrected Amplitude

FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS**Applicable Standard**

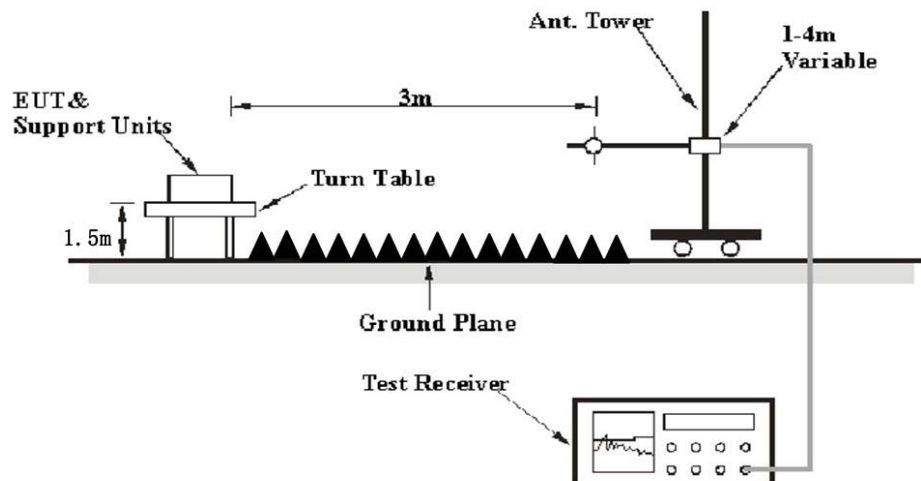
FCC §15.247 (d); §15.209; §15.205;

EUT Setup

Below 1 GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were 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.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1 GHz, peak and Average detection 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:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with 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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247.

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level complies 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:	23 °C
Relative Humidity:	48 %
ATM Pressure:	101.0 kPa

The testing was performed by Layne Li on 2016-12-13.

EUT operation mode: Transmitting

30 MHz-25 GHz:**802.11b Mode:**

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
175.75	45.87	QP	192	2.4	V	-11.99	33.88	43.5	9.62
2412.00	105.92	PK	270	1.1	H	-3.04	102.88	/	/
2412.00	99.78	Ave.	270	1.1	H	-3.04	96.74	/	/
2412.00	98.22	PK	163	1.0	V	-3.04	95.18	/	/
2412.00	92.49	Ave.	163	1.0	V	-3.04	89.45	/	/
2372.12	50.31	PK	226	2.4	H	-3.06	47.25	74	26.75
2372.12	39.63	Ave.	226	2.4	H	-3.06	36.57	54	17.43
2382.14	49.04	PK	172	1.9	H	-3.06	45.98	74	28.02
2382.14	38.47	Ave.	172	1.9	H	-3.06	35.41	54	18.59
2483.73	46.13	PK	340	1.8	H	-2.99	43.14	74	30.86
2483.73	31.61	Ave.	340	1.8	H	-2.99	28.62	54	25.38
4824.00	45.98	PK	297	2.4	H	7.19	53.17	74	20.83
4824.00	29.73	Ave.	297	2.4	H	7.19	36.92	54	17.08

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Middle Channel (2442 MHz)									
175.75	46.02	QP	300	1.7	V	-11.99	34.03	43.5	9.47
2442.00	105.68	PK	255	1.7	H	-3.02	102.66	/	/
2442.00	100.90	Ave.	255	1.7	H	-3.02	97.88	/	/
2442.00	98.98	PK	259	1.6	V	-3.02	95.96	/	/
2442.00	94.80	Ave.	259	1.6	V	-3.02	91.78	/	/
2382.30	45.18	PK	67	2.3	H	-3.06	42.12	74	31.88
2382.30	32.02	Ave.	67	2.3	H	-3.06	28.96	54	25.04
2486.14	50.95	PK	6	2.3	H	-2.99	47.96	74	26.04
2486.14	38.55	Ave.	6	2.3	H	-2.99	35.56	54	18.44
2491.70	50.24	PK	151	2.2	H	-2.99	47.25	74	26.75
2491.70	38.10	Ave.	151	2.2	H	-2.99	35.11	54	18.89
4884.00	45.15	PK	55	2.4	H	7.28	52.43	74	21.57
4884.00	30.18	Ave.	55	2.4	H	7.28	37.46	54	16.54
High Channel (2472 MHz)									
175.75	45.74	QP	304	1.7	V	-11.99	33.75	43.5	9.75
2472.00	105.71	PK	59	1.8	H	-3.00	102.71	/	/
2472.00	100.77	Ave.	59	1.8	H	-3.00	97.77	/	/
2472.00	100.59	PK	155	1.1	V	-3.00	97.59	/	/
2472.00	95.76	Ave.	155	1.1	V	-3.00	92.76	/	/
2372.12	44.75	PK	212	1.9	H	-3.06	41.69	74	32.31
2372.12	30.09	Ave.	212	1.9	H	-3.06	27.03	54	26.97
2483.56	67.42	PK	206	1.8	H	-2.99	64.43	74	9.57
2483.56	55.70	Ave.	206	1.8	H	-2.99	52.71	54	1.29
2486.87	64.00	PK	285	1.9	H	-2.99	61.01	74	12.99
2486.87	55.33	Ave.	285	1.9	H	-2.99	52.34	54	1.66
4944.00	45.78	PK	266	2.4	H	7.37	53.15	74	20.85
4944.00	28.50	Ave.	266	2.4	H	7.37	35.87	54	18.13

802.11g Mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
175.75	46.78	QP	11	1.5	V	-11.99	34.79	43.5	8.71
2412.00	107.50	PK	185	1.8	H	-3.04	104.46	/	/
2412.00	97.03	Ave.	185	1.8	H	-3.04	93.99	/	/
2412.00	102.44	PK	18	1.8	V	-3.04	99.40	/	/
2412.00	92.18	Ave.	18	1.8	V	-3.04	89.14	/	/
2390.00	71.64	PK	125	1.8	H	-3.05	68.59	74	5.41
2390.00	49.62	Ave.	125	1.8	H	-3.05	46.57	54	7.43
2386.79	68.07	PK	176	1.5	H	-3.05	65.02	74	8.98
2386.79	48.46	Ave.	176	1.5	H	-3.05	45.41	54	8.59
2483.63	49.71	PK	150	2.5	H	-2.99	46.72	74	27.28
2483.63	32.07	Ave.	150	2.5	H	-2.99	29.08	54	24.92
4824.00	45.41	PK	88	2.5	H	7.19	52.60	74	21.40
4824.00	29.73	Ave.	88	2.5	H	7.19	36.92	54	17.08
Middle Channel (2442 MHz)									
175.75	46.02	QP	300	1.7	V	-11.99	34.03	43.5	9.47
2442.00	108.14	PK	244	1.2	H	-3.02	105.12	/	/
2442.00	97.70	Ave.	244	1.2	H	-3.02	94.68	/	/
2442.00	98.70	PK	30	2.4	V	-3.02	95.68	/	/
2442.00	88.58	Ave.	30	2.4	V	-3.02	85.56	/	/
2387.91	54.21	PK	130	2.0	H	-3.05	51.16	74	22.84
2387.91	34.06	Ave.	130	2.0	H	-3.05	31.01	54	22.99
2484.06	63.13	PK	128	2.0	H	-2.99	60.14	74	13.86
2484.06	40.59	Ave.	128	2.0	H	-2.99	37.60	54	16.40
2485.48	62.40	PK	199	2.0	H	-2.99	59.41	74	14.59
2485.48	39.43	Ave.	199	2.0	H	-2.99	36.44	54	17.56
4884.00	45.87	PK	170	1.5	H	7.28	53.15	74	20.85
4884.00	30.18	Ave.	170	1.5	H	7.28	37.46	54	16.54

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel (2472 MHz)									
175.75	45.74	QP	304	1.7	V	-11.99	33.75	43.5	9.75
2472.00	108.48	PK	144	1.1	H	-3.00	105.48	/	/
2472.00	98.24	Ave.	144	1.1	H	-3.00	95.24	/	/
2472.00	103.42	PK	265	1.5	V	-3.00	100.42	/	/
2472.00	93.41	Ave.	265	1.5	V	-3.00	90.41	/	/
2384.86	50.28	PK	151	2.0	H	-3.05	47.23	74	26.77
2384.86	34.06	Ave.	151	2.0	H	-3.05	31.01	54	22.99
2483.63	75.98	PK	334	1.1	H	-2.99	72.99	74	1.01
2483.63	56.06	Ave.	334	1.1	H	-2.99	53.07	54	0.93
2485.25	73.26	PK	191	1.9	H	-2.99	70.27	74	3.73
2485.25	54.65	Ave.	191	1.9	H	-2.99	51.66	54	2.34
4944.00	44.67	PK	27	2.3	H	7.37	52.04	74	21.96
4944.00	28.50	Ave.	27	2.3	H	7.37	35.87	54	18.13

802.11n-HT20 Mode:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2412 MHz)									
175.75	45.92	QP	47	1.7	V	-11.99	33.93	43.5	9.57
2412.00	104.84	PK	356	1.0	H	-3.04	101.80	/	/
2412.00	94.69	Ave.	356	1.0	H	-3.04	91.65	/	/
2412.00	100.03	PK	132	2.4	V	-3.04	96.99	/	/
2412.00	89.84	Ave.	132	2.4	V	-3.04	86.80	/	/
2384.38	65.10	PK	188	2.4	H	-3.05	62.05	74	11.95
2384.38	46.62	Ave.	188	2.4	H	-3.05	43.57	54	10.43
2386.47	63.64	PK	144	1.0	H	-3.05	60.59	74	13.41
2386.47	45.54	Ave.	144	1.0	H	-3.05	42.49	54	11.51
2488.07	53.82	PK	313	1.5	H	-2.99	50.83	74	23.17
2488.07	34.57	Ave.	313	1.5	H	-2.99	31.58	54	22.42
4824.00	45.29	PK	172	1.0	H	7.19	52.48	74	21.52
4824.00	29.73	Ave.	172	1.0	H	7.19	36.92	54	17.08
Middle Channel(2442 MHz)									
175.75	45.97	QP	274	1.2	V	-11.99	33.98	43.5	9.52
2442.00	105.08	PK	44	1.8	H	-3.02	102.06	/	/
2442.00	94.81	Ave.	44	1.8	H	-3.02	91.79	/	/
2442.00	99.21	PK	206	2.4	V	-3.02	96.19	/	/
2442.00	88.71	Ave.	206	2.4	V	-3.02	85.69	/	/
2385.51	54.22	PK	27	2.3	H	-3.05	51.17	74	22.83
2385.51	35.99	Ave.	27	2.3	H	-3.05	32.94	54	21.06
2483.89	62.63	PK	171	1.3	H	-2.99	59.64	74	14.36
2483.89	39.43	Ave.	171	1.3	H	-2.99	36.44	54	17.56
2487.43	60.93	PK	326	2.0	H	-2.99	57.94	74	16.06
2487.43	38.09	Ave.	326	2.0	H	-2.99	35.10	54	18.90
4884.00	45.66	PK	205	1.9	H	7.28	52.94	74	21.06
4884.00	30.18	Ave.	205	1.9	H	7.28	37.46	54	16.54

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
High Channel (2472 MHz)									
175.75	45.95	QP	105	1.0	V	-11.99	33.96	43.5	9.54
2472.00	106.91	PK	127	1.6	H	-3.00	103.91	/	/
2472.00	96.72	Ave.	127	1.6	H	-3.00	93.72	/	/
2472.00	101.23	PK	139	1.6	V	-3.00	98.23	/	/
2472.00	91.04	Ave.	139	1.6	V	-3.00	88.04	/	/
2389.35	52.83	PK	177	1.9	H	-3.05	49.78	74	24.22
2389.35	34.06	Ave.	177	1.9	H	-3.05	31.01	54	22.99
2483.56	75.85	PK	134	1.1	H	-2.99	72.86	74	1.14
2483.56	56.21	Ave.	134	1.1	H	-2.99	53.22	54	0.78
2483.76	72.65	PK	285	1.8	H	-2.99	69.66	74	4.34
2483.76	54.32	Ave.	285	1.8	H	-2.99	51.33	54	2.67
4944.00	45.45	PK	318	2.2	H	7.37	52.82	74	21.18
4944.00	28.50	Ave.	318	2.2	H	7.37	35.87	54	18.13

Note:

Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

Corrected Amplitude = Corrected Factor + Reading

Margin = Limit - Corrected. Amplitude

The other spurious emission which is 20dB to the limit was not recorded.

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