

FCC PART 15.247

TEST REPORT

For

SZ DJI TECHNOLOGY CO., LTD

14th floor, West Wing, Skyworth Semiconductor Design Building NO.18 Gaoxin South 4th Ave, Nanshan,
Shenzhen, Guangdong, China

FCC ID: SS3-GL6581502

Report Type: Original Report	Product Type: Remote Controller
Test Engineer: Allen Qiao	<i>Allen Qiao</i>
Report Number: RDG150203002-00A	
Report Date: 2015-02-11	
Reviewed By: Sula Huang RF Engineer	<i>Sula Huang</i>
Test Laboratory: Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn	

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. (Dongguan). 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.

TABLE OF CONTENTS

GENERAL INFORMATION.....	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	4
OBJECTIVE.....	4
RELATED SUBMITTAL(S)/GRANT(S).....	4
TEST METHODOLOGY.....	4
TEST FACILITY.....	4
SYSTEM TEST CONFIGURATION.....	5
DESCRIPTION OF TEST CONFIGURATION.....	5
EUT EXERCISE SOFTWARE.....	5
EQUIPMENT MODIFICATIONS.....	5
BLOCK DIAGRAM OF TEST SETUP.....	5
SUMMARY OF TEST RESULTS.....	6
FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE.....	7
APPLICABLE STANDARD.....	7
FCC §15.203 - ANTENNA REQUIREMENT.....	8
APPLICABLE STANDARD.....	8
ANTENNA CONNECTOR CONSTRUCTION.....	8
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS.....	9
APPLICABLE STANDARD.....	9
MEASUREMENT UNCERTAINTY.....	9
EUT SETUP.....	9
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP.....	10
TEST PROCEDURE.....	10
CORRECTED AMPLITUDE & MARGIN CALCULATION.....	11
TEST EQUIPMENT LIST AND DETAILS.....	11
TEST RESULTS SUMMARY.....	11
TEST DATA.....	11
FCC §15.247(a) (2) – 6dB BANDWIDTH.....	15
APPLICABLE STANDARD.....	15
TEST PROCEDURE.....	15
TEST EQUIPMENT LIST AND DETAILS.....	15
TEST DATA.....	15
FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER.....	18
APPLICABLE STANDARD.....	18
TEST PROCEDURE.....	18
TEST EQUIPMENT LIST AND DETAILS.....	18
TEST DATA.....	18
FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE.....	20
APPLICABLE STANDARD.....	20
TEST PROCEDURE.....	20
TEST EQUIPMENT LIST AND DETAILS.....	20
TEST DATA.....	20
FCC §15.247(e) - POWER SPECTRAL DENSITY.....	22

APPLICABLE STANDARD22
TEST PROCEDURE22
TEST EQUIPMENT LIST AND DETAILS.....22
TEST DATA22

FEMVAL

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *SZ DJI TECHNOLOGY CO., LTD*'s product, model number: *GL658B(FCC ID: SS3-GL6581502)* (the "EUT") in this report was a Remote Controller(called as *C1*), which was measured approximately: 30.0 cm (L) x 16.5 cm (W) x 9.5 cm(H), rated input voltage: DC 7.4V from battery.

** All measurement and test data in this report was gathered from production sample serial number: 150203002. (Assigned by BAACL.Dongguan). The EUT was received on 2015-02-04.*

Objective

This report is prepared on behalf of *SZ DJI TECHNOLOGY CO., LTD* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communications Commission's rules

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

Related Submittal(s)/Grant(s)

FCC Part15C DXX submissions with FCC ID: *SS3-GL6581502*

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, 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 and Bay Area Compliance Laboratories Corp. (Dongguan).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications 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 February 06, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. 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 Engineering Mode, which was provided by the manufacturer.

For 2.4G band, 39 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2404	21	2444
2	2406
...
...
..	...	38	2478
20	2442	29	2480

3channels were configured to test: 2404MHz, 2442MHz, 2480MHz

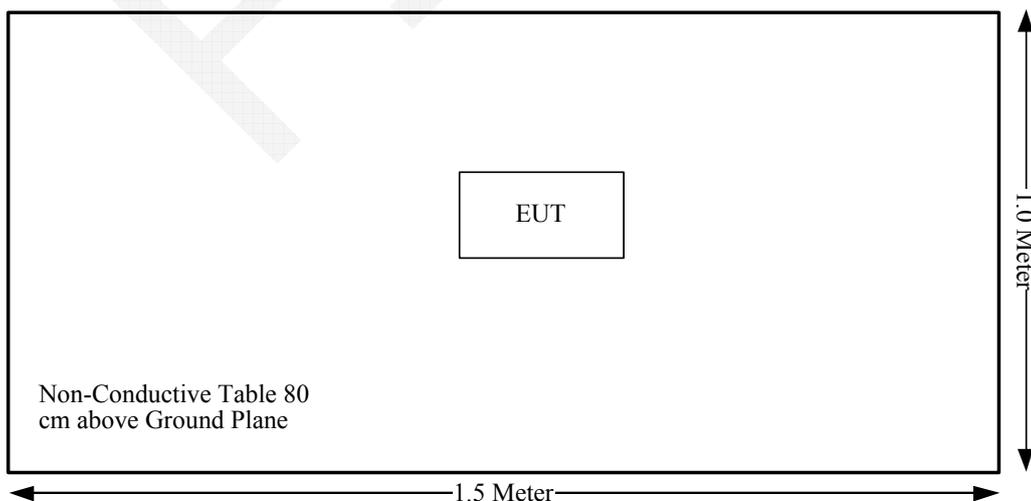
EUT Exercise Software

The engineering mode was set by software: Sscom32.exe, the software configured the EUT as maximum power, and switched the test channels.

Equipment Modifications

No modification was made to the EUT.

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.247 (i) & §1.1310 & §2.1093	RF EXPOSURE	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Not Applicable
§15.247(d)	Spurious Emissions at Antenna Port	Compliance
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Bandwidth	Compliance
§15.247(b)(3)	Maximum Peak Conducted Output Power	Compliance
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliance
§15.247(e)	Power Spectral Density	Compliance

Not Applicable: The EUT powered by lithium battery in normal operation.

FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE

Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v05r02:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Measurement Result

The maximum conducted AVG output power= 11.71dBm(14.83 mW) at 2442MHz
 $[(\text{max. power of channel, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$
 $= 14.83 / 5 \cdot (\sqrt{2.442}) = 6.75 < 7.5$ for hands use.

The EUT meet SAR test exclusion for hands use, so the SAR evaluation is not necessary.

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

Antenna Connector Construction

The EUT has an integral dipole antenna arrangement for transmitting, the antenna gain is 3.5dBi @ 2.4G Band, and another antenna only for receiving, fulfill the requirement of the item. Please refer to the internal photos.

Result: Compliance.

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

Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

Measurement Uncertainty

Compliance or non-compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cispr} of Table 2, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 2, then:

- compliance is deemed to occur if no measured disturbance level, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit.

Based on CISPR 16-4-2-2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:

30M~200MHz: 5.0 dB

200M~1GHz: 6.2 dB

1G~6GHz: 4.45 dB

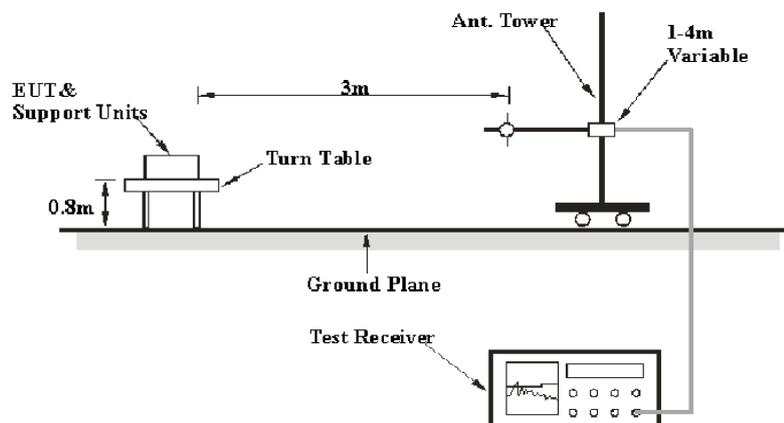
6G~18GHz: 5.23 dB

Table 2 – Values of U_{cispr}

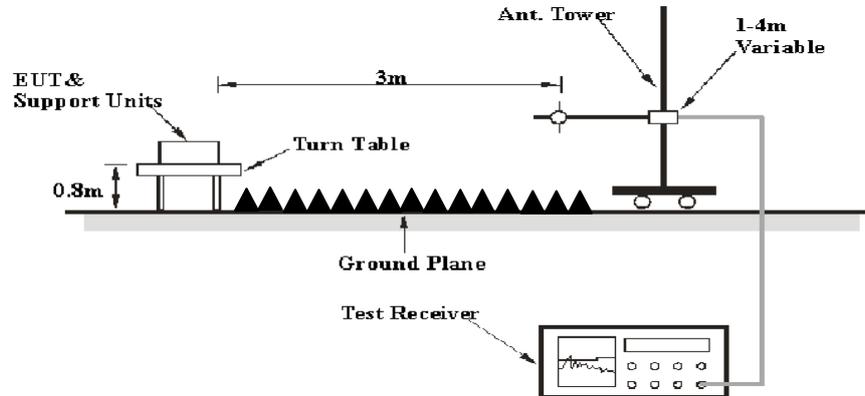
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

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 C63.4-2009. The specification used was the FCC 15.209, and FCC 15.247 limits.

The spacing between the peripherals was 10 cm.

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
30MHz – 1000 MHz	120 kHz	300 kHz	120kHz	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 Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

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

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 Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2014-05-09	2015-05-09
Sunol Sciences	Antenna	JB3	A060611-3	2014-07-28	2017-07-27
HP	Amplifier	8447E	2434A02181	2014-09-01	2015-09-01
R&S	Spectrum Analyzer	FSEM	DE31388	2014-05-09	2015-05-09
ETS LINDGREN	Horn Antenna	3115	000 527 35	2012-09-06	2015-09-06
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2014-02-19	2015-02-19
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-01 1304	2014-06-16	2017-06-15
Quinstar	Amplifier	QLW- 18405536-JO	15964001001	2014-09-06	2015-09-06

* **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).

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Section 15.205, 15.209 and 15.247, with the worst margin reading of:

5.09 dB at 62.01MHz in the Vertical polarization

Test Data

Environmental Conditions

Temperature:	23.6 °C
Relative Humidity:	60 %
ATM Pressure:	102.1 kPa

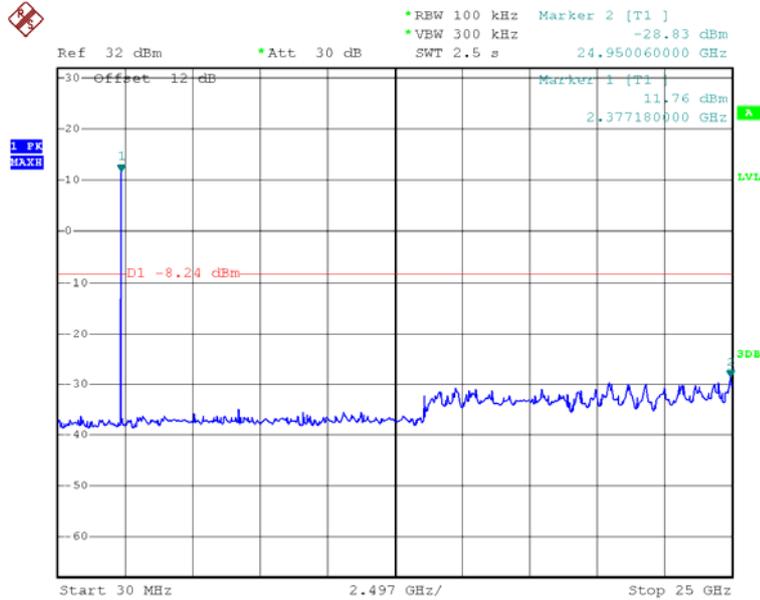
The testing was performed by Allen Qiao on 2015-02-09.

Mode: Transmitting

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBµV/m)	FCC 15.247	
	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)
Low Channel: 2404 MHz									
2404	84.13	PK	H	25.65	3.66	0.00	113.44	N/A	N/A
2404	76.24	AV	H	25.65	3.66	0.00	105.55	N/A	N/A
2404	88.94	PK	V	25.65	3.66	0.00	118.25	N/A	N/A
2404	80.66	AV	V	25.65	3.66	0.00	109.97	N/A	N/A
2390	25.27	PK	V	25.61	3.63	0.00	54.51	74.00	19.49
2390	13.34	AV	V	25.61	3.63	0.00	42.58	54.00	11.42
4808	57.36	PK	V	30.60	5.06	27.41	65.61	74.00	8.39
4808	28.34	AV	V	30.60	5.06	27.41	36.59	54.00	17.41
7212	34.65	PK	V	34.11	6.62	25.91	49.47	74.00	24.53
7212	18.67	AV	V	34.11	6.62	25.91	33.49	54.00	20.51
9616	31.39	PK	V	35.98	8.53	27.53	48.37	74.00	25.63
9616	18.25	AV	V	35.98	8.53	27.53	35.23	54.00	18.77
3790	34.26	PK	V	29.44	4.64	27.37	40.97	74.00	33.03
3790	22.13	AV	V	29.44	4.64	27.37	28.84	54.00	25.16
62.01	47.1	QP	V	7.73	0.99	21.41	34.41	40.00	5.59
Middle Channel: 2442MHz									
2442	84.17	PK	H	25.75	3.77	0.00	113.69	N/A	N/A
2442	76.38	AV	H	25.75	3.77	0.00	105.90	N/A	N/A
2442	90.12	PK	V	25.75	3.77	0.00	119.64	N/A	N/A
2442	82.43	AV	V	25.75	3.77	0.00	111.95	N/A	N/A
4884	54.64	PK	V	30.80	5.20	27.42	63.22	74.00	10.78
4884	22.91	AV	V	30.80	5.20	27.42	31.49	54.00	22.51
7326	38.18	PK	V	34.38	6.75	25.88	53.43	74.00	20.57
7326	19.05	AV	V	34.38	6.75	25.88	34.30	54.00	19.70
9768	30.19	PK	V	36.34	8.62	27.19	47.96	74.00	26.04
9768	17.87	AV	V	36.34	8.62	27.19	35.64	54.00	18.36
2751	34.17	PK	V	26.55	4.35	27.53	37.54	74.00	36.46
2751	21.13	AV	V	26.55	4.35	27.53	24.50	54.00	29.50
1447	34.63	PK	V	23.46	2.95	27.19	33.85	74.00	40.15
1447	22.12	AV	V	23.46	2.95	27.19	21.34	54.00	32.66
62.01	46.9	QP	V	7.73	0.99	21.41	34.21	40.00	5.79
High Channel: 2480 MHz									
2480	82.56	PK	H	25.85	3.68	0.00	112.09	N/A	N/A
2480	74.55	AV	H	25.85	3.68	0.00	104.08	N/A	N/A
2480	89.57	PK	V	25.85	3.68	0.00	119.10	N/A	N/A
2480	81.82	AV	V	25.85	3.68	0.00	111.35	N/A	N/A
2483.5	25.49	PK	V	25.86	3.67	0.00	55.02	74.00	18.98
2483.5	14.12	AV	V	25.86	3.67	0.00	43.65	54.00	10.35
4960	49.64	PK	V	31.00	5.34	27.43	58.55	74.00	15.45
4960	23.24	AV	V	31.00	5.34	27.43	32.15	54.00	21.85
7440	41.21	PK	V	34.66	6.89	25.97	56.79	74.00	17.21
7440	19.87	AV	V	34.66	6.89	25.97	35.45	54.00	18.55
9920	29.31	PK	V	36.71	8.71	26.66	48.07	74.00	25.93
9920	16.67	AV	V	36.71	8.71	26.66	35.43	54.00	18.57
3790	34.35	PK	V	29.44	4.64	27.37	41.06	74.00	32.94
3790	22.18	AV	V	29.44	4.64	27.37	28.89	54.00	25.11
62.01	47.6	QP	V	7.73	0.99	21.41	34.91	40.00	5.09

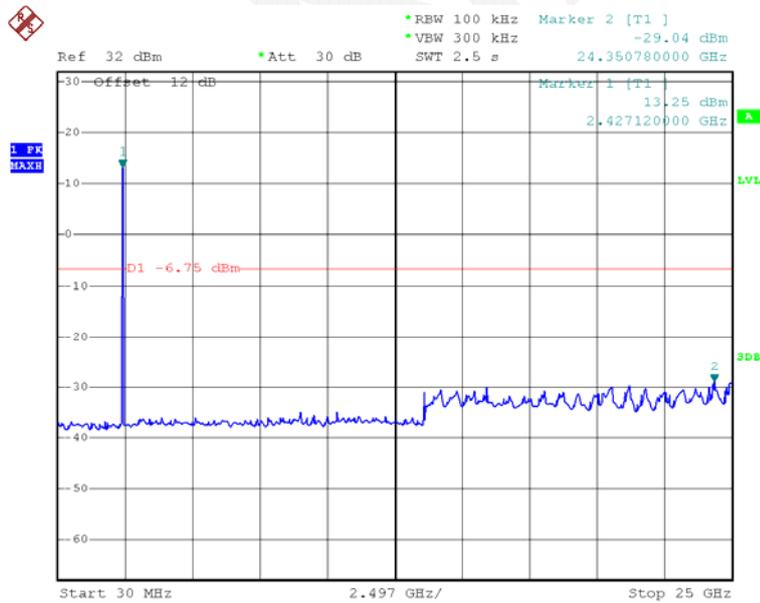
Conducted Spurious Emissions at Antenna Port

Low Channel



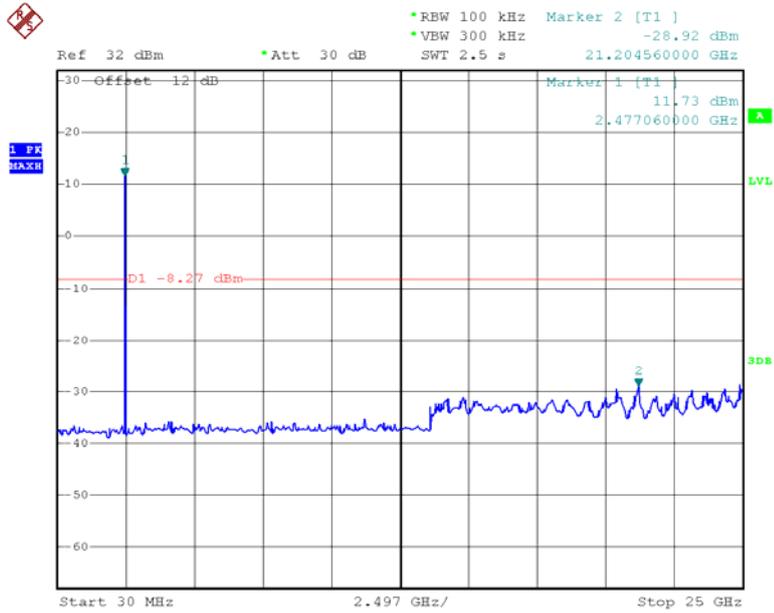
Date: 7.FEB.2015 14:36:07

Middle Channel



Date: 7.FEB.2015 14:35:18

High Channel



Date: 7.FEB.2015 14:33:57



FCC §15.247(a) (2) – 6dB BANDWIDTH

Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09

* **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).

Test Data

Environmental Conditions

Temperature:	21.1 °C
Relative Humidity:	36 %
ATM Pressure:	102 kPa

The testing was performed by Allen Qiao on 2015-02-07.

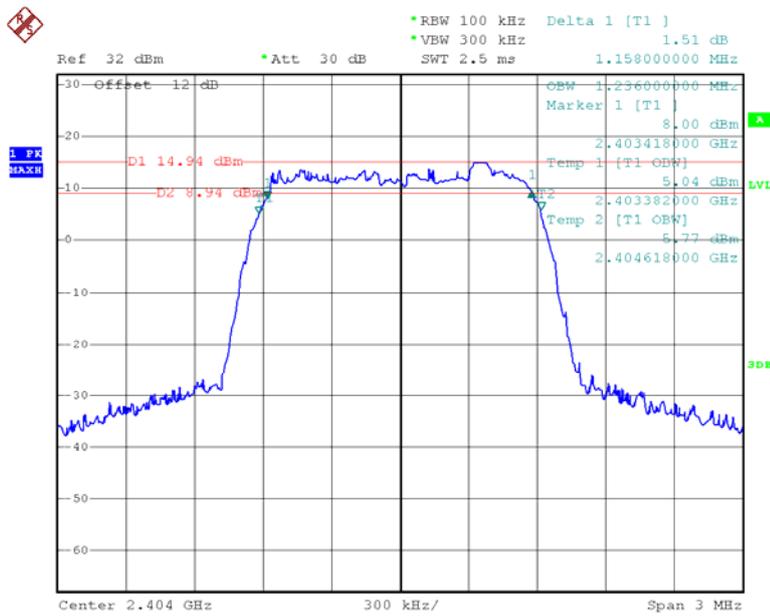
Test Result: Pass.

Please refer to the following tables and plots.

Test Mode: Transmitting

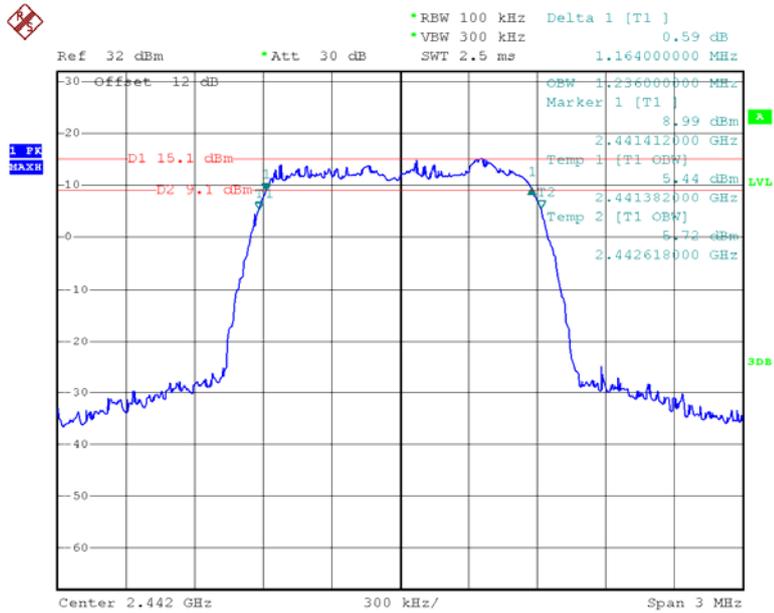
Channel	Frequency	6 dB Bandwidth	Limits
	(MHz)	(MHz)	(MHz)
Low	2404	1.158	0.5
Middle	2442	1.164	0.5
High	2480	1.164	0.5

Low Channel



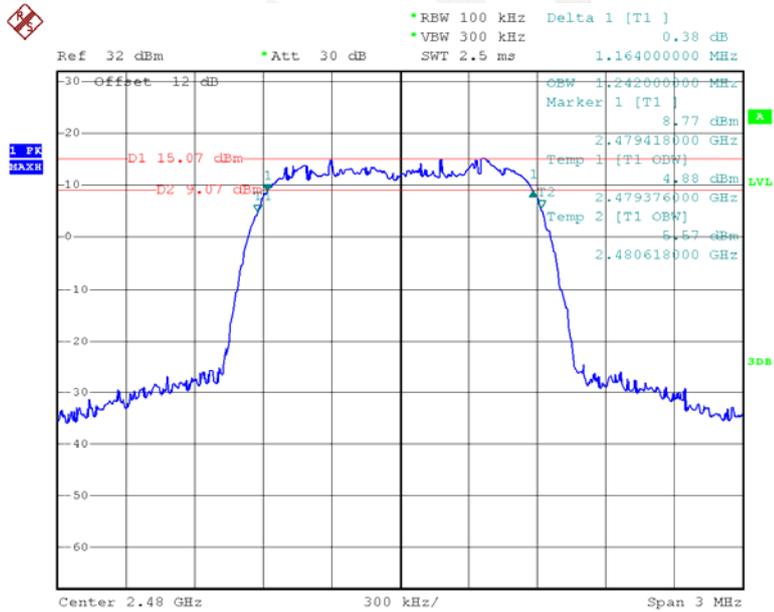
Date: 7.FEB.2015 14:22:28

Middle Channel



Date: 7.FEB.2015 14:23:41

High Channel



Date: 7.FEB.2015 14:24:58

FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

1. According to KDB 558074 D01 DTS Meas Guidance v03r02, place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a Test Equipment.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Wideband Power Sensor	N1921A	MY54210016	2014-11-03	2015-11-03
Agilent	Wideband Power Sensor	N1921A	MY54170013	2014-11-03	2015-11-03
Agilent	P-Series Power Meter	N1912A	MY5000448	2014-11-03	2015-11-03

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

Test Data

Environmental Conditions

Temperature:	21.1 °C
Relative Humidity:	36 %
ATM Pressure:	102 kPa

The testing was performed by Allen Qiao on 2015-02-07.

Test Mode: Transmitting

Channel	Frequency	Max Conducted Peak Output Power	Max Conducted Average Output Power	Limit	Result
	(MHz)	(dBm)	(dBm)	(dBm)	
Low	2404	24.86	11.43	30	Pass
Middle	2442	24.98	11.71	30	Pass
High	2480	25.07	11.68	30	Pass

FEMVA

FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09

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

Test Data

Environmental Conditions

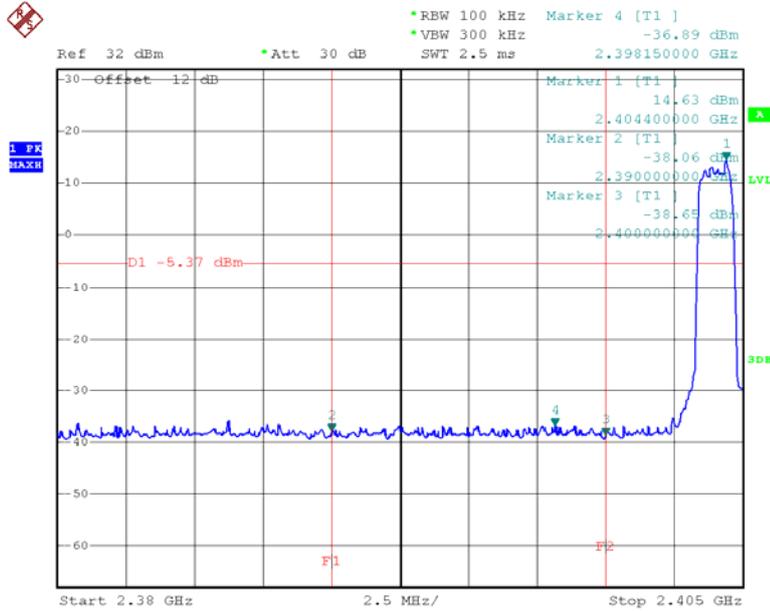
Temperature:	21.1 °C
Relative Humidity:	36 %
ATM Pressure:	102 kPa

The testing was performed by Allen Qiao on 2015-02-07

Test Result: *Compliance*

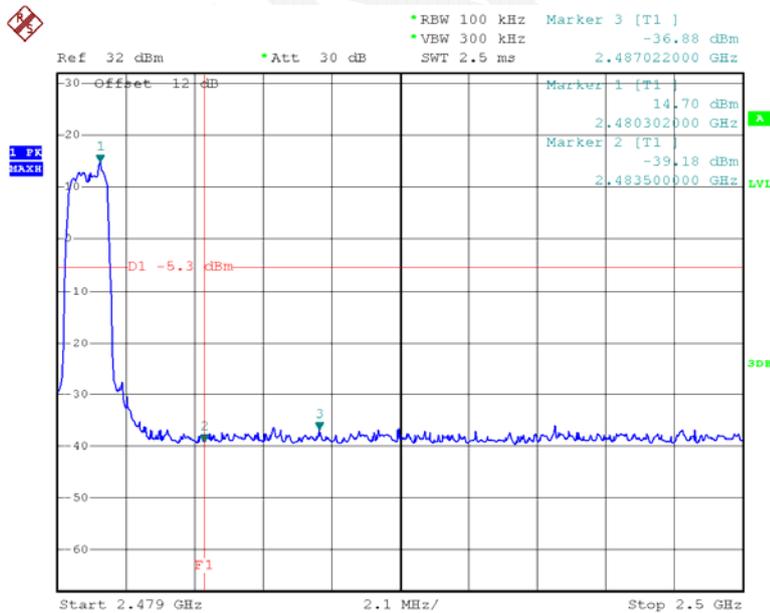
Please refer to following plots.

Band Edge, Left Side



Date: 7.FEB.2015 14:31:22

Band Edge, Right Side



Date: 7.FEB.2015 14:32:40

FCC §15.247(e) - POWER SPECTRAL DENSITY

Applicable Standard

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the RBW = 3 kHz, VBW = 10 kHz, Set the span to 1.5 times the DTS bandwidth.
4. Use the peak marker function to determine the maximum amplitude level.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2014-05-09	2015-05-09

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

Test Data

Environmental Conditions

Temperature:	21.1 °C
Relative Humidity:	36 %
ATM Pressure:	102 kPa

The testing was performed by Allen Qiao on 2015-02-07.

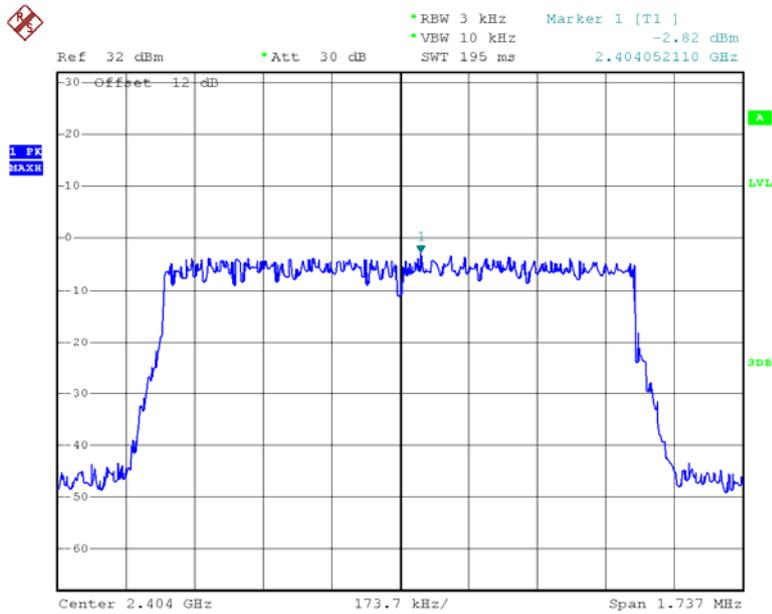
Test Result: Pass

Test Mode: Transmitting

Channel	Frequency	Power Spectral Density	Limits	Result
	MHz	dBm/3kHz	dBm/3kHz	
Low	2404	-2.82	8	Pass
Middle	2442	-2.07	8	Pass
High	2480	-2.32	8	Pass

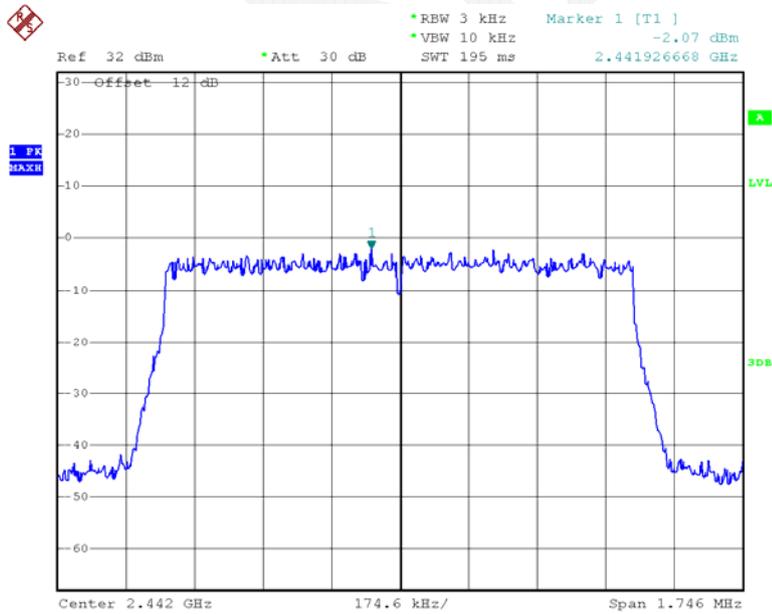
Please refer to the following plots

Power Spectral Density, Low Channel



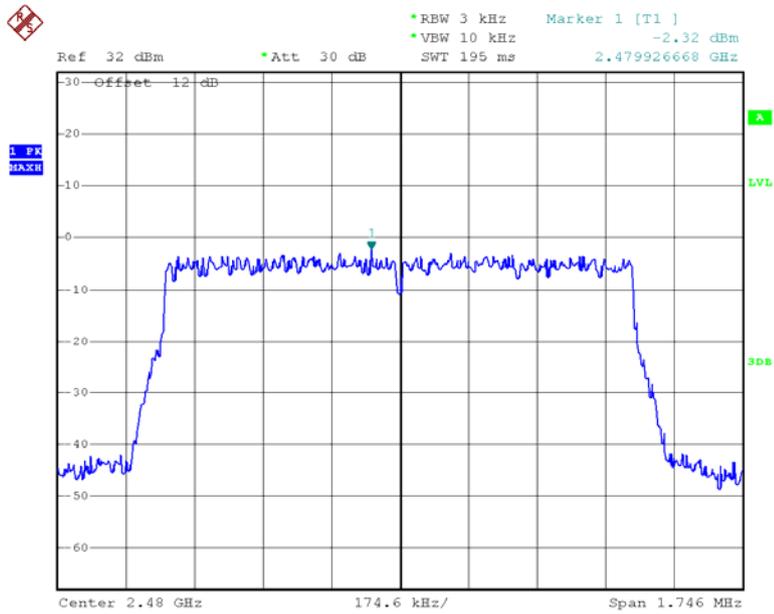
Date: 7.FEB.2015 14:29:46

Power Spectral Density, Middle Channel



Date: 7.FEB.2015 14:28:12

Power Spectral Density, High Channel



Date: 7.FEB.2015 14:27:19

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