FCC PART 15.249

TEST REPORT

For

Jiaxing Shufude Electric Bed Co., Ltd.

East No. 07 Provincial Road, Tengyun Village Wangjiangjing Development Zone, Jiaxing, Zhejiang, China

FCC ID: WKZCU3582L

Report Type: Original Report	**Product Type:** Control UNIT
Test Engineer:	Chris Wang
Report Number:	RKS160912004-00A
Report Date:	2016-09-14
Reviewed By:	Jesse Huang EMC Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Kunshan) Chenghu Road,Kunshan Development Zone No.248,Kunshan, Jiangsu, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The Jiaxing Shufude Electric Bed Co., Ltd.' s product, model number: CU358-2-L (FCC ID: WKZCU3582L) (the "EUT") in this report was a Control UNIT, was measured approximately: 111mm (L) x96.5mm (W) x 40mm (H), rated input voltage: DC18-32V.

All measurement and test data in this report was gathered from production sample serial number: 20160822003.

(Assigned by BACL, Kunshan). The EUT was received on 2016-08-22.

Objective

This type approval report is prepared on behalf of Jiaxing Shufude Electric Bed Co., Ltd. in accordance with Part 2-Subpart J, and Part 15-Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.209 and 15.249 rules.

Related Submittal(s)/Grant(s)

FCC Part 15.249 DXX Submittal with FCC ID: WKZRF365A.

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

Measurement uncertainty with radiated emission is 5.91 dB for 30MHz-1GHz.and 4.92 dB for above 1GHz, 1.95dB for conducted measurement.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the Chenghu 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 December 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

Justification

The system was configured in testing mode which was provided by manufacturer.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2403	39	2441
2	2404	40	2442
…	…	…	…
…	…	…	…
37	2439	77	2479
38	2440	78	2480

EUT was tested with Channel 1, 40 and 78.

EUT Exercise Software

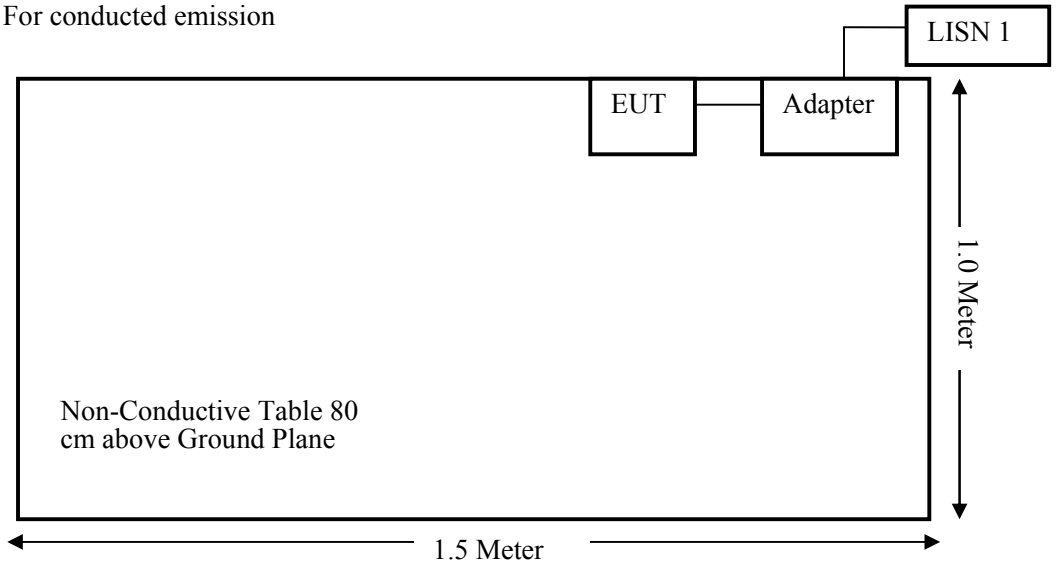
No software was used during the test.

Support Equipment List and Details

NO.	Manufacturer	Description	Model	Serial Number
Adapter 1	OKIN	AC/DC Switching Power Supply Input: AC100-240V 50/60Hz 1.5A Output: DC29V, 2A	SP2-A2	RBD507305854
Adapter 2		AC/DC Switching Power Supply Input: AC100-240V 50/60Hz 1.5A Output: DC29V, 2A	02-290020	RBD534100135

Block Diagram of Test Setup

For conducted emission



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207(a)	Conduction Emissions	Compliance
15.205, §15.209, §15.249	Radiated Emissions& Out of Band Emission	Compliance
§15.215 (c)	20 dB Bandwidth	Compliance

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

For intentional device, 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.

Antenna Connector Construction

The EUT has a PCB antenna arrangement and antenna gain is 1dBi, which was permanently attached ,fulfill the requirement of this section, please refer to the EUT photos.

Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

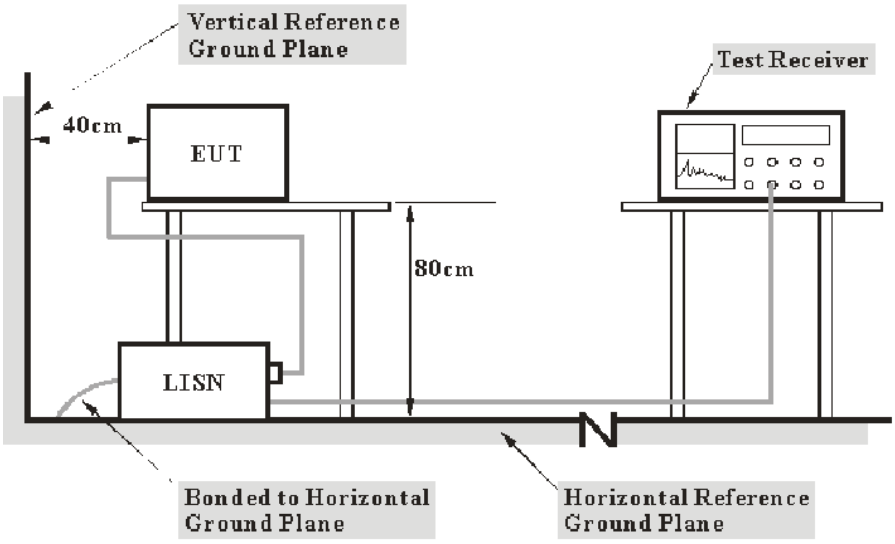
Measurement Uncertainty

Input quantities to be considered for conducted disturbance measurements maybe receiver reading, attenuation of the connection between LISN and receiver, LISN voltage division factor, LISN VDF frequency interpolation and receiver related input quantities, etc.

Based on CISPR 16-4-2, the expended combined standard uncertainty of conducted disturbance test at Bay Area Compliance Laboratories Corp. (Kunshan) is shown as below. And the uncertainty will not be taken into consideration for the test data recorded in the report.

Port	Expanded Measurement uncertainty
AC Mains	3.26 dB (k=2, 95% level of confidence)
CAT 3	3.70 dB (k=2, 95% level of confidence)
CAT 5	3.86 dB (k=2, 95% level of confidence)
CAT 6	4.64 dB (k=2, 95% level of confidence)

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 adapter was connected to a 120 VAC/60 Hz 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 was connected to the outlet of the 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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
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	2015-10-01	2016-10-01
Rohde & Schwarz	CE Test software	EMC 32	V 09.10.0	--	--

*** 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).

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:

Correction Factor = LISN VDF + Cable Loss

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 15.207, the worst margin reading as below:

Adapter 1: 17.76 dB at **0.160000 MHz** in the **Line** conducted mode
Adapter 2: 13.54 dB at **0.395000 MHz** in the **Neutral** conducted mode

Refer to CISPR16-4-2 and CISPR 16-4-1, 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

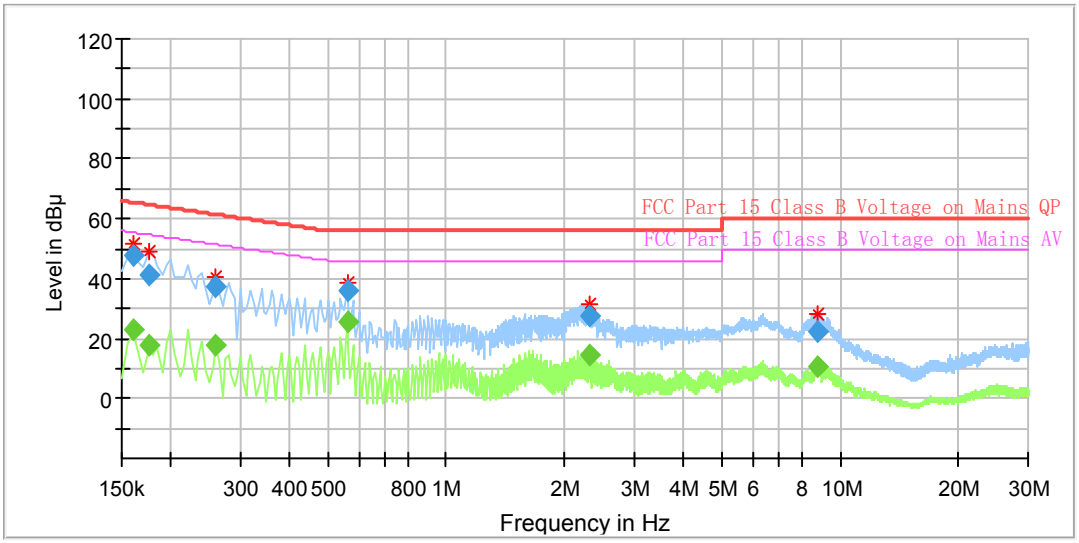
Temperature:	23 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Matt Yao on 2016-09-01.

EUT operation mode: Transmitting

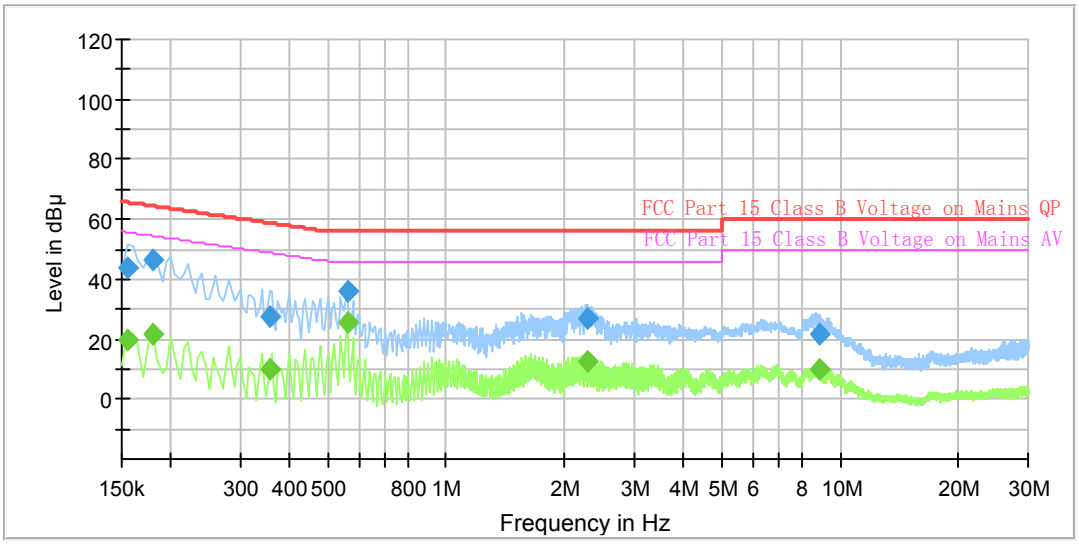
Adapter 1:

AC 120V/60 Hz, Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.160000	---	23.25	9.000	L1	11.0	32.21	55.46	Compliance
0.160000	47.70	---	9.000	L1	11.0	17.76	65.46	Compliance
0.175000	---	17.76	9.000	L1	11.0	36.96	54.72	Compliance
0.175000	41.18	---	9.000	L1	11.0	23.54	64.72	Compliance
0.260000	---	17.65	9.000	L1	11.0	33.78	51.43	Compliance
0.260000	37.56	---	9.000	L1	11.0	23.87	61.43	Compliance
0.560000	---	25.64	9.000	L1	11.1	20.36	46.00	Compliance
0.560000	35.79	---	9.000	L1	11.1	20.21	56.00	Compliance
2.300000	---	14.40	9.000	L1	11.2	31.60	46.00	Compliance
2.300000	27.69	---	9.000	L1	11.2	28.31	56.00	Compliance
8.755000	---	10.70	9.000	L1	11.4	39.30	50.00	Compliance
8.755000	22.12	---	9.000	L1	11.0	37.88	60.00	Compliance

AC 120V/60 Hz, Neutral

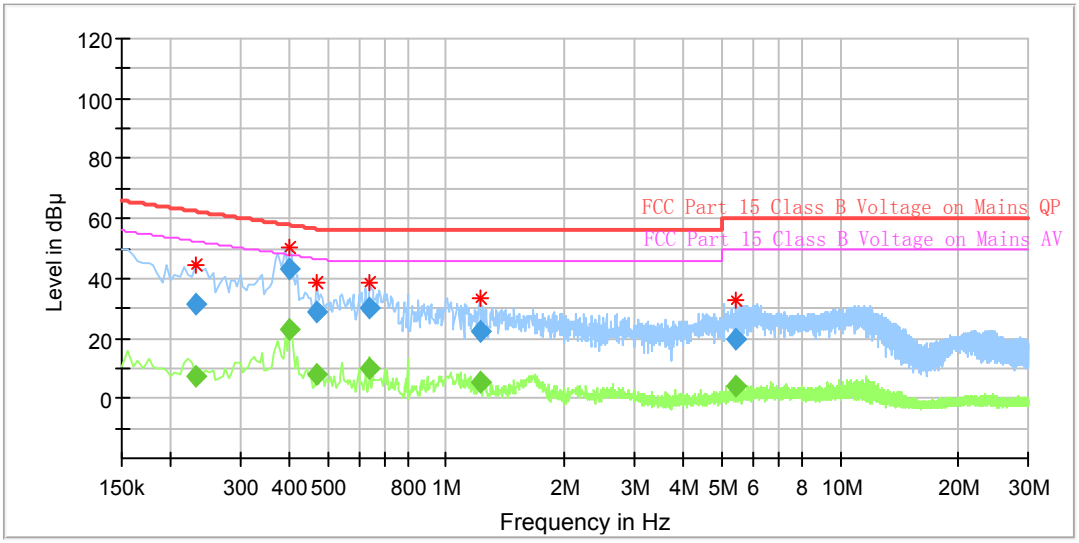


Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.155000	---	19.40	9.000	N	11.0	36.33	55.73	Compliance
0.155000	43.73	---	9.000	N	11.0	22.00	65.73	Compliance
0.180000	---	21.37	9.000	N	11.0	33.12	54.49	Compliance
0.180000	46.14	---	9.000	N	11.0	18.35	64.49	Compliance
0.355000	---	9.94	9.000	N	11.0	38.90	48.84	Compliance
0.355000	27.76	---	9.000	N	11.0	31.08	58.84	Compliance
0.560000	---	25.81	9.000	N	11.0	20.19	46.00	Compliance
0.560000	36.10	---	9.000	N	11.0	19.90	56.00	Compliance
2.295000	---	12.86	9.000	N	11.3	33.14	46.00	Compliance
2.295000	26.59	---	9.000	N	11.3	29.41	56.00	Compliance
8.845000	---	10.27	9.000	N	11.4	39.73	50.00	Compliance
8.845000	21.78	---	9.000	N	11.4	38.22	60.00	Compliance

Note:
1) Corr.=LISN VDF (Voltage Division Factor) + Cable Loss
2) Corrected Amplitude = Reading + Corr.
3) Margin = Limit –Corrected Amplitude

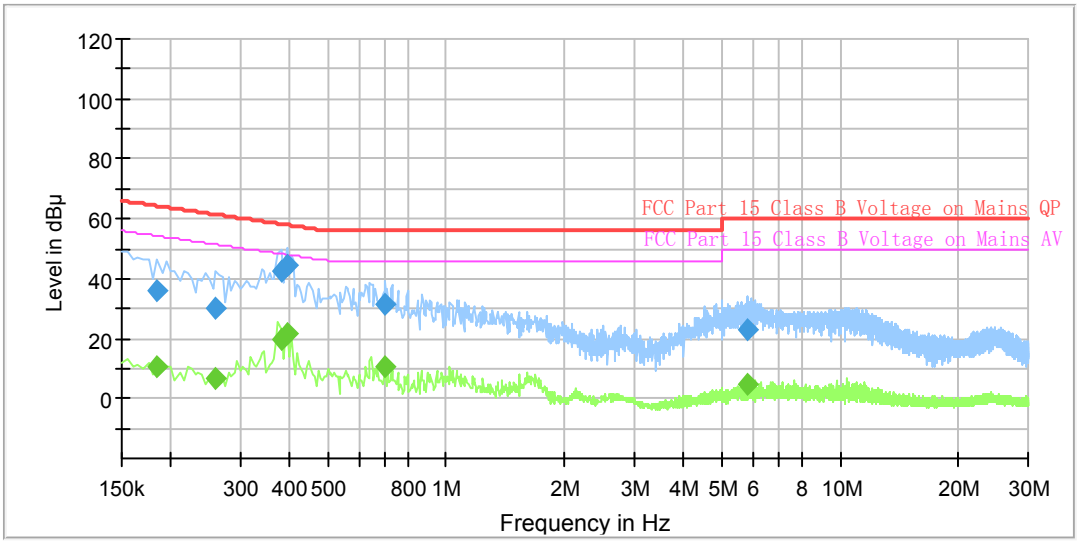
Adapter 2:

AC 120V/60 Hz, Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.230000	---	7.12	9.000	L1	11.0	45.33	52.45	Compliance
0.230000	31.43	---	9.000	L1	11.0	31.02	62.45	Compliance
0.400000	---	23.26	9.000	L1	11.0	24.59	47.85	Compliance
0.400000	42.95	---	9.000	L1	11.0	14.90	57.85	Compliance
0.470000	---	8.29	9.000	L1	11.0	38.22	46.51	Compliance
0.470000	28.79	---	9.000	L1	11.0	27.72	56.51	Compliance
0.640000	---	10.02	9.000	L1	11.1	35.98	46.00	Compliance
0.640000	30.36	---	9.000	L1	11.1	25.64	56.00	Compliance
1.215000	---	5.56	9.000	L1	11.1	40.44	46.00	Compliance
1.215000	22.22	---	9.000	L1	11.1	33.78	56.00	Compliance
5.460000	---	4.08	9.000	L1	11.3	45.92	50.00	Compliance
5.460000	19.94	---	9.000	L1	11.3	40.06	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	---	10.78	9.000	N	11.0	43.48	54.26	Compliance
0.185000	35.74	---	9.000	N	11.0	28.52	64.26	Compliance
0.260000	---	6.72	9.000	N	11.0	44.71	51.43	Compliance
0.260000	30.36	---	9.000	N	11.0	31.07	61.43	Compliance
0.380000	---	19.66	9.000	N	11.0	28.62	48.28	Compliance
0.380000	42.54	---	9.000	N	11.0	15.74	58.28	Compliance
0.395000	---	21.61	9.000	N	11.0	26.35	47.96	Compliance
0.395000	44.42	---	9.000	N	11.0	13.54	57.96	Compliance
0.700000	---	10.68	9.000	N	11.1	35.32	46.00	Compliance
0.700000	31.42	---	9.000	N	11.1	24.58	56.00	Compliance
5.800000	---	4.79	9.000	N	11.4	45.21	50.00	Compliance
5.800000	22.79	---	9.000	N	11.4	37.21	60.00	Compliance

Note:
1) Corr.=LISN VDF (Voltage Division Factor) + Cable Loss
2) Corrected Amplitude = Reading + Corr.
3) Margin = Limit –Corrected Amplitude

FCC§15.205, §15.209&§15.249- RADIATED EMISSIONS& OUT OF BAND EMISSION

Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

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 1, 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 1, 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.

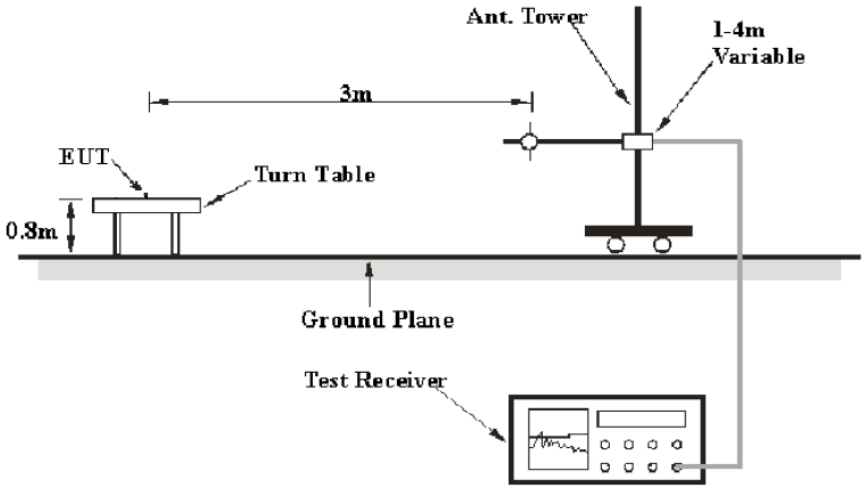
Based on CISPR 16-4-2: 2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Kunshan) is:
30M~1GHz: 5.91 dB
Above 1G: 4.92 dB

Table 1 – Values of U_{cispr}

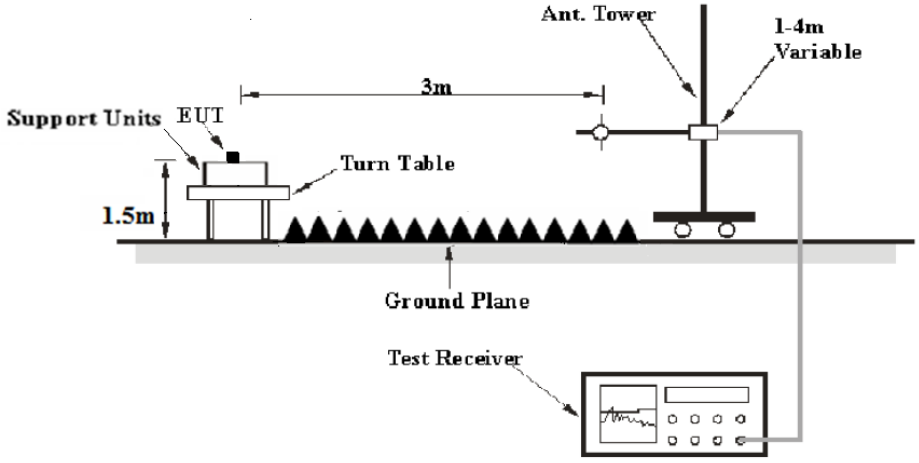
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

EUT Setup

Below 1 GHz:



Above 1 GHz:



The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

Test Equipment 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	120 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 detection mode from 30MHz to 1GHz, Peak and average detection mode 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 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit –Corrected Amplitude

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma Instrunent	Amplifier	330	171377	2016-07-04	2017-07-03
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	2015-11-7	2016-11-6
DUCOMMUN	Pre-amplifier	ALN-22093530-01	990147	2016-9-16	2017-9-15
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2015-11-12	2016-11-11
Mini	Pre-amplifier	ZVA-183-S+	857001418	2016-07-04	2017-07-03
R&S	Auto test Software	EMC32	V 09.10.0	-	-
BACL	RF cable	KS-LAB-012	KS-LAB-012	2015-12-16	2016-12-15
BACL	RF cable	KS-LAB-010	KS-LAB-010	2015-12-16	2016-12-15

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

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 &15.205 & 15.249, with the worst margin reading of:

6.19 dB at **2403 MHz** in the **Vertical** polarization for Low Channel

Test Data

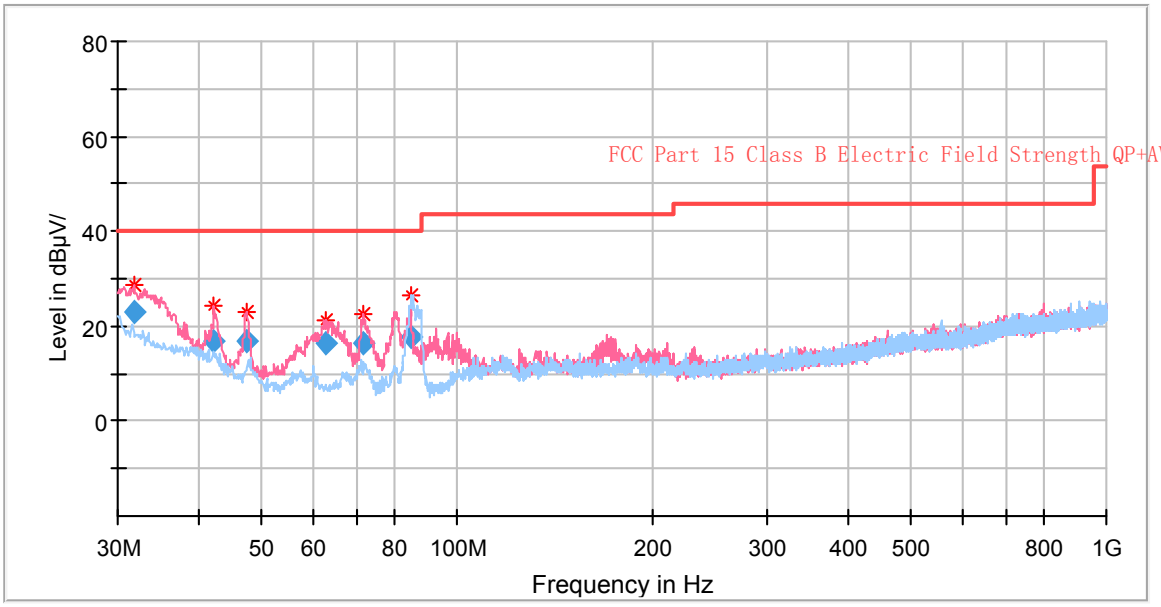
Environmental Conditions

Temperature:	25.6°C
Relative Humidity:	52%
ATM Pressure:	101.2 kPa

The testing was performed by Chris Wang on 2016-09-02.

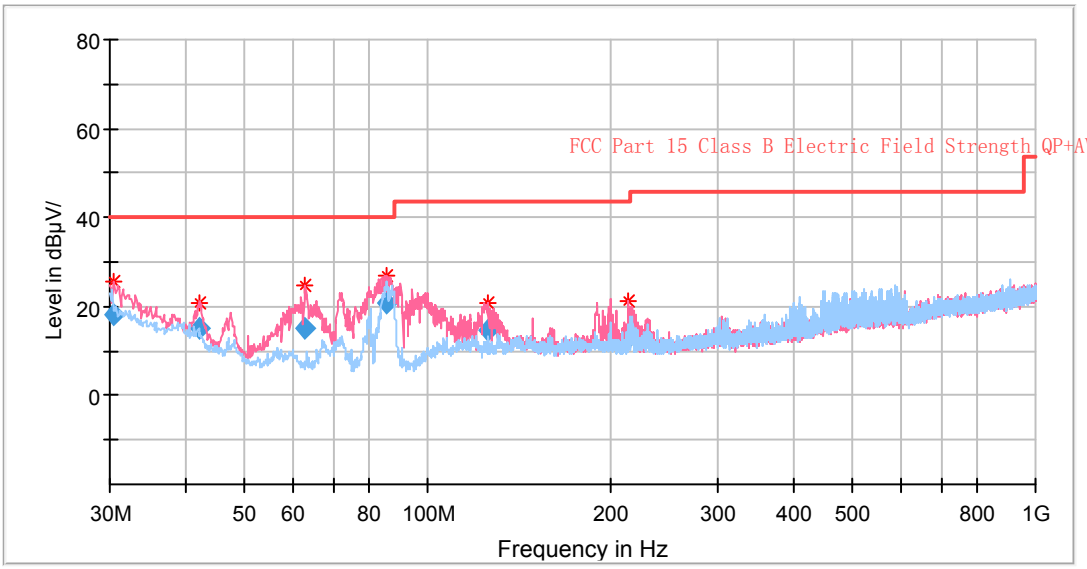
30MHz-1GHz:

Adapter 1:



Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.249/15.205/15.209	
	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (cm)	Polar (H/V)			Limit (dB µ V/m)	Margin (dB)
31.818750	29.05	QP	218.0	101.0	V	-6.2	22.85	40.00	17.15
42.246250	28.58	QP	90.0	101.0	V	-11.8	16.78	40.00	23.22
47.460000	31.75	QP	251.0	101.0	V	-15.0	16.75	40.00	23.25
62.737500	33.09	QP	161.0	101.0	V	-16.9	16.19	40.00	23.81
71.588750	33.63	QP	353.0	101.0	V	-17.1	16.53	40.00	23.47
84.805000	34.50	QP	81.0	101.0	H	-17.0	17.50	40.00	22.50

Adapter 2:



Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.249/15.205/15.209	
	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (cm)	Polar (H/V)			Limit (dB µ V/m)	Margin (dB)
30.485000	23.55	QP	194.0	101.0	V	-5.5	18.05	40.00	21.95
42.003750	26.68	QP	264.0	101.0	V	-11.6	15.08	40.00	24.92
62.980000	31.90	QP	199.0	101.0	V	-16.9	15.00	40.00	25.00
85.896250	37.70	QP	264.0	101.0	V	-17.0	20.70	40.00	19.30
125.545000	28.83	QP	227.0	101.0	V	-14.0	14.83	43.50	28.67
214.421250	25.54	QP	175.0	101.0	V	-12.5	13.04	43.50	30.46

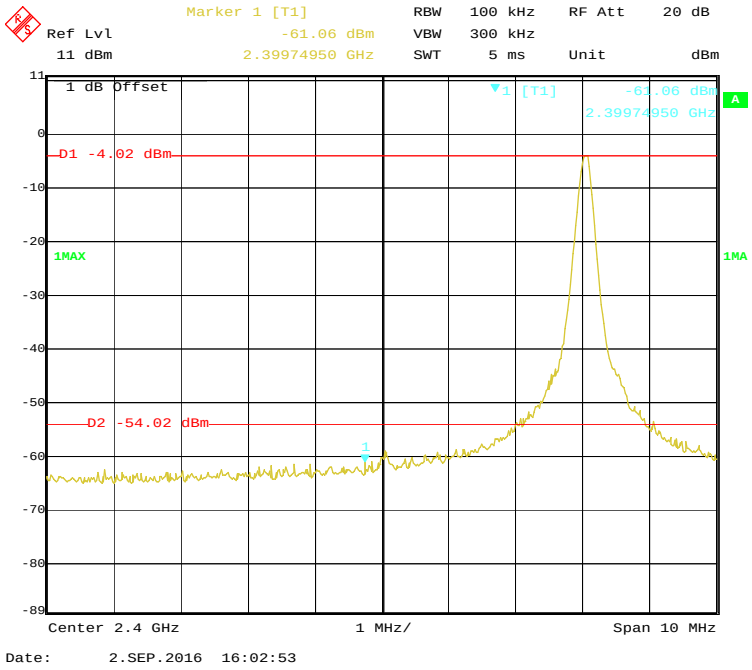
Test Mode: Transmitting （Scan with X, Y, Z axis, the worst case is X axis ）

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.249/15.205/15.209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (cm)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
Low Channel (2403 MHz)									
2403	89.23	PK	320	218	V	4.9	94.13	114.00	19.87
2403	82.91	Ave	320	218	V	4.9	87.81	94.00	6.19
2403	85.04	PK	145	154	H	4.9	89.94	114.00	24.06
2403	78.28	Ave	145	154	H	4.9	83.18	94.00	10.82
2390	34.03	PK	222	162	V	4.9	38.93	74.00	35.07
2390	20.22	Ave	222	162	V	4.9	25.12	54.00	28.88
2400	33.61	PK	239	196	V	4.9	38.51	74.00	35.49
2400	29.21	Ave	239	196	V	4.9	34.11	54.00	19.89
1210	34.31	PK	148	180	H	1.4	35.71	74.00	38.29
1210	27.75	Ave	148	180	H	1.4	29.15	54.00	24.85
4806	32.23	PK	223	208	H	13.3	45.53	74.00	28.47
4806	24.65	Ave	223	208	H	13.3	37.95	54.00	16.05
7209	30.12	PK	102	215	H	19.7	49.82	74.00	24.18
7209	21.53	Ave	102	215	H	19.7	41.23	54.00	12.77
Middle Channel (2442MHz)									
2442	88.96	PK	111	227	V	4.9	93.86	114.00	20.14
2442	82.62	Ave	111	227	V	4.9	87.52	94.00	6.48
2442	84.87	PK	104	246	H	4.9	89.77	114.00	24.23
2442	78.87	Ave	104	246	H	4.9	83.77	94.00	10.23
1210	33.26	PK	61	241	H	1.4	34.66	74.00	39.34
1210	20.89	Ave	61	241	H	1.4	22.29	54.00	31.71
4884	33.21	PK	335	237	H	13.6	46.81	74.00	27.19
4884	28.82	Ave	335	237	H	13.6	42.42	54.00	11.58
6681	34.20	PK	292	228	V	17.9	52.10	74.00	21.90
6681	26.87	Ave	292	228	V	17.9	44.77	54.00	9.23
6948	31.95	PK	69	170	H	18.8	50.75	74.00	23.25
6948	25.32	Ave	69	170	H	18.8	44.12	54.00	9.88
7326	30.28	PK	157	204	H	20.0	50.28	74.00	23.72
7326	21.77	Ave	157	204	H	20.0	41.77	54.00	12.23

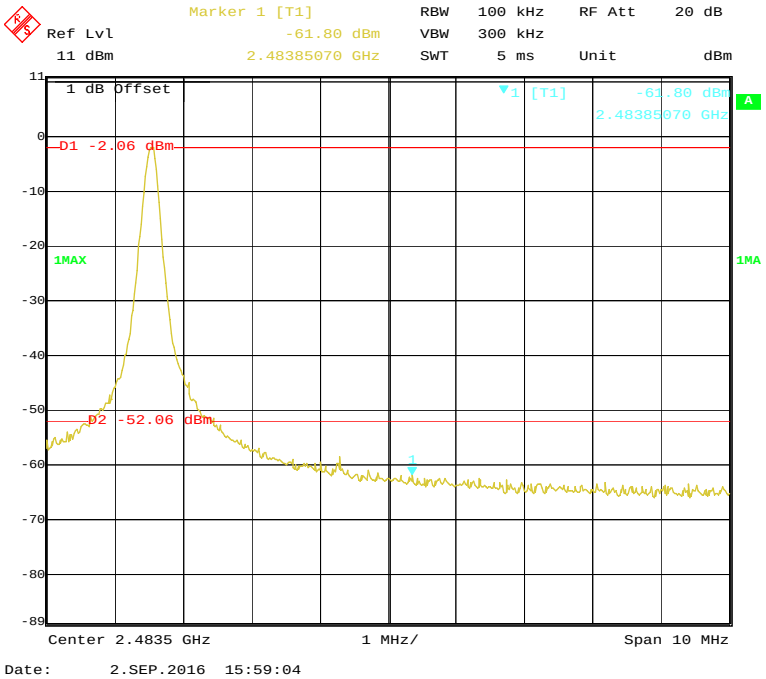
Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.249/15.205/15.209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (cm)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
High Channel (2480MHz)									
2480	90.91	PK	356	190	V	5.0	95.91	114.00	18.09
2480	82.79	Ave	356	190	V	5.0	87.79	94.00	6.21
2480	85.85	PK	311	163	H	5.0	90.85	114.00	23.15
2480	78.43	Ave	311	163	H	5.0	83.43	94.00	10.57
2483.5	33.64	PK	42	151	H	5.0	38.64	74.00	35.36
2483.5	18.91	Ave	42	151	H	5.0	23.91	54.00	30.09
2489	34.27	PK	99	191	H	5.0	39.27	74.00	34.73
2489	28.72	Ave	99	191	H	5.0	33.72	54.00	20.28
1238	34.30	PK	144	230	H	1.5	35.80	74.00	38.20
1238	28.14	Ave	144	230	H	1.5	29.64	54.00	24.36
4960	32.43	PK	109	216	H	13.9	46.33	74.00	27.67
4960	23.24	Ave	109	216	H	13.9	37.14	54.00	16.86
7440	30.41	PK	91	171	H	20.4	50.81	74.00	23.19
7440	21.35	Ave	91	171	H	20.4	41.75	54.00	12.25

Out of Band Emission

Band Edge, Left Side



Band Edge, Right Side



FCC §15.215(c) – 20 dB BANDWIDTH TESTING

Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

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 on the test table without connection to measurement instrument. Turn on the EUT. 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 20 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
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2015-11-12	2016-11-11
BACL	RF cable	KS-LAB-012	KS-LAB-012	2015-12-16	2016-12-15

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

Test Data

Environmental Conditions

Temperature:	25.6°C
Relative Humidity:	51 %
ATM Pressure:	101.2kPa

** The testing was performed by Chris Wang on 2016-09-03.*

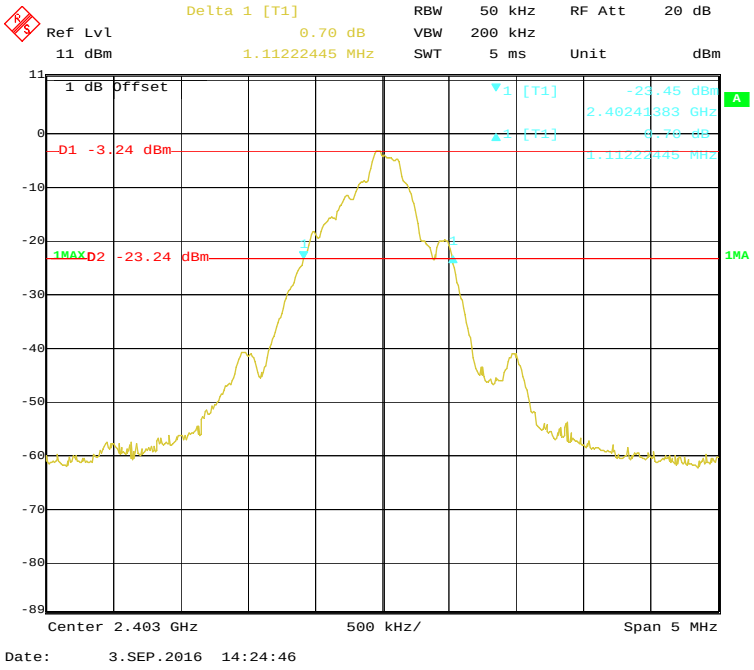
Test Result: Compliant.

Please refer to following tables and plots

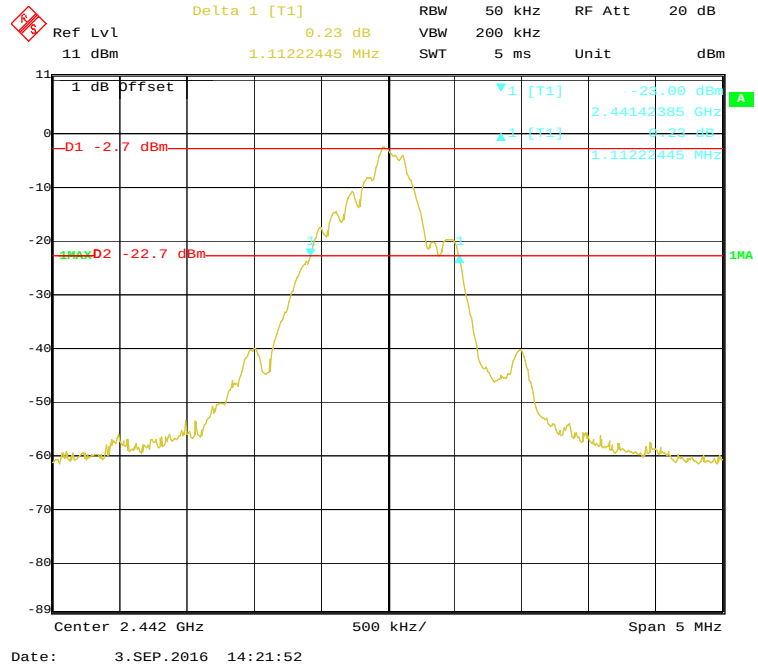
Test Mode: Transmitting

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2403	1.11
Middle	2442	1.11
High	2480	1.12

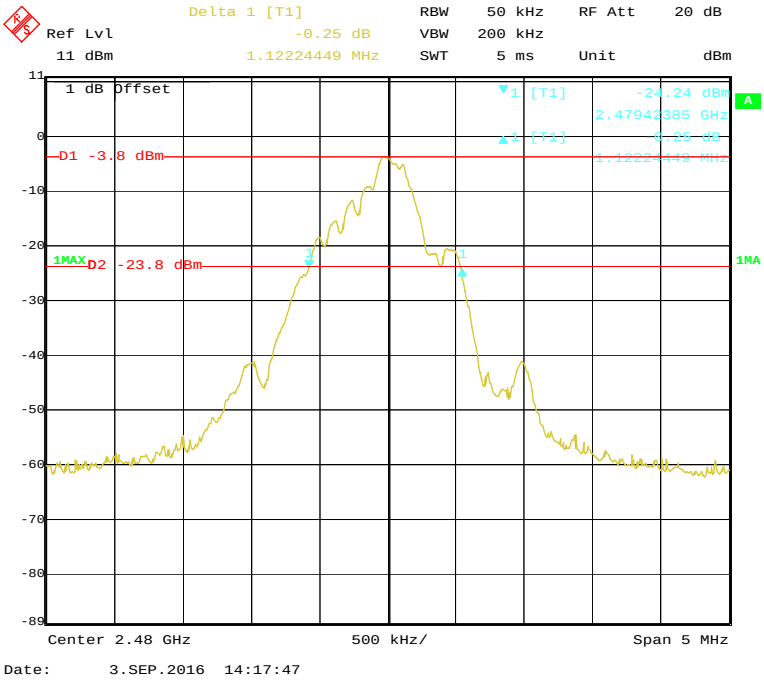
Low Channel



Middle Channel



High Channel



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