



# FCC PART 15.407

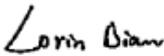
## TEST REPORT

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-GL800A1703**

<b>Report Type:</b> Original Report	<b>Product Name:</b> Cendence
<b>Test Engineer:</b> <u>Lorin Bian</u>	
<b>Report Number:</b> <u>RDG170326002B</u>	
<b>Report Date:</b> <u>2017-05-23</u>	
<b>Reviewed By:</b> <u>Henry Ding</u> EMC Leader	
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## GENERAL INFORMATION

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### Product Description for Equipment under Test (EUT)

The **SZ DJI TECHNOLOGY CO., LTD**'s product, model number: **GL800A (FCC ID: SS3-GL800A1703)** (the "EUT") in this report was a **Cendence**, which was measured approximately: 17.8 cm (L) x 17.04 cm (W) x 12.6 cm (H), rated input voltage: DC 7.6V from Rechargeable Battery.

*\*All measurement and test data in this report was gathered from final production sample, serial number: 170326002 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2017-03-26, and EUT conformed to test requirement.*

### Objective

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

The tests were performed in order to determine compliance with FCC Rules Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

### Related Submittal(s)/Grant(s)

FCC Part 15C DTS submissions with FCC ID: SS3-GL800A1703.  
Part of system granted with FCC ID: SS3-T650A1609.

### Test Methodology

All measurements detailed in this Test Report were performed in accordance with ANSI C63.10-2013 "American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices".

All of the measurements detailed in this Test Report were performed by Bay Area Compliance Laboratories Corp. (Chengdu).

The Bay Area Compliance Laboratories Corp. Chengdu's measurement Uncertainties (calculated for a k=2 Coverage Factor corresponding to approximately 95% Coverage) were as follows:

-For all of the AC Line Conducted Emissions Tests reported herein:  $\pm 3.17$  dB.  
-For of all of the Direct Antenna Conducted Emissions Tests reported herein:  $\pm 0.56$  dB.

-For of all of the direct Radiated Emissions Tests reported herein are:

30 MHz to 200 MHz:  $\pm 4.7$  dB;  
200 MHz to 1 GHz:  $\pm 6.0$  dB;  
1 GHz to 6 GHz:  $\pm 5.13$  dB; and,  
6 GHz to 40 GHz:  $\pm 5.47$  dB.

And the uncertainty will not be taken into consideration for all test data recorded in the report.

## **Test Facility**

The test site used by BACL to collect test data is located in the No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China.

Test site at BACL 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 April 24, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.:560332. 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 EUT was configured for testing in an engineering mode which was provided by the manufacturer.

For 5GHz band, the device employed LB and 10M modes.

EUT employed two antennas For LB mode, only antenna 2 was used for transmitting, and 42 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5727	22	5775.3
2	5729.3	23	5777.6
3	5731.6	24	5779.9
~	~	~	~
19	5768.4	40	5816.7
20	5770.7	41	5819
21	5773	42	5821.3

The device test with channel 1, 22, 42.

EUT employed two antennas for 10MHz mode, the two antennas only operated at MIMO mode, and 9 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5745	6	5795
2	5755	7	5805
3	5765	8	5815
4	5775	9	5825
5	5785	/	/

The device test with channel 1, 5, 9.

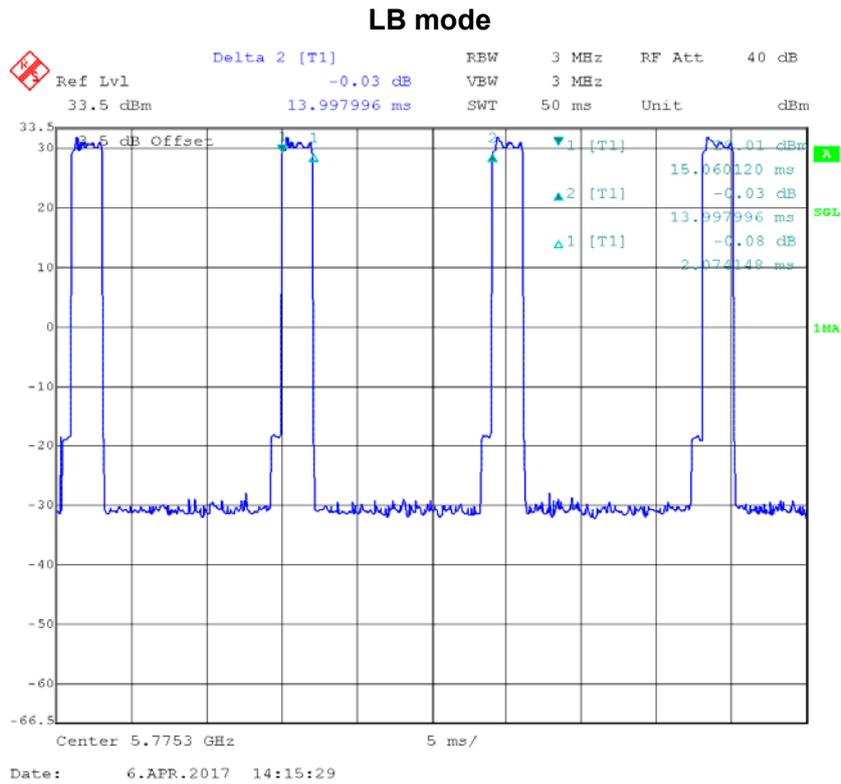
### EUT Exercise Software

The software "DJI-RF Certification" was used for testing, which was provided by manufacturer. The maximum power for LB mode was configured as default setting by software, and the maximum power for 10MHz was as below setting, the power setting was provided by the manufacturer:

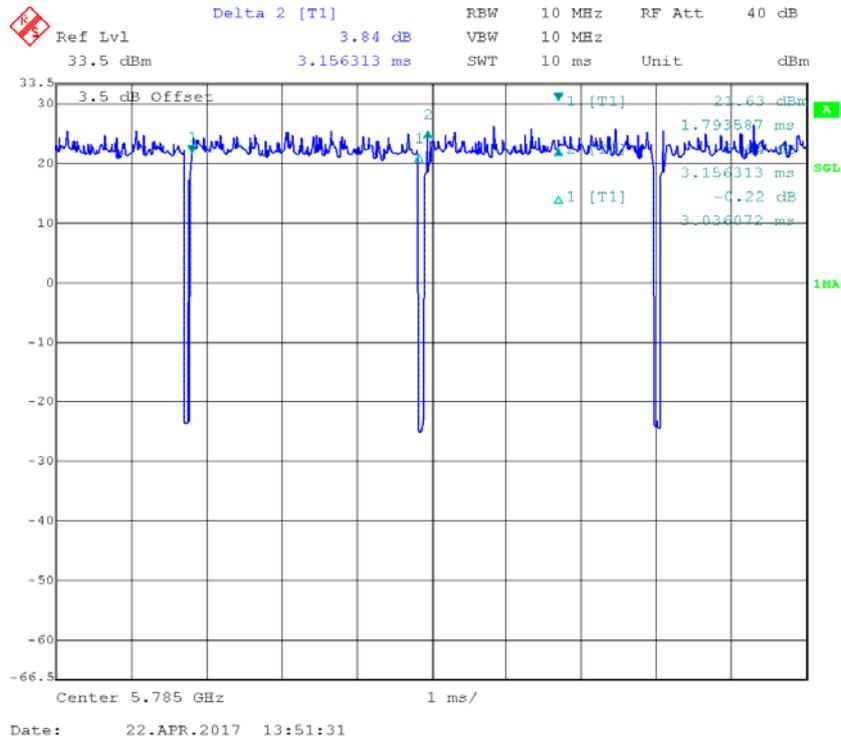
Test Mode	Test Software Version	DJI-RF Certification		
	Test Frequency(MHz)	5745MHz	5785MHz	5825MHz
10M	Power Level Setting	38	38	38

The software configured maximum duty cycle as below:

Mode	T <sub>on</sub> (ms)	T <sub>on+off</sub> (ms)	Duty Cycle (%)
LB	2.074	13.998	14.82
10M	3.036	3.156	96.20



**10M mode**



**Equipment Modifications**

No modification was made to the EUT.

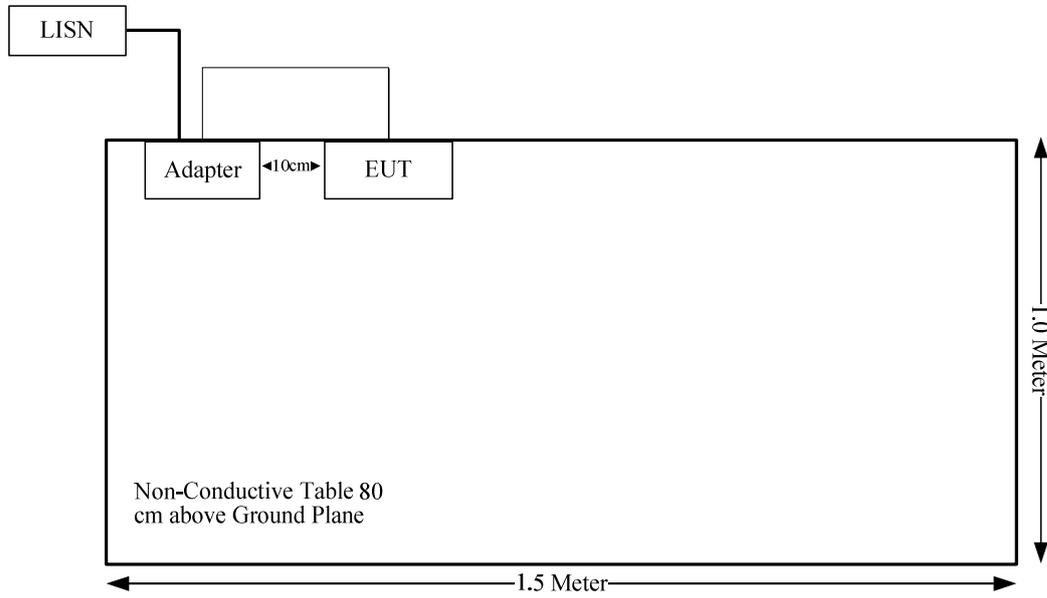
**Support Equipment List and Details**

Manufacturer	Description	Model	Serial Number
DJI	Adapter	PH4C100	ADF0230S11546300055

**External Cable**

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
DC cable	Yes	Yes	1.0	Adapter	EUT

### Block Diagram of Test Setup



## **SUMMARY OF TEST RESULTS**

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<b>FCC Rules</b>	<b>Description of Test</b>	<b>Result</b>
FCC §15.407 (f) & §1.1310 & §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.407(b)(6)&§15.207(a)	Conducted Emissions	Compliance
§15.205& §15.209 &§15.407(b) (1),(6),(7)	Unwanted Emission	Compliance
§15.407(b) (1),(2),(3),(4)	Out Of Band Emissions	Compliance
§15.407(a)	Emission Bandwidth	Compliance
§15.407(a)(1)	Maximum Conducted Output Power	Compliance
§15.407 (a)(1),(5)	Power Spectral Density	Compliance
§15.407(g)	Frequency stability	Compliance

## **FCC §15.407 (f) & §1.1310 & §2.1093- RF EXPOSURE**

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### **Applicable Standard**

According to subpart 15.407(f), §1.1310 and §2.1093.

### **Test Result**

Compliant, please refer to the SAR report: RDG170326002-20A.

## **FCC §15.203 – ANTENNA REQUIREMENT**

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### **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 use of a standard antenna jack or electrical connector is prohibited.

And according to FCC 47 CFR section 15.407 (a)(1), if transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **Antenna Connector Construction**

The EUT has 2 un-detachable external antennas arrangement for LB mode, Antenna 1 only for receiving, antenna 2 for transmitting and receiving, the antenna gain are 3.3dBi@ 2.4GHz band and 4.48dBi@5.8GHz, and 2 internal antennas for 10MHz mode, the antenna gain are 3.34dBi @ 2.4GHz band and 5 dBi @5.8GHz band, that fulfill the requirement of the item. Please refer to the EUT photos.

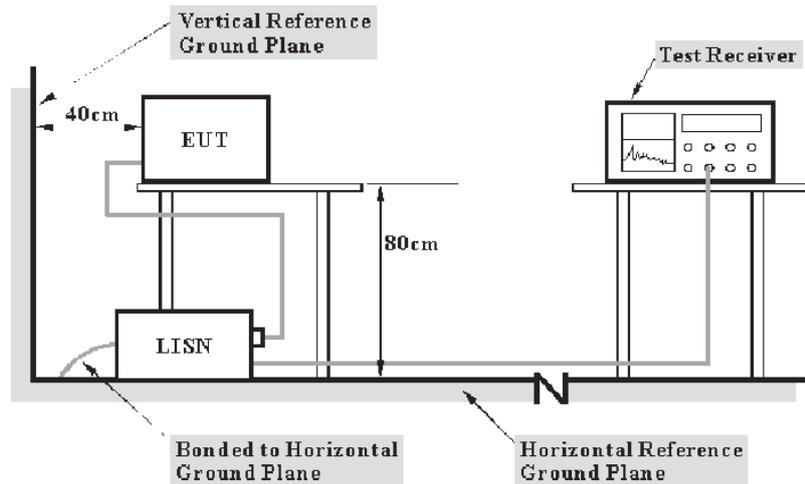
**Result:** Compliance.

## §15.407(b)(6)&§15.207 (a) – CONDUCTED EMISSIONS

### Applicable Standard

FCC §15.407(b)(6)&§15.207 (a)

### 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.

The adapter was connected to a 120 V/60 Hz AC power source

### EMI Test Receiver Setup

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

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

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

## Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

$$C_f = A_C + VDF$$

Herein,

$V_C$  (cord. Reading): corrected voltage amplitude

$V_R$ : reading voltage amplitude

$A_C$ : attenuation caused by cable loss

VDF: voltage division factor of AMN

$C_f$ : Correction Factor

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum 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
Rohde & Schwarz	EMI Test Receiver	ESCS 30	836858/0016	2016-12-02	2017-12-01
Rohde & Schwarz	L.I.S.N.	ENV216	100018	2016-12-02	2017-12-01
Rohde & Schwarz	PULSE LIMITER	ESH3Z2	DE14781	2016-10-31	2017-10-30
Unknown	Conducted Cable	Unknown	NO.5	2016-11-10	2017-11-09
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A

\* **Statement of Traceability:** BA CL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B “Implementation of traceability policy in accredited laboratories”.

## Test Procedure

During the conducted emission test, the adapter was connected to the first 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 Data

### Environmental Conditions

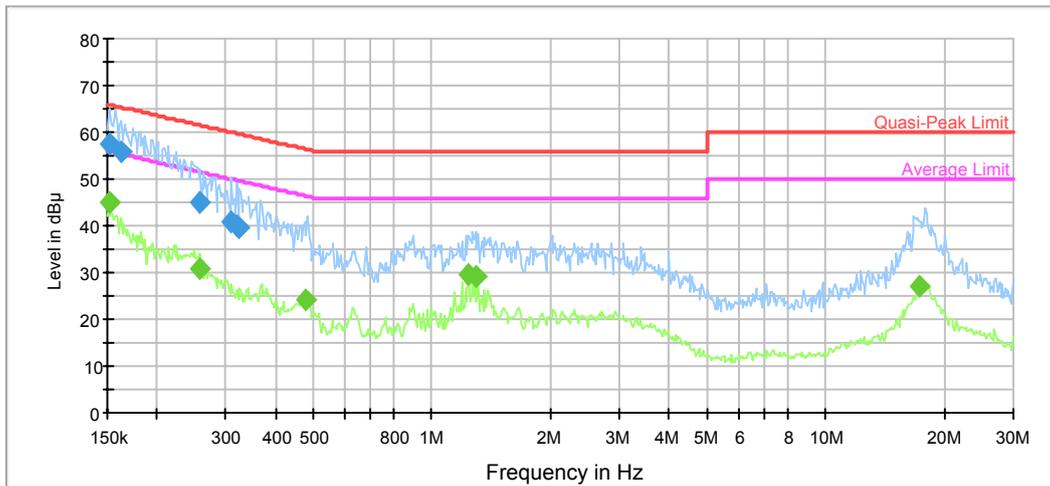
<b>Temperature:</b>	23.7 °C
<b>Relative Humidity:</b>	44.3 %
<b>ATM Pressure:</b>	100.5 kPa

*The testing was performed by Lorin Bian on 2017-04-17.*

*Test Result: Compliance, please refer to the below data and plots.*

Test Mode: Charging and transmitting (10MHz mode was the worst)

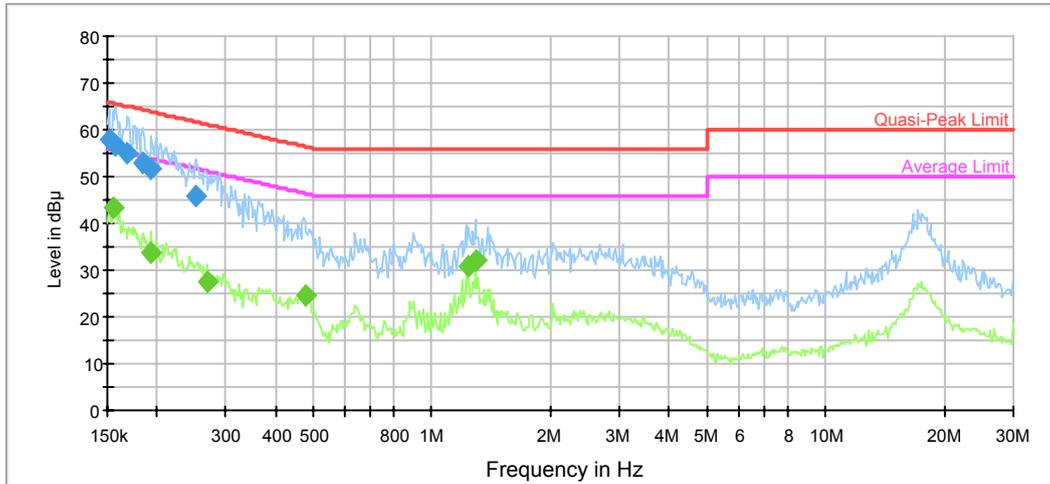
AC120V, 60Hz, Line:



Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.151200	57.5	9.000	L1	19.7	8.4	65.9	Compliance
0.162441	56.0	9.000	L1	19.7	9.3	65.3	Compliance
0.257874	45.0	9.000	L1	19.7	16.5	61.5	Compliance
0.309742	40.9	9.000	L1	19.7	19.1	60.0	Compliance
0.319773	40.0	9.000	L1	19.7	19.7	59.7	Compliance
0.324910	39.6	9.000	L1	19.7	20.0	59.6	Compliance

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.151200	44.9	9.000	L1	19.7	11.0	55.9	Compliance
0.257874	30.6	9.000	L1	19.7	20.9	51.5	Compliance
0.476287	24.2	9.000	L1	19.7	22.2	46.4	Compliance
1.239175	29.5	9.000	L1	19.7	16.5	46.0	Compliance
1.289541	29.0	9.000	L1	19.7	17.0	46.0	Compliance
17.320829	27.1	9.000	L1	20.1	22.9	50.0	Compliance

**AC120V, 60Hz, Neutral:**



Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.151200	57.7	9.000	N	19.7	8.2	65.9	Compliance
0.157346	56.8	9.000	N	19.7	8.8	65.6	Compliance
0.169044	54.8	9.000	N	19.7	10.2	65.0	Compliance
0.184529	52.8	9.000	N	19.6	11.5	64.3	Compliance
0.193566	51.6	9.000	N	19.6	12.3	63.9	Compliance
0.251783	45.9	9.000	N	19.6	15.8	61.7	Compliance

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.154858	43.4	9.000	N	19.7	12.3	55.7	Compliance
0.193566	33.9	9.000	N	19.6	20.0	53.9	Compliance
0.268355	27.4	9.000	N	19.6	23.8	51.2	Compliance
0.476287	24.8	9.000	N	19.6	21.6	46.4	Compliance
1.239175	30.8	9.000	N	19.6	15.2	46.0	Compliance
1.289541	32.0	9.000	N	19.6	14.0	46.0	Compliance

## **FCC §15.209, §15.205 & §15.407(b) –UNWANTED EMISSION**

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### **Applicable Standard**

FCC §15.407; §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of  $-27$  dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

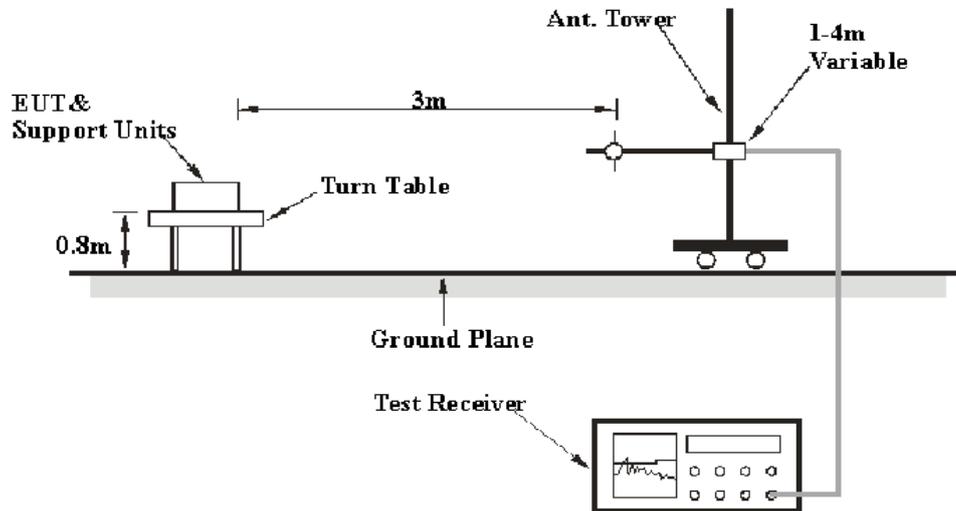
(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

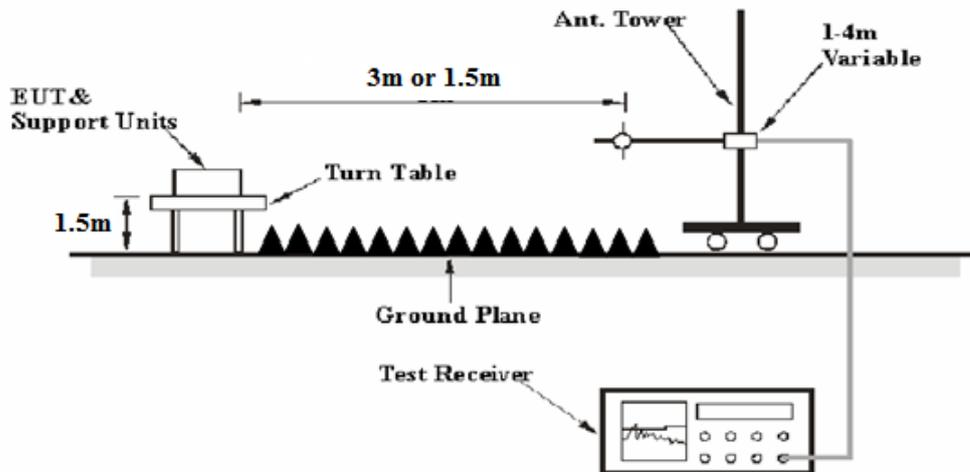
(7) The provisions of §15.205 apply to intentional radiators operating under this section.

## EUT Setup

### Below 1 GHz:



### Above 1 GHz:



The radiated 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, and FCC 15.407 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 & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 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

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

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

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

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03, emission shall be computed as:  $E [dB\mu V/m] = EIRP[dBm] + 95.2$ , for  $d = 3$  meters.

According to C63.10, the above 1G test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m

Distance extrapolation factor =  $20 \log(\text{specific distance [3m]}/\text{test distance [1.5m]})$  dB

Extrapolation result = Corrected Amplitude (dB $\mu$ V/m) - distance extrapolation factor (6dB)

## 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:

$$\text{Margin} = \text{Limit} - \text{Extrapolation result}$$

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Amplifier	8447D	2944A10442	2016-12-02	2017-12-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2016-12-02	2017-12-01
Sunol Sciences	Broadband Antenna	JB3	A121808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	003-6076	2016-12-02	2017-12-01
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-0113024	2014-06-16	2017-06-15
Mini-circuits	Amplifier	ZVA-183-S+	771001215	2016-05-20	2017-05-19
EMCT	Semi-Anechoic Chamber	966	966-1	2015-04-24	2018-04-23
Unknown	RF Cable (below 1GHz)	Unknown	NO.1	2016-11-10	2017-11-09
Unknown	RF Cable (below 1GHz)	Unknown	NO.4	2016-11-10	2017-11-09
Unknown	RF Cable (above 1GHz)	Unknown	NO.2	2016-11-10	2017-11-09
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-011312	2016-08-18	2017-08-18
Quinstar	Amplifier	QLW-18405536-JO	15964001032	2016-08-18	2017-08-18
Agilent	Spectrum Analyzer	8564E	5943A01752	2016-08-18	2017-08-18

\* **Statement of Traceability:** BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

### Test Data

#### Environmental Conditions

<b>Temperature:</b>	21.3~24.9 °C
<b>Relative Humidity:</b>	50.1~54.1 %
<b>ATM Pressure:</b>	100.9 kPa

The testing was performed by Lorin Bian from 2017-04-10 to 2017-04-19.

Test Mode: Transmitting

**30MHz-40GHz** (For above 1GHz, test performed at 1.5m distance EUT to antenna)

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBµV/m)	Extrapolation Result dBµV/m	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
LB mode, Low Channel:5727 MHz										
5727	86.21	PK	H	32.57	5.72	0.00	124.5	118.5	N/A	N/A
5727	75.78	AV	H	32.57	5.72	0.00	114.07	108.07	N/A	N/A
5727	96.80	PK	V	32.57	5.72	0.00	135.09	129.09	N/A	N/A
5727	85.82	AV	V	32.57	5.72	0.00	124.11	118.11	N/A	N/A
5725	62.04	PK	V	32.57	5.72	0.00	100.33	94.33	122.2	27.87
5720	37.60	PK	V	32.56	5.71	0.00	75.87	69.87	110.8	40.93
5700	26.60	PK	V	32.54	5.70	0.00	64.84	58.84	105.2	46.36
5650	24.80	PK	V	32.48	5.65	0.00	62.93	56.93	68.2	11.27
11454	36.88	PK	V	37.96	8.22	26.02	57.04	51.04	74	22.96
11454	24.21	AV	V	37.96	8.22	26.02	44.37	38.37	54	15.63
17181	29.08	PK	V	42.73	10.73	25.92	56.62	50.62	74	23.38
17181	16.82	AV	V	42.73	10.73	25.92	44.36	38.36	54	15.64
4532	34.74	PK	V	29.90	5.25	26.85	43.04	37.04	74	36.96
4532	22.23	AV	V	29.90	5.25	26.85	30.53	24.53	54	29.47
3978	35.12	PK	V	28.91	4.89	26.55	42.37	36.37	74	37.63
3978	22.66	AV	V	28.91	4.89	26.55	29.91	23.91	54	30.09
341.37	45.42	QP	H	14.86	1.16	27.73	33.71	33.71	46.00	12.29
488.81	36.95	QP	H	18.16	1.63	28.75	27.99	27.99	46.00	18.01
LB mode,Middle Channel:5775.3 MHz										
5775.3	86.73	PK	H	32.63	5.76	0.00	125.12	119.12	N/A	N/A
5775.3	76.90	AV	H	32.63	5.76	0.00	115.29	109.29	N/A	N/A
5775.3	98.01	PK	V	32.63	5.76	0.00	136.4	130.4	N/A	N/A
5775.3	87.84	AV	V	32.63	5.76	0.00	126.23	120.23	N/A	N/A
11550.6	44.71	PK	V	38.02	8.21	26.01	64.93	58.93	74	15.07
11550.6	27.88	AV	V	38.02	8.21	26.01	48.1	42.1	54	11.9
17325.9	29.65	PK	V	43.40	10.98	26.12	57.91	51.91	74	22.09
17325.9	17.00	AV	V	43.40	10.98	26.12	45.26	39.26	54	14.74
4722	34.59	PK	V	30.51	5.16	26.86	43.4	37.4	74	36.6
4722	21.52	AV	V	30.51	5.16	26.86	30.33	24.33	54	29.67
4965	34.01	PK	V	31.29	5.05	26.88	43.47	37.47	74	36.53
4965	22.03	AV	V	31.29	5.05	26.88	31.49	25.49	54	28.51
341.37	45.69	QP	H	14.86	1.16	27.73	33.98	33.98	46.00	12.02
488.81	37.09	QP	H	18.16	1.63	28.75	28.13	28.13	46.00	17.87

LB mode, High Channel: 5821.3 MHz										
5821.3	85.71	PK	H	32.69	5.80	0.00	124.2	118.2	N/A	N/A
5821.3	77.48	AV	H	32.69	5.80	0.00	115.97	109.97	N/A	N/A
5821.3	96.83	PK	V	32.69	5.80	0.00	135.32	129.32	N/A	N/A
5821.3	88.16	AV	V	32.69	5.80	0.00	126.65	120.65	N/A	N/A
5850	25.88	PK	V	32.72	5.83	0.00	64.43	58.43	122.2	63.77
5855	26.61	PK	V	32.73	5.83	0.00	65.17	59.17	110.8	51.63
5875	24.94	PK	V	32.75	5.85	0.00	63.54	57.54	105.2	47.66
5925	24.95	PK	V	32.81	5.89	0.00	63.65	57.65	68.2	10.55
11642.6	37.11	PK	V	38.06	8.20	25.98	57.39	51.39	74	22.61
11642.6	23.88	AV	V	38.06	8.20	25.98	44.16	38.16	54	15.84
17463.9	28.93	PK	V	44.03	11.21	26.32	57.85	51.85	74	22.15
17463.9	16.35	AV	V	44.03	11.21	26.32	45.27	39.27	54	14.73
4356	34.52	PK	V	29.57	5.17	26.76	42.5	36.5	74	37.5
4356	21.69	AV	V	29.57	5.17	26.76	29.67	23.67	54	30.33
4833	34.20	PK	V	30.87	5.11	26.87	43.31	37.31	74	36.69
4833	22.29	AV	V	30.87	5.11	26.87	31.4	25.4	54	28.6
341.37	46.53	QP	H	14.86	1.16	27.73	34.82	34.82	46.00	11.18
488.81	37.51	QP	H	18.16	1.63	28.75	28.55	28.55	46.00	17.45

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBµV/m)	Extrapolation Result dBµV/m	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
10MHz mode, Low Channel:5745 MHz										
5745	86.74	PK	H	32.15	4.68	0.00	123.57	117.57	N/A	N/A
5745	74.02	AV	H	32.15	4.68	0.00	110.85	104.85	N/A	N/A
5745	93.87	PK	V	32.15	4.68	0.00	130.70	124.70	N/A	N/A
5745	82.21	AV	V	32.15	4.68	0.00	119.04	113.04	N/A	N/A
5725	41.38	PK	V	32.15	4.67	0.00	78.20	72.20	122.20	50.00
5720	40.25	PK	V	32.14	4.66	0.00	77.05	71.05	110.80	39.75
5700	32.59	PK	V	32.14	4.65	0.00	69.38	63.38	105.20	41.82
5650	30.71	PK	V	32.13	4.60	0.00	67.44	61.44	68.20	6.76
11490	31.96	PK	V	37.89	6.85	0.00	76.70	70.70	74.00	3.30
11490	11.89	AV	V	37.89	6.85	0.00	56.63	50.63	54.00	3.37
17235	46.69	PK	V	40.91	8.68	26.05	70.23	64.23	74.00	9.77
17235	31.85	AV	V	40.91	8.68	26.05	55.39	49.39	54.00	4.61
4693	34.57	PK	V	30.30	4.25	25.47	43.65	37.65	74.00	36.35
4693	21.46	AV	V	30.30	4.25	25.47	30.54	24.54	54.00	29.46
3678	34.27	PK	V	29.19	3.73	25.80	41.39	35.39	74.00	38.61
3678	21.83	AV	V	29.19	3.73	25.80	28.95	22.95	54.00	31.05
341.37	46.06	QP	H	14.86	1.16	27.73	34.35	34.35	46.00	11.65
488.81	37.95	QP	H	18.16	1.63	28.75	28.99	28.99	46.00	17.01
10MHz mode, Middle Channel:5785 MHz										
5785	85.86	PK	H	32.16	4.71	0.00	122.73	116.73	N/A	N/A
5785	72.64	AV	H	32.16	4.71	0.00	109.51	103.51	N/A	N/A
5785	93.42	PK	V	32.16	4.71	0.00	130.29	124.29	N/A	N/A
5785	81.93	AV	V	32.16	4.71	0.00	118.80	112.80	N/A	N/A
11570	30.24	PK	V	37.90	6.87	0.00	75.01	69.01	74.00	4.99
11570	12.05	AV	V	37.90	6.87	0.00	56.82	50.82	54.00	3.18
17355	46.87	PK	V	41.63	8.67	26.41	70.76	64.76	74.00	9.24
17355	32.96	AV	V	41.63	8.67	26.41	56.85	50.85	54.00	3.15
4286	35.17	PK	V	29.84	3.99	25.77	43.23	37.23	74.00	36.77
4286	22.36	AV	V	29.84	3.99	25.77	30.42	24.42	54.00	29.58
3127	33.98	PK	V	27.61	3.46	23.99	41.06	35.06	74.00	38.94
3127	21.05	AV	V	27.61	3.46	23.99	28.13	22.13	54.00	31.87
341.37	45.59	QP	H	14.86	1.16	27.73	33.88	33.88	46.00	12.12
488.81	38.39	QP	H	18.16	1.63	28.75	29.43	29.43	46.00	16.57

10MHz mode, High Channel:5825 MHz										
5825	88.07	PK	H	32.69	5.81	0.00	126.57	120.57	N/A	N/A
5825	76.19	AV	H	32.69	5.81	0.00	114.69	108.69	N/A	N/A
5825	92.04	PK	V	32.69	5.81	0.00	130.54	124.54	N/A	N/A
5825	80.13	AV	V	32.69	5.81	0.00	118.63	112.63	N/A	N/A
5850	38.58	PK	V	32.72	5.83	0.00	77.13	71.13	122.2	51.07
5855	38.40	PK	V	32.73	5.83	0.00	76.96	70.96	110.8	39.84
5875	25.98	PK	V	32.75	5.85	0.00	64.58	58.58	105.2	46.62
5925	26.17	PK	V	32.81	5.89	0.00	64.87	58.87	68.2	9.33
11650	56.09	PK	V	38.06	8.20	25.98	76.37	70.37	74	3.63
11650	36.54	AV	V	38.06	8.20	25.98	56.82	50.82	54	3.18
17475	41.47	PK	V	44.09	11.23	26.33	70.46	64.46	74	9.54
17475	27.53	AV	V	44.09	11.23	26.33	56.52	50.52	54	3.48
4338	33.58	PK	V	29.54	5.16	26.75	41.53	35.53	74	38.47
4338	20.99	AV	V	29.54	5.16	26.75	28.94	22.94	54	31.06
3792	35.33	PK	V	28.17	4.61	26.57	41.54	35.54	74	38.46
3792	22.88	AV	V	28.17	4.61	26.57	29.09	23.09	54	30.91
341.37	46.62	QP	H	14.86	1.16	27.73	34.91	34.91	46.00	11.09
488.81	35.99	QP	H	18.16	1.63	28.75	27.03	27.03	46.00	18.97

## **FCC §15.407(b)–OUT- OF-BAND EMISSIONS**

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### **Applicable Standard**

FCC §15.407

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of  $-27$  dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

### **Test Procedure**

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
Unknown	RF Cable	Unknown	NO.3	Each Time	/

\* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data

#### Environmental Conditions

<b>Temperature:</b>	22.6 °C
<b>Relative Humidity:</b>	58 %
<b>ATM Pressure:</b>	98.6 kPa

*The testing was performed by Lorin Bian on 2017-04-06.*

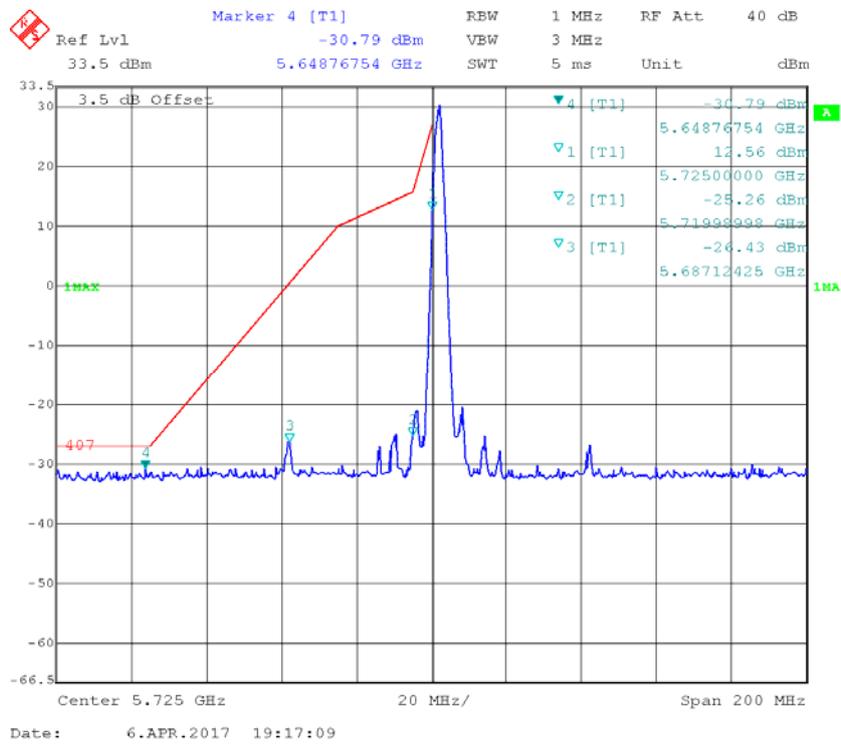
**Test Result:** Pass.

Please refer to the following tables and plots.

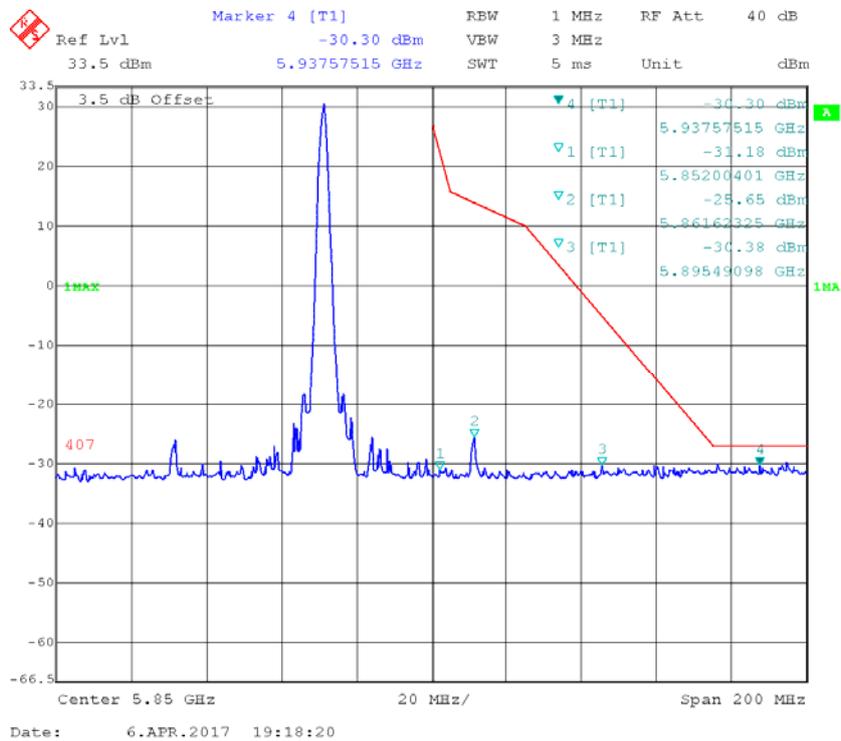
**Test Result:** Pass.

Please refer to the following tables and plots.

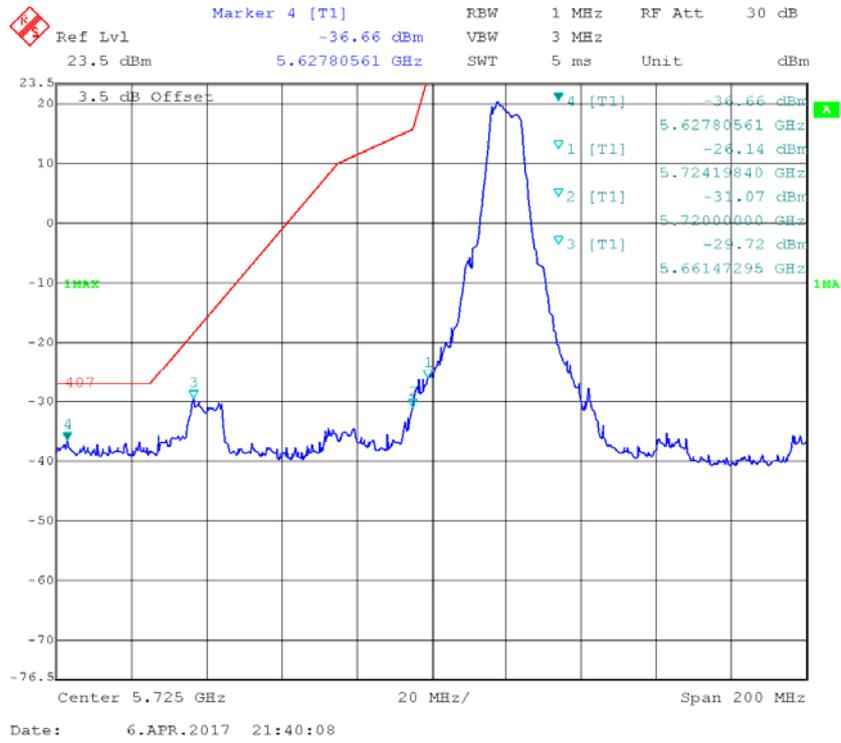
### LB Low Channel



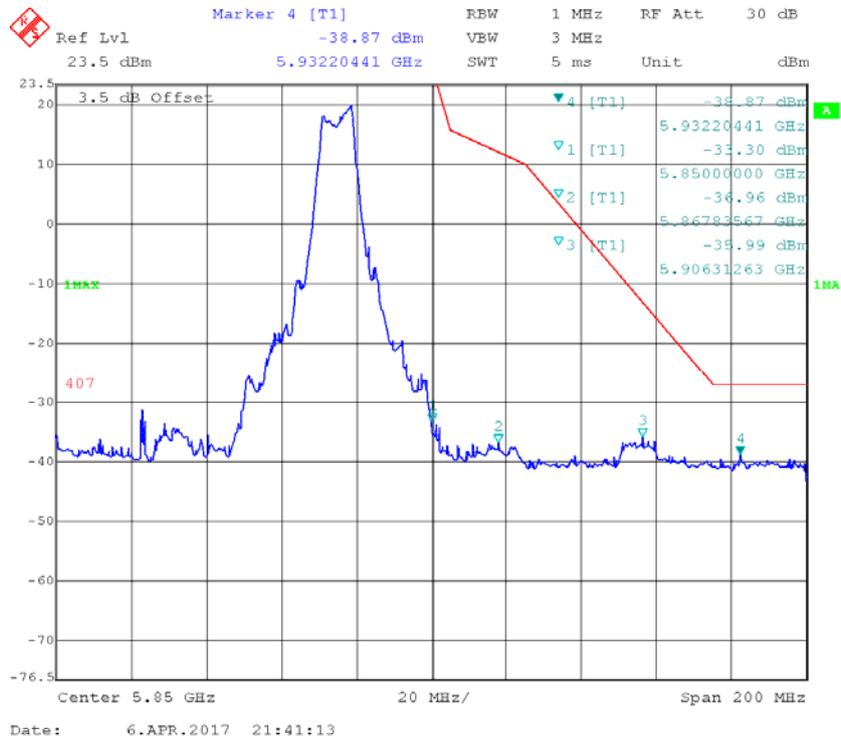
### LB High Channel



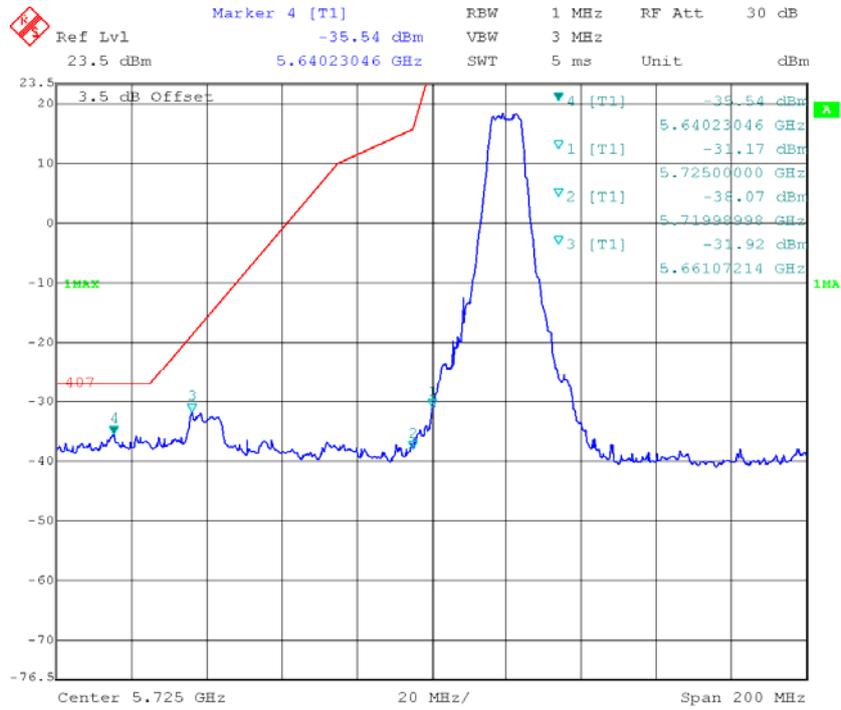
### 10M Antenna 1 Low Channel



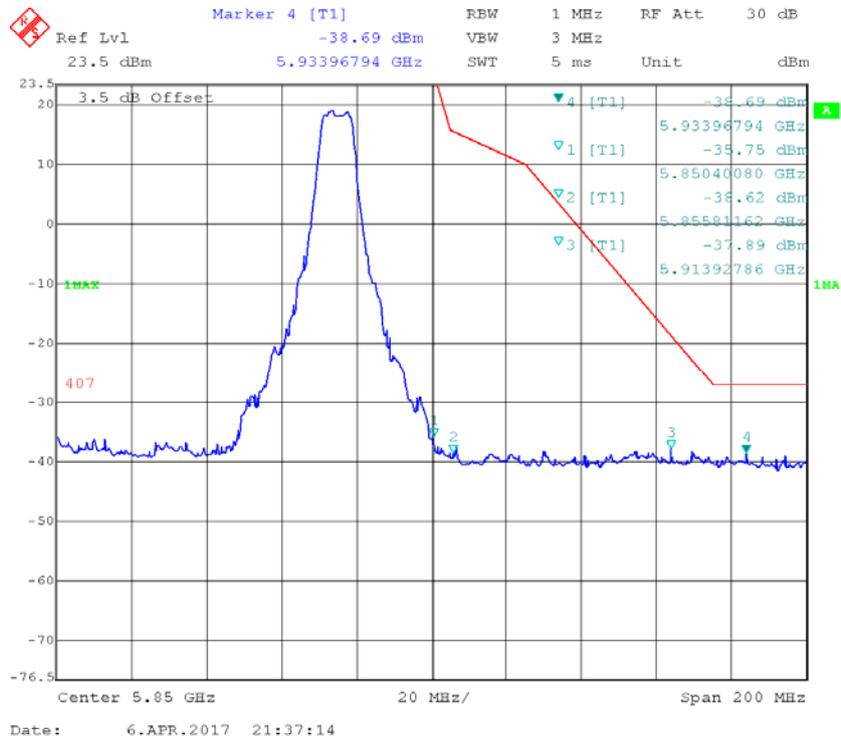
### 10M Antenna 1 High Channel



### 10M Antenna 2 Low Channel



### 10M Antenna 2 High Channel



## FCC §15.407(a) –EMISSION BANDWIDTH

### Applicable Standard

15.407(a)

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
Unknown	RF Cable	Unknown	NO.3	Each Time	/

\* **Statement of Traceability:** BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

### Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03.

### Test Data

#### Environmental Conditions

Temperature:	22.6 °C
Relative Humidity:	58 %
ATM Pressure:	98.6 kPa

*The testing was performed by Lorin Bian on 2017-04-06.*

**Test Result:** Pass.

Please refer to the following tables and plots.

Test mode: Transmitting (Test was performed at antenna 2 for LB mode, and 1 for 10MHz mode)

**26 dB Emission Bandwidth:**

Mode	Channel	Frequency (MHz)	26 dB Emission Bandwidth (MHz)
LB	Low	5727	1.34
	Middle	5775.3	1.37
	High	5821.3	1.33
10M	Low	5745	13.07
	Middle	5785	13.57
	High	5825	13.63

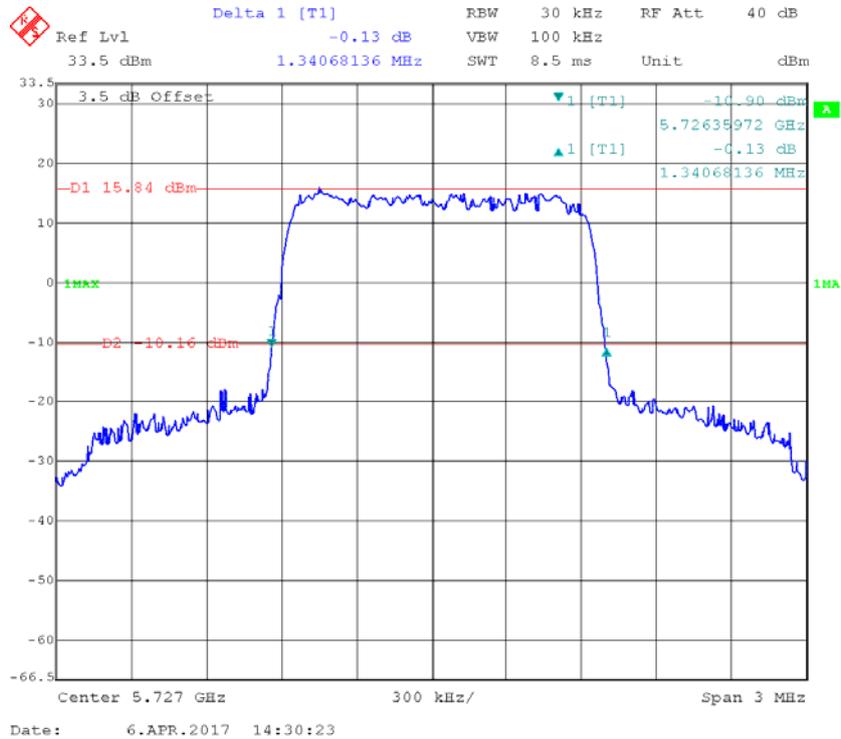
Note: 26dB Emission Bandwidth only for reporting.

**6 dB Emission Bandwidth:**

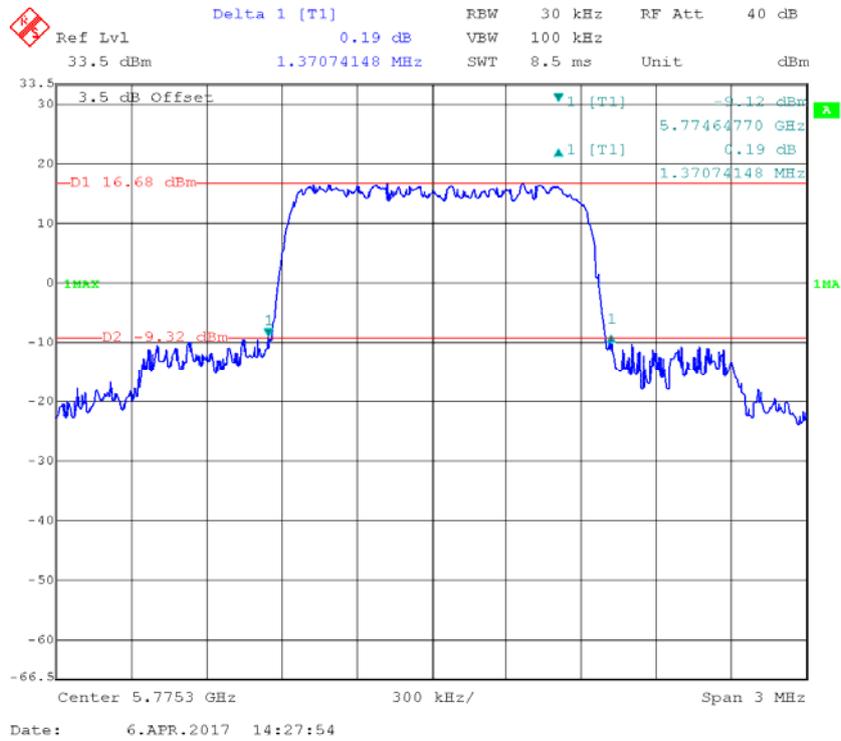
Mode	Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limits (MHz)
LB	Low	5727	1.21	≥0.5
	Middle	5775.3	1.21	≥0.5
	High	5821.3	1.19	≥0.5
10M	Low	5745	8.9	≥0.5
	Middle	5785	8.91	≥0.5
	High	5825	8.94	≥0.5

26 dB Bandwidth:

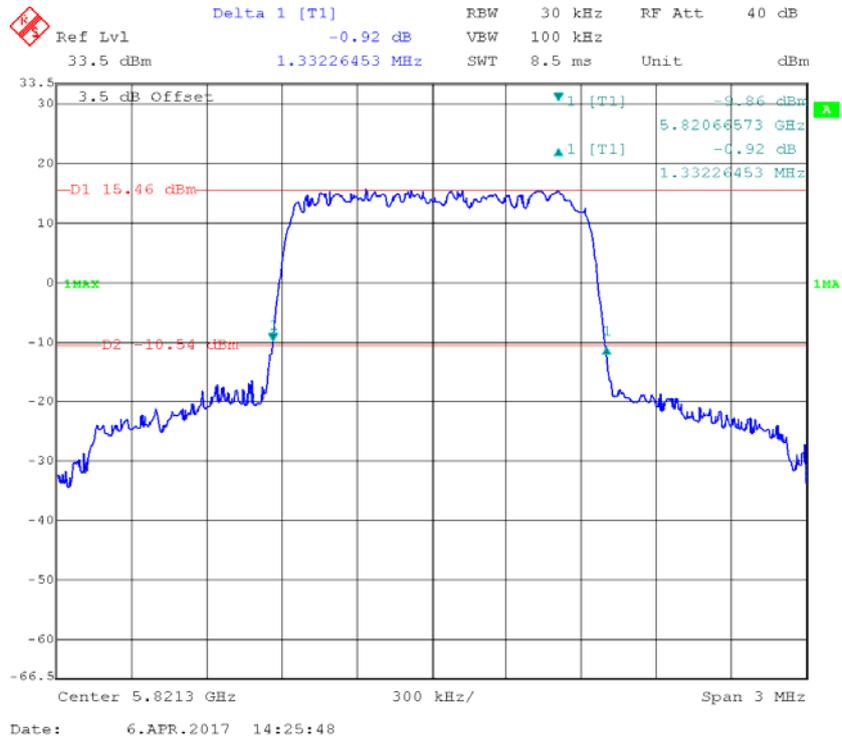
LB, Low Channel



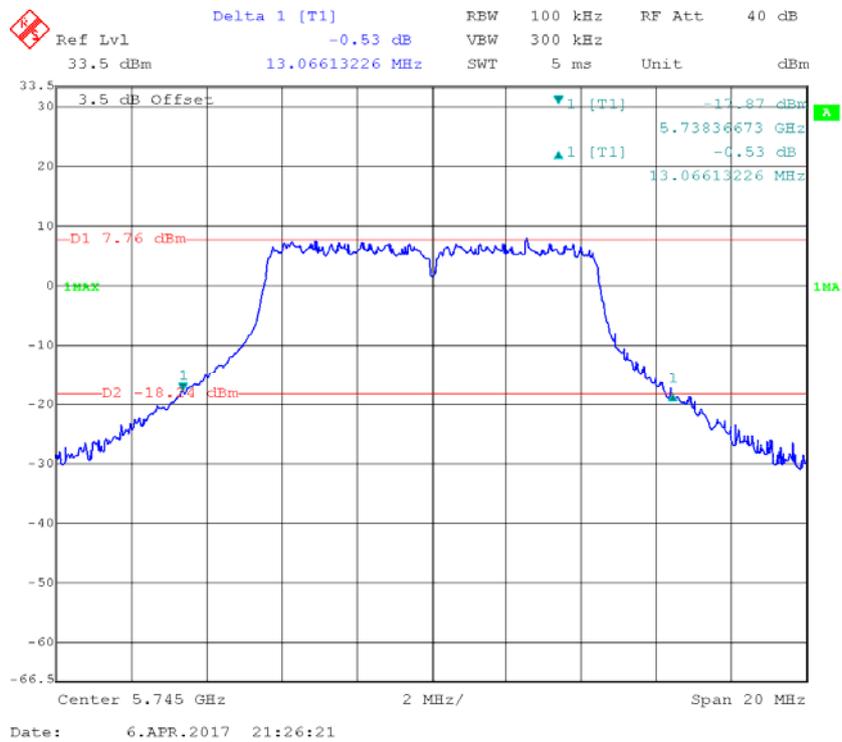
LB, Middle Channel



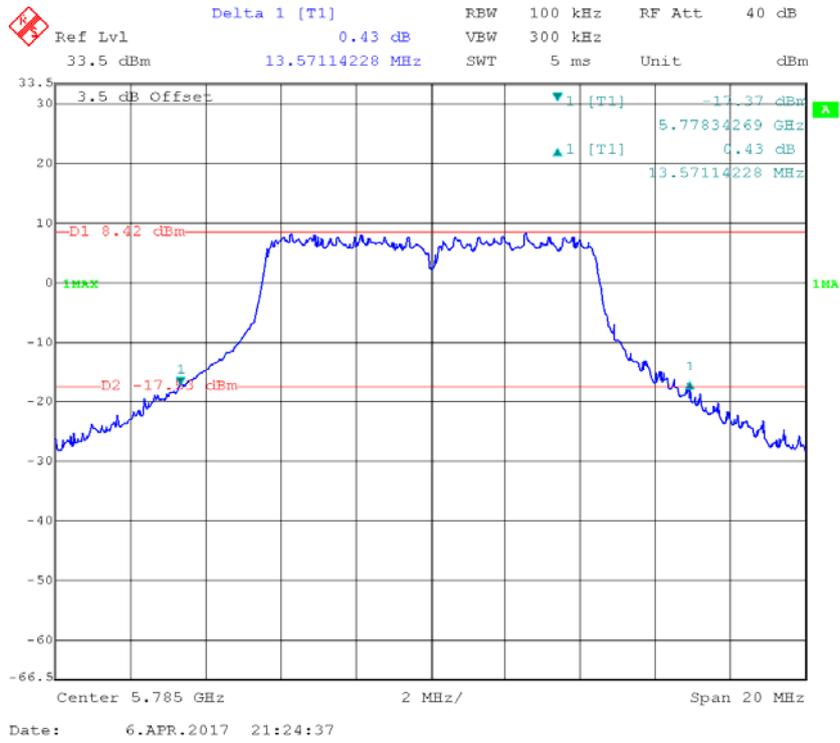
### LB, High Channel



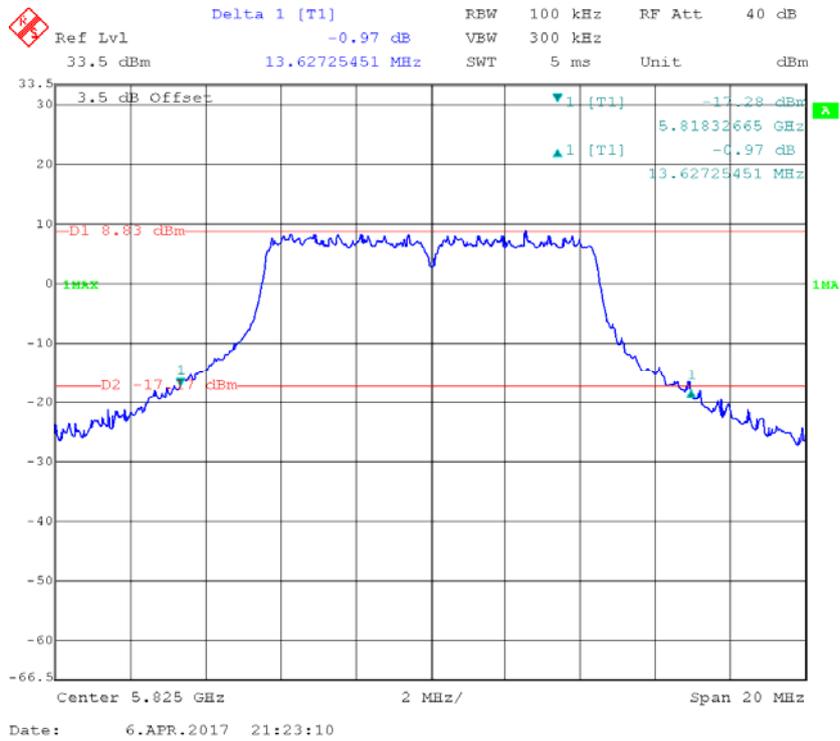
### 10M, Low Channel



### 10M, Middle Channel

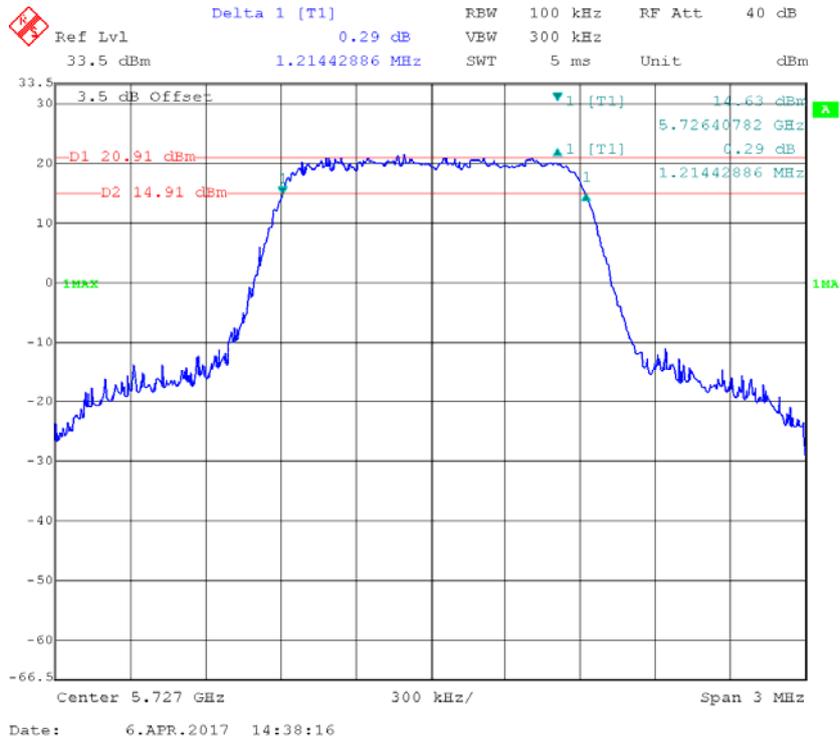


### 10M, High Channel

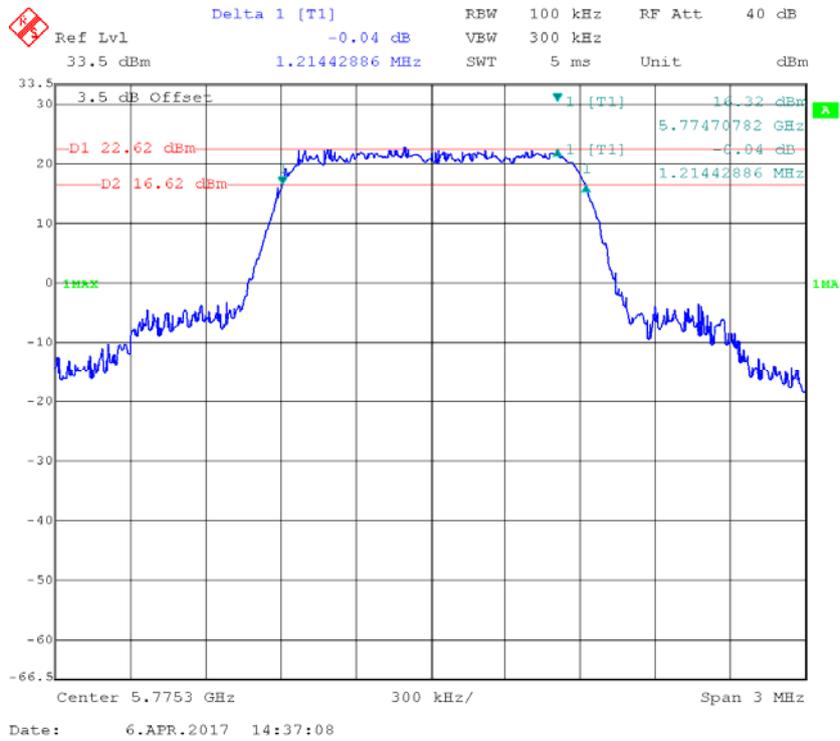


6dB Bandwidth:

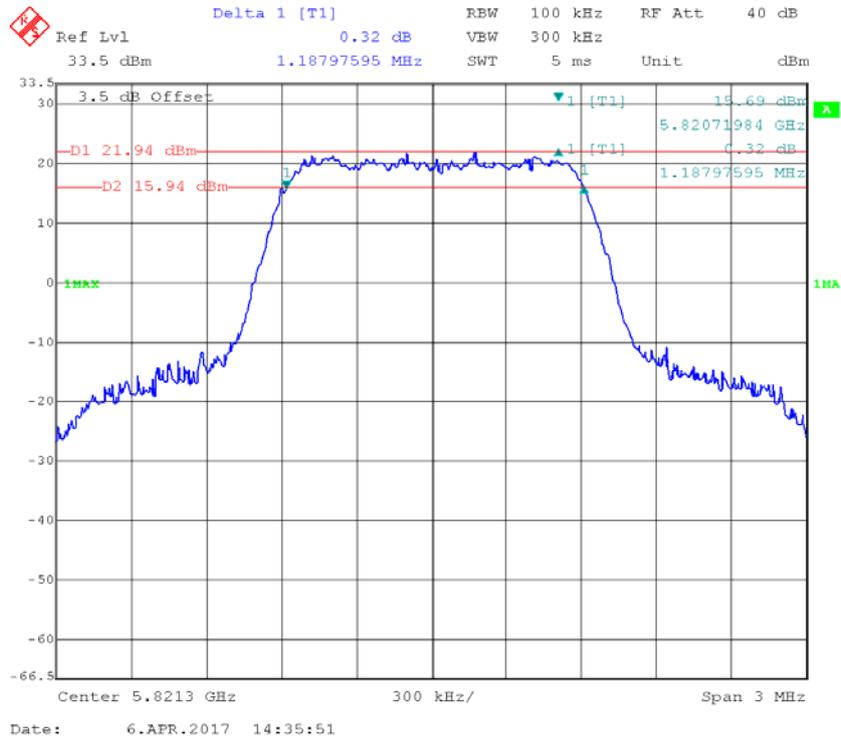
LB, Low Channel



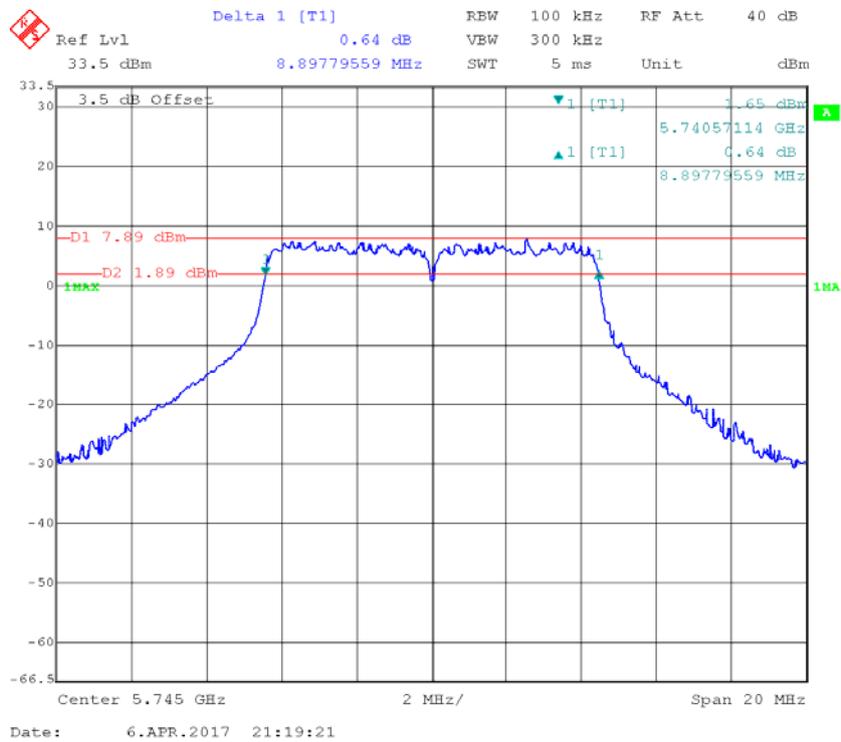
LB, Middle Channel



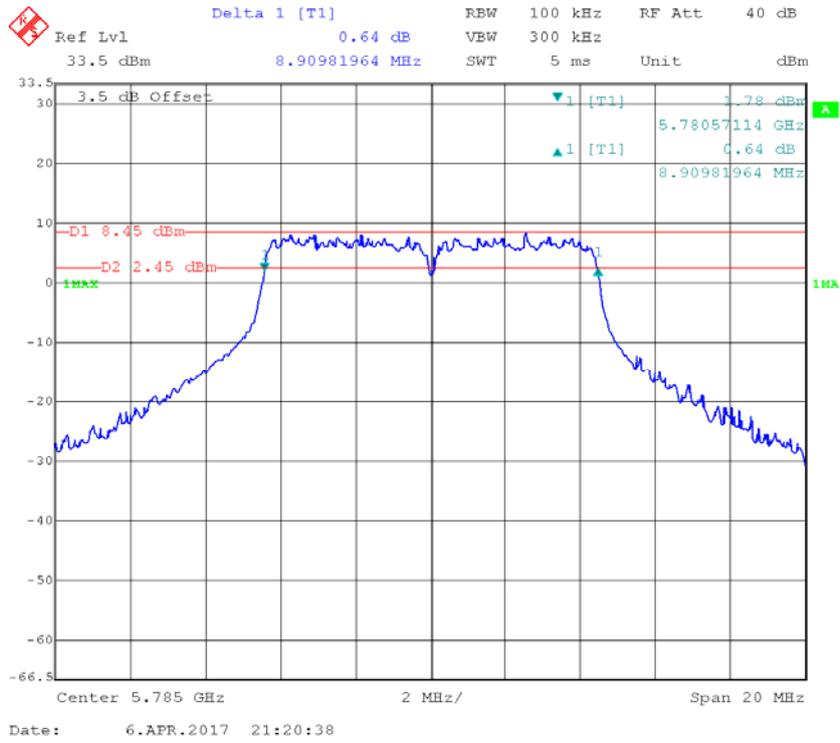
### LB, High Channel



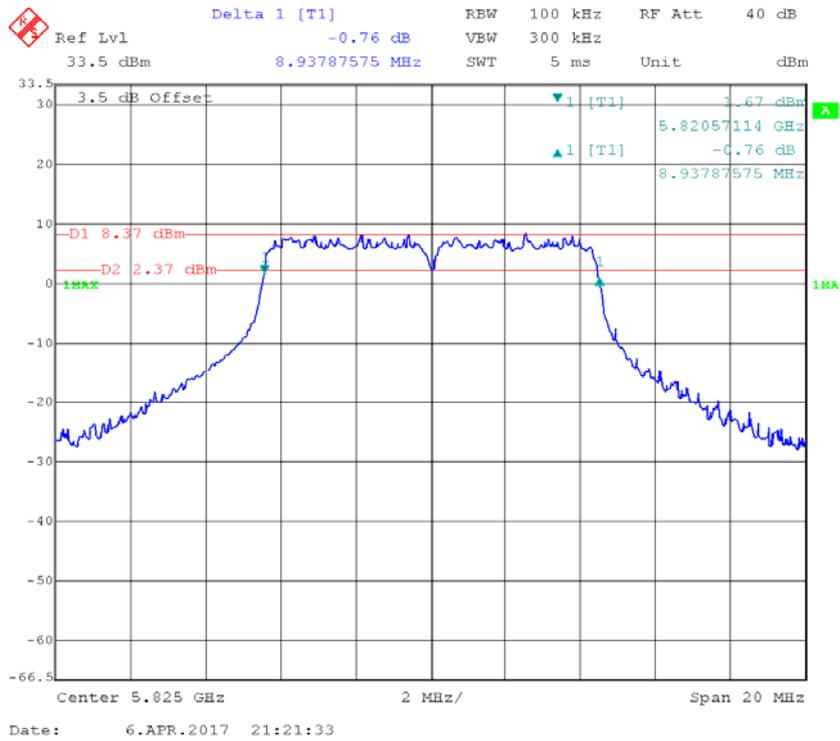
### 10M, Low Channel



### 10M, Middle Channel



### 10M, High Channel



## FCC §15.407(g) – FREQUENCY STABILITY

### Applicable Standard

FCC §15.407

(g) Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

### Test Procedure

According to C63.10-2013 clause 6.8.

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
N/A	RF Cable	N/A	N/A	Each Time	/
FLUKE	Multimeter	1587	27870099	2016-12-30	2017-12-29
BACL	High Temperature Test Chamber	BTH-150	30024	2016-12-02	2017-12-01

\* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data

#### Environmental Conditions

Temperature:	22.6 °C
Relative Humidity:	58 %
ATM Pressure:	98.6 kPa

*The testing was performed by Lorin Bian on 2017-05-23.*

LB Mode:

Temperature	Voltage	f <sub>L</sub> at Low Test Channel	F <sub>H</sub> at High Test Channel	Limit
°C	V <sub>DC</sub>	MHz	MHz	
-20	7.6	5726.3594	5821.9979	f <sub>L</sub> and f <sub>H</sub> Within 5725~5850MHz range
-10		5726.3572	5821.9942	
10		5726.3586	5821.9965	
20		5726.3598	5821.9943	
30		5726.3588	5821.9954	
40		5726.3575	5821.9963	
25	7.2	5726.3588	5821.9972	
25	8.4	5726.3599	5821.9977	

Note: the f<sub>L</sub> and f<sub>H</sub> determined by 26dB bandwidth low edge at Low test channel and High edge at High test channel.

10M mode(test performed at antenna 1):

Temperature	Voltage	f <sub>L</sub> at Low Test Channel	F <sub>H</sub> at High Test Channel	Limit
°C	V <sub>DC</sub>	MHz	MHz	
-20	7.6	5738.3667	5831.9538	f <sub>L</sub> and f <sub>H</sub> Within 5725~5850MHz range
-10		5738.3674	5831.9532	
10		5738.3679	5831.9541	
20		5738.3688	5831.9548	
30		5738.3681	5831.9549	
40		5738.3678	5831.9544	
25	7.2	5738.3662	5831.9542	
25	8.4	5738.3661	5831.9548	

Note: the f<sub>L</sub> and f<sub>H</sub> determined by 26dB bandwidth low edge at Low test channel and High edge at High test channel.

## **FCC §15.407(a) –MAXIMUM CONDUCTED OUTPUT POWER**

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### **Applicable Standard**

(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm  $10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(4) The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Wideband Power Sensor	N1921A	MY54170074	2017-01-03	2018-01-03
Agilent	P-Series Power Meter	N1912A	MY5000798	2017-01-03	2018-01-03
Unknown	RF Cable	Unknown	NO.3	Each Time	/

\* **Statement of Traceability:** BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

### Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03.

**Test Data**

**Environmental Conditions**

<b>Temperature:</b>	22.6 °C
<b>Relative Humidity:</b>	58 %
<b>ATM Pressure:</b>	98.6 kPa

The testing was performed by Lorin Bian on 2017-04-06.

Test Mode: Transmitting

Mode	Frequency (MHz)	RMS Channel Power (dBm)	Limits (dBm)	Result
LB	5727	22.71	30	PASS
	5775.3	24.37	30	PASS
	5821.3	23.01	30	PASS

Mode	Frequency (MHz)	RMS Channel Power (dBm)		Total (dBm)	Limits (dBm)	Result
		Antenna 1	Antenna 2			
10M	5745	18.23	16.73	20.55	30	PASS
	5785	18.54	17.92	21.25	30	PASS
	5825	17.98	18.04	21.02	30	PASS

Note: For 10MHz mode, the device employed Cyclic Delay Diversity (CDD) for MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements:

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4;

So:

Directional gain = GANT + Array Gain = 5dBi < 6dBi

## **FCC §15.407(a) - POWER SPECTRAL DENSITY**

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### **Applicable Standard**

(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm  $10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

## Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03.

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
Unknown	RF Cable	Unknown	NO.3	Each Time	/

\* **Statement of Traceability:** BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

**Test Data**

**Environmental Conditions**

<b>Temperature:</b>	22.6 °C
<b>Relative Humidity:</b>	58 %
<b>ATM Pressure:</b>	98.6 kPa

The testing was performed by Lorin Bian on 2017-04-06.

Test Mode: Transmitting

Test Result: Compliance. Please refer to the following table and plot.

LB Mode:

Channel	Frequency (MHz)	PSD (dBm/300kHz)	Total (dBm/500kHz)	Limit (dBm/500kHz)
Low	5727	20.8	23.00	30
Middle	5775.3	22.44	24.64	30
High	5821.3	20.9	23.1	30

10MHz Mode:

Channel	Frequency (MHz)	PSD (dBm/300kHz)		Total (dBm/500kHz)	Limit (dBm/500kHz)
		Antenna 1	Antenna 2		
Low	5745	9.31	7.35	13.65	28
Middle	5785	8.91	7.68	13.55	28
High	5825	8.66	7.61	13.38	28

Note: the device employed Cyclic Delay Diversity (CDD) for 10MHz modes, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:  
 Array Gain = 10 log(NANT/NSS) dB.

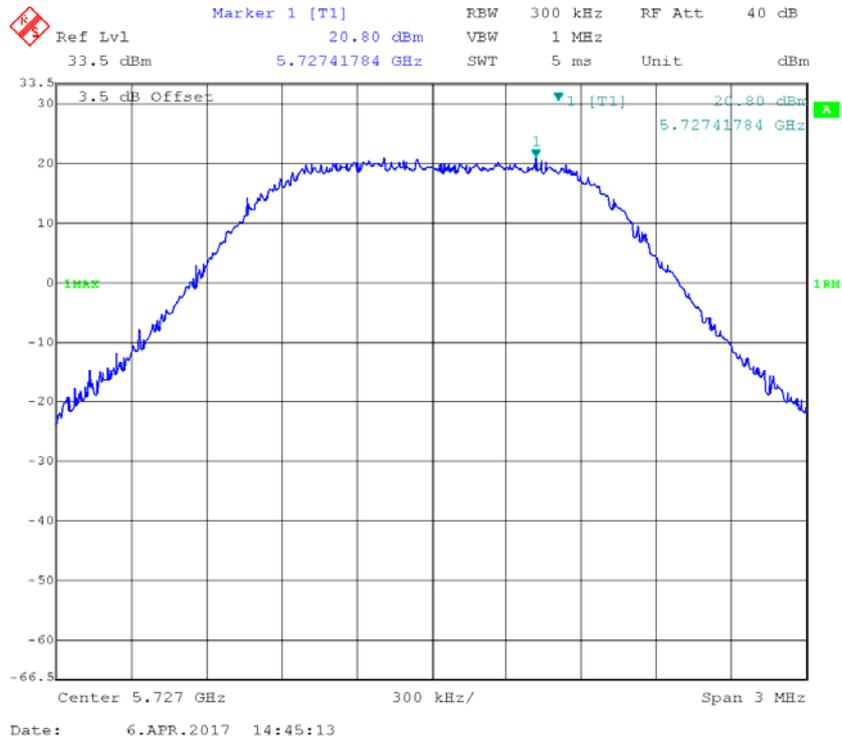
So:

$$\text{Directional gain} = \text{GANT} + \text{Array Gain} = 5 + 10 \cdot \log(2) = 8 \text{ dBi}$$

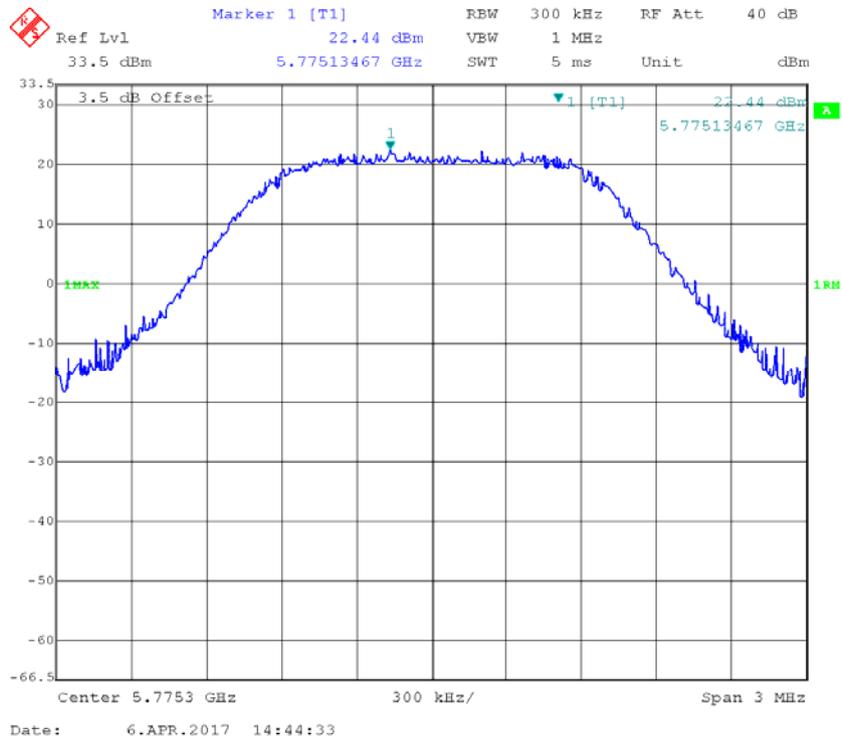
The Power density Limits was reduce 2dB

The measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10 \log(500\text{kHz}/\text{RBW})$  to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

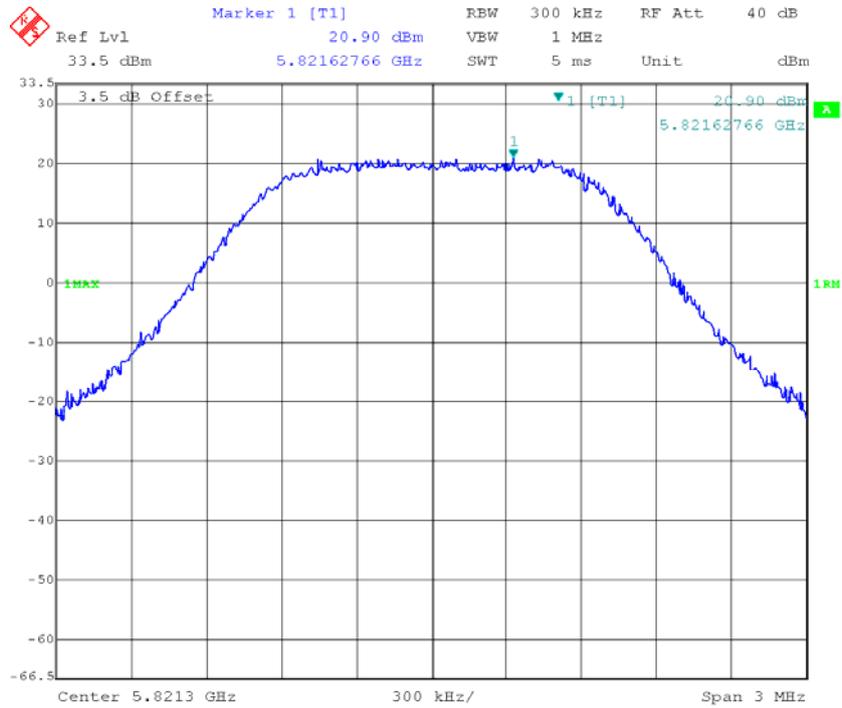
### LB, Low Channel



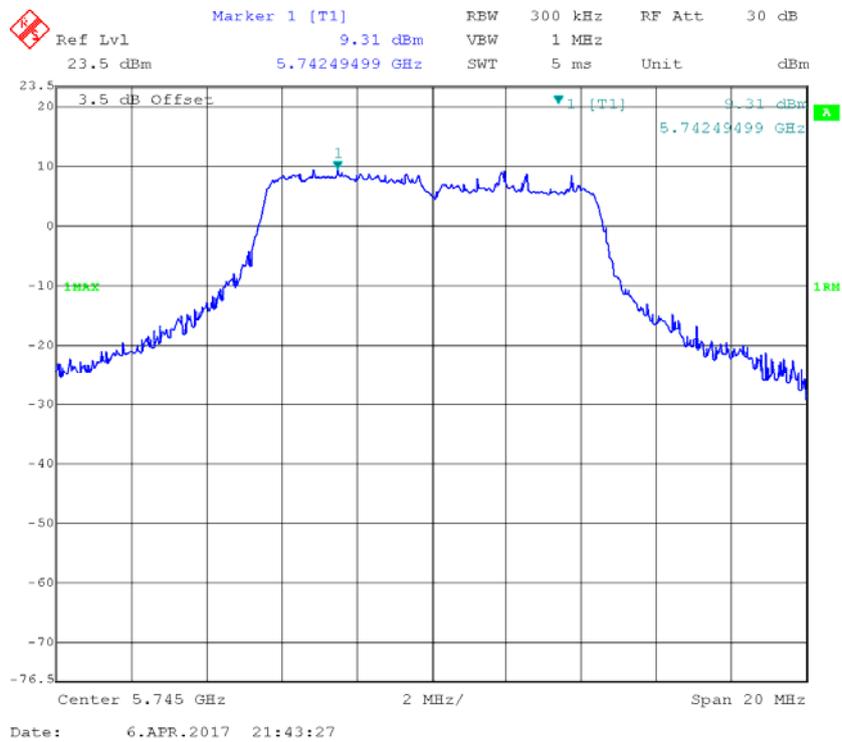
### LB, Middle Channel



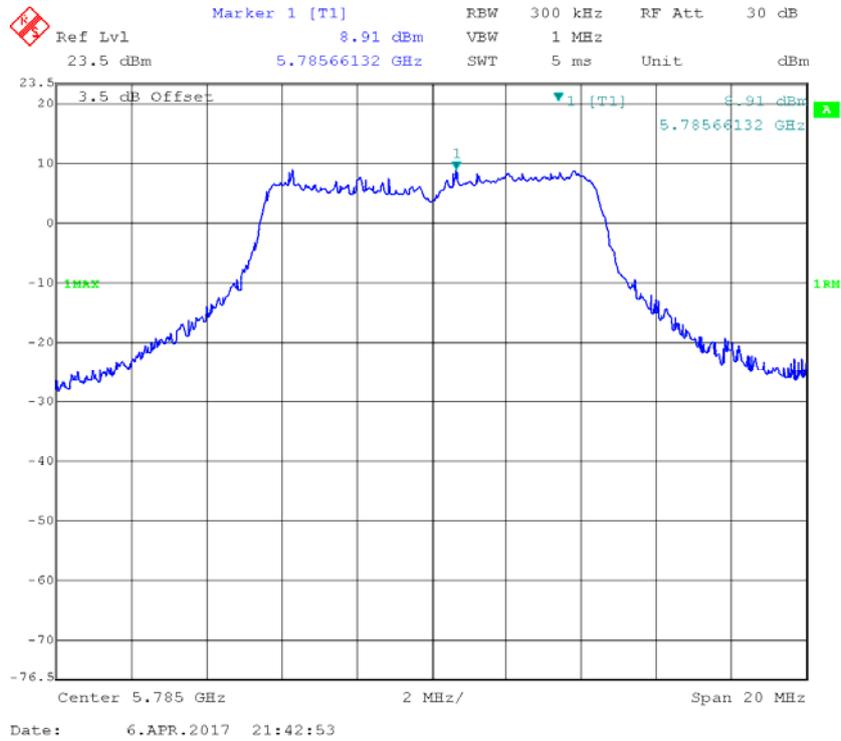
### LB, High Channel



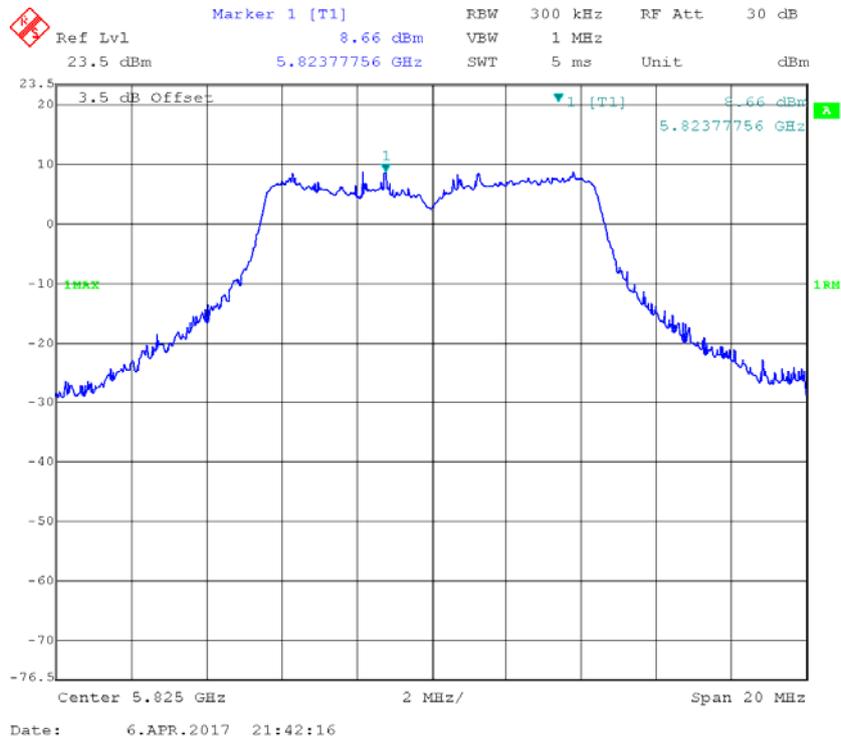
### 10M, Low Channel, Antenna 1



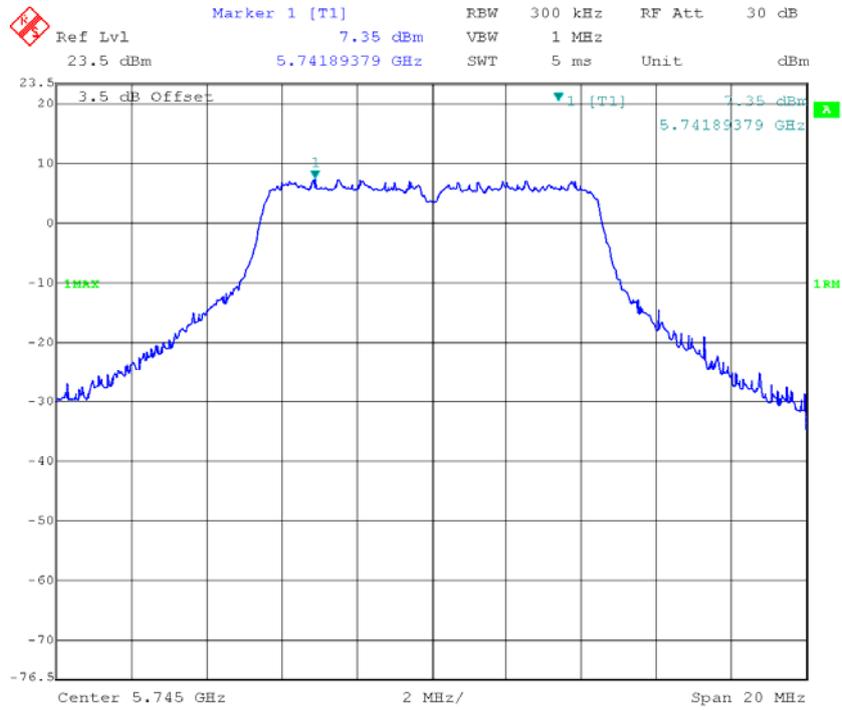
### 10M, Middle Channel Antenna 1



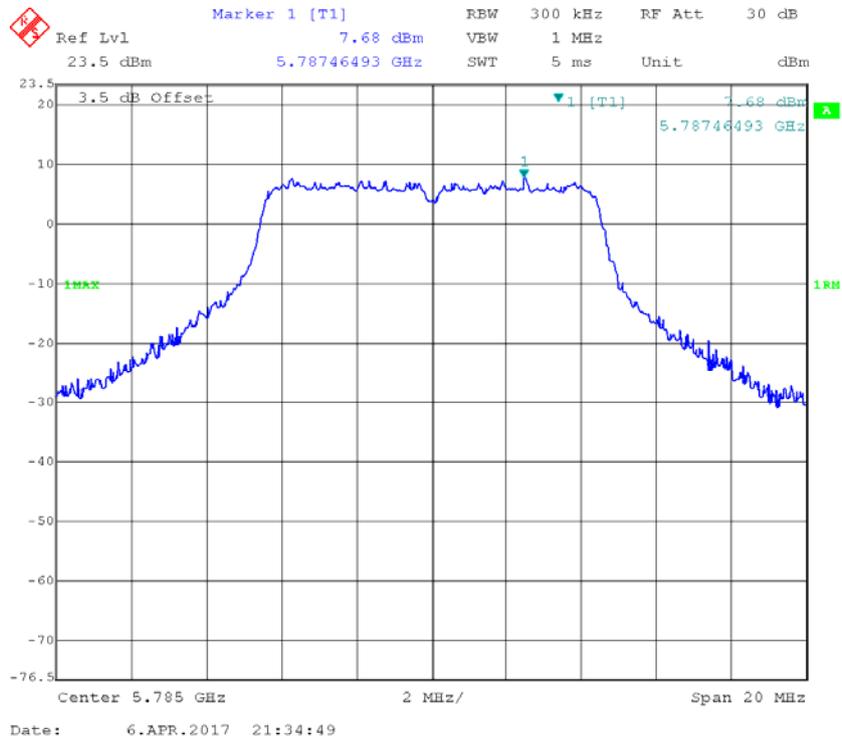
### 10M, High Channel Antenna 1



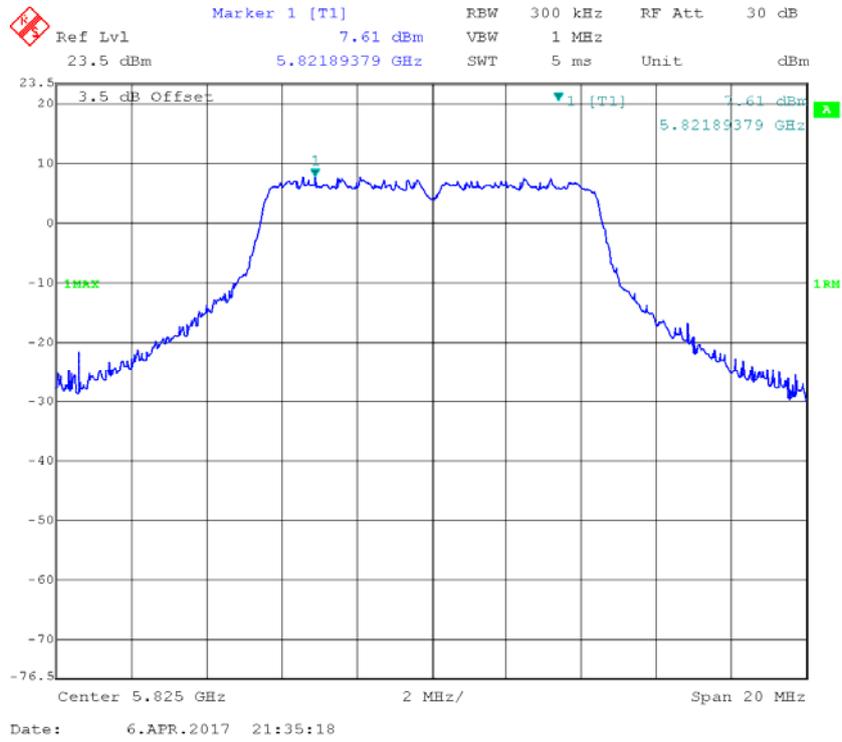
### 10M, Low Channel, Antenna 2



### 10M, Middle Channel, Antenna 2



### 10M, High Channel, Antenna 2



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