FCC PART 15C

TEST REPORT

For

Bytech NY Inc.

2585 West 13th Street,Brooklyn NY 11223, New York, United States

FCC ID: 2AHN6-OPCP200

Report Type:	**Product Type:**
Original Report	5W Adjust Wireless Charge Stand

Report Number:	RSZ181029830-00
Report Date:	2018-11-19
Reviewed By:	Rocky Kang RF Engineer
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA* or any agency of the Federal Government. * This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "*".

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Bytech NY Inc.'s* product, model number: *BY-OP-CP-200-BK (FCC ID: 2AHN6-OPCP200, UPC Number: 805112045204, SKU Number: 3113917)* in this report is a *5W Adjust Wireless Charge Stand,* which was measured approximately: 7.9 cm (L) * 7.9 cm (W) * 11.3 cm (H), rated with input voltage: DC 5V.

** All measurement and test data in this report was gathered from production sample serial number: 181029830 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2018-10-29.*

Objective

This report is prepared on behalf of *Bytech NY Inc.* in accordance with Part 2, Subpart J, and Part 15, Subparts A and C of the Federal Communications Commission's rules.

The objective is to determine the compliance of EUT with FCC rules, section 15.203, 15.205, 15.207 and 15.209.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

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

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

Measurement Uncertainty

Item		Uncertainty
AC Power Line Conducted Emissions		±1.95 dB
Radiated emission	9 kHz~30MHz	±4.52 dB
	30MHz~1 GHz	±5.81 dB
Occupied Bandwidth		±0.5 kHz
Temperature		±3.0 ℃
Humidity		±6 %

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No. : CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a test mode

The device is a wireless charger operation on frequency 110 kHz - 205 kHz.

EUT Exercise Software

No software used in test.

Support Equipment List and Details

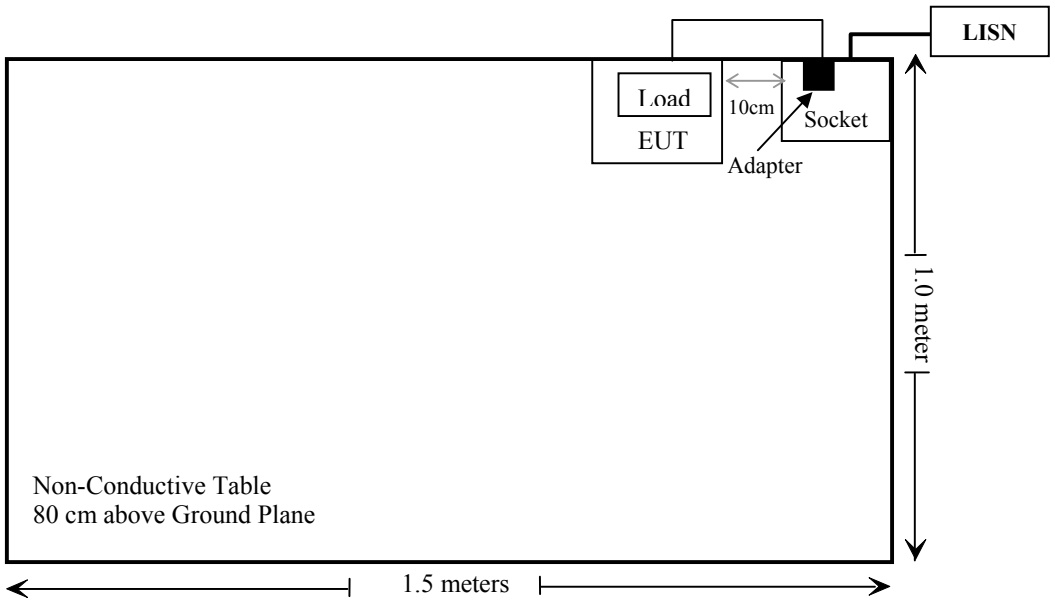
Manufacturer	Description	Model	Serial Number
/	Load	/	/
SENWA	Adapter	SENWAC1A	/

External I/O Cable

Cable Description	Length (m)	From Port	To
Shielded detachable USB cable	0.3	EUT	Adapter

Block Diagram of Test Setup

For Conducted Emissions:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§1.1310 & §2.1091	Maximum Permissible Exposure(MPE)	Compliance
FCC§15.203	Antenna Requirement	Compliance
FCC§15.207	AC Line Conducted Emission	Compliance
§15.209 §15.205	Radiated Emission Test	Compliance

FCC §1.1310, §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According with KDB 680106 D01 RF Exposure Wireless Charging Apps v03 clause 3 c)

c) For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

According to 680106 D01 RF Exposure Wireless Charging App v03 clause 5 b)

b) Inductive wireless power transfer applications with supporting field strength results and meeting all of the following requirements are not required to submit a KDB inquiry for devices approved using SDoC or a PAG for equipment approved using certification to address RF exposure compliance. However, the responsible party is required to keep a copy of the test report in accordance with KDB 865664 D02. A copy of the test report is to be submitted with the application if the device is approved using certification.

(1) Power transfer frequency is less than 1 MHz.

(2) Output power from each primary coil is less than or equal to 15 watts.

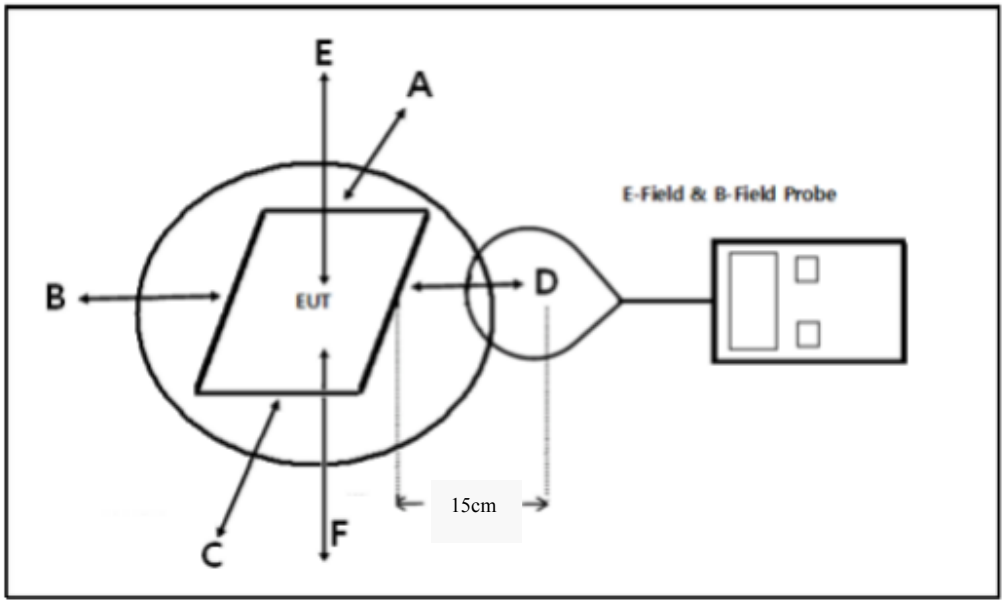
(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

(4) Client device is placed directly in contact with the transmitter.

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Block Diagram of Test Setup



Note: 20 cm for Top test.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Narda	Exposure Level Tester	ELT-400	N-0215	2018-02-22	2019-02-21
Narda	B Field Probe	ELT Probe 100cm^2	M-0658	2018-02-22	2019-02-21
ETS-Lindgren	Isotropic Probe	HI-6005	00069461	2016-02-29	2019-02-28

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

Test Data

Environmental Conditions

Temperature:	26°C
Relative Humidity:	57 %
ATM Pressure:	100.4 kPa

The testing was performed by Hill He on 2018-11-13.

Test mode: Transmitting

H-Filed Strength

Frequency Range (kHz)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)	50% Limit (A/m)	Limit Test (A/m)
110-205	0.106	0.169	0.078	0.124	0.047	0.815	1.63

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20 cm for top test.

E-Filed Strength

Frequency Range (kHz)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)	50% Limit (V/m)	Limit Test (V/m)
110-205	1.16	1.35	1.37	1.27	1.31	307	614

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20 cm for top test.

Result: Compliance

Considerations of compliance 680106 D01 RF Exposure Wireless Charging App v03 clause 5 b:

(1) Power transfer frequency is less than 1 MHz.

Yes, the operation frequency is 110-205 kHz.

(2) Output power from each primary coil is less than or equal to 15 watts.

Yes, the maximum output power of primary coil is 5Watts, less than 15 watts.

(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

The transfer system includes only single primary coils to detect and allow coupling only between individual pairs of coils.

(4) Client device is placed directly in contact with the transmitter.

Yes, client device is placed directly in contact with the transmitter

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes, mobile exposure conditions only

(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Yes, the test result for H and E-filed strength less than 50% of the MPE limit.

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

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.

Antenna Connected Construction

The EUT has a coil antenna arrangement, which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

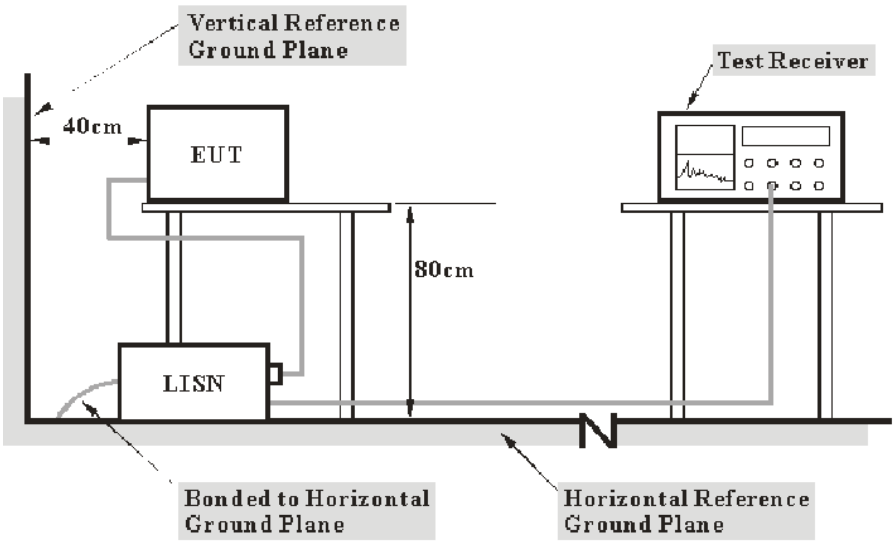
Result: Compliance.

FCC §15.207 – AC LINE CONDUCTED EMISSION

Applicable Standard

FCC§15.207

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

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

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

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2018-07-11	2019-07-11
Rohde & Schwarz	LISN	ENV216	3560.6650.12-101613-Yb	2017-12-21	2018-12-21
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2018-05-12	2018-11-21
Rohde & Schwarz	CE Test software	EMC 32	V8.53.0	NCR	NCR
Unknown	Conducted Emission Cable	78652	UF A210B-1-0720-504504	2018-05-12	2018-11-12

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

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

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

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

Corrected Factor & Margin Calculation

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

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

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Results Summary

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

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

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

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

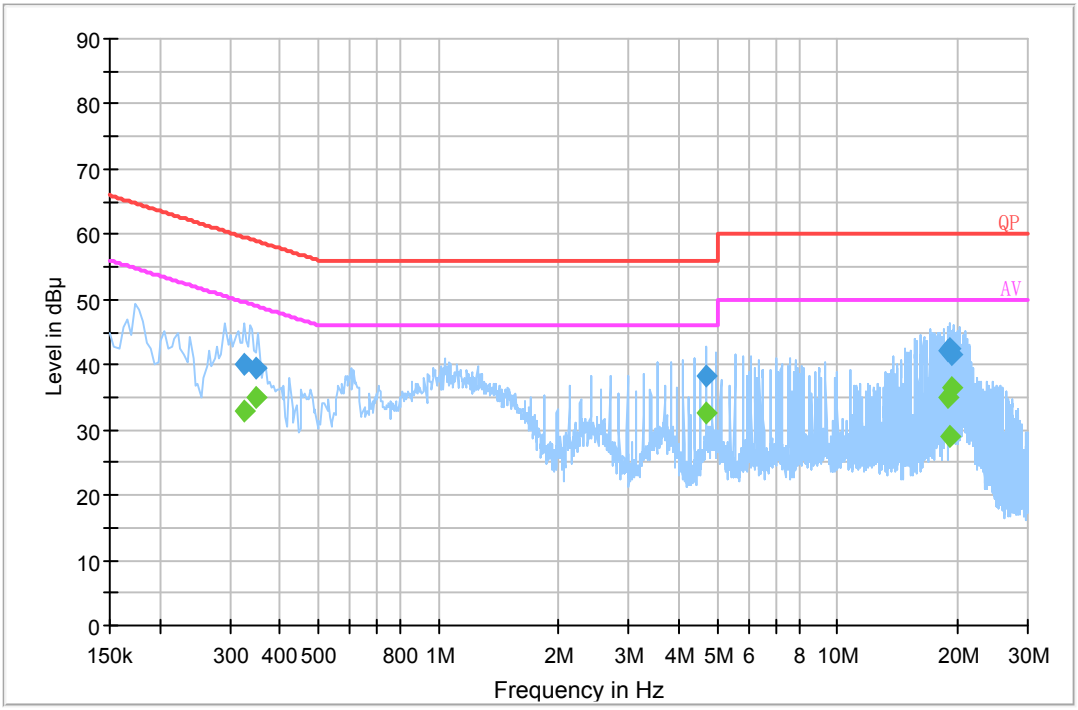
Environmental Conditions

Temperature:	26°C
Relative Humidity:	57 %
ATM Pressure:	100.4 kPa

The testing was performed by Haiguo Li on 2018-11-09.

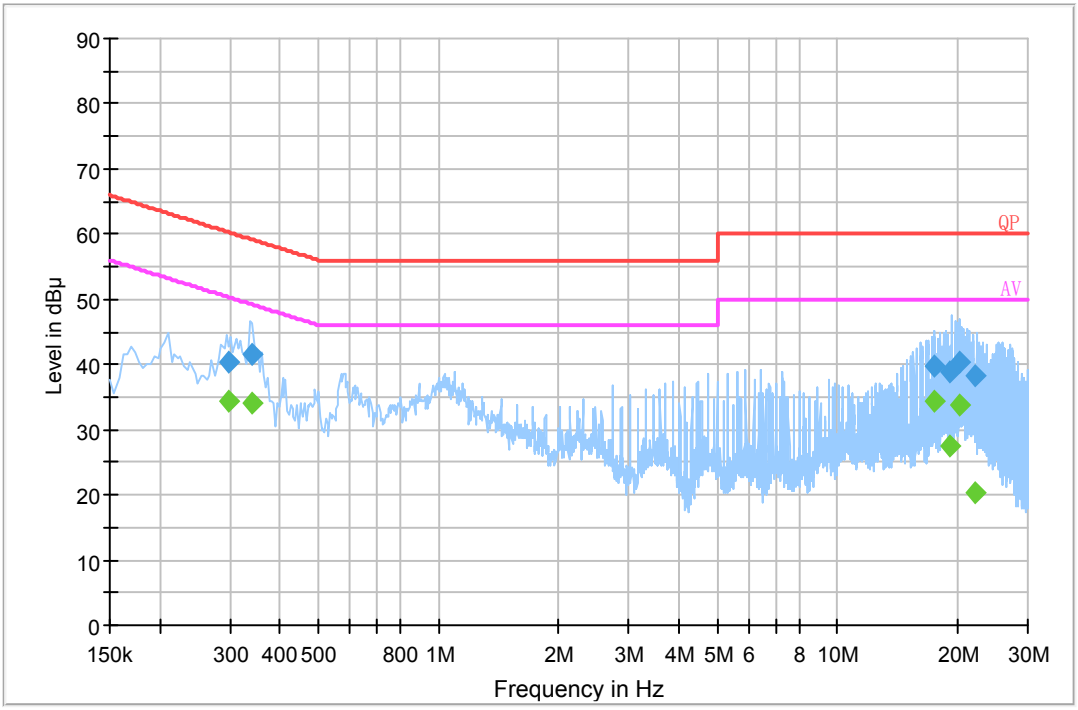
Test Mode: Transmitting

AC 120 V/60 Hz, Line:



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.325110	40.1	19.8	59.6	19.5	QP
0.348690	39.5	19.7	59.0	19.5	QP
4.707830	38.4	20.1	56.0	17.6	QP
18.856850	42.0	20.2	60.0	18	QP
19.135110	42.5	20.2	60.0	17.5	QP
19.420330	41.5	20.2	60.0	18.5	QP
0.325110	33.0	19.8	49.6	16.6	Ave.
0.348690	35.1	19.7	49.0	13.9	Ave.
4.707830	32.5	20.1	46.0	13.5	Ave.
18.856850	35.0	20.2	50.0	15	Ave.
19.135110	29.1	20.2	50.0	20.9	Ave.
19.420330	36.4	20.2	50.0	13.6	Ave.

AC 120V/ 60 Hz, Neutral:



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.297470	40.3	19.8	60.3	20.0	QP
0.340930	41.6	19.7	59.2	17.6	QP
17.511170	39.9	20.2	60.0	20.1	QP
19.114970	39.0	20.2	60.0	21.0	QP
20.210070	40.4	20.2	60.0	19.6	QP
22.199830	38.3	20.3	60.0	21.7	QP
0.297470	34.3	19.8	50.3	16.0	Ave.
0.340930	34.1	19.7	49.2	15.1	Ave.
17.511170	34.2	20.2	50.0	15.8	Ave.
19.114970	27.6	20.2	50.0	22.4	Ave.
20.210070	33.7	20.2	50.0	16.3	Ave.
22.199830	20.3	20.3	50.0	29.7	Ave.

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

FCC §15.205 & §15.209 - RADIATED EMISSIONS TEST

Applicable Standard

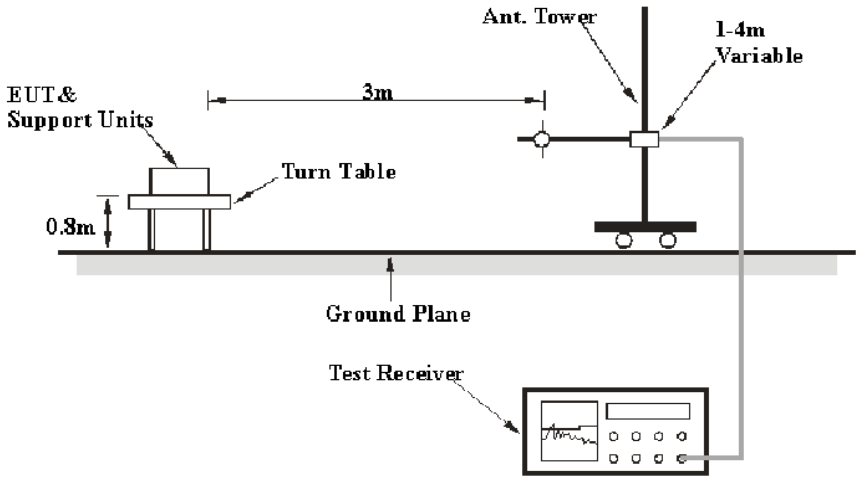
As per FCC Part 15.209

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permItted under other sections of this part, e.g., §§15.231 and 15.241.

EUT Setup



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part Subpart C limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 1 GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	Measurement
9 kHz – 150 kHz	200 Hz	1 kHz	QP/Average
150 kHz – 30 MHz	9 kHz	30 kHz	QP/Average
30 MHz – 1000 MHz	120 kHz	300 kHz	QP

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP/Average measurement

Corrected Amplitude & Margin Calculation

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

Corr. Ampl. = 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 - Corr. Ampl.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma instrument	Amplifier	310 N	186238	2018-11-12	2019-05-12
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2018-01-11	2019-01-11
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2017-12-22	2020-12-21
ETS	Passive Loop Antenna	6512	29604	2018-03-07	2021-03-06
TDK	Chamber	Chamber A	2#	2016-12-05	2019-12-05
UTiFLEX MICRO-C0AX	RF Cable	UFA147A-2362-100100	MFR64639 231029-003	2018-08-01	2019-02-01
Ducommun technologies	RF Cable	104PEA	218124002	2018-05-21	2018-11-21

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) 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.

Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	57 %
ATM Pressure:	100.7 kPa

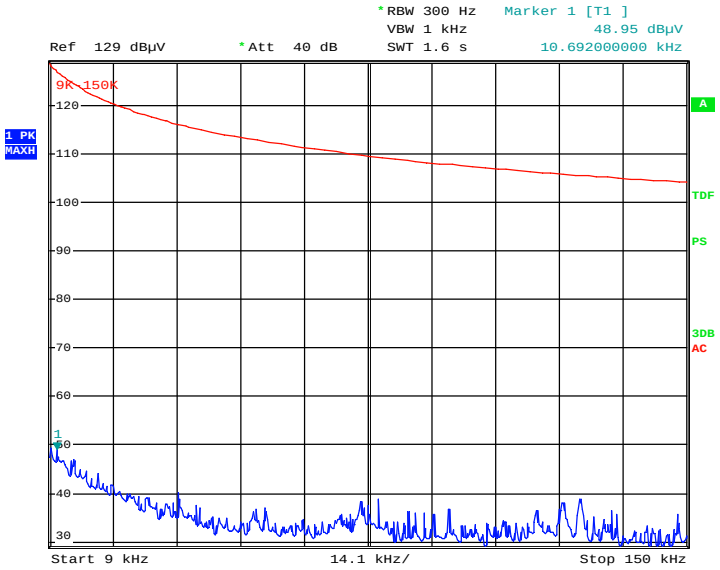
The testing was performed by Hill He on 2018-11-16.

Test mode: Transmitting

1) 9 kHz~30MHz:

Frequency (MHz)	Corrected Amplitude (dBμV/m)	Detector (PK/QP/AV)	Turntable Degree	Rx Antenna Height (m)	Rx Antenna Polar	Corrected Factor (dB/m)	FCC Part 15.205&15.209 Limit (dBμV/m)	FCC Part 15.205&15.209 Margin (dB)	Remark
0.010692	48.95	PK	175	1	H	87.3	127.02	78.07	Spurious emission
0.5082	65.91	PK	203	1	H	65.7	73.48	7.57	
0.150	85.27	PK	227	1	H	63.5	104.08	18.81	Fundamental

9 KHz-150 KHz



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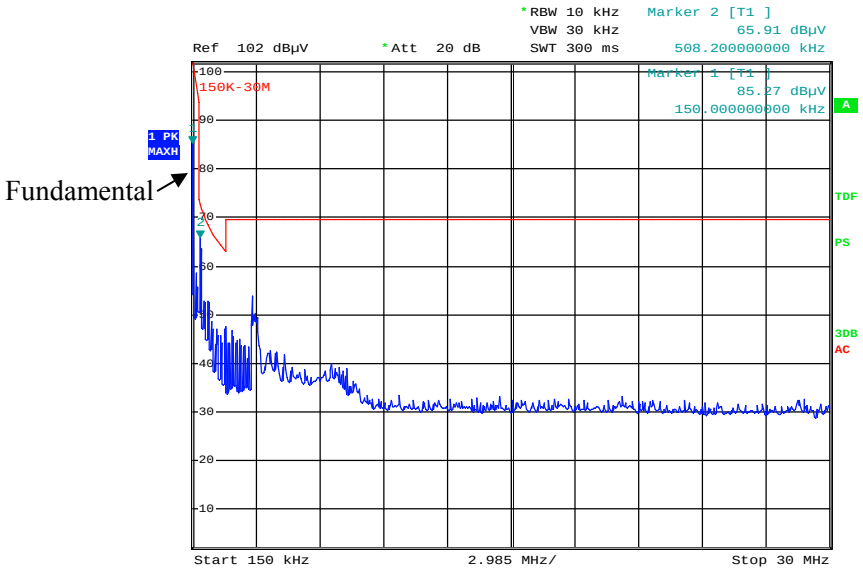
150 KHz-30MHz



Fundamental

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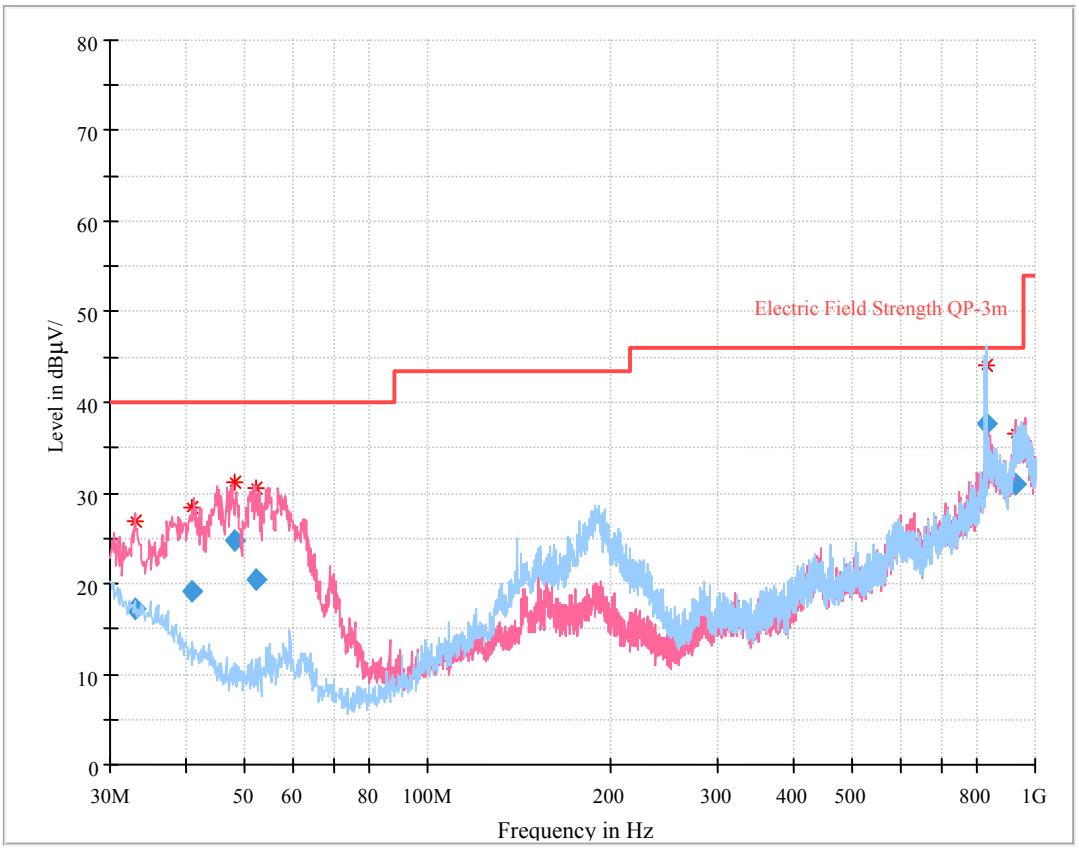
2) 30 MHz ~ 1GHz



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna height (cm)	Antenna Polarity	Turntable position (degree)	Correction Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
32.916625	17.19	113.0	V	270.0	-9.4	40.00	22.81
40.811375	19.22	123.0	V	282.0	-14.3	40.00	20.78
48.092750	24.68	100.0	V	259.0	-18.8	40.00	15.32
52.326500	20.47	100.0	V	245.0	-19.8	40.00	19.53
828.899500	38.92	383.0	H	215.0	4.8	46.00	7.08
925.450750	30.96	130.0	V	64.0	7.1	46.00	15.04

Note:
Corrected Amplitude = Corrected Factor + Reading
Corrected Factor=Antenna factor (RX) + cable loss - amplifier factor
Margin = Limit- Corr. Amplitude

Result: Compliance

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