TESTING LABORATORY
CERTIFICATE # 4821.01

FCC PART 15D

MEASUREMENT AND TEST REPORT

For

RTX Hong Kong Ltd.

8/F Corporation Square, 8 Lam Lok Street, Kowloon Bay, Hong Kong

FCC ID: T7HCT8440

Report Type:	Product Type:
Original Report	RTX8440 DECT Handset

Report Number:	RSZ191030017-00
Report Date:	2020-01-13
Reviewed By:	Kieron Luo RF Engineer
Prepared By:	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

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	RTX8440 DECT Handset
Tested Model	RTX8440
Multiple Model	CP-6823-3PC-K9
Frequency Range	1921.536~1928.448 MHz
Transmit Power	20.38dBm
Modulation Technique	GFSK
Antenna Specification	1 dBi
Voltage Range	DC3.7V from battery or DC 5.0V from charger adapter
Date of Test	2019/11/08
Sample serial number	RSZ191030017-RF-S1(Assigned by Shenzhen BACL)
Received date	2019/10/30
Sample/EUT Status	Good Condition
Adapter 1 Information	Model: S005CAU0500100 Input: AC 100-240V, 50/60 Hz, 200mA Output: DC 5V, 1000 mA
Adapter 2 Information	Model: S008ACM0500100 Input: AC 100-240V, 50/60 Hz, 300mA Output: DC 5V, 1000 mA

Notes: This series products model: CP-6823-3PC-K9 and RTX8440 are identical schematics, Model RTX8440 was selected for fully testing, the detailed information can be referred to the declaration which was stated and guaranteed by the applicant.

Objective

This test report was based on the *RTX Hong Kong Ltd.* tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.17 - 2013.

The tests were performed in order to determine the compliance of the EUT with FCC Part 15-Subpart D, section 15.207, 15.315, 15.317, 15.319 and 15.323 rules.

Related Submittal(s)/Grant(s)

Submitted with PUB Base unit submission with FCC ID: T7HX9440.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.17 - 2013, American National Standard Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) 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 Lines Conducted Emissions	±1.95dB
RF conducted test with spectrum	±1.5dB
Occupied Bandwidth	±5%
Temperature	±3℃
Humidity	±6%
Supply voltages	±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

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

Description of Test Configuration

The system was configured to testing mode which is provided by the manufacturer.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

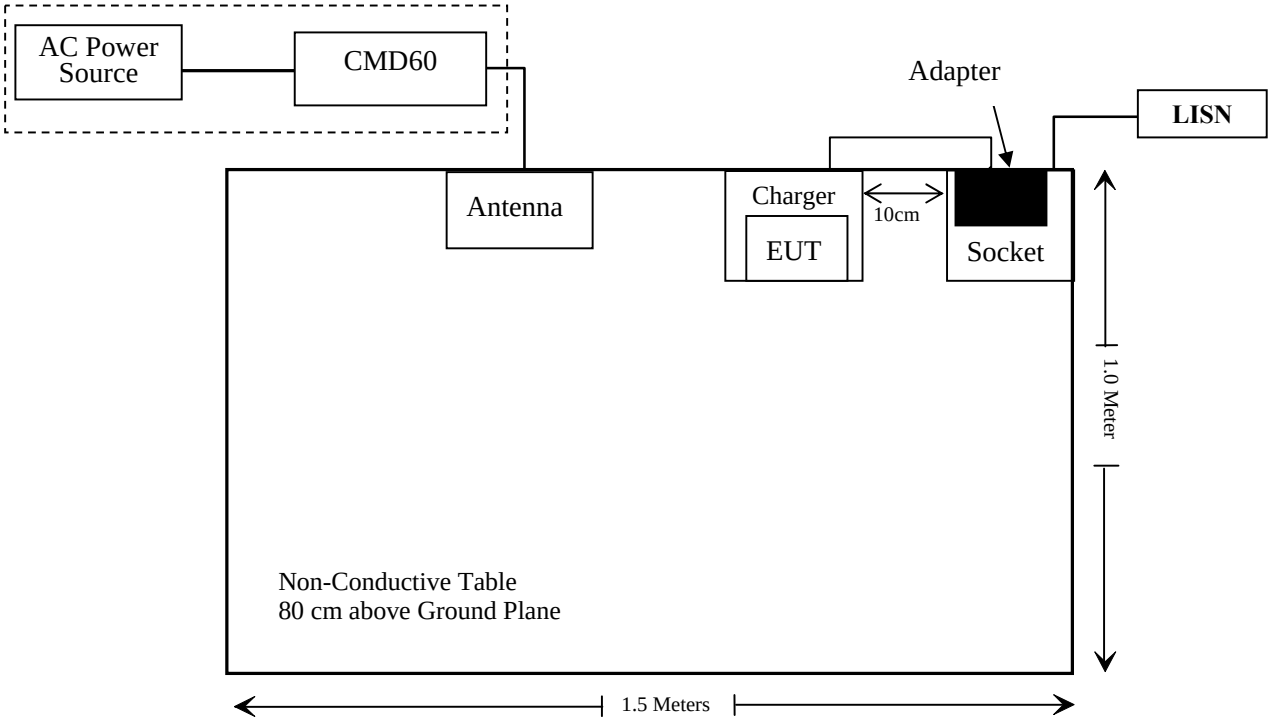
Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Digital Radio Communication Test	CMD60	830861/029

External I/O Cable

Cable Description	Length (m)	From/Port	To
Un-shielding Un-detachable DC Cable	1.8	Adapter	Charger

Block Diagram of Test Setup

For conducted emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 & §2.1093	RF EXPOSURE	Compliance
§ 15.317, § 15.203	Antenna Requirement	Compliance
§ 15.315, § 15.207	Conducted Emission	Compliance
§ 15.323 (a)	Emission Bandwidth	Compliance*
§ 15.319 (c)	Peak Transmit Power	Compliance*
§ 15.319 (d)	Power Spectral Density	Compliance*
§ 15.323 (d)	Emission Inside and Outside the sub-band	Compliance*
§ 15.319 (g)	Radiated Emission	Not Applicable
§ 15.323 (f)	Frequency Stability Handset	Compliance*
§ 15.323 (c)(e) § 15.319 (f)	Specific Requirements for UPCS	Compliance*

Not Applicable: EUT is compliance with 15.323 (d).
Compliance*: The test data please refer to the report RSZ191016011-00 (FCC ID: T7HCT8431, Model: RTX8431, granted date: 12/26/2019) issued by Bay Area Compliance Laboratories Corp. (Shenzhen) issued on 2019-12-17.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2019-07-11	2020-07-11
Rohde & Schwarz	LISN	ENV216	3560.6650.12-101613-Yb	2019-01-25	2020-01-25
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2019-03-02	2020-03-01
Rohde & Schwarz	CE Test software	EMC 32	V8.53.0	NCR	NCR
Unknown	Conducted Emission Cable	78652	UF A210B-1-0720-504504	2018-11-12	2019-11-12

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

FCC §1.1307 & §2.1093 - RF EXPOSURE

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliance, please refer to the SAR report: RSZ191030017-20A.

FCC§15.317 & §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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.

Antenna Connector Construction

The EUT has two integral antennas, the antennas gain are 1 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

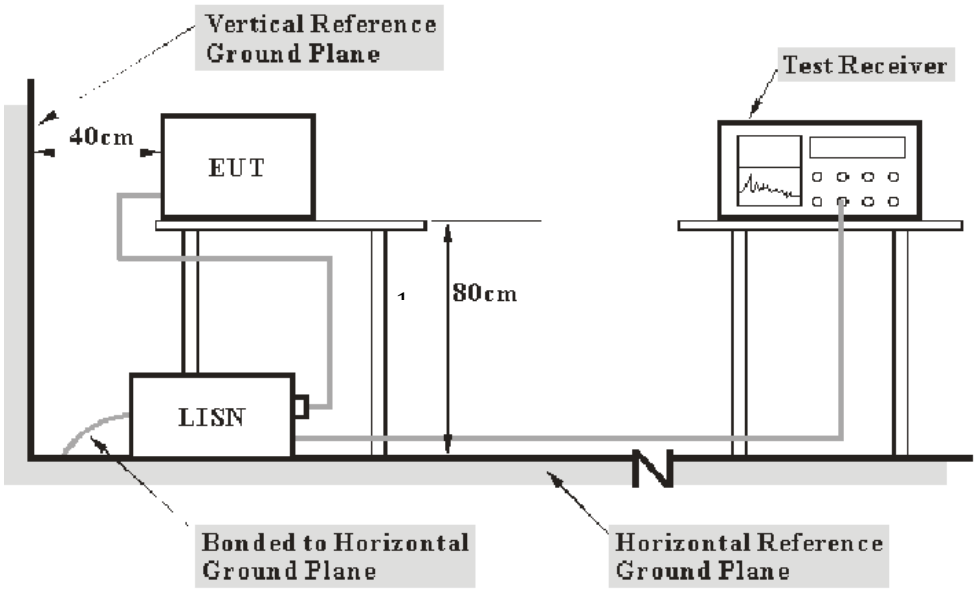
Result: Compliant.

FCC§15.315 & §15.207 - CONDUCTED EMISSIONS

Applicable Standard

FCC§15.315, an unlicensed PCS device that is designed to be connected to the public utility (AC) power line must meet the limits specified in §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 C63.17-2013 measurement procedure. The specification used was with the FCC 15.315 and FCC 15.207 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.

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, 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 the Outlet Cable Loss, LISN Insertion Loss, Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Correction Factor = Outlet Cable Loss + LISN Insertion Loss + 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 15.107.

Test Data

Environmental Conditions

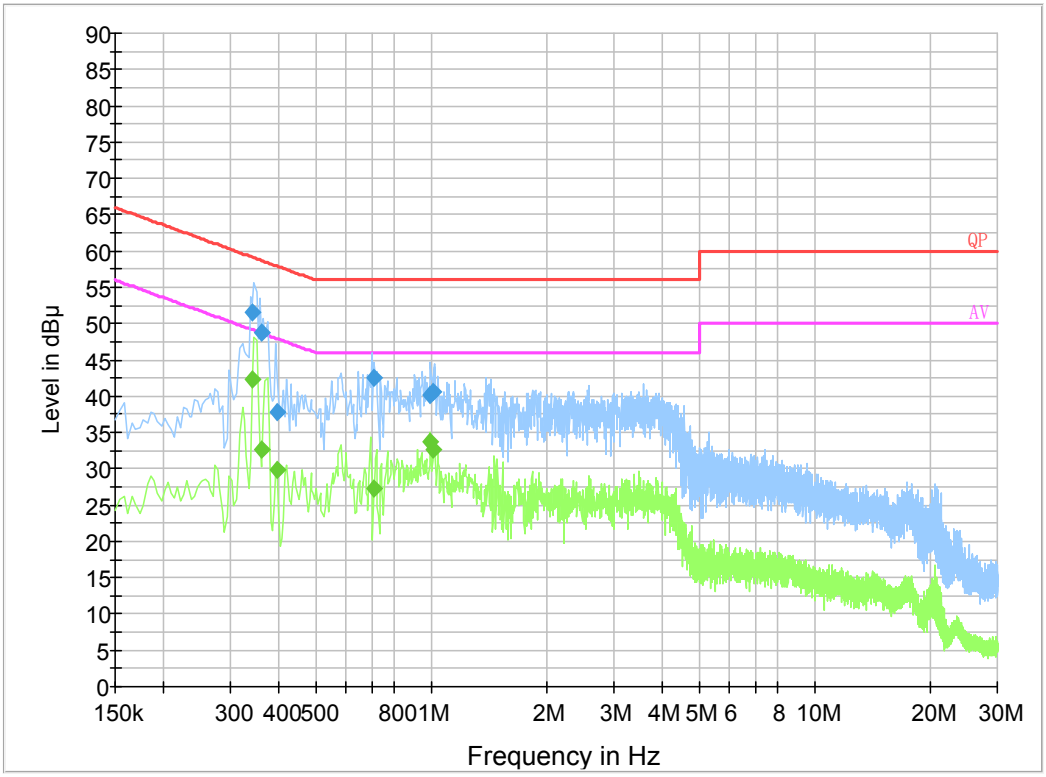
Temperature:	25 ℃
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Haiguo Li on 2019-11-08.

Test mode: Transmitting & Charging

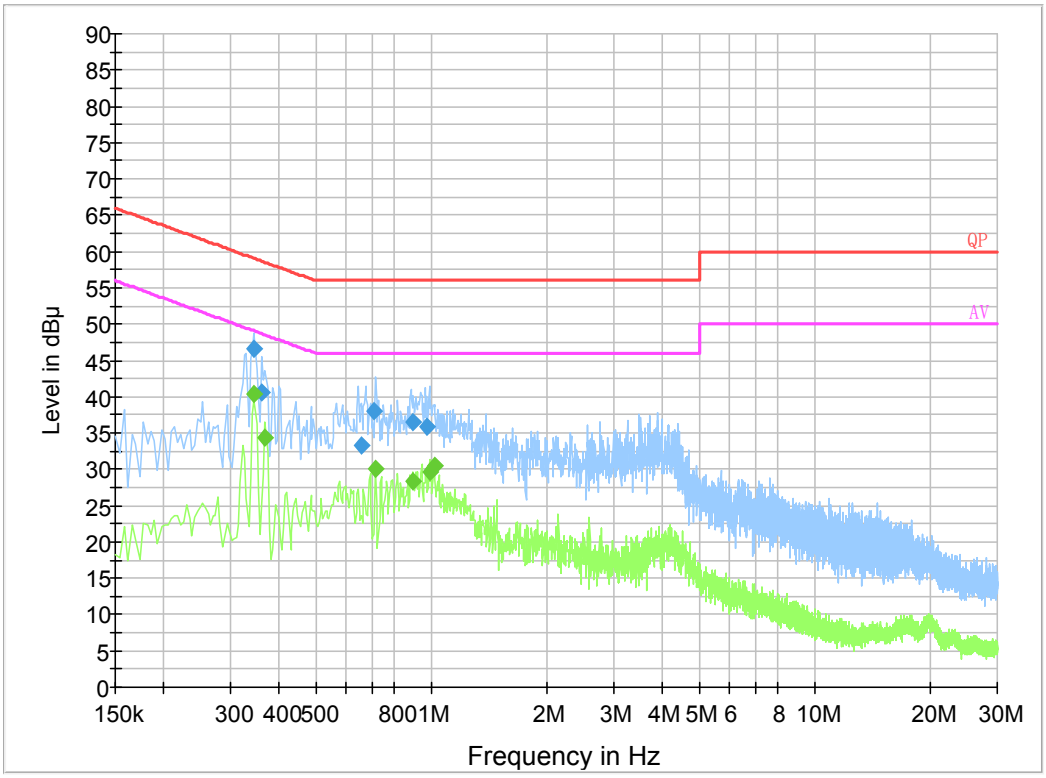
Power by Adapter 1:

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.340810	51.5	19.9	59.2	7.7	QP
0.360630	48.7	19.9	58.7	10.0	QP
0.396090	37.8	19.9	57.9	20.1	QP
0.707470	42.5	19.8	56.0	13.5	QP
0.995030	40.1	19.9	56.0	15.9	QP
1.010730	40.6	19.9	56.0	15.4	QP
0.340810	42.4	19.9	49.2	6.8	Ave.
0.360630	32.7	19.9	48.7	16.0	Ave.
0.396090	29.8	19.9	47.9	18.1	Ave.
0.707470	27.2	19.8	46.0	18.8	Ave.
0.995030	33.6	19.9	46.0	12.4	Ave.
1.010730	32.6	19.9	46.0	13.4	Ave.

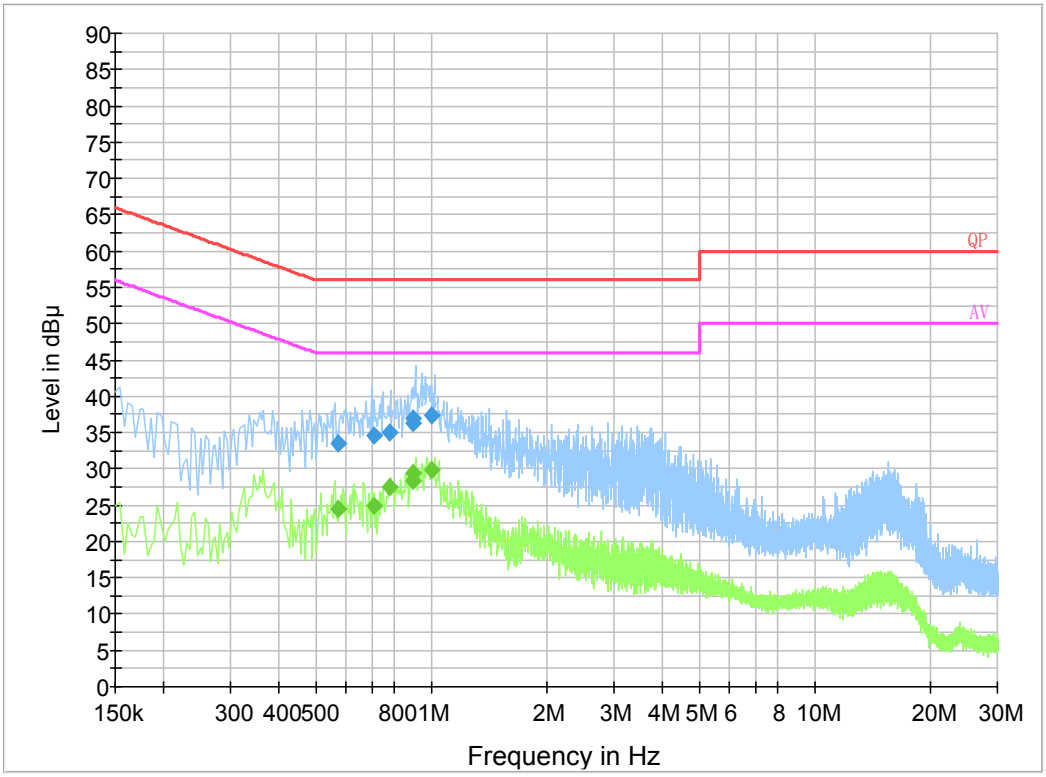
AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.344810	46.7	19.8	59.1	12.4	QP
0.360570	40.5	19.9	58.7	18.2	QP
0.655690	33.3	19.8	56.0	22.7	QP
0.711230	38.0	19.8	56.0	18.0	QP
0.896710	36.4	19.7	56.0	19.6	QP
0.975150	35.8	19.8	56.0	20.2	QP
0.346000	40.5	19.8	49.1	8.6	Ave.
0.370000	34.3	19.9	48.5	14.2	Ave.
0.714000	30.0	19.8	46.0	16.0	Ave.
0.898000	28.4	19.7	46.0	17.6	Ave.
0.990000	29.6	19.8	46.0	16.4	Ave.
1.022000	30.5	19.8	46.0	15.5	Ave.

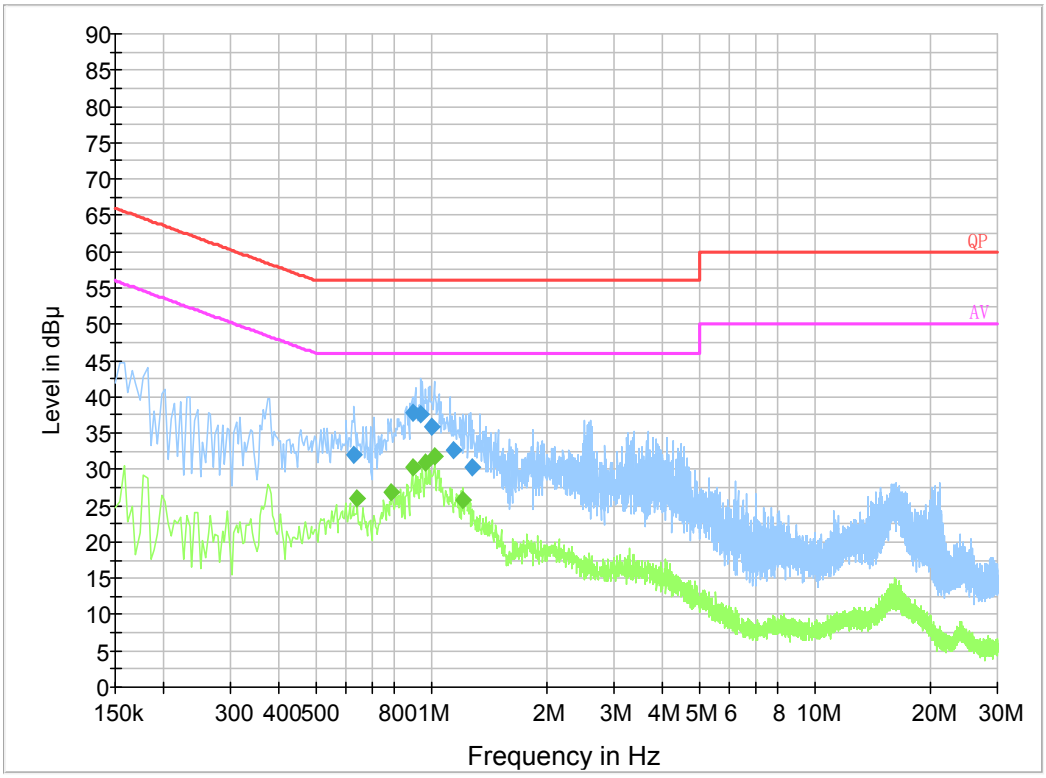
Power by Adapter 2:

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.569570	33.5	19.8	56.0	22.5	QP
0.712530	34.5	19.8	56.0	21.5	QP
0.778210	35.0	19.8	56.0	21.0	QP
0.896350	37.0	19.8	56.0	19.0	QP
0.900590	36.4	19.8	56.0	19.6	QP
1.006670	37.4	19.9	56.0	18.6	QP
0.569570	24.5	19.8	46.0	21.5	Ave.
0.712530	25.0	19.8	46.0	21.0	Ave.
0.778210	27.4	19.8	46.0	18.6	Ave.
0.896350	29.5	19.8	46.0	16.5	Ave.
0.900590	28.3	19.8	46.0	17.7	Ave.
1.006670	29.9	19.9	46.0	16.1	Ave.

AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/Ave./QP)
0.628550	32.1	19.8	56.0	23.9	QP
0.896590	37.8	19.7	56.0	18.2	QP
0.943870	37.5	19.8	56.0	18.5	QP
1.006730	36.0	19.8	56.0	20.0	QP
1.148630	32.7	19.8	56.0	23.3	QP
1.284990	30.2	19.8	56.0	25.8	QP
0.642000	26.1	19.8	46.0	19.9	Ave.
0.790000	26.8	19.8	46.0	19.2	Ave.
0.894000	30.2	19.7	46.0	15.8	Ave.
0.970000	30.9	19.8	46.0	15.1	Ave.
1.022000	31.9	19.8	46.0	14.1	Ave.
1.214000	25.8	19.8	46.0	20.2	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

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