

VARIANT RADIO TEST REPORT

(FCC Part 15 Subpart C)

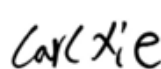
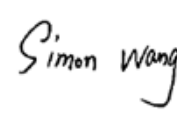
Applicant:	BARTEC
Address:	Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany

Manufacturer:	BARTEC
Address:	Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany
Product:	Smartscanner / Smartphone
Brand Name:	BARTEC
Model Name:	SP9EX1/SC9EX1/SP9EX2/SC9EX2
FCC ID:	TBUSX9EX
Date of tests:	Dec. 20, 2025 ~ Jan. 05, 2026

The tests have been carried out according to the requirements of the following standard:

- ☒ **Part 15 Subpart C §15. 225**
- ☒ **RSS-Gen Issue 5, Amendment 2 (February 2021)**
- ☒ **ANSI C63.10-2020**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Carl Xie Engineer / Mobile Department	Approved by Simon Wang Manager / Mobile Department
 Date: Jan. 05, 2026	 Date: Jan. 05, 2026

BOOMWAVE TEST (SHENZHEN) CO., LTD. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of BOOMWAVE TEST (SHENZHEN) CO., LTD., the test report shall not be reproduced except in full.

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Test Report No.: PSZ-QSZ2510291415RF06

REPORT REVISE RECORD

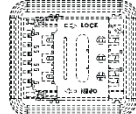
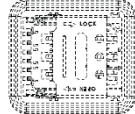
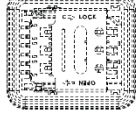
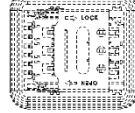
ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSU2312140113RF08	Original release	Jul. 26, 2024
PSZ-QSZ2510291415RF06	Based on the original report, new product update HW, for specific changes please refer to the Product ASSY release notes document provided by the applicant. This report verify field strength of fundamental emissions and mask, CE and RSE worst case. So this report only replaces the data of field strength of fundamental emissions and mask ,CE and RSE worst case, other data please refer to original report.	Jan. 05, 2026

SUMMARY OF TEST RESULT

FCC Rule	IC Rule	Description	Limit	Result	Remark
-	RSS-Gen 6.7	99% Bandwidth	-	See note1	-
15.225(a)(b)(c)	RSS-210 Annex B.6	Field Strength of Fundamental Emissions	15.225(a)(b)(c) RSS-210 Annex B.6	Pass	-
15.215	-	20dB Spectrum Bandwidth	15.215	See note1	-
15.225(d) 15.209	RSS-210 Annex B.6	Radiated Emission	15.225(d) & 15.209 RSS-210 Annex B.6	Pass	-
15.207	RSS-GEN 8.8	AC Conducted Emission	15.207(a)	Pass	
15.225(e)	Annex B.6	Frequency Stability	< ±100 ppm	See note1	-
15.203	RSS-Gen 6.8	Antenna Requirement	N/A	See note1	-

NOTE:

- Please refer to original report (Report No.: PSU-QSU2312140113RF08, FCC ID: TBUSX9EX).
- In this report, for specific changes please refer to the documentation provided by the applicant (REV_F SC9EX1_SP9EX1_SC9EX2_SP9EX2 PCBA HW release notes (Ver. 6.0), REV_F SC9EX1_SP9EX1_SC9EX2_SP9EX2 Product ASSY release notes (Ver. 1.0) and SC9EX1_SP9EX1_SC9EX2_SP9EX2 SW release notes (Ver. 6.0)).
- The differences between SC9EX1 and SP9EX1 the presence of the barcode scanner module and the "bump" on the back cover that model SC9EX1 incorporates the barcode scanner module, no differences on the PCBA between the variants(model:SP9EX1). We verified power and RSE worst case on parent product SC9EX1 and SP9EX1 variant, only the worst-case(SC9EX1) results are shown in the report.
- The devices BARTEC SP9EX1 Smartphone and BARTEC SP9EX2 Smartphone share the same hardware and software. The same applies for the devices BARTEC SC9EX1 Smartscanner and BARTEC SC9EX2 Smartscanner. The only difference are the hazardous area marking of the devices, see table for clarification.

BARTEC SP9EX1 Smartphone	BARTEC SP9EX2 Smartphone
BARTEC SP9EX1 Type: 17-S19B-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com    UL 24 ATEX 3153X Ex II 1G Ex ia IIC T4 Ga Ex II 2D Ex ia IIC T135°C Db IP64 IECEx UL 24.0004X Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III, T4 Zone 0, AEx ia IIC T4 Ga Zone 21, AEx ia IIC T135°C Db Zone 0, Ex ia IIC T4 Ga Zone 21, Ex ia IIC T135°C Db -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSSS MFD: MONTHYY <i>reserved for logos of country approvals</i> USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: 17-S1Z0-0020/**** Utiliser uniquement la batterie BARTEC GmbH type: 17-S1Z0-0020/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.	BARTEC SP9EX2 Type: B7-S29P-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com    UL 24 ATEX xxxxx Ex II 3G Ex ic IIC T4 Gc Ex II 3D Ex ic IIC T135°C Dc IP64 IECEx UL 24.xxxxx Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups E, F and G; Class III, T4 Zone 2, AEx ic IIC T4 Gc Zone 22, AEx ic IIC T135°C Dc Zone 2, Ex ic IIC T4 Gc Zone 22, Ex ic IIC T135°C Dc -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSSS MFD: MONTHYY <i>reserved for logos of country approvals</i> USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: B7-AZZ0-0098/**** Utiliser uniquement la batterie BARTEC GmbH type: B7-AZZ0-0098/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.
BARTEC SC9EX1 Smartscanner	BARTEC SC9EX2 Smartscanner
BARTEC SC9EX1 Type: 17-S19C-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com    UL 24 ATEX 3153X Ex II 1G Ex ia op is IIC T4 Ga Ex II 2D Ex ia op is IIC T135°C Db IP64 IECEx UL 24.0004X Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III, T4 Zone 0, AEx ia op is IIC T4 Ga Zone 21, AEx ia op is IIC T135°C Db Zone 0, Ex ia op is IIC T4 Ga Zone 21, Ex ia op is IIC T135°C Db -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSSS MFD: MONTHYY <i>reserved for logos of country approvals</i> USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: 17-S1Z0-0020/**** Utiliser uniquement la batterie BARTEC GmbH type: 17-S1Z0-0020/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.	BARTEC SC9EX2 Type: B7-S29C-****/***** Mfr: BARTEC GmbH Max-Eyth-Strasse 16 97980 Bad Mergentheim, DE www.bartec.com    UL 24 ATEX xxxxx Ex II 3G Ex ic op is IIC T4 Gc Ex II 3D Ex ic op is IIC T135°C Dc IP64 IECEx UL 24.xxxxx Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups E, F and G; Class III, T4 Zone 2, AEx ic op is IIC T4 Gc Zone 22, AEx ic op is IIC T135°C Dc Zone 2, Ex ic op is IIC T4 Gc Zone 22, Ex ic op is IIC T135°C Dc -20° < Ta < +55°C QR-code S/N: TTTTYYSSSSSS MFD: MONTHYY <i>reserved for logos of country approvals</i> USB port: USB-PD compatible – 5-20 Vdc / max 3 A DC-In port: 12 Vdc / max 1.5 A USB Um = 20 V / DCin Um = 12 V WARNING/ATTENTION: Use only replaceable battery pack BARTEC GmbH type: B7-AZZ0-0098/**** Utiliser uniquement la batterie BARTEC GmbH type: B7-AZZ0-0098/**** INTRINSICALLY SAFE/SECURITE INTRINSEQUE Warning - Substitution of components may impair intrinsic safety. Avertissement - La substitution des composants peut nuire à la sécurité intrinsèque.

*Test Lab Information Reference

Lab A:

Boomwave Test (Shenzhen) Co., Ltd.

Lab Address:

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan 4th Rd, Chiwan Comm, Zhaoshang St, Nanshan Dist, Shenzhen, Guangdong, Shenzhen, China

Accredited Test Lab Cert 7607.01

The FCC Site Registration No. is 646781; The Designation No. is CN1429.

1 GENERAL DESCRIPTION

1.1 GENERAL DESCRIPTION OF EUT

Items	Description
Tx/Rx Frequency Range	13.559MHZ-13.561MHZ
Channel Number	1
20dBW	2.6051 kHz
99%OBW	10.130 kHz
Antenna Type	Coil Antenna
Type of Modulation	ASK
HW VERSION	F
SW VERSION	AWG1.250822.030 15030

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Display(AMOLED)	EDO	Everdisplay Optronics Co., Ltd.	E611FCC74.A	N/A
Back cover	IV Techmould	N/A	N/A	N/A
Bezel	IV Techmould	N/A	N/A	N/A
Photo/Video Camera 1	Sunny Optical	N/A	F48N03A (Auto focus)	N/A
Photo/Video Camera 2	TrulyOpto	N/A	CSF208-B8BF-E(Fix focus)	N/A
CPU	Qualcomm	N/A	QCM6490	N/A
UFS	Kioxia	N/A	THGJFAT0T44BAIL	N/A
BT/WLAN Module	Murata	N/A	LBEE5QG2CX-830	N/A
NFC chipset	NXP	N/A	SN110TUK1	N/A
Battery	BARTEC	N/A	17-S1Z0-0020/****	4300 mAh, 3.68V
USB-C Cable	BARTEC	N/A	G7-A0Z0-0010	Length: 0.8m

1.2 MODIFICATION OF EUT

No modifications are made to the EUT during all test items.

1.3 APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.225
- ♦ ANSI C63.10-2020
- ♦ RSS-210 Issue 10
- ♦ RSS-Gen Issue 5

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

2.1 DESCRIPTIONS OF TEST MODE

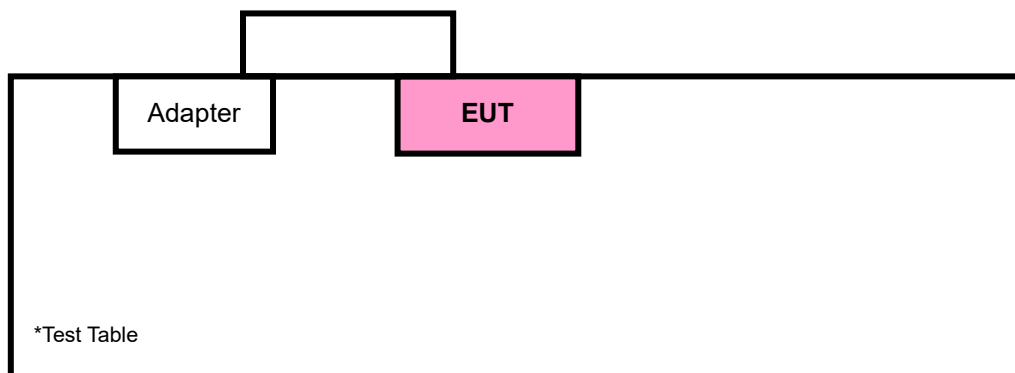
Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	
AC Power Line Conducted Emissions	Field Strength of Fundamental Emissions
20dB Spectrum Bandwidth	Frequency Stability
Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz
Note: 1. The EUT was programmed to be in continuously transmitting mode. 2. The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmit at 13.56MHz and is placed around 3 cm gap to the EUT. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, work in modes and data rates. Selected for the final test as listed below.	

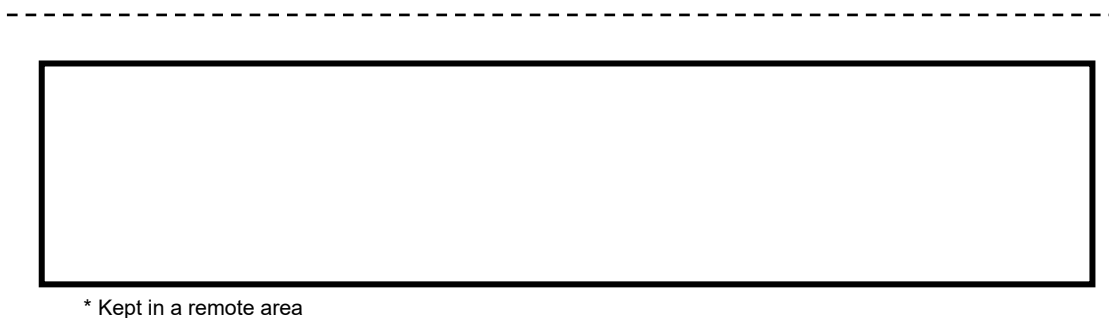
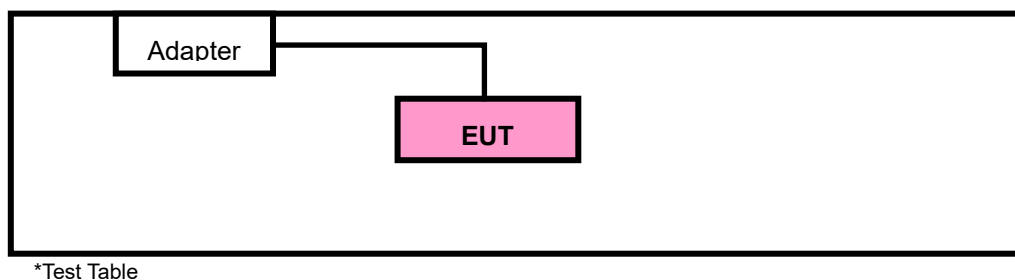
Frequency	Work in Modes	Type	Data Rate (Kbps)
13.56 MHz	☐ Card Emulation ☒ Reader/Writer ☐ Peer-to-Peer	☐ A ☐ B ☒ F ☐ V	☐ 106 ☒ 212 ☐ 424 ☐ 848
Remark: The mark " ☒ " means is chosen for testing; The mark " ☐ " means is not chosen for testing.			

2.2 TEST CONFIGURATIONS

<AC Conducted Emissions>



< For Fundamental Emissions and Mask and Radiated Emissions Measurement >



2.3 SUPPORT EQUIPMENT

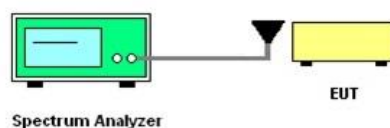
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A	N/A	N/A	N/A	N/A

2.4 TEST SETUP

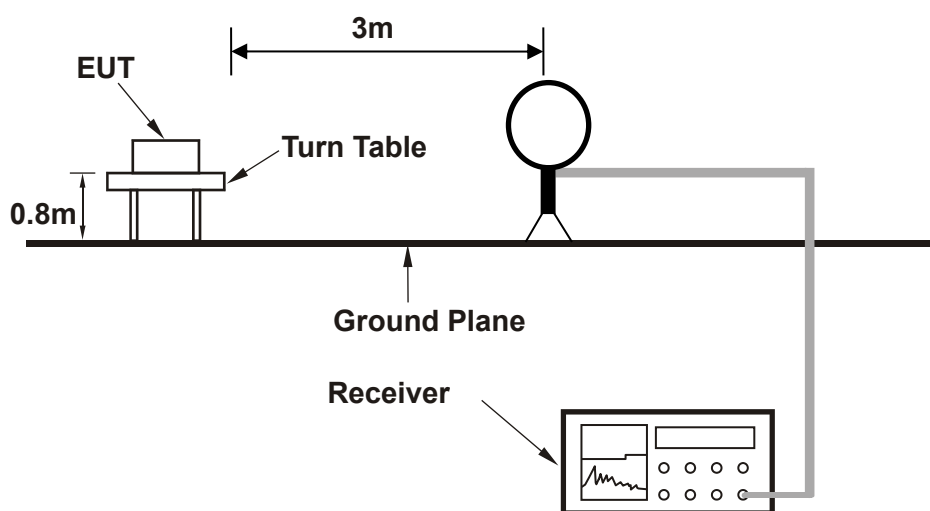
The EUT is continuously communicating during the tests.

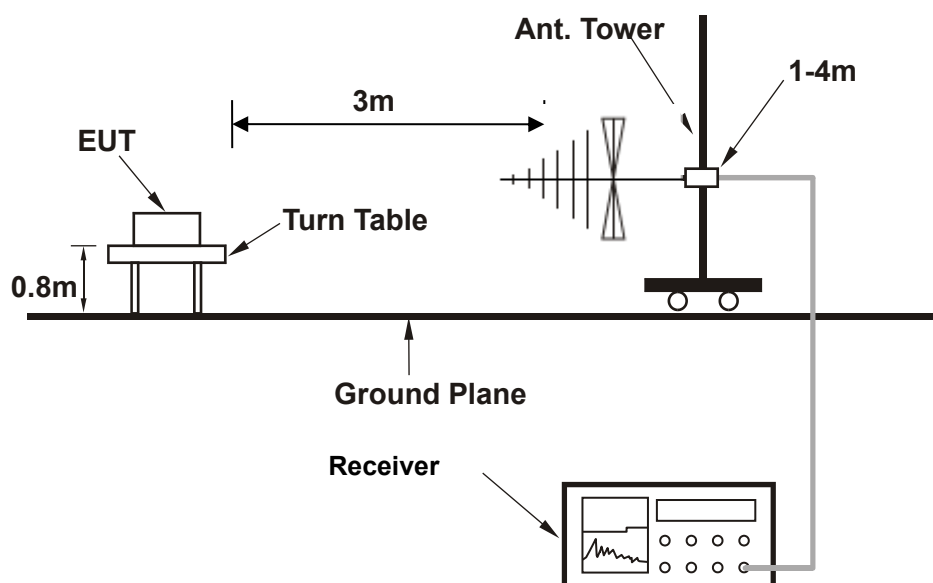
EUT was set in the Hidden menu mode to enable NFC communications.

Setup diagram for Conducted Test



Setup diagram for Radiation(9KHz~30MHz) Test





2.5 MEASUREMENT RESULTS EXPLANATION EXAMPLE

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5 + 10 = 15 \text{ (dB)}\end{aligned}$$

3 TEST RESULT

3.1 FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK MEASUREMENT

3.1.1 LIMIT OF FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK

Rules and specifications	FCC CFR 47 Part 15 section 15.225			
	IC RSS-210 B.6			
Description	Compliance with the spectrum mask is tested with RBW set to 9kHz.			
Freq. of Emission (MHz)	Field Strength ($\mu\text{V/m}$) at 30m	Field Strength ($\text{dB}\mu\text{V/m}$) at 30m	Field Strength ($\text{dB}\mu\text{V/m}$) at 10m	Field Strength ($\text{dB}\mu\text{V/m}$) at 3m
1.705~13.110	30	29.5	48.58	69.5
13.110~13.410	106	40.5	59.58	80.5
13.410~13.553	334	50.5	69.58	90.5
13.553~13.567	15848	84.0	103.08	124.0
13.567~13.710	334	50.5	69.58	90.5
13.710~14.010	106	40.5	59.58	80.5
14.010~30.000	30	29.5	48.58	69.5

3.1.2 TEST PROCEDURES

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
1. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
2. The height of the receiving antenna was fixed at one meter above ground to find the maximum emissions field strength.
3. For Fundamental emissions, use the receiver to measure QP reading.
4. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
5. Compliance with the spectrum mask is tested with RBW set to 9kHz.

Note: Emission level (dB μ V/m) = 20 log Emission level (μ V/m).

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3.1.3 TEST RESULTS OF FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK (1.705 MHz ~ 30 MHz)

Test Mode :	NFC (13.56 MHz)	Temperature :	23°C
Test Engineer :	Carl Xie	Relative Humidity :	50%
Frequency Range	13.11MHz~14.01MHz	Polarization :	Horizontal

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	13.560	46.83	124.00	77.17	20.26	V	88.9	1.00



Test Report No.: PSZ-QSZ2510291415RF06

Test Mode :	NFC (13.56 MHz)	Temperature :	23°C
Test Engineer :	Carl Xie	Relative Humidity :	50%
Frequency Range	13.11MHz~14.01MHz	Polarization :	Vertical

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	13.560	55.42	124.00	68.58	20.26	V	246.6	1.00



3.2 RADIATED EMISSIONS MEASUREMENT

3.2.1 LIMIT

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

Frequencies (MHz)	Field Strength ($\mu\text{V/m}$)	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

3.2.2 MEASURING INSTRUMENT SETTING

The following table is the setting of receiver.

Receiver Parameter	Setting
Attenuation	Auto
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

Note: 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. Radiated emission limits in these two bands are based on measurements employing an average detector.

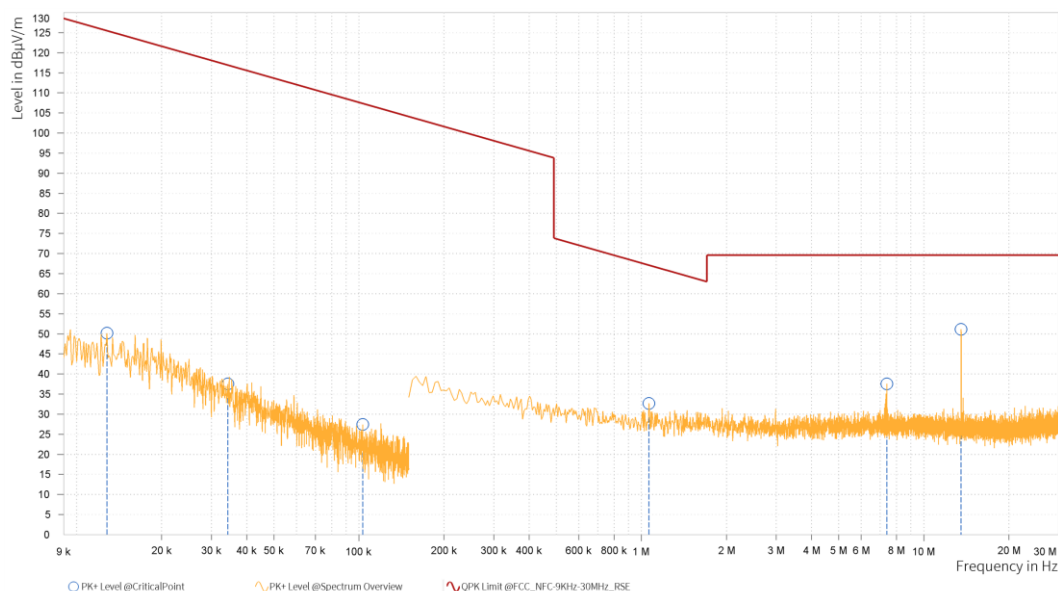
3.2.3 TEST PROCEDURES

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver.

3.2.4 TEST RESULTS OF RADIATED EMISSIONS (9 KHZ ~ 30 MHZ)

Test Mode :	NFC (13.56 MHz)	Temperature :	23℃
Test Engineer :	Carl Xie	Relative Humidity :	50%
Frequency Range	9 KHz ~ 30 MHz	Polarization :	Horizontal

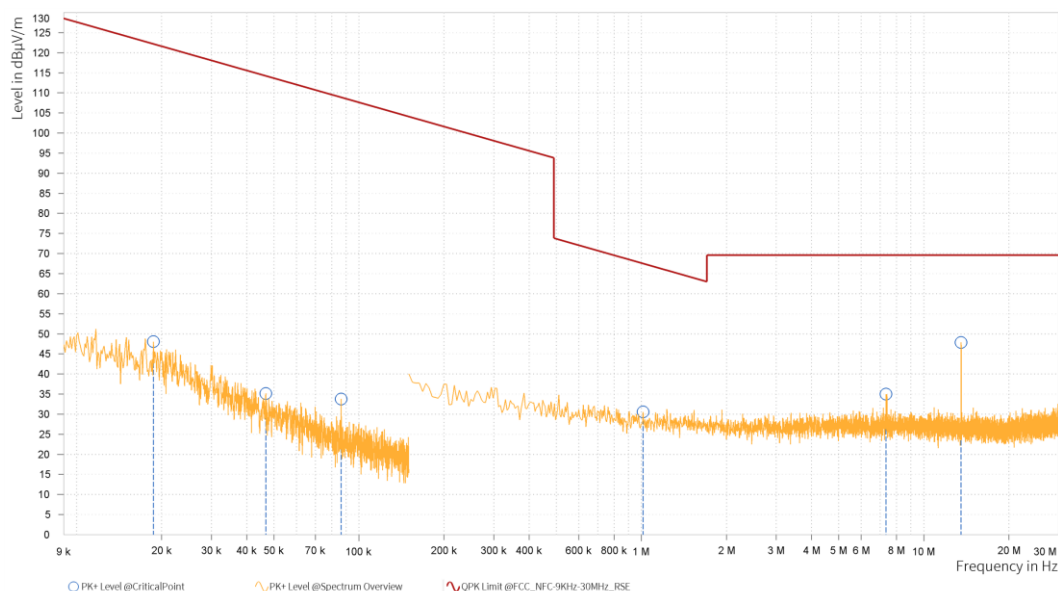
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	0.013	50.18	125.33	75.15	20.16	H	359	1.00
1	0.034	37.52	116.97	79.45	20.51	H	1	1.00
1	0.103	27.43	107.35	79.92	20.42	H	4.9	1.00
2	1.064	32.69	67.07	34.38	20.44	H	1	1.00
2	7.395	37.55	69.54	31.99	20.40	H	359	1.00
2	13.560	51.16	69.54	18.38	20.26	H	359	1.00



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Test Mode :	NFC (13.56 MHz)	Temperature :	23℃
Test Engineer :	Carl Xie	Relative Humidity :	50%
Frequency Range	9 KHz ~ 30 MHz	Polarization :	Vertical

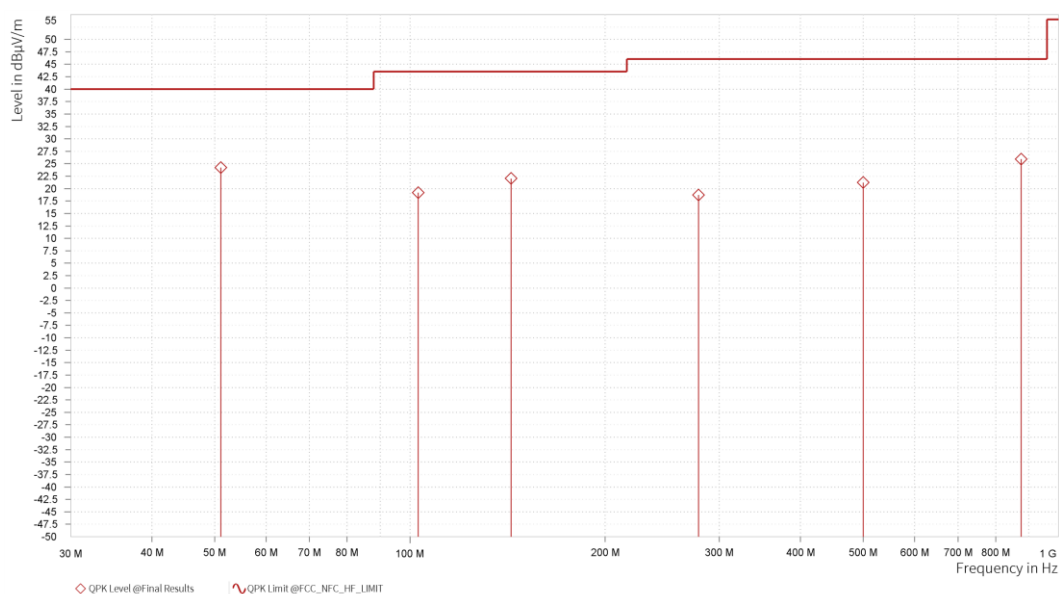
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	0.019	48.07	122.03	74.04	20.30	V	4.2	1.00
1	0.047	35.18	114.16	78.98	20.58	V	4.2	1.00
1	0.086	33.79	108.91	75.12	20.48	V	359.4	1.00
2	1.014	30.54	67.48	36.94	20.43	V	359.4	1.00
2	7.346	34.98	69.54	34.56	20.39	V	359	1.00
2	13.560	47.87	69.54	21.67	20.26	V	1	1.00



3.2.5 TEST RESULT OF RADIATED SPURIOUS EMISSION (30MHZ ~ 1GHZ)

Test Mode :	NFC (13.56MHz)	Temperature :	23℃
Test Engineer :	Carl Xie	Relative Humidity :	50%
Frequency Range	30MHz~1GHz	Polarization :	Horizontal

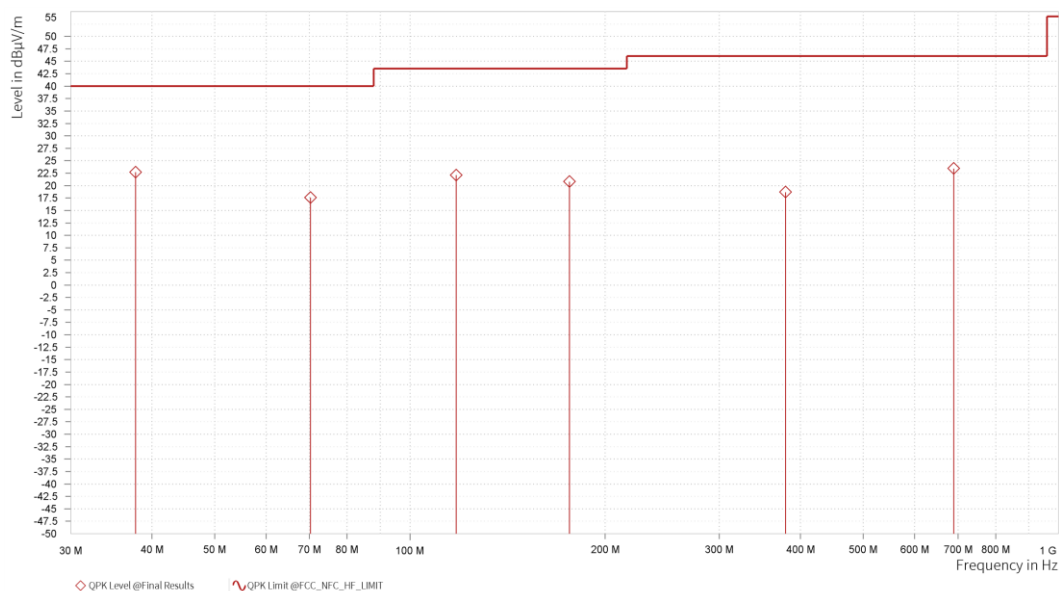
Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	51.120	24.22	40.00	15.78	-8.97	H	359.1	1.00	120.000
1	103.015	19.17	43.50	24.33	-10.98	H	359	1.00	120.000
1	143.181	22.01	43.50	21.49	-14.41	H	224.5	2.00	120.000
1	278.452	18.70	46.00	27.30	-6.99	H	133.1	1.00	120.000
1	499.877	21.21	46.00	24.79	-2.75	H	87	2.00	120.000
1	876.193	25.91	46.00	20.09	2.14	H	271.8	1.00	120.000



Test Report No.: PSZ-QSZ2510291415RF06

Test Mode :	NFC (13.56MHz)	Temperature :	23℃
Test Engineer :	Carl Xie	Relative Humidity :	50%
Frequency Range	30MHz~1GHz	Polarization :	Vertical

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	37.760	22.70	40.00	17.30	-12.23	V	85.8	2.00	120.000
1	70.255	17.60	40.00	22.40	-15.63	V	224.5	2.00	120.000
1	117.873	22.10	43.50	21.40	-11.64	V	355.1	2.00	120.000
1	176.161	20.79	43.50	22.71	-12.45	V	273	1.00	120.000
1	379.332	18.68	46.00	27.32	-3.77	V	359.1	1.00	120.000
1	689.071	23.43	46.00	22.57	-1.51	V	359	2.00	120.000



3.3 AC CONDUCTED EMISSION MEASUREMENT

3.3.1 LIMIT OF AC CONDUCTED EMISSION

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

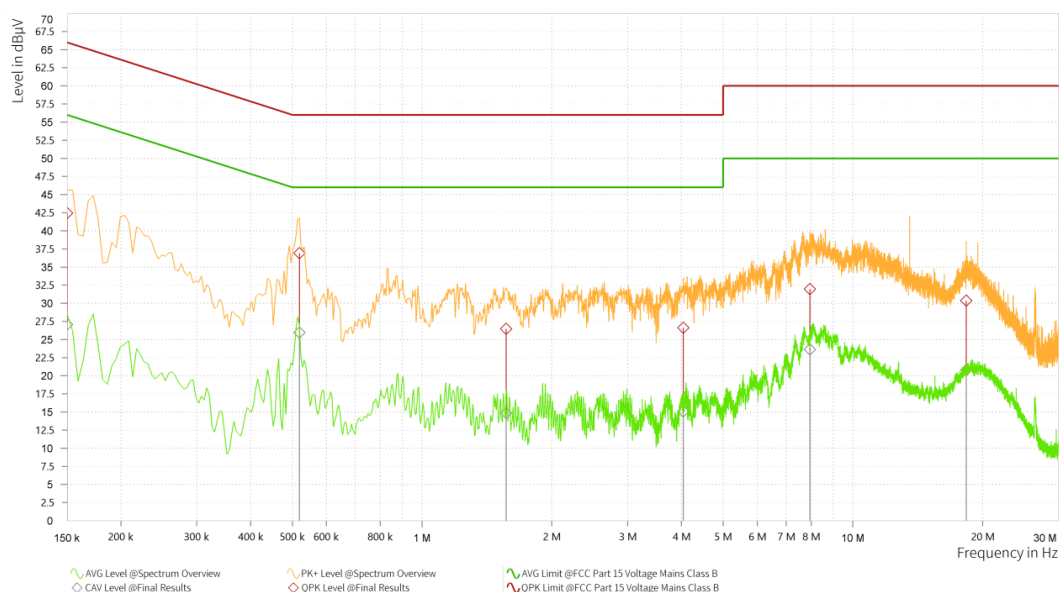
3.3.2 TEST PROCEDURES

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.3.3 TEST RESULT OF AC CONDUCTED EMISSION

Test Mode :	NFC	Temperature :	26°C
Test Engineer :	Carl Xie	Relative Humidity :	51%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	NFC		

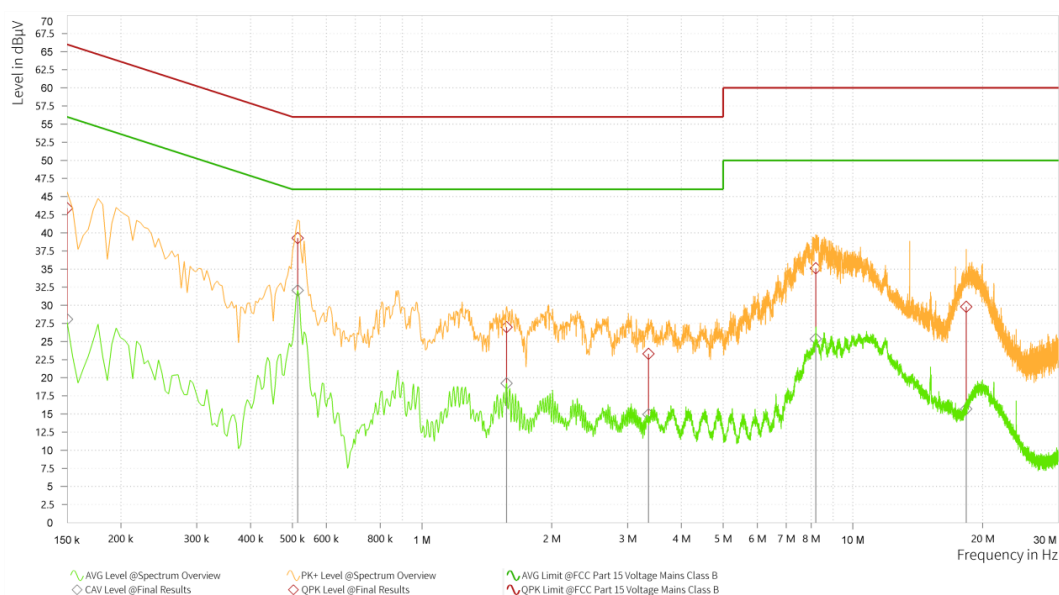
Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.150	42.44	66.00	23.56	27.08	56.00	28.92	9.80	L1	9.000
1	0.519	36.93	56.00	19.07	25.95	46.00	20.05	9.75	L1	9.000
1	1.568	26.47	56.00	29.53	14.85	46.00	31.15	9.79	L1	9.000
1	4.043	26.62	56.00	29.38	15.11	46.00	30.89	10.05	L1	9.000
1	7.949	31.97	60.00	28.03	23.65	50.00	26.35	10.61	L1	9.000
1	18.335	30.36	60.00	29.64	20.78	50.00	29.22	13.12	L1	9.000



Test Report No.: PSZ-QSZ2510291415RF06

Test Mode :	NFC	Temperature :	26°C
Test Engineer :	Carl Xie	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz	Phase :	Neutral
Function Type :	NFC		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.150	43.40	66.00	22.60	28.08	56.00	27.92	9.80	N	9.000
1	0.515	39.26	56.00	16.74	32.06	46.00	13.94	9.75	N	9.000
1	1.572	27.00	56.00	29.00	19.21	46.00	26.79	9.79	N	9.000
1	3.354	23.30	56.00	32.70	14.93	46.00	31.07	9.99	N	9.000
1	8.205	35.10	60.00	24.90	25.36	50.00	24.64	10.66	N	9.000
1	18.321	29.80	60.00	30.20	15.70	50.00	34.30	13.11	N	9.000



4 LIST OF MEASURING EQUIPMENT

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
WIDEBANDRADIO COMMUNICATION TESTER	Rohde&Schwarz	CMW500	169399	Jun.19,24	Jun.18,26
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC- 02Chamber	Aug.20,25	Aug.19,28
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Jul.04,25	Jul.03,27
Loop Antenna	R&S	HFH2- Z2/Z2E	100976	Feb.22,25	Feb.21,27
Antenna Power Supply	RS	N/A	N/A	N/A	N/A
Receiver	R&S	ESR26	101734	Mar.28,24	Mar.27,26
Measurement Software	R&S	ELEKTRA	N/A	N/A	N/A
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
CABLE	R&S	W13.01	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	W13.02	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	W12.14	N/A	Apr.26,25	Apr.25,26

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Chamber.
 3. The FCC Site Registration No. is 646781; The Designation No. is CN1429.

5 UNCERTAINTY OF EVALUATION

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Frequency Stability	$\pm 76.97\text{Hz}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

-----End of the report-----