



TEST REPORT

FCC ID: 2ADYY-AE10

Product: Mobile Phone

Model No.: AE10

Trade Mark: TECNO

Report No.: WSCT-A2LA-R&E240300009A-NFC

Issued Date: 11 July 2024

Issued for:

TECNO MOBILE LIMITED

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI
STREET FOTAN NT HONGKONG

Issued By:

World Standardization Certification & Testing Group(Shenzhen) Co.,Ltd.

Building A-B, Baoshi Science & Technology Park, Baoshi Road,
Bao'an District, Shenzhen, Guangdong, China

TEL: +86-755-26996192

FAX: +86-755-86376605



Note: The results contained in this report pertain only to the tested sample. This report shall not be reproduced, except in full, without written approval of World Standardization Certification & Testing Group(Shenzhen) Co., Ltd. This report must not be used by the client to claim product certification, approval, or any agency of the U.S. Government.





TABLE OF CONTENTS

1. Test Certification	3
2. Test Result Summary	4
3. EUT Description	5
4. Genera Information	6
4.1. TEST ENVIRONMENT AND MODE	6
4.2. DESCRIPTION OF SUPPORT UNITS	6
5. Facilities and Accreditations	7
5.1. FACILITIES	7
5.2. ACCREDITATIONS	7
5.3. MEASUREMENT UNCERTAINTY	8
6. MEASUREMENT INSTRUMENTS	9
7. GENERAL TEST CONFIGURATIONS	10
7.2. TEST SETUPS	10
8. TEST ITEMS	12
8.1. ANTENNA REQUIREMENTS	12
8.2. EMISSION BANDWIDTH	13
8.3. FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND RADIATED EMISSIONS	16
8.4. FREQUENCY TOLERANCE	22
8.5. CONDUCTED EMISSION	23
4 Test Setup Photographs	26



Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com

1. Test Certification

Product:	Mobile Phone
Model No.:	AE10
Trade Mark:	TECNO
Applicant:	TECNO MOBILE LIMITED FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Date of receipt:	14 February 2024
Date of Test:	15 February 2024 to 11 July 2024
Applicable Standards:	FCC CFR Title 47 Part 15 Subpart C KDB 558074 D01 DTS Meas Guidance v04

The above equipment has been tested by World Standardization Certification & Testing Group(Shenzhen)Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:

Wang Xiang

(Wang Xiang)

Checked By:

Qin Shuiquan

(Qin Shuiquan)

Approved By:

Liu Fuxin

(Liu Fuxin)

Date:

11 July 2024

世标检测认证股份
World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.ADD: Building A-B, Baoshi Science & Technology Park, Baoshi Road, Baoan District, Shenzhen, Guangdong, China
TEL: 0086-755-26996192 26996053 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http: www.wsct-cert.com

Member of the WSCT INC.



2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
Emission Bandwidth	§15.215	PASS
Field Strength of Fundamental Emissions	§15.225(a)	PASS
Radiated Emissions	§15.225(d) / 15.209	PASS
Frequency Stability	§15.225(e)	PASS
Conducted Emission	§15.207	PASS

Note: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.



3. EUT Description

Product Name:	Mobile Phone
Model :	AE10
Trade Mark:	TECNO
Software version:	AE10-H833A-U-OP-240421V2267
Hardware version:	V2.0
Operation Frequency:	NFC: 13.553-13.567MHz(TX/RX)
Antenna Type	Coil Antenna
Modulation Technology:	ASK(NFC)
Operating Voltage:	Adapter: U700TSA Input: 100-240V~50/60Hz 2.0A Output: 5.0V~3.0A 15.0W or 5.0-10.0V~7.0A MAX or 11.0V~6.4A MAX or 4.0-20.0V~3.5A 70.0W MAX Rechargeable Li-ion Polymer Battery Model1: BL-29GT Rated Voltage: 3.86V Rated Capacity: 2973mAh/11.48Wh Typical Capacity: 3043mAh/11.75Wh Limited Charge Voltage: 4.53V Rechargeable Li-ion Polymer Battery Model2: BL-25MT Rated Voltage: 3.86V Rated Capacity: 2637mAh/10.18Wh Typical Capacity: 2707mAh/10.45Wh Limited Charge Voltage: 4.53V
Remark:	N/A.

Note: 1. N/A stands for no applicable.

2. Antenna gain provided by the customer.



4. Genera Information

4.1. Test environment and mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations(The value of duty cycle is 98.46%) with Fully-charged battery.
The sample was placed (0.1m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	

4.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.



5. Facilities and Accreditations

5.1. Facilities

All measurement facilities used to collect the measurement data are located at **Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China of the World Standardization Certification & Testing Group(Shenzhen) CO., LTD**

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5.2. ACCREDITATIONS

CNAS - Registration Number: L3732

China National Accreditation Service for Conformity Assessment, The test firm Registration Number: L3732

FCC - Designation Number: CN1303

World Standardization Certification & Testing Group(Shenzhen) CO., LTD. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Designation Number: CN1303.

A2LA - Certificate Number: 5768.01

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number: 5768.01



5.3.Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

PARAMETER	Value
Conducted emissions (9 kHz-30 MHz)	3.2 dB
Radiated emissions (9 kHz-30 MHz)	3.3 dB
Radiated emissions (30 MHz-1 GHz)	3.8 dB



Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question

Please Contact with WSCT

www.wsct-cert.com

6. MEASUREMENT INSTRUMENTS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibrated	Calibrated until	Use or Not
EMI Test Receiver	R&S	ESCI	100005	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Bi-log Antenna	SCHWARZBECK	VULB9168	01488	2023-07-29	2024-07-28	<input checked="" type="checkbox"/>
Broadband Antenna	SCHWARZBECK	VULB9161	9161-4079	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Loop antenna	SCHNARZBE	FMZB1519B	00023	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
pre-amplifier	CDSI	PAP-1G18-38	--	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
System Controller	CT	SC100	-	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Spectrum analyzer	R&S	FSU26	200409	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
H & T Chamber	Guangzhou gongwen	GDJS-500-40	0329	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
MXG Vector Signal Generator	KEYSIGHT	N5182B	53060646	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
EXG Analog Signal Generator	Agilent	N5171B	40060472	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
MXA Signal Analyzer	Agilent	N9020A	54123254	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
USB Wideband Power Sensor	Agilent	U2021XA	52110008	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Simultaneous Sampling DAQ	Agilent	U2531A	53100008	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Coaxial cable	Megalon	LMR400	N/A	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
GPIB cable	megalon	GPIB	N/A	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Cable	H+S	SUCOFLEX	102(0.2m)	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Cable	H+S	SUCOFLEX	102(1.5m)	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>
Anechoic chamber	SAEMC	966	-	2023-11-05	2024-11-04	<input checked="" type="checkbox"/>



7. GENERAL TEST CONFIGURATIONS

7.1.1. Test Environments

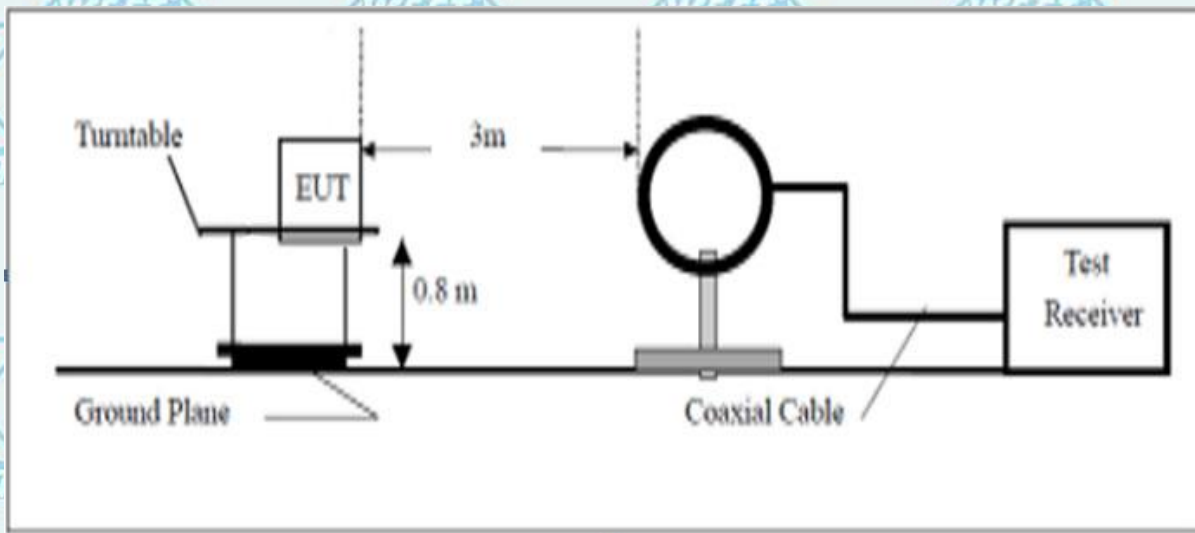
During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	30% to 60%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	DC 3.91V

7.2. Test Setups

Test Setup 1

Radiated Test (Below 30 MHz)



(Diagram 1)



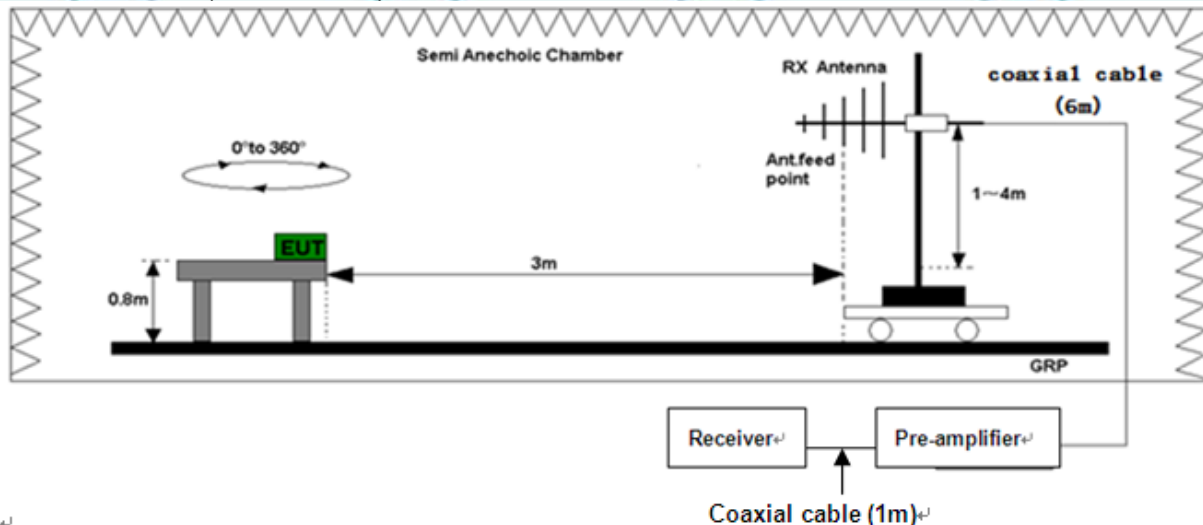
Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com

Test Setup 2

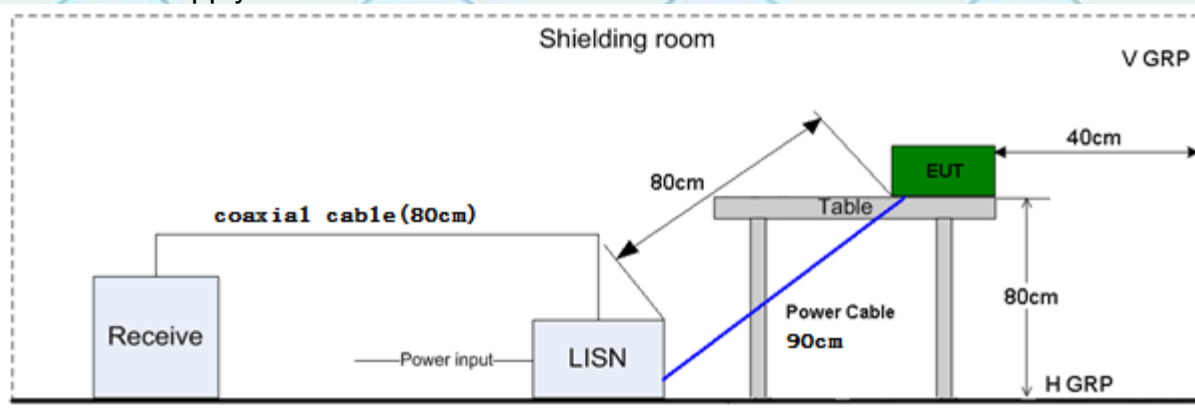
Radiated Test (30 MHz-1G)



(Diagram 2)

Test Setup 3

AC Power Supply Port Test



(Diagram 3)



8. TEST ITEMS

8.1. Antenna Requirements

8.1.1. Relevant Standards

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. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

8.1.2. Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna design is used.

Reference Documents	Item
Photo	Please refer EUT internal photos.



8.2. Emission Bandwidth

8.2.1. Definition

15.215(c);

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

The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

8.2.2. Test Setup

See section 7.2(Diagram 1)





8.2.3. Test Procedure

The 20dB bandwidth is measured with a spectrum analyzer connected via a receiver antenna placed near the EUT while the EUT is operating in transmission mode.

Use the following spectrum analyzer settings:

Span = between 2 to 5 times the OBW

RBW = 1% to 5% the OBW

VBW \geq 3RBW

Sweep = auto

Detector function = peak

Trace = max hold

The 99% emission bandwidth is measured with a spectrum analyzer connected via a receiver antenna placed near the EUT while the EUT is operating in transmission mode.

Use the following spectrum analyzer settings:

Span = between 1.5 to 5 times the OBW

RBW = 1% to 5% OBW

VBW \geq 3RBW

Sweep = auto

Detector function = peak

Trace = max hold

8.2.4. Test Result

Note: Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.



Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

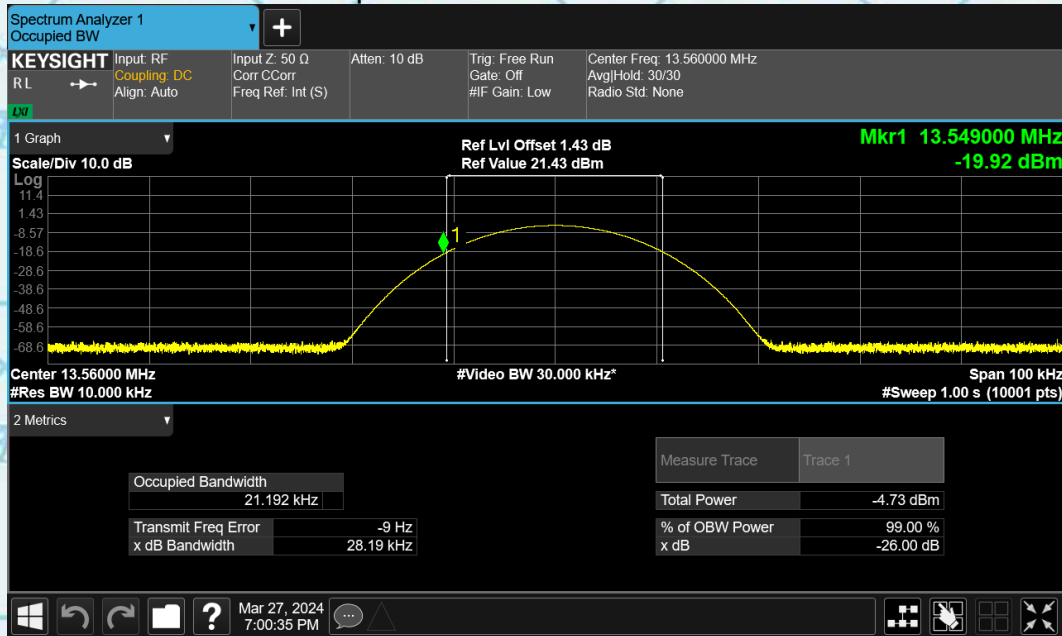
For Question,
Please Contact with WSCT
www.wsct-cert.com

Test Data

Frequency (MHz)	Emission Bandwidth(20dB down)(kHz)	Occupied Bandwidth(99%) (kHz)
13.560	28.19	21.192

Test Plots

Emission Bandwidth& 99% Occupied Bandwidth





8.3. Field Strength of Fundamental Emissions and Radiated Emissions

8.3.1. Limit

FCC §15.225(a), (b), (c)

According to FCC section 15.225, for <30 MHz, Radiated emissions were measured according to ANSI C63.4.

The EUT was set to transmit at the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10 kHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT)

There was no detected Restricted bands and Radiated spurious emission below 30MHz.

The 30m limit was converted to 3m Limit using square factor(x) as it was found by measurements as follows; 3 m Limit(dBμV/m) = 20log(X)+40log(30/3)=
20log(15848)+40log(30/3) = 124dBμV

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 range (MHz)	Field Strength@30m		Field Strength@10m	Field Strength@3m
	μV/m	dBμV/m	dBμV/m	dBμV/m
Below 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	103.08	124
13.567 ~ 13.710	334	50.5	69.58	90.5
13.710 ~14.010	106	40.5	59.58	80.5
Above 14.010	30	29.5	48.58	69.5

Note:

1. Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].
2. In the emission tables above, the tighter limit applies at the band edges.



Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question,

Please Contact with WSCT

www.wsct-cert.com

FCC §15.225(d)

According to FCC section 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 ($\mu\text{V/m}$)	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

Note:

1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dB $\mu\text{V/m}$ @3m (AV) and 74dB $\mu\text{V/m}$ @3m (PK).

8.3.2. Test Setup

See section 7.2(Diagram 1 and Diagram 2)

8.3.3. Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The

Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified.

Only the worst RB size/offset presented. The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1 \text{ GHz}$, 100 kHz for $30 \text{ MHz} < f < 1 \text{ GHz}$, 10 kHz for $150 \text{ kHz} < f < 30 \text{ MHz}$,

300 Hz for $f < 150 \text{ kHz}$

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold



8.3.4. Test Result

Field Strength of Fundamental Emissions

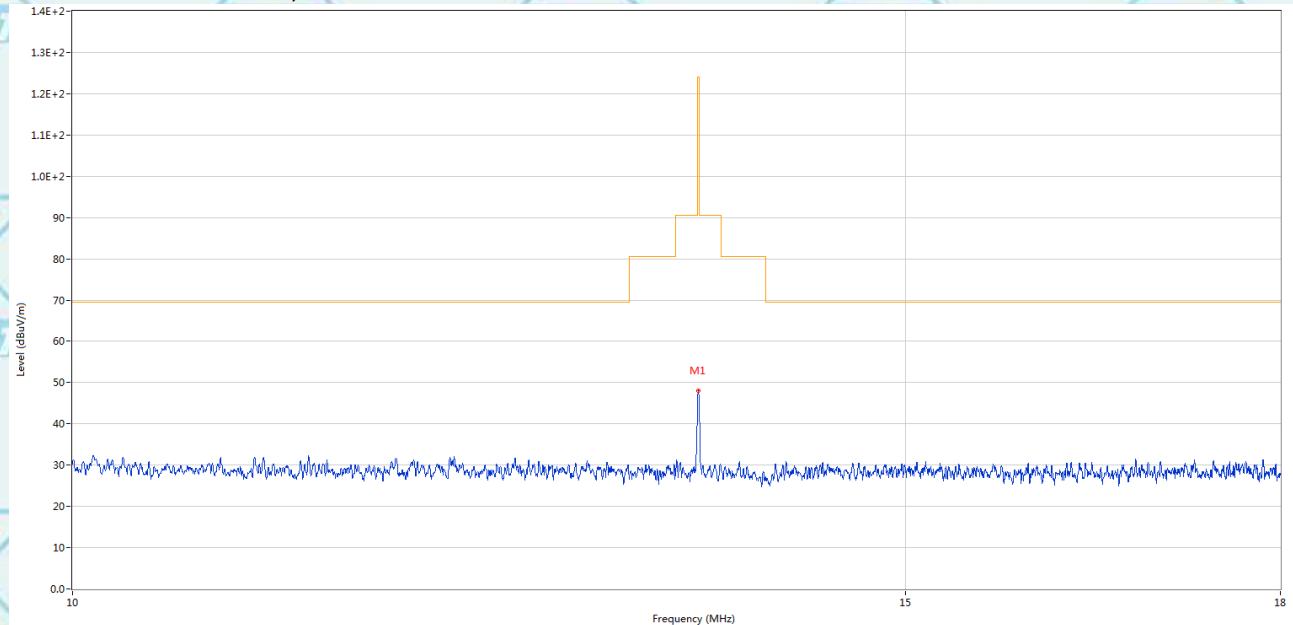
Note: Field Strength of Fundamental Emissions tests were performed in X, Y, Z axis direction of EUT. And only the worst axis test condition was recorded in this test report.

Test Data

Field Strength of Fundamental Emissions Value					
Frequency (MHz)	Detector	Field Strength (dB μ V/m)	Limit @3m (dB μ V/m)	EUT	Margin (dB)
13.560	PEAK	48.14	124.0	X axis	75.86

Test Plot

Test Antenna-LOOP, EUT X axis





Radiated Emissions

Note 1: This frequency which near 13.560 MHz with circle should be ignored because they are NFC carrier frequency.

Note 2: All Radiated Emissions tests were performed in X, Y, Z axis direction of EUT. And only the worst axis test condition was recorded in this test report.

The Data and Plots (9 kHz ~ 30 MHz)

Below 30 MHz, Test Antenna LOOP, EUT X axis

No.	Freq. MHz	Results level dBuV	Correct Factor dB	Measure -ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	0.063	41.36	20.15	61.51	111.4	-49.89	QP
2	0.071	41.52	20.06	61.58	110.6	-49.02	QP
3	0.206	43.52	20.18	63.70	101.4	-37.7	QP
4	0.268	38.97	19.97	58.94	99.3	-40.36	QP
5	1.208	35.01	20.13	55.14	66.1	-10.96	QP
6	13.560	47.58	20.54	68.12	69.5	-1.38	QP



Report No.: WSCT-A2LA-R&E240300009A-NFC
30 MHz to 1 GHz,
Horizontal:

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	30.1054	36.54	-1.73	34.81	40.00	-5.19	QP
2		37.5479	30.35	-0.86	29.49	40.00	-10.51	QP
3		93.7685	40.22	-4.52	35.70	43.50	-7.80	QP
4		212.2695	32.80	-3.34	29.46	43.50	-14.04	QP
5	!	321.0608	39.03	0.76	39.79	46.00	-6.21	QP
6		968.9338	27.48	14.02	41.50	54.00	-12.50	QP

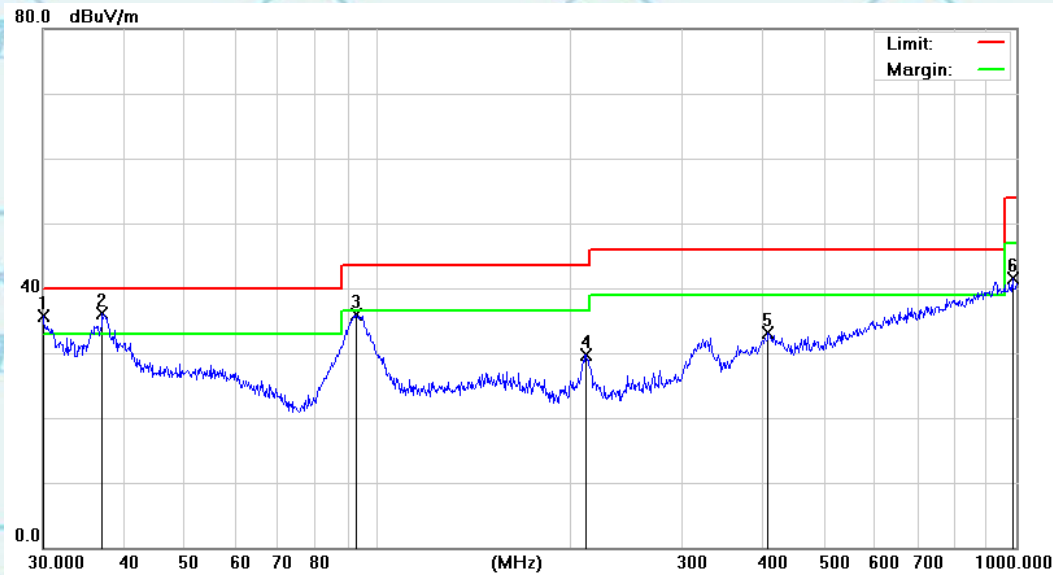


Report No.: WSCT-A2LA-R&E240300009A-NFC

Vertical:

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	!	30.0000	37.47	-1.73	35.74	40.00	-4.26	QP
2	*	37.1550	36.99	-0.94	36.05	40.00	-3.95	QP
3		92.7871	40.47	-4.57	35.90	43.50	-7.60	QP
4		212.2695	33.07	-3.34	29.73	43.50	-13.77	QP
5		408.9460	30.10	2.96	33.06	46.00	-12.94	QP
6		986.0717	27.18	14.25	41.43	54.00	-12.57	QP

Note1:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor.

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) - Limits (dBuV)

Note2: EUT has been tested in unfolded states, and the report only reflects data in the unfolded state (worst-case scenario)



8.4. Frequency Tolerance

8.4.1. Limit

FCC §15.225(e)

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees

C. For battery operated equipment, the equipment tests shall be performed using a new battery.

8.4.2. Test Setup

See section 7.2(Diagram 1)

8.4.3. Test Procedure

1. The test is performed in a Temperature Chamber.
2. The EUT is configured as MS + DC Power Supply.

8.4.4. Test Result

Note 1: Because the 85%(3.2895V) and 115% (4.4505V)of the rated supply voltage value exceeds the cut-off voltage upper(4.45V) and lower(3.45V) limit of the manufacturer, the cut-off voltage of EUT is test here.

OPERATING FREQUENCY:	13560000 Hz
REFERENCE VOLTAGE:	3.91 V
DEVIATION LIMIT:	$\pm 0.01\%$

VOLTAGE (%)	Test Conditions		Frequency(Hz)	Deviation (%)	Verdict
	Power (VDC)	Temperature (°C)			
100	3.91	-10	13559979	0.000144	Pass
100		0	13559958	0.000310	Pass
100		+10	13560000	0.000000	Pass
100		+20	13560000	0.000000	Pass
100		+25	13560000	0.000000	Pass
100		+30	13560000	0.000000	Pass
100		+40	13559956	0.000328	Pass
100		+50	13560028	-0.000209	Pass
100		+55	13560040	-0.000292	Pass
MAX(Battery End Point, 85)	3.45	+25	13559957	0.000314	Pass
MIN(Battery End Point, 115)	4.5	+25	13560036	-0.000266	Pass



8.5. Conducted Emission

8.5.1. Limit

FCC §15.207

For an intentional radiator 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 within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

8.5.2. Test Setup

See section 4.2(Diagram 3)

8.5.3. Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

8.5.4. Test Result

Note 1: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

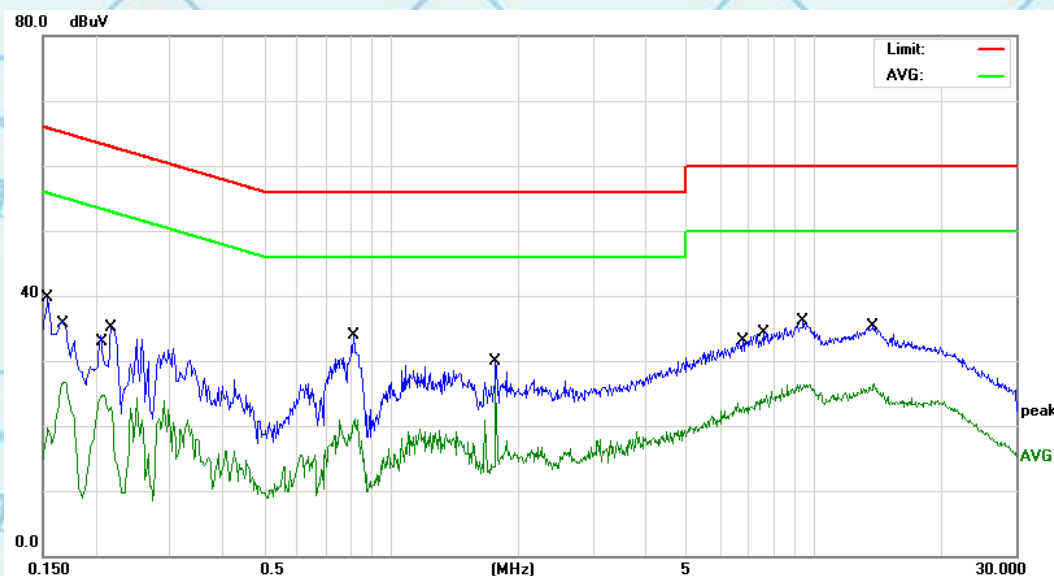


Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com

Temperature	20 °C	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	NFC

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)

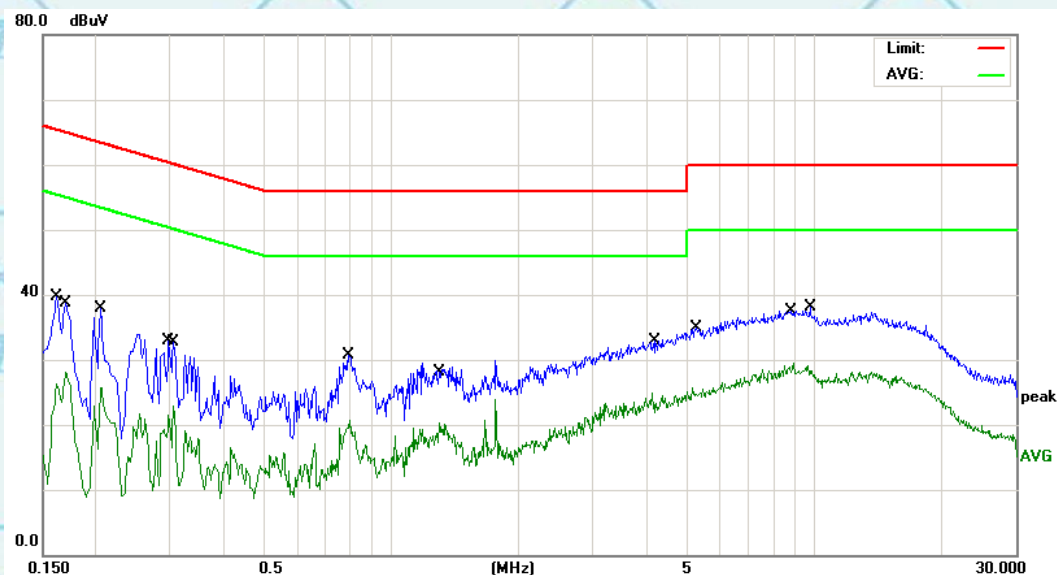
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1539	29.21	10.45	39.66	65.78	-26.12	QP
2		0.1700	16.28	10.45	26.73	54.96	-28.23	AVG
3		0.2100	14.20	10.45	24.65	53.20	-28.55	AVG
4		0.2180	24.56	10.45	35.01	62.89	-27.88	QP
5		0.8139	23.30	10.54	33.84	56.00	-22.16	QP
6		0.8220	10.63	10.54	21.17	46.00	-24.83	AVG
7		1.7700	19.20	10.67	29.87	56.00	-26.13	QP
8	*	1.7700	14.78	10.67	25.45	46.00	-20.55	AVG
9		6.8020	22.33	10.77	33.10	60.00	-26.90	QP
10		7.5100	13.29	10.79	24.08	50.00	-25.92	AVG
11		9.4180	25.32	10.82	36.14	60.00	-23.86	QP
12		13.8700	15.32	11.12	26.44	50.00	-23.56	AVG



Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question

Please Contact with WSCT
www.wsct-cert.com**Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)**

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1620	29.33	10.45	39.78	65.36	-25.58	QP
2		0.1700	17.58	10.45	28.03	54.96	-26.93	AVG
3		0.2060	27.37	10.45	37.82	63.36	-25.54	QP
4		0.2060	15.27	10.45	25.72	53.36	-27.64	AVG
5		0.2980	22.47	10.47	32.94	60.30	-27.36	QP
6		0.3060	12.49	10.47	22.96	50.08	-27.12	AVG
7		0.7940	20.08	10.54	30.62	56.00	-25.38	QP
8		1.2980	9.61	10.60	20.21	46.00	-25.79	AVG
9		4.1460	14.22	10.73	24.95	46.00	-21.05	AVG
10		5.2700	24.12	10.74	34.86	60.00	-25.14	QP
11	*	8.9500	18.77	10.81	29.58	50.00	-20.42	AVG
12		9.7940	27.31	10.83	38.14	60.00	-21.86	QP

Note1:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = LISN Factor + Cable loss

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) - Limits (dBuV)

Q.P. = Quasi-Peak AVG = average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.



Report No.: WSCT-A2LA-R&E240300009A-NFC

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com

4 Test Setup Photographs

Please refer to Annex "Set Up Photos-15C" for test setup photos

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