

# FCC PART 15C TEST REPORT No.I22Z60151-EMC02

for

**Honor Device Co., Ltd.**

**Smart Phone**

**Model Name: LGE-NX9**

**FCC ID: 2AYGCLGE-NX9**

with

**Hardware Version: HN1LGEHM**

**Software Version: 6.0.0.108(C900E103R1P3)**

**Issued Date: 2022-04-29**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

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## **REPORT HISTORY**

Report Number	Revision	Description	Issue Date
I22Z60151-EMC02	Rev.0	1 <sup>st</sup> edition	2022-04-19
I22Z60151-EMC02	Rev.1	2 <sup>nd</sup> edition	2022-04-29

Note: the latest revision of the test report supersedes all previous version

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## 1. Test Laboratory

### 1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

### 1.2. Testing Location

Location 1: CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,  
P. R. China 100191

### 1.3. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

### 1.4. Project data

Testing Start Date: 2022-03-01

Testing End Date: 2022-03-20

### 1.5. Signature



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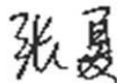
(Prepared this test report)



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Zhang Ying

(Reviewed this test report)



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Zhang Xia

Deputy Director of the laboratory

(Approved this test report)



No. I22Z60151-EMC02

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: Honor Device Co., Ltd.  
Address /Post: Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China  
Contact: /  
Email: /  
Telephone: /

### **2.2. Manufacturer Information**

Company Name: Honor Device Co., Ltd.  
Address /Post: Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China  
Contact: /  
Email: /  
Telephone: /

### 3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

Description	Smart Phone
Model Name	LGE-NX9
FCC ID	2AYGCLGE-NX9

#### 3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	867843050023477/867843050024970	HN1LGEHM	6.0.0.108(C900E103R1P3)
EUT2	867843050056592/867843050057699	HN1LGEHM	6.0.0.108(C900E103R1P3)

\*EUT ID: is used to identify the test sample in the lab internally.

#### 3.3. Internal Identification of AE

AE ID*	Description	SN	Note
AE1-1	Adapter	0221945	HN-200500E01
AE1-2	Adapter	02221944	HN-200500B01
AE1-3	Adapter	02221943	HN-200500U01
AE2-1	USB Cable	04072296	L125UC008-CS-H
AE2-2	USB Cable	04072296	AU2-CRO015HF
AE2-3	USB Cable	04072296	RY0001
AE3-1	Headset	22040347	1331-3301-6001-TC-347
AE4-1	Battery	2402AAAD	HB586680EFW
AE4-2	Battery	2402AAAD	HB586680EFW
AE5-1	Wireless Charging	99059XEN	Power-W06

\*AE ID: is used to identify the test sample in the lab internally.

#### 3.4. EUT Set-ups

EUT set-up	Combination of EUT and AE	Remarks
Set.WPT1-1	EUT1+AE1-2+AE2-1/AE2-2/AE2-3+AE5-1	Wireless charging, TX test
Set.WPT1-2	EUT2+AE1-2+AE2-1/AE2-2/AE2-3+AE5-1	Wireless charging, TX test
Set.WPT3-1	EUT1+AE1-2+AE2-1/AE2-2/AE2-3+EUT2	Reverse Wireless charging, TX test
Set.WPT3-2	EUT2+AE1-2+AE2-1/AE2-2/AE2-3+EUT1	Reverse Wireless charging, TX test

### 3.5. General Description

LGE-NX9 is subscriber equipment in the GSM/WCDMA/LTE/NR system. The Mobile Phone implements such functions as RF signal receiving/transmitting, NR/LTE/UMTS and GSM/GPRS/EDGE protocol processing, voice, video MMS service, GPS, AGPS, Wi-Fi etc. dual SIM/single SIM card interface. LGE-NX9 is dual/single SIM smart phone. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet , or to exchange data with other Bluetooth devices.

The WPT system works at a frequency of 111kHz-145kHz.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the Client.

For more EUT information please refers to the manufacturer's specifications or user's manual.

It support:

GSM	850/1900
WCDMA	Bands 2/4/5
LTE	Bands 2/4/5/7/12/13/17/25/26/38/41/66
5G NR	Bands 2/5/7/38/41/66/71

## **4. Reference Documents**

### **4.1. Documents supplied by applicant**

EUT parameters, referring to Annex A for detailed information, are supplied by the client or manufacturer, which are the bases of testing.

### **4.2. Reference Documents for testing**

The following documents listed in this section are referred for testing.

<b>Reference</b>	<b>Title</b>	<b>Version</b>
CFR 47 Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations.	2019
CFR 47 Part 15, Subpart C	Radio Frequency Devices -- Intentional Radiators	2019
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013



## 5. Test Results

### 5.1. Summary of Test Results

No	Test Cases	Clause in Regulation	Section in This Report	Verdict
1	Transmitter Radiated Emission	CFR 47 § 15.209	A.1	P
2	AC Power-line Conducted Emissions	CFR 47 § 15.207	A.2	P
The measurement is carried out according to ANSI C63.10. See <b>ANNEX A</b> for details.				

#### Test Conditions:

For this report, all the test cases listed above were tested under normal Temperature, Voltage, humidity and Air Pressure except the Frequency Tolerance test case.

#### See the following terms for result verdict:

P	Pass, The EUT complies with the essential requirements in the standard.
NP	Not Perform, The test was not performed by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

### 5.2. Statements

The test cases listed in Section 5.1 of this report for the EUT specified in Section 3 were performed by CTTL according to the reference documents in Section 4.

The EUT meets all applicable requirements of the regulations and standards in Section 4.2.

## 6. Test Facilities Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL. DUE DATE	CAL. INTERVAL
1	Test Receiver	ESW44	103023	Rohde & Schwarz	2022-10-28	1 Year
2	H-field Antenna	HFH2-Z2	829324/007	Rohde & Schwarz	2022-12-23	1 Year
3	EMI Antenna	VULB 9163	01223	Schwarzbeck	2022-03-22	1 Year
4	Test Receiver	ESCI	100344	Rohde & Schwarz	2023-02-21	1 Year
5	LISN	ENV216	101200	Rohde & Schwarz	2022-05-30	1 Year

## **7. Antenna Requirements**

According to FCC 47 CFR § 15.203:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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.”

- (1) The antenna of the EUT are permanently attached.
- (2) This unit was tested with its standard battery.

## 8. Measurement Uncertainty

Item	Uncertainty
Radiated Emissions (<1GHz)	$U = 4.86 \text{ dB}, k=2$
Radiated Emissions (>1GHz)	$U = 5.26 \text{ dB}, k=2$
Conducted emission	$U = 3.38 \text{ dB}, k=2$

## **ANNEX A: Detailed Test Results**

### **A.1. Transmitter Radiated Emissions**

#### **A.1.1. Reference**

See Clause 6.4, 6.5 of ANSI C63.10-2013 generally.

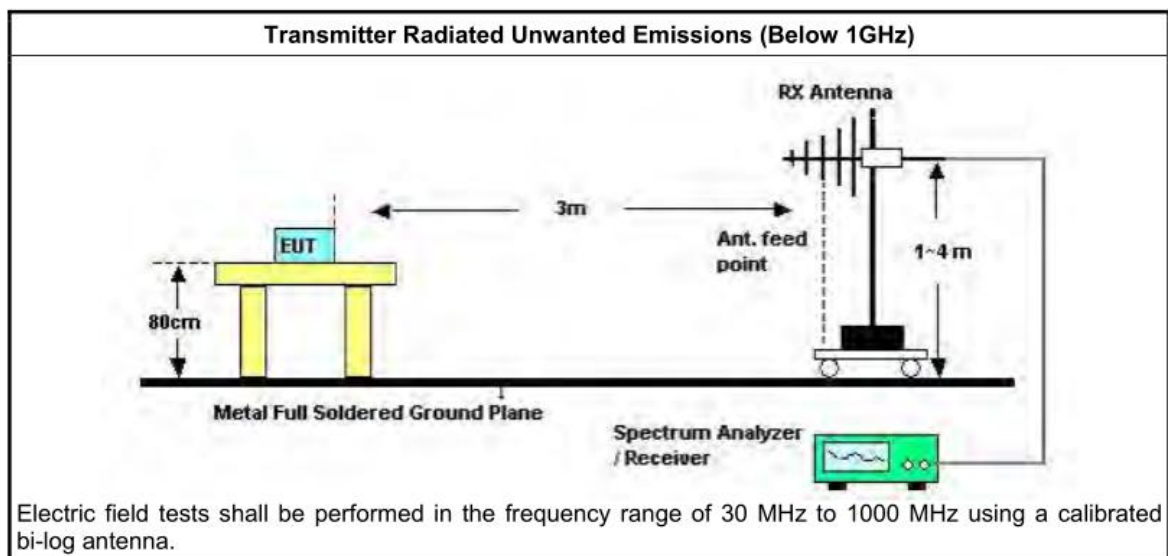
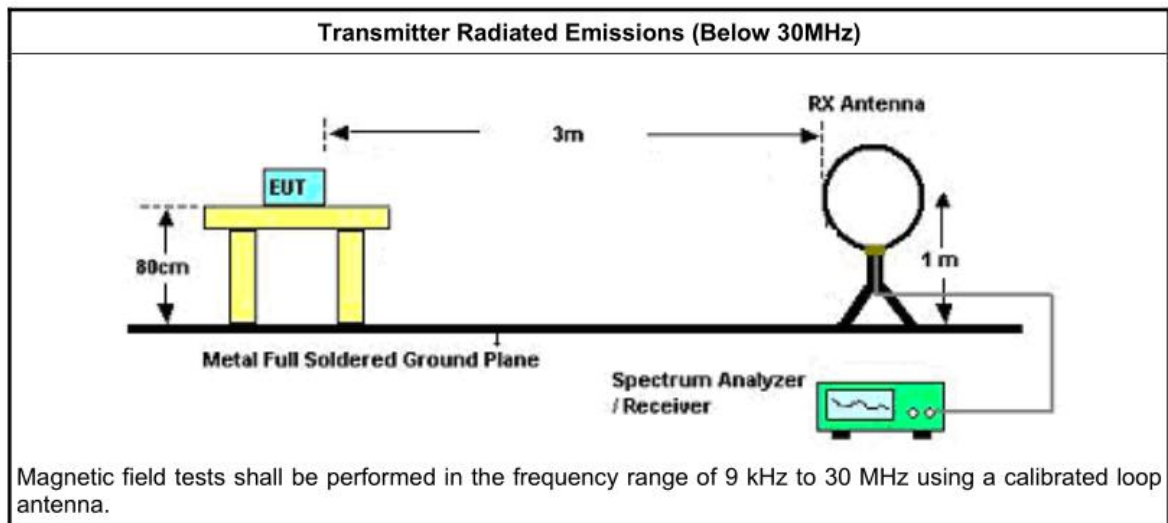
#### **A.1.2. Measurement Methods**

At frequencies below 30MHz, measurements may be performed at a distance closer than that specified in the requirements; however, an attempt should be made to avoid making measurements in the ear field. Pending the development of an appropriate measurement procedure for measurements performed below 30MH, when performing measurements at a closer distance than specified, the results shall be following below methods. The results shall be by using the square of an inverse linear distance extrapolation factor (10 dB/decade).

For radiated measurement, Loop antenna was rotated about the horizontal and vertical axis and the equipment to be measured and the test antenna shall be oriented to obtain the maximum emitted field strength level.

The any unwanted emissions level shall not exceed the fundamental emission level.

#### **A.1.3. Measurement Setup**



#### A.1.4. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state WPT.

The EUT is powered by a travel adapter.

**Wireless charging mode:** At the beginning of measurement, the battery is discharged to 0%-50%, the EUT is charged by the wireless charger.

**Reverse Wireless charging mode:** Using the EUT as a wireless charger and the EUT is charged to 80% or more. The battery of another phone is discharged to 0%-50%. Another phone is charged by the EUT.

#### A.1.5. Limits

Transmitter Radiated Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

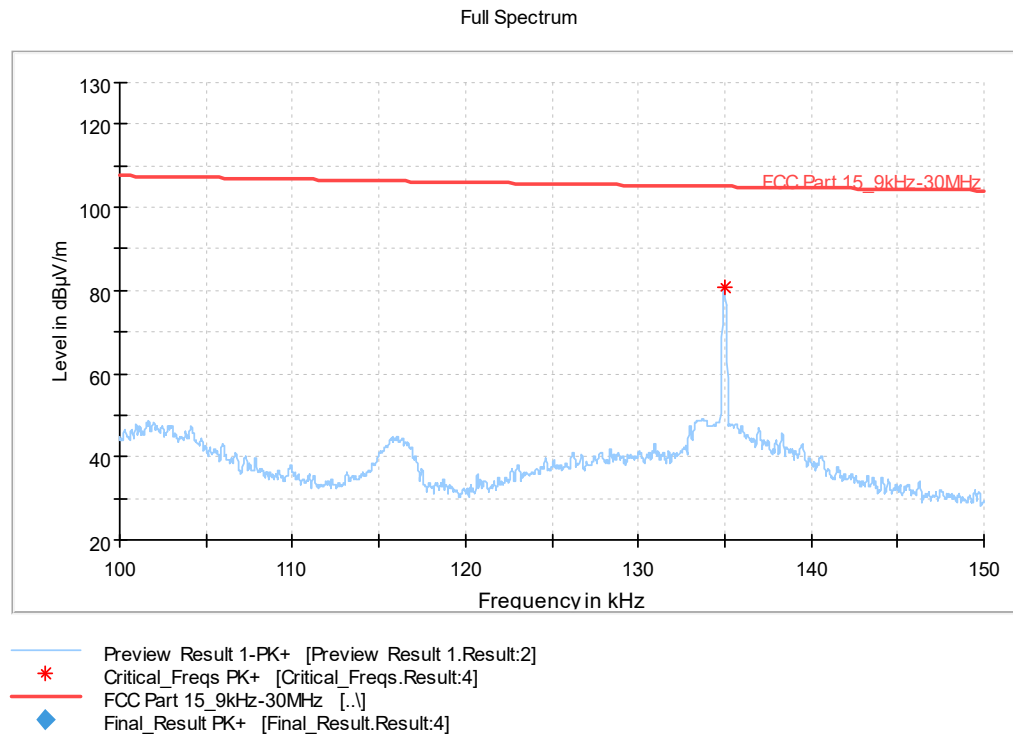
Note 3: the frequency bands 9-90 kHz, 110-490 kHz measurements employing an average detector and other below 1GHz measurements employing a CISPR quasi-peak detector.

#### A.1.6. Measurement Results

**Conclusions: PASS.**

## Wireless charging

We tested configurations of Set.WPT1-1 and Set.WPT1-2, only the worst cases were shown in test report.



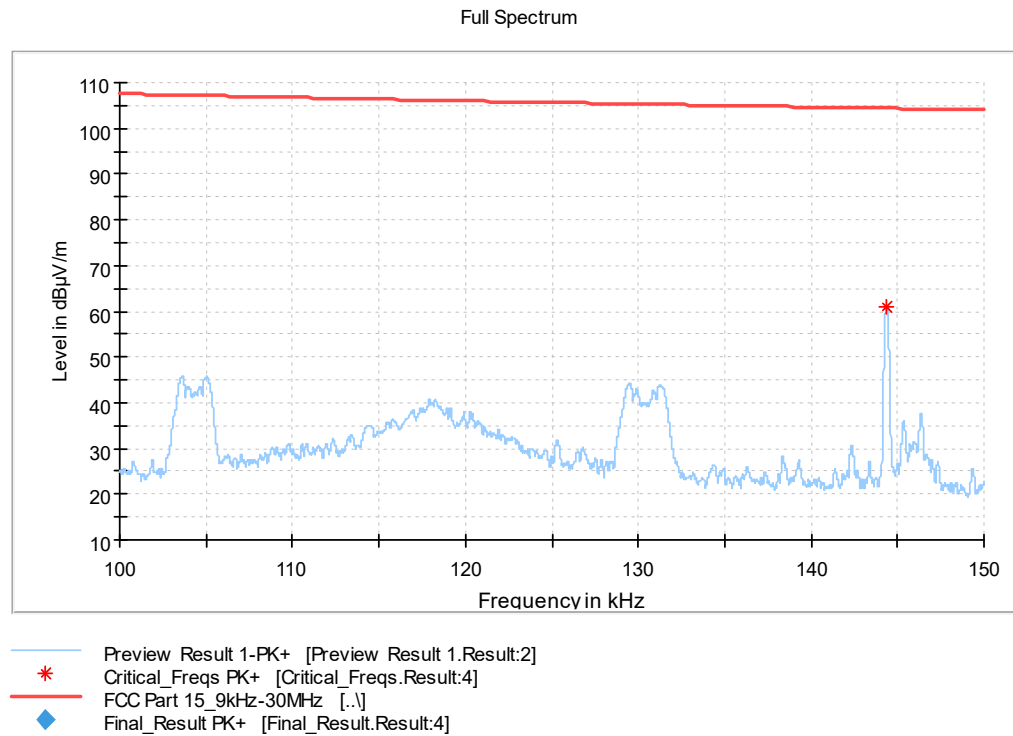
**Figure A-1: Traffic Mode(distance = 3m, Set.WPT1-1)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Azimuth (deg)
0.134984	80.57	104.99	24.42	V	160.0



## Reverse Wireless charging

We tested configurations of Set.WPT3-1 and Set.WPT3-2, only the worst cases were shown in test report.

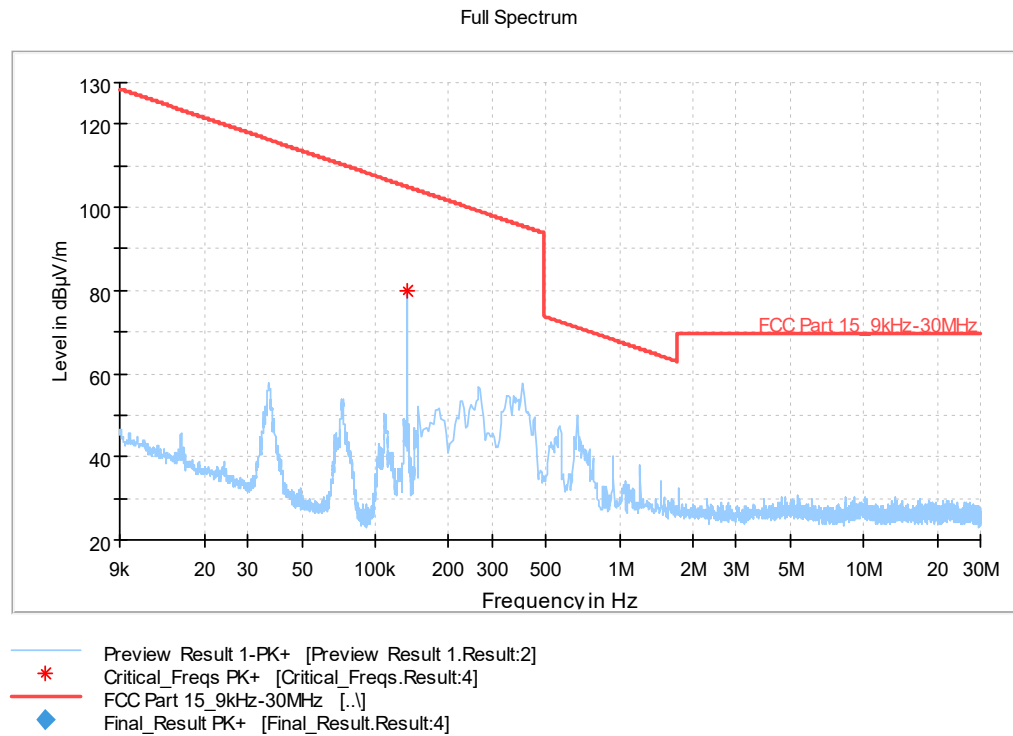


**Figure A-2: Traffic Mode(distance = 3m, Set.WPT3-1)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Azimuth (deg)
0.144375	61.13	104.41	43.28	V	140.0

## Wireless charging

We tested configurations of Set.WPT1-1 and Set.WPT1-2, only the worst cases were shown in test report.

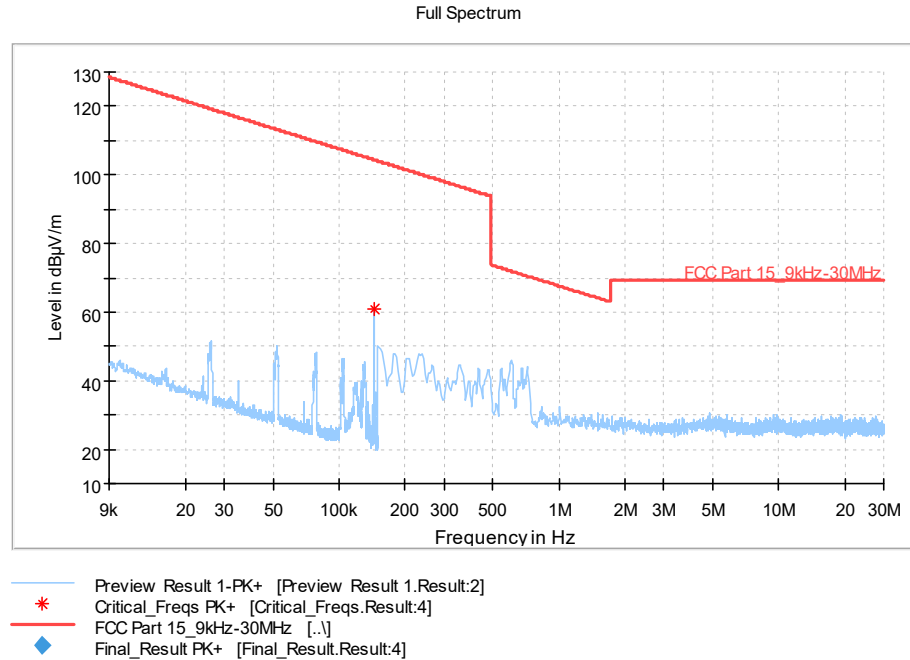


**Figure A-3: Traffic Mode(distance = 3m, Set.WPT1-2, 9kHz-30MHz)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Azimuth (deg)
0.134966	79.73	104.99	25.27	V	173.0

## Reverse Wireless charging

We tested configurations of Set.WPT3-1 and Set.WPT3-2, only the worst cases were shown in test report.

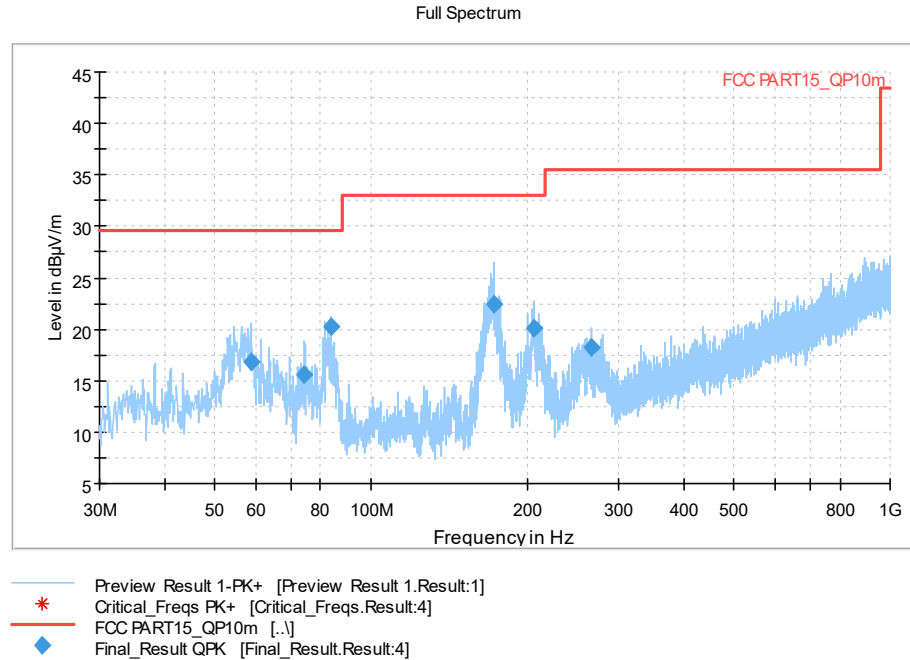


**Figure A-4: Traffic Mode(distance = 3m, Set.WPT3-1, 9kHz-30MHz)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Azimuth (deg)
0.144360	60.90	104.41	43.51	V	142.0

### Wireless charging and Reverse Wireless charging

We tested configurations of Set.WPT1-1,Set.WPT1-2, Set.WPT3-1 and Set.WPT3-2, only the worst cases were shown in test report.



**Figure A-5: Traffic Mode(distance = 10m, Set.WPT1-1, 30MHz-1GHz)**

#### Final\_Result

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
58.906000	16.84	29.54	12.70	2000.	120.000	275.0	V	150.0
74.523000	15.52	29.54	14.02	2000.	120.000	183.0	V	281.0
83.932000	20.29	29.54	9.25	2000.	120.000	175.0	V	300.0
172.978000	22.50	33.06	10.56	2000.	120.000	95.0	V	99.0
205.376000	20.10	33.06	12.96	2000.	120.000	125.0	V	152.0
265.419000	18.22	35.56	17.34	2000.	120.000	125.0	V	154.0

## A.2. AC Conducted emission

### A.2.1. Reference

See Clause 6.2 of ANSI C63.10-2013 specifically.

See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

### A.2.2. Measurement Methods

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

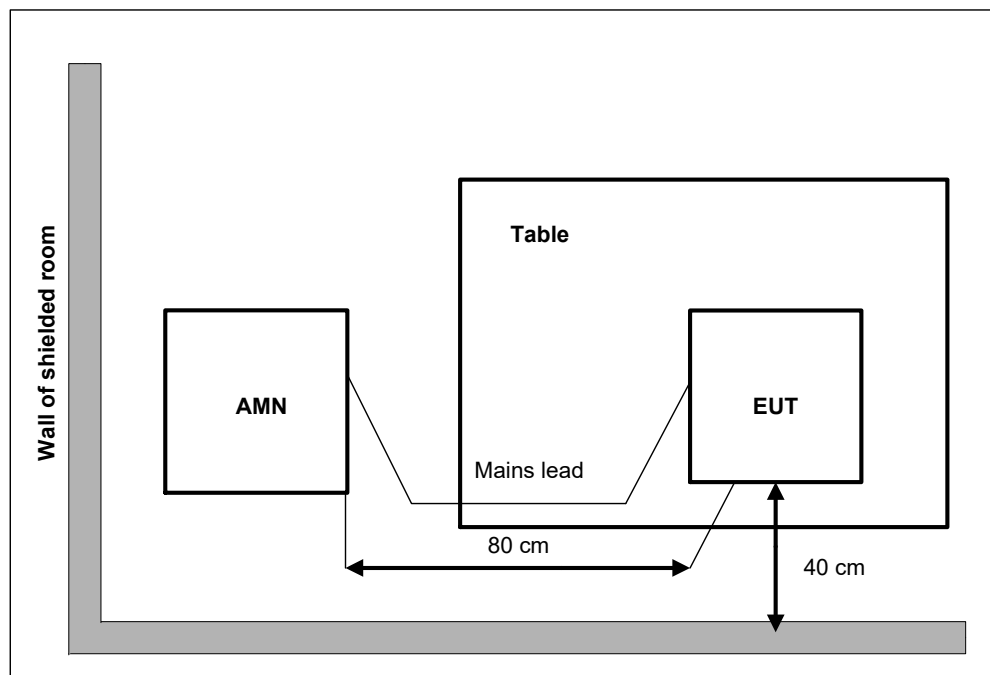
The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

The measurement bandwidth is:

**Table B-1: Measurement Bandwidth**

Frequency of Emission (MHz)	RBW/VBW
0.15-30	9kHz

### A.2.3. Measurement Setup



### A.2.4. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of WPT (See 3.4).

The EUT is powered by a travel adapter.

### A.2.5. Limits

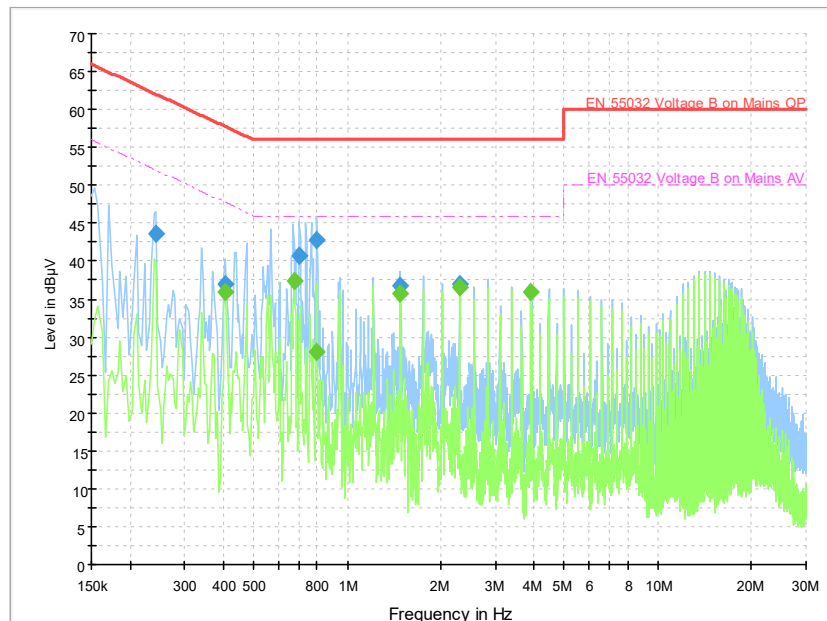
Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Average Limit (dB $\mu$ V)
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

## A.2.6. Measurement Results

### Wireless charging

We tested configurations of Set.1-1 and Set.1-2, only the worst cases were shown in test report.

**Conclusions:** Set.WPT1-1 **PASS**.



**Figure A-6: Traffic Mode (Set.WPT1-1, Wireless charging)**

#### Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.242000	43.6	5000.0	9.000	On	L1	20.0	18.5	62.0
0.406000	37.0	5000.0	9.000	On	L1	19.9	20.7	57.7
0.698000	40.8	5000.0	9.000	On	N	19.8	15.2	56.0
0.798000	42.8	5000.0	9.000	On	N	19.8	13.2	56.0
1.486000	36.7	5000.0	9.000	On	L1	19.5	19.3	56.0
2.294000	37.0	5000.0	9.000	On	N	19.8	19.0	56.0

#### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.406000	35.9	5000.0	9.000	On	L1	19.9	11.8	47.7
0.674000	37.3	5000.0	9.000	On	N	19.8	8.7	46.0
0.798000	28.0	5000.0	9.000	On	N	19.8	18.0	46.0
1.486000	35.7	5000.0	9.000	On	L1	19.5	10.3	46.0
2.294000	36.5	5000.0	9.000	On	L1	19.5	9.5	46.0
3.914000	35.9	5000.0	9.000	On	N	19.7	10.1	46.0

### Reverse Wireless charging

We tested configurations of Set.3-1 and Set.3-2, only the worst cases were shown in test report.

**Conclusions:** Set.WPT3-1 **PASS**.

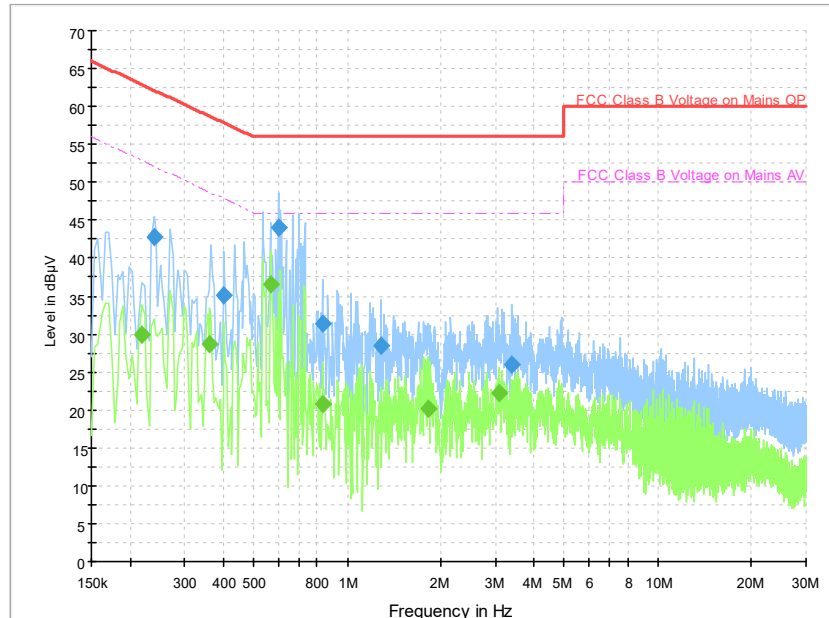


Figure A-7: Traffic Mode (Set.WPT01, Reverse Wireless charging)

#### Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.238000	42.8	5000.0	9.000	On	N	19.8	19.3	62.2
0.402000	35.1	5000.0	9.000	On	L1	19.9	22.7	57.8
0.598000	44.1	5000.0	9.000	On	N	19.9	11.9	56.0
0.830000	31.4	5000.0	9.000	On	N	19.8	24.6	56.0
1.282000	28.6	5000.0	9.000	On	L1	19.5	27.4	56.0
3.378000	26.1	5000.0	9.000	On	N	19.7	29.9	56.0

#### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.654000	30.1	1000.0	9.000	On	L1	19.7	15.9	46.0
0.726000	35.3	1000.0	9.000	On	L1	19.7	10.7	46.0
0.775500	30.6	1000.0	9.000	On	L1	19.7	15.4	46.0
0.897000	29.4	1000.0	9.000	On	L1	19.6	16.6	46.0
1.446000	28.0	1000.0	9.000	On	L1	19.5	18.0	46.0
2.031000	27.8	1000.0	9.000	On	L1	19.4	18.2	46.0

## **ANNEX B: EUT parameters**

Disclaimer: The product information and test accessories provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

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