# FCC Radio Test Report

## FCC ID: 2AYGCANY-NX1

**This report concerns: Original Grant**

| | | |
|---|---|---|
| **Project No.** | : | 2203G020 |
| **Equipment** | : | Smart Phone |
| **Brand Name** | : | HONOR |
| **Test Model** | : | ANY-NX1 |
| **Series Model** | : | N/A |
| **Applicant** | : | Honor Device Co., Ltd. |
| **Address** | : | Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, P.R.China |
| **Manufacturer** | : | Honor Device Co., Ltd. |
| **Address** | : | Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, P.R.China |
| **Date of Receipt** | : | Jan. 04, 2022 |
| **Date of Test** | : | Jan. 06, 2022 ~ Mar. 14, 2022 |
| **Issued Date** | : | Apr. 08, 2022 |
| **Report Version** | : | R01 |
| **Standard(s)** | : | 47 CFR FCC Part 24 Subpart E<br>47 CFR FCC Part 2<br>ANSI/TIA/EIA-603-E-2016<br>FCC KDB 971168 D01 Power Meas License Digital Systems v03r01 |

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Edward Li

**Prepared by :** Edward Li

Treey Chen

**Approved by :** Treey Chen

TESTING CERT #5123.02

Add: No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China.

Tel: +86-769-8318-3000

Web: www.newbtl.com

**Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

**BTL**'s reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

The report must not be used by the client to claim product certification, approval, or endorsement by NIST, A2LA, or any agency of the U.S. Government.

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**BTL**'s laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

**BTL** is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and is not use in determining the Pass/Fail results.

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## REPORT ISSUED HISTORY

| Report No. | Version | Description | Issued Date | Note |
|---|---|---|---|---|
| BTL-FCCP-6-2203G020 | R00 | Original Report. | Mar. 25, 2022 | Invalid |
| BTL-FCCP-6-2203G020 | R01 | Modified the comments of TCB. | Apr. 08, 2022 | Valid |

## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| FCC Part 24 Subpart E & Part 2 | | | |
|---|---|---|---|
| **Standard(s) Section** | **Test Item** | **Judgment** | **Remark** |
| 2.1046<br>24.232(c) | Equivalent Isotropic Radiated Power | PASS | ------ |
| 2.1049 | Occupied Bandwidth | PASS | ------ |
| 2.1051<br>24.238(a) | Conducted Spurious Emissions | PASS | ------ |
| 2.1047 | Modulation Characteristics | PASS | ------ |
| 24.238(a) | Band Edge Measurements | PASS | ------ |
| 24.232(d) | Peak To Average Ratio | PASS | ------ |
| 2.1055<br>24.235 | Frequency Stability | PASS | ------ |

Note:

(1) “N/A” denotes test is not applicable in this test report.

### 1.1 TEST FACILITY

The test facilities used to collect the test data of conduted in this report is at the location of Room 108, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China.

BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

### 1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

| Parameter | Uncertainty |
|---|---|
| Transmit Output Power Output Data | U = 0.40 dB |
| RF Power Density, Conducted | U = 0.66 dB |
| Bandwidth | 200kHz: U＝9.06kHz<br>1.4MHz: U＝9.48kHz<br>3MHz: U＝10.86kHz<br>5MHz: U=13.84kHz<br>10MHz: U=22.32kHz<br>15MHz: U=31.9kHz<br>20MHz: U=41.78kHz |
| Band Edge Compliance | U = 0.9 dB |
| Spurious Emissions, Conducted | 20MHz~3.6GHz：U＝0.88dB<br>3.6GHz~8.4GHz：U＝1.08dB<br>8.4GHz~13.6GHz：U＝1.24dB<br>13.6GHz~22GHz：U＝1.34dB<br>22GHz~26.5GHz：U＝1.36dB |
| Frequency Stability | 800MHz: U＝24.08Hz<br>900MHz: U＝24.54Hz<br>1900MHz: U＝34.7Hz<br>2100MHz: U=36.96Hz<br>2300MHz: U=39.24Hz<br>2500MHz: U=41.58Hz<br>2600MHz: U=42.74Hz |

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

### 1.3 TEST ENVIRONMENT CONDITIONS

| Test Item | Temperature | Humidity | Test Voltage | Tested By |
|---|---|---|---|---|
| Output Power & EIRP | 19.5 ~ 25°C | 40 ~ 55% | DC 3.87V | Rick Liao |
| Occupied Bandwidth | 19.5 ~ 25°C | 40 ~ 55% | DC 3.87V | Rick Liao |
| Conducted Spurious Emissions | 19.5 ~ 25°C | 40 ~ 55% | DC 3.87V | Rick Liao |
| Band Edge | 19.5 ~ 25°C | 40 ~ 55% | DC 3.87V | Rick Liao |
| Peak to Average Ratio | 19.5 ~ 25°C | 40 ~ 55% | DC 3.87V | Rick Liao |
| Frequency Stability | Normal & Extreme | 40 ~ 55% | Normal & Extreme | Rick Liao |

# 2. GENERAL INFORMATION

## 2.1 GENERAL DESCRIPTION OF EUT

| | | | |
|---|---|---|---|
| Equipment | Smart Phone | | |
| Brand Name | HONOR | | |
| Test Model | ANY-NX1 | | |
| Series Model | N/A | | |
| Model Difference(s) | N/A | | |
| Hardware Version | HN3ANYM | | |
| Software Version | 4.2.0.42(C900E42R1P3) | | |
| Power Source | 1# DC voltage supplied from AC adapter.<br>2# Supplied from battery. | | |
| Power Rating | 1# I/P: 100-240V~ 50/60Hz 1.8A O/P: 5V ⎓ 2A or 10V ⎓ 4A or 11V ⎓ 6A Max<br>2# DC 3.87V, Rated Capacity:4700mAh | | |
| IMEI No. | 865253060027868, 865253060027462, 865253060027488, 865253060027173 | | |
| Modulation Type | GSM 1900/GPRS 1900/ EDGE 1900 | GMSK, 8PSK | |
| | WCDMA/HSDPA/HSUPA | UL: QPSK | |
| Max. EIRP | GSM 1900 | 29.79 | dBm |
| | WCDMA Band II | 22.40 | dBm |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

| PCS 1900 | | | | |
|---|---|---|---|---|
| Test Frequency ID | UARFCN | Frequency of Uplink (MHz) | UARFCN | Frequency of Downlink (MHz) |
| Low Range | 512 | 1850.2 | 528 | 1930.2 |
| Mid Range | 661 | 1880 | 677 | 1960 |
| High Range | 810 | 1909.8 | 826 | 1989.8 |

| WCDMA Band II | | | | |
|---|---|---|---|---|
| Test Frequency ID | UARFCN | Frequency of Uplink (MHz) | UARFCN | Frequency of Downlink (MHz) |
| Low Range | 9262 | 1852.4 | 9662 | 1932.4 |
| Mid Range | 9400 | 1880.0 | 9800 | 1960.0 |
| High Range | 9538 | 1907.6 | 9938 | 1987.6 |

3. Table for Filed Antenna:

| Brand | Model Name | Antenna Type | Connector | Gain (dBi) | Note |
|---|---|---|---|---|---|
| N/A | N/A | Integral | N/A | -0.7 | GSM 850 |
| | | | | -0.7 | WCDMA Band V |

Note: The antenna gain is provided by the manufacturer.

4. The EUT contains following accessory devices:

| Object / Part No. | Manufacturer / Trademark | Type / Model Name | Technical Data |
|---|---|---|---|
| Adapter | HONOR Device Co., Ltd. | HW-110600E00 | I/P: 100-240V ~50/60Hz, 1.8A O/P: 5V ⎓ 2A or 10V ⎓ 4A or 11V ⎓ 6A Max |
| | | HW-110600B00 | |
| | | HW-110600U00 | |
| | | HN-110600E00 | |
| | | HN-110600B00 | |
| | | HN-110600U00 | |
| Battery | | HB466596EFW | Rated capacity: 4700 mAh Nominal Voltage: +3.87V Charging Voltage: +4.45V |

## 2.2 DESCRIPTION OF TEST MODES

Test Modes in the report are described below:

| Test Mode | Test Modes Description |
|---|---|
| GSM/TM1 | GSM system, GSM, GMSK modulation |
| GSM/TM2 | GSM system, GPRS, GMSK modulation |
| GSM/TM3 | GSM system, EDGE, 8PSK modulation |
| UMTS/TM1 | WCDMA system, QPSK modulation |

Note: The test mode(s) are selected according to relevant radio technology specifications.

Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

| PCS 1900 MODE | | | |
|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Mode |
| Output Power & EIRP | 512 to 810 | 512, 661, 810 | GSM, GPRS, EDGE |
| Peak to Average Ratio | 512 to 810 | 512, 661, 810 | GSM, GPRS, EDGE |
| Modulation Characteristics | 512 to 810 | 661 | GSM, GPRS, EDGE |
| Occupied Bandwidth | 512 to 810 | 512, 661, 810 | GSM, GPRS, EDGE |
| Band Edge | 512 to 810 | 512, 810 | GSM, GPRS, EDGE |
| Conducted Spurious Emissions | 512 to 810 | 512, 661, 810 | GSM, GPRS, EDGE |
| Frequency Stability | 512 to 810 | 512, 661, 810 | GSM, GPRS, EDGE |

| WCDMA BAND II MODE | | | |
|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Mode |
| Output Power & EIRP | 9262 to 9538 | 9262, 9400, 9538 | WCDMA |
| Peak to Average Ratio | 9262 to 9538 | 9262, 9400, 9538 | WCDMA |
| Modulation Characteristics | 9262 to 9538 | 9400 | WCDMA |
| Occupied Bandwidth | 9262 to 9538 | 9262, 9400, 9538 | WCDMA |
| Band Edge | 9262 to 9538 | 9262, 9538 | WCDMA |
| Conducted Spurious Emissions | 9262 to 9538 | 9262, 9400, 9538 | WCDMA |
| Frequency Stability | 9262 to 9538 | 9262, 9400, 9538 | WCDMA |

# 3. TEST RESULT

## 3.1 OUTPUT POWER MEASUREMENT

### 3.1.1 LIMIT

Mobile / Portable station are limited to 7 watts e.r.p.

### 3.1.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.

**EIRP / ERP:**

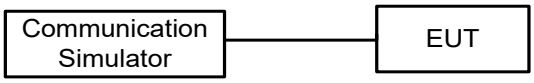
EIRP = Output Power + Antenan gain
ERP = EIPR - 2.15dBi

**Output Power:**

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

### 3.1.3 TEST SETUP LAYOUT

**Output Power Measurement**




### 3.1.4 TEST DEVIATION

No deviation

### 3.1.5 TEST RESULTS

Please refer to the APPENDIX.

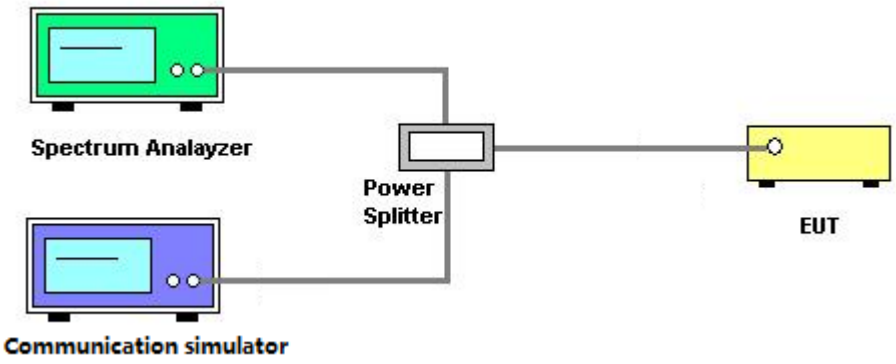
## 3.2 OCCUPIED BANDWIDTH MEASUREMENT

### 3.2.1 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 4.

1. The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth and 26dB bandwidth.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. RBW=(1% ~ 5%)*EBW
   VBW≥3* RBW
4. Set spectrum analyzer with Peak detector.

### 3.2.2 TEST SETUP LAYOUT




### 3.2.3 TEST DEVIATION

No deviation

### 3.2.4 TEST RESULTS

Please refer to the APPENDIX.

## 3.3 CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

### 3.3.1 LIMIT

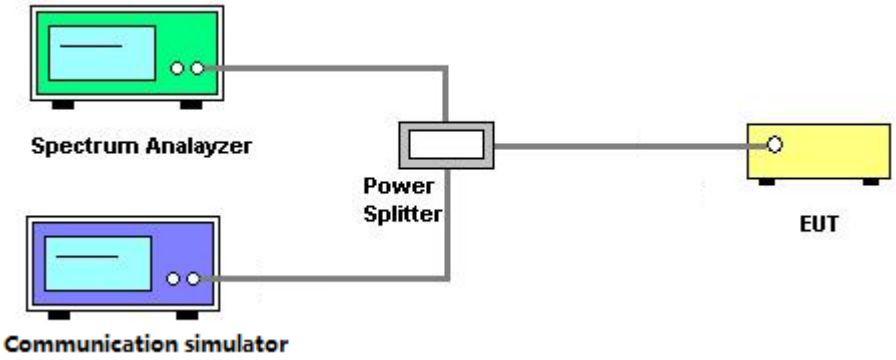
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

### 3.3.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW>=1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with Peak detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 3.3.3 TEST SETUP LAYOUT




### 3.3.4 TEST DEVIATION

No deviation

### 3.3.5 TEST RESULTS

Please refer to the APPENDIX.

## 3.4 BAND EDGE MEASUREMENT

### 3.4.1 LIMIT

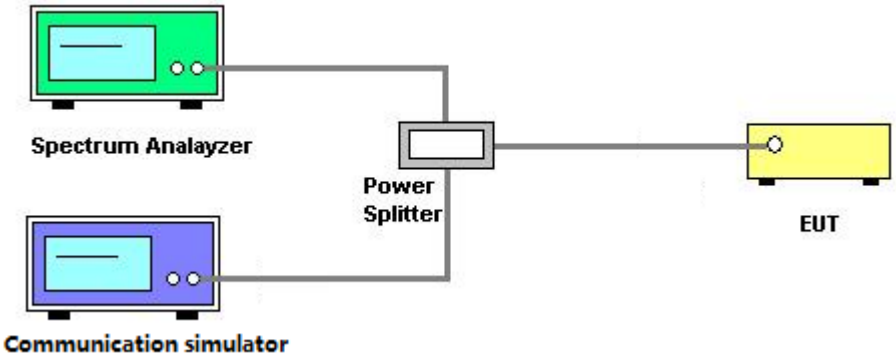
A Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

### 3.4.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. All measurements were done at low and high operational frequency range.
2. Record the max trace plot into the test report.

### 3.4.3 TEST SETUP LAYOUT




### 3.4.4 TEST DEVIATION

No deviation

### 3.4.5 TEST RESULTS

Please refer to the APPENDIX.

## 3.5 PEAK TO AVERAGE RATIO MEASUREMENT

### 3.5.1 LIMIT

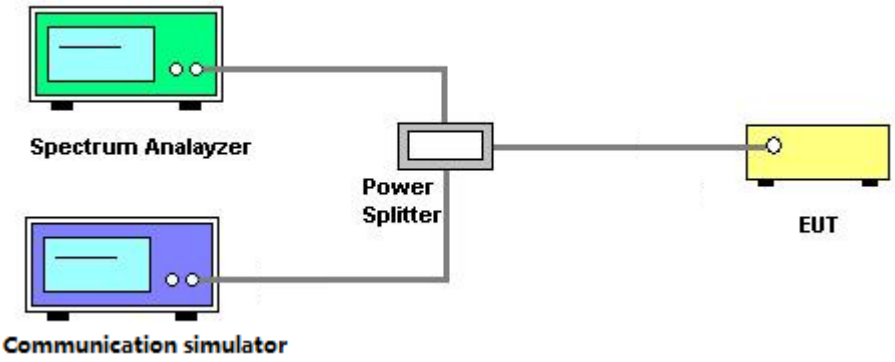
In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 3.5.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 5.7.

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

### 3.5.3 TEST SETUP LAYOUT




### 3.5.4 TEST DEVIATION

No deviation

### 3.5.5 TEST RESULTS

Please refer to the APPENDIX.

## 3.6 FREQUENCY STABILITY MEASUREMENT

### 3.6.1 LIMIT

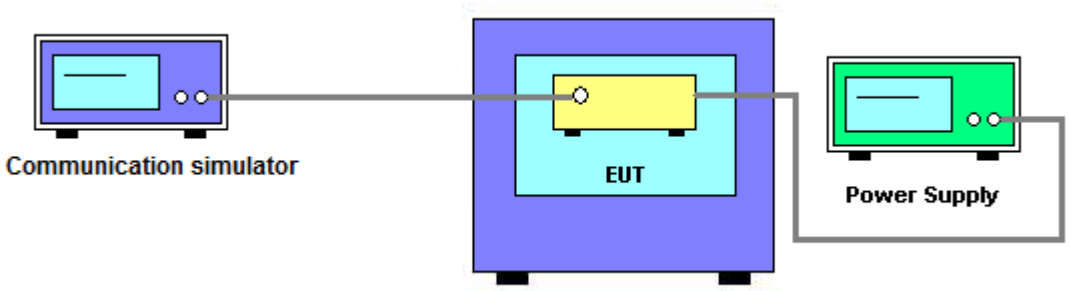
±1.5 ppm is for base and fixed station. ±2.5 ppm is for mobile station.

### 3.6.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 9.

1. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
2. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
3. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5°C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
4. The frequency error was recorded frequency error from the communication simulator.

### 3.6.3 TEST SETUP LAYOUT




### 3.6.4 TEST DEVIATION

No deviation

### 3.6.5 TEST RESULTS

Please refer to the APPENDIX.

## 4. LIST OF MEASUREMENT EQUIPMENTS

| Conducted Measurement | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Temperature Chamber | WEISS | WKL64/40 | 56246014990010 | May 24, 2022 |
| 2 | Universal Radio Communication Tester | R&S | CMW500 | 167224 | Sep. 27, 2022 |
| 3 | Universal Radio Communication Tester | R&S | CMW500 | 169872 | May 13, 2022 |
| 4 | Universal Radio Communication Tester | R&S | CMW500 | 169873 | May 13, 2022 |
| 5 | Signal Analyzer | R&S | FSW26 | 102253 | May 13, 2022 |
| 6 | Signal Analyzer | R&S | FSW43 | 101998 | May 13, 2022 |
| 7 | Vector Signal Generator | R&S | SMW200A | 109896 | Sep. 27, 2022 |
| 8 | Vector Signal Generator | R&S | SMW200A | 109897 | Sep. 27, 2022 |

Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

**End of Test Report**