**Prüfbericht - Produkte**
*Test Report - Products*

TÜVRheinland®

| | | | | |
|---|---|---|---|---|
| **Prüfbericht-Nr.:** *Test report no.:* | **60412422 001** | **Auftrags-Nr.:** *Order no.:* | 168277703 | Seite 1 von 19 *Page 1 of 19* |
| **Kunden-Referenz-Nr.:** *Client reference no.:* | N/A | **Auftragsdatum:** *Order date:* | 2020-08-13 | |
| **Auftraggeber:** *Client:* | **Cherry GmbH** Cherrystr.,91275 Auerbach/OPf. Germany | | | |
| **Prüfgegenstand:** *Test item:* | Wireless Desktop | | | |
| **Bezeichnung / Typ-Nr.:** *Identification / Type no.:* | JD-70M (Trademark: CHERRY) | | | |
| **Auftrags-Inhalt:** *Order content:* | FCC approval | | | |
| **Prüfgrundlage:** *Test specification:* | CFR47 FCC Part 15: Subpart C Section 15.249<br>CFR47 FCC Part 15: Subpart C Section 15.209<br>CFR47 FCC Part 2: Section 2.1093 | | | |
| **Wareneingangsdatum:** *Date of sample receipt:* | 2020-08-13 | Please refer to photo documents | | |
| **Prüfmuster-Nr.:** *Test sample no.:* | A002887787-001, 002 | | | |
| **Prüfzeitraum:** *Testing period:* | 2020-08-14 – 2020-09-18 | | | |
| **Ort der Prüfung:** *Place of testing:* | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| **Prüflaboratorium:** *Testing laboratory:* | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| **Prüfergebnis*:** *Test result*:* | Pass | | | |

| | | | |
|---|---|---|---|
| ***geprüft von:*** *tested by:* | | **genehmigt von:** *authorized by:* | |
| ***Datum:*** *Date:* 2020-09-21 | Alex Lan | **Ausstellungsdatum:** *Issue date:* 2020-09-21 | Winnie Hou |
| **Stellung** / Position | Alex Lan / Senior Project Engineer | **Stellung** / Position | Winnie Hou / Technical Certifier |

**Sonstiges /** *Other:*

FCC ID: GDDJD-70M

| | |
|---|---|
| **Zustand des Prüfgegenstandes bei Anlieferung:** *Condition of the test item at delivery:* | Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged:* |

| | | | | | |
|---|---|---|---|---|---|
| * Legende: | 1 = sehr gut | 2 = gut | 3 = befriedigend | 4 = ausreichend | 5 = mangelhalt |
| | P(ass) = entspricht o.g. Prüfgrundlage(n) | | F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | N/A = nicht anwendbar | N/T = nicht getestet |
| *Legend:* | *1 = very good* | *2 = good* | *3 = satisfactory* | *4 = sufficient* | *5 = poor* |
| | *P(ass) = passed a.m. test specifications(s)* | | *F(ail) = failed a.m. test specifications(s)* | *N/A = not applicable* | *N/T = not tested* |

**Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.**

*This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.*

V05

# *Test Summary*

**5.1.1 ANTENNA REQUIREMENT**
*RESULT: Pass*

**5.1.2 FUNDAMENTAL & HARMONICS RADIATED EMISSION**
*RESULT: Pass*

**5.1.3 20DB BANDWIDTH**
*RESULT: Pass*

**5.1.4 RADIATED SPURIOUS EMISSION & BAND EDGE**
*RESULT: Pass*

**6.1.1 ELECTROMAGNETIC FIELDS**
*RESULT: Pass*

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# 1 General Remarks

## 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results of General 2.4GHz wireless.

# 2 Test Sites

## 2.1 Test Facilities

**TÜV Rheinland (Shenzhen) Co., Ltd. Testing Center**

No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China

FCC Registration No.: 694916

IC Registration No.: 25069

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

| **Radio Spectrum Testing** | | | | |
|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal. Until** |
| Wireless Connectivity Tester | Rohde & Schwarz | CMW270 | 101375 | 2021-08-30 |
| Signal Analyzer | Rohde & Schwarz | FSV 40 | 101441 | 2021-08-30 |
| Vector Signal Generator | Rohde & Schwarz | SMBV100A | 263301 | 2021-08-30 |
| Signal Generator | Rohde & Schwarz | SMB100A | 115186 | 2021-08-30 |
| OSP | Rohde & Schwarz | OSP 150 | 101017 | 2021-12-20 |
| Control PC | DELL | OptiPlex 7050 | FTJZ9P2 | N/A |
| Test Software | Rohde & Schwarz | WMS32 (V10.40.10) | N/A | N/A |
| Power Meter | Rohde & Schwarz | NRP2 | 107105 | 2021-12-20 |
| Wideband Power Sensor | Rohde & Schwarz | NRP-Z81 | 105350 | 2021-12-20 |
| **Unwanted Emission Testing** | | | | |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal. Until** |
| Signal Generator | Rohde & Schwarz | SMB100A | 180840 | 2021-08-30 |
| Wideband Radio Communication Tester | Rohde & Schwarz | CMW500 | 165339 | 2021-08-30 |
| Signal Analyzer | Rohde & Schwarz | FSV 40 | 101440 | 2021-08-30 |
| System Controller Interface | Rohde & Schwarz | SCI-100 | S10010036 | N/A |
| Filterbank | Rohde & Schwarz | CDMA | 100751 | 2021-08-30 |
| Filterbank | Rohde & Schwarz | GSM | 100811 | 2021-08-30 |
| OSP | Rohde & Schwarz | OSP 120 | 102041 | N/A |
| OSP | Rohde & Schwarz | OSP 150 | 101385 | N/A |
| Pre-amplifier | Rohde & Schwarz | SCU08F1 | 08320030 | 2021-08-30 |
| Amplifier | Rohde & Schwarz | SCU-18F | 180079 | 2021-08-30 |
| Amplifier | Rohde & Schwarz | SCU40A | 100450 | 2021-09-03 |
| Trilog Broadband Antenna (30 MHz - 1 GHz) | Schwarzbeck | VULB9162 | 192 | 2021-09-02 |
| Double-Ridged Antenna (1 -18 GHz) | ETS-LINDGREN | 3117 | 00218719 | 2021-09-02 |
| Wideband Ridged Horn Antenna (12-18 GHz) | Steatite | QMS-00208 | 18312 | 2021-09-02 |
| Wideband Ridged Horn Antenna (18-40 GHz) | Steatite | QMS-00880 | 19066 | 2021-09-02 |
| Biconical Broadband Antenna (30 MHz - 1 GHz) | Schwarzbeck | VUBA 9117 | 357 | 2021-09-02 |

| | | | | |
|---|---|---|---|---|
| Double Ridged Broadband Horn Antenna (1 – 18 GHz) | Schwarzbeck | BBHA 9120 D | 01760 | 2021-09-02 |
| Broadband Horn Antenna (15 – 40 GHz) | Schwarzbeck | BBHA 9170 | 00862 | 2021-09-02 |
| Test software | Rohde & Schwarz | EMC32 (V10.40.00) | N/A | N/A |
| Control PC | Dell | OptiPlex 7050 | 36NW9P2 | N/A |

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

| Item | | Extended Uncertainty |
|---|---|---|
| Radiated Emission (30-1000MHz) | Field strength (dBµV/m) | ± 5.16 dB |
| Radiated Emission (above 1000MHz) | Field strength (dBµV/m) | ± 2.22 dB |
| Radio Spectrum | | ± 4.51 dB |

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Guangdong) Ltd. file for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Testing Center Test facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

# 3 General Product Information

## 3.1 Product Function and Intended Use

The EUT is Wireless Mouse; it supports general 2.4GHz wireless technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

## 3.2 Ratings and System Details

**Table 2: Technical Specification of EUT**

| General Information of EUT | Value |
|---|---|
| Kind of Equipment | Wireless Desktop |
| Type Designation | JD-70M |
| FCC ID | GDDJD-70M |
| Operating Voltage | DC 3V via 2*AAA battery |
| Testing Voltage | DC 3V |
| Operating Frequency | 2408 ~ 2474MHz |
| Type of Modulation | GFSK |
| Channel Number | 34 channel |
| Channel Separation | 2 MHz |
| Antenna Type | Integral Antenna |
| Antenna number | 1 |
| Antenna Gain | -0.61 dBi Max |

**Table 3: RF Channel and Frequency**

| RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) |
|---|---|---|---|---|---|---|---|
| **00** | **2408.00** | 09 | 2426.00 | 18 | 2444.00 | 27 | 2462.00 |
| 01 | 2410.00 | 10 | 2428.00 | 19 | 2446.00 | 28 | 2464.00 |
| 02 | 2412.00 | 11 | 2430.00 | 20 | 2448.00 | 29 | 2466.00 |
| 03 | 2414.00 | 12 | 2432.00 | 21 | 2450.00 | 30 | 2468.00 |
| 04 | 2416.00 | 13 | 2434.00 | 22 | 2452.00 | 31 | 2470.00 |
| 05 | 2418.00 | 14 | 2436.00 | 23 | 2454.00 | 32 | 2472.00 |
| 06 | 2420.00 | 15 | 2438.00 | 24 | 2456.00 | **33** | **2474.00** |
| 07 | 2422.00 | **16** | **2440.00** | 25 | 2458.00 | | |
| 08 | 2424.00 | 17 | 2442.00 | 26 | 2460.00 | | |

## 3.3 Independent Operation Modes

The basic operation modes are:

A. On, transmitting mode
   1. Low channel
   2. Middle channel
   3. High channel

B. On, normal operating

C. Off

## 3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

## 3.5 Submitted Documents

- Application Form
- Block Diagram
- FCC/IC Label and Location Info
- Operation Description
- Photo Document
- Schematics
- User Manual

# 4 Test Set-up and Operation Modes

## 4.1 Principle of Configuration Selection

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

## 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013 & ANSI C63.4:2014.

## 4.3 Special Accessories and Auxiliary Equipment

**Table 4: List of Accessories and Auxiliary Equipment**

| Description | Manufacturer | Model |
|---|---|---|
| Notebook PC | Lenovo | ThinkPad X260 |

## 4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

# 4.5 Test Setup Diagram

**Diagram of Measurement Configuration for Radiation Test (Below 1GHz)**

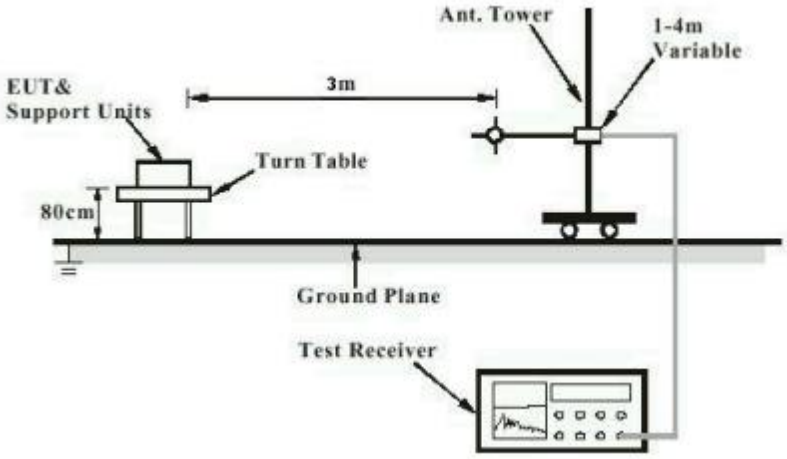



**Diagram of Measurement Configuration for Radiation Test (Above 1GHz)**

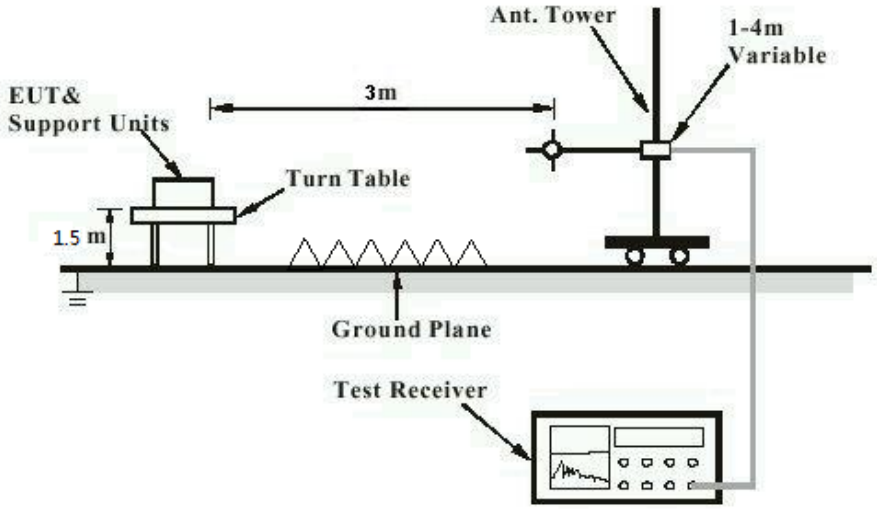
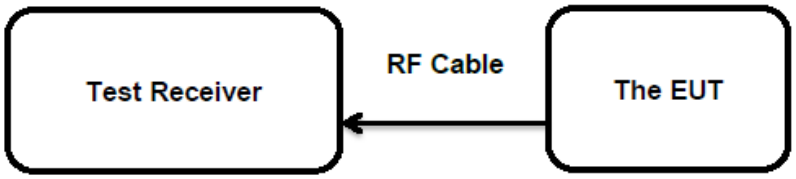


**Diagram of Measurement Configuration for Conducted Transmitter Measurement**



# 5 Test Results

## 5.1 Transmitter Requirement & Test Suites

### 5.1.1 Antenna Requirement

**RESULT:** **Pass**

**Test Specification**

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is -0.61 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

## 5.1.2 Fundamental & Harmonics Radiated Emission

**RESULT:** **Pass**

**Test Specification**

| | | |
|---|---|---|
| Test standard | : | FCC Part 15.249(a) |
| Basic standard | : | ANSI C63.10: 2013 |
| Limits | : | Refer to FCC Part 15.209(a) |
| Kind of test site | : | Shielded Room |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 26.08.2020 |
| Input voltage | : | DC 3V |
| Operation mode | : | A |
| Test channel | : | Low / Middle / High |
| Ambient temperature | : | 22℃ |
| Relative humidity | : | 50 % |
| Atmospheric pressure | : | 100 kPa |

For the measurement records, refer to the appendix B.

## 5.1.3 20dB Bandwidth

**RESULT:** **Pass**

**Test Specification**

| | | |
|---|---|---|
| Test standard | : | FCC Part 15.215 |
| Basic standard | : | ANSI C63.10: 2013 |
| Kind of test site | : | Shielded Room |

**Test Setup**

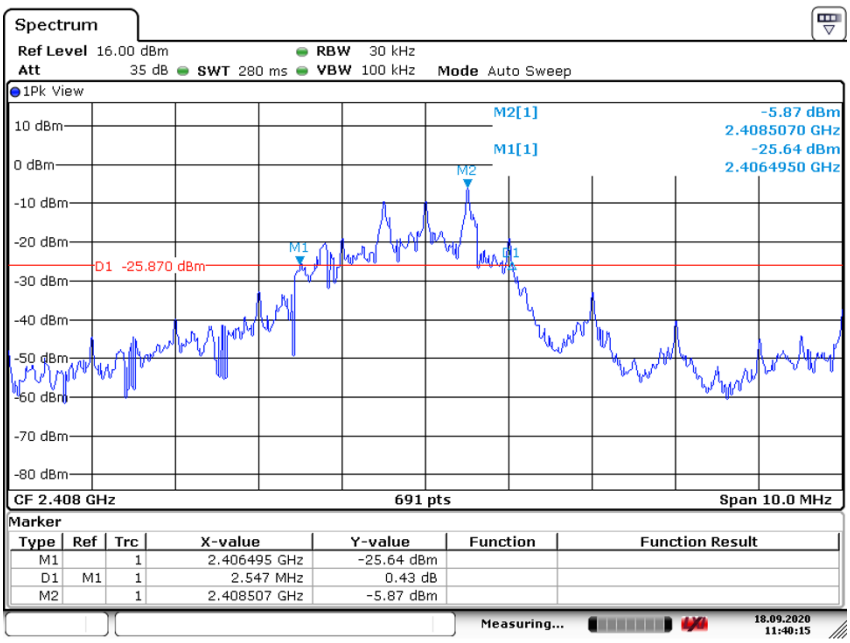
| | | |
|---|---|---|
| Date of testing | : | 04.09.2020 |
| Input voltage | : | DC 3V |
| Operation mode | : | A |
| Ambient temperature | : | 22℃ |
| Relative humidity | : | 50 % |
| Atmospheric pressure | : | 100 kPa |

For details refer to following test result.

**Table 5: Test Result of 20dB Bandwidth**

| Test Channel (MHz) | 20dB Bandwidth (MHz) | Limit (MHz) |
|---|---|---|
| 2408 | 2.547 | Within the assigned frequency band 2400~2483.5MHz |
| 2440 | 2.460 | |
| 2474 | 2.301 | |
| **Maximum Measured Value** | 2.547 | |

For the measurement records, refer to following test plot:

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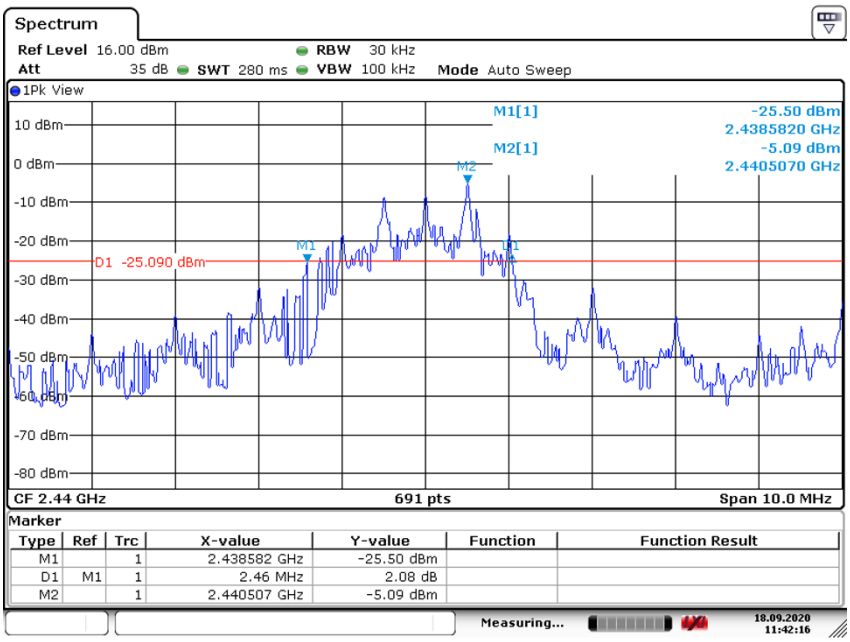


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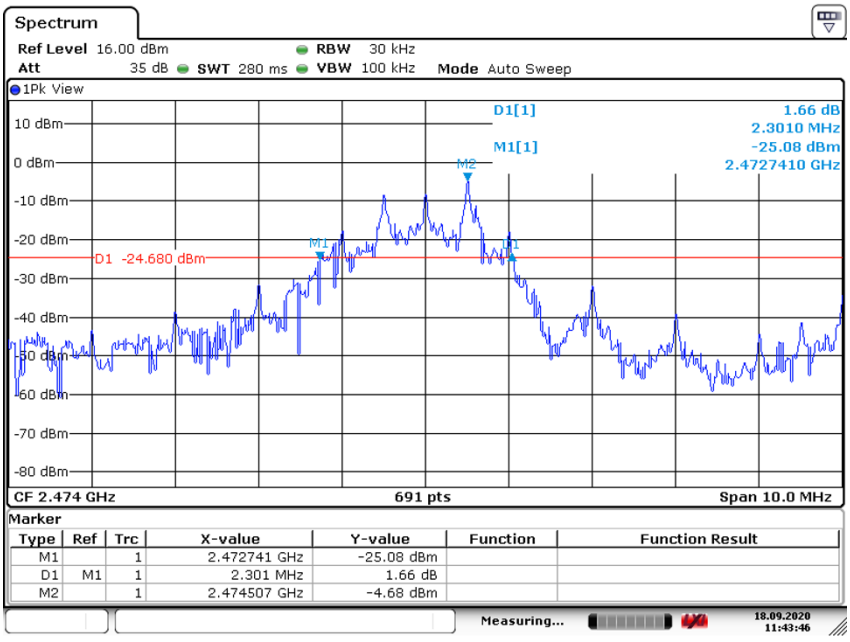


Date: 18.SEP.2020 11:43:46

## 5.1.4 Radiated Spurious Emission & Band Edge

**RESULT:** **Pass**

**Test Specification**

| | | |
|---|---|---|
| Test standard | : | FCC Part 15.249 (d) & FCC Part 15.205 |
| Basic standard | : | ANSI C63.10: 2013 |
| Limits | : | Refer to 15.209(a) of FCC part 15.247(d) |
| Kind of test site | : | 3m Semi-anechoic Chamber |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 26.08.2020 |
| Input voltage | : | DC 3V |
| Operation mode | : | A |
| Ambient temperature | : | 22 ℃ |
| Relative humidity | : | 50 % |
| Atmospheric pressure | : | 100 kPa |

Remark:
Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

# 6 Safety Human Exposure

## 6.1 Radio Frequency Exposure Compliance

### 6.1.1 Electromagnetic Fields

**RESULT:** **Pass**

**Test Specification**

| | | |
|---|---|---|
| Test standard | : | CFR47 FCC Part 2: Section 2.1093<br>CFR47 FCC Part 1: Section 1.1310<br>FCC KDB Publication 447498 D01 v06 |

➢ **Measurement Record:**

The separation distance of the EUT should be 5mm.The measured maximum specified e.i.r.p of the Keyboard is 89.13dBuV/m≈ -6.10dBm, which is far below the SAR exclusion threshold level 10 mW (Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v06.

# 7 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

# 8 List of Tables

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# Appendix B: Test Results of General 2.4GHz

**APPENDIX B: TEST RESULTS OF GENERAL 2.4GHZ** ..... **1**

**APPENDIX B.1: FUNDAMENTAL & HARMONICS RADIATED EMISSION** ..... 2

*30MHz - 1GHz* ..... *2*

*1GHz - 18GHz* ..... *6*

**APPENDIX B.2: TEST RESULTS OF RADIATED EMISSIONS IN RESTRICTED BANDS** ..... 12

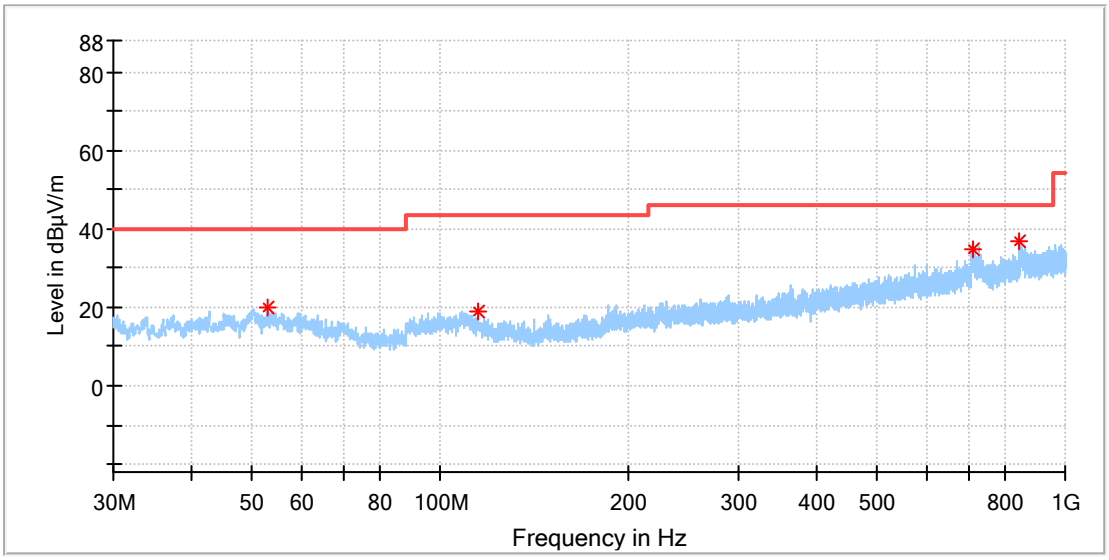
Note: Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz -26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

## Appendix B.1: Fundamental & Harmonics Radiated Emission

30MHz - 1GHz

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Low channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |

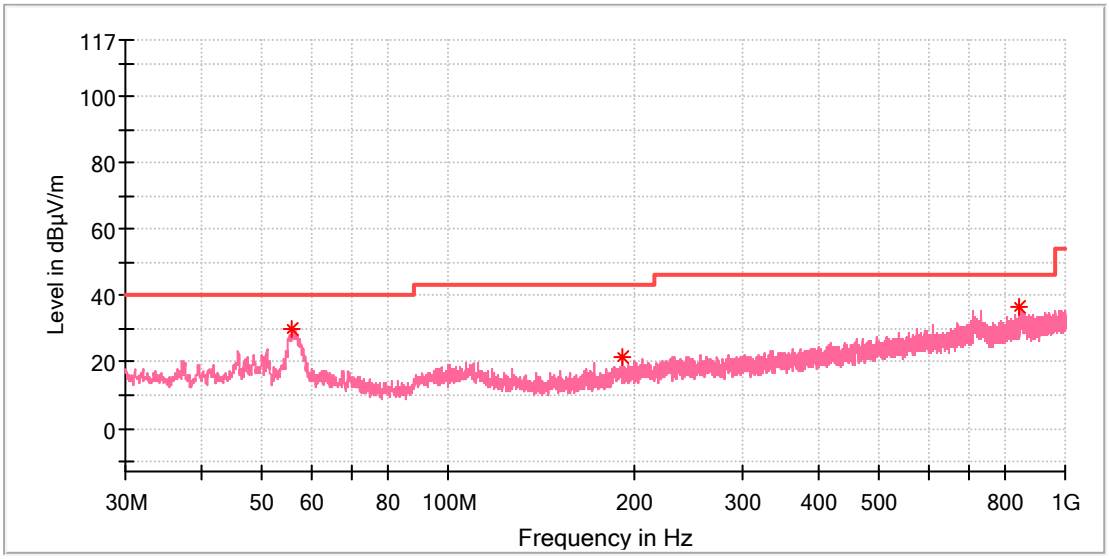



## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 52.843500 | 19.95 | --- | 40.00 | 20.05 | 100.0 | H | 358.0 | -18.7 |
| 115.166000 | 19.13 | --- | 43.50 | 24.37 | 100.0 | H | 53.0 | -20.1 |
| 710.746000 | 34.64 | --- | 46.00 | 11.37 | 100.0 | H | 140.0 | -8.2 |
| 844.897000 | 36.99 | --- | 46.00 | 9.01 | 100.0 | H | 6.0 | -6.0 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Low channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |

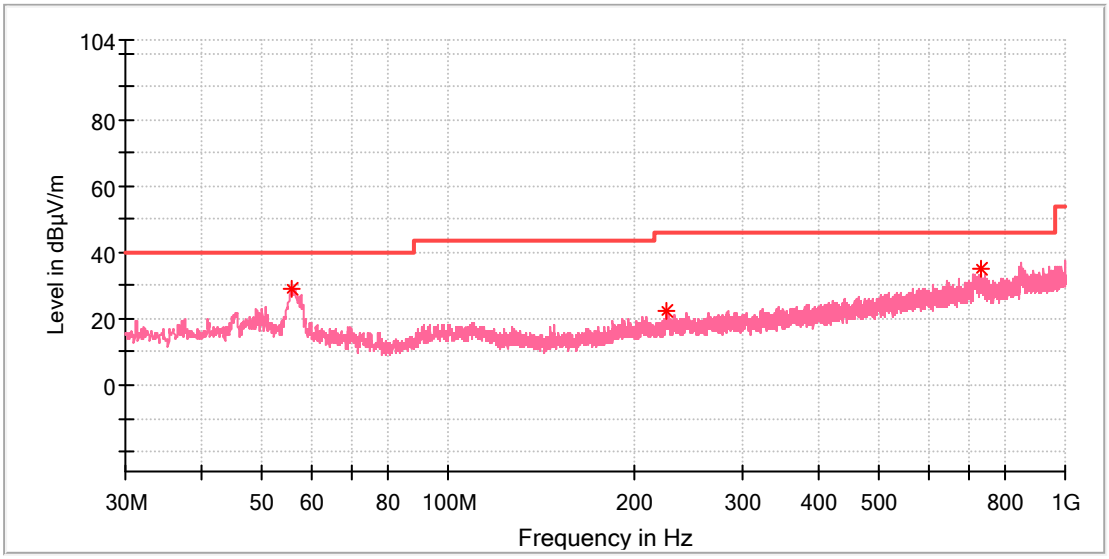



## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 55.947500 | 30.21 | --- | 40.00 | 9.79 | 100.0 | V | 276.0 | -18.8 |
| 191.650500 | 21.32 | --- | 43.50 | 22.18 | 100.0 | V | 235.0 | -19.8 |
| 844.897000 | 36.76 | --- | 46.00 | 9.24 | 100.0 | V | 244.0 | -6.0 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | High channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |

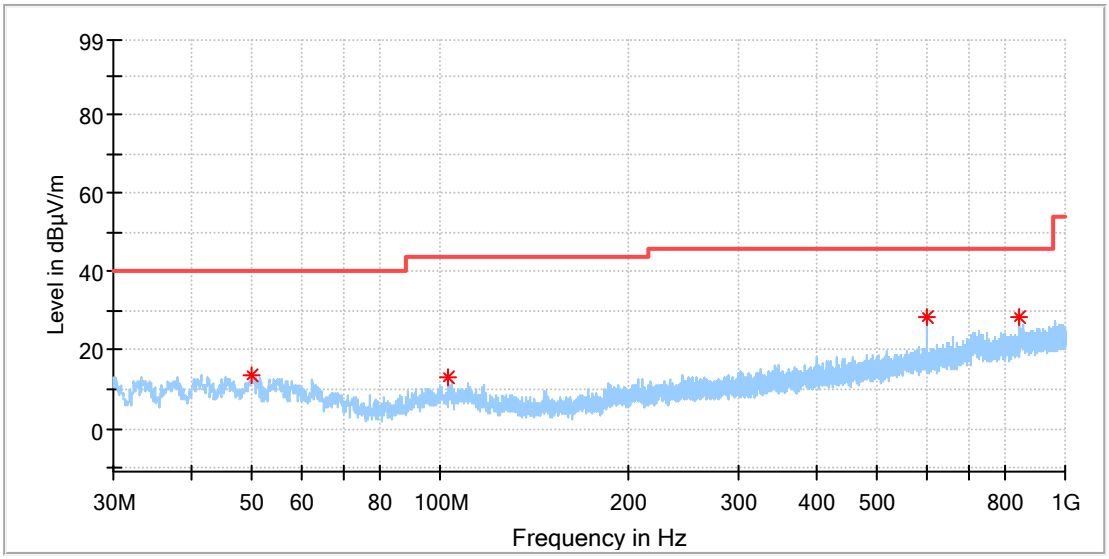



## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 55.947500 | 29.22 | --- | 40.00 | 10.78 | 100.0 | V | 0.0 | -18.8 |
| 226.473500 | 22.18 | --- | 46.00 | 23.82 | 100.0 | V | 104.0 | -18.6 |
| 729.079000 | 34.93 | --- | 46.00 | 11.07 | 100.0 | V | 158.0 | -7.9 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | High channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |



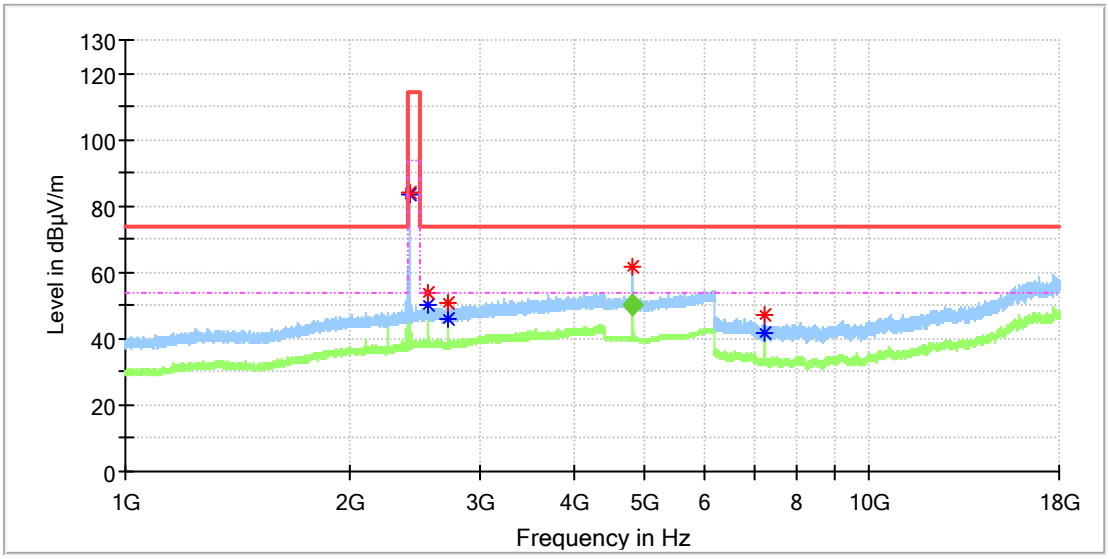

## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 49.885000 | 13.80 | --- | 40.00 | 26.20 | 100.0 | H | 223.0 | -18.6 |
| 103.089500 | 12.95 | --- | 43.50 | 30.55 | 100.0 | H | 105.0 | -19.2 |
| 600.020500 | 28.54 | --- | 46.00 | 17.46 | 100.0 | H | 105.0 | -10.2 |
| 844.800000 | 28.39 | --- | 46.00 | 17.61 | 100.0 | H | 231.0 | -6.0 |

1GHz - 18GHz

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Low channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

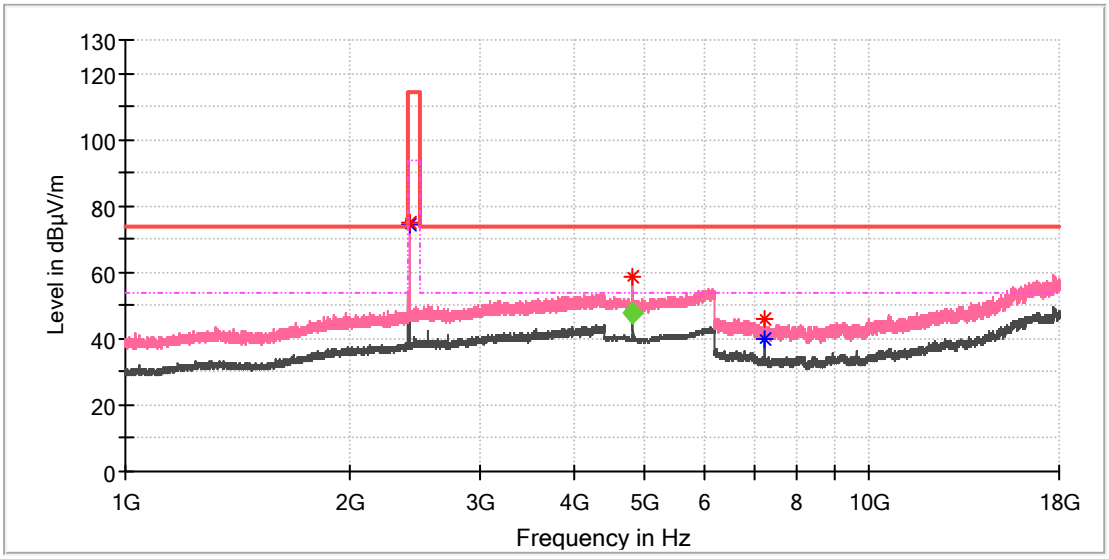
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2407.812500 | 83.80 | --- | 114.00 | 30.20 | 100.0 | H | 239.0 | 7.1 |
| 2408.025000 | --- | 83.33 | 94.00 | 10.67 | 100.0 | H | 239.0 | 7.1 |
| 2557.837500 | 53.66 | --- | 74.00 | 20.34 | 100.0 | H | 127.0 | 7.6 |
| 2558.050000 | --- | 50.46 | 54.00 | 3.54 | 100.0 | H | 127.0 | 7.6 |
| 2708.075000 | 51.03 | --- | 74.00 | 22.97 | 100.0 | H | 300.0 | 7.6 |
| 2708.075000 | --- | 46.10 | 54.00 | 7.90 | 100.0 | H | 300.0 | 7.6 |
| 4816.597222 | 61.48 | --- | 74.00 | 12.52 | 100.0 | H | 122.0 | 13.5 |
| 7223.650000 | 47.38 | --- | 74.00 | 26.62 | 100.0 | H | 98.0 | 8.7 |
| 7223.650000 | --- | 41.72 | 54.00 | 12.28 | 100.0 | H | 98.0 | 8.7 |

## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 4816.016667 | --- | 50.27 | 54.00 | 3.73 | 100.0 | H | 122.0 | 13.5 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Low channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

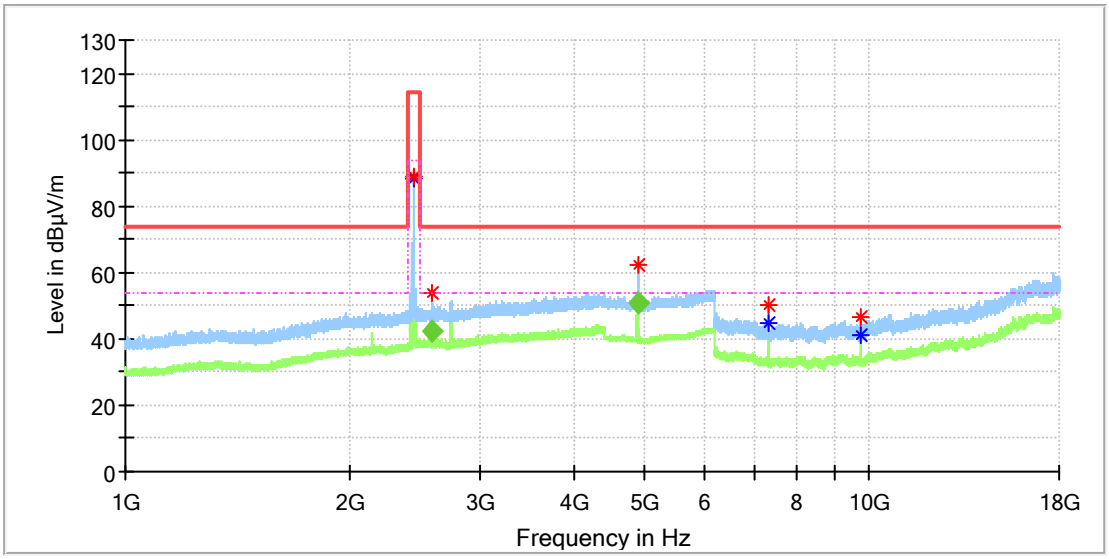
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2408.025000 | --- | 74.29 | 94.00 | 19.71 | 100.0 | V | 326.0 | 7.1 |
| 2408.237500 | 74.83 | --- | 114.00 | 39.17 | 100.0 | V | 326.0 | 7.1 |
| 4815.338889 | 58.79 | --- | 74.00 | 15.21 | 100.0 | V | 199.0 | 13.5 |
| 7223.650000 | 45.95 | --- | 74.00 | 28.05 | 100.0 | V | 298.0 | 8.7 |
| 7223.650000 | --- | 39.63 | 54.00 | 14.37 | 100.0 | V | 298.0 | 8.7 |

## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 4815.994444 | --- | 47.84 | 54.00 | 6.16 | 100.0 | V | 199.0 | 13.5 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Mid channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

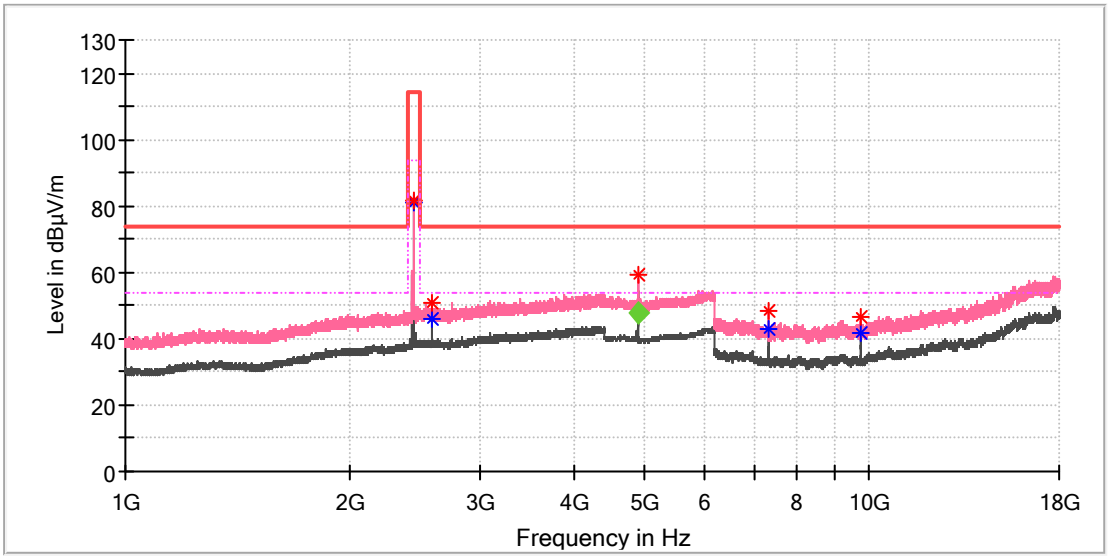
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2440.112500 | 89.13 | --- | 114.00 | 24.87 | 100.0 | H | 326.0 | 7.4 |
| 2440.112500 | --- | 88.56 | 94.00 | 5.44 | 100.0 | H | 326.0 | 7.4 |
| 2590.074375 | 53.93 | --- | 74.00 | 20.07 | 100.0 | H | 0.0 | 7.4 |
| 4879.641667 | 62.28 | --- | 74.00 | 11.72 | 100.0 | H | 327.0 | 13.4 |
| 7319.033333 | 50.24 | --- | 74.00 | 23.76 | 100.0 | H | 235.0 | 8.2 |
| 7320.016667 | --- | 44.50 | 54.00 | 9.50 | 100.0 | H | 235.0 | 8.2 |
| 9761.141667 | --- | 41.18 | 54.00 | 12.82 | 100.0 | H | 188.0 | 10.4 |
| 9761.141667 | 46.65 | --- | 74.00 | 27.35 | 100.0 | H | 188.0 | 10.4 |

## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2590.386250 | --- | 42.10 | 54.00 | 11.90 | 100.0 | H | 0.0 | 7.4 |
| 4879.972222 | --- | 50.72 | 54.00 | 3.28 | 100.0 | H | 327.0 | 13.4 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Mid channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

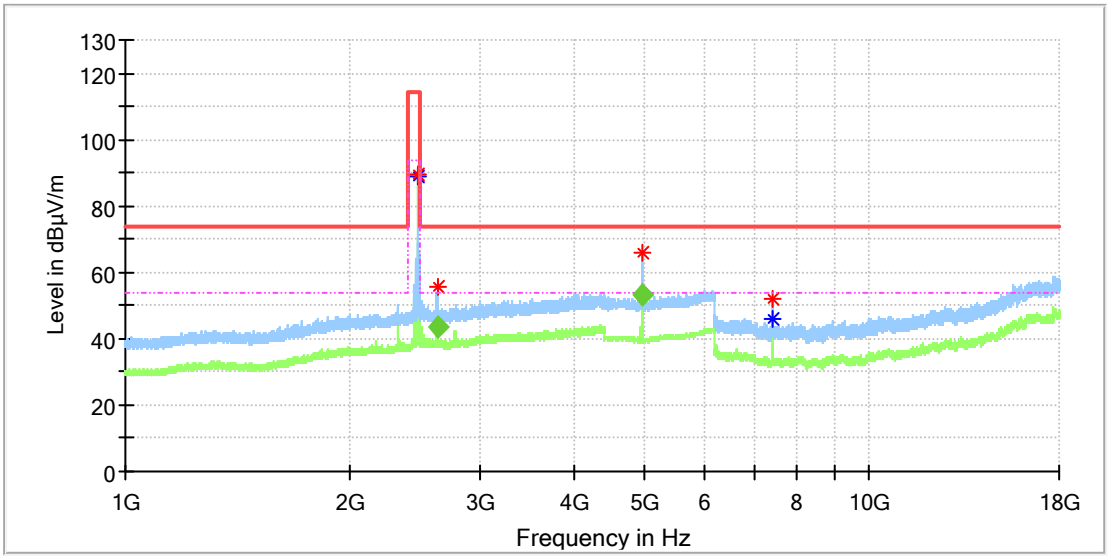
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2440.112500 | --- | 80.93 | 94.00 | 13.07 | 100.0 | V | 210.0 | 7.4 |
| 2440.325000 | 81.60 | --- | 114.00 | 32.40 | 100.0 | V | 210.0 | 7.4 |
| 2590.137500 | --- | 46.18 | 54.00 | 7.82 | 100.0 | V | 210.0 | 7.4 |
| 2590.350000 | 50.59 | --- | 74.00 | 23.41 | 100.0 | V | 210.0 | 7.4 |
| 4879.644444 | 59.03 | --- | 74.00 | 14.97 | 100.0 | V | 35.0 | 13.4 |
| 7319.525000 | 48.54 | --- | 74.00 | 25.46 | 100.0 | V | 168.0 | 8.2 |
| 7320.016667 | --- | 43.20 | 54.00 | 10.80 | 100.0 | V | 168.0 | 8.2 |
| 9760.650000 | 46.59 | --- | 74.00 | 27.41 | 100.0 | V | 168.0 | 10.4 |
| 9761.141667 | --- | 41.90 | 54.00 | 12.10 | 100.0 | V | 168.0 | 10.4 |

## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 4880.072222 | --- | 47.63 | 54.00 | 6.37 | 100.0 | V | 35.0 | 13.4 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | High channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

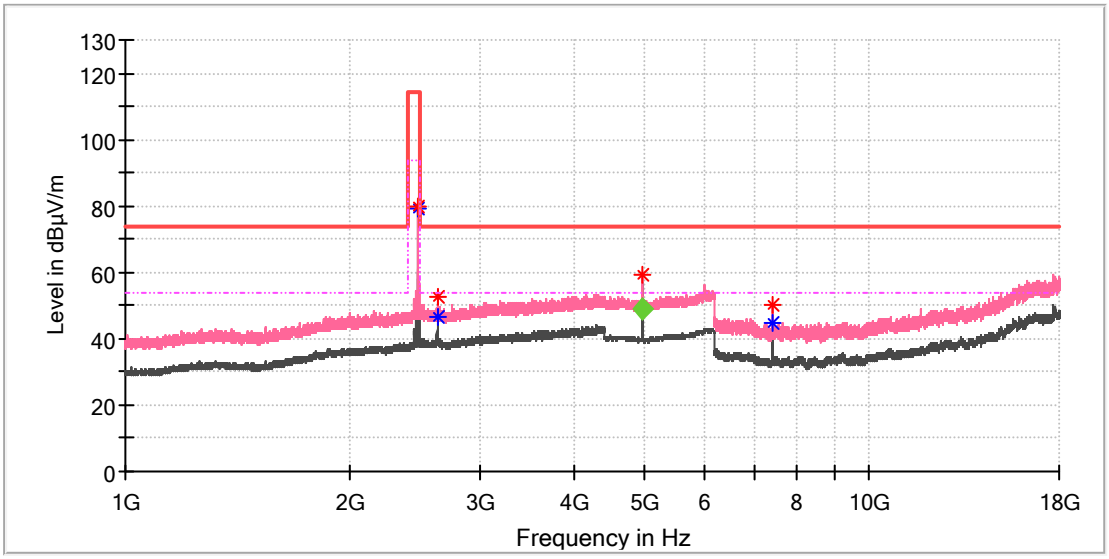
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2473.900000 | --- | 88.83 | 94.00 | 5.17 | 100.0 | H | 353.0 | 7.4 |
| 2474.325000 | 89.63 | --- | 114.00 | 24.37 | 100.0 | H | 353.0 | 7.4 |
| 2624.010625 | 55.38 | --- | 74.00 | 18.62 | 100.0 | H | 353.0 | 7.5 |
| 4948.511111 | 65.85 | --- | 74.00 | 8.15 | 100.0 | H | 323.0 | 13.2 |
| 7422.283333 | --- | 46.06 | 54.00 | 7.94 | 100.0 | H | 229.0 | 8.4 |
| 7422.775000 | 51.77 | --- | 74.00 | 22.23 | 100.0 | H | 229.0 | 8.4 |

## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2624.248125 | --- | 43.51 | 54.00 | 10.49 | 100.0 | H | 353.0 | 7.5 |
| 4948.277778 | --- | 52.95 | 54.00 | 1.05 | 100.0 | H | 323.0 | 13.2 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | High channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2474.112500 | --- | 79.30 | 94.00 | 14.70 | 100.0 | V | 216.0 | 7.4 |
| 2474.325000 | 79.81 | --- | 114.00 | 34.19 | 100.0 | V | 216.0 | 7.4 |
| 2623.925000 | --- | 46.43 | 54.00 | 7.57 | 100.0 | V | 216.0 | 7.5 |
| 2624.350000 | 52.54 | --- | 74.00 | 21.46 | 100.0 | V | 3.0 | 7.5 |
| 4948.605556 | 59.36 | --- | 74.00 | 14.64 | 100.0 | V | 83.0 | 13.2 |
| 7421.791667 | 49.97 | --- | 74.00 | 24.04 | 100.0 | V | 190.0 | 8.4 |
| 7422.283333 | --- | 44.50 | 54.00 | 9.50 | 100.0 | V | 190.0 | 8.4 |

## Final_Result

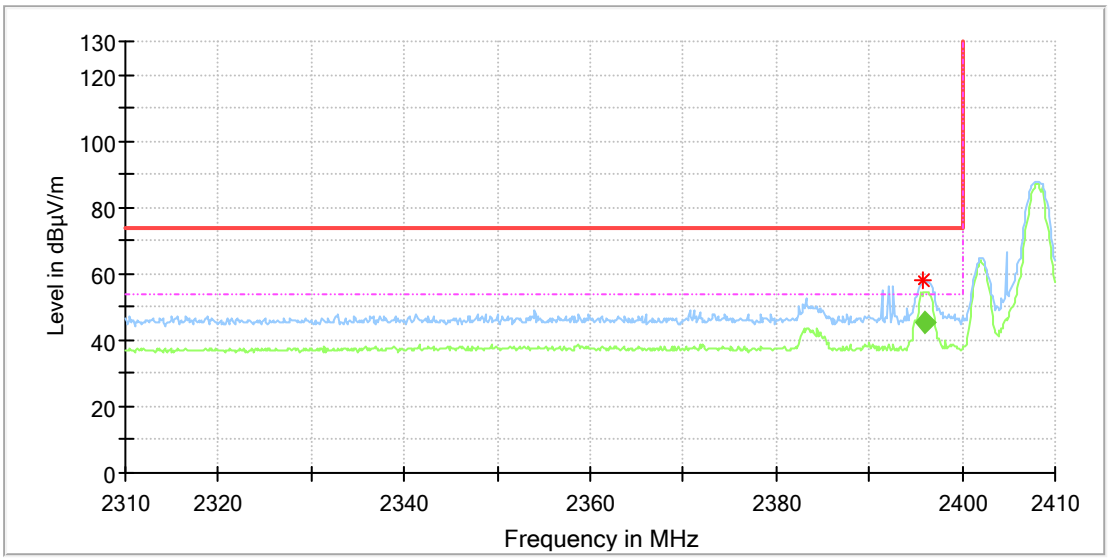
| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 4948.133333 | --- | 48.96 | 54.00 | 5.04 | 100.0 | V | 39.0 | 13.2 |

Note: The measurement results 2402-2483.5MHz was exclusion band, when Band Reject Filter used. So only the radiated spurious emissions of out this exclusion band were evaluated.

## Appendix B.2: Test Results of Radiated Emissions in Restricted Bands

# EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Low channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




# Critical_Freqs

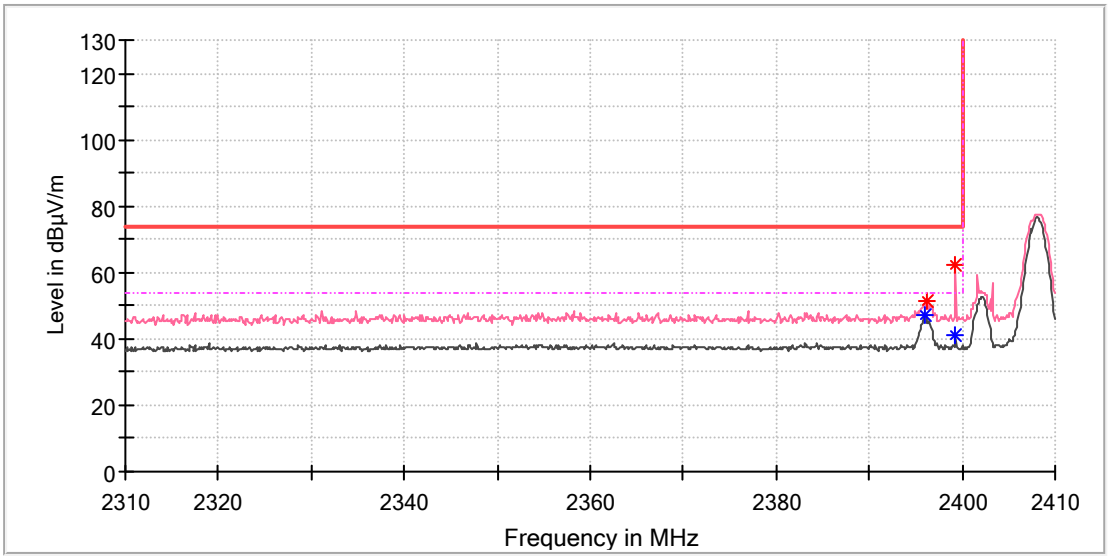
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2395.856875 | 58.18 | --- | 74.00 | 15.82 | 100.0 | H | 143.0 | 7.0 |

# Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2396.035563 | --- | 45.56 | 54.00 | 8.44 | 103.0 | H | 142.0 | 7.0 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | Low channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |

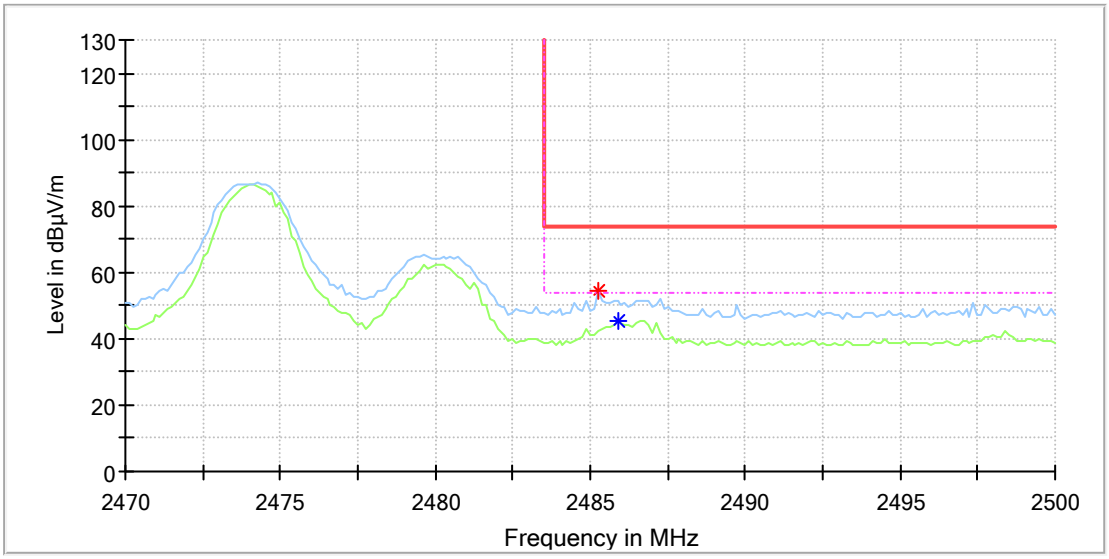



## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2396.000000 | --- | 46.96 | 54.00 | 7.04 | 100.0 | V | 320.0 | 7.0 |
| 2396.125000 | 51.38 | --- | 74.00 | 22.62 | 100.0 | V | 320.0 | 7.0 |
| 2399.250000 | --- | 41.19 | 54.00 | 12.81 | 100.0 | V | 331.0 | 7.0 |
| 2399.250000 | 62.51 | --- | 74.00 | 11.49 | 100.0 | V | 331.0 | 7.0 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | High channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |

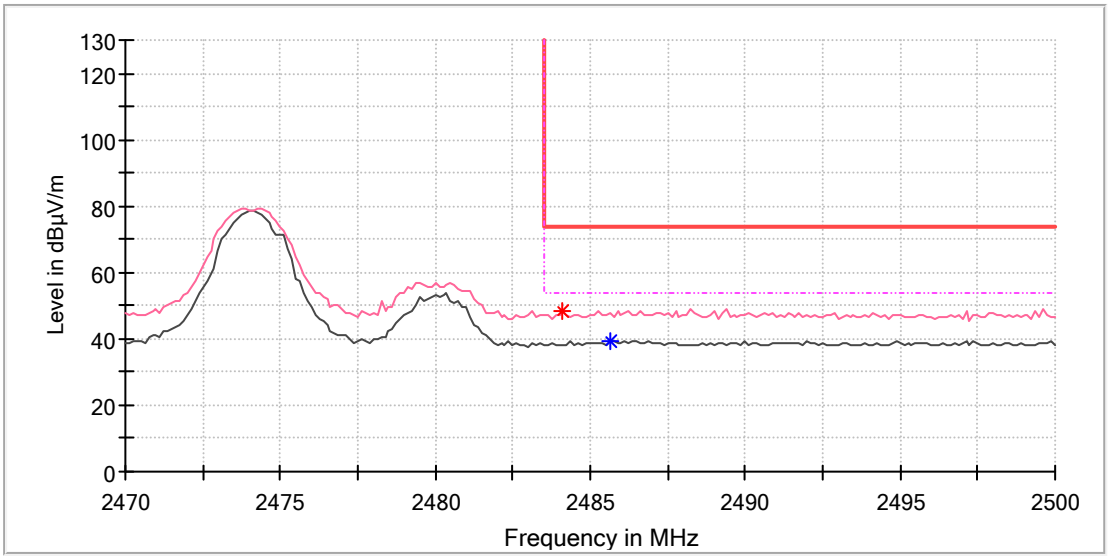



## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2485.250000 | 54.17 | --- | 74.00 | 19.83 | 100.0 | H | 157.0 | 7.4 |
| 2485.875000 | --- | 45.41 | 54.00 | 8.59 | 100.0 | H | 134.0 | 7.4 |

## EUT Information

| | |
|---|---|
| EUT Name: | Wireless Desktop |
| Model: | JD-70M |
| Test Mode: | High channel |
| Test Voltage:: | Battery |
| Remark: | Temp 22 Humi:50% |
| Test Standard: | FCC 15.249 |
| Tested By: | Kei Zhang |
| Reviewed By: | Terry Yin |




## Critical_Freqs

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|---|---|---|---|---|---|---|---|---|
| 2484.125000 | 48.45 | --- | 74.00 | 25.55 | 100.0 | V | 101.0 | 7.4 |
| 2485.625000 | --- | 39.46 | 54.00 | 14.54 | 100.0 | V | 270.0 | 7.4 |