

FCC Test Report

Report No.: AGC00803220601FE03

FCC ID : 2AYO2-URKM-20

APPLICATION PURPOSE : Original Equipment

PRODUCT DESIGNATION: Wireless Mouse

BRAND NAME : N/A

URKM-10, URKM-20, URKM-30, URKM-40, URKM-50,

URKM-60, URKM-70, URKM-80, URKM-90, URKM-10M,

MODEL NAME : URKM-20M, URKM-30M, URKM-40M, URKM-50M,

URKM-60M

APPLICANT: SHENZHEN AIERJI TONGXIN YOUXIAN GONGSI

DATE OF ISSUE : Jun. 21, 2022

STANDARD(S)

TEST PROCEDURE(S)

FCC Part 15 Rules

REPORT VERSION: V1.0

Attestation of Global Comphance (Shenzhen) Co., Ltd





Page 2 of 34

REPORT REVISE RECORD

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0 | / | Jun. 21, 2022 | Valid | Initial Release |



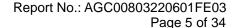
TABLE OF CONTENTS

| 1. VERIFICATION OF CONFORMITY | 5 |
|---|----|
| 2. GENERAL INFORMATION | 6 |
| 2.1. PRODUCT DESCRIPTION | 6 |
| 2.2. TABLE OF CARRIER FREQUENCY | 7 |
| 3. MEASUREMENT UNCERTAINTY | ε |
| 4. DESCRIPTION OF TEST MODES | g |
| 5. SYSTEM TEST CONFIGURATION | 10 |
| 5.1. CONFIGURATION OF EUT SYSTEM | 10 |
| 5.2 EQUIPMENT USED IN TESTED SYSTEM | 10 |
| 5.3. SUMMARY OF TEST RESULTS | 10 |
| 6. TEST FACILITY | 11 |
| 7. RADIATED EMISSION | 12 |
| 7.1TEST LIMIT | 12 |
| 7.2. MEASUREMENT PROCEDURE | 13 |
| 7.3. TEST SETUP | |
| 7.4. TEST RESULT | 16 |
| 8. BAND EDGE EMISSION | 22 |
| 8.1. MEASUREMENT PROCEDURE | 22 |
| 8.2 TEST SETUP | |
| 8.3 RADIATED TEST RESULT | 22 |
| 9. 20DB BANDWIDTH | 27 |
| 9.1. MEASUREMENT PROCEDURE | 27 |
| 9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) | 27 |
| 9.3. MEASUREMENT RESULTS | 28 |
| 10. FCC LINE CONDUCTED EMISSION TEST | 30 |
| 10.1. LIMITS OF LINE CONDUCTED EMISSION TEST | 30 |
| 10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST | 30 |



Report No.: AGC00803220601FE03 Page 4 of 34

| 10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST | 31 |
|---|----|
| 10.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST | 31 |
| 10.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST | 32 |
| APPENDIX A: PHOTOGRAPHS OF TEST SETUP | 34 |
| APPENDIX B: PHOTOGRAPHS OF THE EUT | 34 |





1. VERIFICATION OF CONFORMITY

| Applicant | SHENZHEN AIERJI TONGXIN YOUXIAN GONGSI |
|---------------------------------|--|
| Address | 404, Building 47, Dayun Software Town, 8288 Longgang Avenue, He'ao Community, Yuanshan Street, Longgang District, Shenzhen |
| Manufacturer | Shenzhen Hangshi Technology Co., Ltd |
| Address | Hangshi Technology Park, Democracy West Industry Area, Shajing Town, Bao'an District, Shenzhen, China. |
| Factory | Shenzhen Hangshi Technology Co., Ltd |
| Address | Hangshi Technology Park, Democracy West Industry Area, Shajing Town, Bao'an District, Shenzhen, China. |
| Product Designation | Wireless Mouse |
| Brand Name | N/A |
| Test Model | URKM-10 |
| Series Model | URKM-20, URKM-30, URKM-40, URKM-50, URKM-60, URKM-70, URKM-80, URKM-90, URKM-10M, URKM-20M, URKM-30M, URKM-40M, URKM-50M, URKM-60M |
| Difference description | All the series models are the same as the test model except for the model names. |
| Date of test | Jun. 13, 2022 to Jun. 21, 2022 |
| Deviation | No any deviation from the test method |
| Condition of Test Sample | Normal |
| Test Result | Pass |
| Report Template | AGCRT-US-BR/RF |
| | |

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.249.

Alan Duan
(Project Engineer)

Reviewed By

Calvin Liu
(Reviewer)

Approved By

Max Zhang
(Authorized Officer)

Jun. 21, 2022

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



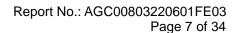
Page 6 of 34

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

| Operation Frequency | 2405 MHz to 2470 MHz | |
|--|----------------------|--|
| Maximum field strength 84.27dBuV/m(average)@3m | | |
| Modulation GFSK | | |
| Number of channels | 8 | |
| Antenna Gain -1.2dBi | | |
| Antenna Designation PCB Antenna (Met 15.203 Antenna requirement) | | |
| Hardware Version | V1.04 | |
| Software Version | V1.1.3 | |
| Power Supply | DC 3.7V by batter | |





2.2. TABLE OF CARRIER FREQUENCY

| Channel Number | Frequency (MHz) |
|----------------|--------------------|
| 1 | 2405 |
| 2 | 2413 |
| 3 | 2422 |
| 4 | 2430 |
| 5 | 2440 |
| 6 | 2450 |
| 7 | 2460 |
| 8 | 2470 |



Page 8 of 34

3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

- Uncertainty of Conducted Emission, Uc = ±3.2 dB
- Uncertainty of Radiated Emission below 1GHz, Uc = ±3.9 dB
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB
- Uncertainty of Occupied Channel Bandwidth: Uc = ±2 %



Page 9 of 34

4. DESCRIPTION OF TEST MODES

| NO. | TEST MODE DESCRIPTION |
|-----|-----------------------|
| 1 | Low channel GFSK |
| 2 | Middle channel GFSK |
| 3 | High channel GFSK |

Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.



Page 10 of 34

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Radiated Emission Configure:

| EUT |
|-----|
|-----|

Conducted Emission Configure:

| EUT |
|-----|
|-----|

5.2 EQUIPMENT USED IN TESTED SYSTEM

| Item | Equipment | Model No. | ID or Specification | Remark |
|------|----------------|--------------|---------------------|--------|
| 1 | Wireless Mouse | URKM-10 | 2AYO2-URKM-20 | EUT |
| 2 | PC | D15 | | AE |
| 3 | Adapter(PC) | HW-200325CP0 | | AE |

5.3. SUMMARY OF TEST RESULTS

| FCC RULES | DESCRIPTION OF TEST | RESULT |
|----------------|---------------------|-----------|
| §15.249&15.209 | Radiated Emission | Compliant |
| §15.249 | Band Edges | Compliant |
| §15.215 | 20dB bandwidth | Compliant |
| §15.207 | Conducted Emission | Compliant |



Page 11 of 34

6. TEST FACILITY

| Test Site | Attestation of Global Compliance (Shenzhen) Co., Ltd |
|-----------------------------------|--|
| Location | 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China |
| Designation Number | CN1259 |
| FCC Test Firm Registration Number | 975832 |
| A2LA Cert. No. | 5054.02 |
| Description | Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA |

TEST EQUIPMENT OF CONDUCTED EMISSION TEST

| Equipment | Manufacturer | Model | S/N | Cal. Date | Cal. Due |
|---------------|--------------|------------------|--------|---------------|---------------|
| TEST RECEIVER | R&S | ESPI | 101206 | Mar.28, 2022 | Mar.27, 2023 |
| LISN | R&S | ESH2-Z5 | 100086 | Jun. 09, 2022 | Jun. 08, 2023 |
| Test software | R&S | ES-K1(Ver.V1.71) | N/A | N/A | N/A |

TEST EQUIPMENT OF RADIATED EMISSION TEST

| Equipment | Manufacturer | Model | S/N | Cal. Date | Cal. Due |
|--------------------------------------|----------------|--------------|------------|---------------|---------------|
| TEST RECEIVER | R&S | ESCI | 10096 | Sep. 06, 2021 | Sep. 05, 2022 |
| EXA Signal Analyzer | Aglient | N9010A | MY53470504 | Nov. 17, 2021 | Nov. 16, 2022 |
| 2.4GHz Fliter | EM Electronics | 2400-2500MHz | N/A | Mar. 22, 2022 | Mar. 21, 2024 |
| Attenuator | ZHINAN | E-002 | N/A | Sep. 03, 2020 | Sep. 02, 2022 |
| Horn antenna | SCHWARZBECK | BBHA 9170 | #768 | Oct. 31, 2021 | Oct. 30, 2023 |
| Active loop antenna (9K-30MHz) | ZHINAN | ZN30900C | 18051 | Mar. 12, 2022 | Mar. 11, 2024 |
| Double-Ridged Waveguide Horn | ETS LINDGREN | 3117 | 00034609 | Apr. 23, 2021 | Apr. 22, 2023 |
| Broadband Preamplifier | ETS LINDGREN | 3117PA | 00225134 | Sep. 03, 2020 | Sep. 02, 2022 |
| ANTENNA | SCHWARZBECK | VULB9168 | 494 | Jan. 08, 2020 | Jan. 07, 2023 |



Page 12 of 34

7. RADIATED EMISSION

7.1TEST LIMIT

Standard FCC15.249

| Fundamental Frequency | Field Strength of Fundamental | Field Strength of Harmonics |
|-----------------------|-------------------------------|-----------------------------|
| | (millivolts/meter) | (microvolts/meter) |
| 900-928MHz | 50 | 500 |
| 2400-2483.5MHz | 50 | 500 |
| 5725-5875MHz | 50 | 500 |
| 24.0-24.25GHz | 250 | 2500 |

Standard FCC 15.209

| Frequency | Distance | Field Strengths Limit | | | |
|---------------|----------|--|----------|--|--|
| (MHz) | Meters | μ V/m | dB(μV)/m | | |
| 0.009 ~ 0.490 | 300 | 2400/F(kHz) | | | |
| 0.490 ~ 1.705 | 30 | 24000/F(kHz) | | | |
| 1.705 ~ 30 | 30 | 30 | | | |
| 30 ~ 88 | 3 | 100 | 40.0 | | |
| 88 ~ 216 | 3 | 150 | 43.5 | | |
| 216 ~ 960 | 3 | 200 | 46.0 | | |
| 960 ~ 1000 | 3 | 500 | 54.0 | | |
| Above 1000 | 3 | Other:74.0 dB(µV)/m (Peak) 54.0 dB(µV)/m (Average) | | | |

Remark:

- (1) Emission level dB μ V = 20 log Emission level μ V/m
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.



Report No.: AGC00803220601FE03 Page 13 of 34

7.2. MEASUREMENT PROCEDURE

- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use minimum resolution bandwidth of 1 MHz. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.



Page 14 of 34

The following table is the setting of spectrum analyzer and receiver.

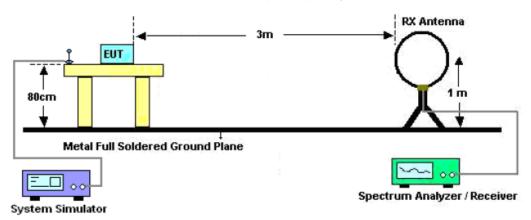
| Spectrum Parameter | Setting |
|-----------------------|--------------------------------|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP |
| | 1GHz~26.5GHz |
| Start ~Stop Frequency | RBW 2.4MHz/ VBW 8MHz for Peak, |
| | RBW 2.4MHz/10Hz for Average |

| Receiver Parameter | Setting |
|-----------------------|--------------------------------|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP |

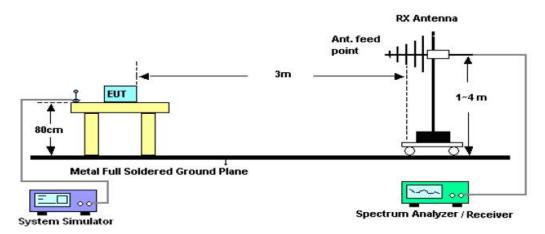


7.3. TEST SETUP

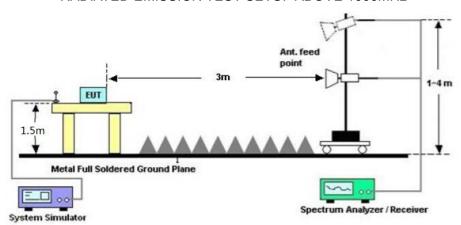
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz





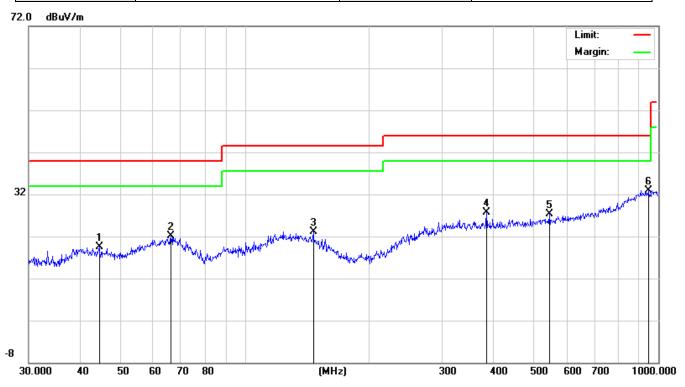
7.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION 30MHz-1GHZ

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|------------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 1 | Polarization: | Horizontal |



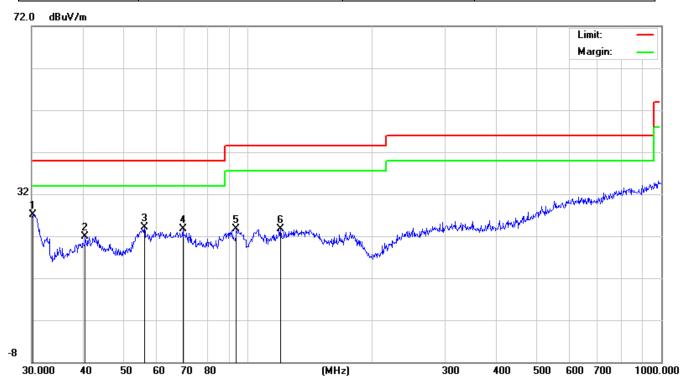
| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|
| | | MHz | dBu∀ | dB | dBuV/m | dBuV/m | dB | Detector |
| 1 | | 44.4307 | 5.08 | 14.49 | 19.57 | 40.00 | -20.43 | peak |
| 2 | | 66.2661 | 5.20 | 16.87 | 22.07 | 40.00 | -17.93 | peak |
| 3 | | 146.3735 | 5.97 | 17.18 | 23.15 | 43.50 | -20.35 | peak |
| 4 | | 383.9318 | 7.09 | 20.64 | 27.73 | 46.00 | -18.27 | peak |
| 5 | | 545.1825 | 5.85 | 21.43 | 27.28 | 46.00 | -18.72 | peak |
| 6 | * | 945.4398 | 5.04 | 27.91 | 32.95 | 46.00 | -13.05 | peak |

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|----------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 1 | Polarization: | Vertical |



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|
| | | MHz | dBu∀ | dB | dBuV/m | dBuV/m | dB | Detector |
| 1 | * | 30.2111 | 14.87 | 12.18 | 27.05 | 40.00 | -12.95 | peak |
| 2 | | 40.4172 | 6.97 | 15.02 | 21.99 | 40.00 | -18.01 | peak |
| 3 | | 56.1974 | 8.48 | 15.54 | 24.02 | 40.00 | -15.98 | peak |
| 4 | | 69.6005 | 6.65 | 17.10 | 23.75 | 40.00 | -16.25 | peak |
| 5 | | 93.7685 | 9.49 | 14.24 | 23.73 | 43.50 | -19.77 | peak |
| 6 | | 119.8556 | 5.73 | 17.93 | 23.66 | 43.50 | -19.84 | peak |

RESULT: PASS

Note:

Factor=Antenna Factor + Cable loss, Over=Measurement-Level.

The "Factor" value can be calculated automatically by software of measurement system.



Page 18 of 34

FIELD STRENGTH OF FUNDAMENTAL

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|-------------------|----------------|--------------------|------------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Modulation : | GFSK | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 2405 | 98.60 | -9.61 | 88.99 | 114.00 | -25.01 | peak |
| 2405 | 93.88 | -9.61 | 84.27 | 94.00 | -9.73 | AVG |
| 2430 | 93.82 | -9.61 | 84.21 | 114.00 | -29.79 | peak |
| 2430 | 90.80 | -9.61 | 81.19 | 94.00 | -12.81 | AVG |
| 2470 | 96.77 | -9.61 | 87.16 | 114.00 | -26.84 | peak |
| 2470 | 91.87 | -9.61 | 82.26 | 94.00 | -11.74 | AVG |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|-------------------|----------------|--------------------|----------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Modulation : | GFSK | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 2405 | 98.69 | -9.61 | 89.08 | 114.00 | -24.92 | peak |
| 2405 | 93.84 | -9.61 | 84.23 | 94.00 | -9.77 | AVG |
| 2430 | 91.72 | -9.61 | 82.11 | 114.00 | -31.89 | peak |
| 2430 | 91.24 | -9.61 | 81.63 | 94.00 | -12.37 | AVG |
| 2470 | 96.45 | -9.61 | 86.84 | 114.00 | -27.16 | peak |
| 2470 | 91.77 | -9.61 | 82.16 | 94.00 | -11.84 | AVG |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |



Page 19 of 34

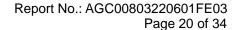
RADIATED EMISSION ABOVE 1GHZ

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|------------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure: | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 1 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4810 | 48.65 | 3.76 | 52.41 | 74.00 | -21.59 | peak |
| 4810 | 43.54 | 3.76 | 47.30 | 54.00 | -6.70 | AVG |
| 7215 | 42.56 | 8.17 | 50.73 | 74.00 | -23.27 | peak |
| 7215 38.68 8.17 46.85 54.00 -7.15 AVG | | | | | | |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|----------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 1 | Polarization: | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4810 | 47.93 | 3.76 | 51.69 | 74.00 | -22.31 | peak |
| 4810 | 43.86 | 3.76 | 47.62 | 54.00 | -6.38 | AVG |
| 7215 | 42.14 | 8.17 | 50.31 | 74.00 | -23.69 | peak |
| 7215 | 37.58 | 8.17 | 45.75 | 54.00 | -8.25 | AVG |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |



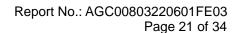


| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|------------|
| Temperature: | 25℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 2 | Polarization : | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4860 | 47.15 | 3.78 | 50.93 | 74.00 | -23.07 | peak |
| 4860 | 43.57 | 3.78 | 47.35 | 54.00 | -6.65 | AVG |
| 7290 | 43.84 | 8.23 | 52.07 | 74.00 | -21.93 | peak |
| 7290 39.68 8.23 47.91 54.00 -6.09 AVG | | | | | | |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|----------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure: | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 2 | Polarization : | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4860 | 48.93 | 3.78 | 52.71 | 74.00 | -21.29 | peak |
| 4860 | 42.64 | 3.78 | 46.42 | 54.00 | -7.58 | AVG |
| 7290 | 44.18 | 8.23 | 52.41 | 74.00 | -21.59 | peak |
| 7290 39.94 8.23 48.17 54.00 -5.83 AVG | | | | | | |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |





| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|------------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 3 | Polarization: | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4940 | 47.85 | 3.81 | 51.66 | 74.00 | -22.34 | peak |
| 4940 | 44.24 | 3.81 | 48.05 | 54.00 | -5.95 | AVG |
| 7410 | 42.17 | 8.27 | 50.44 | 74.00 | -23.56 | peak |
| 7410 38.69 8.27 46.96 54.00 -7.04 AV | | | | | | AVG |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |

| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|----------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 3 | Polarization: | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4940 | 48.65 | 3.81 | 52.46 | 74.00 | -21.54 | peak |
| 4940 | 43.14 | 3.81 | 46.95 | 54.00 | -7.05 | AVG |
| 7410 | 44.53 | 8.27 | 52.80 | 74.00 | -21.20 | peak |
| 7410 40.26 8.27 48.53 54.00 -5.47 AV | | | | | | AVG |
| Remark: | | | | | | |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. | | | | | | |

Note: Other emissions from 8G to 25 GHz are considered as ambient noise. No recording in the test report. Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Level-Limit.

The "Factor" value can be calculated automatically by software of measurement system.



8. BAND EDGE EMISSION

8.1TEST LIMIT

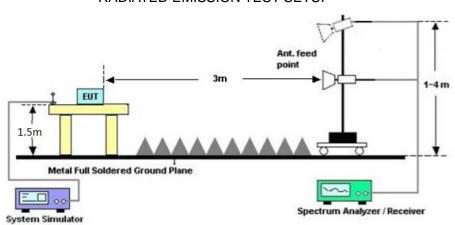
| | Limit of the Field Strength (dBμV/m) | | | |
|----------------|--------------------------------------|---------|--|--|
| Frequency Band | Peak | Average | | |
| f≤2390MHz | 74 | 54 | | |
| f≥2483.5MHz | 74 | 54 | | |

8.2. MEASUREMENT PROCEDURE

- 1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
- 2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: (a) PEAK: RBW=1MHz, VBW=3MHz / Sweep=AUTO
- (b) AVERAGE: RBW=1MHz; VBW=1/on time(1KHz) / Sweep=AUTO
- 3. Other procedures refer to clause 7.2.

8.3 TEST SETUP

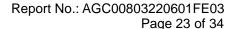
RADIATED EMISSION TEST SETUP



8.4 TEST RESULT

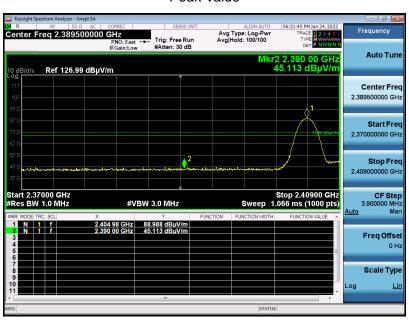
Note:

- 1. Factor=Antenna Factor + Cable loss Amplifier gain. Field Strength=Factor + Reading level
- 2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μ V) to represent the Amplitude. Use the F dB(μ V/m) to represent the Field Strength. So A=F.

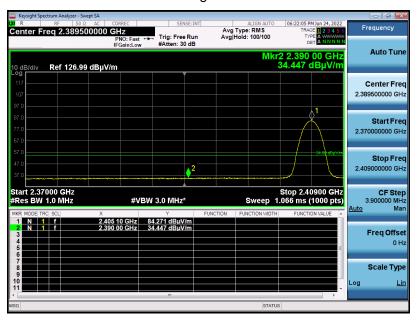




| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|------------|
| Temperature: | 25℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 1 | Polarization : | Horizontal |

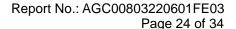


Average Value



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

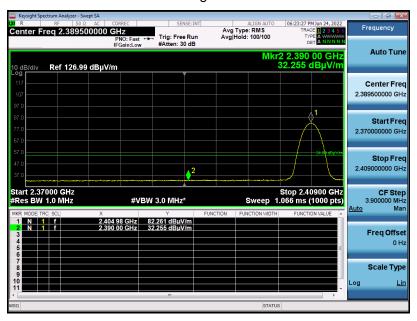


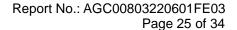


| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|----------|
| Temperature: | 25℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 1 | Polarization: | Vertical |



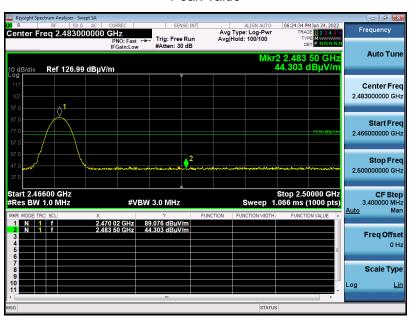
Average Value



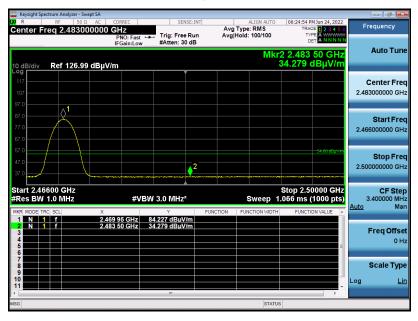




| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|------------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 3 | Polarization : | Horizontal |

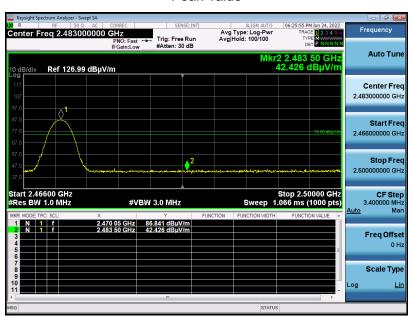


Average Value





| EUT: | Wireless Mouse | Model Name. : | URKM-10 |
|--------------|----------------|--------------------|----------|
| Temperature: | 25 ℃ | Relative Humidity: | 55% |
| Pressure : | 1010 hPa | Test Voltage : | DC 3.7V |
| Test Mode : | Mode 3 | Polarization : | Vertical |

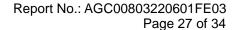


Average Value



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



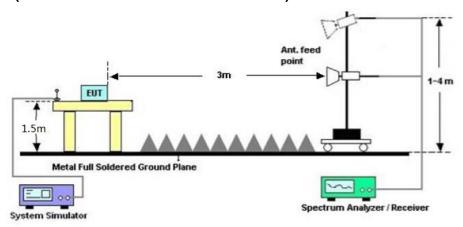


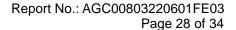
9. 20DB BANDWIDTH

9.1. MEASUREMENT PROCEDURE

- 1. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 2. Set SPA Centre Frequency = Operation Frequency, RBW= 30 KHz, VBW ≥ 3 × RBW.
- 3. Set SPA Trace 1 Max hold, then View.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)







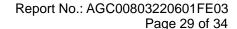
9.3. MEASUREMENT RESULTS

| TEST ITEM | 20DB BANDWIDTH |
|-----------------|----------------|
| TEST MODULATION | GFSK |

| Test Data (MHz) | Criteria | |
|-----------------|----------|------|
| Low Channel | 2.562 | PASS |
| Middle Channel | 2.539 | PASS |
| High Channel | 2.534 | PASS |

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL







TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



10. FCC LINE CONDUCTED EMISSION TEST

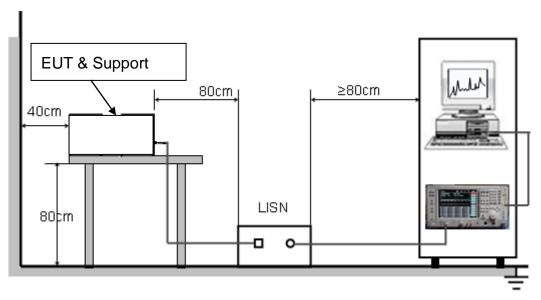
10.1. LIMITS OF LINE CONDUCTED EMISSION TEST

| Francisco | Maximum RF Line Voltage | | | |
|---------------|-------------------------|----------------|--|--|
| Frequency | Q.P.(dBuV) | Average(dBuV) | | |
| 150kHz~500kHz | 66-56 | 56-46 | | |
| 500kHz~5MHz | 56 | 46 | | |
| 5MHz~30MHz | 60 | 50 | | |

Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST





Report No.: AGC00803220601FE03 Page 31 of 34

10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipments received AC120VV/60Hz power from a LISN, if any.
- 5. The EUT received charging voltage by adapter which received 120V/60Hzpower by a LISN..
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

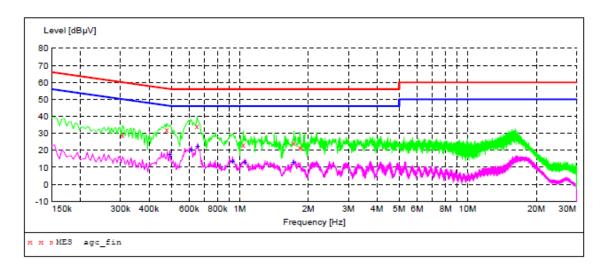
10.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.



10.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Line Conducted Emission Test Line 1-L



MEASUREMENT RESULT: "agc_fin"

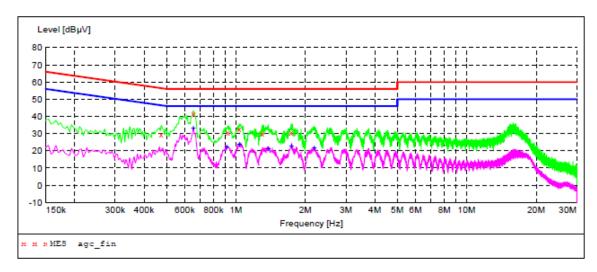
| 9:49 V Level Z dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line |
|---------------------------|--|---|--|--|---|
| 29.00 | 6.0 | 60 | | _ | L1 |
| | | | | _ | L1 L1 |
| | | | | _ | L1 |
| | | | | _ | L1 |
| 21.70 | 6.4 | 56 | 34.3 | QP | L1 |
| | Level dBμV 29.00 32.30 34.50 23.10 24.30 | Tevel Transd dBμV dB 29.00 6.0 32.30 5.5 34.50 5.4 23.10 5.5 24.30 6.3 | Tevel Transd Limit dBμV dB dBμV dBμV | Level Transd Limit Margin dB | Level Transd Limit Margin Detector dBμV dB dBμV dB 29.00 6.0 60 31.1 QP 32.30 5.5 56 24.1 QP 34.50 5.4 56 21.5 QP 23.10 5.5 56 32.9 QP 24.30 6.3 56 31.7 QP |

MEASUREMENT RESULT: "agc fin2"

| 2022/6/15 9:4 Frequency MHz | | Transd dB | Limit dBµV | Margin dB | Detector | Line |
|--|--|--|----------------------------|--|----------------|----------------------------|
| 0.494000 0.614000 0.654000 0.930000 1.050000 | 17.60 20.10 22.50 13.60 12.90 12.70 | 5.4 5.4 5.4 5.4 5.5 6.2 | 46 46 46 46 46 | 28.5 25.9 23.5 32.4 33.1 33.3 | AV AV AV | L1 L1 L1 L1 L1 |



Line Conducted Emission Test Line 2-N



MEASUREMENT RESULT: "agc_fin"

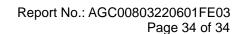
| 2022/6/15 9:49 Frequency MHz | | Transd dB | Limit dBµV | Margin dB | Detector | Line |
|--|--|--|----------------------------|--------------|----------------|-----------------------|
| 0.474000 0.654000 0.922000 1.034000 1.302000 1.734000 | 29.60 41.50 30.80 32.50 30.30 30.70 | 5.5 5.4 5.4 5.5 5.8 6.3 | 56 56 56 56 56 | 25.2 23.5 | QP QP QP | N N N N N |

MEASUREMENT RESULT: "agc_fin2"

| | Transd dB | Limit dBµV | Margin dB | Detector | Line |
|-------|--|---|---|--|--|
| 33.10 | 5.4 | 46 | 12.9 | AV | N |
| 22.50 | 5.4 | 46 | 23.5 | AV | N |
| 24.00 | 5.5 | 46 | 22.0 | AV | N |
| 21.20 | 5.9 | 46 | 24.8 | AV | N |
| 22.70 | 6.3 | 46 | 23.3 | AV | N |
| 21.60 | 6.5 | 46 | 24.4 | AV | N |
| | Level dBµV 33.10 22.50 24.00 21.20 22.70 | Level Transd dB | Level Transd Limit dBμV dB dBμV dB d6 d8μV 33.10 5.4 46 22.50 5.4 46 24.00 5.5 46 21.20 5.9 46 22.70 6.3 46 | Level dBμV Transd dB dBμV Limit dBμV Margin dB 33.10 5.4 46 12.9 22.50 5.4 46 23.5 24.00 5.5 46 22.0 21.20 5.9 46 24.8 22.70 6.3 46 23.3 | Level dBμV Transd dB dBμV Limit dB |

RESULT: PASS

Note: All the test modes had been tested, the mode 1 was the worst case. Only the data of the worst case would be record in this test report.





APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC00803220601AP01

APPENDIX B: PHOTOGRAPHS OF THE EUT

Refer to the Report No.: AGC00803220601AP02

----END OF REPORT----



Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.