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Report Template Version: V05 Report Template Revision Date: 2021-11-03

Test Report

| Depart No. | CQAS720220601023F |
|-------------------------|---|
| Report No.: | CQA3220220001023E |
| Applicant: | SHENZHEN XFANIC TECHNOLOGY CO., LTD |
| Address of Applicant: | 1-4/F, Block 2, Longcheng Industrial Area, Dalang Subdistrict, Longhua District |
| | |
| Equipment Under Test (E | UT): |
| EUT Name: | 2.4G WIRELESS LAVALIER MICOPHOEN |
| Model No.: | XF-A3001A, XF-A3003A, XF-A3003B, XF-A3004A, XF-A3005A, XF-A3005B, XF-A3005C, XF-A3005D, PK-MIC02-C, PK-MIC01-L |
| Test Model No.: | XF-A3001A |
| Brand Name: | N/A |
| FCC ID: | 2ASRI-A300X |
| Standards: | 47 CFR Part 15, Subpart C |
| Date of Receipt: | 2022-06-17 |
| Date of Test: | 2022-06-17 to 2022-07-01 |
| Date of Issue: | 2022-07-12 |
| Test Result: | PASS* |

*In the configuration tested, the EUT complied with the standards specified above

| Tested By: | lewis zhou | TESTING |
|--------------|----------------|-------------------|
| | (Lewis Zhou) | The second second |
| Reviewed By: | K. Liao | |
| | (KLiao) | APDROVED * |
| Approved By: | Janos | PROVE |
| | (Jack Ai) | |

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.



1 Version

Revision History Of Report

| Report No. | Version | Description | Issue Date |
|-------------------|---------|----------------|------------|
| CQASZ20220601023E | Rev.01 | Initial report | 2022-07-12 |



2 Test Summary

| Test Item | Test Requirement | Test method | Result |
|--|--|--------------------|--------|
| Antenna Requirement | 47 CFR Part 15, Subpart C Section 15.203 | ANSI C63.10 (2013) | PASS |
| AC Power Line Conducted Emission | 47 CFR Part 15, Subpart C Section 15.207 | ANSI C63.10 (2013) | PASS |
| Field Strength of the Fundamental Signal | 47 CFR Part 15, Subpart C Section 15.249 (a) | ANSI C63.10 (2013) | PASS |
| Spurious Emissions | 47 CFR Part 15, Subpart C Section 15.249 (a)/15.209 | ANSI C63.10 (2013) | PASS |
| Restricted bands around fundamental frequency (Radiated Emission) | ental 47 CFR Part 15, Subpart C Section ANSI C63 10 (2013) | | PASS |
| 20dB Occupied Bandwidth | 47 CFR Part 15, Subpart C Section 15.215 (c) | ANSI C63.10 (2013) | PASS |



3 Contents

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4 General Information

4.1 Client Information

| Applicant: | SHENZHEN XFANIC TECHNOLOGY CO., LTD |
|-----------------------------|---|
| Address of Applicant: | 1-4/F, Block 2, Longcheng Industrial Area, Dalang Subdistrict, Longhua District |
| Manufacturer: | SHENZHEN XFANIC TECHNOLOGY CO., LTD |
| Address of Manufacturer: | 1-4/F, Block 2, Longcheng Industrial Area, Dalang Subdistrict, Longhua District |
| Factory: | SHENZHEN XFANIC TECHNOLOGY CO., LTD |
| Address of Factory: | 1-4/F, Block 2, Longcheng Industrial Area, Dalang Subdistrict, Longhua District |

4.2 General Description of EUT

| EUT Name: | 2.4G WIRELESS LAVALIER MICOPHOEN | | |
|-----------------------|--|--|--|
| Model No.: | XF-A3001A, XF-A3003A, XF-A3003B, XF-A3004A, XF-A3005A, XF-A3005B, XF- A3005C, XF-A3005D, PK-MIC02-C, PK-MIC01-L | | |
| Test Model No.: | XF-A3001A | | |
| Trade Mark: | N/A | | |
| Software Version: | V1.1 | | |
| Hardware Version: | V1.1 | | |
| Frequency Range: | 2402MHz~2480MHz | | |
| Modulation Type: | GFSK | | |
| Number of Channels: | 3 | | |
| Sample Type: | Mobile Portable Fix Location | | |
| Test Software of EUT: | BT_Tool | | |
| Antenna Type: | Chip Antenna | | |
| Antenna Gain: | 1.8 dBi | | |
| Power Supply: | Micphone:Li-ion battery: DC 3.7V 70mAh, Charge by DC 3.7V for Charge box | | |
| | Charge box:Li-ion battery: DC 3.7V 500mAh, Charge by DC 5V for adapter | | |

Model No.:XF-A3001A, XF-A3003A, XF-A3003B, XF-A3004A, XF-A3005A, XF-A3005B, XF-A3005C, XF-A3005D, PK-MIC02-C, PK-MIC01-L

Their electrical circuit design, layout, components used and internal wiring are identical, Only the appearance shape is different.



| Operation Frequency each of channel | | | | | |
|---|---------|---|---------|---|-----------|
| Channel Frequency Channel Frequency Channel Frequency | | | | | Frequency |
| 1 | 2402MHz | 2 | 2441MHz | 3 | 2480MHz |

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Channel | Frequency |
|--------------------------|-----------|
| The Lowest channel(CH1) | 2402MHz |
| The Middle channel(CH2) | 2441MHz |
| The Highest channel(CH3) | 2480MHz |



4.3 Test Environment and Mode

| Operating Environment | Operating Environment: | | | |
|------------------------|---|--|--|--|
| Radiated Emissions: | | | | |
| Temperature: | 27 °C | | | |
| Humidity: | 59 % RH | | | |
| Atmospheric Pressure: | 1009mbar | | | |
| | | | | |
| Temperature: | 26 °C | | | |
| Humidity: | 59 % RH | | | |
| Atmospheric Pressure: | 1009mbar | | | |
| Radio conducted item t | est (RF Conducted test room): | | | |
| Temperature: | 25.3 °C | | | |
| Humidity: | 55 % RH | | | |
| Atmospheric Pressure: | 1009mbar | | | |
| Test mode: | | | | |
| Transmitting mode: | Use test software (RF test) to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT. | | | |

4.4 Description of Support Units

The EUT has been tested with associated equipment below.

1) Support equipment

| Description | Manufacturer | Model No. | Certification | Supplied by |
|-------------|----------------|-----------|---------------|-------------|
| Adapter | SanLi Constant | SL18WQC-G | DOC | CQA |
| 2) Cable | | | | |

| Cable No. | Description | Manufacturer | Cable Type/Length | Supplied by |
|-----------|-------------|--------------|-------------------|-------------|
| / | 1 | / | / | / |



4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate.

The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities.

The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the **Shenzhen Huaxia Testing Technology Co., Ltd.** quality system acc. to DIN EN ISO/IEC 17025.

Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

| Test | Range | Uncertainty | Notes |
|-------------------------------------|------------|-------------|-------|
| Radiated Emission | Below 1GHz | 5.12dB | (1) |
| Radiated Emission | Above 1GHz | 4.60dB | (1) |
| Conducted 0.15~30MHz Disturbance | | 3.34dB | (1) |

Hereafter the best measurement capability for **CQA** laboratory is reported:

(1)This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



4.6 Test Location

All tests were performed at:

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

4.7 Test Facility

• A2LA (Certificate No. 4742.01)

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

• FCC Registration No.: 522263

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

4.8 Deviation from Standards

None.

4.9 Abnormalities from Standard Conditions

None.

4.10 Other Information Requested by the Customer

None.



4.11 Equipment List

| Test Equipment | Manufacturer | Model No. | Instrument No. | Calibration Date | Calibration Due Date |
|-------------------------------|--------------|----------------------------|-------------------|---------------------|-------------------------|
| EMI Test Receiver | R&S | ESR7 | CQA-005 | 2021/9/10 | 2022/9/9 |
| Spectrum analyzer | R&S | FSU26 | CQA-038 | 2021/9/10 | 2022/9/9 |
| Preamplifier | MITEQ | AMF-6D-02001800-29- 20P | CQA-036 | 2021/9/10 | 2022/9/9 |
| Loop antenna | Schwarzbeck | FMZB1516 | CQA-060 | 2021/9/16 | 2024/9/15 |
| Bilog Antenna | R&S | HL562 | CQA-011 | 2021/9/16 | 2024/9/15 |
| Horn Antenna | R&S | HF906 | CQA-012 | 2021/9/16 | 2024/9/15 |
| Horn Antenna | Schwarzbeck | BBHA 9170 | CQA-088 | 2021/9/16 | 2024/9/15 |
| Coaxial Cable (Above 1GHz) | CQA | N/A | C007 | 2021/9/10 | 2022/9/9 |
| Coaxial Cable (Below 1GHz) | CQA | N/A | C013 | 2021/9/10 | 2022/9/9 |
| Antenna Connector | CQA | RFC-01 | CQA-080 | 2021/9/10 | 2022/9/9 |
| RF cable(9KHz~40GHz) | CQA | RF-01 | CQA-079 | 2021/9/10 | 2022/9/9 |
| Power divider | MIDWEST | PWD-2533-02-SMA-79 | CQA-067 | 2021/9/10 | 2022/9/9 |

Note:

The temporary antenna connector is soldered on the pcb board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.



5 Test results and Measurement Data

5.1 Antenna Requirement

| Standard requirement: | 47 CFR Part 15C Section 15.203 | | | | | | |
|---|---|--|--|--|--|--|--|
| 15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. | | | | | | | |
| EUT Antenna: | | | | | | | |
| The antenna is Chip antenna | a. The best case gain of the antenna is 1.8dBi. | | | | | | |



5.2 Conducted Emissions

| Test Requirement: | 47 CFR Part 15C Section 15.2 | 207 | | | |
|-----------------------|--|--|---------------|--|--|
| Test Method: | ANSI C63.10: 2013 | | | | |
| Test Frequency Range: | 150kHz to 30MHz | | | | |
| Limit: | Limit (dBuV) | | | | |
| | Frequency range (MHz) | Quasi-peak | Average | | |
| | 0.15-0.5 | 66 to 56* | 56 to 46* | | |
| | 0.5-5 | 56 | 46 | | |
| | 5-30 | 60 | 50 | | |
| | * Decreases with the logarithm | n of the frequency. | | | |
| Test Procedure: | The mains terminal disturbance voltage test was conducted in a shielded room. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50µH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement. | | | | |
| Test Setup: | Shielding Room | AE B B B C C S S C S C S C S S S S C S S S S S S S S S S S S S | Test Receiver | | |



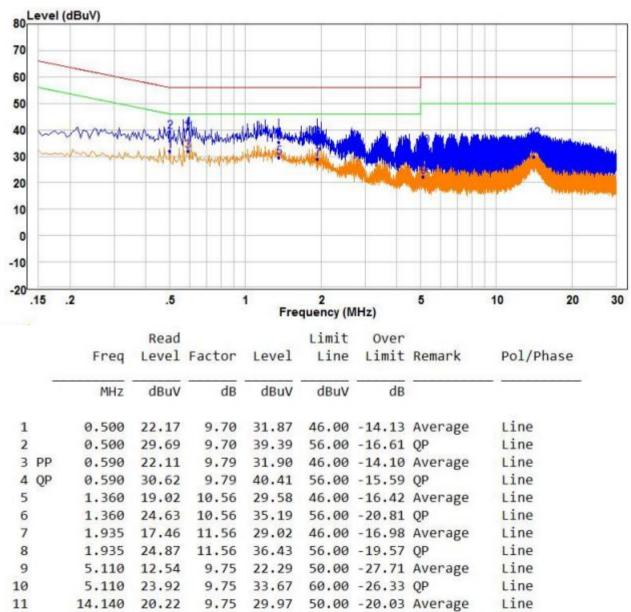
Report No.:CQASZ20220601023E

Line

| Test Mode: | Charge +Transmitting mode. |
|------------------|----------------------------|
| Final Test Mode: | Charge +Transmitting mode |
| Test Results: | Pass |

Measurement Data:

Live line:



9.75 36.58 60.00 -23.42 QP

Remark:

12

1. The following Quasi-Peak and Average measurements were performed on the EUT:

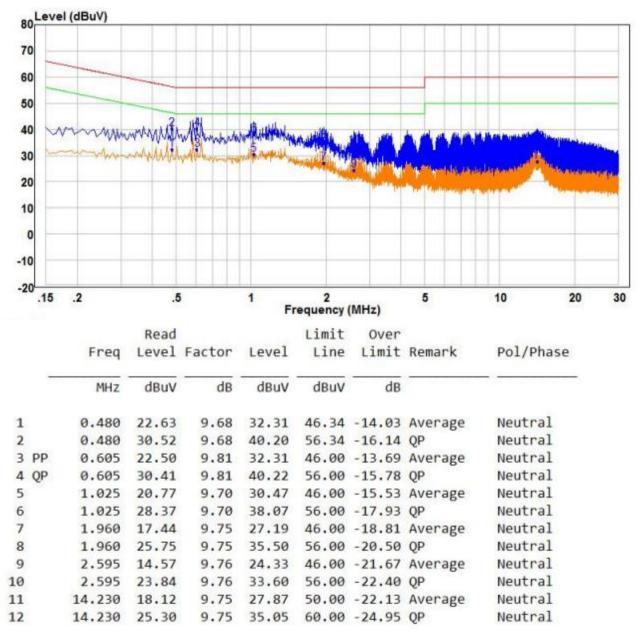
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

14.140 26.83

3. If the Peak value under Average limit, the Average value is not recorded in the report.



Neutral line:



Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

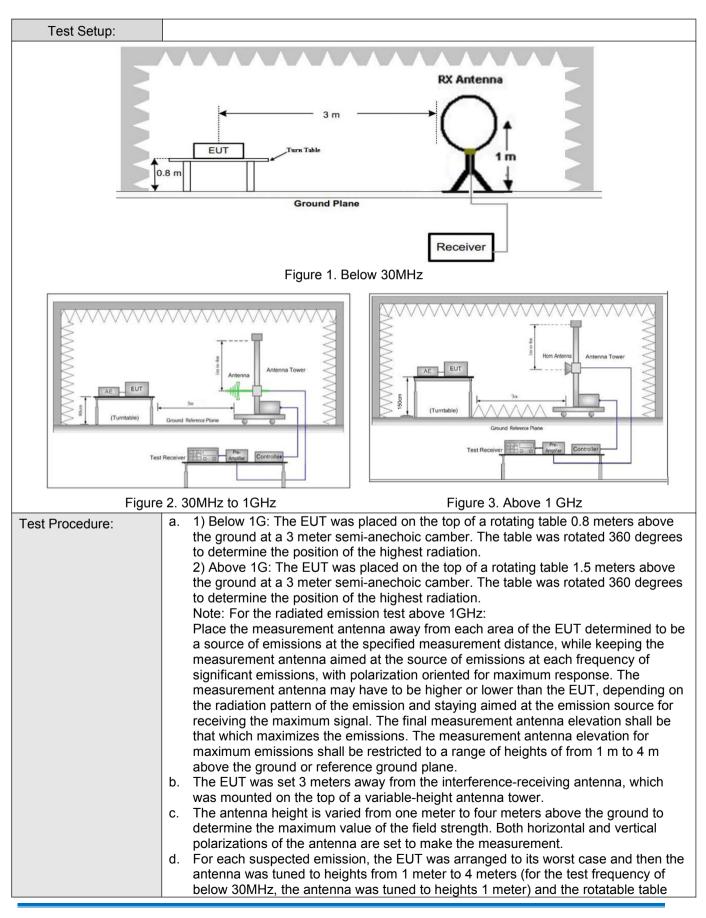
3. If the Peak value under Average limit, the Average value is not recorded in the report.



5.3 Radiated Emission

| Test Method:ANSI C63.10: 2013Test Site:Measurement Distance: 3m (Semi-Anechoic Chamber)Receiver Setup:FrequencyDetectorRBWVBWRemark0.009MHz-0.090MHzPeak10kHz30KHzPeak0.009MHz-0.090MHzAverage10kHz30KHzAverage0.009MHz-0.110MHzQuasi-peak10kHz30KHzQuasi-peak0.110MHz-0.490MHzPeak10kHz30KHzQuasi-peak0.110MHz-0.490MHzAverage10kHz30KHzAverage0.490MHz-0.490MHzQuasi-peak10kHz30KHzQuasi-peak0.490MHz-0.490MHzQuasi-peak10kHz30KHzQuasi-peak0.490MHz-1GHzQuasi-peak100 kHz30KHzQuasi-peakAbove 1GHzPeak1MHz10HzAverageNote: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value.Itimit (dBuV/m)Remark distance for distance for(Spurious Emissions and band edge)FrequencyField strength (microvol/meter)Limit (dBuV/m)Remark distance for distance for distance for distance for distance for1.705MHz-30MHz2400/F(kHz)3000.490MHz-1.705MHz300301.705MHz-30MHz30301.705MHz-30MHz30301.705MHz-30MHz10040.0Quasi-peak388MHz-216MHz10040.0 <t< th=""><th colspan="6">47 CFR Part 15C Section 15.249 and 15.209 and 15.205</th></t<> | 47 CFR Part 15C Section 15.249 and 15.209 and 15.205 | | | | | | |
|--|--|--|--|--|--|--|--|
| Receiver Setup:FrequencyDetectorRBWVBWRemark0.009MHz-0.090MHzPeak10kHz30KHzPeak0.009MHz-0.090MHzAverage10kHz30KHzAverage0.009MHz-0.110MHzQuasi-peak10kHz30KHzQuasi-peak0.110MHz-0.490MHzPeak10kHz30KHzQuasi-peak0.110MHz-0.490MHzPeak10kHz30KHzPeak0.110MHz-0.490MHzQuasi-peak10kHz30KHzAverage0.490MHz-30MHzQuasi-peak10kHz30KHzQuasi-peak30MHz-1GHzQuasi-peak10kHz30KHzQuasi-peakAbove 1GHzPeak1MHz30HzQuasi-peakNote: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value.Measurent distance of 0.009MHz-0.490MHz2400/F(kHz)1000.490MHz-1.705MHz24000/F(kHz)3000.490MHz-1.705MHz3003000.490MHz-1.705MHz24000/F(kHz)30030030MHz-88MHz10040.0Quasi-peak330MHz-88MHz10040.0Quasi-peak3388MHz-216MHz15043.5Quasi-peak3 | | | | | | | |
| Limit: Frequency Field strength (microvolt/meter) Limit (dBuV/m) Remark Remark Measuren distance Massing Limit: (Spurious Emissions and band edge) Frequency Field strength (microvolt/kHz) Limit 30 Remark Measuren distance 30 Limit: (Spurious Emissions and band edge) Remark Measuren 30 Job Hz 2400/F(kHz) - - 30 30MHz-120MHz 2400/F(kHz) - - 30 - - 30 30MHz-120MHz 2400/F(kHz) - - 30 - 30 30MHz-13Hz Quasi-peak 100 HJz 300KHz Quasi-peak 30MHz-13Hz Quasi-peak 100 KHz 300KHz Quasi-peak 300Hz-13Hz Peak 11MHz 300Hz Average 300KHz Quasi-peak 300Hz-13Hz 7 7 30 - 300 - 300 300MHz-0.490MHz 2400/F(kHz) - - 30 30 - 30 30 | Measurement Distance: 3m (Semi-Anechoic Chamber) | | | | | | |
| Limit: 0.009MHz-0.090MHz Average 10kHz 30KHz Average 0.090MHz-0.110MHz Quasi-peak 10kHz 30KHz Quasi-peak 0.110MHz-0.490MHz Peak 10kHz 30KHz Quasi-peak 0.110MHz-0.490MHz Peak 10kHz 30KHz Peak 0.110MHz-0.490MHz Average 10kHz 30KHz Average 0.490MHz-30MHz Quasi-peak 10kHz 30KHz Quasi-peak 0.490MHz-30MHz Quasi-peak 10kHz 30KHz Quasi-peak 30MHz-1GHz Quasi-peak 100 kHz 300KHz Quasi-peak Above 1GHz Peak 1MHz 30Hz Peak Above 1GHz Peak 1MHz 10Hz Average Note: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value. 0.009MHz-0.490MHz 2400/F(kHz) - - 300 0.490MHz-0.490MHz 2400/F(kHz) - - 300 - - 30 0.490MHz-1.705MHz | | | | | | | |
| Limit: Frequency Field strength (microvolt/meter) Limit (dBuV/m) Remark Limit: Remark Measurent distance Measurent distance 0.090MHz-0.490MHz Quasi-peak 10kHz 30KHz Quasi-peak 0.110MHz-0.490MHz Average 10kHz 30KHz Average 0.490MHz-0.490MHz Average 10kHz 30KHz Average 0.490MHz-0.490MHz Quasi-peak 10kHz 30kHz Quasi-peak 30MHz-1GHz Quasi-peak 10kHz 30KHz Quasi-peak Above 1GHz Quasi-peak 10kHz 30KHz Quasi-peak Note: For fundamental frequency, RBW=5MHz, VBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value. Measurent distance of the complexity of th | | | | | | | |
| Limit: (Spurious Emissions and band edge) $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ $extrema = 100$ $extrema = 100$ $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ $extrema = 100$ $extrema = 100$ $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ $extrema = 100$ $extrema = 100$ $extrema = 100$ Limit: (Spurious Emissions and band edge) $extrema = 100$ $extrema = 100$ $extrema = 1000$ $extrema = 1000$ Limit: (Spurious Emissions and band edge) $extrema = 1000$ $extrema = 1000$ $extrema = 1000$ $extrema = 1000$ Limit: (Spurious Emissions and | | | | | | | |
| 0.110MHz-0.490MHzAverage10kHz30KHzAverage0.490MHz -30MHzQuasi-peak10kHz30kHzQuasi-peak30MHz-1GHzQuasi-peak100 kHz300KHzQuasi-peakAbove 1GHzPeak1MHz3MHzPeakAbove 1GHzPeak1MHz10HzAverageNote: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value.Note: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for average value.Measurem distance of the constraint of th | | | | | | | |
| Limit: (Spurious Emissions and band edge)Frequency 0.490MHz-1.705MHzField strength 2400/F(kHz)Limit (dBuV/m)RemarkMeasurem distance of 300Limit: (Spurious Emissions and band edge)FrequencyR100 (kHz)3001.705MHz-0.490MHz2400/F(kHz)3001.705MHz-30MHz10040.0Quasi-peak30300Hz-88MHz10043.5Quasi-peak30 | | | | | | | |
| Solution <t< td=""><td></td></t<> | | | | | | | |
| Peak1MHz3MHzPeakAbove 1GHzPeak1MHz10HzAveragePeak1MHz10HzAverageNote: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value.Note: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for (dBuV/m)Limit: (Spurious Emissions and band edge)FrequencyField strength (microvolt/meter)Limit (dBuV/m)Measurem distance of 3000.009MHz-0.490MHz2400/F(kHz)3000.490MHz-1.705MHz24000/F(kHz)3001.705MHz-30MHz303030MHz-88MHz10040.0Quasi-peak388MHz-216MHz15043.5Quasi-peak3 | | | | | | | |
| Above 1GHzPeak1MHz10HzAverageNote: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value, RMS detector is for Average value.Note: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for value.Measurem distance (dBuV/m)Limit: (Spurious Emissions and band edge)FrequencyField strength (microvolt/meter)Limit (dBuV/m)Measurem distance (dBuV/m)0.009MHz-0.490MHz2400/F(kHz)3000.490MHz-1.705MHz24000/F(kHz)3001.705MHz-30MHz303030MHz-88MHz10040.0Quasi-peak388MHz-216MHz15043.5Quasi-peak3 | | | | | | | |
| Limit: (Spurious Emissions and band edge)FrequencyField strength (microvolt/meter)Limit (dBuV/m)Measurem distance (aliance)0.009MHz-0.490MHz2400/F(kHz)3000.490MHz-1.705MHz24000/F(kHz)3001.705MHz-30MHz3030030MHz-88MHz10040.0Quasi-peak388MHz-216MHz15043.5Quasi-peak3 | | | | | | | |
| value, RMS detector is for Average value.Limit: (Spurious Emissions and band edge)FrequencyField strength (microvolt/meter)Limit (dBuV/m)RemarkMeasurem distance distance 0.009MHz-0.490MHz0.009MHz-0.490MHz2400/F(kHz)3000.490MHz-1.705MHz24000/F(kHz)3001.705MHz-30MHz303030MHz-88MHz10040.0Quasi-peak388MHz-216MHz15043.5Quasi-peak3 | | | | | | | |
| (Spurious Emissions and band edge) Frequency Frequency Frequency Frequency Remark distance 0.009MHz-0.490MHz 2400/F(kHz) - - 300 0.490MHz-1.705MHz 24000/F(kHz) - - 300 1.705MHz-30MHz 30 - - 30 30MHz-88MHz 100 40.0 Quasi-peak 3 88MHz-216MHz 150 43.5 Quasi-peak 3 | PK | | | | | | |
| 0.0003MH2-0.430MH2 2400/(kH2) - - 30 0.490MHz-1.705MHz 24000/F(kHz) - - 30 1.705MHz-30MHz 30 - - 30 30MHz-88MHz 100 40.0 Quasi-peak 3 88MHz-216MHz 150 43.5 Quasi-peak 3 | | | | | | | |
| 1.705MHz-30MHz 30 - - 30 30MHz-88MHz 100 40.0 Quasi-peak 3 88MHz-216MHz 150 43.5 Quasi-peak 3 | | | | | | | |
| 30MHz-88MHz 100 40.0 Quasi-peak 3 88MHz-216MHz 150 43.5 Quasi-peak 3 | | | | | | | |
| 88MHz-216MHz 150 43.5 Quasi-peak 3 | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 216MHz-960MHz 200 46.0 Quasi-peak 3 | | | | | | | |
| 960MHz-1GHz 500 54.0 Quasi-peak 3 | | | | | | | |
| Above 1GHz50054.0Average3 | | | | | | | |
| Note: 1) 15.35(b), Unless otherwise specified, the limit on peak radio freque emissions is 20dB above the maximum permitted average emission applicable to the equipment under test. This peak limit applies to the total pemission level radiated by the device. 2) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation. | limit | | | | | | |
| Limit: Frequency Limit (dBuV/m @3m) Remark | 1 | | | | | | |
| (Field strength of the 94.0 Average Value | - | | | | | | |
| fundamental signal) 2400MHz-2483.5MHz 114.0 Peak Value | 1 | | | | | | |







| | was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. | | | | | |
|---|---|--|--|--|--|--|
| | f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. | | | | | |
| g. Test the EUT in the lowest channel, the middle channel, the Highest chan | | | | | | |
| | h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case. i. Repeat above procedures until all frequencies measured was complete. | | | | | |
| Exploratory Test Mode: | Transmitting mode, Charge + Transmitting mode. | | | | | |
| Final Test Mode: | Pretest the EUT at Transmitting mode and Charge + Transmitting mode, found the Charge + Transmitting mode which it is worse case. | | | | | |
| | For below 1GHz part, through pre-scan, the worst case is the lowest channel. | | | | | |
| | Only the worst case is recorded in the report. | | | | | |
| Test Results: | Pass | | | | | |



6 pp

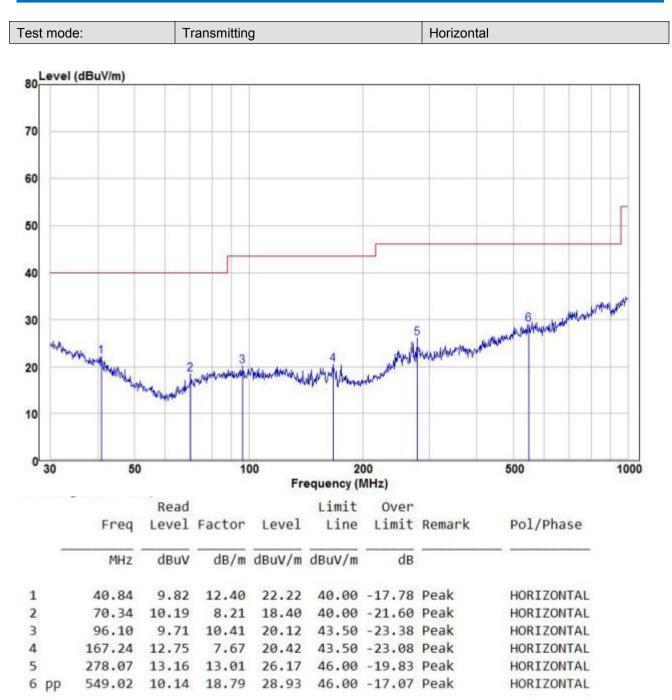
Report No.:CQASZ20220601023E

VERTICAL

Measurement Data 30MHz~1GHz Test mode: Transmitting Vertical 80 Level (dBuV/m) 70 60 50 40 30 2 mille 5 Manufartight Augument a shink a glad and 20 1th 10 0 30 50 100 200 500 1000 Frequency (MHz) Read Limit Over Freq Level Factor Level Line Limit Remark Pol/Phase dB/m dBuV/m dBuV/m dB MHZ dBuV 1 47.99 11.46 9.03 20.49 40.00 -19.51 Peak VERTICAL 2 95.43 9.63 10.37 20.00 43.50 -23.50 Peak VERTICAL 3 143.83 12.27 8.21 20.48 43.50 -23.02 Peak VERTICAL 4 264.75 10.89 12.57 23.46 46.00 -22.54 Peak VERTICAL 5 432.55 10.64 16.17 26.81 46.00 -19.19 Peak VERTICAL

501.18 12.83 18.29 31.12 46.00 -14.88 Peak







| Above 1GHz | | | | | | | |
|------------|------------------|------------|-------------------|------------|--------|----------|-----------|
| Test mode: | | Transmitti | ng | Test chanr | nel: | Lowest | |
| Frequency | Meter Reading | Factor | Emission Level | Limits | Over | Detector | Ant. Pol. |
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | Туре | H/V |
| 2390 | 60.98 | -9.2 | 51.78 | 74 | -22.22 | Peak | н |
| 2390 | 45.57 | -9.2 | 36.37 | 54 | -17.63 | AVG | Н |
| 2400 | 43.79 | -9.39 | 34.40 | 74 | -39.60 | Peak | Н |
| 2400 | 44.91 | -9.39 | 35.52 | 54 | -18.48 | AVG | Н |
| 2402 | 99.46 | -9.33 | 90.13 | 114 | -23.87 | peak | н |
| 2402 | 97.05 | -9.33 | 87.72 | 94 | -6.28 | AVG | Н |
| 4804 | 54.86 | -4.28 | 50.58 | 74 | -23.42 | peak | Н |
| 4804 | 43.45 | -4.28 | 39.17 | 54 | -14.83 | AVG | Н |
| 7206 | 53.22 | 1.13 | 54.35 | 74 | -19.65 | peak | Н |
| 7206 | 36.73 | 1.13 | 37.86 | 54 | -16.14 | AVG | Н |
| 2390 | 59.98 | -9.2 | 50.78 | 74 | -23.22 | peak | V |
| 2390 | 43.68 | -9.2 | 34.48 | 54 | -19.52 | AVG | V |
| 2400 | 60.98 | -9.39 | 51.59 | 74 | -22.41 | peak | V |
| 2400 | 44.13 | -9.39 | 34.74 | 54 | -19.26 | AVG | V |
| 2402 | 96.24 | -9.33 | 86.91 | 114 | -27.09 | peak | V |
| 2402 | 92.71 | -9.33 | 83.38 | 94 | -10.62 | AVG | V |
| 4804 | 55.33 | -4.28 | 51.05 | 74 | -22.95 | peak | V |
| 4804 | 42.70 | -4.28 | 38.42 | 54 | -15.58 | AVG | V |
| 7206 | 51.66 | 1.13 | 52.79 | 74 | -21.21 | peak | V |
| 7206 | 36.48 | 1.13 | 37.61 | 54 | -16.39 | AVG | V |



| Test mode: | | Transmitti | ng | Test chanr | nel: | Middle | |
|------------|------------------|------------|-------------------|------------|--------|----------|-----------|
| Frequency | Meter Reading | Factor | Emission Level | Limits | Over | Detector | Ant. Pol. |
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | Туре | H/V |
| 2441 | 98.17 | -9.37 | 88.80 | 114 | -25.20 | peak | н |
| 2441 | 97.82 | -9.37 | 88.45 | 94 | -5.55 | AVG | н |
| 4882 | 54.81 | -4.14 | 50.67 | 74 | -23.33 | peak | Н |
| 4882 | 43.00 | -4.14 | 38.86 | 54 | -15.14 | AVG | н |
| 7323 | 53.47 | 0.56 | 54.03 | 74 | -19.97 | peak | Н |
| 7323 | 36.46 | 0.56 | 37.02 | 54 | -16.98 | AVG | н |
| 2441 | 96.13 | -9.36 | 86.77 | 114 | -27.23 | peak | V |
| 2441 | 92.95 | -9.36 | 83.59 | 94 | -10.41 | AVG | V |
| 4882 | 57.52 | -4.14 | 53.38 | 74 | -20.62 | peak | V |
| 4882 | 42.29 | -4.14 | 38.15 | 54 | -15.85 | AVG | V |
| 7323 | 51.13 | 0.56 | 51.69 | 74 | -22.31 | peak | V |
| 7323 | 36.67 | 0.56 | 37.23 | 54 | -16.77 | AVG | V |



| Test mode: | | Transmitti | ng | Test chanr | nel: | Highest | |
|------------|------------------|------------|-------------------|------------|--------|----------|-----------|
| Frequency | Meter Reading | Factor | Emission Level | Limits | Over | Detector | Ant. Pol. |
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | Туре | H/V |
| 2480 | 100.08 | -9.23 | 90.85 | 114 | -23.15 | peak | н |
| 2480 | 98.17 | -9.23 | 88.94 | 94 | -5.06 | AVG | н |
| 2483.5 | 62.20 | -9.29 | 52.91 | 74 | -21.09 | Peak | н |
| 2483.5 | 43.06 | -9.29 | 33.77 | 54 | -20.23 | AVG | н |
| 4960 | 56.31 | -4.03 | 52.28 | 74 | -21.72 | peak | н |
| 4960 | 41.35 | -4.03 | 37.32 | 54 | -16.68 | AVG | н |
| 7440 | 52.00 | 1.68 | 53.68 | 74 | -20.32 | peak | н |
| 7440 | 37.07 | 1.68 | 38.75 | 54 | -15.25 | AVG | н |
| 2480 | 96.89 | -9.23 | 87.66 | 114 | -26.34 | peak | V |
| 2480 | 94.27 | -9.23 | 85.04 | 94 | -8.96 | AVG | V |
| 2483.5 | 61.64 | -9.29 | 52.35 | 74 | -21.65 | peak | V |
| 2483.5 | 42.87 | -9.29 | 33.58 | 54 | -20.42 | AVG | V |
| 4960 | 55.88 | -4.03 | 51.85 | 74 | -22.15 | peak | V |
| 4960 | 41.04 | -4.03 | 37.01 | 54 | -16.99 | AVG | V |
| 7440 | 52.98 | 1.68 | 54.66 | 74 | -19.34 | peak | V |
| 7440 | 37.87 | 1.68 | 39.55 | 54 | -14.45 | AVG | V |

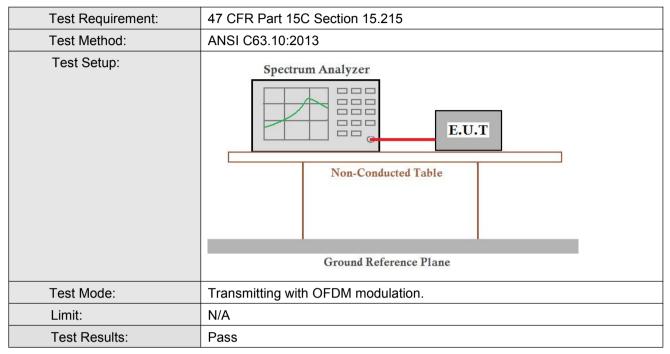
Remark:

 The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

2) Scan from 9kHz to 25GHz, The disturbance above 10GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.



5.4 20dB Bandwidth

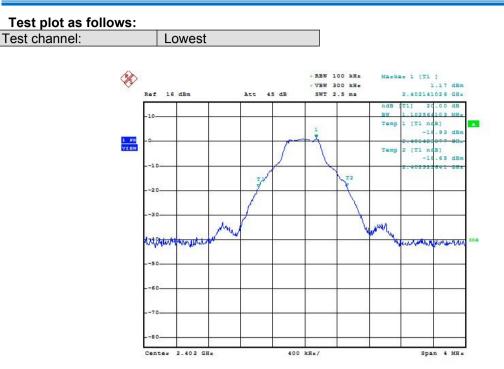


Measurement Data

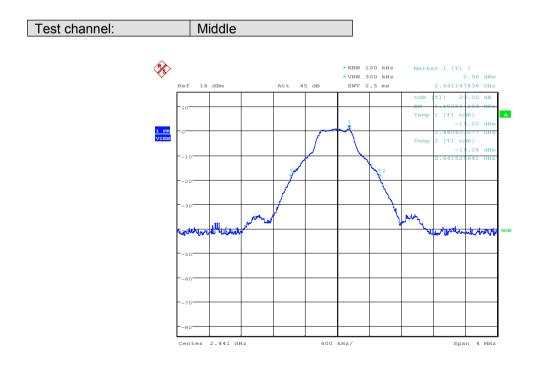
| Test channel | 20dB bandwidth (MHz) | Results |
|--------------|----------------------|---------|
| Lowest | 1.103 | Pass |
| Middle | 1.103 | Pass |
| Highest | 1.103 | Pass |



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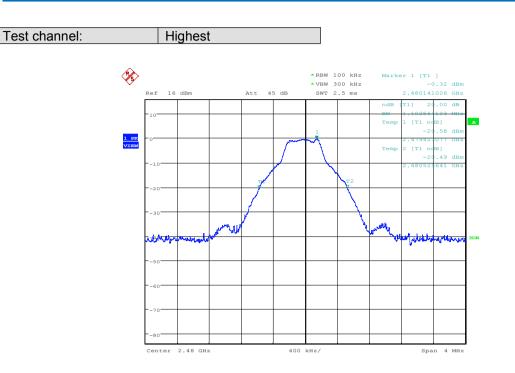
Date: 25.FEB.2022 00:10:54



Date: 25.FEB.2022 00:10:14



Report No.:CQASZ20220601023E



Date: 25.FEB.2022 00:09:38



6 Photographs

6.1 Radiated Emission Test Setup

9kHz~30MHz







6.2 Conducted Emission Test Setup



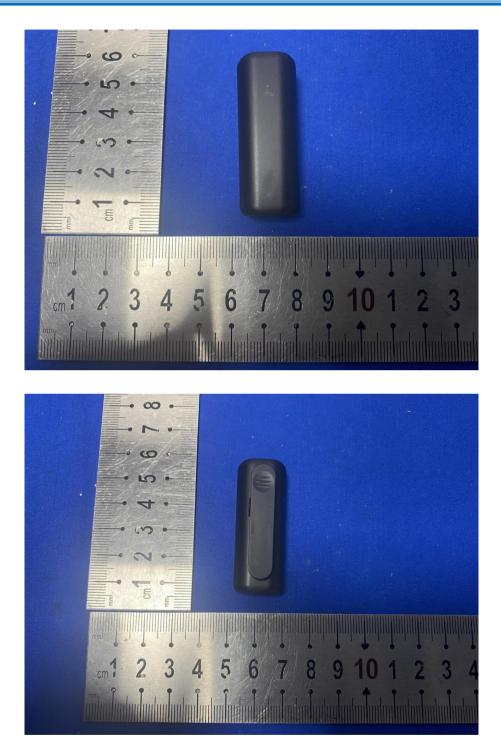


6.3 EUT Constructional Details







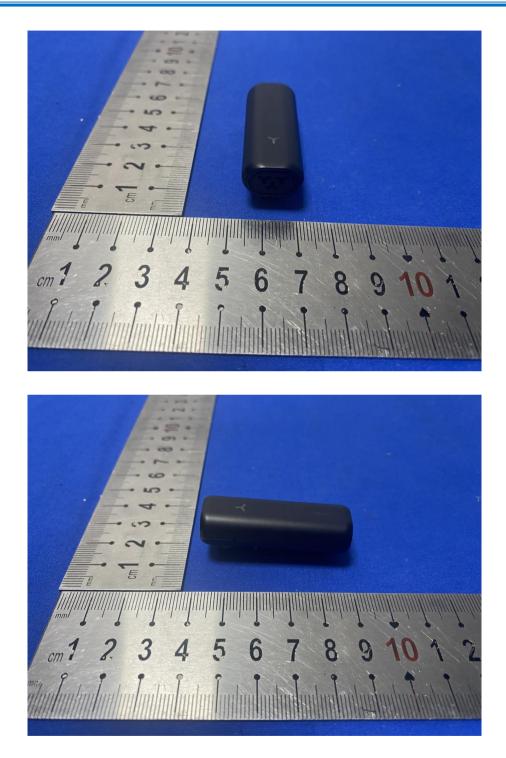




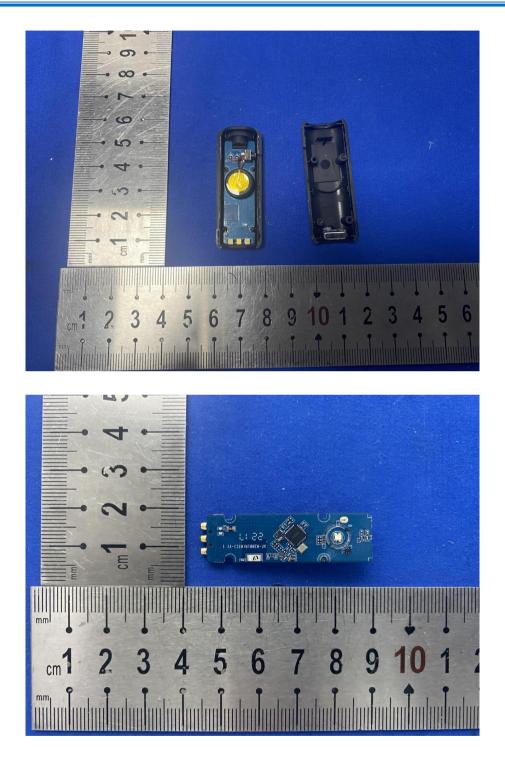






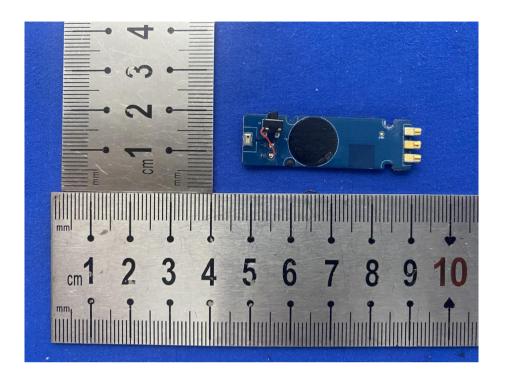








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*** END OF REPORT ***