

FCC Test Report

Report No.: AGC07240220501FE02

| FCC ID | : | 2A3TF-CRESTMK2 |
|-------------------------|------------|-------------------------------------|
| APPLICATION PURPOSE | : | Original Equipment |
| PRODUCT DESIGNATION | : | Bluetooth headphone |
| BRAND NAME | : | Orange |
| MODEL NAME | : | Orange Crest MK 2 |
| APPLICANT | : | OMEC Consumer Products Ltd |
| DATE OF ISSUE | : | May 27, 2022 |
| STANDARD(S) | : | FCC Part 15.247 |
| REPORT VERSION | : | V1.0 |
| <u>Attestation of (</u> | <u>710</u> | obal Compliance (Shenzhen) Co., Ltd |





REPORT REVISE RECORD

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|----------------|-------------|--------------|---------------|-----------------|
| V1.0 | / | May 27, 2022 | Valid | Initial Release |



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1. VERIFICATION OF COMPLIANCE

| Applicant | OMEC Consumer Products Ltd | |
|--------------------------|---|--|
| Address | OMEC House, 108 Ripon Way, Borehamwood, Hertfordshire, WD6 2JA, United Kingdom | |
| Manufacturer | Senmai Electron Limited | |
| Address | No.5 Shuiling Road, Zhouwu Industrial Zone, Dongcheng District, Dongguan City, Guangdong, China | |
| Factory | Senmai Electron Limited | |
| Address | No.5 Shuiling Road, Zhouwu Industrial Zone, Dongcheng District, Dongguan City, Guangdong, China | |
| Product Designation | Bluetooth headphone | |
| Brand Name | Orange | |
| Test Model | Orange Crest MK 2 | |
| Date of test | May 23, 2022 to May 27, 2022 | |
| Deviation | No any deviation from the test method | |
| Condition of Test Sample | Normal | |
| Test Result | Pass | |
| Report Template | AGCRT-US-BLE/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 part 15.247.

Thea Huang Prepared By Thea Huang May 27, 2022 (Project Engineer) **Reviewed By** Calvin Liu May 27, 2022 (Reviewer) Approved By Max Zhang May 27, 2022 (Authorized Officer)

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Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

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



2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as a "Bluetooth headphone". It is designed by way of utilizing the GFSK technology to achieve the system operation.

A major technical description of EUT is described as following

| Operation Frequency | 2.402 GHz to 2.480GHz |
|---------------------|--|
| RF Output Power | 6.108dBm (Max) |
| Bluetooth Version | V5.0 |
| Modulation | BR □GFSK, EDR □π /4-DQPSK, □8DPSK BLE ⊠GFSK 1Mbps □GFSK 2Mbps |
| Number of channels | 40 Channels |
| Antenna Designation | PCB Antenna (Comply with requirements of the FCC part 15.203) |
| Antenna Gain | 1.5dBi |
| Hardware Version | V6.0 |
| Software Version | 5.0 |
| Power Supply | DC 3.7V by battery or DC 5V by adapter |

2.2. TABLE OF CARRIER FREQUENCYS

| Frequency Band | Channel Number | Frequency |
|----------------|----------------|-----------|
| 2400~2483.5MHz | 0 | 2402 MHz |
| | 1 | 2404 MHz |
| | : | : |
| | 38 | 2478 MHz |
| | 39 | 2480 MHz |



2.3. RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for FCC ID: 2A3TF-CRESTMK2 filing to comply with the FCC Part 15.247 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device. For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.



3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y $\pm U$, 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%.

| Item | Measurement Uncertainty |
|---|----------------------------|
| Uncertainty of Conducted Emission for AC Port | $U_c = \pm 3.1 \text{ dB}$ |
| Uncertainty of Radiated Emission below 1GHz | $U_c = \pm 4.0 \text{ dB}$ |
| Uncertainty of Radiated Emission above 1GHz | $U_c = \pm 4.8 \text{ dB}$ |
| Uncertainty of total RF power, conducted | $U_c = \pm 0.8 \text{ dB}$ |
| Uncertainty of RF power density, conducted | $U_c = \pm 2.6 \text{ dB}$ |
| Uncertainty of spurious emissions, conducted | $U_c = \pm 2 \%$ |
| Uncertainty of Occupied Channel Bandwidth | $U_c = \pm 2 \%$ |



4. DESCRIPTION OF TEST MODES

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

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.
- 3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.

Software Setting

| S BlueTest3 | - | |
|--|--|-------|
| Test Mode STERED CODEC LB SETTLE FCM TONE STERED FCM TONE STERED FCM TONE STERED FCM TONE STERED FCM TONE STERED ELE TEST TX BLE TEST TX BLE TEST TX BLE TEST TX Test Results Test Results C:\Users\Administrato Opening USE SFI (602498 Transport active. | r\AppData\Local\CSR Ltd.\BlueTest3\uetappl | |
| 1 | | · · · |



5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure:

EUT

Conducted Emission Configure:

| EUT | AE |
|-----|----|
| | |
| | |

5.2. EQUIPMENT USED IN TESTED SYSTEM

| Item | Equipment | Model No. | ID or Specification | Remark |
|------|---------------------|-------------------|---------------------|--------|
| 1 | Bluetooth headphone | Orange Crest MK 2 | 2A3TF-CRESTMK2 | EUT |
| 2 | Control Box | CSR USB-SPI | N/A | AE |

5.3. SUMMARY OF TEST RESULTS

| FCC RULES | DESCRIPTION OF TEST | RESULT |
|---------------|--|----------------|
| 15.247 (b)(3) | Peak Output Power | Compliant |
| 15.247 (a)(2) | 6 dB Bandwidth | Compliant |
| 15.247 (d) | Conducted Spurious Emission | Compliant |
| 15.247 (e) | Maximum Conducted Output Power Density | Compliant |
| 15.209 | Radiated Emission | Compliant |
| 15.207 | Conducted Emission | Not applicable |

Note: The BT function cannot transmit when charging.



6. TEST FACILITY

| Test Site | Test Site Attestation of Global Compliance (Shenzhen) Co., Ltd | | | | | |
|---|--|----------------|----------------------|------------------|--------------------|---------------|
| Location1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Comr Fuhai Street, Bao'an District, Shenzhen, Guangdong, China | | | | | ng Community, | |
| Designation Num | ber | CN1259 | | | | |
| FCC Test Firm Registration Num | ber | 975832 | | | | |
| A2LA Cert. No. | | 5054.02 | | | | |
| Description | | Attestation of | Global Compliance (| Shenzhen) Co., L | td is accredited t | by A2LA |
| TEST EQUIPMENT | OF F | RADIATED EM | ISSION TEST | - | | |
| Equipment | Ма | anufacturer | Model | S/N | Cal. Date | Cal. Due |
| TEST RECEIVER | | R&S | ESCI | 10096 | Mar. 28, 2022 | Mar. 27, 2023 |
| EXA Signal Analyzer | | Aglient | N9010A | MY53470504 | Nov. 17, 2021 | Nov. 16, 2022 |
| 2.4GHz Filter | ΕM | 1 Electronics | 2400-2500 | N/A | Mar. 22, 2022 | Mar. 21, 2024 |
| Attenuator | | ZHINAN | E-002 | N/A | Sep. 03, 2020 | Sep. 02, 2022 |
| Horn antenna | SCH | IWARZBECK | 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 | S LINDGREN | 3117 | 00034609 | Apr. 23, 2021 | Apr. 22, 2023 |
| Broadband Preamplifier | ETS | S LINDGREN | 3117PA | 00225134 | Sep. 03, 2020 | Sep. 02, 2022 |
| ANTENNA | SCF | IWARZBECK | VULB9168 | 494 | Jan. 08, 2021 | Jan. 07, 2023 |
| Test software | - | Tonscend | JS32-RE (Ver.2.5) | N/A | N/A | N/A |



7. PEAK OUTPUT POWER

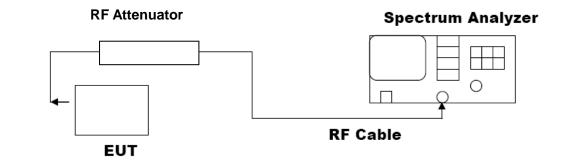
7.1. MEASUREMENT PROCEDURE

For peak power test:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. RBW≥DTS bandwidth
- 3. VBW≥3*RBW.
- 4. SPAN≥VBW.
- 5. Sweep: Auto.
- 6. Detector function: Peak.
- 7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) PEAK POWER TEST SETUP





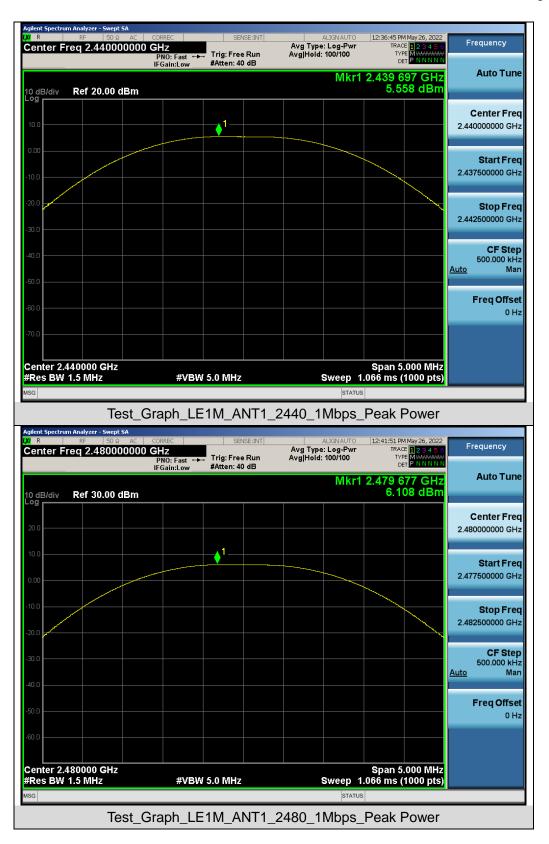
7.3. LIMITS AND MEASUREMENT RESULT

| Test Data of Conducted Output Power | | | | | |
|-------------------------------------|-----------------------|---------------------|-----------------|--------------|--|
| Test Mode | Test Channel (MHz) | Peak Power (dBm) | Limits (dBm) | Pass or Fail | |
| | 2402 | 3.950 | ≪30 | Pass | |
| GFSK 1M | 2440 | 5.558 | ≪30 | Pass | |
| | 2480 | 6.108 | ≤30 | Pass | |



Test Graphs of Conducted Output Power







8. BANDWIDTH

8.1. MEASUREMENT PROCEDURE

6dB bandwidth:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 kHz, VBW≥3×RBW.
- 4. Set SPA Trace 1 Max hold, then View.

Occupied bandwidth:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hoping channel The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak

4. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

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

The same as described in section 7.2.

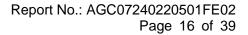
8.3. LIMITS AND MEASUREMENT RESULTS

| Test Data of Occupied Bandwidth and DTS Bandwidth | | | | | | |
|---|---|-------|-------|-----------------|--------------|--|
| Test Mode | Test Channel99% Occupied-6dB(MHz)Bandwidth (MHz)Bandwidth (MHz) | | | Limits (MHz) | Pass or Fail | |
| | 2402 | 1.029 | 0.693 | ≥0.5 | Pass | |
| GFSK 1M | 2440 | 1.025 | 0.693 | ≥0.5 | Pass | |
| | 2480 | 1.027 | 0.705 | ≥0.5 | Pass | |





Test Graphs of Occupied Bandwidth





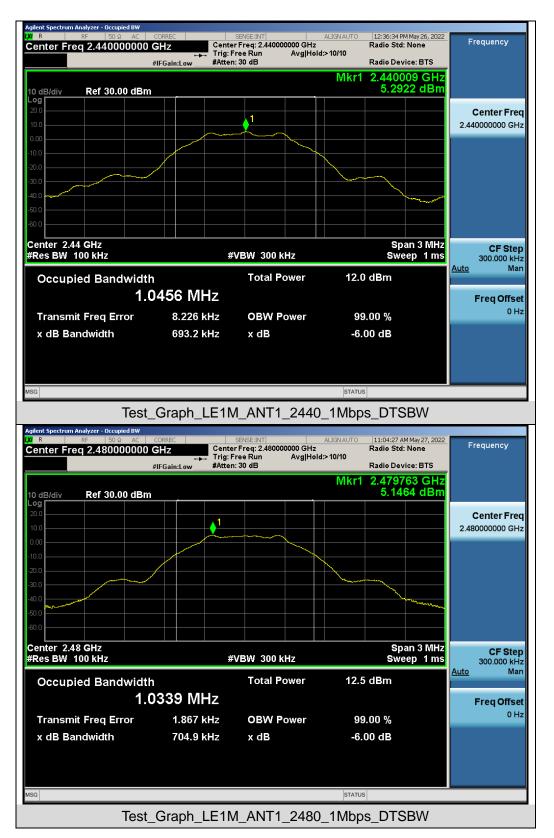


Test_Graph_LE1M_ANT1_2480_1Mbps_OBW



Test Graphs of DTS Bandwidth







9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

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

The same as described in section 7.2.

9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

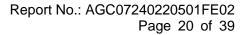
9.4. LIMITS AND MEASUREMENT RESULT

| LIMITS AND MEASUREMENT RESULT | | | | |
|--|--|----------|--|--|
| Angliaghta Limita | Measurement Result | | | |
| Applicable Limits | Test Data | Criteria | | |
| In any 100 kHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power. | At least -20dBc than the reference level | PASS | | |

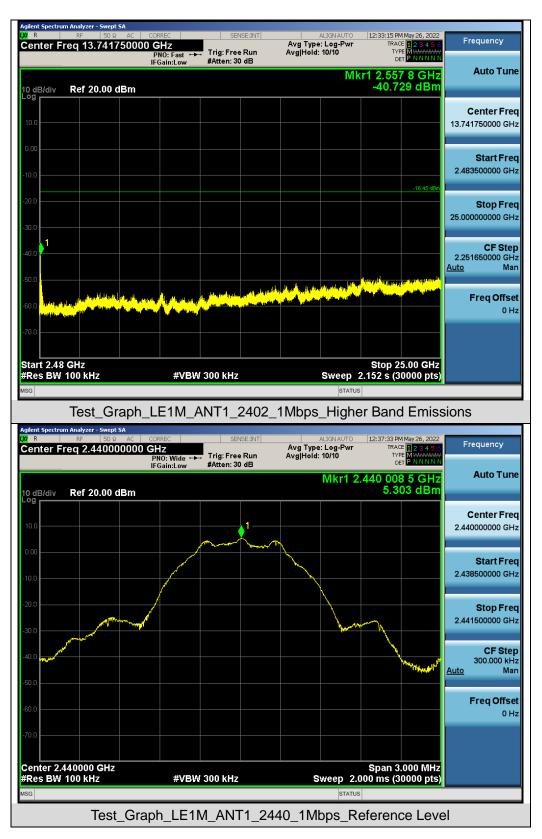


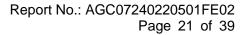


Test Graphs of Spurious Emissions in Non-Restricted Frequency Bands

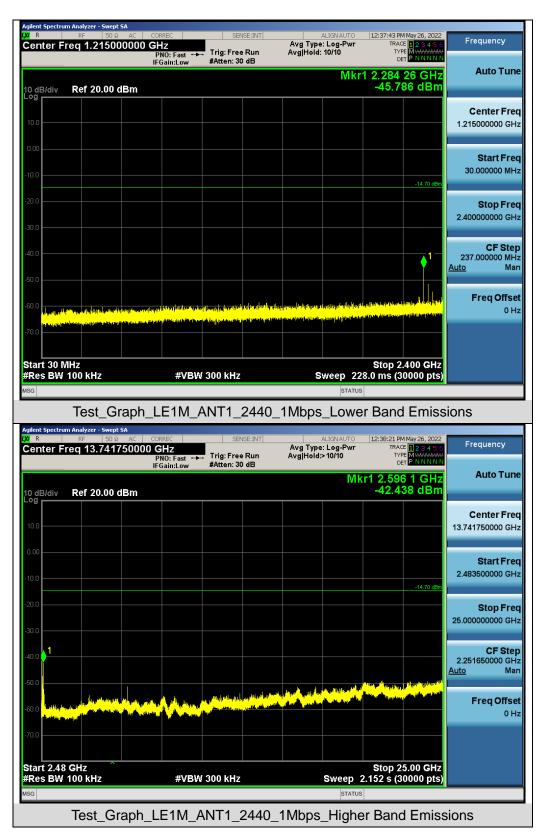




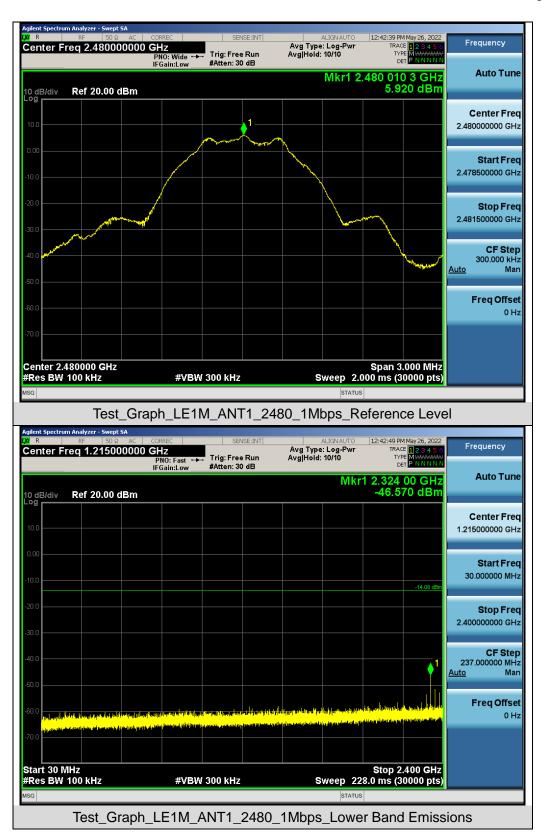














| R | RF 50 Ω AC | CORREC | SENSE:INT | ALIGN AUTO | 12:43:26 PM May 26, 2022 | Frequency |
|-----------------------------|-------------------------------------|------------------------------------|-----------------------------------|---|---|----------------------------------|
| enter F | req 13.75000000 | 0 GHz PNO: Fast ↔ IFGain:Low | . Trig: Free Run #Atten: 30 dB | Avg Type: Log-Pwr Avg Hold: 10/10 | TRACE 123456 TYPE MWWWWW DET PNNNNN | Frequency |
|) dB/div | Ref 20.00 dBm | | | Mk | r1 2.636 5 GHz -44.209 dBm | Auto Tun |
| | | | | | | Center Fre |
| 0.0 | | | | | | 13.750000000 GH |
| .00 | | | | | | Start Fre |
| 0.0 | | | | | -14.08 dBm | 2.500000000 GH |
| 0.0 | | | | | | Stop Fre |
| 0.0 | | | | | | 25.000000000 GH |
| | | | | | | CF Ste |
| ľ | | | | | | 2.250000000 GH <u>Auto</u> Ma |
| .0 | ر المار المراجعة المحمد المراجع الم | alada Jali Jali nas. 1 t | المطالعاتين والمراطة العريق | and the state of the | | FreqOffse |
| o.o <mark>a shi a sh</mark> | | | | | | 0H |
| 0.0 | | | | | | |
| tart 2.50 |) GHz | | | | Stop 25.00 GHz | |
| | 100 kHz | #VBW | 300 kHz | | 2.152 s (30000 pts) | |
| 2 | | | | 1Mbps_Highe | | |





Test Graphs of Band Edge Emissions in Non-Restricted Frequency Bands



10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

10.1. MEASUREMENT PROCEDURE

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set the SPA Trace 1 Max hold, then View.

Note: The method of PKPSD in the KDB 558074 item 8.4 was used in this testing.

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

Refer to Section 7.2.

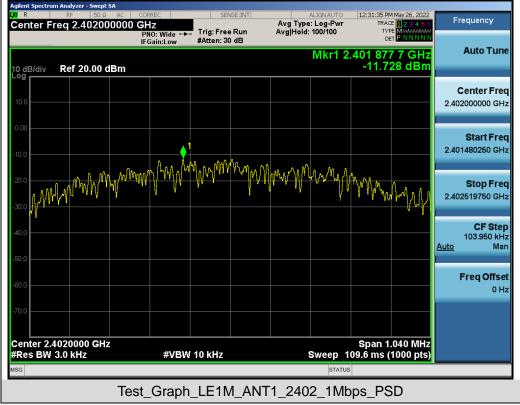
10.3. MEASUREMENT EQUIPMENT USED

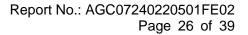
Refer to Section 6.

10.4. LIMITS AND MEASUREMENT RESULT

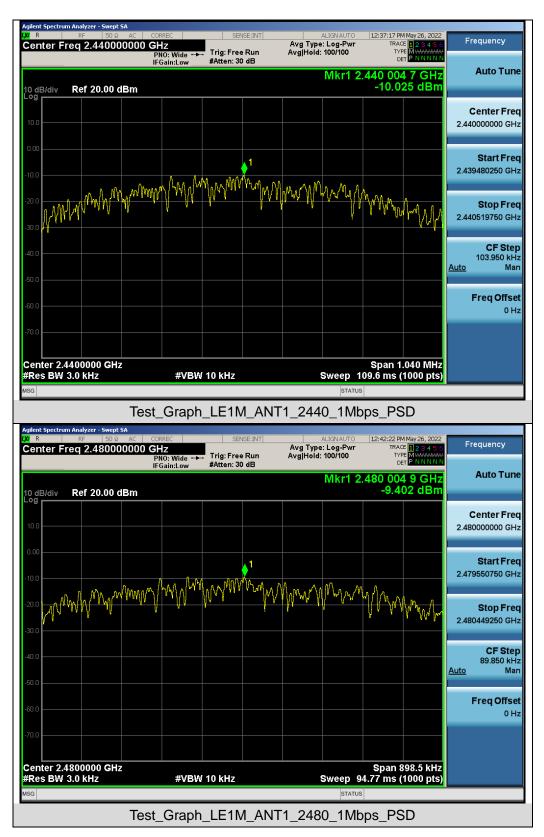
| Test Data of Conducted Output Power Spectral Density | | | | | |
|--|-----------------------|-----------------------------|---------------------|--------------|--|
| Test Mode | Test Channel (MHz) | Power density (dBm/3kHz) | Limit (dBm/3kHz) | Pass or Fail | |
| | 2402 | -11.728 | ≪8 | Pass | |
| GFSK 1M | 2440 | -10.025 | ≪8 | Pass | |
| | 2480 | -9.402 | ≪8 | Pass | |

Test Graphs of Conducted Output Power Spectral Density











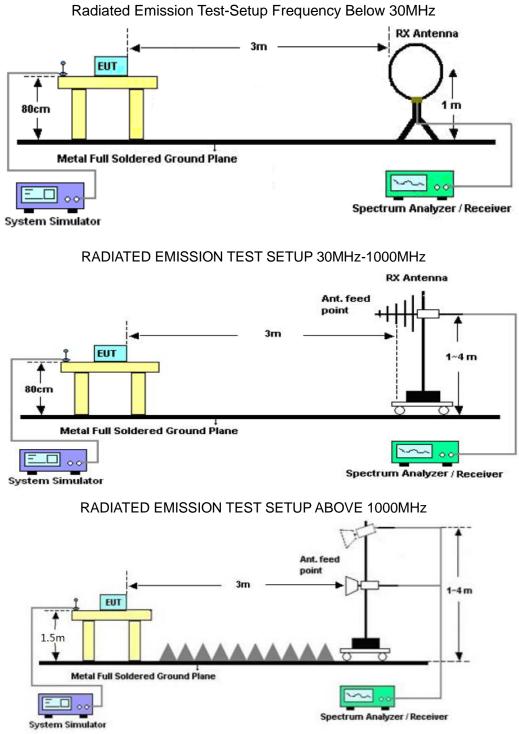
11. RADIATED EMISSION

11.1. 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 emission, 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 1MHz RBW and 3MHz VBW for peak reading. 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.



11.2. TEST SETUP





11.3. LIMITS AND MEASUREMENT RESULT

15.209 Limit in the below table has to be followed

| Frequencies (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|----------------------|--------------------------------------|----------------------------------|
| 0.009~0.490 | 2400/F(kHz) | 300 |
| 0.490~1.705 | 24000/F(kHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| Above 960 | 500 | 3 |

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

11.4. TEST RESULT

Radiated emission below 30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.



EUT

Tempe

Pressu Test M

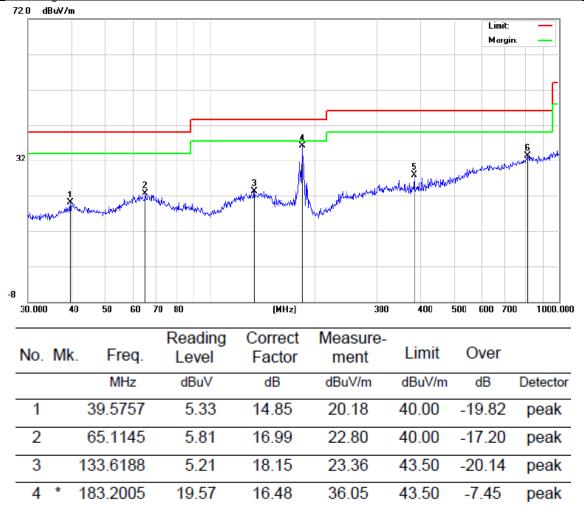
| | Bluetooth headpho | one | Model Name | Orange Crest MK 2 |
|--------------|-----------------------|---------------------|------------------------|----------------------|
| erature | 25° C | | Relative Humidity | 55.4% |
| ure | 960hPa | | Test Voltage | Normal Voltage |
| lode | Mode 3 | | Antenna | Horizontal |
| 72.0 dBuV/m | | | | |
| 32 | | | | |
| 30.000 40 50 | | (MHz) | | 500 600 700 1000.000 |
| No. Mk. F | Reading req. Level | Correct M Factor | leasure- ment Limit | Over |
| 1 | MHz dBuV | dB d | lBuV/m dBuV/m | dB Detector |
| 1 68.8 | 8721 5.93 | 17.04 | 22.97 40.00 | -17.03 peak |
| 2 * 183.2 | 2005 23.08 | 16.02 | 39.10 43.50 | -4.40 peak |
| 3 364.2 | 2595 13.98 | 20.59 | 34.57 46.00 | -11.43 peak |
| 4 404.6 | 6665 15.05 | 20.70 | 35.75 46.00 | -10.25 peak |
| 5 742.2 | 2587 8.96 | 23.68 | 32.64 46.00 | -13.36 peak |
| 6 887.6 | 6099 6.49 | 27.44 | 33.93 46.00 | -12.07 peak |

Radiated emission from 30MHz to 1000MHz

RESULT: PASS



| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna | Vertical |



RESULT: PASS Note:

5

6

Note:

1. Factor=Antenna Factor + Cable loss, Over=Measurement-Limit.

383.9318

810.2654

2. All test modes had been tested. The mode 3 is the worst case and recorded in the report.

8.87

5.94

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19.06

27.43

27.93

33.37

46.00

46.00

-18.07

-12.63

peak

peak



Radiated emission above 1GHz

| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 1 | Antenna | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---------------|------------------|---------------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4804.000 | 43.58 | 0.08 | 43.66 | 74 | -30.34 | peak |
| 4804.000 | 35.41 | 0.08 | 35.49 | 54 | -18.51 | AVG |
| 7206.000 | 38.39 | 2.21 | 40.6 | 74 | -33.4 | peak |
| 7206.000 | 31.33 | 2.21 | 33.54 | 54 | -20.46 | AVG |
| | | | | | | |
| Remark: | | | | | | |
| actor = Anter | na Factor + Cabl | e Loss – Pre- | amplifier. | | | |

| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 1 | Antenna | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|-----------|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4804.000 | 44.78 | 0.08 | 44.86 | 74 | -29.14 | peak |
| 4804.000 | 34.52 | 0.08 | 34.6 | 54 | -19.4 | AVG |
| 7206.000 | 38.41 | 2.21 | 40.62 | 74 | -33.38 | peak |
| 7206.000 | 30.46 | 2.21 | 32.67 | 54 | -21.33 | AVG |
| | | | | | | |
| emark: | | | | | | |



| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 2 | Antenna | Horizontal |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---------------|-------------------|----------------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4880.000 | 44.89 | 0.14 | 45.03 | 74 | -28.97 | peak |
| 4880.000 | 35.52 | 0.14 | 35.66 | 54 | -18.34 | AVG |
| 7320.000 | 39.63 | 2.36 | 41.99 | 74 | -32.01 | peak |
| 7320.000 | 31.64 | 2.36 | 34 | 54 | -20 | AVG |
| | | | | | | |
| Remark: | | | | | | |
| actor = Anter | nna Factor + Cabl | e Loss – Pre-a | amplifier. | | | |

| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 2 | Antenna | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|-----------|---------------|--------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4880.000 | 45.74 | 0.14 | 45.88 | 74 | -28.12 | peak |
| 4880.000 | 38.46 | 0.14 | 38.6 | 54 | -15.4 | AVG |
| 7320.000 | 40.32 | 2.36 | 42.68 | 74 | -31.32 | peak |
| 7320.000 | 32.3 | 2.36 | 34.66 | 54 | -19.34 | AVG |
| | | | | | | |
| emark: | | | | | | |



| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna | Horizontal |

| Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---------------|-----------------------------------|--|---|---|---|
| (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 44.85 | 0.22 | 45.07 | 74 | -28.93 | peak |
| 35.69 | 0.22 | 35.91 | 54 | -18.09 | AVG |
| 38.61 | 2.64 | 41.25 | 74 | -32.75 | peak |
| 29.6 | 2.64 | 32.24 | 54 | -21.76 | AVG |
| | | | | | |
| | (dBµV) 44.85 35.69 38.61 | (dBµV) (dB) 44.85 0.22 35.69 0.22 38.61 2.64 | (dBµV) (dB) (dBµV/m) 44.85 0.22 45.07 35.69 0.22 35.91 38.61 2.64 41.25 | (dBµV) (dB) (dBµV/m) (dBµV/m) 44.85 0.22 45.07 74 35.69 0.22 35.91 54 38.61 2.64 41.25 74 | (dBµV) (dB) (dBµV/m) (dBµV/m) (dB) 44.85 0.22 45.07 74 -28.93 35.69 0.22 35.91 54 -18.09 38.61 2.64 41.25 74 -32.75 |

| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna | Vertical |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Value Type |
|---------------|-------------------|---------------|----------------|----------|--------|------------|
| (MHz) | (dBµV) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | value Type |
| 4960.000 | 42.74 | 0.22 | 42.96 | 74 | -31.04 | peak |
| 4960.000 | 34.26 | 0.22 | 34.48 | 54 | -19.52 | AVG |
| 7440.000 | 38.38 | 2.64 | 41.02 | 74 | -32.98 | peak |
| 7440.000 | 29.51 | 2.64 | 32.15 | 54 | -21.85 | AVG |
| | | | | | | |
| Remark: | | | | | | |
| actor = Anter | nna Factor + Cabl | e Loss – Pre- | amplifier. | | | |

RESULT: PASS

Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin=Level-Limit.

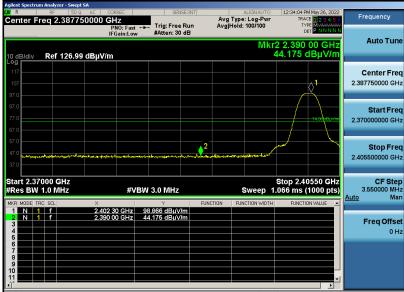
The "Factor" value can be calculated automatically by software of measurement system.



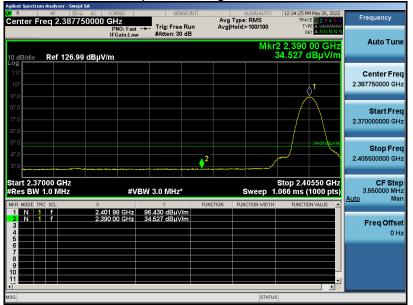
| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 1 | Antenna | Horizontal |

Test result for band edge emission at restricted bands

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: PASS

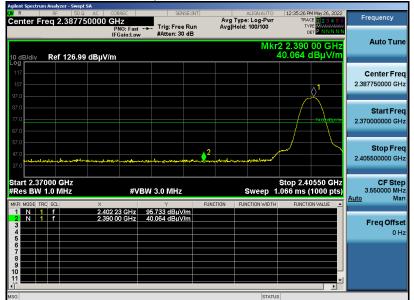
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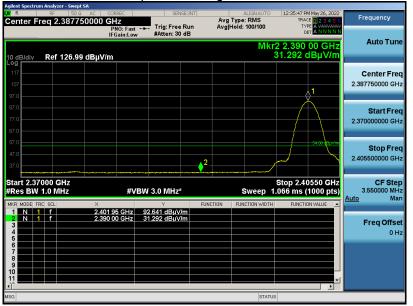


| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 1 | Antenna | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: PASS

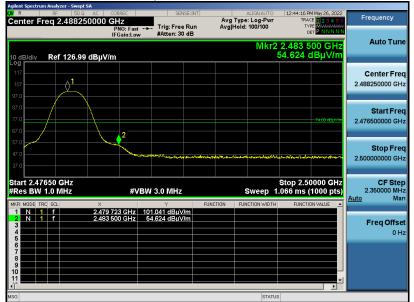
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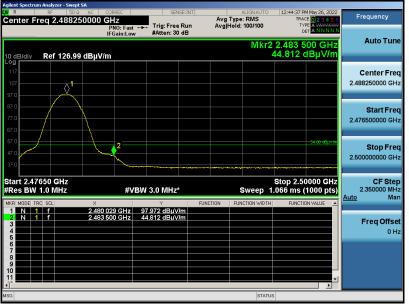


| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna | Horizontal |

Test Graph for Peak Measurement



Test Graph for Average Measurement

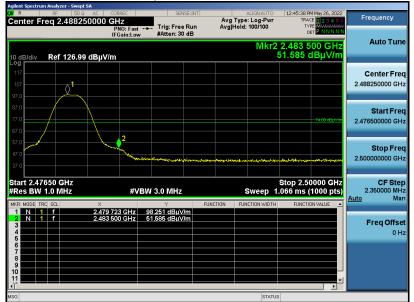


RESULT: PASS



| EUT | Bluetooth headphone | Model Name | Orange Crest MK 2 |
|-------------|---------------------|-------------------|-------------------|
| Temperature | 25° C | Relative Humidity | 55.4% |
| Pressure | 960hPa | Test Voltage | Normal Voltage |
| Test Mode | Mode 3 | Antenna | Vertical |

Test Graph for Peak Measurement



Test Graph for Average Measurement



RESULT: PASS Note: The factor had been edited in the "Input Correction" of

Note: The factor had been edited in the "Input Correction" of the Spectrum Analyzer.

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APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC07240220501AP01

APPENDIX B: PHOTOGRAPHS OF EUT Refer to the Report No.: AGC07240220501AP02

----END OF REPORT----



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