

Anbotek

Address





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FCC Test Report

GODOX PHOTO EQUIPMENT CO.,LTD **Applicant**

1st to 4th Floor, Building 2/1st to 4th Floor,

Building 4, Yaochuan Industrial Zone, Tangwei

Community, Fuhai Street, Baoan District,

Shenzhen, 518103 China

Wireless Lavalier Microphone System(Receiver) Product Name

Report Date Oct. 26, 2023

Shenzhen Anbotek Compilance Laboratory Limited











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TEST REPORT

Applicant : GODOX PHOTO EQUIPMENT CO.,LTD

Manufacturer : GODOX Photo Equipment Co.,Ltd.

Product Name : Wireless Lavalier Microphone System(Receiver)

Test Model No. : WES2 RX

Reference Model No. : N/A

Trade Mark : GOOX

WES2 RX Input: MAX. 9V= 2A

Rating(s) : WES2 RX Output: 5V-1A, 5V-2A,

9V=1A, 9V=2A

Test Standard(s) 47 CFR Part 15.247

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with above listed standard(s) requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

| Date of Receipt: | Sept. 27, 2023 |
|--------------------------------------|--|
| Artborek Artbore Ali. | Ande Anborek Anbore All borek |
| Date of Test: | Sept. 27, 2023 to Oct. 16, 2023 |
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| otek Anbotek Anbotek Anbotek Anbotek | Tu Tu Hong |
| Prepared By: | too, top Williams Williams Williams |
| Anborek Anborek Anborek | (TuTu Hong) |
| Anbotek Anbotek Anbotek Anbotek | Idward pan |
| Approved & Authorized Signer: | ak Danisa kanada ka |
| one Allin alek Anboyen Anbo | (Edward Pan) |





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Revision History

| Report Version | Description | Issued Date |
|-------------------------|---------------------------------|----------------------|
| Anbores ROO nbores Ari | Original Issue. | Oct. 26, 2023 |
| Walter Opposer Waspelak | Tipose Will Williams Williams | Anborek Anborek Anb |
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1. General Information

1.1. Client Information

| | * U.S. | dla | |
|------|--------------|-----|---|
| , | Applicant | : | GODOX PHOTO EQUIPMENT CO.,LTD |
| 1,6 | Address | : | 1st to 4th Floor, Building 2/1st to 4th Floor, Building 4 ,Yaochuan Industrial Zone, Tangwei Community, Fuhai Street, Baoan District, Shenzhen, 518103 China |
| 10 | Manufacturer | : | GODOX Photo Equipment Co.,Ltd. |
| 0.00 | Address | : | 4th Floor of Building 1, 1st to 4th Floor of Building 2, 4th Floor of Building 3, 1st to 4th Floor of Building 4, Yaochuan Industrial Zone, Tangwei Communi ty, Fuhai Street, Bao'an District, Shenzhen 518103, China |
| 0 | Factory | : | GODOX Photo Equipment Co.,Ltd. |
| | Address | : | 4th Floor of Building 1, 1st to 4th Floor of Building 2, 4th Floor of Building 3, 1st to 4th Floor of Building 4, Yaochuan Industrial Zone, Tangwei Communi ty, Fuhai Street, Bao'an District, Shenzhen 518103, China |

1.2. Description of Device (EUT)

| | _ | |
|------------------------|---|---|
| Product Name | : | Wireless Lavalier Microphone System(Receiver) |
| Test Model No. | : | WES2 RX |
| Reference Model No. | • | N/A Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek |
| Trade Mark | : | Anborek Anborek Anborek Anborek |
| Test Power Supply | : | AC 120V/60Hz for adapter/DC 9V via mobile phone |
| Test Sample No. | : | 1-2-1(Normal Sample), 1-2-2(Engineering Sample) |
| Adapter | : | N/A Antories Antories Antories Antories Antories Antories |
| RF Specification | | |
| Operation Frequency | • | 2402~2480 MHz |
| Number of Channel | : | 79 Anbores Anbores Anbores Anbores Anbores |
| Modulation Type | | GFSK, bodes Andrek Andrek Andrek Andrek Andrek Andrek |
| Antenna Type | : | Ceramic Antenna |
| Antenna Gain(Peak) | : | 1.33dBi Andrew Andrew Andrew Andrew Andrew |
| | | Dr. Mr. War |

Remark:

- (1) All of the RF specification are provided by customer.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.







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1.3. Auxiliary Equipment Used During Test

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| | 0.0 | | | - UI- | | 0.0 | (37) | _ |
|---------------|---------|-----------|-------------|-------------|----------|-----------|-----------|-------------------|
| Title | | Manufactu | urer | Model No. | | Seri | ial No. | |
| Xiaomi 33W a | dapter | Xiaom | anboigh | MDY-11-EX | abotek | SA62212 | 2LA04358J | , ₁₇ @ |
| Mobile pho | ne do | Xiaom | WUPO46W | Redmi K40 | **** | iek pripe | T Pull | .No. |
| Notebool | (Mario | lenovo | k Will Olek | E14 | 6.0 | polek b | W. J. | 200 |
| "Dough Wupoug | Ir. b. | upos Will | Otek Wipots | well alpoie | % | Anboick | Vupos | P |

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1.4. Description of Test Configuration

| 100,0 | D'1. | | and of the | | | -MO,_ | 1000 | 0.0 | |
|----------------------------------|----------------|-------------------|----------------|---------------------------------|----------------|---------|----------------|------------|----------------|
| Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
| 01 | 2402 | 18 | 2419 | 35 | 2436 | 52 | 2453 | 69 | 2470 |
| 02,000 | 2403 | 19 | 2420 | 36 | 2437 | 53 | 2454 | 70 | 2471 |
| o ⁶ 03 _№ 0 | 2404 | 20 | 2421 | 37 _M n ^{bo} | 2438 | 54 | 2455 | 71 | 2472 |
| 04 | 2405 | 21 | 2422 | 38 | 2439 | 55 | 2456 | 72 | 2473 |
| 05 | 2406 | 22 | 2423 | 39 | 2440 | 56 | 2457 | 73 | 2474 |
| 06 | 2407 | 23 | 2424 | 40 | 2441 | 57 | 2458 | 74 | 2475 |
| 07 ₀₀ 0% | 2408 | 24 | 2425 | 41 | 2442 | 58 | 2459 | 75 | 2476 |
| № 08 M | 2409 | 25 | 2426 | 42 | 2443 | 59 | 2460 | 76 | 2477 |
| 09 | 2410 | 26 | 2427 | 43 M | 2444 | 60 | 2461 | 77 | 2478 |
| 10 | 2411 | 27 | 2428 | 44 | 2445 | 61 | 2462 | 78 | 2479 |
| 1110 | 2412 | 28 | 2429 | 45 | 2446 | 62 | 2463 | 79 | 2480 |
| 12 | 2413 | 29 | 2430 | 46 | 2447 | 63 | 2464 | Aribora | Arres 150M |
| 13 | 2414 | 30 | 2431 | 47,000 | 2448 | 64 | 2465 | Anhors | D. T. S. |
| 14 | 2415 | 31 | 2432 | 48 M | 2449 | 65 | 2466 | | |
| 15 | 2416 | 32 | 2433 | 49 | 2450 | 66 | 2467 | | |
| 16 | 2417 | 33 | 2434 | 50 | 2451 | 67 | 2468 | 00/01 | Wilden, Welk |
| 17 | 2418 | 34 | 2435 | 51 | 2452 | 68 | 2469 | A. iba isa | Augus Me |
| P. Bellen | 1 | -16 ¹⁰ | - 40° | - Bar | M. tool | 9/1 | 5 V* | 1.0 | * U/D |

Note:

- 1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.
- 2. EUT was tested with channel 01,



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1.5. Description of Test Modes

| | Pretest Modes | Descriptions |
|---|------------------|---|
| 0 | And TM100000 And | Keep the EUT in continuously transmitting mode (non-hopping). |
| | TM2 MOONE | Keep the EUT in continuously transmitting mode. |

1.6. Measurement Uncertainty

| Parameter | Uncertainty |
|--|---|
| Conducted emissions (AMN 150kHz~30MHz) | 3.4dB |
| Occupied Bandwidth | 925Hz |
| Conducted Output Power | 0.76dB |
| Conducted Spurious Emission | 1.24dB Amborek Anborek |
| Radiated spurious emissions (above 1GHz) | 1G-6GHz: 4.78dB; 6G-18GHz: 4.88dB 18G-40GHz: 5.68dB |
| Radiated emissions (Below 30MHz) | 3.53dB |
| Radiated spurious emissions (30MHz~1GHz) | Horizontal: 3.92dB; Vertical: 4.52dB |

The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.









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1.7. Test Summary

| Test Items | Test Modes | Status |
|---|-----------------------|------------|
| Antenna requirement | And Obotek / Andoores | P |
| Conducted Emission at AC power line | Mode1 Antonia | Р |
| Occupied Bandwidth | Mode1 | Р |
| Maximum Conducted Output Power | Mode1 | P |
| Channel Separation | Mode2 | P. P. A. |
| Number of Hopping Frequencies | Mode2 | P |
| Dwell Times Andrews Andrews Andrews Andrews | Mode2 | P |
| Emissions in non-restricted frequency bands | Mode1,2 | P |
| Band edge emissions (Radiated) | Mode1 | P |
| Emissions in frequency bands (below 1GHz) | Mode1 | P |
| Emissions in frequency bands (above 1GHz) | Mode1 | NP N |
| Note: P: Passotek Antiporek Antiporek Antiporek | s hotels Anborel | Anbo. |
| N: N/A, not applicable | Yun Vel | Hall Mulpe |

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1.8. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.:184111

Shenzhen Anbotek Compliance Laboratory Limited, 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. 184111.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128

1.9. Disclaimer

- The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- 2. The test report is invalid if there is any evidence and/or falsification.
- 3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- 4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
- 5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- 6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.





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1.10. Test Equipment List

| Conducted Emission at AC power line | | | | | | | | | |
|-------------------------------------|--|------------------|-----------|------------------|------------------|--------------|--|--|--|
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal.Due Date | | | |
| 1 | L.I.S.N. Artificial Mains Network | Rohde & Schwarz | ENV216 | 100055 | 2022-10-23 | 2023-10-22 | | | |
| 2 | Three Phase V- type Artificial Power Network | CYBERTEK | EM5040DT | E215040D T001 | 2023-07-05 | 2024-07-04 | | | |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESCI | 100627 | 2023-10-12 | 2024-10-11 | | | |
| 4 | Software Name EZ-EMC | Farad Technology | ANB-03A | N/A | ich I pripatelle | W Joseph | | | |

Occupied Bandwidth

Maximum Conducted Output Power

Channel Separation

Number of Hopping Frequencies

Dwell Time

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Emissions in non-restricted frequency bands

| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal.Due Date |
|------|-----------------------------------|-----------------|-----------|-----------------|------------|--------------|
| 1 | MXG RF Vector Signal Generator | Agilent | N5182A | MY481806 56 | 2023-10-12 | 2024-10-11 |
| 2 | Power Meter | Agilent | N1914A | MY500011 02 | 2022-10-26 | 2023-10-25 |
| 3 | DC Power Supply | IVYTECH | IV3605 | 1804D360 510 | 2022-10-22 | 2023-10-21 |
| 4 | MXA Spectrum Analysis | KEYSIGHT | N9020A | MY505318 23 | 2023-02-23 | 2024-02-22 |
| 5 | Oscilloscope | Tektronix | MDO3012 | C020298 | 2022-10-19 | 2023-10-18 |
| 6 | Spectrum Analyzer | Rohde & Schwarz | FSV40-N | 101792 | 2023-05-26 | 2024-05-25 |

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| note. | PUL | alok Alpo, | bes. | 1010 C | AME | -10 ¹ |
|-------|---|------------------|----------------------|-----------------|-------------|------------------|
| | edge emissions (Ra sions in frequency ba | | Wipoyen Wek | Wupopop | Wupasak | Vupp. |
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal.Due Date |
| 1 00 | EMI Test Receiver | Rohde & Schwarz | ESR26 | 101481 | 2022-10-23 | 2023-10-22 |
| 2 | EMI Preamplifier | SKET Electronic | LNPA- 0118G-45 | SKET-PA- 002 | 2023-10-12 | 2024-10-11 |
| 3 | Double Ridged Horn Antenna | SCHWARZBECK | BBHA 9120D | 02555 | 2022-10-16 | 2025-10-15 |
| 4 | EMI Test Software EZ-EMC | SHURPLE | N/A | N/A | Villa Villa | VUpode. |
| 5 | Horn Antenna | A-INFO | LB-180400- KF | J21106062 8 | 2022-10-23 | 2023-10-22 |
| 6 | Spectrum Analyzer | Rohde & Schwarz | FSV40-N | 101792 | 2023-05-26 | 2024-05-25 |
| 7 | Amplifier | Talent Microwave | TLLA18G40 G-50-30 | 23022802 | 2023-05-25 | 2024-05-24 |

| Emiss | sions in frequency ba | ands (below 1GHz) | Who.e. | Vulga | Vupoyo _k | Wpour 1 |
|-------|----------------------------|-------------------|-----------|------------|---------------------|--------------|
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal.Due Date |
| 1 | EMI Test Receiver | Rohde & Schwarz | ESR26 | 101481 | 2022-10-23 | 2023-10-22 |
| 2 | Pre-amplifier | SONOMA | 310N | 186860 | 2022-10-23 | 2023-10-22 |
| 3. | Bilog Broadband Antenna | Schwarzbeck | VULB9163 | 345 | 2022-10-23 | 2025-10-22 |
| 4 | EMI Test Software EZ-EMC | SHURPLE | N/A | N/A | Wuhosan | Mark |

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2. Antenna requirement

Test Requirement:

Refer to 47 CFR Part 15.203, 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 shall be considered sufficient to comply with the provisions of this section.

2.1. Conclusion

The antenna is a Ceramic antenna which permanently attached, and the best case gain of the antenna is **1.33 dBi**. It complies with the standard requirement.





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3. Conducted Emission at AC power line

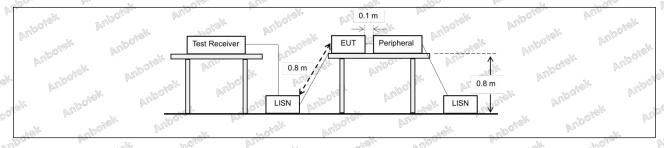
| | | A CIP | - NO. |
|--------------------|--|--|-------------------------------------|
| Anborek Anborek | Refer to 47 CFR 15.207(a), Excep section, for an intentional radiator public utility (AC) power line, the radiator | that is designed to be con adio frequency voltage tha | nected to the it is conducted |
| Test Requirement: | back onto the AC power line on ar band 150 kHz to 30 MHz, shall no measured using a 50 μH/50 ohms | y frequency or frequencie exceed the limits in the fo | s, within the ollowing table, as |
| Polick Vibousk | (LISN). Frequency of emission (MHz) | Conducted limit (dBµV) | tupo, |
| Me Oligh | Wilder Washington | Quasi-peak | Average |
| Tupour Win | 0.15-0.5 | 66 to 56* | 56 to 46* |
| Test Limit: | 0.5-5 | 56 | 46 |
| Alle abole | 5-30 | 60 | 50 |
| y Wipoin M | *Decreases with the logarithm of t | ne frequency. | bu. |
| Test Method: | ANSI C63.10-2020 section 6.2 | Profess Puposes | Vier |
| Procedure: | Refer to ANSI C63.10-2020 section line conducted emissions from unl | | |
| 3.1. EUT Operation | Anborok Anborok Anbo | all Antonas Anton | otek Anbotek |

3.1. EUT Operation

| 0.0 | Operating Envir | onment: | Alupa. | Projek. | Aupoles. | Vun Viek | VUpolok | Aupo |
|-----|-----------------|----------------------|--------------|-------------|--------------|------------------|---------------|-------|
| 30 | Test mode: | 1: TX (Non hopping). | -Hopping): K | eep the EUT | in continuou | ısly transmittir | ng mode (non- | Pupo, |

3.2. Test Setup

Aupotsk



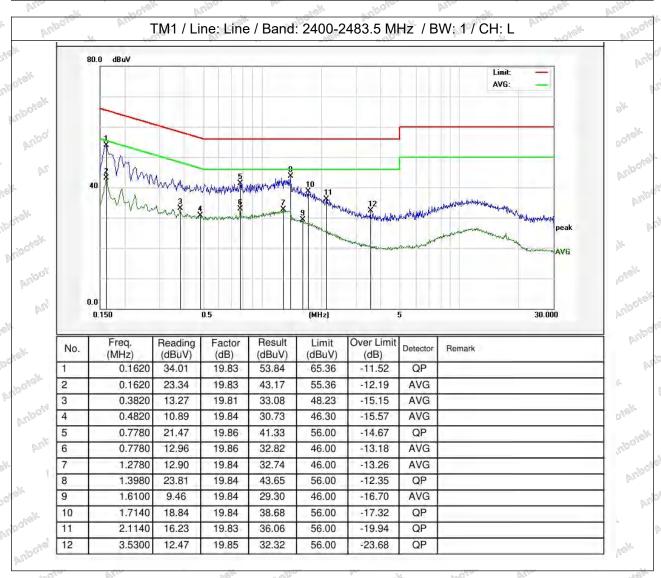




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3.3. Test Data

Temperature: 24.3 °C Humidity: 56.6 % Atmospheric Pressure: 101 kPa

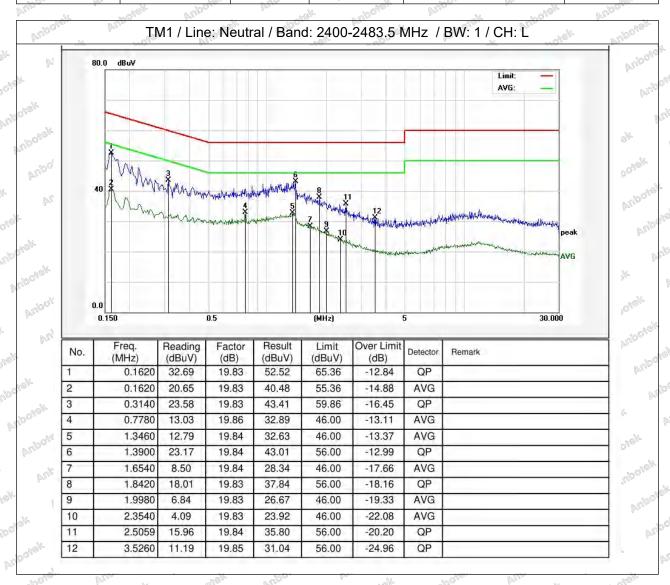






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Temperature: 24.3 °C Humidity: 56.6 % Atmospheric Pressure: 101 kPa







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4. Occupied Bandwidth

| Toot Poquiroment: | 17 CED 15 215(c) of the horizontal Ambours |
|---|---|
| Test Requirement: | 47 CFR 15.215(c) |
| abolek Anbo. | Refer to 47 CFR 15.215(c), intentional radiators operating under the |
| VIII. | alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to |
| Test Limit: | ensure that the 20 dB bandwidth of the emission, or whatever bandwidth |
| Test Lilling. | may otherwise be specified in the specific rule section under which the |
| One Will | equipment operates, is contained within the frequency band designated in |
| "polsk Vupo. | the rule section under which the equipment is operated. |
| 71/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 | ANSI C63.10-2020, section 7.8.6, For occupied bandwidth measurements, |
| Test Method: | use the procedure in 6.9.3. Frequency hopping shall be disabled for this test. |
| Anbo k | The occupied bandwidth is the frequency bandwidth such that, below its |
| Will Offer William | lower and above its upper frequency limits, the mean powers are each equal |
| r color pup | to 0.5% of the total mean power of the given emission. The following |
| You Vilon | procedure shall be used for measuring 99% power bandwidth: |
| stek anboyer | a) The instrument center frequency is set to the nominal EUT channel center |
| 100 m | frequency. The frequency span for the spectrum analyzer shall be between |
| Vilpolole Vilpa | 1.5 times and 5.0 times the OBW. |
| bre Williams | b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to |
| Pulpa " " Ulie | 5% of the OBW, and VBW shall be at least three times the RBW, unless |
| Vupo _{jou} Vupo | otherwise specified by the applicable requirement, |
| h. well was | c) Set the reference level of the instrument as required, keeping the signal |
| ion Mups. | from exceeding the maximum input mixer level for linear operation. In |
| dok vupojen b | general, the peak of the spectral envelope shall be more than [10 log |
| lon. In. | (OBW/RBW)] below the reference level. Specific guidance is given in |
| * Upoten Vupo | 4.1.6.2. |
| Drooff was | d) Step a) through step c) might require iteration to adjust within the |
| Procedure: | specified range. |
| VUPOLO. | e) Video averaging is not permitted. Where practical, a sample detection and |
| r soich supo | single sweep mode shall be used. Otherwise, peak detection and max-hold |
| W. William | mode (until the trace stabilizes) shall be used. |
| arek anbotes As | f) Use the 99% power bandwidth function of the instrument (if available) and |
| De le l'algh | report the measured bandwidth. |
| PUPOLON VUDA | g) If the instrument does not have a 99% power bandwidth function, then the |
| is. Wholes | trace data points are recovered and directly summed in linear power terms. |
| Pulps Follow | The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is |
| anboten Andre | recorded as the lower frequency. The process is repeated until 99.5% of the |
| N NAPOS | total is reached; that frequency is recorded as the upper frequency. The 99% |
| Wage - Fr | power bandwidth is the difference between these two frequencies. |
| sigh Anboise An | h) The occupied bandwidth shall be reported by providing spectral plot(s) of |
| in a supplemental | the measuring instrument display; the plot axes and the scale units per |
| upoles Aups | division shall be clearly labeled. Tabular data may be reported in addition to |
| Well Will populare | the plot(s). |
| 100, h. | |

4.1. EUT Operation

| e l | Operating Envir | onment: | en aloutok | Vupoles / | Vu | anborell | Vupp. | ~ 70 |
|-----|-----------------|--------------|---------------|---------------|--------------|--------------|------------|------|
| | Test mode: | 1: TX (Non-F | lopping): Kee | ep the EUT in | continuously | transmitting | mode (non- | Bro. |







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Anborak

Anborek

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Anbore

Anbor hopping). Anborett Anborett Anborett Anborett

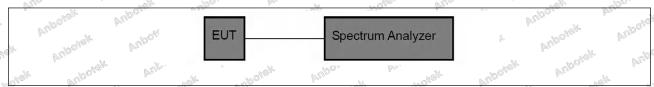
Aupotek

P.Upok

Anbore

A.Noote

4.2. Test Setup



4.3. Test Data

| | 00 - 00 | 90 | | 1 00 ⁰⁰⁰ | A. I.Ali D | 100° | 40415 |
|--------------|---------|------|-----------|---------------------|------------------|-------|---------|
| Temperature: | 26.5 °C | - 40 | Humidity: | 53.4 % | Atmospheric Pres | sure: | 101 kPa |

Please Refer to Appendix for Details.

Anbotek

Anbolek





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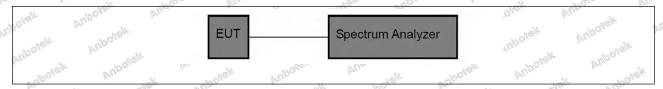
5. Maximum Conducted Output Power

| | 1 Albert Andrew Andrew Andrew Andrew |
|---|--|
| Test Requirement: | 47 CFR 15.247(b)(1) |
| Anbolek Anbolet | Refer to 47 CFR 15.247(b)(1), For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping |
| Test Limit: | channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 |
| olek ^{Vupolek} Vu | watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts. |
| Test Method: | ANSI C63.10-2020, section 7.8.5 |
| Anbotek Anbotek Anbotek Anbotek Anbotek | This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. Frequency hopping shall be disabled for this test. Use the following spectrum analyzer settings: |
| Hak Anbotek Ani | a) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel. |
| Place of Williams | b) RBW > 20 dB bandwidth of the emission being measured. c) VBW ≥ RBW. |
| Anborek Anborek | d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. |
| Procedure: | f) Trace: Max-hold. |
| Vupp. | g) Allow trace to stabilize. |
| ek Vipoles Vur | h) Use the marker-to-peak function to set the marker to the peak of the emission. |
| Potes. Ville | i) The indicated level is the peak output power, after any corrections for external attenuators and cables. |
| Anbotak Anbotak | j) A spectral plot of the test results and setup description shall be included in the test report. |
| Vupolek Vupole | NOTE—A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied |
| ak Vipoige VVD. | bandwidth of the unlicensed wireless device, rather than a spectrum analyzer. |
| The Market A | Tarrangeon Andrew Andrew Aller |

5.1. EUT Operation

| Operating Envi | ronment: | Vupo. | abolek | PUPOLE. | Vu. | anboyek | Aupo. |
|----------------|---------------------|-------|--------------|---------------|-----------------|--------------|----------|
| Test mode: | 1: TX (N hopping | | : Keep the E | JT in continu | ously transmitt | ing mode (no | n- Mupon |

5.2. Test Setup



5.3. Test Data

| Temperature: 26.5 °C Humidity: 53.4 % Atmospheric Pressure: 101 kPa | d _{DA} I |
|---|-------------------|
|---|-------------------|







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Anborek

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Please Refer to Appendix for Details.

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Anborek

Anbotek



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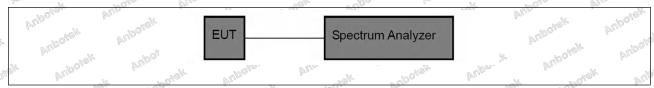
6. Channel Separation

| Upp. br. | POLESIA PL | 10 | 10/4 | 900,_ | Br. | 2018r |
|------------------------------------|--|--|--------------------------------|---------------------------|---------------------------------|-----------------|
| Test Requirement: | 47 CFR 15.247 | (a)(1) | upo, ek | . Heriode | WUP O.Lo. | Vue |
| Y Aupotek Aupotek | Refer to 47 CFF hopping channe the 20 dB band | el carrier frequ width of the ho | encies separ opping chann | ated by a r el, whiche | ninimum of 2 ver is greater. | 5 kHz or |
| Test Limit: Darek Antoriek | Alternatively, fre band may have 25 kHz or two-tl whichever is gre greater than 12 | hopping chan nirds of the 20 eater, provided | nel carrier fre dB bandwidt | equencies th of the ho | that are sepa opping chann | rated by el, |
| Test Method: | ANSI C63.10-20 | 020, section 7 | .8.2 | Vun Viele | Vilpolis le | Vujoo. |
| Anborek Anbore | The EUT shall he spectrum analyze | | ng function er | nabled. Us | e the followin | g Mupou |
| lek Anborek Anb | a) Span: Wide eb) RBW: Start wspacing; adjust channel. | vith the RBW s | set to approxi | imately 309 | % of the chan | nel |
| Anbores Anborek | c) Video (or ave d) Sweep: No fa | | 7/00 | Bra. | Anborek Anborek | Aupolok |
| Procedure: | e) Detector fund f) Trace: Max-ho | -40 | Vupo, alpoyak | Alleo Alliborel | F WUPOLLON | iok Anbe |
| ok Wupoye, Wun | g) Allow the trac | ce to stabilize. | ok Aupoke | igh Mupo | Podek Vi | Pogisk . |
| Aupolek Pupolek Vupolek Vupolek | Use the marker peaks of the ad regulatory limit included in the t | jacent channe shall be deterr | ls. Complian | ce of an El | JT with the ap | opropriate |

6.1. EUT Operation

| o | Operating Envir | onment: | Anbores | Vilgo, | Vulpoye _k | Vupous. | - bulle | P.O. |
|----|-----------------|---------------|----------------|----------------|----------------------|---------------|--|------|
| -6 | Test mode: | 2: TX (Hoppin | g): Keep the I | EUT in continu | ously transm | nitting mode. | W. P. C. | |

6.2. Test Setup



6.3. Test Data

| Temperature: | 26.5 °C | VUPO484 | Humidity: | 53.4 % | Atmospheric Pressur | re: 101 kPa |
|--------------|---------|---------|-----------|--------|---------------------|-------------|
| 40.070 | 4000 | 120 | | 5.777 | | |

Please Refer to Appendix for Details.







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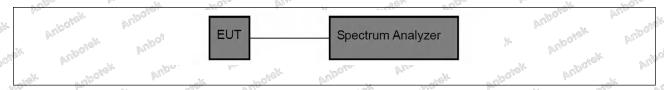
7. Number of Hopping Frequencies

| Test Requirement: | 47 CFR 15.247(a)(1)(iii) |
|---|---|
| Test Limit: Anborek Anborek Anborek Anborek | Refer to 47 CFR 15.247(a)(1)(iii), Fequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used. |
| Test Method: | ANSI C63.10-2020, section 7.8.3 |
| Anborek Anborek | The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: a) Span: The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency |
| he vipajek | range of operation across multiple spans, to allow the individual channels to be clearly seen. |
| Anboriek Anboriek | b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller. c) VBW ≥ RBW. |
| Procedure: | d) Sweep: No faster than coupled (auto) time. |
| Wupo. | e) Detector function: Peak. |
| Hok Wipous Will | f) Trace: Max-hold. |
| ibotok Anboton | g) Allow the trace to stabilize. |
| Anborek Anborek Anborek | It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A spectral plot of the data shall be included in the test report. |
| All All | _ spectral proper the add shall be included in the teatheren. |

7.1. EUT Operation

| | Operating Environment: | Professor Contraction of the Con | Wipose | Vun | Aupotok | W. Upo. | lisea |
|---|------------------------|--|--------|-----|---------|---------|-------|
| Test mode: 2: TX (Hopping): Keep the EUT in continuously transmitting mode. | | | | | | | 0 |

7.2. Test Setup



7.3. Test Data

| Temperature: 26.5 °C Humidity: 53.4 % Atmos | oheric Pressure: 101 kPa |
|---|--------------------------|
|---|--------------------------|

Please Refer to Appendix for Details.







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8. Dwell Time

| Was the state of t | - 100 All All All All All All All All All A |
|--|--|
| Test Requirement: | 47 CFR 15.247(a)(1)(iii) |
| Test Limit: Anborek Anborek Anborek Anborek | Refer to 47 CFR 15.247(a)(1)(iii), Fequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used. |
| Test Method: | ANSI C63.10-2020, section 7.8.4 |
| Anbotek Anbotek Anbotek Anbotek Anbotek | The dwell time per hop on a channel is the time from the start of the first transmission to the end of the last transmission for that hop. If the device has a single transmission per hop then the dwell time is the duration of that transmission. If the device has a multiple transmissions per hop then the dwell time is measured from the start of the first transmission to the end of the last transmission. |
| Anborek Anborek Anborek Anborek Anborek Anborek | The time of occupancy is the total time that the device dwells on a channel over an observation period specified in the regulatory requirement. To determine the time of occupancy the spectrum analyzer will be configured to measure both the dwell time per hop and the number of times the device transmits on a specific channel in a given period. |
| Anborek Anborek Anborek Anborek Anborek Anborek Anborek Anborek | The EUT shall have its hopping function enabled. Compliance with the requirements shall be made with the minimum and with the maximum number of channels enabled. If the dwell time per channel does not vary with the number of channels than compliance with the requirements may be based on the minimum number of channels. If the device supports different dwell times per channel (example Bluetooth devices can dwell on a channel for 1, 3 or 5 time slots) then measurements can be limited to the longest dwell time with the minimum number of channels. |
| Anborek Anborek Anborek Anborek Anborek | Use the following spectrum analyzer settings to determine the dwell time per hop: a) Span: Zero span, centered on a hopping channel. b) RBW shall be ≤ channel spacing and where possible RBW should be |
| otek Anbotek Anbotek Anbotek Anbotek | set >> 1 / T, where T is the expected transmission time per hop. c) Sweep time: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = 1/hopping rate) should achieve this. |
| Anborek Anborek Anborek Anborek | d) Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent channel. e) Detector function: Peak. |









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- f) Trace: Clear-write, single sweep.
- g) Place markers at the start of the first transmission on the channel and at the end of the last transmission. The dwell time per hop is the time between these two markers.

To determine the number of hops on a channel in the regulatory observation period repeat the measurement using a longer sweep time. When the device uses a single hopping sequence the period of measurement should be sufficient to capture at least 2 hops. When the device uses a dynamic hopping sequence, or the sequence varies, the period of measurement may need to capture multiple hops to better determine the average time of occupancy. Count the number of hops on the channel across the sweep time.

The average number of hops on the same channel within the regulatory observation period is calculated from the number of hops on the channel divided by the spectrum analyzer sweep time multiplied by the regulatory observation period. For example, if three hops are counted with an analyzer sweep time of 500 ms and the regulatory observation period is 10 s, then the number of hops in that ten seconds is 3 / 0.5 × 10. or 60 hops.

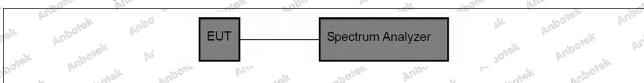
The average time of occupancy is calculated by multiplying the dwell time per hop by the number of hops in the observation period.

8.1. EUT Operation

Operating Environment:

2: TX (Hopping): Keep the EUT in continuously transmitting mode. Test mode:

8.2. Test Setup



8.3. Test Data

| Temperature: | 26.5 °C | AUDO | Humidity: | 53.4 % | upore | Atmospheric Pressure: 101 kPa | |
|--------------|----------|------|-----------|--------|-------|-------------------------------|----|
| . 670 | W. U. S. | | 70 | 100 Av | | | 0. |

Please Refer to Appendix for Details.



Hotline



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9. Emissions in non-restricted frequency bands

| Test Requirement: | 47 CFR 15.247(d), 15.209, 15.205 |
|---|--|
| Anborek Anborek Anborek Anborek Anborek Anborek Anborek Anborek Anborek | Refer to 47 CFR 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB |
| Aupotelk Aupo. | instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. |
| Test Method: | ANSI C63.10-2020 section 7.8.7 |
| otek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek | 7.8.7.1 General considerations To demonstrate compliance with the relative out-of-band emissions requirements conducted spurious emissions shall be measured for the transmit frequencies, per 5.5 and 5.6, and at the maximum transmit powers. Frequency hopping shall be disabled for this test with the exception of measurements at the allocated band-edges which shall be repeated with hopping enabled. |
| nbotek Anbotek Anbotek Anbotek Anbotek Anbotek | Connect the primary antenna port through an attenuator to the spectrum analyzer input; in the results, account for all losses between the unlicensed wireless device output and the spectrum analyzer. The frequency range of testing shall span 30 MHz to 10 times the operating frequency and this may be done in a single sweep or, to aid resolution, across a number of sweeps. The resolution bandwidth shall be 100 kHz, video bandwidth 300 kHz, and a coupled sweep time with a peak detector. |
| . "Upolek Vupo | Antoniek Antoniek Antoniek Antoniek Antoniek |
| Procedure: Anborek Anborek Anborek Anborek Anborek | The limit is based on the highest in-band level across all channels measured using the same instrument settings (resolution bandwidth of 100 kHz, video bandwidth of 300 kHz, and a coupled sweep time with a peak detector). To help clearly demonstrate compliance a display line may be set at the required offset (typically 20 dB) below the highest in-band level. Where the highest in-band level is not clearly identified in the out-of-band measurements a separate spectral plot showing the in-band level shall be |
| Wilhouse "Wilher | provided. Anbores Ambaras Anbores Anbores Anbores |
| Botek Anbotek Anbotek Anbotek Anbotek Anbotek | When conducted measurements cannot be made (for example a device with integrated, non-removable antenna) radiated measurements shall be used. The reference level for determining the limit shall be established by maximizing the field strength from the highest power channel and measuring using the resolution and video bandwidth settings and peak detector as described above. The field strength limit for spurious emissions outside of restricted-bands shall then be set at the required offset (typically 20 dB) |









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standards measurement procedures described in Clause 6 with the exception that the resolution bandwidth shall be 100 kHz, video bandwidth 300 kHz, and a coupled sweep time with a peak detector. Note that use of wider measurement bandwidths are acceptable for measuring the spurious emissions provided that the peak detector is used and that the measured value of spurious emissions are compared to the highest in-band level measured with the 100 kHz / 300 kHz bandwidth settings to determine compliance.

7.8.7.2 Band-edges

Compliance with a relative limit at the band-edges (e.g., -20 dBc) shall be made on the lowest and on the highest channels with frequency hopping disabled and repeated with frequency hopping enabled. For the latter test the hopping sequence shall include the lowest and highest channels.

For measurements with the hopping disabled the analyzer screen shall clearly show compliance with the requirement within 10 MHz of the allocated band-edge.

For measurements with the hopping enabled the analyzer screen shall clearly show compliance with the requirement within 10 MHz of both of the allocated band-edges. This could require separate spectral plots for each band-edge.

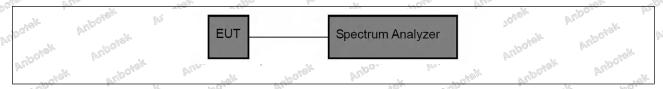
9.1. EUT Operation

Operating Environment:

Test mode:

- 1: TX (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping).
- 2: TX (Hopping): Keep the EUT in continuously transmitting mode.

9.2. Test Setup



9.3. Test Data

| a B | Temperature: | 26.5 °C | Humidity: | 53.4 % | Atı | mospheric Pressure: | 101 kPa | M |
|-----|--------------|---------|-----------|--------|-----|---------------------|---------|---|
| | | | | | | | | |

Please Refer to Appendix for Details.





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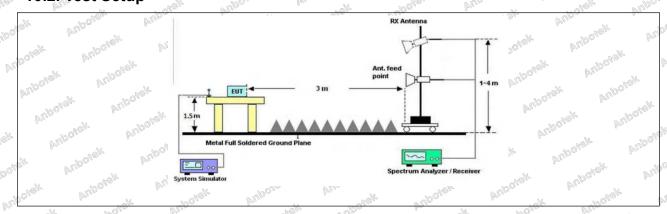
10. Band edge emissions (Radiated)

| | | | - No. 100 · | | | | | | |
|--------------------|--|--|-------------------------------|--|--|--|--|--|--|
| Test Requirement: | restricted bands, as defined | In addition, radiated emissions d in § 15.205(a), must also comp ecified in § 15.209(a)(see § 15.2 | ly with the | | | | | | |
| ek Wilpodey Wilpod | Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) | | | | | | |
| oos Alicotek | 0.009-0.490 | 2400/F(kHz) | 300 100 | | | | | | |
| Wupo, Wupotek | 0.490-1.705 1.705-30.0 | 24000/F(kHz) 30 | 30 | | | | | | |
| Anto tek | 30-88 88-216 | 100 ** 150 ** | 3 | | | | | | |
| Test Limit: | 216-960 Above 960 | 200 ** 500 | 3 Marie And | | | | | | |
| otak Pupotek Vig | ** Except as provided in pa intentional radiators operati | ragraph (g), fundamental emissi ng under this section shall not b | e located in the | | | | | | |
| Anboriek Anboriek | frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. | | | | | | | | |
| Test Method: | ANSI C63.10-2020 section | 6.10 Market | Aupotes Aupotes | | | | | | |
| Procedure: | ANSI C63.10-2020 section | 6.10.5.2 | VUPOSA, VUPO | | | | | | |

10.1. EUT Operation

| Operating En | vironment: | Wolself. | Vupose. | Vien Male | * Lpoyele | Mapar |
|--------------|------------------|------------------|----------------------|----------------|-------------|-------|
| Test mode: | 1: TX (Non-Hoppi | ing): Keep the l | EUT in contir | nuously transm | itting mode | (non- |
| 100 lu | hopping). | TUD. | notice of the second | yr 200, | be. | V SON |

10.2. Test Setup







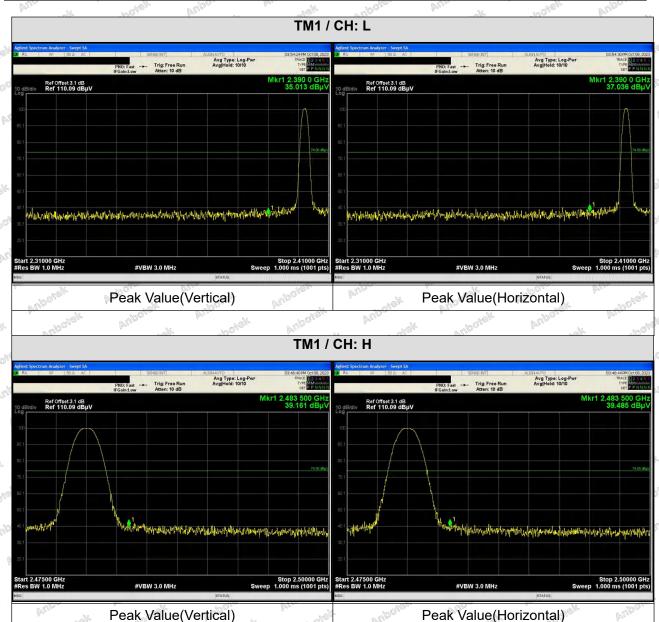


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10.3. Test Data

Temperature: 26.5 °C Humidity: 53.4 % Atmospheric Pressure: 101 kPa





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Average:

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| o ^l | Average: | otek Anbore | Villa Colos | r Wupologe | Vupp. | Wpotek | Vupose V | - Moyor |
|----------------|---------------|------------------------|-------------|------------------------------|-------------------|--------------|-----------|-----------------------|
| | Test Mode | Peak Value (dBuV/m) | DCCF | Average Value (dBuV/m) | Limit (dBuV/m) | Polarization | Verdict | Anboh |
| , | TM1 / CH: L | 35.013 | -2.32 | 32.690 | 54.00 | Vertical | Pass | brug. |
| | TIVIT / CH. L | 37.036 | -2.32 | 34.713 | 54.00 | Horizontal | Pass | d' |
| /(B | TM1 / CH: H | 39.161 | -2.32 | 36.838 | 54.00 | Vertical | Pass | |
| 0.00 | TWIT / CH. H | 39.485 | -2.32 | 37.162 | 54.00 | Horizontal | Pass | 1001 ⁽⁸⁾¹⁶ |
| 16 | Pomork: | Otek Pupos | yek anboyek | W.pc. ser | Augotok | Anbotok | Vilpo, bo | Will Olek |

Remark:

- 1. DCCF=20log(Duty Cycle)
- 2. Average Value=Peak Value+DCCF



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11. Emissions in frequency bands (below 1GHz)

| ACCUPATION OF THE PROPERTY OF | - 10/D | | | | | |
|--|---|---|--------------------|--|--|--|
| Test Requirement: | Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)). | | | | | |
| W Polek Vupo, | Frequency (MHz) | Field strength | Measurement | | | |
| VIII. | Pulpa K Pu | (microvolts/meter) | distance | | | |
| hotek Anbo. A. | And Andrew | VPO. | (meters) | | | |
| Jr Polesk | 0.009-0.490 | 2400/F(kHz) | 300 | | | |
| Vupose Wus | 0.490-1.705 | 24000/F(kHz) | 30 | | | |
| anbotes | 1.705-30.0 | 30 | 30 | | | |
| William I'm the state of the st | 30-88 | 100 ** | 3.0% NO.000 | | | |
| T Alboria | 88-216 | 150 ** | 3 | | | |
| Test Limit: | 216-960 | 200 *** | 3 bother | | | |
| William In. | Above 960 | 500 | 3 100 | | | |
| otek Anboten And | intentional radiators operati | ragraph (g), fundamental emissi ng under this section shall not b | e located in the | | | |
| NOPOLES WAS BUILD OF | | z, 76-88 MHz, 174-216 MHz or 4 | | | | |
| and the state of t | | hese frequency bands is permitt | ed under other | | | |
| Vulga P. Stelf | sections of this part, e.g., | Andrew Andrew | - Otek Aubore | | | |
| Apples Migg | §§ 15.231 and 15.241. | Mr. Pul | - N - 1043k | | | |
| Test Method: | ANSI C63.10-2020 section | 6.6.4 | Anbores And | | | |
| Procedure: | ANSI C63.10-2020 section | 6.6.4 proposition and the same | Vilgo House Vilgos | | | |

11.1. EUT Operation

Aupotsk

| Operating Env | vironment: | W. Polsk | Mpoke | Pun. | anborek. | Anbo. |
|---------------|-----------------|----------------|--------------|----------------|-------------|-------|
| Test mode: | 1: TX (Non-Hopp | ing): Keep the | EUT in conti | nuously transm | itting mode | (non- |
| rost mode. | hopping). | 3k Pupo, | 120 a. | ak aboles | Wille | v ~ ~ |



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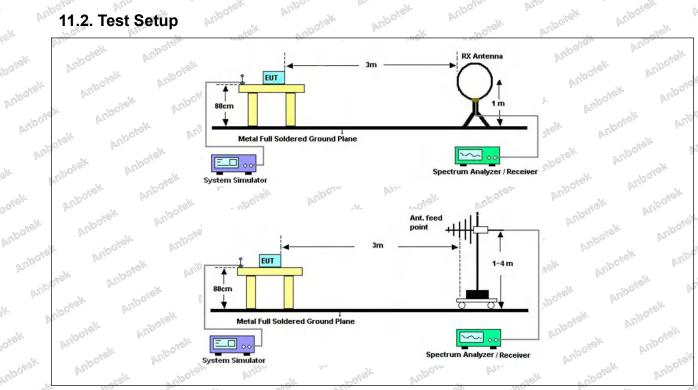
Page 32 of 73 Report No.: 18220WC30212701 FCC ID: 2ABYN101

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P.Upok

11.2. Test Setup



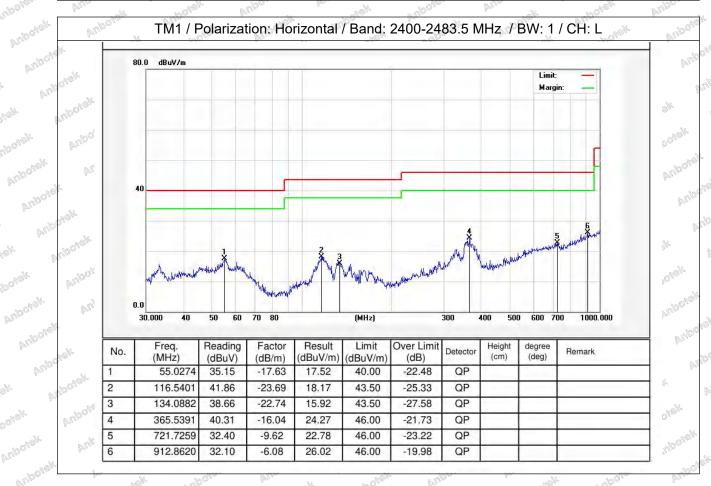
Anborek



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11.3. Test Data

Temperature: 26.5 °C Humidity: 53.4 % Atmospheric Pressure: 101 kPa

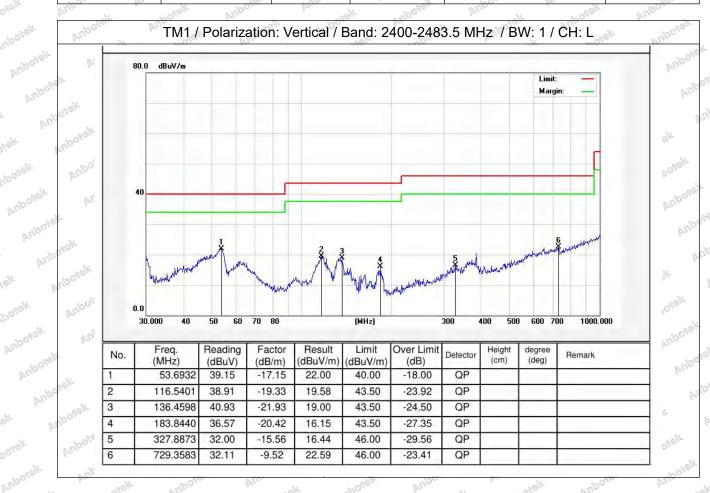






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Temperature: 26.5 °C Humidity: 53.4 % Atmospheric Pressure: 101 kPa







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12. Emissions in frequency bands (above 1GHz)

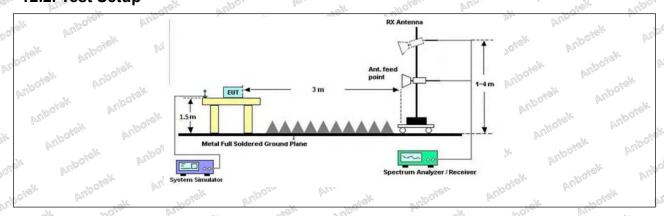
| In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified | | | | | |
|--|--|---|--|--|--|
| in § 15.209(a)(see § 15.205(c)).` | | | | | |
| Frequency (MHz) | Field strength | Measurement | | | |
| Pulpa Pr | (microvolts/meter) | distance | | | |
| AUD AUDION AUDION | and a supplied to the supplied | (meters) | | | |
| [25] | | 300 | | | |
| 16.07 | | 30 | | | |
| | The state of the s | 30 | | | |
| The state of the s | - AU - 1 | 3.01 | | | |
| N | Sus | 3 | | | |
| 100 | | 3 bottom | | | |
| Above 960 | 500 | 3 Mark | | | |
| ** Except as provided in pa | ragraph (g), fundamental emissi | ons from | | | |
| | | | | | |
| | | | | | |
| | nese frequency bands is permit | ea unaer other | | | |
| 257 | Wholes William William | solek Anbor | | | |
| §§ 15.231 and 15.241. | by by | 100 t 3 l | | | |
| ANSI C63.10-2020 section | 6.6.4 | Vupose Vue | | | |
| ANSI C63.10-2020 section | 6.6.4 Andrew | Vupopole Vupo | | | |
| | in § 15.205(a), must also co in § 15.209(a)(see § 15.205) Frequency (MHz) 0.009-0.490 0.490-1.705 1.705-30.0 30-88 88-216 216-960 Above 960 ** Except as provided in paintentional radiators operatifrequency bands 54-72 MH However, operation within the sections of this part, e.g., §§ 15.231 and 15.241. ANSI C63.10-2020 section | in § 15.205(a), must also comply with the radiated emission in § 15.209(a)(see § 15.205(c)). Frequency (MHz) Field strength (microvolts/meter) 0.009-0.490 0.490-1.705 24000/F(kHz) 1.705-30.0 30 30-88 100 ** 88-216 150 ** 216-960 200 ** Above 960 ** Except as provided in paragraph (g), fundamental emissi intentional radiators operating under this section shall not b frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or However, operation within these frequency bands is permitt sections of this part, e.g., | | | |

12.1. EUT Operation

Aupotsk

| Operating En | vironment: | Photograph. | VU/DOJ. | Vilga | * upotek | Mupate |
|--------------|------------------|-----------------|----------------------|----------------|-------------|--------|
| Test mode: | 1: TX (Non-Hoppi | ng): Keep the l | EUT in contir | nuously transm | itting mode | (non- |
| 100,0 | hopping). | DUD. | notice of the second | Jr "1001" | Be. | V Gier |

12.2. Test Setup







W. potek

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Report No.: 18220WC30212701 FCC ID: 2ABYN101 Page 36 of 73

12.3. Test Data

Temperature: 26.5 °C Humidity: 53.4 % Atmospheric Pressure: 101 kPa

| PU. | Potell Pup. | D. 1820. | alek Anboh | Wag Wall | - 100fells | Aupo. | |
|--------------------|-------------------|---|--------------------|------------------------|--------------------|-------------------|--|
| TM1 / CH: L | | | | | | | |
| Peak value: | | | | | | | |
| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization | |
| 4804.00 | 27.37 | 15.27 | 42.64 | 74.00 | -31.36 | Vertical | |
| 7206.00 | 28.50 | 18.09 | 46.59 | 74.00 | -27.41 | Vertical | |
| 9608.00 | 29.39 | 23.76 | 53.15 | 74.00 | -20.85 | Vertical | |
| 12010.00 | Anboile * Al | as of the same of | Upoleje Aup | 74.00 | otek Aupoli | Vertical | |
| 14412.00 | VUPO *Oh | Wipe. | Notes. | 74.00 | in Asia | Vertical | |
| 4804.00 | 27.73 | 15.27 | 43.00 | 74.00 | -31.00 | Horizontal | |
| 7206.00 | 28.75 | 18.09 | 46.84 | 74.00 | -27.16 | Horizontal | |
| 9608.00 | 28.32 | 23.76 | 52.08 | 74.00 | -21.92 | Horizontal | |
| 12010.00 | otell * Mujo | alk ho | iek Wipose | 74.00 | k nboiek | Horizontal | |
| 14412.00 | 150fGF* | DOLL PULL | ode sab | 74.00 | no to | Horizontal | |
| Average value: | | | | | | | |
| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | polarization | |
| 4804.00 | 16.75 | 15.27 | 32.02 | 54.00 | -21.98 | Vertical | |
| 7206.00 | 17.53 | 18.09 | 35.62 | 54.00 | -18.38 | Vertical | |
| 9608.00 | 18.41 | 23.76 | 42.17 | 54.00 | -11.83 | Vertical | |
| 12010.00 | 100 g | Yupole, bu | P. C. | 54.00 | 100 pp. | Vertical Vertical | |
| 14412.00 | An * | *Upolek | VUPO. | 54.00 | Pus. | Vertical | |
| 4804.00 | 16.08 | 15.27 | 31.35 | 54.00 | -22.65 | Horizontal | |
| 7206.00 | 17.81 | 18.09 | 35.90 | 54.00 | -18.10 | Horizontal | |
| 9608.00 | 17.63 | 23.76 | 41.39 | 54.00 | -12.61 | Horizontal | |
| 12010.00 | * * | otolk Wupon. | The most | 54.00 | Vun Fok | Horizontal | |
| 14412.00 | * | ing Haro | O. V. | 54.00 | Ole William | Horizontal | |

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| 3K Anloo" | br. | A nipore | BURE | rotek | Anico A | -46 ^V - |
|--------------------|---|------------------------|--------------------|------------------------|--------------------|--------------------|
| | | | ГМ1 / CH: M | | | |
| Peak value: | | | | | | |
| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 4882.00 | 27.39 | 15.42 | 42.81 | 74.00 | -31.19 | Vertical |
| 7323.00 | 28.35 | 18.02 | 46.37 | 74.00 | -27.63 | Vertical |
| 9764.00 | 28.40 | 23.80 | 52.20 | 74.00 | -21.80 | Vertical |
| 12205.00 | * | Anloom | poiok | 74.00 | VUP. | Vertical |
| 14646.00 | * | iek ^{bu} poda | A.M. | 74.00 | Moga | Vertical |
| 4882.00 | 27.43 | 15.42 | 42.85 | 74.00 | -31,15 | Horizontal |
| 7323.00 | 28.74 | 18.02 | 46.76 | 74.00 | -27.24 | Horizontal |
| 9764.00 | 28.02 | 23.80 | 51.82 | 74.00 | -22.18 | Horizontal |
| 12205.00 | * of ch | Wupoles. | Vien Siek | 74.00 | PUDO S | Horizontal |
| 14646.00 | * | s nborek | Wupa | 74.00 | Mpole | Horizontal |
| verage value: | | | | | | |
| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | polarization |
| 4882.00 | 16.48 | 15.42 | 31.90 | 54.00 | -22.10 | Vertical V |
| 7323.00 | 17.63 | 18.02 | 35.65 | 54.00 | -18.35 Ann | Vertical |
| 9764.00 | 18.27 | 23.80 | 42.07 | 54.00 | -11.93 | Vertical |
| 12205.00 | W MOON | N. Star | Anbore " | 54.00 | Merode | Vertical |
| 14646.00 | otok * Milboti | BUB. | ek abolek | 54.00 | 20tek | Vertical |
| 4882.00 | 15.99 | 15.42 | 31.41 | 54.00 | -22.59 | Horizontal |
| 7323.00 | 17.37 | 18.02 | 35.39 | 54.00 | -18.61 | Horizontal |
| 9764.00 | 18.14 | 23.80 | 41.94 | 54.00 | 12.06 pm | Horizontal |
| 12205.00 | and to real | Pupo Puk | Sporek | 54.00 | 1018/4 | Horizontal |
| 14646.00 | * ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | VUPOL | bigg. | 54.00 | PUD. | Horizontal |

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| Bu. Wun | North | 7.4p0, | bu. | -1001/B. | AME | A CALL |
|--------------------|-------------------|------------------|--------------------|------------------------|--------------------|--------------|
| | | | TM1 / CH: H | | | |
| Peak value: | | | | | | |
| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 4960.00 | 27.66 | 15.58 | 43.24 | 74.00 | -30.76 | Vertical |
| 7440.00 | 28.36 | 17.93 | 46.29 | 74.00 | -27.71 | Vertical |
| 9920.00 | 28.95 | 23.83 | 52.78 | 74.00 | -21.22 | Vertical |
| 12400.00 | * | W.p.c.i.e. | VUR. | 74.00 | Anbo | Vertical |
| 14880.00 | * % | iek Vipoles | . William | 74.00 | Anbore. | Vertical |
| 4960.00 | 27.50 | 15.58 | 43.08 | 74.00 | -30.92 | Horizontal |
| 7440.00 | 28.77 | 17.93 | 46.70 | 74.00 | -27.30 | Horizontal |
| 9920.00 | 28.70 | 23.83 | 52.53 | 74.00 | -21.47 | Horizontal |
| 12400.00 | Who * | coolel- | PUPO. | 74.00 | Pupose Vus | Horizontal |
| 14880.00 | Mak Donald | 1001.0gh | Willpayer | 74.00 | * Upoliek | Horizontal |
| Average value: | | | | | | |
| Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | polarization |
| 4960.00 | 17.60 | 15.58 | 33.18 | 54.00 | -20.82 | Vertical |
| 7440.00 | 18.64 | 17.93 | 36.57 | 54.00 | -17.43 M | Vertical |
| 9920.00 | 18.82 | 23.83 | 42.65 | 54.00 | -11.35 | Vertical P |
| 12400.00 | M * Mbolek | Vupo, | Post City | 54.00 | Vien | Vertical |
| 14880.00 | * | ale Anboro | Plan Sigh | 54.00 | Wulper - Sk | Vertical |
| 4960.00 | 17.43 | 15.58 | 33.01 | 54.00 | -20.99 | Horizontal |
| 7440.00 | 18.74 Ann | 17.93 | 36.67 And 36 | 54.00 | -17.33 | Horizontal |
| 9920.00 | 18.04 | 23.83 | 41.87 | 54.00 | +12.13 | Horizontal |
| 12400.00 | ***** | Anbores | VII. | 54.00 | 100 | Horizontal |
| 14880 00 | * | John John | WUD | 54 00 | Upo, b | Horizontal |

Remark:

- 1. Result =Reading + Factor
- 2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.







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APPENDIX I -- TEST SETUP PHOTOGRAPH

Conducted Emission at AC power line



Emissions in frequency bands (below 1GHz)



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Emissions in frequency bands (above 1GHz)







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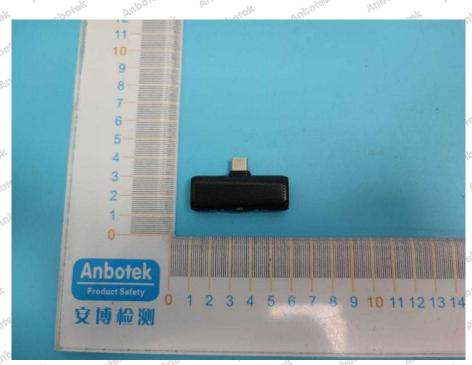
P.Upose

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APPENDIX II -- EXTERNAL PHOTOGRAPH













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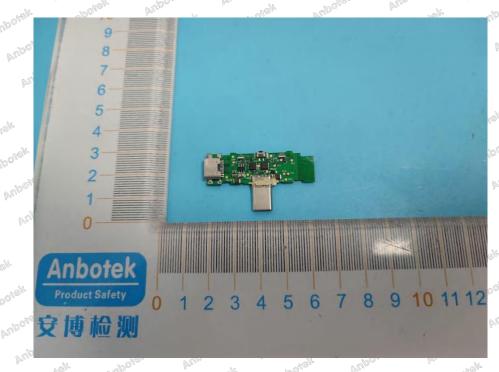
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APPENDIX III -- INTERNAL PHOTOGRAPH





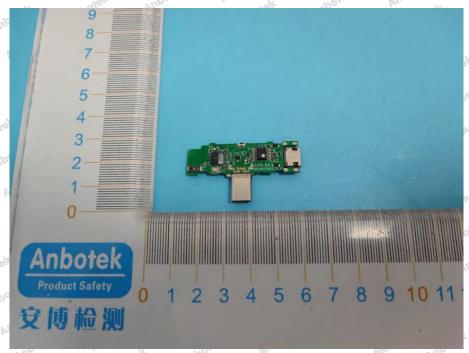








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Anbore

Appendix Test Data

| Report No.: | 18220WC30212701 | Test Sample No.: | 1-2-2 Antonial Antonia |
|------------------|-----------------|--------------------|------------------------|
| Start Test Date: | 2023.10.07 | Finish Test Date: | 2023.10.09 |
| Test Engineer: | Hayman Chen | Auditor: | Rick his |
| Temperature: | 26.5°C | Relative Humidity: | 53.4% |
| Pressure: | 101kPa | Anbores Anton | ak Aupotek Aupo |

Appendix A: 20dB Emission Bandwidth

Test Result

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| TestMode | Antenna | Frequency[MHz] | 20db EBW[MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|----------|----------------|---------------|---------|---------|------------|---------|
| - Malk | PUPO. | 2402 | 0.95 | 2401.53 | 2402.49 | 700" Pr | V- |
| 2.4G | Ant1 | 2441 | 0.96 | 2440.54 | 2441.49 | | 0000 |
| (0) | P. Wilde | 2480 | 0.89 | 2479.54 | 2480.43 | VUD | al |



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Anbotek

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Test Graphs

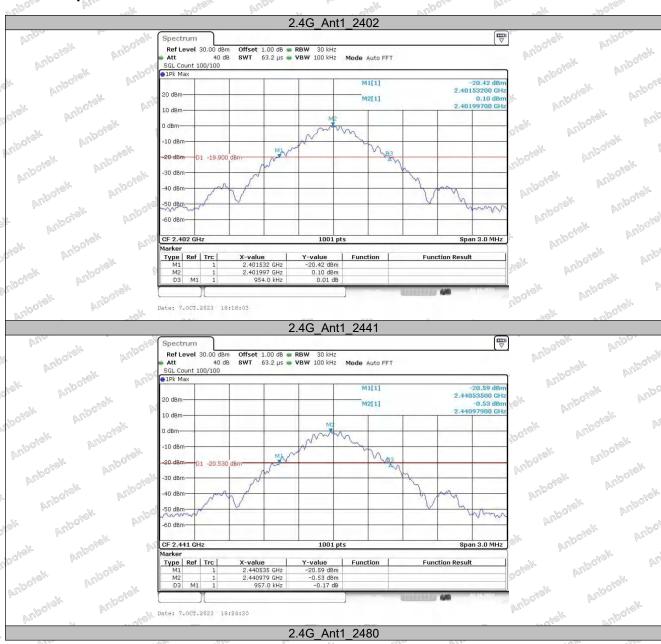
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Anborok

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Aupotak

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Shenzhen Anbotek Compliance Laboratory Limited





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Appendix B: Occupied Channel Bandwidth

Anbore

Test Result

Anboiek

Anbotak

| | TestMode | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----|-----------|---------|----------------|-----------|-----------|-----------|------------|---------|
| Ī | gree . Se | de de | 2402 | 0.908 | 2401.5504 | 2402.4585 | 1001e | Burn. |
| 16 | 2.4G | Ant1 | 2441 | 0.896 | 2440.5534 | 2441.4496 | N | 10011 |
| | V- | -rel- | 2480 | 0.881 | 2479.5594 | 2480.4406 | ~ 40° | 1300 |



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Test Graphs

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Aupotek

Aupotak

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Shenzhen Anbotek Compliance Laboratory Limited

Anborek



Anbotek



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Vupo_{tek}

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Appendix C: Maximum conducted output power

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Test Result Peak

| | | | | W and the second | | |
|-----|---------------|---------|----------------|------------------------------|-------------------------|---------|
| > | Test Mode | Antenna | Frequency[MHz] | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
| | A POSE | William | 2402 | 3.71 | ≤20.97 | PASS |
| K(E | 2.4G | Ant1 | 2441 | 3.37 | ≤20.97 | PASS |
| | - Ale - MOTEN | William | 2480 | 2.98 | ≤20.97 | PASS |

Anborek

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Anbotek





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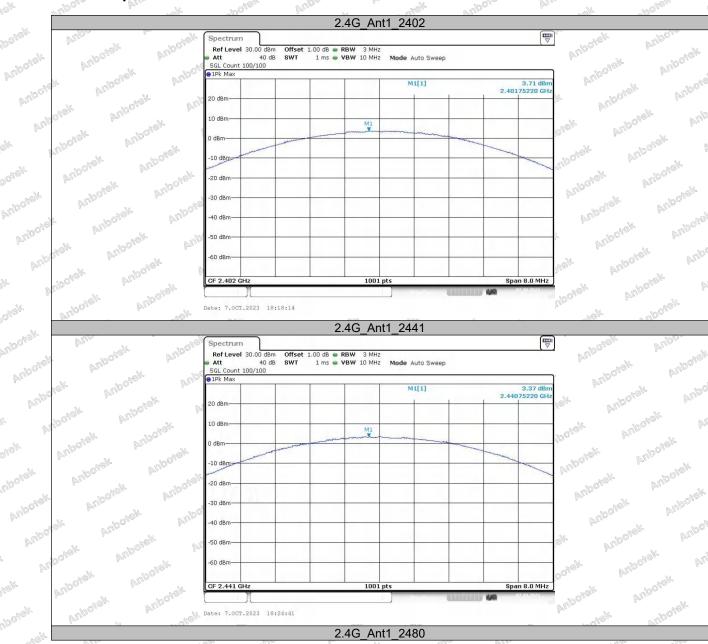
Test Graphs

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<u>Anborel</u>

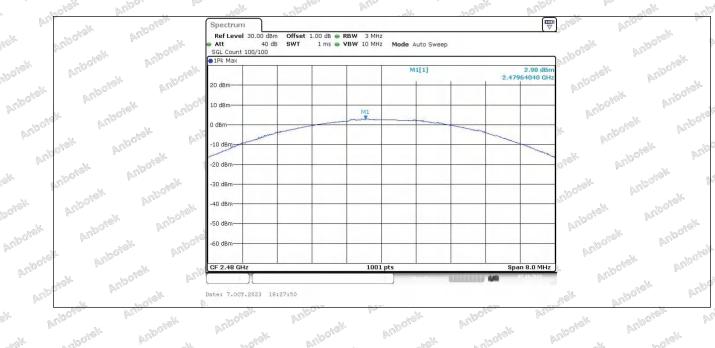
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Appendix D: Carrier frequency separation

Aribotek

Test Result

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| - | TestMode | Antenna | Frequency[MHz] | Result[MHz] | Limit[MHz] | Verdict |
|---|----------|---------|----------------|-------------|------------|---------|
| | 2.4G | Ant1 | Нор | 1.006 | ≥0.960 | PASS |

Anloofek





P.Upole

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Appendix E: Time of occupancy

Test Result

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| TestMode | Antenna | Frequency[MHz] | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|----------------|--------------------|--------------------|-----------|----------|---------|
| 2.4G | Ant1 | Нор | 2.850 | 4 | 0.011 | ≤0.4 | PASS |

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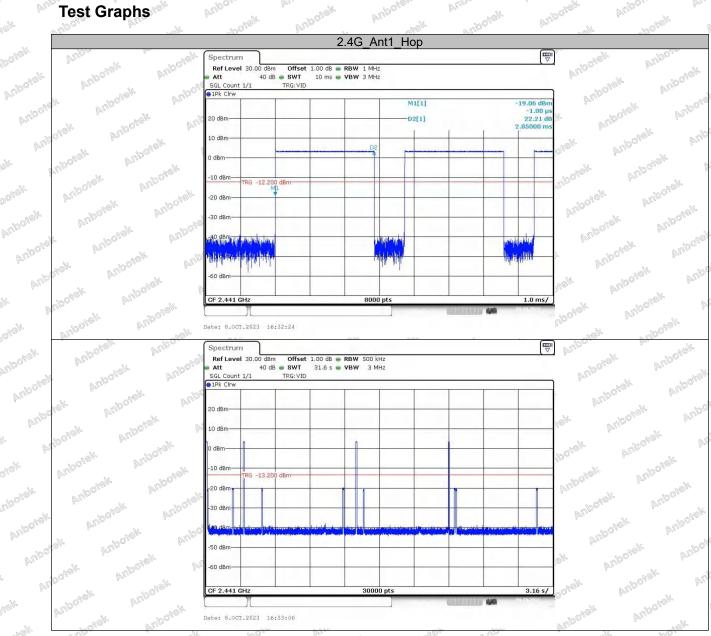
Test Graphs

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Appendix F: Number of hopping channels

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Test Result

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| 5 | TestMode | Antenna | Frequency[MHz] | Result[Num] | Limit[Num] | Verdict |
|---|----------|---------|----------------|-------------|------------|---------|
| | 2.4G | Ant1 | Нор | 79 | ≥15 | PASS |

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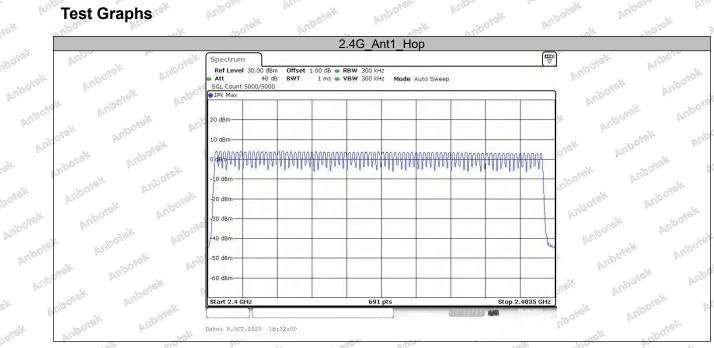
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Appendix G: Band edge measurements

Test Result

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| | TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----|------------------------|---------|--------|----------------|-------------------|-----------------|----------------|---------|
| | L 100 ¹ (6) | W WW | Low | 2402 | 2.24 | -52.52 | ≤-17.76 | PASS |
| (6) | 2.4G | M Ant1 | High | 2480 | 2.23 | -53.68 | ≤-17.77 | PASS |
| | 2.4G | Ant1 | Low | Hop_2402 | 2.83 | -57.24 | ≤-17.17 | PASS |
| jg | 340 WILL. | -Ma | High | Hop 2480 | 2.71 | -55.65 | ≤-17.29 | PASS |

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Appendix H: Conducted Spurious Emission

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| | W.Lo. | | // | ho. | 1-010. PU. | | coll- | |
|------|----------|--|----------------|--------------------|-------------------|-----------------|---------------------|---------|
| | TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
| | K | Anb | - W | Reference | 2.05 | 2.05 | Wulpo | PASS |
| fee. | MARIE | | 2402 | 30~1000 | 2.05 | -68.78 | ≤-17.95 | PASS |
| | No. | o _{fer} | Who is | 1000~26500 | 2.05 | -30.79 | ≤-17.95 | PASS |
| 80 | 0,000 | No. | "POLONO WALL | Reference | 1.78 | 1.78 | po _{jes} , | PASS |
| | 2.4G | Ant1 | 2441 | 30~1000 | 1.78 | -68.48 | ≤-18.22 | PASS |
| 8 | Nipo. | No. | anbore. | 1000~26500 | 1.78 | -31.95 | <i></i> ≤-18.22 | PASS |
| | NO FOR | PUPO. | No. | Reference | 1.07 | 1.07 M | | PASS |
| | PULP. | le l | 2480 | 30~1000 | 1.07 M | -68.74 | ≤-18.93 | PASS |
| | "pois" | MUDO | Neste Land | 1000~26500 | 1.07 | -32.1 | ≤-18.93 | PASS |

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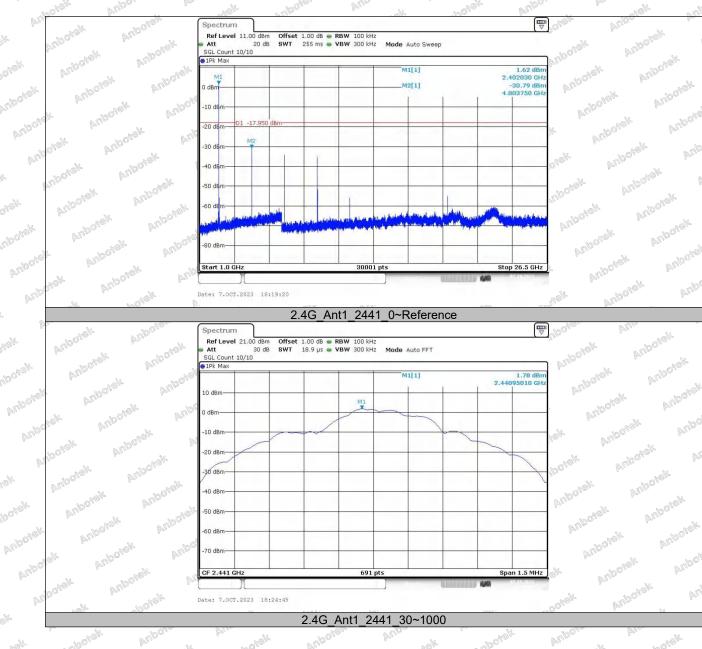
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Hotline

www.anbotek.com.cn

400-003-0500



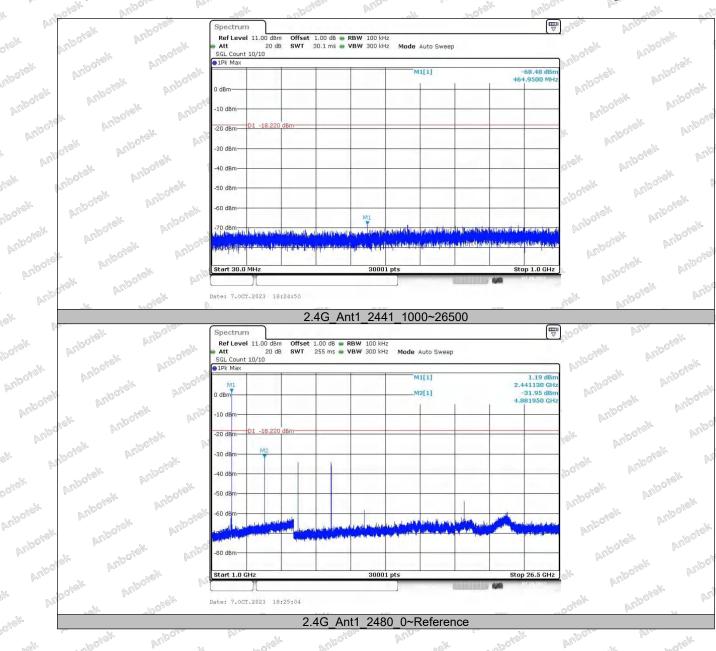
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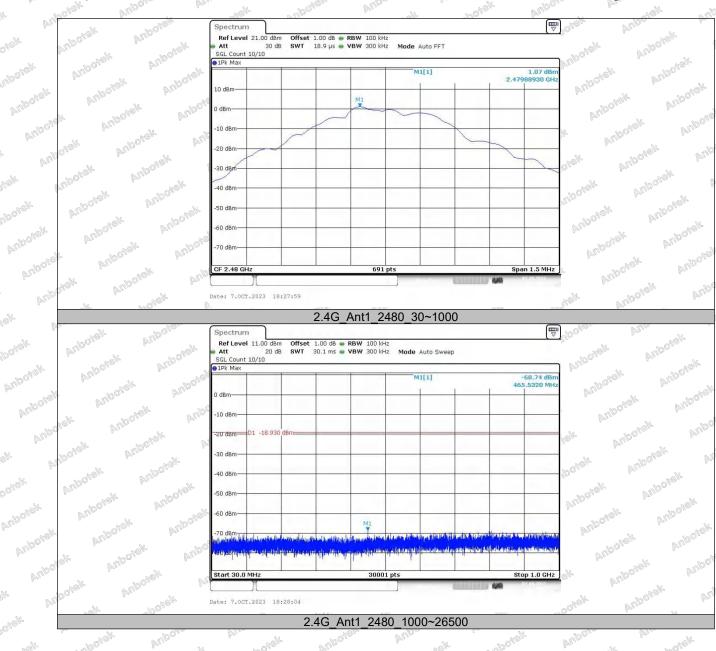
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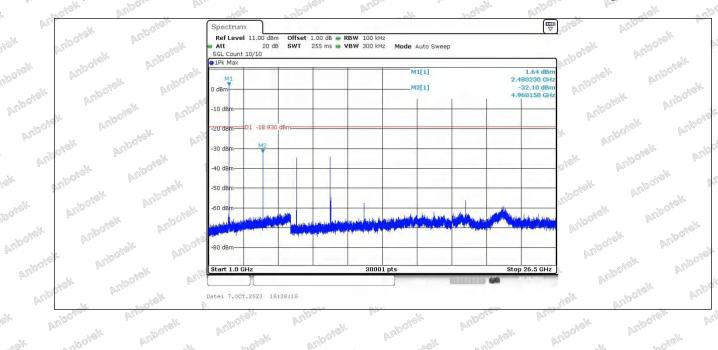
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Appendix I: Duty Cycle

Test Result

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| | 12/2 a. | | | | 0 | 0. | - AU- |
|------------|-----------|-----------------------------------|----------------|---------|--------|------------|-------------|
| | TestMode | Antenna | Eroguepov(MU=1 | ON Time | Period | Duty Cycle | Duty Cycle |
| restivioue | | Antenna | Frequency[MHz] | [ms] | [ms] | [%] | Factor[dB] |
| | k pojer | P.Up. | 2402 | 2.87 | 3.75 | 76.53 | 1.16 |
| 1800 | 2.4G | Ant1 | 2441 | 2.87 | 3.75 | 76.53 | 1.16 |
| | Toda Yes. | View | 2480 | 2.87 | 3.75 | 76.53 | 1.16 |
| 3/0 | Do. | 10.2 1815 | DOLO VUE | A MOYON | Anbo | Pro Carlo | Vipolo Vien |
| | "Otok Vu | b _O , b _v . | "of "pot | YUR THE | MO!GIV | Anibo. | Pr. |
| | "Up. | - ~\rangle | -100, by. | 1,000 | o all | - No. | 700, A |



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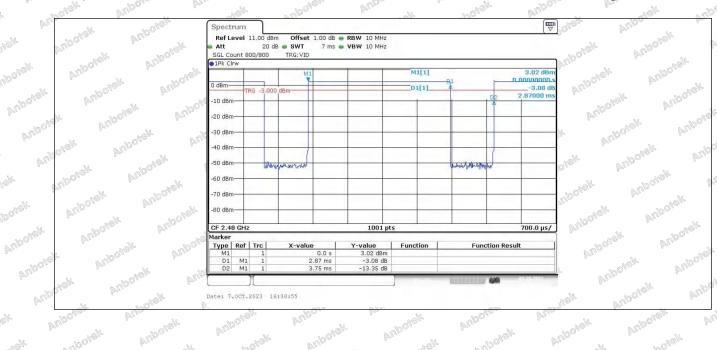
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