

FCC Test Report

Report No.: AGC00742190601FE06

| | | |
|----------------------------|---|--|
| FCC ID | : | 2AKC6XHT-WF6D |
| APPLICATION PURPOSE | : | Original Equipment |
| PRODUCT DESIGNATION | : | Dual Band Wireless USB Adapter |
| BRAND NAME | : | N/A |
| MODEL NAME | : | XHT-6B16, XHT-6B18 |
| CLIENT | : | SHEN ZHEN XIN HUA TIAN TECHNOLOGY CO., LTD |
| DATE OF ISSUE | : | Jun. 27, 2019 |
| STANDARD(S) | : | FCC Part 15.407 |
| TEST PROCEDURE(S) | : | KDB 789033 D02 v02r01 |
| REPORT VERSION | : | V1.0 |

Attestation of Global Compliance (Shenzhen) Co., Ltd

CAUTION:

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

REPORT REVISE RECORD

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0 | / | Jun. 27, 2019 | Valid | Initial Release |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

TABLE OF CONTENTS

| | |
|---|-----------|
| 1. VERIFICATION OF CONFORMITY | 5 |
| 2. GENERAL INFORMATION | 6 |
| 2.1. PRODUCT DESCRIPTION | 6 |
| 2.2. TABLE OF CARRIER FREQUENCIES..... | 7 |
| 2.3. RELATED SUBMITTAL(S) / GRANT (S)..... | 7 |
| 2.4. TEST METHODOLOGY | 7 |
| 2.5. SPECIAL ACCESSORIES..... | 7 |
| 2.6. EQUIPMENT MODIFICATIONS | 7 |
| 3. MEASUREMENT UNCERTAINTY..... | 8 |
| 4. DESCRIPTION OF TEST MODES | 9 |
| 5. SYSTEM TEST CONFIGURATION | 10 |
| 5.1. CONFIGURATION OF EUT SYSTEM | 10 |
| 5.2. EQUIPMENT USED IN EUT SYSTEM | 10 |
| 5.3. SUMMARY OF TEST RESULTS | 10 |
| 6. TEST FACILITY | 11 |
| 7. MAXIMUM CONDUCTED OUTPUT POWER | 12 |
| 7.1. MEASUREMENT PROCEDURE | 12 |
| 7.2. TEST SET-UP | 12 |
| 7.3. LIMITS AND MEASUREMENT RESULT | 13 |
| 8. 6DB BANDWIDTH..... | 15 |
| 8.1. MEASUREMENT PROCEDURE | 15 |
| 8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)..... | 15 |
| 8.3. LIMITS AND MEASUREMENT RESULTS..... | 16 |
| 9. EMISSION BANDWIDTH | 24 |
| 9.1. MEASUREMENT PROCEDURE | 24 |
| 9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)..... | 24 |
| 9.3. LIMITS AND MEASUREMENT RESULTS..... | 25 |
| 10. MAXIMUM CONDUCTED OUTPUT PEAK POWER SPECTRAL DENSITY | 33 |
| 10.1 MEASUREMENT PROCEDURE | 33 |
| 10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)..... | 33 |
| 10.3 MEASUREMENT EQUIPMENT USED..... | 33 |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

| | |
|---|------------|
| 10.4 LIMITS AND MEASUREMENT RESULT | 33 |
| 11. CONDUCTED SPURIOUS EMISSION | 61 |
| 11.1. MEASUREMENT PROCEDURE | 61 |
| 11.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) | 61 |
| 11.3. MEASUREMENT EQUIPMENT USED | 61 |
| 11.4. LIMITS AND MEASUREMENT RESULT | 61 |
| 12. RADIATED EMISSION | 83 |
| 9.1. MEASUREMENT PROCEDURE | 83 |
| 9.2. TEST SETUP | 84 |
| 9.3. LIMITS AND MEASUREMENT RESULT | 85 |
| 9.4. TEST RESULT | 85 |
| 13. BAND EDGE EMISSION | 92 |
| 13.1. MEASUREMENT PROCEDURE | 92 |
| 13.2. TEST SET-UP | 92 |
| 13.3. TEST RESULT | 93 |
| 14. FREQUENCY STABILITY | 99 |
| 14.1. MEASUREMENT PROCEDURE | 99 |
| 14.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) | 99 |
| 14.3. MEASUREMENT RESULTS | 100 |
| 15. FCC LINE CONDUCTED EMISSION TEST | 106 |
| 15.1. LIMITS OF LINE CONDUCTED EMISSION TEST | 106 |
| 15.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST | 106 |
| 15.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST | 107 |
| 15.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST | 107 |
| 15.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST | 108 |
| APPENDIX A: PHOTOGRAPHS OF TEST SETUP | 110 |
| APPENDIX B: PHOTOGRAPHS OF EUT | 112 |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

1. VERIFICATION OF CONFORMITY

| | |
|---------------------------------|---|
| Applicant | SHEN ZHEN SHI XIN HUA TIAN TECHNOLOGY CO., LTD |
| Address | 3Floor, B Buliding, DaHong Industrial Park, GuangMin District, Shenzhen City, China |
| Manufacturer | SHEN ZHEN SHI XIN HUA TIAN TECHNOLOGY CO., LTD |
| Address | 3Floor, B Buliding, DaHong Industrial Park, GuangMin District, Shenzhen City, China |
| Factory | SHEN ZHEN SHI XIN HUA TIAN TECHNOLOGY CO., LTD |
| Address | 3Floor, B Buliding, DaHong Industrial Park, GuangMin District, Shenzhen City, China |
| Product Designation | Dual Band Wireless USB Adapter |
| Brand Name | N/A |
| Test Model | XHT-6B16 |
| Series Model | XHT-6B18 |
| Model Difference | All the same except for the model name and color |
| Date of test | Jun. 13, 2019 to Jun. 25, 2019 |
| Deviation | None |
| Condition of Test Sample | Normal |
| Test Result | Pass |
| Report Template | AGCRT-US-BGN/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 requirement of FCC Part 15 Rules requirement.

Tested By

NiNi

NiNi Guo(Guo Lili)

Jun. 25, 2019

Reviewed By

Max Zhang

Max Zhang(Zhang Yi)

Jun. 27, 2019

Approved By

*Forrest Lei*Forrest Lei(Lei Yonggang)
Authorized Officer

Jun. 27, 2019



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as "Dual Band Wireless USB Adapter". It is designed by way of utilizing the OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

| | |
|---------------------------------|---|
| Product Name | Dual Band Wireless USB Adapter |
| Model/Type reference | XHT-6B16 |
| Modulation | 802.11a/n20/n40/ac20/ac40/ac80 BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM,OFDM |
| Operation Frequency | 5150 MHz~5250MHz;5725 MHz~5850MHz |
| Channel number | 15 |
| Antenna Designation | Two external antennas(Use of reverse SMA connector) |
| Number of transmit chain | 2(802.11a used antenna 0, 802.11n/ac used two antennas) |
| Directional gain | All transmit signals are completely uncorrelated with each other |
| Antenna gain | 5dBi |
| Power Supply | DC 5V |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

2.2. TABLE OF CARRIER FREQUENCIES

| Frequency Band | Channel Number | Frequency | Frequency Band | Channel Number | Frequency |
|----------------------|----------------|-----------|----------------------|----------------|-----------|
| 5150 GHz~ 5250GHz | 36 | 5180 MHz | 5725 GHz~ 5850GHz | 149 | 5745 MHz |
| | 38 | 5190 MHz | | 151 | 5755 MHz |
| | 40 | 5200 MHz | | 153 | 5765 MHz |
| | 42 | 5210 MHz | | 155 | 5775MHz |
| | 44 | 5220 MHz | | 157 | 5785 MHz |
| | 46 | 5230 MHz | | 159 | 5795 MHz |
| | 48 | 5240 MHz | | 161 | 5805 MHz |
| | | | | 165 | 5825MHz |

Note: For 20MHZ bandwidth system use Channel 36,40,44,48,149,153,157,161,165; For 40MHZ bandwidth system use Channel 38,46,151,159; For 80MHZ bandwidth system use Channel 42,155

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

This submittal(s) (test report) is intended for **FCC ID: 2AKC6XHT-WF6D** filing to comply with the FCC Part 15 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.

Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.407 rules KDB 789033 D02

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1~4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in measurement" (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission, $U_c = \pm 3.2 \text{ dB}$
- Uncertainty of Radiated Emission below 1GHz, $U_c = \pm 3.9 \text{ dB}$
- Uncertainty of Radiated Emission above 1GHz, $U_c = \pm 4.8 \text{ dB}$



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

4. DESCRIPTION OF TEST MODES

| Mode | Available channel | Tested channel | Modulation | Date rate(Mbps) |
|------------------|---------------------------------|--------------------------|------------|-----------------|
| 802.11a/n20/ac20 | 36,40,44,48,149,153,157,161,165 | 36,38,48,149, 157,165 | OFDM | 6/6.5 |
| 802.11n40/ac40 | 38,46,151,159 | 38,46, 151,159 | OFDM | 13.5 |
| 802.11ac80 | 42,155 | 42,155 | OFDM | 13.5 |

Note:

1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.
3. The test software is the RtkTestAPP-v2.0.0_20170425 which can set the EUT into the individual test modes



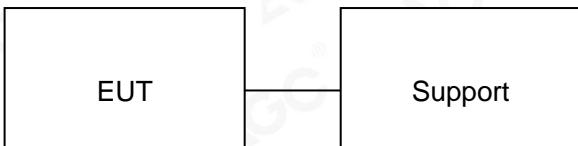
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1–4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

5. SYSTEM TEST CONFIGURATION**5.1. CONFIGURATION OF EUT SYSTEM**

Configure 1:

**5.2. EQUIPMENT USED IN EUT SYSTEM**

| Item | Equipment | Model No. | ID or Specification | Remark |
|------|--------------------------------|------------------|---------------------|---------|
| 1 | Dual Band Wireless USB Adapter | XHT-6B06 | 2AKC6XHT-WF6D | EUT |
| 2 | PC | XIAOMI | N/A | Support |
| 3 | PC adapter | XIAOMI ADC6501TM | DC15V/3A | Support |

5.3. SUMMARY OF TEST RESULTS

| FCC RULES | DESCRIPTION OF TEST | RESULT |
|-----------|--|-----------|
| §15.407 | 6dB Bandwidth | Compliant |
| §15.407 | Emission Bandwidth | Compliant |
| §15.407 | Maximum conducted output power | Compliant |
| §15.407 | Conducted Spurious Emission | Compliant |
| §15.407 | Maximum Conducted Output Power Density | Compliant |
| §15.209 | Radiated Emission | Compliant |
| §15.407 | Band Edges | Compliant |
| §15.207 | Line Conduction Emission | Compliant |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

6. TEST FACILITY

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

TEST EQUIPMENT OF CONDUCTED EMISSION TEST

| Equipment | Manufacturer | Model | S/N | Cal. Date | Cal. Due |
|---------------|--------------|---------|--------|---------------|---------------|
| TEST RECEIVER | R&S | ESPI | 101206 | Jun. 12, 2018 | Jun. 11, 2019 |
| LISN | R&S | ESH2-Z5 | 100086 | Aug. 28, 2018 | Aug. 27, 2019 |

TEST EQUIPMENT OF RADIATED EMISSION TEST

| Equipment | Manufacturer | Model | S/N | Cal. Date | Cal. Due |
|--------------------------------|--------------|-------------|------------|---------------|---------------|
| TEST RECEIVER | R&S | ESCI | 10096 | Jun. 12, 2018 | Jun. 11, 2019 |
| EXA Signal Analyzer | Aglient | N9010A | MY53470504 | Dec. 20, 2018 | Dec. 19, 2019 |
| Power sensor | Aglient | U2021XA | MY54110007 | Sep. 20, 2018 | Sep. 19, 2019 |
| Horn antenna | SCHWARZBECK | BBHA 9170 | #768 | Jun. 12, 2018 | Jun. 11, 2019 |
| preamplifier | ChengYi | EMC184045SE | 980508 | Sep. 21, 2017 | Sep. 20, 2020 |
| Active loop antenna (9K-30MHz) | A.H. | SAS-562B | N/A | Jun. 14, 2018 | Jun. 13, 2020 |
| Double-Ridged Waveguide Horn | ETS LINDGREN | 3117 | 00034609 | May. 26, 2018 | May. 25, 2020 |
| Broadband Preamplifier | SCHWARZBECK | BBV 9718 | 9718-205 | Oct. 25, 2018 | Oct. 24, 2019 |
| ANTENNA | SCHWARZBECK | VULB9168 | D69250 | Sep. 28, 2017 | Sep. 27, 2019 |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

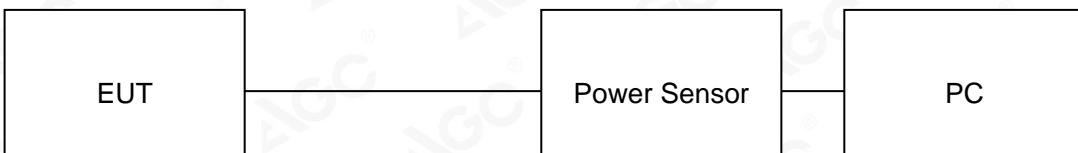
For average power test:

1. Connect EUT RF output port to power sensor through an RF attenuator.
2. Connect the power sensor to the PC.
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Record the maximum power from the software.

Note : The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

7.2. TEST SET-UP

AVERAGE POWER SETUP



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

7.3. LIMITS AND MEASUREMENT RESULT

| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION | | | |
|--|---------------------|-------------------------|--------------|
| Frequency (MHz) | Average Power (dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5180 | 6.95 | 24 | Pass |
| 5200 | 6.71 | 24 | Pass |
| 5240 | 6.53 | 24 | Pass |
| 5745 | 6.25 | 30 | Pass |
| 5785 | 6.14 | 30 | Pass |
| 5825 | 6.17 | 30 | Pass |

| LIMITS AND MEASUREMENT RESULT FOR 802.11N20 MODULATION | | | | | |
|--|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz) | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5180 | 0.61 | 0.56 | 3.60 | 24 | Pass |
| 5200 | 0.59 | 0.34 | 3.48 | 24 | Pass |
| 5240 | 0.56 | 0.27 | 3.43 | 24 | Pass |
| 5745 | 0.55 | 0.29 | 3.43 | 30 | Pass |
| 5785 | 0.60 | 0.31 | 3.47 | 30 | Pass |
| 5825 | 0.51 | 0.24 | 3.39 | 30 | Pass |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC20 MODULATION | | | | | |
|---|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz) | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5180 | 0.50 | 0.21 | 3.37 | 24 | Pass |
| 5200 | 0.46 | 0.11 | 3.30 | 24 | Pass |
| 5240 | 0.44 | 0.16 | 3.31 | 24 | Pass |
| 5745 | 0.41 | 0.14 | 3.29 | 30 | Pass |
| 5785 | 0.40 | 0.13 | 3.28 | 30 | Pass |
| 5825 | 0.39 | 0.16 | 3.29 | 30 | Pass |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

| LIMITS AND MEASUREMENT RESULT FOR 802.11N40 MODULATION | | | | | |
|--|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz) | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5190 | -1.23 | -1.69 | 1.56 | 24 | Pass |
| 5230 | -1.30 | -1.72 | 1.51 | 24 | Pass |
| 5755 | -1.39 | -1.76 | 1.44 | 30 | Pass |
| 5795 | -1.44 | -1.79 | 1.40 | 30 | Pass |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC40 MODULATION | | | | | |
|---|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz) | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5190 | -1.56 | -1.91 | 1.28 | 24 | Pass |
| 5230 | -1.60 | -1.83 | 1.30 | 24 | Pass |
| 5755 | -1.63 | -1.96 | 1.22 | 30 | Pass |
| 5795 | -1.65 | -1.98 | 1.20 | 30 | Pass |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC80 MODULATION | | | | | |
|---|----------------------------|----------------------------|--------------------------|-------------------------|--------------|
| Frequency (MHz) | Average Power Chain 0(dBm) | Average Power Chain 1(dBm) | Average Power Total(dBm) | Applicable Limits (dBm) | Pass or Fail |
| 5210 | -4.06 | -4.12 | -1.08 | 24 | Pass |
| 5775 | -4.64 | -4.68 | -1.65 | 30 | Pass |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1–4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

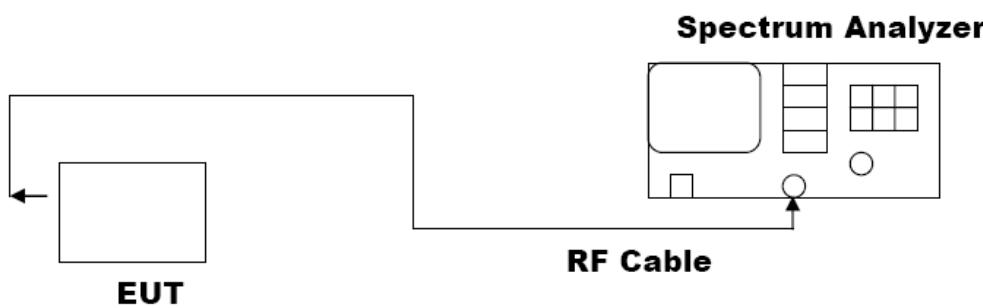
8. 6dB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

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



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

8.3. LIMITS AND MEASUREMENT RESULTS

| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION | | | |
|--|-------------------|-------|----------|
| Applicable Limits | Applicable Limits | | |
| | Test Data (MHz) | | Criteria |
| >500KHZ | 5745MHz | 16.34 | PASS |
| | 5785MHz | 16.36 | PASS |
| | 5825MHz | 16.35 | PASS |

| LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION | | | |
|---|-------------------|-------|----------|
| Applicable Limits | Applicable Limits | | |
| | Test Data (MHz) | | Criteria |
| >500KHZ | 5745MHz | 17.54 | PASS |
| | 5785MHz | 17.56 | PASS |
| | 5825MHz | 17.51 | PASS |
| | 5755MHz | 36.36 | PASS |
| | 5795MHz | 36.33 | PASS |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC20/40/80 MODULATION | | | |
|---|-------------------|-------|----------|
| Applicable Limits | Applicable Limits | | |
| | Test Data (MHz) | | Criteria |
| >500KHZ | 5745MHz | 17.32 | PASS |
| | 5785MHz | 17.15 | PASS |
| | 5825MHz | 17.07 | PASS |
| | 5755MHz | 36.34 | PASS |
| | 5795MHz | 36.35 | PASS |
| | 5775MHz | 75.28 | PASS |



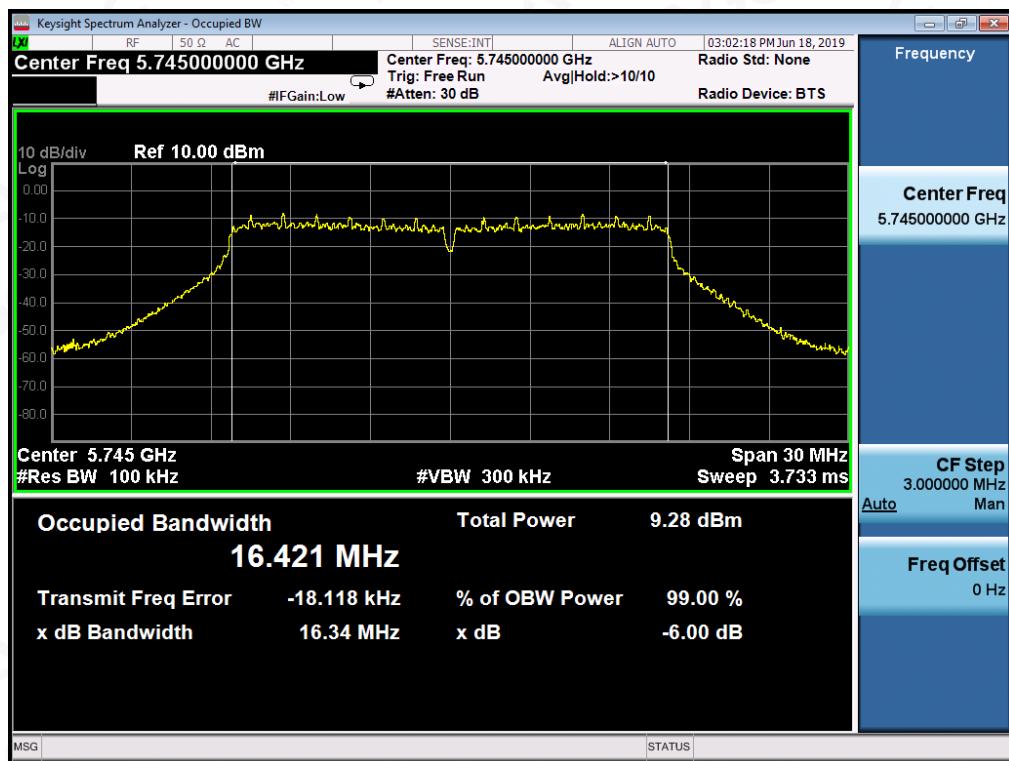
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1–4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

802.11a20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5745MHz



TEST PLOT OF BANDWIDTH FOR 5785MHz



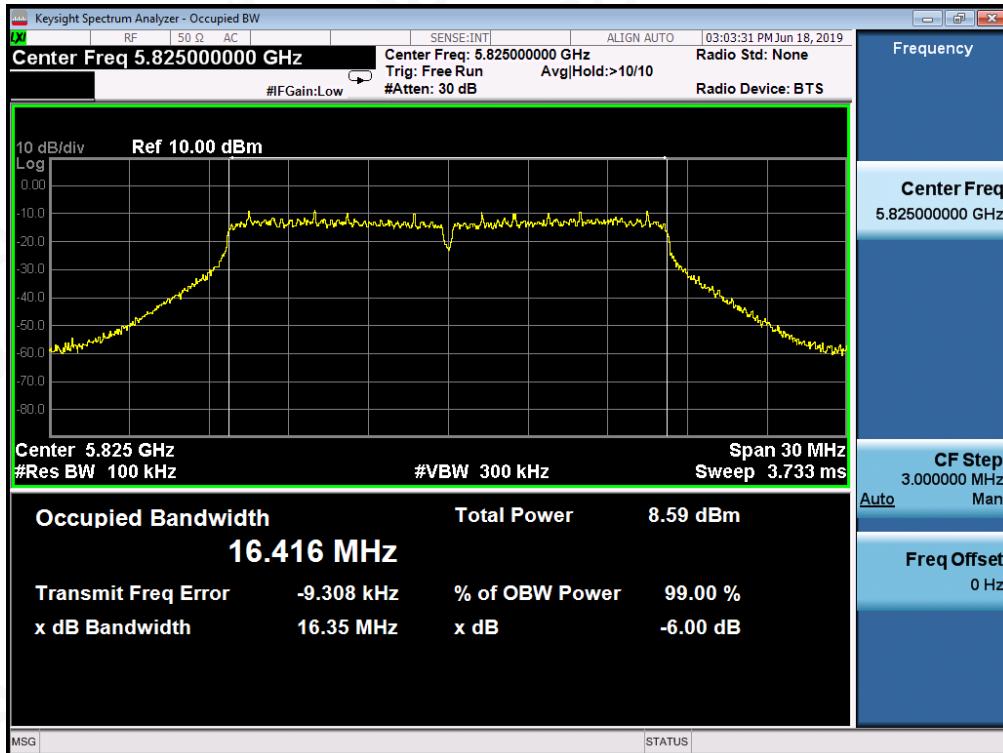
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

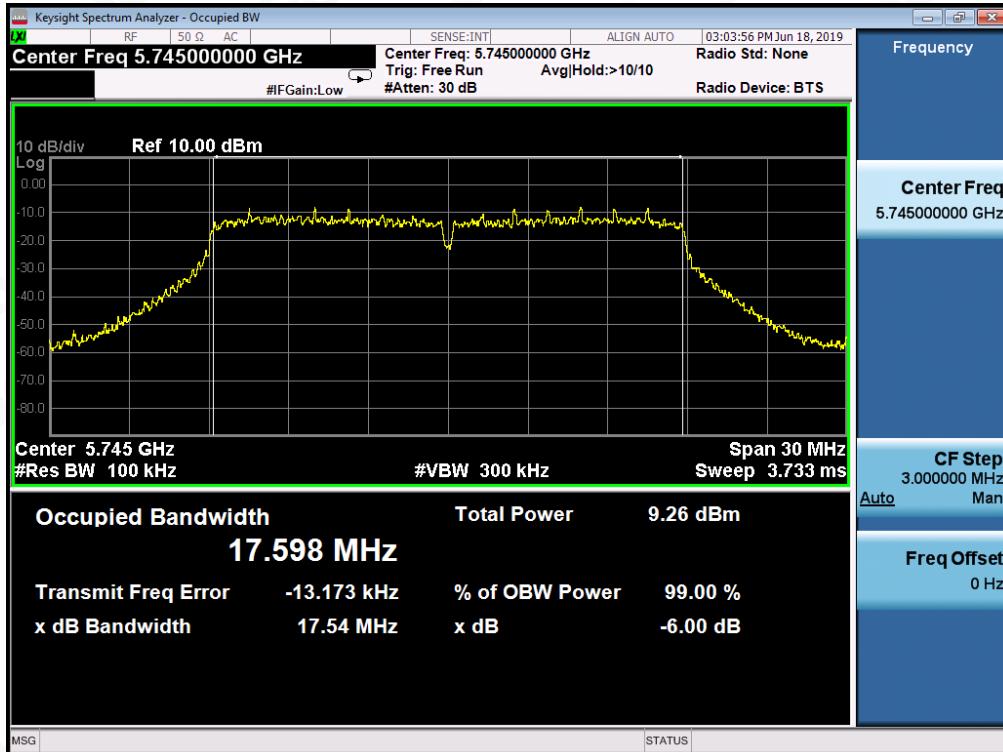
Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5825MHz



802.11n20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5745MHz



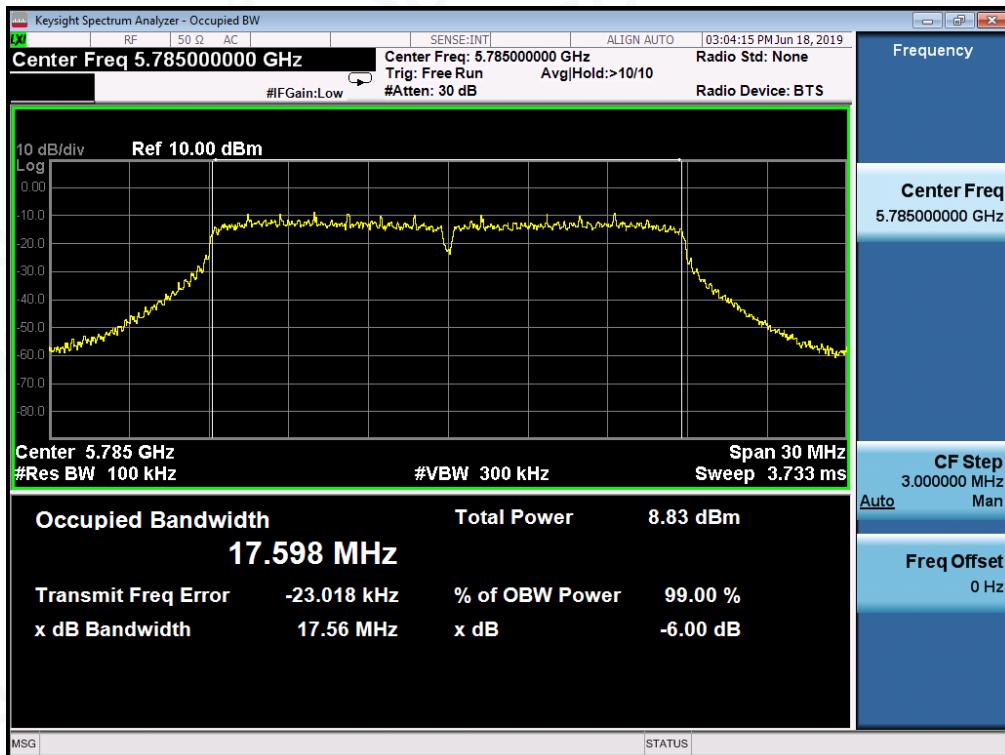
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

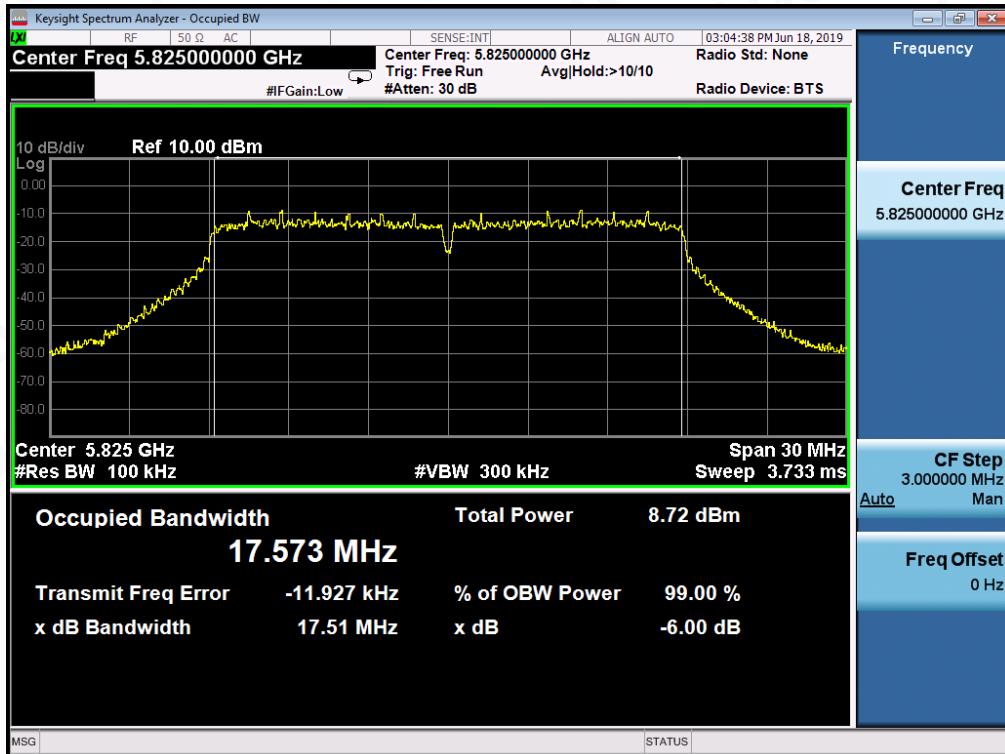
Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5785MHz



TEST PLOT OF BANDWIDTH FOR 5825MHz



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

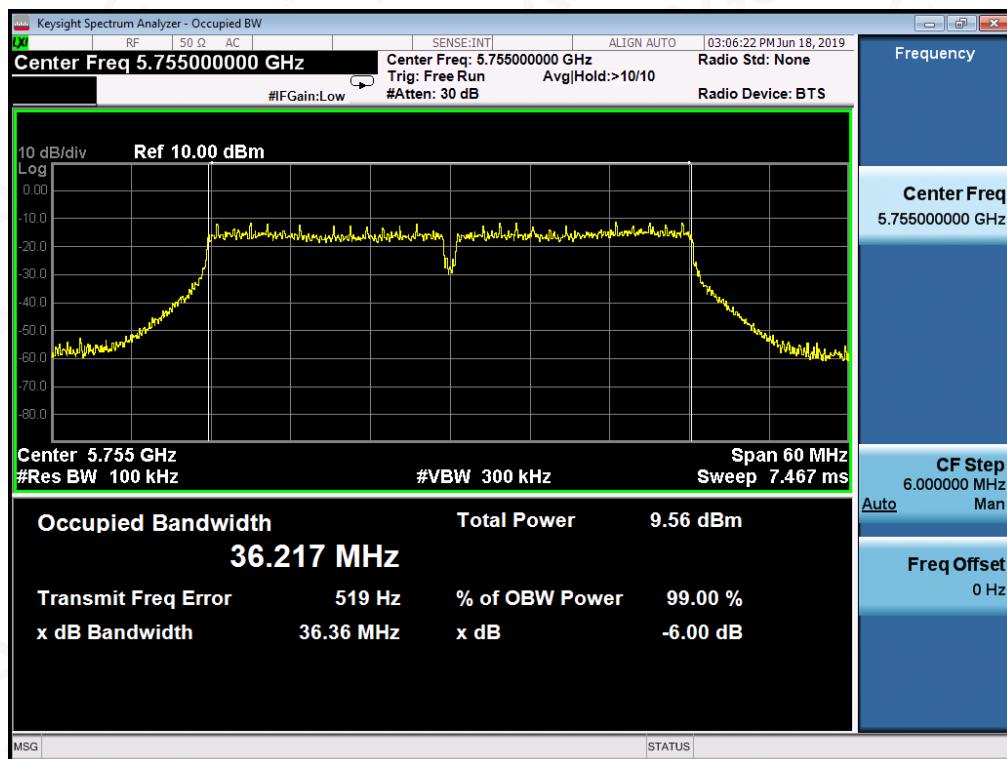
 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

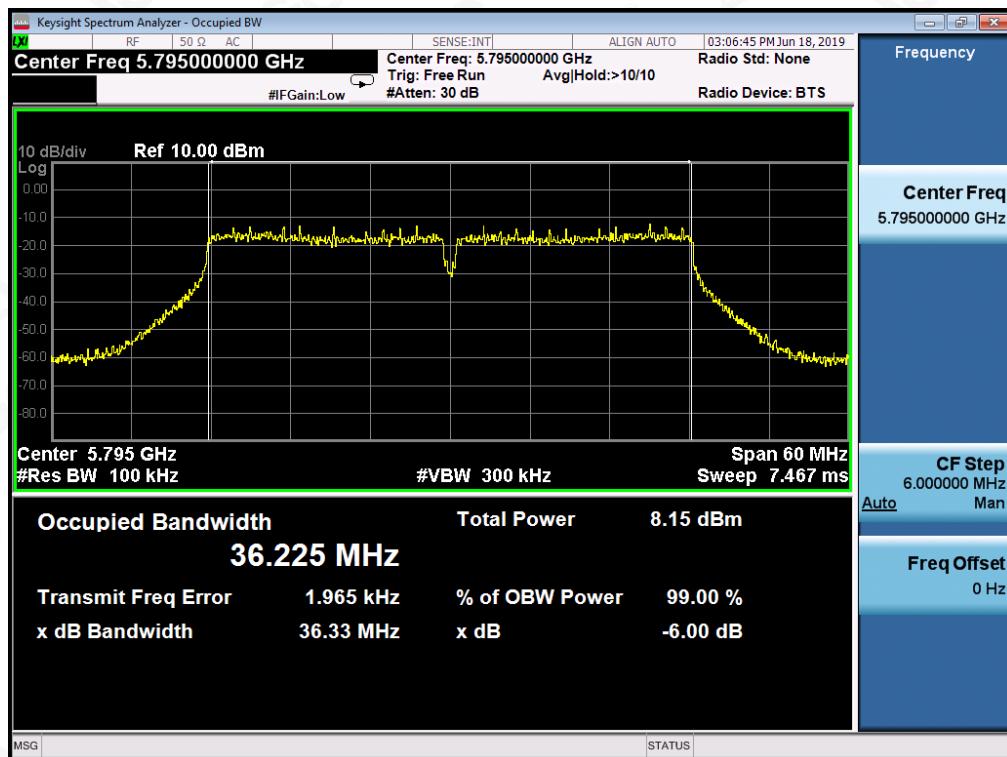
Service Hotline:400 089 2118

802.11n40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5755MHz



TEST PLOT OF BANDWIDTH FOR 5795MHz

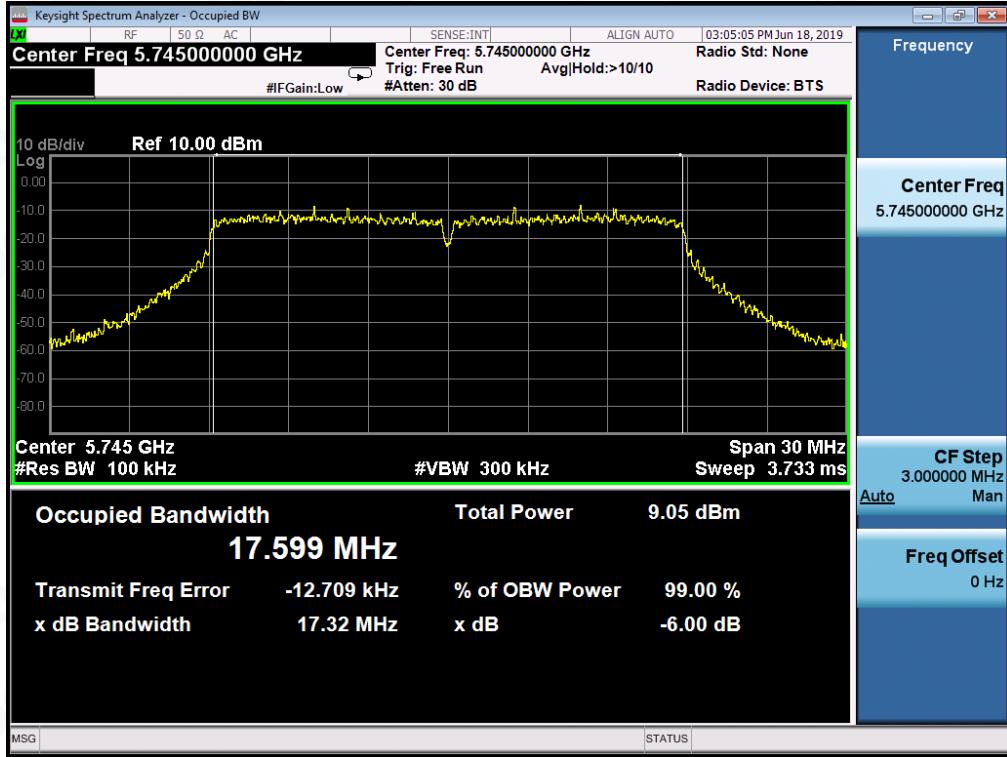


Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

802.11ac20 TEST RESULT
TEST PLOT OF BANDWIDTH FOR 5745MHz

TEST PLOT OF BANDWIDTH FOR 5785MHz


Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1–4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

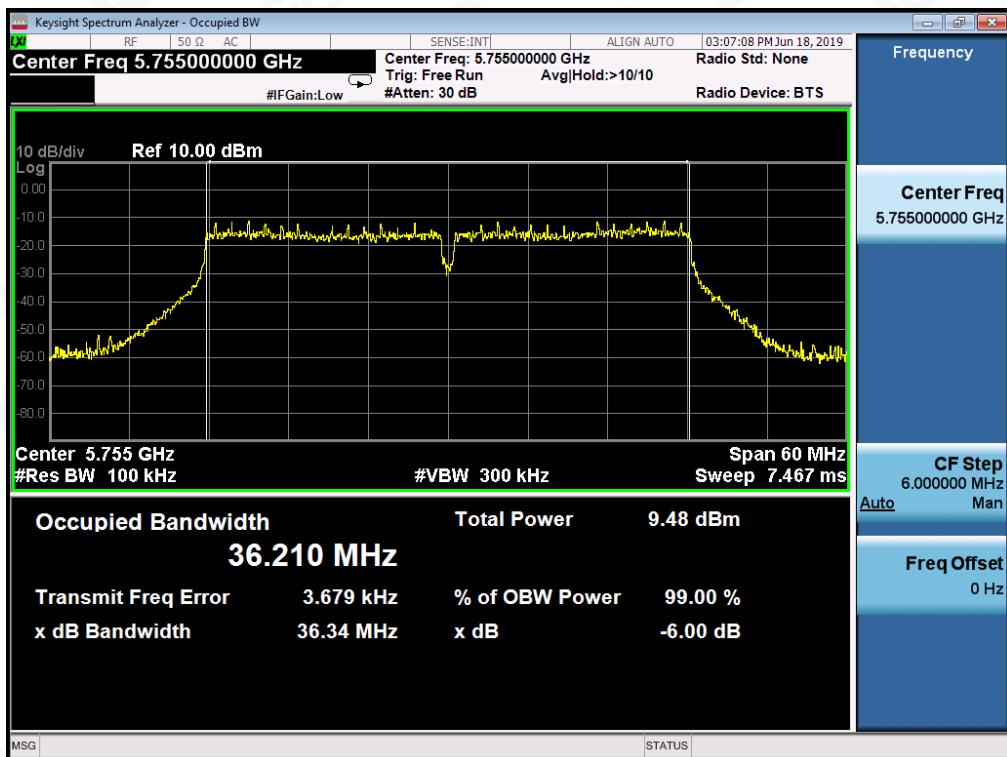
Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5825MHz



802.11ac40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5755MHz



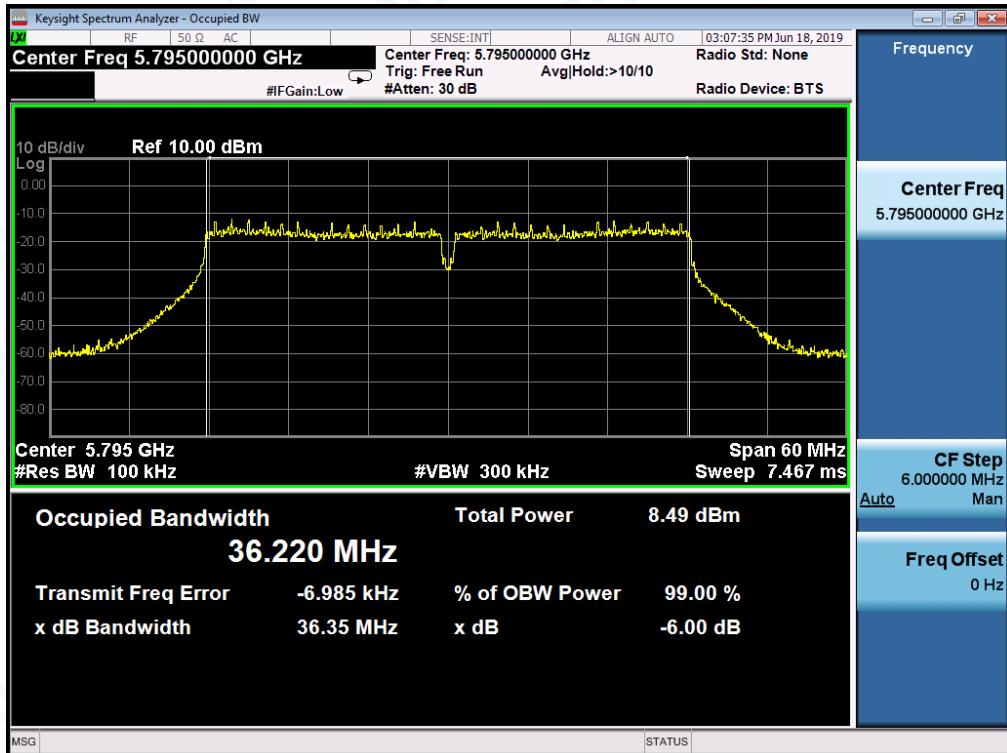
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

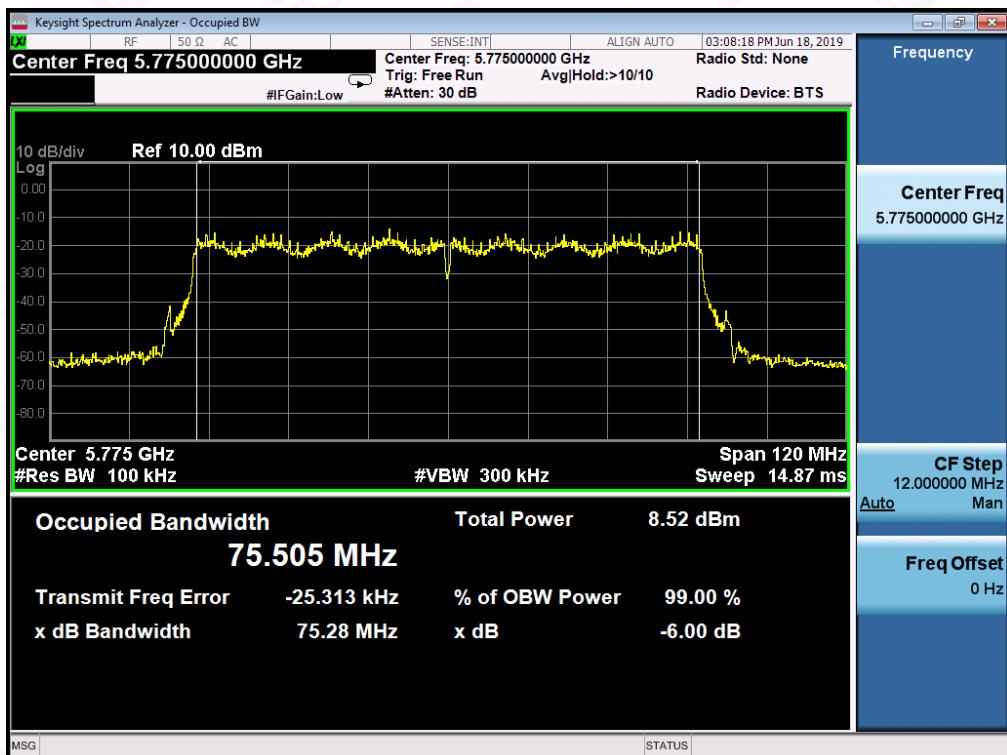
Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5795MHz



802.11ac80 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5775MHz



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

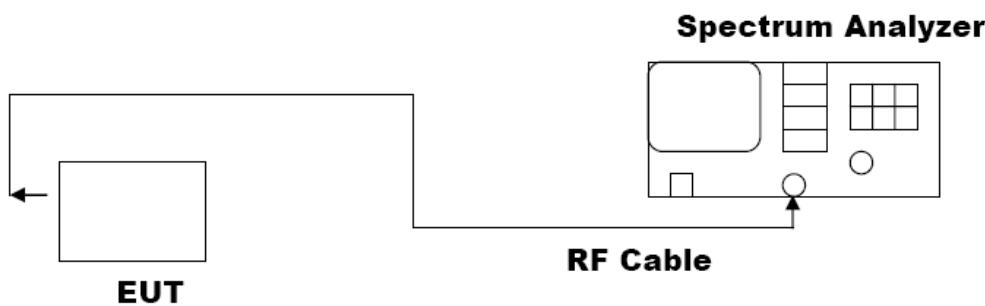
9. EMISSION BANDWIDTH

9.1. MEASUREMENT PROCEDURE

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

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



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

9.3. LIMITS AND MEASUREMENT RESULTS

| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION | | | |
|--|-------------------|-------|----------|
| Applicable Limits | Applicable Limits | | |
| | Test Data (MHz) | | Criteria |
| Within the Band | 5180MHz | 20.54 | PASS |
| | 5200MHz | 20.38 | PASS |
| | 5240MHz | 20.45 | PASS |

| LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION | | | |
|---|-------------------|-------|----------|
| Applicable Limits | Applicable Limits | | |
| | Test Data (MHz) | | Criteria |
| Within the Band | 5180MHz | 20.49 | PASS |
| | 5200MHz | 20.39 | PASS |
| | 5240MHz | 20.59 | PASS |
| | 5190MHz | 43.72 | PASS |
| | 5230MHz | 43.70 | PASS |

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC80 MODULATION | | | |
|---|-------------------|-------|----------|
| Applicable Limits | Applicable Limits | | |
| | Test Data (MHz) | | Criteria |
| Within the Band | 5180MHz | 20.63 | PASS |
| | 5200MHz | 20.39 | PASS |
| | 5240MHz | 20.71 | PASS |
| | 5190MHz | 42.88 | PASS |
| | 5230MHz | 42.71 | PASS |
| | 5210MHz | 83.06 | PASS |

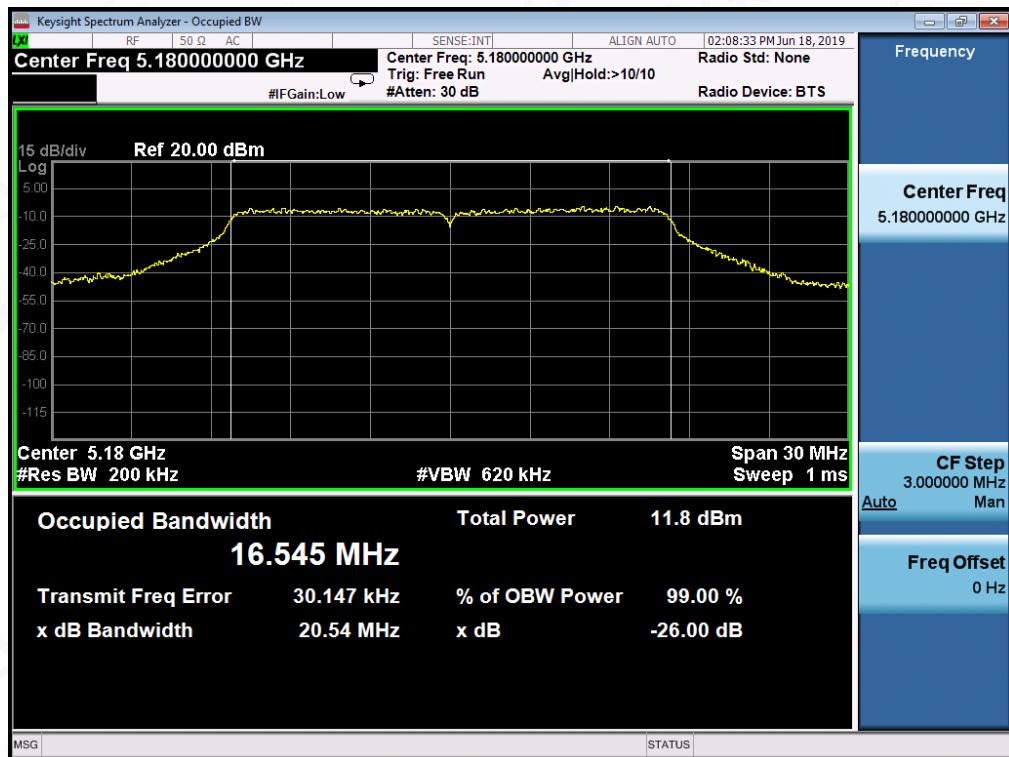
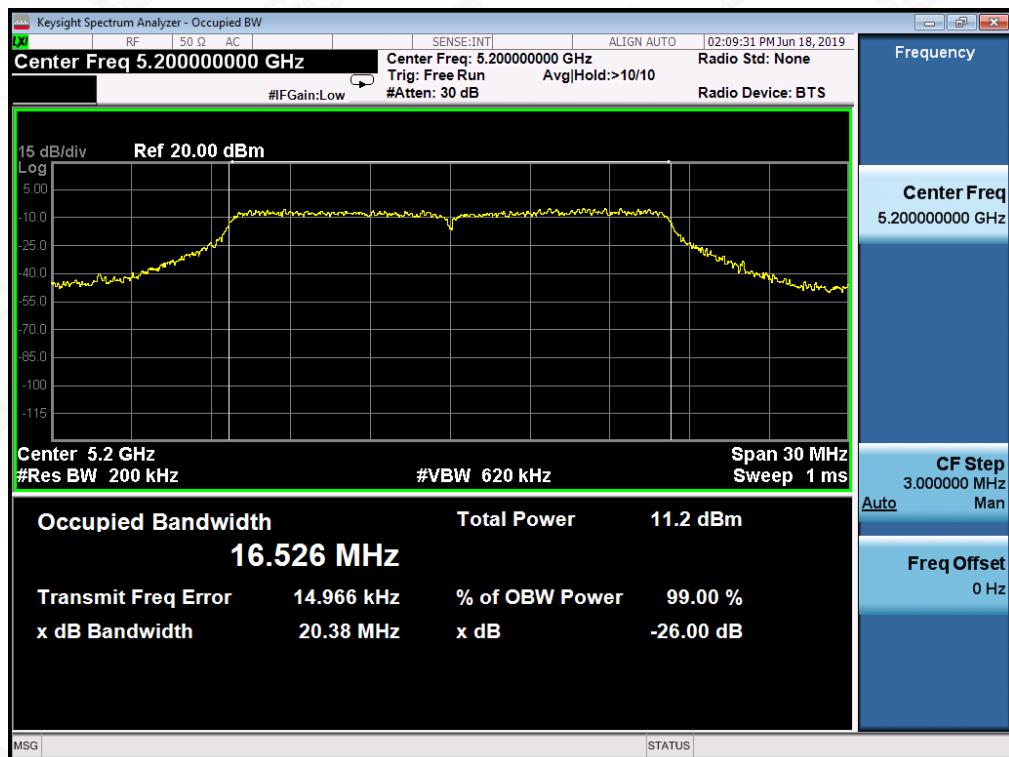
A 26-dB bandwidth that straddles into U-NII 2A band but its 99% occupied power bandwidth does not. If DFS is required, the device must be able to detect radar signal within its 99% occupied power bandwidth. For this rare case, DFS requirement does not apply.



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1–4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

802.11a20 TEST RESULT
TEST PLOT OF BANDWIDTH FOR 5180MHz

TEST PLOT OF BANDWIDTH FOR 5200MHz


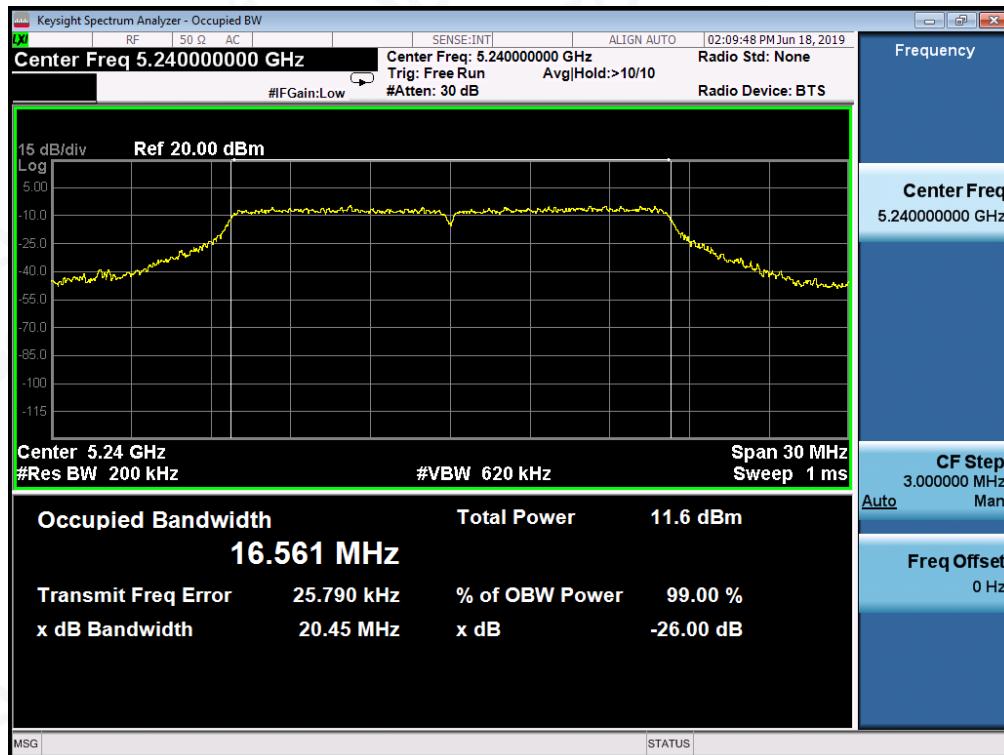
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

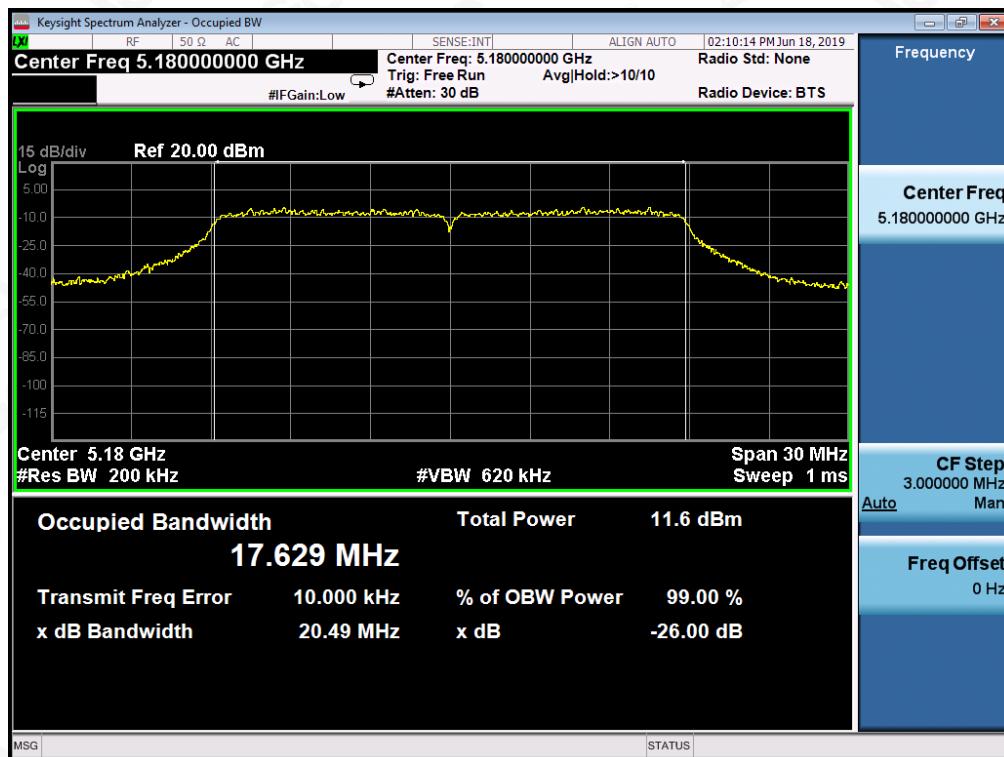
Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5240MHz



802.11n20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5180MHz



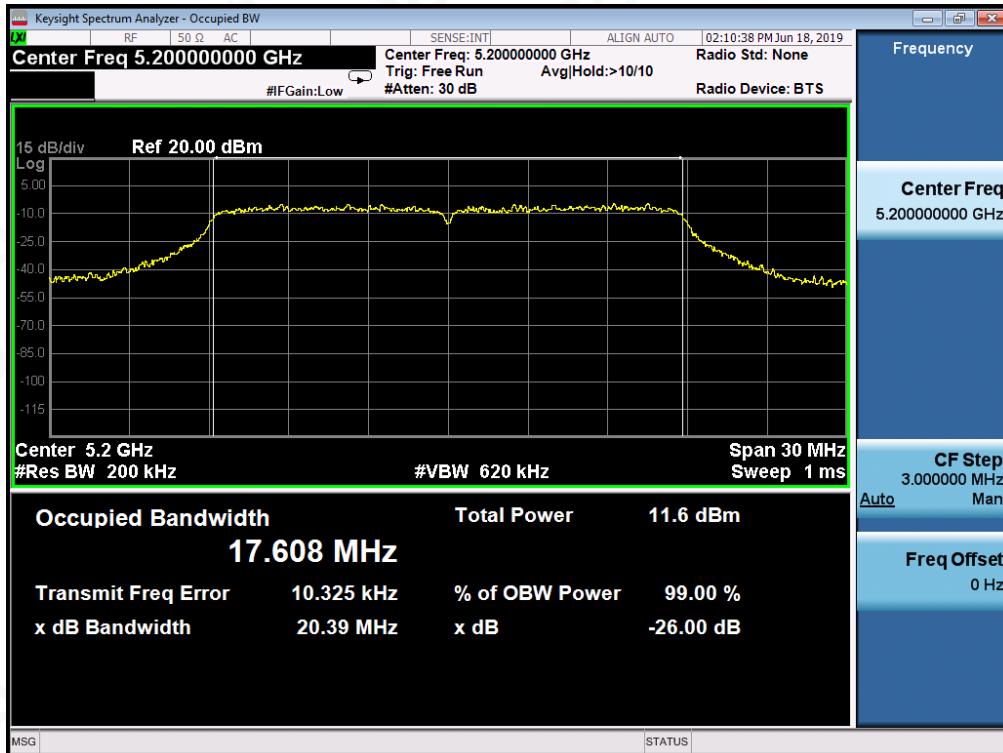
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

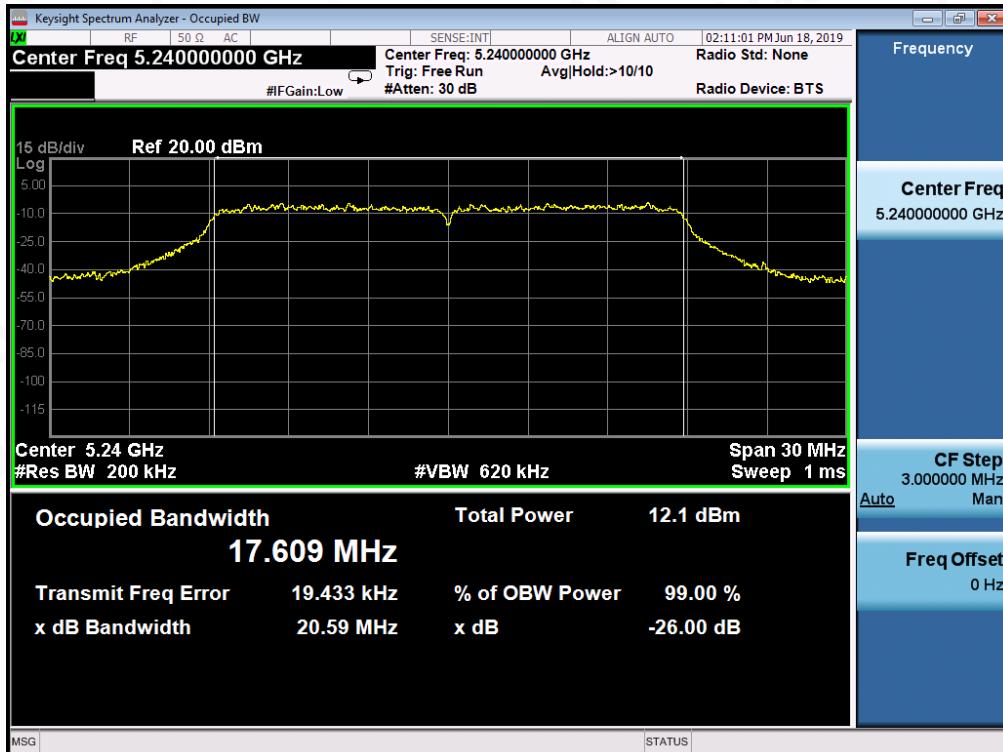
Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5200MHz



TEST PLOT OF BANDWIDTH FOR 5240MHz



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

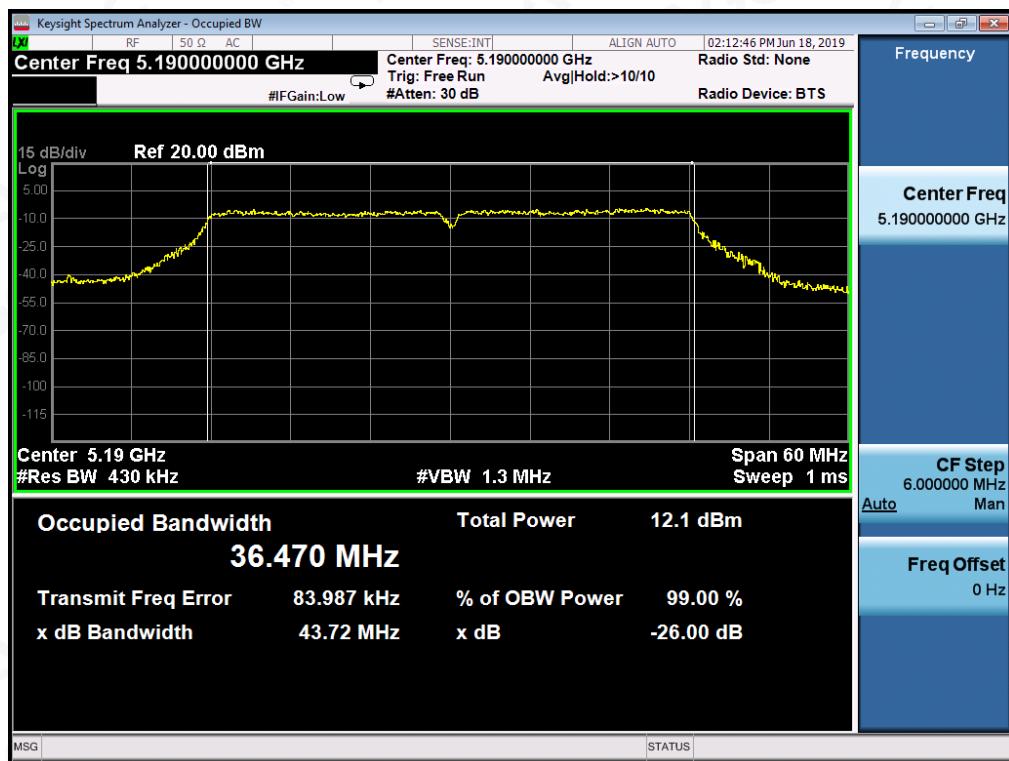
 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

802.11n40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5190MHz



TEST PLOT OF BANDWIDTH FOR 5230MHz



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

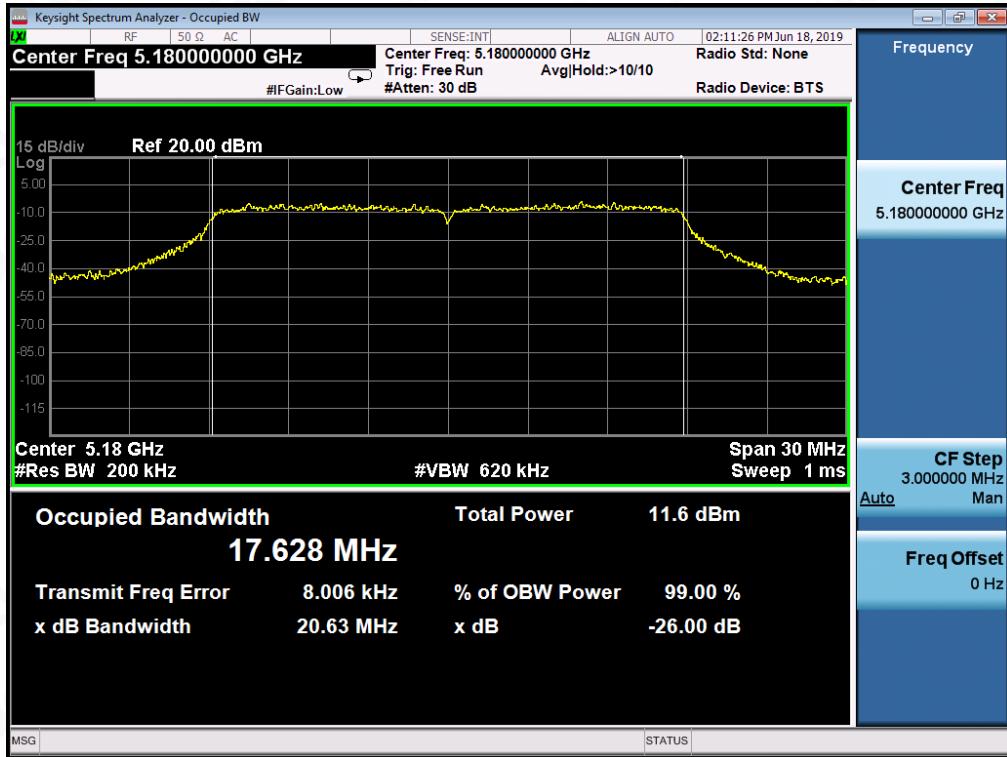
Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

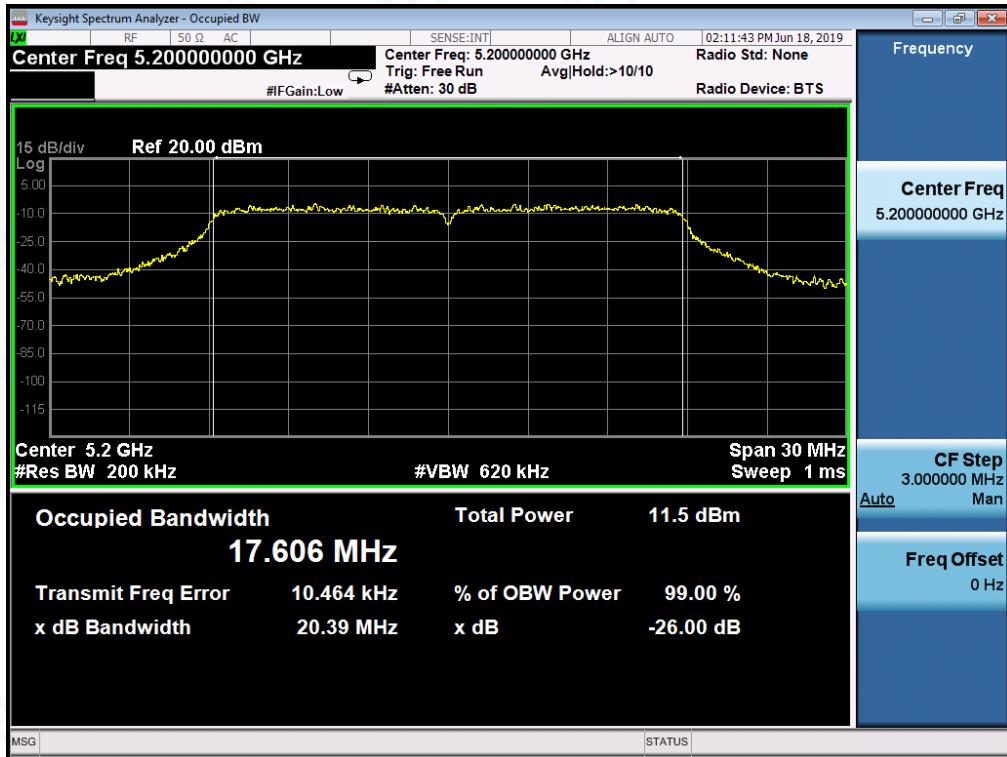
Service Hotline:400 089 2118

802.11ac20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz



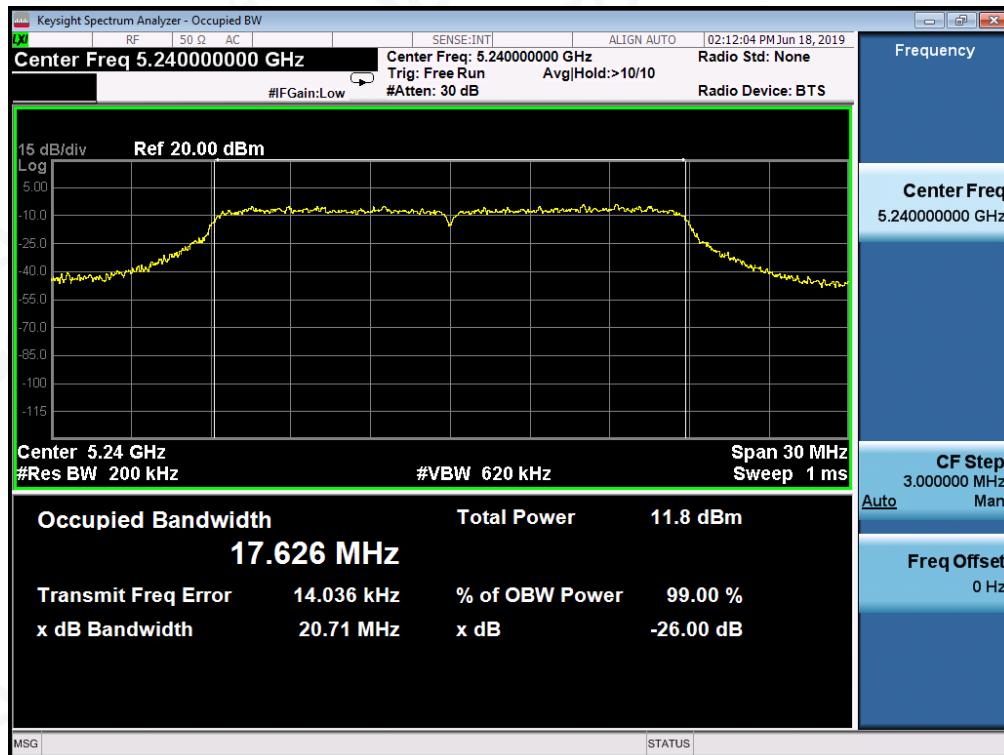
Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1–4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5240MHz



802.11ac40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5190MHz



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

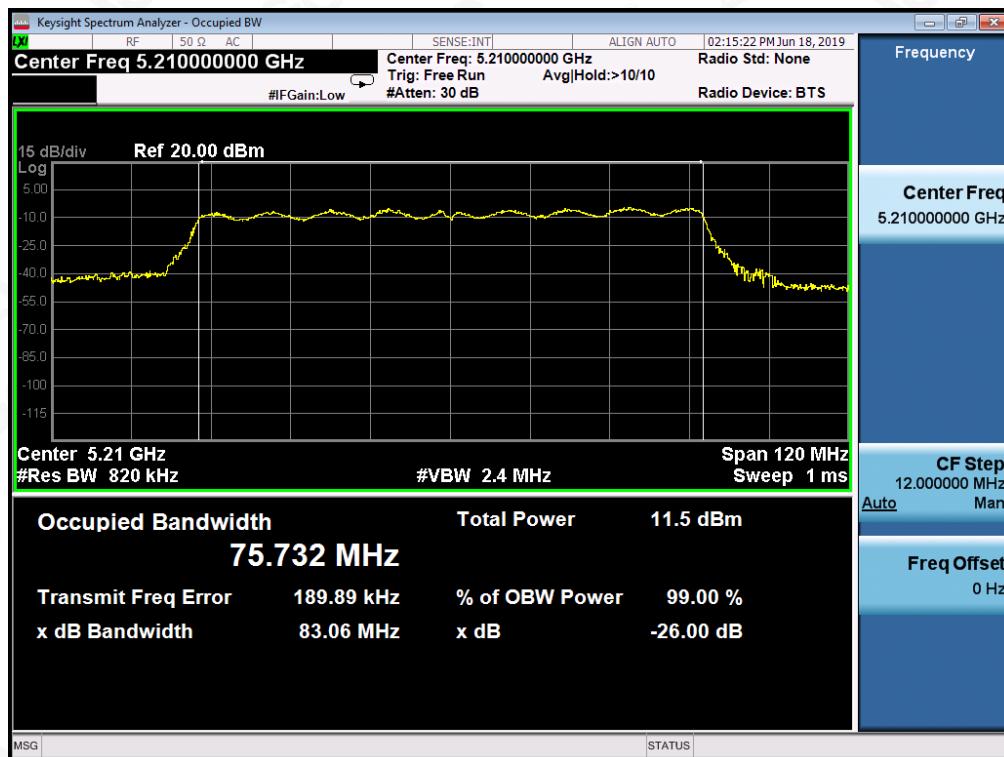
Service Hotline:400 089 2118

TEST PLOT OF BANDWIDTH FOR 5230MHz



802.11ac80 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5210MHz



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

10. MAXIMUM CONDUCTED OUTPUT PEAK POWER SPECTRAL DENSITY**10.1 MEASUREMENT PROCEDURE**

Refer to KDB 789033 section F

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2.

10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

| LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION | | | |
|--|----------------------------|----------------------------|--------------|
| Freq (MHz) | Power density (dBm/MHz) | Applicable Limits (dBm) | Pass or Fail |
| 5180 | -0.363 | 11 | Pass |
| 5200 | 0.230 | 11 | Pass |
| 5240 | 1.228 | 11 | Pass |

| Freq (MHz) | Power density (dBm/500kHz) | Applicable Limits (dBm) | Pass or Fail |
|---------------|-------------------------------|----------------------------|--------------|
| 5745 | -2.630 | 30 | Pass |
| 5785 | -3.205 | 30 | Pass |
| 5825 | -3.317 | 30 | Pass |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

| LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION | | | | | |
|---|------------------------------------|------------------------------------|----------------------------------|--------------|--------------|
| Freq (MHz) | Power density Chain 0 (dBm/MHz) | Power density Chain 1 (dBm/MHz) | Power density Total (dBm/MHz) | Limits (dBm) | Pass or Fail |
| 5180 | -0.733 | -0.881 | 2.20 | 11 | Pass |
| 5200 | -0.655 | -0.449 | 2.46 | 11 | Pass |
| 5240 | 0.680 | 0.442 | 3.57 | 11 | Pass |
| 5190 | -3.181 | -3.303 | -0.23 | 11 | Pass |
| 5230 | -2.311 | -2.474 | 0.62 | 11 | Pass |
| Freq (MHz) | Power density Chain 0 (dBm/500kHz) | Power density Chain 1 (dBm/500kHz) | Power density Total (dBm/500kHz) | Limits (dBm) | Pass or Fail |
| 5745 | -3.260 | -3.250 | -0.24 | 30 | Pass |
| 5785 | -3.388 | -3.400 | -0.38 | 30 | Pass |
| 5825 | -3.990 | -4.126 | -1.05 | 30 | Pass |
| 5755 | -5.814 | -6.069 | -2.93 | 30 | Pass |
| 5795 | -6.244 | -5.598 | -2.90 | 30 | Pass |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118

| LIMITS AND MEASUREMENT RESULT FOR 802.11AC20/40/80 MODULATION | | | | | |
|---|------------------------------------|------------------------------------|----------------------------------|--------------|--------------|
| Freq (MHz) | Power density Chain 0 (dBm/MHz) | Power density Chain 1 (dBm/MHz) | Power density Total (dBm/MHz) | Limits (dBm) | Pass or Fail |
| 5180 | -1.091 | -1.202 | 1.86 | 11 | Pass |
| 5200 | -0.803 | -0.907 | 2.16 | 11 | Pass |
| 5240 | 0.099 | -0.048 | 3.04 | 11 | Pass |
| 5190 | -2.655 | -2.675 | 0.35 | 11 | Pass |
| 5230 | -2.093 | -2.326 | 0.80 | 11 | Pass |
| 5210 | -4.644 | -4.770 | -1.70 | 11 | Pass |
| Freq (MHz) | Power density Chain 0 (dBm/500kHz) | Power density Chain 1 (dBm/500kHz) | Power density Total (dBm/500kHz) | Limits (dBm) | Pass or Fail |
| 5745 | -3.308 | -3.532 | -0.41 | 30 | Pass |
| 5785 | -3.464 | -3.900 | -0.67 | 30 | Pass |
| 5825 | -4.335 | -4.368 | -1.34 | 30 | Pass |
| 5755 | -5.500 | -5.669 | -2.57 | 30 | Pass |
| 5795 | -5.794 | -5.785 | -2.78 | 30 | Pass |
| 5775 | -8.036 | -7.824 | -4.92 | 30 | Pass |



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technial Industrial Park, Gushu,
 Xixiang, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Service Hotline:400 089 2118