





# **FCC Test Report**

Report No.: AGC02390210402FE06

FCC ID : 2ABRU-BW2837

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION**: Dual-Band Wi-Fi, Bluetooth & BLE Dual-Mode Module

BRAND NAME : BDE

MODEL NAME : BDE-BW2837

**APPLICANT**: Guangzhou BDE Technology Inc.

**DATE OF ISSUE** : Apr. 30, 2021

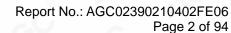
**STANDARD(S)** FCC Part 15.407

**TEST PROCEDURE(S)** KDB 789033 D02 v02r01

REPORT VERSION : V1.0

Attestation of Global Complance (Shenzhen) Co., Ltd







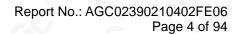
# REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Apr. 30, 2021	Valid	Initial Release



# **TABLE OF CONTENTS**

1.	VERIFICATION OF CONFORMITY	5
2.	GENERAL INFORMATION	
	2.1. PRODUCT DESCRIPTION	6
	2.2. TABLE OF CARRIER FREQUENCYS	7
	2.3. RELATED SUBMITTAL(S) / GRANT (S)	8
	2.4. TEST METHODOLOGY	8
	2.5. SPECIAL ACCESSORIES	8
	2.6. EQUIPMENT MODIFICATIONS	8
	2.7. ANTENNA REQUIREMENT	
	2.8. DESCRIPTION OF AVAILABLE ANTENNAS	9
3.	MEASUREMENT UNCERTAINTY	10
4.	DESCRIPTION OF TEST MODES	11
5.	SYSTEM TEST CONFIGURATION	12
	5.1. CONFIGURATION OF EUT SYSTEM	12
	5.2. EQUIPMENT USED IN EUT SYSTEM	12
	5.3. SUMMARY OF TEST RESULTS	12
6.	TEST FACILITY	13
7.	MAXIMUM CONDUCTED OUTPUT POWER	
	7.1. MEASUREMENT PROCEDURE	14
	7.2. TEST SET-UP	
	7.3. LIMITS AND MEASUREMENT RESULT	15
8.	BANDWIDTH	17
	8.1. MEASUREMENT PROCEDURE	17
	8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	17
	8.3. LIMITS AND MEASUREMENT RESULTS	18
9.	MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY	31
	9.1. MEASUREMENT PROCEDURE	31
	9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	
	9.3. MEASUREMENT EQUIPMENT USED	
	9.4. LIMITS AND MEASUREMENT RESULT	





10. CONDUCTED SPURIOUS EMISSION	49
10.1. MEASUREMENT PROCEDURE	49
10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	
10.3. MEASUREMENT EQUIPMENT USED	49
10.4. LIMITS AND MEASUREMENT RESULT	49
11. RADIATED EMISSION	
11.1. MEASUREMENT PROCEDURE	
11.2. TEST SETUP	
11.3. LIMITS AND MEASUREMENT RESULT	
11.4. TEST RESULT	
12. LINE CONDUCTED EMISSION TEST	88
12.1. LIMITS OF LINE CONDUCTED EMISSION TEST	88
12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	88
12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	89
12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	89
12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	90
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	92
APPENDIX B: PHOTOGRAPHS OF EUT	94



# 1. VERIFICATION OF CONFORMITY

Applicant	Guangzhou BDE Technology Inc.
Address	B2-403, Chuangyi Building, 162 Science Avenue, Huangpu District, Guangzhou 510663, China
Manufacturer	Guangzhou BDE Technology Inc.
Address	B2-403, Chuangyi Building, 162 Science Avenue, Huangpu District, Guangzhou 510663, China
Factory	Guangzhou BDE Technology Inc.
Address	B2-403, Chuangyi Building, 162 Science Avenue, Huangpu District, Guangzhou 510663, China
Product Designation	Dual-Band Wi-Fi, Bluetooth & BLE Dual-Mode Module
Brand Name	BDE
Test Model	BDE-BW2837
Date of test	Apr. 13, 2021 to Apr. 30, 2021
Deviation	No any deviation from the test method
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.

Prepared By	Eddy Liu	
-C	Eddy Liu (Project Engineer)	Apr. 30, 2021
Reviewed By	Max Zhang	
CC CC	Max Zhang (Reviewer)	Apr. 30, 2021
Approved By	Formerlies	
NGC -	Forrest Lei (Authorized Officer)	Apr. 30, 2021

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 6 of 94

#### 2. GENERAL INFORMATION

#### 2.1. PRODUCT DESCRIPTION

The EUT is designed as "Dual-Band Wi-Fi, Bluetooth & BLE Dual-Mode Module". 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

Operation Frequency	5150 MHz~5250MHz; 5725 MHz~5850MHz
Output Power	IEEE 802.11a20:17.16dBm; IEEE 802.11n(20):16.78dBm; IEEE802.11n(40):17.72dBm
Modulation	BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM, OFDM
Number of channels	15
Hardware Version	V1.0
Software Version	V1.0
Antenna Designation	Antenna 1:Chip Antenna Antenna 2:Chip Antenna (Comply with requirements of the FCC part 15.203)
Antenna Gain	Antenna 1:5.2dBi Antenna 2:5.2dBi
Power Supply	DC 3.3V

#### Note:

- 1. The EUT is designed as client devices without radar detection.
- 2. The device do not support TPC.
- 3. The maximum antenna gain is 5.2dBi, the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for N<sub>ANT</sub> ≤ 4;

So: Directional gain = Gant + Array Gain =5.2dBi < 6dBi



Page 7 of 94

## 2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency	Frequency Band	Channel Number	Frequency
	36	5180 MHz	0	149	5745 MHz
-0	38	5190 MHz	GO CO	151	5755 MHz
10	40	5200 MHz	5725 GHz~ 5850GHz	153	5765 MHz
5150 GHz∼	42	5210 MHz		155	5775MHz
5250GHz	44	5220 MHz		157	5785 MHz
	46	5230 MHz		159	5795 MHz
	48	5240 MHz		161	5805 MHz
20			200	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.



Page 8 of 94

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

This submittal(s) (test report) is intended for **FCC ID: 2ABRU-BW2837** 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.

#### 2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.



Page 9 of 94

#### 2.8. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency TX Bandwidth Max Peak Gain (dE	TX	Bandwidth	Sain (dBi)	Directional Gain	
Type	Band (MHz)	Paths	(MHz)	Ant 1	Ant 2	(dBi)
5G WIFI Chip A	Antenna List (5GHz 2	2*2 MIMO)				
Internal	5150 ~ 5250	2	20	5.2	5.2	8.21
Antenna	5725 ~ 5850	2	20	5.2	5.2	0.21

Note 1: The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11n mode.

Note 2: The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

If all antennas have the same gain, Gant, Directional gain = Gant + Array Gain, where Array Gain is as follows.

• For power spectral density (PSD) measurements on devices:

Array Gain =  $10 \log (N_{ANT}/N_{SS}) dB = 3.01$ ;

For power measurements on IEEE 802.1devices:

Array Gain = 0 dB for  $N_{ANT} \le 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥40 MHz for any Nant;

Array Gain = 5 log(Nant/Nss) dB or 3 dB, whichever is less, for 20 MHz channel widths with Nant ≥ 5.

If antenna gains are not equal, Directional gain may be calculated by using the formulas applicable to equal gain antennas with Gant set equal to the gain of the antenna having the highest gain.

Note 3: Antenna 1 corresponds to the front right of the EUT, antenna 2 corresponds to the front left of the EUT, antenna 3 corresponds to the right rear of the EUT, and antenna 4 corresponds to the left rear of the EUT.

Note 4: Both EUT and antenna support U-NII-1 (5150-5250MHz)



Page 10 of 94

# 3. MEASUREMENT UNCERTAINTY

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

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

a/Inspection

The test results

the test report.



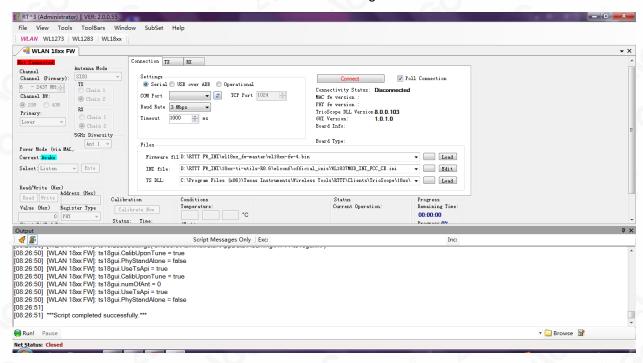
## 4. DESCRIPTION OF TEST MODES

Mode	Available channel	Tested channel	Modulation	Date rate (Mbps)
802.11a/n	36,40,44,48, 149,153,157,161,165	36,40,48, 149,157,165	OFDM	6Mbps/MCS0
802.11n	38,46,151,159	38,46,151,159	OFDM	MCS0

#### 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.

## Software Setting



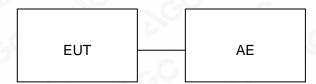


Page 12 of 94

# 5. SYSTEM TEST CONFIGURATION

# **5.1. CONFIGURATION OF EUT SYSTEM**

Configure 1:

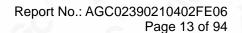


## **5.2. EQUIPMENT USED IN EUT SYSTEM**

				(0)
Item	Equipment	Model No.	ID or Specification	Remark
1	Dual-Band Wi-Fi, Bluetooth &	BDE-BW2837	2ABRU-BW2837	EUT
2	Control	BDE	J5K-NPC	AE
3	PC	HUAWEI		AE
4	Chip Antenna	Pulse/W3006	5.2dBi	EUT

#### **5.3. SUMMARY OF TEST RESULTS**

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





## 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			
<b>Designation Number</b>	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	May 15, 2020	May 14, 2021
LISN	R&S	ESH2-Z5	100086	Jul. 03,2020	Jul. 02,2021
Test software	R&S	ES-K1 (Ver V1.71)	N/A	N/A	N/A

## **TEST EQUIPMENT OF RADIATED EMISSION TEST**

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	May 15, 2020	May 14, 2021
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 07, 2020	Dec. 06, 2021
Power sensor	Aglient	U2021XA	MY54110007	Jun. 08, 2020	Jun. 07, 2021
5GHz Fliter	EM Electronics	5150-5880MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep.21, 2019	Sep. 20, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 17, 2019	May 16, 2021
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Sep. 20, 2019	Sep. 19, 2021
Test software	FARA	EZ-EMC (Ver RA-03A)	N/A	N/A	N/A



Report No.: AGC02390210402FE06 Page 14 of 94

## 7. MAXIMUM CONDUCTED OUTPUT POWER

#### 7.1. MEASUREMENT PROCEDURE

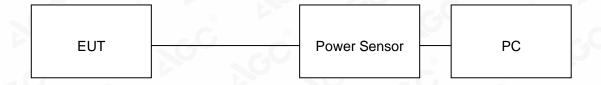
For average power test:

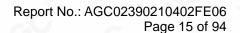
- 1. Connect EUT RF output port to power sensor through an RF attenuator.
- 2. Connect the power sensor to the PC.
- 3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 4. Record the maximum power from the software.

**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**





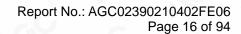


# 7.3. LIMITS AND MEASUREMENT RESULT

	Test Data of Conducted Output Power for band 5.15-5.25 GHz-ant 1					
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail		
a.C	5180	16.82	23.98	Pass		
802.11a	5200	16.82	23.98	Pass		
	5240	17.01	23.98	Pass		
· · · · · · ·	5180	14.32	23.98	Pass		
802.11n20	5200	14.30	23.98	Pass		
	5240	13.26	23.98	Pass		
000 44 40	5190	14.43	23.98	Pass		
802.11n40	5230	13.99	23.98	Pass		

	Test Data of Conducted Output Power for band 5.15-5.25 GHz-ant 2					
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail		
	5180	17.16	23.98	Pass		
802.11a	5200	15.83	23.98	Pass		
	5240	15.75	23.98	Pass		
	5180	13.05	23.98	Pass		
802.11n20	5200	13.06	23.98	Pass		
	5240	14.22	23.98	Pass		
000 44=40	5190	14.97	23.98	Pass		
802.11n40	5230	13.83	23.98	Pass		

Tes	Test Data of Conducted Output Power for band 5.15-5.25 GHz-Total ant 1+2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail	
30 -0	5180	16.74	23.98	Pass	
802.11n20	5200	16.73	23.98	Pass	
	5240	16.78	23.98	Pass	
000 44 = 40	5190	17.72	23.98	Pass	
802.11n40	5230	16.92	23.98	Pass	





Test Data of Conducted Output Power for band 5.725-5.85 GHz-ant 1						
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail		
	5745	14.30	30	Pass		
802.11a	5785	15.69	30	Pass		
	5825	15.59	30	Pass		
	5745	12.01	30	Pass		
802.11n20	5785	12.17	30	Pass		
	5825	12.09	30	Pass		
000 44-40	5755	13.38	30	Pass		
802.11n40	5795	13.47	30	Pass		

Test Data of Conducted Output Power for band 5.725-5.85 GHz-ant 2					
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail	
G	5745	14.26	30	Pass	
802.11a	5785	16.00	30	Pass	
	5825	15.27	30	Pass	
,0	5745	11.72	30	Pass	
802.11n20	5785	12.17	30	Pass	
	5825	12.19	30	Pass	
902 11 - 10	5755	13.37	30	Pass	
802.11n40	5795	13.04	30	Pass	

Test	Test Data of Conducted Output Power for band 5.725-5.85 GHz-Total ant 1+2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail	
®	5745	14.88	30	Pass	
802.11n20	5785	15.18	30	Pass	
	5825	15.15	30	Pass	
802.11n40	5755	16.38	30	Pass	
	5795	16.27	30	Pass	

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



#### 8. BANDWIDTH

#### **8.1. MEASUREMENT PROCEDURE**

-6dB bandwidth (DTS bandwidth):

- 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 ≥3\*RBW. Detector = Peak. Trace mode = max hold.
- Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

## 99% occupied bandwidth:

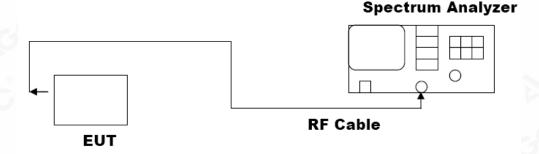
- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
  The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video
  bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
- 4. Set SPA Trace 1 Max hold, then View.

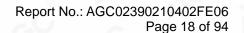
#### -26dB Bandwidth:

- 1. Set RBW = approximately 1% of the emission bandwidth.
- 2. Set the VBW > RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. 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.

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







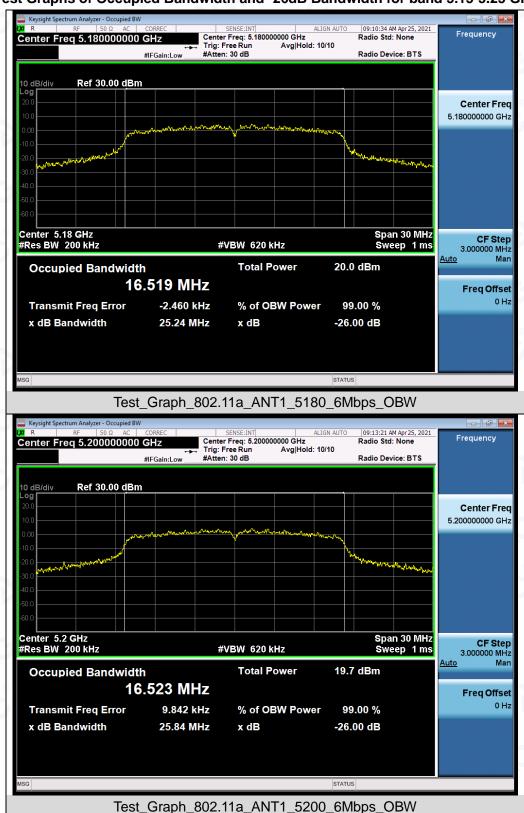
# 8.3. LIMITS AND MEASUREMENT RESULTS

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
0	5180	16.519	25.241	N/A	Pass
802.11a	5200	16.523	25.841	N/A	Pass
	5240	16.581	25.732	N/A	Pass
6	5180	17.501	22.063	N/A	Pass
802.11n20	5200	17.468	22.408	N/A	Pass
	5240	17.481	22.098	N/A	Pass
000.44.40	5190	35.772	42.139	N/A	Pass
802.11n40	5230	35.766	41.356	N/A	Pass

Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Pass or Fail
	5745	16.229	15.099	0.5	Pass
802.11a	5785	16.374	15.100	0.5	Pass
	5825	16.657	15.104	0.5	Pass
	5745	17.379	15.099	0.5	Pass
802.11n20	5785	17.515	15.101	0.5	Pass
	5825	17.480	15.101	0.5	Pass
802.11n40	5755	35.760	33.817	0.5	Pass
	5795	35.802	35.036	0.5	Pass



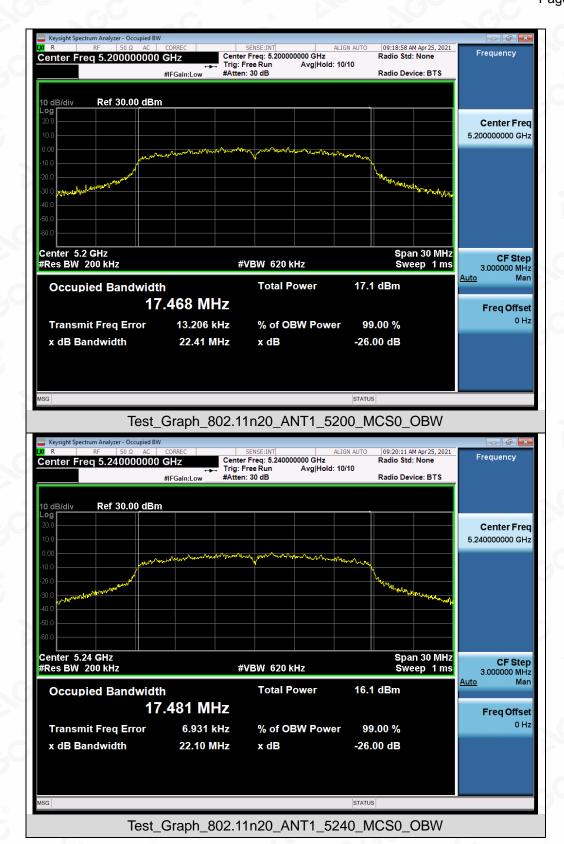
## Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz



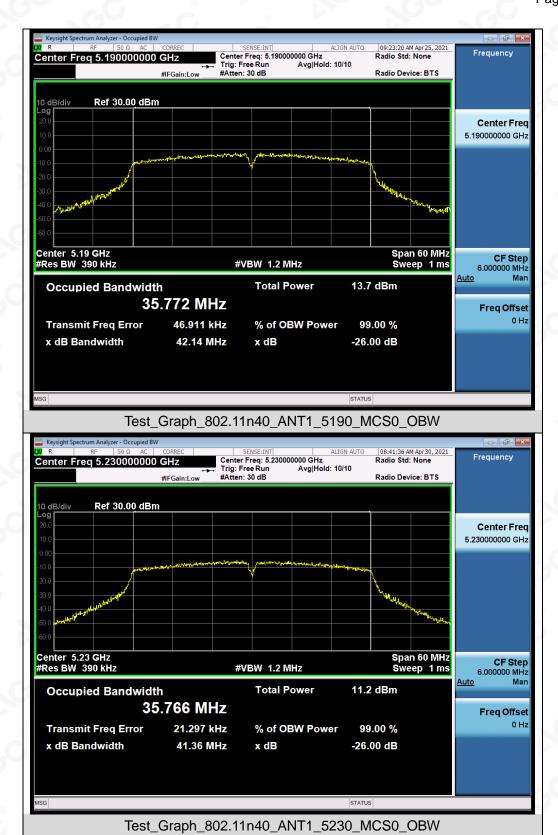






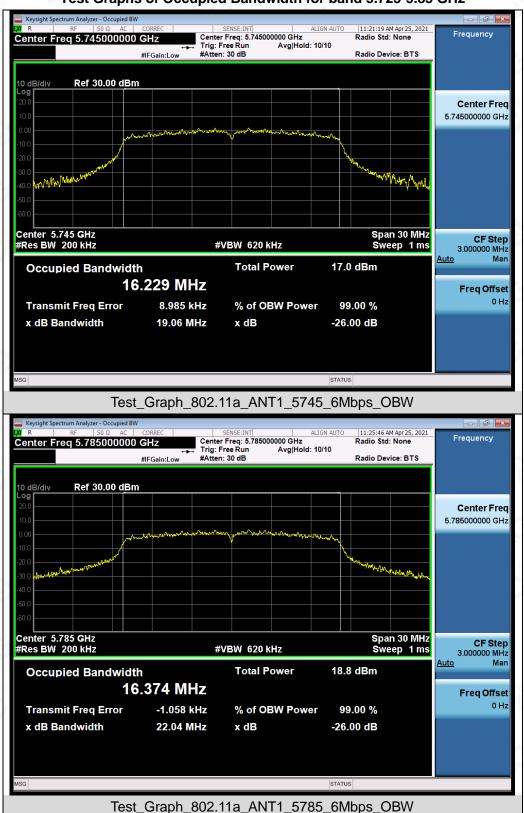






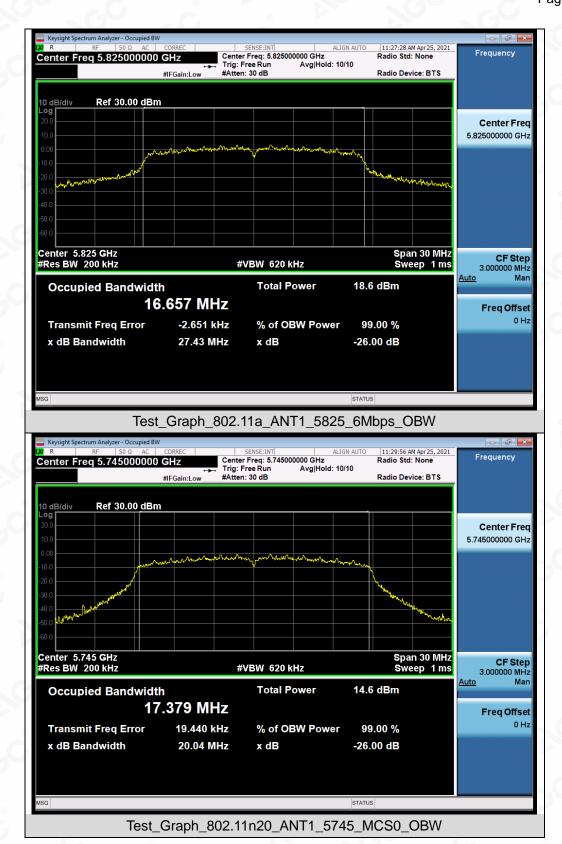


## Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz

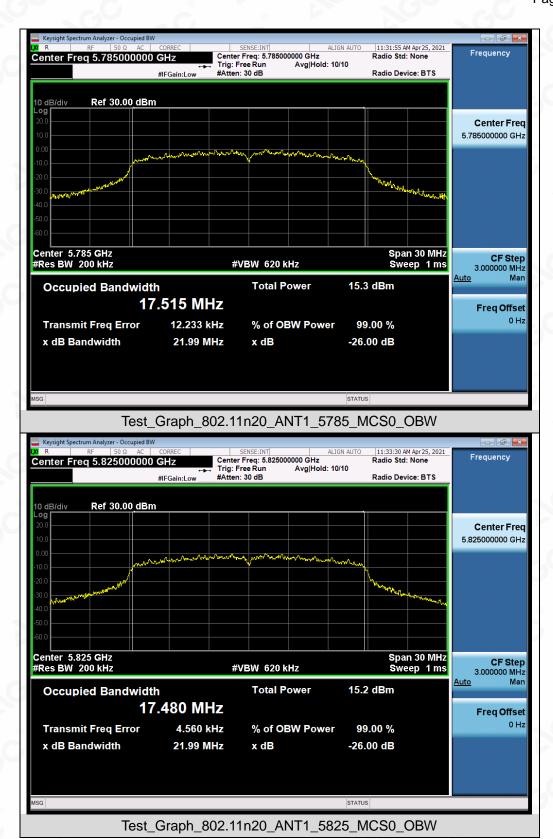


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesthov/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC within 15days after the sesures of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

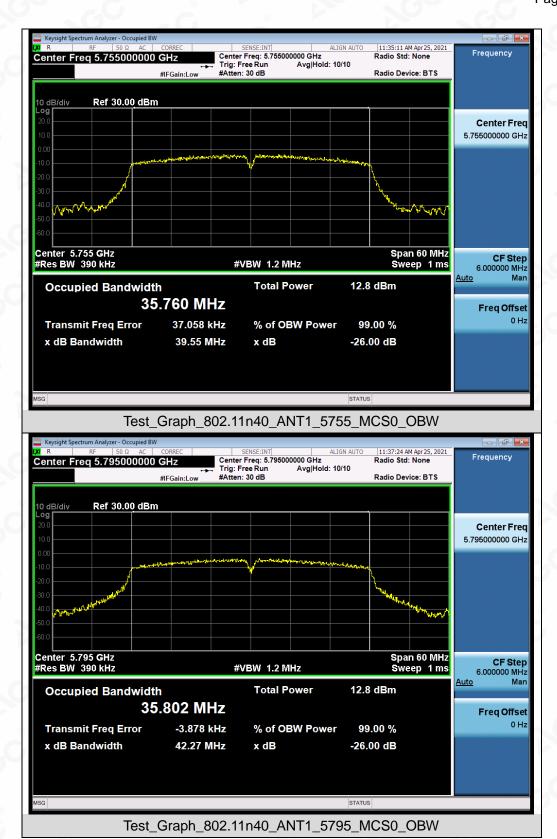






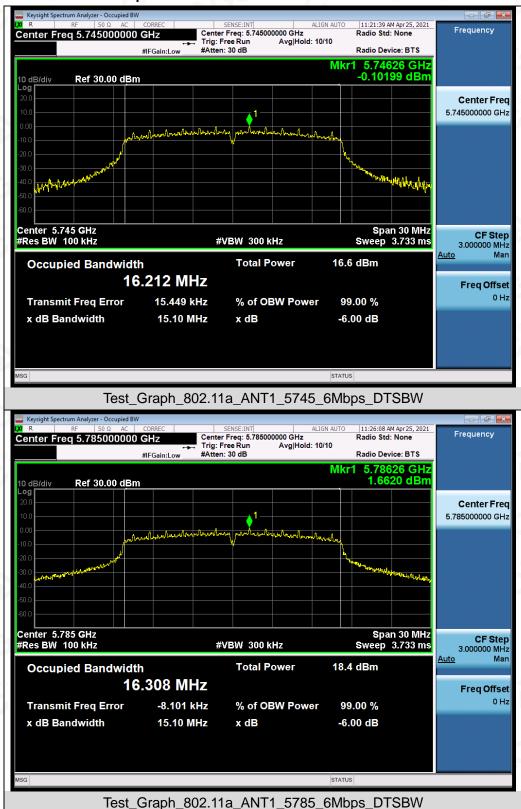




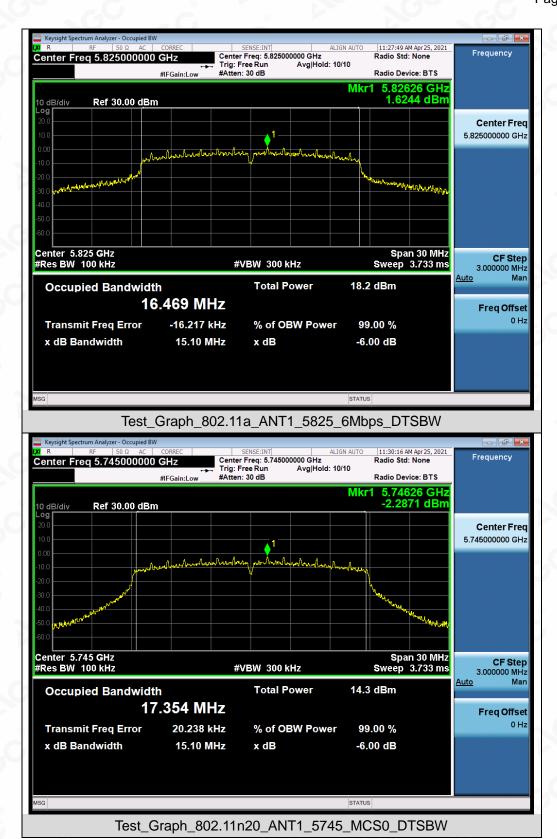




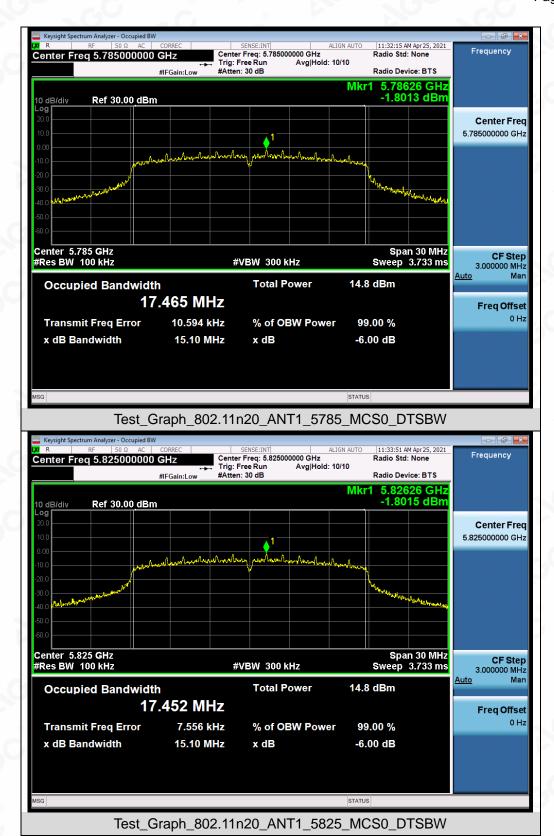
## Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz



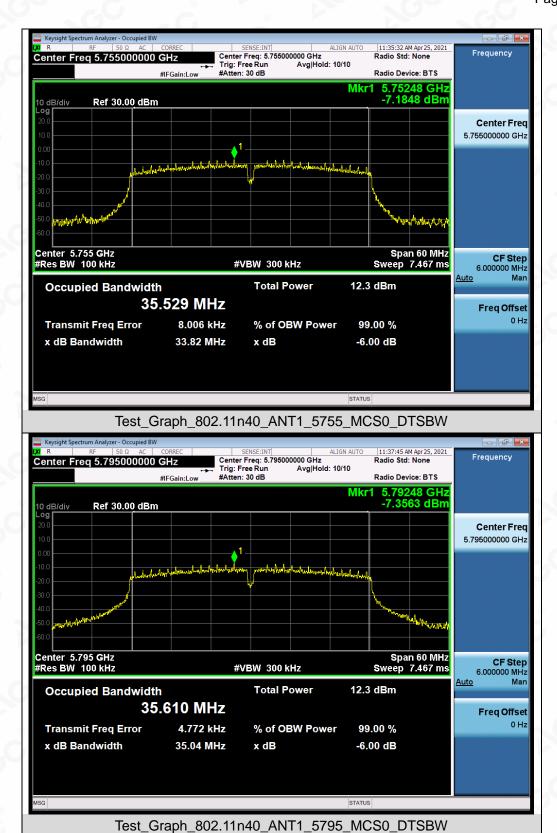














Page 31 of 94

# 9. MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

## 9.1. MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

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

Refer to Section 8.2.

#### 9.3. MEASUREMENT EQUIPMENT USED

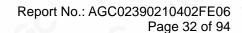
Refer to Section 6.

## 9.4. LIMITS AND MEASUREMENT RESULT

Те	Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-ant 1				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail	
8	5180	7.148	8.79	Pass	
802.11a	5200	6.914	8.79	Pass	
	5240	7.042	8.79	Pass	
	5180	4.255	8.79	Pass	
802.11n20	5200	4.671	8.79	Pass	
- GU	5240	2.857	8.79	Pass	
000 11 10	5190	1.350	8.79	Pass	
802.11n40	5230	1.651	8.79	Pass	

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz- ant 2				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
	5180	7.345	8.79	Pass
802.11a	5200	5.861	8.79	Pass
	5240	5.745	8.79	Pass
-0	5180	3.139	8.79	Pass
802.11n20	5200	2.824	8.79	Pass
	5240	4.387	8.79	Pass
802.11n40	5190	2.681	8.79	Pass
	5230	1.301	8.79	Pass

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz- Total ant 1+2				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
	5180	6.74	8.79	Pass
802.11n20	5200	6.86	8.79	Pass
-C	5240	6.70	8.79	Pass
802.11n40	5190	5.08	8.79	Pass
	5230	4.49	8.79	Pass





Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-ant 1				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	1.407	27.79	Pass
	5785	3.122	27.79	Pass
	5825	2.628	27.79	Pass
802.11n20	5745	-0.695	27.79	Pass
	5785	-0.408	27.79	Pass
	5825	-0.695	27.79	Pass
802.11n40	5755	-1.906	27.79	Pass
	5795	-1.395	27.79	Pass

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-ant 2				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
	5745	1.932	27.79	Pass
802.11a	5785	3.417	27.79	Pass
	5825	2.542	27.79	Pass
	5745	-1.126	27.79	Pass
802.11n20	5785	-0.467	27.79	Pass
	5825	-0.663	27.79	Pass
802.11n40	5755	-2.175	27.79	Pass
	5795	-1.867	27.79	Pass

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz- Total ant 1+2				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11n20	5745	2.11	27.79	Pass
	5785	2.57	27.79	Pass
	5825	2.33	27.79	Pass
802.11n40	5755	0.97	27.79	Pass
	5795	1.39	27.79	Pass



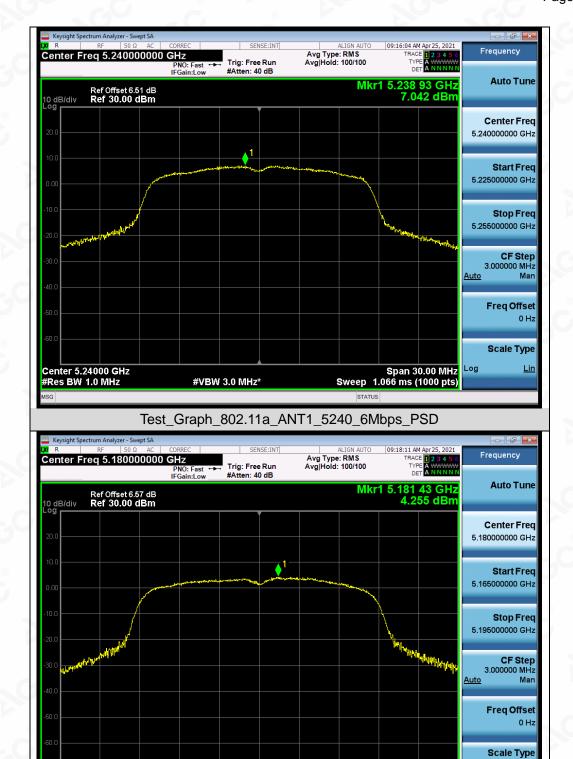
## Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz-ant 1





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





Test\_Graph\_802.11n20\_ANT1\_5180\_MCS0\_PSD

#VBW 3.0 MHz\*

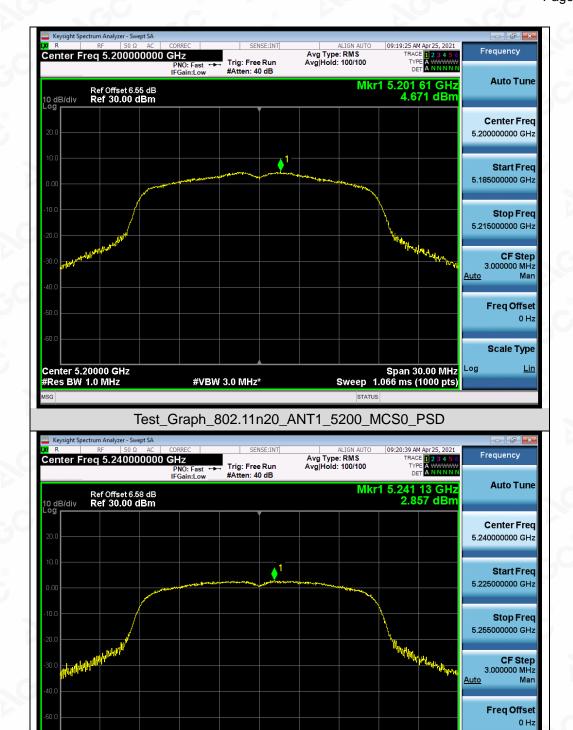
Span 30.00 MHz Sweep 1.066 ms (1000 pts)

Center 5.18000 GHz #Res BW 1.0 MHz

Scale Type

Span 30.00 MHz Sweep 1.066 ms (1000 pts)





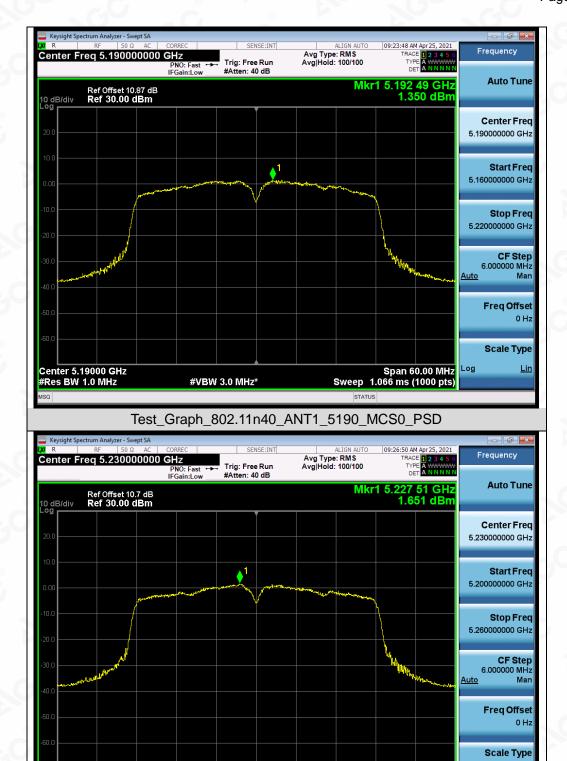
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the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

Test\_Graph\_802.11n20\_ANT1\_5240\_MCS0\_PSD

#VBW 3.0 MHz\*

Center 5.24000 GHz #Res BW 1.0 MHz





Test\_Graph\_802.11n40\_ANT1\_5230\_MCS0\_PSD

#VBW 3.0 MHz\*

Span 60.00 MHz Sweep 1.066 ms (1000 pts)

Center 5.23000 GHz #Res BW 1.0 MHz