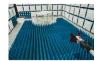


PCTEST

18855 Adams Court, Morgan Hill, CA 95037 USA Tel. 410.290.6652 / Fax 410.290.6654 http://www.pctest.com



MEASUREMENT REPORT FCC PART 15.407 / ISED RSS-247 UNII 802.11ax OFDMA

Applicant Name:

Apple Inc. One Apple Park Way Cupertino, CA 95014 United States

Date of Testing: 12/10/2019 - 02/26/2020 **Test Site/Location:** PCTEST. Morgan Hill, CA, USA **Test Report Serial No.:** 1C1912170050-09.BCG

FCC ID:	
IC:	
APPLICAN	T:

BCGA2228

579C-A2228

Apple Inc.

Application Type:
Model/HVIN:
EUT Type:
Frequency Range:
FCC Classification:
FCC Rule Part(s):
ISED Specification:
Test Procedure(s):

Certification A2228 Tablet Device 5180 - 5825MHz Unlicensed National Information Infrastructure (UNII) Part 15 Subpart E (15.407) RSS-247 Issue 2 ANSI C63.10-2013, KDB 789033 D02 v02r01, KDB 662911 D01 v02r01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013 and KDB 789033 D02 v02r01. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Randy Ortanez President



FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 1 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 1 of 537
© 2020 PCTEST			V 9.0 02/01/2019

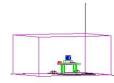


TABLE OF CONTENTS

1.0	INTRO	ODUCTIO	۷N	4
	1.1	Scope		4
	1.2	PCTES	ST Test Location	4
	1.3	Test F	acility / Accreditations	4
2.0	PROE	DUCT INF	ORMATION	5
	2.1	Equipr	nent Description	5
	2.2	Device	e Capabilities	5
	2.3	Antenr	na Description	6
	2.4	Test S	upport Equipment	7
	2.5	Test C	Configuration	7
	2.6	Softwa	are and Firmware	7
	2.7	EMI S	uppression Device(s)/Modifications	7
3.0	DESC	RIPTION	OF TESTS	8
	3.1	Evalua	ation Procedure	8
	3.2	Radiat	ed Emissions	8
	3.3	Enviro	nmental Conditions	8
4.0	ANTE	NNA REC	QUIREMENTS	9
5.0	MEAS	SUREMEN	NT UNCERTAINTY	10
6.0	TEST	EQUIPM	ENT CALIBRATION DATA	11
7.0	TEST	RESULT	S	12
	7.1	Summ	ary	12
	7.2	26dB E	Bandwidth Measurement – 802.11ax OFDMA	13
	7.3	6dB Ba	andwidth Measurement – 802.11ax OFDMA	98
	7.4	UNII C	Output Power Measurement – 802.11ax OFDMA	. 125
	7.5	Maxim	um Power Spectral Density – 802.11ax OFDMA	. 146
	7.6	Radiat	ed Spurious Emission Measurements – Above 1GHz	. 403
		7.6.1	SISO Core 0 Radiated Spurious Emission Measurements	. 406
		7.6.2	SISO Core 1 Radiated Spurious Emission Measurements	. 426
		7.6.3	CDD Radiated Spurious Emission Measurements	. 446
		7.6.4	SISO Core 0 Radiated Band Edge Measurements (20MHz BW)	. 467
		7.6.5	SISO Core 0 Radiated Band Edge Measurements (40MHz BW)	. 475
		7.6.6	SISO Core 0 Radiated Band Edge Measurements (80MHz BW)	. 483
		7.6.7	SISO Core 1 Radiated Band Edge Measurements (20MHz BW)	. 489
		7.6.8	SISO Core 1 Radiated Band Edge Measurements (40MHz BW)	. 497
		7.6.9	SISO Core 1 Radiated Band Edge Measurements (80MHz BW)	. 505
		7.6.10	CDD Radiated Band Edge Measurements (20MHz BW)	. 511
		7.6.11	CDD Radiated Band Edge Measurements (40MHz BW)	. 519
		7.6.12	CDD Radiated Band Edge Measurements (80MHz BW)	. 527
	7.7	Radiat	ed Spurious Emissions Measurements – Below 1GHz	. 533
8.0	CONC	CLUSION		. 537

FCC ID: BCGA2228	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 0 af 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 2 of 537
© 2020 PCTEST	•	·	V 9 0 02/01/2019





MEASUREMENT REPORT



				SI	SO				CDD	/SDM		
	UNII Band Bandwidth (MHz)	Ty Fragmanay	Cor	те 0	Cor	Core 1		Core 0		re 1	Summed	
UNII Band		Tx Frequency (MHz)	Max. Power (mW)	Max. Power (dBm)								
1		5180 - 5240	56.234	17.50	50.119	17.00	50.119	17.00	50.119	17.00	100.122	20.01
2A	20	5260 - 5320	44.668	16.50	44.668	16.50	44.668	16.50	44.668	16.50	89.337	19.51
2C	20	5500 - 5720	35.481	15.50	44.668	16.50	35.481	15.50	44.668	16.50	80.150	19.04
3		5745 - 5825	36.308	15.60	39.811	16.00	37.584	15.75	39.811	16.00	77.394	18.89
1		5190 - 5230	56.234	17.50	50.119	17.00	50.119	17.00	50.119	17.00	100.237	20.01
2A	40	5270 - 5310	44.668	16.50	44.259	16.46	44.668	16.50	44.259	16.46	88.927	19.49
2C	40	5510 - 5710	44.668	16.50	44.668	16.50	35.481	15.50	44.668	16.50	80.150	19.04
3		5755 - 5795	37.584	15.75	39.811	16.00	37.584	15.75	39.811	16.00	77.394	18.89
1		5210	21.135	13.25	21.135	13.25	15.849	12.00	15.849	12.00	31.698	15.01
2A	80	5290	14.125	11.50	14.125	11.50	9.931	9.97	10.000	10.00	19.931	13.00
2C		5530 - 5690	35.318	15.48	44.566	16.49	34.834	15.42	44.668	16.50	79.502	19.00
3		5775	37.584	15.75	39.811	16.00	25.119	14.00	25.119	14.00	50.238	17.01

FCC EUT Overview

				SI	SO				CDD	/SDM		
	Channel Band Bandwidth (MHz)	Ty Fragmanay	Cor	re 0	Cor	Core 1		Core 0		re 1	Summed	
UNII Band		Tx Frequency (MHz)	Max. Power (mW)	Max. Power (dBm)								
1		5180 - 5240	39.811	16.00	39.719	15.99	12.589	11.00	12.589	11.00	25.179	14.01
2A	20	5260 - 5320	44.668	16.50	44.668	16.50	44.668	16.50	44.668	16.50	89.337	19.51
2C	20	5500 - 5720	35.481	15.50	44.668	16.50	35.481	15.50	44.668	16.50	80.150	19.04
3		5745 - 5825	36.308	15.60	39.811	16.00	37.584	15.75	39.811	16.00	77.394	18.89
1		5190 - 5230	56.234	17.50	50.119	17.00	22.387	13.50	22.080	13.44	44.467	16.48
2A	40	5270 - 5310	44.668	16.50	44.259	16.46	44.668	16.50	44.259	16.46	88.927	19.49
2C	40	5510 - 5710	44.668	16.50	44.668	16.50	35.481	15.50	44.668	16.50	80.150	19.04
3		5755 - 5795	37.584	15.75	39.811	16.00	37.584	15.75	39.811	16.00	77.394	18.89
1		5210	21.135	13.25	21.135	13.25	15.740	11.97	15.849	12.00	31.589	15.00
2A	80	5290	14.125	11.50	14.125	11.50	9.931	9.97	10.000	10.00	19.931	13.00
2C		5530 - 5690	35.318	15.48	44.566	16.49	34.834	15.42	44.668	16.50	79.502	19.00
3		5775	37.584	15.75	39.811	16.00	25.119	14.00	25.119	14.00	50.238	17.01

ISED EUT Overview

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 2 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 3 of 537
© 2020 PCTEST			V 9.0 02/01/2019



1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 PCTEST Test Location

These measurement tests were conducted at the PCTEST facility located at 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

1.3 Test Facility / Accreditations

Measurements were performed at PCTEST located in Morgan Hill, CA 95037, U.S.A.

- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- PCTEST facility is a registered (22831) test laboratory with the site description on file with ISED.

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 4 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 4 of 537
© 2020 PCTEST			V 9.0 02/01/2019



PRODUCT INFORMATION 2.0

2.1 **Equipment Description**

The Equipment Under Test (EUT) is the Apple Tablet Device FCC ID: BCGA2228. The test data contained in this report pertains only to the emissions due to the EUT's UNII transmitter.

Test Device Serial No.: DLXZR006P7FJ, DLXZR034P7FJ

2.2 **Device Capabilities**

This device contains the following capabilities:

802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE, HDR4, HDR8)

This device supports BT Beamforming

	Band 1	
Ch.	Frequency (MHz)	
36	5180	
:	:	

5210

÷

5240

42

÷

48

	Band 2A
Ch.	Frequency (MHz)
52	5260
:	:
56	5280
:	:
64	5320

	Band 2C
Ch.	Frequency (MHz)
100	5500
:	•••
116	5580
:	:
144	5720
ionev	/ Channel Operat

Donal 00

Band 3						
Ch.	Frequency (MHz)					
149	5745					
:	• •					
157	5785					
:	•••					
165	5825					

,

. .

Table 2-1. 802.11ax (20MHz) Frequency / Channel Operations

Band 1					
Ch.	Frequency (MHz)				
38	5190				
:	:				
46	5230				

	Band 2A
Ch.	Frequency (MHz)
54	5270
:	:
62	5310

	Band 2C
Ch.	Frequency (MHz)
102	5510
:	:
110	5550
:	:
142	5710

Band 3

Ch.	Frequency (MHz)				
151	5755				
:					
159	5795				

Table 2-2. 802.11ax (40MHz BW) Frequency / Channel Operations

	Band 1	Band 2A				Band 2C			Band 3
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch		Frequency (MHz)		Ch.	Frequency (MHz)
42	5210	58	5290	10	6	5530		155	5775
				:		:	-		
				13	В	5690			

Table 2-3 802.11ax (80MHz BW) Frequency / Channel Operations

FCC ID: BCGA2228	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dege E of 527	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 5 of 537	
© 2020 PCTEST		•	V 9.0 02/01/2019	



Notes:

5GHz NII operation is possible in 20MHz, and 40MHz, and 80MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = peak per the guidance of Section B)2)b) of ANSI C63.10-2013 and KDB 789033 D02 v02r01. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Measured Duty Cycles							
902 11 M	lada (Pand	Duty Cycle [%]					
802.11 Mode/Band		CORE 0	CORE 1	CDD/SDM			
	ax (HE20)	99.2	99.4	98.6			
5GHz	ax (HE40)	98.4	98.5	98.2			
	ax (HT80)	98.3	99.1	98.5			

Table 2-4. Measured Duty Cycles

- 2. 5GHz ANTUpper is correlating to Core 0 and 5GHz ANTLower is correlating to Core 1.
- 3. The device employs CDD/SDM technology. Below are the possible configurations.

WiFi Configurations		SISO		CDD		SDM		STBC	
		CORE 0	CORE 1	CORE 0	CORE 1	CORE 0	CORE 1	CORE 0	CORE 1
	11ax (20MHz)	~	√	√	\checkmark	×	×	×	×
5GHz	11ax (40MHz)	~	√	√	\checkmark	✓	√	\checkmark	~
	11ax (80MHz)	~	√	\checkmark	√	✓	~	\checkmark	~

Table 2-5. Frequency / Channel Operations

 \checkmark = Support ; **x** = NOT Support **SISO** = Single Input Single Output **CDD** = Cyclic Delay Diversity – 2Tx Function **SDM** = Spatial Diversity Multiplexing – CDD/SDM function **STBC** = Space-Time Block Coding – 2Tx Function

2.3 Antenna Description

Following antennas were used for the testing.

	Antenna Gain (dBi)				
Frequency [GHz]	ANTUpper	ANTLower			
5.150 - 5.250	2.1	-0.2			
5.260 - 5.350	1.3	0.2			
5.470 - 5.725	3.7	2.3			
5.745 - 5.850	4.7	2.8			

Table 2-6. Highest Antenna Gain

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 6 of 527	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 6 of 537	
© 2020 PCTEST		•	V 9.0 02/01/2019	



2.4 Test Support Equipment

1	Apple MacBook	Model:	A1398	S/N:	C2QKP008F6F3
	w/ AC/DC Adapter	Model:	A1435	S/N:	C04325505K1F288BG
2	Apple USB-C Cable	Model:	Chimp	S/N:	304523
3	USB-C Cable	Model:	A1997	S/N:	N/A
	w / AC/DC Adapter	Model:	A1720	S/N:	C3D9274B06YLHDAE
4	Apple Pencil	Model:	A2051	S/N:	GQXYGSXCJKM9
5	DC Power Supply	Model:	KPS3010D	S/N	N/A

Table 2-7. Test Support Equipment Used

2.5 Test Configuration

The EUT was tested per the guidance of KDB 789033 D02 v02r01. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing.

There are two vendors of the WiFi/Bluetooth radio modules, variant 1 and variant 2. Both radio modules have the same mechanical outline, same on-board antenna matching circuit, identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances. The worst case configuration was found between the two variants. The EUT was also investigated with and without charger.

For emissions from 1GHz – 18GHz, low, mid, and high channels were tested with highest power and worst case configuration. The emissions below 1GHz and above 18GHz were tested with the highest transmitting power channel and the worst case configuration.

The EUT was manipulated through three orthogonal planes of X-orientation (flatbed), Y-orientation (landscape), and Z-orientation (portrait) during the testing. Only the worst case emissions were reported in this test report.

Throughout the report, 5GHz ANTUpper is correlating to Core 0 and 5GHz ANTLower is correlating to Core 1.

For 802.11a/n/ac test results, see separate UNII report,1C1912170050-08-R1.BCG.

2.6 Software and Firmware

The test was conducted with firmware version 17E228 installed on the EUT.

2.7 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

FCC ID: BCGA2228	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 7 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 7 of 537
© 2020 PCTEST	-	·	V 9.0 02/01/2019



3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013) and the guidance provided in KDB 789033 D02 v02r01 were used in the measurement of the EUT.

Deviation from measurement procedure.....None

3.2 Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. An 80cm tall test table made of Styrodur is placed on top of the turn table. For measurements above 1GHz, an additional Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

Per KDB 414788, radiated emission test sites other than open-field test sites (e.g., shielded anechoic chambers), may be employed for emission measurements below 30MHz if characterized so that the measurements correspond to those obtained at an open-field test site. To determine test site equivalency, a reference sample transmitting at 149kHz was measured on an open field test site (asphalt with no ground plane) and then measured in the 3m semi-anechoic chamber. A calibrated 60cm loop antenna was used while the reference device was rotated through the X, Y and Z axis in order to capture the worst case level. A maximum deviation of 2.77dB at 149kHz was measured when comparing the 3 meter semi-anechoic chamber to the open field site.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33 depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, mode of operation, turntable azimuth, and receive antenna height was noted for each frequency effound.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions.

3.3 Environmental Conditions

The temperature is controlled within range of 15°C to 35°C. The relative humidity is controlled within range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

FCC ID: BCGA2228	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 8 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	(10/2019 - 02/26/2020 Tablet Device	
© 2020 PCTEST		•	V 9.0 02/01/2019



4.0 ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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."

- The antennas of the EUT are permanently attached.
- There are no provisions for connection to an external antenna.

Conclusion:

The EUT complies with the requirement of §15.203.

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 0 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 9 of 537
© 2020 PCTEST	•	•	V 9.0 02/01/2019



5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	1.29
Line Conducted Disturbance	2.48
Radiated Disturbance (<1GHz)	4.15
Radiated Disturbance (>1GHz)	4.70
Radiated Disturbance (>18GHz)	5.01

FCC ID: BCGA2228	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 10 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 10 of 537
© 2020 PCTEST		· · · · · · · · · · · · · · · · · · ·	V 9.0 02/01/2019



6.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent Technologies	N9030A	3Hz-44GHz PXA Signal Analyzer	3/13/2019	Annual	3/13/2020	MY49430244
Anritsu	ML2496A	Power Meter	10/29/2019	Annual	10/29/2020	184005
Anritsu	MA2411B	Pulse Power Sensor	10/29/2019	Annual	10/29/2020	1726261
Anritsu	MA2411B	Pulse Power Sensor	10/29/2019	Annual	10/29/2020	1726262
ATM	180-442A-KF	20dB Nominal Gain Horn Antenna	10/29/2019	Annual	10/29/2020	T058701-02
COM-POWER	LIN-120A	LISN	3/13/2019	Annual	3/13/2020	241297
ETS-Lindgren	3142E-PA	Pre-Amplifier (30MHz - 6GHz)	9/19/2019	Annual	9/19/2020	213236
ETS-Lindgren	3142E	BiConiLog Antenna (30MHz - 6GHz)	8/14/2019	Annual	8/14/2020	224569
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	3/12/2019	Annual	3/12/2020	205956
Rohde & Schwarz	ESW26	EMI Test Receiver	5/21/2019	Annual	5/21/2020	101299
Rohde & Schwarz	ESW44	EMI Test Receiver	7/27/2019	Annual	7/27/2020	101668
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	9/19/2019	Annual	9/19/2020	100051
Rohde & Schwarz	TC-TA18	Cross Polarized Vivaldi Antenna (400MHz-18GHz)	11/14/2019	Annual	11/14/2020	101057
Rohde & Schwarz	HFH2-Z2	Loop Antenna	3/21/2019	Annual	3/21/2020	100519

Table 6-1. Annual Test Equipment Calibration Schedule

Note:

For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

FCC ID: BCGA2228	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Degs 11 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 11 of 537
© 2020 PCTEST	•	•	V 9.0 02/01/2019



7.0 TEST RESULTS

7.1 Summary

Company Name:	Apple Inc.
FCC ID:	BCGA2228
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
N/A	RSS-Gen [6.7]	26dB Bandwidth	N/A		PASS	Section 7.2
15.407(e)	RSS-Gen [6.7]	6dB Bandwidth	>500kHz(5725-5850MHz)		PASS	Section 7.3
15.407 (a.1.iv), (a.2), (a.3)	RSS-247 [6.2]	Maximum Conducted Output Power	Maximum conducted powers must meet the limits detailed in 15.407 (a) (RSS-247 [6.2])	CONDUCTED	PASS	Section 7.4
15.407 (a.1.iv), (a.2), (a.3)	RSS-247 [6.2]	Maximum Power Spectral Density	Maximum power spectral density must meet the limits detailed in 15.407 (a) (RSS-247 [6.2])		PASS	Section 7.5
15.407(h)	RSS-247 [6.3]	Dynamic Frequency Selection	See DFS Test Report		PASS	See DFS Test Report (1C191217005 0-07.BCG)
15.407(b.1), (2), (3), (4)	RSS-247 [6.2]	Undesirable Emissions	Undesirable emissions must meet the limits detailed in 15.407(b) (RSS- 247 [6.2])	RADIATED	PASS	Section 7.6
15.205, 15.407(b.1), (4), (5), (6)	RSS-Gen [8.9]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209 (RSS-Gen [8.9])		PASS	Section 7.6, 7.7
15.407	RSS-Gen [8.8]	AC Conducted Emissions 150kHz – 30MHz	< FCC 15.207 (RSS-Gen [8.8]) limits	LINE CONDUCTED	PASS	See UNII Test Report (1C191217005 0-08-R1.BCG)

Table 7-1. Summary of Test Results

Notes:

- 1) All channels, modes, and modulations/data rates were investigated among all UNII bands. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.
- 4) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is PCTEST "UNII Automation," Version 4.7.
- 5) For radiated band edge, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is PCTEST "Chamber Automation," Version 1.3.1.
- 6) Per RSS-247 Section 6.2.3, transmission on channels which overlap the 5600-5650 MHz is prohibited. This device operates under these frequencies only under the control of a certified master device and does not support active scanning on these channels. This device does not transmit any beacons or initiate any transmissions in UNII Bands 2A or 2C.
- 802.11ax OFDMA testing was performed for all signal tone configurations as specified by the 802.11ax standard. Worst case results are determined and reported per the guidance provided at the October 2018 TCB Workshop.

8) Only one RU index could be selected at a time so no contiguous or non-contiguous RU's we	were considered for testing.
---	------------------------------

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 12 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 12 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019



7.2 26dB Bandwidth Measurement – 802.11ax OFDMA RSS-Gen [6.2]

Test Overview and Limit

The bandwidth at 26dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

The 26dB bandwidth is used to determine the conducted power limits.

Test Procedure Used

ANSI C63.10-2013 – Section 12.4 KDB 789033 D02 v02r01 – Section C

Test Settings

- The signal analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 26. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = approximately 1% of the emission bandwidth
- 3. VBW \geq 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-1. Test Instrument & Measurement Setup

Test Notes

- 1. All antenna configs were investigated and only the worst case is reported.
- 2. All RU's were investigated and only worst case partially-loaded and fully-loaded RU's were reported.

FCC ID: BCGA2228	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dega 12 of 527		
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 13 of 537		
© 2020 PCTEST V 9.0 02/01/2019 All rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and					



SISO Core 0 26 dB Bandwidth Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	RU Size	Index	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]
				RU26	0	MCS0	19.98
	5180	36	ax (20MHz)	RU26	4	MCS0	18.95
			l ì í	RU26	8	MCS0	20.29
				RU26	Index Data Rate [Mbps] I 6 0 MCS0 6 6 4 MCS0 6 6 0 MCS0 6 6 17 MCS0 6 6 17 MCS0 6 6 17 MCS0 6 6 18 MCS0 6 6 4 MCS0 6 6 4 MCS0 6 6 18 MCS0 6 6 4 MCS0 6 6 0 MCS0 6	19.79	
	5200	40	ax (20MHz)	RU26	4	MCS0	18.99
				RU26	8	MCS0	20.35
				RU26	0	MCS0	19.66
	5240	48	ax (20MHz)	RU26	4	MCS0	19.00
<u>d</u>				RU26	8	MCS0	20.19
Band 1				RU26	0	MCS0	19.84
_	5190	38	ax (40MHz)	RU26	8	MCS0	21.16
				RU26	17	MCS0	19.41
				RU26	0	MCS0	19.72
	5230	46	ax (40MHz)	RU26	8	MCS0	21.65
				RU26	17	MCS0	19.71
				RU26	0	MCS0	19.38
	5210	42	ax (80MHz)	RU26	18	MCS0	38.44
				RU26	36	MCS0	20.42
				RU26	0	MCS0	19.62
	5260	52	ax (20MHz)	RU26	4	MCS0	18.99
				RU26	8	MCS0	20.32
				RU26	0	MCS0	19.92
	5280	56	ax (20MHz)	RU26	4	MCS0	18.65
				RU26	8	MCS0	20.34
	4		ax (20MHz)	RU26	0	MCS0	19.94
5	5320	64		RU26	4	MCS0	19.00
Band 2A			, , ,	RU26	8		20.24
8		5270 54		RU26	0	MCS0	20.13
	5270		ax (40MHz)	RU26	8	MCS0	22.11
			,	RU26			19.52
				RU26			20.20
	5310	62	ax (40MHz)	RU26			22.15
			, ,	RU26	17		19.34
				RU26			19.53
	5290	58	ax (80MHz)	RU26			38.74
			,	RU26			20.28
				RU26			19.93
	5500	100	ax (20MHz)	RU26	-		18.48
			,	RU26			20.43
				RU26		MCS0	19.83
	5580	116	ax (20MHz)	RU26			18.85
		-		RU26			20.10
				RU26			19.71
	5720	144	ax (20MHz)	RU26	-		18.85
				RU26			20.37
				RU26			19.99
	5510	102	ax (40MHz)	RU26			21.54
Band 2C				RU26			19.00
and				RU26			19.61
ä	5550	110	ax (40MHz)	RU26			21.73
				RU26			19.62
				RU26			19.56
	5710	142	ax (40MHz)	RU26			22.48
				RU26			19.48
				RU26			19.44
	5530	106	ax (80MHz)	RU26			38.18
	0000			RU26			20.26
				RU26			19.48
	5690	138	ax (80MHz)	RU26			38.88
	0000	100		RU26			20.35
		1	1 1	11020	50	10000	20.00

Table 7-2. Conducted Bandwidth Measurements SISO CORE 0 (RU26)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 14 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 14 of 537
© 2020 PCTEST	•	•	V 9.0 02/01/2019



	Frequency [MHz]	Channel No.	802.11 Mode	RU Size	Index	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]
	5180	36	ax (20MHz)	RU242	61	MCS0	20.94
	5200	40	ax (20MHz)	RU242	61	MCS0	20.88
Band 1	5240	48	ax (20MHz)	RU242	61	MCS0	20.91
Bar	5190	38	ax (40MHz)	RU484	65	MCS0	39.86
	5230	46	ax (40MHz)	RU484	65	MCS0	40.28
	5210	42	ax (80MHz)	RU996	67	MCS0	80.89
	5260	52	ax (20MHz)	RU242	61	MCS0	20.86
	5280	56	ax (20MHz)	RU242	61	MCS0	21.13
Band 2A	5320	64	ax (20MHz)	RU242	61	MCS0	20.93
Ban	5270	54	ax (40MHz)	RU484	65	MCS0	39.93
	5310	62	ax (40MHz)	RU484	65	MCS0	39.71
	5290	58	ax (80MHz)	RU996	67	MCS0	80.73
	5500	100	ax (20MHz)	RU242	61	MCS0	21.03
	5580	116	ax (20MHz)	RU242	61	MCS0	20.98
	5720	144	ax (20MHz)	RU242	61	MCS0	21.02
Band 2C	5510	102	ax (40MHz)	RU484	65	MCS0	39.84
Ban	5550	110	ax (40MHz)	RU484	65	MCS0	40.07
	5710	142	ax (40MHz)	RU484	65	MCS0	40.08
	5530	106	ax (80MHz)	RU996	67	MCS0	80.94
	5690	138	ax (80MHz)	RU996	67	MCS0	80.82

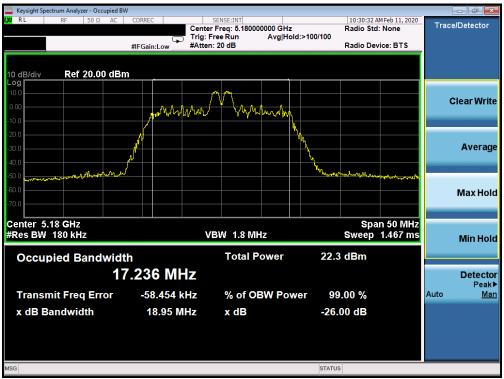
Table 7-3. Conducted Bandwidth Measurements SISO CORE 0 (Full RU)

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 15 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 15 of 537
© 2020 PCTEST		•	V 9.0 02/01/2019





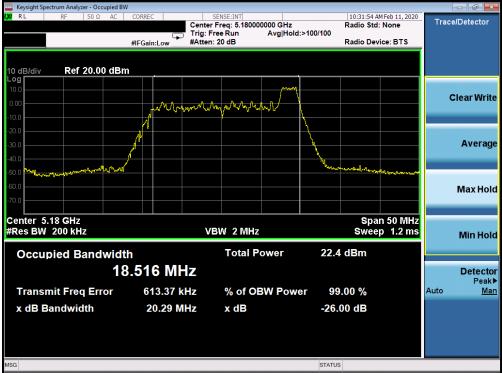
Plot 7-1. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 36)



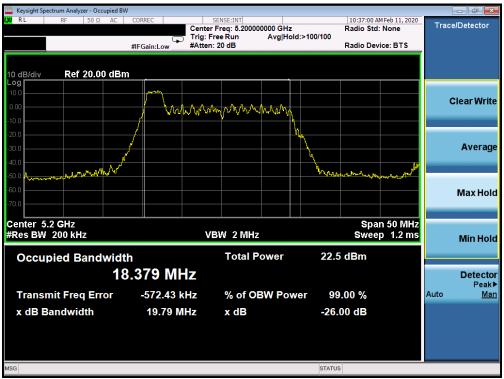
Plot 7-2. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 - RU26 (UNII Band 1) - Ch. 36)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 40 -4 507		
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 16 of 537		
2020 PCTEST V 9.0 02/01/2019					





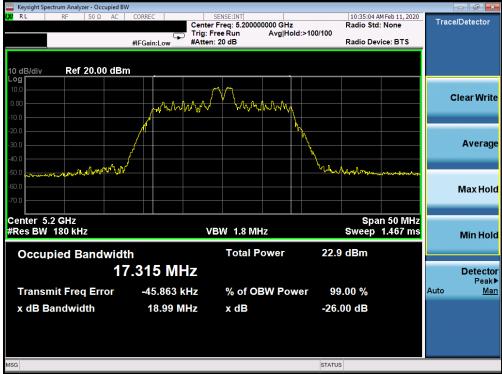
Plot 7-3. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 36)



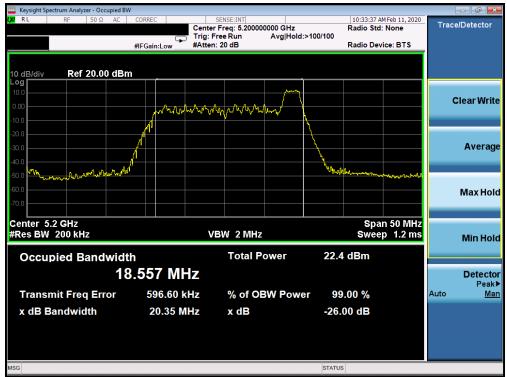
Plot 7-4. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 40)

FCC ID: BCGA2228	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dama 47 af 507			
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 17 of 537			
V 9.0 02/01/2019						





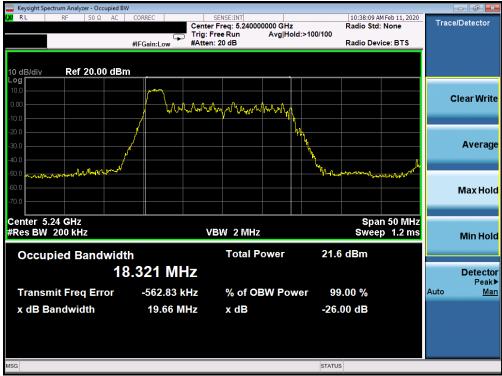
Plot 7-5. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 1) – Ch. 40)



Plot 7-6. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8- RU26 (UNII Band 1) - Ch. 40)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 40 af 507		
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 18 of 537		
2020 PCTEST V 9.0 02/01/2019					





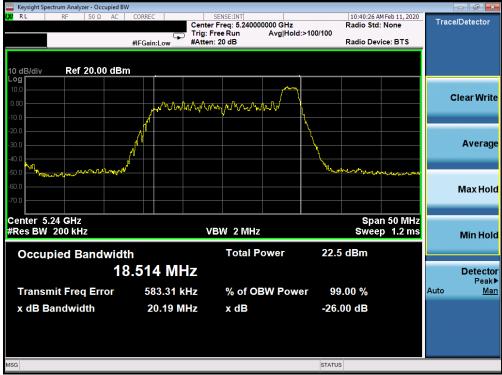
Plot 7-7. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 48)



Plot 7-8. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 - RU26 (UNII Band 1) - Ch. 48)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 40 af 507		
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 19 of 537		
2020 PCTEST V 9.0 02/01/2019					





Plot 7-9. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 1) – Ch. 48)



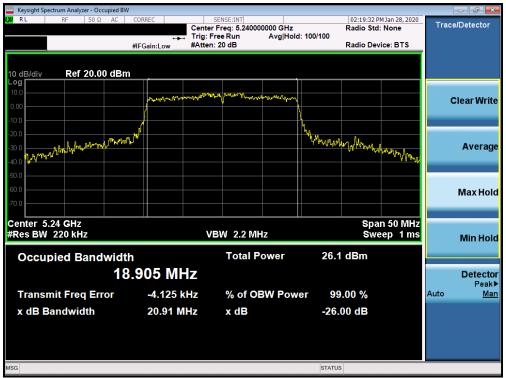
Plot 7-10. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax- RU242 (UNII Band 1) - Ch. 36)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:			
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 20 of 537		
V 9.0 02/01/2019 V 9.0 02/01/2019					



Keysight Spectrum Analyzer - Occupied BW					
LXX RL RF 50Ω AC CO		req: 5.20000000 GHz		20:04 PM Jan 28, 2020 lio Std: None	Trace/Detector
#IF	Gain:Low #Atten: 2			lio Device: BTS	
10 dB/div Ref 20.00 dBm					
10.0	with white the second	1 Andrew and the and			Clear Write
-10.0	1				
			N		
-20.0 -30.0 -40.0			white and the second	^{cl} umbly ylly vyny yn ylly	Average
-50.0					
-60.0					Max Hold
-70.0					
Center 5.2 GHz		W 2.2 MHz		Span 50 MHz	
#Res BW 220 kHz	VD'			Sweep 1 ms	Min Hold
Occupied Bandwidth		Total Power	26.2 dB	m	
18.8	85 MHz				Detector Peak▶
Transmit Freq Error	20.933 kHz	% of OBW Pow	ver 99.00	%	Auto <u>Man</u>
x dB Bandwidth	20.88 MHz	x dB	-26.00 d	B	
MSG			STATUS		

Plot 7-11. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax-RU242 (UNII Band 1) - Ch. 40)



Plot 7-12. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax- RU242 (UNII Band 1) - Ch. 48)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dana 04 af 507		
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 21 of 537		
V 9.0 02/01/2019					



🔤 Keysight Spectrum Analyzer - Occupied B					-	
LX RL RF 50Ω AC	CORREC	SENSE:INT r Freq: 5.190000000 GHz	11:59:46 Radio St	AM Feb 11, 2020 d: None	Trace/I	Detector
		Free Run Avg Hold n: 20 dB	l:>100/100 Radio De	vice: BTS		
,	#IFGalli:Low #Atten	. 20 00	Radio De	NICE. DTS		
10 dB/div Ref 20.00 dB	m					
Log	A.					
0.00					Cl	ear Write
-10.0	Mr Mr Mr Mr	14				
-20.0						
-30.0		Mary Mary Mary Mary				Average
-40.0			ч <u>т</u>			g -
-50.0	und f		homeway	Marcan Anna ad a		
-60.0						Max Hold
-70.0						παλ ποια
Center 5.19 GHz #Res BW 200 kHz	v	BW 2 MHz	Spa Sween	n 100 MHz 2.333 ms		
ALCO BRI 200 KHZ	·		•	21000 1110		Min Hold
Occupied Bandwid	th	Total Power	22.7 dBm			
18	8.131 MHz					Detector
		% of OBW Pow	er 99.00 %		Auto	Peak▶ Man
Transmit Freq Error	-10.131 MHz				Auto	IVIAII
x dB Bandwidth	19.84 MHz	x dB	-26.00 dB			
MSG			STATUS			

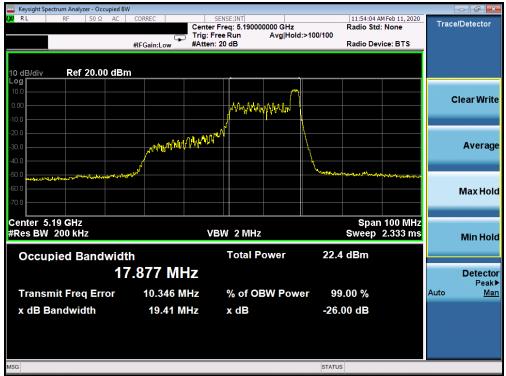
Plot 7-13. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 38)



Plot 7-14. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 38)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 22 of 537
2 2020 PCTEST V 9.0 02/01/2019 VI rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and			





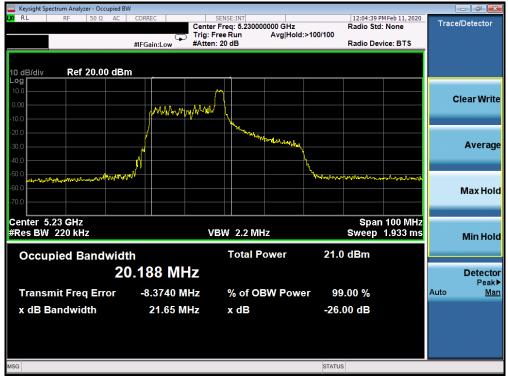
Plot 7-15. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 1) – Ch. 38)



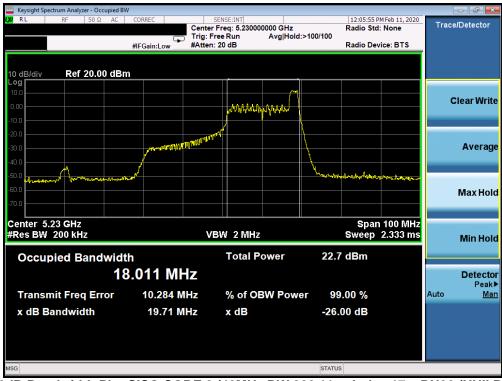
Plot 7-16. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 46)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 23 of 537
© 2020 PCTEST V 9.0 02/01/2019			





Plot 7-17. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 46)



Plot 7-18. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 1) – Ch. 46)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 24 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 24 of 537
2020 PCTEST V 9.0 02/01/2019			



🤤 Keysight Spectrum Analyzer - Occupied BW					
(χ) RL RF 50 Ω AC		SENSE:INT r Freq: 5.190000000 GHz Free Run Avg Hold		48:02 AM Feb 06, 2020 io Std: None	Trace/Detector
		n: 20 dB		io Device: BTS	
10 dB/div Ref 20.00 dBm					
Log 10.0 0.00 -10.0	and a second a second by an art for the	Mpartune			Clear Write
-20.0	N				Average
-40.0 -50.0 www.edu-with-with-to-with-				Maded London Terlington	Max Hold
Center 5.19 GHz #Res BW 390 kHz		BW 4 MHz		Span 100 MHz Sweep 1 ms	Min Hold
Occupied Bandwidth	1	Total Power	23.3 dB	m	
	.481 MHz				Detector Peak▶
Transmit Freq Error	37.790 kHz	% of OBW Pow	ver 99.00	%	Auto <u>Man</u>
x dB Bandwidth	39.86 MHz	x dB	-26.00 d	В	
MSG			STATUS		

Plot 7-19. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 1) - Ch. 38)



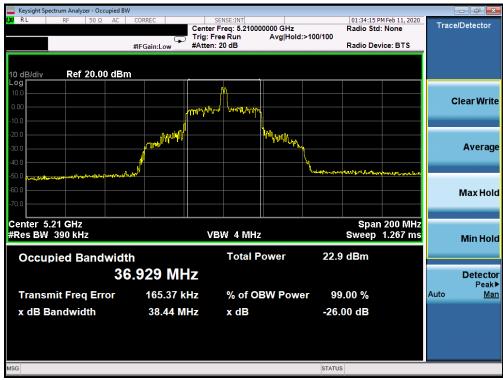
Plot 7-20. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 1) - Ch. 46)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 05 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 25 of 537
© 2020 PCTEST V 9.0 02/01/2019			



Keysight Spectrum Analyzer - Occupied BV	V				
LXI RL RF 50Ω AC	CORREC	SENSE:INT Center Freq: 5.21000	0000 GHz	01:34:53 PM Feb 1 Radio Std: None	
		Trig: Free Run #Atten: 20 dB	Avg Hold:>100/100	Radio Device: B	тѕ
	in Gameon				
10 dB/div Ref 20.00 dBr	n				
10.0					
0.00	WHAT				Clear Write
-10.0					
-20.0	-/ h.				
-30.0		The wood in the second	and the second second		Average
-40.0			A constant		
-50.0 maynether when the set					
-70.0					Max Hold
Center 5.21 GHz				Span 200	Ball
#Res BW 200 kHz		VBW 2 MHz		Sweep 4.66	
Occupied Bandwidt	b	Total P	ower 22	4 dBm	
				4 dBm	Detector
	5.073 MITZ	2			Detector Peak►
Transmit Freq Error	-30.255 MH	z % of OE	3W Power 9	9.00 %	Auto <u>Man</u>
x dB Bandwidth	19.38 MH	z xdB	-26	.00 dB	
MSG			STATU	10	
mod			STATU		

Plot 7-21. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 42)



Plot 7-22. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 18 – RU26 (UNII Band 1) – Ch. 42)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 26 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 26 of 537
2020 PCTEST V 9.0 02/01/2019			



Keysight Spectrum Analyzer - Occupied BW					
LXX RL RF 50Ω AC		SENSE:INT Freq: 5.210000000 GHz	01:30:26 F Radio Std	M Feb 11, 2020 : None	Trace/Detector
		ree Run Avg Hold : 20 dB	:>100/100 Radio Dev	vice: BTS	
10 dB/div Ref 20.00 dBn	1				
Log 10.0		m			
0.00		not the			Clear Write
-10.0		V			
-20.0					
-30.0	Mar South and Mar Mar Mar	with all the second sec			Average
-40.0					
-50.0 vane when the stand water and some					
-70.0					Max Hold
				000 5411-	
Center 5.21 GHz #Res BW 200 kHz	v	BW 2 MHz		1 200 MHz 4.667 ms	Min Hold
		- /			MITHOL
Occupied Bandwidt		Total Power	22.2 dBm		
18	3.314 MHz				Detector Peak▶
Transmit Freq Error	30.258 MHz	% of OBW Powe	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	20.42 MHz	x dB	-26.00 dB		
MSG			STATUS		

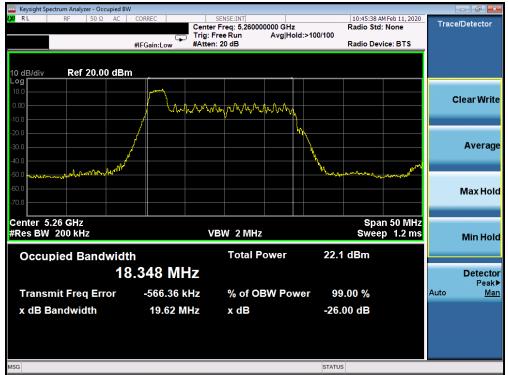
Plot 7-23. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 36 – RU26 (UNII Band 1) – Ch. 42)



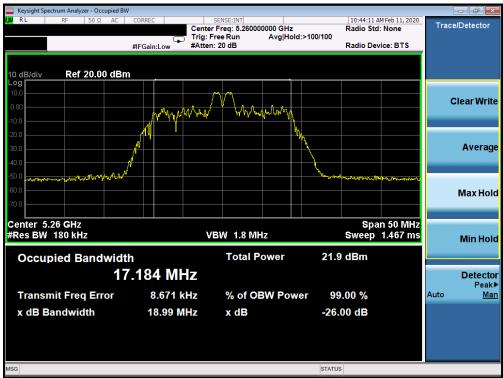
Plot 7-24. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax - RU996 (UNII Band 1) - Ch. 42)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dana 07 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 27 of 537
2020 PCTEST V 9.0 02/01/2019			





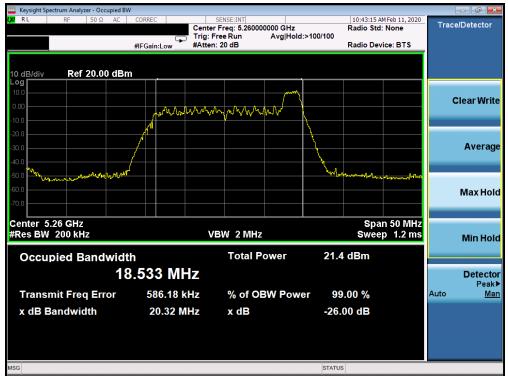
Plot 7-25. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 52)



Plot 7-26. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2A) – Ch. 52)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 28 of 537
© 2020 PCTEST		La successione de la conflicta d'in ante ante dans an la constante de la constante de la constante de la const	V 9.0 02/01/2019





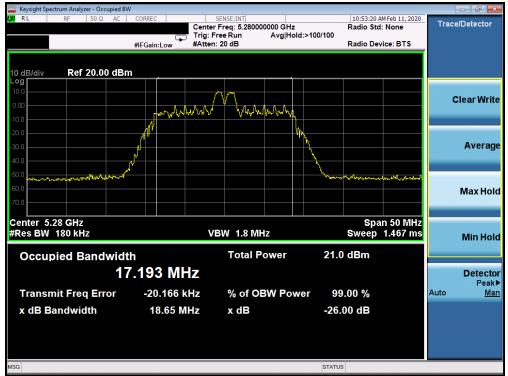
Plot 7-27. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 2A) – Ch. 52)



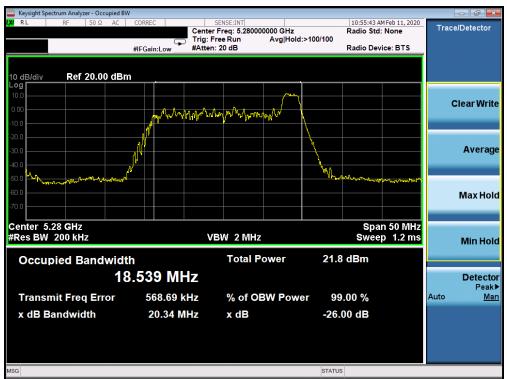
Plot 7-28. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 56)

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 29 of 537
© 2020 PCTEST			V 9.0 02/01/2019





Plot 7-29. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2A) – Ch. 56)



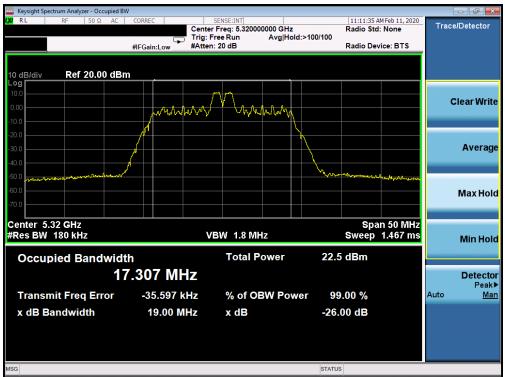
Plot 7-30. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8– RU26 (UNII Band 2A) – Ch. 56)

FCC ID: BCGA2228	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 30 of 537
© 2020 PCTEST V 9.0 02/01/2019			





Plot 7-31. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 64)



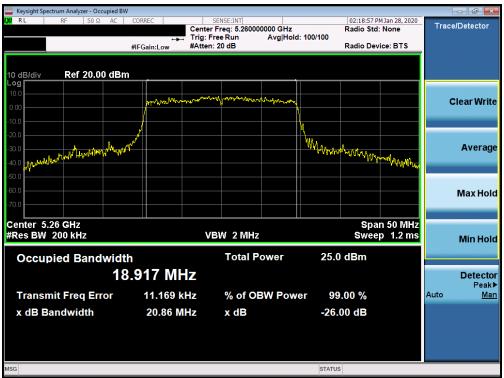
Plot 7-32. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2A) – Ch. 64)

FCC ID: BCGA2228	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 31 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	
© 2020 PCTEST V 9.0 02/01/2019			





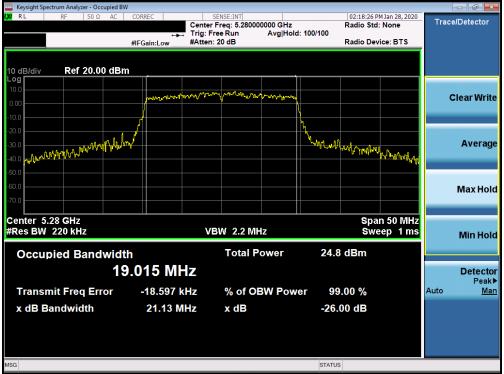
Plot 7-33. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 2A) – Ch. 64)



Plot 7-34. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax- RU242 (UNII Band 2A) - Ch. 52)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 32 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	
© 2020 PCTEST V 9.0 02/01/2019			





Plot 7-35. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax- RU242 (UNII Band 2A) - Ch. 56)



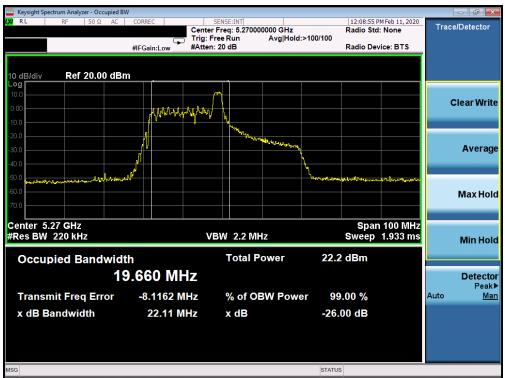
Plot 7-36. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax- RU242 (UNII Band 2A) - Ch. 64)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 33 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	
© 2020 PCTEST V 9.0 02/01/2019 All rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and			





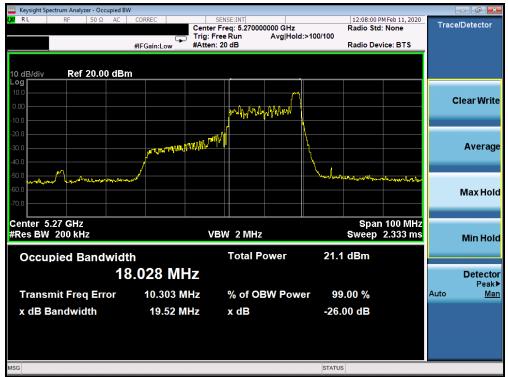
Plot 7-37. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 54)



Plot 7-38. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 – RU26 (UNII Band 2A) – Ch. 54)

FCC ID: BCGA2228	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 34 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	
© 2020 PCTEST V 9.0 02/01/2019			





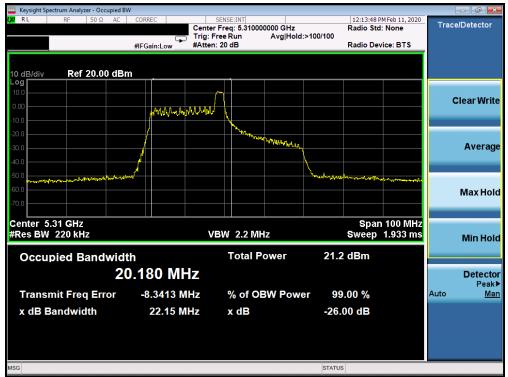
Plot 7-39. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 2A) – Ch. 54)



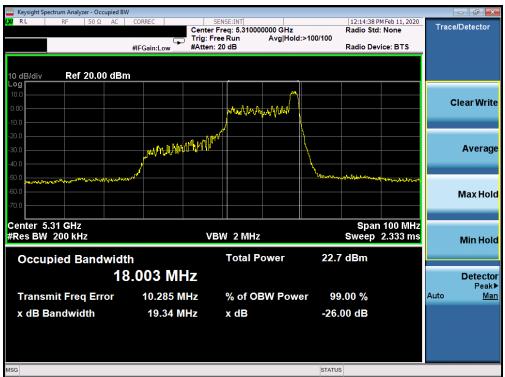
Plot 7-40. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 62)

FCC ID: BCGA2228	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 25 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 35 of 537
© 2020 PCTEST V 9.0 02/01/2019			





Plot 7-41. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 – RU26 (UNII Band 2A) – Ch. 62)



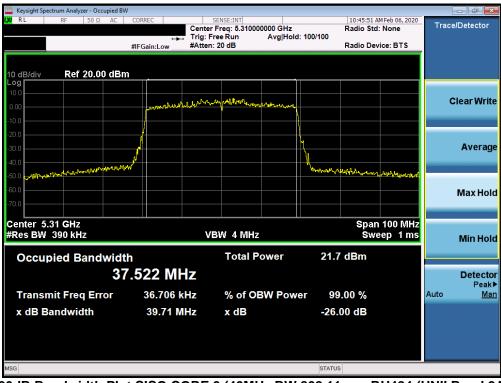
Plot 7-42. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 2A) – Ch. 62)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 36 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	
© 2020 PCTEST V 9.0 02/01/2019			



Keysight Spectrum Analyzer - Occupied BW					
μμά RL RF 50 Ω AC	Center	SENSE:INT r Freq: 5.270000000 GHz Free Run Avg Hol n: 20 dB	10:46:34 / Radio Sto d: 100/100 Radio De		Trace/Detector
10 dB/div Ref 20.00 dBm					
10.0 0.00	formation to the	en y 1 Marina han mail			Clear Write
-10.0					
-20.0 -30.0 -40.0 mithing Ling Ling Ling and Ling and Ling and Ling Ling Ling Ling Ling and Ling and Ling and Ling and Ling				M-MALIMILWHY	Average
-50.0					Max Hold
Center 5.27 GHz				100 MHz	
#Res BW 390 kHz Occupied Bandwidth		BW 4 MHz Total Power	25.7 dBm	eep 1ms	Min Hold
37	.578 MHz				Detector Peak▶
Transmit Freq Error	111.96 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	39.93 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-43. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 2A) - Ch. 54)



Plot 7-44. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 2A) - Ch. 62)

FCC ID: BCGA2228	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 07 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 37 of 537
2020 PCTEST V 9.0 02/01/2019			



🔤 Keysight Spectrum Analyzer - Occupi	ed BW				
LX/ RL RF 50Ω /	AC CORREC Cent	SENSE:INT ter Freg: 5.290000000 GHz	01:36:14 P Radio Std	M Feb 11, 2020	Trace/Detector
	Trig:	: Free Run Avg Hold en: 20 dB	:>100/100 Radio Dev	ion: BTS	
	#IFGain:Low #Atte	en. 20 dB	Radio Dev	ICE. BTS	
10 dB/div Ref 20.00 d					
10 dB/div Ref 20.00 c					
10.0					Clear Write
0.00	WM4 Munt				Clear Wille
-10.0					
-20.0	\rightarrow \land				
-30.0		www. Jackson and and walling			Average
-40.0					
-50.0 contraction of the states of the states of the states	Constraint .		mound the sharped for the	alman subman	
-60.0					Max Hold
-70.0					
Center 5.29 GHz	I		Span	200 MHz	
#Res BW 200 kHz		VBW 2 MHz		4.667 ms	Min Hold
	: -141-	Total Power	22.2 dBm		
Occupied Bandw		Total Fower	22.2 UBIII		
	17.944 MHz				Detector Peak►
Transmit Freq Error	-30.291 MHz	% of OBW Powe	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	19.53 MHz	x dB	-26.00 dB		
MSG			STATUS		

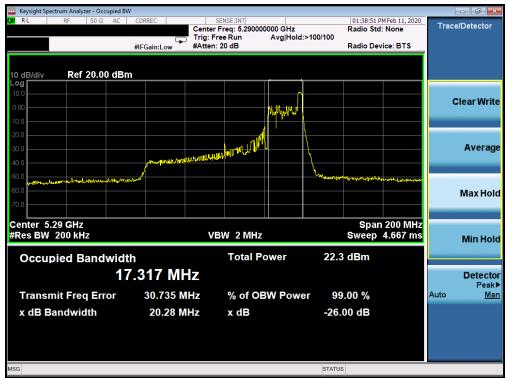
Plot 7-45. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 58)



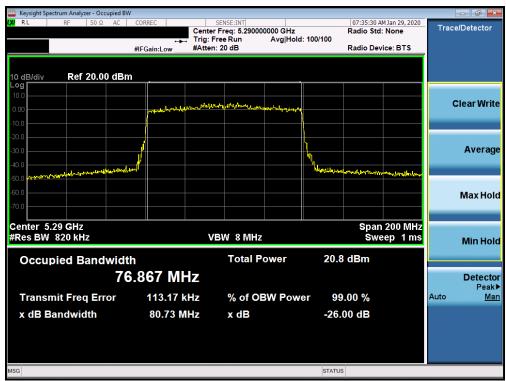
Plot 7-46. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 18 – RU26 (UNII Band 2A) – Ch. 58)

FCC ID: BCGA2228	<u><i>PCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 38 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





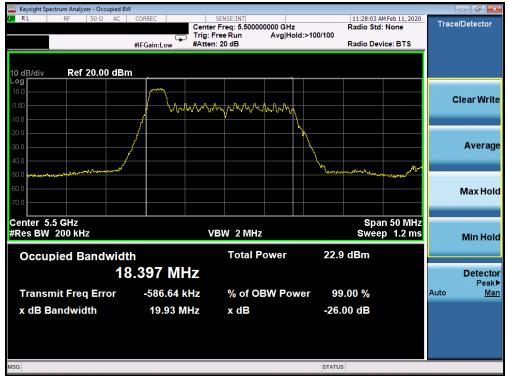
Plot 7-47. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 36 – RU26 (UNII Band 2A) – Ch. 58)



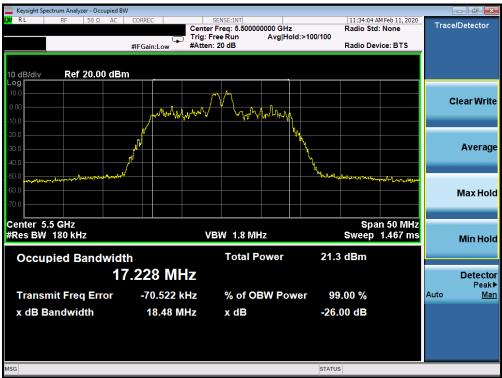
Plot 7-48. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax - RU996 (UNII Band 2A) - Ch. 58)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 39 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





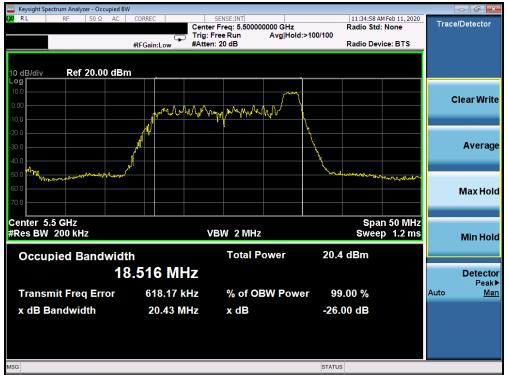
Plot 7-49. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 100)



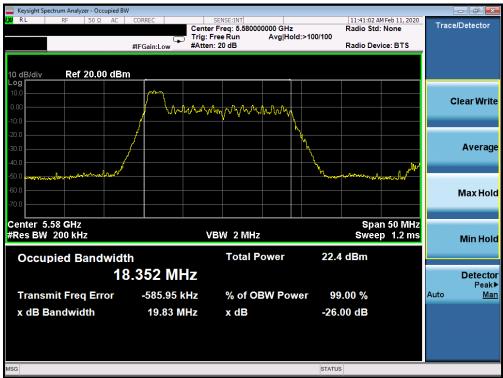
Plot 7-50. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2C) – Ch. 100)

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 40 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 40 of 537
© 2020 PCTEST			V 9.0 02/01/2019





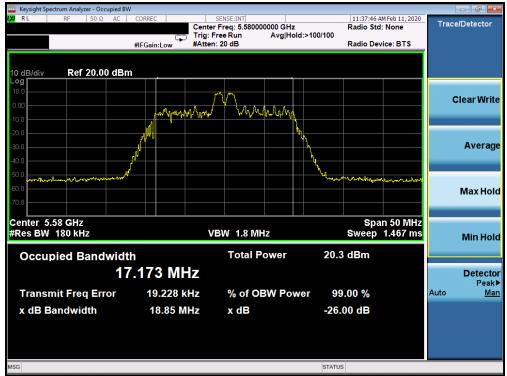
Plot 7-51. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 2C) – Ch. 100)



Plot 7-52. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 120)

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 41 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 41 of 537
© 2020 PCTEST			V 9.0 02/01/2019





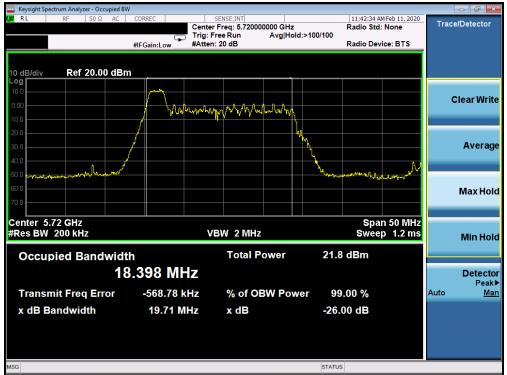
Plot 7-53. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2C) – Ch. 120)



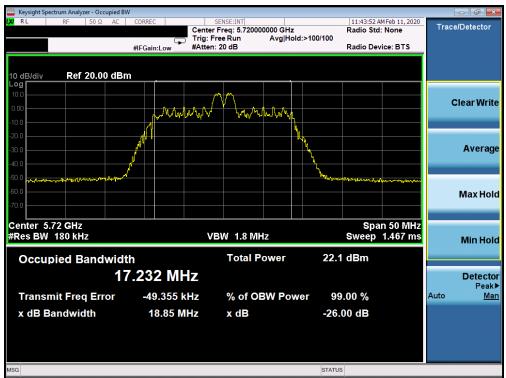
Plot 7-54. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8– RU26 (UNII Band 2C) – Ch. 120)

FCC ID: BCGA2228	<u><i>PCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 42 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 42 of 537
© 2020 PCTEST V 9.0 02/01/2019			





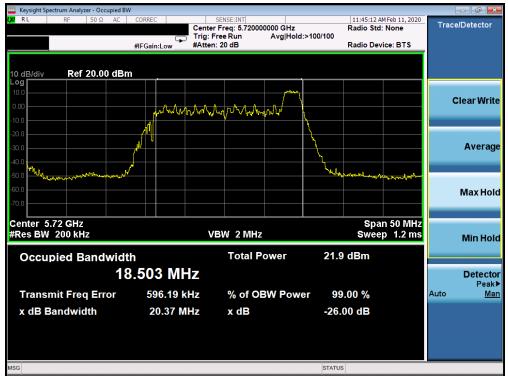
Plot 7-55. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 144)



Plot 7-56. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2C) – Ch. 144)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 42 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 43 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





Plot 7-57. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 2C) – Ch. 144)



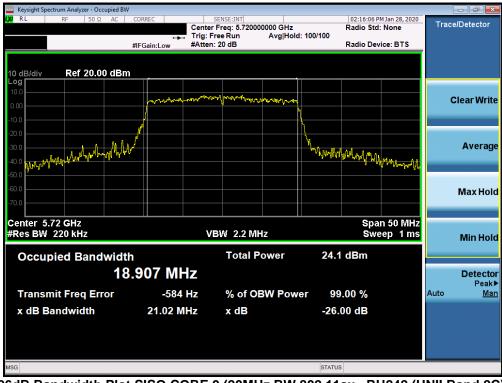
Plot 7-58. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax-RU242 (UNII Band 2C) - Ch. 100)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dana 44 at 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 44 of 537
2020 PCTEST V 9.0 02/01/2019			





Plot 7-59. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax-RU242 (UNII Band 2C) - Ch. 120)



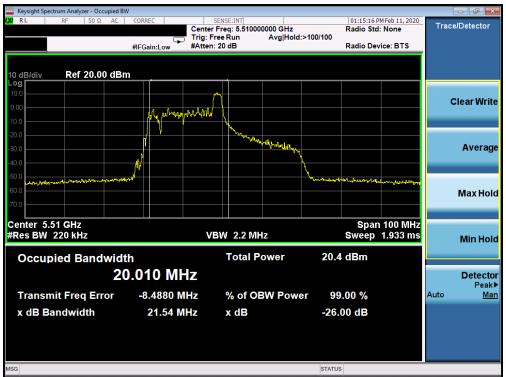
Plot 7-60. 26dB Bandwidth Plot SISO CORE 0 (20MHz BW 802.11ax- RU242 (UNII Band 2C) - Ch. 144)

FCC ID: BCGA2228	<u>CAPCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 45 at 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 45 of 537
© 2020 PCTEST	vise specified, no part of this report	t may be reproduced or utilized in any part, form or by any means, electronic or mechanical.	V 9.0 02/01/2019





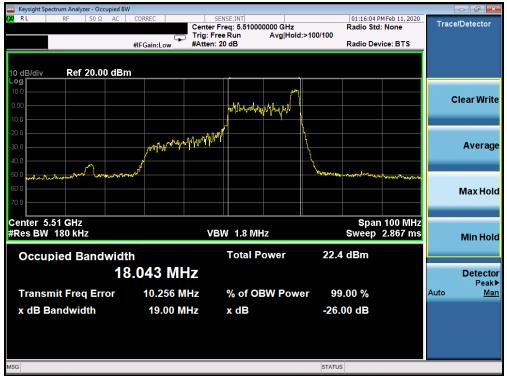
Plot 7-61. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 102)



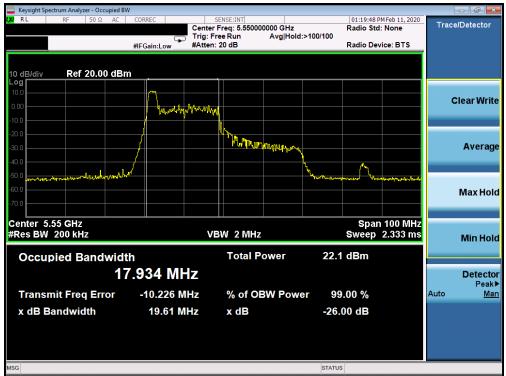
Plot 7-62. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 – RU26 (UNII Band 2C) – Ch. 102)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 46 ef 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 46 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





Plot 7-63. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 2C) – Ch. 102)



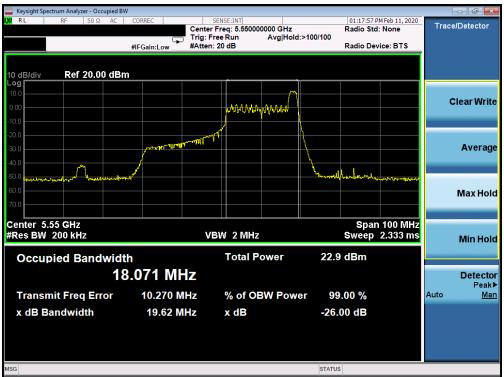
Plot 7-64. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 110)

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 47 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 47 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





Plot 7-65. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 – RU26 (UNII Band 2C) – Ch. 110)



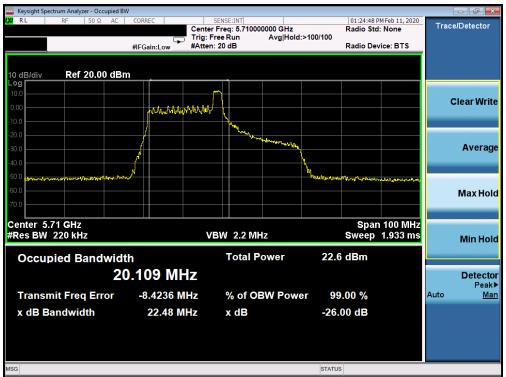
Plot 7-66. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 2C) – Ch. 110)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 49 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 48 of 537
© 2020 PCTEST V 9.0 02/01/2019			





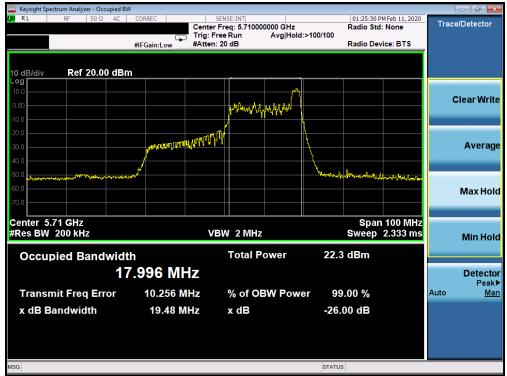
Plot 7-67. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 142)



Plot 7-68. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 8 – RU26 (UNII Band 2C) – Ch. 142)

FCC ID: BCGA2228			Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 40 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 49 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





Plot 7-69. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 2C) – Ch. 142)



Plot 7-70. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 2C) - Ch. 102)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 50 of 537
2 2020 PCTEST V 9.0 02/01/2019			



Keysight Spectrum Analyzer - Occupied BW							
			d: 100/100	10:44:26 AM Radio Std: Radio Devi		Trace	/Detector
10 dB/div Ref 20.00 dBm							
0.00	haden Martin Martin	My manner where man mus				c	lear Write
-10.0 -20.0 -30.0 -40.0 Arnatharthan 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 1946, 19	41 ⁰¹		hulwahy	t-flaffwahrtf _{lad}	1. Marting and the second s		Average
-60.0							Max Hold
Center 5.55 GHz #Res BW 390 kHz	VE	3W 4 MHz		Swe	100 MHz ep 1 ms		Min Hold
Occupied Bandwidth 37.	537 MHz	Total Power	25.8	dBm			Detector Peak▶
Transmit Freq Error x dB Bandwidth	14.891 kHz 40.07 MHz	% of OBW Pow x dB	ver 99. -26.0	00 % 0 dB		Auto	Man
MSG			STATUS				

Plot 7-71. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 2C) - Ch. 110)



Plot 7-72. 26dB Bandwidth Plot SISO CORE 0 (40MHz BW 802.11ax - RU484 (UNII Band 2C) - Ch. 142)

FCC ID: BCGA2228	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 54 af 507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 51 of 537	
2 2020 PCTEST V 9.0 02/01/2019 VI rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and				



Keysight Spectrum Analyzer - Occupied B\	V				
LXI RL RF 50Ω AC	CORREC	SENSE:INT Freg: 5.530000000 GHz		5 PM Feb 11, 2020	Trace/Detector
	Trig:		d:>100/100	evice: BTS	
10 dB/div Ref 20.00 dBr	n				
Log 10.0 0.00	, yawayawa				Clear Write
-20.0		Month march manager	1 1		Average
-50.0	مرد المراجع الم مراجع المراجع ال			4.000/12.000/12/12/12/12/12/12/12/12/12/12/12/12/12/	Max Hold
Center 5.53 GHz #Res BW 200 kHz	II	/BW 2 MHz		n 200 MHz 4.667 ms	Min Hold
Occupied Bandwidf	^h 7.885 MHz	Total Power	22.9 dBm		Detector
Transmit Freq Error	-30.314 MHz	% of OBW Pow	er 99.00 %		Peak⊅ Auto <u>Mar</u>
x dB Bandwidth	19.44 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-73. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 106)



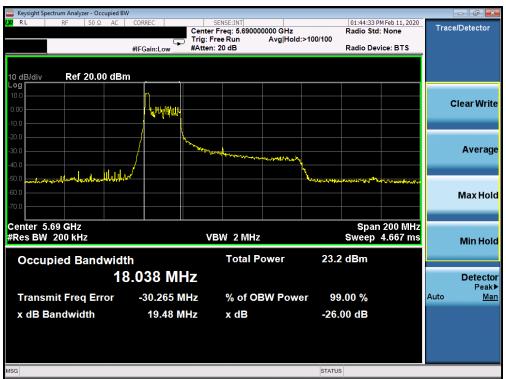
Plot 7-74. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 18 – RU26 (UNII Band 2C) – Ch. 106)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 52 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 52 of 537
© 2020 PCTEST V 9.0 02/01/2019			



Keysight Spectrum Analyzer - Occupied BV					
LXX RL RF 50Ω AC		SENSE:INT Freq: 5.53000000 GHz	01:39:54 F Radio Sto	M Feb 11, 2020 : None	Trace/Detector
		ree Run Avg Hold : 20 dB	l:>100/100 Radio De	vice: BTS	
	an ouncert				
10 dB/div Ref 20.00 dBn	1				
10.0					
0.00		A. Malankhald			Clear Write
-10.0					
-20.0			\		
-30.0	ประกูญหารีการสามาราการเป็น	m/urrate	\ <u>\</u>		Average
-40.0	and all the second s				
-50.0 -50.0	~~~ ^{**}		""Hat have a free to a second a second	مرد بالأسالية من مريد	
-70.0					Max Hold
				000 8411-	
Center 5.53 GHz #Res BW 200 kHz	v	BW 2 MHz		1 200 MHz 4.667 ms	Min Hold
		T - 4 - 1 D			MITHOU
Occupied Bandwidt		Total Power	22.4 dBm		
18	3.171 MHz				Detector Peak▶
Transmit Freq Error	30.298 MHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	20.26 MHz	x dB	-26.00 dB		
MSG			STATUS		

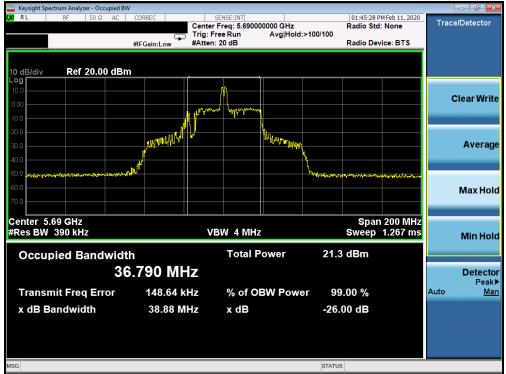
Plot 7-75. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 36 – RU26 (UNII Band 2C) – Ch. 106)



Plot 7-76. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 0 – RU26 (UNII Band 2C) – Ch. 138)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 52 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 53 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





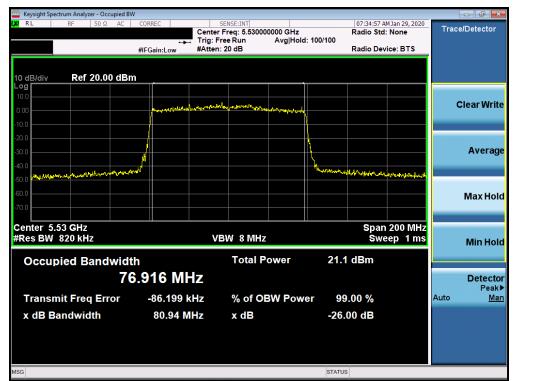
Plot 7-77. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 18 – RU26 (UNII Band 2C) – Ch. 138)



Plot 7-78. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax Index 36 – RU26 (UNII Band 2C) – Ch. 138)

FCC ID: BCGA2228	<u><i>CPCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 54 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 54 of 537
© 2020 PCTEST		·	V 9.0 02/01/2019





Plot 7-79. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax - RU996 (UNII Band 2C) - Ch. 106)



Plot 7-80. 26dB Bandwidth Plot SISO CORE 0 (80MHz BW 802.11ax - RU996 (UNII Band 2C) - Ch. 138)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 55 of 537
2 2020 PCTEST V 9.0 02/01/2019			



SISO Core 1 26dB Bandwidth Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	RU Size	Index	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]
				RU26	0	MCS0	19.64
	5180	36	ax (20MHz)	RU26	4	MCS0	18.97
				RU26	8	MCS0	20.27
				RU26	0	MCS0	19.78
	5200	40	ax (20MHz)	RU26	4	MCS0	18.80
				RU26	8	MCS0	20.19
				RU26	0	MCS0	19.76
	5240	48	ax (20MHz)	RU26	4	MCS0	18.97
<u>d</u>				RU26	8	MCS0	20.10
Band 1				RU26	0	MCS0	19.49
_	5190	38	ax (40MHz)	RU26	8	MCS0	21.71
				RU26	17	MCS0	19.61
				RU26	0	MCS0	19.43
	5230	46	ax (40MHz)	RU26	8	MCS0	21.84
				RU26	17	MCS0	19.55
				RU26	0	MCS0	19.44
	5210	42	ax (80MHz)	RU26	18	MCS0	37.49
				RU26	36	MCS0	20.32
				RU26	0	MCS0	19.74
	5260	52	ax (20MHz)	RU26	4	MCS0	18.74
		-		RU26	8	MCS0	20.52
				RU26	0	MCS0	19.53
	5280	56	ax (20MHz)	RU26	4	MCS0	18.65
				RU26	8	MCS0	19.76
_				RU26	0	MCS0	19.36
2A	5320	64	ax (20MHz)	RU26	4	MCS0	18.91
Band 2A	0020	04		RU26	8	MCS0	20.38
ä				RU26	0	MCS0	19.35
	5270	54	ax (40MHz)	RU26	8	MCS0	21.48
	5270	34	ax (40MHz)	RU26	17	MCS0	19.46
				RU26	0	MCS0	20.00
	5310	62	ax (40MHz)	RU26	8	MCS0	21.95
	3310	02		RU26	17	MCS0	20.04
				RU26	0	MCS0	19.52
	5290	58	ax (80MHz)	RU26	18	MCS0	38.71
	5250	50		RU26	36	MCS0	19.75
				RU26	0	MCS0	19.51
	5500	100	ov (20MH 7)	RU26	4	MCS0	18.70
	5500	100	ax (20MHz)	RU26	8	MCS0	20.27
					0		
	5590	110	av (20ML=)	RU26	4	MCS0	19.66 19.03
	5580	116	ax (20MHz)	RU26		MCS0	
				RU26	8	MCS0	20.37
	FTOO	4.4.4		RU26	0	MCS0	19.83
	5720	144	ax (20MHz)	RU26	4	MCS0	19.08
				RU26	8	MCS0	19.54
	FE 10	100		RU26	0	MCS0	19.94
20	5510	102	ax (40MHz)	RU26	8	MCS0	22.43
Band 2C			RU26	17	MCS0	19.40	
Ba	5550 110		RU26	0	MCS0	19.63	
		ax (40MHz)	RU26	8	MCS0	22.46	
			RU26	17	MCS0	19.44	
			RU26	0	MCS0	19.83	
	5710	142	ax (40MHz)	RU26	8	MCS0	21.42
				RU26	17	MCS0	19.32
				RU26	0	MCS0	19.49
	5530	106	ax (80MHz)	RU26	18	MCS0	38.67
				RU26	36	MCS0	20.23
				RU26	0	MCS0	19.57
	5690	138	ax (80MHz)	RU26	18	MCS0	38.70
	1	1	1	RU26	36	MCS0	20.18

Table 7-4. Conducted Bandwidth Measurements SISO CORE 1 (RU26)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage FC of F27
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 56 of 537
© 2020 PCTEST		•	V 9.0 02/01/2019

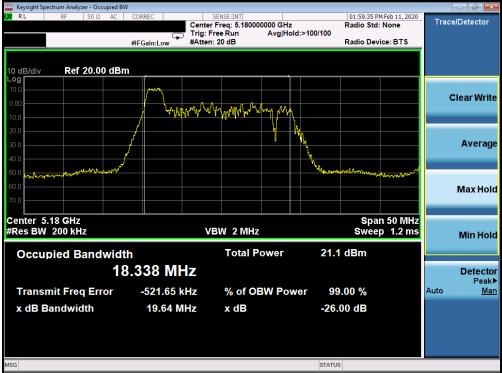


	Frequency [MHz]	Channel No.	802.11 Mode	RU Size	Index	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]
	5180	36	ax (20MHz)	RU242	61	MCS0	20.95
	5200	40	ax (20MHz)	RU242	61	MCS0	20.81
Band 1	5240	48	ax (20MHz)	RU242	61	MCS0	20.76
Bar	5190	38	ax (40MHz)	RU484	65	MCS0	39.78
	5230	46	ax (40MHz)	RU484	65	MCS0	40.13
	5210	42	ax (80MHz)	RU996	67	MCS0	80.59
	5260	52	ax (20MHz)	RU242	61	MCS0	21.01
	5280	56	ax (20MHz)	RU242	61	MCS0	20.78
Band 2A	5320	64	ax (20MHz)	RU242	61	MCS0	20.99
Bane	5270	54	ax (40MHz)	RU484	65	MCS0	40.00
	5310	62	ax (40MHz)	RU484	65	MCS0	39.64
	5290	58	ax (80MHz)	RU996	67	MCS0	81.16
	5500	100	ax (20MHz)	RU242	61	MCS0	20.81
	5580	116	ax (20MHz)	RU242	61	MCS0	20.95
	5720	144	ax (20MHz)	RU242	61	MCS0	20.87
4 2C	5510	102	ax (40MHz)	RU484	65	MCS0	40.01
Band 2C	5550	110	ax (40MHz)	RU484	65	MCS0	40.29
	5710	142	ax (40MHz)	RU484	65	MCS0	39.94
	5530	106	ax (80MHz)	RU996	67	MCS0	81.13
	5690	138	ax (80MHz)	RU996	67	MCS0	81.47

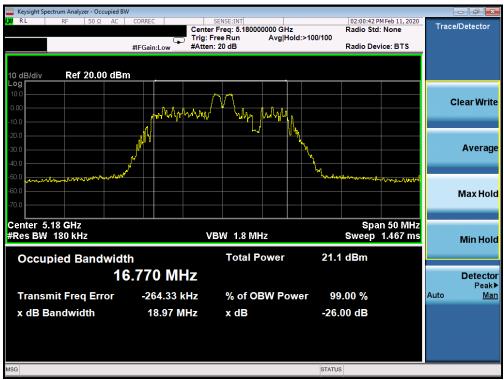
Table 7-5. Conducted Bandwidth Measurements SISO CORE 1 (Full RU)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dava 57 af 507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 57 of 537	
© 2020 PCTEST	•		V 9.0 02/01/2019	





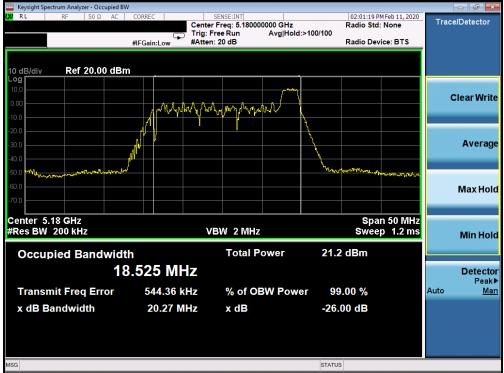
Plot 7-81. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 36)



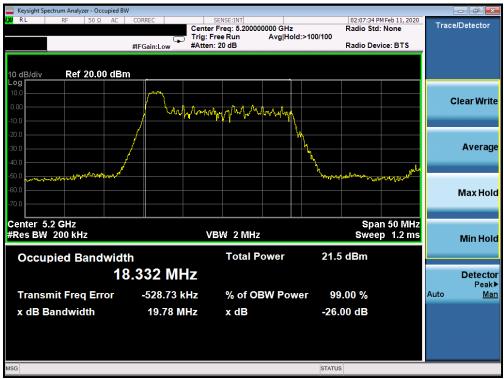
Plot 7-82. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 4 - RU26 (UNII Band 1) - Ch. 36)

FCC ID: BCGA2228	<u><i>PCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 58 of 537
2020 PCTEST V 9.0 02/01/2019			





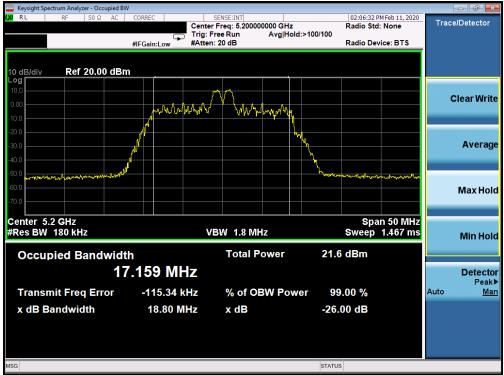
Plot 7-83. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 36)



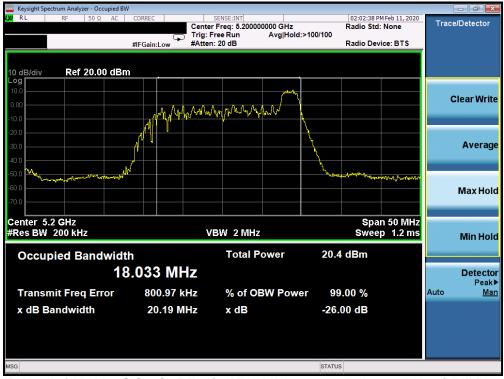
Plot 7-84. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 40)

FCC ID: BCGA2228	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 59 of 537
2020 PCTEST V 9.0 02/01/2019			





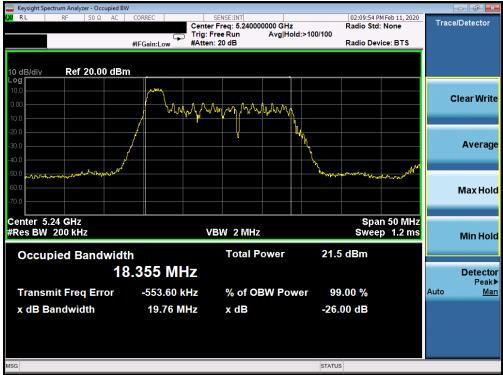
Plot 7-85. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 4 - RU26 (UNII Band 1) - Ch. 40)



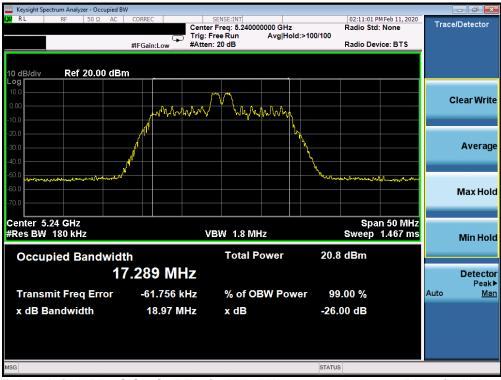
Plot 7-86. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 8– RU26 (UNII Band 1) – Ch. 40)

FCC ID: BCGA2228	<u><u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 af 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 60 of 537
2020 PCTEST V 9.0 02/01/2019			





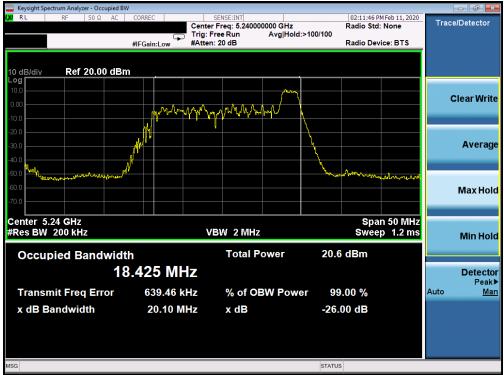
Plot 7-87. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 48)



Plot 7-88. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 1) – Ch. 48)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dana 04 af 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 61 of 537
2 2020 PCTEST V 9.0 02/01/2019			





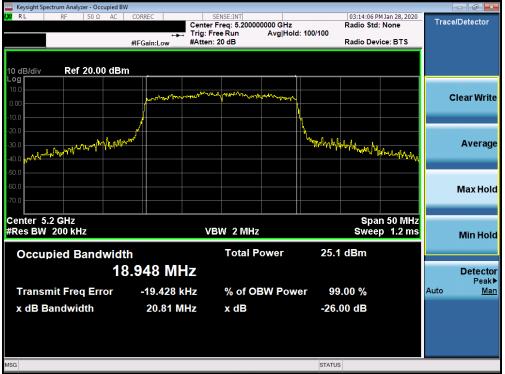
Plot 7-89. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 48)



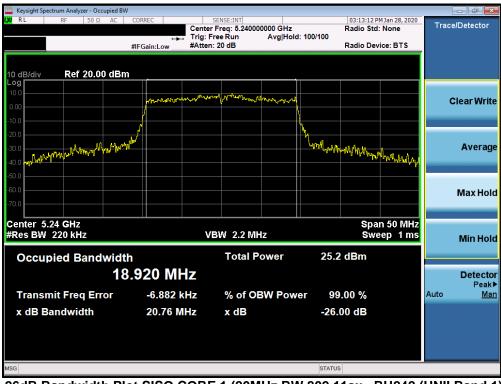
Plot 7-90. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax- RU242 (UNII Band 1) - Ch. 36)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 60 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 62 of 537
2020 PCTEST V 9.0 02/01/2019			





Plot 7-91. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax- RU242 (UNII Band 1) - Ch. 40)



Plot 7-92. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax- RU242 (UNII Band 1) - Ch. 48)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 60 af 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 63 of 537
2020 PCTEST V 9.0 02/01/2019			



122 RL RF 50 Ω AC CORREC SENSE:INT 03:01:11 PM Feb 11, 2020	Trace/Detector
The Freq Due August 400/400	Theorem
#FGain:Low #Atten: 20 dB Radio Device: BTS	
10 dB/div Ref 20.00 dBm	
	Clear Write
and it in the second seco	
-200	Average
40.0	
500 walnum the second when the second s	
-60.0	
	Max Hold
Center 5.19 GHz Span 100 MHz	
#Res BW 200 kHz VBW 2 MHz Sweep 2.333 ms	Min Hold
	WIIT HOID
Occupied Bandwidth Total Power 21.5 dBm	
17.907 MHz	Detector
	Detector Peak►
Transmit Freq Error -10.236 MHz % of OBW Power 99.00 %	
x dB Bandwidth 19.49 MHz x dB -26.00 dB	

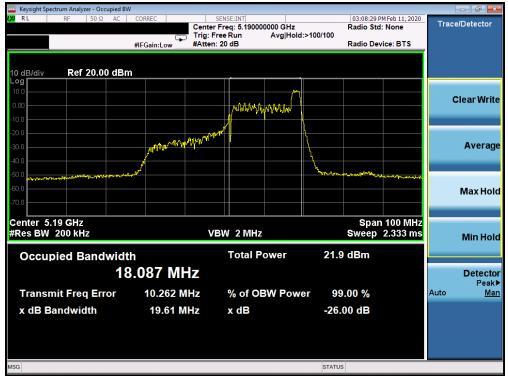
Plot 7-93. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 38)



Plot 7-94. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 38)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 04 af 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 64 of 537
2 2020 PCTEST V 9.0 02/01/2019			





Plot 7-95. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 1) – Ch. 38)



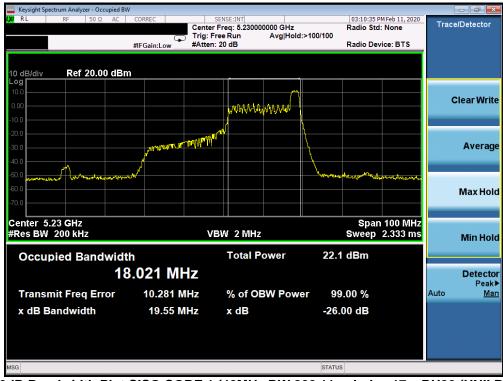
Plot 7-96. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax Index 0 - RU26 (UNII Band 1) - Ch. 46)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	D 05 (507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 65 of 537	
2020 PCTEST V 9.0 02/01/2019				





Plot 7-97. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax Index 8 - RU26 (UNII Band 1) - Ch. 46)



Plot 7-98. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax Index 17 – RU26 (UNII Band 1) – Ch. 46)

FCC ID: BCGA2228	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage CC of 527	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 66 of 537	
2020 PCTEST V 9.0 02/01/2019				



Keysight Spectrum Analyzer - Occupied BV					
LXU RL RF 50 Ω AC		SENSE:INT Freq: 5.190000000 GHz	10:11:55 PM Radio Std: 1		tector
		ree Run Avg Hold: 1 : 20 dB	00/100 Radio Devic	e: BTS	
10 dB/div Ref 20.00 dBr	n				
10.0					
0.00	and Muchanner	manhamana		Clea	r Write
-10.0					
-20.0					
-30.0			14	A	verage
-40.0 -50.0 mantfulletaanthuutlourerranthoman			M. Mathicken towners any	Change of the	
-60.0					
-70.0				Ma	ix Hold
Center 5.19 GHz			O man (
#Res BW 390 kHz	V	BW 4 MHz		100 MHz p 1 ms Mi	in Hold
O	1-	Total Power	22.5 dBm		THOID
Occupied Bandwidt		Total Power	22.5 UBIII		
31	7.534 MHz			D	etector Peak▶
Transmit Freq Error	24.520 kHz	% of OBW Power	99.00 %	Auto	<u>Man</u>
x dB Bandwidth	39.78 MHz	x dB	-26.00 dB		
MSG			STATUS		
			014105		

Plot 7-99. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax - RU484 (UNII Band 1) - Ch. 38)



Plot 7-100. 26dB Bandwidth Plot SISO CORE 1 (40MHz BW 802.11ax - RU484 (UNII Band 1) - Ch. 46)

FCC ID: BCGA2228	<u><u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dana 07 af 507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 67 of 537	
2 2020 PCTEST V 9.0 02/01/2019				



Keysight Spectrum Analyzer - Occupied BV						_	
<mark>μα</mark> RL RF 50Ω AC		sense:INT r Freq: 5.210000000 GHz	R	03:45:27 PM adio Std:	Feb 11, 2020 None	Tracel	Detector
		FreeRun Avg Hold n:20 dB		adio Devi	ce: BTS		
10 dB/div Ref 20.00 dBn	n						
Log 10.0							
0.00	www.man					CI	ear Write
-10.0	4.4.1.489						
-20.0							
-30.0	1	man and many many many to and					Average
-40.0			V				
-50.0	N ²		The state of the second	alan ana ang	1970		
-70.0							Max Hold
Center 5.21 GHz #Res BW 200 kHz	v	/BW 2 MHz	s		200 MHz 4.667 ms		
							Min Hold
Occupied Bandwidt		Total Power	22.7 d	Bm			
17	7.991 MHz						Detector Peak►
Transmit Freq Error	-30.292 MHz	% of OBW Powe	er 99.0	0 %		Auto	<u>Man</u>
x dB Bandwidth	19.44 MHz	x dB	-26.00	dB			
MSG			STATUS				

Plot 7-101. 26dB Bandwidth Plot SISO CORE 1 (80MHz BW 802.11ax Index 0 – RU26 (UNII Band 1) – Ch. 42)



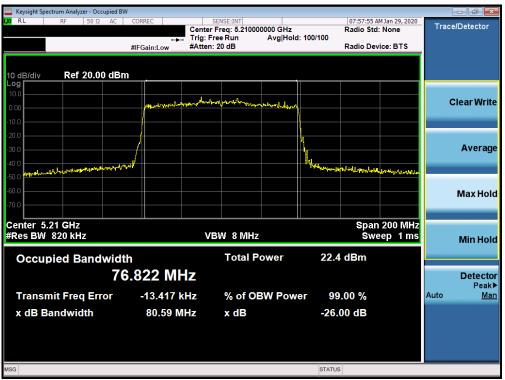
Plot 7-102. 26dB Bandwidth Plot SISO CORE 1 (80MHz BW 802.11ax Index 18 – RU26 (UNII Band 1) – Ch. 42)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	D 00 (507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 68 of 537	
2020 PCTEST V 9.0 02/01/2019				



Keysight Spectrum Analyzer - Occupied	BW				
LX RL RF 50 Ω AC	CORREC	SENSE:INT er Freq: 5.210000000 GHz	03:47:22 Radio St	PM Feb 11, 2020 d: None	Trace/Detector
	Trig:		d:>100/100 Radio D	evice: BTS	
10 dB/div Ref 20.00 dE	sm				
10.0					Clear Write
0.00		nte Wyhite			orear mina
-10.0					
-20.0		1 million			Average
-40.0	mun www.www.war	A-MM (M/) (M / / / / / /			Averuge
			havenue		
-50.0 decommentation				a falanca (karta falada	Max Hold
-70.0					Max Hold
Center 5.21 GHz #Res BW 200 kHz	,	VBW 2 MHz		n 200 MHz 4.667 ms	Min Hold
					WIITHOR
Occupied Bandwig		Total Power	21.9 dBm		
1	8.350 MHz				Detector Peak
Transmit Freq Error	30.280 MHz	% of OBW Pow	ver 99.00 %	F	Auto <u>Mar</u>
x dB Bandwidth	20.32 MHz	x dB	-26.00 dB		
	LOIOL MILL		20.00 40		
MSG			STATUS		

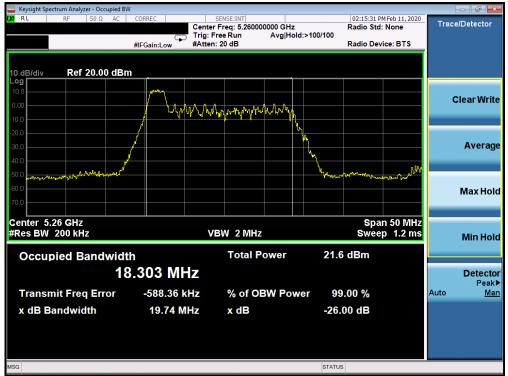
Plot 7-103. 26dB Bandwidth Plot SISO CORE 1 (80MHz BW 802.11ax Index 36 – RU26 (UNII Band 1) – Ch. 42)



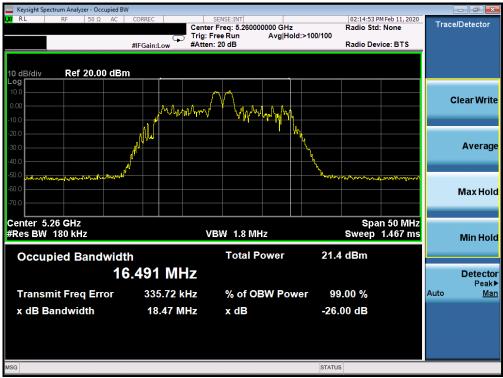
Plot 7-104. 26dB Bandwidth Plot SISO CORE 1 (80MHz BW 802.11ax - RU996 (UNII Band 1) - Ch. 42)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	D 00 (507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 69 of 537	
2020 PCTEST V 9.0 02/01/2019				





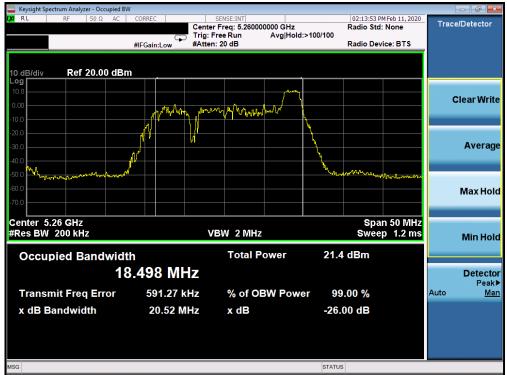
Plot 7-105. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 52)



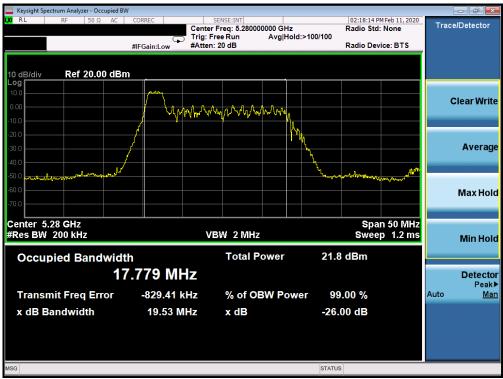
Plot 7-106. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2A) – Ch. 52)

FCC ID: BCGA2228	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 70 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 70 of 537
© 2020 PCTEST V 9.0 02/01/2019			





Plot 7-107. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 2A) – Ch. 52)



Plot 7-108. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 56)

FCC ID: BCGA2228	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 71 of 527
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 71 of 537
> 2020 PCTEST V 9.0 02/01/2019			





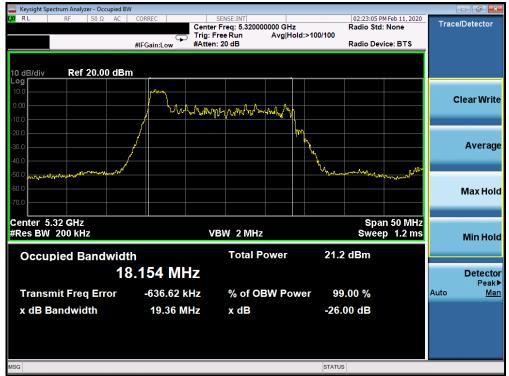
Plot 7-109. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2A) – Ch. 56)



Plot 7-110. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 8– RU26 (UNII Band 2A) – Ch. 56)

FCC ID: BCGA2228	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dawa 70 of 507
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 72 of 537
> 2020 PCTEST V 9.0 02/01/2019			





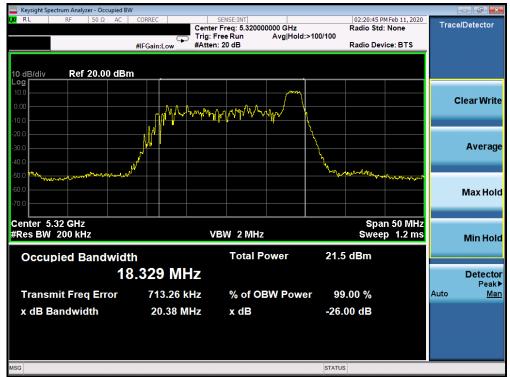
Plot 7-111. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 0 – RU26 (UNII Band 2A) – Ch. 64)



Plot 7-112. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 4 – RU26 (UNII Band 2A) – Ch. 64)

FCC ID: BCGA2228	<u><u><u></u><u>PCTEST</u></u></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	D 70 (507	
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	Page 73 of 537	
2020 PCTEST V 9.0 02/01/2019				





Plot 7-113. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax Index 8 – RU26 (UNII Band 2A) – Ch. 64)



Plot 7-114. 26dB Bandwidth Plot SISO CORE 1 (20MHz BW 802.11ax- RU242 (UNII Band 2A) - Ch. 52)

FCC ID: BCGA2228	<u><i>PCTEST</i></u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 74 of 537
1C1912170050-09.BCG	12/10/2019 - 02/26/2020	Tablet Device	
© 2020 PCTEST V 9.0 02/01/2019 All rights reserved. Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including obstocopying and			