

# PCTEST

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# MEASUREMENT REPORT FCC PART 15.407 UNII a/n/ac/ax

#### **Applicant Name:**

SONY Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075, Japan

### Date of Testing: 8/2/2021 – 9/29/2021

8/2/2021 – 9/29/2021 Test Site/Location: PCTEST Lab. Columbia, MD, USA Test Report Serial No.: 1M2108040087-09.PY7

# FCC ID:

### PY7-95324M

APPLICANT:

# SONY Corporation

Application Type: EUT Type: Frequency Range: Modulation Type: FCC Equipment Class: FCC Rule Part(s): Test Procedure(s):

Certification Portable Handset 5180 – 5825MHz OFDM Unlicensed National Information Infrastructure TX (NII) Part 15 Subpart E (15.407) 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



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# **MEASUREMENT REPORT**



			AN	IT1	AN	IT2	MIMO		
UNII Band	Channel Bandwidth (MHz)	Tx Frequency (MHz)	Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)	
1		5180 - 5240	17.498	12.43	16.482	12.17	32.211	15.08	
2A	20	5260 - 5320	17.539	12.44	16.482	12.17	31.623	15.00	
2C	20	5500 - 5720	17.338	12.39	16.406	12.15	30.549	14.85	
3		5745 - 5825	17.579	12.45	15.959	12.03	33.574	15.26	
1		5190 - 5230	17.298	12.38	16.032	12.05	31.405	14.97	
2A	40	5270 - 5310	16.749	12.24	16.482	12.17	30.690	14.87	
2C	40	5510 - 5710	17.824	12.51	15.885	12.01	32.659	15.14	
3		5755 - 5795	17.539	12.44	15.031	11.77	32.211	15.08	
1		5210	11.092	10.45	9.661	9.85	19.454	12.89	
2A	80	5290	10.257	10.11	10.186	10.08	19.320	12.86	
2C	00	5530 - 5690	17.742	12.49	15.704	11.96	29.717	14.73	
3		5775	10.940	10.39	9.638	9.84	20.701	13.16	
1/2A	160	5250	10.914	10.38	10.399	10.17	21.330	13.29	
2C	100	5570	13.709	11.37	12.246	10.88	25.942	14.14	

**EUT Overview** 

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# **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 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

### **1.3 Test Facility / Accreditations**

#### Measurements were performed at PCTEST located in Columbia, MD 21046, U.S.A.

- PCTEST is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 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 (2451B) test laboratory with the site description on file with ISED.

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# **PRODUCT INFORMATION**

### **Equipment Description**

The Equipment Under Test (EUT) is the SONY Portable Handset FCC ID: PY7-95324M. The test data contained in this report pertains only to the emissions due to the EUT's UNII transmitter.

Test Device Serial No.: 01A9M, 04M9M, 04H9Q, 0539Q

### **Device Capabilities**

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1700/1900, WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR, 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC

Band 1		Band 2A		Band 2C	_	Band 3	
Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	
5180	52	5260	100	5500	149	5745	
:	:	:	:	:	:	:	
5200	56	5280	116	5580	157	5785	
:	:	:	:	:	:	:	
5240	64	5320	144	5720	165	5825	
	Frequency (MHz) 5180 : 5200 :	Frequency (MHz)         Ch.           5180         52           :         :           5200         56           :         :	Frequency (MHz)         Ch.         Frequency (MHz)           5180         52         5260           :         :         :         :           5200         56         5280           :         :         :         :	Frequency (MHz)         Ch.         Frequency (MHz)         Ch.           5180         52         5260         100           :         :         :         :         100           :         56         5280         116           :         :         :         :         :	Frequency (MHz)         Ch.         Frequency (MHz)         Ch.         Frequency (MHz)           5180         52         5260         100         5500           :         :         :         :         100         5500           :         :         :         :         :         :           5200         56         5280         116         5580           :         :         :         :         :         :	Frequency (MHz)         Ch.         149	

Table 2-1. 802.11a / 802.11n / 802.11ac / 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)
02	5510
:	:
18	5590
:	:
12	5670

	Band 3
Ch.	Frequency (MHz)
151	5755

5795

151 ÷

159

142 5670 Table 2-2. 802.11n / 802.11ac / 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)
ĺ	42	5210		58	5290		106	5530		155	5775

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

		Band 1/2A			Band 2C	2C			
	Ch.	Frequency (MHz)		Ch.	Frequency (MHz)				
	50	5250		114	5570				
Table 2-4. 802.11ax (160MHz BW) Frequency / Channel Operations									

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#### Notes:

 5GHz NII operation is possible in 20MHz channel bandwidth. 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:

Maximum Achievable Duty Cycles						
902 11 M	802.11 Mode/Band		Duty Cycle [%]			
802.11 10	ode/Band	ANT1	ANT2	МІМО		
	а	98.3	99.1	99.2		
	n (HT20)	99.7	99.7	99.7		
	ac (HT20)	99.6	99.7	99.7		
	ax (HT20)	99.7	99.7	99.7		
	n (HT40)	99.7	99.7	99.7		
5GHz	ac (HT40)	99.7	99.7	99.7		
	ax (HT40)	99.4	97.9	99.7		
	ac (HT80)		99.7	99.7		
	ax (HT80)	99.7	99.7	99.7		

Table 2-5. Measured Duty Cycles

2. The device employs MIMO technology. Below are the possible configurations.

3. WiFi Configurations		SISO		SDM		CDD	
		SOUTH	NORTH	SOUTH	NORTH	SOUTH	NORTH
	11a	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
2.4GHz	11n	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	11ac	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	11ax	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

 Table 2-6. Frequency / Channel Operations

✓= Support ; × = NOT Support

**SISO** = Single Input Single Output

**SDM** = Spatial Diversity Multiplexing – MIMO function

**CDD** = Cyclic Delay Diversity - 2Tx Function

### 2.3 Antenna Description

Following antenna was used for the testing.

Frequency [GHz]	Antenna Gain (dBi)
5.20	-1.4
5.30	-2.1
5.50	-1.2
5.80	-0.4

Table 2-7. Antenna Peak Gain

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# 2.4 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 and AC line conducted testing. See Sections 3.2 for AC line conducted emissions test setups, 3.3 for radiated emissions test setups, and 7.2, 7.3, 7.4, and 7.5 for antenna port conducted emissions test setups.

### 2.5 Software and Firmware

The test was conducted with firmware version 6.213 installed on the EUT.

### EMI Suppression Device(s)/Modifications

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

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# 3.0 DESCRIPTION OF TESTS

### **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

### **AC Line Conducted Emissions**

The line-conducted facility is located inside a 10'x16'x9' shielded enclosure. The shielded enclosure is manufactured by ETS Lindgren RF Enclosures. The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-5. A 1m x 1.5m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz,  $50\Omega/50\mu$ H Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. The external power line filter is an ETS Lindgren Model LPRX-4X30 (100dB Attenuation, 14kHz-18GHz) and the two EMI/RFI filters are ETS Lindgren Model LRW-2030-S1 (100dB Minimum Insertion Loss, 14kHz – 10GHz). These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference groundplane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

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 RF output of the LISN was connected to the spectrum analyzer and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The spectrum was scanned from 150kHz to 30MHz with a spectrum analyzer. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 10kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions is used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

Line conducted emissions test results are shown in Section 7.8. The EMI Receiver mode of the Agilent MXE was used to perform AC line conducted emissions testing.

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# **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.

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 found.

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.

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 474788 D01.

### 3.4 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).

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# 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.

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# 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	1.13
Line Conducted Disturbance	3.09
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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# 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
-	WL25-1	Conducted Cable Set (25GHz)	2/23/2021	Annual	2/23/2022	WL25-1
-	WL40-1	WLAN Cable Set (40GHz)	2/23/2021	Annual	2/23/2022	WL40-1
-	WL40-2	WLAN Cable Set (40GHz)	3/12/2021	Annual	3/12/2022	WL40-2
Agilent	N5183A	MXG Analog Signal Generator	1/21/2021	Annual	1/21/2022	MY50141900
Anritsu	ML2495A	Power Meter	1/18/2021	Annual	1/18/2022	941001
Anritsu	MA2411B	Pulse Power Sensor	2/5/2021	Annual	2/5/2022	846215
Anritsu	ML2496A	Power Meter	11/25/2020	Annual	11/25/2021	1405003
Anritsu	MA2411B	Pulse Power Sensor	10/20/2020	Annual	10/20/2021	1339027
Anritsu	MS46322A	Vector Network Analyzer	11/6/2020	Annual	11/6/2021	1521001
Anritsu	36585K-2F	Precision Autocal 2-Port	10/24/2020	Annual	10/24/2021	1628014
Emco	3115	Horn Antenna (1-18GHz)	6/18/2020	Biennial	6/18/2022	9704-5182
Emco	3116	Horn Antenna (18 - 40GHz)	7/20/2021	Biennial	7/20/2023	9203-2178
Espec	ESX-2CA	Environmental Chamber	8/27/2020	Biennial	8/27/2022	17620
ETS-Lindgren	3816/2NM	LISN	7/9/2020	Biennial	7/9/2022	114451
ETS-Lindgren	3115	Double Ridged Guide Horn 750MHz - 18GHz	3/12/2020	Biennial	3/12/2022	150693
Keysight Technologies	N9020A	MXA Signal Analyzer	9/22/2020	Annual	9/22/2021	MY54500644
Pasternack	NMLC-2	Line Conducted Emissions Cable (NM)	2/25/2021	Annual	2/25/2022	NMLC-2
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	5/25/2021	Annual	5/25/2022	100348
Solar Electronics	8012-50-R-24-BNC	Line Impedance Stabilization Network	10/1/2019	Biennial	10/1/2021	310233
Sunol	DRH-118	Horn Antenna (1-18GHz)	10/3/2019	Biennial	10/3/2021	A050307
Sunol Science	JB5	Bi-Log Antenna (30M - 5GHz)	7/27/2020	Biennial	7/27/2022	A051107

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.

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# 7.0 TEST RESULTS

### Summary

Company Name:	SONY Corporation
FCC ID:	<u>PY7-95324M</u>
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
N/A	26dB Bandwidth	N/A		PASS	Section 7.2
15.407(e)	6dB Bandwidth	>500kHz(5725-5850MHz)		PASS	Section 7.3
15.407 (a.1.iv), (a.2), (a.3)	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)	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)	Dynamic Frequency Selection	See DFS Test Report		PASS	See DFS Test Report
15.407(b.1), (2), (3), (4)	Undesirable Emissions	Undesirable emissions must meet the limits detailed in 15.407(b) (RSS-247 [6.2])		PASS	Section 7.6
15.205, 15.407(b.1), (4), (5), (6)	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])	RADIATED	PASS	Section 7.6, 7.7
15.407	AC Conducted Emissions 150kHz – 30MHz	< FCC 15.207 (RSS-Gen [8.8]) limits	LINE CONDUCTED	PASS	Section 7.8

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.

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#### 26dB Bandwidth Measurement – 802.11a/n/ac/ax 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**

None.

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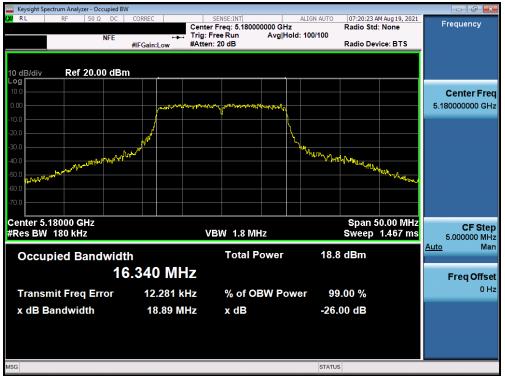
### SISO Antenna-1 26 dB Bandwidth Measurements

	Frequency	Channel			Measured 26dB
	[MHz]	No.	802.11 Mode	Data Rate [Mbps]	Bandwidth [MHz]
	5180	36	а	6	18.89
	5200	40	а	6	18.71
	5240	48	а	6	18.82
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	19.78
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	20.00
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	19.75
-	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	20.58
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	20.67
B	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	20.83
	5190	38	n (40MHz)	13.5/15 (MCS0)	39.98
	5230	46	n (40MHz)	13.5/15 (MCS0)	39.38
	5190	38	ax (40MHz)	13.5/15 (MCS0)	39.84
	5230	46	ax (40MHz)	13.5/15 (MCS0)	39.93
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	81.36
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	81.35
Band 1/2A	5250	50	ac (160MHz)	58.5/65 (MCS0)	163.60
Ba 1/:	5250	50	ax (160MHz)	58.5/65 (MCS0)	166.10
	5260	52	а	6	18.44
	5280	56	а	6	18.74
	5320	64	а	6	19.19
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	19.78
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	20.14
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	19.85
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	20.58
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	20.84
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	20.35
	5270	54	n (40MHz)	13.5/15 (MCS0)	39.17
	5310	62	n (40MHz)	13.5/15 (MCS0)	39.25
	5270	54	ax (40MHz)	13.5/15 (MCS0)	40.09
	5310	62	ax (40MHz)	13.5/15 (MCS0)	39.94
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	81.78
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	81.38
	5500	100	а	6	18.60
	5600	120	а	6	18.44
	5720	144	а	6	18.63
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	19.90
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	20.07
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	19.82
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	20.62
	5580	120	ax (20MHz)	6.5/7.2 (MCS0)	20.68
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	20.53
	5510	102	n (40MHz)	13.5/15 (MCS0)	39.39
Band 2C	5590	118	n (40MHz)	13.5/15 (MCS0)	40.34
anc	5710	142	n (40MHz)	13.5/15 (MCS0)	39.47
Ċ	5510	102	ax (40MHz)	13.5/15 (MCS0)	39.95
	5590	118	ax (40MHz)	13.5/15 (MCS0)	40.07
	5710	142	ax (40MHz)	13.5/15 (MCS0)	39.87
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	81.15
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	81.44
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	81.28
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	81.65
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	82.58
	5000	400	(001 11 1 )		
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	81.25
	5690 5570 5570	138 114 114	ax (80MHz) ac (160MHz) ax (160MHz)	29.3/32.5 (MCS0) 29.3/32.5 (MCS0) 29.3/32.5 (MCS0)	81.25 162.40 161.70

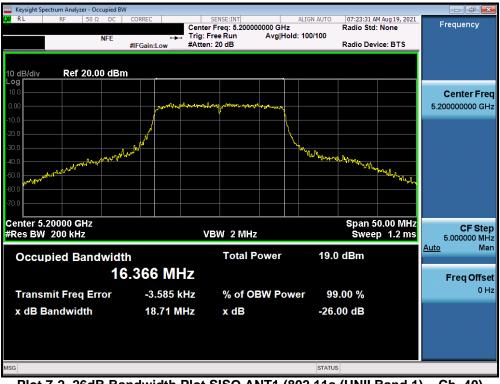
Table 7-2. Conducted Bandwidth Measurements SISO ANT1

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Plot 7-1. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 36)



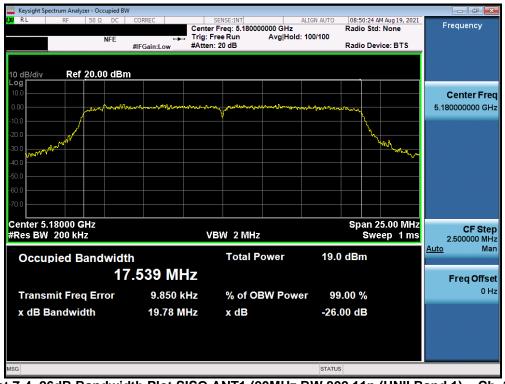
Plot 7-2. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 40)

FCC ID: PY7-95324M	PCTEST <sup>®</sup> Proud to be part of <sup>®</sup> element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:			
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Plot 7-3. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 48)



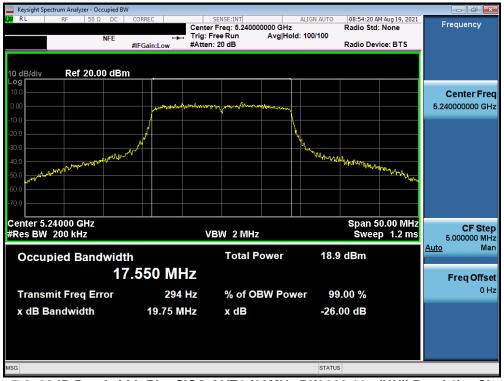
Plot 7-4. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
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Plot 7-5. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)



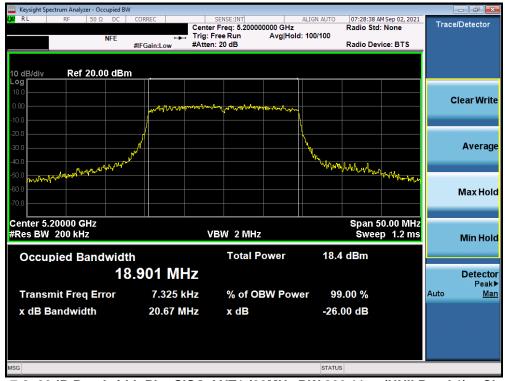
Plot 7-6. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
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Keysight Spectrum Analyzer - Occupied						
Center Freq 5.1800000		SENSE:INT Center Freq: 5.1800			:27:18 AM Sep 02, 2021	Frequency
NFE	÷	Trig: Free Run	Avg Hold:			
	#IFGain:Low	#Atten: 20 dB		Rad	lio Device: BTS	-
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10.0						Center Freq
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-30.0					<sup>v</sup> <sup>v</sup> <sub>n</sub>	
-40.0 AM					July Contraction of the second	
-50.0						
-60.0						
-70.0						
Center 5.18000 GHz				S	oan 25.00 MHz	CF Step
#Res BW 200 kHz		VBW 2 MH	z		Sweep 1 ms	2.500000 MHz
		Total	Jouror	18.2 dB		<u>Auto</u> Man
Occupied Bandwid			ower	18.2 dB	m	
	8.884 MH	Z				Freq Offset
Transmit Freq Error	18.832 k	Hz % of O	BW Powe	r 99.00	0/	0 Hz
			BWFOWG			
x dB Bandwidth	20.58 M	Hz xdB		-26.00 c	IB	
MSG				STATUS		

Plot 7-7. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)



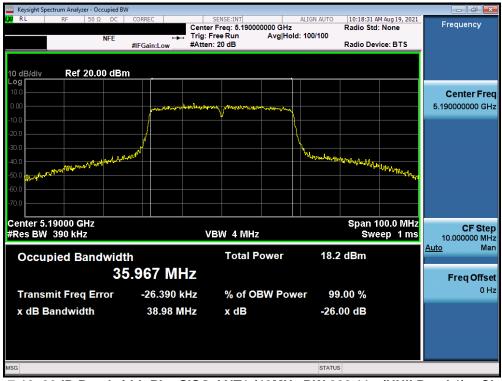
Plot 7-8. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
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Plot 7-9. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)



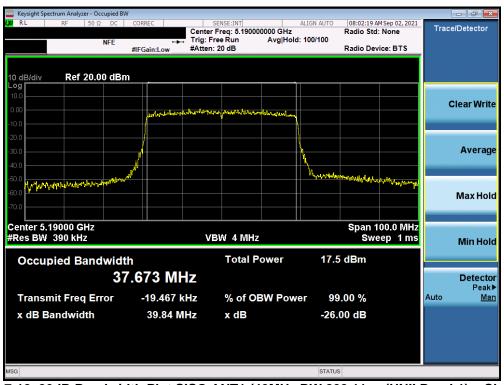
Plot 7-10. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
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i Key	sight Spectrum	i Analyzer - G	ccupiea	BW												
LXI I	- R	F 50	Ω AC	CO	RREC				SE:INT			ALIGN AUTO		M Aug 19, 2021	Trees	e/Detector
									eq: 5.23000				Radio Std	: None	Trac	elDetector
						-				Avg Ho	old:	:>100/100				
				#IF	Gain:Lo	w	#Atte	n: 20	) dB				Radio Dev	ice: BTS		
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#Re	s BW 39	U KHZ						ИBV	V 4 MHz				SW	eep 1 ms		Min Hold
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MSG												STATUS			-	

Plot 7-11. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



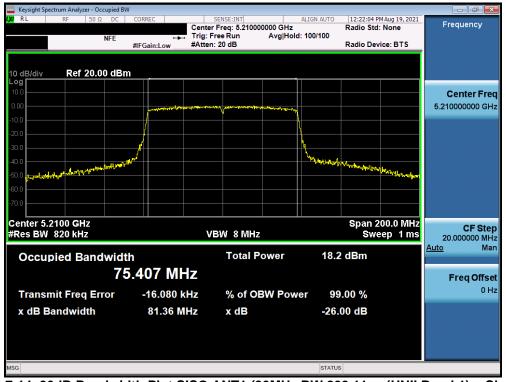
Plot 7-12. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
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Keysight Spectrum Analyzer - Occupied B	W				
LX RL RF 50Ω DC	Trig: I	SENSE:INT r Freq: 5.23000000 GHz Free Run Avg Hol n: 20 dB	Radi d: 100/100	4:06 AM Sep 02, 2021 o Std: None o Device: BTS	Trace/Detector
10 dB/div Ref 20.00 dB Log 10.0 0.00		her plant and the state			Clear Write
-20.0 -30.0 -40.0 -50.0 patrophytem/4/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	,		have the work of the	My in manual	Average
-50.0 <b></b>					Max Hold
Center 5.23000 GHz #Res BW 390 kHz Occupied Bandwid		/BW 4 MHz Total Power		an 100.0 MHz Sweep 1 ms n	Min Hold
	7.560 MHz -20.466 kHz 39.93 MHz	% of OBW Pov x dB		%	<mark>Detector</mark> Peak≯ Auto <u>Man</u>
MSG			STATUS		

Plot 7-13. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



Plot 7-14. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

FCC ID: PY7-95324M	PCTEST <sup>®</sup> Proud to be part of <b>@</b> element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	EUT Type:			
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Keysight Spectrum Analyzer - Occu	pied BW				
02 RL RF 50Ω NI 10 dB/div Ref 20.00	FE ← ← Tri #IFGain:Low #A	SENSE:INT nter Freq: 5.21000000 GHz g: Free Run Avg Hold tten: 20 dB	ALIGN AUTO 08:25:50 AI Radio Std: 100/100 Radio Dev		Trace/Detector
Log 10.0 0.00 -10.0		Angel Asternation and a second			Clear Write
-20.0					Average
-50.0 <mark>annwitzenskalderen dien die die die die die die die die die die</mark>			Therefore and the second secon	nally gland	Max Hold
Center 5.2100 GHz #Res BW 820 kHz	.: -141-	VBW 8 MHz Total Power		00.0 MHz ep 1 ms	Min Hold
Occupied Bandv	75.366 MHz				Detector Peak▶
Transmit Freq Erro	or -24.738 kHz 81.35 MHz	% of OBW Pow x dB	er 99.00 % -26.00 dB	4	Auto <u>Man</u>
MSG			STATUS		

Plot 7-15. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)



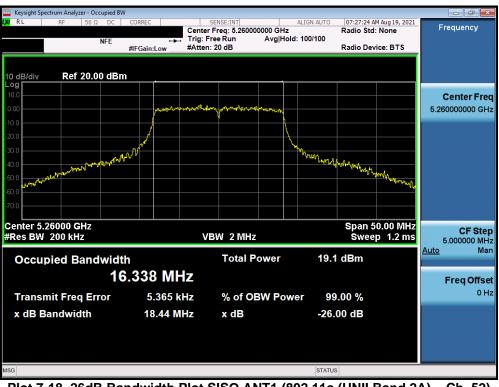
Plot 7-16. 26dB Bandwidth Plot SISO ANT1 (160MHz BW 802.11ac (UNII Band 1) - Ch. 50)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	: Test Dates: EUT Type:			Dega 22 of 244		
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Keysight Spectrum Analyzer - Occupied B\	V				
IX RL RF 50Ω DC	Trig: I	SENSE:INT r Freq: 5.250000000 GHz Free Run Avg Holo n: 26 dB	ALIGN AUTO 09:14:58 / Radio Sto 1: 100/100 Radio De		Trace/Detector
10 dB/div Ref 20.00 dBr	n <u>,                                    </u>				
10.0 0.00	and the second s	elve gottanimetatessa on dan strange			Clear Write
-20.0 -30.0 -40.0 <b>11111111111111111111111111111111111</b>	ad		h Murayttik givlangiana jachtala	nethoogeteers	Average
-50.0 -60.0 -70.0					Max Hold
Center 5.2500 GHz Res BW 3 MHz	v	'BW 50 MHz		eep 1 ms	Min Hold
Occupied Bandwid	th	Total Power	17.8 dBm		
1	54.41 MHz				Detector Peak▶
Transmit Freq Error	37.044 kHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	166.1 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-17. 26dB Bandwidth Plot SISO ANT1 (160MHz BW 802.11ax (UNII Band 1) – Ch. 50)



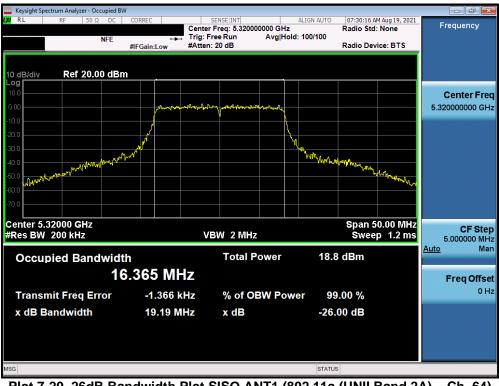
Plot 7-18. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 52)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
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Plot 7-19. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 56)



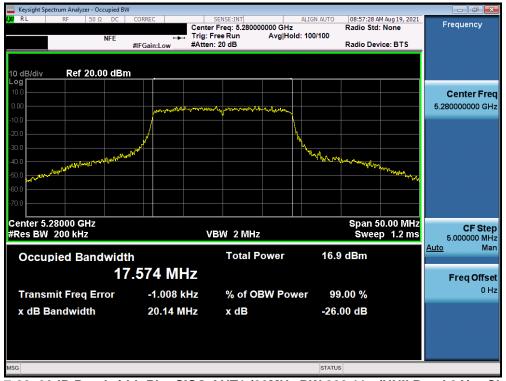
Plot 7-20. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 64)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
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Plot 7-21. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)



Plot 7-22. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dogo 26 of 244		
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 26 of 241		
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Plot 7-23. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)



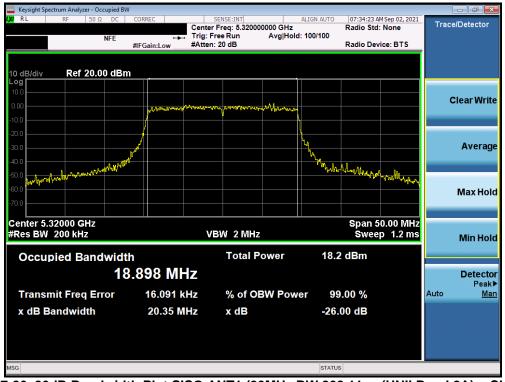
Plot 7-24. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 52)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dage 07 of 044		
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 27 of 241		
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IX RL RF 50Ω DC	CORREC	SENSE:INT	ALIGN A	JTO 07:32:50 AM	ISen 02, 2021	-	
10 dB/div Ref 20.00 dB	#IFGain:Low	Center Freq: 5.28000 Trig: Free Run #Atten: 20 dB	00000 GHz Avg Hold: 100/10	Radio Std: 0 Radio Devi	None	Trace/I	Detector
Log 10.0 0.00 -10.0		menner produced	Junin 100			СІ	ear Write
-20.0	water and the second			1.1. p ()			Average
-40.0 -50.0 -60.0 -70.0				hour and a second and a second and a second a se	ᡧᡰ᠊ᠬᡪᡟᡟᢦᡒᡞ		Max Hold
Center 5.28000 GHz #Res BW 200 kHz		VBW 2 MHz		Sweep	0.00 MHz 0 1.2 ms		Min Hold
Occupied Bandwid	<sup>ith</sup> 8.910 MF	Total P	ower	18.5 dBm			Detector Peak▶
Transmit Freq Error x dB Bandwidth	2.208 k 20.84 M			99.00 % 26.00 dB		Auto	Man

Plot 7-25. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)



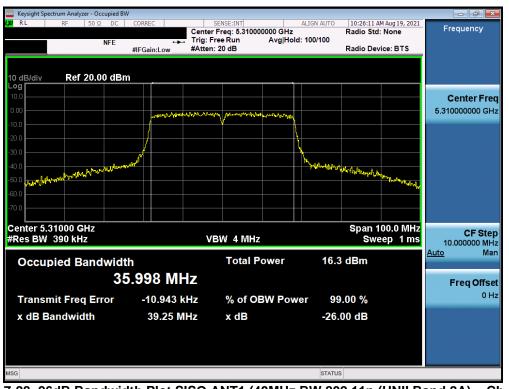
Plot 7-26. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 29 of 244	
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 28 of 241	
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Plot 7-27. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)



Plot 7-28. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)

FCC ID: PY7-95324M	PCTEST <sup>®</sup> Proud to be part of <b>@</b> element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N: Test Dates:		EUT Type:		Dogo 20 of 244		
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 29 of 241		
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Keysight Spectrum Analyzer - Occupied B <sup>1</sup>	W				
<b>LX/</b> RL RF 50 Ω DC	CORREC	SENSE:INT r Freg: 5.270000000 GHz	ALIGN AUTO 08:12:58 A Radio Std	M Sep 02, 2021	Trace/Detector
NFE	Trig: I	Free Run Avg Hold	i: 100/100		
	#IFGain:Low #Atter	n: 20 dB	Radio Dev	/ice: BTS	
10 dB/div Ref 20.00 dBr	m				
10.0					
0.00	under when the	Ash Markel -			Clear Write
-10.0					
-20.0					
-30.0	d de la companya de la compan				Average
-40.0			N .		
-50.0 withour throw with the how we	м <sup>и</sup>		have and a start a start and a start a start a start a start a	dan da	
-60.0				Houd raper from	
					Max Hold
-70.0					
Center 5.27000 GHz			Span 1	00.0 MHz	
#Res BW 390 kHz	V	/BW 4 MHz	Swe	eep 1 ms	Min Hold
	41-	Total Power	19.1 dBm		
Occupied Bandwid		Total Power	19.1 UBIII		
3	7.675 MHz				Detector
Transmit Freq Error	42.553 kHz	% of OBW Pow	er 99.00 %		Peak▶ Auto Man
x dB Bandwidth	40.09 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-29. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)



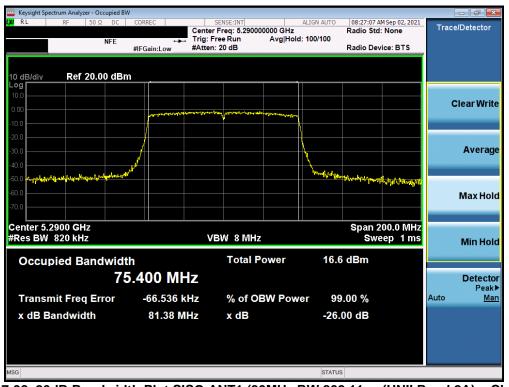
Plot 7-30. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 20 of 244	
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Keysight Spectrum Analyzer - Oc					- ē <b>-</b>
μ <mark>χα</mark> RL   RF   50 Ω	2 DC CORREC NFE #IFGain:Low	SENSE:INT Center Freq: 5.29 Trig: Free Run #Atten: 20 dB	ALIGN AU 0000000 GHz Avg Hold: 100/100	Radio Std: None	Frequency
10 dB/div Ref 20.0	00 dBm				
0.00		and have feeling and have realized			Center Freq 5.290000000 GHz
-10.0					
-30.0 -40.0 -50.0 MANTENNIALANNIA	annin March ann ann ann ann ann ann ann ann ann an			ndall Maran and a start and a	u-ha
-60.0					
Center 5.2900 GHz #Res BW 820 kHz		VBW 8 M	Hz	Span 200.0 N Sweep 1	ms 20.000000 MHz
Occupied Band			Power 1	7.7 dBm	<u>Auto</u> Man
Transmit Freq Er	75.386 N		OBW Power	99.00 %	Freq Offset 0 Hz
x dB Bandwidth	81.78			26.00 dB	
MSG			ST	ATUS	

Plot 7-31. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)



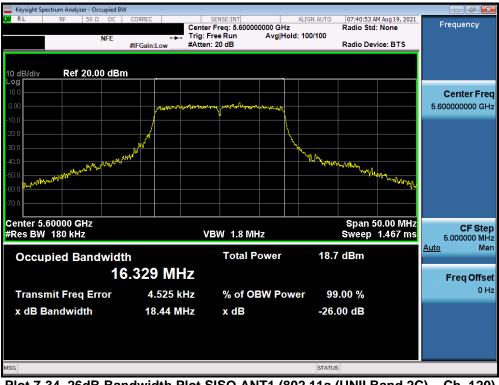
Plot 7-32. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Page 31 of 241		
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset	ortable Handset			
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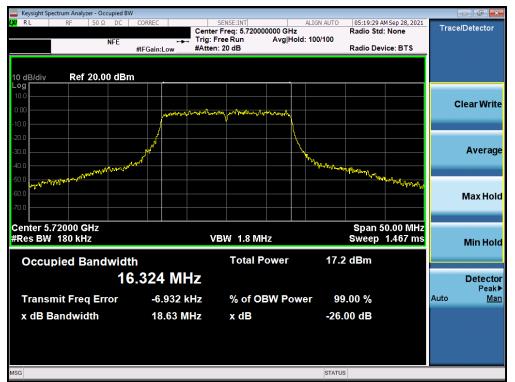
Plot 7-33. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 100)



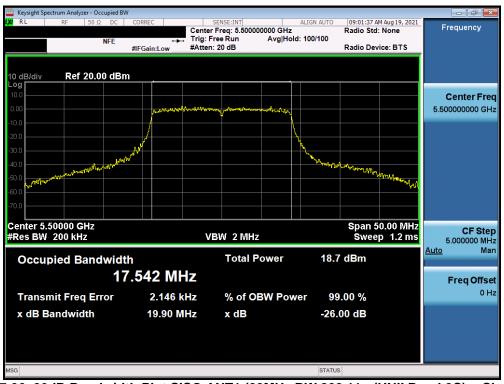
Plot 7-34. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 120)

FCC ID: PY7-95324M	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N: Test Dates:		EUT Type:		Dogo 22 of 244	
1M2108040087-09.PY7 8/2/2021 - 9/10/2021		Portable Handset		Page 32 of 241	
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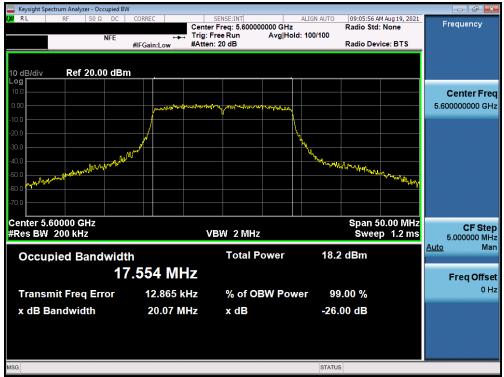
Plot 7-35. 26dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 144)



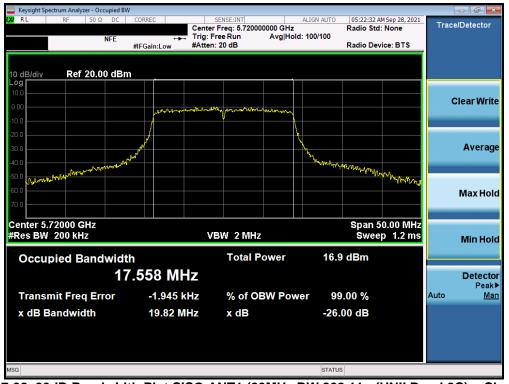
Plot 7-36. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dega 22 of 244		
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Plot 7-37. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



Plot 7-38. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N: Test Dates:		EUT Type:		Dage 24 of 244	
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 34 of 241	
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Keysight Spectrum Analyzer - Occupied BV	V				- <b>6 -</b>
NFE	#IFGain:Low #Atte	SENSE:INT  er Freq: 5.500000000 GHz Free Run Avg Hol n: 20 dB	ALIGN AUTO 07:35:46 A Radio Std d: 100/100 Radio Dev		Trace/Detector
10 dB/div Ref 20.00 dBn Log 10.0 0.00	ก 	ortogen and the monant of the			Clear Write
-20.0 -30.0 -40.0 -50.0	مر مرکس الم		V V		Average
-70.0				and admitship	Max Hold
Center 5.50000 GHz #Res BW 200 kHz Occupied Bandwidt		VBW 2 MHz Total Power		50.00 MHz p 1.2 ms	Min Hold
	3.905 MHz				Detector Peak▶
Transmit Freq Error x dB Bandwidth	21.118 kHz 20.62 MHz	% of OBW Pow x dB	ver 99.00 % -26.00 dB		Auto <u>Man</u>
MSG			STATUS		

Plot 7-39. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



Plot 7-40. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 25 of 244	
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 35 of 241	
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Keysight Spectrum Analyzer - O	ccupied BW								- • • <del>•</del>
10 dB/div Ref 20.0	NFE #IFGai	Center Trig: Fi	SENSE:INT Freq: 5.720000 ree Run : 20 dB		ALIGN AUTO : 100/100	07:38:41 Al Radio Std: Radio Dev		Trac	e/Detector
Log 10.0 -10.0		JAmbula-scapethillydynataarwa	nghayan ana	connect					Clear Write
-30.0	Jol -				h.				Average
-40.0 -50.0 -60.0 -70.0					ч,с-ч,гч,	$\mathcal{M}$	MANIAN LING		Max Hold
Center 5.72000 GHz #Res BW 200 kHz	1 - 1 - 141	VE	BW 2 MHz		49.6	Swee	0.00 MHz p 1.2 ms		Min Hold
Occupied Bandwidth Total Power 18.6 dBm 18.870 MHz									Detector Peak▶
Transmit Freq Er x dB Bandwidth		6.581 kHz 0.53 MHz	% of OE x dB	3W Powe		.00 % 00 dB		Auto	Man
MSG					STATUS				

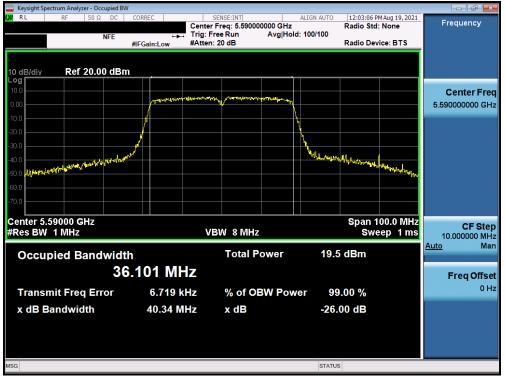
Plot 7-41. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



Plot 7-42. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 26 of 244
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset	Page 36 of 241	
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Plot 7-43. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



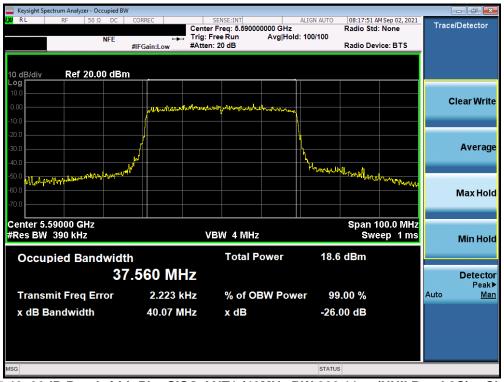
Plot 7-44. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 07 af 044
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 37 of 241
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Keysight Spectrum Analyzer - Occupie	d BW			
μα RL RF 50 Ω D0	Cer Trig	SENSE:INT A ter Freq: 5.51000000 GHz g: Free Run Avg Hold: ten: 20 dB	ALIGN AUTO 08:16:18 AM Sep Radio Std: Non 100/100 Radio Device: E	e Trace/Detector
10 dB/div Ref 20.00 d Log 10.0 0.00 -10.0	Bm .	hand for the second of the seco		Clear Write
-20.0 -30.0 -40.0 -50.0	N. N		humanen and aline	Average
-60.0				Max Hold
Center 5.51000 GHz #Res BW 390 kHz Occupied Bandwi	dth	VBW 4 MHz Total Power	Span 100.0 Sweep 18.6 dBm	
	37.623 MHz			Detector Peak▶
Transmit Freq Error x dB Bandwidth	-45.798 kHz 39.95 MHz	% of OBW Powe x dB	er 99.00 % -26.00 dB	Auto <u>Man</u>
MSG			STATUS	

Plot 7-45. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



Plot 7-46. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dogo 20 of 244		
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Keysight Spectrum Analyzer - Occupied					
KX RL RF 50Ω DC	Cent Trig:	SENSE:INT er Freq: 5.710000000 GHz Free Run Avg Hol	ALIGN AUTO 08:19:39 A Radio Std d: 100/100 Radio Dev		Trace/Detector
	#IFGain:Low #Atte	en: 20 dB	Radio Dev	ice: BTS	
10 dB/div Ref 20.00 dE	8m				
10.0					
0.00	where the second states and the second	whether and the state of the second second			Clear Write
-10.0					
-20.0					
-30.0	<u></u>		<b>A</b>		Average
-40.0	and the second s		Jon to Market Market Marker		
-50.0 -60.0				www.	
-70.0					Max Hold
Center 5.71000 GHz #Res BW 390 kHz	,	VBW 4 MHz		00.0 MHz ep 1 ms	
					Min Hold
Occupied Bandwid		Total Power	18.4 dBm		
3	7.696 MHz				Detector
Transmit Freq Error	-38.122 kHz	% of OBW Pow	ver 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	39.87 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-47. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)



Plot 7-48. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dara 00 at 044
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 39 of 241
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🧫 Keysight Spectrum Analyzer - Occupied I					
μα RL RF 50Ω DC NFE 10 dB/div Ref 20.00 dB	HFGain:Low #Atte	SENSE:INT Pr Freq: 5.61000000 GHz Free Run Avg Hol n: 20 dB	Radio S d: 100/100	PM Aug 19, 2021 td: None evice: BTS	Frequency
		and a constraint of the second s			Center Freq 5.610000000 GHz
-20.0 -30.0 -40.0 -50.0 whereaster the second			M. Marthalulananan	willingthemapping	
-60.0			Span	200.0 MHz	CF Step
#Res BW 820 kHz Occupied Bandwid	lth	/BW 8 MHz Total Power	20.2 dBm	veep 1 ms	20.000000 MHz <u>Auto</u> Man
/ Transmit Freq Error	5.365 MHz -15.844 kHz	% of OBW Pow	ver 99.00 %		Freq Offset 0 Hz
x dB Bandwidth	81.44 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-49. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)



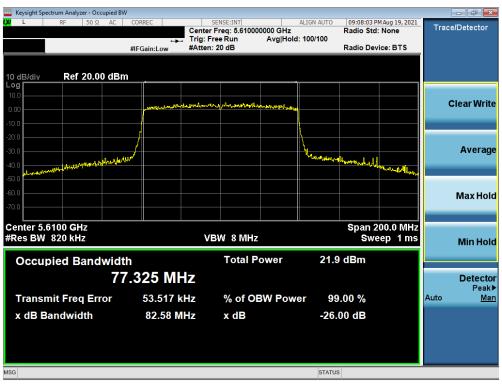
Plot 7-50. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dogo 40 of 244		
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Keysight Spectrum Analyzer - Occupied B <sup>1</sup>	N				
IXI RL RF 50Ω DC	🛶 Trig: I	SENSE:INT r Freq: 5.530000000 GHz Free Run Avg Hol n: 20 dB	Radio : d: 100/100	23 AM Sep 28, 2021 Std: None Device: BTS	Trace/Detector
10 dB/div Ref 20.00 dBr	n				
10.00	Jan Marine Ma	الار وروده المحفظ ا	v		Clear Write
-10.0					
-20.0			4		Average
-50.0 montanews of routing marked of the	หที่ <u></u>		Www.uphurbyhunghung	hand hat have a find a filler	
-60.0					Max Hold
Center 5.5300 GHz #Res BW 820 kHz	V	/BW 8 MHz		n 200.0 MHz weep 1 ms	Min Hold
Occupied Bandwid	th	Total Power	17.3 dBm		
	7.264 MHz				Detector Peak▶
Transmit Freq Error	-33.349 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	81.65 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-51. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)



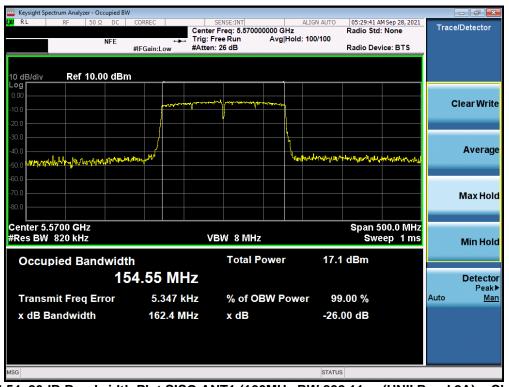
Plot 7-52. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 44 af 044
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Keysight Spectrum Analyzer - Occupied BV	V				
XX RL RF 50Ω DC	Trig:	SENSE:INT er Freq: 5.690000000 GHz Free Run Avg Ho en: 20 dB	Radio Id: 100/100	4:40 AM Sep 28, 2021 • Std: None • Device: BTS	Trace/Detector
10 dB/div Ref 20.00 dBn	n ,				
0.00	Jugonaroward	man ang diterretunden strategy og ge	Lal <mark>l</mark>		Clear Write
-10.0					Average
-30.0 -40.0 -50.0	AND I I		Windwiry Windows	March Martine martine	Average
-60.0					Max Hold
Center 5.6900 GHz #Res BW 820 kHz	I,	VBW 8 MHz		an 200.0 MHz Sweep 1 ms	Min Hold
Occupied Bandwidt	h	Total Power	19.4 dBn	า	
	7.003 MHz				Detector Peak▶
Transmit Freq Error	-42.867 kHz	% of OBW Pov	wer 99.00 %	0	Auto <u>Man</u>
x dB Bandwidth	81.25 MHz	x dB	-26.00 dB	3	
MSG			STATUS		

Plot 7-53. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)



Plot 7-54. 26dB Bandwidth Plot SISO ANT1 (160MHz BW 802.11ac (UNII Band 2A) - Ch. 114)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager			
Test Report S/N:	Test Dates:	EUT Type:		Dogo 42 of 244			
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🔤 Keysight Spectrum Analyzer - Oc									
	DC CORREC	Center F			ALIGN AUTO : 100/100	09:19:23 A Radio Std Radio Dev		Trace	:/Detector
10 dB/div Ref 20.0		and a second second second	pohanunstrangenge	Գ÷⊷kJanagen				c	lear Write
-20.0 -30.0 -40.0 -50.0 magginghod af her	nn.helpen				Lupwer Wallah	<sub>พ</sub> ร้างไปปฏ	hlunmenpusp		Average
-60.0									Max Hold
Center 5.5700 GHz #Res BW 510 kHz Occupied Band	lwidth	#VE	3W 8 MHz Total Po		17.2		00.0 MHz 1.467 ms		Min Hold
Transmit Freq En	<b>154.4</b> ( ror -11	6 MHz 1.785 kHz 61.7 MHz	% of OB		ər 99	.00 % 00 dB		Auto	Detector Peak► <u>Man</u>
MSG					STATUS	5			

Plot 7-55. 26dB Bandwidth Plot SISO ANT1 (160MHz BW 802.11ax (UNII Band 2A) - Ch. 114)

FCC ID: PY7-95324M	PCTEST* Proud to be part of @ element				
Test Report S/N:	Test Dates:	EUT Type:		Dogo 42 of 244	
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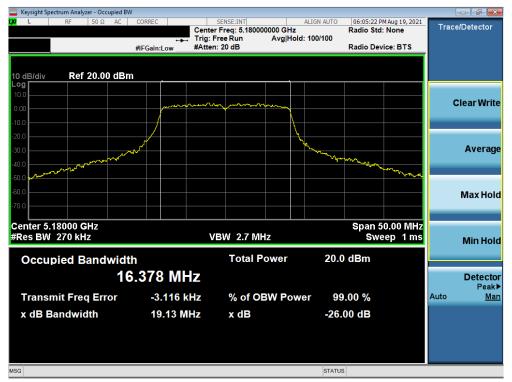
# SISO Antenna-2 26dB Bandwidth Measurements

1	<b>F</b>	Oherment			Measured 26dB
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Bandwidth
	5180	36	а	6	[MHz] 19.13
	5200	40	a	6	18.95
	5240	48	a	6	18.99
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	20.77
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	20.21
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	20.36
+	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	21.02
Band	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	20.73
Ba	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	20.97
	5190	38	n (40MHz)	13.5/15 (MCS0)	39.39
	5230	46	n (40MHz)	13.5/15 (MCS0)	39.38
	5190	38	ax (40MHz)	13.5/15 (MCS0)	40.36
	5230	46	ax (40MHz)	13.5/15 (MCS0)	40.38
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	82.02
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	81.94
P A	5250	50	ac (160MHz)	58.5/65 (MCS0)	166.20
Band 1/2A	5250	50	ax (160MHz)	58.5/65 (MCS0)	160.70
	5260	52	а	6	18.97
	5280	56	а	6	18.94
	5320	64	а	6	18.82
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	20.04
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	20.24
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	20.47
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	20.79
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	20.84
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	20.99
	5270	54	n (40MHz)	13.5/15 (MCS0)	39.53
	5310	62	n (40MHz)	13.5/15 (MCS0)	39.73
	5270	54	ax (40MHz)	13.5/15 (MCS0)	40.38
	5310	62	ax (40MHz)	13.5/15 (MCS0)	40.31
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	81.68
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	81.98
	5500	100	а	6	18.96
	5600	120	а	6	19.11
	5720	144	а	6	18.92
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	20.40
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	20.39
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	20.32
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	20.86
	5580	120	ax (20MHz)	6.5/7.2 (MCS0)	20.97
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	21.02
	5510	102	n (40MHz)	13.5/15 (MCS0)	39.51
2C	5590	118	n (40MHz)	13.5/15 (MCS0)	39.58
Band 2C	5710	142	n (40MHz)	13.5/15 (MCS0)	39.52
ä	5510	102	ax (40MHz)	13.5/15 (MCS0)	40.46
	5590	118	ax (40MHz)	13.5/15 (MCS0)	40.21
	5710	142	ax (40MHz)	13.5/15 (MCS0)	40.37
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	81.44
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	81.84
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	81.63
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	81.88
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	82.58
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	82.16
	5570	114	ac (160MHz)	29.3/32.5 (MCS0)	162.50

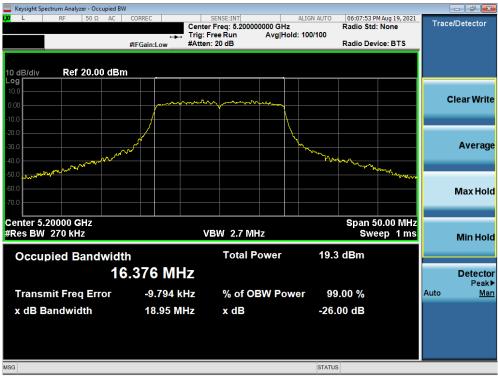
Table 7-3. Conducted Bandwidth Measurements SISO ANT2

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION) SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 44 of 244
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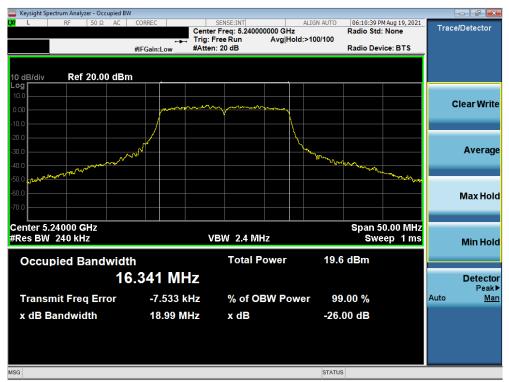
Plot 7-56. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 36)



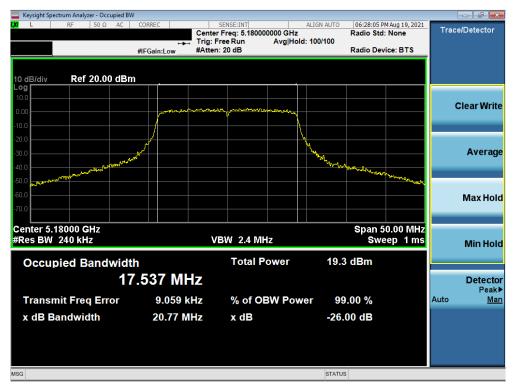
Plot 7-57. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 40)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dage 45 of 244					
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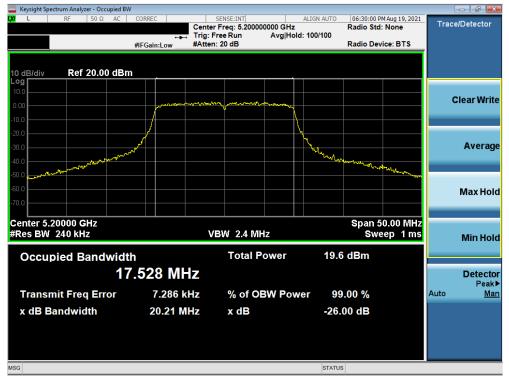




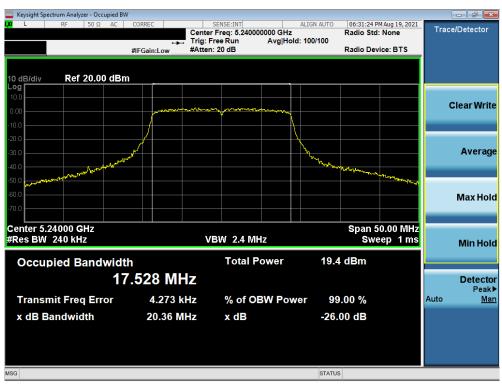
Plot 7-59. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 46 of 244
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Plot 7-60. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)



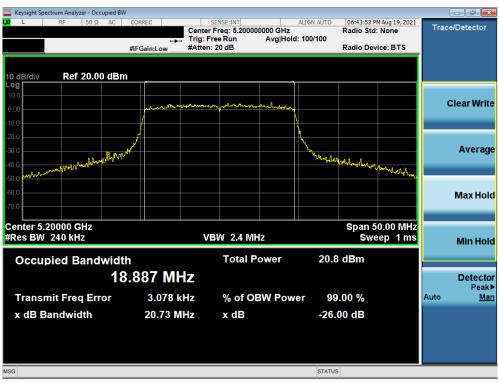
Plot 7-61. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dogo 47 of 044					
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Keysight Spectrum Analyzer - Occup	ied BW					
L RF 50 Ω	AC CORREC	SENSE:INT	ALIGN AUTO	06:42:30 PM Aug		Trace/Detector
		Center Freq: 5.18000 Trig: Free Run	0000 GHz Avg Hold: 100/100	Radio Std: No	ne	Trace/Delector
	Radio Device:	BTS				
	#IFGain:Low	#Atten: 20 dB		Radio Device.	513	
10 dB/div Ref 20.00	dBm					
Log						
10.0						
0.00	mound	what was more thank	mannahar			Clear Write
-10.0						
-20.0			<u> </u>			
-30.0			100 Mar.			Average
and the second second second	manun		Hulma	marilla no. I.		·····
-30.0 -40.0 -50.0 when month with the				mala male grave	nh.	
-50.0						
-60.0						
						Max Hold
-70.0						
				<b>A</b>		
Center 5.18000 GHz				Span 50.0		
#Res BW 240 kHz		VBW 2.4 MHz			1 ms	Min Hold
Occupied Bandw	vidth	Total P	ower 20.	9 dBm		
	18.902 MH	7				Detector
	10.302 WIN	2				Detector Peak►
Transmit Freq Erro	r 6.299 kl	Hz % of Ol	3W Power 9	9.00 %	Au	
	24.02.14					
x dB Bandwidth	21.02 MI	Hz xdB	-20	.00 dB		
MSG			STAT	JS		

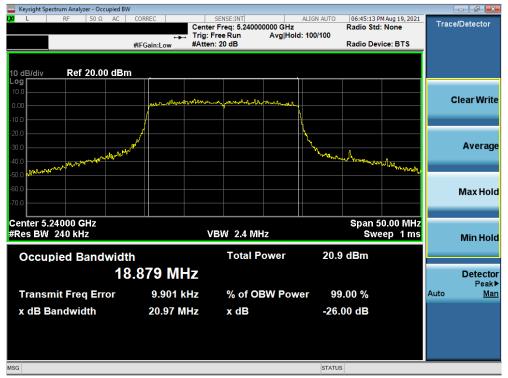
Plot 7-62. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)



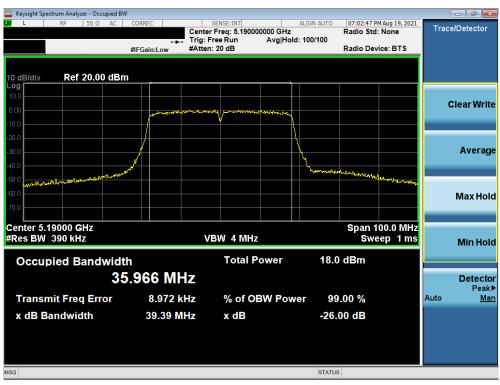
Plot 7-63. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dogo 40 of 244					
1M2108040087-09.PY7	8/2/2021 - 9/10/2021	Portable Handset		Page 48 of 241					
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Plot 7-64. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)



Plot 7-65. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dage 40 of 244					
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Keysight	t Spectrum Ana	alyzer - Occ	upied BW											
LXI L	RF	<u>50 Ω</u>	AC	CORREC		SENSE:IN			ALIGN	I AUTO		M Aug 19, 2021	Tree	e/Detector
		Center Freq: 5.23000000 GHz Radio Std: None									Trac	e/Detector		
						g: Free Ru	י	Avg Ho	ld:>100	0/100				
				#IFGain:L	ow #A	tten: 20 dB					Radio Dev	vice: BTS		
	_													
10 dB/di	V RE	ef 20.00	) dBm											
Log														
10.0														Clear Write
0.00					will an and the second	word prov	ريد (الاستى ال	and the second second						slear write
				1		Ŷ			{					
-10.0				1					1					
-20.0				_/_					<u> </u>			<u> </u>		
-30.0				۲					X					Average
			_	کمر					<b>1</b>					Arenage
-40.0			al manager							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	with making him			
-50.0	and the states	Jump Con										and the state of t		
-60.0														Max Hold
-70.0														
													_	
Center	5.23000	CH <sub>7</sub>									Snan 1	00.0 MHz	-	
	W 390 k					VBW 4	MH-7					eep 1 ms		
#Res D	W 390 N	12				VDVV 4	IVITIZ				SWO	eep rins		Min Hold
		_				_				10.5				
Occ	upied	Band	width			TO	tal Po	ower		19.7	dBm			
														Detector
			35	.967	MHz									Detector
														Peak►
Tran	ismit Fr	eq Err	or		722 Hz	%	of OE	3W Pov	ver	99	.00 %		Auto	<u>Man</u>
v dD	Bandw	i dth		20	38 MHz	хс	ю			26	00 dB			
	Danuw	laun		59.		XU	Б			-20.	JU QB			
MSG										STATUS				

Plot 7-66. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)



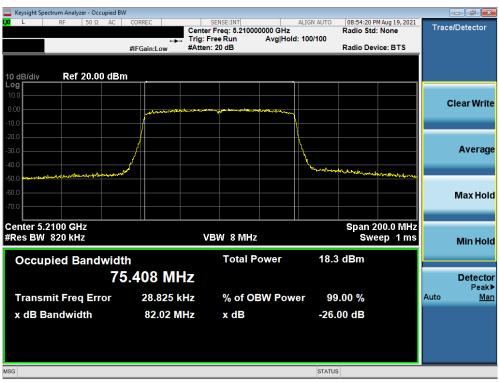
Plot 7-67. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dogo 50 of 244					
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🔤 Keysight S	Spectrum Ana	lyzer - Occu	upied BW									
LXI L	RF	50 Ω	AC	CORREC		SENSE:INT		ALIGN AUTO		M Aug 19, 2021	Tree	e/Detector
						nter Freq: 5.2300			Radio Std	: None	Trac	elDelector
						g: Free Run	Avg Hol	d: 100/100				
				#IFGain:Lo	w #A	tten: 20 dB			Radio Dev	/ice: BTS		
10 dB/div	Bo	f 20.00	dBm									
Log	Re	20.00	UDIII									
10.0												
					t set in south	manders propriete						Clear Write
0.00				- Anna			a provide the second					
-10.0								\				
-20.0								ų				
				1				ι,				_
-30.0								1				Average
-40.0		6101	Alu <sup>m</sup>	//r				manulu	a Manyana			
50.0 km	manutonte	Construction of the second							* kale	all work of the		
-50.0 😽												
-60.0												Max Hold
-70.0												maxmora
-70.0											_	
Center 5	5 23000	GH7							Snan 1	00.0 MHz	_	
#Res BV						VBW 4 MH	7			eep 1 ms		
#Res DV	4 330 K	12					2		300	eep mis		Min Hold
0						Total	Power	24 5	dBm			
Occi	upied I	sana	wiatr			Total	rower	21.5	UDIII			
			37	649	MHz							Detector
			01	.070								Peak►
Trans	smit Fre	q Erro	or	4.0	00 kHz	% of C	BW Pow	ver 99	.00 %		Auto	Man
	D	-141-		10				0.0				
x dB	Bandwi	idth		40.	38 MHz	x dB		-26.	00 dB			
MSG								STATUS				

Plot 7-68. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



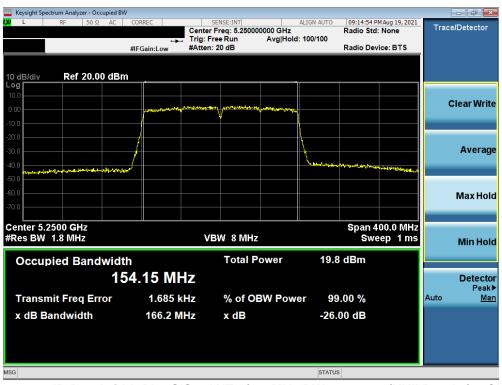
Plot 7-69. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Daga 51 of 244					
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Dd     L     RF     50 Ω     AC     CORREC     SENSE:INT     ALIGN AUTO     [09:02:52 PM Aug 19, 2021]       Center Freq:     S.210000000 GHz     Radio Std: None       Trig:     Free Run     Avg Hold:     100/100       #IFGain:Low     #IFGain:Low     #Atten:     20 dB
Center Pred: 0.21000000 GH2 Radio Sci. None Trig: Free Run Avg Hold: 100/100 Radio Device: BTS 10 dB/div Ref 20.00 dBm
#IFGain:Low     #Atten: 20 dB     Radio Device: BTS       10 dB/div     Ref 20.00 dBm     Image: Clear W       10 0     Image: Clear W     Image: Clear W
10 dB/div Ref 20.00 dBm Log 100 0.00 Clear W
Log 10.0 0.00 Clear W
Log 10.0 0.00 Clear W
Log 100 0.00 Clear W
10.0 Clear W
0.00 Clear W
-30.0 Aver
-50 0
-60.0 Max H
-70.0
Center 5.2100 GHz Span 200.0 MHz
#Res BW 820 KHZ VBW 8 WHZ Sweep 1 His Min H
Occupied Bandwidth Total Power 19.6 dBm
77.153 MHz Dete
17.153 MHZ Dete
Transmit Freq Error 69.457 kHz % of OBW Power 99.00 %
x dB Bandwidth 81.94 MHz x dB -26.00 dB
MSG STATUS

Plot 7-70. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)



Plot 7-71. 26dB Bandwidth Plot SISO ANT2 (160MHz BW 802.11ac (UNII Band 1) - Ch. 50)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
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Keysight Spectrum Analyzer - Occupied BW	1					
<mark>(X)</mark> RL RF 50Ω DC		SENSE:INT r Freq: 5.250000000 GHz	Radio Std	M Sep 28, 2021 : None	Trace/De	etector
NFE		Free Run Avg Holo n: 20 dB	d: 100/100 Radio Dev	vice: BTS		
10 dB/div Ref 20.00 dBm	<u> </u>					
Log 10.0						
0.00					Clea	ar Write
-10.0	mighting mary have the	the Anna my many				
-20.0		_				
-30.0					4	verage
-40.0	<i>J</i>					
-50.0 +b-44pt///////////////////////////////////	MT		Toleston and a state of the second	Manadata		ax Hold
-70.0					IVI	ax noiu
Center 5.2500 GHz				00.0 MHz		
#Res BW 820 kHz	v	/BW 8 MHz		eep 1 ms	M	lin Hold
O	-	Total Power	14.9 dBm			intriord
Occupied Bandwidt		Total Power	14.9 dBm			
15	54.03 MHz				D	etector Peak▶
Transmit Freq Error	112.61 kHz	% of OBW Pow	er 99.00 %		Auto	Man
x dB Bandwidth	160.7 MHz	x dB	-26.00 dB			
MSG			STATUS			

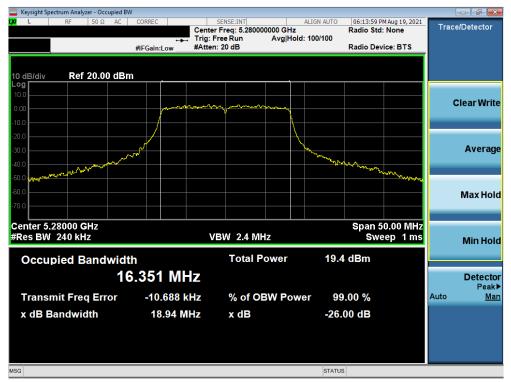
Plot 7-72. 26dB Bandwidth Plot SISO ANT2 (160MHz BW 802.11ax (UNII Band 1) - Ch. 50)



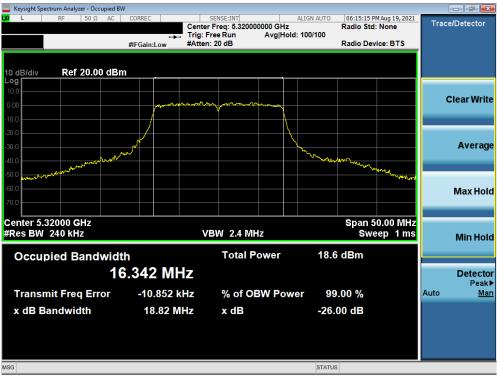
Plot 7-73. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2A) - Ch. 52)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 52 of 244
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Plot 7-74. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2A) - Ch. 56)



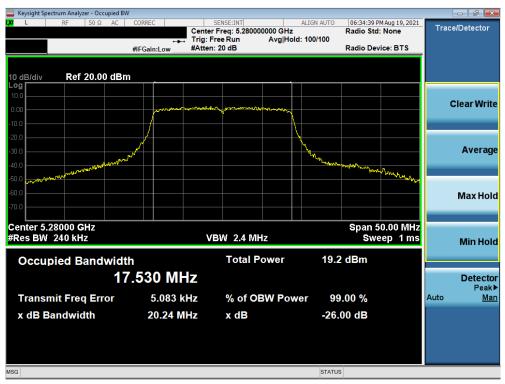
Plot 7-75. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2A) - Ch. 64)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dage 54 of 244					
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🔤 Keysight S	pectrum Analy	zer - Occu	upied BW											
LXI L	RF	50 Ω	AC	CORREC			NSE:INT			GN AUTO		M Aug 19, 2021	Tree	e/Detector
							req: 5.26000				Radio Std	: None	Trac	elDetector
						rig: Fre		Avg Ho	old: 10	00/100				
				#IFGain:L	.ow #	Atten: 2	0 dB				Radio Dev	ice: BTS		
	B - 6	~~ ~~												
10 dB/div	Ref	20.00	dBm											
Log														
10.0														Clear Write
0.00					montan	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		maria						
-10.0				l X			Ì							
-10.0														
-20.0									<u> </u>					
-30.0				<i>A</i>										Average
			man							mar .				
-40.0		Marthan Mart	M-74								- Marten - Dorantes / Con	w		
-50.0	worker for the second											Wwwwwwwwwwwww		
-60.0														Max Hold
-70.0														
Center 5	5.26000 G	Hz									Span 5	0.00 MHz		
#Res BV						VB	N 2.4 MH	17				ep 1 ms		
#Ttes 51	1 2-10 M							12						Min Hold
0	united D						Total P	owor		10.2	dBm			
Occu	ipied B	ana	wiath				TUtal F	Ower		19.2	UDIII			
			17	537	MHz	,								Detector
			· / ·	.557		4								Peak►
Trans	smit Fre	a Erro	or	8.	736 kH	z	% of O	BW Po	wer	99	.00 %		Auto	Man
x dB	Bandwie	dth		20	.04 MH	Z	x dB			-26.0	00 dB			
MSG										STATUS				

Plot 7-76. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)



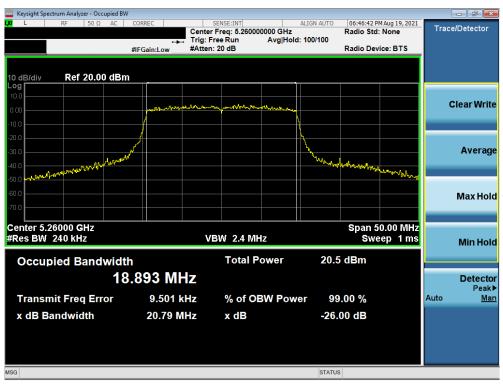
Plot 7-77. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
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🔤 Keysight Sp	ectrum Analyzer -	Occupied	H BW								
LXI L	RF 5	0Ω AC	CORREC		SENSE:INT		ALIGN AUTO		M Aug 19, 2021	Tree	e/Detector
					nter Freq: 5.3200			Radio Std	: None	Trac	Detector
					g: Free Run	Avg Hold	l: 100/100				
			#IFGain	:Low #A	tten: 20 dB			Radio Dev	lice: BTS		
10 dB/div	Ref 20	1.00 di	Bm								
Log											
10.0											Clear Write
0.00				and the second second	man manner	mon					lear write
10.0			1			l ì					
-10.0			/								
-20.0			/			<u>`</u>					
-30.0			~~~				<b>N</b> 1				Average
-30.0			and the second				What is				Average
-40.0	and and a start of the	and					<sup>-</sup> Դովութ <sup></sup>	howwall			
-50.0	and and and and and a second								and		
-60.0											Max Hold
-70.0											maxinoia
-70.0										_	
Contor F	32000 GH							Onon 6			
		<u> </u>							0.00 MHz		
#Res BM	240 kHz				VBW 2.4 M	HZ		SWe	eep 1 ms		Min Hold
Occu	pied Bar	ndwi	dth		Total F	ower	19.1	dBm			
		1	17.541	1 MHz							Detector
											Peak►
Trans	mit Freq E	rror	8	.269 kHz	% of O	BW Pow	er 99	.00 %		Auto	<u>Man</u>
			~				0.0				
хаве	Bandwidth	1	20	).47 MHz	x dB		-20.	00 dB			
MSG							STATUS				
MSG							STATUS				

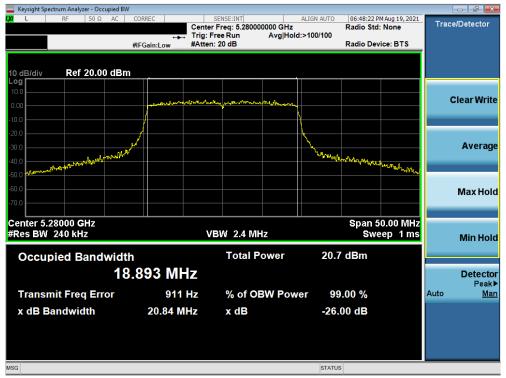
Plot 7-78. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)



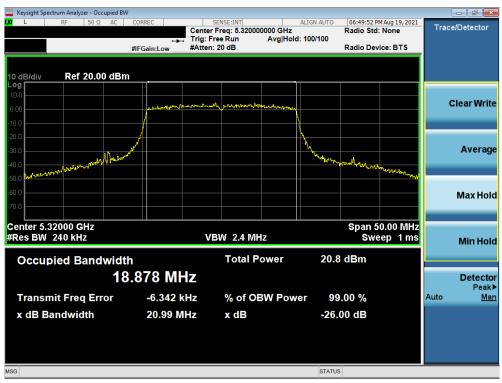
Plot 7-79. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 52)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo EC of 244
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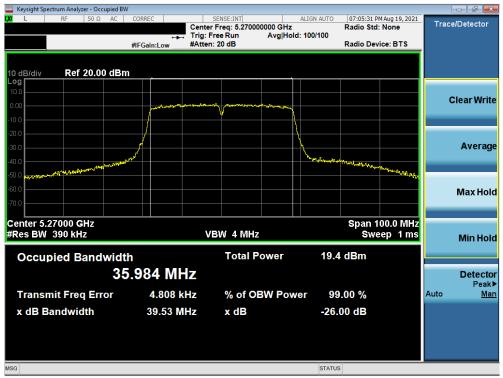
Plot 7-80. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)



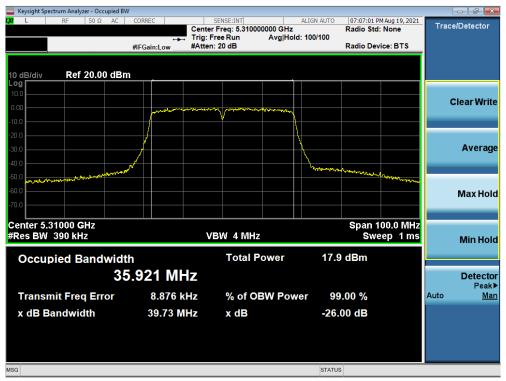
Plot 7-81. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dege EZ of 244
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Plot 7-82. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)



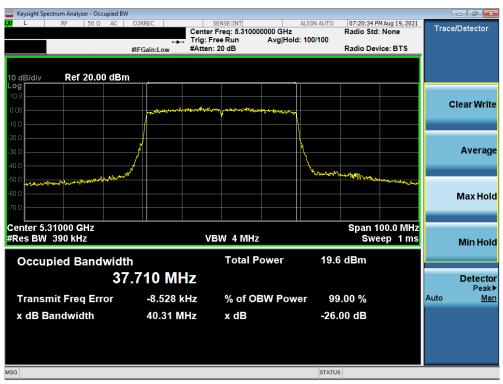
Plot 7-83. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 59 of 244
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Keysight Spectrum Analyzer - Occupied BW						
L RF 50 Ω AC CO	DRREC	SENSE:INT	ALIGN AUTO	07:19:04 PM A		Trace/Detector
		er Freq: 5.270000000 Free Run Av	) GHz vg Hold:>100/100	Radio Std: N	one	The conditioned of the condition
#1		n: 20 dB	g 1010.>100/100	Radio Device	BTS	
	Gam.eow					
10 dB/div Ref 20.00 dBm	_					
Log						
10.0						Clear Write
0.00	marinetrant	when at the way and a prove	-marcyr			Ciedi Wille
-10.0			<u>\</u>			
-20.0						
						•
-30.0						Average
-40.0			Marth	Mar		
-50.0 Malaparana				Mar Coloring	manna	
-60.0						Max Hold
-70.0						
Center 5.27000 GHz				Span 100		
#Res BW 390 kHz		VBW 4 MHz		Swee	p 1 ms	Min Hold
		T-4-L D-	00.0			
Occupied Bandwidth		Total Pow	er 20.3	dBm		
37 7	725 MHz					Detector
51.1						Peak►
Transmit Freq Error	40.332 kHz	% of OBW	Power 99	.00 %		Auto <u>Man</u>
x dB Bandwidth	40.38 MHz	x dB	-26.	00 dB		
	-10100 11112	A GE	20.	oo ab		
MSG			STATUS	3		

Plot 7-84. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)



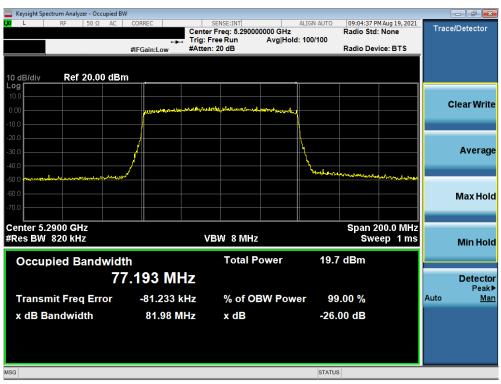
Plot 7-85. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dege E0 of 244
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Keysight Spectrum Analyzer - Occupied B\	N				
L RF 50Ω AC	CORREC	SENSE:INT		5 PM Aug 19, 2021	Trace/Detector
		er Freq: 5.290000000 GHz Free Run Avg Hol	Radio S ld: 100/100	Std: None	Hacebetetet
		n: 20 dB		evice: BTS	
	#IT Galil.Eow				
10 dB/div Ref 20.00 dBr	n				
Log					
10.0					Clear Write
0.00	and a line of the local data of the line o	and the second s			Clear Write
-10.0					
-20.0					
-30.0			+		Average
-40.0					
-50.0 Anternation demonstrated and	we have a second s		Mayles Maril Maril Maril		
-60.0					Max Hold
-70.0					
Center 5.2900 GHz			Spar	1 200.0 MHz	
#Res BW 820 kHz	١	/BW 8 MHz		weep 1 ms	Min Hold
				<u> </u>	MITTOU
Occupied Bandwidt	th	Total Power	18.5 dBm		
/	5.367 MHz				Detector
		~ ~ ~ ~ ~ ~ ~			Peak►
Transmit Freq Error	11.792 kHz	% of OBW Pov	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	81.68 MHz	x dB	-26.00 dB		
	01.00 10112	A dB	-20.00 dB		
100			074740		
MSG			STATUS		

Plot 7-86. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)



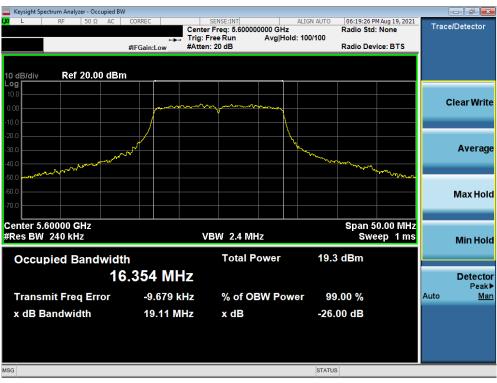
Plot 7-87. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dege 60 of 244
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Keysight Spectrum Analyzer - Occup					- • • <del>•</del>
L RF 50 Ω	AC CORREC	SENSE:INT	00000 GHz	06:16:43 PM Aug 19, 2021 Radio Std: None	Trace/Detector
	+	Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 20 dB		Radio Device: BTS	
10 dB/div Ref 20.00	dBm				
10.0					
0.00		and an and an and an and an and an	m		Clear Write
-10.0		<sup>1</sup>			
-20.0	/				
-30.0			- Vite		Average
	when		March and a start and a start a	×~~_	J
-40.0				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
-60.0					
-70.0					Max Hold
-70.0					
Center 5.50000 GHz				Span 50.00 MHz	
#Res BW 240 kHz		VBW 2.4 M	Hz	Sweep 1 ms	Min Hold
Occupied Dandu	ri al é la	Total F	Power 10	3 dBm	
Occupied Bandw				5 ubiii	
	16.345 MH	IZ			Detector Peak▶
Transmit Freq Erro	r -11.489 k	Hz % of O	BW Power 9	9.00 %	Auto <u>Man</u>
x dB Bandwidth	18.96 N			.00 dB	
X dB Bandwidth	18.90 N	IHZ X dB	-20	.00 dB	
MSG			STATU	JS	

Plot 7-88. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 100)



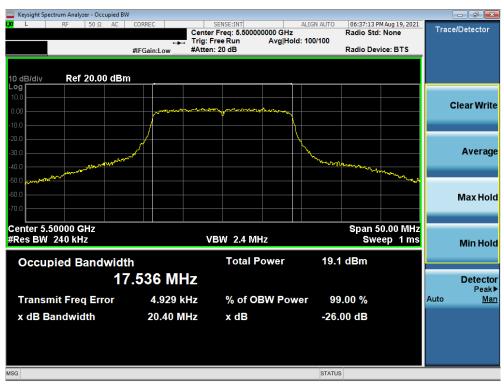
Plot 7-89. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 120)

FCC ID: PY7-95324M	Proved to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 61 of 244
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Keysight Spectrum Analyzer - Occupied B					
L RF 50Ω AC	CORREC	SENSE:INT Center Freg: 5.7200	ALIGN AUTO	06:21:48 PM Aug 19, 2021 Radio Std: None	Trace/Detector
		Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 20 dB		Radio Device: BTS	
10 dB/div Ref 20.00 dBr	n				
Log					
0.00		more anno			Clear Write
-10.0	from the second s	Ŷ			
-20.0					
	r .				Average
-30.0	N <sup>N</sup>		And a second sec		Average
-40.0				and the second s	
-50.0 Martin Martin					
-60.0					Max Hold
-70.0					
Center 5.72000 GHz				Span 50.00 MHz	
#Res BW 240 kHz		VBW 2.4 M	Hz	Sweep 1 ms	Min Hold
					MITTOIC
Occupied Bandwid	th	Total F	Power 18.	1 dBm	
10	6.351 MH	z			Detector
					Peak►
Transmit Freq Error	-8.458 k	Hz % of O	BW Power 9	9.00 %	Auto <u>Man</u>
x dB Bandwidth	18.92 M	Hz x dB	-26	.00 dB	
MSG			STAT	US	

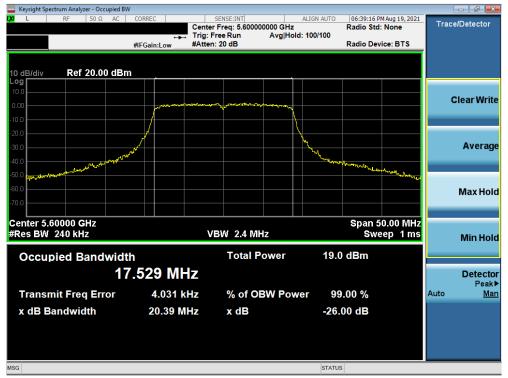
Plot 7-90. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 144)



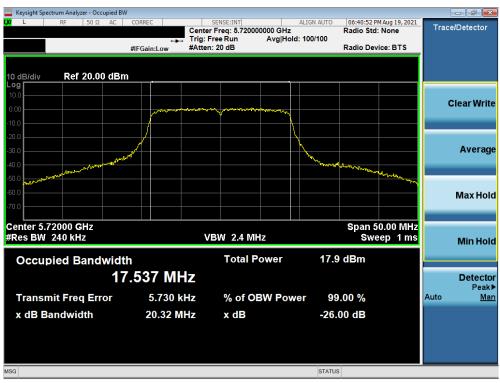
Plot 7-91. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 62 of 244
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Plot 7-92. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 116)



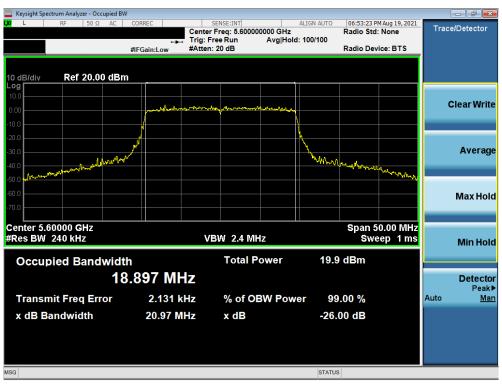
Plot 7-93. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: PY7-95324M	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 62 of 244	
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Keysight Spectrum Analyzer - Occupied BW					
L RF 50Ω AC				PM Aug 19, 2021	Trace/Detector
		req: 5.500000000 GHz	Radio St	d: None	Trace/Detector
	🛶 Trig: Fre				
	#IFGain:Low #Atten: 2	0 dB	Radio D	evice: BTS	
10 dB/div Ref 20.00 dBm					
Log					
10.0					Clear Write
0.00	mal has markly when	monteman			Clear write
	4				
-10.0	/				
-20.0		I A			
-30.0			<b>h</b>		Average
30.0			my my hard		Average
-40.0			and the second of the second	Museum a	
-40.0 -50.0 White man and a second a second a second				1 The Charleson	
-60.0					Max Hold
-70.0					
Center 5.50000 GHz			Snan	50.00 MHz	
#Res BW 240 kHz	VB	N 2.4 MHz		veep 1 ms	
#Res BW 240 RH2	VD	/v 2.4 IVINZ	31	reep mis	Min Hold
		T-4-I D	00 C .ID		
Occupied Bandwidth		Total Power	20.6 dBm		
10	.915 MHz				Detector
10.					Detector Peak►
	4.040	0/ - CODIM D	- 00 00 0/		
Transmit Freq Error	4.248 kHz	% of OBW Power	r 99.00 %		Auto <u>Man</u>
x dB Bandwidth	20.86 MHz	x dB	-26.00 dB		
	20.00 WH2	X UD	-20.00 uB		
MSG			STATUS		

Plot 7-94. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



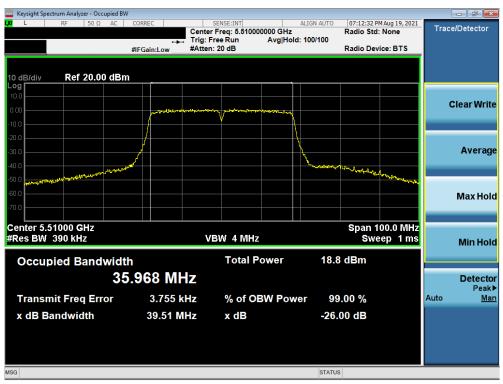
Plot 7-95. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
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L         RF         50 Ω         AC         CORREC         SENSE:INT         ALIGN AUTO         06:54:33 PM Aug 19,2021         Trace/De           Center Freq: 5.72000000 GHz         Center Freq: 5.72000000 GHz         Radio Std: None         Trace/De	4 4
Trig: Free Run Avg Hold: 100/100	
	tector
#IFGain:Low #Atten: 20 dB Radio Device: BTS	
10 dB/div Ref 20.00 dBm	
	ar Write
0.00 CIEC	ar write
	verage
	werage
-40.0	
40.0 Solo metamological Martin State	
-60.0 M	ax Hold
	axmond
Center 5.72000 GHz Span 50.00 MHz	
#Res BW 240 kHz VBW 2.4 MHz Sweep 1 ms M	lin Hold
Occupied Bandwidth Total Power 19.3 dBm	
18.894 MHz	etector
	Peak▶
Transmit Freq Error 7.847 kHz % of OBW Power 99.00 % Auto	<u>Man</u>
x dB Bandwidth 21.02 MHz x dB -26.00 dB	

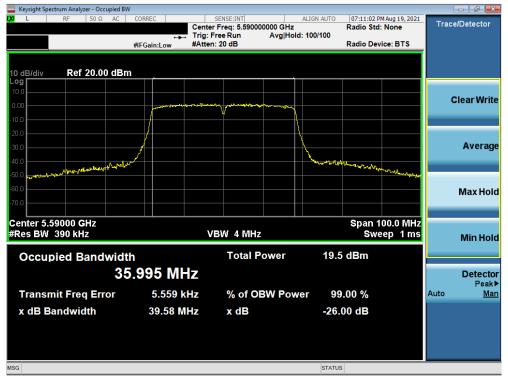
Plot 7-96. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



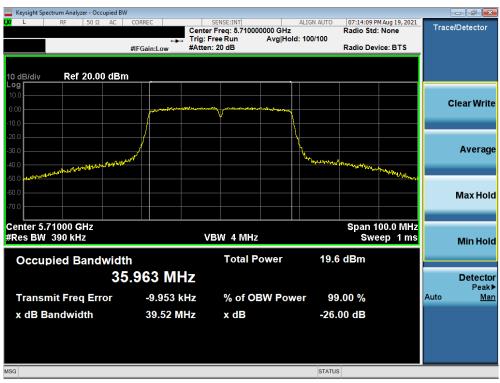
Plot 7-97. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dana 05 at 044
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Plot 7-98. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



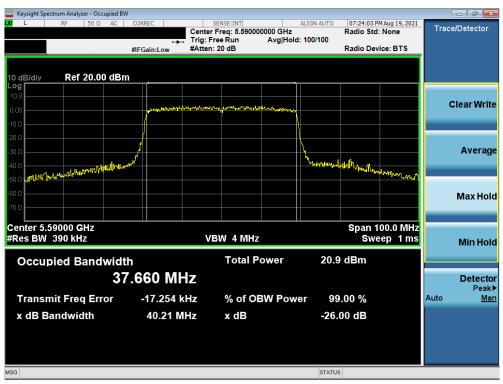
Plot 7-99. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 00 at 044
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Keysight Spectrum Analyzer - Occupied BW					- 6 <b>X</b>
L RF 50Ω AC C		SENSE:INT		7:22:26 PM Aug 19, 2021	Trace/Detector
		Freq: 5.510000000 GHz ree Run Avg Hol	Ra d: 100/100	adio Std: None	TheerBeleelor
#	FGain:Low #Atten:			dio Device: BTS	
	Gameon				
10 dB/div Ref 20.00 dBm					
Log 10.0					
					Clear Write
0.00	unger and the second and the	and the second states and the second states			orear mine
-10.0					
-20.0	/		\		
			A.		Average
-30.0					Average
-40.0			Www.www.hpalya	hand Hand	
-40.0 -50.0 million managener and a start				and when when	
-60.0					
					Max Hold
-70.0					
Center 5.51000 GHz				Span 100.0 MHz	
#Res BW 390 kHz	V	3W 4 MHz		Sweep 1 ms	
#RC3 DW 330 RH2	¥ .	500 4 10112		омеер ттіз	Min Hold
Occupied Bandwidth		Total Power	20.5 dl	Bm	
			20.0 01		
37.	615 MHz				Detector
					Peak►
Transmit Freq Error	1.731 kHz	% of OBW Pow	ver 99.00	0 %	Auto <u>Man</u>
x dB Bandwidth	40.46 MHz	x dB	-26.00	dB	
X db Banamath			20.00		
MSG			STATUS		

Plot 7-100. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



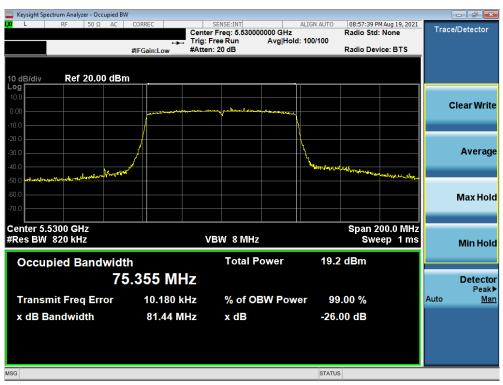
Plot 7-101. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: PY7-95324M	PCTEST <sup>®</sup> Proud to be part of <b>®</b> element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager			
Test Report S/N:	Test Dates:	EUT Type:		Daga 67 of 244			
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🔤 Keysight Spectrum Analyzer - Occupi	ied BW						
L RF 50Ω A	AC CORREC	SENSE:INT	ALIGN AUTO		M Aug 19, 2021	Tracel	Detector
		Center Freq: 5.71000 Trig: Free Run	0000 GHz Avg Hold: 100/100	Radio Std:	None	i i uccii	50100101
	+→→ #IEGain:Low	#Atten: 20 dB	Avginola. 100/100	Radio Dev	ice: BTS		
	an Gameon						
10 dB/div Ref 20.00 c	dBm						
Log							
						CI	ear Write
0.00		www.colonally.commendation	-march france				
-10.0							
-20.0							
-30.0	/		<b>N</b>				Average
-30.0	has have		man	1 a Autor			Average
-40.0 -50.0 when here have a fragment					whyle .		
-50.0					. And the state		
-60.0							Max Hold
-70.0							viax noiu
-70.0						_	
Center 5.71000 GHz				Snan 1	00.0 MHz		
#Res BW 390 kHz		VBW 4 MHz			ep 1 ms		Min Hald
							Min Hold
Occupied Bandw	idth	Total P	ower 21.	2 dBm			
	37.659 MH	Z					Detector
T	4.040 1-1	- 0/ - f OI		0 00 0/		A	Peak►
Transmit Freq Error	4.216 kł	HZ % of OL	3W Power 9	9.00 %		Auto	<u>Man</u>
x dB Bandwidth	40.37 MI	Hz xdB	-26	.00 dB			
MSG			STATU	JS			

Plot 7-102. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)



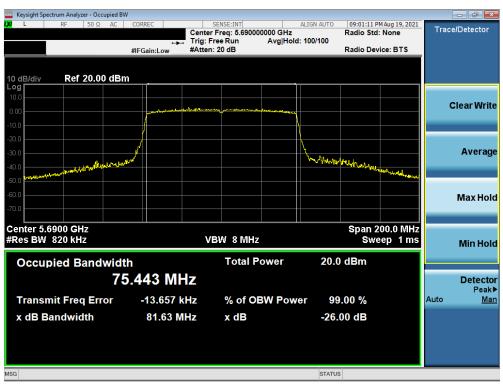
Plot 7-103. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)

FCC ID: PY7-95324M	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager			
Test Report S/N:	Test Dates:	EUT Type:		Dage 69 of 244			
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Keysight Spectrum Analyzer - Occupied I	BW						- 6
L RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO		4 Aug 19, 2021	Trace	Detector
		ter Freq: 5.610000000 G		Radio Std:	None	TTALE	Delector
		j:FreeRun Avg ten:20 dB	Hold: 100/100	Radio Devi	Inc. BTS		
	#IFGain:Low #At	ten. 20 dB		Radio Devi	ICE. BT3		
10 dB/div Ref 20.00 dB	tm						
Log							
10.0							
0.00	- her - relation of the	many monther more				С	lear Write
-10.0							
-20.0							
-30.0	. <u>}</u>    .		L.				Average
-30.0	المسيدية		Werne and				Average
-40.0				whicher	Monal		
-40.0 -50.0							
-60.0							
							Max Hold
-70.0							
Center 5.6100 GHz				Span 2	00.0 MHz		
#Res BW 820 kHz		VBW 8 MHz		Swe	ep 1 ms		<b>Min Hold</b>
Occupied Bandwid	ith	Total Power	r 20.4	dBm			
7	5.380 MHz						Detector
/	<b>3.300 MILZ</b>						Detector Peak▶
Transmit Freq Error	-3.719 kHz	% of OBW P	ower 00	.00 %		Auto	Man
Transmit rieg Entri	-3.7 13 KHZ		00000 33	.00 /0		/ lato	mari
x dB Bandwidth	81.84 MHz	x dB	-26.0	00 dB			
						_	
MSG			STATUS				

Plot 7-104. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)



Plot 7-105. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 60 of 244
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🔤 Kej	/sight Spectrum	n Analyzer - Oco	cupied BW									
L <mark>XI</mark> I	L R	F 50 Ω	AC COR	REC		NSE:INT		ALIGN AUTO		M Aug 19, 2021	Trac	e/Detector
					<b>T</b>	req: 5.53000		d: 100/100	Radio Std	None		
			#IFC	⊶ Gain:Low	#Atten: 2		Avginore	. 100/100	Radio Dev	ice: BTS		
10 dl	3/div	Ref 20.0	0 dBm									
Log 10.0												
												Clear Write
0.00				man	مهرورالهاليمريد	Mar Williams	and the state of the second state of the secon					olear mile
-10.0												
-20.0												
			1					N				Average
-30.0			1					۱ ۲				Average
-40.0		nontrally	dan Marina					- appropriate	rationstrates			
-50.0	with when the second	manner all for	basda							with solar and and and		
-60.0												
												Max Hold
-70.0											_	
Con	ter 5.530								Cnon 1			
	s BW 82				VD	N/8 MHz				00.0 MHz ep 1 ms		
#Re	S DVV 02				VDV				SWE	ep mis		Min Hold
		d Dand				Total P	ower	21.0	dBm			
	ccupie	u Banu				Total F	OWEI	21.0	ubili			
			77.1	08 MI	Z							Detector
												Peak▶
T	ransmit	Freq Err	or	-4.548	٢Hz	% of O	3W Pow	er 99	.00 %		Auto	<u>Man</u>
	dB Band	hwidth		81.88 N	11-	x dB		26	00 dB			
^		awiuui		01.00 W	INZ			-20.	JU UB			
MSG								STATUS				

Plot 7-106. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)



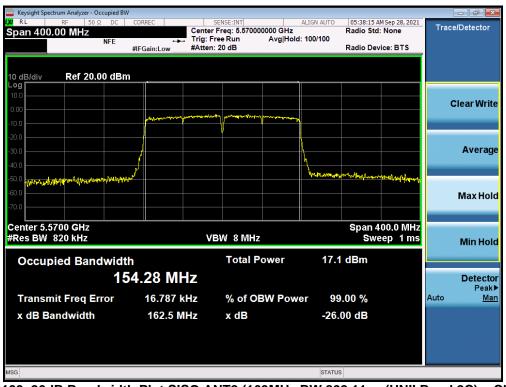
Plot 7-107. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager			
Test Report S/N:	Test Dates:	Dates: EUT Type:		Dage 70 of 244			
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Keysight Spectrum Analyzer - Occupied BW	/						
💢 L RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO	09:09:47 PM		Trace	/Detector
		nter Freq: 5.690000 g: Free Run	000 GHz Avg Hold: 100/100	Radio Std: I	None	mace	
		ten: 20 dB	Avginola. 100/100	Radio Devid	e: BTS		
	#PGall.cow			rtudio Derri			
10 dB/div Ref 20.00 dBn	า						
Log							
10.0							
0.00	and the second s	mannahurs	mathemation			C	lear Write
-10.0						_	
-20.0			R				
-30.0	J						Average
-40.0	,M/		مريا المريابي. مريا المريابي	man warden			
and the second					MULICAN No I		
-50.0							
-60.0							Max Hold
-70.0							
10.0							
Center 5.6900 GHz		· ·		Span 20	0.0 MHz		
#Res BW 820 kHz		VBW 8 MHz			ep 1 ms		
							Min Hold
Occupied Bandwidt	h	Total Po	wer 21.	9 dBm			
			2				
77	7.099 MHz						Detector
							Peak►
Transmit Freq Error	26.725 kHz	% of OB	W Power 9	9.00 %		Auto	Man
x dB Bandwidth	82.16 MHz	x dB	26	.00 dB			
		хub	-20	.00 aB			
MSG			STATU	JS			

Plot 7-108. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)



Plot 7-109. 26dB Bandwidth Plot SISO ANT2 (160MHz BW 802.11ac (UNII Band 2C) - Ch. 114)

FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager				
Test Report S/N:	Test Dates:	EUT Type:		Dege 71 of 244				
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Keysight Spectrum Analyzer - Oc										- • ×
M <sup>R RL</sup> RF 50 Ω Span 400.00 MHz	NFE	Gain:Low				ALIGN AUTO : 100/100	05:40:01 Al Radio Std: Radio Dev		Trace	Detector
10 dB/div Ref 20.0	0 dBm									
10.0			1	Whendersparing					c	lear Write
-10.0		and the second s	1/14009a/41+17.4	WATER AND PARTY A	NY Walt-Ibert Carpor					
-30.0						۱ ۲				Average
	hautherstondard					h Maria anali	-ipto-scalad.ongKyk	Yangan Malan yang		
-70.0										Max Hold
Center 5.5700 GHz #Res BW 820 kHz			VBV	∾8MHz				00.0 MHz ep 1 ms		Min Hold
Occupied Band				Total P	ower	17.9	dBm			
Transmit Freq Er		96 MH		% of OF	3W Powe	or 00	.00 %		Auto	Detector Peak▶ Man
x dB Bandwidth		162.3 MF		x dB			00 /8 00 dB		Auto	man
MSG						STATUS	6			

Plot 7-110. 26dB Bandwidth Plot SISO ANT2 (160MHz BW 802.11ax (UNII Band 2C) – Ch. 114)

FCC ID: PY7-95324M	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dogo 70 of 044	
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### 6dB Bandwidth Measurement – 802.11a/n/ac/ax §15.407 (e); RSS-Gen [6.2]

### **Test Overview and Limit**

The bandwidth at 6dB 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 6dB bandwidth.

# In the 5.725 – 5.850GHz band, the 6dB bandwidth must be $\geq$ 500 kHz.

# Test Procedure Used

ANSI C63.10-2013 – Section 6.9.2 KDB 789033 D02 v02r01 – Section C

# Test Settings

- The signal analyzers' automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. 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 = 100 kHz
- 3. VBW <u>></u> 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple

### Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

### Test Notes

None.

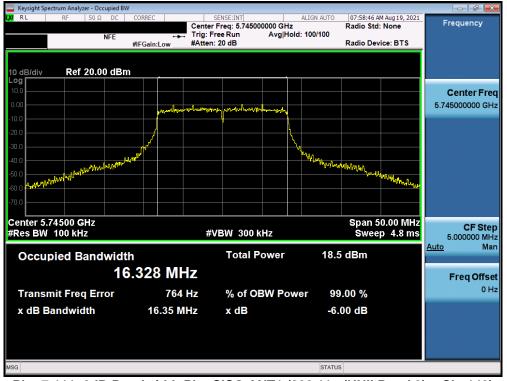
FCC ID: PY7-95324M	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 72 of 244	
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# SISO Antenna-1 6 dB Bandwidth Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	а	6	16.35
	5785	157	а	6	16.34
	5825	165	а	6	16.32
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.63
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.52
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.59
ო	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	18.36
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	18.39
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	18.91
	5755	151	n (40MHz)	13.5/15 (MCS0)	34.71
	5795	159	n (40MHz)	13.5/15 (MCS0)	35.33
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.77
	5795	159	ax (40MHz)	13.5/15 (MCS0)	36.03
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	74.17
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	75.22

Table 7-4. Conducted Bandwidth Measurements SISO ANT1



Plot 7-111. 6dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: PY7-95324M	PCTEST <sup>•</sup> Proud to be part of <b>@</b> element	MEASUREMENT REPORT (CERTIFICATION)	SONY	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dara 74 at 044	
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