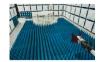


### PCTEST

7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. 410.290.6652 / Fax 410.290.6654 http://www.pctest.com



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

#### **Applicant Name:**

Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, 16677, Korea

### Date of Testing: 10/11/19 – 01/15/20 Test Site/Location: PCTEST Lab. Columbia, MD, USA Test Report Serial No.: 1M1911010179-06.A3L

# FCC ID: IC:

### A3LSMG986W

649E-SMG986W

APPLICANT:

Samsung Electronics Co., Ltd.

Application Type: Model/HVIN: EUT Type: Frequency Range: FCC Classification: FCC Rule Part(s): Test Procedure(s): Certification SM-G986W Portable Handset 5180 – 5825MHz Unlicensed National Information Infrastructure (UNII) Part 15 Subpart E (15.407) ANSI C63.10-2013, KDB 789033 D02 v02r01, KDB 648474 D03 v01r04, 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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	Channel		AN	JTT1	AN	JT2	MI	MO
UNII Band	UNII Band Bandwidth (MHz)		Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)	Max. Power (mW)	Max. Power (dBm)
1		5180 - 5240	36.559	15.63	39.264	15.94	36.736	15.65
2A	20	5260 - 5320	33.806	15.29	34.277	15.35	39.434	15.96
2C	20	5500 - 5720	35.481	15.50	37.411	15.73	39.135	15.93
3		5745 - 5825	39.446	15.96	39.537	15.97	38.184	15.82
1		5190 - 5230	21.979	13.42	24.322	13.86	22.336	13.49
2A	40	5270 - 5310	24.434	13.88	24.889	13.96	24.195	13.84
2C	40	5510 - 5710	24.946	13.97	24.946	13.97	24.986	13.98
3		5755 - 5795	25.061	13.99	24.889	13.96	24.965	13.97
1		5210	18.493	12.67	19.679	12.94	19.363	12.87
2A	80	5290	19.861	12.98	19.724	12.95	19.787	12.96
2C		5530 - 5690	19.588	12.92	18.880	12.76	19.874	12.98
3		5775	19.815	12.97	19.861	12.98	19.575	12.92

**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 Engineering Laboratory, Inc. 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 Engineering Lab located in Columbia, MD 21046, U.S.A.

- PCTEST is an ISO 17025-2005 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 2.0

#### 2.1 **Equipment Description**

The Equipment Under Test (EUT) is the Samsung Portable Handset FCC ID: A3LSMG986W. The test data contained in this report pertains only to the emissions due to the EUT's UNII transmitter.

Test Device Serial No.: 0306M, 0071M, 0388M, 0337M, 0930H, 0764H

#### 2.2 **Device Capabilities**

This device contains the following capabilities:

850 CDMA/EvDO Rev0/A, 1x Advanced (BC0), 850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (n71, n66, n41), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC, ANT+, Wireless Power Transfer

	Band 1		Band 2A	_	Band 2C		Band 3
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
36	5180	52	5260	100	5500	149	5745
:	:	:	:	:	:	:	:
42	5210	56	5280	120	5600	157	5785
:	:	:	:	:	:	:	:
48	5240	64	5320	144	5720	165	5825
	Та	hla 2 1 0	02 11 av (20MU-) E		Channel Oneret	~ ~ <u>~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ </u>	

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

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

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

С

	Band 2C
Ch.	Frequency (MHz)
102	5510
:	:
118	5590
:	:
142	5710

Ba	nd	3

	Bana o
Ch.	Frequency (MHz)
151	5755
:	:
159	5795

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

	Band 1	Band 1 Band 2A		Band 2C		Band 3		
Ch.	Frequency (MHz)		Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
42	5210		58	5290	106	5530	155	5775
		_			:			
					138	5690		

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

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Notes:

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

Mode	Antenna	Bandwidth [MHz]	Tone	Duty Cycle
		[101112]	26T	99.5
802.11ax			52T	99.7
NII RU	1		106T	99.4
		20	242T	98.4
		20	26T	99.5
802.11ax	2		52T	99.7
NII RU	2		106T	99.4
			242T	98.5
			26T	99.7
802.11ax	MIMO CDD	20	52T	99.3
NII RU			106T	98.6
			242T	96.9
			26T	99.5
802.11ax	1		52T 106T	99.7 99.4
NII RU		242T 484T		99.4 98.4
			97.2	
		40	26T	99.5
	2		52T	99.7
802.11ax NII RU			106T	99.3
			242T	98.4
			484T	96.9
	MIMO CDD	40	26T	99.6
802.11ax			52T	99.3
NII RU			106T	98.5
			242T	96.8
			484T	94.7
			26T	99.4
000.44			52T	99.7
802.11ax	1		106T	99.3
NII RU			242T 484T	98.5
				96.8 94.1
		80	996T 26T	94.1 99.5
			52T	99.5 99.7
802.11ax			106T	99.3
NII RU	2		242T	98.3
			484T	96.8
			996T	94.1
			26T	99.7
			52T	99.3
802.11ax	MIMO CDD	80	106T	98.5
NII RU		00	242T	96.8
			484T	94.5
			996T	93.9

#### Table 2-4. Measured Duty Cycles

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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2. The device employs MIMO technology. Below are the possible configurations.

WiFi Configurations		SISO		SDM		CDD/MIMO	
		ANT1	ANT2	ANT1	ANT2	ANT1	ANT2
	11a	~	✓	×	×	✓	✓
5GHz	11n/ac/ax (20MHz)	$\checkmark$	✓	✓	✓	✓	✓
5GHZ	11n/ac/ax (40MHz)	$\checkmark$	✓	✓	✓	✓	✓
	11ac/ax (80MHz)	$\checkmark$	✓	✓	✓	✓	✓

Table 2-5. Frequency / Channel Operations

$$\label{eq:support} \begin{split} & \checkmark = \text{Support} \ ; \ & = \text{NOT Support} \\ \textbf{SISO} = \text{Single Input Single Output} \\ \textbf{CDD} = \text{Cyclic Delay Diversity} - \text{MIMO function} \\ \textbf{SDM} = \text{Spatial Diversity Multiplexing} - \text{MIMO function} \end{split}$$

3. This device supports simultaneous transmission operation, which allows for two SISO channels to operate independent of one another in the 2.4GHz (WLAN & BT) and 5GHz bands simultaneously on each antenna. The following tables show the worst case configurations determined during testing. The data for these configurations is contained in this test report. The BT + 5GHz case is not considered as worst case since the BT power is lower than the 2.4GHz WLAN power.

**Configuration 1:** ANT1 transmitting in 2.4GHz mode and ANT2 in 5GHz mode

Description	2.4 GHz Emission	5 GHz Emission
Antenna	1	2
Channel	6	48
Operating Frequency (MHz)	2437	5240
Data Rate (Mbps)	1	6
Mode	802.11b	802.11a

Table 2-6. Config-1 (ANT1 2.4GHz & ANT2 5GHz)

Configuration 2: ANT1 transmitting in 5GHz mode and ANT2 in 2.4GHz mode

Description	2.4 GHz Emission	5 GHz Emission
Antenna	2	1
Channel	6	120
Operating Frequency (MHz)	2437	5600
Data Rate (Mbps)	1	6
Mode	802.11b	802.11a

Table 2-7. Config-2 (ANT1 5GHz & ANT2 2.4GHz)

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Configuration 3: ANT1 and ANT2 both transmitting in 2.4GHz and 5GHz modes simultaneously

Description	2.4 GHz Emission	5 GHz Emission
Antenna	1, 2	1, 2
Channel	11	165
Operating Frequency (MHz)	2462	5825
Data Rate (Mbps)	6	6
Mode	802.11g	802.11a

Table 2-8. Config-3 (ANT1 MIMO & ANT2 MIMO)

### 2.3 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.

This device supports wireless charging capability and, thus, is subject to the test requirements of KDB 648474 D03 v01r04. Additional radiated spurious emission measurements were performed with the EUT lying flat on an authorized wireless charging pad (WCP) Model: EP-N5100 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

### 2.4 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**

### 3.1 Evaluation Procedure

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

Deviation from measurement procedure.....None

### 3.2 Radiated Emissions

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

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.

### 3.3 Environmental Conditions

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

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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  $U_{\text{CISPR}}$  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
-	WL25-2	Conducted Cable Set (25GHz)	6/3/2019	Annual	6/3/2020	WL25-2
-	WL25-1	Conducted Cable Set (25GHz)	6/5/2019	Annual	6/5/2020	WL25-1
-	WL25-4	Conducted Cable Set (25GHz)	6/4/2019	Annual	6/4/2020	WL25-4
Agilent	N9030A	PXA Signal Analyzer (44GHz)	6/12/2019	Annual	6/12/2020	MY52350166
Agilent	N9020A	MXA Signal Analyzer	4/20/2019	Annual	4/20/2020	US46470561
Emco	3115	Horn Antenna (1-18GHz)	3/28/2018	Biennial	3/28/2020	9704-5182
Emco	3116	Horn Antenna (18 - 40GHz)	6/7/2018	Triennial	6/7/2021	9203-2178
Emco	3160-09	Small Horn (18 - 26.5GHz)	8/9/2018	Biennial	8/9/2020	00135427
Emco	3160-10	Small Horn (26.5 - 40GHz)	8/9/2018	Biennial	8/9/2020	00130993
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	2/14/2019	Biennial	2/14/2021	125518
ETS-Lindgren	3816/2NM	Line Impedance Stabilization Network	6/18/2018	Biennial	6/18/2020	114451
Pasternack	NMLC-2	Line Conducted Emissions Cable (NM)	6/3/2019	Annual	6/3/2020	NMLC-2
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	6/5/2019	Annual	6/5/2020	100342
Rohde & Schwarz	FSW67	Signal / Spectrum Analyzer	5/6/2019	Annual	5/6/2020	103200
Seekonk	NC-100	Torque Wrench 8in-lb	5/9/2018	Biennial	5/9/2020	N/A
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	4/19/2018	Biennial	4/19/2020	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

### 7.1 Summary

Company Name:	Samsung Electronics Co., Ltd.
FCC ID:	A3LSMG986W
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

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

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.
- 802.11ax OFDMA testing was performed for all signal tone configurations as specified by the 802.11ax standard. Worst case results are determined and reported per the guidance provided at the October 2018 TCB Workshop.
- 7) Only one RU index could be selected at a time so no contiguous or non-contiguous RU's were considered for testing.

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

#### **Test Overview and Limit**

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

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

#### **Test Procedure Used**

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

#### **Test Settings**

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

#### Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

#### **Test Notes**

The 26dB Bandwidth measurement for each channel was measured with the RU index showing the highest conducted power.

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## SISO Antenna-1 26 dB Bandwidth Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]
	5180	36	ax (20MHz)	26T	MCS0	19.03
_	5200	40	ax (20MHz)	26T	MCS0	18.68
Band 1	5240	48	ax (20MHz)	26T	MCS0	19.04
Bar	5190	38	ax (40MHz)	26T	MCS0	22.09
	5230	46	ax (40MHz)	26T	MCS0	22.39
	5210	42	ax (80MHz)	26T	MCS0	19.30
	5260	52	ax (20MHz)	26T	MCS0	18.91
∢	5280	56	ax (20MHz)	26T	MCS0	19.12
q 5	5320	64	ax (20MHz)	26T	MCS0	18.59
Band 2A	5270	54	ax (40MHz)	26T	MCS0	18.88
	5310	62	ax (40MHz)	26T	MCS0	19.59
	5290	58	ax (80MHz)	26T	MCS0	19.43
	5500	100	ax (20MHz)	26T	MCS0	18.85
	5600	120	ax (20MHz)	26T	MCS0	18.61
	5720	144	ax (20MHz)	26T	MCS0	18.97
SC	5510	102	ax (40MHz)	26T	MCS0	19.12
Band 2C	5590	118	ax (40MHz)	26T	MCS0	19.20
Ba	5710	142	ax (40MHz)	26T	MCS0	19.16
	5530	106	ax (80MHz)	26T	MCS0	19.51
	5610	122	ax (80MHz)	26T	MCS0	19.71
	5690	138	ax (80MHz)	26T	MCS0	38.80

Table 7-2. Conducted Bandwidth Measurements SISO ANT1 (26 Tones)

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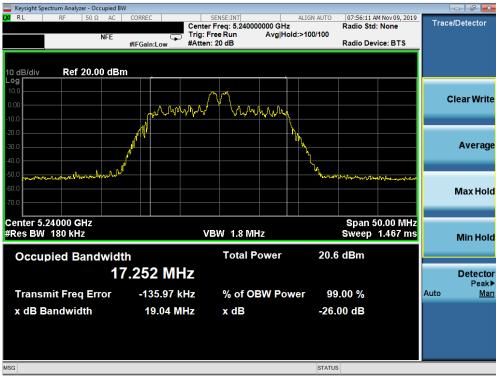
Plot 7-1. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



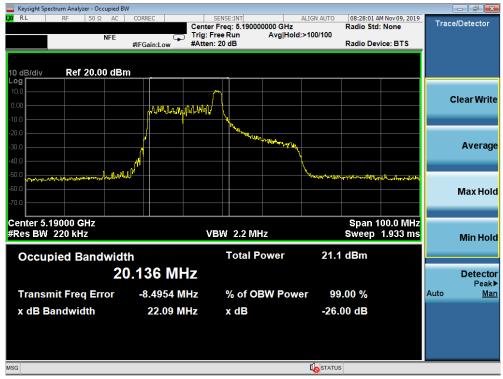
Plot 7-2. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-3. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



Plot 7-4. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

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Keysight Spectrum Analyzer - Occ	cupied BW				
<b>LXI</b> RL RF 50 Ω				M Nov 09, 2019	Trace/Detector
		r Freq: 5.230000000 GHz Free Run Avg Hold:	Radio Std	: None	indeenB etterter
		n: 20 dB	Radio Dev	rice: BTS	
,					
to any and Def 20.0	0 dBm				
10 dB/div Ref 20.0					
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0.00					Clear Write
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-20.0		Mannut and			
-30.0					Average
-40.0					
-50.0			<b>1</b>		
-50.0 (14)14-564470-41-11-14-56470-664700-66700-66700-66700-66700-66700-66700-6670000000-660700000000	and along a second s		and manufactor and provided on the state of the second second second second second second second second second	mennand	
					Max Hold
-70.0					
Center 5.23000 GHz			Snan 1	00.0 MHz	
#Res BW 220 kHz	V	/BW 2.2 MHz		1.933 ms	
			Chicop		Min Hold
Occupied Band	width	Total Power	21.1 dBm		
	19.752 MHz				Detector Peak▶
Transmit Freq Err	or -8.3149 MHz	% of OBW Powe	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	22.39 MHz	x dB	-26.00 dB		
			-Eoroo dib		
MSG			STATUS		

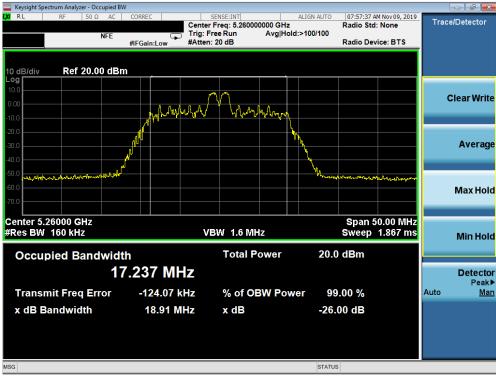
Plot 7-5. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



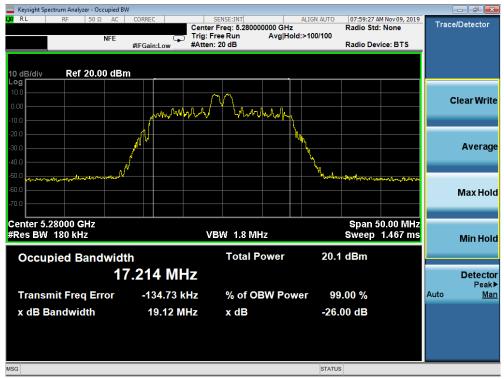
Plot 7-6. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)

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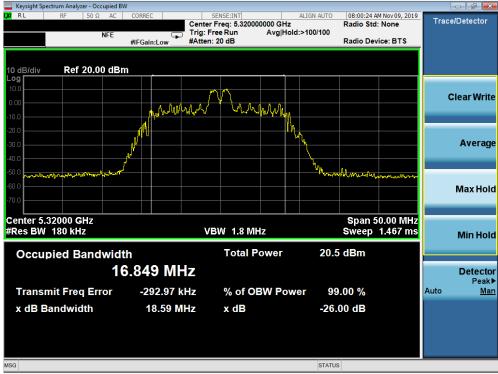
Plot 7-7. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



Plot 7-8. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

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Plot 7-9. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



Plot 7-10. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMG986W	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW	/						
LXI RE 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	08:31:32 A Radio Std	M Nov 09, 2019	Trace	/Detector
NFE		ter Freq: 5.310000000 GH : Free Run Avg H	z old:>100/100	Radio Sta	: None		
NFE		en: 20 dB		Radio Dev	vice: BTS		
10 dB/div Ref 20.00 dBn							
10.0							
0.00						C	lear Write
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			a second second	hand a start way	april - seelan		
-60.0							Max Hold
-70.0							
Center 5.31000 GHz					00.0 MHz		
#Res BW 220 kHz		VBW 2.2 MHz		sweep	1.933 ms		Min Hold
Occurried Devided		Total Power	20.9	dBm			
Occupied Bandwidt		Total Power	20.0				
17	7.857 MHz						Detector
							Peak▶
Transmit Freq Error	-10.374 MHz	% of OBW Po	wer 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	19.59 MHz	x dB	-26	00 dB			
x dB Ballawidth	10.00 11112	A GD	20.	oo ub			
MSG				3			

Plot 7-11. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



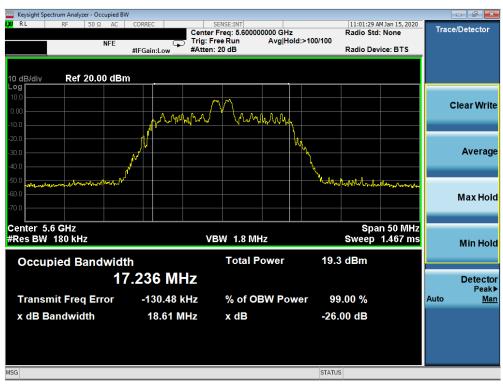
Plot 7-12. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occ	cupied BW							
LX/ RL RF 50Ω	AC CORREC		ISE:INT	ALIGN AUTO		M Nov 09, 2019	Trace	/Detector
			eq: 5.50000000 GH		Radio Std	: None	TTACE	
	NFE #IFGain:Lo	Trig: Free #Atten: 20		lold:>100/100	Radio Dev	ine BTS		
,	#IFGain:Lo	w #Atten. 20	U GB		Raulo Dev	ICE. BTS		
10 dB/div Ref 20.0	0 dBm							
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0.00		( \					C	lear Write:
	mal	$\mathcal{A}$	Whythere					
-10.0								
-20.0				L.				
-30.0								Average
-40.0	A. 11			1 A A				
-50.0	14WW				Mark-Word	and the mean of		
-60.0								
								Max Hold
-70.0								
Center 5.50000 GHz						0.00 MHz		
#Res BW 160 kHz		VBV	V 1.6 MHz		Sweep	1.867 ms		Min Hold
Occupied Band	width		Total Power	20.7	/ dBm			
								Detector
	17.293	MINZ						Detector Peak►
Tron one it From Fro	450	44 1-11-	0/ -f ODW/D		00.0/		Auto	
Transmit Freq Err	or -159	.44 kHz	% of OBW Po	ower 99	0.00 %		Auto	Man
x dB Bandwidth	18.	85 MHz	x dB	-26.	00 dB			
MSG				STATUS	5			

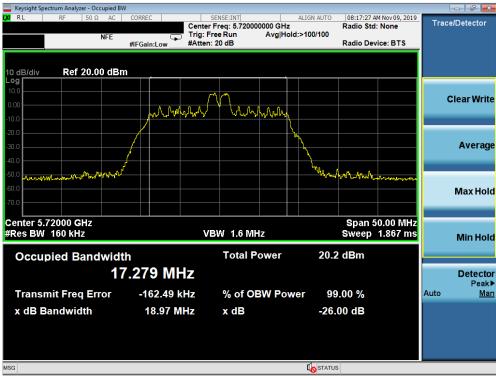
Plot 7-13. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 100)



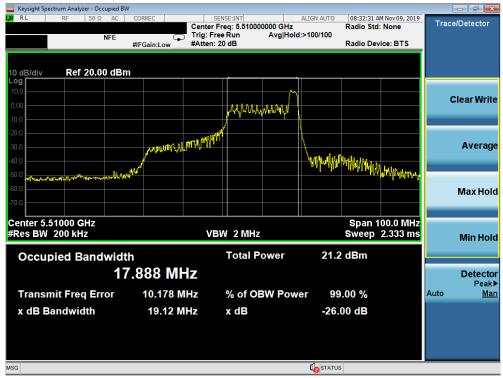
Plot 7-14. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-15. 26dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 144)



Plot 7-16. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 102)

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🔤 Keysight Spectrum Analyzer - Oo					
ι <b>χά</b> RL RF 50 Ω	Ce NEF — Tri	SENSE:INT nter Freq: 5.590000000 GHz g: Free Run Avg Hold tten: 20 dB	ALIGN AUTO 08:33:47 AM Radio Std: 1: 100/100 Radio Devi		Trace/Detector
10 dB/div Ref 20.0	00 dBm				
0.00		Manaharahar			Clear Write
-10.0	And the second s				Average
-40.0	. 10		white and the second	MPMMut	
-70.0					Max Hold
Center 5.59000 GHz #Res BW 150 kHz	1	VBW 1.5 MHz Total Power		00.0 MHz 4.133 ms	Min Hold
Occupied Band	17.938 MHz				Detector Peak▶
Transmit Freq Er	ror 10.110 MHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	19.20 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-17. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



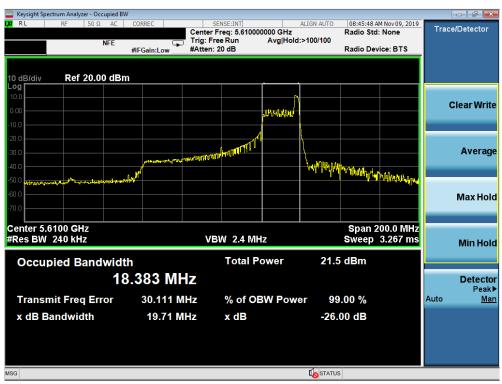
Plot 7-18. 26dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 142)

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		rum Analyzer	r - Occi	upied BW									
L <mark>XI</mark> RI	L	RF	50 Ω	AC COF	RREC		NSE:INT req: 5.53000	0000 CH-	ALIGN AUTO	08:44:35 A	M Nov 09, 2019	Trac	ce/Detector
				NFE	_	Trig: Fre			:>100/100	Radio Sto	: None		
					Gain:Low 📩	#Atten: 2				Radio Dev	vice: BTS		
10 di		Dof 2	00.00	) dBm									
Log	5/017	Reiz	.0.00	JUDIII									
10.0								F					
0.00													Clear Write
								a the second					
-10.0													
-20.0													
-30.0					Mapana	- LALNING	Whith many		1				Average
-40.0					New Provide source				AWALL	A N.h. H. a			
-50.0				1 melia all						n wypry	MARA NULL		
	ala mada na mana									1	111 0-10-10		
-60.0													Max Hold
-70.0													
0	4an 5 57	300 GHz								Onen í			
		300 GH2 300 kHz				VP	W 3 MHz				2.067 MHz 2.067 ms		
#RC		900 KHZ				VD				Sweep	2.007 1115		Min Hold
	couni	ied Ba	nd	width			Total P	ower	21.1	dBm			
<u>۲</u>	ccupi	eu Da	IIIU				Total I		2111	abiii			
				18.3	26 MI	Z							Detector
		-	_									0	Peak►
	ransmi	it Freq	Erre	or	30.235 N	IHZ	% of OE	SW Pow	er 99	.00 %		Auto	<u>Man</u>
x	dB Ba	ndwidt	th		19.51 N	IHz	x dB		-26.	00 dB			
MSG										3			

Plot 7-19. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 106)



Plot 7-20. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

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🔤 Keysight Spectrum Analyzer - Occupied					
LX/RL RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	08:47:03 AM Nov 09, 2019 Radio Std: None	Trace/Detector
NFE	🛶 Trig:	Free Run Avg H	Hold: 100/100		
	#IFGain:Low #Atte	en: 20 dB		Radio Device: BTS	
10 dB/div Ref 20.00 dB	3m				
Log 10.0		1h			
					Clear Write
0.00	~**//in	Area Arate Arate Arate			
-10.0					
-20.0		1 Minn			
-30.0	Martin Provide State	.4.444	1		Average
-40.0			N 40		
-50.0 workey together and the second	<u>"N., W</u>		Uluman	have been and and a strong party	
-60.0					Max Hold
-70.0					Maxilola
Center 5.6900 GHz				Span 200.0 MHz	
#Res BW 430 kHz		VBW 4 MHz		Sweep 1 ms	Min Hold
Occupied Bandwig	ith	Total Power	21.2	2 dBm	
			2.1.2	dBill	
3	6.828 MHz				Detector
Transmit Freq Error	-304.63 kHz	% of OBW Po	ower Q0	.00 %	Peak▶ Auto Man
					<u></u>
x dB Bandwidth	38.80 MHz	x dB	-26.	00 dB	
MSG				3	
			<u> </u>		

Plot 7-21. 26dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 138)

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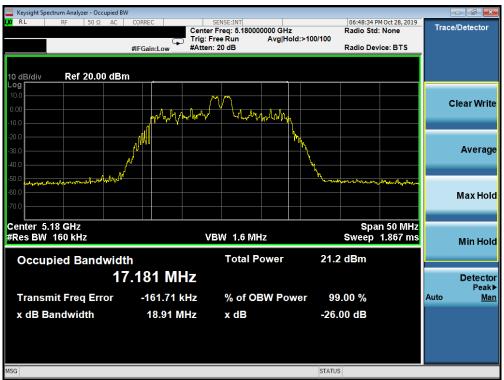
## SISO Antenna-2 26dB Bandwidth Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 26dB Bandwidth [MHz]
	5180	36	ax (20MHz)	26T	MCS0	18.91
	5200	40	ax (20MHz)	26T	MCS0	18.79
Band 1	5240	48	ax (20MHz)	26T	MCS0	18.97
Bar	5190	38	ax (40MHz)	26T	MCS0	21.30
	5230	46	ax (40MHz)	26T	MCS0	20.64
	5210	42	ax (80MHz)	26T	MCS0	38.66
	5260	52	ax (20MHz)	26T	MCS0	19.00
∢	5280	56	ax (20MHz)	26T	MCS0	18.87
q 5	5320	64	ax (20MHz)	26T	MCS0	18.80
Band 2A	5270	54	ax (40MHz)	26T	MCS0	19.49
ш	5310	62	ax (40MHz)	26T	MCS0	19.18
	5290	58	ax (80MHz)	26T	MCS0	20.51
	5500	100	ax (20MHz)	26T	MCS0	18.96
	5600	120	ax (20MHz)	26T	MCS0	18.93
	5720	144	ax (20MHz)	26T	MCS0	18.65
5C	5510	102	ax (40MHz)	26T	MCS0	19.61
Band 2C	5590	118	ax (40MHz)	26T	MCS0	19.47
Ba	5710	142	ax (40MHz)	26T	MCS0	18.91
	5530	106	ax (80MHz)	26T	MCS0	20.33
	5610	122	ax (80MHz)	26T	MCS0	20.35
	5690	138	ax (80MHz)	26T	MCS0	19.80

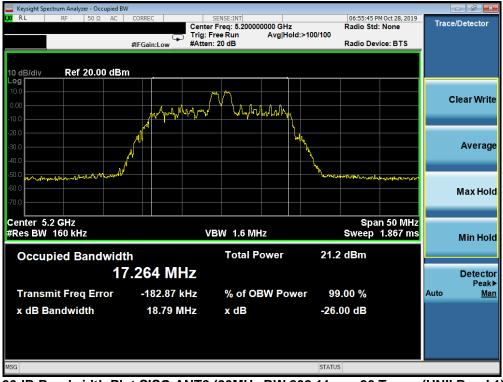
Table 7-3. Conducted Bandwidth Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 07 of 005
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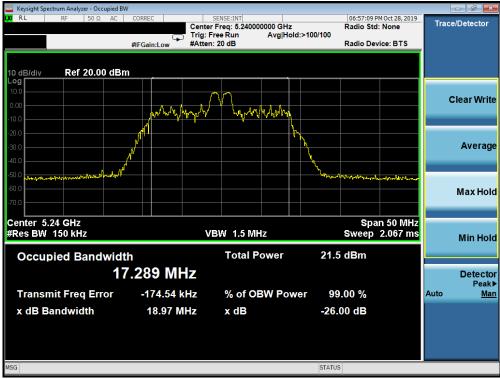
Plot 7-22. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



Plot 7-23. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-24. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



Plot 7-25. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
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Plot 7-26. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



Plot 7-27. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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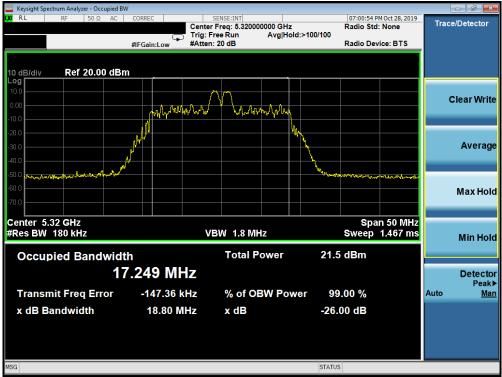
Plot 7-28. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



Plot 7-29. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-30. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



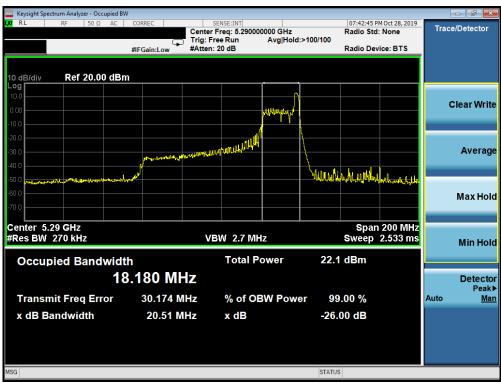
Plot 7-31. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dage 22 of 265		
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Keysight Spectrum Analyzer - Occupied I	BW				
<b>Ι,ΧΙ </b> RF 50 Ω AC		SENSE:INT er Freq: 5.310000000 GHz Free Run Avg Hold:>'	Radio Sto	M Oct 28, 2019 I: None	Trace/Detector
		en: 20 dB	Radio De	vice: BTS	
10 dB/div Ref 20.00 dB	m				
10.0 0.00	Mar	W4			Clear Write
-20.0 -30.0 -40.0		In Marylle There are a series of the series			Average
-50.0				na se manaure	Max Hold
Center 5.31 GHz #Res BW 180 kHz		VBW 1.8 MHz	Sweep	100 MHz 2.867 ms	Min Hold
Occupied Bandwid	lth	Total Power	20.7 dBm		
1	7.934 MHz				Detector Peak▶
Transmit Freq Error	-10.267 MHz	% of OBW Power	99.00 %		Auto <u>Man</u>
x dB Bandwidth	19.18 MHz	x dB	-26.00 dB		
MSG			STATUS		

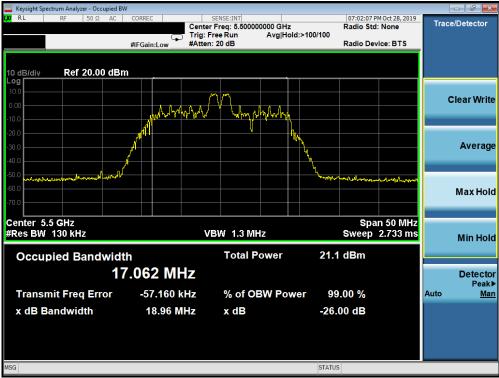
Plot 7-32. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



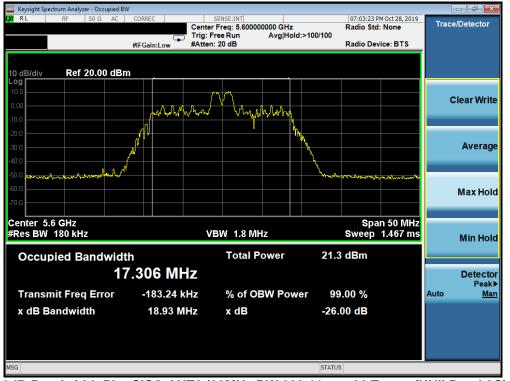
Plot 7-33. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	AMSUNG	Approved by: Quality Manager
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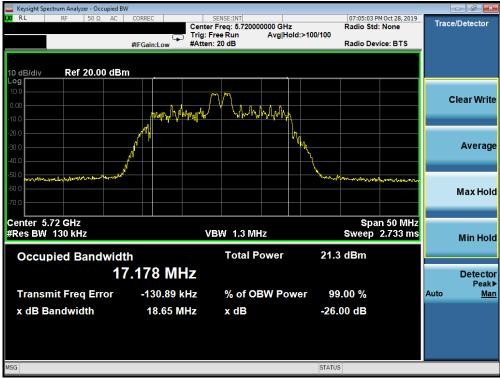
Plot 7-34. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 100)



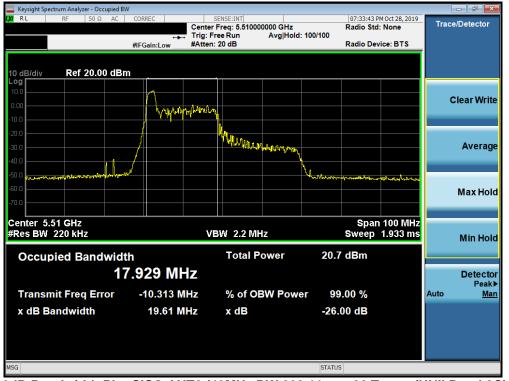
Plot 7-35. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMG986W	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 04 of 005	
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Plot 7-36. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 144)



Plot 7-37. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMG986W	<u><u>PCTEST</u></u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 05 of 005	
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www.www.com analyzer - Occupied	BW				
LXX RL RF 50Ω AC	Trig:	SENSE:INT Rer Freq: 5.590000000 GHz : Free Run Avg Hold:3 en: 20 dB	Radio Std 100/100		Trace/Detector
	#IFGain:Low #Atte	en: 20 dB	Radio Dev	vice: B1s	
10 dB/div Ref 20.00 dE	3m				
10.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Clear Write
-10.0	hu wala	Ann,			
-20.0		A MAN MAN AND AND AND AND AND AND AND AND AND A			Average
-50.0			Gladrathan stranger	ay with w <sup>a</sup> thank speed way	Max Hold
-70.0					
Center 5.59 GHz #Res BW 220 kHz		VBW 2.2 MHz		100 MHz 1.933 ms	Min Hold
Occupied Bandwid		Total Power	21.1 dBm		
1	7.869 MHz				Detector Peak▶
Transmit Freq Error	-10.314 MHz	% of OBW Powe	r 99.00 %		Auto <u>Man</u>
x dB Bandwidth	19.47 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-38. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



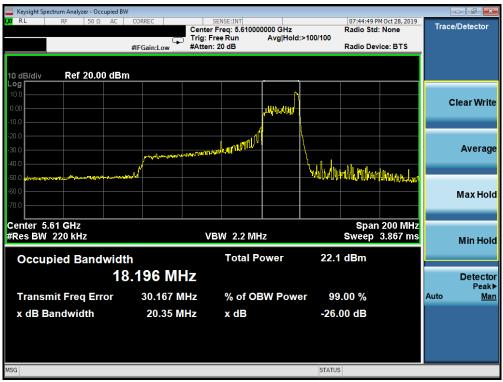
Plot 7-39. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied B	W							
<b>LXU</b> RL RF 50Ω AC	Trig	SENSE:INT nter Freq: 5.5300000 g: Free Run ten: 20 dB	00 GHz Avg Hold:>1	00/100	Radio Std:		Trac	e/Detector
,	#IFGain:Low #At	ten: 20 dB			Radio Dev	ICE: BIS		
10 dB/div Ref 20.00 dB	n							
Log 10.0			<u>^</u>					
0.00			144wy fy f					Clear Write
-20.0								
-30.0		A STANDING IN						Average
-40.0	Contraction and and and	MANNA AND THE	\					, in the second s
-50.0 water margaret water and an and	Alul <sup>A</sup>		Y	Wald	h/~¶ourly	Murphant		
-60.0								Max Hold
-70.0								
Center 5.53 GHz					Span	200 MHz		
#Res BW 200 kHz		VBW 2 MHz				4.667 ms		Min Hold
Occupied Bandwid	th	Total Po	wer	21.8	dBm			
18	8.391 MHz							Detector
Transmit Freq Error	30.058 MHz	% of OB	V Power	99.	00 %		Auto	Peak▶ <u>Man</u>
x dB Bandwidth	20.33 MHz	x dB		-26.0	0 dB			
MSG				STATUS				

Plot 7-40. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 106)



Plot 7-41. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	ectrum Analyze												
LXI RL	RF	50 Ω	AC	CORREC			ENSE:INT Freg: 5.69000	0000 GHz		07:48:01 Radio Sto	M Oct 28, 2019	Trac	e/Detector
					. 🗣	Trig: Fr #Atten:	ee Run		:>100/100	Radio De			
				#IFGain:	Low	#Atten:	20 dB			Radio De	VICE: DIS	r in the second s	
	Def		D										
10 dB/div Log	Reiz	20.00	dBm					I <u></u>					
10.0								n n	1				Clear Write
0.00								WY WW					
-10.0													
-20.0									<u> </u>				
-30.0				-	and the second street	ANT THE THE AND	Jeronand III		\ \				Average
-40.0									ha dut	ويرو الشار	1		
-50.0 <b></b>	And the second second	al manufactures	*******						- YQ, WYYY	MUNUMAN	Additional and a star		
-60.0													Max Hold
-70.0													
Center 5	.69 GHz								1	Spar	1 200 MHz		
#Res BW		z				VE	SW 1.8 MH	lz			5.733 ms		Min Hold
0							Total P	owor	22	1 dBm			
Occu	pied Ba	anav					Τυτάι Γ	Ower	22.	I UBIII			
			18	.115	5 MI	ΗZ							Detector Peak▶
Transi	mit Freq	Erro	or	30.	154 N	IHz	% of O	3W Pow	er 99	9.00 %		Auto	reak≱ <u>Man</u>
	Bandwid			10	).80 M	IH7	x dB		-26	.00 dB			
		u			.00 1	11 12	A UD		-20	00 aB			
MSG									STATU	\$			
									JIATO				

Plot 7-42. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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## 7.3 6dB Bandwidth Measurement – 802.11ax OFDMA §15.407 (e); RSS-Gen [6.7]

#### **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  $\geq$  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

The 6dB Bandwidth measurement for each channel was measured with the RU index showing the highest conducted power.

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### SISO Antenna-1 6 dB Bandwidth Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	ax (20MHz)	26T	MCS0	2.11
e	5785	157	ax (20MHz)	26T	MCS0	2.72
	5825	165	ax (20MHz)	26T	MCS0	2.08
Band	5755	151	ax (40MHz)	26T	MCS0	2.13
	5795	159	ax (40MHz)	26T	MCS0	2.16
	5775	155	ax (80MHz)	26T	MCS0	2.84

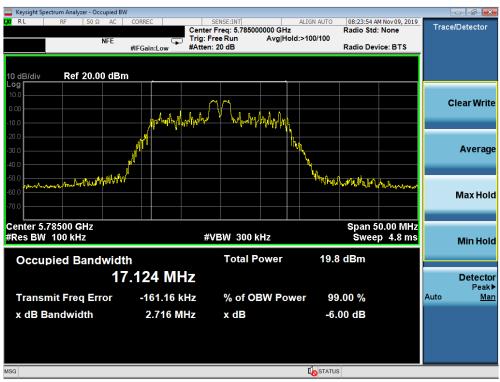
Table 7-4. Conducted Bandwidth Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analy:	zer - Occup	ied BW										
LXI RL	RF	50 Ω	AC CORF	EC			SE:INT		ALIGN AUTO		M Nov 09, 2019	Trac	e/Detector
							eq: 5.74500			Radio Std	: None	TTAC	erDelector
		NF		ain:l ow		g: Free ten: 20		AvgiHold	d:>100/100	Radio Dev	vice: BTS		
,			#IFG	ain:Low	#/\	ten. 20	uD			Radio De	nce. BT3		
10 dB/div	Ref	20.00	dBm										
Log													
10.0											<u> </u>		
0.00													Clear Write
				and a day	1. Ask	n dain	Warnahr	make					
-10.0				W. a. a.	M. W.	. MIRAIN	MLO BOIL	e dan e					
-20.0			ىر	<i>l</i>					<b>∖</b>				
-30.0			1						1				Average
			/"						× 1				
-40.0									Ju 19	. 11 s			
-50.0		Marilym	phyllogy						- M.	ᠰᡢᢇᡃᡳᠬᡀᠩᢔ	MMWWW		
-60.0	and the second										<ul> <li>A match with a second se</li></ul>		
													Max Hold
-70.0													
Center 5.											50.00 MHz		
#Res BW	100 KH	Z				#VB	W 300 k	HZ		Swee	p 4.8 ms		Min Hold
Occu	pied B	andw	vidth				Total P	ower	20.	/ dBm			
			18.43	24 M	LI-7								Detector
			10.4	<b>74 IVI</b>	ΠΖ								Detector Peak▶
Traper	nit Free	a Erro	-	17.55			% of O	3W Pow	0	9.00 %		Auto	Man
Transr	meree	q Ello	<u> </u>	+17.55	KHZ		% 01 UI	SW FOW	ei 98	.00 %		Auto	IVIAII
x dB B	andwig	dth		2.108	MHz		x dB		-6	00 dB			
MSG									<b>I</b> STATU	e			
MSG									UN STATU	5			

Plot 7-43. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)



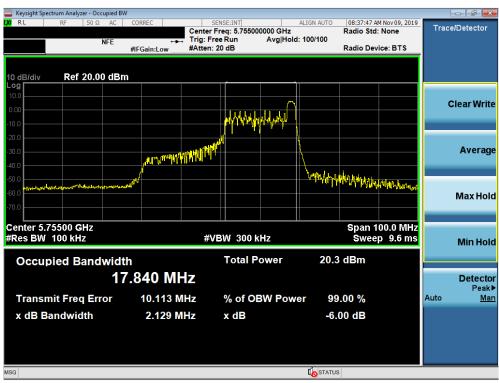
Plot 7-44. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Oce	cupied BW										
<b>LXI</b> RL RF 50 Ω	AC COF	RREC		NSE:INT			GN AUTO		M Nov 09, 2019	Trac	e/Detector
			Center Fi Trig: Fre	req: 5.82500	0000 GH Avg H		00/400	Radio Std:	None	mac	erbetector
	NFE #IE	Gain:Low	#Atten: 2		Avgin	010.210	50/100	Radio Dev	ice: BTS		
		Jam.LOw						ituaio per			
10 dB/div Ref 20.0	0 dBm										
Log											
10.0		brand									
0.00			1								Clear Write
-10.0		yerh #	white	delwar.	had at						
	1				11.40						
-20.0		۰ ۱				10/08					
-30.0	ļ [					"IN N					Average
-40.0						\	1				
	N State Sta						Window a	ALL N.			
-50.0							. n is na Mi	WWW.	mannon		
-60.0											Max Hold
-70.0											
Center 5.82500 GHz								Span 5	0.00 MHz		
#Res BW 100 kHz			#VE	300 k	Hz				p 4.8 ms		Min Hold
											MITHOU
Occupied Band	width			Total P	ower		20.1	dBm			
Coouprou Barra											
	18.2	61 MI	TZ								Detector
											Peak►
Transmit Freq Err	ror	-609.11	KHZ	% of O	3W Po	wer	99	.00 %		Auto	<u>Man</u>
x dB Bandwidth		2.082 N	H7	x dB			-6 (	00 dB			
		2.002 1	1112	Adb			-0.0				
NEC							STATUS				_
MSG							STATUS				

Plot 7-45. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 165)



Plot 7-46. 6dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	ectrum Analyz	zer - Occupi	ed BW									
LXI RL	RF	50 Ω /	AC CORREC			ENSE:INT		ALIGN AUTO		M Nov 09, 2019	Tree	e/Detector
						Freq: 5.7950			Radio Std	: None	Trac	erDetector
		NF		•	Trig: Fre #Atten:		Avg Hold	d:>100/100	Radio Dev			
			#IFGair	:Low	#Atten:	20 dB			Radio Dev	lice: BIS		
10 dB/div	Dof	20.00 (	1B m									
Log	Kei	20.00 (				- <u>i</u>						
10.0												
					٣	2						Clear Write
0.00				41014	LILL C							
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-20.0				1 A		Ň.						
						Mar .						_
-30.0			<mark>/</mark>				monde			<u> </u>		Average
-40.0												
-50.0			. r 👘 🗌					N N				
	Lingung	an meter With	NUW					handruchter	Manappenson			
-60.0									and a standard	and a second to the second to		Max Hold
-70.0												maxinoid
Center 5.	79500 G	H7							Snan 1	00.0 MHz		
#Res BW					#V	BW 300	kH7			p 9.6 ms		
ances Bh		<u>ح</u>				BH 000	NT 12		Once	p 3.0 m3		Min Hold
0			: -14l-			Total F	Power	20.0	) dBm			
Occu	pied B	andw	latin			TUtarr	Ower	20.0	u Bill			
			18.91	9 ME	7							Detector
			10.01									Peak►
Trans	mit Fred	q Erroi	-9.0	270 M	Hz	% of O	BW Pow	er 99	.00 %		Auto	Man
x dB F	Bandwic	lth	2	159 M	Hz	x dB		-6	00 dB			
A GD L	Janawia		2	100 10	112	A UD		-0.				
MSG									5			

Plot 7-47. 6dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 159)



Plot 7-48. 6dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)

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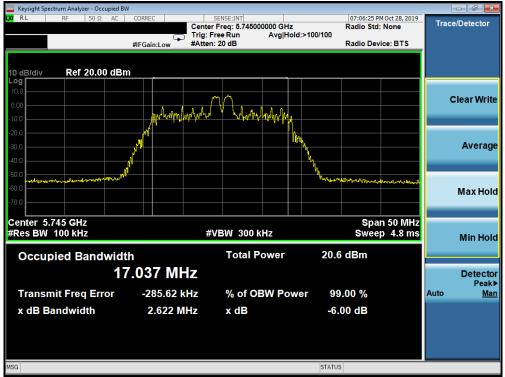
## SISO Antenna-2 6dB Bandwidth Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	ax (20MHz)	26T	MCS0	2.62
	5785	157	ax (20MHz)	26T	MCS0	2.72
1d 3	5825	165	ax (20MHz)	26T	MCS0	2.71
Band	5755	151	ax (40MHz)	26T	MCS0	2.14
_	5795	159	ax (40MHz)	26T	MCS0	2.14
	5775	155	ax (80MHz)	26T	MCS0	2.23

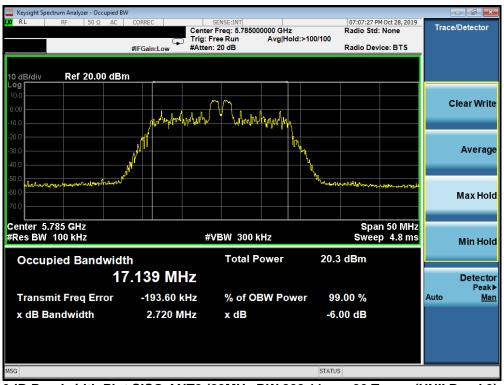
Table 7-5. Conducted Bandwidth Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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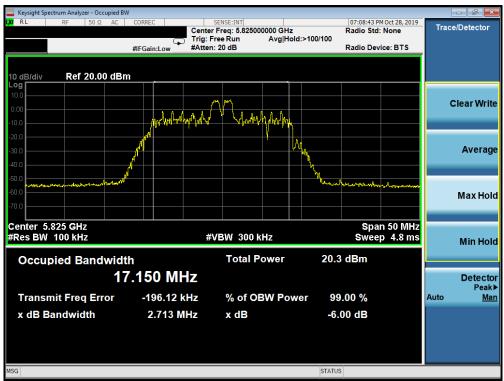
Plot 7-49. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)



Plot 7-50. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-51. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 165)



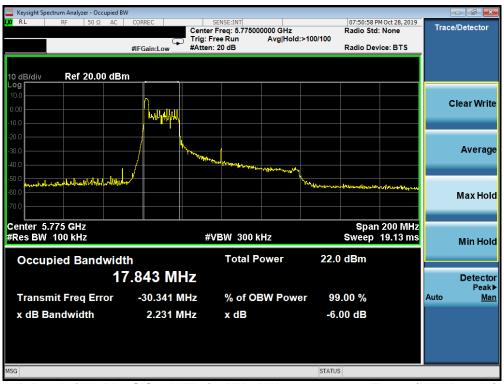
Plot 7-52. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW								
<b>LX/</b> RL RF 50Ω AC	Trie	SENSE:INT ter Freq: 5.79500 : Free Run	0000 GHz Avg Hold	->100/100	07:38:35 P	10ct 28, 2019 None	Trac	e/Detector
		en: 20 dB	Avginoid	.= 100/100	Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm								
Log 10.0								
0.00		.n						Clear Write
-10.0	Mart & Lynn Big alger	vγ (					_	
-20.0								
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-40.0			montener					/ Workigo
-50.0	1			L.				
-50.0 ก/หมาคามากการสาราชาวิทยาสาราชาวิทยา				unmenter	walve have three	homesoname		
								Max Hold
-70.0							_	
Center 5.795 GHz						100 MHz		
#Res BW 100 kHz		#VBW 300 k	Hz		Swee	p 9.6 ms		Min Hold
Occupied Bandwidth	า	Total P	ower	21.8	dBm			
	.950 MHz							Detector
								Peak▶
Transmit Freq Error	-9.0445 MHz	% of OE	<b>3W Powe</b>	er 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	2.140 MHz	x dB		-6.	00 dB			
MSG				STATUS	6			

Plot 7-53. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 159)



Plot 7-54. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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# 7.4 UNII Output Power Measurement – 802.11ax OFDMA §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

#### Test Overview and Limits

A transmitter antenna terminal of the EUT is connected to the input of an RF pulse power sensor. Measurement is made using a broadband average power meter 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.

In the 5.15 – 5.25GHz band, the maximum permissible conducted output power is 250mW (23.98dBm). The maximum e.i.r.p. shall not exceed the lesser of 200 mW or 10 + 10 log10B, dBm.

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(29.58) = 25.71dBm$ . The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(23.20) = 24.65dBm$ . The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

In the 5.725 – 5.850GHz band, the maximum permissible conducted output power is 1W (30dBm). The maximum e.i.r.p. is 36 dBm.

#### Test Procedure Used

ANSI C63.10-2013 – Section 12.3.3.2 Method PM-G KDB 789033 D02 v02r01 – Section E)3)b) Method PM-G ANSI C63.10-2013 – Section 14.2 Measure-and-Sum Technique KDB 662911 v02r01 – Section E)1) Measure-and-Sum Technique

#### **Test Settings**

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

#### Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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### SISO Antenna-1 Conducted Output Power Measurements (26 Tones)

	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					0	4	8	[dBm]	Margin [dB]	[abi]	Lapud	Ennie [GBin]	margin [ab]
N	5180	36	AVG	26T	10.48	10.76	10.55	23.98	-13.22	-6.45	4.31	22.39	-18.08
ΞΞ	5200	40	AVG	26T	10.41	10.65	10.40	23.98	-13.33	-6.69	3.96	22.39	-18.43
ΞĦ	5240	48	AVG	26T	10.35	10.62	10.36	23.98	-13.36	-6.45	4.17	22.39	-18.22
S. S	5260	52	AVG	26T	10.28	10.42	10.12	23.47	-13.05	-6.45	3.97	29.47	-25.50
<u>S</u> 7	5280	56	AVG	26T	10.14	10.44	10.30	23.47	-13.03	-6.61	3.83	29.47	-25.64
NP	5320	64	AVG	26T	10.27	10.52	10.26	23.47	-12.95	-6.55	3.97	29.47	-25.50
E E	5500	100	AVG	26T	10.34	10.60	10.37	22.80	-12.20	-6.99	3.61	28.80	-25.19
С Ш	5600	120	AVG	26T	10.77	10.97	10.64	22.80	-11.83	-6.99	3.98	28.80	-24.82
ŝ	5720	144	AVG	26T	10.18	10.36	10.07	22.80	-12.44	-6.99	3.37	28.80	-25.43
	5745	149	AVG	26T	10.04	10.05	10.87	30.00	-19.13	-6.99	3.88	-	-
	5785	157	AVG	26T	10.08	10.38	10.13	30.00	-19.62	-6.99	3.39	-	-
	5825	165	AVG	26T	10.96	10.33	10.90	30.00	-19.04	-6.95	4.01	-	-

Table 7-6. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p.
Ϋ́ τ					0	8	17	[dBm]	Margin [dB]	[ubi]	Lapuil		Margin [dB]
<b>₹</b> ≑	5190	38	AVG	26T	10.98	10.99	10.88	23.98	-12.99	-6.69	4.30	22.39	-18.09
5.5	5230	46	AVG	26T	10.90	10.98	10.76	23.98	-13.00	-6.45	4.53	22.39	-17.86
4 3	5270	54	AVG	26T	10.88	10.69	10.69	23.47	-12.59	-6.61	4.27	29.47	-25.20
<u>、</u>	5310	62	AVG	26T	10.77	10.76	10.69	23.47	-12.70	-6.55	4.22	29.47	-25.25
₽ ⊆	5510	102	AVG	26T	10.84	10.84	10.98	22.80	-11.82	-6.99	3.99	28.80	-24.81
<u>ت</u> 8	5590	118	AVG	26T	10.98	10.97	10.98	22.80	-11.82	-6.99	3.99	28.80	-24.81
ю п	5710	142	AVG	26T	10.42	10.41	10.45	22.80	-12.35	-6.86	3.59	28.80	-25.21
~	5755	151	AVG	26T	10.51	10.47	10.66	30.00	-19.34	-6.86	3.80	-	-
	5795	159	AVG	26T	10.17	10.73	10.28	30.00	-19.27	-6.95	3.78	-	-

Table 7-7. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
₹ £					0	18	36	[dBm]	Margin [dB]	Lapi	Lapui	спла (авта)	wargin [ub]
e te	5210	42	AVG	26T	10.97	10.51	10.72	23.98	-13.01	-6.45	4.52	22.39	-17.87
<u>8</u> 8	5290	58	AVG	26T	10.72	10.26	10.58	23.47	-12.75	-6.55	4.17	29.47	-25.30
우입	5530	106	AVG	26T	10.85	10.71	10.90	22.80	-11.90	-6.99	3.91	28.80	-24.89
Ba G	5610	122	AVG	26T	10.95	10.73	10.98	22.80	-11.82	-6.99	3.99	28.80	-24.81
5	5690	138	AVG	26T	10.32	10.93	10.27	22.80	-11.87	-6.86	4.07	28.80	-24.73
	5775	155	AVG	26T	10.34	10.95	10.76	30.00	-19.05	-6.86	4.09	-	-

Table 7-8. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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### SISO Antenna-1 Conducted Output Power Measurements (52 Tones)

	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					37	39	40	[dBm]	Margin [dB]	[abi]	Lapud	Ennie [GBin]	margin [ab]
N	5180	36	AVG	52T	12.46	12.60	12.48	23.98	-11.38	-6.45	6.15	22.39	-16.24
ΞΞ	5200	40	AVG	52T	12.36	12.53	12.41	23.98	-11.45	-6.69	5.84	22.39	-16.55
ΣĦ	5240	48	AVG	52T	12.29	12.44	12.31	23.98	-11.54	-6.45	5.99	22.39	-16.40
S. S	5260	52	AVG	52T	12.38	12.41	12.31	23.47	-11.06	-6.45	5.96	29.47	-23.51
<u>S</u>	5280	56	AVG	52T	12.29	12.44	12.27	23.47	-11.03	-6.61	5.83	29.47	-23.64
NP	5320	64	AVG	52T	12.43	12.47	12.32	23.47	-11.00	-6.55	5.92	29.47	-23.55
E I	5500	100	AVG	52T	12.47	12.52	12.32	22.80	-10.28	-6.99	5.53	28.80	-23.27
С Ш	5600	120	AVG	52T	12.58	12.75	12.59	22.80	-10.05	-6.99	5.76	28.80	-23.04
5	5720	144	AVG	52T	12.93	12.97	12.96	22.80	-9.83	-6.99	5.98	28.80	-22.82
	5745	149	AVG	52T	12.96	12.92	12.75	30.00	-17.04	-6.99	5.97	-	-
	5785	157	AVG	52T	12.96	12.33	12.96	30.00	-17.04	-6.99	5.97	-	-
	5825	165	AVG	52T	12.90	12.28	12.95	30.00	-17.05	-6.95	6.00	-	-

Table 7-9. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p.	e.i.r.p.
					37	40	44	[dBm]	Margin [dB]	[dBi]	Lapul	Limit [dBm]	Margin [dB]
	5190	38	AVG	52T	11.20	11.94	11.08	23.98	-12.04	-6.69	5.25	22.39	-17.14
ם ה	5230	46	AVG	52T	11.08	11.99	11.95	23.98	-11.99	-6.45	5.54	22.39	-16.85
4 ≶	5270	54	AVG	52T	11.94	11.85	11.88	23.47	-11.53	-6.61	5.33	29.47	-24.14
<u>, é</u>	5310	62	AVG	52T	11.97	11.79	11.85	23.47	-11.50	-6.55	5.42	29.47	-24.05
2 S	5510	102	AVG	52T	11.99	11.85	11.26	22.80	-10.81	-6.99	5.00	28.80	-23.80
Ba Ba	5590	118	AVG	52T	11.17	11.95	11.16	22.80	-10.85	-6.99	4.96	28.80	-23.84
о П	5710	142	AVG	52T	11.61	11.47	11.69	22.80	-11.11	-6.86	4.83	28.80	-23.97
•	5755	151	AVG	52T	11.76	11.53	11.74	30.00	-18.24	-6.86	4.90	-	-
	5795	159	AVG	52T	11.22	11.68	11.45	30.00	-18.32	-6.95	4.73	-	-

Table 7-10. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
E H					37	44	52	[dBm]	Margin [dB]	[ubi]	Lapuil	Ennic [GBnij	Margin [ub]
0.0	5210	42	AVG	52T	10.18	10.41	10.87	23.98	-13.11	-6.45	4.42	22.39	-17.97
<u>8</u> <u>8</u>	5290	58	AVG	52T	10.81	10.16	10.73	23.47	-12.66	-6.55	4.26	29.47	-25.21
우입	5530	106	AVG	52T	10.95	10.37	10.94	22.80	-11.85	-6.99	3.96	28.80	-24.84
Ba	5610	122	AVG	52T	10.14	10.45	10.20	22.80	-12.35	-6.99	3.46	28.80	-25.34
5	5690	138	AVG	52T	10.34	10.72	10.46	22.80	-12.08	-6.86	3.86	28.80	-24.94
	5775	155	AVG	52T	10.53	10.98	10.81	30.00	-19.02	-6.86	4.12	-	-

Table 7-11. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
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### SISO Antenna-1 Conducted Output Power Measurements (106 Tones)

	Freq [MHz]	Channel	Detector	Tones	RU I	ndex	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					53	54	[dBm]	Margin [dB]	[00]	Lapud	Ennie [GBin]	margin [ab]
N	5180	36	AVG	106T	14.57	14.67	23.98	-9.31	-6.45	8.22	22.39	-14.17
E E	5200	40	AVG	106T	14.52	14.52	23.98	-9.46	-6.69	7.83	22.39	-14.56
ΣĦ	5240	48	AVG	106T	14.48	14.49	23.98	-9.49	-6.45	8.04	22.39	-14.35
S. S	5260	52	AVG	106T	14.56	14.39	23.47	-8.91	-6.45	8.11	29.47	-21.36
<u>&lt;</u> (2)	5280	56	AVG	106T	14.50	14.57	23.47	-8.90	-6.61	7.96	29.47	-21.51
	5320	64	AVG	106T	14.49	14.48	23.47	-8.98	-6.55	7.94	29.47	-21.53
a T	5500	100	AVG	106T	14.50	14.45	22.80	-8.30	-6.99	7.51	28.80	-21.29
C m	5600	120	AVG	106T	14.71	14.73	22.80	-8.07	-6.99	7.74	28.80	-21.06
5	5720	144	AVG	106T	14.88	14.88	22.80	-7.92	-6.99	7.89	28.80	-20.91
	5745	149	AVG	106T	14.94	14.84	30.00	-15.06	-6.99	7.95	-	-
	5785	157	AVG	106T	14.99	14.95	30.00	-15.01	-6.99	8.00	-	-
	5825	165	AVG	106T	14.91	14.90	30.00	-15.09	-6.95	7.96	-	-

Table 7-12. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

Freq [N	Hz] Channe	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
2				53	54	56	[dBm]	Margin [dB]	[dBi]	[dBm]	Limit [dBm]	Margin [dB]
519	) 38	AVG	106T	12.35	12.98	12.26	23.98	-11.00	-6.69	6.29	22.39	-16.10
523	) 46	AVG	106T	12.33	12.91	12.13	23.98	-11.07	-6.45	6.46	22.39	-15.93
527	) 54	AVG	106T	12.20	12.74	12.19	23.47	-10.73	-6.61	6.13	29.47	-23.34
531	) 62	AVG	106T	12.22	12.77	12.03	23.47	-10.70	-6.55	6.22	29.47	-23.25
551	) 102	AVG	106T	12.24	12.79	12.42	22.80	-10.01	-6.99	5.80	28.80	-23.00
559	) 118	AVG	106T	12.34	12.91	12.36	22.80	-9.89	-6.99	5.92	28.80	-22.88
571	) 142	AVG	106T	12.78	12.41	12.81	22.80	-9.99	-6.86	5.95	28.80	-22.85
575	5 151	AVG	106T	12.92	12.42	12.93	30.00	-17.07	-6.86	6.07	-	-
579	5 159	AVG	106T	12.52	12.53	12.74	30.00	-17.26	-6.95	5.79	-	-

Table 7-13. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
T C					53	56	60	[dBm]	Margin [dB]	[ubij	Lapui	спла (авта)	wargin [ub]
idti	5210	42	AVG	106T	11.25	11.43	11.05	23.98	-12.55	-6.45	4.98	22.39	-17.41
z (8 dwi	5290	58	AVG	106T	11.98	11.31	11.86	23.47	-11.49	-6.55	5.43	29.47	-24.04
₽č	5530	106	AVG	106T	11.20	11.46	11.20	22.80	-11.34	-6.99	4.47	28.80	-24.33
5GF Ba	5610	122	AVG	106T	11.21	11.61	11.35	22.80	-11.19	-6.99	4.62	28.80	-24.18
- 2	5690	138	AVG	106T	11.44	11.80	11.63	22.80	-11.00	-6.86	4.94	28.80	-23.86
	5775	155	AVG	106T	11.63	11.96	11.82	30.00	-18.04	-6.86	5.10	-	-

Table 7-14. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo E1 of 205
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset		Page 51 of 265
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### SISO Antenna-1 Conducted Output Power Measurements (242 Tones)

	Freq [MHz]	Channel	Detector	Tones	RU Index	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					61	[dBm]	Margin [dB]	[abi]	Lapud	Entire [GBm]	ina gir [ab]
N	5180	36	AVG	242T	15.63	23.98	-8.35	-6.45	9.18	22.39	-13.21
E E	5200	40	AVG	242T	15.54	23.98	-8.44	-6.69	8.85	22.39	-13.54
	5240	48	AVG	242T	15.50	23.98	-8.48	-6.45	9.05	22.39	-13.34
	5260	52	AVG	242T	15.20	23.47	-8.27	-6.45	8.75	29.47	-20.72
<u>&lt;</u> (2)	5280	56	AVG	242T	15.29	23.47	-8.18	-6.61	8.68	29.47	-20.79
	5320	64	AVG	242T	15.26	23.47	-8.21	-6.55	8.71	29.47	-20.76
ar H	5500	100	AVG	242T	15.22	22.80	-7.58	-6.99	8.23	28.80	-20.57
C m	5600	120	AVG	242T	15.48	22.80	-7.32	-6.99	8.49	28.80	-20.31
Ω	5720	144	AVG	242T	15.50	22.80	-7.30	-6.99	8.51	28.80	-20.29
	5745	149	AVG	242T	15.76	30.00	-14.24	-6.99	8.77	-	-
	5785	157	AVG	242T	15.96	30.00	-14.04	-6.99	8.97	-	-
	5825	165	AVG	242T	15.82	30.00	-14.18	-6.95	8.87	-	-

Table 7-15. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

N	Freq [MHz]	Channel	Detector	Tones	RU li	ndex	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					61	62	[dBm]	Margin [dB]	[ubi]	Lapuil	сили [авил]	Margin [ub]
÷ ÷	5190	38	AVG	242T	13.16	13.42	23.98	-10.56	-6.69	6.73	22.39	-15.66
E D	5230	46	AVG	242T	13.37	13.31	23.98	-10.61	-6.45	6.92	22.39	-15.47
<u>4</u> 5	5270	54	AVG	242T	13.32	13.35	23.47	-10.12	-6.61	6.74	29.47	-22.73
νó	5310	62	AVG	242T	13.35	13.25	23.47	-10.12	-6.55	6.80	29.47	-22.67
<b>P C</b>	5510	102	AVG	242T	13.45	13.72	22.80	-9.08	-6.99	6.73	28.80	-22.07
a s	5590	118	AVG	242T	13.64	13.62	22.80	-9.16	-6.99	6.65	28.80	-22.15
B B	5710	142	AVG	242T	13.97	13.96	22.80	-8.83	-6.86	7.11	28.80	-21.69
~	5755	151	AVG	242T	13.91	13.99	30.00	-16.01	-6.86	7.13	-	-
	5795	159	AVG	242T	13.73	13.94	30.00	-16.06	-6.95	6.99	-	-

Table 7-16. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

z	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
E H					61	62	64	[dBm]	Margin [dB]	[ubi]	[ubiii]	Ennic [GBnij	
0.0	5210	42	AVG	242T	12.51	12.67	12.32	23.98	-11.31	-6.45	6.22	22.39	-16.17
<u>8</u> (8	5290	58	AVG	242T	12.17	12.39	12.15	23.47	-11.08	-6.55	5.84	29.47	-23.63
Ρŭ	5530	106	AVG	242T	12.41	12.56	12.49	22.80	-10.24	-6.99	5.57	28.80	-23.23
5Gł Ba	5610	122	AVG	242T	12.38	12.73	12.64	22.80	-10.07	-6.99	5.74	28.80	-23.06
5	5690	138	AVG	242T	12.74	12.92	12.73	22.80	-9.88	-6.86	6.06	28.80	-22.74
	5775	155	AVG	242T	12.86	12.97	12.83	30.00	-17.03	-6.86	6.11	-	-

Table 7-17. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage E2 of 26E
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset		Page 52 of 265
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### SISO Antenna-1 Conducted Output Power Measurements (484 Tones)

N	Freq [MHz]	Channel	Detector	Tones	RU Index	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin (dB)
T ?					65	[dBm]	Margin [dB]	L	[		
E F	5190	38	AVG	484T	13.26	23.98	-10.72	-6.69	6.57	22.39	-15.82
ig O	5230	46	AVG	484T	13.18	23.98	-10.80	-6.45	6.73	22.39	-15.66
4 3	5270	54	AVG	484T	13.20	23.47	-10.27	-6.61	6.59	29.47	-22.88
νþ	5310	62	AVG	484T	13.88	23.47	-9.59	-6.55	7.33	29.47	-22.14
μŽ	5510	102	AVG	484T	13.40	22.80	-9.40	-6.99	6.41	28.80	-22.39
ta se	5590	118	AVG	484T	13.39	22.80	-9.41	-6.99	6.40	28.80	-22.40
B G	5710	142	AVG	484T	13.70	22.80	-9.10	-6.86	6.84	28.80	-21.96
	5755	151	AVG	484T	13.75	30.00	-16.25	-6.86	6.89	-	-
	5795	159	AVG	484T	13.61	30.00	-16.39	-6.95	6.66	-	-

Table 7-18. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

N	Freq [MHz]	Channel	Detector	Tones	RU I	ndex	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
E H					65	66	[dBm]	Margin [dB]	[ubi]	lapui	ста (авта)	Margin [ub]
0.0	5210	42	AVG	484T	12.27	12.12	23.98	-11.71	-6.45	5.82	22.39	-16.57
<u>8</u>	5290	58	AVG	484T	12.94	12.88	23.47	-10.53	-6.55	6.39	29.47	-23.08
우입	5530	106	AVG	484T	12.28	12.41	22.80	-10.39	-6.99	5.42	28.80	-23.38
5Gł Ba	5610	122	AVG	484T	12.31	12.53	22.80	-10.27	-6.99	5.54	28.80	-23.26
- <u>5</u>	5690	138	AVG	484T	12.60	12.69	22.80	-10.11	-6.86	5.83	28.80	-22.97
	5775	155	AVG	484T	12.57	12.73	30.00	-17.27	-6.86	5.87	-	-

Table 7-19. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

### SISO Antenna-1 Conducted Output Power Measurements (996 Tones)

N	Freq [MHz]	Channel	Detector	Tones	RU Index	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
l ₹ €					67	[dBm]	Margin [dB]	[abi]	Lapud	Ennie [GBin]	inai giri [ab]
<b>D</b> P	5210	42	AVG	996T	12.15	23.98	-11.83	-6.45	5.70	22.39	-16.69
8) 1 (8)	5290	58	AVG	996T	12.98	23.47	-10.49	-6.55	6.43	29.47	-23.04
Pu Pu	5530	106	AVG	996T	12.18	22.80	-10.62	-6.99	5.19	28.80	-23.61
5GI Ba	5610	122	AVG	996T	12.20	22.80	-10.60	-6.99	5.21	28.80	-23.59
5	5690	138	AVG	996T	12.50	22.80	-10.30	-6.86	5.64	28.80	-23.16
	5775	155	AVG	996T	12.61	30.00	-17.39	-6.86	5.75	-	-

Table 7-20. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power (996 Tones)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo E2 of 26E
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset		Page 53 of 265
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### SISO Antenna-2 Conducted Output Power Measurements (26 Tones)

	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					0	4	8	[dBm]	Margin [dB]	[ubi]	[ubiii]		
N	5180	36	AVG	26T	10.61	10.97	10.94	23.98	-13.01	-6.58	4.39	22.39	-18.00
ΞΞ	5200	40	AVG	26T	10.59	10.85	10.72	23.98	-13.13	-6.58	4.27	22.39	-18.12
₹ ¥	5240	48	AVG	26T	10.59	10.97	10.75	23.98	-13.01	-6.97	4.00	22.39	-18.39
0.2	5260	52	AVG	26T	10.72	10.87	10.61	23.47	-12.60	-6.50	4.37	29.47	-25.10
<u>&lt;</u> 0	5280	56	AVG	26T	10.66	10.98	10.71	23.47	-12.49	-6.50	4.48	29.47	-24.99
N 2	5320	64	AVG	26T	10.93	10.96	10.78	23.47	-12.51	-6.19	4.77	29.47	-24.70
a T	5500	100	AVG	26T	10.47	10.61	10.42	22.80	-12.19	-6.20	4.41	28.80	-24.39
С Ш	5600	120	AVG	26T	10.92	10.93	10.49	22.80	-11.87	-6.20	4.73	28.80	-24.07
ŝ.	5720	144	AVG	26T	10.91	10.97	10.63	22.80	-11.83	-6.70	4.27	28.80	-24.53
	5745	149	AVG	26T	10.53	10.55	10.07	30.00	-19.45	-6.70	3.85	-	-
	5785	157	AVG	26T	10.40	10.47	10.25	30.00	-19.53	-6.70	3.77	-	-
	5825	165	AVG	26T	10.25	10.46	10.05	30.00	-19.54	-6.01	4.45	-	-

Table 7-21. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index	·	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p.	e.i.r.p. Margin [dB]
lΪ 🤶	,				0	8	17	[dBm]	Margin [dB]	[ubi]	[ubiii]		
t Z	5190	38	AVG	26T	10.46	10.54	10.40	23.98	-13.44	-6.58	3.96	22.39	-18.43
e b	5230	46	AVG	26T	10.47	10.57	10.45	23.98	-13.41	-6.58	3.99	22.39	-18.40
4 3	5270	54	AVG	26T	10.40	10.30	10.37	23.47	-13.07	-6.50	3.90	29.47	-25.57
<u> </u>	5310	62	AVG	26T	10.53	10.44	10.37	23.47	-12.94	-6.50	4.03	29.47	-25.44
₽ ⊆	5510	102	AVG	26T	10.33	10.29	10.31	22.80	-12.47	-6.20	4.13	28.80	-24.67
ta a	5590	118	AVG	26T	10.41	10.40	10.25	22.80	-12.39	-6.20	4.21	28.80	-24.59
ര്മ	5710	142	AVG	26T	10.40	10.18	10.17	22.80	-12.40	-6.70	3.70	28.80	-25.10
~	5755	151	AVG	26T	10.94	10.80	10.87	30.00	-19.06	-6.70	4.24	-	-
	5795	159	AVG	26T	10.39	10.85	10.21	30.00	-19.15	-6.70	4.15	-	-

Table 7-22. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
E E					0	18	36	[dBm]	Margin [dB]	[ubi]	[ubiii]		Margin [ub]
OM	5210	42	AVG	26T	10.22	10.85	10.11	23.98	-13.13	-6.58	4.27	22.39	-18.12
<u>∞</u> ≥	5290	58	AVG	26T	10.02	10.65	10.90	23.47	-12.57	-6.50	4.40	29.47	-25.07
우입	5530	106	AVG	26T	10.08	10.75	10.87	22.80	-11.93	-6.20	4.67	28.80	-24.13
5Gł Ba	5610	122	AVG	26T	10.03	10.52	10.78	22.80	-12.02	-6.20	4.58	28.80	-24.22
5	5690	138	AVG	26T	10.11	10.52	10.72	22.80	-12.08	-6.70	4.02	28.80	-24.78
	5775	155	AVG	26T	10.64	10.27	10.39	30.00	-19.36	-6.70	3.94	-	-

Table 7-23. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage E4 of 2005
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset		Page 54 of 265
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### SISO Antenna-2 Conducted Output Power Measurements (52 Tones)

	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					37	39	40	[dBm]	Margin [dB]	[ubi]	[ubiii]		
N	5180	36	AVG	52T	12.80	12.98	12.90	23.98	-11.00	-6.58	6.40	22.39	-15.99
ΞΞ	5200	40	AVG	52T	12.87	12.94	12.92	23.98	-11.04	-6.58	6.36	22.39	-16.03
₹ ¥	5240	48	AVG	52T	12.94	12.90	12.97	23.98	-11.01	-6.97	6.00	22.39	-16.39
	5260	52	AVG	52T	12.04	12.17	12.02	23.47	-11.30	-6.50	5.67	29.47	-23.80
<u>&lt;</u> (5)	5280	56	AVG	52T	12.15	12.33	12.25	23.47	-11.14	-6.50	5.83	29.47	-23.64
N 2	5320	64	AVG	52T	12.34	12.48	12.33	23.47	-10.99	-6.19	6.29	29.47	-23.18
a T	5500	100	AVG	52T	12.21	12.40	12.20	22.80	-10.40	-6.20	6.20	28.80	-22.60
С Ш	5600	120	AVG	52T	12.70	12.65	12.46	22.80	-10.10	-6.20	6.50	28.80	-22.30
5	5720	144	AVG	52T	12.77	12.96	12.79	22.80	-9.84	-6.70	6.26	28.80	-22.54
	5745	149	AVG	52T	12.48	12.38	12.10	30.00	-17.52	-6.70	5.78	-	-
	5785	157	AVG	52T	12.46	12.58	12.26	30.00	-17.42	-6.70	5.88	-	-
	5825	165	AVG	52T	12.09	12.34	12.04	30.00	-17.66	-6.01	6.33	-	-

Table 7-24. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p.	e.i.r.p. Margin [dB]
lΪ 🤶	,				37	40	44	[dBm]	Margin [dB]	[ubi]	[ubiii]		
= ÷	5190	38	AVG	52T	11.56	11.57	11.62	23.98	-12.36	-6.58	5.04	22.39	-17.35
e b	5230	46	AVG	52T	11.61	11.48	11.61	23.98	-12.37	-6.58	5.03	22.39	-17.36
4 3	5270	54	AVG	52T	11.50	11.44	11.43	23.47	-11.97	-6.50	5.00	29.47	-24.47
Đ	5310	62	AVG	52T	11.62	11.52	11.43	23.47	-11.85	-6.50	5.12	29.47	-24.35
₽ ⊆	5510	102	AVG	52T	11.56	11.22	11.62	22.80	-11.18	-6.20	5.42	28.80	-23.38
ta a	5590	118	AVG	52T	11.59	11.28	11.39	22.80	-11.21	-6.20	5.39	28.80	-23.41
യ്മ	5710	142	AVG	52T	11.58	11.29	11.45	22.80	-11.22	-6.70	4.88	28.80	-23.92
~	5755	151	AVG	52T	11.70	11.68	11.84	30.00	-18.16	-6.70	5.14	-	-
	5795	159	AVG	52T	11.38	11.65	11.30	30.00	-18.35	-6.70	4.95	-	-

Table 7-25. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
王운					37	44	52	[dBm]	Margin [dB]	[ubi]	[abiii]	Cinic [Obin]	Margin [ub]
OM	5210	42	AVG	52T	10.30	10.67	10.30	23.98	-13.31	-6.58	4.09	22.39	-18.30
<u>∞</u> ≥	5290	58	AVG	52T	10.14	10.55	10.10	23.47	-12.92	-6.50	4.05	29.47	-25.42
P S	5530	106	AVG	52T	10.17	10.25	10.06	22.80	-12.55	-6.20	4.05	28.80	-24.75
5Gł Ba	5610	122	AVG	52T	10.14	10.26	10.97	22.80	-11.83	-6.20	4.77	28.80	-24.03
5	5690	138	AVG	52T	10.29	10.34	10.96	22.80	-11.84	-6.70	4.26	28.80	-24.54
	5775	155	AVG	52T	10.83	10.98	10.60	30.00	-19.02	-6.70	4.28	-	-

Table 7-26. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo EE of 200E
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset		Page 55 of 265
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### SISO Antenna-2 Conducted Output Power Measurements (106 Tones)

	Freq [MHz]	Channel	Detector	Tones	RU I	ndex	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					53	54	[dBm]	Margin [dB]	[abi]	Lapud	Ennie [GBin]	Margin [ab]
N	5180	36	AVG	106T	14.90	14.95	23.98	-9.03	-6.58	8.37	22.39	-14.02
E E	5200	40	AVG	106T	14.03	14.11	23.98	-9.87	-6.58	7.53	22.39	-14.86
dt S	5240	48	AVG	106T	14.13	14.14	23.98	-9.84	-6.97	7.17	22.39	-15.22
	5260	52	AVG	106T	14.09	14.12	23.47	-9.35	-6.50	7.62	29.47	-21.85
<u>&lt;</u> 3	5280	56	AVG	106T	14.21	14.17	23.47	-9.26	-6.50	7.71	29.47	-21.76
N 2	5320	64	AVG	106T	14.36	14.32	23.47	-9.11	-6.19	8.17	29.47	-21.30
a I	5500	100	AVG	106T	14.35	14.29	22.80	-8.45	-6.20	8.15	28.80	-20.65
C B B	5600	120	AVG	106T	14.72	14.52	22.80	-8.08	-6.20	8.52	28.80	-20.28
5	5720	144	AVG	106T	14.80	14.68	22.80	-8.00	-6.70	8.10	28.80	-20.70
	5745	149	AVG	106T	14.13	14.06	30.00	-15.87	-6.70	7.43	-	-
	5785	157	AVG	106T	14.17	14.08	30.00	-15.83	-6.70	7.47	-	-
	5825	165	AVG	106T	14.84	14.78	30.00	-15.16	-6.01	8.83	-	-

Table 7-27. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

N	Freq [MHz]	Channel Detector Tones		Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p.	e.i.r.p. Margin [dB]
ΪÏ 🛜	,				53	54	56	[dBm]	Margin [dB]	[ubi]	Lapud	Chine [GDin]	Margin [ub]
≓ ⇒	5190	38	AVG	106T	12.93	12.61	12.81	23.98	-11.05	-6.58	6.35	22.39	-16.04
<u>5</u>	5230	46	AVG	106T	12.90	12.54	12.85	23.98	-11.08	-6.58	6.32	22.39	-16.07
4 5	5270	54	AVG	106T	12.78	12.32	12.79	23.47	-10.68	-6.50	6.29	29.47	-23.18
<u>с</u> б	5310	62	AVG	106T	12.94	12.41	12.83	23.47	-10.53	-6.50	6.44	29.47	-23.03
₽ ⊆	5510	102	AVG	106T	12.64	12.29	12.80	22.80	-10.00	-6.20	6.60	28.80	-22.20
ta a	5590	118	AVG	106T	12.72	12.23	12.64	22.80	-10.08	-6.20	6.52	28.80	-22.28
	5710	142	AVG	106T	12.74	12.16	12.56	22.80	-10.06	-6.70	6.04	28.80	-22.76
	5755	151	AVG	106T	12.37	12.85	12.23	30.00	-17.15	-6.70	6.15	-	-
	5795	159	AVG	106T	12.91	12.69	12.63	30.00	-17.09	-6.70	6.21	-	-

Table 7-28. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
0MH idth)					53	56	60	[dBm]	Margin [dB]	[ubij	Lapuil		wargin [ub]
id O	5210	42	AVG	106T	11.46	11.69	11.41	23.98	-12.29	-6.58	5.11	22.39	-17.28
<u>8</u>	5290	58	AVG	106T	11.18	11.52	11.17	23.47	-11.95	-6.50	5.02	29.47	-24.45
PC 42	5530	106	AVG	106T	11.33	11.44	11.27	22.80	-11.36	-6.20	5.24	28.80	-23.56
5G Ba	5610	122	AVG	106T	11.25	11.42	11.11	22.80	-11.38	-6.20	5.22	28.80	-23.58
5	5690	138	AVG	106T	11.39	11.39	11.14	22.80	-11.41	-6.70	4.69	28.80	-24.11
	5775	155	AVG	106T	11.77	11.95	11.61	30.00	-18.05	-6.70	5.25	-	-

Table 7-29. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage EC of DCE
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset	Page 56 of 265
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### SISO Antenna-2 Conducted Output Power Measurements (242 Tones)

	Freq [MHz]	Channel	Detector	Tones	RU Index	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					61	[dBm]	Margin [dB]	[abi]	[abiii]	Ennie [GBhij	margin [ab]
N	5180	36	AVG	242T	15.91	23.98	-8.07	-6.58	9.33	22.39	-13.06
E E	5200	40	AVG	242T	15.94	23.98	-8.04	-6.58	9.36	22.39	-13.03
d ≥	5240	48	AVG	242T	15.93	23.98	-8.05	-6.97	8.96	22.39	-13.43
	5260	52	AVG	242T	15.11	23.47	-8.36	-6.50	8.61	29.47	-20.86
<u>&lt;</u> ()	5280	56	AVG	242T	15.26	23.47	-8.21	-6.50	8.76	29.47	-20.71
N 2	5320	64	AVG	242T	15.35	23.47	-8.12	-6.19	9.16	29.47	-20.31
a T	5500	100	AVG	242T	15.38	22.80	-7.42	-6.20	9.18	28.80	-19.62
C m	5600	120	AVG	242T	15.57	22.80	-7.23	-6.20	9.37	28.80	-19.43
ເ <u>ດ</u>	5720	144	AVG	242T	15.73	22.80	-7.07	-6.70	9.03	28.80	-19.77
	5745	149	AVG	242T	15.90	30.00	-14.10	-6.70	9.20	-	-
	5785	157	AVG	242T	15.97	30.00	-14.03	-6.70	9.27	-	-
	5825	165	AVG	242T	15.79	30.00	-14.21	-6.01	9.78	-	-

Table 7-30. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

N	Freq [MHz]	Freq [MHz] Channel		Tones	RU I	ndex	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
					61	62	[dBm]	Margin [dB]	[abij	Capiti	Ennit [dbin]	
두 눈		38	AVG	242T	13.25	13.29	23.98	-10.69	-6.58	6.71	22.39	-15.68
6 P	5230	46	AVG	242T	13.86	13.65	23.98	-10.12	-6.58	7.28	22.39	-15.11
4 \$	5270	54	AVG	242T	13.80	13.70	23.47	-9.67	-6.50	7.30	29.47	-22.17
	5310	62	AVG	242T	13.96	13.69	23.47	-9.51	-6.50	7.46	29.47	-22.01
우려	5510	102	AVG	242T	13.67	13.97	22.80	-8.83	-6.20	7.77	28.80	-21.03
		118	AVG	242T	13.65	13.59	22.80	-9.15	-6.20	7.45	28.80	-21.35
വ്വ	5710	142	AVG	242T	13.74	13.55	22.80	-9.06	-6.70	7.04	28.80	-21.76
~~	5755	151	AVG	242T	13.91	13.96	30.00	-16.04	-6.70	7.26	-	-
	5795	159	AVG	242T	13.79	13.82	30.00	-16.18	-6.70	7.12	-	-

Table 7-31. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

N	Freq [MHz]	Channel	Detector	Tones		RU Index		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p.	e.i.r.p. Margin [dB]
OMH idth)					61	62	64	[dBm]	Margin [dB]	[ubi]	[ubiii]	Cinic [ubin]	Margin [ub]
id N	5210	42	AVG	242T	12.62	12.94	12.62	23.98	-11.04	-6.58	6.36	22.39	-16.03
<u>8</u>	5290	58	AVG	242T	12.51	12.76	12.47	23.47	-10.71	-6.50	6.26	29.47	-23.21
P C	5530	106	AVG	242T	12.45	12.61	12.48	22.80	-10.19	-6.20	6.41	28.80	-22.39
Ba	5610	122	AVG	242T	12.42	12.55	12.36	22.80	-10.25	-6.20	6.35	28.80	-22.45
5	5690	138	AVG	242T	12.39	12.42	12.40	22.80	-10.38	-6.70	5.72	28.80	-23.08
	5775	155	AVG	242T	12.79	12.98	12.85	30.00	-17.02	-6.70	6.28	-	-

Table 7-32. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga FZ of 2005
1M1911010179-06.A3L	10/11/19 - 01/20/20	Portable Handset		Page 57 of 265
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### SISO Antenna-2 Conducted Output Power Measurements (484 Tones)

N	Freq [MHz]	Channel	Detector	Tones	RU Index	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
l <del>ii</del> e					65	[dBm]	Margin [dB]	[ubi]	[GDin]	Ennie [GDin]	Margin [ab]
t j	5190	38	AVG	484T	13.05	23.98	-10.93	-6.58	6.47	22.39	-15.92
id <u>f</u>	5230	46	AVG	484T	13.68	23.98	-10.30	-6.58	7.10	22.39	-15.29
<u>4</u>	5270	54	AVG	484T	13.65	23.47	-9.82	-6.50	7.15	29.47	-22.32
	5310	62	AVG	484T	13.44	23.47	-10.03	-6.50	6.94	29.47	-22.53
μĞ	5510	102	AVG	484T	13.51	22.80	-9.29	-6.20	7.31	28.80	-21.49
	5590	118	AVG	484T	13.32	22.80	-9.48	-6.20	7.12	28.80	-21.68
D C	5710	142	AVG	484T	13.42	22.80	-9.38	-6.70	6.72	28.80	-22.08
~	5755	151	AVG	484T	13.95	30.00	-16.05	-6.70	7.25	-	-
	5795	159	AVG	484T	13.85	30.00	-16.15	-6.70	7.15	-	-

Table 7-33. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

	Freq [MHz]	Channel	Detector	Tones	RUI	ndex	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
(Le					65	66	[dBm]	Margin [dB]	[ubi]	Lapuil		iviai gili [ub]
	5210	42	AVG	484T	12.46	12.45	23.98	-11.52	-6.58	5.88	22.39	-16.51
2 <u>3</u>	5290	58	AVG	484T	12.22	12.36	23.47	-11.11	-6.50	5.86	29.47	-23.61
1 2	5530	106	AVG	484T	12.23	12.49	22.80	-10.31	-6.20	6.29	28.80	-22.51
Ba	5610	122	AVG	484T	12.23	12.32	22.80	-10.48	-6.20	6.12	28.80	-22.68
, —	5690	138	AVG	484T	12.33	12.45	22.80	-10.35	-6.70	5.75	28.80	-23.05
	5775	155	AVG	484T	12.67	12.90	30.00	-17.10	-6.70	6.20	-	-

Table 7-34. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

### SISO Antenna-2 Conducted Output Power Measurements (996 Tones)

Ţ	Freq [MHz]	Channel	Detector	Tones	RU Index	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
<b>≑</b> £					67	[dBm]	Margin [dB]		• • •		
S P	5210	42	AVG	996T	12.29	23.98	-11.69	-6.58	5.71	22.39	-16.68
<u>8</u>	5290	58	AVG	996T	12.95	23.47	-10.52	-6.50	6.45	29.47	-23.02
5GHz Band	5530	106	AVG	996T	12.76	22.80	-10.04	-6.20	6.56	28.80	-22.24
GH	5610	122	AVG	996T	12.65	22.80	-10.15	-6.20	6.45	28.80	-22.35
2	5690	138	AVG	996T	12.66	22.80	-10.14	-6.70	5.96	28.80	-22.84
	5775	155	AVG	996T	12.28	30.00	-17.72	-6.70	5.58	-	-

Table 7-35. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power (996 Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage EQ of 2005
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### MIMO Maximum Conducted Output Power Measurements (26 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	
	Freq [MHz]	Channel	Detector	Tones		0			4			8		Power Limit	Power	Ant. Gain			e.i.r.p. Margin (dB)
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Chine [GDin]	Margin [ub]
_	5180	36	AVG	26T	6.12	8.97	10.79	5.41	8.20	10.04	6.39	8.95	10.87	23.98	-13.11	-3.50	7.36	22.39	-15.03
=1	5200	40	AVG	26T	6.28	8.98	10.85	5.69	8.19	10.13	6.40	8.95	10.87	23.98	-13.11	-3.62	7.25	22.39	-15.14
5	5240	48	AVG	26T	5.64	7.98	9.98	5.98	8.27	10.28	6.66	8.97	10.98	23.98	-13.00	-3.70	7.28	22.39	-15.11
ΞL	5260	52	AVG	26T	6.65	7.85	10.30	6.90	8.13	10.57	6.41	7.68	10.10	23.47	-12.90	-3.46	7.10	29.47	-22.37
≤	5280	56	AVG	26T	6.61	7.83	10.27	6.83	8.11	10.53	6.33	7.85	10.17	23.47	-12.94	-3.54	6.98	29.47	-22.49
2	5320	64	AVG	26T	6.03	7.86	10.05	6.17	8.10	10.25	6.71	8.73	10.85	23.47	-12.62	-3.36	7.49	29.47	-21.98
a	5500	100	AVG	26T	6.64	7.75	10.24	6.98	7.82	10.43	6.83	7.56	10.22	22.80	-12.37	-3.58	6.85	28.80	-21.95
ŏ 🗌	5600	120	AVG	26T	7.06	7.79	10.45	7.10	7.91	10.53	6.64	7.46	10.08	22.80	-12.27	-3.58	6.96	28.80	-21.84
	5720	144	AVG	26T	6.87	7.74	10.34	7.15	7.86	10.53	6.99	7.41	10.22	22.80	-12.27	-3.83	6.70	28.80	-22.10
	5745	149	AVG	26T	6.06	8.41	10.40	6.44	8.76	10.76	6.27	8.19	10.35	30.00	-19.24	-3.83	6.93		
	5785	157	AVG	26T	6.89	8.38	10.71	6.43	7.83	10.20	7.19	8.12	10.69	30.00	-19.29	-3.83	6.88	-	-
	5825	165	AVG	26T	7.44	8.35	10.93	6.76	7.77	10.30	7.38	8.02	10.72	30.00	-19.07	-3.46	7.47	-	-

Table 7-36. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

									RU Index					Conducted	Conducted	Directional	Manualian	Manada	
	Freq [MHz]	Channel	Detector	Tones		0			8			17		Power Limit	Power	Ant. Gain		Max e.i.r.p. Limit [dBm]	
Î					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	сили (автиј	Iviai gin [ub]
₹ ÷	5190	38	AVG	26T	7.95	7.76	10.87	8.06	7.86	10.97	7.89	8.02	10.97	23.98	-13.01	-3.62	7.35	22.39	-15.04
פ פו	5230	46	AVG	26T	7.86	7.83	10.86	7.95	7.96	10.97	7.83	8.12	10.99	23.98	-12.99	-3.50	7.48	22.39	-14.91
<u>4 2</u>	5270	54	AVG	26T	7.67	6.74	10.24	7.41	6.60	10.03	7.30	6.71	10.03	23.47	-13.23	-3.54	6.70	29.47	-22.77
<u> </u>	5310	62	AVG	26T	7.37	6.83	10.12	8.18	7.58	10.90	8.12	7.41	10.79	23.47	-12.57	-3.51	7.39	29.47	-22.08
Ρč	5510	102	AVG	26T	7.93	6.80	10.41	7.82	6.71	10.31	7.79	6.87	10.36	22.80	-12.39	-3.58	6.84	28.80	-21.96
ia i	5590	118	AVG	26T	7.48	6.67	10.10	8.19	7.45	10.85	8.20	7.68	10.96	22.80	-11.84	-3.58	7.38	28.80	-21.42
б	5710	142	AVG	26T	7.91	6.73	10.37	8.00	6.36	10.27	8.22	6.69	10.53	22.80	-12.27	-3.77	6.76	28.80	-22.04
<b>.</b> ,	5755	151	AVG	26T	7.33	7.52	10.44	7.26	7.57	10.43	7.53	7.41	10.48	30.00	-19.52	-3.77	6.71	-	-
	5795	159	AVG	26T	7.91	8.01	10.97	7.49	7.53	10.52	7.94	7.69	10.83	30.00	-19.03	-3.81	7.16		-

Table 7-37. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Manualian	e.i.r.p.
N	Freq [MHz]	Channel	Detector	Tones		0			18			36		Power Limit	Power	Ant. Gain		Limit [dBm]	
E E					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuid	Linii (ubiii)	Inter an
5 5	5210	42	AVG	26T	8.02	7.25	10.66	7.86	7.14	10.52	7.49	6.79	10.16	23.98	-13.32	-3.50	7.16	22.39	-15.23
<u>8</u> 8	5290	58	AVG	26T	8.42	6.46	10.56	7.83	6.20	10.10	7.72	6.37	10.11	23.47	-12.91	-3.51	7.05	29.47	-22.42
우입	5530	106	AVG	26T	8.16	7.04	10.65	8.25	6.59	10.51	8.84	6.89	10.98	22.80	-11.82	-3.58	7.41	28.80	-21.39
Ξœ	5610	122	AVG	26T	8.76	6.94	10.95	8.21	6.72	10.54	7.97	6.89	10.47	22.80	-11.85	-3.58	7.38	28.80	-21.42
5	5690	138	AVG	26T	8.11	7.16	10.67	7.48	6.67	10.10	8.19	7.14	10.71	22.80	-12.09	-3.77	6.94	28.80	-21.86
	5775	155	AVG	26T	6.95	8.09	10.57	7.35	7.71	10.54	7.51	6.85	10.20	30.00	-19.43	-3.77	6.80	-	-

Table 7-38. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo E0 of 205
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### MIMO Conducted Output Power Measurements (52 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		37			39			40		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]		Margin [dB]
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Ennie [GDinj	margin [ub]
	5180	36	AVG	52T	9.52	9.48	12.51	9.91	9.67	12.80	9.77	9.49	12.64	23.98	-11.18	-3.50	9.30	22.39	-13.09
2	5200	40	AVG	52T	9.69	9.49	12.60	9.95	9.75	12.86	9.71	9.59	12.66	23.98	-11.12	-3.62	9.24	22.39	-13.15
Ħ	5240	48	AVG	52T	9.56	9.75	12.67	9.58	9.86	12.73	9.46	9.62	12.55	23.98	-11.25	-3.70	9.04	22.39	-13.35
÷	5260	52	AVG	52T	10.36	9.53	12.98	9.49	8.70	12.12	10.26	9.48	12.90	23.47	-10.49	-3.46	9.51	29.47	-19.96
. <u>≥</u> .	5280	56	AVG	52T	10.23	9.54	12.91	10.33	9.58	12.98	10.11	9.40	12.78	23.47	-10.49	-3.54	9.44	29.47	-20.03
2	5320	64	AVG	52T	10.04	9.34	12.71	10.06	9.46	12.78	9.82	9.22	12.54	23.47	-10.69	-3.36	9.42	29.47	-20.05
a	5500	100	AVG	52T	9.49	8.59	12.07	9.72	8.65	12.23	10.35	9.52	12.97	22.80	-9.83	-3.58	9.39	28.80	-19.41
<b>m</b>	5600	120	AVG	52T	10.15	9.59	12.89	10.18	9.51	12.87	9.92	9.26	12.61	22.80	-9.91	-3.58	9.31	28.80	-19.49
_	5720	144	AVG	52T	9.79	8.63	12.26	9.99	8.68	12.39	9.97	8.55	12.33	22.80	-10.41	-3.83	8.56	28.80	-20.24
	5745	149	AVG	52T	8.72	9.44	12.11	8.82	9.32	12.09	9.68	10.03	12.87	30.00	-17.13	-3.83	9.04		-
	5785	157	AVG	52T	9.94	9.91	12.94	9.29	9.06	12.19	9.94	9.67	12.82	30.00	-17.06	-3.83	9.10	-	-
	5825	165	AVG	52T	9.56	9.65	12.62	10.04	9.77	12.92	9.69	9.42	12.57	30.00	-17.08	-3.46	9.46	-	-

Table 7-39. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

									RU Index					Conducted	Conducted	Directional	Manualian	Manada	
	Freq [MHz]	Channel	Detector	Tones		37			40			44		Power Limit	Power	Ant. Gain		Max e.i.r.p. Limit [dBm]	
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapui	сили (автиј	wargin [ub]
≂ ⇒	5190	38	AVG	52T	8.27	7.95	11.12	8.29	8.45	11.38	8.48	8.21	11.36	23.98	-12.60	-3.62	7.76	22.39	-14.63
פפ	5230	46	AVG	52T	8.12	8.07	11.11	8.57	8.49	11.54	8.74	8.40	11.58	23.98	-12.40	-3.50	8.08	22.39	-14.31
4 i 2 i	5270	54	AVG	52T	9.08	7.87	11.53	9.65	8.12	11.96	9.56	8.17	11.93	23.47	-11.51	-3.54	8.42	29.47	-21.05
<u> </u>	5310	62	AVG	52T	8.66	7.93	11.32	9.17	8.11	11.68	9.01	8.06	11.57	23.47	-11.79	-3.51	8.17	29.47	-21.30
Ρč	5510	102	AVG	52T	9.04	8.07	11.59	9.44	8.32	11.93	9.14	7.66	11.47	22.80	-10.87	-3.58	8.35	28.80	-20.45
ia i	5590	118	AVG	52T	8.64	7.91	11.30	8.76	7.06	11.00	8.71	7.53	11.17	22.80	-11.50	-3.58	7.72	28.80	-21.08
	5710	142	AVG	52T	9.11	7.99	11.60	9.17	8.49	11.85	8.51	7.82	11.19	22.80	-10.95	-3.77	8.08	28.80	-20.72
<u>.</u> ,	5755	151	AVG	52T	8.27	8.69	11.50	8.45	9.28	11.90	7.98	8.44	11.23	30.00	-18.10	-3.77	8.13	-	-
	5795	159	AVG	52T	8.19	8.23	11.22	8.27	8.31	11.30	8.21	7.89	11.06	30.00	-18.70	-3.81	7.49		

Table 7-40. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Manualian	e.i.r.p.
N	Freq [MHz]	Channel	Detector	Tones		37			44			52		Power Limit	Power	Ant. Gain		Limit [dBm]	
E E					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linii (ubiii)	iviar gin [ub]
5 5	5210	42	AVG	52T	8.35	7.13	10.79	7.96	6.91	10.48	7.66	6.81	10.27	23.98	-13.19	-3.50	7.29	22.39	-15.10
<u>8</u> 8	5290	58	AVG	52T	8.74	6.42	10.74	7.82	6.09	10.05	7.95	6.53	10.31	23.47	-12.73	-3.51	7.23	29.47	-22.24
우입	5530	106	AVG	52T	8.42	7.09	10.82	8.26	6.45	10.46	8.10	6.02	10.19	22.80	-11.98	-3.58	7.24	28.80	-21.56
ΒŪ	5610	122	AVG	52T	8.10	5.95	10.17	8.02	6.20	10.21	8.17	7.12	10.69	22.80	-12.11	-3.58	7.11	28.80	-21.69
- û	5690	138	AVG	52T	8.41	7.29	10.90	7.52	6.46	10.03	8.28	7.25	10.81	22.80	-11.90	-3.77	7.13	28.80	-21.67
	5775	155	AVG	52T	7.27	8.30	10.83	7.39	7.45	10.43	7.77	6.93	10.38	30.00	-19.17	-3.77	7.06	-	

Table 7-41. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 60 of 265
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### MIMO Conducted Output Power Measurements (106 Tones)

							RU I	ndex			Conducted	Conducted	Directional	Managian	Manadana	
	Freq [MHz]	Channel	Detector	Tones		53			54		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin (dB)
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Cinic [ubin]	margin [ub]
N	5180	36	AVG	106T	11.67	11.35	14.52	11.72	11.23	14.49	23.98	-9.46	-3.50	11.02	22.39	-11.37
ΞΞ	5200	40	AVG	106T	11.79	11.56	14.69	11.75	11.61	14.69	23.98	-9.29	-3.62	11.07	22.39	-11.32
ן ב	5240	48	AVG	106T	11.63	11.75	14.70	11.61	11.83	14.73	23.98	-9.25	-3.70	11.04	22.39	-11.35
20 Vic	5260	52	AVG	106T	11.49	10.61	14.08	11.38	10.69	14.06	23.47	-9.39	-3.46	10.62	29.47	-18.85
<u>S</u> <u>S</u>	5280	56	AVG	106T	12.38	11.48	14.96	12.18	11.48	14.85	23.47	-8.51	-3.54	11.42	29.47	-18.05
	5320	64	AVG	106T	12.02	11.27	14.67	12.03	11.29	14.69	23.47	-8.78	-3.36	11.33	29.47	-18.14
ы	5500	100	AVG	106T	12.34	11.51	14.96	12.41	11.31	14.91	22.80	-7.84	-3.58	11.38	28.80	-17.42
5 B B	5600	120	AVG	106T	11.98	11.47	14.74	11.96	11.17	14.59	22.80	-8.06	-3.58	11.17	28.80	-17.63
<u>ດ</u>	5720	144	AVG	106T	11.66	10.71	14.22	12.59	11.15	14.94	22.80	-7.86	-3.83	11.11	28.80	-17.69
	5745	149	AVG	106T	11.75	11.93	14.85	11.36	11.53	14.46	30.00	-15.15	-3.83	11.02	-	-
	5785	157	AVG	106T	12.07	11.62	14.86	12.05	11.13	14.62	30.00	-15.14	-3.83	11.03	-	-
	5825	165	AVG	106T	11.87	11.11	14.52	11.87	11.04	14.49	30.00	-15.48	-3.46	11.06	-	-

Table 7-42. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Manualian	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		53			54			56		Power Limit	Power	Ant. Gain		Limit [dBm]	
2					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linii (ubinj	imar gin [ub]
÷	5190	38	AVG	106T	9.59	9.14	12.38	10.27	9.61	12.96	9.68	9.21	12.46	23.98	-11.02	-3.62	9.34	22.39	-13.05
p	5230	46	AVG	106T	9.56	9.03	12.31	9.62	8.87	12.27	9.98	9.43	12.72	23.98	-11.26	-3.50	9.22	22.39	-13.17
. ≷I	5270	54	AVG	106T	9.96	8.19	12.17	10.54	8.71	12.73	9.87	8.27	12.15	23.47	-10.74	-3.54	9.19	29.47	-20.28
6	5310	62	AVG	106T	9.69	8.41	12.11	10.16	8.89	12.58	10.34	9.29	12.86	23.47	-10.61	-3.51	9.34	29.47	-20.13
Ē	5510	102	AVG	106T	9.60	8.93	12.29	10.33	9.30	12.86	10.17	8.82	12.56	22.80	-9.94	-3.58	9.28	28.80	-19.52
g	5590	118	AVG	106T	10.27	8.75	12.59	10.71	9.06	12.97	9.92	8.81	12.41	22.80	-9.83	-3.58	9.40	28.80	-19.40
ш	5710	142	AVG	106T	9.53	9.20	12.38	9.92	9.63	12.79	9.48	9.13	12.32	22.80	-10.01	-3.77	9.02	28.80	-19.78
	5755	151	AVG	106T	8.70	9.72	12.25	9.34	10.10	12.75	9.13	9.51	12.33	30.00	-17.25	-3.77	8.98		-
	5795	159	AVG	106T	8.92	9.38	12.17	8.98	9.21	12.11	9.41	9.11	12.27	30.00	-17.73	-3.81	8.46		

Table 7-43. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Maxaira	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		53			56			60		Power Limit	Power	Ant. Gain		Limit [dBm]	
÷					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuid	Linii (ubiii)	wargin [ub]
0	5210	42	AVG	106T	8.57	7.44	11.05	9.06	7.91	11.53	8.97	8.03	11.54	23.98	-12.44	-3.50	8.03	22.39	-14.36
<u> </u>	5290	58	AVG	106T	9.81	7.72	11.90	9.02	7.01	11.14	9.08	7.98	11.58	23.47	-11.57	-3.51	8.39	29.47	-21.08
Ĕ	5530	106	AVG	106T	9.45	8.41	11.97	9.18	7.71	11.52	9.27	7.40	11.45	22.80	-10.83	-3.58	8.40	28.80	-20.40
Ba	5610	122	AVG	106T	9.18	7.21	11.32	9.13	7.45	11.38	9.32	8.45	11.92	22.80	-10.88	-3.58	8.34	28.80	-20.46
· — [	5690	138	AVG	106T	9.40	8.45	11.96	8.49	7.73	11.14	9.27	8.63	11.97	22.80	-10.83	-3.77	8.20	28.80	-20.60
[	5775	155	AVG	106T	8.46	9.28	11.90	8.28	8.44	11.37	8.78	8.14	11.48	30.00	-18.10	-3.77	8.13	-	-

Table 7-44. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 61 of 265
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### MIMO Conducted Output Power Measurements (242 Tones)

						RU Index		Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		61		Power Limit	Power	Ant. Gain	[dBm]	Limit [dBm]	•
					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	lapui		Margin [GD]
N	5180	36	AVG	242T	12.75	12.33	15.56	23.98	-8.42	-3.50	12.05	22.39	-10.34
E E	5200	40	AVG	242T	12.63	12.38	15.52	23.98	-8.46	-3.62	11.89	22.39	-10.50
ΞĦ	5240	48	AVG	242T	12.57	12.71	15.65	23.98	-8.33	-3.70	11.96	22.39	-10.43
, ĭ	5260	52	AVG	242T	13.33	12.53	15.96	23.47	-7.51	-3.46	12.49	29.47	-16.98
<u>&lt;</u> 2	5280	56	AVG	242T	13.22	12.47	15.87	23.47	-7.60	-3.54	12.33	29.47	-17.14
N 2	5320	64	AVG	242T	13.06	12.21	15.67	23.47	-7.80	-3.36	12.31	29.47	-17.16
E T	5500	100	AVG	242T	13.36	12.42	15.93	22.80	-6.87	-3.58	12.35	28.80	-16.45
С Ш	5600	120	AVG	242T	13.37	12.39	15.92	22.80	-6.88	-3.58	12.34	28.80	-16.46
S	5720	144	AVG	242T	12.49	11.51	15.04	22.80	-7.76	-3.83	11.20	28.80	-17.60
	5745	149	AVG	242T	12.66	12.81	15.75	30.00	-14.25	-3.83	11.91	-	-
	5785	157	AVG	242T	12.98	12.63	15.82	30.00	-14.18	-3.83	11.99	-	-
	5825	165	AVG	242T	12.68	12.35	15.53	30.00	-14.47	-3.46	12.07	-	-

Table 7-45. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

							RUI	ndex			Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
N	Freq [MHz]	Channel	Detector	Tones		61			62		Power Limit	Power	Ant. Gain	[dBm]	Limit [dBm]	
ΪC					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Cinic (ability	
≓ ÷	5190	38	AVG	242T	10.97	9.74	13.41	10.99	10.14	13.60	23.98	-10.38	-3.62	9.97	22.39	-12.42
<u>e</u> 3	5230	46	AVG	242T	11.32	9.88	13.67	11.24	10.33	13.82	23.98	-10.16	-3.50	10.31	22.39	-12.08
4 3	5270	54	AVG	242T	11.42	9.05	13.41	11.21	9.25	13.35	23.47	-10.06	-3.54	9.86	29.47	-19.61
νī	5310	62	AVG	242T	11.12	9.24	13.29	11.57	9.93	13.84	23.47	-9.63	-3.51	10.32	29.47	-19.15
ΡČ	5510	102	AVG	242T	11.03	9.67	13.41	11.30	9.69	13.58	22.80	-9.22	-3.58	10.00	28.80	-18.80
ъ В	5590	118	AVG	242T	11.39	9.47	13.55	11.25	9.63	13.53	22.80	-9.25	-3.58	9.97	28.80	-18.83
ы	5710	142	AVG	242T	10.66	9.72	13.23	10.64	9.86	13.28	22.80	-9.52	-3.77	9.51	28.80	-19.29
~/	5755	151	AVG	242T	9.60	10.53	13.10	10.31	10.52	13.43	30.00	-16.57	-3.77	9.66	-	-
	5795	159	AVG	242T	10.48	10.53	13.52	10.84	10.58	13.72	30.00	-16.28	-3.81	9.91	-	-

Table 7-46. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Maxaira	e.i.r.p.
N	Freq [MHz]	Channel	Detector	Tones		61			62			64		Power Limit	Power	Ant. Gain		Limit [dBm]	
Ē€					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuid	Linii (ubiiij	Margin [ub]
5 2	5210	42	AVG	242T	9.96	8.86	12.46	10.12	9.26	12.72	10.25	9.43	12.87	23.98	-11.11	-3.50	9.37	22.39	-13.02
<u>≥ ≅</u>	5290	58	AVG	242T	10.16	8.15	12.28	10.16	8.35	12.36	10.61	9.18	12.96	23.47	-10.51	-3.51	9.45	29.47	-20.02
2 2	5530	106	AVG	242T	9.84	8.72	12.33	10.34	8.89	12.68	10.53	8.89	12.80	22.80	-10.00	-3.58	9.22	28.80	-19.58
B B	5610	122	AVG	242T	10.29	8.59	12.53	10.35	8.69	12.61	9.74	8.98	12.39	22.80	-10.19	-3.58	9.03	28.80	-19.77
<u> </u>	5690	138	AVG	242T	9.59	8.80	12.22	9.61	8.87	12.27	9.67	9.09	12.40	22.80	-10.40	-3.77	8.63	28.80	-20.17
	5775	155	AVG	242T	8.72	9.48	12.13	9.21	9.69	12.47	9.89	9.43	12.68	30.00	-17.32	-3.77	8.91	-	

Table 7-47. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

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### MIMO Conducted Output Power Measurements (484 Tones)

							RU Index		Conducted	Conducted	Directional	Maxainn	Maxainn	
N		Freq [MHz]	Channel	Detector	Tones		65		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
ΪŤ 1						ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Chine (CDDing	
5	₽	5190	38	AVG	484T	11.61	10.12	13.94	23.98	-10.04	-3.62	10.31	22.39	-12.08
5	▫∟	5230	46	AVG	484T	10.98	9.81	13.44	23.98	-10.53	-3.50	9.94	22.39	-12.45
4	≥□	5270	54	AVG	484T	10.95	8.80	13.02	23.47	-10.45	-3.54	9.47	29.47	-20.00
<u> </u>	5	5310	62	AVG	484T	11.53	9.78	13.75	23.47	-9.72	-3.51	10.24	29.47	-19.23
무	<u> </u>	5510	102	AVG	484T	10.86	9.38	13.19	22.80	-9.61	-3.58	9.62	28.80	-19.18
志。	2a	5590	118	AVG	484T	11.14	9.51	13.41	22.80	-9.39	-3.58	9.84	28.80	-18.96
	-	5710	142	AVG	484T	11.33	10.57	13.98	22.80	-8.82	-3.77	10.21	28.80	-18.59
~/		5755	151	AVG	484T	10.69	11.22	13.97	30.00	-16.03	-3.77	10.20	-	-
		5795	159	AVG	484T	10.34	10.35	13.36	30.00	-16.64	-3.81	9.54	-	-

Table 7-48. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

							RUI	ndex			Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
N	Freq [MHz]	Channel	Detector	Tones		65			66		Power Limit	Power	Ant. Gain		Limit [dBm]	
<u> </u>					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Chine (CDing	wargin [ub]
5	5210	42	AVG	484T	9.48	8.84	12.18	9.79	9.22	12.52	23.98	-11.45	-3.50	9.02	22.39	-13.37
3	5290	58	AVG	484T	10.71	9.02	12.96	10.45	9.13	12.85	23.47	-10.51	-3.51	9.44	29.47	-20.03
Ĕ	5530	106	AVG	484T	9.82	8.51	12.22	10.29	8.69	12.57	22.80	-10.23	-3.58	9.00	28.80	-19.80
Ba	5610	122	AVG	484T	9.98	8.43	12.28	9.65	8.67	12.20	22.80	-10.52	-3.58	8.71	28.80	-20.09
· -	5690	138	AVG	484T	10.22	9.71	12.98	9.45	8.87	12.18	22.80	-9.82	-3.77	9.21	28.80	-19.59
	5775	155	AVG	484T	9.45	10.32	12.92	9.23	9.33	12.29	30.00	-17.08	-3.77	9.15	-	-

Table 7-49. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

### MIMO Conducted Output Power Measurements (996 Tones)

						RU Index		Conducted	Conducted	Directional	Maxainn	Maxainn	
N	Freq [MHz]	Channel	Detector	Tones		67		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
₽ (f)					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	lapui		
lo bi	5210	42	AVG	996T	9.61	8.85	12.26	23.98	-11.72	-3.50	8.75	22.39	-13.64
<u>∞ ≥</u>	5290	58	AVG	996T	10.45	8.59	12.63	23.47	-10.84	-3.51	9.11	29.47	-20.36
P ⊂	5530	106	AVG	996T	9.83	9.07	12.48	22.80	-10.32	-3.58	8.90	28.80	-19.90
5Gł Ba	5610	122	AVG	996T	9.67	9.02	12.37	22.80	-10.43	-3.58	8.79	28.80	-20.01
5	5690	138	AVG	996T	9.06	9.24	12.16	22.80	-10.64	-3.77	8.39	28.80	-20.41
	5775	155	AVG	996T	8.87	9.67	12.30	30.00	-17.70	-3.77	8.53	-	-

Table 7-50. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (996 Tones)

#### Note:

Per ANSI C63.10-2013 and KDB 662911 v02r01 Section E)1), the conducted powers at Antenna 1 and Antenna 2 were first measured separately during MIMO transmission as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

Per ANSI C63.10-2013 Section 14.4.3, the directional gain is calculated using the following formula, where  $G_N$  is the gain of the nth antenna and  $N_{ANT}$ , the total number of antennas used.

Directional gain =  $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}} + ... + 10^{G_{N/20}})^2 / N_{ANT}] dBi$ 

#### Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 15.93 dBm for Antenna-1 and 16.16 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(15.93 dBm + 16.16 dBm) = (39.17 mW + 41.30 mW) = 80.48 mW = 19.06 dBm

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# 7.5 Maximum Power Spectral Density – 802.11ax OFDMA §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

#### **Test Overview and Limit**

The spectrum analyzer was connected to the antenna terminal while the EUT was 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. Method SA-1, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, was used to measure the power spectral density.

## In the 5.15 – 5.25GHz, 5.25 – 5.35GHz, 5.47 – 5.725GHz bands, the maximum permissible power spectral density is 11dBm/MHz.

#### In the 5.725 – 5.850GHz band, the maximum permissible power spectral density is 30dBm/500kHz.

#### Test Procedure Used

ANSI C63.10-2013 – Section 12.3.2.2 KDB 789033 D02 v02r01 – Section F ANSI C63.10-2013 – Section 14.3.2.2 Measure-and-Sum Technique KDB 662911 v02r01 – Section E)2) Measure-and-Sum Technique

#### Test Settings

- 1. Analyzer was set to the center frequency of the UNII channel under investigation
- 2. Span was set to encompass the entire emission bandwidth of the signal
- 3. RBW = 1MHz
- 4. VBW = 3MHz
- 5. Number of sweep points  $\geq 2 \times (\text{span/RBW})$
- 6. Sweep time = auto
- 7. Detector = power averaging (RMS)
- 8. Trigger was set to free run for all modes
- 9. Trace was averaged over 100 sweeps
- 10. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

#### Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

#### Test Notes

The power spectral density for each channel was measured with the RU index showing the highest conducted power

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### SISO Antenna-1 Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	26T	MCS0	7.03	11.0	-3.97
	5200	40	ax (20MHz)	26T	MCS0	7.40	11.0	-3.60
Band 1	5240	48	ax (20MHz)	26T	MCS0	7.06	11.0	-3.94
Bar	5190	38	ax (40MHz)	26T	MCS0	8.67	11.0	-2.33
	5230	46	ax (40MHz)	26T	MCS0	8.41	11.0	-2.59
	5210	42	ax (80MHz)	26T	MCS0	8.57	11.0	-2.43
	5260	52	ax (20MHz)	26T	MCS0	6.89	11.0	-4.11
₫	5280	56	ax (20MHz)	26T	MCS0	6.54	11.0	-4.46
Band 2A	5320	64	ax (20MHz)	26T	MCS0	7.04	11.0	-3.96
an	5270	54	ax (40MHz)	26T	MCS0	8.38	11.0	-2.62
ш	5310	62	ax (40MHz)	26T	MCS0	8.76	11.0	-2.24
	5290	58	ax (80MHz)	26T	MCS0	8.11	11.0	-2.89
	5500	100	ax (20MHz)	26T	MCS0	6.76	11.0	-4.24
	5600	120	ax (20MHz)	26T	MCS0	6.01	11.0	-4.99
	5720	144	ax (20MHz)	26T	MCS0	6.78	11.0	-4.22
5C	5510	102	ax (40MHz)	26T	MCS0	8.52	11.0	-2.48
Band 2C	5590	118	ax (40MHz)	26T	MCS0	8.43	11.0	-2.57
Ba	5710	142	ax (40MHz)	26T	MCS0	8.98	11.0	-2.02
	5530	106	ax (80MHz)	26T	MCS0	7.80	11.0	-3.20
	5610	122	ax (80MHz)	26T	MCS0	8.23	11.0	-2.77
	5690	138	ax (80MHz)	26T	MCS0	4.86	11.0	-6.14

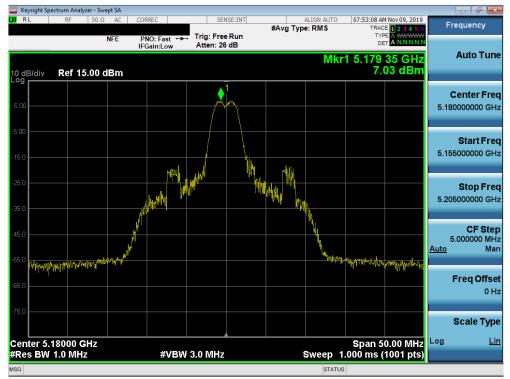
Table 7-51. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT1 (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	26T	MCS0	7.03	-6.45	0.58	10.0	-9.42
	5200	40	ax (20MHz)	26T	MCS0	7.40	-6.69	0.71	10.0	-9.29
1 pr	5240	48	ax (20MHz)	26T	MCS0	7.06	-6.45	0.61	10.0	-9.39
Band	5190	38	ax (40MHz)	26T	MCS0	8.67	-6.69	1.98	10.0	-8.02
	5230	46	ax (40MHz)	26T	MCS0	8.41	-6.45	1.96	10.0	-8.04
	5210	42	ax (80MHz)	26T	MCS0	8.57	-6.45	2.12	10.0	-7.88

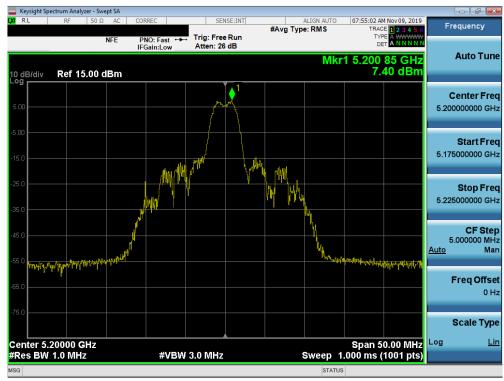
Table 7-52. Band 1 e.i.r.p Conducted Power Spectral Density Measurements ISED (26 Tones)

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Plot 7-55. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



Plot 7-56. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

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Plot 7-57. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



Plot 7-58. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

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Plot 7-59. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



Plot 7-60. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)

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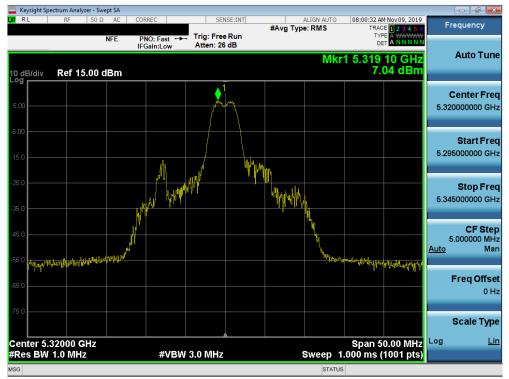
Plot 7-61. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



Plot 7-62. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

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Plot 7-63. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



Plot 7-64. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

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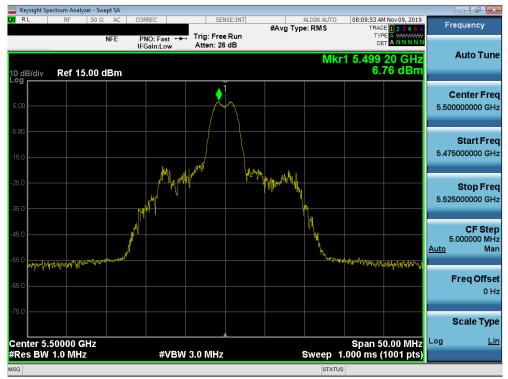
Plot 7-65. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



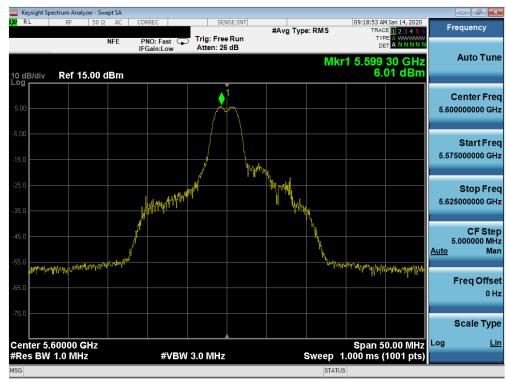
Plot 7-66. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)

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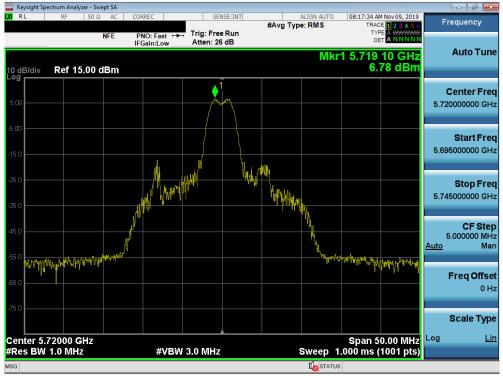
Plot 7-67. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 100)



Plot 7-68. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 120)

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Plot 7-69. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 144)



Plot 7-70. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 102)

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Plot 7-71. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



Plot 7-72. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 142)

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Plot 7-73. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 106)



Plot 7-74. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

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Plot 7-75. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 138)

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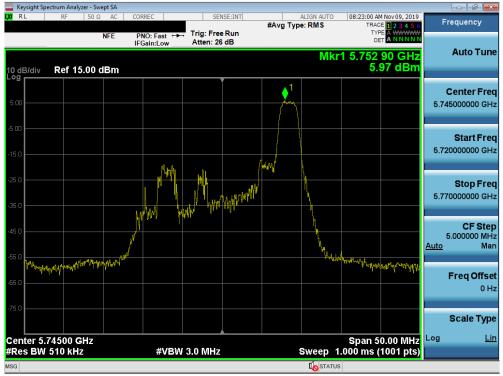


	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density	Margin [dB]
	5745	149	ax (20MHz)	26T	MCS0	5.97	30.00	-24.03
<i>с</i>	5785	157	ax (20MHz)	26T	MCS0	4.59	30.00	-25.41
	5825	165	ax (20MHz)	26T	MCS0	5.40	30.00	-24.60
Band	5755	151	ax (40MHz)	26T	MCS0	5.58	30.00	-24.42
	5795	159	ax (40MHz)	26T	MCS0	5.14	30.00	-24.86
	5775	155	ax (80MHz)	26T	MCS0	7.08	30.00	-22.92

Table 7-53. Band 3 Conducted Power Spectral Density Measurements SISO ANT1 (26 Tones)

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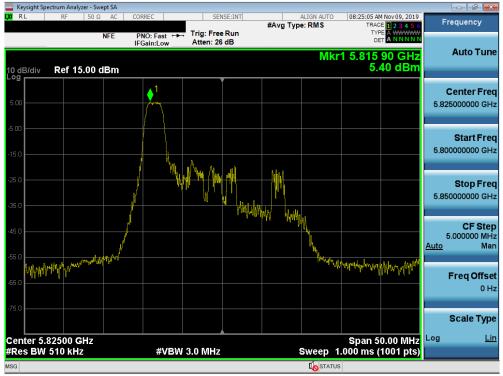
Plot 7-76. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)



Plot 7-77. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)

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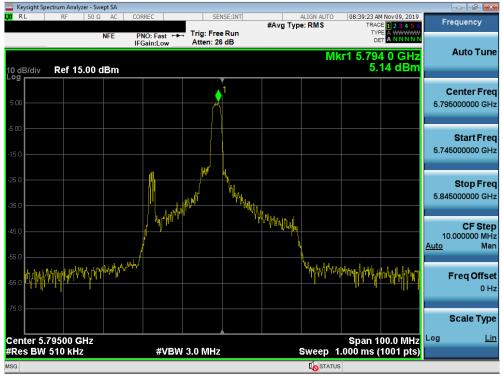
Plot 7-78. Power Spectral Density Plot SISO ANT1 (20 MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 165)



Plot 7-79. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)

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Plot 7-80. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 159)



Plot 7-81. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)

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## SISO Antenna-1 Power Spectral Density Measurements (Full Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	242T	MCS0	3.85	11.0	-7.15
	5200	40	ax (20MHz)	242T	MCS0	3.89	11.0	-7.11
Band 1	5240	48	ax (20MHz)	242T	MCS0	3.74	11.0	-7.26
Bar	5190	38	ax (40MHz)	242T	MCS0	-1.43	11.0	-12.43
_	5230	46	ax (40MHz)	242T	MCS0	-1.39	11.0	-12.39
	5210	42	ax (80MHz)	242T	MCS0	-5.00	11.0	-16.00
	5260	52	ax (20MHz)	242T	MCS0	3.28	11.0	-7.72
⊲	5280	56	ax (20MHz)	242T	MCS0	3.37	11.0	-7.63
Band 2A	5320	64	ax (20MHz)	242T	MCS0	3.63	11.0	-7.37
ano	5270	54	ax (40MHz)	242T	MCS0	-1.49	11.0	-12.49
ш	5310	62	ax (40MHz)	242T	MCS0	-0.72	11.0	-11.72
	5290	58	ax (80MHz)	242T	MCS0	-4.72	11.0	-15.72
	5500	100	ax (20MHz)	242T	MCS0	3.19	11.0	-7.81
	5600	120	ax (20MHz)	242T	MCS0	3.18	11.0	-7.82
	5720	144	ax (20MHz)	242T	MCS0	3.34	11.0	-7.66
5C	5510	102	ax (40MHz)	242T	MCS0	-1.73	11.0	-12.73
Band 2C	5590	118	ax (40MHz)	242T	MCS0	-1.53	11.0	-12.53
Ba	5710	142	ax (40MHz)	242T	MCS0	-1.30	11.0	-12.30
	5530	106	ax (80MHz)	242T	MCS0	-5.27	11.0	-16.27
	5610	122	ax (80MHz)	242T	MCS0	-5.20	11.0	-16.20
	5690	138	ax (80MHz)	242T	MCS0	-7.62	11.0	-18.62

Table 7-54. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT1 (Full Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	242T	MCS0	3.85	-6.45	-2.60	10.0	-12.60
	5200	40	ax (20MHz)	242T	MCS0	3.89	-6.69	-2.80	10.0	-12.80
d 1	5240	48	ax (20MHz)	242T	MCS0	3.74	-6.45	-2.71	10.0	-12.71
Band	5190	38	ax (40MHz)	484T	MCS0	-1.38	-6.69	-8.07	10.0	-18.07
	5230	46	ax (40MHz)	484T	MCS0	-1.39	-6.45	-7.84	10.0	-17.84
	5210	42	ax (80MHz)	996T	MCS0	-5.00	-6.45	-11.45	10.0	-21.45

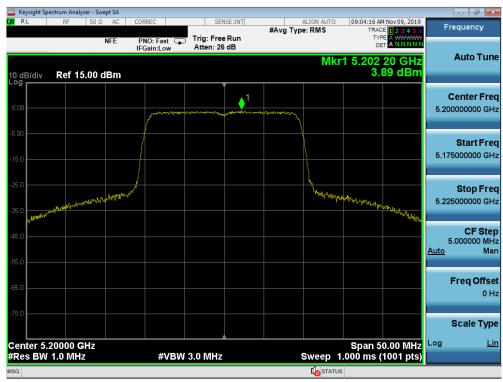
Table 7-55. Band 1 e.i.r.p Conducted Power Spectral Density Measurements SISO ANT1 (Full Tones)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-82. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 36)



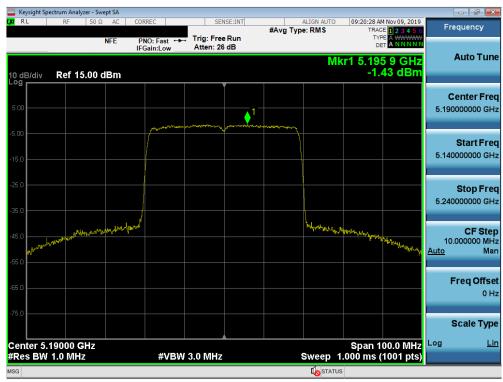
Plot 7-83. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-84. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 48)



Plot 7-85. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 38)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SUNG	Approved by: Quality Manager
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Keysight Spectrum Analyze									
LXXI RL RF	50 Ω AC	CORREC		ISE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	Nov 09, 2019 E 1 2 3 4 5 6 E A WWWW	Frequency
	NFE	PNO: Fast G	Atten: 26				DE		Auto Tune
10 dB/div Ref 15.	00 dBm						-1.	2 1 GHz 39 dBm	
			)						Center Freq
5.00		Junio	1 million	Alore and a second	multimetrice				5.230000000 GHz
-5.00									Start Freq
-15.0						1			5.180000000 GHz
-25.0		J							Stop Freq
-35.0									5.280000000 GHz
-45.0	والمحاصية والمعادية	par-l <sup>ad</sup>				hy how where	Warnamin and the		CF Step
-45.0								we we have been and the	10.000000 MHz <u>Auto</u> Man
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-75.0									Scale Type
Center 5.23000 GH	17						Snan 1	00.0 MHz	Log <u>Lin</u>
#Res BW 1.0 MHz		#VBV	/ 3.0 MHz			Sweep 1	.000 ms (	1001 pts)	
MSG						to status	3		

Plot 7-86. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 46)



Plot 7-87. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 42)

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Plot 7-88. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 52)



Plot 7-89. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-90. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 64)



Plot 7-91. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMG986W	<u>PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 96 of 265
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Plot 7-92. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 62)



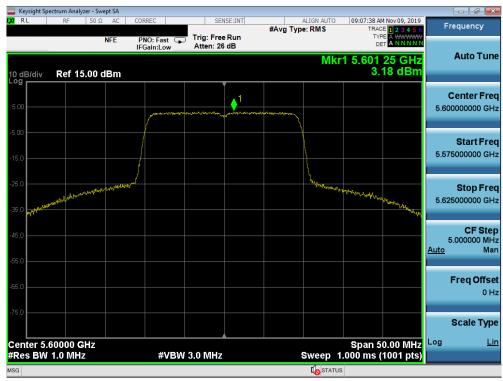
Plot 7-93. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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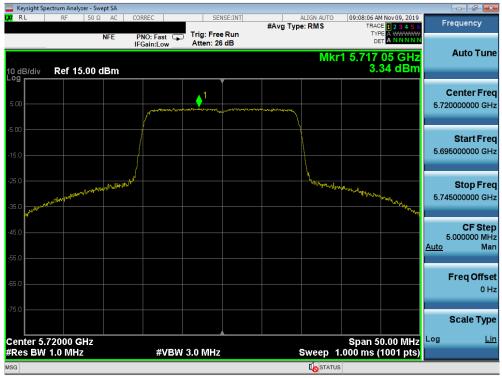
Plot 7-94. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 100)



Plot 7-95. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-96. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 144)



Plot 7-97. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-98. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 118)



Plot 7-99. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 142)

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Plot 7-100. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 106)



Plot 7-101. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMG986W	<u> PCTEST</u>	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-102. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density	Margin [dB]
	5745	149	ax (20MHz)	242T	MCS0	1.16	30.00	-28.84
m	5785	157	ax (20MHz)	242T	MCS0	1.02	30.00	-28.98
	5825	165	ax (20MHz)	242T	MCS0	1.22	30.00	-28.78
Band	5755	151	ax (40MHz)	242T	MCS0	-3.97	30.00	-33.97
	5795	159	ax (40MHz)	242T	MCS0	-3.90	30.00	-33.90
	5775	155	ax (80MHz)	242T	MCS0	-4.92	30.00	-34.92

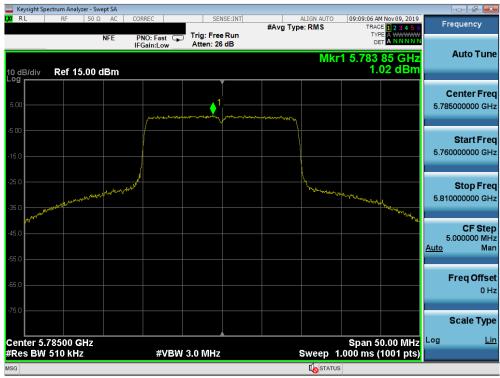
Table 7-56. Band 3 Conducted Power Spectral Density Measurements SISO ANT1 (Full Tones)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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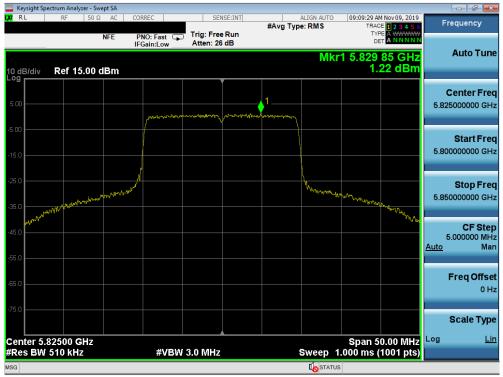
Plot 7-103. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 149)



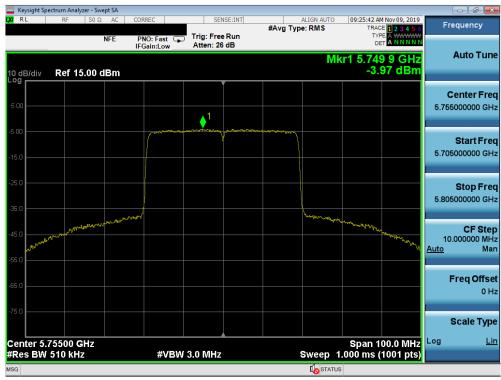
Plot 7-104. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-105. Power Spectral Density Plot SISO ANT1 (20 MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 165)



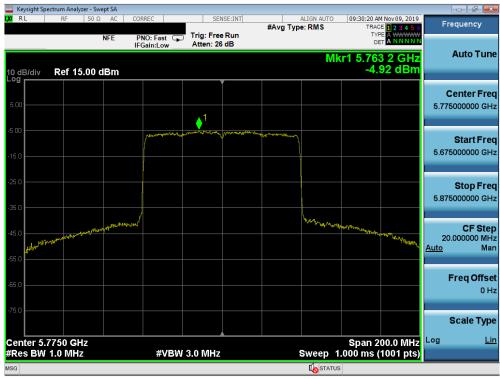
Plot 7-106. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 151)

FCC ID: A3LSMG986W	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	ISUNG	Approved by: Quality Manager	
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Keysight Spectrum Ar						
LXI RL RF	50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	TRACE 1 2 3 4 5 6	Frequency
	NFE	PNO: Fast 😱	Trig: Free Run Atten: 26 dB		TYPE A WWWW DET A NNNN	
10 dB/div Ref	15.00 dBm			M	kr1 5.798 0 GHz -3.90 dBm	Auto Tune
			ľ			Center Freq
5.00			<b>↓</b> <sup>1</sup>			5.795000000 GHz
-5.00		/ provide a second	- minter file	and the second sec		Start Freq
-15.0						5.745000000 GHz
-25.0						Stop Freq
-35.0						5.845000000 GHz
-45.0	mpanneraliti	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Married Married	with the many of the	CF Step
-45.0					Contraction of the second s	10.000000 MHz <u>Auto</u> Man
						Freg Offset
-65.0						0 Hz
-75.0						Scale Type
Center 5.79500	GHz				Span 100.0 MHz	Log <u>Lin</u>
#Res BW 510 k	Hz	#VBW	3.0 MHz		1.000 ms (1001 pts)	
MSG					US	

Plot 7-107. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 159)



Plot 7-108. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 155)

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## SISO Antenna-2 Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	26T	MCS0	8.30	11.0	-2.70
	5200	40	ax (20MHz)	26T	MCS0	8.02	11.0	-2.98
Band 1	5240	48	ax (20MHz)	26T	MCS0	8.69	11.0	-2.31
Bar	5190	38	ax (40MHz)	26T	MCS0	9.25	11.0	-1.75
	5230	46	ax (40MHz)	26T	MCS0	9.49	11.0	-1.51
	5210	42	ax (80MHz)	26T	MCS0	7.48	11.0	-3.52
	5260	52	ax (20MHz)	26T	MCS0	8.31	11.0	-2.69
∢	5280	56	ax (20MHz)	26T	MCS0	8.27	11.0	-2.73
d 2,	5320	64	ax (20MHz)	26T	MCS0	8.21	11.0	-2.79
Band 2A	5270	54	ax (40MHz)	26T	MCS0	8.68	11.0	-2.32
ш	5310	62	ax (40MHz)	26T	MCS0	8.11	11.0	-2.89
	5290	58	ax (80MHz)	26T	MCS0	8.99	11.0	-2.01
	5500	100	ax (20MHz)	26T	MCS0	8.13	11.0	-2.87
	5600	120	ax (20MHz)	26T	MCS0	8.23	11.0	-2.77
	5720	144	ax (20MHz)	26T	MCS0	8.10	11.0	-2.90
2C	5510	102	ax (40MHz)	26T	MCS0	8.43	11.0	-2.57
Band 2C	5590	118	ax (40MHz)	26T	MCS0	8.50	11.0	-2.50
Ba	5710	142	ax (40MHz)	26T	MCS0	8.65	11.0	-2.35
	5530	106	ax (80MHz)	26T	MCS0	8.83	11.0	-2.17
	5610	122	ax (80MHz)	26T	MCS0	8.55	11.0	-2.45
	5690	138	ax (80MHz)	26T	MCS0	6.48	11.0	-4.52

Table 7-57. Conducted Power Spectral Density Measurements SISO ANT2 (26 Tones)

-		Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Γ		5180	36	ax (20MHz)	26T	MCS0	8.30	-6.45	1.85	10.0	-8.15
	_	5200	40	ax (20MHz)	26T	MCS0	8.02	-6.69	1.33	10.0	-8.67
	nd 1	5240	48	ax (20MHz)	26T	MCS0	8.69	-6.45	2.24	10.0	-7.76
	Bar	5190	38	ax (40MHz)	26T	MCS0	9.25	-6.69	2.56	10.0	-7.44
	_	5230	46	ax (40MHz)	26T	MCS0	9.49	-6.45	3.04	10.0	-6.96
		5210	42	ax (80MHz)	26T	MCS0	7.48	-6.45	1.03	10.0	-8.97

Table 7-58. Band 1 e.i.r.p Conducted Power Spectral Density Measurements (ISED 26 Tones)

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Plot 7-109. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



Plot 7-110. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

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Plot 7-111. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



Plot 7-112. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

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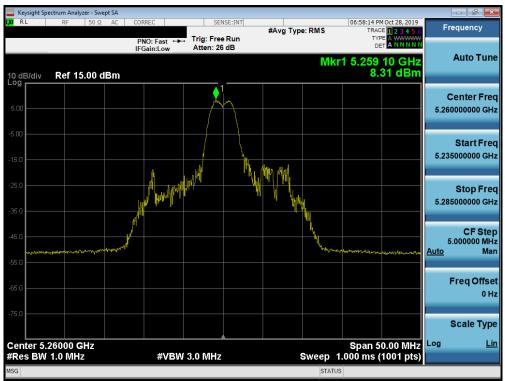
Plot 7-113. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



Plot 7-114. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)

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Plot 7-115. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



Plot 7-116. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

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