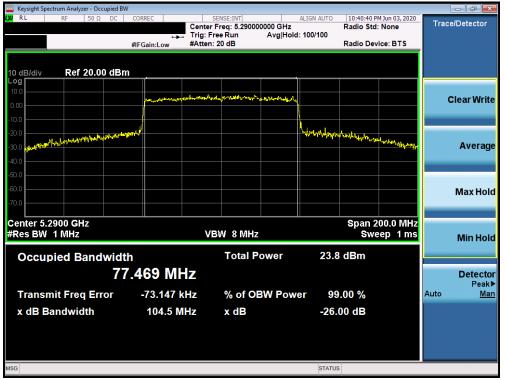


Keysight Spectrum Analyzer - Occupied BW							
XX RL RF 50Ω DC COR		NSE:INT rea: 5.290000000 GHz	ALIGN AUTO	02:50:06 Al	M Jun 03, 2020	Trac	e/Detector
NFE	Trig: Fre	e Run Avg Hold	d: 100/100				
#IF(	Gain:Low #Atten: 2	0 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm	_						
Log 10.0							
0.00	North and a many provide the stand of the second of the se	hour and a state of the second				(	Clear Write
-10.0							
			A and a start of				
-20.0			N. Martinlag set of the	and the second	mon hourseling		Average
							Average
-40.0							
-50.0							
-60.0							Max Hold
-70.0							
Center 5.2900 GHz				Snan 2	00.0 MHz		
#Res BW 1.1 MHz	VB	W 8 MHz			ep 1 ms		Min Hald
							Min Hold
Occupied Bandwidth		Total Power	23.3	dBm			
76 1	24 MHz						Detector
							Peak►
Transmit Freq Error	34.309 kHz	% of OBW Pow	ver 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	115.7 MHz	x dB	-26.	00 dB			
MSG			STATUS				

Plot 7-74. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)



Plot 7-75. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)

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Plot 7-76. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 100)



Plot 7-77. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 120)

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Plot 7-78. 26dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 144)



Plot 7-79. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-80. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



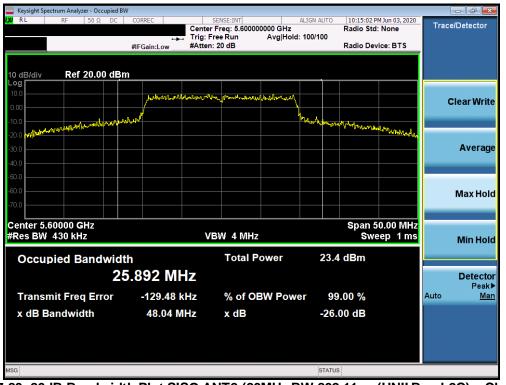
Plot 7-81. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMN986U	PCTEST Proud to be port of S	(CEDITIECATION) SAMSUNG		Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupie					
<b>(χ) RL</b> RF 50Ω D	Tri	SENSE:INT nter Freq: 5.500000000 GHz g: Free Run Avg Hole ten: 20 dB	Radio S d: 100/100	2 PM Jun 03, 2020 td: None	Trace/Detector
,	#IFGain:Low #A		Radio L	evice. B13	
10 dB/div Ref 20.00 d	lBm				
Log 10.0	Jow march Martalanda	det mon from monthly below with	}		Clear Write
0.00					Cical Write
-10.0	Y Paul Plant		When the set of the se	Mr. Martinella	
-20.0 MM/NV					Average
-40.0					5
-50.0					
-60.0					Max Hold
-70.0					
Center 5.50000 GHz #Res BW 390 kHz		VBW 4 MHz		50.00 MHz weep 1 ms	
#RC3 BW 330 RH2				меер тттэ	Min Hold
Occupied Bandw	idth	Total Power	24.1 dBm		
	23.263 MHz				Detector
Transmit Freq Error	303.18 kHz	% of OBW Pow	ver 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	46.20 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-82. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



Plot 7-83. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMN986U	PCTEST Proud to be post of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager			
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Keysight Spectrum Analyzer - Occupied BW					
LXU RL RF 50Ω DC C	Center	ENSE:INT Freq: 5.720000000 GHz		0:16:27 PM Jun 03, 2020 dio Std: None	Trace/Detector
#	IFGain:Low #Atten:			dio Device: BTS	
10 dB/div Ref 20.00 dBm					
10.0					
0.00	Jour and the state of the second	- Martin Martin Martin Contraction	Υ		Clear Write
			My marked and an an		
-10.0			A STATE OF	Watan Marta Andrew Warrange	
-30.0					Average
-40.0					
-50.0					
-60.0					Max Hold
-70.0					Max Hold
Center 5.72000 GHz Res BW 470 kHz	3/6	3W 5 MHz	S	pan 50.00 MHz	
Res BW 470 KHZ	VE			Sweep 1 ms	Min Hold
Occupied Bandwidth		Total Power	23.8 dE	3m	
	407 MHz				Detector
					Peak▶
Transmit Freq Error	377.80 kHz	% of OBW Pow	ver 99.00	%	Auto <u>Man</u>
x dB Bandwidth	48.09 MHz	x dB	-26.00	dB	
MSG			STATUS		

Plot 7-84. 26dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



Plot 7-85. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG		Approved by: Quality Manager
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Plot 7-86. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



Plot 7-87. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager			
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Keysight Spectrum Analyzer - Occupied I							[	- 0 ×
<b>LXI RL RF 50 Ω DC</b>	tri	SENSE:INT nter Freq: 5.510000 g: Free Run		IGN AUTO	Radio Std:		Trace	e/Detector
	#IFGain:Low #At	tten: 20 dB			Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dB	m							
10.0	العندي من المريم المريم المريم الم	hoursely because and	howerby					lear Write
0.00	<b>/</b>							
-10.0 -20.0	Auchland			-Timly and the second	met we black	h alaun an a		
						an all the second second		Average
-30.0								Average
-40.0								
-60.0								
-70.0								Max Hold
Center 5.51000 GHz						00.0 MHz		
#Res BW 750 kHz		VBW 8 MHz			Swe	ep 1 ms		Min Hold
Occupied Bandwid	lth	Total Po	wer	24.1	dBm		_	
3	9.515 MHz							Detector
								Peak▶
Transmit Freq Error	393.54 kHz	% of OB	W Power	99.	00 %		Auto	Man
x dB Bandwidth	78.58 MHz	x dB		-26.0	0 dB			
MSG				STATUS				

Plot 7-88. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



Plot 7-89. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: A3LSMN986U	PCTEST Proud to be post of Second	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager			
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Keysight Spectrum Analyzer - Occupied BW						-	
<b>LXI</b> RL RF 50 Ω DC 0		SENSE:INT Freg: 5.710000000 GHz	ALIGN AUTO	10:33:57 P Radio Std	M Jun 03, 2020	Trace	/Detector
	Trig: F	ree Run Avg Hol	d: 100/100				
	#FGain:Low #Atten:	: 20 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm							
Log							
10.0	to any low and low and	ung Moran unane will marked my	<b>`</b>			c	lear Write
0.00							
-10.0	w/		And Barrison	Unternetaria			
-20.0					White the		
-30.0							Average
-40.0							
-50.0							
-60.0							
-70.0							Max Hold
-70.0							_
Center 5.71000 GHz				Span 1	00.0 MHz		
#Res BW 750 kHz	V	BW 8 MHz		Swe	ep 1 ms		Min Hold
Occupied Bandwidth		Total Power	23.	8 dBm			
43.	019 MHz						Detector
							Peak▶
Transmit Freq Error	1.6939 MHz	% of OBW Pow	/er 99	9.00 %		Auto	Man
x dB Bandwidth	80.89 MHz	x dB	-26	.00 dB			
MSG			STATU	S			

Plot 7-90. 26dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)



Plot 7-91. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - O	ccupied BW										
(X) RL RF 50 s	NFE	CORREC			0000 GHz Avg Hold	ALIGN /		02:53:12 A Radio Std Radio Dev		Trac	e/Detector
10 dB/div Ref 20.0	00 dBm				1				1		
0.00		Joentomann	antitet to a set of the	n filmen and the second se	ununun					(	Clear Write
-10.0	wnahauld	41				herefor	4 m 12 1	/ICIAL/Addates/10	M. Hadenberghalt		
-30.0											Average
-50.0											Max Hold
-70.0 Center 5.6100 GHz								Onení			
Res BW 1.8 MHz			VBI	N 8 MHz				Swo	200.0 MHz eep 1 ms		Min Hold
Occupied Band		450 MI	47	Total P	ower		23.9	dBm			Detector
Transmit Freq Er		1.3084 N		% of O	3W Pow	er	99	.00 %		Auto	Peak▶ <u>Man</u>
x dB Bandwidth		181.0 N	IHz	x dB			-26.0	00 dB			
MSG							STATUS				

Plot 7-92. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)



Plot 7-93. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Every State Content Analyzer - Occupied BW							
LX/ RL RF 50Ω DC COR		ENSE:INT Freg: 5.530000000 GHz	ALIGN AUTO	10:42:08 Pl Radio Std:	M Jun 03, 2020	Trace	/Detector
	Trig: Fr	eeRun Avg Ho	ld: 100/100				
#IFC	Gain:Low #Atten:	20 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm							
10.0	. and an hard monthly	رو بو بو الروان و مروان و الروان و المروان و المروان و المروان و المروان و مروان و المروان و المروان و المروان					
0.00	and the second	- And Marthan Contractor States of the	~			C	lear Write
-10.0							
-20.0 -30.0 byrathyldafyrwydrahynbarwylantarylatur			Montenanter	<sup>Aldeled</sup> er Andelled			
-30.0 minthally and a second					When the far when		Average
-40.0							
-50.0							
-60.0			_				Max Hold
-70.0							Maxinola
Center 5.5300 GHz #Res BW 1.1 MHz	VB	W 8 MHz			00.0 MHz ep 1 ms		
	*	999 O 1911 12		300	ep mis		Min Hold
Occupied Bandwidth		Total Power	22.9	dBm			
	10 MHz						Detector
							Peak►
Transmit Freq Error -	31.714 kHz	% of OBW Pov	ver 99	0.00 %		Auto	Man
x dB Bandwidth	104.6 MHz	x dB	-26.	00 dB			
MSG			STATUS	5			

Plot 7-94. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)



Plot 7-95. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMN986U	PCTEST Proud to be post of Second	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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W   RL   RF   50 0.0 DC   CORREC   SENSEINT   ALIGN AUTO   10:44:51 PNJun 03.2020     Radio Std: None   Radio Std: None   Radio Std: None   Radio Device: BTS   Radio Device: BTS     10 dB/div   Ref 20.00 dBm	Keysight Spectrum Analyzer - Occupied BW					
International and the second of the secon	<b>(X)</b> RL RF 50Ω DC	Center	Freq: 5.69000000 GHz	Radio S		Trace/Detector
Log 100 100 100 100 100 100 100 10				Radio D	evice: BTS	
Log 100 100 100 100 100 100 100 10						
Image: Span 200.0 GHz   VBW 8 MHz   Span 200.0 MHz     Ccupied Bandwidth   Total Power   23.9 dBm     Detector   Peak<						
Center 5.6900 GHz #Res BW 1.6 MHz Cccupied Bandwidth 78.940 MHz Clear Write Clear Write Cl						
100   200   1		plunge have been a faith the	white the stand of the product in the start			Clear Write
Average Average Average Average Average Max Hold Center 5.6900 GHz #Res BW 1.6 MHz VBW 8 MHz Span 200.0 MHz Sweep 1 ms Average Max Hold Max Hold Detector Peak						
Average Average Average Average Average Max Hold Center 5.6900 GHz #Res BW 1.6 MHz VBW 8 MHz Span 200.0 MHz Sweep 1 ms Average Max Hold Max Hold Detector Peak	20.0 A to the the property of all all all all all all all all all al	wh-		Marghallon on the Margaren Jack	mouthald	
40.0 60.0 60.0 70.0 Center 5.6900 GHz #Res BW 1.6 MHz VBW 8 MHz Sweep 1 ms Occupied Bandwidth Total Power 23.9 dBm 78.940 MHz Detector Peak►	Westprover a re-				A high series and ser	Avorago
60.0   60.0   Image: Constraint of the second sec						Average
60.0   Amax Hold     70.0   Amax Hold     Center 5.6900 GHz   Span 200.0 MHz     #Res BW 1.6 MHz   VBW 8 MHz   Sweep 1 ms     Occupied Bandwidth   Total Power   23.9 dBm     78.940 MHz   Detector     Peak<						
70.0 Image: Context 5.6900 GHz Span 200.0 MHz   #Res BW 1.6 MHz VBW 8 MHz Sweep 1 ms   Occupied Bandwidth Total Power 23.9 dBm   78.940 MHz Detector						
Center 5.6900 GHz #Res BW 1.6 MHz VBW 8 MHz Sweep 1 ms Occupied Bandwidth Total Power 23.9 dBm 78.940 MHz Detector Peak►						Max Hold
#Res BW 1.6 MHz VBW 8 MHz Sweep 1 ms   Occupied Bandwidth Total Power 23.9 dBm   78.940 MHz Detector	-70.0					
#Res BW 1.6 MHz VBW 8 MHz Sweep 1 ms   Occupied Bandwidth Total Power 23.9 dBm   78.940 MHz Detector	Center 5.6900 GHz			Span	200.0 MHz	
78.940 MHz Detector Peak►		V	BW 8 MHz			Min Hold
78.940 MHz Detector Peak►	Occupied Bandwidth	<b>,</b>	Total Power	23.9 dBm		
Peak►						
	/8	.940 MHZ				
	Transmit Freq Error	196.45 kHz	% of OBW Pow	er 99.00 %		
x dB Bandwidth 153.2 MHz x dB -26.00 dB	x dB Bandwidth	153.2 MHz	x dB	-26.00 dB		
MSG STATUS	MSG			STATUS		

Plot 7-96. 26dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)

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## 7.3 6dB Bandwidth Measurement – 802.11a/n/ac/ax

§15.407 (e); RSS-Gen [6.2]

### **Test Overview and Limit**

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 6dB bandwidth.

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

### Test Procedure Used

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

### Test Settings

- The signal analyzers' automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 100 kHz
- 3. VBW  $\geq$  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

None.

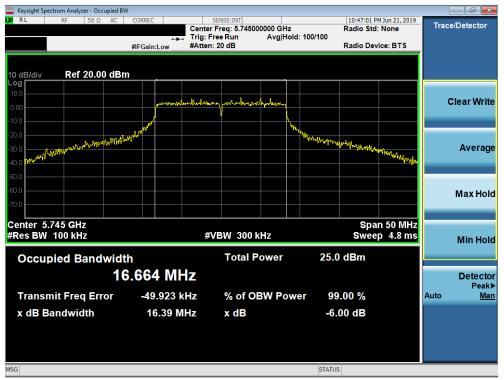
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-	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	а	6	16.39
	5785	157	а	6	16.39
	5825	165	а	6	16.40
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.61
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.58
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.59
<u> </u>	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	19.07
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	19.09
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	19.15
	5755	151	n (40MHz)	13.5/15 (MCS0)	36.33
	5795	159	n (40MHz)	13.5/15 (MCS0)	36.17
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.66
	5795	159	ax (40MHz)	13.5/15 (MCS0)	37.52
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	75.94
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	77.00

### SISO Antenna-1 6 dB Bandwidth Measurements

Table 7-4. Conducted Bandwidth Measurements SISO ANT1



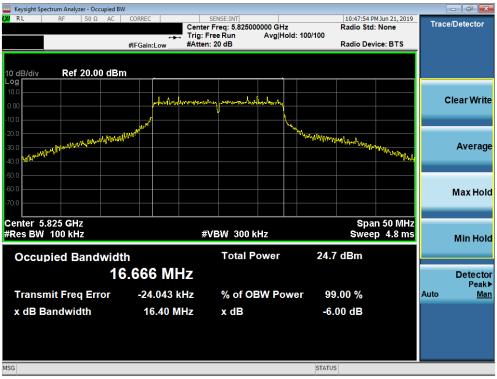
Plot 7-97. 6dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 3) - Ch. 149)

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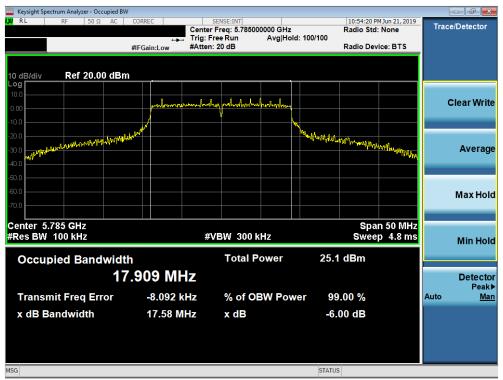
Plot 7-99. 6dB Bandwidth Plot SISO ANT1 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMN986U	PCTEST Proud to be part of 8	MEASUREMENT REPORT (CERTIFICATION)	ASUNG	<b>Approved by:</b> Quality Manager
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Plot 7-100. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



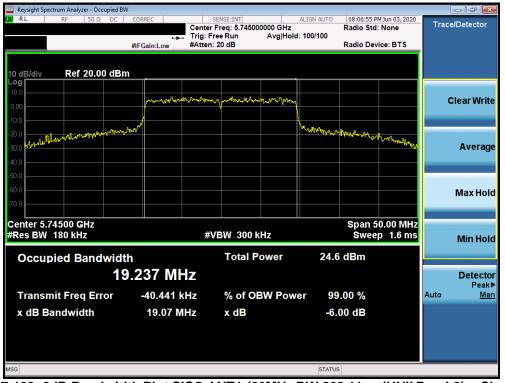
Plot 7-101. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Plot 7-102. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



Plot 7-103. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMN986U	PCTEST Proud to be post of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied E	3W				
<b>LXI</b> RL RF 50 Ω DC	CORREC	SENSE:INT r Freg: 5.785000000 GHz	ALIGN AUTO 08:09:51 P Radio Std	M Jun 03, 2020	Trace/Detector
	Trig: I	Free Run Avg Hol	d: 100/100	. None	
	#IFGain:Low #Atter	n: 20 dB	Radio Dev	rice: BTS	
10 dB/div Ref 20.00 dB	m				
Log					
10.0	waynumany many	whap When when the the the way of			Clear Write
0.00					
-10.0	N				
-20.0 -20.0 -30.0 mm			www.www.wy.lylabangham. Magalant	Wmahahaa	
-30.0 4111000				A REAL PROPERTY.	Average
-40.0					
-50.0					
-60.0					Max Hold
-70.0					IVIAX HOID
-70.0					
Center 5.78500 GHz				0.00 MHz	
#Res BW 180 kHz	#	VBW 300 kHz	Swee	p 1.6 ms	Min Hold
	41-	Total Power	24.4 dBm		
Occupied Bandwid		Total Fower	24.4 UBIII		
1	9.254 MHz				Detector
	47.000 1.11-	N - 6 ODW D			Peak▶ Auto Man
Transmit Freq Error	-17.368 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	19.09 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-104. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



Plot 7-105. 6dB Bandwidth Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMN986U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied	BW				
LXI RL RF 50Ω AC	CORREC	SENSE:INT r Freq: 5.755000000 GHz	10:58:16 P Radio Std:	M Jun 21, 2019	Trace/Detector
		FreeRun Avg Hold		None	
	#IFGain:Low #Atter	n: 20 dB	Radio Dev	ice: BTS	
10 dB/div Ref 20.00 dB	lm				
Log					
10.0					Clear Write
0.00	1 miles deschool	In marchile to a ship rate of			Clear write
-10.0					
-20.0					
-30.0			L		Average
-40.0	Andrik		with mark parties the	d.	
and wrath way				19 march 19	
-56.8					
-60.0					Max Hold
-70.0					
Center 5.755 GHz			Cnon	100 MHz	
#Res BW 100 kHz	#	VBW 300 kHz		p 9.6 ms	
#RC3 DW TOO RT2	"	4044 300 KHZ	0000	5 3.0 1113	Min Hold
Occupied Bandwid	ith	Total Power	22.3 dBm		
3	6.190 MHz				Detector Peak▶
Transmit Freq Error	-29.871 kHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	36.33 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-106. 6dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



Plot 7-107. 6dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMN986U	PCTEST Proud to be post of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied BW					
X/RL RF 50Ω DC COR		ENSE:INT Freq: 5.755000000 GHz		3:47:59 PM Jun 03, 2020 dio Std: None	Trace/Detector
	🛶 Trig: Fr	ee Run Avg Hol	d: 100/100		
#IFC	Gain:Low #Atten:	20 dB	Ra	dio Device: BTS	
10 dB/div Ref 20.00 dBm					
Log 10.0					
0.00	por and a second and a second	Monter and months have			Clear Write
-10.0					
			Wounder Josephia	Mar. 1	
-20.0				and the and the with	Average
-40.0					Arrenuge
-50.0					
-60.0					Max Hold
-70.0					
Center 5.75500 GHz			S	pan 100.0 MHz	
#Res BW 360 kHz	VE	SW 4 MHz		Sweep 1 ms	Min Hold
		Total Power	24.8 dE	2m	
Occupied Bandwidth		Total Fower	24.0 UE	5111	
37.9	43 MHz				Detector
Transmit Freq Error	44.699 kHz	% of OBW Pow	ver 99.00	%	Peak▶ Auto Man
x dB Bandwidth	37.66 MHz	x dB	-6.00	dB	
MSG			STATUS		

Plot 7-108. 6dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-109. 6dB Bandwidth Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMN986U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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🔤 Keysight Spectrum Analyzer - Occupied BW					
X     RF     50 Ω     AC     CORREC     SENSE:INT     11:02:38 PM Jun 21, 2019       Center Freq:     5.775000000 GHz     Radio Std: None     Trace	/Detector				
Trig: Free Run Avg Hold: 100/100					
#IFGain:Low #Atten: 20 dB Radio Device: BTS					
10 dB/div Ref 20.00 dBm					
10.0					
	lear Write				
	Average				
40.0 Son a strateging a second share the off the order of					
60.0	Max Hold				
70.0					
Center 5.775 GHz Span 200 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 19.13 ms					
#Kes BW 100 KH2 #VBW 300 KH2 Sweep 19.13 IIIS	Min Hold				
Occupied Bandwidth Total Power 22.0 dBm					
75.545 MHz	Detector				
75.545 WHZ	Detector Peak▶				
Transmit Freq Error -50.035 kHz % of OBW Power 99.00 %	Man				
x dB Bandwidth 75.94 MHz x dB -6.00 dB					
MSG					

Plot 7-110. 6dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-111. 6dB Bandwidth Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

FCC ID: A3LSMN986U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	<b>Approved by:</b> Quality Manager	
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## SISO Antenna-2 6dB Bandwidth Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	а	6	16.34
	5785	157	а	6	16.38
	5825	165	а	6	16.42
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.63
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.59
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.61
т	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	19.06
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	19.09
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	19.05
	5755	151	n (40MHz)	13.5/15 (MCS0)	36.33
	5795	159	n (40MHz)	13.5/15 (MCS0)	36.38
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.95
	5795	159	ax (40MHz)	13.5/15 (MCS0)	37.96
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	75.64
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	77.40

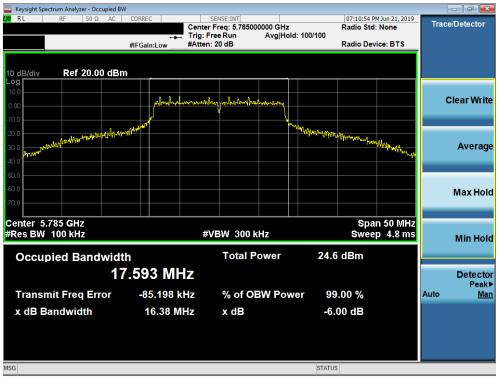
Table 7-5. Conducted Bandwidth Measurements SISO ANT2

FCC ID: A3LSMN986U	Poud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	<b>Approved by:</b> Quality Manager
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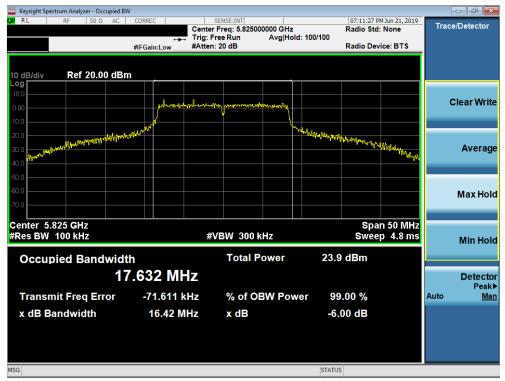




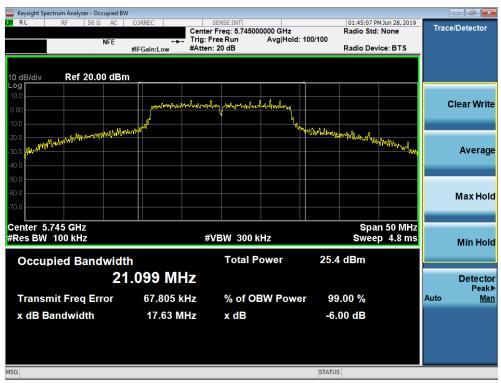
Plot 7-113. 6dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 157)

FCC ID: A3LSMN986U	POLITEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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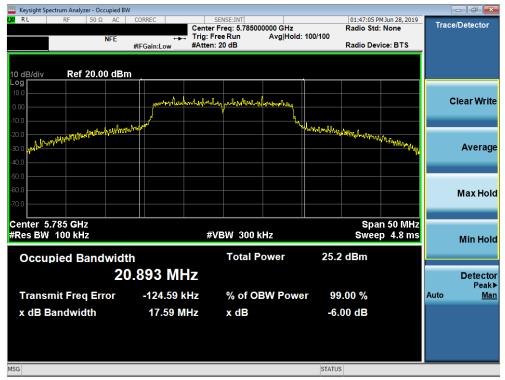
Plot 7-114. 6dB Bandwidth Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 165)



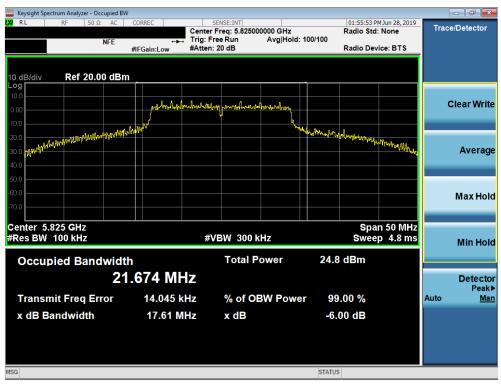
Plot 7-115. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)

FCC ID: A3LSMN986U	PCTEST Proud to be post of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	<b>Approved by:</b> Quality Manager		
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Plot 7-116. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)



Plot 7-117. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)

FCC ID: A3LSMN986U	PCTEST Proud to be post of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied BW						_	- Ø 🗙
XX RL RF 50Ω DC		NSE:INT reg: 5.745000000 GHz	ALIGN AUTO	10:20:09 P Radio Std	M Jun 03, 2020	Trace	Detector
	Trig: Fre	eRun Avg Hold	: 100/100				
	#IFGain:Low #Atten: 2	20 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm							
Log							
0.00	mannalwayawas	maharmon har hurrow my				С	lear Write
-10.0	M		mohnint	make			
2000 May Manuel					when him happy		
-30.0							Average
-40.0							
-50.0							
-60.0							Max Hold
-70.0							
				<b>A</b>	0.00.8411-		
Center 5.74500 GHz #Res BW 180 kHz	#\/	300 kHz			0.00 MHz p 1.6 ms		
TRUES DVV TOURINZ	<i></i>	500 KHZ		awee	p 1.0 ms		Min Hold
Occupied Bandwidth		Total Power	24.2	dBm			
	766 MHz						Detector
23.							Detector Peak▶
Transmit Freq Error	107.86 kHz	% of OBW Powe	er 99	.00 %		Auto	Man
x dB Bandwidth	19.06 MHz	x dB	6	00 dB			
	19.00 WITZ	Xub	-0.	00 UB			
MSG			STATUS	3			

Plot 7-118. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)



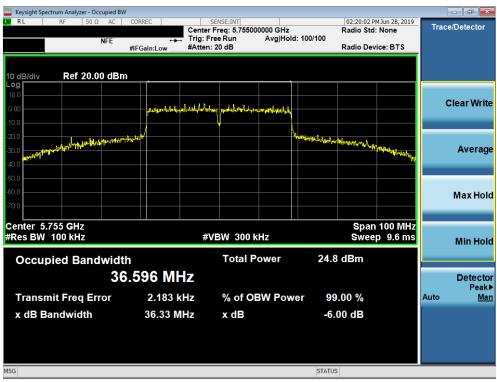
Plot 7-119. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)

FCC ID: A3LSMN986U	PCTEST Proud to be part of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied BW						_	
LX/ RL RF 50Ω DC C	CORREC	SENSE:INT nter Freq: 5.825000000 G	ALIGN AUTO	10:24:06 Pl Radio Std	4 Jun 03, 2020	Trace	Detector
	tri	g: Free Run Avg	Hold: 100/100				
#	IFGain:Low #A	tten: 20 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm							
Log							
	Holmon Margaret	walt monorman	~~~			с	lear Write
0.00							
-10.0	440		marrie	un hand gran and			
-20.0				- Company of the second	alwood and the half		
-30.0							Average
-40.0							
-50.0							
-60.0							Max Hold
-70.0							
Center 5.82500 GHz					0.00 MHz		
#Res BW 180 kHz		#VBW 300 kHz		Swee	p 1.6 ms		Min Hold
Occupied Bandwidth		Total Power	24	3 dBm			
			24.				
22.	709 MHz						Detector
Transmit Freq Error	79.544 kHz	% of OBW P	ower 0	9.00 %		Auto	Peak▶ Man
-							
x dB Bandwidth	19.05 MHz	x dB	-6	.00 dB			
MSG			STATU	JS			

Plot 7-120. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)



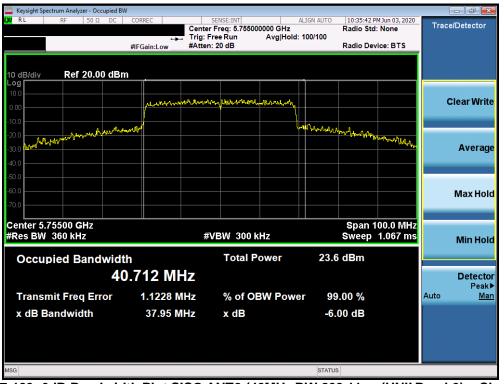
Plot 7-121. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)

FCC ID: A3LSMN986U	PCTEST Proud to be post of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied	BW				- đ <b>×</b>
LXX RL RF 50Ω AC		SENSE:INT r Freq: 5.795000000 GHz	Radio Std	M Jun 28, 2019 I: None	Trace/Detector
NFE		Free Run Avg Hol n: 20 dB	d: 100/100 Radio Dev	vice: BTS	
10 dB/div Ref 20.00 dB	Sm			1	
10.0					Clear Write
0.00	uphy holdin law of shared gi	non webendertetersteterstetete			Clear Write
-10.0					
-20.0 -30.0 <u>เป็นชาติการณ์เกิดที่เป็นสูงค่า</u> หน้าเข้าเห็นเข้าเ	himeen late		Manufally and	teleigh states	Average
-40.0				La Calificitation and	J
-50.0					
-60.0					Max Hold
-70.0					
Center 5.795 GHz				100 MHz	
#Res BW 100 kHz	#	VBW 300 kHz	Swee	ep 9.6 ms	Min Hold
Occupied Bandwid	lth	Total Power	24.5 dBm		
3	6.541 MHz				Detector
Transmit Freq Error	-23.774 kHz	% of OBW Pow	ver 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	36.38 MHz	x dB	-6.00 dB		
MSG			STATUS		
mod			STATUS		

Plot 7-122. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)



Plot 7-123. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)

FCC ID: A3LSMN986U	PCTEST Proud to be post of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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🔤 Keysight Spectrum Analyzer - Occupied BW					
LXX RL RF 50Ω DC	CORREC	SENSE:INT r Freg: 5.795000000 GHz	ALIGN AUTO 10:37:30 Radio St	PM Jun 03, 2020	Trace/Detector
	Trig: F	Free Run Avg Hol	d: 100/100		
	#IFGain:Low #Atten	n: 20 dB	Radio De	evice: BTS	
10 dB/div Ref 20.00 dBm					
Log 10.0					
0.00	wall man mark mark the	wayouthawamona			Clear Write
-10.0	~~**		Mr. Junk With sports and		
-20.0 -20.0			- Contraction of the Contraction	WW What	
30.0 7				. www.pi	Average
-40.0					
-50.0					
-60.0					Max Hold
-70.0					
Center 5.79500 GHz #Res BW 360 kHz	#	VBW 300 kHz		100.0 MHz 1.067 ms	
#Res BW JOO KIIZ	"	VDVV JOO KIIZ	Sweep	1.007 1115	Min Hold
Occupied Bandwidth	1	Total Power	23.5 dBm		
	.439 MHz				Detector
50	.433 11172				Peak►
Transmit Freq Error	7.162 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	37.96 MHz	x dB	-6.00 dB		
	57.50 MITIZ	X UD	-0.00 uB		
MSG			STATUS		

Plot 7-124. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)



Plot 7-125. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)

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🔤 Keysight Spectrum Analyzer - Occupie	ed BW				
<b>LX/ RL</b> RF 50Ω D		SENSE:INT		46:33 PM Jun 03, 2020 io Std: None	Trace/Detector
			Had : 100/100	lo Sta: None	
		Atten: 20 dB		io Device: BTS	
10 dB/div Ref 20.00 d	Bm				
Log					
10.0					
0.00	Alamonthumber	Manny manh up relymouth			Clear Write
-10.0					
-20.0	and the second second		-martines real		
-30.0 - hour man hand the wind the	<b>1</b> , <b>1</b>		-marting Abyline wi	M. M. Marken Mark	Average
					Average
-40.0					
-50.0					
-60.0					Max Hold
-70.0					
Center 5.7750 GHz			Sp	an 200.0 MHz	
#Res BW 750 kHz		#VBW 300 kHz		Sweep 1 ms	Min Hold
Occurried Dandwi		Total Power	22.4 dB	m	
Occupied Bandwi			22.4 UD		
	78.041 MHz				Detector
T		0/ - f ODW D		0/	Peak► Auto Man
Transmit Freq Error	-23.855 kH	z % of OBW Pow	er 99.00	%	Auto <u>Man</u>
x dB Bandwidth	77.40 MHz	z xdB	-6.00 d	В	
100			OTATUS.		
MSG			STATUS		

Plot 7-126. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

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# 7.4 UNII Output Power Measurement – 802.11a/n/ac/ax §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 +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(34.29) = 26.35dBm$ . 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 +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(37.49) = 26.74dBm$ . 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

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## SISO Antenna-1 Conducted Output Power Measurements

	Freq [MHz]	Channel	Detector		IEEE Transn	nission Mode		Conducted Power Limit	Conducted Power
				802.11a	802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]
	5180	36	AVG	18.30	17.39	17.44	16.91	23.98	-5.68
	5200	40	AVG	18.26	18.30	18.24	17.56	23.98	-5.68
	5220	44	AVG	18.18	18.25	18.16	17.44	23.98	-5.73
	5240	48	AVG	18.26	18.22	18.23	17.50	23.98	-5.72
2	5260	52	AVG	18.13	18.24	18.16	17.51	23.98	-5.74
Bandwidth)	5280	56	AVG	18.12	18.25	18.19	17.52	23.98	-5.73
÷	5300	60	AVG	18.18	18.30	18.28	17.63	23.98	-5.68
5 F	5320	64	AVG	18.15	16.71	16.74	17.57	23.98	-5.83
Ē	5500	100	AVG	17.96	17.90	17.97	17.33	23.98	-6.01
a	5520	104	AVG	18.04	17.96	18.05	17.39	23.98	-5.93
	5540	108	AVG	18.08	18.11	18.09	17.51	23.98	-5.87
Î	5560	112	AVG	18.19	18.15	18.18	17.54	23.98	-5.79
(20MHz	5580	116	AVG	18.16	18.12	18.15	17.47	23.98	-5.82
50	5600	120	AVG	18.28	18.23	18.23	17.63	23.98	-5.70
Ň	5620	124	AVG	18.22	18.26	18.17	17.56	23.98	-5.72
5GHz	5640	128	AVG	18.24	18.28	18.26	17.63	23.98	-5.70
Ū	5660	132	AVG	18.27	18.30	18.22	17.61	23.98	-5.68
LO LO	5680	136	AVG	18.33	18.35	18.30	17.71	23.98	-5.63
	5700	140	AVG	18.30	18.34	18.26	17.64	23.98	-5.64
	5720	144	AVG	18.17	18.20	18.11	17.50	23.98	-5.78
	5745	149	AVG	18.03	18.05	17.93	17.34	30.00	-11.95
	5765	153	AVG	18.14	18.06	18.12	17.44	30.00	-11.86
	5785	157	AVG	18.04	18.04	18.02	17.34	30.00	-11.96
	5805	161	AVG	17.84	17.88	17.86	17.20	30.00	-12.12
	5825	165	AVG	17.74	17.78	17.73	17.98	30.00	-12.22

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

idth)	Freq [MHz]	Channel	Detector	IEEE	Transmission	Conducted Power Limit	Conducted Power	
Ð				802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]
Ξ	5190	38	AVG	13.50	13.38	15.87	23.98	-10.48
ndwi	5230	46	AVG	17.23	17.28	16.51	23.98	-6.70
a a	5270	54	AVG	17.49	17.48	16.82	23.98	-6.49
Ш	5310	62	AVG	14.64	14.53	15.32	23.98	-9.34
<u>Р</u>	5510	102	AVG	17.25	17.22	16.54	23.98	-6.73
(40MH	5550	110	AVG	17.33	17.40	16.63	23.98	-6.58
ō	5590	118	AVG	17.40	17.34	16.60	23.98	-6.58
4	5630	126	AVG	17.48	17.49	16.78	23.98	-6.49
N	5670	134	AVG	17.47	17.47	16.73	23.98	-6.51
ЧD	5710	142	AVG	17.48	17.49	16.68	23.98	-6.49
20	5755	151	AVG	17.21	17.25	16.40	30.00	-12.75
	5795	159	AVG	17.00	16.97	16.20	30.00	-13.00

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

FCC ID: A3LSMN986U	Poud to be part of S	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	Freq [MHz]	Channel Detector		IEEE Transm	nission Mode	Conducted Power Limit	Conducted Power	
5GHz (80MHz Bandwidth)				802.11ac	802.11ax	[dBm]	Margin [dB]	
dt O	5210	42	AVG	14.11	14.51	23.98	-9.87	
(8) Mivi	5290	58	AVG	13.76	14.51	23.98	-10.22	
Hz	5530	106	AVG	16.31	15.66	23.98	-7.67	
B: B:	5610	122	AVG	16.38	15.74	23.98	-7.60	
	5690	138	AVG	16.40	15.78	23.98	-7.58	
	5775	155	AVG	16.03	15.28	30.00	-13.97	

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

FCC ID: A3LSMN986U	PCTEST Proud to be post of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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## SISO Antenna-2 Conducted Output Power Measurements

	Freq [MHz]	Channel	Detector		IEEE Transn	nission Mode		Conducted Power Limit	Conducted Power
				802.11a	802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]
	5180	36	AVG	18.47	17.40	17.44	16.89	23.98	-5.51
	5200	40	AVG	18.40	18.43	18.36	17.74	23.98	-5.55
	5220	44	AVG	18.32	18.32	18.34	17.65	23.98	-5.64
	5240	48	AVG	18.23	18.31	18.31	17.68	23.98	-5.67
2	5260	52	AVG	18.30	18.31	18.30	17.65	23.98	-5.67
Bandwidth)	5280	56	AVG	18.26	18.20	18.21	17.61	23.98	-5.72
, je	5300	60	AVG	18.25	18.25	18.26	17.62	23.98	-5.72
5	5320	64	AVG	18.12	16.49	16.52	17.46	23.98	-5.86
Ē	5500	100	AVG	17.93	18.10	18.06	17.52	23.98	-5.88
Ba	5520	104	AVG	17.88	18.04	18.08	17.53	23.98	-5.90
	5540	108	AVG	17.88	18.06	18.05	17.52	23.98	-5.92
Î	5560	112	AVG	17.92	18.08	18.09	17.50	23.98	-5.89
(20MHz	5580	116	AVG	17.95	18.06	18.02	17.49	23.98	-5.92
50	5600	120	AVG	17.90	18.18	18.10	17.52	23.98	-5.80
	5620	124	AVG	18.19	18.16	18.10	17.44	23.98	-5.79
5GHz	5640	128	AVG	18.24	18.20	18.12	17.51	23.98	-5.74
Ċ	5660	132	AVG	18.26	18.26	18.23	17.53	23.98	-5.72
5	5680	136	AVG	18.33	18.30	18.29	17.64	23.98	-5.65
	5700	140	AVG	18.40	18.33	18.32	17.65	23.98	-5.58
	5720	144	AVG	18.42	18.32	18.27	17.65	23.98	-5.56
	5745	149	AVG	18.33	18.30	18.26	17.35	30.00	-11.67
	5765	153	AVG	18.42	18.44	18.40	17.56	30.00	-11.56
	5785	157	AVG	18.49	18.48	18.45	17.59	30.00	-11.51
	5805	161	AVG	18.49	18.49	18.47	17.55	30.00	-11.51
	5825	165	AVG	18.49	18.49	18.49	17.58	30.00	-11.51

Table 7-9. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power

ndwidth)	Freq [MHz]	Channel	Detector	IEEE	Transmission	Conducted Power Limit	Conducted Power	
Ē				802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]
Š	5190	38	AVG	13.61	13.44	15.62	23.98	-10.37
p	5230	46	AVG	16.51	16.51	16.66	23.98	-7.47
a	5270	54	AVG	16.51	16.51	16.63	23.98	-7.47
Δ	5310	62	AVG	14.56	14.42	15.19	23.98	-9.42
4	5510	102	AVG	17.28	17.26	16.61	23.98	-6.70
(40MH	5550	110	AVG	17.26	17.23	16.55	23.98	-6.72
ō	5590	118	AVG	17.23	17.16	16.52	23.98	-6.75
4	5630	126	AVG	17.28	17.31	16.63	23.98	-6.67
N	5670	134	AVG	17.35	17.38	16.63	23.98	-6.60
Ϋ́	5710	142	AVG	17.48	17.38	16.66	23.98	-6.50
50	5755	151	AVG	17.21	17.49	16.66	30.00	-12.51
	5795	159	AVG	16.84	17.49	16.59	30.00	-12.51



		Freq [MHz]	Freq [MHz]	Freq [MHz]	Freq [MHz]	Freq [MHz] C	Freq [MHz] Channel	I Detector		nission Mode	Conducted Power Limit	Conducte Power	
					802.11ac	802.11ax	[dBm]	Margin [d	B]				
	s ÷	5210	42	AVG	14.09	14.32	23.98	-9.89					
	SHz	5290	58	AVG	13.74	14.11	23.98	-10.24					
5		5530	106	AVG	15.86	15.14	23.98	-8.12					
		5610	122	AVG	15.7	15.89	23.98	-8.28					
		5690	138	AVG	15.76	15.92	23.98	-8.22					
		5775	155	AVG	15.74	15.98	30.00	-14.26					
FCC ID: A3LSMN986U	<u>ه</u>	PCTES Proud to be part of @	T		IENT REPORT FICATION)		SAMSUNG		Approved by: Quality Manager				
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Table 7-11. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power

FCC ID: A3LSMN986U	PCTEST Poud to be post of 8	MEASUREMENT REPORT (CERTIFICATION)	<b>Approved by:</b> Quality Manager
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	Freq [MHz]	Channel	Detector	Cond	Conducted Power [dBm]		Conducted Power Limit	Conducted Power
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
	5180	36	AVG	17.39	17.40	20.41	23.98	-3.57
	5200	40	AVG	18.30	18.43	21.38	23.98	-2.60
	5220	44	AVG	18.25	18.32	21.30	23.98	-2.68
	5240	48	AVG	18.22	18.31	21.28	23.98	-2.70
	5260	52	AVG	18.24	18.31	21.29	23.98	-2.69
	5280	56	AVG	18.25	18.20	21.24	23.98	-2.74
	5300	60	AVG	18.30	18.25	21.29	23.98	-2.69
-	5320	64	AVG	16.71	16.49	19.61	23.98	-4.37
	5500	100	AVG	17.90	18.10	21.01	23.98	-2.97
	5520	104	AVG	17.96	18.04	21.01	23.98	-2.97
	5540	108	AVG	18.11	18.06	21.10	23.98	-2.88
	5560	112	AVG	18.15	18.08	21.13	23.98	-2.85
	5580	116	AVG	18.12	18.06	21.10	23.98	-2.88
	5600	120	AVG	18.23	18.18	21.22	23.98	-2.76
•	5620	124	AVG	18.26	18.16	21.22	23.98	-2.76
	5640	128	AVG	18.28	18.20	21.25	23.98	-2.73
	5660	132	AVG	18.30	18.26	21.29	23.98	-2.69
	5680	136	AVG	18.35	18.30	21.34	23.98	-2.64
	5700	140	AVG	18.34	18.33	21.35	23.98	-2.63
	5720	144	AVG	18.20	18.32	21.27	23.98	-2.71
	5745	149	AVG	16.99	16.97	19.99	30.00	-10.01
	5765	153	AVG	16.39	17.21	19.83	30.00	-10.17
	5785	157	AVG	16.94	16.99	19.98	30.00	-10.02
	5805	161	AVG	16.97	16.88	19.94	30.00	-10.06
	5825	165	AVG	16.75	17.11	19.94	30.00	-10.06

## **MIMO Maximum Conducted Output Power Measurements**

Table 7-12. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMN986U	Poud to be post of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	Freq [MHz]	Channel	Detector	Conducted Power [dBm]		dBm]	Conducted Power Limit	Conducted Power
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
	5180	36	AVG	17.44	17.44	20.45	23.98	-3.53
	5200	40	AVG	18.24	18.36	21.31	23.98	-2.67
	5220	44	AVG	18.16	18.34	21.26	23.98	-2.72
	5240	48	AVG	18.23	18.31	21.28	23.98	-2.70
<del>c</del>	5260	52	AVG	18.16	18.30	21.24	23.98	-2.74
	5280	56	AVG	18.19	18.21	21.21	23.98	-2.77
ž.	5300	60	AVG	18.28	18.26	21.28	23.98	-2.70
Bandwidth)	5320	64	AVG	16.74	16.52	19.64	23.98	-4.34
Ĕ	5500	100	AVG	17.97	18.06	21.03	23.98	-2.95
â	5520	104	AVG	18.05	18.08	21.08	23.98	-2.90
	5540	108	AVG	18.09	18.05	21.08	23.98	-2.90
(20MHz	5560	112	AVG	18.18	18.09	21.15	23.98	-2.83
Σ	5580	116	AVG	18.15	18.02	21.10	23.98	-2.88
50	5600	120	AVG	18.23	18.10	21.18	23.98	-2.80
	5620	124	AVG	18.17	18.10	21.15	23.98	-2.83
ΗZ	5640	128	AVG	18.26	18.12	21.20	23.98	-2.78
5G	5660	132	AVG	18.22	18.23	21.24	23.98	-2.74
2J	5680	136	AVG	18.30	18.29	21.31	23.98	-2.67
	5700	140	AVG	18.26	18.32	21.30	23.98	-2.68
	5720	144	AVG	18.11	18.27	21.20	23.98	-2.78
	5745	149	AVG	16.98	16.96	19.98	30.00	-10.02
	5765	153	AVG	16.89	17.04	19.98	30.00	-10.02
	5785	157	AVG	16.70	17.05	19.89	30.00	-10.11
	5805	161	AVG	16.81	17.14	19.99	30.00	-10.01
	5825	165	AVG	16.70	17.01	19.87	30.00	-10.13

Table 7-13. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

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	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Power Limit	Conducted Power
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
	5180	36	AVG	18.30	18.47	21.40	23.98	-2.58
	5200	40	AVG	18.26	18.40	21.34	23.98	-2.64
	5220	44	AVG	18.18	18.32	21.26	23.98	-2.72
	5240	48	AVG	18.26	18.23	21.26	23.98	-2.72
2	5260	52	AVG	18.13	18.30	21.23	23.98	-2.75
	5280	56	AVG	18.12	18.26	21.20	23.98	-2.78
ž.	5300	60	AVG	18.18	18.25	21.23	23.98	-2.75
2	5320	64	AVG	18.15	18.12	21.15	23.98	-2.83
Bandwidth)	5500	100	AVG	17.96	17.93	20.96	23.98	-3.02
â	5520	104	AVG	18.04	17.88	20.97	23.98	-3.01
	5540	108	AVG	18.08	17.88	20.99	23.98	-2.99
Ш.	5560	112	AVG	18.19	17.92	21.07	23.98	-2.91
Σ	5580	116	AVG	18.16	17.95	21.07	23.98	-2.91
(20MHz	5600	120	AVG	18.28	17.90	21.10	23.98	-2.88
	5620	124	AVG	18.22	18.19	21.22	23.98	-2.76
Ηz	5640	128	AVG	18.24	18.24	21.25	23.98	-2.73
5G	5660	132	AVG	18.27	18.26	21.28	23.98	-2.70
LC L	5680	136	AVG	18.33	18.33	21.34	23.98	-2.64
	5700	140	AVG	18.30	18.40	21.36	23.98	-2.62
	5720	144	AVG	18.17	18.42	21.31	23.98	-2.67
	5745	149	AVG	16.89	17.07	19.99	30.00	-10.01
	5765	153	AVG	17.10	16.78	19.95	30.00	-10.05
	5785	157	AVG	16.92	16.85	19.90	30.00	-10.10
	5805	161	AVG	16.98	16.80	19.90	30.00	-10.10
	5825	165	AVG	16.82	17.11	19.98	30.00	-10.02

Table 7-14. MIMO 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

FCC ID: A3LSMN986U	PCTEST Poud to be post of 8	MEASUREMENT REPORT (CERTIFICATION)	<b>Approved by:</b> Quality Manager
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	Freq [MHz]	Channel	Detector	Conc	Conducted Power [dBm]			Conducted Power
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
	5180	36	AVG	13.63	13.90	16.78	23.98	-7.20
	5200	40	AVG	14.97	14.66	17.83	23.98	-6.15
	5220	44	AVG	14.98	14.69	17.85	23.98	-6.13
	5240	48	AVG	14.91	14.75	17.84	23.98	-6.14
<b>E</b>	5260	52	AVG	14.05	14.11	17.09	23.98	-6.89
	5280	56	AVG	14.16	14.16	17.17	23.98	-6.81
i i i i	5300	60	AVG	14.22	14.08	17.16	23.98	-6.82
Bandwidth)	5320	64	AVG	14.03	13.87	16.96	23.98	-7.02
Ĕ	5500	100	AVG	14.66	15.17	17.93	23.98	-6.05
m	5520	104	AVG	14.45	14.92	17.70	23.98	-6.28
	5540	108	AVG	14.79	15.17	17.99	23.98	-5.99
(20MHz	5560	112	AVG	14.87	15.09	17.99	23.98	-5.99
Σ	5580	116	AVG	14.50	14.82	17.67	23.98	-6.31
50	5600	120	AVG	14.82	15.04	17.94	23.98	-6.04
	5620	124	AVG	14.84	15.07	17.97	23.98	-6.01
Ηz	5640	128	AVG	14.83	15.07	17.96	23.98	-6.02
5G	5660	132	AVG	14.88	15.08	17.99	23.98	-5.99
LO LO	5680	136	AVG	14.09	14.28	17.20	23.98	-6.78
	5700	140	AVG	14.03	14.24	17.15	23.98	-6.83
	5720	144	AVG	14.85	15.10	17.99	23.98	-5.99
	5745	149	AVG	14.50	14.94	17.74	30.00	-12.26
	5765	153	AVG	14.41	14.91	17.68	30.00	-12.32
	5785	157	AVG	14.30	14.81	17.57	30.00	-12.43
	5805	161	AVG	14.13	14.86	17.52	30.00	-12.48
	5825	165	AVG	14.03	14.88	17.49	30.00	-12.51

Table 7-15. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

ndwidth)	Freq [MHz] Channel		Detector	Cond	lucted Power [	dBm]	Conducted Power Limit	Conducted Power
dt				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
Ϊ	5190	38	AVG	13.50	13.61	16.57	23.98	-7.41
pr	5230	46	AVG	17.23	16.51	19.90	23.98	-4.08
ອ	5270	54	AVG	17.49	16.51	20.04	23.98	-3.94
ш	5310	62	AVG	14.64	14.56	17.61	23.98	-6.37
μz	5510	102	AVG	17.25	17.28	20.28	23.98	-3.70
	5550	110	AVG	17.33	17.26	20.31	23.98	-3.67
(40MI	5590	118	AVG	17.40	17.23	20.33	23.98	-3.65
4	5630	126	AVG	17.48	17.28	20.39	23.98	-3.59
Ŧ	5670	134	AVG	17.47	17.35	20.42	23.98	-3.56
Ъ	5710	142	AVG	17.48	17.48	20.49	23.98	-3.49
50	5755	151	AVG	17.21	17.21	20.22	30.00	-9.78
	5795	159	AVG	17.00	16.84	19.93	30.00	-10.07

Table 7-16. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMN986U	PCTEST Proud to be part of 8	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	<b>Approved by:</b> Quality Manager	
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ndwidth)	Freq [MHz] Channel		Detector	Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power
Ę				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
Š	5190	38	AVG	13.38	13.44	16.42	23.98	-7.56
p	5230	46	AVG	17.28	16.51	19.92	23.98	-4.06
ar	5270	54	AVG	17.48	16.51	20.03	23.98	-3.95
ш	5310	62	AVG	14.53	14.42	17.49	23.98	-6.49
Ł	5510	102	AVG	17.22	17.26	20.25	23.98	-3.73
Ξ	5550	110	AVG	17.40	17.23	20.33	23.98	-3.65
ō	5590	118	AVG	17.34	17.16	20.26	23.98	-3.72
(40	5630	126	AVG	17.49	17.31	20.41	23.98	-3.57
Ŧ	5670	134	AVG	17.47	17.38	20.44	23.98	-3.54
Б	5710	142	AVG	17.49	17.38	20.45	23.98	-3.53
50	5755	151	AVG	17.25	17.49	20.38	30.00	-9.62
	5795	159	AVG	16.97	17.49	20.25	30.00	-9.75

dwidth)	Freq [MHz]	req [MHz] Channel	Detector	Cond	lucted Power [	dBm]	Conducted Power Limit	Conducted Power
Ð				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
≧	5190	38	AVG	12.01	12.76	15.41	23.98	-8.57
2	5230	46	AVG	13.43	13.96	16.71	23.98	-7.27
	5270	54	AVG	13.50	13.70	16.61	23.98	-7.37
	5310	62	AVG	11.80	11.73	14.78	23.98	-9.20
	5510	102	AVG	13.07	13.99	16.56	23.98	-7.42
	5550	110	AVG	12.91	13.98	16.49	23.98	-7.49
	5590	118	AVG	12.74	13.90	16.37	23.98	-7.61
	5630	126	AVG	13.46	13.86	16.67	23.98	-7.31
	5670	134	AVG	12.91	13.86	16.42	23.98	-7.56
	5710	142	AVG	13.55	13.82	16.70	23.98	-7.28
	5755	151	AVG	12.90	13.97	16.48	30.00	-13.52
	5795	159	AVG	12.71	13.99	16.41	30.00	-13.59

Table 7-18. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMN986U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	<b>Approved by:</b> Quality Manager	
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	Freq [MHz]	Freq [MHz] Channel		Freq [MHz] Channel Detector		Cond	lucted Power [	dBm]	Conducted Power Limit	Conducted Power Margin [dB]
(80MHz width)				ANT1	ANT2	MIMO	[dBm]			
(80MH: width)	5210	42	AVG	14.11	14.09	17.11	23.98	-6.87		
(8) Mui	5290	58	AVG	13.76	13.74	16.76	23.98	-7.22		
5GHz Band	5530	106	AVG	16.31	15.86	19.10	23.98	-4.88		
B, G	5610	122	AVG	16.38	15.70	19.06	23.98	-4.92		
	5690	138	AVG	16.40	15.76	19.10	23.98	-4.88		
	5775	155	AVG	16.03	15.74	18.90	30.00	-11.10		

Table 7-19. MIMO 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz] Channel		Channel Detector		Conducted Power [dBm]			Conducted Power
(80MHz width)				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
width)	5210	42	AVG	11.67	11.85	14.77	23.98	-9.21
<u>s</u>	5290	58	AVG	11.83	11.27	14.57	23.98	-9.41
5GHz ( Band	5530	106	AVG	11.83	13.38	15.68	23.98	-8.30
	5610	122	AVG	11.71	13.32	15.60	23.98	-8.38
	5690	138	AVG	12.13	13.14	15.67	23.98	-8.31
	5775	155	AVG	11.89	13.41	15.73	30.00	-14.27

Table 7-20. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMN986U	PCTEST Proud to be part of 8	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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#### 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.

#### Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 17.39 dBm for Antenna-1 and 17.40 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(17.39 dBm + 17.40 dBm) = (54.83 mW + 54.95 mW) = 109.78 mW = 20.41 dBm

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# 7.5 Maximum Power Spectral Density – 802.11a/n/ac/ax §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.





#### **Test Notes**

#### None

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### SISO Antenna-1 Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	а	6	6.26	11.0	-4.74
	5200	40	а	6	6.55	11.0	-4.45
	5240	48	а	6	7.02	11.0	-3.98
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	5.85	11.0	-5.15
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.24	11.0	-4.76
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	6.77	11.0	-4.23
Ξ	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.32	11.0	-6.68
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	4.68	11.0	-6.32
В	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	5.34	11.0	-5.66
	5190	38	n (40MHz)	13.5/15 (MCS0)	1.90	11.0	-9.10
	5230	46	n (40MHz)	13.5/15 (MCS0)	2.14	11.0	-8.86
	5190	38	ax (40MHz)	13.5/15 (MCS0)	1.69	11.0	-9.31
	5230	46	ax (40MHz)	13.5/15 (MCS0)	2.30	11.0	-8.70
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-1.09	11.0	-12.09
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-1.79	11.0	-12.79
	5260	52	а	6	7.21	11.0	-3.80
	5280	56	а	6	6.81	11.0	-4.19
	5320	64	а	6	6.85	11.0	-4.15
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.53	11.0	-4.47
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.63	11.0	-4.37
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	6.51	11.0	-4.49
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	5.39	11.0	-5.61
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	5.63	11.0	-5.37
ä	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	5.42	11.0	-5.58
	5270	54	n (40MHz)	13.5/15 (MCS0)	2.39	11.0	-8.61
	5310	62	n (40MHz)	13.5/15 (MCS0)	2.96	11.0	-8.04
	5270	54	ax (40MHz)	13.5/15 (MCS0)	2.17	11.0	-8.84
	5310	62	ax (40MHz)	13.5/15 (MCS0)	2.15	11.0	-8.85
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-1.13	11.0	-12.13
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-1.76	11.0	-12.76
	5500	100	а	6	6.55	11.0	-4.45
	5580	116	а	6	6.16	11.0	-4.84
	5600	120	а	6	5.83	11.0	-5.17
	5700	140	а	6	6.63	11.0	-4.37
	5720	144	а	6	6.35	11.0	-4.65
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	6.32	11.0	-4.68
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	5.90	11.0	-5.10
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.09	11.0	-4.91
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	5.24	11.0	-5.76
0	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	4.87	11.0	-6.13
d 2C	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	5.15	11.0	-5.85
Band	5510	102	n (40MHz)	13.5/15 (MCS0)	2.57	11.0	-8.43
Ξ	5590	118	n (40MHz)	13.5/15 (MCS0)	2.34	11.0	-8.66
	5710	142	n (40MHz)	13.5/15 (MCS0)	2.78	11.0	-8.22
	5510	102	ax (40MHz)	13.5/15 (MCS0)	2.05	11.0	-8.95
	5590	118	ax (40MHz)	13.5/15 (MCS0)	1.49	11.0	-9.51
	5710 5520	142	ax (40MHz)	13.5/15 (MCS0)	1.93	11.0	-9.07
	5530 5610	106	ac (80MHz)	29.3/32.5 (MCS0)	-1.37	11.0	-12.37
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-1.28	11.0	-12.28
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-0.32	11.0	-11.32
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-1.81	11.0	-12.81
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-1.93	11.0	-12.93
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-1.79	11.0	-12.79

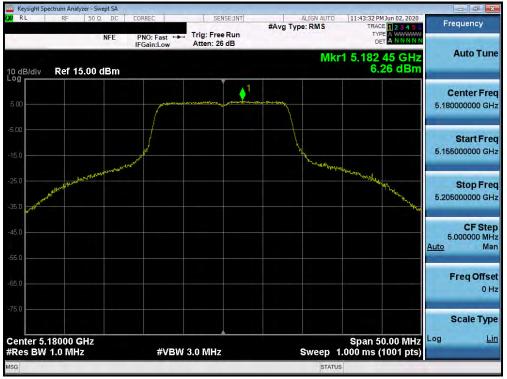
Table 7-21. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT1

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-	Frequency [MHz]	Channel No.	802.11 Mode	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	а	6	6.26	-5.61	0.65	10.0	-9.35
	5200	40	а	6	6.55	-5.61	0.94	10.0	-9.06
	5240	48	а	6	7.02	-5.61	1.41	10.0	-8.59
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	5.85	-5.61	0.24	10.0	-9.76
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.24	-5.61	0.63	10.0	-9.37
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	6.77	-5.61	1.16	10.0	-8.84
-	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.32	-5.61	-1.29	10.0	-11.29
Band	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	4.68	-5.61	-0.93	10.0	-10.93
ä	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	5.34	-5.61	-0.27	10.0	-10.27
	5190	38	n (40MHz)	13.5/15 (MCS0)	1.90	-5.61	-3.71	10.0	-13.71
	5230	46	n (40MHz)	13.5/15 (MCS0)	2.14	-5.61	-3.47	10.0	-13.47
	5190	38	ax (40MHz)	13.5/15 (MCS0)	1.69	-5.61	-3.92	10.0	-13.92
	5230	46	ax (40MHz)	13.5/15 (MCS0)	2.30	-5.61	-3.31	10.0	-13.31
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-1.09	-5.61	-6.70	10.0	-16.70
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-1.79	-5.61	-7.40	10.0	-17.40

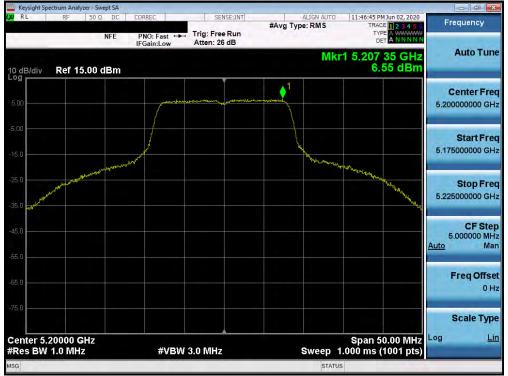
Table 7-22. Band 1 e.i.r.p. Conducted Power Spectral Density Measurements (ISED) SISO ANT1



Plot 7-127. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 36)

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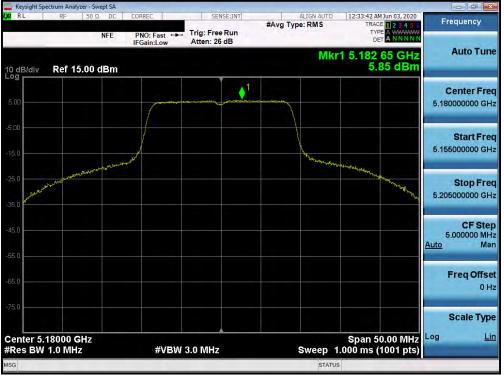
Plot 7-128. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 40)



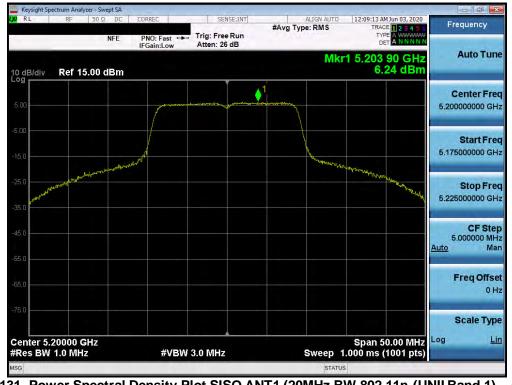
Plot 7-129. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 48)

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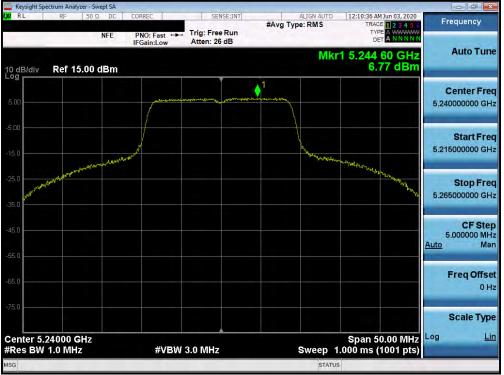
Plot 7-130. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)



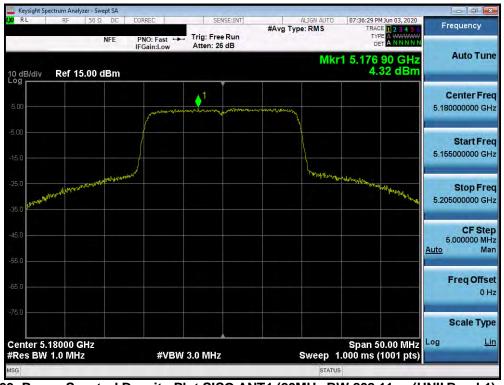
Plot 7-131. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)

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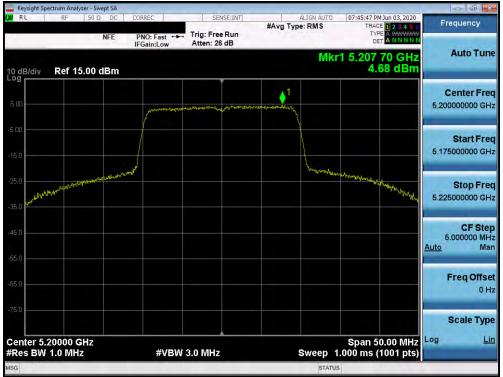
Plot 7-132. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)



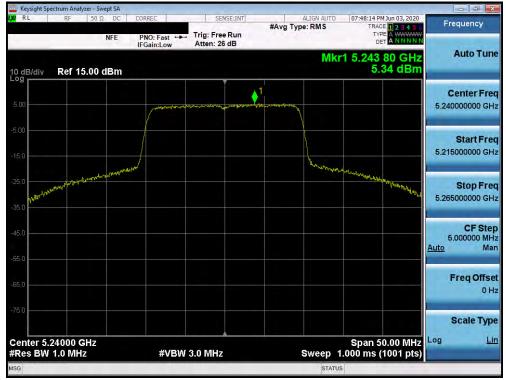
Plot 7-133. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)

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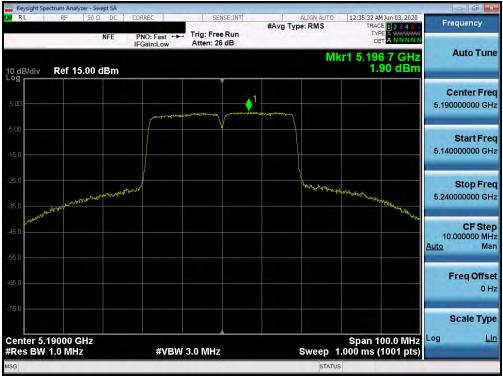
Plot 7-134. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)



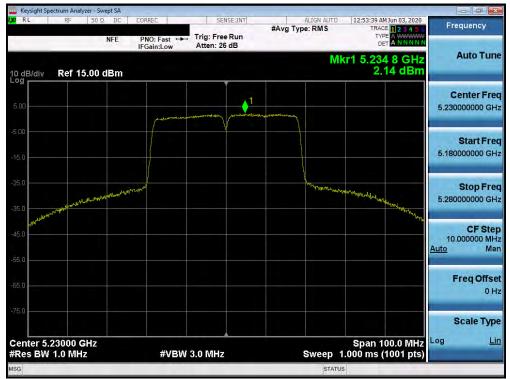
Plot 7-135. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)

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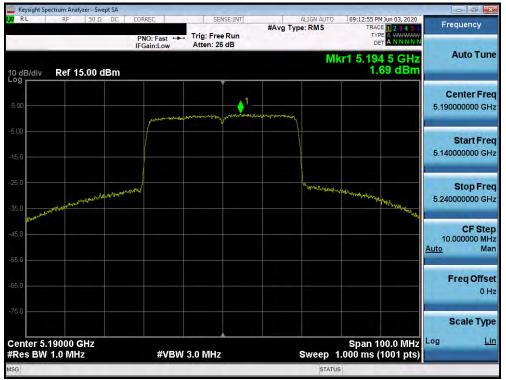
Plot 7-136. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)



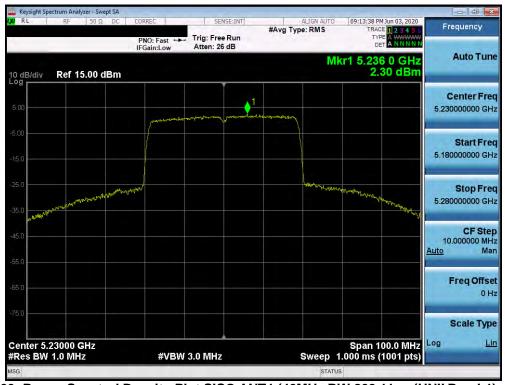
Plot 7-137. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)

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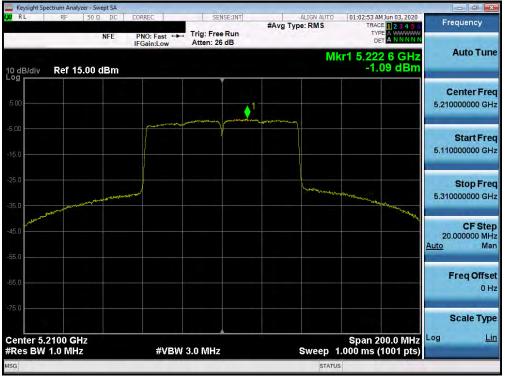
Plot 7-138. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)



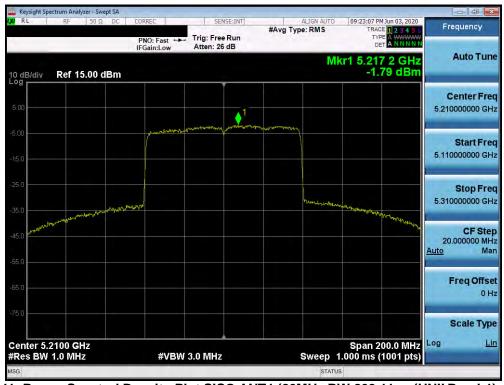
Plot 7-139. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 42)

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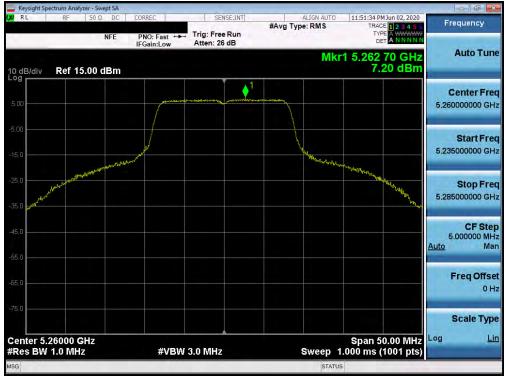
Plot 7-140. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)



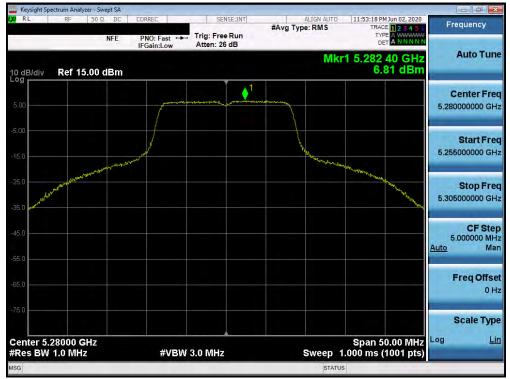
Plot 7-141. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)

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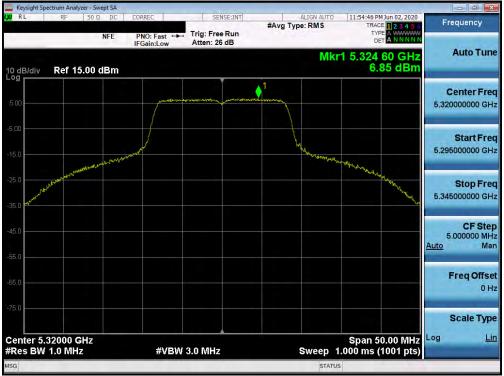
Plot 7-142. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) – Ch. 52)



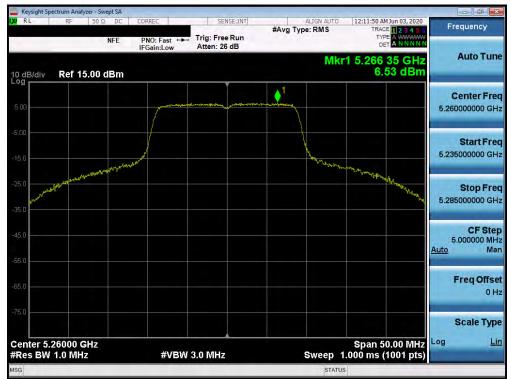
Plot 7-143. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 56)

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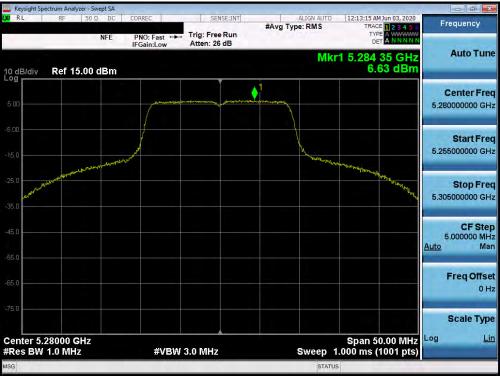
Plot 7-144. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 64)



Plot 7-145. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)

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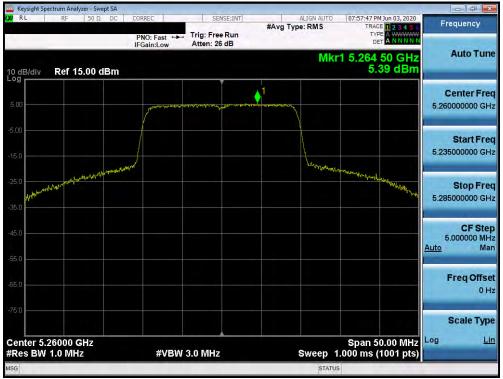
Plot 7-146. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)



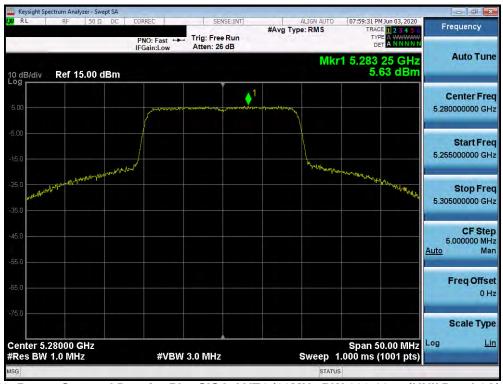
Plot 7-147. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)

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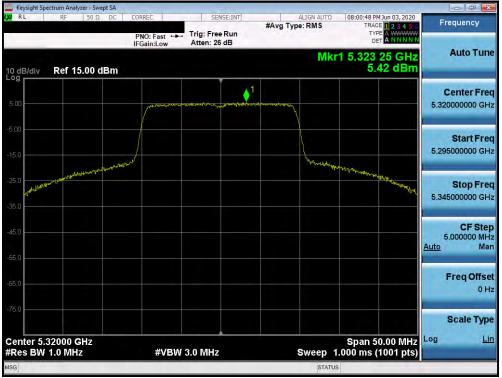
Plot 7-148. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 52)



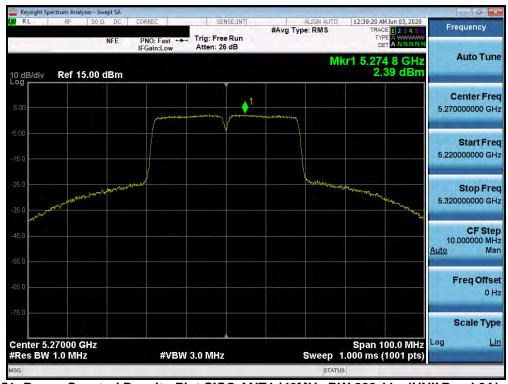
Plot 7-149. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)

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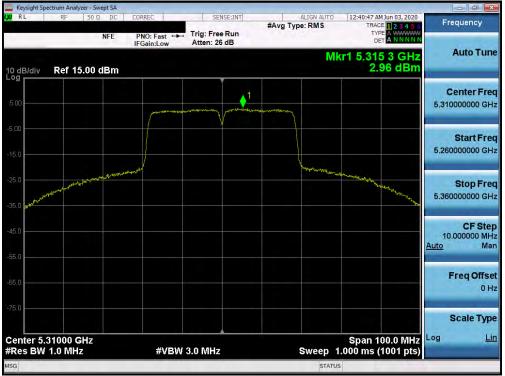
Plot 7-150. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)



Plot 7-151. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)

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Plot 7-152. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)



Plot 7-153. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)

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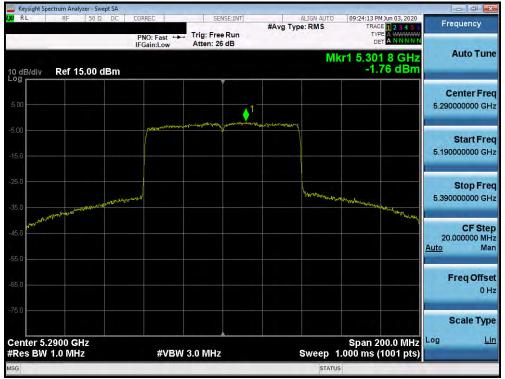
Plot 7-154. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)



Plot 7-155. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)

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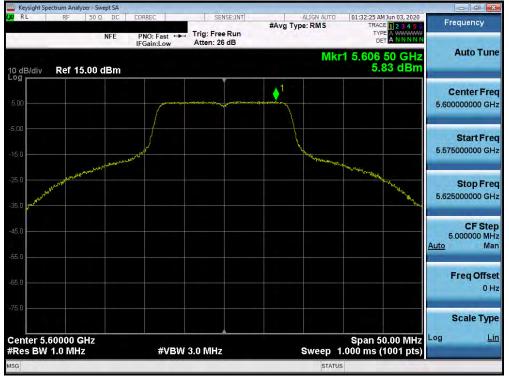
Plot 7-156. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)



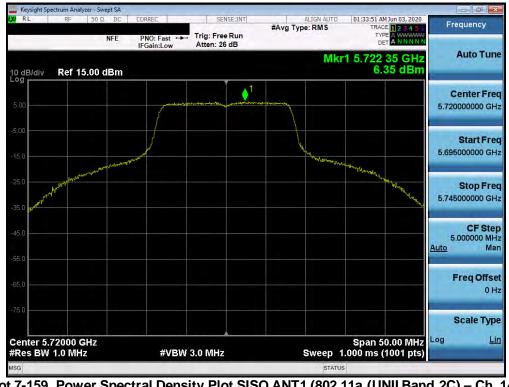
Plot 7-157. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 100)

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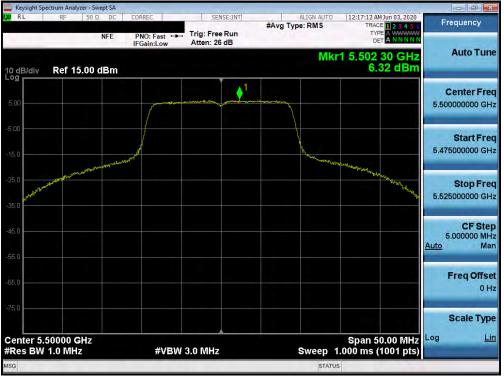
Plot 7-158. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 120)



Plot 7-159. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 144)

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Plot 7-160. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)



Plot 7-161. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)

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