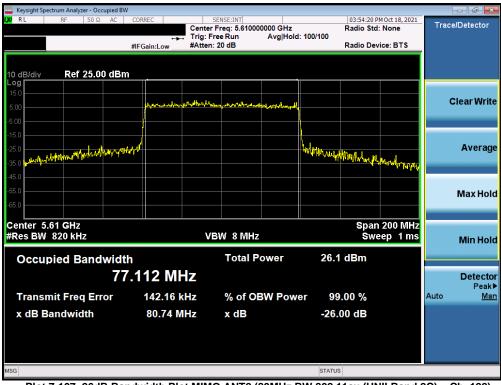


Keysight Spectrum Analyzer - Occupied BW									
LX/RL RF 50Ω AC	CORREC		NSE:INT reg: 5.53000	0000 GHz		03:53:34 PI Radio Std:	MOct 18, 2021	Trac	e/Detector
	↔	, Trig: Free	e Run	Avg Hold	1: 100/100				
	#IFGain:Low	#Atten: 2	0 dB			Radio Dev	ice: BTS		
10 dB/div Ref 25.00 dBm									
Log 15.0									
5.00	Autor	ويهو الماريون الماريون	Marchan ma	mendeling					Clear Write
-5.00	į –								
-15.0									
	- N								Average
a day a shaking the set of the set of the	4M,				AN ANALAN	al March March	and		Average
33.0 1.1.							a shirt for the second s		
-45.0									
-55.0									Max Hold
-65.0									
Center 5.53 GHz						Snan	200 MHz		
#Res BW 820 kHz		VB	N 8 MHz				ep 1 ms		Min Hold
									Wiinfiold
Occupied Bandwidt	ו		Total P	ower	26.2	dBm			
76	.963 M	Hz							Detector
									Peak►
Transmit Freq Error	239.77	kHz	% of OE	3W Pow	er 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	81.01 N	٨Hz	x dB		-26.	00 dB			
MSG					STATUS	;			

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



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

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 71 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 71 of 257
© 2022 PCTEST	·			V 9.0 02/01/2019



Keysight Spectrum Analyzer - Occupied E	BW				
LXX RL RF 50Ω AC	un an		03:55:24 PM Radio Std: M d: 100/100	None	Trace/Detector
	#IFGain:Low #A	tten: 20 dB	Radio Devic	e: BTS	
10 dB/div Ref 25.00 dB	m				
15.0 5.00		ward million and the strengthe	A.		Clear Write
-5.00					
-25.0 -35.0 4.1	Ъ., """		house hours and hours	al Applitution	Average
-45.0 -55.0 -65.0					Max Hold
Center 5.69 GHz #Res BW 820 kHz		VBW 8 MHz		200 MHz p 1 ms	Min Hold
Occupied Bandwid		Total Power	24.4 dBm		
	7.304 MHz 227.78 kHz	% of OBW Pow	ver 99.00 %		Detector Peak▶ Auto <u>Man</u>
Transmit Freq Error					Auto <u>Mari</u>
x dB Bandwidth	81.24 MHz	x dB	-26.00 dB		
MSG			STATUS		

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



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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 70 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 72 of 257
© 2022 PCTEST		·	V 9.0 02/01/2019



Keysight Spectrum Analyzer - Occupied BW						×
			Radio S 100/100	3 PM Oct 18, 2021 td: None evice: BTS	Trace/Detector	
10 dB/div Ref 20.00 dBm Log	I					
10.0	ng haf film ware and a film that a film of the start of the	ๅ๛ <i>฿๛[๛]๛฿๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛</i>			Clear Wri	ite
-20.0 -20.0 -30.0 -40.0 mbh.cetturrith			walke My up Maring	WAA Markana Markana Markana Markana Markana M	Averaç	ge
-50.0					Max Ho	d
Center 5.57 GHz #Res BW 470 kHz		5 MHz	Sweet	an 400 MHz 5 1.733 ms	Min Ho	ld
	15 MHz	Total Power	25.4 dBm		Detect Peal	k►
Transmit Freq Error x dB Bandwidth		% of OBW Powe x dB	ər 99.00 % -26.00 dB		Auto <u>M</u> a	<u>an</u>
MSG			STATUS			

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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dago 72 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 73 of 257
© 2022 PCTEST			V 9.0 02/01/2019



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

<u>§15.407 (e); RSS-Gen [6.2]</u>

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 and 5.850 – 5.895 bands, 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.

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 74 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	set	
© 2022 PCTEST				V 9.0 02/01/2019



MIMO Antenna-1 6 dB	Bandwidth Measurements
---------------------	------------------------

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	а	6	16.41
	5785	157	а	6	16.42
	5825	165	а	6	16.39
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.63
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.66
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.61
ო	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	19.07
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	19.03
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	19.02
	5755	151	n (40MHz)	13.5/15 (MCS0)	36.39
	5795	159	n (40MHz)	13.5/15 (MCS0)	36.11
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.72
	5795	159	ax (40MHz)	13.5/15 (MCS0)	37.68
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	76.01
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	77.28

Table 7-4. Conducted Bandwidth Measurements MIMO ANT1



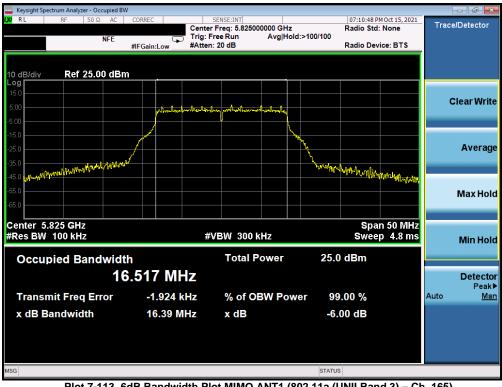
Plot 7-111. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 75 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 75 of 257
© 2022 PCTEST		•	V 9.0 02/01/2019



🔤 Keysight Spectrum Analyzer - Oco											
XX RL RF 50 Ω	1	ORREC	Center Fr	NSE:INT req: 5.78500			100/100	07:07:18 Pf Radio Std:	10ct 15, 2021 None	Trac	e/Detector
	NFE #I	⊶ FGain:Low	#Atten: 2		Avgin	010.	100/100	Radio Dev	ice: BTS		
10 dB/div Ref 25.0	0 dBm										
15.0											
5.00			april and set the set		a utilation m					1	Clear Write
-5.00											
-15.0		-M ^C				(Voran					
-25.0	- 7)	^				Average
-35.0 -45.0 mmmon/huptlen////////////////////////////////////	when the way						hulu wu	A.a. 18			
								helphant	WY WALLAND		
-55.0											Max Hold
-65.0											
Center 5.785 GHz			-43 (n 50 MHz		
#Res BW 100 kHz			#VE	300 k	HZ			Swee	o 4.8 ms		Min Hold
Occupied Band	width			Total P	ower		24.1	dBm			
	16.	550 M	Hz								Detector
		8.893		% of O	- 0.4/		- 00	00.0/		Auto	Peak▶ Man
Transmit Freq Err	or					we		.00 %		Auto	IVIAII
x dB Bandwidth		16.42	MHZ	x dB			-6.	00 dB			
MSG							STATUS				

Plot 7-112. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 157)



Plot 7-113. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 76 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 76 of 257
© 2022 PCTEST				V 9.0 02/01/2019



Keysight Spectrum Analyzer - Occ										
LX/ RL RF 50 Ω	AC COP	RREC	Center Fr	vse:INT eq: 5.74500 Run		d: 100/100	12:26:03 A Radio Std	M Oct 16, 2021 : None	Trac	e/Detector
		Gain:Low	#Atten: 2	0 dB	•.		Radio Dev	ice: BTS		
10 dB/div Ref 25.00	0 dBm									
15.0										Clear Write
-5.00		mannahus	mound	partra-tradia	however					
-15.0	^ ^	port			h.	h.				
-25.0	J.					1				Average
-35.0 -45.0 -45.0 -45.0	AL JANN					Mr M	un half and the state	Manhan la a		
-55.0								,		Max Hold
-65.0										
Center 5.745 GHz #Res BW 100 kHz			#VE	SW 300 k	Hz			n 50 MHz p 4.8 ms		Min Hold
Occupied Band	width			Total P	ower	24.3	3 dBm			
	17.7	16 MI	Ηz							Detector Peak▶
Transmit Freq Err	or	7.192	(Hz	% of O	3W Pow	ver 99	9.00 %		Auto	<u>Man</u>
x dB Bandwidth		17.63 N	lHz	x dB		-6.	00 dB			
MSG						STATU	S			

Plot 7-114. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



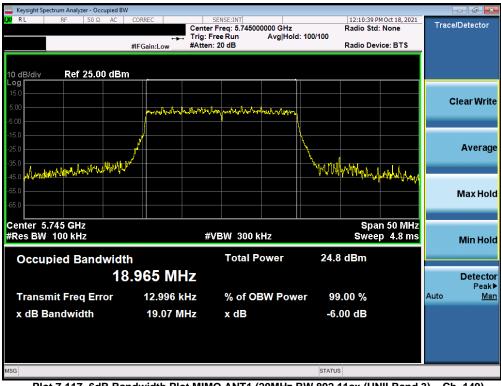
Plot 7-115. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:				
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 77 of 257		
© 2022 PCTEST		•		V 9.0 02/01/2019		



🔤 Keysight Spectrum Analyzer - Occi	upied BW										
LX1 RF 50 Ω	AC CORRE		Center Fr	SE:INT eq: 5.82500 Run	0000 GHz Avg Hol	d: 100/10	0	12:29:56 A	10ct 16, 2021 None	Trac	e/Detector
		in:Low	#Atten: 20				-	Radio Dev	ice: BTS		
10 dB/div Ref 25.00) dBm										
15.0 5.00		man/Monthunde	whenther	mhumatan	lasolarrows,						Clear Write
-5.00 -15.0 -25.0	لى مىر		 			K, M,					Average
-35.0 -45.0 www.lbl.hu.al.ru.al.ru.al.ru.al.ru	Malphankor					 ₩	49M.)	Vnr-Vnpphy	WHA.WA.Ja.		, rrorage
-55.0											Max Hold
Center 5.825 GHz #Res BW 100 kHz			#VB	W 300 k	Hz				n 50 MHz p 4.8 ms		Min Hold
Occupied Band	width			Total P	ower	2	24.7	dBm			
	17.70	02 MH	z								Detector Peak▶
Transmit Freq Err	or ·	7.827 k	Hz	% of OE	3W Pow	/er	99 .	.00 %		Auto	<u>Man</u>
x dB Bandwidth		17.61 M	Hz	x dB			-6.0	00 dB			
MSG						S	TATUS				

Plot 7-116. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



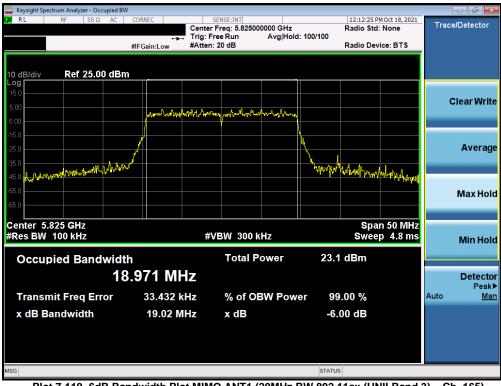
Plot 7-117. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	NG	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dega 70 of 257		
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 78 of 257		
© 2022 PCTEST	-			V 9.0 02/01/2019		



Keysight Spectrum Analyzer - Occupied						- 0
L <mark>X/</mark> R L RF 50 Ω AC		SENSE:INT er Freg: 5.785000000 GHz	12:11:33 P Radio Std	MOct 18, 2021	Trace	/Detector
	🛶 Trig:	FreeRun Avg Hold	1: 100/100 Radio Dev	In BTS		
	#IFGain:Low #Atte	n: 20 dB	Raulo Dev	ICE: DTS		
10 dB/div Ref 25.00 df	Bm					
Log						
5.00					с	lear Write
-5.00	of most for the second	an part throw has been and the for				
-5.00						
-25.0			1			Average
	~ <i>/</i> /		Mandallan av 1			Average
-35.0 -45.0 Munruhuluhuluhumuhulum	4 ⁴⁷		When the to a start of the star	Wywhite		
-55.0						
-65.0						Max Hold
Center 5.785 GHz				n 50 MHz		
#Res BW 100 kHz		#VBW 300 kHz	Swee	p 4.8 ms		Min Hold
Occupied Bandwig	dth	Total Power	24.9 dBm			
	18.959 MHz					Detector
						Peak▶
Transmit Freq Error	21.379 kHz	% of OBW Pow	er 99.00 %		Auto	<u>Man</u>
x dB Bandwidth	19.03 MHz	x dB	-6.00 dB			
MSG			STATUS			

Plot 7-118. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



Plot 7-119. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	ISUNG	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dage 70 of 257		
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 79 of 257		
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Keysight Spectrum Analyzer - Occupied	BW				
LXI RL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 5.755000	0000 GHz	12:46:09 AM Oct 16, 2021 Radio Std: None	Trace/Detector
NFE		Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 20 dB		Radio Device: BTS	
10 dB/div Ref 25.00 dB	۶m				
15.0					
					Clear Write
5.00	الهلمالملير	بالهاماناناليس بسهامانا المامار	a. July lo L Lyl		
-5.00					
-15.0					
-25.0	/		<u> </u>		Average
-35.0	1 mart			1.	
-45.0	and the second		YOWW	Martin Martin Martin Martin	
-55.0					Max Hold
-65.0					Muxitolu
Center 5.755 GHz				Span 100 MHz	
#Res BW 100 kHz		#VBW_300 k	Hz	Sweep 9.6 ms	Min Hold
Occupied Bandwid	ith	Total Po	ower 24.8	dBm	
			24.0	dBill	
3	6.171 MH	Z			Detector
Transmit Freq Error	-10.062 kł	lz % of OE	3W Power 99	.00 %	Peak▶ Auto <u>Man</u>
x dB Bandwidth	36.39 MH	z xdB	-6 (00 dB	
	50.55 Mil		-0.0		
MSG			STATUS		

Plot 7-120. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



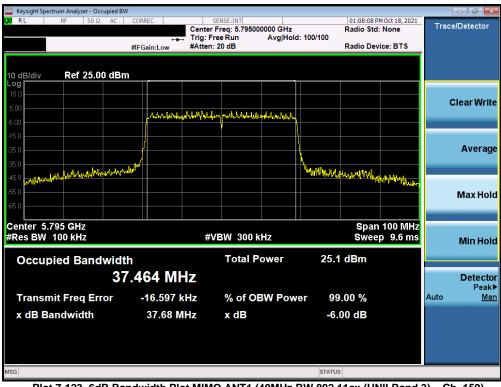
Plot 7-121. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS908JPN	PCTEST [®] Proud to be part of ® element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager		
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1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 80 of 257		
© 2022 PCTEST	-			V 9.0 02/01/2019		



Keysight Spectrum Analyzer - Occupied	BW					
LX/ RL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 5.755000	000 GHz	01:07:08 PM Oct 18, 2021 Radio Std: None	Trace	/Detector
		Trig: Free Run #Atten: 20 dB	Avg Hold: 100/100	Radio Device: BTS		
, 	#IFGall1:LOW	WAtten: 20 ab		Radio Bevice: B15	ī	
10 dB/div Ref 25.00 dB	m					
Log						
15.0					с	lear Write
5.00	- where the shake the	apport in which the day	Alethalm			
-5.00						
-15.0						Average
-25.0						Average
-35.0	Ju Jun M		White white	No. Jiallato .		
-45.0				way and the solution the second		
-65.0						Max Hold
-65.0						
Center 5.755 GHz				Span 100 MH		
#Res BW 100 kHz		#VBW 300 kH	lz	Sweep 9.6 ms		Min Hold
Occupied Bandwid	lth	Total Po	wer 24.9	dBm		
	7.523 MH	7				Detector
	7.525 Will I					Peak►
Transmit Freq Error	16.218 kH	z % of OB	W Power 99	.00 %	Auto	<u>Man</u>
x dB Bandwidth	37.72 MH	z xdB	-6.	00 dB		
MSG			STATUS			

Plot 7-122. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



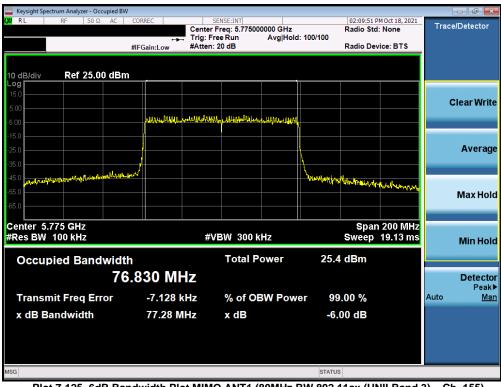
Plot 7-123. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dava 04 at 057		
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 81 of 257		
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Keysight Spectrum Analyzer - Oc										
Ι,Χ RL RF 50 Ω	AC COF	REC	Center Fr Trig: Free			d: 100/100	Radio Std		Trac	e/Detector
		Gain:Low	#Atten: 20) dB			Radio Dev	rice: BTS		
10 dB/div Ref 25.0	0 dBm									
15.0										Clear Write
-5.00		MANUL AMMUN	uuuuu	alm.N.M.M.	MUNN-NULPI					
-25.0										Average
-35.0 -45.0	hollowwww					hulppiersky	whenter	montendation		
-55.0										Max Hold
Center 5.775 GHz #Res BW 100 kHz			#VB	W 300 k	Hz			200 MHz 19.13 ms		Min Hold
Occupied Band	lwidth			Total P	ower	25.4	dBm			
		11 MF	lz							Detector Peak▶
Transmit Freq Er	ror ·	-66.443 k	(Hz	% of OE	3W Pow	'er 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth		76.01 M	IHz	x dB		-6.0	00 dB			
MSG						STATUS				

Plot 7-124. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



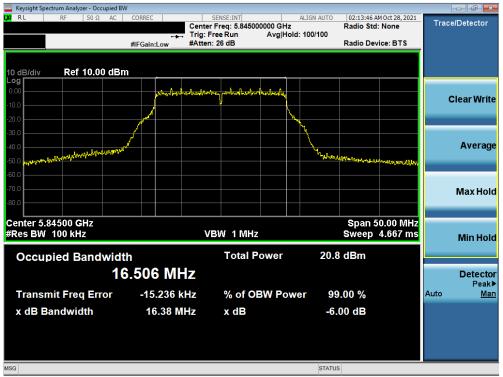
Plot 7-125. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Dogo 82 of 257		
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 82 of 257		
© 2022 PCTEST	•			V 9.0 02/01/2019		



	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
Band 3/4	5845	169	а	6	16.38
Band 4	5865	173	а	6	16.40
Dallu 4	5885	177	а	6	16.39
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	17.64
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	17.66
Dallu 4	5885	177	n (20MHz)	6.5/7.2 (MCS0)	17.63
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	19.06
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	18.94
Dallu 4	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	19.05
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	36.42
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	37.67
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	37.46
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	37.67
	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	76.13
Pand 2/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	77.66
Band 3/4	5815	163	ac (160MHz)	58.5/65 (MCS0)	156.10
	5815	163	ax (160MHz)	58.5/65 (MCS0)	157.70

Table 7-5. Conducted Bandwidth Measurements Band 4 MIMO ANT1



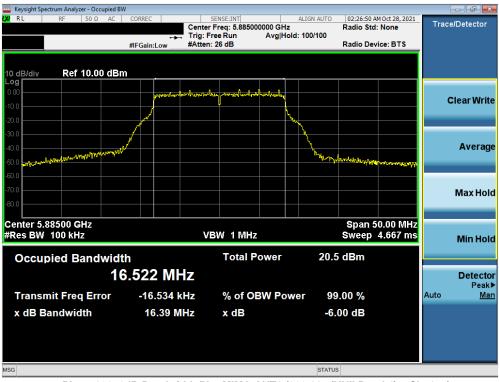
Plot 7-126. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3/4) – Ch. 169)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 02 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 83 of 257	
© 2022 PCTEST	•	·		V 9.0 02/01/2019	



🔤 Keysight Spectrum Analyzer - Occup	ied BW				
LXI RL RF 50 Ω	AC CORREC	SENSE:INT Center Freg: 5.86500	ALIGN AUTO	02:20:48 AM Oct 28, 20 Radio Std: None	Trace/Detector
			Avg Hold: 100/100	Radio Sta. None	
	#IFGain:Low	#Atten: 26 dB		Radio Device: BTS	
10 dB/div Ref 20.00	dBm				
Log					
0.00					Clear Write
	police Agenti	andrafell and a second s	handropella		
-10.0					
-20.0	م می مربع م				
-30.0					Average
-40.0	mastrad				
-40.0 -50.0 portally on the most of the most of the second s			Varolyor	Mmuhandplater	hau
-60.0					Max Hold
-70.0					Wax Hold
-10.0					
Center 5.86500 GHz			· · ·	Span 50.00 M	Hz
#Res BW 100 kHz		VBW 1 MHz		Sweep 4.667	ns Min Hold
Occupied Bandw	vidth	Total P	ower 20.	/ dBm	
	16.522 MF	z			Detector Peak▶
Transmit Freq Erro	r -13.473 k	Hz % of O	BW Power 99	9.00 %	Auto <u>Man</u>
x dB Bandwidth	16.40 M	Hz xdB	-6.	00 dB	
MSG			STATU	S	

Plot 7-127. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 4) - Ch. 173)



Plot 7-128. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 94 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 84 of 257	
© 2022 PCTEST	·	·		V 9.0 02/01/2019	





Plot 7-129. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3/4) - Ch. 169)



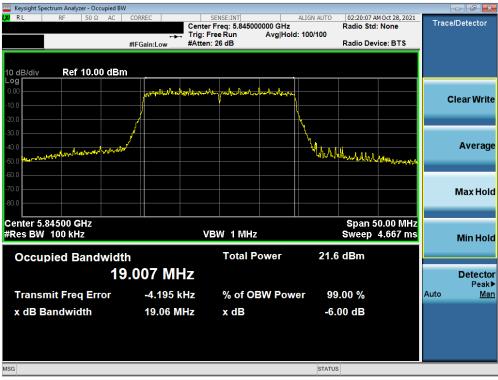
Plot 7-130. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 05 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 85 of 257
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www.www.com.com.com.com.com.com.com.com.com.com	BW				- ē 💌
💢 RL RF 50 Ω AC	CORREC	SENSE:INT		02:28:58 AM Oct 28, 2021	Trace/Detector
		iter Freq: 5.885000000 GH j: Free Run Avg H	1z Ri lold: 100/100	adio Std: None	The of Bottoolor
		ten: 26 dB		adio Device: BTS	
10 dB/div Ref 20.00 dE	sm		- <u> </u>		
10.0					
0.00		- when and water and and			Clear Write
	and party for the start of the start	-W. Bla held we wind with a little for			
-10.0	1		N.		
-20.0					
-30.0			+ ∖		Average
-40.0					
-40.0			"muntum	WWWWWWWWW	
				and the second second	
-60.0					Max Hold
-70.0					
Center 5.88500 GHz #Res BW 100 kHz				Span 50.00 MHz weep 4.667 ms	
#Res BW 100 KHZ		VBW 1 MHz	>	weep 4.007 ms	Min Hold
Occupied Bandwid	ith	Total Power	21.0 d	Rm	
		Total Tower	21.0 u	om	
1	7.713 MHz				Detector
					Peak►
Transmit Freq Error	-10.349 kHz	% of OBW Po	ower 99.00	0 %	Auto <u>Man</u>
x dB Bandwidth	17.63 MHz	x dB	-6.00	dB	
			0100		
MSG			STATUS		

Plot 7-131. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 4) - Ch. 177)



Plot 7-132. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS908JPN	Provid to be part of (e) element	MEASUREMENT REPORT (CERTIFICATION)	SUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 96 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 86 of 257	
© 2022 PCTEST	·			V 9.0 02/01/2019	



Keysight Spectrum Analyzer - Occupied BW					
	Center	SENSE:INT Freq: 5.865000000 GHz ree Run Avg Hold : 26 dB	Radio Sto I: 100/100	AM Oct 28, 2021 d: None vice: BTS	Trace/Detector
10 dB/div Ref 10.00 dBm					
-10.0	yana tuluwa turikana turikana kutuka kati	- point make weather			Clear Write
-20.0 -30.0 -40.0 -50.0			hon all have all when a shift	Withorstown	Average
-60.0					Max Hold
Center 5.86500 GHz #Res BW 100 kHz	VI	BW 1 MHz		50.00 MHz 4.667 ms	Min Hold
Occupied Bandwidth 18.	957 MHz	Total Power	21.4 dBm		Detector Peak▶
Transmit Freq Error x dB Bandwidth	-864 Hz 18.94 MHz	% of OBW Pow x dB	er 99.00 % -6.00 dB		Auto <u>Man</u>
MSG			STATUS		

Plot 7-133. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 4) - Ch. 173)



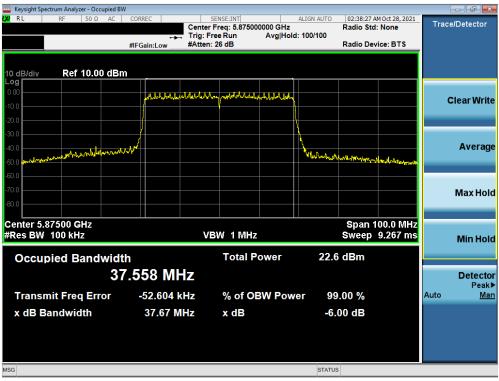
Plot 7-134. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N: Test Dates:		EUT Type:			
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 87 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



Keysight Spectrum Analyzer - Occupied BW					- ē ×
LXI RL RF 50Ω AC	CORREC	SENSE:INT er Freg: 5.835000000 GH		AM Oct 28, 2021	Trace/Detector
			12 Radio Sto Iold: 100/100	a: None	
		en: 24 dB		vice: BTS	
10 dB/div Ref 10.00 dBm				_	
0.00					
-10.0	La fayer of a fayer of	K/ way and the selected states is a second state of the second states in	* <u>`</u>		Clear Write
	1	V			
-20.0			_N		
-30.0					
-40.0	₩		Moderna L		Average
-50.0 Anthenal Charles and the second			hand a start and a start and a start and a start and a start a start and a start a start and a start a start a	Month and players a	
-60.0					
-70.0					Max Hold
-80.0					
			0		
Center 5.83500 GHz #Res BW 100 kHz		VBW 1 MHz	Span	100.0 MHz 9.267 ms	
#Res BW TOURH2			Sweep	9.207 1115	Min Hold
Occupied Bandwidth		Total Power	22.2 dBm		
36	.180 MHz				Detector
					Peak►
Transmit Freq Error	-9.244 kHz	% of OBW Po	ower 99.00 %		Auto <u>Man</u>
x dB Bandwidth	36.42 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-135. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3/4) - Ch. 167)



Plot 7-136. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 00 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 88 of 257
© 2022 PCTEST	•			V 9.0 02/01/2019



Keysight Spectrum Analyzer - Occupied BW					
LX RL RF 50Ω AC CORP		eq: 5.835000000 GHz		35:29 AM Oct 28, 2021 io Std: None	Trace/Detector
#FC	→→ Trig: Free ain:Low #Atten: 2			io Device: BTS	
#FG	ain:Low #Atten: 2	+ uD	Rau	IO DEVICE. BTS	
10 dB/div Ref 10.00 dBm					
0.00	1. J. Jan Jack Marken	ne that have been a started and a			
-10.0					Clear Write
-20.0					
-30.0			1		
-40.0			<u>}</u>		Average
-40.0			monthlynnupplan	Nhyput have been the	
-60.0					
-70.0					Max Hold
-80.0					Maxilola
Center 5.83500 GHz #Res BW 100 kHz	VB	V 1 MHz		an 100.0 MHz	
#Res BW TOO KHZ	V DV		5₩	eep 9.267 ms	Min Hold
Occupied Bandwidth		Total Power	22.5 dB	m	
	3 2 MH z				Detector
57.40					Peak►
Transmit Freq Error 🛛 式	38.675 kHz	% of OBW Powe	er 99.00	%	Auto <u>Man</u>
x dB Bandwidth	37.46 MHz	x dB	-6.00 d	в	
MSG			STATUS		

Plot 7-137. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3/4) - Ch. 167)



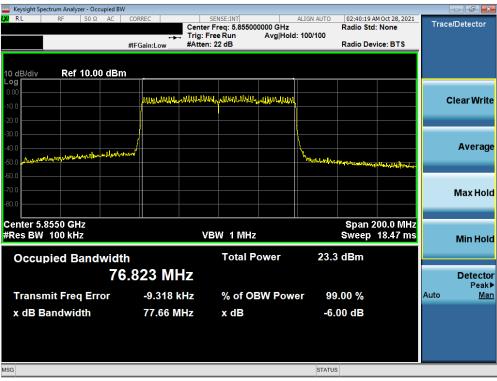
Plot 7-138. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dege 90 of 257		
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 89 of 257		
© 2022 PCTEST V 9.0 02/01/2019					



www.www.com analyzer - Occupied BW									
LXX RL RF 50Ω AC CO	DRREC		NSE:INT reg: 5.85500	0000 GH-	ALIGN AUTO	02:39:57 / Radio Std	M Oct 28, 2021	Trac	e/Detector
	↔				d: 100/100	Raulo Stu	. None		
#1	FGain:Low	#Atten: 2				Radio Dev	ice: BTS		
10 dB/div Ref 10.00 dBm									
Log 0.00									
	un Mill	.Mut Mut	MUNANUM	uuuuu					Clear Write
-10.0									
-20.0	-								
-30.0									
-40.0	/				1.				Average
-50.0 Higher Marrie Head and Marrie Mar					Unperterhouse	And the ball have been	ld todly b		
-60.0							da terdina da reada		
-70.0									Max Hold
-80.0									Max Holu
Center 5.8550 GHz							200.0 MHz		
#Res BW 100 kHz		٧B١	N 1 MHz			Sweep	18.47 ms		Min Hold
Occupied Bandwidth			Total P	ower	22.6	dBm			
			l otur i i		22.0				
/5.4	486 MI	HZ							Detector Peak►
Transmit Freq Error	-33.231	kHz	% of OE	3W Pow	er 99	.00 %		Auto	Man
x dB Bandwidth	76.13 N	(Hz	x dB		-6 (00 dB			
	10.10 1		A GB		0.0				
MSG					STATUS				

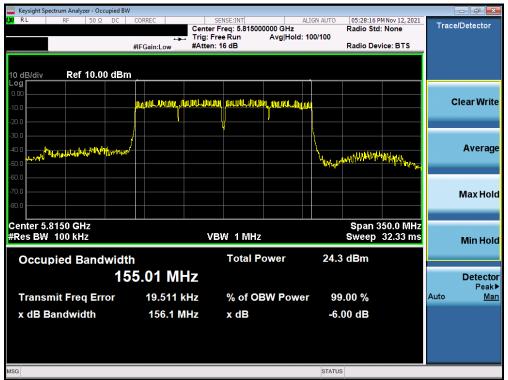
Plot 7-139. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 3/4) - Ch. 171)



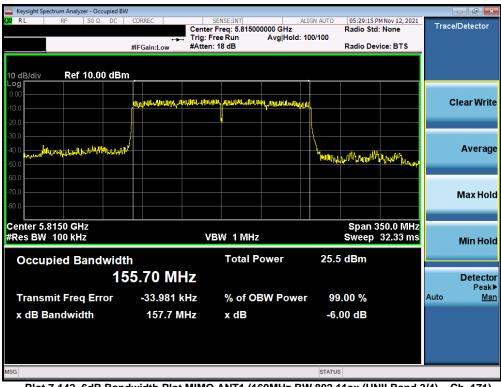
Plot 7-140. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 90 of 257	
© 2022 PCTEST		·	V 9.0 02/01/2019	





Plot 7-141. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ac (UNII Band 3/4) - Ch. 171)



Plot 7-142. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	IMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 01 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 91 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



MIMO Antenna-2 6dB Bandwidth Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	а	6	16.43
	5785	157	а	6	16.42
	5825	165	а	6	16.44
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.67
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.68
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.68
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	17.66
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	17.69
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	17.65
	5755	151	n (40MHz)	13.5/15 (MCS0)	36.45
	5795	159	n (40MHz)	13.5/15 (MCS0)	36.35
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.74
	5795	159	ax (40MHz)	13.5/15 (MCS0)	37.61
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	76.26
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	77.70

Table 7-6. Conducted Bandwidth Measurements MIMO ANT2



Plot 7-143. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 02 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 92 of 257
© 2022 PCTEST		·	V 9.0 02/01/2019





Plot 7-144. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3) - Ch. 157)



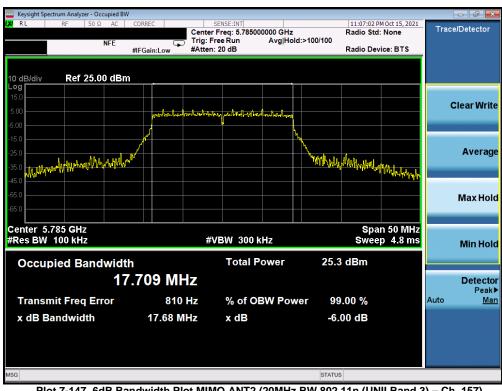
Plot 7-145. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 00 at 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 93 of 257	
© 2022 PCTEST	•			V 9.0 02/01/2019	



🔤 Keysight Spectrum Analyzer - Occupied BW					-0	
UXIRL RF 50Ω AC	Center Trig: F	SENSE:INT Freq: 5.745000000 GHz Free Run Avg Hold	08:03:09 P Radio Std d:>100/100 Radio Dev		Trace/D	etector
	#IFGain:Low #Atten	: 20 dB	Radio Dev	ICE: BIS		
10 dB/div Ref 25.00 dBm						
15.0		an relimption burger to be			Cle	ar Write
-5.00			Ng			
-25.0 -35.0 www.mipry.hun.plan.plan.lun.lun.hun.	nd l		Wheeler and a strate		4	Average
-45.0			·····	MAN ANA ANA		
-65.0					м	ax Hold
Center 5.745 GHz #Res BW 100 kHz	#	VBW 300 kHz		n 50 MHz p 4.8 ms	N	lin Hold
Occupied Bandwidt	h	Total Power	25.3 dBm			
	.700 MHz				0)etector Peak▶
Transmit Freq Error	325 Hz	% of OBW Pow	ver 99.00 %		Auto	<u>Man</u>
x dB Bandwidth	17.67 MHz	x dB	-6.00 dB			
MSG			STATUS			

Plot 7-146. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



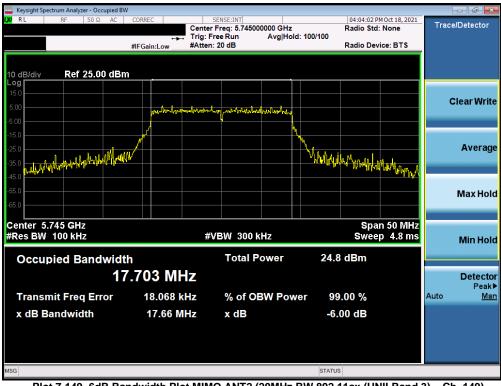
Plot 7-147. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Туре:		
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 94 of 257	
© 2022 PCTEST	•	·		V 9.0 02/01/2019	





Plot 7-148. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 95 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	andset		
© 2022 PCTEST V 9.0 02/01/2019					



Keysight Spectrum Analyzer - Occup	pied BW						- 0 ×
ιχα RL RF 50 Ω	AC CORREC	SENSE:INT Center Freq: 5.785000 Trig: Free Run #Atten: 20 dB	0000 GHz Avg Hold: 100/100	04:04:50 PM Radio Std: Radio Devi		Trace	/Detector
	#IFGall.LOW	mattern. 20 dB		radio Deri			
10 dB/div Ref 25.00	dBm						
15.0							
5.00	www.dww	there was a second	wardong			C	lear Write
-5.00			<u> </u>				
-15.0			- Mu				Average
-25.0	Miller and the		WWWWW	11mgallyman	. h		Average
-35.0 WWWWWWWWWWWW					Marmaka		
-55.0							Max Hold
-65.0							
Center 5.785 GHz				Spar	ז 50 MHz		
#Res BW 100 kHz		#VBW 300 ki	Hz		o 4.8 ms		Min Hold
Occupied Bandw	vidth	Total Po	ower 24.9	dBm			
	17.722 MH	7					Detector
							Peak▶
Transmit Freq Erro				9.00 %		Auto	<u>Man</u>
x dB Bandwidth	17.69 MI	lz xdB	-6.	00 dB			
MSG			STATU	S			

Plot 7-150. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



Plot 7-151. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 00 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 96 of 257
© 2022 PCTEST			V 9.0 02/01/2019



		n Analyzer - Oce												
LXU RL	R	F 50 Ω	AC C	ORRI	C		NSE:INT req: 5.75500	0000 GHz			11:36:30 P	M Oct 15, 2021	Tra	ce/Detector
			NFE		Ģ	Trig: Fre	e Run		ld:	>100/100				
			#	FGa	in:Low	#Atten: 2	0 dB		_		Radio Dev	ice: BTS		
10 dE	3/div	Ref 25.0	0 dBm						_					
Log 15.0														
5.00														Clear Write
-5.00					/logsholw/whe	whylebelinhylwe	poplyfullital	unhalitetak						
-15.0				Į,			Ų		Į					
				1					١					Average
-25.0		1 . 14	h have north a	_r /					h	Y-Mah Mala J	1			Average
-35.0	WINNIN WAR	with white	ar dinata na							· · · · · · · · · · · · · · · · · · ·	where we are a second	P-liphahahali a		
-40.0	<u></u>													
-55.0														Max Hold
-65.0														
Cont	ter 5.755										Cnan	100 MHz		
	BW 10					#VE	300 k	Hz				p 9.6 ms		
														Min Hold
0	ccupie	d Band	width				Total P	ower		25.9	dBm			
			36	19	80 MI	7								Detector
						12								Peak►
Tr	ansmit	Freq Err	ror	-2	2.786	кНz	% of O	BW Pov	ve	er 99	.00 %		Auto	<u>Man</u>
x	dB Band	dwidth			36.45 N	1Hz	x dB			-6.	00 dB			
MSG										STATUS				

Plot 7-152. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



Plot 7-153. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMS908JPN	PCTEST [®] Proud to be part of ® element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 07 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 97 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



Keysight Spectrum Analyzer - Occupied BW							
LXI RL RF 50 Ω AC		SENSE:INT er Freq: 5.755000000 GHz Free Run Avg Hold	Radio Std	M Oct 18, 2021 : None	Trace/Detector		
		n: 20 dB	Radio Dev	rice: BTS			
10 dB/div Ref 25.00 dBr							
5.00	البارين معرارين	vales, probatichartication			Clear Write		
-5.00	Mortha Address Anna	and the second second for the second field in some					
-15.0 -25.0 -35.0	heddfo ^{rt}		Marchennes		Average		
-35.0 www.www.				while the way			
-55.0					Max Hold		
Center 5.755 GHz #Res BW 100 kHz	\$	≇VBW 300 kHz		100 MHz p 9.6 ms	Min Hold		
Occupied Bandwidt	h	Total Power	25.8 dBm				
37.558 MHz					Detector Peak▶		
Transmit Freq Error	1.204 kHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>		
x dB Bandwidth	37.74 MHz	x dB	-6.00 dB				
MSG			STATUS				

Plot 7-154. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-155. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 00 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 98 of 257
© 2022 PCTEST		•		V 9.0 02/01/2019



🔤 Keysight Spectrum Analyzer - Occupi	ied BW						
LXX RL RF 50Ω A			0000 GHz Avg Hold: 100/100	Radio Std		Trace	/Detector
	#IFGain:Low	#Atten: 20 dB		Radio Dev	/ice: BTS		
10 dB/div Ref 25.00 d	dBm						
Log 15.0							
5.00						C	lear Write
-5.00	Mappenthalis	MANMINAN, MANNANANA	MIMMIN				
-15.0			,				
-25.0	į						Average
-35.0							_
-35.0 -45.0 mman and and a standard and a	loch and and		moutoling	ulphilled gradestad			
-55.0					a hana hadhal		Max Hold
-65.0							maxinoia
				0	000 5411-		
Center 5.775 GHz #Res BW 100 kHz		#VBW 300 k	Hz		1200 MHz 19.13 ms		Min Hold
Occupied Bandw	idth	Total P	ower 26.1	dBm			
	75.466 MH	7					Detector
							Peak►
Transmit Freq Error	r -49.608 k	Hz % of OE	3W Power 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	76.26 M	Hz xdB	-6.	00 dB			
MSG			STATUS	3			

Plot 7-156. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



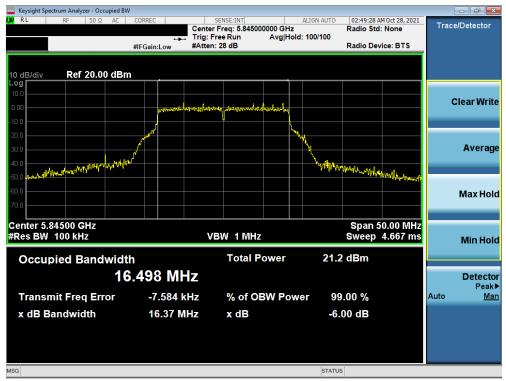
Plot 7-157. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMS908JPN		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 00 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 99 of 257	
© 2022 PCTEST	-			V 9.0 02/01/2019	



	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-2 6dB Bandwidth [MHz]
Band 3/4	5845	169	а	6	16.37
Band 4	5865	173	а	6	16.41
Dallu 4	5885	177	а	6	16.38
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	17.62
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	17.65
Dallu 4	5885	177	n (20MHz)	6.5/7.2 (MCS0)	17.65
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	18.98
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	18.89
Dallu 4	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	18.96
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	36.42
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	36.39
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	37.37
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	37.42
	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	76.03
Pand 2/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	77.52
Band 3/4	5815	163	ac (160MHz)	58.5/65 (MCS0)	155.90
	5815	163	ax (160MHz)	58.5/65 (MCS0)	156.90

Table 7-7. Conducted Bandwidth Measurements Band 4 MIMO ANT2



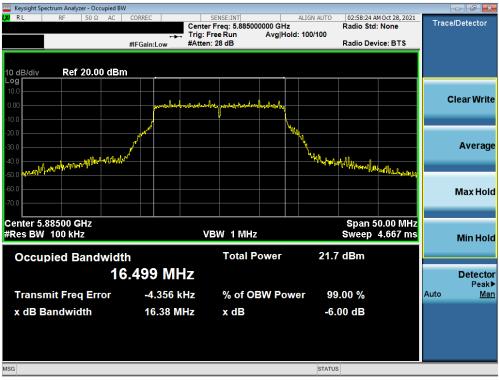
Plot 7-158. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS908JPN		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Degra 100 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 100 of 257
© 2022 PCTEST		·		V 9.0 02/01/2019





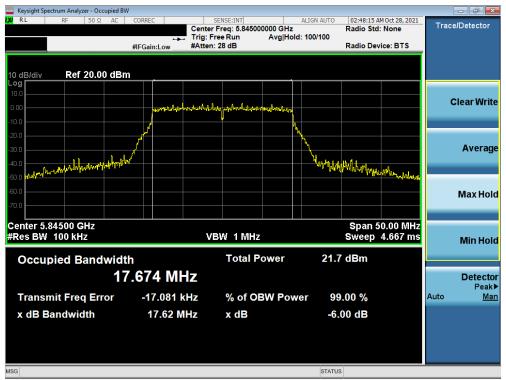
Plot 7-159. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 4) - Ch. 173)



Plot 7-160. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	De	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 101 of 257	
© 2022 PCTEST		·	V 9.0 02/01/2019	





Plot 7-161. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3/4) - Ch. 169)



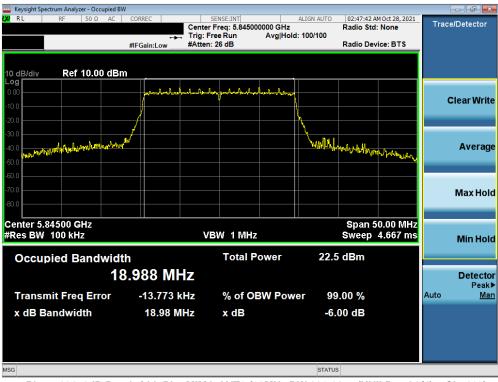
Plot 7-162. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	AMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 102 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 102 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	





Plot 7-163. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 4) - Ch. 177)



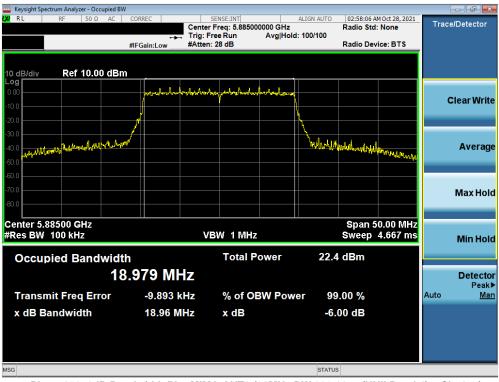
Plot 7-164. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS908JPN		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 400 at 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 103 of 257	
© 2022 PCTEST		·	V 9.0 02/01/2019	



www.www.com/www.cow/www.com/www.cow/ww					
XX RL RF 50Ω AC		SENSE:INT Freq: 5.865000000 GHz	Radio Sto	AM Oct 28, 2021 1: None	Trace/Detector
		Free Run Avg Holo n: 28 dB	d: 100/100 Radio De	vice: BTS	
10 dB/div Ref 10.00 dBm					
Log 0.00	- July Jaw South	han markan handbert and server			
-10.0					Clear Write
-20.0			<u>\</u>		
-30.0	J				
-40.0			" Aller www.with	Mundary .	Average
-50.0					
-60.0					
-70.0					Max Hold
Center 5.86500 GHz #Res BW 100 kHz	,	/BW 1 MHz		50.00 MHz 4.667 ms	
#Res DW TOURNZ			Sweep	4.007 1115	Min Hold
Occupied Bandwidth	า	Total Power	22.3 dBm		
18	.960 MHz				Detector
Transmit Freq Error	-23.628 kHz	% of OBW Pow	ver 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	18.89 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-165. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 4) - Ch. 173)



Plot 7-166. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS908JPN	PCTEST [®] Proud to be part of ® element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		De
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 104 of 257
© 2022 PCTEST				V 9.0 02/01/2019



www.commonstance.commonstance.commonstance.commonstance.commonstance.commonstance.commonstance.commonstance.com					
LX RL RF 50Ω AC	CORREC	SENSE:INT		AM Oct 28, 2021	Trace/Detector
		er Freq: 5.835000000 GH Free Run Avg H	z Radio St old: 100/100	a: None	
		en: 24 dB		evice: BTS	
				Í	
10 dB/div Ref 10.00 dBm					
0.00	كبالطوام اعتظابهم العليلية ال	لمراجل ومعادرة والمراجات المراسي ومعاتيا	a		
-10.0					Clear Write
-20.0	/				
-30.0	/		N I		
	www.		Warmen Walnut Happ		Average
Salar Marin - a Marin			ente de l'Andrik Mande	Mary most free	Average
-50.0				- Internet	
-60.0					
-70.0					Max Hold
-80.0					Maxitola
Center 5.83500 GHz				100.0 MHz	
#Res BW 100 kHz		VBW 1 MHz	Sweep	9.267 ms	Min Hold
			00.4.15		
Occupied Bandwidth	ו	Total Power	23.4 dBm		
36	.183 MHz				Detector
					Peak▶
Transmit Freq Error	-18.570 kHz	% of OBW Po	wer 99.00 %		Auto <u>Man</u>
x dB Bandwidth	36.42 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-167. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3/4) - Ch. 167)



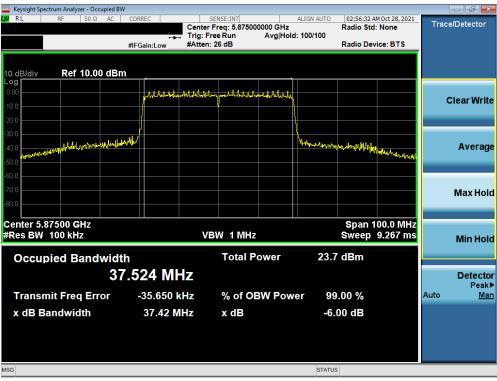
Plot 7-168. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS908JPN	PCTEST [®] Proud to be part of ® element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dogo 105 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 105 of 257	
© 2022 PCTEST	-			V 9.0 02/01/2019	



www.www.com analyzer - Occupied BW					
🗶 RL RF 50Ω AC COR		NSE:INT reg: 5.835000000 GHz		5:18 AM Oct 28, 2021 Std: None	Trace/Detector
	Trig: Free		i: 100/100	Sta: None	
#IFG	Gain:Low #Atten: 2			Device: BTS	
10 dB/div Ref 10.00 dBm					
Log					
0.00	while he winder the	probabilister and the states of the second			Clear Write
-10.0					Cical Write
-20.0					
-30.0			l		
-40.0			manua no han	ulua	Average
-50.0			and a second of the second of	MM www.dw. walnum	g
-60.0					
-70.0					Max Hold
-80.0					
Center 5.83500 GHz			On /		
#Res BW 100 kHz	VB	N/1MHz	spa	an 100.0 MHz ep 9.267 ms	
#Res Bw Too Rilz	۷D1		GWC	ep 9.207 ms	Min Hold
Occupied Bandwidth		Total Power	23.0 dBn	1	
37.4	87 MHz				Detector Peak▶
Transmit Freq Error -	42.660 kHz	% of OBW Pow	er 99.00 %	, 0	Auto <u>Man</u>
x dB Bandwidth	37.37 MHz	x dB	-6.00 dE		
	57.57 MITZ	X UB	-0.00 u	•	
MSG			STATUS		

Plot 7-169. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3/4) - Ch. 167)



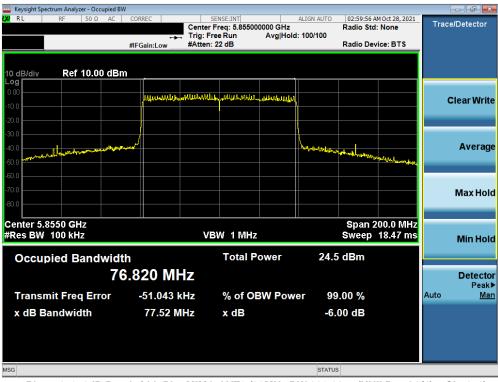
Plot 7-170. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 400 af 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 106 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



Keysight Spectrum Analyzer - Occupied BW							
🗶 RL RF 50Ω AC COR		INSE:INT reg: 5.855000000 GHz	ALIGN AUTO	02:59:16 A Radio Std	M Oct 28, 2021	Trac	e/Detector
	Trig: Fre		d: 100/100	Radio Sta	None		
#IF@	Gain:Low #Atten: 2			Radio Dev	ice: BTS		
10 dB/div Ref 10.00 dBm							
Log							
0.00	MINH AMALL MANALIN	MINA MUMANIA					Clear Write
-10.0						· `	siear winte
-20.0	/						
-30.0			\				
-40.0			And south to				Average
-40.0			a stand of the	Mymmeter	hales.		
					a state of the local dates		
-60.0							
-70.0							Max Hold
-80.0							
Center 5.8550 GHz #Res BW 100 kHz		W 1 MHz			00.0 MHz		
#Res BW TOUREZ	A D.			sweep	18.47 ms		Min Hold
Occupied Bandwidth		Total Power	24.1	dBm			
		lotari ottor	2				
/5.5	22 MHz						Detector
Transmit Freq Error -	60.116 kHz	% of OBW Pow	ver 99.	00 %		Auto	Peak▶ <u>Man</u>
	76.00 MUL						
x dB Bandwidth	76.03 MHz	x dB	-0.0	0 dB			
MSG			STATUS				

Plot 7-171. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3/4) - Ch. 171)



Plot 7-172. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 107 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 107 of 257
© 2022 PCTEST	-		V 9.0 02/01/2019



Keysight Spectrum Analyzer - Occupied BW					- 5
KL RF 50Ω DC	CORREC	SENSE:INT 4	ALIGN AUTO 06:22:47 P Radio Std	M Nov 12, 2021	Trace/Detector
	Trig:	Free Run Avg Hold:	100/100		
	#IFGain:Low #Atte	n: 18 dB	Radio Dev	vice: BTS	
10 dB/div Ref 10.00 dBm					
Log 0.00					
	an an an ann an an an an an an an an an	נותות, המתנה איני באמיר איניים אי	ndut		Clear Write
-10.0					
-20.0					
-30.0					
-40.0 and the property of the			Wything Mith Mith		Average
-50.0				N MAR	
-60.0					
-70.0					Max Hold
-80.0					ind i i o i a
Center 5.8150 GHz		(B)4/ 4 5411-		50.0 MHz	
#Res BW 100 kHz		/BW 1 MHz	Sweep	32.33 ms	Min Hold
Occupied Bandwidt	h	Total Power	24.9 dBm		
15	5.00 MHz				Detector Peak▶
Transmit Freq Error	-15.895 kHz	% of OBW Powe	r 99.00 %		Auto <u>Man</u>
x dB Bandwidth	155.9 MHz	x dB	-6.00 dB		
MSG			STATUS		
MSG			STATUS		

Plot 7-173. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ac (UNII Band 3/4) - Ch. 163)



Plot 7-174. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 108 of 257
© 2022 PCTEST	•			V 9.0 02/01/2019



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 + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(19.36) = 23.87dBm$. 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 + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(19.58) = 23.92dBm$. 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.

In the 5.850 – 5.895 GHz band, the maximum permissible e.i.r.p is 30dBm.

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

Test Notes

Per RSS-247 Section 6.2.3, transmission on channels which overlap the 5600-5650 MHz is prohibited. This device operates under these frequencies only under the control of a certified master device and does not support active scanning on these channels. This device does not transmit any beacons or initiate any transmissions in UNII Bands 2A or 2C.

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 100 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 109 of 257	
© 2022 PCTEST			V 9.0 02/01/2019	



MIMO Maximum Conducted Output Power Measurements

	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power
~				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
<u>ج</u>	5180	36	AVG	14.48	15.23	17.88	23.98	-6.10
j,	5200	40	AVG	14.47	14.90	17.70	23.98	-6.28
	5220	44	AVG	14.47	15.07	17.79	23.98	-6.19
andwidth)	5240	48	AVG	14.52	14.97	17.76	23.98	-6.22
Ba	5260	52	AVG	15.55	14.31	17.99	23.98	-5.99
	5280	56	AVG	14.98	15.11	18.05	23.98	-5.93
Hz	5300	60	AVG	14.96	14.84	17.91	23.98	-6.07
(20M	5320	64	AVG	14.84	14.86	17.86	23.98	-6.12
20	5500	100	AVG	14.65	14.84	17.76	23.98	-6.22
	5600	120	AVG	14.71	14.64	17.69	23.98	-6.29
Hz	5620	124	AVG	14.87	14.54	17.72	23.98	-6.26
5G	5720	144	AVG	14.91	15.17	18.06	23.98	-5.92
LC L	5745	149	AVG	15.41	15.55	18.49	30.00	-11.51
	5785	157	AVG	14.68	14.91	17.81	30.00	-12.19
	5825	165	AVG	15.68	14.80	18.27	30.00	-11.73

Table 7-8. MIMO 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power
~				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
È	5180	36	AVG	14.35	15.09	17.75	23.98	-6.23
i i i i i i i i i i i i i i i i i i i	5200	40	AVG	14.34	14.94	17.66	23.98	-6.32
	5220	44	AVG	14.49	15.11	17.82	23.98	-6.16
andwidth	5240	48	AVG	14.52	15.08	17.82	23.98	-6.16
Ba	5260	52	AVG	14.47	14.75	17.62	23.98	-6.36
	5280	56	AVG	14.91	14.83	17.88	23.98	-6.10
Hz	5300	60	AVG	14.95	14.91	17.94	23.98	-6.04
(20M	5320	64	AVG	15.02	14.92	17.98	23.98	-6.00
20	5500	100	AVG	15.43	15.52	18.49	23.98	-5.49
	5600	120	AVG	14.87	14.84	17.86	23.98	-6.12
HZ	5620	124	AVG	14.94	14.59	17.78	23.98	-6.20
Ċ	5720	144	AVG	15.23	15.13	18.19	23.98	-5.79
Ω.	5745	149	AVG	15.38	15.54	18.47	30.00	-11.53
	5785	157	AVG	14.65	14.73	17.70	30.00	-12.30
	5825	165	AVG	14.69	15.12	17.92	30.00	-12.08

Table 7-9. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 110 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 110 of 257
© 2022 PCTEST		·	V 9.0 02/01/2019



	Freq [MHz]	Channel	Detector	Conducted Power [dBm]		Conducted Power Limit	Conducted Power	
2				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
H	5180	36	AVG	15.11	15.82	18.49	23.98	-5.49
i,	5200	40	AVG	15.29	15.67	18.49	23.98	-5.49
	5220	44	AVG	15.39	15.57	18.49	23.98	-5.49
andwidth)	5240	48	AVG	14.56	14.95	17.77	23.98	-6.21
Ba	5260	52	AVG	14.83	14.92	17.89	23.98	-6.09
	5280	56	AVG	14.58	14.99	17.80	23.98	-6.18
Î	5300	60	AVG	14.81	14.72	17.78	23.98	-6.20
(20MHz	5320	64	AVG	14.79	14.74	17.78	23.98	-6.20
50	5500	100	AVG	15.41	15.46	18.45	23.98	-5.53
	5600	120	AVG	15.53	15.27	18.41	23.98	-5.57
Hz	5620	124	AVG	15.41	15.26	18.35	23.98	-5.63
5G	5720	144	AVG	14.63	15.00	17.83	23.98	-6.15
LO LO	5745	149	AVG	14.98	15.33	18.17	30.00	-11.83
	5785	157	AVG	15.36	15.56	18.47	30.00	-11.53
	5825	165	AVG	15.33	15.62	18.49	30.00	-11.51

Table 7-10. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power
~				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
Ht ا	5180	36	AVG	14.41	15.25	17.86	23.98	-6.12
, ic	5200	40	AVG	14.22	15.05	17.67	23.98	-6.31
5	5220	44	AVG	14.41	15.07	17.76	23.98	-6.22
Bandwidth)	5240	48	AVG	14.57	15.12	17.86	23.98	-6.12
3a	5260	52	AVG	14.76	15.18	17.99	23.98	-5.99
	5280	56	AVG	14.68	14.87	17.79	23.98	-6.19
Î	5300	60	AVG	14.88	14.77	17.84	23.98	-6.14
(20MHz	5320	64	AVG	14.85	14.93	17.90	23.98	-6.08
20	5500	100	AVG	14.73	14.58	17.67	23.98	-6.31
	5600	120	AVG	14.48	14.67	17.59	23.98	-6.39
Hz	5620	124	AVG	14.83	14.78	17.82	23.98	-6.16
5G	5720	144	AVG	15.12	15.40	18.27	23.98	-5.71
LC L	5745	149	AVG	14.68	14.85	17.78	30.00	-12.22
	5785	157	AVG	15.33	15.60	18.48	30.00	-11.52
	5825	165	AVG	14.65	14.81	17.74	30.00	-12.26

Table 7-11. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 111 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 111 of 257
© 2022 PCTEST	•	·	V 9.0 02/01/2019



Freq [MHz]	Channel	Channel Detector		ucted Power [dBm]	Conducted Conducted Power Limit Power		
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
P C	5190	38	AVG	15.18	15.60	18.41	23.98	-5.57
0MH; idth)	5230	46	AVG	15.33	15.61	18.48	23.98	-5.50
lo bi	5270	54	AVG	15.03	15.20	18.13	23.98	-5.85
(4) dv	5310	62	AVG	15.56	15.35	18.47	23.98	-5.51
	5510	102	AVG	15.32	15.05	18.20	23.98	-5.78
G Ва	5590	118	AVG	15.21	15.12	18.18	23.98	-5.80
50	5630	126	AVG	15.58	15.28	18.44	23.98	-5.54
	5710	142	AVG	14.91	14.82	17.87	23.98	-6.11
	5755	151	AVG	15.06	15.14	18.11	30.00	-11.89
	5795	159	AVG	15.19	15.28	18.25	30.00	-11.75

Table 7-12. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power	
				ANT1	ANT2	MIMO		Margin [dB]	
P C	5190	38	AVG	14.90	15.45	18.19	23.98	-5.79	
0MH; idth)	5230	46	AVG	15.15	15.39	18.28	23.98	-5.70	
(40 wid	5270	54	AVG	14.95	15.08	18.03	23.98	-5.95	
$\frac{1}{2}$	5310	62	AVG	15.22	15.30	18.27	23.98	-5.71	
lz (nď	5510	102	AVG	14.88	14.63	17.77	23.98	-6.21	
Ва Ва	5590	118	AVG	15.14	14.75	17.96	23.98	-6.02	
50 E	5630	126	AVG	15.37	14.89	18.14	23.98	-5.84	
	5710	142	AVG	15.41	15.52	18.48	23.98	-5.50	
	5755	151	AVG	14.78	14.98	17.89	30.00	-12.11	
	5795	159	AVG	15.01	15.19	18.11	30.00	-11.89	

Table 7-13. MIMO 40MHz BW 802.11ac (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 112 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 112 01 257
© 2022 PCTEST			V 9.0 02/01/2019



	Freq [MHz]	Channel	Detector	Cond	Conducted Power Limit	Conducted Power		
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
P C	5190	38	AVG	15.16	15.64	18.41	23.98	-5.57
0MH; idth)	5230	46	AVG	15.40	15.57	18.49	23.98	-5.49
1 Pi	5270	54	AVG	15.18	15.33	18.27	23.98	-5.71
(4) dwj	5310	62	AVG	15.51	15.38	18.46	23.98	-5.52
	5510	102	AVG	15.31	15.30	18.32	23.98	-5.66
G Ва	5590	118	AVG	15.38	15.31	18.35	23.98	-5.63
50	5630	126	AVG	15.58	15.29	18.45	23.98	-5.53
	5710	142	AVG	14.86	15.16	18.02	23.98	-5.96
	5755	151	AVG	14.92	15.15	18.05	30.00	-11.95
	5795	159	AVG	15.18	15.27	18.24	30.00	-11.76

Table 7-14. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	lucted Power [Conducted Power Limit	Conducted Power	
Hz (c				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
(80MI width	5210	42	AVG	14.34	14.49	17.43	23.98	-6.55
	5290	58	AVG	15.46	15.44	18.46	23.98	-5.52
	5530	106	AVG	14.71	14.85	17.79	23.98	-6.19
5GH Ba	5610	122	AVG	14.92	14.57	17.76	23.98	-6.22
	5690	138	AVG	15.24	15.21	18.24	23.98	-5.74
	5775	155	AVG	14.67	14.93	17.81	30.00	-12.19

Table 7-15. MIMO 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz] Channel		Channel Detector		lucted Power [Conducted Power Limit	Conducted Power	
Hz (c				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
(80MH; width)	5210	42	AVG	14.87	14.96	17.93	23.98	-6.05
8) 1 vi	5290	58	AVG	14.97	14.93	17.96	23.98	-6.02
GHz (80MH Bandwidth)	5530	106	AVG	14.93	15.04	17.99	23.98	-5.99
5GI Ba	5610	122	AVG	15.12	14.76	17.95	23.98	-6.03
	5690	138	AVG	15.47	15.45	18.47	23.98	-5.51
	5775	155	AVG	14.89	15.30	18.11	30.00	-11.89

Table 7-16. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

5GHz 60MHz Idwidth)	Freq [MHz]	Channel	Detector	Cond	lucted Power [Conducted Power Limit	Conducted Power		
5GHz 60MH ndwid				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	
5 (16 anc	5250	50	AVG	14.13	13.79	16.97	23.98	-7.01	
B.	5570	114	AVG	15.30	15.53	18.43	30.00	-11.57	
	Т	able 7-17. MIMO	160MHz BW 8	02.1ac (UNII) M	aximum Condu	ucted Output P	ower		
FCC ID: A3LSMS908JPN				EASUREMENT RE (CERTIFICATIO		SAMSUNG	· · ·	oved by: nical Manager	
	Test Report S/N: Test Dates 1M2112100159-07.A3L 9/14/2021		EUT Type: 021 Portable Ha				Page	113 of 257	

V 9.0 02/01/2019



łz MHz idth)	Freq [MHz]	Channel	Detector	Cond	lucted Power [Conducted Power Limit	Conducted Power	
무영장				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
5 (16 anc	5250	50	AVG	14.52	14.13	17.34	23.98	-6.64
ä	5570	114	AVG	14.84	14.87	17.86	30.00	-12.14

Table 7-18. MIMO 160MHz BW 802.1ax (UNII) Maximum Conducted Output Power

4	Freq [MHz]	BW [MHz]	Channel	Detector	C	onducted Pow	er	Directional Gain	Max e.i.r.p [dBm]	Max e.i.r.p	e.i.r.p Margin [dB]
Hz H 4					Ant1	Ant2	Mimo	Gain	[abiii]	Emite [dBin]	margin [ab]
DN 20	5845		169	AVG	14.53	15.14	17.86	-3.27	14.59	30.00	-15.41
	5865	20	173	AVG	14.58	15.28	17.95	-3.27	14.68	30.00	-15.32
	5885	1	177	AVG	14.60	15.23	17.94	-3.27	14.67	30.00	-15.33

Table 7-19. MIMO 802.11a (UNII 4) Maximum Conducted Output Power and e.i.r.p.

		BW [MHz] Channel	Detector	Co	onducted Pow	er	Directional Gain	Max e.i.r.p [dBm]	Max e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]	
4					Ant1	Ant2	Mimo	Gain	[abiii]		margin [ab]
I I -	5845		169	AVG	14.59	15.08	17.85	-3.27	14.58	30.00	-15.42
UN N	5865	20	173	AVG	14.52	15.18	17.87	-3.27	14.60	30.00	-15.40
<u>د</u>	5885		177	AVG	14.61	15.25	17.95	-3.27	14.68	30.00	-15.32
	5835	40	167	AVG	15.16	15.49	18.34	-3.27	15.07	30.00	-14.93
	5875		175	AVG	15.13	15.77	18.47	-3.27	15.20	30.00	-14.80

Table 7-20. MIMO 802.11n (UNII 4) Maximum Conducted Output Power and e.i.r.p.

	Freq [MHz] BW [MHz]	BW [MHz] Channel		Detector	Conducted Power			Directional Gain	Max e.i.r.p [dBm]	Max e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
					Ant1	Ant2	Mimo	Gain	[abiii]	Emit [abiii]	margin [ab]
→ (4	5845		169	AVG	14.41	15.13	17.80	-3.27	14.53	30.00	-15.47
HZ H	5865	20	173	AVG	14.57	15.09	17.84	-3.27	14.57	30.00	-15.43
DN 2G	5885		177	AVG	14.50	15.19	17.87	-3.27	14.60	30.00	-15.40
C 5	5835	40	167	AVG	15.23	15.50	18.38	-3.27	15.11	30.00	-14.89
	5875	40	175	AVG	15.05	15.80	18.45	-3.27	15.18	30.00	-14.82
	5855	80	171	AVG	14.64	15.14	17.91	-3.27	14.64	30.00	-15.36
	5815	160	163	AVG	15.48	15.20	18.35	-3.27	15.08	36.00	-20.92

Table 7-21. MIMO 802.11ac (UNII 4) Maximum Conducted Output Power and e.i.r.p.

	Freq [MHz] BW [MHz]	BW [MHz] Channel	Detector	C	Conducted Power			Max e.i.r.p [dBm]	Max e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]	
					Ant1	Ant2	Mimo	Gain	[abiii]	Chine [abin]	Margin [ub]
<u>ъ</u> (4	5845	20	169	AVG	14.58	15.13	17.87	-3.27	14.60	30.00	-15.40
_ I =	5865		173	AVG	14.74	15.55	18.17	-3.27	14.90	30.00	-15.10
	5885		177	AVG	14.70	15.37	18.06	-3.27	14.79	30.00	-15.21
<u>د</u> د	5835	40	167	AVG	15.08	15.58	18.35	-3.27	15.08	30.00	-14.92
	5875	40	175	AVG	14.38	14.91	17.66	-3.27	14.39	30.00	-15.61
	5855	80	171	AVG	14.94	15.49	18.23	-3.27	14.96	30.00	-15.04
	5815	160	163	AVG	14.73	14.68	18.85	-3.27	15.58	36.00	-20.42

Table 7-22. MIMO 802.11ax (UNII 4) Maximum Conducted Output Power and e.i.r.p.

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 114 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 114 of 257
© 2022 PCTEST			V 9.0 02/01/2019



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 14.35 dBm for Antenna-1 and 15.09 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(14.35 dBm + 15.09 dBm) = (27.20 mW + 32.31 mW) = 59.51 mW = 17.75 dBm

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 17.75 dBm with directional gain of -3.72 dBi.

e.i.r.p. (dBm) = Conducted Power (dBm) + Ant gain (dBi)

17.75 dBm + (-3.72) dBi = 14.03 dBm

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 115 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 115 of 257
© 2022 PCTEST		·		V 9.0 02/01/2019



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.

In the 5.850 – 5.855, the maximum power spectral density must not exceed 14dBm/MHz e.i.r.p.

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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 116 of 257	
1M2112100159-07.A3L	2100159-07.A3L 9/14/2021 - 11/12/2021 Portable Handset			Page 116 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



Summed MIMO Power Spectral Density Measurements

	Frequency Channel 802.11 Mode Data Rate [Mb]	Data Rate [Mbns]	Antenna-1 Power Density	Antenna-2 Power Density	Summed MIMO Power	Max Power Density	Margin		
	[MHz]	No.	002.111 110000	Data Nate [mbp3]	[dBm]	[dBm]	Density [dBm]	[dBm/MHz]	[dB]
	5180	36	а	6	6.69	6.44	9.58	11.0	-1.42
	5200	40	а	6	6.70	6.65	9.69	11.0	-1.31
	5240	48	а	6	7.03	6.69	9.88	11.0	-1.12
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	6.47	5.93	9.22	11.0	-1.78
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.72	6.37	9.56	11.0	-1.44
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	6.96	6.29	9.65	11.0	-1.35
1	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	6.48	6.39	9.45	11.0	-1.55
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	7.04	6.48	9.78	11.0	-1.22
B	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	6.83	6.47	9.66	11.0	-1.34
	5190	38	n (40MHz)	13.5/15 (MCS0)	3.47	3.37	6.43	11.0	-4.57
	5230	46	n (40MHz)	13.5/15 (MCS0)	3.94	3.50	6.74	11.0	-4.26
	5190	38	ax (40MHz)	13.5/15 (MCS0)	3.71	3.74	6.74	11.0	-4.26
	5230	46	ax (40MHz)	13.5/15 (MCS0)	3.99	3.71	6.87	11.0	-4.13
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	1.28	0.73	4.02	11.0	-6.98
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	1.43	1.10	4.28	11.0	-6.72
Band 1/2A	5250	50	ac (160MHz)	58.5/65 (MCS0)	-1.57	-2.72	0.90	11.0	-10.10
₿ 1	5250	50	ax (160MHz)	58.5/65 (MCS0)	-1.21	-2.40	1.24	11.0	-9.76
	5260	52	а	6	7.06	6.75	9.92	11.0	-1.08
	5280	56	а	6	6.67	6.71	9.70	11.0	-1.30
	5320	64	а	6	7.07	6.43	9.77	11.0	-1.23
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.62	6.11	9.38	11.0	-1.62
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.47	6.10	9.30	11.0	-1.70
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	7.11	6.06	9.63	11.0	-1.37
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	6.78	6.54	9.67	11.0	-1.33
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	6.82	6.48	9.66	11.0	-1.34
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	7.02	6.27	9.67	11.0	-1.33
	5270	54	n (40MHz)	13.5/15 (MCS0)	3.48	3.38	6.44	11.0	-4.56
	5310	62	n (40MHz)	13.5/15 (MCS0)	3.93	3.47	6.72	11.0	-4.28
	5270	54	ax (40MHz)	13.5/15 (MCS0)	4.06	3.63	6.86	11.0	-4.14
	5310	62	ax (40MHz)	13.5/15 (MCS0)	4.42	3.94	7.20	11.0	-3.80
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	1.55	1.23	4.40	11.0	-6.60
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	1.75	1.43	4.60	11.0	-6.40
	5500	100	а	6	5.29	5.98	8.66	11.0	-2.34
	5600	120	а	6	6.03	6.03	9.04	11.0	-1.96
	5720	144	а	6	6.72	6.95	9.85	11.0	-1.15
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	5.09	5.90	8.52	11.0	-2.48
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	5.74	6.28	9.03	11.0	-1.97
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.43	6.62	9.54	11.0	-1.46
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	5.44	6.11	8.80	11.0	-2.20
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	6.03	6.27	9.16	11.0	-1.84
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	6.40	6.99	9.72	11.0	-1.28
	5510	102	n (40MHz)	13.5/15 (MCS0)	2.07	2.63	5.37	11.0	-5.63
сı N	5590	118	n (40MHz)	13.5/15 (MCS0)	2.80	2.83	5.82	11.0	-5.18
Band 2C	5710	142	n (40MHz)	13.5/15 (MCS0)	3.15	3.66	6.42	11.0	-4.58
Bar	5510	102	ax (40MHz)	13.5/15 (MCS0)	2.62	3.15	5.90	11.0	-5.10
	5590	118	ax (40MHz)	13.5/15 (MCS0)	2.80	3.30	6.07	11.0	-4.93
	5710	142	ax (40MHz)	13.5/15 (MCS0)	3.56	3.92	6.75	11.0	-4.25
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-0.86	0.09	2.65	11.0	-8.35
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	0.07	0.07	3.08	11.0	-7.92
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-2.31	-2.02	0.85	11.0	-10.15
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-0.33	0.25	2.98	11.0	-8.02
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	0.27	0.07	3.18	11.0	-7.82
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-2.09	-2.03	0.95	11.0	-10.05
	5570	114	ac (160MHz)	58.5/65 (MCS0)	-3.55	-2.54	-0.01	11.0	-11.01
	5570	114	ax (160MHz)	58.5/65 (MCS0)	-3.10	-2.44	0.26	11.0	-10.74

Table 7-23. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 117 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 117 01 257
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2 PCTES



	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
	5745	149	а	6	3.39	3.22	6.32	30.0	-23.68
	5785	157	а	6	3.44	3.64	6.55	30.0	-23.45
	5825	165	а	6	3.60	3.45	6.54	30.0	-23.46
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	3.12	3.09	6.12	30.0	-23.88
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	3.31	3.12	6.23	30.0	-23.77
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	3.33	3.36	6.36	30.0	-23.64
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	3.01	3.26	6.15	30.0	-23.85
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	3.34	3.47	6.42	30.0	-23.58
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	3.38	3.39	6.39	30.0	-23.61
	5755	151	n (40MHz)	13.5/15 (MCS0)	0.31	-0.01	3.16	30.0	-26.84
	5795	159	n (40MHz)	13.5/15 (MCS0)	0.34	0.33	3.35	30.0	-26.65
	5755	151	ax (40MHz)	13.5/15 (MCS0)	0.15	0.72	3.45	30.0	-26.55
	5795	159	ax (40MHz)	13.5/15 (MCS0)	0.33	0.48	3.42	30.0	-26.58
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-0.31	0.14	2.93	30.0	-27.07
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-0.03	0.40	3.20	30.0	-26.80

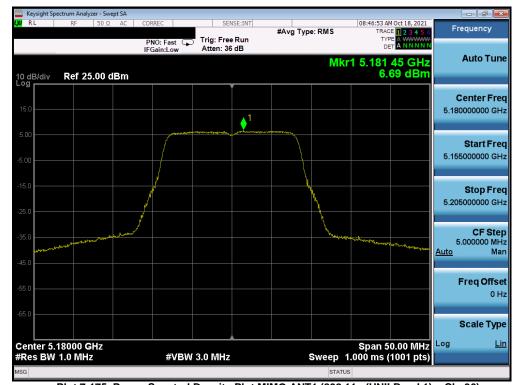
Table 7-24. Band 3 MIMO Conducted Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 Power Density [dBm/MHz]	Antenna-2 Power Density [dBm/MHz]	MIMO Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	EIRP Power Density [dBm/MHz]	Max EIRP Power Density [dBm/MHz]	Margin [dB]
Band 3/4	5845	169	а	6	2.93	3.34	6.15	-3.27	2.88	14.00	-11.12
Band 4	5865	173	а	6	2.84	3.88	6.40	-3.27	3.13	14.00	-10.87
Danu 4	5885	177	а	6	3.05	4.01	6.57	-3.27	3.30	14.00	-10.70
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	2.67	3.26	5.99	-3.27	2.72	14.00	-11.28
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	2.54	3.80	6.22	-3.27	2.95	14.00	-11.05
Danu 4	5885	177	n (20MHz)	6.5/7.2 (MCS0)	2.57	3.80	6.24	-3.27	2.97	14.00	-11.03
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	2.49	3.56	6.07	-3.27	2.79	14.00	-11.21
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	2.43	3.58	6.05	-3.27	2.78	14.00	-11.22
Danu 4	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	2.65	3.80	6.27	-3.27	3.00	14.00	-11.00
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	0.31	1.05	3.71	-3.27	0.44	14.00	-13.56
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	0.20	1.43	3.87	-3.27	0.60	14.00	-13.40
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	0.14	0.93	3.56	-3.27	0.29	14.00	-13.71
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	0.24	1.42	3.88	-3.27	0.61	14.00	-13.39
	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	-3.48	-2.16	0.24	-3.27	-3.03	14.00	-17.03
Band 3/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	-1.67	-0.96	1.71	-3.27	-1.56	14.00	-15.56
Dari0 3/4	5815	163	ac (160MHz)	58.5/65 (MCS0)	-5.05	-4.33	-1.66	-3.27	-4.93	14.00	-18.93
	5815	163	ax (160MHz)	58.5/65 (MCS0)	-5.24	-4.05	-1.60	-3.27	-4.87	14.00	-18.87

Table 7-25. Band 4 MIMO e.i.r.p Spectral Density Measurements

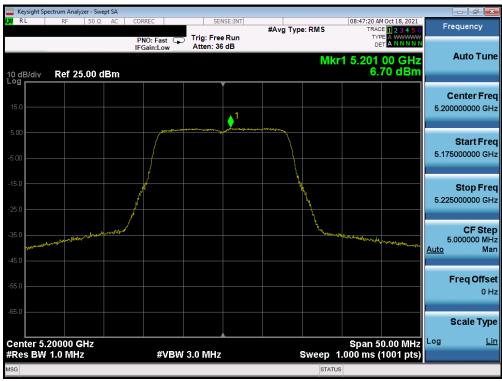
FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 118 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		
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MIMO Antenna-1 Power Spectral Density Measurements

Plot 7-175. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 36)



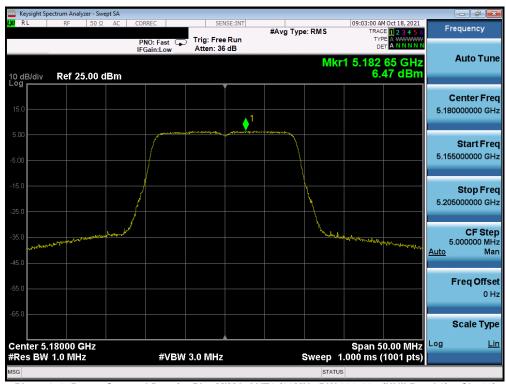
Plot 7-176. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS908JPN	Proved to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:			Dogo 110 of 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021			Page 119 of 257	
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	ectrum Analyzer - Swe									
LX/IRL	RF 50 Ω	AC CO	RREC	SEI	ISE:INT	#Avg Typ	e: RMS	TRACI	Oct 18, 2021	Frequency
10 dB/div	Ref 25.00 c	IF	NO: Fast Gain:Low	Trig: Free Atten: 36			Mki	^{DE}	95 GHz 3 dBm	Auto Tune
15.0				↓ ¹						Center Fred 5.240000000 GH:
-5.00										Start Free 5.215000000 GH:
-15.0		/				\	N N			Stop Fred 5.265000000 GH:
-35.0	ash Brink and a share for the second						home and the second	a town and a strong of	Jana Cardol Card	CF Step 5.000000 MH: <u>Auto</u> Mar
-55.0										Freq Offse 0 H:
	24000 GHz							Span 5		Scale Type
#Res BW	1.0 MHz		#VBW	3.0 MHz			-	1.000 ms (*	1001 pts)	
MSG							STATU	s		

Plot 7-177. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 48)



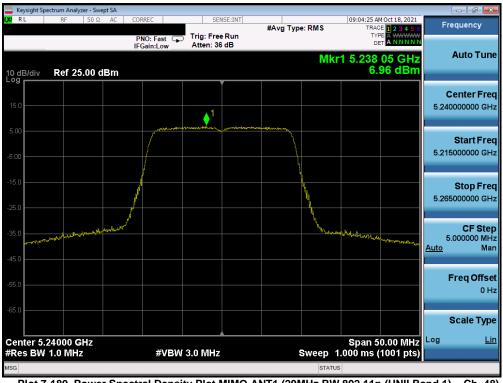
Plot 7-178. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Degre 100 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021 Portable Handset		Page 120 of 257
© 2022 PCTEST			V 9.0 02/01/2019



	ectrum Analyzer - Sw										
LXI RL	RF 50 Ω	AC	CORREC	SEN	SE:INT	#Avg Typ	e: RMS		M Oct 18, 2021 DE 1 2 3 4 5 6	Fr	equency
10 dB/div	Ref 25.00 c	d D ma	PNO: Fast IFGain:Low	Trig: Free Atten: 36				1 5.203	40 GHz 72 dBm		Auto Tune
	Kei 23.00 C				 ∳ ¹						Center Freq 0000000 GHz
-5.00				All and a second se	an a					5.17	Start Freq 5000000 GHz
-15.0			/							5.22	Stop Freq 5000000 GHz
-35.0	and all all and a second	and the second s					howen and the second se	in aligned and the second	Maril Makedy Roca	5 <u>Auto</u>	CF Step .000000 MHz Man
-55.0											F req Offset 0 Hz
-65.0											Scale Type
Center 5. #Res BW	20000 GHz 1.0 MHz		#VBW	3.0 MHz			Sweep 1	Span 5 .000 ms (0.00 MHz (1001 pts)	Log	Lin
MSG							STATUS	3			

Plot 7-179. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)



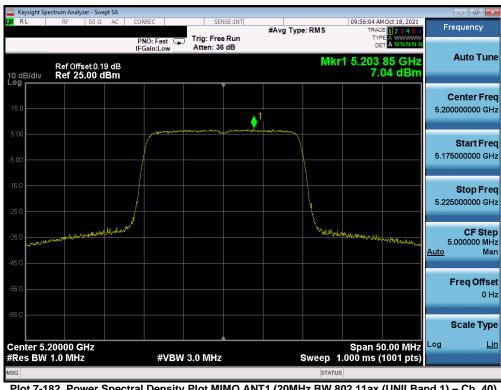
Plot 7-180. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 121 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 121 of 257	
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	ectrum Analyzer									
L <mark>XI</mark> RL	RF 5	50Ω AC	CORREC	SENS	SE:INT	#Avg Typ	e: RMS		HOct 18, 2021	Frequency
			PNO: Fast 😱 IFGain:Low	Trig: Free Atten: 36				TYF De		Auto Tune
10 dB/div Log	Ref Offset Ref 25.0						MKr	1 5.184 6.	10 GHz 48 dBm	
15.0					•					Center Freq 5.180000000 GHz
-5.00				The free free free free free free free fr	-prostant for	an many				Start Freq 5.155000000 GHz
-15.0										Stop Freq 5.205000000 GHz
-35.0	Window and Street and Street	mbornarow					Y Kulananana	all the destrological	L-Marianton Award	CF Step 5.000000 MHz <u>Auto</u> Man
-55.0										Freq Offset 0 Hz
-65.0										Scale Type
Center 5. #Res BW	18000 GH 1.0 MHz	z	#VBW	3.0 MHz			Sweep_1	Span 5 .000 ms (0.00 MHz 1001 pts)	Log <u>Lin</u>
MSG							STATUS		Pace/	

Plot 7-181. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)



Plot 7-182. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 100 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 122 of 257
© 2022 PCTEST		•		V 9.0 02/01/2019



	ectrum Analyz		SA										J X
X/RL	RF	50 Ω /	AC C	ORREC			NSE:INT	#Avg Typ	e: RMS	TRAC	M Oct 18, 2021	Freque	ency
10 dB/div	Ref Offs Ref 25		dB	PNO: Fa FGain:L	ast 😱 .ow	Trig: Free Atten: 36			Mkr	TYF DE 1 5.239	15 GHz 83 dBm	Aut	to Tune
15.0						•						Cent 5.240000	e r Freq 000 GHz
-5.00					<u>1990-1999</u>		and and a second se					Sta 5.215000	a rt Freq 000 GHz
-15.0												St (5.265000	o p Frec 000 GHz
-35.0	My and a straight	we we have the second	horsenand						M. Marine	nerth LAntiger (st.	had and a second second		CF Step 000 MHz Mar
-55.0												Free	q Offse 0 Hi
-65.0	24000 G	Hz								Span 5	0.00 MHz	Sca Log	le Type <u>Lir</u>
#Res BW				#	¢VB₩	3.0 MHz			Sweep 1	.000 ms ((1001 pts)		
MSG									STATUS	5			

Plot 7-183. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)



Plot 7-184. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 122 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 123 of 257
© 2022 PCTEST			V 9.0 02/01/2019



	ectrum Analyzer - Sw								
LX/RL	RF 50 Ω	AC C	ORREC	SENSE		g Type: RMS		Oct 18, 2021	Frequency
10 dB/div	Ref Offset 0.′ Ref 25.00 (19 dB	PNO: Fast 🕞 FGain:Low	Trig: Free R Atten: 36 df		N	TYP DE 1kr1 5.238	A WWWWW A N N N N N	Auto Tune
15.0					1				Center Freq 5.230000000 GHz
-5.00									Start Freq 5.180000000 GHz
-15.0									Stop Freq 5.280000000 GHz
-35.0	hand and the second will be second from	and the object of the logical sectors of the sector of the	<i>ب</i> ل				Hyverblashershere	heline (leternethergert	CF Step 10.000000 MHz <u>Auto</u> Man
-55.0									Freq Offset 0 Hz
-65.0									Scale Type
Center 5. #Res BW	23000 GHz 1.0 MHz		#VBW	3.0 MHz		Sweep	Span 10 1.000 ms (*	00.0 MHz 1001 pts)	Log <u>Lin</u>
MSG						STAT	rus		

Plot 7-185. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)

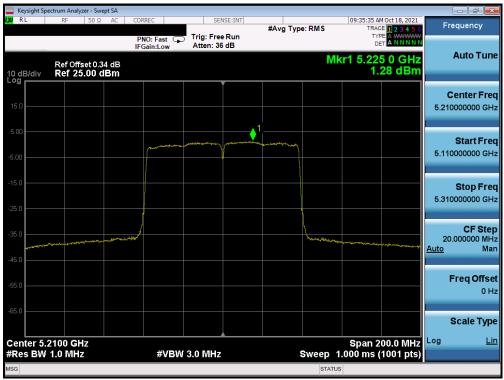


FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 104 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 124 of 257
© 2022 PCTEST				V 9.0 02/01/2019



	ectrum Analyzer - Sw										D X
LXI RL	RF 50 Ω	AC O	DRREC		SE:INT	#Avg Typ	e: RMS	TRAC	HOct 18, 2021	Freque	ncy
10 dB/div	Ref Offset 0.3 Ref 25.00 (1 35 dB	PNO: Fast 🕞 FGain:Low	Trig: Free Atten: 36			Mk	r1 5.23	5 7 GHz 99 dBm	Auto	o Tune
Log					1					Cento 5.2300000	e r Freq 000 GHz
-5.00										Sta 5.1800000	rt Freq 000 GHz
-15.0										Sto 5.2800000	p Freq 000 GHz
-35.0	and and the second of the second s	and a start of the	/				harry we	new say half stays	ne-mlage-man	C 10.0000 <u>Auto</u>	F Step 00 MHz Man
-55.0										Freq	Offsel 0 Hz
	23000 GHz							Span 1	00.0 191112	Scal	e Type <u>Lin</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz					1001 pts)		
MSG							STATUS				

Plot 7-187. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



Plot 7-188. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 105 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 125 of 257
© 2022 PCTEST	•	·	V 9.0 02/01/2019



	ectrum Analyzer - Sw									
L <mark>XI</mark> RL	RF 50 Ω	AC C	ORREC	SEN	ISE:INT	#Avg Typ	e: RMS		1 Oct 18, 2021	Frequency
10 dB/div	Ref Offset 0.3 Ref 25.00 (1 39 dB	PNO: Fast 🕞 FGain:Low	Trig: Free Atten: 36				TYF DE		Auto Tune
15.0										Center Freq 5.210000000 GHz
-5.00					and the part of the second	m				Start Freq 5.110000000 GHz
-15.0										Stop Freq 5.310000000 GHz
-35.0	an and a second second second second	and a second second second	<i>,</i>				Lehnerston	^{NSA} ING BOILD BOI	Ander Space of the Space of States	CF Step 20.000000 MHz <u>Auto</u> Man
-55.0										Freq Offset 0 Hz
-65.0	2100 GHz							Enon 3		Scale Type
#Res BW			#VBW	3.0 MHz			Sweep 1	span 2 .000 ms (00.0 MHz 1001 pts)	
MSG							STATUS			

Plot 7-189. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)



Plot 7-190. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ac (UNII Band 1/2A) - Ch. 50)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 126 of 257
© 2022 PCTEST	-			V 9.0 02/01/2019



🔤 Keysight Sp	ectrum Analyzer - Sv	vept SA								
L <mark>XI</mark> L	RF 50 Ω	2 AC	CORREC	SEI	NSE:INT	#Avg Typ	e: RMS		1 Oct 18, 2021	Frequency
			PNO: Fast ↔ IFGain:Low	. Trig: Free Atten: 36		Avg Hold:	: 100/100	TYF DE		Auto Tun
10 dB/div Log	Ref Offset 0. Ref 25.00						M	kr1 5.272 -1.2	2 8 GHz 14 dBm	Auto Tuli
										Center Fre
15.0										5.250000000 GH
5.00					1					Start Fre
-5.00						man	\			5.05000000 GH
-15.0										Stop Fre
-25.0										5.450000000 GH
-35.0								AWAY IA		CF Ste
-45.0	and the second s							alle Vlann	manantensa	40.000000 MH <u>Auto</u> Ma
										Freq Offse
-55.0										он
-65.0										Scale Type
Center 5.								Span 4	00.0 MHz	Log <u>Li</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz	*		Sweep ′	1.000 ms (1001 pts)	
MSG							STATU	S		

Plot 7-191. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax (UNII Band 1/2A) - Ch. 50)



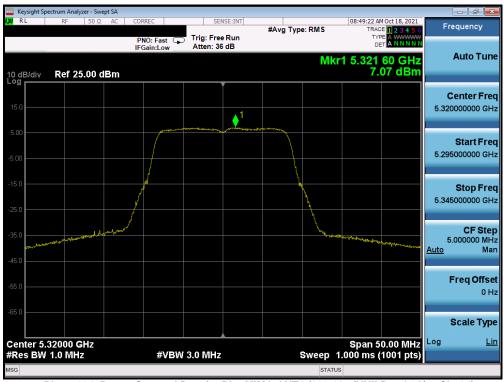
Plot 7-192. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	ASUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	s: EUT Type:		Dage 107 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 127 of 257
© 2022 PCTEST				V 9.0 02/01/2019



	ectrum Analyzer - Sv										- 6 🗙
LXVI RL	RF 50 Ω	2 AC C	ORREC	SEN	SE:INT	#Avg Typ	e: RMS	TRAC	1 Oct 18, 2021 E 1 2 3 4 5 6	Fre	quency
10 dB/div	Ref 25.00		PNO: Fast 🖵	Trig: Free Atten: 36			Mki	□≡ r1 5.284	95 GHz 7 dBm		Auto Tune
15.0					/	↓ 1					enter Freq 000000 GHz
-5.00				Line of the same o	, , , , , , , , , , , , , , , , , , ,						Start Freq 000000 GHz
-15.0						\\	h h				Stop Freq 000000 GHz
-35.0	ومحاصفا والمسرف معرفهما والمحاصر						J. Marian	- the transford the	anger Junger Junger	5. <u>Auto</u>	CF Step 000000 MHz Man
-55.0										F	r eq Offset 0 Hz
-65.0										S Log	Scale Type
Center 5. #Res BW	28000 GHz 1.0 MHz		#VBW	3.0 MHz			Sweep	5 Span 1.000 ms (0.00 191112	LUg	
MSG							STATU	s			

Plot 7-193. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 56)



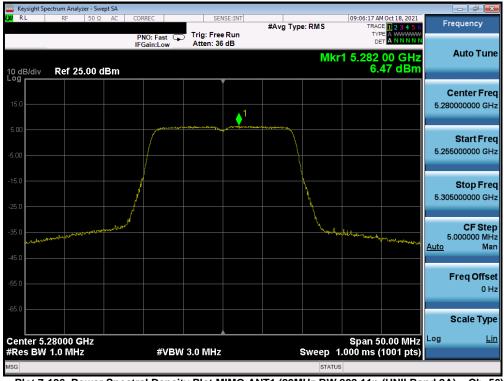
Plot 7-194. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 100 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 128 of 257
© 2022 PCTEST			V 9.0 02/01/2019



	ectrum Analyzer - Swept										
LXI RL	RF 50 Ω	AC CORRE	EC	SEN	SE:INT	#Avg Typ	e: RMS		HOct 18, 2021	Frequ	ency
10 dB/div	Ref 25.00 dE	IFGai): Fast 😱 in:Low	Trig: Free Atten: 36				TYF DE 1 5.263	40 GHz 62 dBm	Au	to Tune
15.0					↓ ¹						ter Freq 0000 GHz
-5.00											art Freq 0000 GHz
-15.0											op Freq 0000 GHz
-35.0	nydraw ^y yrthyray agendad	New York Contraction					harris	norman and an	hyportydatydawater		CF Step 0000 MHz Man
-55.0										Fre	q Offset 0 Hz
-65.0	26000 GHz							Snan 5	0.00 MHz	Sca	ale Type <u>Lin</u>
#Res BW			#VBW	3.0 MHz			Sweep 1	.000 ms (1001 pts)		
MSG							STATUS	5			

Plot 7-195. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)



Plot 7-196. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 100 of 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 129 of 257
© 2022 PCTEST	•	·		V 9.0 02/01/2019



	trum Analyzer - Swe									_	
LXU RL	RF 50 Ω	AC CO	RREC	SEI	ISE:INT	#Avg Typ	e: RMS		Oct 18, 2021	Fn	equency
10 dB/div	Ref 25.00 d	IF	PNO: Fast 😱 Gain:Low	Trig: Free Atten: 36				TYP DE 1 5.322	ANNNN		Auto Tune
15.0					1						Center Freq 0000000 GHz
-5.00										5.295	Start Freq 5000000 GHz
-15.0		/	ļ							5.345	Stop Freq
-35.0	ang trading the state of the st	Jonard					hr. Urgelyw	. Hologoolithing and the p	ing the second second	5 <u>Auto</u>	CF Step .000000 MHz Man
-55.0										i	F req Offset 0 Hz
-65.0											Scale Type
Center 5.3 #Res BW 1			#VBW	3.0 MHz			Sweep	5 Span ') I.000 ms).00 MHz 1001 pts)	Log	<u>Lin</u>
MSG							STATU	s			

Plot 7-197. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)

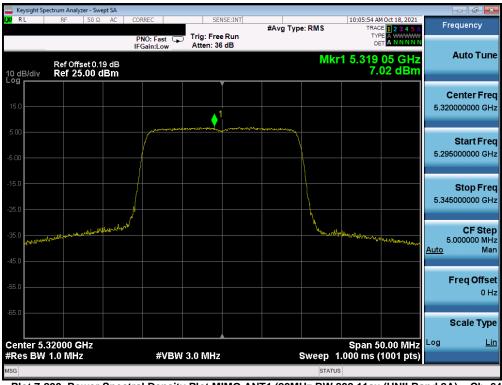


FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 120 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 130 of 257
© 2022 PCTEST	•		V 9.0 02/01/2019



	ectrum Analyzer - Sw									
L <mark>XI</mark> RL	RF 50 Ω	2 AC (CORREC	SEN	SE:INT	#Avg Typ	e: RMS		HOCt 18, 2021	Frequency
			PNO: Fast 😱 IFGain:Low	Trig: Free Atten: 36				TYF DE		Auto Tune
10 dB/div Log	Ref Offset 0. Ref 25.00						IVIKI	1 5.281 6.	85 GHz 82 dBm	
										Center Freq
15.0			مرمور مناورين	han an a	1 	-				5.280000000 GHz
5.00							h			Start Freq
-5.00										5.255000000 GHz
-15.0			/							Stop Freq
-25.0										5.305000000 GHz
-35.0	A MARINA CON	un character					M. Marken Marke	White		CF Step
-35.0	for the second							. I THE WAY	whenpeline	5.000000 MHz <u>Auto</u> Man
										Freq Offset
-55.0										0 Hz
-65.0										Scale Type
Center 5.2	28000 GHz							Span 5	0.00 MHz	Log <u>Lin</u>
#Res BW			#VBW	3.0 MHz			Sweep 1	.000 ms (1001 pts)	
MSG							STATUS			

Plot 7-199. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)



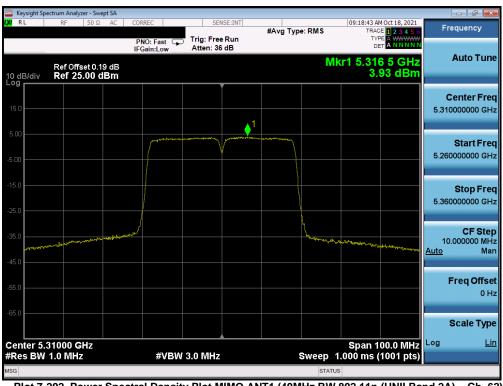
Plot 7-200. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 121 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 131 of 257
© 2022 PCTEST		•		V 9.0 02/01/2019



	ectrum Analyzer - Sw									
LXI RL	RF 50 Ω	2 AC	CORREC	SEI	NSE:INT	#Avg Typ	e: RMS		M Oct 18, 2021	Frequency
10 dB/div	Ref Offset 0. Ref 25.00	19 dB	PNO: Fast 🖵 IFGain:Low	Trig: Free Atten: 36			М	cr1 5.26		Auto Tun
15.0				<u> </u>						Center Fre 5.270000000 GH
-5.00										Start Free 5.220000000 GH
-15.0										Stop Free 5.320000000 GH
-35.0	uponet water and the set	and a start of the	Jac 1997				theman	with managent managent		CF Step 10.000000 MH <u>Auto</u> Mar
-55.0										Freq Offse 0 H
-65.0 Center 5.1	27000 GHz							Span 1	00.0 MHz	Scale Type
#Res BW			#VBW	3.0 MHz				.000 ms (1001 pts)	
MSG							STATU	S		

Plot 7-201. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)



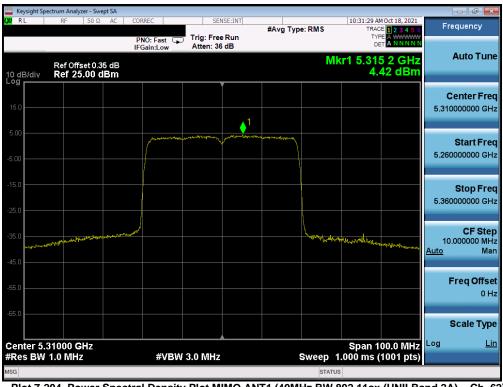
Plot 7-202. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 400 at 057
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 132 of 257
© 2022 PCTEST		·		V 9.0 02/01/2019



		Analyzer - Sw										
LXI RL	R	F 50 Ω	AC	CORREC	S	ENSE:INT	#Avg Typ	e: RMS		HOct 18, 2021	Freque	ency
10 dB/c		f Offset 0.3		PNO: Fast IFGain:Low				M	or 1 5.274	4 6 GHz 06 dBm	Aut	to Tune
15.0						1					Cent 5.270000	t er Freq 000 GHz
-5.00					uluran and a second		and a start of the				Sta 5.220000	a rt Freq 000 GHz
-15.0											Sto 5.320000	o p Freq 000 GHz
-35.0	and the second second	and the second	en hum					hand	no the second	mantheson		CF Step 000 MHz Man
-55.0											Free	q Offset 0 Hz
-65.0	r 5.2700)0 GHz							Span 1	00.0 MHz	Sca	le Type <u>Lin</u>
	BW 1.0			#V	BW 3.0 MH	z		Sweep 1	.000 ms (1001 pts)		
MSG								STATUS	S			

Plot 7-203. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)



Plot 7-204. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 122 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 133 of 257
© 2022 PCTEST	*			V 9.0 02/01/2019



	ectrum Analyzer - Swept	SA					
LXI RL	RF 50 Ω	AC CORREC	SENSI		vpe: RMS	09:39:57 AM Oct 18, 2021 TRACE 1 2 3 4 5 6	Frequency
	Ref Offset 0.34	PNO: Fast IFGain:Low	Trig: Free F Atten: 36 d	Run		r1 5.305 2 GHz	Auto Tune
10 dB/div Log	Ref 25.00 dB	sm				1.55 dBm	
15.0							Center Freq 5.290000000 GHz
5.00		purperter a	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1	~		Start Freq 5.190000000 GHz
-15.0							Stop Freq 5.390000000 GHz
-35.0	ht gh that and strategy again go the grad	www.				hand a gal for some of the second second second	CF Step 20.000000 MHz <u>Auto</u> Man
-55.0							Freq Offset 0 Hz
-65.0							Scale Type
Center 5. #Res BW	2900 GHz 1.0 MHz	#VI	BW 3.0 MHz		Sweep 1	Span 200.0 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG					STATUS		

Plot 7-205. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)

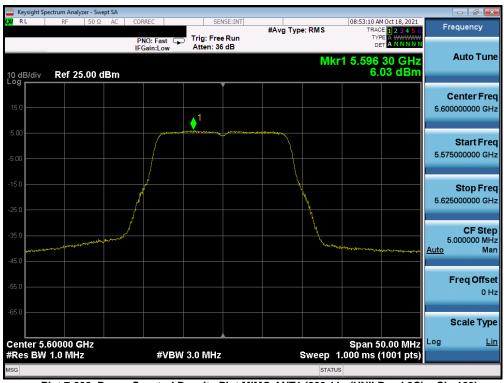


FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 124 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 134 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



	ectrum Analyzer - S									
LXI RL	RF 50	Ω AC	CORREC	SEI	ISE:INT	#Avg Typ	e: RMS		Oct 18, 2021	Frequency
			PNO: Fast G	Trig: Free Atten: 36				TYP DE		
10 dB/div Log	Ref 25.00	dBm					Mkı	1 5.496 5.2	00 GHz 29 dBm	Auto Tur
15.0				▲ 1						Center Fre 5.500000000 GH
-5.00				enter en characterita						Start Fre 5.475000000 GH
-15.0			A starting the start of the sta				A.			Stop Fre 5.525000000 GH
-35.0	and the second	manne	¢.				and the second	homeway	wanter for the left of the	CF Ste 5.000000 Mł <u>Auto</u> Ma
-55.0										Freq Offs 0 F
-65.0										Scale Typ
Center 5. #Res BW	50000 GHz 1.0 MHz		#VBV	V 3.0 MHz			Sweep	Span 50 1.000 ms (*	2.00 IVII 12	Log <u>L</u>
MSG							STATU	s		

Plot 7-207. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 100)



Plot 7-208. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 125 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 135 of 257	
© 2022 PCTEST			V 9.0 02/01/2019	



🔤 Keysight Spectrum Analyzer						
LX/RL RF	50 Ω AC CORREC	SEN	ISE:INT #AV	g Type: RMS	08:54:56 AM Oct 18, 2021 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 25.	IFGain:	ast Trig: Free Low Atten: 36	Run		TYPE A WWWW DET A NNNNN 1 5.721 70 GHz 6.72 dBm	Auto Tune
15.0			↓1			Center Freq 5.720000000 GHz
-5.00			and and a second se			Start Freq 5.695000000 GHz
-15.0						Stop Freq 5.745000000 GHz
-35.0	and Alexandread			han	MMpalesenergenergenerge	CF Step 5.000000 MHz <u>Auto</u> Man
-55.0						Freq Offset 0 Hz
-65.0						Scale Type
Center 5.72000 GH #Res BW 1.0 MHz		#VBW 3.0 MHz			Span 50.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG				STATUS		

Plot 7-209. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 144)



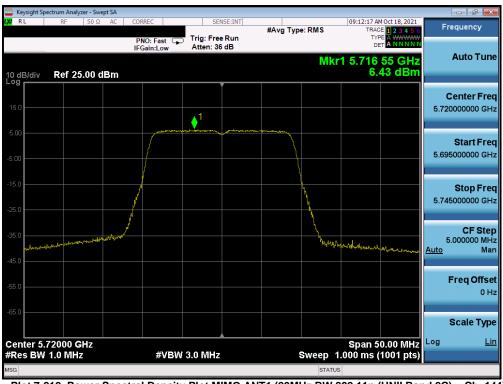
Plot 7-210. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 400 af 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021 Portable Handset			Page 136 of 257	
© 2022 PCTEST	•	·		V 9.0 02/01/2019	



Keysight Spectrum Analyzer - Swe					
LX/ RL RF 50 Ω	AC CORREC	SENSE:INT	#Avg Type: RMS	09:11:12 AM Oct 18, 2021 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 25.00 d	IFGain:Low	Trig: Free Run Atten: 36 dB		TYPE A WWWW DET A NNNNN 1 5.595 10 GHz 5.74 dBm	Auto Tune
15.0	1				Center Freq 5.60000000 GHz
-5.00					Start Freq 5.575000000 GHz
-15.0	Jeff				Stop Freq 5.625000000 GHz
-35.0			have been a second	h-guthister where may make	CF Step 5.000000 MHz <u>Auto</u> Man
-55.0					Freq Offset 0 Hz
-65.0					Scale Type
Center 5.60000 GHz #Res BW 1.0 MHz	#VBW 3	.0 MHz	Sweep 1	Span 50.00 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS		

Plot 7-211. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



Plot 7-212. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dana 407 af 057	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 137 of 257	
© 2022 PCTEST			V 9.0 02/01/2019	



	ectrum Analyzer -	Swept SA								
XURL	RF 50	Ω AC	CORREC	SEN	ISE:INT	#Avg Typ	e: RMS		HOct 18, 2021	Frequency
			PNO: Fast 🖵 IFGain:Low	Trig: Free Atten: 36				TYF DE		Auto Tune
10 dB/div Log	Ref Offset						WIKT	5.	90 GHz 44 dBm	
15.0										Center Freq 5.50000000 GHz
					♦ ¹					5.50000000 GH2
5.00			(manufacture of the second se							Start Freq 5.475000000 GHz
-5.00										
-15.0										Stop Fred 5.525000000 GHz
-25.0			/							
and a start	محمد المراجع ومعدوم المحمد ا	and a second	U				the second	wardsmaningerser	hannanan	CF Step 5.000000 MH; <u>Auto</u> Mar
-45.0										Freg Offse
-55.0										0 H;
-65.0										Scale Type
Center 5.: #Res BW	50000 GHz 1.0 MHz		#VBW	3.0 MHz			Sweep 1	Span 5 .000 ms (0.00 MHz 1001 pts)	Log <u>Lin</u>
MSG							STATUS			

Plot 7-213. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



Plot 7-214. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 138 of 257
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	landset	
© 2022 PCTEST	•			V 9.0 02/01/2019



	ectrum Analyzer - Swe									
LX/IRL	RF 50 Ω	AC CC	ORREC	SEI	ISE:INT	#Avg Typ	e: RMS		M Oct 18, 2021	Frequency
	Ref Offset 0.1	II 9 dB	PNO: Fast 😱 FGain:Low	Trig: Free Atten: 36		0 ,		TYF DE 1 5.717		Auto Tune
10 dB/div Log	Ref 25.00 c	lBm	_			_		6.	40 dBm	
15.0				↓ ¹						Center Freq 5.720000000 GHz
-5.00				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	an the second					Start Freq 5.695000000 GHz
-15.0			/							Stop Freq 5.745000000 GHz
-35.0	had free for the state of the s	and a					Kulowa	Month mark mark	Hunancostyme	CF Step 5.000000 MHz <u>Auto</u> Man
-45.0										Freq Offset 0 Hz
-65.0										Scale Type
Center 5. #Res BW	72000 GHz 1.0 MHz		#VBW	3.0 MHz			Sweep 1	Span 5 .000 ms (0.00 MHz 1001 pts)	Log <u>Lin</u>
MSG							STATUS			

Plot 7-215. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 120 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 139 of 257	
© 2022 PCTEST				V 9.0 02/01/2019	



									×		
LXI RL	RF 50 \$	Ω AC	CORREC	SEI	ISE:INT	#Avg Typ	e RMS		AM Oct 18, 2021	Frequency	,
	Ref Offset 0	.19 dB	PNO: Fast IFGain:Low	Trig: Free Atten: 36				۳ kr1 5.57	6 2 GHz	Auto T	une
10 dB/div Log	Ref 25.00	dBm					1				
15.0										Center F 5.590000000	
-5.00						*****				Start F 5.540000000	
-15.0										Stop F 5.640000000	
-35.0	and a state of the	harond	and				-	ter and the second s	water of a star	CF S 10.000000 <u>Auto</u>	Step MHz Man
-55.0										Freq Of	f set 0 Hz
-65.0										Scale T	ype
Center 5.59000 GHz Span 100.0 MHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)							Log	Lin			
MSG STATUS											

Plot 7-217. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



Plot 7-218. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)		oproved by: echnical Manager	
Test Report S/N:	Test Dates:	EUT Type:	De	Page 140 of 257	
1M2112100159-07.A3L	9/14/2021 - 11/12/2021	Portable Handset	Pa		
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