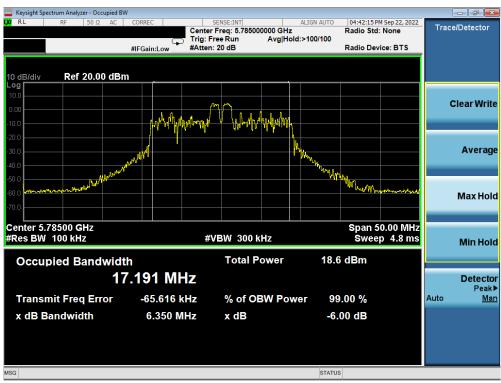


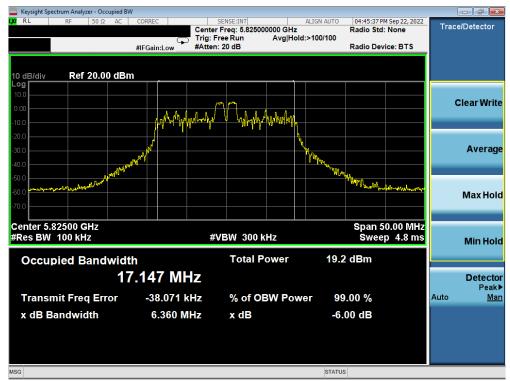
Plot 7-124. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)



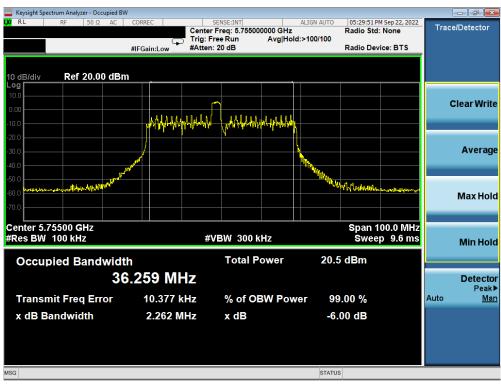
Plot 7-125. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 00 of 226
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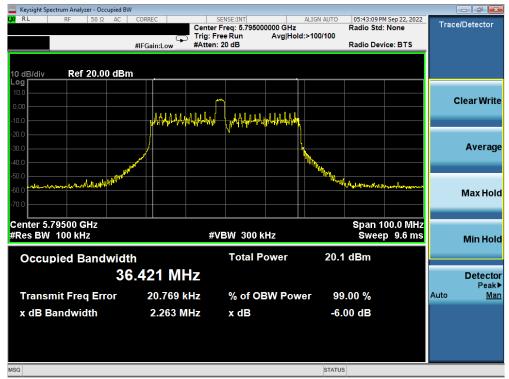
Plot 7-126. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 165)



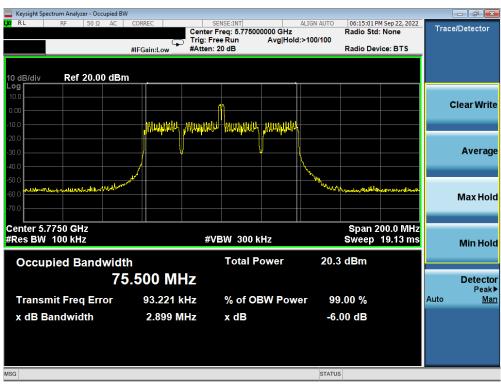
Plot 7-127. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 01 of 226
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Plot 7-128. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 159)



Plot 7-129. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 02 of 220
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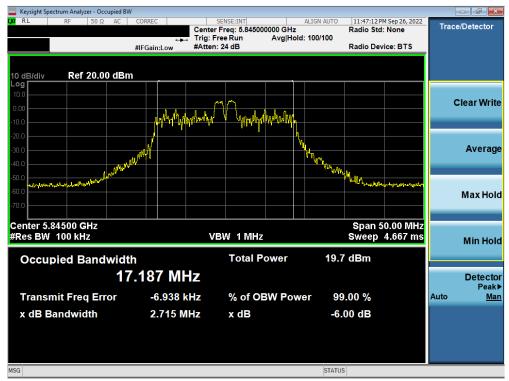


	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
Band 3/4	5845	169	ax (20MHz)	26T	MCS0	2.71
Band 4	5865	173	ax (20MHz)	26T	MCS0	2.67
Dallu 4	5885	177	ax (20MHz)	26T	MCS0	2.68
Band 3/4	5835	167	ax (40MHz)	26T	MCS0	2.17
Band 4	5875	175	ax (40MHz)	26T	MCS0	2.21
	5855	171	ax (80MHz)	26T	MCS0	2.88
Band 3/4	5815	163	ax (160MHz L)	26T	MCS0	3.03
	5815	163	ax (160MHz U)	26T	MCS0	2.60

Table 7-11. Conducted Bandwidth Measurements MIMO ANT2 (26 Tones)

FCC ID: A3LSMS916U	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 02 of 226
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			1/ 0.0.02/01/2010





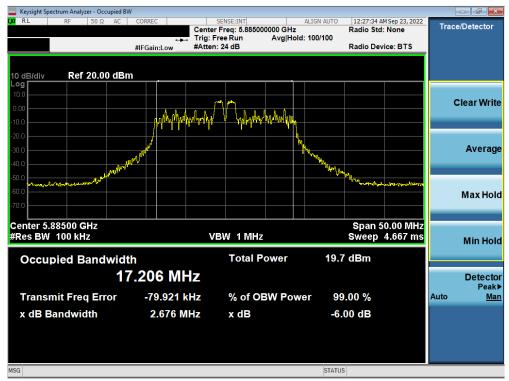
Plot 7-130. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 169)



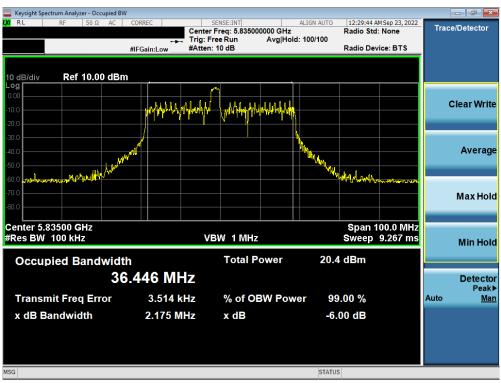
Plot 7-131. 6dB Bandwidth Plot MIMO ANT12(20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dege 04 of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 94 of 236
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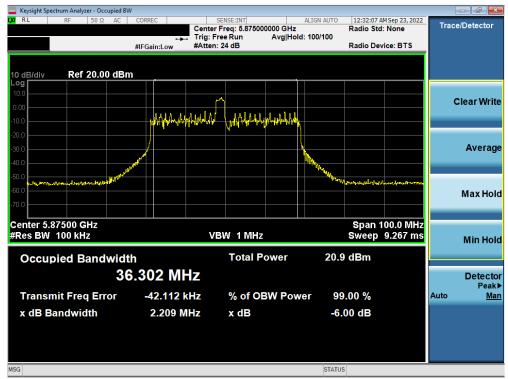
Plot 7-132. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 177)



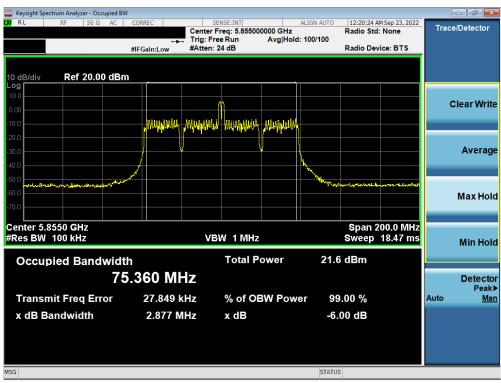
Plot 7-133. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 167)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage OF of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 95 of 236
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Plot 7-134. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 175)



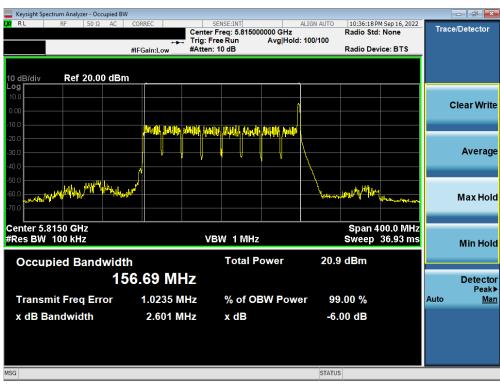
Plot 7-135. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 171)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dege 06 of 226
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Plot 7-136. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)



Plot 7-137. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW U 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 07 of 220
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		-	V 9 0 02/01/2019



MIMO Antenna-2 6dB Bandwidth Measurements (Full Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	ax (20MHz)	242T	MCS0	19.03
	5785	157	ax (20MHz)	242T	MCS0	19.08
od 3	5825	165	ax (20MHz)	242T	MCS0	19.11
Band	5755	151	ax (40MHz)	484T	MCS0	38.19
	5795	159	ax (40MHz)	484T	MCS0	38.19
	5775	155	ax (80MHz)	996T	MCS0	78.33

Table 7-12. Conducted Bandwidth Measurements MIMO ANT2 (Full Tones)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 00 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 98 of 236
			V/ 0 0 00/04/0040





Plot 7-138. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3) - Ch. 149)



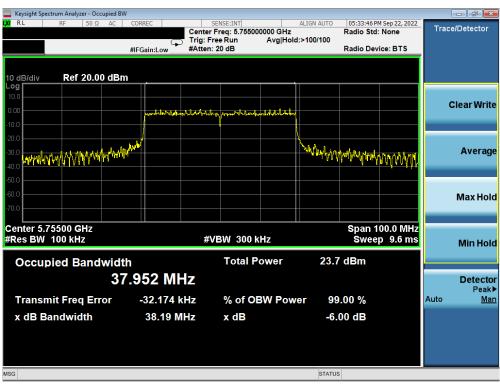
Plot 7-139. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 00 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 99 of 236
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www.www.com analyzer - Occupied BW								- 6
ΙΧΙ RF 50 Ω AC	Test in the second s	SENSE:INT nter Freq: 5.82500		ALIGN AUTO	04:47:54 P Radio Std	M Sep 22, 2022 : None	Trac	e/Detector
		g: Free Run tten: 20 dB	Avginoid	1:>100/100	Radio Dev	rice: BTS		
10 dB/div Ref 20.00 dBm								
10.0								
0.00	manhahun	how when have	maharharma				(Clear Write
-10.0								
-20.0	1			Ч. М. 10а				
-30.0	~~			" In the second	wyhannaddynyd	AND THE REAL		Average
-40.0								
-50.0								
-60.0								Max Hold
-70.0								maxitora
					A			
Center 5.82500 GHz #Res BW 100 kHz		#VBW 300 k	Hz			0.00 MHz p 4.8 ms		Min Hold
Occupied Bandwidth		Total P	ower	24.2	dBm			
		10tul 1		2-112	abiii			_
19.	.006 MHz							Detector Peak►
Transmit Freq Error	-34.236 kHz	% of OE	BW Pow	er 99	.00 %		Auto	Man
x dB Bandwidth	19.11 MHz	x dB		-6.	00 dB			
MSG				STATUS	;			

Plot 7-140. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3) - Ch. 165)



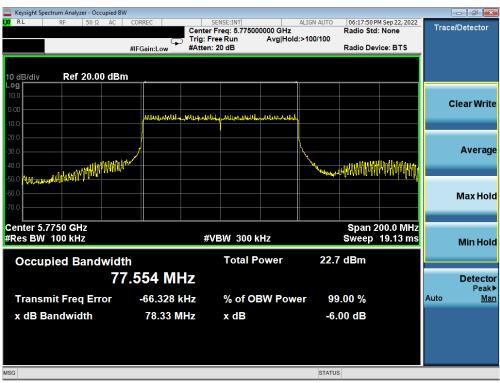
Plot 7-141. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 3) - Ch. 151)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 100 of 226
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Keysight Spectrum Analyzer - Occupied BW	1						
UM RL RF 50Ω AC	Trig: F	SENSE:INT r Freq: 5.795000000 GH Free Run Avg H I: 20 dB	ALIGN AUTO Iz Iold:>100/100	05:46:28 P Radio Std Radio Dev		Trace	e/Detector
10 dB/div Ref 20.00 dBn	1		_,				
0.00		hay readed to grade the standard and the st	-La			c	Clear Write
-10.0 -20.0 -30.0 -40.0	dat		white the second	an a	NULANIANI,		Average
-50.0 -60.0 -70.0							Max Hold
Center 5.79500 GHz #Res BW 100 kHz		VBW 300 kHz Total Power	22.2		00.0 MHz p 9.6 ms		Min Hold
Occupied Bandwidt 37	ⁿ /.958 MHz	Total Fower	20.2	UBIII			Detector Peak▶
Transmit Freq Error	-28.985 kHz	% of OBW Po	ower 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	38.19 MHz	x dB	-6.	00 dB			
MSG			STATUS	3			

Plot 7-142. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 3) - Ch. 159)



Plot 7-143. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 3) - Ch. 155)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 101 of 226
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	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
Band 3/4	5845	169	ax (20MHz)	242T	MCS0	19.11
Band 4	5865	173	ax (20MHz)	242T	MCS0	19.12
Dallu 4	5885	177	ax (20MHz)	242T	MCS0	19.10
Band 3/4	5835	167	ax (40MHz)	484T	MCS0	38.16
Band 4	5875	175	ax (40MHz)	484T	MCS0	38.17
Band 3/4	5855	171	ax (80MHz)	996T	MCS0	78.24
Dalid 5/4	5815	163	ax (160MHz)	996T	MCS0	158.24

Table 7-13. Conducted Bandwidth Measurements MIMO ANT2 (Full Tones)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 102 of 226
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Keysight Spectrum Analyzer - Occupied BV	V				- 6 ×
XX RL RF 50Ω AC	Trig:	SENSE:INT Freq: 5.845000000 GH Free Run Avg H n: 28 dB	lz Radi lold: 100/100	23:20 AM Sep 23, 2022 o Std: None o Device: BTS	Trace/Detector
10 dB/div Ref 20.00 dBn	n				
Log 10.0 0.00 -10.0	personal and	hing an and a standard to	uun		Clear Write
-20.0 -30.0 -40.0	ww			142, nod Whydy Mytheray	Average
-50.0					Max Hold
Center 5.84500 GHz #Res BW 100 kHz		/BW 1 MHz Total Power		an 50.00 MHz eep 4.667 ms	Min Hold
Occupied Bandwidt	.045 MHz	Total Fower	24.7 UDI		Detector Peak▶
Transmit Freq Error x dB Bandwidth	-32.618 kHz 19.11 MHz	% of OBW Po x dB	ower 99.00 ° -6.00 d		Auto <u>Man</u>
MSG			STATUS		

Plot 7-144. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3/4) - Ch. 169)



Plot 7-145. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 102 of 226
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🔤 Keysight Spectrum Analyzer - Occu	pied BW							- 🗗 🗙
(X) RL RF 50 Ω	AC CORREC #IFGain:Low		: 5.885000000 GH un Avg l	ALIGN AUTO Hz Hold: 100/100	12:28:32 A Radio Std Radio Dev		Trace	e/Detector
10 dB/div Ref 10.00	dBm							
0.00 -10.0	annabh An	shachachachae year	on the own the shear the	rt			c	lear Write
-20.0	nino+ra-			Whymen	n MAAAAAAAA	1646 - 194		
-30.0 -40.0						and the second		Average
-50.0								
-70.0								Max Hold
-80.0								
Center 5.88500 GHz #Res BW 100 kHz		VBW	1 MHz			0.00 MHz 4.667 ms		Min Hold
Occupied Bandv			otal Power	24.8	3 dBm			
	19.024 M	Hz						Detector Peak▶
Transmit Freq Erro	or -35.959	kHz %	of OBW Pe	ower 99	9.00 %		Auto	<u>Man</u>
x dB Bandwidth	19.10 I	MHz x	dB	-6.	00 dB			
MSG				STATU	S			

Plot 7-146. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 177)



Plot 7-147. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 3/4) - Ch. 167)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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www.www.com.com.com.com.com.com.com.com.com.com	BW						- 6
U2 RL RF 50 Ω AC		SENSE:INT Senter Freq: 5.8750000 rig: Free Run Atten: 26 dB	ALIGN AUTO 000 GHz Avg Hold: 100/100	12:33:27 A Radio Std Radio Dev		Trace	/Detector
10 dB/div Ref 10.00 dB	m						
Log 0.00 -10.0	au, rankakatan ang kalan ang ka	uter mellenen pruduiter statuteren	tyletydogolae			с	lear Write
-20.0 -30.0 -40.0 <mark>MUMUMWWWWWWWW</mark> -50.0	Aufum"			mhinyunyu	y-hylywdyy		Average
-60.0 -70.0 -80.0							Max Hold
Center 5.87500 GHz #Res BW 100 kHz		VBW 1 MHz			00.0 MHz 9.267 ms		Min Hold
Occupied Bandwid	lth	Total Po	wer 24.3	3 dBm			
3	7.884 MHz						Detector Peak▶
Transmit Freq Error	-31.517 kH	z % of OB	W Power 99	0.00 %		Auto	<u>Man</u>
x dB Bandwidth	38.17 MH	z xdB	-6.	00 dB			
MSG			STATUS	5			

Plot 7-148. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 4) - Ch. 175)



Plot 7-149. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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🔤 Keysight Spectrum Analyzer - Occupied B	W				
LXI RL RF 50Ω AC	CORREC	SENSE:INT r Freq: 5.815000000 GHz	ALIGN AUTO 10:38:33 P Radio Std	M Sep 16, 2022	Trace/Detector
	🛶 Trig: I	Free Run Avg Hold:	100/100		
	#IFGain:Low #Atter	n: 10 dB	Radio Dev	vice: BTS	
10 dB/div Ref 20.00 dB	m				
10.0					
0.00					Clear Write
-10.0	Buch March road got work 1919	when a share with the state of			
-20.0					
-30.0					Average
-40.0			L.		, tronugo
			1		
-50.0			Margh and and a strate of the start of the s	and and a second	
-60.0				- Constant	Max Hold
-70.0					
Center 5.8150 GHz			Span 4	00.0 MHz	
#Res BW 100 kHz	v	'BW 1 MHz	Sweep	36.93 ms	Min Hold
		Tatal Damas			
Occupied Bandwid		Total Power	22.8 dBm		
1	56.07 MHz				Detector
Transmit From Freeze	77 670 kH-	% of OBW Powe	r 99.00 %		Peak► Auto Man
Transmit Freq Error	-77.672 kHz				Auto <u>Ivian</u>
x dB Bandwidth	158.2 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-150. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax – 996 Tones (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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7.4 UNII Output Power Measurement – 802.11ax OFDMA §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

Test Overview and Limits

A transmitter antenna terminal of the EUT is connected to the input of an RF pulse power sensor. Measurement is made using a broadband average power meter while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies.

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

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(18.88) = 23.76dBm$. 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 + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(19.01) = 23.79dBm$. 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

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MIMO Maximum Conducted Output Power Measurements (26 Tones)

~									RU Index					Conducted	Conducted	Directional	Managara	Max e.i.r.p.	e.i.r.p.
width)	Freq [MHz]	Channel	Detector	Tones		0			4			8		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Limit [dBm]	
븅					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Linine [dDini]	mai giri [db]
÷	5180	36	AVG	26T	10.40	10.81	13.62	10.35	11.04	13.72	10.19	10.80	13.52	23.98	-10.26	-1.03	12.69	30.00	-17.31
2	5200	40	AVG	26T	10.50	11.41	13.99	9.98	11.09	13.58	10.38	11.50	13.99	23.98	-9.99	-1.03	12.96	30.00	-17.04
þ	5240	48	AVG	26T	10.59	11.05	13.84	10.64	11.09	13.88	10.43	11.03	13.75	23.98	-10.10	-1.03	12.85	30.00	-17.15
a	5260	52	AVG	26T	10.49	11.09	13.81	10.57	11.08	13.84	10.41	11.16	13.81	23.98	-10.14	-0.28	13.56	30.00	-16.44
ñ	5280	56	AVG	26T	10.34	11.08	13.74	10.42	11.11	13.79	10.27	11.12	13.73	23.98	-10.19	-0.28	13.51	30.00	-16.49
N	5320	64	AVG	26T	10.56	11.29	13.95	10.14	10.90	13.55	10.51	11.38	13.98	23.98	-10.00	-0.28	13.70	30.00	-16.30
Ϊ	5500	100	AVG	26T	10.56	10.92	13.75	10.61	11.15	13.90	10.59	11.09	13.86	23.98	-10.08	0.56	14.46	30.00	-15.54
5	5600	120	AVG	26T	10.35	10.57	13.47	10.94	10.65	13.81	10.37	10.76	13.58	23.98	-10.17	0.56	14.37	30.00	-15.63
20M	5720	144	AVG	26T	10.54	10.60	13.58	11.14	10.72	13.95	10.62	10.58	13.61	23.98	-10.03	0.56	14.51	30.00	-15.49
N.	5745	149	AVG	26T	10.76	11.18	13.99	10.45	10.68	13.58	10.32	10.68	13.51	30.00	-16.01	-0.05	13.94	36.00	-22.06
	5785	157	AVG	26T	11.25	10.55	13.92	11.34	10.57	13.98	11.36	10.54	13.98	30.00	-16.02	-0.05	13.93	36.00	-22.07
우	5825	165	AVG	26T	11.36	10.29	13.87	11.44	10.45	13.98	11.51	10.31	13.96	30.00	-16.02	-0.05	13.93	36.00	-22.07
5	5845	169	AVG	26T	11.26	10.37	13.85	11.44	10.43	13.97	11.40	10.26	13.88		1.00	0.08	14.05	30.00	-15.95
ŭ	5865	173	AVG	26T	11.18	10.36	13.80	11.35	10.50	13.96	11.32	10.27	13.84			0.08	14.04	30.00	-15.96
	5885	177	AVG	26T	11.42	10.34	13.92	11.70	10.11	13.99	11.52	10.14	13.89		-	0.08	14.07	30.00	-15.93

Table 7-14. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (26 Tones)



Table 7-15. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Maxaira	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		0			18			36		Power Limit	Power	Ant. Gain		Limit [dBm]	
Ŧ 🕤					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linii (ubinj	inai gin [ub]
Ξ÷	5210	42	AVG	26T	10.79	10.68	13.75	10.97	10.86	13.93	10.55	10.69	13.63	23.98	-10.05	-1.03	12.90	30.00	-17.10
widt	5290	58	AVG	26T	10.37	10.67	13.53	10.59	11.08	13.85	10.26	11.07	13.69	23.98	-10.13	-0.28	13.57	30.00	-16.43
х d	5530	106	AVG	26T	10.69	10.51	13.61	10.76	11.18	13.99	10.37	11.26	13.85	23.98	-9.99	0.56	14.55	30.00	-15.45
a E	5610	122	AVG	26T	11.30	10.50	13.93	11.01	10.55	13.80	10.21	10.76	13.50	23.98	-10.05	0.56	14.49	30.00	-15.51
S 🖁	5690	138	AVG	26T	11.40	10.50	13.98	11.18	10.58	13.90	10.49	10.57	13.54	23.98	-10.00	0.56	14.54	30.00	-15.46
~	5775	155	AVG	26T	11.25	10.69	13.99	11.38	10.38	13.92	11.30	9.83	13.64	30.00	-16.01	-0.05	13.94	36.00	-22.06
	5855	171	AVG	26T	10.92	10.13	13.55	11.32	10.49	13.94	11.30	9.88	13.66	-	-	0.08	14.02	30.00	-15.98

Table 7-16. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (26 Tones)

-									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Manualian	
원 높	Freq [MHz]	Channel	Detector	Tones		0			18			36		Power Limit	Power	Ant. Gain		Limit [dBm]	e.i.r.p.
포호응					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil		margin [ub]
0 8 S	5250	50	AVG	26T	10.54	10.69	13.63	10.95	10.96	13.97	10.69	10.95	13.83	23.98	-10.01	-1.03	12.94	30.00	-17.06
ਡ ੱ ੱ	5570	114	AVG	26T	11.43	10.02	13.79	11.32	10.31	13.85	11.27	10.56	13.94	30.00	-16.06	-0.05	13.89	36.00	-22.11
<u>م</u>	5815	163	AVG	26T	10.99	10.61	13.81	11.06	10.65	13.87	11.17	10.51	13.86			0.08	13.95	30.00	-16.05
		Tel	1. 7	47		4000		VI /II			···· •			4		(00 T			

Table 7-17. MIMO 160MHz BW L (UNII) Maximum Conducted Output Power (26 Tones)

	-									RU Index					Conducted	Conducted	Directional			
	번 불	Freq [MHz]	Channel	Detector	Tones		0			18			36		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p.
Ŧ	Σž					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuid	Linit [abiii]	iniai gin [ub]
O I	<u>9</u>	5250	50	AVG	26T	10.62	10.93	13.79	10.67	11.26	13.99	10.17	11.23	13.74	23.98	-9.99	-1.03	12.96	30.00	-17.04
	a C	5570	114	AVG	26T	11.23	10.59	13.93	10.57	10.78	13.69	10.54	11.18	13.88	30.00	-16.07	-0.05	13.88	36.00	-22.12
		5815	163	AVG	26T	11.23	10.49	13.89	11.09	10.05	13.61	11.45	9.92	13.76	-		0.08	13.97	30.00	-16.03

Table 7-18. MIMO 80MHz BW U (UNII) Maximum Conducted Output Power (26 Tones)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 109 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 108 of 236
			V 0 0 02/01/2010



MIMO Conducted Output Power Measurements (52 Tones)

								RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
Freq [MHz]	Channel	Detector	Tones		37			39			40		Power Limit	Power	Ant. Gain		Limit [dBm]	
				ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Linine [dDini]	margin [db]
5180	36	AVG	52T	12.57	13.50	16.07	12.59	13.64	16.16	12.53	13.62	16.12	23.98	-7.82	-1.03	15.13	30.00	-14.87
5200	40	AVG	52T	12.39	13.62	16.06	12.36	13.71	16.10	12.68	14.15	16.49	23.98	-7.49	-1.03	15.46	30.00	-14.54
5240	48	AVG	52T	12.01	13.99	16.12	12.51	13.58	16.09	12.94	13.96	16.49	23.98	-7.49	-1.03	15.46	30.00	-14.54
5260	52	AVG	52T	12.47	13.50	16.03	12.70	13.61	16.19	12.86	14.01	16.48	23.98	-7.50	-0.28	16.20	30.00	-13.80
5280	56	AVG	52T	12.84	13.94	16.43	12.49	13.61	16.10	12.82	14.04	16.48	23.98	-7.50	-0.28	16.20	30.00	-13.80
5320	64	AVG	52T	12.76	13.84	16.35	12.73	13.92	16.38	12.63	13.89	16.32	23.98	-7.60	-0.28	16.10	30.00	-13.90
5500	100	AVG	52T	13.44	13.51	16.49	12.97	13.15	16.07	13.31	13.64	16.49	23.98	-7.49	0.56	17.05	30.00	-12.95
5600	120	AVG	52T	13.44	13.44	16.45	13.07	13.07	16.08	13.40	13.51	16.47	23.98	-7.51	0.56	17.03	30.00	-12.97
5720	144	AVG	52T	13.43	13.26	16.35	13.41	13.42	16.43	13.48	13.38	16.44	23.98	-7.54	0.56	17.00	30.00	-13.00
5745	149	AVG	52T	12.93	13.36	16.16	12.66	13.06	15.87	12.89	13.35	16.14	30.00	-13.84	-0.05	16.11	36.00	-19.89
5785	157	AVG	52T	13.65	12.52	16.13	13.70	12.16	16.01	13.79	12.38	16.15	30.00	-13.85	-0.05	16.10	36.00	-19.90
5825	165	AVG	52T	13.66	12.89	16.30	13.53	12.63	16.11	13.25	12.89	16.08	30.00	-13.70	-0.05	16.25	36.00	-19.75
5845	169	AVG	52T	13.59	12.82	16.23	13.45	12.60	16.06	13.55	12.81	16.21	-	-	0.08	16.31	30.00	-16.57
5865	173	AVG	52T	13.58	12.68	16.16	13.30	12.63	15.99	13.60	12.77	16.22		1.1	0.08	16.30	30.00	-16.57
5885	177	AVG	52T	13.66	12.62	16.18	13.61	12.41	16.06	13.83	12.61	16.27	-	-	0.08	16.35	30.00	-16.57

Table 7-19. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

								RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Maxaira	e.i.r.p.
Freq [MHz]	Channel	Detector	Tones		37			40			44		Power Limit	Power	Ant. Gain		Limit [dBm]	
				ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil		margin [ub
5190	38	AVG	52T	12.73	13.80	16.31	12.46	13.57	16.06	12.64	13.91	16.33	23.98	-7.65	-1.03	15.30	30.00	-14.70
5230	46	AVG	52T	12.87	13.52	16.22	12.71	13.47	16.12	12.86	13.74	16.33	23.98	-7.65	-1.03	15.30	30.00	-14.70
5270	54	AVG	52T	12.91	13.74	16.35	12.70	13.56	16.16	12.75	13.90	16.37	23.98	-7.61	-0.28	16.09	30.00	-13.91
5310	62	AVG	52T	13.01	13.89	16.48	12.86	13.84	16.39	12.79	14.07	16.49	23.98	-7.49	-0.28	16.21	30.00	-13.79
5510	102	AVG	52T	13.35	13.46	16.41	13.06	13.33	16.21	13.21	13.72	16.48	23.98	-7.50	0.56	17.04	30.00	-12.96
5590	118	AVG	52T	13.42	13.33	16.38	13.17	13.15	16.17	13.46	13.43	16.45	23.98	-7.52	0.56	17.01	30.00	-12.99
5710	142	AVG	52T	13.27	13.07	16.18	13.53	13.41	16.48	13.40	13.21	16.32	23.98	-7.50	0.56	17.04	30.00	-12.96
5755	151	AVG	52T	13.07	13.67	16.39	13.02	13.53	16.29	12.70	13.23	15.98	30.00	-13.61	-0.05	16.34	36.00	-19.66
5795	159	AVG	52T	13.52	12.46	16.03	13.82	12.70	16.31	13.53	12.36	15.99	30.00	-13.69	-0.05	16.26	36.00	-19.74
5835	167	AVG	52T	13.35	12.89	16.14	13.62	13.02	16.34	13.56	12.74	16.18		-	0.08	16.42	30.00	-13.58
5875	175	AVG	52T	13.17	12.92	16.06	13.67	13.17	16.44	13.47	12.72	16.12	-	-	0.08	16.52	30.00	-13.48

Table 7-20. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

									RU Index					Conducted	Conducted	Directional	Maxaira	Max e.i.r.p.	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		37			44			52		Power Limit	Power	Ant. Gain		Limit [dBm]	
-					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapui	Linit [ubin]	wargin [ub]
	5210	42	AVG	52T	13.31	13.47	16.40	12.95	13.52	16.25	13.05	13.85	16.48	23.98	-7.50	-1.03	15.45	30.00	-14.55
	5290	58	AVG	52T	12.91	13.67	16.32	12.69	13.60	16.18	12.80	14.07	16.49	23.98	-7.49	-0.28	16.21	30.00	-13.79
5	5530	106	AVG	52T	13.46	13.41	16.44	13.18	13.46	16.34	13.11	13.80	16.48	23.98	-7.50	0.56	17.04	30.00	-12.96
	5610	122	AVG	52T	13.62	13.15	16.40	13.34	13.14	16.25	13.16	13.66	16.43	23.98	-7.55	0.56	16.99	30.00	-13.01
ר	5690	138	AVG	52T	13.51	12.88	16.22	13.50	13.45	16.49	13.45	13.26	16.36	23.98	-7.49	0.56	17.05	30.00	-12.95
	5775	155	AVG	52T	13.63	12.24	16.00	14.00	12.75	16.43	13.83	12.59	16.26	30.00	-13.57	-0.05	16.38	36.00	-19.62
	5855	171	AVG	52T	13.16	12.88	16.03	13.60	13.16	16.40	13.64	12.53	16.13	-	-	0.08	16.48	30.00	-13.52

Table 7-21. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (52 Tones)

-									RU Index					Conducted	Conducted	Directional	Manualian	Manualian	e.i.r.p.
, 분 홍	Freq [MHz]	Channel	Detector	Tones		37			44			52		Power Limit		Ant. Gain	Max e.i.r.p. [dBm]	Limit [dBm]	
포 호 중					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil		margin [ub]
5 8 6	5250	50	AVG	52T	12.93	13.35	16.15	12.84	13.44	16.16	12.63	13.51	16.10	23.98	-7.82	-1.03	15.13	30.00	-14.87
~ £ ∈	5570	114	AVG	52T	13.38	13.07	16.24	13.68	13.26	16.49	13.48	13.40	16.45	30.00	-13.51	-0.05	16.44	36.00	-19.56
•	5815	163	AVG	52T	13.77	12.89	16.36	13.72	12.86	16.32	13.75	12.72	16.28			0.08	16.44	30.00	-13.56
		Tek	1. 7	22	MINAO	40004		VI /II						4 D		(EO T			

Table 7-22. MIMO 160MHz BW L (UNII) Maximum Conducted Output Power (52 Tones)

	-								RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Mar	e.i.r.p.
. ₽ :	Freq [MHz]	Channel	Detector	Tones		37			44			52		Power Limit	Power	Ant. Gain		Limit [dBm]	
ΞĒ	X				ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapini	Linit (abinj	iwai gin [ub]
9 8 ·	5250	50	AVG	52T	13.44	13.41	16.44	13.29	13.37	16.34	12.98	13.43	16.22	23.98	-7.54	-1.03	15.41	30.00	-14.59
Ξ ``	5570	114	AVG	52T	13.80	12.24	16.10	13.65	13.01	16.35	13.58	13.37	16.49	30.00	-13.51	-0.05	16.44	36.00	-19.56
1	5815	163	AVG	52T	13.90	12.73	16.36	13.67	12.09	15.96	14.06	12.06	16.18		-	0.08	16.44	30.00	-13.56

Table 7-23. MIMO 160MHz BW U (UNII) Maximum Conducted Output Power (52 Tones)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 100 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 109 of 236
•			V 9.0 02/01/2019



MIMO Conducted Output Power Measurements (106 Tones)

~							RU I	ndex			Conducted	Conducted	Directional	Mar		
Ę	Freq [MHz]	Channel	Detector	Tones		53			54		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p.
Б.					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	lapui		
widt	5180	36	AVG	106T	15.67	16.20	18.95	15.59	16.24	18.94	23.98	-5.03	-1.03	17.92	30.00	-12.08
2	5200	40	AVG	106T	15.54	16.20	18.89	15.46	16.32	18.92	23.98	-5.06	-1.03	17.89	30.00	-12.11
and	5240	48	AVG	106T	15.69	15.96	18.84	15.59	15.98	18.80	23.98	-5.14	-1.03	17.81	30.00	-12.19
a	5260	52	AVG	106T	15.48	16.03	18.77	15.42	16.02	18.74	23.98	-5.21	-0.28	18.49	30.00	-11.51
Ω.	5280	56	AVG	106T	15.23	16.07	18.68	15.21	16.09	18.68	23.98	-5.30	-0.28	18.40	30.00	-11.60
N	5320	64	AVG	106T	15.39	16.38	18.92	15.35	16.52	18.98	23.98	-4.99	-0.28	18.70	30.00	-11.30
Ξ	5500	100	AVG	106T	15.77	15.68	18.74	15.86	15.87	18.88	23.98	-5.10	0.56	19.44	30.00	-10.56
Ξ	5600	120	AVG	106T	15.85	16.07	18.97	15.86	16.09	18.99	23.98	-4.99	0.56	19.55	30.00	-10.45
20M	5720	144	AVG	106T	16.00	15.94	18.98	15.97	15.98	18.99	23.98	-4.99	0.56	19.55	30.00	-10.45
<u>N</u>	5745	149	AVG	106T	15.70	16.08	18.90	15.76	16.06	18.92	30.00	-11.08	-0.05	18.87	36.00	-17.13
N	5785	157	AVG	106T	16.03	15.34	18.71	16.05	15.34	18.72	30.00	-11.28	-0.05	18.67	36.00	-17.33
_	5825	165	AVG	106T	15.99	15.34	18.69	16.03	15.40	18.74	30.00	-11.26	-0.05	18.69	36.00	-17.31
ъ С	5845	169	AVG	106T	15.97	15.39	18.70	16.03	15.33	18.70	-	-	0.08	18.78	30.00	-11.22
2	5865	173	AVG	106T	15.95	15.40	18.69	16.05	15.38	18.74	-	-	0.08	18.82	30.00	-11.18
	5885	177	AVG	106T	16.18	15.19	18.72	16.19	15.04	18.66	-	-	0.08	18.80	30.00	-11.20

Table 7-24. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

									RU Index					Conducted	Conducted	Directional	Manualian	Manualian	
Freq	q [MHz]	Channel	Detector	Tones		53			54			56		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p.
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linii (ubinj	iwar gin [ub]
5	5190	38	AVG	106T	15.61	16.20	18.93	15.32	16.03	18.70	15.34	16.18	18.79	23.98	-5.05	-1.03	17.90	30.00	-12.10
5	5230	46	AVG	106T	15.65	15.88	18.78	15.53	15.68	18.62	15.59	15.91	18.76	23.98	-5.20	-1.03	17.75	30.00	-12.25
5	5270	54	AVG	106T	15.34	15.93	18.66	15.40	15.79	18.61	15.44	16.06	18.77	23.98	-5.21	-0.28	18.49	30.00	-11.51
5	5310	62	AVG	106T	15.64	16.25	18.97	15.43	16.19	18.84	15.48	16.42	18.99	23.98	-4.99	-0.28	18.71	30.00	-11.29
5	5510	102	AVG	106T	15.93	15.56	18.76	15.76	15.53	18.66	15.81	15.80	18.82	23.98	-5.16	0.56	19.38	30.00	-10.62
5	5590	118	AVG	106T	15.90	15.79	18.86	15.76	15.73	18.76	15.78	16.09	18.95	23.98	-5.03	0.56	19.51	30.00	-10.49
5	5710	142	AVG	106T	15.88	15.87	18.89	15.68	15.74	18.72	15.84	15.94	18.90	23.98	-5.08	0.56	19.46	30.00	-10.54
5	5755	151	AVG	106T	15.52	15.93	18.74	15.34	15.88	18.63	15.44	16.09	18.79	30.00	-11.21	-0.05	18.74	36.00	-17.26
5	5795	159	AVG	106T	15.80	15.31	18.57	16.16	15.65	18.92	15.88	15.30	18.61	30.00	-11.08	-0.05	18.87	36.00	-17.13
5	5835	167	AVG	106T	16.11	15.76	18.95	15.97	15.60	18.80	16.29	15.64	18.99		-	0.08	19.07	30.00	-10.93
5	5875	175	AVG	106T	16.00	15.85	18.94	15.90	15.68	18.80	16.16	15.71	18.95	-	-	0.08	19.03	30.00	-10.97

Table 7-25. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Manualian	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		53			56			60		Power Limit	Power	Ant. Gain		Limit [dBm]	
Ŧ 🕤					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	lapuil		margin [ub]
ΞΞ	5210	42	AVG	106T	16.07	15.85	18.97	15.80	15.58	18.70	15.87	15.84	18.87	23.98	-5.01	-1.03	17.94	30.00	-12.06
vic (8	5290	58	AVG	106T	15.36	15.86	18.63	15.63	16.23	18.95	15.31	16.21	18.79	23.98	-5.03	-0.28	18.67	30.00	-11.33
N N	5530	106	AVG	106T	15.95	15.39	18.69	15.70	15.47	18.60	15.78	16.08	18.94	23.98	-5.04	0.56	19.50	30.00	-10.50
a E	5610	122	AVG	106T	15.98	15.56	18.79	15.67	15.65	18.67	15.70	16.18	18.96	23.98	-5.02	0.56	19.52	30.00	-10.48
ы	5690	138	AVG	106T	16.02	15.64	18.84	15.67	15.64	18.67	15.87	16.07	18.98	23.98	-5.00	0.56	19.54	30.00	-10.46
	5775	155	AVG	106T	16.29	15.64	18.99	16.22	15.59	18.93	15.94	15.25	18.62	30.00	-11.01	-0.05	18.94	36.00	-17.06
	5855	171	AVG	106T	15.86	15.76	18.82	15.93	15.46	18.71	16.27	15.46	18.89	-		0.08	18.97	30.00	-11.03

Table 7-26. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (106 Tones)

-									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Maxoirn	e.i.r.p.
우 후	Freq [MHz]	Channel	Detector	Tones		53			56			60		Power Limit	Power	Ant. Gain			Margin [dB]
~ 눈 눈 눈					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linit (abinj	margin [ub]
5 8 4	5250	50	AVG	106T	15.75	15.70	18.74	15.66	15.69	18.69	15.69	16.06	18.89	23.98	-5.09	-1.03	17.86	30.00	-12.14
Ξ Ξ n	5570	114	AVG	106T	16.43	15.08	18.82	16.48	15.34	18.96	16.20	15.52	18.88	30.00	-11.04	-0.05	18.91	36.00	-17.09
a	5815	163	AVG	106T	16.13	15.64	18.90	16.20	15.69	18.96	16.05	15.47	18.78	-		0.08	19.04	30.00	-10.96

Table 7-27. MIMO 160MHz BW (UNII) L Maximum Conducted Output Power (106 Tones)

-									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Marria	e.i.r.p.
. 분 둘	Freq [MHz]	Channel	Detector	Tones		53			56			60		Power Limit		Ant. Gain		Limit [dBm]	
포호응					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linit (ubinj	margin [ub]
0 8 S	5250	50	AVG	106T	15.61	16.07	18.86	15.68	16.25	18.98	15.56	16.23	18.92	23.98	-4.99	-1.03	17.95	30.00	-12.05
ਭ <u>ਤੇ</u> "	5570	114	AVG	106T	16.17	15.69	18.95	15.75	15.53	18.65	15.76	16.07	18.93	30.00	-11.05	-0.05	18.90	36.00	-17.10
<u>۵</u>	5815	163	AVG	106T	16.04	15.43	18.76	16.36	15.52	18.97	16.20	15.00	18.65			0.08	19.05	30.00	-10.95
		Tala	1. 7	00		400841		/ /			··· •					400		`	

Table 7-28. MIMO 160MHz BW (UNII) U Maximum Conducted Output Power (106 Tones)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 110 of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 110 of 236
			V 9.0 02/01/2019



MIMO Conducted Output Power Measurements (242 Tones)

						RU Index		Conducted	Conducted	Directional	Maxainn	Mayainn	
ţ	Freq [MHz]	Channel	Detector	Tones		61		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
d					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]		
ž	5180	36	AVG	242T	16.52	17.10	19.83	23.98	-4.15	-1.03	18.80	30.00	-11.20
	5200	40	AVG	242T	16.30	17.13	19.75	23.98	-4.23	-1.03	18.72	30.00	-11.28
nd	5240	48	AVG	242T	16.42	16.82	19.63	23.98	-4.34	-1.03	18.60	30.00	-11.40
a	5260	52	AVG	242T	16.25	16.95	19.62	23.98	-4.36	-0.28	19.34	30.00	-10.66
m	5280	56	AVG	242T	16.15	16.97	19.59	23.98	-4.39	-0.28	19.31	30.00	-10.69
N	5320	64	AVG	242T	16.48	17.28	19.91	23.98	-4.07	-0.28	19.63	30.00	-10.37
Î	5500	100	AVG	242T	16.45	16.87	19.68	23.98	-4.30	0.56	20.24	30.00	-9.76
Σ	5600	120	AVG	242T	16.71	17.08	19.91	23.98	-4.07	0.56	20.47	30.00	-9.53
5	5720	144	AVG	242T	16.81	16.79	19.81	23.98	-4.17	0.56	20.37	30.00	-9.63
N	5745	149	AVG	242T	16.54	16.84	19.70	30.00	-10.30	-0.05	19.65	36.00	-16.35
N	5785	157	AVG	242T	16.88	16.36	19.64	30.00	-10.36	-0.05	19.59	36.00	-16.41
-	5825	165	AVG	242T	16.83	16.26	19.56	30.00	-10.44	-0.05	19.51	36.00	-16.49
с С	5845	169	AVG	242T	17.14	16.68	19.93	-	-	0.08	20.01	30.00	-8.43
ž	5865	173	AVG	242T	17.06	16.72	19.90	-	-	0.08	19.98	30.00	-8.43
	5885	177	AVG	242T	17.36	16.53	19.98	-	-	0.08	20.06	30.00	-8.43

Table 7-29. MIMO 20MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

							RUI	ndex			Conducted	Conducted	Directional			
	Freq [MHz]	Channel	Detector	Tones		61			62		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p.
N					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Chine [GDinj	Ivial gill [GD]
ΪC	5190	38	AVG	242T	16.21	16.98	19.62	16.10	17.03	19.60	23.98	-4.36	-1.03	18.59	30.00	-11.41
≂ ÷	5230	46	AVG	242T	16.81	17.02	19.93	16.81	17.09	19.96	23.98	-4.02	-1.03	18.93	30.00	-11.07
5.2	5270	54	AVG	242T	16.66	17.15	19.92	16.61	17.13	19.89	23.98	-4.06	-0.28	19.64	30.00	-10.36
4 3	5310	62	AVG	242T	16.59	16.97	19.79	16.55	17.07	19.83	23.98	-4.15	-0.28	19.55	30.00	-10.45
	5510	102	AVG	242T	16.58	16.61	19.61	16.49	16.77	19.64	23.98	-4.34	0.56	20.20	30.00	-9.80
Υč	5590	118	AVG	242T	16.61	16.81	19.72	16.59	17.04	19.83	23.98	-4.15	0.56	20.39	30.00	-9.61
	5710	142	AVG	242T	16.61	16.58	19.61	16.54	16.67	19.62	23.98	-4.36	0.56	20.18	30.00	-9.82
Ющ	5755	151	AVG	242T	16.71	17.18	19.96	16.74	17.16	19.97	30.00	-10.03	-0.05	19.92	36.00	-16.08
~	5795	159	AVG	242T	17.04	16.78	19.92	17.07	16.77	19.93	30.00	-10.07	-0.05	19.88	36.00	-16.12
	5835	167	AVG	242T	16.87	16.58	19.74	16.97	16.43	19.72	-	-	0.08	19.82	30.00	-10.18
	5875	175	AVG	242T	16.75	16.63	19.70	16.81	16.50	19.67	-	-	0.08	19.78	30.00	-10.22

Table 7-30. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

									RU Index					Conducted	Conducted	Directional	Manualian	Max e.i.r.p.	e.i.r.p.
	Freq [MHz]	Channel	Detector	Tones		61			62			64		Power Limit	Power	Ant. Gain		Limit [dBm]	
ž 🕤					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil		wargin [ub]
≣ ≟	5210	42	AVG	242T	16.79	16.61	19.71	16.58	16.53	19.57	16.61	16.67	19.65	23.98	-4.27	-1.03	18.68	30.00	-11.32
8 is	5290	58	AVG	242T	16.71	17.19	19.97	16.62	17.13	19.89	16.57	17.35	19.99	23.98	-3.99	-0.28	19.71	30.00	-10.29
р м	5530	106	AVG	242T	16.66	16.48	19.58	16.54	16.58	19.57	16.67	17.15	19.93	23.98	-4.05	0.56	20.49	30.00	-9.51
a I	5610	122	AVG	242T	16.81	16.75	19.79	16.58	16.74	19.67	16.57	17.20	19.91	23.98	-4.07	0.56	20.47	30.00	-9.53
с В	5690	138	AVG	242T	16.78	16.48	19.64	16.67	16.47	19.58	16.72	16.82	19.78	23.98	-4.20	0.56	20.34	30.00	-9.66
	5775	155	AVG	242T	17.20	16.61	19.93	17.10	16.63	19.88	17.19	16.75	19.99	30.00	-10.01	-0.05	19.94	36.00	-16.06
	5855	171	AVG	242T	16.81	16.63	19.73	16.77	16.49	19.64	17.05	16.40	19.75			0.08	19.83	30.00	-10.17

Table 7-31. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (242 Tones)

	-								RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Maxaira	e.i.r.p.
. P 3	Freq [MHz]	Channel	Detector	Tones		61			62			64		Power Limit	Power	Ant. Gain		Limit [dBm]	
ΞĒ·					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil	Linit [ubiii]	wargin [ub]
<u>0</u> 8-	5250	50	AVG	242T	16.53	16.72	19.64	16.94	17.01	19.99	16.64	16.90	19.78	23.98	-3.99	-1.03	18.96	30.00	-11.04
Ξ 1	5570	114	AVG	242T	17.36	16.00	19.74	17.26	16.15	19.75	17.01	16.37	19.71	30.00	-10.25	-0.05	19.70	36.00	-16.30
	5815	163	AVG	242T	17.07	16.85	19.97	17.04	16.85	19.96	16.96	16.51	19.75	-		0.08	20.05	30.00	-9.95
		Tab	1. 7	20 1		4 0004		/ /1 1611								1040 -		`	

Table 7-32. MIMO 160MHz BW (UNII) L Maximum Conducted Output Power (242 Tones)

-									RU Index					Conducted	Conducted	Directional	Max e.i.r.p.	Manualian	e.i.r.p.
부 높	Freq [MHz]	Channel	Detector	Tones		61			62			64		Power Limit	Power	Ant. Gain			e.i.r.p. Margin [dB]
포호응					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Linit (ubinj	margin [ub]
0 8 6	5250	50	AVG	242T	16.63	16.90	19.78	16.75	17.06	19.92	16.35	17.07	19.74	23.98	-4.06	-1.03	18.89	30.00	-11.11
a E a	5570	114	AVG	242T	17.06	16.61	19.85	17.01	16.88	19.96	16.68	17.05	19.88	30.00	-10.04	-0.05	19.91	36.00	-16.09
	5815	163	AVG	242T	16.97	16.50	19.75	17.14	16.59	19.88	17.40	16.50	19.98		1	0.08	20.06	30.00	-9.94

Table 7-33. MIMO 160MHz BW (UNII) U Maximum Conducted Output Power (242 Tones)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 111 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 111 of 236
•			V 9.0 02/01/2019



MIMO Conducted Output Power Measurements (484 Tones)

						RU Index		Conducted	Conducted	Directional	Maxainn	Maxainn	
	Freq [MHz]	Channel	Detector	Tones		65		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
N					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Linit [abiii]	Margin [ub]
ŤΞ	5190	38	AVG	484T	15.30	16.03	18.69	23.98	-5.29	-1.03	17.66	30.00	-12.34
Ξŧ	5230	46	AVG	484T	15.41	15.70	18.57	23.98	-5.41	-1.03	17.54	30.00	-12.46
P P	5270	54	AVG	484T	15.30	15.86	18.60	23.98	-5.38	-0.28	18.32	30.00	-11.68
<u>4</u> ×	5310	62	AVG	484T	15.46	16.26	18.89	23.98	-5.09	-0.28	18.61	30.00	-11.39
	5510	102	AVG	484T	15.80	15.74	18.78	23.98	-5.20	0.56	19.34	30.00	-10.66
Υč	5590	118	AVG	484T	15.69	15.81	18.76	23.98	-5.22	0.56	19.32	30.00	-10.68
는 S	5710	142	AVG	484T	15.69	15.86	18.79	23.98	-5.19	0.56	19.35	30.00	-10.65
പ്പ	5755	151	AVG	484T	15.35	15.88	18.63	30.00	-11.37	-0.05	18.58	36.00	-17.42
~/	5795	159	AVG	484T	16.23	15.65	18.96	30.00	-11.04	-0.05	18.91	36.00	-17.09
	5835	167	AVG	484T	16.04	15.62	18.85	-	-	0.08	18.93	30.00	-11.07
	5875	175	AVG	484T	15.89	15.66	18.79	-	-	0.08	18.87	30.00	-11.13

Table 7-34. MIMO 40MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

							RUI	Index			Conducted	Conducted	Directional	Manualian	Manualian	
	Freq [MHz]	Channel	Detector	Tones		65			66		Power Limit	Power	Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
¥ 🕤					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Linit [abiii]	Margin [ub]
Ξ÷	5210	42	AVG	484T	15.84	15.67	18.77	15.69	15.66	18.69	23.98	-5.21	-1.03	17.74	30.00	-12.26
(80) wid	5290	58	AVG	484T	15.65	16.19	18.94	15.52	16.39	18.99	23.98	-4.99	-0.28	18.71	30.00	-11.29
, N	5530	106	AVG	484T	16.17	15.77	18.98	15.54	15.81	18.69	23.98	-5.00	0.56	19.54	30.00	-10.46
a E	5610	122	AVG	484T	15.69	15.53	18.62	15.58	15.87	18.74	23.98	-5.24	0.56	19.30	30.00	-10.70
5GH Bai	5690	138	AVG	484T	15.73	15.61	18.68	15.74	15.83	18.80	23.98	-5.18	0.56	19.36	30.00	-10.64
	5775	155	AVG	484T	16.27	15.55	18.94	16.24	15.31	18.81	30.00	-11.06	-0.05	18.89	36.00	-17.11
	5855	171	AVG	484T	15.80	15.62	18.72	16.07	15.42	18.77	-	-	0.08	18.85	30.00	-11.15
	Table 7.25 MIMO 80MHz BW (UNIII) Maximum Conducted Output Bower (484 Tables)															

Table 7-35. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (484 Tones)

-							RUI	ndex			Conducted	Conducted	Directional	Maxaira	Max e.i.r.p.	e.i.r.p.
₽ ≨	Freq [MHz]	Channel	Detector	Tones		65			66		Power Limit	Power	Ant. Gain		Limit [dBm]	
ΞΞ					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]		wargin [ub]
0 8 4	5250	50	AVG	484T	15.54	15.67	18.62	15.64	15.91	18.79	23.98	-5.19	-1.03	17.76	30.00	-12.24
Ξ.	5570	114	AVG	484T	16.38	15.13	18.81	16.13	15.36	18.77	30.00	-11.19	-0.05	18.76	36.00	-17.24
α a	5815	163	AVG	484T	15.98	15.62	18.81	15.96	15.44	18.72	-	-	0.08	18.89	30.00	-11.11

Table 7-36. MIMO 160MHz BW L (UNII) Maximum Conducted Output Power (484 Tones)

-							RU li	ndex			Conducted	Conducted	Directional		Max e.i.r.p.	e.i.r.p.
, ₽ 놓	Freq [MHz]	Channel	Detector	Tones		65			66		Power Limit	Power	Ant. Gain		Limit [dBm]	
문 술 응					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapuil		wargin [ub]
0 8 g	5250	50	AVG	484T	15.53	16.04	18.80	15.41	15.78	18.61	23.98	-5.18	-1.03	17.77	30.00	-12.23
а <u>с</u> н	5570	114	AVG	484T	15.97	15.76	18.88	15.68	15.62	18.66	30.00	-11.12	-0.05	18.83	36.00	-17.17
<u>۵</u>	5815	163	AVG	484T	15.98	15.40	18.71	16.40	15.43	18.95	-	-	0.08	19.03	30.00	-10.97

Table 7-37. MIMO 80MHz BW U (UNII) Maximum Conducted Output Power (484 Tones)

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MIMO Conducted Output Power Measurements (996 Tones)

						RU Index		Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	airn
	Freq [MHz]	Channel	Detector	Tones		67		Power Limit	Power	Ant. Gain	[dBm]	Limit [dBm]	e.i.r.p. Margin [dB]
F (ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Linic [ubiii]	
E S	5210	42	AVG	996T	14.72	14.87	17.81	23.98	-6.17	-1.03	16.78	30.00	-13.22
(80) wid	5290	58	AVG	996T	14.52	15.39	17.99	23.98	-5.99	-0.28	17.71	30.00	-12.29
) z (5530	106	AVG	996T	14.52	14.69	17.62	23.98	-6.36	0.56	18.18	30.00	-11.82
ar	5610	122	AVG	996T	14.74	14.60	17.68	23.98	-6.30	0.56	18.24	30.00	-11.76
5G Ba	5690	138	AVG	996T	14.75	14.85	17.81	23.98	-6.17	0.56	18.37	30.00	-11.63
	5775	155	AVG	996T	15.27	14.50	17.91	30.00	-12.09	-0.05	17.86	36.00	-18.14
	5855	171	AVG	996T	15.06	14.53	17.81	-	-	0.08	17.89	30.00	-12.11

Table 7-38. MIMO 80MHz BW (UNII) Maximum Conducted Output Power (996 Tones)

						RU Index		Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
, 우 훅	Freq [MHz]	Channel	Detector	Tones		67		Power Limit	Power	Ant. Gain	[dBm]	Limit [dBm]	
ΞΞŞ					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Linit [abiii]	
0 8 g	5250	50	AVG	996T	14.86	15.03	17.96	23.98	-6.02	-1.03	16.93	30.00	-13.07
a 🖸 🕻	5570	114	AVG	996T	15.02	14.31	17.69	30.00	-12.31	-0.05	17.64	36.00	-18.36
m	5815	163	AVG	996T	14.98	14.34	17.68	-	-	0.08	17.76	30.00	-12.24

Table 7-39. MIMO 160MHz BW (UNII) L Maximum Conducted Output Power (996 Tones)

2						RU Index		Conducted	Conducted	Directional	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
, 우 놓	Freq [MHz]	Channel	Detector	Tones		67		Power Limit	Power	Ant. Gain		Limit [dBm]	
ΞΞŞ					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[abiii]	Linic [abiii]	
5 S S	5250	50	AVG	996T	14.64	15.28	17.98	23.98	-6.00	-1.03	16.95	30.00	-13.05
ਭ 🖸 🎽	5570	114	AVG	996T	14.90	15.05	17.99	30.00	-12.01	-0.05	17.94	36.00	-18.06
2	5815	163	AVG	996T	15.36	14.20	17.83	-	-	0.08	17.91	30.00	-12.09

Table 7-40. MIMO 160MHz BW (UNII) U Maximum Conducted Output Power (996 Tones)

lz th)	Freg [MHz]	Channel	Detector	Tones		RU Index 67		Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p.
로 두 달					ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[dBm]	Limit [dBm]	Margin [dB]
0 8 ¢	5250	50	AVG	996T	14.74	15.20	17.99	23.98	-5.99	-1.03	16.96	30.00	-13.04
an 🚊 🕻	5570	114	AVG	996T	15.04	14.91	17.99	30.00	-12.01	-0.05	17.94	36.00	-18.06
<u> </u>	5815	163	AVG	996T	15.34	14.58	17.99	-	-	0.08	18.07	30.00	-11.93

Table 7-41. MIMO 160MHz BW (UNII) Maximum Conducted Output Power (996*2 Tones)

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Note:

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

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 16.81 dBm for Antenna 1 and 16.79 dBm for Antenna 2.

Antenna 1 + Antenna 2 = MIMO

(16.81 dBm + 16.79 dBm) = (47.97 mW + 47.75 mW) = 95.73 mW = 19.81 dBm

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 20.31 dBm with directional gain of -0.31dBi.

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

19.81 dBm + -1.03 dBi = 18.78 dBm

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

Test Overview and Limit

The spectrum analyzer was connected to the antenna terminal while the EUT was operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. Method SA-1, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, was used to measure the power spectral density.

In the 5.15 – 5.25GHz band, the maximum permissible power spectral density is 11dBm/MHz.

In the 5.25 – 5.35GHz and 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 – 5.855GHz band, the maximum permissible power spectral density is 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

Test Notes

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

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MIMO Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	26T	MCS0	6.17	6.33	9.26	11.00	-1.74
	5200	40	ax (20MHz)	26T	MCS0	7.75	7.82	10.79	11.00	-0.21
d 1	5240	48	ax (20MHz)	26T	MCS0	7.09	6.13	9.65	11.00	-1.35
Band 1	5190	38	ax (40MHz)	26T	MCS0	7.54	8.27	10.93	11.00	-0.07
_	5230	46	ax (40MHz)	26T	MCS0	8.12	7.63	10.89	11.00	-0.11
	5210	42	ax (80MHz)	26T	MCS0	6.97	6.46	9.73	11.00	-1.27
Band 1/2A	5210	50	ax (160MHz L)	26T	MCS0	6.65	7.11	9.90	11.00	-1.10
Ba 1/:	5210	50	ax (160MHz U)	26T	MCS0	6.92	7.32	10.13	11.00	-0.87
	5260	52	ax (20MHz)	26T	MCS0	7.25	6.80	10.04	11.00	-0.96
-	5280	56	ax (20MHz)	26T	MCS0	6.99	6.80	9.91	11.00	-1.09
d 2A	5320	64	ax (20MHz)	26T	MCS0	7.84	8.05	10.95	11.00	-0.05
Band	5270	54	ax (40MHz)	26T	MCS0	7.95	8.00	10.99	11.00	-0.01
	5310	62	ax (40MHz)	26T	MCS0	7.92	7.90	10.92	11.00	-0.08
	5290	58	ax (80MHz)	26T	MCS0	6.82	6.76	9.80	11.00	-1.20
	5500	100	ax (20MHz)	26T	MCS0	7.03	7.07	10.06	11.00	-0.94
	5600	120	ax (20MHz)	26T	MCS0	6.79	6.48	9.65	11.00	-1.35
	5720	144	ax (20MHz)	26T	MCS0	7.51	6.63	10.11	11.00	-0.89
	5510	102	ax (40MHz)	26T	MCS0	7.80	7.91	10.87	11.00	-0.13
SC	5590	118	ax (40MHz)	26T	MCS0	7.96	7.90	10.94	11.00	-0.06
Band	5710	142	ax (40MHz)	26T	MCS0	7.62	7.91	10.78	11.00	-0.22
Ba	5530	106	ax (80MHz)	26T	MCS0	6.34	6.75	9.56	11.00	-1.44
	5610	122	ax (80MHz)	26T	MCS0	6.28	6.40	9.35	11.00	-1.65
	5690	138	ax (80MHz)	26T	MCS0	7.19	6.54	9.89	11.00	-1.11
	5570	114	ax (160MHz L)	26T	MCS0	8.00	7.11	10.59	11.00	-0.41
	5570	114	ax (160MHz U)	26T	MCS0	7.75	7.32	10.55	11.00	-0.45

Table 7-42. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density	Margin [dB]
	5745	149	ax (20MHz)	26T	MCS0	4.79	4.77	7.79	30.00	-22.21
	5785	157	ax (20MHz)	26T	MCS0	5.09	4.26	7.70	30.00	-22.30
1d 3	5825	165	ax (20MHz)	26T	MCS0	5.68	4.55	8.16	30.00	-21.84
Band	5755	151	ax (40MHz)	26T	MCS0	5.84	5.52	8.69	30.00	-21.31
	5795	159	ax (40MHz)	26T	MCS0	5.85	4.90	8.41	30.00	-21.59
	5775	155	ax (80MHz)	26T	MCS0	4.95	3.89	7.46	30.00	-22.54

Table 7-43. Band 3 MIMO Conducted Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm/MHz]	Antenna-2 Power Density [dBm/MHz]	MIMO Summed Power Density [dBm/MHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]	Directional Antenna Gain [dBi]	EIRP Power Density [dBm/MHz]	Max EIRP Power Density [dBm/MHz]	Margin [dB]
Band 3/4	5845	169	ax (20MHz)	26T	MCS0	7.78	7.25	10.53	30.00	-19.47	0.08	10.61	14.00	-3.39
Pand 4	5865	173	ax (20MHz)	26T	MCS0	7.54	7.08	10.33			0.08	10.40	14.00	-3.60
Band 4	5885	177	ax (20MHz)	26T	MCS0	7.81	7.28	10.57			0.08	10.64	14.00	-3.36
Band 3/4	5835	167	ax (40MHz)	26T	MCS0	8.76	8.23	11.52	30.00	-18.48	0.08	11.59	14.00	-2.41
Band 4	5875	175	ax (40MHz)	26T	MCS0	8.56	8.38	11.48			0.08	11.56	14.00	-2.44
	5855	171	ax (80MHz)	26T	MCS0	7.37	6.71	10.06	30.00	-19.94	0.08	10.14	14.00	-3.86
Band 3/4	5815	163	ax (160MHz L)	26T	MCS0	7.35	6.79	10.09	30.00	-19.91	0.08	10.16	14.00	-3.84
	5815	163	ax (160MHz U)	26T	MCS0	7.85	6.75	10.34	30.00	-19.66	0.08	10.42	14.00	-3.58

Table 7-44. Band 4 MIMO Max e.i.r.p Power Spectral Density Measurements (26 Tones)

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	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	ax (20MHz)	242T	MCS0	4.67	4.24	7.47	11.00	-3.53
	5200	40	ax (20MHz)	242T	MCS0	4.37	4.23	7.31	11.00	-3.69
Band 1	5240	48	ax (20MHz)	242T	MCS0	5.03	4.15	7.62	11.00	-3.38
Ban	5190	38	ax (40MHz)	484T	MCS0	0.58	1.13	3.87	11.00	-7.13
	5230	46	ax (40MHz)	484T	MCS0	1.08	0.97	4.04	11.00	-6.96
	5210	42	ax (80MHz)	996T	MCS0	-3.09	-3.43	-0.25	11.00	-11.25
Ban d 1/2A	5250	50	ax (160MHz L)	996T	MCS0	-5.34	-4.84	-2.07	11.00	-13.07
	5260	52	ax (20MHz)	242T	MCS0	4.90	4.77	7.85	11.00	-3.15
	5280	56	ax (20MHz)	242T	MCS0	5.12	5.03	8.09	11.00	-2.91
Band 2A	5320	64	ax (20MHz)	242T	MCS0	4.88	5.22	8.06	11.00	-2.94
Bane	5270	54	ax (40MHz)	484T	MCS0	0.69	0.73	3.72	11.00	-7.28
	5310	62	ax (40MHz)	484T	MCS0	1.39	1.50	4.46	11.00	-6.54
	5290	58	ax (80MHz)	996T	MCS0	-2.95	-2.87	0.10	11.00	-10.90
	5500	100	ax (20MHz)	242T	MCS0	5.02	4.77	7.91	11.00	-3.09
	5600	120	ax (20MHz)	242T	MCS0	4.84	5.08	7.97	11.00	-3.03
	5720	144	ax (20MHz)	242T	MCS0	5.19	4.67	7.95	11.00	-3.05
	5510	102	ax (40MHz)	484T	MCS0	0.85	0.70	3.79	11.00	-7.21
Band 2C	5590	118	ax (40MHz)	484T	MCS0	0.78	0.81	3.81	11.00	-7.19
Ban	5710	142	ax (40MHz)	484T	MCS0	0.41	0.06	3.25	11.00	-7.75
	5530	106	ax (80MHz)	996T	MCS0	-3.68	-3.14	-0.39	11.00	-11.39
	5610	122	ax (80MHz)	996T	MCS0	-3.74	-3.16	-0.43	11.00	-11.43
	5690	138	ax (80MHz)	996T	MCS0	-3.21	-3.06	-0.12	11.00	-11.12
	5570	114	ax (160MHz L)	26T	MCS0	-5.25	-5.39	-2.31	11.00	-13.31

Table 7-45. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements (Full Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]		Summed MIMO Power Density [dBm]	Max Permissible Power Density	Margin [dB]
	5745	149	ax (20MHz)	242T	MCS0	2.09	1.96	5.03	30.00	-24.97
	5785	157	ax (20MHz)	242T	MCS0	2.23	1.60	4.93	30.00	-25.07
d 3	5825	165	ax (20MHz)	242T	MCS0	2.92	2.05	5.52	30.00	-24.48
Band	5755	151	ax (40MHz)	484T	MCS0	-1.77	-1.72	1.27	30.00	-28.73
	5795	159	ax (40MHz)	484T	MCS0	-0.99	-1.76	1.65	30.00	-28.35
	5775	155	ax (80MHz)	996T	MCS0	-5.46	-6.09	-2.75	30.00	-32.75

 Table 7-46. Band 3 MIMO Conducted Power Spectral Density Measurements (Full Tones)

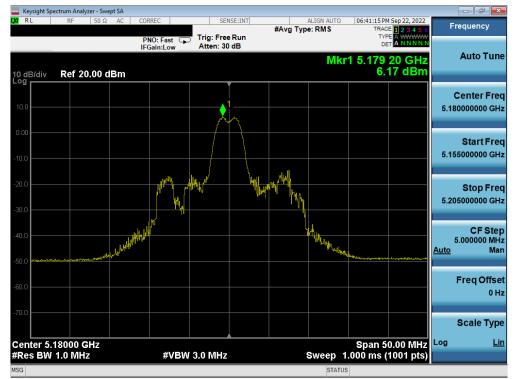
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm/MHz]	Antenna-2 Power Density [dBm/MHz]	MIMO Summed Power Density [dBm/MHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]	Directional Antenna Gain [dBi]	EIRP Power Density [dBm/MHz]	Max EIRP Power Density [dBm/MHz]	Margin [dB]
Band 3/4	5845	169	ax (20MHz)	242T	MCS0	5.42	5.57	8.51	30.00	-21.49	0.08	8.59	14.00	-5.41
Band 4	5865	173	ax (20MHz)	242T	MCS0	5.11	5.50	8.32			0.08	8.40	14.00	-5.60
Dallu 4	5885	177	ax (20MHz)	242T	MCS0	5.49	5.48	8.50			0.08	8.58	14.00	-5.42
Band 3/4	5835	167	ax (40MHz)	484T	MCS0	1.45	1.79	4.63	30.00	-25.37	0.08	4.71	14.00	-9.29
Band 4	5875	175	ax (40MHz)	484T	MCS0	1.49	1.66	4.59			0.08	4.67	14.00	-9.33
Band 3/4	5855	171	ax (80MHz)	996T	MCS0	-2.84	-2.73	0.22	30.00	-29.78	0.08	0.30	14.00	-13.70
Dan0 3/4	5815	163	ax (160MHz)	996T	MCS0	-5.06	-6.92	-2.88	30.00	-32.88	0.08	-2.80	14.00	-16.80
	5815	163	, ,						30.00					L

Table 7-47. Band 4 MIMO Max e.i.r.p Power Spectral Density Measurements (Full Tones)

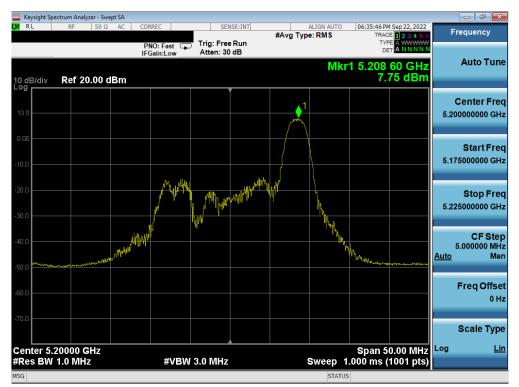
FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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MIMO Antenna-1 Power Spectral Density Measurements (26 Tones)



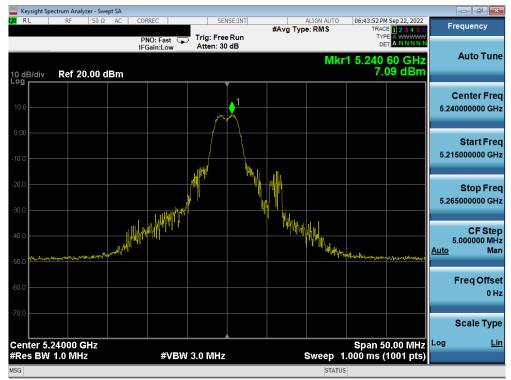
Plot 7-151. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



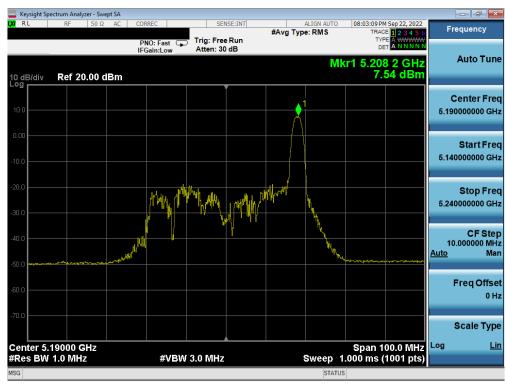
Plot 7-152. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-153. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



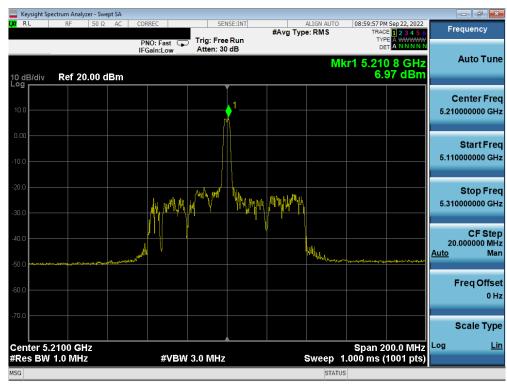
Plot 7-154. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 110 of 226
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	<u>.</u>	·	V 9.0 02/01/2019





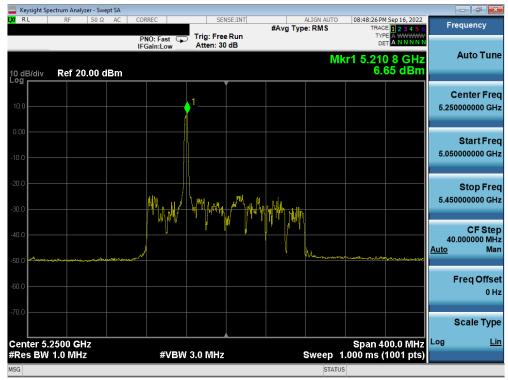
Plot 7-155. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



Plot 7-156. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 100 of 000
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 120 of 236
	<u>.</u>	·	V 9.0 02/01/2019





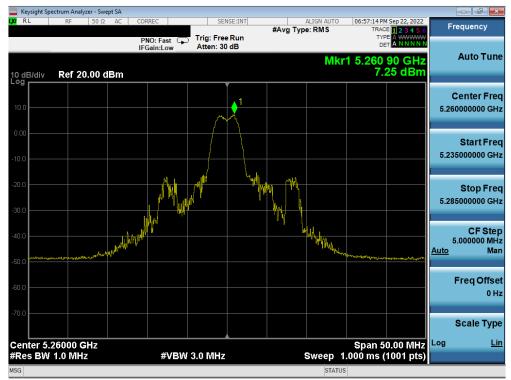
Plot 7-157. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)



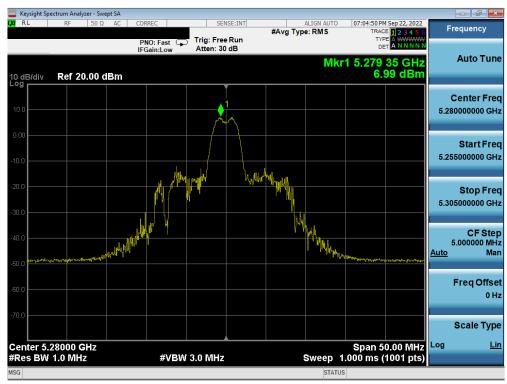
Plot 7-158. Power Spectral Density Plot MIMO ANT1 (80MHz BW U 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 101 of 000
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 121 of 236
•	<u>.</u>	·	V 9.0 02/01/2019





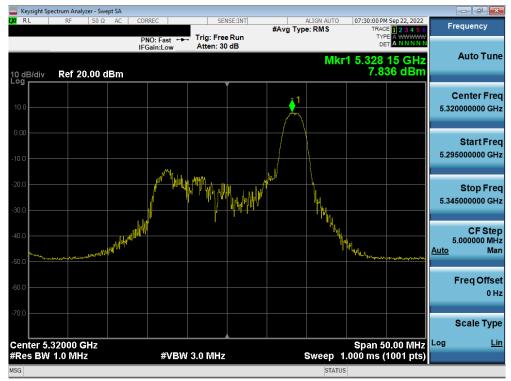
Plot 7-159. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



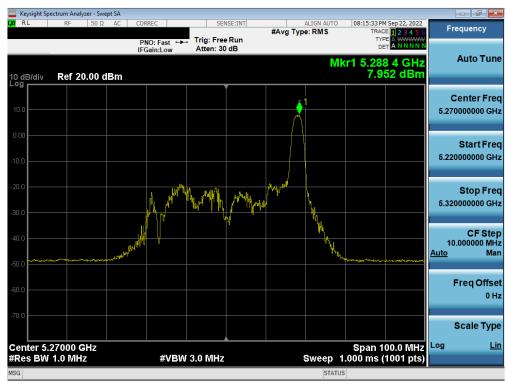
Plot 7-160. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 100 of 000
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 122 of 236
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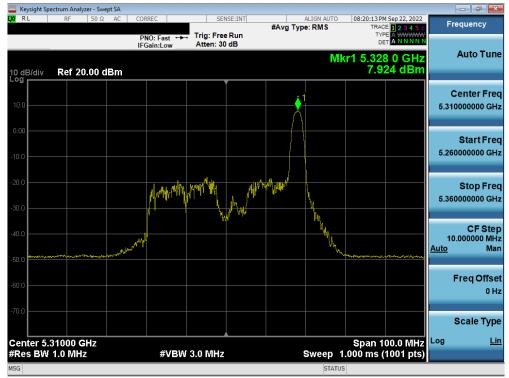
Plot 7-161. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



Plot 7-162. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 102 of 026
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 123 of 236
	<u>.</u>	·	V 9.0 02/01/2019





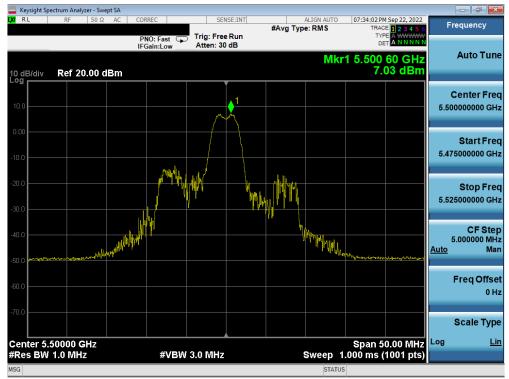
Plot 7-163. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



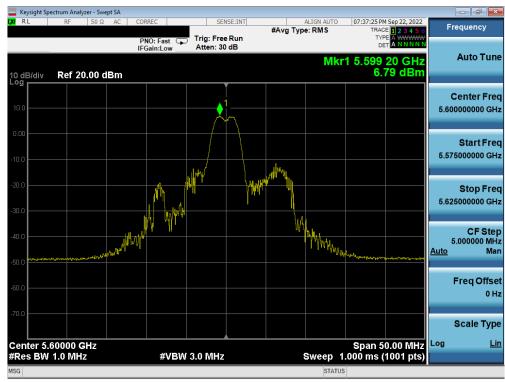
Plot 7-164. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 124 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 124 of 236
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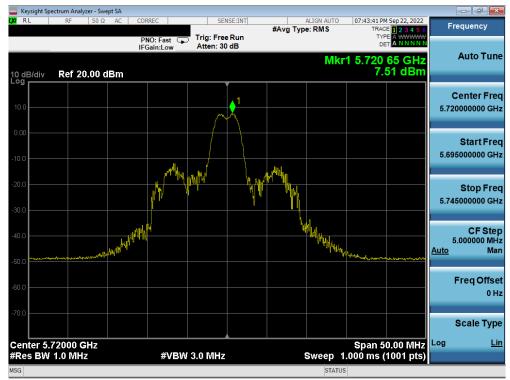
Plot 7-165. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 100)



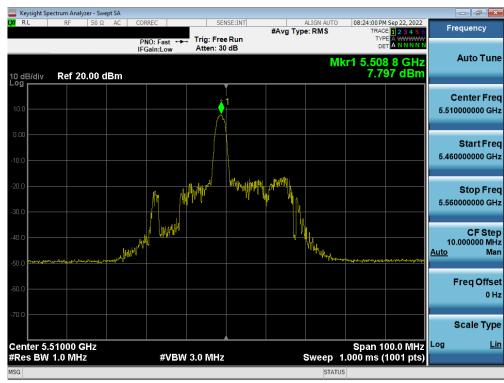
Plot 7-166. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 105 of 006
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 125 of 236
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Plot 7-167. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 144)



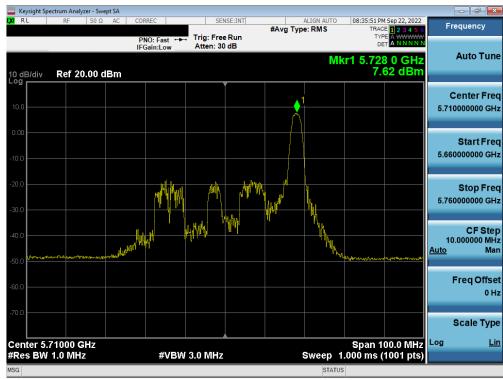
Plot 7-168. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Daga 106 at 006
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 126 of 236
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Plot 7-169. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 118)



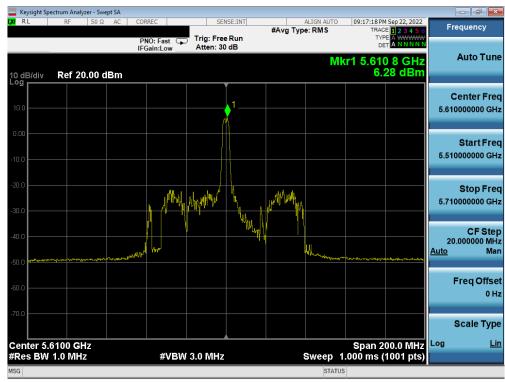
Plot 7-170. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dege 107 of 000
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 127 of 236
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	ctrum Analyzer - Swe										o X
L <mark>XI</mark> RL	RF 50 Ω	AC CO	RREC	SEN	ISE:INT	#Avg Typ	ALIGN AUT		4 Sep 22, 2022	Freque	ncy
10 dB/div	Ref 20.00 c	IF	NO:Fast ⊂⊾ Gain:Low	Trig: Free Atten: 30		#*** 9 *}		/ikr1 5.52		Auto	o Tune
10.0					1					Cente 5.5300000	er Freq 000 GHz
-10.0										Sta 5.4300000	rt Freq 000 GHz
-20.0				MAYWAY	h Wyryr My	Multu				Sto 5.6300000	p Freq 000 GHz
-40.0	montom						Holder		بالاسمير ومرواد ومعالي	C 20.0000 <u>Auto</u>	F Step 00 MHz Man
-60.0										Freq	Offset 0 Hz
Center 5.5	300 GHz							Span 2	00.0 MHz		e Type <u>Lin</u>
#Res BW			#VBW	3.0 MHz			Sweep	1.000 ms (1001 pts)		
MSG							STA				

Plot 7-171. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 106)



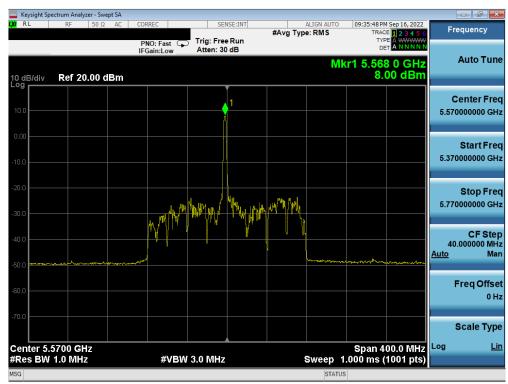
Plot 7-172. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Daga 100 of 000
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 128 of 236
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Plot 7-173. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 138)



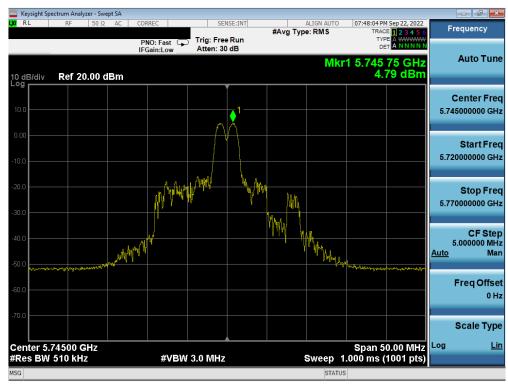
Plot 7-174. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - 26 Tones (UNII Band 2C) - Ch. 114)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 100 of 000
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 129 of 236
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	ctrum Analyzer - Swept SA								
LXIRL	RF 50 Ω AC			NSE:INT	#Avg Ty	ALIGN AUTO	TRACE	1 2 3 4 5 6	Frequency
10 dB/div Log	Ref 20.00 dBm	PNO: Fast 🖵 IFGain:Low	Trig: Free Atten: 30			N	DET /kr1 5.648	0 GHz 7 dBm	Auto Tune
10.0						1			Center Freq 5.570000000 GHz
-10.0									Start Freq 5.370000000 GHz
-20.0		HANN HANN	Ant har	Mary Mary	Munan				Stop Freq 5.770000000 GHz
-40.0		nature material and the second			1 1 J	here	when a fact from the same star	yl i djenger, agi Tavle	CF Step 40.000000 MHz <u>Auto</u> Man
-60.0									Freq Offset 0 Hz
-70.0 Center 5.5	i700 GHz						Span 40	0.0 MHz	Scale Type
#Res BW		#VBW	/ 3.0 MHz			Sweep	1.000 ms (1	001 pts)	
MSG						STA			

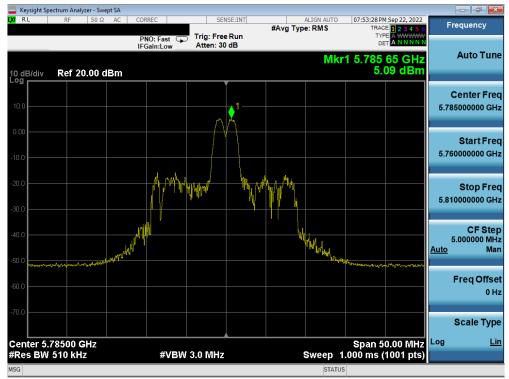
Plot 7-175. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax - 26 Tones (UNII Band 2C) - Ch. 114)



Plot 7-176. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 120 of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 130 of 236
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Plot 7-177. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)



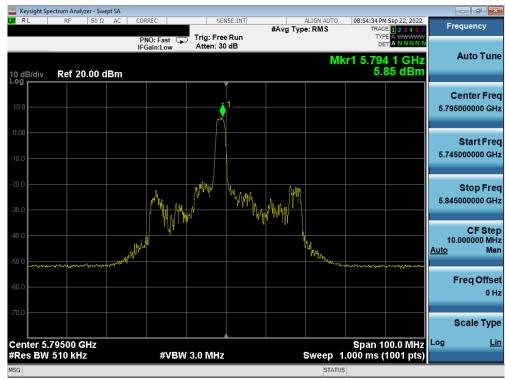
Plot 7-178. Power Spectral Density Plot MIMO ANT1 (20 MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 101 of 000	
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 131 of 236	
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Plot 7-179. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)



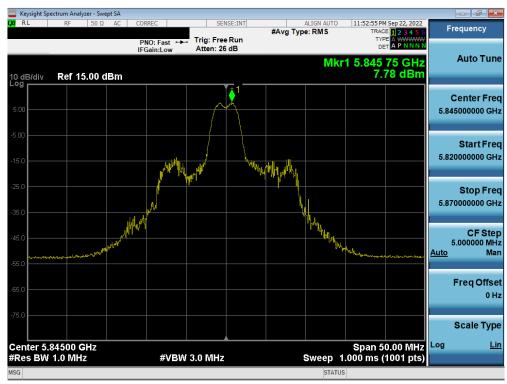
Plot 7-180. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 122 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 132 of 236
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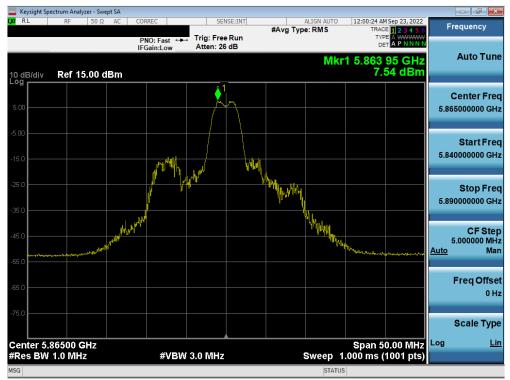
Plot 7-181. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)



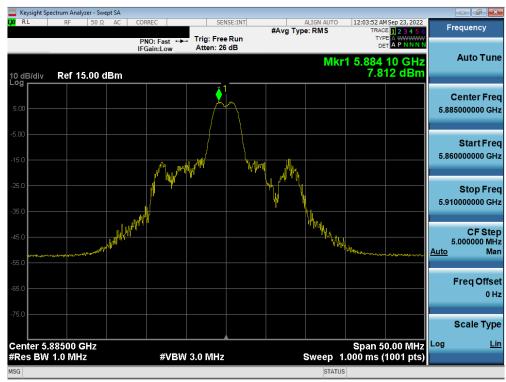
Plot 7-182. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 122 of 226
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Plot 7-183. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 173)



Plot 7-184. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 124 of 226
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Plot 7-185. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 167)



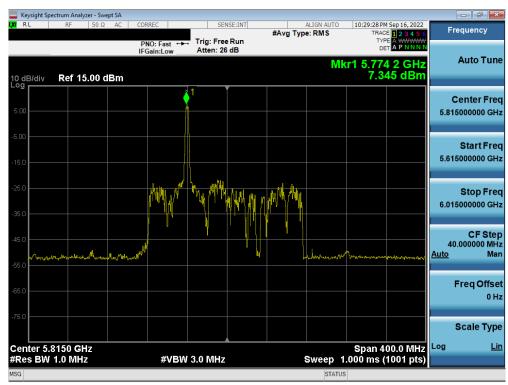
Plot 7-186. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 4) – Ch. 175)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 125 of 226
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Plot 7-187. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 171)



Plot 7-188. Power Spectral Density Plot MIMO ANT1 (160MHz BW (L) 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dege 126 of 226	
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Plot 7-189. Power Spectral Density Plot MIMO ANT1 (160MHz BW (U) 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)

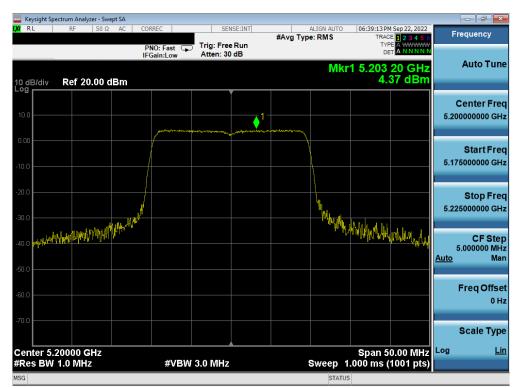
FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 127 of 226	
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MIMO Antenna-1 Power Spectral Density Measurements (Full Tones)



Plot 7-190. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 36)



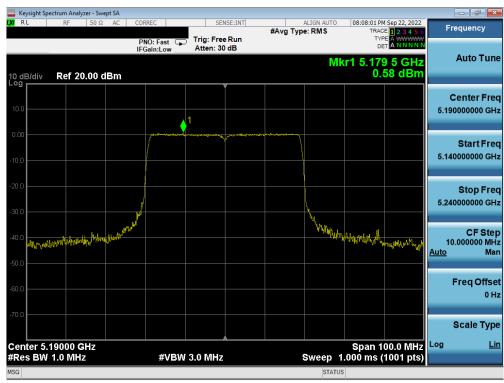
Plot 7-191. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-192. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 48)



Plot 7-193. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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			V 9.0 02/01/2019	



	ectrum Analyzer - Swep										
L <mark>XI</mark> RL	RF 50 Ω	AC COR	REC	SEN	ISE:INT	#Avg Typ	ALIGN AUTO		E 1 2 3 4 5 6	Fr	equency
	_		IO: Fast 🕞 Bain:Low	Trig: Free Atten: 30		• //		TYF De			Auto Tune
10 dB/div Log	Ref 20.00 di	Bm					Μ	kr1 5.21 1.	4 9 GHz 08 dBm		Auto Tune
				ľ í						c	enter Freq
10.0			▲1							5.23	0000000 GHz
0.00			- mandana	and the second s	personan						Start Freq
-10.0										5.18	0000000 GHz
-20.0											Oton Ener
-30.0		J					ų.,			5.28	Stop Freq
-30.0	nivitalianthination	Man Mar					M Workson	mmulthing	44MmmWhan		CF Step
-50.0										10 <u>Auto</u>	.000000 MHz Man
-30.0											Freq Offset
-60.0											0 Hz
-70.0											
											Scale Type
	23000 GHz						_	Span 1	21 111 2.00	Log	<u>Lin</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz				1.000 ms (1001 pts)		
MSG							STATU	S			

Plot 7-194. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 46)



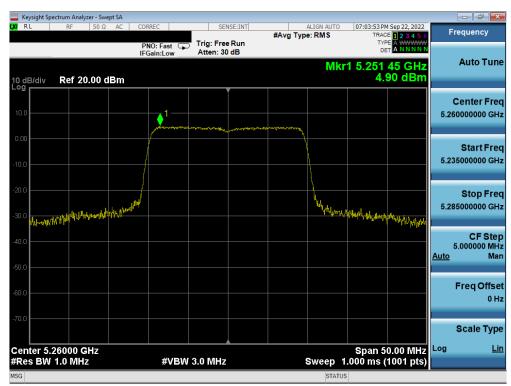
Plot 7-195. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 42)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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Keysight Spectrum Analyzer - Swept SA								
LXX RL RF 50Ω AC	CORREC	SENSE:INT	#Avg Typ	ALIGN AUTO e: RMS		Sep 16, 2022	Frequ	iency
		rig: Free Run Atten: 30 dB		Mł	TYP DE (r1 5.236	4 GHz	Au	ito Tune
10 dB/div Ref 20.00 dBm					-5.3	34 dBm		
10.0								iter Freq 0000 GHz
0.00								
-10.0	eproprocedul approximation	verified hourses	monag					art Freq 0000 GHz
-20.0								top Freq 0000 GHz
-30.0 -40.0	~~~				Andreh Marter Annon			CF Step 0000 MHz
-50.0						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>Auto</u>	Man
-60.0							Fre	q Offset 0 Hz
-70.0							Sci	ale Type
Center 5.2500 GHz #Res BW 1.0 MHz	#VBW 3.1			Duroon 4	Span 4 .000 ms (00.0 191112	Log	Lin
#Res BW 1.0 MHZ	#VBW 3.			sweep 1	`	roor pts)		

Plot 7-196. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - Full Tones (UNII Band 1/2A) - Ch. 50)



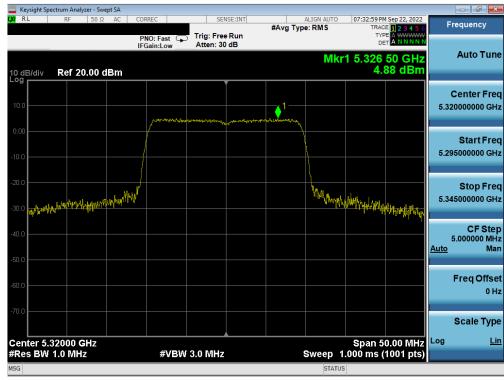
Plot 7-197. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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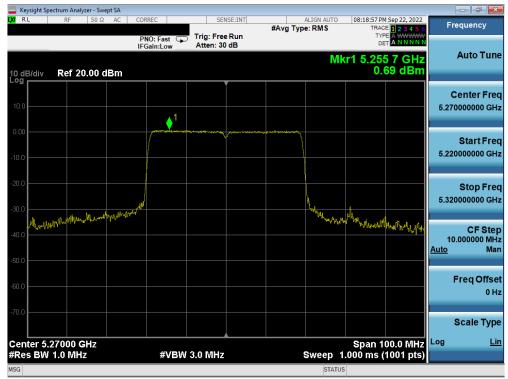
Plot 7-198. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 56)



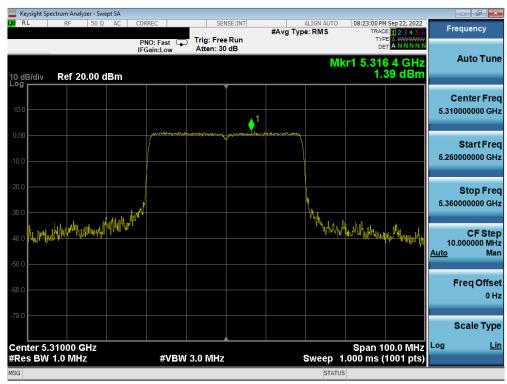
Plot 7-199. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 142 of 226	
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Plot 7-200. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 54)



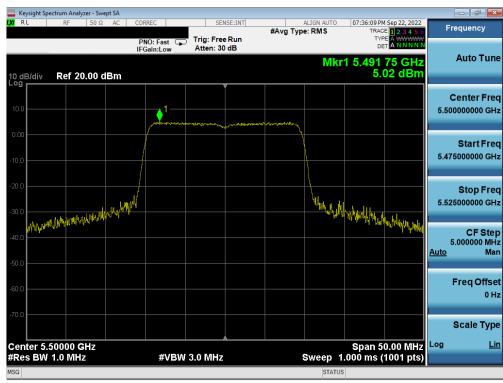
Plot 7-201. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 142 of 226	
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 143 of 236	
	-	·	V 9.0 02/01/2019	



	trum Analyzer - Swe	pt SA								
L <mark>XI</mark> RL	RF 50 Ω	AC COF	REC		ISE:INT	#Avg Typ	ALIGN AUTO	TRACI	Sep 22, 2022	Frequency
10 dB/div	Ref 20.00 d	IFC	Ю: Fast ⊊ Sain:Low	Trig: Free Atten: 30			М	₀₀ kr1 5.251	8 GHz 5 dBm	Auto Tur
10.0			<u>، 1</u>							Center Fre 5.290000000 GF
-10.0				-marana	phalmententen	and marked a				Start Fre 5.190000000 GH
-20.0										Stop Fre 5.390000000 GF
-40.0	nth your and your and the second states	ant more that					I III	Wholeshinghing	www.	CF Ste 20.000000 M⊦ <u>Auto</u> Ma
-60.0										Freq Offse 0 F
-70.0										Scale Typ
Center 5.2								Span 2	00.0 MHz	Log <u>L</u> i
#Res BW 1	I.U IVIHZ		#VBW	3.0 MHz				1.000 ms (′	iout pts)	
MSG							STATU	JS		

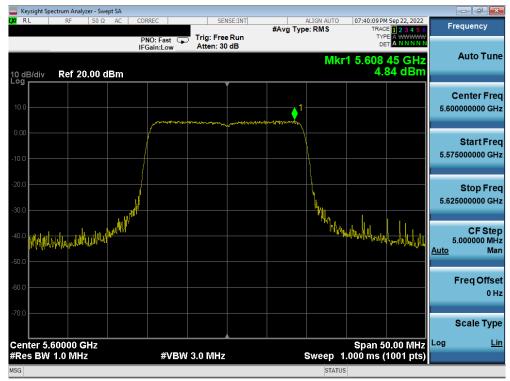
Plot 7-202. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 58)



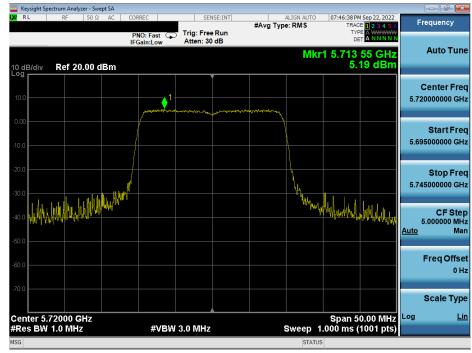
Plot 7-203. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 111 of 220
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Plot 7-204. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 120)



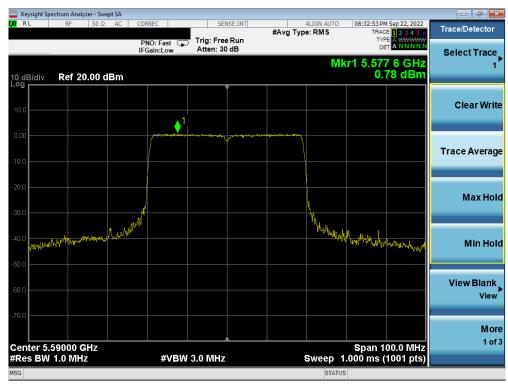
Plot 7-205. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 145 of 226
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	ectrum Analyzer - Swe										- 🖻 🗙
LX/RL	RF 50 Ω	AC COI	RREC	SEN	ISE:INT	#Avg Ty	ALIGN AUTO pe: RMS		E 1 2 3 4 5 6	Fre	equency
			NO: Fast 🖵 Gain:Low	Trig: Free Atten: 30				TYF De			A
10 dB/div Log	Ref 20.00 c	IBm					M	kr1 5.519 0.	95 GHz 85 dBm		Auto Tune
					7					С	enter Freq
10.0						<u>1</u>				5.510	0000000 GHz
0.00			por sources,		manne	~	\				
							}			5 400	Start Freq
-10.0										5.460	000000 GHz
-20.0											Stop Freq
		ļ								5.560	0000000 GHz
-30.0	Manandana	how whether the					Hayer Markey	Napon Martinyary	hypersection	- 40	CF Step
-50.0										Auto	Man
										F	Freq Offset
-60.0											0 Hz
-70.0											
											Scale Type
	51000 GHz							Span 1	00.0 MHz	Log	Lin
#Res BW	1.0 MHz		#VBW	3.0 MHz			Sweep	1.000 ms (1001 pts)		
MSG							STATU	JS			

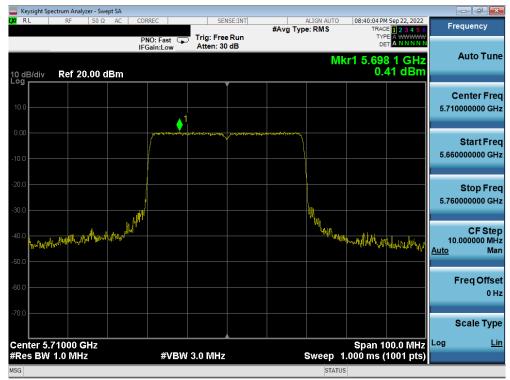
Plot 7-206. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 102)



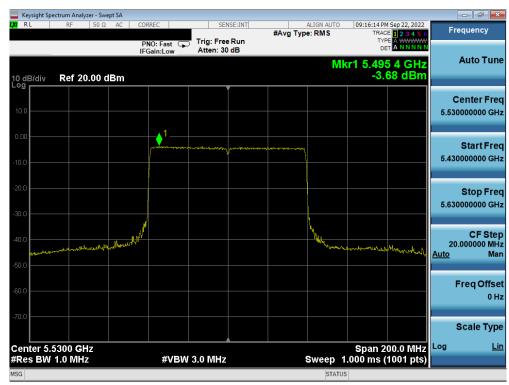
Plot 7-207. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 118)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 146 of 026
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 146 of 236
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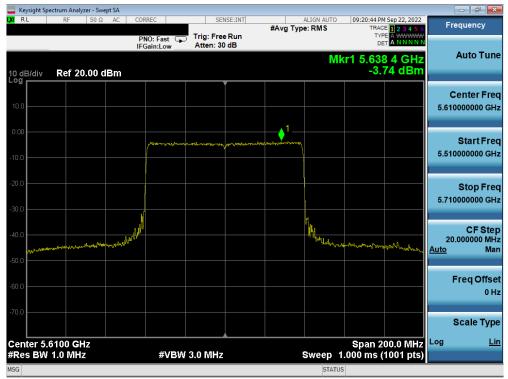
Plot 7-208. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 142)



Plot 7-209. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 117 of 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 147 of 236
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Plot 7-210. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 122)



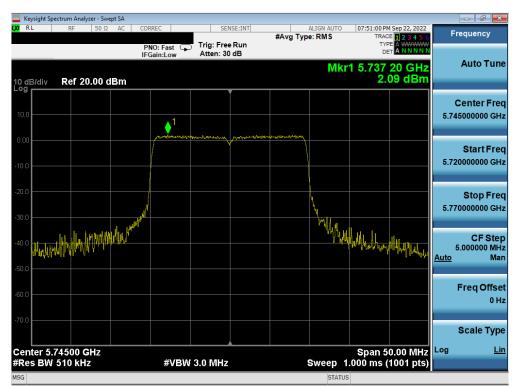
Plot 7-211. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 140 of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 148 of 236
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Keysight Spectrum Analyzer - Swept SA					
X R L RF 50 Ω AC			ALIGN AUTO	09:21:34 PM Sep 16, 2022 TRACE 1 2 3 4 5 6 TYPE A WWWW	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 🖵 Trig: Fre IFGain:Low Atten: 3		Mk	cr1 5.602 0 GHz -5.39 dBm	Auto Tune
10.0					Center Freq 5.570000000 GHz
-10.0	herenantran	My marine and marked			Start Freq 5.370000000 GHz
-20.0					Stop Freq 5.770000000 GHz
-40.0			hyperson	an for the state of the state o	CF Step 40.000000 MHz <u>Auto</u> Man
-60.0					Freq Offset 0 Hz
Center 5.5700 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz		Sween_1	Span 400.0 MHz .000 ms (1001 pts)	Scale Type Log <u>Lin</u>
			STATUS		

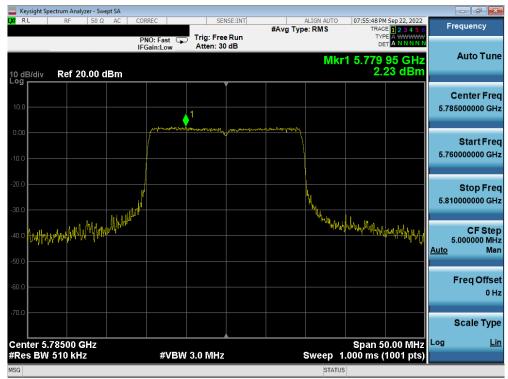
Plot 7-212. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 114)



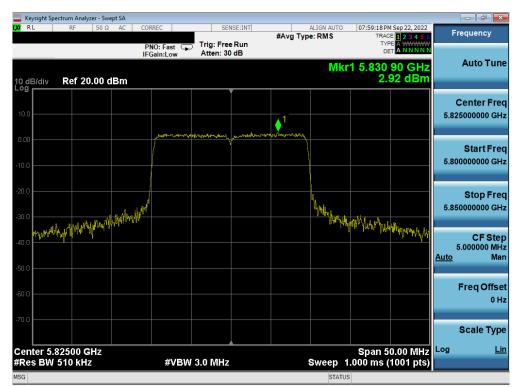
Plot 7-213. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 140 of 220
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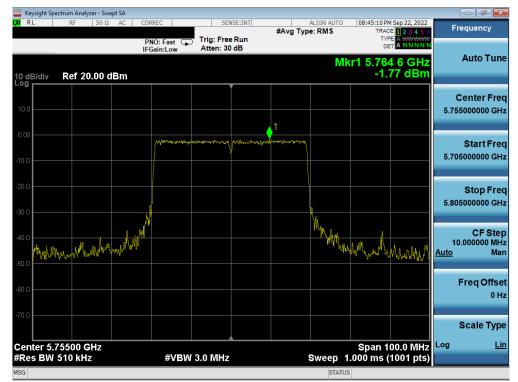
Plot 7-214. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 157)



Plot 7-215. Power Spectral Density Plot MIMO ANT1 (20 MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 150 of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 150 of 236
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Plot 7-216. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 151)



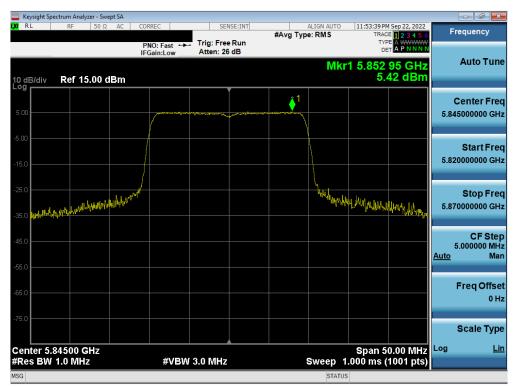
Plot 7-217. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 151 of 226
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Plot 7-218. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 155)



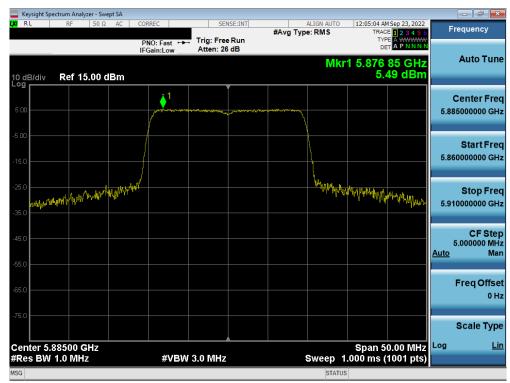
Plot 7-219. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 452 of 220
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 152 of 236
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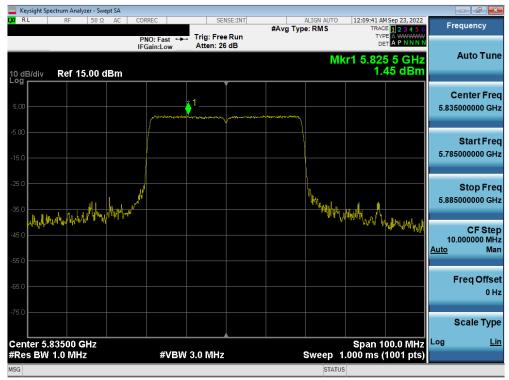
Plot 7-220. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 173)



Plot 7-221. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 152 of 226
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Plot 7-222. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 3/4) - Ch. 167)



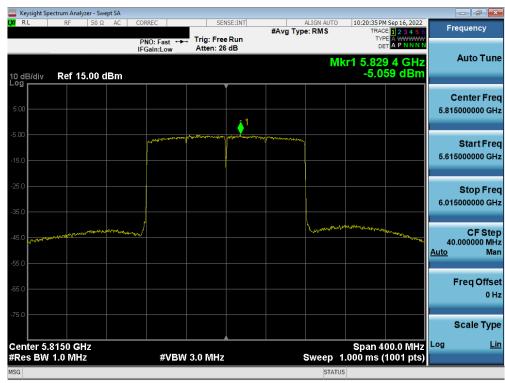
Plot 7-223. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 154 of 226
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	ectrum Analyzer - Swe										
LXU RL	RF 50 Ω	AC CO	RREC	SEI	ISE:INT	#Avg Typ	ALIGN AUTO		E 1 2 3 4 5 6	Fr	equency
			NO: Fast ↔ Gain:Low	, Trig: Free Atten: 26			M	DE kr1 5.82			Auto Tune
10 dB/div Log	Ref 15.00 c	IBm						-2.	84 dBm		
5.00			▲ 1								Center Freq 5000000 GHz
-5.00			promonente anno esta a	ym	pogener Ascenedity	a lanakan karan				5.75	Start Freq 5000000 GHz
-25.0							¥.,			5.95	Stop Freq 5000000 GHz
	p-shen the often from the second	bar William					Mp Ward	WaynerAnthe	White	20 <u>Auto</u>	CF Step 0.000000 MHz Man
-55.0											Freq Offset 0 Hz
-75.0											Scale Type
	8550 GHz							Span 2	00.0 MHz	Log	<u>Lin</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz				1.000 ms (1001 pts)		
MSG							STATU	S			

Plot 7-224. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 171)

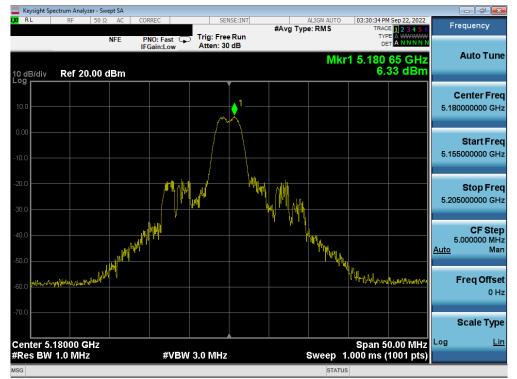


Plot 7-225. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)

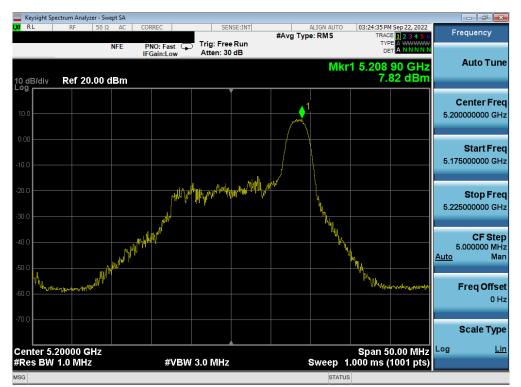
FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 155 of 226
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MIMO Antenna-2 Power Spectral Density Measurements (26 Tones)



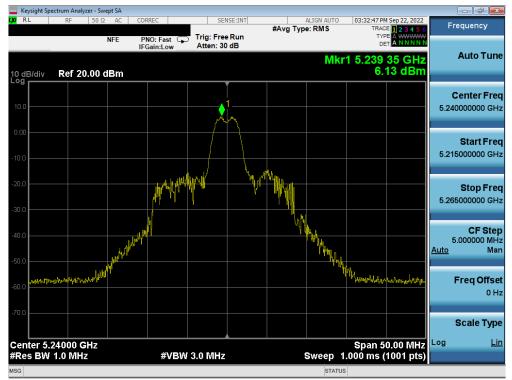
Plot 7-226. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



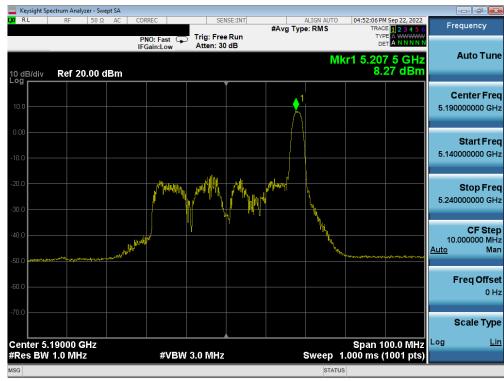
Plot 7-227. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS916U	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 156 of 226
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Plot 7-228. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



Plot 7-229. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Daga 157 of 026
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Plot 7-230. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



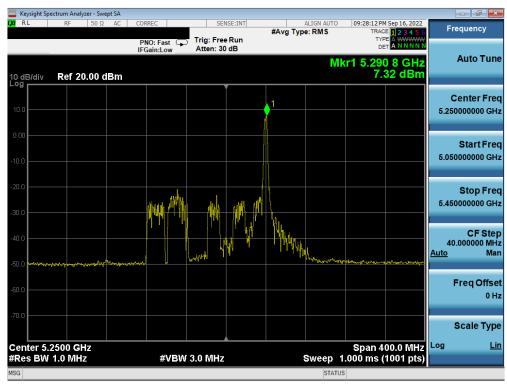
Plot 7-231. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dega 159 of 220	
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 158 of 236	
	<u>.</u>	·	V 9.0 02/01/2019	





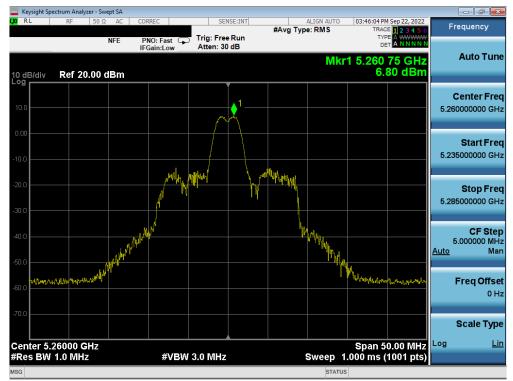
Plot 7-232. Power Spectral Density Plot MIMO ANT2 (160MHz BW 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)



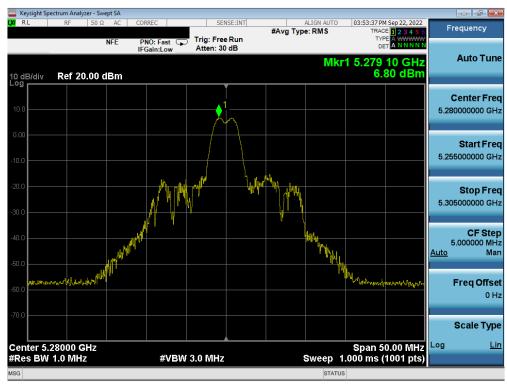
Plot 7-233. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 150 of 000
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Plot 7-234. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



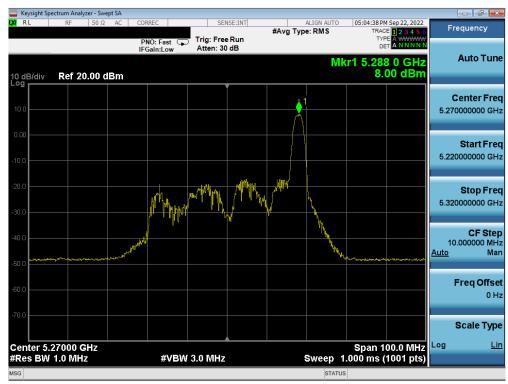
Plot 7-235. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 160 of 226
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Plot 7-236. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



Plot 7-237. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 161 of 226
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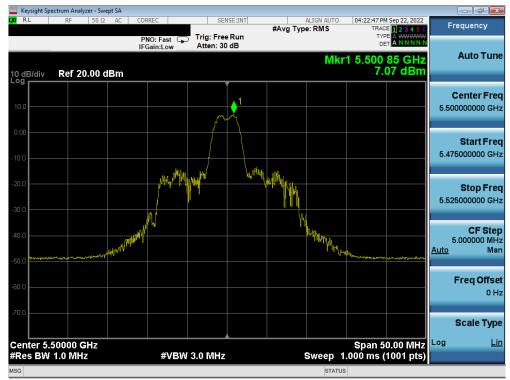
Plot 7-238. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



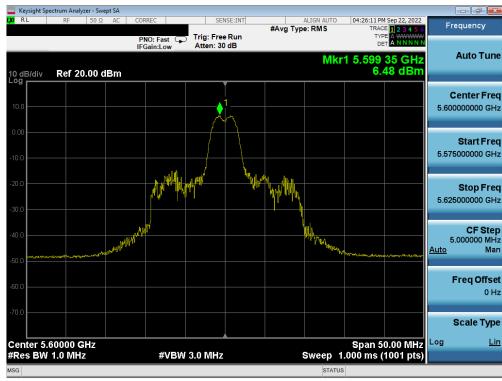
Plot 7-239. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 162 of 226	
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Plot 7-240. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 100)



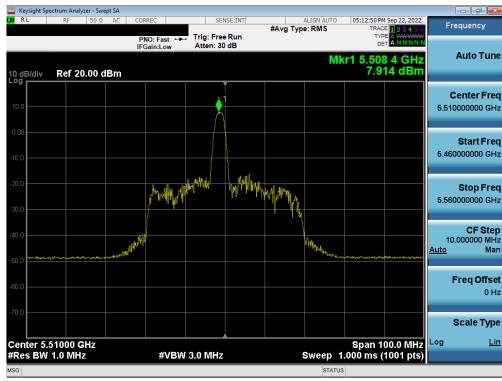
Plot 7-241. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 162 of 226
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Plot 7-242. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 144)



Plot 7-243. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Daga 164 at 226
1M2209010097-14.A3L	09/02/2022-11/08/2022	Portable Handset	Page 164 of 236
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Plot 7-244. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



Plot 7-245. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Daga 165 of 226
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🔤 Keysight Spectrum Analyzer - Swept SA 🚽					
LXI RL RF 50Ω AC			ALIGN AUTO g Type: RMS	TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast Fi IFGain:Low Atten:	ree Run 30 dB	N	Akr1 5.530 8 GHz 6.75 dBm	Auto Tune
10.0		1			Center Freq 5.530000000 GHz
-10.0					Start Freq 5.430000000 GHz
-20.0	ALANA AN ANA ALANA		/*/w		Stop Freq 5.630000000 GHz
-40.0	advard		hurm	uhu/www.uhamwenyman-uhaus-shi	CF Step 20.000000 MHz <u>Auto</u> Man
-60.0					Freq Offset 0 Hz
-70.0 Center 5.5300 GHz				Span 200.0 MHz	Scale Type
#Res BW 1.0 MHz	#VBW 3.0 MH	z	Sweep	1.000 ms (1001 pts)	

Plot 7-246. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 106)



Plot 7-247. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMS916U	element	element MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dage 166 of 226	
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