

Keysight Spectrum Analyzer - Occupied	d BW						
LX RL RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO	06:08:52 PM	May 18, 2021	Trac	e/Detector
		Center Freq: 5.7850000	0 GHz	Radio Std: I	None	mue	c/Detector
	#FGain:Low	#Atten: 20 dB		Radio Devic	e: BTS		
	#II Galli.LOW						
10 dB/div Ref 20.00 dl	Bm						
Log							
10.0							
0.00							Jear write
-10.0						_	
		white showing .	honor .				
-20.0	1 million						
-30.0							Average
-40.0			<u>\</u>				
50.0			walk the second				
	1 Jun -		W. WAR	storn .			
-60.0 have have have a start of the second s				- Marthala	William Provident		Max Hold
-70.0							
Center 5.78500 GHz				Span 50	.00 MHz		
#Res BW 100 kHz		#VBW_300 kHz	4	Sweep	4.8 ms		Min Hold
		_					
Occupied Bandwi	dth	Total Pov	ver 3.4	dBm			
-	16 102 MH	7					Detector
							Peak
Transmit Freg Error	-59.460 kl	tz % of OBW	Power 99	.00 %		Auto	Man
	001100 10						
x dB Bandwidth	16.33 MI	lz xdB	-6.	00 dB			
MSG			STATU	5			

Plot 7-236. 6dB Bandwidth Plot MIMO (20MHz 802.11a (UNII Band 3) - Ch. 157)



Plot 7-237. 6dB Bandwidth Plot MIMO (20MHz 802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager			
Test Report S/N: Test Dates: 1M2104070032-14.A3L 04/12/2021-06/02/2021		EUT Type:	Dage 142 of 500			
		Portable Handset	Page 142 01 509			
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Keysight Spectrum Analyzer - Occupied	BW						- F 🗙
LXI RL RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	11:47:36 PI	M May 17, 2021	Trac	e/Detector
	Ce	enter Freq: 5.745000000 G	Hz Hald: 100/100	Radio Std:	None	IIac	erbelector
	#IEGain:Low #A	ig. Free Run Avg	Hold. 100/100	Radio Dev	ice: BTS		
	#IFGdIII.LOW #/			Tradio Det			
10 dB/div Ref 20.00 dB	sm						
Log							
10.0							01
0.00							clear write
10.0						_	
10.0	weakerfrinkinger	monthly more from the	41				
-20.0		V					
-30.0			_ <u>\</u>				Average
-40.0	and water		Way				
TO O A A A A A A A A A A A A A A A A A A	Yw -		- willing the	Wood I.			
-5U.U				- Walking here	WWWWWWWWW		
-60.0							Max Hold
-70.0							
Center 5.74500 GHz				Span 5	0.00 MHz		
#Res BW 100 kHz		#VBW 300 kHz		Swee	p 4.8 ms		Min Hold
Occupied Bandwid	ith	Total Power	7.58	3 dBm			
	7 000 1411						
1	7.603 MHZ						Detector
	50 (07)						Peak►
Transmit Freq Error	-52.437 kHz	% of OBW P	ower 99	9.00 %		Auto	<u>Man</u>
x dB Bandwidth	13 21 MHz	x dB	-6	00 dB			
		A dib					
MCC			STATU	c			
MSG			STATU	5			

Plot 7-238. 6dB Bandwidth Plot MIMO (20MHz 802.11n (UNII Band 3) - Ch. 149)



Plot 7-239. 6dB Bandwidth Plot MIMO (20MHz 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMF711U	PCTEST [®] Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 142 of 500	
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Keysight Spectrum Analyzer - Occupied B	W						
X RL RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	11:48:55 PI	M May 17, 2021	Trac	e/Detector
	Cente	Free Run Avail	1z Hold: 100/100	Radio Std:	None		
	#IFGain:Low #Atte	n: 20 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dB	m		-				
10.0							Clear Write
0.00							
-10.0	1	La martile de la					
-20.0	And all the fill and the second se		Pro				
-30.0							Average
10.0	المحمد		When.				
-40.0	-WW		WVVVVTIWN .				
-50.0			- 10 M M	Why hybridge			
-60.0 minuter Martine Martine				- THINKY	- Million Brillion		Max Hold
-70.0							maxinoid
10.0							
Center 5.82500 GHz				Span 5	0.00 MHz		
#Res BW 100 kHz	\$	#VBW 300 kHz		Swee	p 4.8 ms		Min Hold
							Mill Hold
Occupied Bandwid	th	Total Power	6.97	′ dBm		_	
	7 500 MUL-						
	7.302 IVITIZ						Detector
Transmit Frag Error	40 046 kH-			00.0/		Auto	Peak Map
Transmit Freq Error	-49.040 KHZ		ower as	.00 /0		Auto	Inan
x dB Bandwidth	13.93 MHz	x dB	-6.	00 dB			
MSG			STATUS	3			

Plot 7-240. 6dB Bandwidth Plot MIMO (20MHz 802.11n (UNII Band 3) - Ch. 165)



Plot 7-241. 6dB Bandwidth Plot MIMO (20MHz 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager			
Test Report S/N: Test Dates:		EUT Type:	Dogo 144 of 500			
1M2104070032-14.A3L	04/12/2021-06/02/2021	Portable Handset	Fage 144 01 509			
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Keysight Spectrum Analyzer - Occupied BW	/				- F ×
LXI RL RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO 10:	54:38 PM May 17, 2021	Trace/Detector
	Cent	er Freq: 5.785000000 GHz	Rad	io Std: None	The condition
	#IFGain:Low #Atte	en: 20 dB	Rad	io Device: BTS	
	WI Guill.LOW				
10 dB/div Ref 20.00 dBm	າ				
L0g					
10.0					Clear Write
0.00					elour mile
-10.0					
-20.0	a mathematic	mer as he was many a			
20.0			k l		Averade
-30.0			1		Average
-40.0	Net		Why Williams		
-50.0				and all and and and	
-60.0				. non the Mart	Maylald
70.0					wax Hold
-70.0					
Cepter 5 78500 GHz			Sr	an 50.00 MHz	
#Res BW 100 kHz		#VBW_300 kHz		weep 4.8 ms	
					Min Hold
Occupied Bandwidt	h	Total Power	5.88 dB	m	
Occupied Balldwidt					
18	3.791 MHz				Detector
					Peak►
Transmit Freq Error	-30.835 kHz	% of OBW Pow	er 99.00	%	Auto <u>Man</u>
x dB Bandwidth	16.68 MHz	x dB	-6.00 d	B	
			0.00 a		
MSG			STATUS		

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



Plot 7-243. 6dB Bandwidth Plot MIMO (20MHz 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N: Test Dates: 1M2104070032-14.A3L 04/12/2021-06/02/2021		EUT Type:	Dage 145 of 500		
		Portable Handset	Page 145 01 509		
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Keysight Spectrum Analyzer - Occupier	d BW						- 6 💌
LXI RL RF 50 Ω AC	C CORREC	SENSE:INT	ALIGN AUTO	12:05:21 A	May 18, 2021	Trac	e/Detector
		rig: Free Run A	valHold: 100/100	Radio Std:	None		
	#IFGain:Low #	Atten: 20 dB		Radio Dev	ice: BTS		
	Dee						
Log	Bm						
10.0							
0.00						(Clear Write
10.00							
-10.0							
-20.0	angto believe	deveryal privile very wind	theless				
-30.0							Average
-40.0							
-50.0	/		<u>\</u>				
CO.O. I water a weath the set of the set	and a way of the second		Thursday and the	محمد الحمام محم			
					the second by the second is		Max Hold
-70.0							
Center 5 75500 CHz				Enon 1	00 0 MH-		
#Res BW/ 100 kHz		#VRM 300 kHz		Swee	00.0 Minz		
WILCO BUY TOO KITZ		#VDVV 500 KHZ		Owee	5 3.0 1113		Min Hold
Occupied Bandwi	dth	Total Pow	ver 1.39	dBm			
Occupied Bandwi							
	36.101 MHz						Detector
Tronomit From Freeze	00 604 616	9/ of ODW	Down 00	00.0/		Auto	Peak►
Transmit Freq Error	-99.604 KH		Power 99	.00 %		Auto	<u>ivian</u>
x dB Bandwidth	35.12 MH	z xdB	-6.	00 dB			
				,			
MSG			STATUS				

Plot 7-244. 6dB Bandwidth Plot MIMO (40MHz 802.11n (UNII Band 3) - Ch. 151)



Plot 7-245. 6dB Bandwidth Plot MIMO (40MHz 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 146 of 500		
1M2104070032-14.A3L	04/12/2021-06/02/2021	Portable Handset	Fage 146 01 509		
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Image: NP S0 Ω AC CORREC SENSE:INT ALIGN AUTO 11:56:54 PM May 17, 2021 Trace/Detec Center Freq: 5.75500000 GHz Radio Std: None Trig: Free Run Avg Hold: 100/100 Radio Device: BTS Trace/Detec	tor
Center Freq: 5.755000000 GHz Radio Std: None Trig: Free Run Avg Hold: 100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS	.01
#IFGain:Low #Atten: 20 dB Radio Device: BTS	
10 dB/div Ref 20.00 dBm	
	I:4
Ctear V	rite
	_
1000 and 100	
	age
Source in the state of the stat	
-60.0 whether whether a second se	lold
-70.0	
Center 5.75500 GHz Span 100.0 MHz	
#Res BW 100 kHz #VBW 300 kHz Sweep 9.6 ms	hold
	loiu
Occupied Bandwidth Total Power 6.07 dBm	_
37.258 MHZ Dete	ctor
	eak►
Transmit Freq Error -101.62 kHz % of OBW Power 99.00 %	Man
x dB Bandwidth 36.13 MHz x dB -6.00 dB	

Plot 7-246. 6dB Bandwidth Plot MIMO (40MHz 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-247. 6dB Bandwidth Plot MIMO (40MHz 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF711U	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N: Test Dates: 1M2104070032-14.A3L 04/12/2021-06/02/2021		EUT Type:	Dage 147 of 500		
		Portable Handset	Page 147 01 509		
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🔤 Keysight Spectrum Analyzer - Occup	pied BW						
LX/ R L RF 50 Ω	AC CORREC	SENSE:INT	ALIGN AUTO	12:12:04 A	M May 18, 2021	Trac	e/Detector
Center Freq: 5.775000000 GHz Radio Std: None							elbelector
	++→ #IEGain:Low	#Atten: 20 dB	Avginoid. 100/100	Radio Dev	ice: BTS		
	In Guin.cow						
10 dB/div Ref 20.00	dBm						
Log							
10.0							Clear Write
0.00							
-10.0							
-20.0							
-20.0	workers merterments	Mulan was marene	hellow.				A
-30.0							Average
-40.0							
-50.0			<u>↓</u>				
60.0 when a state data share	Lought Welder		And the second second				
				and Model Product	an failt faith a star start of the		Max Hold
-70.0							
Contor 5 7750 CHr				Enon 1			
TRAC BW 100 KHz		#\/B\M_200 L		Sparrz	10.13 mc		
#Res BW TOORH2		#VDVV J001	.nz	aweep	19.131115		Min Hold
Occupied Rendu	vi oltio	Total P	ower 15	dBm			
Occupied Bandw	viatn	Total I	0wei 1.5	+ ubiii			
	75.474 MH	Z					Detector
							Peak▶
Transmit Freq Erro	or -248.94 k	Hz % of O	BW Power 99	9.00 %		Auto	Man
v dB Bandwidth	75 70 M		8_	00 dB			
	15.10 1		-0,				
MSC			CTATU	c			
mou			STATU	5			

Plot 7-248. 6dB Bandwidth Plot MIMO (80MHz 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-249. 6dB Bandwidth Plot MIMO (80MHz 802.11ax (UNII Band 3) - Ch. 155)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 148 of 500
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MIMO 6 dB Bandwidth Measurements-Q

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	MIMO 6dB Bandwidth - Q [MHz]
	5745	149	а	6	16.35
	5785	157	а	6	16.02
	5825	165	а	6	16.09
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	15.20
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	15.34
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	16.96
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	18.94
and	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	17.94
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	18.92
	5755	151	n (40MHz)	13.5/15 (MCS0)	33.95
	5795	159	n (40MHz)	13.5/15 (MCS0)	35.20
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.23
	5795	159	ax (40MHz)	13.5/15 (MCS0)	37.71
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	75.21
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	76.34

Table 7-9. Conducted Bandwidth Measurements MIMO



Plot 7-250. 6dB Bandwidth Plot MIMO (20MHz 802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 140 of 500
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Plot 7-251. 6dB Bandwidth Plot MIMO (20MHz 802.11a (UNII Band 3) - Ch. 157)



Plot 7-252. 6dB Bandwidth Plot MIMO (20MHz 802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 150 of 500
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Plot 7-253. 6dB Bandwidth Plot MIMO (20MHz 802.11n (UNII Band 3) - Ch. 149)



FCC ID: A3LSMF711U	<u> <i>(</i>PCTEST</u>)	MEASUREMENT REPORT	Approved by:
	Proud to be part of element	(CERTIFICATION)	Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 151 of 500
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Keysight Spectrum Analyzer - Occupied BW				- ē ×
LXI RL RF 50Ω DC CORREC	SENSE:INT	ALIGN AUTO 02:43	:46 AM May 15, 2021	Trace/Detector
	Trig: Free Run A	valHold: 100/100	Sta: None	
#IFGain:Lo	w #Atten: 20 dB	Radio	Device: BTS	
10 dB/dig Bef 20.00 dBm				
Log				
10.0				
0.00				Clear Write
-10.0				
20.0	a lange to a dealer of			
-20.0	and an and the best of the set of			Avorago
-30.0		1		Average
-40.0				
-50.0		may white the date water	1 .	
-60.0 marine whether way more and		, i Jussiwilli	W WWWWWWWWWW	Max Hold
-70.0				maxitora
Center 5.82500 GHz		Spa	n 50.00 MHz	
#Res BW 100 kHz	#VBW 300 kHz	Sv	veep 4.8 ms	Min Hold
		4 40 15		
Occupied Bandwidth	I otal Pow	er 1.43 dBm		
17.630	MHz			Detector
				Peak▶
Transmit Freq Error -14.0	089 kHz % of OBW	Power 99.00 %	, D	Auto <u>Man</u>
x dB Bandwidth 16	96 MHz v dB	-6 00 dE	2	
		-0.00 at		
MSG		STATUS		

Plot 7-255. 6dB Bandwidth Plot MIMO (20MHz 802.11n (UNII Band 3) - Ch. 165)



Plot 7-256. 6dB Bandwidth Plot MIMO (20MHz 802.11ax (UNII Band 3) - Ch. 149)

	r			
ECC ID: A21 SME71111	<u> </u>	MEASUREMENT REPORT	AMSUNG	Approved by:
FUC ID. ASLSIMF/ ITU	Proud to be part of 😁 element	(CERTIFICATION)	AIN'S ON O	Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 152 of 500
1M2104070032-14.A3L	04/12/2021-06/02/2021	Portable Handset		Fage 152 01 509
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Plot 7-257. 6dB Bandwidth Plot MIMO (20MHz 802.11ax (UNII Band 3) - Ch. 157)



Plot 7-258. 6dB Bandwidth Plot MIMO (20MHz 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dago 152 of 500
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444	Keysight Sp	ectrum Analyz	er - Occu	upied BW											
L X I	RL	RF	50 Ω	DC	CORRE	C	Conto	SENSE:INT	00000 CH-	A	LIGN AUTO	03:07:53 A	M May 15, 2021	Trac	e/Detector
_						H	Trig:	Free Run	Avg Ho	d:	100/100	Radio Sto	: None		
					#IFGai	n:Low	#Atter	n: 20 dB				Radio Dev	vice: BTS		
10	dB/div	Ref	20.00) dBm		-				-					
10															
															Clear Write
0.0															
-10	.0									Ħ					
-20	.0					المجلسان المحين المحين المحين الم	- hylenarly	ting putrimeter	Mentolinghour	H					
-30	.0					-1				ł					Average
-40	.0				/					ł					
-50	.0				1 M					Å					
-60	0 mgr vin	~%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mhai	whymuth	, .						Mr. Angle and A	work and the second second	Mudgimmeta		
-70															Max Holu
-70															
Ce	enter 5.	.75500 G	Hz									Span 1	00.0 MHz		
#R	tes BW	100 kH:	z				#	VBW 300	kHz			Swee	p 9.6 ms		Min Hold
	Occu	pied Ba	and	width	1			Total	Power		2.28	dBm			
				35	.98	0 M	Hz								Detector
															Peak►
	Trans	mit Freq	Erro	or	-4	5.915	kHz	% of C	BW Pov	Ne	r 99	.00 %		Auto	Man
	x dB E	Bandwid	th		3	3.95	ИHz	x dB			-6.	00 dB			
MSG	ì										STATUS	6			

Plot 7-259. 6dB Bandwidth Plot MIMO (40MHz 802.11n (UNII Band 3) - Ch. 151)



Plot 7-260. 6dB Bandwidth Plot MIMO (40MHz 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 151 of 500
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🔤 Keysight Spe	ctrum Analyzer - Oce	cupied BW									
LXI RL	RF 50 Ω	DC CO	RREC	SE Contor E	NSE:INT	0000 GH-	ALIGN AUTO	02:54:23 A	M May 15, 2021	Trac	e/Detector
			+	Trig: Fre	e Run	Avg Hold	d: 100/100	Raulo Stu	. None		
		#IF	Gain:Low	#Atten: 2	20 dB			Radio Dev	rice: BTS		
10 dB/div	Ref 20.0	0 dBm									
10.0											
0.00										(Clear Write
40.0											
-10.0											
-20.0			And a starter of	Ref of the second second second	and the second	and the second second second					Average
-30.0											Average
-40.0			ľ				1				
-50.0	wandenter	alang wand					Wheel weeping	Holmoniking	Whankshine .		
-60.0											Max Hold
-70.0											
Center 57	75500 CHz							Snan 1	00.0 MHz		
#Res BW	100 kHz			#VI	BW 300 H	Hz		Swee	p 9.6 ms		
Occup	bied Band	width			Total P	ower	4.58	dBm			
		37 7	52 M	Hz							Detector
		01.1									Peak►
Transn	nit Freq Eri	or	-27.352	kHz	% of O	BW Pow	er 99	.00 %		Auto	<u>Man</u>
x dB B	andwidth		37.23	٨Hz	x dB		-6.	00 dB			
MSG							STATIS				
Mada							STATUS	,			

Plot 7-261. 6dB Bandwidth Plot MIMO (40MHz 802.11ax (UNII Band 3) – Ch. 151)



Plot 7-262. 6dB Bandwidth Plot MIMO (40MHz 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF711U	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 155 of 500
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Plot 7-263. 6dB Bandwidth Plot MIMO (80MHz 802.11ac (UNII Band 3) – Ch. 155)



Plot 7-264. 6dB Bandwidth Plot MIMO (80MHz 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 156 of 500	
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7.4 UNII Output Power Measurement – 802.11a/n/ac/ax §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

Test Overview and Limits

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

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

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(18.82) = 23.75dBm$. 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 + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(18.61) = 23.70dBm$. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

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

Test Procedure Used

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

Test Settings

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

Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

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Test Notes

- 1. Per RSS-247 Section 6.2.3, transmission on channels which overlap the 5600-5650 MHz is prohibited. This device operates under these frequencies only under the control of a certified master device and does not support active scanning on these channels. This device does not transmit any beacons or initiate any transmissions in UNII Bands 2A or 2C.
- 2. This device will be manufactured using two different WIFI chipsets (N and Q). Both two chipsets are tested, and both conducted emissions data is shown in this report.

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SISO Antenna-1 Conducted Output Power Measurements - N

	Freq [MHz]	Channel	Detector		IEEE Transm	nission Mode		Conducted Power Limit	Conducted Power Margin	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
Ê				802.11a	802.11n	802.11ac	802.11ax	[dBm]	[dB]	[0.2.]	[]		[]
÷	5180	36	AVG	16.17	15.47	15.41	15.22	23.98	-7.81	-6.60	9.57	23.01	-13.44
je je	5200	40	AVG	17.98	17.95	17.92	17.99	23.98	-6.00	-6.60	11.38	23.01	-11.63
5	5220	44	AVG	17.99	17.98	17.98	17.98	23.98	-5.99	-6.60	11.39	23.01	-11.62
Ĕ	5240	48	AVG	17.75	17.99	17.99	17.97	23.98	-5.99	-6.60	11.39	23.01	-11.62
a	5260	52	AVG	17.98	17.97	17.93	17.96	23.98	-6.00	-8.10	9.88	30.00	-20.12
N	5280	56	AVG	17.92	17.86	17.85	17.88	23.98	-6.06	-8.10	9.82	30.00	-20.18
Î	5300	60	AVG	17.89	17.85	17.87	17.86	23.98	-6.09	-8.10	9.79	30.00	-20.21
Σ	5320	64	AVG	17.99	16.75	16.70	16.54	23.98	-5.99	-8.10	9.89	30.00	-20.11
50	5500	100	AVG	17.96	16.67	16.65	16.99	23.98	-6.02	-9.80	8.16	30.00	-21.84
<u> </u>	5600	120	AVG	17.81	17.72	17.74	17.76	23.98	-6.17	-9.80	8.01	-	-
Ŧ	5620	124	AVG	17.98	17.95	17.97	17.98	23.98	-6.00	-9.80	8.18	-	-
Ū	5720	144	AVG	17.99	17.98	17.75	17.77	23.98	-5.99	-9.80	8.19	30.00	-21.81
2J	5745	149	AVG	17.91	17.89	17.92	17.94	30.00	-12.08	-7.70	10.22	-	-
	5785	157	AVG	17.78	17.69	17.78	17.75	30.00	-12.22	-7.70	10.08	-	-
	5825	165	AVG	17.96	17.97	17.98	17.99	30.00	-12.02	-7.70	10.28	-	-

Table 7-10. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	IEEE	Transmission	Mode	Conducted Power Limit	Conducted Power Margin	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11n	802.11ac	802.11ax	[dBm]	[dB]	[]	[]		[]
₽ つ	5190	38	AVG	13.94	13.75	13.89	23.98	-10.04	-6.60	7.34	23.01	-15.67
후 푼	5230	46	AVG	16.72	16.73	16.62	23.98	-7.25	-6.60	10.13	23.01	-12.88
<u>P</u>	5270	54	AVG	16.75	16.74	16.61	23.98	-7.23	-8.10	8.65	30.00	-21.35
<u>4</u>	5310	62	AVG	14.58	14.59	14.77	23.98	-9.39	-8.10	6.49	30.00	-23.51
NĞ	5510	102	AVG	15.48	15.49	15.23	23.98	-8.49	-9.80	5.69	30.00	-24.31
т В В	5590	118	AVG	16.93	16.95	16.87	23.98	-7.03	-9.80	7.15	-	-
50	5630	126	AVG	16.74	16.75	16.64	23.98	-7.23	-9.80	6.95	-	-
	5710	142	AVG	16.82	16.79	16.75	23.98	-7.16	-9.80	7.02	30.00	-22.98
	5755	151	AVG	16.87	16.83	16.77	30.00	-13.13	-7.70	9.17	-	-
	5795	159	AVG	16.98	16.95	16.97	30.00	-13.02	-7.70	9.28	-	-

Table 7-11. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	IEEE Transmission Mode		Conducted Power Limit	Conducted Power Margin	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
₽ ₽				802.11ac	802.11ax	[dBm]	[dB]	[]			
o M Idtl	5210	42	AVG	12.48	12.47	23.98	-11.50	-6.60	5.88	23.01	-17.13
Hz (80 andwi	5290	58	AVG	12.83	12.87	23.98	-11.15	-8.10	4.73	30.00	-25.27
	5530	106	AVG	14.79	14.78	23.98	-9.19	-9.80	4.99	30.00	-25.01
B G	5610	122	AVG	15.84	15.86	23.98	-8.14	-9.80	6.04	-	-
	5690	138	AVG	15.82	15.83	23.98	-8.16	-9.80	6.02	30.00	-23.98
	5775	155	AVG	15.95	15.94	30.00	-14.05	-7.70	8.25	-	-

Table 7-12. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power

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MIMO Maximum Conducted Output Power Measurements - N

	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	Lapud	Ennie [GBIII]	[GD]
÷	5180	36	AVG	15.40	16.23	18.85	23.98	-5.13	-3.34	15.51	23.01	-7.50
/io	5200	40	AVG	17.98	17.67	20.84	23.98	-3.14	-3.34	17.50	23.01	-5.51
5	5220	44	AVG	17.41	17.98	20.71	23.98	-3.27	-3.34	17.37	23.01	-5.64
Ĕ	5240	48	AVG	17.57	17.96	20.78	23.98	-3.20	-3.34	17.44	23.01	-5.57
3a	5260	52	AVG	17.72	17.93	20.84	23.98	-3.14	-4.14	16.70	30.00	-13.30
	5280	56	AVG	17.98	17.28	20.65	23.98	-3.33	-4.14	16.51	30.00	-13.49
Ϊ	5300	60	AVG	17.98	17.95	20.98	23.98	-3.00	-4.14	16.84	30.00	-13.16
Σ	5320	64	AVG	17.72	17.36	20.55	23.98	-3.43	-4.14	16.41	30.00	-13.59
50	5500	100	AVG	17.56	17.57	20.58	23.98	-3.40	-5.45	15.13	30.00	-14.87
<u> </u>	5600	120	AVG	17.43	17.95	20.71	23.98	-3.27	-5.45	15.26	-	-
Ť	5620	124	AVG	17.97	17.96	20.98	23.98	-3.00	-5.45	15.53	-	-
Ū	5720	144	AVG	17.95	17.54	20.76	23.98	-3.22	-5.45	15.31	30.00	-14.69
Ū.	5745	149	AVG	17.78	17.35	20.58	30.00	-9.42	-4.84	15.74	-	-
	5785	157	AVG	17.93	17.61	20.78	30.00	-9.22	-4.84	15.94	-	-
	5825	165	AVG	17.03	17.98	20.54	30.00	-9.46	-4.84	15.70	-	-

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

	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		[]
È	5180	36	AVG	15.72	15.00	18.39	23.98	-5.59	-3.34	15.05	23.01	-7.96
į	5200	40	AVG	17.98	17.57	20.79	23.98	-3.19	-3.34	17.45	23.01	-5.56
- S	5220	44	AVG	17.38	17.96	20.69	23.98	-3.29	-3.34	17.35	23.01	-5.66
Ĕ	5240	48	AVG	17.45	17.96	20.72	23.98	-3.26	-3.34	17.38	23.01	-5.63
a	5260	52	AVG	17.64	17.95	20.81	23.98	-3.17	-4.14	16.67	30.00	-13.33
N	5280	56	AVG	17.95	17.21	20.61	23.98	-3.37	-4.14	16.47	30.00	-13.53
Î	5300	60	AVG	17.96	17.83	20.91	23.98	-3.07	-4.14	16.77	30.00	-13.23
Σ	5320	64	AVG	16.19	16.94	19.59	23.98	-4.39	-4.14	15.45	30.00	-14.55
50	5500	100	AVG	16.95	16.04	19.53	23.98	-4.45	-5.45	14.08	30.00	-15.92
	5600	120	AVG	17.98	17.52	20.77	23.98	-3.21	-5.45	15.32	-	-
Ĩ	5620	124	AVG	17.99	17.91	20.96	23.98	-3.02	-5.45	15.51	-	-
Ū	5720	144	AVG	17.96	17.43	20.71	23.98	-3.27	-5.45	15.26	30.00	-14.74
Ŝ	5745	149	AVG	17.98	17.73	20.87	30.00	-9.13	-4.84	16.03	-	-
	5785	157	AVG	17.86	17.39	20.64	30.00	-9.36	-4.84	15.80	-	-
	5825	165	AVG	17.04	17.99	20.55	30.00	-9.45	-4.84	15.71	-	-

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

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	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		[]
÷	5180	36	AVG	15.41	14.86	18.15	23.98	-5.83	-3.34	14.81	23.01	-8.20
j	5200	40	AVG	17.96	17.65	20.82	23.98	-3.16	-3.34	17.48	23.01	-5.53
5	5220	44	AVG	17.45	17.87	20.68	23.98	-3.30	-3.34	17.34	23.01	-5.67
ğ	5240	48	AVG	17.49	17.98	20.75	23.98	-3.23	-3.34	17.41	23.01	-5.60
a	5260	52	AVG	17.67	17.87	20.78	23.98	-3.20	-4.14	16.64	30.00	-13.36
N	5280	56	AVG	17.97	17.24	20.63	23.98	-3.35	-4.14	16.49	30.00	-13.51
Î	5300	60	AVG	17.99	17.75	20.88	23.98	-3.10	-4.14	16.74	30.00	-13.26
Σ	5320	64	AVG	16.98	16.21	19.62	23.98	-4.36	-4.14	15.48	30.00	-14.52
50	5500	100	AVG	16.94	16.10	19.55	23.98	-4.43	-5.45	14.10	30.00	-15.90
	5600	120	AVG	17.98	17.43	20.72	23.98	-3.26	-5.45	15.27	-	-
Ŧ	5620	124	AVG	17.99	17.96	20.99	23.98	-2.99	-5.45	15.54	-	-
Ū	5720	144	AVG	17.98	17.54	20.78	23.98	-3.20	-5.45	15.33	30.00	-14.67
ŝ	5745	149	AVG	17.82	17.25	20.55	30.00	-9.45	-4.84	15.71	-	-
	5785	157	AVG	17.88	17.45	20.68	30.00	-9.32	-4.84	15.84	-	-
	5825	165	AVG	17.07	17.93	20.53	30.00	-9.47	-4.84	15.69	-	-

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

	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Conducted Power Limit Power Margin		Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	Lapud	Ennie [GBnij	[0.5]
主	5180	36	AVG	14.46	15.13	17.82	23.98	-6.16	-3.34	14.48	23.01	-8.53
÷	5200	40	AVG	17.98	17.55	20.78	23.98	-3.20	-3.34	17.44	23.01	-5.57
5	5220	44	AVG	17.33	17.91	20.64	23.98	-3.34	-3.34	17.30	23.01	-5.71
Ĕ	5240	48	AVG	17.45	17.96	20.72	23.98	-3.26	-3.34	17.38	23.01	-5.63
a Ma	5260	52	AVG	17.66	17.98	20.83	23.98	-3.15	-4.14	16.69	30.00	-13.31
N	5280	56	AVG	17.95	17.21	20.61	23.98	-3.37	-4.14	16.47	30.00	-13.53
Î	5300	60	AVG	17.97	17.88	20.94	23.98	-3.04	-4.14	16.80	30.00	-13.20
Σ	5320	64	AVG	15.38	16.72	19.11	23.98	-4.87	-4.14	14.97	30.00	-15.03
50	5500	100	AVG	16.47	16.72	19.61	23.98	-4.37	-5.45	14.16	30.00	-15.84
<u> </u>	5600	120	AVG	17.98	17.52	20.77	23.98	-3.21	-5.45	15.32	-	-
Ť	5620	124	AVG	17.97	17.87	20.93	23.98	-3.05	-5.45	15.48	-	-
Ū	5720	144	AVG	17.86	17.98	20.93	23.98	-3.05	-5.45	15.48	30.00	-14.52
ŝ	5745	149	AVG	17.81	17.26	20.55	30.00	-9.45	-4.84	15.71	-	-
	5785	157	AVG	17.83	17.59	20.72	30.00	-9.28	-4.84	15.88	-	-
	5825	165	AVG	17.04	17.94	20.52	30.00	-9.48	-4.84	15.68	-	-
	T - 1	1. 7 40			1000 44	/		• •				

Table 7-16. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin
				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[ubii]	Ennie [dBin]	[05]
₽ つ	5190	38	AVG	13.72	13.95	16.85	23.98	-7.13	-3.34	13.51	23.01	-9.50
루 푼	5230	46	AVG	16.98	16.97	19.99	23.98	-3.99	-3.34	16.65	23.01	-6.36
o i	5270	54	AVG	16.93	16.42	19.69	23.98	-4.29	-4.14	15.55	30.00	-14.45
<u>4</u>	5310	62	AVG	14.99	14.11	17.58	23.98	-6.40	-4.14	13.44	30.00	-16.56
N C	5510	102	AVG	15.33	14.53	17.96	23.98	-6.02	-5.45	12.51	30.00	-17.49
а За	5590	118	AVG	16.87	16.73	19.81	23.98	-4.17	-5.45	14.36	-	-
50	5630	126	AVG	16.74	16.07	19.43	23.98	-4.55	-5.45	13.98	-	-
	5710	142	AVG	16.98	16.63	19.82	23.98	-4.16	-5.45	14.37	30.00	-15.63
	5755	151	AVG	16.99	16.05	19.56	30.00	-10.44	-4.84	14.72	-	-
	5795	159	AVG	16.55	16.87	19.72	30.00	-10.28	-4.84	14.88	-	-
	Tel	1. 7 47			1 000 44					(D		

Table 7-17. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

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	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[[]
₽ つ	5190	38	AVG	13.93	13.12	16.55	23.98	-7.43	-3.34	13.21	23.01	-9.80
후 된	5230	46	AVG	16.96	16.98	19.98	23.98	-4.00	-3.34	16.64	23.01	-6.37
o i	5270	54	AVG	16.84	16.41	19.64	23.98	-4.34	-4.14	15.50	30.00	-14.50
<u>र र</u>	5310	62	AVG	14.92	14.09	17.54	23.98	-6.44	-4.14	13.40	30.00	-16.60
ъй	5510	102	AVG	15.30	14.58	17.97	23.98	-6.01	-5.45	12.52	30.00	-17.48
ЗЧ За	5590	118	AVG	16.96	16.71	19.85	23.98	-4.13	-5.45	14.40	-	-
50	5630	126	AVG	16.86	16.04	19.48	23.98	-4.50	-5.45	14.03	-	-
	5710	142	AVG	16.99	16.66	19.84	23.98	-4.14	-5.45	14.39	30.00	-15.61
	5755	151	AVG	16.98	16.08	19.56	30.00	-10.44	-4.84	14.72	-	-
	5795	159	AVG	16.69	16.86	19.79	30.00	-10.21	-4.84	14.95	-	-

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

	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin
				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	Lapud	Ennie [übiii]	[ub]
₽ つ	5190	38	AVG	13.66	13.81	16.75	23.98	-7.23	-3.34	13.41	23.01	-9.60
루 푼	5230	46	AVG	16.91	16.95	19.94	23.98	-4.04	-3.34	16.60	23.01	-6.41
o i	5270	54	AVG	16.79	16.31	19.57	23.98	-4.41	-4.14	15.43	30.00	-14.57
<u>7</u> <u>5</u>	5310	62	AVG	13.98	14.85	17.45	23.98	-6.53	-4.14	13.31	30.00	-16.69
N C	5510	102	AVG	14.39	15.22	17.84	23.98	-6.14	-5.45	12.39	30.00	-17.61
a a	5590	118	AVG	16.77	16.59	19.69	23.98	-4.29	-5.45	14.24	-	-
2 Ц	5630	126	AVG	16.99	16.42	19.72	23.98	-4.26	-5.45	14.27	-	-
	5710	142	AVG	16.94	16.53	19.75	23.98	-4.23	-5.45	14.30	30.00	-15.70
	5755	151	AVG	16.97	16.02	19.53	30.00	-10.47	-4.84	14.69	-	-
	5795	159	AVG	16.54	16.81	19.69	30.00	-10.31	-4.84	14.85	-	-

Table 7-19. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p.	e.i.r.p. Margin [dB]
ਸੈ ਦੇ				ANT1	ANT2	МІМО	[dBm]	[dB]	[dBi]	[]		[]
OM Idt	5210	42	AVG	12.13	12.57	15.37	23.98	-8.61	-3.34	12.03	23.01	-10.98
8) M	5290	58	AVG	12.87	13.08	15.99	23.98	-7.99	-4.14	11.85	30.00	-18.15
Hz	5530	106	AVG	14.91	14.08	17.53	23.98	-6.45	-5.45	12.08	30.00	-17.92
ВĞ	5610	122	AVG	15.98	15.16	18.60	23.98	-5.38	-5.45	13.15	-	-
	5690	138	AVG	15.99	15.11	18.58	23.98	-5.40	-5.45	13.13	30.00	-16.87
	5775	155	AVG	15.98	15.07	18.56	30.00	-11.44	-4.84	13.72	-	-

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

	Freq [MHz]	Channel	Detector	Cond	lucted Power [d	dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
₽ €				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		[]
Idt O	5210	42	AVG	12.12	12.66	15.41	23.98	-8.57	-3.34	12.07	23.01	-10.94
8) Å	5290	58	AVG	12.48	12.73	15.62	23.98	-8.36	-4.14	11.48	30.00	-18.52
Hz au	5530	106	AVG	14.57	14.79	17.69	23.98	-6.29	-5.45	12.24	30.00	-17.76
В С	5610	122	AVG	15.99	15.14	18.60	23.98	-5.38	-5.45	13.15	-	-
	5690	138	AVG	15.98	15.05	18.55	23.98	-5.43	-5.45	13.10	30.00	-16.90
	5775	155	AVG	15.93	15.04	18.52	30.00	-11.48	-4.84	13.68	-	-

Table 7-21. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 162 of 500
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SISO Antenna-1 Conducted Output Power Measurements - Q

	Freq [MHz]	Channel	Detector		IEEE Transm	nission Mode		Conducted Power Limit	Conducted Power Margin	Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
2				802.11a	802.11n	802.11ac	802.11ax	[dBm]	[dB]	[]	[]		[0-]
主	5180	36	AVG	15.85	15.11	15.48	15.36	23.98	-8.13	-6.60	9.25	23.01	-13.76
÷	5200	40	AVG	17.59	17.62	17.72	17.64	23.98	-6.26	-6.60	11.12	23.01	-11.89
5	5220	44	AVG	17.58	17.66	17.66	17.60	23.98	-6.32	-6.60	11.06	23.01	-11.95
Ĕ	5240	48	AVG	17.52	17.48	17.52	17.42	23.98	-6.46	-6.60	10.92	23.01	-12.09
a	5260	52	AVG	17.65	17.52	17.54	17.45	23.98	-6.33	-8.10	9.55	30.00	-20.45
N	5280	56	AVG	17.65	17.50	17.54	17.50	23.98	-6.33	-8.10	9.55	30.00	-20.45
Î	5300	60	AVG	17.80	17.65	17.78	17.66	23.98	-6.18	-8.10	9.70	30.00	-20.30
Σ	5320	64	AVG	17.54	16.62	16.95	16.94	23.98	-6.44	-8.10	9.44	30.00	-20.56
50	5500	100	AVG	17.62	16.86	16.97	16.92	23.98	-6.36	-9.80	7.82	30.00	-22.18
<u> </u>	5600	120	AVG	17.80	17.69	17.52	17.57	23.98	-6.18	-9.80	8.00	-	-
Ť	5620	124	AVG	17.62	17.69	17.64	17.55	23.98	-6.29	-9.80	7.89	-	-
Ū	5720	144	AVG	17.72	17.59	17.60	17.57	23.98	-6.26	-9.80	7.92	30.00	-22.08
Ū.	5745	149	AVG	17.71	17.51	17.58	17.55	30.00	-12.29	-7.70	10.01	-	-
	5785	157	AVG	17.84	17.67	17.80	17.63	30.00	-12.16	-7.70	10.14	-	-
	5825	165	AVG	17.58	17.47	17.44	17.95	30.00	-12.42	-7.70	9.88	-	-

Table 7-22. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	IEEE	Transmission I	Mode	Conducted Power Limit	Conducted Power Margin	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11n	802.11ac	802.11ax	[dBm]	[dB]		[]		[·]
₽ つ	5190	38	AVG	13.68	13.03	13.78	23.98	-10.30	-6.60	7.08	23.01	-15.93
후 판	5230	46	AVG	16.89	16.80	16.80	23.98	-7.09	-6.60	10.29	23.01	-12.72
lo bi	5270	54	AVG	16.96	16.93	16.95	23.98	-7.02	-8.10	8.86	30.00	-21.14
<u>7</u> <u>7</u>	5310	62	AVG	14.99	14.60	14.76	23.98	-8.99	-8.10	6.89	30.00	-23.11
N C	5510	102	AVG	15.44	15.43	15.37	23.98	-8.54	-9.80	5.64	30.00	-24.36
а За	5590	118	AVG	16.53	16.46	16.95	23.98	-7.45	-9.80	6.73	-	-
50	5630	126	AVG	16.66	16.65	16.47	23.98	-7.32	-9.80	6.86	-	-
	5710	142	AVG	16.88	16.62	16.73	23.98	-7.10	-9.80	7.08	30.00	-22.92
	5755	151	AVG	16.70	16.63	16.63	30.00	-13.30	-7.70	9.00	-	-
	5795	159	AVG	16.56	16.64	16.50	30.00	-13.36	-7.70	8.94	-	-

Table 7-23. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power

×	Freq [MHz]	Channel	Detector	IEEE Transm	nission Mode	Conducted Power Limit	Conducted Power Margin	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
If H				802.11ac	802.11ax	[dBm]	[dB]	[cm]	[abii]	Ennie [GBin]	[00]
80l vid	5210	42	AVG	12.15	12.47	23.98	-11.83	-6.60	5.55	23.01	-17.46
) z	5290	58	AVG	12.98	12.67	23.98	-11.00	-8.10	4.88	30.00	-25.12
GH Bai	5530	106	AVG	14.97	14.82	23.98	-9.01	-9.80	5.17	30.00	-24.83
Ū.	5690	138	AVG	15.42	15.39	23.98	-8.56	-9.80	5.62	30.00	-24.38
	5775	155	AVG	15.79	15.72	30.00	-14.21	-7.70	8.09	-	-

Table 7-24. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 162 of 500
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MIMO Maximum Conducted Output Power Measurements - Q

	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		[]
主	5180	36	AVG	15.85	15.67	18.77	23.98	-5.21	-3.34	15.43	23.01	-7.58
÷	5200	40	AVG	17.59	17.66	20.64	23.98	-3.34	-3.34	17.30	23.01	-5.71
5	5220	44	AVG	17.58	17.88	20.74	23.98	-3.24	-3.34	17.40	23.01	-5.61
ğ	5240	48	AVG	17.52	17.84	20.69	23.98	-3.29	-3.34	17.35	23.01	-5.66
a	5260	52	AVG	17.65	17.79	20.73	23.98	-3.25	-4.14	16.59	30.00	-13.41
N	5280	56	AVG	17.65	17.97	20.82	23.98	-3.16	-4.14	16.68	30.00	-13.32
Ï	5300	60	AVG	17.80	17.94	20.88	23.98	-3.10	-4.14	16.74	30.00	-13.26
Σ	5320	64	AVG	17.54	17.98	20.78	23.98	-3.20	-4.14	16.64	30.00	-13.36
50	5500	100	AVG	17.62	17.91	20.78	23.98	-3.20	-5.45	15.33	30.00	-14.67
	5600	120	AVG	17.80	17.95	20.89	23.98	-3.09	-5.45	15.44	-	-
Ŧ	5620	124	AVG	17.62	17.75	20.70	23.98	-3.28	-5.45	15.25	-	-
Ū	5720	144	AVG	17.72	17.54	20.64	23.98	-3.34	-5.45	15.19	30.00	-14.81
ŝ	5745	149	AVG	17.71	17.68	20.71	30.00	-9.29	-4.84	15.87	-	-
	5785	157	AVG	17.84	17.99	20.93	30.00	-9.07	-4.84	16.09	-	-
	5825	165	AVG	17.58	17.76	20.68	30.00	-9.32	-4.84	15.84	-	-

Table 7-25. MIMO 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	cted Conducted Limit Power Margin n] [dB]	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		[]
主	5180	36	AVG	15.11	15.15	18.14	23.98	-5.84	-3.34	14.80	23.01	-8.21
/ic	5200	40	AVG	17.62	17.91	20.78	23.98	-3.20	-3.34	17.44	23.01	-5.57
5	5220	44	AVG	17.66	17.71	20.70	23.98	-3.28	-3.34	17.36	23.01	-5.65
Ĕ	5240	48	AVG	17.48	17.64	20.57	23.98	-3.41	-3.34	17.23	23.01	-5.78
a	5260	52	AVG	17.52	17.67	20.61	23.98	-3.37	-4.14	16.47	30.00	-13.53
N	5280	56	AVG	17.50	17.84	20.68	23.98	-3.30	-4.14	16.54	30.00	-13.46
Î	5300	60	AVG	17.65	17.81	20.74	23.98	-3.24	-4.14	16.60	30.00	-13.40
Σ	5320	64	AVG	16.62	16.92	19.78	23.98	-4.20	-4.14	15.64	30.00	-14.36
50	5500	100	AVG	16.86	16.51	19.70	23.98	-4.28	-5.45	14.25	30.00	-15.75
	5600	120	AVG	17.69	17.66	20.69	23.98	-3.29	-5.45	15.24	-	-
Ť	5620	124	AVG	17.69	17.56	20.64	23.98	-3.34	-5.45	15.19	-	-
Ū	5720	144	AVG	17.59	17.79	20.70	23.98	-3.28	-5.45	15.25	30.00	-14.75
ц С	5745	149	AVG	17.51	17.98	20.76	30.00	-9.24	-4.84	15.92	-	-
	5785	157	AVG	17.67	17.92	20.81	30.00	-9.19	-4.84	15.97	-	-
	5825	165	AVG	17.47	17.54	20.52	30.00	-9.48	-4.84	15.68	-	-

Table 7-26. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 164 of 500
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	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Conducted Power Limit Power Margin		Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		[]
÷	5180	36	AVG	15.48	15.45	18.48	23.98	-5.50	-3.34	15.14	23.01	-7.87
j:	5200	40	AVG	17.72	17.86	20.80	23.98	-3.18	-3.34	17.46	23.01	-5.55
5	5220	44	AVG	17.66	17.72	20.70	23.98	-3.28	-3.34	17.36	23.01	-5.65
Ĕ	5240	48	AVG	17.52	17.61	20.58	23.98	-3.40	-3.34	17.24	23.01	-5.77
3a	5260	52	AVG	17.54	17.65	20.61	23.98	-3.37	-4.14	16.47	30.00	-13.53
N	5280	56	AVG	17.54	17.90	20.73	23.98	-3.25	-4.14	16.59	30.00	-13.41
Ϊ	5300	60	AVG	17.78	17.88	20.84	23.98	-3.14	-4.14	16.70	30.00	-13.30
Σ	5320	64	AVG	16.95	16.98	19.98	23.98	-4.00	-4.14	15.84	30.00	-14.16
50	5500	100	AVG	16.97	16.48	19.74	23.98	-4.24	-5.45	14.29	30.00	-15.71
<u> </u>	5600	120	AVG	17.52	17.68	20.61	23.98	-3.37	-5.45	15.16	-	-
Ť	5620	124	AVG	17.64	17.59	20.63	23.98	-3.35	-5.45	15.18	-	-
Ū	5720	144	AVG	17.60	17.88	20.75	23.98	-3.23	-5.45	15.30	30.00	-14.70
2J	5745	149	AVG	17.58	17.99	20.80	30.00	-9.20	-4.84	15.96	-	-
	5785	157	AVG	17.80	17.92	20.87	30.00	-9.13	-4.84	16.03	-	-
	5825	165	AVG	17.44	17.57	20.52	30.00	-9.48	-4.84	15.68	-	-

Table 7-27. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conc	Conducted Power [dBm] Ca			Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
Ê				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]		r1
主	5180	36	AVG	15.36	15.39	18.39	23.98	-5.59	-3.34	15.05	23.01	-7.96
÷	5200	40	AVG	17.64	17.99	20.83	23.98	-3.15	-3.34	17.49	23.01	-5.52
5	5220	44	AVG	17.60	17.77	20.70	23.98	-3.28	-3.34	17.36	23.01	-5.65
Ĕ	5240	48	AVG	17.42	17.68	20.56	23.98	-3.42	-3.34	17.22	23.01	-5.79
a Ma	5260	52	AVG	17.45	17.74	20.61	23.98	-3.37	-4.14	16.47	30.00	-13.53
N	5280	56	AVG	17.50	17.94	20.74	23.98	-3.24	-4.14	16.60	30.00	-13.40
Î	5300	60	AVG	17.66	17.83	20.76	23.98	-3.22	-4.14	16.62	30.00	-13.38
Σ	5320	64	AVG	16.94	16.76	19.86	23.98	-4.12	-4.14	15.72	30.00	-14.28
50	5500	100	AVG	16.92	16.95	19.95	23.98	-4.03	-5.45	14.50	30.00	-15.50
	5600	120	AVG	17.57	17.79	20.69	23.98	-3.29	-5.45	15.24	-	-
Ŧ	5620	124	AVG	17.55	17.74	20.66	23.98	-3.32	-5.45	15.21	-	-
Ū	5720	144	AVG	17.57	17.95	20.77	23.98	-3.21	-5.45	15.32	30.00	-14.68
2 L	5745	149	AVG	17.55	17.63	20.60	30.00	-9.40	-4.84	15.76	-	-
	5785	157	AVG	17.63	17.94	20.80	30.00	-9.20	-4.84	15.96	-	-
	5825	165	AVG	17.95	17.68	20.83	30.00	-9.17	-4.84	15.99	-	-

Table 7-28. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	ducted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin
				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	lapuil	Ennie [GBIII]	[05]
₽ つ	5190	38	AVG	13.68	13.79	16.75	23.98	-7.23	-3.34	13.41	23.01	-9.60
후 푼	5230	46	AVG	16.89	16.67	19.79	23.98	-4.19	-3.34	16.45	23.01	-6.56
lo pi	5270	54	AVG	16.96	16.55	19.77	23.98	-4.21	-4.14	15.63	30.00	-14.37
<u>4</u> <u>4</u>	5310	62	AVG	14.99	14.97	17.99	23.98	-5.99	-4.14	13.85	30.00	-16.15
ŭ₽	5510	102	AVG	15.44	15.30	18.38	23.98	-5.60	-5.45	12.93	30.00	-17.07
3F 3a	5590	118	AVG	16.53	16.89	19.72	23.98	-4.26	-5.45	14.27	-	-
50	5630	126	AVG	16.66	16.36	19.52	23.98	-4.46	-5.45	14.07	-	-
	5710	142	AVG	16.88	16.83	19.87	23.98	-4.11	-5.45	14.42	30.00	-15.58
	5755	151	AVG	16.70	16.71	19.72	30.00	-10.28	-4.84	14.88	-	-
	5795	159	AVG	16.56	16.87	19.73	30.00	-10.27	-4.84	14.89	-	-

Table 7-29. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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	Freq [MHz] Channel		Detector	Conducted Power [dBm]			Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin IdB1
				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]			·1
₽ ⊂	5190	38	AVG	13.03	13.86	16.48	23.98	-7.50	-3.34	13.14	23.01	-9.87
루 푼	5230	46	AVG	16.80	16.67	19.75	23.98	-4.23	-3.34	16.41	23.01	-6.60
Di pi	5270	54	AVG	16.93	16.50	19.73	23.98	-4.25	-4.14	15.59	30.00	-14.41
<u>4</u> 2	5310	62	AVG	14.60	14.72	17.67	23.98	-6.31	-4.14	13.53	30.00	-16.47
N N	5510	102	AVG	15.43	15.28	18.37	23.98	-5.61	-5.45	12.92	30.00	-17.08
а За	5590	118	AVG	16.46	16.92	19.71	23.98	-4.27	-5.45	14.26	-	-
50	5630	126	AVG	16.65	16.41	19.54	23.98	-4.44	-5.45	14.09	-	-
	5710	142	AVG	16.62	16.92	19.78	23.98	-4.20	-5.45	14.33	30.00	-15.67
	5755	151	AVG	16.63	16.71	19.68	30.00	-10.32	-4.84	14.84	-	-
	5795	159	AVG	16.64	16.78	19.72	30.00	-10.28	-4.84	14.88	-	-

Table 7-30. MIMO 40MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin
				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[ubiii]	Ennie [GBIII]	[ab]
₽ つ	5190	38	AVG	13.78	13.92	16.86	23.98	-7.12	-3.34	13.52	23.01	-9.49
후 된	5230	46	AVG	16.80	16.51	19.67	23.98	-4.31	-3.34	16.33	23.01	-6.68
<u>P</u>	5270	54	AVG	16.95	16.91	19.94	23.98	-4.04	-4.14	15.80	30.00	-14.20
<u>4</u> 2	5310	62	AVG	14.76	14.98	17.88	23.98	-6.10	-4.14	13.74	30.00	-16.26
ъч	5510	102	AVG	15.37	15.47	18.43	23.98	-5.55	-5.45	12.98	30.00	-17.02
т в	5590	118	AVG	16.95	16.71	19.84	23.98	-4.14	-5.45	14.39	-	-
2 С	5630	126	AVG	16.47	16.86	19.68	23.98	-4.30	-5.45	14.23	-	-
	5710	142	AVG	16.73	16.76	19.76	23.98	-4.22	-5.45	14.31	30.00	-15.69
	5755	151	AVG	16.63	16.63	19.64	30.00	-10.36	-4.84	14.80	-	-
	5795	159	AVG	16.50	16.68	19.60	30.00	-10.40	-4.84	14.76	-	-

Table 7-31. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

N	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
E E				ANT1	ANT2	МІМО	[dBm]	[dB]	[dBi]	[]		[]
801 vid	5210	42	AVG	12.15	12.46	15.32	23.98	-8.66	-3.34	11.98	23.01	-11.03
) z (5290	58	AVG	12.98	12.87	15.94	23.98	-8.04	-4.14	11.80	30.00	-18.20
GH Bai	5530	106	AVG	14.97	14.80	17.90	23.98	-6 .08	-5.45	12.45	30.00	-17.55
Ū.	5690	138	AVG	15.42	15.90	18.68	23.98	-5.30	-5.45	13.23	30.00	-16.77
	5775	155	AVG	15.79	15.59	18.70	30.00	-11.30	-4.84	13.86	-	-

Table 7-32. MIMO 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

Hz ()	Freq [MHz]	Channel	Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power Margin	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
H (f)				ANT1	ANT2	MIMO	[dBm]	[dB]	[dBi]	[]	,	r1
801 vid	5210	42	AVG	12.47	12.42	15.46	23.98	-8.52	-3.34	12.12	23.01	-10.89
) z (5290	58	AVG	12.67	12.76	15.73	23.98	-8.25	-4.14	11.59	30.00	-18.41
GH Bai	5530	106	AVG	14.82	14.65	17.75	23.98	-6.23	-5.45	12.30	30.00	-17.70
Ū.	5690	138	AVG	15.39	15.81	18.62	23.98	-5.36	-5.45	13.17	30.00	-16.83
	5775	155	AVG	15.72	15.55	18.65	30.00	-11.35	-4.84	13.81	-	-

Table 7-33. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

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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 15.72 dBm for Antenna-1 and 15.00 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(15.72 dBm + 15.00 dBm) = (37.33 mW + 31.62 mW) = 68.95 mW = 18.39 dBm

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 18.39 dBm with directional gain of -6.80 dBi.

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

18.39 dBm + -6.80 dBi = 11.59 dBm

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

Test Overview and Limit

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

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

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

Test Procedure Used

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

Test Settings

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

Test Setup

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

Figure 7-4. Test Instrument & Measurement Setup

Test Notes

None

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SISO Antenna-1 Power Spectral Density Measurements - N

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	а	6	4.45	11.0	-6.55
	5200	40	а	6	4.35	11.0	-6.65
	5240	48	а	6	4.24	11.0	-6.76
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.31	11.0	-6.69
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	4.58	11.0	-6.42
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	4.84	11.0	-6.16
-	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.70	11.0	-6.30
and	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	4.05	11.0	-6.95
ä	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	4.12	11.0	-6.88
	5190	38	n (40MHz)	13.5/15 (MCS0)	0.88	11.0	-10.12
	5230	46	n (40MHz)	13.5/15 (MCS0)	0.96	11.0	-10.04
	5190	38	ax (40MHz)	13.5/15 (MCS0)	0.31	11.0	-10.69
	5230	46	ax (40MHz)	13.5/15 (MCS0)	0.23	11.0	-10.77
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-2.15	11.0	-13.15
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-2.04	11.0	-13.04
	5260	52	а	6	4.75	11.0	-6.25
	5280	56	а	6	5.03	11.0	-5.97
	5320	64	а	6	5.48	11.0	-5.52
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	4.96	11.0	-6.04
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	5.05	11.0	-5.95
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	5.28	11.0	-5.72
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	5.02	11.0	-5.98
pu	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	4.60	11.0	-6.40
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	5.14	11.0	-5.86
	5270	54	n (40MHz)	13.5/15 (MCS0)	1.55	11.0	-9.45
	5310	62	n (40MHz)	13.5/15 (MCS0)	1.90	11.0	-9.10
	5270	54	ax (40MHz)	13.5/15 (MCS0)	0.67	11.0	-10.33
	5310	62	ax (40MHz)	13.5/15 (MCS0)	1.74	11.0	-9.26
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-0.30	11.0	-11.30
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-0.94	11.0	-11.94
	5500	100	а	6	4.36	11.0	-6.64
	5600	120	а	6	5.04	11.0	-5.96
	5720	144	а	6	5.05	11.0	-5.95
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	4.09	11.0	-6.91
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	4.82	11.0	-6.18
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	4.33	11.0	-6.67
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	4.25	11.0	-6.75
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	4.50	11.0	-6.50
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	4.68	11.0	-6.32
50	5510	102	n (40MHz)	13.5/15 (MCS0)	1.28	11.0	-9.72
and	5590	118	n (40MHz)	13.5/15 (MCS0)	1.41	11.0	-9.59
ä	5710	142	n (40MHz)	13.5/15 (MCS0)	1.55	11.0	-9.45
	5510	102	ax (40MHz)	13.5/15 (MCS0)	0.23	11.0	-10.77
	5590	118	ax (40MHz)	13.5/15 (MCS0)	0.78	11.0	-10.22
	5710	142	ax (40MHz)	13.5/15 (MCS0)	0.87	11.0	-10.13
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-2.18	11.0	-13.18
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-2.28	11.0	-13.28
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-4.74	11.0	-15.74
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-2.22	11.0	-13.22
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-2.77	11.0	-13.77
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-5.11	11.0	-16.11

Table 7-34. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT1

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Plot 7-265. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 1) - Ch. 36)

Plot 7-266. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 1) - Ch. 40)

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Plot 7-267. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 1) - Ch. 48)

Plot 7-268. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

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Plot 7-269. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)

Plot 7-270. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

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Plot 7-271. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)

Plot 7-272. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

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Plot 7-273. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)

Plot 7-274. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

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Plot 7-276. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)

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Plot 7-277. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)

Plot 7-278. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

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Plot 7-279. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)

Plot 7-280. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 2A) - Ch. 52)

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Plot 7-281. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 2A) - Ch. 56)



Plot 7-282. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 2A) - Ch. 64)

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Plot 7-283. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)



Plot 7-284. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)

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Plot 7-286. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 52)

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Plot 7-287. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)



Plot 7-288. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)

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Plot 7-289. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)



Plot 7-290. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)

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Plot 7-291. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)



Plot 7-292. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)

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Plot 7-293. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)



Plot 7-294. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 194 of 500
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Plot 7-295. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 2C) - Ch. 100)



Plot 7-296. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-298. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

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Plot 7-299. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



Plot 7-300. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dege 197 of 500
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Plot 7-301. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



Plot 7-302. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-303. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



Plot 7-304. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 180 of 500
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Plot 7-305. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



Plot 7-306. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 500
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Plot 7-307. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



Plot 7-308. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-309. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)



Plot 7-310. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 102 of 500
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Plot 7-311. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)



Plot 7-312. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 102 of 500
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Plot 7-313. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)



Plot 7-314. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 104 of 500
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Plot 7-315. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMF711U	POUL to be part of @ element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
	5745	149	а	6	2.33	30.0	-27.67
	5785	157	а	6	2.38	30.0	-27.62
	5825	165	а	6	2.98	30.0	-27.02
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	2.52	30.0	-27.48
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	2.58	30.0	-27.42
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	2.94	30.0	-27.06
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	1.77	30.0	-28.23
and	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	1.85	30.0	-28.15
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	2.06	30.0	-27.94
	5755	151	n (40MHz)	13.5/15 (MCS0)	-0.88	30.0	-30.88
	5795	159	n (40MHz)	13.5/15 (MCS0)	-1.16	30.0	-31.16
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-1.75	30.0	-31.75
	5795	159	ax (40MHz)	13.5/15 (MCS0)	-1.75	30.0	-31.75
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-0.54	30.0	-30.54
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-0.98	30.0	-30.98

 Table 7-35. Band 3 Conducted Power Spectral Density Measurements SISO ANT1



Plot 7-316. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-317. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 3) - Ch. 157)



Plot 7-318. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-319. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



Plot 7-320. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 500
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Plot 7-321. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



Plot 7-322. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 100 of 500
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🔤 Keysight Spectrum Analyzer - S	wept SA				
LX RL RF 50	Ω DC CORREC	SENSE:INT	ALIGN AUTO	08:45:57 PM Apr 15, 2021	Frequency
	NFE PNO: Fast IFGain:Low	Trig: Free Run Atten: 26 dB		TYPE A WWWWW DET A NNNNN	Auto Tuno
10 dB/div Ref 15.00	dBm		Mkr	1 5.784 55 GHz 1.85 dBm	Auto Tune
5.00	manaphily	1 martine	an aven		Center Freq 5.785000000 GHz
-5.00	an water and a factor of the second s		h h h h h h h h h h h h h h h h h h h		Start Freq 5.760000000 GHz
-25.0				march marked and a factor of the second s	Stop Freq 5.81000000 GHz
-45.0					CF Step 5.000000 MHz <u>Auto</u> Man
-65.0					Freq Offset 0 Hz
-75.0					Scale Type
Center 5./8500 GHz #Res BW 510 kHz	#VBW	3.0 MHz	Sweep 1.	Span 50.00 MHz 000 ms (1001 <u>pts)</u>	
MSG			STATUS		

Plot 7-323. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



Plot 7-324. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager	
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Plot 7-325. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



Plot 7-326. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 201 of 500	
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Plot 7-327. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-328. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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Plot 7-329. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-330. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 202 of 500	
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Summed MIMO Power Spectral Density Measurements - N

	Frequency [MHz]	Channel No.	802.11 Mode	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	а	6	6.94	6.87	9.92	11.0	-1.08
Band 1	5200	40	а	6	6.95	7.16	10.07	11.0	-0.93
	5240	48	а	6	6.71	6.57	9.65	11.0	-1.35
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	6.61	6.77	9.70	11.0	-1.30
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.49	7.05	9.79	11.0	-1.21
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.46	6.19	9.88	11.0	-1.12
	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	6.88	6.53	9.72	11.0	-1.28
	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	7.27	6.53	9.93	11.0	-1.07
ä	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	7.26	6.30	9.82	11.0	-1.18
	5190	38	n (40MHz)	13.5/15 (MCS0)	3.58	2.90	6.26	11.0	-4.74
	5230	46	n (40MHz)	13.5/15 (MCS0)	4.08	2.33	6.30	11.0	-4.70
	5190	38	ax (40MHz)	13.5/15 (MCS0)	3.48	2.36	5.97	11.0	-5.03
	5230	46	ax (40MHz)	13.5/15 (MCS0)	3.93	2.44	6.26	11.0	-4.74
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-0.89	-1.58	1.79	11.0	-9.21
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-0.78	-1.86	1.72	11.0	-9.28
	5260	52	а	6	7.97	6.43	10.28	11.0	-0.72
	5280	56	а	6	7.48	6.70	10.12	11.0	-0.88
	5320	64	а	6	8.19	6.73	10.53	11.0	-0.47
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	7.76	6.03	9.99	11.0	-1.01
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	7.95	6.31	10.22	11.0	-0.78
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	8.12	6.17	10.26	11.0	-0.74
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	7.61	5.97	9.88	11.0	-1.12
pu	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	6.81	5.68	9.29	11.0	-1.71
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	8.12	6.49	10.39	11.0	-0.61
	5270	54	n (40MHz)	13.5/15 (MCS0)	1.14	1.37	4.27	11.0	-6.73
	5310	62	n (40MHz)	13.5/15 (MCS0)	-0.28	0.03	2.89	11.0	-8.11
	5270	54	ax (40MHz)	13.5/15 (MCS0)	1.95	2.23	5.10	11.0	-5.90
	5310	62	ax (40MHz)	13.5/15 (MCS0)	-0.29	0.01	2.87	11.0	-8.13
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-2.05	-2.03	0.97	11.0	-10.03
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-1.88	-1.88	1.13	11.0	-9.87
	5500	100	а	6	7.50	6.49	10.03	11.0	-0.97
	5600	120	а	6	7.01	7.80	10.43	11.0	-0.57
	5720	144	а	6	6.45	7.52	10.03	11.0	-0.97
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	7.16	6.37	9.79	11.0	-1.21
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	6.23	7.04	9.66	11.0	-1.34
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.37	6.76	9.58	11.0	-1.42
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	6.91	6.15	9.56	11.0	-1.44
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	6.11	6.77	9.46	11.0	-1.54
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	6.04	6.74	9.41	11.0	-1.59
50	5510	102	n (40MHz)	13.5/15 (MCS0)	2.86	2.05	5.48	11.0	-5.52
pu	5590	118	n (40MHz)	13.5/15 (MCS0)	2.39	1.74	5.09	11.0	-5.91
Ba	5710	142	n (40MHz)	13.5/15 (MCS0)	2.24	2.53	5.40	11.0	-5.60
	5510	102	ax (40MHz)	13.5/15 (MCS0)	3.30	2.39	5.88	11.0	-5.12
	5590	118	ax (40MHz)	13.5/15 (MCS0)	2.60	2.73	5.68	11.0	-5.32
	5710	142	ax (40MHz)	13.5/15 (MCS0)	2.88	2.87	5.89	11.0	-5.11
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-1.65	-1.81	1.28	11.0	-9.72
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-1.84	-1.64	1.27	11.0	-9.73
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-1.50	-1.82	1.35	11.0	-9.65
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-1.69	-1.80	1.27	11.0	-9.73
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-1.39	-0.89	1.88	11.0	-9.12
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-4.52	-4.67	-1.58	11.0	-12.58

Table 7-36. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
	5745	149	а	6	6.67	6.72	9.71	30.0	-20.29
	5785	157	а	6	7.21	6.77	10.01	30.0	-19.99
	5825	165	а	6	6.75	6.62	9.70	30.0	-20.30
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	6.42	6.87	9.66	30.0	-20.34
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	6.56	5.89	9.25	30.0	-20.75
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	6.54	6.87	9.72	30.0	-20.28
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	6.35	6.66	9.52	30.0	-20.48
and	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	6.66	6.08	9.39	30.0	-20.61
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	6.88	6.40	9.66	30.0	-20.34
	5755	151	n (40MHz)	13.5/15 (MCS0)	3.00	2.43	5.73	30.0	-24.27
	5795	159	n (40MHz)	13.5/15 (MCS0)	-1.45	-0.60	2.01	30.0	-27.99
	5755	151	ax (40MHz)	13.5/15 (MCS0)	2.65	2.10	5.39	30.0	-24.61
Ī	5795	159	ax (40MHz)	13.5/15 (MCS0)	3.24	2.27	5.79	30.0	-24.21
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-0.93	-2.14	1.52	30.0	-28.48
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	0.23	-0.06	3.10	30.0	-26.90

Table 7-37. Band 3 MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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MIMO Antenna-1 Band 1, 2A, 2C Power Spectral Density Measurements - N

Plot 7-331. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 1) - Ch. 36)



Plot 7-332. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 1) - Ch. 40)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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Plot 7-333. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 1) - Ch. 48)



Plot 7-334. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dago 207 of 500
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Plot 7-335. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)



Plot 7-336. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 200 of E00
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Keysight Spectrum Analyzer - S	Swept SA								
LXI RF 50	Ω AC CO	ORREC	SENSE:INT	#Avg Typ	ALIGN AUTO	06:51:17 PM TRAC	Apr 23, 2021	F	requency
10 dB/div Ref 15.00	NFE II	PNO: Fast () FGain:Low	Atten: 26 dB		Mkr	1 5.181 6.8	00 GHz 88 dBm		Auto Tune
5.00			personal and marries	and and the second				5.18	Center Freq 80000000 GHz
-5.00 -15.0	and ward and a second				Langer War	and the state of the		5.18	Start Freq 55000000 GHz
-25.0							- Thankathan	5.20	Stop Freq 05000000 GHz
-45.0								<u>Auto</u>	CF Step 5.000000 MHz Man
-65.0									Freq Offset 0 Hz
-/5.0									Scale Type
Center 5.18000 GHz #Res BW 1.0 MHz		#VBW	3.0 MHz		Sweep 1	Span 5 .000 ms (0.00 MHz 1001 pts)	Log	Lin
MSG					STATUS	5			

Plot 7-337. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)



Plot 7-338. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-339. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)



Plot 7-340. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

FCC ID: A3LSMF711U	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga 210 of 500	
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Plot 7-341. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)



Plot 7-342. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Baga 211 of 500
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Plot 7-343. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



Plot 7-344. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-345. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)



Plot 7-346. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMF711U	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 212 of 500
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Plot 7-347. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 2A) - Ch. 56)



Plot 7-348. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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