

www.www.com analyzer - Occupied BW						(	- 6 <b>-</b> ×
LXURL RF 50Ω AC CO		NSE:INT req: 5.875000000 GHz	ALIGN AUTO	05:47:12 F Radio Std	M Oct 28, 2021 I: None	Trace	Detector
#1	FGain:Low #Atten: 2			Radio De	vice: BTS		
,							
10 dB/div Ref 10.00 dBm							
Log 0.00							
-10.0	Angle Ball of the Sound Content of Market and and and a start of the s	population to a shall be a shall be a shall be				c	lear Write
-20.0							
-30.0			t				
-40.0							Average
-50.0			Ymydruni	hat the second	abrication Automatic		
-60.0							
-70.0							Max Hold
-80.0							
Center 5.87500 GHz #Res BW 100 kHz	VB	W 1 MHz		Span 1	100.0 MHz 9.267 ms		
The s by too kill	\$D)			Gweep	5.207 1115		Min Hold
Occupied Bandwidth		Total Power	22.8	dBm			
	546 MHz						Detector
37.3							Detector Peak▶
Transmit Freq Error	-1.658 kHz	% of OBW Pow	er 99	.00 %		Auto	Man
x dB Bandwidth	37.77 MHz	x dB	-6.	00 dB			
MSG			STATUS				

Plot 7-125. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 4) - Ch. 175)



Plot 7-126. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax – 996 Tones (UNII Band 3/4) – Ch. 171)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N: Test Dates: EUT Type:		EUT Type:	Dama 00 at 040		
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Page 88 of 242			
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Plot 7-127. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW L 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)



Plot 7-128. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW U 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga 90 of 242	
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 89 of 242	
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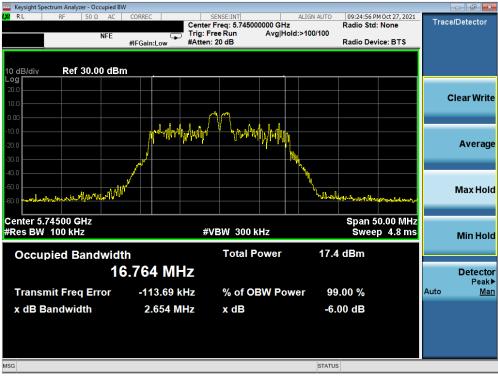
## MIMO Antenna-2 6dB Bandwidth Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	ax (20MHz)	26T	MCS0	2.65
e	5785	157	ax (20MHz)	26T	MCS0	2.65
	5825	165	ax (20MHz)	26T	MCS0	2.68
Band	5755	151	ax (40MHz)	26T	MCS0	2.12
	5795	159	ax (40MHz)	26T	MCS0	2.13
	5775	155	ax (80MHz)	26T	MCS0	2.80

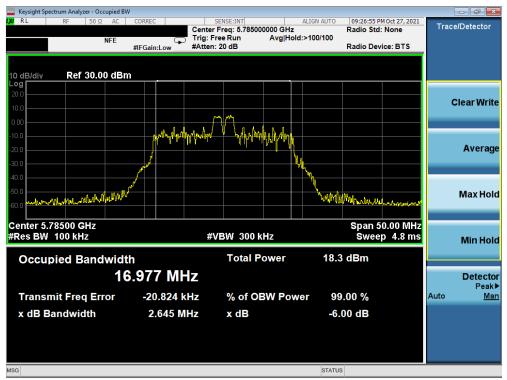
Table 7-10. Conducted Bandwidth Measurements MIMO ANT2 (26 Tones)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 00 of 242
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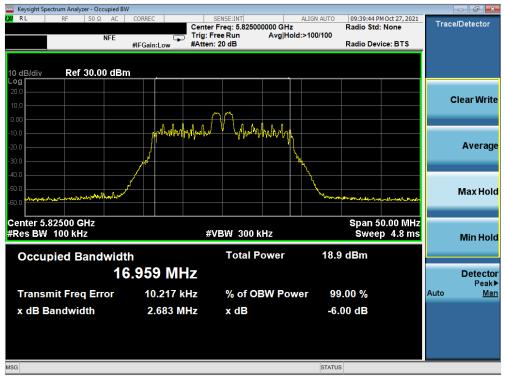
Plot 7-129. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)



Plot 7-130. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dara 04 at 040
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset Page		Page 91 of 242
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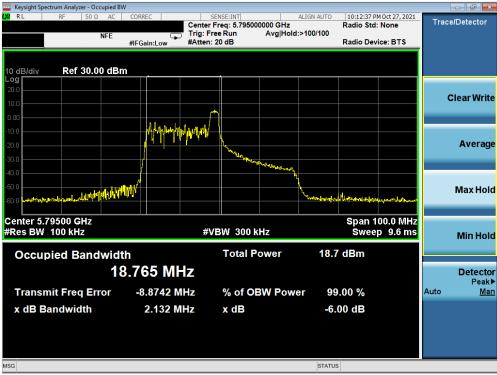
Plot 7-131. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 165)



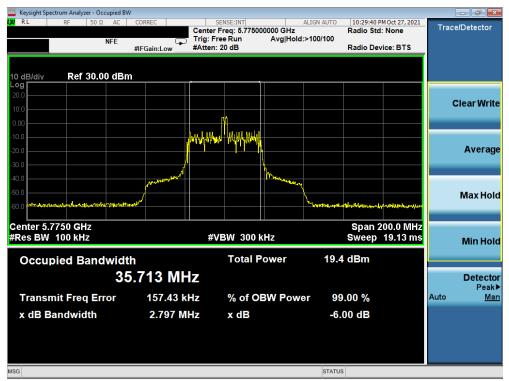
Plot 7-132. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N: Test Dates: EUT Type:		Dage 02 of 242			
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Plot 7-133. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 159)



Plot 7-134. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: Test Dates:		EUT Type:		Dama 00 at 040
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 93 of 242	
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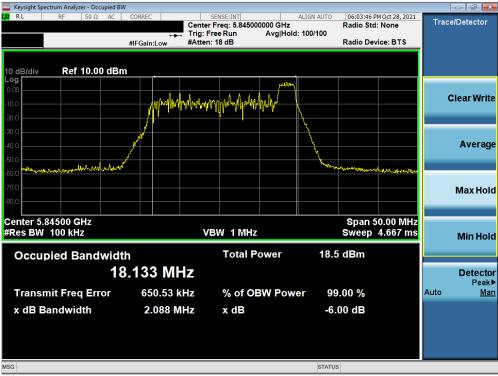


	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
Band 3/4	5845	169	ax (20MHz)	26T	MCS0	2.09
Band 4	5865	173	ax (20MHz)	26T	MCS0	2.11
Dallu 4	5885	177	ax (20MHz)	26T	MCS0	2.09
Band 3/4	5835	167	ax (40MHz)	26T	MCS0	2.10
Band 4	5875	175	ax (40MHz)	26T	MCS0	2.07
	5855	171	ax (80MHz)	26T	MCS0	2.73
Band 3/4	5815	163	ax (160MHz L)	26T	MCS0	3.05
	5815	163	ax (160MHz U)	26T	MCS0	2.99

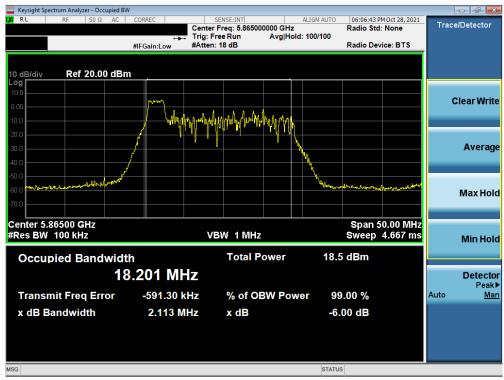
Table 7-11. Conducted Bandwidth Measurements MIMO ANT2 (26 Tones)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 04 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 94 of 242
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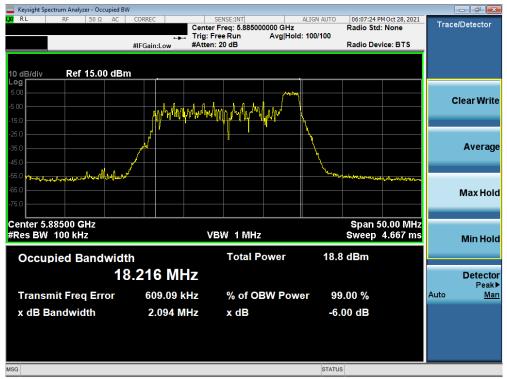
Plot 7-135. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 169)



Plot 7-136. 6dB Bandwidth Plot MIMO ANT2(20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dara 05 at 040
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 95 of 242
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Plot 7-137. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 177)



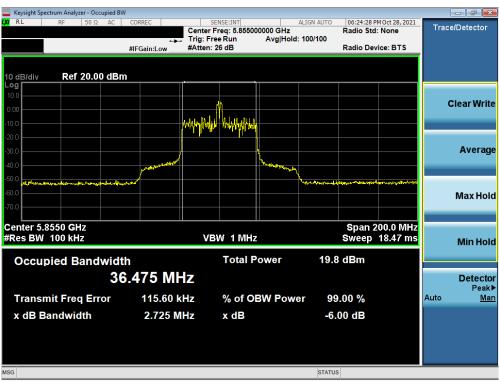
Plot 7-138. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 167)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 040		
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 96 of 242		
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🔤 Keysight Spectrum Analyzer - Occupied B					
LXI RL RF 50Ω AC	CORREC	SENSE:INT r Freg: 5.875000000 GHz		8 PM Oct 28, 2021 td: None	Trace/Detector
	Trig: F	Free Run Avg Hold	I: 100/100		
	#IFGain:Low #Atter	n: 20 dB	Radio D	evice: BTS	
10 dB/div Ref 20.00 dBr	n				
10.0					
0.00					Clear Write
-10.0					
-20.0					
-30.0					Average
-40.0	mh shih ware and		<u>\</u>		
-50.0			<u>∖</u>		
-60.0 martinenalation	and		Mar mart any bearing	Walnethannon	Mawlind
-70.0					Max Hold
10.0					
Center 5.87500 GHz				100.0 MHz	
#Res BW 100 kHz	V	BW 1 MHz	Swee	o 9.267 ms	Min Hold
Occupied Bandwid	th	Total Power	18.9 dBm		
1	7.832 MHz				Detector Peak▶
Transmit Freq Error	10.196 MHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	2.073 MHz	x dB	-6.00 dB		
	2.075 1112	X UB	-0.00 ub		
			OTATIO		
MSG			STATUS		

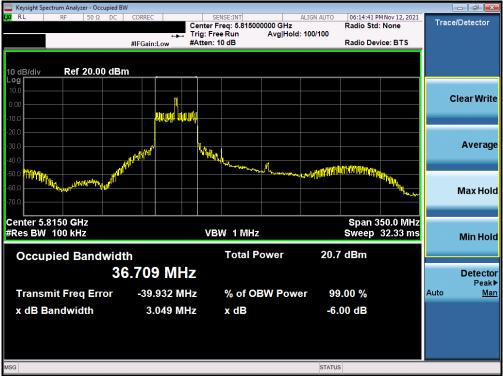
Plot 7-139. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 175)



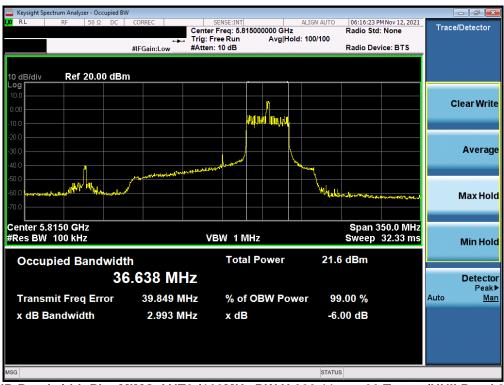
Plot 7-140. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	NG	Approved by: Technical Manager			
Test Report S/N:	Test Dates:	EUT Type:		Dage 07 of 242			
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 97 of 242			
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Plot 7-141. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW L 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)



Plot 7-142. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW U 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 09 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 98 of 242
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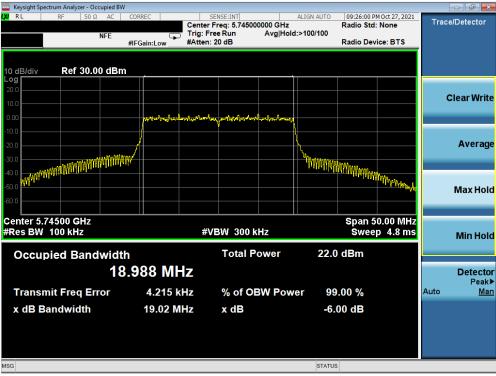


	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	ax (20MHz)	242T	MCS0	19.02
	5785	157	ax (20MHz)	242T	MCS0	19.08
1d 3	5825	165	ax (20MHz)	242T	MCS0	19.01
Band	5755	151	ax (40MHz)	484T	MCS0	37.36
	5795	159	ax (40MHz)	484T	MCS0	37.48
	5775	155	ax (80MHz)	996T	MCS0	77.10

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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 00 of 242
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Plot 7-143. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3) - Ch. 149)



Plot 7-144. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:		Page 100 of 242		
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset				
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www.www.com.com.com.com.com.com.com.com.com.com	cupied BW									
<b>LXU</b> RL RF 50 Ω	NFE	Ģ	Center Fr			ALIGN AUTO	09:40:28 Pl Radio Std: Radio Dev		Trac	e/Detector
	#IFG	ain:Low	#Atten. 20	JUD			Raulo Dev	ice. DT3		
10 dB/div Ref 30.00	0 dBm									
20.0										
10.0										Clear Write
0.00		portionful	artheretun	methownawhow	hatenlyng					
-10.0	, ,									
-20.0	أمر					h_				Average
-30.0						₩ ₩				
-40.0	Ambia					- Wataki	WHO'LE HAT THE	st.fl. a		
-50.0 m / / / / / / · · ·							·- • • • • • • • • • • • • • • • • • • •	www.whitehay		Max Hold
-60.0										
Center 5.82500 GHz							Snan 5	0.00 MHz		
#Res BW 100 kHz			#VB	W 300 k	Hz			p 4.8 ms		Min Hold
Occupied Band	width			Total P	ower	22.2	dBm			
		73 MF	7							Detector
										Peak▶
Transmit Freq Err	or	12.615 k	Hz	% of O	3W Pow	er 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth		19.01 M	Hz	x dB		-6.0	00 dB			
MSG						STATUS				

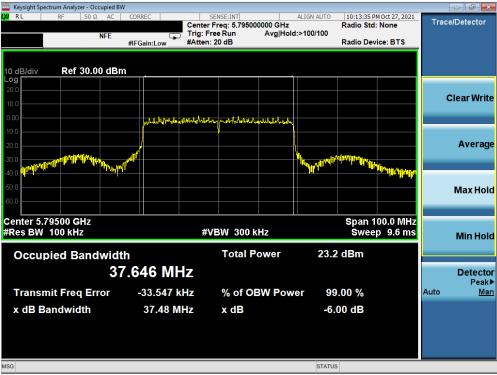
Plot 7-145. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3) - Ch. 165)



Plot 7-146. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 3) – Ch. 151)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager				
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Plot 7-147. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 3) - Ch. 159)



Plot 7-148. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 3) - Ch. 155)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: Test Dates:		EUT Type:		Dama 400 at 040
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 102 of 242
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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	18.95
Band 4	5865	173	ax (20MHz)	242T	MCS0	18.92
Danu 4	5885 177	177	ax (20MHz)	242T	MCS0	18.92
Band 3/4	5835	167	ax (40MHz)	484T	MCS0	37.62
Band 4	5875	175	ax (40MHz)	484T	MCS0	37.32
	5855	171	ax (80MHz)	996T	MCS0	77.36
Band 3/4	5815	163	ax (160MHz L)	996T	MCS0	77.78
	5815	163	ax (160MHz U)	996T	MCS0	77.09

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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	UNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 102 of 242
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🔤 Keysight Spectrum Analyzer - Occup	pied BW					
<mark>LX/</mark> RL RF 50Ω	AC CORREC	SENSE:INT Center Freg: 5.84500	ALIGN AUTO	06:04:13 PM Oct Radio Std: Nor		Trace/Detector
			Avg Hold: 100/100	Radio Std: Nor	ne	
	#IFGain:Low	#Atten: 26 dB		Radio Device:	втѕ	
10 dB/div Ref 20.00	dBm					
Log						
10.0						Clear Write
0.00	mound	and and the state of the state	hallow			
-10.0						
-20.0			<u>├}∖</u>			
-30.0	, <b>f</b>		└───			Average
-40.0	المعيد المعالي		Marcall	100.0		
-50.0 M/h/w/h/w/lang yr 100				Williammethyla	mulu	
-60.0						
						Max Hold
-70.0						
Center 5.84500 GHz				Span 50.00	0 MHz	
#Res BW 100 kHz		VBW 1 MHz		Sweep 4.6		Min Hold
						Millinea
Occupied Bandw	vidth	Total P	ower 22.3	3 dBm		
	18.960 MH	Z				Detector
						Peak►
Transmit Freq Erro	or 4.929 k	Hz % of O	3W Power 99	0.00 %	4	Auto <u>Man</u>
x dB Bandwidth	18.95 M	Hz xdB	-6.	00 dB		
MSG			STATUS	5		

Plot 7-149. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 3/4) - Ch. 169)



Plot 7-150. 6dB Bandwidth Plot MIMO ANT2(20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS908JPN	PCTEST ° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 104 of 242
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www.www.com analyzer - Occupied BW							- 6 ×
<b>LXU</b> R L RF 50 Ω AC CO		ENSE:INT Freq: 5.885000000 GHz	ALIGN AUTO	06:07:56 P	M Oct 28, 2021	Trace	/Detector
	🛶 Trig: Fr	eeRun Avg Holo	d: 100/100				
	FGain:Low #Atten:	26 dB		Radio Dev	ice: BTS		
10 dB/div Ref 20.00 dBm	_						
Log 10.0							
0.00	and the flored attest & after	N Bulley Back of all all all here				0	lear Write:
	Inthose A miles and the factor		l				
-10.0							
-20.0	1		A.				_
-30.0			<b>A</b>				Average
-40.0 Anthe And			- MAY WW	whow hat	NAL WALL .		
-50.0					፣ ግድም ያየምታለ		
-60.0							Max Hold
-70.0							
Center 5.88500 GHz	VE				0.00 MHz		
#Res BW 100 kHz	VE	3W 1 MHz		Sweep	4.667 ms		Min Hold
Occupied Bandwidth		Total Power	22.7	dBm			
18.3	951 MHz						Detector Peak▶
Transmit Freq Error	-536 Hz	% of OBW Pow	ver 99	.00 %		Auto	Man
x dB Bandwidth	18.92 MHz	x dB	-6 (	00 dB			
	10.52 MITZ	A UB	-0.0				
MSG			STATUS				

Plot 7-151. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 177)



Plot 7-152. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 3/4) - Ch. 167)

FCC ID: A3LSMS908JPN	PCTEST ° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager						
Test Report S/N:	Test Dates:	EUT Type:		Dage 105 of 242						
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www.www.com.com/www.co							- 6 <b>-</b> ×-
IXIRL RF 50Ω AC CORI	Center Fr		ALIGN AUTO	06:21:23 P Radio Std	M Oct 28, 2021 : None	Trac	e/Detector
#IFG	Gain:Low #Atten: 2	6 dB		Radio Dev	/ice: BTS		
10 dB/div Ref 10.00 dBm							
Log 0.00	he have the state has the	1					
-10.0	A TOTAL ARE AND A TOTAL AND A TOTAL	Ŋ₽₽₽₽₩₩₩₩₩₽₽₩₽₩₽₩₽₽₽₽₩₩₩₽₩₽₩₽₩₽₩₽₩₽₩₽₩₽				(	Clear Write
-20.0							
-30.0			\				
-40.0 -40.0 -0.0 mm <sup>2</sup> /alwin 11 <sup>11</sup> +14 <sub>9</sub> tarent role and det			hard Martan (111)	Martin Martin	<b>A</b> n		Average
-50.0				and the second	"Lawyork Wardy		
-60.0							
-70.0							Max Hold
-80.0							
Center 5.87500 GHz				Span 1	00.0 MHz		
#Res BW 100 kHz	VBI	N 1 MHz			9.267 ms		Min Hold
Occupied Bondwidth		Total Power	23 /	dBm			
Occupied Bandwidth		I otal I owel	23.4	ubiii			
37.5	32 MHz						Detector Peak▶
Transmit Freq Error -	19.896 kHz	% of OBW Pow	er 99	.00 %		Auto	Man
	37.32 MHz	x dB	-6.	00 dB			
MSG			STATUS				

Plot 7-153. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 4) - Ch. 175)



Plot 7-154. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 171)

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Plot 7-155. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW L 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)



Plot 7-156. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW U 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 107 of 212
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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 +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(18.49) = 23.67dBm$ . 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 +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(18.49) = 23.67dBm$ . 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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager						
Test Report S/N:	Test Dates:	EUT Type:	Dama 400 at 040						
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## MIMO Maximum Conducted Output Power Measurements (26 Tones)

									RU Index					Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		0			4			8		Power Limit	Power
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
N	5180	36	AVG	26T	8.37	9.20	11.81	8.93	9.45	12.21	8.82	9.36	12.11	23.98	-11.77
ΞΞ	5200	40	AVG	26T	8.76	8.93	11.85	9.26	9.42	12.35	9.03	9.09	12.07	23.98	-11.63
ד צ	5240	48	AVG	26T	9.07	8.92	12.00	9.49	9.37	12.44	9.22	9.03	12.14	23.98	-11.54
<b>U</b> .=	5260	52	AVG	26T	8.92	8.80	11.87	9.47	9.38	12.44	9.16	9.08	12.13	23.47	-11.03
<u>        </u>	5280	56	AVG	26T	9.02	8.63	11.84	9.38	9.17	12.29	9.42	8.93	12.19	23.47	-11.18
N 2	5320	64	AVG	26T	9.46	8.87	12.18	9.44	9.45	12.46	9.38	9.05	12.23	23.47	-11.01
ы Т	5500	100	AVG	26T	8.85	8.21	11.55	9.16	8.53	11.87	8.97	8.01	11.53	22.80	-10.93
C m	5600	120	AVG	26T	8.87	8.55	11.72	9.24	9.46	12.36	8.65	8.94	11.81	22.80	-10.44
5	5720	144	AVG	26T	9.07	9.03	12.06	9.60	9.35	12.49	9.49	9.36	12.44	22.80	-10.31
	5745	149	AVG	26T	8.91	8.87	11.90	9.21	9.31	12.27	8.91	8.77	11.85	30.00	-17.73
	5785	157	AVG	26T	8.77	8.82	11.81	9.41	9.15	12.29	8.78	9.05	11.93	30.00	-17.71
	5825	165	AVG	26T	9.01	9.40	12.22	9.39	9.55	12.48	9.05	9.15	12.11	30.00	-17.52

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

									RU Index					Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		0			8		17			Power Limit	Power
Η̈́ ο					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
÷ ÷	5190	38	AVG	26T	8.38	8.65	11.53	9.09	9.56	12.34	8.93	9.07	12.01	23.98	-11.64
e b	5230	46	AVG	26T	8.52	8.72	11.63	9.33	9.40	12.38	8.81	8.93	11.88	23.98	-11.60
4 5	5270	54	AVG	26T	8.98	8.80	11.90	9.41	9.46	12.45	9.01	8.95	11.99	23.47	-11.02
ν́б	5310	62	AVG	26T	8.74	8.29	11.53	9.26	9.00	12.14	8.81	8.90	11.87	23.47	-11.33
₽ Č	5510	102	AVG	26T	8.87	8.54	11.72	9.11	8.83	11.98	8.90	8.83	11.88	22.80	-10.82
in the second se	5590	118	AVG	26T	8.73	8.29	11.53	9.48	8.75	12.14	8.84	8.19	11.54	22.80	-10.66
ю ш	5710	142	AVG	26T	9.22	9.16	12.20	9.38	9.04	12.22	9.54	9.41	12.49	22.80	-10.31
~,	5755	151	AVG	26T	8.88	8.63	11.77	9.55	9.39	12.48	8.96	9.20	12.09	30.00	-17.52
	5795	159	AVG	26T	9.21	8.75	12.00	9.26	9.24	12.26	8.64	8.77	11.72	30.00	-17.74
	Table 7.15 MIMO 40MHz DW (UNII) Maximum Conducted Output Dower (26 Tables)														

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

	RU Index											Conducted	Conducted		
N	Freq [MHz]	Channel	Detector	Tones		0			18			36	Power Limit	Power	
। ਵ ਦਿ					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
S Đ	5210	42	AVG	26T	8.76	9.26	12.03	9.18	9.16	12.18	9.10	8.57	11.85	23.98	-11.80
<u>®</u> <u>&gt;</u>	5290	58	AVG	26T	9.12	9.36	12.25	9.52	9.37	12.46	9.16	9.00	12.09	23.47	-11.01
₽ũ	5530	106	AVG	26T	9.27	8.59	11.95	9.28	8.92	12.11	8.71	8.54	11.64	22.80	-10.69
5GF Ba	5610	122	AVG	26T	9.35	8.50	11.96	9.22	8.21	11.75	9.37	8.53	11.98	22.80	-10.82
5	5690	138	AVG	26T	9.22	8.65	11.95	9.13	9.19	12.17	8.70	8.94	11.83	22.80	-10.63
	5775	155	AVG	26T	9.24	8.75	12.01	9.28	9.22	12.26	9.12	9.19	12.17	30.00	-17.74

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

₹		Frea						Average C	onducted Po	wer (dBm)						
Ξ,	Band	[MHz]	Channel	Tones	RU Index: 0			RU Index: 18			RU Index: 36					
B A		נייוייבן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO			
16(	1	5250	50	26T	9.57	10.09	12.85	10.07	9.70	12.90	9.04	9.24	12.15			
	2A	5570	114	26T	9.91	9.85	12.89	9.97	9.78	12.89	9.49	9.26	12.39			

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

N		Freq						Average C	onducted Po	wer (dBm)			
۲ IHz	Band	[MHz]	Channel	Tones		RU Index: 0		I	RU Index: 18	1	l	RU Index: 36	•
B M B M	נויורבן				ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16( F	1	5250	50	26T	9.88	10.01	12.96	9.78	9.42	12.61	9.25	9.33	12.30
	2C	5570	114	26T	9.65	9.38	12.53	9.76	9.24	12.52	9.68	9.10	12.41

Table 7-18. MIMO 160MHz BW U (UNII) Maximum Conducted Output Power (26 Tones)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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## MIMO Conducted Output Power Measurements (52 Tones)

									RU Index					Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		37			39			40		Power Limit	Power
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
N	5180	36	AVG	52T	12.34	12.85	15.61	12.58	13.21	15.92	12.56	12.98	15.79	23.98	-8.06
ΞΞ	5200	40	AVG	52T	12.39	12.81	15.62	12.77	13.15	15.97	12.51	12.98	15.76	23.98	-8.00
ד צ	5240	48	AVG	52T	12.65	12.94	15.81	12.86	13.09	15.99	12.75	13.11	15.94	23.98	-7.99
<b>U</b>	5260	52	AVG	52T	12.64	12.64	15.65	12.34	12.16	15.26	12.83	12.91	15.88	23.47	-7.59
<u>&lt;</u> 2	5280	56	AVG	52T	12.75	12.76	15.76	13.01	12.94	15.99	12.84	12.78	15.82	23.47	-7.48
N	5320	64	AVG	52T	13.05	12.69	15.88	12.38	12.22	15.31	13.11	12.81	15.97	23.47	-7.50
a T	5500	100	AVG	52T	12.69	12.46	15.59	12.96	12.81	15.90	12.33	12.41	15.38	22.80	-6.90
С Ш	5600	120	AVG	52T	12.95	12.76	15.87	12.94	12.93	15.95	12.86	12.79	15.84	22.80	-6.85
ŝ	5720	144	AVG	52T	12.16	12.39	15.29	12.53	12.66	15.61	12.05	12.15	15.11	22.80	-7.19
	5745	149	AVG	52T	12.45	12.53	15.50	12.73	12.93	15.84	12.46	12.61	15.55	30.00	-14.16
	5785	157	AVG	52T	12.46	12.67	15.58	12.88	12.92	15.91	12.53	12.85	15.70	30.00	-14.09
	5825	165	AVG	52T	12.51	12.86	15.70	12.80	12.99	15.91	12.55	12.82	15.69	30.00	-14.09

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

									RU Index					Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		37			40			44		Power Limit	Power
ŤΞ					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
÷ ÷	5190	38	AVG	52T	11.82	12.55	15.21	12.36	12.73	15.56	12.23	12.76	15.51	23.98	-8.42
e b	5230	46	AVG	52T	12.04	12.46	15.27	12.24	12.54	15.40	12.27	12.68	15.49	23.98	-8.49
4 5	5270	54	AVG	52T	12.15	12.29	15.23	12.46	12.52	15.50	12.64	12.63	15.65	23.47	-7.82
<u> </u>	5310	62	AVG	52T	12.47	12.08	15.29	12.71	12.49	15.61	12.82	12.60	15.72	23.47	-7.75
ΡČ	5510	102	AVG	52T	12.42	12.28	15.36	13.07	12.87	15.98	12.38	12.42	15.41	22.80	-6.82
in the second se	5590	118	AVG	52T	12.62	12.17	15.41	13.06	12.89	15.99	12.67	12.42	15.56	22.80	-6.81
ы В С	5710	142	AVG	52T	12.94	12.87	15.92	12.41	12.55	15.49	12.97	12.98	15.99	22.80	-6.81
~/	5755	151	AVG	52T	12.18	12.29	15.25	12.89	12.73	15.82	12.21	12.18	15.21	30.00	-14.18
	5795	159	AVG	52T	12.41	12.48	15.46	13.01	12.92	15.98	12.59	12.65	15.63	30.00	-14.02
		Tabla	7 20	BAIRA/					Condu				0 Tomo	-	

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

									RU Index					Conducted	Conducted
N _	Freq [MHz]	Channel	Detector	Tones		37			44			52		Power Limit	Power
। ਵ ਦਿ					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
S Đ	5210	42	AVG	52T	12.42	12.77	15.61	12.48	12.45	15.48	12.40	12.16	15.29	23.98	-8.37
<u>∞ ≥</u>	5290	58	AVG	52T	12.65	12.64	15.66	12.43	12.32	15.39	12.35	12.09	15.23	23.47	-7.81
우입	5530	106	AVG	52T	12.82	12.99	15.92	12.85	13.10	15.99	12.66	12.89	15.79	22.80	-6.81
ы В	5610	122	AVG	52T	12.00	12.75	15.40	13.01	12.81	15.92	12.86	12.79	15.84	22.80	-6.88
5	5690	138	AVG	52T	12.85	12.98	15.93	12.26	12.62	15.46	12.32	12.67	15.51	22.80	-6.87
	5775	155	AVG	52T	12.58	12.82	15.71	12.10	12.46	15.29	12.01	12.33	15.18	30.00	-14.29

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

₹		Frea						Average C	onducted Po	wer (dBm)			
Ξ,	Band	[MHz]	Channel	Tones		RU Index: 37	,	l	RU Index: 44			RU Index: 52	
B A		נייוייבן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16(	1	5250	50	52T	12.75	13.15	15.96	12.58	12.81	15.71	12.93	12.94	15.95
	2C	5570	114	52T	12.81	12.97	15.90	12.19	12.51	15.36	12.20	12.37	15.30
	_			10 100		1 /1 18 111		<u> </u>			(50.7		

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

N		Frea						Average C	onducted Po	wer (dBm)			
Hz /	Band	[MHz]	Channel	Tones		RU Index: 37	,		RU Index: 44		l	RU Index: 52	1
BVB					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16(	1	5250	50	52T	12.76	12.63	15.71	12.75	12.60	15.68	13.13	12.78	15.97
<b>~</b>	2C	5570	114	52T	12.25	12.41	15.34	12.89	12.99	15.95	12.38	12.57	15.49

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

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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### MIMO Conducted Output Power Measurements (106 Tones)

							RU I	ndex			Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		53			54		Power Limit	Power
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
N	5180	36	AVG	106T	14.42	14.98	17.72	14.68	15.22	17.97	23.98	-6.01
ΞĒ	5200	40	AVG	106T	14.24	14.86	17.57	14.52	14.96	17.75	23.98	-6.23
₹ 5	5240	48	AVG	106T	14.46	14.86	17.67	14.65	14.94	17.81	23.98	-6.17
	5260	52	AVG	106T	14.57	14.64	17.62	14.96	14.98	17.98	23.47	-5.49
<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	5280	56	AVG	106T	14.83	14.82	17.84	14.89	14.96	17.94	23.47	-5.53
N 2	5320	64	AVG	106T	15.07	14.85	17.97	15.05	14.88	17.98	23.47	-5.49
a I	5500	100	AVG	106T	14.47	14.34	17.42	14.46	14.42	17.45	22.80	-5.35
C m	5600	120	AVG	106T	14.98	14.87	17.94	14.71	14.84	17.79	22.80	-4.86
<b>S</b>	5720	144	AVG	106T	14.28	14.43	17.37	14.26	14.35	17.31	22.80	-5.43
	5745	149	AVG	106T	14.51	14.48	17.50	14.44	14.52	17.49	30.00	-12.50
	5785	157	AVG	106T	14.66	14.76	17.72	14.43	14.78	17.62	30.00	-12.28
	5825	165	AVG	106T	14.59	14.93	17.78	14.68	14.82	17.76	30.00	-12.22

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

									RU Index					Conducted	Conducted
N	Freq [MHz]	Channel	Detector	Tones		53			54			56		Power Limit	Power
Ť 🕤					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
는 눈	5190	38	AVG	106T	13.99	14.65	17.34	14.68	15.26	17.99	14.53	14.93	17.74	23.98	-5.99
5 P	5230	46	AVG	106T	14.41	14.65	17.54	14.72	15.16	17.96	14.51	14.97	17.76	23.98	-6.02
4 5	5270	54	AVG	106T	14.75	14.64	17.71	14.46	14.33	17.40	14.84	14.88	17.87	23.47	-5.60
<u> </u>	5310	62	AVG	106T	14.85	14.68	17.78	14.65	14.27	17.47	14.94	14.78	17.87	23.47	-5.60
ΡĊ	5510	102	AVG	106T	14.64	14.30	17.48	14.96	14.74	17.86	14.61	14.35	17.49	22.80	-4.94
in the second se	5590	118	AVG	106T	14.71	14.42	17.58	15.08	14.86	17.98	14.72	14.62	17.68	22.80	-4.82
ЮШ	5710	142	AVG	106T	14.93	15.01	17.98	14.61	14.65	17.64	14.36	14.40	17.39	22.80	-4.82
47	5755	151	AVG	106T	14.28	14.26	17.28	14.69	14.60	17.66	14.23	14.45	17.35	30.00	-12.34
	5795	159	AVG	106T	14.48	14.46	17.48	14.88	14.83	17.86	14.59	14.71	17.66	30.00	-12.14

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

									RU Index					Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		53			56			60		Power Limit	Power
Ê.					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
5 0	5210	42	AVG	106T	14.37	14.70	17.55	14.36	14.35	17.37	14.38	14.12	17.26	23.98	-6.43
<u> </u>	5290	58	AVG	106T	14.91	14.59	17.76	14.38	14.26	17.33	14.26	14.15	17.22	23.47	-5.71
1 č	5530	106	AVG	106T	14.04	14.26	17.16	14.15	14.37	17.27	14.83	15.11	17.98	22.80	-4.82
S &	5610	122	AVG	106T	14.74	14.91	17.84	14.34	14.02	17.19	14.26	14.18	17.23	22.80	-4.96
n —	5690	138	AVG	106T	14.86	15.06	17.97	14.34	14.43	17.40	14.36	14.68	17.53	22.80	-4.83
	5775	155	AVG	106T	14.48	14.57	17.54	14.89	15.05	17.98	14.72	15.18	17.97	30.00	-12.02

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

N		Frea						Average C	onducted Po	wer (dBm)			
۲Hz	Band	[MHz]	Channel	Tones		RU Index: 53	1	l	RU Index: 56	i		RU Index: 60	1
N N N		נאורוצן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16( F	1	5250	50	106T	14.40	14.89	17.66	14.26	14.40	17.34	14.74	14.66	17.71
<b>~</b>	2C	5570	114	106T	14.88	15.07	17.99	14.19	14.39	17.30	14.04	14.41	17.24

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

N		Free						Average C	onducted Po	wer (dBm)			
Hz /	Band	Freq [MHz]	Channel	Tones		RU Index: 53		-	RU Index: 56		RU Index: 60		
N N N		נייייבן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16( F	1	5250	50	106T	14.78	14.59	17.70	14.84	14.59	17.73	14.83	14.49	17.67
	2C	5570	114	106T	14.25	14.41	17.34	14.16	14.32	17.25	14.01	14.34	17.19

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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 111 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 111 of 242
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## MIMO Conducted Output Power Measurements (242 Tones)

						RU Index		Conducted	Conducted
	Freq [MHz]	Channel	Detector	Tones		61		Power Limit	Power
					ANT1	ANT2	MIMO	[dBm]	Margin [dB]
N	5180	36	AVG	242T	14.55	15.12	17.85	23.98	-6.12
E E	5200	40	AVG	242T	14.49	14.94	17.73	23.98	-6.25
N N	5240	48	AVG	242T	14.58	14.89	17.75	23.98	-6.23
	5260	52	AVG	242T	14.56	14.72	17.65	23.47	-5.82
<u>S</u> <u>S</u>	5280	56	AVG	242T	14.74	14.72	17.74	23.47	-5.73
N C	5320	64	AVG	242T	15.03	14.85	17.95	23.47	-5.52
a T	5500	100	AVG	242T	14.58	14.49	17.55	22.80	-5.25
C M	5600	120	AVG	242T	14.83	14.93	17.89	22.80	-4.91
S	5720	144	AVG	242T	15.17	15.38	18.29	22.80	-4.51
	5745	149	AVG	242T	15.25	15.69	18.49	30.00	-11.51
	5785	157	AVG	242T	14.59	14.73	17.67	30.00	-12.33
	5825	165	AVG	242T	14.56	14.78	17.68	30.00	-12.32

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

							RU I	ndex			Conducted	Conducted
N	Freq [MHz]	Channel	Detector	Tones		61			62		Power Limit	Power
ΪC	<b>&gt;</b>				ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
14 ÷	5190	38	AVG	242T	14.48	15.12	17.82	14.72	15.08	17.91	23.98	-6.07
	5230	46	AVG	242T	14.46	14.84	17.66	14.65	15.17	17.93	23.98	-6.05
4 >	5270	54	AVG	242T	14.96	14.98	17.98	15.15	15.13	18.15	23.47	-5.32
$\sim$	5310	62	AVG	242T	15.12	14.93	18.04	15.18	15.01	18.11	23.47	-5.36
2 4	5510	102	AVG	242T	14.58	14.43	17.52	14.72	14.76	17.75	22.80	-5.05
ц В В В В В	5590	118	AVG	242T	14.72	14.46	17.60	14.88	14.75	17.83	22.80	-4.97
D D D D	5710	142	AVG	242T	15.01	15.04	18.04	15.41	15.51	18.47	22.80	-4.33
~/	5755	151	AVG	242T	15.35	15.54	18.46	14.65	14.79	17.73	30.00	-11.54
	5795	159	AVG	242T	15.37	15.58	18.49	14.62	14.91	17.78	30.00	-11.51

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

									RU Index					Conducted	Conducted
N	Freq [MHz]	Channel	Detector	Tones		61			62			64		Power Limit	Power
∃ ਦੇ ਦੇ					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
e te	5210	42	AVG	242T	14.74	14.91	17.84	15.26	15.23	18.26	15.50	15.23	18.38	23.98	-5.60
∞≥	5290	58	AVG	242T	14.26	15.19	17.76	14.84	14.53	17.70	15.41	15.28	18.36	23.47	-5.11
우입	5530	106	AVG	242T	15.09	15.39	18.25	15.12	15.40	18.27	15.19	15.41	18.31	22.80	-4.49
10 m	5610	122	AVG	242T	14.91	15.02	17.98	14.94	15.12	18.04	15.26	15.14	18.21	22.80	-4.59
5	5690	138	AVG	242T	15.05	15.26	18.17	15.33	15.57	18.46	14.63	14.93	17.79	22.80	-4.34
	5775	155	AVG	242T	14.84	14.99	17.93	15.01	15.14	18.09	14.91	15.49	18.22	30.00	-11.78
						<b>B</b> 144 /1			<u> </u>			1.			

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

N		Frea						Average C	onducted Po	wer (dBm)			
Hz ,	Band	and [MHz] Channel Tone		Tones	RU Index: 61			RU Index: 62			RU Index: 64		
N N N		נייויזבן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16( F	1	5250	50	242T	14.93	15.36	18.16	14.81	15.04	17.94	15.40	15.55	18.49
<b>~</b>	2C	5570	114	242T	14.76	15.09	17.94	15.14	15.71	18.44	15.15	15.29	18.23

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

N		Frea						Average C	onducted Po	wer (dBm)			
Hz /	Band	[MHz]	Channel	Tones		RU Index: 61		RU Index: 62			RU Index: 64		
B A O		נייוייבן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16( F	1	5250	50	242T	14.96	14.80	17.89	15.34	15.23	18.30	15.19	14.81	18.01
	2C	5570	114	242T	15.24	15.51	18.39	15.22	15.42	18.33	15.31	15.64	18.49
	-			0 4 0 0 1		/		<u> </u>	4 1 0		10.10	- \	

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

FCC ID: A3LSMS908JPN	Proved to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 112 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 112 of 242
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## MIMO Conducted Output Power Measurements (484 Tones)

						RU I	ndex			Conducted	Conducted
Freq [MHz]	Channel	Detector	Tones		65			66		Power Limit	Power
				ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	[dBm]	Margin [dB]
5210	42	AVG	484T	14.31	14.26	17.30	13.83	13.79	16.82	23.98	-6.68
5290	58	AVG	484T	15.13	14.90	18.03	15.32	15.15	18.25	23.47	-5.22
5530	106	AVG	484T	14.83	15.16	18.01	14.75	15.09	17.93	22.80	-4.79
5610	122	AVG	484T	14.72	14.64	17.69	14.75	14.83	17.80	22.80	-5.00
5690	138	AVG	484T	14.68	14.96	17.83	15.25	15.49	18.38	22.80	-4.42
5775	155	AVG	484T	14.58	14.81	17.71	14.71	15.05	17.89	30.00	-12.11
	5210 5290 5530 5610 5690	5210         42           5290         58           5530         106           5610         122           5690         138	5210         42         AVG           5290         58         AVG           5530         106         AVG           5610         122         AVG           5690         138         AVG	5210         42         AVG         484T           5290         58         AVG         484T           5530         106         AVG         484T           5610         122         AVG         484T           5690         138         AVG         484T	ANT1           5210         42         AVG         484T         14.31           5290         58         AVG         484T         15.13           5530         106         AVG         484T         14.83           5610         122         AVG         484T         14.72           5690         138         AVG         484T         14.68	ANT1         ANT2           5210         42         AVG         484T         14.31         14.26           5290         58         AVG         484T         15.13         14.90           5530         106         AVG         484T         14.83         15.16           5610         122         AVG         484T         14.72         14.64           5690         138         AVG         484T         14.68         14.96	Freq [MHz]         Channel         Detector         Tones         65           5210         42         AVG         484T         14.31         14.26         17.30           5290         58         AVG         484T         15.13         14.90         18.03           5530         106         AVG         484T         14.83         15.16         18.01           5610         122         AVG         484T         14.72         14.64         17.69           5690         138         AVG         484T         14.68         14.96         17.83	ANT1         ANT2         MIMO         ANT1           5210         42         AVG         484T         14.31         14.26         17.30         13.83           5290         58         AVG         484T         15.13         14.90         18.03         15.32           5530         106         AVG         484T         14.83         15.16         18.01         14.75           5610         122         AVG         484T         14.72         14.64         17.69         14.75           5690         138         AVG         484T         14.68         14.96         17.83         15.25	Freq [MHz]         Channel         Detector         Tones         65         MIMO         ANT1         ANT2           5210         42         AVG         484T         14.31         14.26         17.30         13.83         13.79           5290         58         AVG         484T         15.13         14.90         18.03         15.32         15.15           5530         106         AVG         484T         14.83         15.16         18.01         14.75         15.09           5610         122         AVG         484T         14.72         14.64         17.69         14.75         14.83           5690         138         AVG         484T         14.68         14.96         17.83         15.25         15.49	$\begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	$\begin{tabular}{ c c c c c c } \hline Free [MHz] $$ Property $$ Power Limit $$ Power$

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

					RU Index		Conducted	Conducted
Freq [MHz]	Channel	Detector	Tones		65		Power Limit	Power
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]
5190	38	AVG	484T	13.47	13.97	16.74	23.98	-7.24
5230	46	AVG	484T	15.14	15.32	18.24	23.98	-5.74
5270	54	AVG	484T	15.52	15.29	18.42	23.47	-5.05
5310	62	AVG	484T	15.55	15.40	18.49	23.47	-4.98
5510	102	AVG	484T	15.21	14.82	18.03	22.80	-4.77
5590	118	AVG	484T	15.27	14.95	18.12	22.80	-4.68
5710	142	AVG	484T	15.38	15.57	18.49	22.80	-4.31
5755	151	AVG	484T	14.84	14.82	17.84	30.00	-12.16
5795	159	AVG	484T	15.07	15.14	18.12	30.00	-11.88
	5190 5230 5270 5310 5510 5590 5710 5755 5795	5190         38           5230         46           5270         54           5310         62           5510         102           5590         118           5710         142           5755         151           5795         159	5190         38         AVG           5230         46         AVG           5270         54         AVG           5310         62         AVG           5510         102         AVG           5590         118         AVG           5710         142         AVG           5755         151         AVG           5795         159         AVG	5190         38         AVG         484T           5230         46         AVG         484T           5270         54         AVG         484T           5310         62         AVG         484T           5510         102         AVG         484T           5590         118         AVG         484T           5710         142         AVG         484T           5755         151         AVG         484T           5795         159         AVG         484T	ANT1           5190         38         AVG         484T         13.47           5230         46         AVG         484T         15.14           5270         54         AVG         484T         15.52           5310         62         AVG         484T         15.55           5510         102         AVG         484T         15.21           5590         118         AVG         484T         15.27           5710         142         AVG         484T         15.38           5755         151         AVG         484T         15.38           5795         159         AVG         484T         15.07	Freq [MHz]         Channel         Detector         Tones         65           5190         38         AVG         484T         13.47         13.97           5230         46         AVG         484T         15.14         15.32           5270         54         AVG         484T         15.52         15.29           5310         62         AVG         484T         15.55         15.40           5510         102         AVG         484T         15.21         14.82           5590         118         AVG         484T         15.27         14.95           5710         142         AVG         484T         15.27         14.95           5755         151         AVG         484T         15.38         15.57           5795         159         AVG         484T         14.84         14.82	Freq [MHz]         Channel         Detector         Tones         65           ANT1         ANT2         MIMO           5190         38         AVG         484T         13.47         13.97         16.74           5230         46         AVG         484T         15.14         15.32         18.24           5270         54         AVG         484T         15.52         15.29         18.42           5210         62         AVG         484T         15.55         15.40         18.49           5510         102         AVG         484T         15.27         14.82         18.03           5590         118         AVG         484T         15.27         14.95         18.12           5710         142         AVG         484T         15.38         15.57         18.49           5755         151         AVG         484T         14.84         14.82         17.84           5795         159         AVG         484T         15.07         15.14         18.12	Freq [MHz]         Channel         Detector         Tones         65         Power Limit           5190         38         AVG         484T         13.47         13.97         16.74         23.98           5230         46         AVG         484T         15.14         15.32         18.24         23.98           5270         54         AVG         484T         15.52         15.29         18.42         23.47           5310         62         AVG         484T         15.55         15.40         18.49         23.47           5510         102         AVG         484T         15.27         14.82         18.03         22.80           5590         118         AVG         484T         15.27         14.95         18.12         22.80           5710         142         AVG         484T         15.27         14.95         18.12         22.80           5750         118         AVG         484T         15.38         15.57         18.49         22.80           5755         151         AVG         484T         14.84         14.82         17.84         30.00           5795         159         AVG         484T <t< th=""></t<>

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

N		From				Aver	age Conduc	ted Power (c	lBm)	
Ηz	H > Band [MH		Freq [MHz] Channel			RU Index: 65	65		RU Index: 66	
M M M M					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
16( I	1	5250	50	484T	14.27	14.49	17.39	13.65	13.69	16.68
	2C	5570	114	484T	14.75	15.09	17.93	15.14	15.56	18.37

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

N		Free				Aver	age Conduc	ted Power (c	lBm)	
٩Hz	Band	Freq [MHz]	Channel	Tones		RU Index: 65			RU Index: 66	
2 >		נאורזצן			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
99	1	5250	50	484T	14.20	13.93	17.08	14.13	13.86	17.01
~	2C	5570	114	484T	15.27	15.46	18.38	15.21	15.41	18.32

Table 7-37. MIMO 160MHz BW U (UNII) Maximum Conducted Output Power (484 Tones)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 112 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 113 of 242
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## MIMO Conducted Output Power Measurements (996 Tones)

						RU Index		Conducted	Conducted
Hz (c	Freq [MHz]	Channel	Detector	Tones		67		Power Limit	Power
₹£					ANT1	ANT2	MIMO	[dBm]	Margin [dB]
(80MI width	5210	42	AVG	996T	14.76	14.93	17.86	23.98	-6.12
	5290	58	AVG	996T	15.15	14.81	17.99	23.47	-5.48
Hz and	5530	106	AVG	996T	15.27	15.67	18.48	22.80	-4.32
5Gł Ba	5610	122	AVG	996T	15.41	15.39	18.41	22.80	-4.39
5	5690	138	AVG	996T	14.68	14.86	17.78	22.80	-5.02
	5775	155	AVG	996T	15.27	15.50	18.40	30.00	-11.60

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

N	Band [MHz]			Average Conducted Power (dBm)					
0MH; BW		•	Channel	Tones	RU Index: 67				
					ANT1	ANT2	MIMO		
16( H	1	5250	50	996T	12.39	12.43	15.42		
	2C	5570	114	996T	14.74	15.04	17.90		

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

N	Band [MHz]			Average Conducted Power (dBm)					
0MHz BW		•	Channel	Tones	RU Index: 67				
					ANT1	ANT2	MIMO		
160 B	1	5250	50	996T	12.31	12.06	15.20		
	2C	5570	114	996T	15.17	15.33	18.26		

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

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga 114 of 242	
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							Ant1	Ant2	MIMO	Directional	Max	Max e.i.r.p	e.i.r.p
Frequency	Bandwidth	Channel	Mode	Tone	RU index	Detector	Power	Power	Power	Gain	e.i.r.p	Limit	Margin
							[dBm]	[dBm]	[dBm]	[dBi]	[dBm]	[dBm]	[dB]
5845 5845	20MHz 20MHz	169 169	ax RU ax RU	26T 26T	0 4	Average Average	9.08 8.68	9.28 9.04	12.19 11.87	-3.27	8.92 8.60	30.00 30.00	-21.08 -21.40
5845	20MHz	169	ax RU	20T	8	Average	9.13	9.04	12.21	-3.27	8.94	30.00	-21.40
5845	20MHz	169	ax RU	52T	37	Average	12.65	13.24	15.97	-3.27	12.70	30.00	-17.30
5845	20MHz	169	ax RU	52T	39	Average	11.93	12.49	15.23	-3.27	11.96	30.00	-18.04
5845	20MHz	169	ax RU	52T	40	Average	12.68	13.22	15.97	-3.27	12.70	30.00	-17.30
5845	20MHz	169	ax RU	106T	53	Average	14.54	15.19	17.89	-3.27	14.62	30.00	-15.38
5845	20MHz	169	ax RU	106T	54	Average	14.68	15.13	17.92	-3.27	14.65	30.00	-15.35
5845	20MHz	169	ax RU	242T	61	Average	14.58	15.20	17.91	-3.27	14.64	30.00	-15.36
5865	20MHz	173	ax RU	26T	0	Average	9.35	9.38	12.38	-3.27	9.11	30.00	-20.89
5865	20MHz	173	ax RU	26T	4 8	Average	8.72	9.04	11.89 12.18	-3.27	8.62	30.00	-21.38
5865 5865	20MHz 20MHz	173 173	ax RU ax RU	26T 52T	37	Average Average	9.21 12.64	9.13 13.28	15.98	-3.27 -3.27	8.91 12.71	30.00 30.00	-21.09 -17.29
5865	20MHz	173	ax RU	52T	39	Average	11.86	12.34	15.12	-3.27	11.85	30.00	-17.25
5865	20MHz	173	ax RU	52T	40	Average	12.43	13.02	15.75	-3.27	12.48	30.00	-17.52
5865	20MHz	173	ax RU	106T	53	Average	14.68	15.15	17.93	-3.27	14.66	30.00	-15.34
5865	20MHz	173	ax RU	106T	54	Average	14.66	15.25	17.98	-3.27	14.71	30.00	-15.29
5865	20MHz	173	ax RU	242T	61	Average	14.47	15.28	17.90	-3.27	14.63	30.00	-15.37
5885	20MHz	177	ax RU	26T	0	Average	8.77	9.03	11.91	-3.27	8.64	30.00	-21.36
5885	20MHz	177	ax RU	26T	4	Average	8.98	9.44	12.23	-3.27	8.96	30.00	-21.04
5885	20MHz	177	ax RU	26T	8	Average	9.27	9.63	12.47	-3.27	9.20	30.00	-20.80
5885	20MHz	177	ax RU	52T	37	Average	12.63	13.27	15.97	-3.27	12.70	30.00	-17.30
5885	20MHz	177	ax RU	52T	39	Average	11.83	12.51	15.19	-3.27	11.92	30.00	-18.08
5885	20MHz	177	ax RU	52T	40	Average	12.69	13.25	15.99	-3.27	12.72	30.00	-17.28
5885	20MHz	177	ax RU	106T	53 54	Average	14.61	15.31	17.98	-3.27	14.71	30.00	-15.29
5885 5885	20MHz 20MHz	177 177	ax RU ax RU	106T 242T	61	Average Average	14.63 14.54	15.25 15.20	17.96 17.89	-3.27 -3.27	14.69 14.62	30.00 30.00	-15.31 -15.38
5835	40MHz	167	ax RU	2421 26T	0	Average	9.11	9.16	17.05	-3.27	8.87	30.00	-21.13
5835	40MHz	167	ax RU	26T	8	Average	8.92	8.78	11.86	-3.27	8.59	30.00	-21.41
5835	40MHz	167	ax RU	26T	17	Average	9.24	9.27	12.27	-3.27	9.00	30.00	-21.00
5835	40MHz	167	ax RU	52T	37	Average	12.47	12.65	15.57	-3.27	12.30	30.00	-17.70
5835	40MHz	167	ax RU	52T	40	Average	12.25	12.41	15.34	-3.27	12.07	30.00	-17.93
5835	40MHz	167	ax RU	52T	44	Average	12.46	12.92	15.71	-3.27	12.44	30.00	-17.56
5835	40MHz	167	ax RU	106T	53	Average	14.57	14.85	17.72	-3.27	14.45	30.00	-15.55
5835	40MHz	167	ax RU	106T	54	Average	14.72	15.11	17.93	-3.27	14.66	30.00	-15.34
5835	40MHz	167	ax RU	106T	56	Average	14.45	15.00	17.74	-3.27	14.47	30.00	-15.53
5835	40MHz	167	ax RU	242T	61	Average	14.53	15.00	17.78	-3.27	14.51	30.00	-15.49
5835 5835	40MHz 40MHz	167 167	ax RU ax RU	242T 484T	62 65	Average	14.61 15.05	15.22 15.43	17.94 18.25	-3.27 -3.27	14.67 14.98	30.00 30.00	-15.33 -15.02
5875	40MHz	107	ax RU ax RU	26T	0	Average Average	9.07	9.32	18.25	-3.27	8.94	30.00	-13.02
5875	40MHz	175	ax RU	26T	8	Average	9.28	9.30	12.21	-3.27	9.03	30.00	-20.97
5875	40MHz	175	ax RU	26T	17	Average	9.27	9.35	12.32	-3.27	9.05	30.00	-20.95
5875	40MHz	175	ax RU	52T	37	Average	12.11	12.81	15.48	-3.27	12.21	30.00	-17.79
5875	40MHz	175	ax RU	52T	40	Average	12.14	12.55	15.36	-3.27	12.09	30.00	-17.91
5875	40MHz	175	ax RU	52T	44	Average	12.46	12.97	15.73	-3.27	12.46	30.00	-17.54
5875	40MHz	175	ax RU	106T	53	Average	14.28	14.94	17.63	-3.27	14.36	30.00	-15.64
5875	40MHz	175	ax RU	106T	54	Average	14.12	14.53	17.34	-3.27	14.07	30.00	-15.93
5875	40MHz	175	ax RU	106T	56	Average	14.50	15.11	17.83	-3.27	14.56	30.00	-15.44
5875 5875	40MHz	175	ax RU	242T 242T	61 62	Average	14.40	15.05 15.37	17.75	-3.27 -3.27	14.48	30.00 30.00	-15.52
5875	40MHz 40MHz	175 175	ax RU ax RU	2421 484T	62	Average Average	14.73 14.77	15.37	18.07 18.12	-3.27	14.80 14.85	30.00	-15.20 -15.15
5855	80MHz	175	ax RU ax RU	26T	0	Average	8.65	8.96	18.12	-3.27	8.55	30.00	-13.15
5855	80MHz	171	ax RU	26T	18	Average	9.20	9.71	12.47	-3.27	9.20	30.00	-20.80
5855	80MHz	171	ax RU	26T	36	Average	8.87	9.21	12.05	-3.27	8.78	30.00	-21.22
5855	80MHz	171	ax RU	52T	37	Average	12.61	13.05	15.85	-3.27	12.58	30.00	-17.42
5855	80MHz	171	ax RU	52T	44	Average	11.93	12.49	15.23	-3.27	11.96	30.00	-18.04
5855	80MHz	171	ax RU	52T	52	Average	11.83	12.47	15.17	-3.27	11.90	30.00	-18.10
5855	80MHz	171	ax RU	106T	53	Average	14.74	15.10	17.93	-3.27	14.66	30.00	-15.34
5855	80MHz	171	ax RU	106T	56	Average	13.95	14.36	17.17	-3.27	13.90	30.00	-16.10
5855	80MHz	171	ax RU	106T	60	Average	13.80	14.42	17.13	-3.27	13.86	30.00	-16.14
5855	80MHz	171	ax RU	242T	61	Average	14.88	15.15	18.03	-3.27	14.76	30.00	-15.24
5855	80MHz	171	ax RU	242T	62	Average	14.97	15.42	18.21	-3.27	14.94	30.00	-15.06
5855	80MHz	171	ax RU	242T	64	Average Average	15.08	15.62	18.37	-3.27	15.10	30.00	-14.90
5855	80MHz	171	ax RU	484T	65	Ű	14.46	14.87	17.68	-3.27	14.41	30.00	-15.59
5855 5855	80MHz 80MHz	171 171	ax RU ax RU	484T 996T	66 67	Average	14.62 15.18	15.16 15.64	17.91 18.43	-3.27 -3.27	14.64 15.16	30.00 30.00	-15.36 -14.84
2022		1 1/1	ax KU	5301	67	Average	13.10	13.04	10.45	-3.27	13.10	30.00	-14.04

### Table 7-41. UNII-4 Maximum 20/40/80MHz Conducted Output Power (all Tones)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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							Ant1	Ant2	MIMO	Directional	Max	Max e.i.r.p	e.i.r.p
_				_			Power	Power	Power	Gain	e.i.r.p	Limit	Margin
Frequency	Bandwidth	Channel	Mode	Tone	RU index	Detector	[dBm]	[dBm]	[dBm]	[dBi]	[dBm]	[dBm]	[dB]
5775	L160MHz	ax RU	26T	ax RU	26T	Average	9.77	9.07	12.44	-3.27	9.17	36.00	-26.83
5775	L160MHz	ax RU	26T	ax RU	26T	Average	10.07	9.87	12.98	-3.27	9.71	36.00	-26.29
5775	L160MHz	ax RU	26T	ax RU	26T	Average	9.47	9.23	12.36	-3.27	9.09	36.00	-26.91
5775	L160MHz	ax RU	52T	ax RU	52T	Average	12.93	12.68	15.82	-3.27	12.55	36.00	-23.45
5775	L160MHz	ax RU	52T	ax RU	52T	Average	13.01	12.92	15.98	-3.27	12.71	36.00	-23.29
5775	L160MHz	ax RU	52T	ax RU	52T	Average	12.03	12.25	15.15	-3.27	11.88	36.00	-24.12
5775	L160MHz	ax RU	106T	ax RU	106T	Average	14.47	14.26	17.38	-3.27	14.11	36.00	-21.89
5775	L160MHz	ax RU	106T	ax RU	106T	Average	14.86	14.74	17.81	-3.27	14.54	36.00	-21.46
5775	L160MHz	ax RU	106T	ax RU	106T	Average	14.86	14.92	17.90	-3.27	14.63	36.00	-21.37
5775	L160MHz	ax RU	242T	ax RU	242T	Average	14.94	14.68	17.82	-3.27	14.55	36.00	-21.45
5775	L160MHz	ax RU	242T	ax RU	242T	Average	15.35	15.05	18.21	-3.27	14.94	36.00	-21.06
5775	L160MHz	ax RU	242T	ax RU	242T	Average	15.08	15.15	18.13	-3.27	14.86	36.00	-21.14
5775	L160MHz	ax RU	484T	ax RU	484T	Average	14.76	14.66	17.72	-3.27	14.45	36.00	-21.55
5775	L160MHz	ax RU	484T	ax RU	484T	Average	15.06	15.09	18.09	-3.27	14.82	36.00	-21.18
5775	L160MHz	ax RU	996T	ax RU	996T	Average	15.44	15.31	18.39	-3.27	15.12	36.00	-20.88
5855	H160MHz	ax RU	26T	ax RU	26T	Average	9.38	9.50	12.45	-3.27	9.18	36.00	-26.82
5855	H160MHz	ax RU	26T	ax RU	26T	Average	9.81	10.01	12.92	-3.27	9.65	36.00	-26.35
5855	H160MHz	ax RU	26T	ax RU	26T	Average	9.33	9.98	12.68	-3.27	9.41	36.00	-26.59
5855	H160MHz	ax RU	52T	ax RU	52T	Average	12.19	12.40	15.31	-3.27	12.04	36.00	-23.96
5855	H160MHz	ax RU	52T	ax RU	52T	Average	12.05	12.30	15.19	-3.27	11.92	36.00	-24.08
5855	H160MHz	ax RU	52T	ax RU	52T	Average	12.08	12.46	15.28	-3.27	12.01	36.00	-23.99
5855	H160MHz	ax RU	106T	ax RU	106T	Average	14.03	14.27	17.16	-3.27	13.89	36.00	-22.11
5855	H160MHz	ax RU	106T	ax RU	106T	Average	14.02	14.25	17.15	-3.27	13.88	36.00	-22.12
5855	H160MHz	ax RU	106T	ax RU	106T	Average	13.89	14.38	17.15	-3.27	13.88	36.00	-22.12
5855	H160MHz	ax RU	242T	ax RU	242T	Average	15.06	15.25	18.16	-3.27	14.89	36.00	-21.11
5855	H160MHz	ax RU	242T	ax RU	242T	Average	15.40	15.55	18.49	-3.27	15.22	36.00	-20.78
5855	H160MHz	ax RU	242T	ax RU	242T	Average	15.23	15.55	18.40	-3.27	15.13	36.00	-20.87
5855	H160MHz	ax RU	484T	ax RU	484T	Average	15.16	15.36	18.27	-3.27	15.00	36.00	-21.00
5855	H160MHz	ax RU	484T	ax RU	484T	Average	15.26	15.40	18.34	-3.27	15.07	36.00	-20.93
5855	H160MHz	ax RU	996T	ax RU	996T	Average	15.21	15.38	18.31	-3.27	15.04	36.00	-20.96
	-	able 7 4	<u> </u>		4.04					ar (all T			

Table 7-42. UNII-4 Maximum 160MHz Conducted Output Power (all Tones)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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#### Note:

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

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

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

#### Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 14.35 dBm for Antenna-1 and 15.09 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

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

#### Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 17.75 dBm with directional gain of -3.27dBi.

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

17.75 dBm + (-3.27) dBi = 14.48 dBm

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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# 7.5 Maximum Power Spectral Density – 802.11ax OFDMA §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

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

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

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

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

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

#### Test Procedure Used

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

#### Test Settings

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

#### Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

#### Test Notes

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

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## Summed 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	5.07	6.18	8.67	11.00	-2.33
_	5200	40	ax (20MHz)	26T	MCS0	5.49	6.41	8.99	11.00	-2.01
p p	5240	48	ax (20MHz)	26T	MCS0	5.52	6.30	8.94	11.00	-2.06
Band 1	5190	38	ax (40MHz)	26T	MCS0	6.36	7.63	10.05	11.00	-0.95
	5230	46	ax (40MHz)	26T	MCS0	6.66	7.81	10.28	11.00	-0.72
	5210	42	ax (80MHz)	26T	MCS0	5.14	6.18	8.70	11.00	-2.30
Band 1/2A	5250	50	ax (160MHz L)	26T	MCS0	4.22	5.16	7.73	11.00	-3.27
Ba 1/1	5250	50	ax (160MHz U)	26T	MCS0	6.43	7.21	9.85	11.00	-1.15
	5260	52	ax (20MHz)	26T	MCS0	5.73	6.15	8.95	11.00	-2.05
∢	5280	56	ax (20MHz)	26T	MCS0	5.74	6.43	9.11	11.00	-1.89
Band 2A	5320	64	ax (20MHz)	26T	MCS0	5.15	6.02	8.62	11.00	-2.38
gan	5270	54	ax (40MHz)	26T	MCS0	7.00	7.84	10.45	11.00	-0.55
	5310	62	ax (40MHz)	26T	MCS0	6.74	7.54	10.17	11.00	-0.83
	5290	58	ax (80MHz)	26T	MCS0	6.02	5.74	8.89	11.00	-2.11
	5500	100	ax (20MHz)	26T	MCS0	4.66	4.65	7.67	11.00	-3.33
	5600	120	ax (20MHz)	26T	MCS0	5.31	5.24	8.29	11.00	-2.71
	5720	144	ax (20MHz)	26T	MCS0	6.25	5.82	9.05	11.00	-1.95
	5510	102	ax (40MHz)	26T	MCS0	5.79	5.74	8.77	11.00	-2.23
SC	5590	118	ax (40MHz)	26T	MCS0	6.45	5.64	9.07	11.00	-1.93
Band 2C	5710	142	ax (40MHz)	26T	MCS0	6.31	6.10	9.22	11.00	-1.78
Ba	5530	106	ax (80MHz)	26T	MCS0	3.69	4.65	7.21	11.00	-3.79
	5610	122	ax (80MHz)	26T	MCS0	5.91	5.14	8.55	11.00	-2.45
	5690	138	ax (80MHz)	26T	MCS0	5.13	5.61	8.39	11.00	-2.61
	5570	114	ax (160MHz L)	26T	MCS0	5.59	5.40	8.51	11.00	-2.49
	5570	114	ax (160MHz U)	26T	MCS0	6.57	6.13	9.37	11.00	-1.63

 Table 7-43. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (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	3.71	3.16	6.45	30.00	-23.55
e	5785	157	ax (20MHz)	26T	MCS0	3.24	3.68	6.48	30.00	-23.52
	5825	165	ax (20MHz)	26T	MCS0	3.41	3.72	6.58	30.00	-23.42
Band	5755	151	ax (40MHz)	26T	MCS0	4.17	3.87	7.03	30.00	-22.97
	5795	159	ax (40MHz)	26T	MCS0	3.96	4.16	7.07	30.00	-22.93
	5775	155	ax (80MHz)	26T	MCS0	3.10	3.77	6.46	30.00	-23.54

Table 7-44. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (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	6.38	6.82	9.62	30.00	-20.38	-3.27	6.35	14.00	-7.65
Band 4	5865	173	ax (20MHz)	26T	MCS0	6.45	7.10	9.79			-3.27	6.52	14.00	-7.48
Dallu 4	5885	177	ax (20MHz)	26T	MCS0	6.73	7.26	10.01			-3.27	6.74	14.00	-7.26
Band 3/4	5835	167	ax (40MHz)	26T	MCS0	6.44	6.77	9.62	30.00	-20.38	-3.27	6.35	14.00	-7.65
Band 4	5875	175	ax (40MHz)	26T	MCS0	7.04	7.57	10.32			-3.27	7.05	14.00	-6.95
	5855	171	ax (80MHz)	26T	MCS0	5.88	6.19	9.04	30.00	-20.96	-3.27	5.77	14.00	-8.23
Band 3/4	5815	163	ax (160MHz L)	26T	MCS0	6.67	6.41	9.55	30.00	-20.45	-3.27	6.28	14.00	-7.72
	5815	163	ax (160MHz U)	26T	MCS0	5.49	6.40	8.98	30.00	-21.02	-3.27	5.71	14.00	-8.29

Table 7-45. Band 4 MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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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	2.44	3.98	6.29	11.00	-4.71
	5200	40	ax (20MHz)	242T	MCS0	2.76	3.58	6.20	11.00	-4.80
Band 1	5240	48	ax (20MHz)	242T	MCS0	3.06	4.03	6.58	11.00	-4.42
Bar	5190	38	ax (40MHz)	484T	MCS0	0.29	1.27	3.82	11.00	-7.18
	5230	46	ax (40MHz)	484T	MCS0	0.67	1.33	4.02	11.00	-6.98
	5210	42	ax (80MHz)	996T	MCS0	-2.25	-1.78	1.00	11.00	Margin [dB] -4.71 -4.80 -4.42 -7.18
Band 1/2A	5250	50	ax (160MHz L)	996T	MCS0	-2.70	-1.35	1.04	11.00	Margin [dB]           -4.71           -4.80           -4.42           -7.18           -6.98           -10.00           -9.96           -10.47           -4.86           -4.73           -6.76           -6.79           -9.89           -5.70           -5.41           -4.98           -7.87           -7.70           -7.01           -10.34           -9.53           -11.01
Ba 1/:	5250	50	ax (160MHz U)	996T	MCS0	-2.90	-2.09	0.53	11.00	-10.47
	5260	52	ax (20MHz)	242T	MCS0	3.02	3.15	6.10	11.00	-4.90
	5280	56	ax (20MHz)	242T	MCS0	3.08	3.17	6.14	11.00	-4.86
Band 2A	5320	64	ax (20MHz)	242T	MCS0	3.20	3.32	6.27	11.00	-4.73
Ban	5270	54	ax (40MHz)	484T	MCS0	1.13	1.32	4.24	11.00	-6.76
	5310	62	ax (40MHz)	484T	MCS0	1.01	1.39	4.21	11.00	-6.79
	5290	58	ax (80MHz)	996T	MCS0	-1.85	-1.95	1.11	11.00	-9.89
	5500	100	ax (20MHz)	242T	MCS0	2.15	2.42	5.30	11.00	-5.70
	5600	120	ax (20MHz)	242T	MCS0	2.37	2.77	5.59	11.00	-5.41
	5720	144	ax (20MHz)	242T	MCS0	2.67	3.33	6.02	11.00	-4.98
	5510	102	ax (40MHz)	484T	MCS0	0.02	0.22	3.13	11.00	-7.87
Ŋ	5590	118	ax (40MHz)	484T	MCS0	0.26	0.32	3.30	11.00	-7.70
Band 2C	5710	142	ax (40MHz)	484T	MCS0	0.52	1.40	3.99	11.00	-7.01
â	5530	106	ax (80MHz)	996T	MCS0	-2.88	-3.11	0.02	11.00	-10.98
	5610	122	ax (80MHz)	996T	MCS0	-2.32	-2.38	0.66	11.00	-10.34
	5690	138	ax (80MHz)	996T	MCS0	-1.67	-1.42	1.47	11.00	-9.53
	5570	114	ax (160MHz L)	996T	MCS0	-3.58	-2.52	-0.01	11.00	-11.01
	5570	114	ax (160MHz U)	996T	MCS0	-2.24	-1.69	1.05	11.00	-9.95

Table 7-46. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (Full 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)	242T	MCS0	-0.53	-0.13	2.68	30.00	-27.32
	5785	157	ax (20MHz)	242T	MCS0	-0.55	0.24	2.87	30.00	-27.13
od 3	5825	165	ax (20MHz)	242T	MCS0	0.64	0.14	3.40	30.00	-26.60
Band	5755	151	ax (40MHz)	484T	MCS0	-2.76	-2.17	0.56	30.00	-29.44
	5795	159	ax (40MHz)	484T	MCS0	-2.91	-2.16	0.49	30.00	-29.51
	5775	155	ax (80MHz)	996T	MCS0	-4.45	-4.54	-1.48	30.00	-31.48

Table 7-47. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (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	2.48	3.18	5.86	30.00	-24.14	-3.27	2.59	14.00	-11.41
Band 4	5865	173	ax (20MHz)	242T	MCS0	2.49	3.22	5.88			-3.27	2.61	14.00	-11.39
Dallu 4	5885	177	ax (20MHz)	242T	MCS0	2.92	3.32	6.13			-3.27	2.86	14.00	-11.14
Band 3/4	5835	167	ax (40MHz)	484T	MCS0	0.38	1.05	3.74	30.00	-26.26	-3.27	0.46	14.00	-13.54
Band 4	5875	175	ax (40MHz)	484T	MCS0	0.47	1.25	3.88			-3.27	0.61	14.00	-13.39
	5855	171	ax (80MHz)	996T	MCS0	-2.01	-1.37	1.33	30.00	-28.67	-3.27	-1.94	14.00	-15.94
Band 3/4	5815	163	ax (160MHz L)	996T	MCS0	-1.89	-2.10	1.02	30.00	-28.98	-3.27	-2.25	14.00	-16.25
	5815	163	ax (160MHz U)	996T	MCS0	-2.28	-1.47	1.15	30.00	-28.85	-3.27	-2.12	14.00	-16.12
Table 7-48. Band 4 MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)														
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#### Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna-1 and Antenna-2 were first measured separately with reduced Antenna-1 and Antenna-2 powers per manufacture's tune-up document. The measured values were then summed in linear power units then converted back to dBm.

#### Sample Directional Gain Calculation:

Assuming the antenna gain is -6.53 dBi for Antenna-1 and -6.04 dBi for Antenna-2.

Directional gain = 
$$10 \log[(10^{G_{1/20}} + 10^{G_{2/20}} + ... + 10^{G_{N/20}})^2 / N_{ANT}] dBi$$
  
=  $10 \log[(10^{-8.61/20} + 10^{-7.68/20} / 2] dBi$   
= (-3.27) dBi

#### Sample MIMO Calculation:

Assuming the average conducted power spectral density was measured to be 5.88 dBm for Antenna-1 and 6.27 dBm for Antenna-2.

Antenna-1 + Antenna-2 = MIMO

(5.88 dBm + 6.27 dBm) = (3.87 mW + 4.24 mW) = 8.11mW = 9.09 dBm

#### Sample e.i.r.p Power Spectral Density Calculation:

Assuming the average MIMO power density was calculated to be 9.09 dBm with directional gain of -3.27 dBi.

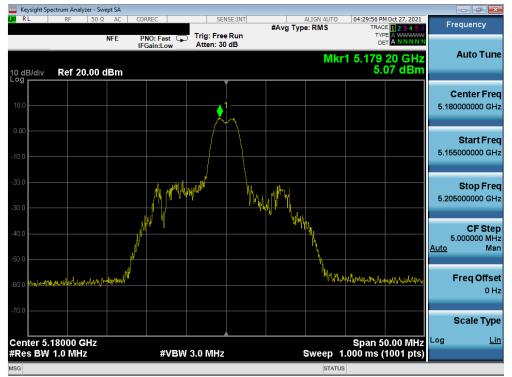
e.i.r.p. Power Spectral Density(dBm) = Power Spectral Density (dBm) + directional gain (dBi)

9.09 dBm + (-3.27) dBi = 5.82 dBm

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



Plot 7-157. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



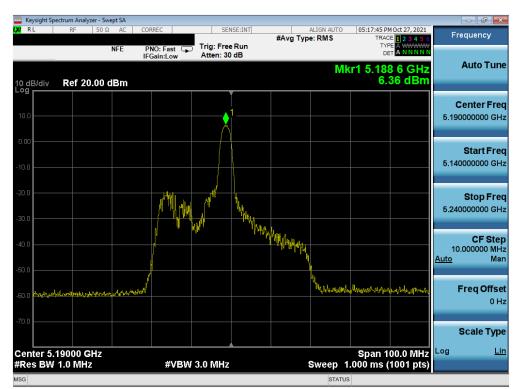
Plot 7-158. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS908JPN	PCTEST* Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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Plot 7-159. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



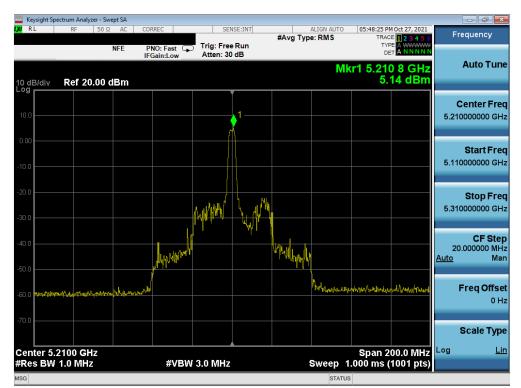
Plot 7-160. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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Plot 7-161. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



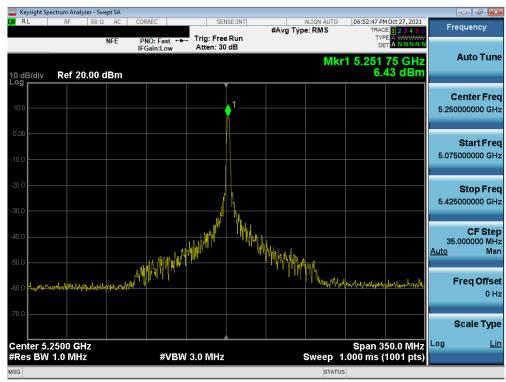
Plot 7-162. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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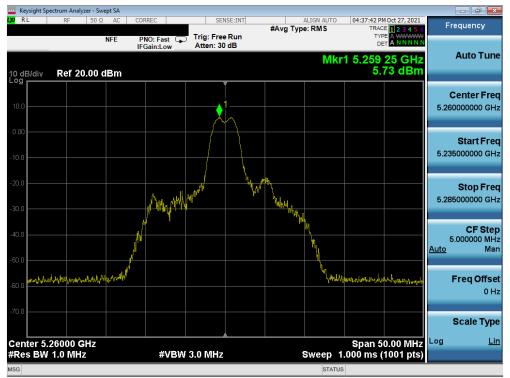
Plot 7-163. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)



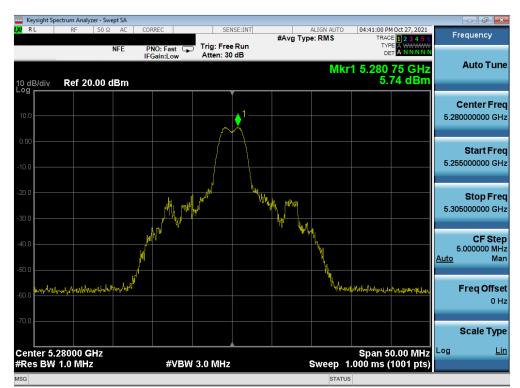
Plot 7-164. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax – 26 Tones (UNII Band 1/2A) – Ch. 50)

FCC ID: A3LSMS908JPN	Proved to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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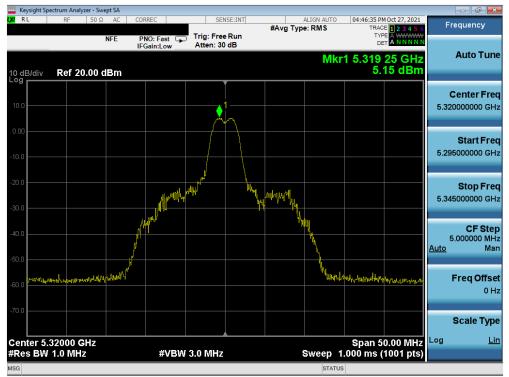
Plot 7-165. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



Plot 7-166. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-167. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



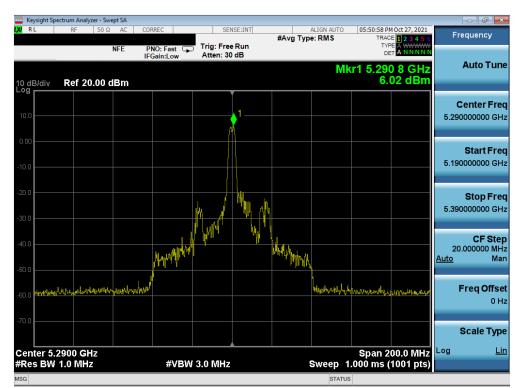
Plot 7-168. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMS908JPN	PCTEST° Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager
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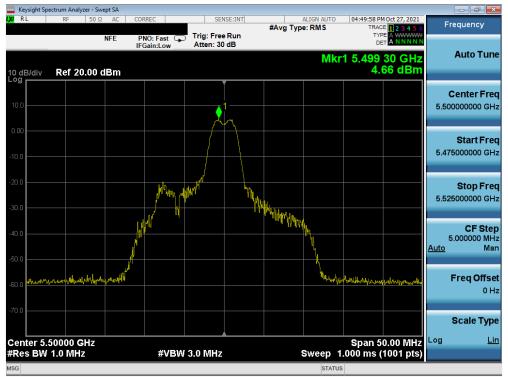
Plot 7-169. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



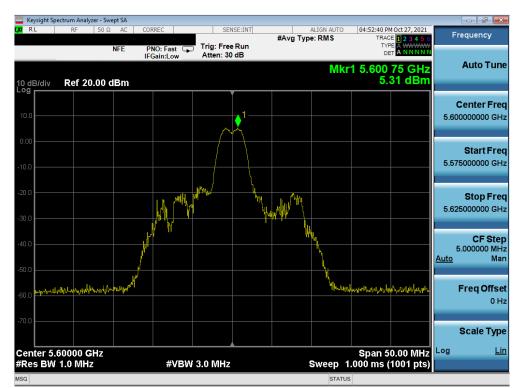
Plot 7-170. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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Plot 7-171. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 100)



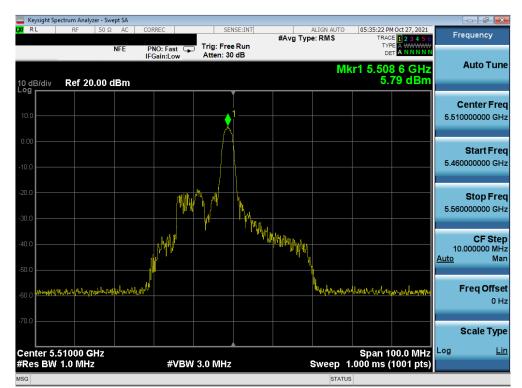
Plot 7-172. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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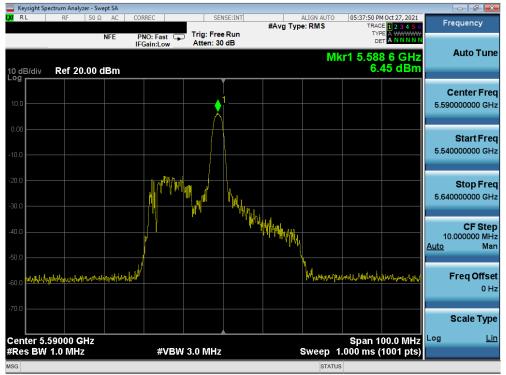
Plot 7-173. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 144)



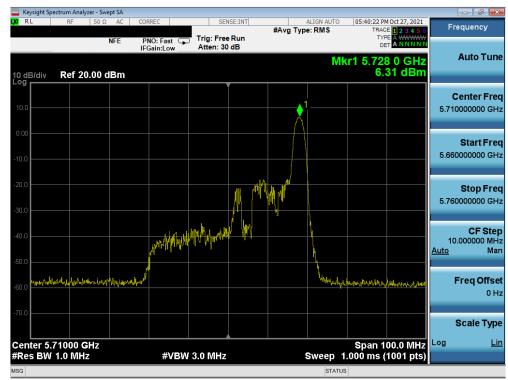
Plot 7-174. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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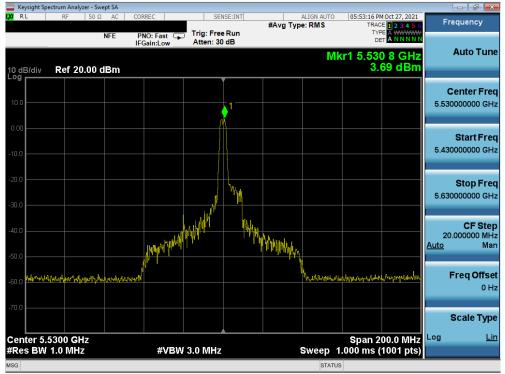
Plot 7-175. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



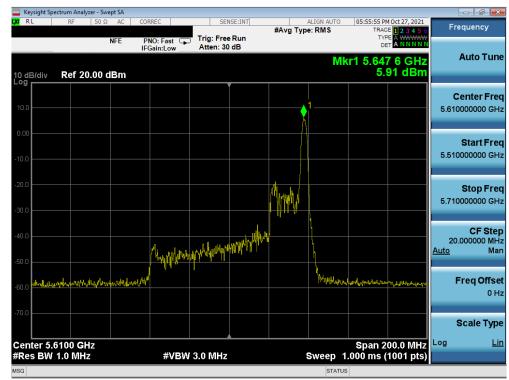
Plot 7-176. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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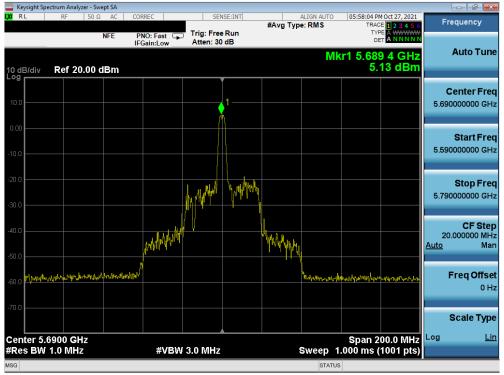
Plot 7-177. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 106)



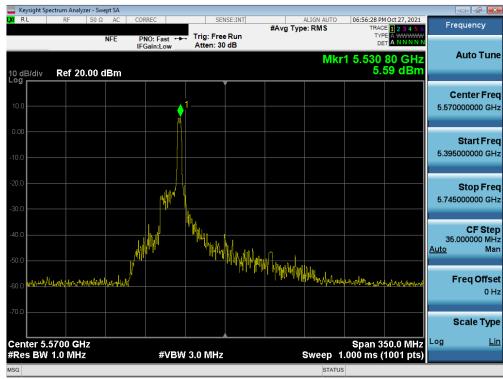
Plot 7-178. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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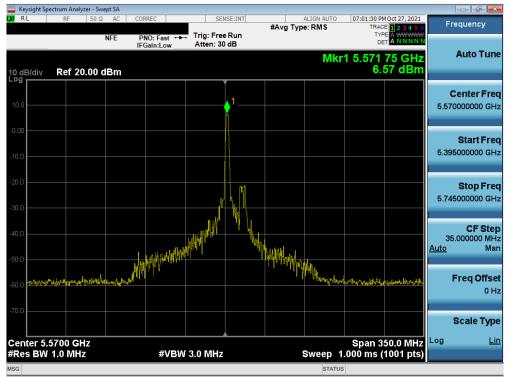
Plot 7-179. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 138)



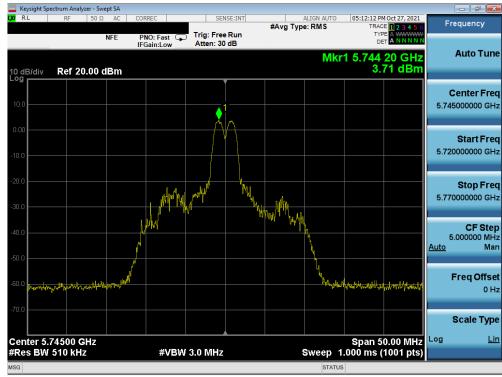
Plot 7-180. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - 26 Tones (UNII Band 2C) - Ch. 114)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
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Plot 7-181. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax - 26 Tones (UNII Band 2C) - Ch. 114)



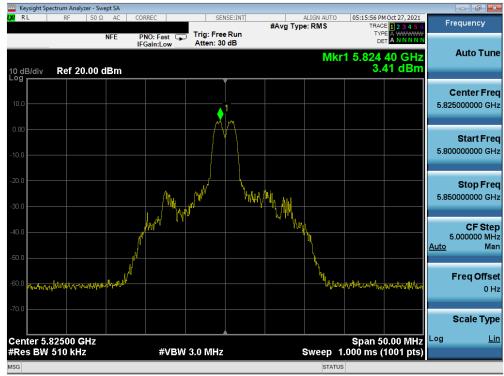
Plot 7-182. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	UNG	Approved by: Technical Manager
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Plot 7-183. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)



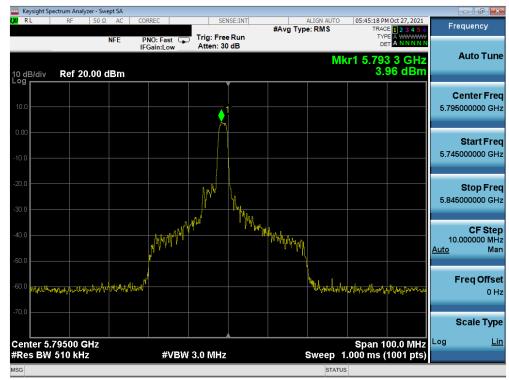
Plot 7-184. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 165)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-185. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)



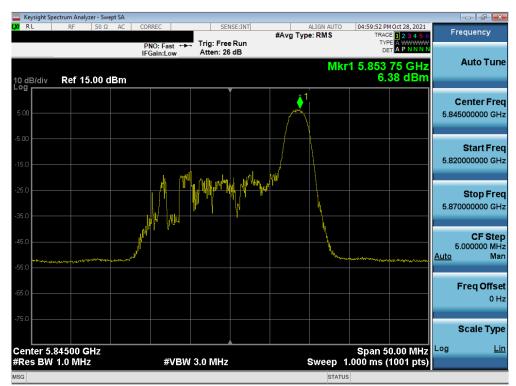
Plot 7-186. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	UNG	Approved by: Technical Manager
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Plot 7-187. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)



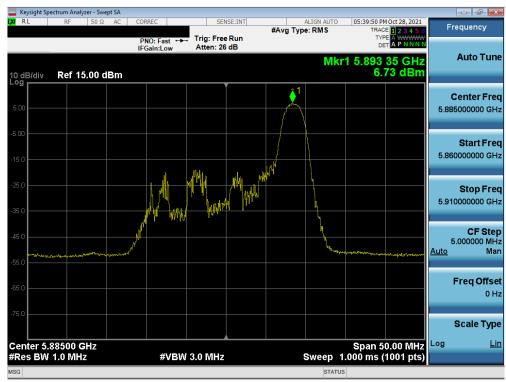
Plot 7-188. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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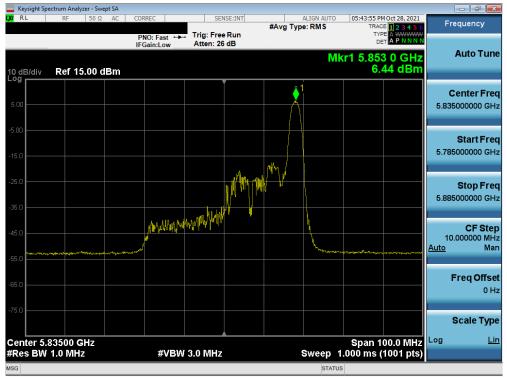
Plot 7-189. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 173)



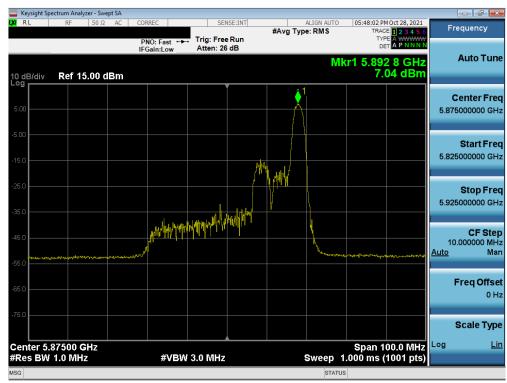
Plot 7-190. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 120 of 242	
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Plot 7-191. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 167)



Plot 7-192. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 120 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 139 of 242
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Plot 7-193. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 171)



Plot 7-194. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Domo 140 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 140 of 242
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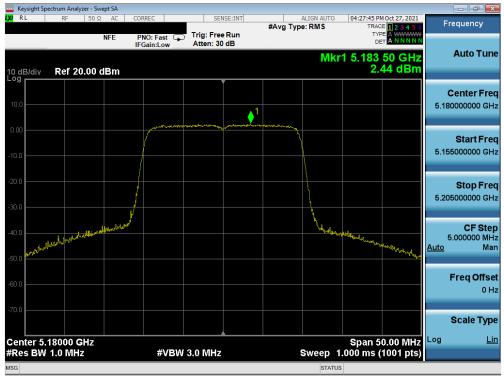




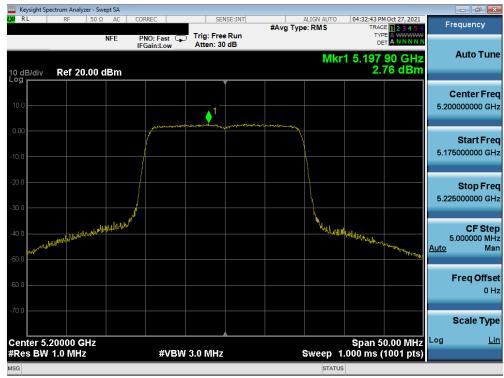
Plot 7-195. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 111 of 212
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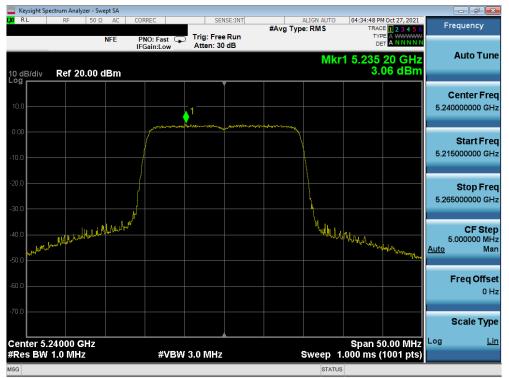
Plot 7-196. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 36)



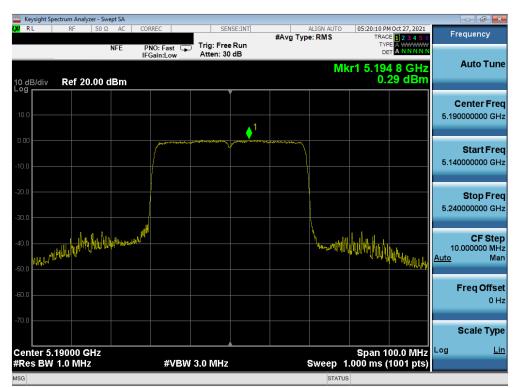
Plot 7-197. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 142 of 242
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Plot 7-198. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 48)



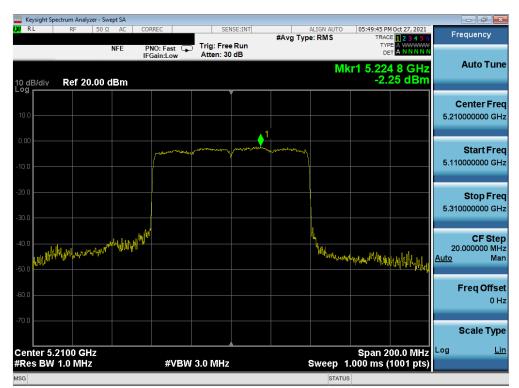
Plot 7-199. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 38)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 142 of 242
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset	Page 143 of 242
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	ctrum Analyzer - S									
RL	RF 50	Ω AC NFE	CORREC PNO: Fast	Trig: Fre		#Avg Typ	ALIGN AUTO	TRAC TYP	I Oct 27, 2021 E 1 2 3 4 5 6 E A WWWW A N N N N N	Frequency
10 dB/div Log	Ref 20.00	dBm	IFGain:Low	Atten: 30			M	(r1 5.23)	-	Auto Tune
10.0					↓ <sup>1</sup>					Center Freq 5.230000000 GHz
-10.0						- and a second				<b>Start Freq</b> 5.180000000 GHz
-20.0										<b>Stop Freq</b> 5.280000000 GHz
-40.0	North Martin	meradonitation	الا <mark>ر</mark>				Manuflan	freder Mus	the welf to see when	CF Step 10.000000 MHz <u>Auto</u> Man
-60.0										<b>Freq Offset</b> 0 Hz
-70.0	23000 GHz							Span 1	00.0 MHz	Scale Type
#Res BW			#V	BW 3.0 MHz			Sweep 1	.000 ms (	1001 pts)	
MSG							STATUS	6		

Plot 7-200. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 46)



Plot 7-201. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 42)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 111 of 212
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Plot 7-202. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - Full Tones (UNII Band 1/2A) - Ch. 50)



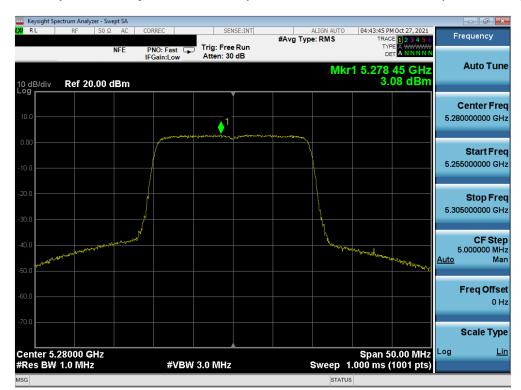
Plot 7-203. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax - Full Tones (UNII Band 1/2A) - Ch. 50)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 145 of 242
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	ctrum Analyzer - S									
LXI RL	RF 50	Ω AC (	PNO: Fast	Trig: Free		#Avg Typ	ALIGN AUTO	TRAC TYP	Oct 27, 2021 E 1 2 3 4 5 6 E A WWWWW	Frequency
10 dB/div Log	Ref 20.00		IFGain:Low	Atten: 30	dB		Mki	1 5.261	35 GHz 02 dBm	Auto Tune
10.0					↓1					Center Fred 5.260000000 GHz
-10.0										Start Free 5.235000000 GHz
-20.0										Stop Fred 5.285000000 GHz
-40.0	Mananatan	and the second of the second of the					Can a construction of the	and the state of t	Manoporation	CF Step 5.000000 MHz <u>Auto</u> Mar
-60.0										Freq Offset 0 Hz
-70.0	:6000 GHz							Span 5	0.00 MHz	Scale Type
#Res BW			#VBV	V 3.0 MHz			Sweep 1	1.000 ms (	1001 pts)	
MSG							STATU	S		

Plot 7-204. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 52)



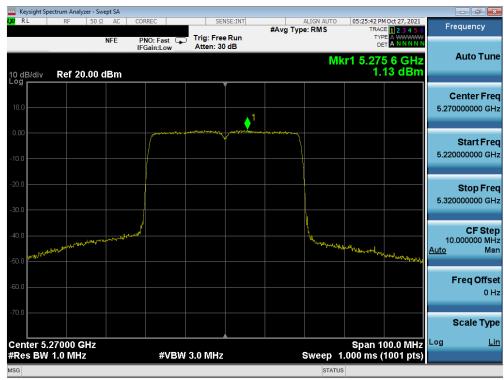
Plot 7-205. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMS908JPN	Proved to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 440 at 040
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 146 of 242
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🔤 Keysight Spectrum Analyzer - S									
LX/ RL RF 50	Ω ΑC Ο	ORREC	SEN	ISE:INT	#Avg Typ	ALIGN AUTO e: RMS		1 Oct 27, 2021 E 1 2 3 4 5 6	Frequency
	NFE	PNO: Fast 📮 IFGain:Low	Trig: Free Atten: 30	eRun dB			TYP		
10 dB/div Ref 20.00	dBm					Mkr	1 5.323 3.:	40 GHz 20 dBm	Auto Tune
10.0		ممريناتين	and the second	1					Center Freq 5.320000000 GHz
-10.0									<b>Start Freq</b> 5.295000000 GHz
-20.0									<b>Stop Freq</b> 5.345000000 GHz
-40.0	W. Markanakarika						megnorentrestytune	mussinger	CF Step 5.000000 MHz <u>Auto</u> Man
-60.0									<b>Freq Offset</b> 0 Hz
-70.0							0		Scale Type
Center 5.32000 GHz #Res BW 1.0 MHz		#VBW	3.0 MHz			Sweep 1	span 5 .000 ms (	0.00 MHz 1001 pts)	
MSG						STATUS			

Plot 7-206. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 64)



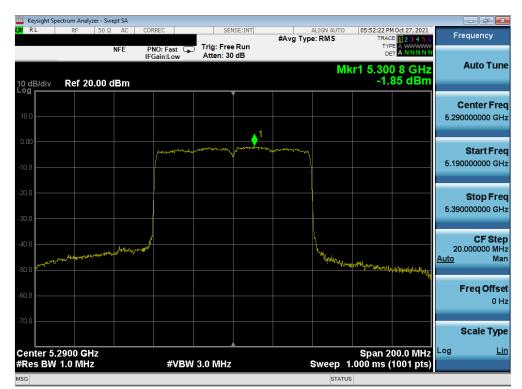
Plot 7-207. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMS908JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	ISUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 117 of 212
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	ctrum Analyzer - Sw									
LXI RL	RF 50 Ω		NO: Fast			#Avg Typ	ALIGN AUTO e: RMS	TRAC TYP	E 1 2 3 4 5 6	Frequency
10 dB/div	Ref 20.00 (	IFO	Gain:Low	Atten: 30			Mk	r1 5.301	I 8 GHz 01 dBm	Auto Tune
10.0				` 1						Center Free 5.310000000 GH
-10.0				and a second	pannerai					Start Free 5.260000000 GH
-20.0										Stop Free 5.360000000 GH
-40.0	Alderson	and a second de la constant					anna anna	توم المرجعين المراجع المرجع	mayartury	CF Step 10.000000 MH <u>Auto</u> Mar
-60.0										Freq Offse 0 H
-70.0 Center 5.3								Snan 1	00.0 MHz	Scale Type
#Res BW			#VBW	/ 3.0 MHz			Sweep 1	opan n .000 ms (	00.0 191112	
MSG							STATUS			

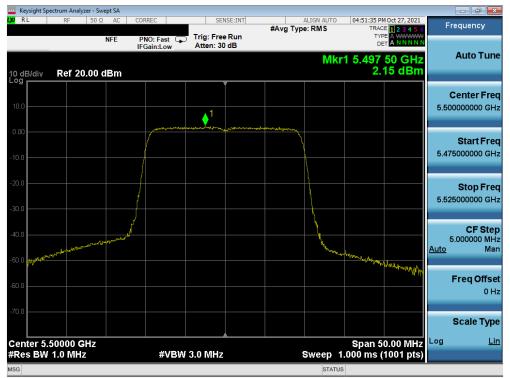
Plot 7-208. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 62)



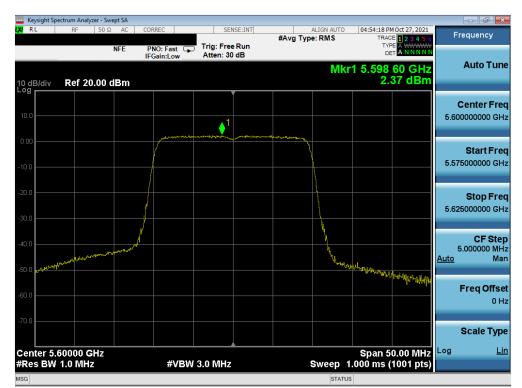
Plot 7-209. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama (10 af 010
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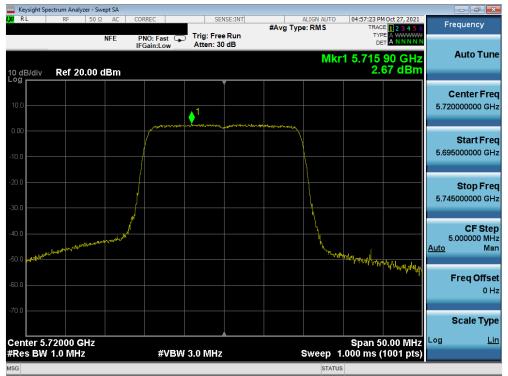
Plot 7-210. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 100)



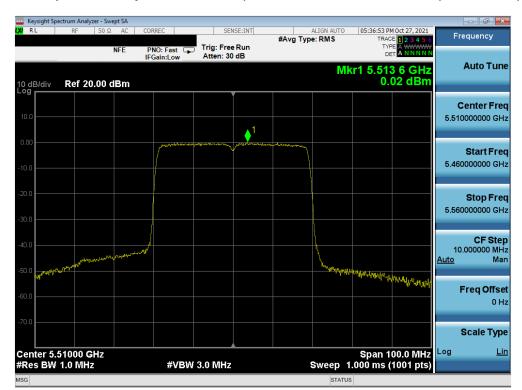
Plot 7-211. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Daga 140 of 242		
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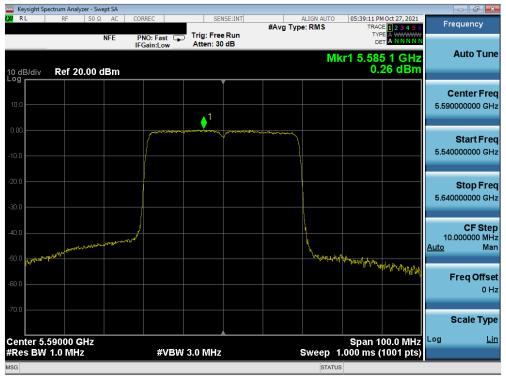
Plot 7-212. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 144)



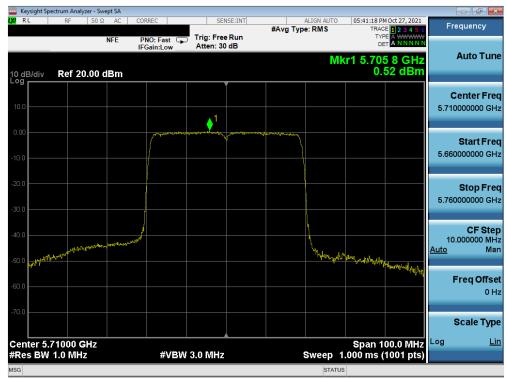
Plot 7-213. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Daga 150 of 242		
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Plot 7-214. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 118)



Plot 7-215. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 151 of 242
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Plot 7-216. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 106)



Plot 7-217. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dage 152 of 242		
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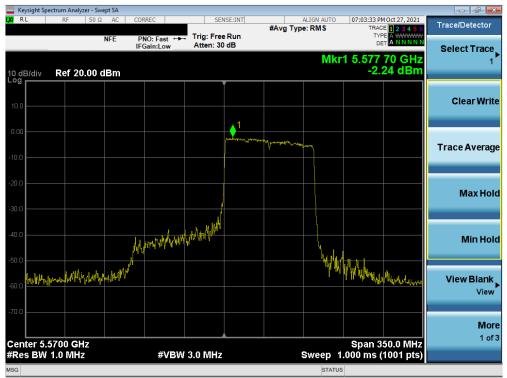
Plot 7-218. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 138)



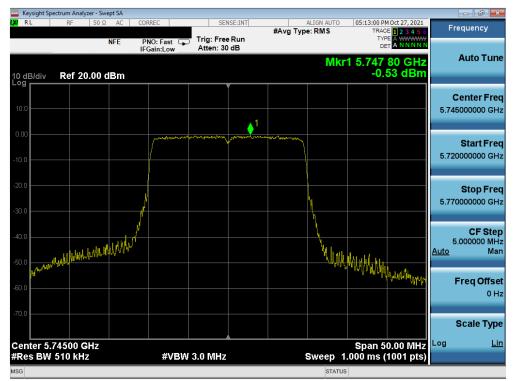
Plot 7-219. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - Full Tones (UNII Band 2C) - Ch. 114)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	ISUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 450 at 040
1M2112100159-08.A3L	9/14/2021 - 11/12/2021	Portable Handset		Page 153 of 242
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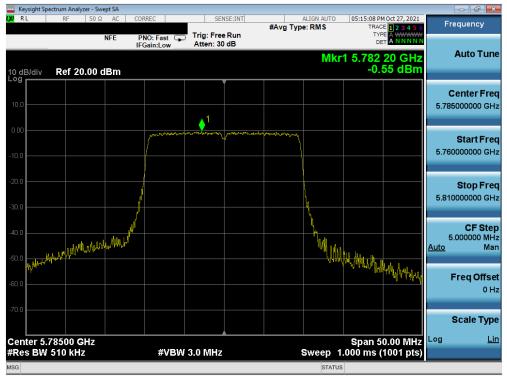
Plot 7-220. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax - Full Tones (UNII Band 2C) - Ch. 114)



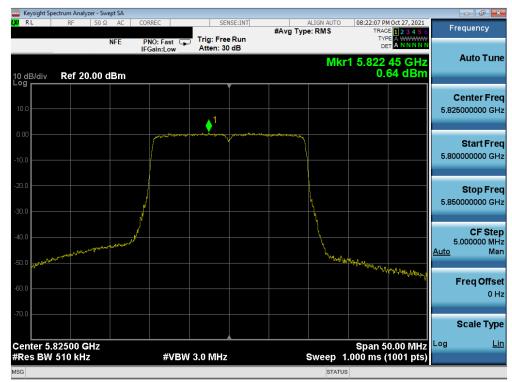
Plot 7-221. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-222. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 157)



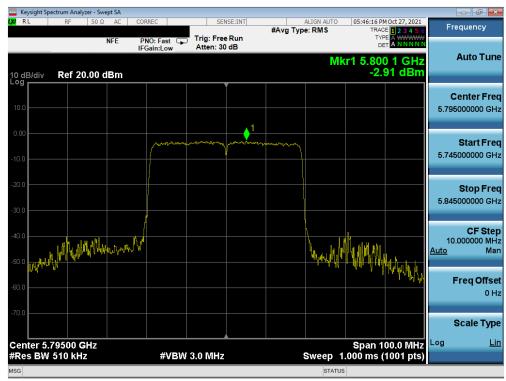
Plot 7-223. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 165)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 155 of 242
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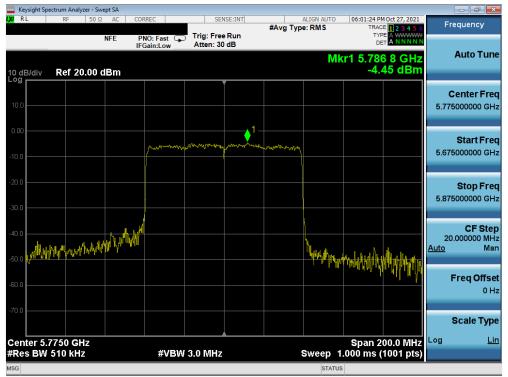
Plot 7-224. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 151)



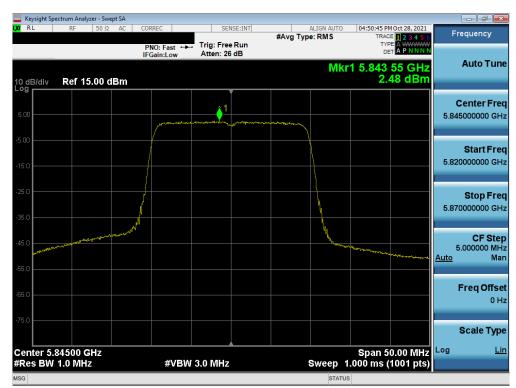
Plot 7-225. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 156 of 242
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Plot 7-226. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 155)



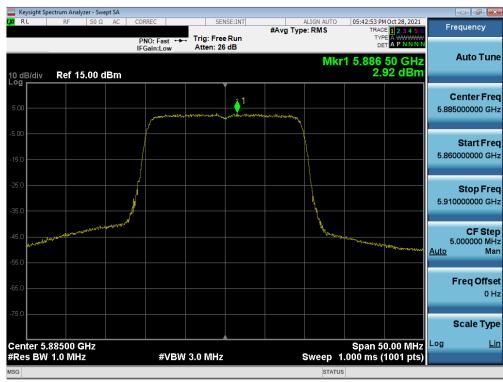
Plot 7-227. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 157 of 242
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	ectrum Analyzer - Sv									
Center F	RF 50 Ω req 5.8650		RREC Z		ISE:INT	#Avg Type	ALIGN AUTO e: RMS	TRAC	4 Oct 28, 2021	Frequency
			NO: Fast 🔸 Gain:Low	. Trig: Free Atten: 26						
							Mkr	1 5.868	15 GHz 85 dBm	Auto Tune
10 dB/div	Ref 15.00	dBm		, ,		1	1	2.4		
					<u>≏ 1</u>					Center Freq
5.00			_	and mark a more share	- provinsion and a second	- Hours -				5.865000000 GHz
-5.00			/							
-5.00							l			Start Freq
-15.0							}			5.840000000 GHz
							ł			
-25.0							1			Stop Freq
-35.0		/					<u> </u>			5.89000000 GHz
							1			
-45.0	and the second second second						term	Warnach de		CF Step 5.000000 MHz
and a start									Montenate	<u>Auto</u> Man
-55.0										
-65.0										Freq Offset
										0 Hz
-75.0										
										Scale Type
	86500 GHz							Span 5	0.00 191112	Log <u>Lin</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz			Sweep 1	.000 ms (	1001 pts)	
MSG							STATU	S		

Plot 7-228. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 173)



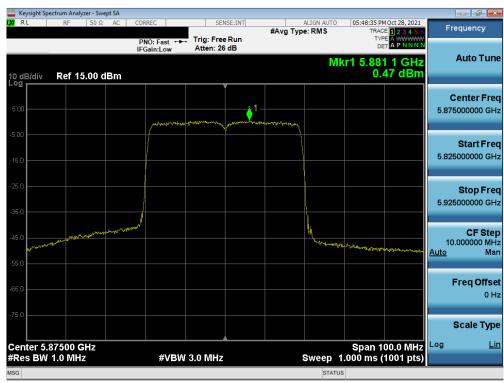
Plot 7-229. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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🔤 Keysight Spectrum Analyzer - Swept SA					
<b>,X/</b> RL RF 50Ω AC	CORREC S	SENSE:INT #Avg Typ	e: RMS T	6 PM Oct 28, 2021 RACE 1 2 3 4 5 6	Frequency
	PNO: Fast ↔ Trig: Fr IFGain:Low Atten:			DET A WWWWW	
10 dB/div Ref 15.00 dBm			Mkr1 5.8	31 3 GHz 0.38 dBm	Auto Tune
5.00	î				Center Freq 5.835000000 GHz
-5.00					<b>Start Freq</b> 5.785000000 GHz
-25.0					<b>Stop Freq</b> 5.885000000 GHz
-45.0 -55.0			hannester	and the stand of the	CF Step 10.000000 MHz Auto Man
-65.0					<b>Freq Offset</b> 0 Hz
-75.0					Scale Type
Center 5.83500 GHz #Res BW 1.0 MHz	#VBW 3.0 MH	Z	Spar Sweep 1.000 m	100.0 MHz	.og <u>Lin</u>
MSG			STATUS		

Plot 7-230. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 3/4) - Ch. 167)



Plot 7-231. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 484 Tones (UNII Band 4) – Ch. 175)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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		trum Analyzer -									
l <mark>XI</mark> RI	L	RF 50	Ω AC	CORREC	SEI	NSE:INT	#Avg Typ	ALIGN AUTO		HOct 28, 2021	Frequency
				PNO: Fast ↔	Trig: Fre	Run			TYP		
	_			IFGain:Low	Atten: 26	dB					Auto Tune
								Mk	(r1 5.84)	2 6 GHz	Auto Tune
10 dE Log	3/div	Ref 15.00	) dBm				_		-2.	01 dBm	
						Ĭ					Center Freq
5.00											5.855000000 GHz
-5.00				powerstand	wall the good	man and the start of	and all all all all all all all all all al				
							1				Start Freq
-15.0											5.755000000 GHz
-25.0											Stop Freq
											5.955000000 GHz
-35.0											
				w <sup>2</sup>				۲,			CF Step
-45.0	enally	and the state of the	-10 QL					Maple and a free house	hybelanan		20.000000 MHz
									Million and a second	Mar for the second	<u>Auto</u> Man
-55.0											
-65.0											Freq Offset
-65.U											0 Hz
-75.0											
-75.0											Scale Type
		550 GHz							Span 2	00.0 MHz	Log <u>Lin</u>
#Res	s BW 1	.0 MHz		#VBW	/ 3.0 MHz			Sweep 1	.000 ms (	1001 pts)	
MSG								STATUS	6		

Plot 7-232. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 171)



Plot 7-233. Power Spectral Density Plot MIMO ANT1 (160MHz BW L 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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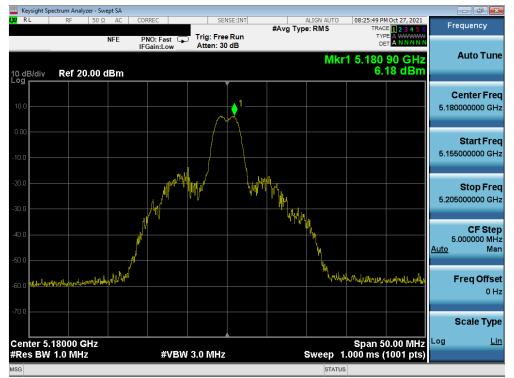
Keysight Spectrum Analyzer - Swept SA									×
LXX RL RF 50Ω DC	CORREC	SEN	ISE:INT	#Avg Type	ALIGN AUTO		MNov 12, 2021	Frequency	
10 dB/div Ref 15.00 dBm	PNO: Fast ↔ IFGain:Low	. Trig: Free Atten: 28				TYF DE 1 5.838	45 GHz 28 dBm	Auto Ti	une
5.00			1	a mantanati	_			Center F 5.815000000	
-5.00				Y				<b>Start F</b> 5.640000000 (	
-25.0		WW WWW			NKU U	A 11		<b>Stop F</b> 5.990000000 (	
-45.0	phine and a second	M <sup>r</sup>			¥1[N	Ч <u>М</u> Н Н <sub>М</sub> М <sub>ИL</sub>	nd striktling	CF S 35.000000 M <u>Auto</u>	
-65.0								Freq Off (	f <b>set</b> 0 Hz
-75.0								Scale Ty	
Center 5.8150 GHz #Res BW 1.0 MHz	#VBW	3.0 MHz		5	Sweep 1.	Span 3 .000 m <u>s (</u>	50.0 MHz 1001 pts)	_	Lin
MSG					STATUS				_

Plot 7-234. Power Spectral Density Plot MIMO ANT1 (160MHz BW U 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 163)

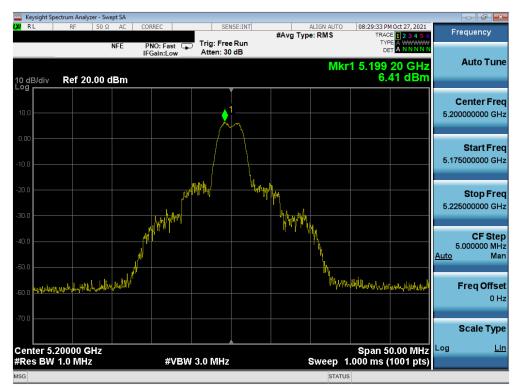
FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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## MIMO Antenna-2 Power Spectral Density Measurements (26 Tones)



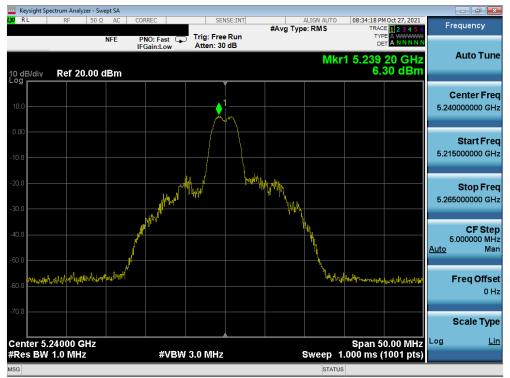
Plot 7-235. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 36)



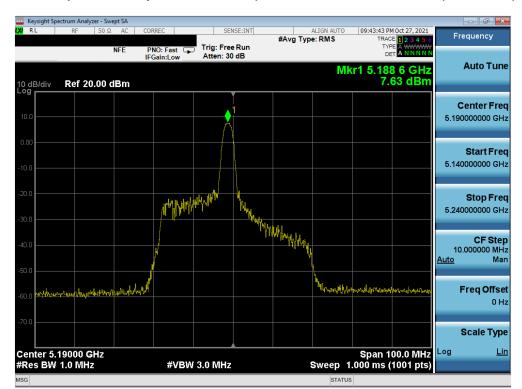
Plot 7-236. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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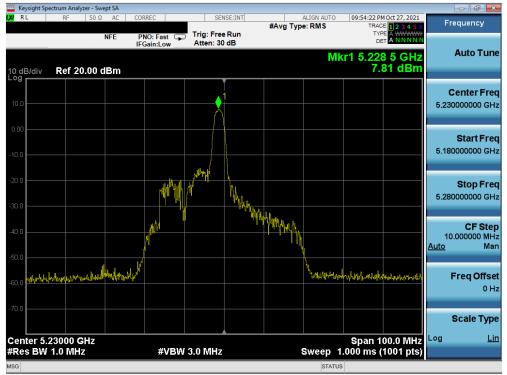
Plot 7-237. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 48)



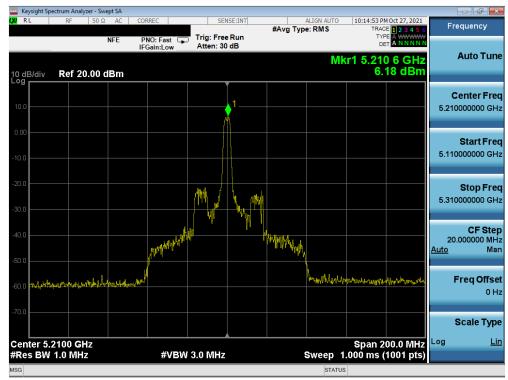
Plot 7-238. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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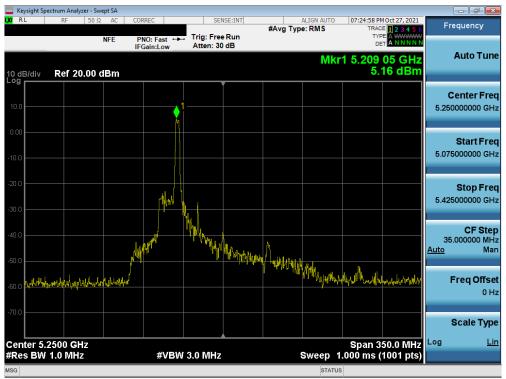
Plot 7-239. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 46)



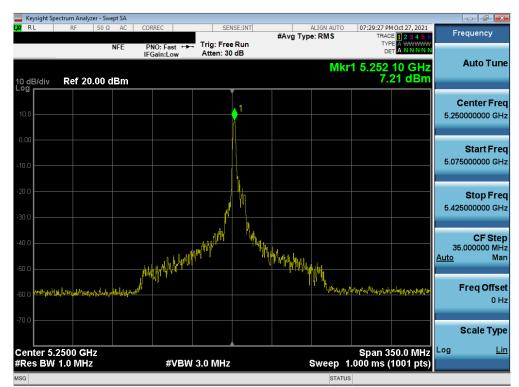
Plot 7-240. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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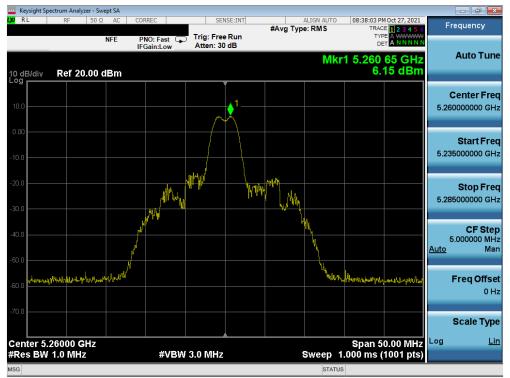
Plot 7-241. Power Spectral Density Plot MIMO ANT2 (160MHz BW L 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)



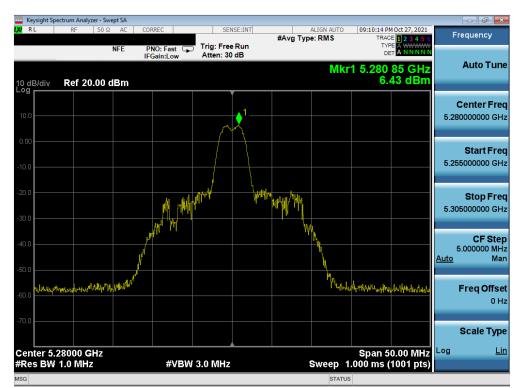
Plot 7-242. Power Spectral Density Plot MIMO ANT2 (160MHz BW U 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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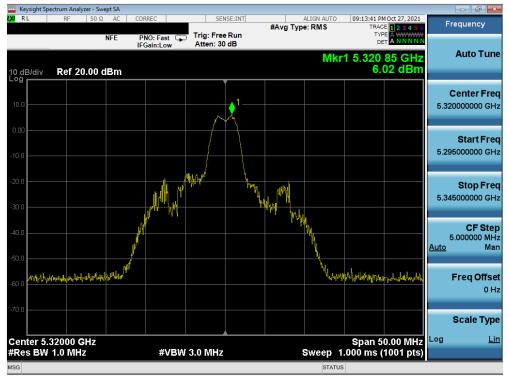
Plot 7-243. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 52)



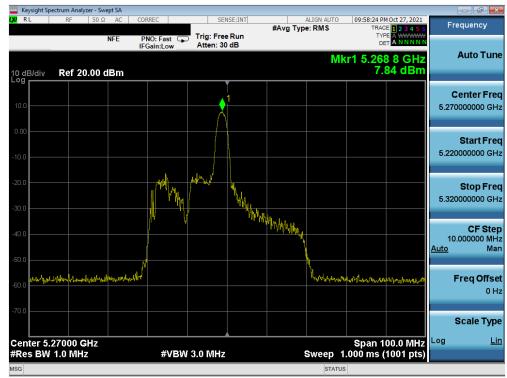
Plot 7-244. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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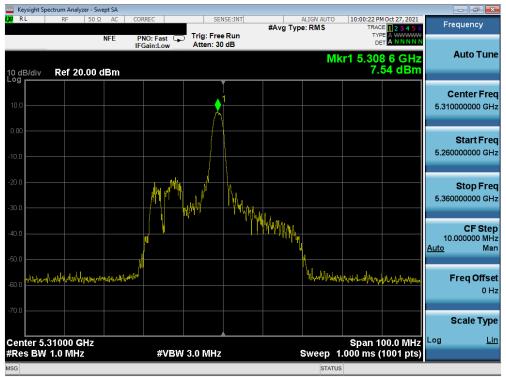
Plot 7-245. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 64)



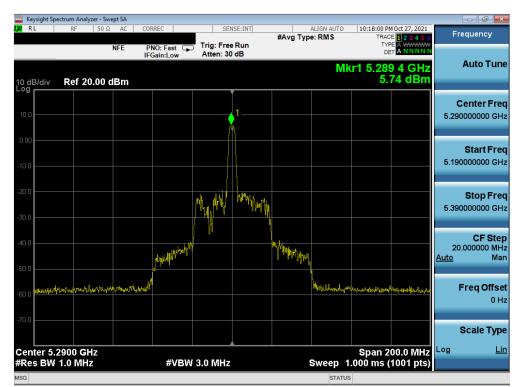
Plot 7-246. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMS908JPN	Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager
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Plot 7-247. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 62)



Plot 7-248. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMS908JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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