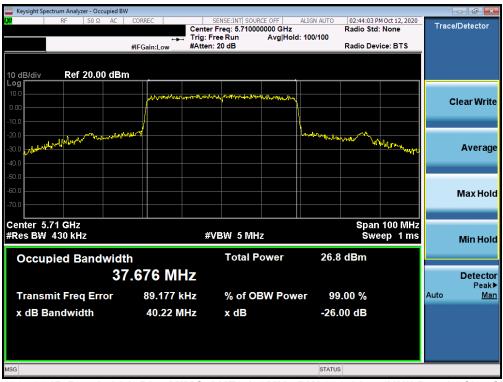


Keysight Spectrum Analyzer - Occupied BW	1				- ē x
ιχι RF 50 Ω AC		SENSE:INT SOURCE OFF	Radio Ste	PM Oct 12, 2020 d: None	Trace/Detector
		Free Run Avg Holo n: 20 dB	d: 100/100 Radio De	vice: BTS	
,	an ouncer				
10 dB/div Ref 20.00 dBm	ı				
Log					
0.00	Mur mar with whith	ally for Marler Jos Jos			Clear Write
-10.0					
	mar		how we wanted and the second s		
-20.0				manuly light	Average
-40.0					
-50.0					
-60.0					Max Hold
-70.0					
Center 5.59 GHz			Spai	n 100 MHz	
#Res BW 430 kHz	#	VBW 5 MHz	Sw	veep 1 ms	Min Hold
Occupied Bandwidt	h	Total Power	26.7 dBm		
	 .676 MHz				Detector
					Peak▶
Transmit Freq Error	88.694 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	40.58 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-101. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)



Plot 7-102. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMG998JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BW					
LX RF 50 Ω AC CC	ORREC Cente	SENSE:INT SOURCE OFF	ALIGN AUTO 03:11:33 F Radio Sto	M Oct 12, 2020	Trace/Detector
	Trig: I	Free Run Avg Hold	d: 100/100		
#1	FGain:Low #Atter	n: 20 dB	Radio De	vice: BTS	
10 dB/div Ref 20.00 dBm					
10.0					
0.00	ad many participant about	meynen for the second and the second second			Clear Write
-10.0					
-20.0 -30.0	r i i i i i i i i i i i i i i i i i i i		Gerthallow Harting and mage		
Me-lastrell'			a the way wally	Phin Mputhan	Average
-40.0					
-50.0					
-60.0					Max Hold
-70.0					
Center 5.53 GHz #Res BW 820 kHz		VBW 8 MHz		n 200 MHz eep 1 ms	
#Res BW 820 RHZ	#		30	eep This	Min Hold
Occupied Bandwidth		Total Power	25.4 dBm		
	653 MHz				Detector
75.0					Detector Peak►
Transmit Freq Error	199.58 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	80.88 MHz	x dB	-26.00 dB		
	00.00 11112	X UD	-20.00 uB		
MSG			STATUS		

Plot 7-103. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)



Plot 7-104. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BW									
KM RF 50 Ω AC COF	REC	Center Fr	ISE:INT SOUR eq: 5.69000 Run	0000 GHz	ALIGN AUTO	03:13:48 P Radio Std	M Oct 12, 2020 : None	Trac	e/Detector
#IF0	Gain:Low	#Atten: 20				Radio Dev	rice: BTS		
10 dB/div Ref 20.00 dBm									
10.0									
0.00	anyomether	- And Carlow	1 martin and	the states and the seal				(Clear Write
-10.0	/				\				
-20.0	·								
-30.0					handhame	And Berry 1			Average
-40.0						A BARDAR & A	montering		
-50.0									
-60.0									
									Max Hold
-70.0									
Center 5.69 GHz						Span	200 MHz		
#Res BW 820 kHz		#VB	W 8 MH	Z		Swe	eep 1 ms		Min Hold
Occurried Bandwidth			Total P	ower	24.7	dBm			
Occupied Bandwidth			Total I		2-10	abiii			
/5.6	23 MH	Z							Detector Peak▶
Transmit Freq Error	130.35 kl	Hz	% of OE	BW Pow	er 99	.00 %		Auto	Peak► <u>Man</u>
x dB Bandwidth	80.91 MI	Hz	x dB		-26.	00 dB			
MSG					STATUS	5			

Plot 7-105. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 60 of 207
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🛄 Keysight Spectru	ım Analyzer - Occu	ipied BW									
LXI	RF 50 Ω	AC COR		Center F	NSE:INT SOUR		ALIGN AUTO	03:17:38 P Radio Std	M Oct 12, 2020 : None	Trac	e/Detector
		#IFC	Gain:Low	#Atten: 2	0 dB	Avginoid	. 100/100	Radio Dev	vice: BTS		
10 dB/div	Ref 20.00	dBm									
10.0			مورد عدار ک	Annalistation	ماماد أملح	the stars					
0.00				and a second		an surrout the second				(Clear Write
-10.0											
-20.0	mannalundo	and Marth					Ma hurra				
-30.0	mandation	W N N					""" MINTWORK	worth yhere	mahulus		Average
-40.0											
-50.0											
-60.0											Max Hold
-70.0											
Center 5.61	GHz							Span	200 MHz		
#Res BW 8				#VE	BW 8 MH	z			eep 1 ms		Min Hold
Occupi	od Bondu	width			Total P	ower	26.1	dBm			
Occupie	ed Bandv			—	Total I	OWCI	20.1	aBill			
		//.0	30 MI	ĦΖ							Detector Peak▶
Transmit	t Freq Erro	or	191.83 I	kHz	% of O	BW Pow	er 99	.00 %		Auto	Man
x dB Bar	ndwidth		80.77 N	1Hz	x dB		-26.	00 dB			
MSG							STATUS	3			

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



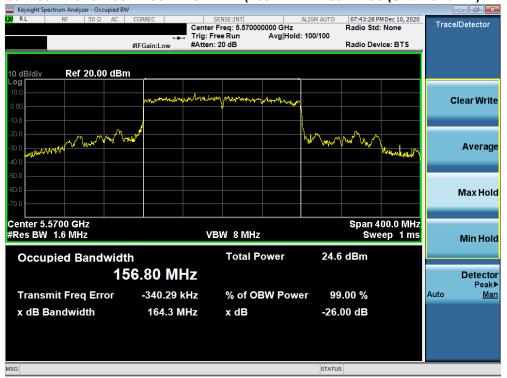
Plot 7-108. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-109. 26dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ac (UNII Band 2C) - Ch. 114)



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 74 af 207
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7.3 6dB Bandwidth Measurement – 802.11a/n/ac/ax

§15.407 (e); RSS-Gen [6.2]

Test Overview and Limit

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

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

Test Procedure Used

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

Test Settings

- The signal analyzers' automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 100 kHz
- 3. VBW <u>></u> 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple

Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

Test Notes

None.

FCC ID: A3LSMG998JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 6dB Bandwidth [MHz]	Antenna-2 6dB Bandwidth [MHz]
	5745	149	а	6	16.41	16.45
	5785	157	а	6	16.36	16.44
	5825	165	а	6	16.37	16.42
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.59	17.66
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.64	17.68
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.57	17.67
ς Υ	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	19.15	19.06
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	19.18	19.10
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	19.11	19.06
	5755	151	n (40MHz)	13.5/15 (MCS0)	36.48	36.48
	5795	159	n (40MHz)	13.5/15 (MCS0)	36.48	36.57
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.94	37.83
	5795	159	ax (40MHz)	13.5/15 (MCS0)	37.85	37.73
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	76.24	76.10
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	77.16	77.63

Table 7-3. Conducted Bandwidth Measurements MIMO

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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MIMO Antenna-1 6 dB Bandwidth Measurements



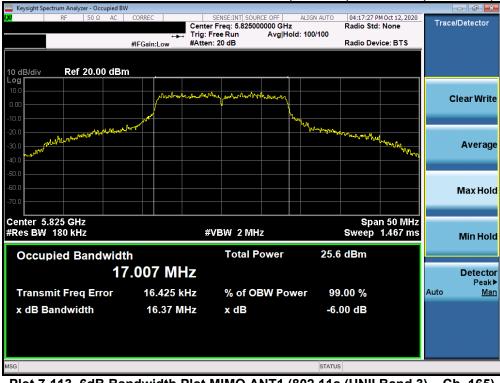
Plot 7-111. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 74 of 207
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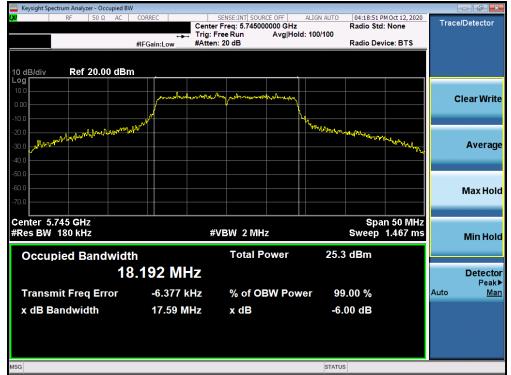
Plot 7-112. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 157)



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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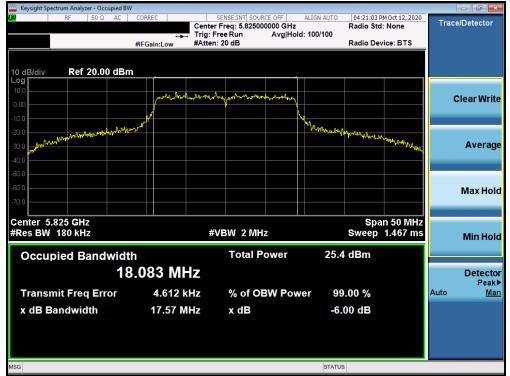
Plot 7-114. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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Plot 7-116. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)



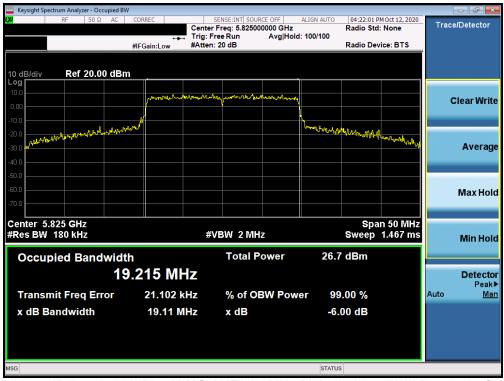
Plot 7-117. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMG998JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied E	BW				
ιχί RF 50 Ω AC		SENSE:INT SOURCE OFF r Freq: 5.785000000 GHz Free Run Avg Hold	ALIGN AUTO 04:24:11 F Radio Sto 1: 100/100	PM Oct 12, 2020 I: None	Trace/Detector
		n: 20 dB	Radio De	vice: BTS	
10 dB/div Ref 20.00 dB	m				
	Minahananan	man man and and a second second			Clear Writ
-10.0 -20.0	- And		herling allow -		
-30.0 Allow March March March 1 40.0			Confront water mark	M Margan	Averag
-50.0					
-70,0					Max Ho
Center 5.785 GHz #Res BW 180 kHz	#	VBW 2 MHz		an 50 MHz 1.467 ms	Min Ho
Occupied Bandwid	lth	Total Power	25.8 dBm		
	9.123 MHz				Detecto Peak
Transmit Freq Error	24.124 kHz	% of OBW Pow	er 99.00 %		Auto <u>Ma</u>
x dB Bandwidth	19.18 MHz	x dB	-6.00 dB		
MSG			STATUS		

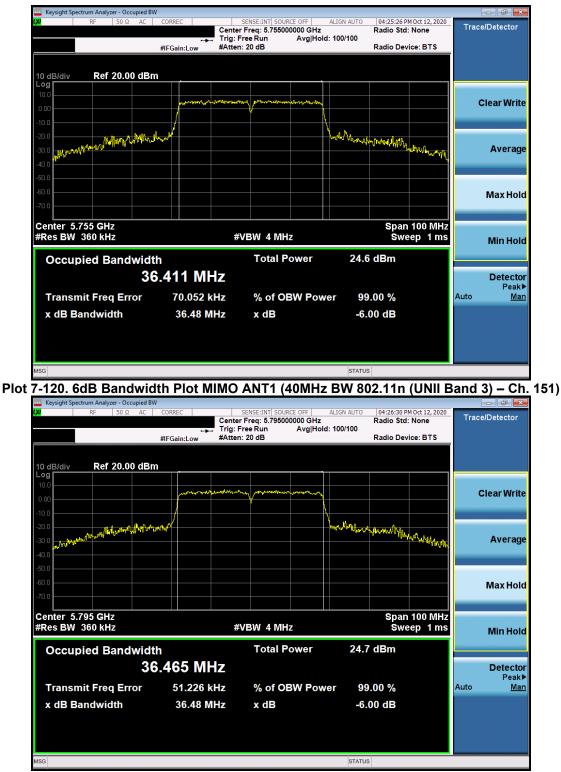
Plot 7-118. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 79 of 207
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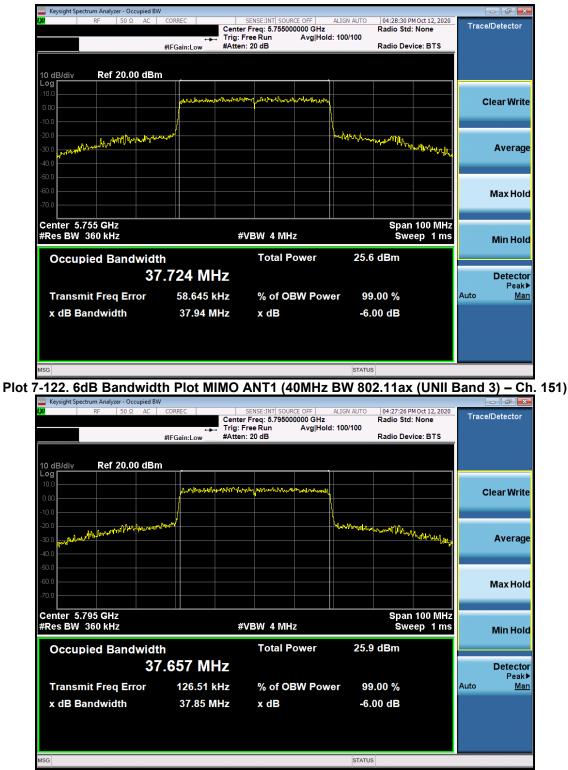




Plot 7-121. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 70 of 207
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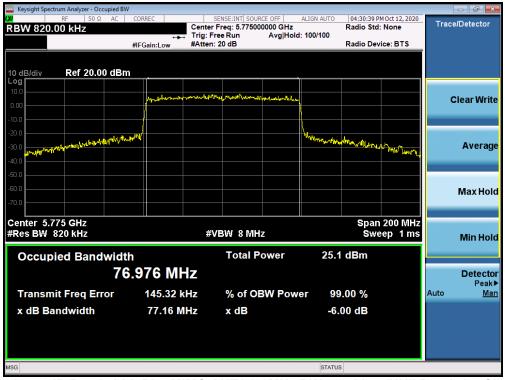
Plot 7-123. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BW					- ē x
KM RF 50 Ω AC CORF	Cente	SENSE:INT SOURCE OFF r Freq: 5.775000000 GHz Free Run Avg Ho		PM Oct 12, 2020	Trace/Detector
#IFG		n: 20 dB		evice: BTS	
10 dB/div Ref 20.00 dBm					
Log 10.0					
0.00	- manufal manan	and more allowed and the second	<u>_</u>		Clear Write
-10.0					
-20.0					
1 A Bally work			hard worth multimenter		Average
-30.0 -40.0 mm40.0				mt yearly many	Average
-50.0					
-60.0					
					Max Hold
-70.0					
Center 5.775 GHz			Spa	n 200 MHz	
#Res BW 750 kHz	#	VBW 8 MHz	Sv	veep 1ms	Min Hold
Occupied Rendwidth		Total Power	23.8 dBm		
Occupied Bandwidth		TOtal Power	23.0 UBIII		
75.84	45 MHz				Detector
Transmit Freq Error	205.59 kHz	% of OBW Pov	ver 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	76.24 MHz	x dB	-6.00 dB		
MSG			STATUS		

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



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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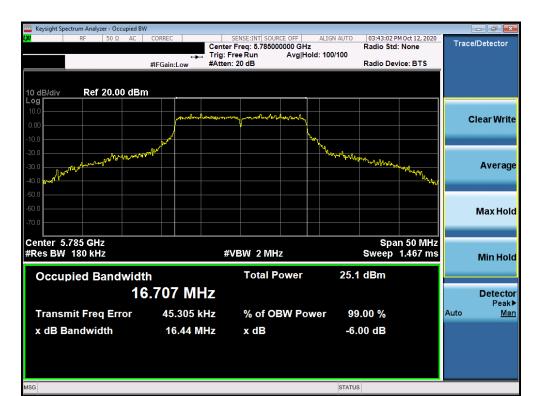
MIMO Antenna-2 6dB Bandwidth Measurements



Plot 7-126. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-127. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3) - Ch. 157)



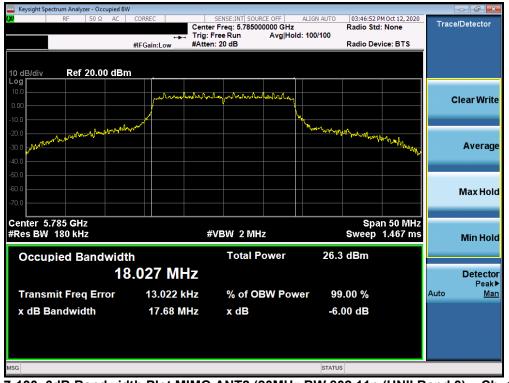
Plot 7-128. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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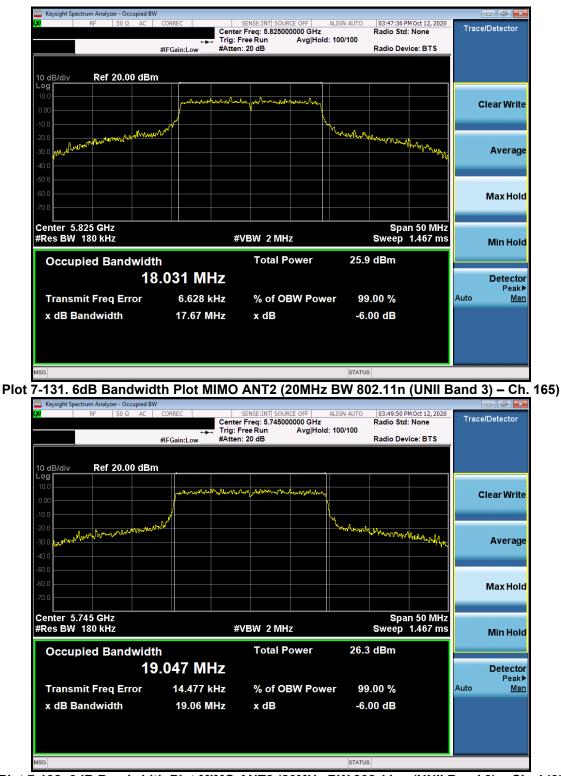
Plot 7-129. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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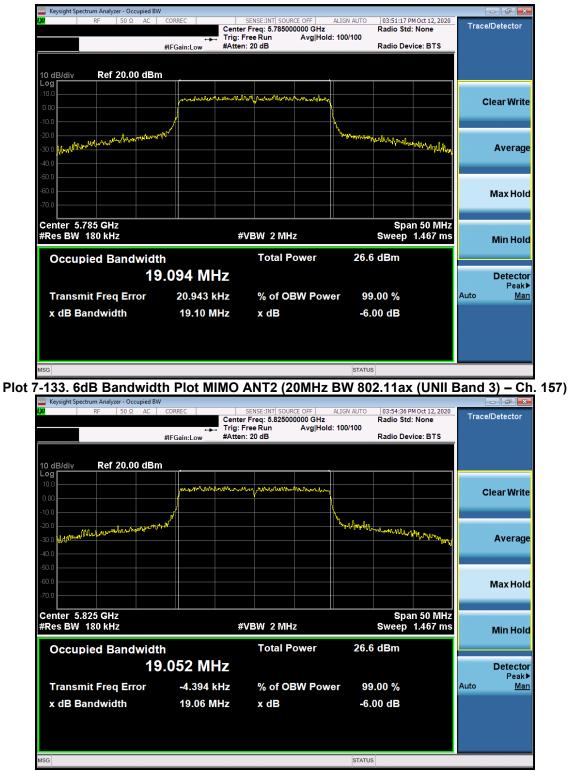




Plot 7-132. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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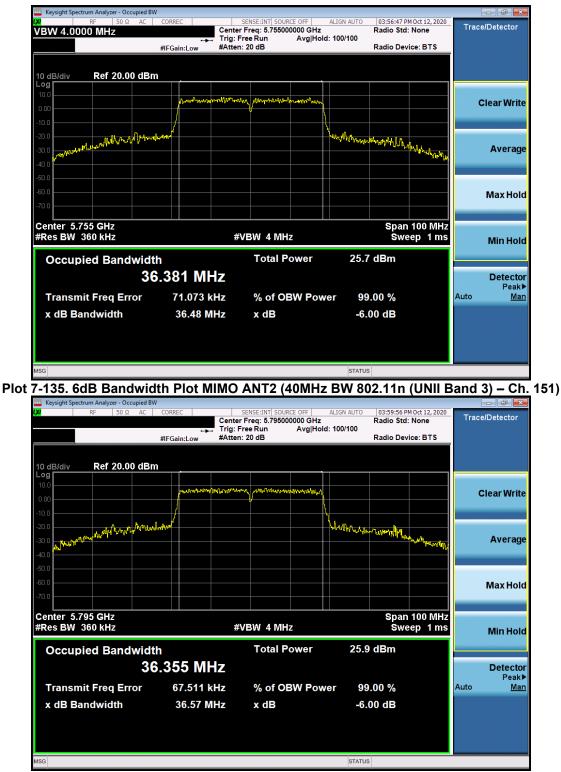




Plot 7-134. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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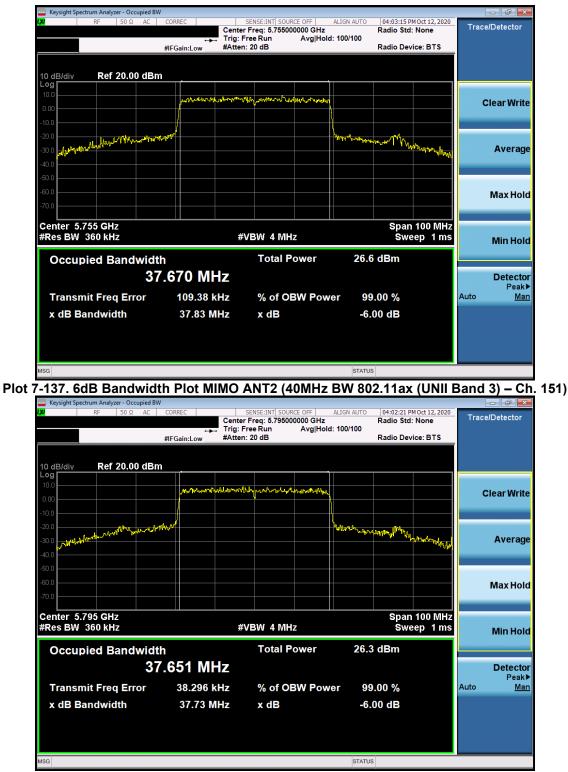




Plot 7-136. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		D
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Plot 7-138. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG998JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (Certification)	MSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 99 of 207
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Keysight Spectrum Analyzer - Occupied BW	/				- ē x
LXI RF 50 Ω AC	CORREC Center	SENSE:INT SOURCE OFF	ALIGN AUTO 04:10:00 P Radio Std	M Oct 12, 2020 : None	Trace/Detector
		Free Run Avg Holo n: 20 dB	d: 100/100 Radio Dev	vice: BTS	
	#IFGain:Low #Atte	11. 20 GD	Radio Der	Ace. DT3	
10 dB/div Ref 20.00 dBm	n				
Log					
10.0	al marine manual monoral and	and Mahaman Compression			Clear Write
0.00					
-10.0					
-20.0 -30.0	White		West plans never have added by	- 1h	Average
-30.0 01				And the Association of the second second	Average
-40.0					
-60.0					
-70.0					Max Hold
Center 5.775 GHz				200 MHz	
#Res BW 750 kHz	1	≇VBW 8 MHz	SW	eep 1ms	Min Hold
Occupied Bandwidt	h	Total Power	26.1 dBm		
	5.672 MHz				Detector
		~ ~ ~ ~ ~ ~ ~ ~ ~			Peak▶
Transmit Freq Error	150.72 kHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	76.10 MHz	x dB	-6.00 dB		
MSG			STATUS		

Plot 7-139. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)



Plot 7-140. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 90 of 207
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7.4 UNII Output Power Measurement – 802.11a/n/ac/ax

§15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

Test Overview and Limits

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

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

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(27.93) = 25.46dBm$. 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 + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(21.03) = 24.23dBm$. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

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

Test Procedure Used

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

Test Settings

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

Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

Test Notes

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

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 00 of 207
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MIMO Maximum Conducted Output Power Measurements

	Freq [MHz] Cha		Detector	Conc	Conducted Power [dBm]			Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
Ê				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
andwidth	5180	36	AVG	16.52	17.26	19.92	23.98	-4.06	-3.12	16.80	23.01	-6.21
÷	5200	40	AVG	16.43	17.31	19.90	23.98	-4.08	-3.12	16.78	23.01	-6.23
5	5220	44	AVG	16.48	17.31	19.93	23.98	-4.05	-3.12	16.81	23.01	-6.20
Ĕ	5240	48	AVG	16.47	17.42	19.98	23.98	-4.00	-3.12	16.86	23.01	-6.15
Ba	5260	52	AVG	16.50	16.83	19.68	23.98	-4.30	-3.05	16.63	30.00	-13.37
N	5280	56	AVG	16.51	16.92	19.73	23.98	-4.25	-3.05	16.68	30.00	-13.32
T I	5300	60	AVG	16.43	17.06	19.77	23.98	-4.21	-3.05	16.72	30.00	-13.28
MO	5320	64	AVG	16.52	17.04	19.80	23.98	-4.18	-3.05	16.75	30.00	-13.25
(20	5500	100	AVG	16.77	17.02	19.91	23.98	-4.07	-3.15	16.76	30.00	-13.24
) и	5600	120	AVG	16.66	17.06	19.87	23.98	-4.11	-3.15	16.72	-	-
	5620	124	AVG	16.59	17.01	19.82	23.98	-4.16	-3.15	16.67	-	-
56	5720	144	AVG	16.45	16.74	19.61	23.98	-4.37	-3.15	16.46	30.00	-13.54
LC LC	5745	149	AVG	17.38	17.43	20.42	30.00	-9.58	-3.00	17.42	-	-
	5785	157	AVG	17.37	17.35	20.37	30.00	-9.63	-3.00	17.37	-	-
	5825	165	AVG	17.17	17.47	20.33	30.00	-9.67	-3.00	17.33	-	-

Table 7-4. MIMO 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [dBin]	margin [ab]
idth)	5180	36	AVG	16.43	17.08	19.78	23.98	-4.20	-3.12	16.66	23.01	-6.35
i i i i i i i i i i i i i i i i i i i	5200	40	AVG	16.32	17.10	19.74	23.98	-4.24	-3.12	16.62	23.01	-6.39
M	5220	44	AVG	16.38	17.17	19.80	23.98	-4.18	-3.12	16.68	23.01	-6.33
pu	5240	48	AVG	16.34	17.18	19.79	23.98	-4.19	-3.12	16.67	23.01	-6.34
Ba	5260	52	AVG	16.37	16.92	19.66	23.98	-4.32	-3.05	16.61	30.00	-13.39
N	5280	56	AVG	16.37	16.86	19.63	23.98	-4.35	-3.05	16.58	30.00	-13.42
T	5300	60	AVG	16.36	17.09	19.75	23.98	-4.23	-3.05	16.70	30.00	-13.30
Σ	5320	64	AVG	16.31	17.11	19.74	23.98	-4.24	-3.05	16.69	30.00	-13.31
(20	5500	100	AVG	16.68	17.19	19.95	23.98	-4.03	-3.15	16.80	30.00	-13.20
N N	5600	120	AVG	16.54	17.08	19.83	23.98	-4.15	-3.15	16.68	-	-
Ť	5620	124	AVG	16.58	16.97	19.79	23.98	-4.19	-3.15	16.64	-	-
Ū	5720	144	AVG	16.18	16.83	19.53	23.98	-4.45	-3.15	16.38	30.00	-13.62
Q.	5745	149	AVG	17.03	17.48	20.27	30.00	-9.73	-3	17.27	-	-
	5785	157	AVG	17.21	17.46	20.35	30.00	-9.65	-3	17.35	-	-
	5825	165	AVG	17.04	17.57	20.32	30.00	-9.68	-3	17.32	-	-

Table 7-5. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 01 of 207
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	Freq [MHz]] Channel	Detector	Cond	lucted Power [dBm]	Conducted Power Limit [dBm]	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
	5180	36	AVG	16.27	17.24	19.79	23.98	-4.19	-3.12	16.67	23.01	-6.34
÷	5200	40	AVG	16.34	17.15	19.77	23.98	-4.21	-3.12	16.65	23.01	-6.36
ndwidth	5220	44	AVG	16.03	17.42	19.79	23.98	-4.19	-3.12	16.67	23.01	-6.34
Ĕ	5240	48	AVG	16.01	17.35	19.74	23.98	-4.24	-3.12	16.62	23.01	-6.39
Ba	5260	52	AVG	16.81	17.97	20.44	23.98	-3.54	-3.05	17.39	30.00	-12.61
	5280	56	AVG	16.19	17.33	19.81	23.98	-4.17	-3.05	16.76	30.00	-13.24
F	5300	60	AVG	16.01	17.08	19.59	23.98	-4.39	-3.05	16.54	30.00	-13.46
(20M	5320	64	AVG	15.91	17.26	19.65	23.98	-4.33	-3.05	16.60	30.00	-13.40
50	5500	100	AVG	16.32	17.28	19.84	23.98	-4.14	-3.15	16.69	30.00	-13.31
	5600	120	AVG	16.42	17.07	19.77	23.98	-4.21	-3.15	16.62	-	-
F	5620	124	AVG	16.53	17.26	19.92	23.98	-4.06	-3.15	16.77	-	-
5G	5720	144	AVG	17.31	17.53	20.43	23.98	-3.55	-3.15	17.28	30.00	-12.72
LO LO	5745	149	AVG	17.31	17.47	20.40	30.00	-9.60	-3.00	17.40	-	-
	5785	157	AVG	17.31	17.48	20.41	30.00	-9.59	-3.00	17.41	-	-
	5825	165	AVG	16.98	17.54	20.28	30.00	-9.72	-3.00	17.28	-	-

Table 7-6. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz] Channel		Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
<u> </u>				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [aBin]	margin [ab]
andwidth	5180	36	AVG	16.53	17.43	20.01	23.98	-3.97	-3.12	16.89	23.01	-6.12
<u>i</u>	5200	40	AVG	16.44	17.36	19.93	23.98	-4.05	-3.12	16.81	23.01	-6.20
5	5220	44	AVG	16.37	17.54	20.00	23.98	-3.98	-3.12	16.88	23.01	-6.13
Ĕ	5240	48	AVG	16.41	17.55	20.03	23.98	-3.95	-3.12	16.91	23.01	-6.10
Ba	5260	52	AVG	16.27	17.23	19.79	23.98	-4.19	-3.05	16.74	30.00	-13.26
z	5280	56	AVG	16.28	17.25	19.80	23.98	-4.18	-3.05	16.75	30.00	-13.25
	5300	60	AVG	16.22	17.32	19.82	23.98	-4.16	-3.05	16.77	30.00	-13.23
20M	5320	64	AVG	16.29	17.43	19.91	23.98	-4.07	-3.05	16.86	30.00	-13.14
20	5500	100	AVG	16.75	17.51	20.16	23.98	-3.82	-3.15	17.01	30.00	-12.99
) z	5600	120	AVG	16.87	17.45	20.18	23.98	-3.80	-3.15	17.03	-	-
Ϊ	5620	124	AVG	16.79	17.43	20.13	23.98	-3.85	-3.15	16.98	-	-
5G	5720	144	AVG	16.57	17.01	19.81	23.98	-4.17	-3.15	16.66	30.00	-13.34
2 L	5745	149	AVG	16.65	16.71	19.69	30.00	-10.31	-3.00	16.69	-	-
	5785	157	AVG	16.45	16.78	19.63	30.00	-10.37	-3.00	16.63	-	-
	5825	165	AVG	17.24	17.69	20.48	30.00	-9.52	-3.00	17.48	-	-

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

dth)	Freq [MHz]	Freq [MHz] Channel [Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
ij				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [GB/1]	
dwi	5190	38	AVG	14.15	14.94	17.57	23.98	-6.41	-3.12	14.45	23.01	-8.56
2	5230	46	AVG	15.91	16.92	19.45	23.98	-4.53	-3.12	16.33	23.01	-6.68
Ba	5270	54	AVG	15.87	16.54	19.23	23.98	-4.75	-3.05	16.18	30.00	-13.82
N	5310	62	AVG	13.92	14.56	17.26	23.98	-6.72	-3.05	14.21	30.00	-15.79
	5510	102	AVG	15.14	15.64	18.41	23.98	-5.57	-3.15	15.26	30.00	-14.74
(40M	5590	118	AVG	16.18	16.84	19.53	23.98	-4.45	-3.15	16.38	-	-
64	5630	126	AVG	16.21	16.68	19.46	23.98	-4.52	-3.15	16.31	-	-
Ň	5710	142	AVG	15.89	16.29	19.10	23.98	-4.88	-3.15	15.95	30.00	-14.05
Ĩ	5755	151	AVG	16.11	16.08	19.11	30.00	-10.89	-3.00	16.11	-	-
Ū	5785	157	AVG	15.94	16.45	19.21	30.00	-10.79	-3.00	16.21	-	-
Ω.	5805	161	AVG	16.07	16.42	19.26	30.00	-10.74	-3.00	16.26	-	-

Table 7-8. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMG998JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 02 of 207
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ith)	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Power Limit	t Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
.i				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
dwid	5190	38	AVG	14.01	14.89	17.48	23.98	-6.50	-3.12	14.36	23.01	-8.65
_	5230	46	AVG	15.93	16.91	19.46	23.98	-4.52	-3.12	16.34	23.01	-6.67
Ва	5270	54	AVG	15.82	16.51	19.19	23.98	-4.79	-3.05	16.14	30.00	-13.86
N	5310	62	AVG	14.01	14.43	17.24	23.98	-6.74	-3.05	14.19	30.00	-15.81
т –	5510	102	AVG	15.26	15.61	18.45	23.98	-5.53	-3.15	15.30	30.00	-14.70
Σ	5590	118	AVG	16.19	16.65	19.44	23.98	-4.54	-3.15	16.29	-	-
(40	5630	126	AVG	16.22	16.55	19.40	23.98	-4.58	-3.15	16.25	-	-
	5710	142	AVG	15.92	16.29	19.12	23.98	-4.86	-3.15	15.97	30.00	-14.03
£	5755	151	AVG	16.17	16.15	19.17	30.00	-10.83	-3.00	16.17	-	-
C	5785	157	AVG	16.03	16.38	19.22	30.00	-10.78	-3.00	16.22	-	-
S	5805	161	AVG	16.24	16.59	19.43	30.00	-10.57	-3.00	16.43	-	-

Table 7-9. MIMO 40MHz BW 802.11ac (UNII) Maximum Conducted Output Power

idth)	Freq [MHz]	Freq [MHz] Channel	nnel Detector	Conducted Power [dBm]			Conducted Power Limit	it Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
÷				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [GBIII]	margin [ab]
d	5190	38	AVG	14.28	14.97	17.65	23.98	-6.33	-3.12	14.53	23.01	-8.48
_	5230	46	AVG	16.09	16.96	19.56	23.98	-4.42	-3.12	16.44	23.01	-6.57
Ba	5270	54	AVG	15.96	16.68	19.35	23.98	-4.63	-3.05	16.30	30.00	-13.70
N	5310	62	AVG	14.12	14.58	17.37	23.98	-6.61	-3.05	14.32	30.00	-15.68
I	5510	102	AVG	14.87	14.91	17.90	23.98	-6.08	-3.15	14.75	30.00	-15.25
(40M	5590	118	AVG	16.40	16.91	19.67	23.98	-4.31	-3.15	16.52	-	-
6	5630	126	AVG	16.51	16.58	19.56	23.98	-4.42	-3.15	16.41	-	-
	5710	142	AVG	16.23	16.52	19.39	23.98	-4.59	-3.15	16.24	30.00	-13.76
Ŧ	5755	151	AVG	16.35	16.31	19.34	30.00	-10.66	-3.00	16.34	-	-
Ū	5785	157	AVG	16.21	16.32	19.28	30.00	-10.72	-3.00	16.28	-	-
S	5805	161	AVG	16.14	16.37	19.27	30.00	-10.73	-3.00	16.27	-	-

Table 7-10. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

	Freq [MHz]		Detector	Conc	lucted Power [dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
F (c				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
dt O	5210	42	AVG	13.92	14.43	17.19	23.98	-6.79	-3.12	14.07	23.01	-8.94
(80 Jwid	5290	58	AVG	14.56	15.12	17.86	23.98	-6.12	-3.05	14.81	30.00	-15.19
Hz	5530	106	AVG	16.00	16.50	19.27	23.98	-4.71	-3.15	16.12	30.00	-13.88
5GH Bai	5610	122	AVG	15.94	16.24	19.10	23.98	-4.88	-3.15	15.95	-	-
	5690	138	AVG	16.08	16.16	19.13	23.98	-4.85	-3.15	15.98	30.00	-14.02
	5775	155	AVG	15.51	15.88	18.71	30.00	-11.29	-3.00	15.71	-	-

Table 7-11. MIMO 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]		Detector	Cond	lucted Power [dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
F (c				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [aBin]	
oM	5210	42	AVG	14.26	14.62	17.45	23.98	-6.53	-3.12	14.33	23.01	-8.68
8) <u>x</u>	5290	58	AVG	14.05	14.27	17.17	23.98	-6.81	-3.05	14.12	30.00	-15.88
Hz	5530	106	AVG	16.05	16.45	19.26	23.98	-4.72	-3.15	16.11	30.00	-13.89
Ba Ba	5610	122	AVG	16.11	16.30	19.22	23.98	-4.76	-3.15	16.07	-	-
	5690	138	AVG	15.91	16.40	19.17	23.98	-4.81	-3.15	16.02	30.00	-13.98
	5775	155	AVG	15.71	16.13	18.94	30.00	-11.06	-3.00	15.94	-	-

Table 7-12. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 02 of 207
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lz IHz idth)	Freq [MHz] Channel D		Detector	Conducted Power [dBm]			Power Limit Pow		Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]	
Q H O				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]			
5((16 anc	5250	50	AVG	12.89	12.43	15.68	23.98	-8.30	-3.13	12.55	23.01	-10.46
ä	5570	114	AVG	13.35	13.91	16.65	30.00	-13.35	-3.15	13.50	-	-

Table 7-13. MIMO 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power

łz AHz idth)	Freq [MHz]	Channel Detector	Conducted Power [dBm]			Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]	
5GH 60M hdwi				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]			
5 (16 and	5250	50	AVG	12.35	13.52	15.98	23.98	-8.00	-3.13	12.85	23.01	-10.16
ä	5570	114	AVG	13.65	14.28	16.99	30.00	-13.01	-3.15	13.84	-	-

Table 7-14. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power

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^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})² / N_{ANT}] dBi

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 19.78 dBm with directional gain of -3.12 dBi.

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

19.78 dBm + (-3.12) dBi = 16.66 dBm

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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7.5 Maximum Power Spectral Density – 802.11a/n/ac/ax §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

Test Overview and Limit

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

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

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

Test Procedure Used

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

Test Settings

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

Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

Test Notes

None

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Summed MIMO Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	а	6	6.85	7.07	9.97	11.0	-1.03
	5200	40	а	6	7.08	7.03	10.07	11.0	-0.93
	5240	48	а	6	6.98	7.22	10.11	11.0	-0.89
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	7.82	7.87	10.86	11.0	-0.14
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	7.72	7.93	10.84	11.0	-0.16
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.70	8.06	10.89	11.0	-0.11
.	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	7.52	7.76	10.65	11.0	-0.35
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	7.43	7.94	10.70	11.0	-0.30
Ba	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	7.76	7.90	10.84	11.0	-0.16
	5190	38	n (40MHz)	13.5/15 (MCS0)	3.09	3.59	6.36	11.0	-4.64
	5230	46	n (40MHz)	13.5/15 (MCS0)	3.22	3.60	6.42	11.0	-4.58
	5190	38	ax (40MHz)	13.5/15 (MCS0)	3.20	3.47	6.35	11.0	-4.65
	5230	46	ax (40MHz)	13.5/15 (MCS0)	3.05	3.63	6.36	11.0	-4.64
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-0.94	-0.58	2.25	11.0	-8.75
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-0.85	-0.18	2.51	11.0	-8.49
Band 1/2A	5250	50	ac (160MHz)	58.5/65 (MCS0)	-7.74	-7.74	-4.73	11.0	-15.73
1/2	5250	50	ax (160MHz)	72.1/61.3 (MCS0)	-6.21	-6.78	-3.48	11.0	-14.48
	5260	52	а	6	6.93	6.83	9.89	11.0	-1.11
	5280	56	а	6	6.71	7.00	9.87	11.0	-1.13
	5320	64	а	6	7.12	7.49	10.32	11.0	-0.68
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	7.57	8.03	10.82	11.0	-0.18
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	7.49	7.83	10.67	11.0	-0.33
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	7.72	8.11	10.93	11.0	-0.07
₹	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	7.34	8.19	10.80	11.0	-0.20
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	7.46	7.76	10.62	11.0	-0.38
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	6.50	6.90	9.71	11.0	-1.29
	5270	54	n (40MHz)	13.5/15 (MCS0)	2.92	3.12	6.03	11.0	-4.97
	5310	62	n (40MHz)	13.5/15 (MCS0)	2.94	3.34	6.15	11.0	-4.85
	5270	54	ax (40MHz)	13.5/15 (MCS0)	2.78	3.06	5.93	11.0	-5.07
	5310	62	ax (40MHz)	13.5/15 (MCS0)	2.94	3.52	6.25	11.0	-4.75
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-1.44	-0.88	1.86	11.0	-9.14
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-1.16	-0.71	2.08	11.0	-8.92
	5500	100	а	6	6.81	7.17	10.00	11.0	-1.00
	5600	120	а	6	7.12	7.31	10.23	11.0	-0.77
	5720	144	а	6	6.77	6.84	9.82	11.0	-1.18
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	6.23	6.96	9.62	11.0	-1.38
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	6.69	6.75	9.73	11.0	-1.27
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.36	6.69	9.54	11.0	-1.46
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	6.22	6.96	9.62	11.0	-1.38
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	6.51	6.73	9.63	11.0	-1.37
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	7.11	6.85	9.99	11.0	-1.01
	5510	102	n (40MHz)	13.5/15 (MCS0)	3.38	3.56	6.48	11.0	-4.52
SC	5590	118	n (40MHz)	13.5/15 (MCS0)	3.42	3.82	6.63	11.0	-4.37
Band 2C	5710	142	n (40MHz)	13.5/15 (MCS0)	3.11	3.54	6.34	11.0	-4.66
Ba	5510	102	ax (40MHz)	13.5/15 (MCS0)	3.02	3.56	6.31	11.0	-4.69
	5590	118	ax (40MHz)	13.5/15 (MCS0)	3.22	3.74	6.50	11.0	-4.50
	5710	142	ax (40MHz)	13.5/15 (MCS0)	2.90	3.69	6.32	11.0	-4.68
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-1.18	-0.70	2.08	11.0	-8.92
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-1.01	-0.72	2.15	11.0	-8.85
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-1.02	-0.61	2.20	11.0	-8.80
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-0.91	-0.22	2.46	11.0	-8.54
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-0.55	-0.51	2.48	11.0	-8.52
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-0.94	-0.64	2.22	11.0	-8.78
	5570	114	ac (160MHz)	58.5/65 (MCS0)	-6.30	-5.98	-3.13	11.0	-14.13
	5570	114	ax (160MHz)	72.1/61.3 (MCS0)	-5.13	-4.54	-1.81	11.0	-12.81

Table 7-15. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
	5745	149	а	6	6.77	6.85	9.82	30.0	-20.18
	5785	157	а	6	7.02	6.87	9.96	30.0	-20.04
	5825	165	а	6	7.88	8.06	10.98	30.0	-19.02
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	7.66	7.58	10.63	30.0	-19.37
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	7.63	7.69	10.67	30.0	-19.33
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	7.24	7.70	10.49	30.0	-19.51
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	7.07	6.48	9.80	30.0	-20.20
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	6.20	6.48	9.35	30.0	-20.65
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	7.40	7.63	10.53	30.0	-19.47
	5755	151	n (40MHz)	13.5/15 (MCS0)	3.48	3.43	6.47	30.0	-23.53
	5795	159	n (40MHz)	13.5/15 (MCS0)	2.65	3.34	6.02	30.0	-23.98
	5755	151	ax (40MHz)	13.5/15 (MCS0)	3.23	3.50	6.38	30.0	-23.62
	5795	159	ax (40MHz)	13.5/15 (MCS0)	3.01	3.32	6.18	30.0	-23.82
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-1.21	-1.07	1.87	30.0	-28.13
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-0.95	-1.09	1.99	30.0	-28.01

Table 7-16. Band 3 MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 07 of 207
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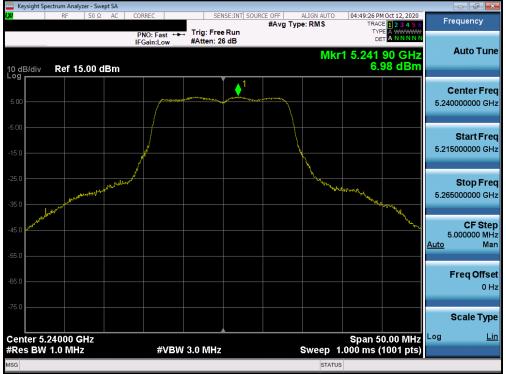
Plot 7-141. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 36)



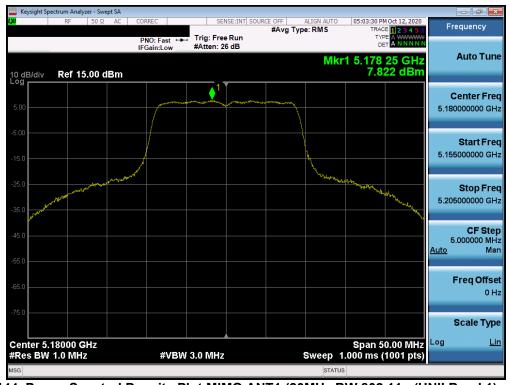
Plot 7-142. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 40)

FCC ID: A3LSMG998JPN	PCTEST Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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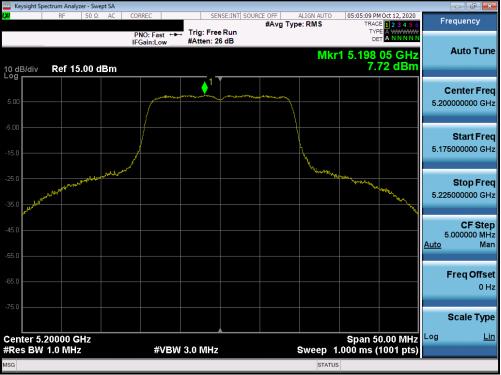
Plot 7-143. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) – Ch. 48)



Plot 7-144. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 00 of 207
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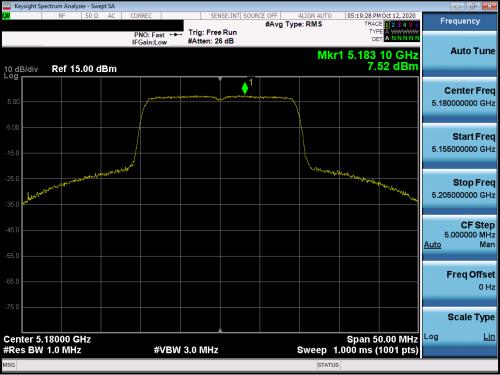
Plot 7-145. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)



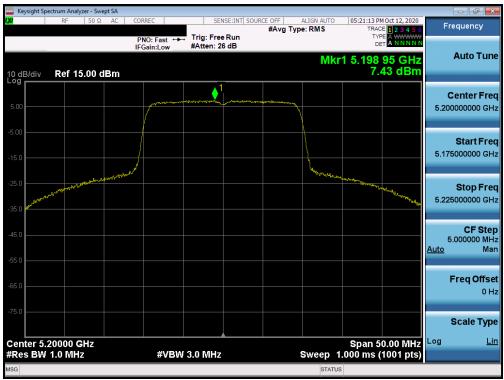
Plot 7-146. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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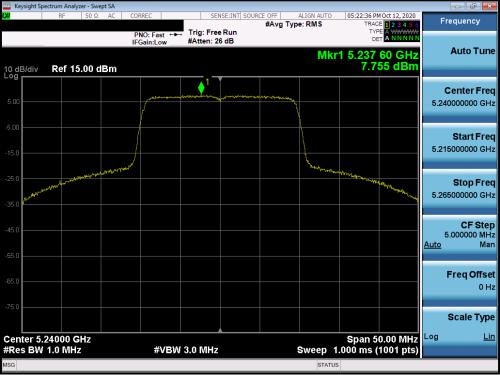
Plot 7-147. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)



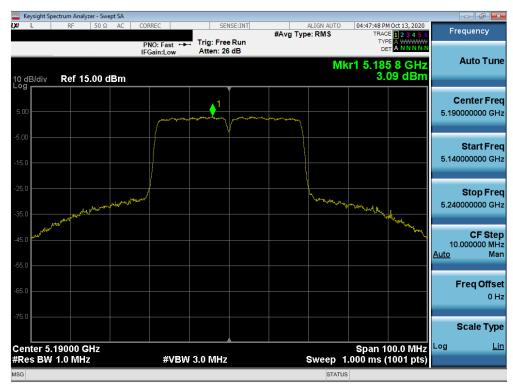
Plot 7-148. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-149. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)



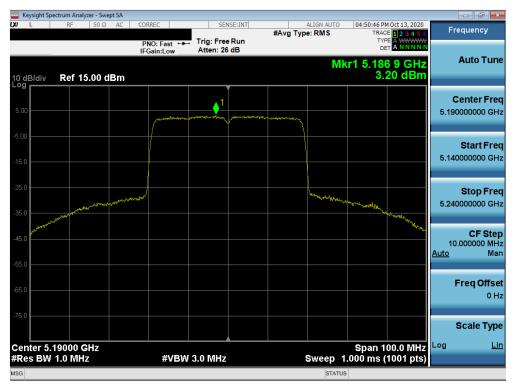
Plot 7-150. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-151. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)



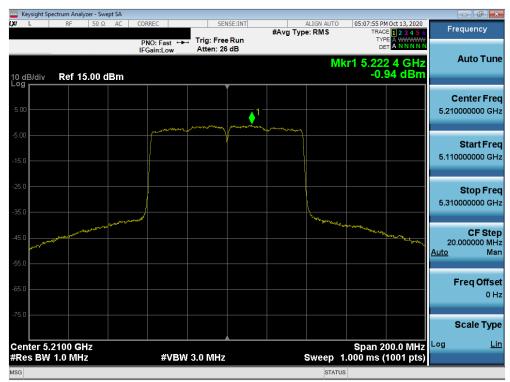
Plot 7-152. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-153. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



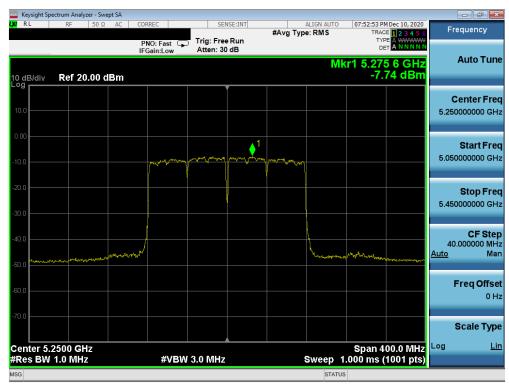
Plot 7-154. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-155. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)



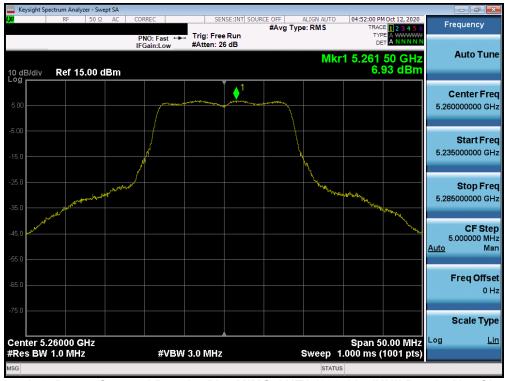
Plot 7-156. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ac (UNII Band 1) - Ch. 50)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Degs 105 of 207
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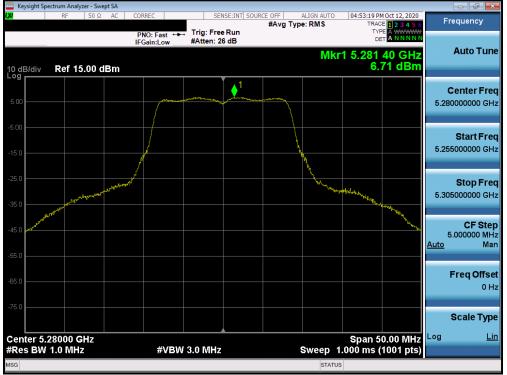
Plot 7-157. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax (UNII Band 1) - Ch. 50)



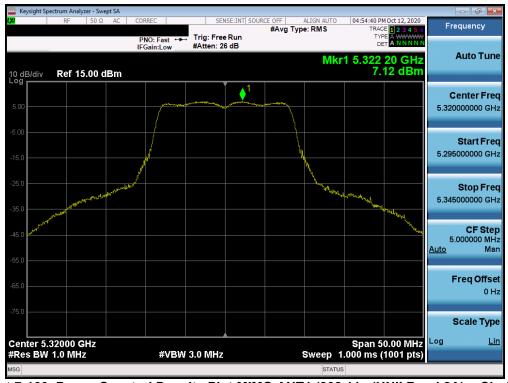
Plot 7-158. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 106 of 207
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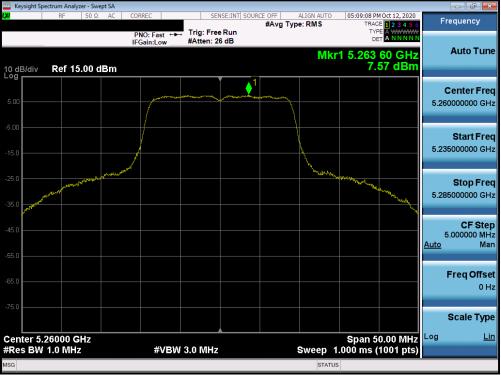
Plot 7-159. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) – Ch. 56)



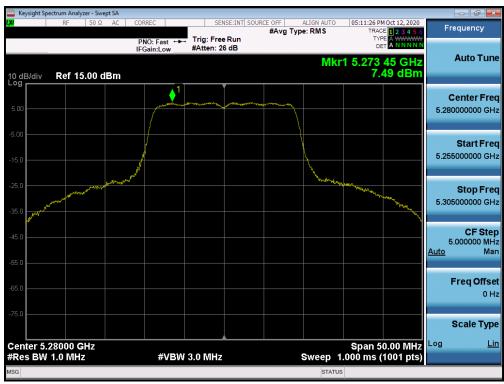
Plot 7-160. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 107 of 207
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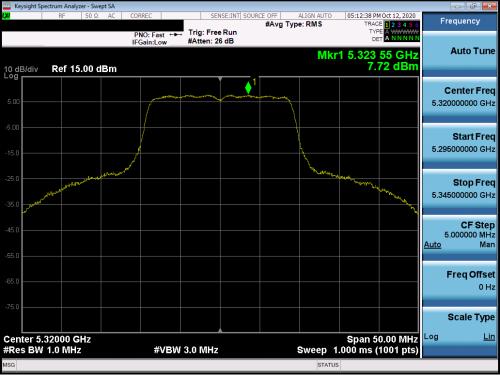
Plot 7-161. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)



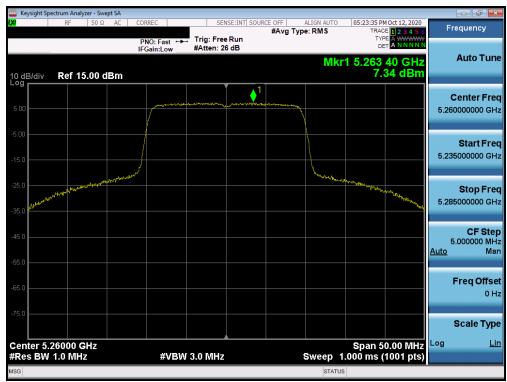
Plot 7-162. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 100 of 207
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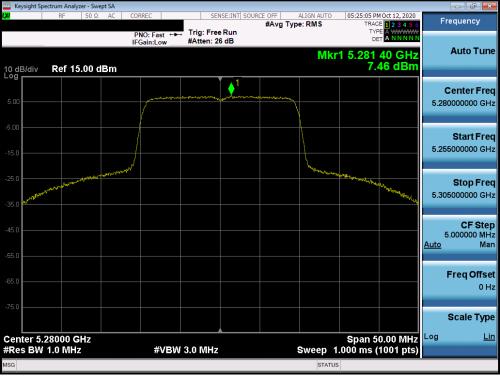
Plot 7-163. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)



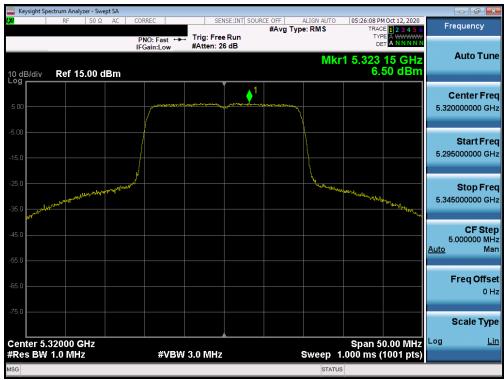
Plot 7-164. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 100 of 207
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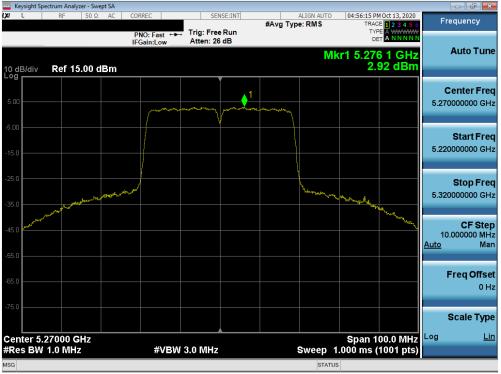
Plot 7-165. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)



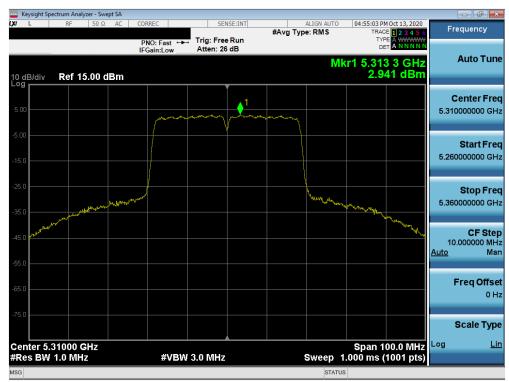
Plot 7-166. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 110 of 207
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Plot 7-167. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)



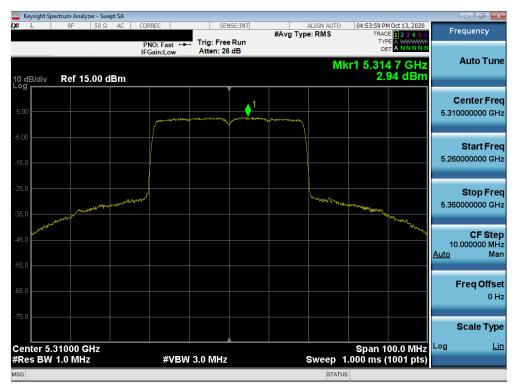
Plot 7-168. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 111 of 207
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	trum Analyzer - Swept SA					
LXI L	RF 50 Ω AC		SENSE:INT	ALIGN AUTO #Avg Type: RMS	04:52:15 PM Oct 13, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW	Frequency
10 dB/div Log	Ref 15.00 dBm	PNO: Fast	Atten: 26 dB	Mł	type A WWWW Det A NNNNN xr1 5.263 8 GHz 2.78 dBm	Auto Tune
5.00			1 			Center Freq 5.270000000 GHz
-5.00						Start Freq 5.220000000 GHz
-25.0	and particular and resident	and a start of the			will work had the work of the work of the work of the second seco	Stop Freq 5.320000000 GHz
-45.0						CF Step 10.000000 MHz <u>Auto</u> Man
-65.0						Freq Offset 0 Hz
						Scale Type
Center 5.27 #Res BW 1		#VBW	3.0 MHz	Sweep 1	Span 100.0 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG				STATUS	3	

Plot 7-169. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)



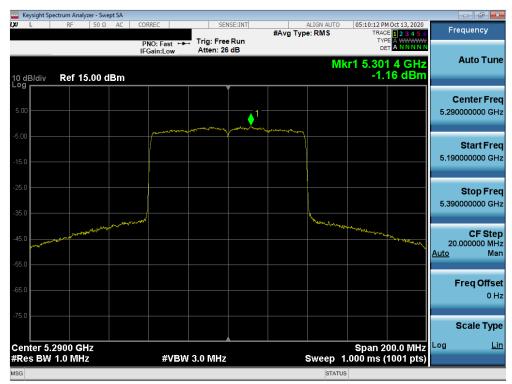
Plot 7-170. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 112 of 207
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Plot 7-171. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)



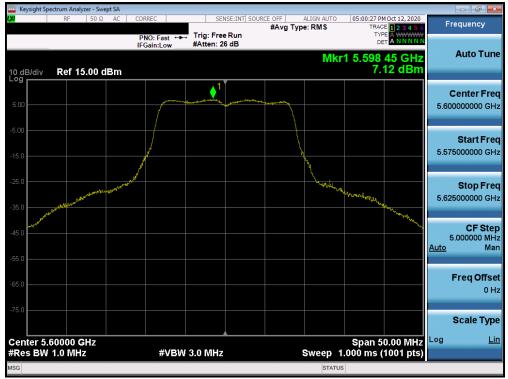
Plot 7-172. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dame 112 of 207
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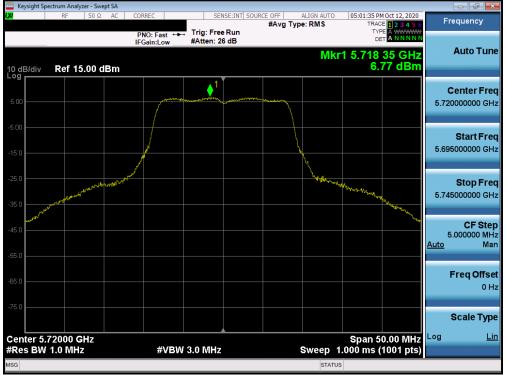
Plot 7-173. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) – Ch. 100)



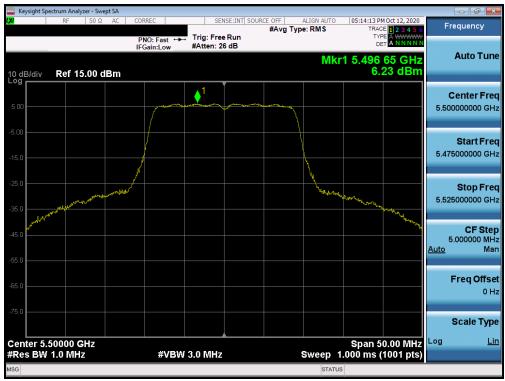
Plot 7-174. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 114 of 207
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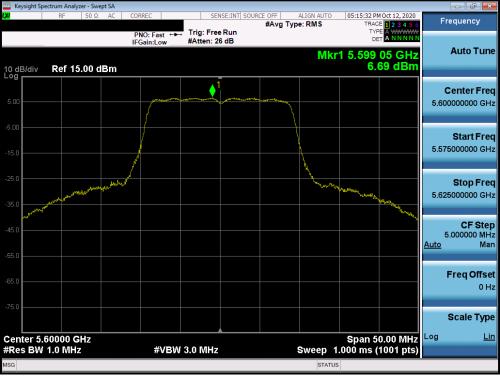
Plot 7-175. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 144)



Plot 7-176. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Degs 115 of 207	
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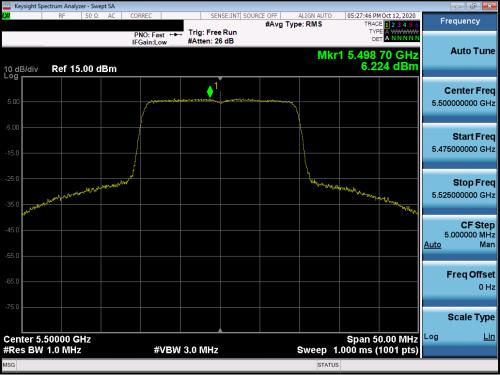
Plot 7-177. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



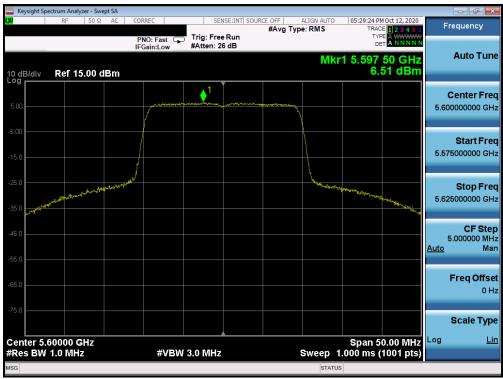
Plot 7-178. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 116 of 207	
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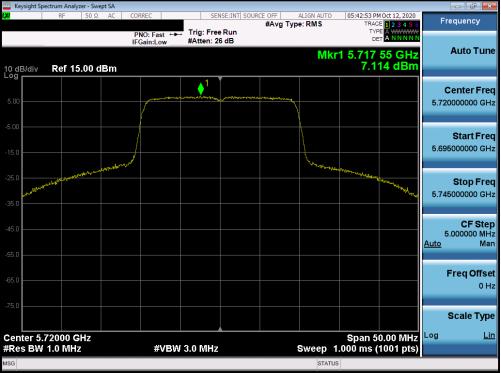
Plot 7-179. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



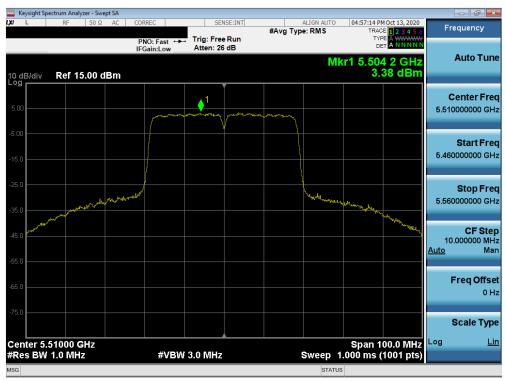
Plot 7-180. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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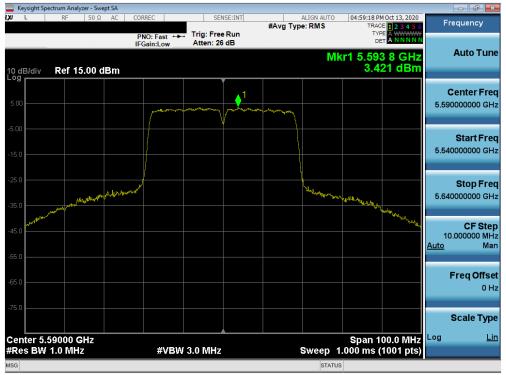
Plot 7-181. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



Plot 7-182. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 119 of 207
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Plot 7-183. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



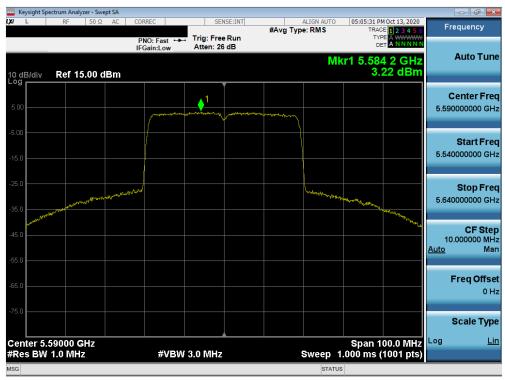
Plot 7-184. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Swept SA				
LX/IL RF 50Ω AC		#Avg Type: R	TYPE A WAARAAAA	
10 dB/div Ref 15.00 dBm	PNO: Fast ++- Trig: Free IFGain:Low Atten: 26		Mkr1 5.503 8 GHz 3.020 dBm	Auto Tune
5.00	1	printer and the printer of the print		Center Freq 5.510000000 GHz
-15.0				Start Freq 5.46000000 GHz
-25.0	Marry		Marine and a barren agenting the state of the	Stop Freq 5.56000000 GHz
-45.0				CF Step 10.000000 MHz <u>Auto</u> Man
-65.0				Freq Offset 0 Hz
-75.0				Scale Type
Center 5.51000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	Sw	Span 100.0 MHz (reep 1.000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATUS	

Plot 7-185. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



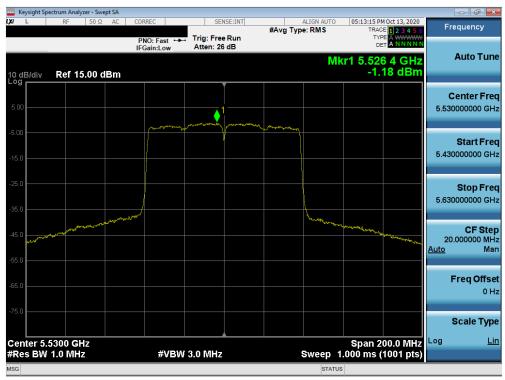
Plot 7-186. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 100 of 207	
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	um Analyzer - Swej										
LXIL	RF 50 Ω	AC COI	RREC		ISE:INT	#Avg Type	ALIGN AUTO E: RMS	TRAC	M Oct 13, 2020	Fr	equency
10 dB/div	Ref 15.00 d	IF	NO: Fast ↔ Gain:Low	. Trig: Free Atten: 26			Mk	r1 5.70	a 9 GHz 99 dBm		Auto Tune
5.00				1	manome	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					Center Freq 0000000 GHz
-5.00										5.660	Start Freq
-25.0	now many from the	North Start and Start					and the second	manstrally of basery	about the state	5.760	Stop Freq 0000000 GHz
-45.0									· **	10 <u>Auto</u>	CF Step .000000 MHz Man
-65.0										'	F req Offset 0 Hz
-75.0										Log	Scale Type Lin
Center 5.71 #Res BW 1.			#VBW	3.0 MHz			Sweep 1	Span 1 .000 m <u>s (</u>	00.0 MHz (1001 pts)	LUg	<u></u>
MSG							STATUS				

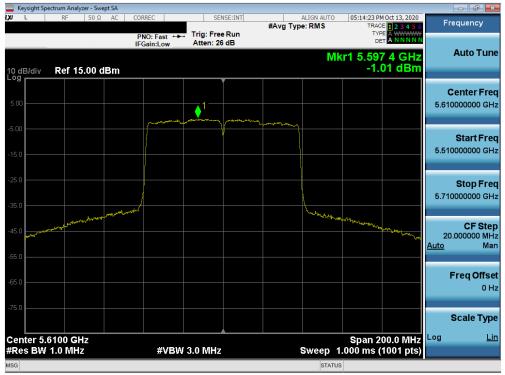
Plot 7-187. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)



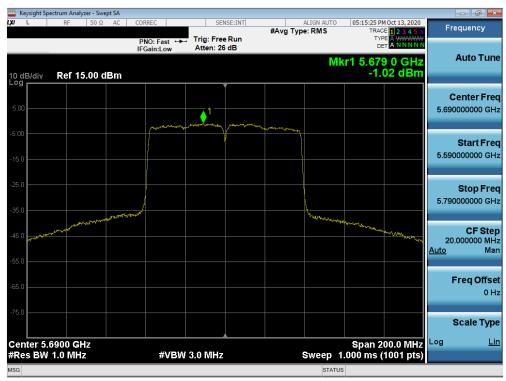
Plot 7-188. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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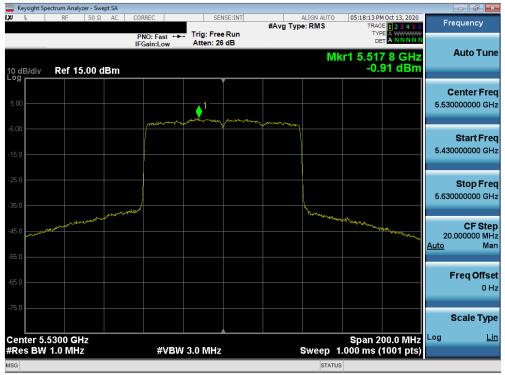
Plot 7-189. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)



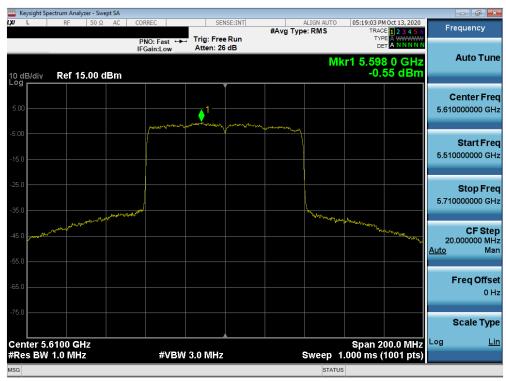
Plot 7-190. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-191. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)



Plot 7-192. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-193. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)



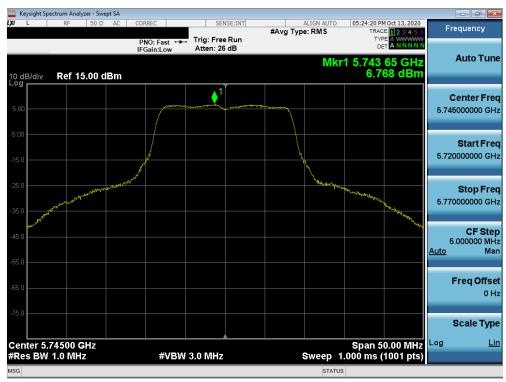
Plot 7-194. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ac (UNII Band 2C) - Ch. 114)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)		Approved by: Technical Manager
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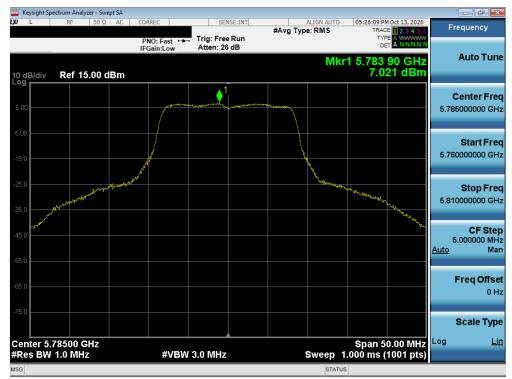
Plot 7-195. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax (UNII Band 2C) - Ch. 114)



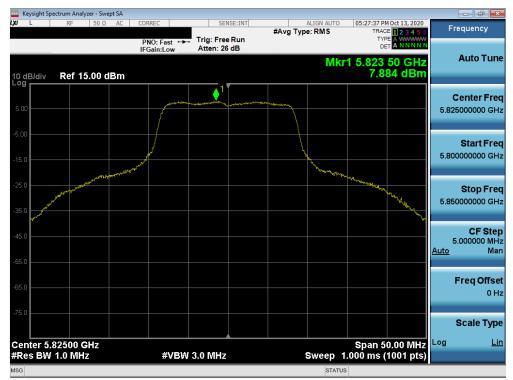
Plot 7-196. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)		Approved by: Technical Manager
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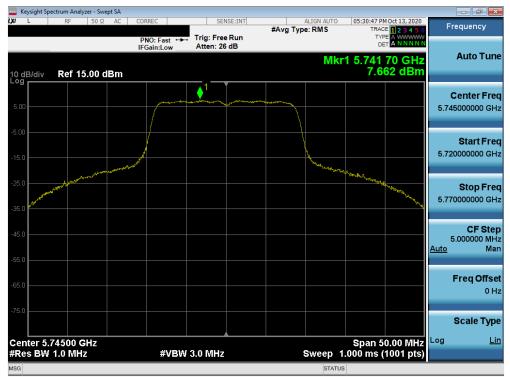




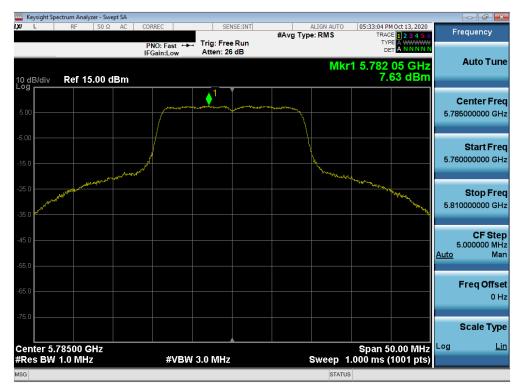
Plot 7-198. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-199. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



Plot 7-200. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	SAMSUNG	Approved by: Technical Manager
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Plot 7-201. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



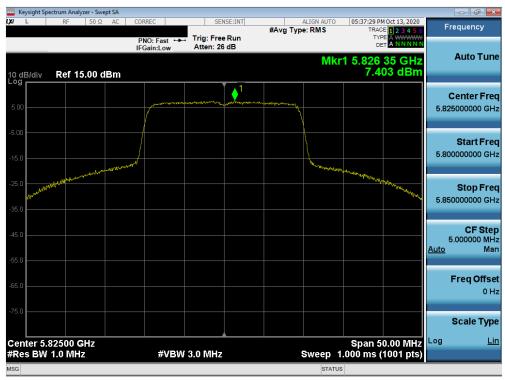
Plot 7-202. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)		Approved by: Technical Manager	
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	trum Analyzer - Swe									(
LXI L	RF 50 Ω	AC CO	RREC		ISE:INT	#Avg Type	ALIGN AUTO e: RMS	TRAC	10ct 13, 2020 E 1 2 3 4 5 6	Fre	equency
10 dB/div Log	Ref 15.00 c	IF	NO: Fast ↔ Gain:Low	Trig: Free Atten: 26			Mkr	DE 1 5.788	10 GHz 99 dBm		Auto Tune
5.00				and the grade of the state of the	المراجعة الم						enter Freq 000000 GHz
-5.00										5.760	Start Freq 000000 GHz
-25.0	when have but the	allantrice A.A.					"Worker	However and the log	Maria Michael	5.810	Stop Freq 000000 GHz
-45.0										5. <u>Auto</u>	CF Step 000000 MHz Man
-65.0										F	F req Offset 0 Hz
-75.0 Center 5.73	8500 GHz							Snan-5	0.00 MHz	s Log	Scale Type Lin
#Res BW 1			#VBW	3.0 MHz			Sweep 1	.000 ms (1001 pt <u>s)</u>		
MSG							STATUS				

Plot 7-203. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



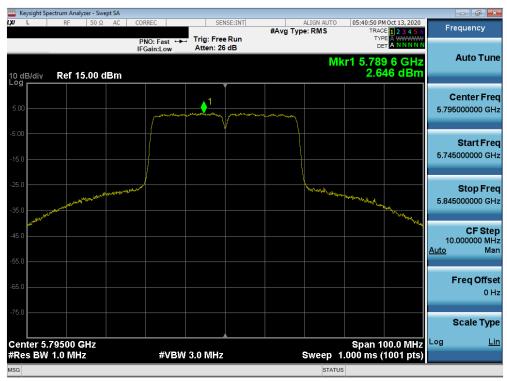
Plot 7-204. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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	trum Analyzer - Sw										
LXIL	RF 50 Ω		CORREC	.	SE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	MOct 13, 2020 E 1 2 3 4 5 6 E A WWWW	Fr	equency
10 dB/div	Ref 15.00 c		PNO: Fast ↔ IFGain:Low	Atten: 26			Mk	r1 5.76	1 6 GHz 48 dBm		Auto Tune
5.00											Center Freq 5000000 GHz
-5.00										5.70	Start Freq 5000000 GHz
-25.0	white and the state of the stat	a distance and a	Ared .				handtheachignesis	Jar - Martlestope	And a	5.80	Stop Freq 5000000 GHz
-45.0										10 <u>Auto</u>	CF Step 0.000000 MHz Man
-65.0											F req Offset 0 Hz
-75.0 Center 5.7	5500 GHz							Snap 1	00.0 MHz	Log	Scale Type Lin
#Res BW			#VBW	3.0 MHz			Sweep 1	.000 ms (1001 pts)		
MSG							STATUS				

Plot 7-205. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)



Plot 7-206. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)		Approved by: Technical Manager
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Keysight Spectrum Analyzer - Swept SA						
XUL RF 50ΩAC	CORREC	SENSE:INT	ALIGN AL #Avg Type: RMS	TRAC	E 1 2 3 4 5 6	Frequency
10 dB/div Ref 15.00 dBm		: 26 dB		DE Mkr1 5.74		Auto Tune
5.00	1		n warne warde			Center Freq 5.755000000 GHz
-5.00						Start Freq 5.705000000 GHz
-25.0	редея — — — — — — — — — — — — — — — — — — —			and had all and a standard and a	un mut	Stop Freq 5.805000000 GHz
-45.0						CF Step 10.000000 MHz <u>Auto</u> Man
-65.0						Freq Offset 0 Hz
-75.0 Center 5.75500 GHz				Span 1	00.0 MHz	Scale Type Log <u>Lin</u>
#Res BW 1.0 MHz	#VBW 3.0 M	Hz	Swee	p 1.000 ms (1001 pts)	
MSG			S	TATUS		

Plot 7-207. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-208. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG998JPN	Proud to be part of @ element	MEASUREMENT REPORT (Certification)	Approved by: Technical Manager
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