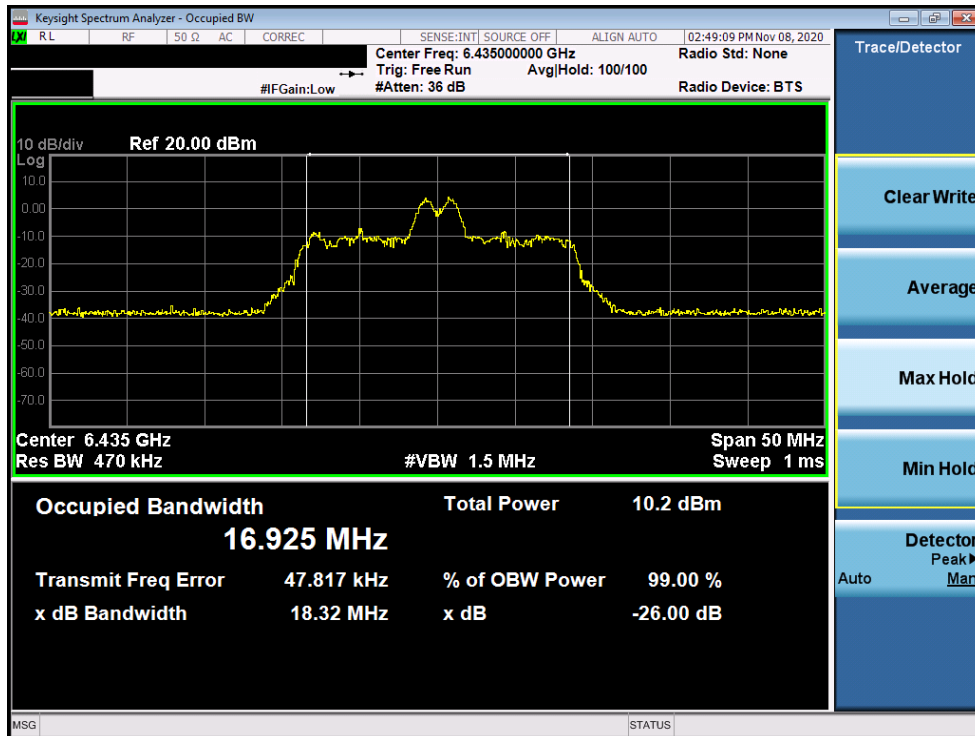
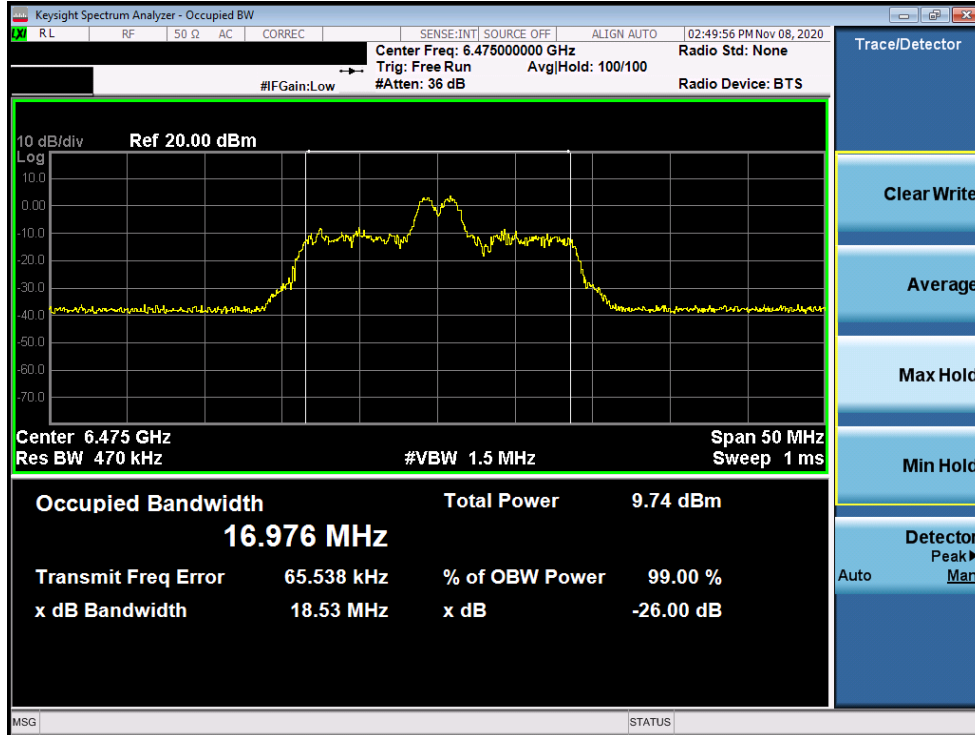


Plot 7-75. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 87)

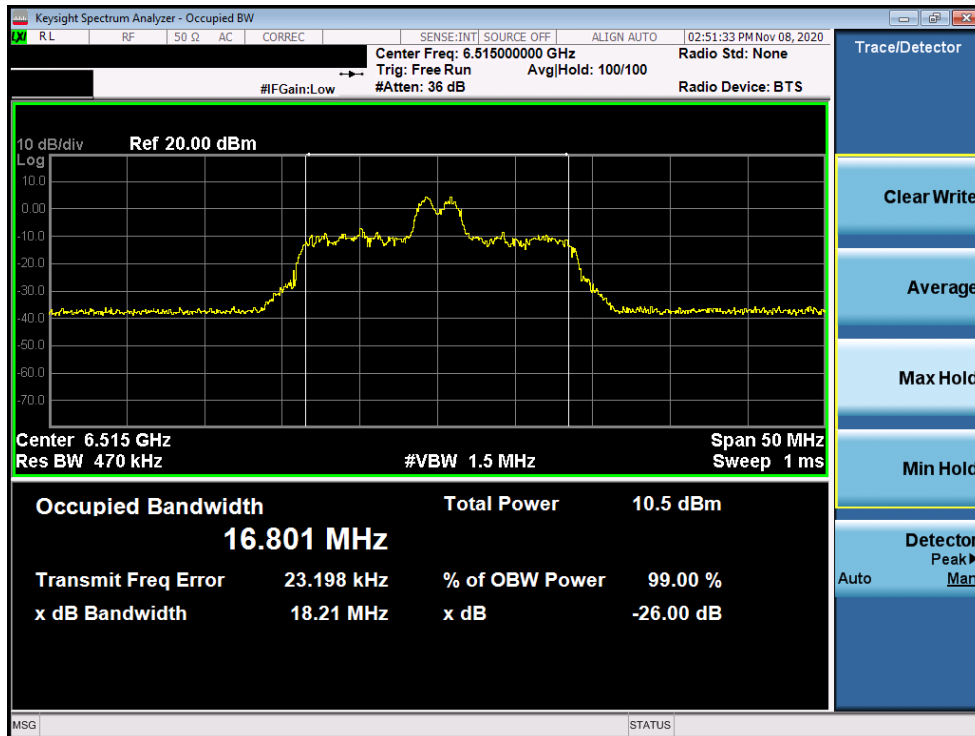


Plot 7-76. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 97)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 55 of 276

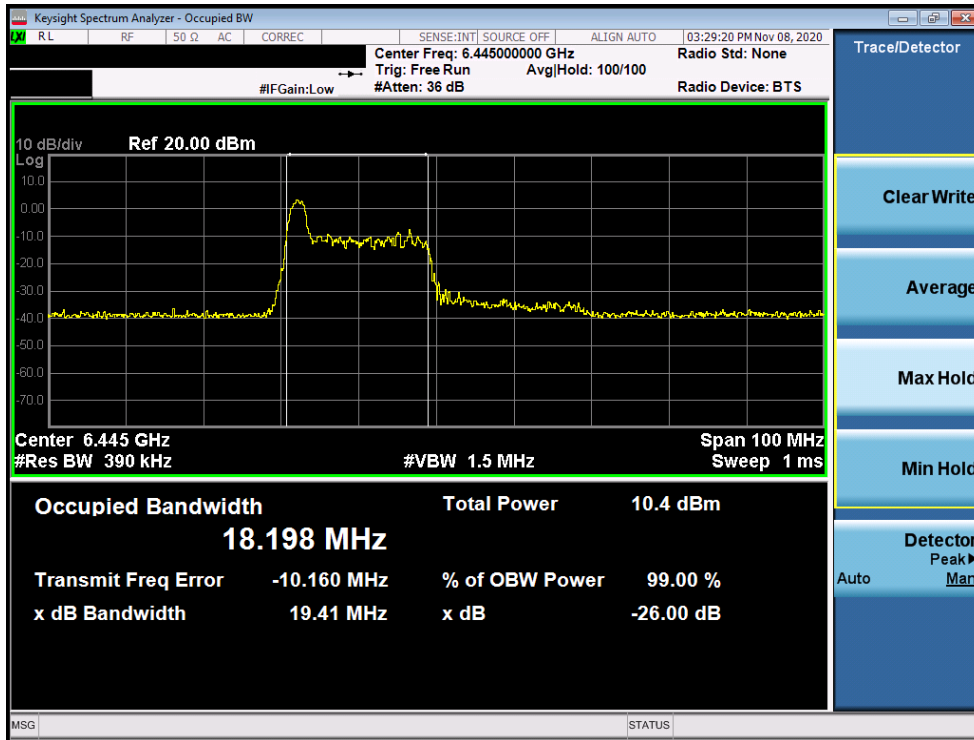


Plot 7-77. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 105)



Plot 7-78. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 113)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 56 of 276



Plot 7-79. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 99)



Plot 7-80. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 107)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 57 of 276

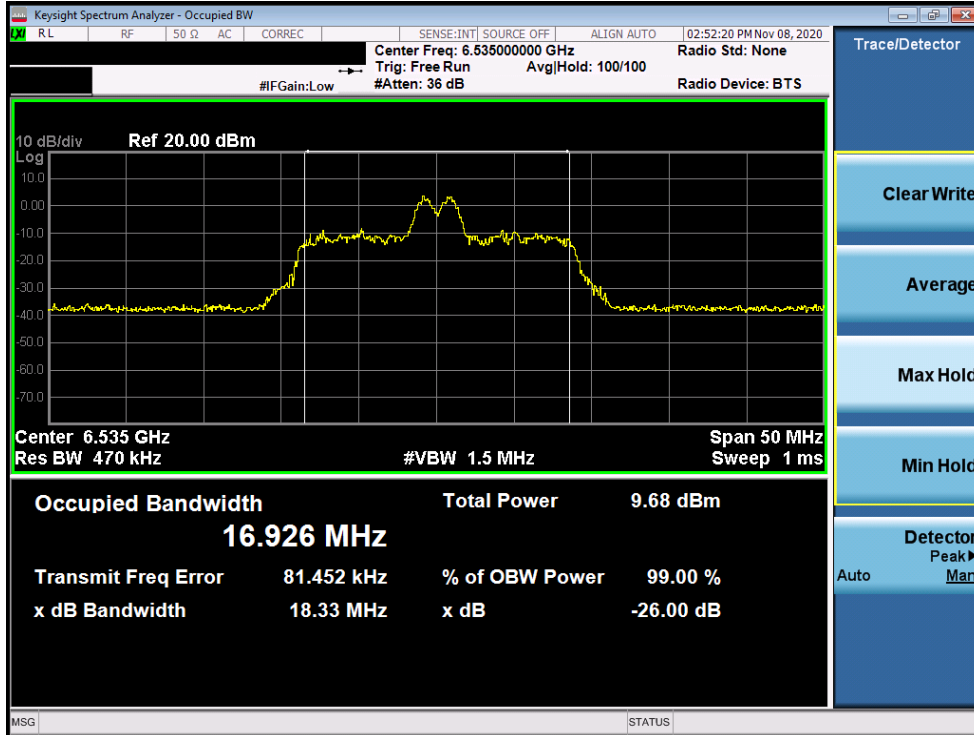


Plot 7-81. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 115)

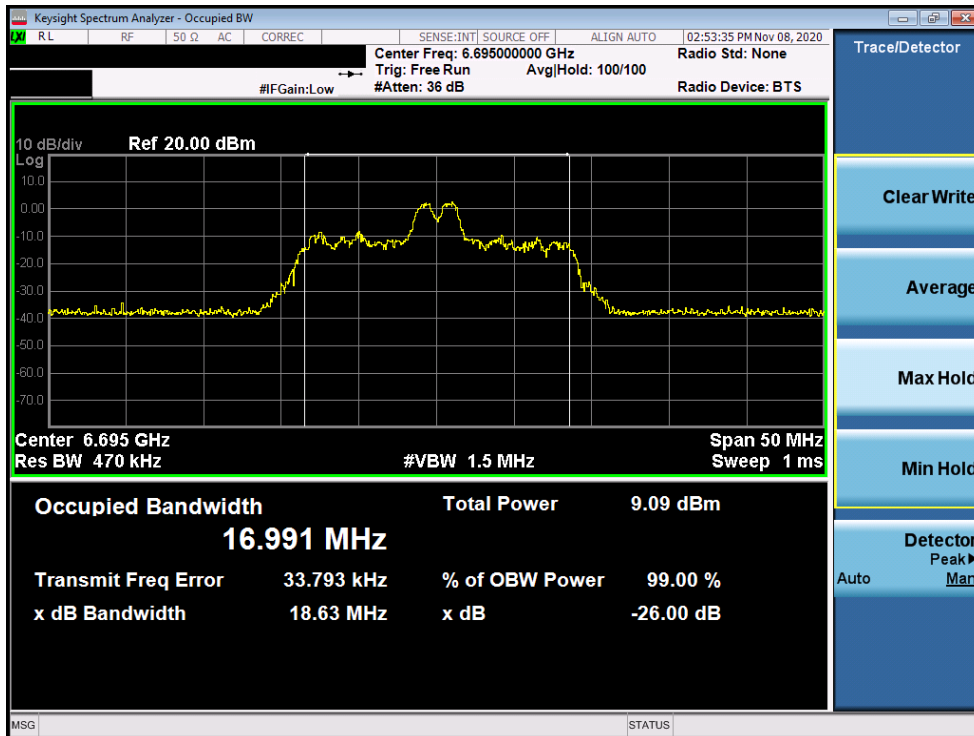


Plot 7-82. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 103)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 58 of 276

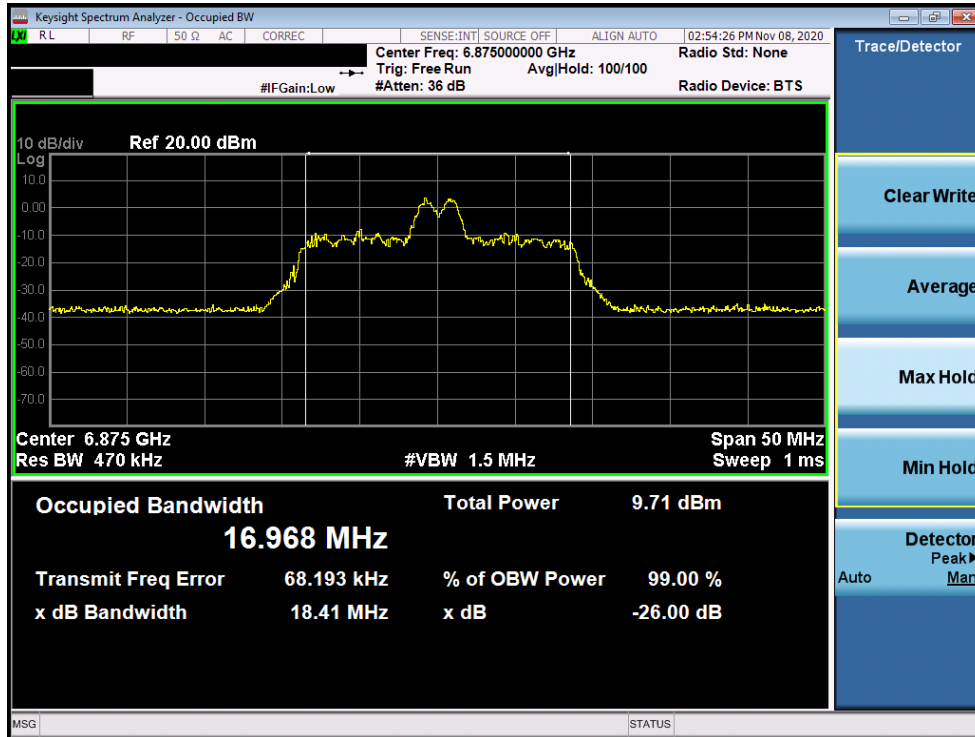


Plot 7-83. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 117)

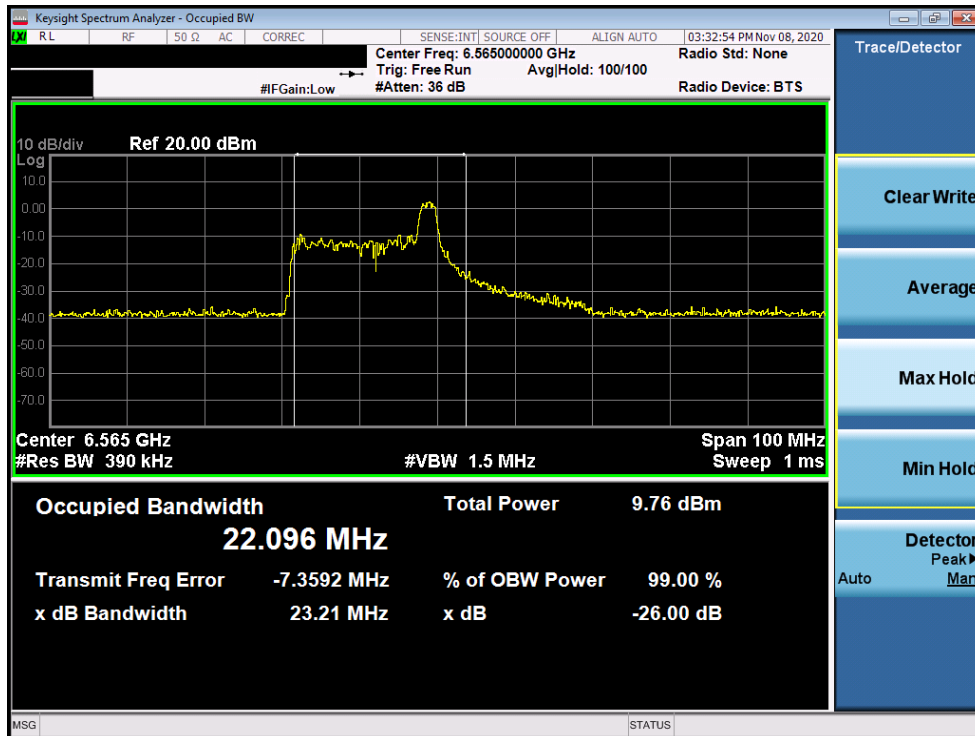


Plot 7-84. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 149)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 59 of 276

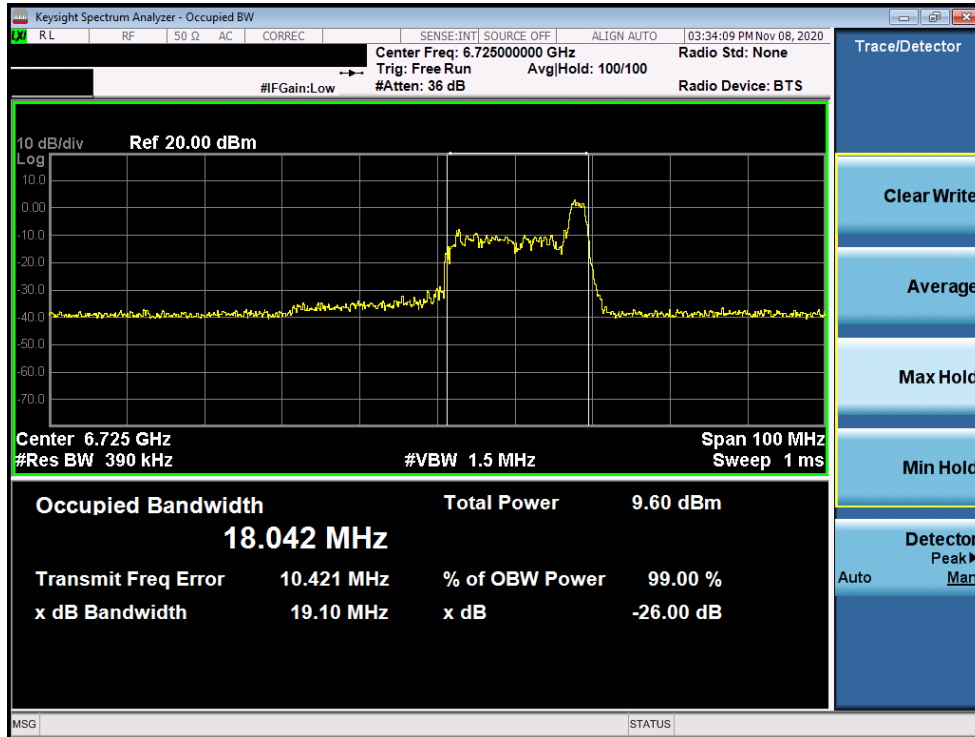


Plot 7-85. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 185)

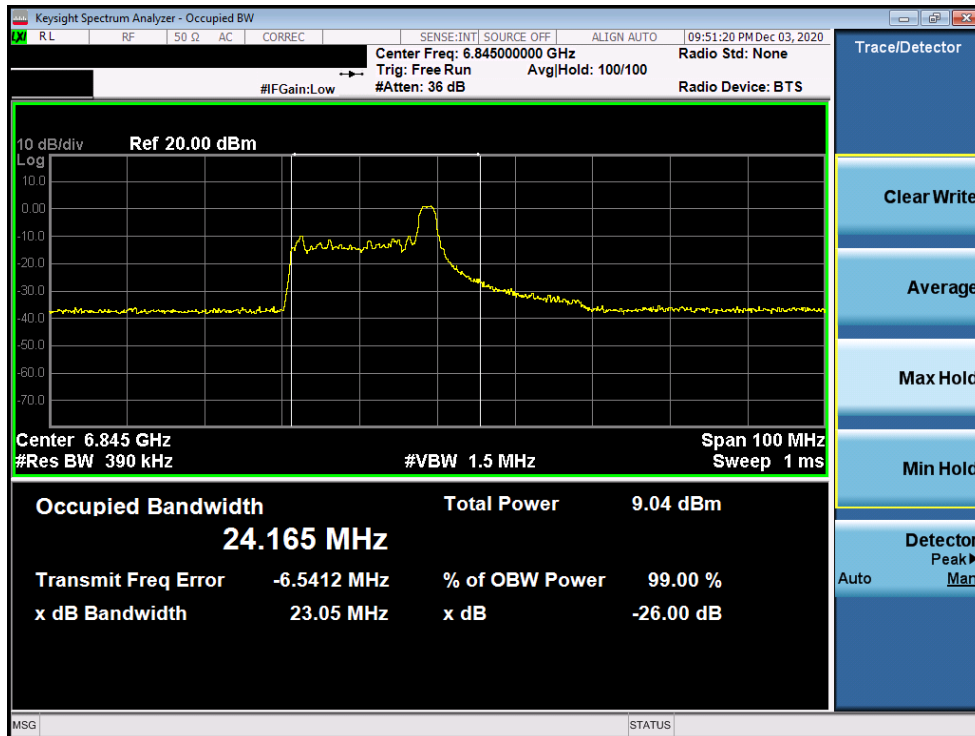


Plot 7-86. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 123)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 60 of 276

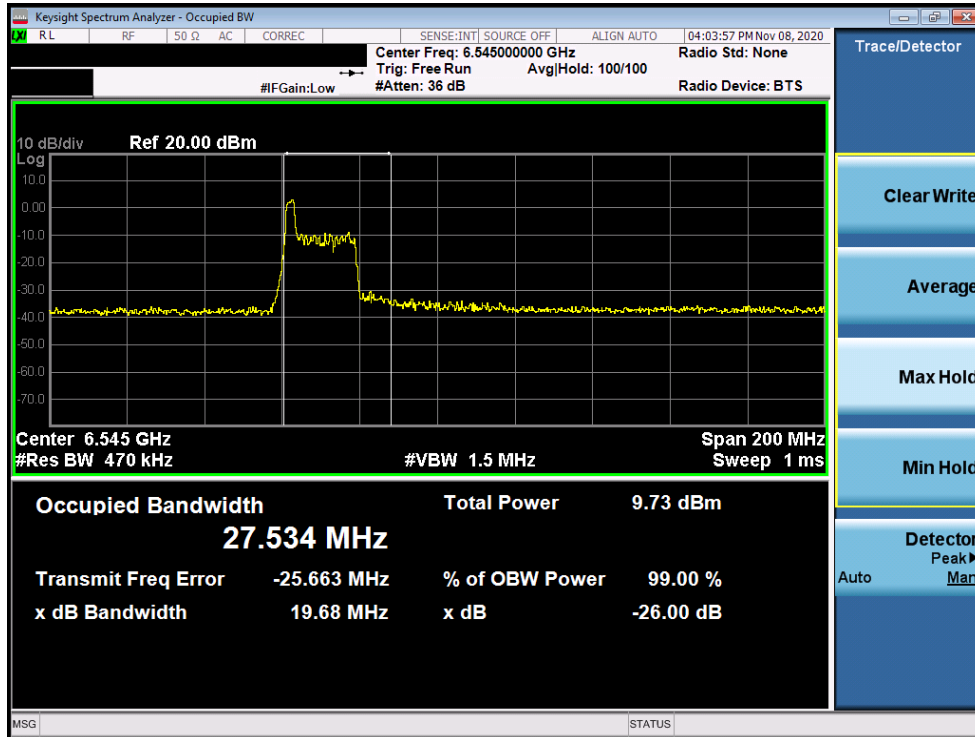


Plot 7-87. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 155)

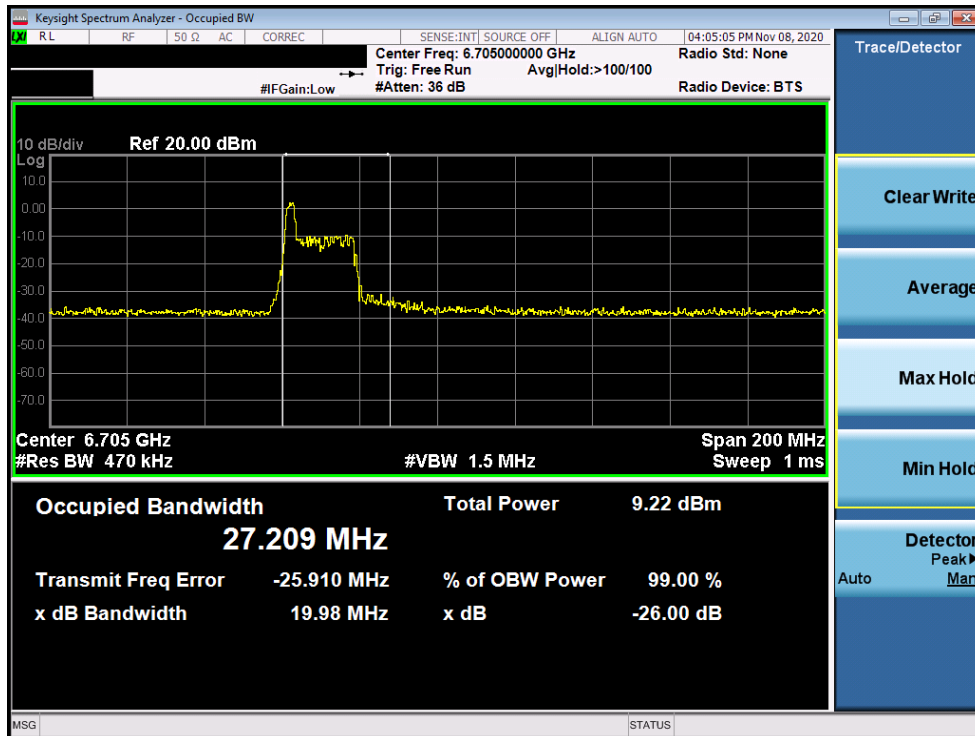


Plot 7-88. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 179)

FCC ID: A3LSMG998B	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 61 of 276

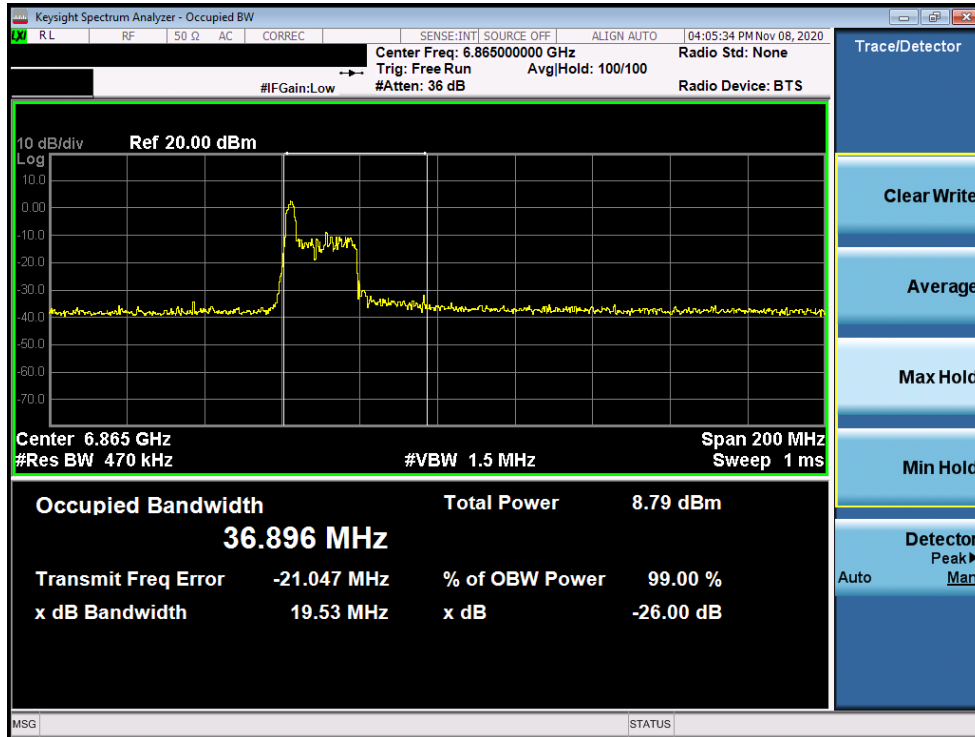


Plot 7-89. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 119)

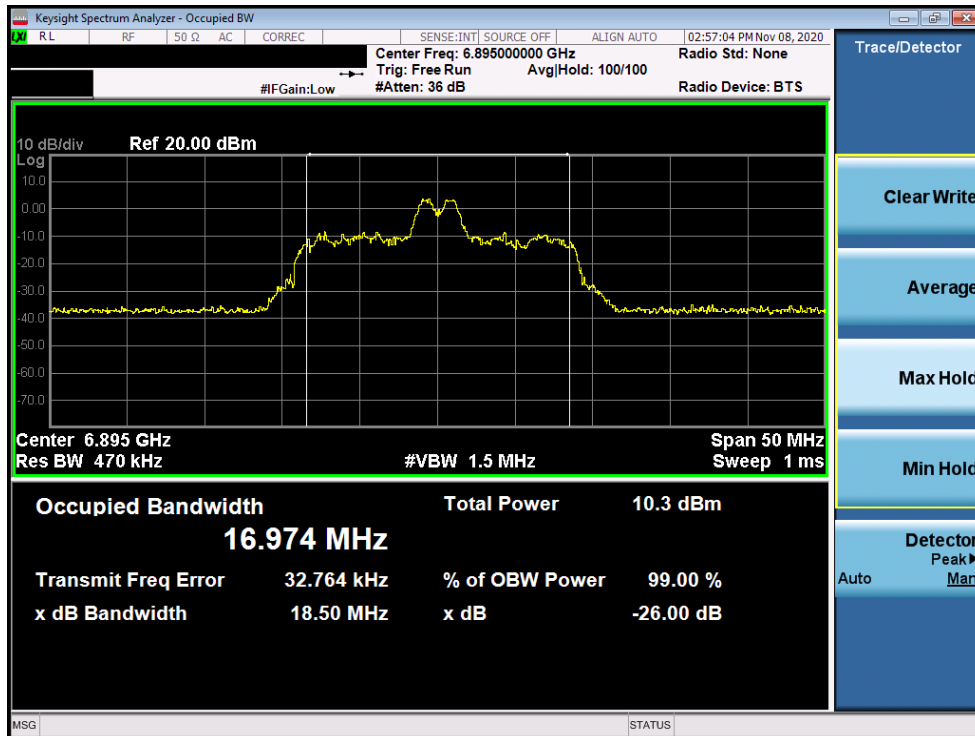


Plot 7-90. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 151)

FCC ID: A3LSMG998B	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 62 of 276

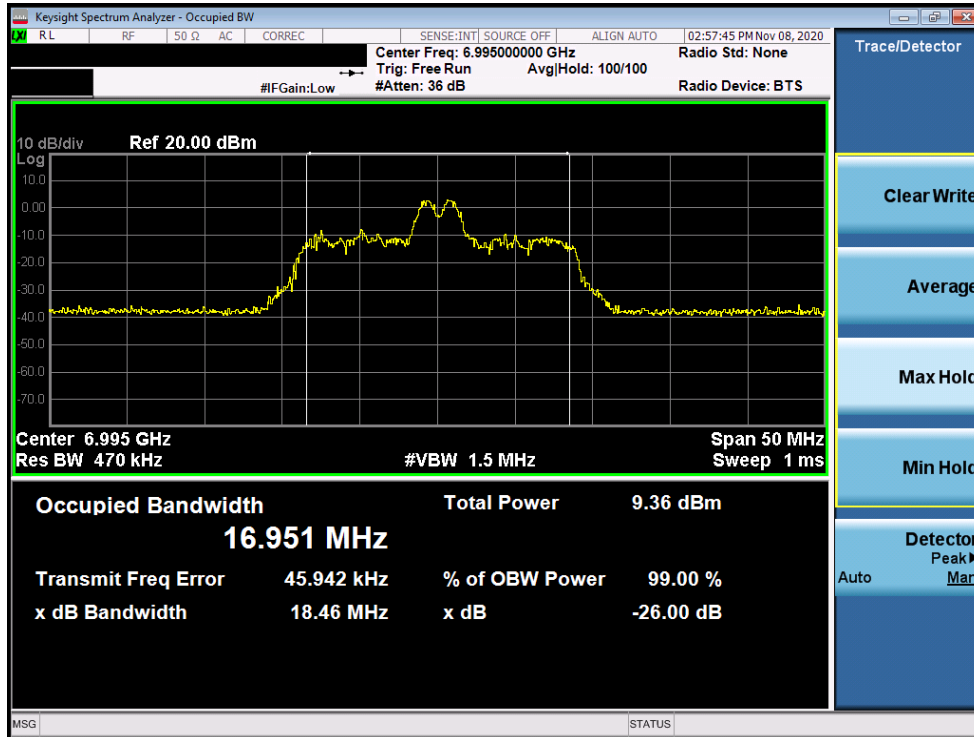


Plot 7-91. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 183)

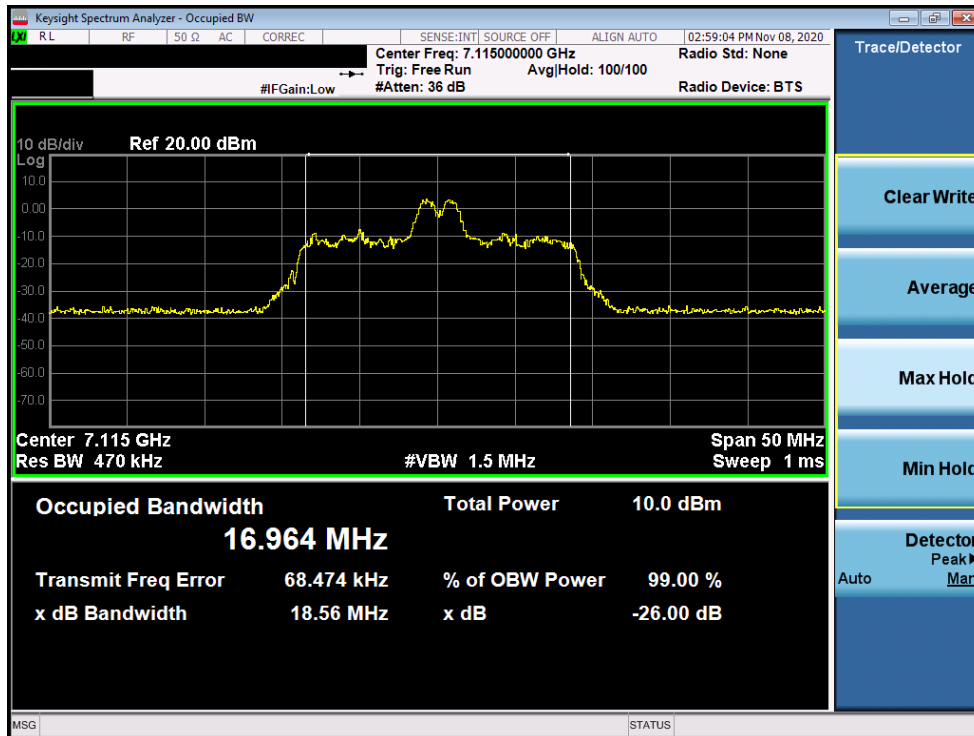


Plot 7-92. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 189)

FCC ID: A3LSMG998B	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 63 of 276

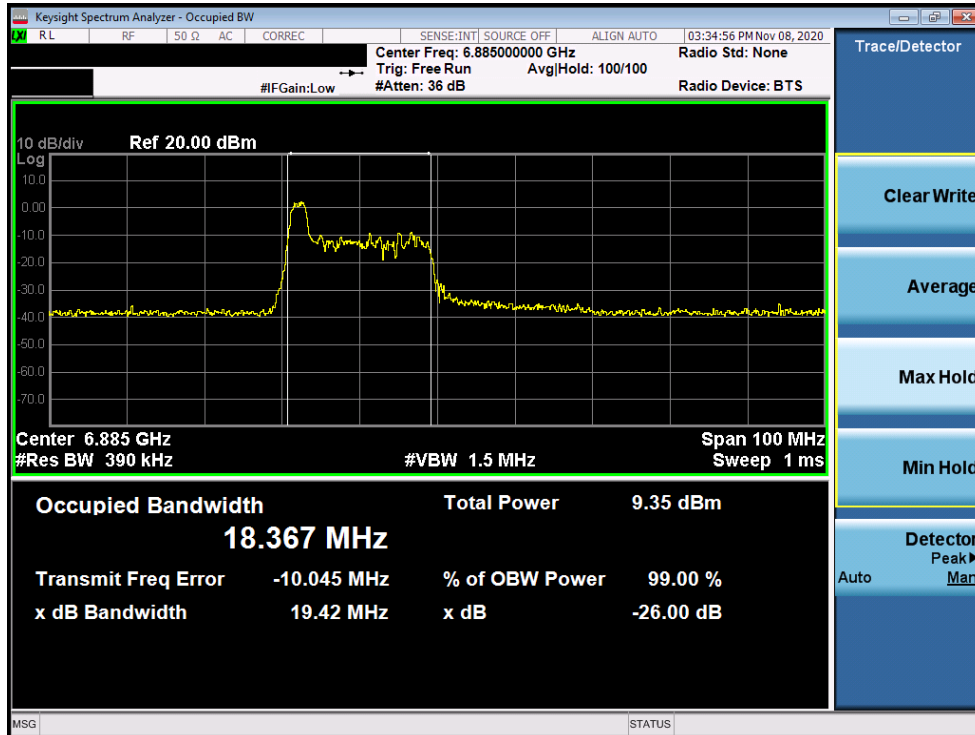


Plot 7-93. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 209)

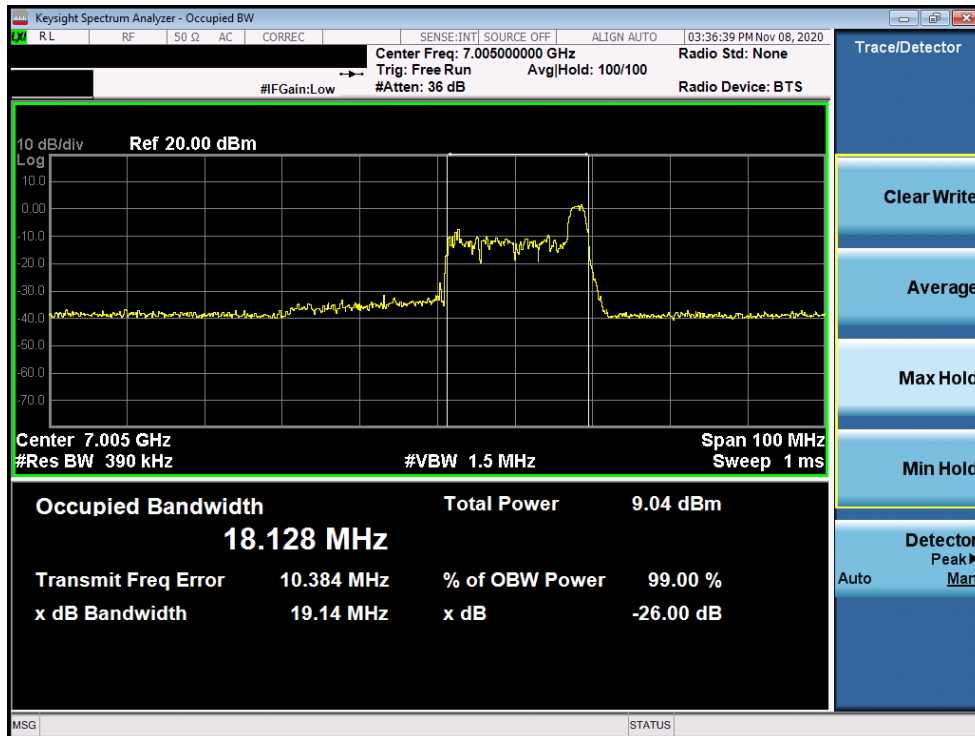


Plot 7-94. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 233)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 64 of 276

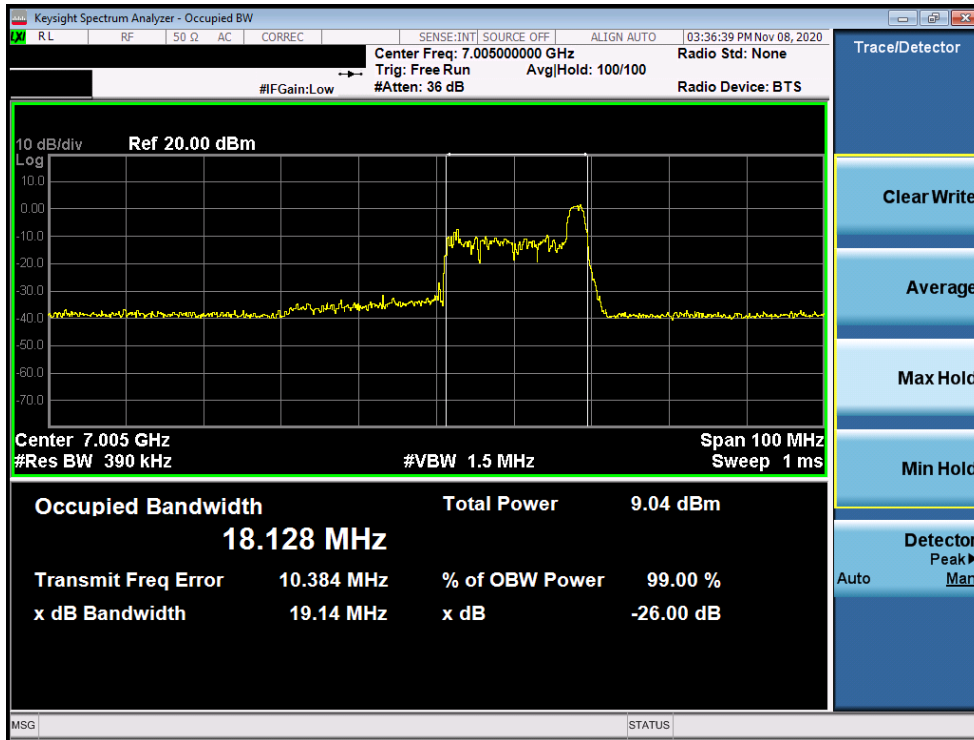


Plot 7-95. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 187)

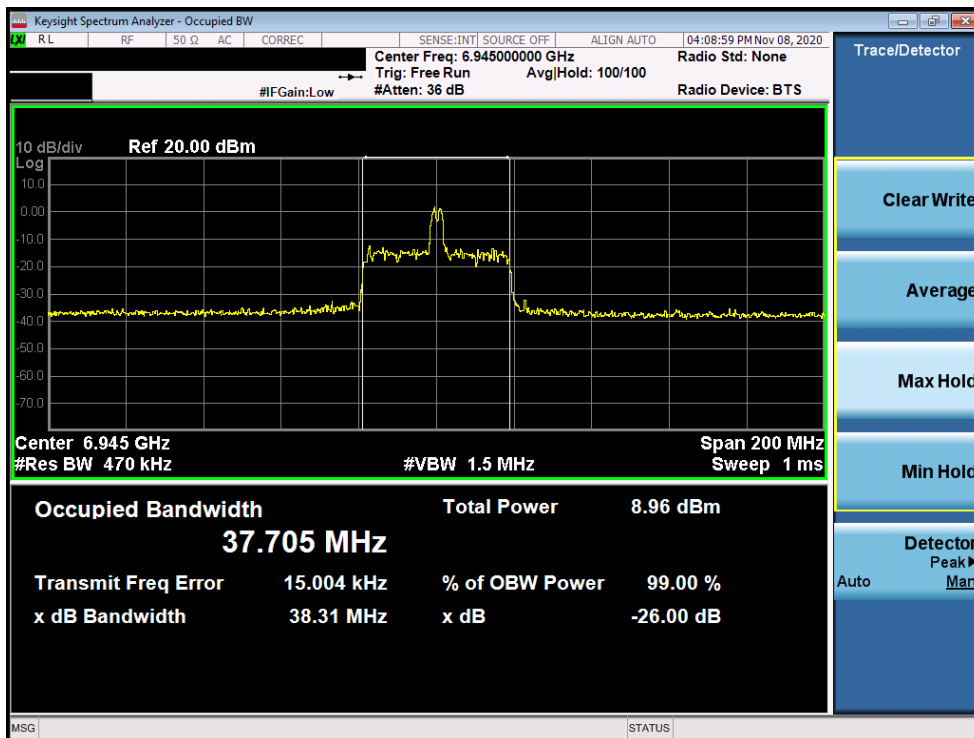


Plot 7-96. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 211)

FCC ID: A3LSMG998B	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 65 of 276

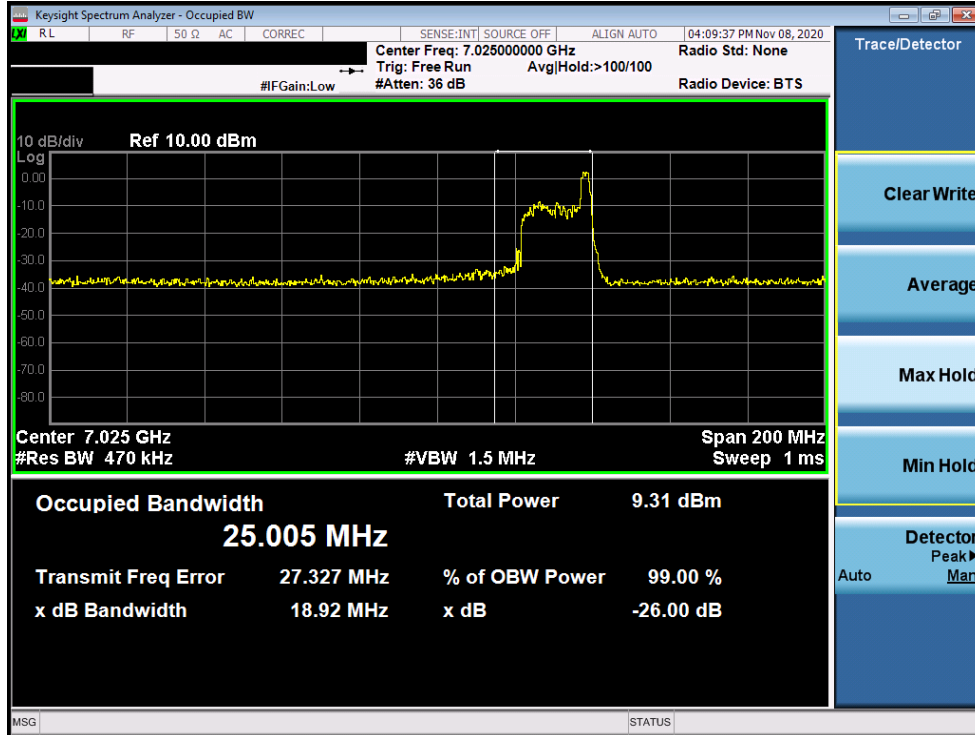


Plot 7-97. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 227)



Plot 7-98. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 199)

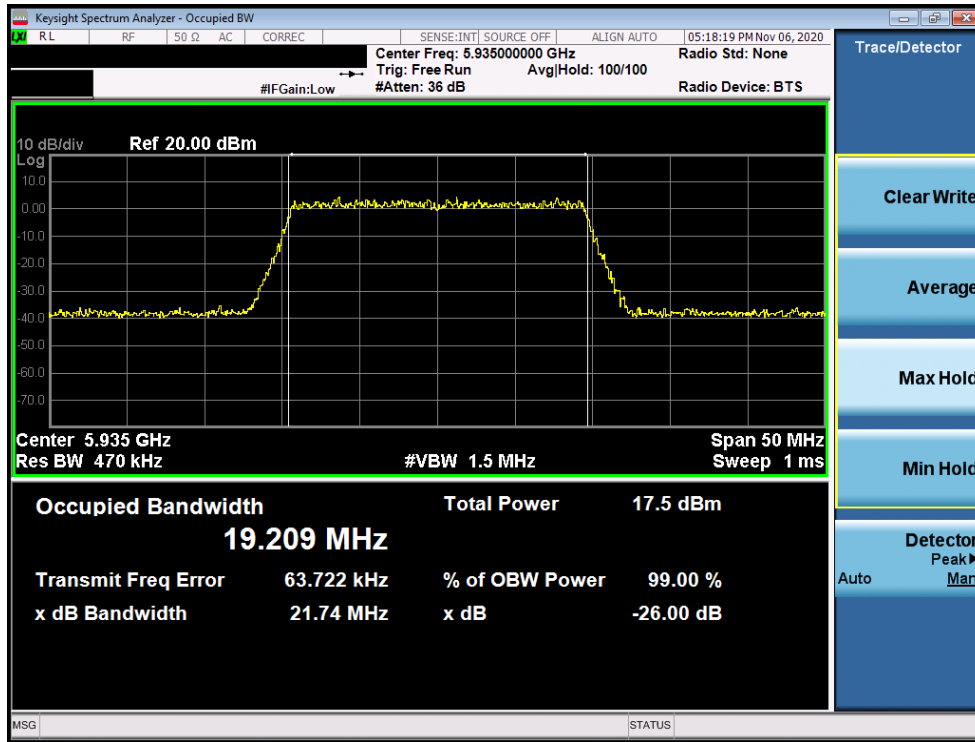
FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 66 of 276



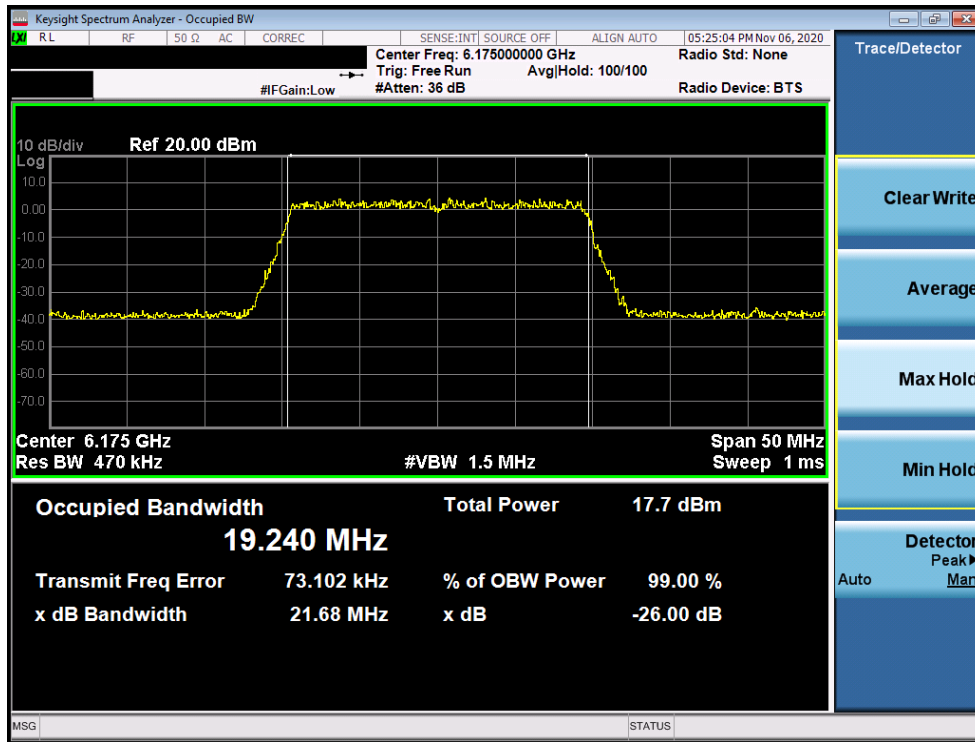
Plot 7-99. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (26 Tones) (UNII Band 8) – Ch. 215)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 67 of 276

MIMO Antenna-2 26dB Bandwidth Measurements (Full Tones)

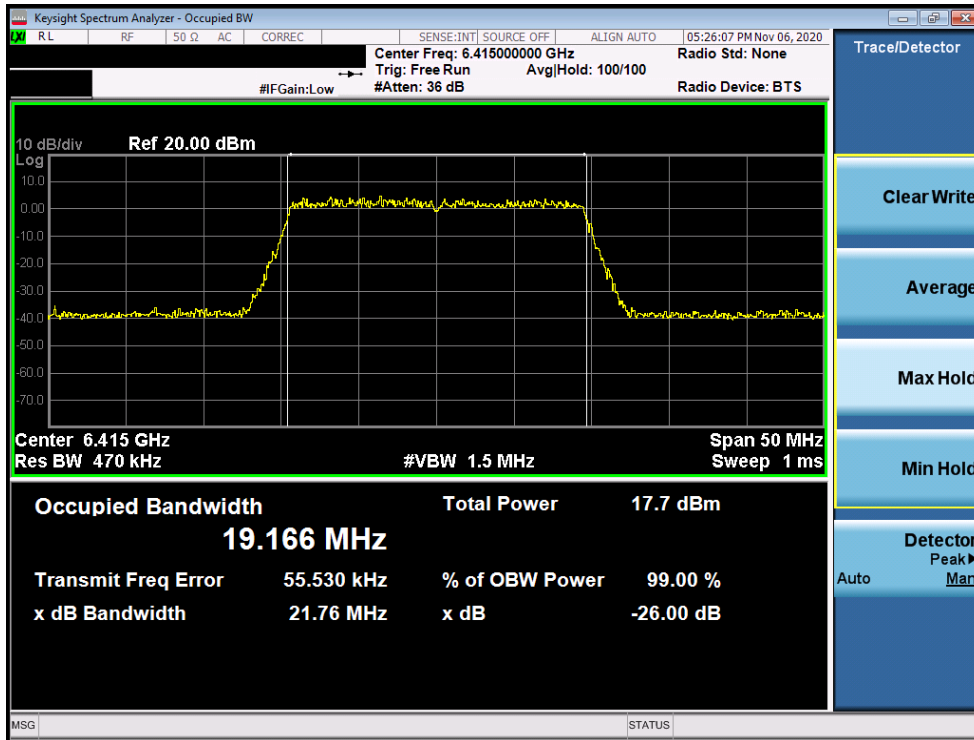


Plot 7-100. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) UNII Band 5) – Ch. 2)

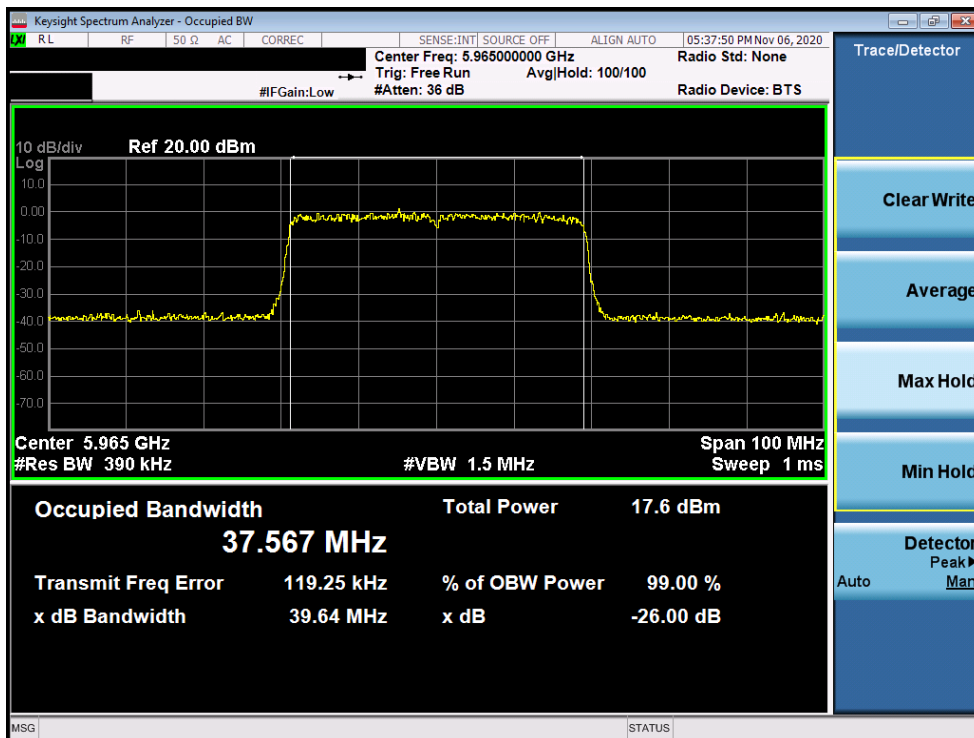


Plot 7-101. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 45)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 68 of 276

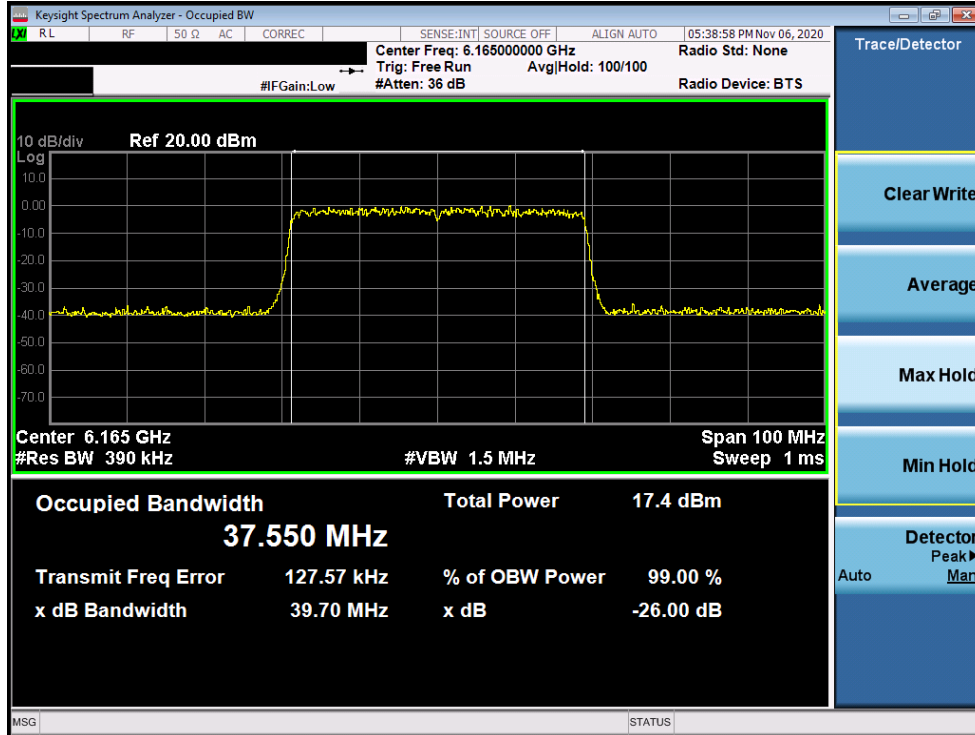


Plot 7-102. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) UNII Band 5) – Ch. 93)

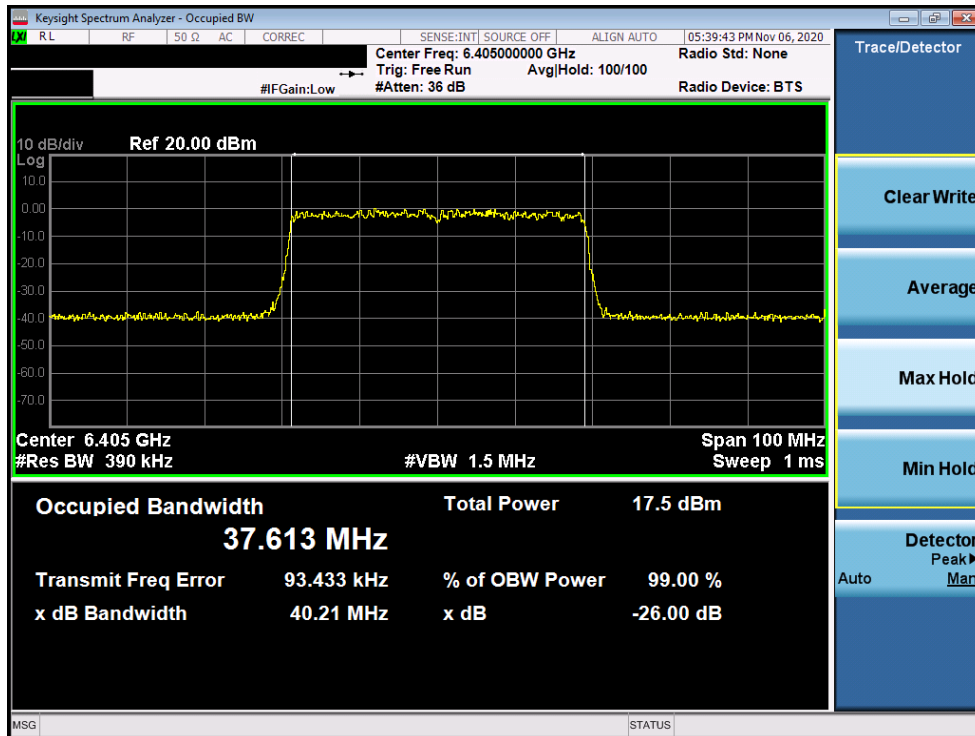


Plot 7-103. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 3)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 69 of 276

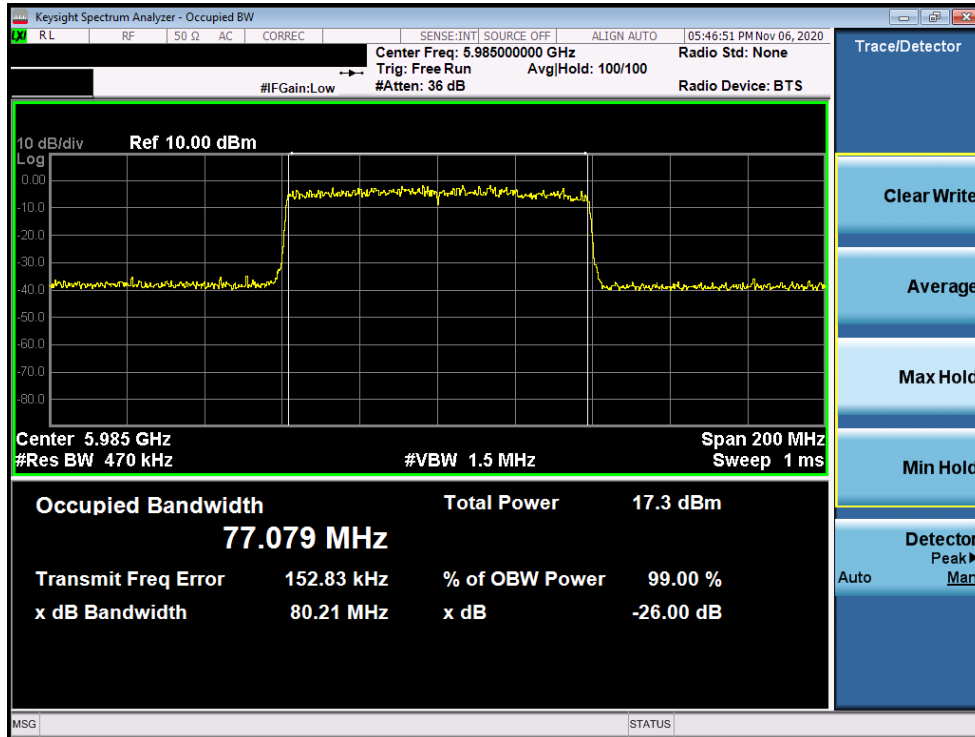


Plot 7-104. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 43)

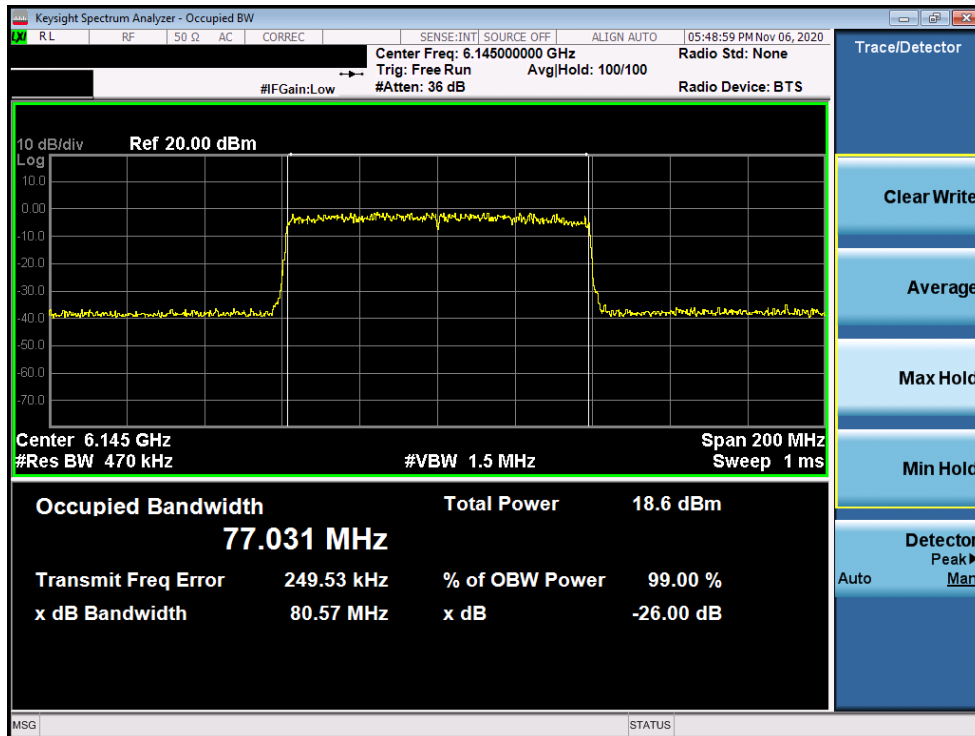


Plot 7-105. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 91)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 70 of 276

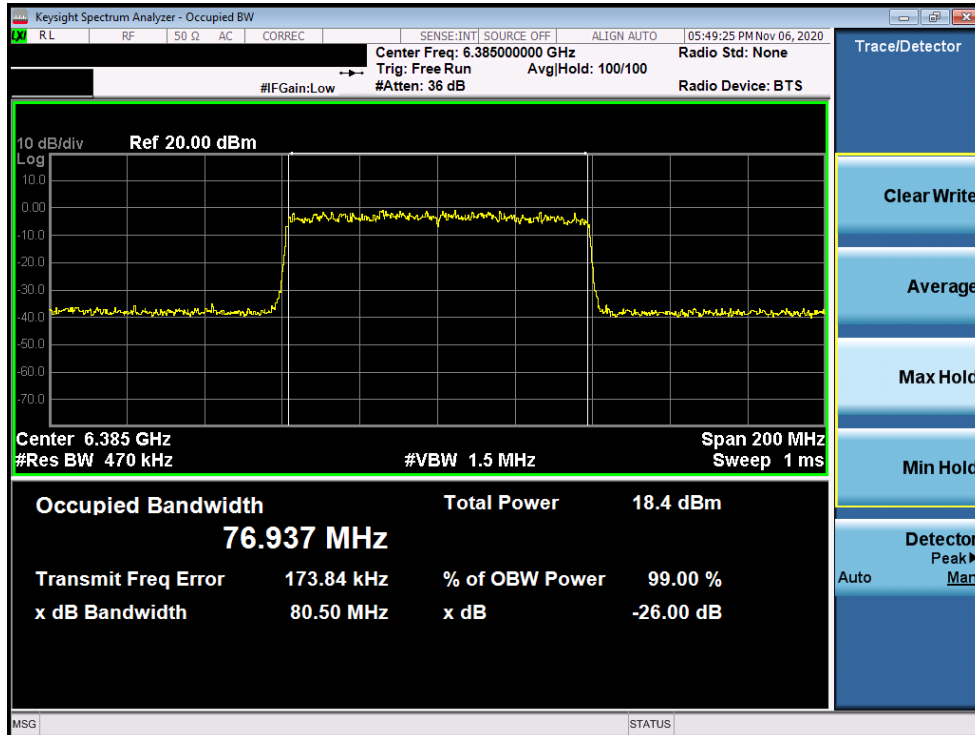


Plot 7-106. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 7)

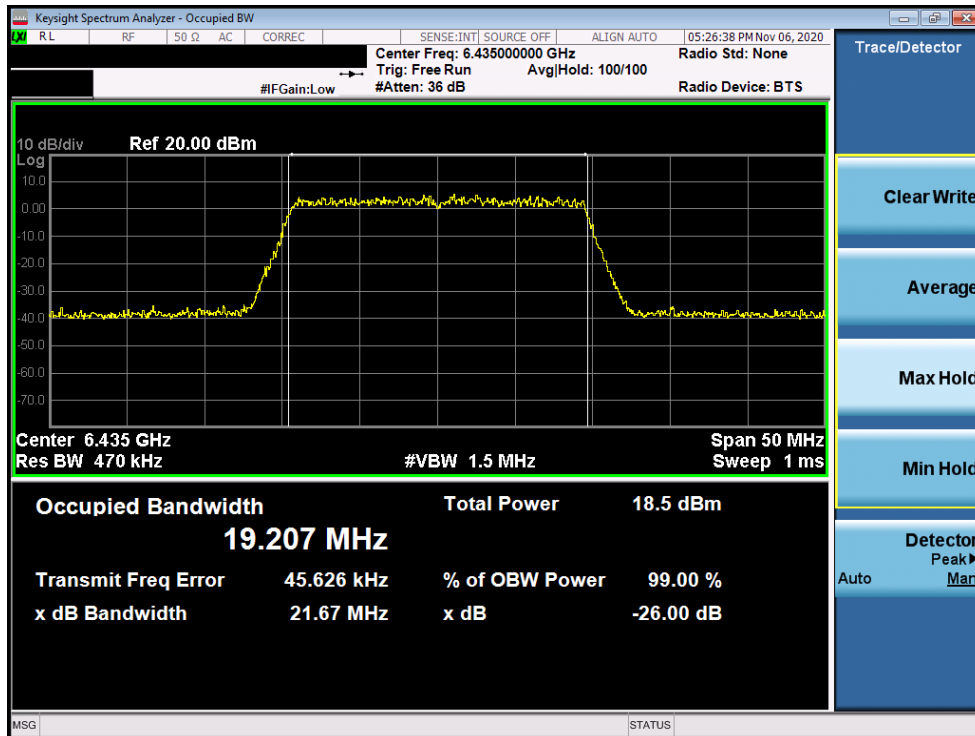


Plot 7-107. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 39)

FCC ID: A3LSMG998B	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 71 of 276

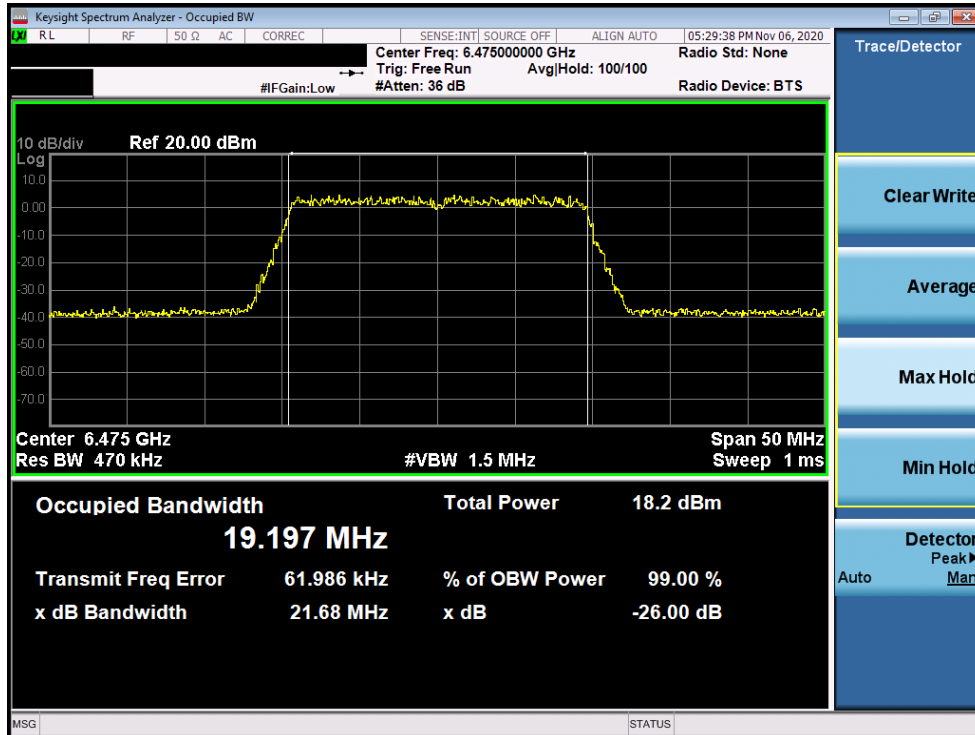


Plot 7-108. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 5) – Ch. 87)

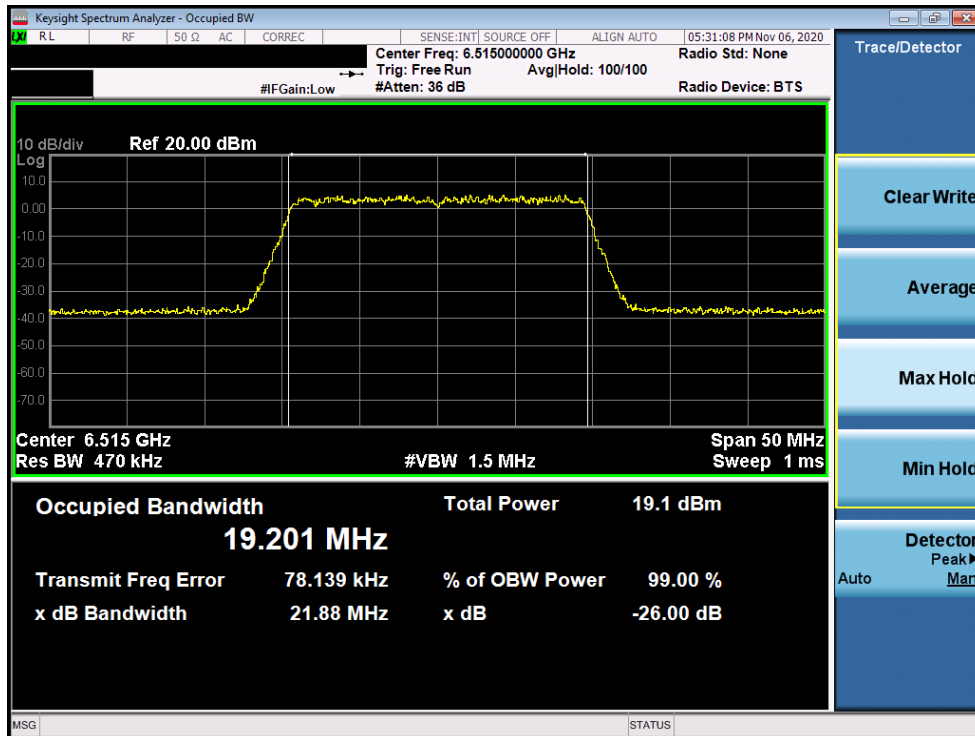


Plot 7-109. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 97)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 72 of 276

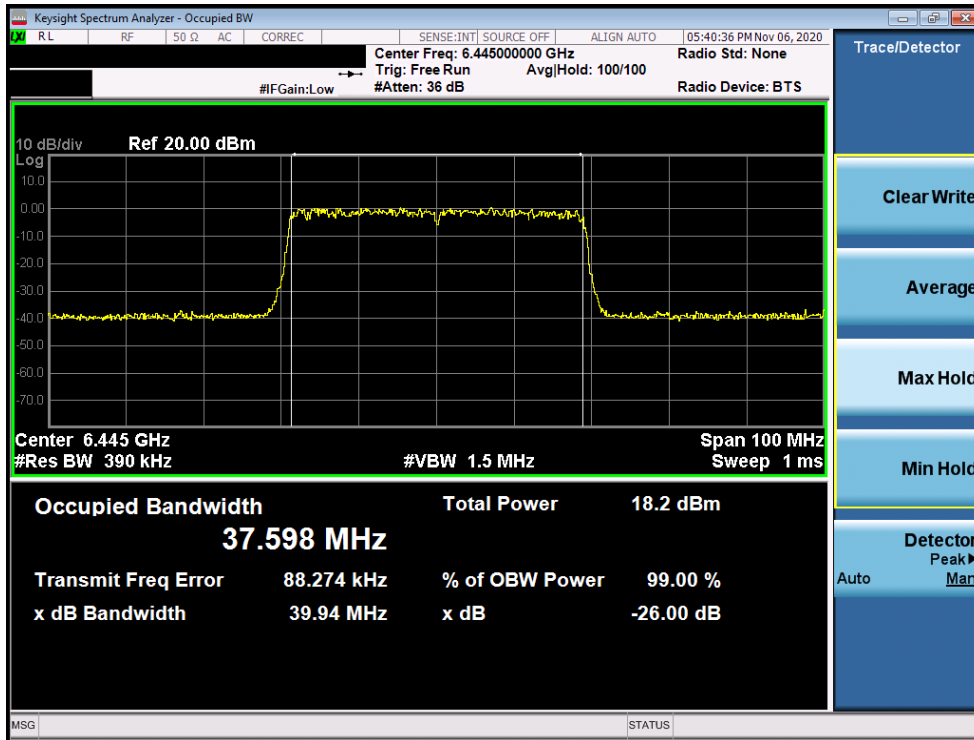


Plot 7-110. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 105)

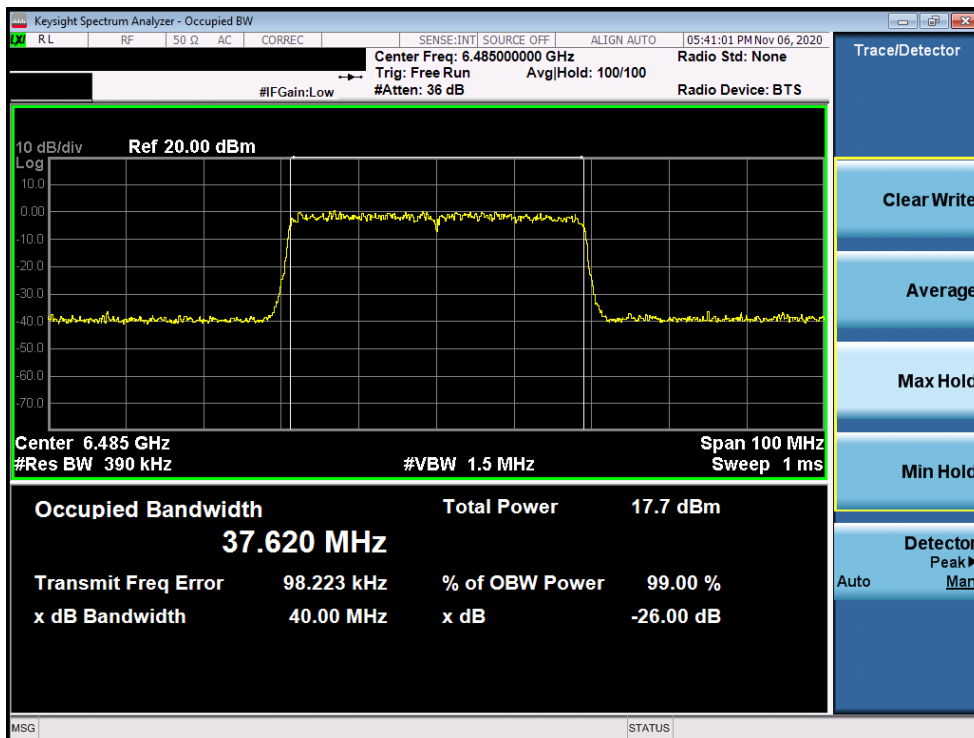


Plot 7-111. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 113)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 73 of 276

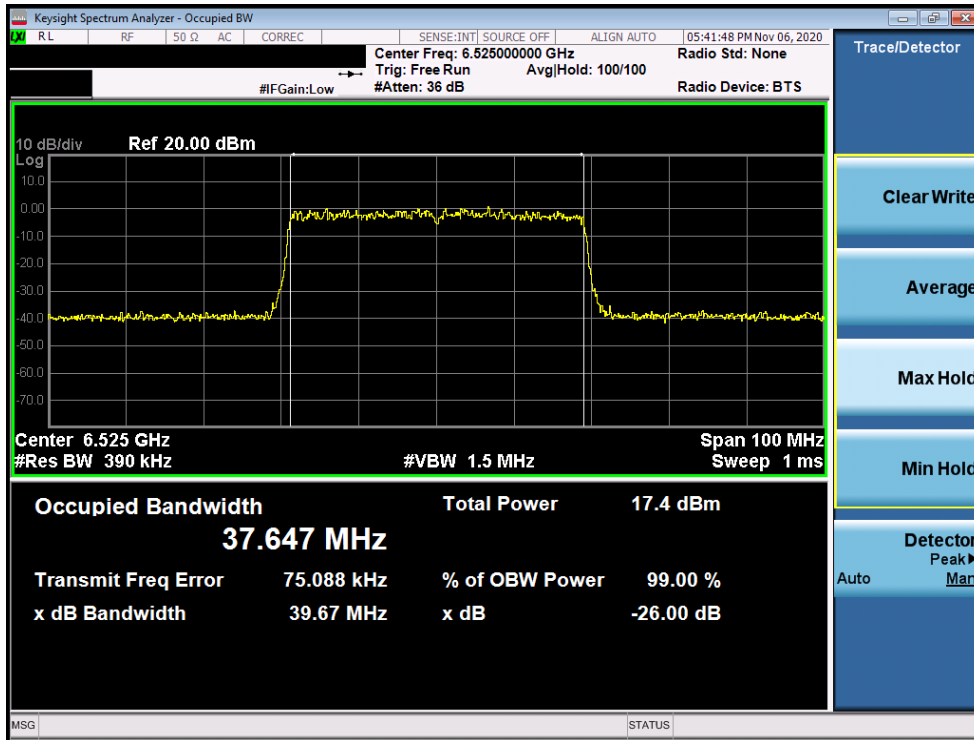


Plot 7-112. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 99)

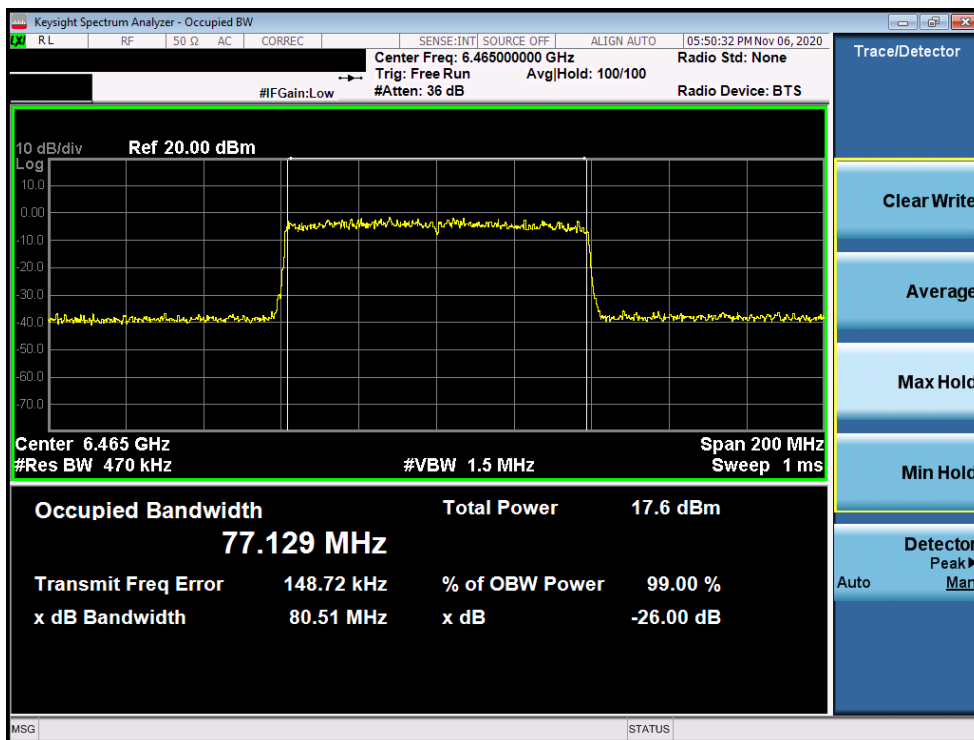


Plot 7-113. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 107)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 74 of 276

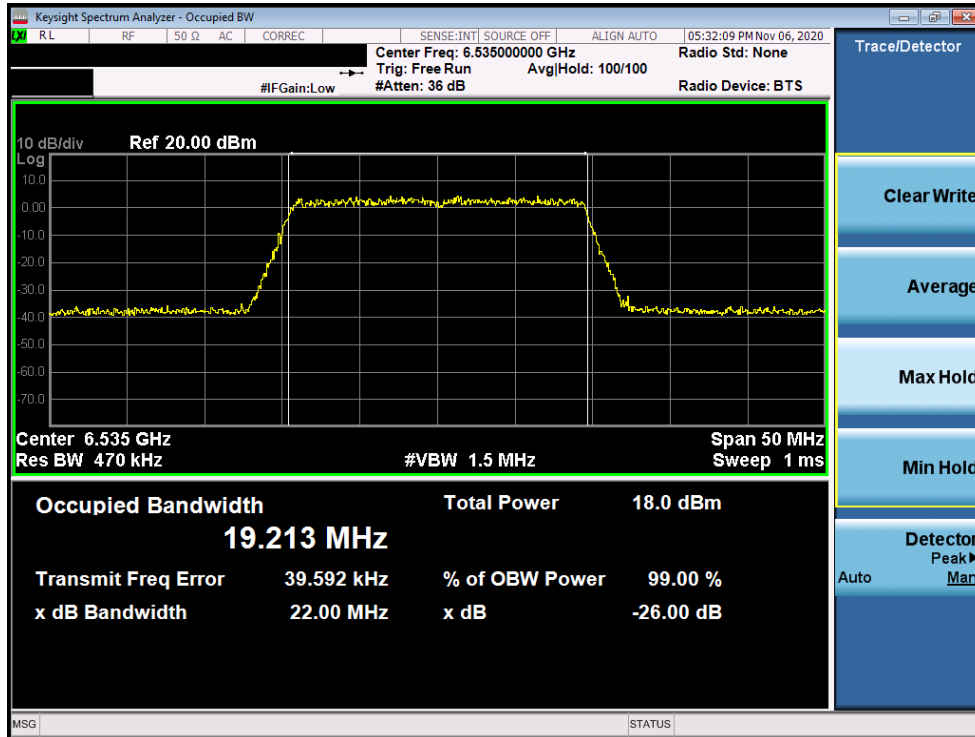


Plot 7-114. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 115)

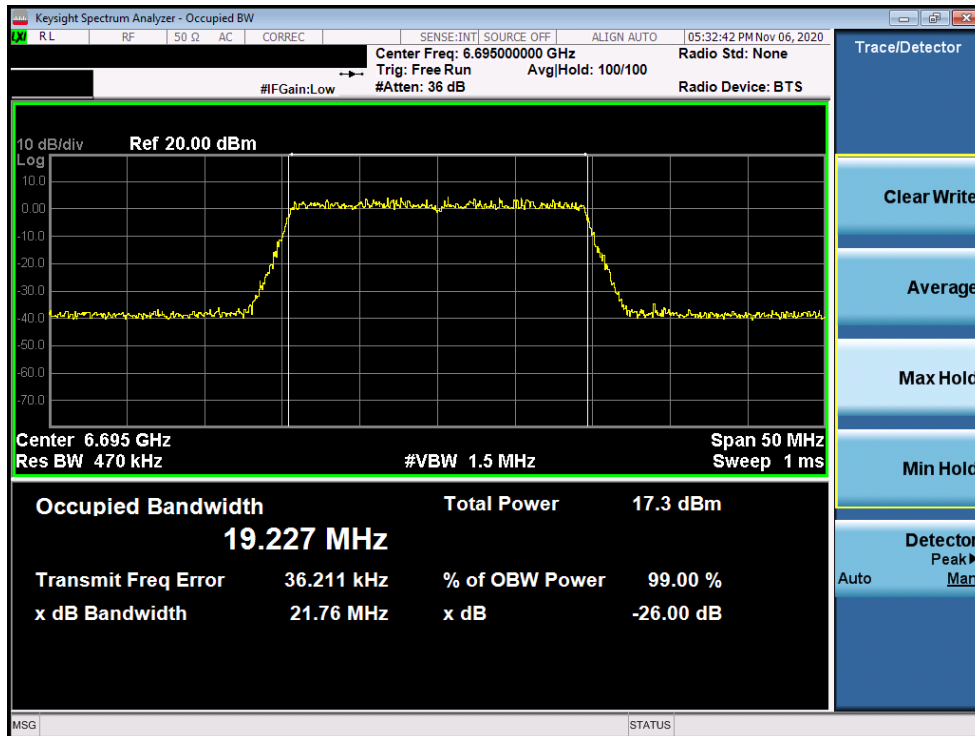


Plot 7-115. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 6) – Ch. 103)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 75 of 276

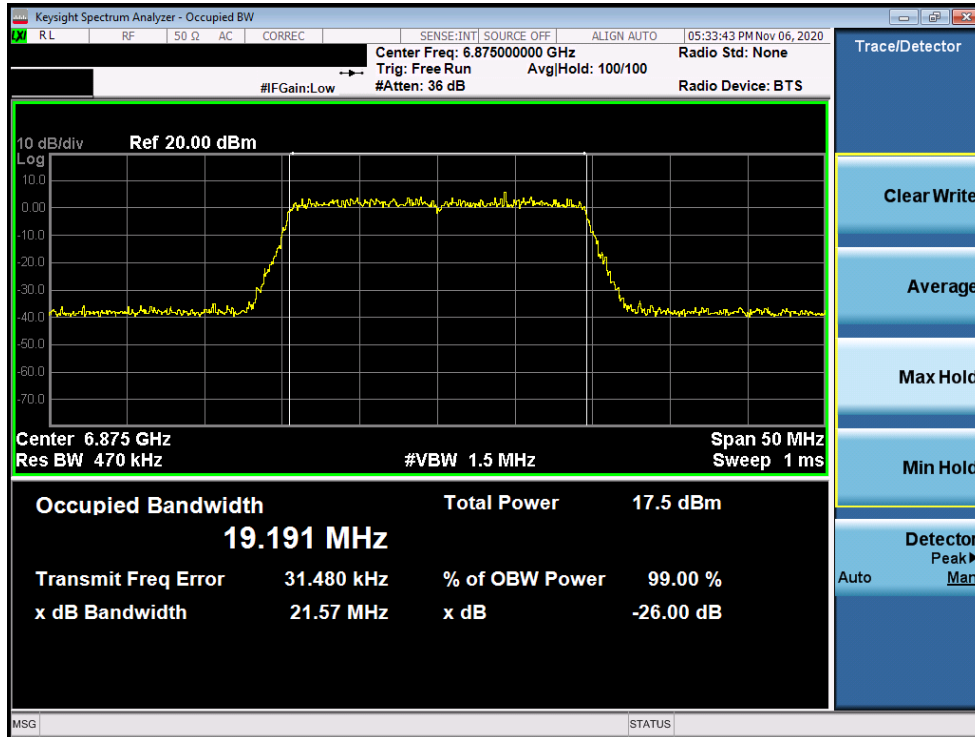


Plot 7-116. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 117)

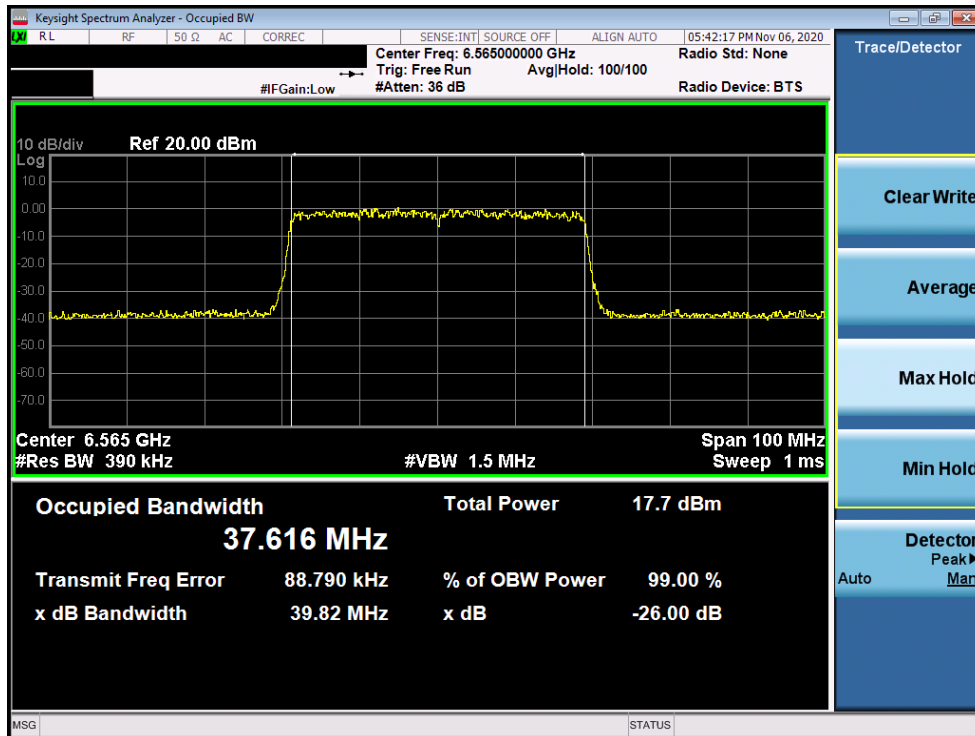


Plot 7-117. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 149)

FCC ID: A3LSMG998B	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 76 of 276

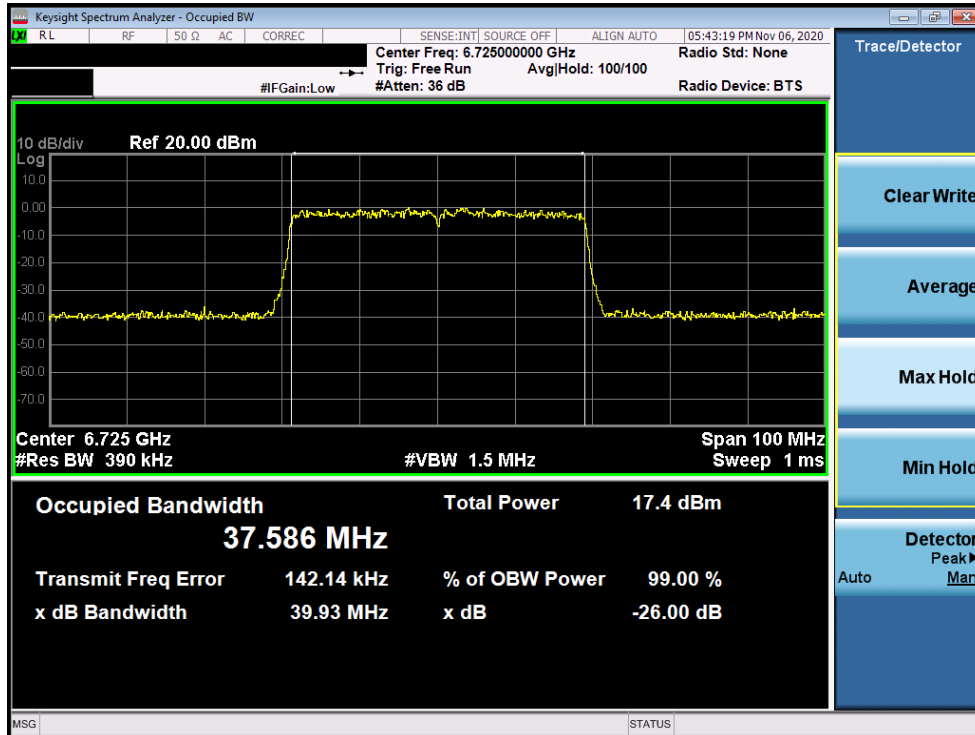


Plot 7-118. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 185)

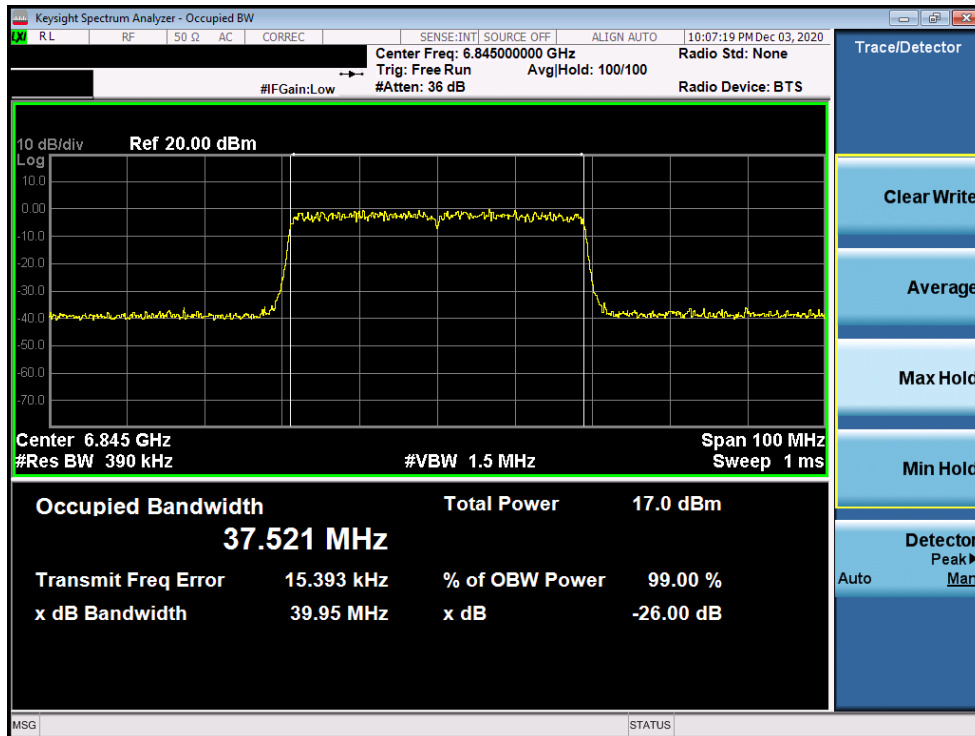


Plot 7-119. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 123)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 77 of 276

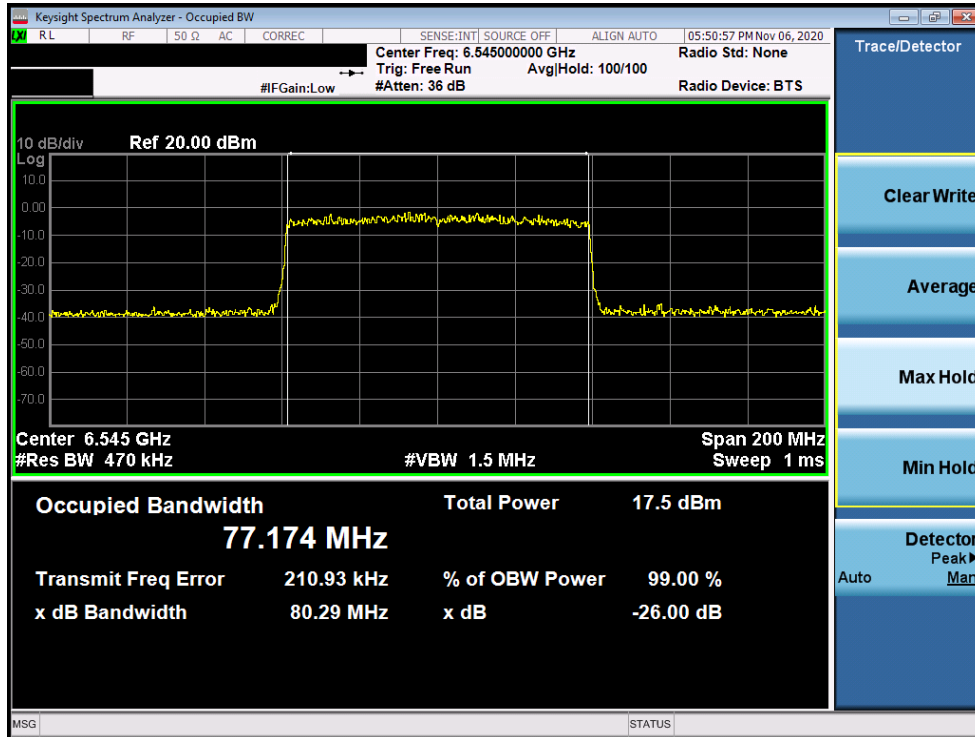


Plot 7-120. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 155)

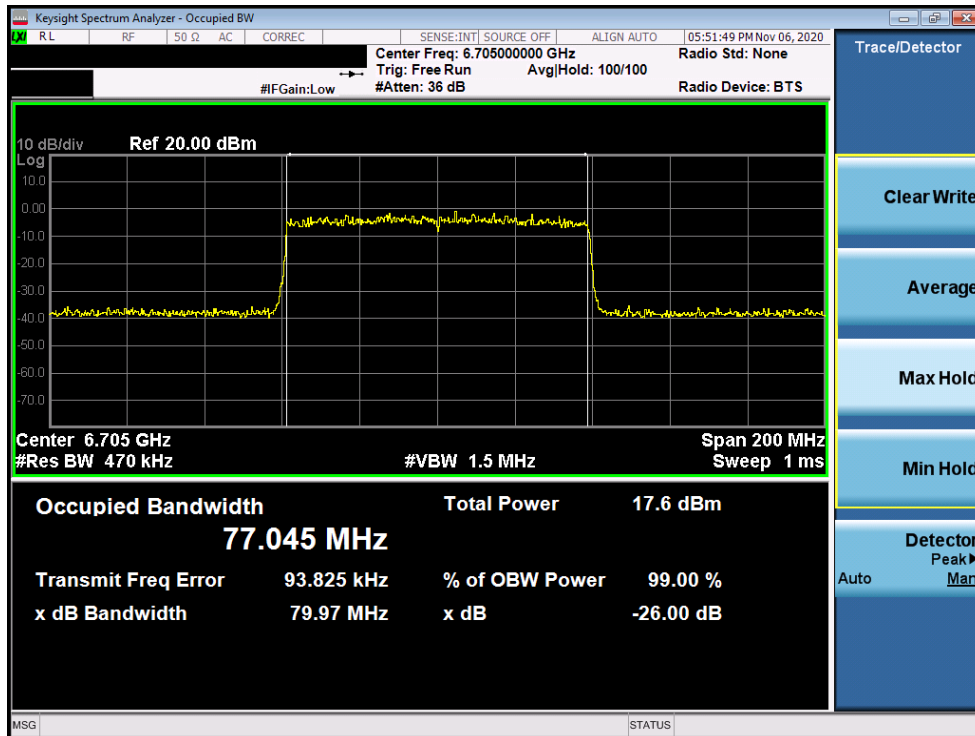


Plot 7-121. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 179)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 78 of 276

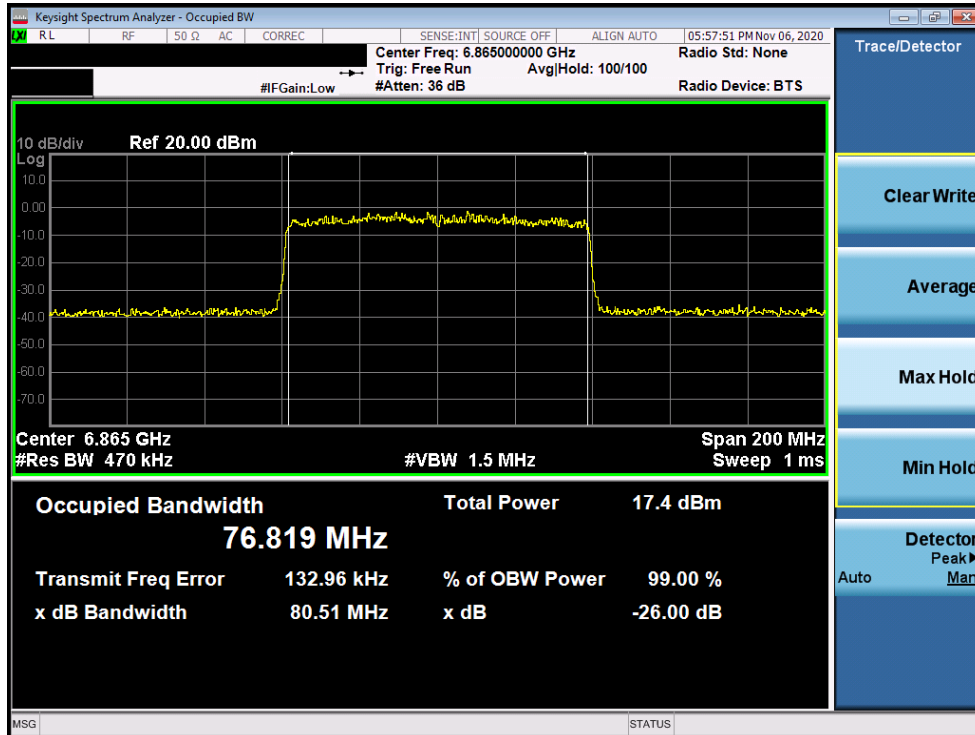


Plot 7-122. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 119)

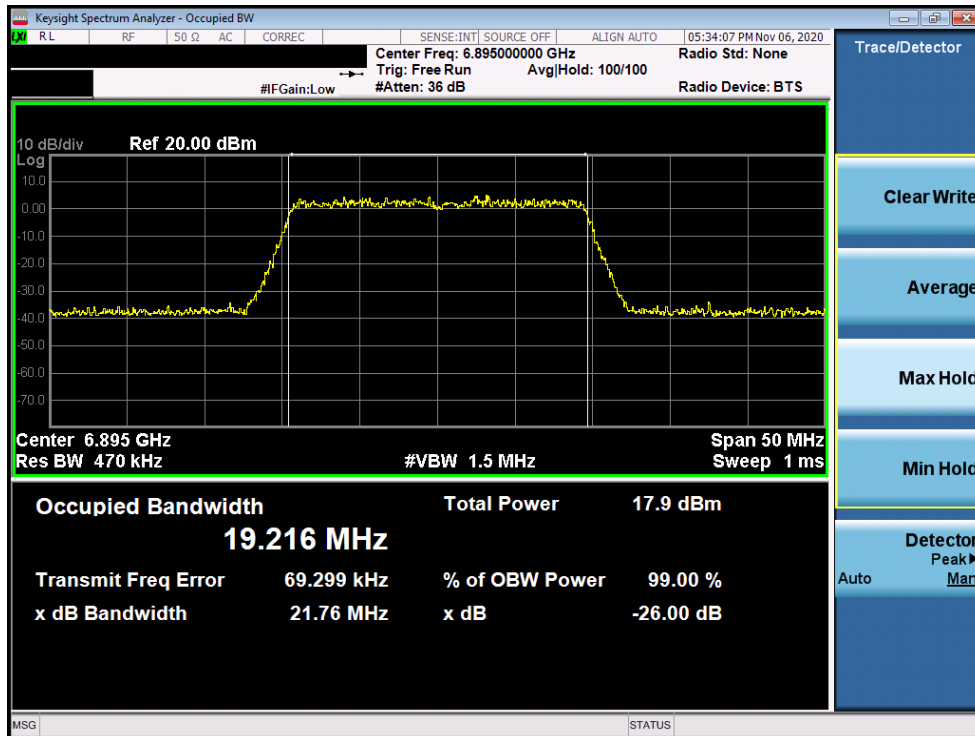


Plot 7-123. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 151)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 79 of 276

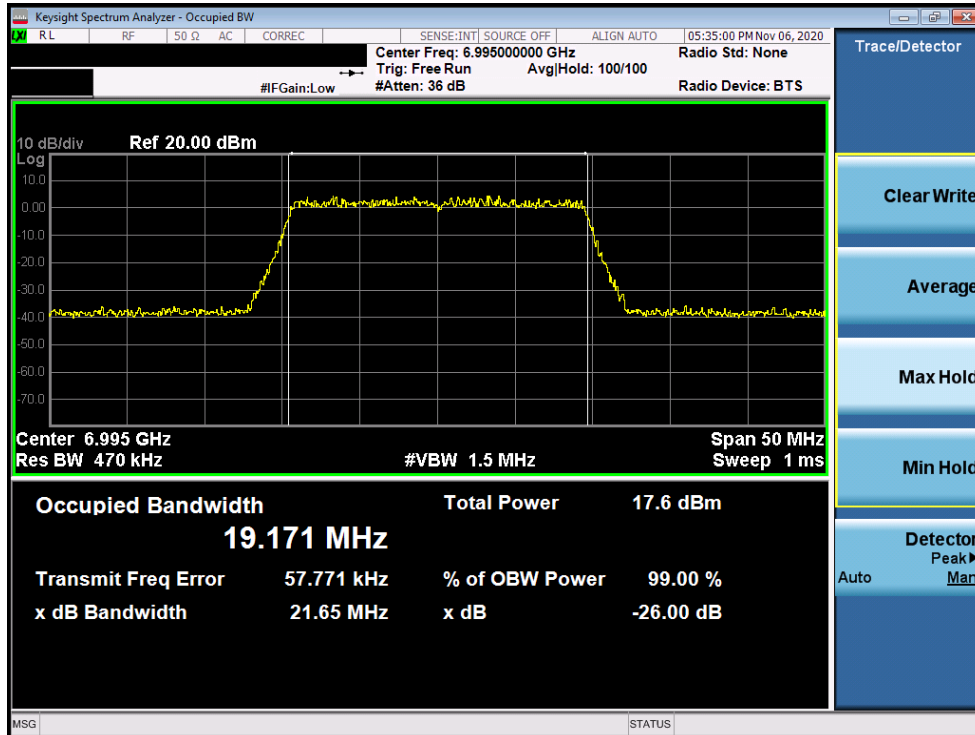


Plot 7-124. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 7) – Ch. 183)

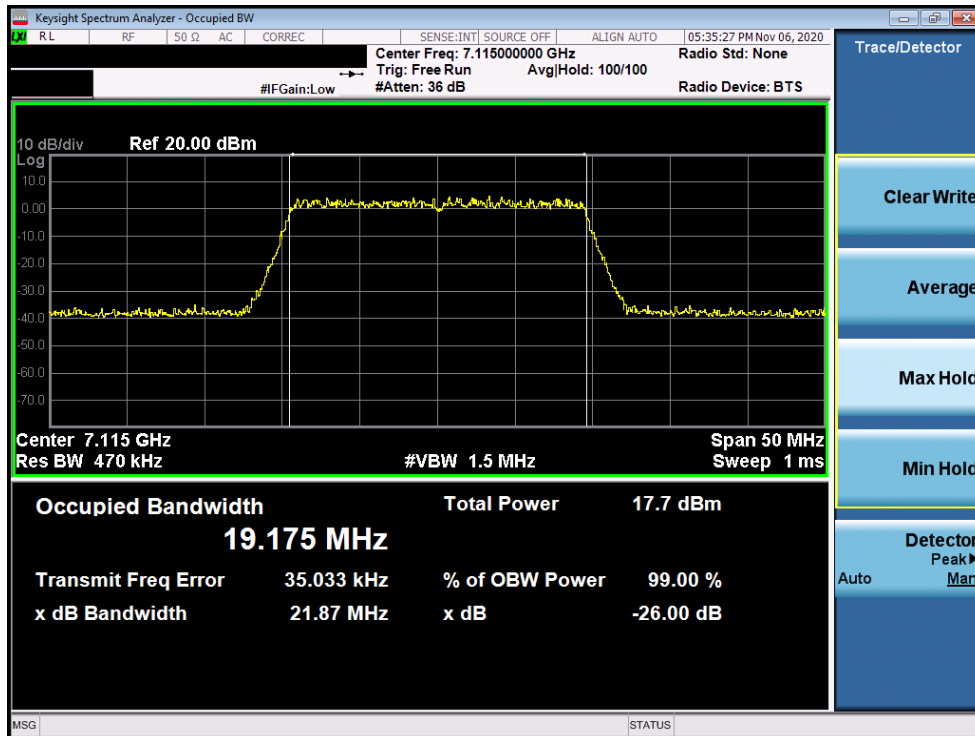


Plot 7-125. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 189)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 80 of 276

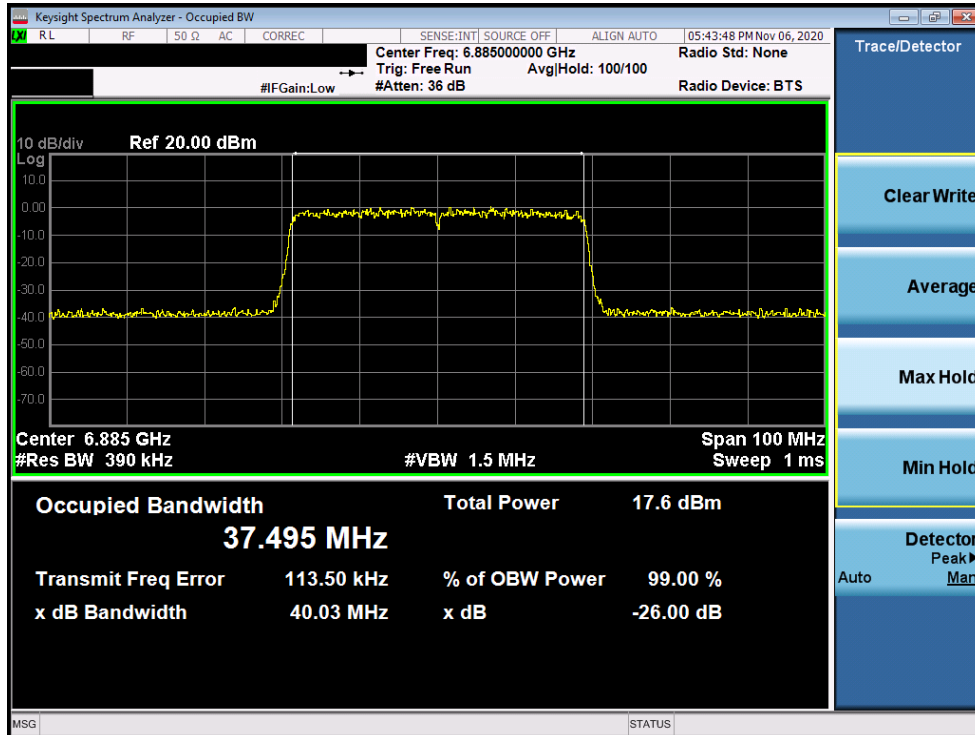


Plot 7-126. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 209)

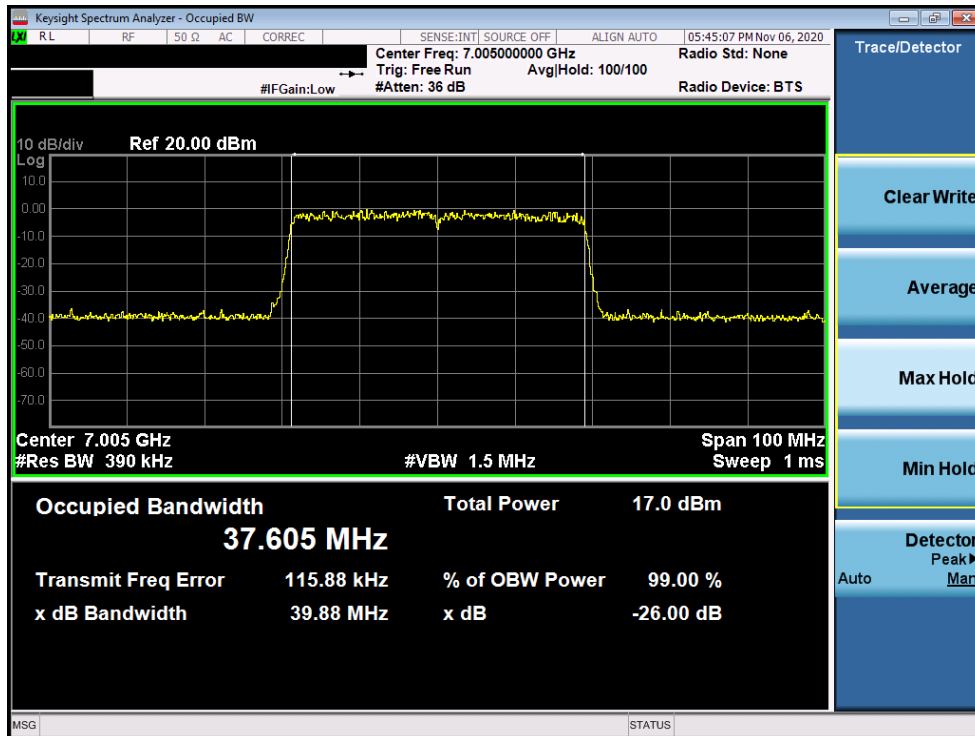


Plot 7-127. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 233)

FCC ID: A3LSMG998B	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 81 of 276

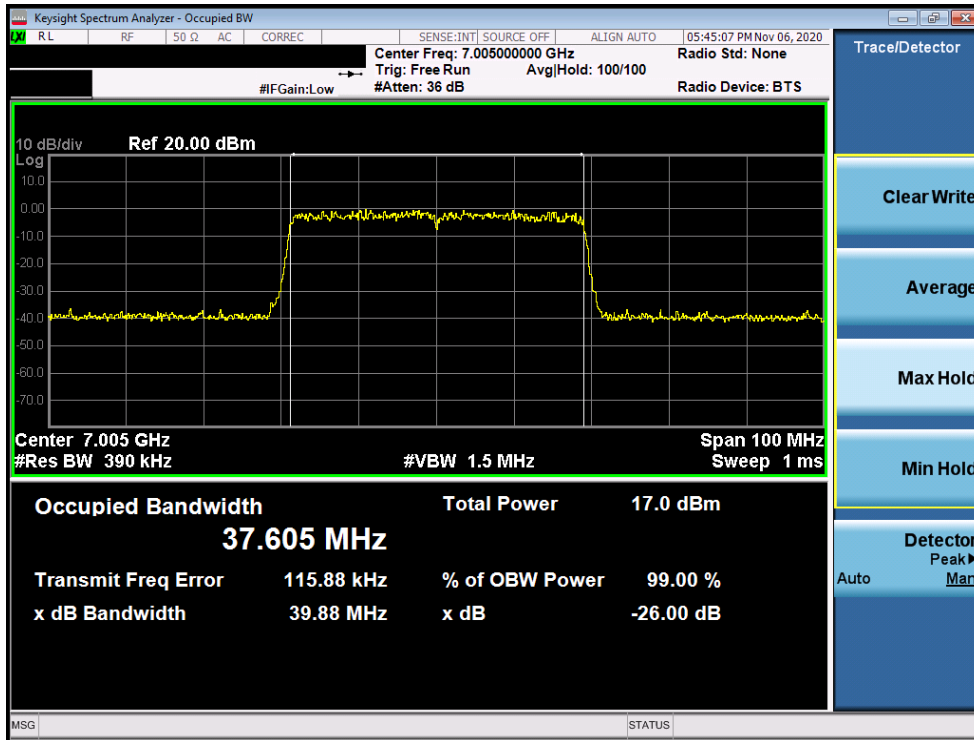


Plot 7-128. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 187)

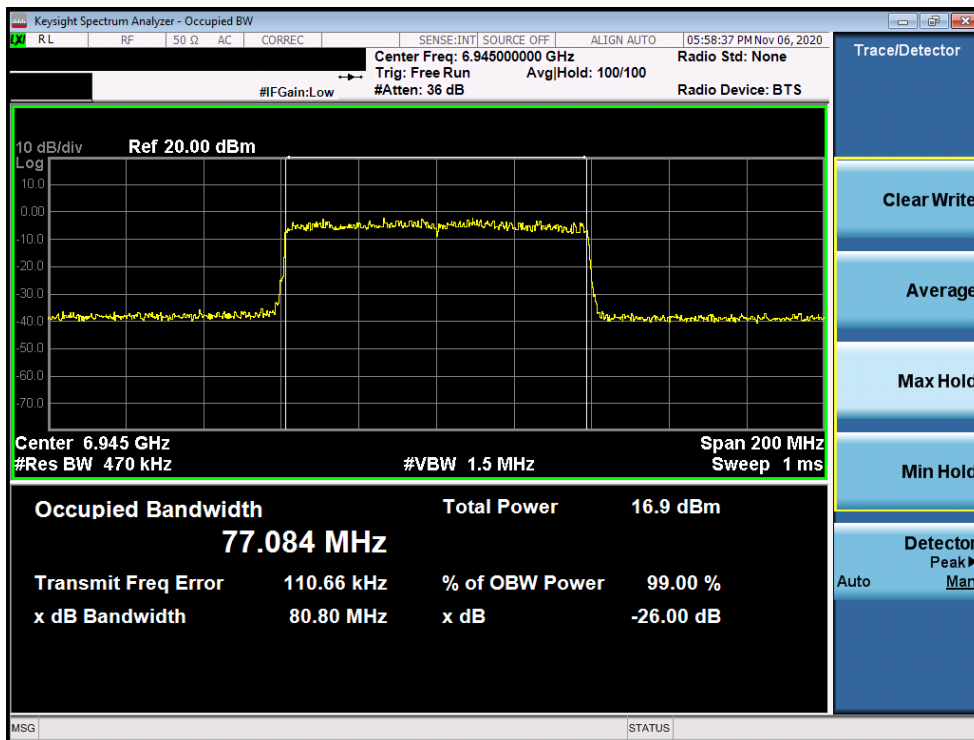


Plot 7-129. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 211)

FCC ID: A3LSMG998B	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 82 of 276

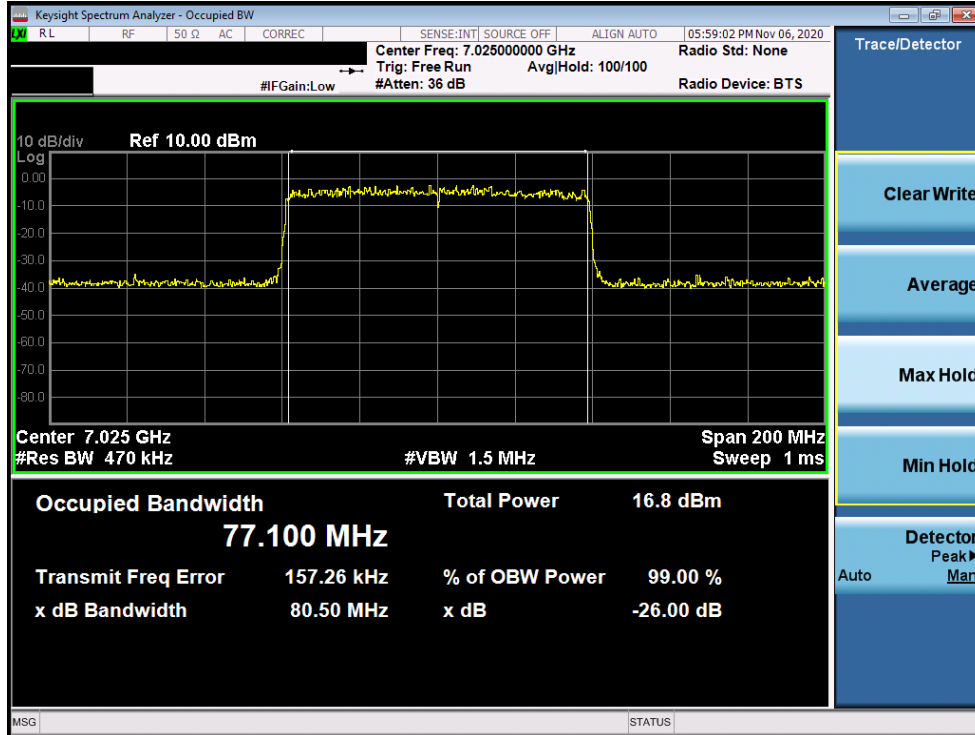


Plot 7-130. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 227)



Plot 7-131. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 199)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 83 of 276



Plot 7-132. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (Full Tones) (UNII Band 8) – Ch. 215)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 84 of 276

7.3 UNII Output Power Measurement – 802.11ax § 2.1046, §15.407(a)(11), §15.407(a)(8)

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.

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 7-2. Test Instrument & Measurement Setup

Test Notes

None.

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset	Page 85 of 276	

MIMO Maximum Conducted Output Power Measurements (26 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 0			RU Index: 4			RU Index: 8						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5935	2	26T	-1.31	-1.42	1.65	-0.91	-1.42	1.85	-1.62	-1.72	1.34	-0.89	0.96	24.00	-23.04	
	6175	45	26T	-0.89	-1.45	1.85	-1.09	-1.72	1.62	-1.32	-2.11	1.31	-0.89	0.96	24.00	-23.04	
	6415	93	26T	-1.14	-1.58	1.66	-1.12	-1.37	1.77	-1.43	-1.69	1.45	-0.89	0.88	24.00	-23.12	
6	6435	97	26T	-0.47	-2.13	1.79	-0.41	-1.82	1.95	-0.85	-2.03	1.61	-1.61	0.34	24.00	-23.66	
	6475	105	26T	-0.83	-1.45	1.88	-0.42	-1.78	1.96	-0.73	-1.67	1.84	-1.61	0.35	24.00	-23.65	
	6515	113	26T	-1.04	-1.73	1.64	-0.51	-1.82	1.89	-0.67	-2.03	1.71	-1.61	0.28	24.00	-23.72	
7	6535	117	26T	-1.29	-1.72	1.51	-1.03	-1.43	1.78	-1.22	-1.67	1.57	-1.55	0.23	24.00	-23.77	
	6695	149	26T	-1.43	-1.45	1.57	-1.24	-1.12	1.83	-1.58	-1.77	1.34	-1.55	0.28	24.00	-23.72	
	6875	185	26T	-1.35	-1.53	1.57	-0.95	-1.21	1.93	-1.48	-1.71	1.42	-1.55	0.38	24.00	-23.62	
8	6895	189	26T	-1.37	-1.25	1.70	-1.15	-0.93	1.97	-1.41	-1.63	1.49	-1.84	0.13	24.00	-23.87	
	6995	209	26T	-1.23	-1.22	1.79	-1.13	-1.04	1.93	-1.47	-1.43	1.56	-1.84	0.09	24.00	-23.91	
	7115	233	26T	-1.25	-1.16	1.81	-0.96	-1.15	1.96	-1.52	-1.32	1.59	-1.84	0.12	24.00	-23.88	

Table 7-2. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 0			RU Index: 8			RU Index: 17						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5965	3	26T	-1.42	-1.31	1.65	-1.02	-1.25	1.88	-1.18	-1.39	1.73	-0.89	0.99	24.00	-23.01	
	6165	43	26T	-1.24	-1.63	1.58	-1.37	-1.34	1.66	-1.21	-1.78	1.52	-0.89	0.77	24.00	-23.23	
	6405	91	26T	-1.25	-1.42	1.68	-1.34	-1.47	1.61	-1.08	-1.51	1.72	-0.89	0.83	24.00	-23.17	
6	6445	99	26T	-0.89	-1.41	1.87	-0.54	-1.85	1.86	-0.92	-1.84	1.65	-1.61	0.26	24.00	-23.74	
	6485	107	26T	-0.96	-1.87	1.62	-0.78	-1.82	1.74	-0.83	-1.72	1.76	-1.61	0.15	24.00	-23.85	
	6525	115	26T	-0.91	-1.73	1.71	-0.72	-1.95	1.72	-0.93	-1.85	1.64	-1.61	0.11	24.00	-23.89	
7	6565	123	26T	-1.23	-1.54	1.63	-0.93	-1.25	1.92	-1.08	-1.42	1.76	-1.55	0.37	24.00	-23.63	
	6725	155	26T	-1.29	-1.57	1.58	-1.17	-1.44	1.71	-1.15	-1.34	1.77	-1.55	0.22	24.00	-23.78	
	6845	179	26T	-1.48	-2.23	1.17	-0.90	-1.50	1.82	-1.58	-2.26	1.10	-1.55	0.27	24.00	-23.73	
8	6885	187	26T	-1.37	-1.34	1.66	-1.46	-1.35	1.61	-1.42	-1.39	1.61	-1.84	-0.18	24.00	-24.18	
	7005	211	26T	-1.25	-1.22	1.78	-1.32	-1.35	1.68	-1.22	-1.04	1.88	-1.84	0.04	24.00	-23.96	
	7085	227	26T	-1.25	-1.39	1.69	-1.54	-1.31	1.59	-1.61	-1.38	1.52	-1.84	-0.15	24.00	-24.15	

Table 7-3. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 0			RU Index: 18			RU Index: 36						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5985	7	26T	-1.75	-0.96	1.67	-1.46	-1.57	1.50	-2.03	-0.97	1.54	-0.89	0.78	24.00	-23.22	
	6145	39	26T	-1.55	-1.34	1.57	-1.17	-1.86	1.51	-1.12	-1.54	1.69	-0.89	0.80	24.00	-23.20	
	6385	87	26T	-1.36	-1.09	1.79	-1.23	-1.37	1.71	-1.12	-0.98	1.96	-0.89	1.07	24.00	-22.93	
6	6465	103	26T	-0.94	-1.63	1.74	-1.21	-1.87	1.48	-0.73	-2.01	1.69	-1.61	0.13	24.00	-23.87	
	6545	119	26T	-1.42	-1.16	1.72	-1.76	-1.57	1.35	-2.06	-1.41	1.29	-1.55	0.17	24.00	-23.83	
	6705	151	26T	-1.31	-0.87	1.93	-1.72	-1.77	1.27	-1.24	-1.02	1.88	-1.55	0.38	24.00	-23.62	
7	6865	183	26T	-1.24	-0.85	1.97	-1.52	-1.64	1.43	-1.44	-0.92	1.84	-1.55	0.42	24.00	-23.58	
	6945	199	26T	-1.17	-1.40	1.73	-1.76	-1.73	1.27	-0.85	-1.67	1.77	-1.84	-0.07	24.00	-24.07	
	7025	215	26T	-2.07	-1.52	1.22	-1.48	-1.17	1.69	-1.18	-1.02	1.91	-1.84	0.07	24.00	-23.93	

Table 7-4. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

160MHz BW 80L	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 0			RU Index: 18			RU Index: 36						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	26T	-1.54	-1.09	1.70	-1.98	-1.19	1.44	-2.15	-1.53	1.18	-0.89	0.81	24.00	-23.19	
	6185	47	26T	-1.97	-1.12	1.49	-2.12	-1.13	1.41	-1.89	-1.04	1.57	-0.89	0.68	24.00	-23.32	
	6345	79	26T	-1.52	-1.44	1.53	-1.72	-1.61	1.35	-2.03	-1.83	1.08	-0.89	0.64	24.00	-23.36	
6	6505	111	26T	-1.24	-1.69	1.55	-1.15	-1.71	1.59	-1.52	-1.92	1.29	-1.61	-0.02	24.00	-24.02	
	6665	143	26T	-1.89	-1.87	1.13	-1.84	-2.00	1.09	-1.24	-1.55	1.62	-1.55	0.07	24.00	-23.93	
7	6825	175	26T	-1.90	-1.89	1.12	-1.84	-2.02	1.08	-1.02	-1.06	1.97	-1.55	0.42	24.00	-23.58	
	6985	207	26T	-1.60	-1.35	1.54	-1.55	-1.68	1.40	-1.55	-1.80	1.34	-1.84	-0.30	24.00	-24.30	

Table 7-5. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Lower 26T Block

FCC ID: A3LSMG998B	 Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 86 of 276

160MHz BW 80U	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 0			RU Index: 18			RU Index: 36						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	26T	-1.72	-0.64	1.86	-1.82	-0.93	1.66	-2.40	-1.24	1.23	-0.89	0.97	24.00	-23.03	
	6185	47	26T	-2.02	-1.17	1.44	-2.04	-1.09	1.47	-1.92	-1.03	1.56	-0.89	0.67	24.00	-23.33	
	6345	79	26T	-1.44	-1.13	1.73	-1.58	-1.57	1.44	-1.02	-1.26	1.87	-0.89	0.98	24.00	-23.02	
6	6505	111	26T	-1.12	-1.39	1.76	-1.51	-1.90	1.31	-1.73	-1.95	1.17	-1.61	0.15	24.00	-23.85	
	6665	143	26T	-0.78	-1.34	1.96	-1.03	-1.21	1.89	-0.94	-1.37	1.86	-1.55	0.41	24.00	-23.59	
7	6825	175	26T	-1.60	-1.91	1.26	-1.81	-1.53	1.34	-1.28	-1.51	1.62	-1.55	0.07	24.00	-23.93	
	6985	207	26T	-1.35	-1.38	1.65	-1.81	-1.62	1.30	-1.51	-1.08	1.72	-1.84	-0.12	24.00	-24.12	

Table 7-6. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Upper 26T Block

FCC ID: A3LSMG998B	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 87 of 276

MIMO Maximum Conducted Output Power Measurements (52 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 37			RU Index: 39			RU Index: 40						
					1.55	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5935	2	52T	1.55	1.13	4.36	1.86	1.77	4.83	1.52	1.49	4.52	-0.89	3.94	24.00	-20.06	
	6175	45	52T	1.64	0.96	4.32	2.04	1.43	4.76	1.62	1.33	4.49	-0.89	3.87	24.00	-20.13	
	6415	93	52T	1.69	1.27	4.50	2.02	1.87	4.96	1.98	1.52	4.77	-0.89	4.07	24.00	-19.93	
6	6435	97	52T	1.92	1.12	4.55	2.17	1.53	4.87	2.04	1.03	4.57	-1.61	3.26	24.00	-20.74	
	6475	105	52T	2.16	0.76	4.53	2.03	1.87	4.96	2.17	1.01	4.64	-1.61	3.35	24.00	-20.65	
	6515	113	52T	1.93	1.31	4.64	2.21	1.42	4.84	1.95	1.41	4.70	-1.61	3.23	24.00	-20.77	
7	6535	117	52T	1.58	1.39	4.50	1.84	1.97	4.92	1.71	1.35	4.54	-1.55	3.37	24.00	-20.63	
	6695	149	52T	1.83	1.07	4.48	1.85	1.78	4.83	1.74	1.21	4.49	-1.55	3.28	24.00	-20.72	
	6875	185	52T	1.72	1.02	4.39	2.15	1.32	4.77	1.65	1.13	4.41	-1.55	3.22	24.00	-20.78	
8	6895	189	52T	1.75	1.42	4.60	2.02	1.86	4.95	1.95	1.46	4.72	-1.84	3.11	24.00	-20.89	
	6995	209	52T	1.66	1.75	4.72	1.91	1.85	4.89	1.64	1.76	4.71	-1.84	3.05	24.00	-20.95	
	7115	233	52T	1.78	1.25	4.53	1.83	2.05	4.95	1.72	1.54	4.64	-1.84	3.11	24.00	-20.89	

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

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 37			RU Index: 40			RU Index: 44						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5965	3	52T	1.88	1.74	4.82	2.04	1.65	4.86	1.74	1.85	4.81	-0.89	3.97	24.00	-20.03	
	6165	43	52T	1.78	1.65	4.73	1.65	1.42	4.55	1.96	1.43	4.71	-0.89	3.84	24.00	-20.16	
	6405	91	52T	1.25	1.54	4.41	1.61	1.48	4.56	1.89	1.28	4.61	-0.89	3.72	24.00	-20.28	
6	6445	99	52T	1.87	1.57	4.73	2.08	1.25	4.70	2.22	1.28	4.79	-1.61	3.18	24.00	-20.82	
	6485	107	52T	1.76	1.44	4.61	2.23	1.28	4.79	1.11	1.21	4.17	-1.61	3.18	24.00	-20.82	
	6525	115	52T	1.85	1.47	4.67	2.19	1.18	4.72	2.09	1.31	4.73	-1.61	3.12	24.00	-20.88	
7	6565	123	52T	2.12	1.62	4.89	2.13	1.13	4.67	1.88	1.68	4.79	-1.55	3.34	24.00	-20.66	
	6725	155	52T	2.28	1.58	4.95	1.97	1.85	4.92	1.88	1.62	4.76	-1.55	3.40	24.00	-20.60	
	6845	179	52T	1.59	0.95	4.29	2.05	1.51	4.80	1.78	0.68	4.28	-1.55	3.25	24.00	-20.75	
8	6885	187	52T	1.72	1.79	4.77	1.55	1.64	4.61	1.79	1.85	4.83	-1.84	2.99	24.00	-21.01	
	7005	211	52T	1.69	1.54	4.63	1.69	1.58	4.65	1.74	1.91	4.84	-1.84	3.00	24.00	-21.00	
	7085	227	52T	1.66	1.89	4.79	1.69	1.55	4.63	1.73	1.88	4.82	-1.84	2.98	24.00	-21.02	

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

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 37			RU Index: 44			RU Index: 52						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5985	7	52T	1.73	2.01	4.88	1.79	1.72	4.77	1.42	1.91	4.68	-0.89	3.99	24.00	-20.01	
	6145	39	52T	1.72	1.47	4.61	1.47	1.35	4.42	1.75	1.89	4.83	-0.89	3.94	24.00	-20.06	
	6385	87	52T	1.71	1.84	4.79	1.41	1.59	4.51	1.21	1.82	4.54	-0.89	3.90	24.00	-20.10	
6	6465	103	52T	2.25	1.52	4.91	1.81	1.93	4.88	2.12	1.58	4.87	-1.61	3.30	24.00	-20.70	
	6545	119	52T	1.49	2.08	4.81	1.37	2.04	4.73	1.82	1.88	4.86	-1.55	3.31	24.00	-20.69	
	6705	151	52T	1.69	1.82	4.77	1.51	1.89	4.71	1.82	2.07	4.96	-1.55	3.41	24.00	-20.59	
7	6865	183	52T	1.75	2.06	4.92	1.86	1.55	4.72	1.91	1.93	4.93	-1.55	3.38	24.00	-20.62	
	6945	199	52T	1.47	1.35	4.42	1.82	1.92	4.88	1.83	1.56	4.71	-1.84	3.04	24.00	-20.96	
	7025	215	52T	1.31	1.47	4.40	1.39	1.88	4.65	1.72	1.99	4.87	-1.84	3.03	24.00	-20.97	

Table 7-9. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 88 of 276

160MHz BW 80L	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 37			RU Index: 44			RU Index: 52						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	52T	1.28	2.00	4.67	1.49	2.38	4.97	0.94	2.14	4.59	-0.89	4.08	24.00	-19.92	
	6185	47	52T	1.22	2.21	4.75	1.37	2.31	4.88	0.94	1.91	4.46	-0.89	3.99	24.00	-20.01	
	6345	79	52T	1.70	1.99	4.86	1.47	1.69	4.59	1.25	1.05	4.16	-0.89	3.97	24.00	-20.03	
6	6505	111	52T	1.57	1.47	4.53	1.42	1.36	4.40	1.38	1.10	4.25	-1.61	2.92	24.00	-21.08	
	6665	143	52T	1.15	0.98	4.08	1.35	0.85	4.12	1.81	1.37	4.61	-1.55	3.06	24.00	-20.94	
7	6825	175	52T	1.18	1.12	4.16	1.33	1.07	4.21	1.94	1.89	4.93	-1.55	3.38	24.00	-20.62	
	6985	207	52T	1.18	1.22	4.21	1.84	1.88	4.87	1.61	1.28	4.46	-1.84	3.03	24.00	-20.97	

Table 7-10. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Lower 52T Block

160MHz BW 80U	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 37			RU Index: 44			RU Index: 52						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	52T	1.06	2.10	4.62	0.67	1.91	4.34	1.27	2.47	4.92	-0.89	4.03	24.00	-19.97	
	6185	47	52T	0.86	1.90	4.42	0.80	1.44	4.14	0.74	1.79	4.31	-0.89	3.53	24.00	-20.47	
	6345	79	52T	1.63	1.54	4.60	1.08	1.00	4.05	1.32	1.01	4.18	-0.89	3.71	24.00	-20.29	
6	6505	111	52T	1.48	1.33	4.42	1.28	0.90	4.10	1.41	1.33	4.38	-1.61	2.81	24.00	-21.19	
	6665	143	52T	2.25	1.65	4.97	1.52	1.09	4.32	1.77	1.78	4.79	-1.55	3.42	24.00	-20.58	
7	6825	175	52T	1.11	1.21	4.17	1.78	1.51	4.66	1.43	1.58	4.52	-1.55	3.11	24.00	-20.89	
	6985	207	52T	1.36	1.56	4.47	1.76	1.17	4.49	0.94	1.27	4.12	-1.84	2.65	24.00	-21.35	

Table 7-11. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Upper 52T Block

FCC ID: A3LSMG998B	 PCTEST [®] Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 89 of 276

MIMO Maximum Conducted Output Power Measurements (106 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 53			RU Index: 54						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5935	2	106T	4.51	4.21	7.37	4.88	4.51	7.71	-0.89	6.82	24.00	-17.18	
	6175	45	106T	4.82	3.89	7.39	4.96	4.32	7.66	-0.89	6.77	24.00	-17.23	
	6415	93	106T	5.06	3.71	7.45	5.21	4.31	7.79	-0.89	6.90	24.00	-17.10	
6	6435	97	106T	5.21	4.18	7.74	5.46	4.18	7.88	-1.61	6.27	24.00	-17.73	
	6475	105	106T	5.11	4.03	7.61	5.32	4.21	7.81	-1.61	6.20	24.00	-17.80	
	6515	113	106T	5.27	3.85	7.63	5.31	3.95	7.69	-1.61	6.08	24.00	-17.92	
7	6535	117	106T	4.57	4.35	7.47	4.96	4.42	7.71	-1.55	6.16	24.00	-17.84	
	6695	153	106T	4.72	4.36	7.55	4.81	4.45	7.64	-1.55	6.09	24.00	-17.91	
	6875	185	106T	4.58	4.03	7.32	4.73	4.56	7.66	-1.55	6.11	24.00	-17.89	
8	6895	189	106T	4.93	4.36	7.66	5.02	4.53	7.79	-1.84	5.95	24.00	-18.05	
	6995	209	106T	4.91	4.23	7.59	4.81	4.93	7.88	-1.84	6.04	24.00	-17.96	
	7115	233	106T	4.83	4.71	7.78	4.92	4.67	7.81	-1.84	5.97	24.00	-18.03	

Table 7-12. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 53			RU Index: 54			RU Index: 56						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5965	3	106T	5.16	4.58	7.89	5.15	4.73	7.96	4.96	4.81	7.90	-0.89	7.07	24.00	-16.93	
	6165	43	106T	5.13	4.47	7.82	5.19	4.21	7.74	5.19	4.62	7.92	-0.89	7.03	24.00	-16.97	
	6405	91	106T	5.35	4.38	7.90	4.64	4.51	7.59	5.28	4.62	7.97	-0.89	7.08	24.00	-16.92	
6	6445	99	106T	5.27	4.28	7.81	5.64	3.82	7.83	5.37	4.02	7.76	-1.61	6.22	24.00	-17.78	
	6485	107	106T	5.09	4.12	7.64	5.31	4.43	7.90	5.12	4.03	7.62	-1.61	6.29	24.00	-17.71	
	6525	115	106T	5.42	4.08	7.81	5.45	4.37	7.95	5.13	3.84	7.54	-1.61	6.34	24.00	-17.66	
7	6565	123	106T	4.81	4.62	7.73	5.02	4.71	7.88	4.43	4.11	7.28	-1.55	6.33	24.00	-17.67	
	6725	155	106T	4.67	4.52	7.61	4.98	4.92	7.96	4.27	4.37	7.33	-1.55	6.41	24.00	-17.59	
	6845	179	106T	4.80	3.88	7.37	5.34	4.22	7.83	4.76	3.94	7.38	-1.55	6.28	24.00	-17.72	
8	6885	187	106T	4.62	4.51	7.58	4.65	4.72	7.70	4.05	4.89	7.50	-1.84	5.86	24.00	-18.14	
	7005	211	106T	4.42	4.12	7.28	4.97	4.82	7.91	4.36	4.05	7.22	-1.84	6.07	24.00	-17.93	
	7085	227	106T	4.18	4.61	7.41	4.89	4.61	7.76	4.45	4.32	7.40	-1.84	5.92	24.00	-18.08	

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

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 53			RU Index: 56			RU Index: 60						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5985	7	106T	4.78	4.83	7.82	4.34	4.93	7.66	4.62	4.91	7.78	-0.89	6.93	24.00	-17.07	
	6145	39	106T	4.47	4.95	7.73	3.92	4.83	7.41	5.02	4.71	7.88	-0.89	6.99	24.00	-17.01	
	6385	87	106T	5.02	4.84	7.94	4.91	4.62	7.78	4.92	4.27	7.62	-0.89	7.05	24.00	-16.95	
6	6465	103	106T	5.12	3.75	7.50	5.49	4.28	7.94	5.04	3.92	7.53	-1.61	6.33	24.00	-17.67	
	6545	119	106T	4.43	4.26	7.36	4.54	4.87	7.72	4.36	4.24	7.31	-1.55	6.17	24.00	-17.83	
	6705	151	106T	4.43	4.07	7.26	4.55	4.47	7.52	4.16	4.72	7.46	-1.55	5.97	24.00	-18.03	
7	6865	183	106T	4.02	4.53	7.29	4.52	4.71	7.63	3.82	4.47	7.17	-1.55	6.08	24.00	-17.92	
	6945	199	106T	4.27	4.45	7.37	4.46	5.15	7.83	3.98	4.91	7.48	-1.84	5.99	24.00	-18.01	
	7025	215	106T	4.31	4.57	7.45	4.24	4.85	7.57	3.83	4.92	7.42	-1.84	5.73	24.00	-18.27	

Table 7-14. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 90 of 276

160MHz BW 80L	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 53			RU Index: 56			RU Index: 60						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	106T	3.91	4.80	7.39	4.34	4.51	7.44	4.12	4.97	7.58	-0.89	6.69	24.00	-17.31	
	6185	47	106T	3.57	4.95	7.32	3.85	5.32	7.66	3.54	4.84	7.25	-0.89	6.77	24.00	-17.23	
	6345	79	106T	4.26	4.49	7.39	4.78	4.80	7.80	4.16	4.26	7.22	-0.89	6.91	24.00	-17.09	
6	6505	111	106T	4.38	4.35	7.38	4.47	4.36	7.43	4.31	4.04	7.19	-1.61	5.82	24.00	-18.18	
	6665	143	106T	4.93	4.85	7.90	4.31	3.98	7.16	5.11	4.63	7.89	-1.55	6.35	24.00	-17.65	
7	6825	175	106T	4.43	4.71	7.58	4.94	4.74	7.85	4.61	4.67	7.65	-1.55	6.30	24.00	-17.70	
	6985	207	106T	4.11	4.42	7.28	4.24	4.21	7.24	4.35	4.42	7.40	-1.84	5.56	24.00	-18.44	

Table 7-15. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Lower 106T Block

160MHz BW 80U	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 53			RU Index: 56			RU Index: 60						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	106T	3.83	4.54	7.21	3.91	4.86	7.42	3.83	5.13	7.54	-0.89	6.65	24.00	-17.35	
	6185	47	106T	3.85	5.14	7.55	3.51	4.71	7.16	3.38	4.77	7.14	-0.89	6.66	24.00	-17.34	
	6345	79	106T	4.16	4.41	7.30	4.08	4.36	7.23	4.51	3.92	7.24	-0.89	6.41	24.00	-17.59	
6	6505	111	106T	4.54	4.21	7.39	4.29	4.06	7.19	4.54	3.94	7.26	-1.61	5.78	24.00	-18.22	
	6665	143	106T	5.09	4.61	7.87	4.82	4.08	7.48	4.59	4.36	7.49	-1.55	6.32	24.00	-17.68	
7	6825	175	106T	4.97	4.76	7.88	4.87	4.42	7.66	4.81	4.72	7.78	-1.55	6.33	24.00	-17.67	
	6985	207	106T	4.41	4.52	7.48	4.23	4.17	7.21	4.18	4.67	7.44	-1.84	5.64	24.00	-18.36	

Table 7-16. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Upper 106T Block

FCC ID: A3LSMG998B	 PCTEST [®] Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 91 of 276

MIMO Maximum Conducted Output Power Measurements (242 Tones)

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 61						
					ANT1	ANT2	MIMO				
5	5935	2	242T	6.23	6.29	9.27	-0.89	8.38	24.00	-15.62	
	6175	45	242T	5.35	6.72	9.10	-0.89	8.21	24.00	-15.79	
	6415	93	242T	6.31	6.24	9.29	-0.89	8.40	24.00	-15.60	
6	6435	97	242T	5.74	6.64	9.22	-1.61	7.61	24.00	-16.39	
	6475	105	242T	5.74	7.11	9.49	-1.61	7.88	24.00	-16.12	
	6515	113	242T	5.77	6.72	9.28	-1.61	7.67	24.00	-16.33	
7	6535	117	242T	9.13	8.54	11.86	-1.55	10.31	24.00	-13.69	
	6695	149	242T	9.07	8.51	11.81	-1.55	10.26	24.00	-13.74	
	6875	185	242T	8.93	8.67	11.81	-1.55	10.26	24.00	-13.74	
8	6995	209	242T	9.05	8.64	11.86	-1.84	10.02	24.00	-13.98	
	7115	233	242T	8.87	8.38	11.64	-1.84	9.80	24.00	-14.20	

Table 7-17. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 61			RU Index: 62						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5965	3	242T	9.28	8.66	11.99	9.25	8.58	11.94	-0.89	11.10	24.00	-12.90	
	6165	43	242T	9.13	8.43	11.80	9.12	8.37	11.77	-0.89	10.91	24.00	-13.09	
	6405	91	242T	9.08	8.19	11.67	9.21	8.28	11.78	-0.89	10.89	24.00	-13.11	
6	6445	99	242T	9.58	8.26	11.98	9.62	8.24	11.99	-1.61	10.38	24.00	-13.62	
	6485	107	242T	9.58	8.27	11.98	9.51	8.38	11.99	-1.61	10.38	24.00	-13.62	
	6525	115	242T	9.54	8.34	11.99	9.56	8.32	11.99	-1.61	10.38	24.00	-13.62	
7	6565	123	242T	9.18	8.61	11.91	9.13	8.67	11.92	-1.55	10.37	24.00	-13.63	
	6725	155	242T	9.08	8.72	11.91	9.09	8.69	11.90	-1.55	10.36	24.00	-13.64	
	6845	179	242T	7.93	8.20	11.08	8.20	8.36	11.29	-1.55	9.74	24.00	-14.26	
8	6885	187	242T	8.84	8.91	11.89	9.12	8.75	11.95	-1.84	10.11	24.00	-13.89	
	7005	211	242T	9.08	8.65	11.88	9.05	8.74	11.91	-1.84	10.07	24.00	-13.93	
	7085	227	242T	9.07	8.73	11.91	9.04	8.72	11.89	-1.84	10.07	24.00	-13.93	

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

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 61			RU Index: 62			RU Index: 64						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5985	7	242T	8.67	8.85	11.77	8.51	8.75	11.64	8.62	8.73	11.69	-0.89	10.88	24.00	-13.12	
	6145	39	242T	8.45	8.49	11.48	8.37	8.38	11.39	8.36	8.45	11.42	-0.89	10.59	24.00	-13.41	
	6385	87	242T	8.35	8.47	11.42	8.26	8.29	11.29	8.35	8.61	11.49	-0.89	10.60	24.00	-13.40	
6	6465	103	242T	8.91	8.65	11.79	8.87	8.35	11.63	8.89	8.57	11.74	-1.61	10.18	24.00	-13.82	
	6545	119	242T	8.11	8.78	11.47	7.96	8.71	11.36	8.04	8.76	11.43	-1.55	9.92	24.00	-14.08	
	6705	151	242T	7.98	8.87	11.46	7.82	8.93	11.42	8.04	8.69	11.39	-1.55	9.91	24.00	-14.09	
8	6865	183	242T	8.07	8.91	11.52	8.32	8.67	11.51	8.02	8.78	11.43	-1.55	9.97	24.00	-14.03	
	6945	199	242T	8.33	9.01	11.69	8.39	8.74	11.58	8.34	9.09	11.74	-1.84	9.90	24.00	-14.10	
	7025	215	242T	8.27	8.85	11.58	8.22	8.45	11.35	8.19	8.92	11.58	-1.84	9.74	24.00	-14.26	

Table 7-19. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset	Page 92 of 276	

160MHz BW 80L	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 61			RU Index: 62			RU Index: 64						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	242T	8.42	9.39	11.94	8.61	8.78	11.71	8.53	8.98	11.77	-0.89	11.05	24.00	-12.95	
	6185	47	242T	7.84	9.09	11.52	8.25	8.97	11.64	8.08	8.96	11.55	-0.89	10.75	24.00	-13.25	
	6345	79	242T	8.21	8.67	11.46	9.03	8.87	11.96	8.24	8.11	11.19	-0.89	11.07	24.00	-12.93	
6	6505	111	242T	8.63	8.48	11.57	8.55	8.40	11.49	8.61	8.49	11.56	-1.61	9.96	24.00	-14.04	
7	6665	143	242T	8.87	9.01	11.95	8.61	8.55	11.59	8.72	8.73	11.74	-1.55	10.40	24.00	-13.60	
	6825	175	242T	8.57	9.28	11.95	8.73	8.88	11.82	8.72	8.64	11.69	-1.55	10.40	24.00	-13.60	
8	6985	207	242T	8.18	8.68	11.45	8.35	8.88	11.63	8.06	8.41	11.25	-1.84	9.79	24.00	-14.21	

Table 7-20. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Lower 242T Block

160MHz BW 80U	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)									Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 61			RU Index: 62			RU Index: 64						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	242T	8.32	8.82	11.59	8.14	8.84	11.51	8.26	9.49	11.93	-0.89	11.04	24.00	-12.96	
	6185	47	242T	8.01	9.10	11.60	7.95	9.01	11.52	7.61	8.96	11.35	-0.89	10.71	24.00	-13.29	
	6345	79	242T	8.37	8.61	11.50	8.25	8.14	11.21	8.22	8.14	11.19	-0.89	10.61	24.00	-13.39	
6	6505	111	242T	8.62	8.05	11.35	8.46	8.01	11.25	8.29	8.44	11.38	-1.61	9.77	24.00	-14.23	
7	6665	143	242T	8.87	8.42	11.66	8.78	8.47	11.64	8.77	8.81	11.80	-1.55	10.25	24.00	-13.75	
	6825	175	242T	8.98	8.97	11.99	8.87	8.86	11.87	8.84	9.03	11.95	-1.55	10.44	24.00	-13.56	
8	6985	207	242T	7.84	8.35	11.11	8.43	8.95	11.71	8.58	9.26	11.94	-1.84	10.10	24.00	-13.90	

Table 7-21. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Upper 242T Block

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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MIMO Maximum Conducted Output Power Measurements (484 Tones)

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 65						
					ANT1	ANT2	MIMO				
5	5965	3	484T	8.78	8.19	11.51	-0.89	10.62	24.00	-13.38	
	6165	43	484T	8.73	7.98	11.38	-0.89	10.49	24.00	-13.51	
	6405	91	484T	8.75	7.75	11.29	-0.89	10.40	24.00	-13.60	
6	6445	99	484T	9.14	7.85	11.55	-1.61	9.94	24.00	-14.06	
	6485	107	484T	9.15	7.92	11.59	-1.61	9.98	24.00	-14.02	
	6525	115	484T	9.10	7.95	11.57	-1.61	9.96	24.00	-14.04	
7	6565	123	484T	8.72	8.43	11.59	-1.55	10.04	24.00	-13.96	
	6725	155	484T	8.59	8.12	11.37	-1.55	9.82	24.00	-14.18	
	6845	179	484T	7.98	8.39	11.20	-1.55	9.65	24.00	-14.35	
8	6885	187	484T	8.63	8.19	11.43	-1.84	9.59	24.00	-14.41	
	7005	211	484T	8.65	7.92	11.31	-1.84	9.47	24.00	-14.53	
	7085	227	484T	8.57	7.98	11.30	-1.84	9.46	24.00	-14.54	

Table 7-22. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 65			RU Index: 66						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	5985	7	484T	8.17	9.15	11.70	8.34	9.18	11.79	-0.89	10.90	24.00	-13.10	
	6145	39	484T	8.19	8.81	11.52	8.26	8.82	11.56	-0.89	10.67	24.00	-13.33	
	6385	87	484T	8.34	8.74	11.55	8.52	8.82	11.68	-0.89	10.79	24.00	-13.21	
6	6465	103	484T	8.62	7.87	11.27	8.78	8.09	11.46	-1.61	9.85	24.00	-14.15	
	6545	119	484T	8.82	9.11	11.98	8.14	8.37	11.27	-1.55	10.43	24.00	-13.57	
7	6705	151	484T	8.17	8.43	11.31	8.12	8.34	11.24	-1.55	9.76	24.00	-14.24	
	6865	183	484T	8.31	8.32	11.33	8.34	8.21	11.29	-1.55	9.78	24.00	-14.22	
8	6945	199	484T	8.43	8.25	11.35	8.55	8.36	11.47	-1.84	9.63	24.00	-14.37	
	7025	215	484T	8.33	8.06	11.21	8.23	8.12	11.19	-1.84	9.37	24.00	-14.63	

Table 7-23. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

160MHz BW 80L	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 65			RU Index: 66						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	484T	8.09	8.69	11.41	8.12	8.81	11.49	-0.89	10.60	24.00	-13.40	
	6185	47	484T	7.72	8.69	11.24	8.18	9.07	11.66	-0.89	10.77	24.00	-13.23	
	6345	79	484T	8.81	8.85	11.84	8.45	8.77	11.62	-0.89	10.95	24.00	-13.05	
6	6505	111	484T	9.04	8.72	11.89	8.58	8.28	11.44	-1.61	10.28	24.00	-13.72	
7	6665	143	484T	8.74	8.23	11.50	8.74	8.83	11.80	-1.55	10.25	24.00	-13.75	
	6825	175	484T	8.45	8.72	11.60	8.73	9.04	11.90	-1.55	10.35	24.00	-13.65	
8	6985	207	484T	8.35	8.68	11.53	8.19	8.26	11.24	-1.84	9.69	24.00	-14.31	

Table 7-24. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Lower 484T Block

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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160MHz BW 80U	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 65			RU Index: 66						
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO				
5	6025	15	484T	8.60	9.27	11.96	7.84	8.54	11.21	-0.89	11.07	24.00	-12.93	
	6185	47	484T	7.86	9.05	11.51	8.58	9.28	11.95	-0.89	11.06	24.00	-12.94	
	6345	79	484T	8.49	8.10	11.31	9.01	8.73	11.88	-0.89	10.99	24.00	-13.01	
6	6505	111	484T	8.66	8.04	11.37	8.84	8.26	11.57	-1.61	9.96	24.00	-14.04	
	6665	143	484T	9.01	8.89	11.96	8.65	8.24	11.46	-1.55	10.41	24.00	-13.59	
7	6825	175	484T	8.89	8.91	11.91	8.75	8.90	11.84	-1.55	10.36	24.00	-13.64	
	6985	207	484T	7.98	8.38	11.19	8.47	8.76	11.63	-1.84	9.79	24.00	-14.21	

Table 7-25. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Upper 484T Block

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 95 of 276

MIMO Maximum Conducted Output Power Measurements (996 Tones)

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 67						
					ANT1	ANT2	MIMO				
5	5985	7	996T	7.96	8.63	11.32	-0.89	10.43	24.00	-13.57	
	6145	39	996T	8.96	8.98	11.98	-0.89	11.09	24.00	-12.91	
	6385	87	996T	8.86	8.97	11.93	-0.89	11.04	24.00	-12.96	
6	6465	103	996T	8.57	8.28	11.44	-1.61	9.83	24.00	-14.17	
7	6545	119	996T	8.27	8.51	11.40	-1.55	9.85	24.00	-14.15	
	6705	151	996T	8.38	8.63	11.52	-1.55	9.97	24.00	-14.03	
	6865	183	996T	8.34	8.43	11.40	-1.55	9.85	24.00	-14.15	
8	6945	199	996T	8.39	8.54	11.48	-1.84	9.64	24.00	-14.36	
	7025	215	996T	8.29	8.41	11.36	-1.84	9.52	24.00	-14.48	

Table 7-26. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

160MHz BW 80L	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 67(L)						
					ANT1	ANT2	MIMO				
5	6025	15	996T	8.03	8.84	11.46	-0.89	10.57	24.00	-13.43	
	6185	47	996T	7.89	8.90	11.43	-0.89	10.54	24.00	-13.46	
	6345	79	996T	8.86	8.62	11.75	-0.89	10.86	24.00	-13.14	
6	6505	111	996T	8.74	8.78	11.77	-1.61	10.16	24.00	-13.84	
7	6665	143	996T	8.76	8.43	11.61	-1.55	10.06	24.00	-13.94	
	6825	175	996T	8.85	9.09	11.98	-1.55	10.43	24.00	-13.57	
8	6985	207	996T	9.01	8.65	11.84	-1.84	10.00	24.00	-14.00	

Table 7-27. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Lower 996T Block

160MHz BW 80U	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)			Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dBm]
					RU Index: 67(U)						
					ANT1	ANT2	MIMO				
5	6025	15	996T	8.44	9.42	11.97	-0.89	11.08	24.00	-12.92	
	6185	47	996T	7.78	8.64	11.24	-0.89	10.35	24.00	-13.65	
	6345	79	996T	8.33	8.32	11.34	-0.89	10.45	24.00	-13.55	
6	6505	111	996T	8.44	8.20	11.33	-1.61	9.72	24.00	-14.28	
7	6665	143	996T	8.16	8.18	11.18	-1.55	9.63	24.00	-14.37	
	6825	175	996T	8.44	9.05	11.77	-1.55	10.22	24.00	-13.78	
8	6985	207	996T	8.22	8.40	11.32	-1.84	9.48	24.00	-14.52	

Table 7-28. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power – Upper 996T Block

FCC ID: A3LSMG998B	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sample MIMO Calculation:

At 5935MHz in 802.11ax (20MHz BW – 26 Tones) mode, the average conducted output power was measured to be -1.85 dBm for Antenna-1 and -0.67 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

$$(-1.85 \text{ dBm} + -0.67 \text{ dBm}) = (0.653 \text{ mW} + 0.857 \text{ mW}) = 1.51 \text{ mW} = 1.79 \text{ dBm}$$

FCC ID: A3LSMG998B	 Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset	Page 97 of 276	

7.4 Maximum Power Spectral Density – 802.11ax §15.407(a)(8)

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 5.925-7.125 GHz bands, the maximum power spectral density must not exceed –1 dBm e.i.r.p. in any 1-megahertz band

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 $\geq 2 \times$ (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 7-3. Test Instrument & Measurement Setup

Test Notes

None

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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MIMO Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 Power Density [dBm/MHz]	Antenna-1 Power Density [dBm/MHz]	Summed MIMO Power Density [dBm/MHz]	Directional Gain [dBi]	e.i.r.p Density [dBm/MHz]	Max EIRP Density [dBm/MHz]	Margin [dB]
Band 5	5935	2	ax (20MHz)	-4.08	-4.48	-1.27	-0.89	-2.15	-1	-1.15
	6175	45	ax (20MHz)	-4.31	-4.32	-1.30	-0.89	-2.19	-1	-1.19
	6415	93	ax (20MHz)	-4.39	-4.16	-1.26	-0.89	-2.15	-1	-1.15
	5695	3	ax (40MHz)	-4.29	-4.03	-1.15	-0.89	-2.04	-1	-1.04
	6165	43	ax (40MHz)	-5.16	-4.24	-1.67	-0.89	-2.55	-1	-1.55
	6405	91	ax (40MHz)	-4.22	-4.99	-1.57	-0.89	-2.46	-1	-1.46
	5985	7	ax (80MHz)	-4.53	-5.51	-1.99	-0.89	-2.87	-1	-1.87
	6145	39	ax (80MHz)	-5.03	-4.62	-1.81	-0.89	-2.70	-1	-1.70
6385	87	ax (80MHz)	-3.99	-5.23	-1.55	-0.89	-2.44	-1	-1.44	
Band 6	6345	97	ax (20MHz)	-4.78	-3.61	-1.14	-1.61	-2.76	-1	-1.76
	6475	105	ax (20MHz)	-4.81	-3.69	-1.20	-1.61	-2.81	-1	-1.81
	6515	113	ax (20MHz)	-4.69	-3.62	-1.11	-1.61	-2.72	-1	-1.72
	6445	99	ax (40MHz)	-3.24	-4.41	-0.78	-1.61	-2.39	-1	-1.39
	6485	107	ax (40MHz)	-3.67	-5.22	-1.36	-1.61	-2.97	-1	-1.97
	6525	115	ax (40MHz)	-3.74	-5.17	-1.38	-1.61	-3.00	-1	-2.00
6465	103	ax (80MHz)	-3.62	-4.45	-1.01	-1.61	-2.62	-1	-1.62	
Band 7	6535	117	ax (20MHz)	-4.01	-4.22	-1.11	-1.55	-2.66	-1	-1.66
	6695	149	ax (20MHz)	-4.47	-4.57	-1.51	-1.55	-3.06	-1	-2.06
	6875	185	ax (20MHz)	-4.04	-4.10	-1.06	-1.55	-2.61	-1	-1.61
	6565	123	ax (40MHz)	-4.10	-5.15	-1.58	-1.55	-3.13	-1	-2.13
	6725	155	ax (40MHz)	-4.25	-4.55	-1.39	-1.55	-2.94	-1	-1.94
	6845	179	ax (40MHz)	-4.46	-4.95	-1.69	-1.55	-3.23	-1	-2.23
	6545	119	ax (80MHz)	-3.93	-5.15	-1.48	-1.55	-3.03	-1	-2.03
	6705	151	ax (80MHz)	-4.06	-5.40	-1.67	-1.55	-3.22	-1	-2.22
6865	183	ax (80MHz)	-3.56	-4.65	-1.06	-1.55	-2.61	-1	-1.61	
Band 8	6895	189	ax (20MHz)	-4.22	-4.09	-1.14	-1.84	-2.98	-1	-1.98
	6995	209	ax (20MHz)	-4.15	-4.29	-1.21	-1.84	-3.05	-1	-2.05
	7115	233	ax (20MHz)	-4.58	-3.84	-1.19	-1.84	-3.03	-1	-2.03
	6885	195	ax (40MHz)	-3.68	-4.64	-1.12	-1.84	-2.96	-1	-1.96
	7005	211	ax (40MHz)	-3.30	-4.35	-0.78	-1.84	-2.62	-1	-1.62
	7085	227	ax (40MHz)	-3.85	-4.47	-1.14	-1.84	-2.98	-1	-1.98
	6945	199	ax (80MHz)	-4.31	-4.89	-1.58	-1.84	-3.42	-1	-2.42
	7025	215	ax (80MHz)	-3.89	-4.94	-1.37	-1.84	-3.21	-1	-2.21

Table 7-29. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (26 Tones)

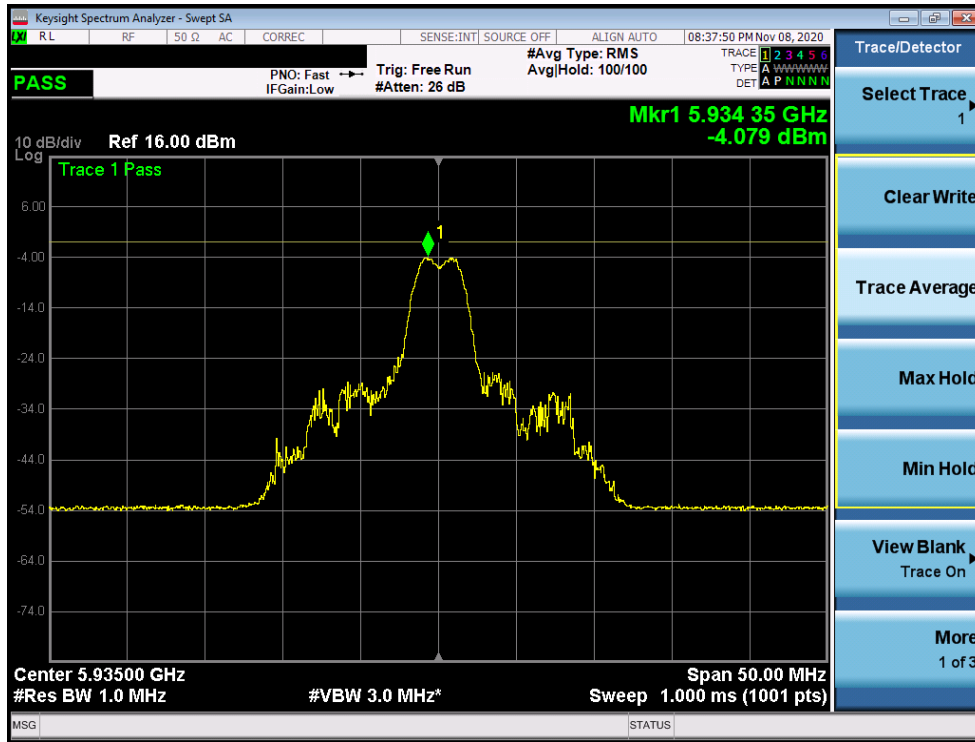
FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 99 of 276

	Frequency [MHz]	Channel	802.11 MODE	Antenna-1 Power Density [dBm/MHz]	Antenna-1 Power Density [dBm/MHz]	Summed MIMO Power Density [dBm/MHz]	Directional Gain [dBi]	e.i.r.p Density [dBm/MHz]	Max EIRP Density [dBm/MHz]	Margin [dB]
Band 5	5935	2	ax (20MHz)	-6.19	-5.05	-2.57	-0.89	-3.46	-1	-2.46
	6175	45	ax (20MHz)	-5.79	-5.32	-2.54	-0.89	-3.43	-1	-2.43
	6415	93	ax (20MHz)	-5.21	-5.67	-2.42	-0.89	-3.31	-1	-2.31
	5695	3	ax (40MHz)	-6.20	-5.65	-2.90	-0.89	-3.79	-1	-2.79
	6165	43	ax (40MHz)	-6.45	-6.05	-3.23	-0.89	-4.12	-1	-3.12
	6405	91	ax (40MHz)	-6.34	-5.54	-2.91	-0.89	-3.80	-1	-2.80
	5985	7	ax (80MHz)	-8.70	-8.34	-5.51	-0.89	-6.39	-1	-5.39
	6145	39	ax (80MHz)	-8.13	-7.66	-4.87	-0.89	-5.76	-1	-4.76
Band 6	6385	87	ax (80MHz)	-8.41	-7.93	-5.15	-0.89	-6.04	-1	-5.04
	6345	97	ax (20MHz)	-5.32	-4.74	-2.01	-1.61	-3.62	-1	-2.62
	6475	105	ax (20MHz)	-5.51	-4.90	-2.18	-1.61	-3.79	-1	-2.79
	6515	113	ax (20MHz)	-5.78	-4.51	-2.09	-1.61	-3.70	-1	-2.70
	6445	99	ax (40MHz)	-6.07	-5.21	-2.61	-1.61	-4.22	-1	-3.22
	6485	107	ax (40MHz)	-6.43	-5.24	-2.78	-1.61	-4.40	-1	-3.40
	6525	115	ax (40MHz)	-6.21	-5.26	-2.70	-1.61	-4.31	-1	-3.31
Band 7	6465	103	ax (80MHz)	-9.05	-8.27	-5.63	-1.61	-7.24	-1	-6.24
	6535	117	ax (20MHz)	-5.05	-5.92	-2.46	-1.55	-4.01	-1	-3.01
	6695	149	ax (20MHz)	-5.11	-6.24	-2.63	-1.55	-4.18	-1	-3.18
	6875	185	ax (20MHz)	-5.09	-5.93	-2.48	-1.55	-4.03	-1	-3.03
	6565	123	ax (40MHz)	-5.93	-5.38	-2.63	-1.55	-4.18	-1	-3.18
	6725	155	ax (40MHz)	-5.81	-5.33	-2.55	-1.55	-4.10	-1	-3.10
	6845	179	ax (40MHz)	-6.07	-6.23	-3.13	-1.55	-4.68	-1	-3.68
	6545	119	ax (80MHz)	-8.60	-8.53	-5.55	-1.55	-7.10	-1	-6.10
	6705	151	ax (80MHz)	-8.57	-8.45	-5.50	-1.55	-7.05	-1	-6.05
Band 8	6865	183	ax (80MHz)	-8.53	-8.64	-5.58	-1.55	-7.12	-1	-6.12
	6895	189	ax (20MHz)	-5.60	-5.36	-2.47	-1.84	-4.31	-1	-3.31
	6995	209	ax (20MHz)	-5.22	-5.52	-2.36	-1.84	-4.20	-1	-3.20
	7115	233	ax (20MHz)	-4.72	-5.07	-1.88	-1.84	-3.72	-1	-2.72
	6885	195	ax (40MHz)	-6.08	-5.54	-2.79	-1.84	-4.63	-1	-3.63
	7005	211	ax (40MHz)	-6.19	-5.54	-2.84	-1.84	-4.69	-1	-3.69
	7085	227	ax (40MHz)	-5.70	-5.57	-2.62	-1.84	-4.46	-1	-3.46
	6945	199	ax (80MHz)	-8.81	-8.66	-5.72	-1.84	-7.56	-1	-6.56
7025	215	ax (80MHz)	-8.98	-8.90	-5.93	-1.84	-7.77	-1	-6.77	

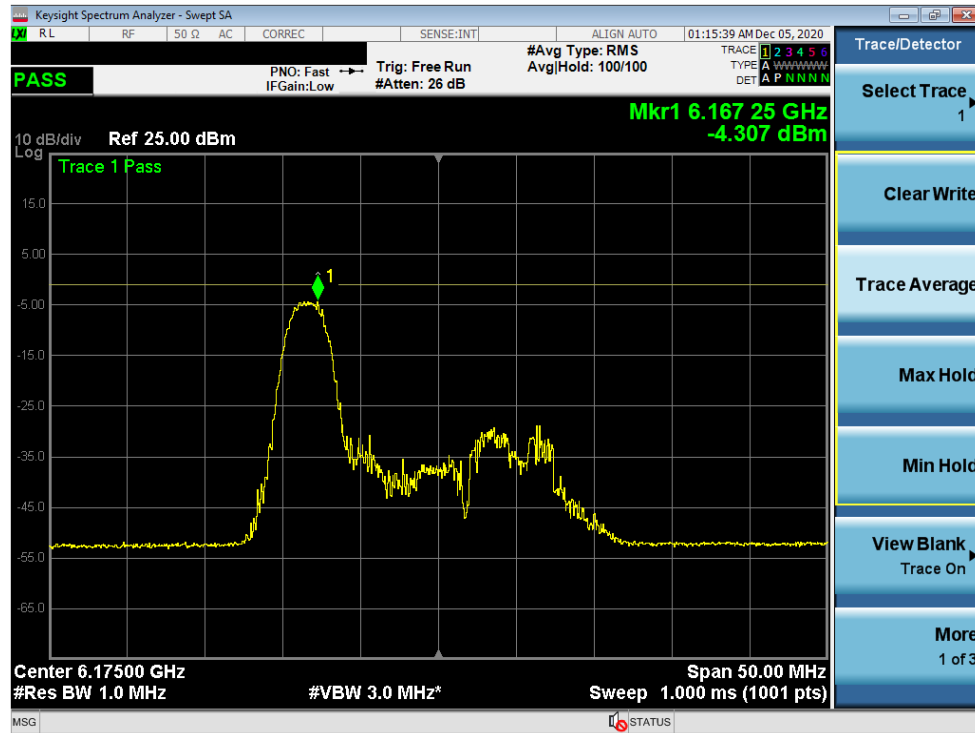
Table 7-30. MIMO e.i.r.p. Conducted Power Spectral Density Measurements (Full Tones)

FCC ID: A3LSMG998B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 100 of 276

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

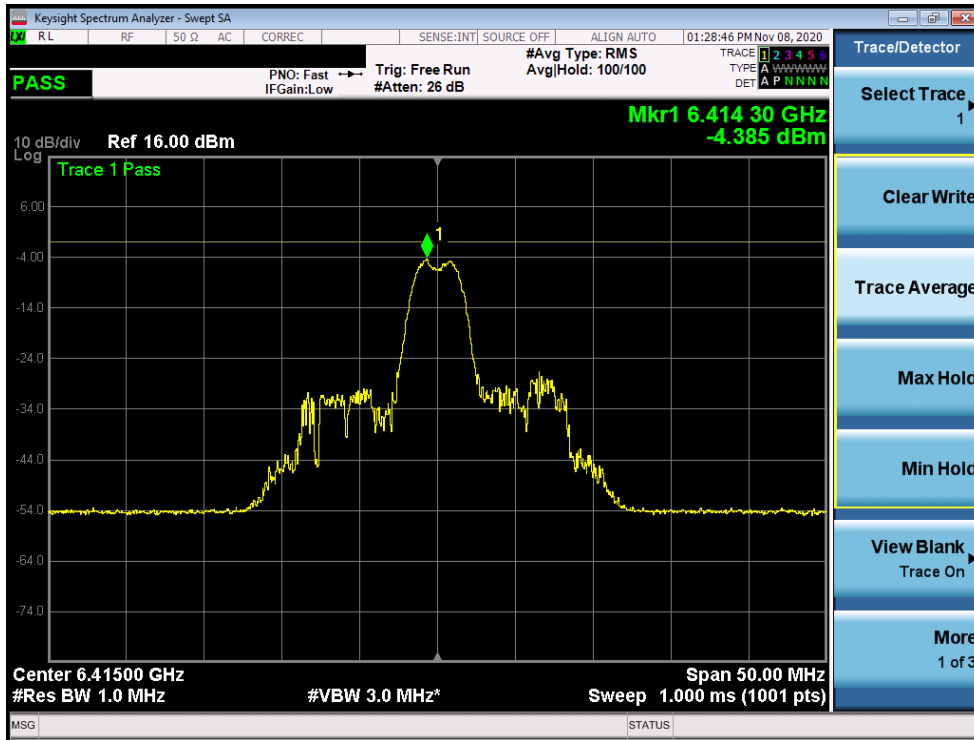


Plot 7-133. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) UNII Band 5) – Ch. 2)

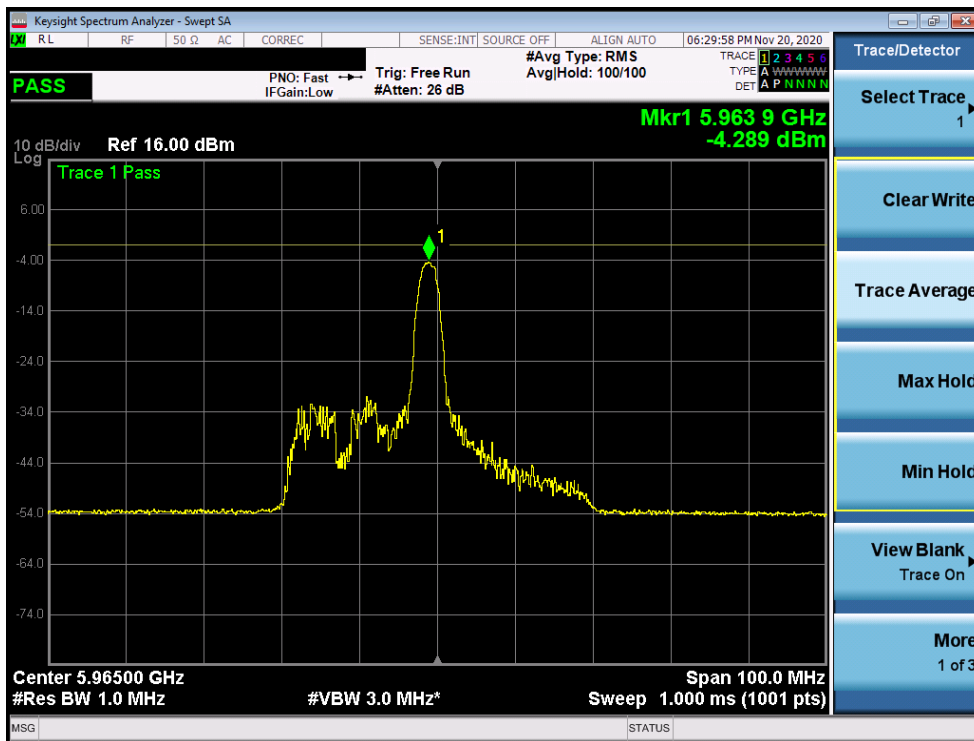


Plot 7-134. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 45)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 101 of 276



Plot 7-135. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) UNII Band 5) – Ch. 93)

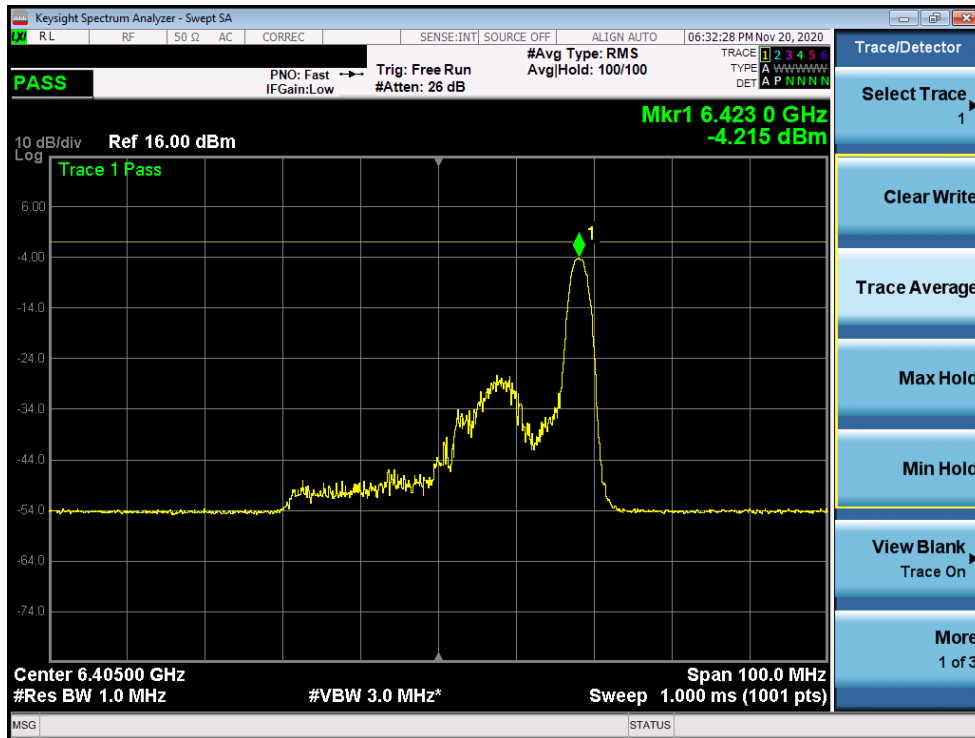


Plot 7-136. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 3)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 102 of 276

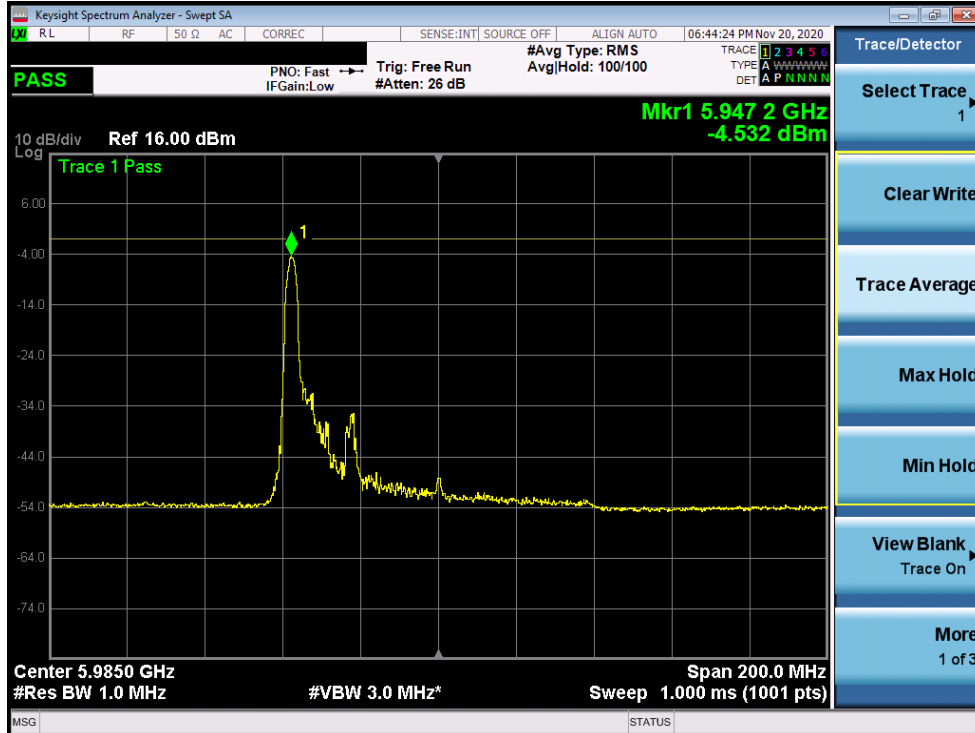


Plot 7-137. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 43)

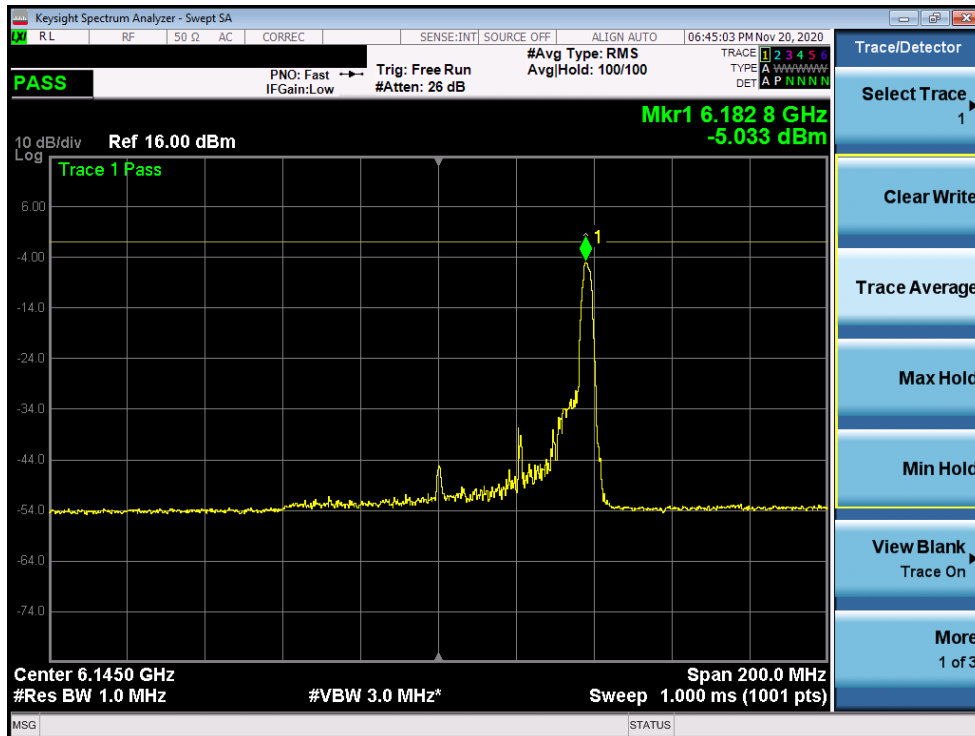


Plot 7-138. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 91)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 103 of 276

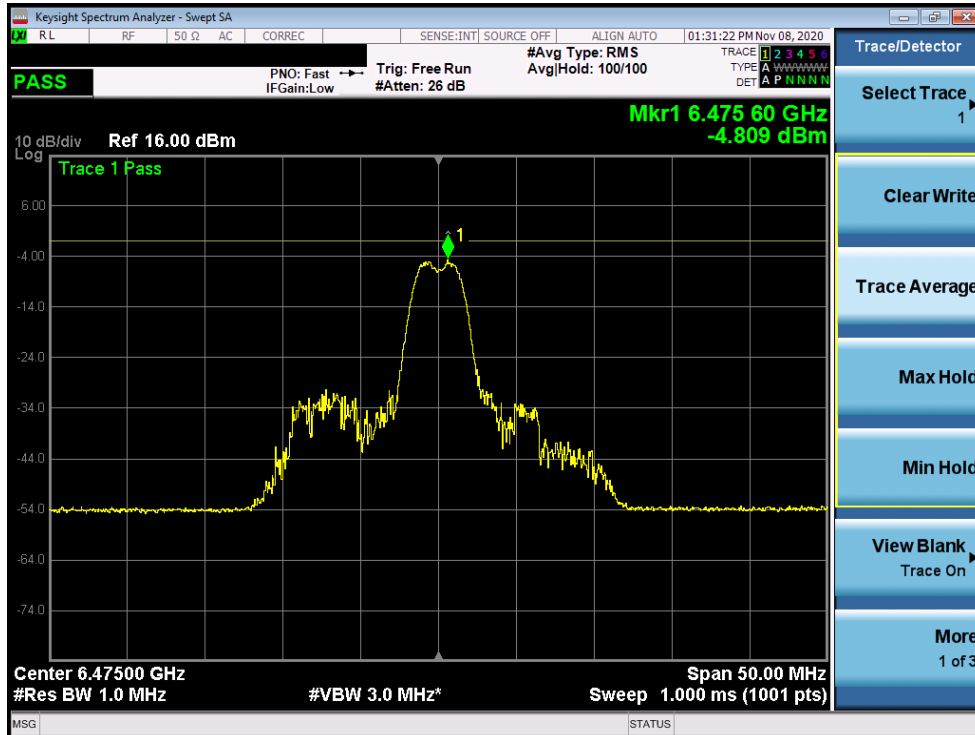


Plot 7-139. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 7)

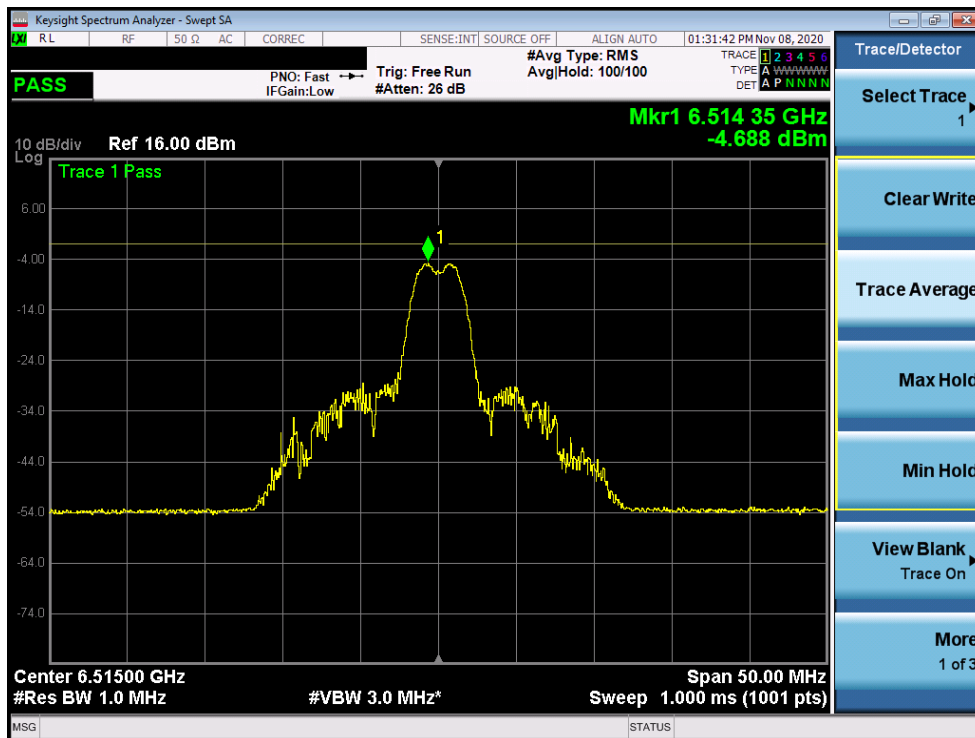


Plot 7-140. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (26 Tones) (UNII Band 5) – Ch. 39)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 104 of 276

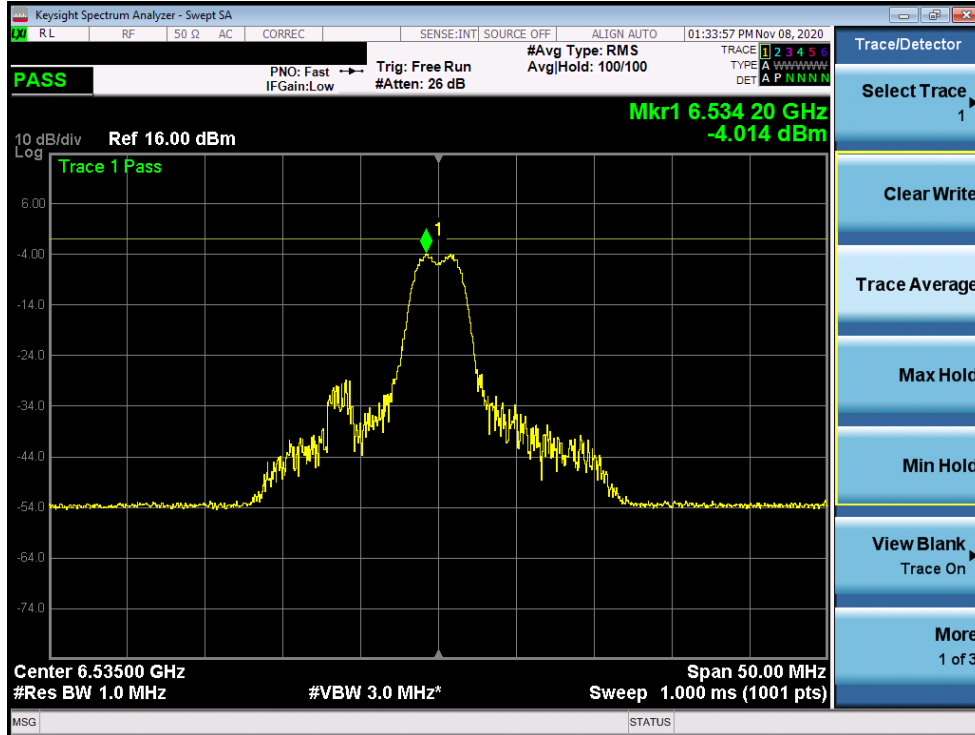


Plot 7-143. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 105)



Plot 7-144. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) (UNII Band 6) – Ch. 113)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 106 of 276



Plot 7-149. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 117)



Plot 7-150. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (26 Tones) (UNII Band 7) – Ch. 149)

FCC ID: A3LSMG998B	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2009230154-27-R1.A3L	Test Dates: 9/28/2020-12/14/2020	EUT Type: Portable Handset		Page 109 of 276