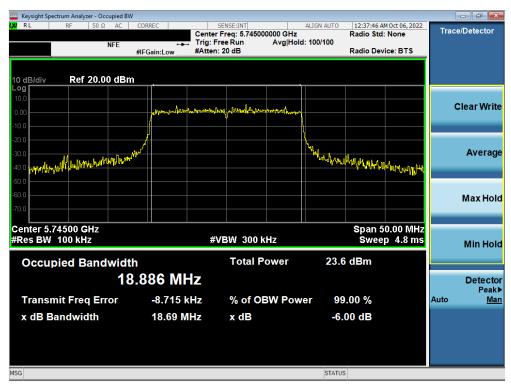


Plot 7-116. 6dB Bandwidth Plot ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



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

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 77 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 77 of 254





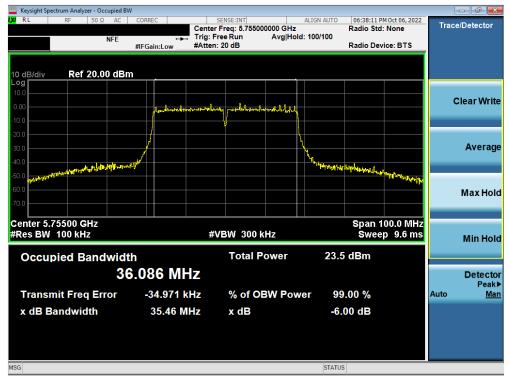
Plot 7-118. 6dB Bandwidth Plot ANT1 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



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

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 79 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 78 of 254





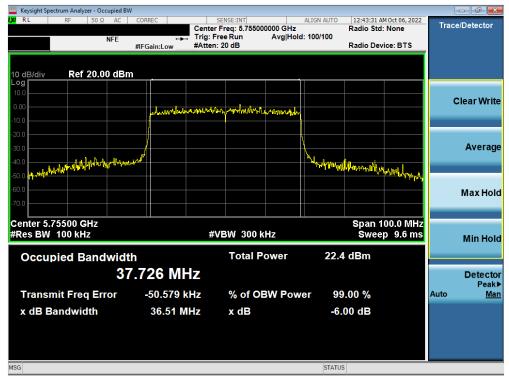
Plot 7-120. 6dB Bandwidth Plot ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



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

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 70 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 79 of 254





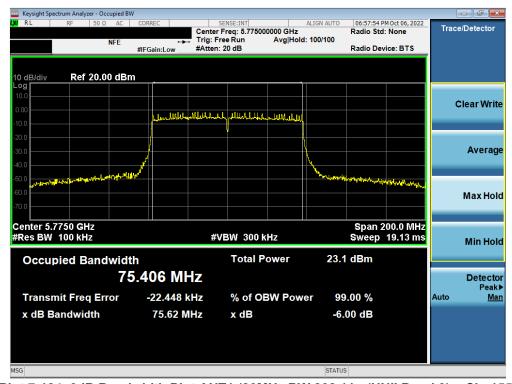
Plot 7-122. 6dB Bandwidth Plot ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



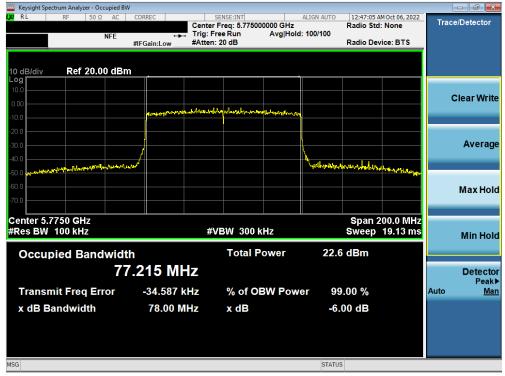
Plot 7-123. 6dB Bandwidth Plot ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 90 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 80 of 254





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



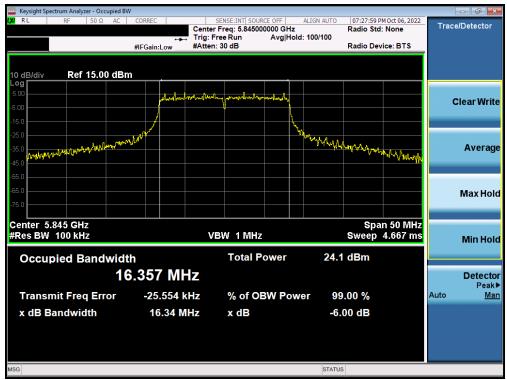
Plot 7-125. 6dB Bandwidth Plot ANT1 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 91 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 81 of 254



	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 6dB Bandwidth [MHz]
Band 3/4	5845	169	а	6	16.34
Band 4	5865	173	а	6	16.34
Dallu 4	5885	177	а	6	16.30
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	17.28
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	17.31
Dallu 4	5885	177	n (20MHz)	6.5/7.2 (MCS0)	17.24
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	18.98
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	18.92
Dallu 4	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	18.78
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	35.44
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	36.21
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	38.19
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	37.90
	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	75.48
Band 3/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	78.20
ballu 5/4	5815	163	ac (160MHz)	58.5/65 (MCS0)	155.80
	5815	163	ax (160MHz)	58.5/65 (MCS0)	156.00

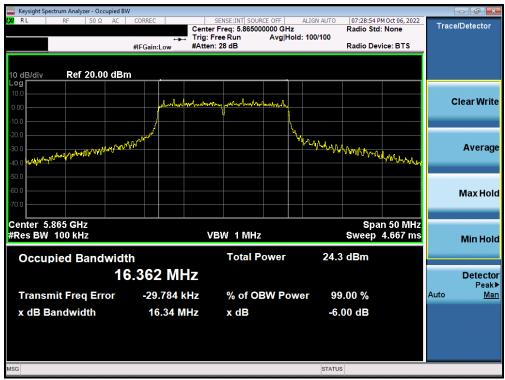
Table 7-5. Conducted Bandwidth Measurements Band 4 MIMO ANT1



Plot 7-126. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 82 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 62 01 254





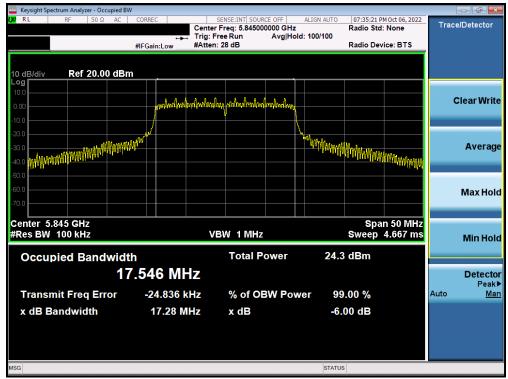
Plot 7-127. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 4) - Ch. 173)



Plot 7-128. 6dB Bandwidth Plot MIMO ANT1 (802.11a (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 92 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 83 of 254





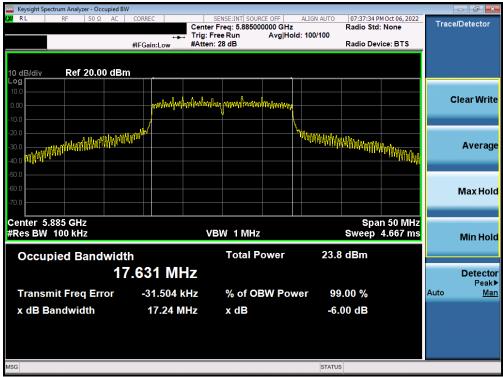
Plot 7-129. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3/4) - Ch. 169)



Plot 7-130. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 94 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 84 of 254





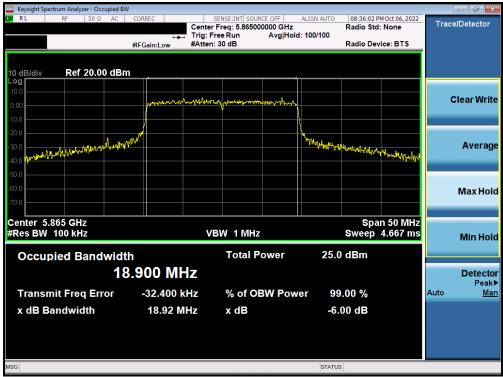
Plot 7-131. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 4) - Ch. 177)



Plot 7-132. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 95 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 85 of 254





Plot 7-133. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 4) - Ch. 173)



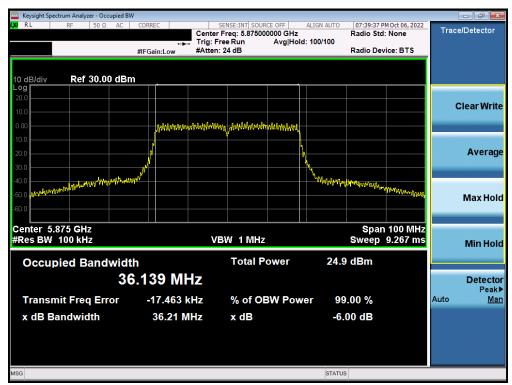
Plot 7-134. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 96 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 86 of 254





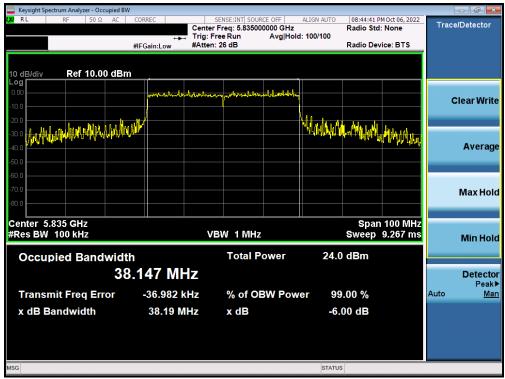
Plot 7-135. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3/4) - Ch. 167)



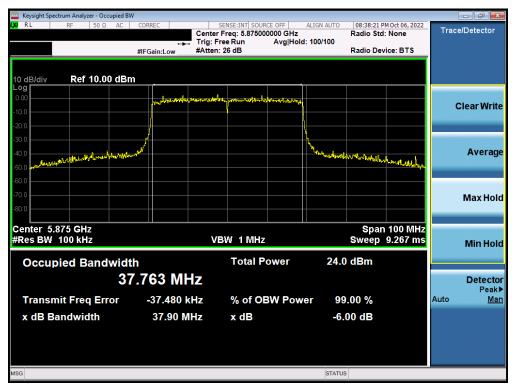
Plot 7-136. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 97 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 87 of 254





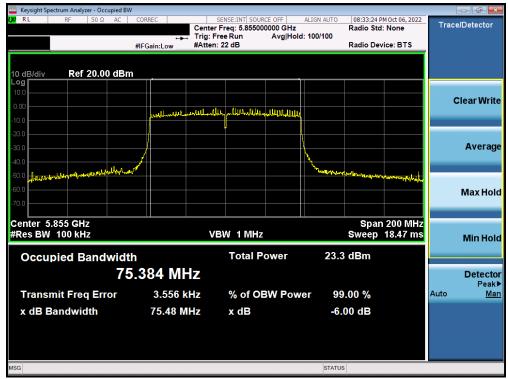
Plot 7-137. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3/4) - Ch. 167)



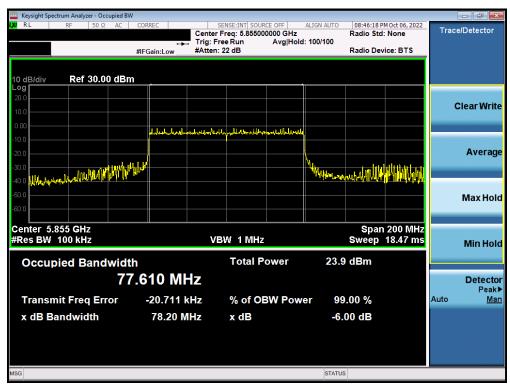
Plot 7-138. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 00 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 88 of 254





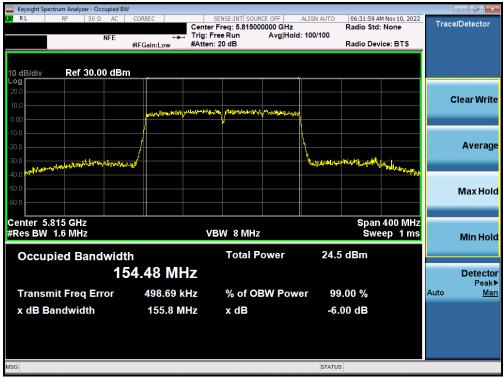
Plot 7-139. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 3/4) - Ch. 171)



Plot 7-140. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 90 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 89 of 254





Plot 7-141. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ac (UNII Band 3/4) - Ch. 163)



Plot 7-142. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 00 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 90 of 254



## MIMO Antenna-2 6dB Bandwidth Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]
	5745	149	а	6	16.39
	5785	157	а	6	16.38
	5825	165	а	6	16.37
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	17.57
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	17.32
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	17.56
က	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	18.98
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	18.96
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	18.70
	5755	151	n (40MHz)	13.5/15 (MCS0)	35.46
	5795	159	n (40MHz)	13.5/15 (MCS0)	35.82
	5755	151	ax (40MHz)	13.5/15 (MCS0)	37.96
	5795	159	ax (40MHz)	13.5/15 (MCS0)	38.04
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	74.73
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	77.86

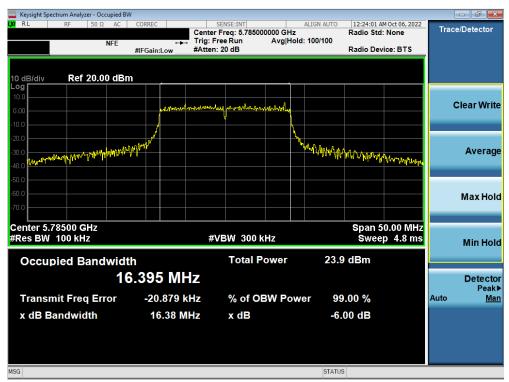
Table 7-6. Conducted Bandwidth Measurements MIMO ANT2



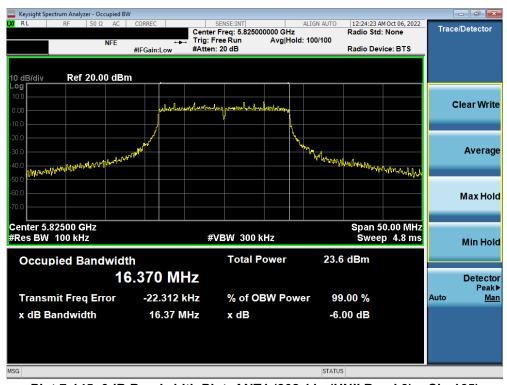
Plot 7-143. 6dB Bandwidth Plot ANT2 (802.11a (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 91 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Fage 91 01 204





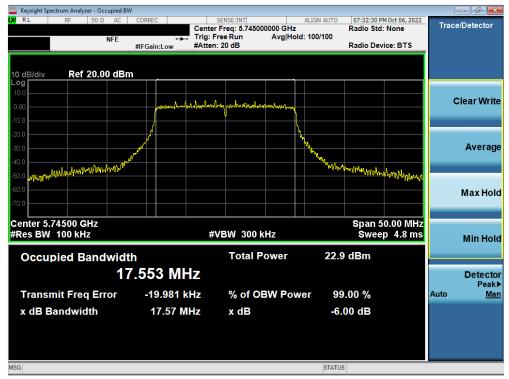
Plot 7-144. 6dB Bandwidth Plot ANT2 (802.11a (UNII Band 3) - Ch. 157)



Plot 7-145. 6dB Bandwidth Plot ANT1 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 02 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 92 of 254





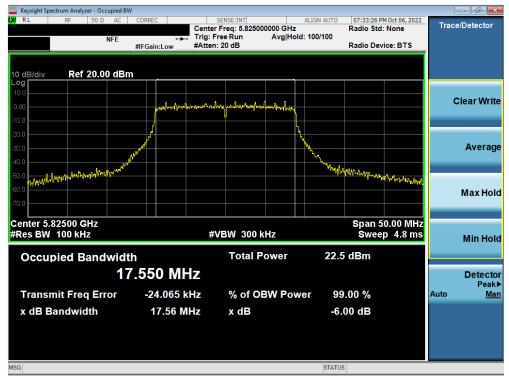
Plot 7-146. 6dB Bandwidth Plot ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



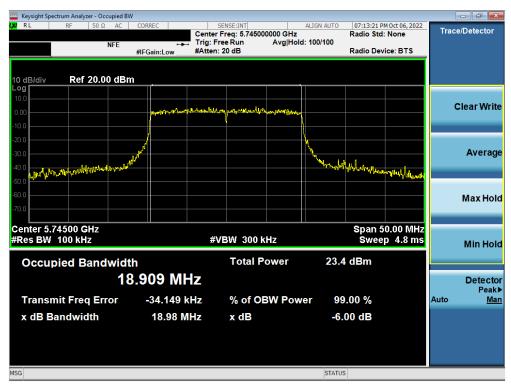
Plot 7-147. 6dB Bandwidth Plot ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 02 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 93 of 254





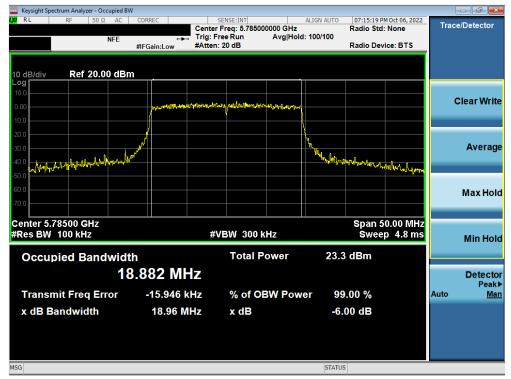
Plot 7-148. 6dB Bandwidth Plot ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



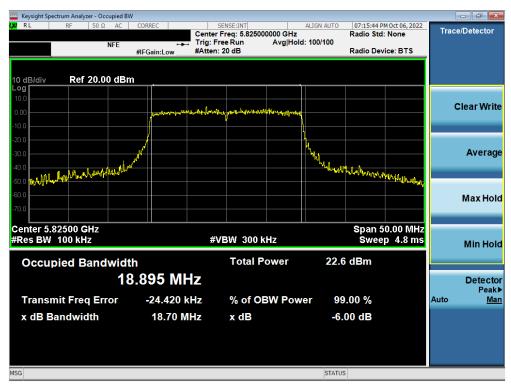
Plot 7-149. 6dB Bandwidth Plot ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 04 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 94 of 254





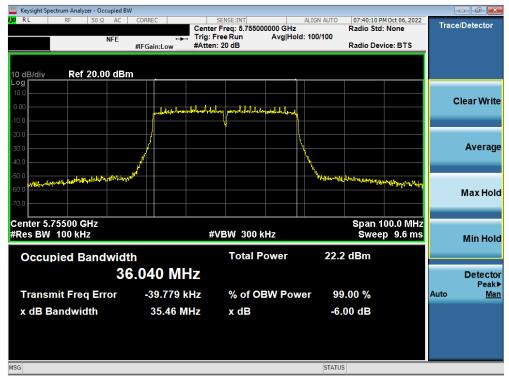
Plot 7-150. 6dB Bandwidth Plot ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



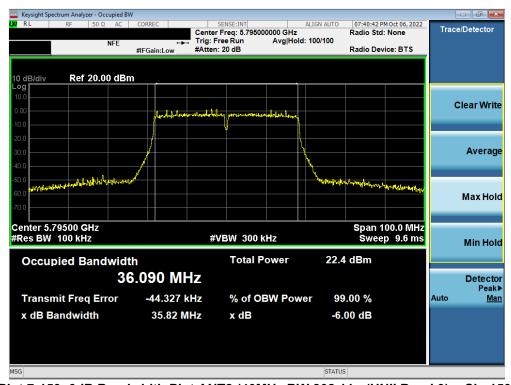
Plot 7-151. 6dB Bandwidth Plot ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo OF of OF4
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 95 of 254





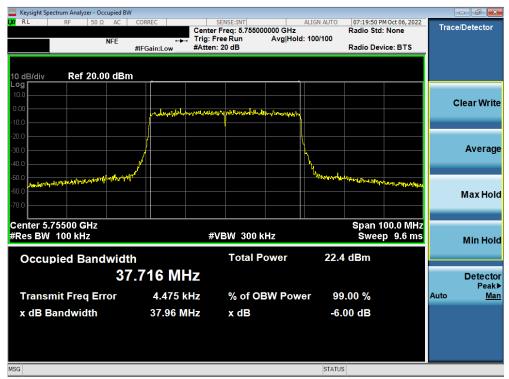
Plot 7-152. 6dB Bandwidth Plot ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



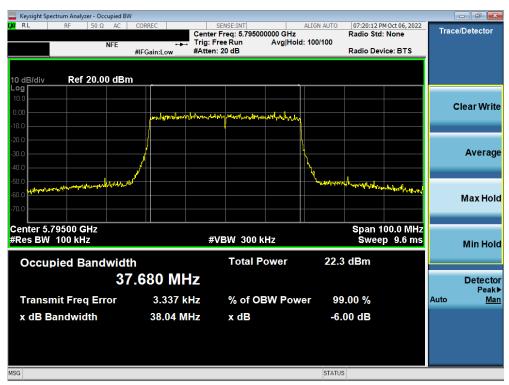
Plot 7-153. 6dB Bandwidth Plot ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 06 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 96 of 254





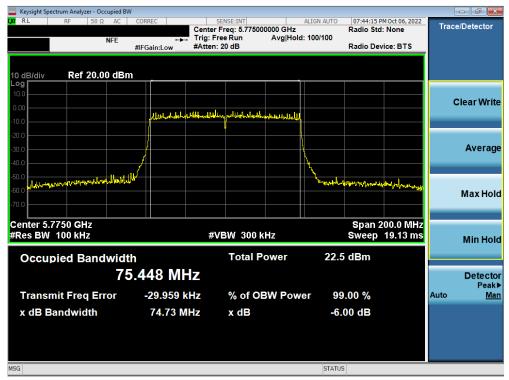
Plot 7-154. 6dB Bandwidth Plot ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



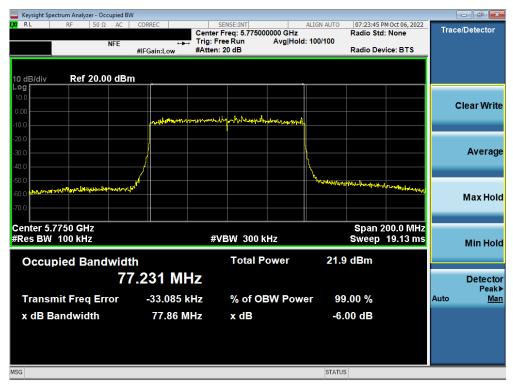
Plot 7-155. 6dB Bandwidth Plot ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 07 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 97 of 254





Plot 7-156. 6dB Bandwidth Plot ANT2 (80MHz BW 802.11n (UNII Band 3) - Ch. 155)



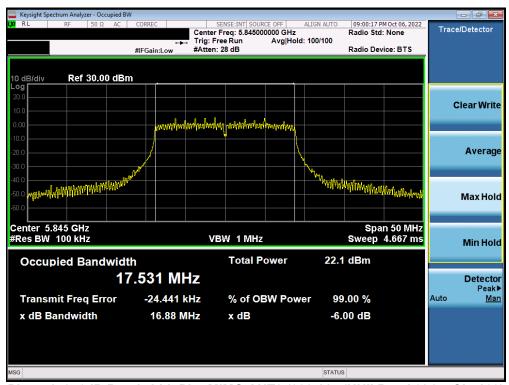
Plot 7-157. 6dB Bandwidth Plot ANT2 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 09 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 98 of 254



	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured 6dB Bandwidth [MHz]	
Band 3/4	5845	169	а	6	16.88	
Band 4	5865	173	а	6	16.87	
Danu 4	5885	177	а	6	17.26	
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	17.22	
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	16.94	
Dallu 4	5885	177	n (20MHz)	6.5/7.2 (MCS0)	16.59	
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	18.97	
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	18.97	
5885		177	ax (20MHz)	6.5/7.2 (MCS0)	18.48	
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	35.70	
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	35.76	
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	37.87	
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	37.88	
	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	74.57	
Pand 2/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	77.43	
Band 3/4	5815	163	ac (160MHz)	58.5/65 (MCS0)	155.70	
	5815	163	ax (160MHz)	58.5/65 (MCS0)	156.00	

Table 7-7. Conducted Bandwidth Measurements Band 4 MIMO ANT2



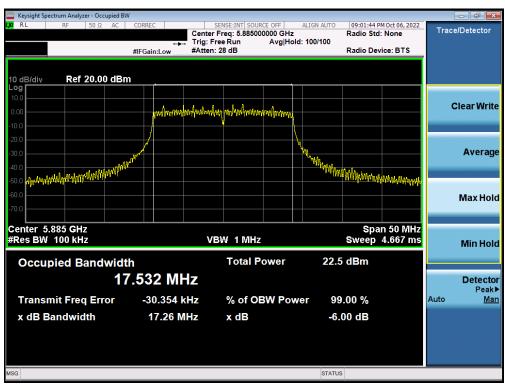
Plot 7-158. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 00 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 99 of 254		





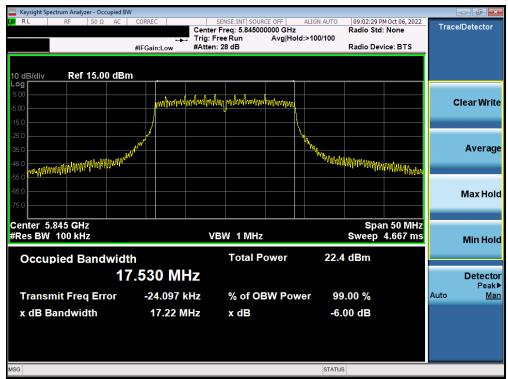
Plot 7-159. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 4) - Ch. 173)



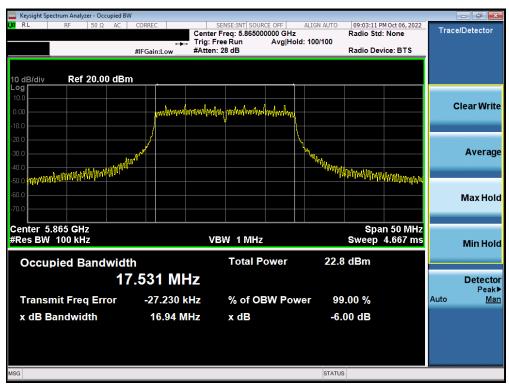
Plot 7-160. 6dB Bandwidth Plot MIMO ANT2 (802.11a (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 100 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 100 of 254





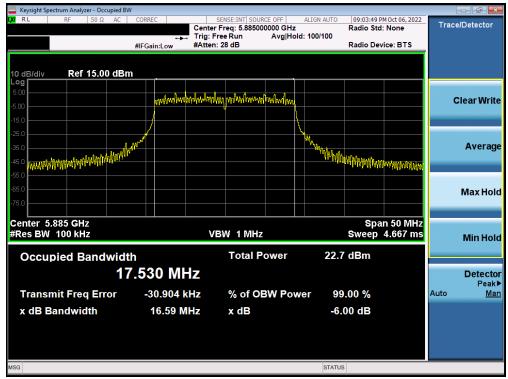
Plot 7-161. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3/4) - Ch. 169)



Plot 7-162. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 4) - Ch. 173)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 101 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 101 of 254		





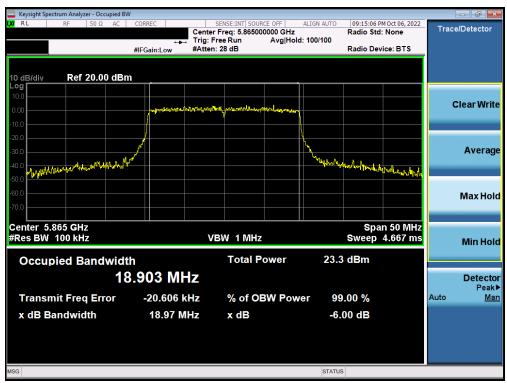
Plot 7-163. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 4) - Ch. 177)



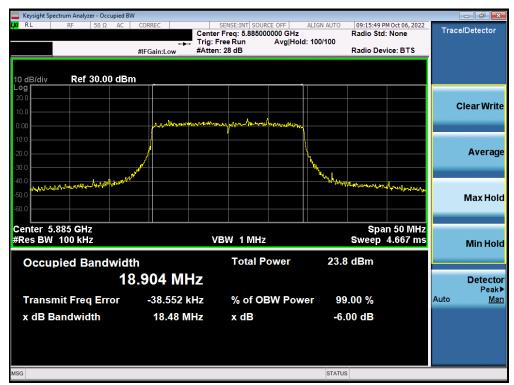
Plot 7-164. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3/4) - Ch. 169)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 102 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Fage 102 01 254





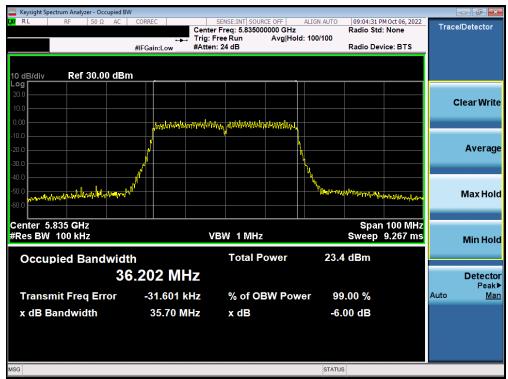
Plot 7-165. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 4) - Ch. 173)



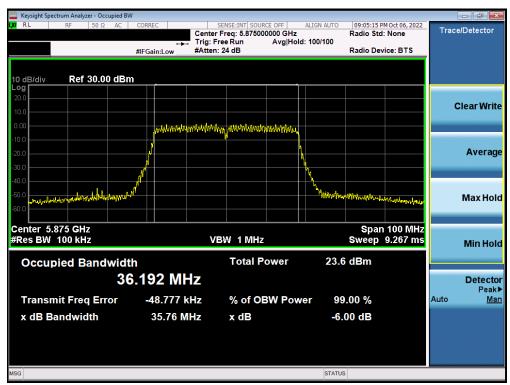
Plot 7-166. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 4) - Ch. 177)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 102 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 103 of 254		





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



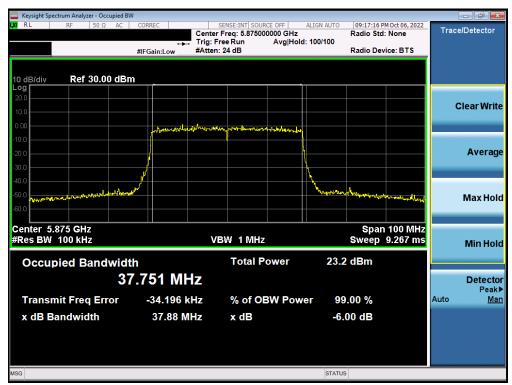
Plot 7-168. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 104 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 104 of 254		





Plot 7-169. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3/4) - Ch. 167)



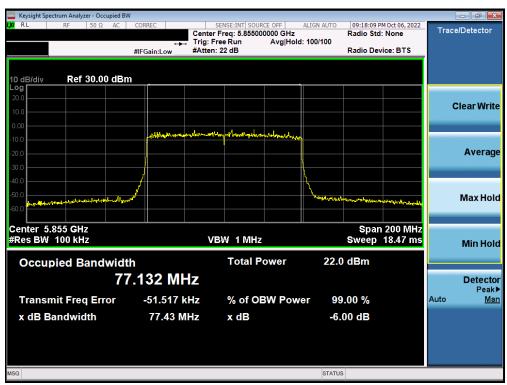
Plot 7-170. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 4) - Ch. 175)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 105 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 105 of 254





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



Plot 7-172. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3/4) - Ch. 171)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 106 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 106 of 254		





Plot 7-173. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ac (UNII Band 3/4) - Ch. 163)



Plot 7-174. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 3/4) - Ch. 163)

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 107 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 107 of 254



# 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 1 Watt (30dBm).

In the 5.25-5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm +  $10\log_{10}(26$ dB BW) = 11 dBm +  $10\log_{10}(19.26)$  = 23.85dBm. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or  $17 + 10\log_{10}(19.26)$  dBm.

In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm +  $10log_{10}(26dB \ BW) = 11 \ dBm + 10log_{10}(19.83) = 23.97dBm$ . 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. shall not exceed 36 dBm.

In the 5.850 - 5.895 GHz band, the maximum permissible e.i.r.p is 30dBm.

#### **Test Procedure Used**

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

#### **Test Settings**

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

## **Test Setup**

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



Figure 7-3. Test Instrument & Measurement Setup

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)			
Test Report S/N:	Test Dates:	EUT Type:	Page 108 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 106 01 254		



# **MIMO Maximum Conducted Output Power Measurements**

	Freq [MHz]	Channel	Detector	Cond	lucted Power	[dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]			3 1 1
	5180	36	AVG	17.89	17.06	20.51	23.98	-3.47	-0.99	19.52	30.00	-10.48
	5200	40	AVG	17.79	17.01	20.43	23.98	-3.55	-0.99	19.44	30.00	-10.56
÷	5220	44	AVG	17.55	16.41	20.03	23.98	-3.95	-0.99	19.04	30.00	-10.96
width	5240	48	AVG	17.51	16.39	20.00	23.98	-3.98	-0.99	19.01	30.00	-10.99
<u> </u>	5260	52	AVG	17.55	16.60	20.11	23.98	-3.87	0.40	20.51	30.00	-9.49
and	5280	56	AVG	17.50	16.62	20.09	23.98	-3.89	0.40	20.49	30.00	-9.51
ā	5300	60	AVG	17.39	16.60	20.02	23.98	-3.96	0.40	20.42	30.00	-9.58
<b>B</b>	5320	64	AVG	17.91	16.71	20.36	23.98	-3.62	0.40	20.76	30.00	-9.24
Ž	5500	100	AVG	17.51	16.53	20.06	23.98	-3.92	-0.81	19.25	30.00	-10.75
Ŧ	5600	120	AVG	17.65	16.86	20.28	23.98	-3.70	-0.81	19.47	30.00	-10.53
Wo	5620	124	AVG	17.62	16.82	20.25	23.98	-3.73	-0.81	19.44	30.00	-10.56
<u>8</u>	5720	144	AVG	17.76	16.86	20.34	23.98	-3.64	-0.81	19.53	30.00	-10.47
N	5745	149	AVG	17.50	16.49	20.03	30.00	-9.97	-0.58	19.45	36.00	-16.55
Ţ	5765	153	AVG	17.77	16.88	20.36	30.00	-9.64	-0.58	19.78	36.00	-16.22
56	5785	157	AVG	17.63	16.95	20.31	30.00	-9.69	-0.58	19.73	36.00	-16.27
4,	5805	161	AVG	17.49	16.89	20.21	30.00	-9.79	-0.58	19.63	36.00	-16.37
	5825	165	AVG	17.81	16.60	20.26	30.00	-9.74	-0.58	19.68	36.00	-16.32
	5845	169	AVG	17.65	16.55	20.15			-0.91	19.24	30.00	-10.76
	5865	173	AVG	17.57	16.42	20.04			-0.91	19.13	30.00	-10.87
	5885	177	AVG	17.67	16.85	20.29			-0.91	19.38	30.00	-10.62

Table 7-8. MIMO 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	ucted Power [	[dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[uDiii]	Linne [abin]	margin [ab]
	5180	36	AVG	17.71	16.95	20.36	23.98	-3.62	-0.99	19.37	30.00	-10.63
	5200	40	AVG	17.69	16.99	20.36	23.98	-3.62	-0.99	19.37	30.00	-10.63
ţ	5220	44	AVG	17.92	16.76	20.39	23.98	-3.59	-0.99	19.40	30.00	-10.60
ndwidth)	5240	48	AVG	17.86	16.76	20.36	23.98	-3.62	-0.99	19.37	30.00	-10.63
<b>≥</b>	5260	52	AVG	17.90	16.94	20.46	23.98	-3.52	0.40	20.86	30.00	-9.14
פַ	5280	56	AVG	17.85	16.92	20.42	23.98	-3.56	0.40	20.82	30.00	-9.18
<b>™</b>	5300	60	AVG	17.75	16.90	20.36	23.98	-3.62	0.40	20.76	30.00	-9.24
<b>m</b>	5320	64	AVG	17.99	17.00	20.53	23.98	-3.45	0.40	20.93	30.00	-9.07
Ň	5500	100	AVG	17.94	17.93	20.95	23.98	-3.03	-0.81	20.14	30.00	-9.86
OMHz	5600	120	AVG	17.55	16.67	20.14	23.98	-3.84	-0.81	19.33	30.00	-10.67
6	5620	124	AVG	17.48	16.71	20.12	23.98	-3.86	-0.81	19.31	30.00	-10.69
2	5720	144	AVG	17.71	16.74	20.26	23.98	-3.72	-0.81	19.45	30.00	-10.55
_	5745	149	AVG	17.66	16.72	20.23	30.00	-9.77	-0.58	19.65	36.00	-16.35
Ŧ	5765	153	AVG	17.68	16.81	20.28	30.00	-9.72	-0.58	19.70	36.00	-16.30
5G	5785	157	AVG	17.52	16.85	20.21	30.00	-9.79	-0.58	19.63	36.00	-16.37
4)	5805	161	AVG	17.45	16.76	20.13	30.00	-9.87	-0.58	19.55	36.00	-16.45
	5825	165	AVG	17.66	16.49	20.12	30.00	-9.88	-0.58	19.54	36.00	-16.46
	5845	169	AVG	17.62	16.45	20.08			-0.91	19.17	30.00	-10.83
	5865	173	AVG	17.94	17.91	20.94			-0.91	20.03	30.00	-9.97
	5885	177	AVG	17.82	16.78	20.34			-0.91	19.43	30.00	-10.57

Table 7-9. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 109 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Fage 109 01 254



	Freq [MHz] Channel Detector		Detector	Cond	ucted Power	[dBm]	Conducted Power Limit		Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		9[]
	5180	36	AVG	17.80	17.12	20.48	23.98	-3.50	-0.99	19.49	30.00	-10.51
	5200	40	AVG	17.75	17.10	20.45	23.98	-3.53	-0.99	19.46	30.00	-10.54
width	5220	44	AVG	17.96	16.81	20.43	23.98	-3.55	-0.99	19.44	30.00	-10.56
<u> </u>	5240	48	AVG	17.94	16.84	20.44	23.98	-3.54	-0.99	19.45	30.00	-10.55
<u> </u>	5260	52	AVG	17.97	16.95	20.50	23.98	-3.48	0.40	20.90	30.00	-9.10
and	5280	56	AVG	17.95	16.94	20.48	23.98	-3.50	0.40	20.88	30.00	-9.12
ā	5300	60	AVG	17.91	16.96	20.47	23.98	-3.51	0.40	20.87	30.00	-9.13
<u> </u>	5320	64	AVG	17.74	16.64	20.24	23.98	-3.74	0.40	20.64	30.00	-9.36
Ž.	5500	100	AVG	17.95	16.91	20.47	23.98	-3.51	-0.81	19.66	30.00	-10.34
Ξ	5600	120	AVG	17.65	16.76	20.24	23.98	-3.74	-0.81	19.43	30.00	-10.57
20N	5620	124	AVG	17.61	16.81	20.24	23.98	-3.74	-0.81	19.43	30.00	-10.57
(2)	5720	144	AVG	17.79	16.80	20.33	23.98	-3.65	-0.81	19.52	30.00	-10.48
N	5745	149	AVG	17.54	16.50	20.06	30.00	-9.94	-0.58	19.48	36.00	-16.52
Hz	5765	153	AVG	17.80	16.82	20.35	30.00	-9.65	-0.58	19.77	36.00	-16.23
<b>5</b> G	5785	157	AVG	17.57	16.88	20.25	30.00	-9.75	-0.58	19.67	36.00	-16.33
4,	5805	161	AVG	17.91	17.37	20.66	30.00	-9.34	-0.58	20.08	36.00	-15.92
	5825	165	AVG	17.76	16.46	20.17	30.00	-9.83	-0.58	19.59	36.00	-16.41
	5845	169	AVG	17.65	16.42	20.09			-0.91	19.18	30.00	-10.82
	5865	173	AVG	17.53	16.28	19.96			-0.91	19.05	30.00	-10.95
	5885	177	AVG	17.86	16.76	20.36			-0.91	19.45	30.00	-10.55

Table 7-10. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Cond	ucted Power	[dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[uDiii]	Linnit [abin]	margin [ab]
	5180	36	AVG	17.87	17.04	20.49	23.98	-3.49	-0.99	19.50	30.00	-10.50
	5200	40	AVG	17.79	17.00	20.42	23.98	-3.56	-0.99	19.43	30.00	-10.57
<b>\$</b>	5220	44	AVG	17.98	16.79	20.44	23.98	-3.54	-0.99	19.45	30.00	-10.55
<u> </u>	5240	48	AVG	17.93	16.82	20.42	23.98	-3.56	-0.99	19.43	30.00	-10.57
andwidth	5260	52	AVG	17.98	16.90	20.48	23.98	-3.50	0.40	20.88	30.00	-9.12
힏	5280	56	AVG	17.90	16.87	20.43	23.98	-3.55	0.40	20.83	30.00	-9.17
	5300	60	AVG	17.83	16.88	20.39	23.98	-3.59	0.40	20.79	30.00	-9.21
Ω	5320	64	AVG	17.99	16.95	20.51	23.98	-3.47	0.40	20.91	30.00	-9.09
Ž	5500	100	AVG	17.99	16.90	20.49	23.98	-3.49	-0.81	19.68	30.00	-10.32
Ê	5600	120	AVG	17.64	16.76	20.23	23.98	-3.75	-0.81	19.42	30.00	-10.58
WO	5620	124	AVG	17.56	16.86	20.23	23.98	-3.75	-0.81	19.42	30.00	-10.58
<u> </u>	5720	144	AVG	17.72	16.83	20.31	23.98	-3.67	-0.81	19.50	30.00	-10.50
N	5745	149	AVG	17.84	16.83	20.37	30.00	-9.63	-0.58	19.79	36.00	-16.21
Ξ	5765	153	AVG	17.74	16.77	20.29	30.00	-9.71	-0.58	19.71	36.00	-16.29
5G	5785	157	AVG	17.59	16.84	20.24	30.00	-9.76	-0.58	19.66	36.00	-16.34
	5805	161	AVG	17.94	17.35	20.67	30.00	-9.33	-0.58	20.09	36.00	-15.91
	5825	165	AVG	17.79	16.52	20.21	30.00	-9.79	-0.58	19.63	36.00	-16.37
	5845	169	AVG	17.67	16.47	20.12			-0.91	19.21	30.00	-10.79
	5865	173	AVG	17.58	16.37	20.03			-0.91	19.12	30.00	-10.88
	5885	177	AVG	17.89	16.76	20.37			-0.91	19.46	30.00	-10.54

Table 7-11. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 110 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 110 of 254



Fre	Freq [MHz]	Channel	Detector	Cond	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		g [u=]
	5190	38	AVG	16.75	16.06	19.43	23.98	-4.55	-0.99	18.44	30.00	-11.56
	5230	46	AVG	16.97	15.94	19.50	23.98	-4.48	-0.99	18.51	30.00	-11.49
	5270	54	AVG	16.98	16.19	19.61	23.98	-4.37	0.40	20.01	30.00	-9.99
	5310	62	AVG	16.74	16.02	19.41	23.98	-4.57	0.40	19.81	30.00	-10.19
	5510	102	AVG	16.01	16.75	19.41	23.98	-4.57	-0.81	18.60	30.00	-11.40
	5590	118	AVG	16.69	16.82	19.77	23.98	-4.21	-0.81	18.96	30.00	-11.04
	5630	126	AVG	16.80	16.47	19.65	23.98	-4.33	-0.81	18.84	30.00	-11.16
	5710	142	AVG	16.98	16.87	19.94	23.98	-4.04	-0.81	19.13	30.00	-10.87
	5755	151	AVG	16.76	15.72	19.28	30.00	-10.72	-0.58	18.70	36.00	-17.30
	5795	159	AVG	16.96	16.21	19.61	30.00	-10.39	-0.58	19.03	36.00	-16.97
	5835	167	AVG	16.91	15.73	19.37			-0.91	18.46	30.00	-11.54
	5875	175	AVG	16.66	15.62	19.18			-0.91	18.27	30.00	-11.73

Table 7-12. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

dth)	Freq [MHz]	Channel	Detector	Cond	lucted Power	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
<u> </u>				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
` <b>≥</b>	5190	38	AVG	16.57	16.99	19.80	23.98	-4.18	-0.99	18.81	30.00	-11.19
p	5230	46	AVG	16.78	16.91	19.86	23.98	-4.12	-0.99	18.87	30.00	-11.13
Ø	5270	54	AVG	16.21	16.63	19.44	23.98	-4.54	0.40	19.84	30.00	-10.16
Ω	5310	62	AVG	16.57	16.71	19.65	23.98	-4.33	0.40	20.05	30.00	-9.95
Ň	5510	102	AVG	16.08	16.79	19.46	23.98	-4.52	-0.81	18.65	30.00	-11.35
Ŧ	5590	118	AVG	16.77	16.88	19.84	23.98	-4.14	-0.81	19.03	30.00	-10.97
(40M	5630	126	AVG	16.98	16.45	19.73	23.98	-4.25	-0.81	18.92	30.00	-11.08
4	5710	142	AVG	16.64	16.31	19.49	23.98	-4.49	-0.81	18.68	30.00	-11.32
N	5755	151	AVG	16.80	16.76	19.79	30.00	-10.21	-0.58	19.21	36.00	-16.79
Į	5795	159	AVG	16.70	16.75	19.74	30.00	-10.26	-0.58	19.16	36.00	-16.84
<b>2</b> G	5835	167	AVG	16.91	16.42	19.68			-0.91	18.77	30.00	-11.23
4/	5875	175	AVG	16.73	16.30	19.53			-0.91	18.62	30.00	-11.38

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

th)	Freq [MHz]	Channel	Detector	Cond	ucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
<u> </u>				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		g [u.=]
_ ≥	5190	38	AVG	16.52	16.74	19.64	23.98	-4.34	-0.99	18.65	30.00	-11.35
n d	5230	46	AVG	16.50	16.65	19.59	23.98	-4.39	-0.99	18.60	30.00	-11.40
Ø	5270	54	AVG	16.48	16.88	19.69	23.98	-4.29	0.40	20.09	30.00	-9.91
Ω	5310	62	AVG	16.87	16.99	19.94	23.98	-4.04	0.40	20.34	30.00	-9.66
Ň	5510	102	AVG	16.38	16.98	19.70	23.98	-4.28	-0.81	18.89	30.00	-11.11
Ξ	5590	118	AVG	16.56	16.57	19.58	23.98	-4.40	-0.81	18.77	30.00	-11.23
6	5630	126	AVG	16.68	16.22	19.47	23.98	-4.51	-0.81	18.66	30.00	-11.34
(40	5710	142	AVG	16.89	16.67	19.79	23.98	-4.19	-0.81	18.98	30.00	-11.02
N	5755	151	AVG	16.60	16.56	19.59	30.00	-10.41	-0.58	19.01	36.00	-16.99
Ï	5795	159	AVG	16.40	16.60	19.51	30.00	-10.49	-0.58	18.93	36.00	-17.07
56	5835	167	AVG	16.95	16.74	19.86			-0.91	18.95	30.00	-11.05
4)	5875	175	AVG	16.80	16.64	19.73			-0.91	18.82	30.00	-11.18

Table 7-14. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS911U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 111 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	rage III 01 254



/idth)	Freq [MHz]	Channel	Detector	Cond	ucted Power	[dBm]	Conducted Power Limit		Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
\$				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
Ban	5210	42	AVG	15.44	15.77	18.62	23.98	-5.36	-0.99	17.63	30.00	-12.37
Z B	5290	58	AVG	15.29	15.93	18.63	23.98	-5.35	0.40	19.03	30.00	-10.97
Ï	5530	106	AVG	15.11	15.95	18.56	23.98	-5.42	-0.81	17.75	30.00	-12.25
(80 N	5610	122	AVG	15.81	15.99	18.91	23.98	-5.07	-0.81	18.10	30.00	-11.90
	5690	138	AVG	15.83	15.50	18.68	23.98	-5.30	-0.81	17.87	30.00	-12.13
GHz	5775	155	AVG	15.57	15.52	18.56	30.00	-11.44	-0.58	17.98	36.00	-18.02
5(	5855	171	AVG	15.61	15.11	18.38			-0.91	17.47	30.00	-12.53

Table 7-15. MIMO 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

ndwidth)	Freq [MHz]	Channel	Detector	Cond	ucted Power	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
ð				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
Ban	5210	42	AVG	15.62	15.72	18.68	23.98	-5.30	-0.99	17.69	30.00	-12.31
	5290	58	AVG	15.36	15.98	18.69	23.98	-5.29	0.40	19.09	30.00	-10.91
MHZ	5530	106	AVG	15.20	15.91	18.58	23.98	-5.40	-0.81	17.77	30.00	-12.23
(80N	5610	122	AVG	15.40	15.58	18.50	23.98	-5.48	-0.81	17.69	30.00	-12.31
Z (8	5690	138	AVG	15.86	15.58	18.73	23.98	-5.25	-0.81	17.92	30.00	-12.08
I	5775	155	AVG	15.54	15.54	18.55	30.00	-11.45	-0.58	17.97	36.00	-18.03
5G	5855	171	AVG	15.68	15.21	18.46			-0.91	17.55	30.00	-12.45

Table 7-16. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

OMHz dth)	Freq [MHz] Channel Det		Detector	Cond	ucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
<u> 5</u>				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]			
z (1 ndv	5250	50	AVG	15.54	15.76	18.66	23.98	-5.32	-0.99	17.67	30.00	-12.33
GH; Baı	5570	114	AVG	15.57	15.91	18.75	23.98	-5.23	-0.81	17.94	36.00	-18.06
50	5815	163	AVG	15.95	15.98	18.98			-0.91	18.07	30.00	-11.93

Table 7-17. MIMO 160MHz BW 802.11ac (UNII) Maximum Conducted Output Power

5GHz (160MHz Bandwidth)	Freq [MHz]	Channel	Detector	Conducted Power [dBm]			Conducted Power Limit		Directional Ant. Gain	Max e.i.r.p.	Max e.i.r.p.	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]			<b>.</b>
	5250	50	AVG	15.51	15.73	18.63	23.98	-5.35	-0.99	17.64	30.00	-12.36
	5570	114	AVG	15.53	15.86	18.71	23.98	-5.27	-0.81	17.90	36.00	-18.10
	5815	163	AVG	15.91	15.98	18.96			-0.91	18.05	30.00	-11.95

Table 7-18. MIMO 160MHz BW 802.11ax (UNII) Maximum Conducted Output Power

FCC ID: A3LSMS911U		Approved by: Technical Manager			
Test Report S/N:	Test Dates:	EUT Type:	Page 112 of 254		
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	rage 112 01 204		



#### Note:

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

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

Directional gain = 
$$10 \log[(10^{G_1/20} + 10^{G_2/20} + ... + 10^{G_N/20})^2 / N_{ANT}] dBi$$

#### **Sample MIMO Calculation:**

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 17.71 dBm for Antenna 1 and 16.95 dBm for Antenna 2.

$$(17.71 \text{ dBm} + 16.95 \text{ dBm}) = (59.02 \text{ mW} + 49.55 \text{ mW}) = 108.57 \text{ mW} = 20.36 \text{ dBm}$$

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

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 20.36 dBm with directional gain of -0.99 dBi.

FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogg 112 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 113 of 254



## 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 band, the maximum permissible power spectral density is 11dBm/MHz.

In the  $5.25-5.35 \mathrm{GHz}$  and  $5.47-5.725 \mathrm{GHz}$  bands, the maximum permissible power spectral density is  $11 \mathrm{dBm/MHz}$ .

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

In the 5.850 – 5.895 GHz, the maximum power spectral density must not exceed 14dBm/MHz e.i.r.p.

#### **Test Procedure Used**

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

#### **Test Settings**

- 1. Analyzer was set to the center frequency of the UNII channel under investigation
- 2. Span was set to encompass the entire emission bandwidth of the signal
- 3. RBW = 1MHz
- 4. VBW = 3MHz
- 5. Number of sweep points > 2 x (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

FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 114 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 114 01 254



# **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	5.36	6.27	8.85	11.0	-2.15
	5200	40	а	6	5.37	6.42	8.93	11.0	-2.07
	5240	48	а	6	5.13	6.12	8.66	11.0	-2.34
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	6.27	4.63	8.54	11.0	-2.46
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.38	4.94	8.73	11.0	-2.27
Band 1	5240	48	n (20MHz)	6.5/7.2 (MCS0)	6.48	4.54	8.63	11.0	-2.37
_	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	5.06	4.70	7.89	11.0	-3.11
nd	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	5.08	4.93	8.02	11.0	-2.98
Ba	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	5.51	4.84	8.20	11.0	-2.80
	5190	38	n (40MHz)	13.5/15 (MCS0)	2.18	0.84	4.57	11.0	-6.43
	5230	46	n (40MHz)	13.5/15 (MCS0)	2.66	0.98	4.91	11.0	-6.09
	5190	38	ax (40MHz)	13.5/15 (MCS0)	1.14	0.67	3.92	11.0	-7.08
	5230	46	ax (40MHz)	13.5/15 (MCS0)	1.25	1.00	4.14	11.0	-6.86
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-2.90	-4.07	-0.43	11.0	-11.43
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-2.83	-3.41	-0.10	11.0	-11.10
ㅁ	5250	50	ac (160MHz)	58.5/65 (MCS0)	-5.71	-3.94	-1.72	11.0	-12.72
Band 1/2	5250	50	ax (160MHz)	58.5/65 (MCS0)	-4.92	-4.38	-1.63	11.0	-12.63
_	5260	52	a a	6	4.95	6.21	8.64	11.0	-2.36
	5280	56	а	6	5.07	6.29	8.73	11.0	-2.27
	5320	64	а	6	5.22	6.09	8.69	11.0	-2.31
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.36	4.83	8.67	11.0	-2.33
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.44	4.68	8.66	11.0	-2.34
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	6.31	4.79	8.63	11.0	-2.37
∢			, ,	` '					
Band 2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	5.37	4.83	8.12	11.0	-2.88
	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	5.33	4.66	8.02	11.0	-2.98
ш	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	4.96	4.80	7.89	11.0	-3.11
	5270	54	n (40MHz)	13.5/15 (MCS0)	2.68	0.96	4.92	11.0	-6.08
	5310	62	n (40MHz)	13.5/15 (MCS0)	2.61	0.79	4.81	11.0	-6.19
	5270	54	ax (40MHz)	13.5/15 (MCS0)	1.21	0.83	4.03	11.0	-6.97
	5310	62	ax (40MHz)	13.5/15 (MCS0)	1.62	0.93	4.30	11.0	-6.70
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-2.26	-3.26	0.28	11.0	-10.72
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-3.09	-3.28	-0.17	11.0	-11.17
	5500	100	а	6	5.33	6.05	8.72	11.0	-2.28
	5600	120	а	6	4.96	6.47	8.79	11.0	-2.21
	5720	144	а	6	5.99	6.80	9.42	11.0	-1.58
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	6.40	4.64	8.62	11.0	-2.38
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	5.96	4.85	8.45	11.0	-2.55
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.46	5.08	8.83	11.0	-2.17
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	5.21	4.84	8.04	11.0	-2.96
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	4.82	4.74	7.79	11.0	-3.21
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	5.57	5.17	8.38	11.0	-2.62
	5510	102	n (40MHz)	13.5/15 (MCS0)	1.74	1.49	4.62	11.0	-6.38
2C	5590	118	n (40MHz)	13.5/15 (MCS0)	2.45	0.47	4.58	11.0	-6.42
Band 2C	5710	142	n (40MHz)	13.5/15 (MCS0)	2.87	0.91	5.01	11.0	-5.99
Ва	5510	102	ax (40MHz)	13.5/15 (MCS0)	0.96	1.05	4.02	11.0	-6.98
	5590	118	ax (40MHz)	13.5/15 (MCS0)	1.19	0.50	3.87	11.0	-7.13
	5710	142	ax (40MHz)	13.5/15 (MCS0)	1.80	1.22	4.53	11.0	-6.47
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-2.60	-3.04	0.20	11.0	-10.80
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-2.45	-3.72	-0.03	11.0	-11.03
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-2.01	-2.81	0.62	11.0	-10.38
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-2.69	-3.27	0.04	11.0	-10.96
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-3.63	-4.06	-0.83	11.0	-11.83
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-2.58	-3.19	0.14	11.0	-10.86
	5570	114	ac (160MHz)	58.5/65 (MCS0)	-5.36	-4.71	-2.01	11.0	-13.01
			, ,	` ′					-13.42
	5570	114	ax (160MHz)	58.5/65 (MCS0)	-5.62	-5.26	-2.42	11.0	_

Table 7-19. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 115 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 115 of 254



	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]		Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
	5745	149	а	6	2.87	4.08	6.53	30.0	-23.47
	5785	157	а	6	3.53	3.89	6.72	30.0	-23.28
	5825	165	а	6	3.23	3.52	6.39	30.0	-23.61
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	3.99	2.75	6.42	30.0	-23.58
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	3.58	2.15	5.94	30.0	-24.06
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	3.39	1.87	5.70	30.0	-24.30
က	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	2.81	2.48	5.66	30.0	-24.34
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	2.81	2.36	5.60	30.0	-24.40
ă	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	3.28	2.02	5.71	30.0	-24.29
	5755	151	n (40MHz)	13.5/15 (MCS0)	-0.61	-1.85	1.83	30.0	-28.17
	5795	159	n (40MHz)	13.5/15 (MCS0)	-0.20	-1.46	2.22	30.0	-27.78
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-1.19	-1.92	1.47	30.0	-28.53
	5795	159	ax (40MHz)	13.5/15 (MCS0)	-1.42	-1.58	1.51	30.0	-28.49
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-5.13	-5.68	-2.39	30.0	-32.39
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-5.49	-6.03	-2.74	30.0	-32.74

Table 7-20. Band 3 MIMO Conducted Power Spectral Density Measurements

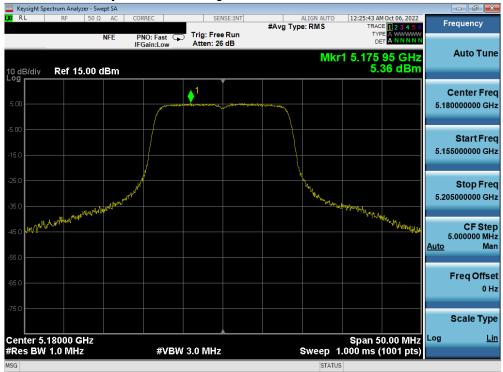
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 Power Density [dBm/MHz]	Antenna-2 Power Density [dBm/MHz]	MIMO Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	EIRP Power Density [dBm/MHz]	Max EIRP Power Density [dBm/MHz]	Margin [dB]
Band 3/4	5845	169	а	6	6.09	4.93	8.56	-0.91	7.65	14.00	-6.35
Band 4	5865	173	а	6	6.42	5.13	8.83	-0.91	7.93	14.00	-6.07
Dallu 4	5885	177	а	6	6.32	5.41	8.90	-0.91	7.99	14.00	-6.01
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	6.12	4.79	8.52	-0.91	7.61	14.00	-6.39
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	6.40	5.36	8.92	-0.91	8.01	14.00	-5.99
Dallu 4	5885	177	n (20MHz)	6.5/7.2 (MCS0)	6.35	5.50	8.96	-0.91	8.05	14.00	-5.95
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	6.31	5.25	8.82	-0.91	7.92	14.00	-6.08
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	6.11	5.12	8.65	-0.91	7.75	14.00	-6.25
Dallu 4	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	6.27	5.30	8.82	-0.91	7.92	14.00	-6.08
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	2.23	1.05	4.69	-0.91	3.78	14.00	-10.22
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	1.88	0.98	4.47	-0.91	3.56	14.00	-10.44
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	2.55	1.41	5.02	-0.91	4.12	14.00	-9.88
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	2.27	1.18	4.77	-0.91	3.86	14.00	-10.14
	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	-2.08	-3.19	0.41	-0.91	-0.50	14.00	-14.50
Pand 2/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	-1.56	-3.14	0.73	-0.91	-0.18	14.00	-14.18
Band 3/4	5815	163	ac (160MHz)	58.5/65 (MCS0)	-4.68	-4.08	-1.36	-0.91	-2.26	14.00	-16.26
	5815	163	ax (160MHz)	58.5/65 (MCS0)	-4.77	-3.69	-1.18	-0.91	-2.09	14.00	-16.09

Table 7-21. Band 3/4 MIMO Conducted Power Spectral Density Measurements

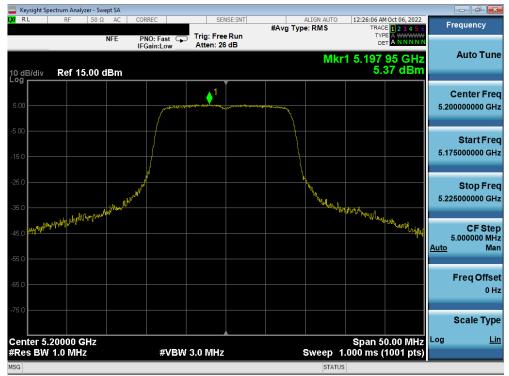
FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 116 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	raye 110 01 254



### MIMO Antenna-1 Power Spectral Density Measurements



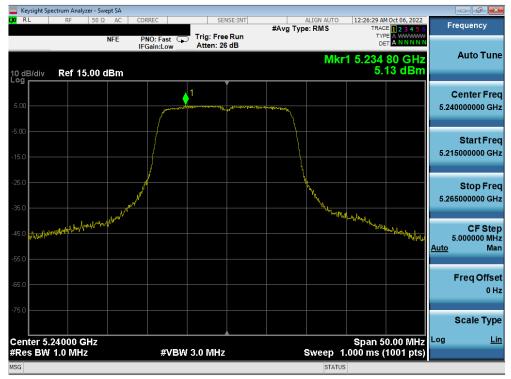
Plot 7-175. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 36)



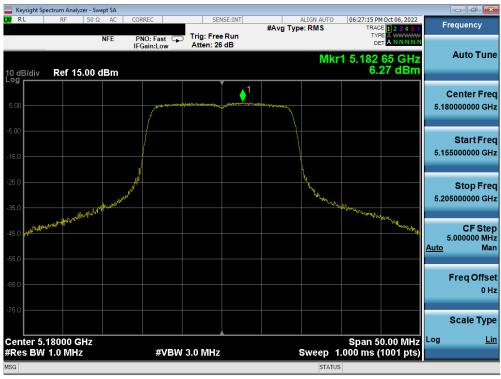
Plot 7-176. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 117 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Fage 117 01 254





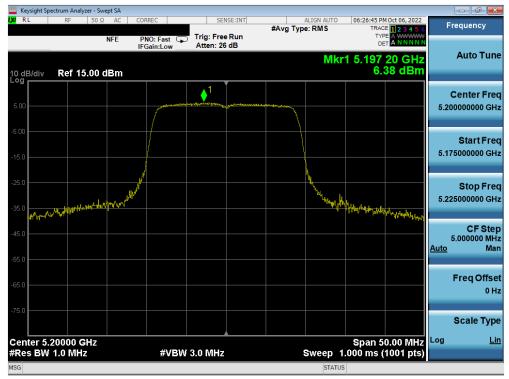
Plot 7-177. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 1) - Ch. 48)



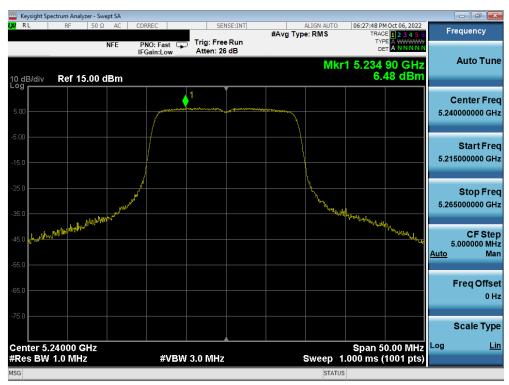
Plot 7-178. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)

FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 118 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 116 01 254





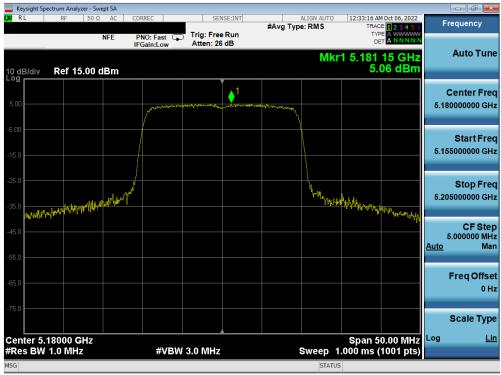
Plot 7-179. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)



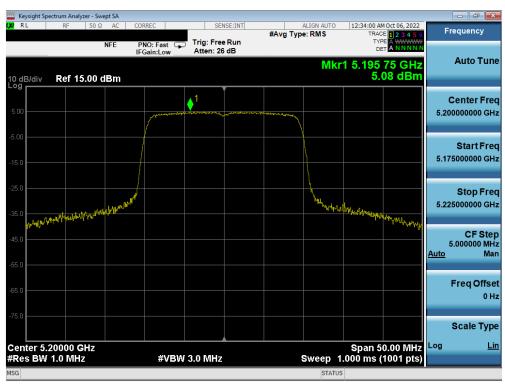
Plot 7-180. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 110 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 119 of 254





Plot 7-181. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)



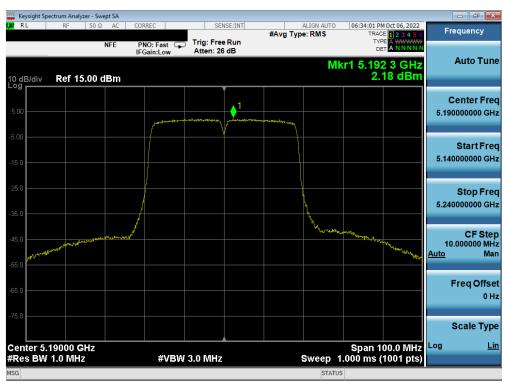
Plot 7-182. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 120 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 120 of 254





Plot 7-183. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)



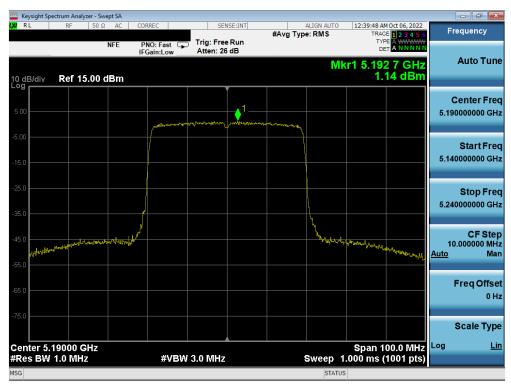
Plot 7-184. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)

FCC ID: A3LSMS911U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dags 101 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 121 of 254





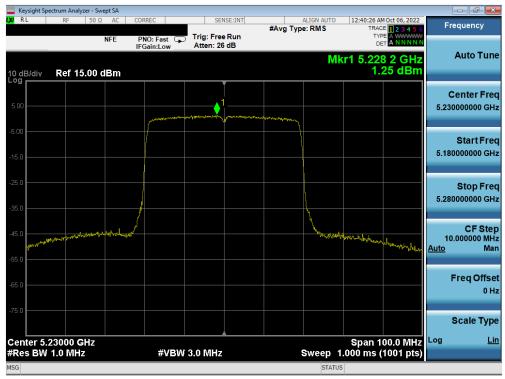
Plot 7-185. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)



Plot 7-186. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 122 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 122 01 254





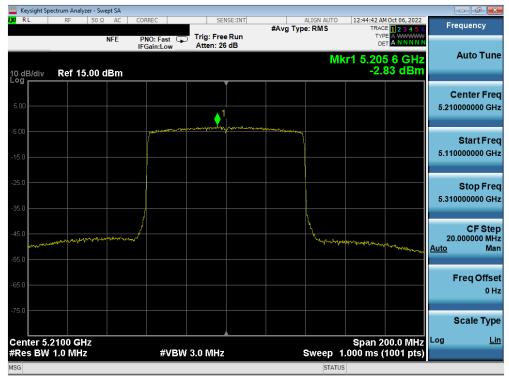
Plot 7-187. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)



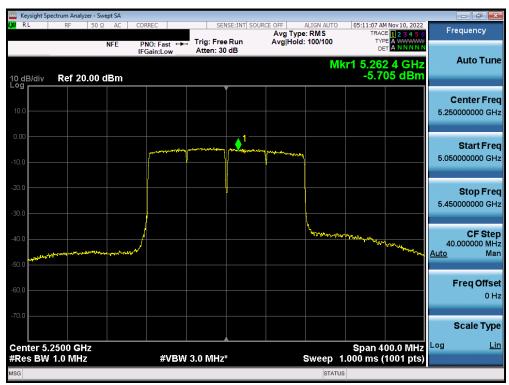
Plot 7-188. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 122 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 123 of 254





Plot 7-189. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)



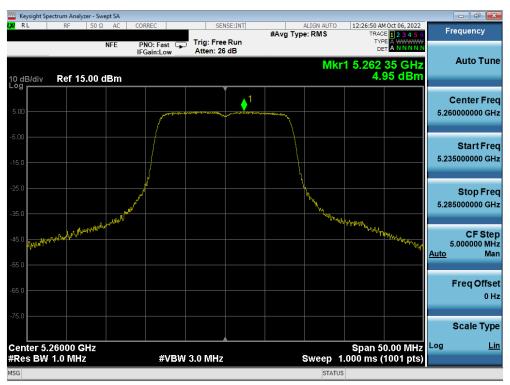
Plot 7-190. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ac (UNII Band 1/2A) - Ch. 50)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 104 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 124 of 254





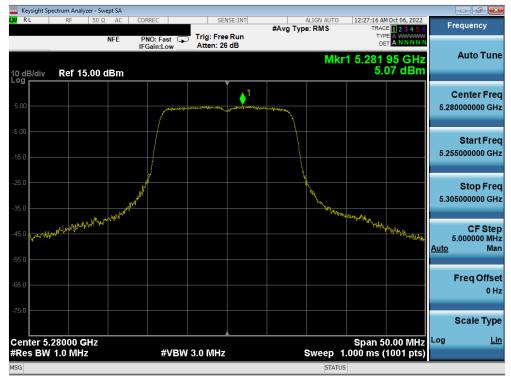
Plot 7-191. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax (UNII Band 1/2A) - Ch. 50)



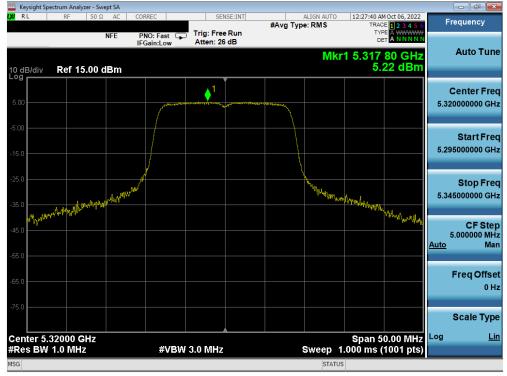
Plot 7-192. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 125 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 125 of 254





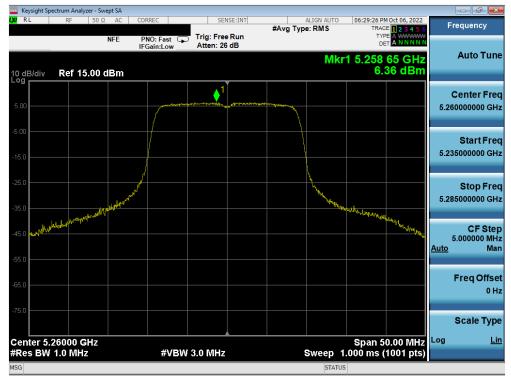
Plot 7-193. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 56)



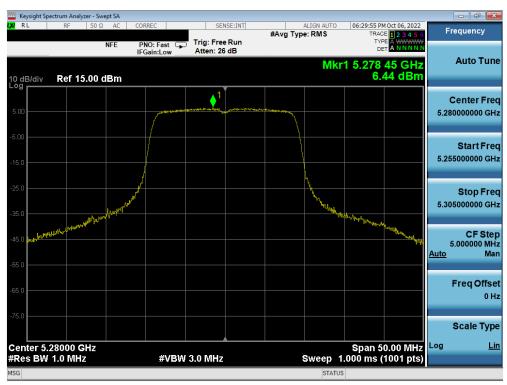
Plot 7-194. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 126 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 126 of 254





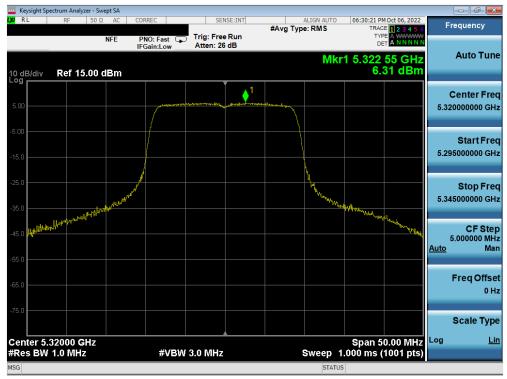
Plot 7-195. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)



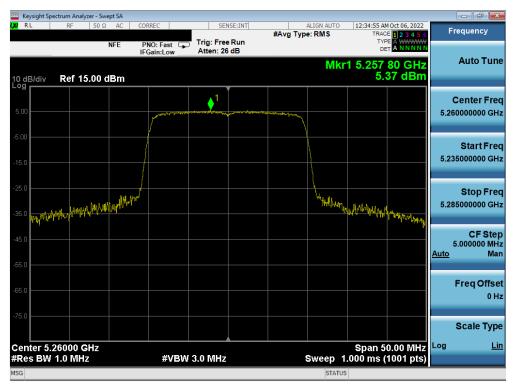
Plot 7-196. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 127 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 127 01 254





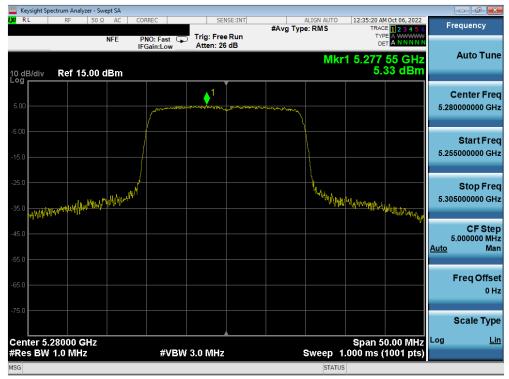
Plot 7-197. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)



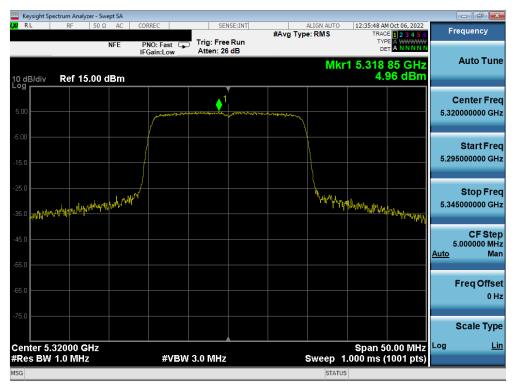
Plot 7-198. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 100 of 054
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 128 of 254





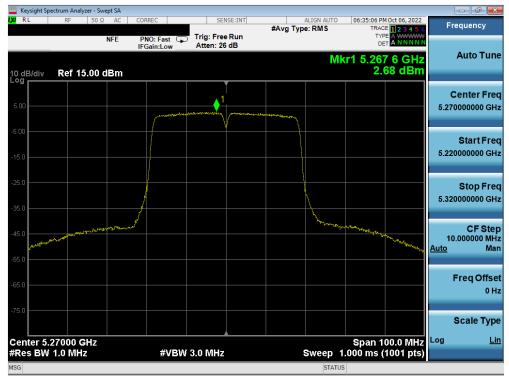
Plot 7-199. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 56)



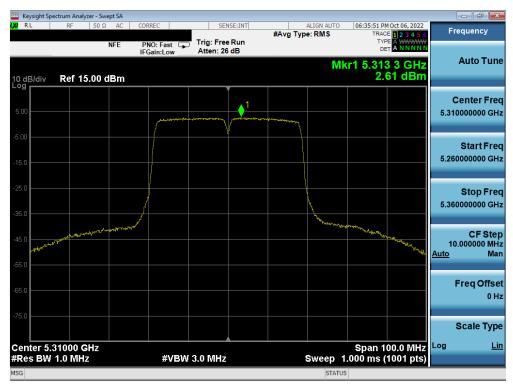
Plot 7-200. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 129 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 129 01 254





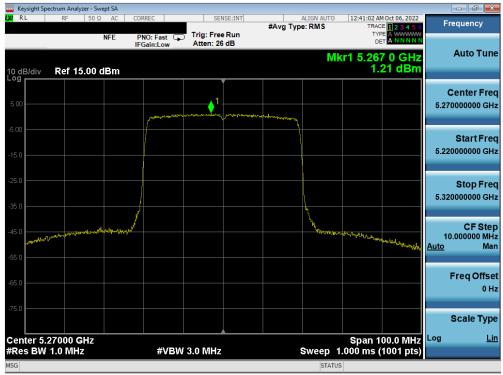
Plot 7-201. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)



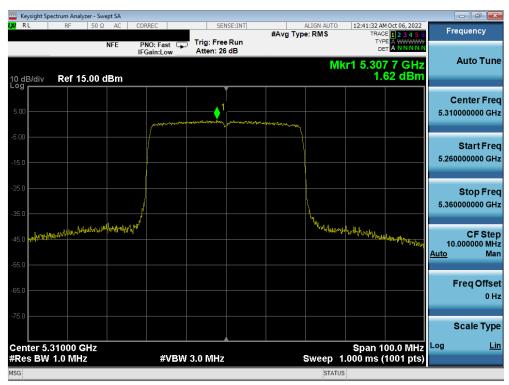
Plot 7-202. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 120 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 130 of 254





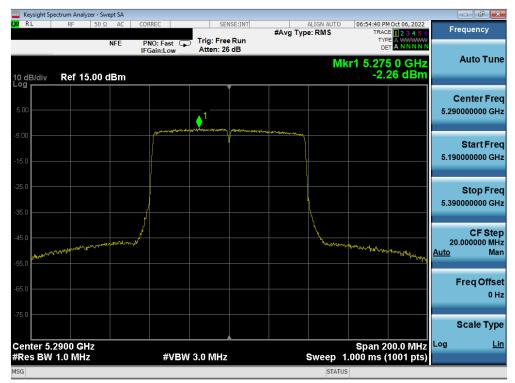
Plot 7-203. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)



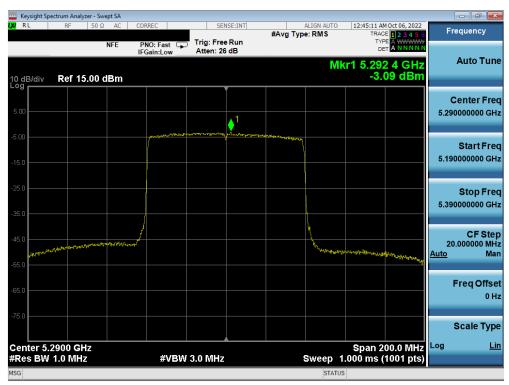
Plot 7-204. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 121 of 251
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 131 of 254





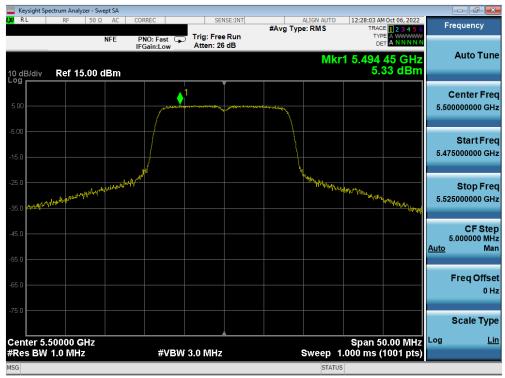
Plot 7-205. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)



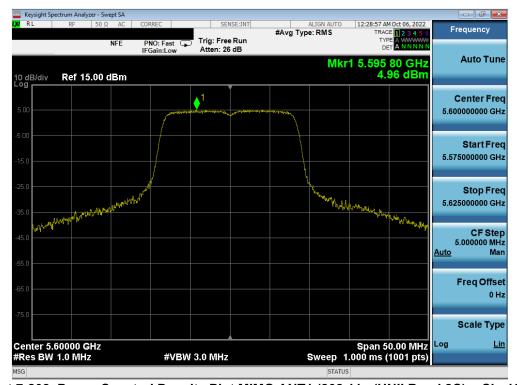
Plot 7-206. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 122 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 132 of 254





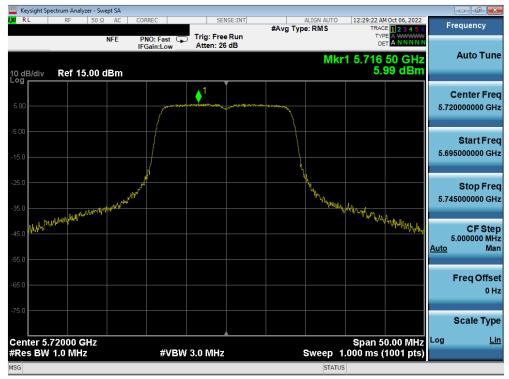
Plot 7-207. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 100)



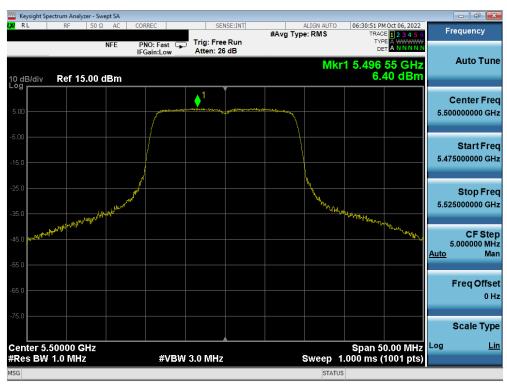
Plot 7-208. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 133 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 133 01 254





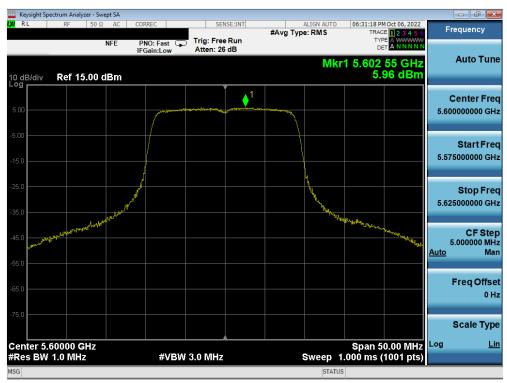
Plot 7-209. Power Spectral Density Plot MIMO ANT1 (802.11a (UNII Band 2C) - Ch. 144)



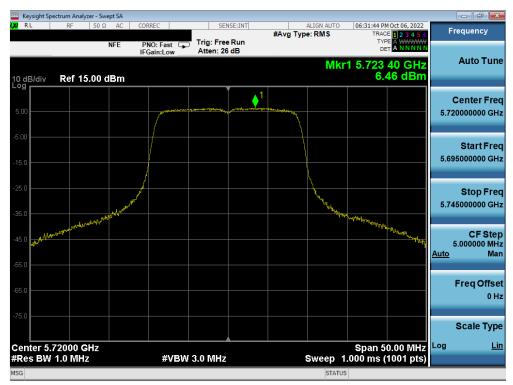
Plot 7-210. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 124 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 134 of 254





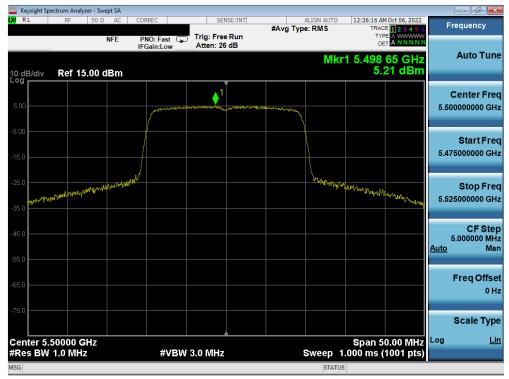
Plot 7-211. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



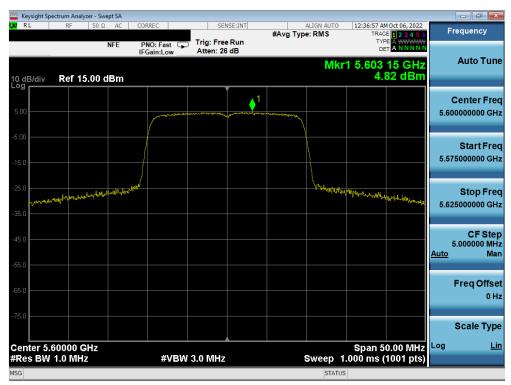
Plot 7-212. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 125 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 135 of 254





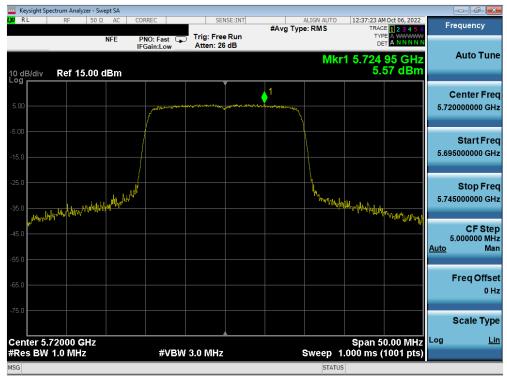
Plot 7-213. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



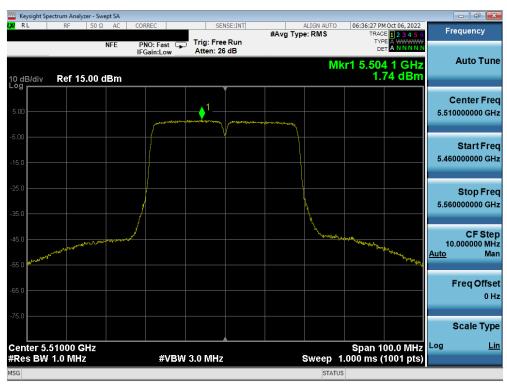
Plot 7-214. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 126 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 136 of 254





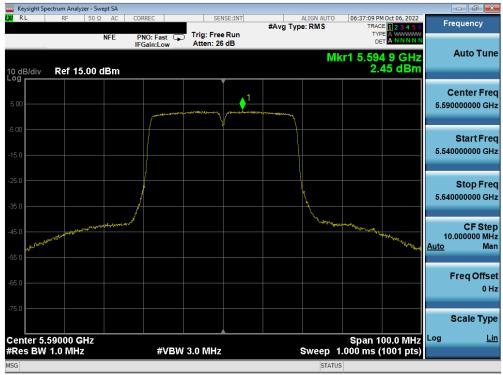
Plot 7-215. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



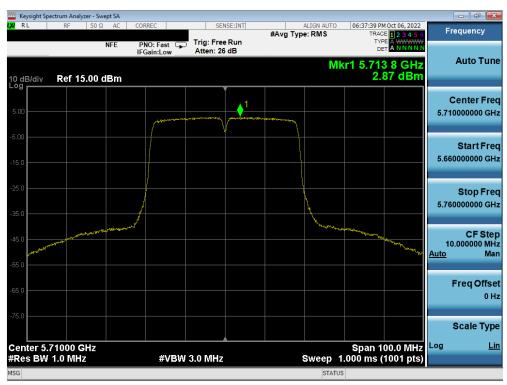
Plot 7-216. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dog 127 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 137 of 254





Plot 7-217. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



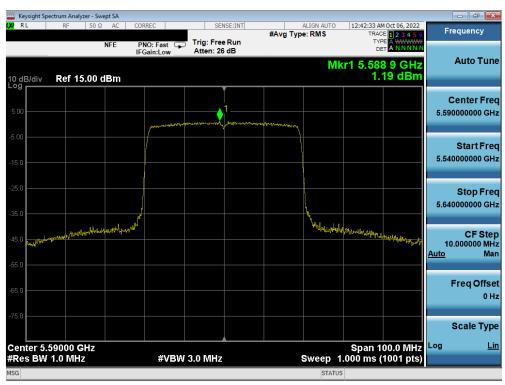
Plot 7-218. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 120 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 138 of 254





Plot 7-219. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



Plot 7-220. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: A3LSMS911U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 120 of 254
1M2209010096-13-R1.A3L	09/02 - 11/08/2022	Portable Handset	Page 139 of 254