

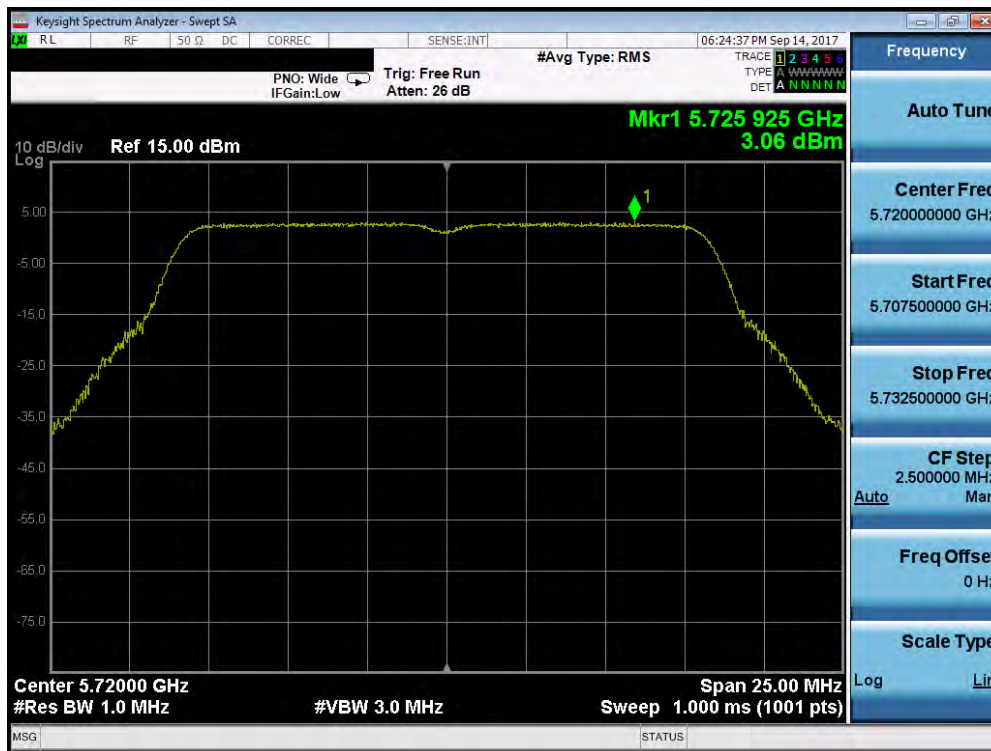


Plot 7-97. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 100)

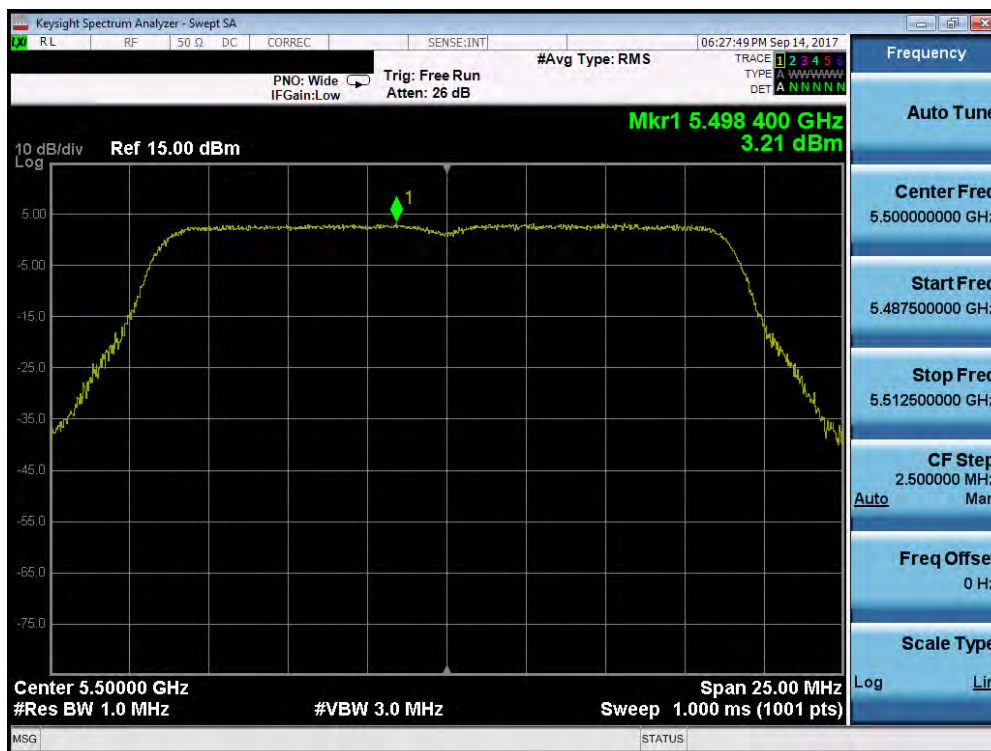


Plot 7-98. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 76 of 258

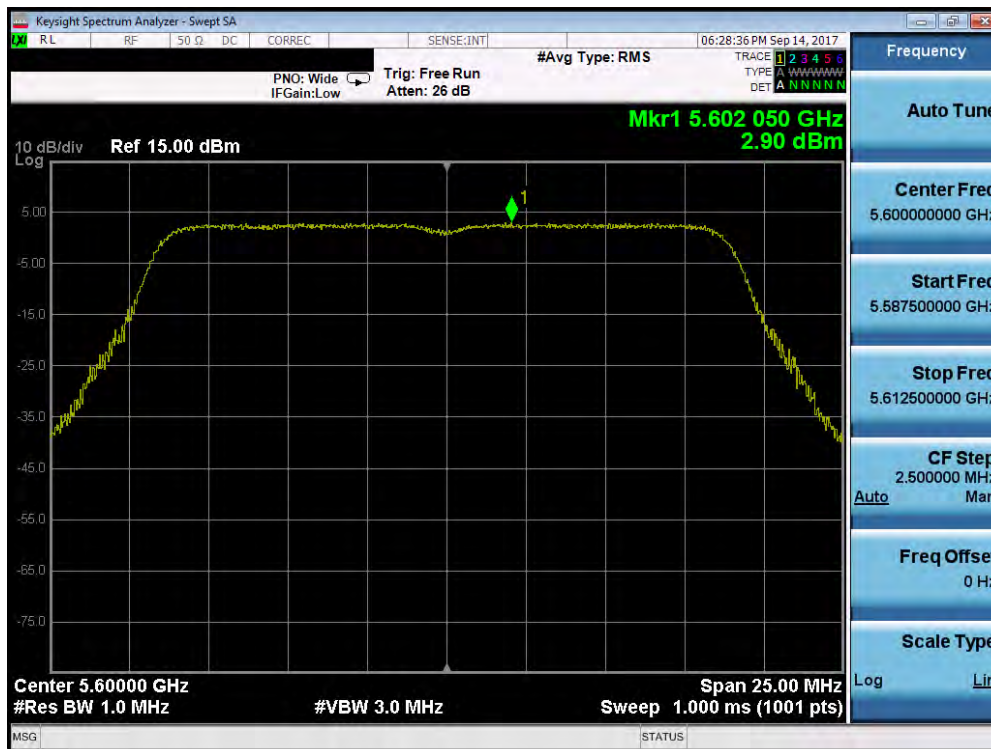


Plot 7-99. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 144)



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

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 77 of 258



Plot 7-101. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

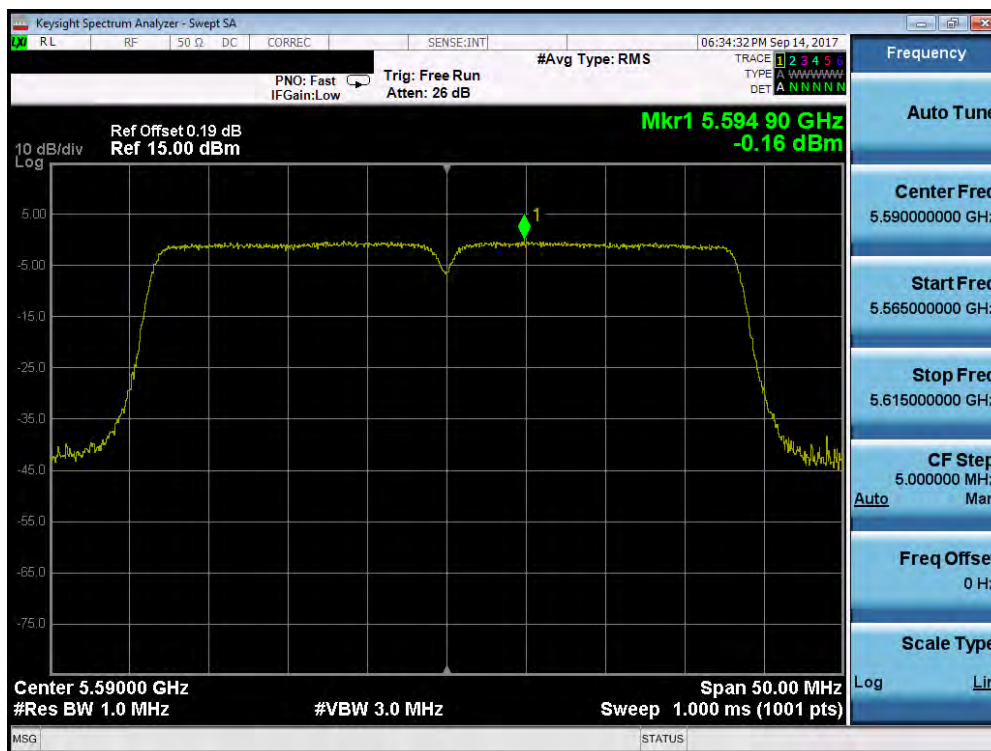


Plot 7-102. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 78 of 258

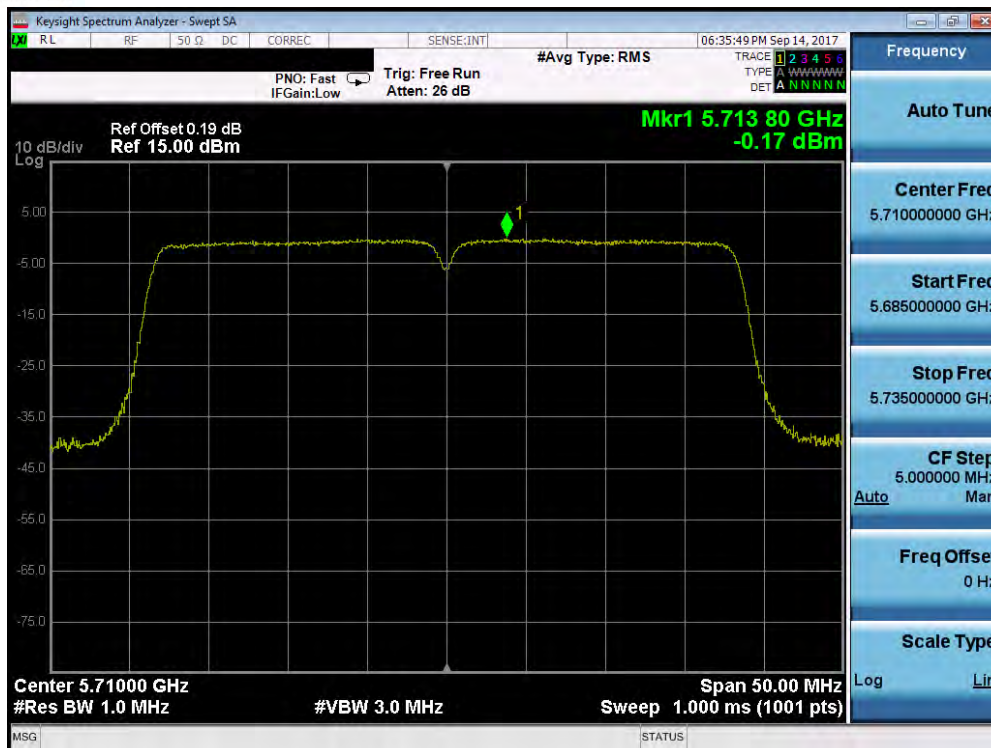


Plot 7-103. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)



Plot 7-104. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 79 of 258

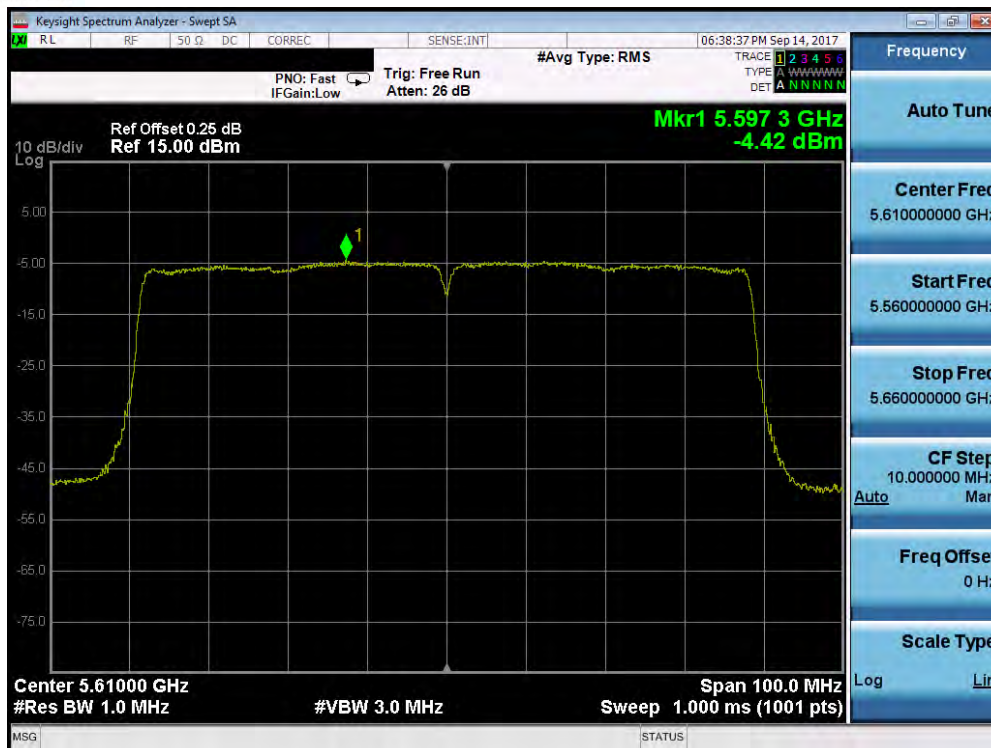


Plot 7-105. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)



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

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 80 of 258



Plot 7-107. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

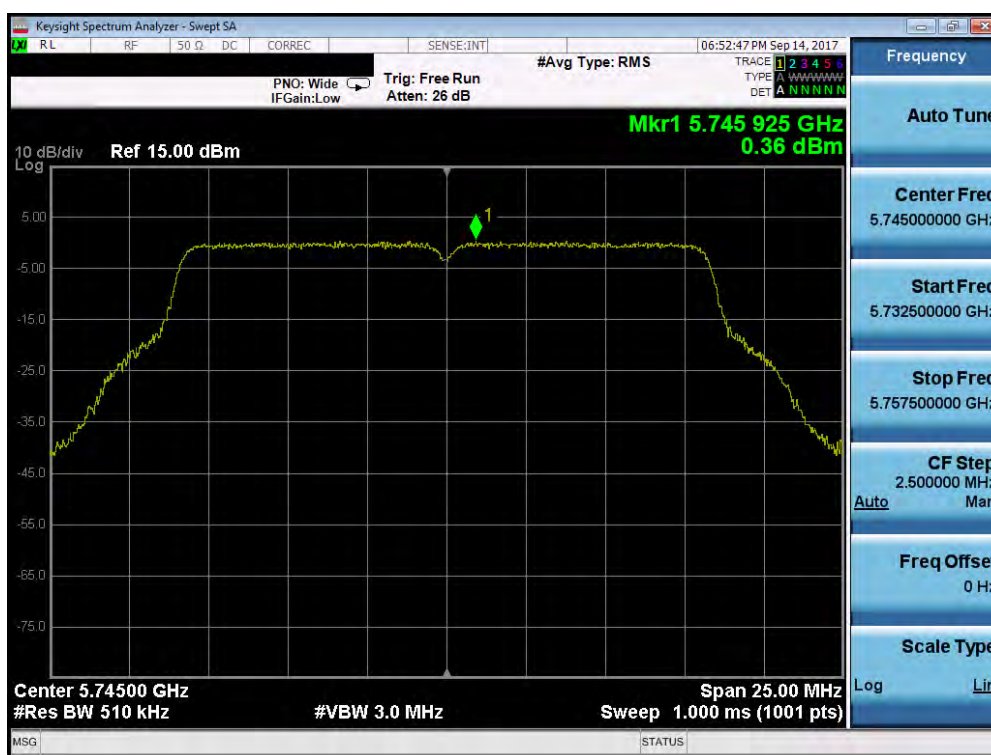


Plot 7-108. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 81 of 258

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	0.36	30.0	-29.64
	5785	157	a	6	0.46	30.0	-29.54
	5825	165	a	6	1.03	30.0	-28.98
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-0.13	30.0	-30.13
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	0.19	30.0	-29.81
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	0.80	30.0	-29.20
	5755	151	n (40MHz)	13.5/15 (MCS0)	-3.02	30.0	-33.02
	5795	159	n (40MHz)	13.5/15 (MCS0)	-2.65	30.0	-32.65
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-4.09	30.0	-34.09

Table 7-19. Band 3 Conducted Power Spectral Density Measurements



Plot 7-109. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 149)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 82 of 258

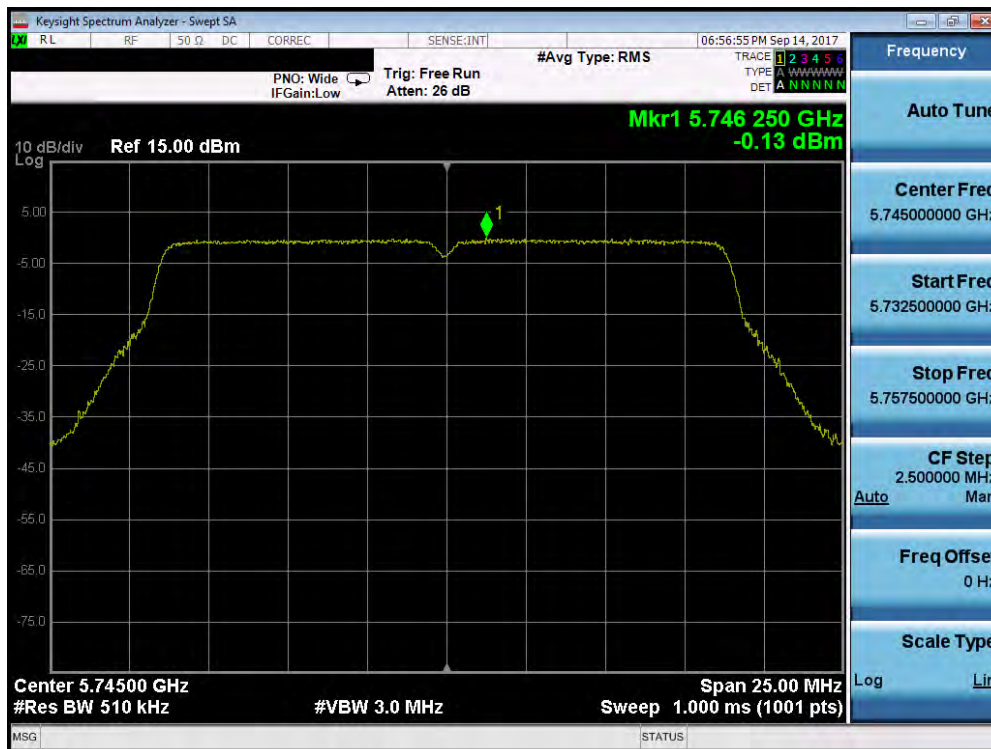


Plot 7-110. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 157)



Plot 7-111. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 83 of 258



Plot 7-112. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

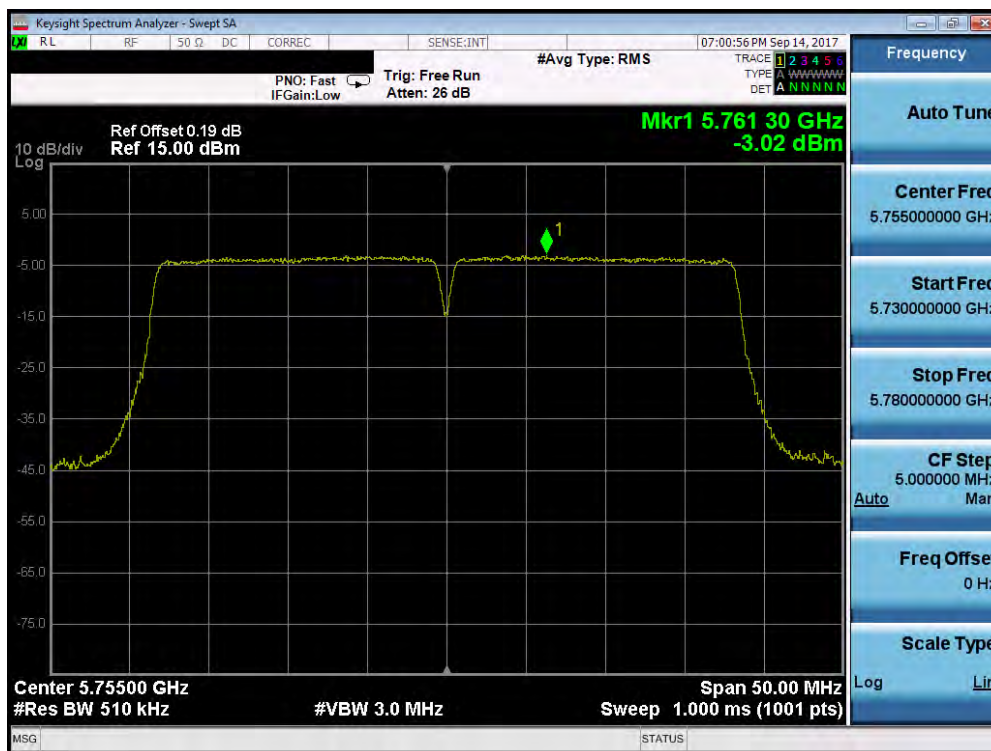


Plot 7-113. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 84 of 258

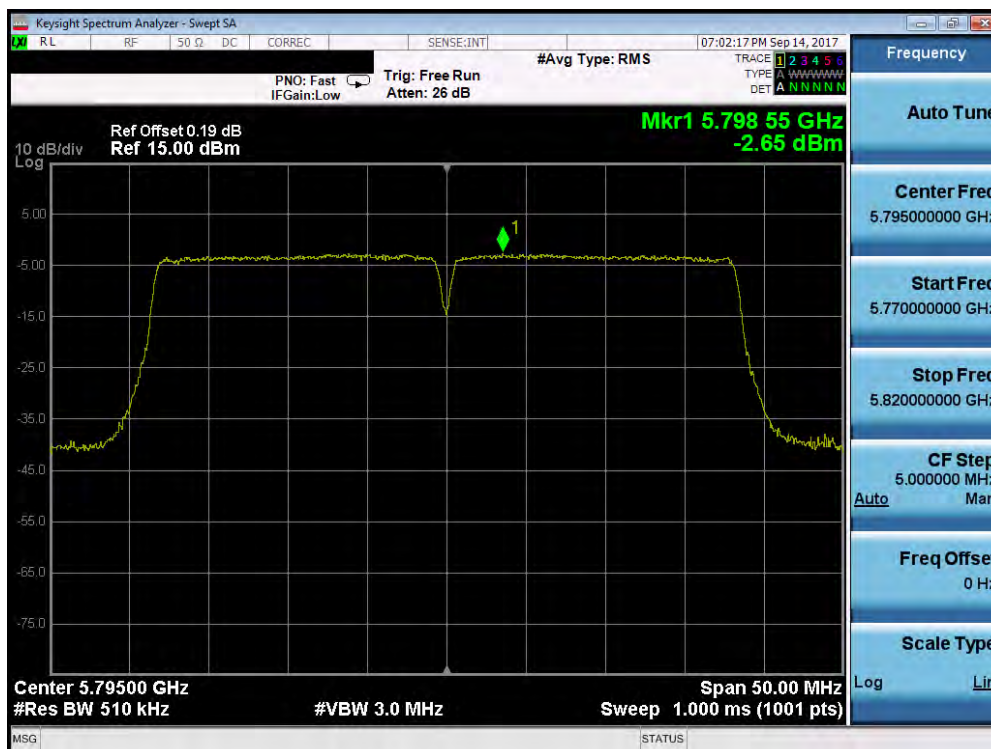


Plot 7-114. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

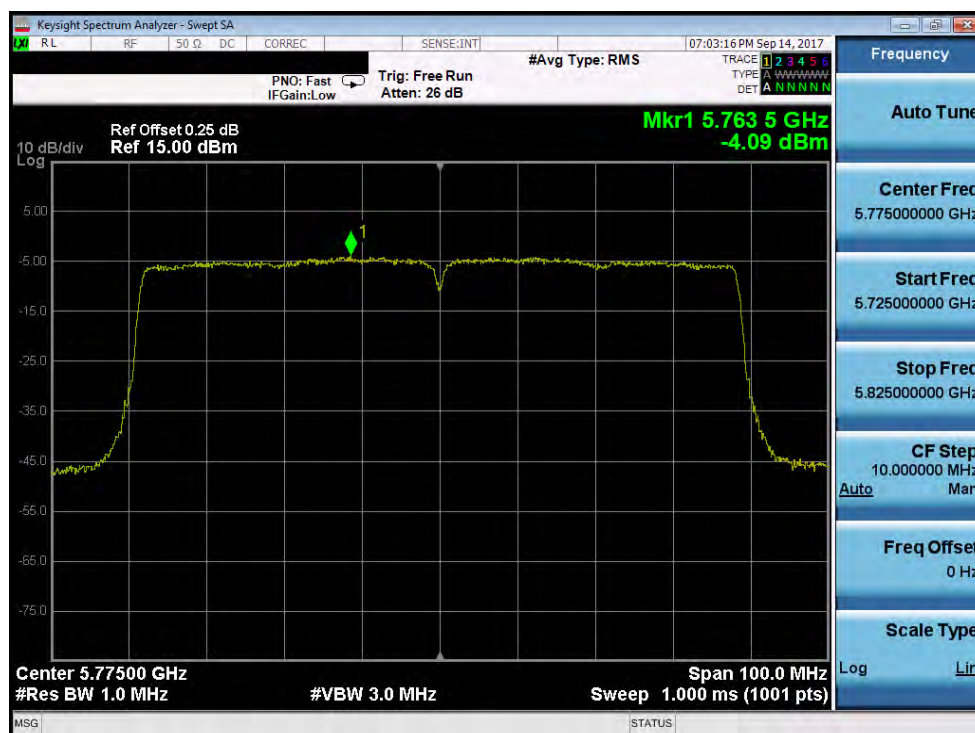


Plot 7-115. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 85 of 258



Plot 7-116. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 159)



Plot 7-117. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 86 of 258

Antenna-2 Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6	3.33	11.0	-7.67
	5200	40	a	6	4.07	11.0	-6.93
	5240	48	a	6	3.72	11.0	-7.28
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	3.51	11.0	-7.49
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	3.07	11.0	-7.93
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	3.39	11.0	-7.61
	5190	38	n (40MHz)	13.5/15 (MCS0)	0.18	11.0	-10.82
	5230	46	n (40MHz)	13.5/15 (MCS0)	0.35	11.0	-10.65
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-3.35	11.0	-14.35
Band 2A	5260	52	a	6	3.58	11.0	-7.42
	5280	56	a	6	3.05	11.0	-7.95
	5320	64	a	6	3.88	11.0	-7.12
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	3.85	11.0	-7.15
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	3.52	11.0	-7.48
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	3.55	11.0	-7.45
	5270	54	n (40MHz)	13.5/15 (MCS0)	0.46	11.0	-10.54
	5310	62	n (40MHz)	13.5/15 (MCS0)	0.66	11.0	-10.34
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-3.17	11.0	-14.17
Band 2C	5500	100	a	6	2.46	11.0	-8.54
	5600	120	a	6	3.19	11.0	-7.81
	5720	144	a	6	3.20	11.0	-7.81
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	2.94	11.0	-8.06
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	2.70	11.0	-8.30
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	2.89	11.0	-8.11
	5510	102	n (40MHz)	13.5/15 (MCS0)	-0.25	11.0	-11.25
	5590	118	n (40MHz)	13.5/15 (MCS0)	-1.40	11.0	-12.40
	5710	142	n (40MHz)	13.5/15 (MCS0)	-0.19	11.0	-11.19
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-3.73	11.0	-14.73
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-4.17	11.0	-15.17
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-4.12	11.0	-15.12

Table 7-20. Conducted Power Spectral Density Measurements

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 87 of 258



Plot 7-118. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 36)

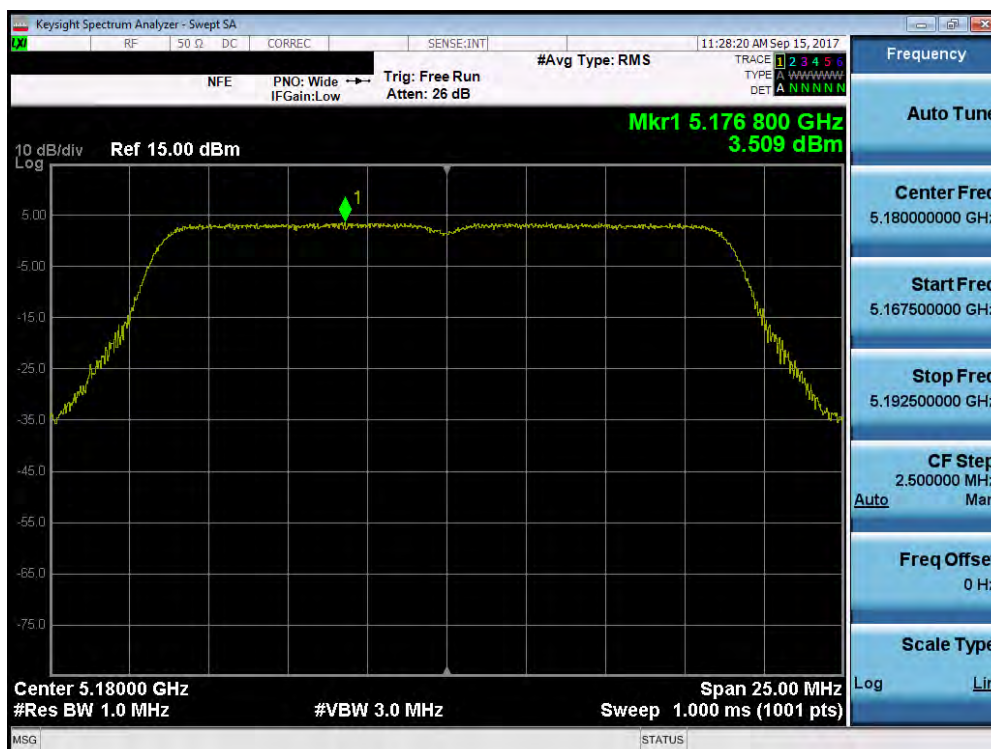


Plot 7-119. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 40)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 88 of 258

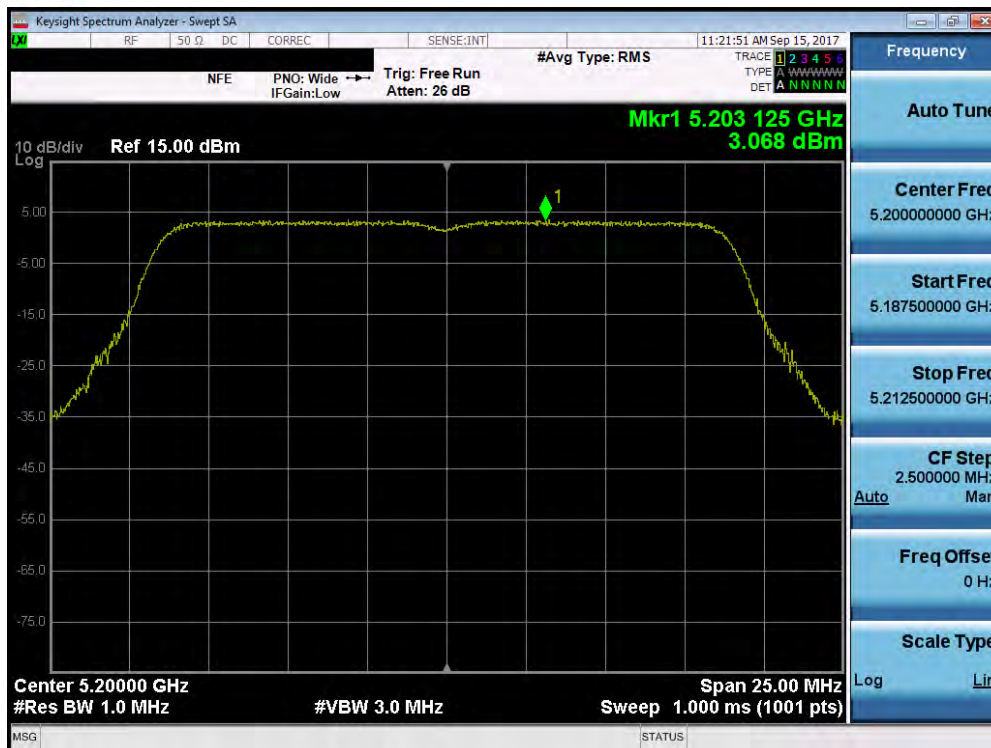


Plot 7-120. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 48)



Plot 7-121. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 89 of 258

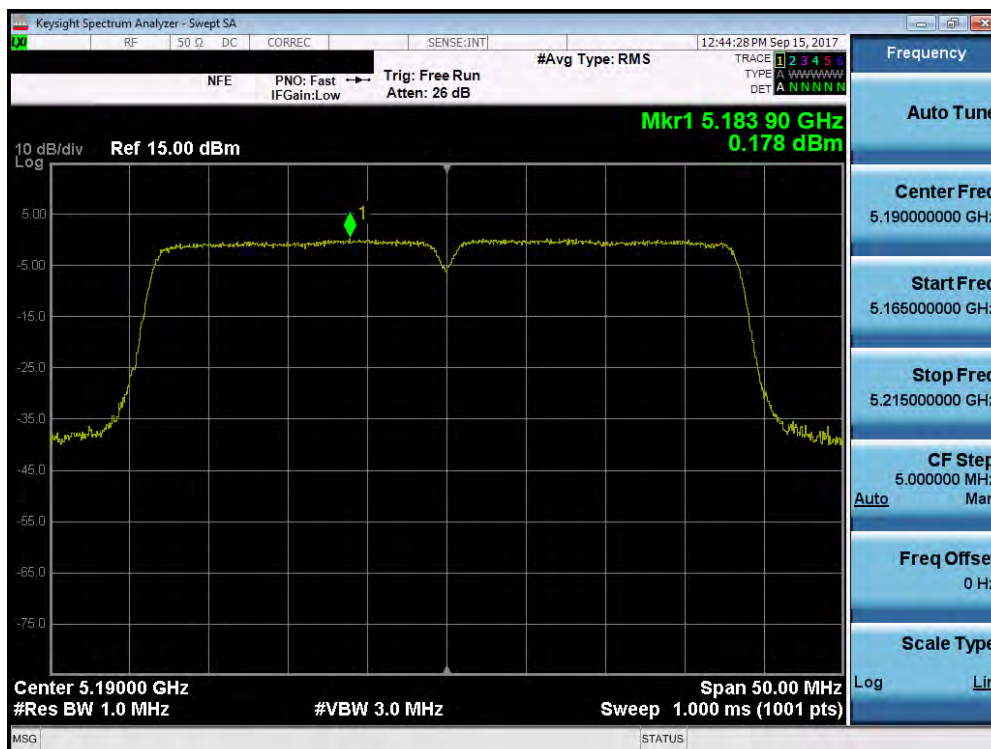


Plot 7-122. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

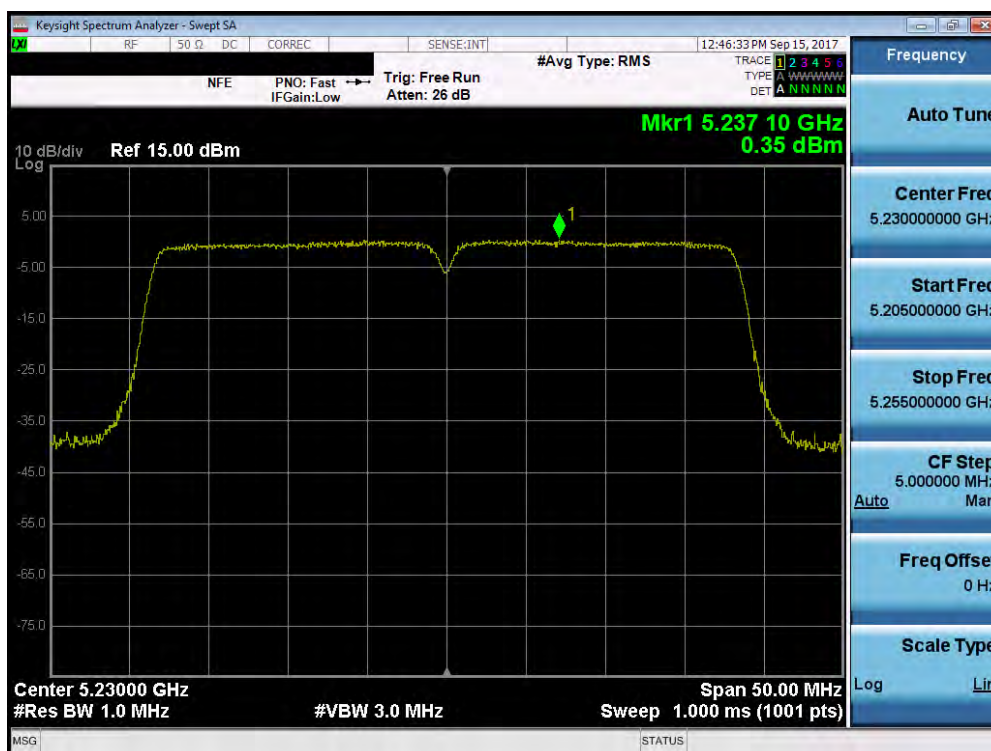


Plot 7-123. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 90 of 258

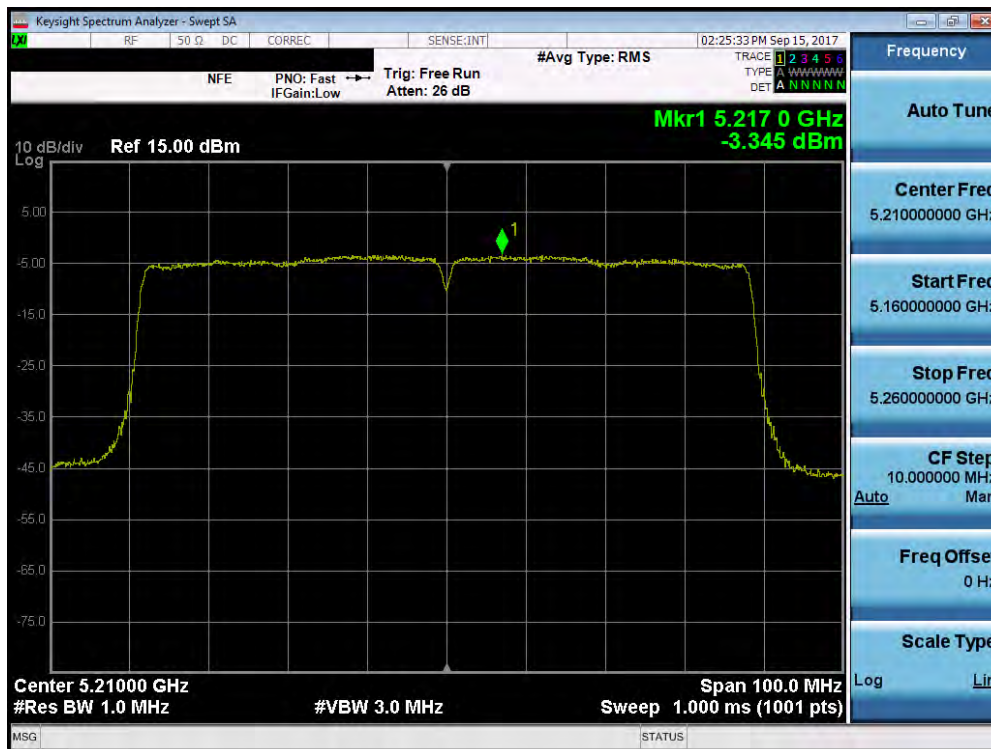


Plot 7-124. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

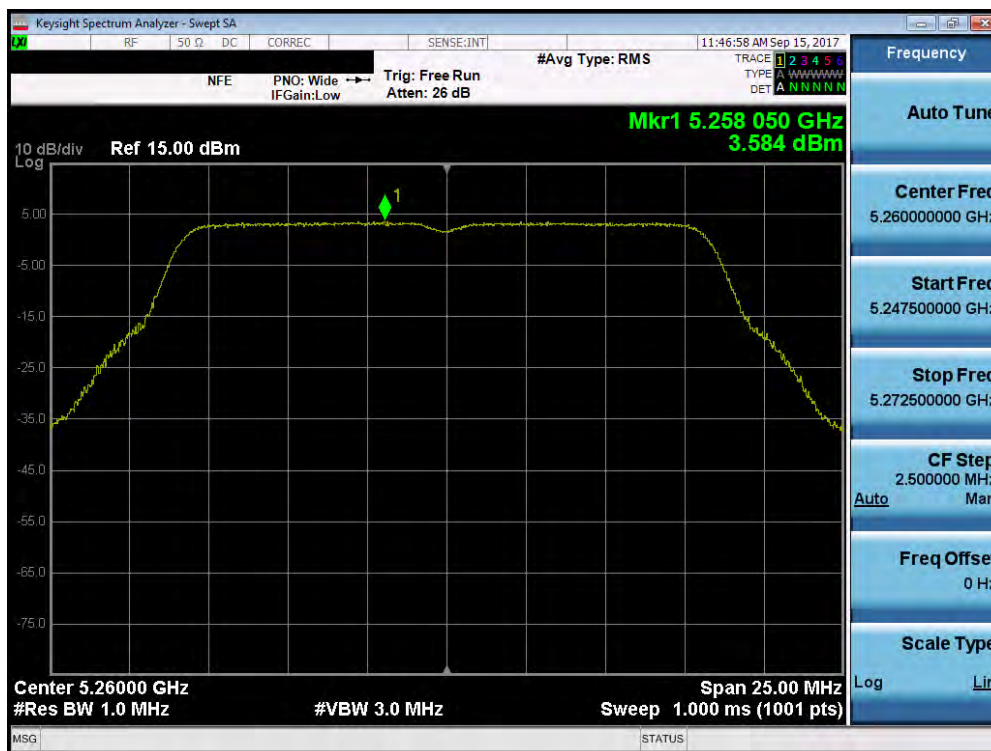


Plot 7-125. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 91 of 258



Plot 7-126. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)



Plot 7-127. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 92 of 258

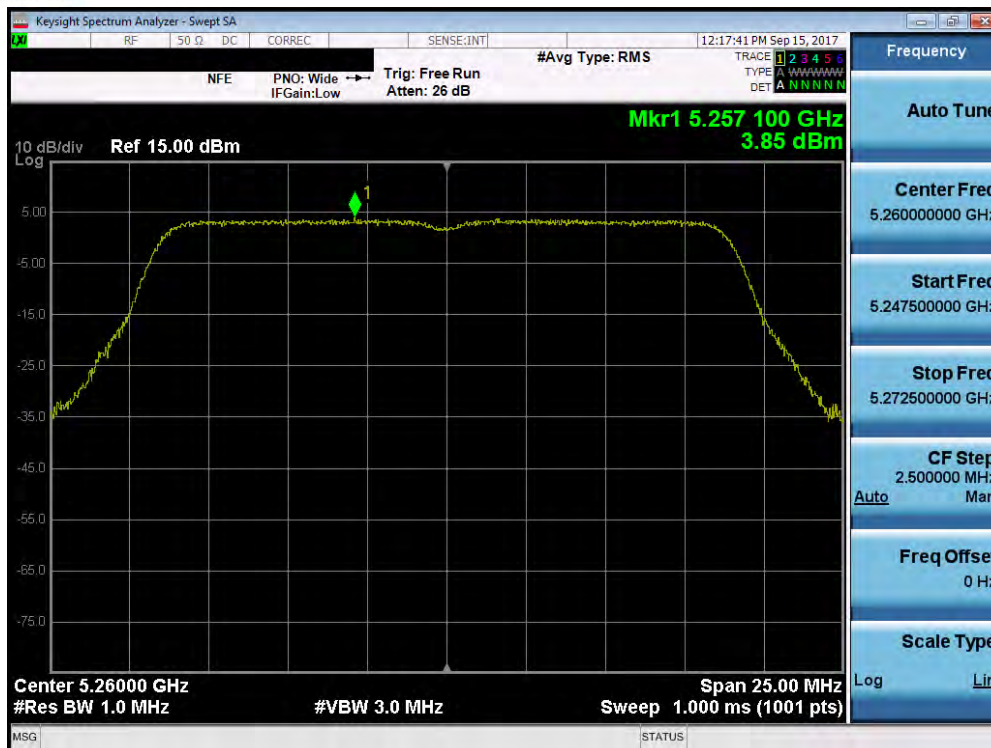


Plot 7-128. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 56)

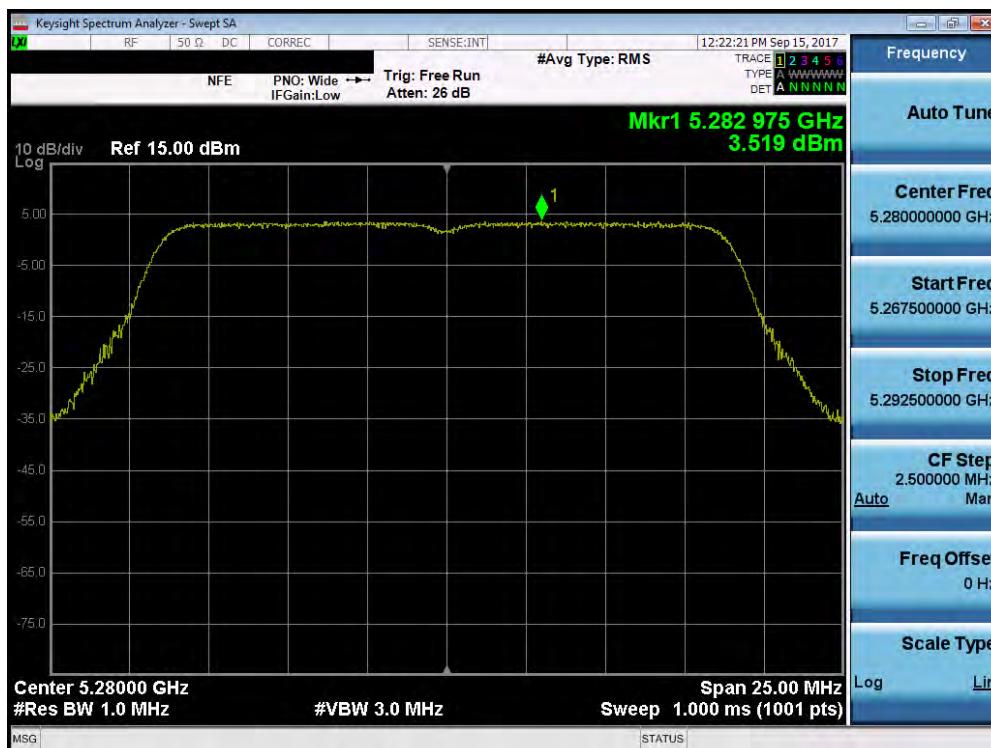


Plot 7-129. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 93 of 258

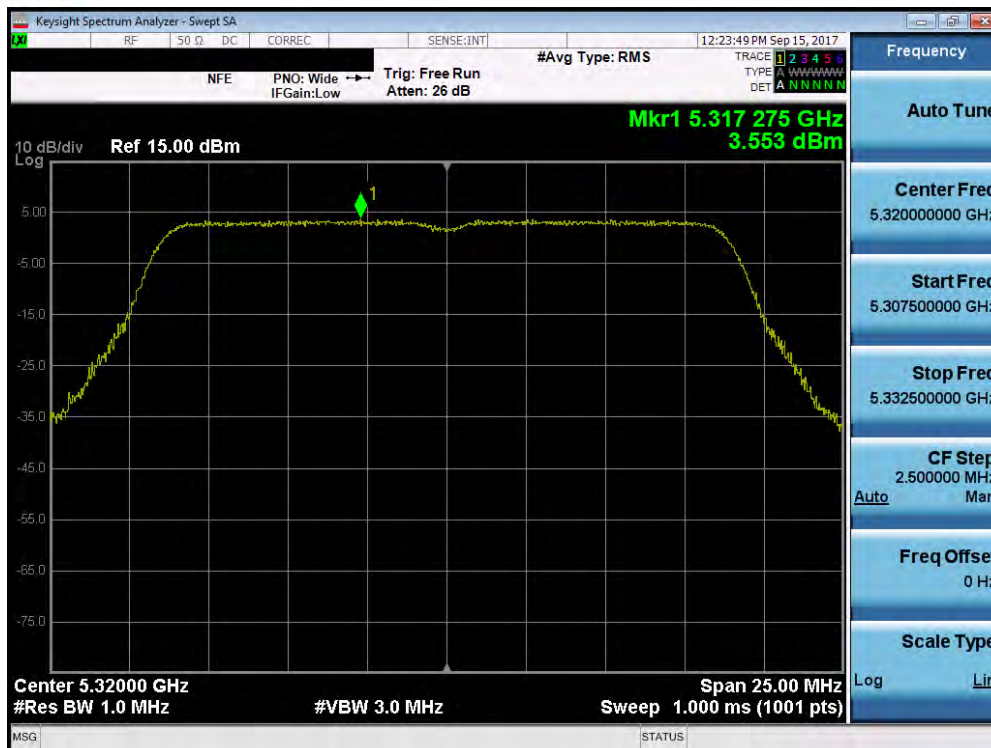


Plot 7-130. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

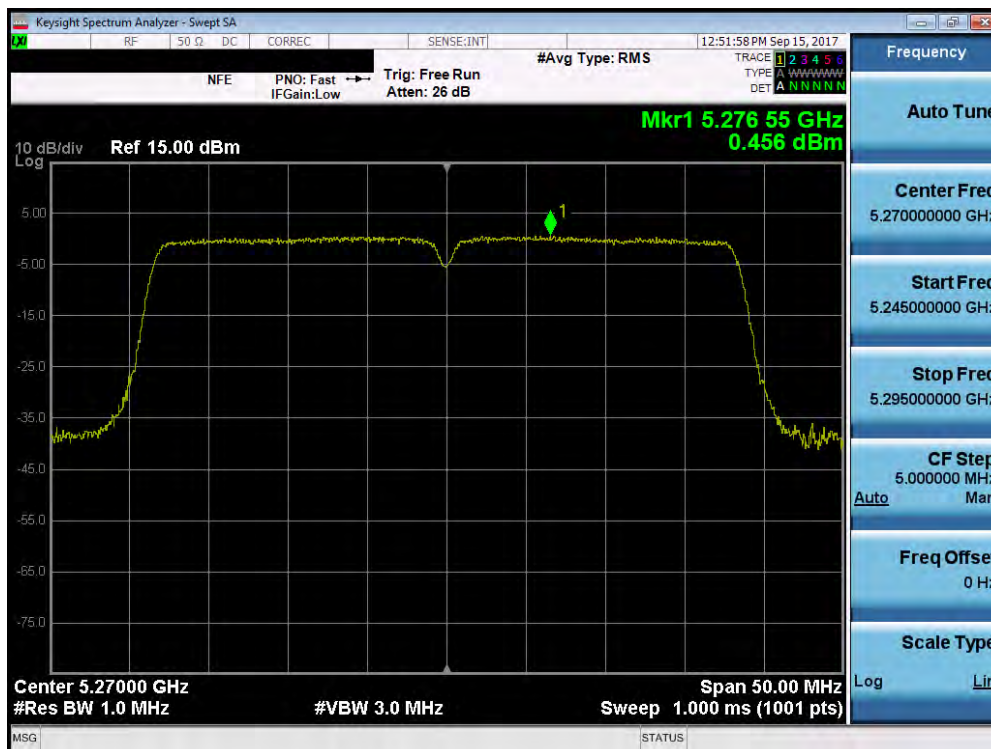


Plot 7-131. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 94 of 258

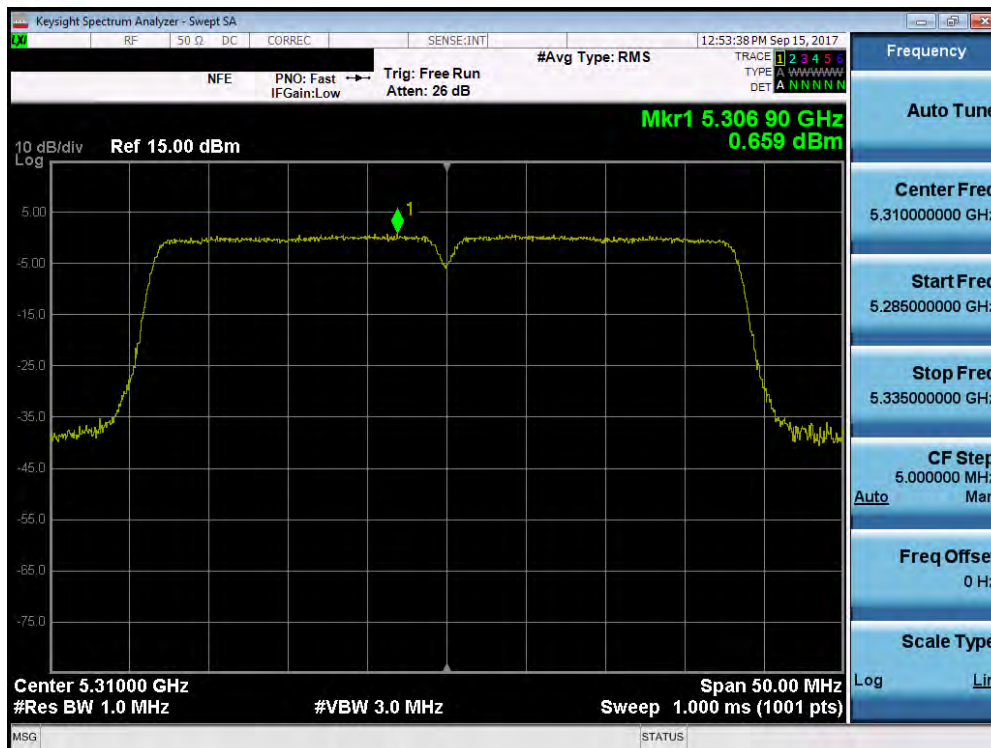


Plot 7-132. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

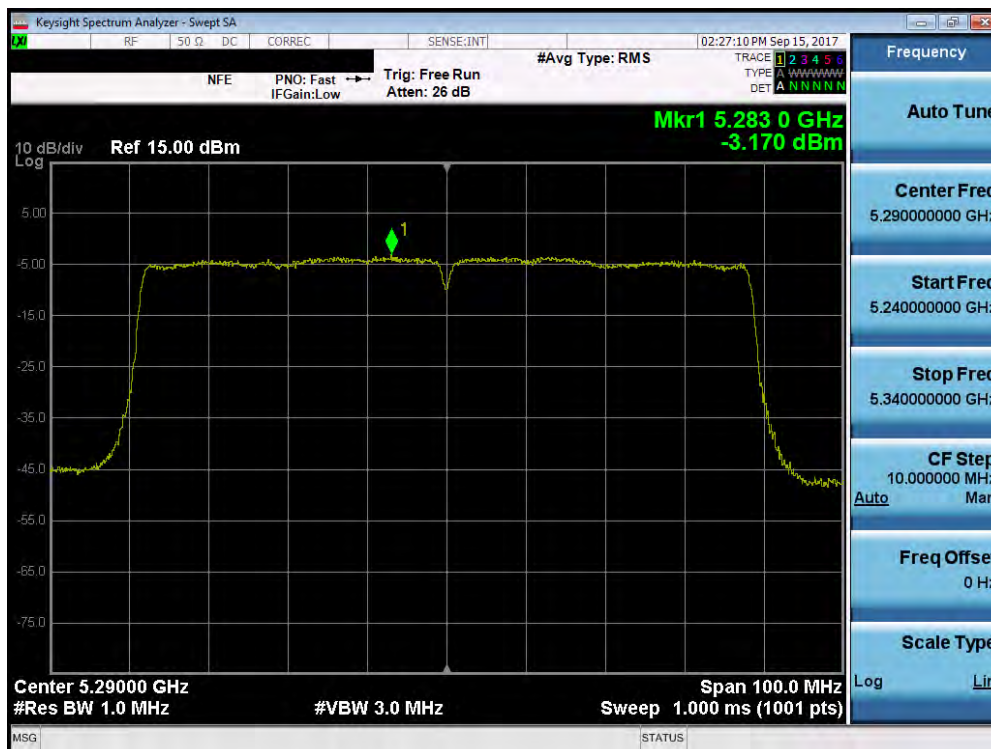


Plot 7-133. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 95 of 258



Plot 7-134. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)



Plot 7-135. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 96 of 258

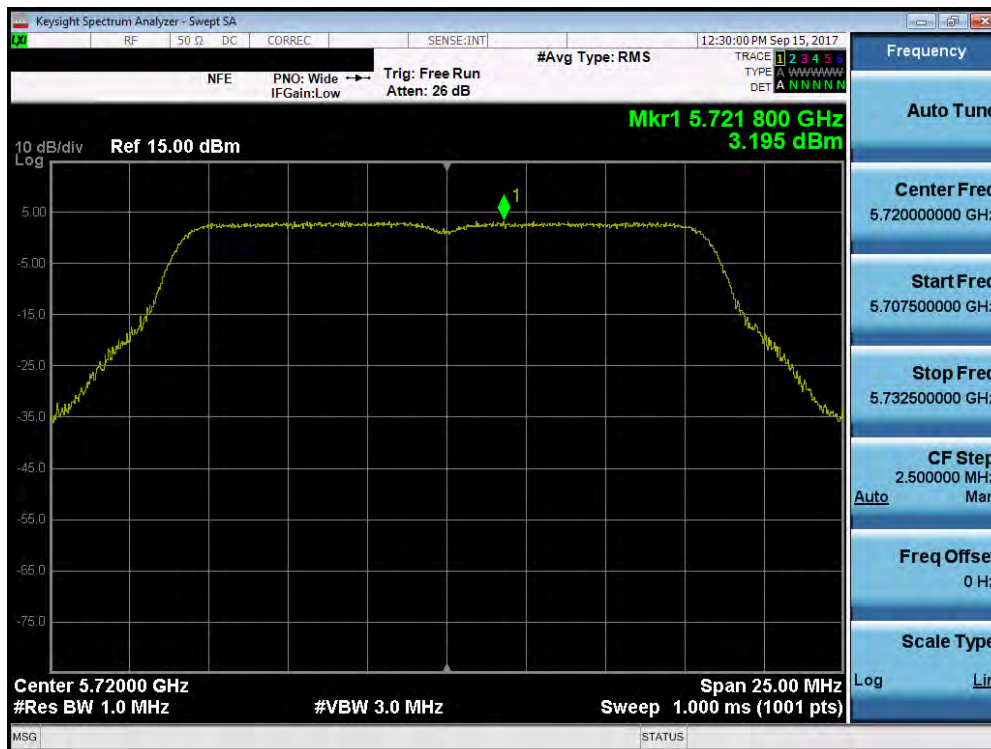


Plot 7-136. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 100)

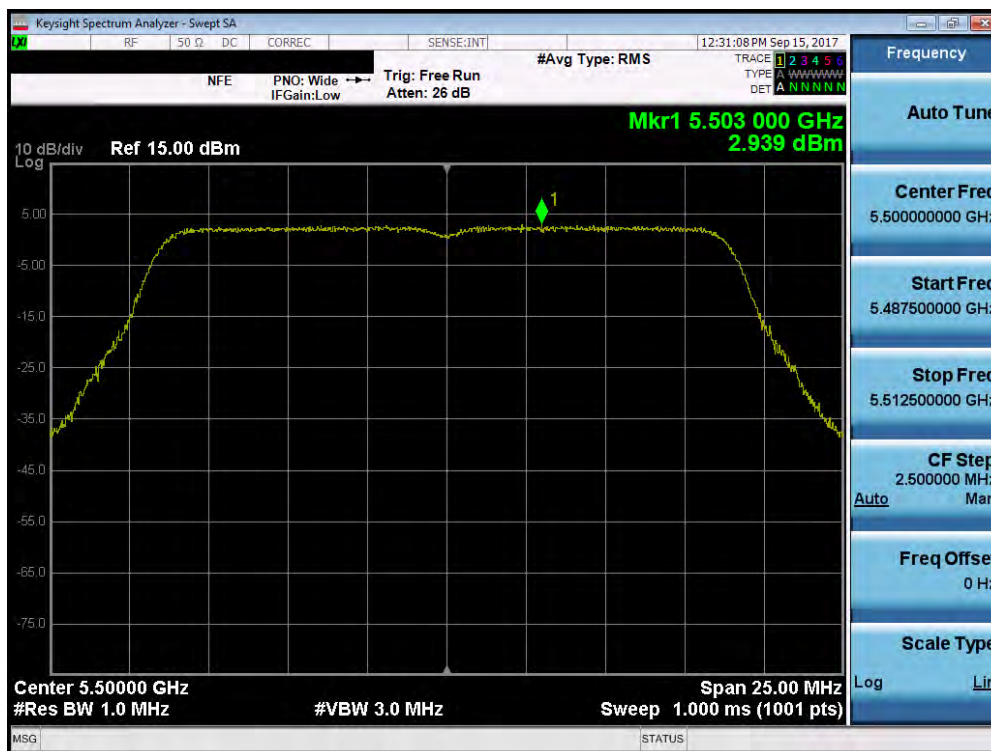


Plot 7-137. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 97 of 258



Plot 7-138. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 144)

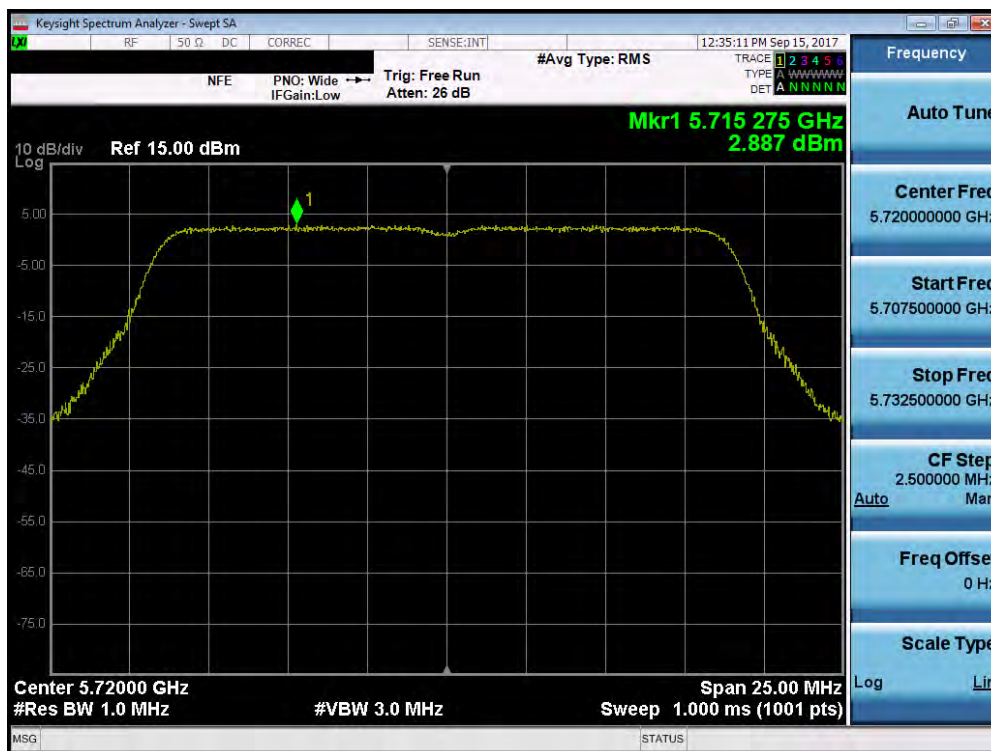


Plot 7-139. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 98 of 258

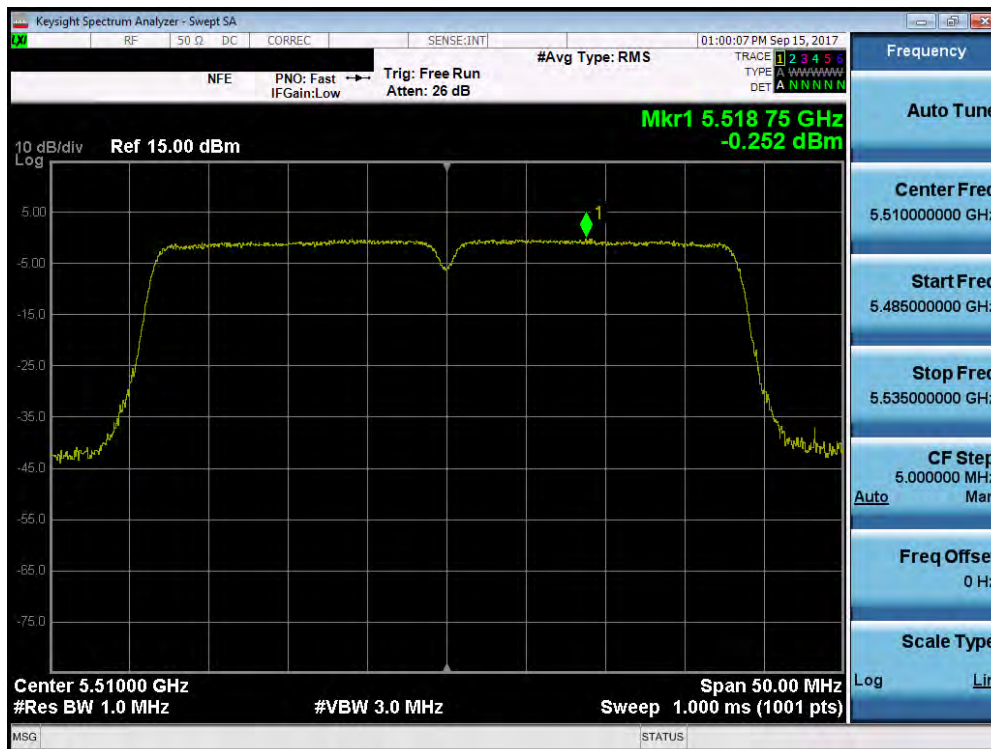


Plot 7-140. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

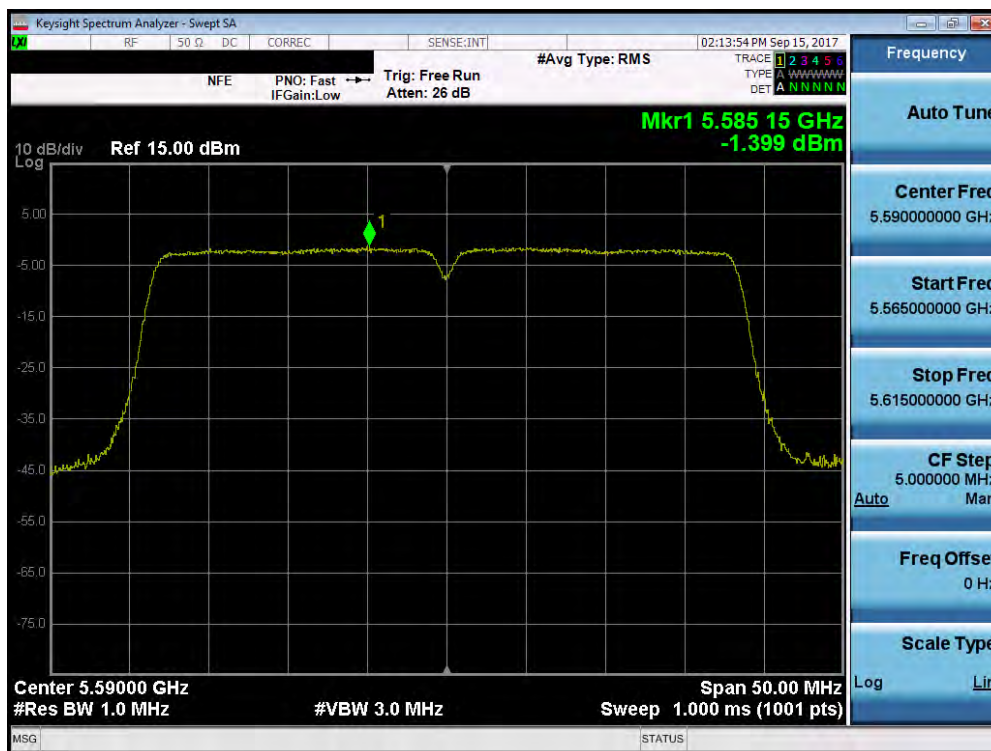


Plot 7-141. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 99 of 258

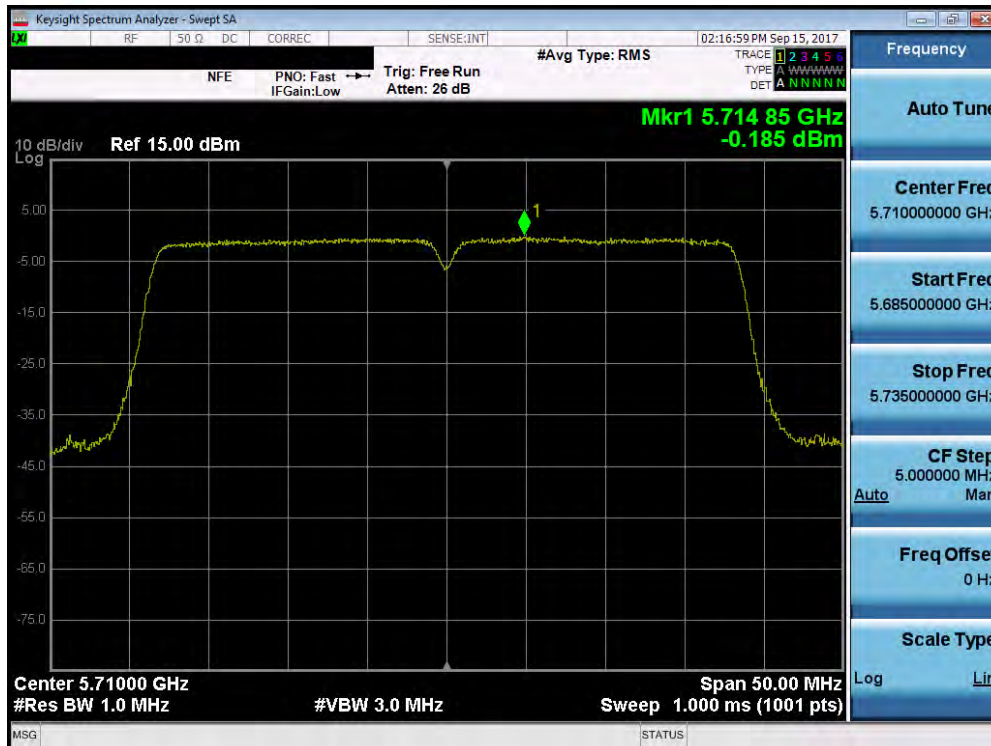


Plot 7-142. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

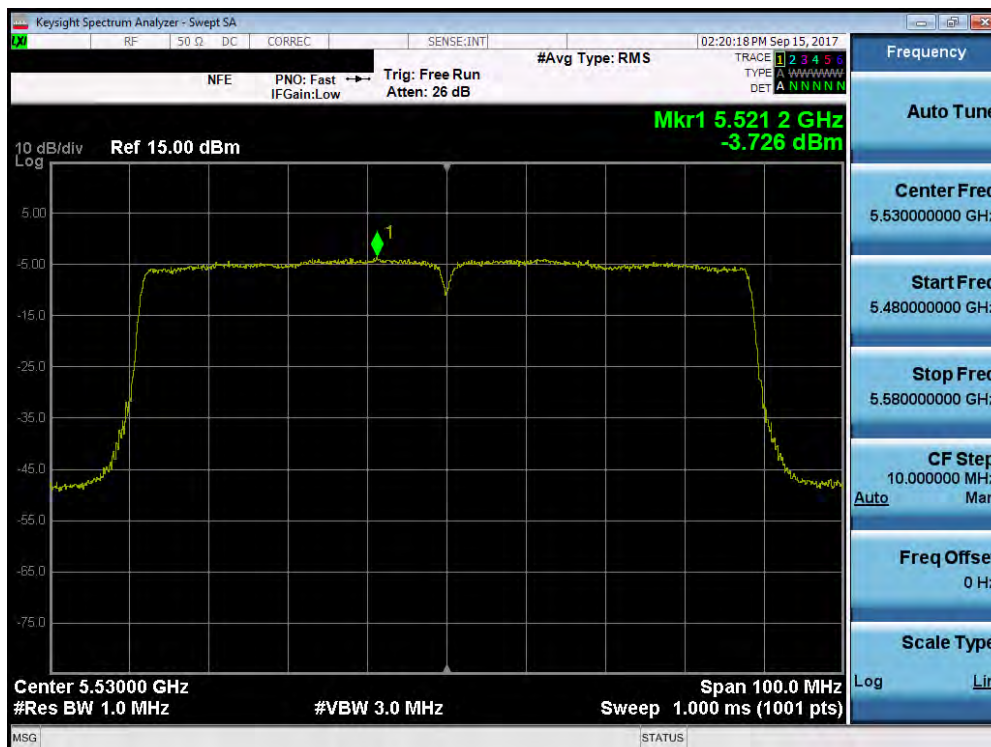


Plot 7-143. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 100 of 258

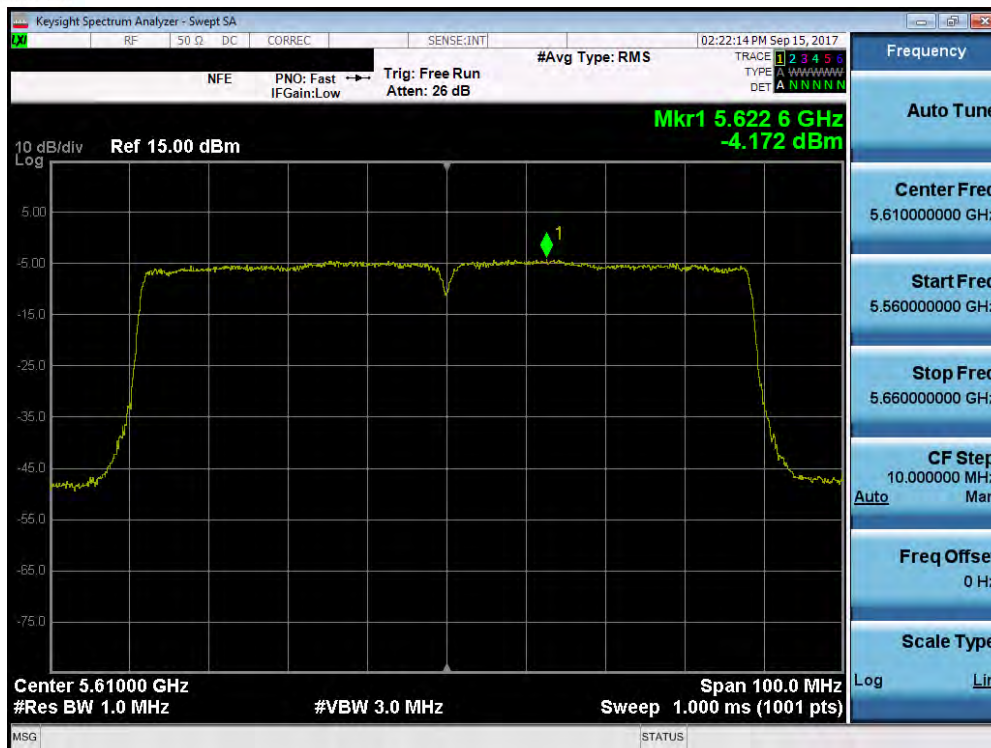


Plot 7-144. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

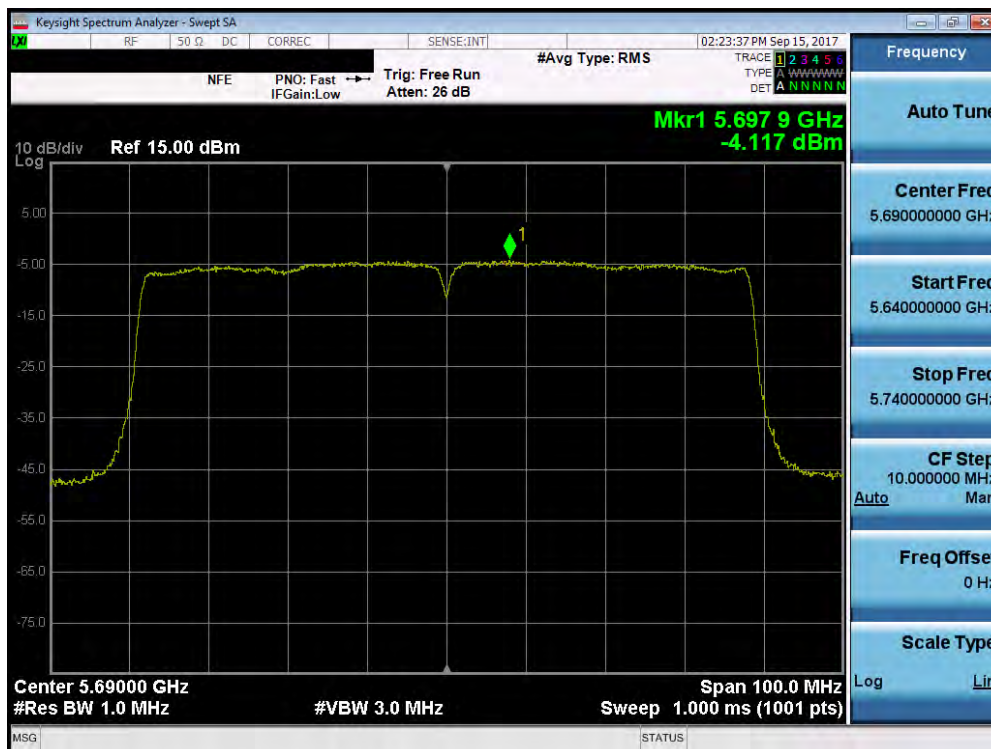


Plot 7-145. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-146. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

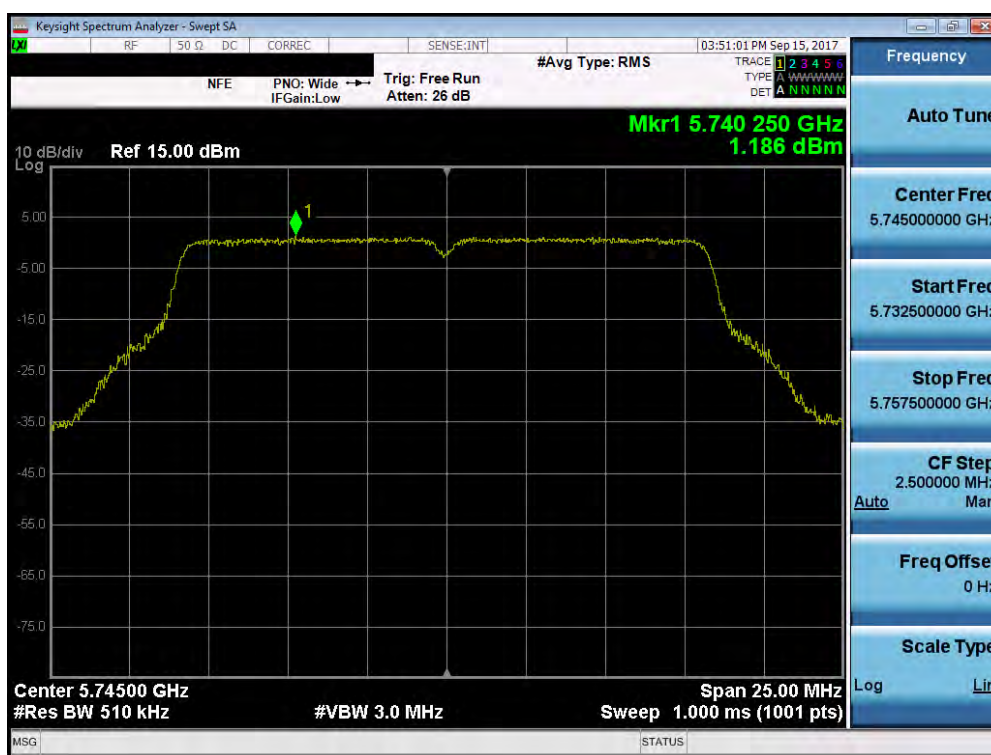


Plot 7-147. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	1.19	30.0	-28.81
	5785	157	a	6	1.35	30.0	-28.65
	5825	165	a	6	1.03	30.0	-28.98
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	0.78	30.0	-29.22
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	1.22	30.0	-28.78
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	0.89	30.0	-29.11
	5755	151	n (40MHz)	13.5/15 (MCS0)	-2.36	30.0	-32.36
	5795	159	n (40MHz)	13.5/15 (MCS0)	-2.31	30.0	-32.31
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-3.70	30.0	-33.70

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



Plot 7-148. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 149)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 103 of 258



Plot 7-149. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 157)

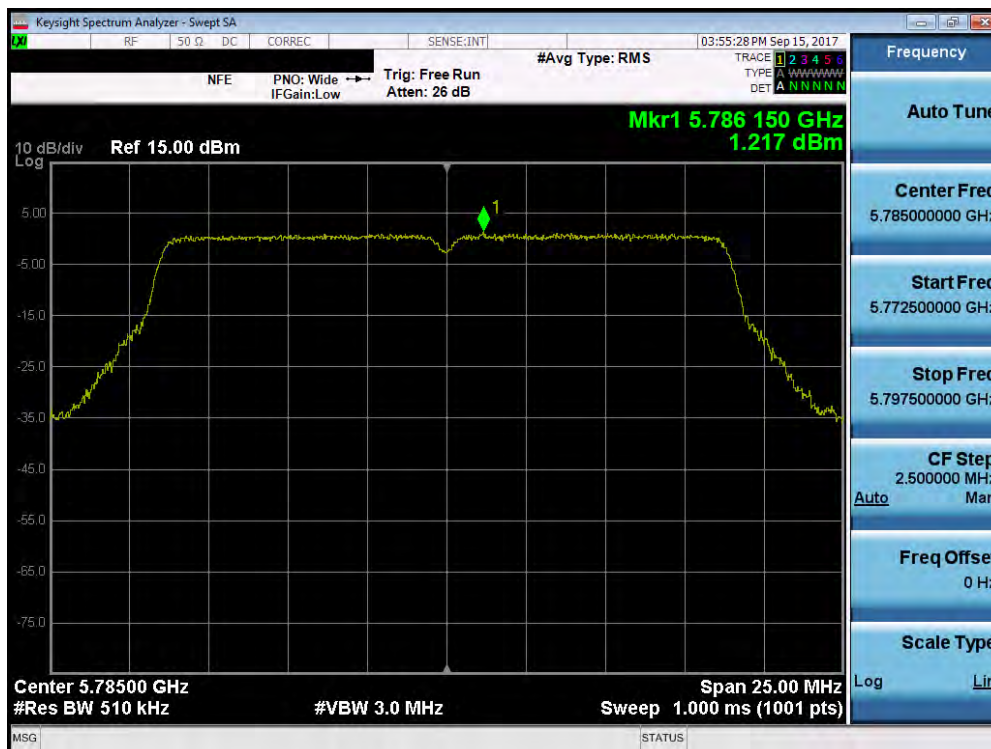


Plot 7-150. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-151. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

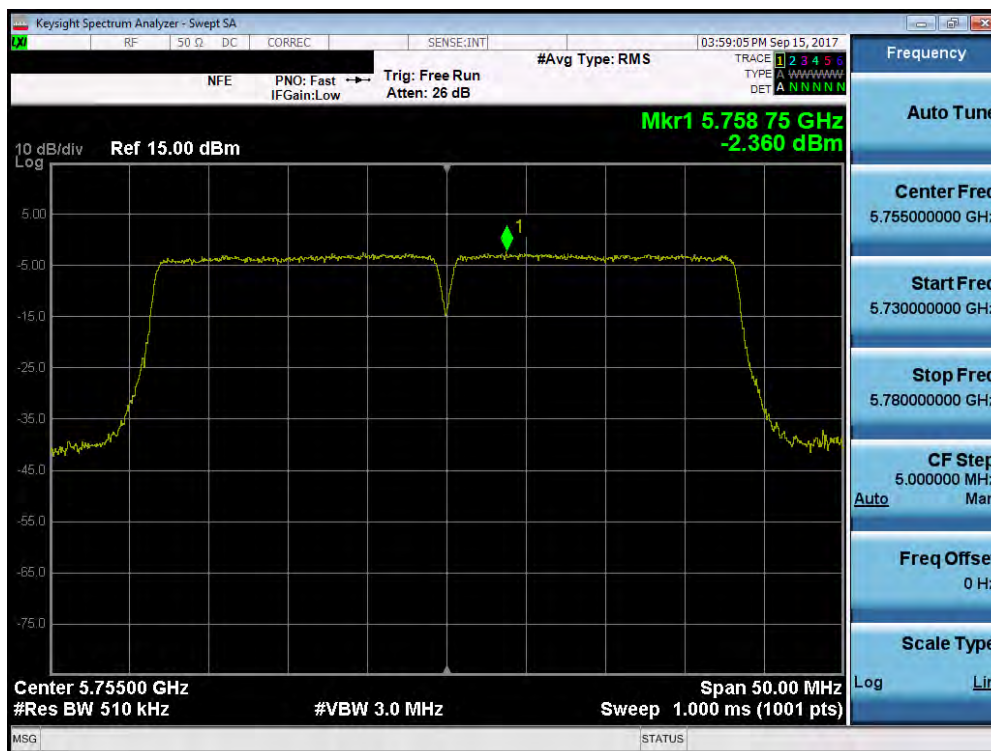


Plot 7-152. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 105 of 258

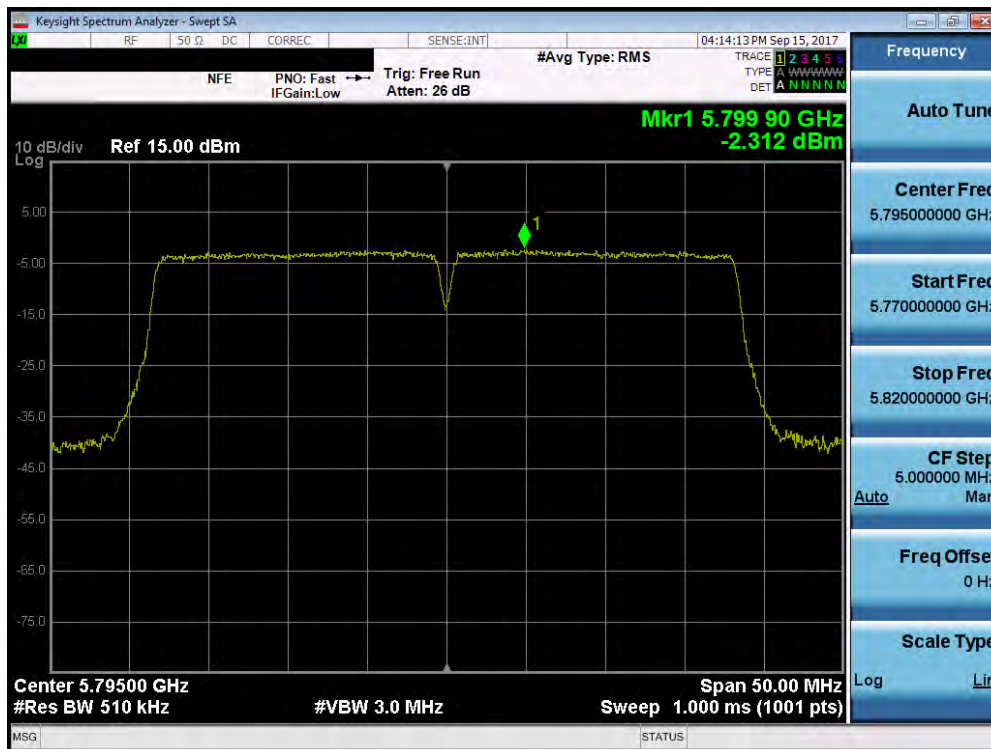


Plot 7-153. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

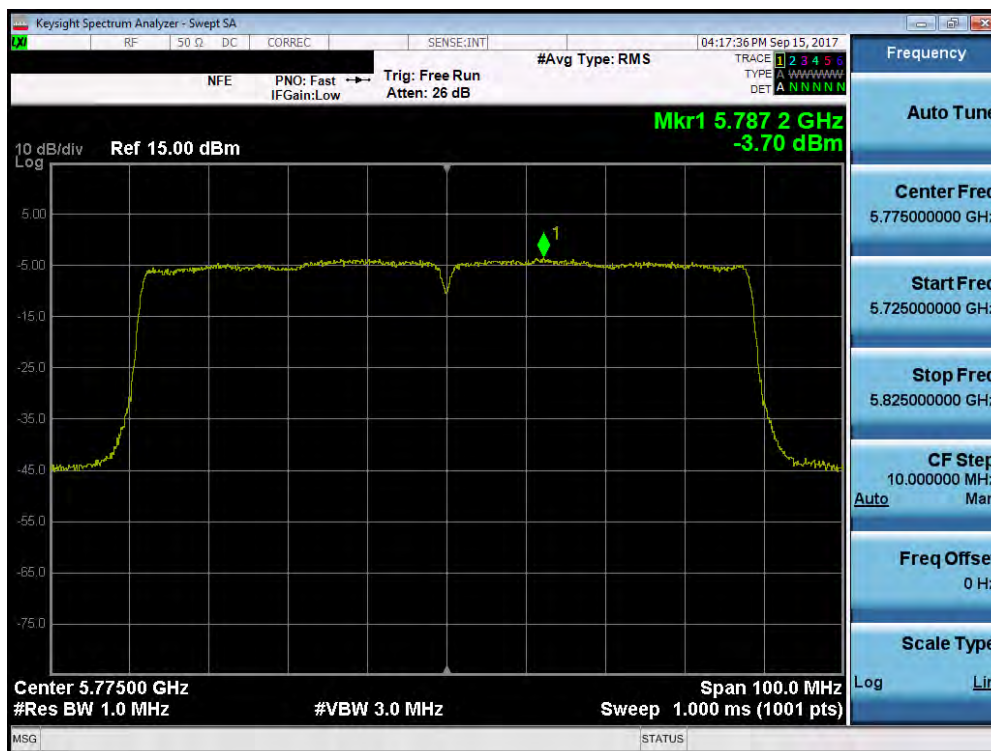


Plot 7-154. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-155. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 159)



Plot 7-156. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: A3LSMG892U	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Summed MIMO Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6.5/7.2 (MCS0)	4.86	3.33	7.17	11.0	-3.83
	5200	40	a	6.5/7.2 (MCS0)	4.76	4.07	7.44	11.0	-3.56
	5240	48	a	6.5/7.2 (MCS0)	4.70	3.72	7.25	11.0	-3.75
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.42	3.51	7.00	11.0	-4.00
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	4.33	3.07	6.75	11.0	-4.25
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	4.15	3.39	6.80	11.0	-4.20
	5190	38	n (40MHz)	13.5/15 (MCS0)	1.18	0.18	3.72	11.0	-7.28
	5230	46	n (40MHz)	13.5/15 (MCS0)	1.65	0.35	4.06	11.0	-6.94
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-1.99	-3.35	0.40	11.0	-10.60
Band 2A	5260	52	a	6.5/7.2 (MCS0)	4.49	3.58	7.07	11.0	-3.93
	5280	56	a	6.5/7.2 (MCS0)	4.22	3.05	6.69	11.0	-4.31
	5320	64	a	6.5/7.2 (MCS0)	4.17	3.88	7.04	11.0	-3.96
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	4.06	3.85	6.97	11.0	-4.03
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	4.14	3.52	6.85	11.0	-4.15
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	4.23	3.55	6.91	11.0	-4.09
	5270	54	n (40MHz)	13.5/15 (MCS0)	2.11	0.46	4.37	11.0	-6.63
	5310	62	n (40MHz)	13.5/15 (MCS0)	1.80	0.66	4.28	11.0	-6.72
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-3.37	-3.17	-0.26	11.0	-11.26
Band 2C	5500	100	a	6.5/7.2 (MCS0)	3.62	2.46	6.09	11.0	-4.91
	5600	120	a	6.5/7.2 (MCS0)	2.96	3.19	6.09	11.0	-4.91
	5720	144	a	6.5/7.2 (MCS0)	3.06	3.20	6.14	11.0	-4.86
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	3.21	2.94	6.08	11.0	-4.92
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	2.90	2.70	5.81	11.0	-5.19
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	2.84	2.89	5.88	11.0	-5.12
	5510	102	n (40MHz)	13.5/15 (MCS0)	0.29	-0.25	3.04	11.0	-7.96
	5590	118	n (40MHz)	13.5/15 (MCS0)	-0.16	-1.40	2.28	11.0	-8.72
	5710	142	n (40MHz)	13.5/15 (MCS0)	-0.17	-0.19	2.83	11.0	-8.17
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-4.16	-3.73	-0.93	11.0	-11.93
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-4.42	-4.17	-1.28	11.0	-12.28
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-6.85	-4.12	-2.26	11.0	-13.26

Table 7-22. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6.5/7.2 (MCS0)	0.36	1.19	3.80	30.0	-26.20
	5785	157	a	6.5/7.2 (MCS0)	0.46	1.35	3.94	30.0	-26.06
	5825	165	a	6.5/7.2 (MCS0)	1.03	1.03	4.04	30.0	-25.96
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-0.13	0.78	3.36	30.0	-26.64
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	0.19	1.22	3.74	30.0	-26.26
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	0.80	0.89	3.86	30.0	-26.14
	5755	151	n (40MHz)	13.5/15 (MCS0)	-3.02	-2.36	0.33	30.0	-29.67
	5795	159	n (40MHz)	13.5/15 (MCS0)	-2.65	-2.31	0.53	30.0	-29.47
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-4.09	-3.70	-0.88	30.0	-30.88

Table 7-23. Band 3 MIMO Conducted Power Spectral Density Measurements

Note:

Per KDB 662911 v02r01 Section E)2), the power spectral density at Antenna 1 and Antenna 2 were first measured separately as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

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Sample MIMO Calculation:

At 5180MHz n mode the average conducted power spectral density was measured to be 4.42 dBm for Antenna-1 and 3.51 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

$$(4.42 \text{ dBm} + 3.51 \text{ dBm}) = (2.77 \text{ mW} + 2.24 \text{ mW}) = 5.01 \text{ mW} = 7.00 \text{ dBm}$$

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