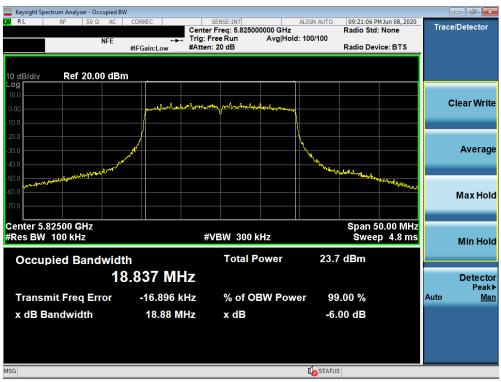




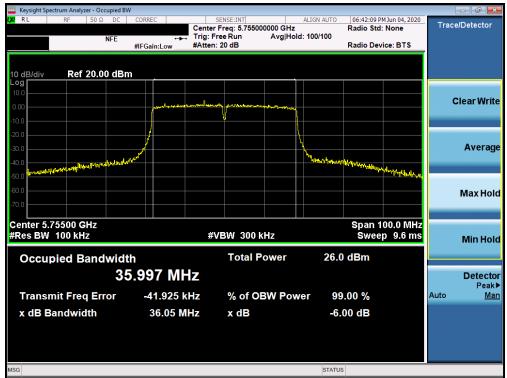
Plot 7-125. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 3) - Ch. 157)



Plot 7-126. 6dB Bandwidth Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 3) - Ch. 165)

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Plot 7-127. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



Plot 7-128. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

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OZ   RL   RF   50 Ω   AC   CORREC   SENSE:INT   ALIGN AUTO   109:31:23 PM Jun 08, 2020   Trace/De     NFE   F   Center Freq: 5.755000000 GHz   Radio Std: None   Radio Std: None   Radio Device: BTS   Trace/De     10 dB/div   Ref 20.00 dBm   Autor device: d	etector ar Write
NFE Trig: Free Run Avg Hold: 100/100   #HFGain:Low #Atten: 20 dB Radio Device: BTS   10 dB/div Ref 20.00 dBm Ref 20.00 dBm   10 0 Image: State of the	ar Write
10 dB/div Ref 20.00 dBm Log 10 0 0.00	ar Write
	ar Write
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0.00 Clea	ar Write
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50.0 Manuar Ma	
	ax Hold
-70.0	
Center 5.75500 GHz Span 100.0 MHz	
	lin Hold
	Innona
Occupied Bandwidth Total Power 23.4 dBm	
37.627 MHz	Detector
Transmit Freg Error -33.954 kHz % of OBW Power 99.00 %	Peak▶ Man
	wan
x dB Bandwidth 37.78 MHz x dB -6.00 dB	
MSG	

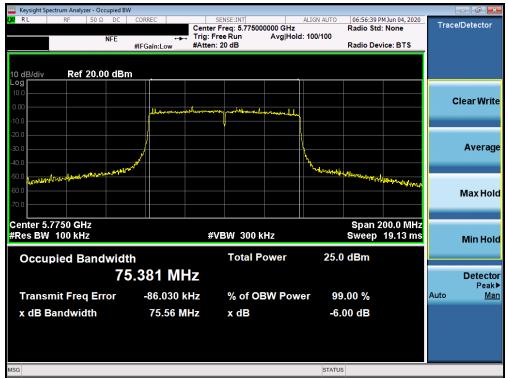
Plot 7-129. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 3) - Ch. 151)



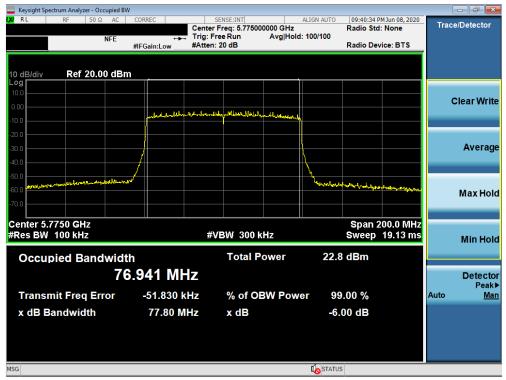
Plot 7-130. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 3) - Ch. 159)

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Plot 7-131. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-132. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax SU (UNII Band 3) - Ch. 155)

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# 7.4 UNII Output Power Measurement – 802.11a/n/ac/ax §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

#### **Test Overview and Limits**

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

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

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(26.34) = 25.21dBm$ . The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm +  $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(19.37) = 23.87dBm$ . The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

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

#### Test Procedure Used

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

#### Test Settings

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

#### Test Setup

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



#### Figure 7-3. Test Instrument & Measurement Setup

#### Test Notes

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

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## SISO Antenna-1 Conducted Output Power Measurements

	Freq [MHz]	Channel	Detector		IEEE Transn	nission Mode		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				802.11a	802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]	[0.2.]	[ubiii]		
	5180	36	AVG	16.75	15.92	15.93	15.98	23.98	-7.23	-6.50	10.25	23.01	-12.76
width)	5200	40	AVG	16.89	16.98	16.63	16.69	23.98	-7.00	-6.70	10.28	23.01	-12.73
5	5220	44	AVG	16.57	16.77	16.70	16.97	23.98	-7.21	-6.90	9.87	23.01	-13.14
and	5240	48	AVG	16.69	16.88	16.95	16.71	23.98	-7.03	-6.90	10.05	23.01	-12.96
Ba	5260	52	AVG	16.72	16.95	16.98	16.80	23.98	-7.00	-6.90	10.08	30.00	-19.92
N	5280	56	AVG	16.66	16.88	16.90	16.85	23.98	-7.08	-6.50	10.40	30.00	-19.60
T	5300	60	AVG	16.62	16.88	16.81	16.67	23.98	-7.10	-6.20	10.68	30.00	-19.32
20M	5320	64	AVG	16.94	16.23	16.33	16.45	23.98	-7.04	-6.20	10.74	30.00	-19.26
50	5500	100	AVG	16.75	16.94	16.90	16.82	23.98	-7.04	-6.10	10.84	30.00	-19.16
) N	5600	120	AVG	16.73	16.97	16.93	16.72	23.98	-7.01	-6.10	10.87	-	-
Ξ	5620	124	AVG	16.98	16.81	16.79	16.57	23.98	-7.00	-6.10	10.88	-	-
Ċ	5720	144	AVG	16.89	16.69	16.60	16.57	23.98	-7.09	-6.10	10.79	30.00	-19.21
Ū.	5745	149	AVG	16.67	16.92	16.91	16.89	30.00	-13.08	-5.90	11.02	-	-
	5785	157	AVG	16.75	16.95	16.92	16.92	30.00	-13.05	-5.90	11.05	-	
	5825	165	AVG	16.71	16.88	16.88	16.79	30.00	-13.12	-5.90	10.98	-	

## Table 7-6. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	IEEE Transmission Mode			Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]	[abi]	Lapud	Ennic [GBin]	maight [ab]
₽ <b>−</b>	5190	38	AVG	15.48	15.03	15.24	23.98	-8.50	-6.70	8.78	23.01	-14.23
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	5230	46	AVG	15.70	15.64	15.98	23.98	-8.28	-6.90	8.80	23.01	-14.21
(40M width	5270	54	AVG	15.94	15.81	15.69	23.98	-8.04	-6.50	9.44	30.00	-20.56
<u>4</u>	5310	62	AVG	14.19	14.49	14.35	23.98	-9.49	-6.20	8.29	30.00	-21.71
Hz and	5510	102	AVG	15.35	15.25	14.32	23.98	-8.63	-6.10	9.25	30.00	-20.75
Ba G	5590	118	AVG	15.90	15.97	15.66	23.98	-8.01	-6.10	9.87	-	-
- 2C	5630	126	AVG	15.77	15.77	15.92	23.98	-8.21	-6.10	9.67	-	-
	5710	142	AVG	15.63	15.56	15.80	23.98	-8.35	-6.10	9.53	30.00	-20.47
	5755	151	AVG	15.56	15.57	15.54	30.00	-14.43	-5.90	9.67	-	-
	5795	159	AVG	15.77	15.77	15.72	30.00	-14.23	-5.90	9.87	-	-

### Table 7-7. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]	eq [MHz] Channel Detector		IEEE Transn	nission Mode	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
F (	Ξ H <sup>Z</sup>			802.11ac	802.11ax	[dBm]	Margin [dB]	[abi]	[abiii]		margin [ab]
80MH idth)	5210	42	AVG	14.89	14.60	23.98	-9.09	-6.70	8.19	23.01	-14.82
<u></u>	5290	58	AVG	13.84	13.80	23.98	-10.14	-6.50	7.34	30.00	-22.66
5GHz Banc	5530	106	AVG	14.85	14.61	23.98	-9.13	-6.10	8.75	30.00	-21.25
B 2	5610	122	AVG	14.70	14.86	23.98	-9.28	-6.10	8.60	-	-
	5690	138	AVG	14.55	14.63	23.98	-9.43	-5.90	8.65	30.00	-21.35
	5775	155	AVG	14.91	14.81	30.00	-15.09	-5.90	9.01	-	-

Table 7-8. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power

FCC ID: A3LSMF707U	PCTEST Freud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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## SISO Antenna-2 Conducted Output Power Measurements

	Freq [MHz]	Channel	Detector		IEEE Transm	nission Mode		Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				802.11a	802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]	[0.2.]	[abiii]		
	5180	36	AVG	16.96	15.98	14.98	15.68	23.98	-7.02	-6.50	10.46	23.01	-12.55
÷	5200	40	AVG	16.57	16.92	16.94	16.78	23.98	-7.04	-6.70	10.24	23.01	-12.77
andwidth	5220	44	AVG	16.70	16.51	16.51	16.73	23.98	-7.28	-6.90	9.80	23.01	-13.21
ğ	5240	48	AVG	16.96	16.71	16.77	16.93	23.98	-7.02	-6.90	10.06	23.01	-12.95
ñ	5260	52	AVG	16.95	16.85	16.91	16.57	23.98	-7.03	-6.90	10.05	30.00	-19.95
N	5280	56	AVG	16.87	16.71	16.72	16.71	23.98	-7.11	-6.50	10.37	30.00	-19.63
T	5300	60	AVG	16.79	16.58	16.59	16.62	23.98	-7.19	-6.20	10.59	30.00	-19.41
20M	5320	64	AVG	16.77	16.33	16.35	16.47	23.98	-7.21	-6.20	10.57	30.00	-19.43
50	5500	100	AVG	16.87	16.60	16.58	16.19	23.98	-7.11	-6.10	10.77	30.00	-19.23
) N	5600	120	AVG	16.77	16.56	16.54	16.57	23.98	-7.21	-6.10	10.67	-	
Ϊ	5620	124	AVG	16.56	16.78	16.79	16.89	23.98	-7.19	-6.10	10.69	-	
Ċ	5720	144	AVG	16.77	16.58	16.54	16.54	23.98	-7.21	-6.10	10.67	30.00	-19.33
Ū.	5745	149	AVG	16.80	16.98	16.97	16.69	30.00	-13.02	-5.90	11.08	-	
	5785	157	AVG	16.58	16.81	16.84	16.97	30.00	-13.16	-5.90	10.94	-	-
	5825	165	AVG	16.85	16.61	16.64	16.74	30.00	-13.15	-5.90	10.95	-	

## Table 7-9. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]	/Hz] Channel	Detector	IEEE Transmission Mode			Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				802.11n	802.11ac	802.11ax	[dBm]	Margin [dB]	[abi]	Lapud	Ennic [GBin]	margin [ab]
₽ <b>-</b>	5190	38	AVG	15.46	15.40	15.25	23.98	-8.52	-6.70	8.76	23.01	-14.25
후 판	5230	46	AVG	15.94	15.89	15.98	23.98	-8.04	-6.90	9.04	23.01	-13.97
(40M width	5270	54	AVG	15.82	15.79	15.85	23.98	-8.16	-6.50	9.32	30.00	-20.68
<u>4</u> ¥	5310	62	AVG	14.48	14.46	14.39	23.98	-9.50	-6.20	8.28	30.00	-21.72
Pd Pd	5510	102	AVG	15.24	15.22	15.39	23.98	-8.74	-6.10	9.14	30.00	-20.86
Ba G	5590	118	AVG	15.97	15.97	15.59	23.98	-8.01	-6.10	9.87	-	-
- 2C	5630	126	AVG	15.71	15.70	15.75	23.98	-8.27	-6.10	9.61	-	-
	5710	142	AVG	15.79	15.67	15.80	23.98	-8.19	-6.10	9.69	30.00	-20.31
	5755	151	AVG	15.94	15.93	15.81	30.00	-14.06	-5.90	10.04	-	-
	5795	159	AVG	15.71	15.67	15.56	30.00	-14.29	-5.90	9.81	-	-

### Table 7-10. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power

	Freq [MHz]		Detector	IEEE Transm	nission Mode	Conducted Power Limit	Conducted Power	Ant. Gain [dBi]	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]	
HZ (c				802.11ac	802.11ax	[dBm]	Margin [dB]	[abij	[abiii]	Ennie [GBIII]	Margin [db]	
idth	5210	42	AVG	14.89	14.99	23.98	-9.09	-6.70	8.19	23.01	-14.82	
	5290	58	AVG	13.92	13.83	23.98	-10.06	-6.50	7.42	30.00	-22.58	
ΡĔ	5530	106	AVG	14.97	14.63	23.98	-9.01	-6.10	8.87	30.00	-21.13	
5GI Ba	5610	122	AVG	14.86	14.61	23.98	-9.12	-6.10	8.76	-	-	
	5690	138	AVG	14.83	14.52	23.98	-9.15	-5.90	8.93	30.00	-21.07	
	5775	155	AVG	14.57	14.84	30.00	-15.43	-5.90	8.67	-	-	

Table 7-11. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power

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## **MIMO Maximum Conducted Output Power Measurements**

	Freq [MHz]	Freq [MHz] Channel Detector		Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
~				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]		margin [ab]
	5180	36	AVG	16.75	16.96	19.87	23.98	-4.11	-3.49	16.38	23.01	-6.63
- <del>č</del>	5200	40	AVG	16.89	16.57	19.74	23.98	-4.24	-3.69	16.05	23.01	-6.96
ndwidth)	5220	44	AVG	16.57	16.70	19.65	23.98	-4.33	-3.89	15.76	23.01	-7.25
ğ	5240	48	AVG	16.69	16.96	19.84	23.98	-4.14	-3.89	15.95	23.01	-7.06
Ba	5260	52	AVG	16.72	16.95	19.85	23.98	-4.13	-3.89	15.96	30.00	-14.04
	5280	56	AVG	16.66	16.87	19.78	23.98	-4.20	-3.49	16.29	30.00	-13.71
Ηz	5300	60	AVG	16.62	16.79	19.72	23.98	-4.26	-3.19	16.53	30.00	-13.47
(20M	5320	64	AVG	16.94	16.77	19.87	23.98	-4.11	-3.19	16.68	30.00	-13.32
50	5500	100	AVG	16.75	16.87	19.82	23.98	-4.16	-3.09	16.73	30.00	-13.27
	5600	120	AVG	16.73	16.77	19.76	23.98	-4.22	-3.09	16.67	-	-
Ŧ	5620	124	AVG	16.98	16.56	19.79	23.98	-4.19	-3.09	16.70	-	-
Ċ	5720	144	AVG	16.89	16.77	19.84	23.98	-4.14	-3.09	16.75	30.00	-13.25
ũ	5745	149	AVG	16.67	16.80	19.75	30.00	-10.25	-2.89	16.86	-	-
	5785	157	AVG	16.75	16.58	19.68	30.00	-10.32	-2.89	16.79	-	-
	5825	165	AVG	16.71	16.85	19.79	30.00	-10.21	-2.89	16.90	-	-

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

	Freq [MHz]	Channel	Detector	Cond	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [GB/II]	margin [ab]
	5180	36	AVG	15.92	15.98	18.96	23.98	-5.02	-3.49	15.47	23.01	-7.54
i i i	5200	40	AVG	16.98	16.92	19.96	23.98	-4.02	-3.69	16.27	23.01	-6.74
Bandwidth)	5220	44	AVG	16.77	16.51	19.65	23.98	-4.33	-3.89	15.76	23.01	-7.25
Ĕ	5240	48	AVG	16.88	16.71	19.81	23.98	-4.17	-3.89	15.92	23.01	-7.09
Ba	5260	52	AVG	16.95	16.85	19.91	23.98	-4.07	-3.89	16.02	30.00	-13.98
N	5280	56	AVG	16.88	16.71	19.81	23.98	-4.17	-3.49	16.32	30.00	-13.68
	5300	60	AVG	16.88	16.58	19.74	23.98	-4.24	-3.19	16.55	30.00	-13.45
Σ	5320	64	AVG	16.23	16.33	19.29	23.98	-4.69	-3.19	16.10	30.00	-13.90
20M	5500	100	AVG	16.94	16.60	19.78	23.98	-4.20	-3.09	16.69	30.00	-13.31
) z	5600	120	AVG	16.97	16.56	19.78	23.98	-4.20	-3.09	16.69	-	-
Ϊ	5620	124	AVG	16.81	16.78	19.81	23.98	-4.17	-3.09	16.72	-	-
U	5720	144	AVG	16.69	16.58	19.65	23.98	-4.33	-3.09	16.56	30.00	-13.44
ũ	5745	149	AVG	16.92	16.98	19.96	30.00	-10.04	-2.89	17.07	-	-
	5785	157	AVG	16.95	16.81	19.89	30.00	-10.11	-2.89	17.00	-	-
	5825	165	AVG	16.88	16.61	19.76	30.00	-10.24	-2.89	16.87	-	-

Table 7-13. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

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	Freq [MHz]	Channel	Detector	Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
2				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [GB/ii]	margin [ab]
andwidth	5180	36	AVG	15.93	14.98	18.49	23.98	-5.49	-3.49	15.00	23.01	-8.01
i i i i	5200	40	AVG	16.63	16.94	19.80	23.98	-4.18	-3.69	16.11	23.01	-6.90
5	5220	44	AVG	16.70	16.51	19.62	23.98	-4.36	-3.89	15.73	23.01	-7.28
Ĕ	5240	48	AVG	16.95	16.77	19.87	23.98	-4.11	-3.89	15.98	23.01	-7.03
Ba	5260	52	AVG	16.98	16.91	19.96	23.98	-4.02	-3.89	16.07	30.00	-13.93
N	5280	56	AVG	16.90	16.72	19.82	23.98	-4.16	-3.49	16.33	30.00	-13.67
T	5300	60	AVG	16.81	16.59	19.71	23.98	-4.27	-3.19	16.52	30.00	-13.48
Σ	5320	64	AVG	16.33	16.35	19.35	23.98	-4.63	-3.19	16.16	30.00	-13.84
20M	5500	100	AVG	16.90	16.58	19.75	23.98	-4.23	-3.09	16.66	30.00	-13.34
) z	5600	120	AVG	16.93	16.54	19.75	23.98	-4.23	-3.09	16.66	-	-
Ϊ	5620	124	AVG	16.79	16.79	19.80	23.98	-4.18	-3.09	16.71	-	-
U	5720	144	AVG	16.60	16.54	19.58	23.98	-4.40	-3.09	16.49	30.00	-13.51
2 L	5745	149	AVG	16.91	16.97	19.95	30.00	-10.05	-2.89	17.06	-	-
	5785	157	AVG	16.92	16.84	19.89	30.00	-10.11	-2.89	17.00	-	-
	5825	165	AVG	16.88	16.64	19.77	30.00	-10.23	-2.89	16.88	-	-

Table 7-14. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
Ê				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]		wargin [ub]
主	5180	36	AVG	15.98	15.68	18.84	23.98	-5.14	-3.49	15.35	23.01	-7.66
÷	5200	40	AVG	16.69	16.78	19.75	23.98	-4.23	-3.69	16.06	23.01	-6.95
Bandwidth)	5220	44	AVG	16.97	16.73	19.86	23.98	-4.12	-3.89	15.97	23.01	-7.04
ğ	5240	48	AVG	16.71	16.93	19.83	23.98	-4.15	-3.89	15.94	23.01	-7.07
Ba	5260	52	AVG	16.80	16.57	19.70	23.98	-4.28	-3.89	15.81	30.00	-14.19
	5280	56	AVG	16.85	16.71	19.79	23.98	-4.19	-3.49	16.30	30.00	-13.70
문	5300	60	AVG	16.67	16.62	19.66	23.98	-4.32	-3.19	16.47	30.00	-13.53
Σ	5320	64	AVG	16.45	16.47	19.47	23.98	-4.51	-3.19	16.28	30.00	-13.72
(20M	5500	100	AVG	16.82	16.19	19.53	23.98	-4.45	-3.09	16.44	30.00	-13.56
	5600	120	AVG	16.72	16.57	19.66	23.98	-4.32	-3.09	16.57	-	-
Ł	5620	124	AVG	16.57	16.89	19.74	23.98	-4.24	-3.09	16.65	-	-
Ċ	5720	144	AVG	16.57	16.54	19.57	23.98	-4.41	-3.09	16.48	30.00	-13.52
ũ	5745	149	AVG	16.89	16.69	19.80	30.00	-10.20	-2.89	16.91	-	-
	5785	157	AVG	16.92	16.97	19.96	30.00	-10.04	-2.89	17.07	-	-
	5825	165	AVG	16.79	16.74	19.78	30.00	-10.22	-2.89	16.89	-	-
	Table	7-15 M			202 11-2	CIT/IN	II) Mavin	um Con	ductod		owor	

Table 7-15. MIMO 20MHz BW 802.11ax SU (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennic [dBin]	margin [ab]
Ϋ́ς	5190	38	AVG	15.48	15.46	18.48	23.98	-5.50	-3.69	14.79	23.01	-8.22
E H	5230	46	AVG	15.70	15.94	18.83	23.98	-5.15	-3.89	14.94	23.01	-8.07
(40M width	5270	54	AVG	15.94	15.82	18.89	23.98	-5.09	-3.49	15.40	30.00	-14.60
4 dv	5310	62	AVG	14.19	14.48	17.35	23.98	-6.63	-3.19	14.16	30.00	-15.84
ΣĒ	5510	102	AVG	15.35	15.24	18.31	23.98	-5.67	-3.09	15.22	30.00	-14.78
Ва Ва	5590	118	AVG	15.90	15.97	18.95	23.98	-5.03	-3.09	15.86	-	-
D D D	5630	126	AVG	15.77	15.71	18.75	23.98	-5.23	-3.09	15.66	-	-
	5710	142	AVG	15.63	15.79	18.72	23.98	-5.26	-3.09	15.63	30.00	-14.37
	5755	151	AVG	15.56	15.94	18.76	30.00	-11.24	-2.89	15.87	-	-
	5795	159	AVG	15.77	15.71	18.75	30.00	-11.25	-2.89	15.86	-	-

Table 7-16. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

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	Freq [MHz]	Channel	Detector	Cond	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	Lapud	Ennie [GB/II]	margin [ab]
HZ HZ	5190	38	AVG	15.03	15.40	18.23	23.98	-5.75	-3.69	14.54	23.01	-8.47
E H	5230	46	AVG	15.64	15.89	18.78	23.98	-5.20	-3.89	14.89	23.01	-8.12
(40MI width	5270	54	AVG	15.81	15.79	18.81	23.98	-5.17	-3.49	15.32	30.00	-14.68
d (4	5310	62	AVG	14.49	14.46	17.49	23.98	-6.49	-3.19	14.30	30.00	-15.70
ΣĒ	5510	102	AVG	15.25	15.22	18.25	23.98	-5.73	-3.09	15.16	30.00	-14.84
GH Bar	5590	118	AVG	15.97	15.97	18.98	23.98	-5.00	-3.09	15.89	-	-
5G B;	5630	126	AVG	15.77	15.70	18.75	23.98	-5.23	-3.09	15.66	-	-
	5710	142	AVG	15.56	15.67	18.63	23.98	-5.35	-3.09	15.54	30.00	-14.46
	5755	151	AVG	15.57	15.93	18.76	30.00	-11.24	-2.89	15.87	-	-
	5795	159	AVG	15.77	15.67	18.73	30.00	-11.27	-2.89	15.84	-	-

Table 7-17. MIMO 40MHz BW 802.11ac (UNII) Maximum Conducted Output Power

	Freq [MHz]	Channel	Detector	Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[ubiii]	Ennik [GBIII]	margin [ab]
H C	5190	38	AVG	15.24	15.25	18.26	23.98	-5.72	-3.69	14.57	23.01	-8.44
두 문	5230	46	AVG	15.98	15.98	18.99	23.98	-4.99	-3.89	15.10	23.01	-7.91
(40MI width	5270	54	AVG	15.69	15.85	18.78	23.98	-5.20	-3.49	15.29	30.00	-14.71
: (40 dwi	5310	62	AVG	14.35	14.39	17.38	23.98	-6.60	-3.19	14.19	30.00	-15.81
⊇ ⊈ I	5510	102	AVG	14.32	15.39	17.90	23.98	-6.08	-3.09	14.81	30.00	-15.19
Ва Ва	5590	118	AVG	15.66	15.59	18.64	23.98	-5.34	-3.09	15.55	-	-
D D D	5630	126	AVG	15.92	15.75	18.85	23.98	-5.13	-3.09	15.76	-	-
	5710	142	AVG	15.80	15.80	18.81	23.98	-5.17	-3.09	15.72	30.00	-14.28
	5755	151	AVG	15.54	15.81	18.69	30.00	-11.31	-2.89	15.80	-	-
	5795	159	AVG	15.72	15.56	18.65	30.00	-11.35	-2.89	15.76	-	-

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

		Channel	Detector	Conc	lucted Power [	dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
0MHz dth)				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[]		
0MH idth)	5210	42	AVG	14.89	14.89	17.90	23.98	-6.08	-3.69	14.21	23.01	-8.80
: (8 dwi	5290	58	AVG	13.84	13.92	16.89	23.98	-7.09	-3.49	13.40	30.00	-16.60
5GHz Band	5530	106	AVG	14.85	14.97	17.92	23.98	-6.06	-3.09	14.83	30.00	-15.17
B 20	5610	122	AVG	14.70	14.86	17.79	23.98	-6.19	-3.09	14.70	-	-
	5690	138	AVG	14.55	14.83	17.70	23.98	-6.28	-2.89	14.81	30.00	-15.19
	5775	155	AVG	14.91	14.57	17.75	30.00	-12.25	-2.89	14.86	-	-
					-	-	Moximu				wor	

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

	Freq [MHz]	Channel	Detector	Conc	lucted Power [	[dBm]	Conducted Power Limit	Conducted Power	Directional Ant. Gain	Max e.i.r.p. [dBm]	Max e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
Hz Hz				ANT1	ANT2	MIMO	[dBm]	Margin [dB]	[dBi]	[	[abiii]	margin [ab]
oM	5210	42	AVG	14.60	14.99	17.81	23.98	-6.17	1.36	19.17	23.01	-3.84
(8) 14	5290	58	AVG	13.80	13.83	16.83	23.98	-7.15	1.44	18.27	30.00	-11.73
GHz Banc	5530	106	AVG	14.61	14.63	17.63	23.98	-6.35	1.60	19.23	30.00	-10.77
B, 5G	5610	122	AVG	14.86	14.61	17.75	23.98	-6.23	1.60	19.35	-	-
	5690	138	AVG	14.63	14.52	17.59	23.98	-6.39	1.69	19.28	30.00	-10.72
	5775	155	AVG	14.81	14.84	17.84	30.00	-12.16	1.69	19.53	-	-

Table 7-20. MIMO 80MHz BW 802.11ax SU (UNII) Maximum Conducted Output Power

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#### Note:

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

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

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

#### Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 15.92 dBm for Antenna-1 and 15.98 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(15.92 dBm + 15.98 dBm) = (39.08 mW + 39.63 mW) = 78.71 mW = 18.96 dBm

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

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 18.96 dBm with directional gain of -3.49 dBi.

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

18.96 dBm + -3.49 dBi = 15.47 dBm

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# 7.5 Maximum Power Spectral Density – 802.11a/n/ac/ax §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

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

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

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

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

#### Test Procedure Used

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

#### Test Settings

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

#### Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

#### **Test Notes**

#### None

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# SISO Antenna-1 Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]	
	5180	36	а	6	4.90	11.0	-6.10	
	5200	40	а	6	5.27	11.0	-5.73	
	5240	48	а	6	5.50	11.0	-5.50	
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.64	11.0	-6.36	
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	5.44	11.0	-5.56	
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	5.75	11.0	-5.25	
<del>.</del>	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	6.71	11.0	-4.29	
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	6.73	11.0	-4.27	
Ĕ	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	6.98	11.0	-4.02	
	5190	38	n (40MHz)	13.5/15 (MCS0)	1.40	11.0	-9.60	
	5230	46	n (40MHz)	13.5/15 (MCS0)	1.45	11.0	-9.55	
	5190	38	ax (40MHz)	13.5/15 (MCS0)	1.33	11.0	-9.67	
	5230	46	ax (40MHz)	13.5/15 (MCS0)	1.90	11.0	-9.10	
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-3.02	11.0	-14.02	
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-2.44	11.0	-13.44	
	5260	52	a	6	7.36	11.0	-3.64	
	5280	56	a	6	7.15	11.0	-3.85	
	5320	64	a	6	6.88	11.0	-4.12	
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.86	11.0	-4.12	
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.63	11.0	-4.37	
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	5.58	11.0	-5.42	
<	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	7.12	11.0	-3.88	
Band 2A			, <i>,</i> ,	, ,				
an	5280	56 64	ax (20MHz)	6.5/7.2 (MCS0)	7.44 6.81	<u>11.0</u> 11.0	-3.56 -4.19	
ш	5320		ax (20MHz)	6.5/7.2 (MCS0)				
	5270	54	n (40MHz)	13.5/15 (MCS0)	1.47	11.0	-9.53	
	5310	62	n (40MHz)	13.5/15 (MCS0)	1.37	11.0	-9.63	
	5270	54	ax (40MHz)	13.5/15 (MCS0)	1.84	11.0	-9.16	
	5310	62	ax (40MHz)	13.5/15 (MCS0)	2.02	11.0	-8.98	
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-2.77	11.0	-13.77	
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-2.11	11.0	-13.11	
	5500	100	а	6	5.20	11.0	-5.80	
	5600	120	а	6	5.33	11.0	-5.67	
	5720	144	а	6	6.51	11.0	-4.49	
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	5.68	11.0	-5.32	
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	5.57	11.0	-5.43	
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.01	11.0	-4.99	
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	5.26	11.0	-5.74	
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	5.53	11.0	-5.47	
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	5.16	11.0	-5.84	
20	5510	102	n (40MHz)	13.5/15 (MCS0)	0.83	11.0	-10.17	
Band 2C	5590	118	n (40MHz)	13.5/15 (MCS0)	1.46	11.0	-9.54	
ä	5710	142	n (40MHz)	13.5/15 (MCS0)	1.21	11.0	-9.80	
	5510	102	ax (40MHz)	13.5/15 (MCS0)	0.96	11.0	-10.04	
	5590	118	ax (40MHz)	13.5/15 (MCS0)	1.17	11.0	-9.83	
	5710	142	ax (40MHz)	13.5/15 (MCS0)	1.27	11.0	-9.73	
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-2.86	11.0	-13.86	
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-3.53	11.0	-14.53	
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-3.22	11.0	-14.22	
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-3.26	11.0	-14.26	
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-3.30	11.0	-14.30	
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-2.66	11.0	-13.66	
Table 7-21	. Bands 1,	2A, 2C	Conducted	d Power Spect	tral Density	Measuremen		
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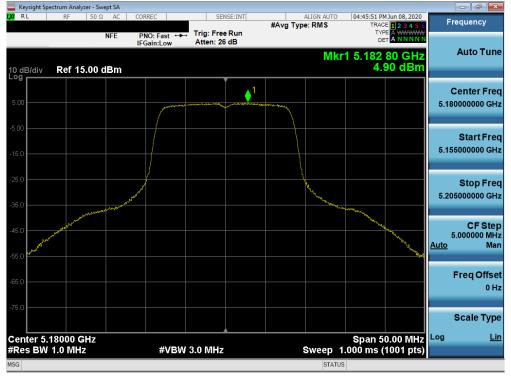
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	а	6	4.90	-6.50	-1.60	10.0	-11.60
	5200	40	а	6	5.27	-6.70	-1.43	10.0	-11.43
	5240	48	а	6	5.50	-6.90	-1.40	10.0	-11.40
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.64	-6.50	-1.86	10.0	-11.86
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	5.44	-6.70	-1.26	10.0	-11.26
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	5.75	-6.90	-1.15	10.0	-11.15
Ξ	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	6.71	-6.50	0.21	10.0	-9.79
Band	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	6.73	-6.70	0.03	10.0	-9.97
ä	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	6.98	-6.90	0.08	10.0	-9.92
	5190	38	n (40MHz)	13.5/15 (MCS0)	1.40	-6.50	-5.10	10.0	-15.10
	5230	46	n (40MHz)	13.5/15 (MCS0)	1.45	-6.90	-5.45	10.0	-15.45
	5190	38	ax (40MHz)	13.5/15 (MCS0)	1.33	-6.50	-5.17	10.0	-15.17
	5230	46	ax (40MHz)	13.5/15 (MCS0)	1.90	-6.90	-5.00	10.0	-15.00
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-3.02	-6.90	-9.92	10.0	-19.92
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-2.44	-6.90	-9.34	10.0	-19.34

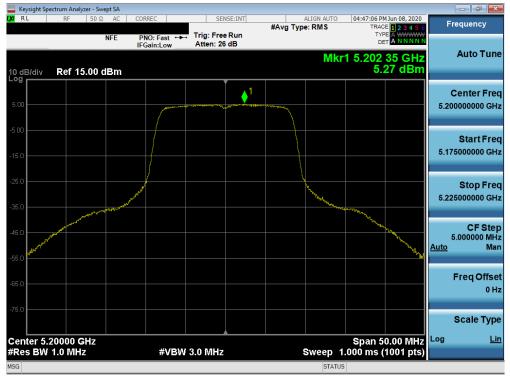
Table 7-22. Band 1 e.i.r.p. Conducted Power Spectral Density Measurements (ISED) SISO ANT1



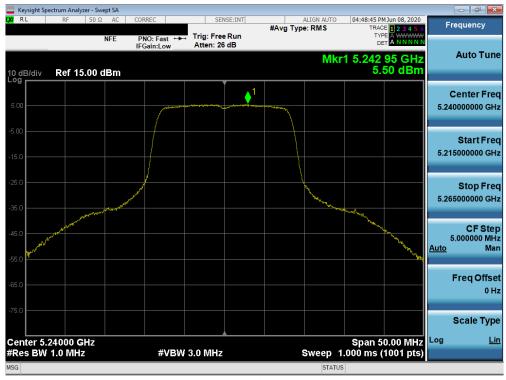
Plot 7-133. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 36)

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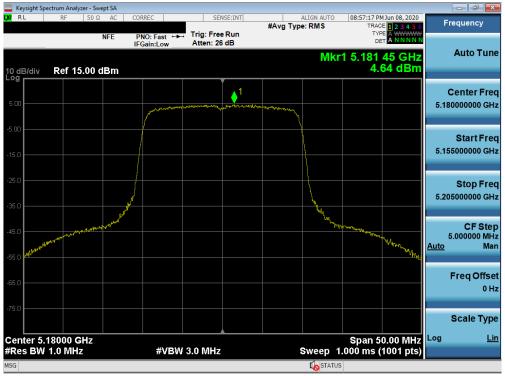
Plot 7-134. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 40)



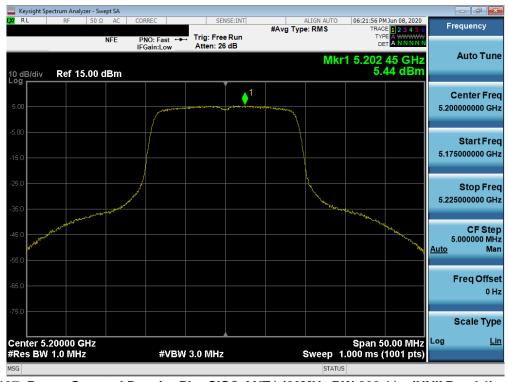
Plot 7-135. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 48)

FCC ID: A3LSMF707U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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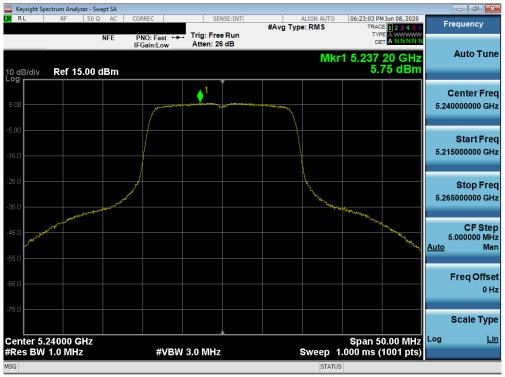
Plot 7-136. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)



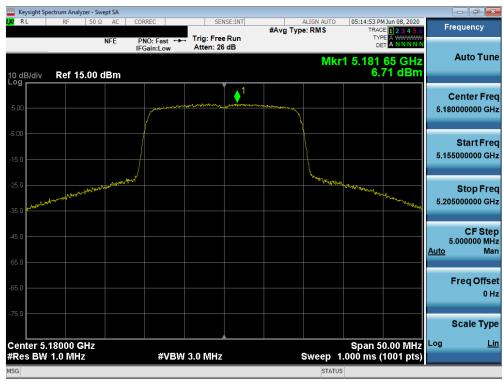
Plot 7-137. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)

FCC ID: A3LSMF707U	PCTEST Freud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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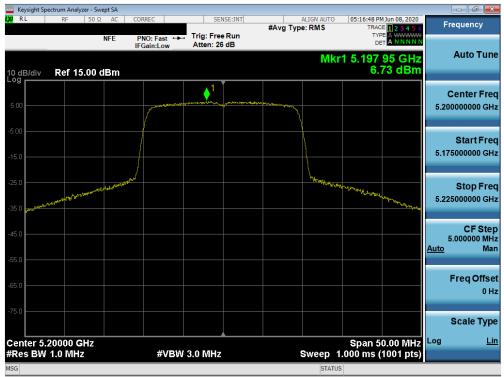
Plot 7-138. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)



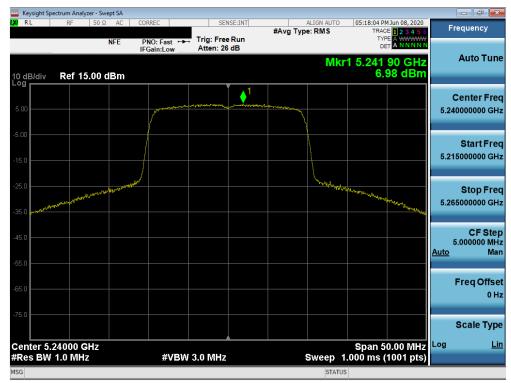
Plot 7-139. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 1) - Ch. 36)

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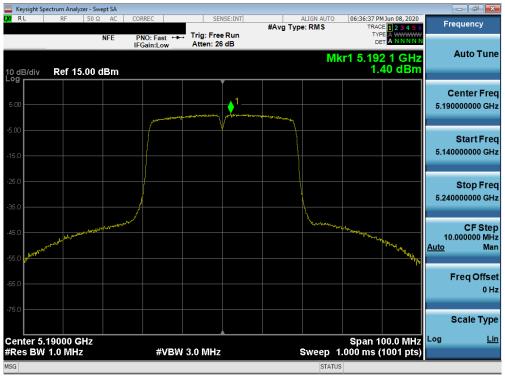
Plot 7-140. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 1) - Ch. 40)



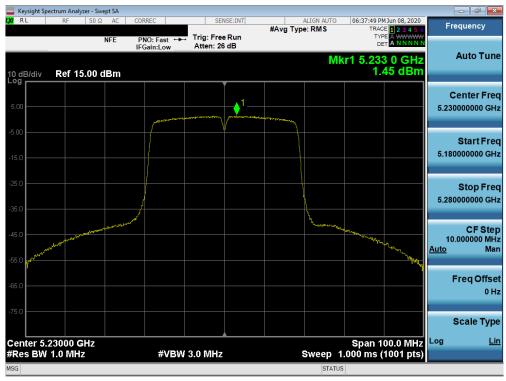
Plot 7-141. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 1) - Ch. 48)

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Plot 7-142. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)



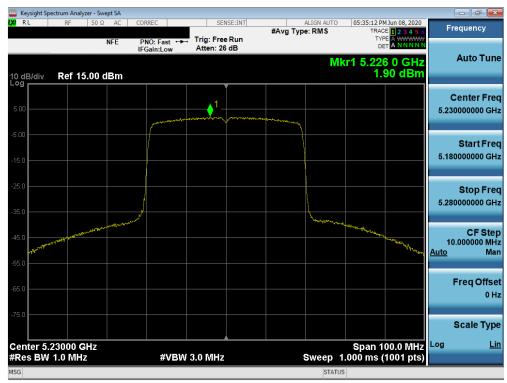
Plot 7-143. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)

FCC ID: A3LSMF707U	PCTEST Proud to be part of @ + ======	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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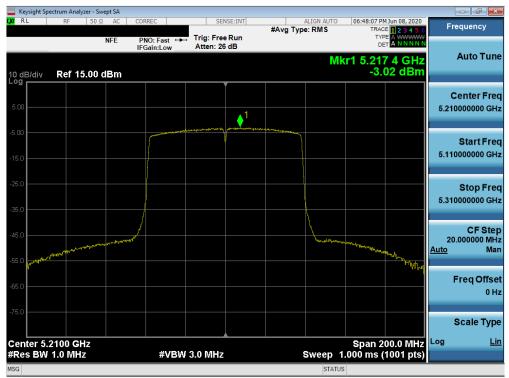
Plot 7-144. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 1) - Ch. 38)



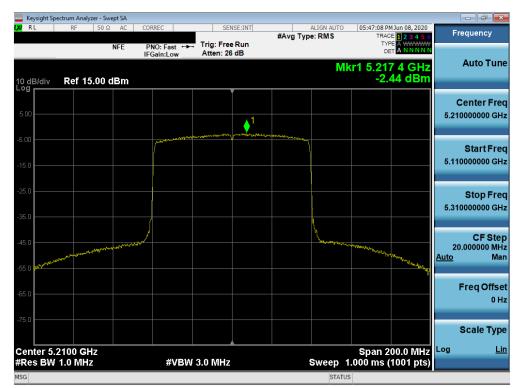
Plot 7-145. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 1) - Ch. 46)

FCC ID: A3LSMF707U	Roud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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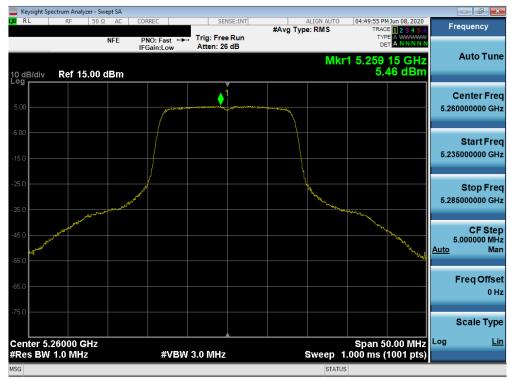
Plot 7-146. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)



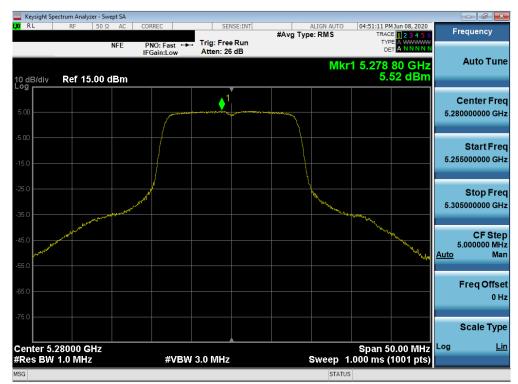
Plot 7-147. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax SU (UNII Band 1) - Ch. 42)

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Plot 7-148. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) – Ch. 52)



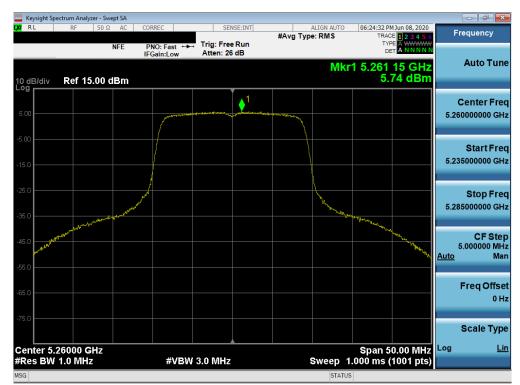
Plot 7-149. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 56)

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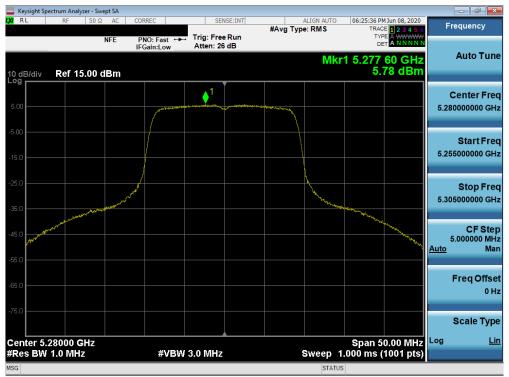
Plot 7-150. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 64)



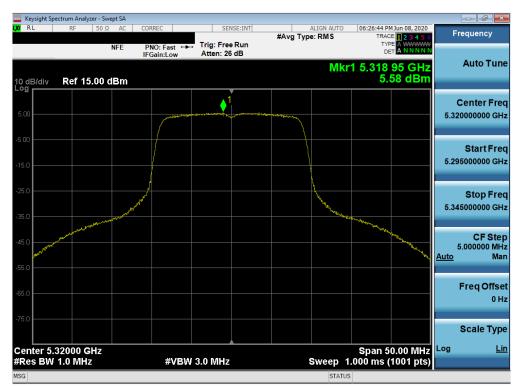
Plot 7-151. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)

FCC ID: A3LSMF707U	Roud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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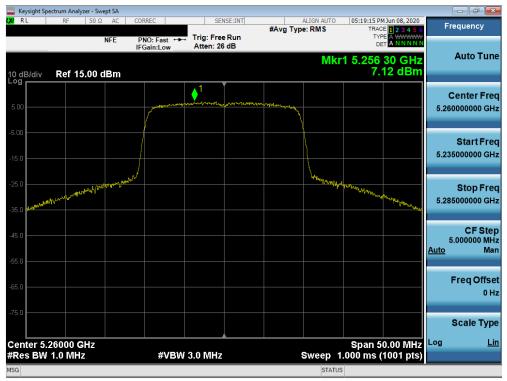
Plot 7-152. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)



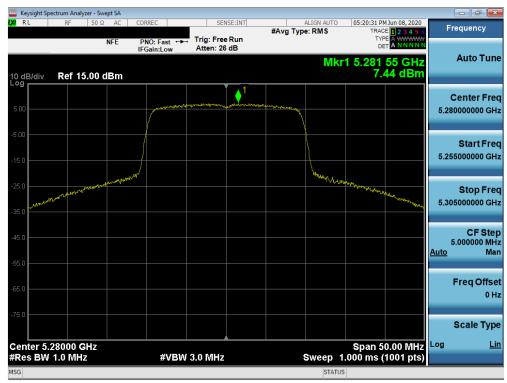
Plot 7-153. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMF707U	Read to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-154. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 2A) - Ch. 52)



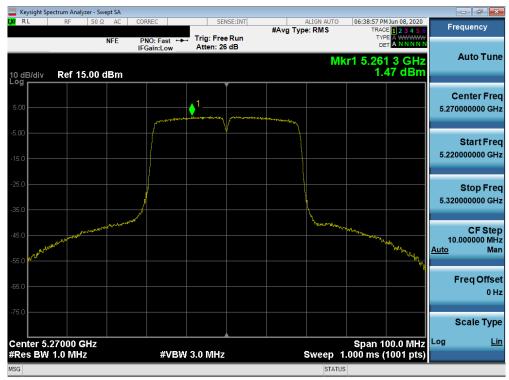
Plot 7-155. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 2A) - Ch. 56)

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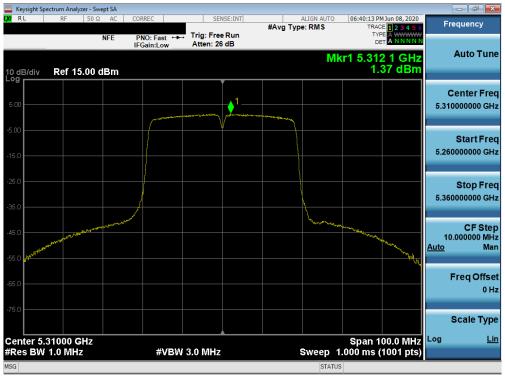
Plot 7-156. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 2A) - Ch. 64)



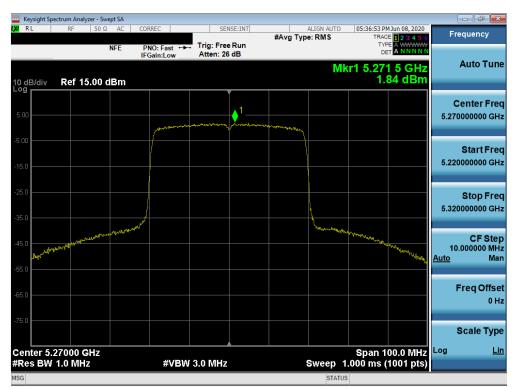
Plot 7-157. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)

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Plot 7-158. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)



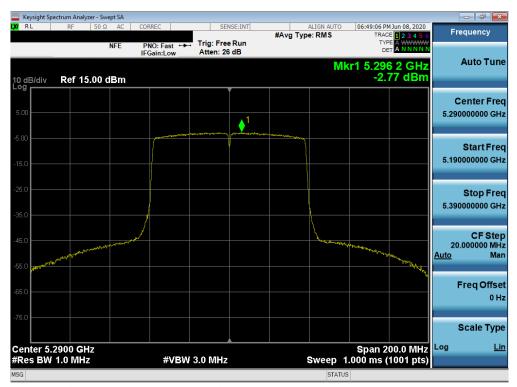
Plot 7-159. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 2A) - Ch. 54)

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Plot 7-160. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 2A) - Ch. 62)



Plot 7-161. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)

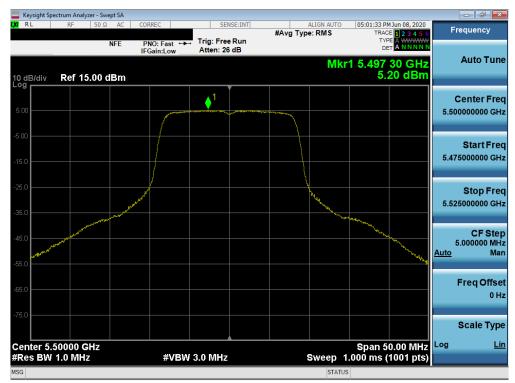
FCC ID: A3LSMF707U	Read to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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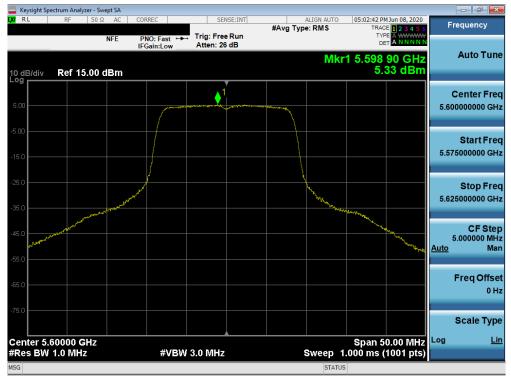
Plot 7-162. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax SU (UNII Band 2A) - Ch. 58)



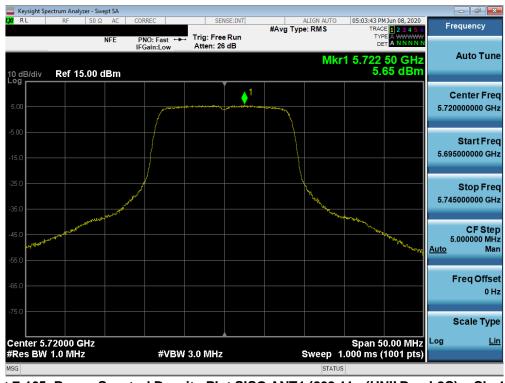
Plot 7-163. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMF707U	PCTEST Rad to be part of (2) - m	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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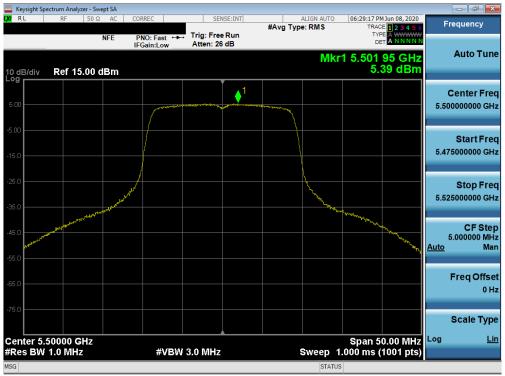
Plot 7-164. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 120)



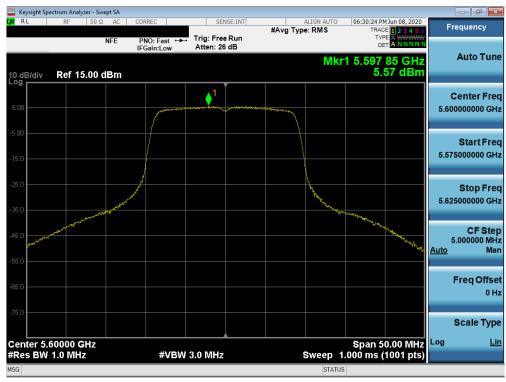
Plot 7-165. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMF707U	PCTEST Freud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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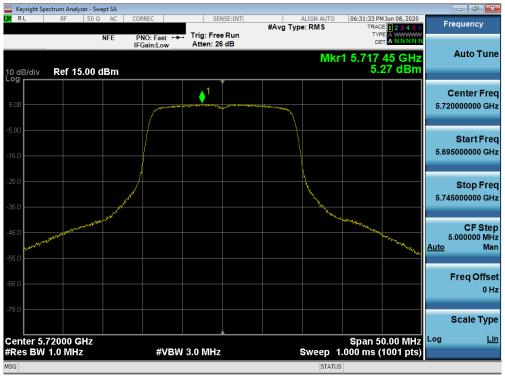
Plot 7-166. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)



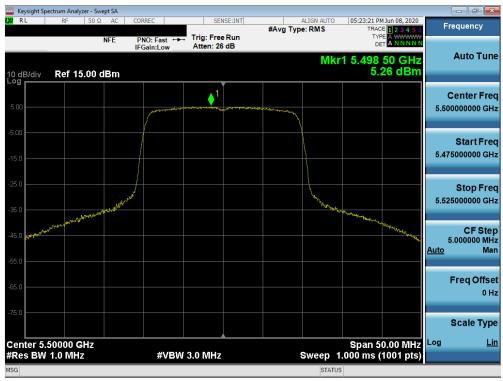
Plot 7-167. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)

FCC ID: A3LSMF707U	Roud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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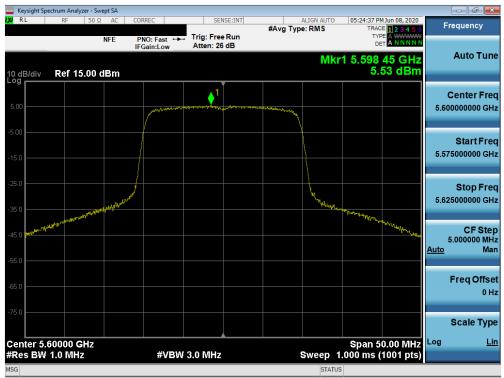
Plot 7-168. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)



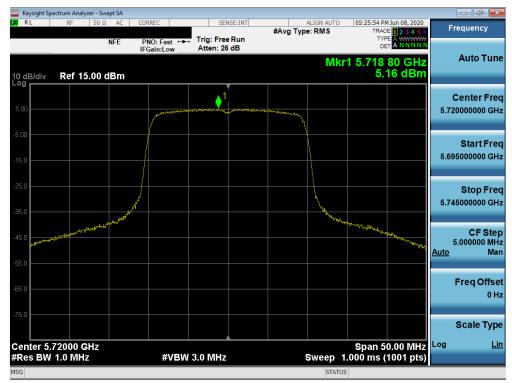
Plot 7-169. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 2C) - Ch. 100)

FCC ID: A3LSMF707U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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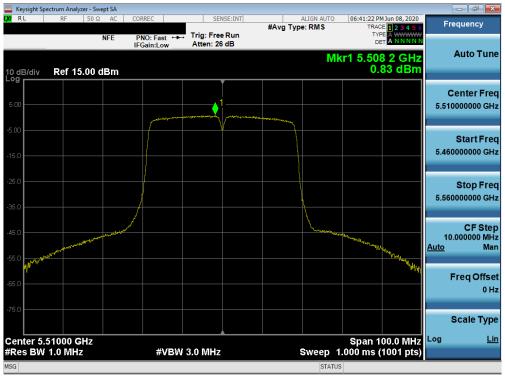
Plot 7-170. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 2C) - Ch. 120)



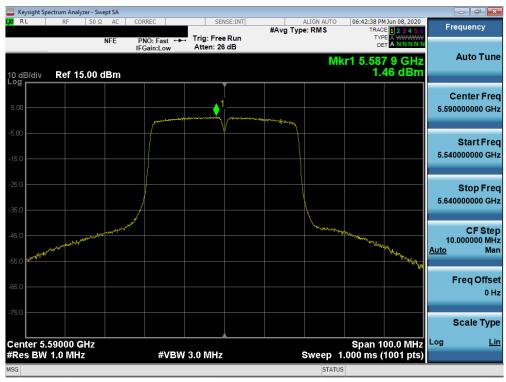
Plot 7-171. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 2C) - Ch. 144)

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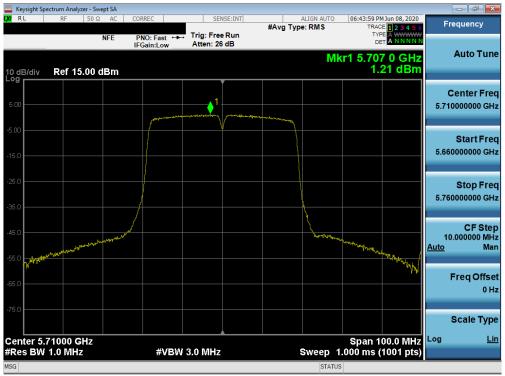
Plot 7-172. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)



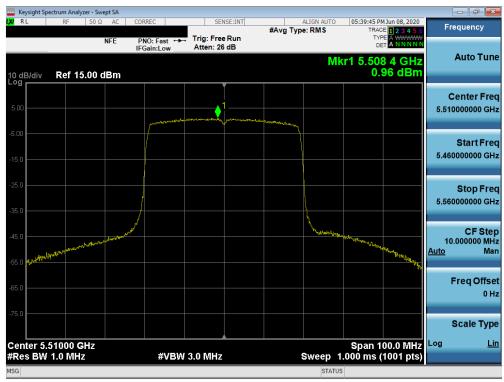
Plot 7-173. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)

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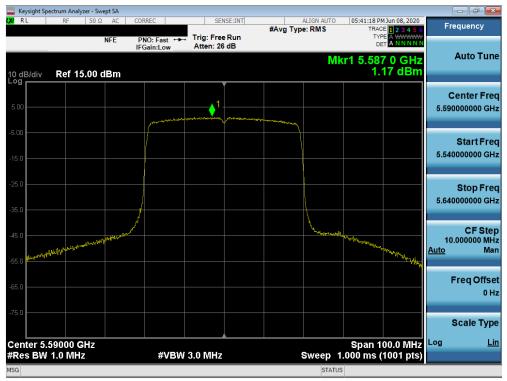
Plot 7-174. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)



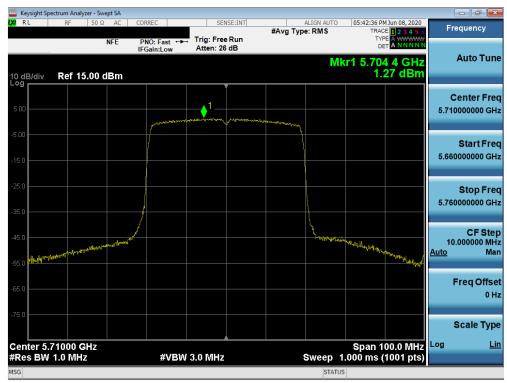
Plot 7-175. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMF707U	PCTEST Proved to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-176. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 2C) - Ch. 118)



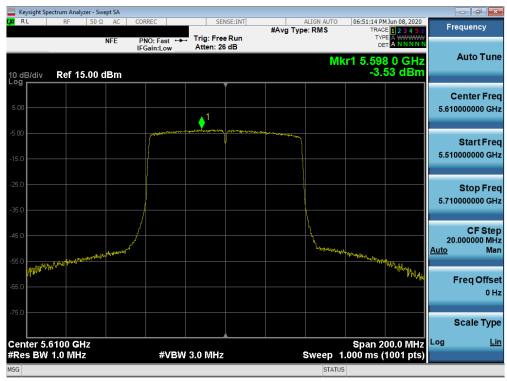
Plot 7-177. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 2C) - Ch. 144)

FCC ID: A3LSMF707U	PCTEST Proud to be part of @ - m	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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🔤 Keysight Spectrum Analyzer - S					
LXI RL RF 50	Ω AC CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	06:50:18 PM Jun 08, 2020 TRACE 1 2 3 4 5 6	Frequency
	NFE PNO: Fast IFGain:Low			DET A WWWW	
10 dB/div Ref 15.00	dBm		MI	kr1 5.519 4 GHz -2.86 dBm	Auto Tune
5.00					Center Freq 5.53000000 GHz
-5.00			to adaption a production of the		
-15.0					Start Freq 5.430000000 GHz
-25.0					Stop Freq
-35.0					5.630000000 GHz
-45.0	and an and a second sec			ans from the	CF Step 20.000000 MHz <u>Auto</u> Man
-55.0					Freq Offset
-65.0					0 Hz
					Scale Type
Center 5.5300 GHz #Res BW 1.0 MHz	#V	BW 3.0 MHz	Sweep	Span 200.0 MHz .000 ms (1001 pts)	Log <u>Lin</u>
MSG			STATU		

Plot 7-178. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)



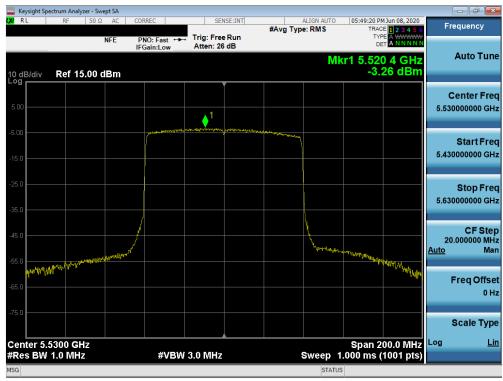
Plot 7-179. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Bogo 120 of 240
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🔤 Keysight Spectrum Analyzer - Sv								
LX/ RL RF 50 \$	Ω AC CORRE		SENSE:INT	#Avg Typ	ALIGN AUTO	TRAC	1 Jun 08, 2020 E 1 2 3 4 5 6	Frequency
	NFE PNC IFGa		j: Free Run en: 26 dB			TYP DE		
10 dB/div Ref 15.00	dBm				Mk	r1 5.69 -3.1	1 6 GHz 22 dBm	Auto Tune
5.00								Center Freq 5.69000000 GHz
-5.00		وروار وروا	1	and provide the importance				
-15.0								Start Freq 5.59000000 GHz
-25.0								Stop Freq
-35.0								5.790000000 GHz
-45.0								CF Step 20.000000 MHz Auto Man
-55.0	White and a second s					monor halfaus	**************************************	Freq Offset
-65.0								0 Hz
-75.0								Scale Type
Center 5.6900 GHz #Res BW 1.0 MHz		#VBW 3.0	MHz		Sweep 1	Span 2 .000 m <u>s (</u>	00.0 MHz 1001 pts)	Log <u>Lin</u>
MSG					STATUS			

Plot 7-180. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)



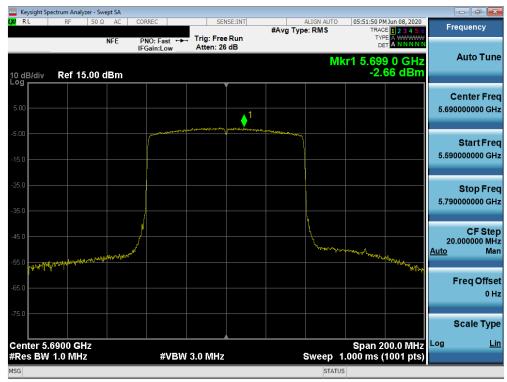
Plot 7-181. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax SU (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMF707U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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🔤 Keysight Spectrum Analyzer - :								- <b>F</b>
<b>LXI RL RF 50</b>	Ω AC CORP	EC	SENSE:INT	#Avg Typ	ALIGN AUTO e: RMS		Jun 08, 2020	Frequency
			g: Free Run ten: 26 dB		Mk	<sup>DE™</sup>	4 GHz	Auto Tune
10 dB/div Ref 15.00	dBm					-3.3	30 dBm	
5.00			1					Center Freq
			1					5.610000000 GHz
-5.00				manage and the second				Start Freq 5.51000000 GHz
-15.0								5.51000000 GHZ
-25.0								Stop Freq 5.710000000 GHz
-35.0								5.7 1000000 GH2
-45.0					2 .			CF Step 20.000000 MHz
-55.0 Maryanananananananananananananananananana	where where					and	LANNING THE AND	<u>Auto</u> Man
-65.0								Freq Offset 0 Hz
-75.0								0112
								Scale Type
Center 5.6100 GHz #Res BW 1.0 MHz		#VBW 3.0	MHz		Sweep_1	Span 20 .000 ms (1	00.0 MHz 1001 pts)	Log <u>Lin</u>
MSG					STATUS			

Plot 7-182. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax SU (UNII Band 2C) - Ch. 122)



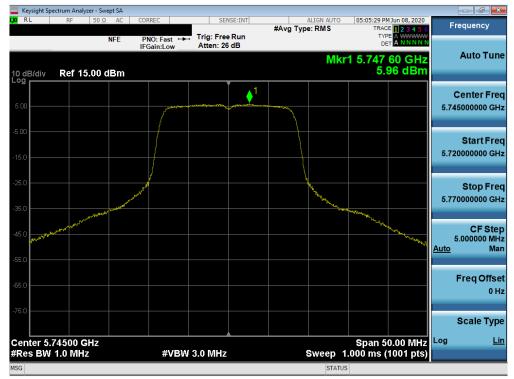
Plot 7-183. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax SU (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMF707U	PCTEST Proved to be part of @	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]
	5745	149	а	6	5.96	30.0	-24.04
	5785	157	а	6	5.70	30.0	-24.30
	5825	165	а	6	5.16	30.0	-24.84
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	6.10	30.0	-23.90
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	5.71	30.0	-24.30
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	5.33	30.0	-24.67
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	5.39	30.0	-24.61
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	5.00	30.0	-25.00
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	4.90	30.0	-25.10
	5755	151	n (40MHz)	13.5/15 (MCS0)	0.97	30.0	-29.03
	5795	159	n (40MHz)	13.5/15 (MCS0)	1.25	30.0	-28.75
	5755	151	ax (40MHz)	13.5/15 (MCS0)	0.69	30.0	-29.31
	5795	159	ax (40MHz)	13.5/15 (MCS0)	0.98	30.0	-29.02
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-1.69	30.0	-31.69
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-2.90	30.0	-32.90

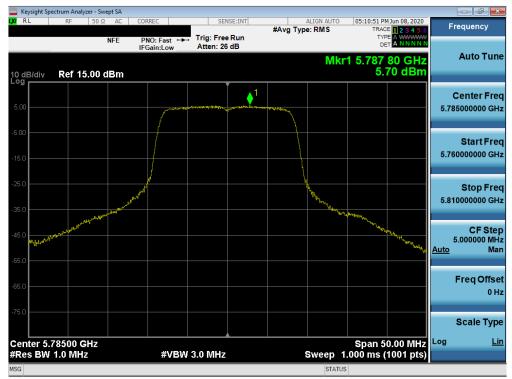
Table 7-23. Band 3 Conducted Power Spectral Density Measurements SISO ANT1



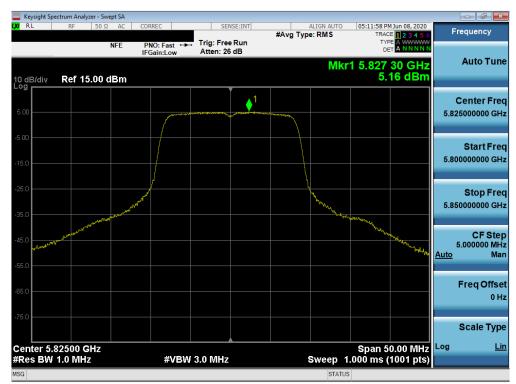
Plot 7-184. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 149)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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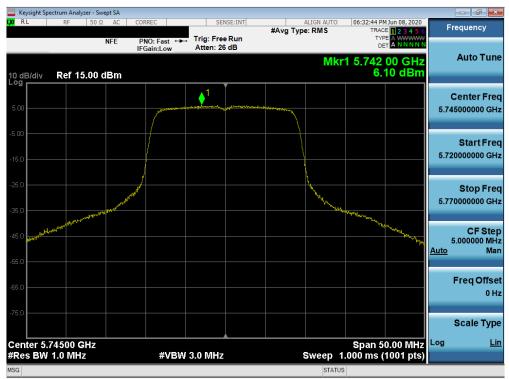
Plot 7-185. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 157)



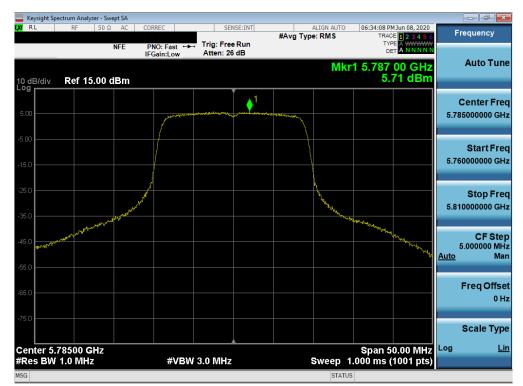
Plot 7-186. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF707U	Road to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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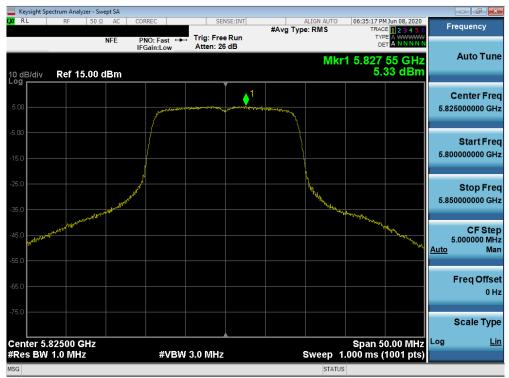
Plot 7-187. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



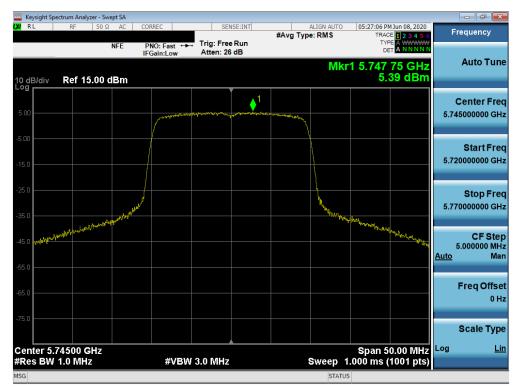
Plot 7-188. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

FCC ID: A3LSMF707U	Read to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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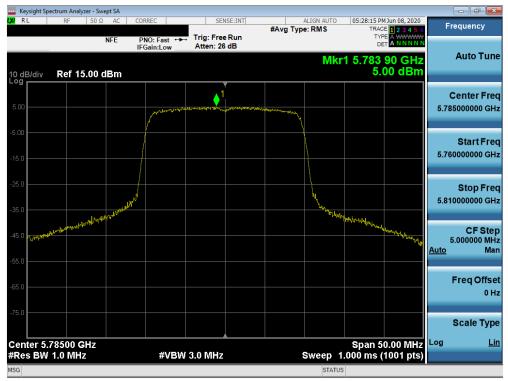
Plot 7-189. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



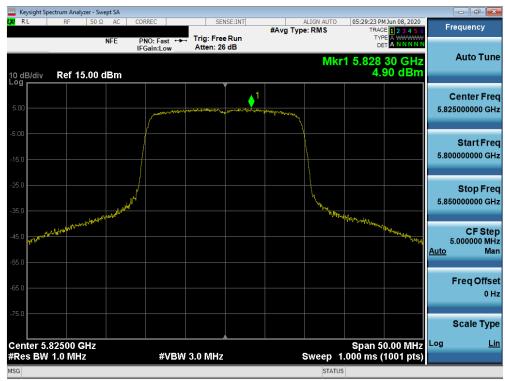
Plot 7-190. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 3) - Ch. 149)

FCC ID: A3LSMF707U	PCTEST Rad to be part of (2) - m	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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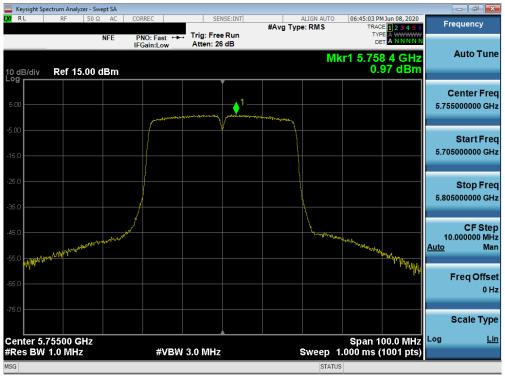
Plot 7-191. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 3) - Ch. 157)



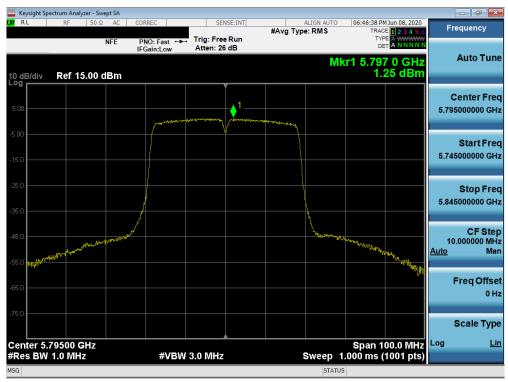
Plot 7-192. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax SU (UNII Band 3) - Ch. 165)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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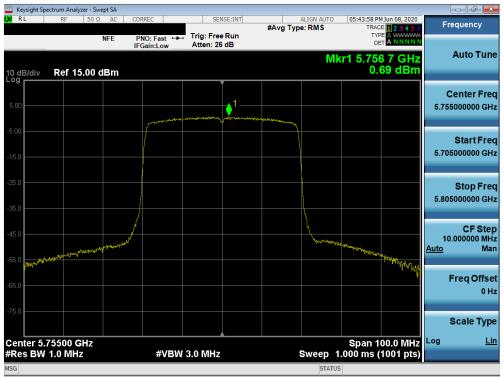
Plot 7-193. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



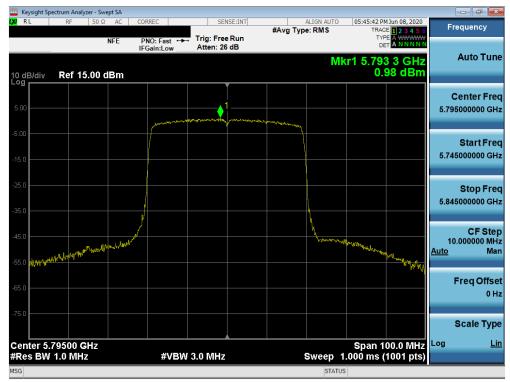
Plot 7-194. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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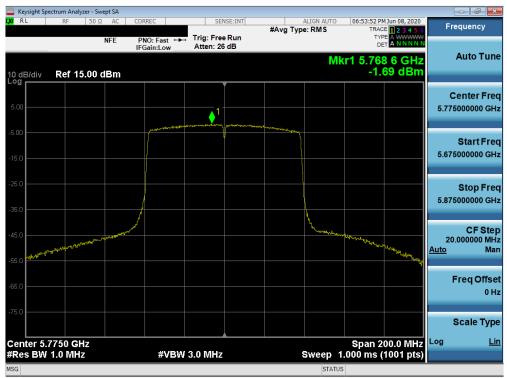
Plot 7-195. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 3) - Ch. 151)



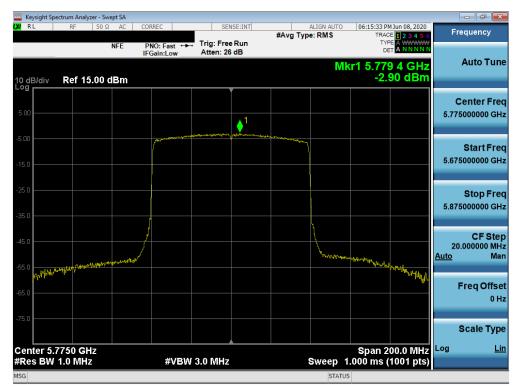
Plot 7-196. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax SU (UNII Band 3) - Ch. 159)

FCC ID: A3LSMF707U	PCTEST Prad to bo part of (2) - m	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-197. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-198. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax SU (UNII Band 3) - Ch. 155)

FCC ID: A3LSMF707U	PCTEST Prad to be part of @	MEASUREMENT REPORT (CERTIFICATION)	AMSUNG	Approved by: Quality Manager
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## SISO Antenna-2 Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
	5180	36	а	6	6.98	11.0	-4.03
	5200	40	а	6	7.23	11.0	-3.77
	5240	48	а	6	7.75	11.0	-3.25
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.99	11.0	-6.01
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	5.38	11.0	-5.63
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.51	11.0	-3.50
<del>~</del>	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.63	11.0	-6.37
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	4.90	11.0	-6.10
Ba	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	5.19	11.0	-5.81
	5190	38	n (40MHz)	13.5/15 (MCS0)	4.39	11.0	-6.61
	5230	46	n (40MHz)	13.5/15 (MCS0)	4.51	11.0	-6.49
	5230	38	ax (40MHz)	13.5/15 (MCS0)	0.43	11.0	-10.57
	5230	46	, ,		1.29	11.0	-9.71
			ax (40MHz)	13.5/15 (MCS0)	-		
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	0.16	11.0	-10.84
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-3.18	11.0	-14.18
	5260	52	а	6	6.58	11.0	-4.42
	5280	56	а	6	6.51	11.0	-4.49
	5320	64	а	6	6.07	11.0	-4.93
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.60	11.0	-4.40
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.18	11.0	-4.82
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	8.04	11.0	-2.96
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	4.76	11.0	-6.24
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	5.02	11.0	-5.98
Bai	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	4.88	11.0	-6.12
	5270	54	n (40MHz)	13.5/15 (MCS0)	5.12	11.0	-5.88
	5310	62	n (40MHz)	13.5/15 (MCS0)	5.33	11.0	-5.67
	5270	54	ax (40MHz)	13.5/15 (MCS0)	0.91	11.0	-10.09
	5310	62	ax (40MHz)	13.5/15 (MCS0)	0.94	11.0	-10.06
	5290	58	ac (80MHz)		0.58	11.0	-10.00
		58	· · · ·	29.3/32.5 (MCS0)			
	5290		ax (80MHz)	29.3/32.5 (MCS0)	-3.29	11.0	-14.29
	5500	100	а	6	8.24	11.0	-2.76
	5600	120	а	6	7.83	11.0	-3.17
	5720	144	а	6	6.27	11.0	-4.73
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	5.94	11.0	-5.06
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	7.95	11.0	-3.05
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.20	11.0	-4.81
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	4.20	11.0	-6.80
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	4.35	11.0	-6.65
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	4.76	11.0	-6.25
Ŋ	5510	102	n (40MHz)	13.5/15 (MCS0)	4.61	11.0	-6.39
Band 2C	5590	118	n (40MHz)	13.5/15 (MCS0)	4.40	11.0	-6.60
Bar	5710	142	n (40MHz)	13.5/15 (MCS0)	4.92	11.0	-6.08
	5510	102	ax (40MHz)	13.5/15 (MCS0)	0.61	11.0	-10.39
	5590	118	ax (40MHz)	13.5/15 (MCS0)	0.38	11.0	-10.62
	5710	142	ax (40MHz)	13.5/15 (MCS0)	0.85	11.0	-10.15
	5530	142	ac (80MHz)	29.3/32.5 (MCS0)	0.50	11.0	
					-		-10.50
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-0.17	11.0	-11.17
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-2.83	11.0	-13.83
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-3.83	11.0	-14.83
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-4.21	11.0	-15.21
	5690 ble <b>7-24 (</b>	138 Conduc	ax (80MHz)	29.3/32.5 (MCS0) Spectral Dens	-3.70	11.0 ments SISO	-14.70 ΔΝΤ2
Ta							Approve
Ta	~						
		TEST	ME	ASUREMENT REPO (CERTIFICATION)	DRT	SAMSUNG	Quality
Ta SMF707U S/N:			ME EUT Type:			SAMSUNG	

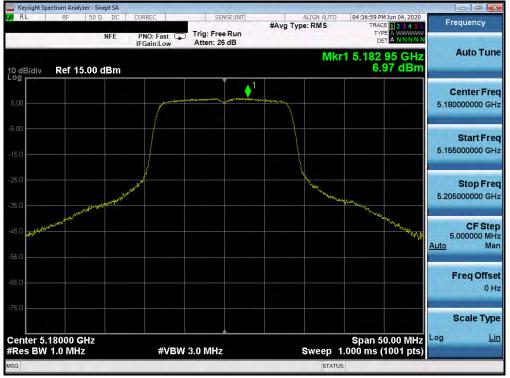
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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	а	6	6.98	-6.50	0.48	10.0	-9.53
	5200	40	а	6	7.23	-6.70	0.53	10.0	-9.47
	5240	48	а	6	7.75	-6.90	0.85	10.0	-9.15
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.99	-6.50	-1.51	10.0	-11.51
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	5.38	-6.70	-1.33	10.0	-11.33
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.51	-6.90	0.61	10.0	-9.40
-	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.63	-6.50	-1.87	10.0	-11.87
Band	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	4.90	-6.70	-1.80	10.0	-11.80
ä	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	5.19	-6.90	-1.71	10.0	-11.71
	5190	38	n (40MHz)	13.5/15 (MCS0)	4.39	-6.50	-2.11	10.0	-12.11
	5230	46	n (40MHz)	13.5/15 (MCS0)	4.51	-6.90	-2.39	10.0	-12.39
	5190	38	ax (40MHz)	13.5/15 (MCS0)	0.43	-6.50	-6.07	10.0	-16.07
	5230	46	ax (40MHz)	13.5/15 (MCS0)	1.29	-6.90	-5.61	10.0	-15.61
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	0.16	-6.90	-6.74	10.0	-16.74
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-3.18	-6.90	-10.08	10.0	-20.08

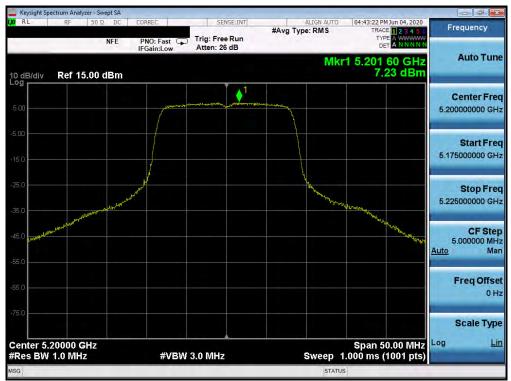
Table 7-25. Band 1 e.i.r.p. Conducted Power Spectral Density Measurements (ISED) SISO ANT2



Plot 7-199. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 36)

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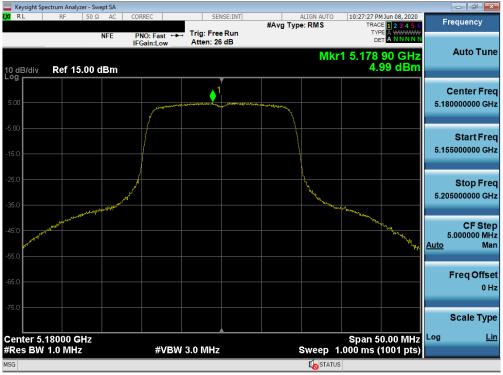




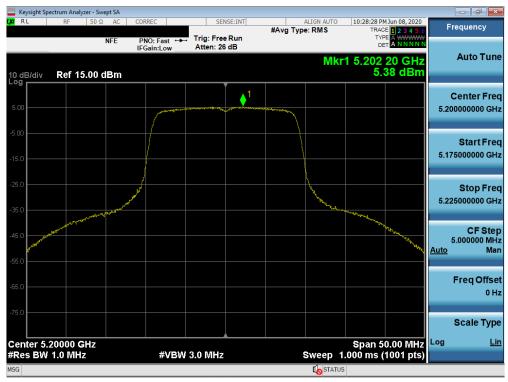
Plot 7-201. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 48)

FCC ID: A3LSMF707U	PCTEST Freud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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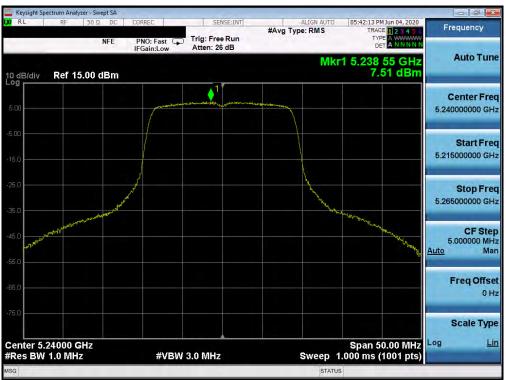
Plot 7-202. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)



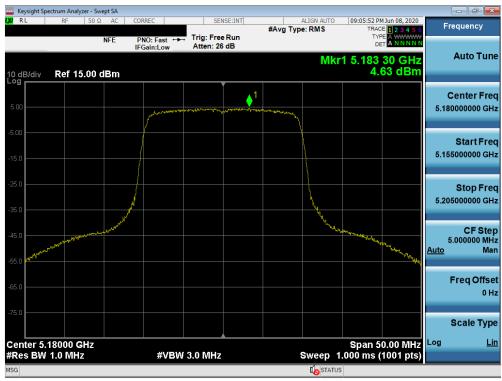
Plot 7-203. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)

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Plot 7-204. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)



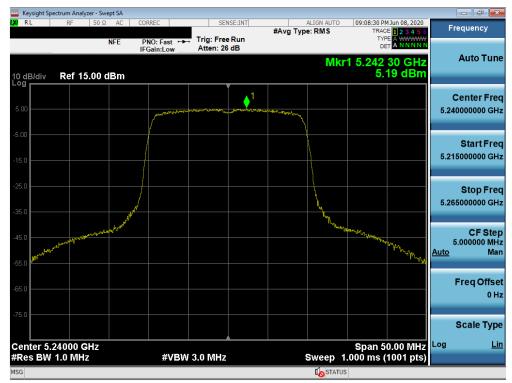
Plot 7-205. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 1) - Ch. 36)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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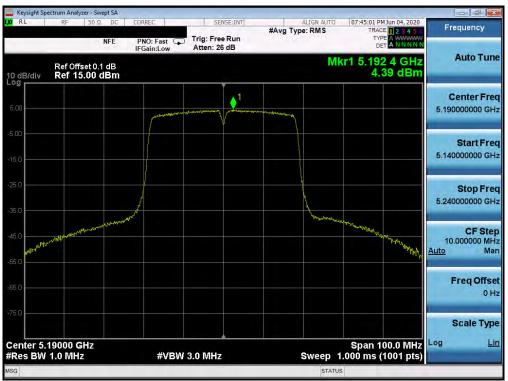
Plot 7-206. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 1) - Ch. 40)



Plot 7-207. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 1) - Ch. 48)

FCC ID: A3LSMF707U	PCTEST Proud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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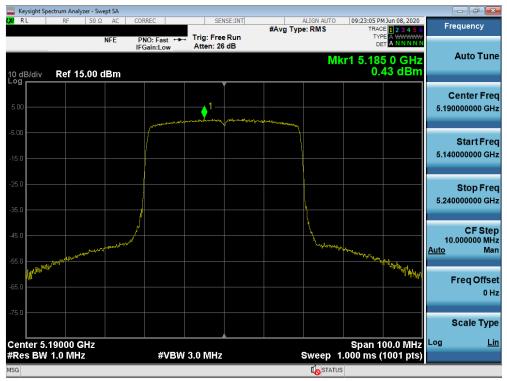
Plot 7-208. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)



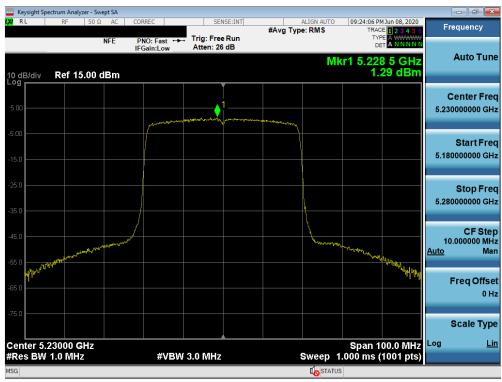
Plot 7-209. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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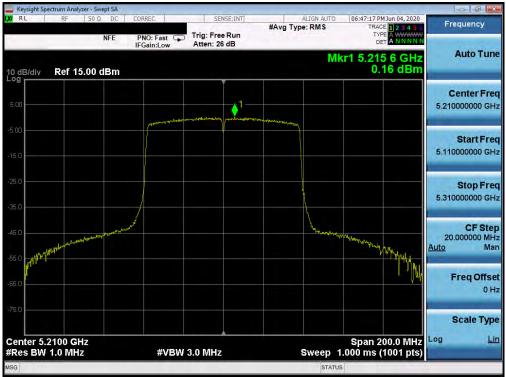
Plot 7-210. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 1) - Ch. 38)



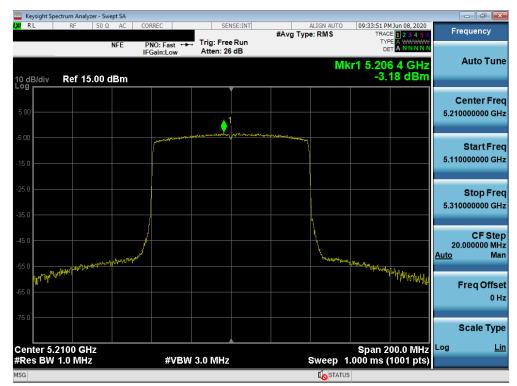
Plot 7-211. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 1) - Ch. 46)

FCC ID: A3LSMF707U	PCTEST Proved to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-212. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)



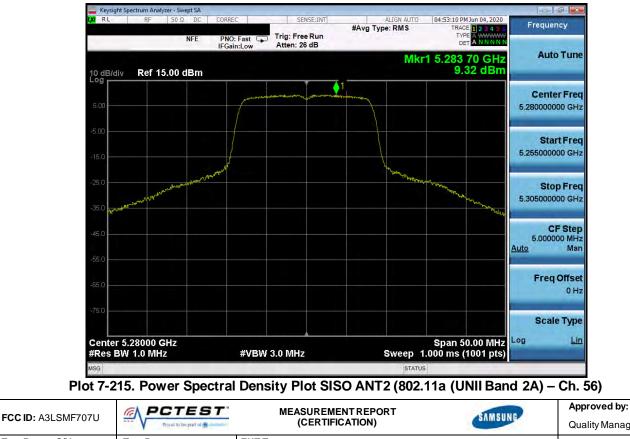
Plot 7-213. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax SU (UNII Band 1) - Ch. 42)

FCC ID: A3LSMF707U	PCTEST Frad to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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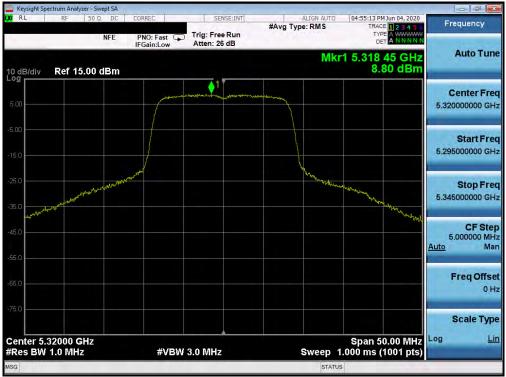




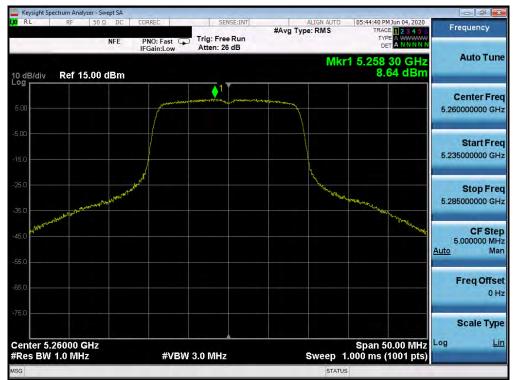


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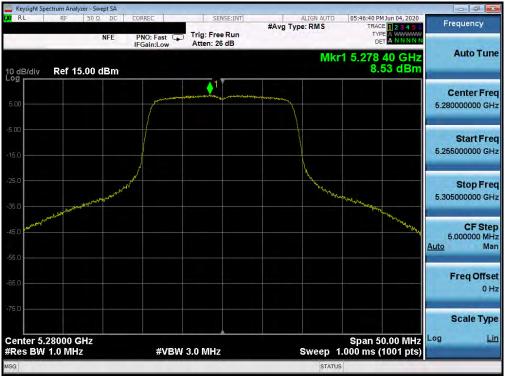
Plot 7-216. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) - Ch. 64)



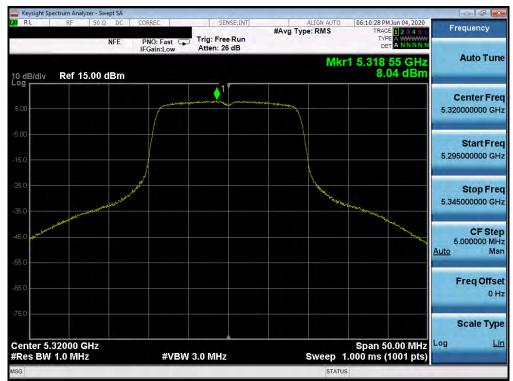
Plot 7-217. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)

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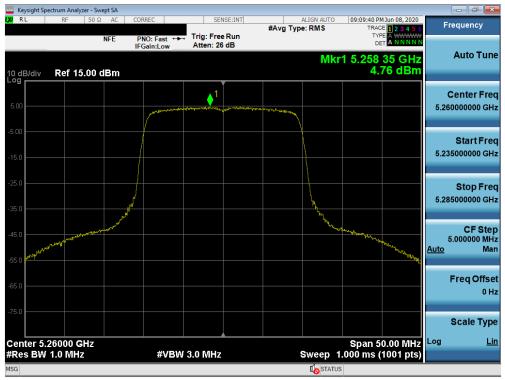
Plot 7-218. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)



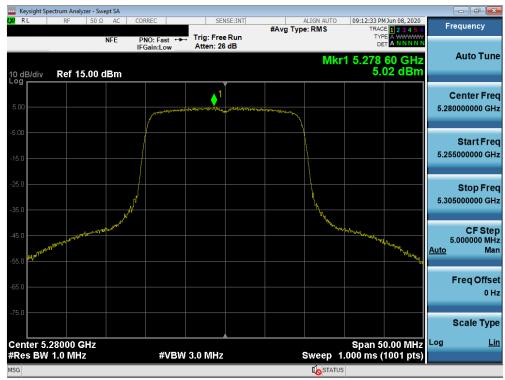
Plot 7-219. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)

FCC ID: A3LSMF707U	Road to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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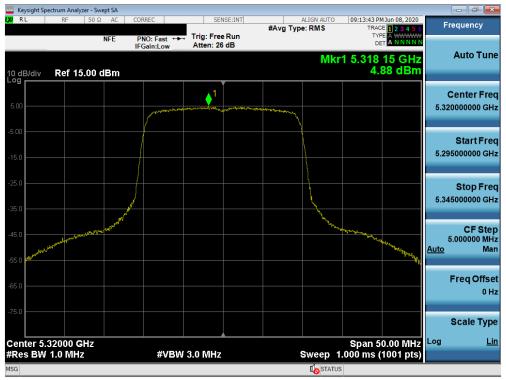
Plot 7-220. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 2A) - Ch. 52)



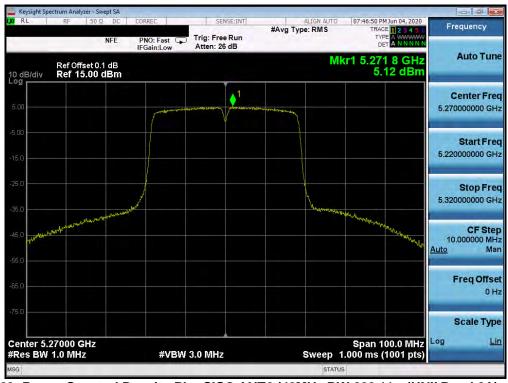
Plot 7-221. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 2A) - Ch. 56)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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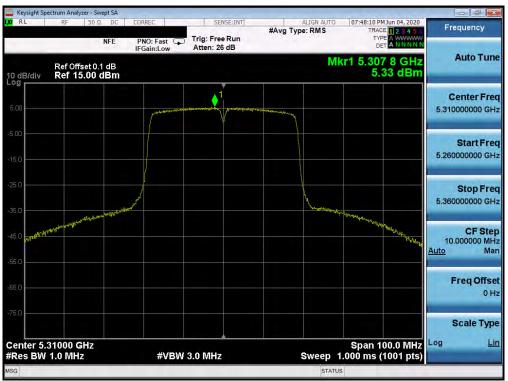
Plot 7-222. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 2A) - Ch. 64)



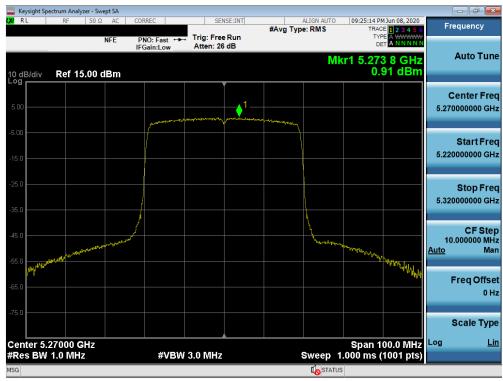
Plot 7-223. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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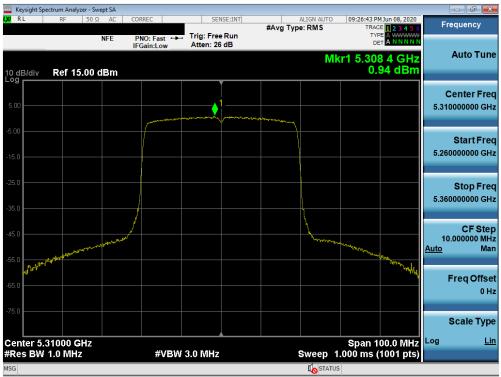
Plot 7-224. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)



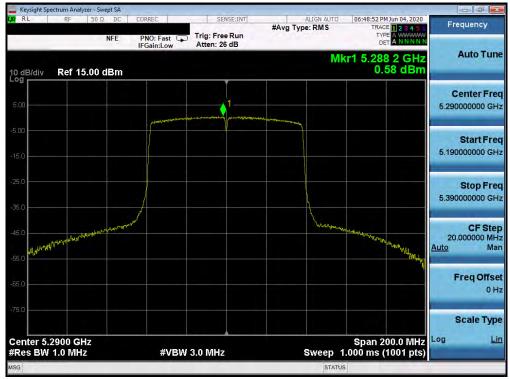
Plot 7-225. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 2A) - Ch. 54)

FCC ID: A3LSMF707U	PCTEST Proved to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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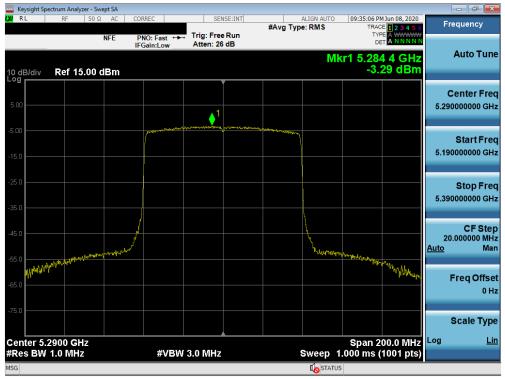
Plot 7-226. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 2A) - Ch. 62)



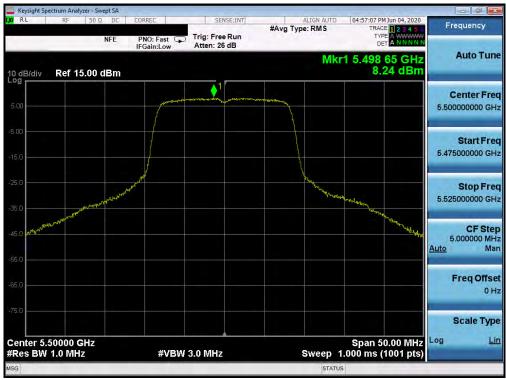
Plot 7-227. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)

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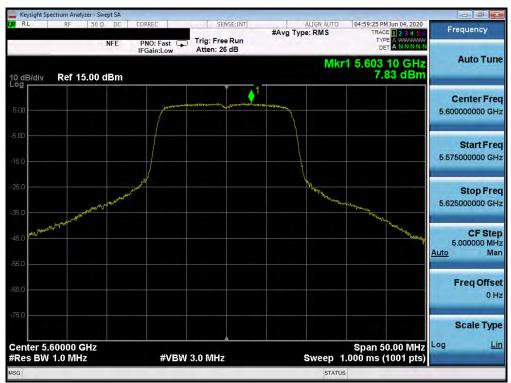
Plot 7-228. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax SU (UNII Band 2A) - Ch. 58)



Plot 7-229. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 100)

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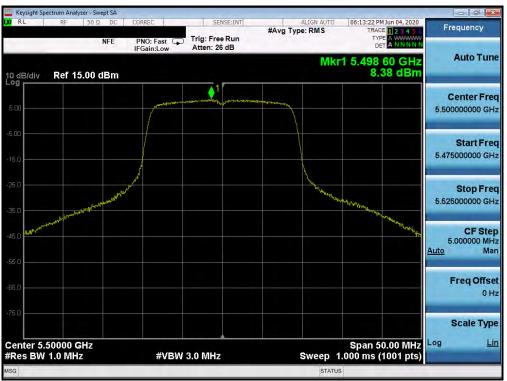


Plot 7-230. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 120)



Approved by: PCTEST **MEASUREMENT REPORT** FCC ID: A3LSMF707U (Ge SAMSUNG (CERTIFICATION) Provid to be papt of a Quality Manager Test Report S/N: EUT Type: Test Dates: Page 148 of 240 1M2005040080-08.A3L 05/04 - 07/06/2020 Portable Handset © 2020 PCTEST V 9.0 02/01/2019





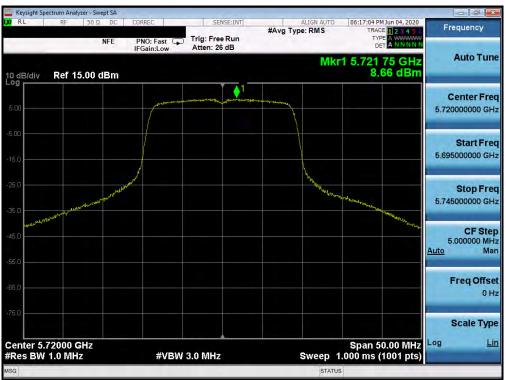
Plot 7-232. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)



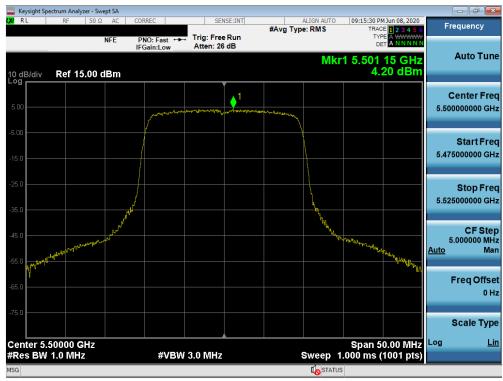
Plot 7-233. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)

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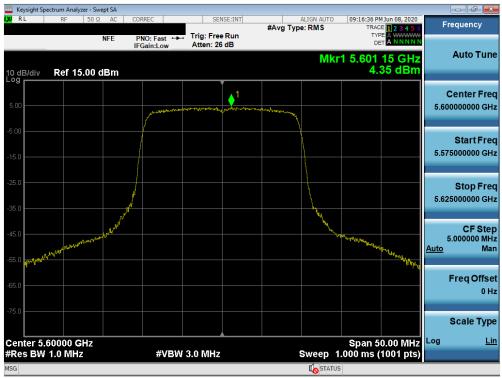
Plot 7-234. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144



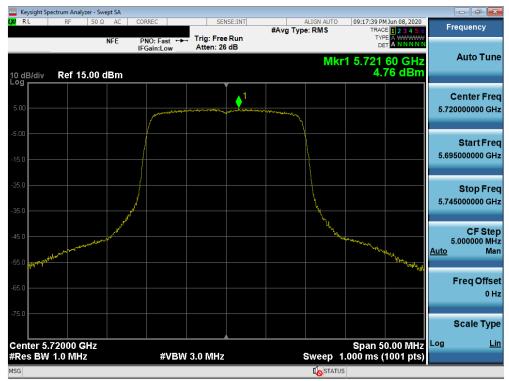
Plot 7-235. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11nax SU (UNII Band 2C) - Ch. 100)

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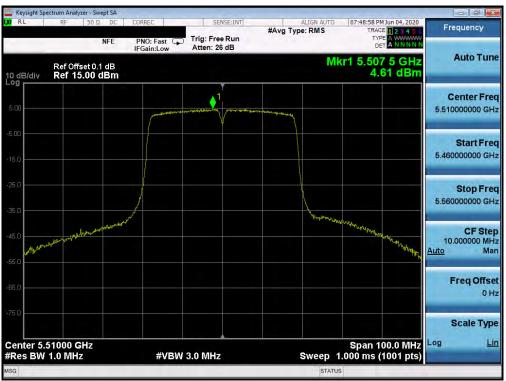
Plot 7-236. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 2C) - Ch. 120)



Plot 7-237. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax SU (UNII Band 2C) - Ch. 144)

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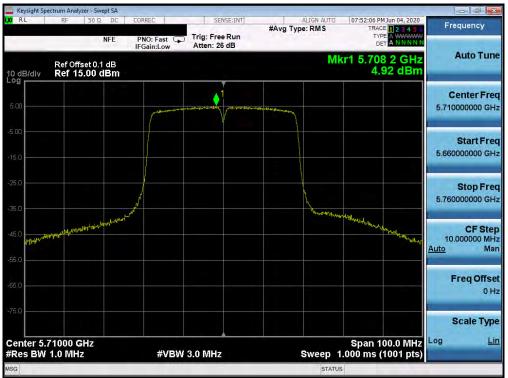
Plot 7-238. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)



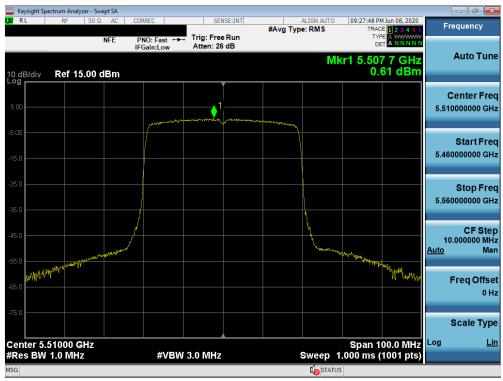
Plot 7-239. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)

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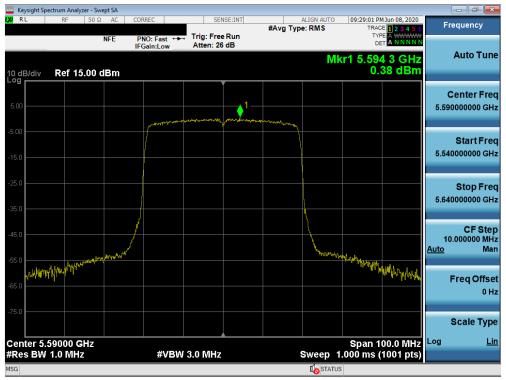
Plot 7-240. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)



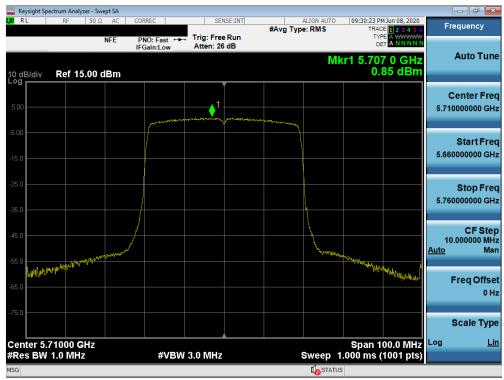
Plot 7-241. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 2C) - Ch. 102)

FCC ID: A3LSMF707U	PCTEST Freud to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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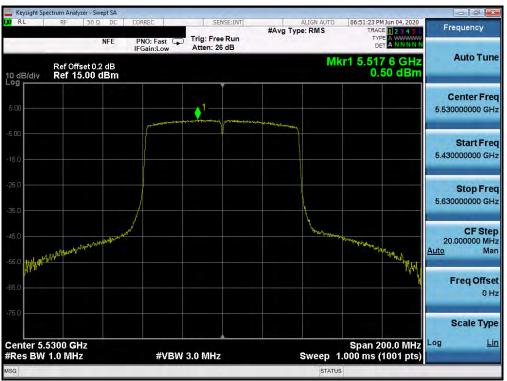
Plot 7-242. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 2C) - Ch. 118)



Plot 7-243. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax SU (UNII Band 2C) - Ch. 142)

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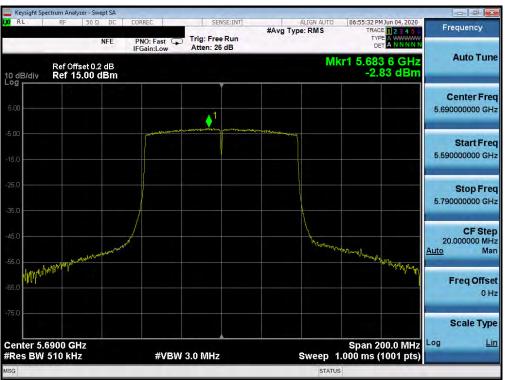
Plot 7-244. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)



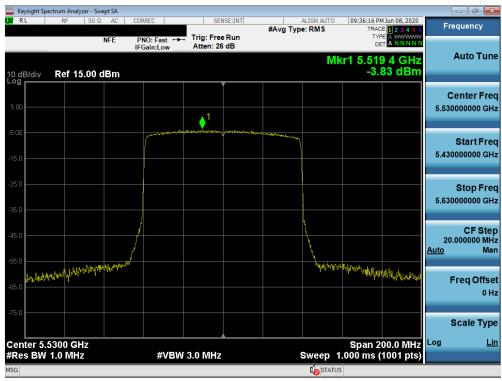
Plot 7-245. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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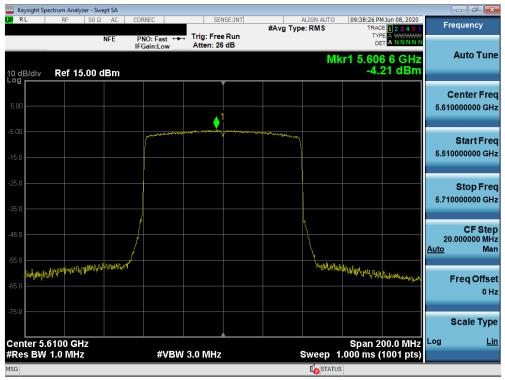
Plot 7-246. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)



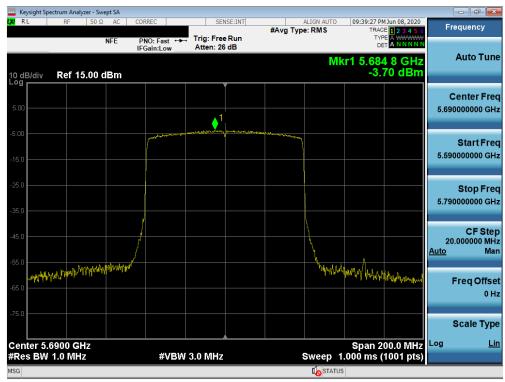
Plot 7-247. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax SU (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMF707U	PCTEST Provid to be part of (2) - man	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Plot 7-248. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax SU (UNII Band 2C) - Ch. 122)



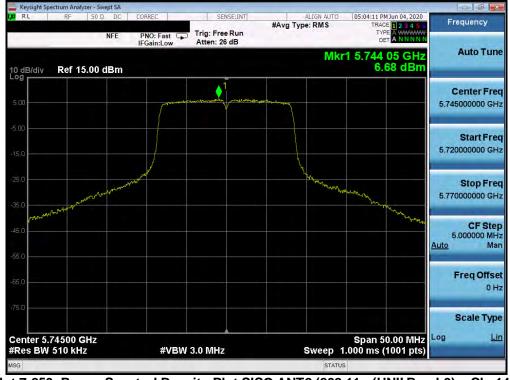
Plot 7-249. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax SU (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMF707U	PCTEST Fred to be part of @	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]
	5745	149	а	6	-4.68	30.0	-34.68
	5785	157	а	6	-4.60	30.0	-34.60
	5825	165	а	6	-5.11	30.0	-35.11
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-5.12	30.0	-35.12
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-4.89	30.0	-34.89
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-5.24	30.0	-35.24
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	4.57	30.0	-25.43
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	4.69	30.0	-25.31
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	4.53	30.0	-25.47
	5755	151	n (40MHz)	13.5/15 (MCS0)	-8.61	30.0	-38.61
	5795	159	n (40MHz)	13.5/15 (MCS0)	-7.95	30.0	-37.95
	5755	151	ax (40MHz)	13.5/15 (MCS0)	0.77	30.0	-29.23
	5795	159	ax (40MHz)	13.5/15 (MCS0)	0.43	30.0	-29.57
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-9.15	30.0	-39.15
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-3.26	30.0	-33.26

Table 7-26. Band 3 Conducted Power Spectral Density Measurements SISO ANT2



Plot 7-250. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 149)

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