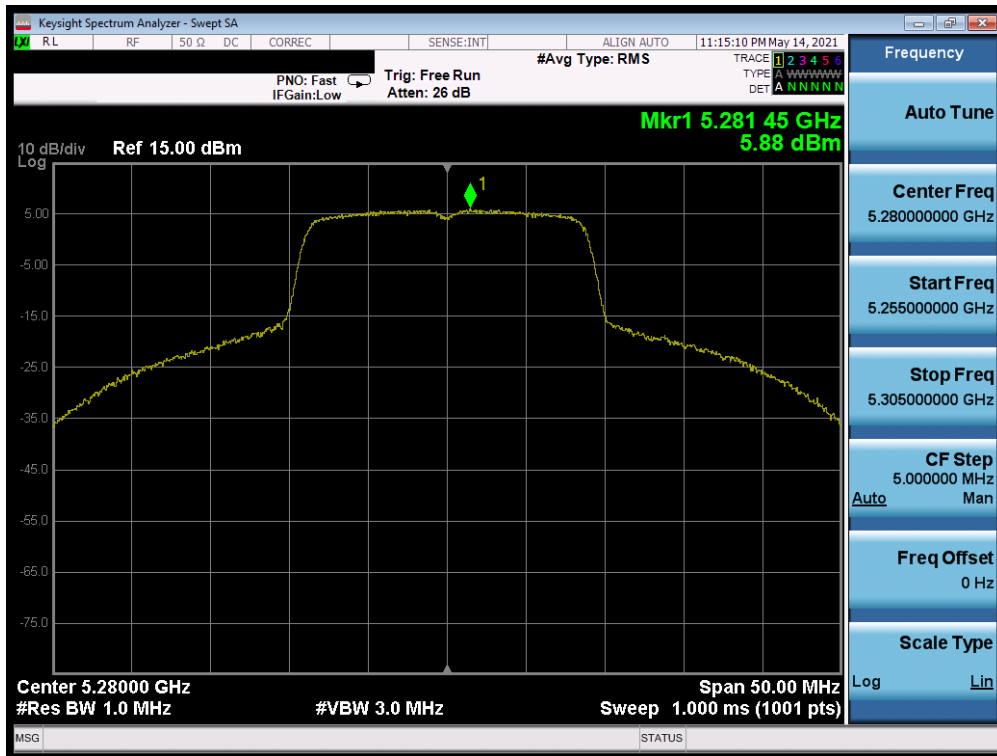
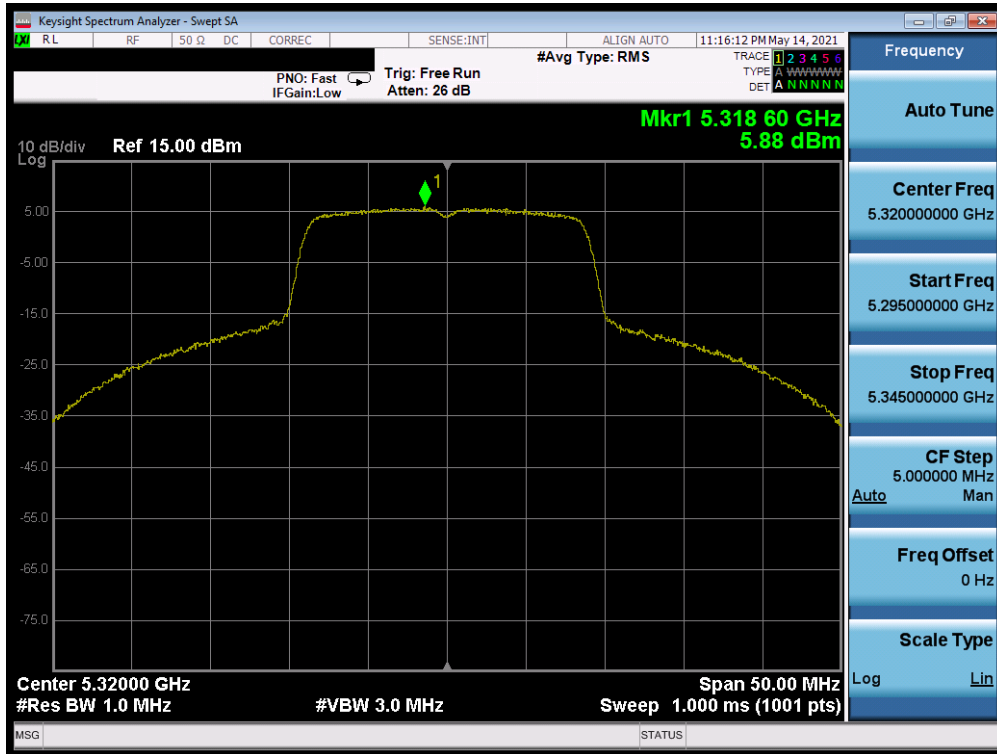


Plot 7-598. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

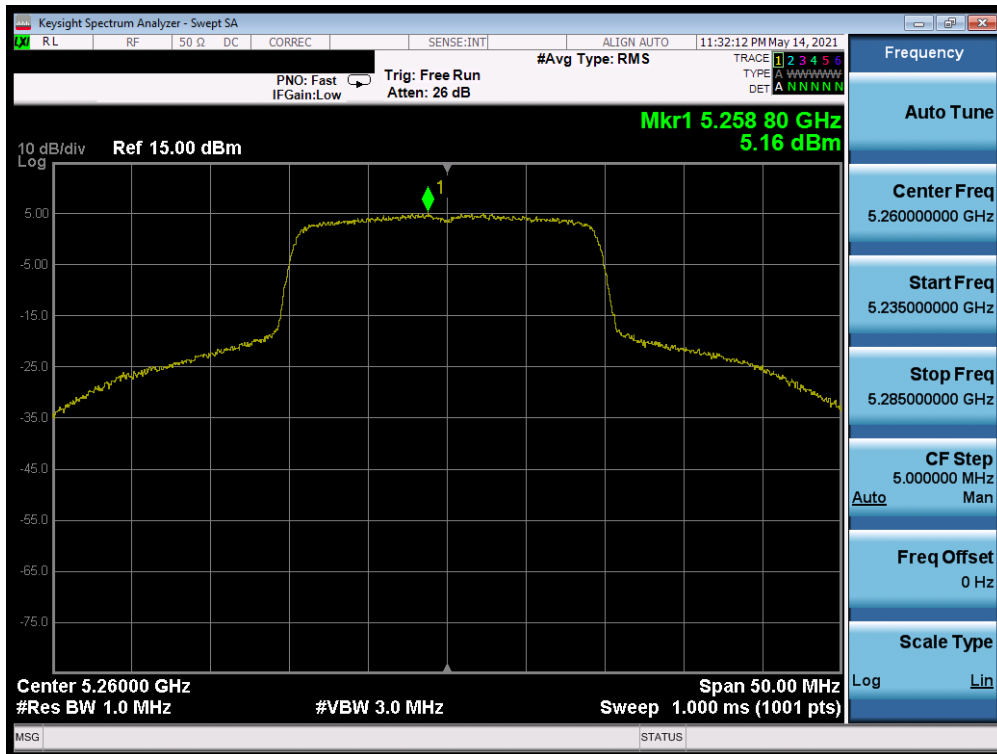


Plot 7-599. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 347 of 509

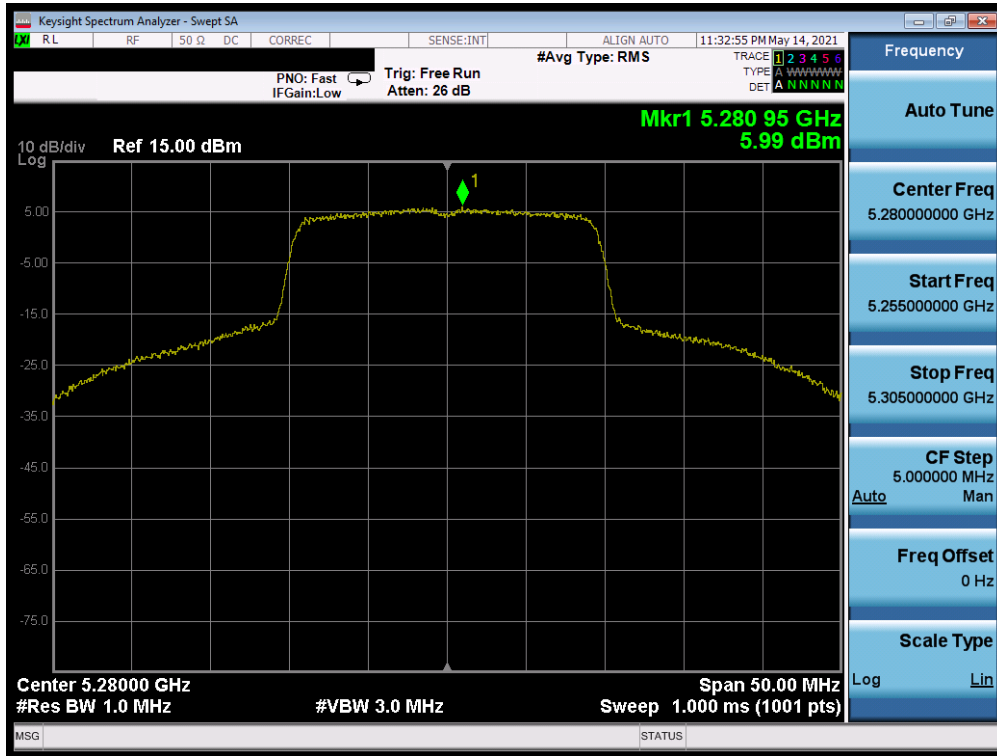


Plot 7-600. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

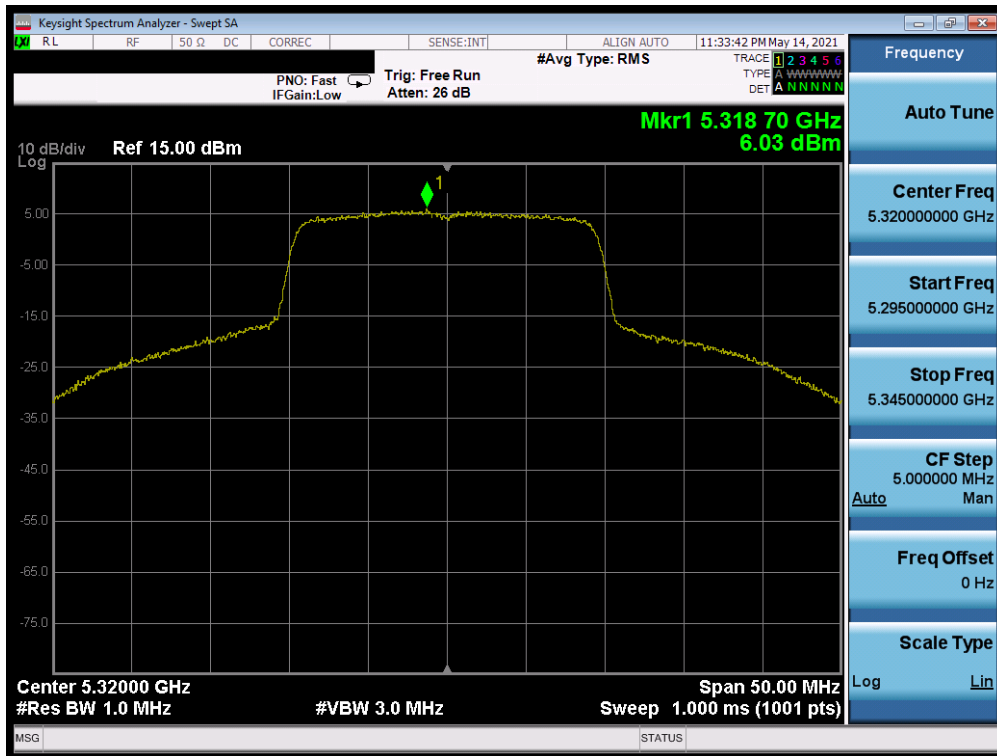


Plot 7-601. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 348 of 509

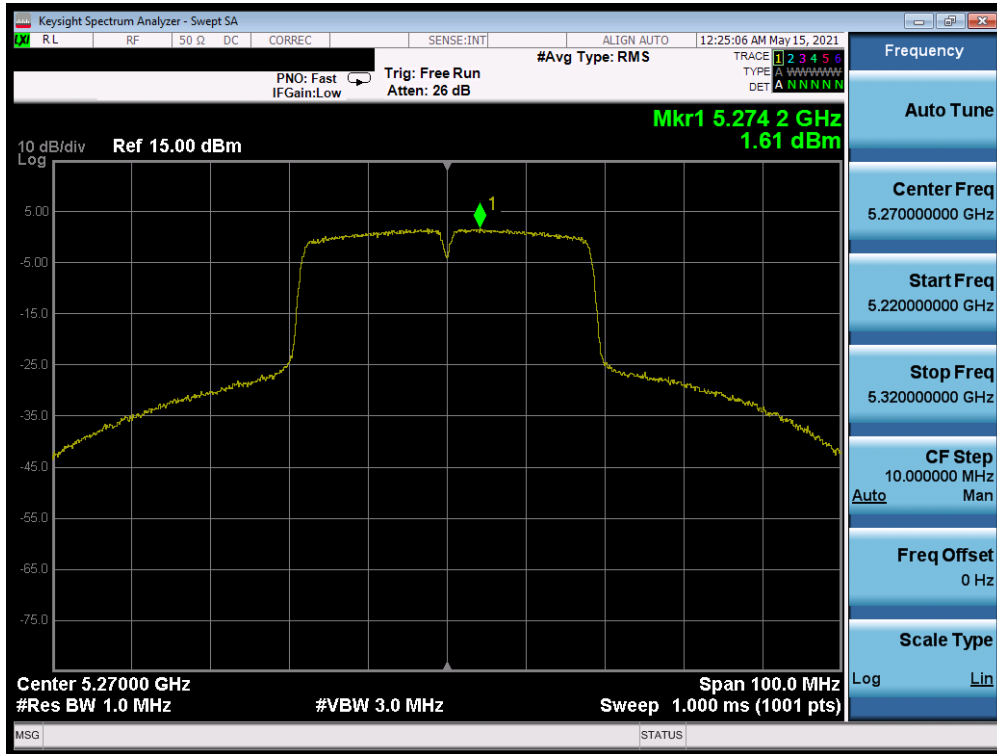


Plot 7-602. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 56)

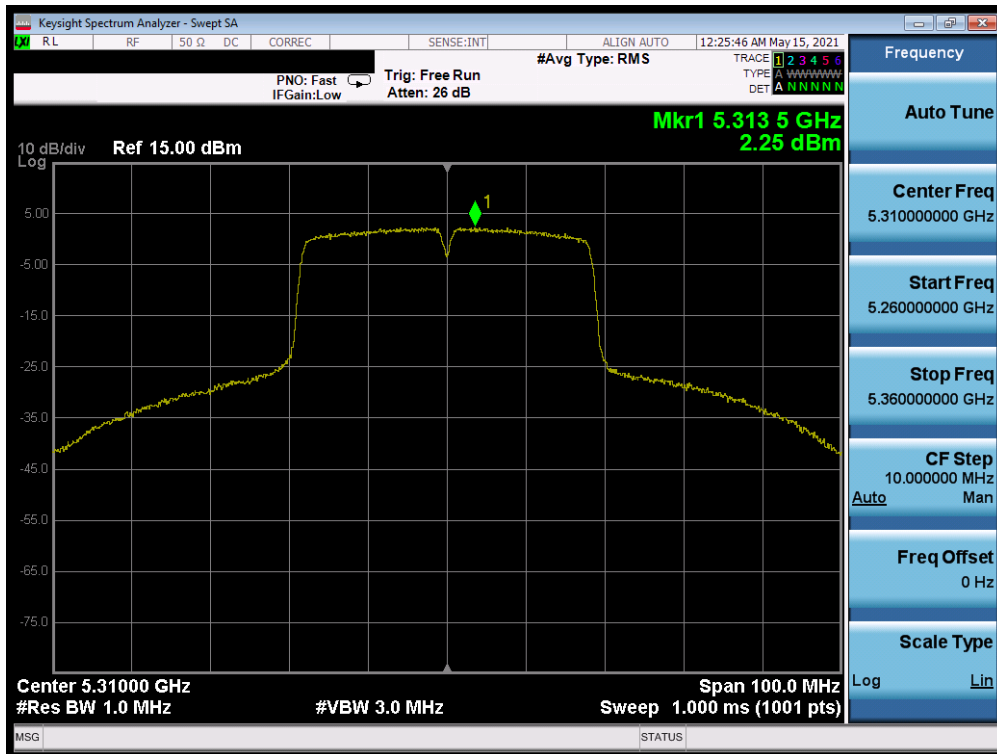


Plot 7-603. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 349 of 509

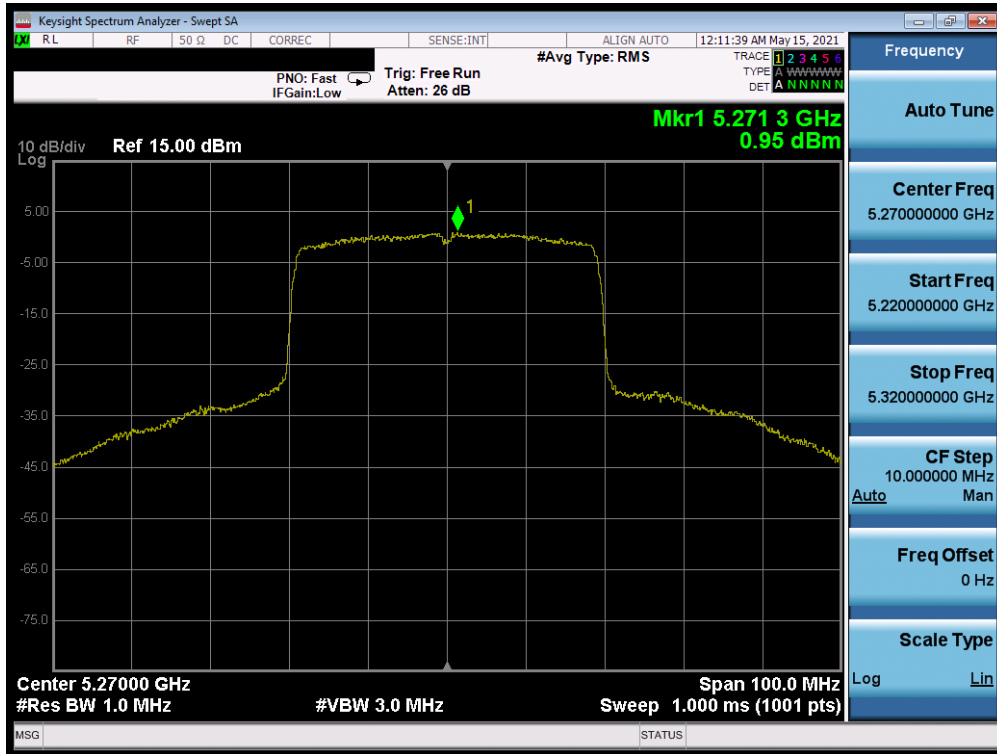


Plot 7-604. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

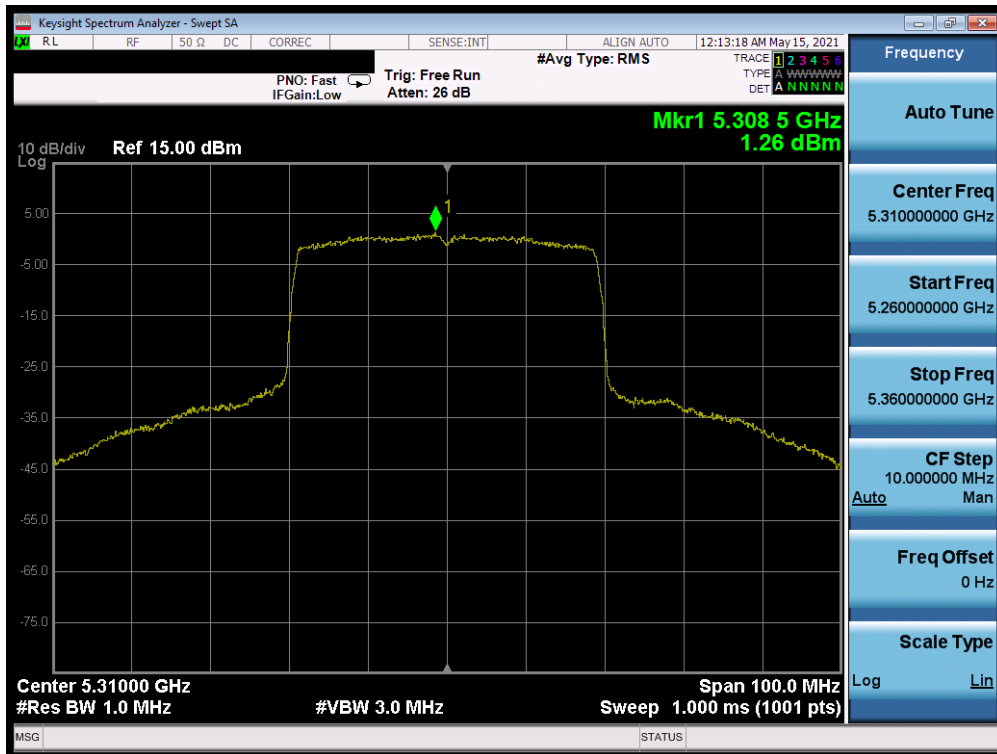


Plot 7-605. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 350 of 509

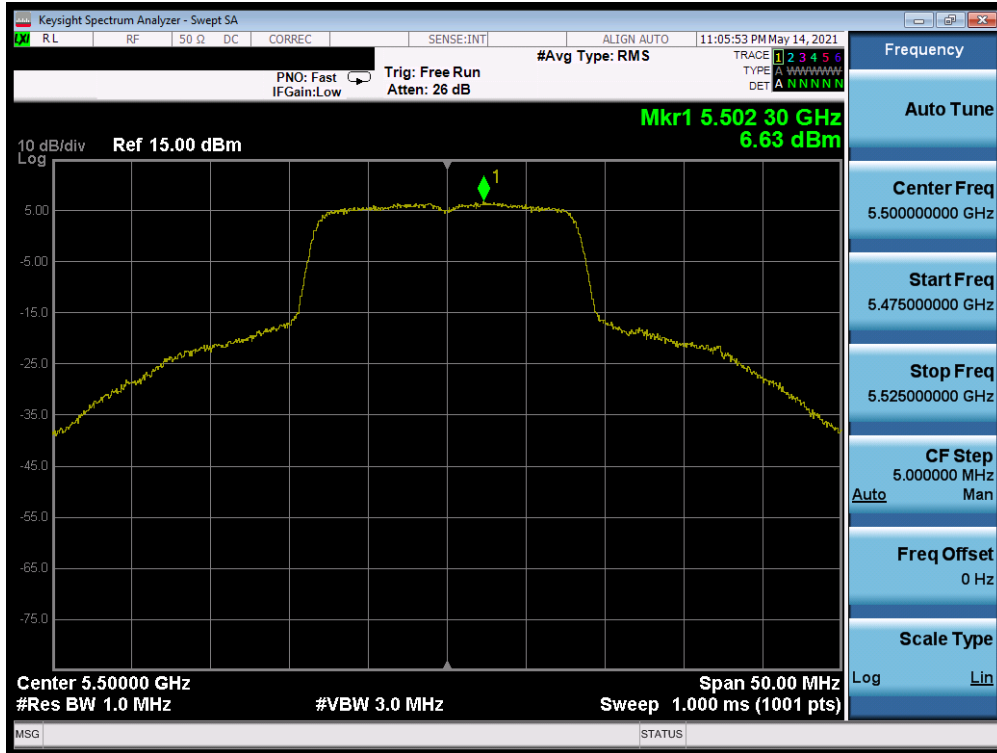


Plot 7-606. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 54)

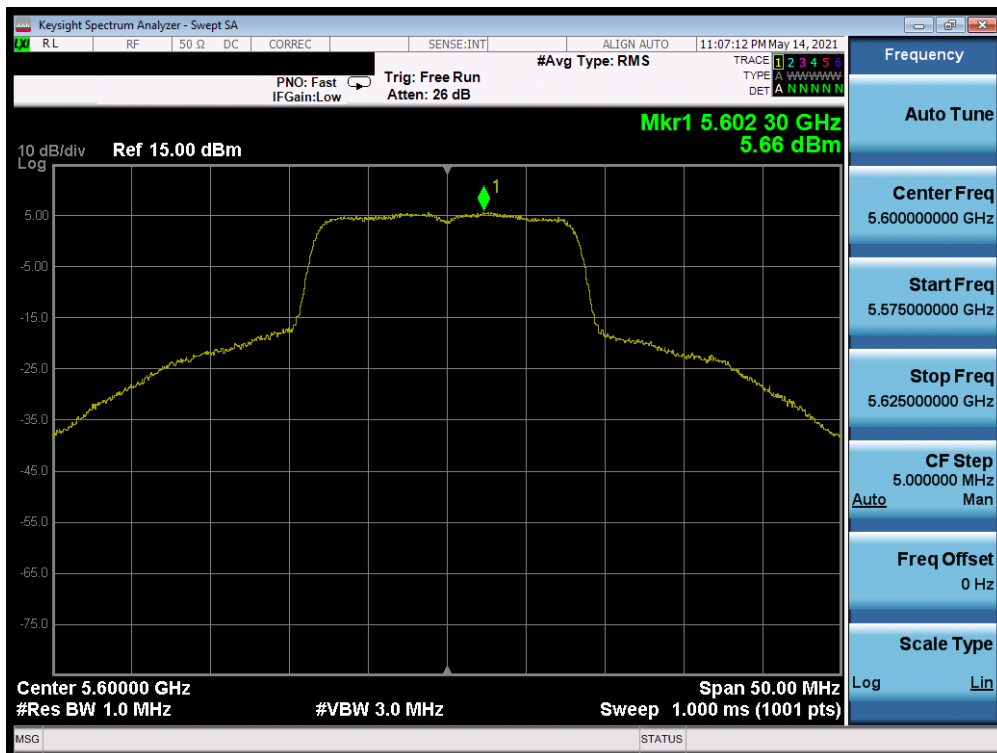


Plot 7-607. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 62)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 351 of 509

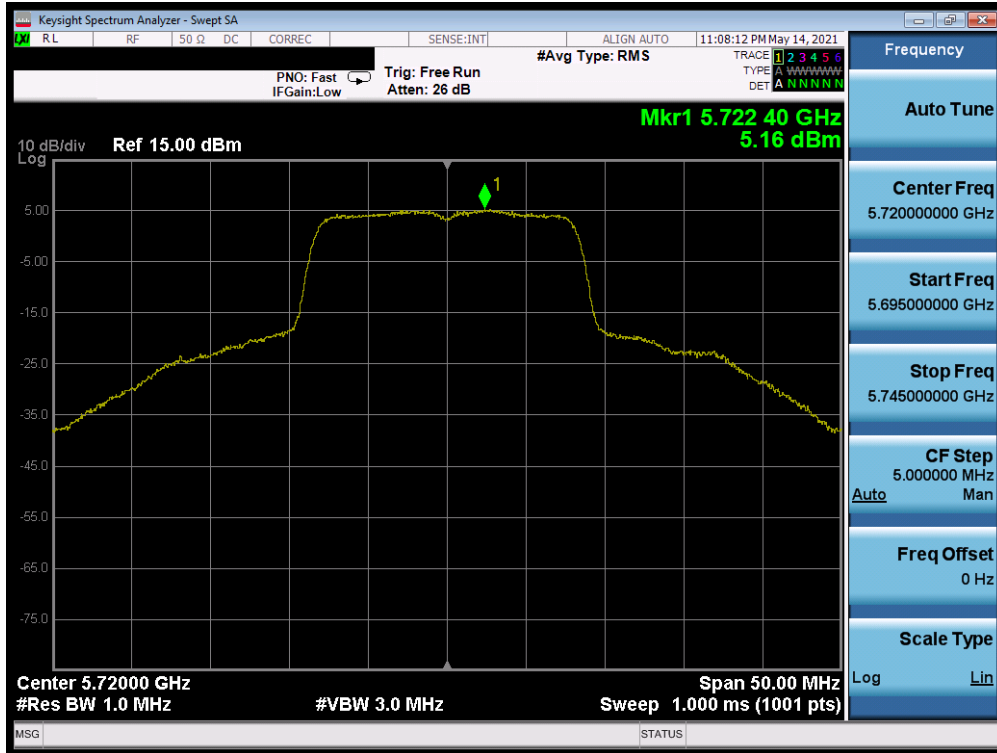


Plot 7-610. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11a (UNII Band 2C) – Ch. 100)

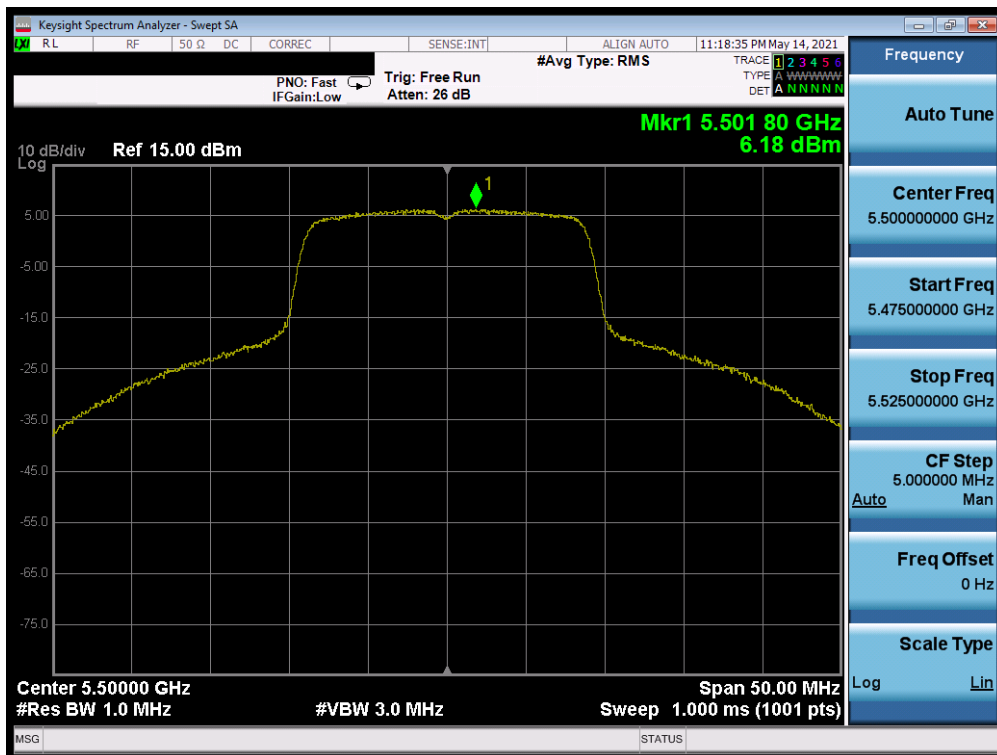


Plot 7-611. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11a (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 353 of 509

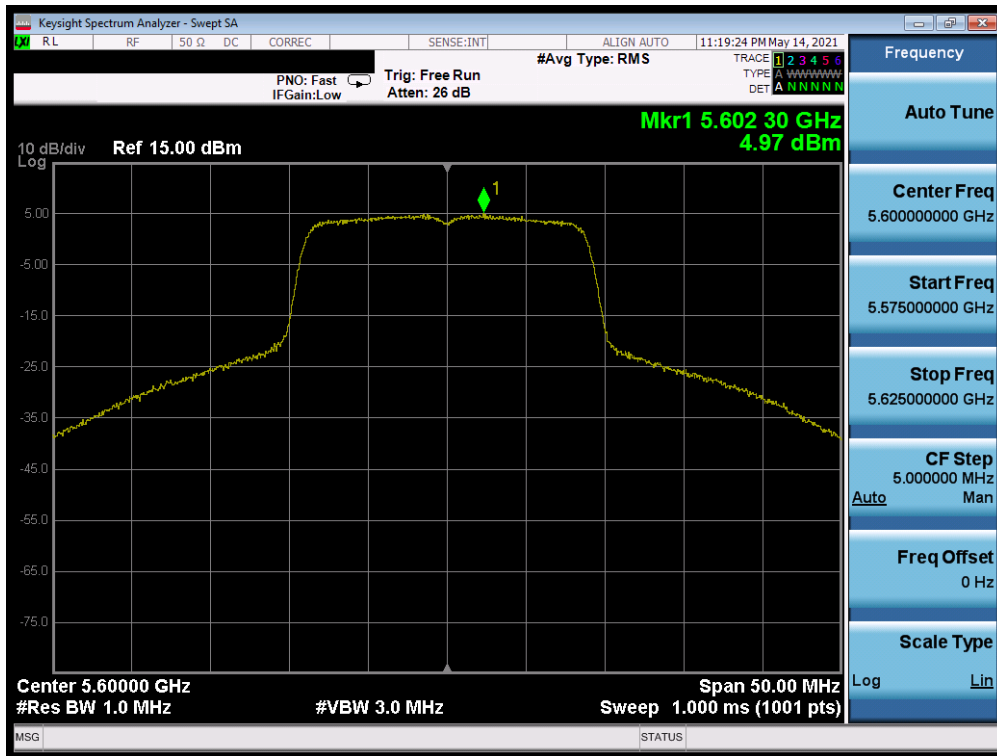


Plot 7-612. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11a (UNII Band 2C) – Ch. 144)

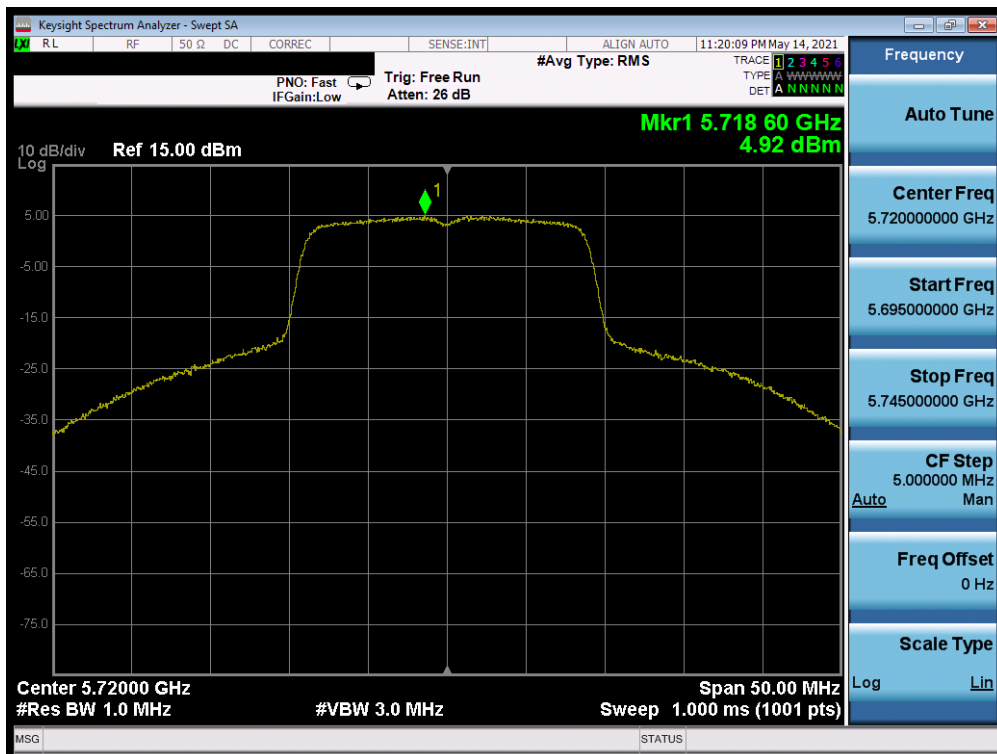


Plot 7-613. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 354 of 509

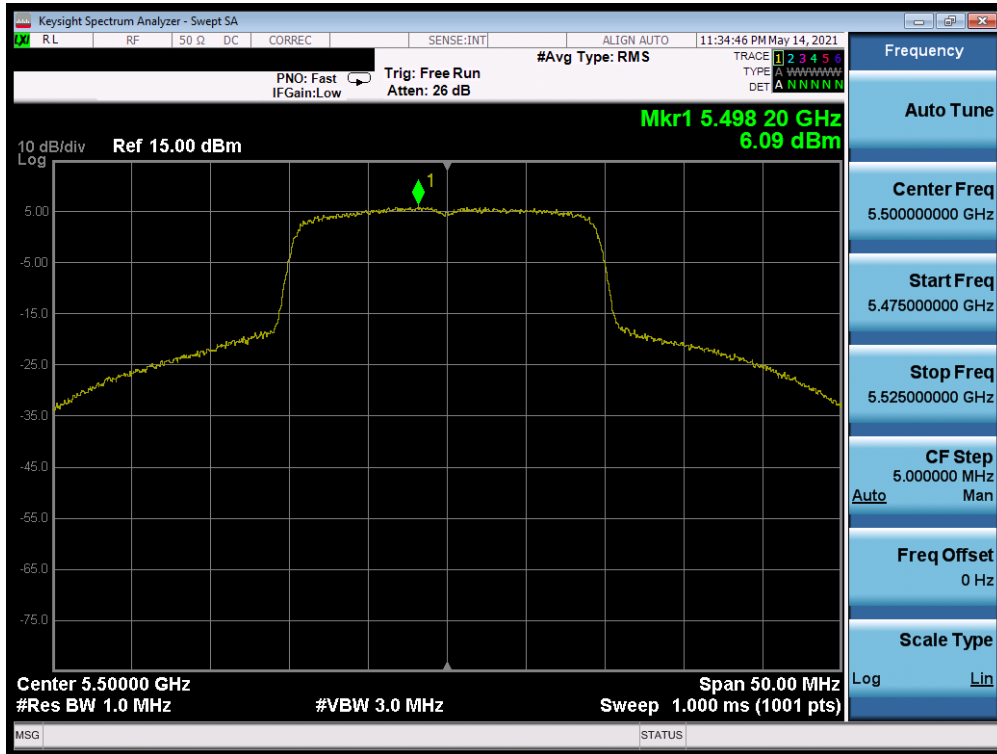


Plot 7-614. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

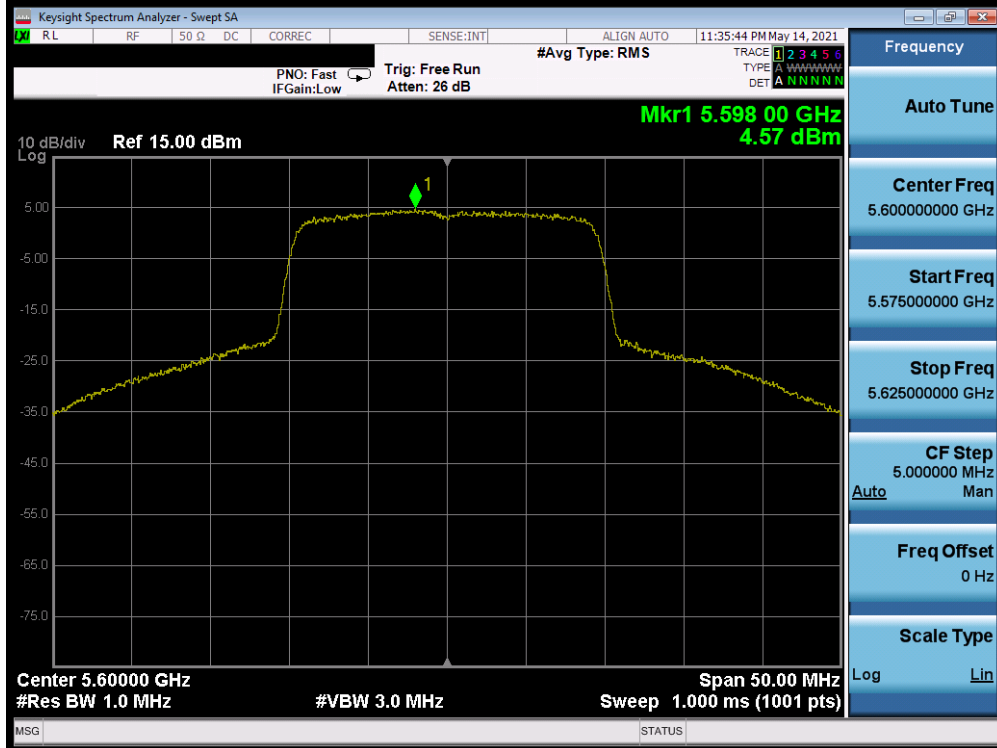


Plot 7-615. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 355 of 509

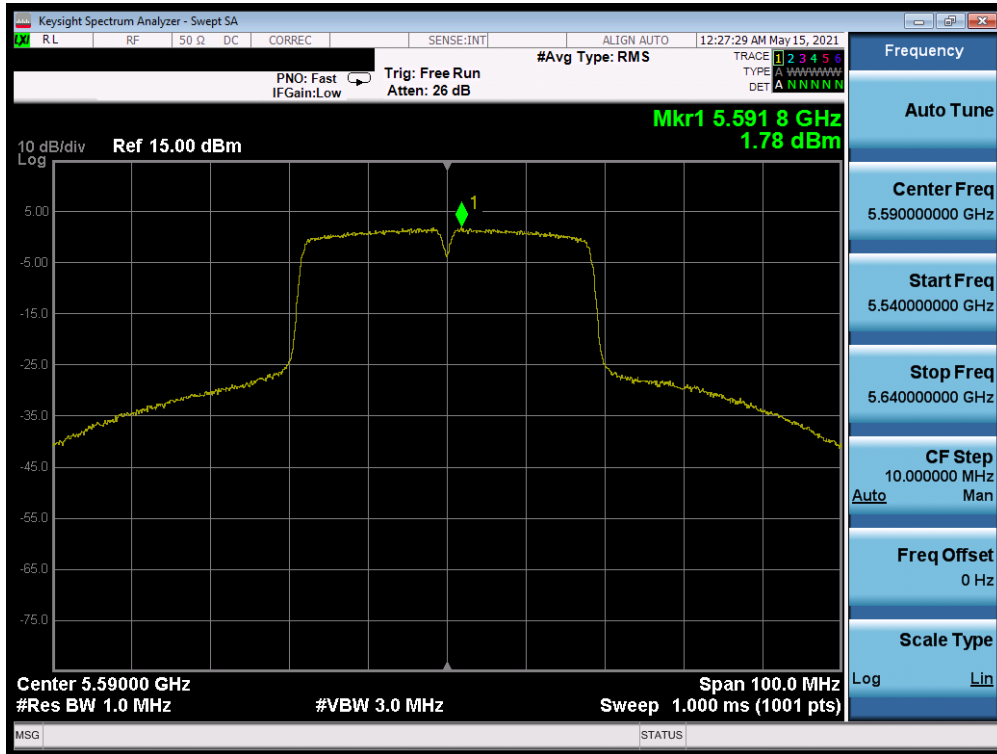


Plot 7-616. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 100)

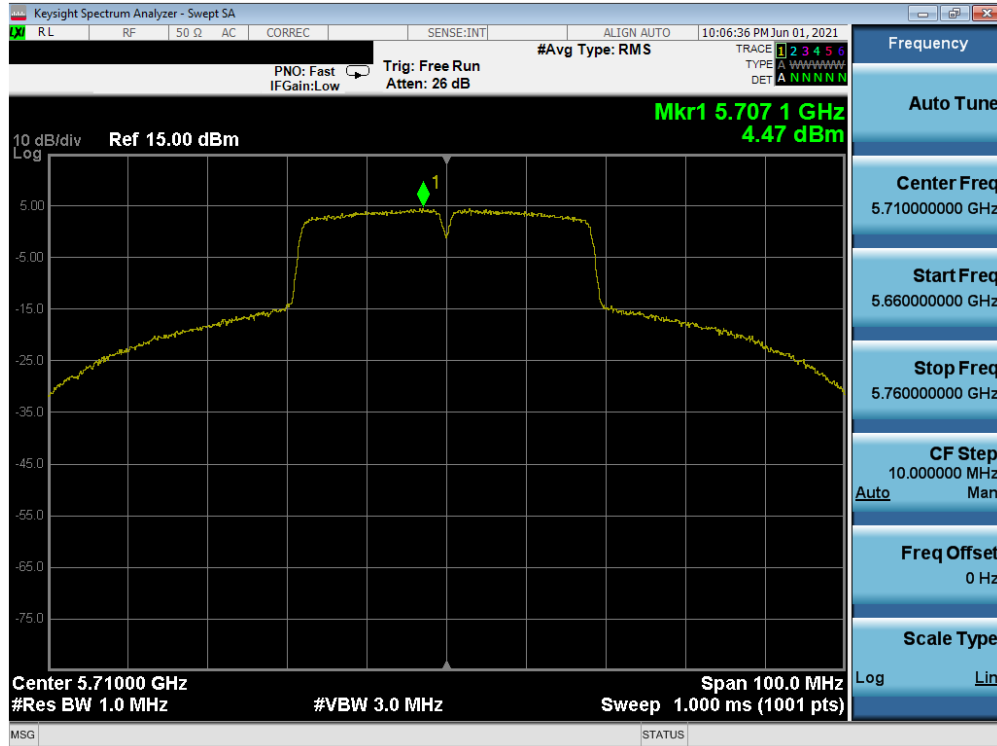


Plot 7-617. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 356 of 509

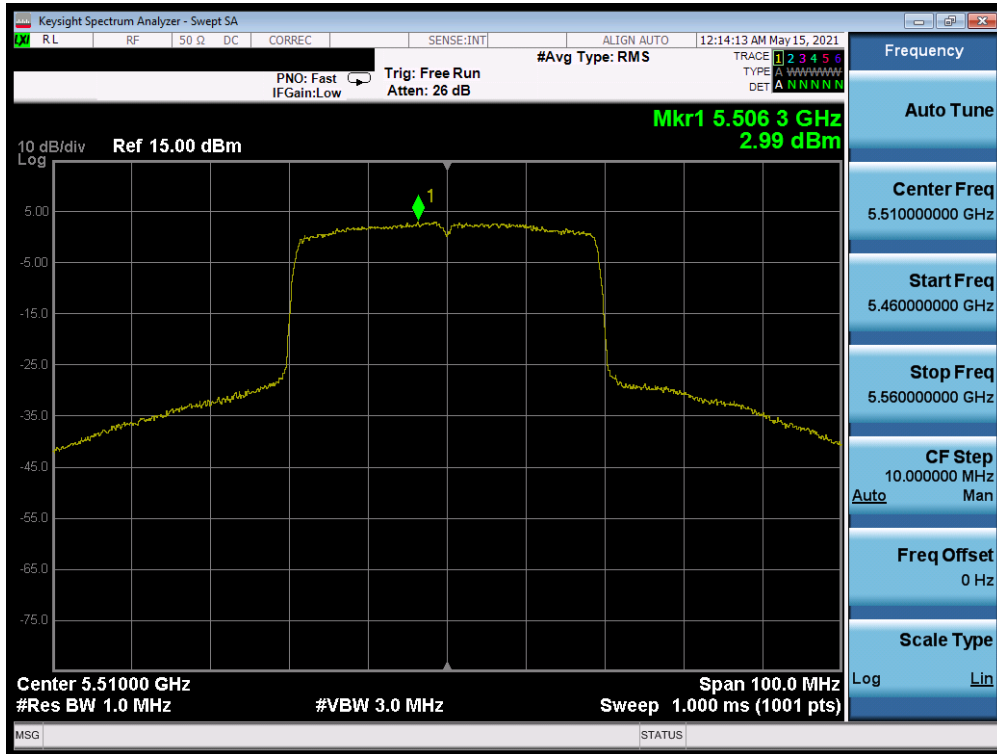


Plot 7-620. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

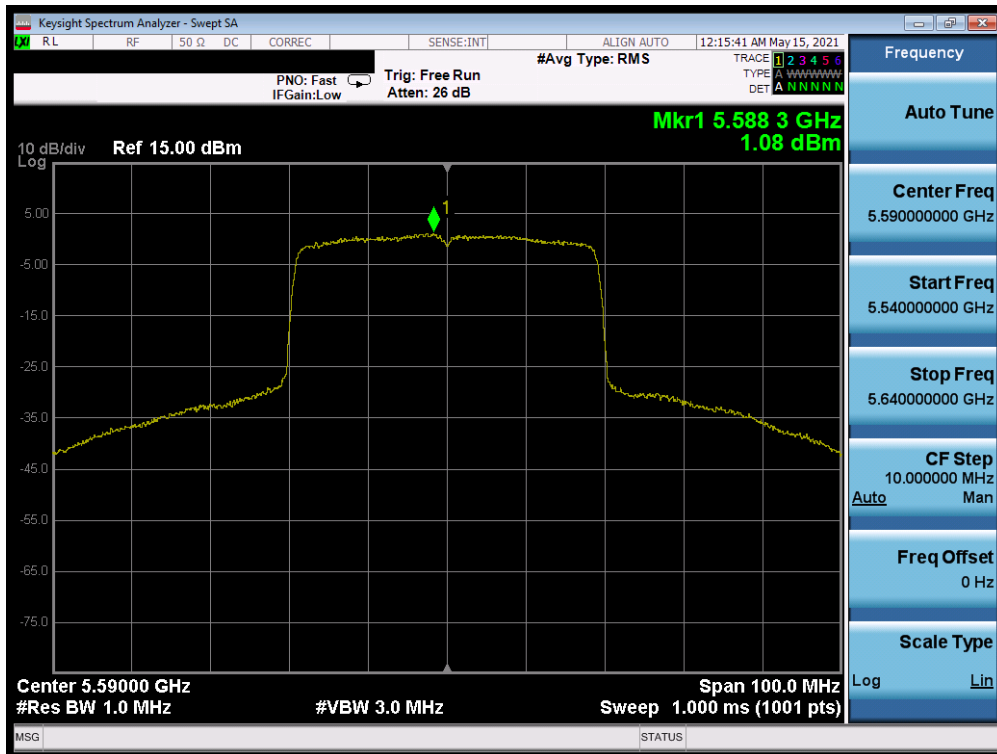


Plot 7-621. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 358 of 509

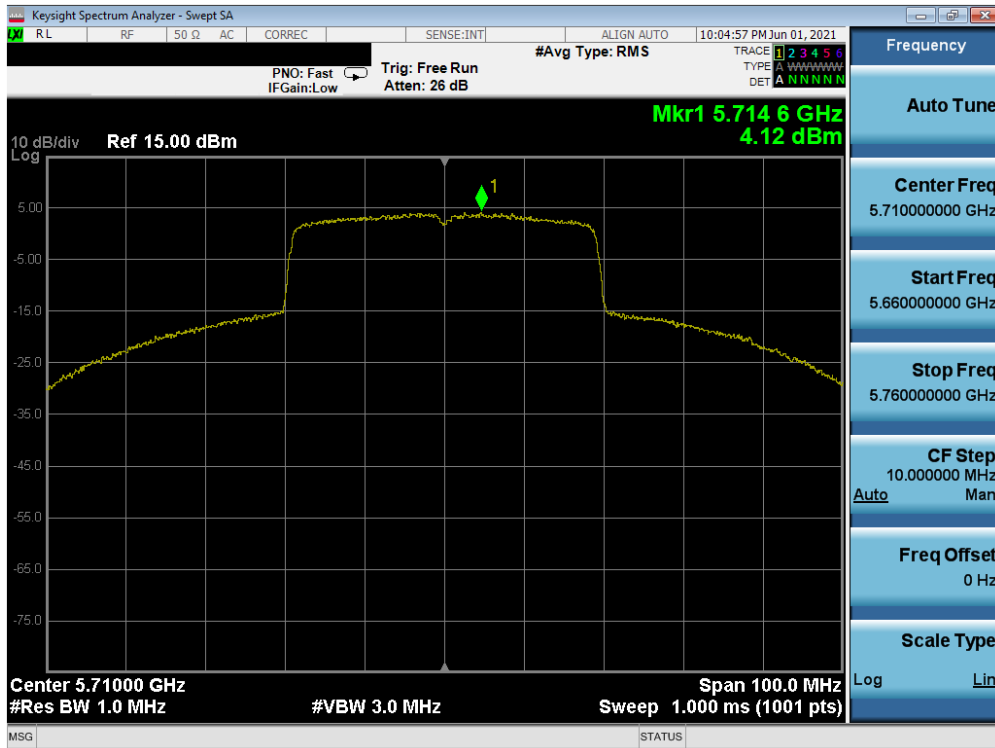


Plot 7-622. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 102)

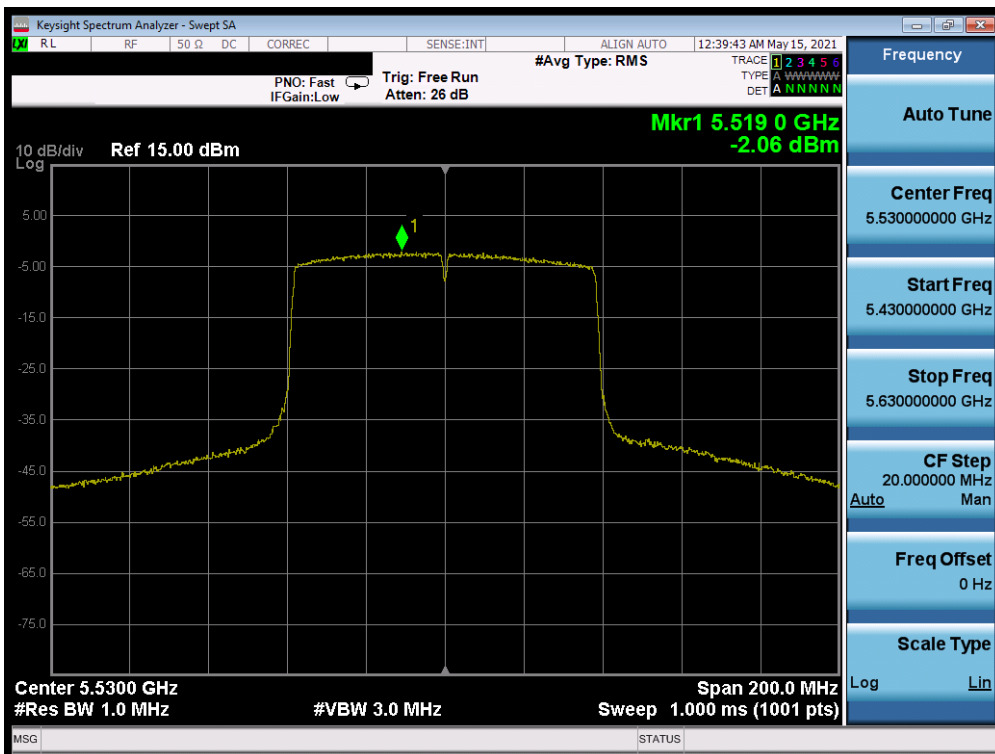


Plot 7-623. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 359 of 509

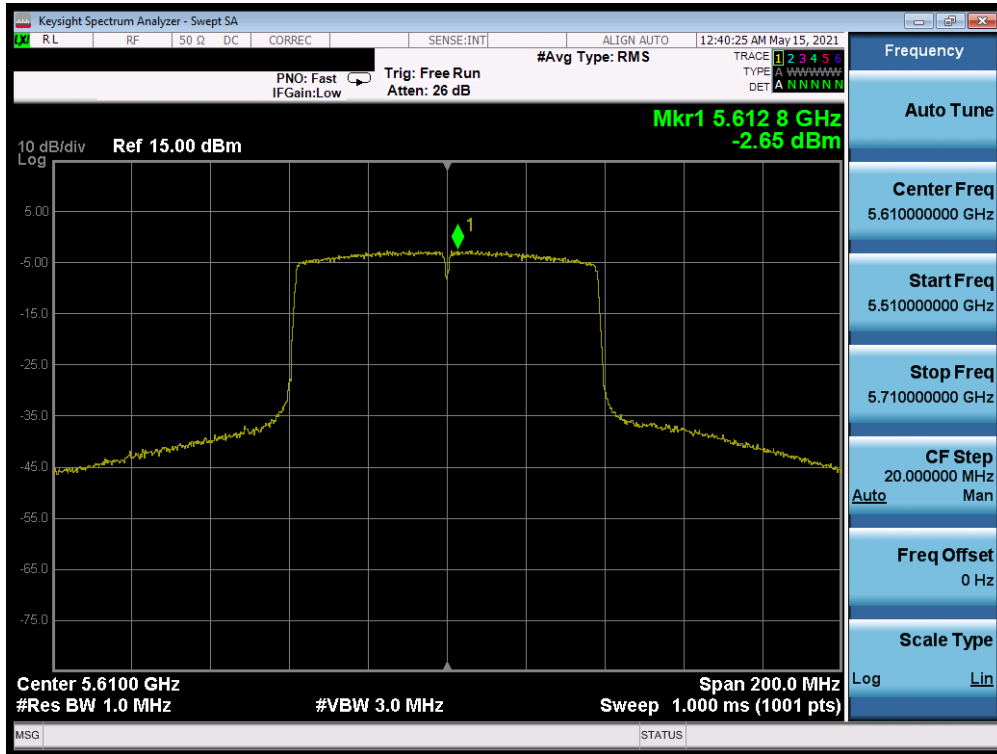


Plot 7-624. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 142)

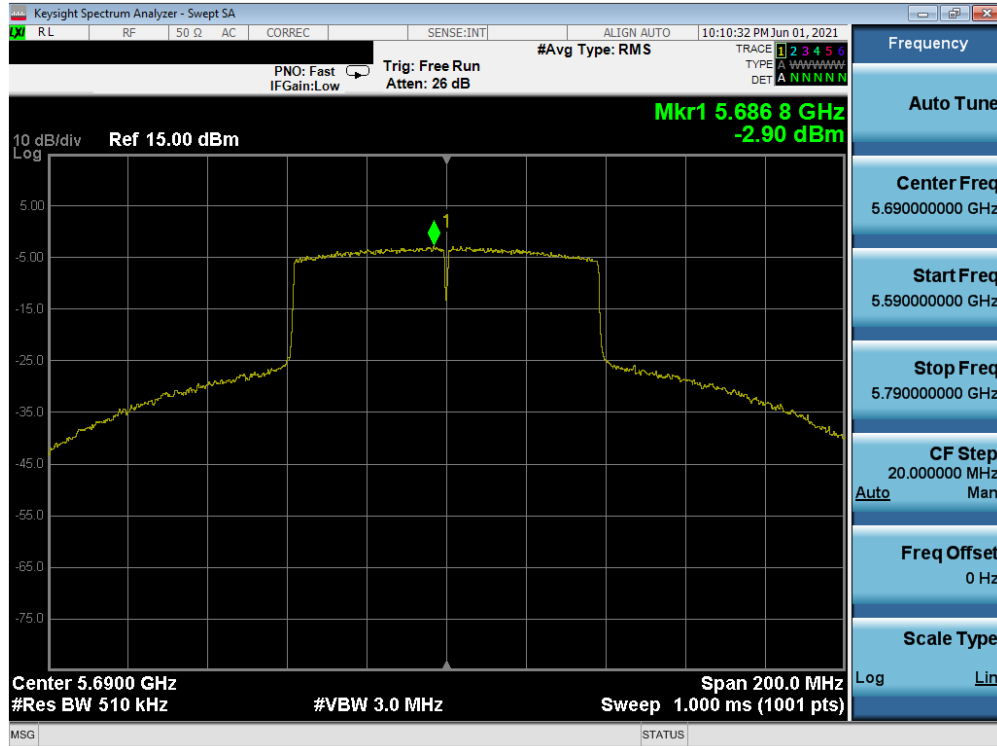


Plot 7-625. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 360 of 509

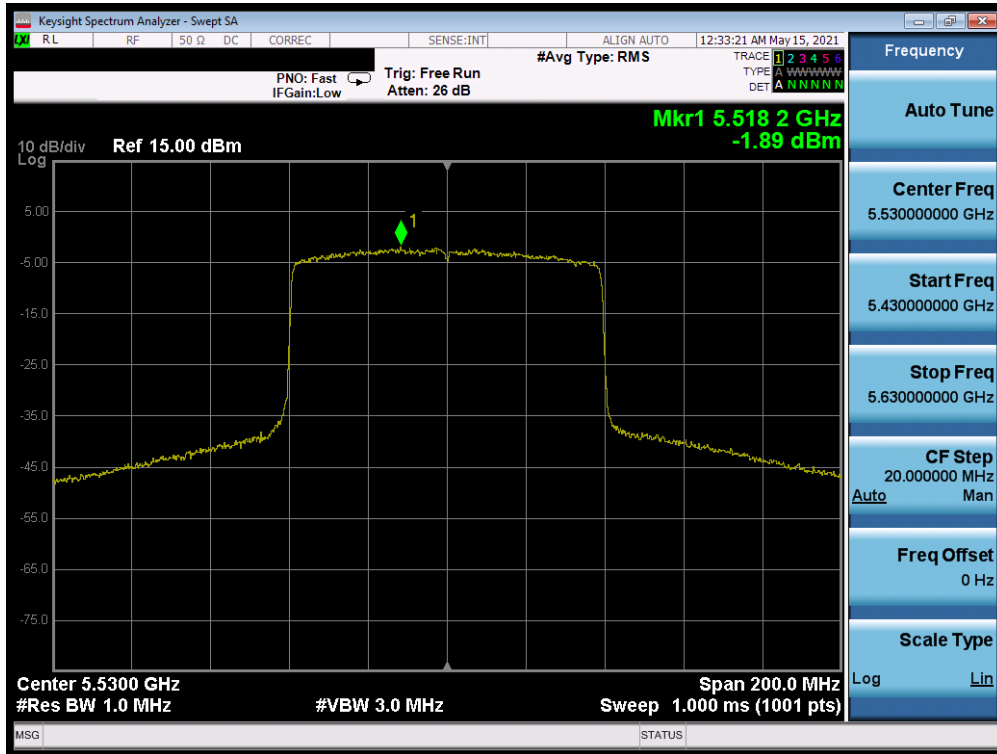


Plot 7-626. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

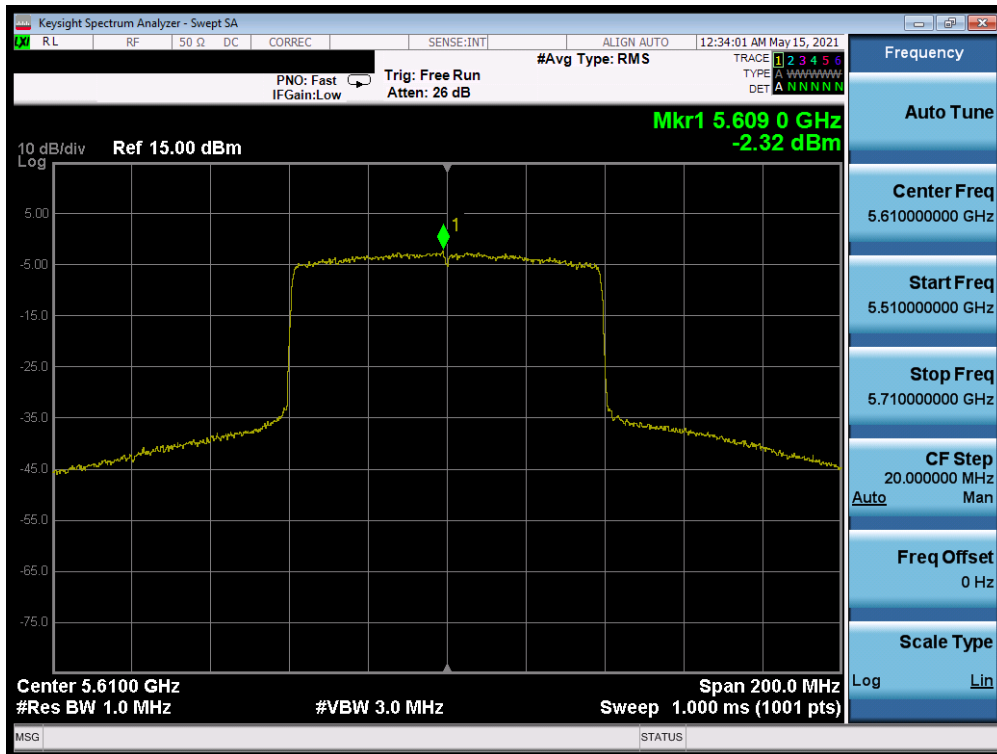


Plot 7-627. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 361 of 509

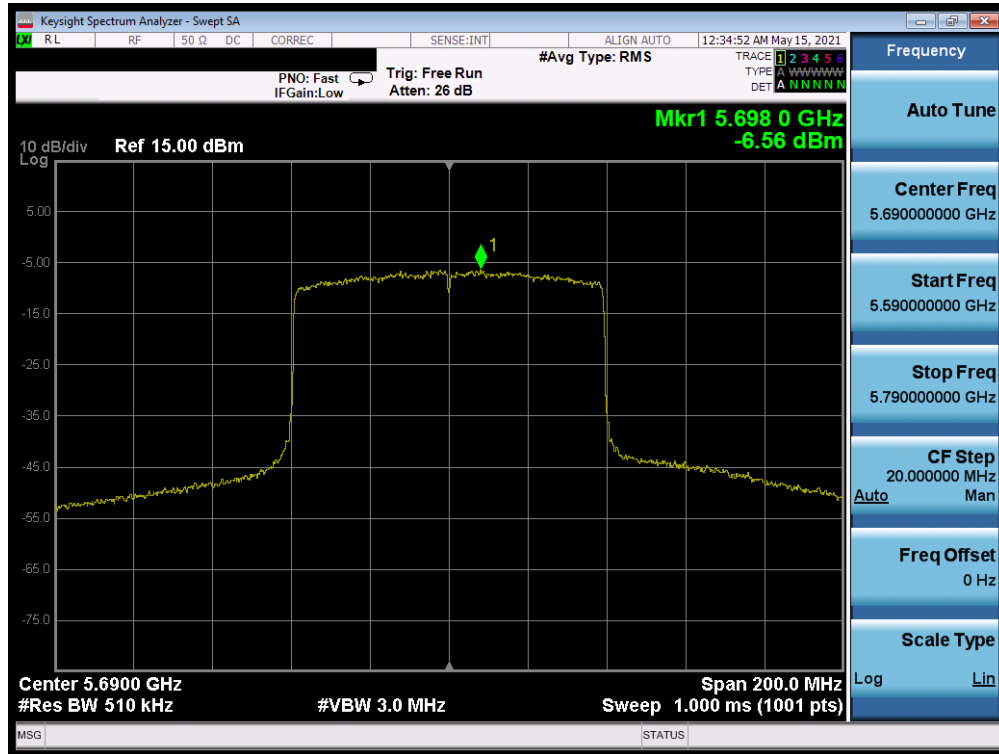


Plot 7-628. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)



Plot 7-629. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

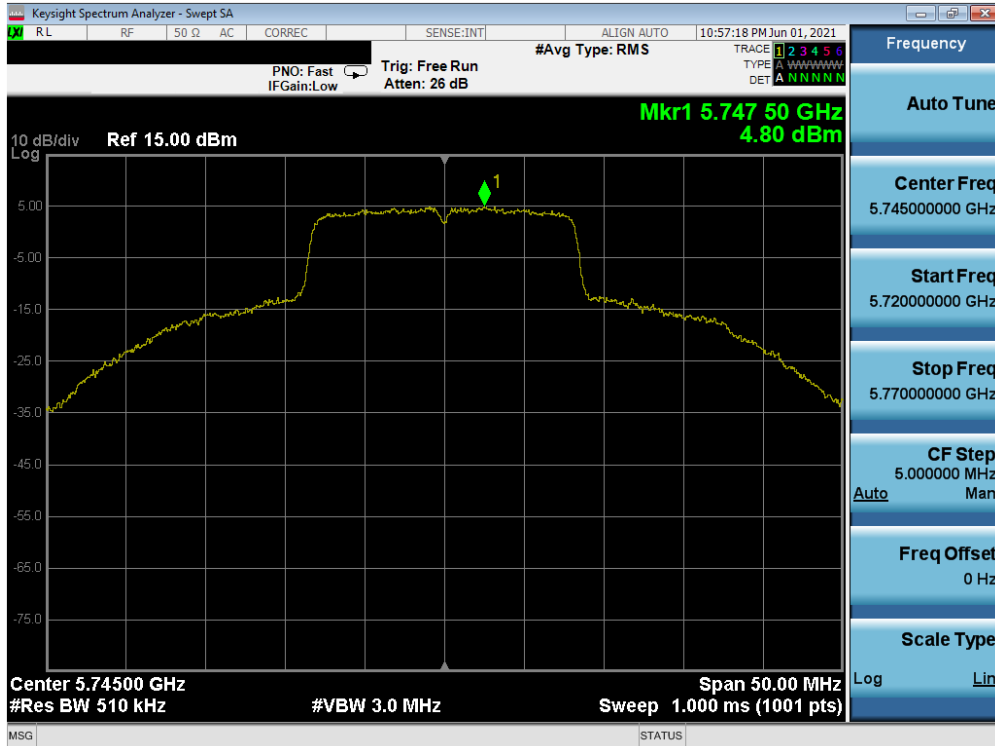
FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 362 of 509



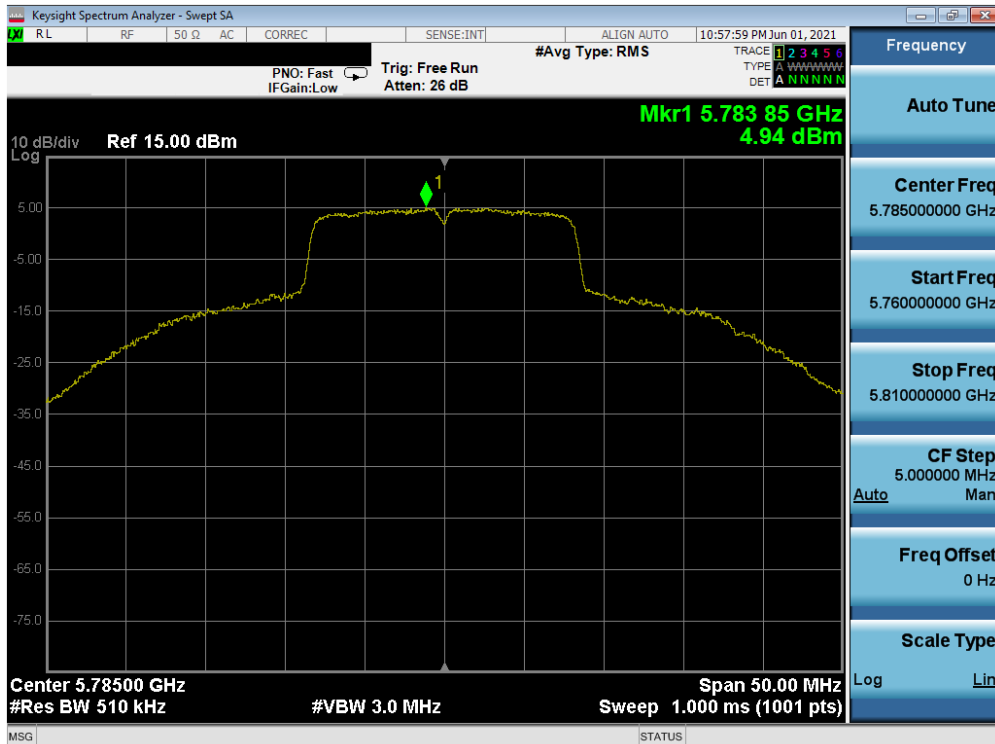
Plot 7-630. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 363 of 509

MIMO Antenna-1 Band 3 Power Spectral Density Measurements – Q

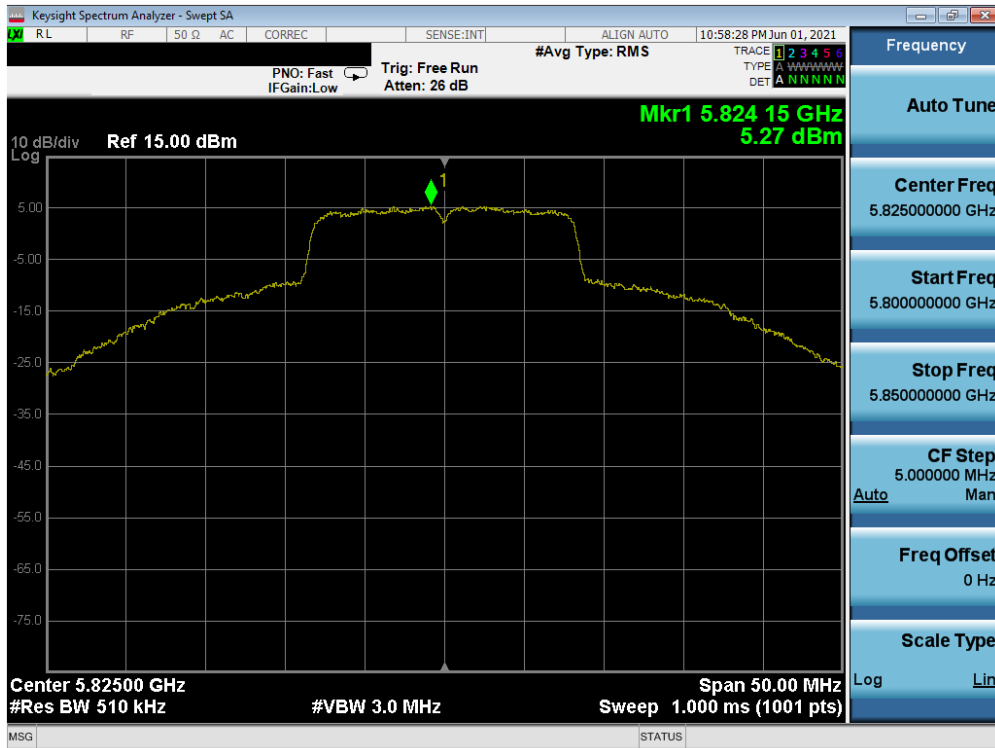


Plot 7-631. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 3) – Ch. 149)

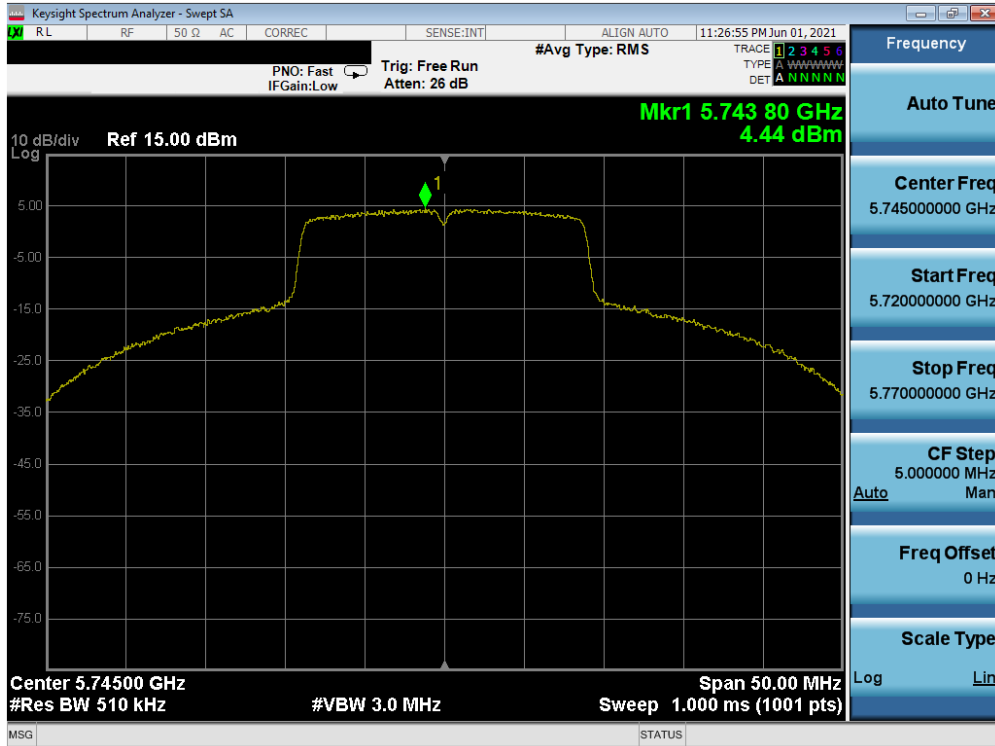


Plot 7-632. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 3) – Ch. 157)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 364 of 509

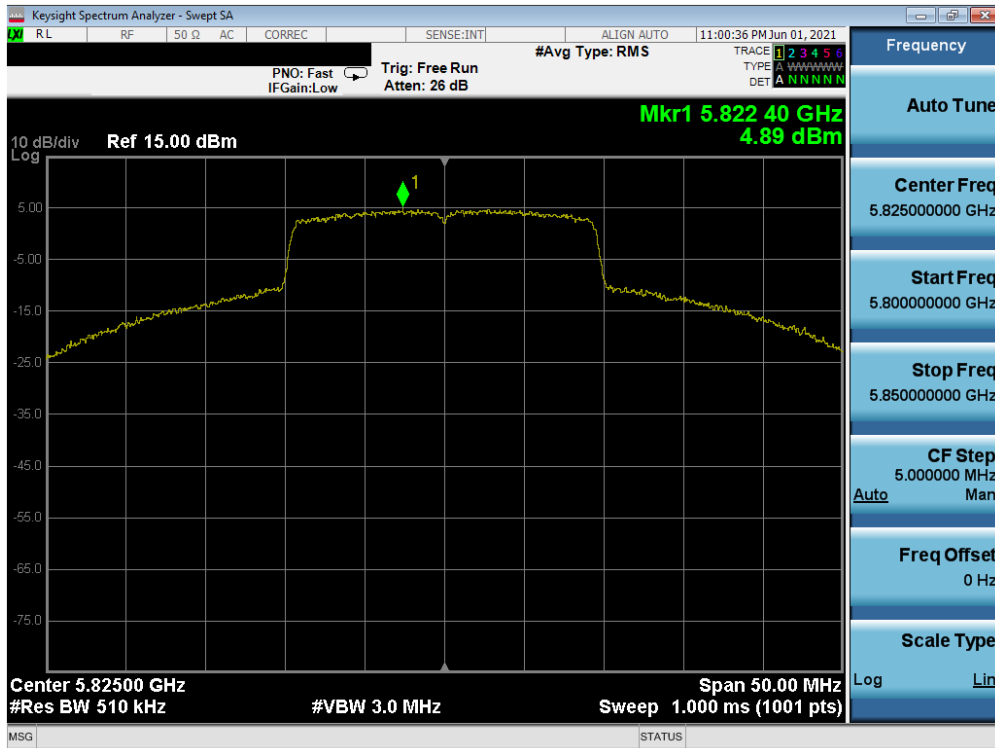


Plot 7-633. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11a (UNII Band 3) – Ch. 165)

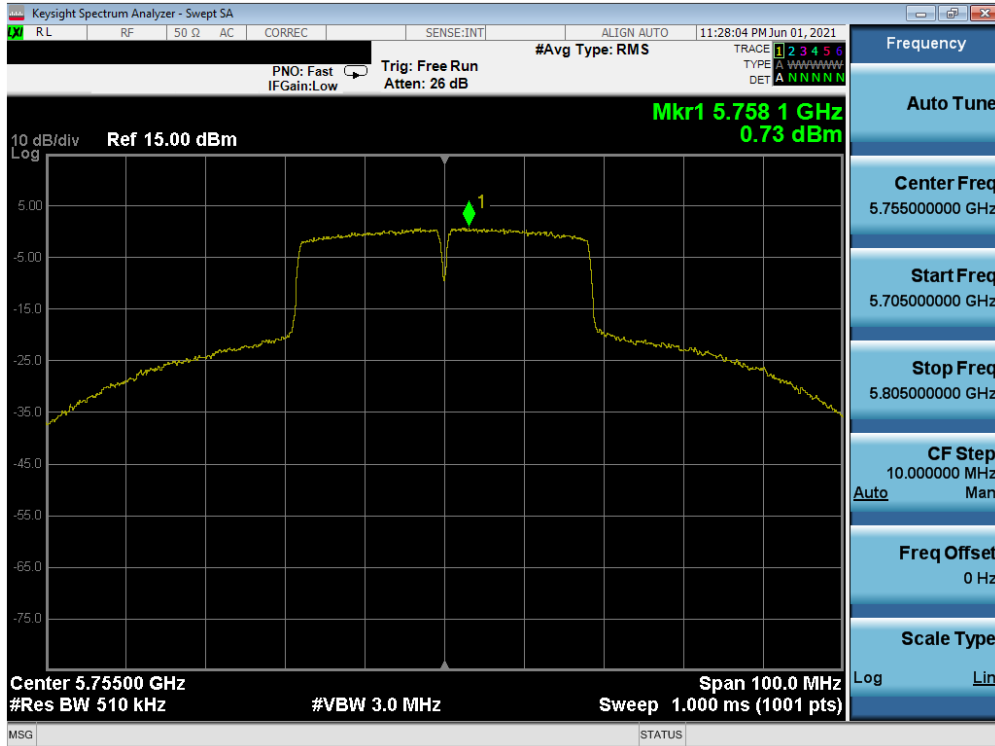


Plot 7-634. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 365 of 509

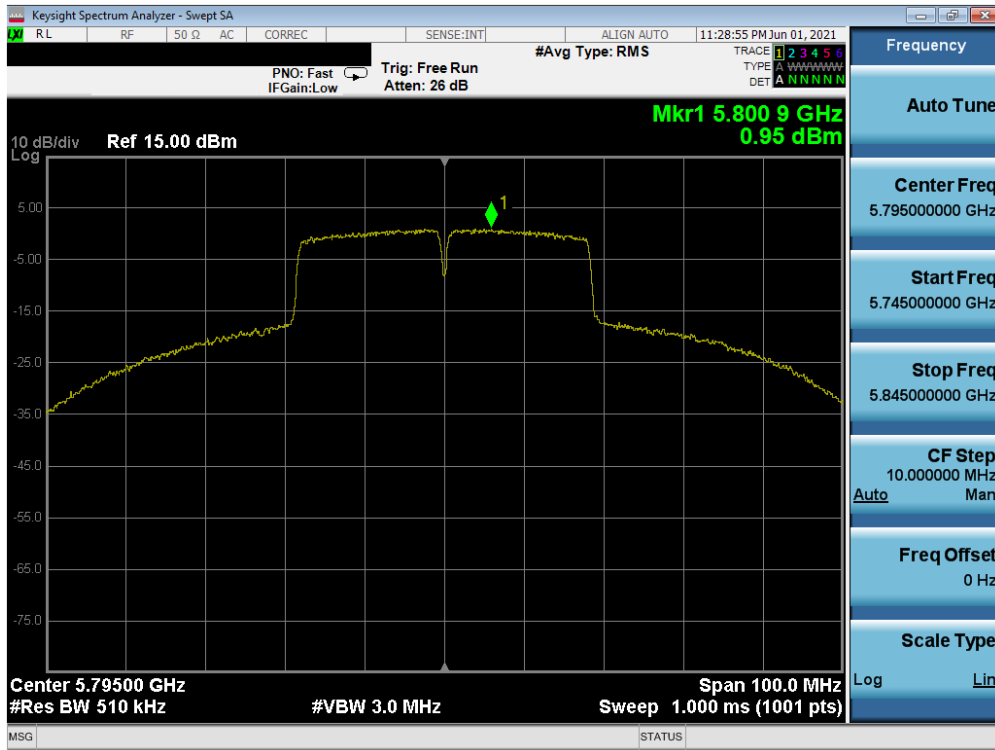


Plot 7-639. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

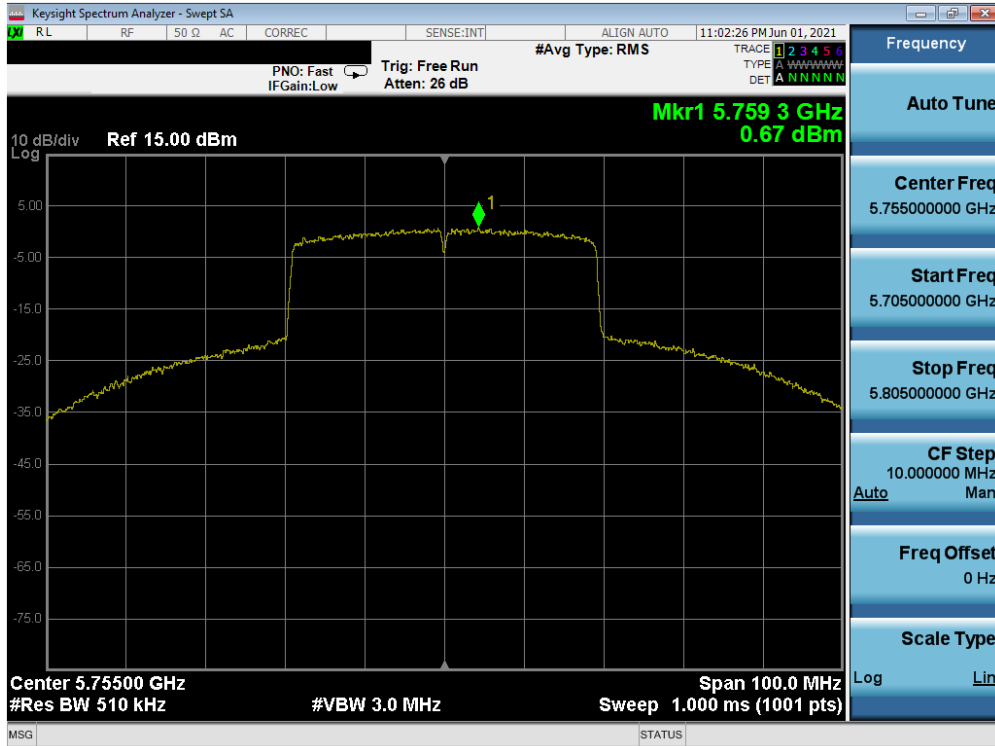


Plot 7-640. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 368 of 509

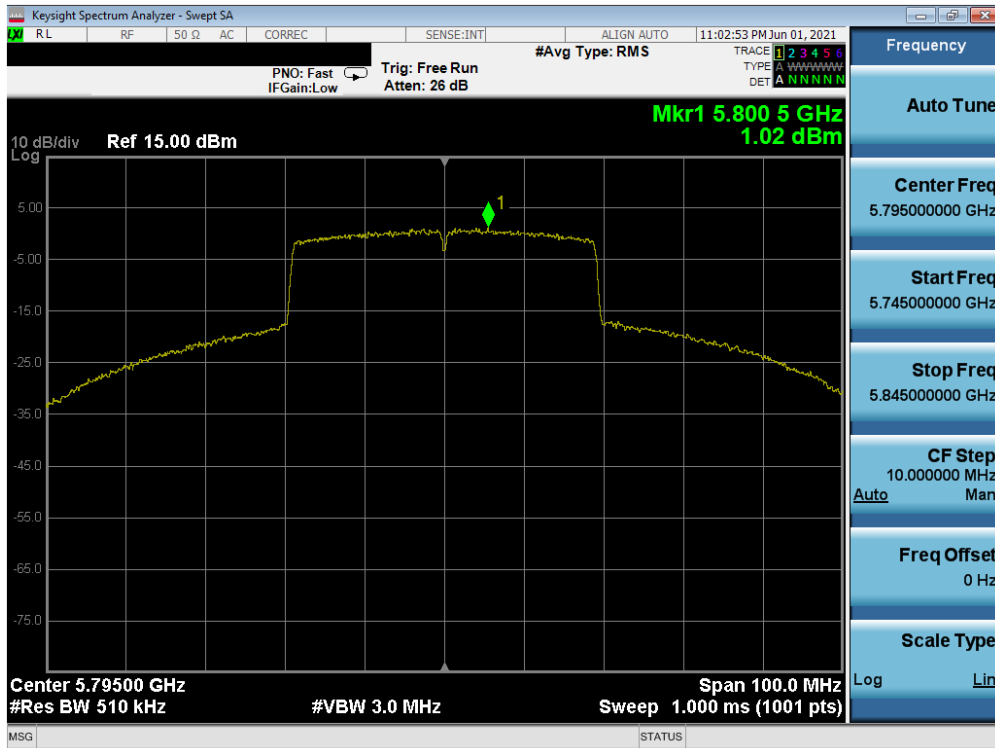


Plot 7-641. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

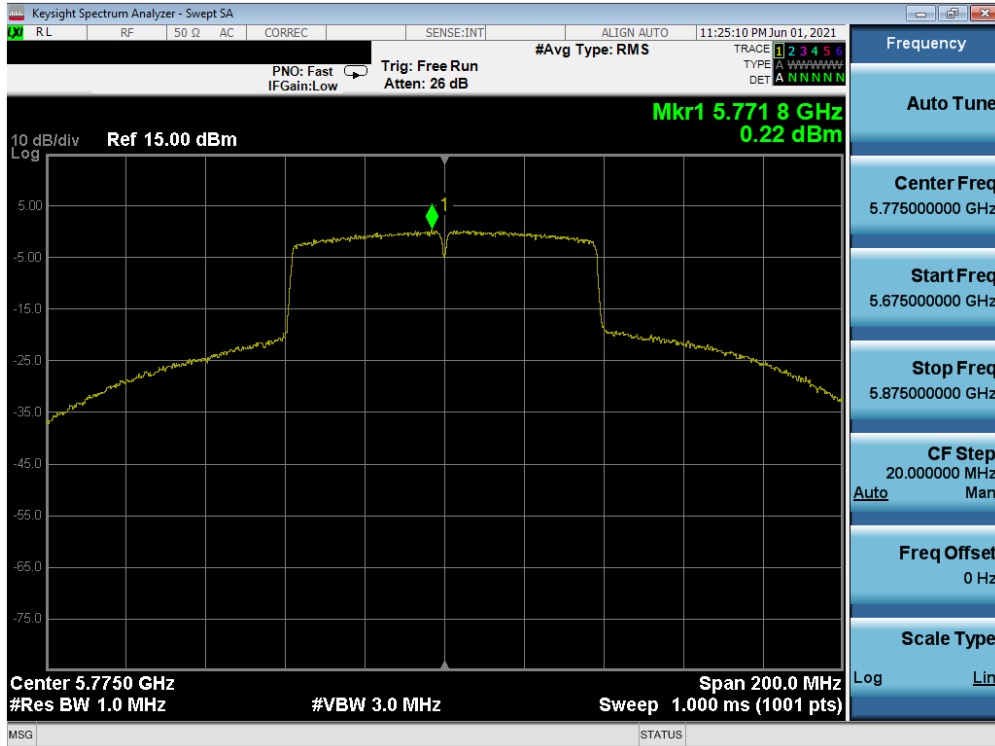


Plot 7-642. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 369 of 509



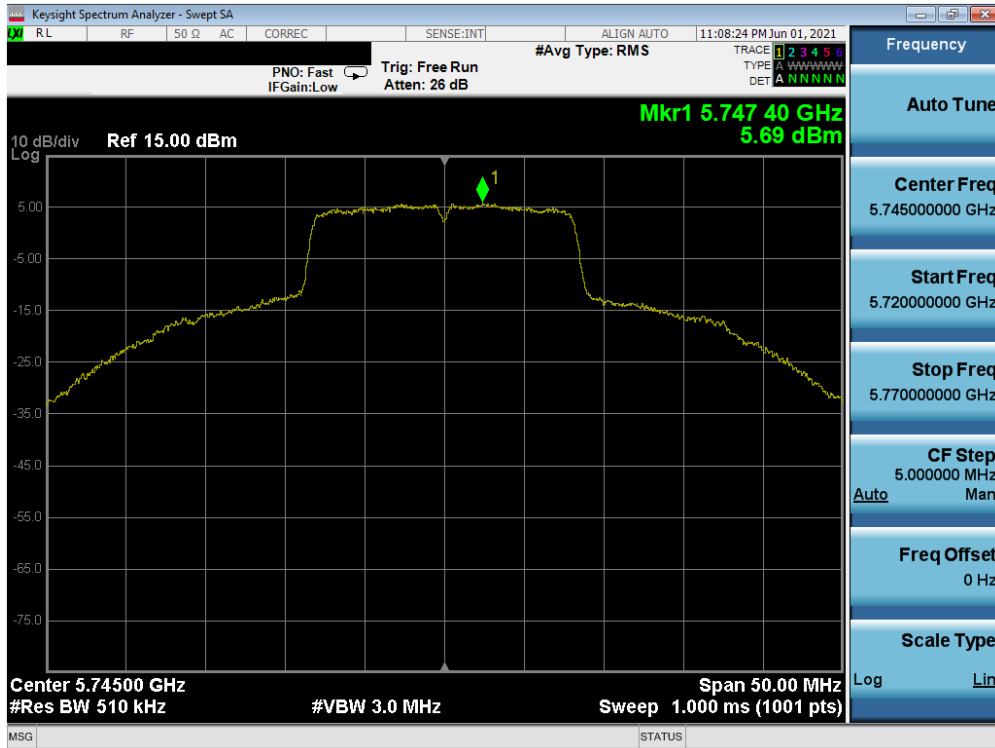
Plot 7-643. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)



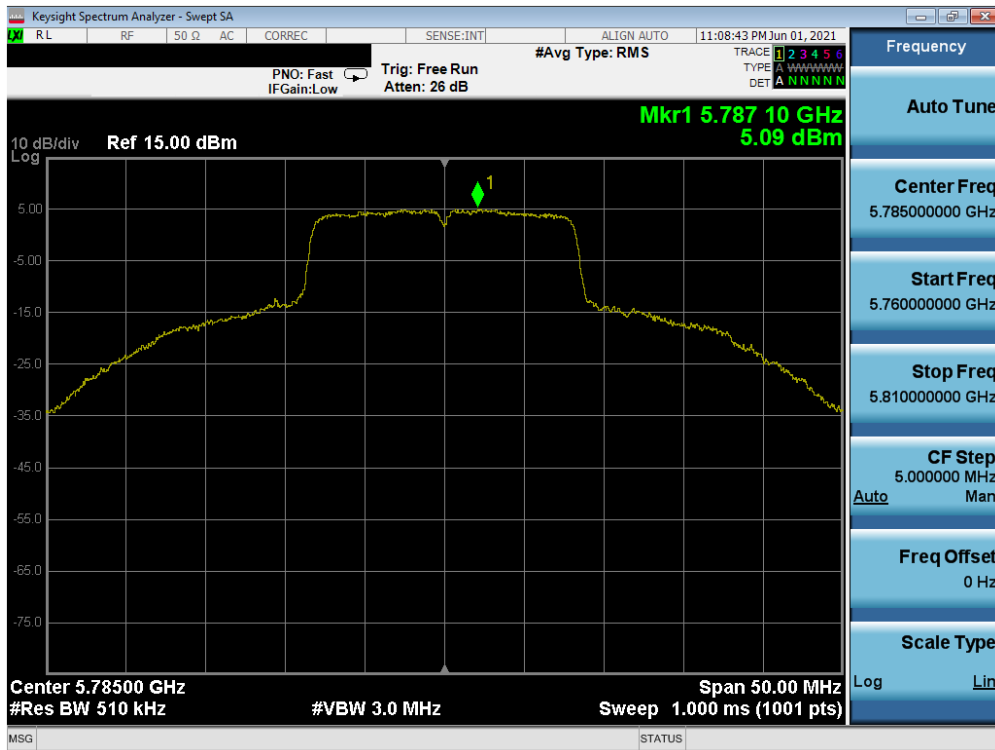
Plot 7-644. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 370 of 509

MIMO Antenna-2 Band 3 Power Spectral Density Measurements - Q

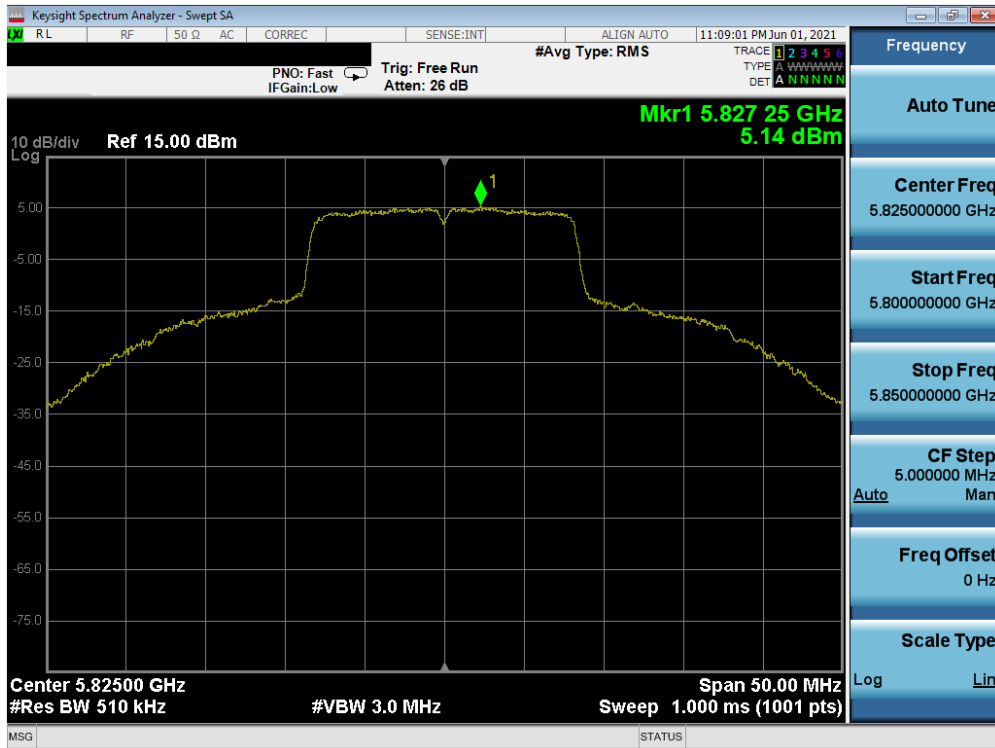


Plot 7-646. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11a (UNII Band 3) – Ch. 149)

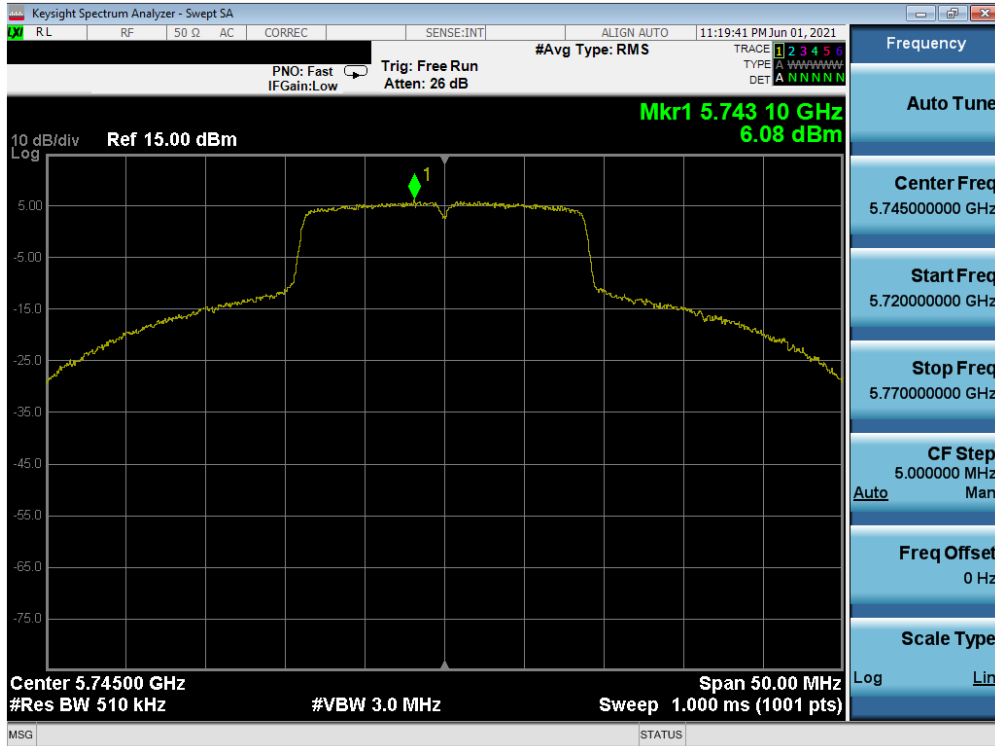


Plot 7-647. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11a (UNII Band 3) – Ch. 157)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 372 of 509

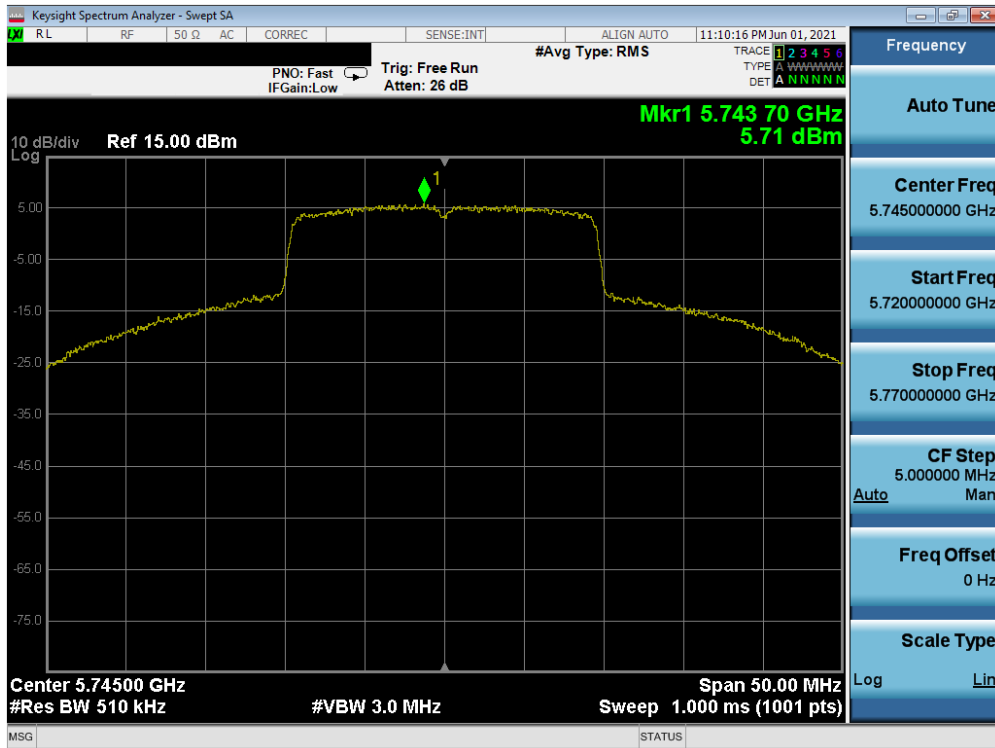


Plot 7-648. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11a (UNII Band 3) – Ch. 165)

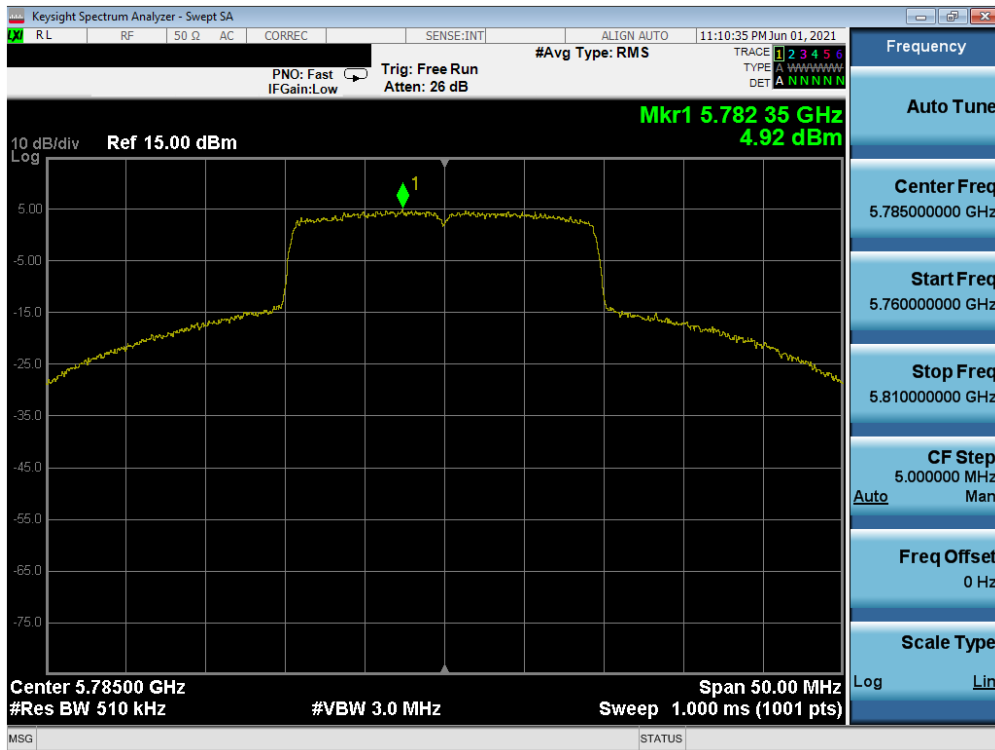


Plot 7-649. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 373 of 509

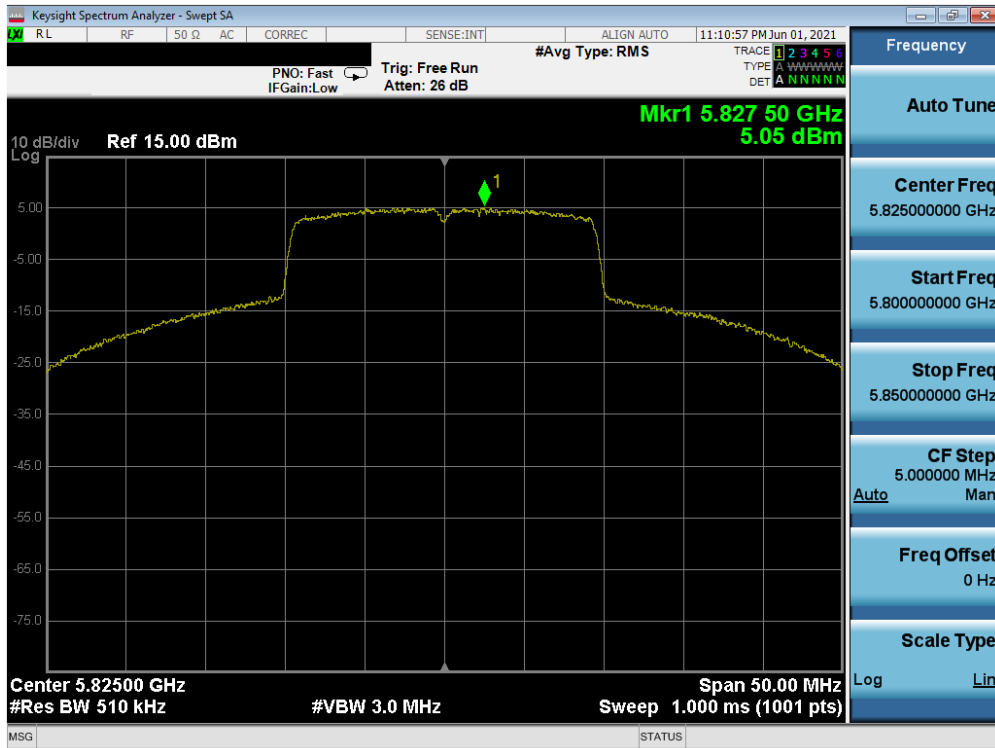


Plot 7-652. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

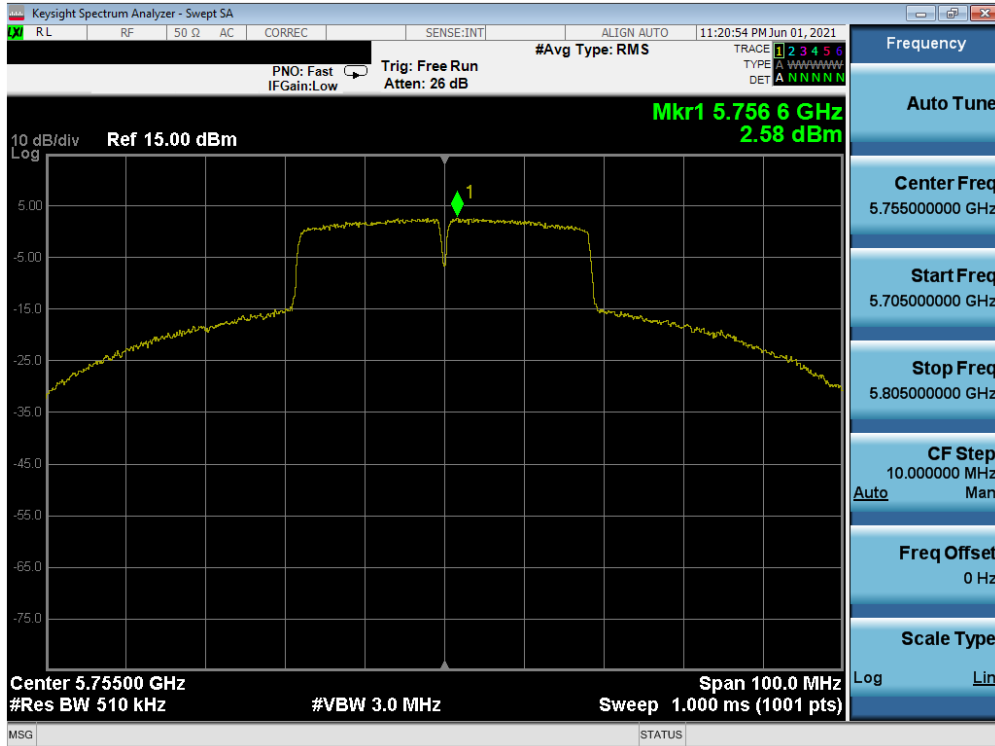


Plot 7-653. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 375 of 509

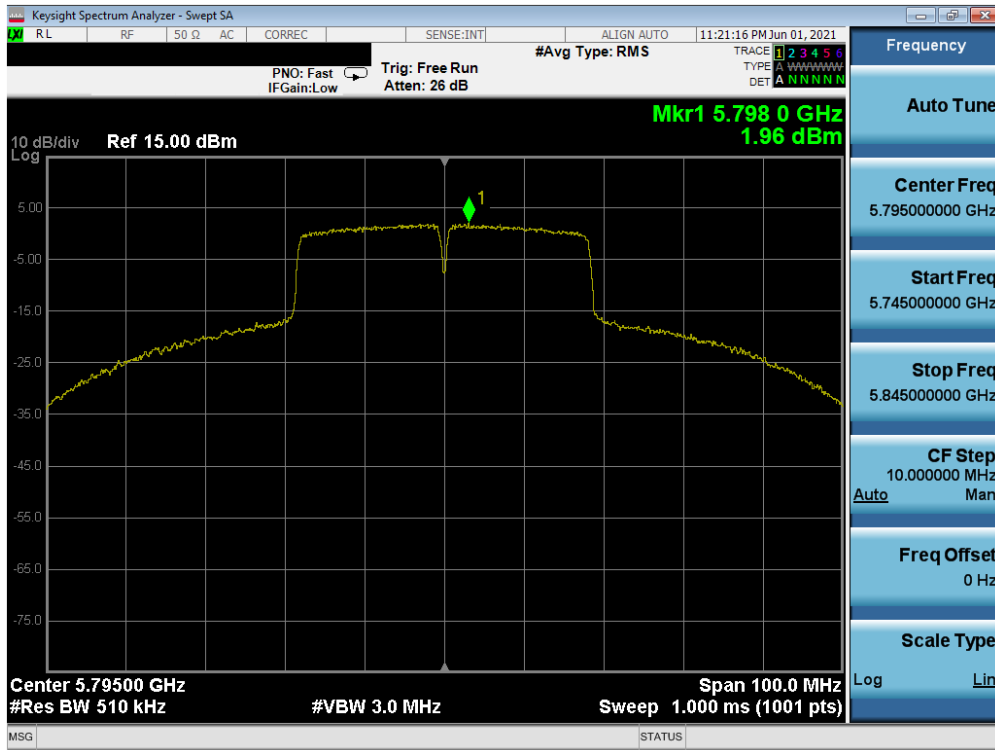


Plot 7-654. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

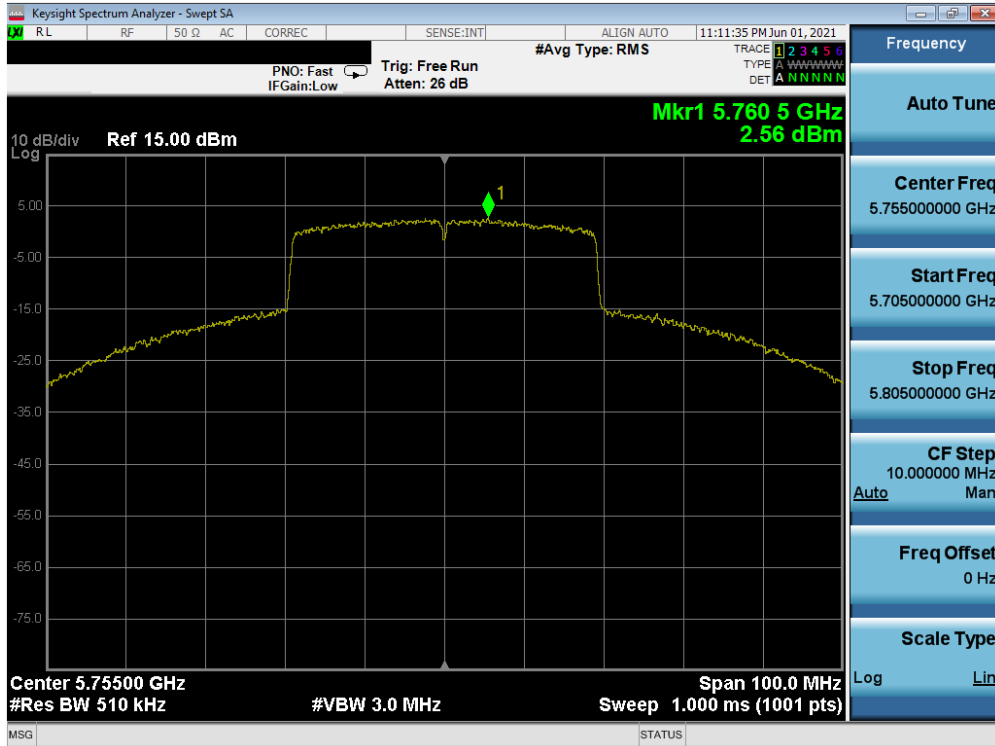


Plot 7-655. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: A3LSMF711U	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 376 of 509

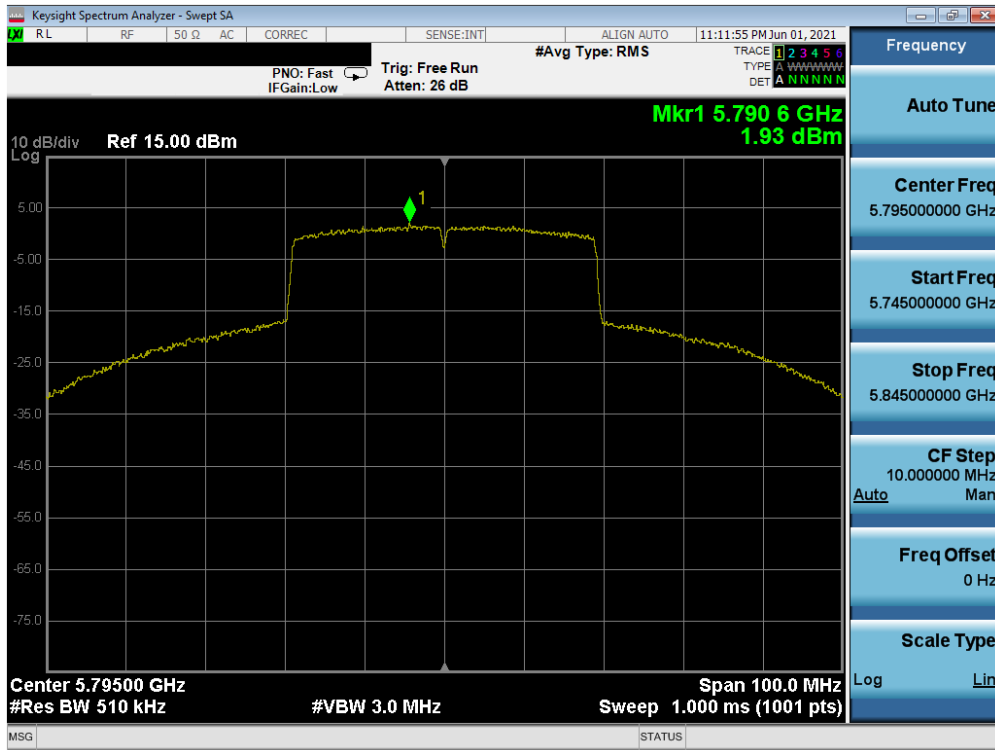


Plot 7-656. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

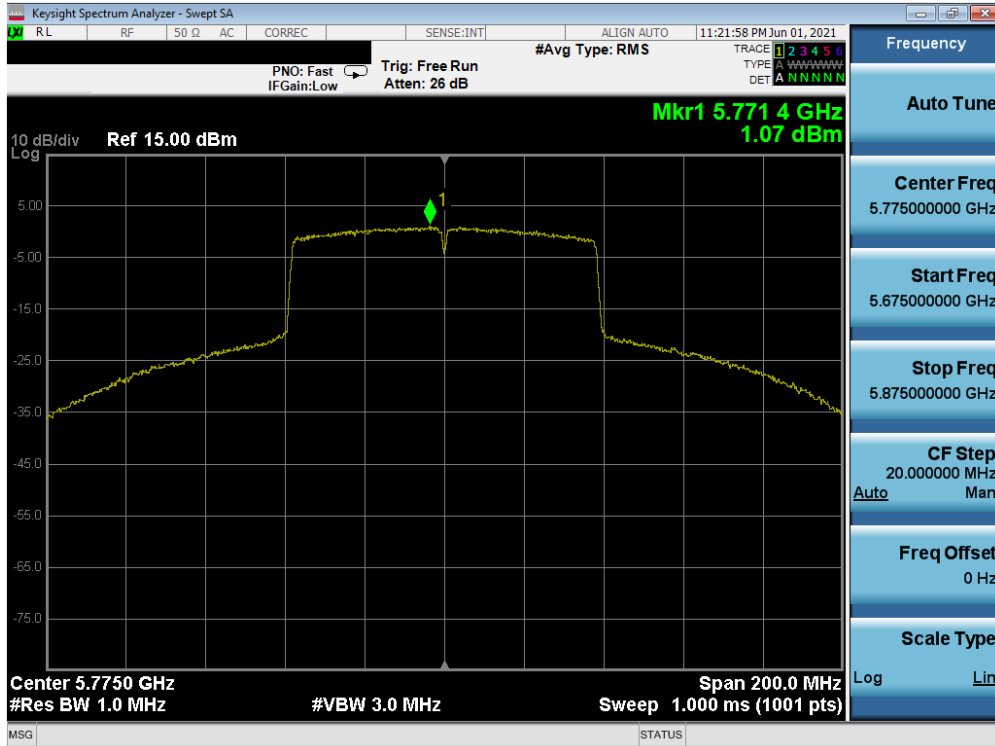


Plot 7-657. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 377 of 509

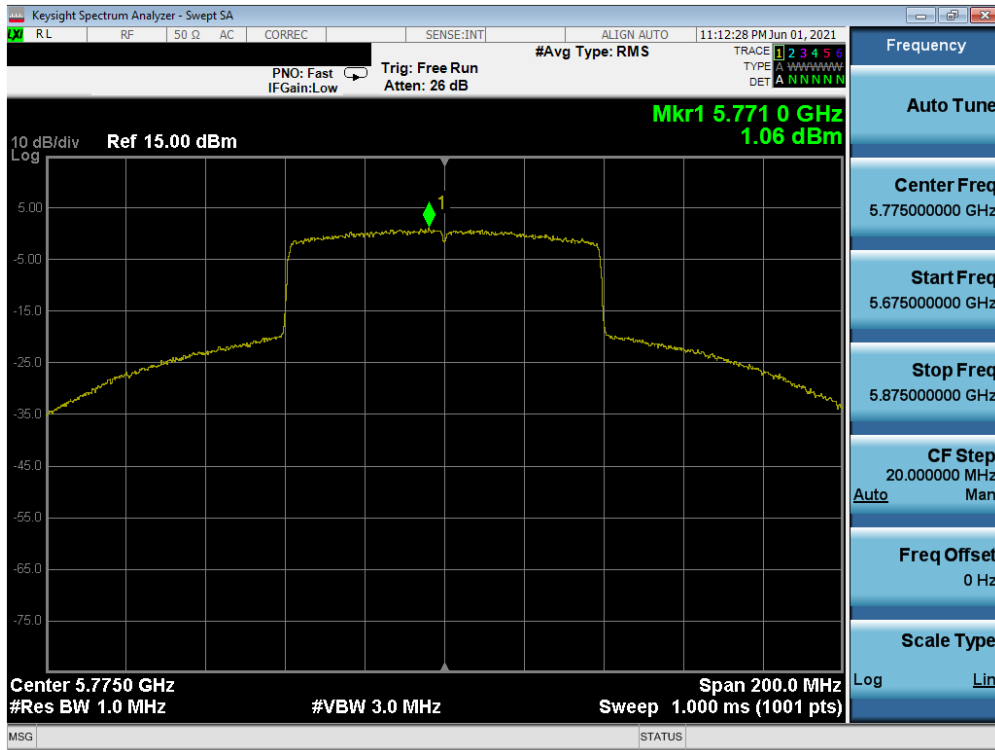


Plot 7-658. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)



Plot 7-659. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 378 of 509



Plot 7-660. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 379 of 509

Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and 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.

Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 6.61 dBm for Antenna-1 and 6.77 dBm for Antenna-2.

$$\text{Antenna 1} + \text{Antenna 2} = \text{MIMO}$$

$$(6.61 \text{ dBm} + 6.77 \text{ dBm}) = (4.58 \text{ mW} + 4.75 \text{ mW}) = 9.33 \text{ mW} = 9.70 \text{ dBm}$$

Sample e.i.r.p Power Spectral Density Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO power density was calculated to be 9.70 dBm with directional gain of -3.64 dBi.

$$\text{e.i.r.p. Power Spectral Density(dBm)} = \text{Power Spectral Density (dBm)} + \text{Ant gain (dBi)}$$

$$9.70 \text{ dBm} + -3.64 \text{ dBi} = 6.06 \text{ dBm}$$

FCC ID: A3LSMF711U	 <p>PCTEST® Proud to be part of element</p>	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 380 of 509

7.6 Radiated Spurious Emission Measurements – Above 1GHz

§15.407(b) §15.205 §15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna 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. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11ax (40MHz BW), and 802.11ac (80MHz)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-42 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-42. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5
KDB 789033 D02 v02r01 – Section G

Test Settings

Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be $\geq 2 \times \text{span/RBW}$)
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 381 of 509	

Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Test Setup

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

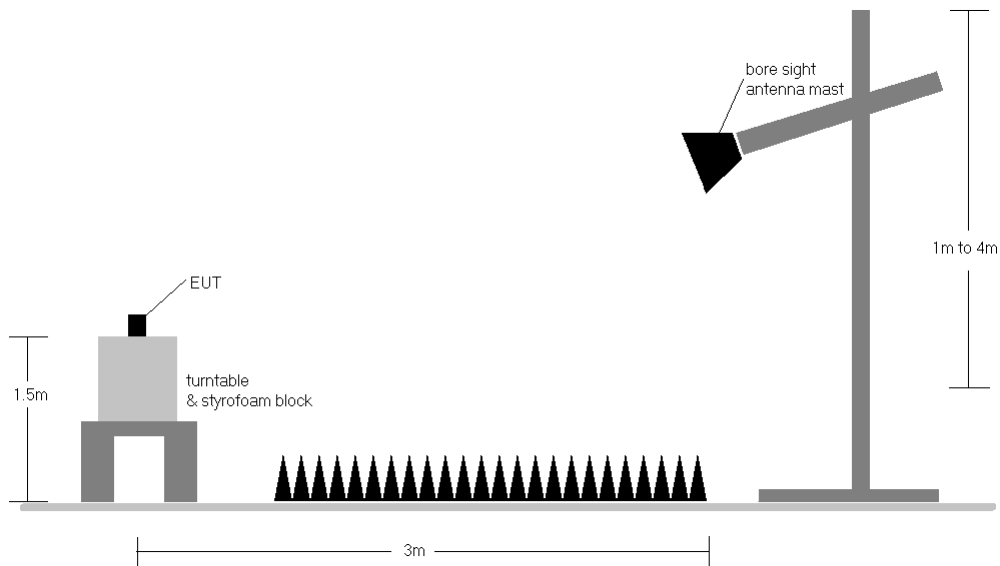


Figure 7-5. Test Instrument & Measurement Setup

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 382 of 509

Test Notes

1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-42.
2. All spurious emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-42. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. Radiated spurious emissions were investigated while operating in MIMO mode, however, it was determined that single antenna operation produced the worst case emissions. Since the emissions produced from MIMO operation were found to be more than 20dB below the limit, the MIMO emissions are not reported.
8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
9. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

Sample Calculations

Determining Spurious Emissions Levels

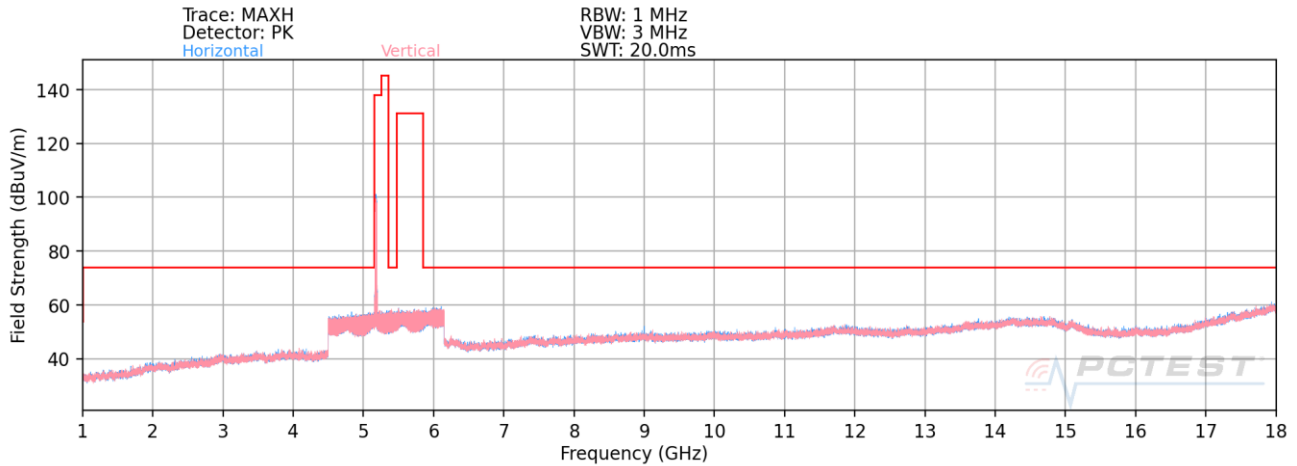
- Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- Margin [dB] = Field Strength Level [dBμV/m] – Limit [dBμV/m]

Radiated Band Edge Measurement Offset

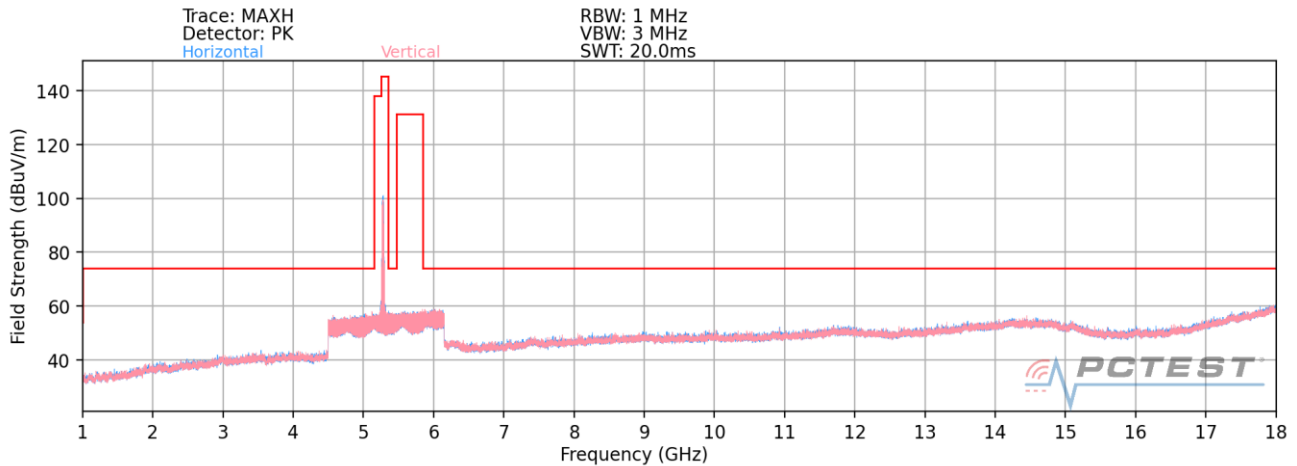
- The amplitude offset shown in the radiated restricted band edge plots was calculated using the formula:
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 383 of 509	

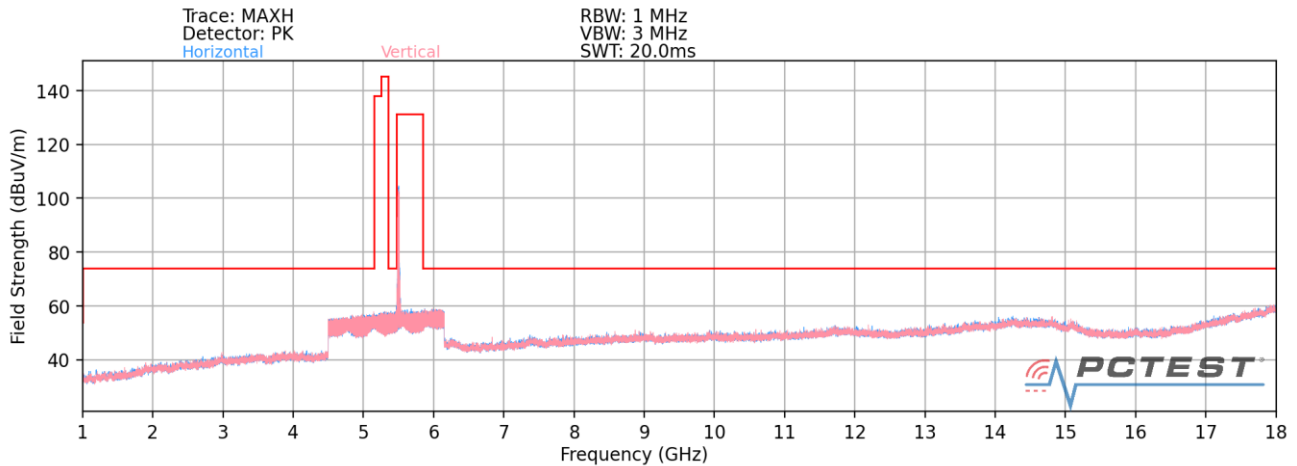
7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements – N



Plot 7-661. Radiated Spurious Plot above 1GHz SISO ANT1 - Open (802.11a – U1 Ch. 40)

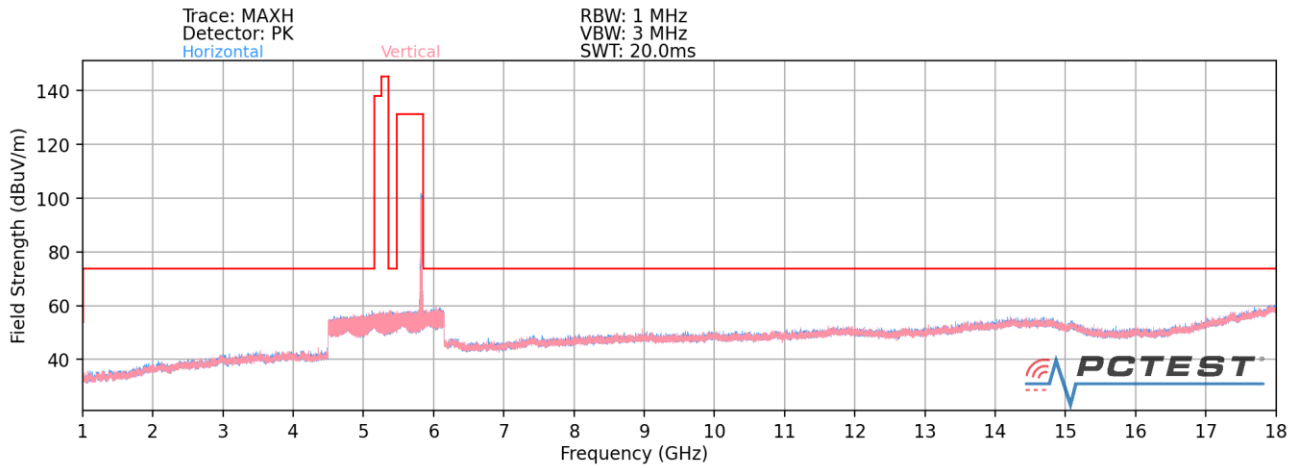


Plot 7-662. Radiated Spurious Plot above 1GHz SISO ANT1- Open (802.11a – U2A Ch. 56)

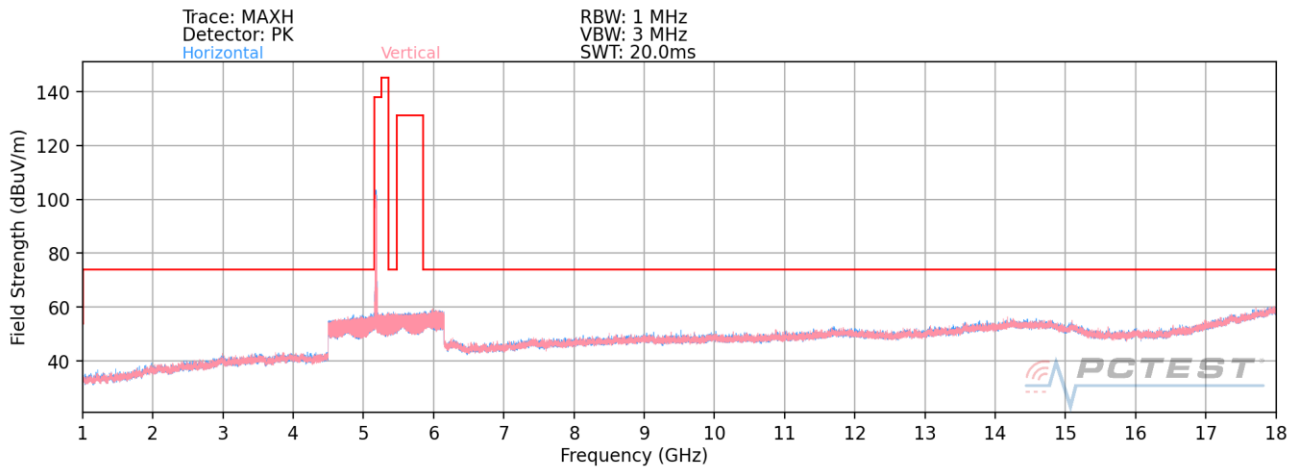


Plot 7-663. Radiated Spurious Plot above 1GHz SISO ANT1 - Open (802.11a – U2C Ch. 120)

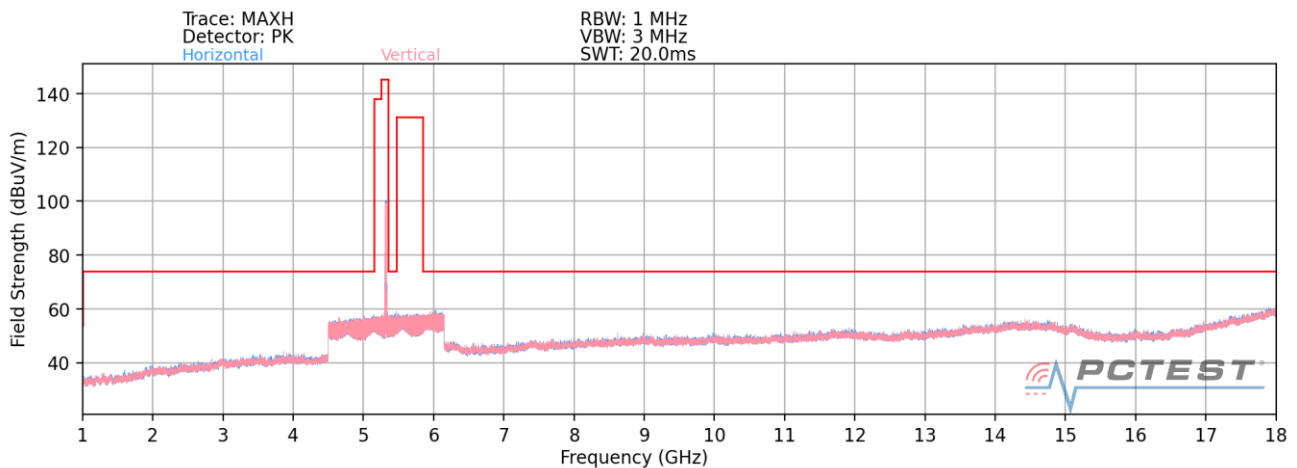
FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 384 of 509	



Plot 7-664. Radiated Spurious Plot above 1GHz SISO ANT1- Open (802.11a – U3 Ch. 157)

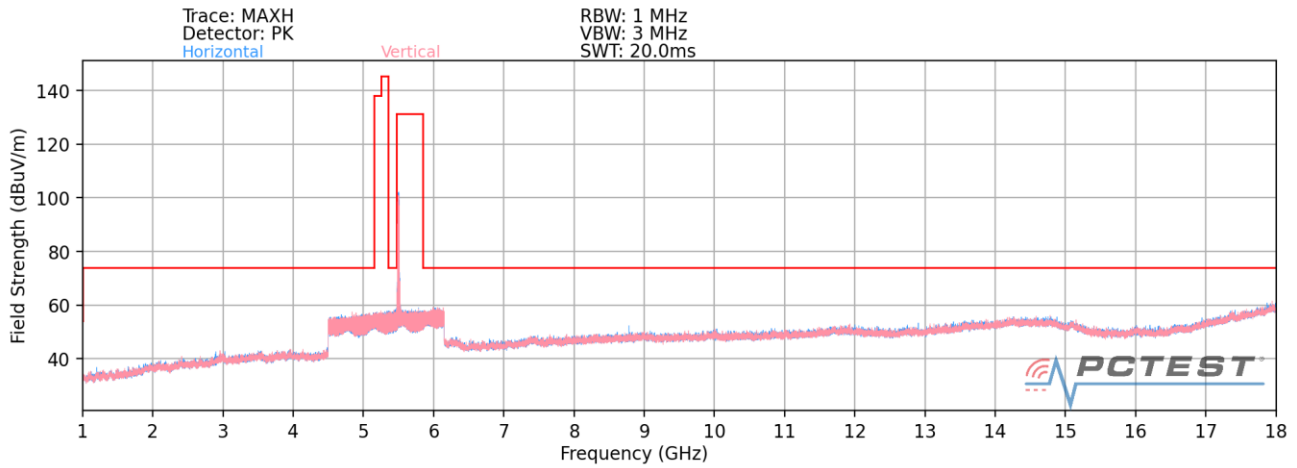


Plot 7-665. Radiated Spurious Plot above 1GHz SISO ANT1 - Closed (802.11a – U1 Ch. 40)

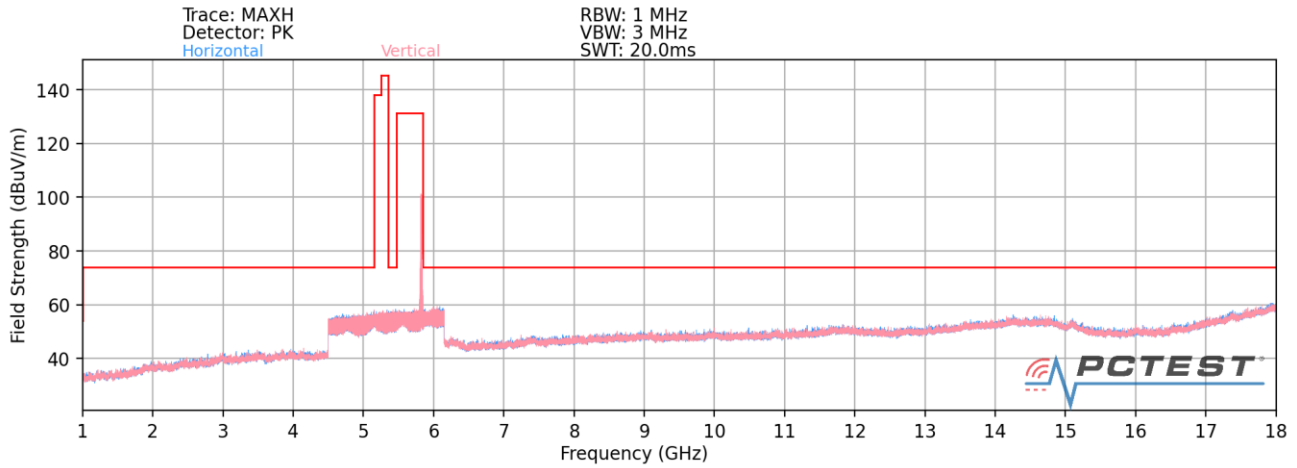


Plot 7-666. Radiated Spurious Plot above 1GHz SISO ANT1 - Closed (802.11a – U2A Ch. 56)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 385 of 509



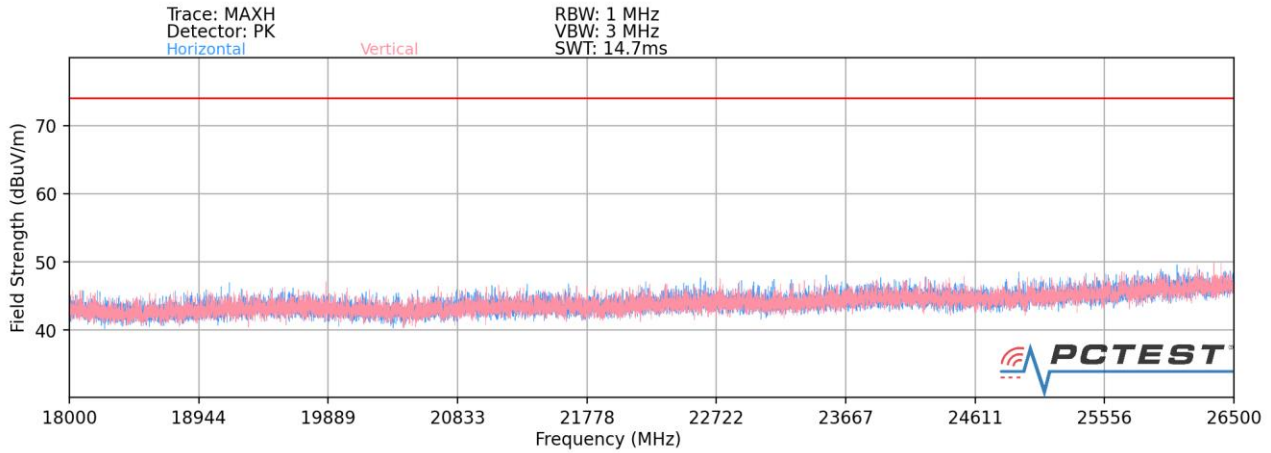
Plot 7-667. Radiated Spurious Plot above 1GHz SISO ANT1- Closed (802.11a – U2C Ch. 120)



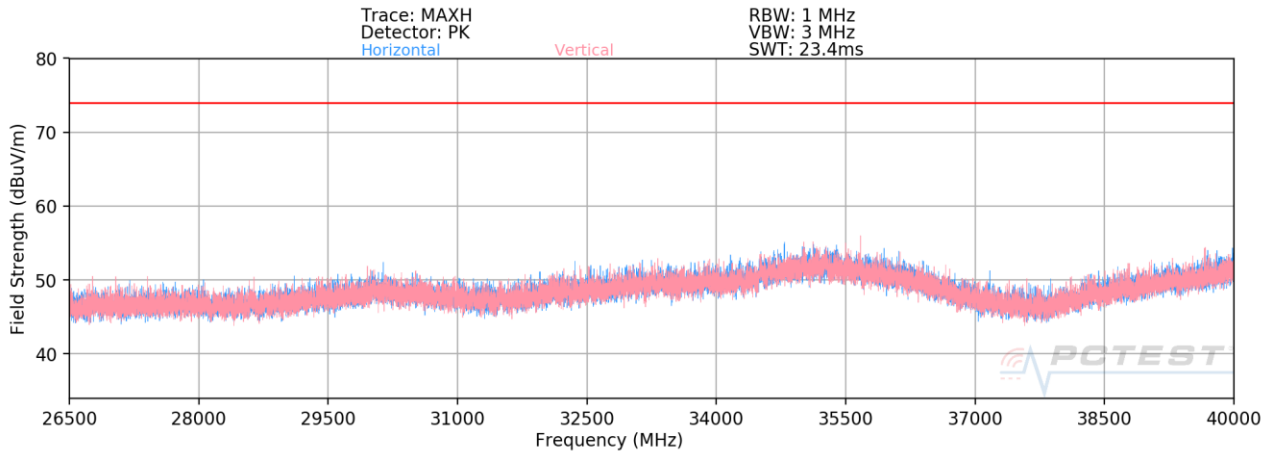
Plot 7-668. Radiated Spurious Plot above 1GHz SISO ANT1- Closed (802.11a – U3 Ch. 157)

FCC ID: A3LSMF711U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 386 of 509

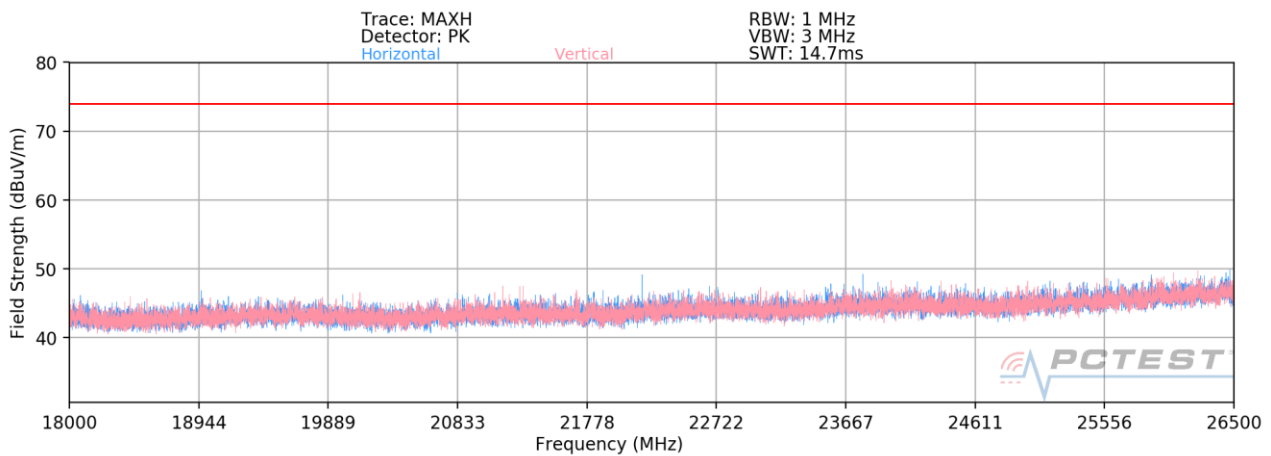
SISO Antenna-1 Radiated Spurious Emission Measurements (Above 18GHz) – N



Plot 7-669. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 - Open (802.11a)

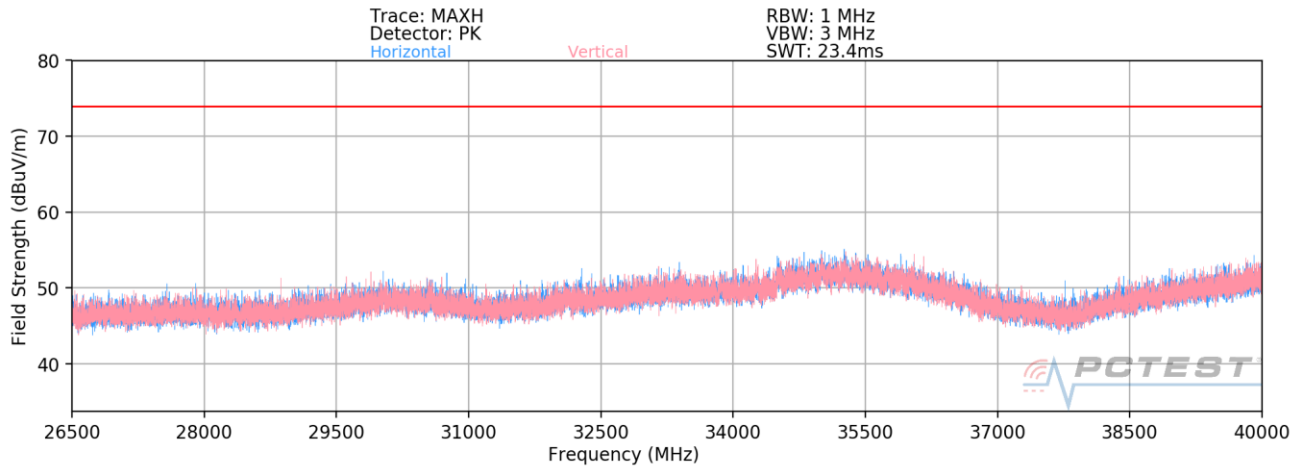


Plot 7-670. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1- Open (802.11a)



Plot 7-671. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 - Closed (802.11a)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 387 of 509



Plot 7-672. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 - Closed (802.11a)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)	 Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 388 of 509

SISO Antenna-1 Radiated Spurious Emission Measurements - N

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10360.00	Peak	H	-	-	-63.81	12.12	0.00	55.31	68.20	-12.89
* 15540.00	Average	H	-	-	-81.75	13.39	0.00	38.64	53.98	-15.34
* 15540.00	Peak	H	-	-	-69.76	13.39	0.00	50.63	73.98	-23.35
* 20720.00	Average	H	-	-	-66.33	-5.06	-9.54	26.07	53.98	-27.91
* 20720.00	Peak	H	-	-	-56.36	-5.06	-9.54	36.04	73.98	-37.94
25900.00	Peak	H	-	-	-55.32	-2.62	-9.54	39.51	68.20	-28.69

Table 7-43. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10400.00	Peak	H	-	-	-64.19	11.58	0.00	54.39	68.20	-13.81
* 15600.00	Average	H	-	-	-81.87	14.08	0.00	39.21	53.98	-14.77
* 15600.00	Peak	H	-	-	-70.19	14.08	0.00	50.89	73.98	-23.09
* 20800.00	Average	H	-	-	-65.66	-4.66	-9.54	27.14	53.98	-26.84
* 20800.00	Peak	H	-	-	-55.16	-4.66	-9.54	37.64	73.98	-36.34
26000.00	Peak	H	-	-	-55.29	-2.44	-9.54	39.73	68.20	-28.47

Table 7-44. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 389 of 509	

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	H	-	-	-64.11	12.38	0.00	55.27	68.20	-12.93
* 15720.00	Average	H	-	-	-81.68	13.91	0.00	39.23	53.98	-14.75
* 15720.00	Peak	H	-	-	-69.13	13.91	0.00	51.78	73.98	-22.20
* 20960.00	Average	H	-	-	-66.71	-4.53	-9.54	26.21	53.98	-27.77
* 20960.00	Peak	H	-	-	-56.17	-4.53	-9.54	36.75	73.98	-37.23
26200.00	Peak	H	-	-	-54.98	-2.55	-9.54	39.92	68.20	-28.28

Table 7-45. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	H	-	-	-64.32	12.34	0.00	55.02	68.20	-13.18
* 15780.00	Average	H	-	-	-81.62	13.58	0.00	38.96	53.98	-15.02
* 15780.00	Peak	H	-	-	-69.95	13.58	0.00	50.63	73.98	-23.35
* 21040.00	Average	H	-	-	-66.26	-4.65	-9.54	26.54	53.98	-27.44
* 21040.00	Peak	H	-	-	-56.53	-4.65	-9.54	36.27	73.98	-37.71
26300.00	Peak	H	-	-	-54.95	-2.48	-9.54	40.03	68.20	-28.17

Table 7-46. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 390 of 509	

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5280MHz
Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	-	-	-66.06	12.03	0.00	52.97	68.20	-15.23
* 15840.00	Average	H	-	-	-81.71	13.60	0.00	38.89	53.98	-15.09
* 15840.00	Peak	H	-	-	-69.73	13.60	0.00	50.87	73.98	-23.11
* 21120.00	Average	H	-	-	-66.58	-4.46	-9.54	26.42	53.98	-27.56
* 21120.00	Peak	H	-	-	-55.77	-4.46	-9.54	37.23	73.98	-36.75
26400.00	Peak	H	-	-	-55.21	-2.11	-9.54	40.14	68.20	-28.06

Table 7-47. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5320MHz
Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	-	-	-78.68	12.39	0.00	40.71	53.98	-13.27
* 10640.00	Peak	H	-	-	-65.44	12.39	0.00	53.95	73.98	-20.03
* 15960.00	Average	H	-	-	-78.60	14.52	0.00	42.92	53.98	-11.06
* 15960.00	Peak	H	-	-	-65.61	14.52	0.00	55.91	73.98	-18.07
* 21280.00	Average	H	-	-	-66.45	-4.40	-9.54	26.60	53.98	-27.38
* 21280.00	Peak	H	-	-	-56.00	-4.40	-9.54	37.05	73.98	-36.93
26600.00	Peak	H	-	-	-55.88	-2.33	-9.54	39.25	68.20	-28.95

Table 7-48. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 391 of 509	

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5500MHz
Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	H	-	-	-78.65	12.79	0.00	41.14	53.98	-12.83
* 11000.00	Peak	H	-	-	-66.24	12.79	0.00	53.55	73.98	-20.42
16500.00	Peak	H	-	-	-69.85	15.02	0.00	52.17	68.20	-16.03
22000.00	Peak	H	-	-	-55.49	-4.38	-9.54	37.58	68.20	-30.62
27500.00	Peak	H	-	-	-55.13	-1.85	-9.54	40.48	68.20	-27.72

Table 7-49. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5600MHz
Channel: 120

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	H	-	-	-79.44	12.86	0.00	40.42	53.98	-13.56
* 11200.00	Peak	H	-	-	-67.30	12.86	0.00	52.56	73.98	-21.42
16800.00	Peak	H	-	-	-70.33	15.52	0.00	52.19	68.20	-16.01
* 22400.00	Average	H	-	-	-66.34	-4.09	-9.54	27.02	53.98	-26.96
* 22400.00	Peak	H	-	-	-55.31	-4.09	-9.54	38.05	73.98	-35.93
28000.00	Peak	H	-	-	-55.38	-1.57	-9.54	40.51	68.20	-27.69

Table 7-50. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 392 of 509

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5720MHz
Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	-	-	-79.39	13.08	0.00	40.69	53.98	-13.29
* 11440.00	Peak	H	-	-	-67.38	13.08	0.00	52.70	73.98	-21.28
17160.00	Peak	H	-	-	-69.20	17.81	0.00	55.61	68.20	-12.59
* 22880.00	Average	H	-	-	-65.93	-4.11	-9.54	27.41	53.98	-26.57
* 22880.00	Peak	H	-	-	-55.42	-4.11	-9.54	37.92	73.98	-36.06
28600.00	Peak	H	-	-	-56.53	-1.25	-9.54	39.68	68.20	-28.52

Table 7-51. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5745MHz
Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	-	-	-79.66	13.64	0.00	40.98	53.98	-13.00
* 11490.00	Peak	H	-	-	-67.67	13.64	0.00	52.97	73.98	-21.01
17235.00	Peak	H	-	-	-69.49	17.96	0.00	55.47	68.20	-12.73
* 22980.00	Average	H	-	-	-66.15	-4.25	-9.54	27.06	53.98	-26.92
* 22980.00	Peak	H	-	-	-54.83	-4.25	-9.54	38.38	73.98	-35.60
28725.00	Peak	H	-	-	-55.92	-1.30	-9.54	40.24	68.20	-27.96

Table 7-52. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 393 of 509

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	-	-	-79.86	13.36	0.00	40.50	53.98	-13.48
* 11570.00	Peak	H	-	-	-67.41	13.36	0.00	52.95	73.98	-21.03
17355.00	Peak	H	-	-	-69.36	20.01	0.00	57.65	68.20	-10.55
23140.00	Peak	H	-	-	-54.65	-4.20	-9.54	38.60	68.20	-29.60
28925.00	Peak	H	-	-	-55.73	-1.06	-9.54	40.66	68.20	-27.54

Table 7-53. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	-	-	-79.86	14.11	0.00	41.25	53.98	-12.73
* 11650.00	Peak	H	-	-	-67.37	14.11	0.00	53.74	73.98	-20.24
17475.00	Peak	H	-	-	-69.34	18.91	0.00	56.57	68.20	-11.63
23300.00	Peak	H	-	-	-56.19	-4.25	-9.54	37.01	68.20	-31.19
29125.00	Peak	H	-	-	-56.19	-1.05	-9.54	40.22	68.20	-27.98

Table 7-54. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 394 of 509	

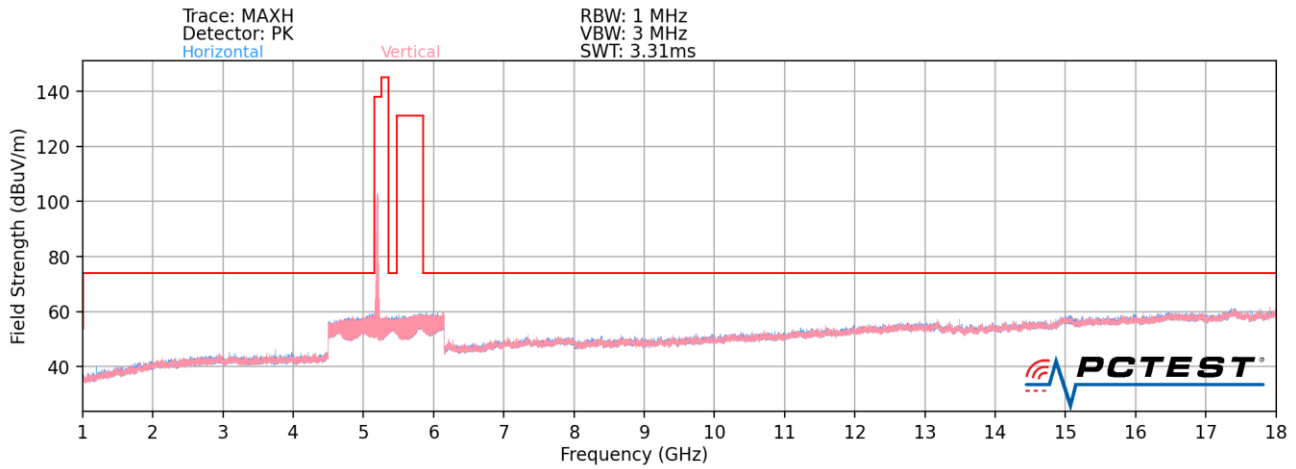
Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11000.00	Average	H	-	-	-80.93	12.79	0.00	38.86	53.98	-15.12
11000.00	Peak	H	-	-	-68.95	12.79	0.00	50.84	73.98	-23.13
16500.00	Peak	H	-	-	-70.27	15.02	0.00	51.75	68.20	-16.45
22000.00	Peak	H	-	-	-58.52	-4.38	-9.54	34.56	68.20	-33.64
27500.00	Peak	H	-	-	-57.40	-1.85	-9.54	38.22	68.20	-29.98

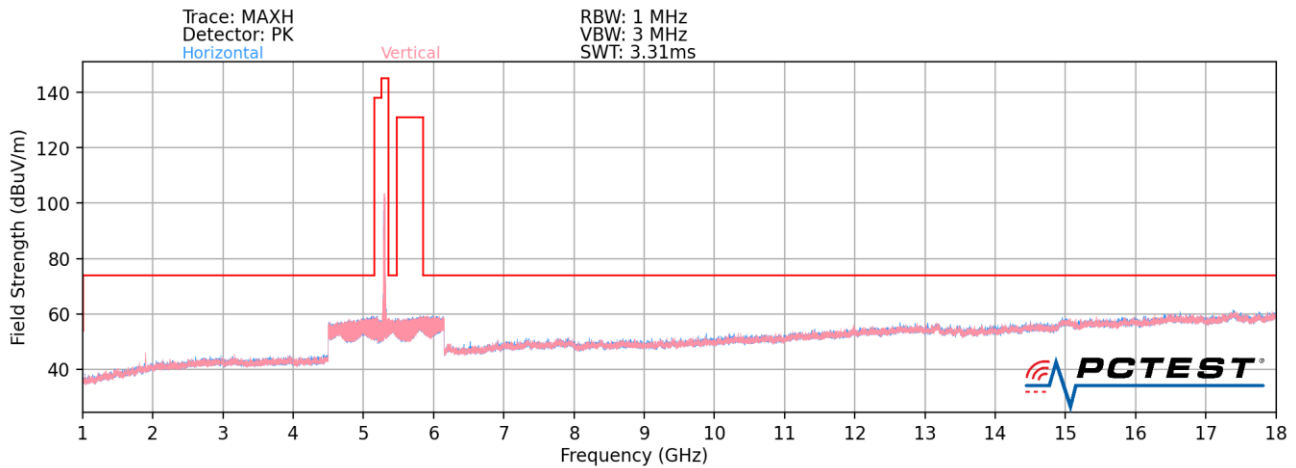
Table 7-55. Radiated Measurements SISO ANT1 with WCP

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 395 of 509

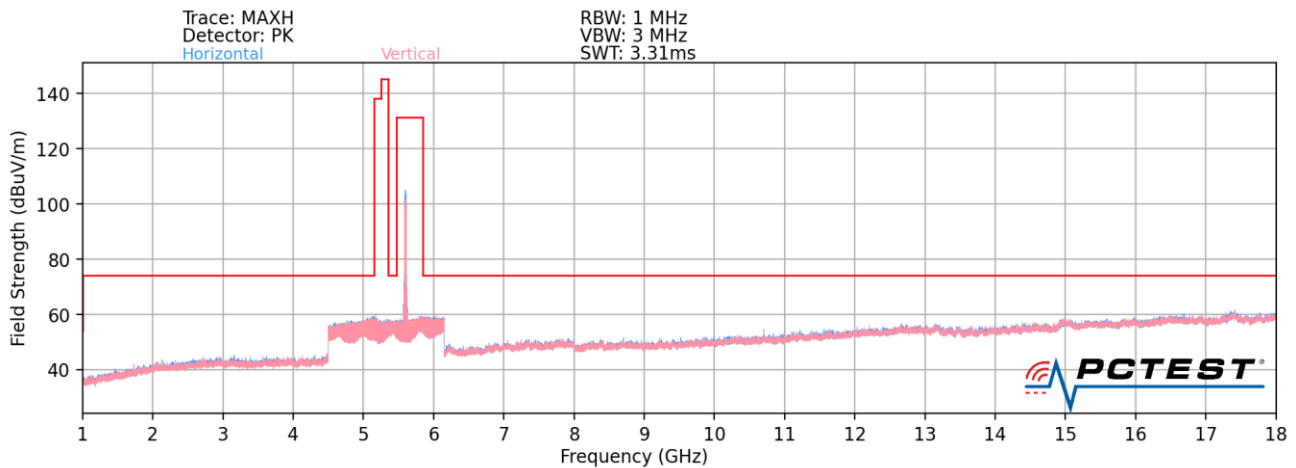
7.6.2 SISO Antenna-1 Radiated Spurious Emission Measurements - Q



Plot 7-673. Radiated Spurious Plot above 1GHz SISO Ant1 Open (802.11a – U1 Ch. 40)

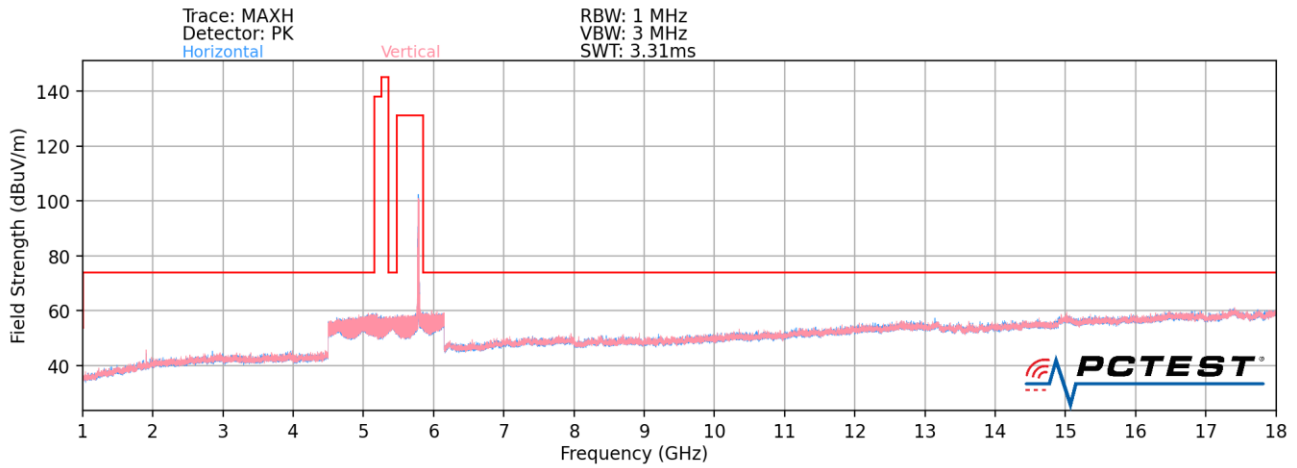


Plot 7-674. Radiated Spurious Plot above 1GHz SISO Ant1 Open (802.11a – U2A Ch. 56)

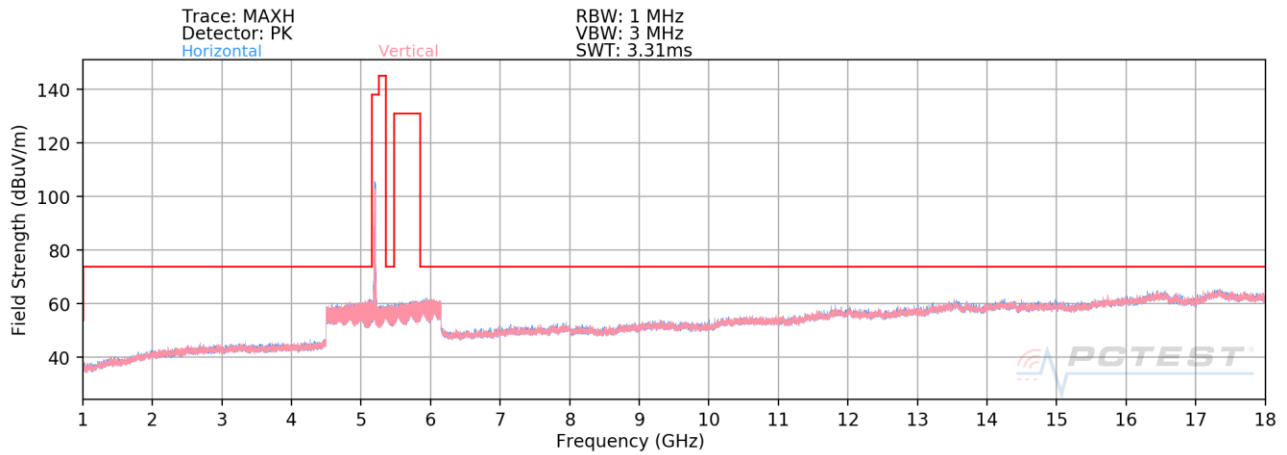


Plot 7-675. Radiated Spurious Plot above 1GHz SISO Ant1 Open (802.11a – U2C Ch. 120)

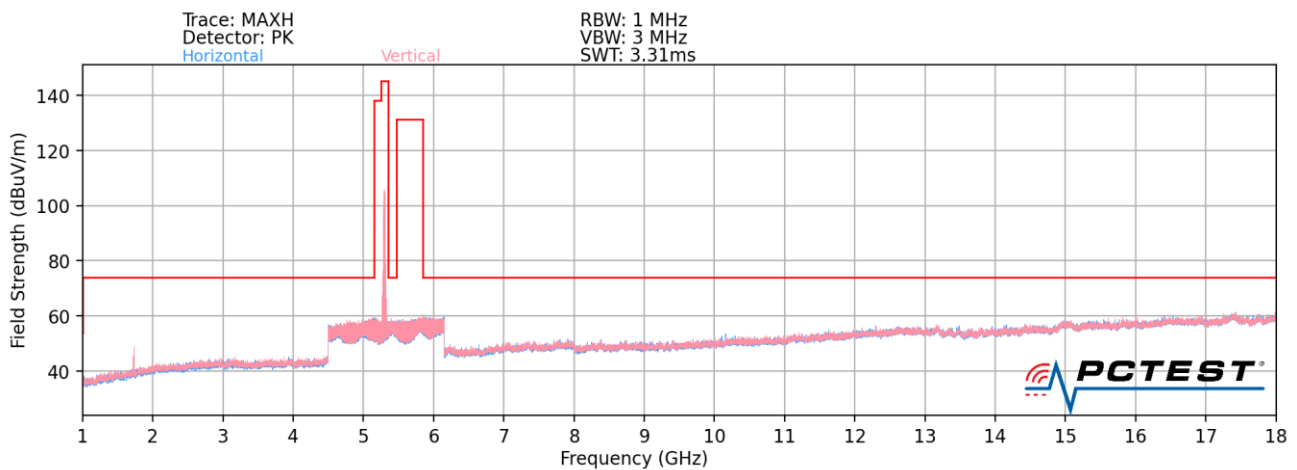
FCC ID: A3LSMF711U	 PCTEST Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 396 of 509



Plot 7-676. Radiated Spurious Plot above 1GHz SISO Ant1 Open (802.11a – U3 Ch. 157)

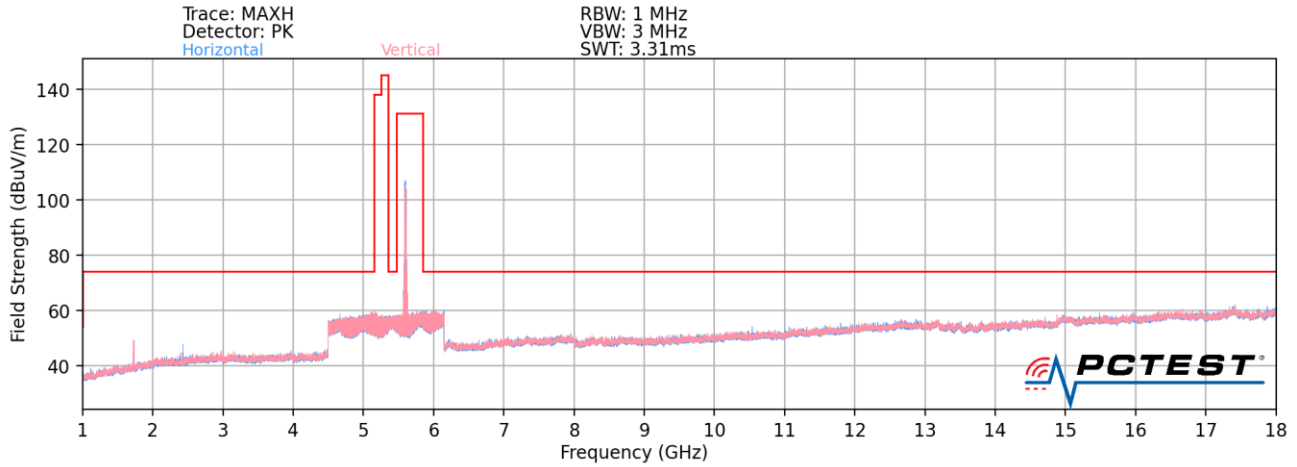


Plot 7-677. Radiated Spurious Plot above 1GHz SISO Ant1 Closed (802.11a – U1 Ch. 40)

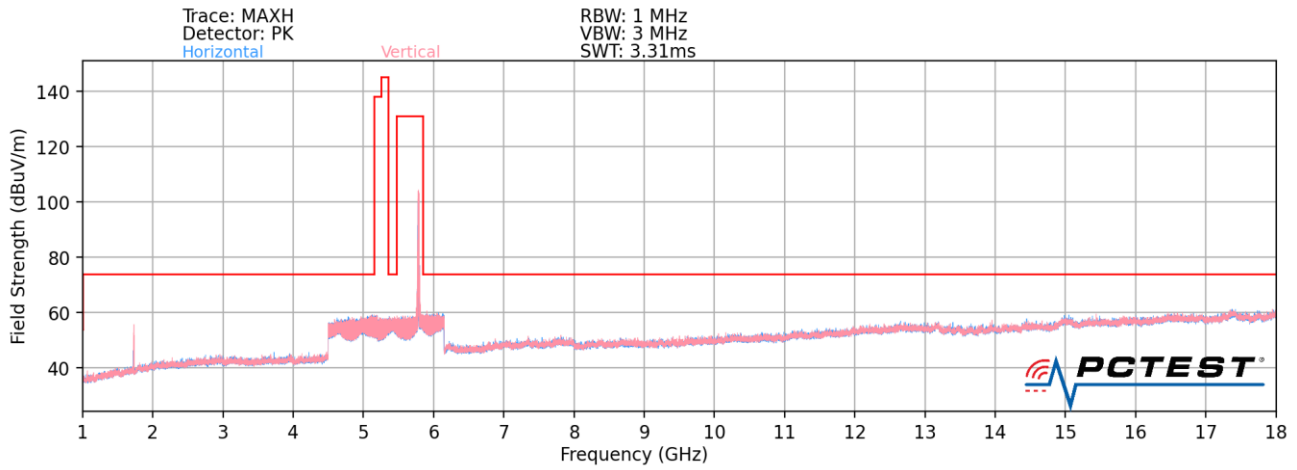


Plot 7-678. Radiated Spurious Plot above 1GHz SISO Ant1 Closed (802.11a – U2A Ch. 56)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 397 of 509



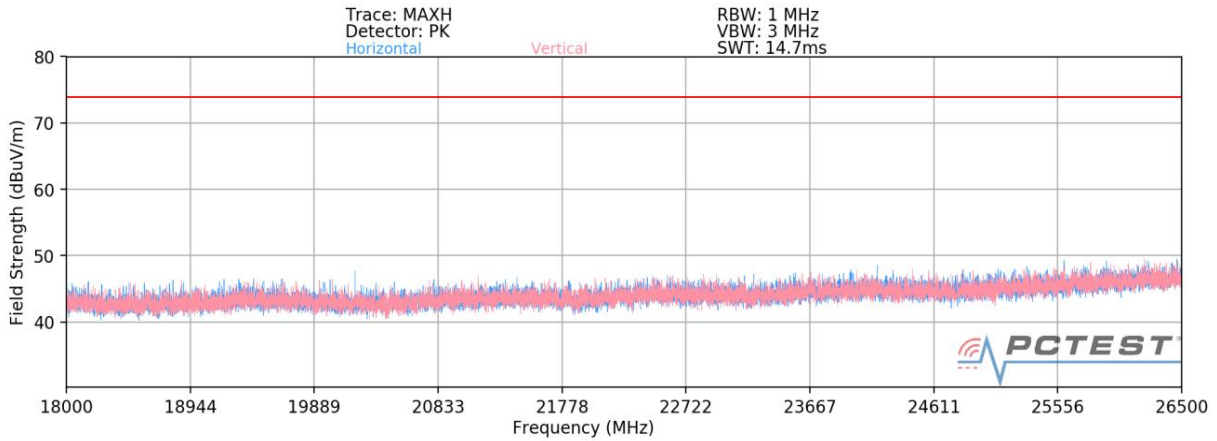
Plot 7-679. Radiated Spurious Plot above 1GHz SISO Ant1 Closed (802.11a – U2C Ch. 120)



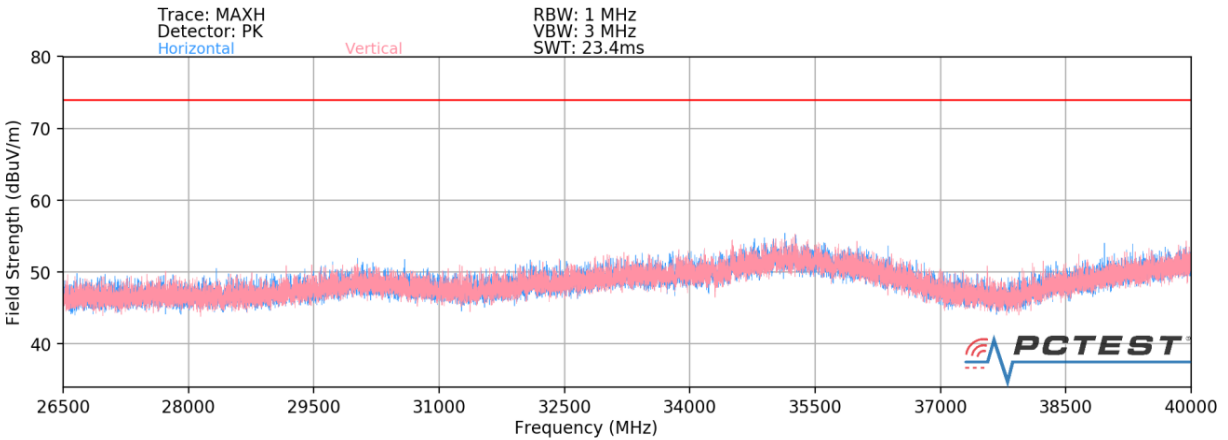
Plot 7-680. Radiated Spurious Plot above 1GHz SISO Ant1 Closed (802.11a – U3 Ch. 157)

FCC ID: A3LSMF711U	 Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 398 of 509

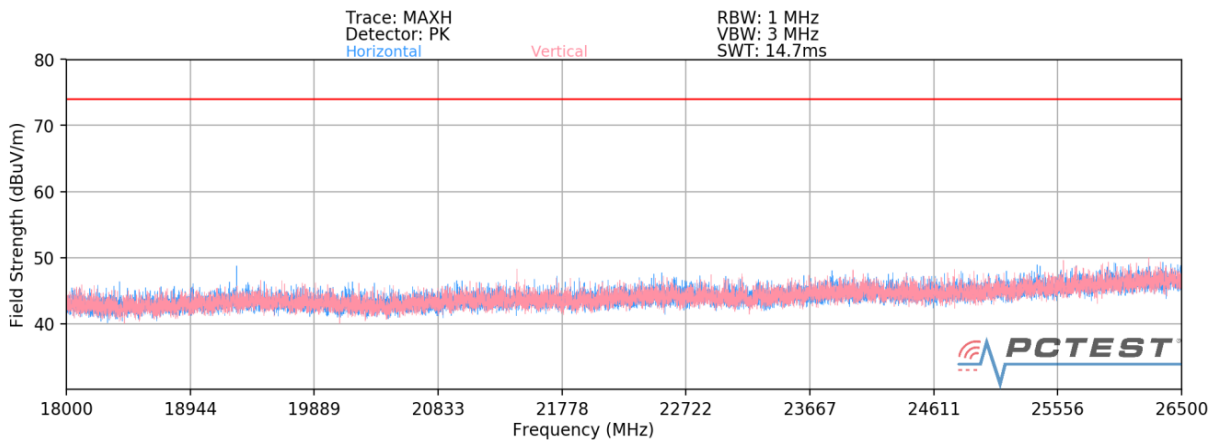
SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz) - Q



Plot 7-681. Radiated Spurious Plot above 18GHz - 26.5GHz SISO Ant1 Open (802.11a)

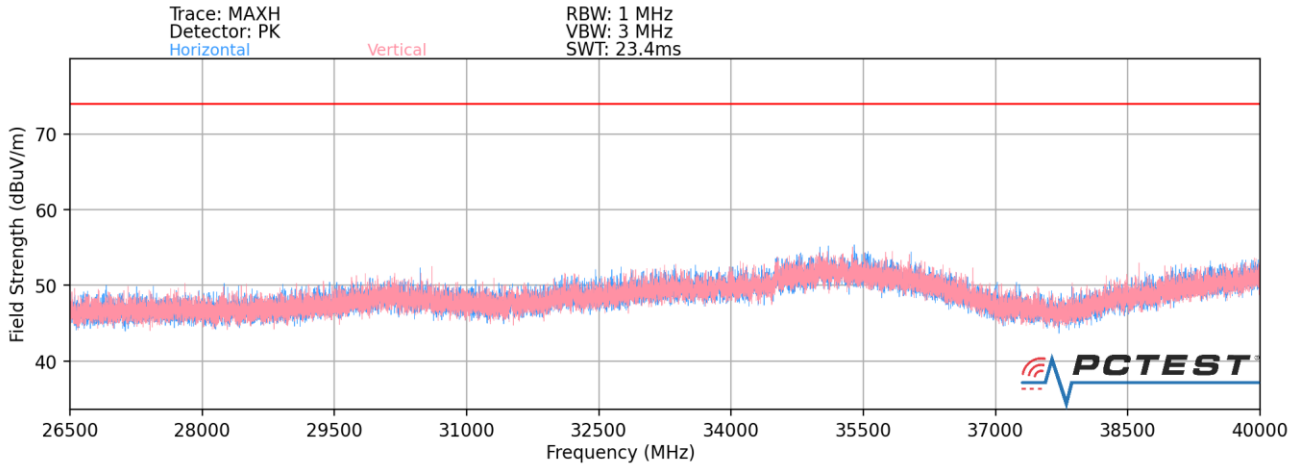


Plot 7-682. Radiated Spurious Plot 26.5GHz - 40GHz SISO Ant1 Open (802.11a)



Plot 7-683. Radiated Spurious Plot above 18GHz - 26.5GHz SISO Ant1 Closed (802.11a)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 399 of 509



Plot 7-684. Radiated Spurious Plot 26.5GHz - 40GHz SISO Ant1 Closed (802.11a)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 400 of 509	

SISO Antenna-1 Radiated Spurious Emission Measurements - Q

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10360.00	Peak	H	-	-	-70.16	15.49	0.00	52.33	68.20	-15.87
* 15540.00	Average	H	-	-	-82.22	22.68	0.00	47.46	53.98	-6.52
* 15540.00	Peak	H	-	-	-71.65	22.68	0.00	58.03	73.98	-15.95
* 20720.00	Average	H	-	-	-66.07	4.48	-9.54	35.87	53.98	-18.11
* 20720.00	Peak	H	-	-	-55.96	4.48	-9.54	45.98	73.98	-28.00
25900.00	Peak	H	-	-	-55.89	6.92	-9.54	48.48	68.20	-19.72

Table 7-56. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10400.00	Peak	H	-	-	-69.97	15.52	0.00	52.55	68.20	-15.65
* 15600.00	Average	H	-	-	-82.23	22.77	0.00	47.54	53.98	-6.44
* 15600.00	Peak	H	-	-	-71.11	22.77	0.00	58.66	73.98	-15.32
* 20800.00	Average	H	-	-	-63.73	4.88	-9.54	38.61	53.98	-15.37
* 20800.00	Peak	H	-	-	-56.09	4.88	-9.54	46.25	73.98	-27.73
26000.00	Peak	H	-	-	-56.59	7.10	-9.54	47.97	68.20	-20.23

Table 7-57. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 401 of 509	

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10480.00	Peak	H	-	-	-70.39	15.45	0.00	52.06	68.20	-16.14
* 15720.00	Average	H	-	-	-82.76	22.76	0.00	47.00	53.98	-6.98
* 15720.00	Peak	H	-	-	-71.39	22.76	0.00	58.37	73.98	-15.61
* 20960.00	Average	H	-	-	-67.53	5.01	-9.54	34.94	53.98	-19.04
* 20960.00	Peak	H	-	-	-57.33	5.01	-9.54	45.13	73.98	-28.85
26200.00	Peak	H	-	-	-56.08	6.99	-9.54	48.37	68.20	-19.83

Table 7-58. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10520.00	Peak	H	-	-	-70.40	15.75	0.00	52.35	68.20	-15.85
* 15780.00	Average	H	-	-	-82.48	22.89	0.00	47.41	53.98	-6.57
* 15780.00	Peak	H	-	-	-71.42	22.89	0.00	58.47	73.98	-15.51
* 21040.00	Average	H	-	-	-66.72	4.89	-9.54	35.62	53.98	-18.36
* 21040.00	Peak	H	-	-	-56.68	4.89	-9.54	45.66	73.98	-28.32
26300.00	Peak	H	-	-	-56.16	7.06	-9.54	48.36	68.20	-19.84

Table 7-59. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 402 of 509	

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	-	-	-71.26	16.14	0.00	51.88	68.20	-16.32
* 15840.00	Average	H	-	-	-82.53	23.17	0.00	47.64	53.98	-6.34
* 15840.00	Peak	H	-	-	-71.36	23.17	0.00	58.81	73.98	-15.17
* 21120.00	Average	H	-	-	-67.19	5.08	-9.54	35.35	53.98	-18.63
* 21120.00	Peak	H	-	-	-56.51	5.08	-9.54	46.04	73.98	-27.94
26400.00	Peak	H	-	-	-55.71	7.43	-9.54	49.18	68.20	-19.02

Table 7-60. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	-	-	-81.76	16.06	0.00	41.30	53.98	-12.68
* 10640.00	Peak	H	-	-	-70.48	16.06	0.00	52.58	73.98	-21.40
* 15960.00	Average	H	-	-	-82.39	23.29	0.00	47.90	53.98	-6.08
* 15960.00	Peak	H	-	-	-70.42	23.29	0.00	59.87	73.98	-14.11
* 21280.00	Average	H	-	-	-67.08	5.14	-9.54	35.52	53.98	-18.46
* 21280.00	Peak	H	-	-	-56.34	5.14	-9.54	46.25	73.98	-27.73
26600.00	Peak	H	-	-	-56.56	7.21	-9.54	48.11	68.20	-20.09

Table 7-61. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 403 of 509	

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5500MHz
Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11000.00	Average	H	-	-	-81.92	16.78	0.00	41.86	53.98	-12.12
* 11000.00	Peak	H	-	-	-70.41	16.78	0.00	53.37	73.98	-20.61
16500.00	Peak	H	-	-	-71.57	24.50	0.00	59.93	68.20	-8.27
22000.00	Peak	H	-	-	-56.56	5.16	-9.54	46.06	68.20	-22.14
27500.00	Peak	H	-	-	-56.27	7.69	-9.54	48.89	68.20	-19.31

Table 7-62. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5600MHz
Channel: 120

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11200.00	Average	H	-	-	-81.40	16.82	0.00	42.42	53.98	-11.56
* 11200.00	Peak	H	-	-	-70.54	16.82	0.00	53.28	73.98	-20.70
16800.00	Peak	H	-	-	-70.81	24.42	0.00	60.61	68.20	-7.59
* 22400.00	Average	H	-	-	-66.86	5.45	-9.54	36.04	53.98	-17.94
* 22400.00	Peak	H	-	-	-56.76	5.45	-9.54	46.14	73.98	-27.83
28000.00	Peak	H	-	-	-56.17	7.99	-9.54	49.28	68.20	-18.92

Table 7-63. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 404 of 509	

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	-	-	-82.09	17.95	0.00	42.86	53.98	-11.12
* 11440.00	Peak	H	-	-	-70.81	17.95	0.00	54.14	73.98	-19.84
17160.00	Peak	H	-	-	-71.94	24.77	0.00	59.83	68.20	-8.37
* 22880.00	Average	H	-	-	-66.67	5.43	-9.54	36.22	53.98	-17.76
* 22880.00	Peak	H	-	-	-56.47	5.43	-9.54	46.42	73.98	-27.56
28600.00	Peak	H	-	-	-56.60	8.29	-9.54	49.15	68.20	-19.05

Table 7-64. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	-	-	-81.73	17.82	0.00	43.09	53.98	-10.89
* 11490.00	Peak	H	-	-	-70.84	17.82	0.00	53.98	73.98	-20.00
17235.00	Peak	H	-	-	-71.17	25.21	0.00	61.04	68.20	-7.16
* 22980.00	Average	H	-	-	-66.80	5.29	-9.54	35.95	53.98	-18.03
* 22980.00	Peak	H	-	-	-56.05	5.29	-9.54	46.71	73.98	-27.27
28725.00	Peak	H	-	-	-55.60	8.24	-9.54	50.09	68.20	-18.11

Table 7-65. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 405 of 509	

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	-	-	-81.89	17.80	0.00	42.91	53.98	-11.07
* 11570.00	Peak	H	-	-	-70.80	17.80	0.00	54.00	73.98	-19.98
17355.00	Peak	H	-	-	-72.32	26.23	0.00	60.91	68.20	-7.29
23140.00	Peak	H	-	-	-56.41	5.34	-9.54	46.39	68.20	-21.81
28925.00	Peak	H	-	-	-56.19	8.48	-9.54	49.75	68.20	-18.45

Table 7-66. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	-	-	-81.83	18.05	0.00	43.22	53.98	-10.76
* 11650.00	Peak	H	-	-	-70.37	18.05	0.00	54.68	73.98	-19.30
17475.00	Peak	H	-	-	-72.40	25.87	0.00	60.47	68.20	-7.73
23300.00	Peak	H	-	-	-56.02	5.29	-9.54	46.72	68.20	-21.48
29125.00	Peak	H	-	-	-56.98	8.49	-9.54	48.97	68.20	-19.23

Table 7-67. Radiated Measurements SISO ANT1

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 406 of 509

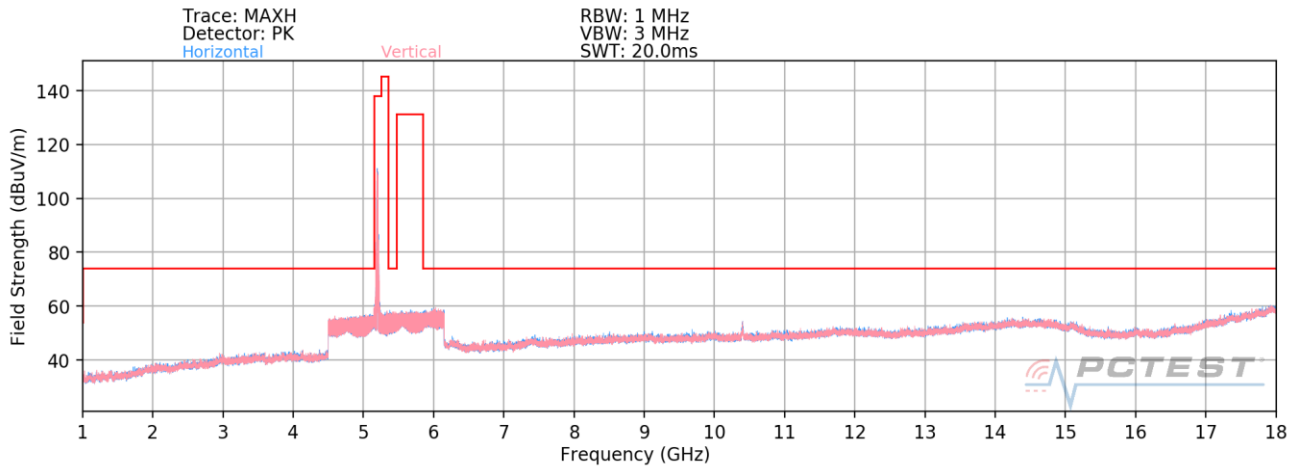
Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11570.00	Average	H	-	-	-83.32	23.08	0.00	46.76	53.98	-7.22
11570.00	Peak	H	-	-	-72.52	23.08	0.00	57.56	73.98	-16.42
17355.00	Peak	H	-	-	-73.39	31.84	0.00	65.45	68.20	-2.75
23140.00	Peak	H	-	-	-58.58	5.34	-9.54	44.22	68.20	-23.98
28925.00	Peak	H	-	-	-59.13	8.47	-9.54	46.80	68.20	-21.40

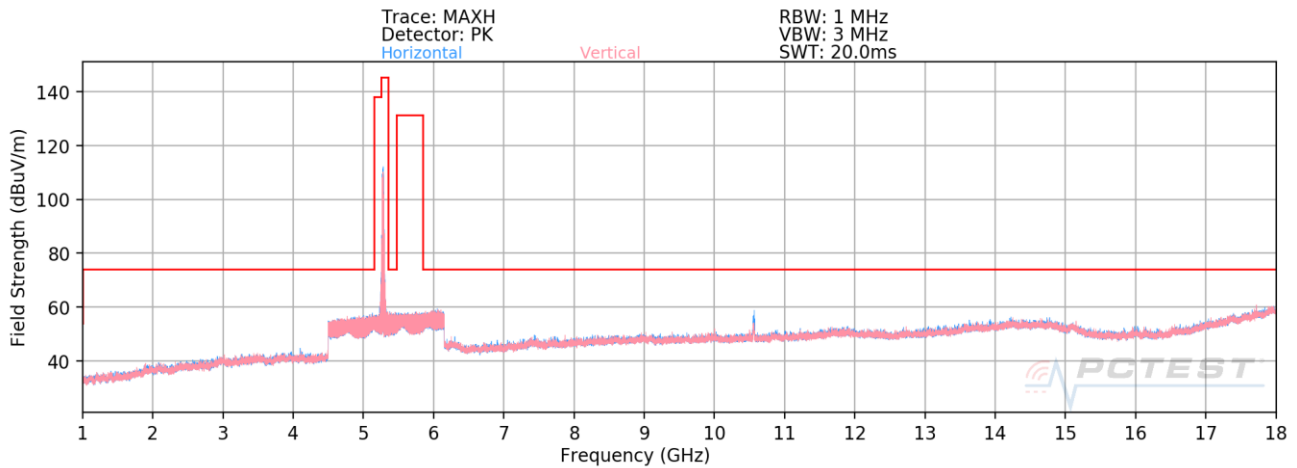
Table 7-68. Radiated Measurements SISO ANT1 with WCP

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset	Page 407 of 509	

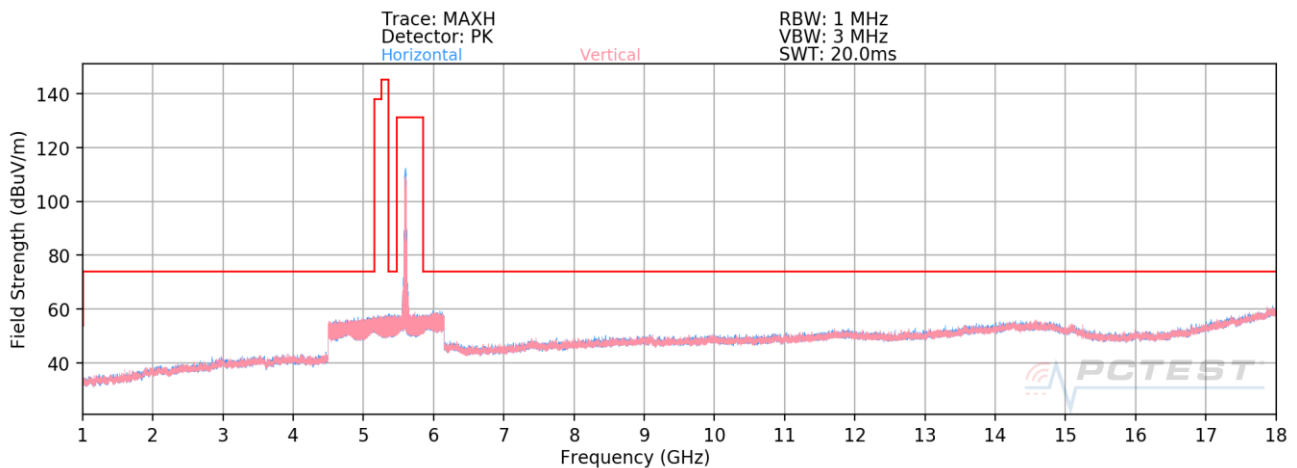
7.6.3 CDD Radiated Spurious Emission Measurements - N



Plot 7-685. Radiated Spurious Plot above 1GHz CDD - Open (802.11a – U1 Ch. 40)



Plot 7-686. Radiated Spurious Plot above 1GHz CDD - Open (802.11a – U2A Ch. 56)



Plot 7-687. Radiated Spurious Plot above 1GHz CDD - Open (802.11a – U2C Ch. 120)

FCC ID: A3LSMF711U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2104070032-14.A3L	Test Dates: 04/12/2021-06/02/2021	EUT Type: Portable Handset		Page 408 of 509