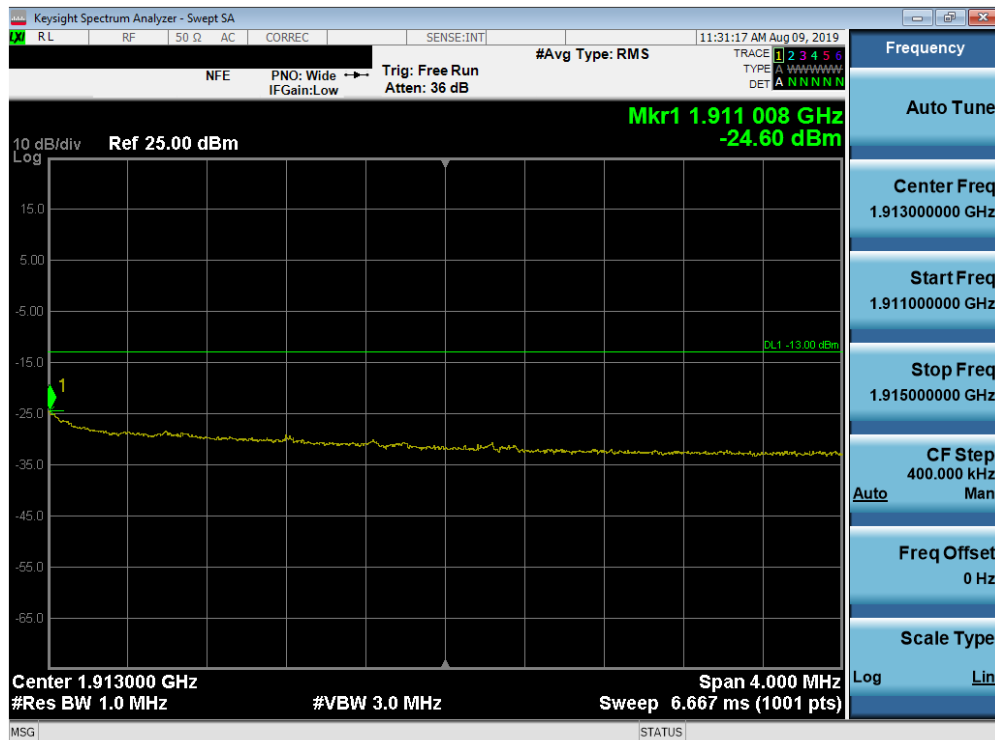
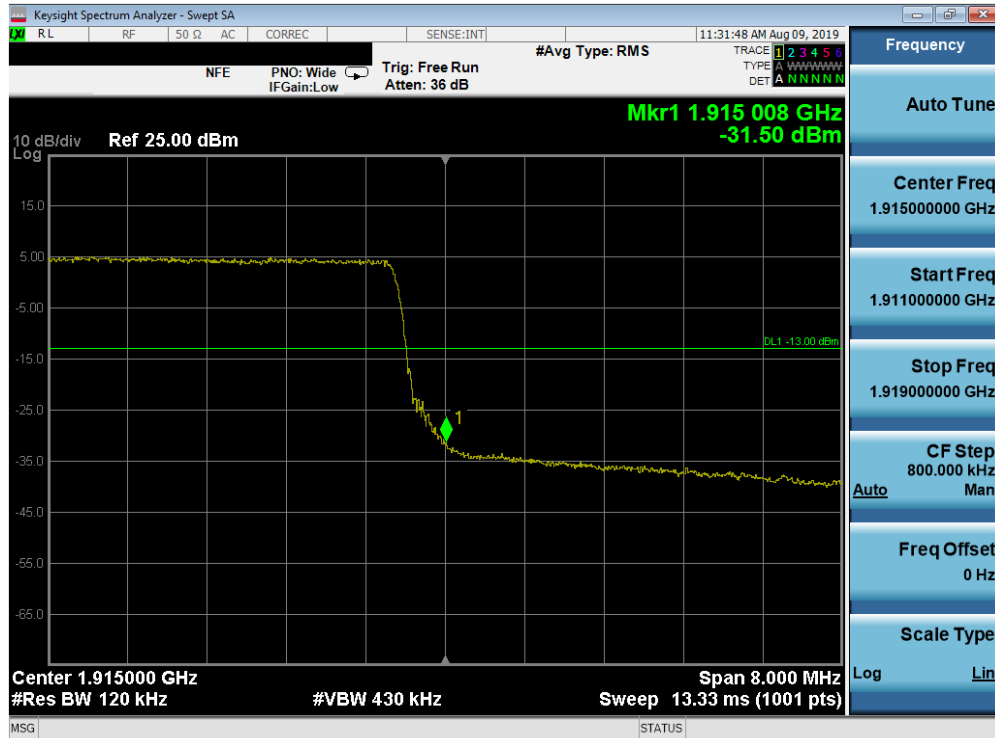


Plot 7-271. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-272. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 - 08/20/2019	EUT Type: Portable Tablet		Page 160 of 277

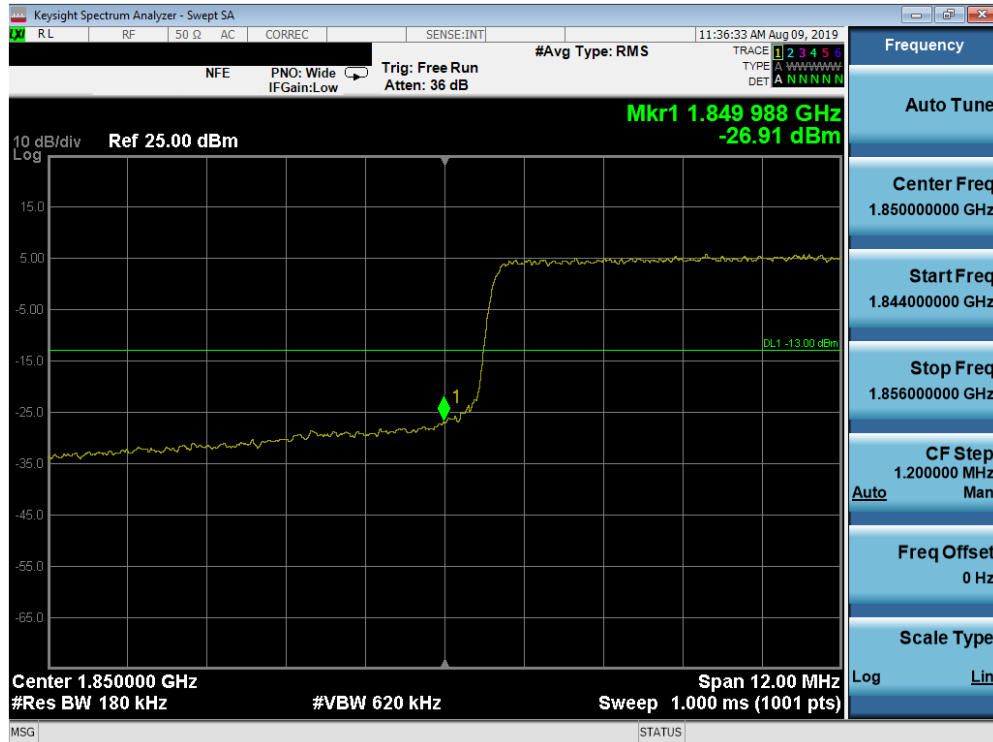


Plot 7-273. Upper Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)

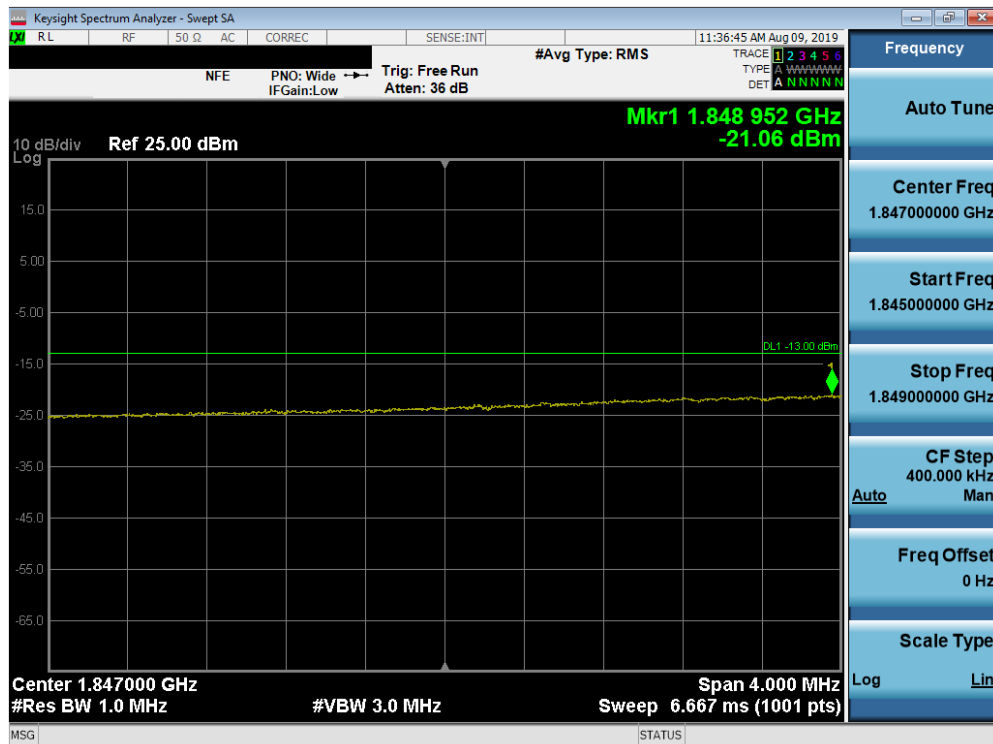


Plot 7-274. Upper Extended Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 161 of 277

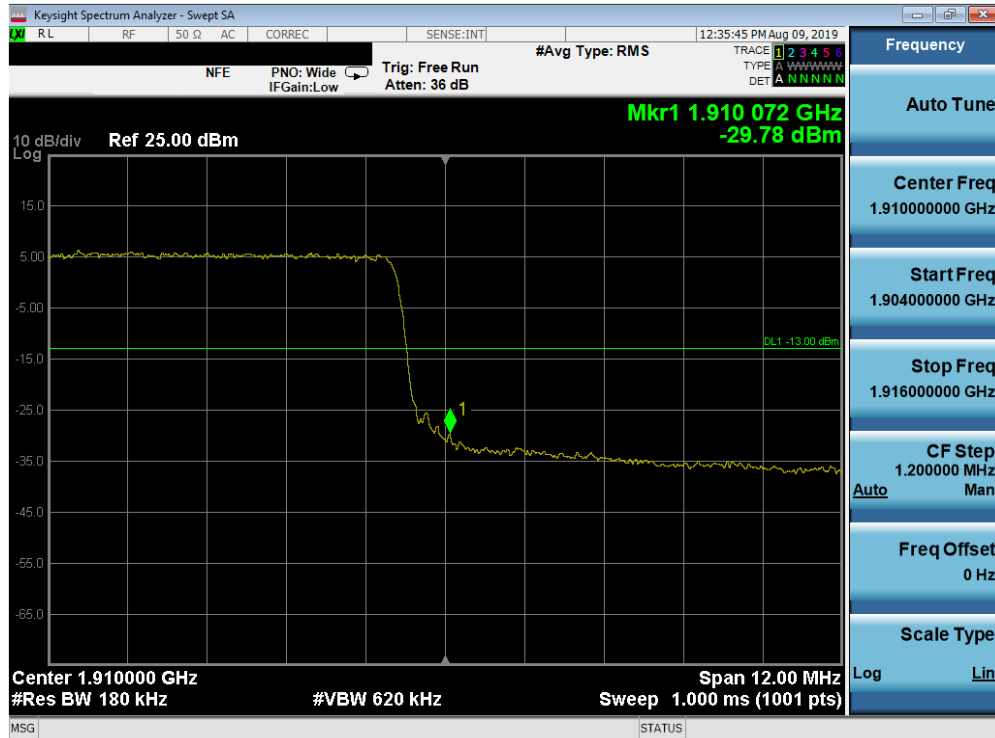


Plot 7-275. Lower Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

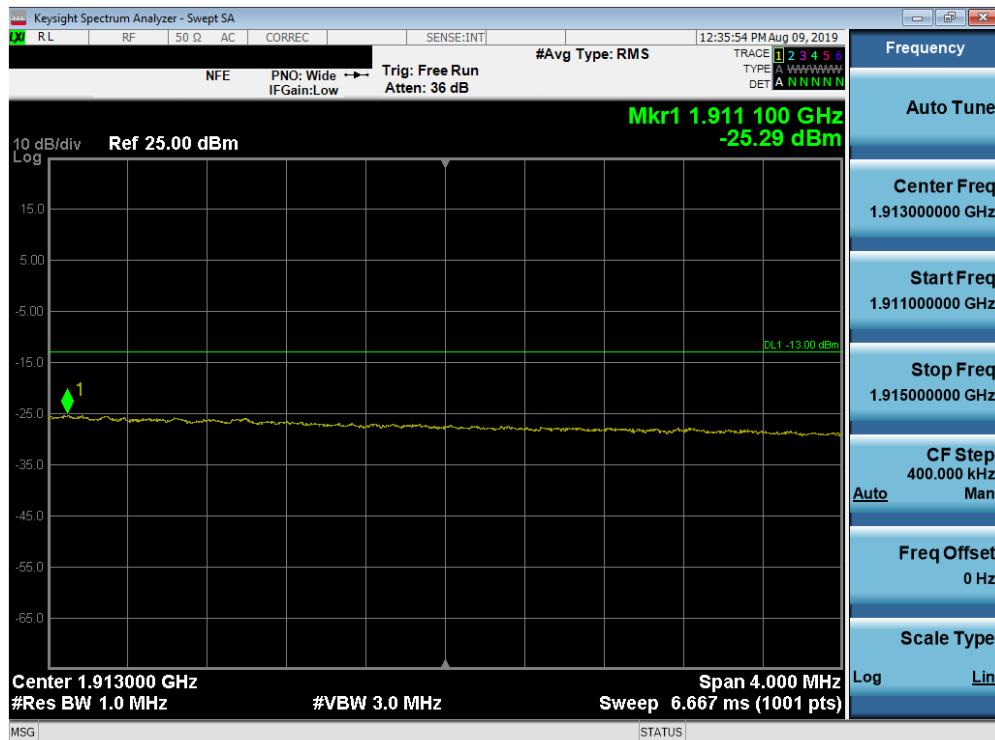


Plot 7-276. Lower Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 162 of 277

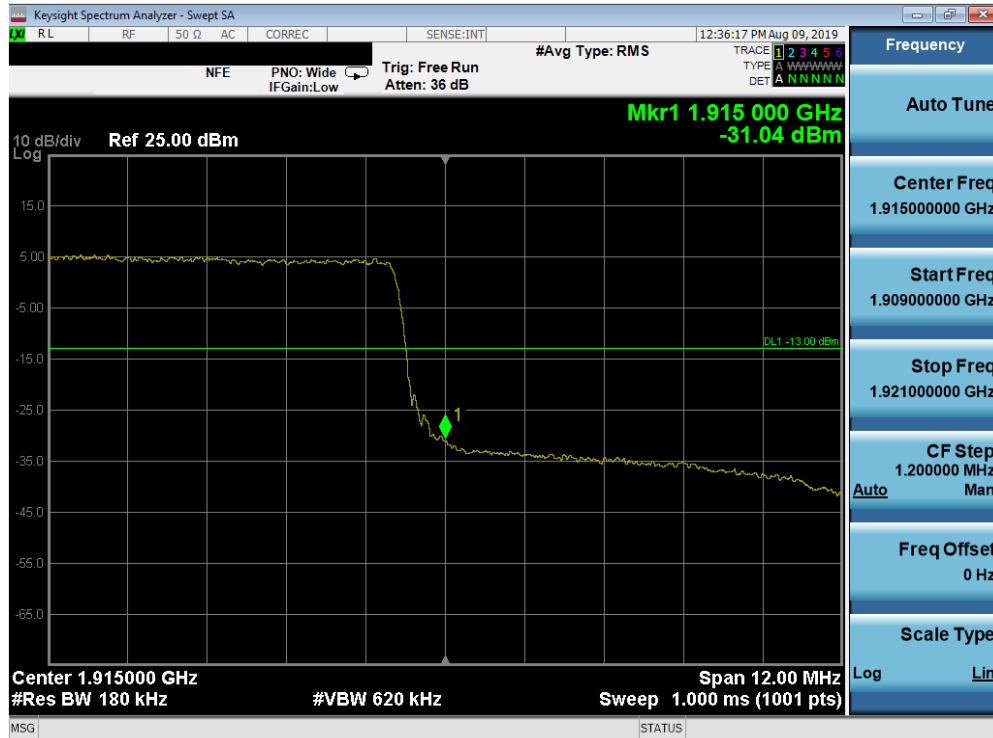


Plot 7-277. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

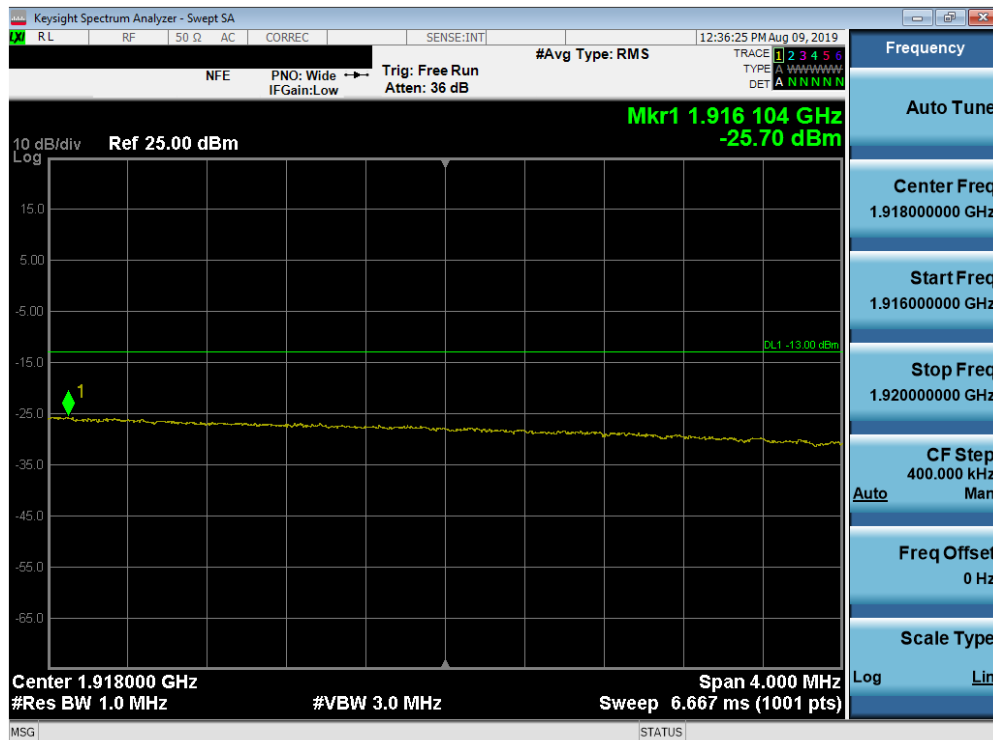


Plot 7-278. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 163 of 277

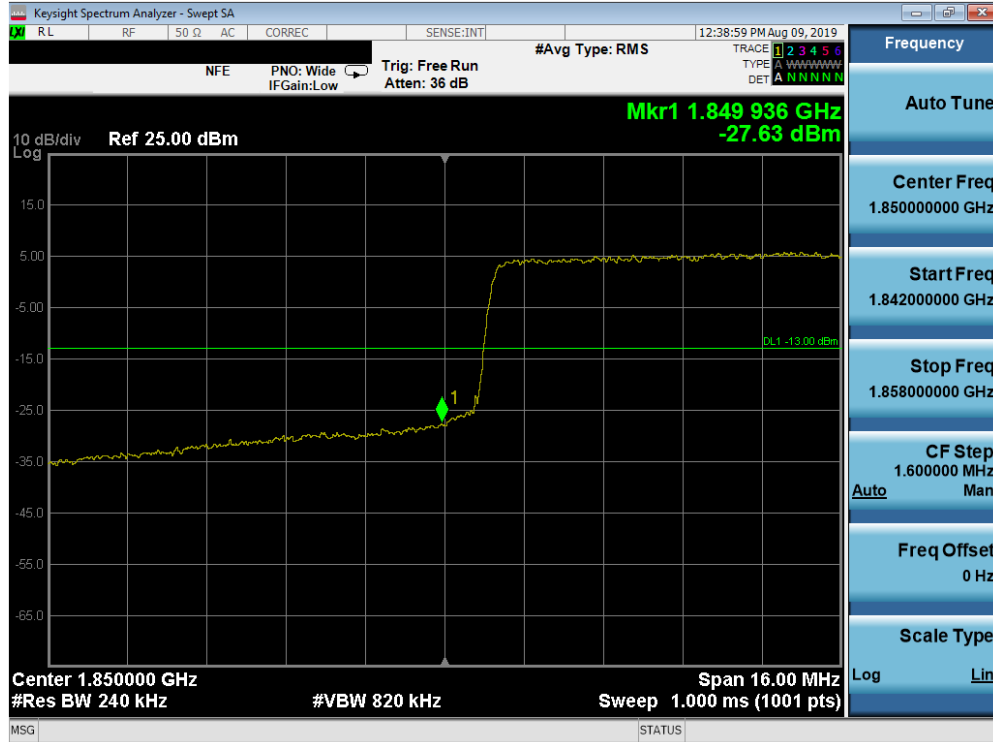


Plot 7-279. Upper Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)

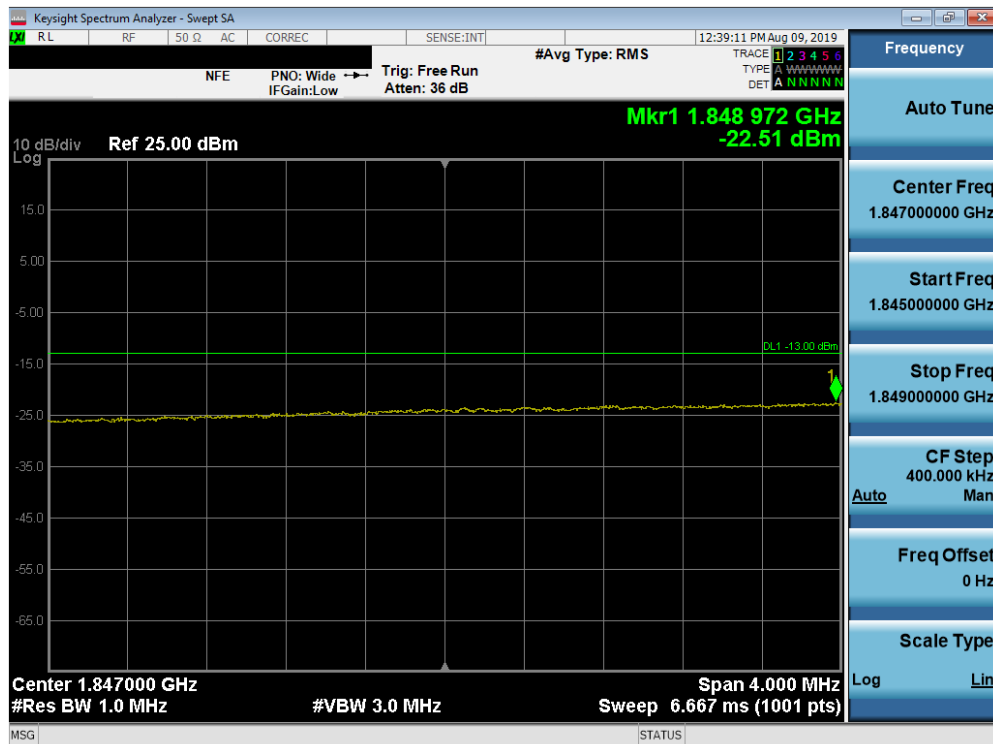


Plot 7-280. Upper Extended Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 164 of 277

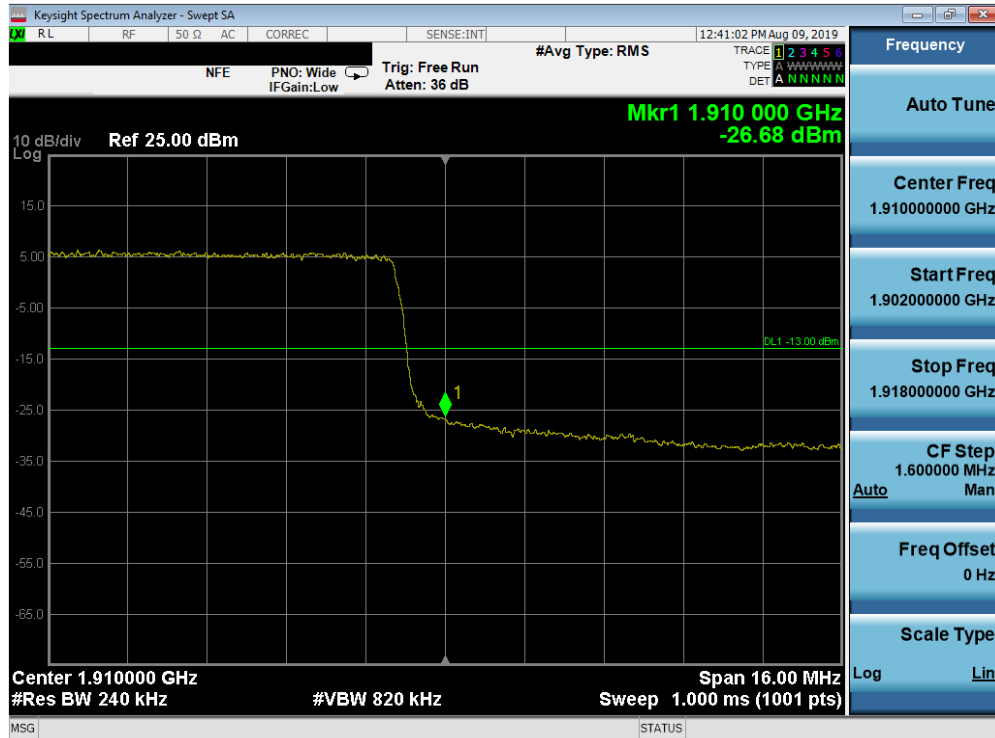


Plot 7-281. Lower Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-282. Lower Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 165 of 277

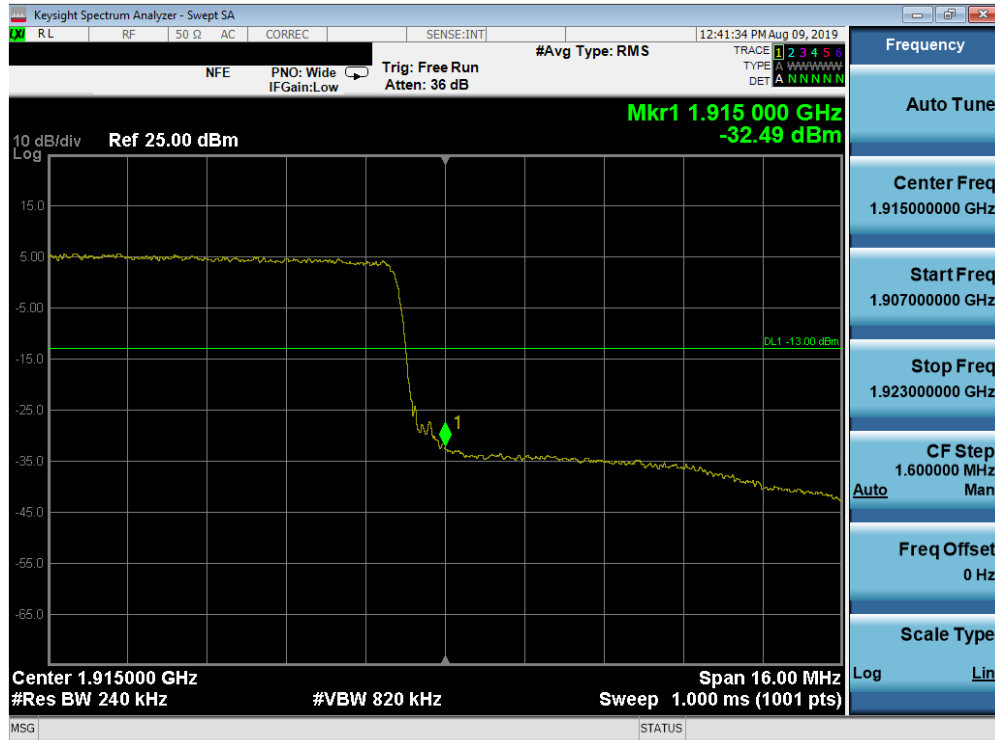


Plot 7-283. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

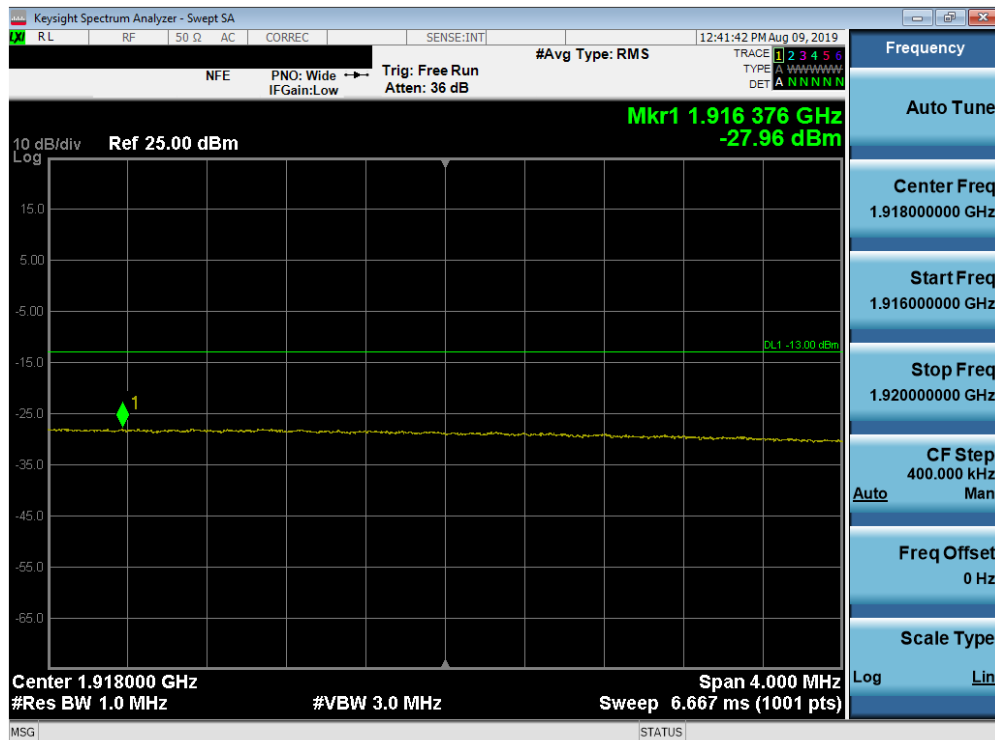


Plot 7-284. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 166 of 277



Plot 7-285. Upper Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)



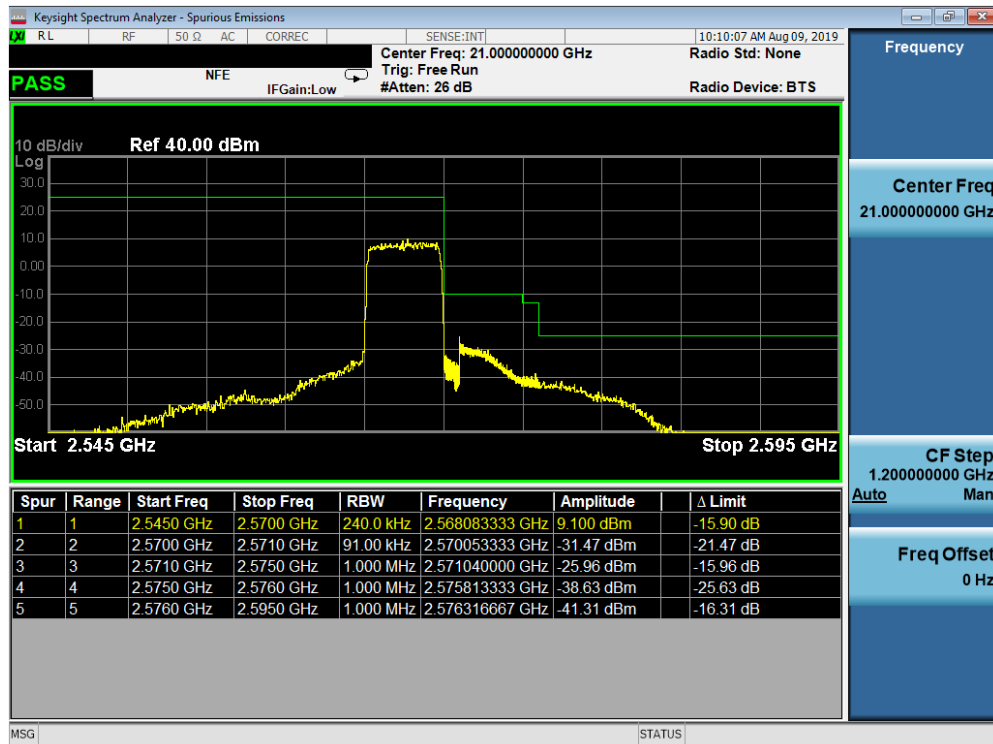
Plot 7-286. Upper Extended Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 167 of 277

Band 7

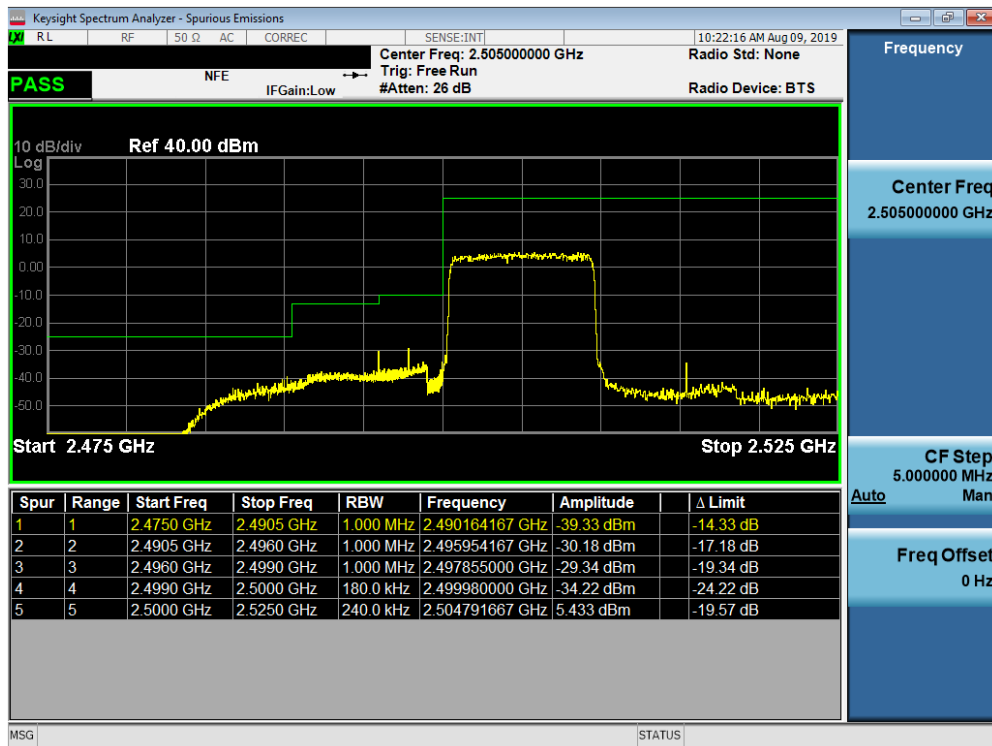


Plot 7-287. Lower ACP Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

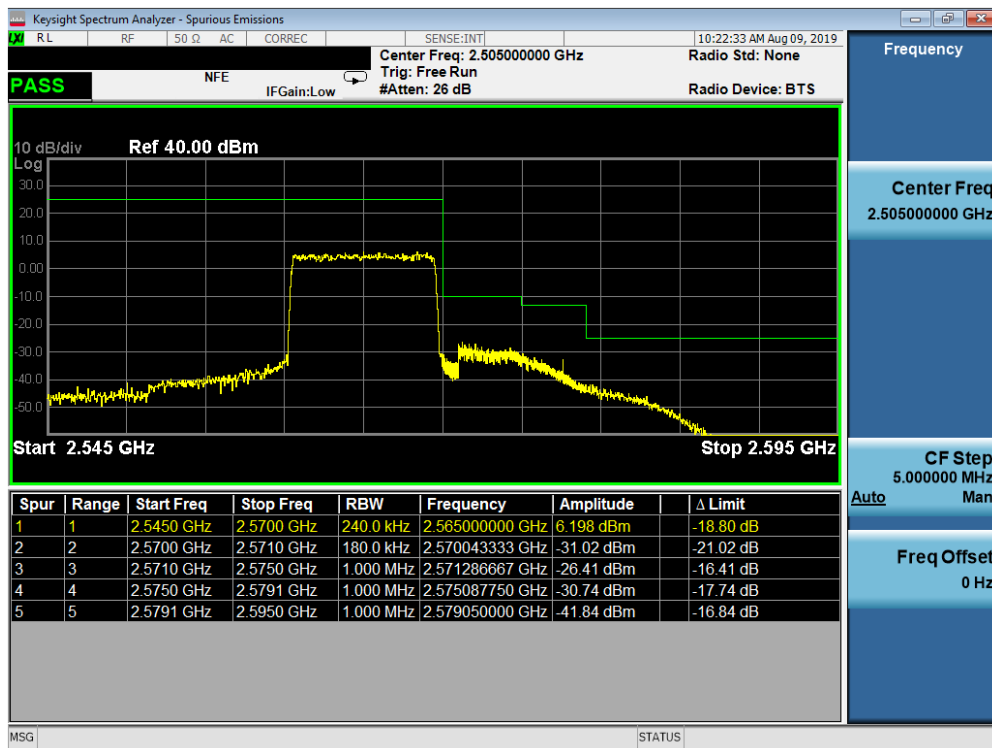


Plot 7-288. Upper ACP Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 168 of 277

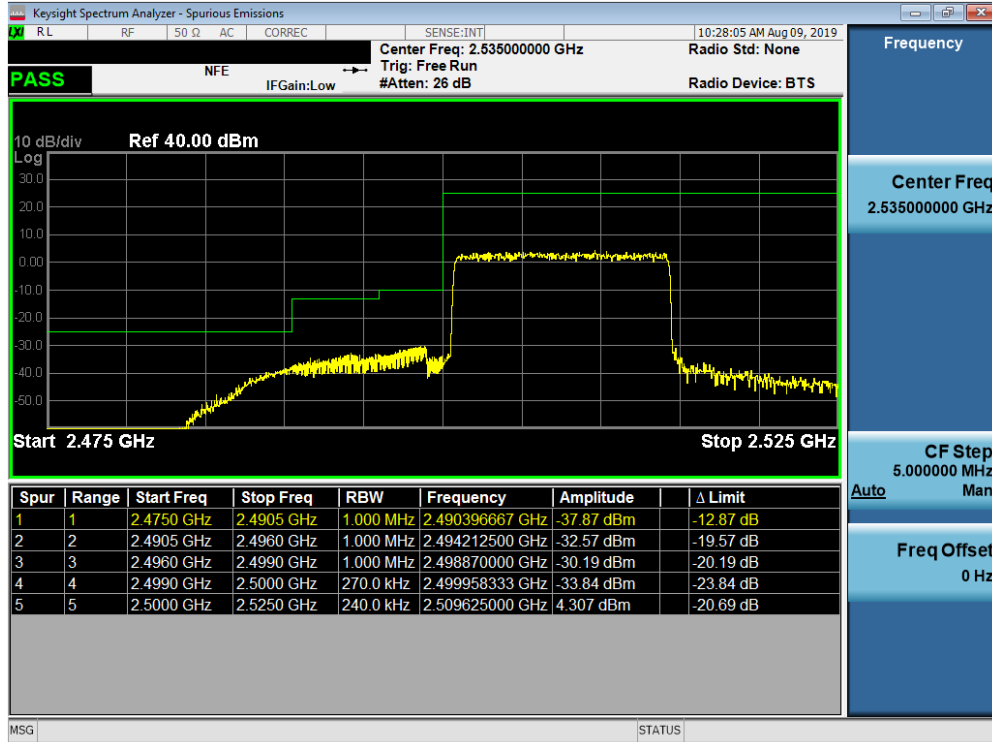


Plot 7-289. Lower ACP Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

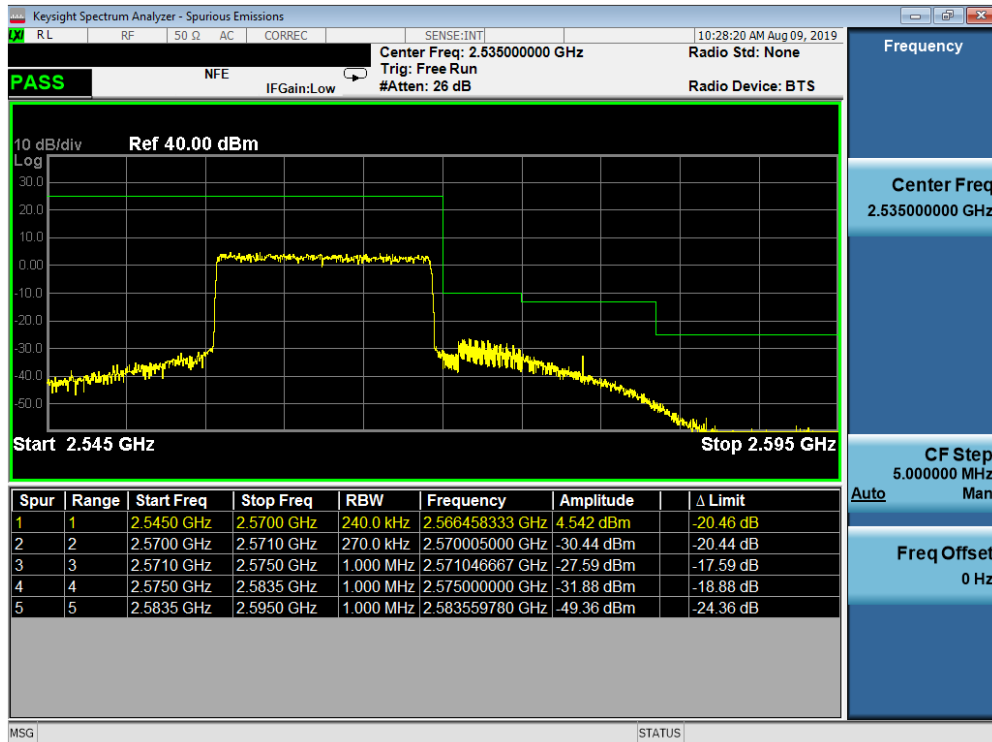


Plot 7-290. Upper ACP Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-291. Lower ACP Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)

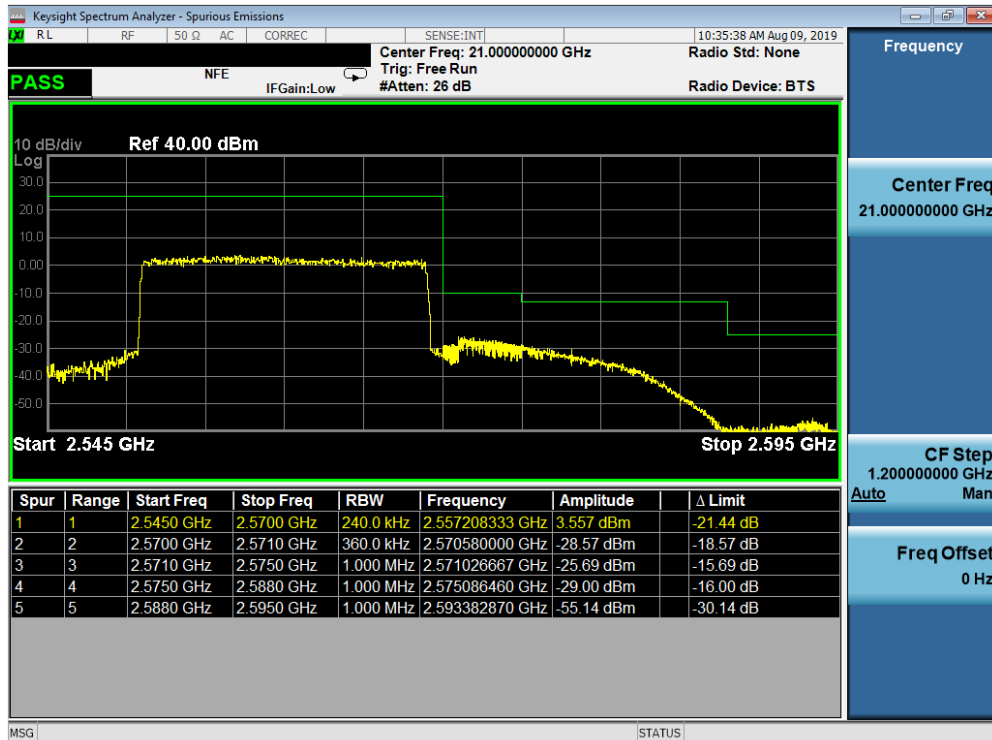


Plot 7-292. Upper ACP Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 170 of 277



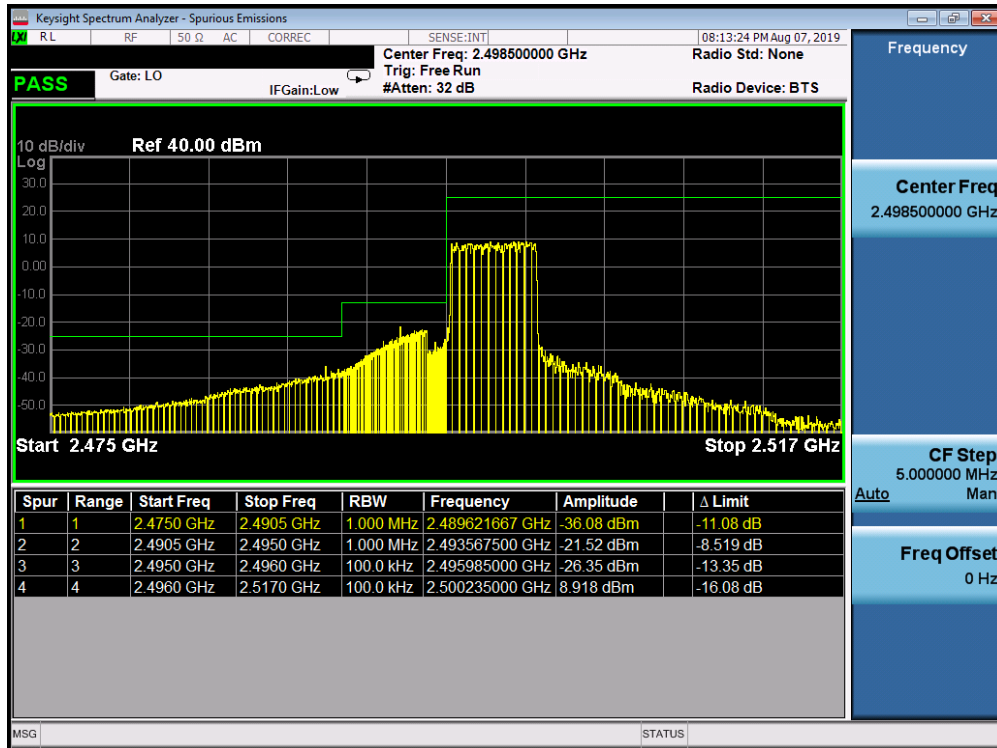
Plot 7-293. Lower ACP Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)



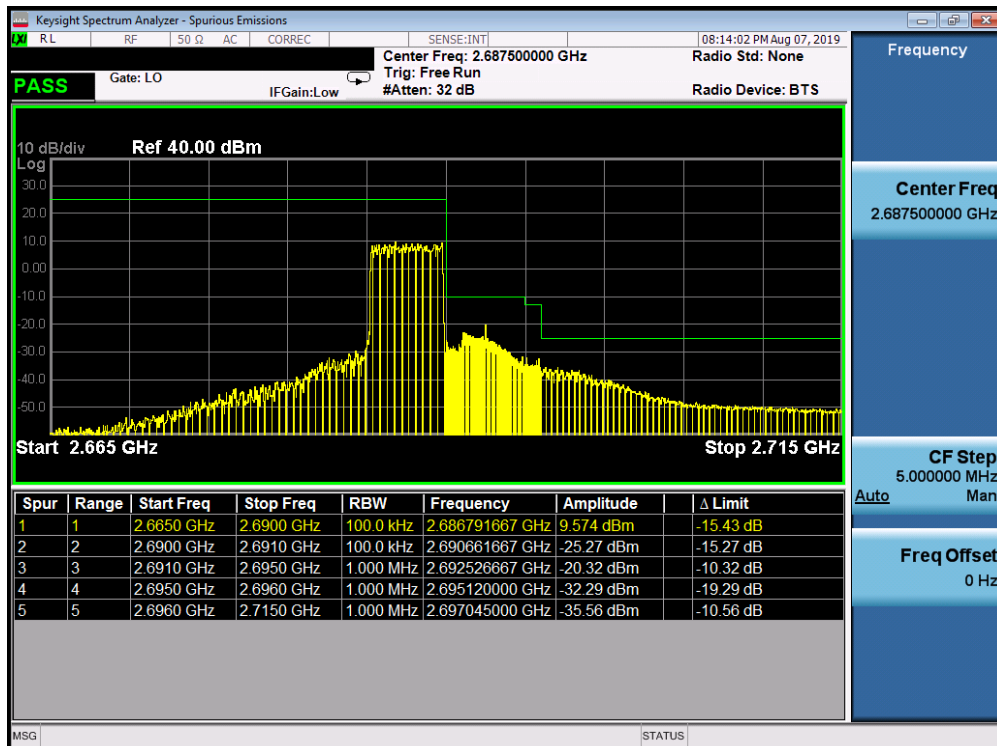
Plot 7-294. Upper ACP Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 171 of 277

Band 41 PC2

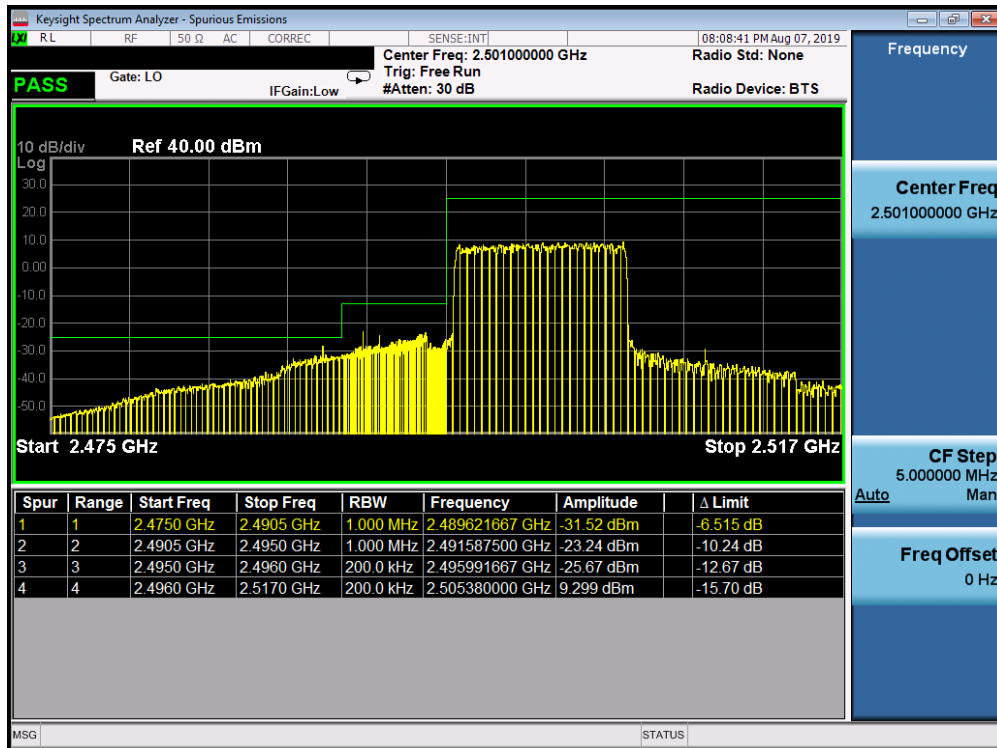


Plot 7-295. Lower ACP Plot at 2496 MHz (Band 41 PC2- 5.0MHz QPSK - Full RB Configuration)

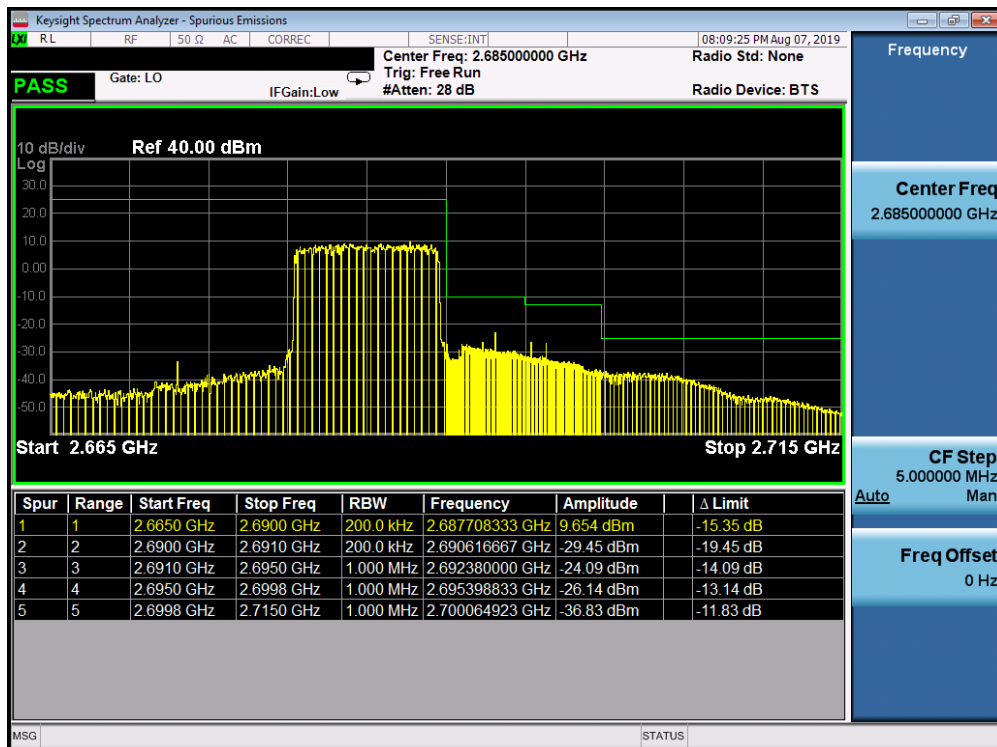


Plot 7-296. Upper ACP Plot (Band 41 PC2- 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 172 of 277		

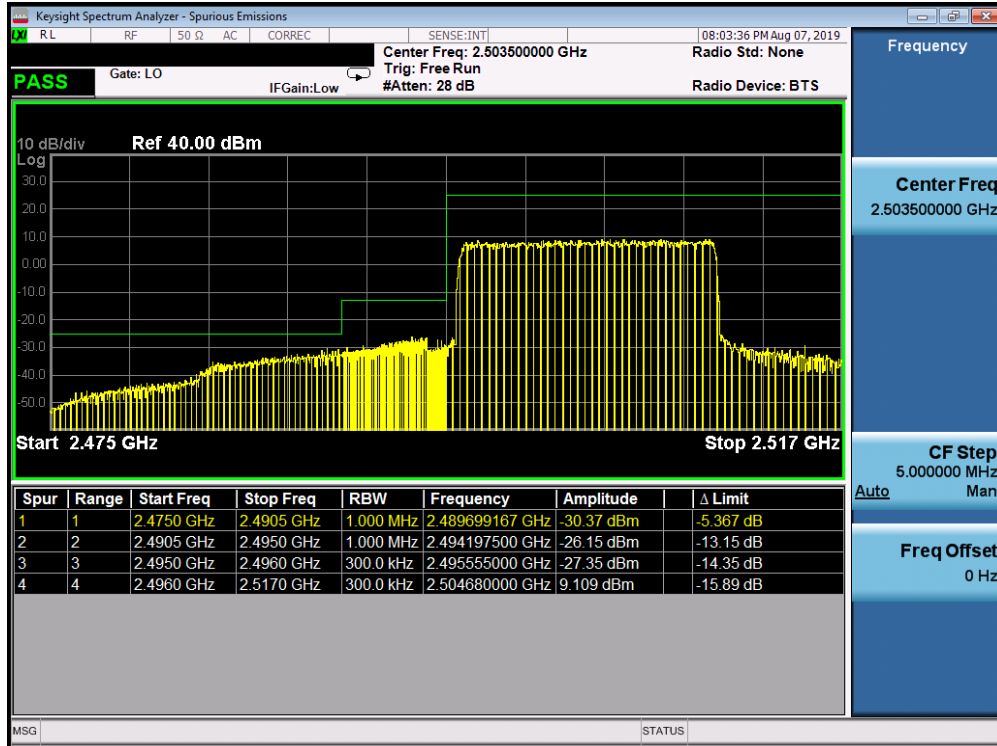


Plot 7-297. Lower ACP Plot at 2496 MHz (Band 41 PC2- 10.0MHz QPSK - Full RB Configuration)

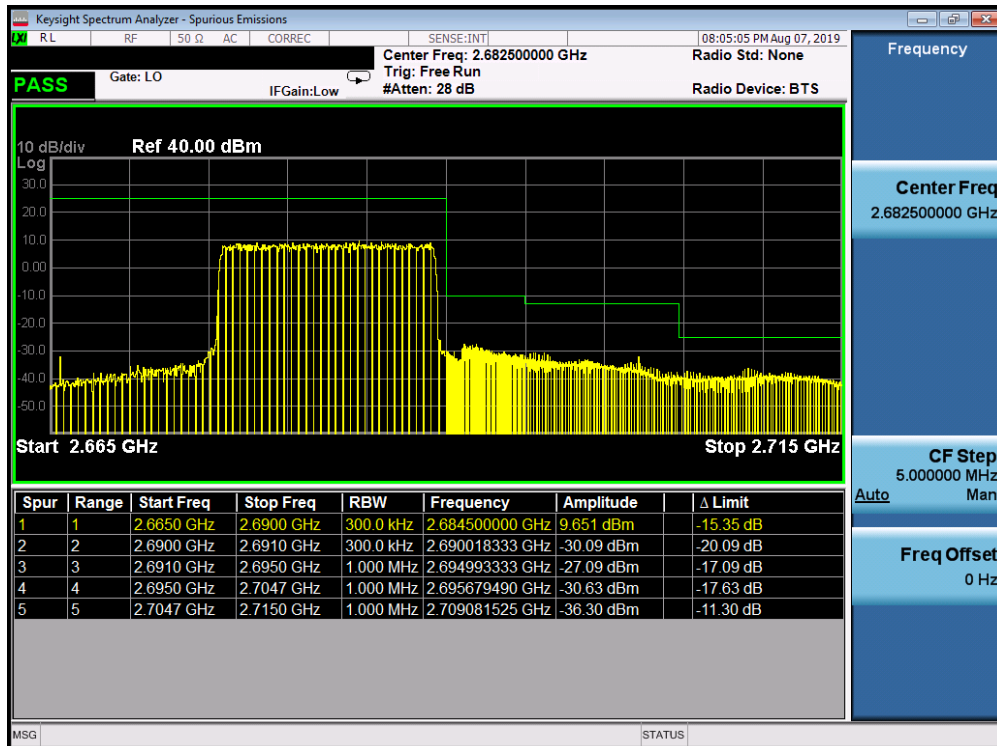


Plot 7-298. Upper ACP Plot (Band 41 PC2- 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 173 of 277

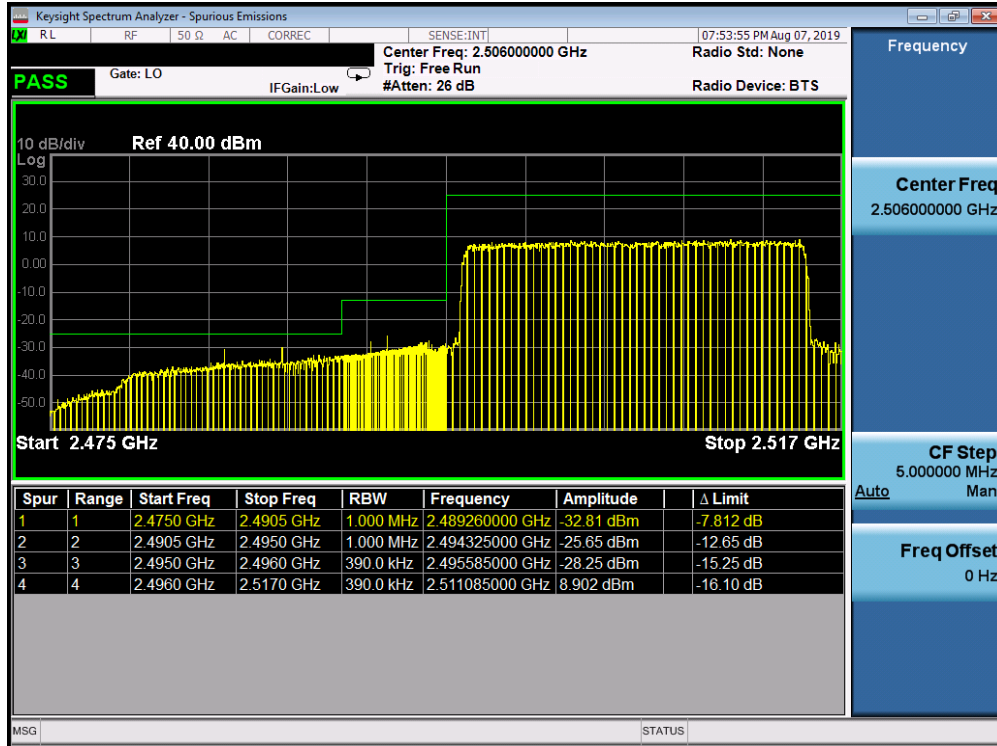


Plot 7-299. Lower ACP Plot at 2496 MHz (Band 41 PC2- 15.0MHz QPSK - Full RB Configuration)

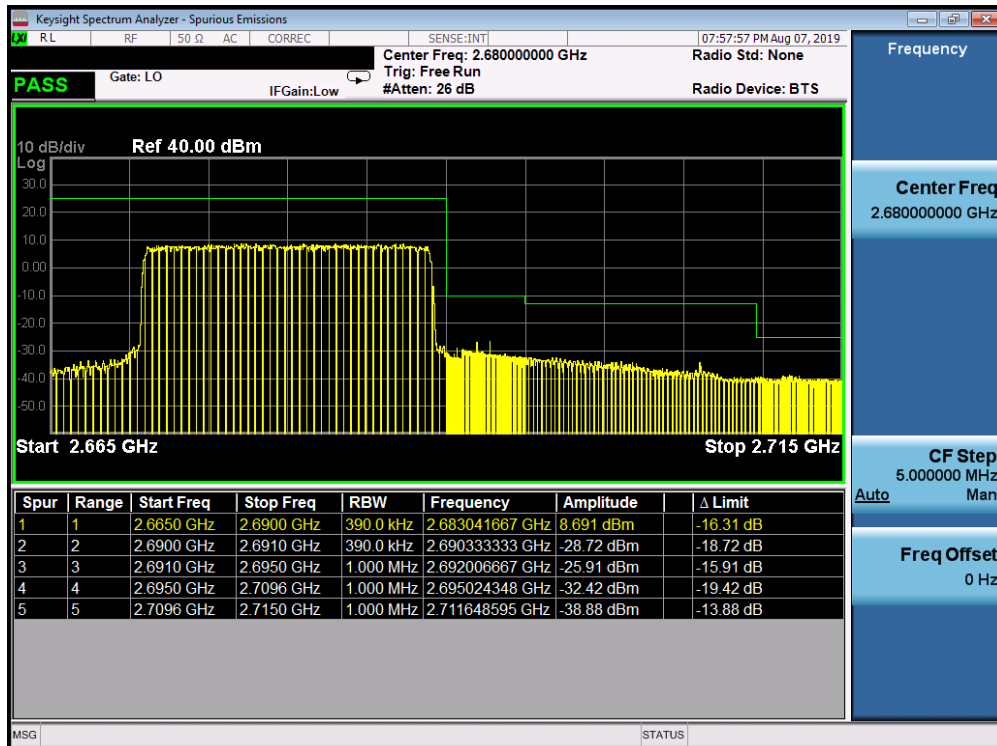


Plot 7-300. Upper ACP Plot (Band 41 PC2- 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 174 of 277



Plot 7-301. Lower ACP Plot at 2496 MHz (Band 41 PC2- 20.0MHz QPSK - Full RB Configuration)



Plot 7-302. Upper ACP Plot (Band 41 PC2- 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 175 of 277

7.5 Peak-Average Ratio

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7.1

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW \geq OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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

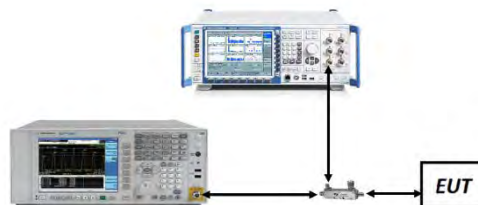


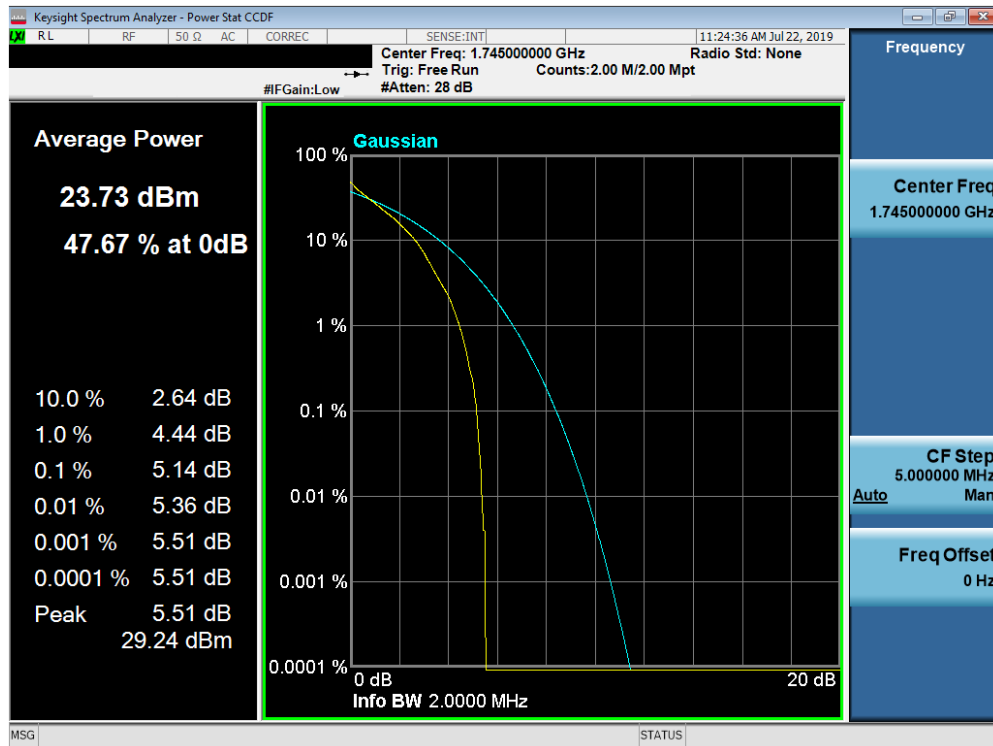
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

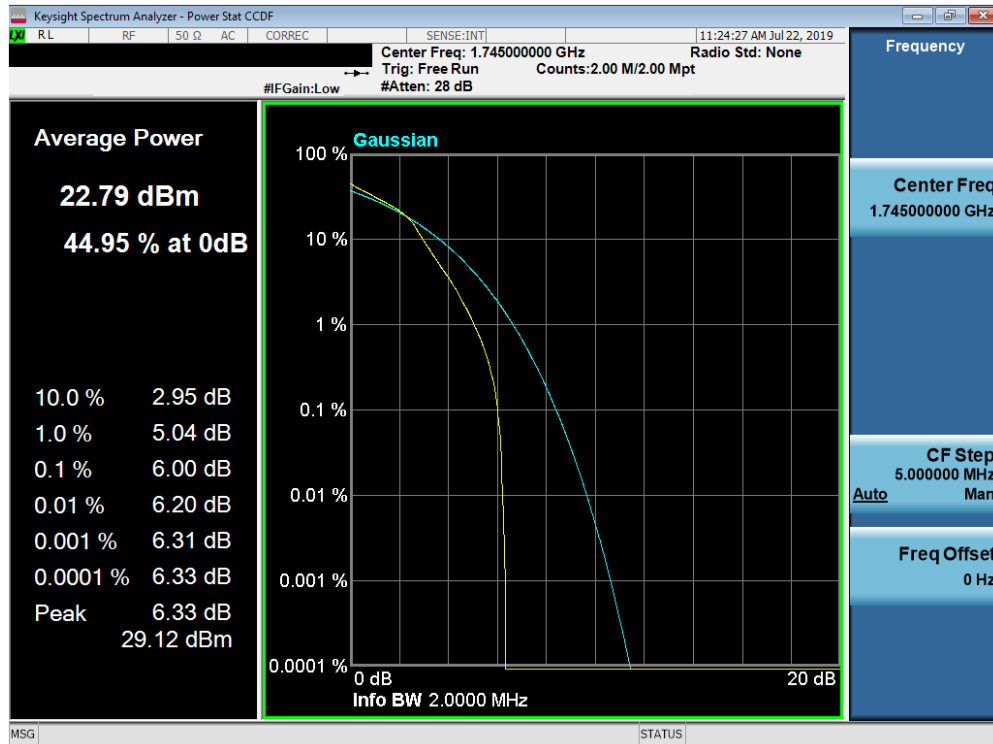
None.

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 176 of 277

Band 66/4

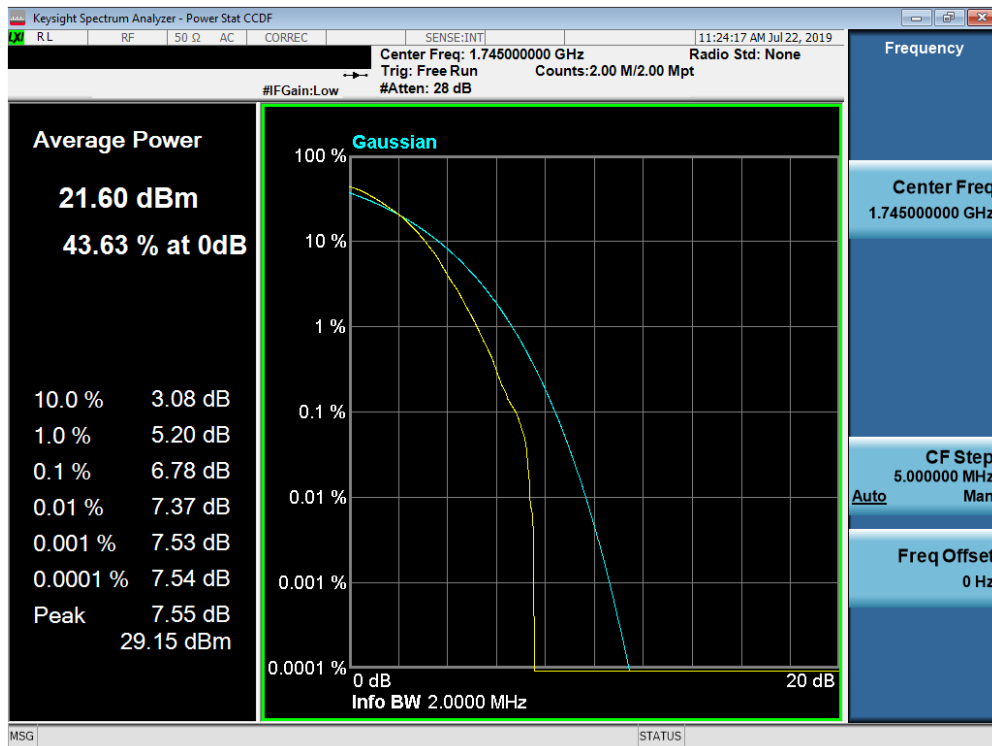


Plot 7-303. PAR Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

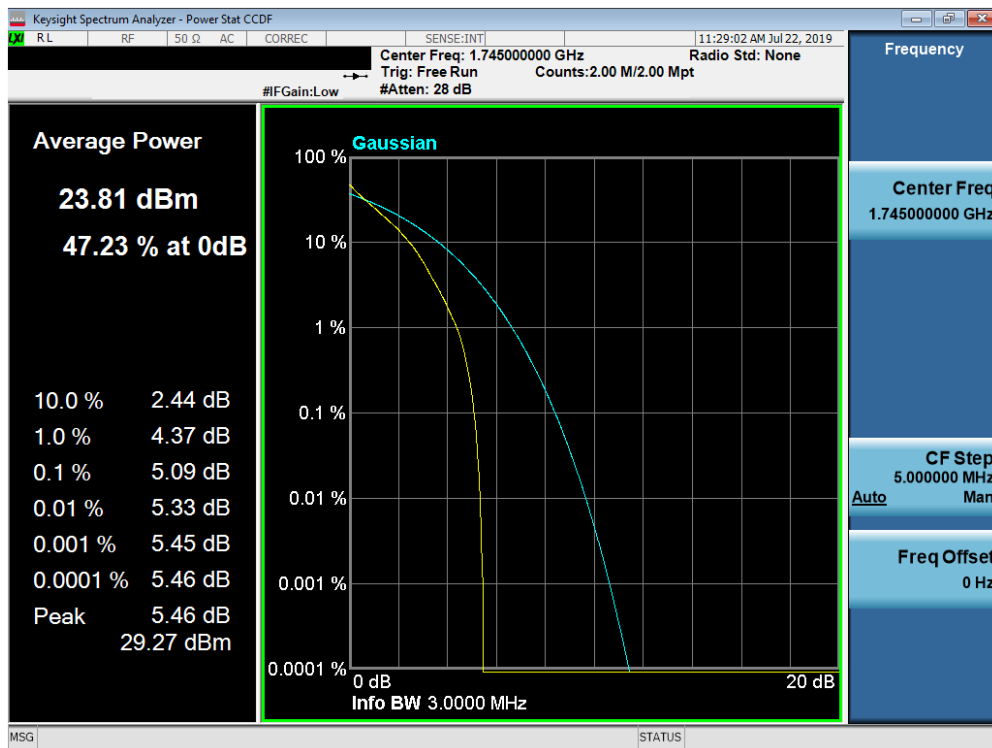


Plot 7-304. PAR Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 177 of 277

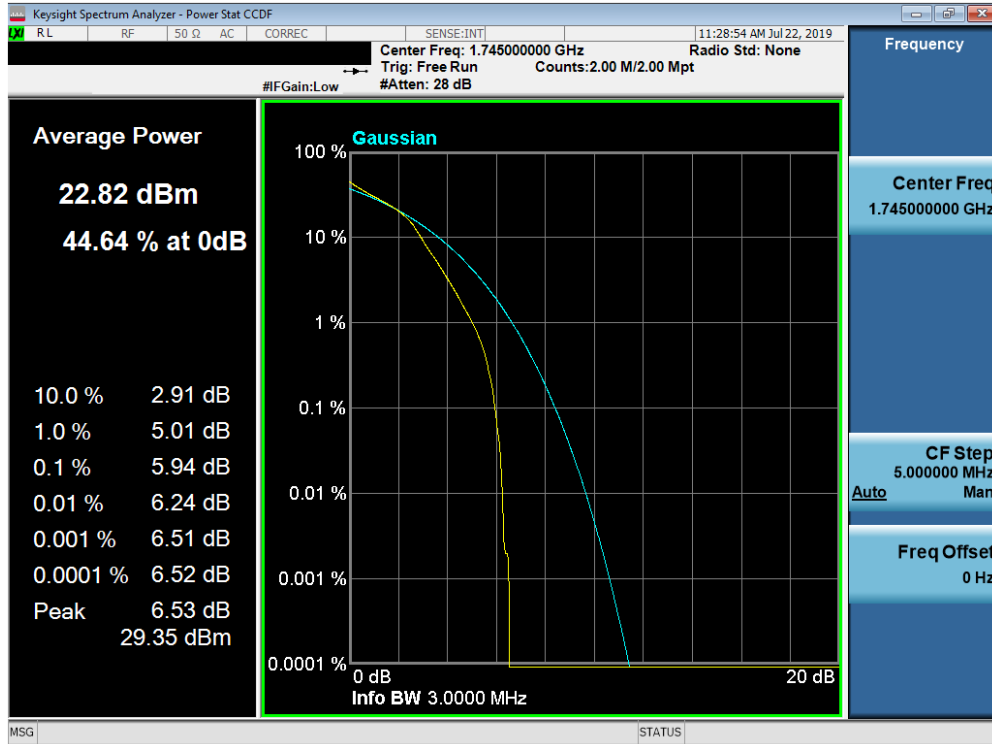


Plot 7-305. PAR Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)

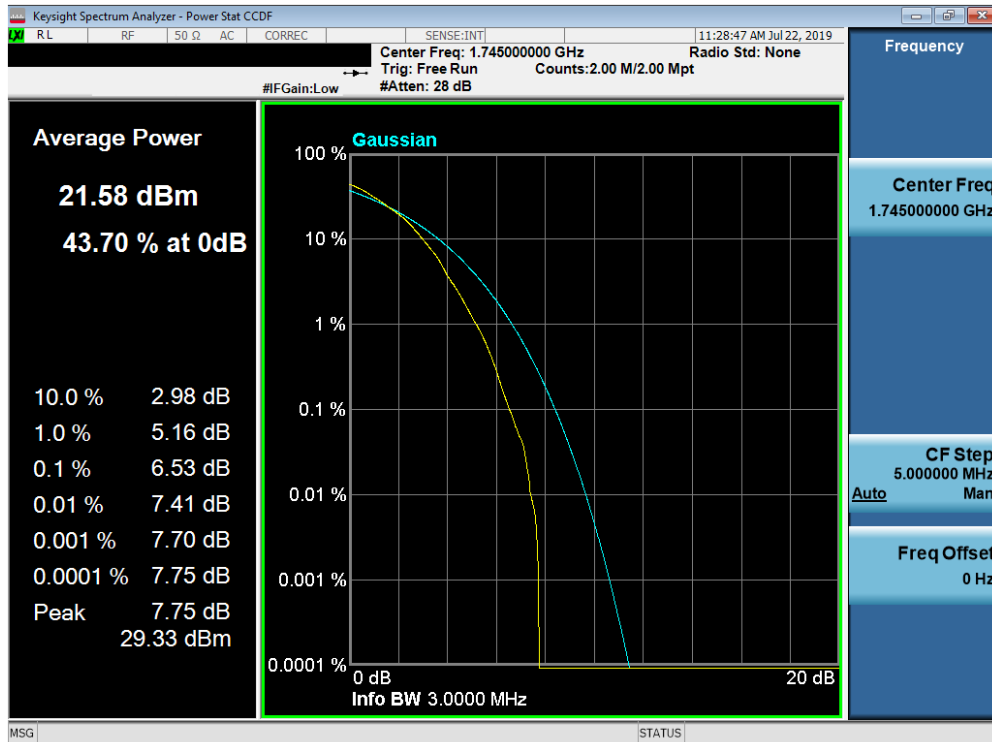


Plot 7-306. PAR Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 - 08/20/2019	EUT Type: Portable Tablet	Page 178 of 277

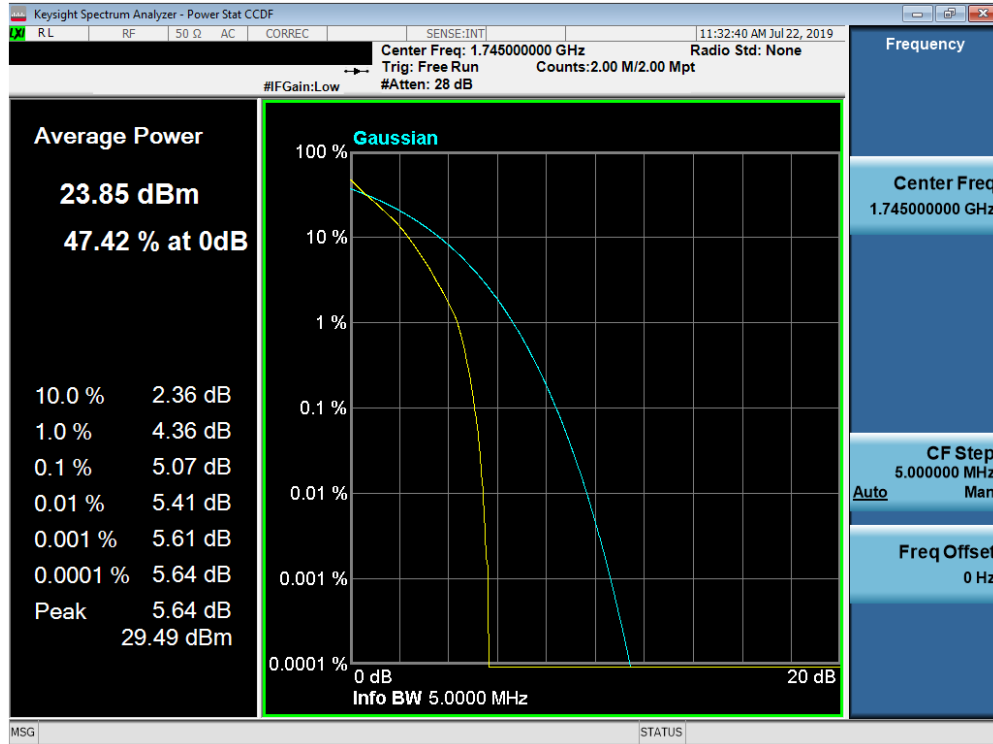


Plot 7-307. PAR Plot (Band 66/4 – 3.0MHz 16-QAM - Full RB Configuration)

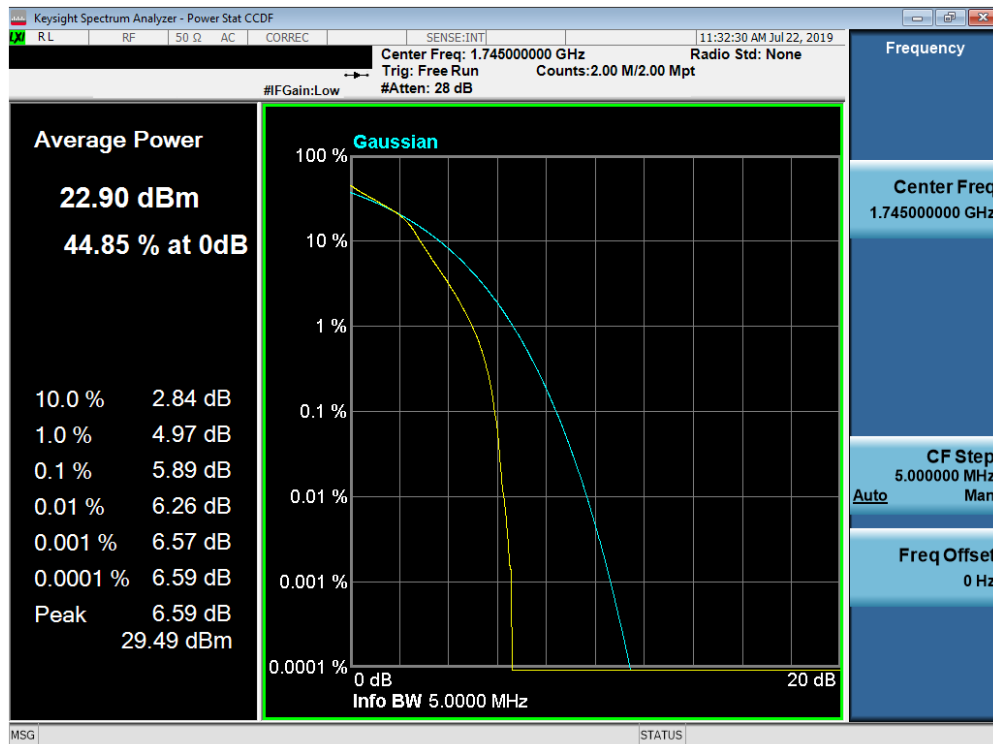


Plot 7-308. PAR Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 179 of 277

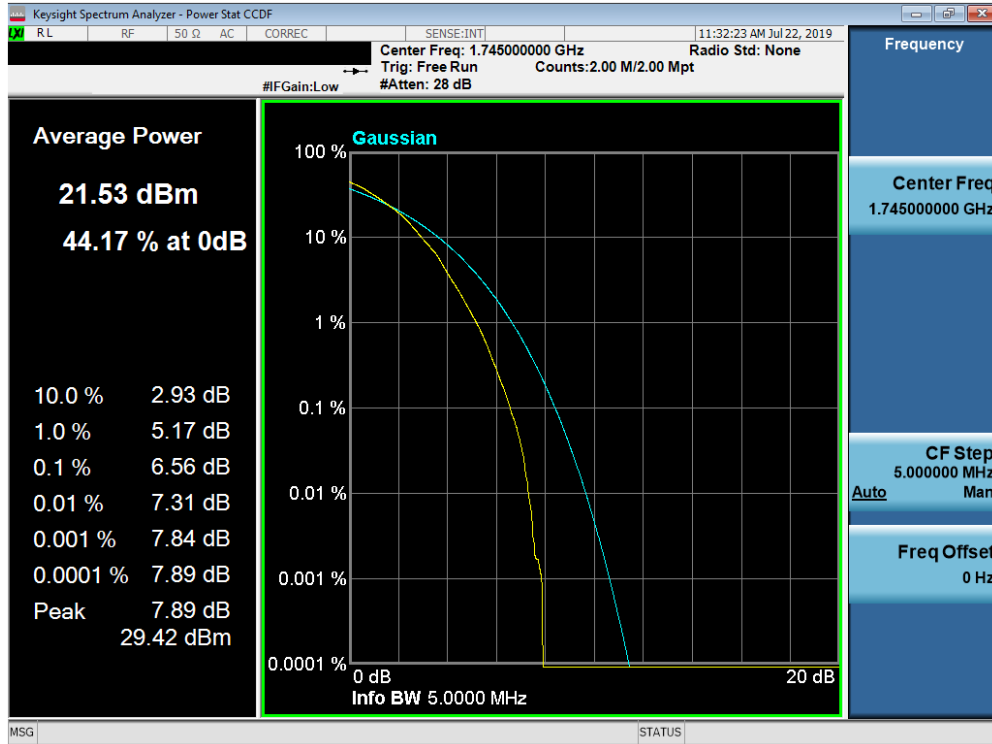


Plot 7-309. PAR Plot (Band 66/4 – 5.0MHz QPSK - Full RB Configuration)

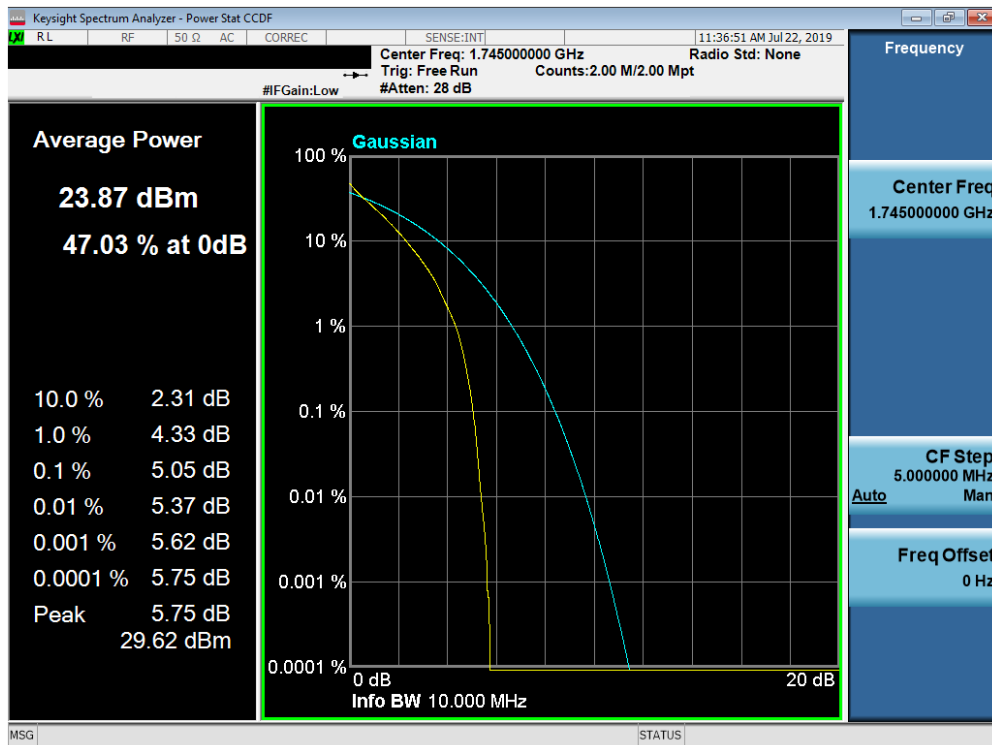


Plot 7-310. PAR Plot (Band 66/4 – 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 180 of 277

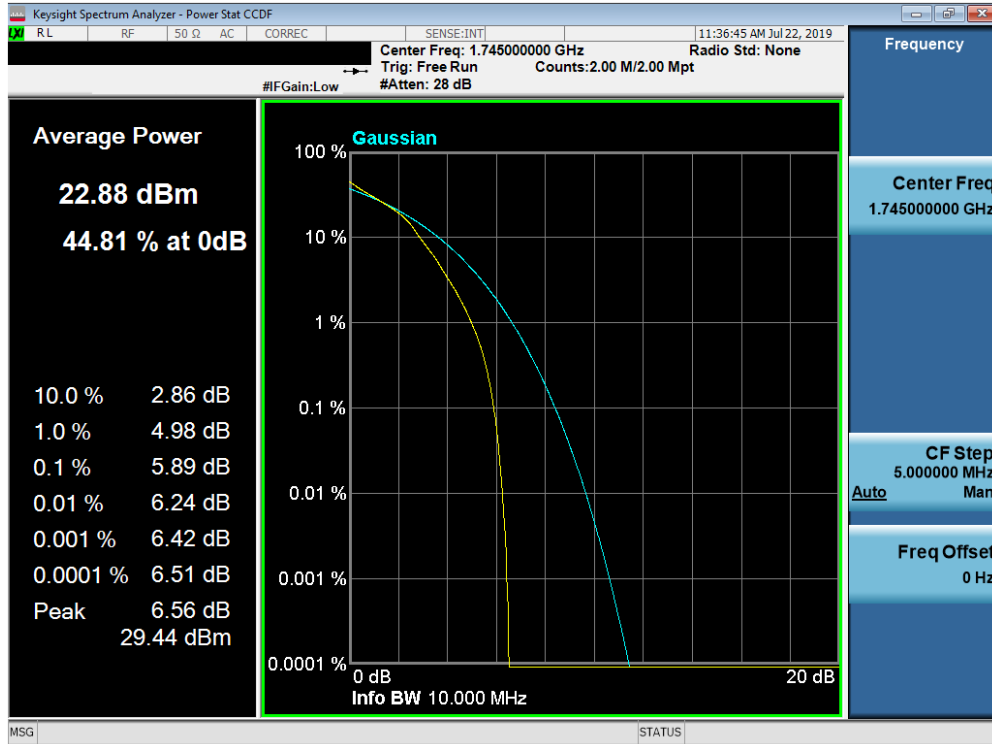


Plot 7-311. PAR Plot (Band 66/4 – 5.0MHz 64-QAM - Full RB Configuration)

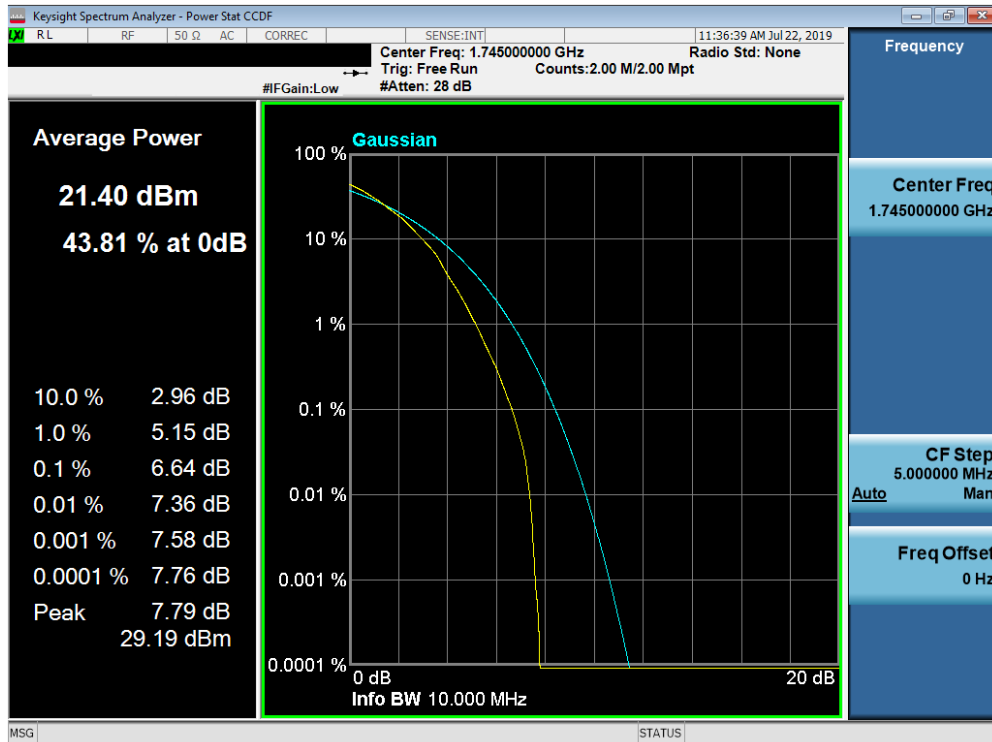


Plot 7-312. PAR Plot (Band 66/4 – 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 181 of 277

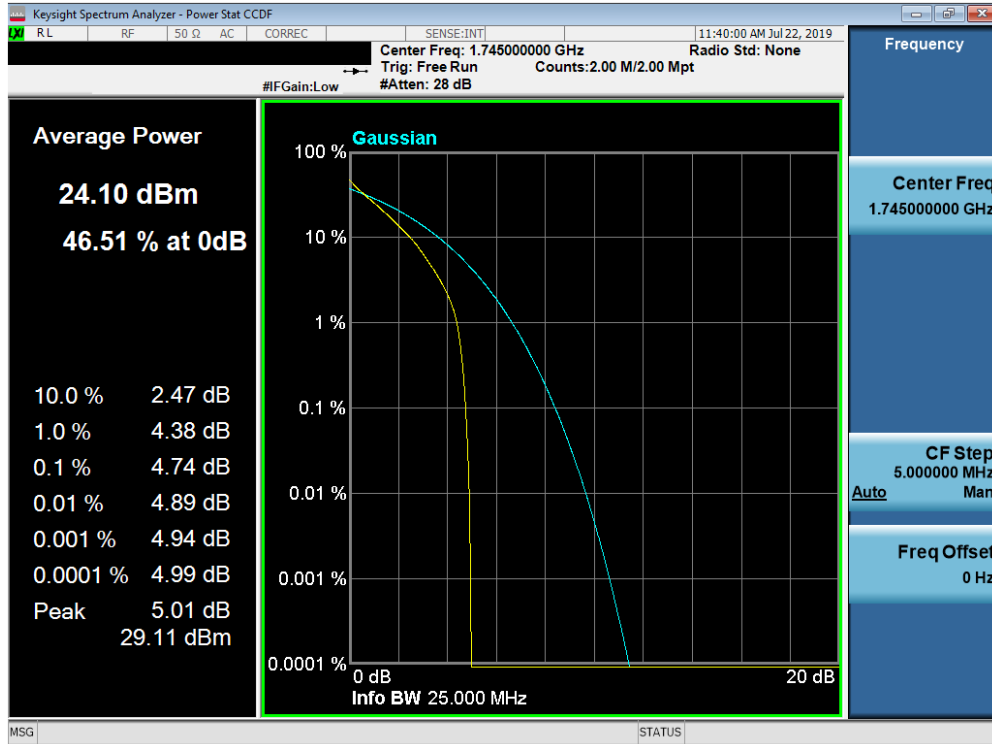


Plot 7-313. PAR Plot (Band 66/4 – 10.0MHz 16-QAM - Full RB Configuration)

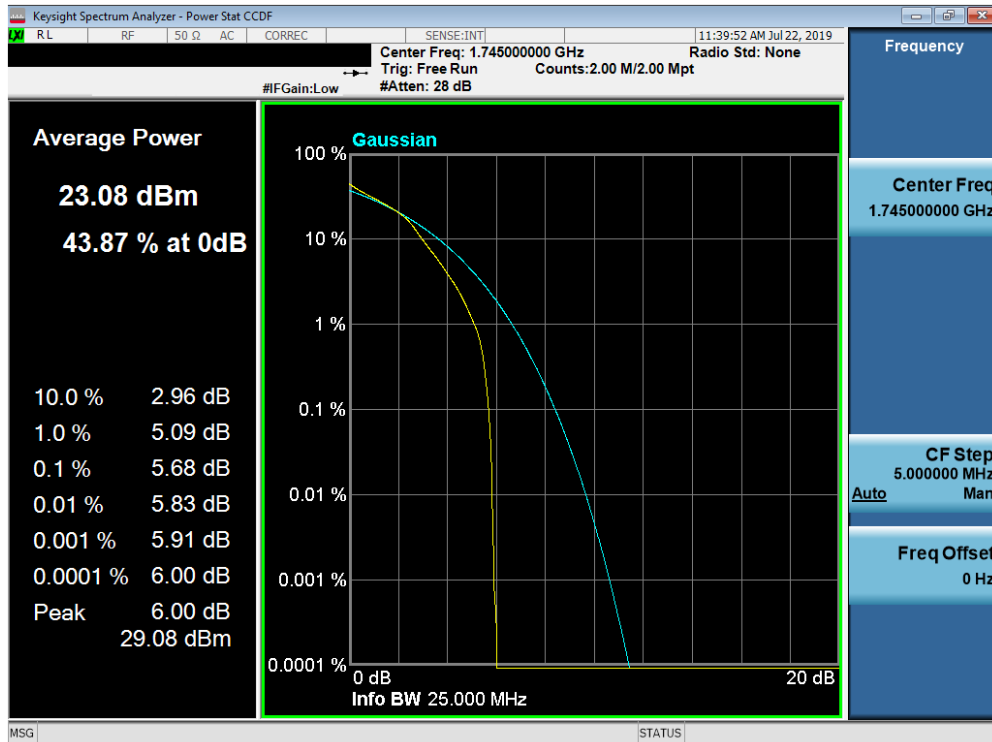


Plot 7-314. PAR Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 182 of 277

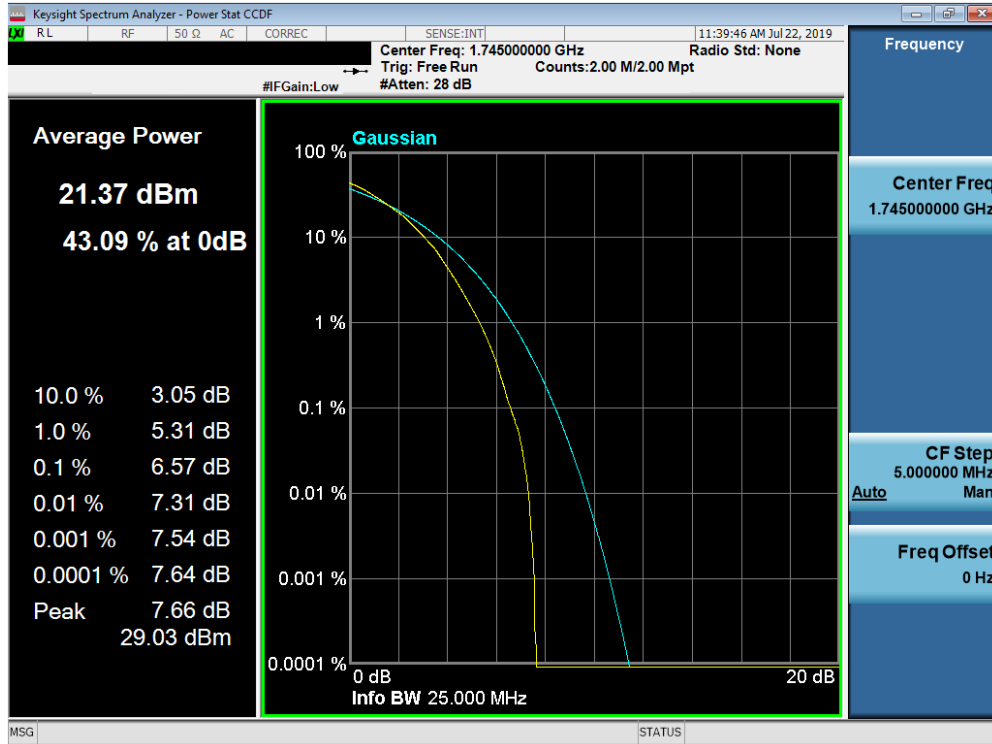


Plot 7-315. PAR Plot (Band 66/4 – 15.0MHz QPSK - Full RB Configuration)

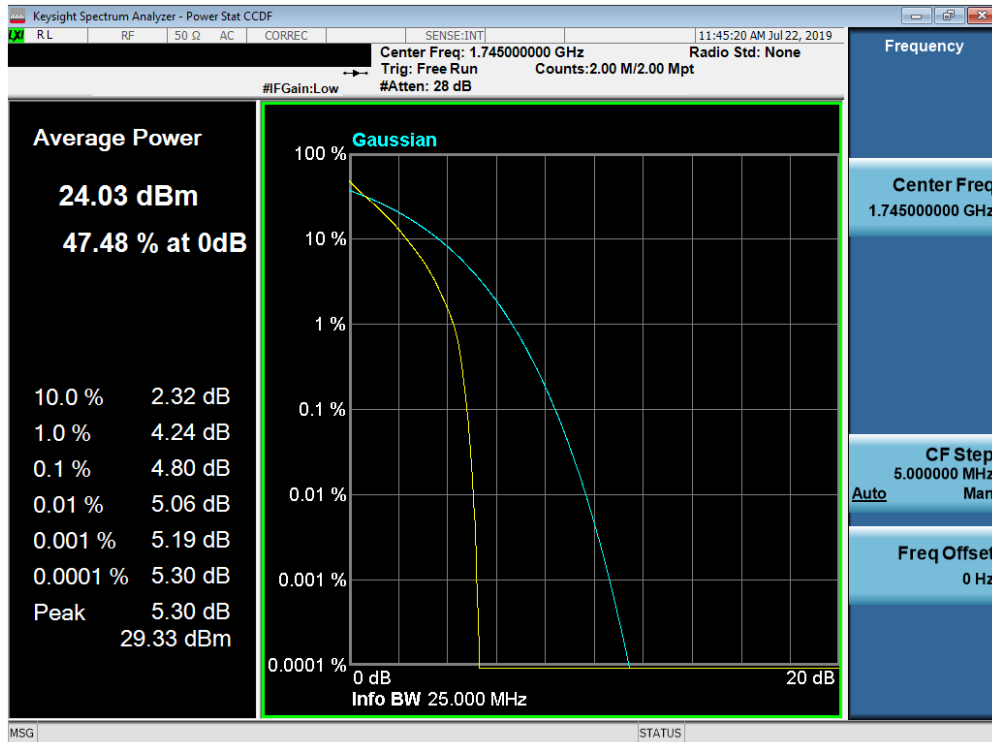


Plot 7-316. PAR Plot (Band 66/4 – 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 183 of 277

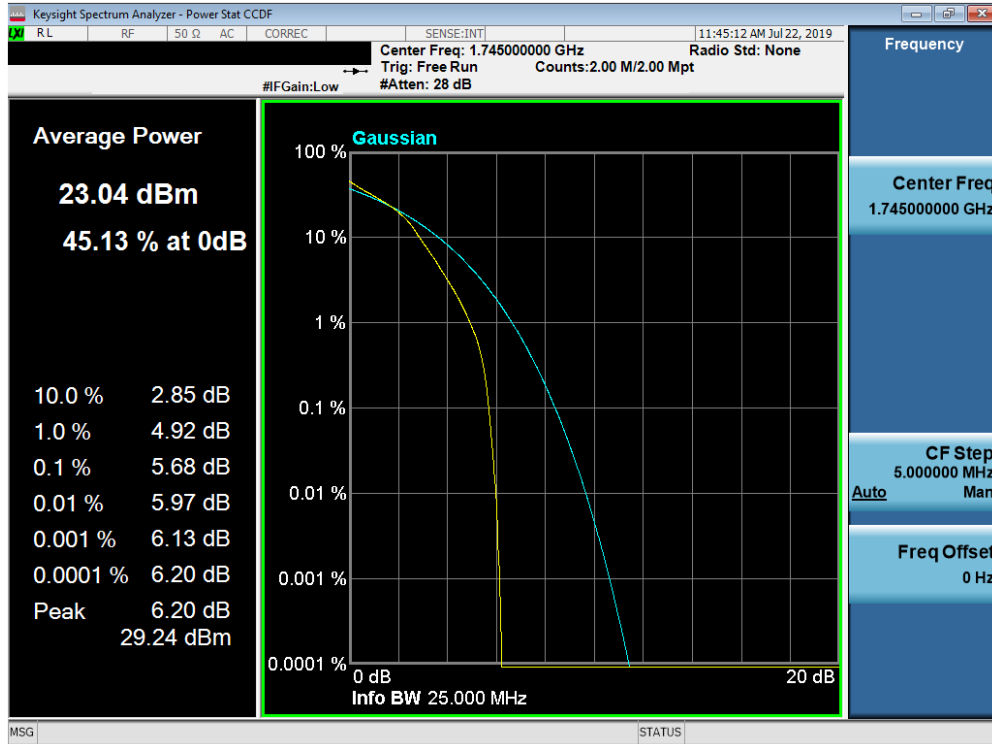


Plot 7-317. PAR Plot (Band 66/4 – 15.0MHz 64-QAM - Full RB Configuration)

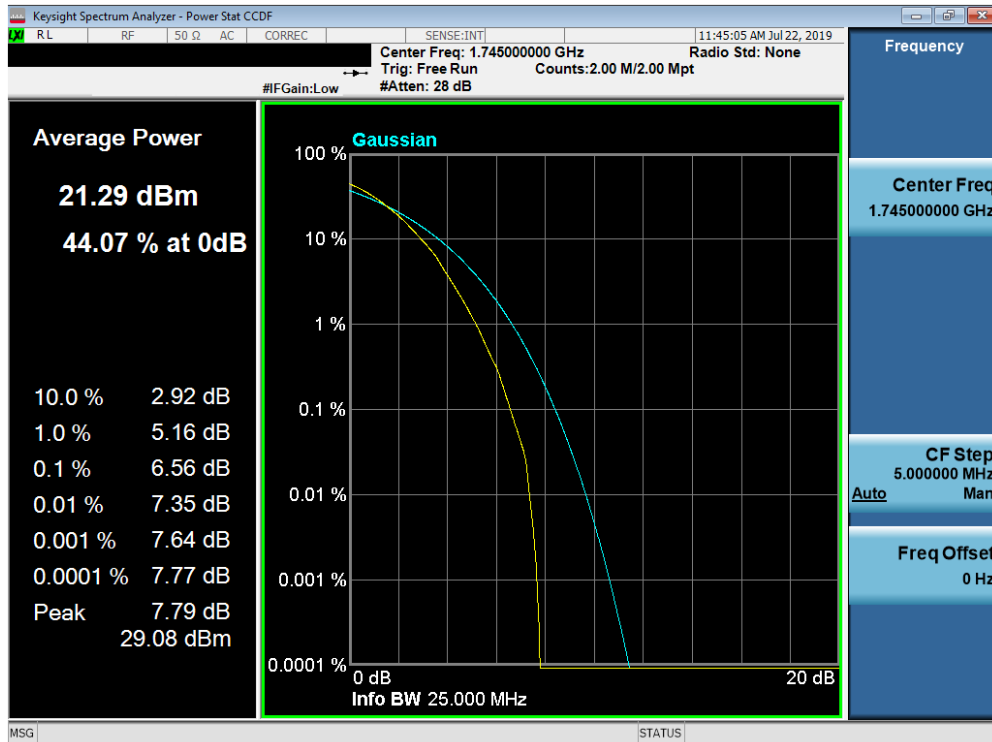


Plot 7-318. PAR Plot (Band 66/4 – 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 184 of 277



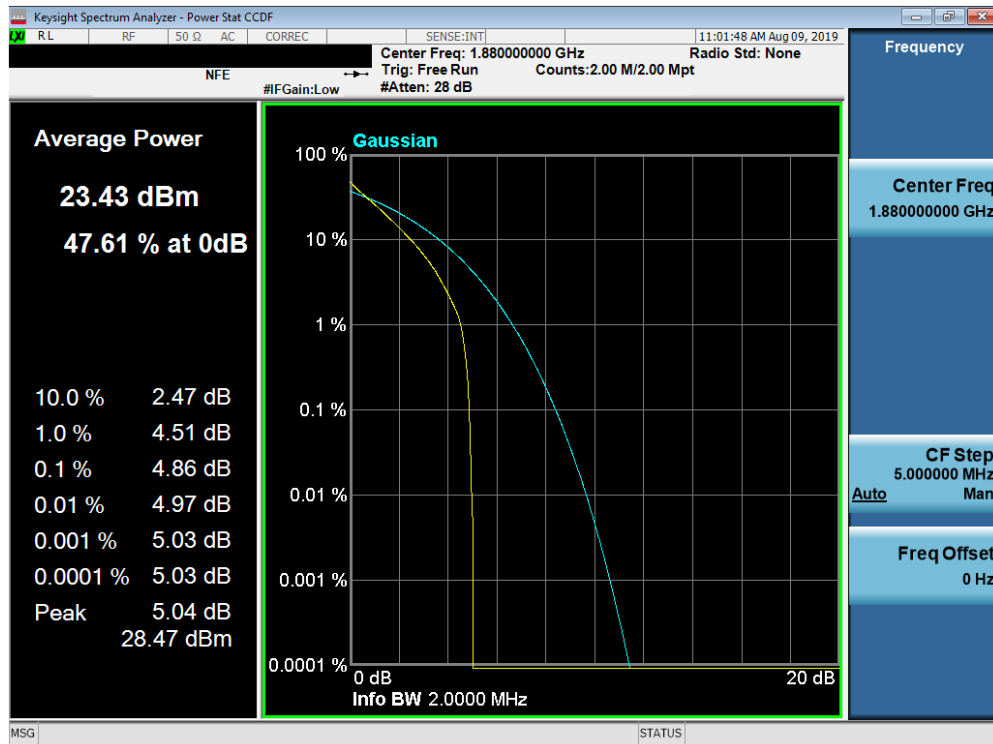
Plot 7-319. PAR Plot (Band 66/4 – 20.0MHz 16-QAM - Full RB Configuration)



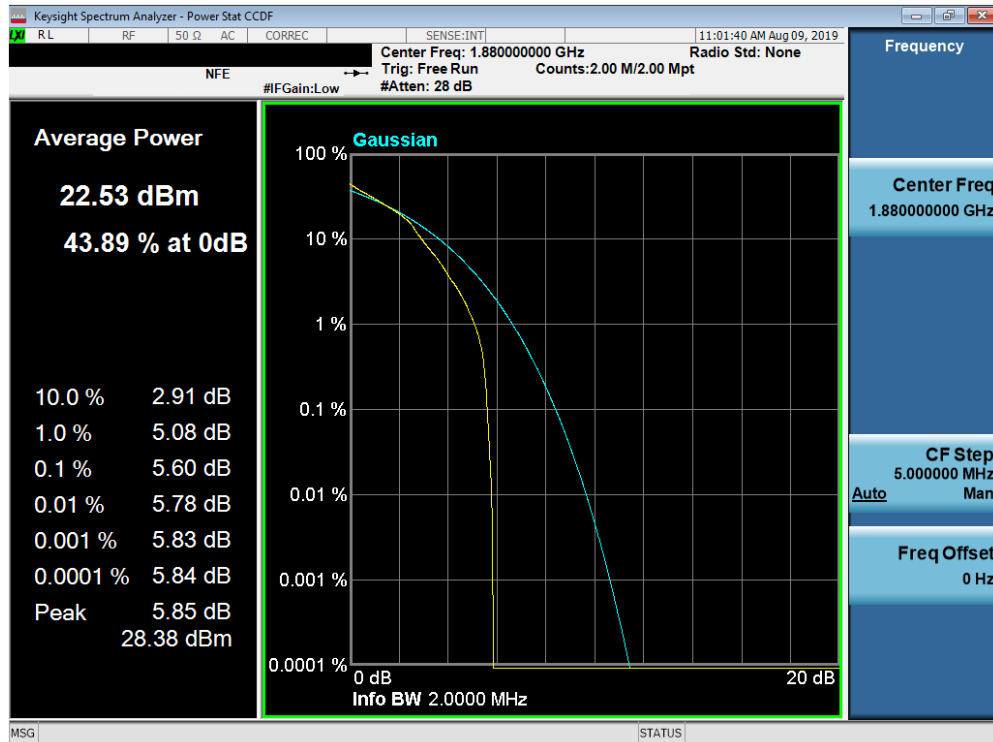
Plot 7-320. PAR Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 185 of 277

Band 25/2

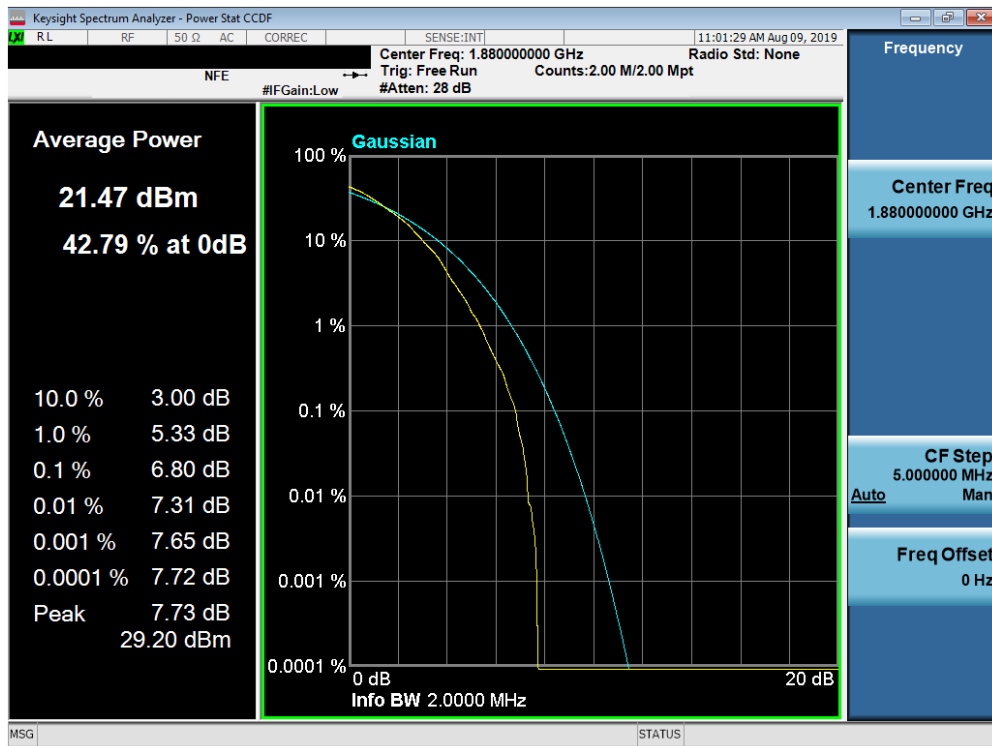


Plot 7-321. PAR Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)

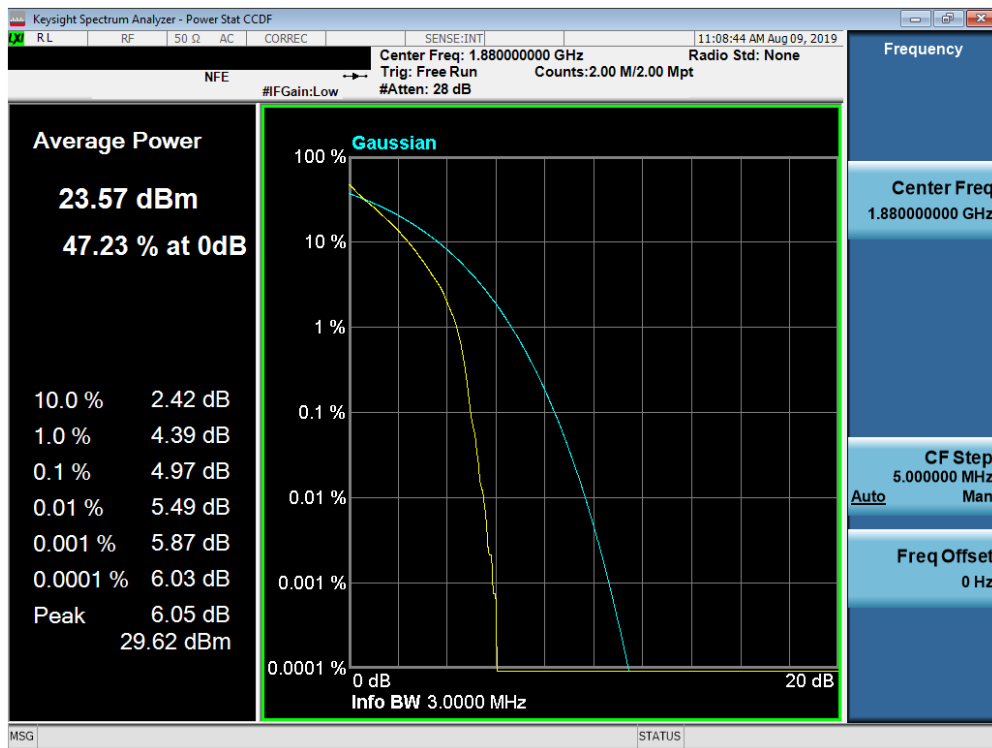


Plot 7-322. PAR Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 186 of 277

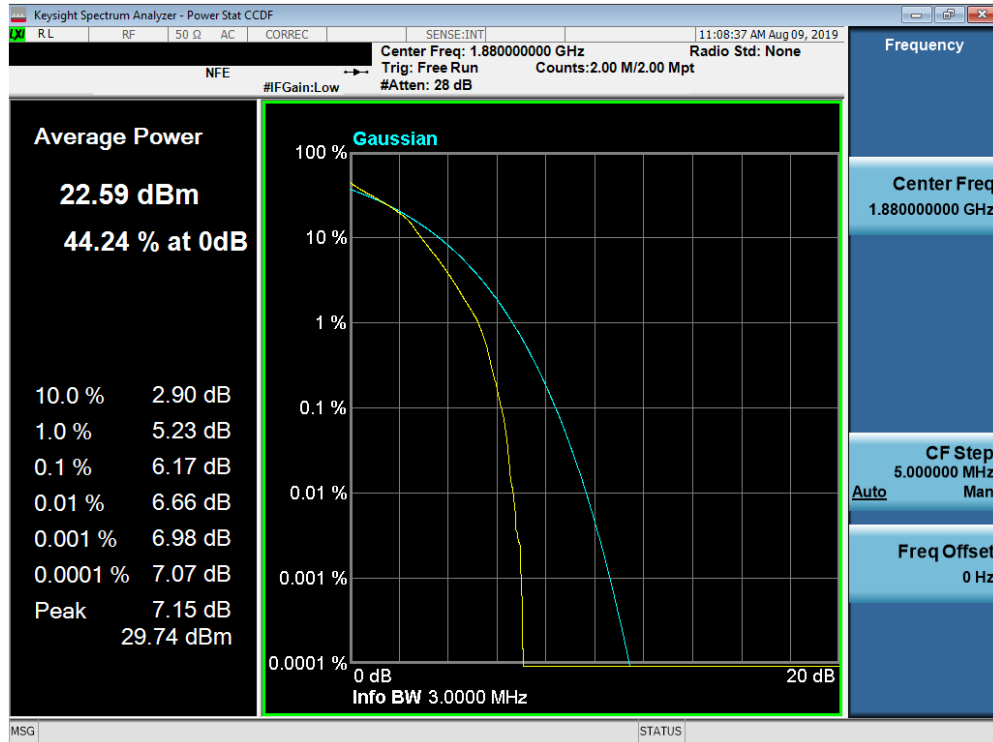


Plot 7-323. PAR Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)

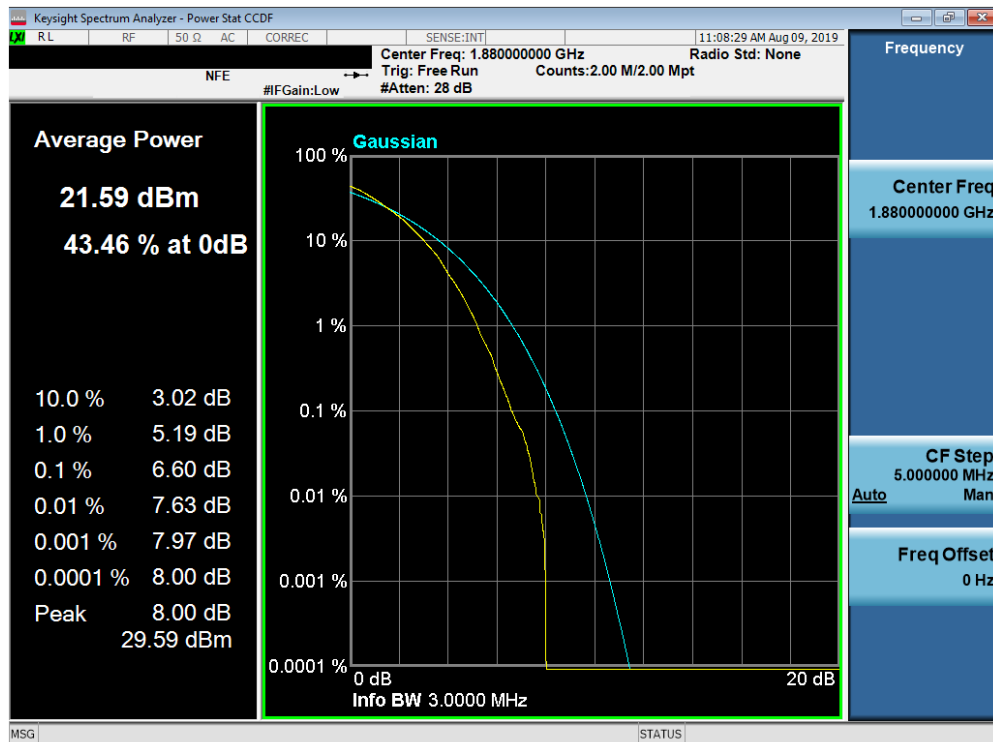


Plot 7-324. PAR Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 187 of 277

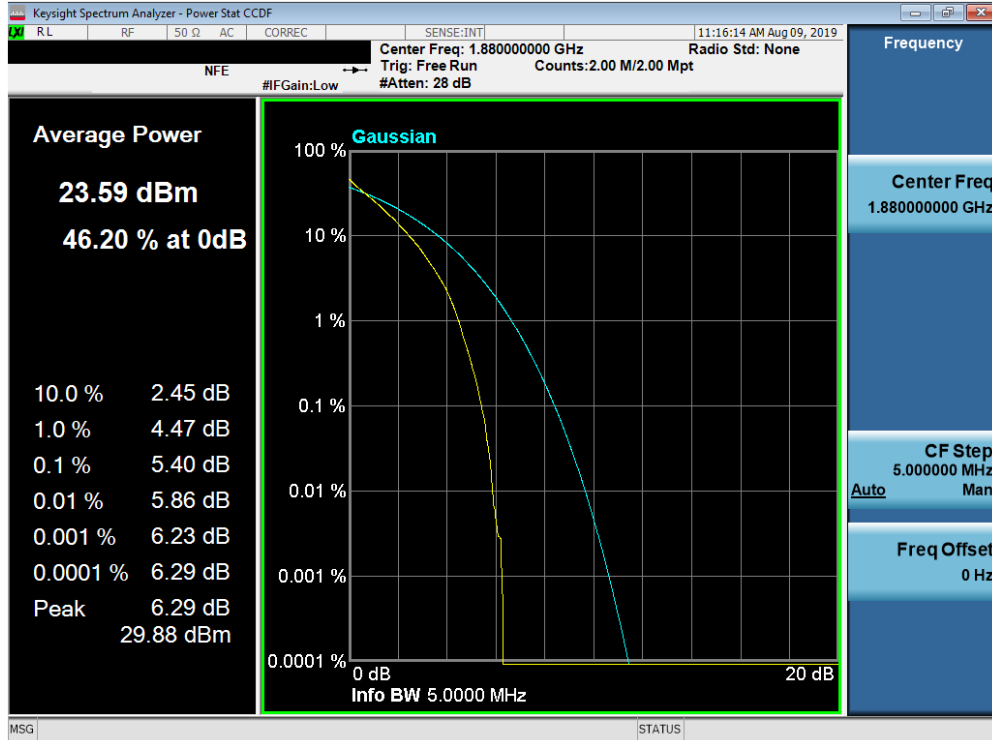


Plot 7-325. PAR Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)

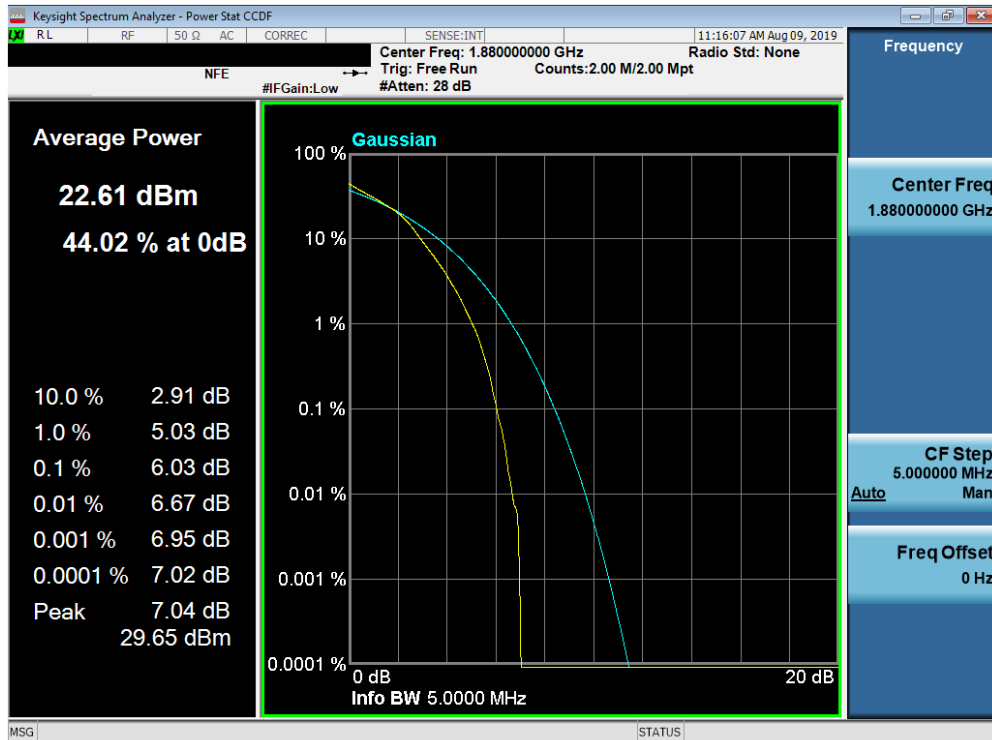


Plot 7-326. PAR Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 188 of 277

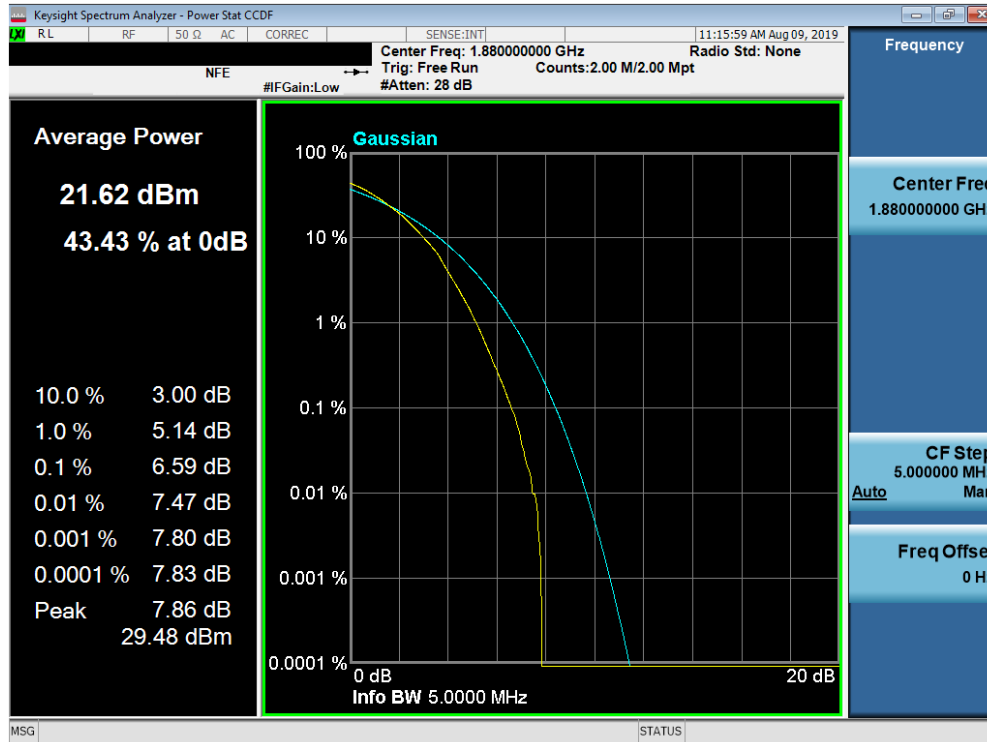


Plot 7-327. PAR Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)

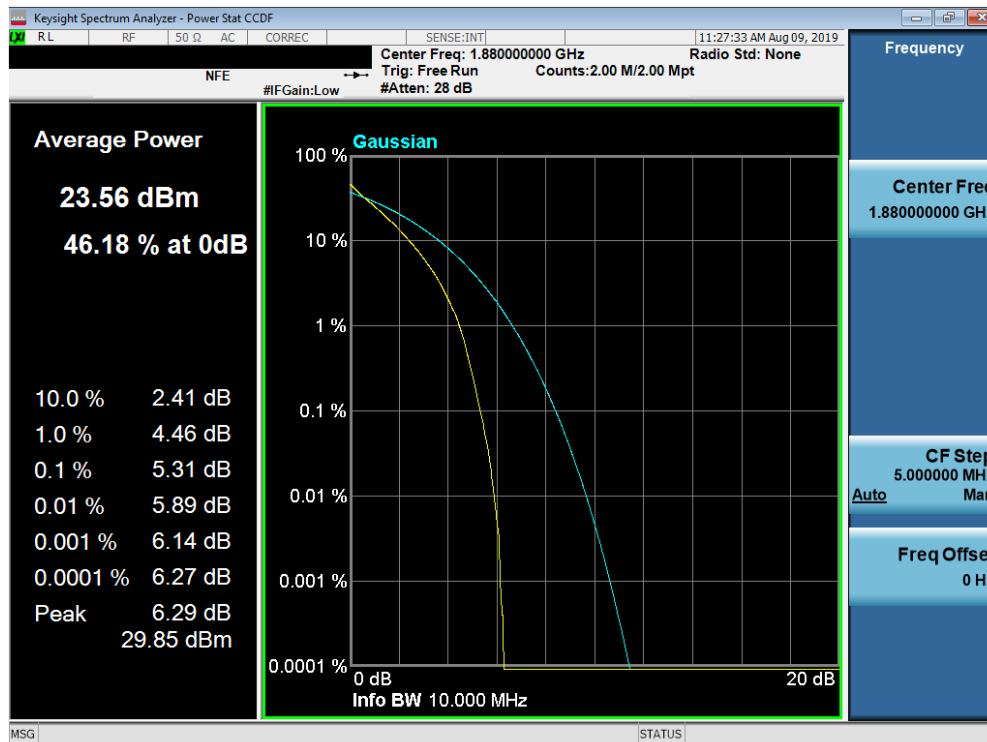


Plot 7-328. PAR Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 189 of 277

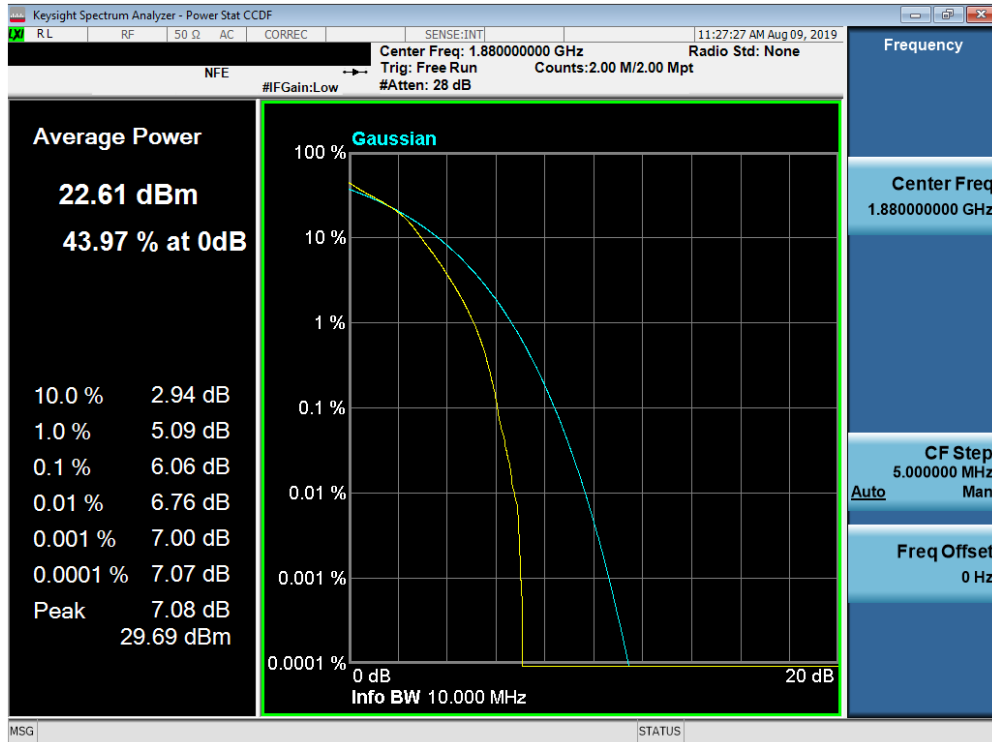


Plot 7-329. PAR Plot (Band 25/2 - 5.0MHz 64-QAM - Full RB Configuration)

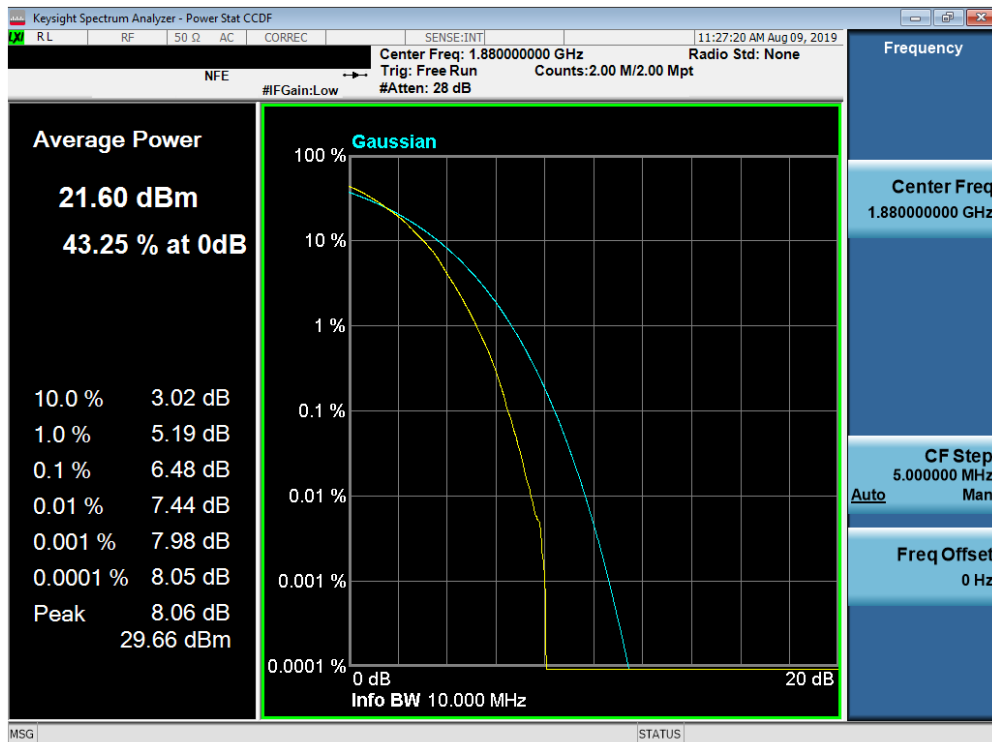


Plot 7-330. PAR Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 190 of 277

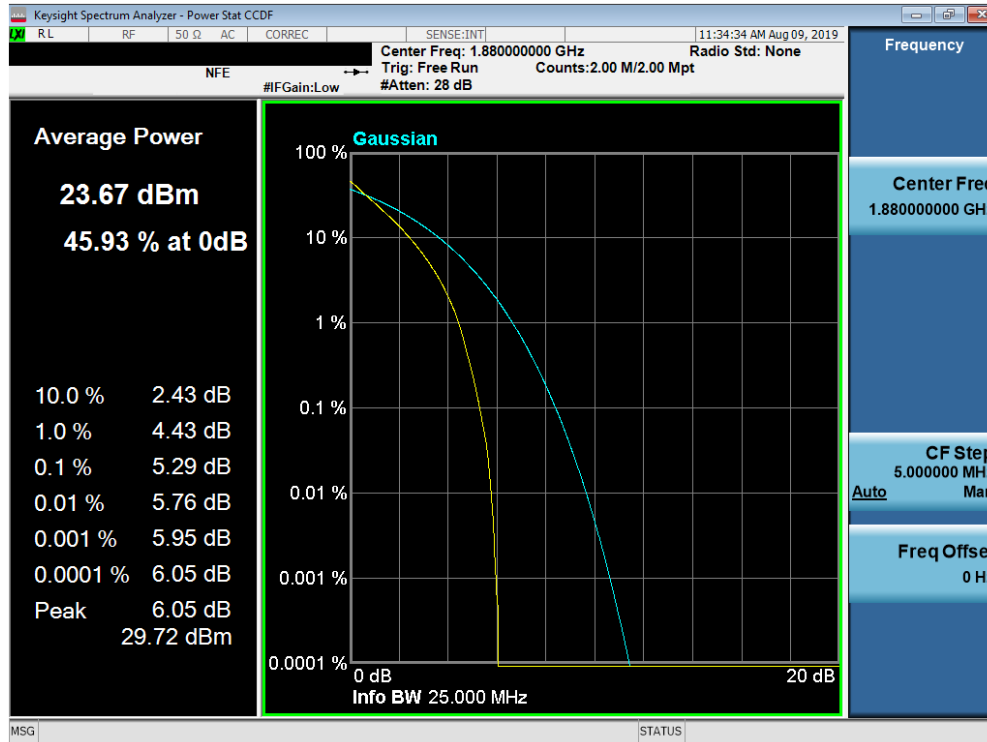


Plot 7-331. PAR Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)

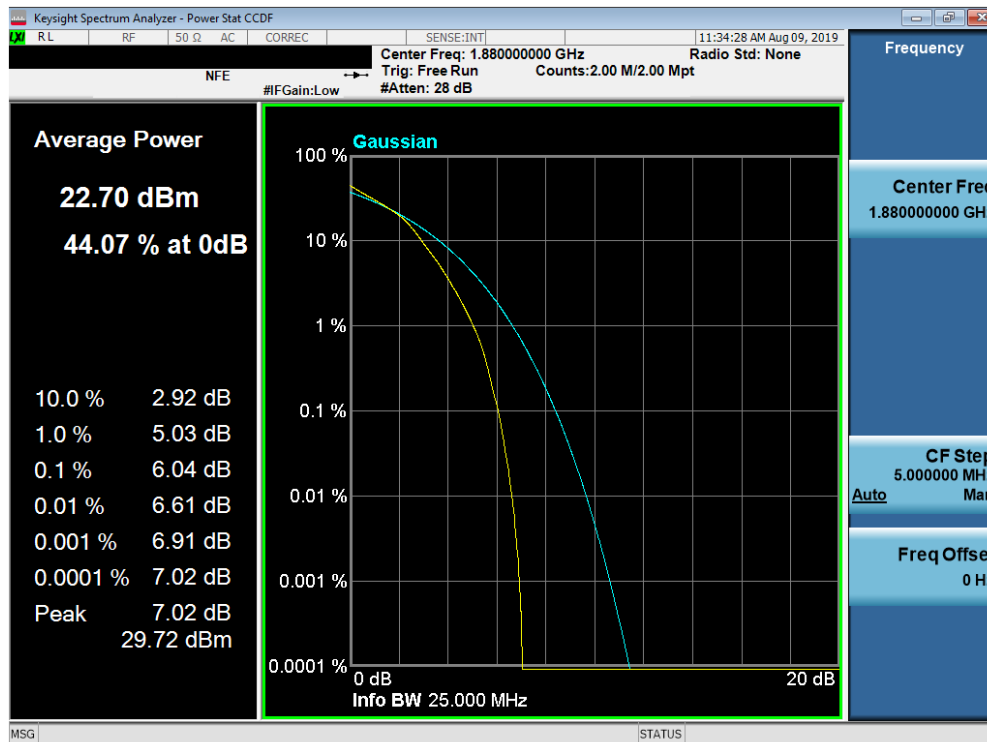


Plot 7-332. PAR Plot (Band 25/2 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 191 of 277

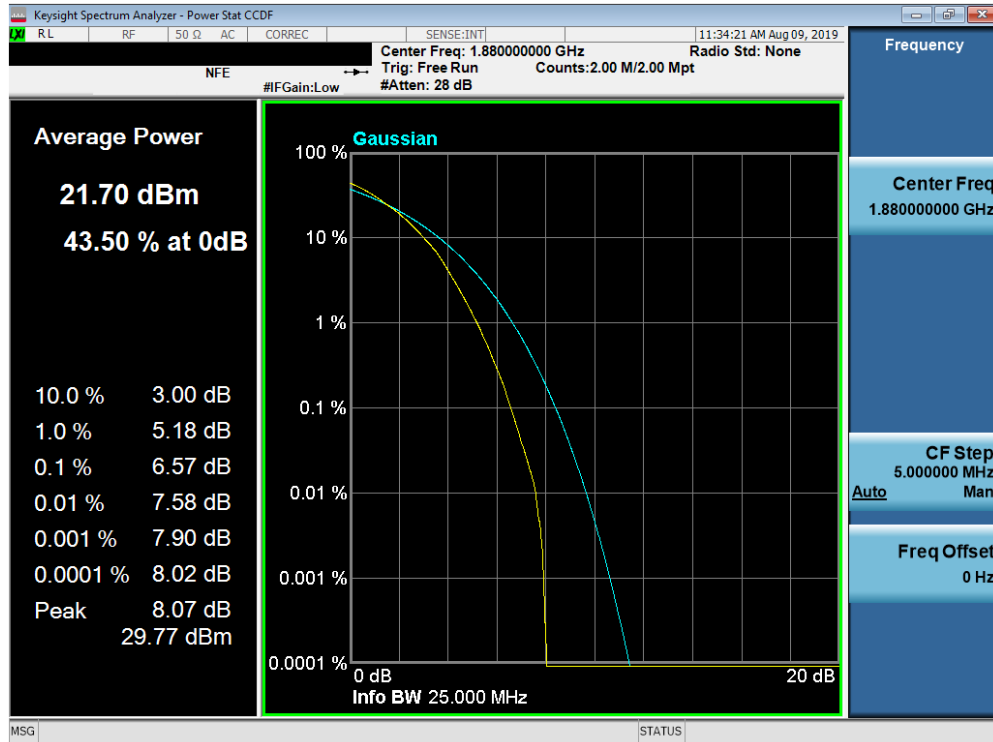


Plot 7-333. PAR Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)

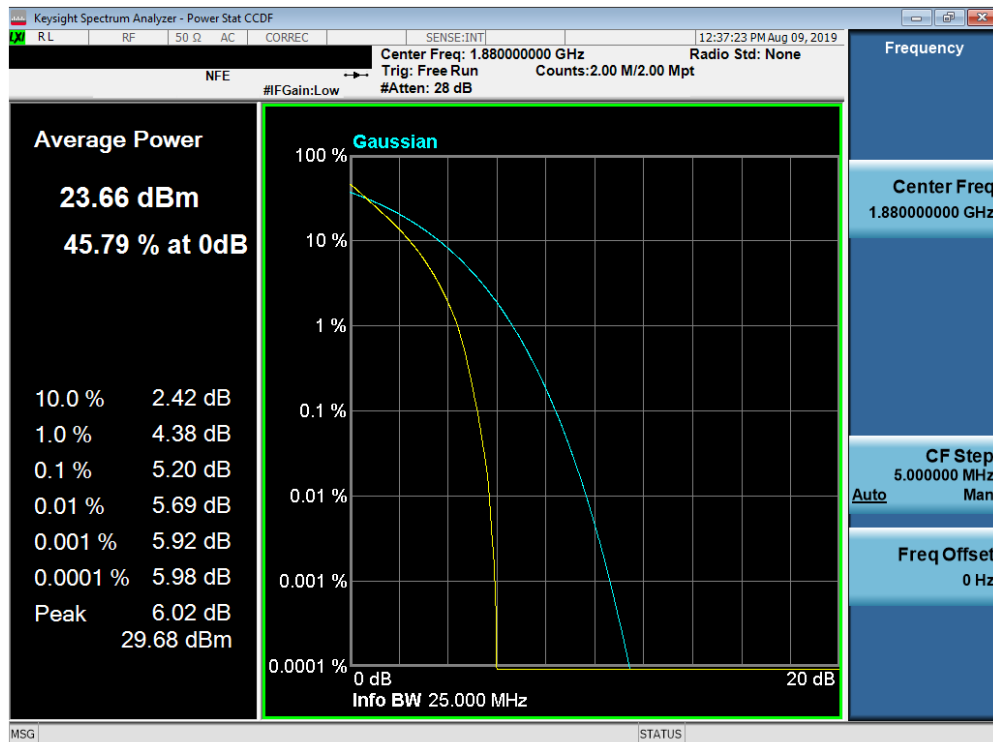


Plot 7-334. PAR Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 192 of 277

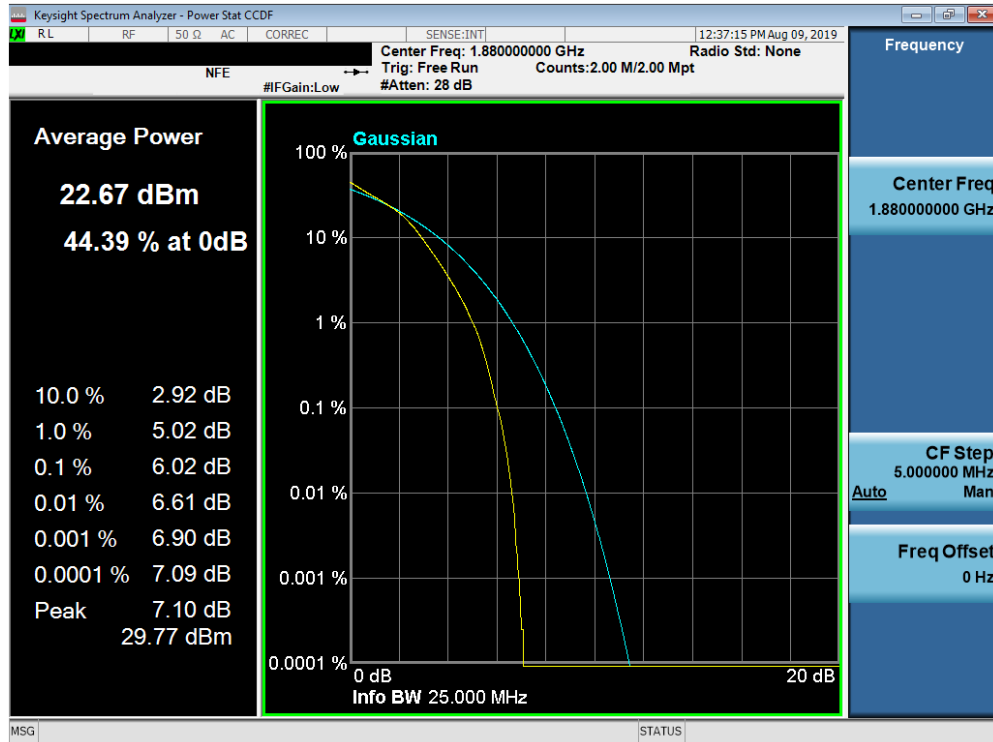


Plot 7-335. PAR Plot (Band 25/2 - 15.0MHz 64-QAM - Full RB Configuration)

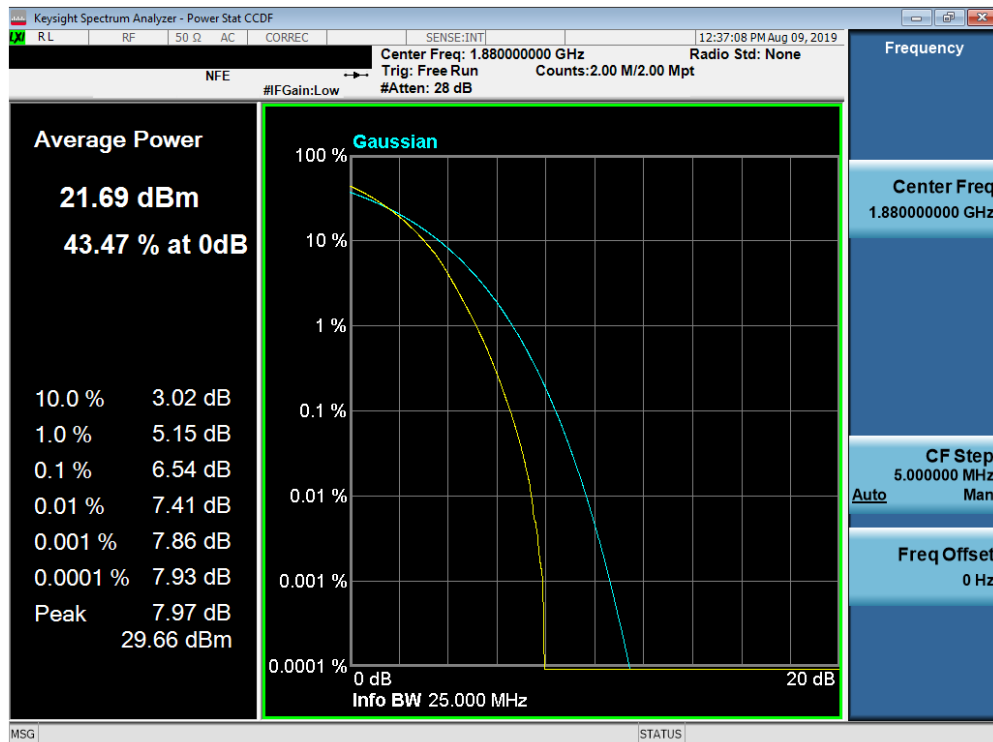


Plot 7-336. PAR Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 193 of 277



Plot 7-337. PAR Plot (Band 25/2 - 20.0MHz 16-QAM - Full RB Configuration)



Plot 7-338. PAR Plot (Band 25/2 - 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 194 of 277

7.6 Uplink Carrier Aggregation

§27.53(m)

Test Overview

The EUT is set up to transmit two contiguous LTE channels. The power level of both carriers and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

For Band 41, the minimum permissible attenuation level of any spurious emission is $55 + 10 \log_{10}(P_{\text{Watts}})$.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to at least 10 * the fundamental frequency (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings

Test Setup

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

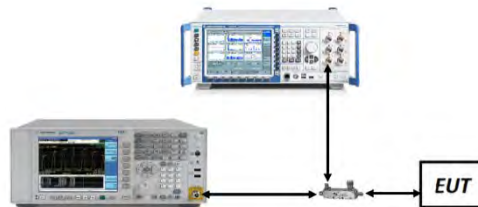


Figure 7-5. Test Instrument & Measurement Setup

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 195 of 277

Test Notes

1. Uplink carrier aggregation is only supported in this EUT while operating in Power Class 2 and Power Class 3.
2. Conducted power and spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device. The worst case (highest) powers were found while operating with QPSK modulation, as shown in Table 7-503 and 7-504 below, with both carriers set to transmit using 1RB.
3. Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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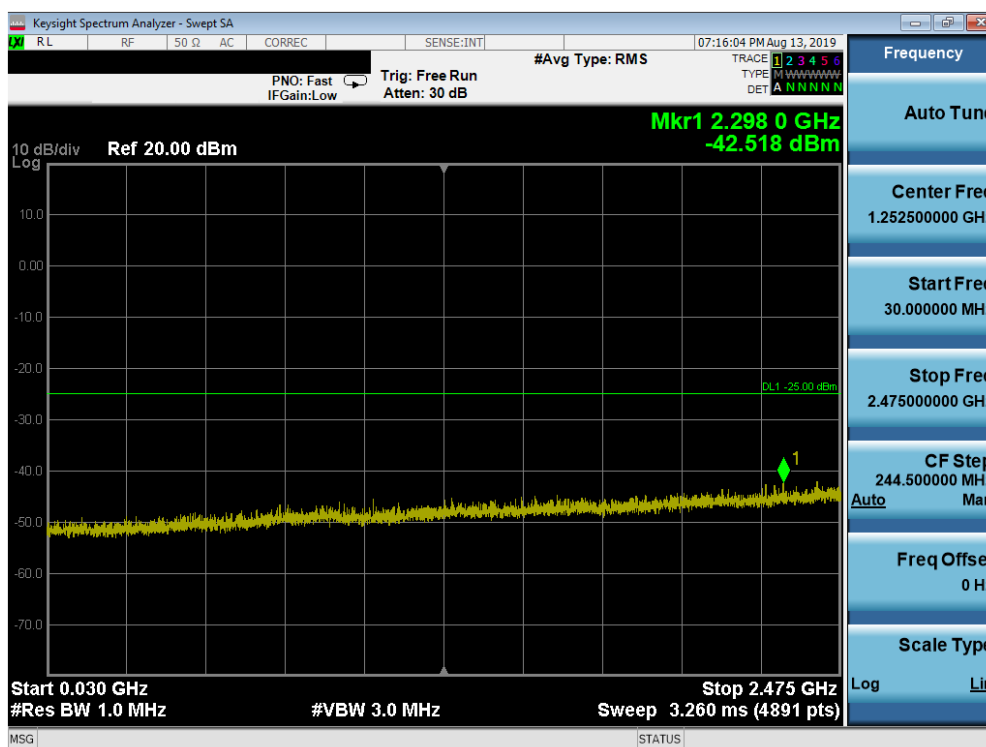
Uplink CA Configuration 41 (PC2)

Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	39750	2506	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	27.17
Max	LTE B41	20	40620	2593	QPSK	1	99	LTE B41	20	40818	2612.8	QPSK	1	0	27.42
Max	LTE B41	20	41490	2680	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	27.05

Table 7-3. Conducted Powers (B41 PC2 –20MHz + 20MHz Channel Bandwidth- PCC/SCC: 1RB)

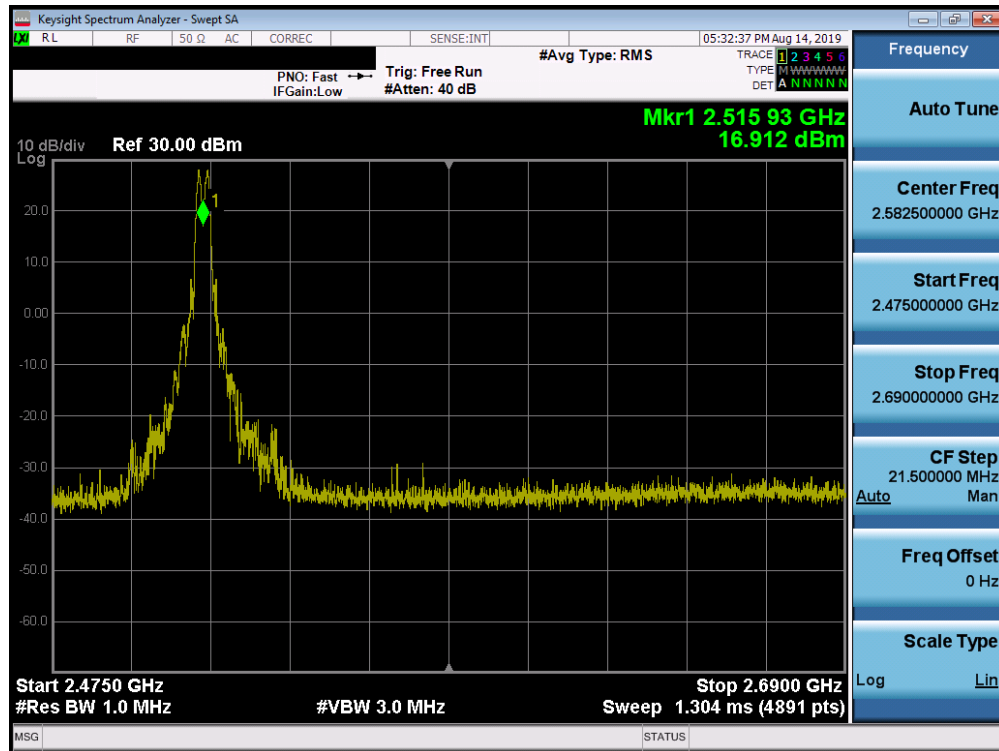
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	40620	2593	QPSK	100	0	LTE B41	20	40818	2612.8	QPSK	100	0	25.44
Max	LTE B41	20	40620	2593	16-QAM	100	0	LTE B41	20	40818	2612.8	16-QAM	100	0	24.41
Max	LTE B41	20	40620	2593	64-QAM	100	0	LTE B41	20	40818	2612.8	64-QAM	100	0	23.17

Table 7-4. Conducted Powers (B41 PC2 with Various Combinations for 20MHz + 20MHz Channel Bandwidth)

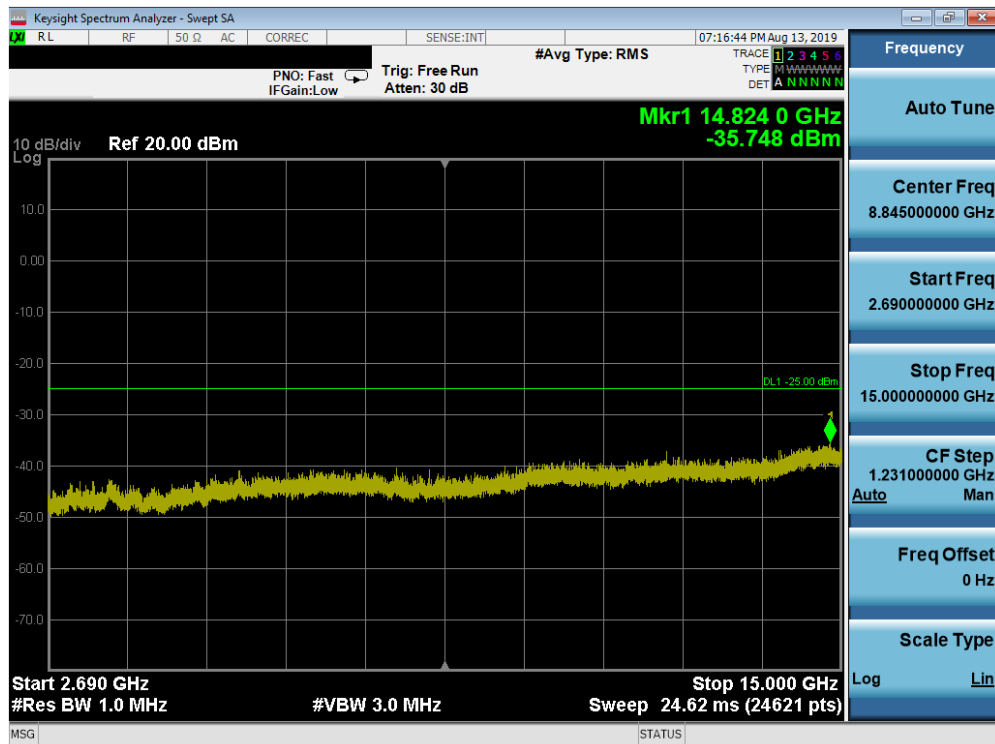


Plot 7-339. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 197 of 277

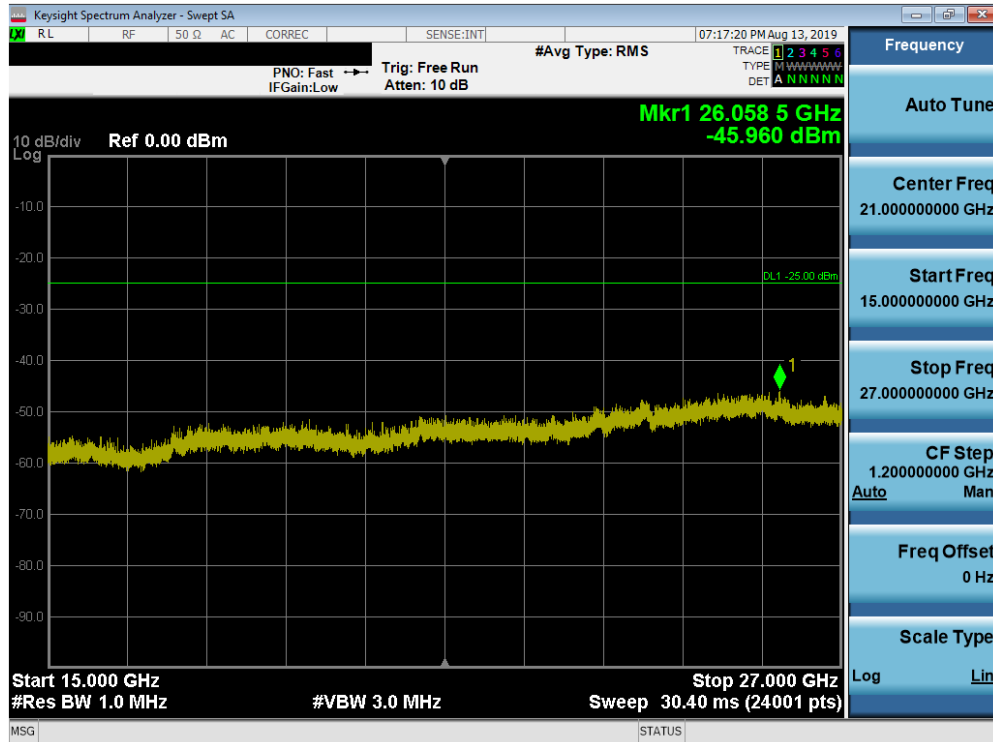


Plot 7-340. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

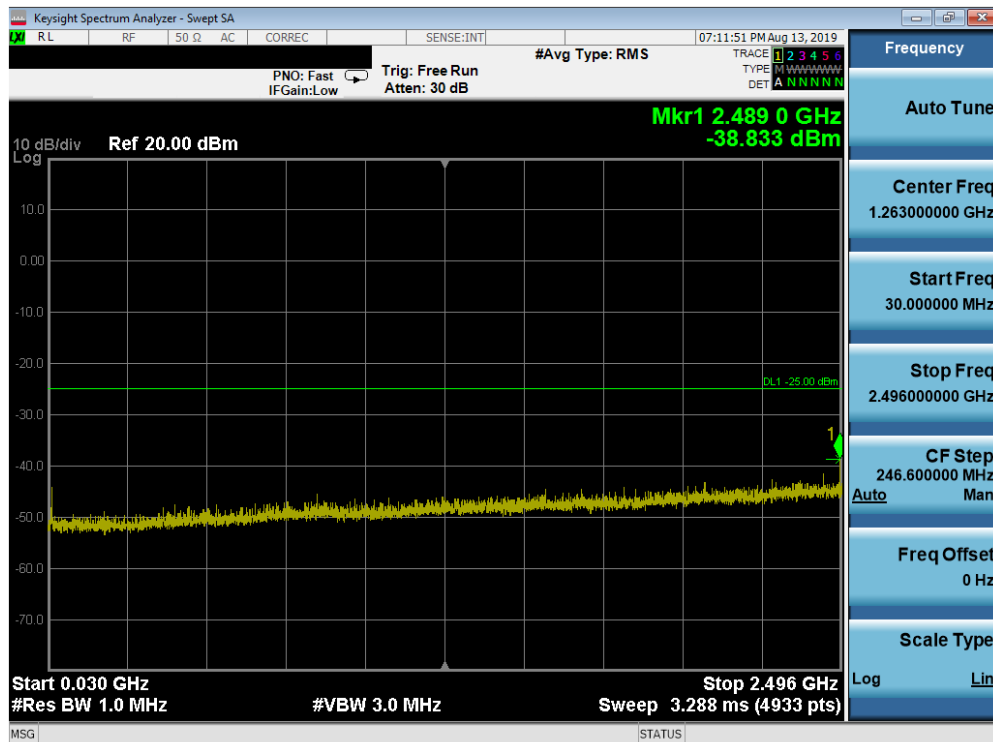


Plot 7-341. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 198 of 277

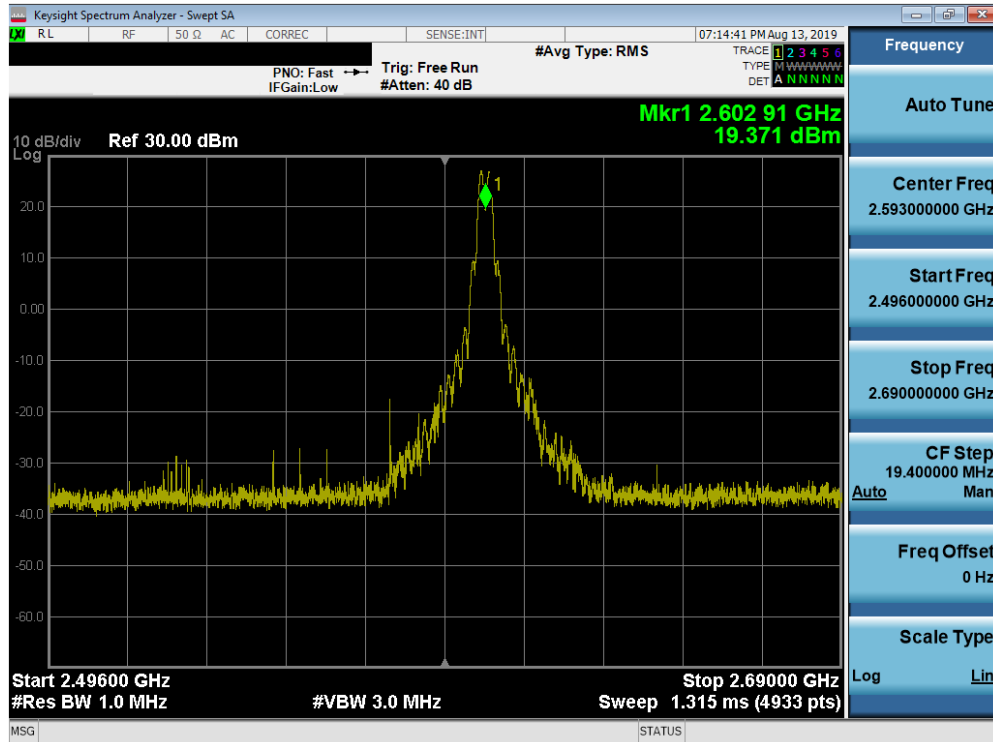


Plot 7-342. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

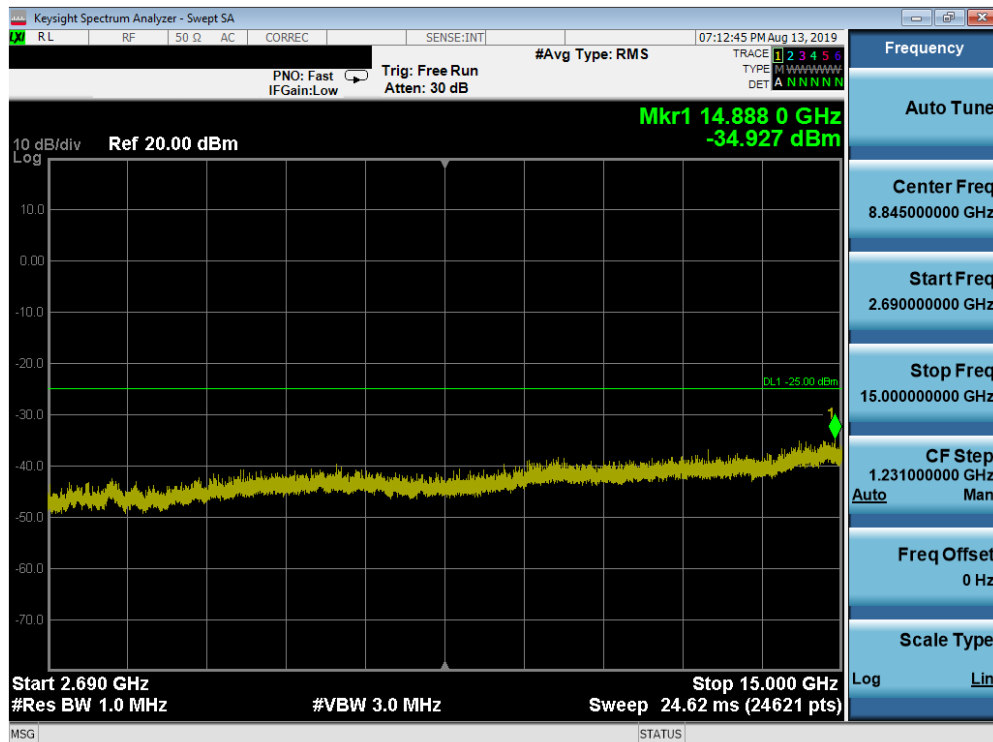


Plot 7-343. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 199 of 277

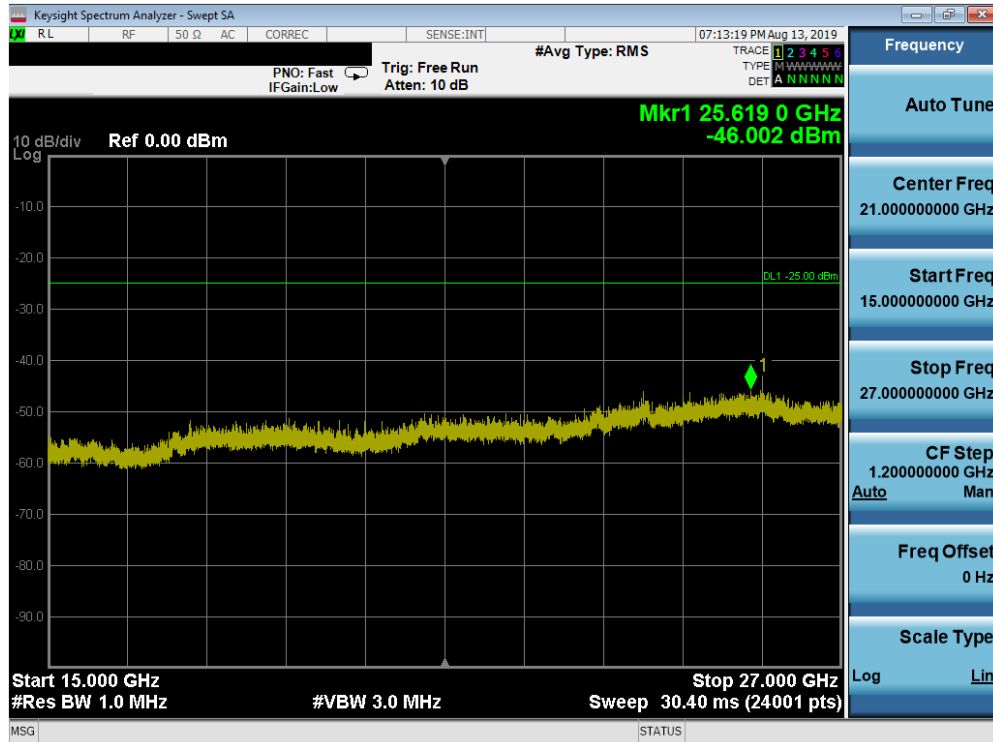


Plot 7-344. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

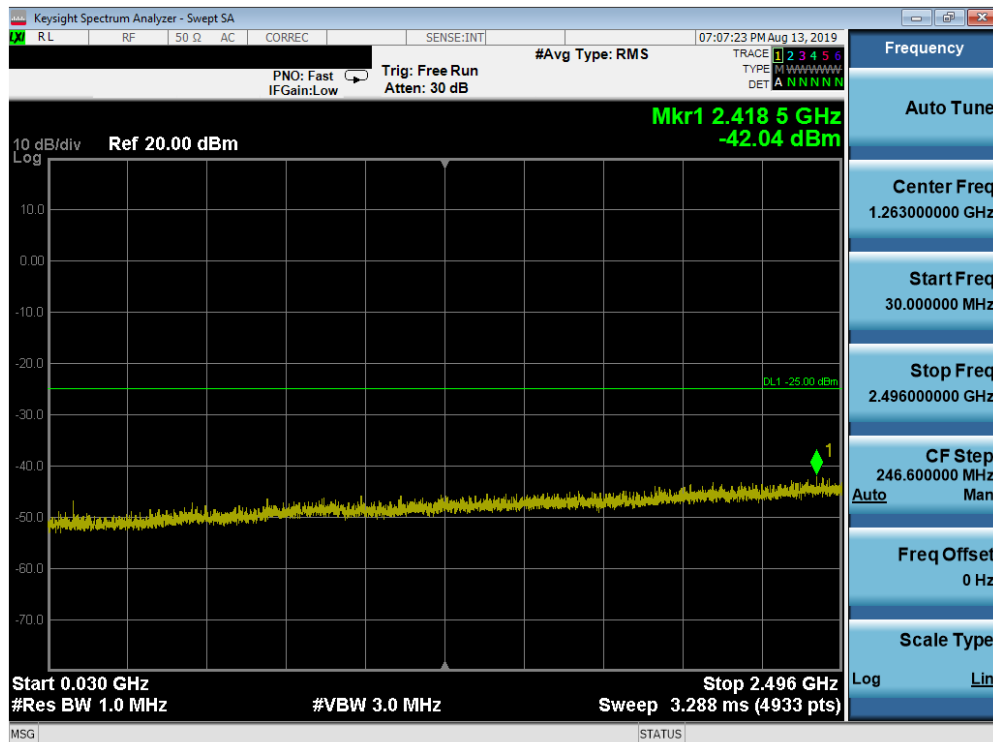


Plot 7-345. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 200 of 277

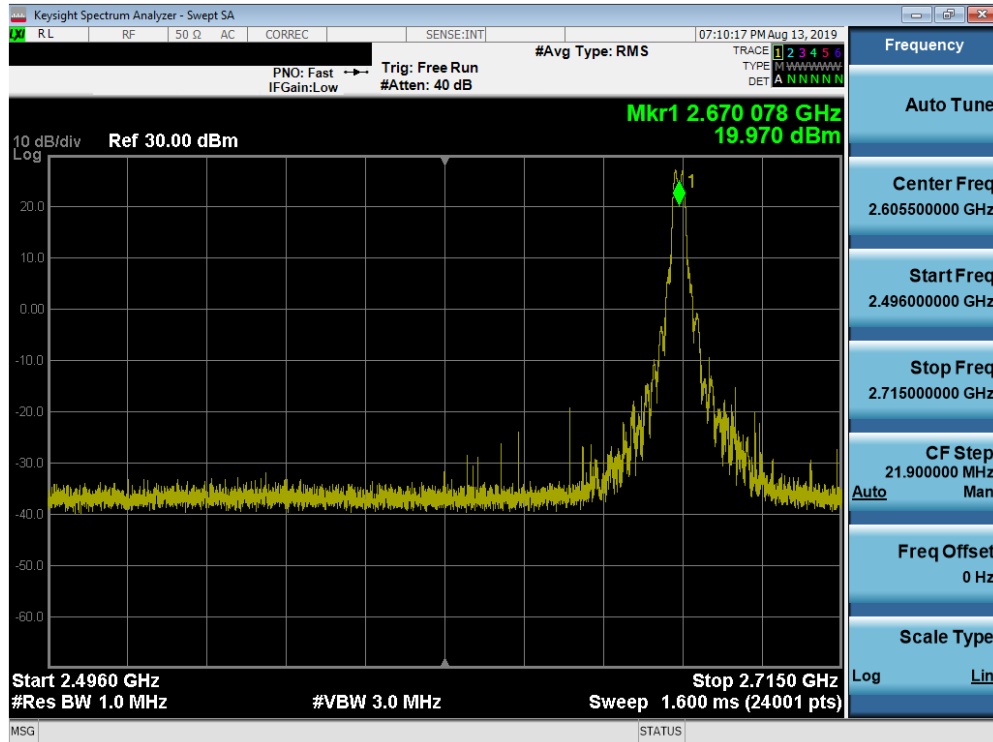


Plot 7-346. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

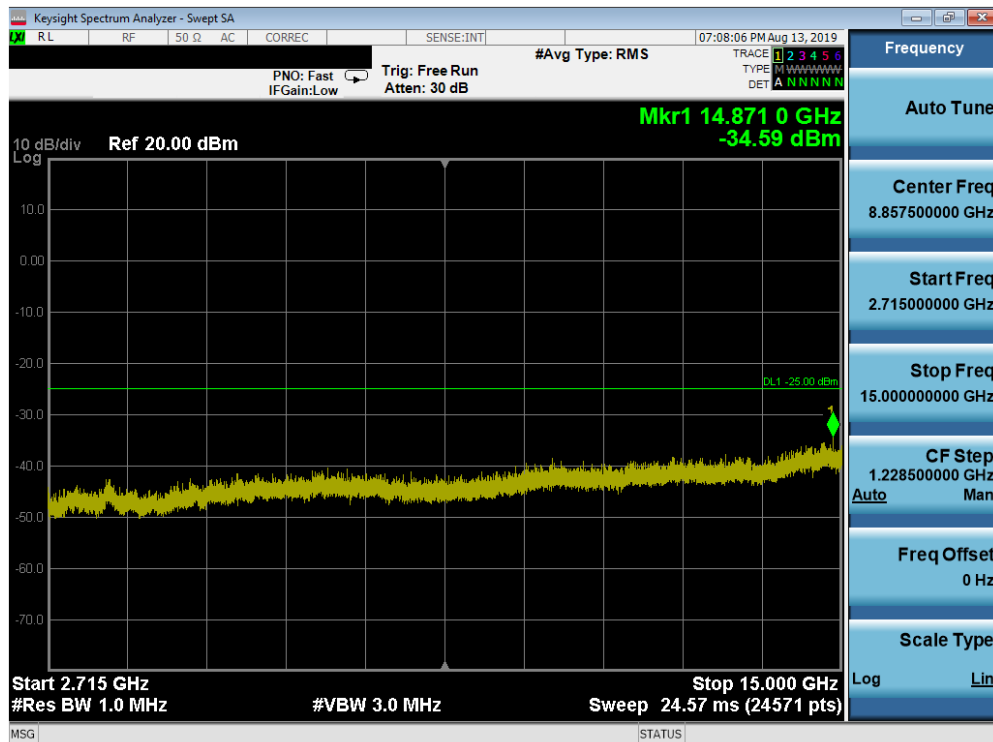


Plot 7-347. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 201 of 277

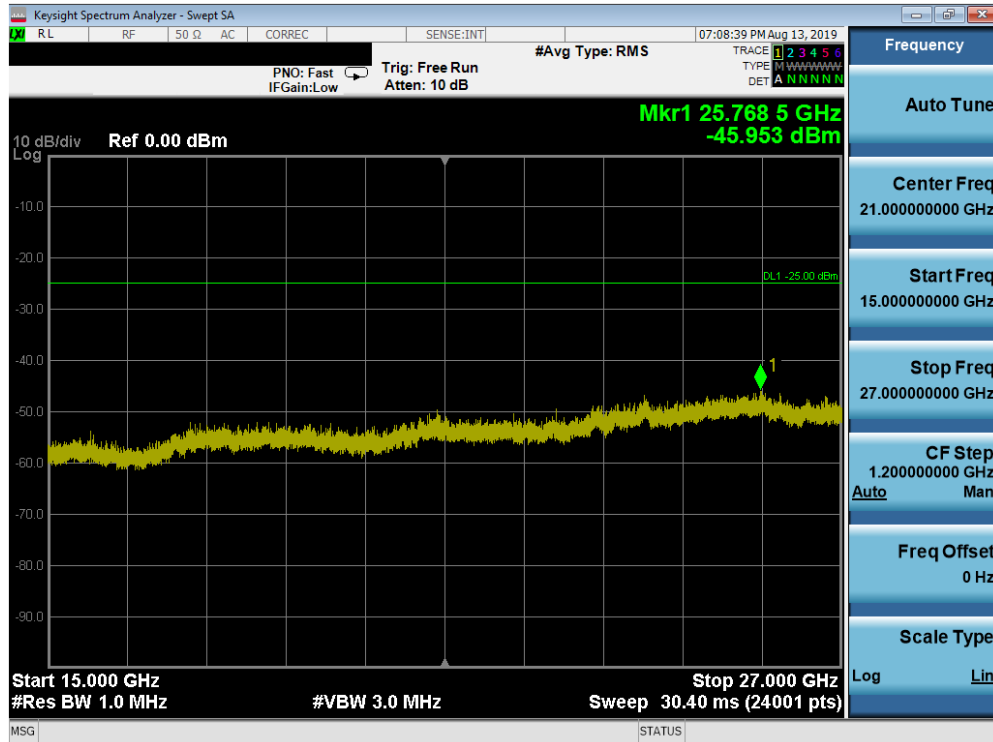


Plot 7-348. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

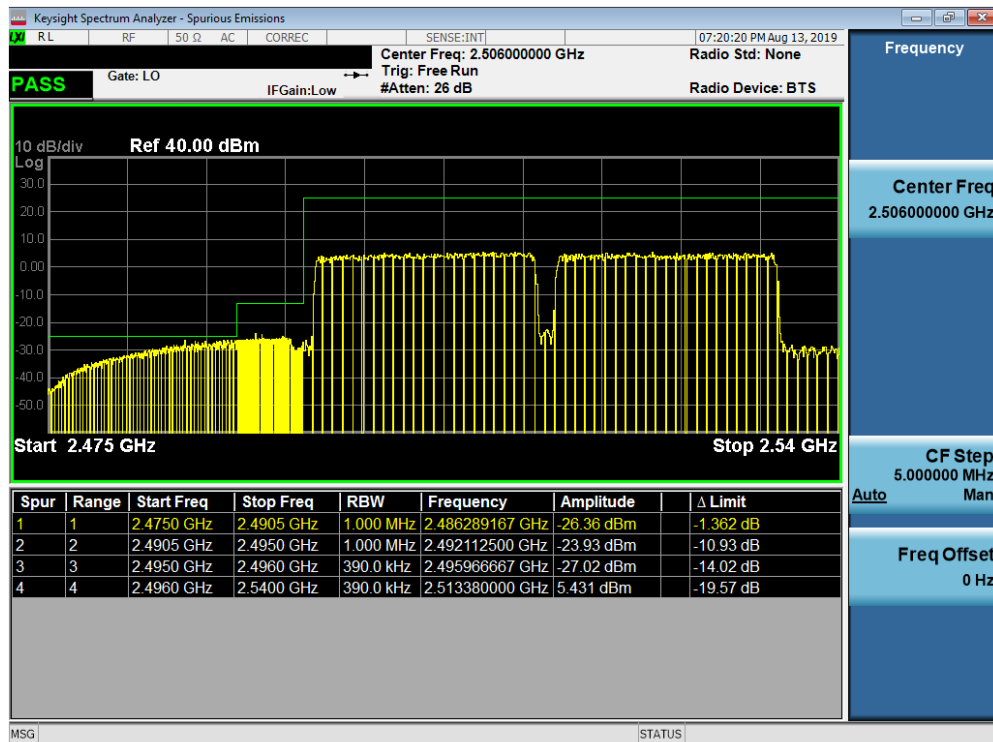


Plot 7-349. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 202 of 277

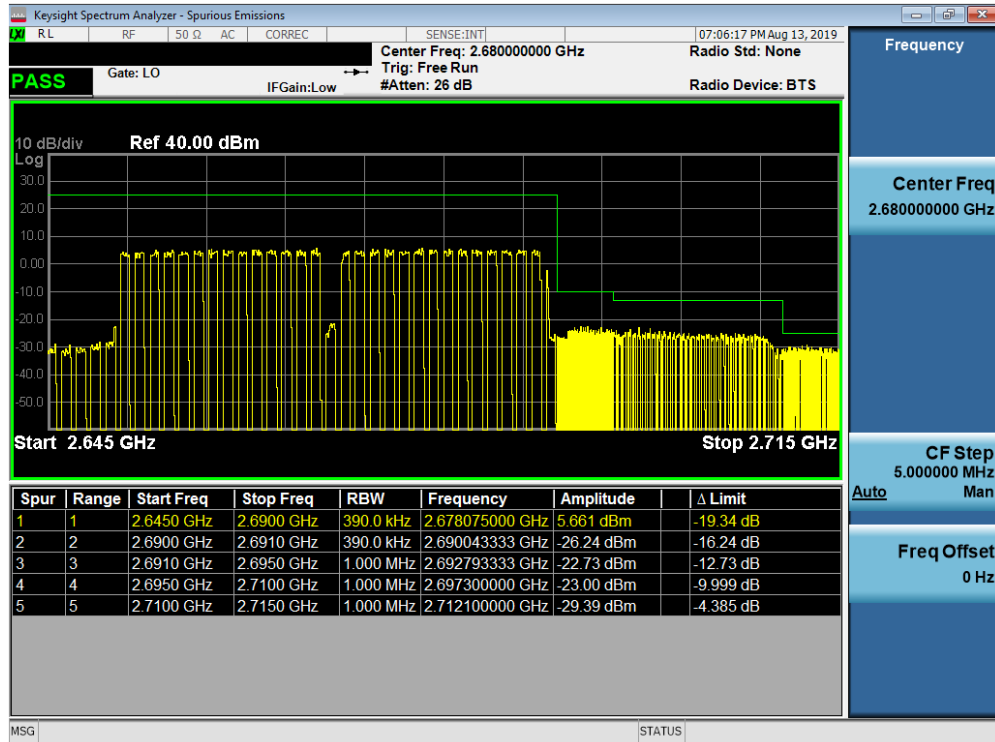


Plot 7-350. Conducted Spurious Plot (Band 41 PC2 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)



Plot 7-351. Lower ACP Plot (Band 41 PC2 - QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Plot 7-352. Lower ACP Plot (Band 41 PC2- QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 204 of 277

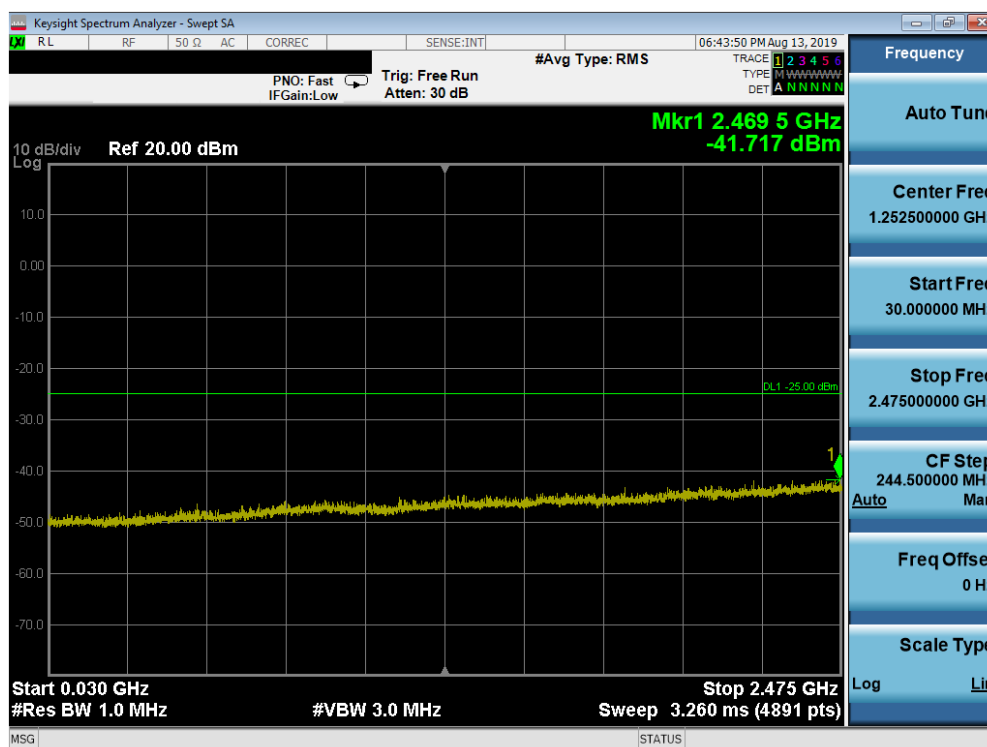
Uplink CA Configuration 41 (PC3)

Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	39750	2506	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	24.05
Max	LTE B41	20	40620	2593	QPSK	1	99	LTE B41	20	40818	2612.8	QPSK	1	0	24.19
Max	LTE B41	20	41490	2680	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	24.03

Table 7-5. Conducted Powers (B41 PC3 –20MHz + 20MHz Channel Bandwidth- PCC/SCC: 1RB)

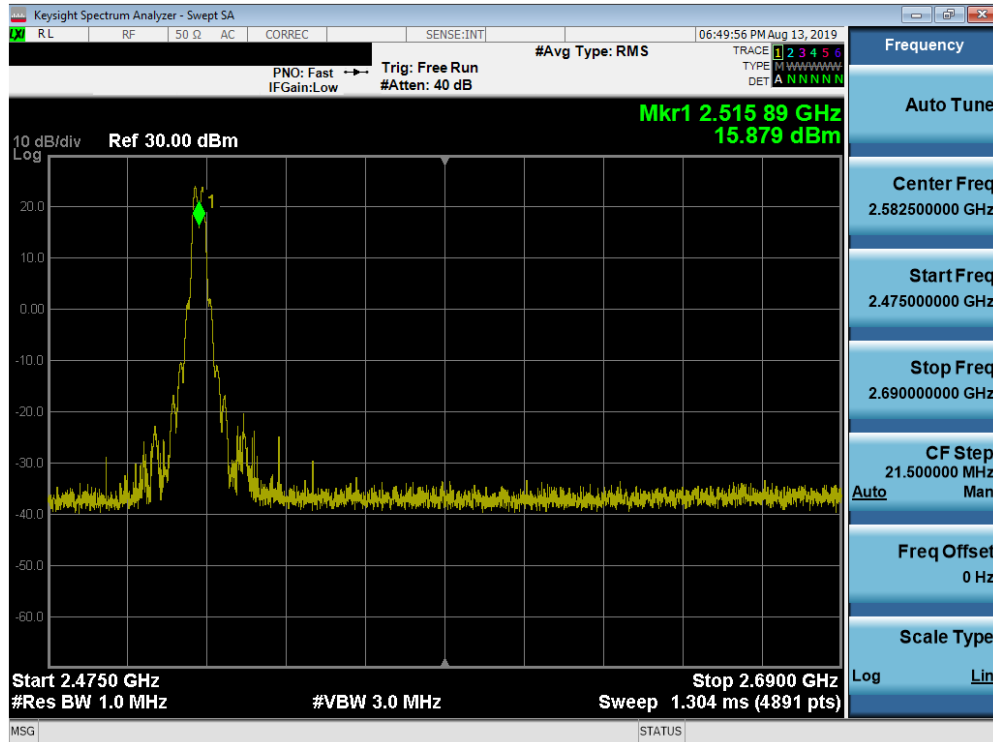
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	40620	2593	QPSK	100	0	LTE B41	20	40818	2612.8	QPSK	100	0	22.36
Max	LTE B41	20	40620	2593	16-QAM	100	0	LTE B41	20	40818	2612.8	16-QAM	100	0	21.39
Max	LTE B41	20	40620	2593	64-QAM	100	0	LTE B41	20	40818	2612.8	64-QAM	100	0	20.17

Table 7-6. Conducted Powers (B41 PC3 with Various Combinations for 20MHz + 20MHz Channel Bandwidth)

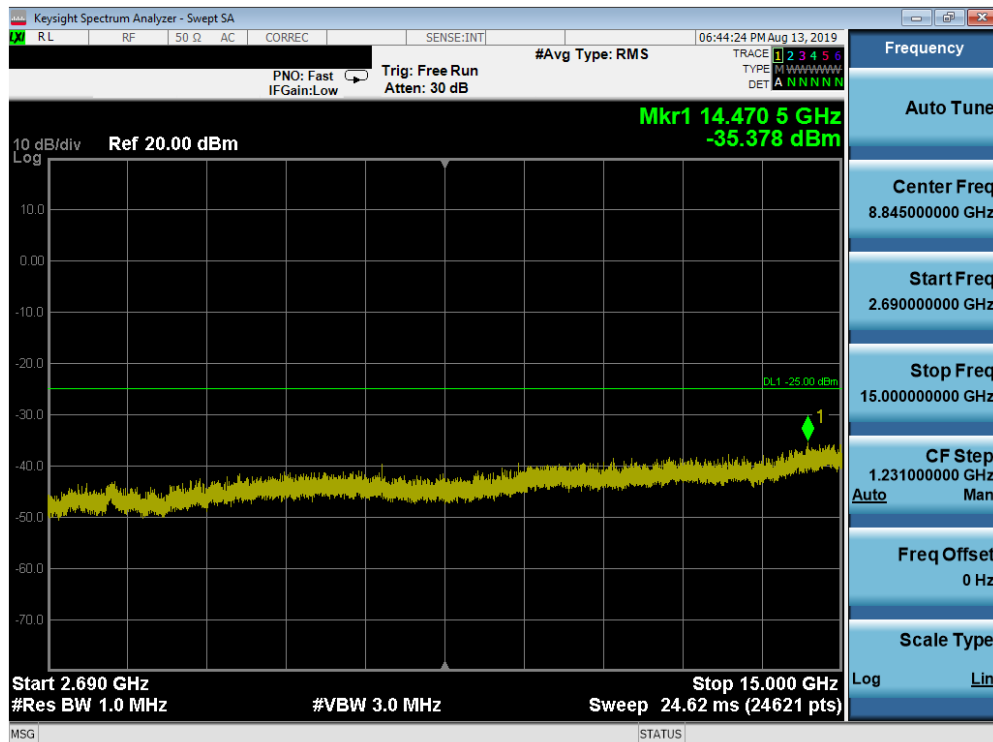


Plot 7-353. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet			Page 205 of 277

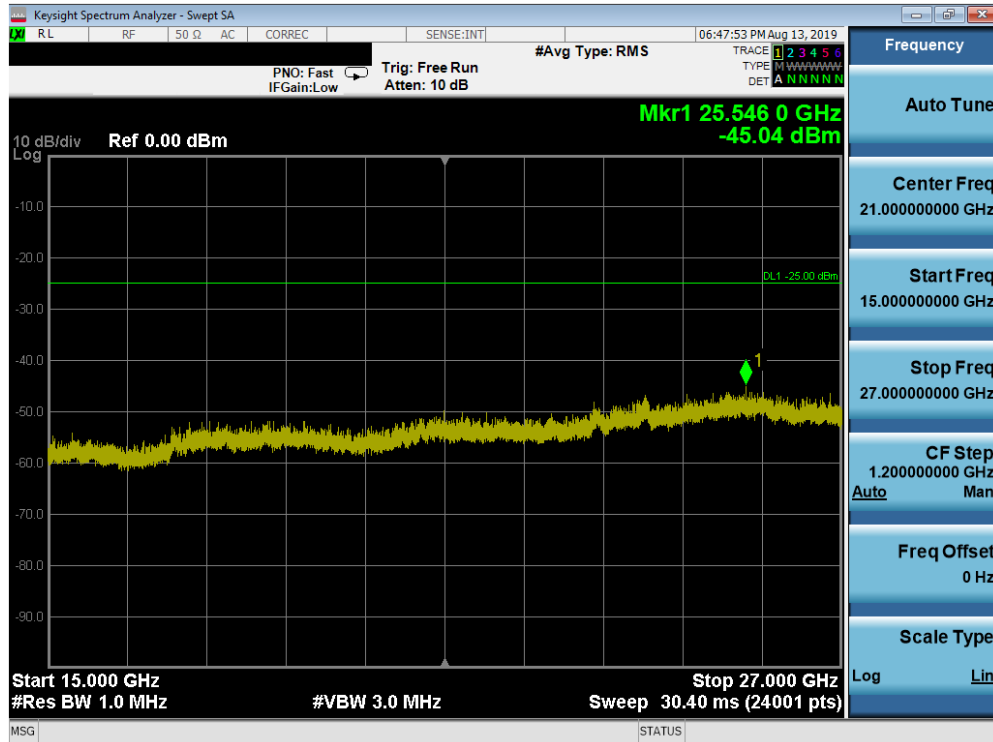


Plot 7-354. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

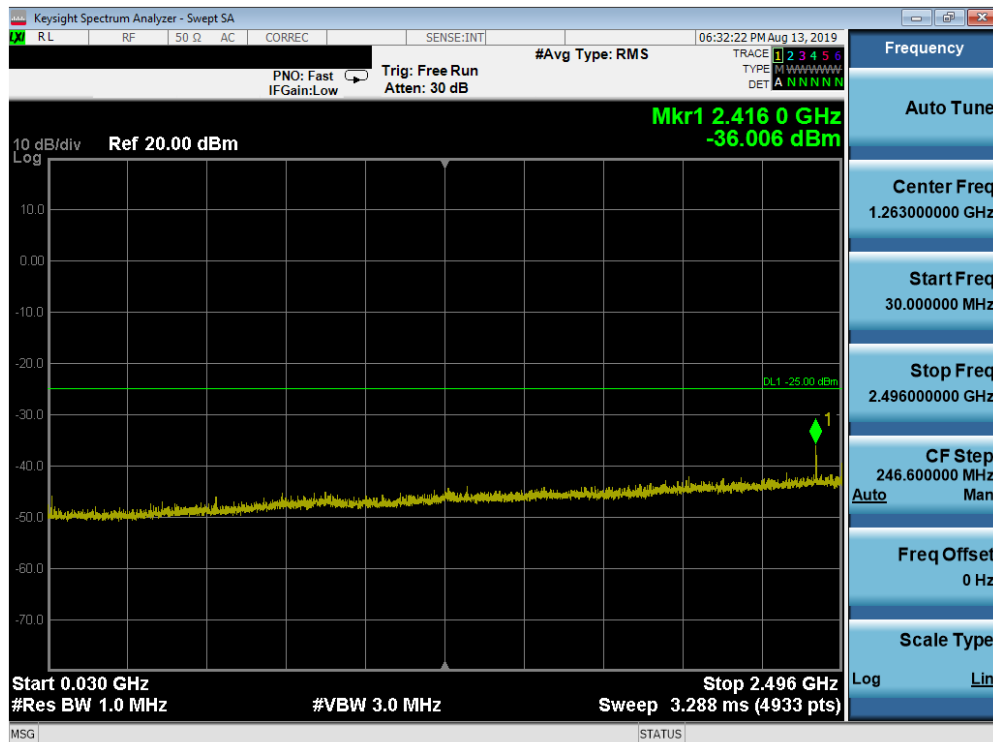


Plot 7-355. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: A3LSMT867U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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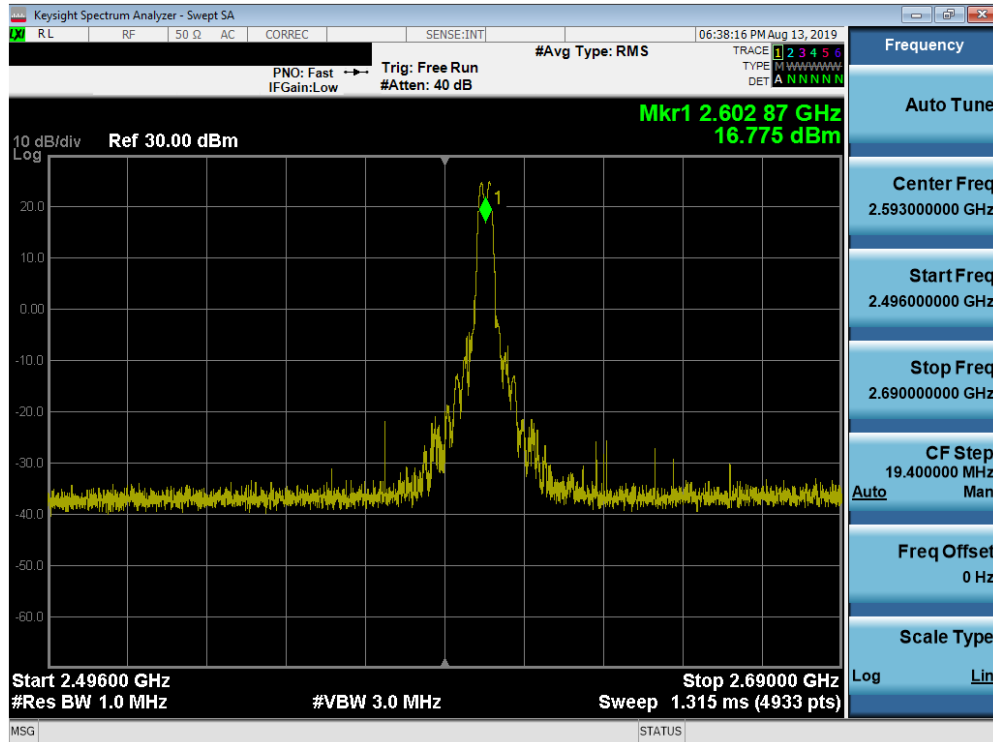


Plot 7-356. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

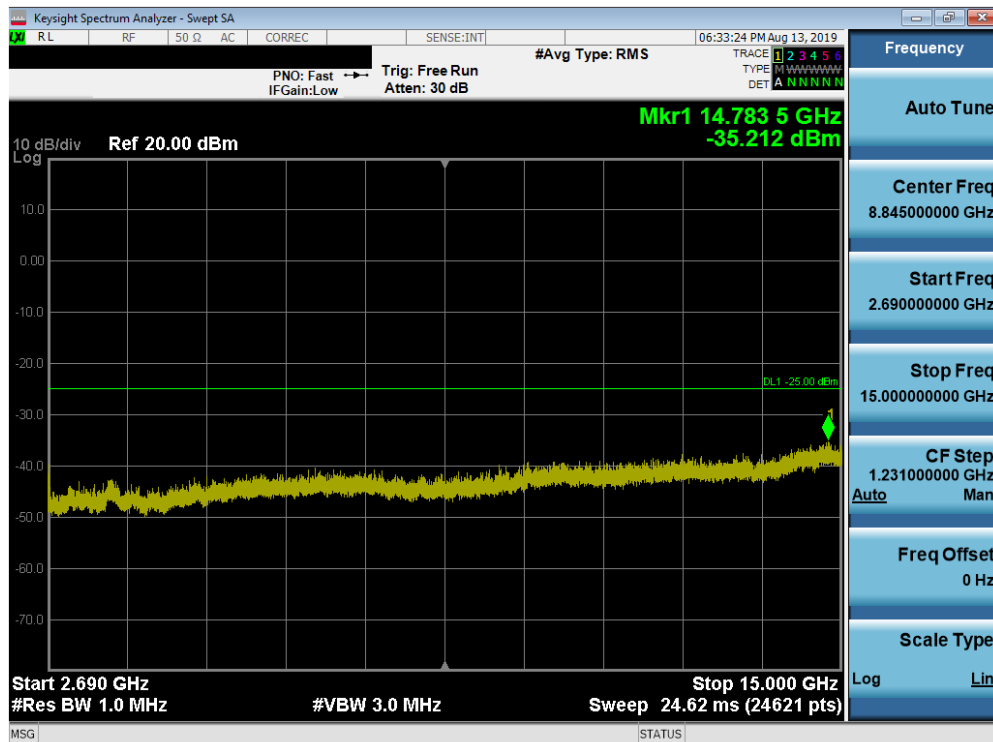


Plot 7-357. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 207 of 277

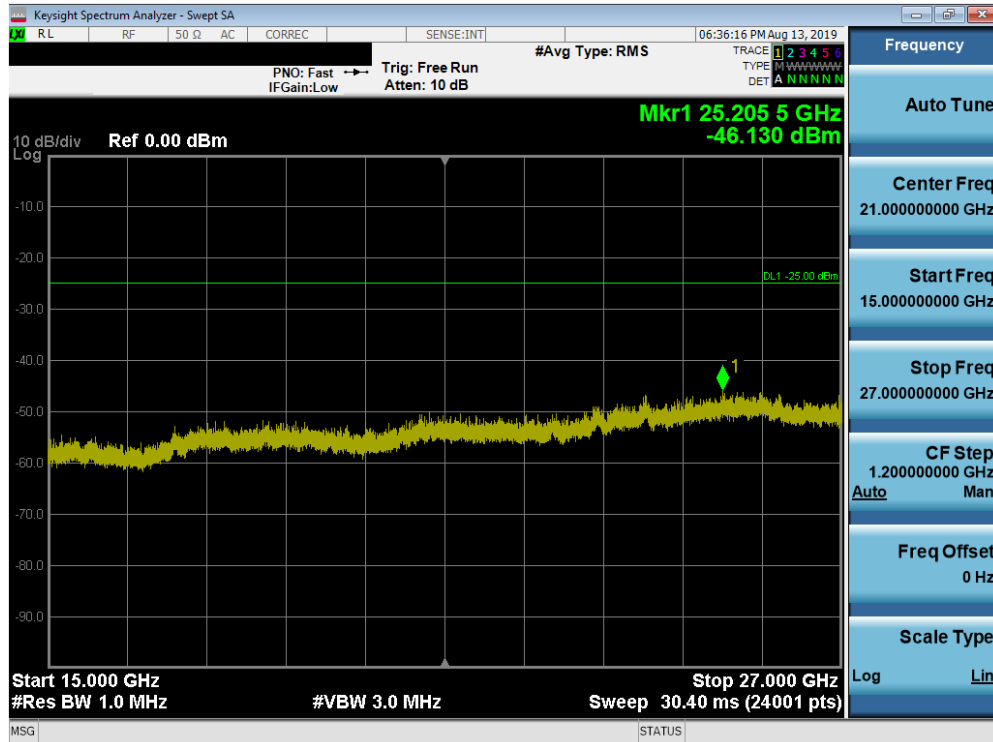


Plot 7-358. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

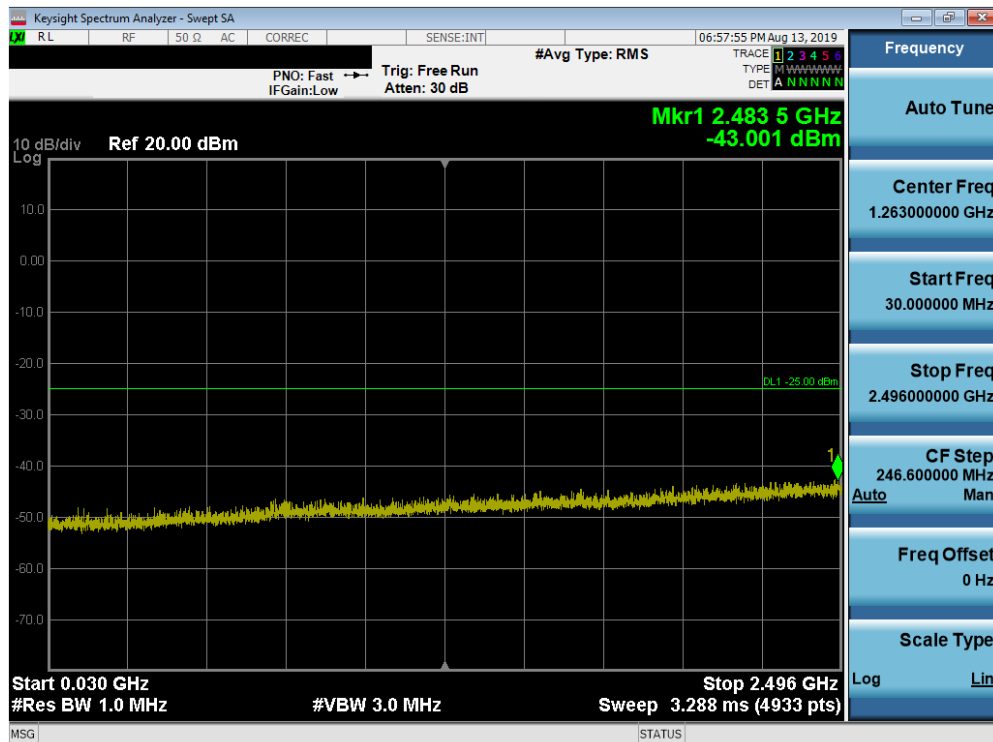


Plot 7-359. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 208 of 277

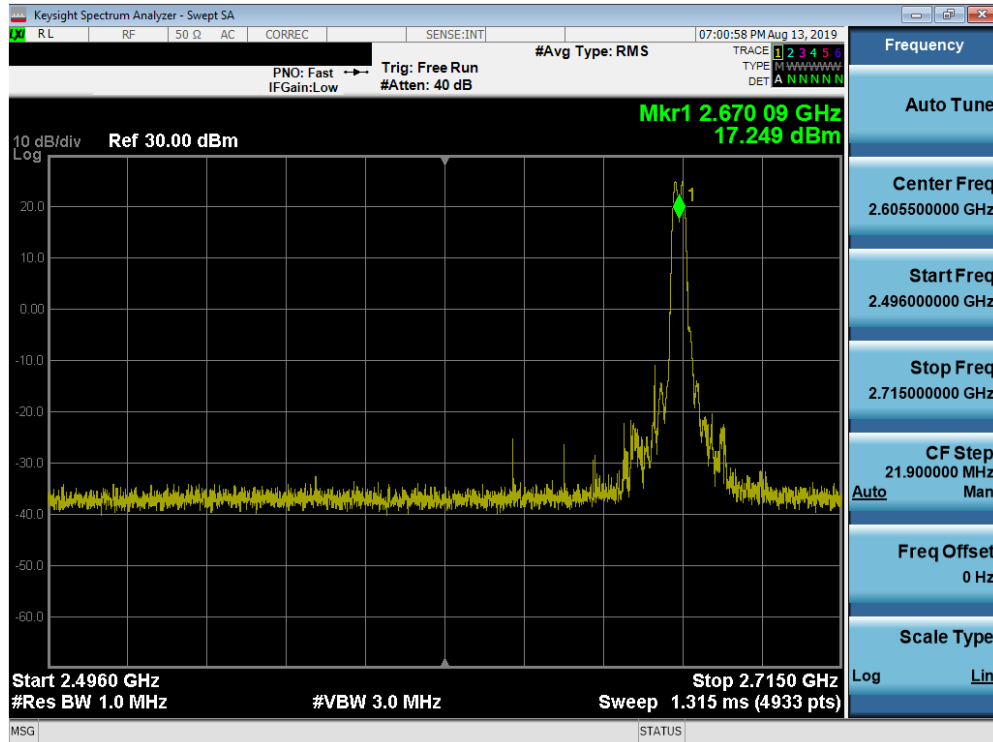


Plot 7-360. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

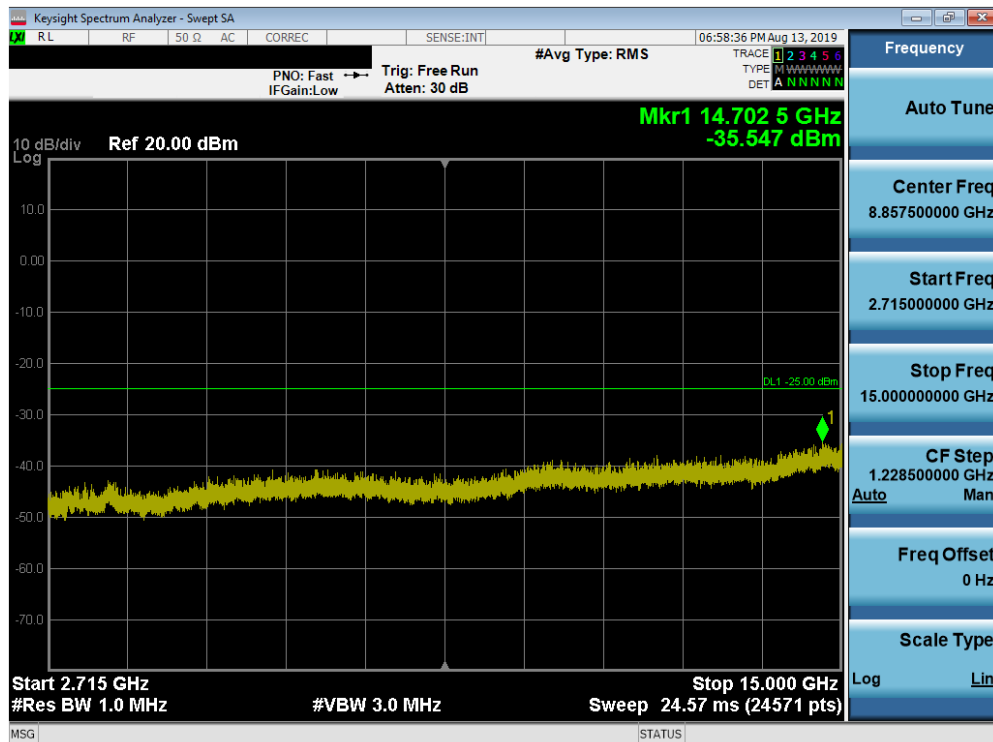


Plot 7-361. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 209 of 277

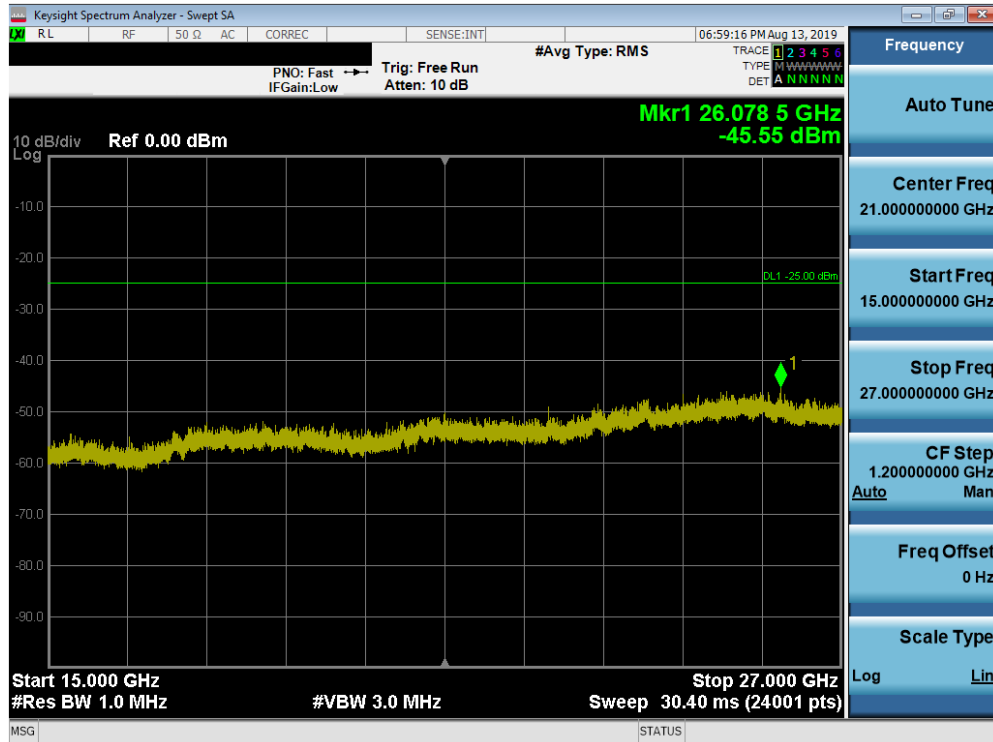


Plot 7-362. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

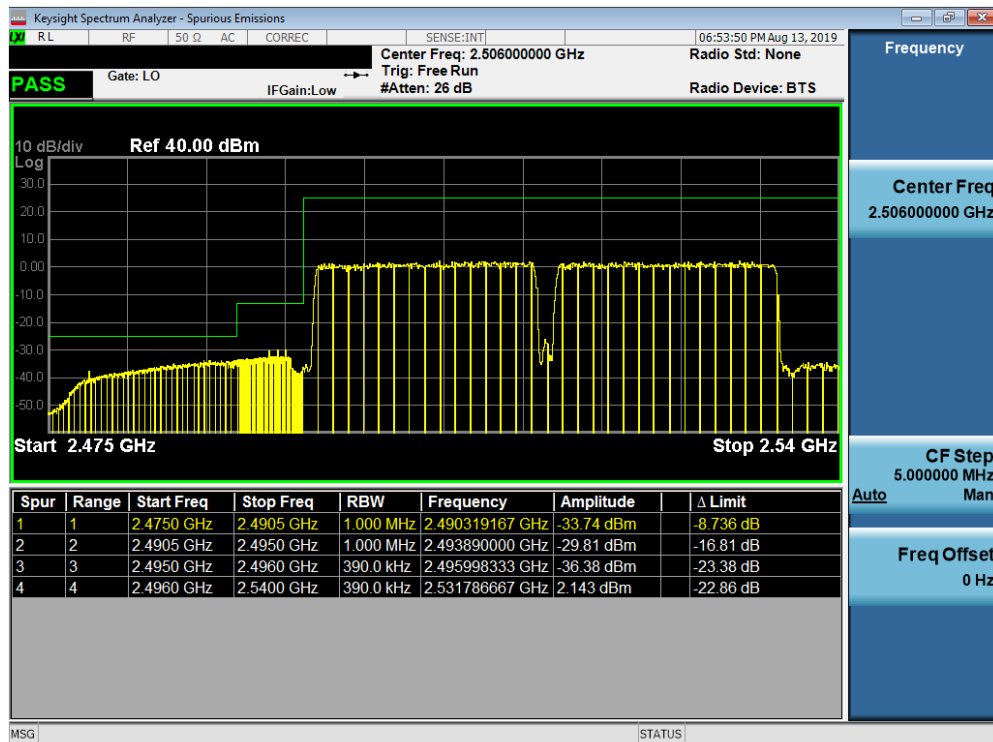


Plot 7-363. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 210 of 277

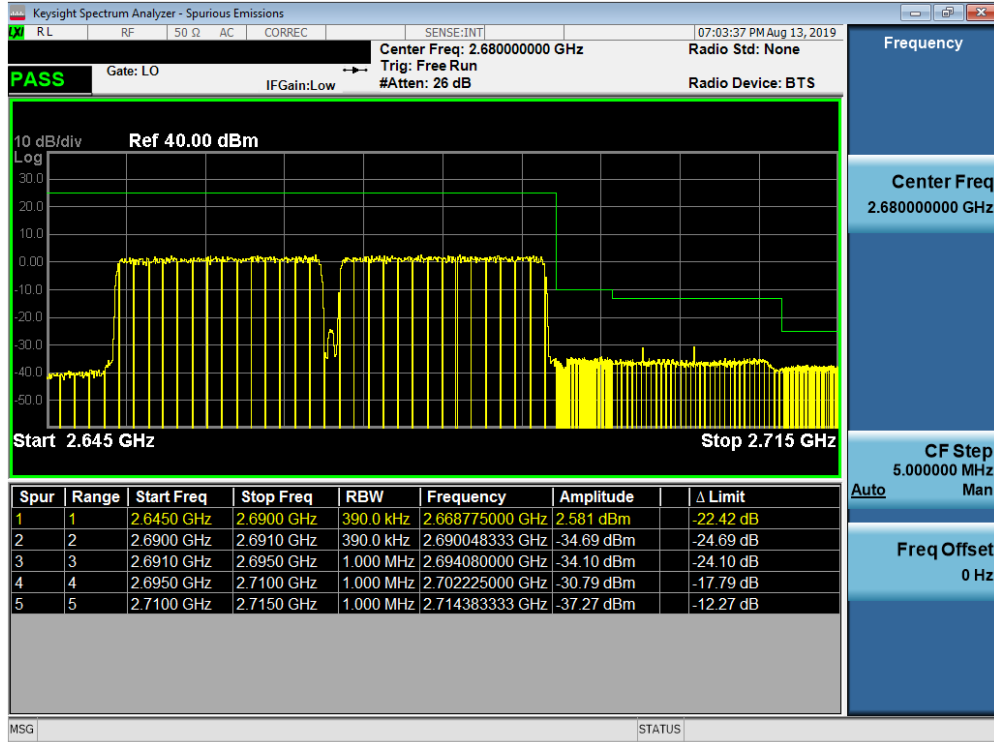


Plot 7-364. Conducted Spurious Plot (Band 41 PC3 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)



Plot 7-365. Lower ACP Plot (Band 41 PC3 - QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 211 of 277



Plot 7-366. Lower ACP Plot (Band 41 PC3- QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	<div><div>MEASUREMENT REPORT (CERTIFICATION)</div><div></div></div>		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 212 of 277

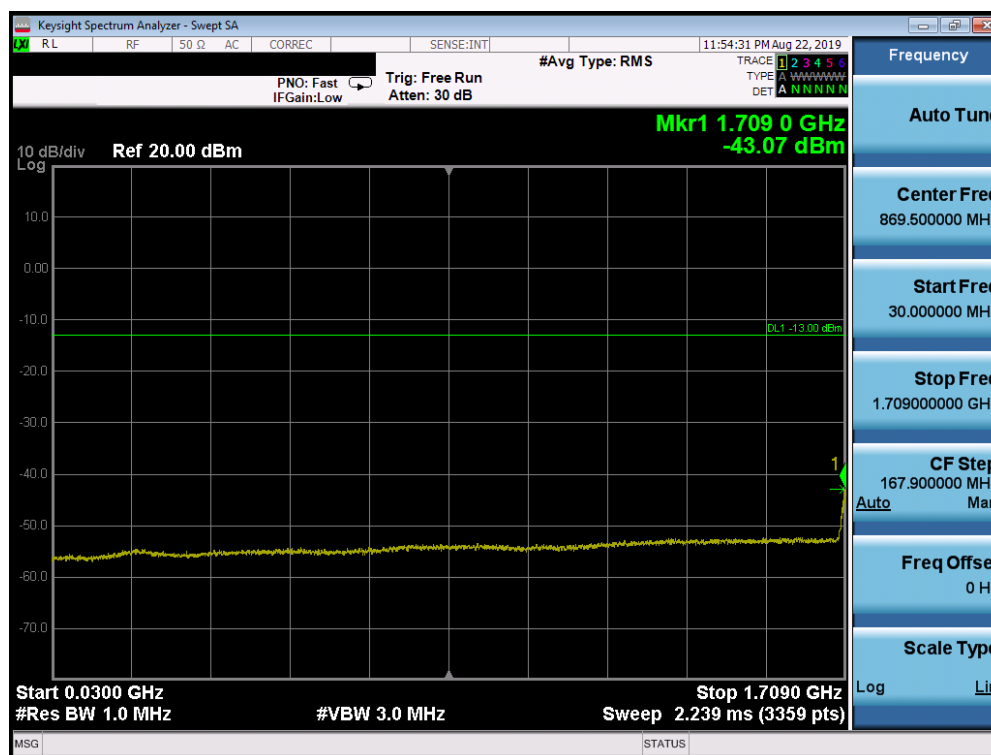
Uplink CA Configuration 66B/C

Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B66	20	132072	1720	QPSK	1	99	LTE B66	20	132270	1739.8	QPSK	1	0	23.04
Max	LTE B66	20	132322	1745	QPSK	1	99	LTE B66	20	132520	1764.8	QPSK	1	0	23.75
Max	LTE B66	20	132572	1770	QPSK	1	0	LTE B66	20	132374	1750.2	QPSK	1	99	23.40

Table 7-7. Conducted Powers (B66 –20MHz + 20MHz Channel Bandwidth- PCC/SCC: 1RB)

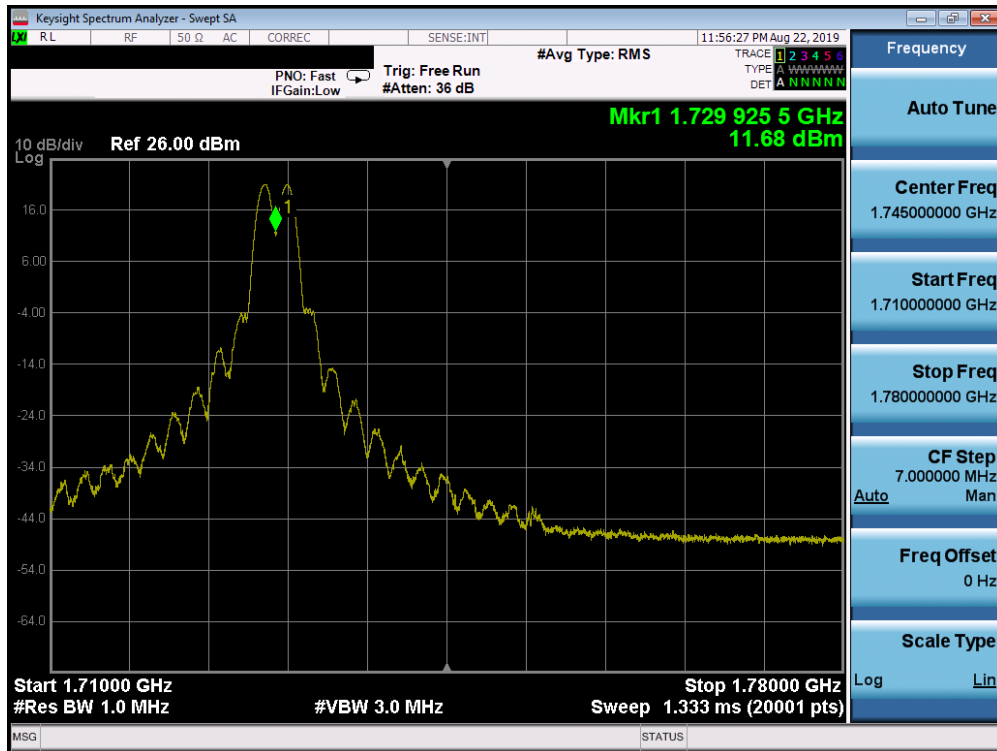
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B66	20	132322	1745	QPSK	100	0	LTE B66	20	132520	1764.8	QPSK	100	0	21.96
Max	LTE B66	20	132322	1745	16-QAM	100	0	LTE B66	20	132520	1764.8	16-QAM	100	0	20.81
Max	LTE B66	20	132322	1745	64-QAM	100	0	LTE B66	20	132520	1764.8	64-QAM	100	0	19.91

Table 7-8. Conducted Powers (B66 with Various Combinations for 20MHz + 20MHz Channel Bandwidth)

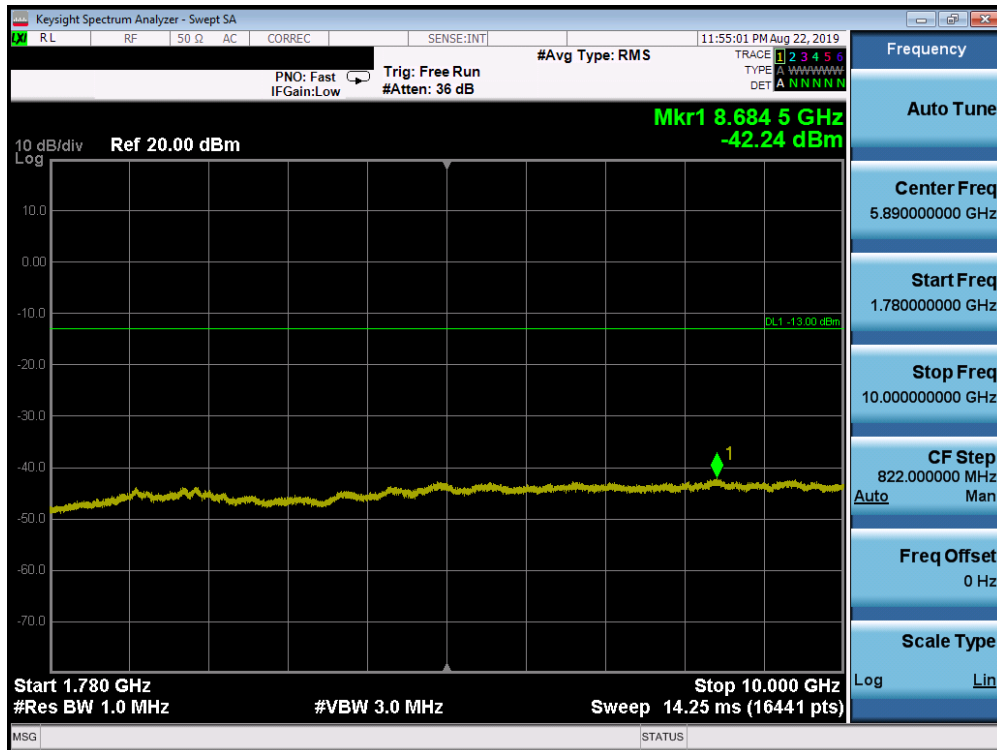


Plot 7-367. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 213 of 277

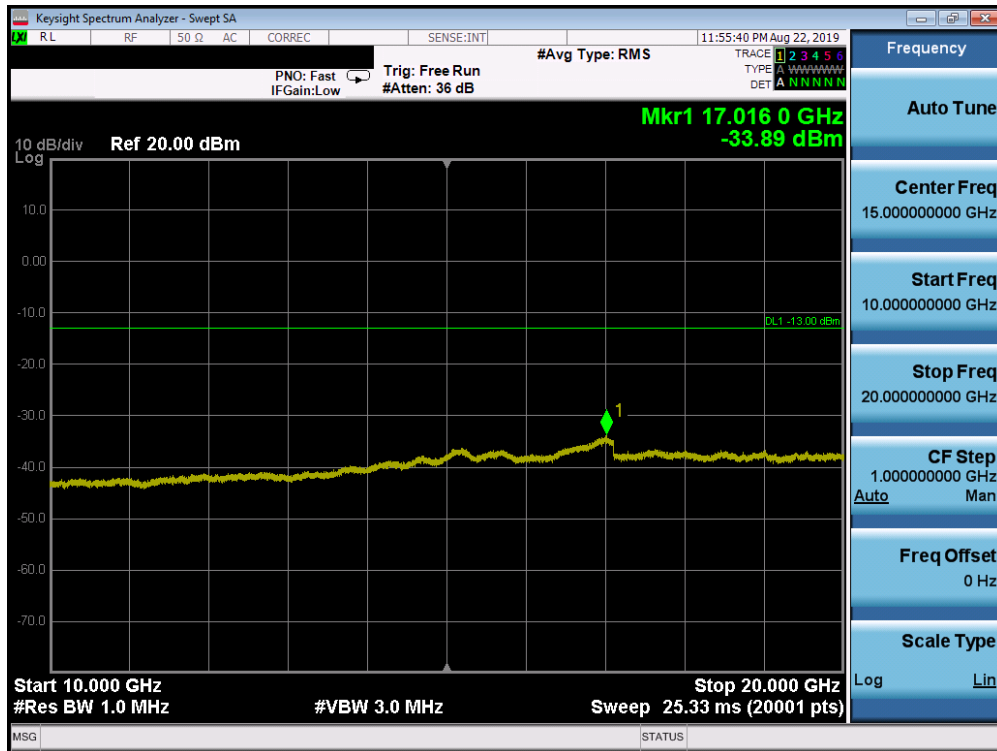


Plot 7-368. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

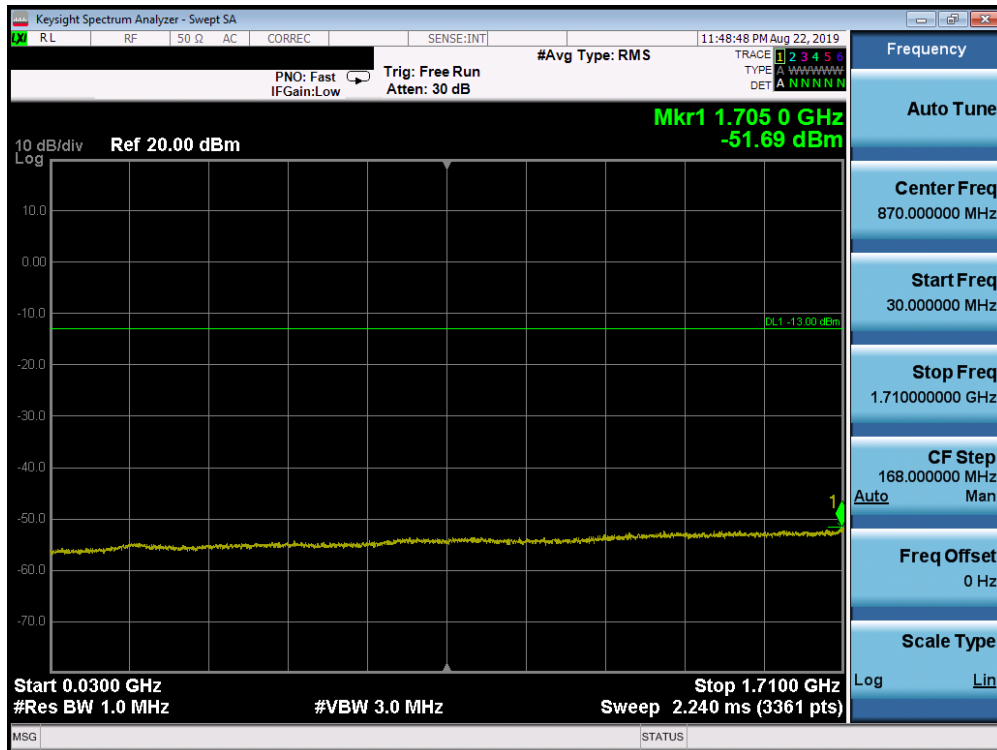


Plot 7-369. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 214 of 277

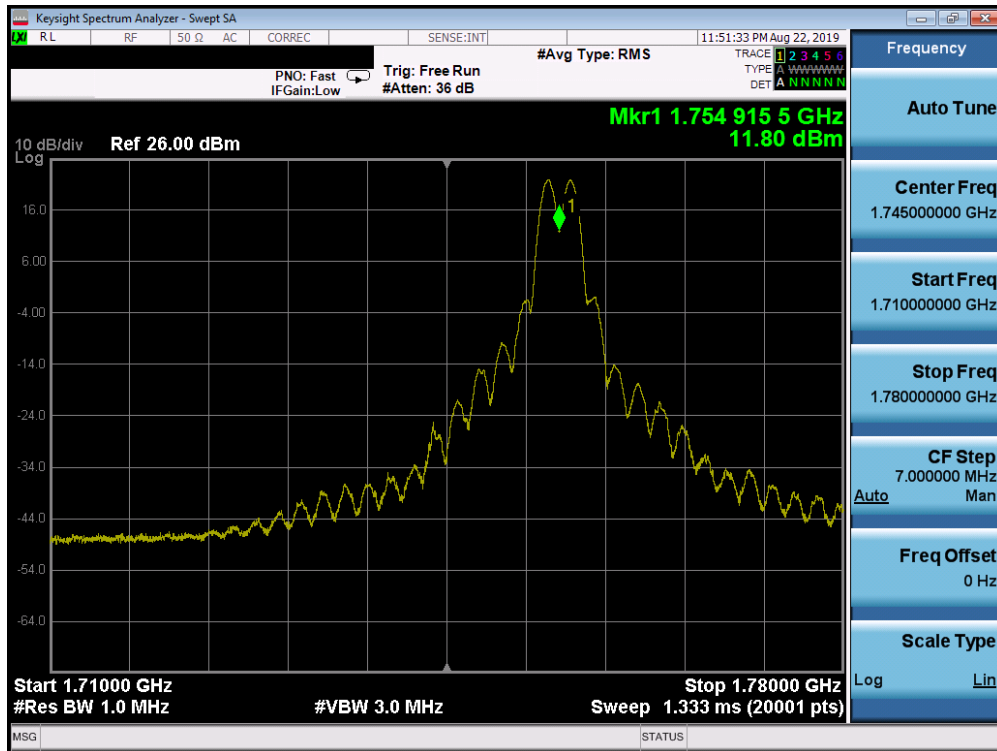


Plot 7-370. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

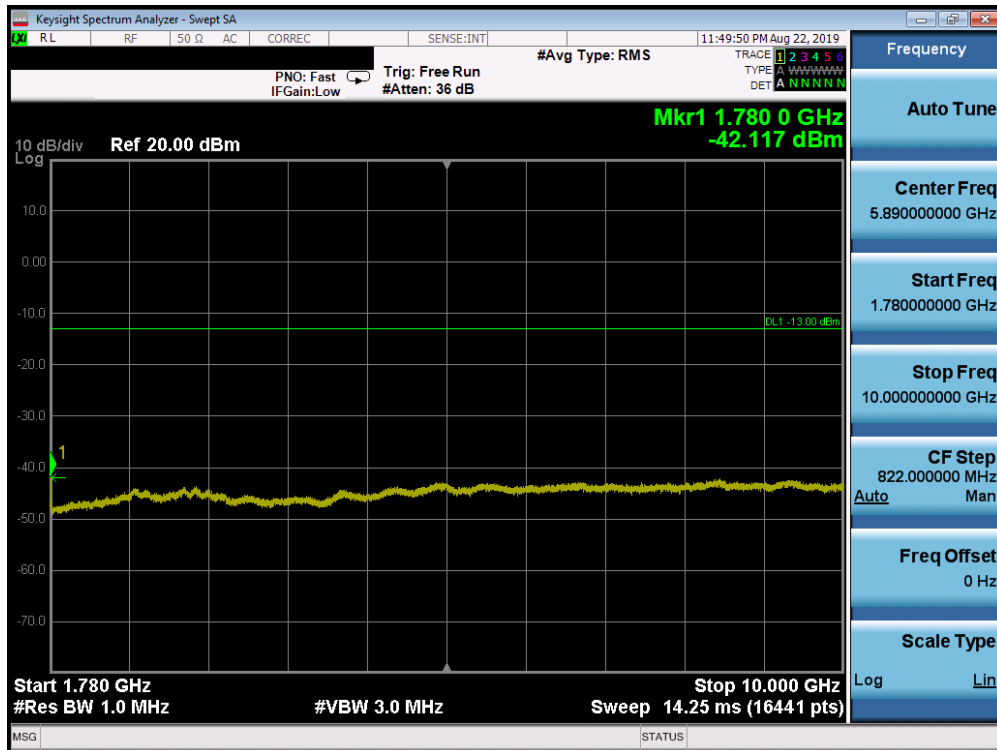


Plot 7-371. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 215 of 277

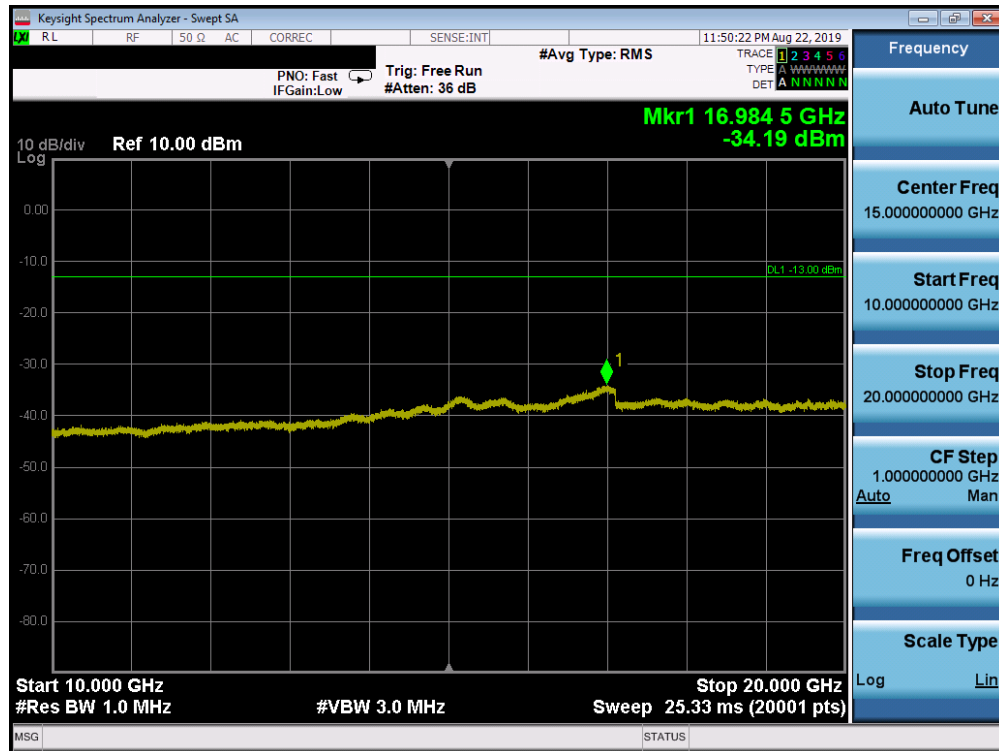


Plot 7-372. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

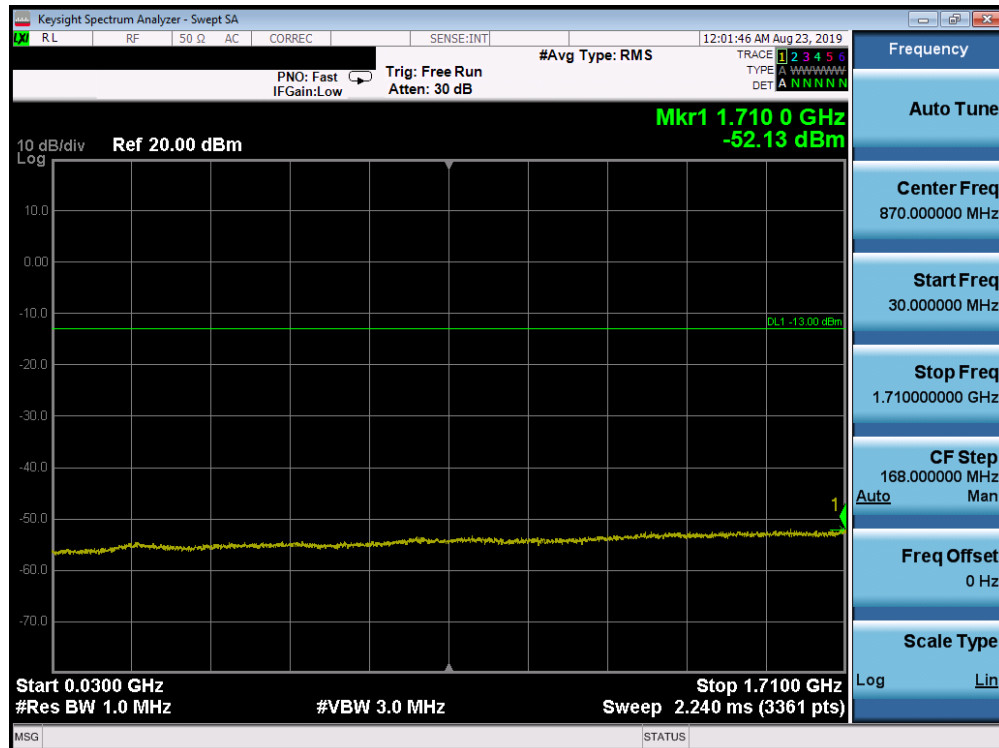


Plot 7-373. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 216 of 277

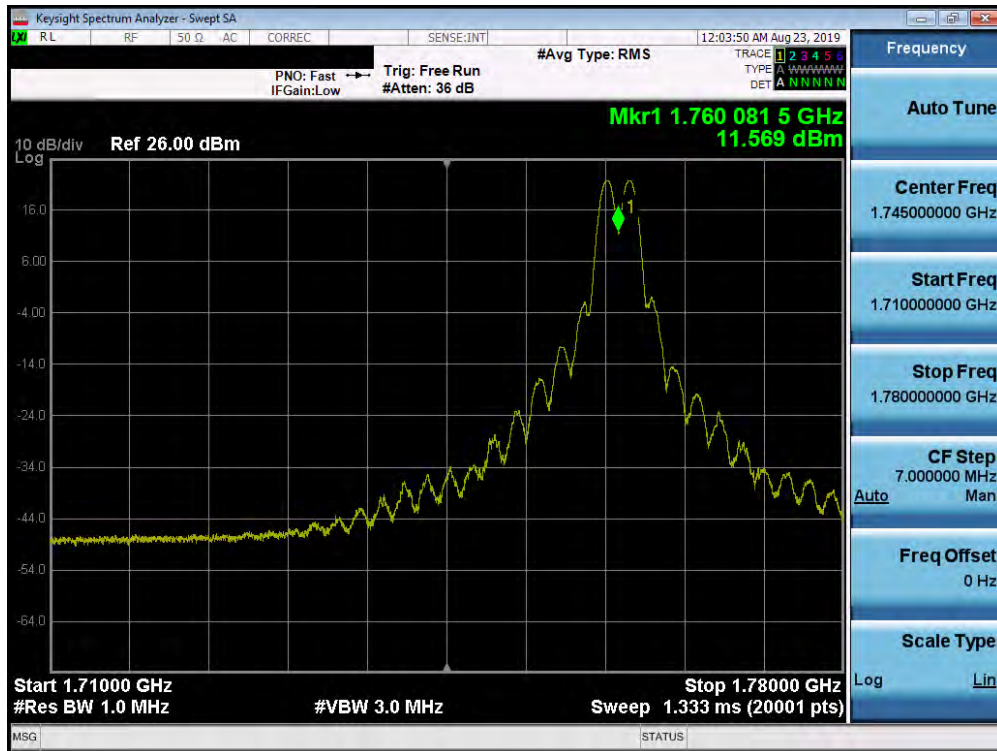


Plot 7-374. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

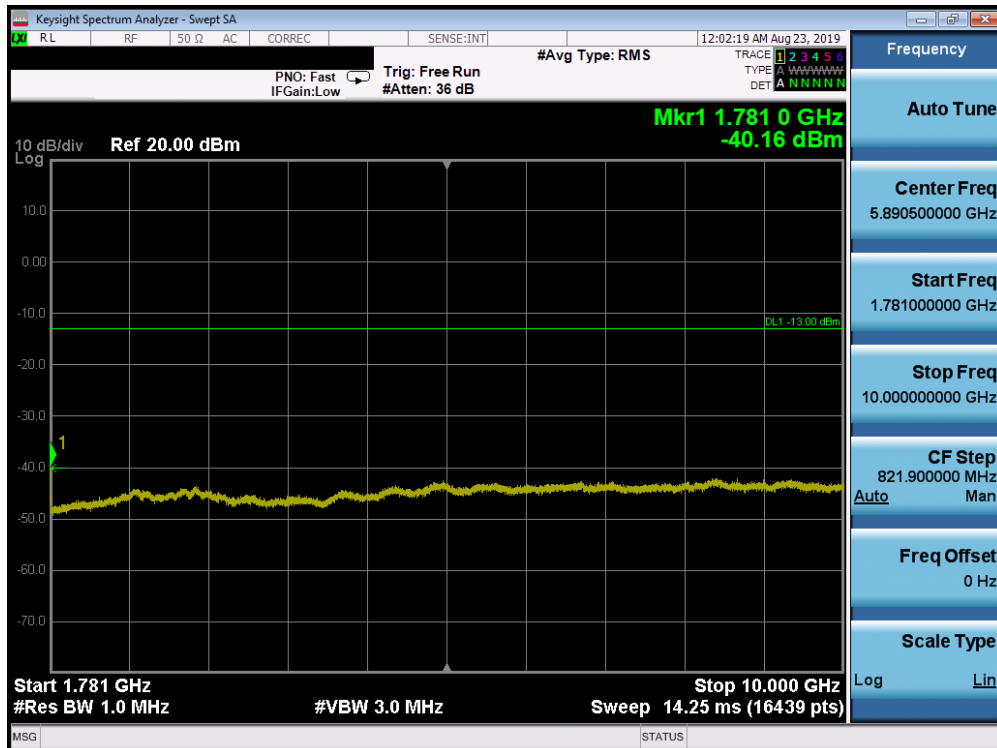


Plot 7-375. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 217 of 277

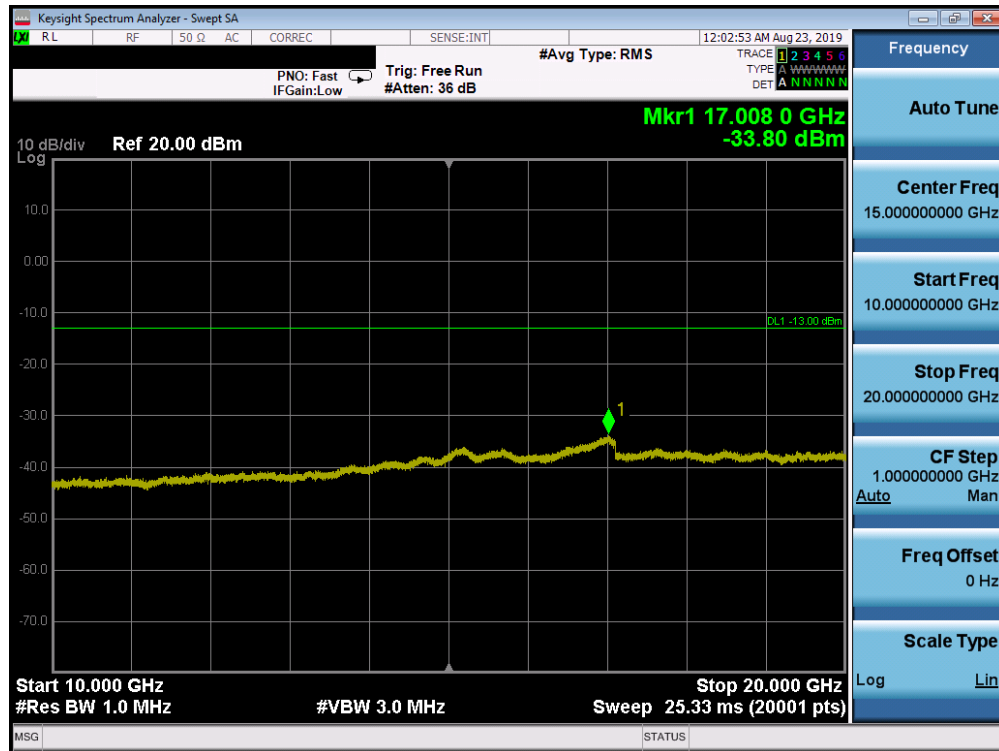


Plot 7-376. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

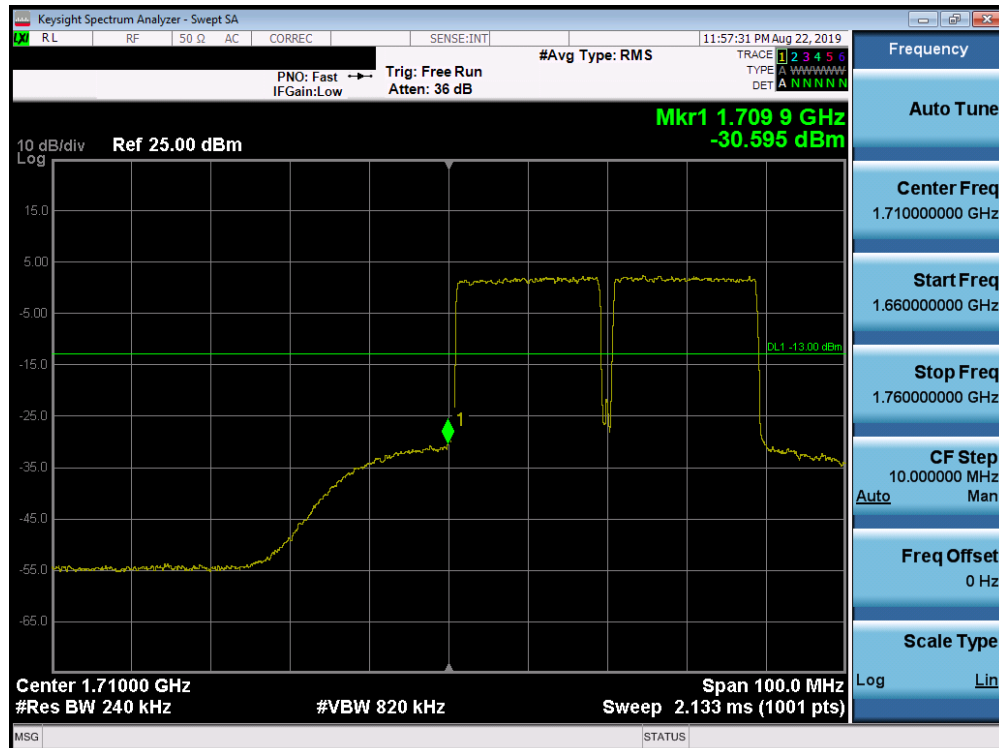


Plot 7-377. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 218 of 277

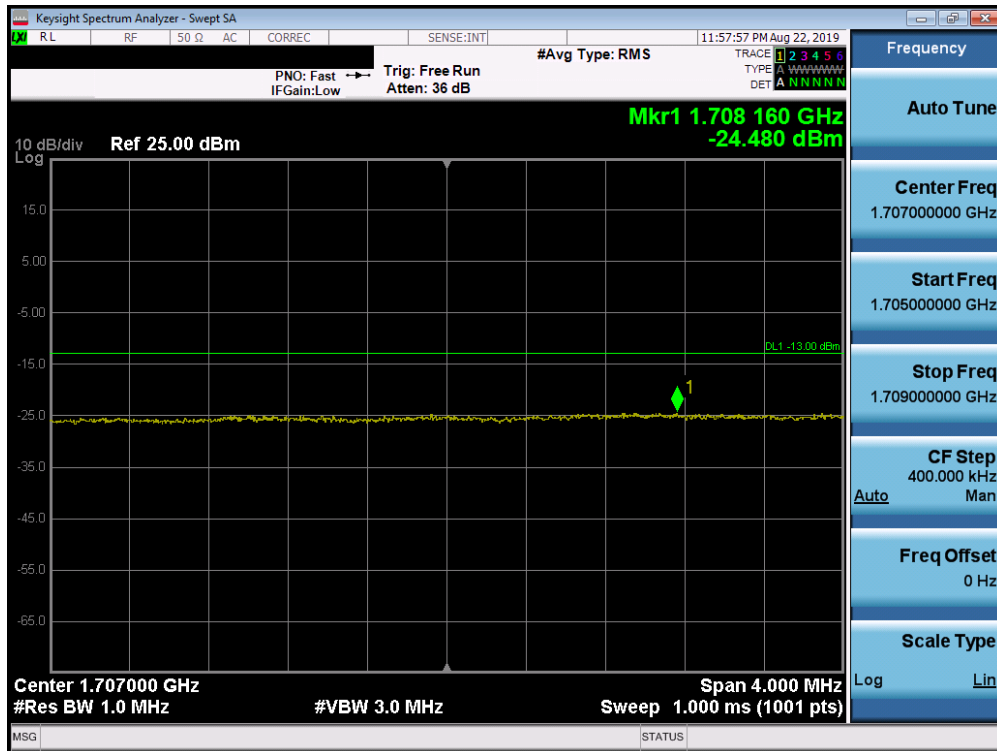


Plot 7-378. Conducted Spurious Plot (Band 66 – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)



Plot 7-379. Lower Band Edge Plot (Band 66 - QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 219 of 277

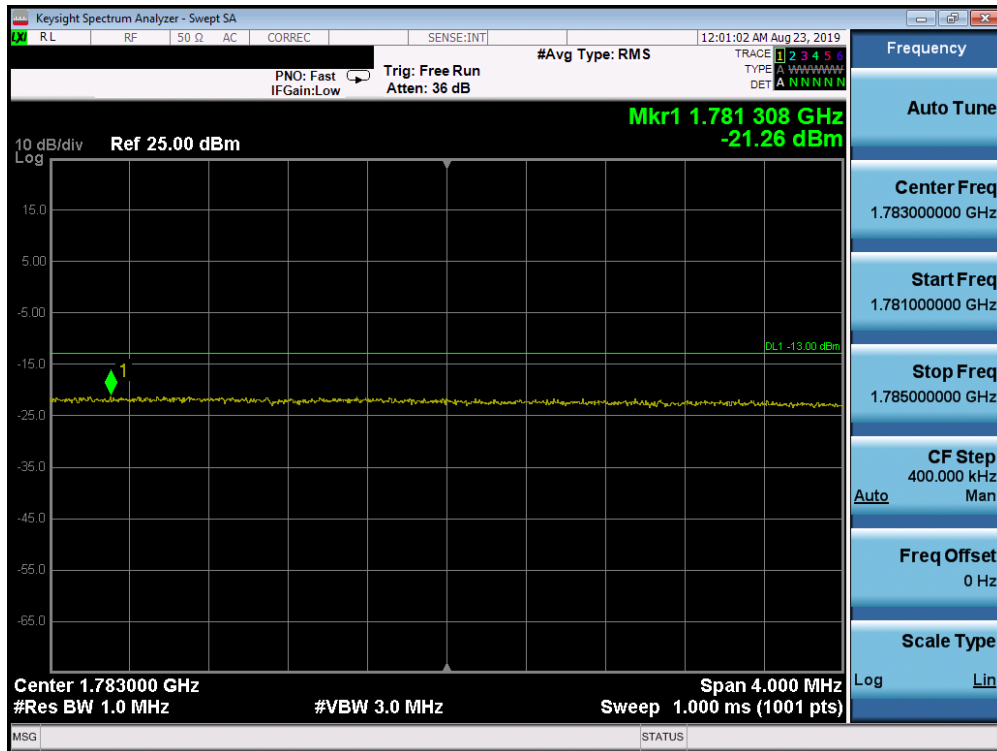


Plot 7-380. Lower Extended Band Edge Plot (Band 66 - QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)



Plot 7-381. Upper Band Edge Plot (Band 66- QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 220 of 277



Plot 7-382. Upper Extended Band Edge Plot (Band 66- QPSK – PCC: 20 MHz SCC:20 MHz – Full RB)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 221 of 277

7.7 Radiated Power (ERP/EIRP)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Test Setup

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

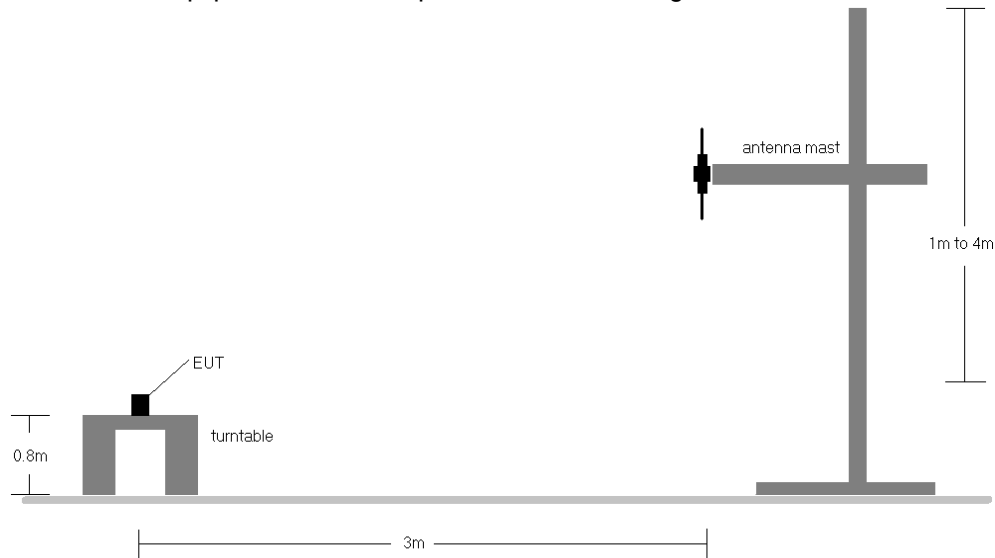


Figure 7-6. Radiated Test Setup <1GHz

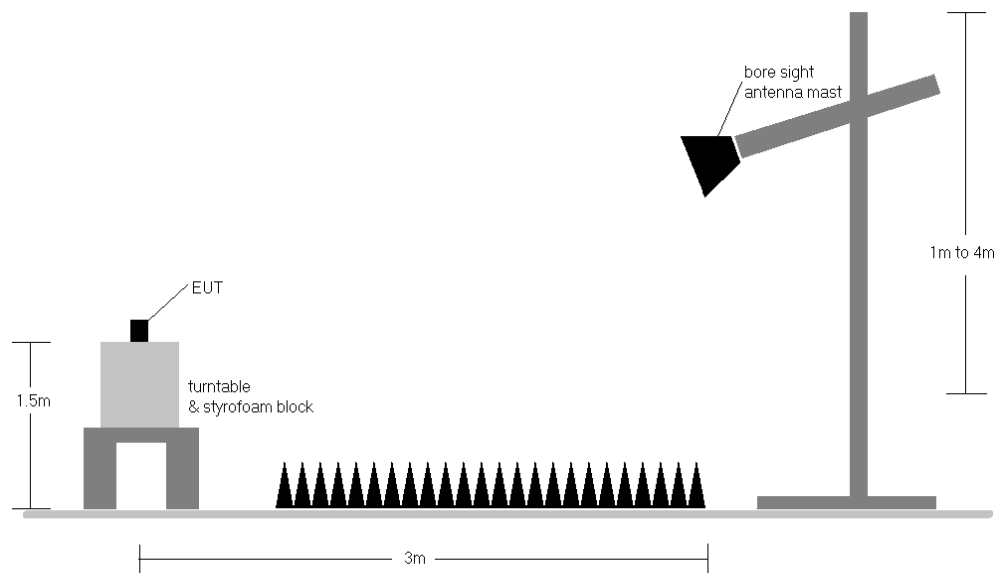


Figure 7-7. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
665.50	5	QPSK	V	102	265	1 / 24	16.17	3.75	17.77	0.060	34.77	-17.00
680.50	5	QPSK	V	102	268	1 / 24	16.71	4.20	18.76	0.075	34.77	-16.01
695.50	5	QPSK	V	102	265	1 / 0	16.52	4.50	18.87	0.077	34.77	-15.90
695.50	5	16-QAM	V	102	265	1 / 0	16.22	4.50	18.57	0.072	34.77	-16.20
695.50	5	64-QAM	V	102	265	1 / 0	15.54	4.50	17.89	0.062	34.77	-16.88
668.00	10	QPSK	V	103	270	1 / 49	16.16	3.80	17.81	0.060	34.77	-16.96
680.50	10	QPSK	V	100	265	1 / 49	16.70	4.20	18.75	0.075	34.77	-16.02
693.00	10	QPSK	V	103	268	1 / 0	16.61	4.40	18.86	0.077	34.77	-15.91
693.00	10	16-QAM	V	103	268	1 / 0	16.21	4.40	18.46	0.070	34.77	-16.31
693.00	10	64-QAM	V	103	268	1 / 0	15.53	4.40	17.78	0.060	34.77	-16.99
670.50	15	QPSK	V	102	265	1 / 74	16.15	3.90	17.90	0.062	34.77	-16.87
680.50	15	QPSK	V	102	262	1 / 74	16.69	4.20	18.74	0.075	34.77	-16.03
690.50	15	QPSK	V	101	265	1 / 0	16.60	4.40	18.85	0.077	34.77	-15.92
690.50	15	16-QAM	V	101	265	1 / 0	16.20	4.40	18.45	0.070	34.77	-16.32
690.50	15	64-QAM	V	101	265	1 / 0	15.52	4.40	17.77	0.060	34.77	-17.00
673.00	20	QPSK	V	100	260	1 / 99	16.14	4.00	17.99	0.063	34.77	-16.78
680.50	20	QPSK	V	102	260	1 / 99	16.68	4.20	18.73	0.075	34.77	-16.04
688.00	20	QPSK	V	100	265	1 / 0	16.69	4.40	18.94	0.078	34.77	-15.83
688.00	20	16-QAM	V	100	265	1 / 0	16.19	4.40	18.44	0.070	34.77	-16.33
688.00	20	64-QAM	V	100	265	1 / 0	15.51	4.40	17.76	0.060	34.77	-17.01
688.00	20	QPSK	H	101	277	1 / 0	13.54	4.20	15.59	0.036	34.77	-19.18

Table 7-9. ERP Data (Band 71)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 224 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	V	102	308	1 / 5	15.78	4.50	18.13	0.065	34.77	-16.64
707.50	1.4	QPSK	V	108	306	1 / 5	15.84	4.60	18.29	0.067	34.77	-16.48
715.30	1.4	QPSK	V	107	308	1 / 5	15.77	4.63	18.25	0.067	34.77	-16.52
715.30	1.4	16-QAM	V	107	308	1 / 5	15.32	4.63	17.80	0.060	34.77	-16.97
707.50	1.4	64-QAM	V	108	306	1 / 5	13.65	4.60	16.10	0.041	34.77	-18.67
700.50	3	QPSK	V	103	305	1 / 14	15.70	4.55	18.10	0.065	34.77	-16.67
707.50	3	QPSK	V	110	306	1 / 14	15.76	4.60	18.21	0.066	34.77	-16.56
714.50	3	QPSK	V	110	306	1 / 14	15.77	4.60	18.22	0.066	34.77	-16.55
714.50	3	16-QAM	V	110	306	1 / 14	15.24	4.60	17.69	0.059	34.77	-17.08
700.50	3	64-QAM	V	103	305	1 / 14	13.62	4.55	16.02	0.040	34.77	-18.75
701.50	5	QPSK	V	102	306	1 / 24	15.62	4.60	18.07	0.064	34.77	-16.70
707.50	5	QPSK	V	109	305	1 / 24	15.68	4.60	18.13	0.065	34.77	-16.64
713.50	5	QPSK	V	108	303	1 / 24	15.82	4.60	18.27	0.067	34.77	-16.50
713.50	5	16-QAM	V	108	303	1 / 24	15.16	4.60	17.61	0.058	34.77	-17.16
701.50	5	64-QAM	V	102	306	1 / 24	13.54	4.60	15.99	0.040	34.77	-18.78
704.00	10	QPSK	V	101	304	1 / 49	15.54	4.50	17.89	0.062	34.77	-16.88
707.50	10	QPSK	V	109	306	1 / 49	15.60	4.60	18.05	0.064	34.77	-16.72
711.00	10	QPSK	V	107	303	1 / 49	15.84	4.60	18.29	0.067	34.77	-16.48
711.00	10	16-QAM	V	107	303	1 / 49	15.08	4.60	17.53	0.057	34.77	-17.24
707.50	10	64-QAM	V	109	306	1 / 49	13.41	4.60	15.86	0.039	34.77	-18.91
711.00	10	QPSK	H	336	217	1 / 49	10.25	4.60	12.70	0.019	34.77	-22.07

Table 7-10. ERP Data (Band 12)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 225 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
779.50	5	QPSK	V	234	85	25 / 0	17.47	5.70	21.02	0.126	34.77	-13.75
782.00	5	QPSK	V	238	86	1 / 0	17.37	5.80	21.02	0.126	34.77	-13.75
784.50	5	QPSK	V	232	72	1 / 0	17.57	5.90	21.32	0.136	34.77	-13.45
779.50	5	16-QAM	V	234	85	25 / 0	17.34	5.70	20.89	0.123	34.77	-13.88
784.50	5	64-QAM	V	232	72	1 / 0	15.85	5.90	19.60	0.091	34.77	-15.17
782.00	10	QPSK	V	233	79	1 / 49	17.40	5.80	21.05	0.127	34.77	-13.72
782.00	10	16-QAM	V	233	79	1 / 49	16.41	5.80	20.06	0.101	34.77	-14.71
782.00	10	64-QAM	V	233	79	1 / 49	15.49	5.80	19.14	0.082	34.77	-15.63
784.50	5	QPSK	H	136	355	1 / 0	15.73	5.80	19.38	0.087	34.77	-15.39

Table 7-11. ERP Data (Band 13)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 226 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	H	195	357	1 / 0	16.62	6.70	21.17	0.131	38.45	-17.28
836.50	1.4	QPSK	H	188	7	1 / 5	16.44	6.70	20.99	0.126	38.45	-17.46
848.30	1.4	QPSK	H	187	7	1 / 0	16.24	6.70	20.79	0.120	38.45	-17.66
824.70	1.4	16-QAM	H	195	357	1 / 0	15.55	6.70	20.10	0.102	38.45	-18.35
824.70	1.4	64-QAM	H	195	357	1 / 0	14.31	6.70	18.86	0.077	38.45	-19.59
825.50	3	QPSK	H	193	355	1 / 0	16.68	6.70	21.23	0.133	38.45	-17.22
836.50	3	QPSK	H	195	6	1 / 14	16.50	6.70	21.05	0.127	38.45	-17.40
847.50	3	QPSK	H	190	8	1 / 0	16.30	6.65	20.80	0.120	38.45	-17.65
825.50	3	16-QAM	H	193	355	1 / 0	15.61	6.70	20.16	0.104	38.45	-18.29
825.50	3	64-QAM	H	193	355	1 / 0	14.37	6.70	18.92	0.078	38.45	-19.53
826.50	5	QPSK	H	196	356	1 / 0	16.74	6.70	21.29	0.135	38.45	-17.16
836.50	5	QPSK	H	196	6	1 / 24	16.56	6.70	21.11	0.129	38.45	-17.34
846.50	5	QPSK	H	190	6	1 / 0	16.36	6.60	20.81	0.121	38.45	-17.64
826.50	5	16-QAM	H	196	356	1 / 0	15.67	6.70	20.22	0.105	38.45	-18.23
826.50	5	64-QAM	H	196	356	1 / 0	14.43	6.70	18.98	0.079	38.45	-19.47
829.00	10	QPSK	H	195	357	1 / 0	16.80	6.70	21.35	0.136	38.45	-17.10
836.50	10	QPSK	H	186	8	1 / 49	16.62	6.70	21.17	0.131	38.45	-17.28
844.00	10	QPSK	H	185	8	1 / 0	16.42	6.60	20.87	0.122	38.45	-17.58
829.00	10	16-QAM	H	195	357	1 / 0	15.73	6.70	20.28	0.107	38.45	-18.17
829.00	10	64-QAM	H	195	357	1 / 0	14.49	6.70	19.04	0.080	38.45	-19.41
829.00	10	QPSK	V	262	177	1 / 0	12.53	6.70	17.08	0.051	38.45	-21.37

Table 7-12. ERP Data (Band 26/5)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
831.50	15	QPSK	H	193	356	1 / 0	16.86	6.70	21.41	0.138	38.45	-17.04
836.50	15	QPSK	H	186	6	1 / 74	16.68	6.70	21.23	0.133	38.45	-17.22
841.50	15	QPSK	H	184	7	1 / 0	16.48	6.60	20.93	0.124	38.45	-17.52
831.50	15	16-QAM	H	193	356	1 / 0	15.79	6.70	20.34	0.108	38.45	-18.11
831.50	15	64-QAM	H	193	356	1 / 0	14.55	6.70	19.10	0.081	38.45	-19.35

Table 7-13. ERP Data (Band 26)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 227 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	H	132	9	3 / 2	15.99	9.44	25.43	0.349	30.00	-4.57
1745.00	1.4	QPSK	H	119	2	3 / 2	16.24	9.23	25.47	0.352	30.00	-4.53
1779.30	1.4	QPSK	H	118	8	3 / 2	14.97	9.26	24.23	0.265	30.00	-5.77
1710.70	1.4	16-QAM	H	132	9	1 / 5	15.31	9.44	24.75	0.299	30.00	-5.25
1710.70	1.4	64-QAM	H	132	9	3 / 2	14.19	9.44	23.63	0.231	30.00	-6.37
1711.50	3	QPSK	H	134	358	1 / 14	16.08	9.44	25.52	0.356	30.00	-4.48
1745.00	3	QPSK	H	131	7	1 / 14	16.25	9.23	25.48	0.353	30.00	-4.52
1778.50	3	QPSK	H	130	4	1 / 0	15.37	9.26	24.63	0.290	30.00	-5.37
1711.50	3	16-QAM	H	134	358	1 / 14	15.41	9.44	24.85	0.305	30.00	-5.15
1711.50	3	64-QAM	H	134	358	1 / 0	14.32	9.44	23.76	0.238	30.00	-6.24
1712.50	5	QPSK	H	146	7	1 / 24	16.12	9.43	25.55	0.359	30.00	-4.45
1745.00	5	QPSK	H	133	10	1 / 24	16.29	9.23	25.52	0.357	30.00	-4.48
1777.50	5	QPSK	H	122	12	1 / 0	15.66	9.26	24.92	0.310	30.00	-5.08
1712.50	5	16-QAM	H	146	7	1 / 24	15.48	9.43	24.91	0.310	30.00	-5.09
1712.50	5	64-QAM	H	146	7	1 / 0	14.42	9.43	23.85	0.243	30.00	-6.15
1715.00	10	QPSK	H	144	11	1 / 49	16.06	9.42	25.48	0.353	30.00	-4.52
1745.00	10	QPSK	H	120	8	1 / 49	16.17	9.23	25.40	0.347	30.00	-4.60
1775.00	10	QPSK	H	118	10	1 / 0	15.71	9.25	24.96	0.313	30.00	-5.04
1715.00	10	16-QAM	H	144	11	1 / 49	15.41	9.42	24.83	0.304	30.00	-5.17
1715.00	10	64-QAM	H	144	11	1 / 0	14.30	9.42	23.72	0.235	30.00	-6.28
1717.50	15	QPSK	H	133	7	1 / 74	16.27	9.40	25.67	0.369	30.00	-4.33
1745.00	15	QPSK	H	120	358	1 / 0	16.33	9.23	25.56	0.360	30.00	-4.44
1772.50	15	QPSK	H	122	14	1 / 0	15.94	9.25	25.19	0.330	30.00	-4.81
1717.50	15	16-QAM	H	133	7	1 / 74	15.63	9.40	25.03	0.318	30.00	-4.97
1717.50	15	64-QAM	H	133	7	1 / 74	14.59	9.40	23.99	0.251	30.00	-6.01
1720.00	20	QPSK	H	139	5	1 / 0	16.38	9.38	25.76	0.377	30.00	-4.24
1745.00	20	QPSK	H	126	4	1 / 0	16.20	9.23	25.43	0.349	30.00	-4.57
1770.00	20	QPSK	H	124	10	1 / 99	16.03	9.24	25.27	0.337	30.00	-4.73
1720.00	20	16-QAM	H	139	5	1 / 0	15.53	9.38	24.91	0.310	30.00	-5.09
1720.00	20	64-QAM	H	139	5	1 / 0	14.45	9.38	23.83	0.242	30.00	-6.17
1720.00	20	QPSK	V	149	92	1 / 0	15.79	9.38	25.17	0.329	30.00	-4.83

Table 7-14. EIRP Data (Band 66/4)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 228 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	V	100	77	1 / 5	15.43	9.88	25.30	0.339	33.01	-7.71
1880.00	1.4	QPSK	V	101	67	1 / 0	15.21	10.10	25.31	0.340	33.01	-7.70
1909.30	1.4	QPSK	V	123	82	1 / 0	15.59	10.31	25.90	0.389	33.01	-7.11
1909.30	1.4	16-QAM	V	123	82	1 / 0	14.87	10.31	25.18	0.330	33.01	-7.83
1909.30	1.4	64-QAM	V	123	82	1 / 0	14.04	10.31	24.35	0.272	33.01	-8.66
1851.50	3	QPSK	V	101	78	1 / 14	15.46	9.88	25.34	0.342	33.01	-7.67
1880.00	3	QPSK	V	101	70	1 / 0	15.32	10.10	25.42	0.349	33.01	-7.59
1908.50	3	QPSK	V	115	78	1 / 0	15.72	10.30	26.02	0.400	33.01	-6.99
1908.50	3	16-QAM	V	115	78	1 / 0	14.83	10.30	25.13	0.326	33.01	-7.88
1908.50	3	64-QAM	V	115	78	1 / 0	14.37	10.30	24.67	0.293	33.01	-8.34
1852.50	5	QPSK	V	102	75	1 / 24	15.46	9.89	25.35	0.343	33.01	-7.66
1880.00	5	QPSK	V	102	66	1 / 0	15.34	10.10	25.44	0.350	33.01	-7.57
1907.50	5	QPSK	V	125	80	1 / 0	15.70	10.30	26.00	0.398	33.01	-7.01
1907.50	5	16-QAM	V	125	80	1 / 0	14.84	10.30	25.14	0.327	33.01	-7.87
1907.50	5	64-QAM	V	125	80	1 / 0	14.50	10.30	24.80	0.302	33.01	-8.21
1855.00	10	QPSK	V	101	75	1 / 49	15.38	9.91	25.29	0.338	33.01	-7.72
1880.00	10	QPSK	V	101	68	1 / 0	15.27	10.10	25.37	0.345	33.01	-7.64
1905.00	10	QPSK	V	123	80	1 / 0	15.76	10.28	26.04	0.402	33.01	-6.97
1905.00	10	16-QAM	V	123	80	1 / 0	15.03	10.28	25.31	0.340	33.01	-7.70
1905.00	10	64-QAM	V	123	80	1 / 0	14.69	10.28	24.97	0.314	33.01	-8.04
1857.50	15	QPSK	V	101	81	1 / 74	15.54	9.93	25.47	0.352	33.01	-7.54
1880.00	15	QPSK	V	101	65	1 / 0	15.43	10.10	25.53	0.358	33.01	-7.48
1902.50	15	QPSK	V	122	82	1 / 0	15.80	10.27	26.07	0.405	33.01	-6.94
1902.50	15	16-QAM	V	122	82	1 / 0	14.98	10.27	25.25	0.335	33.01	-7.76
1902.50	15	64-QAM	V	122	82	1 / 0	14.08	10.27	24.35	0.272	33.01	-8.66
1860.00	20	QPSK	V	100	77	1 / 99	15.50	9.95	25.45	0.351	33.01	-7.56
1880.00	20	QPSK	V	101	67	1 / 0	15.44	10.10	25.54	0.358	33.01	-7.47
1900.00	20	QPSK	V	123	82	1 / 0	15.82	10.26	26.08	0.405	33.01	-6.93
1900.00	20	16-QAM	V	123	82	1 / 0	14.99	10.26	25.25	0.335	33.01	-7.76
1900.00	20	64-QAM	V	123	82	1 / 0	14.04	10.26	24.30	0.269	33.01	-8.71
1900.00	20	QPSK	H	127	94	1 / 0	15.10	10.26	25.36	0.343	33.01	-7.65

Table 7-15. EIRP Data (Band 25/2)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 229 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2502.50	5	QPSK	H	100	45	1 / 24	12.02	9.43	21.45	0.140	33.01	-11.56
2535.00	5	QPSK	H	100	45	1 / 24	12.02	9.39	21.41	0.138	33.01	-11.60
2567.50	5	QPSK	H	102	45	1 / 0	12.01	9.45	21.46	0.140	33.01	-11.55
2567.50	5	16-QAM	H	102	45	1 / 0	11.40	9.45	20.85	0.122	33.01	-12.16
2535.00	5	64-QAM	H	100	45	1 / 24	10.13	9.39	19.52	0.090	33.01	-13.49
2505.00	10	QPSK	H	101	41	1 / 49	11.94	9.43	21.36	0.137	33.01	-11.65
2535.00	10	QPSK	H	100	41	1 / 49	12.08	9.39	21.47	0.140	33.01	-11.54
2565.00	10	QPSK	H	101	48	1 / 0	12.12	9.44	21.56	0.143	33.01	-11.45
2535.00	10	16-QAM	H	100	41	1 / 49	11.44	9.39	20.83	0.121	33.01	-12.18
2535.00	10	64-QAM	H	100	41	1 / 49	10.29	9.39	19.68	0.093	33.01	-13.33
2507.50	15	QPSK	H	101	44	1 / 74	12.09	9.42	21.51	0.142	33.01	-11.50
2535.00	15	QPSK	H	101	41	1 / 74	12.13	9.39	21.52	0.142	33.01	-11.49
2562.50	15	QPSK	H	101	46	1 / 0	12.15	9.43	21.58	0.144	33.01	-11.43
2535.00	15	16-QAM	H	101	41	1 / 74	11.55	9.39	20.94	0.124	33.01	-12.07
2535.00	15	64-QAM	H	101	41	1 / 74	10.44	9.39	19.83	0.096	33.01	-13.18
2510.00	20	QPSK	H	100	43	1 / 99	12.16	9.42	21.58	0.144	33.01	-11.43
2535.00	20	QPSK	H	100	41	1 / 99	12.15	9.39	21.54	0.143	33.01	-11.47
2560.00	20	QPSK	H	100	47	1 / 0	12.14	9.42	21.56	0.143	33.01	-11.45
2535.00	20	16-QAM	H	100	41	1 / 99	11.68	9.39	21.07	0.128	33.01	-11.94
2535.00	20	64-QAM	H	100	41	1 / 99	10.56	9.39	19.95	0.099	33.01	-13.06
2510.00	20	QPSK	V	158	242	1 / 99	11.36	9.42	20.78	0.120	33.01	-12.23

Table 7-16. EIRP Data (Band 7)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 230 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	H	105	45	1 / 0	15.25	9.43	24.69	0.294	33.01	-8.32
2593.00	5	QPSK	H	100	50	1 / 0	15.26	9.55	24.81	0.303	33.01	-8.20
2687.50	5	QPSK	H	102	40	1 / 0	15.02	9.82	24.84	0.305	33.01	-8.17
2593.00	5	16-QAM	H	100	50	1 / 0	14.75	9.55	24.30	0.269	33.01	-8.71
2593.00	5	64-QAM	H	100	50	1 / 0	13.63	9.55	23.18	0.208	33.01	-9.83
2501.00	10	QPSK	H	110	49	1 / 0	15.26	9.43	24.69	0.294	33.01	-8.32
2593.00	10	QPSK	H	100	49	1 / 0	15.28	9.55	24.83	0.304	33.01	-8.18
2685.00	10	QPSK	H	103	49	1 / 0	14.96	9.82	24.78	0.301	33.01	-8.23
2593.00	10	16-QAM	H	100	49	1 / 0	14.73	9.55	24.28	0.268	33.01	-8.73
2593.00	10	64-QAM	H	100	49	1 / 0	13.64	9.55	23.19	0.209	33.01	-9.82
2503.50	15	QPSK	H	108	45	1 / 0	15.31	9.43	24.74	0.298	33.01	-8.27
2593.00	15	QPSK	H	100	49	1 / 0	15.28	9.55	24.83	0.304	33.01	-8.18
2682.50	15	QPSK	H	102	45	1 / 0	14.93	9.83	24.76	0.299	33.01	-8.25
2593.00	15	16-QAM	H	100	49	1 / 0	14.80	9.55	24.35	0.273	33.01	-8.66
2593.00	15	64-QAM	H	100	49	1 / 0	13.69	9.55	23.24	0.211	33.01	-9.77
2506.00	20	QPSK	H	108	44	1 / 0	15.23	9.42	24.65	0.292	33.01	-8.36
2593.00	20	QPSK	H	100	49	1 / 0	15.30	9.55	24.85	0.306	33.01	-8.16
2680.00	20	QPSK	H	102	42	1 / 0	14.87	9.83	24.70	0.295	33.01	-8.31
2593.00	20	16-QAM	H	100	49	1 / 0	14.73	9.55	24.28	0.268	33.01	-8.73
2593.00	20	64-QAM	H	100	49	1 / 0	13.74	9.55	23.29	0.213	33.01	-9.72
2593.00	20	QPSK	V	384	303	1 / 0	5.90	9.55	15.45	0.035	33.01	-17.56

Table 7-17. EIRP Data (Band 41 – PC2)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 231 of 277

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	H	110	42	1 / 0	13.02	9.43	22.46	0.176	33.01	-10.55
2593.00	5	QPSK	H	116	40	1 / 24	12.49	9.55	22.04	0.160	33.01	-10.97
2687.50	5	QPSK	H	101	40	1 / 24	12.72	9.82	22.54	0.179	33.01	-10.47
2687.50	5	16-QAM	H	101	40	1 / 24	11.85	9.82	21.67	0.147	33.01	-11.34
2687.50	5	64-QAM	H	101	40	1 / 24	10.70	9.82	20.52	0.113	33.01	-12.49
2501.00	10	QPSK	H	111	45	1 / 0	12.95	9.43	22.38	0.173	33.01	-10.63
2593.00	10	QPSK	H	116	38	1 / 49	12.44	9.55	21.99	0.158	33.01	-11.02
2685.00	10	QPSK	H	101	35	1 / 49	12.69	9.82	22.51	0.178	33.01	-10.50
2685.00	10	16-QAM	H	101	35	1 / 49	11.73	9.82	21.55	0.143	33.01	-11.46
2685.00	10	64-QAM	H	101	35	1 / 49	10.76	9.82	20.58	0.114	33.01	-12.43
2503.50	15	QPSK	H	112	40	1 / 0	13.05	9.43	22.48	0.177	33.01	-10.53
2593.00	15	QPSK	H	115	42	1 / 74	12.46	9.55	22.01	0.159	33.01	-11.00
2682.50	15	QPSK	H	101	41	1 / 74	12.70	9.83	22.53	0.179	33.01	-10.48
2682.50	15	16-QAM	H	101	41	1 / 74	11.83	9.83	21.66	0.147	33.01	-11.35
2682.50	15	64-QAM	H	101	41	1 / 74	10.65	9.83	20.48	0.112	33.01	-12.53
2506.00	20	QPSK	H	110	42	1 / 0	13.16	9.42	22.58	0.181	33.01	-10.43
2593.00	20	QPSK	H	115	39	1 / 99	12.50	9.55	22.05	0.160	33.01	-10.96
2680.00	20	QPSK	H	100	37	1 / 99	12.66	9.83	22.49	0.178	33.01	-10.52
2680.00	20	16-QAM	H	100	37	1 / 99	11.66	9.83	21.49	0.141	33.01	-11.52
2680.00	20	64-QAM	H	100	37	1 / 99	10.50	9.83	20.33	0.108	33.01	-12.68
2506.00	20	QPSK	V	329	133	1 / 0	8.65	9.68	18.33	0.068	33.01	-14.68

Table 7-18. EIRP Data (Band 41 – PC3)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 232 of 277

7.8 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

ANSI/TIA-603-E-2016 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Test Setup

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

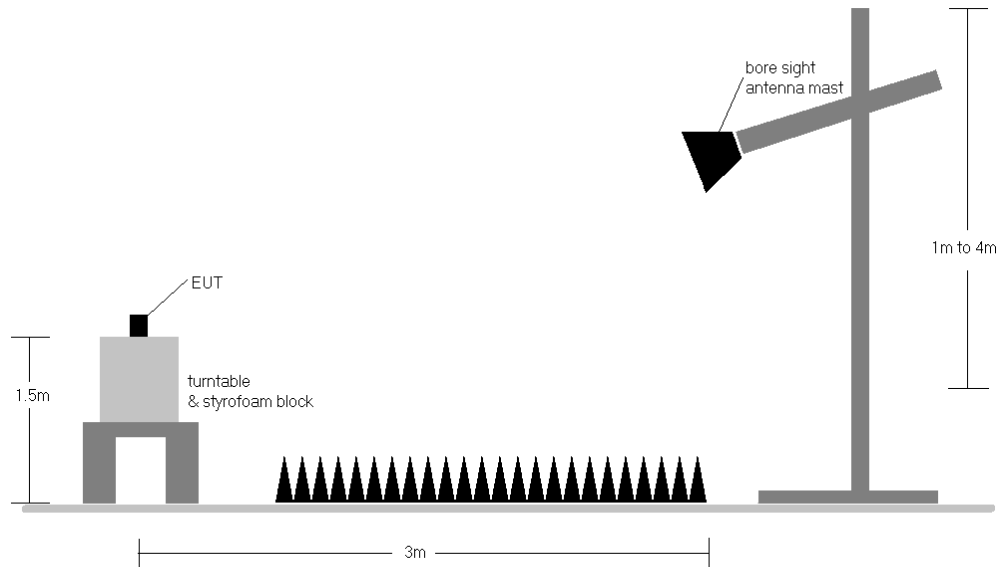


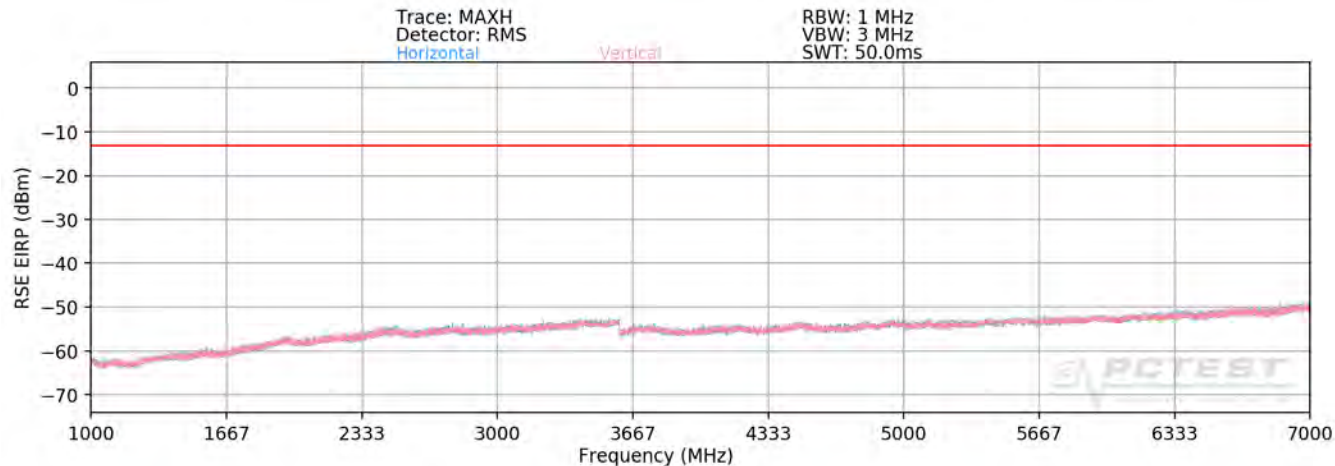
Figure 7-8. Test Instrument & Measurement Setup

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4) 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.
- 5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 71



Plot 7-383. Radiated Spurious Plot above 1GHz (Band 71)

OPERATING FREQUENCY: 673.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1346.00	H	152	164	-70.90	8.76	-62.14	-49.1
2019.00	H	-	-	-72.61	10.22	-62.39	-49.4
2692.00	H	-	-	-70.36	9.81	-60.55	-47.6

Table 7-19. Radiated Spurious Data (Band 71 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 235 of 277

OPERATING FREQUENCY: 680.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1361.00	H	154	157	-73.42	8.61	-64.81	-51.8
2041.50	H	-	-	-72.41	10.04	-62.38	-49.4
2722.00	H	-	-	-70.22	9.58	-60.64	-47.6

Table 7-20. Radiated Spurious Data (Band 71 – Mid Channel)

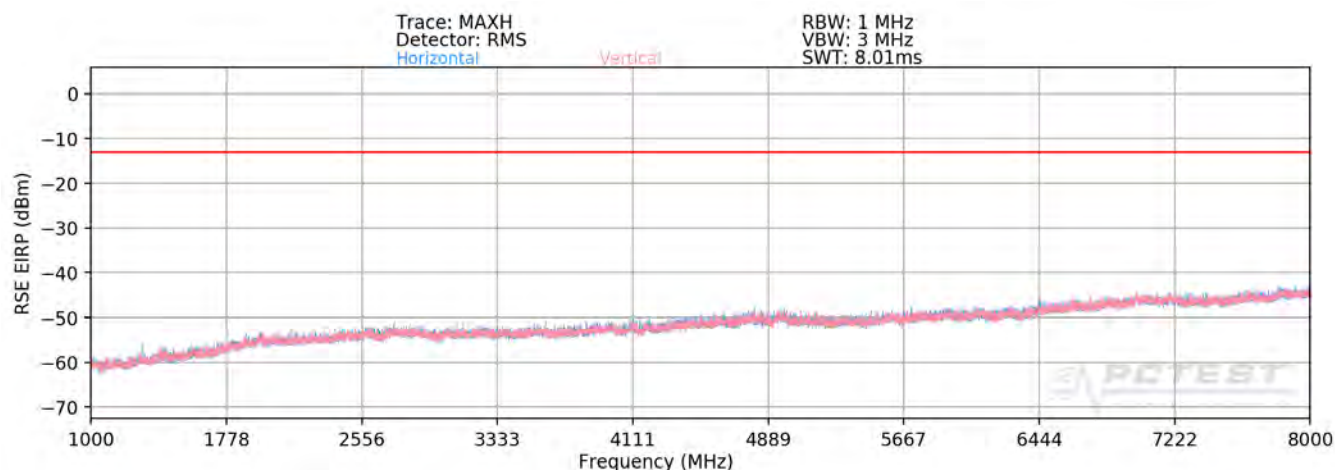
OPERATING FREQUENCY: 688.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1376.00	H	203	175	-72.41	8.41	-64.00	-51.0
2064.00	H	-	-	-72.29	9.87	-62.42	-49.4
2752.00	H	-	-	-69.75	9.30	-60.45	-47.5

Table 7-21. Radiated Spurious Data (Band 71 – High Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 236 of 277

Band 12



Plot 7-384. Radiated Spurious Plot above 1GHz (Band 12)

OPERATING FREQUENCY: 704.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	H	-	-	-73.45	8.16	-65.29	-52.3
2112.00	H	-	-	-71.79	9.61	-62.19	-49.2

Table 7-22. Radiated Spurious Data (Band 12 – Low Channel)

OPERATING FREQUENCY: 707.50 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	H	-	-	-73.51	8.22	-65.30	-52.3
2122.50	H	-	-	-71.46	9.59	-61.87	-48.9

Table 7-23. Radiated Spurious Data (Band 12 – Mid Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)				SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet				Page 237 of 277	

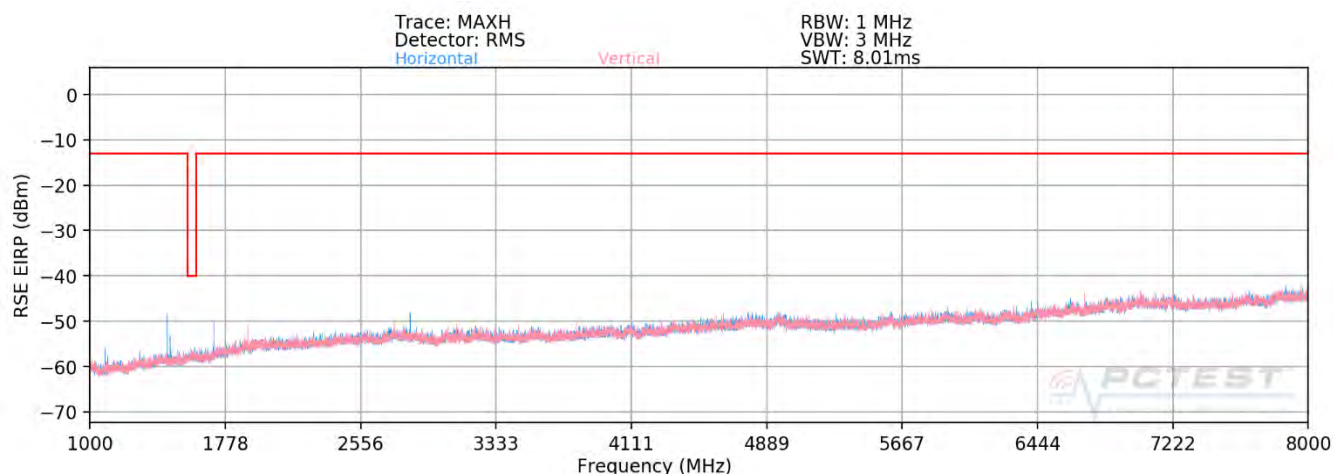
OPERATING FREQUENCY: 711.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1422.00	H	-	-	-73.39	8.27	-65.12	-52.1
2133.00	H	-	-	-71.60	9.57	-62.03	-49.0

Table 7-24. Radiated Spurious Data (Band 12 – High Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 238 of 277

Band 13



Plot 7-385. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY: 782.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2346.00	H	-	-	-68.25	3.64	-64.62	-51.6
3128.00	H	-	-	-58.89	5.73	-53.15	-40.2

Table 7-25. Radiated Spurious Data (Band 13 – Mid Channel)

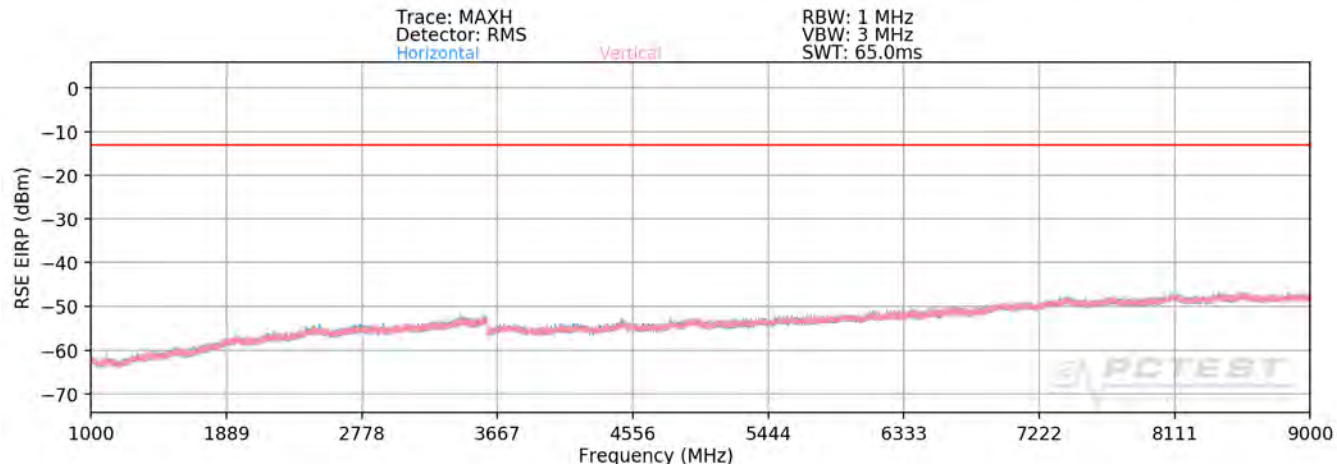
MODULATION SIGNAL: QPSK
BANDWIDTH: 10.00 MHz
DISTANCE: 3 meters
NARROWBAND EMISSION LIMIT: -50 dBm
WIDEBAND EMISSION LIMIT: -40 dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1564.00	H	-	-	-70.27	2.93	-67.33	-27.3

Table 7-26. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet			Page 239 of 277

Band 26/5



Plot 7-386. Radiated Spurious Plot above 1GHz (Band 26/5)

OPERATING FREQUENCY: 829.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz

DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1658.00	H	156	196	-78.81	9.55	-69.26	-56.3
2487.00	H	-	-	-78.24	9.45	-68.79	-55.8
3316.00	H	-	-	-73.26	7.44	-65.82	-52.8
4145.00	H	-	-	-73.22	8.05	-65.17	-52.2

Table 7-27. Radiated Spurious Data (Band 26/5 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 240 of 277

OPERATING FREQUENCY: 836.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1673.00	H	153	198	-75.53	9.54	-66.00	-53.0
2509.50	H	-	-	-77.91	9.42	-68.48	-55.5
3346.00	H	-	-	-72.90	7.32	-65.58	-52.6
4182.50	H	-	-	-73.49	8.16	-65.33	-52.3

Table 7-28. Radiated Spurious Data (Band 26/5 – Mid Channel)

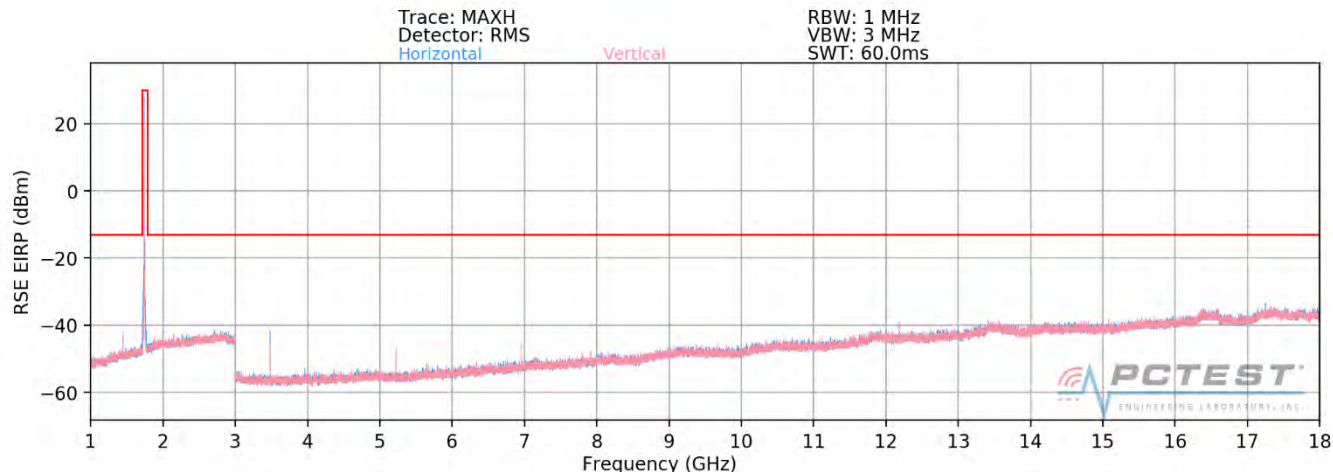
OPERATING FREQUENCY: 844.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1688.00	H	197	214	-77.06	9.52	-67.54	-54.5
2532.00	H	-	-	-77.44	9.40	-68.05	-55.0
3376.00	H	-	-	-72.94	7.31	-65.63	-52.6
4220.00	H	-	-	-73.39	8.34	-65.05	-52.0

Table 7-29. Radiated Spurious Data (Band 26/5 – High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	
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Band 66/4



Plot 7-387. Radiated Spurious Plot above 1GHz (Band 66)

OPERATING FREQUENCY: 1720.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3440.00	H	116	51	-54.96	6.28	-48.68	-35.7
5160.00	H	111	202	-63.75	8.98	-54.77	-41.8
6880.00	H	394	316	-64.67	9.42	-55.25	-42.3
8600.00	H	-	-	-64.81	9.62	-55.20	-42.2
10320.00	H	-	-	-62.44	9.56	-52.88	-39.9
12040.00	H	-	-	-58.31	9.24	-49.07	-36.1

Table 7-30. Radiated Spurious Data (Band 66/4 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 242 of 277

OPERATING FREQUENCY: 1745.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	H	100	52	-50.66	6.47	-44.19	-31.2
5235.00	H	131	205	-61.63	8.97	-52.67	-39.7
6980.00	H	260	315	-63.61	9.23	-54.38	-41.4
8725.00	H	-	-	-64.00	9.59	-54.40	-41.4
10470.00	H	-	-	-61.47	9.43	-52.05	-39.0
12215.00	H	-	-	-59.52	9.17	-50.36	-37.4

Table 7-31. Radiated Spurious Data (Band 66/4 – Mid Channel)

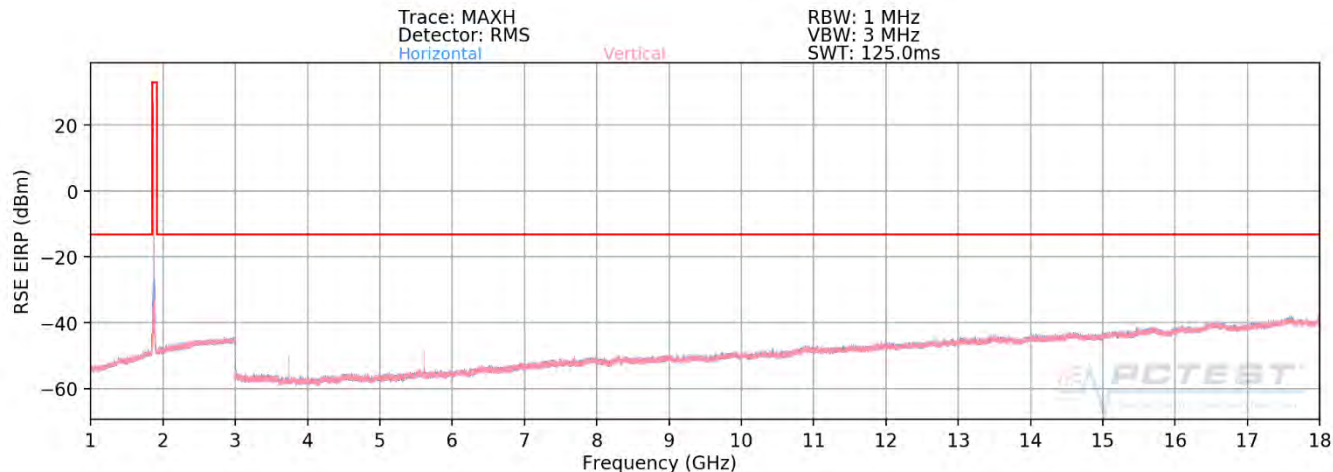
OPERATING FREQUENCY: 1770.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	H	121	51	-54.94	6.45	-48.49	-35.5
5310.00	H	387	323	-60.43	9.09	-51.33	-38.3
7080.00	H	100	58	-57.87	9.17	-48.70	-35.7
8850.00	H	-	-	-63.79	9.57	-54.22	-41.2
10620.00	H	-	-	-61.34	9.55	-51.79	-38.8
12390.00	H	-	-	-58.49	9.11	-49.38	-36.4

Table 7-32. Radiated Spurious Data (Band 66/4 – High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 243 of 277

Band 25/2



Plot 7-388. Radiated Spurious Plot above 1GHz (Band 25/2)

OPERATING FREQUENCY: 1860.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3720.00	H	113	293	-58.11	6.05	-52.06	-39.1
5580.00	H	115	195	-62.89	12.10	-50.79	-37.8
7440.00	H	-	-	-72.84	12.49	-60.34	-47.3
9300.00	H	-	-	-66.43	8.96	-57.47	-44.5

Table 7-33. Radiated Spurious Data (Band 25/2 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 244 of 277

OPERATING FREQUENCY: 1880.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3760.00	H	126	301	-55.88	5.90	-49.98	-37.0
5640.00	H	121	195	-64.80	12.27	-52.53	-39.5
7520.00	H	-	-	-72.27	12.56	-59.71	-46.7
9400.00	H	-	-	-66.36	9.05	-57.31	-44.3

Table 7-34. Radiated Spurious Data (Band 25/2 – Mid Channel)

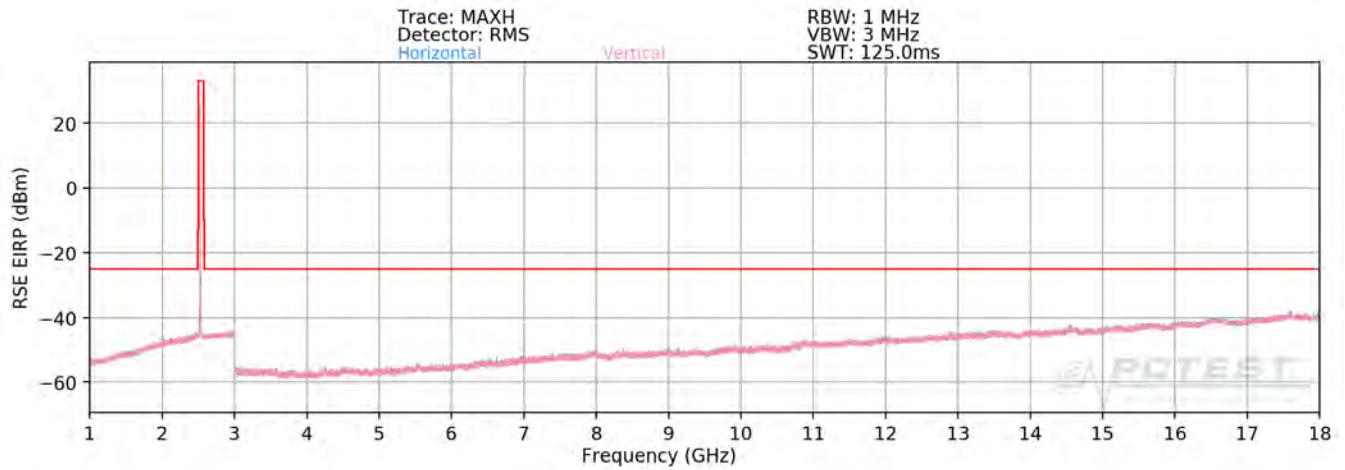
OPERATING FREQUENCY: 1900.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3800.00	H	122	295	-55.76	5.85	-49.90	-36.9
5700.00	H	115	195	-62.72	12.41	-50.31	-37.3
7600.00	H	-	-	-71.88	12.40	-59.47	-46.5
9500.00	H	-	-	-66.79	9.15	-57.64	-44.6

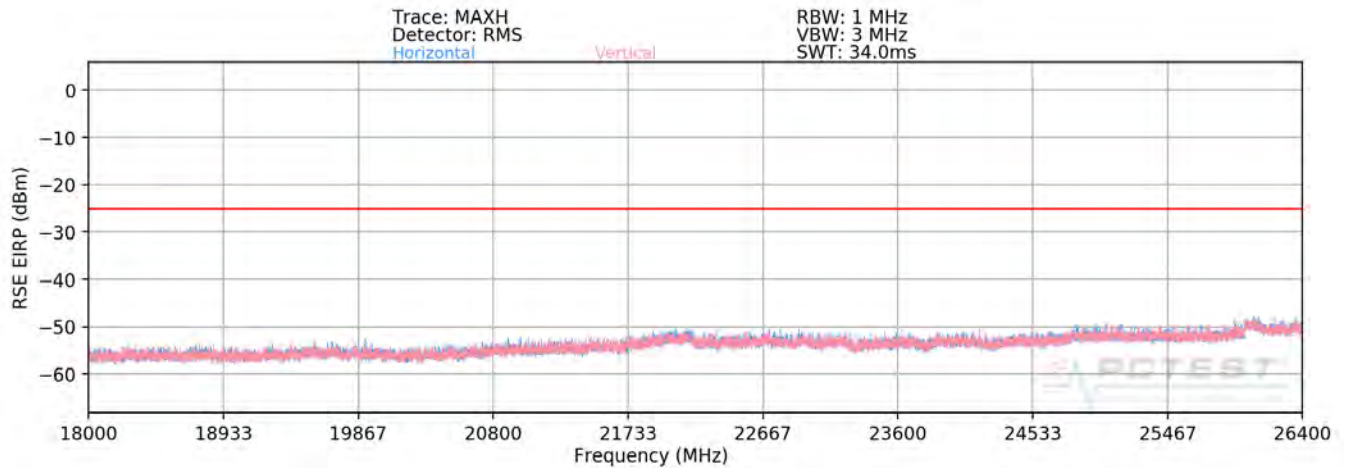
Table 7-35. Radiated Spurious Data (Band 25/2 – High Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 245 of 277

Band 7



Plot 7-389. Radiated Spurious Plot 1GHz - 18GHz (Band 7)



Plot 7-390. Radiated Spurious Plot 18GHz - 26.5GHz (Band 7)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 - 08/20/2019	EUT Type: Portable Tablet	Page 246 of 277

OPERATING FREQUENCY: 2510.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5020.00	V	-	-	-73.07	10.80	-62.27	-37.3
7530.00	V	155	108	-66.75	12.56	-54.19	-29.2
10040.00	V	-	-	-64.58	9.85	-54.73	-29.7
12550.00	V	-	-	-60.16	9.05	-51.11	-26.1

Table 7-36. Radiated Spurious Data (Band 7 – Low Channel)

OPERATING FREQUENCY: 2535.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5070.00	V	127	241	-68.99	10.92	-58.07	-33.1
7605.00	V	133	168	-66.23	12.40	-53.83	-28.8
10140.00	V	-	-	-64.34	9.77	-54.57	-29.6
12675.00	V	-	-	-60.56	9.08	-51.48	-26.5

Table 7-37. Radiated Spurious Data (Band 7 – Mid Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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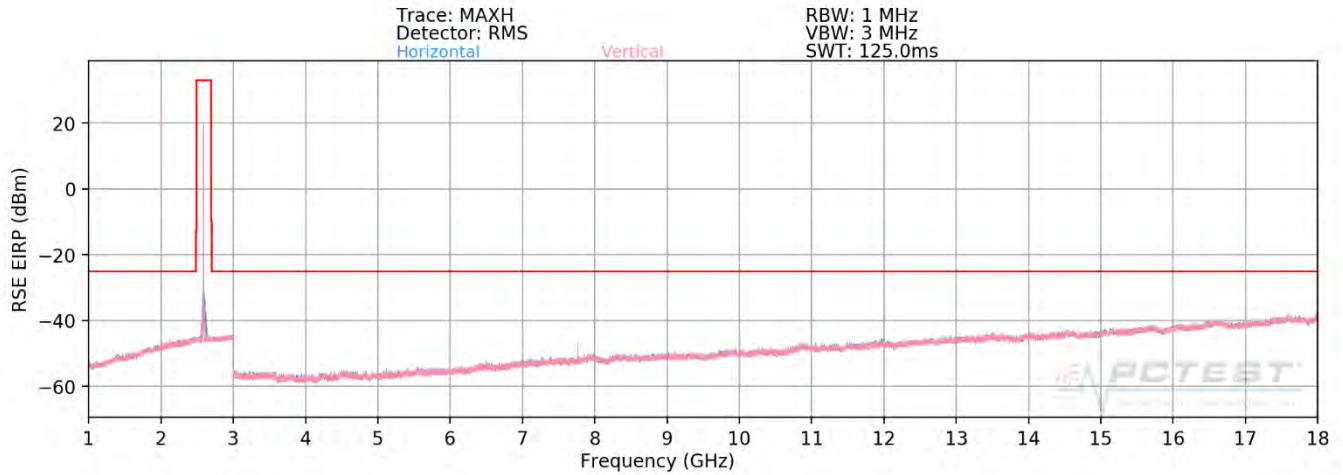
OPERATING FREQUENCY: 2560.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5120.00	V	138	294	-71.63	10.99	-60.64	-35.6
7680.00	V	312	297	-68.08	12.35	-55.73	-30.7
10240.00	V	-	-	-64.67	9.65	-55.01	-30.0
12800.00	V	-	-	-60.45	9.07	-51.38	-26.4

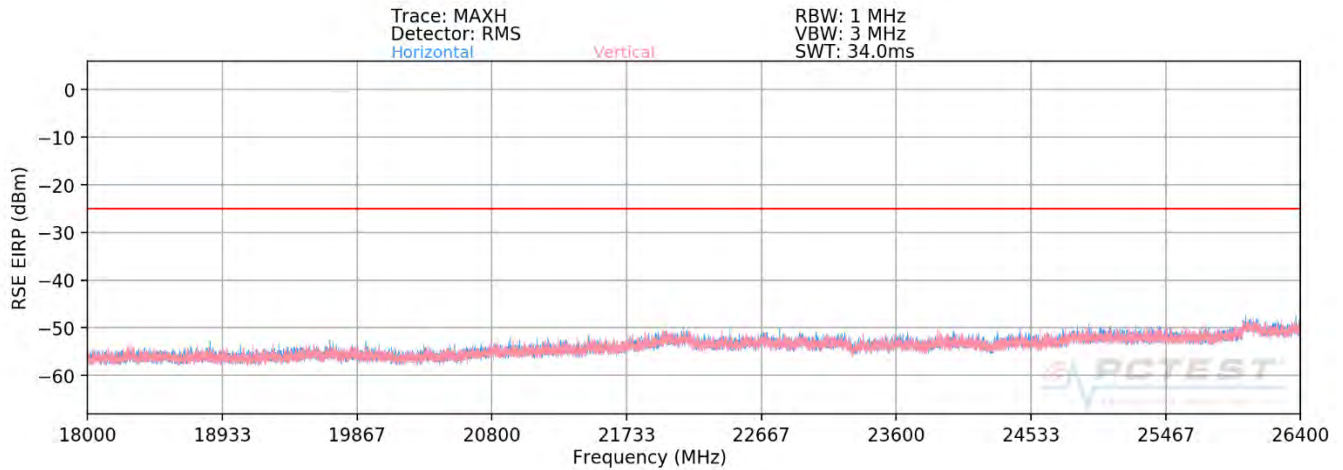
Table 7-38. Radiated Spurious Data (Band 7 – High Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 248 of 277

Band 41 PC2



Plot 7-391. Radiated Spurious Plot 1GHz - 18GHz (Band 41 PC2)



Plot 7-392. Radiated Spurious Plot 18GHz - 26.5GHz (Band 41 PC2)

FCC ID: A3LSMT867U	<div>MEASUREMENT REPORT (CERTIFICATION)</div> <div></div>		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 249 of 277

OPERATING FREQUENCY: 2510.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5020.00	V	340	181	-59.00	10.80	-48.20	-23.2
7530.00	V	285	166	-50.28	12.56	-37.72	-12.7
10040.00	V	-	-	-51.43	9.85	-41.58	-16.6
12550.00	V	225	344	-47.45	8.84	-38.61	-13.6
15060.00	V	-	-	-44.27	8.74	-35.53	-10.5
17570.00	V	-	-	-38.46	7.63	-30.83	-5.8

Table 7-39. Radiated Spurious Data (Band 41 PC2– Low Channel)

OPERATING FREQUENCY: 2593.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	V	-	-	-59.19	11.14	-48.06	-23.1
7779.00	V	108	353	-52.22	12.33	-39.89	-14.9
10372.00	V	-	-	-51.41	9.62	-41.79	-16.8
12965.00	V	-	-	-46.46	8.99	-37.47	-12.5

Table 7-40. Radiated Spurious Data (Band 41 PC2– Mid Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 250 of 277

OPERATING FREQUENCY: 2680.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	V	313	130	-58.46	11.49	-46.97	-22.0
8040.00	V	100	291	-54.30	12.03	-42.28	-17.3
10720.00	V	-	-	-50.01	9.32	-40.69	-15.7
13400.00	V	-	-	-48.95	8.77	-40.19	-15.2

Table 7-41. Radiated Spurious Data (Band 41 PC2– High Channel)

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 251 of 277

7.9 Uplink Carrier Aggregation Radiated Measurements

\$2.1053, \$27.53(m)

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v02r02 – Section 5.8

ANSI/TIA-603-D-2010 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ RBW
3. No. of sweep points $\geq 2 \times$ span / RBW
4. Detector = RMS
5. Trace mode = trace average for continuous emissions, max hold for pulse emissions
6. The trace was allowed to stabilize

FCC ID: A3LSMT867U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Test Setup

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

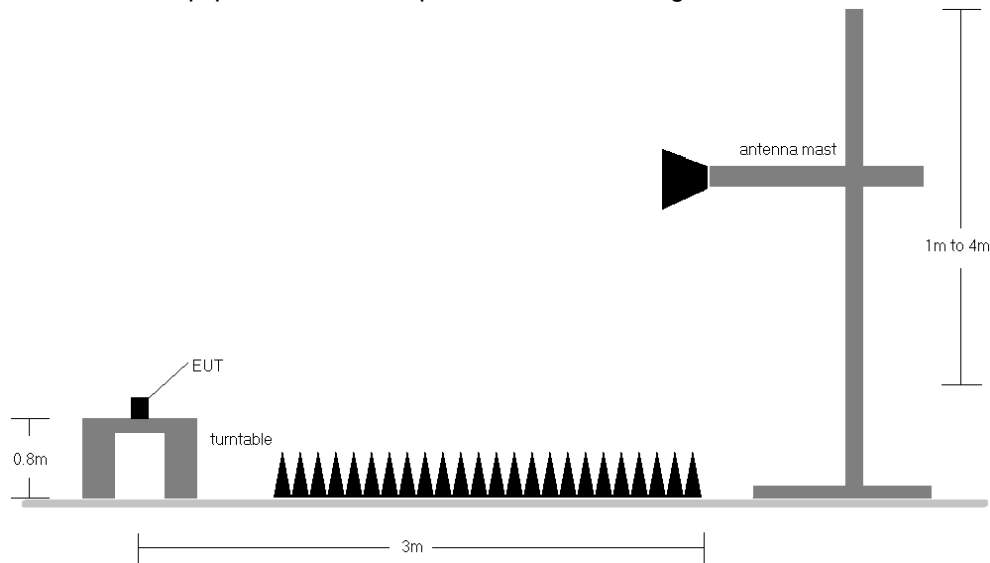


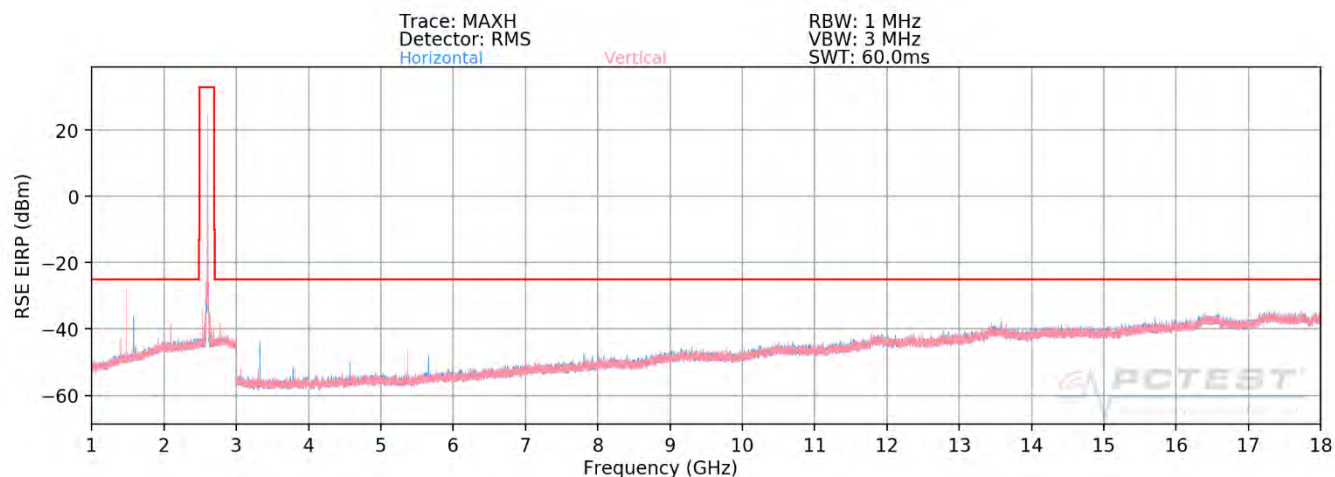
Figure 7-9. Test Instrument & Measurement Setup

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) Radiated spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. The worst case (highest) emissions were found while operating with QPSK modulation with both carriers set to transmit using 1RB.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) 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.
- 6) No significant emissions were found as a result of two uplink carriers operating contiguously.

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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ULCA Band 41 PC2



Plot 7-393. Radiated Spurious Plot above 1GHz (ULCA Band 41 PC2 Mid Channel – PCC/SCC: 1RB)

OPERATING FREQUENCY (PCC): 2506.00 MHz
 OPERATING FREQUENCY (SCC): 2525.80 MHz
 CHANNEL (PCC): 39750
 CHANNEL (SCC): 39948
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	H	178	211	-59.90	10.77	-49.14	-24.1
7518.00	H	136	125	-56.00	12.55	-43.45	-18.4
10024.00	H	-	-	-51.83	9.80	-42.04	-17.0
12530.00	H	-	-	-47.82	8.87	-38.95	-14.0

Table 7-42. Radiated Spurious Plot (ULCA B41 PC2 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0- Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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OPERATING FREQUENCY (PCC): 2593.00 MHz
 OPERATING FREQUENCY (SCC): 2612.80 MHz
 CHANNEL (PCC): 40620
 CHANNEL (SCC): 40818
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	H	-	-	-60.22	11.14	-49.08	-24.1
7779.00	H	184	97	-51.85	12.33	-39.52	-14.5
10372.00	H	-	-	-51.30	9.50	-41.80	-16.8
12965.00	H	-	-	-46.38	8.75	-37.63	-12.6

Table 7-43. Radiated Spurious Plot (ULCA B41 PC2 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0- Mid Channel)

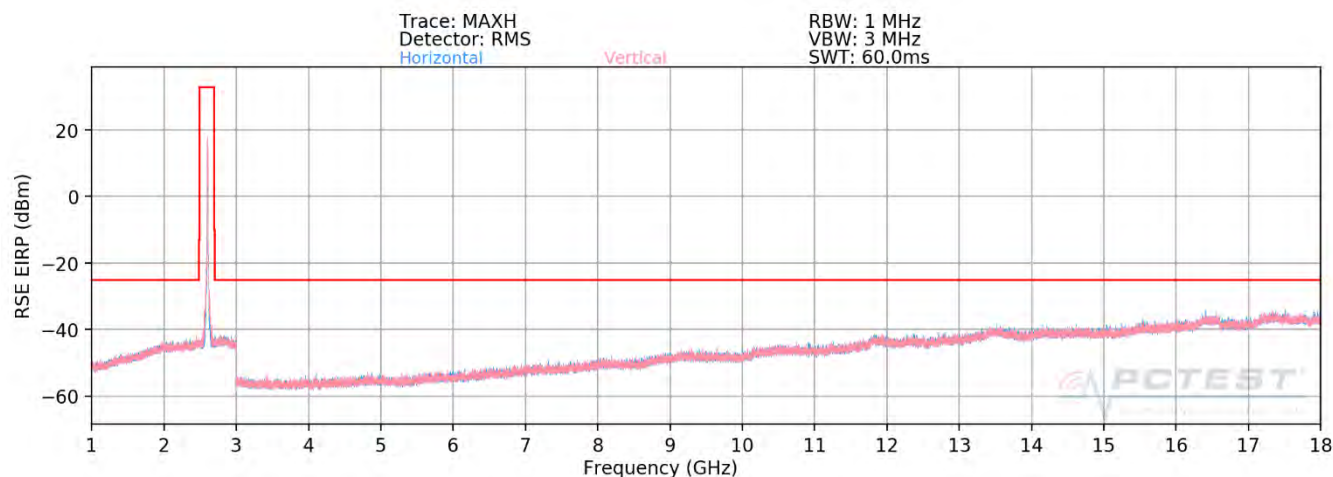
OPERATING FREQUENCY (PCC): 2680.00 MHz
 OPERATING FREQUENCY (SCC): 2660.20 MHz
 CHANNEL (PCC): 41490
 CHANNEL (SCC): 41292
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	H	-	-	-60.70	11.49	-49.21	-24.2
8040.00	H	-	-	-55.69	12.03	-43.66	-18.7

Table 7-44. Radiated Spurious Plot (ULCA B41 PC2 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99- High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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ULCA Band 41 PC3



Plot 7-394. Radiated Spurious Plot above 1GHz (ULCA Band 41 PC3 Mid Channel – PCC/SCC: 1RB)

OPERATING FREQUENCY (PCC): 2506.00 MHz
 OPERATING FREQUENCY (SCC): 2525.80 MHz
 CHANNEL (PCC): 39750
 CHANNEL (SCC): 39948
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	H	-	-	-69.04	10.77	-58.28	-33.3
7518.00	H	-	-	-66.30	12.55	-53.74	-28.7

Table 7-45. Radiated Spurious Plot (ULCA B41 PC3 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0- Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet		Page 256 of 277

OPERATING FREQUENCY (PCC): 2593.00 MHz
 OPERATING FREQUENCY (SCC): 2612.80 MHz
 CHANNEL (PCC): 40620
 CHANNEL (SCC): 40818
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	H	-	-	-65.94	11.14	-54.81	-29.8
7779.00	H	-	-	-65.07	12.33	-52.74	-27.7

Table 7-46. Radiated Spurious Plot (ULCA B41 PC3 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0- Mid Channel)

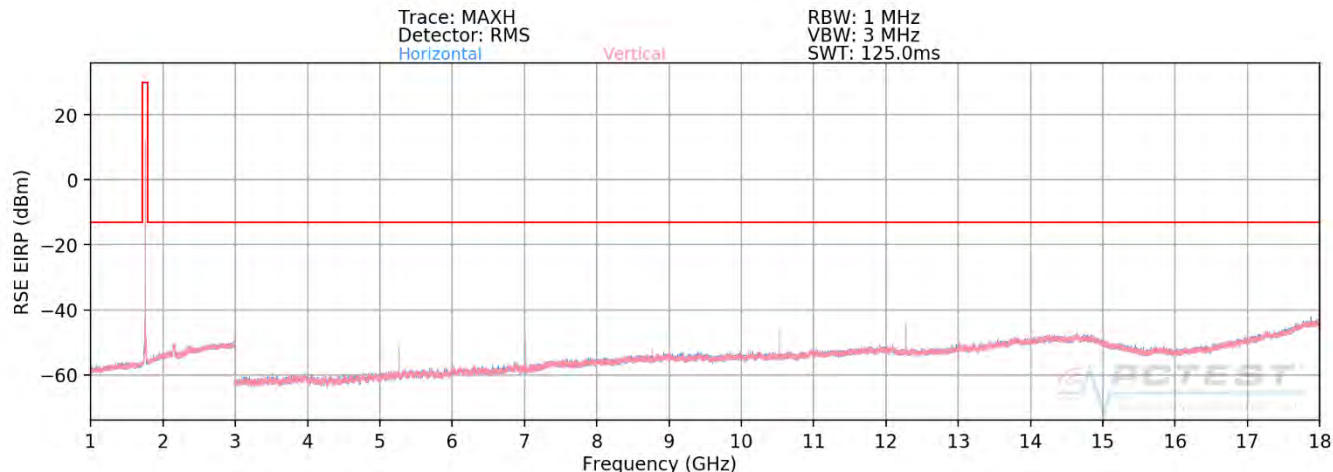
OPERATING FREQUENCY (PCC): 2680.00 MHz
 OPERATING FREQUENCY (SCC): 2660.20 MHz
 CHANNEL (PCC): 41490
 CHANNEL (SCC): 41292
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	H	-	-	-68.83	11.49	-57.34	-32.3
8040.00	H	-	-	-65.59	12.03	-53.57	-28.6

Table 7-47. Radiated Spurious Plot (ULCA B41 PC3 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99- High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 257 of 277

Uplink CA Configuration 66B/C



Plot 7-395. Radiated Spurious Plot (ULCA 66C PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 – Mid Channel)

OPERATING FREQUENCY (PCC): 1720.00 MHz
 OPERATING FREQUENCY (SCC): 1739.80 MHz
 CHANNEL (PCC): 132072
 CHANNEL (SCC): 132270
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3440.00	H	400	349	-71.43	7.51	-63.92	-50.9
5160.00	H	191	212	-66.36	11.10	-55.26	-42.3
6880.00	H	134	249	-60.32	11.72	-48.59	-35.6
8600.00	H	252	217	-62.63	8.83	-53.80	-40.8
10320.00	H	159	179	-63.22	12.41	-50.81	-37.8
12040.00	H	157	131	-59.25	12.75	-46.50	-33.5
13760.00	H	-	-	-64.56	12.03	-52.53	-39.5
15480.00	H	-	-	-71.92	15.93	-55.99	-43.0

Table 7-48. Radiated Spurious Data (ULCA 66C PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 – Low Channel)

FCC ID: A3LSMT867U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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OPERATING FREQUENCY (PCC): 1745.00 MHz
 OPERATING FREQUENCY (SCC): 1764.80 MHz
 CHANNEL (PCC): 132322
 CHANNEL (SCC): 132520
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	H	144	294	-70.63	7.50	-63.13	-50.1
5235.00	H	131	238	-64.51	11.26	-53.25	-40.3
6980.00	H	157	253	-62.96	11.85	-51.11	-38.1
8725.00	H	159	65	-64.06	8.41	-55.65	-42.6
10470.00	H	160	167	-60.98	12.63	-48.35	-35.3
12215.00	H	278	160	-60.06	13.14	-46.92	-33.9
13960.00	H	-	-	-64.77	11.89	-52.88	-39.9
15705.00	H	-	-	-72.26	16.66	-55.60	-42.6

Table 7-49. Radiated Spurious Data (ULCA 66C PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 – Mid Channel)

OPERATING FREQUENCY (PCC): 1770.00 MHz
 OPERATING FREQUENCY (SCC): 1750.20 MHz
 CHANNEL (PCC): 132572
 CHANNEL (SCC): 132374
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	H	118	234	-70.76	7.24	-63.52	-50.5
5310.00	H	169	241	-64.70	11.51	-53.19	-40.2
7080.00	H	128	252	-62.61	11.94	-50.67	-37.7
8850.00	H	136	206	-60.63	7.62	-53.01	-40.0
10620.00	H	184	202	-57.92	12.61	-45.31	-32.3
12390.00	H	204	132	-58.74	13.39	-45.35	-32.4
14160.00	H	-	-	-64.10	11.58	-52.52	-39.5
15930.00	H	-	-	-73.21	16.80	-56.41	-43.4

Table 7-50. Radiated Spurious Data (ULCA 66C PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 – High Channel)

FCC ID: A3LSMT867U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1907300131-03.A3L	Test Dates: 07/22 – 08/20/2019	EUT Type: Portable Tablet	Page 259 of 277