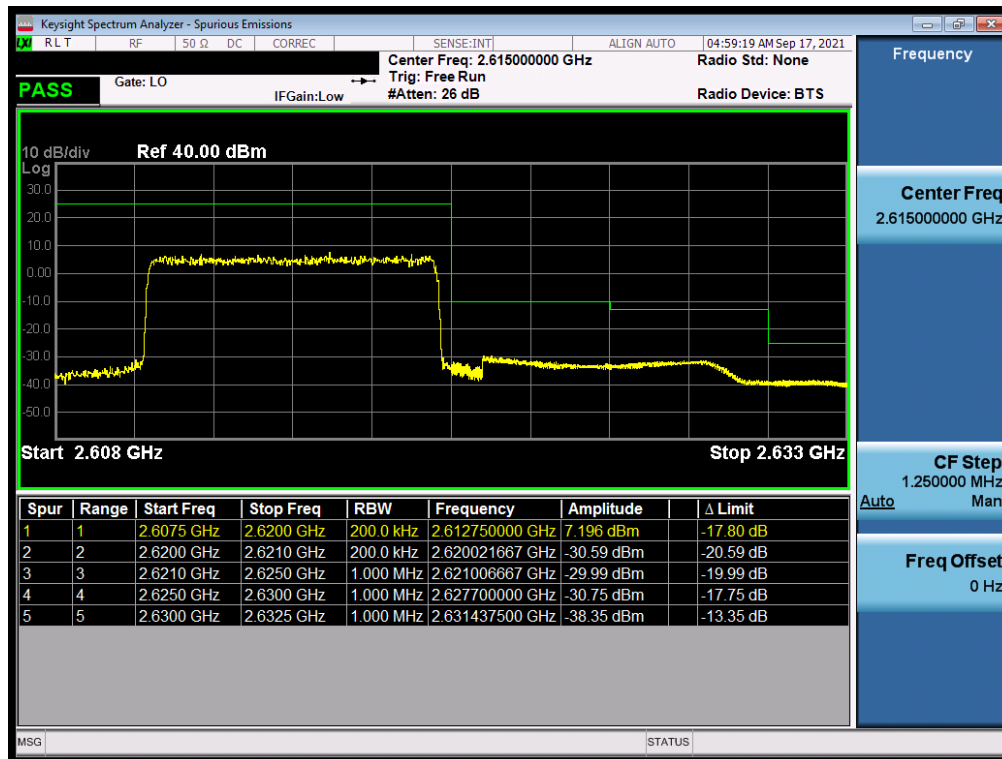
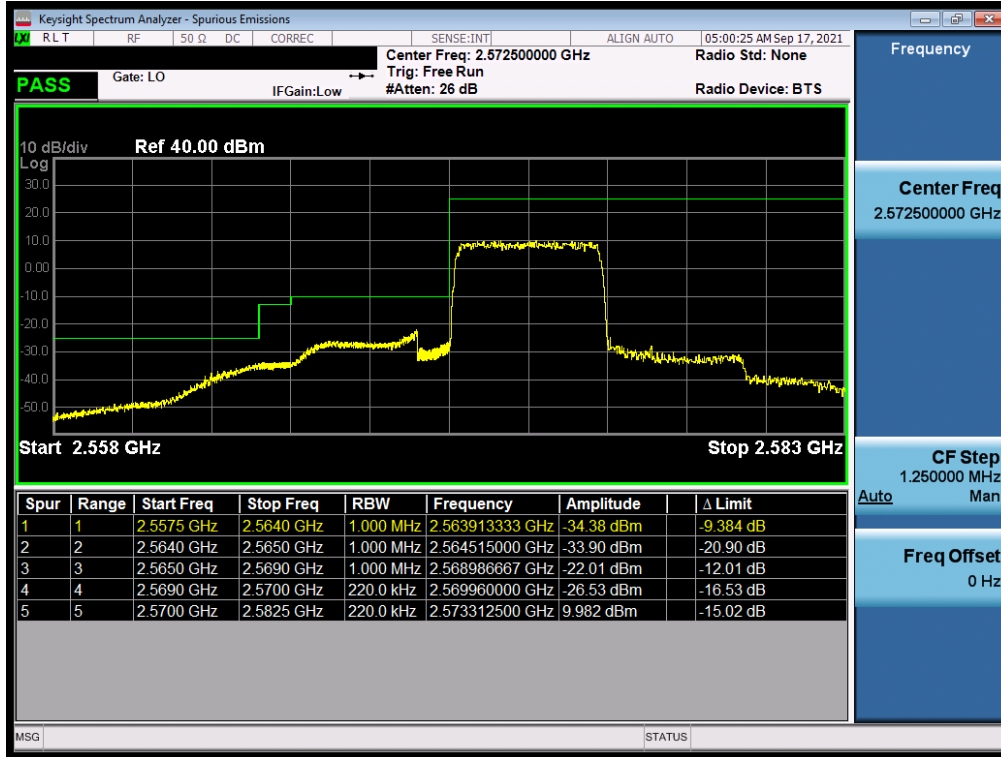


Plot 7-229. Lower Band Edge Plot (LTE Band 38 - 10MHz QPSK – Full RB)

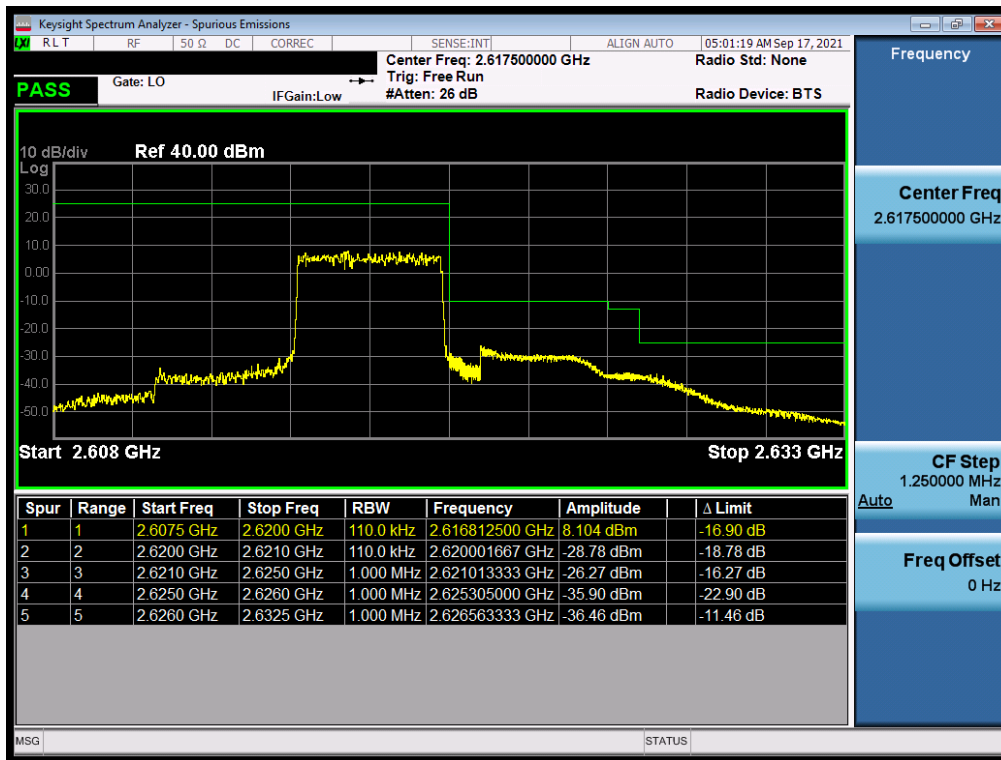


Plot 7-230. Upper Band Edge Plot (LTE Band 38 - 10MHz QPSK – Full RB)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 149 of 242



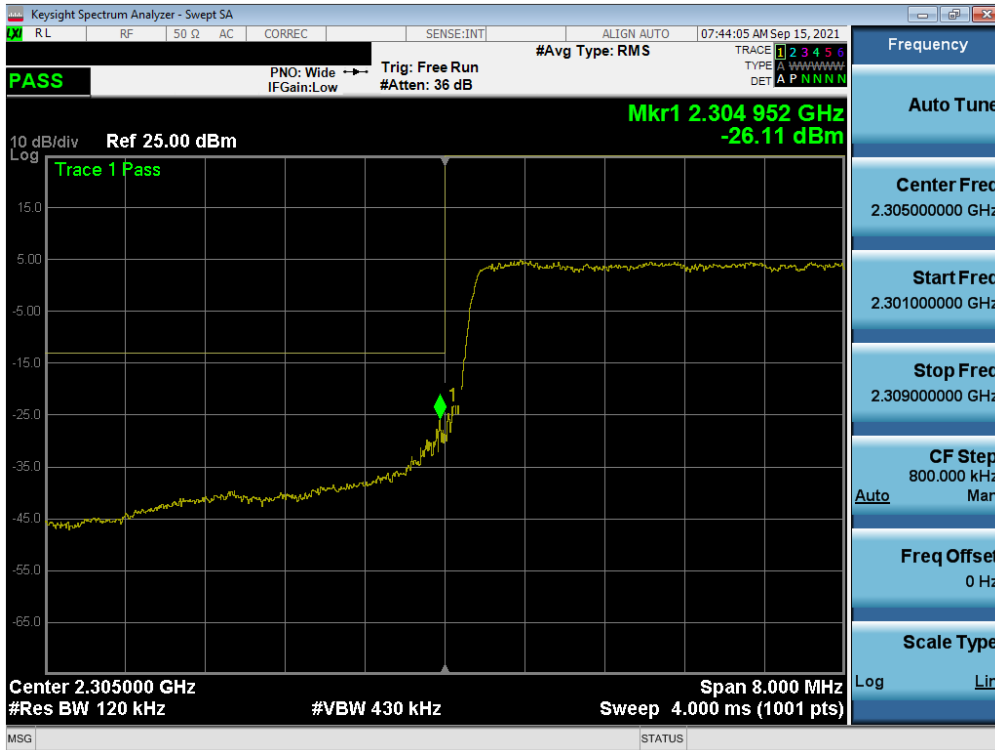
Plot 7-231. Lower Band Edge Plot (LTE Band 38 - 5MHz QPSK - Full RB)



Plot 7-232. Upper Band Edge Plot (LTE Band 38 - 5MHz QPSK - Full RB)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset		Page 150 of 242

NR Band n30 – Ant B



Plot 7-233. Lower Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant B)

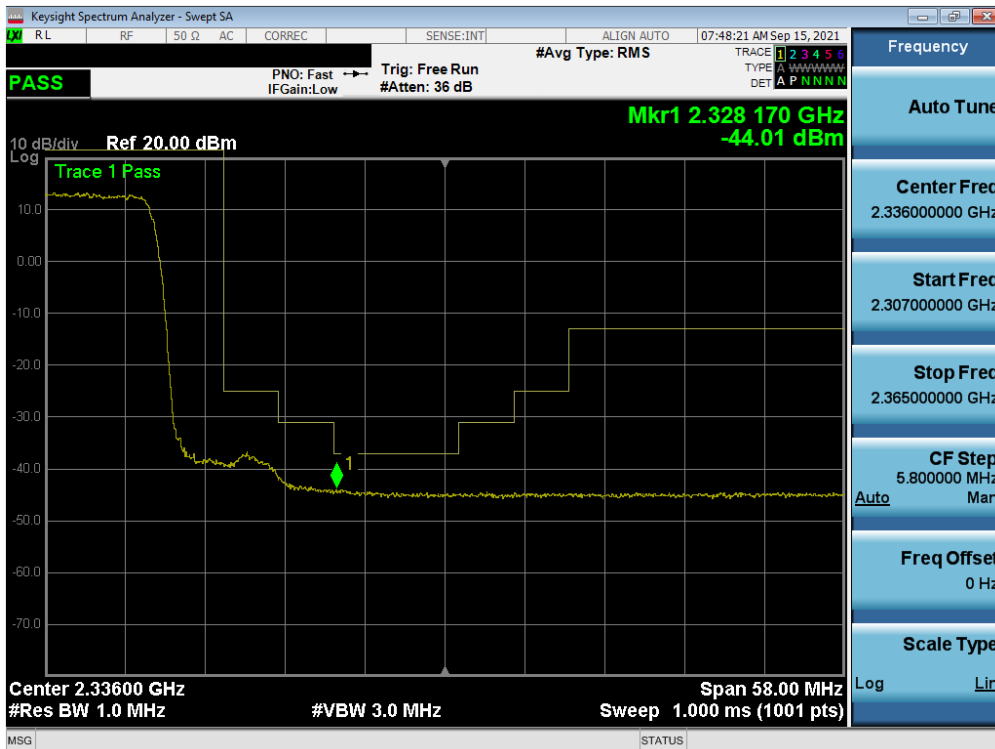


Plot 7-234. Extended Lower Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant B)




FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 151 of 242

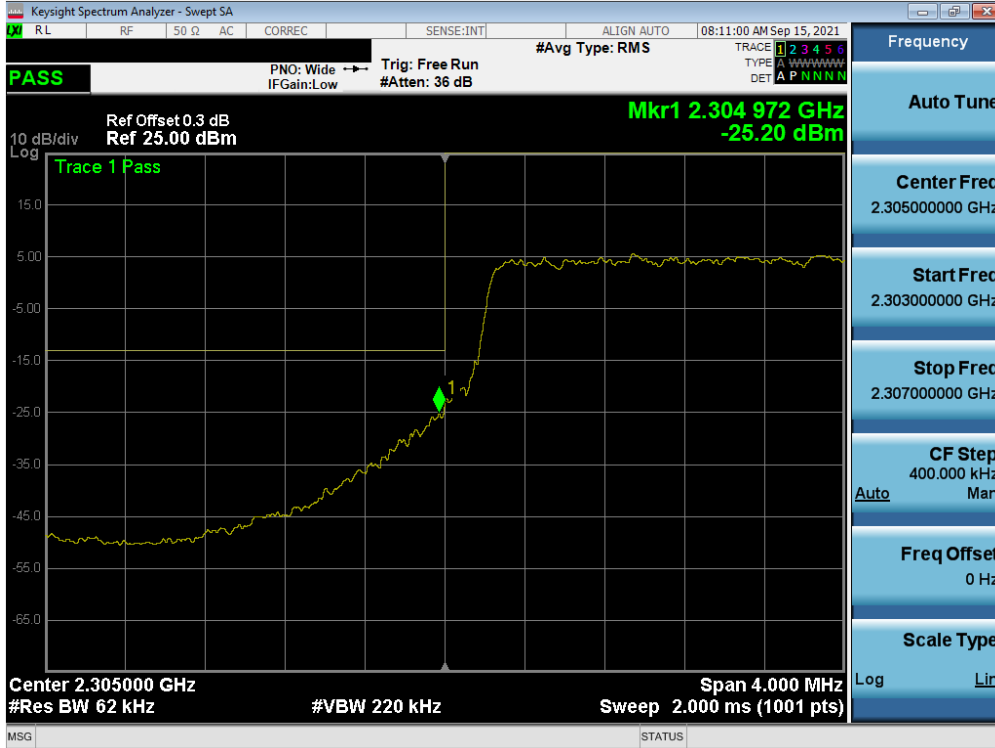


Plot 7-235. Upper Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant B)

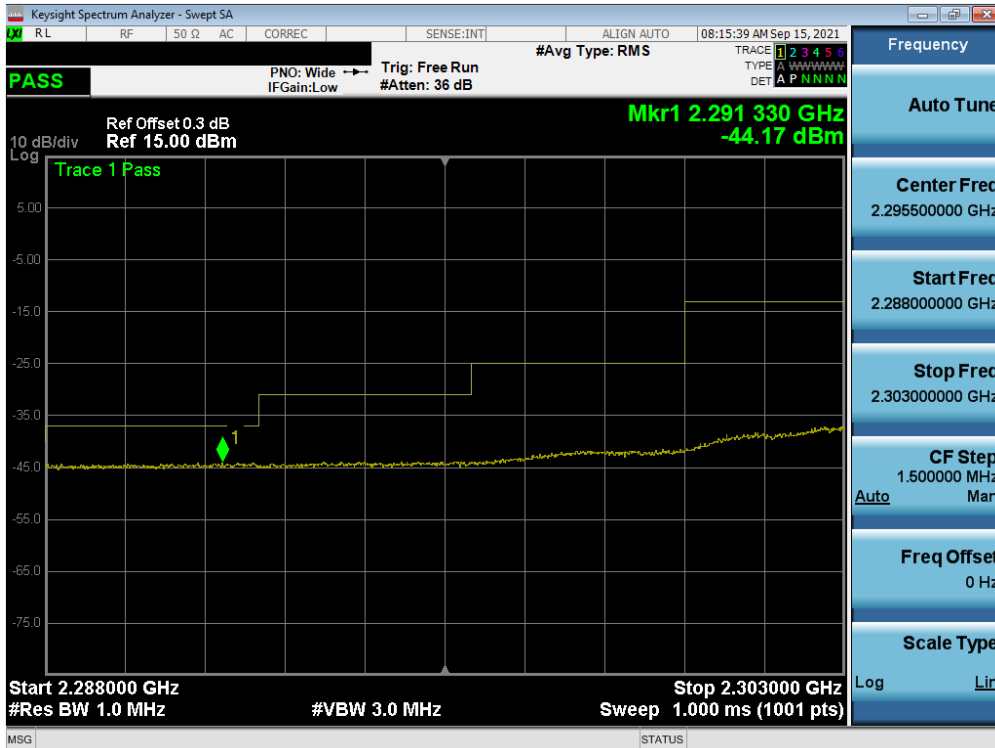


Plot 7-236. Extended Upper Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant B)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of 	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 152 of 242

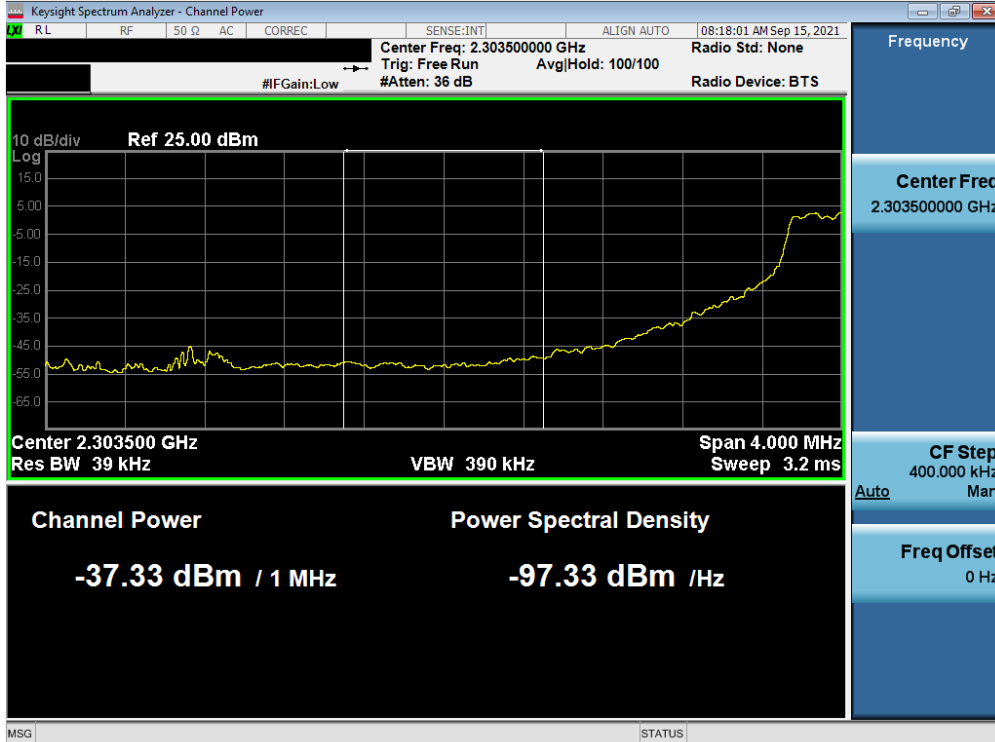


Plot 7-237. Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant B)



Plot 7-238. Extended Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 153 of 242

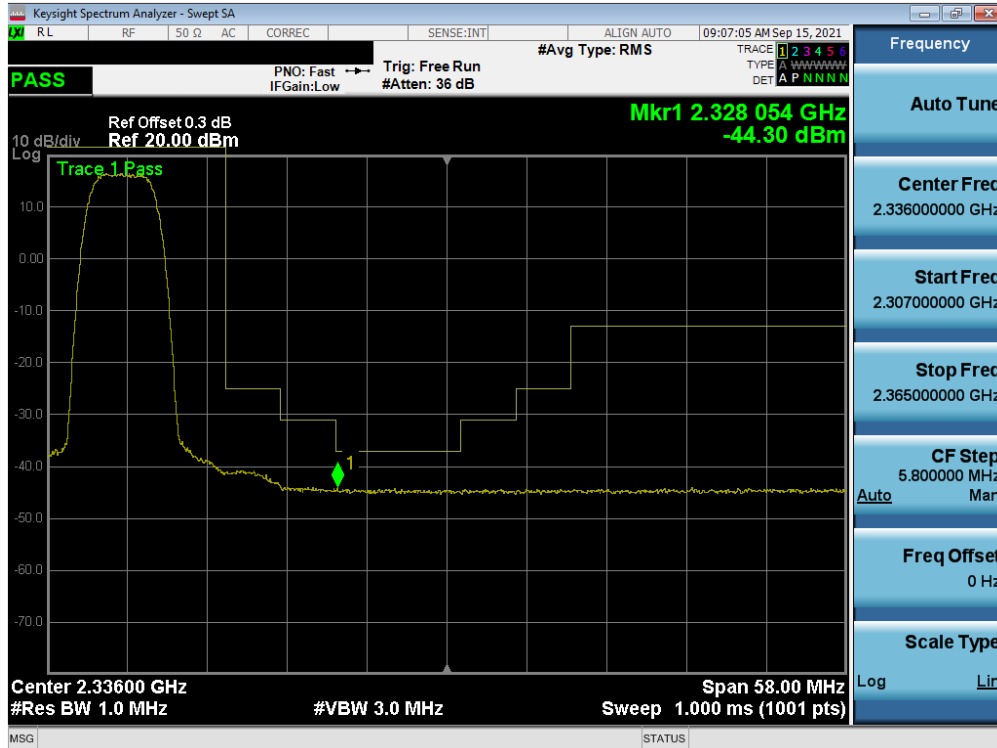


Plot 7-239. Extended Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant B)



Plot 7-240. Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant B)

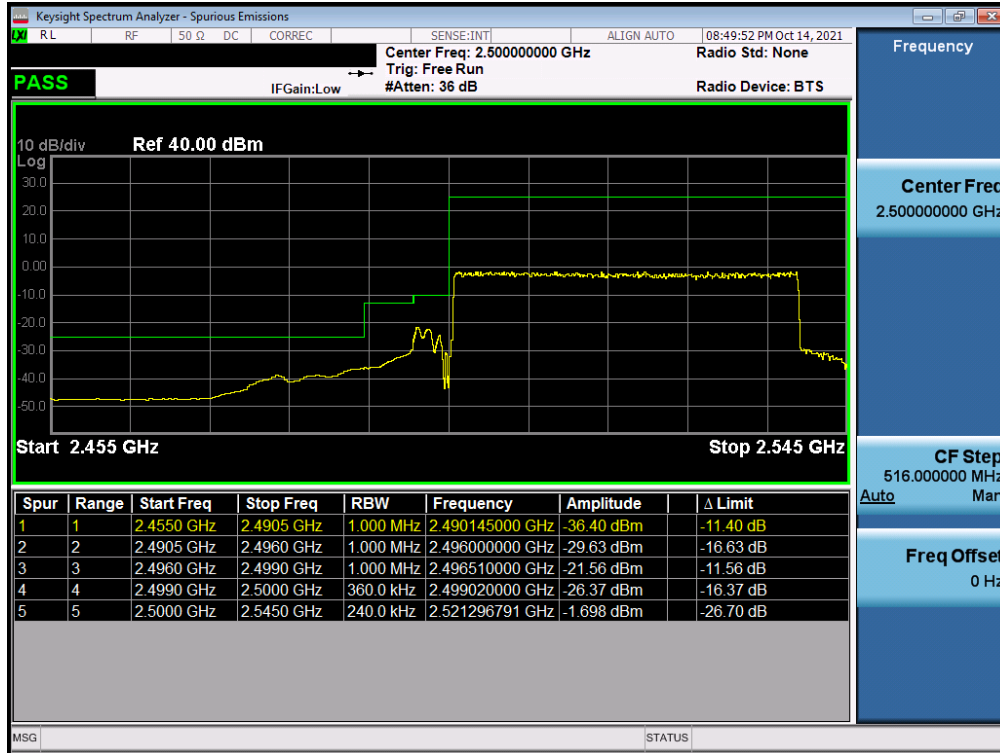
FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 154 of 242



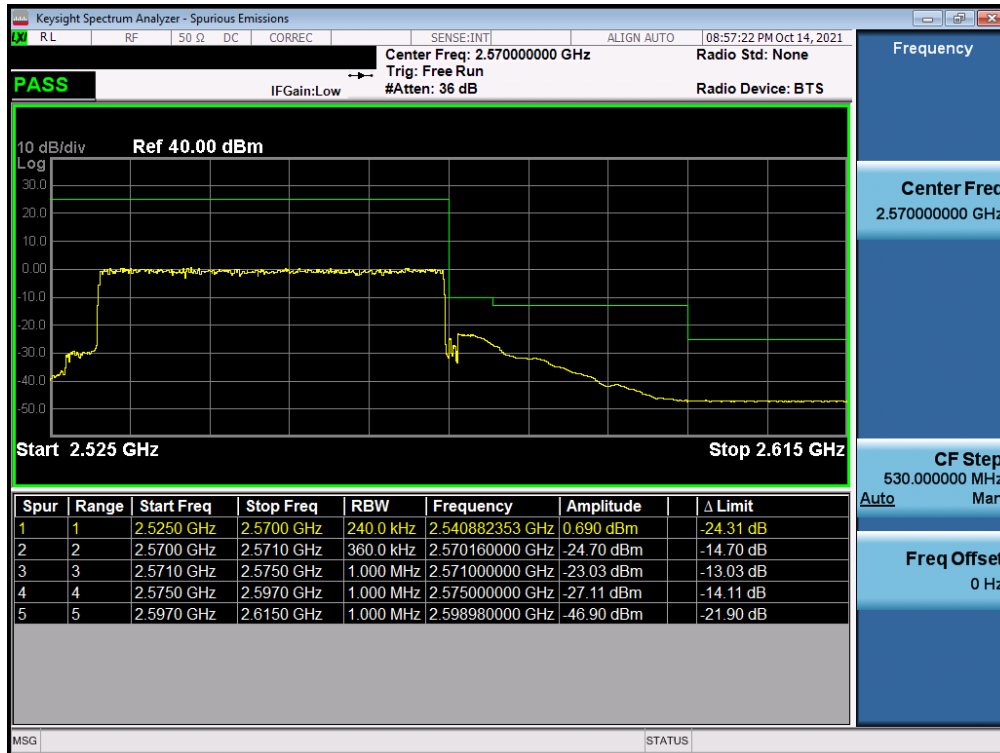
Plot 7-241. Extended Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 155 of 242

NR Band n7 – Ant B

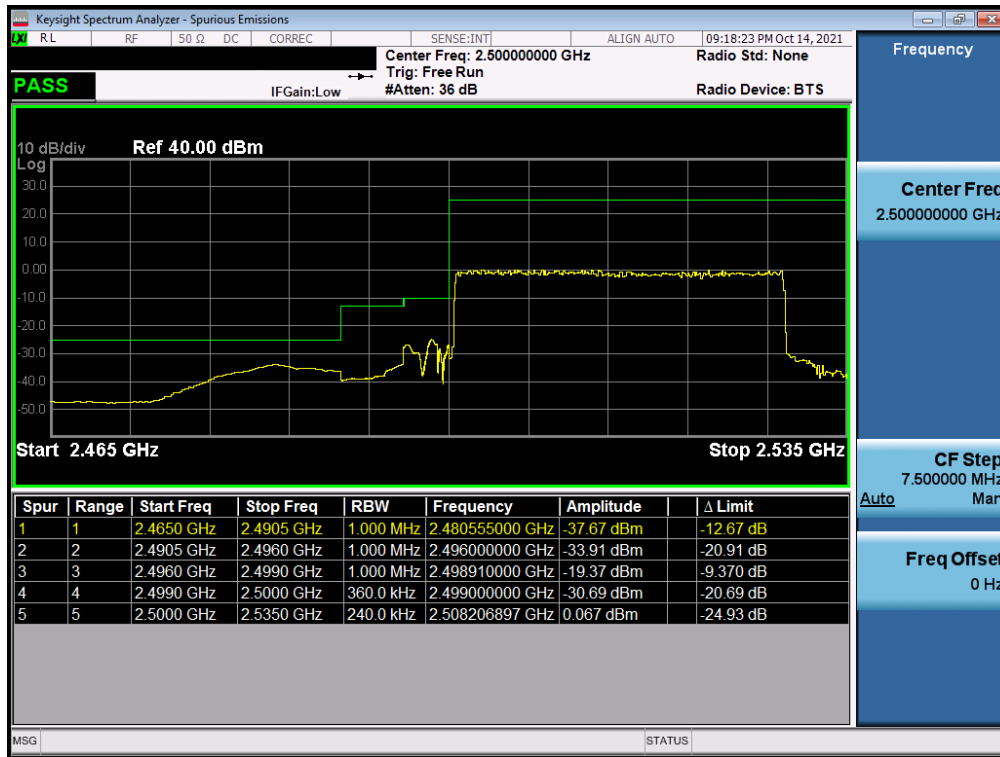


Plot 7-242. Lower Band Edge Plot (NR Band n7 - 40MHz CP-OFDM-QPSK – Full RB – Ant B)

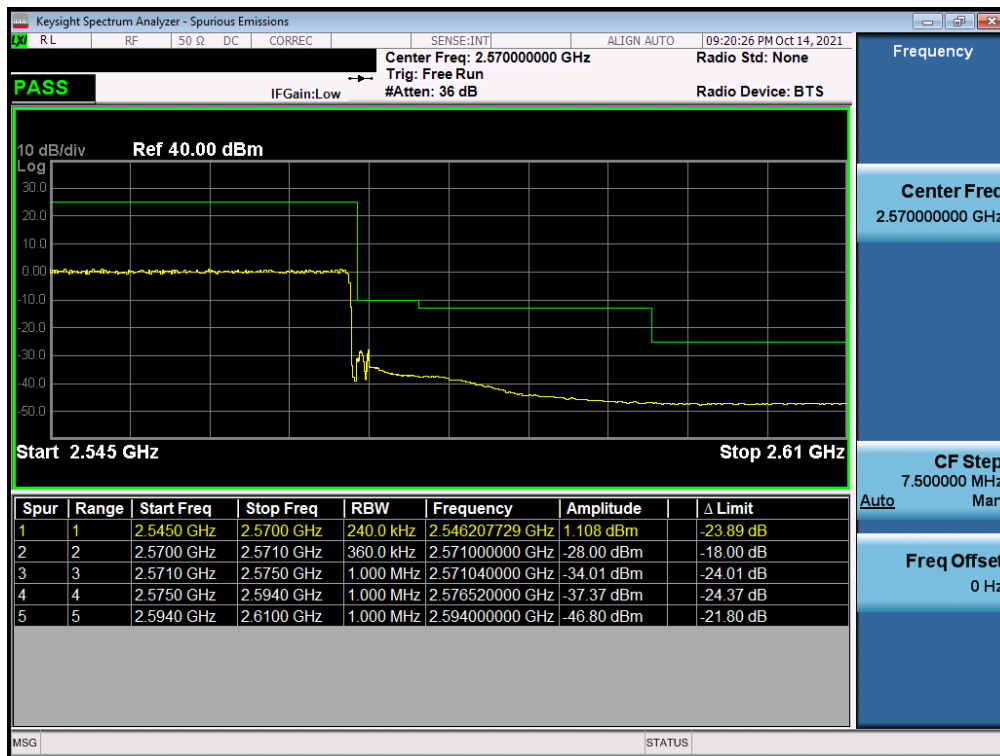


Plot 7-243. Upper Band Edge Plot (NR Band n7 - 40MHz CP-OFDM-QPSK – Full RB – Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 156 of 242

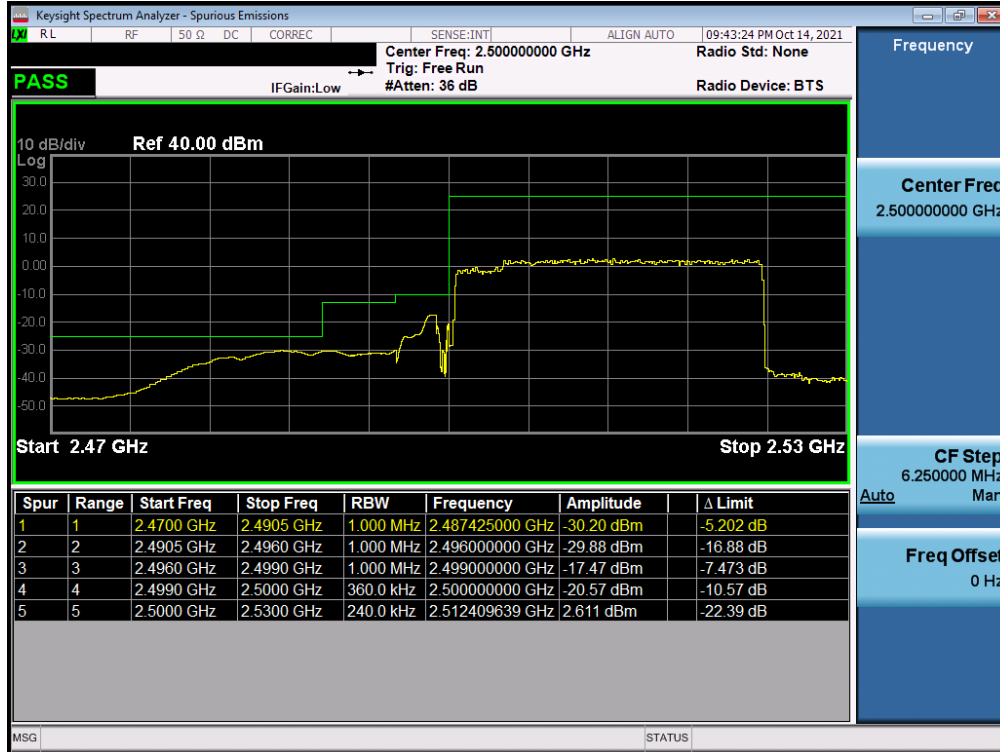


Plot 7-244. Lower Band Edge Plot (NR Band n7 - 30MHz CP-OFDM-QPSK - Full RB - Ant B)

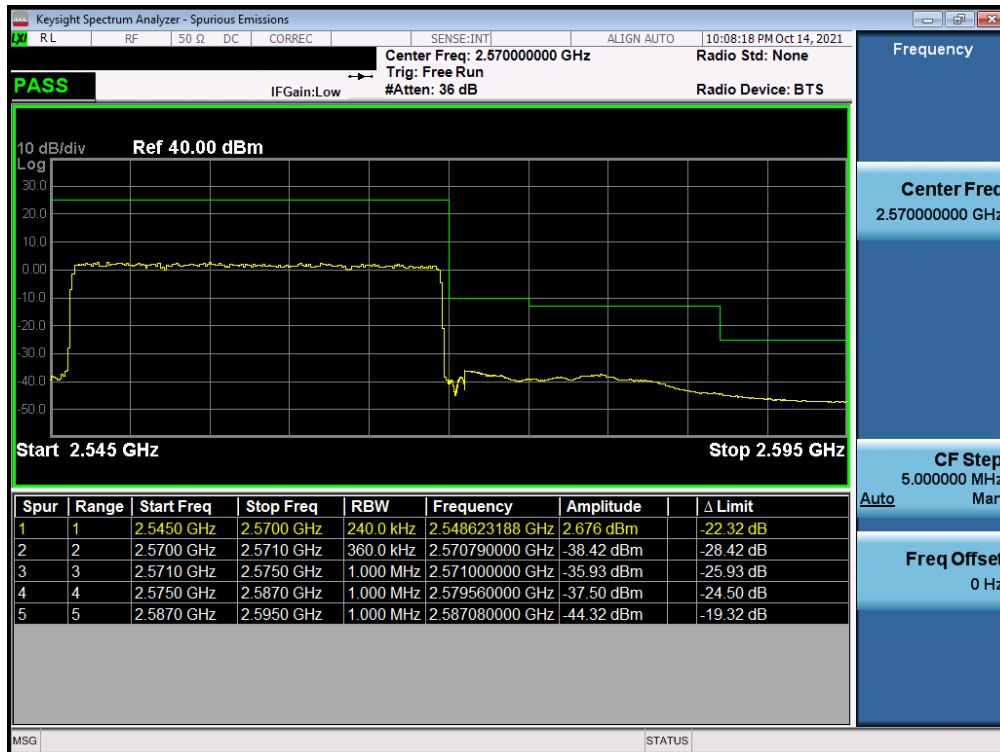


Plot 7-245. Upper Band Edge Plot (NR Band n7 - 30MHz CP-OFDM-QPSK - Full RB - Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset		Page 157 of 242

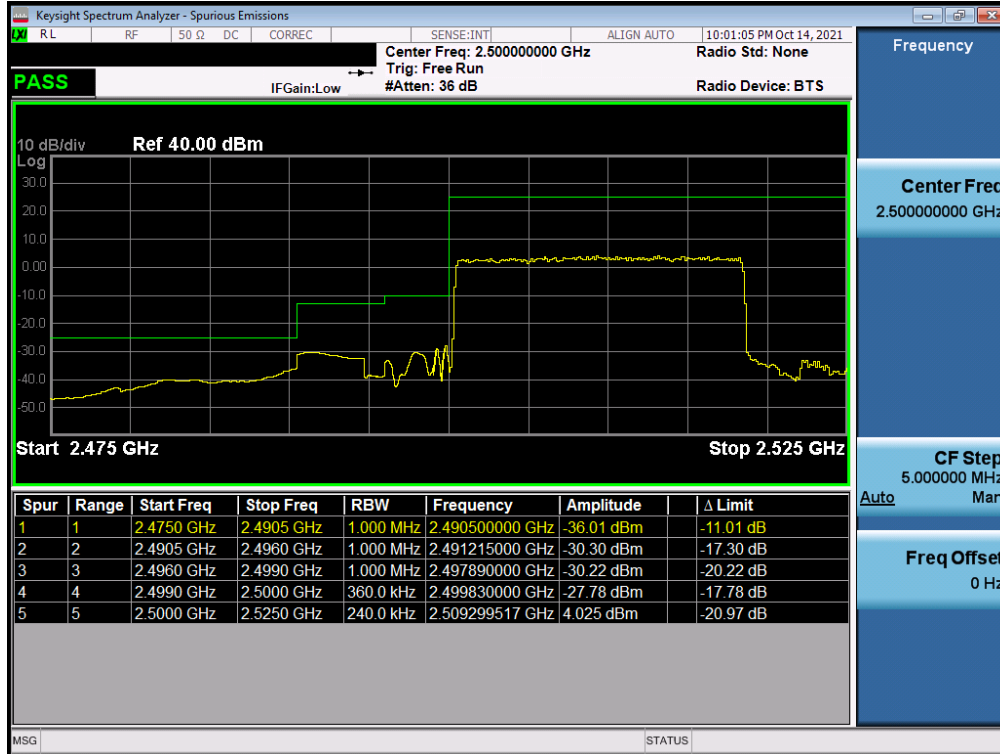


Plot 7-246. Lower Band Edge Plot (NR Band n7 - 25MHz CP-OFDM-QPSK - Full RB - Ant B)

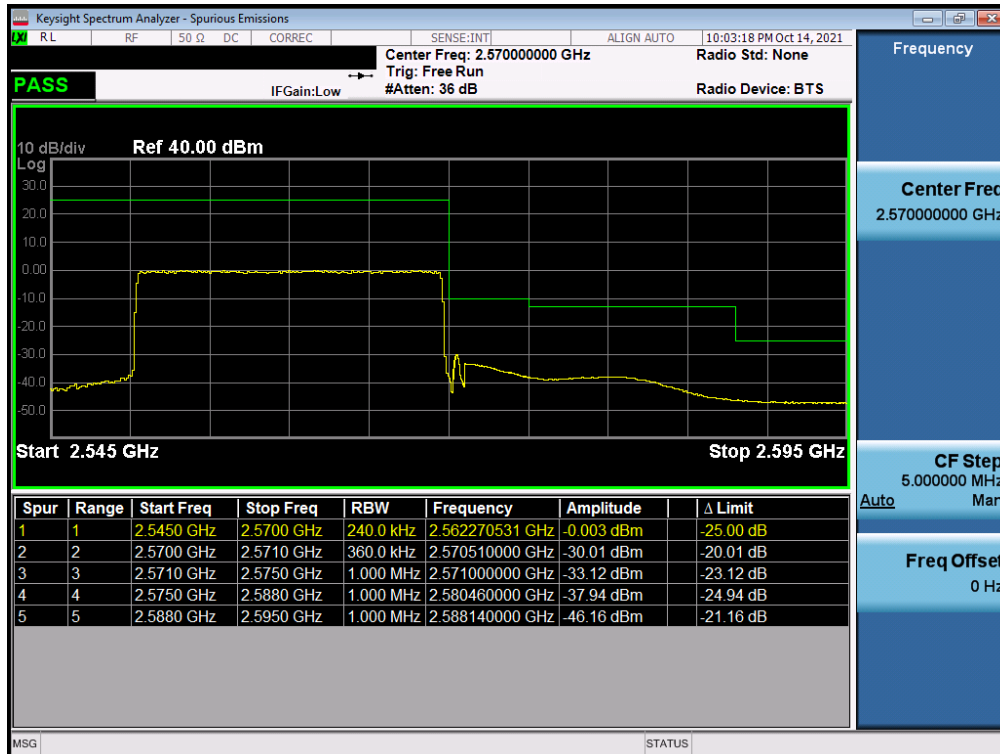


Plot 7-247. Upper Band Edge Plot (NR Band n7 - 25MHz CP-OFDM-QPSK - Full RB - Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset		Page 158 of 242

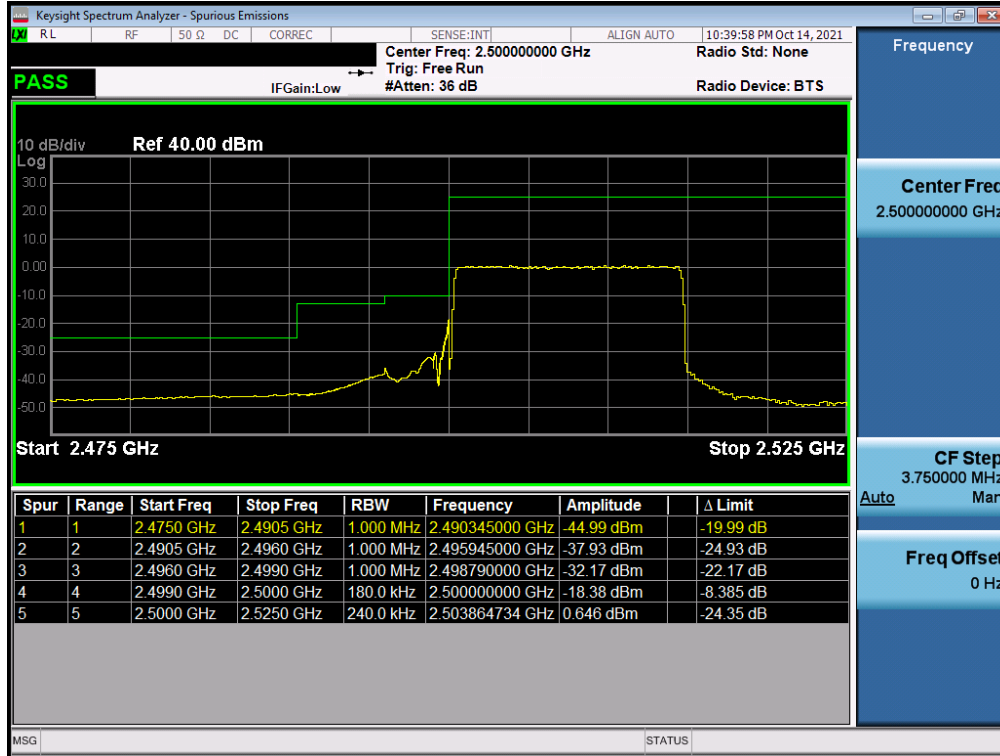


Plot 7-248. Lower Band Edge Plot (NR Band n7 - 20MHz CP-OFDM-QPSK - Full RB - Ant B)

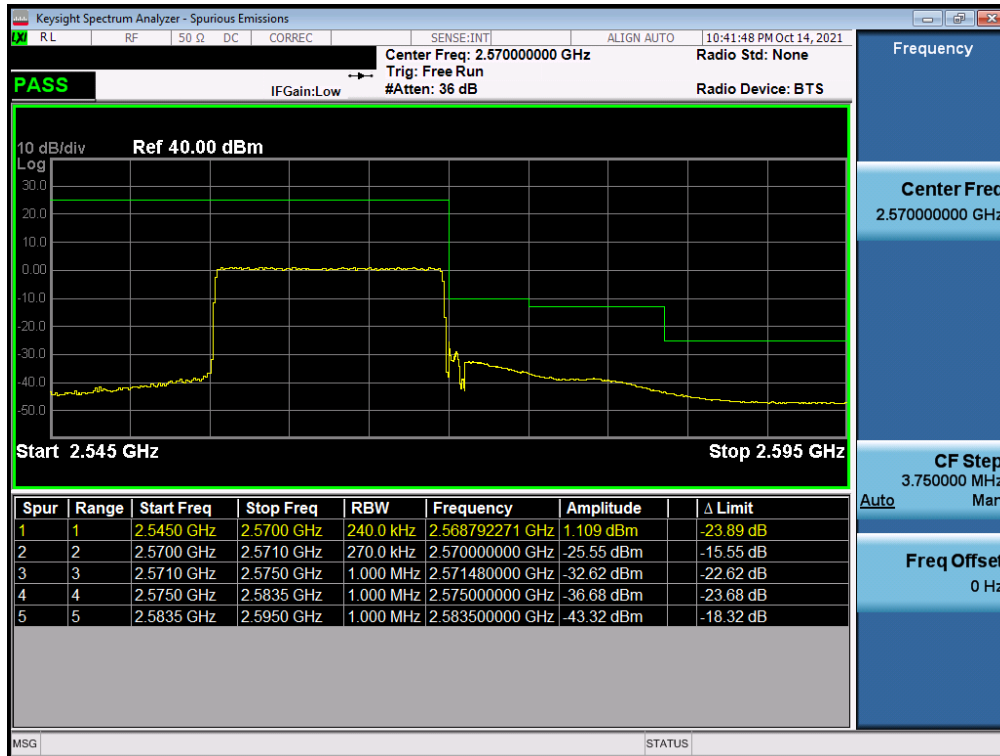


Plot 7-249. Upper Band Edge Plot (NR Band n7 - 20MHz CP-OFDM-QPSK - Full RB - Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset	Page 159 of 242

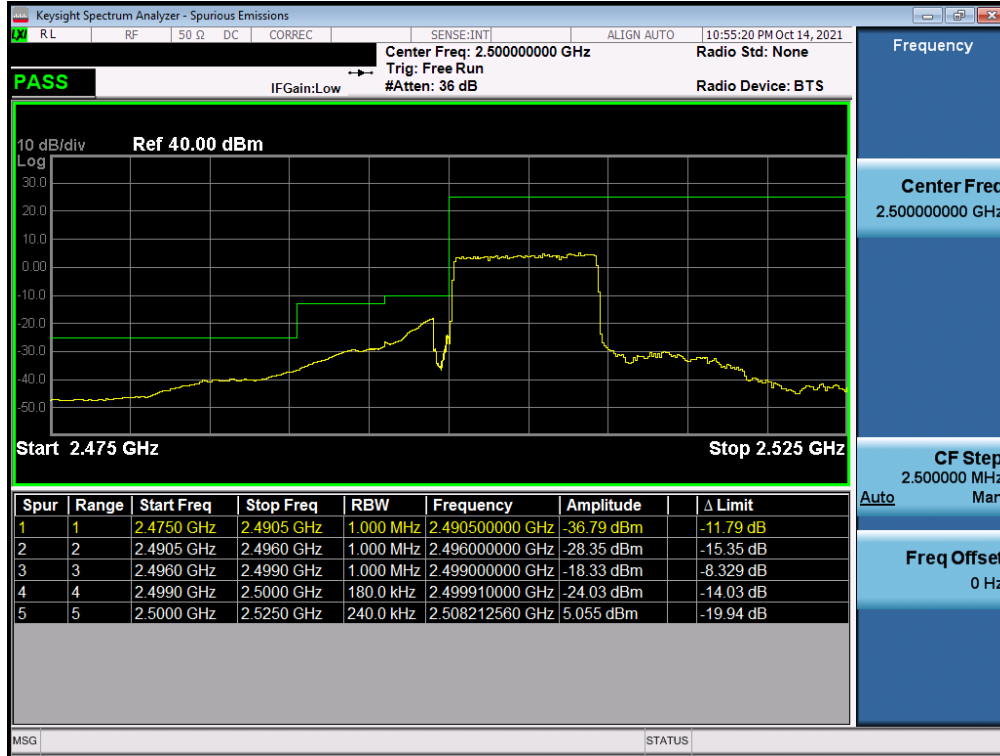


Plot 7-250. Lower Band Edge Plot (NR Band n7 - 15MHz CP-OFDM-QPSK - Full RB - Ant B)

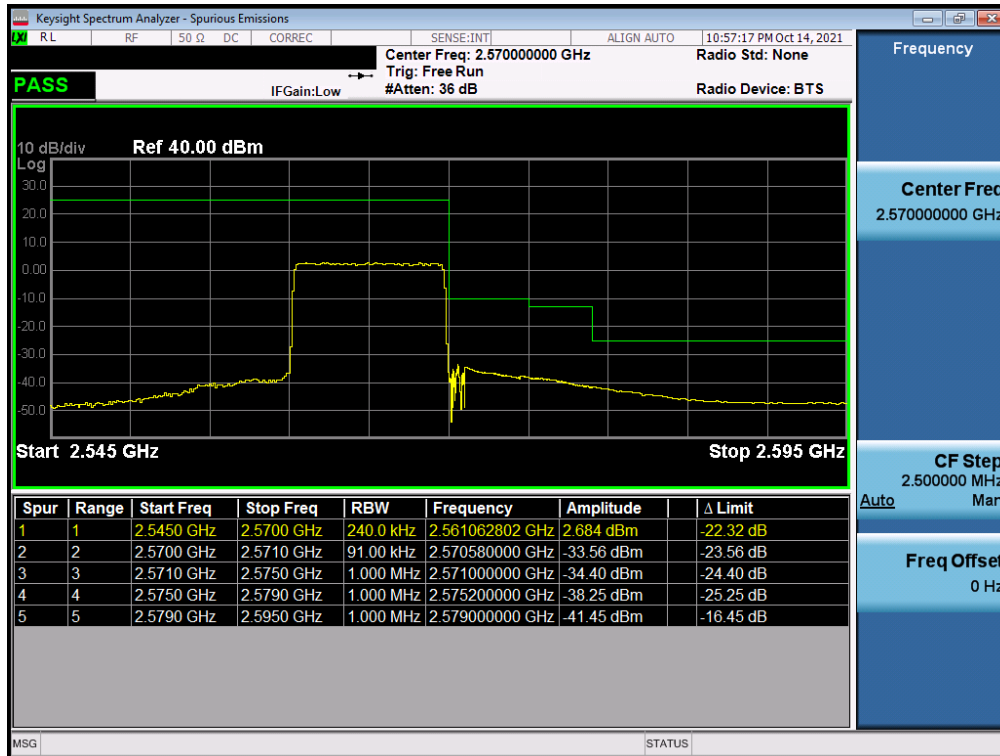


Plot 7-251. Upper Band Edge Plot (NR Band n7 - 15MHz CP-OFDM-QPSK - Full RB - Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset	Page 160 of 242

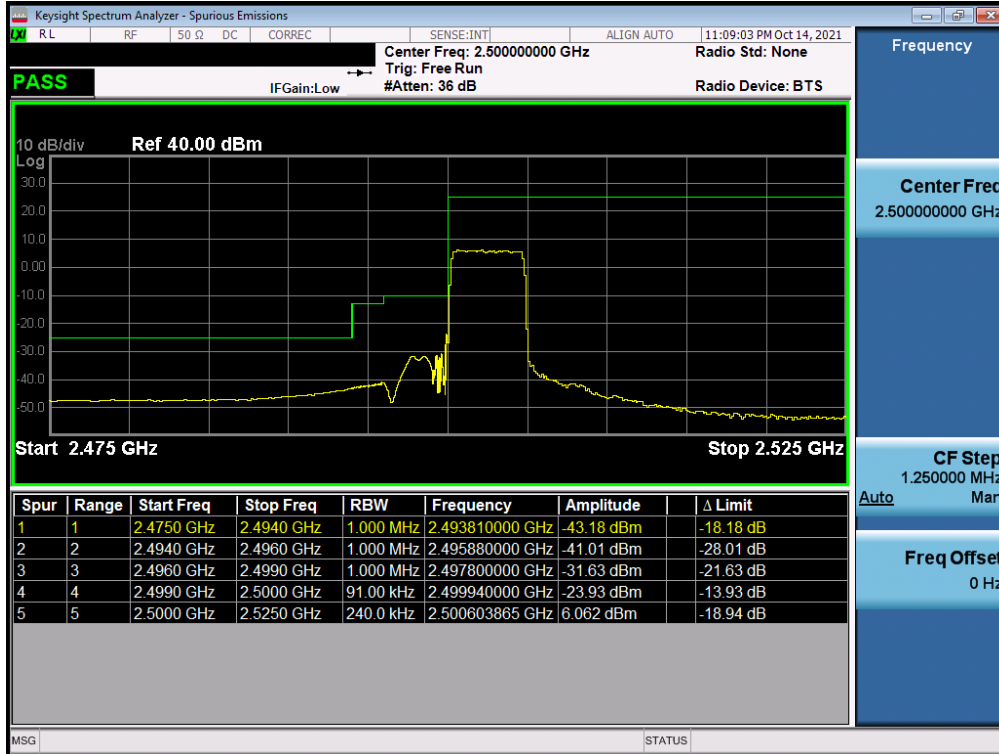


Plot 7-252. Lower Band Edge Plot (NR Band n7 - 10MHz CP-OFDM-QPSK - Full RB - Ant B)

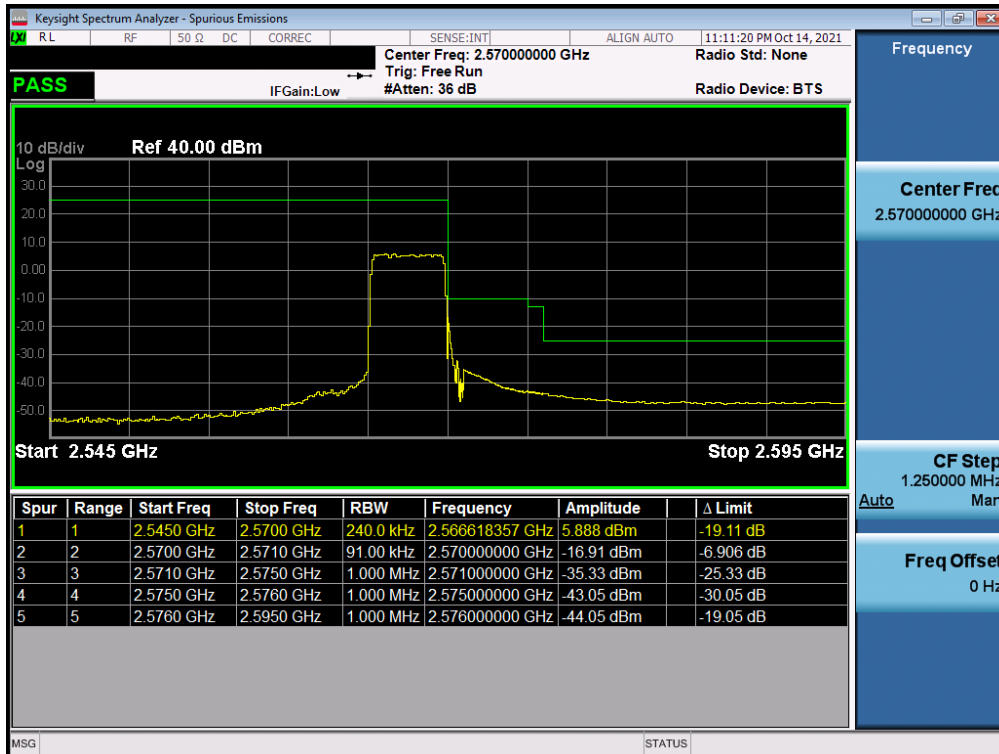


Plot 7-253. Upper Band Edge Plot (NR Band n7 - 10MHz CP-OFDM-QPSK - Full RB - Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset		Page 161 of 242



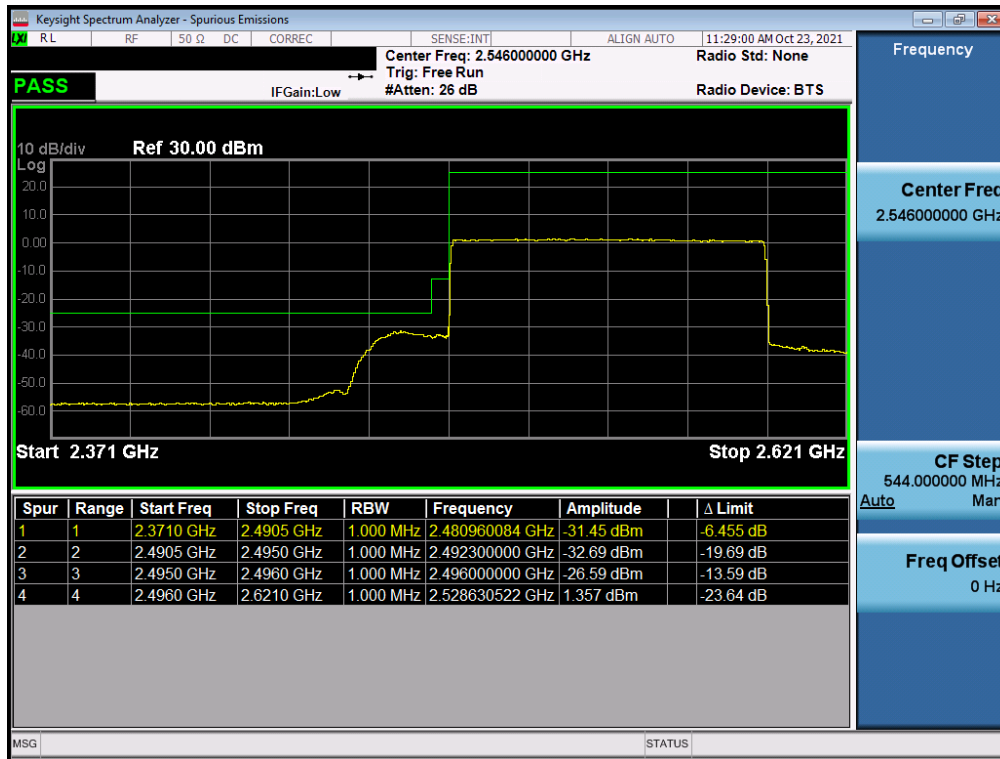
Plot 7-254. Lower Band Edge Plot (NR Band n7 - 5MHz CP-OFDM-QPSK - Full RB - Ant B)



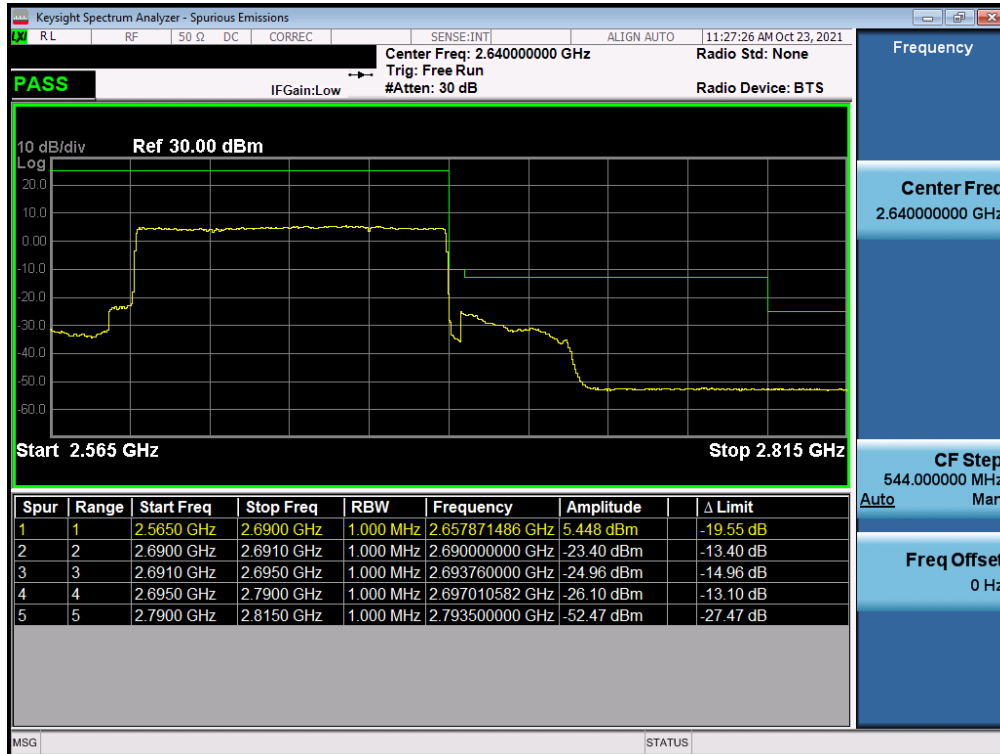
Plot 7-255. Upper Band Edge Plot (NR Band n7 - 5MHz CP-OFDM-QPSK - Full RB - Ant B)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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NR Band n41 – Ant F

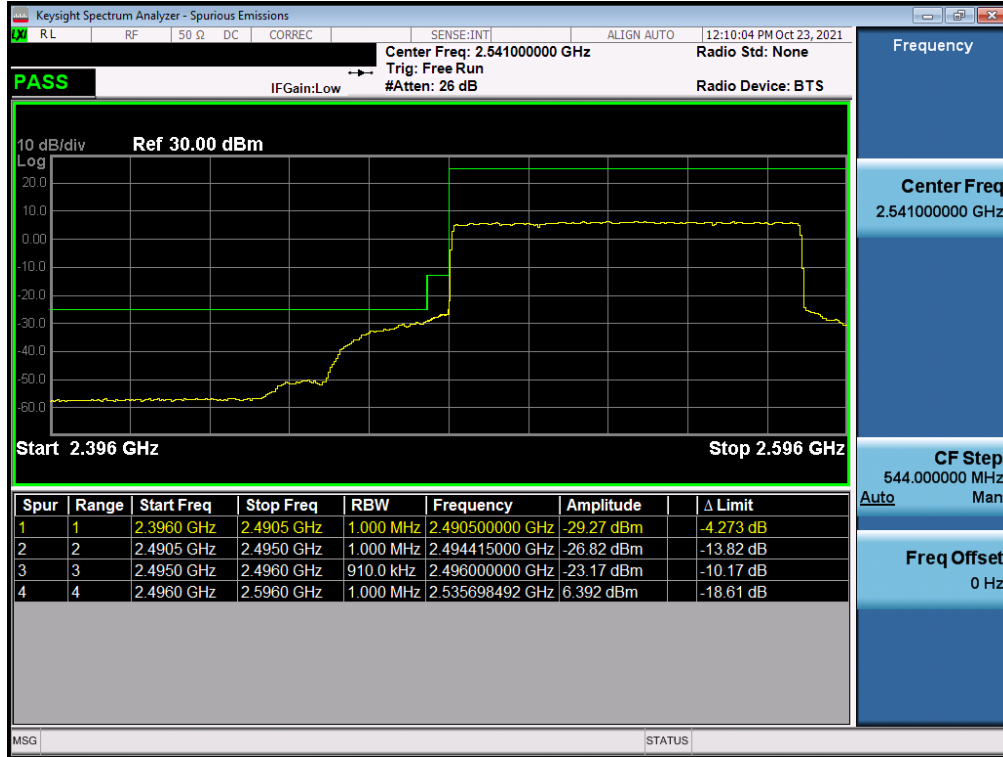


Plot 7-256. Lower ACP Plot (NR Band n41 - 100MHz CP-OFDM-QPSK – Full RB – Ant F)

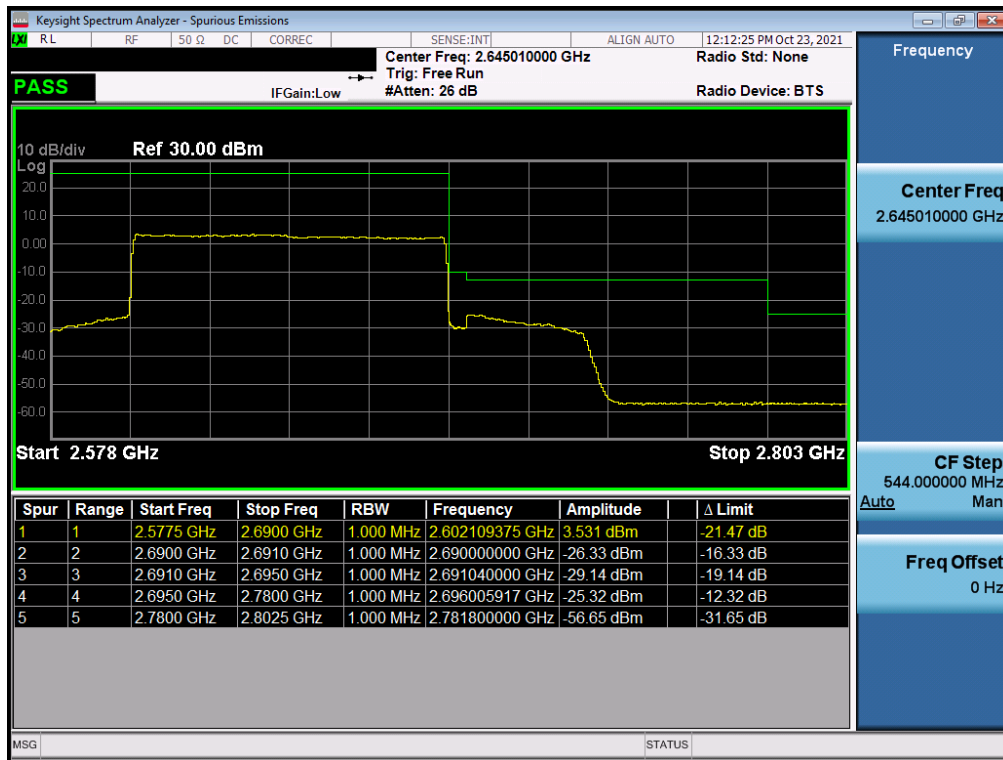


Plot 7-257. Upper ACP Plot (NR Band n41 - 100MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 163 of 242

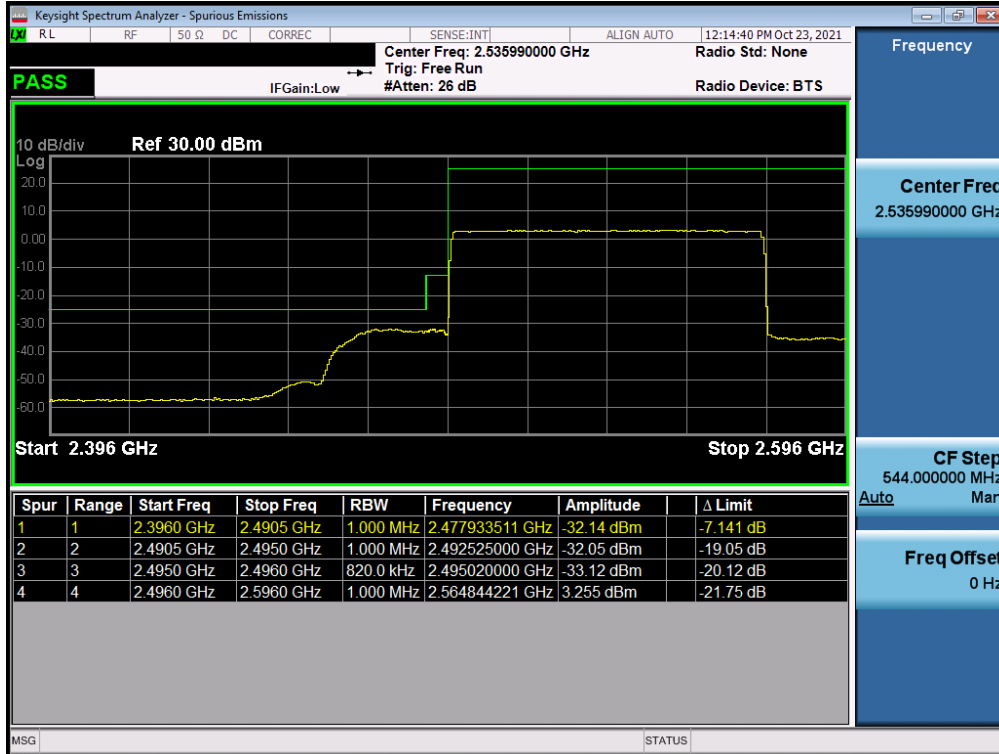


Plot 7-258. Lower ACP Plot (NR Band n41 - 90MHz CP-OFDM-QPSK - Full RB - Ant F)

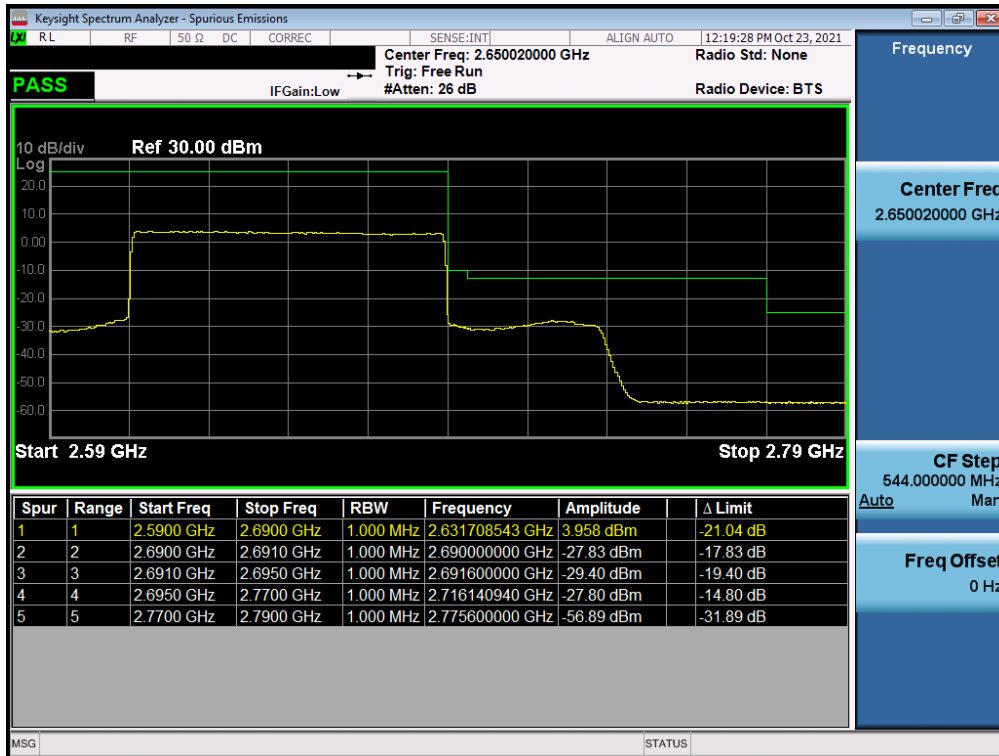


Plot 7-259. Upper ACP Plot (NR Band n41 - 90MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset		Page 164 of 242

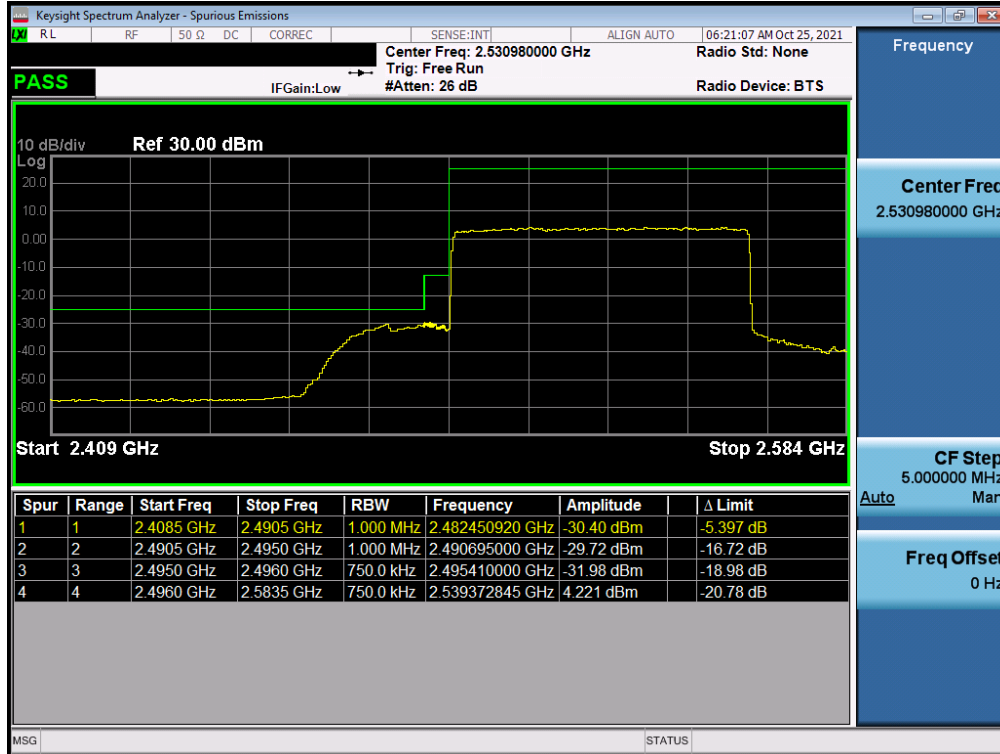


Plot 7-260. Lower ACP Plot (NR Band n41 - 80MHz CP-OFDM-QPSK – Full RB – Ant F)

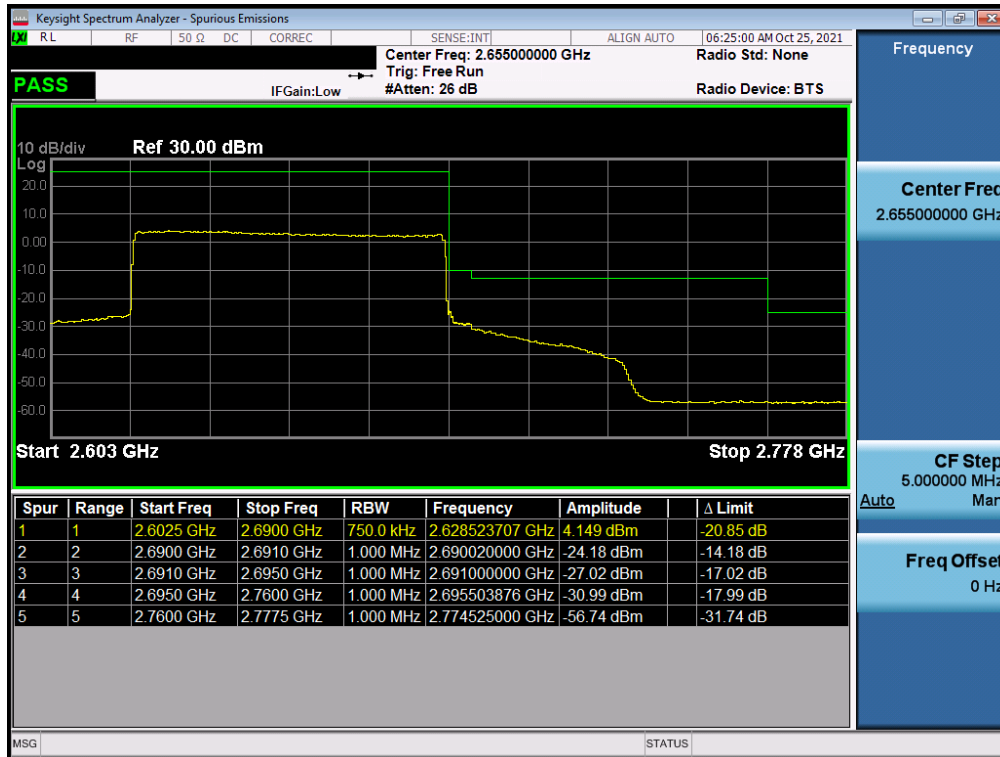


Plot 7-261. Upper ACP Plot (NR Band n41 - 80MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 165 of 242

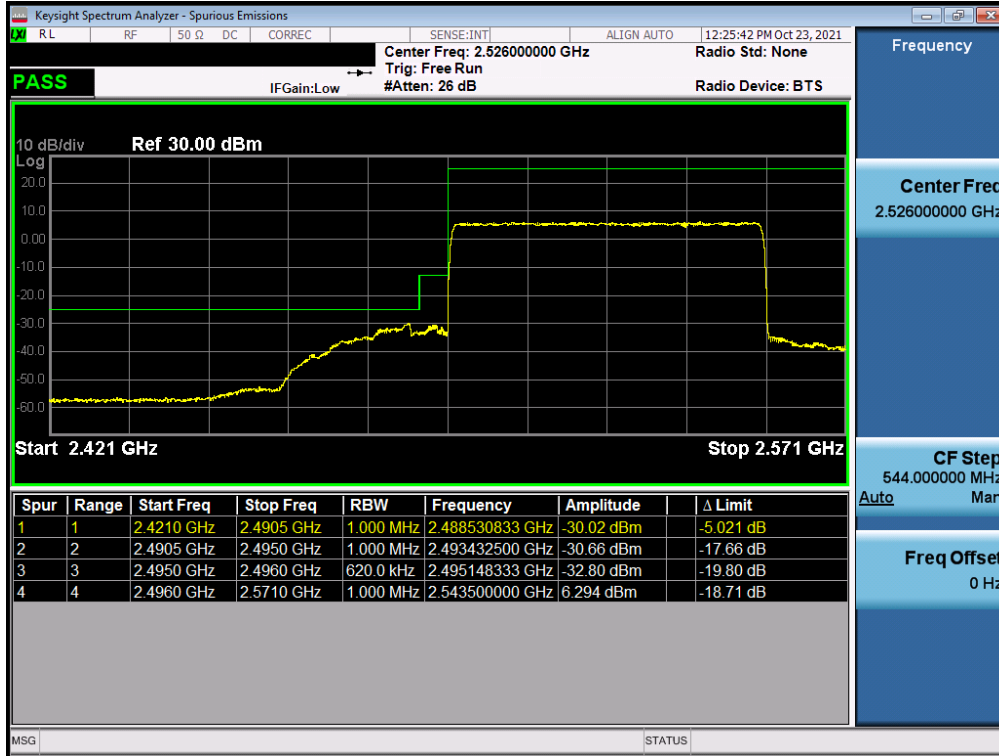


Plot 7-262. Lower ACP Plot (NR Band n41 - 70MHz CP-OFDM-QPSK - Full RB - Ant F)

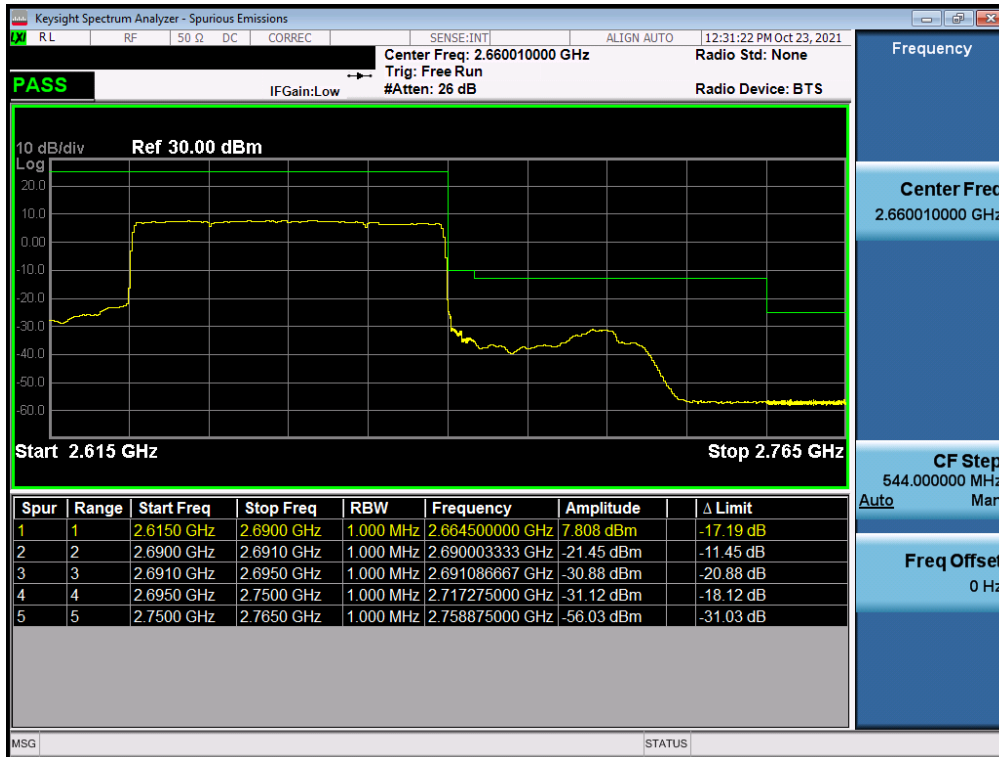


Plot 7-263. Upper ACP Plot (NR Band n41 - 70MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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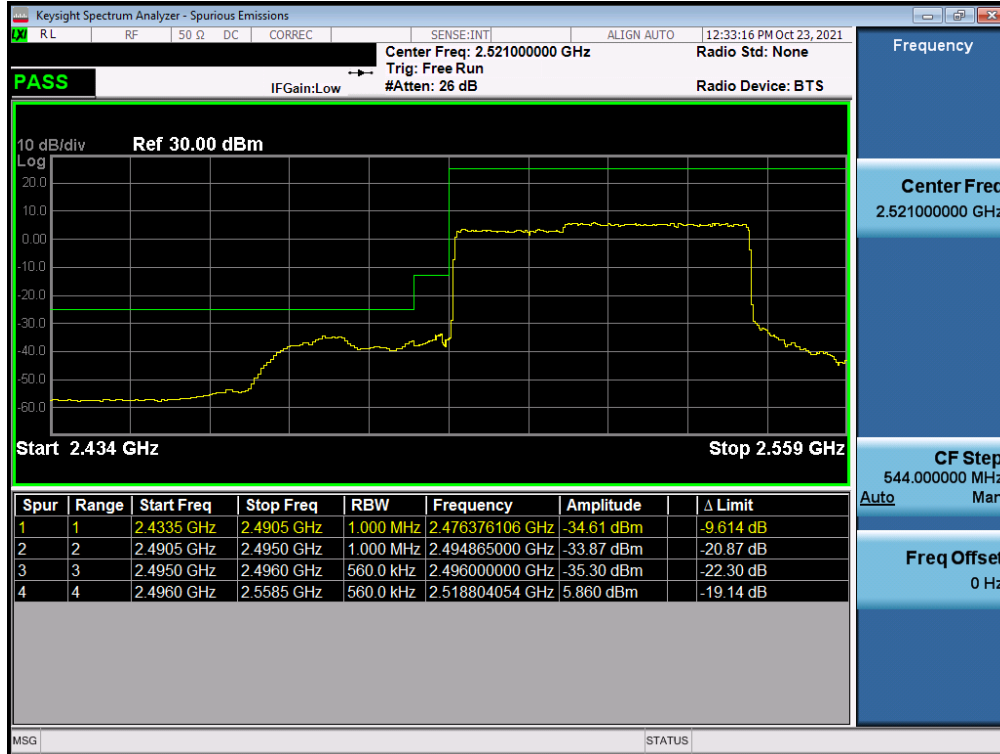


Plot 7-264. Lower ACP Plot (NR Band n41 - 60MHz CP-OFDM-QPSK - Full RB - Ant F)

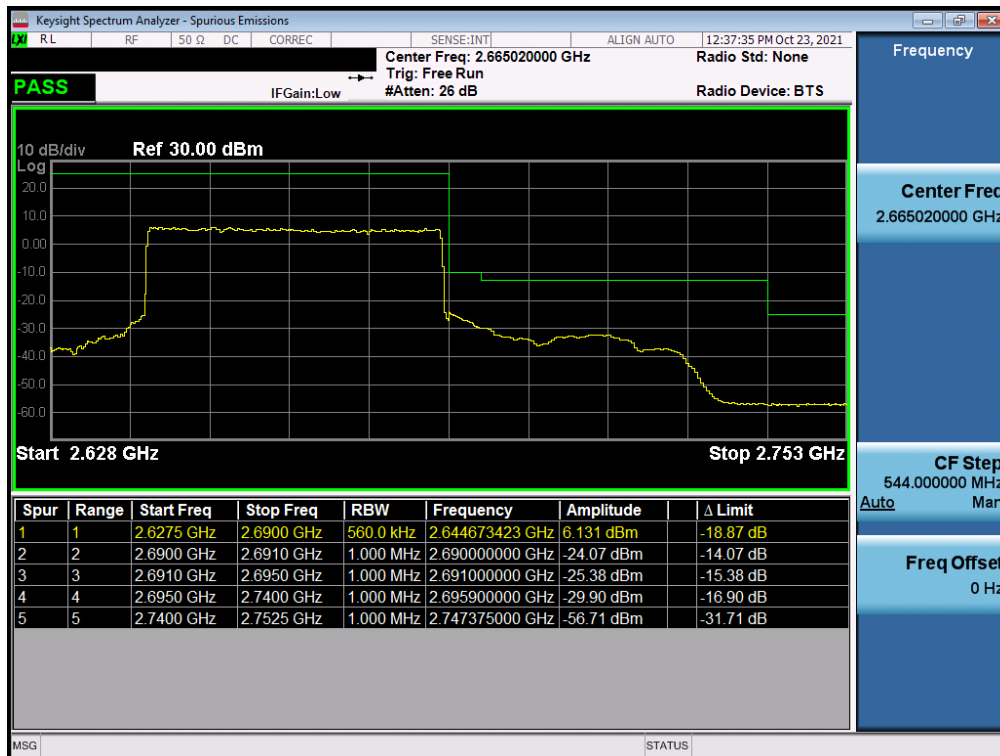


Plot 7-265. Upper ACP Plot (NR Band n41 - 60MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset		Page 167 of 242

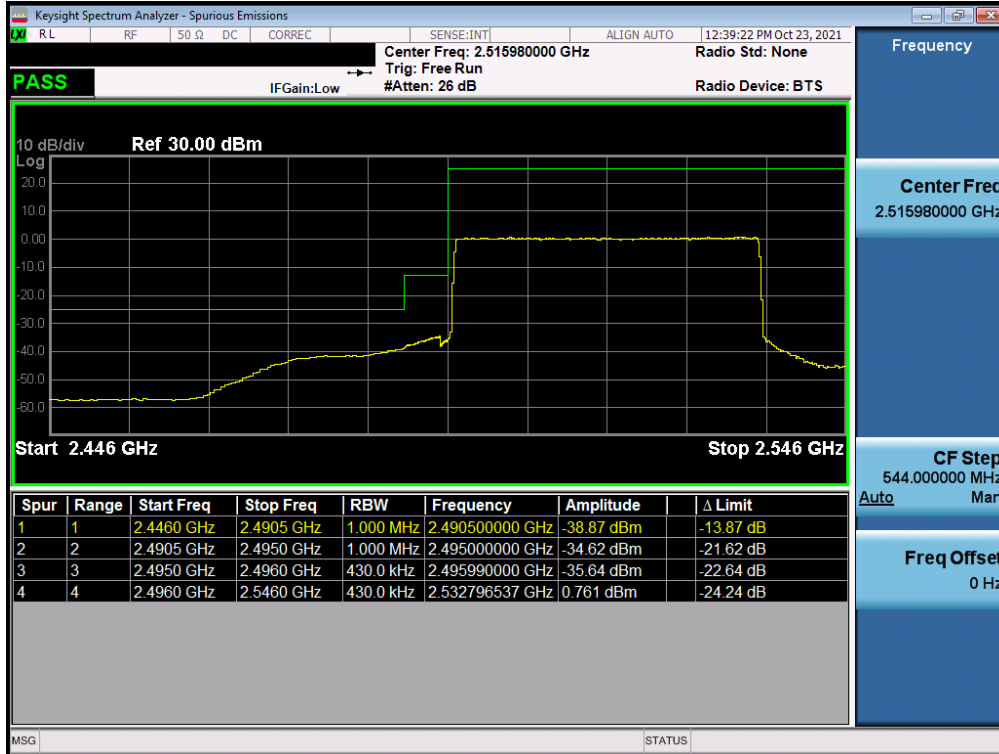


Plot 7-266. Lower ACP Plot (NR Band n41 - 50MHz CP-OFDM-QPSK – Full RB - Ant F)

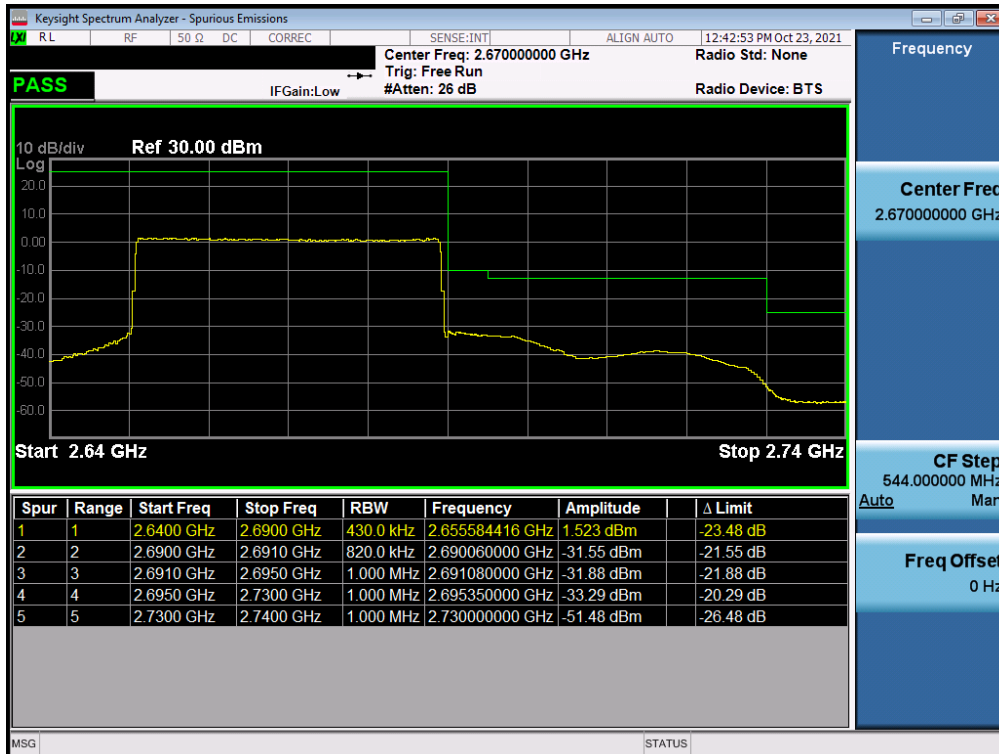


Plot 7-267. Upper ACP Plot (NR Band n41 - 50MHz CP-OFDM-QPSK – Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 168 of 242

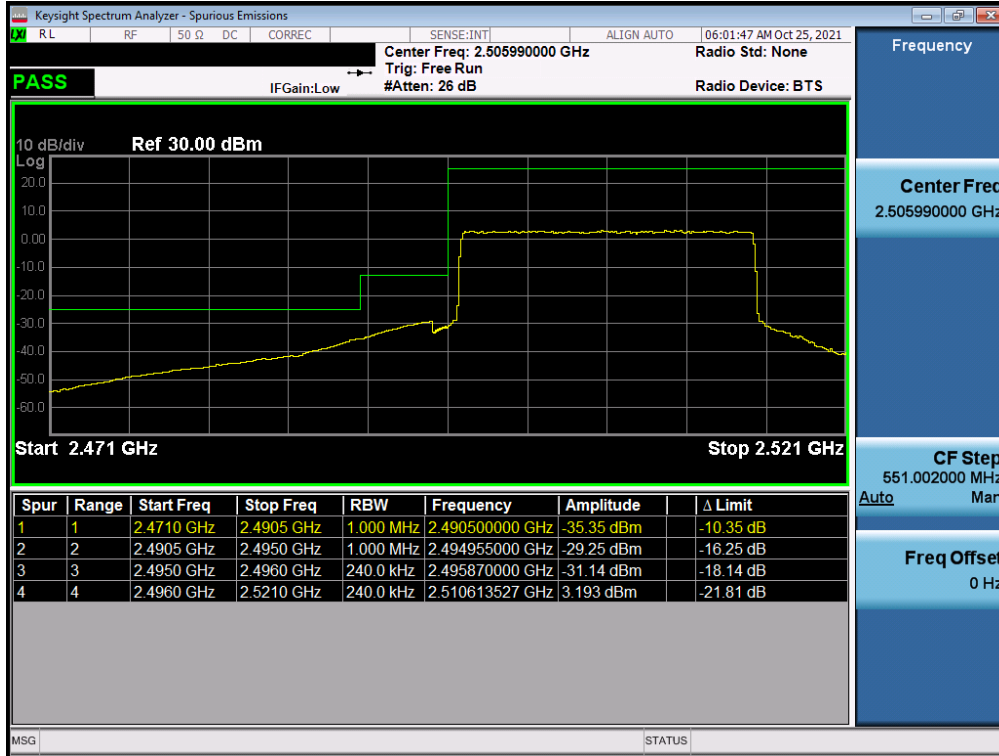


Plot 7-268. Lower ACP Plot (NR Band n41 - 40MHz CP-OFDM-QPSK - Full RB - Ant F)

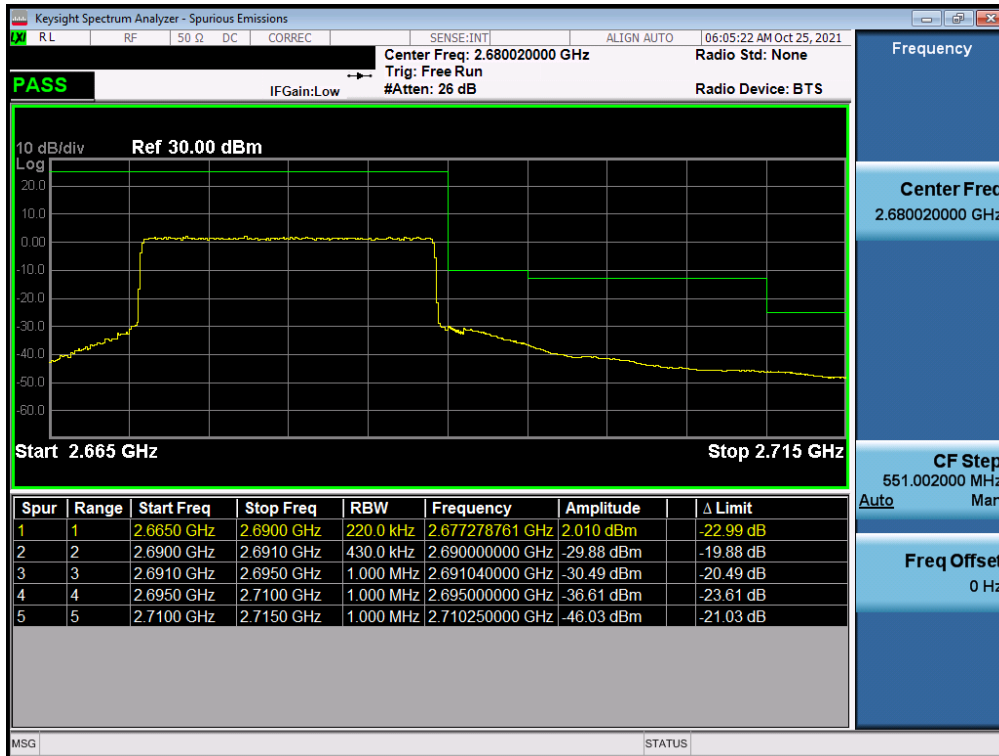


Plot 7-269. Upper ACP Plot (NR Band n41 - 40MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 - 11/10/2021	EUT Type: Portable Handset	Page 169 of 242



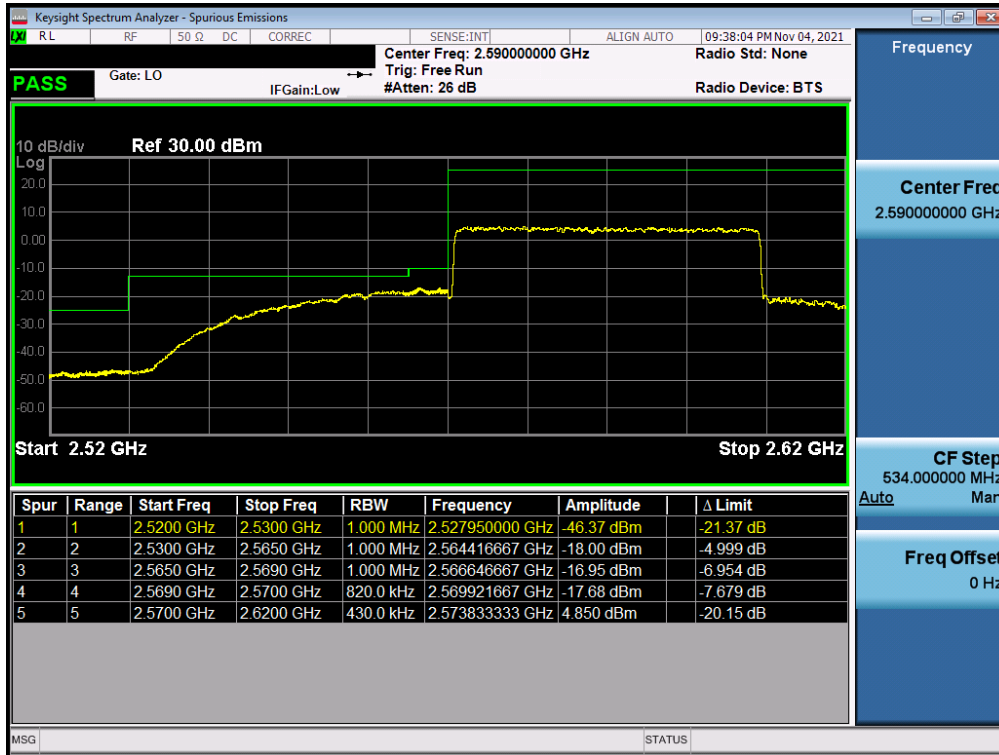
Plot 7-270. Lower ACP Plot (NR Band n41 - 20MHz CP-OFDM-QPSK - Full RB - Ant F)



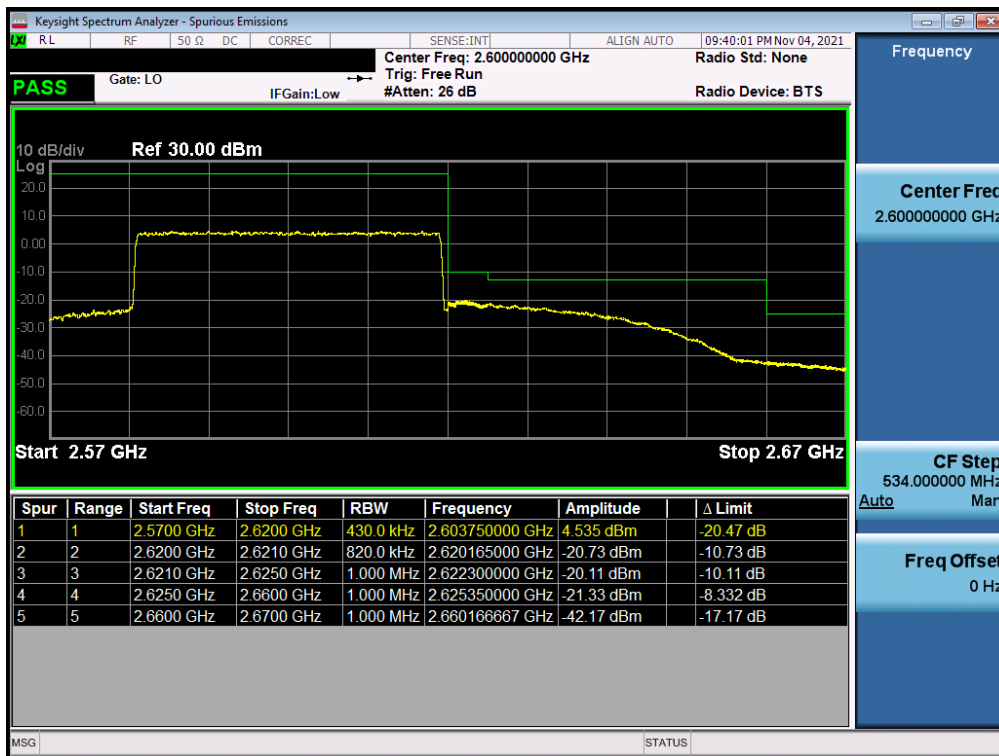
Plot 7-271. Upper ACP Plot (NR Band n41 - 20MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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NR Band n38 – Ant F

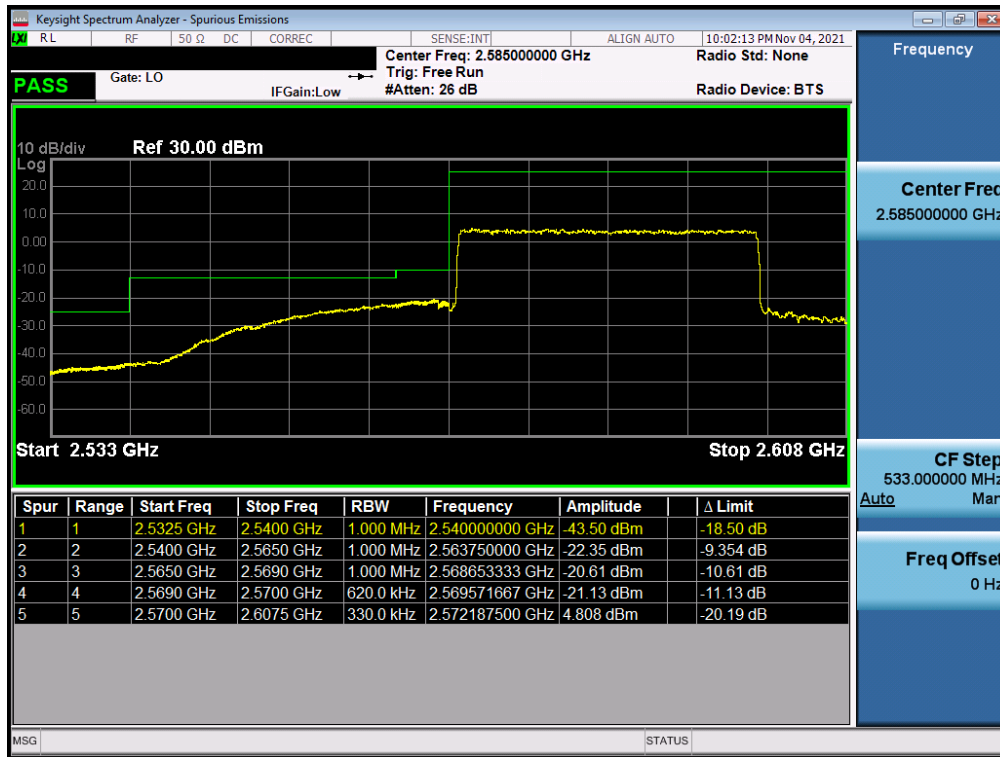


Plot 7-272. Lower Band Edge Plot (NR Band n38 - 40MHz CP-OFDM-QPSK – Full RB - Ant F)

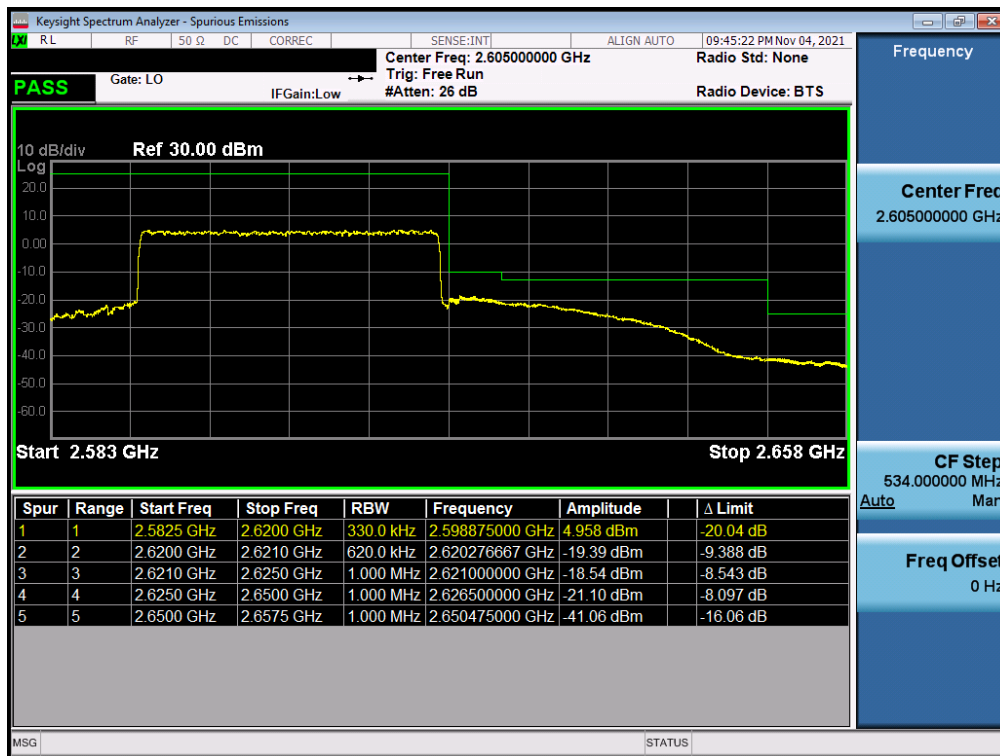


Plot 7-273. Upper Band Edge Plot (NR Band n38 - 40MHz CP-OFDM-QPSK – Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 171 of 242

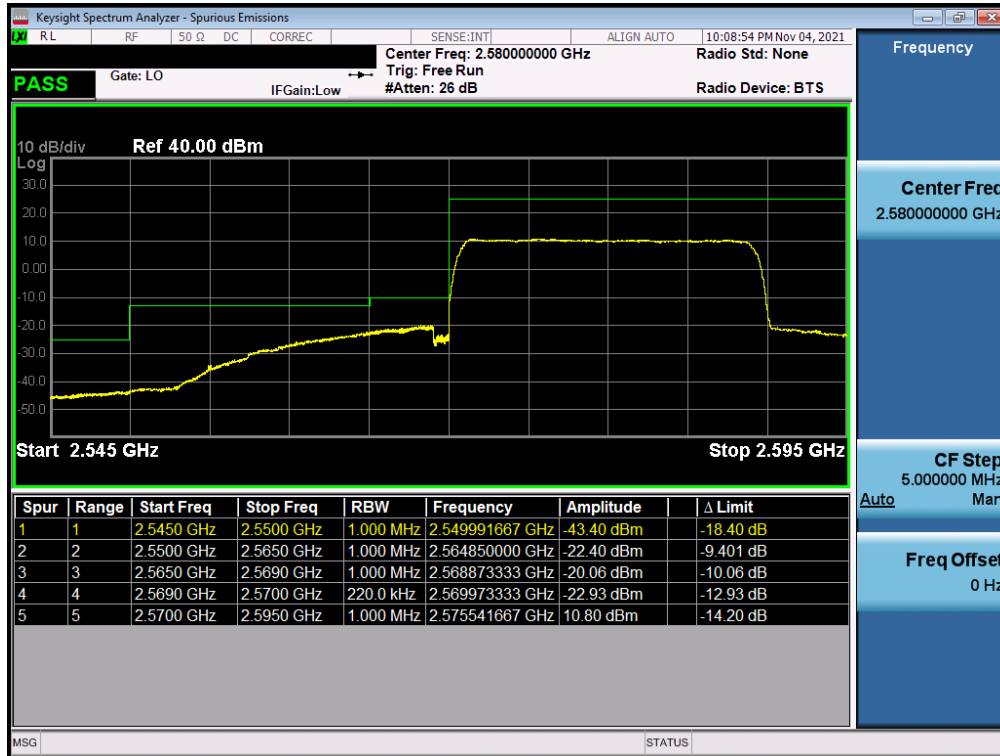


Plot 7-274. Lower Band Edge Plot (NR Band n38 - 30MHz CP-OFDM-QPSK – Full RB - Ant F)



Plot 7-275. Upper Band Edge Plot (NR Band n38 - 30MHz CP-OFDM-QPSK – Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 172 of 242

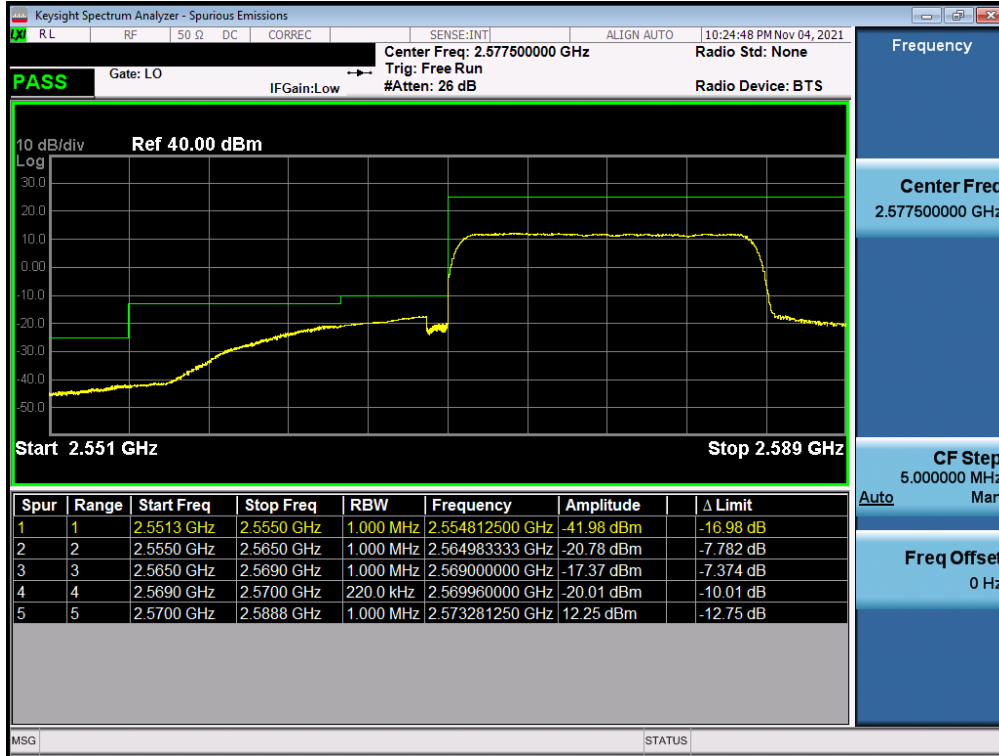


Plot 7-276. Lower Band Edge Plot (NR Band n38 - 20MHz CP-OFDM-QPSK – Full RB - Ant F)

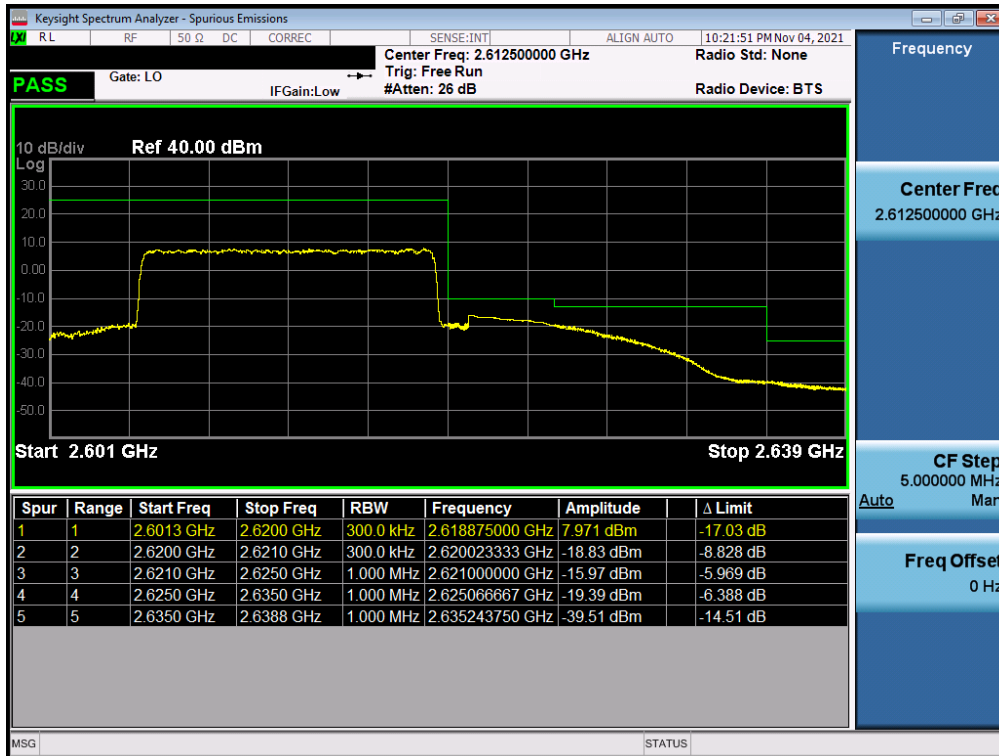


Plot 7-277. Upper Band Edge Plot (NR Band n38 - 20MHz CP-OFDM-QPSK – Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 173 of 242

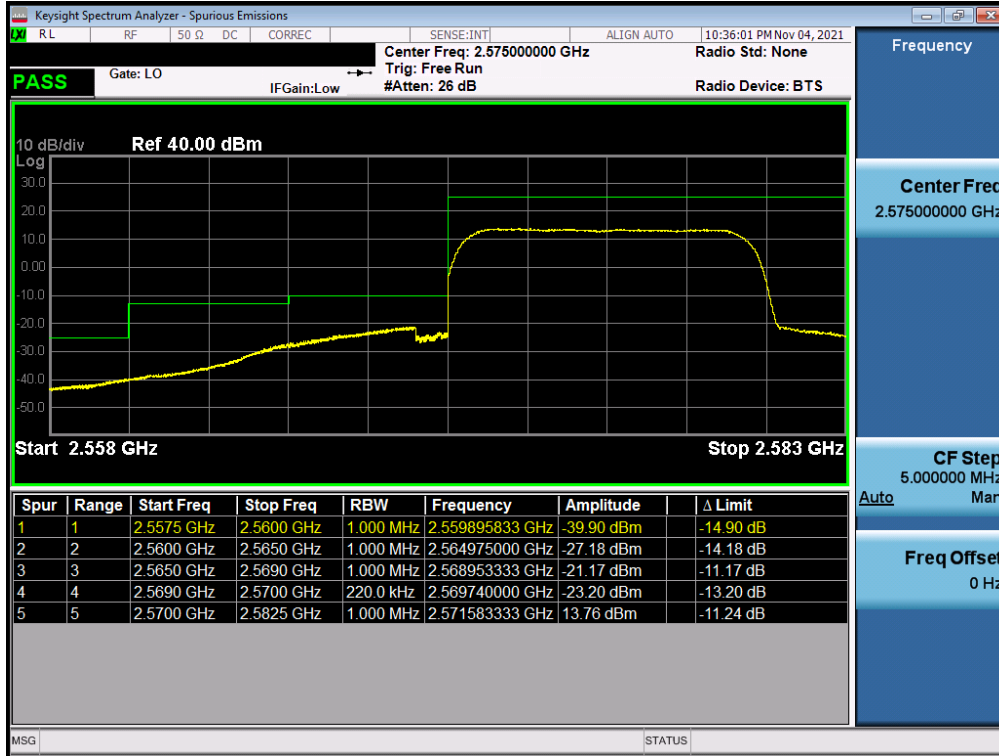


Plot 7-278. Lower Band Edge Plot (NR Band n38 - 15MHz CP-OFDM-QPSK - Full RB - Ant F)

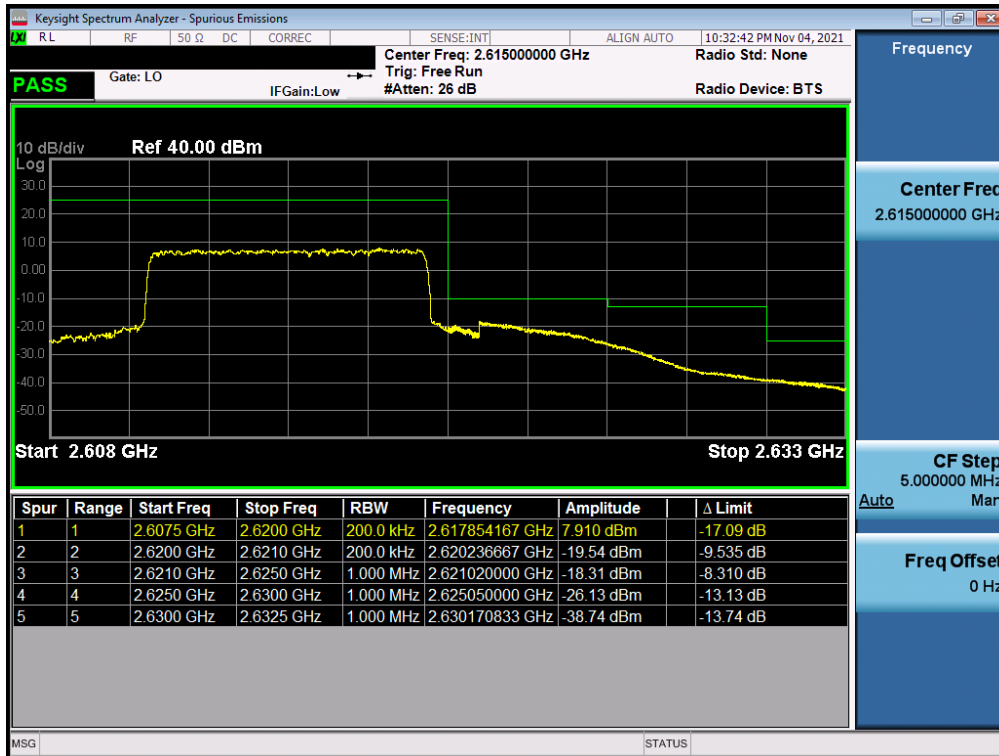


Plot 7-279. Upper Band Edge Plot (NR Band n38 - 15MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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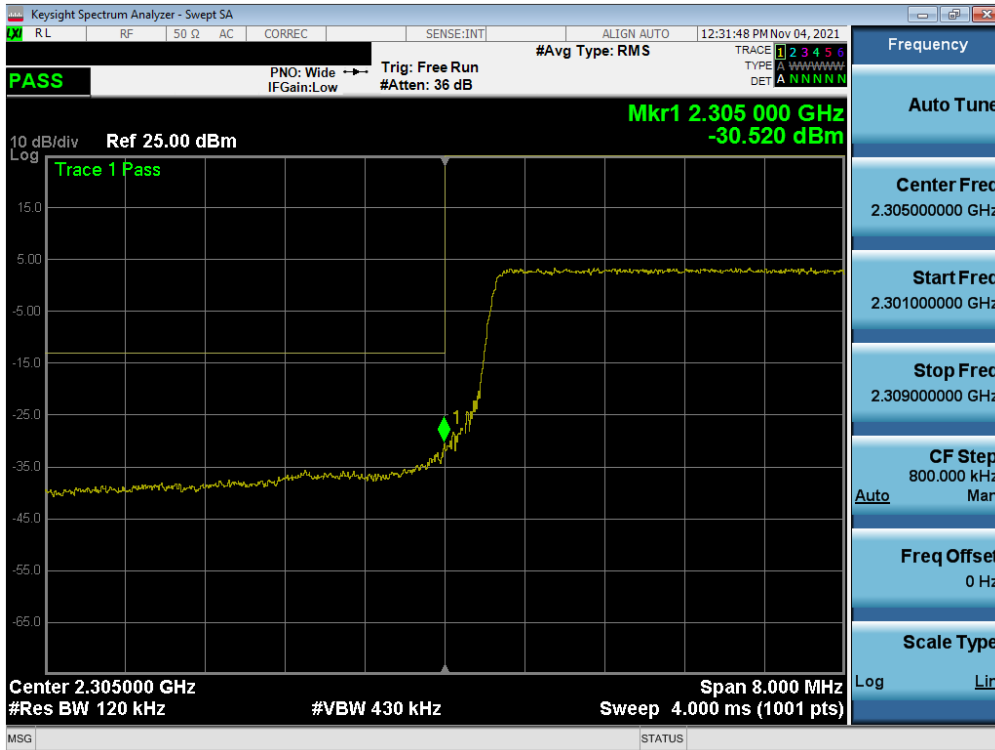
Plot 7-280. Lower Band Edge Plot (NR Band n38 - 10MHz CP-OFDM-QPSK - Full RB - Ant F)



Plot 7-281. Upper Band Edge Plot (NR Band n38 - 10MHz CP-OFDM-QPSK - Full RB - Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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LTE Band 30 – Ant A



Plot 7-282. Lower Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB – Ant A)

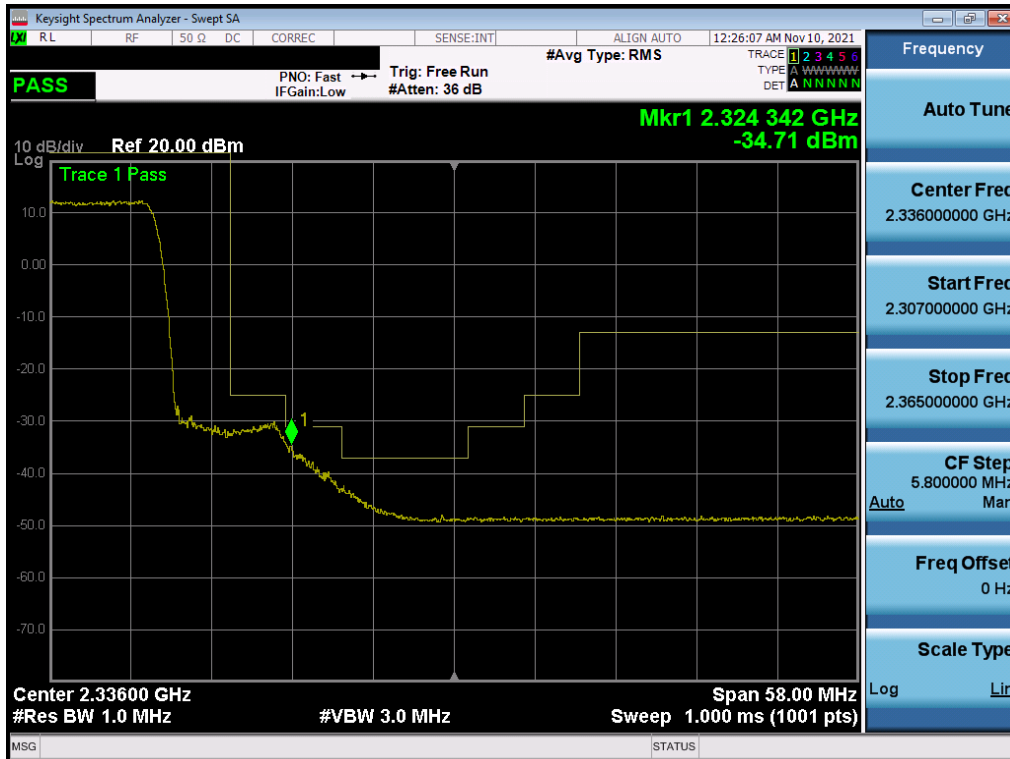


Plot 7-283. Extended Lower Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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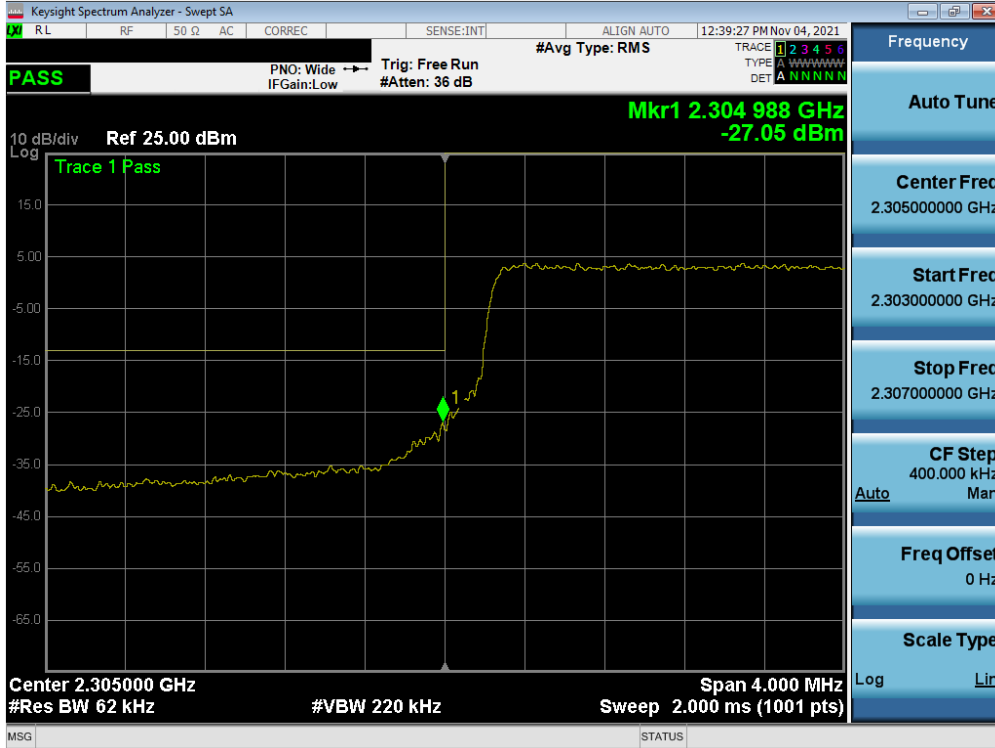


Plot 7-284. Upper Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB – Ant A)



Plot 7-285. Extended Upper Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-286. Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB – Ant A)

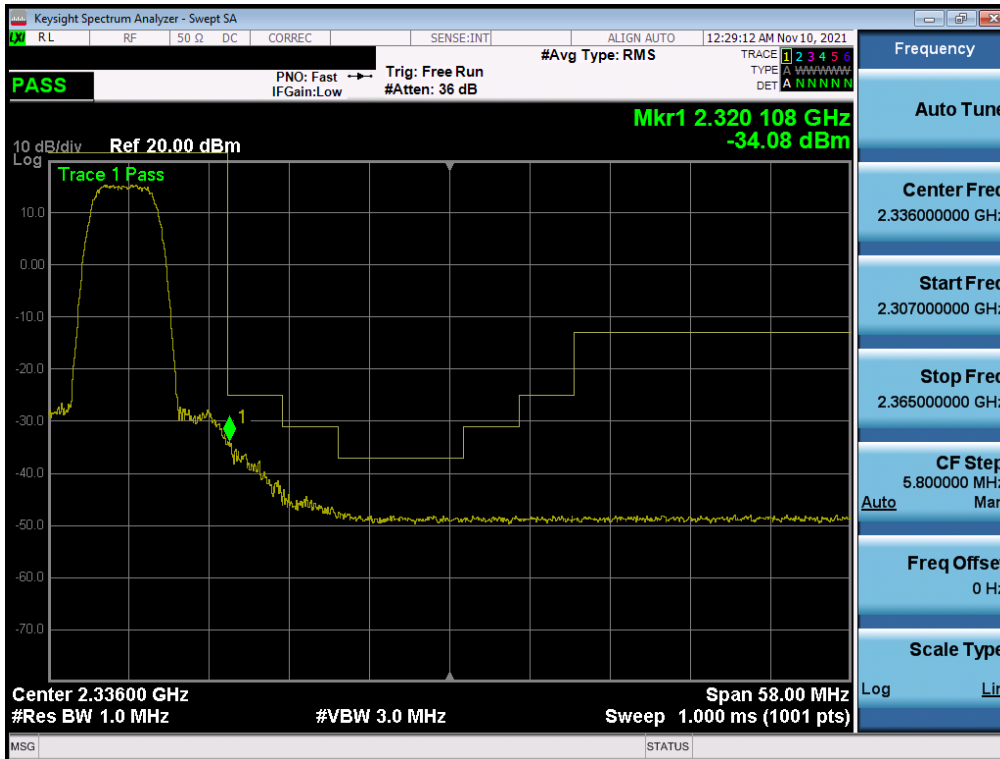


Plot 7-287. Extended Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 178 of 242



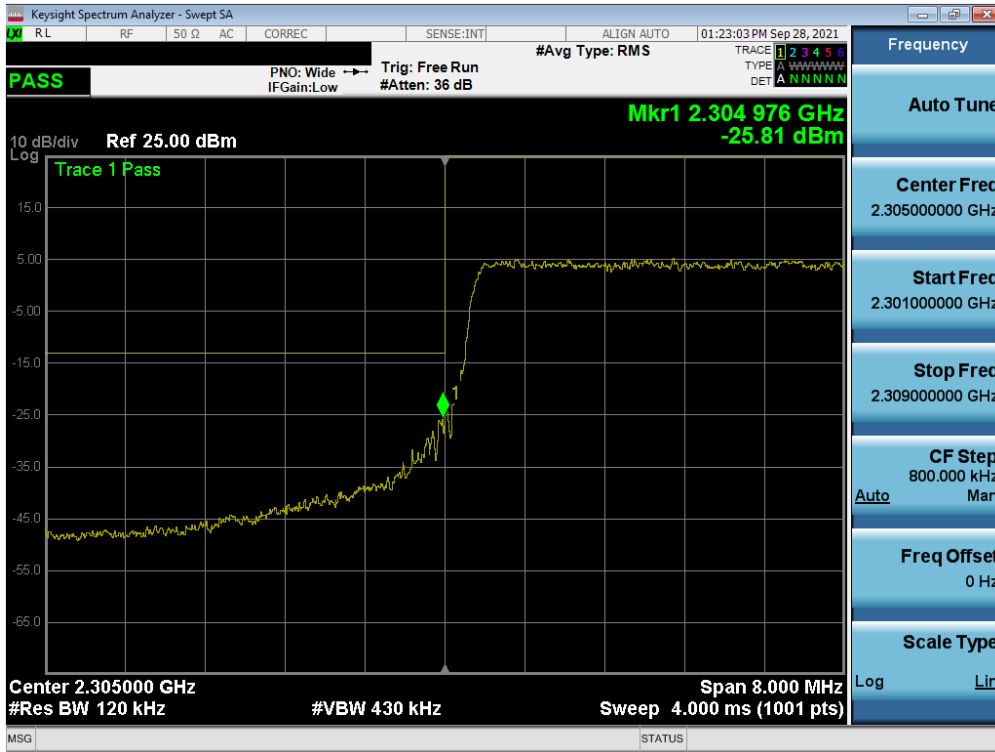
Plot 7-288. Upper Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB – Ant A)



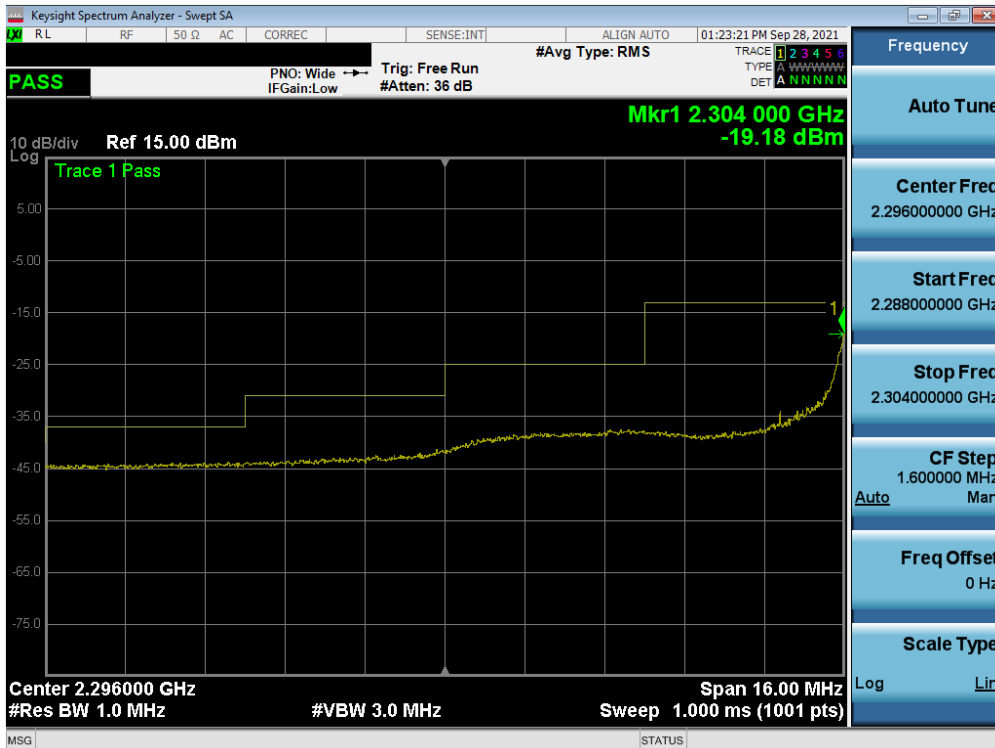
Plot 7-289. Extended Upper Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 179 of 242




NR Band n30 – Ant A

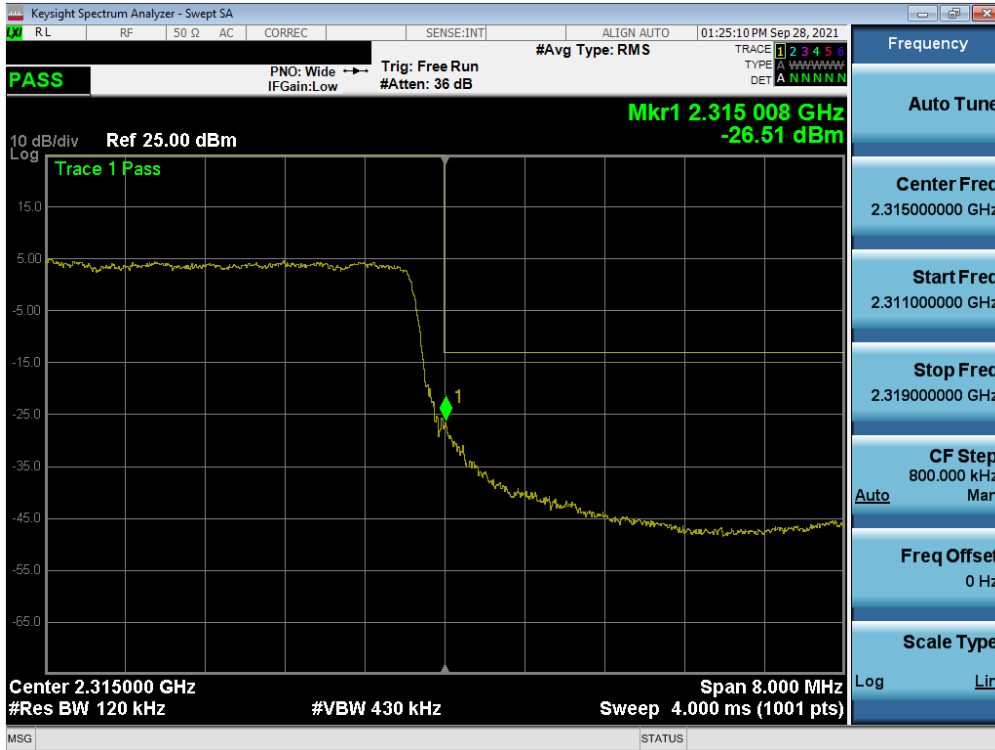


Plot 7-290. Lower Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant A)

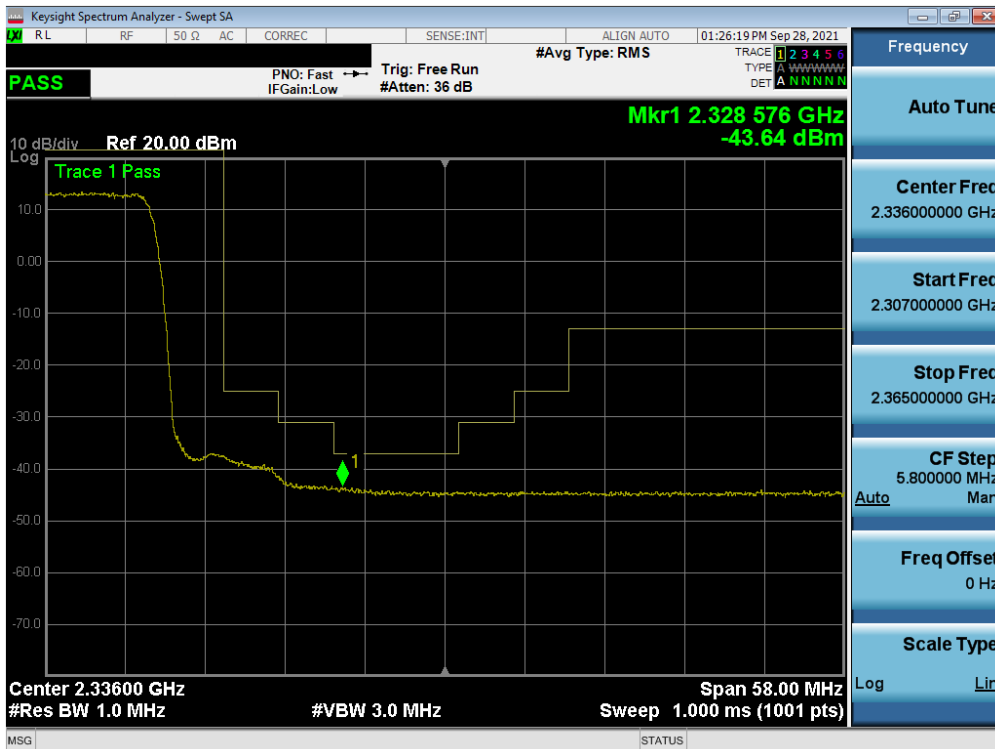


Plot 7-291. Extended Lower Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of 	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 180 of 242

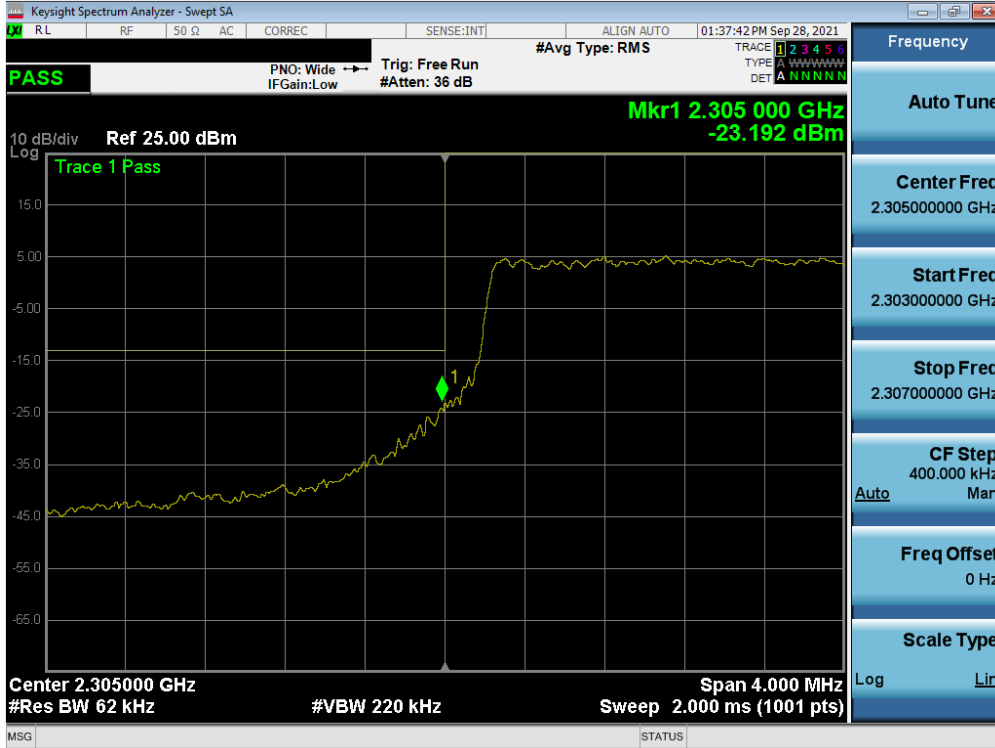


Plot 7-292. Upper Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant A)



Plot 7-293. Extended Upper Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant A)




FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 181 of 242

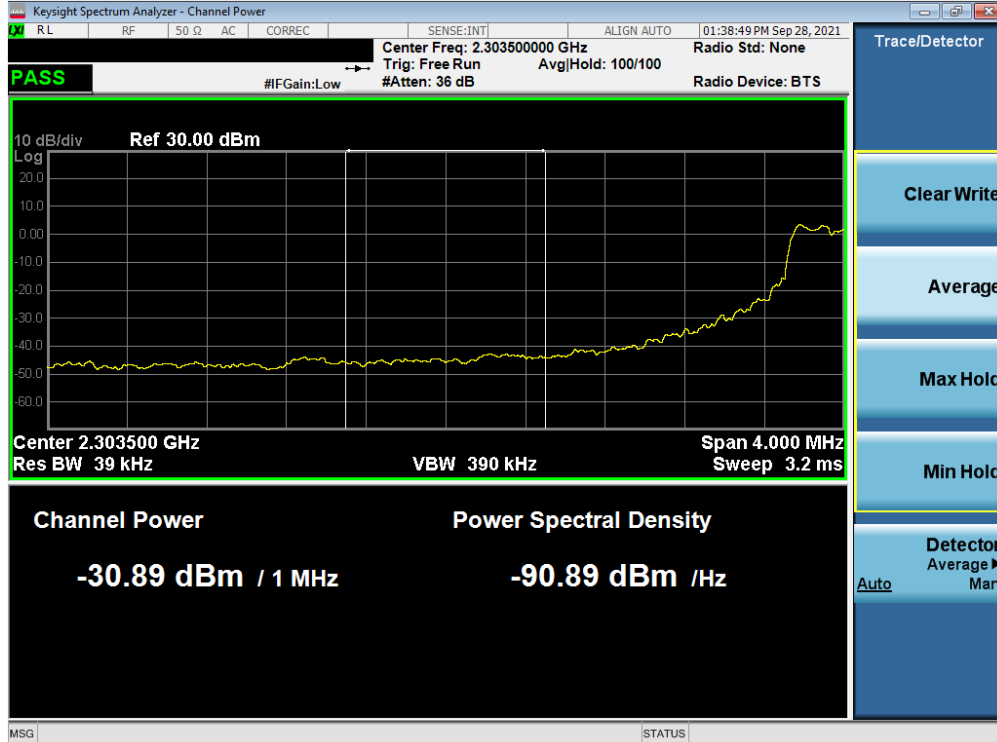


Plot 7-294. Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant A)



Plot 7-295. Extended Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of 	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-296. Extended Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant A)



Plot 7-297. Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant A)

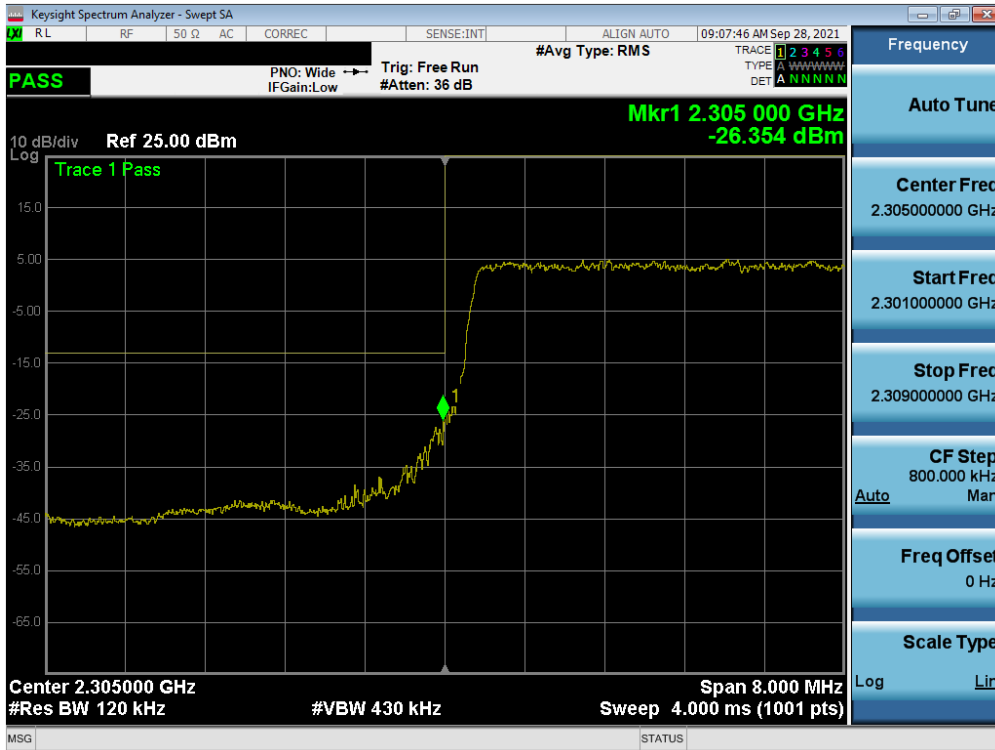
FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 183 of 242



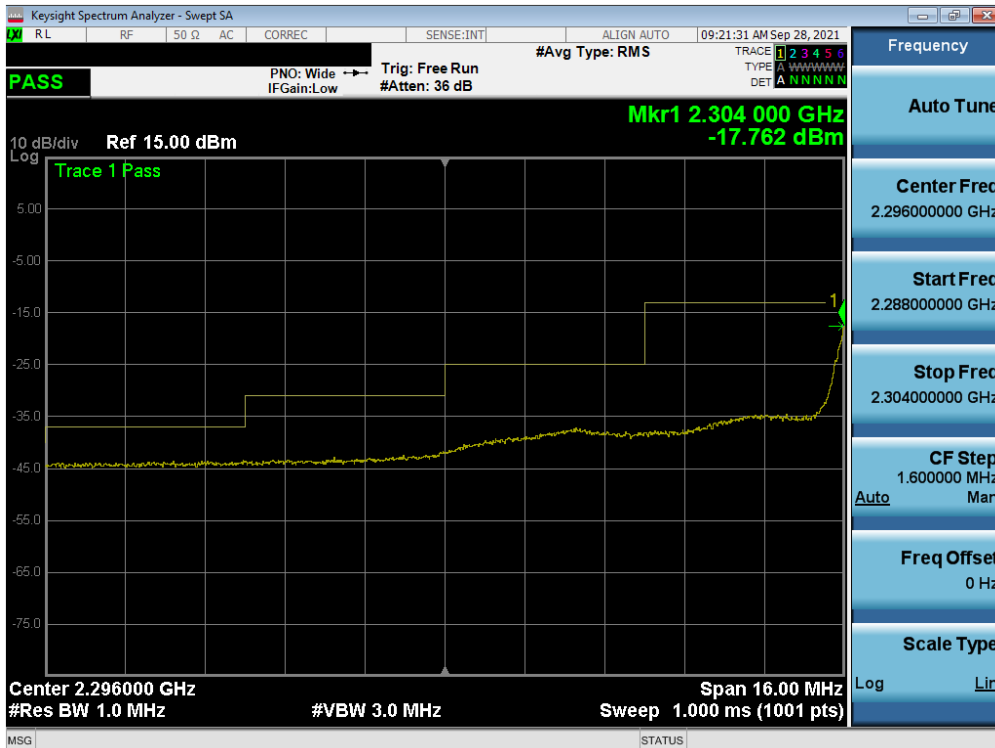
Plot 7-298. Extended Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant A)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n30 – Ant F



Plot 7-299. Lower Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant F)

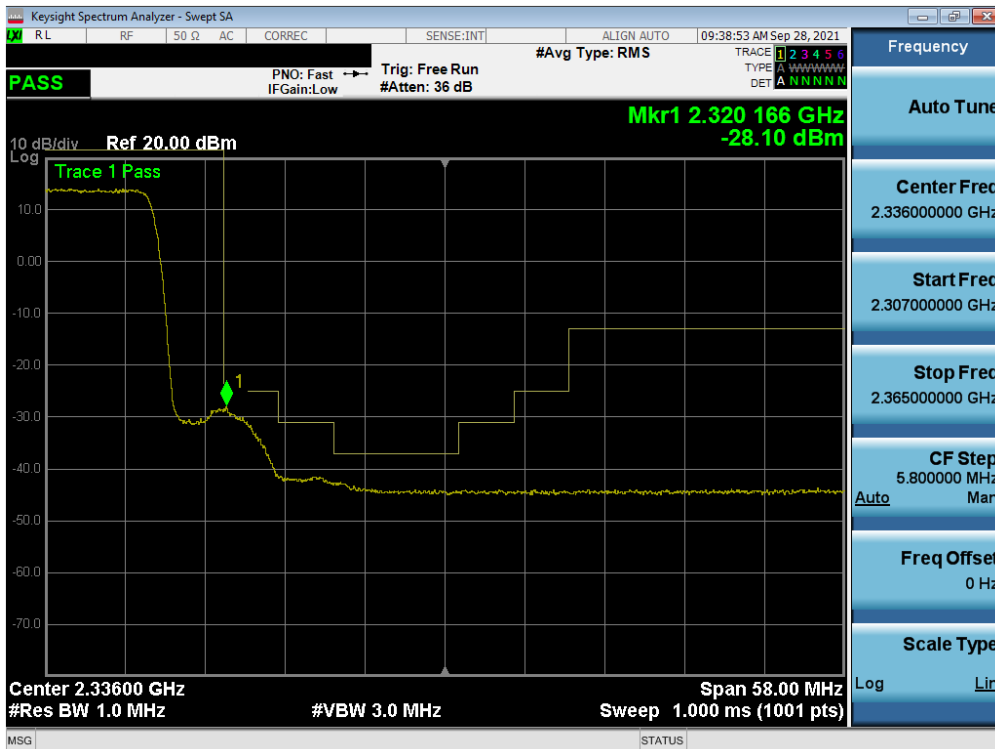


Plot 7-300. Extended Lower Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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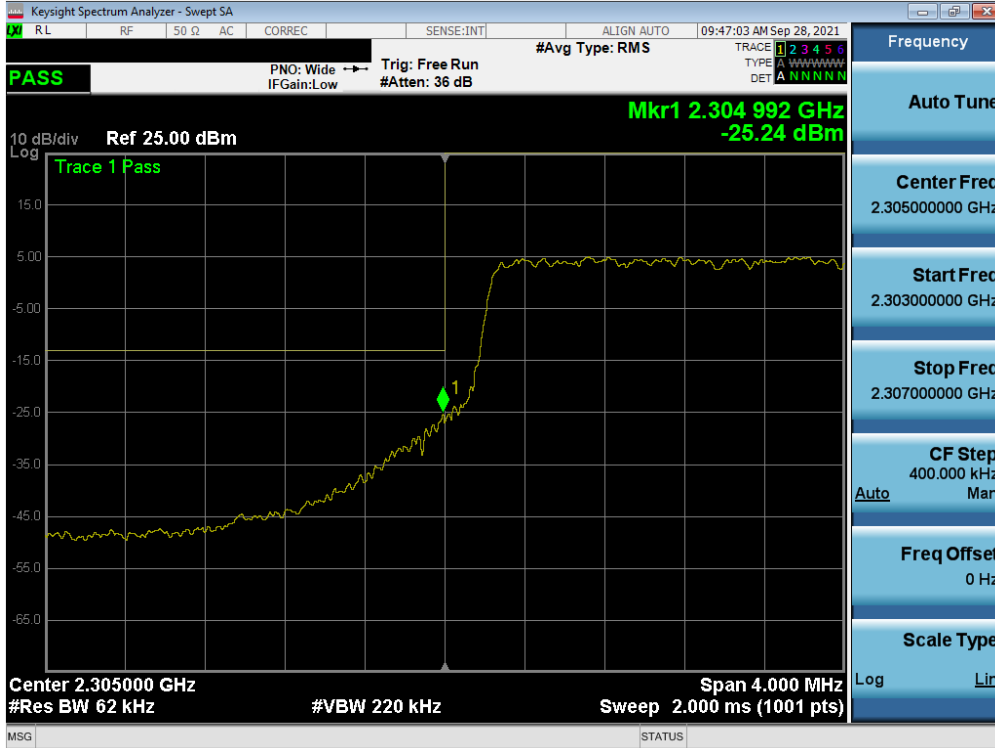


Plot 7-301. Upper Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant F)

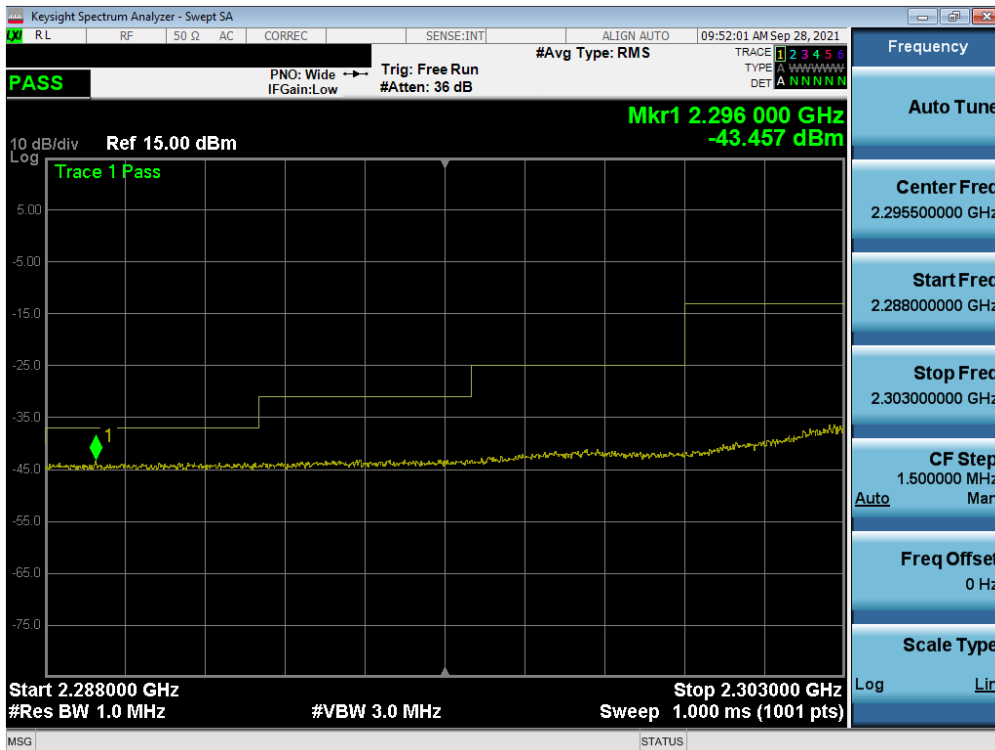


Plot 7-302. Extended Upper Band Edge Plot (NR Band n30 - 10MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 186 of 242

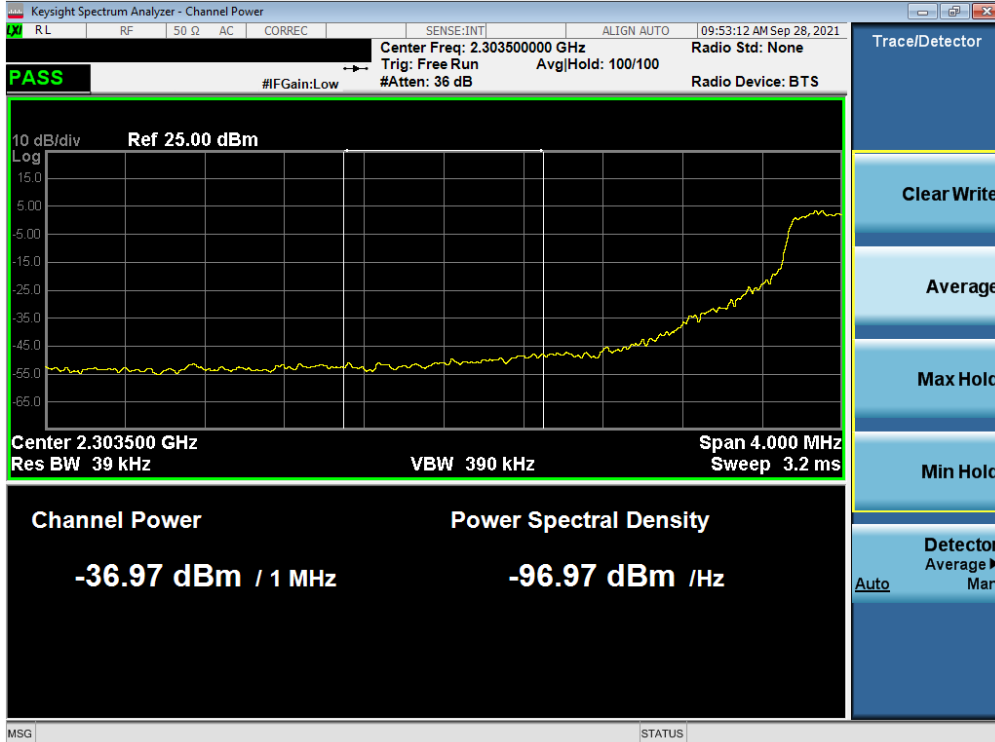


Plot 7-303. Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant F)

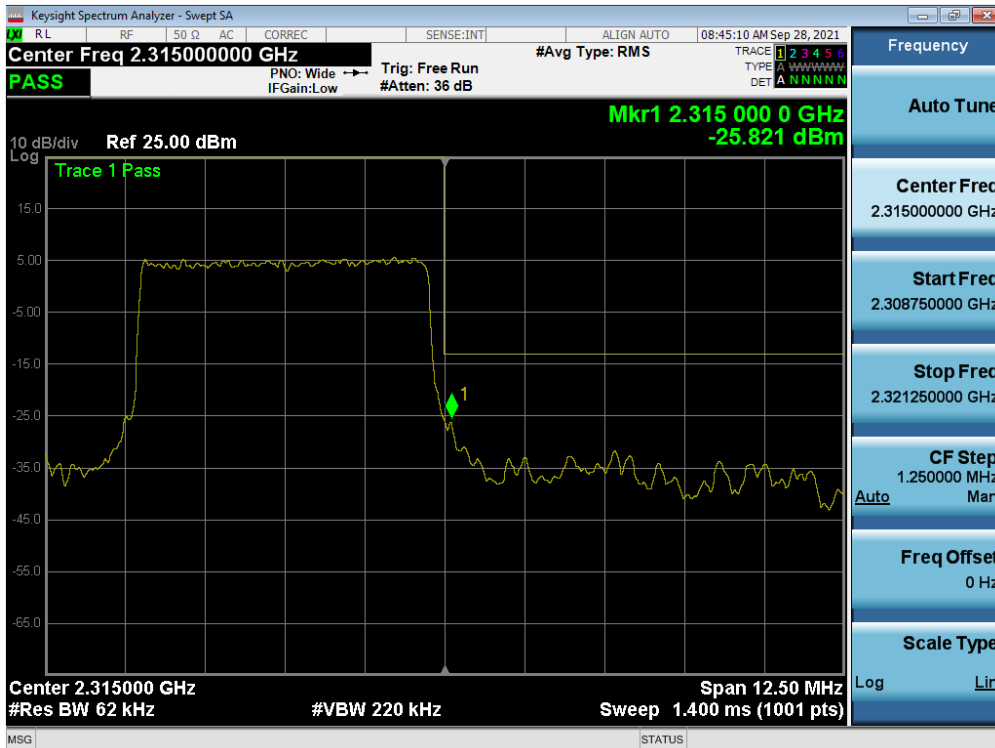


Plot 7-304. Extended Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 187 of 242

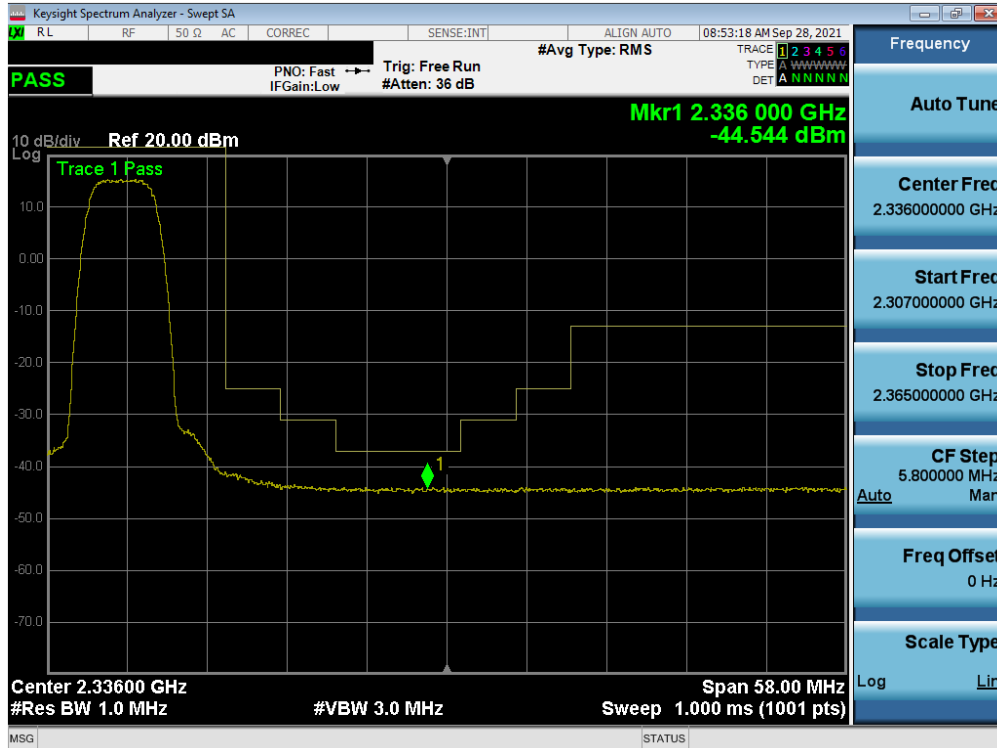


Plot 7-305. Extended Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant F)



Plot 7-306. Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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Plot 7-307. Extended Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB – Ant F)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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7.7 Radiated Power (EIRP)

Test Overview

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 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 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points \geq 2 x 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

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Test Setup

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

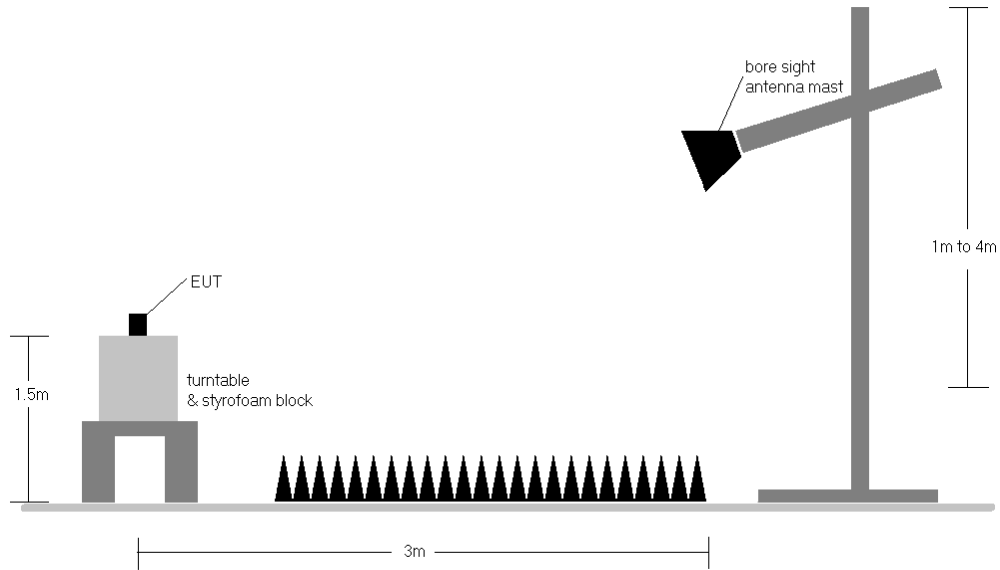


Figure 7-6. Radiated Test Setup >1GHz

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) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) 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.



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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	2310.0	H	115	181	10.55	1 / 0	12.04	22.59	0.181	23.98	-1.39
	16-QAM	2310.0	H	115	181	10.55	1 / 0	11.18	21.73	0.149	23.98	-2.25
5 MHz	QPSK	2307.5	H	115	181	10.52	1 / 24	12.10	22.62	0.183	23.98	-1.36
	QPSK	2310.0	H	115	181	10.55	1 / 0	12.08	22.63	0.183	23.98	-1.35
	QPSK	2312.5	H	115	181	10.56	1 / 12	12.17	22.73	0.187	23.98	-1.25
	16-QAM	2307.5	H	115	181	10.52	1 / 24	11.18	21.70	0.148	23.98	-2.28
	16-QAM	2310.0	H	115	181	10.55	1 / 0	10.92	21.47	0.140	23.98	-2.51
	16-QAM	2312.5	H	115	181	10.56	1 / 12	11.09	21.65	0.146	23.98	-2.33
10 MHz	Opposite Pol.	2310.0	V	147	284	10.37	1/0	11.75	22.12	0.163	23.98	-1.86
	WCP	2310.0	H	115	181	10.55	1/0	10.30	20.85	0.121	23.98	-3.13

Table 7-11. EIRP Data (LTE Band 30 – Ant B)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2510.0	H	129	221	9.51	1 / 49	12.14	21.65	0.146	33.01	-11.36
	QPSK	2535.0	H	100	205	9.40	1 / 49	12.68	22.08	0.162	33.01	-10.93
	QPSK	2560.0	H	118	212	9.43	1 / 25	12.30	21.73	0.149	33.01	-11.28
	16-QAM	2510.0	H	129	221	9.51	1 / 25	11.51	21.02	0.126	33.01	-11.99
	16-QAM	2535.0	H	100	205	9.40	1 / 49	12.00	21.40	0.138	33.01	-11.61
	16-QAM	2560.0	H	118	212	9.43	1 / 25	11.60	21.03	0.127	33.01	-11.98
15 MHz	QPSK	2507.5	H	151	226	9.50	1 / 49	11.82	21.32	0.136	33.01	-11.69
	QPSK	2535.0	H	102	200	9.40	1 / 25	12.31	21.71	0.148	33.01	-11.30
	QPSK	2562.5	H	115	211	9.43	1 / 25	12.36	21.79	0.151	33.01	-11.22
	16-QAM	2507.5	H	151	226	9.50	1 / 49	11.08	20.58	0.114	33.01	-12.43
	16-QAM	2535.0	H	102	200	9.40	1 / 25	11.56	20.96	0.125	33.01	-12.05
	16-QAM	2562.5	H	115	211	9.43	1 / 25	11.63	21.06	0.128	33.01	-11.95
10 MHz	QPSK	2505.0	H	151	226	9.50	1 / 25	11.96	21.46	0.140	33.01	-11.55
	QPSK	2535.0	H	102	200	9.40	1 / 25	12.42	21.82	0.152	33.01	-11.19
	QPSK	2565.0	H	115	211	9.42	1 / 25	12.47	21.89	0.155	33.01	-11.12
	16-QAM	2505.0	H	151	226	9.50	1 / 25	11.26	20.76	0.119	33.01	-12.25
	16-QAM	2535.0	H	102	200	9.40	1 / 0	11.70	21.10	0.129	33.01	-11.91
	16-QAM	2565.0	H	115	211	9.42	1 / 49	11.77	21.19	0.132	33.01	-11.82
5 MHz	QPSK	2502.5	H	151	226	9.49	1 / 24	11.93	21.42	0.139	33.01	-11.59
	QPSK	2535.0	H	102	200	9.40	1 / 12	12.51	21.91	0.155	33.01	-11.10
	QPSK	2567.5	H	115	211	9.42	1 / 12	12.51	21.93	0.156	33.01	-11.08
	16-QAM	2502.5	H	151	226	9.49	1 / 12	11.32	20.81	0.121	33.01	-12.20
	16-QAM	2535.0	H	102	200	9.40	1 / 12	11.88	21.28	0.134	33.01	-11.73
	16-QAM	2567.5	H	115	211	9.42	1 / 12	11.93	21.35	0.136	33.01	-11.66
20 MHz	Opposite Pol.	2535.0	V	100	71	9.40	1 / 24	11.28	20.68	0.117	33.01	-12.33
	WCP	2535.0	H	115	211	9.42	1 / 12	8.97	18.39	0.069	33.01	-14.62

Table 7-12. EIRP Data (LTE Band 7)



FCC ID: A3LSMS901U	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	H	153	218	9.50	1 / 0	15.62	25.12	0.325	33.01	-7.89
	QPSK	2593.0	H	166	203	9.49	1 / 0	15.08	24.57	0.286	33.01	-8.44
	QPSK	2680.0	H	181	217	9.87	1 / 0	15.27	25.14	0.327	33.01	-7.87
	16-QAM	2506.0	H	153	218	9.50	1 / 0	14.61	24.11	0.258	33.01	-8.90
	16-QAM	2593.0	H	166	203	9.49	1 / 0	13.83	23.32	0.215	33.01	-9.69
	16-QAM	2680.0	H	181	217	9.87	1 / 0	14.13	24.00	0.251	33.01	-9.01
	QPSK	2593.0	H	166	203	9.49	1 / 74	14.97	24.46	0.279	33.01	-8.55
	QPSK	2682.5	H	181	217	9.87	1 / 74	15.25	25.12	0.325	33.01	-7.89
	16-QAM	2503.5	H	153	218	9.50	1 / 74	14.60	24.09	0.257	33.01	-8.92
15 MHz	16-QAM	2593.0	H	166	203	9.49	1 / 74	13.84	23.33	0.215	33.01	-9.68
	16-QAM	2682.5	H	181	217	9.87	1 / 74	14.20	24.07	0.255	33.01	-8.94
	QPSK	2501.0	H	153	218	9.49	1 / 0	15.08	24.57	0.287	33.01	-8.44
	QPSK	2593.0	H	166	203	9.49	1 / 0	14.98	24.47	0.280	33.01	-8.54
	QPSK	2685.0	H	181	217	9.86	1 / 25	14.97	24.84	0.304	33.01	-8.18
	16-QAM	2501.0	H	153	218	9.49	1 / 0	14.51	24.00	0.251	33.01	-9.01
	16-QAM	2593.0	H	166	203	9.49	1 / 49	13.73	23.23	0.210	33.01	-9.78
	16-QAM	2685.0	H	181	217	9.86	1 / 25	13.54	23.40	0.219	33.01	-9.61
	5 MHz	QPSK	2498.5	H	153	218	9.49	1 / 0	15.41	24.90	0.309	33.01
QPSK		2593.0	H	166	203	9.49	1 / 0	15.20	24.69	0.294	33.01	-8.32
QPSK		2687.5	H	181	217	9.86	1 / 0	15.14	25.00	0.316	33.01	-8.01
16-QAM		2498.5	H	153	218	9.49	1 / 0	14.50	23.99	0.251	33.01	-9.02
16-QAM		2593.0	H	166	203	9.49	1 / 0	14.30	23.79	0.239	33.01	-9.22
16-QAM		2687.5	H	181	217	9.86	1 / 0	14.07	23.93	0.247	33.01	-9.08
20 MHz	Opposite Pol.	2680.0	V	358	284	9.51	1/50	12.86	22.37	0.173	33.01	-10.64
	WCP	2680.0	H	158	229	9.87	1/50	13.75	23.62	0.230	33.01	-9.39

Table 7-13. EIRP Data (LTE Band 41(PC2))



Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	H	184	229	9.50	1 / 0	13.44	22.94	0.197	33.01	-10.07
	QPSK	2593.0	H	169	215	9.49	1/50	13.69	23.18	0.208	33.01	-9.83
	QPSK	2680.0	H	187	221	9.87	1/50	13.30	23.17	0.208	33.01	-9.84
	16-QAM	2506.0	H	184	229	9.50	1 / 0	12.75	22.25	0.168	33.01	-10.76
	16-QAM	2593.0	H	169	215	9.49	1/50	12.57	22.06	0.161	33.01	-10.95
	16-QAM	2680.0	H	187	221	9.87	1/50	12.55	22.42	0.175	33.01	-10.59
15 MHz	QPSK	2503.5	H	184	229	9.50	1/0	14.16	23.66	0.232	33.01	-9.35
	QPSK	2593.0	H	169	215	9.49	1/0	14.52	24.01	0.252	33.01	-9.00
	QPSK	2682.5	H	187	221	9.87	1/0	13.60	23.46	0.222	33.01	-9.55
	16-QAM	2503.5	H	184	229	9.50	1/0	12.82	22.32	0.171	33.01	-10.69
	16-QAM	2593.0	H	169	215	9.49	1/0	12.23	21.72	0.149	33.01	-11.29
10 MHz	16-QAM	2682.5	H	187	221	9.87	1/0	11.52	21.38	0.137	33.01	-11.63
	QPSK	2501.0	H	184	229	9.49	1/25	13.54	23.03	0.201	33.01	-9.98
	QPSK	2593.0	H	169	215	9.49	1/25	14.27	23.76	0.238	33.01	-9.25
	QPSK	2685.0	H	187	221	9.86	1/0	12.59	22.45	0.176	33.01	-10.56
	16-QAM	2501.0	H	184	229	9.49	1/25	12.08	21.57	0.144	33.01	-11.44
5 MHz	16-QAM	2593.0	H	169	215	9.49	1/25	12.06	21.55	0.143	33.01	-11.46
	16-QAM	2685.0	H	187	221	9.86	1/0	12.18	22.04	0.160	33.01	-10.97
	QPSK	2498.5	H	184	229	9.49	1/24	13.20	22.69	0.186	33.01	-10.32
	QPSK	2593.0	H	169	215	9.49	1/24	13.73	23.22	0.210	33.01	-9.79
	QPSK	2687.5	H	187	221	9.86	1/12	12.35	22.20	0.166	33.01	-10.81
20 MHz	16-QAM	2498.5	H	184	229	9.49	1/24	13.18	22.67	0.185	33.01	-10.34
	16-QAM	2593.0	H	169	215	9.49	1/24	13.12	22.61	0.182	33.01	-10.40
	16-QAM	2687.5	H	187	221	9.86	1/12	12.37	22.22	0.167	33.01	-10.79
20 MHz	Opposite Pol.	2593.0	V	343	281	9.46	1/50	12.12	21.58	0.144	33.01	-11.43
	WCP	2593.0	H	161	206	9.49	1/99	11.80	21.29	0.135	33.01	-11.72

Table 7-14. EIRP Data (LTE Band 41(PC3)/38)

FCC ID: A3LSMS901U	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 193 of 242



Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	$\pi/2$ BPSK	2310.0	V	170	265	10.37	1 / 38	12.34	22.71	0.187	23.98	-1.27
	QPSK	2310.0	V	170	265	10.37	1 / 38	12.23	22.60	0.182	23.98	-1.38
	16-QAM	2310.0	V	170	265	10.37	1 / 38	11.43	21.80	0.151	23.98	-2.18
5 MHz	$\pi/2$ BPSK	2307.5	V	170	265	10.36	1 / 6	12.55	22.91	0.195	23.98	-1.07
	$\pi/2$ BPSK	2310.0	V	170	265	10.37	1 / 6	12.29	22.66	0.185	23.98	-1.32
	$\pi/2$ BPSK	2312.5	V	170	265	10.36	1 / 6	12.48	22.84	0.192	23.98	-1.14
	QPSK	2307.5	V	170	265	10.36	1 / 6	12.38	22.74	0.188	23.98	-1.23
	QPSK	2310.0	V	170	265	10.37	1 / 6	12.18	22.55	0.180	23.98	-1.42
	QPSK	2312.5	V	170	265	10.36	1 / 6	12.48	22.84	0.192	23.98	-1.14
	16-QAM	2312.5	V	170	265	10.36	1 / 6	11.91	22.27	0.169	23.98	-1.71
10 MHz	QPSK (CP-OFDM)	2310.0	V	170	265	10.37	1/38	10.82	21.19	0.132	23.98	-2.79
	Opposite Pol.	2310.0	H	164	327	10.55	1/13	10.84	21.39	0.138	23.98	-2.59
	WCP	2310.0	V	170	265	10.37	1/38	9.26	19.63	0.092	23.98	-4.35

Table 7-15. EIRP Data (NR Band n30 – Ant B)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 194 of 242



Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
40 MHz	π/2 BPSK	2520.0	H	104	222	9.45	1/161	15.00	24.45	0.279	33.01	-8.56
	π/2 BPSK	2535.0	H	107	223	9.40	1/108	14.67	24.07	0.255	33.01	-8.94
	π/2 BPSK	2550.0	H	106	223	9.37	1/54	14.30	23.67	0.233	33.01	-9.34
	QPSK	2520.0	H	104	222	9.45	1/161	14.89	24.34	0.272	33.01	-8.67
	QPSK	2535.0	H	107	223	9.40	1/108	14.62	24.02	0.253	33.01	-8.99
	QPSK	2550.0	H	106	223	9.37	1/54	14.07	23.44	0.221	33.01	-9.57
30 MHz	16-QAM	2520.0	H	104	222	9.45	1/161	14.00	23.45	0.221	33.01	-9.56
	π/2 BPSK	2515.0	H	104	222	9.48	1/40	14.42	23.90	0.245	33.01	-9.11
	π/2 BPSK	2535.0	H	107	223	9.40	1/40	14.96	24.36	0.273	33.01	-8.65
	π/2 BPSK	2555.0	H	106	223	9.40	1/40	14.31	23.71	0.235	33.01	-9.30
	QPSK	2515.0	H	104	222	9.48	1/40	14.11	23.59	0.229	33.01	-9.42
	QPSK	2535.0	H	107	223	9.40	1/40	14.91	24.31	0.270	33.01	-8.70
25 MHz	QPSK	2555.0	H	106	223	9.40	1/40	14.31	23.71	0.235	33.01	-9.30
	16-QAM	2535.0	H	107	223	9.40	1/40	13.55	22.95	0.197	33.01	-10.06
	π/2 BPSK	2512.5	H	104	222	9.49	1/66	14.47	23.97	0.249	33.01	-9.04
	π/2 BPSK	2535.0	H	107	223	9.40	1/99	15.20	24.60	0.289	33.01	-8.41
	π/2 BPSK	2557.5	H	106	223	9.42	1/33	12.46	21.88	0.154	33.01	-11.13
	QPSK	2512.5	H	104	222	9.49	1/66	13.36	22.85	0.193	33.01	-10.16
20 MHz	QPSK	2535.0	H	107	223	9.40	1/99	14.36	23.76	0.238	33.01	-9.25
	QPSK	2557.5	H	106	223	9.42	1/33	10.78	20.20	0.105	33.01	-12.81
	16-QAM	2535.0	H	107	223	9.40	1/99	12.48	21.88	0.154	33.01	-11.13
	π/2 BPSK	2546.0	H	104	222	9.51	1 / 79	15.61	25.12	0.325	33.01	-7.89
	π/2 BPSK	2593.0	H	107	223	9.40	1 / 53	15.11	24.51	0.283	33.01	-8.50
	π/2 BPSK	2640.0	H	106	223	9.43	1 / 53	14.27	23.70	0.235	33.01	-9.31
15 MHz	QPSK	2546.0	H	104	222	9.51	1 / 79	15.58	25.08	0.322	33.01	-7.93
	QPSK	2593.0	H	107	223	9.40	1 / 53	14.77	24.17	0.261	33.01	-8.84
	QPSK	2640.0	H	106	223	9.43	1 / 53	14.01	23.44	0.221	33.01	-9.57
	16-QAM	2546.0	H	104	222	9.51	1 / 79	13.93	23.44	0.221	33.01	-9.57
	π/2 BPSK	2516.0	H	104	222	9.50	1 / 58	14.96	24.46	0.279	33.01	-8.55
	π/2 BPSK	2593.0	H	107	223	9.40	1 / 20	15.04	24.44	0.278	33.01	-8.57
10 MHz	π/2 BPSK	2670.0	H	106	223	9.43	1 / 20	14.09	23.51	0.225	33.01	-9.50
	QPSK	2516.0	H	104	222	9.50	1 / 58	14.94	24.44	0.278	33.01	-8.57
	QPSK	2593.0	H	107	223	9.40	1 / 58	14.13	23.53	0.226	33.01	-9.48
	QPSK	2670.0	H	106	223	9.43	1 / 20	13.86	23.29	0.213	33.01	-9.73
	16-QAM	2516.0	H	104	222	9.50	1 / 58	13.44	22.95	0.197	33.01	-10.06
	π/2 BPSK	2511.0	H	104	222	9.50	1 / 38	14.76	24.26	0.266	33.01	-8.75
5 MHz	π/2 BPSK	2593.0	H	107	223	9.40	1 / 13	14.97	24.37	0.274	33.01	-8.64
	π/2 BPSK	2675.0	H	106	223	9.42	1 / 38	13.97	23.39	0.218	33.01	-9.62
	QPSK	2511.0	H	104	222	9.50	1 / 38	14.64	24.14	0.260	33.01	-8.87
	QPSK	2593.0	H	107	223	9.40	1 / 13	14.74	24.14	0.260	33.01	-8.87
	QPSK	2675.0	H	106	223	9.42	1 / 38	13.71	23.13	0.206	33.01	-9.88
	16-QAM	2511.0	H	104	222	9.50	1 / 38	13.20	22.69	0.186	33.01	-10.32
40 MHz	π/2 BPSK	2506.0	H	104	222	9.49	1 / 18	14.05	23.54	0.226	33.01	-9.47
	π/2 BPSK	2593.0	H	107	223	9.40	1 / 18	14.55	23.95	0.248	33.01	-9.06
	π/2 BPSK	2680.0	H	106	223	9.42	1 / 12	14.04	23.45	0.221	33.01	-9.56
	QPSK	2506.0	H	104	222	9.49	1 / 18	14.09	23.59	0.228	33.01	-9.42
	QPSK	2593.0	H	107	223	9.40	1 / 18	14.68	24.08	0.256	33.01	-8.93
	QPSK	2680.0	H	106	223	9.42	1 / 12	13.55	22.97	0.198	33.01	-10.04
40 MHz	16-QAM	2593.0	H	107	223	9.40	1 / 18	13.35	22.75	0.188	33.01	-10.26
	QPSK (CP-OFDM)	2520.0	H	104	222	9.45	1/108	11.11	20.56	0.114	33.01	-12.45
	QPSK (Opposite Pol.)	2520.0	V	128	263	9.51	1/54	13.74	23.25	0.211	33.01	-9.76
	QPSK (WCP)	2520.0	H	104	222	9.45	1/108	12.64	22.09	0.162	33.01	-10.92

Table 7-16. EIRP Data (NR Band n7 – Ant B)

FCC ID: A3LSMS901U	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 195 of 242

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	2546.0	V	109	57	9.40	1 / 204	13.42	22.82	0.191	33.01	-10.19
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 204	14.15	23.61	0.230	33.01	-9.40
	$\pi/2$ BPSK	2640.0	V	109	46	9.50	1 / 136	15.50	25.00	0.316	33.01	-8.01
	QPSK	2546.0	V	109	57	9.40	1 / 204	13.62	23.02	0.200	33.01	-9.99
	QPSK	2593.0	V	107	43	9.46	1 / 136	14.26	23.72	0.236	33.01	-9.29
	QPSK	2640.0	V	109	46	9.50	1 / 136	15.25	24.75	0.299	33.01	-8.26
90 MHz	16-QAM	2546.0	V	109	57	9.40	1 / 204	12.44	21.84	0.153	33.01	-11.17
	$\pi/2$ BPSK	2541.0	V	109	57	9.46	1 / 61	12.98	22.44	0.175	33.01	-10.57
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 183	14.64	24.10	0.257	33.01	-8.91
	$\pi/2$ BPSK	2645.0	V	109	46	9.51	1 / 61	15.50	25.00	0.317	33.01	-8.01
	QPSK	2541.0	V	109	57	9.46	1 / 61	13.46	22.92	0.196	33.01	-10.09
	QPSK	2593.0	V	107	43	9.46	1 / 183	14.80	24.26	0.267	33.01	-8.75
80 MHz	QPSK	2645.0	V	109	46	9.51	1 / 61	15.16	24.66	0.293	33.01	-8.35
	16-QAM	2541.0	V	109	57	9.46	1 / 61	12.08	21.54	0.143	33.01	-11.47
	$\pi/2$ BPSK	2536.0	V	109	57	9.49	1 / 108	12.92	22.41	0.174	33.01	-10.60
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 162	14.68	24.14	0.260	33.01	-8.87
	$\pi/2$ BPSK	2650.0	V	109	46	9.52	1 / 108	15.48	24.99	0.316	33.01	-8.02
	QPSK	2536.0	V	109	57	9.49	1 / 108	13.14	22.63	0.183	33.01	-10.38
70 MHz	QPSK	2593.0	V	107	43	9.46	1 / 162	14.80	24.26	0.267	33.01	-8.75
	QPSK	2650.0	V	109	46	9.52	1 / 108	15.22	24.73	0.297	33.01	-8.28
	16-QAM	2650.0	V	109	46	9.52	1 / 108	11.98	21.50	0.141	33.01	-11.51
	$\pi/2$ BPSK	2531.0	V	109	57	9.52	1 / 121	13.02	22.53	0.179	33.01	-10.48
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 121	15.31	24.77	0.300	33.01	-8.24
	$\pi/2$ BPSK	2655.0	V	109	46	9.50	1 / 81	14.73	24.23	0.265	33.01	-8.78
60 MHz	QPSK	2531.0	V	109	57	9.52	1 / 121	13.88	23.39	0.218	33.01	-9.62
	QPSK	2593.0	V	107	43	9.46	1 / 40	15.13	24.60	0.288	33.01	-8.41
	QPSK	2655.0	V	109	46	9.50	1 / 81	14.65	24.15	0.260	33.01	-8.86
	16-QAM	2593.0	V	107	43	9.46	1 / 121	12.02	21.48	0.141	33.01	-11.53
	$\pi/2$ BPSK	2526.0	V	109	57	9.52	1 / 40	13.43	22.94	0.197	33.01	-10.07
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 40	14.63	24.09	0.256	33.01	-8.92
50 MHz	$\pi/2$ BPSK	2660.0	V	109	46	9.50	1 / 40	15.52	25.02	0.318	33.01	-7.99
	QPSK	2526.0	V	109	57	9.52	1 / 40	13.85	23.37	0.217	33.01	-9.64
	QPSK	2593.0	V	107	43	9.46	1 / 40	14.87	24.33	0.271	33.01	-8.68
	QPSK	2660.0	V	109	46	9.50	1 / 40	15.25	24.75	0.299	33.01	-8.26
	16-QAM	2526.0	V	109	57	9.52	1 / 40	12.38	21.90	0.155	33.01	-11.11
	$\pi/2$ BPSK	2521.0	V	109	57	9.51	1 / 99	13.12	22.63	0.183	33.01	-10.38
40 MHz	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 33	15.22	24.68	0.294	33.01	-8.33
	$\pi/2$ BPSK	2665.0	V	109	46	9.51	1 / 33	14.28	23.79	0.239	33.01	-9.22
	QPSK	2521.0	V	109	57	9.51	1 / 99	13.57	23.08	0.203	33.01	-9.93
	QPSK	2593.0	V	107	43	9.46	1 / 33	15.18	24.64	0.291	33.01	-8.37
	QPSK	2665.0	V	109	46	9.51	1 / 33	13.93	23.44	0.221	33.01	-9.57
	16-QAM	2521.0	V	109	57	9.51	1 / 99	12.02	21.53	0.142	33.01	-11.48
30 MHz	$\pi/2$ BPSK	2516.0	V	109	57	9.52	1 / 79	13.35	22.87	0.194	33.01	-10.14
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 26	15.01	24.47	0.280	33.01	-8.54
	$\pi/2$ BPSK	2670.0	V	109	46	9.52	1 / 26	14.08	23.60	0.229	33.01	-9.41
	QPSK	2516.0	V	109	57	9.52	1 / 79	13.64	23.17	0.207	33.01	-9.84
	QPSK	2593.0	V	107	43	9.46	1 / 26	14.96	24.42	0.277	33.01	-8.59
	QPSK	2670.0	V	109	46	9.52	1 / 26	13.89	23.41	0.219	33.01	-9.60
20 MHz	16-QAM	2516.0	V	109	57	9.52	1 / 79	12.23	21.75	0.150	33.01	-11.26
	$\pi/2$ BPSK	2511.0	V	109	57	9.54	1 / 58	12.63	22.17	0.165	33.01	-10.84
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 19	14.23	23.70	0.234	33.01	-9.31
	$\pi/2$ BPSK	2675.0	V	109	46	9.52	1 / 19	14.30	23.82	0.241	33.01	-9.19
	QPSK	2511.0	V	109	57	9.54	1 / 58	12.76	22.30	0.170	33.01	-10.71
	QPSK	2593.0	V	107	43	9.46	1 / 19	14.31	23.78	0.239	33.01	-9.23
100 MHz	QPSK	2675.0	V	109	46	9.52	1 / 19	13.90	23.41	0.219	33.01	-9.60
	16-QAM	2511.0	V	109	57	9.54	1 / 58	11.17	20.72	0.118	33.01	-12.29
	$\pi/2$ BPSK	2506.0	V	109	57	9.54	1 / 13	12.42	21.96	0.157	33.01	-11.05
	$\pi/2$ BPSK	2593.0	V	107	43	9.46	1 / 13	14.67	24.13	0.259	33.01	-8.88
	$\pi/2$ BPSK	2680.0	V	109	46	9.51	1 / 13	14.59	24.10	0.257	33.01	-8.91
	QPSK	2506.0	V	109	57	9.54	1 / 13	13.02	22.56	0.180	33.01	-10.45
100 MHz	QPSK	2593.0	V	107	43	9.46	1 / 13	14.33	23.79	0.239	33.01	-9.22
	QPSK	2680.0	V	109	46	9.51	1 / 13	14.28	23.79	0.239	33.01	-9.22
	16-QAM	2506.0	V	109	57	9.54	1 / 13	11.31	20.85	0.122	33.01	-12.16
100 MHz	QPSK (CP-OFDM)	2640.0	V	109	46	9.50	1/204	13.59	23.09	0.204	33.01	-9.92
	QPSK (Opposite Pol.)	2640.0	H	173	15	9.89	1/204	14.28	24.17	0.261	33.01	-8.84
	QPSK (WCP)	2640.0	V	109	46	9.50	1/204	8.70	18.20	0.066	33.01	-14.81

Table 7-17. EIRP Data (NR Band n41 – Ant F)

FCC ID: A3LSMS901U	 Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turtable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	2310.0	H	144	208	10.55	1 / 0	12.40	22.95	0.197	23.98	-1.03
	16-QAM	2310.0	H	144	208	10.55	1 / 25	12.16	22.71	0.186	23.98	-1.27
5 MHz	QPSK	2307.5	H	144	208	10.52	1 / 0	12.39	22.91	0.195	23.98	-1.07
	QPSK	2310.0	H	144	208	10.55	1 / 0	12.42	22.97	0.198	23.98	-1.01
	QPSK	2312.5	H	144	208	10.56	1 / 0	12.31	22.87	0.194	23.98	-1.11
	16-QAM	2307.5	H	144	208	10.52	1/0	12.17	22.69	0.186	23.98	-1.29
10 MHz	Opposite Pol.	2310.0	V	127	285	10.37	1 / 25	12.47	22.84	0.192	23.98	-1.14
	WCP	2310.0	H	144	208	10.55	1 / 0	10.99	21.54	0.142	23.98	-2.44



Table 7-18. EIRP Data (LTE Band 30 – Ant A)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turtable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	$\pi/2$ BPSK	2310.0	H	123	356	10.55	1 / 13	7.62	18.17	0.066	23.98	-5.81
	QPSK	2310.0	H	123	356	10.55	1 / 13	8.31	18.86	0.077	23.98	-5.12
	16-QAM	2310.0	H	123	356	10.55	1 / 13	6.45	17.00	0.050	23.98	-6.98
5 MHz	$\pi/2$ BPSK	2307.5	H	123	356	10.52	1 / 6	6.73	17.25	0.053	23.98	-6.73
	$\pi/2$ BPSK	2310.0	H	123	356	10.55	1 / 6	6.62	17.17	0.052	23.98	-6.81
	$\pi/2$ BPSK	2312.5	H	123	356	10.56	1 / 6	7.04	17.60	0.057	23.98	-6.38
	QPSK	2307.5	H	123	356	10.52	1 / 6	8.68	19.20	0.083	23.98	-4.78
	QPSK	2310.0	H	123	356	10.55	1 / 6	7.53	18.08	0.064	23.98	-5.90
	QPSK	2312.5	H	123	356	10.56	1 / 6	7.89	18.45	0.070	23.98	-5.53
	16-QAM	2312.5	H	123	356	10.56	1 / 6	4.99	15.55	0.036	23.98	-8.43
10 MHz	QPSK (CP-OFDM)	2310.0	H	123	356	10.55	1/13	6.15	16.70	0.047	23.98	-7.28
	Opposite Pol.	2310.0	V	147	331	10.37	1/38	7.86	18.23	0.067	23.98	-5.75
	WCP	2310.0	H	123	356	10.55	1/38	-4.07	6.48	0.004	23.98	-17.50

Table 7-19. EIRP Data (NR Band n30 – Ant A)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turtable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	$\pi/2$ BPSK	2310.0	V	118	63	10.37	1 / 13	12.44	22.81	0.191	23.98	-1.17
	QPSK	2310.0	V	118	63	10.37	1 / 13	12.59	22.96	0.198	23.98	-1.02
	16-QAM	2310.0	V	118	63	10.37	1 / 13	11.89	22.26	0.168	23.98	-1.72
5 MHz	$\pi/2$ BPSK	2307.5	V	118	63	10.36	1 / 6	12.46	22.82	0.191	23.98	-1.16
	$\pi/2$ BPSK	2310.0	V	118	63	10.37	1 / 6	12.33	22.70	0.186	23.98	-1.28
	$\pi/2$ BPSK	2312.5	V	118	63	10.36	1 / 6	12.51	22.87	0.194	23.98	-1.11
	QPSK	2307.5	V	118	63	10.36	1 / 6	12.57	22.93	0.196	23.98	-1.05
	QPSK	2310.0	V	118	63	10.37	1 / 6	11.92	22.29	0.169	23.98	-1.69
	QPSK	2312.5	V	118	63	10.36	1 / 6	12.46	22.82	0.191	23.98	-1.16
	16-QAM	2312.5	V	118	63	10.36	1 / 6	12.08	22.44	0.175	23.98	-1.54
10 MHz	QPSK (CP-OFDM)	2310.0	V	118	63	10.37	1/13	11.18	21.55	0.143	23.98	-2.43
	Opposite Pol.	2310.0	H	223	6	10.55	1/38	12.36	22.91	0.195	23.98	-1.07
	WCP	2310.0	V	118	63	10.37	1/13	10.06	20.43	0.110	23.98	-3.55

Table 7-20. EIRP Data (NR Band n30 – Ant F)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turtable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	2546.0	H	117	234	9.38	1 / 68	11.98	21.36	0.137	33.01	-11.65
	$\pi/2$ BPSK	2593.0	H	107	233	9.49	1 / 204	12.58	22.07	0.161	33.01	-10.94
	$\pi/2$ BPSK	2640.0	H	115	244	9.89	1 / 136	12.70	22.59	0.182	33.01	-10.42
	QPSK	2546.0	H	117	234	9.38	1 / 68	11.21	20.59	0.114	33.01	-12.42
	QPSK	2593.0	H	107	233	9.49	1 / 204	13.37	22.86	0.193	33.01	-10.15
	QPSK	2640.0	H	115	244	9.89	1 / 136	12.46	22.35	0.172	33.01	-10.66
100 MHz	16-QAM	2593.0	H	107	233	9.49	1 / 204	12.85	22.34	0.171	33.01	-10.67
	QPSK (CP-OFDM)	2593.0	H	107	233	9.49	1/204	13.05	22.54	0.180	33.01	-10.47
	QPSK (Opposite Pol.)	2593.0	V	387	253	9.46	1/68	10.86	20.32	0.108	33.01	-12.69
	QPSK (WCP)	2593.0	H	107	233	9.49	1/136	10.00	19.49	0.089	33.01	-13.52



Table 7-21. EIRP Data (NR Band n41 – SRS 2 - Ant B)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turtable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	2546.0	V	224	154	9.40	1 / 68	5.22	14.62	0.029	33.01	-18.39
	$\pi/2$ BPSK	2593.0	V	214	140	9.46	1 / 68	6.24	15.70	0.037	33.01	-17.31
	$\pi/2$ BPSK	2640.0	V	210	166	9.50	1 / 68	5.32	14.82	0.030	33.01	-18.19
	QPSK	2546.0	V	224	154	9.40	1 / 68	5.07	14.47	0.028	33.01	-18.54
	QPSK	2593.0	V	214	140	9.46	1 / 68	6.09	15.55	0.036	33.01	-17.46
	QPSK	2640.0	V	210	166	9.50	1 / 68	5.79	15.29	0.034	33.01	-17.72
100 MHz	16-QAM	2546.0	V	224	154	9.40	1 / 68	5.05	14.45	0.028	33.01	-18.56
	QPSK (CP-OFDM)	2593.0	V	214	140	9.46	1/68	6.03	15.49	0.035	33.01	-17.52
	QPSK (Opposite Pol.)	2593.0	H	117	242	9.49	1/136	6.11	15.60	0.036	33.01	-17.41
	QPSK (WCP)	2593.0	V	214	140	9.46	1/68	1.67	11.13	0.013	33.01	-21.88

Table 7-22. EIRP Data (NR Band n41 - SRS 3 – Ant E)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turtable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	2546.0	V	115	323	9.40	1 / 204	4.10	13.50	0.022	33.01	-19.51
	$\pi/2$ BPSK	2593.0	V	111	328	9.46	1 / 68	4.32	13.78	0.024	33.01	-19.23
	$\pi/2$ BPSK	2640.0	V	102	339	9.50	1 / 136	2.57	12.07	0.016	33.01	-20.94
	QPSK	2546.0	V	115	323	9.40	1 / 204	4.07	13.47	0.022	33.01	-19.54
	QPSK	2593.0	V	111	328	9.46	1 / 68	4.25	13.71	0.024	33.01	-19.30
	QPSK	2640.0	V	102	339	9.50	1 / 136	2.60	12.10	0.016	33.01	-20.91
100 MHz	16-QAM	2593.0	V	111	328	9.46	1 / 68	3.37	12.83	0.019	33.01	-20.18
	QPSK (CP-OFDM)	2593.0	V	111	328	9.46	1 / 136	1.98	11.44	0.014	33.01	-21.57
	QPSK (Opposite Pol.)	2593.0	H	188	354	9.49	1 / 68	0.69	10.18	0.010	33.01	-22.83
	QPSK (WCP)	2593.0	V	111	328	9.46	1 / 68	1.83	11.29	0.013	33.01	-21.72

Table 7-23. EIRP Data (NR Band n41 – SRS 4 – Ant D)

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7.8 Radiated Spurious Emissions Measurements

Test Overview



Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically 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 measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

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

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Test Setup

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

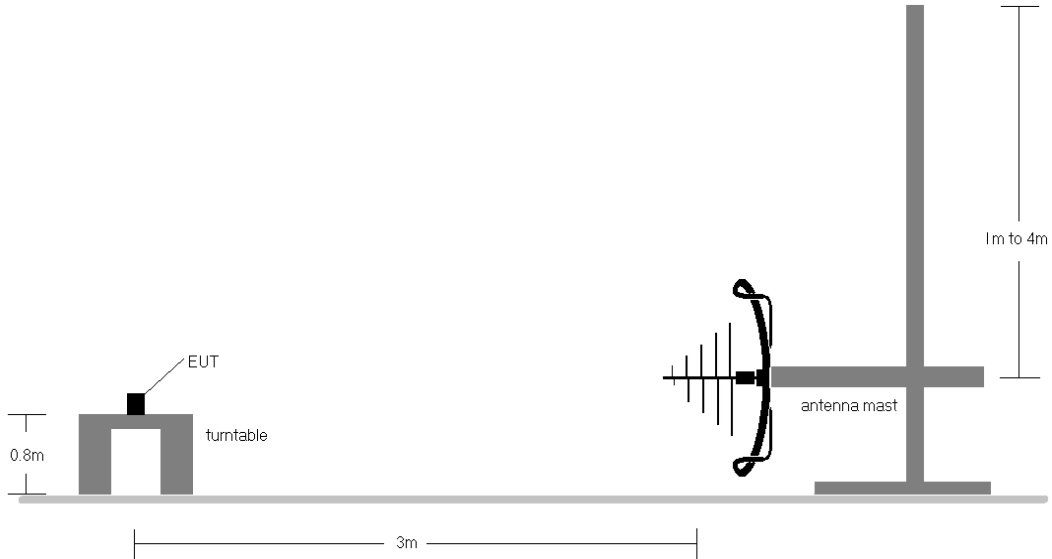


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

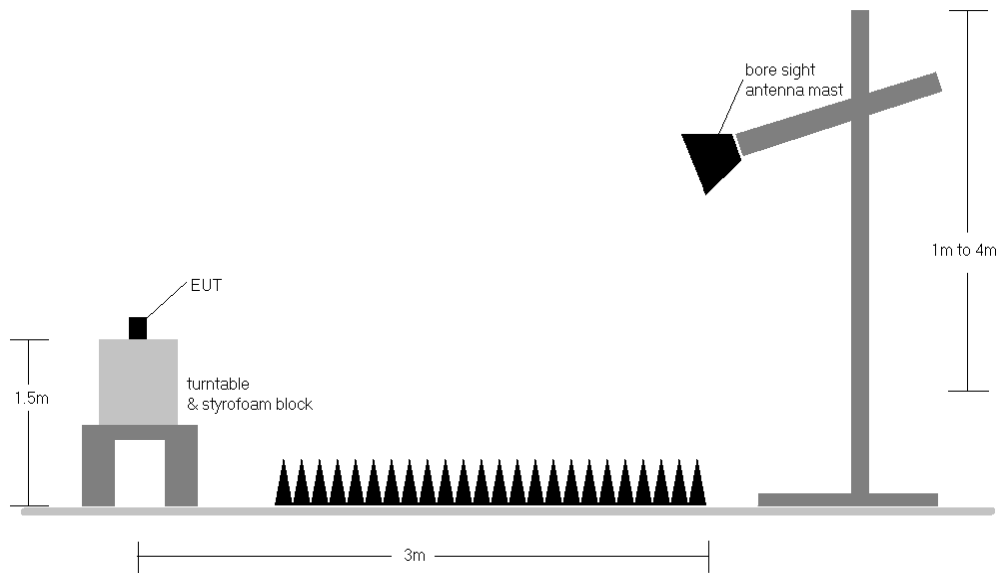




Figure 7-8. Test Instrument & Measurement Setup >1 GHz

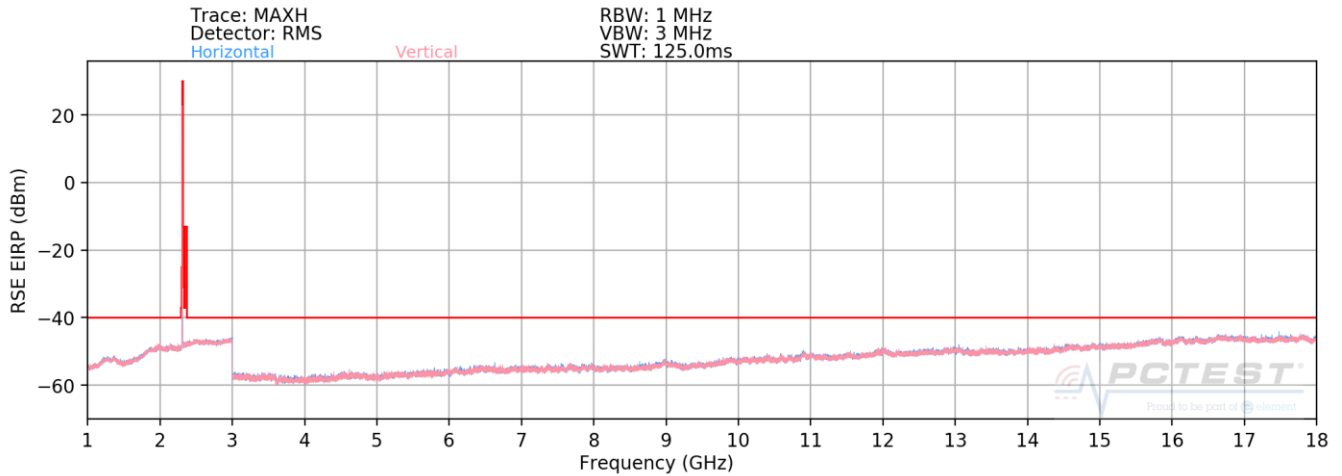
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Test Notes

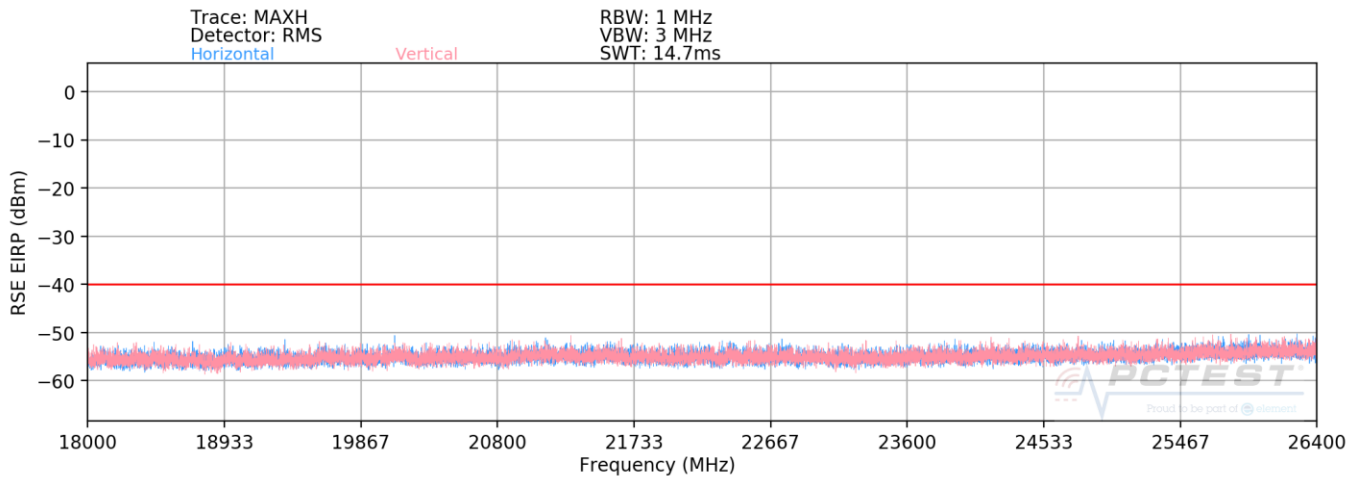
- 1) Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
 - a) $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) 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.
- 3) This unit was tested with its standard battery.
- 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) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 7) ULCA 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.
- 8) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) 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.
- 9) Spurious emissions shown in this section are measured while operating in EN-DC mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor). Spurious emissions from the NR carrier device, is subject to the rules under which the NR carrier operates. Spurious emission caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.
- 10) Spurious emissions measurements are included in this section to address compliance of the NR FR1 ULCA capability. The EUT was set to transmit at the widest bandwidth and on the middle channel of each band.

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LTE Band 30 – Ant B



Plot 7-308. Radiated Spurious Plot – 1-18 GHz (LTE Band 30 – Ant B)





Plot 7-309. Radiated Spurious Plot – 18-26.4 GHz (LTE Band 30 – Ant B)

Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	H	127	43	-74.29	5.64	38.35	-56.91	-40.00	-16.91
6930.00	H	122	347	-79.28	8.21	35.93	-59.32	-40.00	-19.32
9240.00	H	-	-	-80.62	9.33	35.71	-59.55	-40.00	-19.55
11550.00	H	-	-	-82.46	13.56	38.10	-57.16	-40.00	-17.16
13860.00	H	-	-	-82.76	14.92	39.16	-56.09	-40.00	-16.09



Table 7-24. Radiated Spurious Data (LTE Band 30 – Mid Channel – Ant B)

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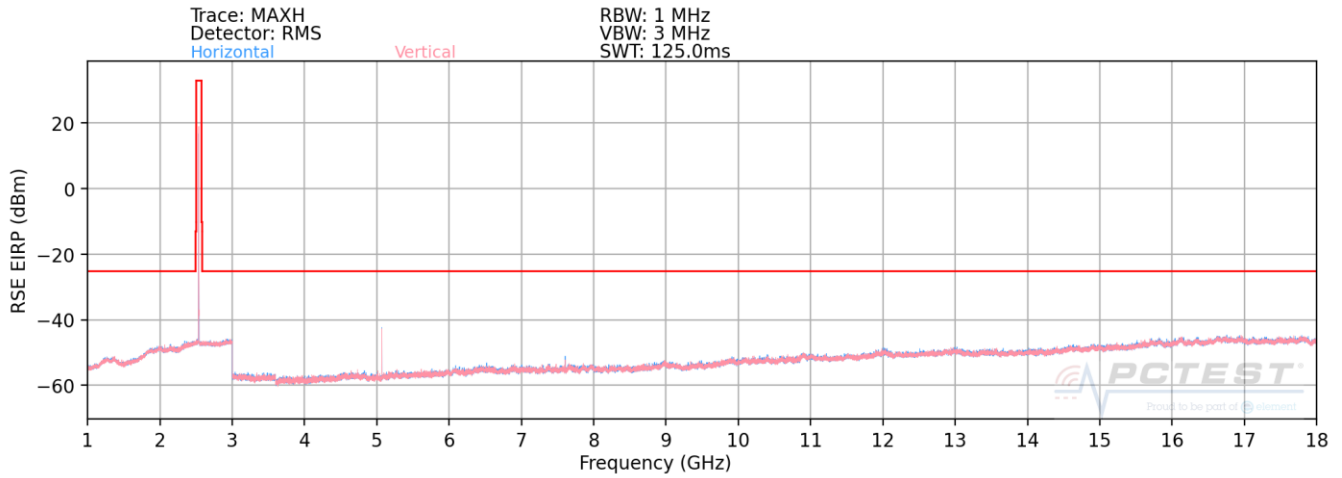
Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	H	127	43	-74.29	5.64	38.35	-56.91	-40.00	-16.91
6930.00	H	122	347	-79.28	8.21	35.93	-59.32	-40.00	-19.32
9240.00	H	-	-	-80.62	9.33	35.71	-59.55	-40.00	-19.55
11550.00	H	-	-	-82.46	13.56	38.10	-57.16	-40.00	-17.16
13860.00	H	-	-	-82.76	14.92	39.16	-56.09	-40.00	-16.09

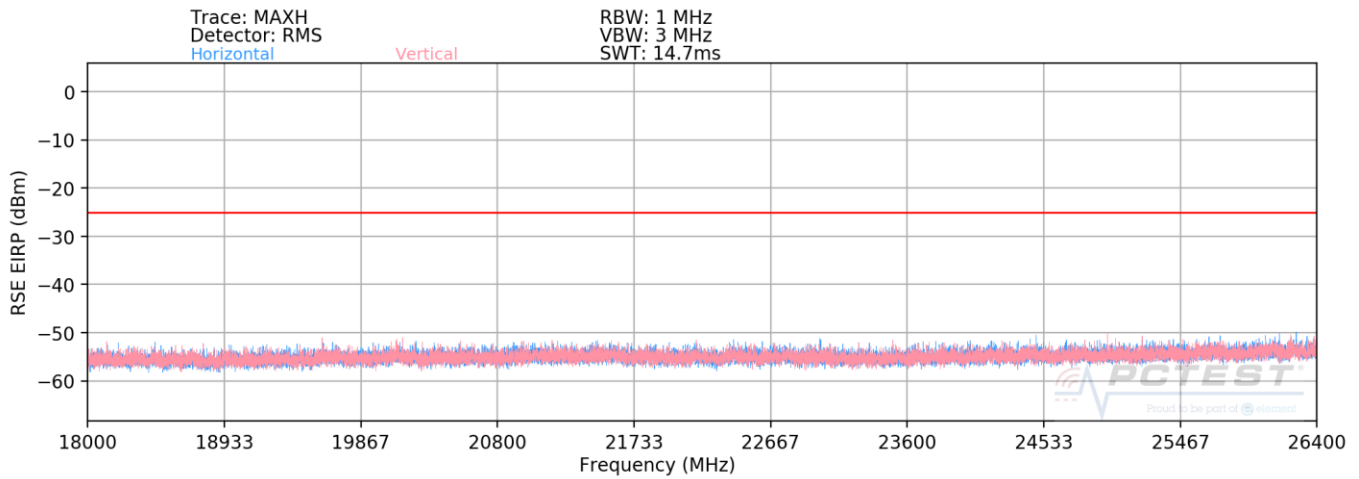
Table 7-25. Radiated Spurious Data with WCP (LTE Band 30 – Ant B)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 7



Plot 7-310. Radiated Spurious Plot – 1-18 GHz (LTE Band 7)





Plot 7-311. Radiated Spurious Plot – 18-26.4 GHz (LTE Band 7)

Bandwidth (MHz):	20
Frequency (MHz):	2510.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5020.00	V	121	55	-64.66	6.03	48.37	-46.89	-25.00	-21.89
7530.00	V	112	231	-77.49	8.68	38.19	-57.07	-25.00	-32.07
10040.00	V	-	-	-80.46	10.90	37.44	-57.81	-25.00	-32.81
12550.00	V	-	-	-82.50	14.48	38.98	-56.28	-25.00	-31.28
15060.00	V	-	-	-82.86	15.70	39.84	-55.42	-25.00	-30.42

Table 7-26. Radiated Spurious Data (LTE Band 7 – Low Channel)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	2535.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5070.00	V	122	354	-62.84	5.91	50.07	-45.19	-25.00	-20.19
7605.00	V	390	20	-71.91	8.45	43.54	-51.72	-25.00	-26.72
10140.00	V	372	272	-80.40	11.26	37.86	-57.39	-25.00	-32.39
12675.00	V	-	-	-82.45	14.34	38.89	-56.36	-25.00	-31.36
15210.00	V	-	-	-82.87	16.42	40.55	-54.71	-25.00	-29.71
17745.00	V	-	-	-82.98	18.48	42.50	-52.76	-25.00	-27.76

Table 7-27. Radiated Spurious Data (LTE Band 7 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	2560.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz



Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5120.00	V	121	345	-60.03	6.08	53.05	-42.21	-25.00	-17.21
7680.00	V	119	259	-72.86	9.16	43.30	-51.96	-25.00	-26.96
10240.00	V	178	309	-80.48	11.48	38.00	-57.26	-25.00	-32.26
12800.00	V	-	-	-82.35	14.36	39.01	-56.25	-25.00	-31.25
15360.00	V	-	-	-82.37	16.12	40.75	-54.50	-25.00	-29.50
17920.00	V	-	-	-83.03	17.92	41.89	-53.36	-25.00	-28.36

Table 7-28. Radiated Spurious Data (LTE Band 7 – High Channel)

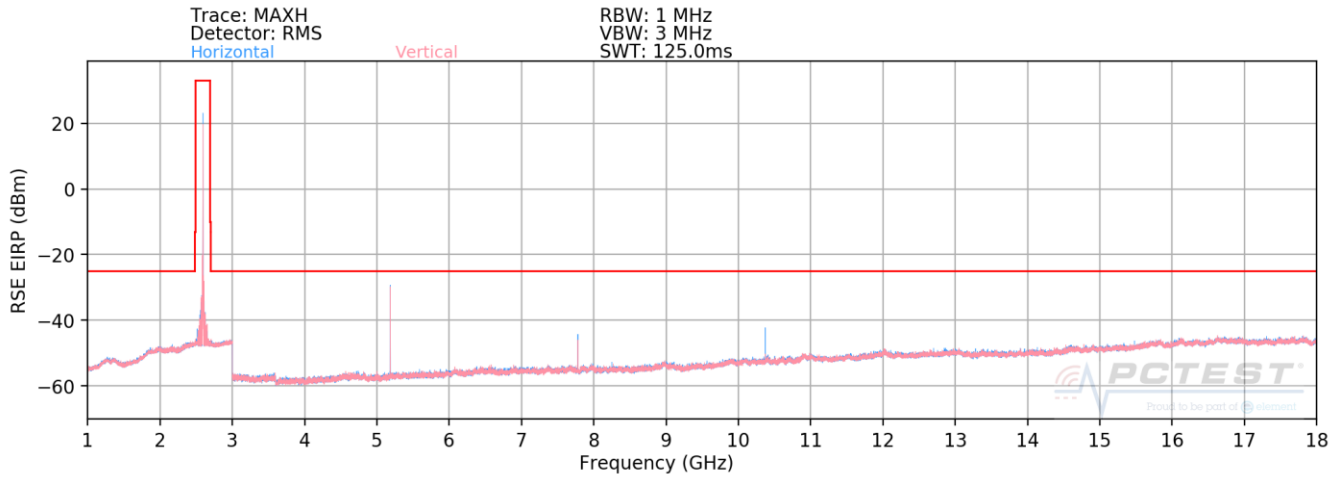
Bandwidth (MHz):	20
Frequency (MHz):	2560.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5120.00	V	118	9	-61.53	6.08	51.55	-43.71	-25.00	-18.71
7680.00	V	141	328	-73.81	9.16	42.35	-52.91	-25.00	-27.91
10240.00	V	211	296	-81.16	11.48	37.32	-57.94	-25.00	-32.94
12800.00	V	-	-	-82.30	14.36	39.06	-56.20	-25.00	-31.20
15360.00	V	-	-	-82.42	16.12	40.70	-54.55	-25.00	-29.55
17920.00	V	-	-	-83.10	17.92	41.82	-53.43	-25.00	-28.43

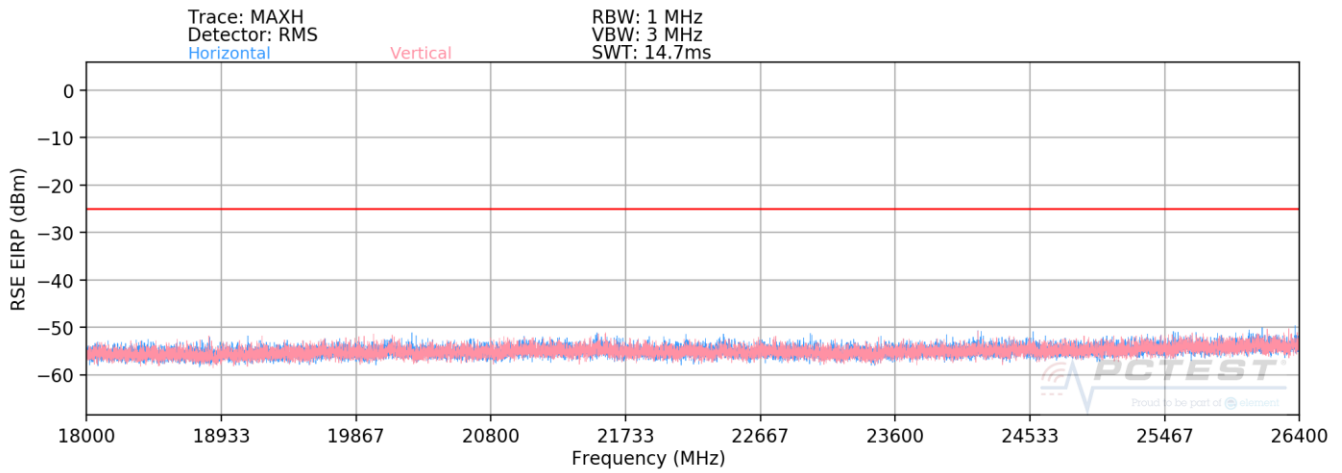
Table 7-29. Radiated Spurious Data with WCP (LTE Band 7)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC2)



Plot 7-312. Radiated Spurious Plot – 1-18 GHz (LTE Band 41(PC2))





Plot 7-313. Radiated Spurious Plot – 18-26.4 GHz (LTE Band 41(PC2))

Bandwidth (MHz):	20
Frequency (MHz):	2506.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5012.00	V	122	59	-57.87	6.04	55.17	-40.09	-25.00	-15.09
7518.00	V	227	37	-69.10	8.49	46.39	-48.87	-25.00	-23.87
10024.00	V	299	332	-76.03	10.73	41.70	-53.56	-25.00	-28.56
12530.00	V	256	309	-79.89	14.42	41.53	-53.73	-25.00	-28.73
15036.00	V	-	-	-82.93	16.10	40.17	-55.08	-25.00	-30.08
17542.00	V	-	-	-81.71	17.72	43.01	-52.25	-25.00	-27.25

Table 7-30. Radiated Spurious Data (LTE Band 41(PC2) – Low Channel)

FCC ID: A3LSMS901U	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 206 of 242

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5186.00	V	116	345	-46.88	6.59	66.71	-28.55	-25.00	-3.55
7779.00	V	113	261	-64.02	8.47	51.45	-43.81	-25.00	-18.81
10372.00	V	279	314	-70.75	12.05	48.30	-46.96	-25.00	-21.96
12965.00	V	239	314	-74.95	14.61	46.66	-48.59	-25.00	-23.59
15558.00	V	-	-	-82.57	16.42	40.85	-54.41	-25.00	-29.41

Table 7-31. Radiated Spurious Data (LTE Band 41(PC2) – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz



Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5360.00	V	119	340	-54.01	6.40	59.39	-35.86	-25.00	-10.86
8040.00	V	114	273	-65.42	8.56	50.14	-45.12	-25.00	-20.12
10720.00	V	281	310	-70.12	12.73	49.61	-45.65	-25.00	-20.65
13400.00	V	237	336	-79.01	14.40	42.39	-52.87	-25.00	-27.87
16080.00	V	-	-	-82.94	17.75	41.81	-53.44	-25.00	-28.44

Table 7-32. Radiated Spurious Data (LTE Band 41(PC2) – High Channel)

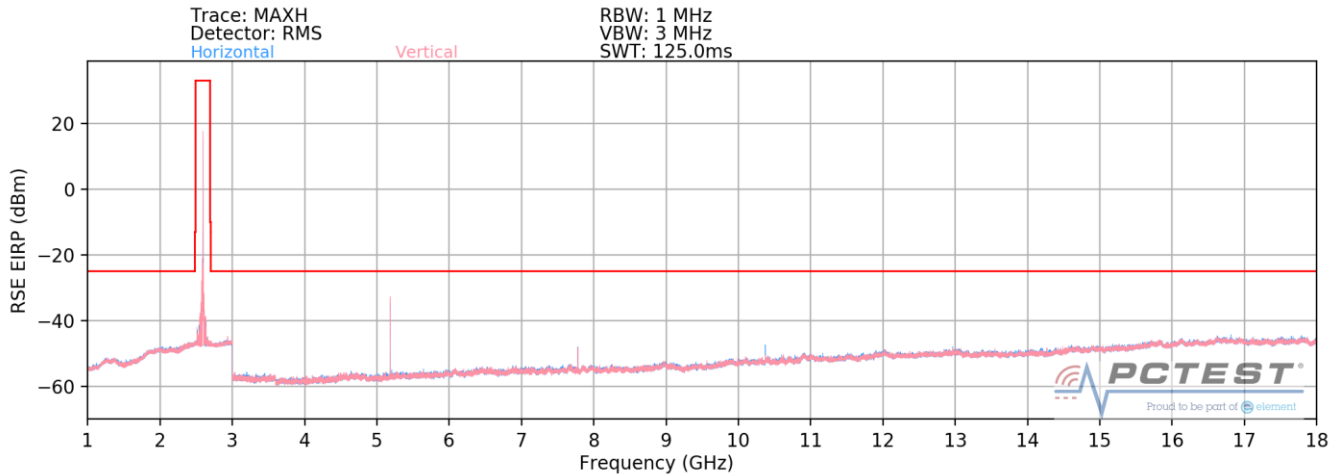
Case:	w/ Wireless Charging Pad
Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Max Hold
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5186.00	V	121	225	-52.53	6.59	61.06	-34.20	-25.00	-9.20
7779.00	V	156	337	-61.11	8.47	54.36	-40.90	-25.00	-15.90
10372.00	V	265	330	-64.34	12.05	54.71	-40.55	-25.00	-15.55
12965.00	V	-	-	-79.84	14.61	41.77	-53.48	-25.00	-28.48
15558.00	V	-	-	-80.25	16.42	43.17	-52.09	-25.00	-27.09

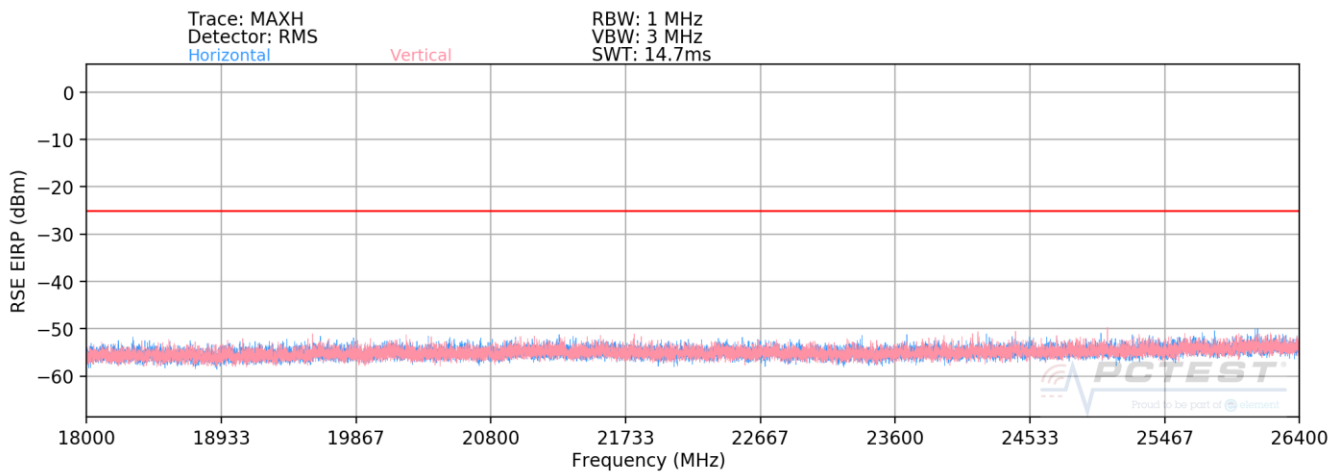
Table 7-33. Radiated Spurious Data with WCP (LTE Band 41(PC2))

FCC ID: A3LSMS901U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 207 of 242

LTE Band 41(PC3)/38



Plot 7-314. Radiated Spurious Plot – 1-18 GHz (LTE Band 41(PC3)/38)





Plot 7-315. Radiated Spurious Plot – 18-26.4 GHz (LTE Band 41(PC3)/38)

Bandwidth (MHz):	20
Frequency (MHz):	2506.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Max Hold
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5012.00	V	118	65	-56.88	6.04	56.16	-39.10	-25.00	-14.10
7518.00	V	113	41	-68.41	8.49	47.08	-48.18	-25.00	-23.18
10024.00	V	238	279	-76.87	10.73	40.86	-54.40	-25.00	-29.40
12530.00	V	-	-	-80.28	14.42	41.14	-54.12	-25.00	-29.12
15036.00	V	-	-	-80.35	16.10	42.75	-52.50	-25.00	-27.50
17542.00	V	-	-	-79.51	17.72	45.21	-50.05	-25.00	-25.05

Table 7-34. Radiated Spurious Data (LTE Band 41(PC3)/38 – Low Channel)

FCC ID: A3LSMS901U	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 208 of 242

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Max Hold
RBW / VBW:	1MHz / 3MHz



Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5186.00	V	384	346	-48.49	6.59	65.10	-30.16	-25.00	-5.16
7779.00	V	116	243	-65.42	8.47	50.05	-45.21	-25.00	-20.21
10372.00	V	296	322	-71.93	12.05	47.12	-48.14	-25.00	-23.14
12965.00	V	249	320	-74.75	14.61	46.86	-48.39	-25.00	-23.39
15558.00	V	-	-	-80.01	16.42	43.41	-51.85	-25.00	-26.85

Table 7-35. Radiated Spurious Data (LTE Band 41(PC3)/38 – Mid Channel)

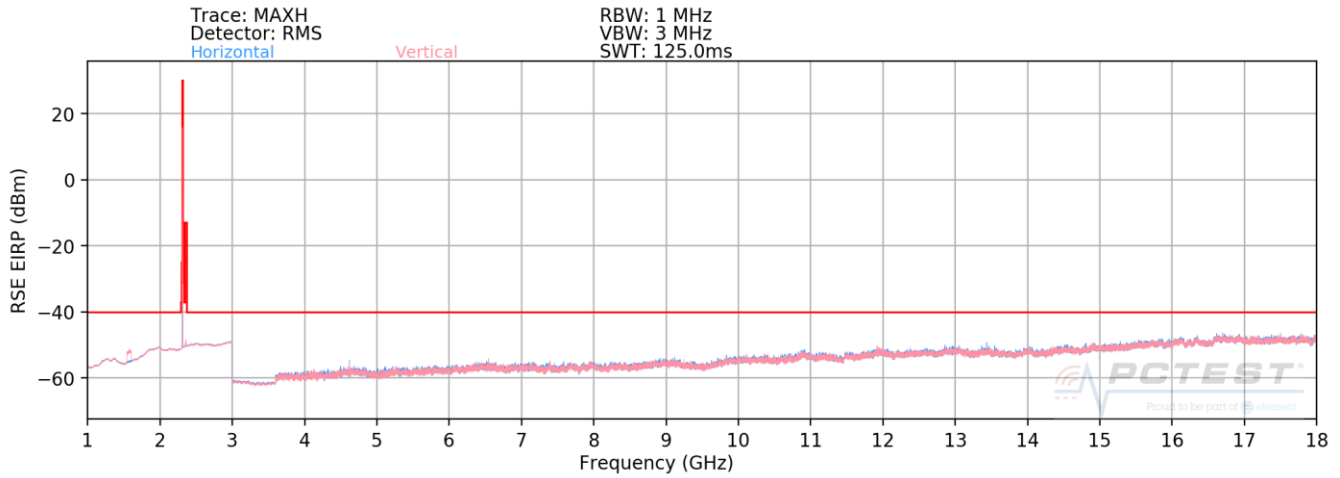
Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50
Detector / Trace Mode:	RMS / Max Hold
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5360.00	V	377	345	-53.65	6.40	59.75	-35.50	-25.00	-10.50
8040.00	V	111	270	-65.99	8.56	49.57	-45.69	-25.00	-20.69
10720.00	V	289	310	-70.30	12.73	49.43	-45.83	-25.00	-20.83
13400.00	V	-	-	-79.79	14.40	41.61	-53.65	-25.00	-28.65
16080.00	V	-	-	-80.38	17.75	44.37	-50.88	-25.00	-25.88

Table 7-36. Radiated Spurious Data (LTE Band 41(PC3)/38 – High Channel)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 209 of 242

LTE Band 30 – Ant A



Plot 7-316. Radiated Spurious Plot (LTE Band 30 – Ant A)

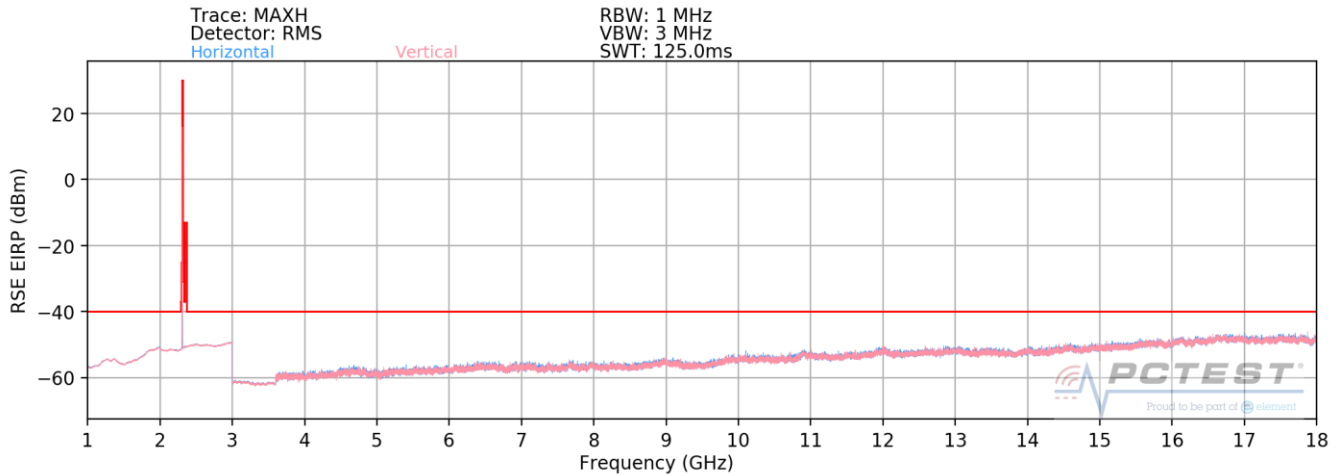
Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	V	114	335	-70.57	5.64	42.07	-53.19	-40.00	-13.19
6930.00	V	112	49	-79.16	8.21	36.05	-59.20	-40.00	-19.20
9240.00	V	-	-	-80.93	9.33	35.40	-59.86	-40.00	-19.86
11550.00	V	-	-	-82.38	13.56	38.18	-57.08	-40.00	-17.08
13860.00	V	-	-	-83.16	14.92	38.76	-56.49	-40.00	-16.49

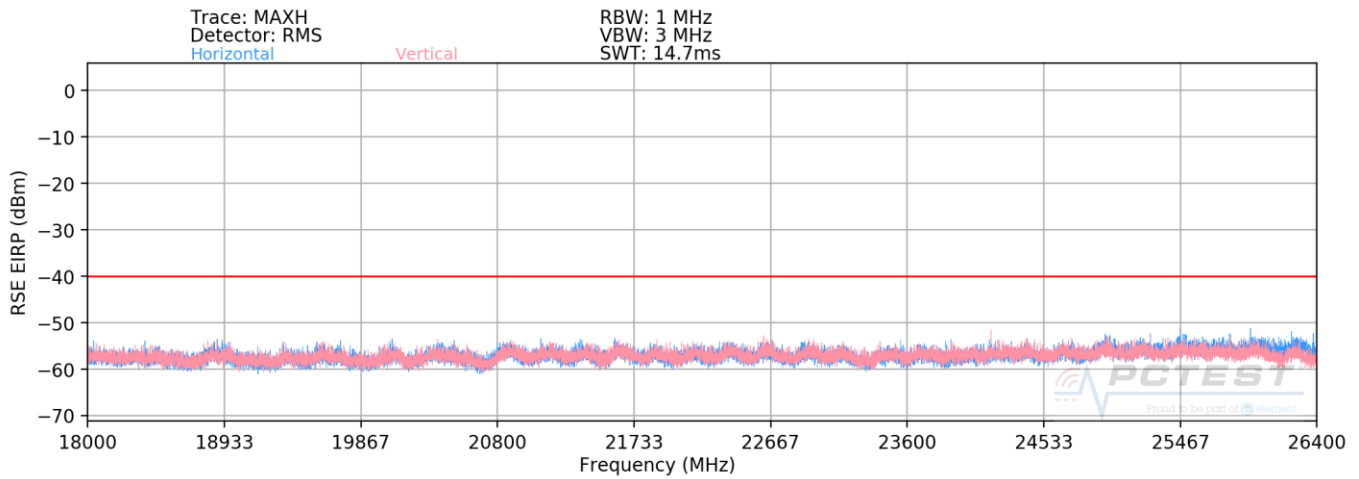
Table 7-37. Radiated Spurious Data (LTE Band 30 – Mid Channel – Ant A)

FCC ID: A3LSMS901U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 210 of 242

NR Band n30 – Ant B



Plot 7-317. Radiated Spurious Plot – 1-18 GHz (NR Band n30 – Ant B)





Plot 7-318. Radiated Spurious Plot – 18-26.4 GHz (NR Band n30 – Ant B)

Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 26
Mode:	Stand Alone
Anchor Band:	-

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	V	115	353	-74.03	5.64	38.61	-56.65	-40.00	-16.65
6930.00	V	-	-	-79.99	8.21	35.22	-60.03	-40.00	-20.03
9240.00	V	-	-	-80.51	9.33	35.82	-59.44	-40.00	-19.44
11550.00	V	-	-	-81.93	13.56	38.63	-56.63	-40.00	-16.63




Table 7-38. Radiated Spurious Data (NR Band n30 – Mid Channel – Ant B)

FCC ID: A3LSMS901U	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset	Page 211 of 242

Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 26
Mode:	Stand Alone
Anchor Band:	-

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
4620.00	V	356	47	-74.87	5.64	37.77	-57.49	-40.00	-17.49
6930.00	V	-	-	-80.01	8.21	35.20	-60.05	-40.00	-20.05
9240.00	V	-	-	-80.55	9.33	35.78	-59.48	-40.00	-19.48
11550.00	V	-	-	-82.09	13.56	38.47	-56.79	-40.00	-16.79

Table 7-39. Radiated Spurious Data (NR Band n30 – WCP – Ant B)

FCC ID: A3LSMS901U	 PCTEST Proud to be part of 	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109080099-05-R3.A3L	Test Dates: 09/08/2021 – 11/10/2021	EUT Type: Portable Handset		Page 212 of 242