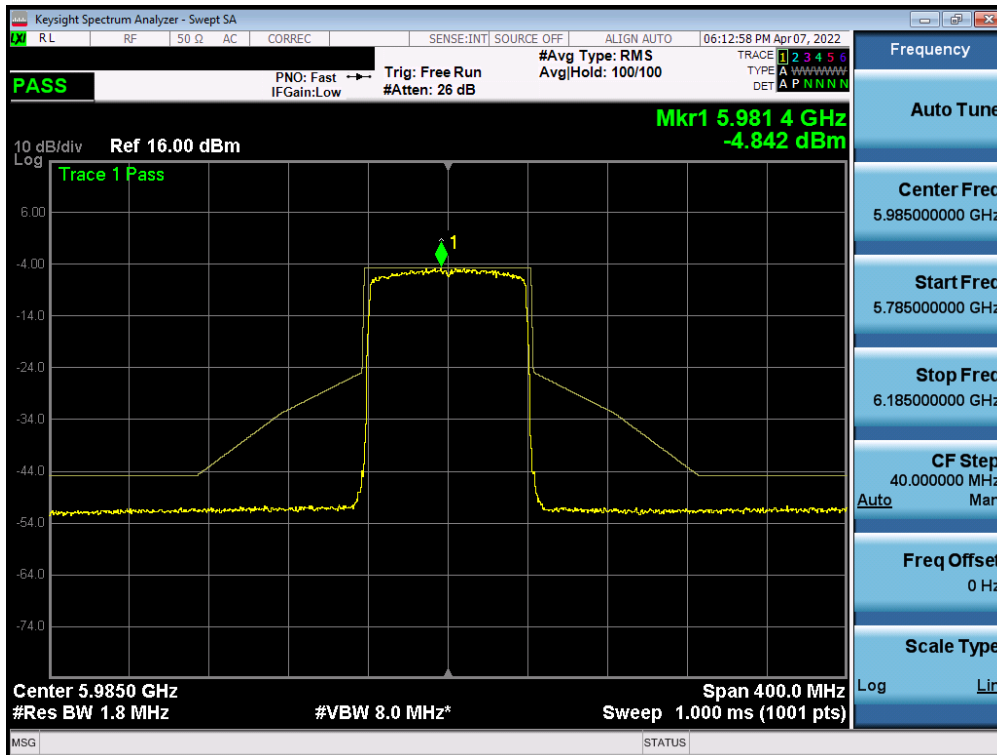
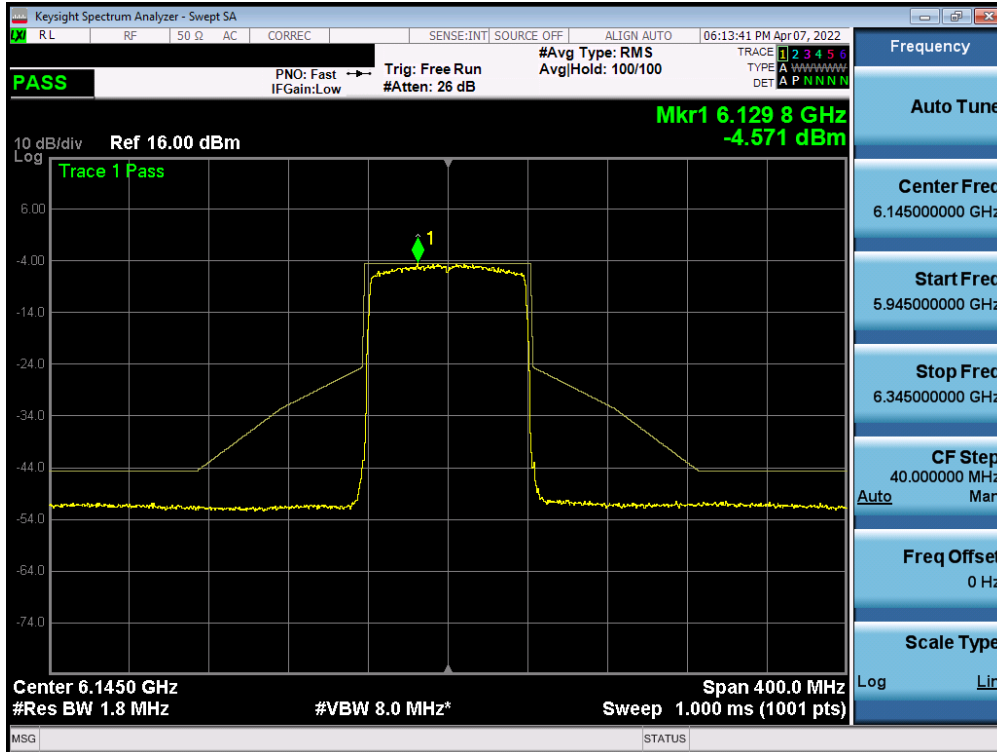


Plot 7-217. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 5) – Ch. 91)

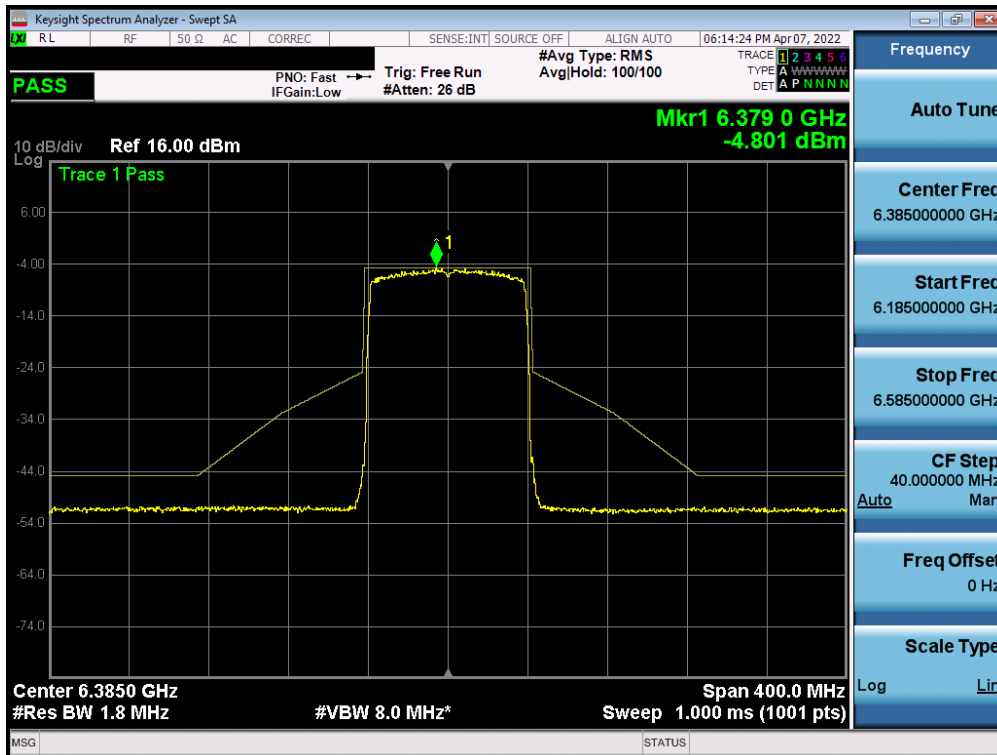


Plot 7-218. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 5) – Ch. 7)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 137 of 237

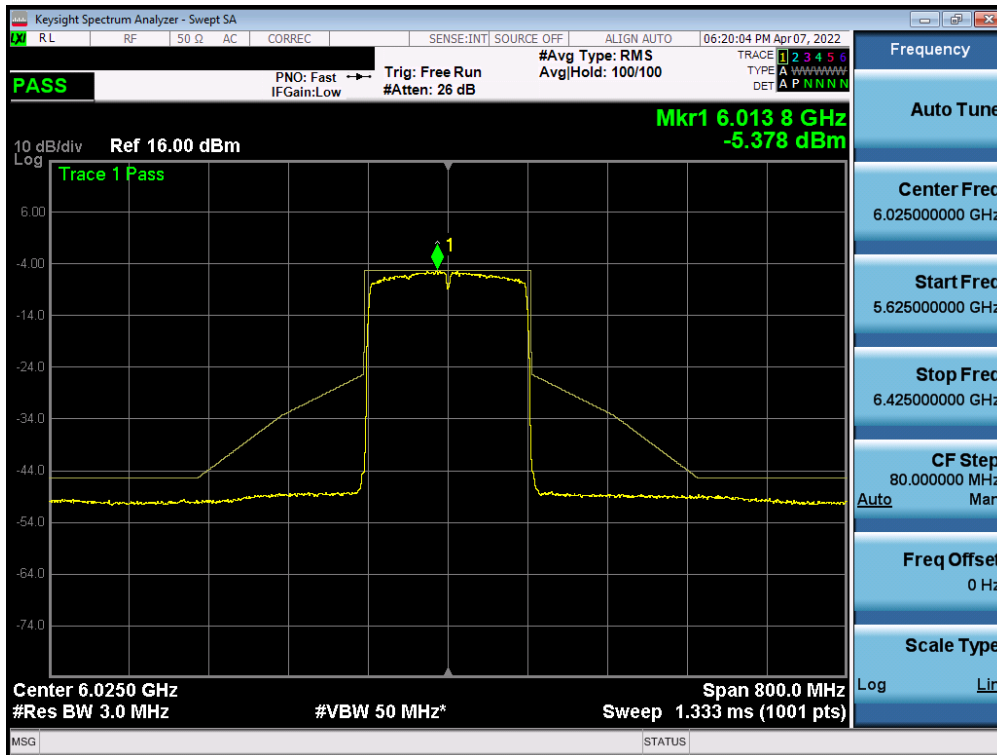


Plot 7-219. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 5) – Ch. 39)

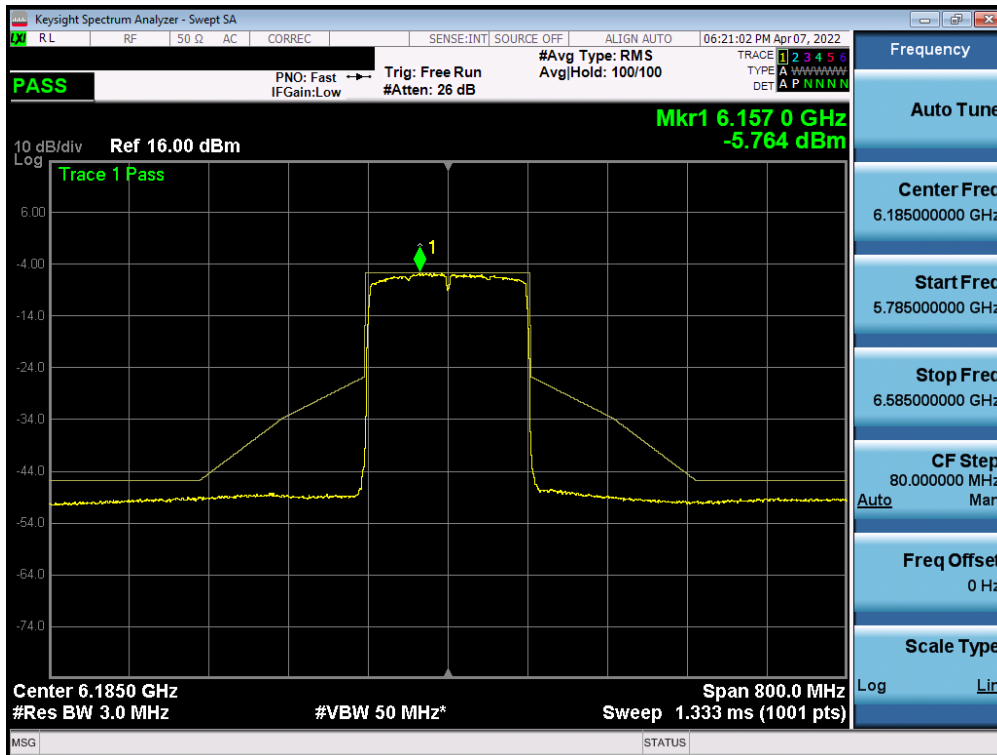


Plot 7-220. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 5) – Ch. 87)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 138 of 237

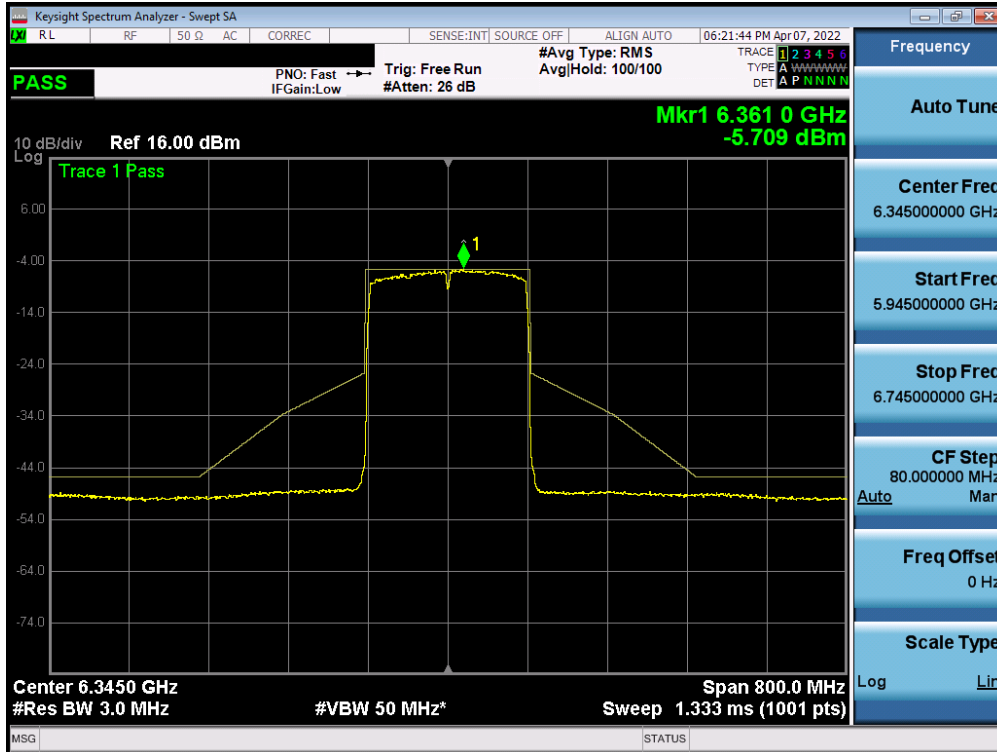


Plot 7-221. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11 ax (UNII Band 5) – Ch. 15)



Plot 7-222. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11 ax (UNII Band 5) – Ch. 47)

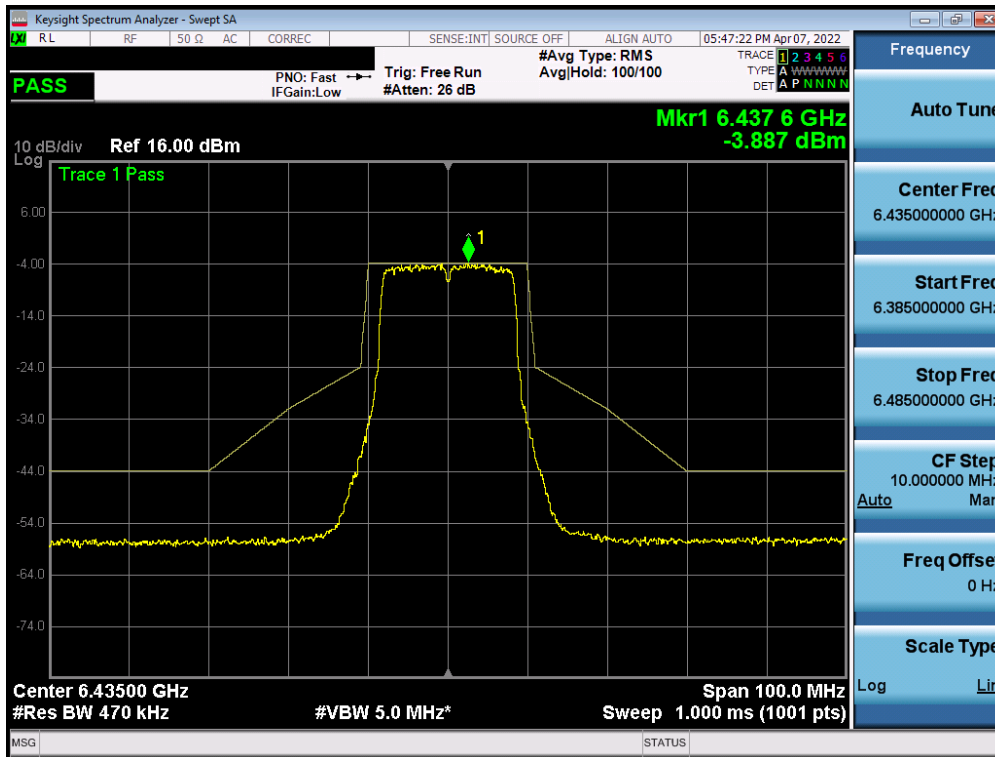
FCC ID: A3LSMF936JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset		Page 139 of 237



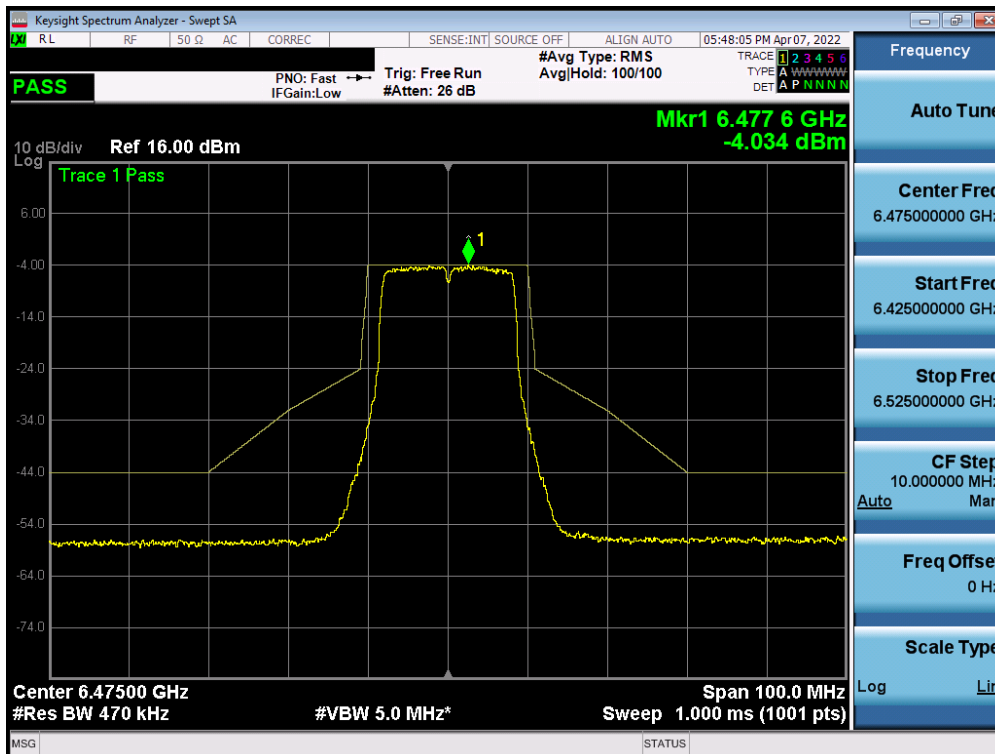
Plot 7-223. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11 ax (UNII Band 5) – Ch. 79)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 140 of 237

## MIMO Antenna-1 In-Band Emission Plot Measurement - (UNII Band 6)

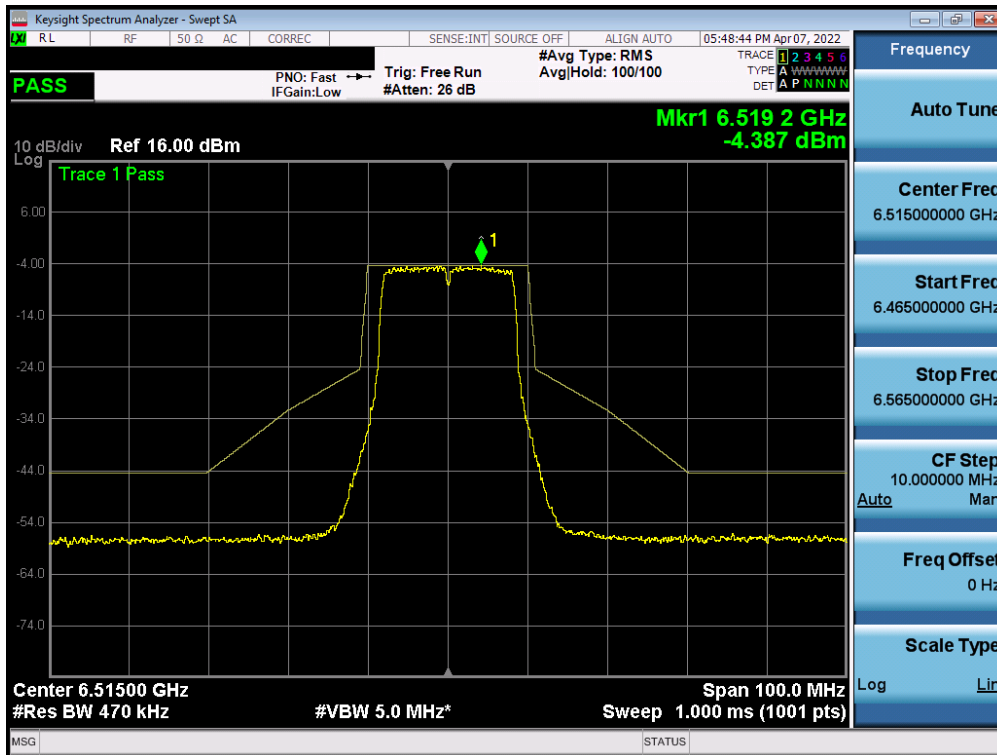


Plot 7-224. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 6) – Ch. 97)

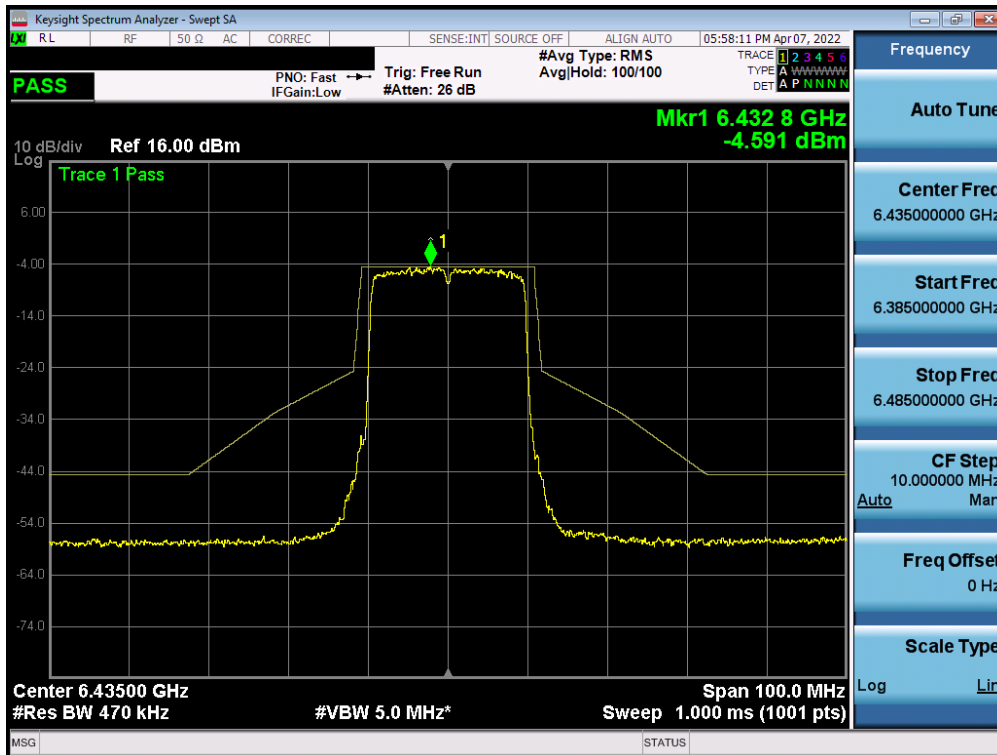


Plot 7-225. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 6) – Ch. 105)

MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
FCC ID: A3LSMF936JPN	Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	Page 141 of 237
EUT Type: Portable Handset			

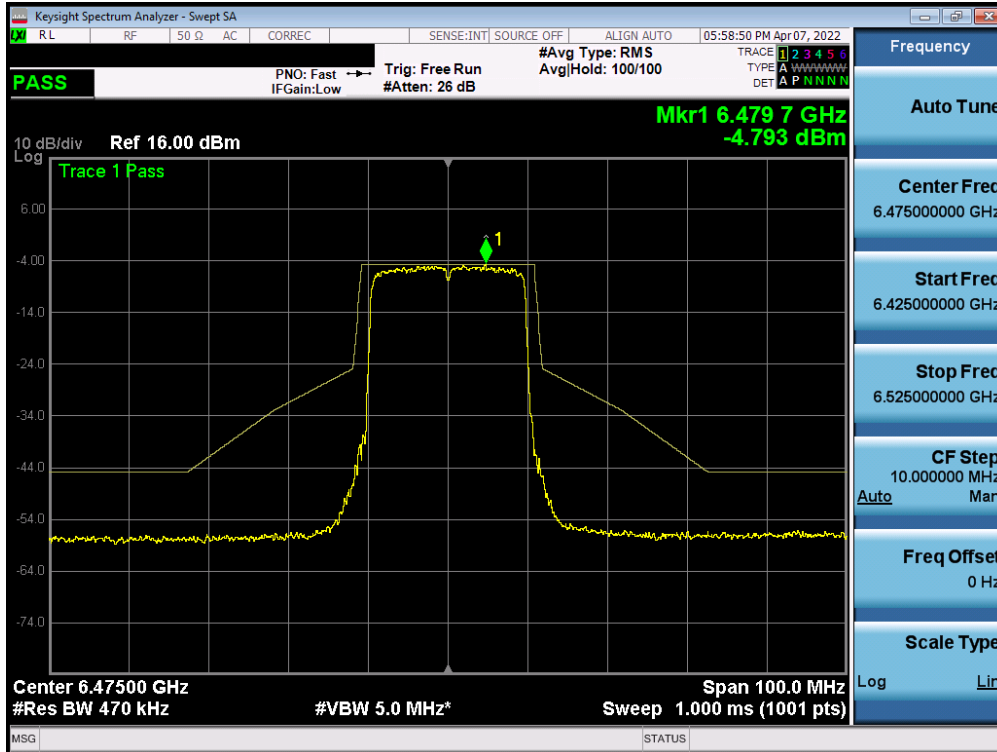


Plot 7-226. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 6) – Ch. 113)

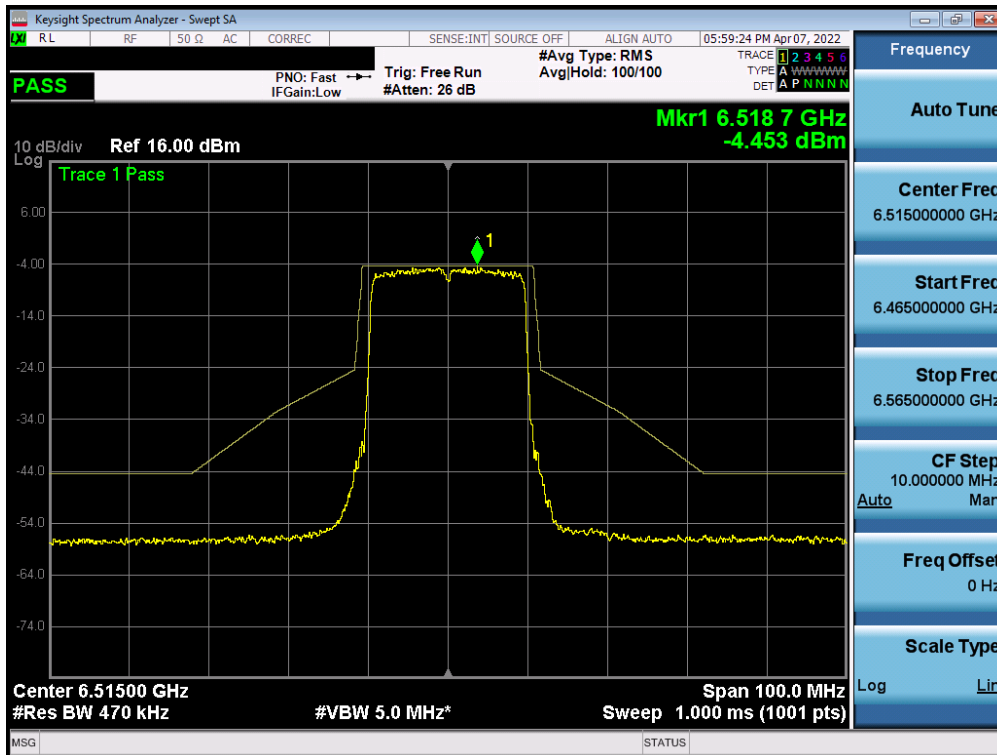


Plot 7-227. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 6) – Ch. 97)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 142 of 237



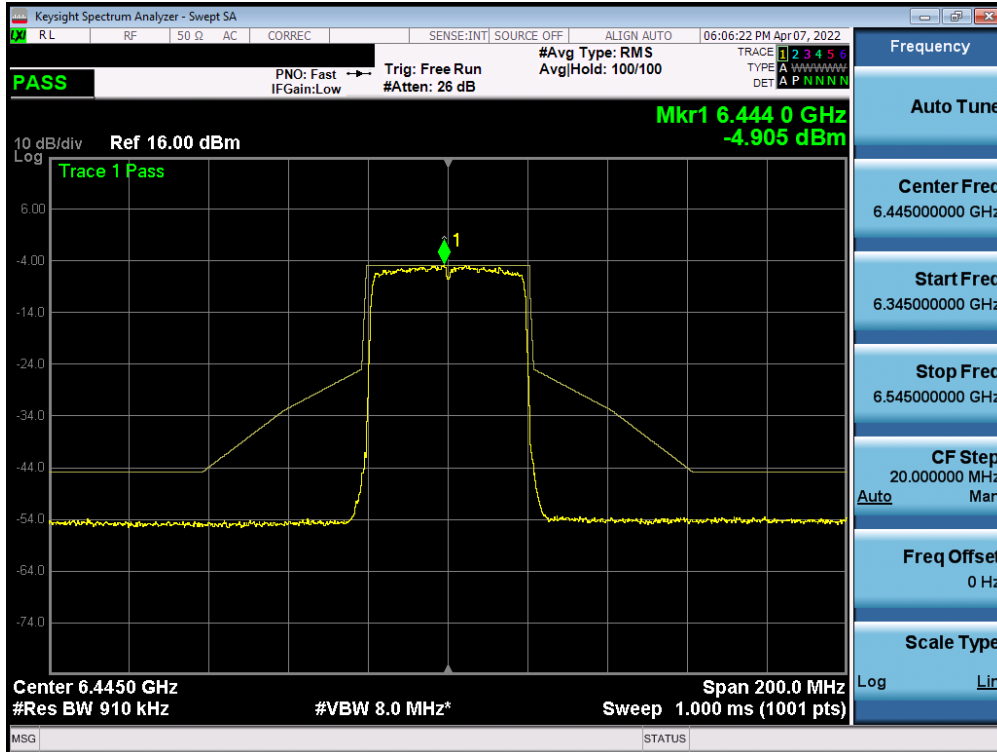
Plot 7-228. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 6) – Ch. 105)



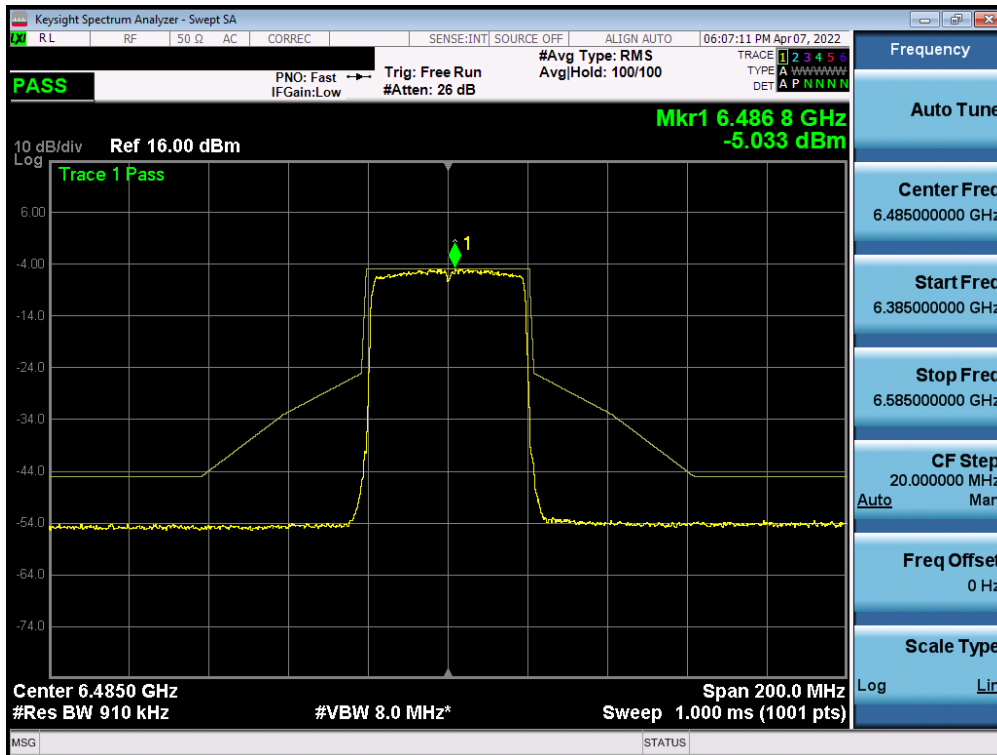
Plot 7-229. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 6) – Ch. 113)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 143 of 237





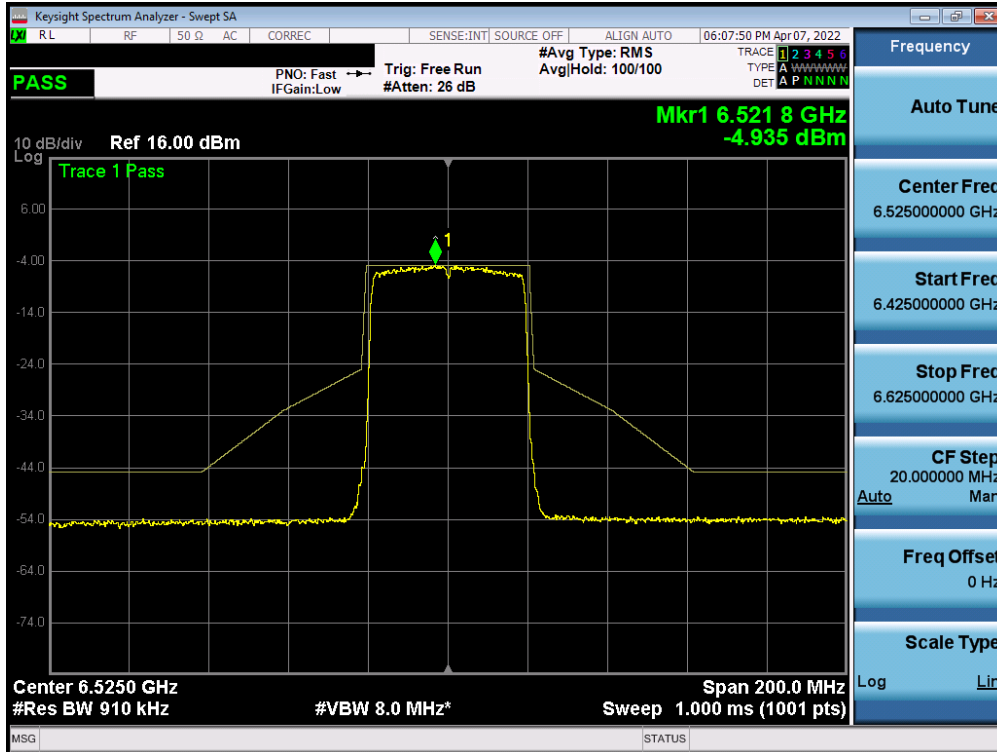
Plot 7-230. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 6) – Ch. 99)



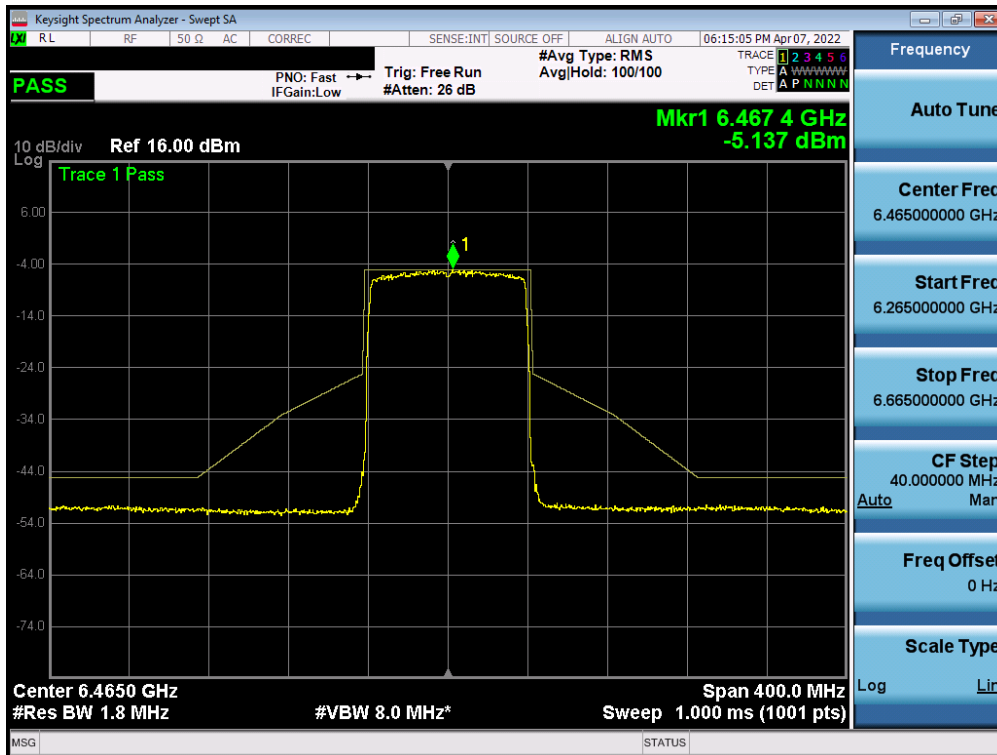
Plot 7-231. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 6) – Ch. 107)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 144 of 237



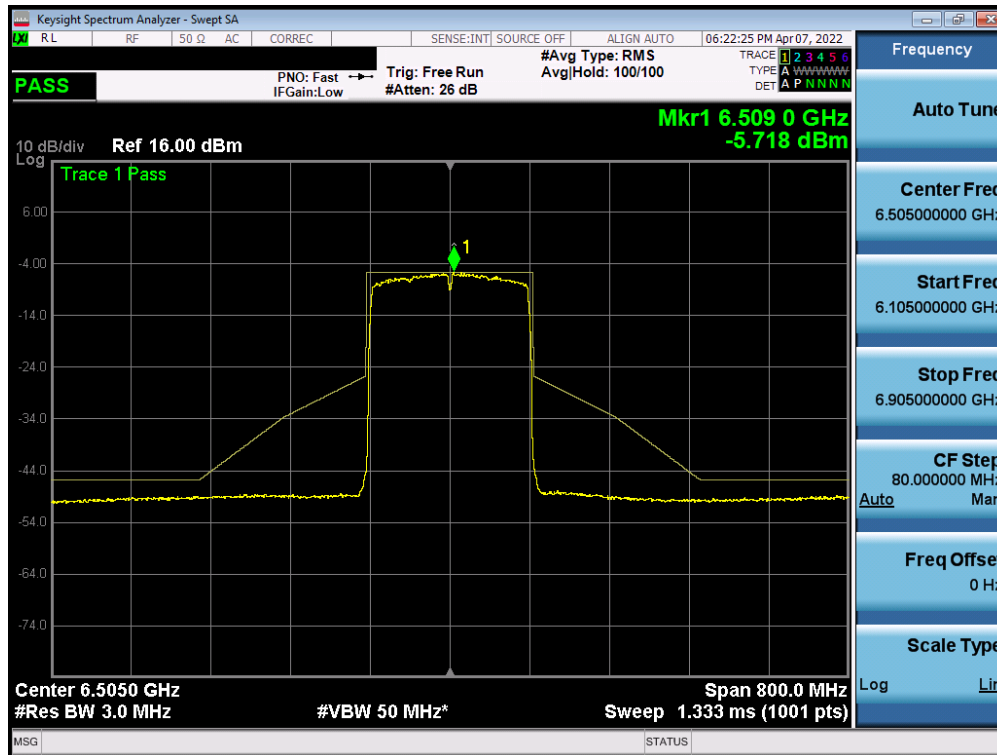


Plot 7-232. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 6) – Ch. 115)



Plot 7-233. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 6) – Ch. 103)

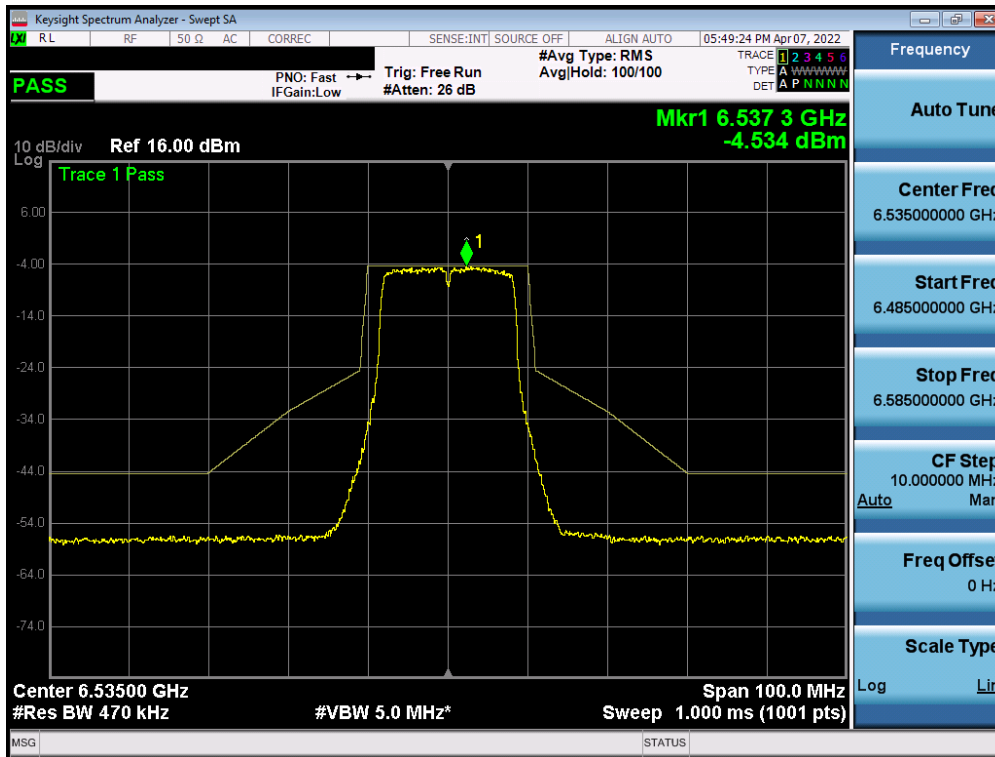
FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 145 of 237



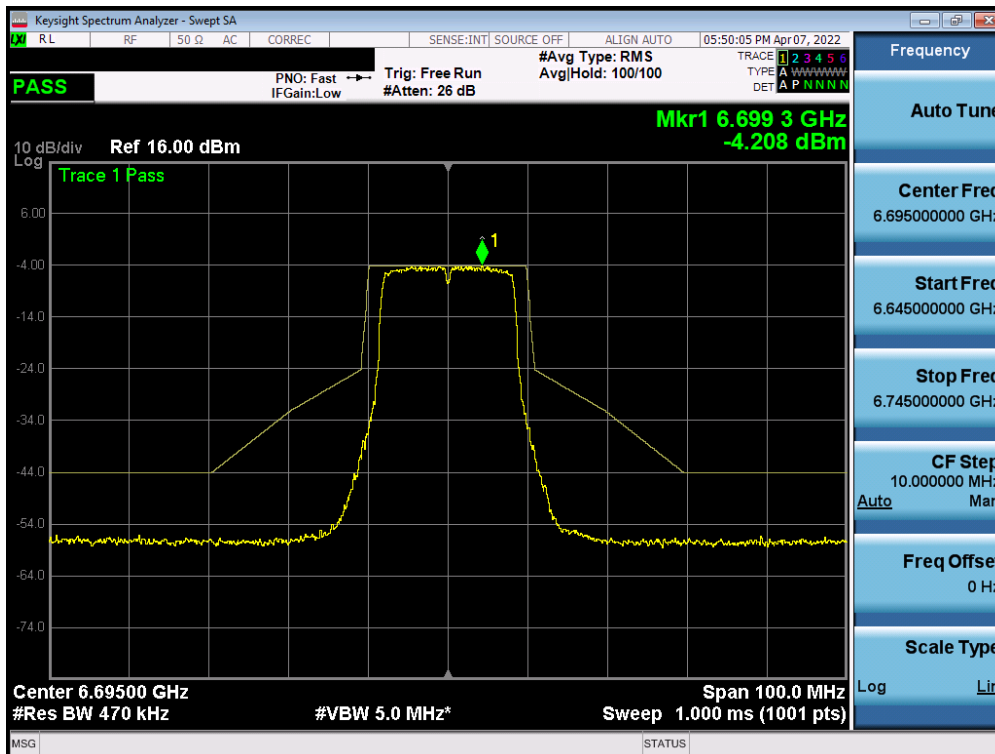
Plot 7-234. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11ax (UNII Band 6) – Ch. 111)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 146 of 237

## MIMO Antenna-1 In-Band Emission Plot Measurement - (UNII Band 7)

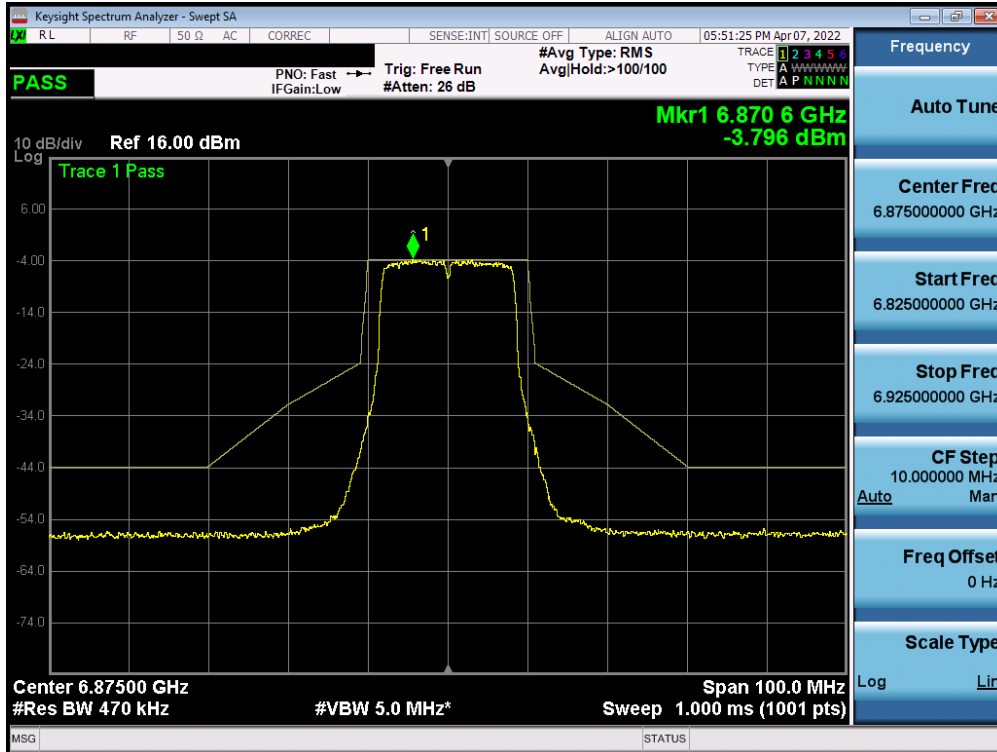


Plot 7-235. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 7) – Ch. 117)

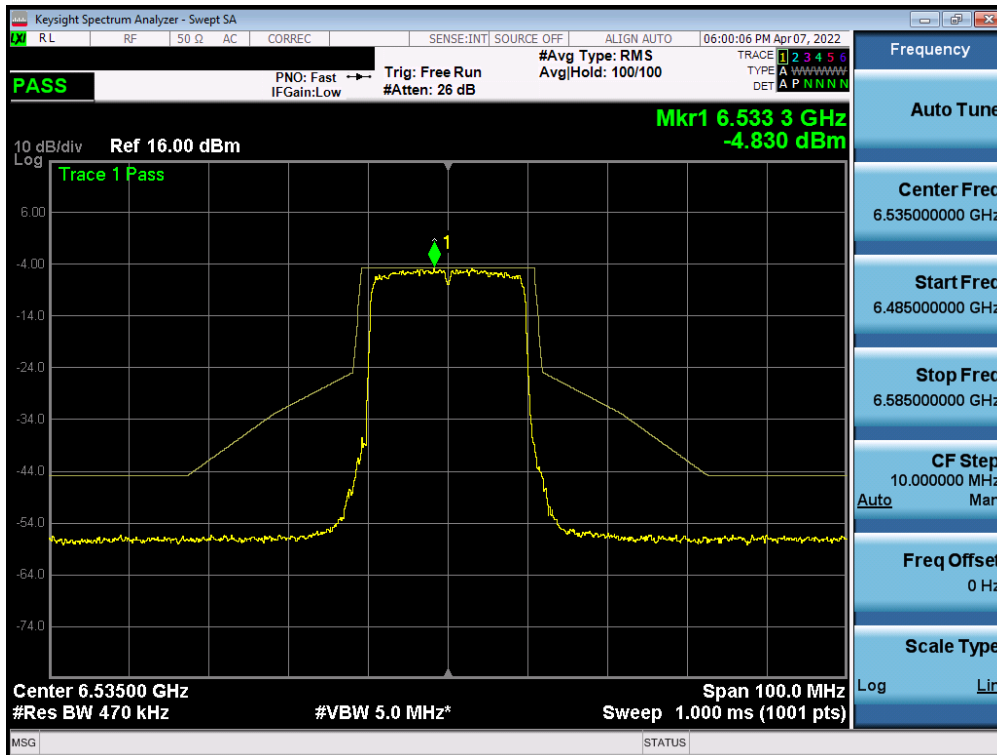


Plot 7-236. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 7) – Ch. 149)

MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
FCC ID: A3LSMF936JPN	Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	Page 147 of 237
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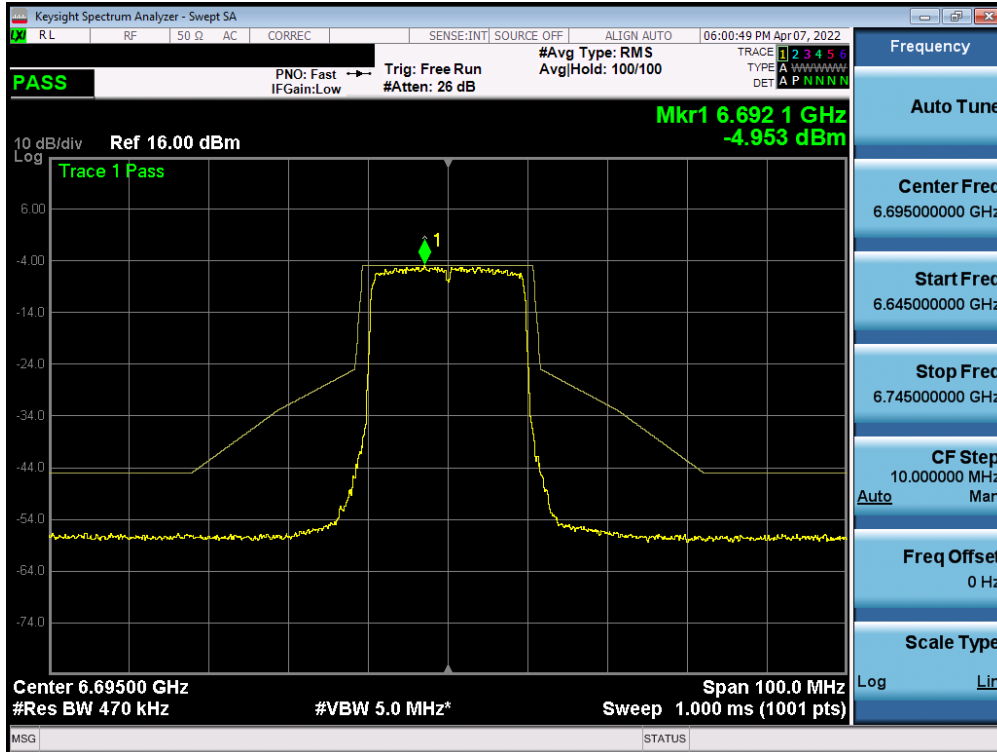


Plot 7-237. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 7) – Ch. 185)

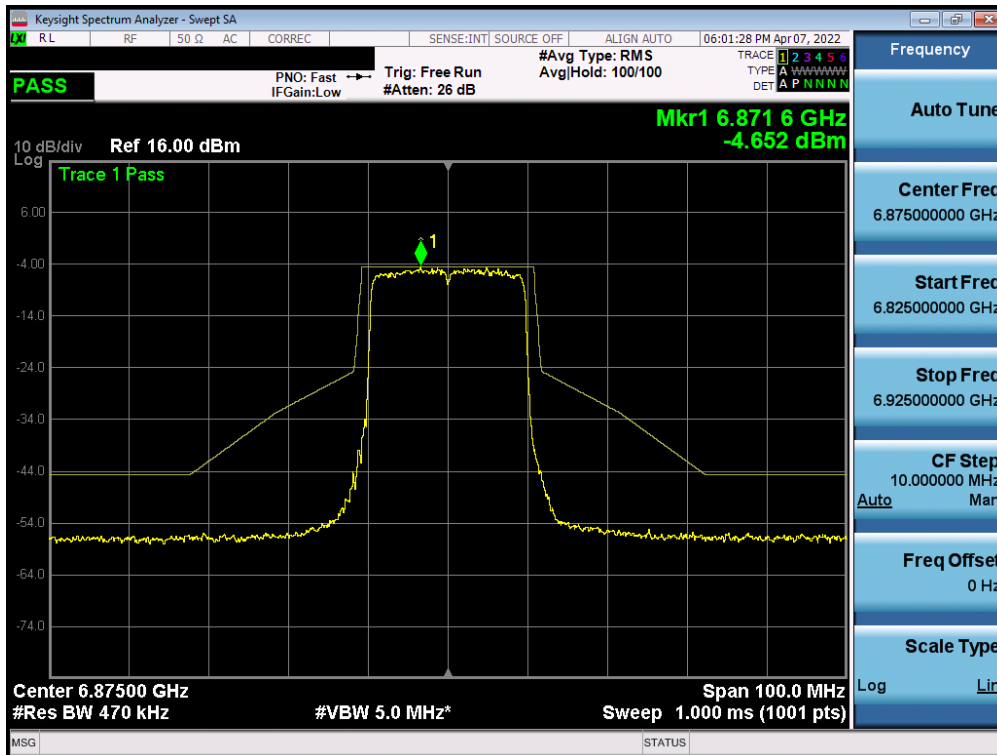


Plot 7-238. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 7) – Ch. 117)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 148 of 237

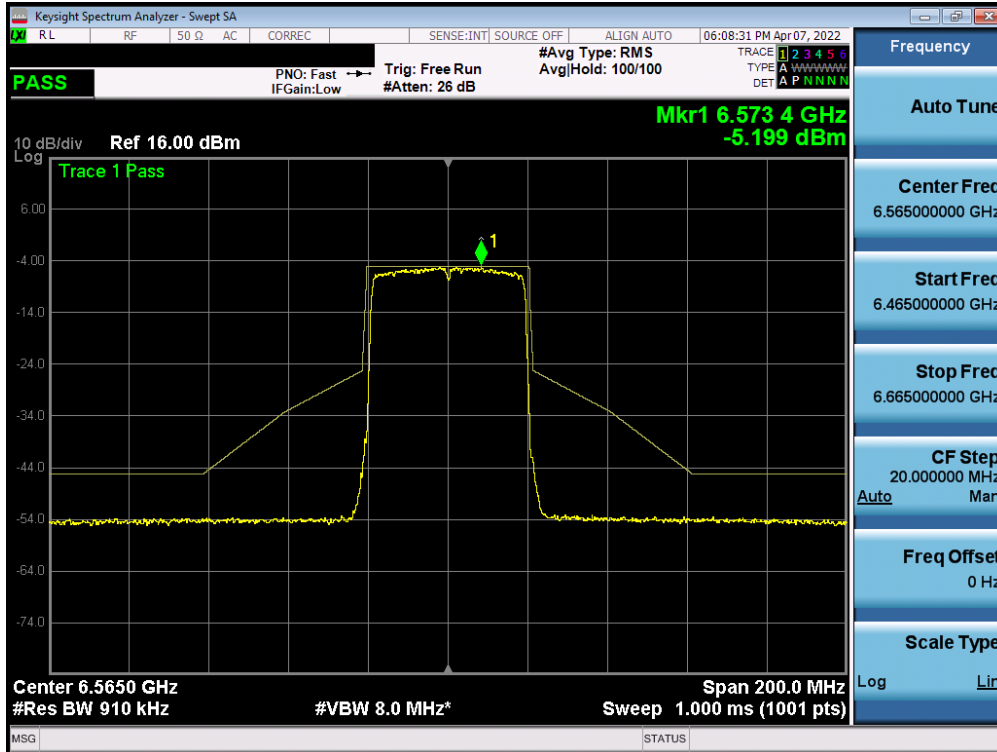


Plot 7-239. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 7) – Ch. 149)

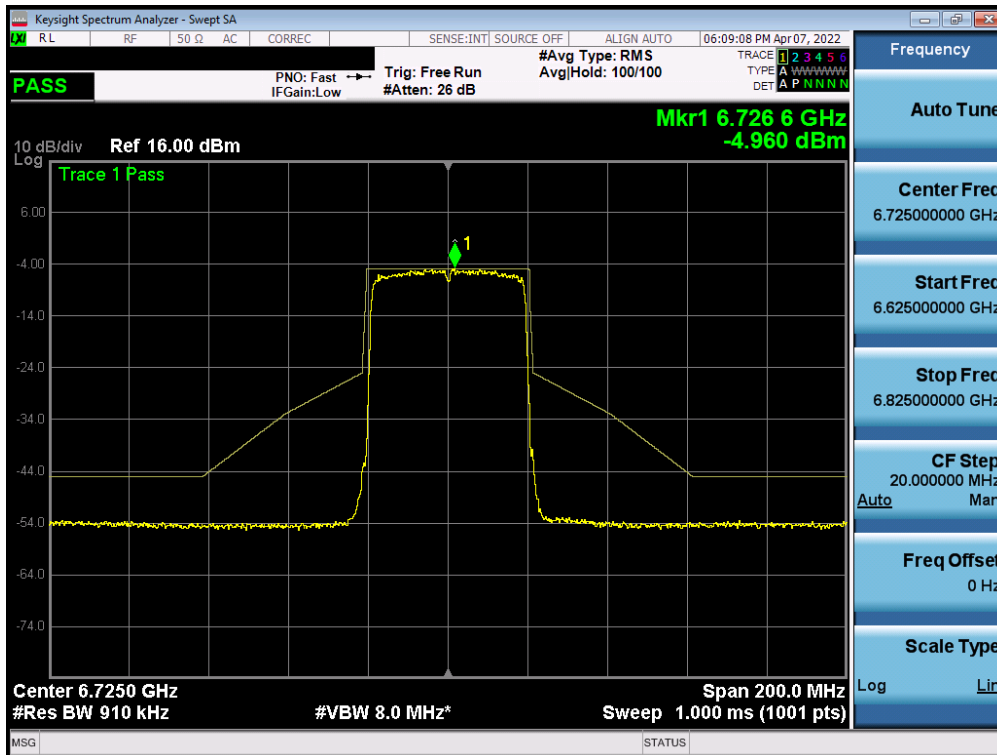


Plot 7-240. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 7) – Ch. 185)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 149 of 237

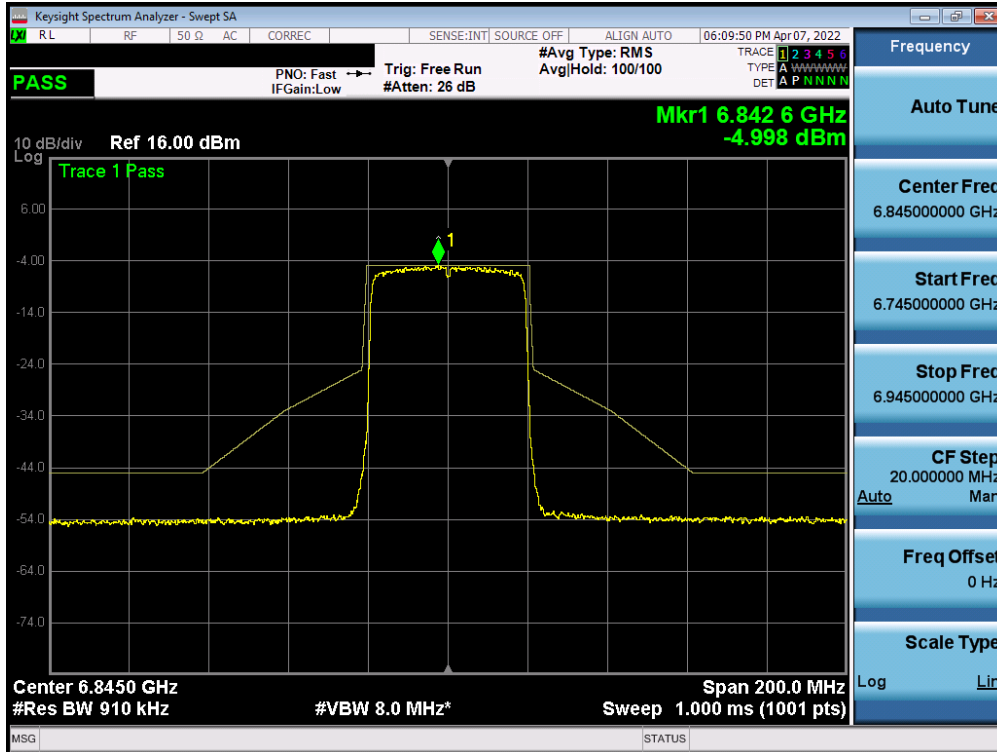


Plot 7-241. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 7) – Ch. 123)

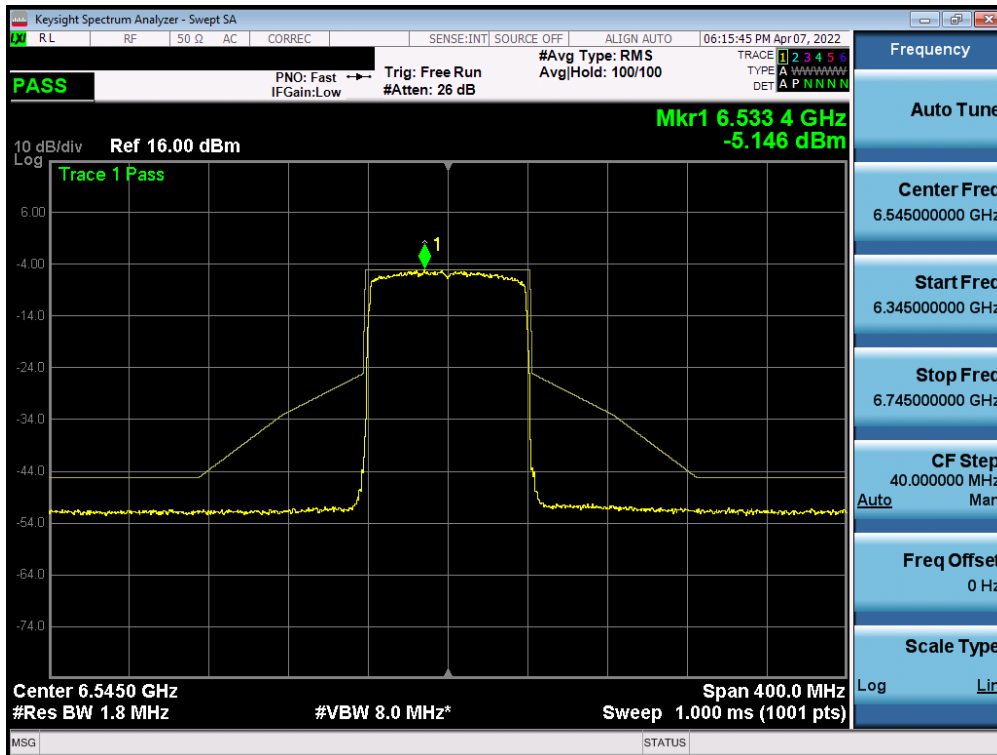


Plot 7-242. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 7) – Ch. 155)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 150 of 237



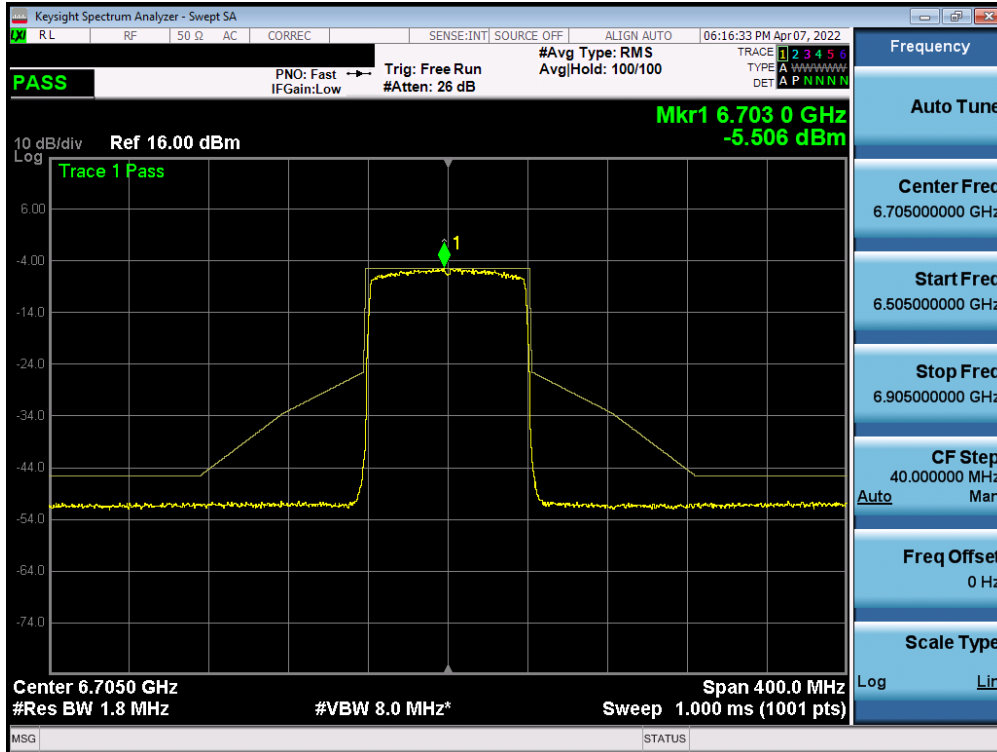
Plot 7-243. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 7) – Ch. 179)



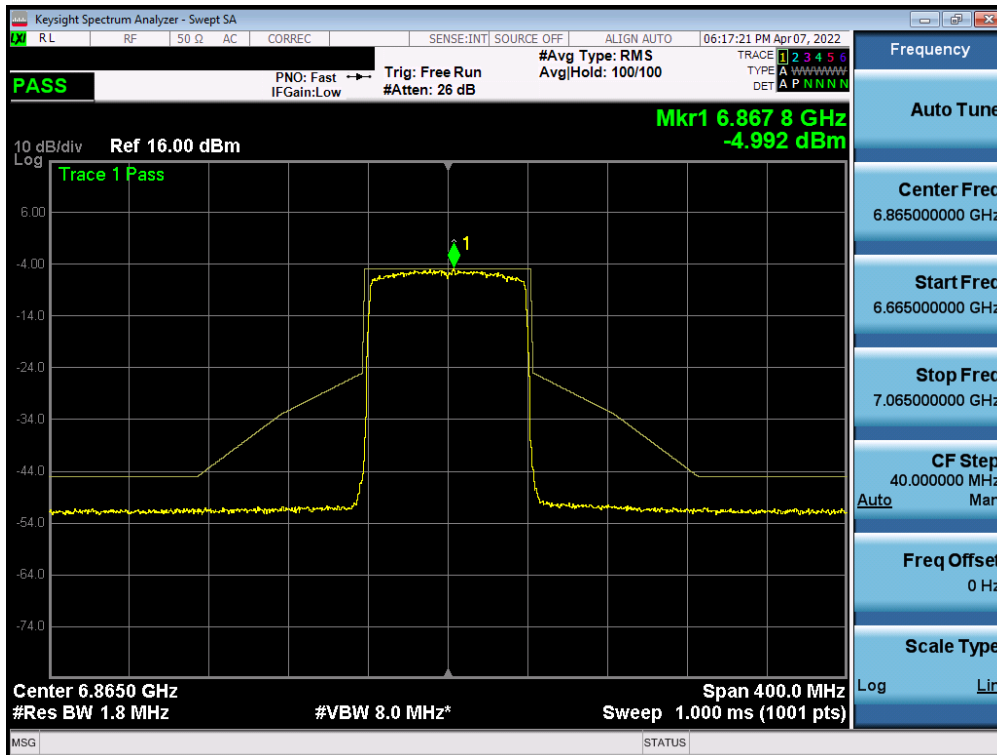
Plot 7-244. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 7) – Ch. 119)

FCC ID: A3LSMF936JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset		Page 151 of 237



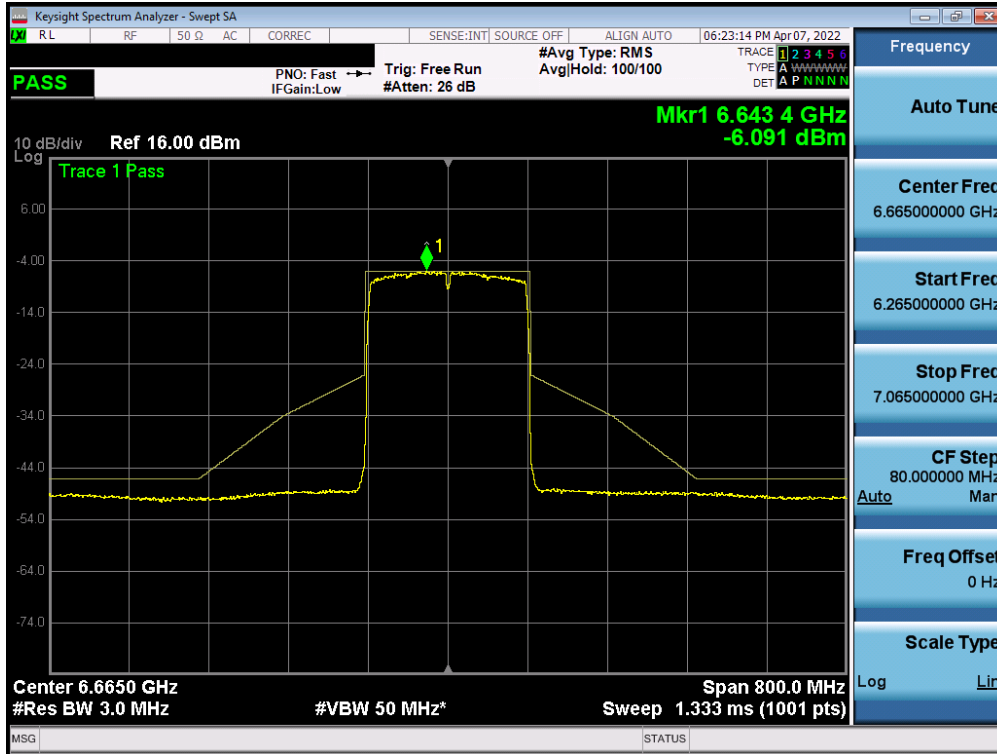


Plot 7-245. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 7) – Ch. 151)

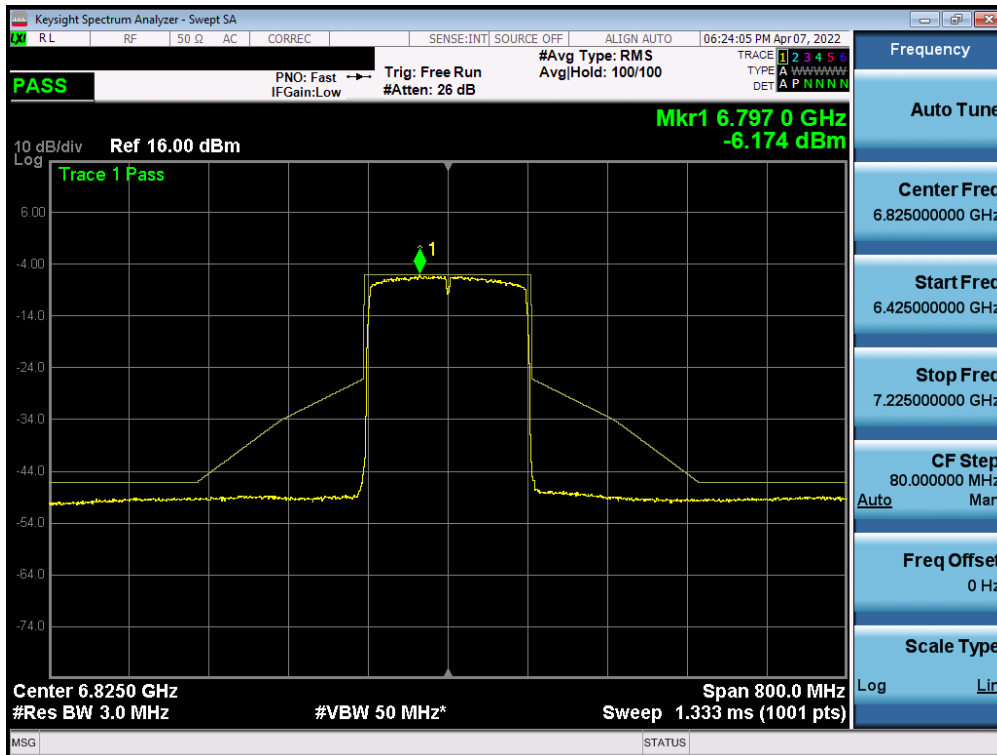


Plot 7-246. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 7) – Ch. 183)

FCC ID: A3LSMF936JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset		Page 152 of 237



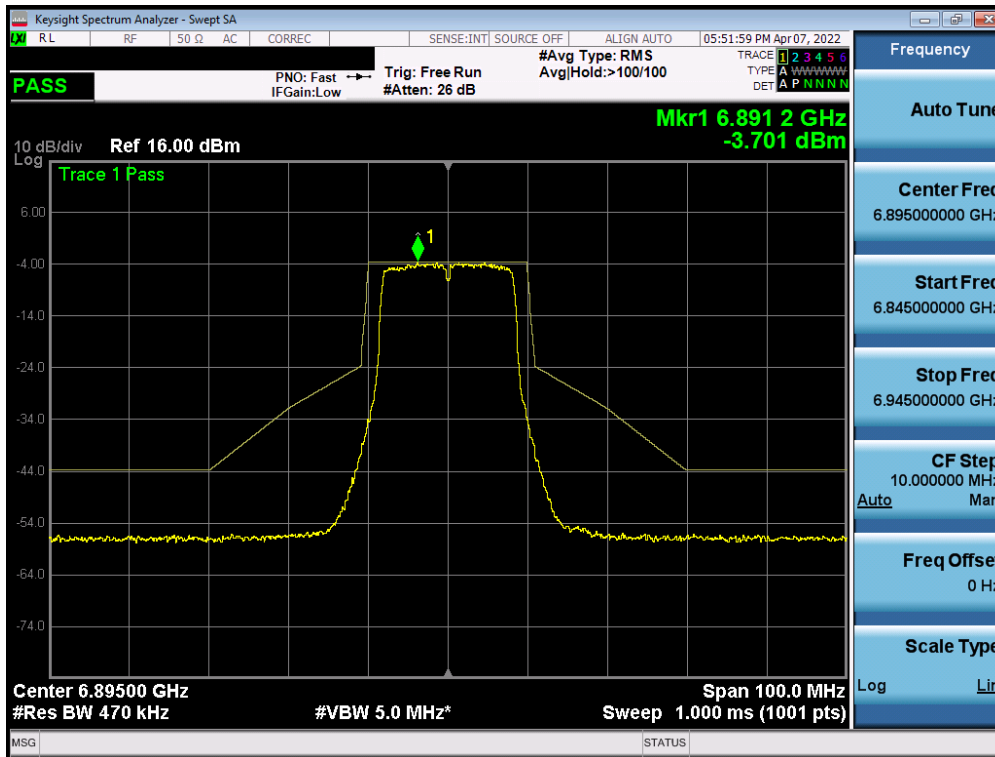
Plot 7-247. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11ax (UNII Band 7) – Ch. 143)



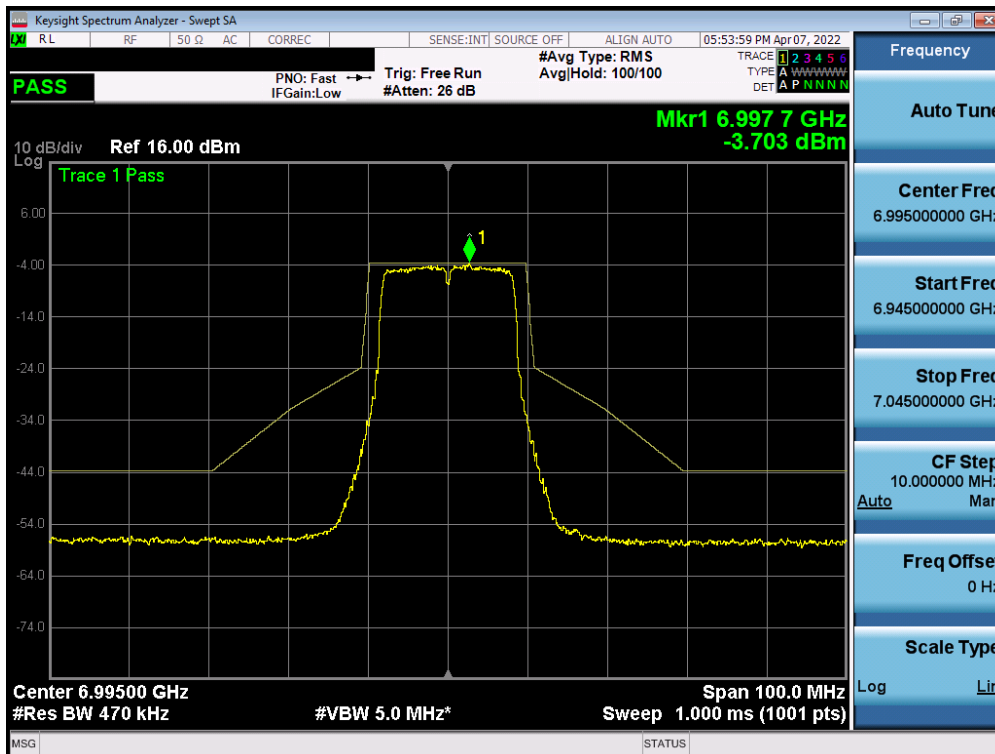
Plot 7-248. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11ax (UNII Band 7) – Ch. 175)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 153 of 237

## MIMO Antenna-1 In-Band Emission Plot Measurement - (UNII Band 8)

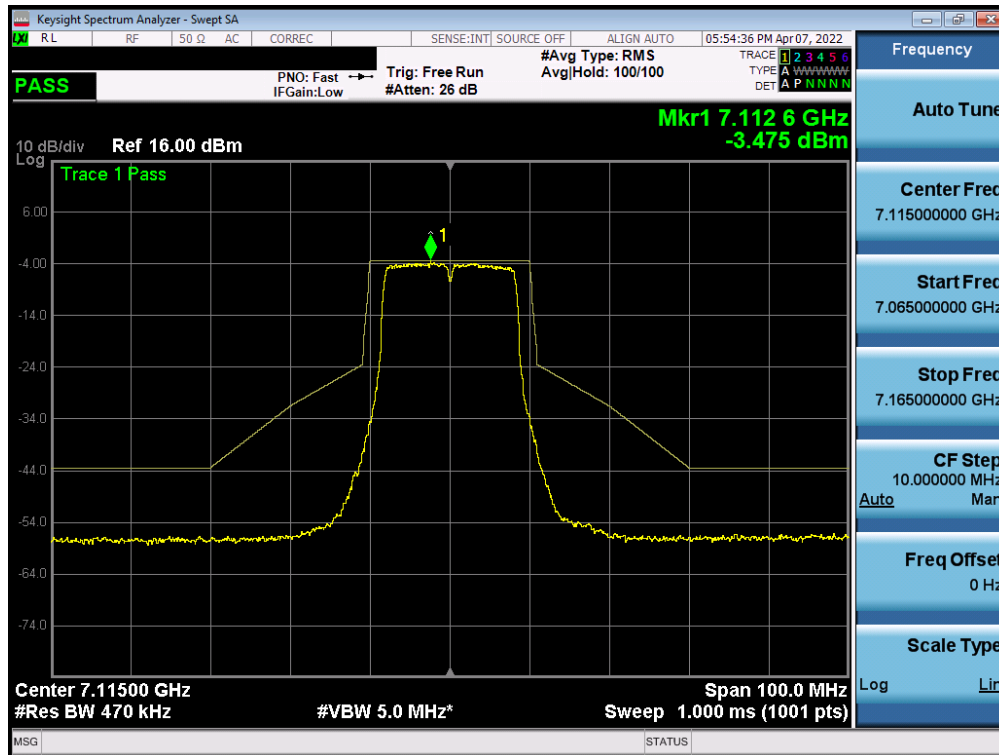


Plot 7-249. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 8) – Ch. 189)

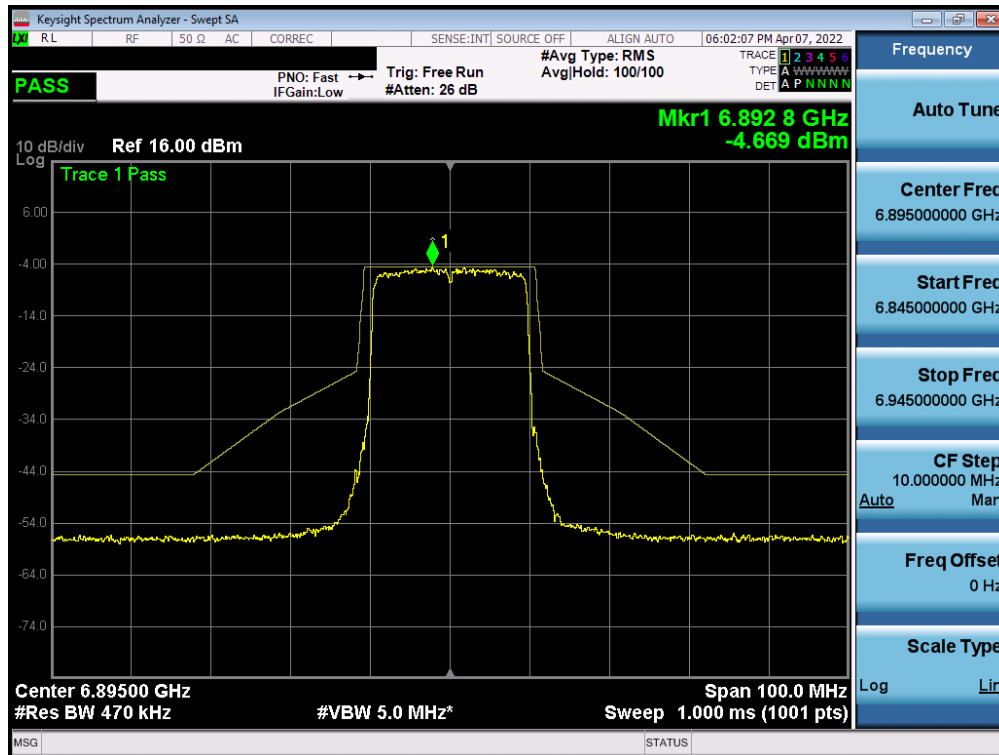


Plot 7-250. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 8) – Ch. 209)

MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
FCC ID: A3LSMF936JPN	Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	Page 154 of 237
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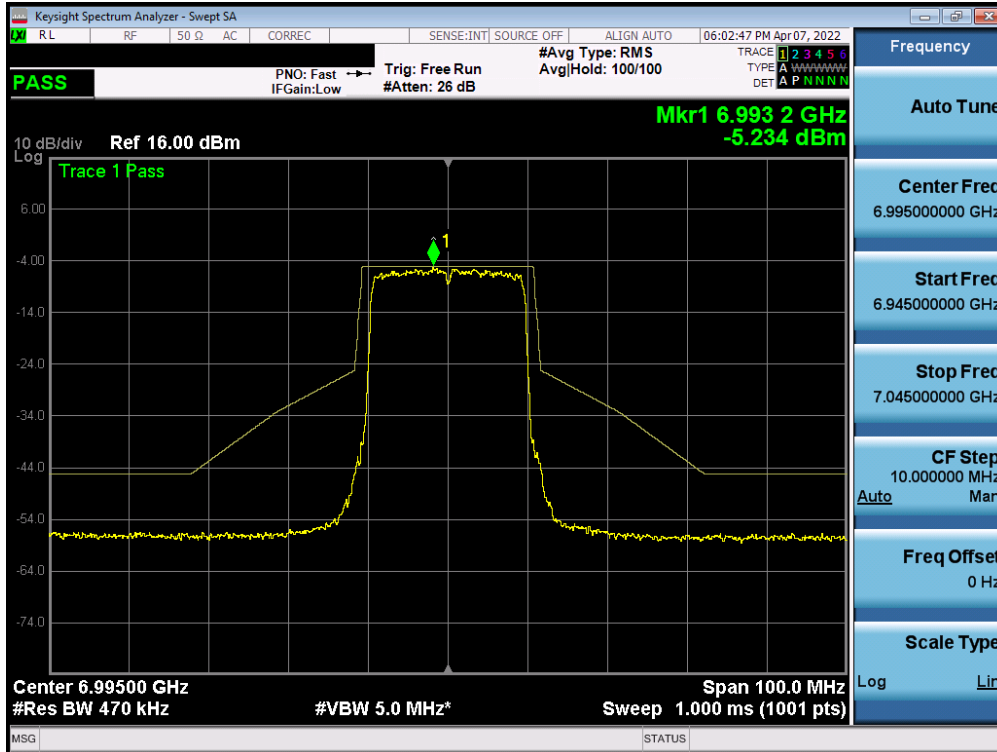


Plot 7-251. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11a (UNII Band 8) – Ch. 233)

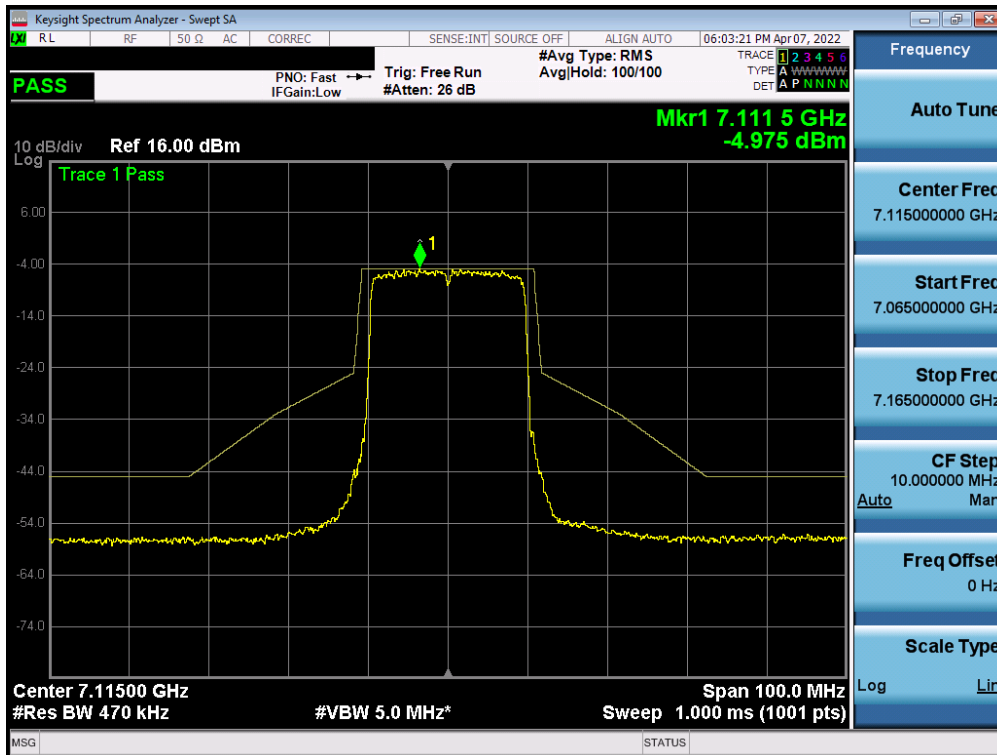


Plot 7-252. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 8) – Ch. 189)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 155 of 237

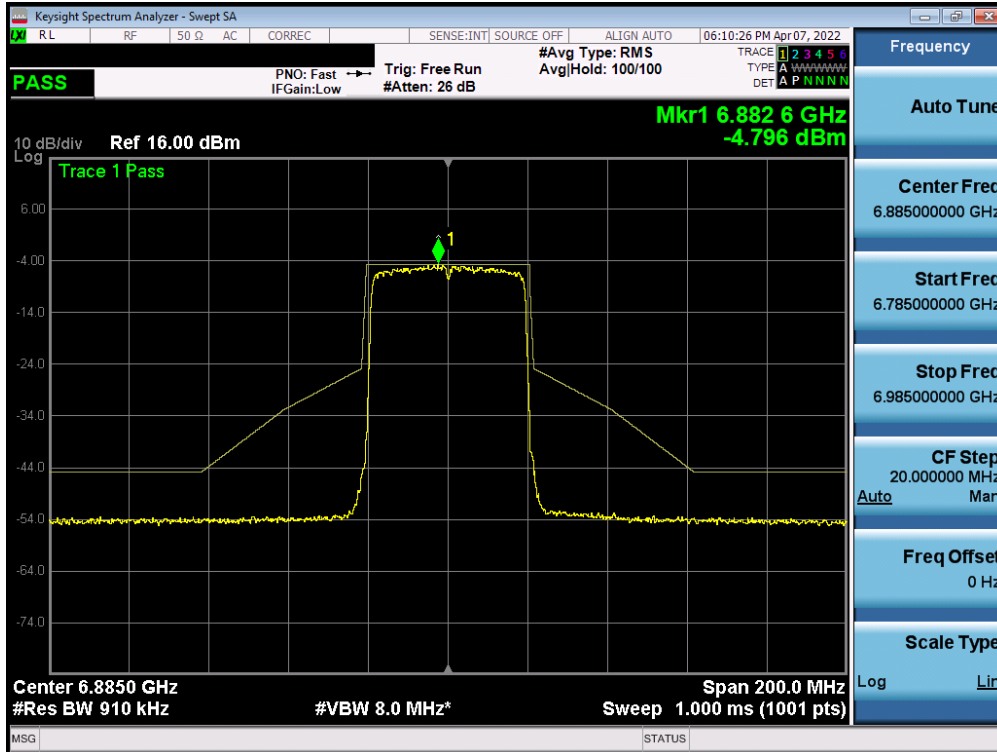


Plot 7-253. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 8) – Ch. 209)

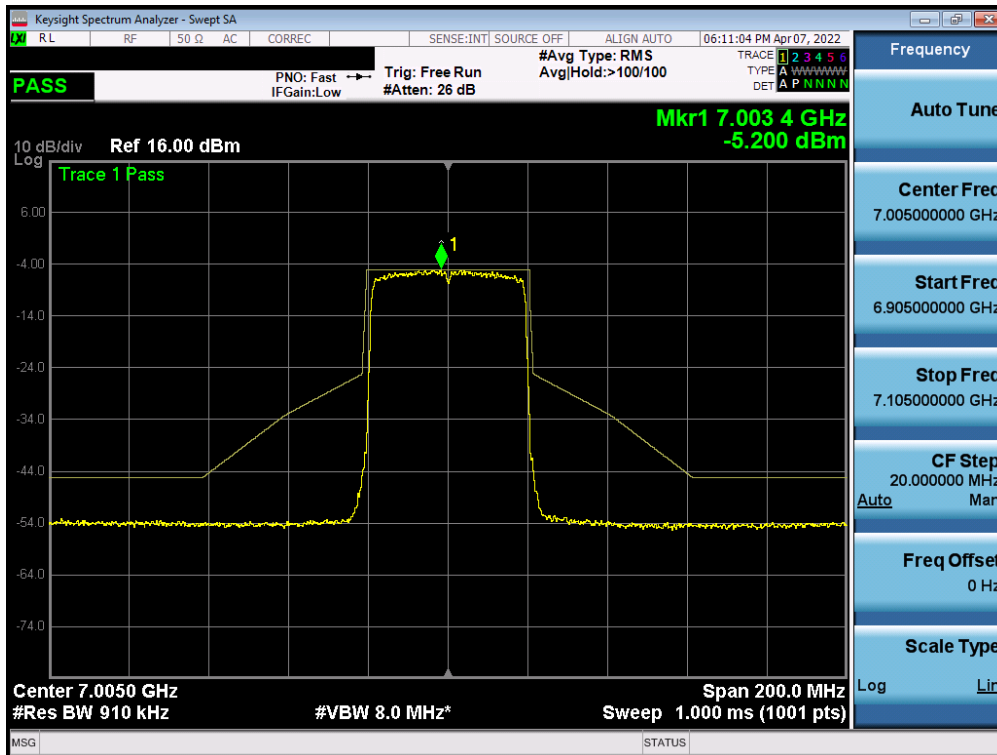


Plot 7-254. In-Band Emission Plot Measurement MIMO ANT1 (20MHz 802.11ax (UNII Band 8) – Ch. 233)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 156 of 237

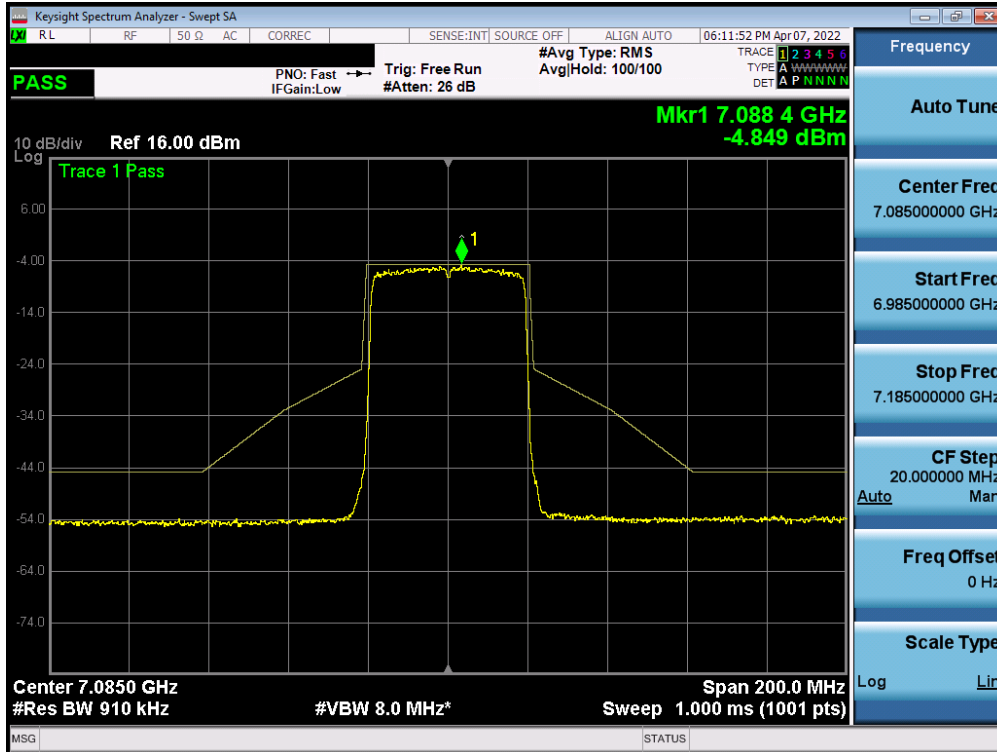


Plot 7-255. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 8) – Ch. 187)

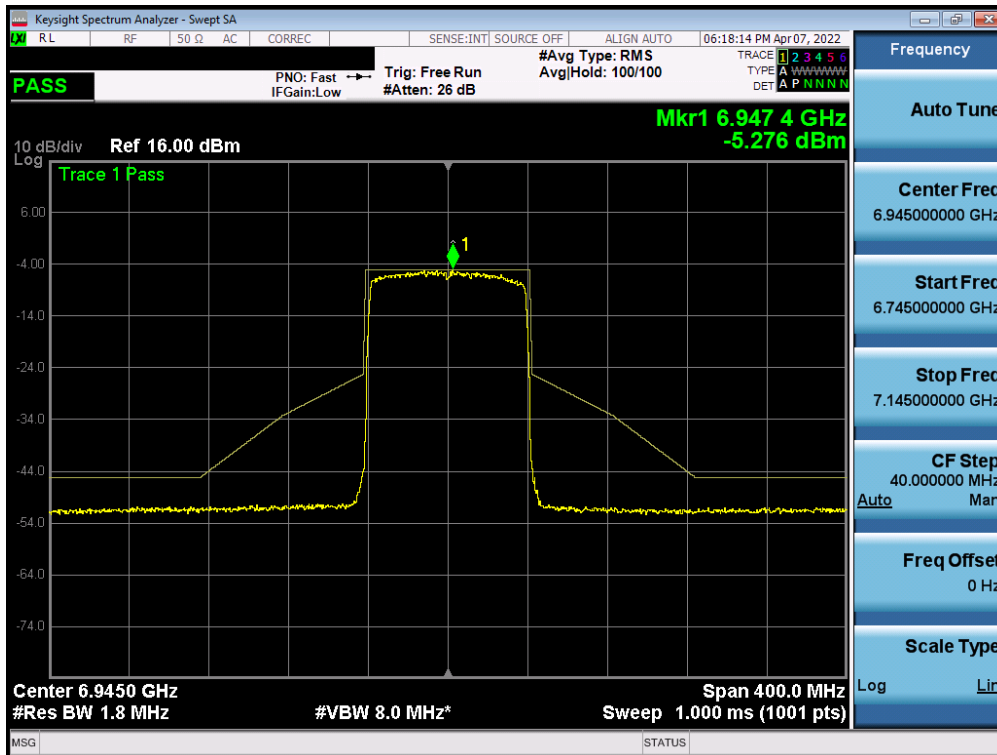


Plot 7-256. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 8) – Ch. 211)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 157 of 237



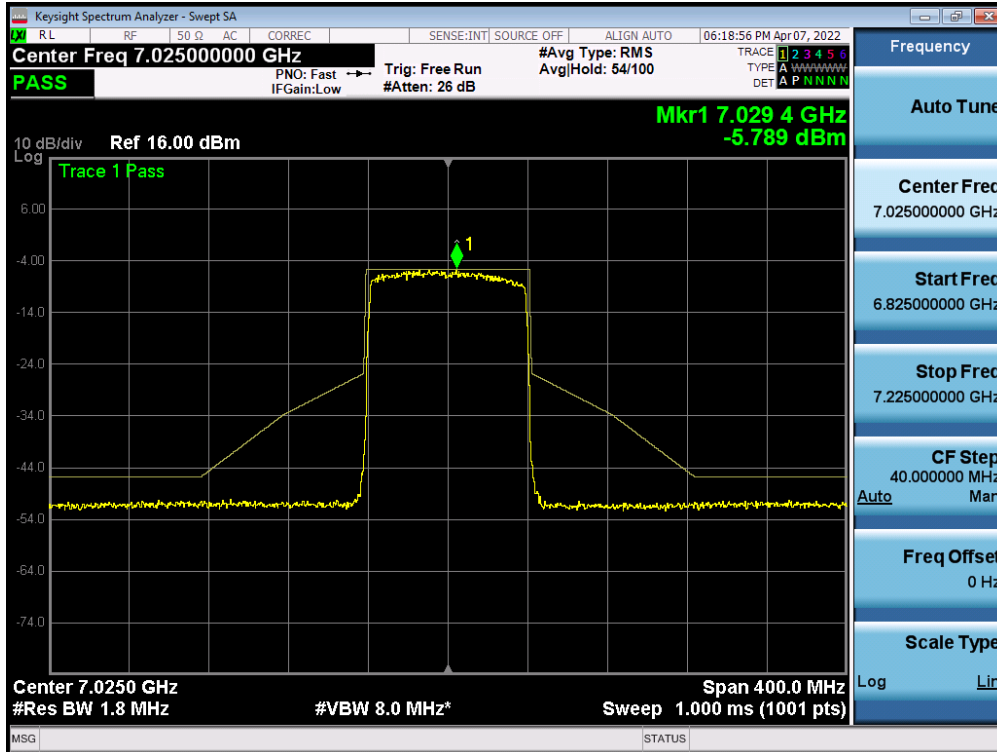
Plot 7-257. In-Band Emission Plot Measurement MIMO ANT1 (40MHz 802.11ax (UNII Band 8) – Ch. 227)



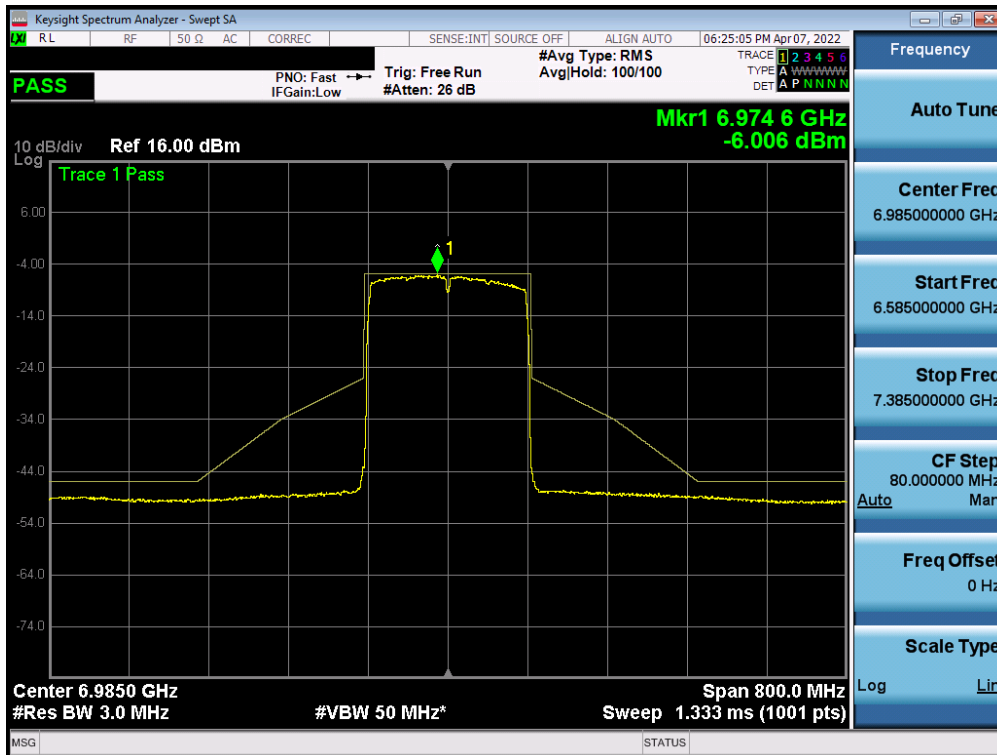
Plot 7-258. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 8) – Ch. 199)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 158 of 237





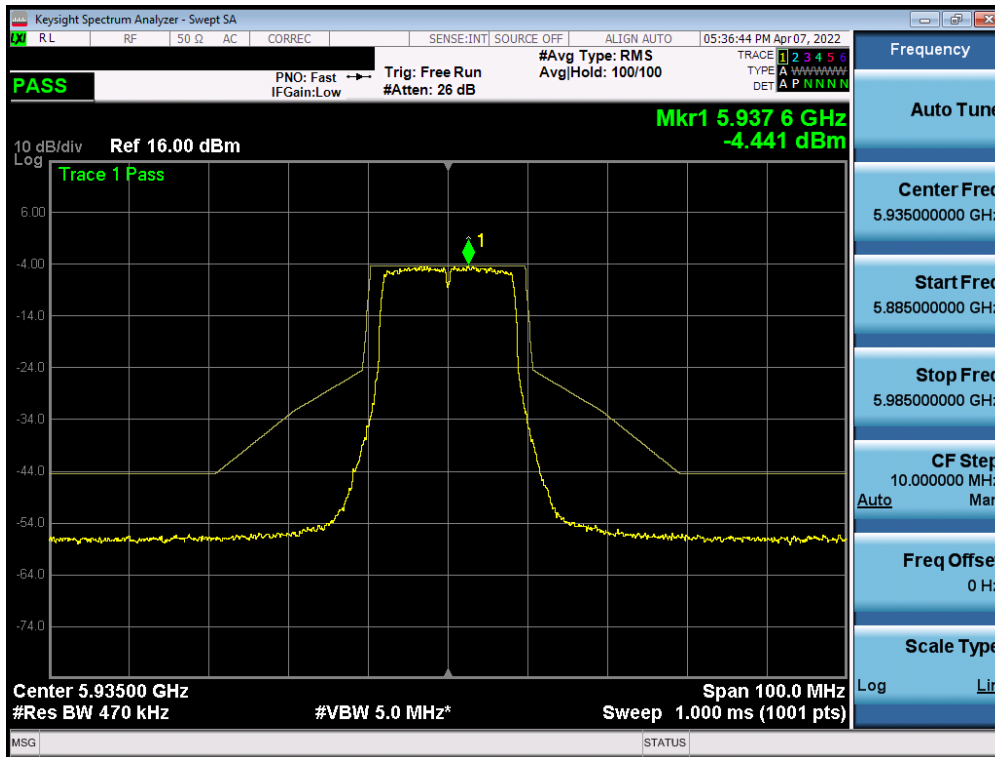
Plot 7-259. In-Band Emission Plot Measurement MIMO ANT1 (80MHz 802.11ax (UNII Band 8) – Ch. 215)



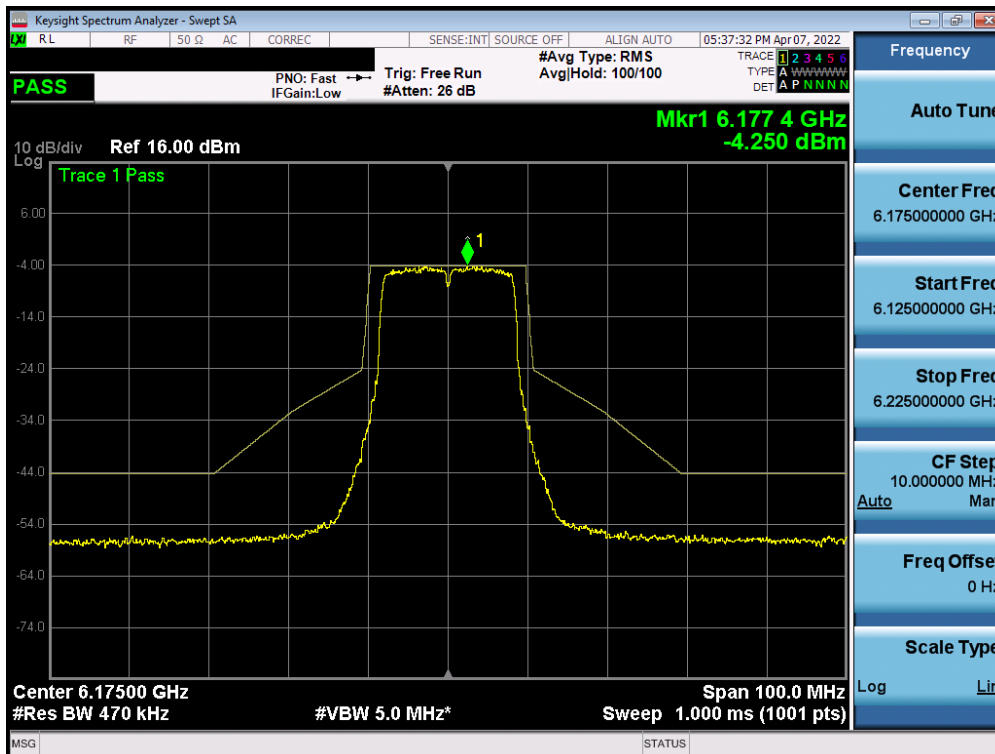
Plot 7-260. In-Band Emission Plot Measurement MIMO ANT1 (160MHz 802.11ax (UNII Band 8) – Ch. 207)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 159 of 237

## MIMO Antenna-2 In-Band Emission Plot Measurement - (UNII Band 5)

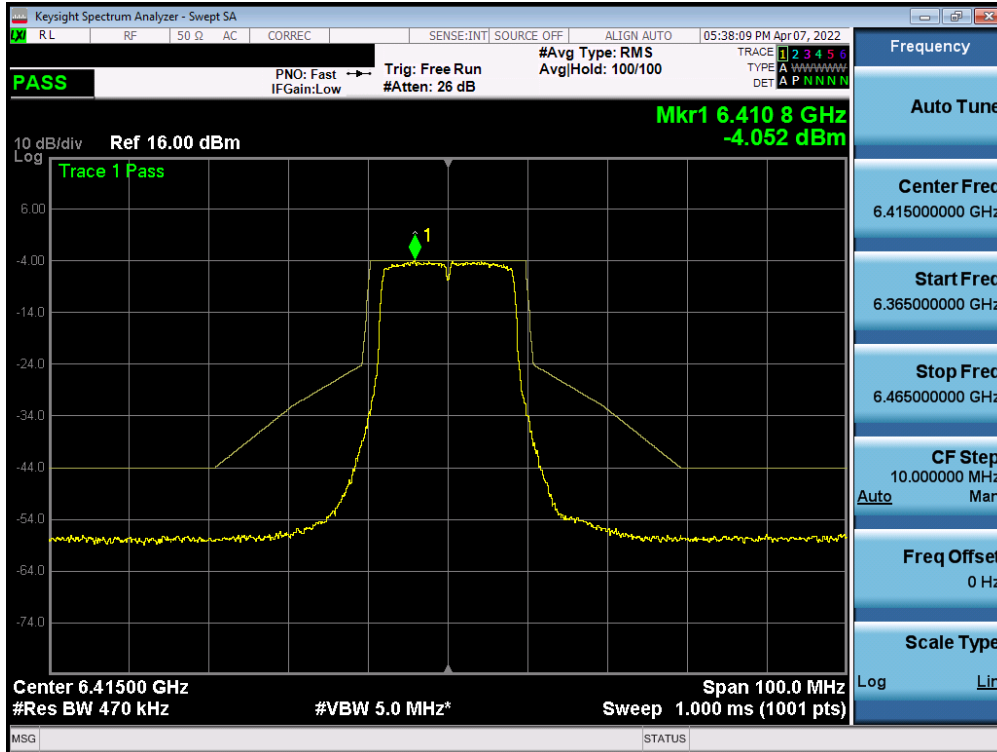


Plot 7-261. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 5) – Ch. 2)

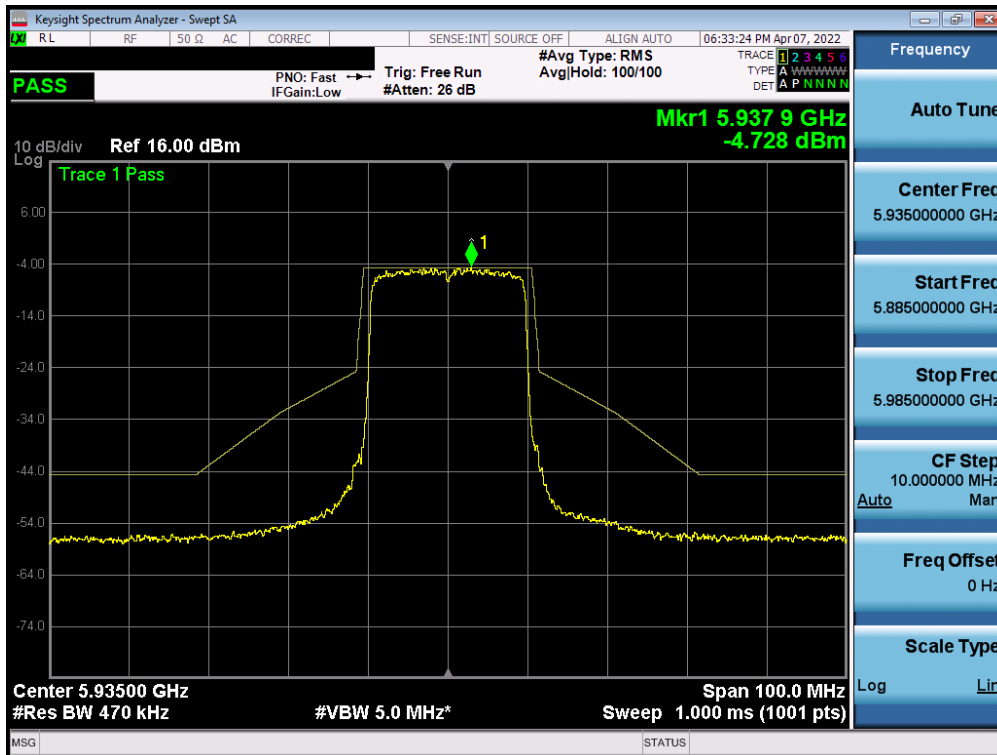


Plot 7-262. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 5) – Ch. 45)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 160 of 237

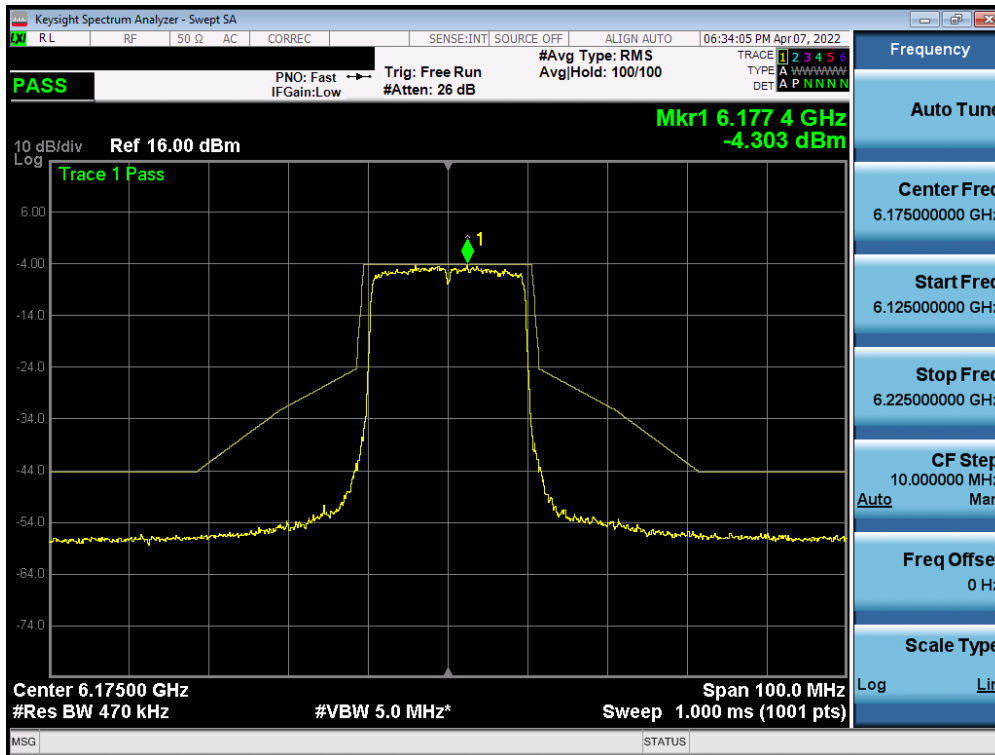


Plot 7-263. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 5) – Ch. 93)

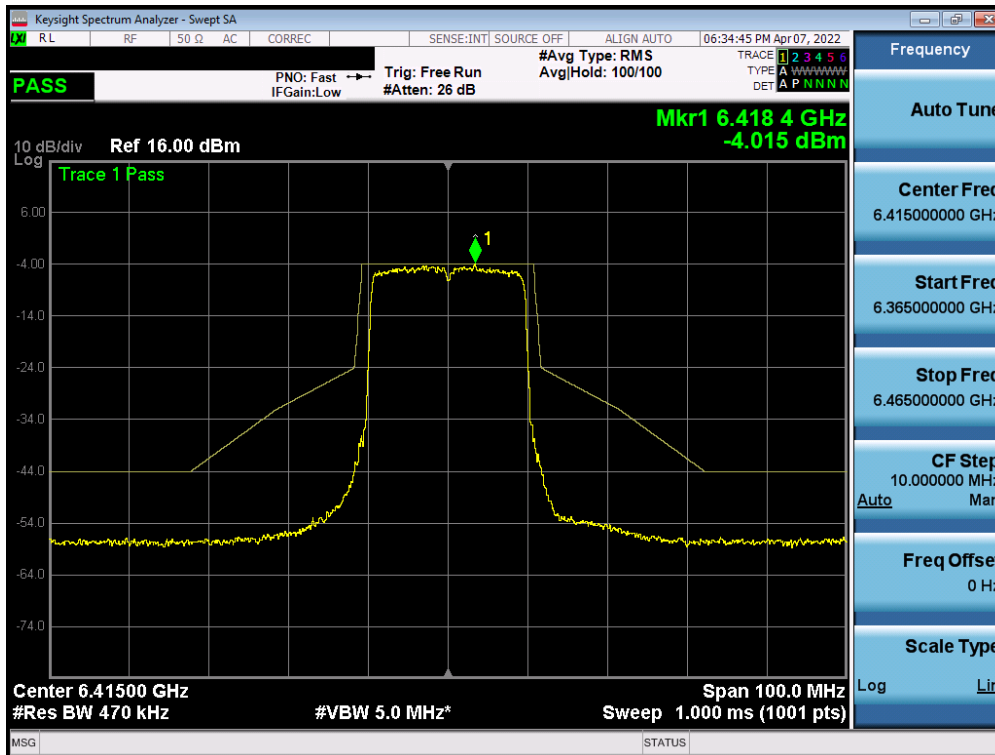


Plot 7-264. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 5) – Ch. 1)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 161 of 237

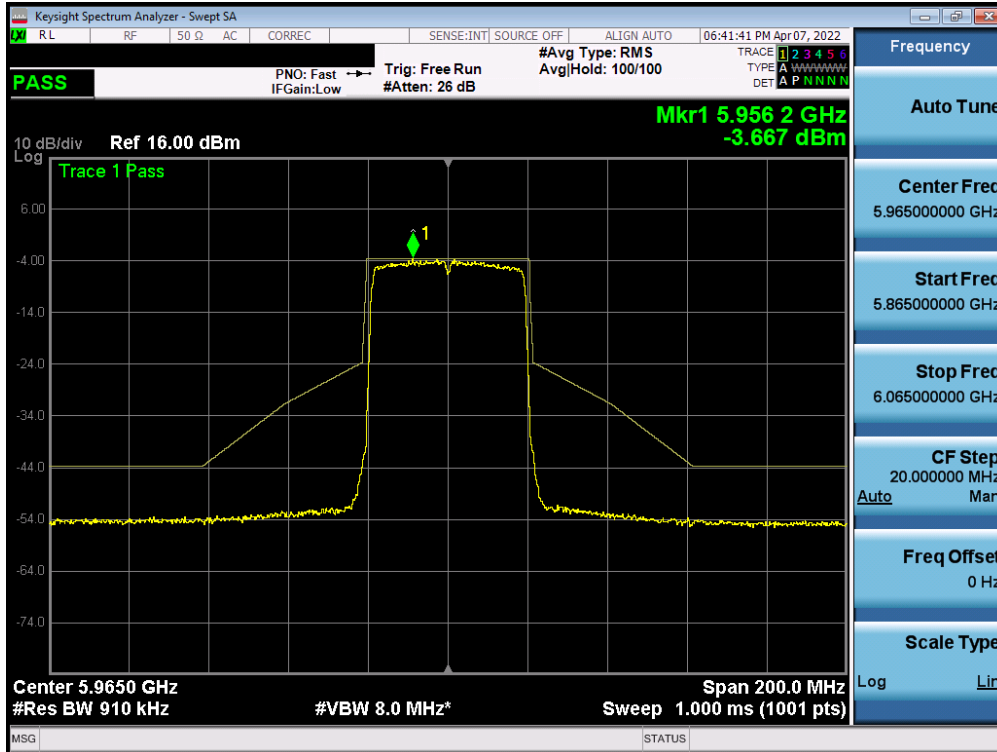


Plot 7-265. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 5) – Ch. 45)

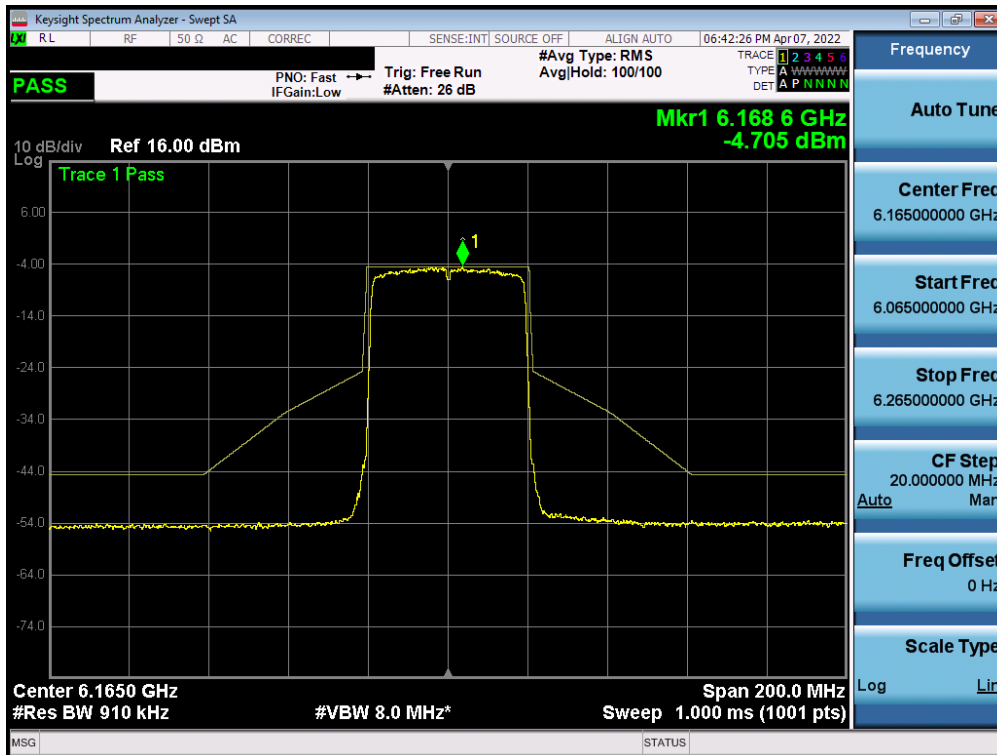


Plot 7-266. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 5) – Ch. 93)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 162 of 237

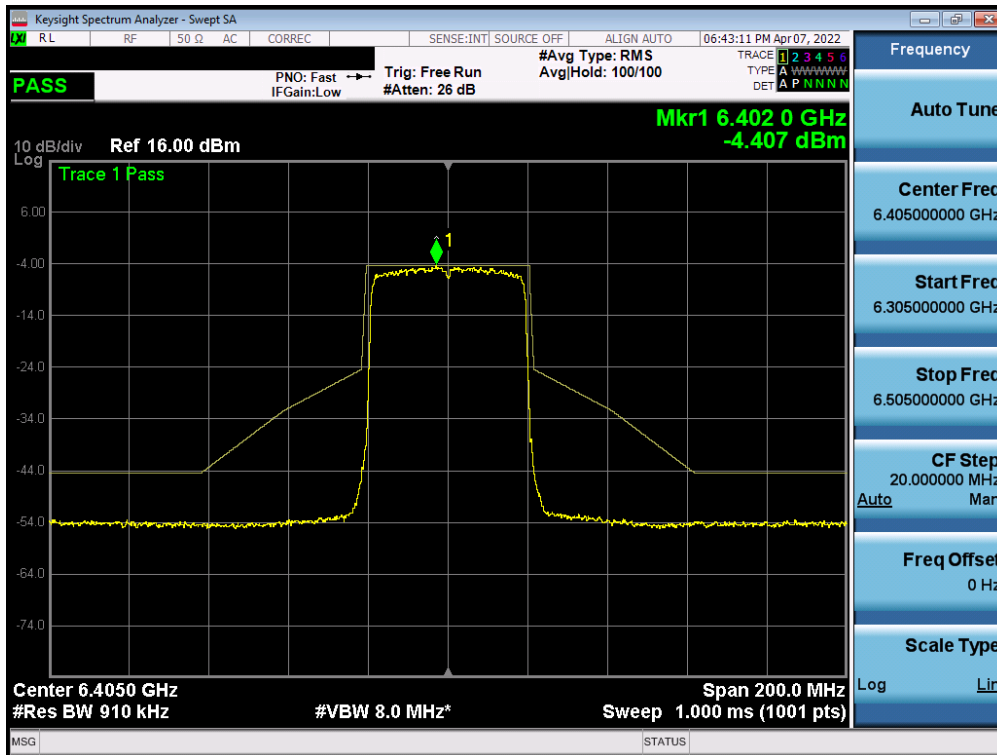


Plot 7-267. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 5) – Ch. 3)

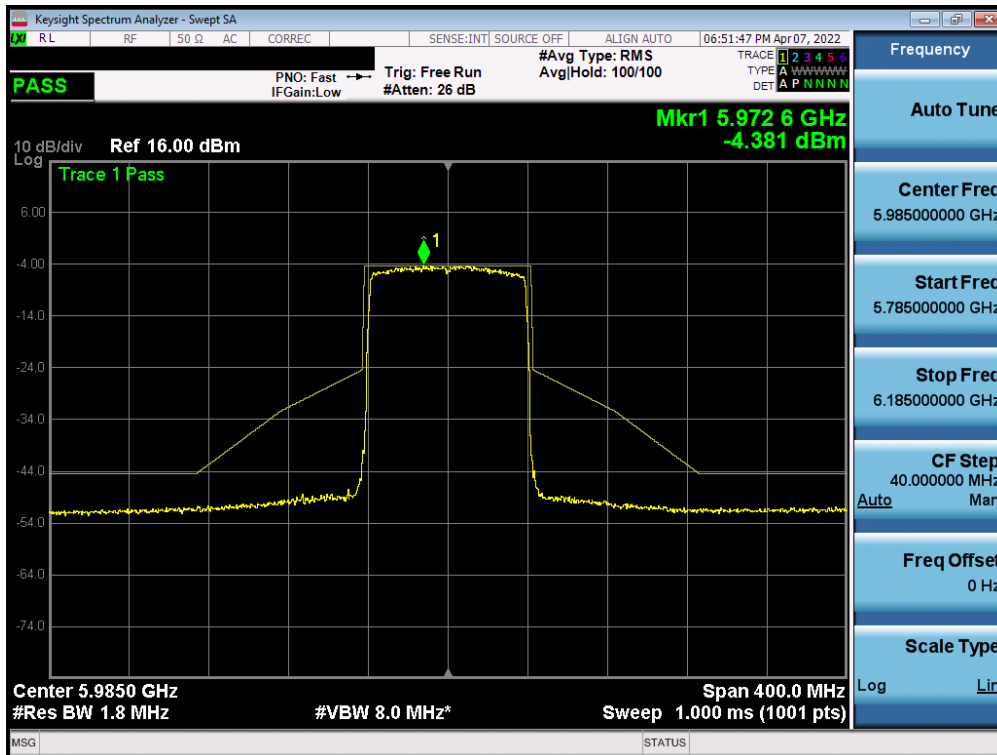


Plot 7-268. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 5) – Ch. 43)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 163 of 237

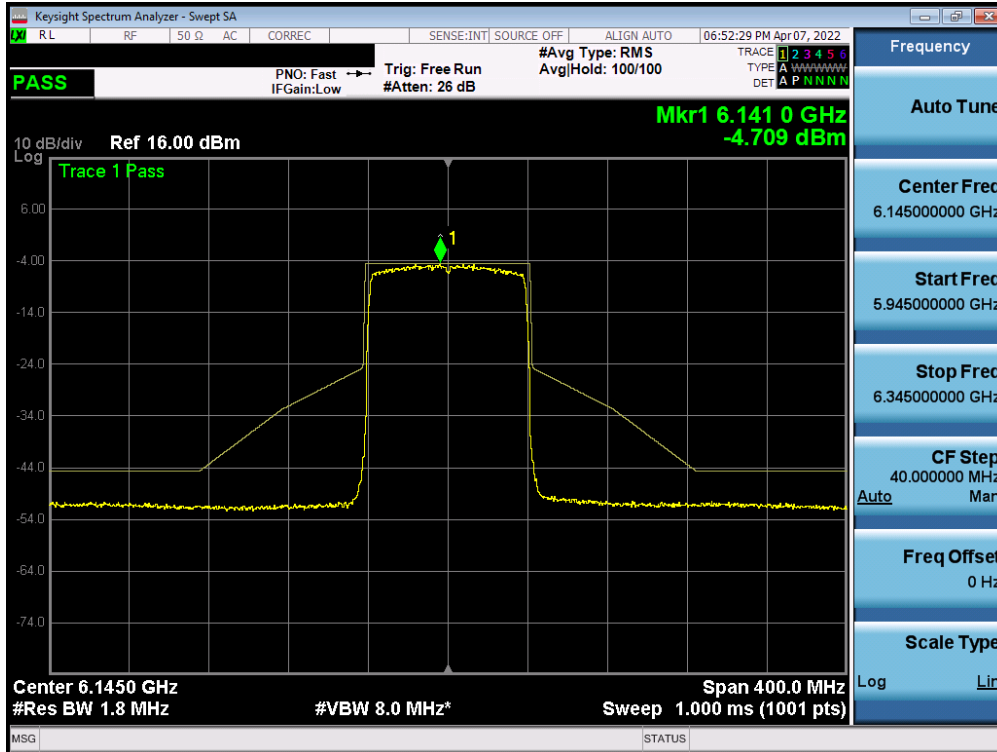


Plot 7-269. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 5) – Ch. 91)

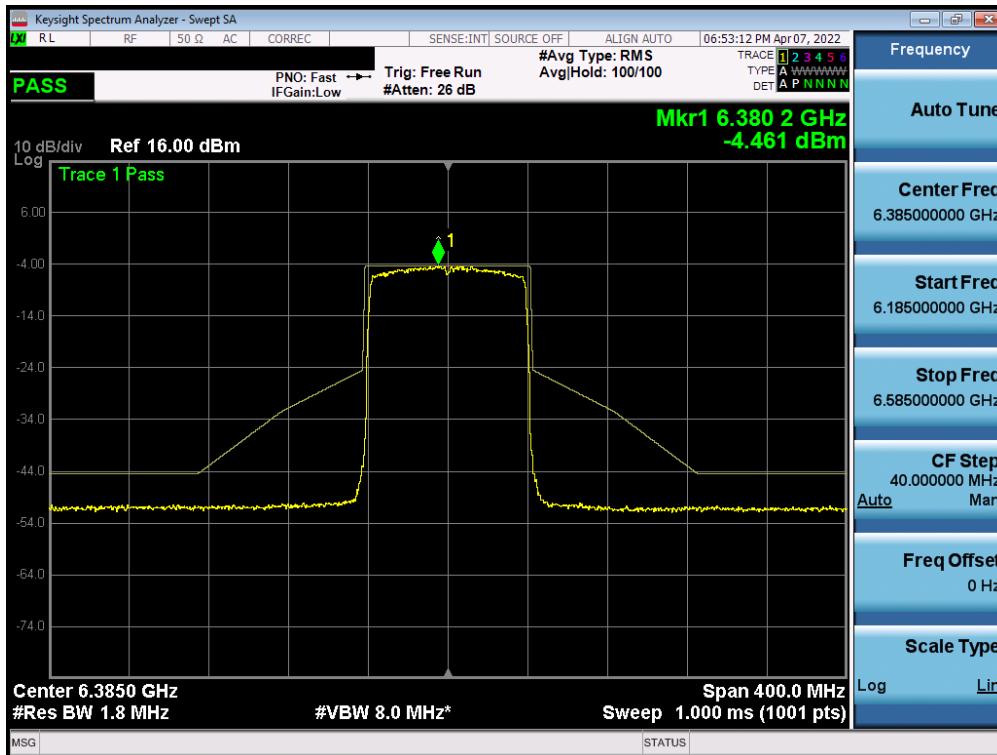


Plot 7-270. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 5) – Ch. 7)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 164 of 237



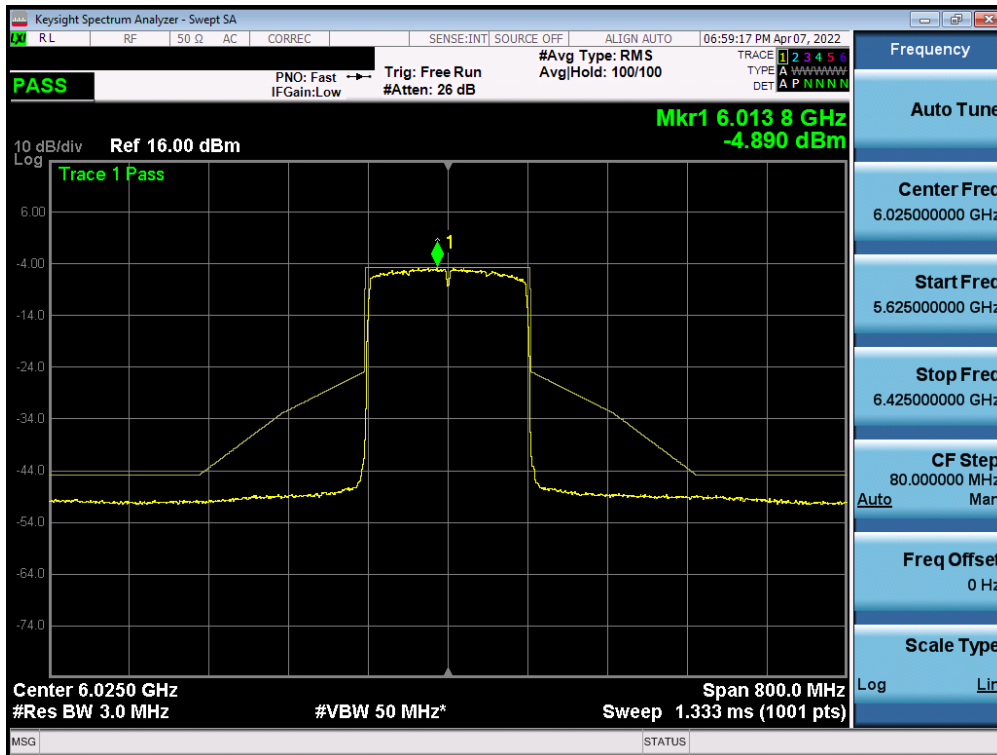
Plot 7-271. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 5) – Ch. 39)



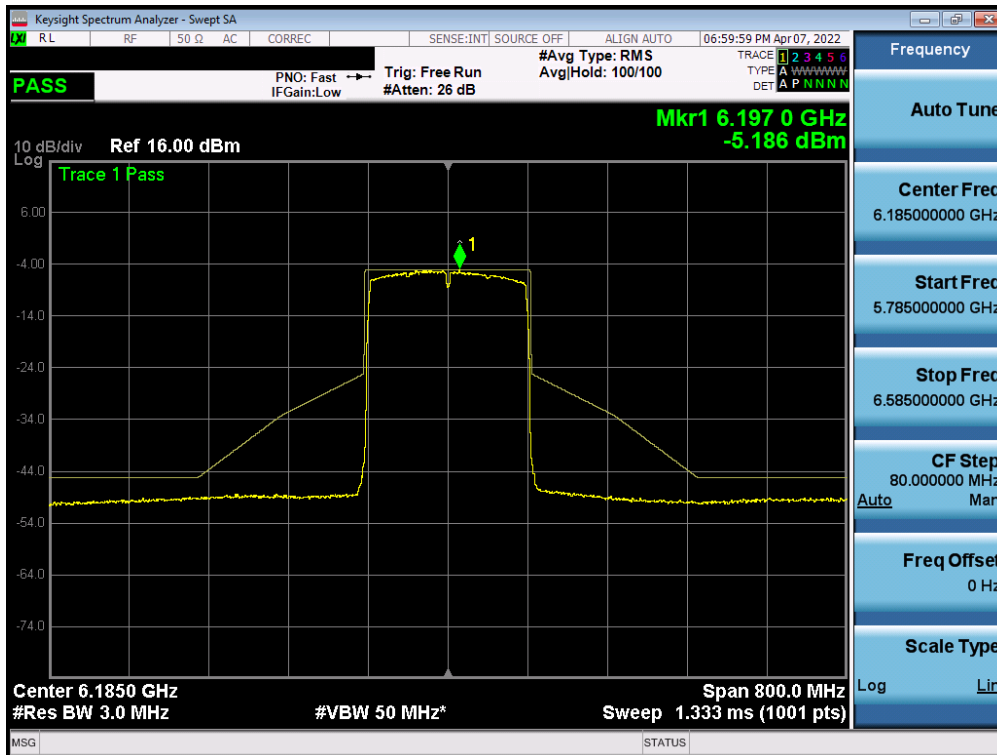
Plot 7-272. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 5) – Ch. 87)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 165 of 237



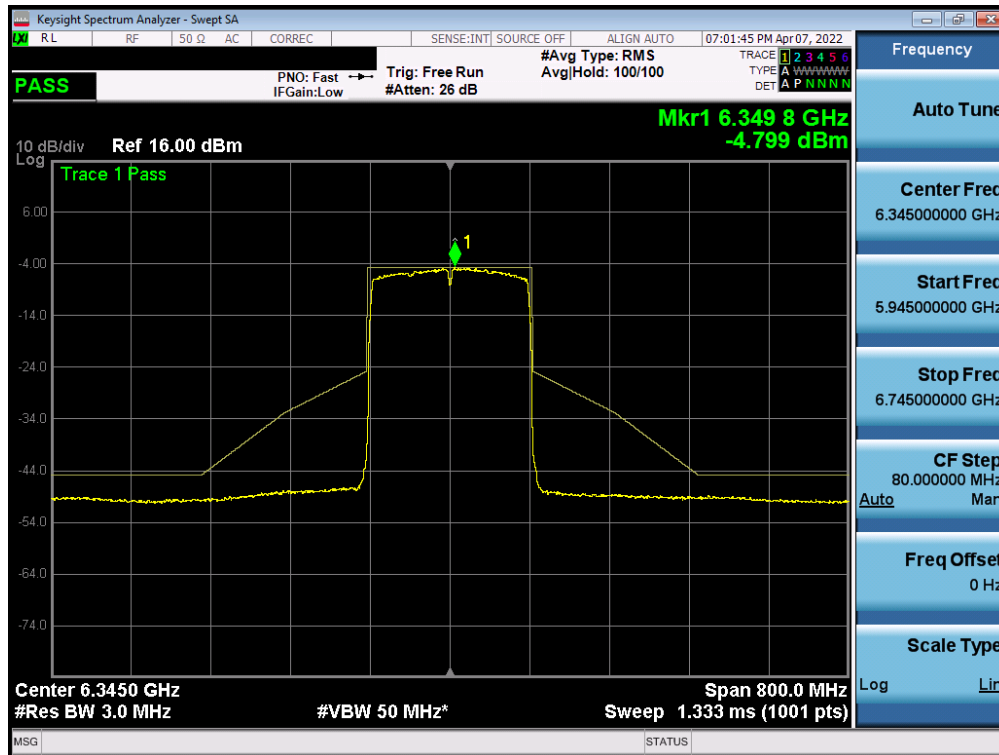


Plot 7-273. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 5) – Ch. 15)



Plot 7-274. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 5) – Ch. 47)

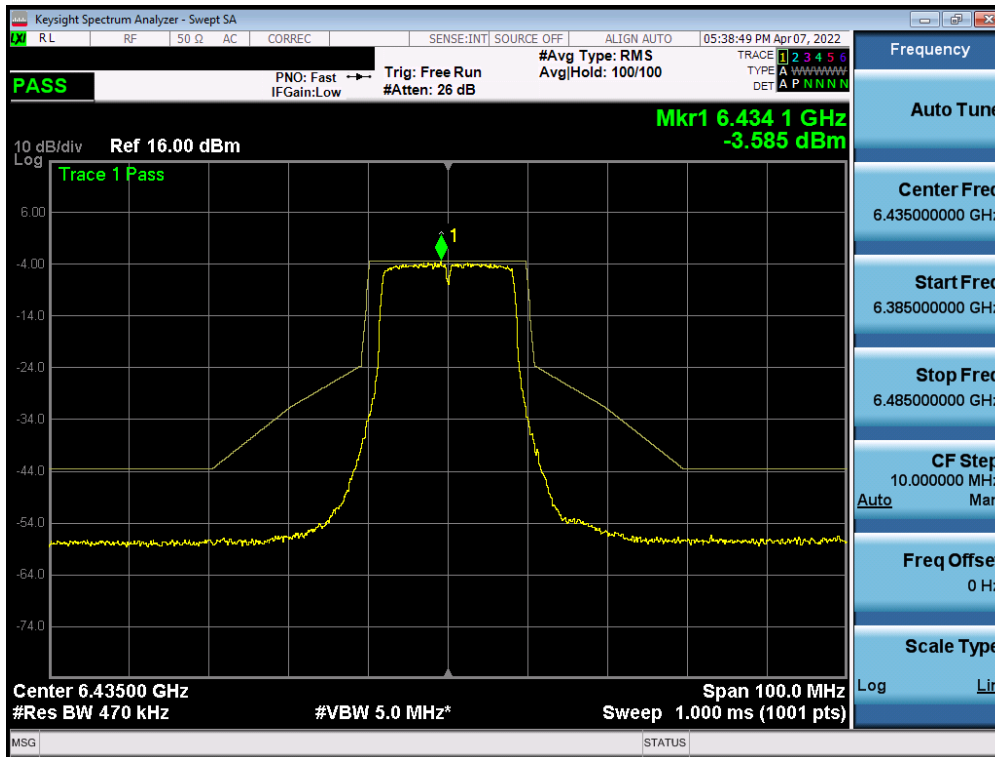
FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 166 of 237



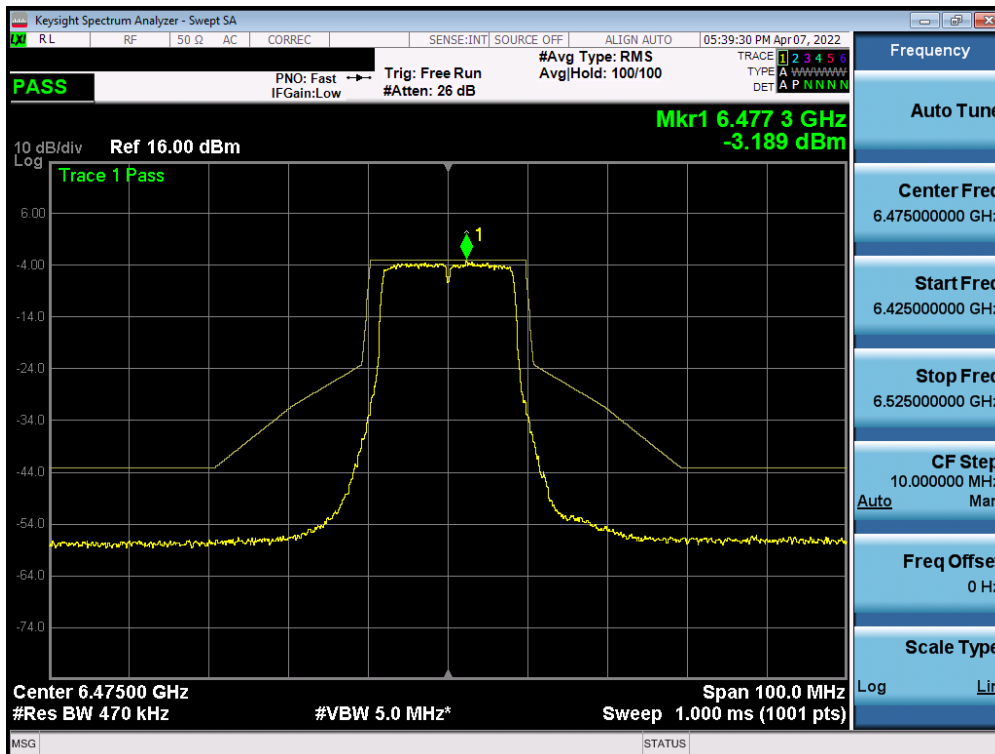
Plot 7-275. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 5) – Ch. 79)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 167 of 237

## MIMO Antenna-2 In-Band Emission Plot Measurement - (UNII Band 6)

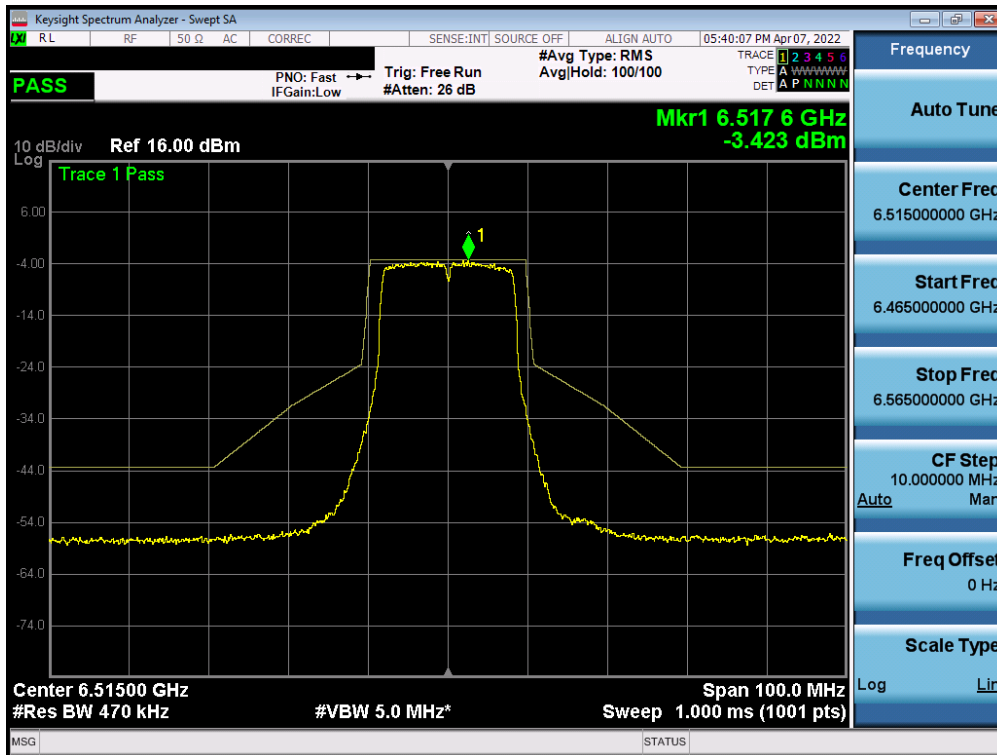


Plot 7-276. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 6) – Ch. 97)

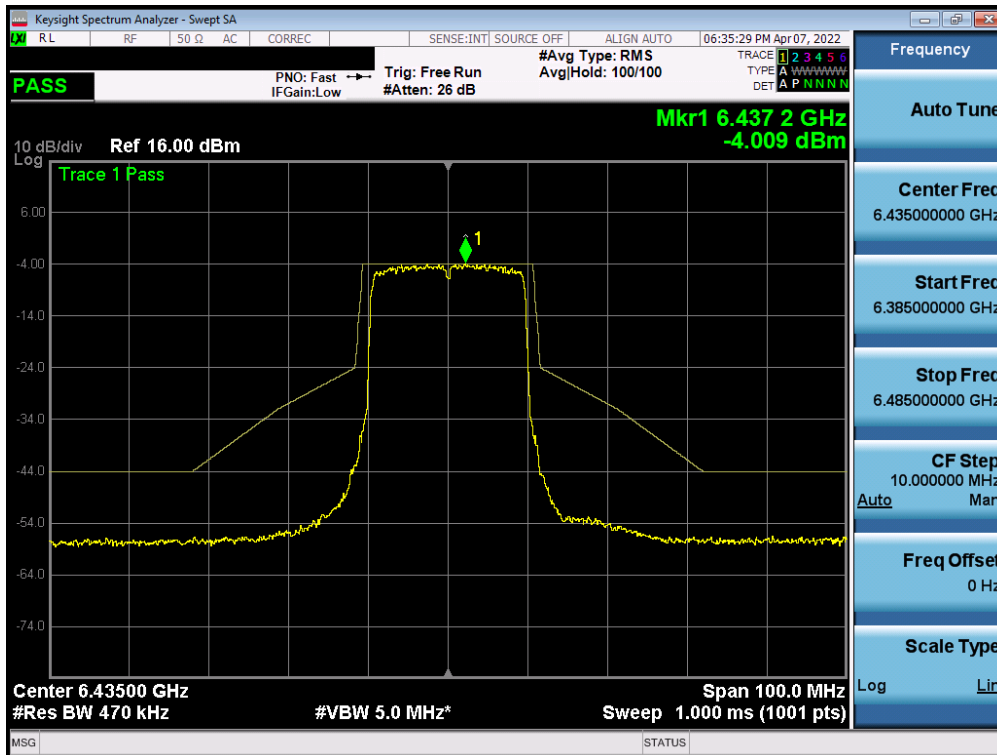


Plot 7-277. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 6) – Ch. 105)

MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
FCC ID: A3LSMF936JPN	Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	Page 168 of 237
EUT Type: Portable Handset			

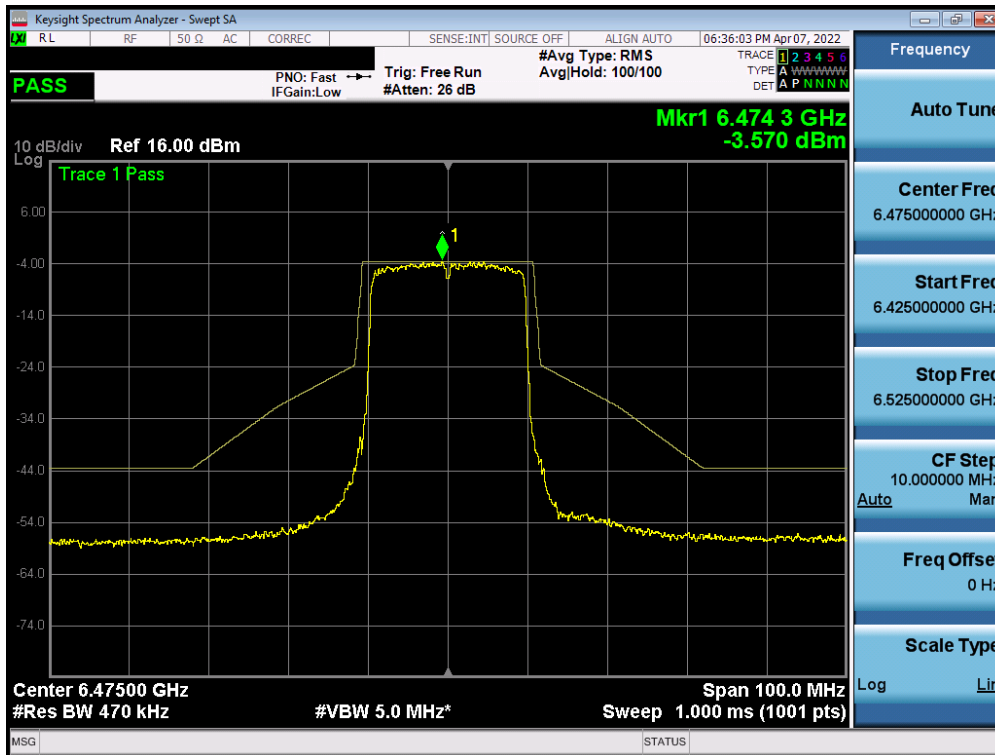


Plot 7-278. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 6) – Ch. 113)

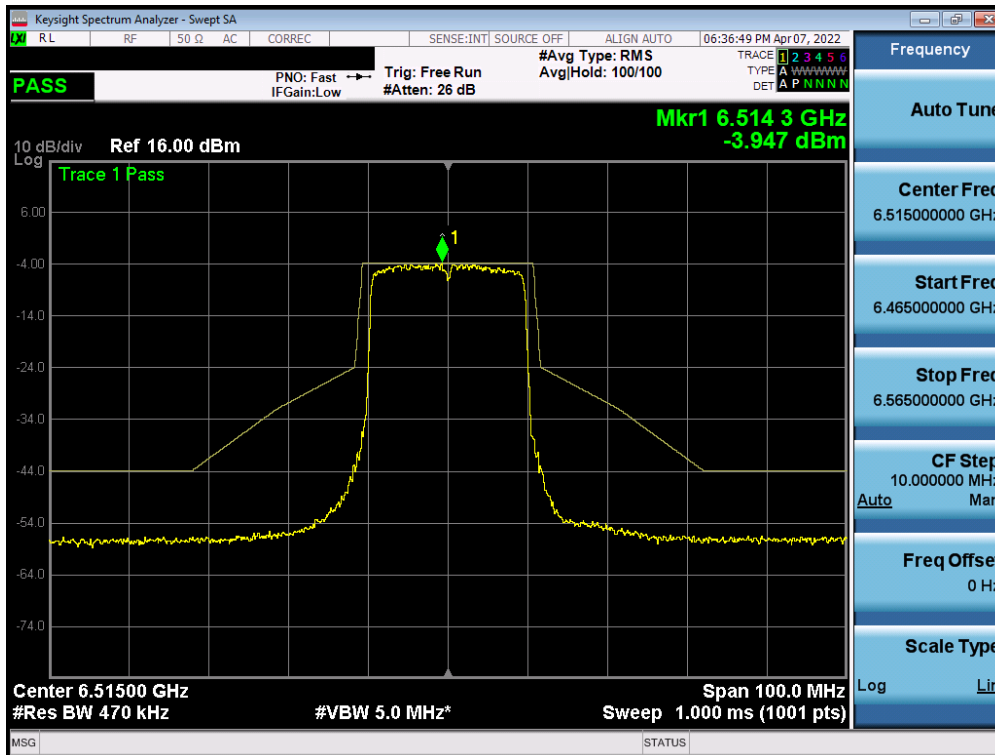


Plot 7-279. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 6) – Ch. 97)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 169 of 237

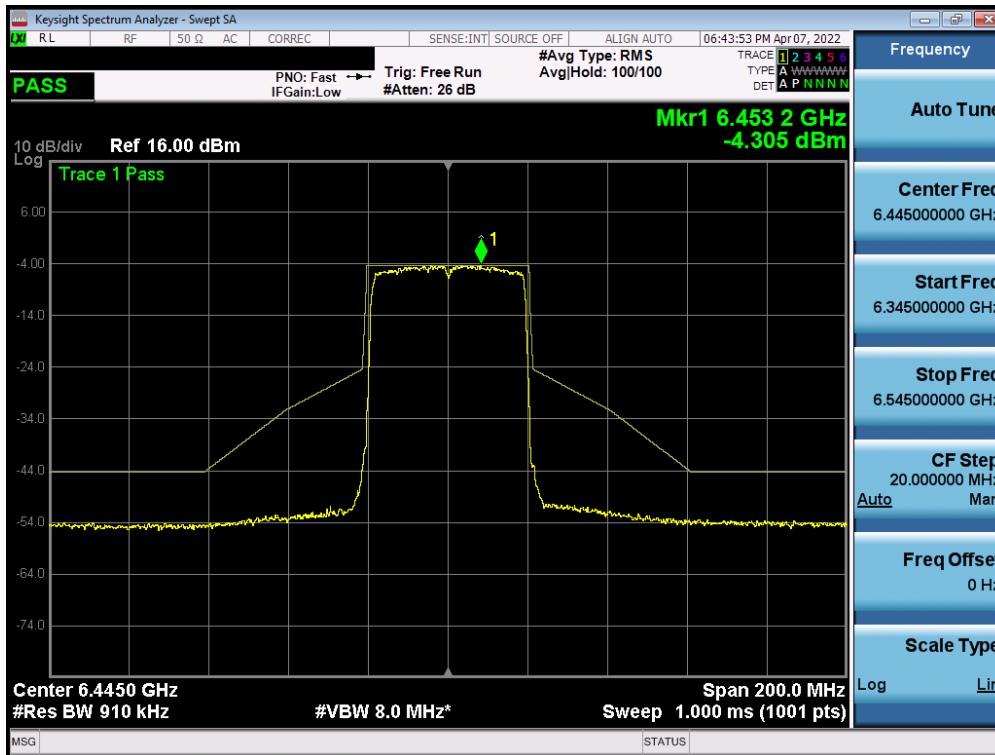


Plot 7-280. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 6) – Ch. 105)

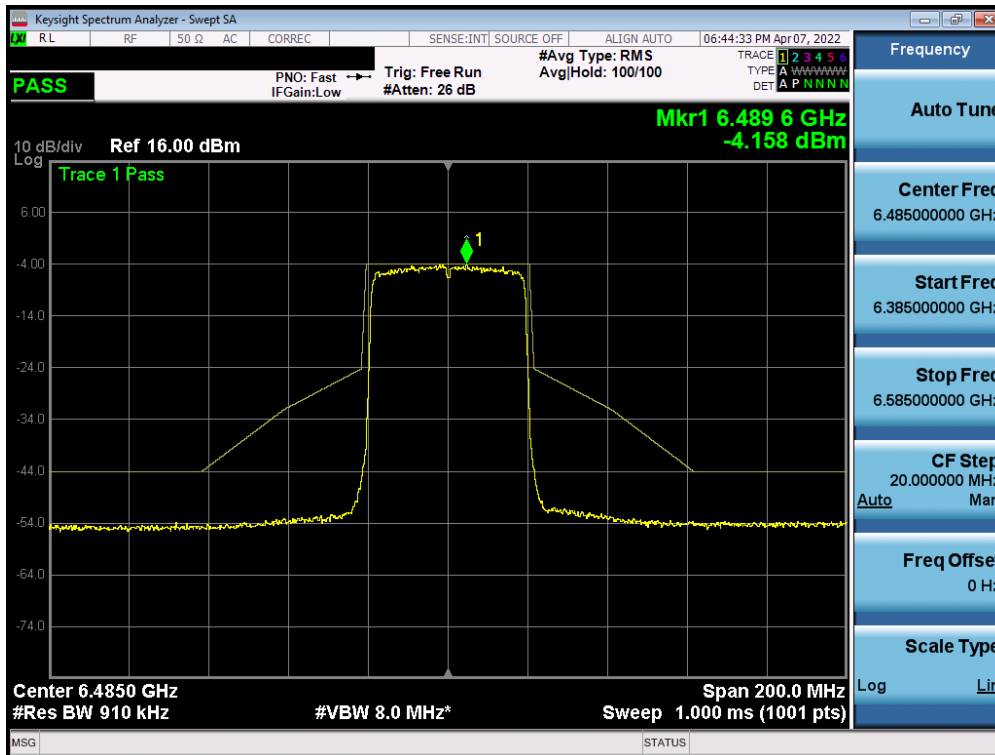


Plot 7-281. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 6) – Ch. 113)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 170 of 237

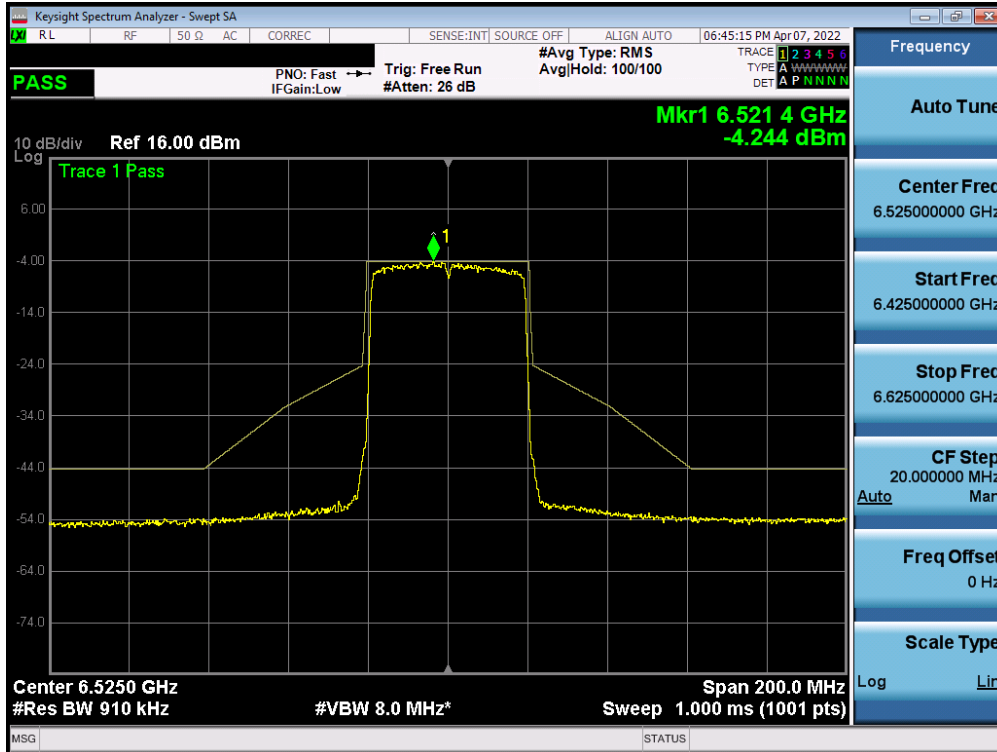


Plot 7-282. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 6) – Ch. 99)

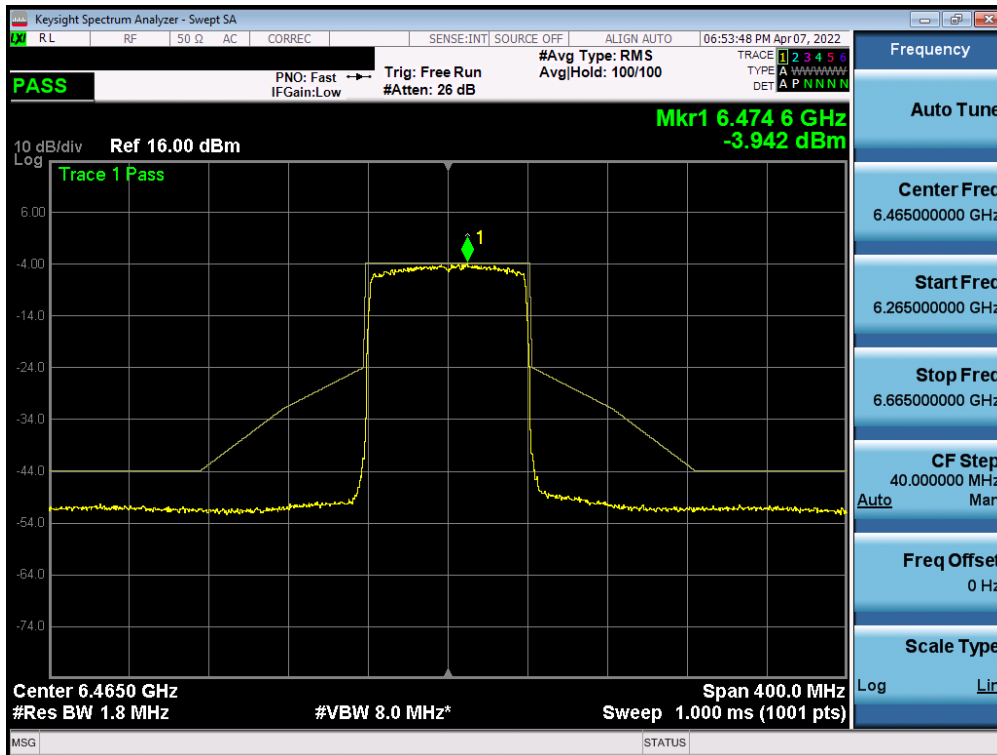


Plot 7-283. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 6) – Ch. 107)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 171 of 237



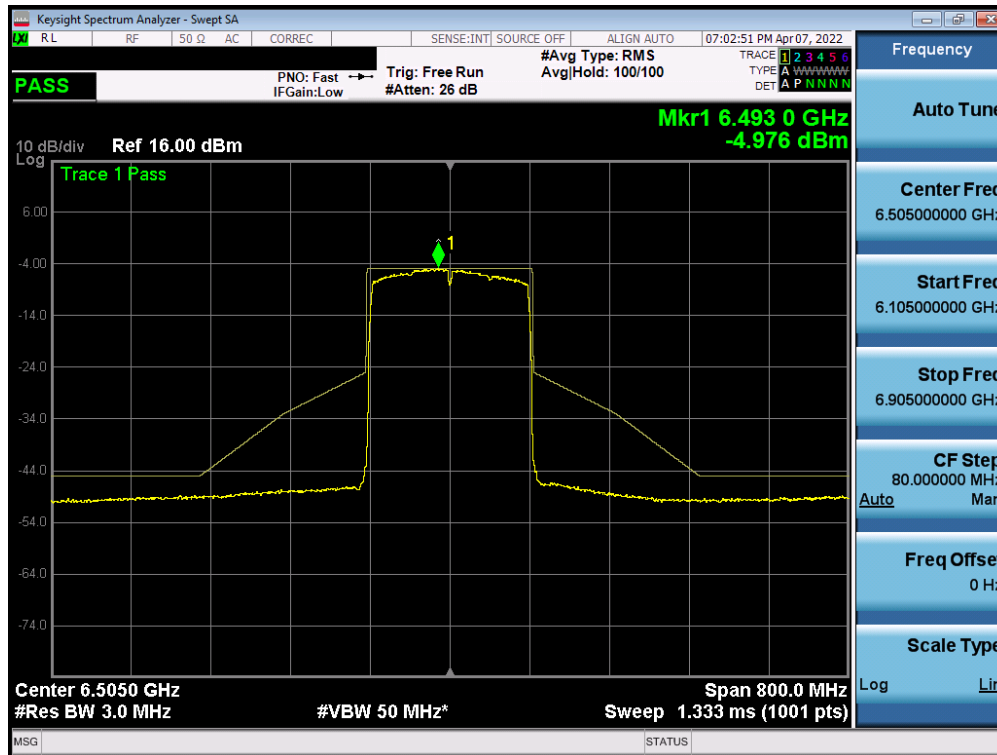
Plot 7-284. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 6) – Ch. 115)



Plot 7-285. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 6) – Ch. 103)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 172 of 237

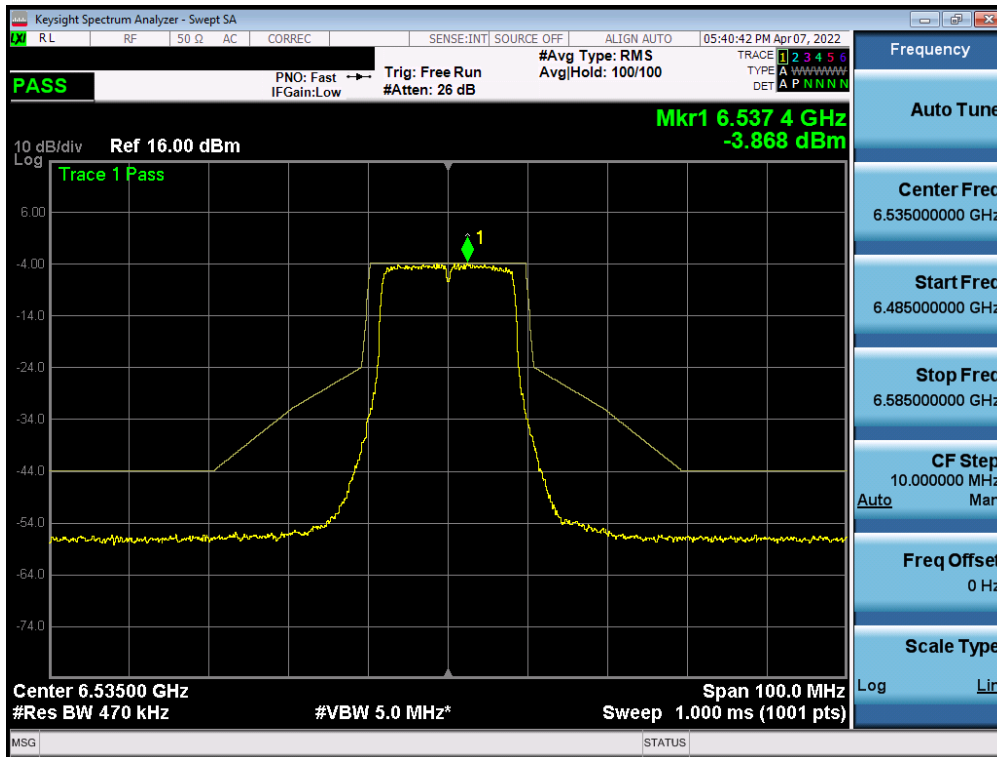




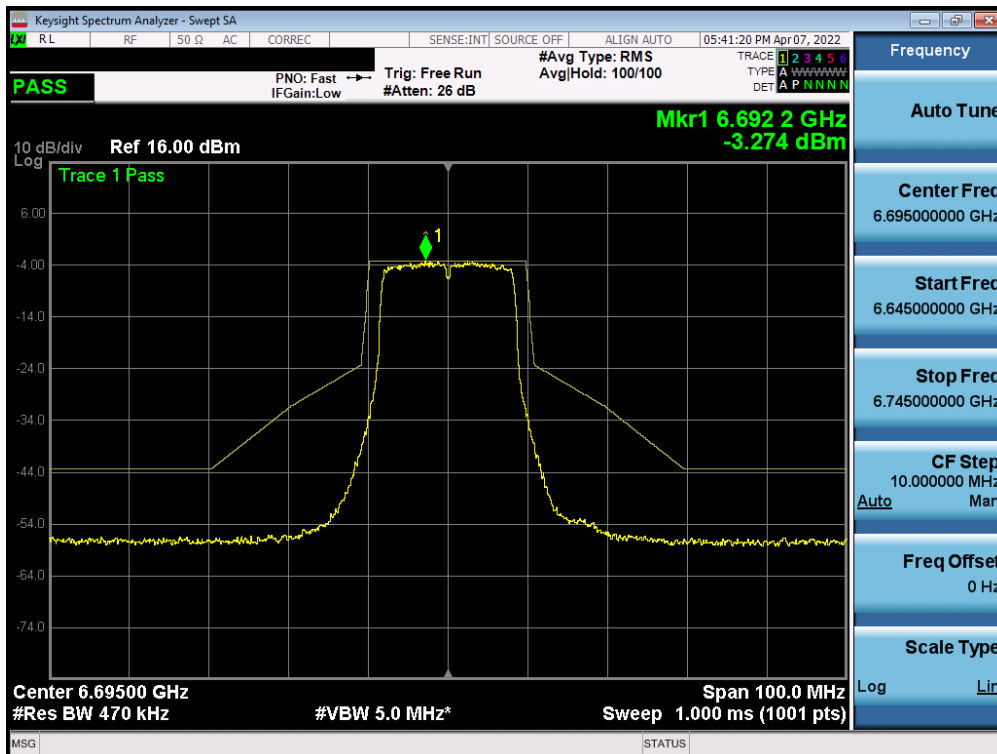
Plot 7-286. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 6) – Ch. 111)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 173 of 237

## MIMO Antenna-2 In-Band Emission Plot Measurement - (UNII Band 7)

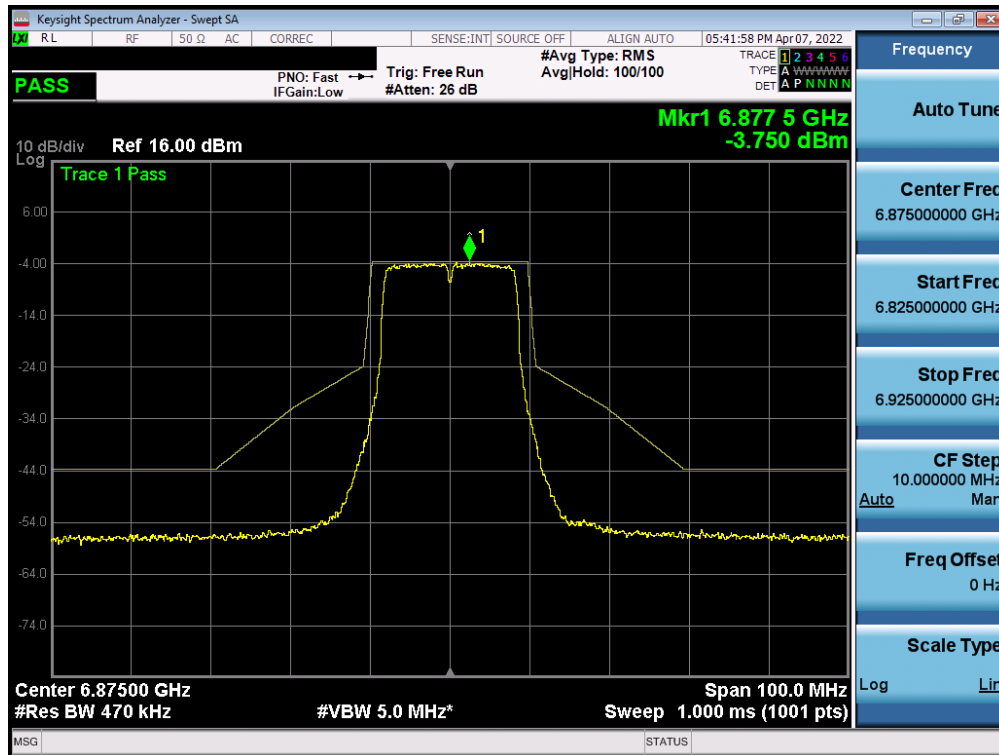


Plot 7-287. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 7) – Ch. 117)

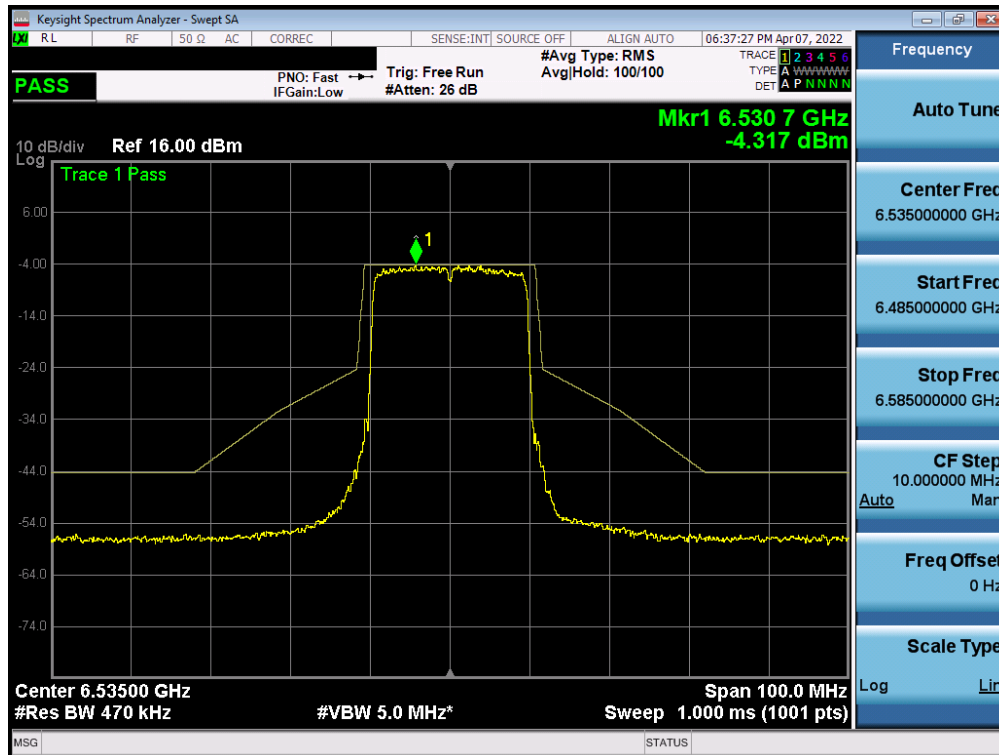


Plot 7-288. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 7) – Ch. 149)

FCC ID: A3LSMF936JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset		Page 174 of 237

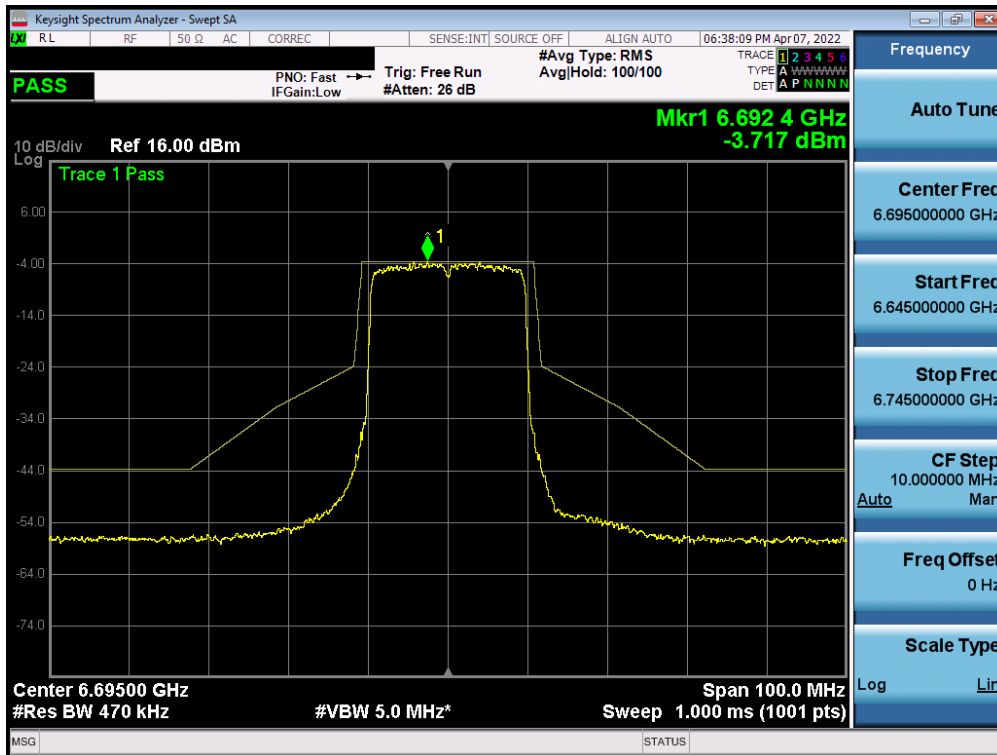


Plot 7-289. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 7) – Ch. 185)

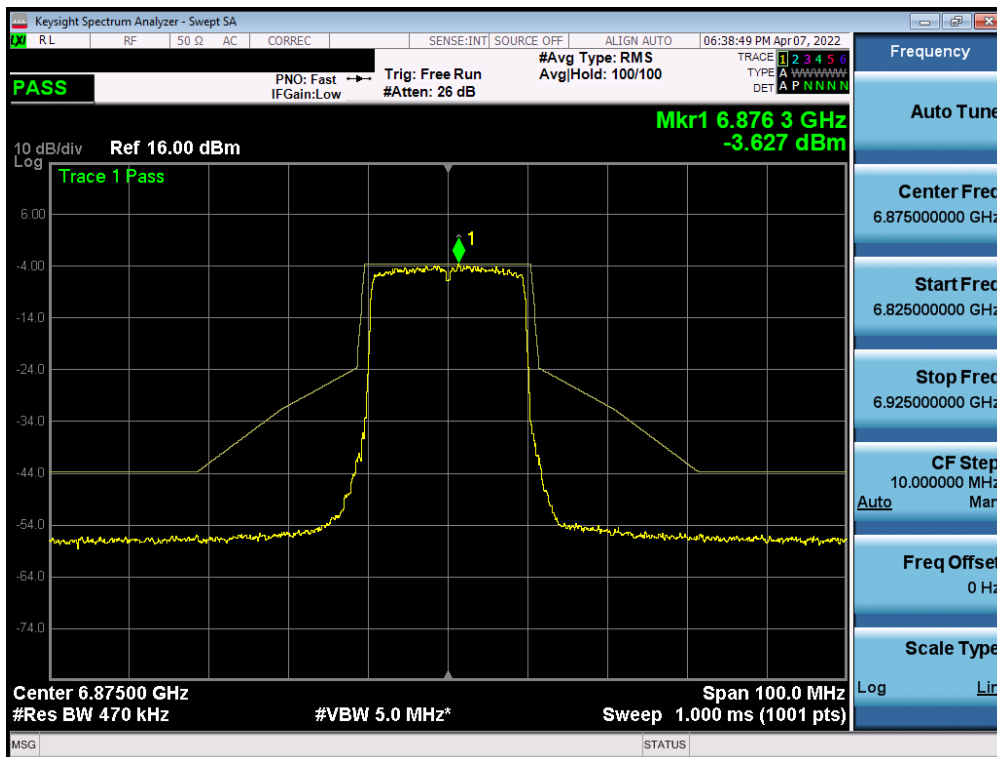


Plot 7-290. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 7) – Ch. 117)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 175 of 237

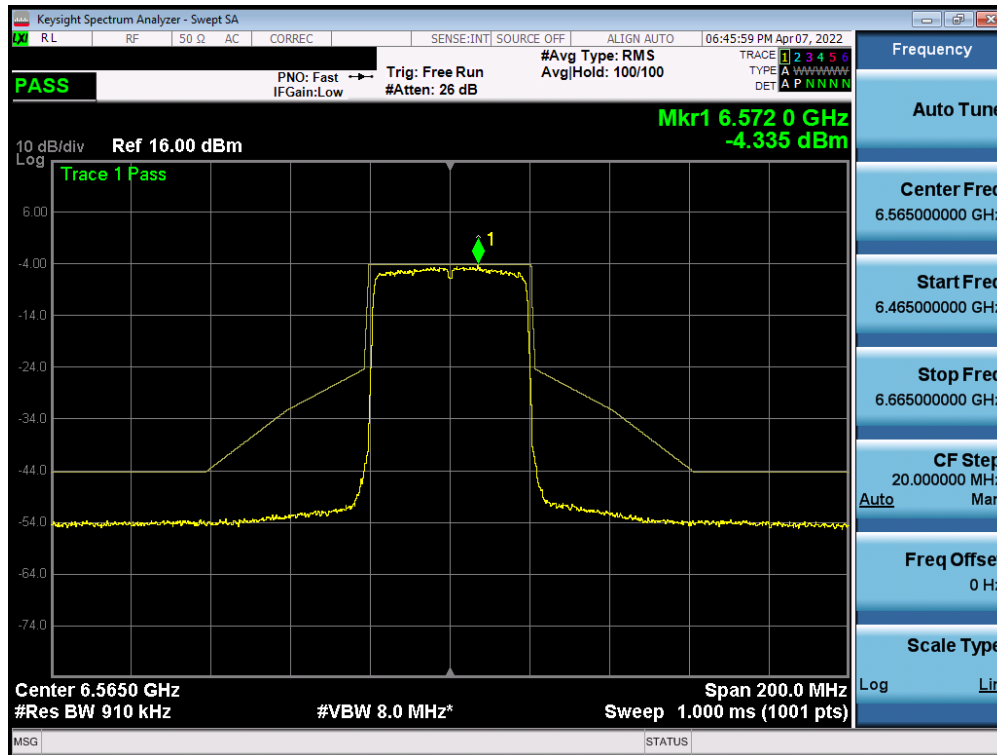


Plot 7-291. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 7) – Ch. 149)

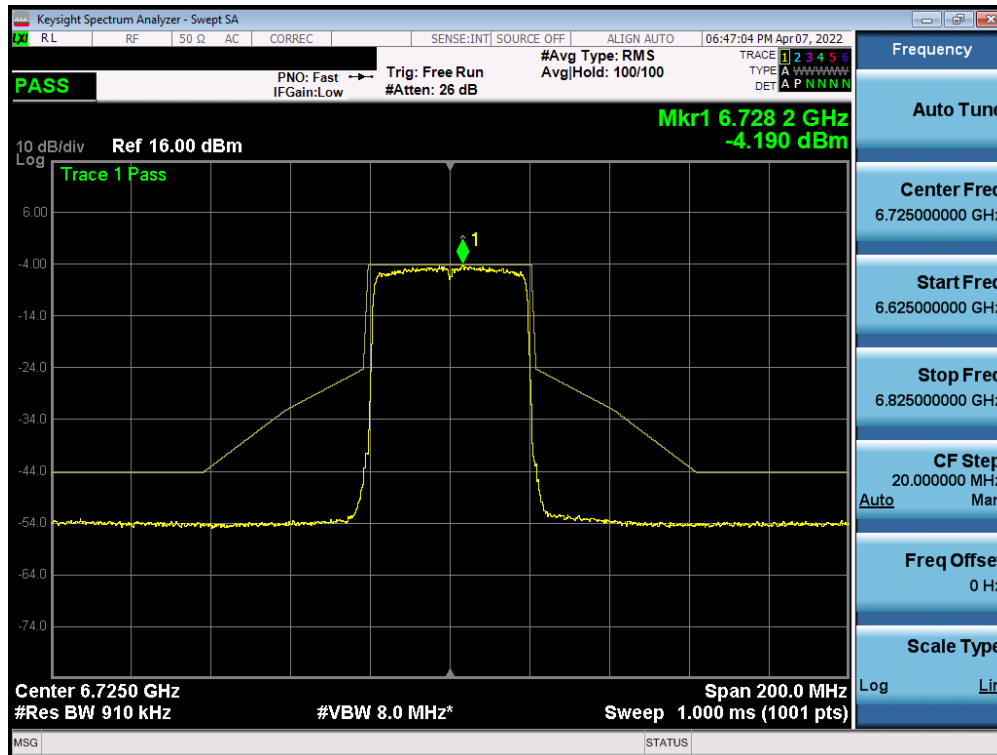


Plot 7-292. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 7) – Ch. 185)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 176 of 237

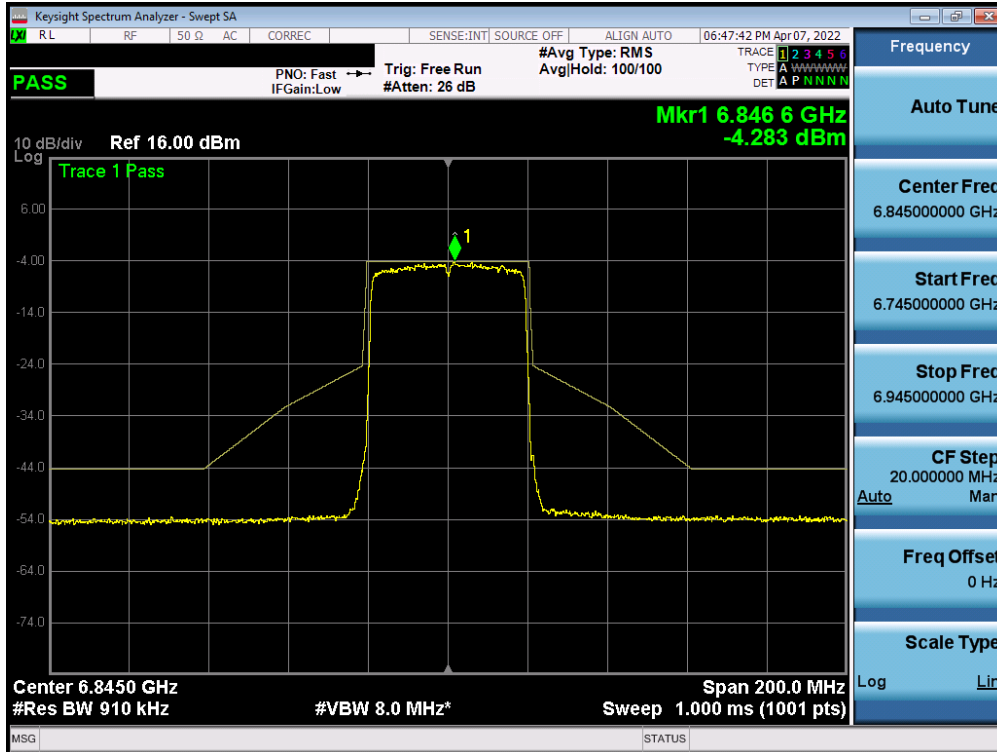


Plot 7-293. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 7) – Ch. 123)

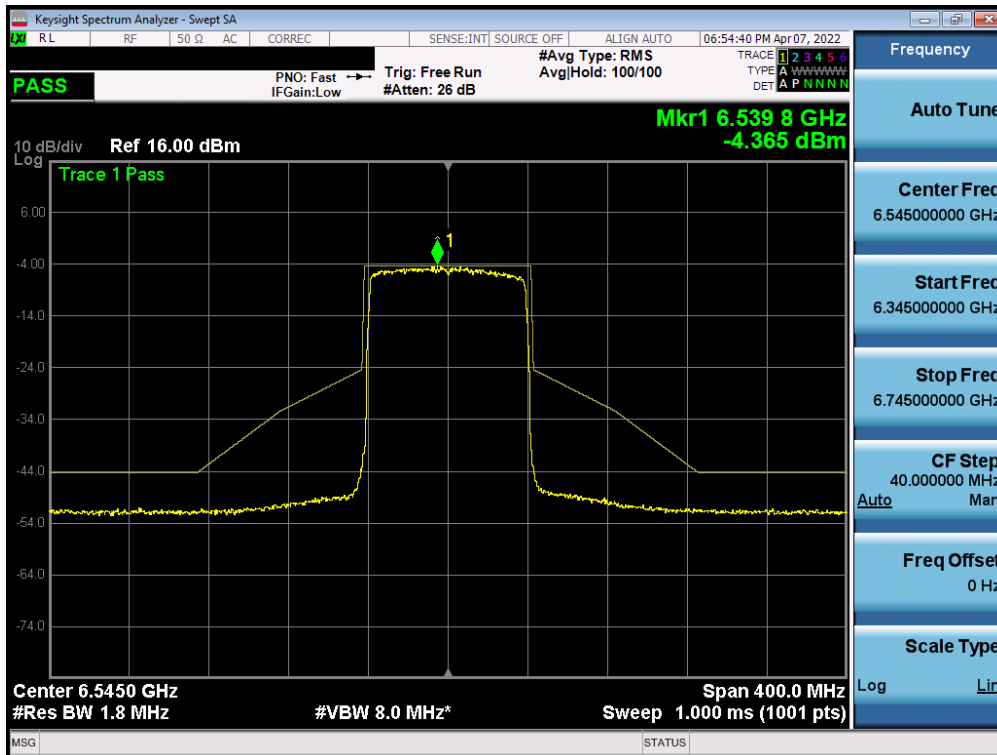


Plot 7-294. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 7) – Ch. 155)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 177 of 237

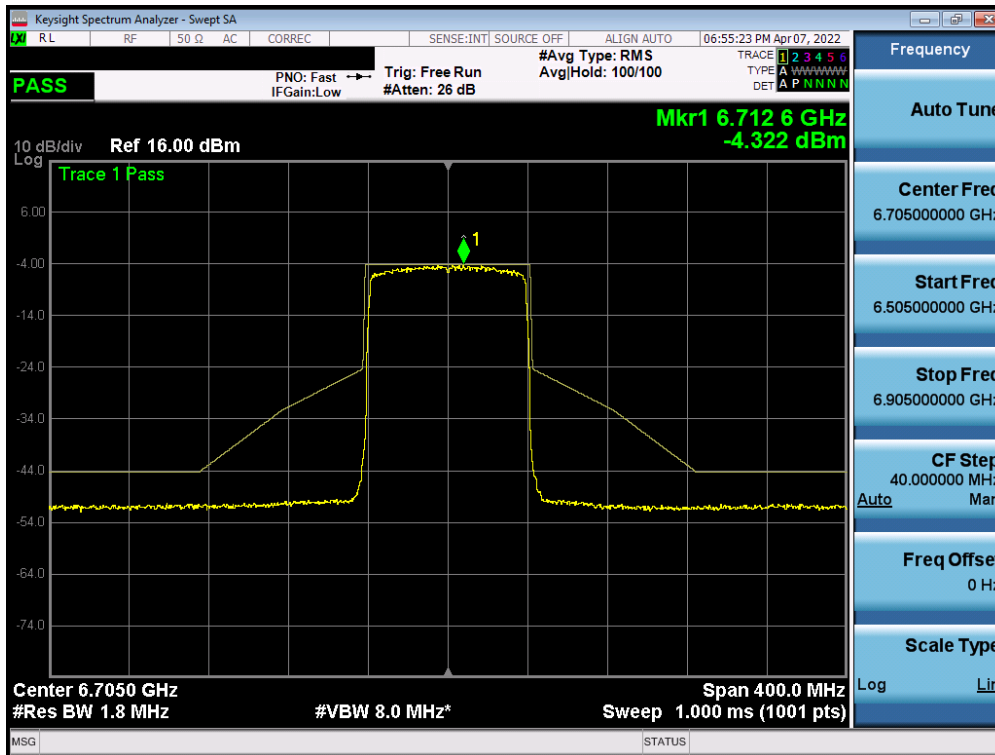


Plot 7-295. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 7) – Ch. 179)

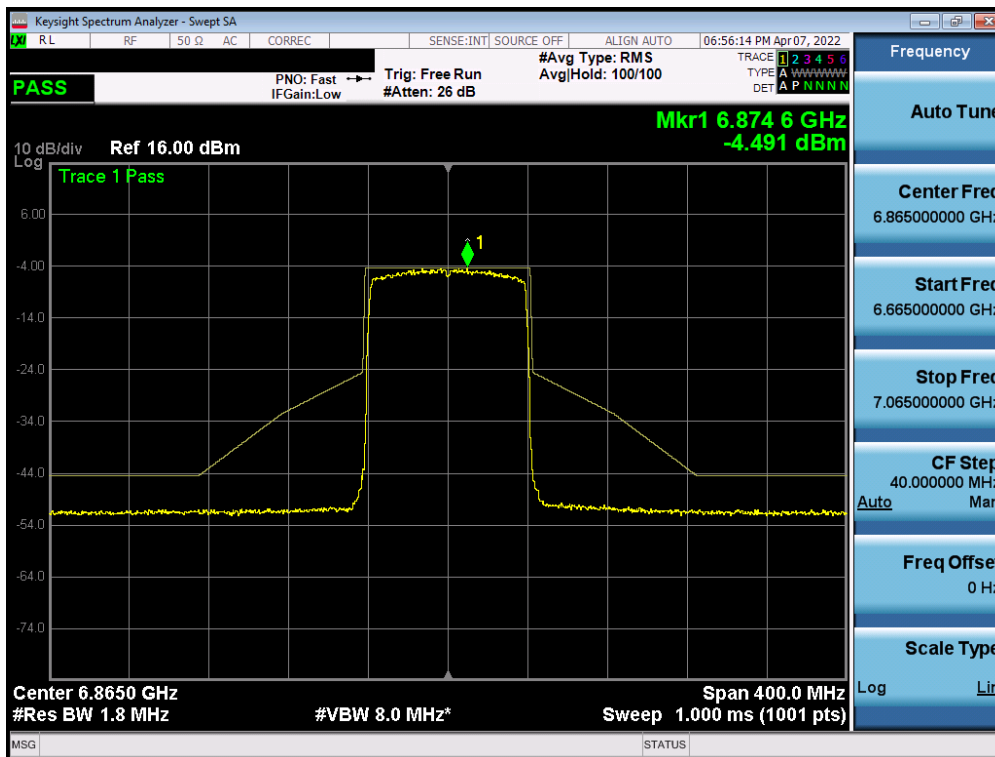


Plot 7-296. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 7) – Ch. 119)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 178 of 237



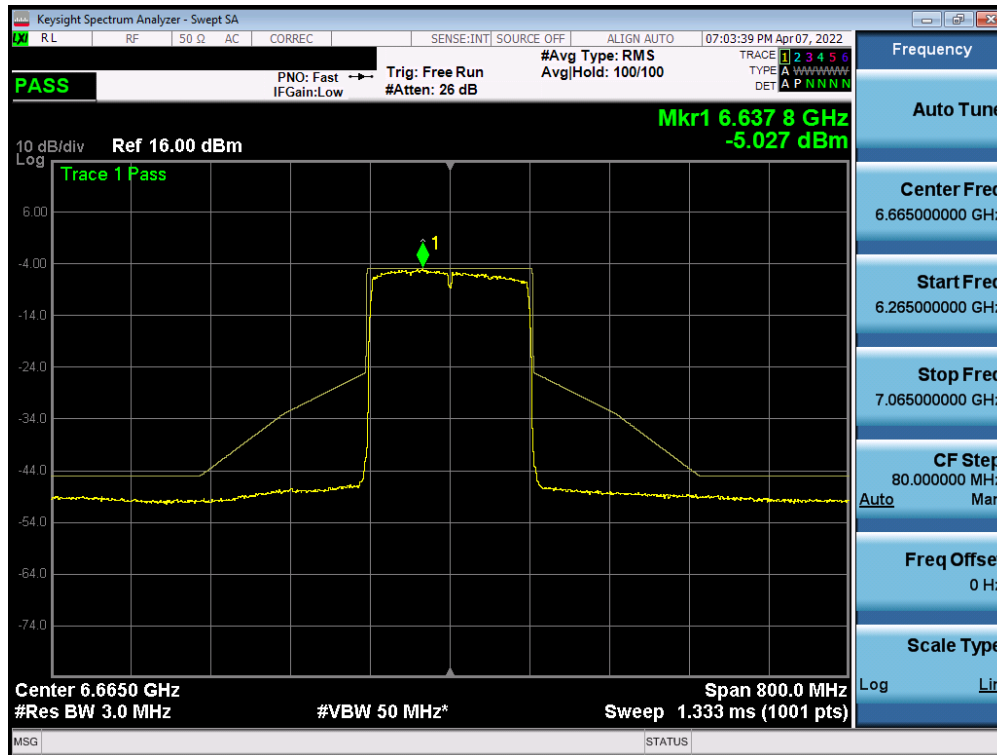
Plot 7-297. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 7) – Ch. 151)



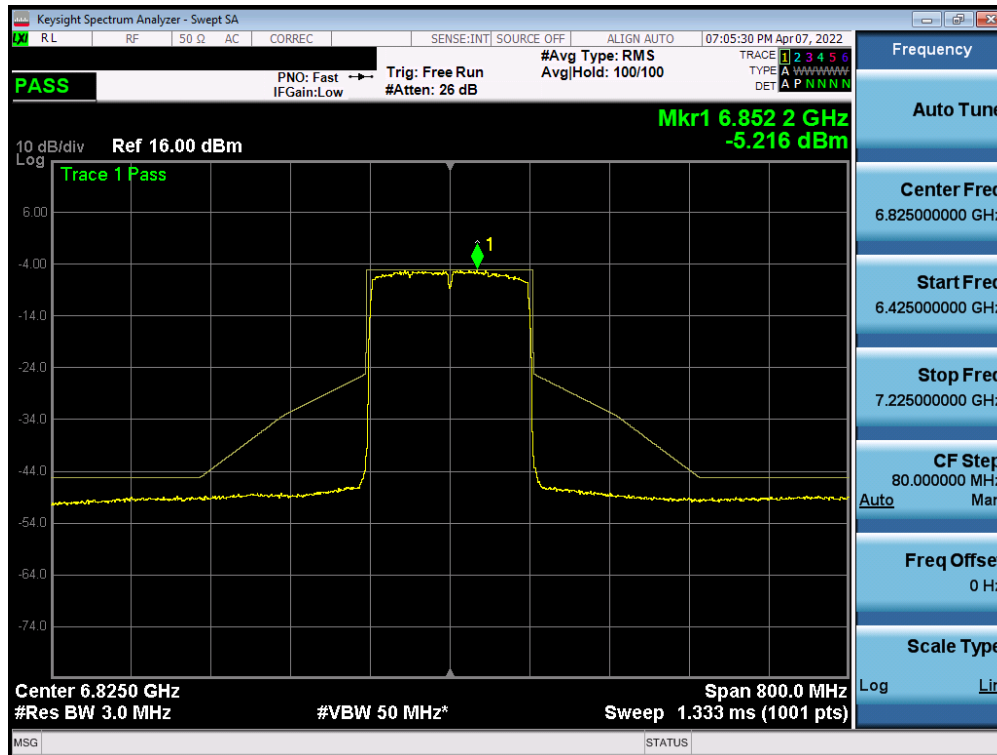
Plot 7-298. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 7) – Ch. 183)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 179 of 237





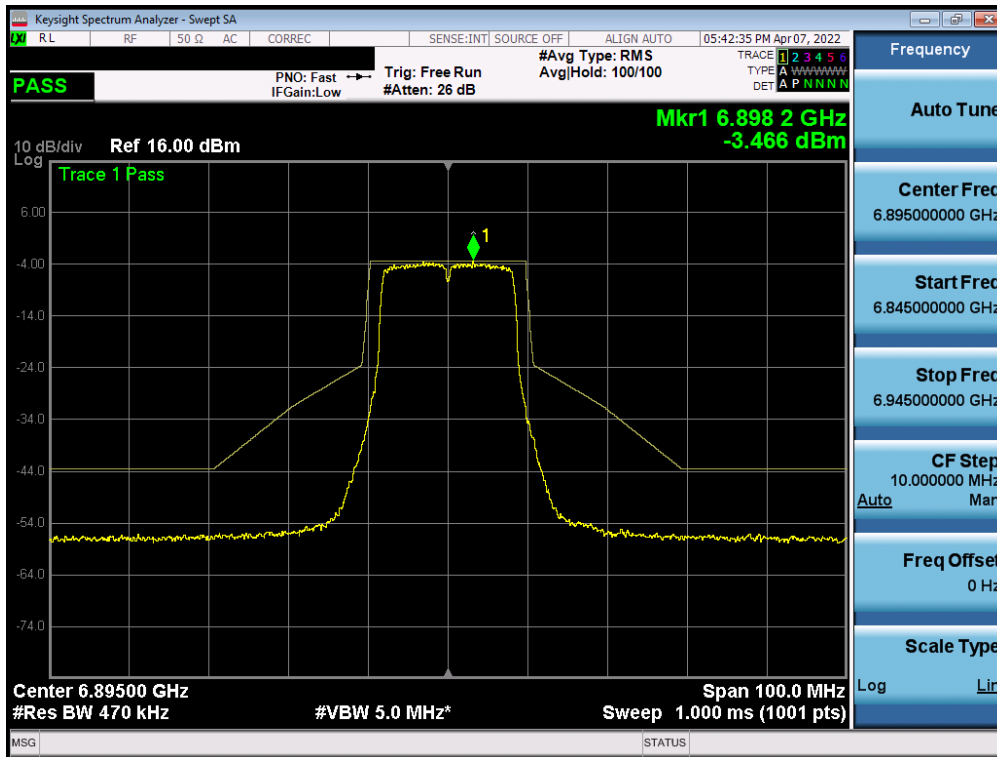
Plot 7-299. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 7) – Ch. 143)



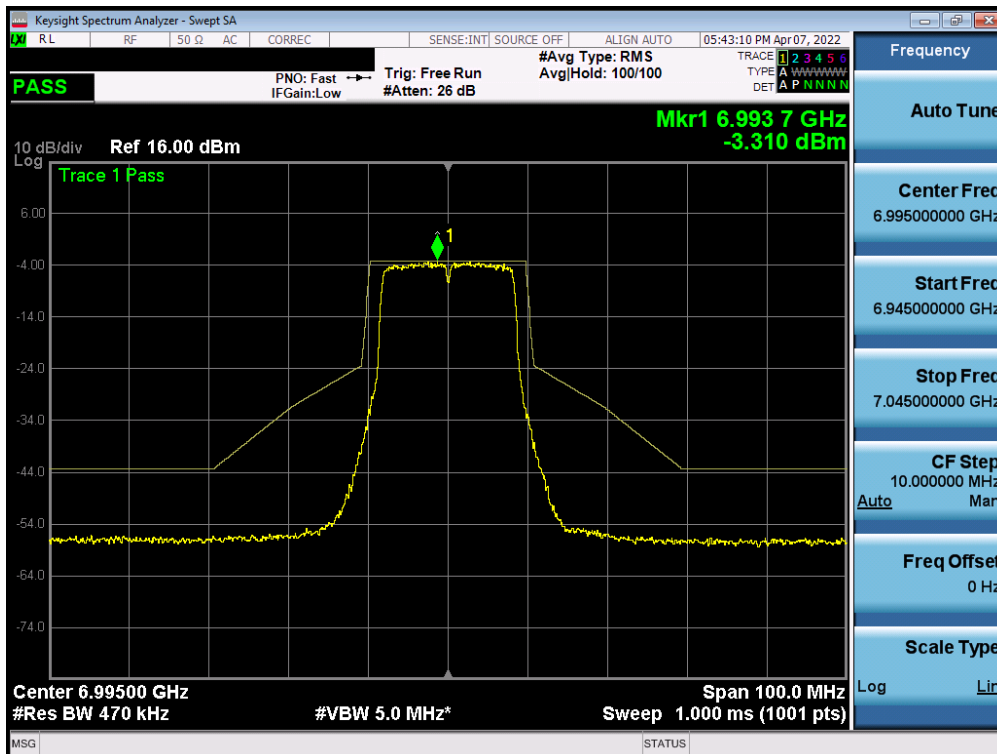
Plot 7-300. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 7) – Ch. 175)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 180 of 237

## MIMO Antenna-2 In-Band Emission Plot Measurement - (UNII Band 8)

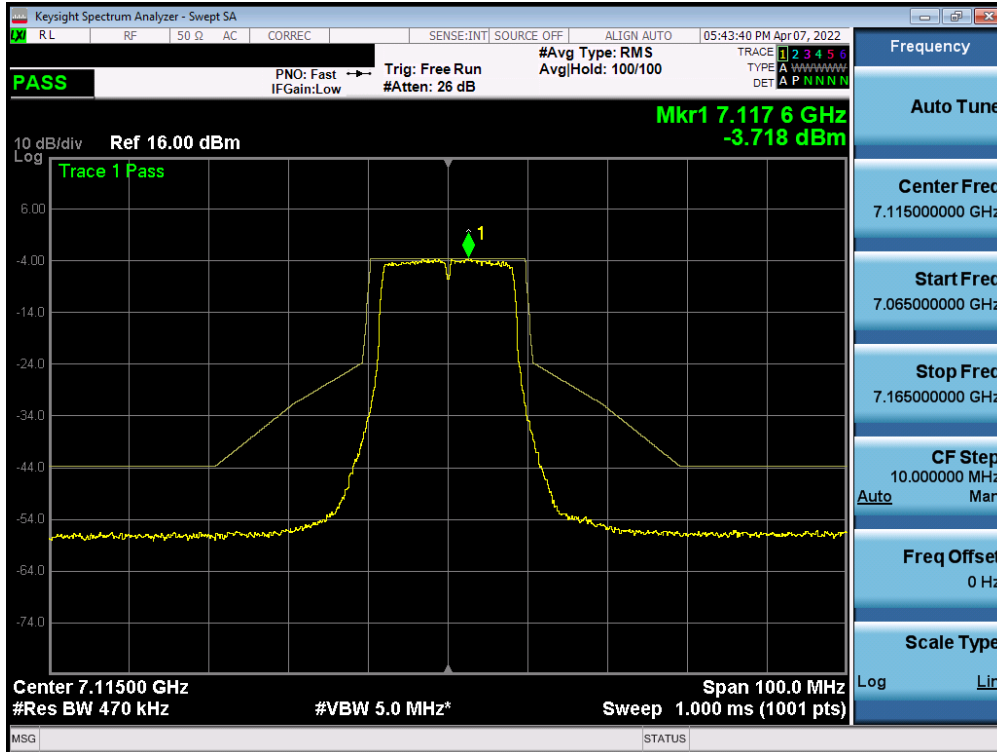


Plot 7-301. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 8) – Ch. 189)

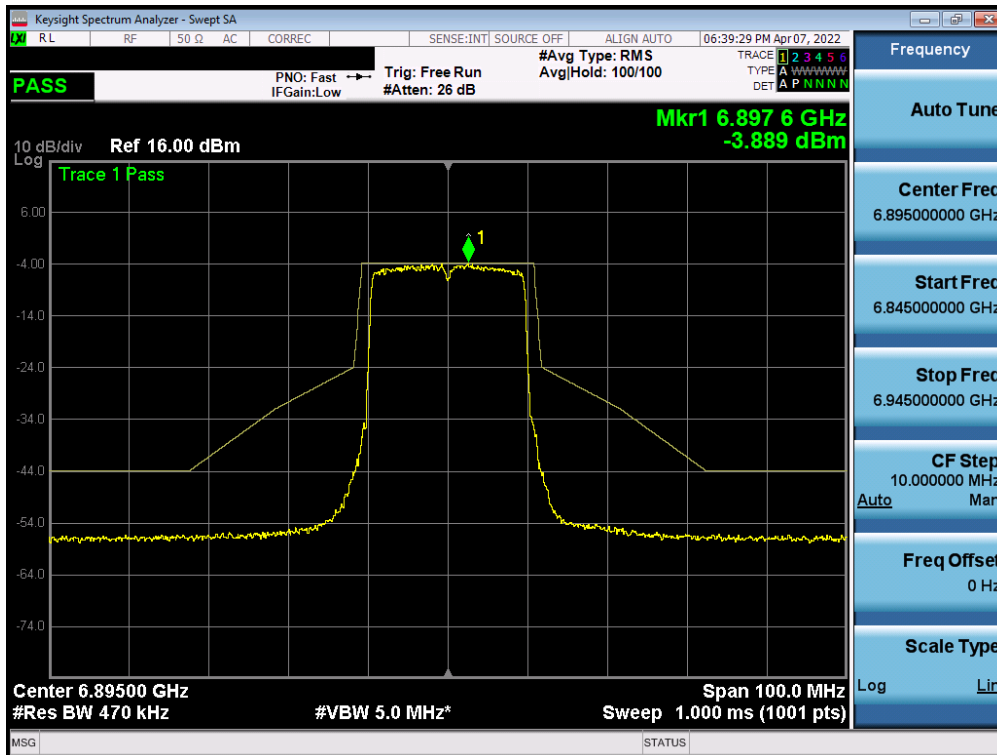


Plot 7-302. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 8) – Ch. 209)

MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
FCC ID: A3LSMF936JPN	Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	Page 181 of 237
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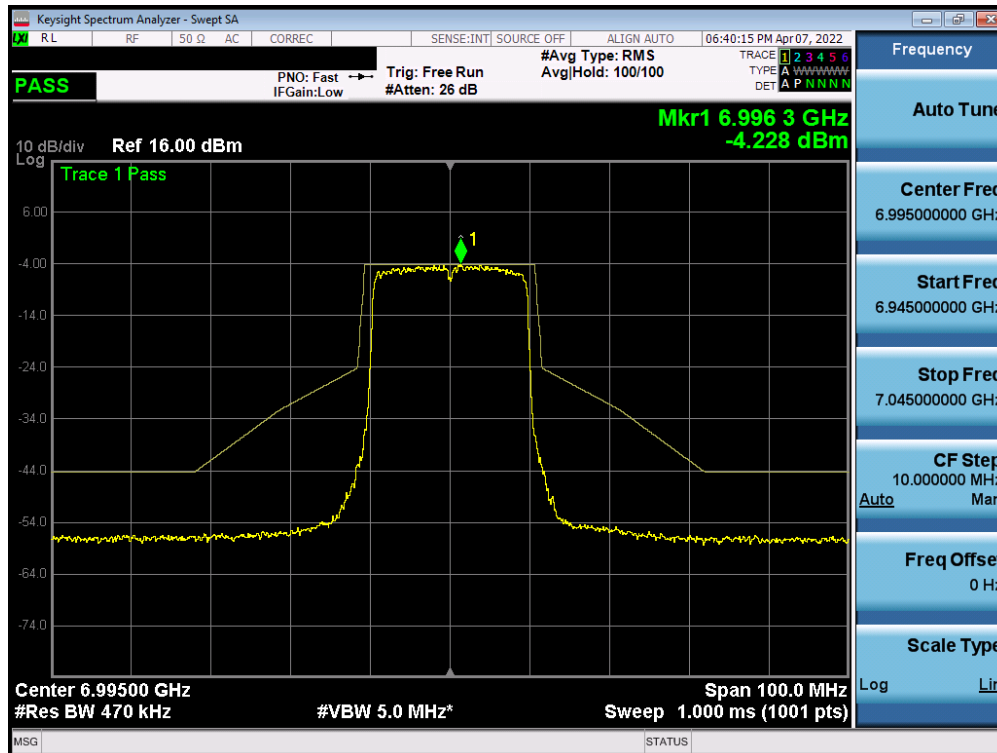


Plot 7-303. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11a (UNII Band 8) – Ch. 233)

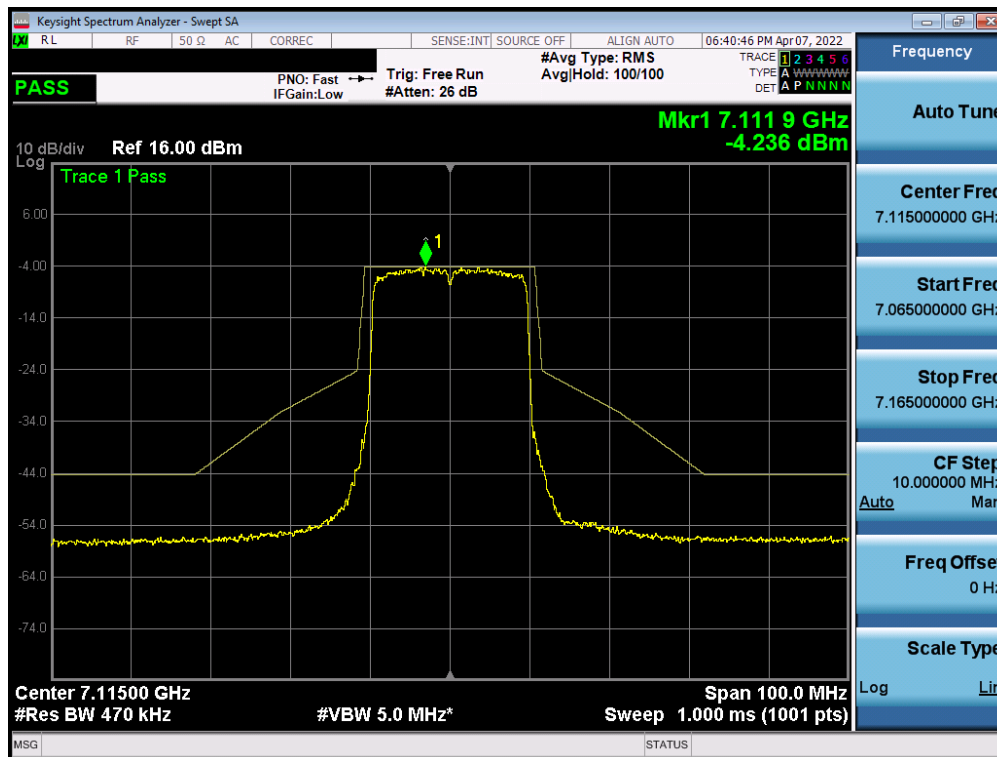


Plot 7-304. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 8) – Ch. 189)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 182 of 237

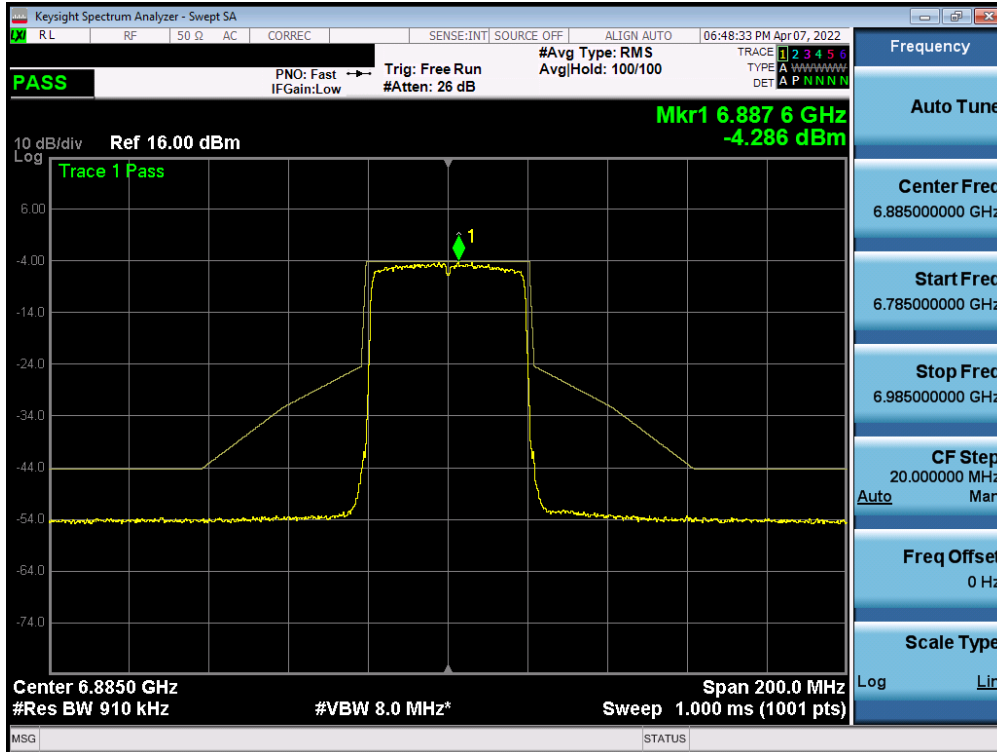


Plot 7-305. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 8) – Ch. 209)

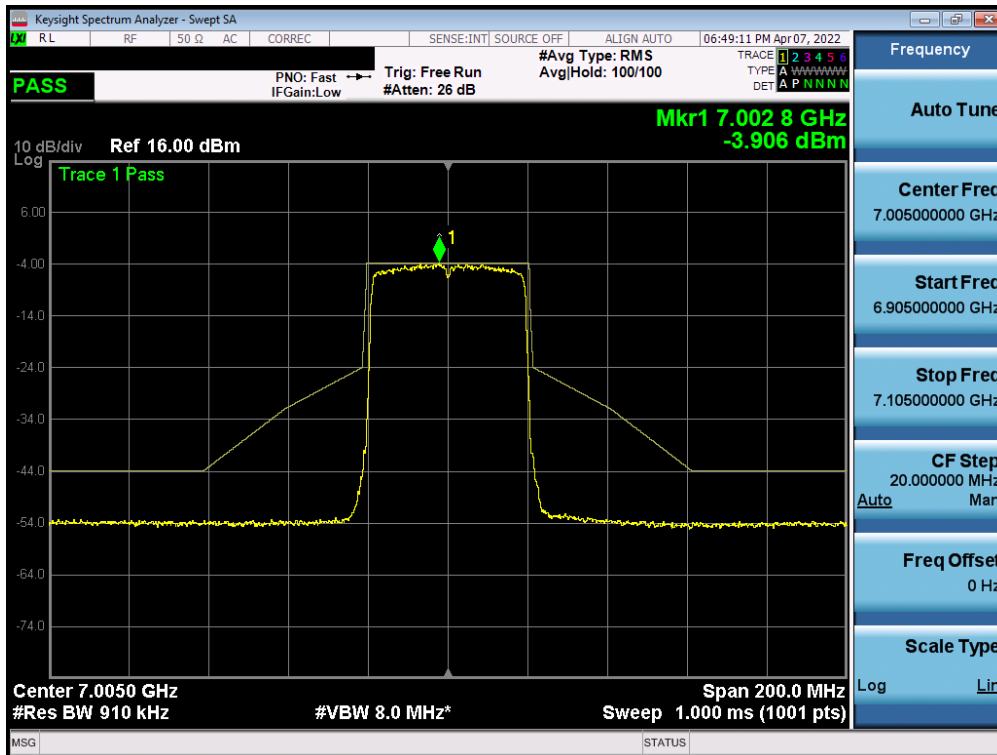


Plot 7-306. In-Band Emission Plot Measurement MIMO ANT2 (20MHz 802.11ax (UNII Band 8) – Ch. 233)

MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
FCC ID: A3LSMF936JPN	Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	Page 183 of 237
	EUT Type: Portable Handset		

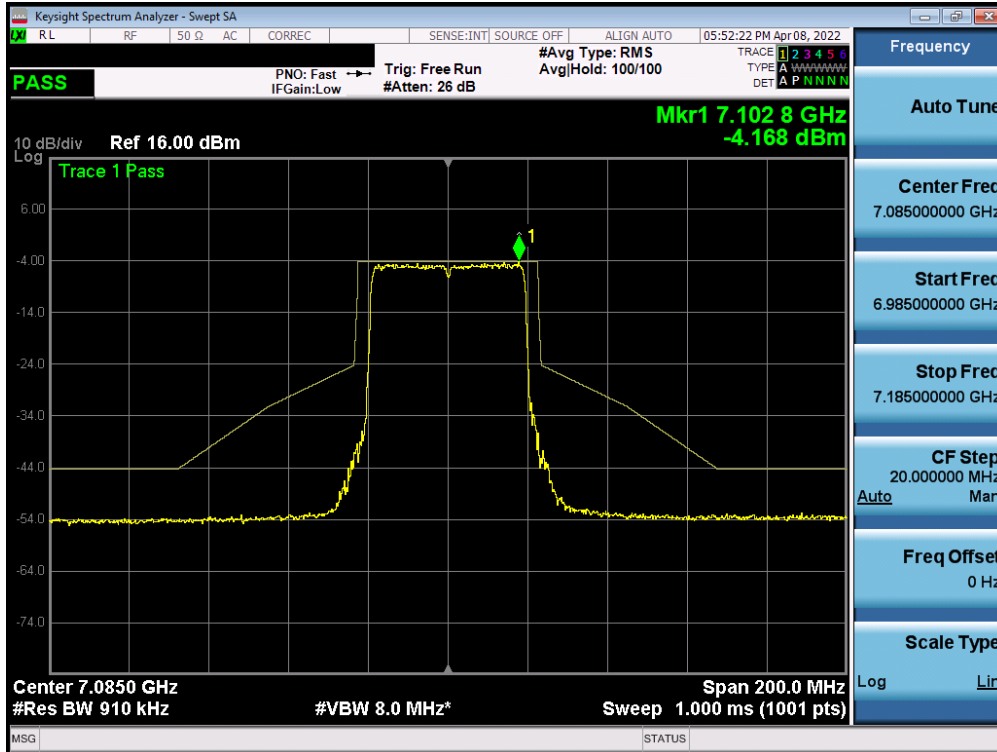


Plot 7-307. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 8) – Ch. 187)

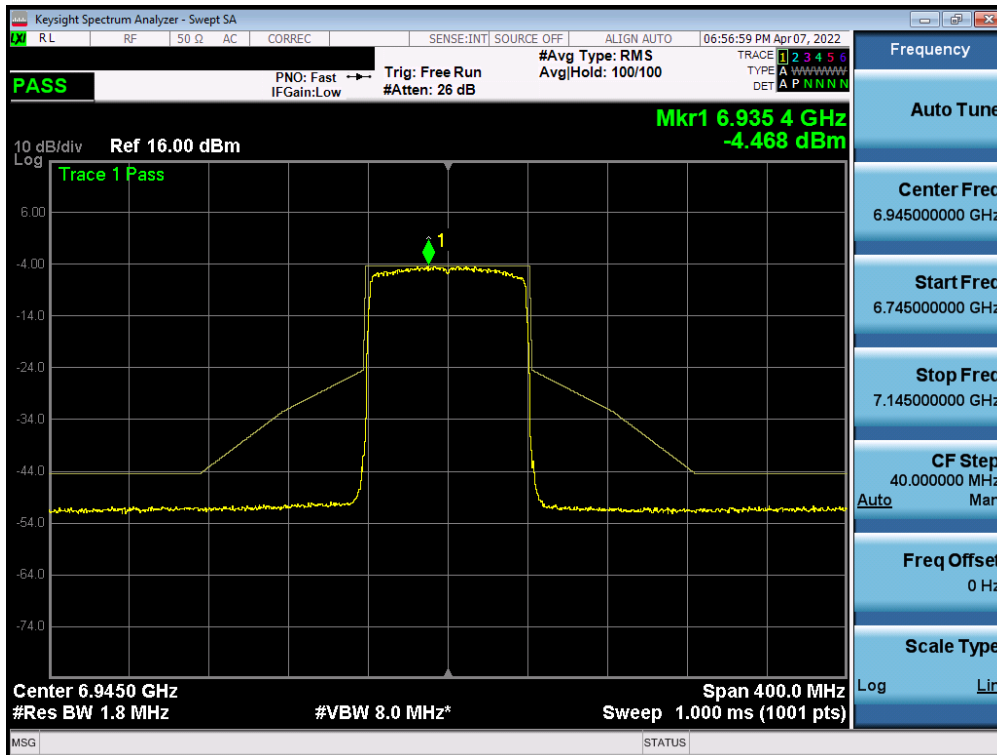


Plot 7-308. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 8) – Ch. 211)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 184 of 237

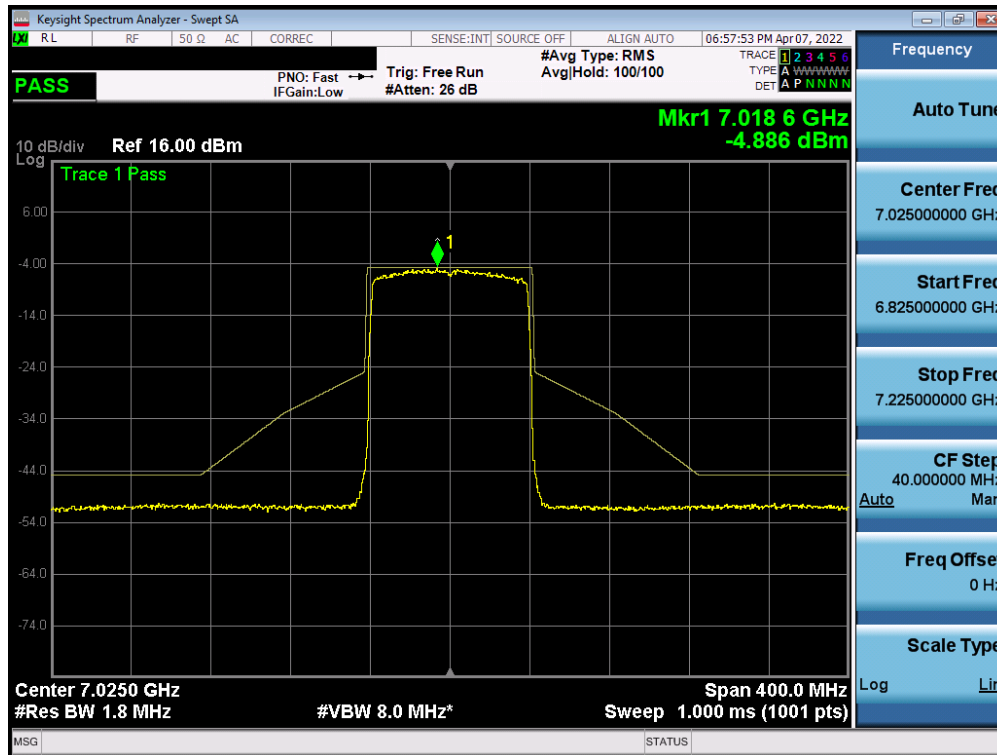


Plot 7-309. In-Band Emission Plot Measurement MIMO ANT2 (40MHz 802.11ax (UNII Band 8) – Ch. 227)

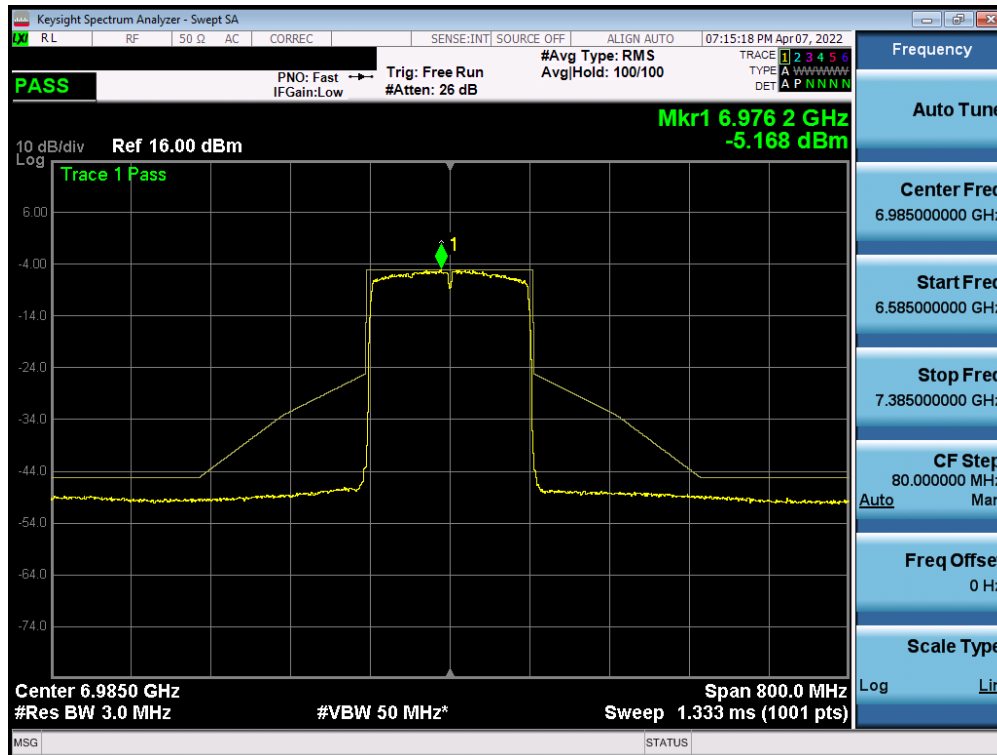


Plot 7-310. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 8) – Ch. 199)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 185 of 237



Plot 7-311. In-Band Emission Plot Measurement MIMO ANT2 (80MHz 802.11ax (UNII Band 8) – Ch. 215)



Plot 7-312. In-Band Emission Plot Measurement MIMO ANT2 (160MHz 802.11ax (UNII Band 8) – Ch. 207)

FCC ID: A3LSMF936JPN	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2206010070-14.A3L	Test Dates: 4/1/2022 – 6/17/2022	EUT Type: Portable Handset	Page 186 of 237



## 7.6 Contention Based Protocol – 802.11a/ax §15.407(d)(6)

### Test Overview and Limit

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed indoor low-power devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel and stay off the channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel.

### Test Procedure Used

ANSI C63.10-2013 – Section 12.3.2.2  
KDB 987594 D02 v01r01

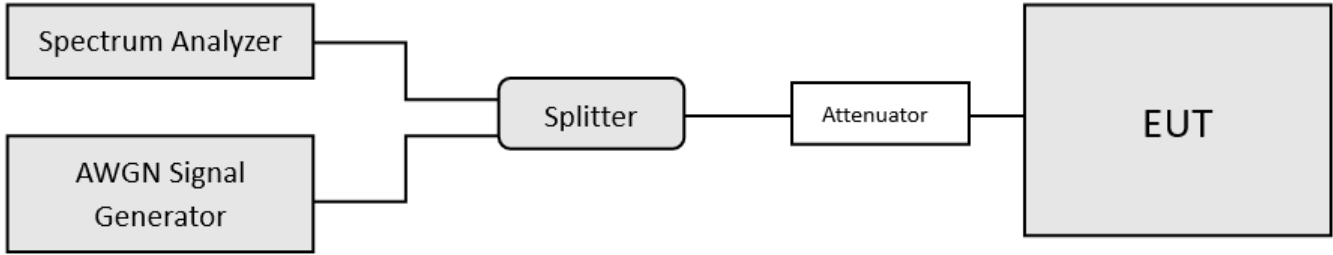
### Test Settings

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EEUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

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### Test Setup

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



**Figure 7-5. Contention-based protocol test setup, conducted method**

### Test Notes

1. Per guidance from KDB 987594 D02 v01r01, contention based protocol was tested using an AWGN signal with a bandwidth of 10MHz (see Plot 7-313). The amplitude of the signal was increased until detected by the EUT, signaled by the ceasing of transmission (see Plot 7-329), marker indicates the point at which the AWGN signal is introduced.
2. 15 trials were ran in order to assure that at least 90% of certainty was met.
3. Per Guidance from KDB 987594 D04 v01, contention based protocol was tested with receiver with the lowest antenna gain.
4. All CBP Timing Plots shown are for the ceased condition. Some spikes that may be shown are from adjacent portions of the spectrum that are still transmitting.

$$\text{Detection Level} = \text{Injected AWGN Power (dBm)} - \text{Antenna Gain (dBi)} + \text{Path Loss (dB)}$$

### Equation 7-1. Detection Level Calculation

Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	Incumbent Freq [MHz]	Injected (AWGN) [dBm]	Antenna Gain [dBi]	Adjusted Power Level [dBm]	Detection Limit [dBm]	Margin [dB]
UNII Band 5	53	6215	20	6215	-73.30	-3.42	-69.88	-62.0	-7.88
				6110	-73.50	-3.42	-70.08	-62.0	-8.08
	47	6185	160	6185	-73.20	-3.42	-69.78	-62.0	-7.78
				6260	-72.20	-3.42	-68.78	-62.0	-6.78
UNII Band 6	101	6455	20	6455	-73.15	-10.50	-62.65	-62.0	-0.65
				6430	-73.10	-10.50	-62.60	-62.0	-0.60
	111	6505	160	6505	-73.20	-10.50	-62.70	-62.0	-0.70
				6580	-73.72	-10.50	-63.22	-62.0	-1.22
UNII Band 7	149	6695	20	6695	-74.10	-8.64	-65.46	-62.0	-3.46
				6750	-71.40	-8.64	-62.76	-62.0	-0.76
	175	6825	160	6825	-74.27	-8.64	-65.63	-62.0	-3.63
				6900	-74.45	-8.64	-65.81	-62.0	-3.81
UNII Band 8	197	6935	20	6935	-75.30	-11.46	-63.84	-62.0	-1.84
				6910	-74.96	-11.46	-63.50	-62.0	-1.50
	207	6985	160	6985	-76.37	-11.46	-64.91	-62.0	-2.91
				7060	-73.90	-11.46	-62.44	-62.0	-0.44

**Table 7-8. Contention Based Protocol – Incumbent Detection Results**

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Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	Incumbent Freq [MHz]	EUT Transmission Status		
					Adjusted AWGN Power (dBm)		
					Normal	Minimal	Ceased
UNII Band 5	53	6215	20	6215	-81.88	-72.88	-69.88
	47	6185	160	6110	-82.08	-73.08	-70.08
				6185	-81.78	-72.78	-69.78
				6260	-80.78	-71.78	-68.78
UNII Band 6	101	6455	20	6455	-74.65	-65.65	-62.65
	111	6505	160	6430	-74.60	-65.60	-62.60
				6505	-74.70	-65.70	-62.70
				6580	-75.22	-66.22	-63.22
UNII Band 7	149	6695	20	6695	-77.46	-68.46	-65.46
	175	6825	160	6750	-74.76	-65.76	-62.76
				6825	-77.63	-68.63	-65.63
				6900	-77.81	-68.81	-65.81
UNII Band 8	197	6935	20	6935	-75.84	-66.84	-63.84
	207	6985	160	6910	-75.50	-66.50	-63.50
				6985	-76.91	-67.91	-64.91
				7060	-74.44	-65.44	-62.44

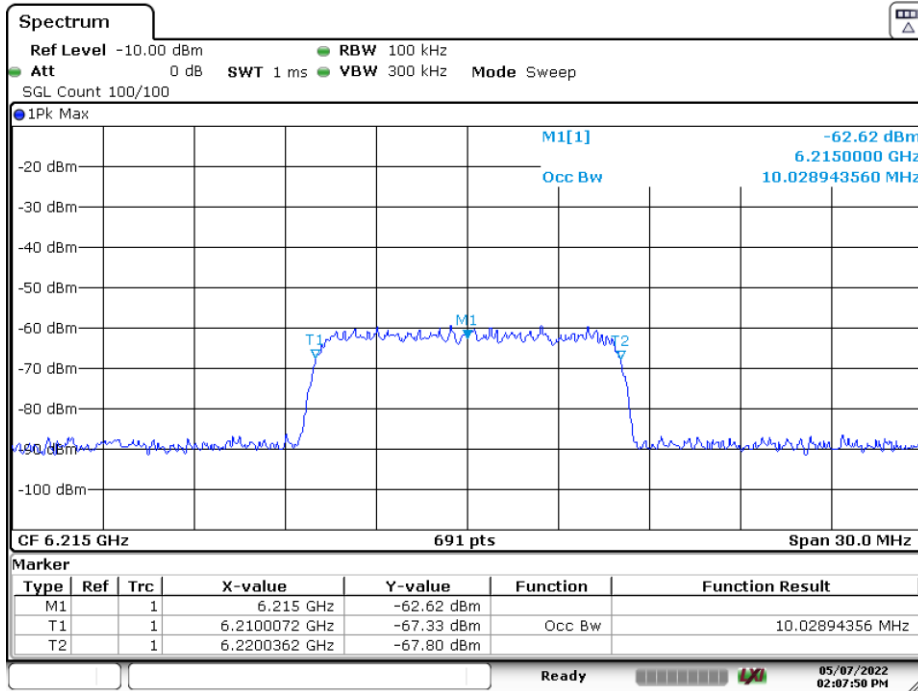
Table 7-9. Contention Based Protocol – Detection Results – All Tx Cases

CBP Detection (1 = Detection, Blank = No Detection)																				
Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Detection Rate (%)	
UNII Band 5	53	6215	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
	47	6185	160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	100		
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100
UNII Band 6	101	6455	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
	111	6505	160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100
UNII Band 7	149	6695	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
	175	6825	160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100
UNII Band 8	197	6935	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
	207	6985	160	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	
				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100

Table 7-10. Contention Based Protocol – Incumbent Detection Trial Results

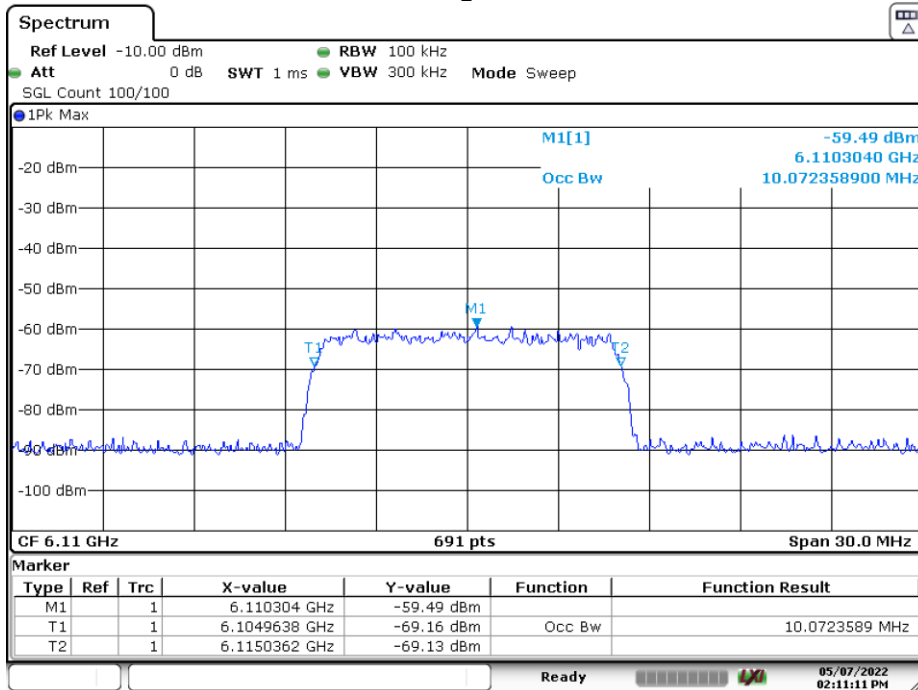
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### AWGN Plots



Date: 7.MAY.2022 14:07:50

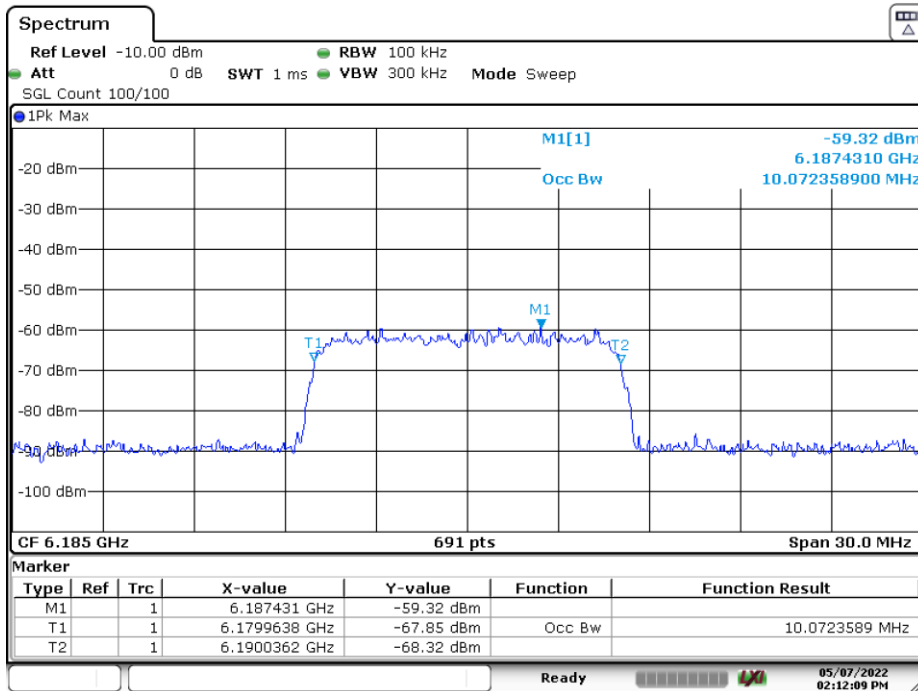
**Plot 7-313. AWGN Signal – UNII 5 – 20MHz**



Date: 7.MAY.2022 14:11:11

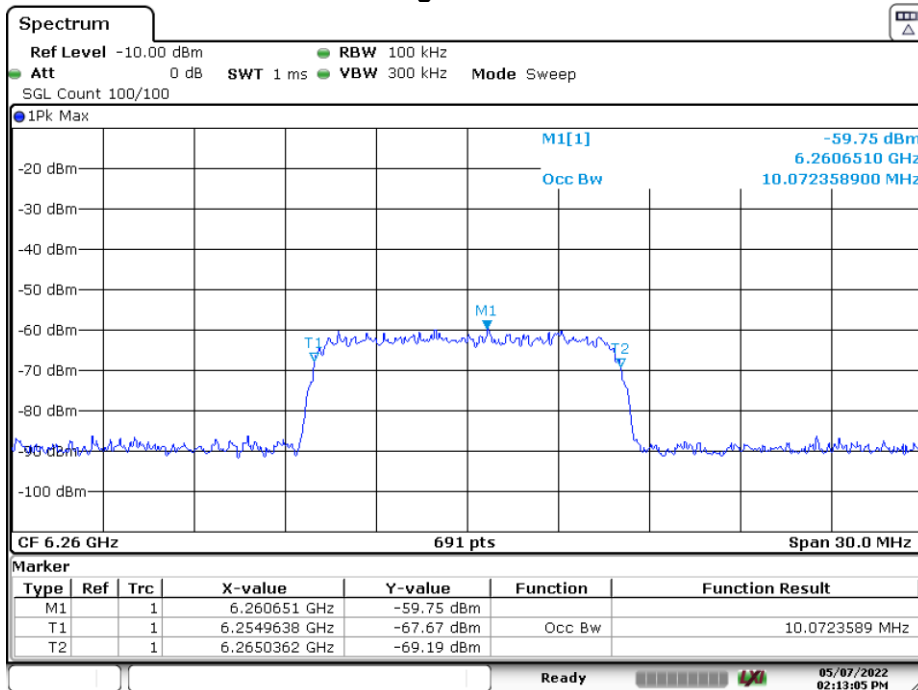
**Plot 7-314. AWGN Signal – UNII 5 – 160MHz - Low**

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Date: 7.MAY.2022 14:12:09

**Plot 7-315. AWGN Signal – UNII 5 – 160MHz - Mid**



Date: 7.MAY.2022 14:13:05

**Plot 7-316. AWGN Signal – UNII 5 – 160MHz - High**

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