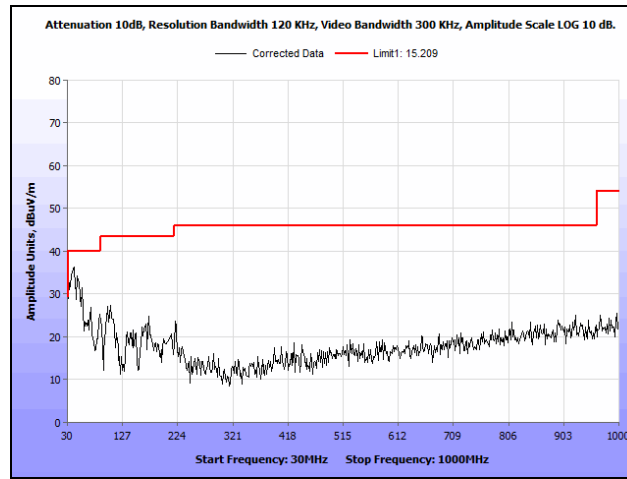
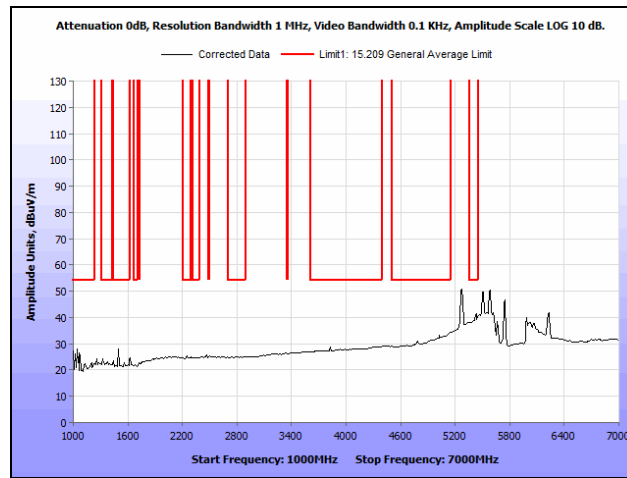


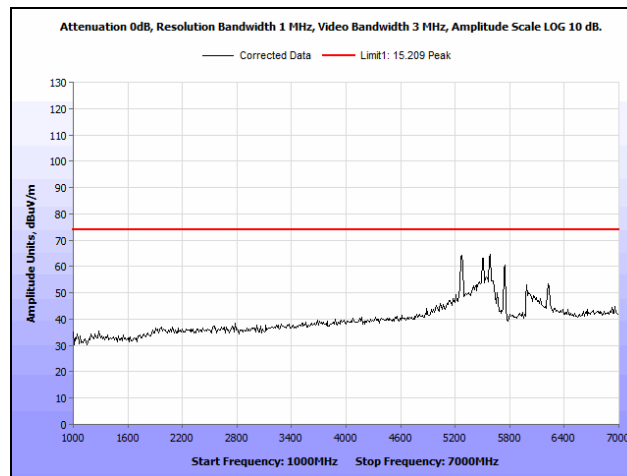
**Radiated Spurious Emissions, 802.11n 20 MHz, UNII 3, ANT-O6ABGN-1211-PA, DMPA**



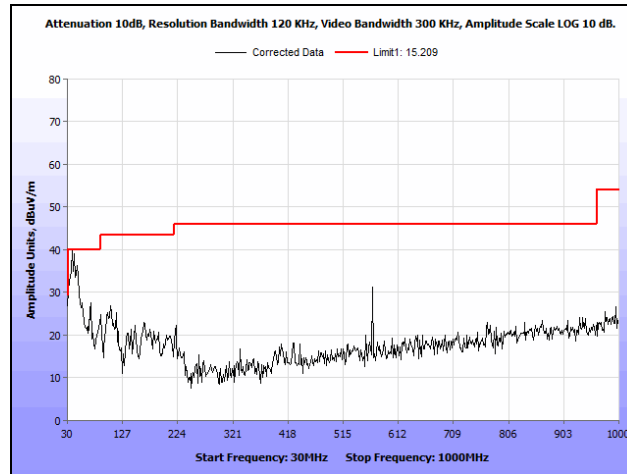
**Plot 210. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 30 MHz – 1 GHz, UNII 3, DMPA**



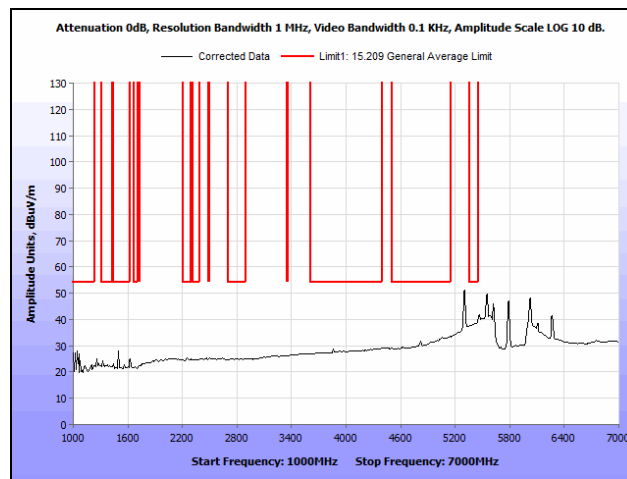
**Plot 211. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Avg., UNII 3, DMPA**



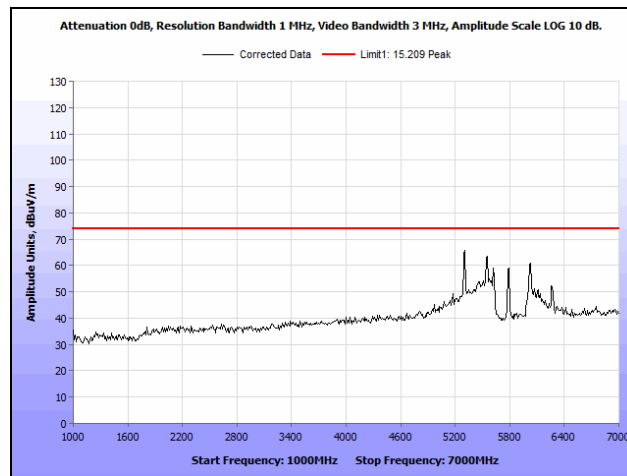
**Plot 212. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Peak, UNII 3, DMPA**



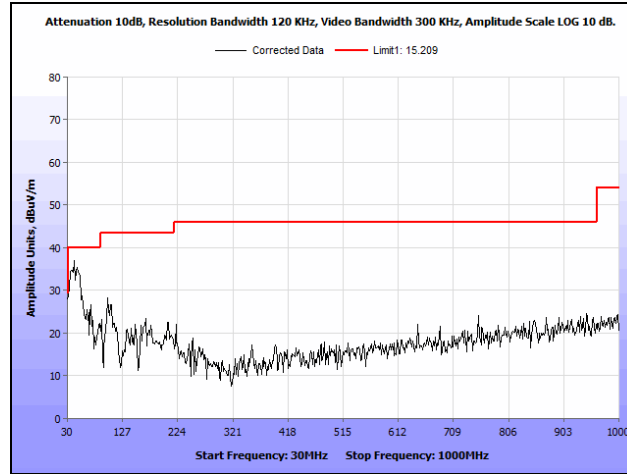
Plot 213. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 30 MHz – 1 GHz, UNII 3, DMPA



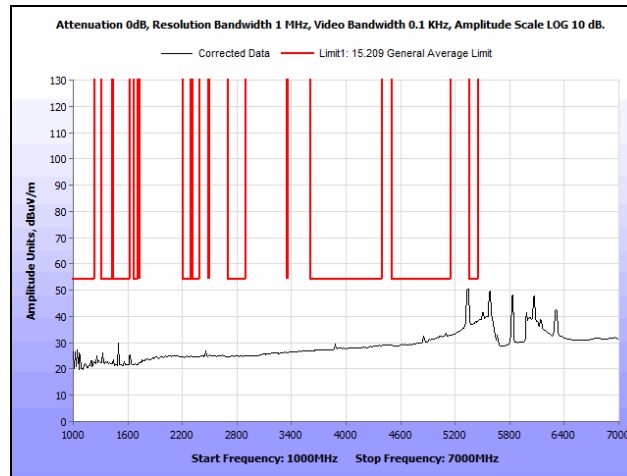
Plot 214. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Avg., UNII 3, DMPA



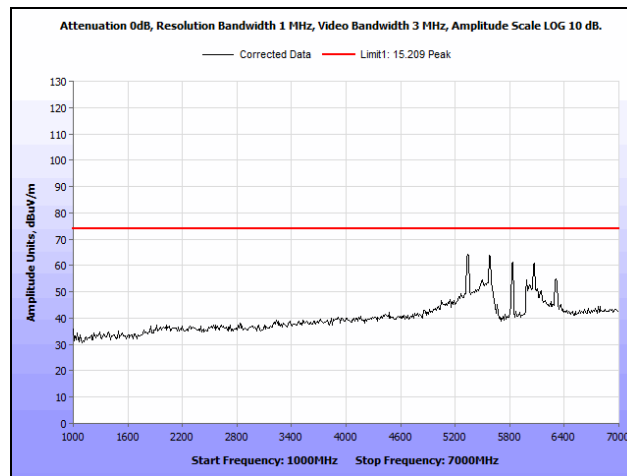
Plot 215. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Peak, UNII 3, DMPA



Plot 216. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 30 MHz – 1 GHz, UNII 3, DMPA

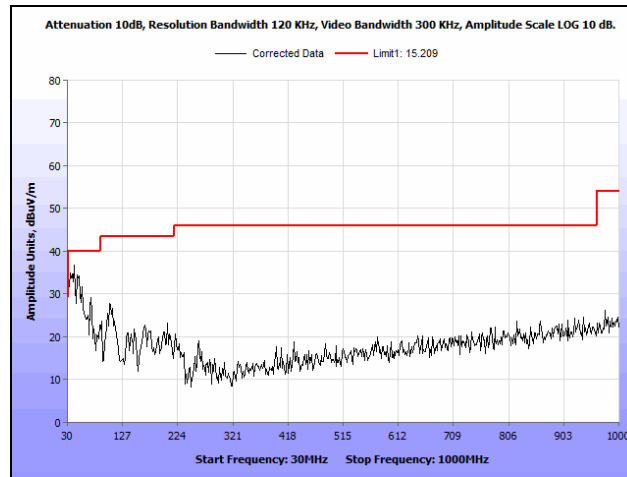


Plot 217. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Avg., UNII 3, DMPA

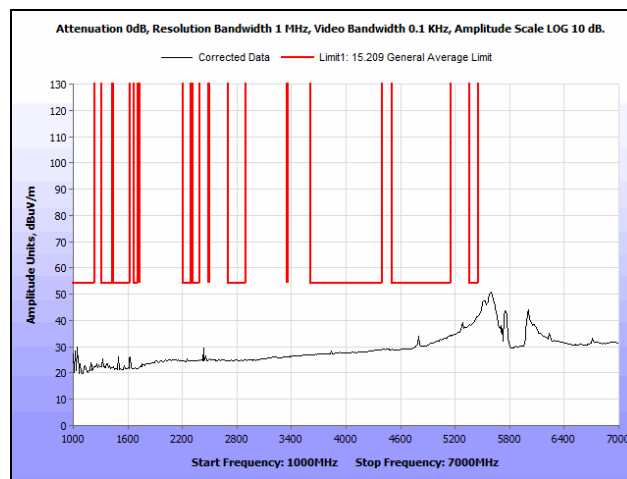


Plot 218. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Peak, UNII 3, DMPA

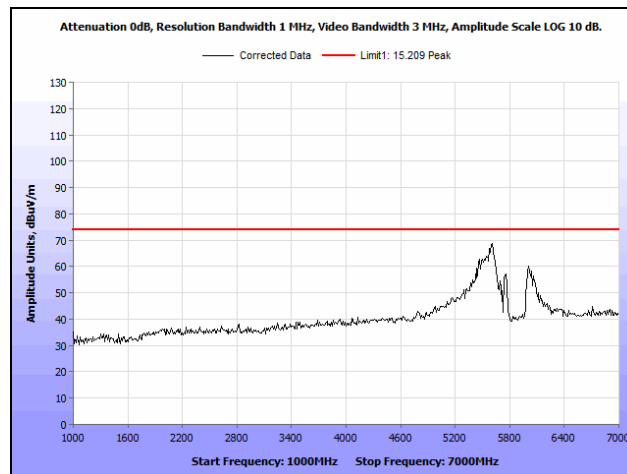
**Radiated Spurious Emissions, 802.11n 40 MHz, UNII 3, ANT-O6ABGN-1211-PA, DMPA**



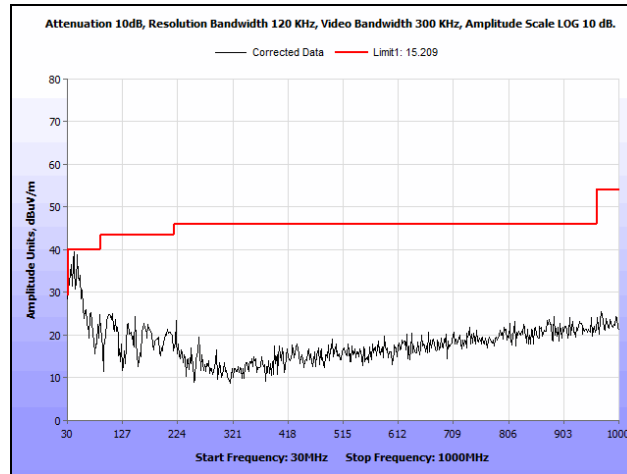
**Plot 219. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, 30 MHz – 1 GHz, UNII 3, DMPA**



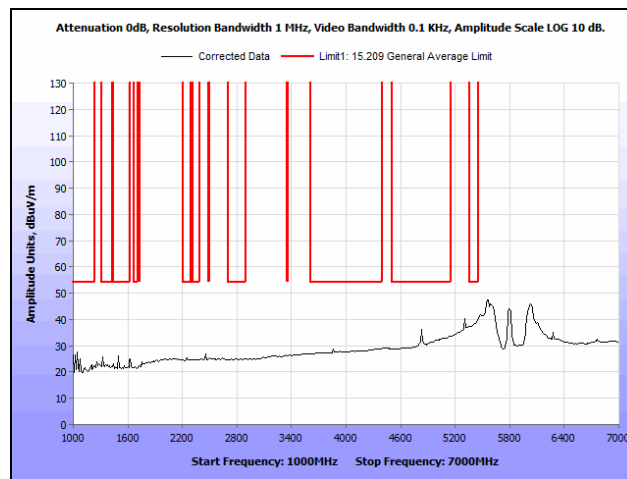
**Plot 220. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Avg., UNII 3, DMPA**



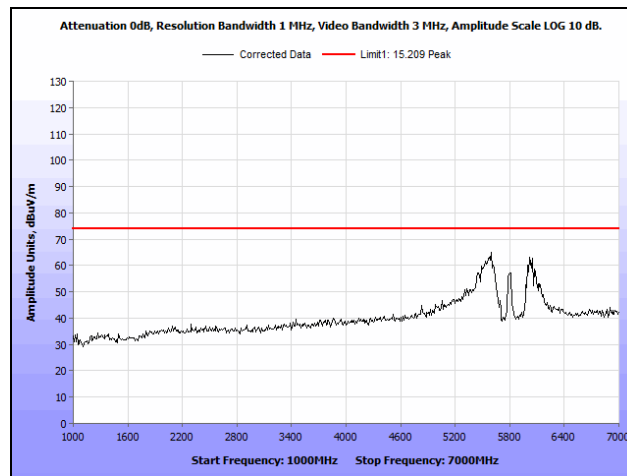
**Plot 221. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Peak, UNII 3, DMPA**



Plot 222. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, 30 MHz – 1 GHz, UNII 3, DMPA

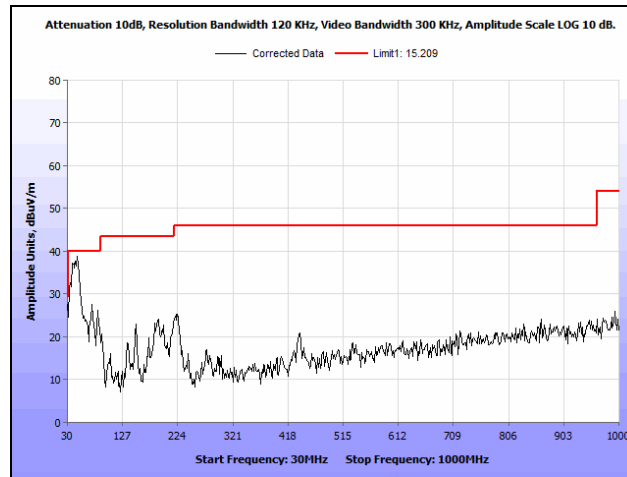


Plot 223. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Avg., UNII 3, DMPA

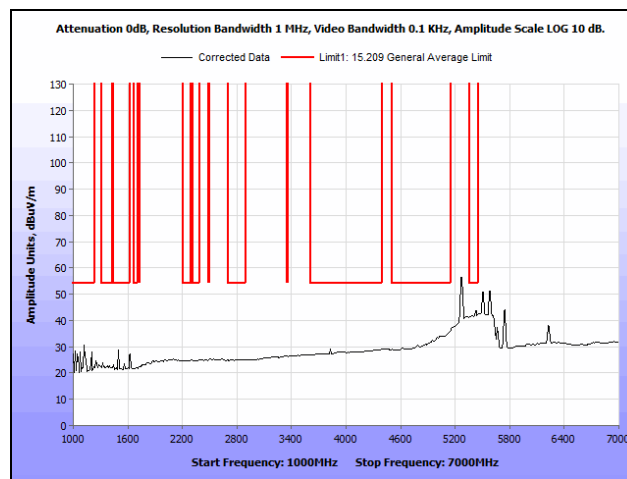


Plot 224. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, 1 GHz – 7 GHz, Peak, UNII 3, DMPA

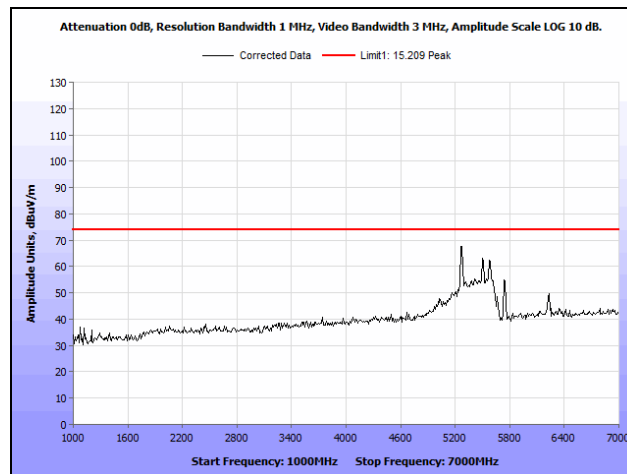
### Radiated Spurious Emissions, 802.11a 20 MHz, UNII 3, ANT-BG080-NM, OODA



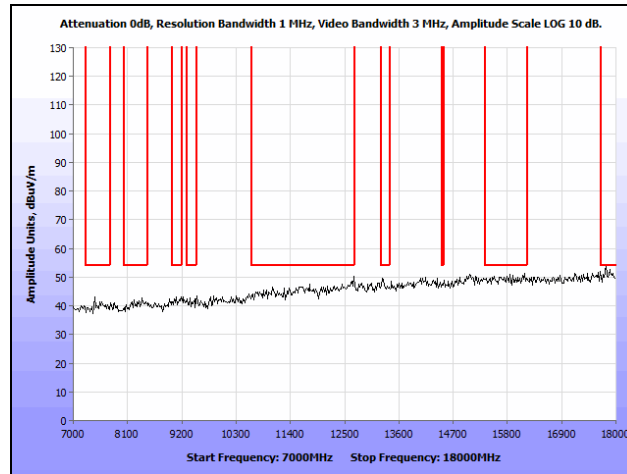
Plot 225. Radiated Spurious Emissions, Low Channel, 802.11a 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



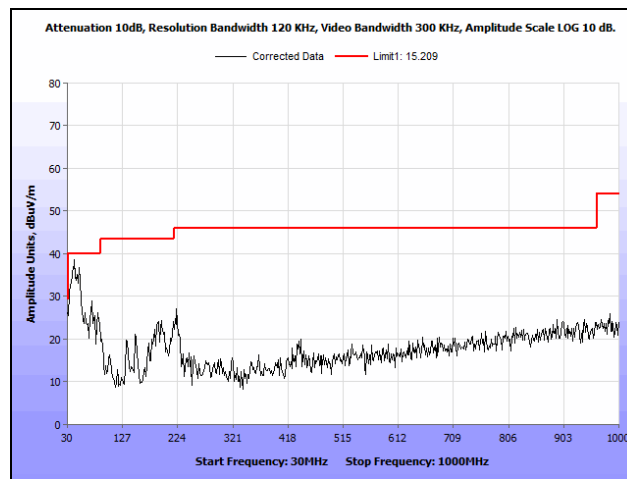
Plot 226. Radiated Spurious Emissions, Low Channel, 802.11a 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



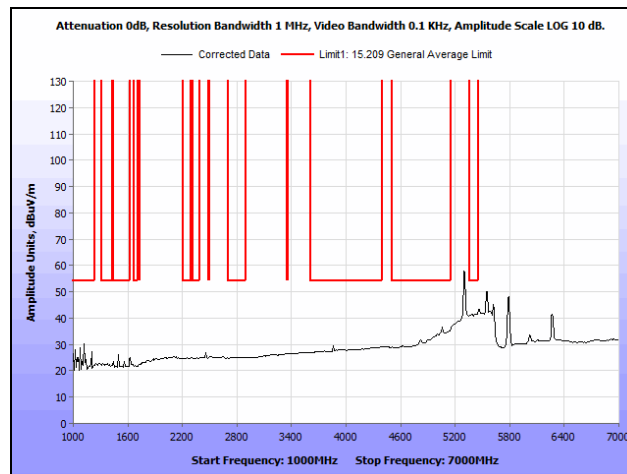
Plot 227. Radiated Spurious Emissions, Low Channel, 802.11a 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA



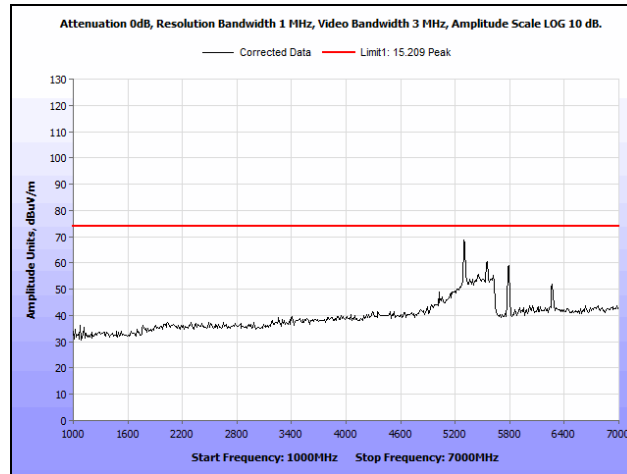
Plot 228. Radiated Spurious Emissions, Low Channel, 802.11a 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA



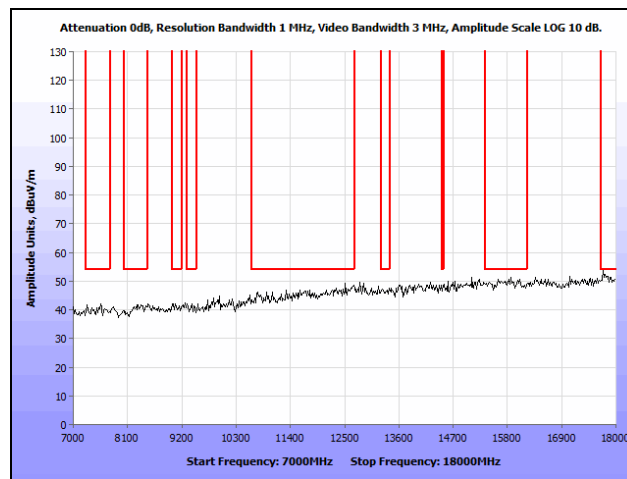
Plot 229. Radiated Spurious Emissions, Mid Channel, 802.11a 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



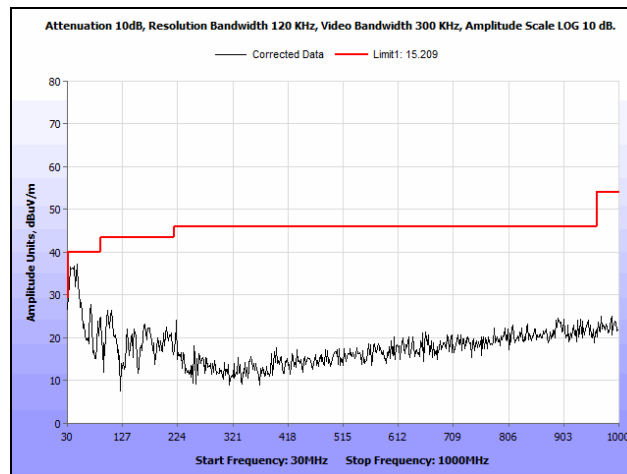
Plot 230. Radiated Spurious Emissions, Mid Channel, 802.11a 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



Plot 231. Radiated Spurious Emissions, Mid Channel, 802.11a 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA

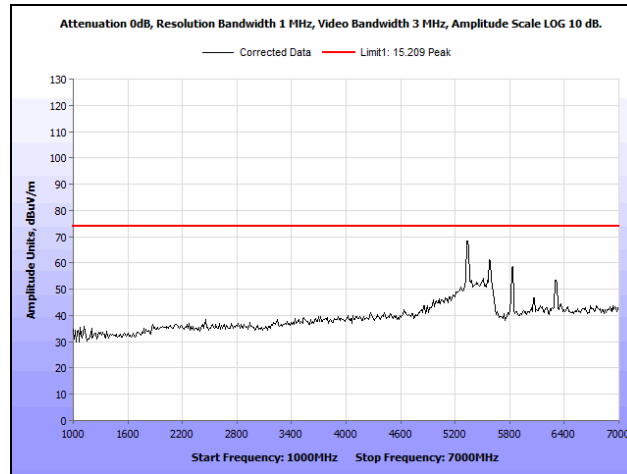


Plot 232. Radiated Spurious Emissions, Mid Channel, 802.11a 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA

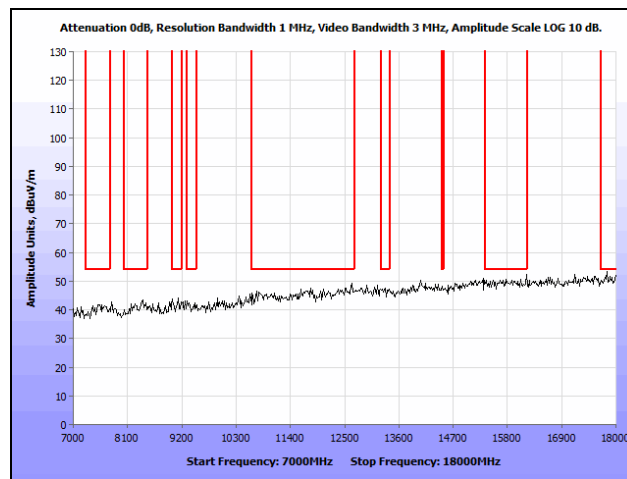


Plot 233. Radiated Spurious Emissions, High Channel, 802.11a 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



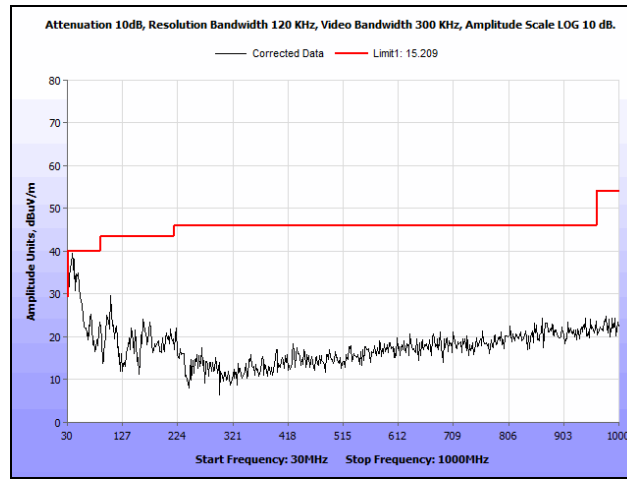


Plot 234. Radiated Spurious Emissions, High Channel, 802.11a 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA

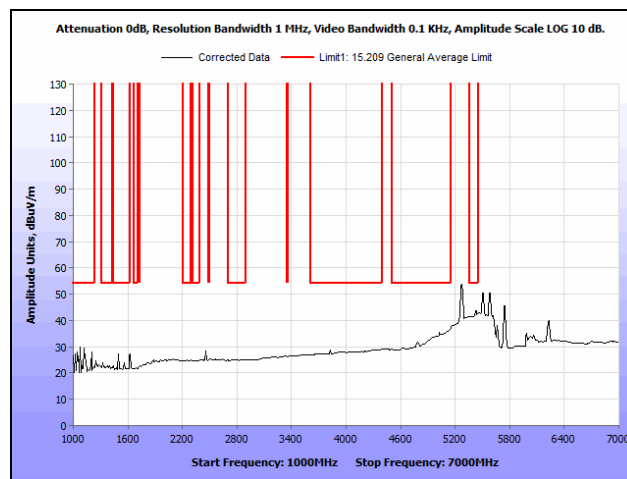


Plot 235. Radiated Spurious Emissions, High Channel, 802.11a 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA

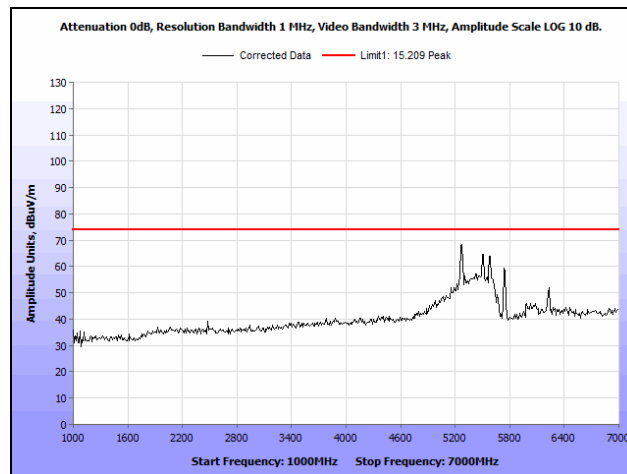
### Radiated Spurious Emissions, 802.11ac 20 MHz, UNII 3, ANT-BG080-NM, OODA



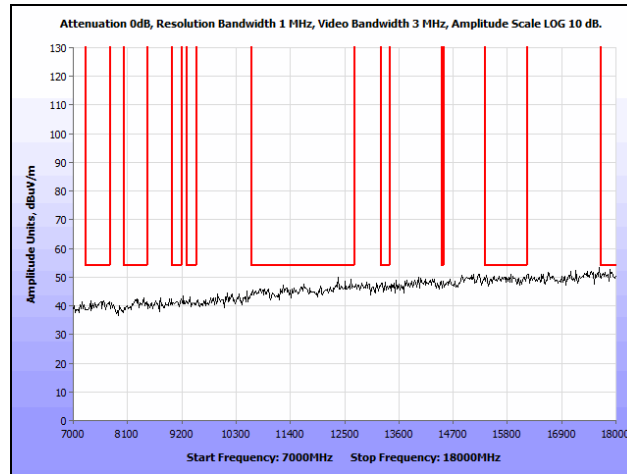
Plot 236. Radiated Spurious Emissions, Low Channel, 802.11ac 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



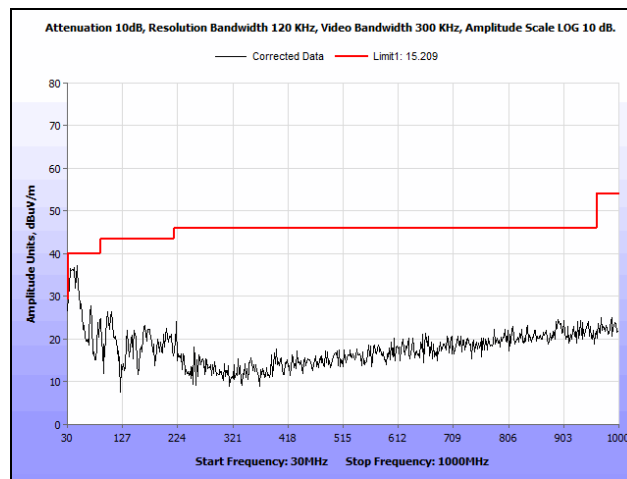
Plot 237. Radiated Spurious Emissions, Low Channel, 802.11ac 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



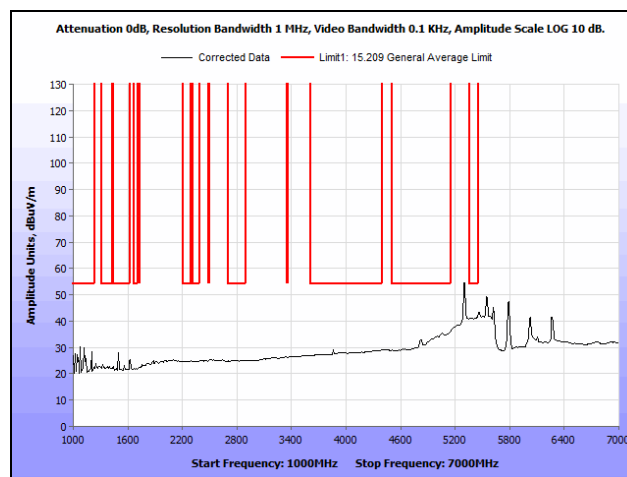
Plot 238. Radiated Spurious Emissions, Low Channel, 802.11ac 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA



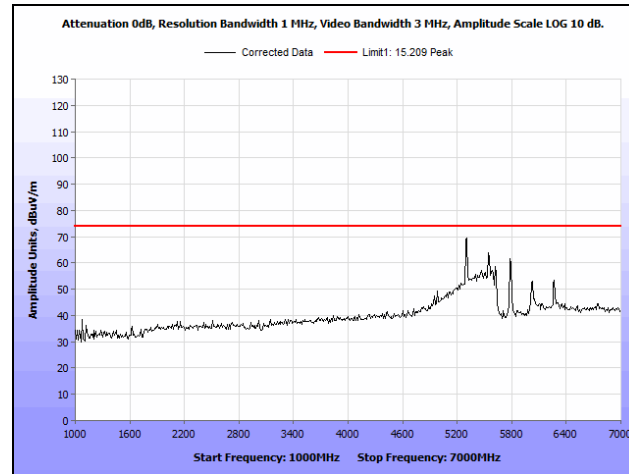
Plot 239. Radiated Spurious Emissions, Low Channel, 802.11ac 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA



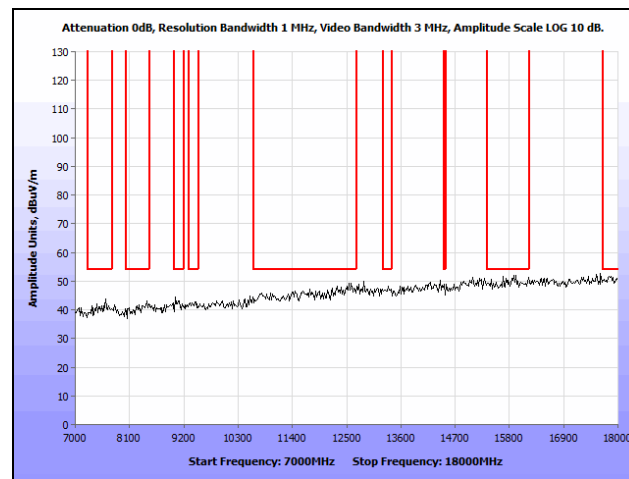
Plot 240. Radiated Spurious Emissions, Mid Channel, 802.11ac 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



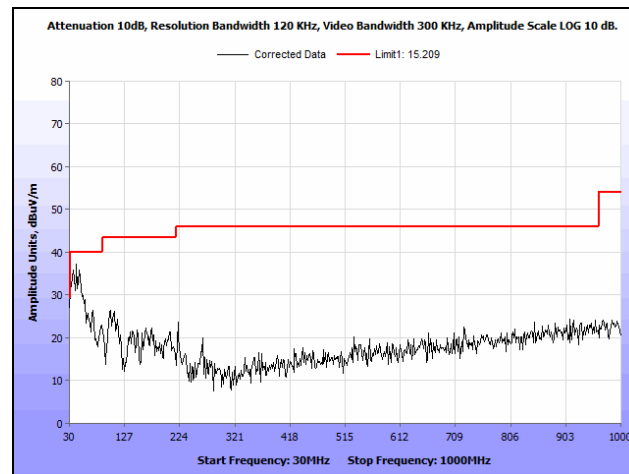
Plot 241. Radiated Spurious Emissions, Mid Channel, 802.11ac 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



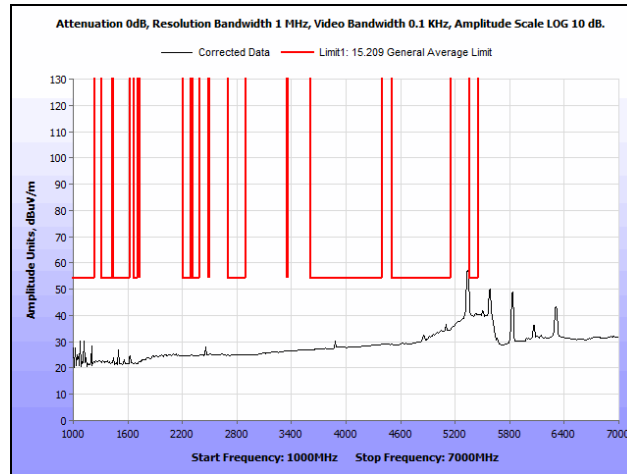
Plot 242. Radiated Spurious Emissions, Mid Channel, 802.11ac 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA



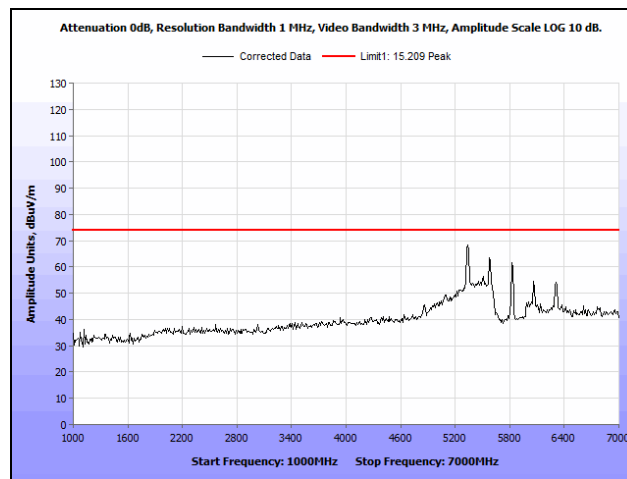
Plot 243. Radiated Spurious Emissions, Mid Channel, 802.11ac 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA



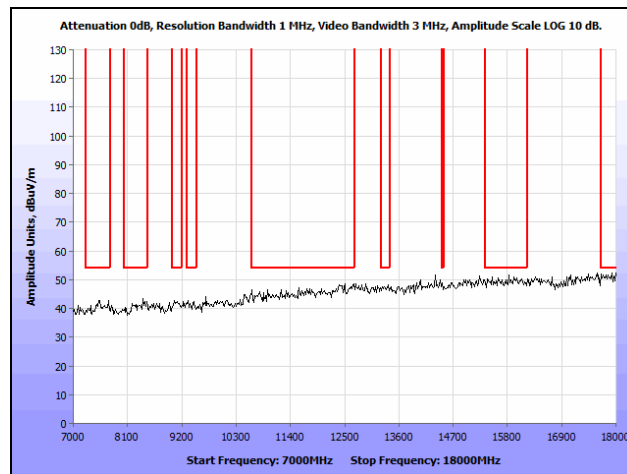
Plot 244. Radiated Spurious Emissions, High Channel, 802.11ac 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



**Plot 245. Radiated Spurious Emissions, High Channel, 802.11ac 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA**

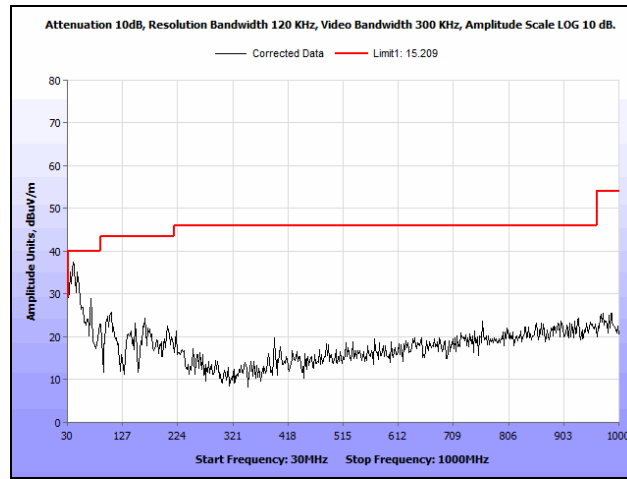


**Plot 246. Radiated Spurious Emissions, High Channel, 802.11ac 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**

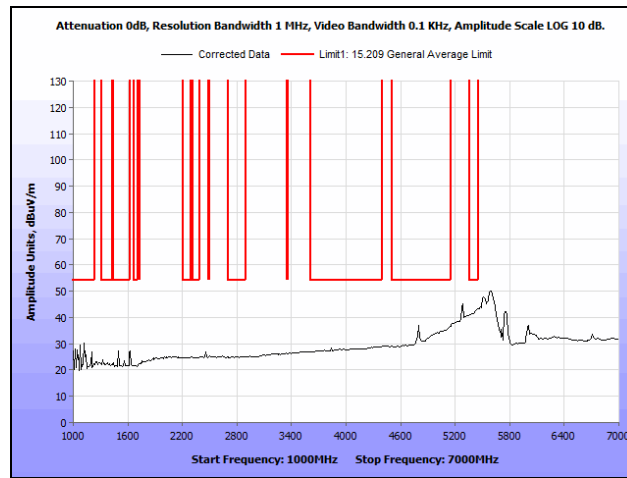


**Plot 247. Radiated Spurious Emissions, High Channel, 802.11ac 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA**

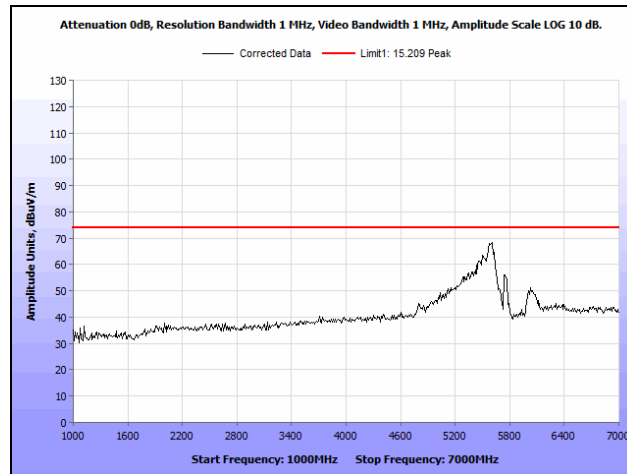
**Radiated Spurious Emissions, 802.11ac 40 MHz, UNII 3, ANT-BG080-NM, OODA**



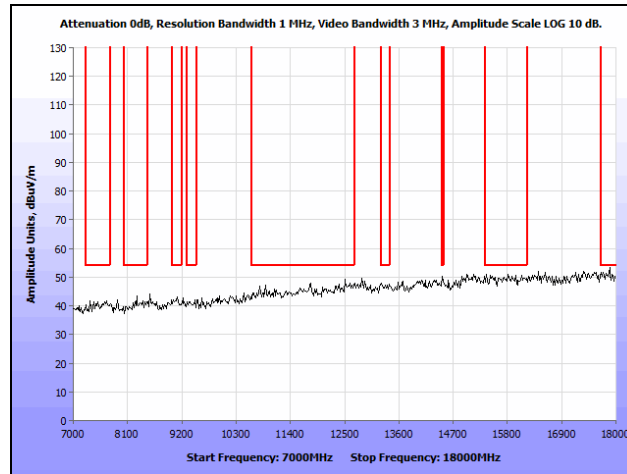
**Plot 248. Radiated Spurious Emissions, Low Channel, 802.11ac 40 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA**



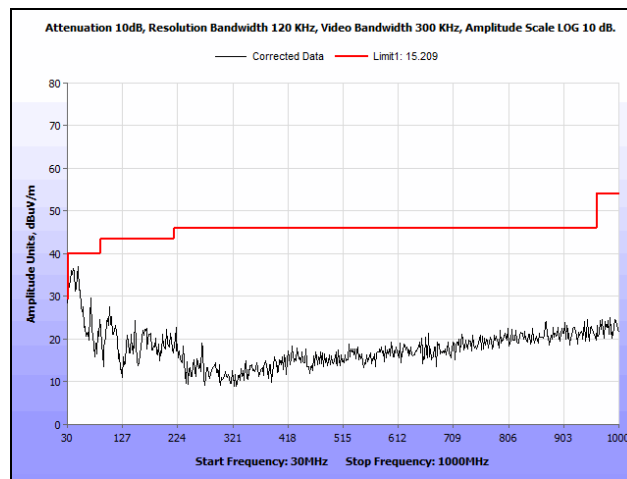
**Plot 249. Radiated Spurious Emissions, Low Channel, 802.11ac 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA**



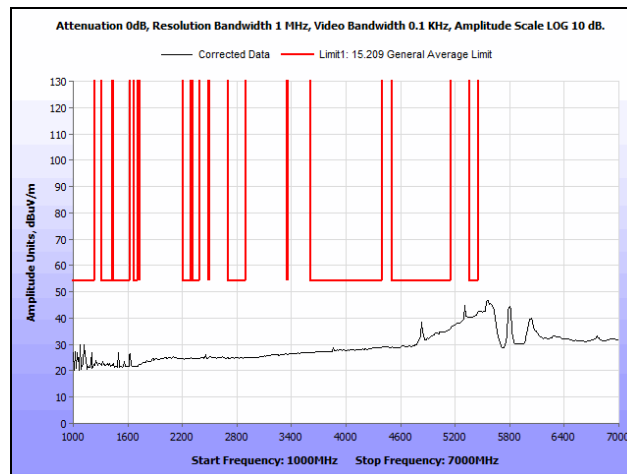
**Plot 250. Radiated Spurious Emissions, Low Channel, 802.11ac 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**



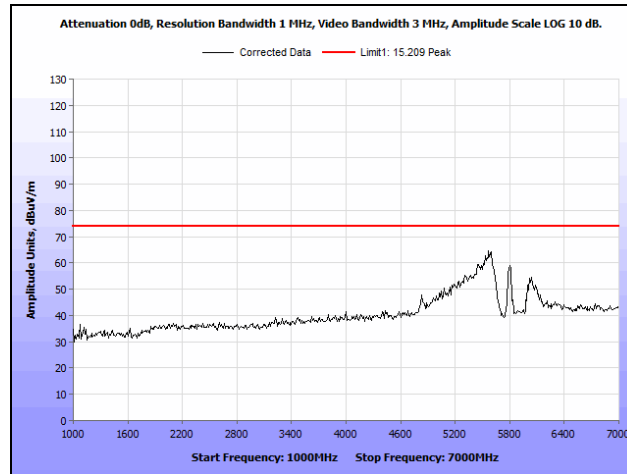
Plot 251. Radiated Spurious Emissions, Low Channel, 802.11ac 40 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA



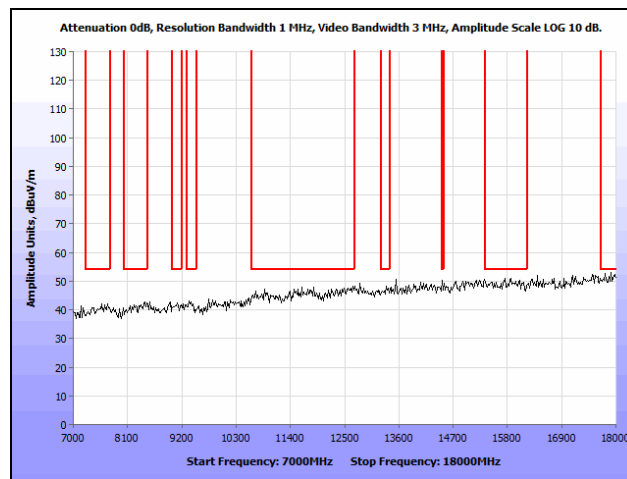
Plot 252. Radiated Spurious Emissions, High Channel, 802.11ac 40 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



Plot 253. Radiated Spurious Emissions, High Channel, 802.11ac 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



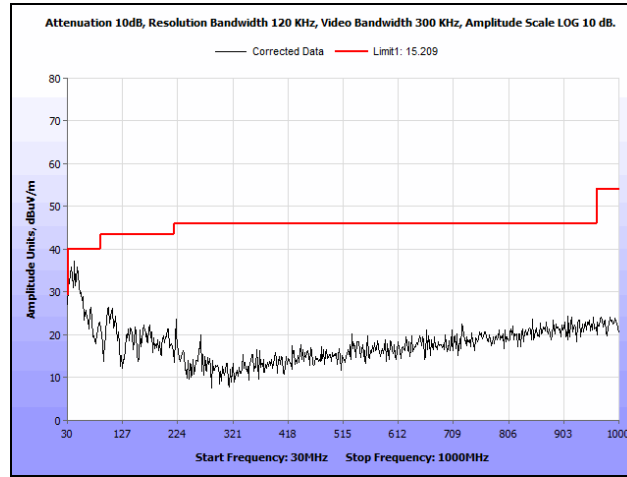
**Plot 254. Radiated Spurious Emissions, High Channel, 802.11ac 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**



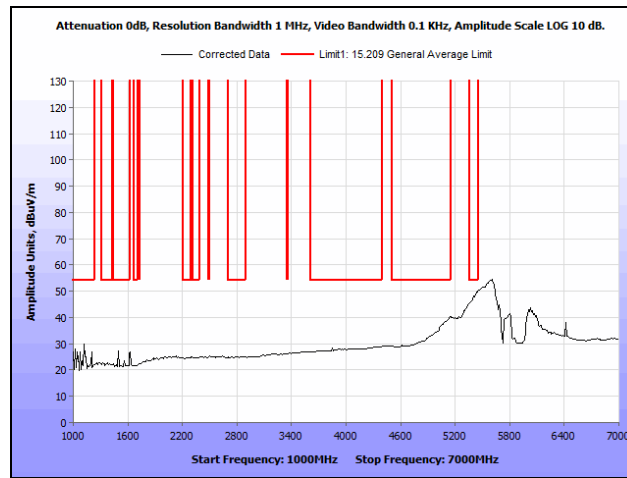
**Plot 255. Radiated Spurious Emissions, High Channel, 802.11ac 40 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA**



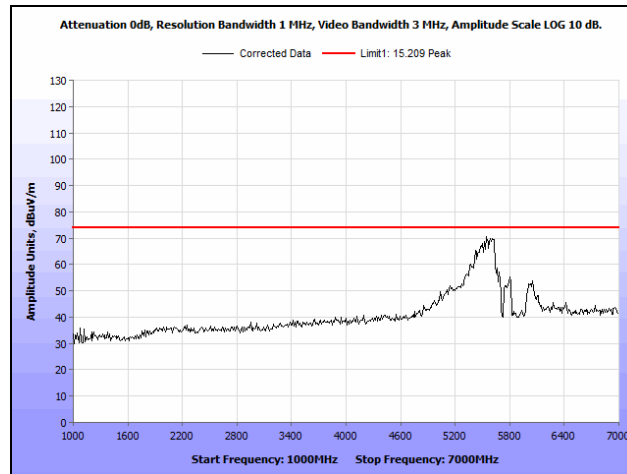
**Radiated Spurious Emissions, 802.11ac 80 MHz, UNII 3, ANT-BG080-NM, OODA**



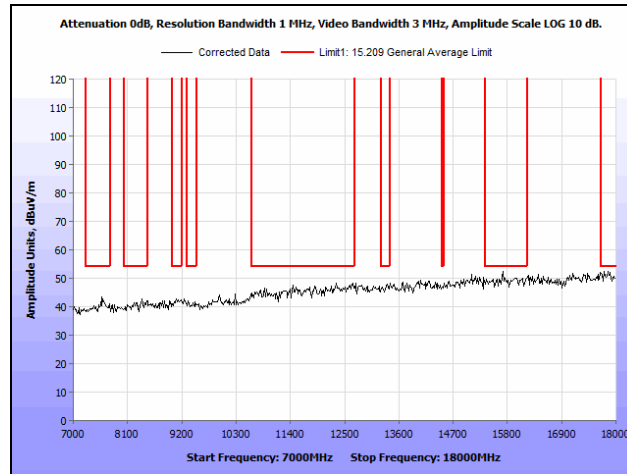
**Plot 256. Radiated Spurious Emissions, High Channel, 802.11ac 80 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA**



**Plot 257. Radiated Spurious Emissions, High Channel, 802.11ac 80 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA**

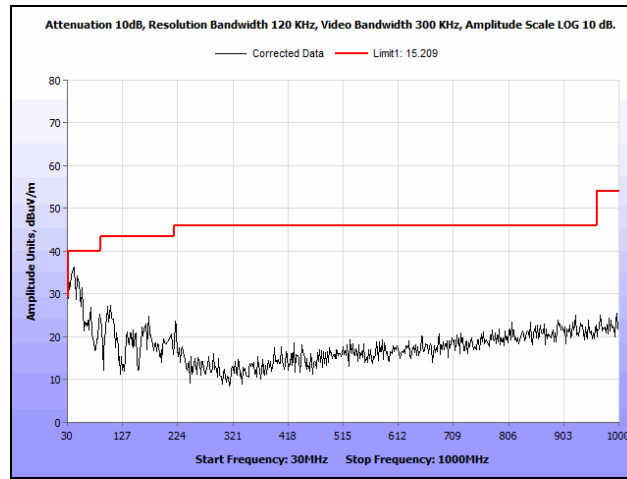


**Plot 258. Radiated Spurious Emissions, High Channel, 802.11ac 80 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**

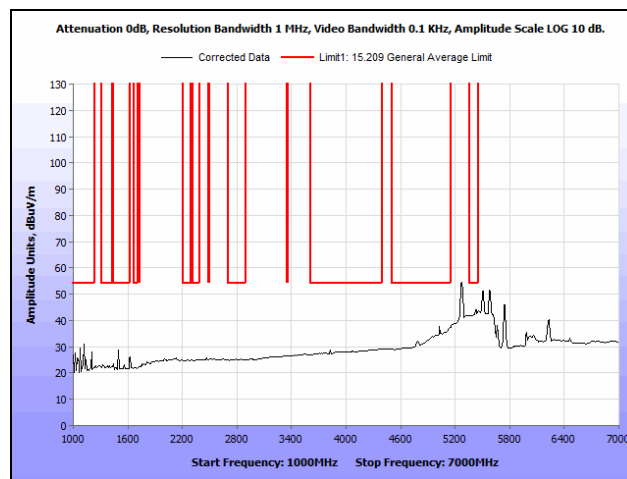


Plot 259. Radiated Spurious Emissions, High Channel, 802.11ac 80 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA

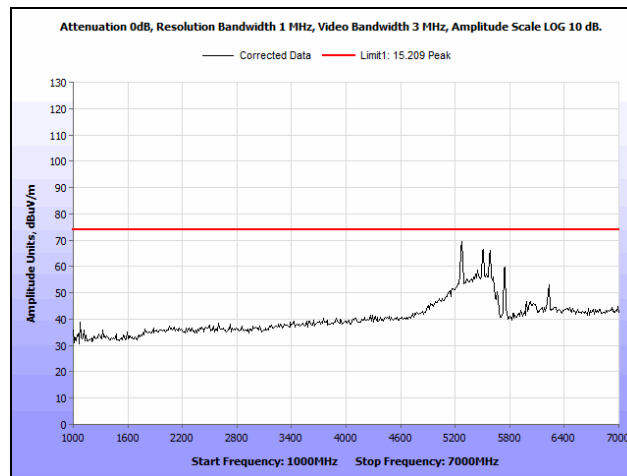
**Radiated Spurious Emissions, 802.11n 20 MHz, UNII 3, ANT-BG080-NM, OODA**



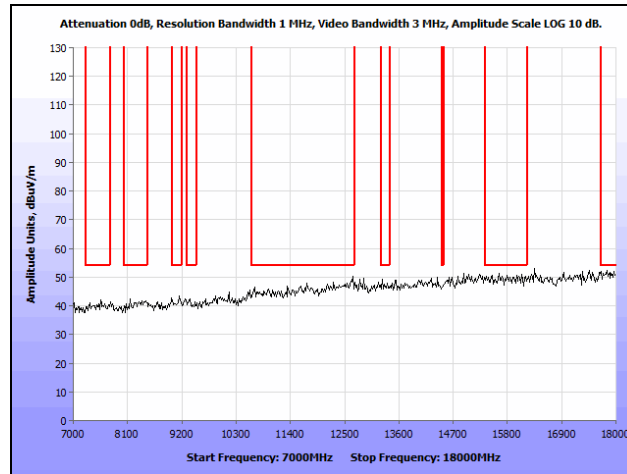
**Plot 260. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA**



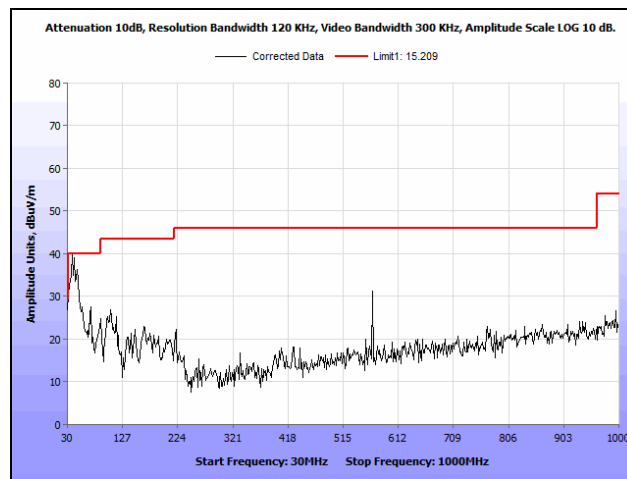
**Plot 261. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA**



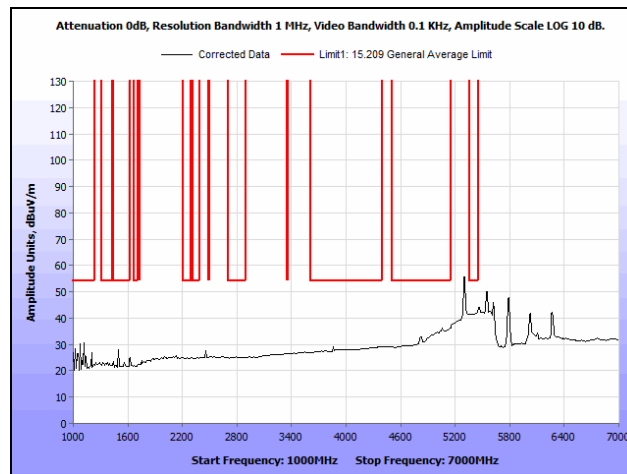
**Plot 262. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**



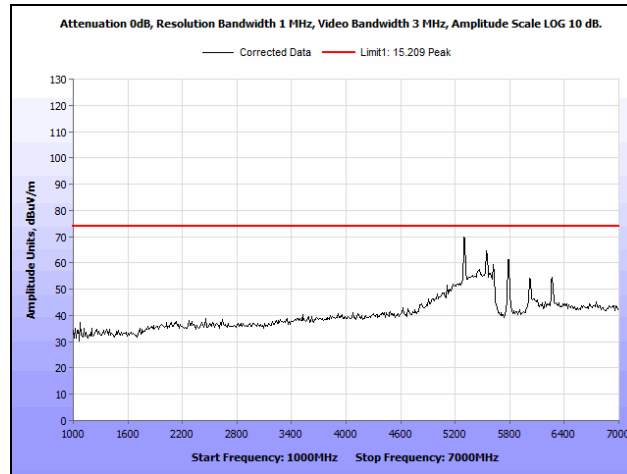
Plot 263. Radiated Spurious Emissions, Low Channel, 802.11n 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA



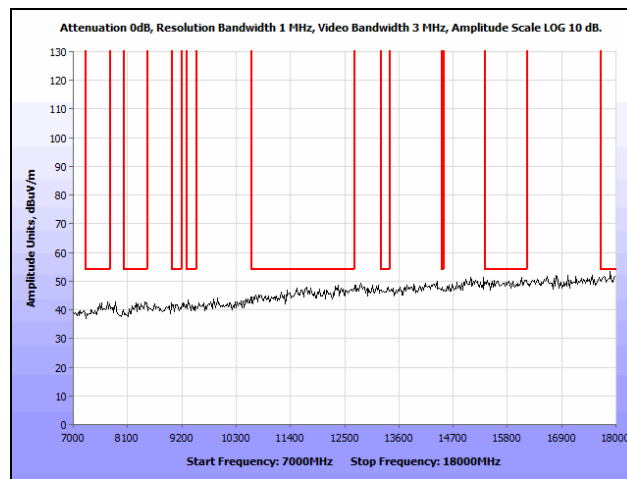
Plot 264. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



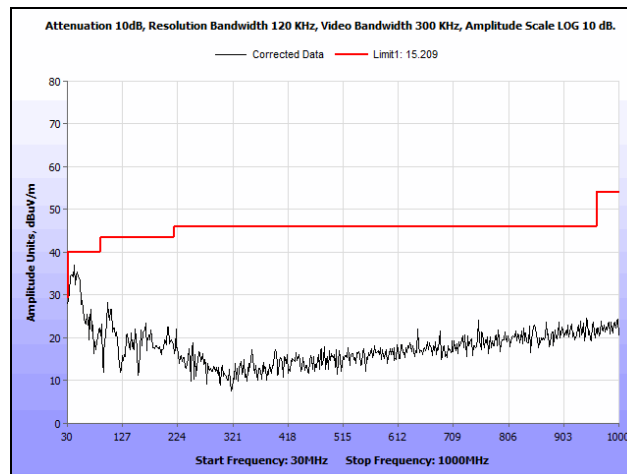
Plot 265. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



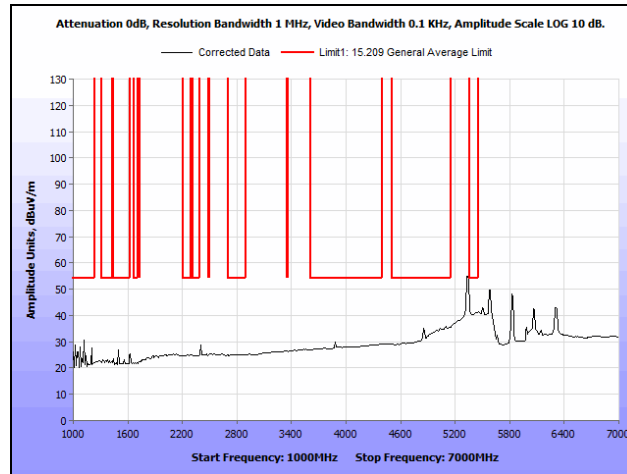
Plot 266. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA



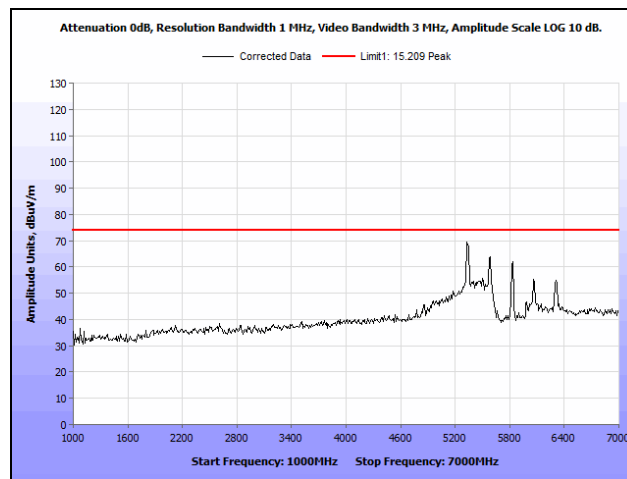
Plot 267. Radiated Spurious Emissions, Mid Channel, 802.11n 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA



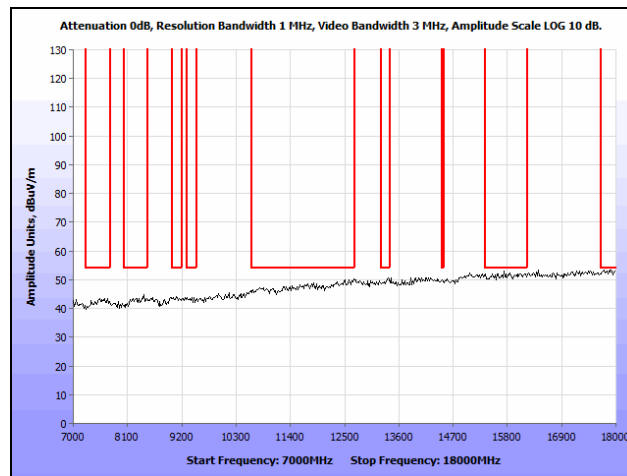
Plot 268. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA



**Plot 269. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA**

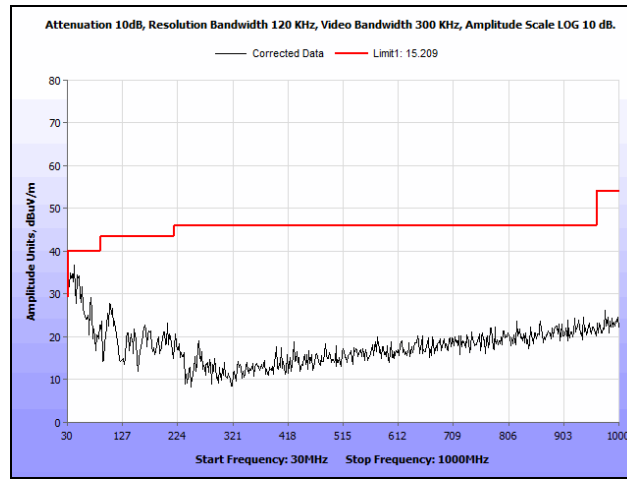


**Plot 270. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**

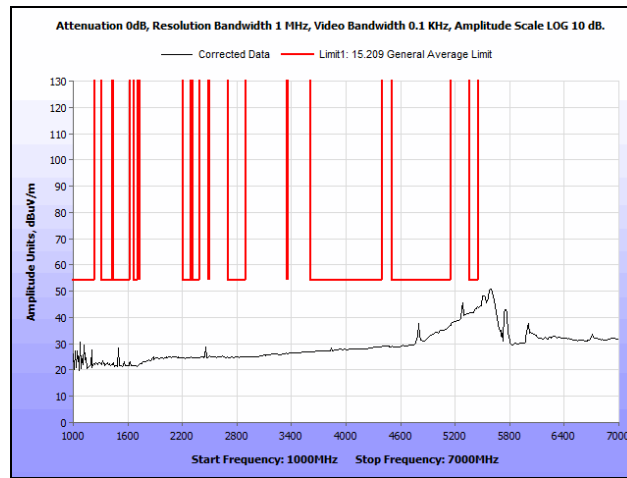


**Plot 271. Radiated Spurious Emissions, High Channel, 802.11n 20 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA**

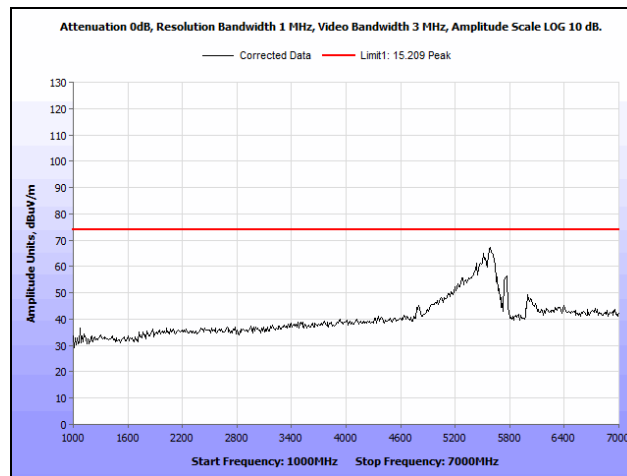
**Radiated Spurious Emissions, 802.11n 40 MHz, UNII 3, ANT-BG080-NM, OODA**



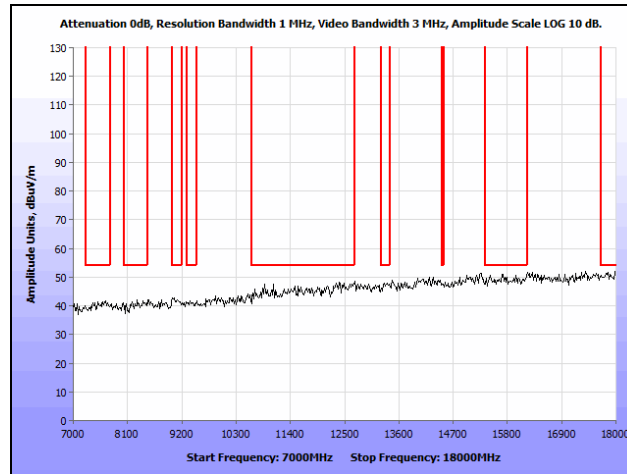
**Plot 272. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA**



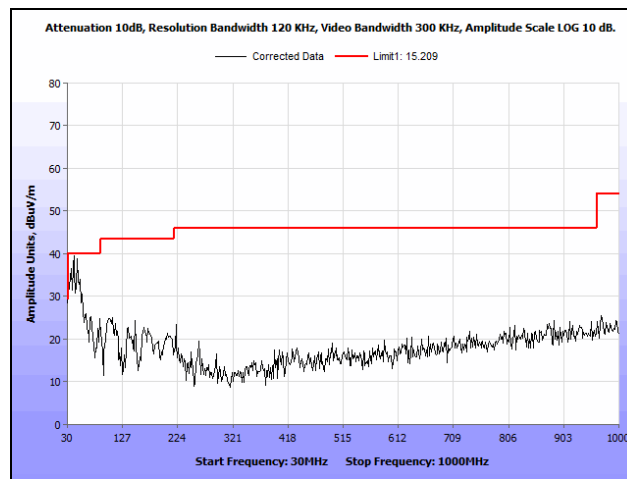
**Plot 273. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA**



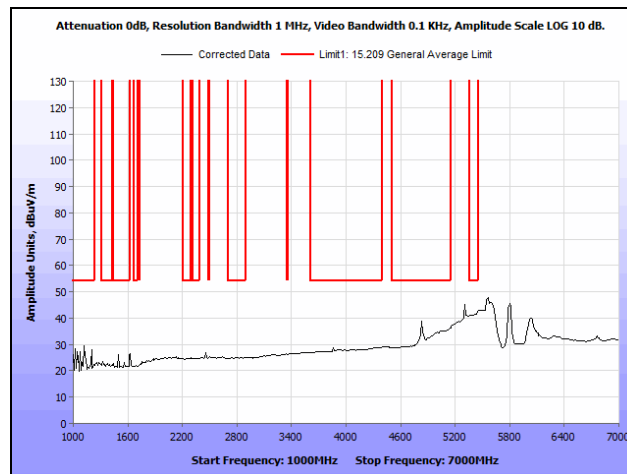
**Plot 274. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**



Plot 275. Radiated Spurious Emissions, Low Channel, 802.11n 40 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA

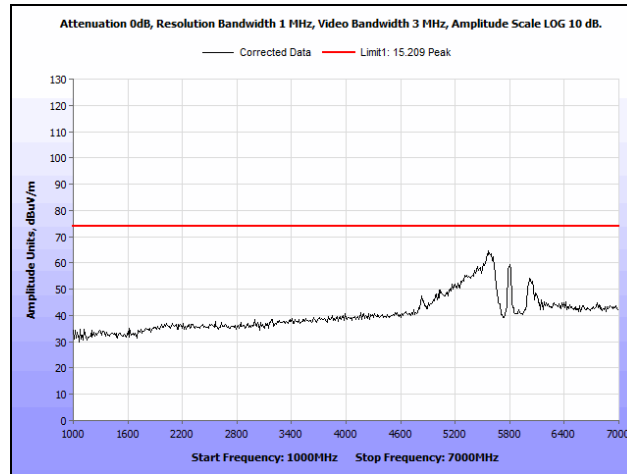


Plot 276. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-BG080-NM, 30 MHz – 1 GHz, UNII 3, OODA

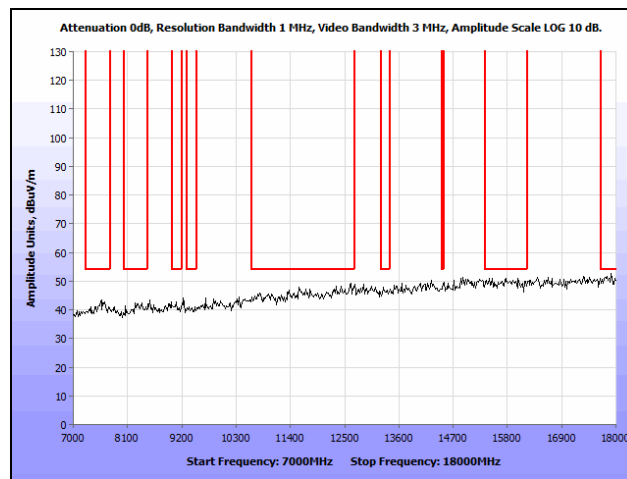


Plot 277. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Avg., UNII 3, OODA



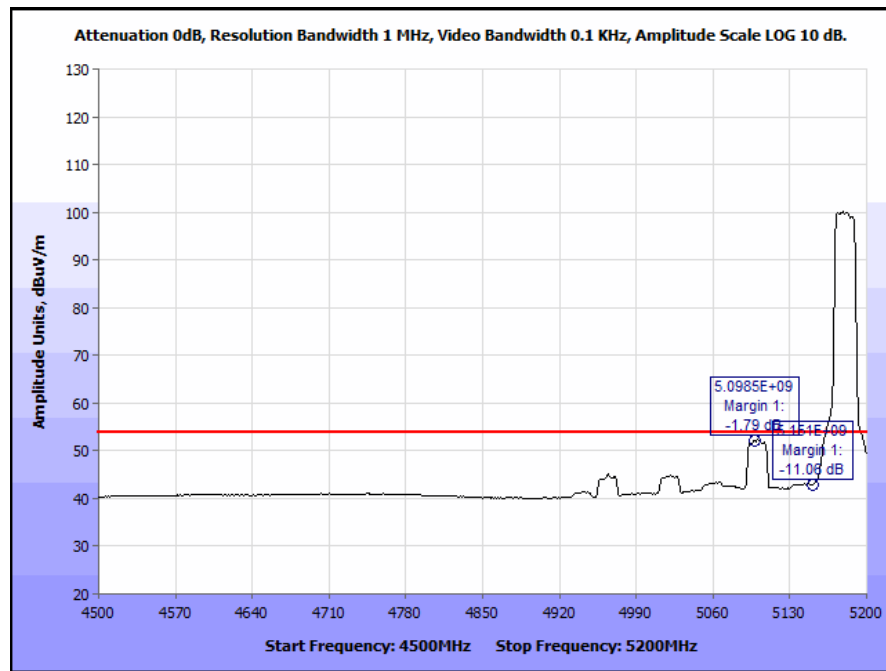


**Plot 278. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-BG080-NM, 1 GHz – 7 GHz, Peak, UNII 3, OODA**

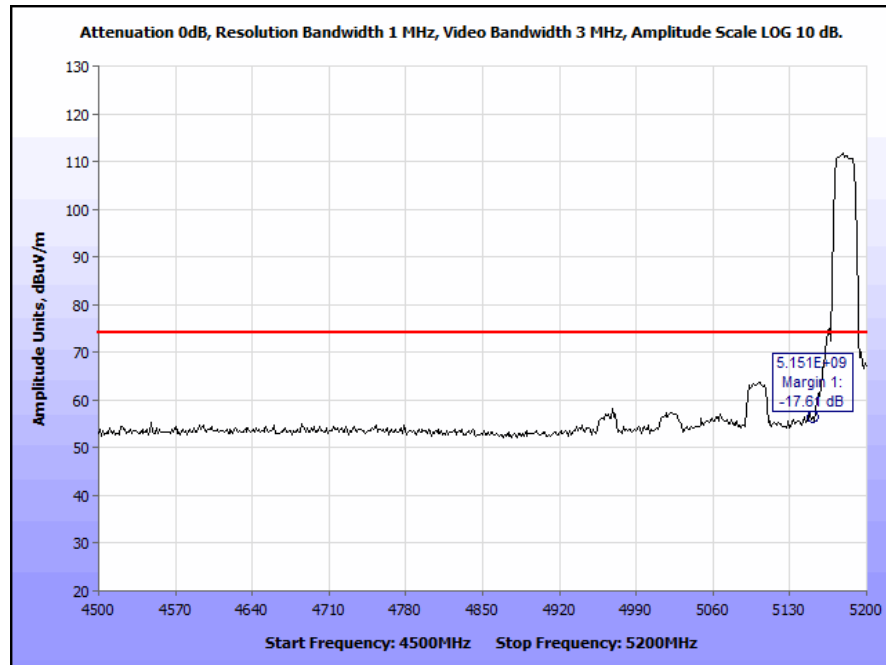


**Plot 279. Radiated Spurious Emissions, High Channel, 802.11n 40 MHz, ANT-BG080-NM, 7 GHz – 18 GHz, UNII 3, OODA**

**Band Edge, 802.11a 20 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5150 Edge**

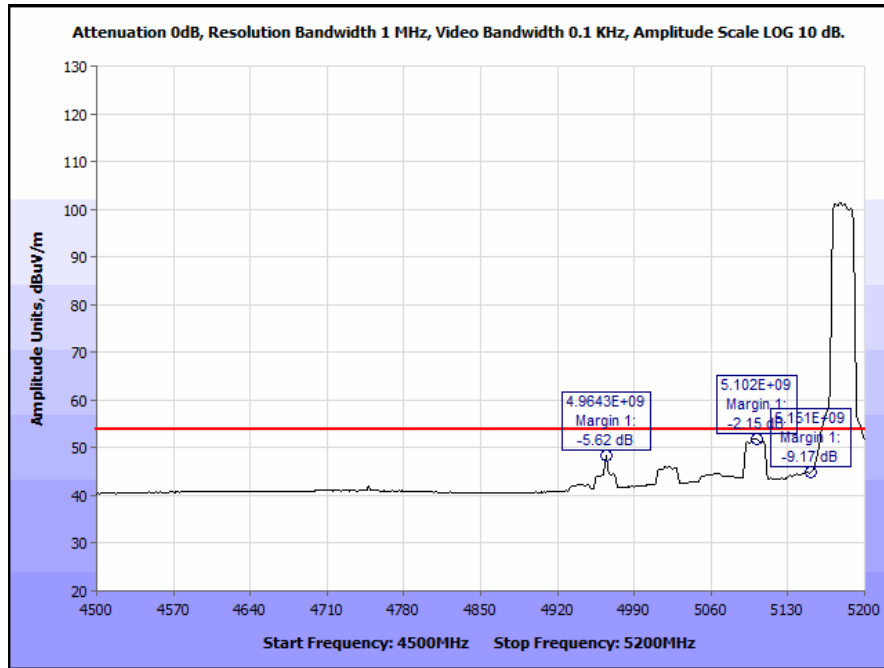


**Plot 280. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11a 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

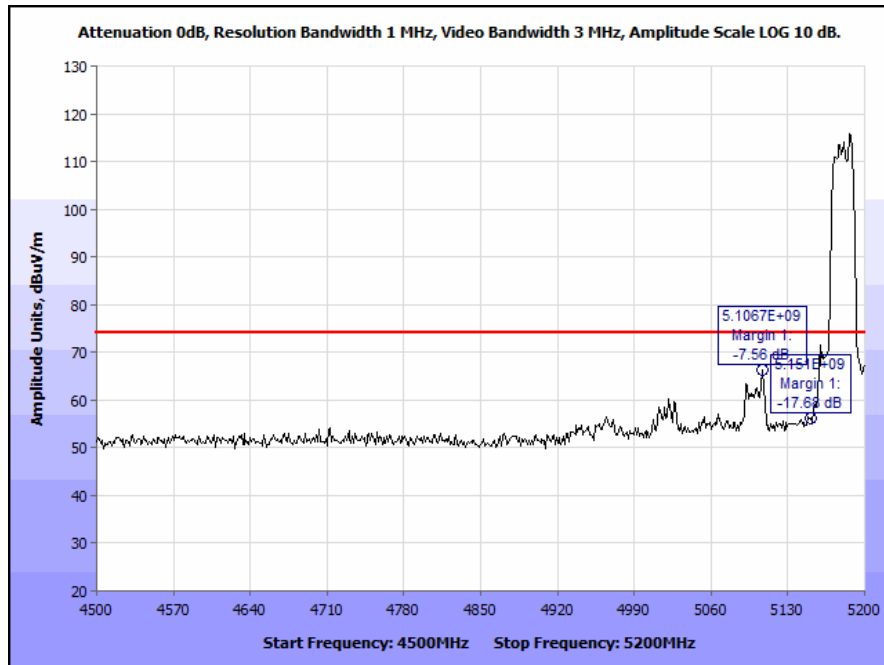


**Plot 281. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11a 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11ac 20 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5150 Edge**

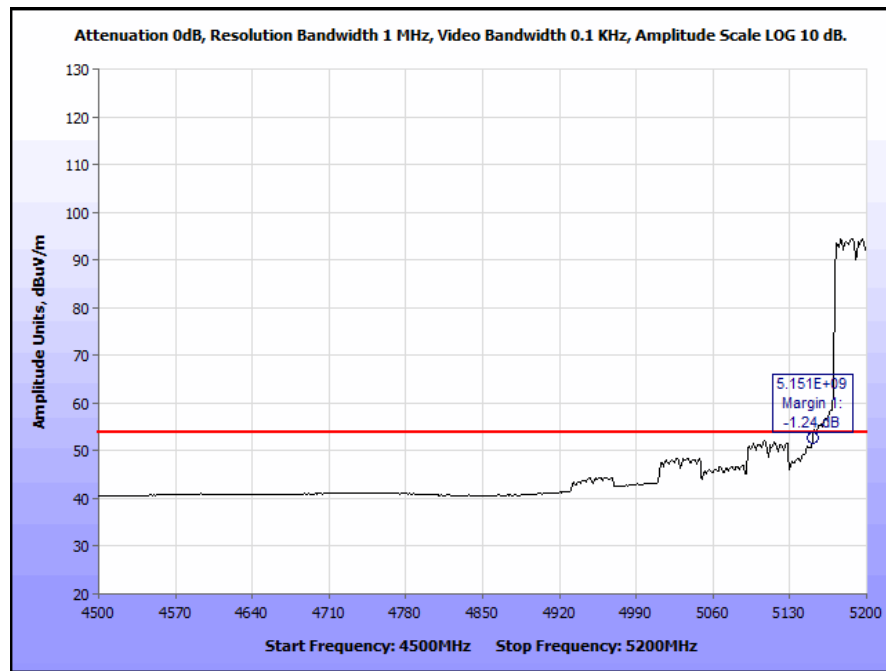


**Plot 282. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11ac 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

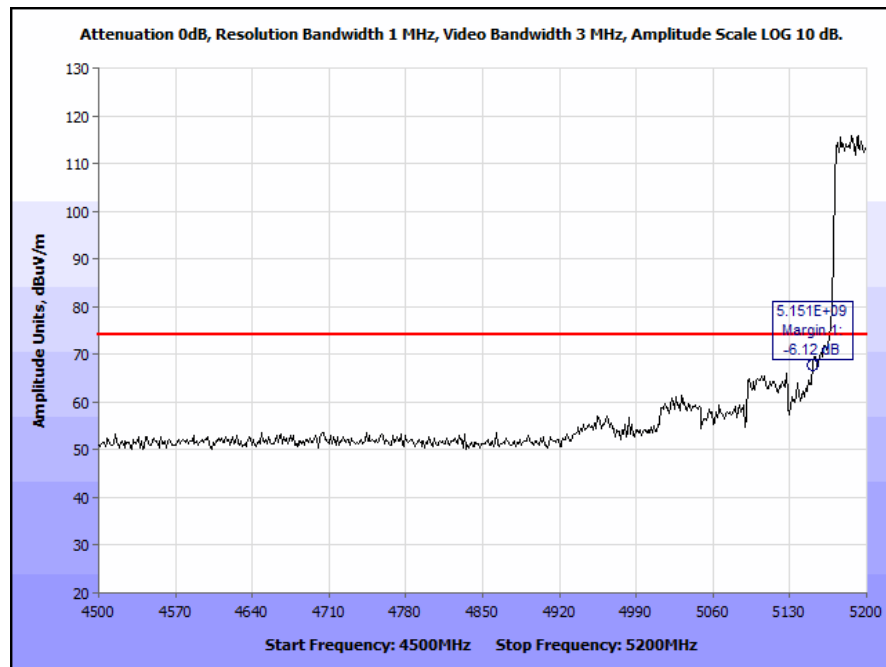


**Plot 283. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11ac 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11ac 40 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5150 Edge**

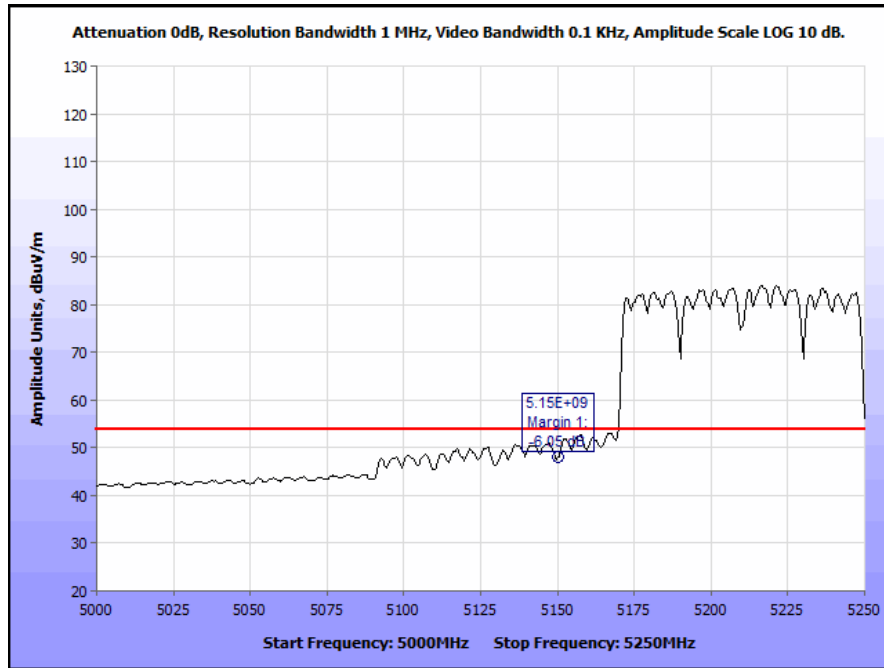


**Plot 284. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11ac 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

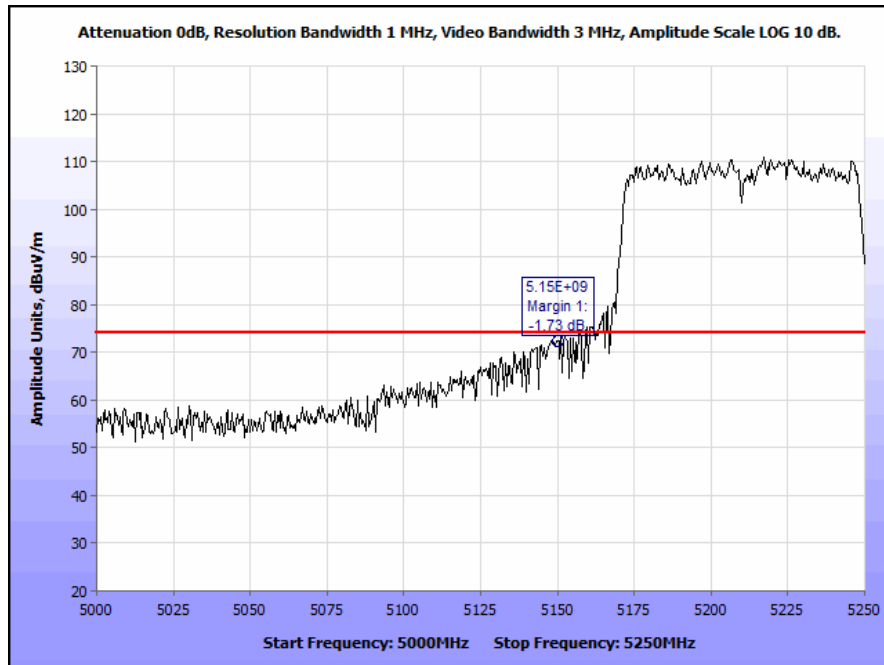


**Plot 285. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11ac 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11ac 80 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5150 Edge**

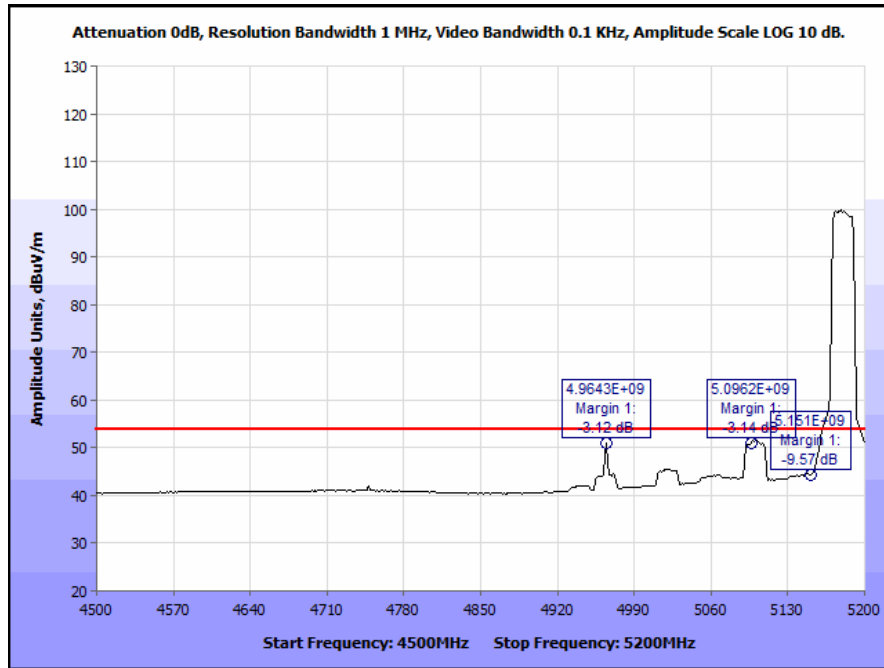


**Plot 286. Radiated Band Edge, 5230 MHz @ 5150 MHz, 802.11ac 80 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

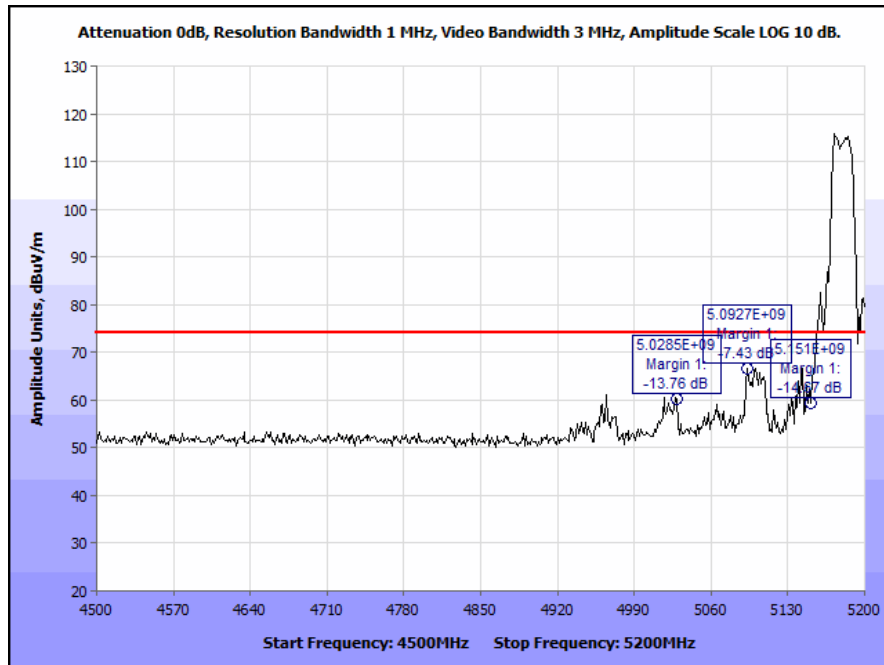


**Plot 287. Radiated Band Edge, 5230 MHz @ 5150 MHz, 802.11ac 80 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5150 Edge**

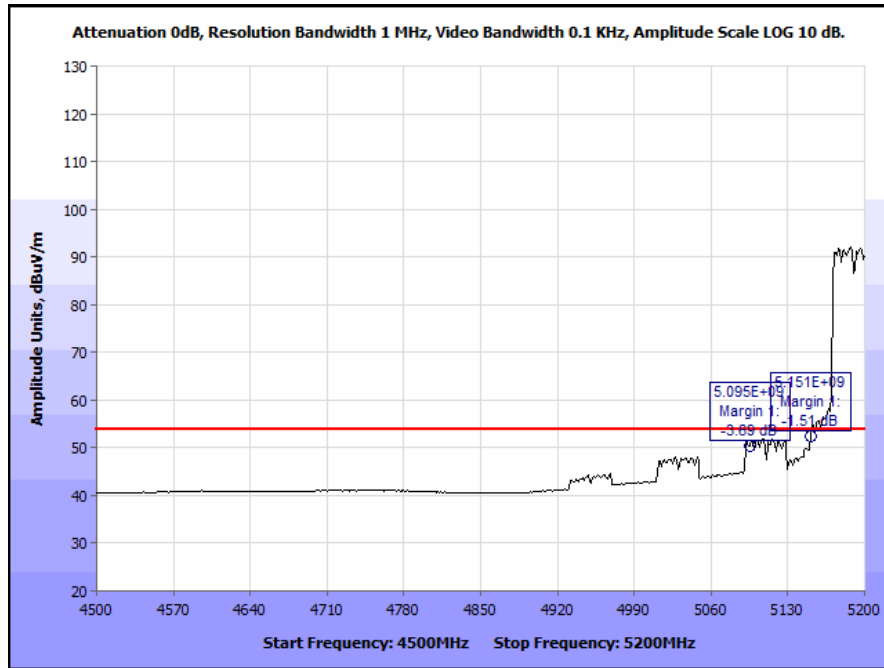


**Plot 288. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11n 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

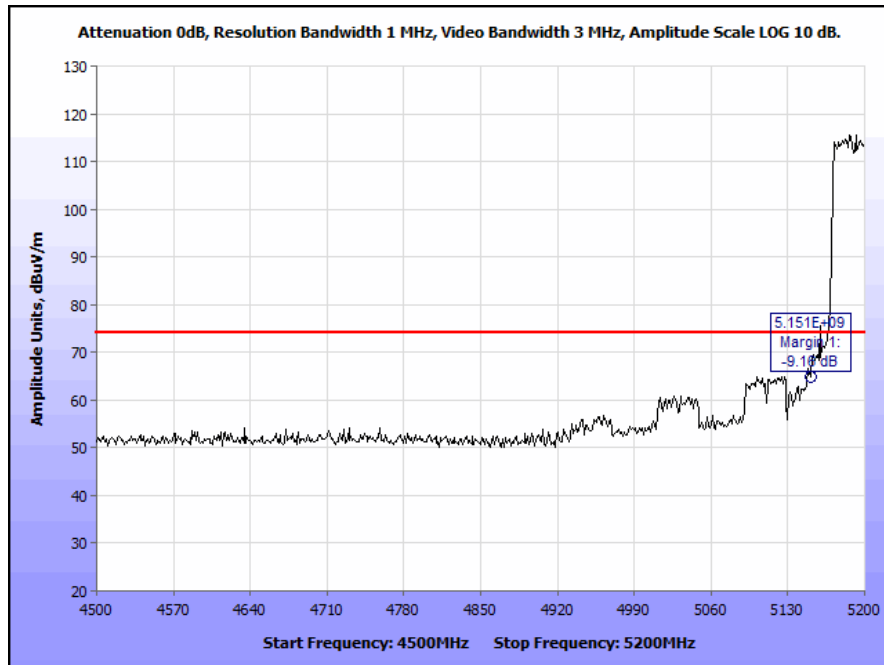


**Plot 289. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11n 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5150 Edge**

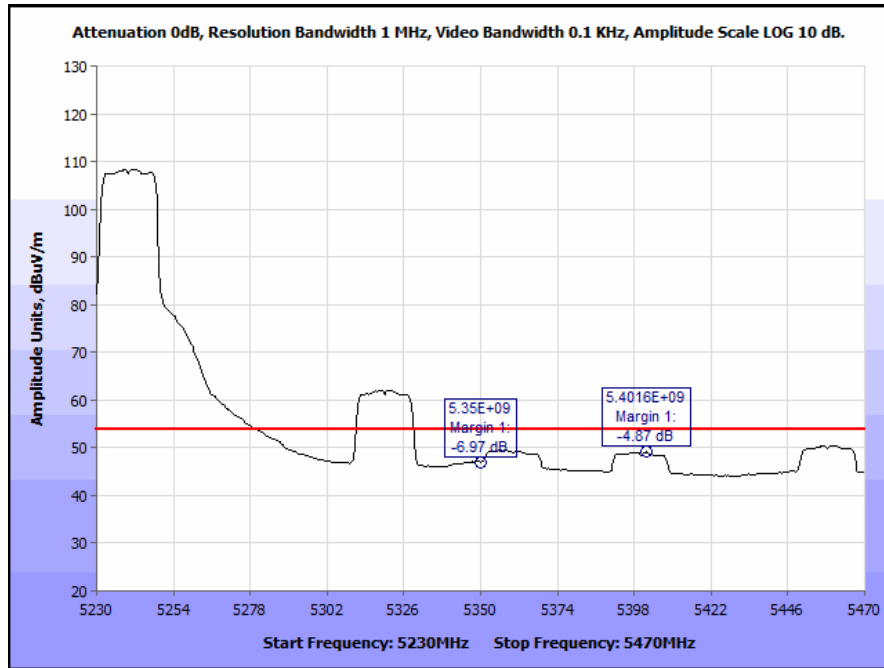


**Plot 290. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11n 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

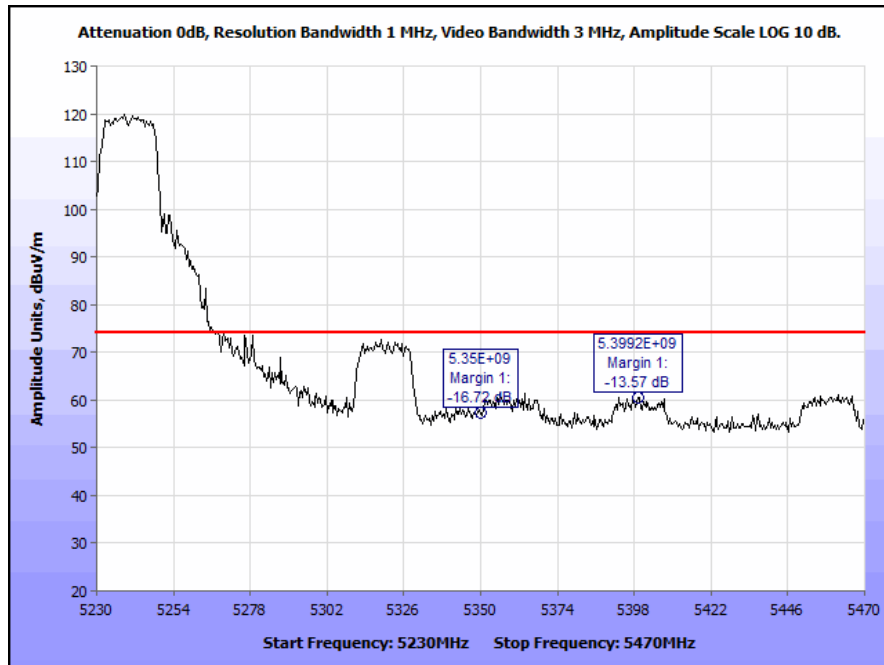


**Plot 291. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11n 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11a 20 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5350 Edge**



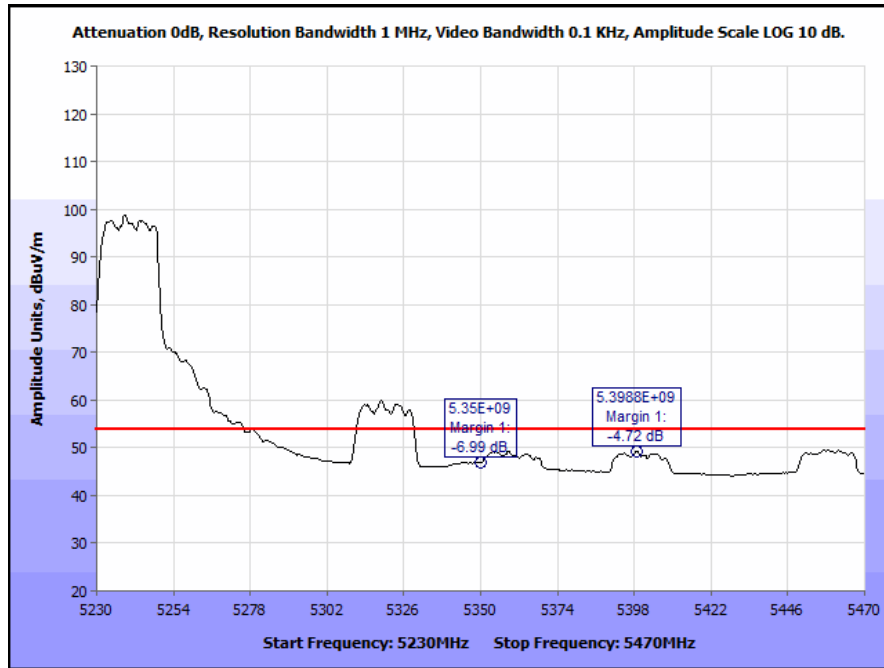
**Plot 292. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11a 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**



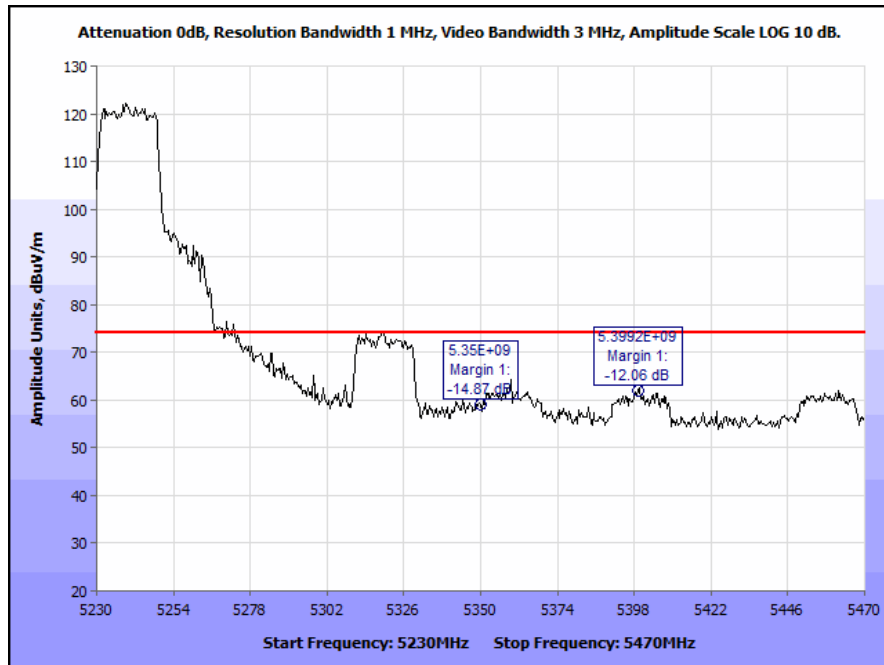
**Plot 293. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11a 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**



**Band Edge, 802.11ac 20 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5350 Edge**

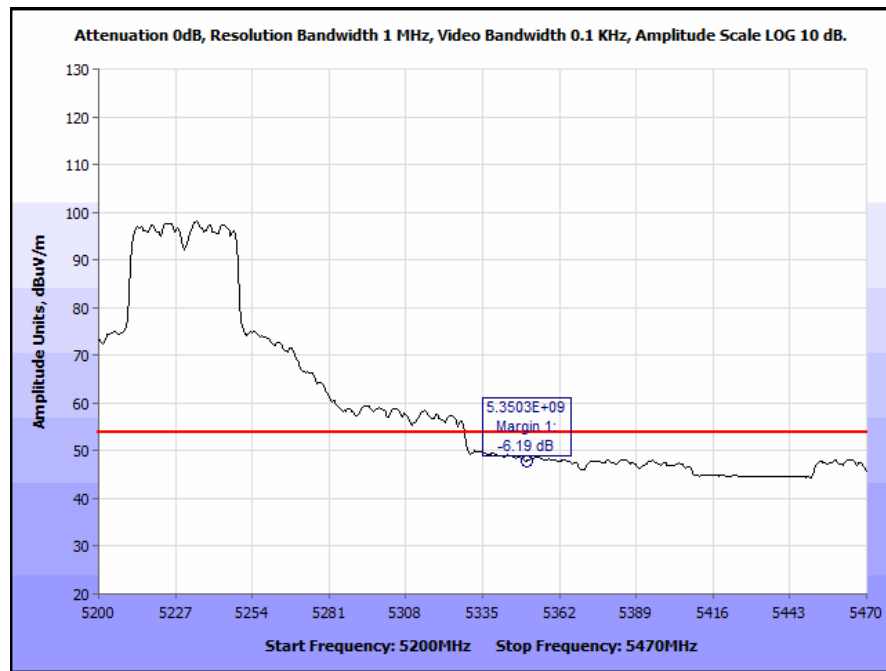


**Plot 294. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11ac 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

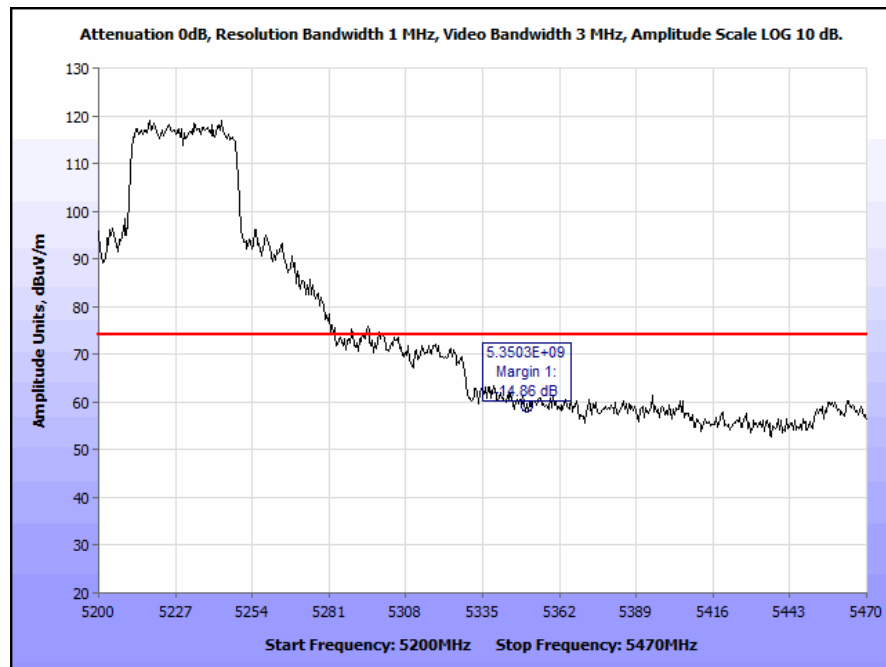


**Plot 295. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11ac 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11ac 40 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5350 Edge**

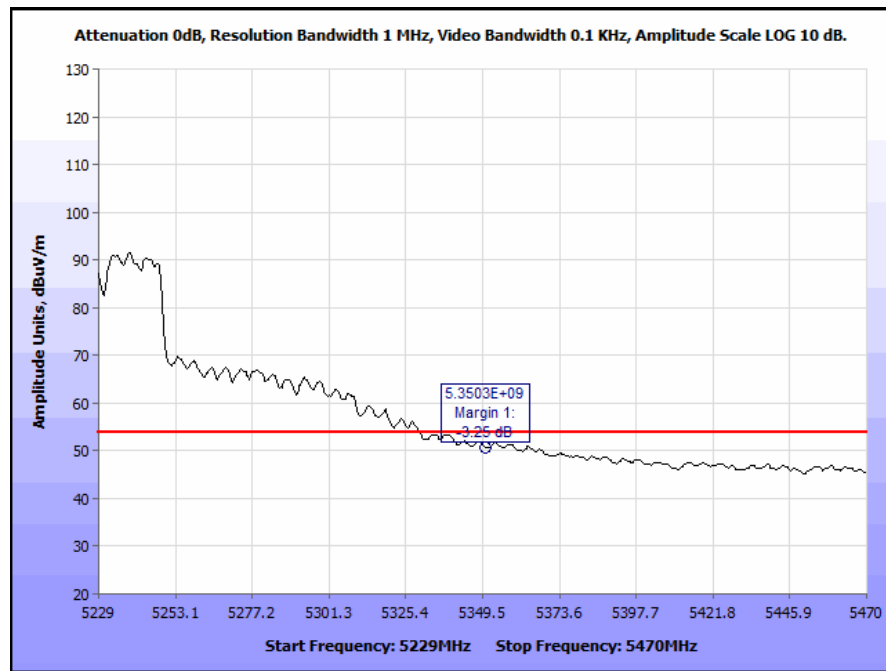


**Plot 296. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11ac 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

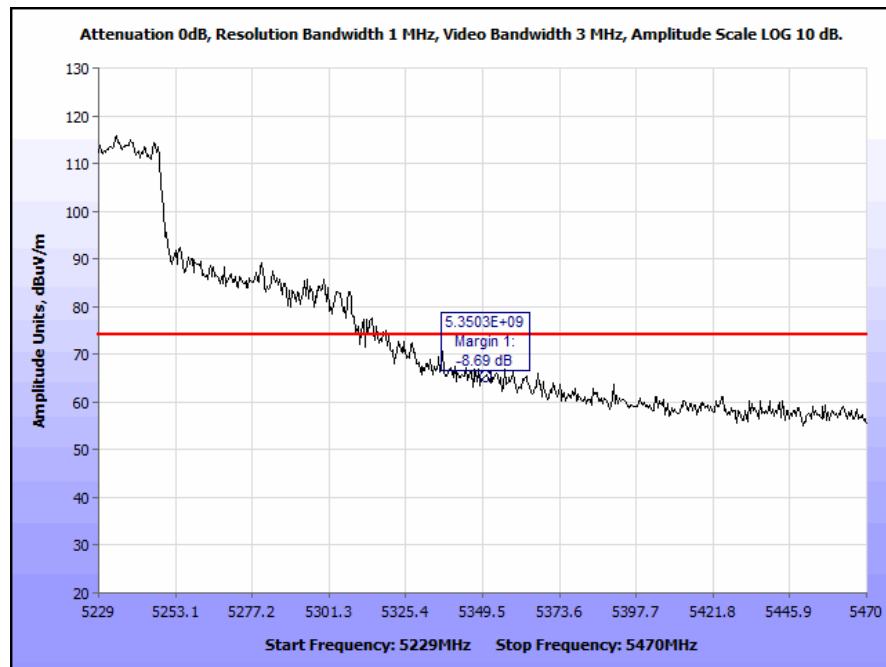


**Plot 297. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11ac 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11ac 80 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5350 Edge**

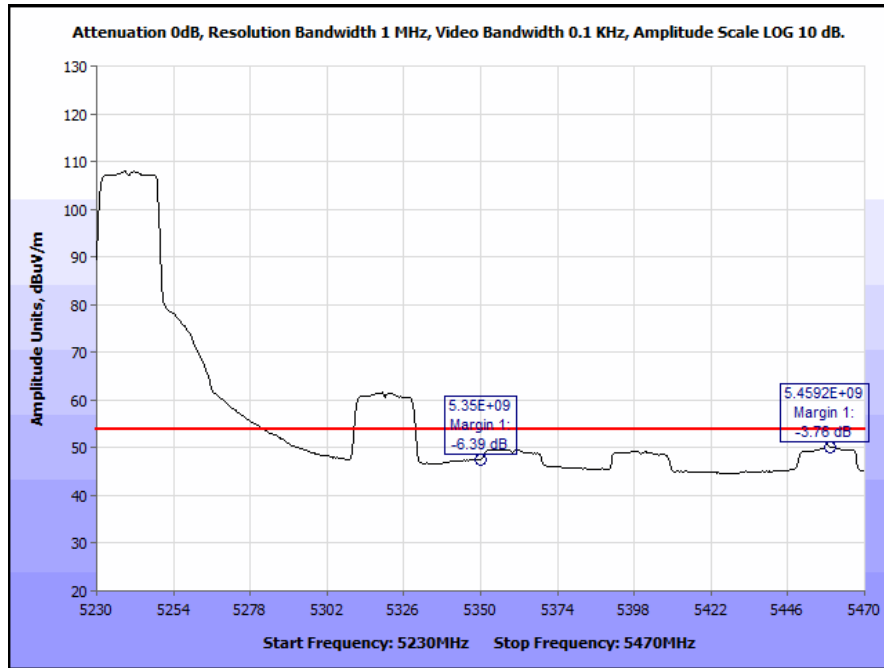


**Plot 298. Radiated Band Edge, 5210 MHz @ 5350 MHz, 802.11ac 80 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

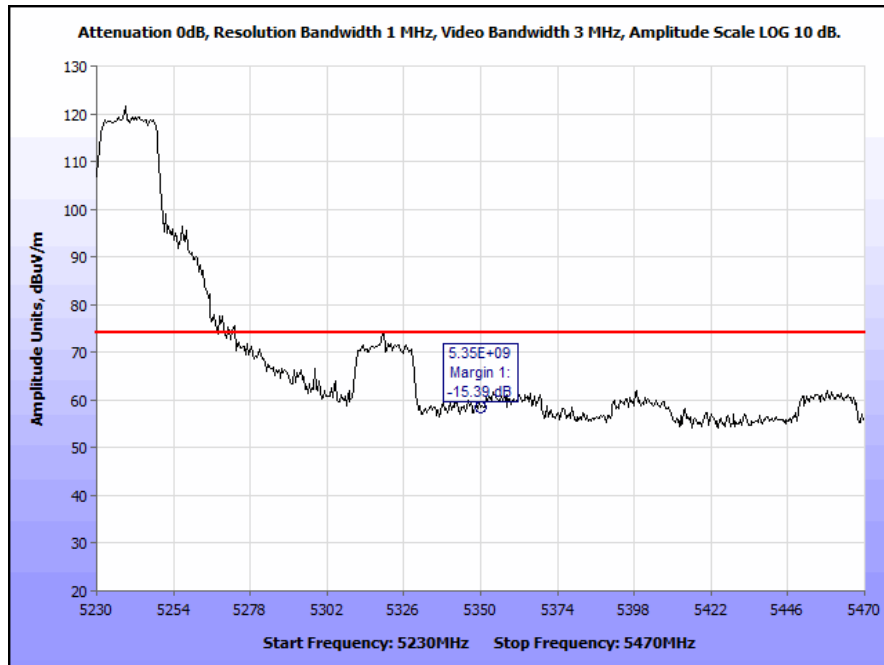


**Plot 299. Radiated Band Edge, 5210 MHz @ 5350 MHz, 802.11ac 80 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5350 Edge**

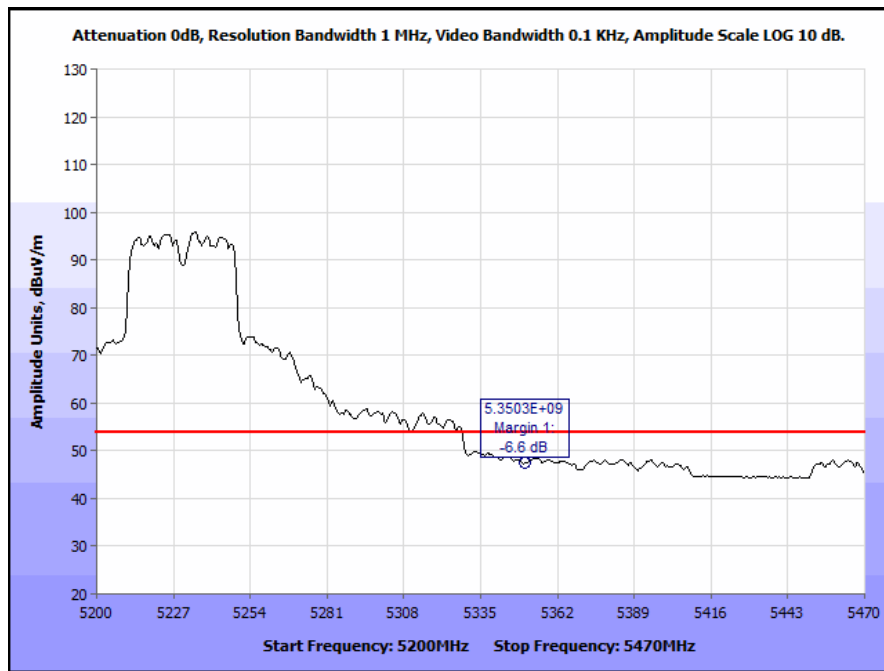


**Plot 300. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11n 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

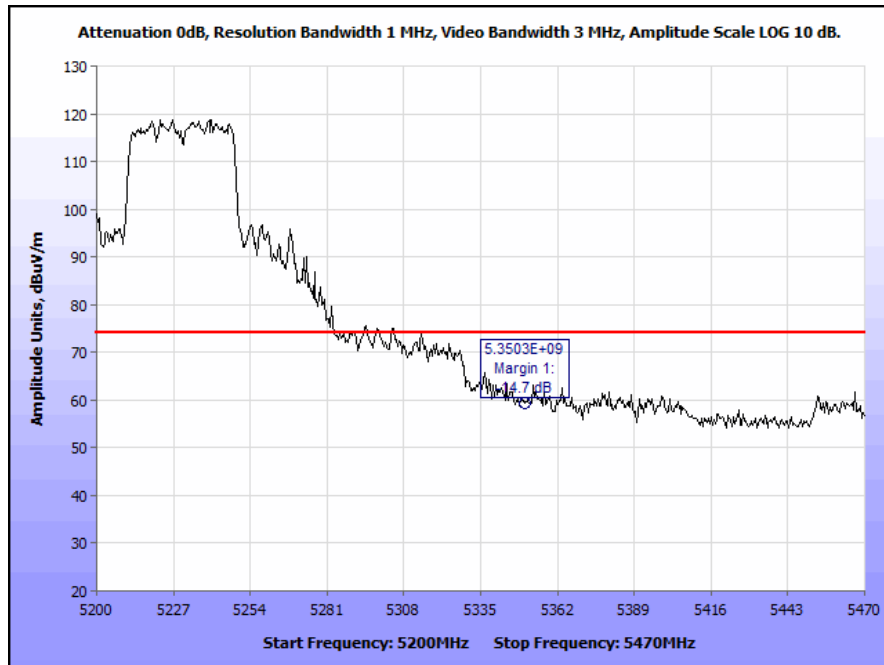


**Plot 301. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11n 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, UNII 1, DMPA, 5350 Edge**

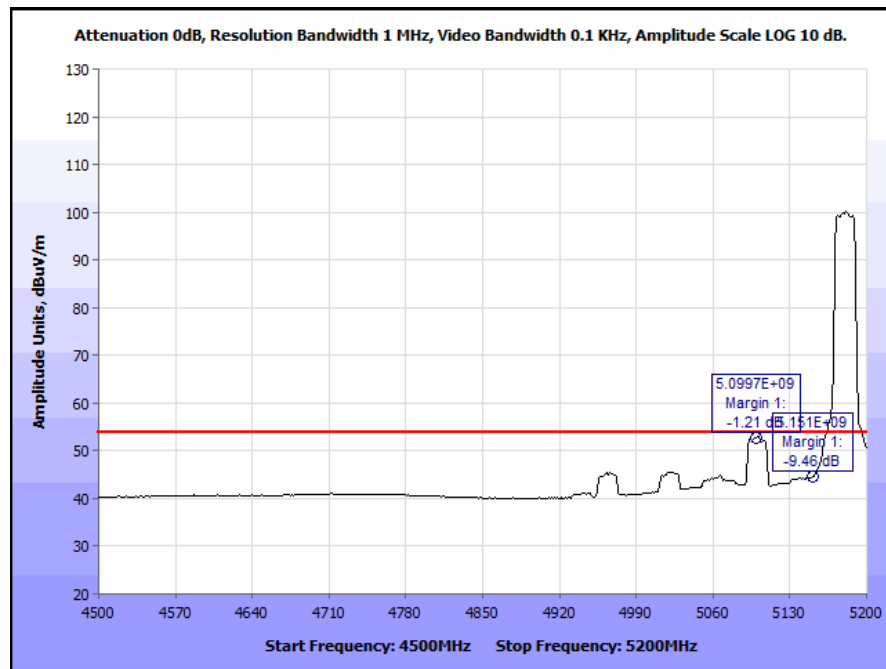


**Plot 302. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11n 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 1, DMPA**

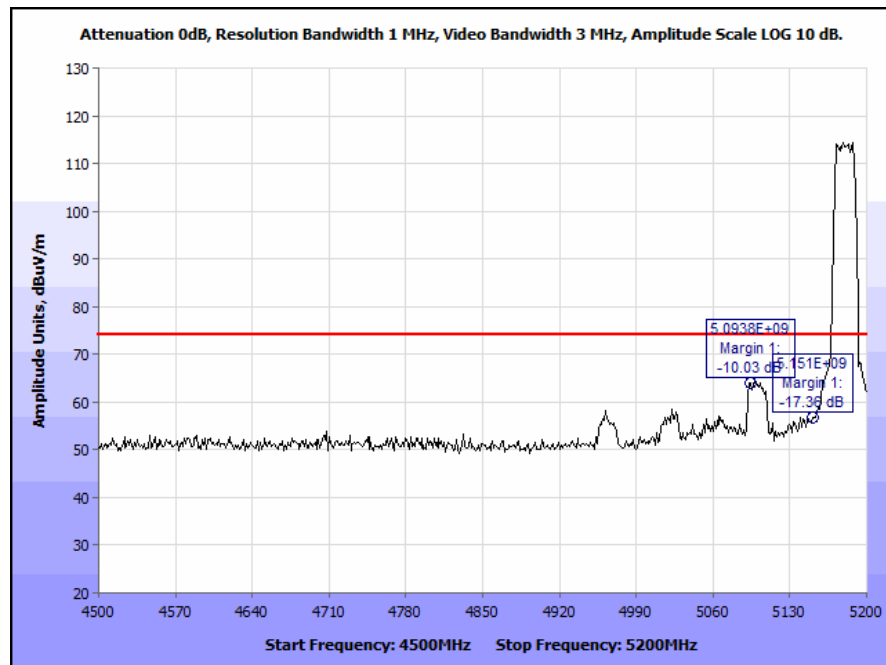


**Plot 303. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11n 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 1, DMPA**

**Band Edge, 802.11a 20 MHz, ANT-BG080-NM1, UNII 1, OODA, 5150 Edge**

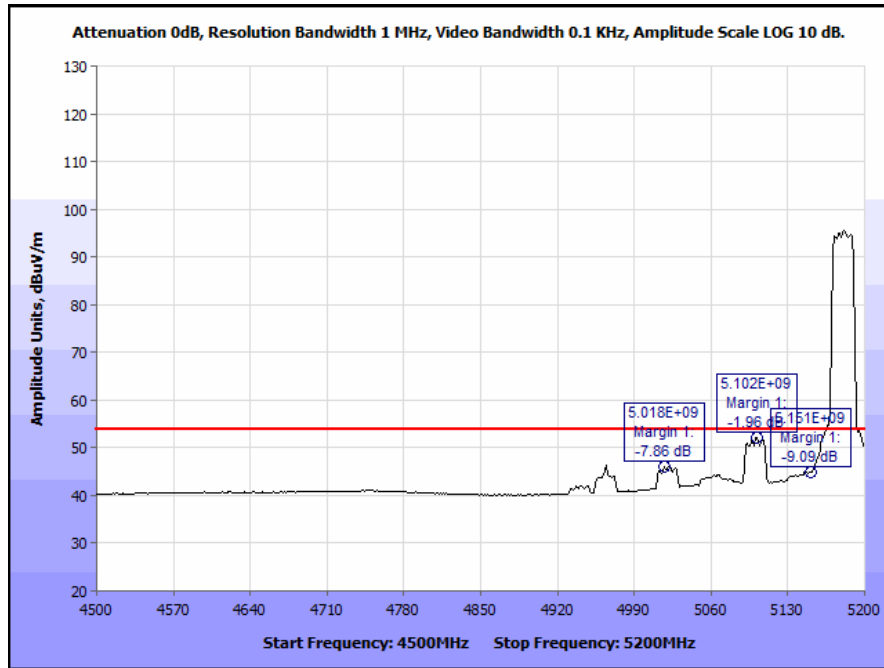


**Plot 304. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11a 20 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

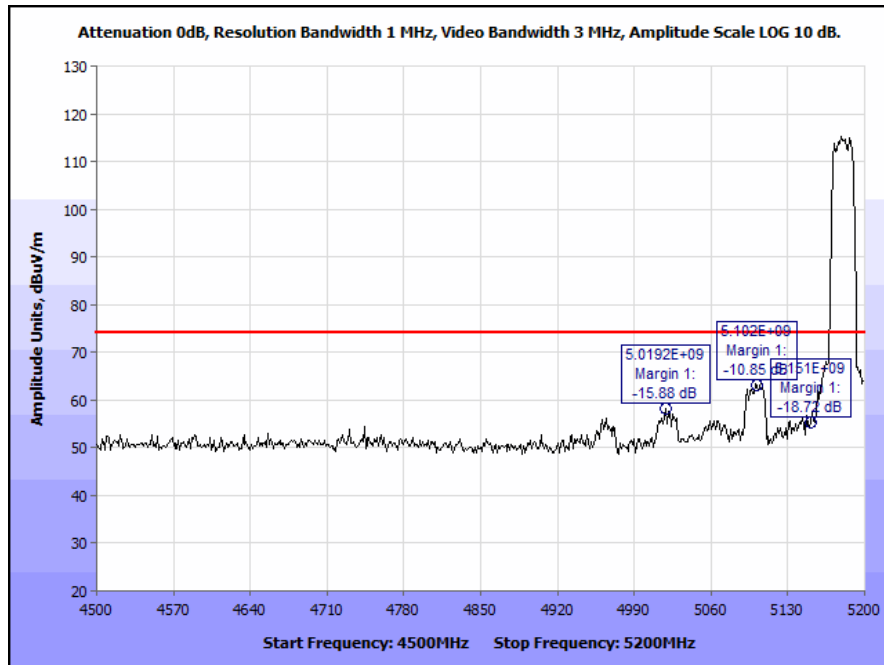


**Plot 305. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11a 20 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11ac 20 MHz, ANT-BG080-NM1, UNII 1, OODA, 5150 Edge**

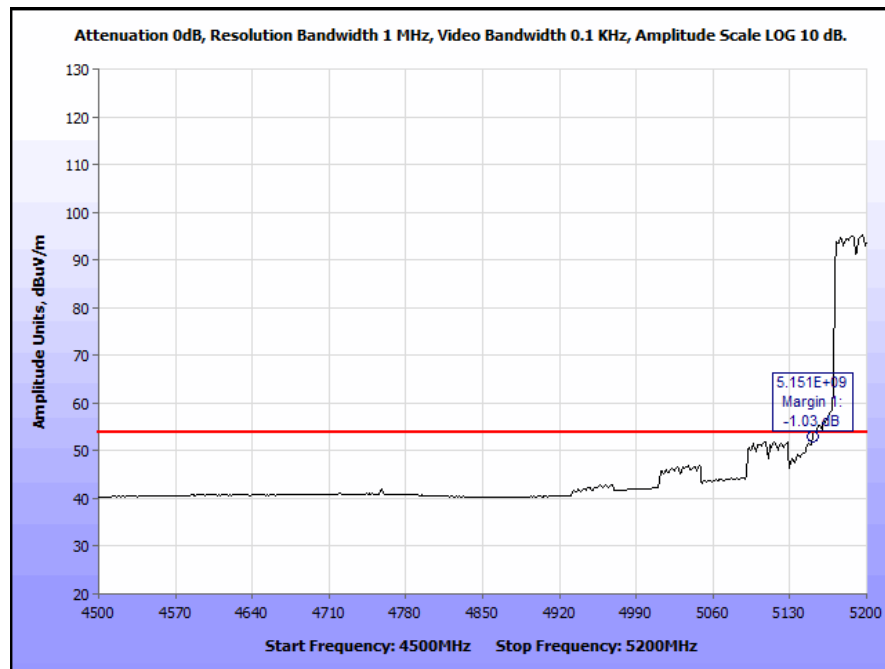


**Plot 306. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11ac 20 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

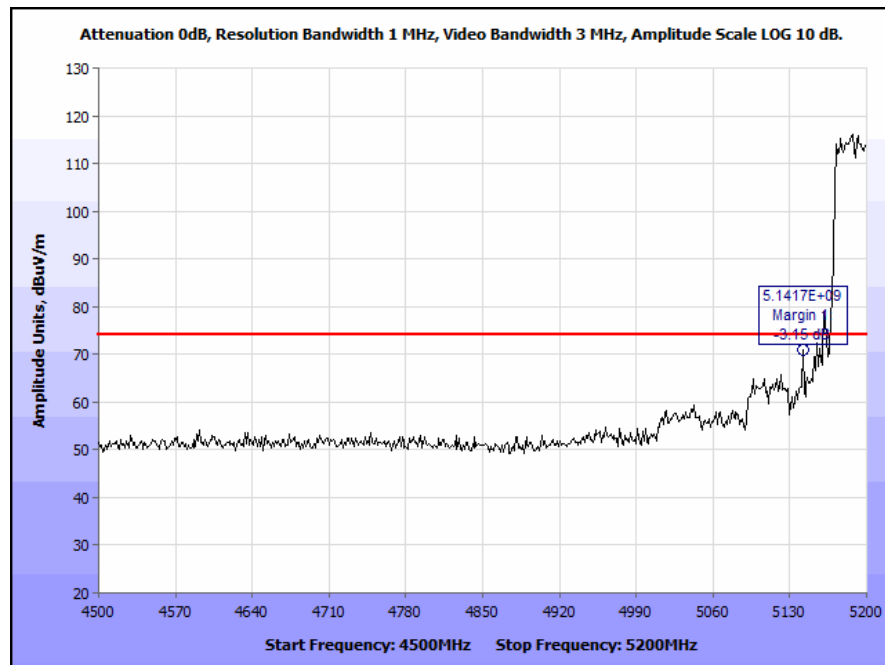


**Plot 307. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11ac 20 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11ac 40 MHz, ANT-BG080-NM1, UNII 1, OODA, 5150 Edge**



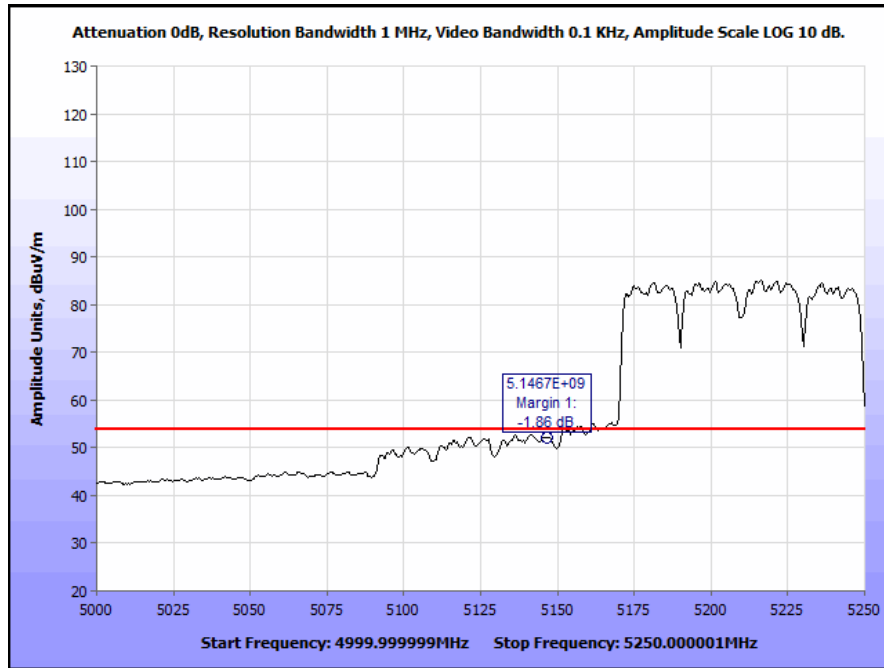
**Plot 308. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11ac 40 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**



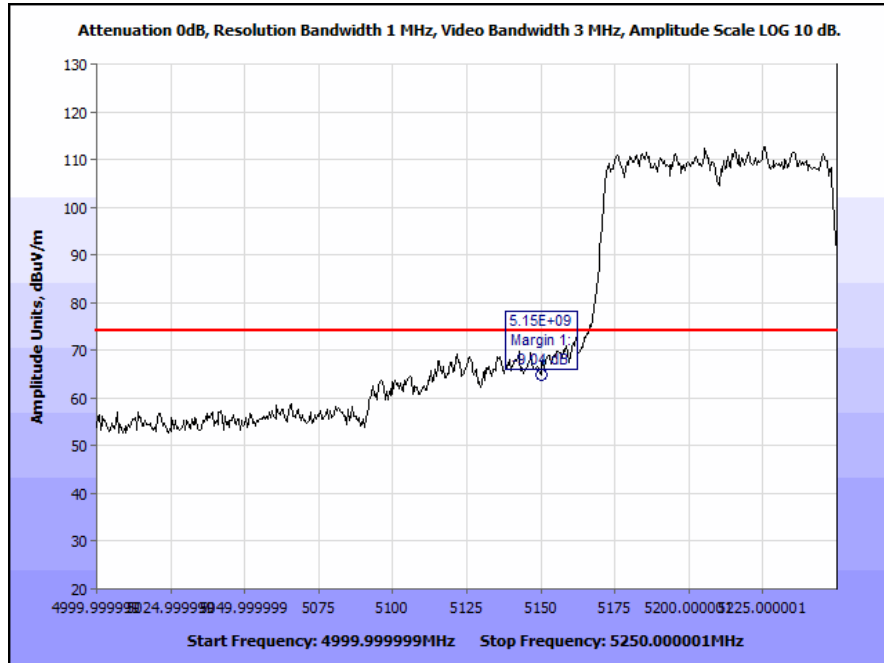
**Plot 309. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11ac 40 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**



**Band Edge, 802.11ac 80 MHz, ANT-BG080-NM1, UNII 1, OODA, 5150 Edge**

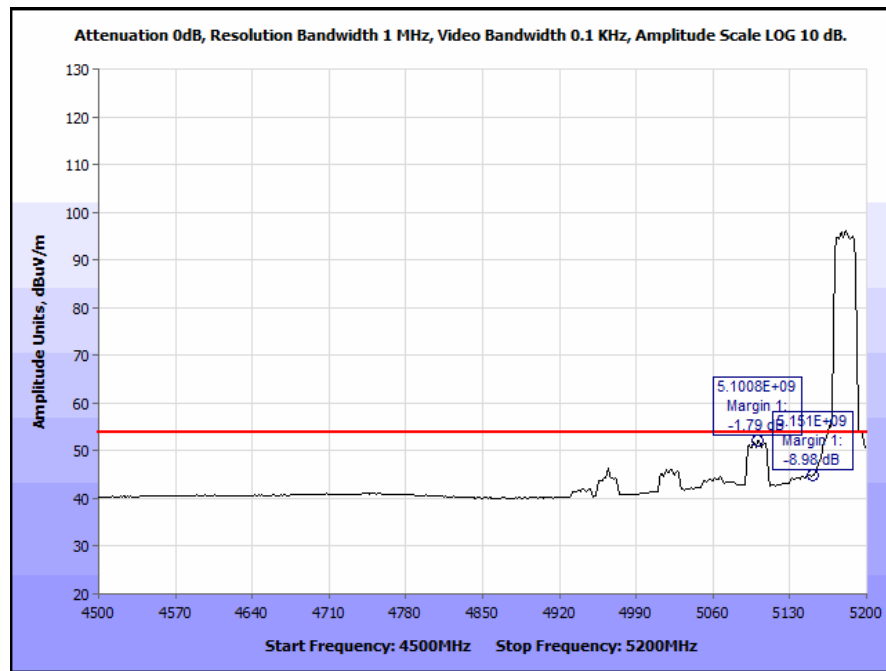


**Plot 310. Radiated Band Edge, 5230 MHz @ 5150 MHz, 802.11ac 80 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

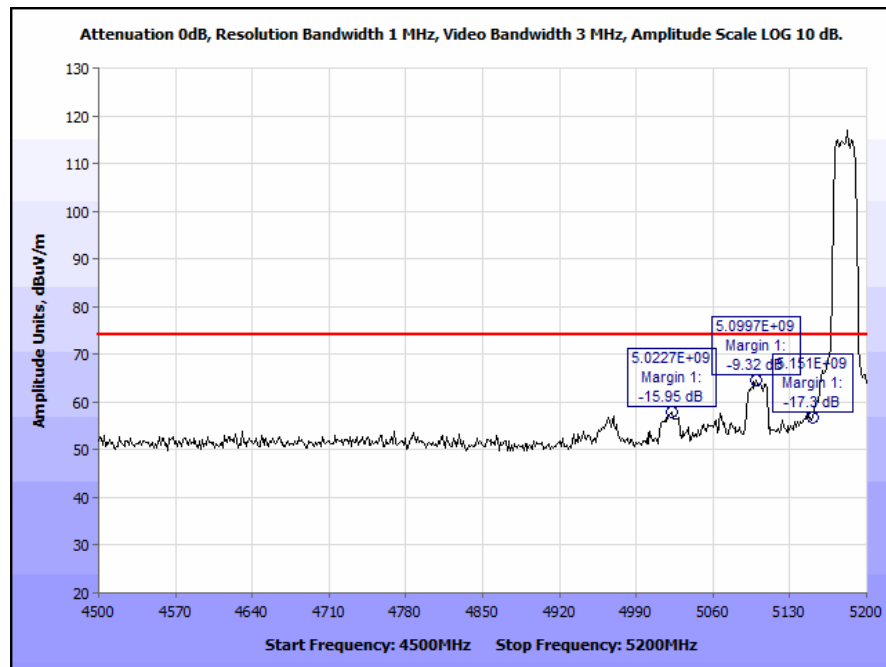


**Plot 311. Radiated Band Edge, 5230 MHz @ 5150 MHz, 802.11ac 80 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11n 20 MHz, ANT-BG080-NM1, UNII 1, OODA, 5150 Edge**

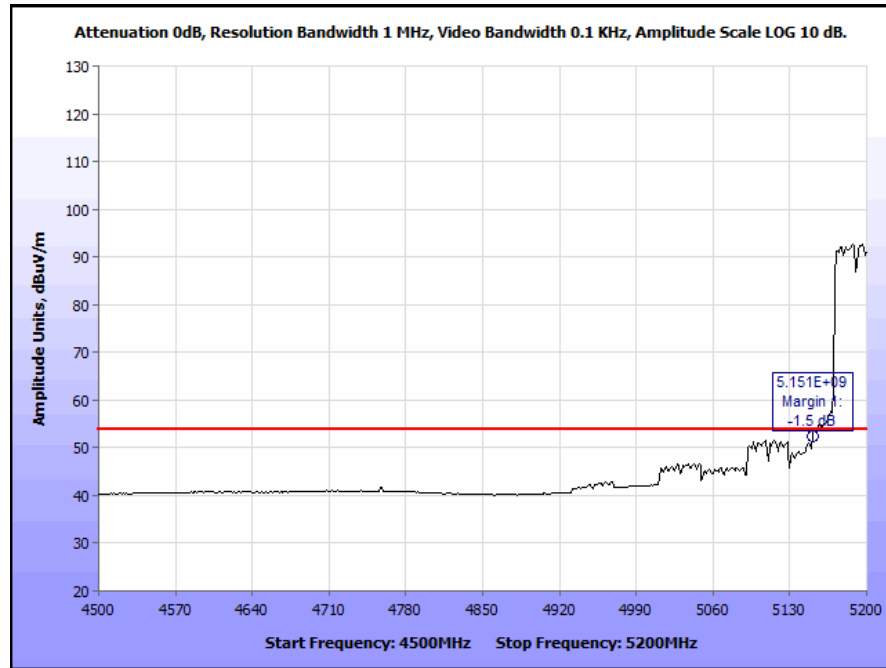


**Plot 312. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11n 20 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

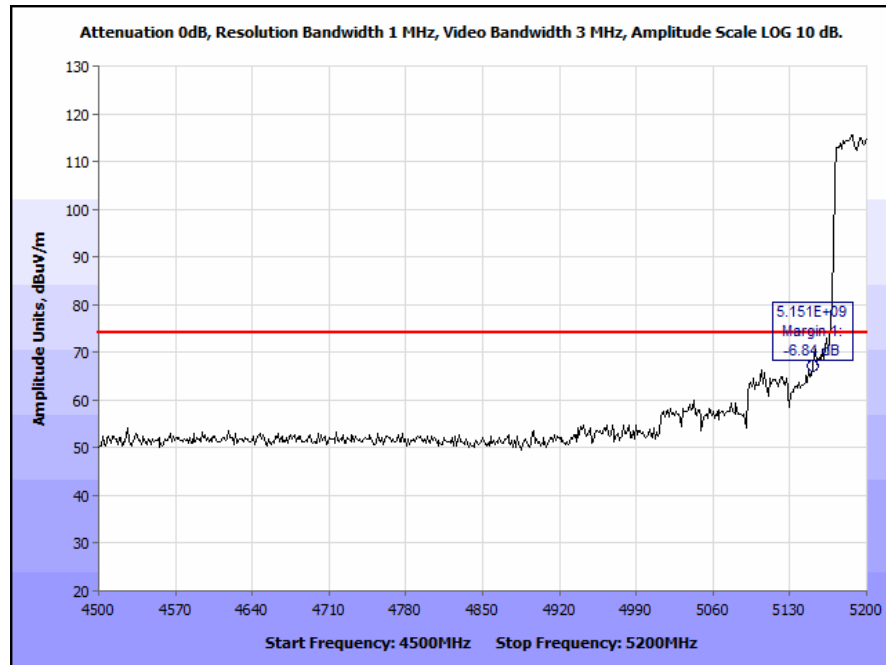


**Plot 313. Radiated Band Edge, 5180 MHz @ 5150 MHz, 802.11n 20 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11n 40 MHz, ANT-BG080-NM1, UNII 1, OODA, 5150 Edge**

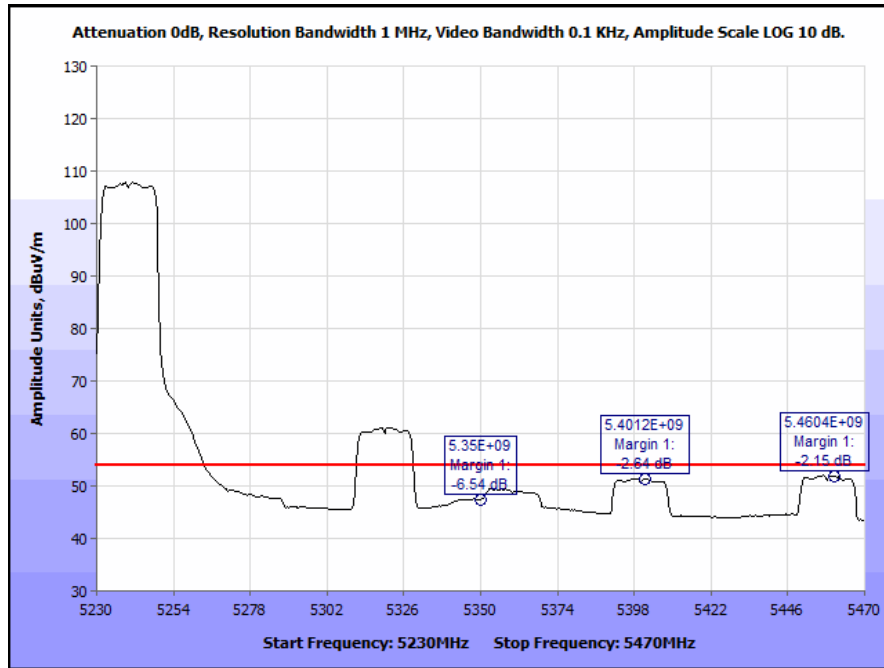


**Plot 314. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11n 40 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

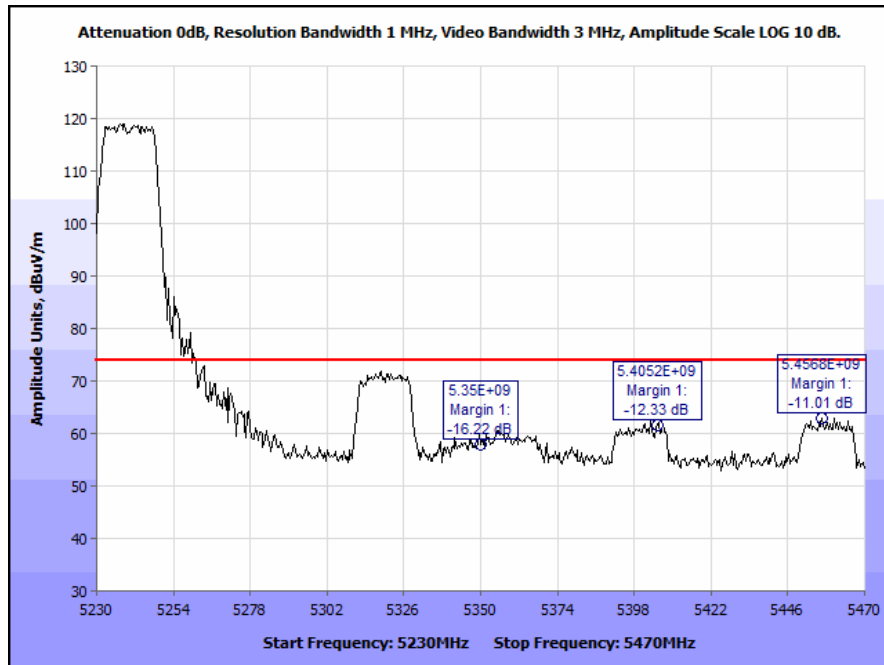


**Plot 315. Radiated Band Edge, 5190 MHz @ 5150 MHz, 802.11n 40 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11a 20 MHz, ANT-BG080-NM1, UNII 1, OODA, 5350 Edge**

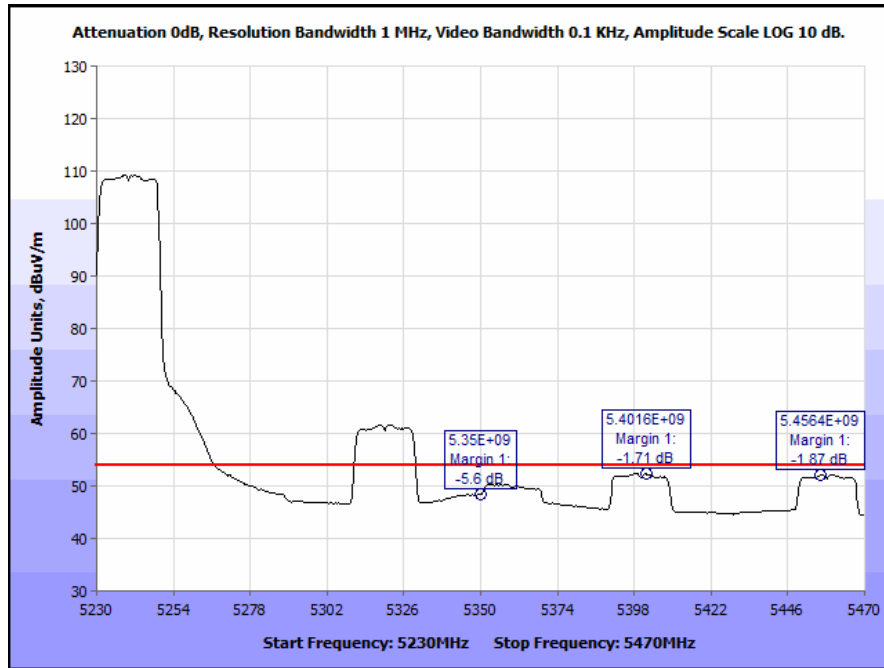


**Plot 316. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11a 20 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

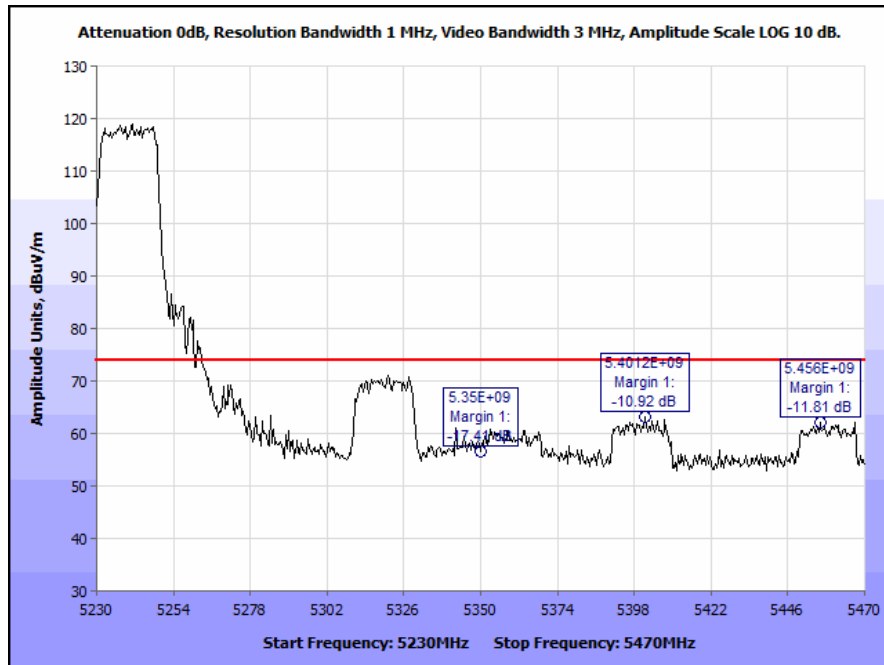


**Plot 317. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11a 20 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11ac 20 MHz, ANT-BG080-NM1, UNII 1, OODA, 5350 Edge**

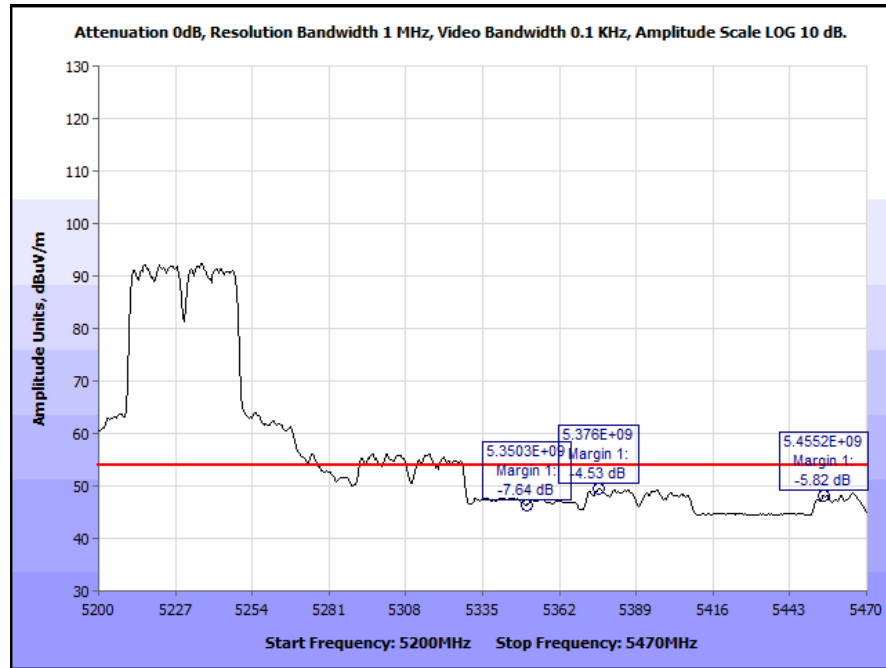


**Plot 318. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11ac 20 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

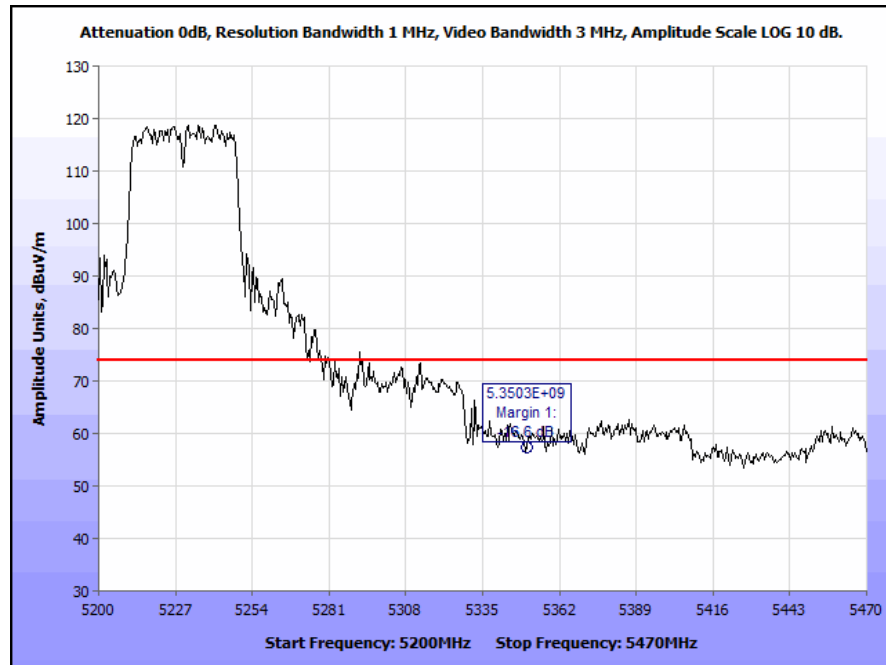


**Plot 319. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11ac 20 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11ac 40 MHz, ANT-BG080-NM1, UNII 1, OODA, 5350 Edge**

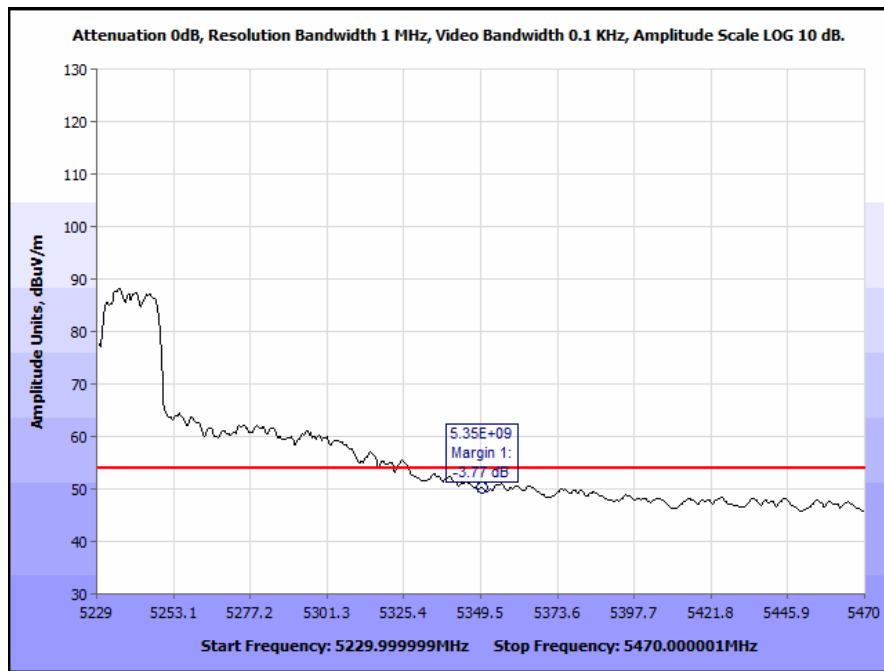


**Plot 320. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11ac 40 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

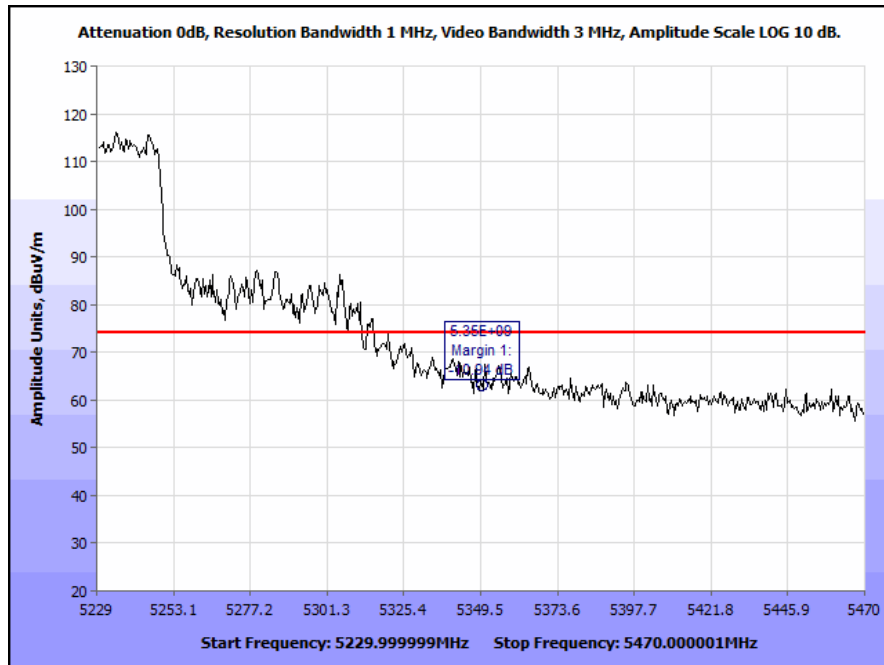


**Plot 321. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11ac 40 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11ac 80 MHz, ANT-BG080-NM1, UNII 1, OODA, 5350 Edge**

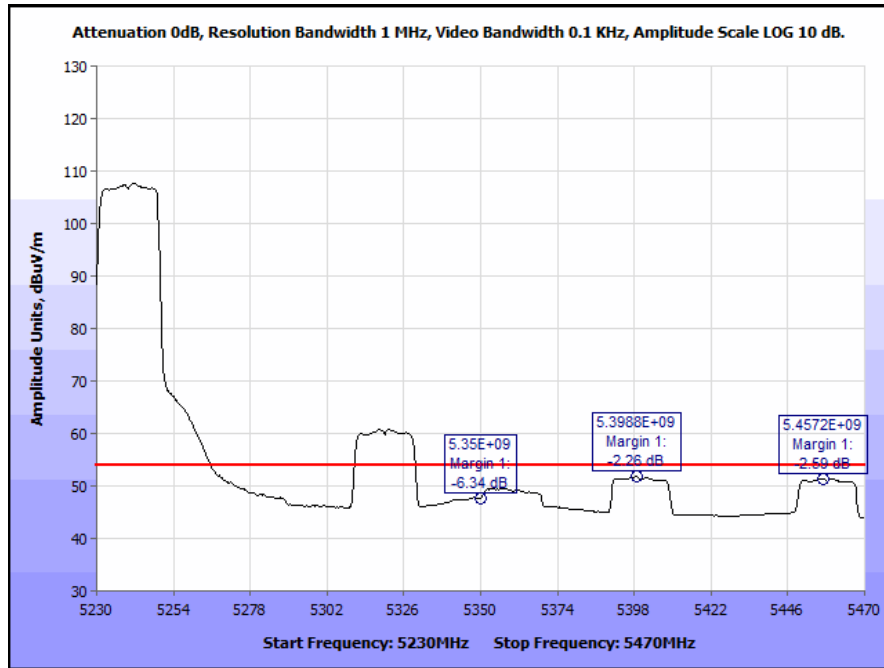


**Plot 322. Radiated Band Edge, 5210 MHz @ 5350 MHz, 802.11ac 80 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

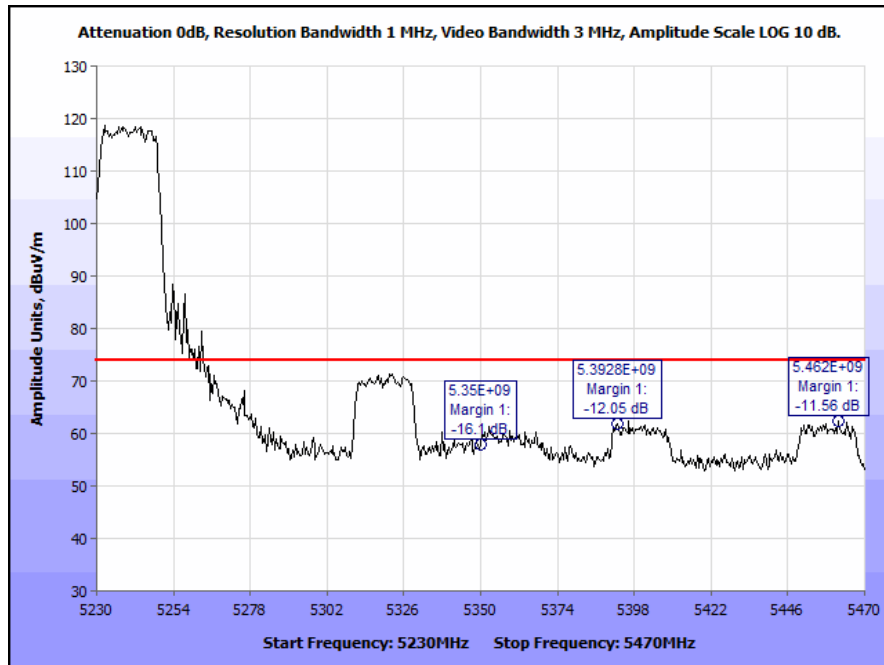


**Plot 323. Radiated Band Edge, 5210 MHz @ 5350 MHz, 802.11ac 80 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11n 20 MHz, ANT-BG080-NM1, UNII 1, OODA, 5350 Edge**



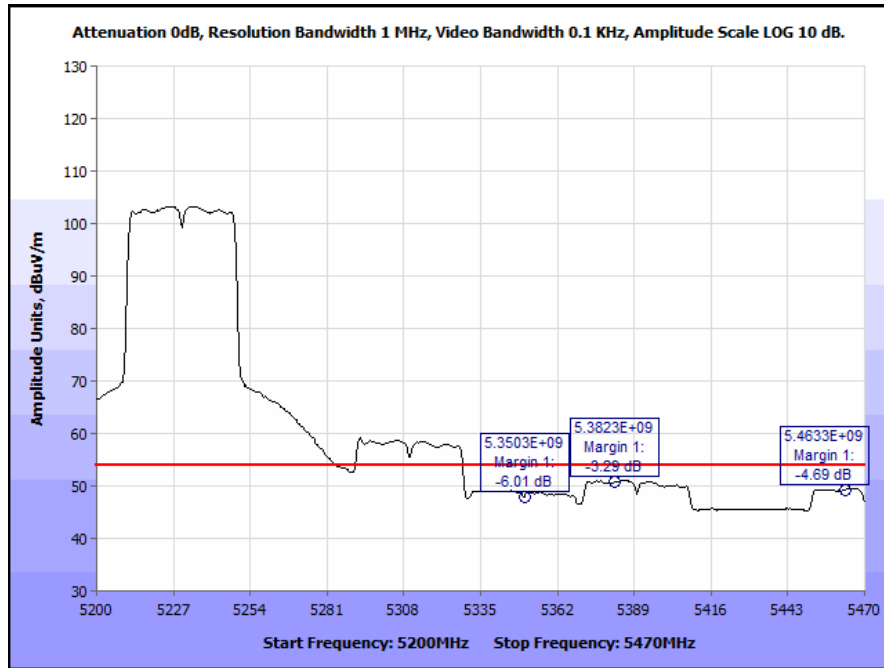
**Plot 324. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11n 20 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**



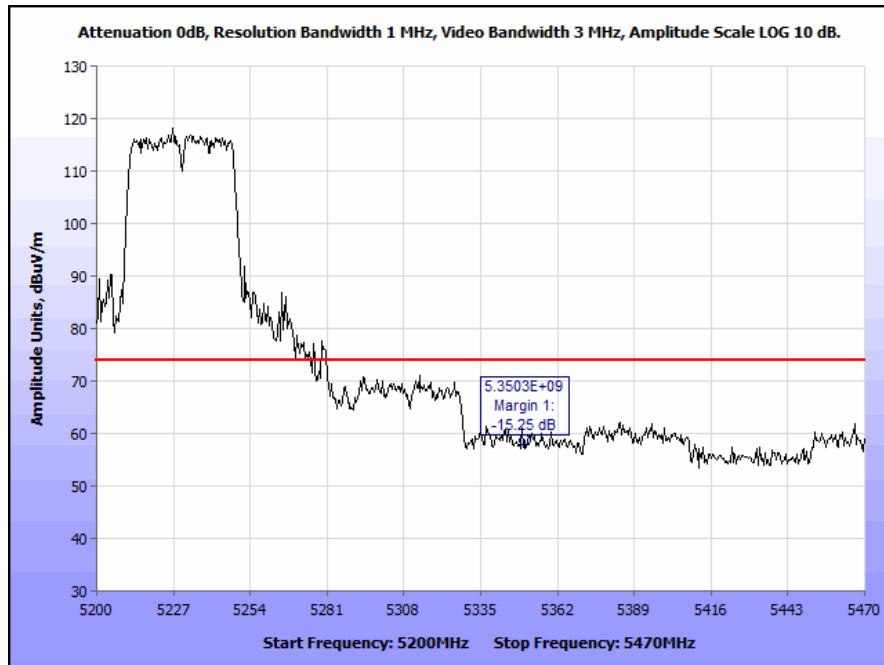
**Plot 325. Radiated Band Edge, 5240 MHz @ 5350 MHz, 802.11n 20 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**



**Band Edge, 802.11n 40 MHz, ANT-BG080-NM1, UNII 1, OODA, 5350 Edge**

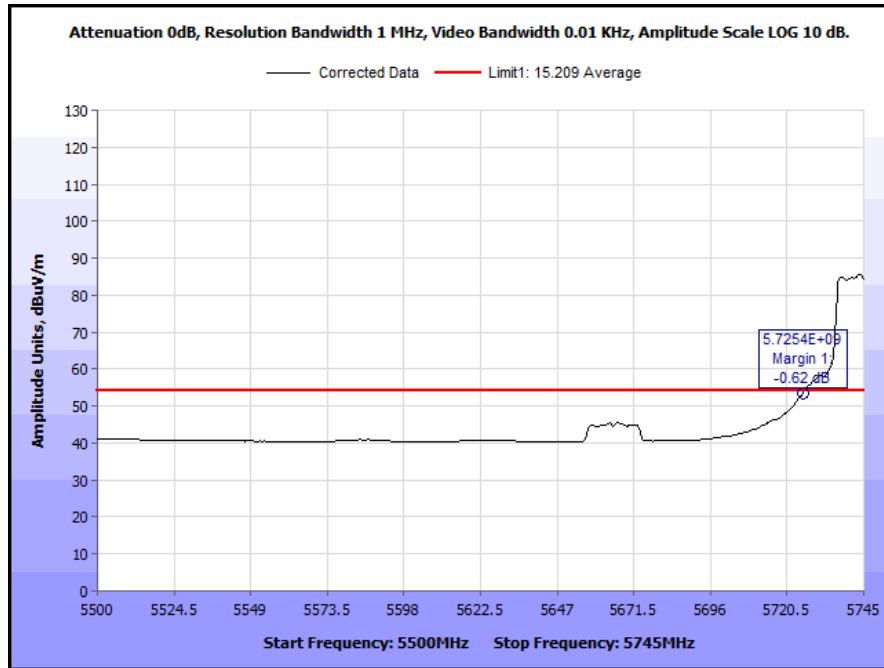


**Plot 326. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11n 40 MHz, Avg., ANT-BG080-NM1, UNII 1, OODA**

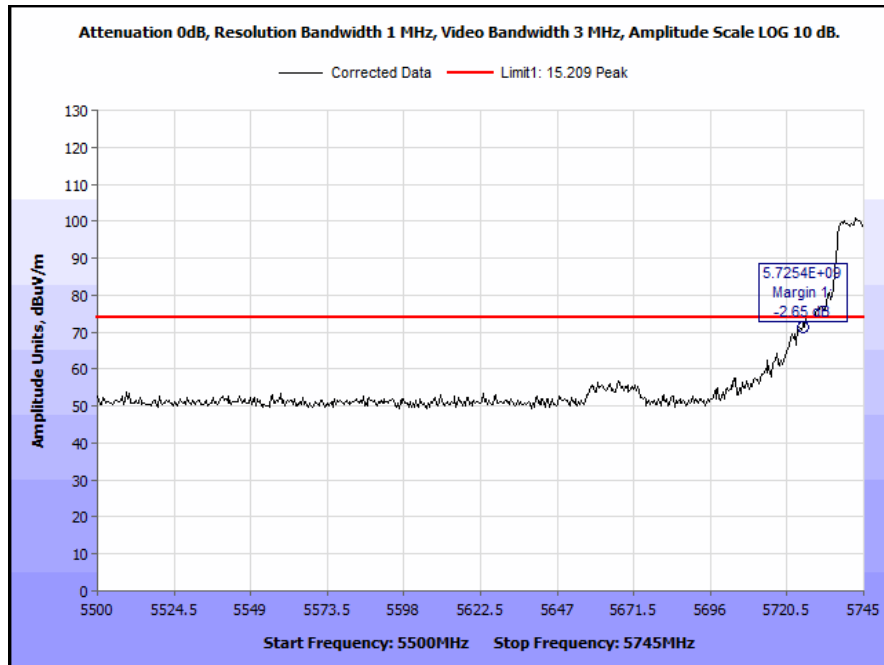


**Plot 327. Radiated Band Edge, 5230 MHz @ 5350 MHz, 802.11n 40 MHz, Peak, ANT-BG080-NM1, UNII 1, OODA**

**Band Edge, 802.11a 20 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5725 Edge**

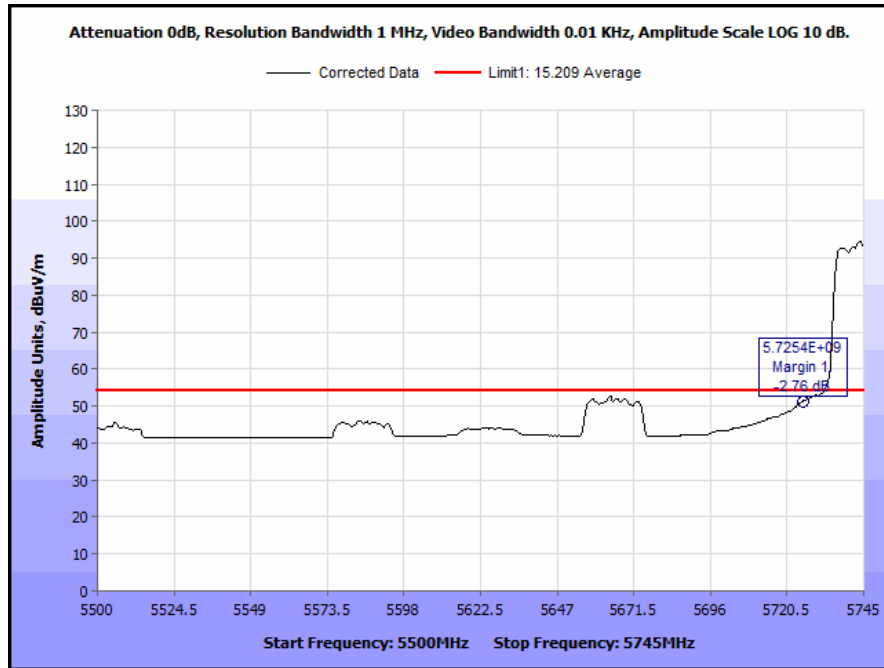


**Plot 328. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11a 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

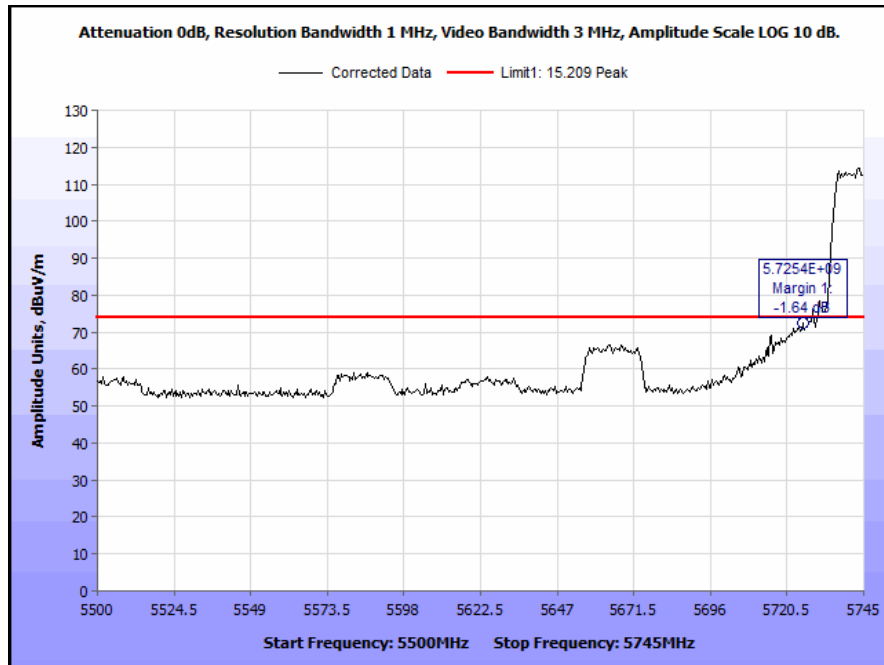


**Plot 329. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11a 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11ac 20 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5725 Edge**

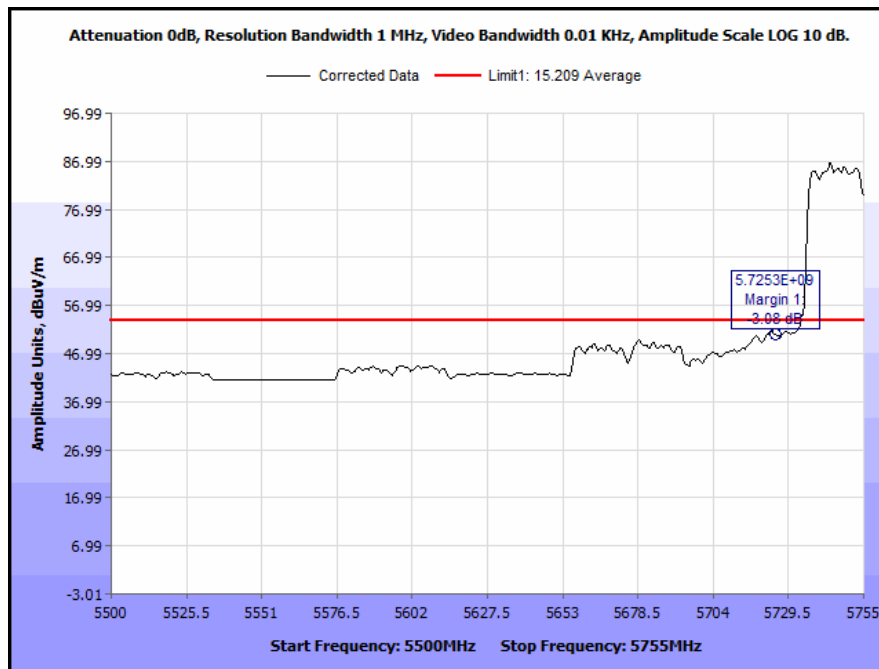


**Plot 330. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11ac 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

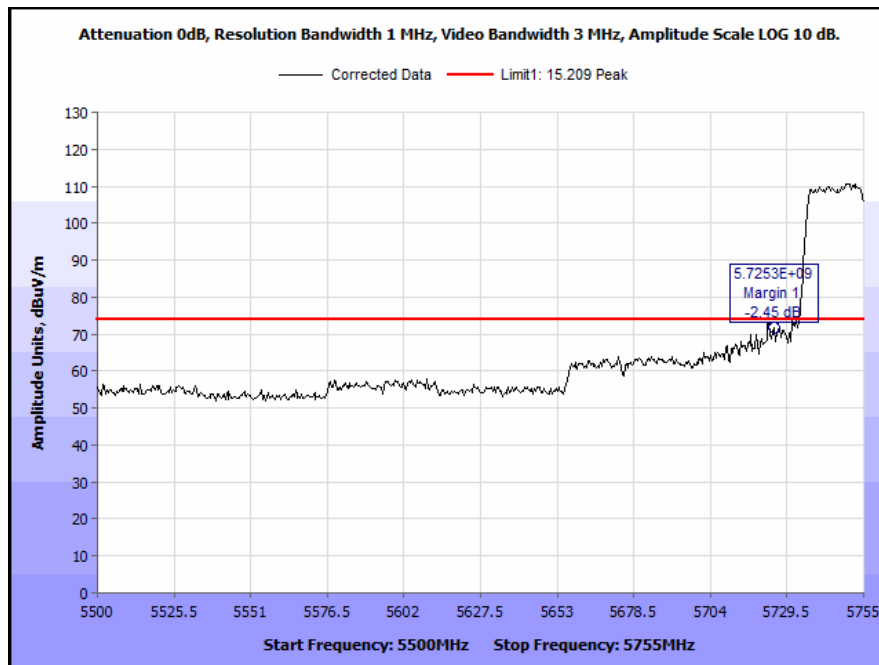


**Plot 331. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11ac 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11ac 40 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5725 Edge**

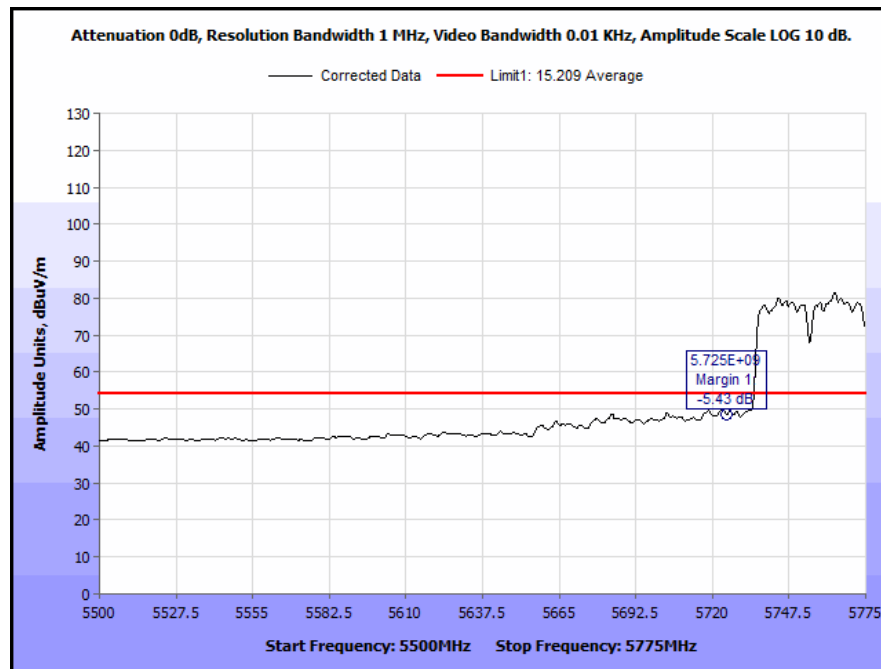


**Plot 332. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11ac 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

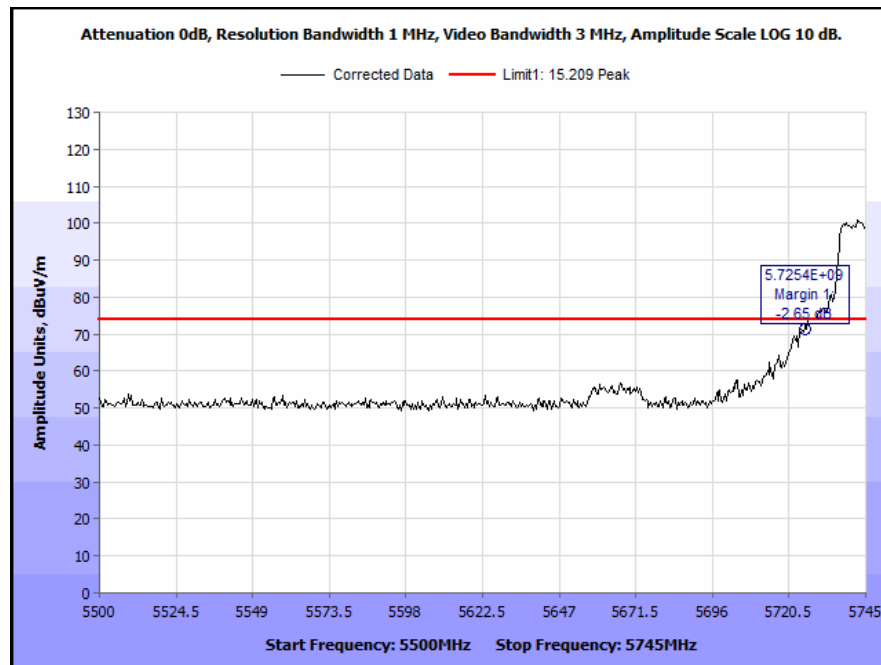


**Plot 333. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11ac 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11ac 80 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5725 Edge**

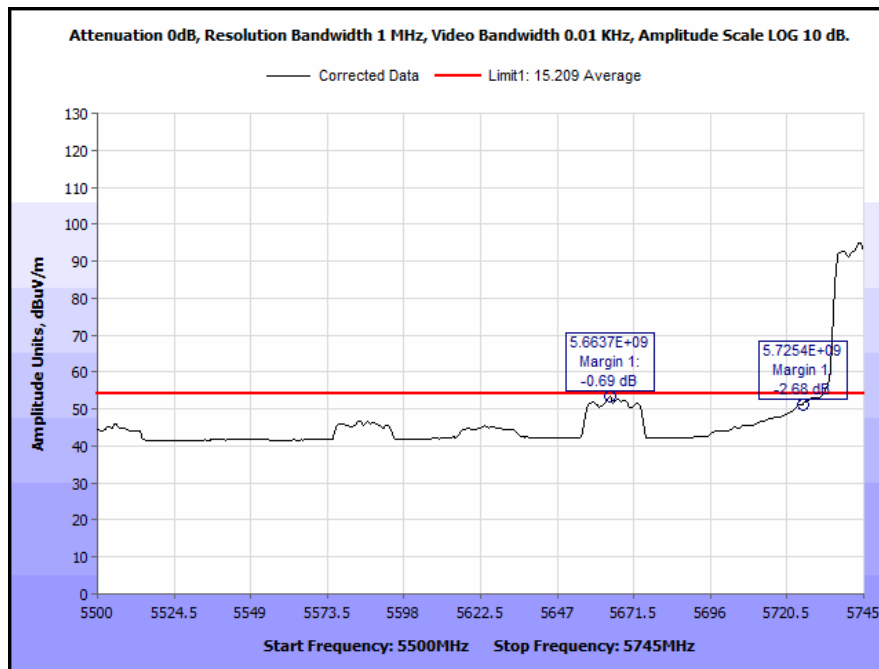


**Plot 334. Radiated Band Edge, 5775 MHz @ 5725 MHz, 802.11ac 80 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

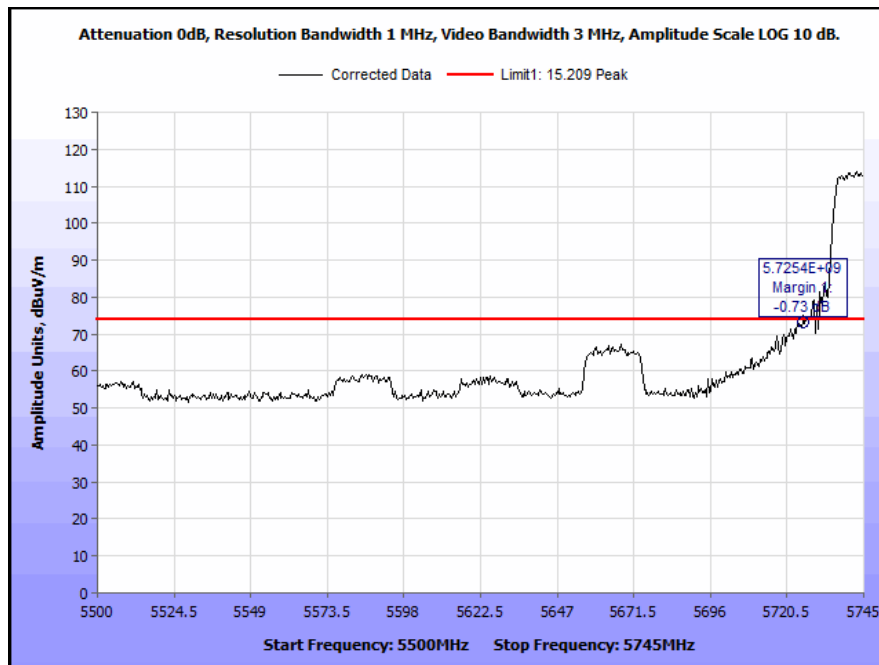


**Plot 335. Radiated Band Edge, 5775 MHz @ 5725 MHz, 802.11ac 80 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5725 Edge**

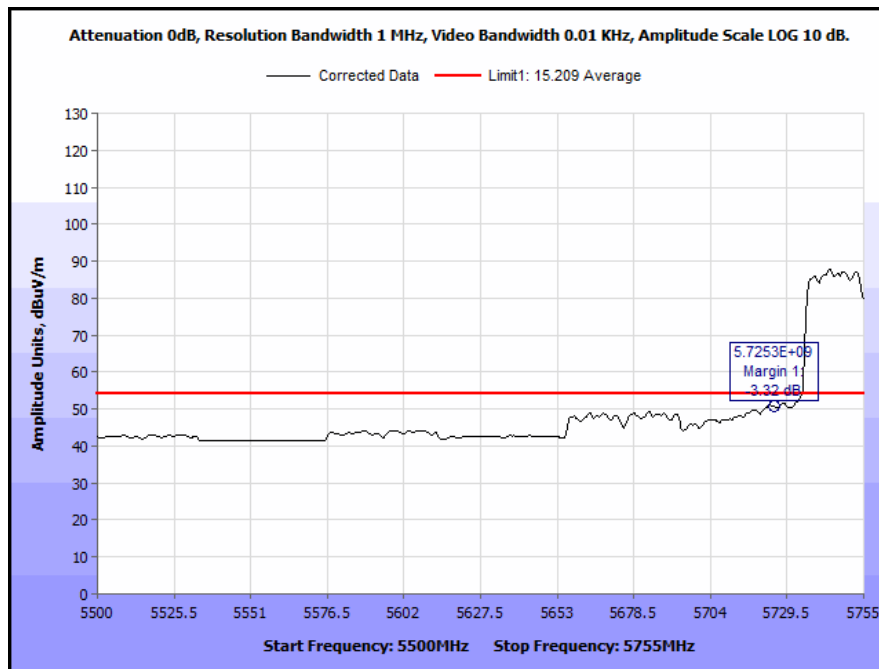


**Plot 336. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11n 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

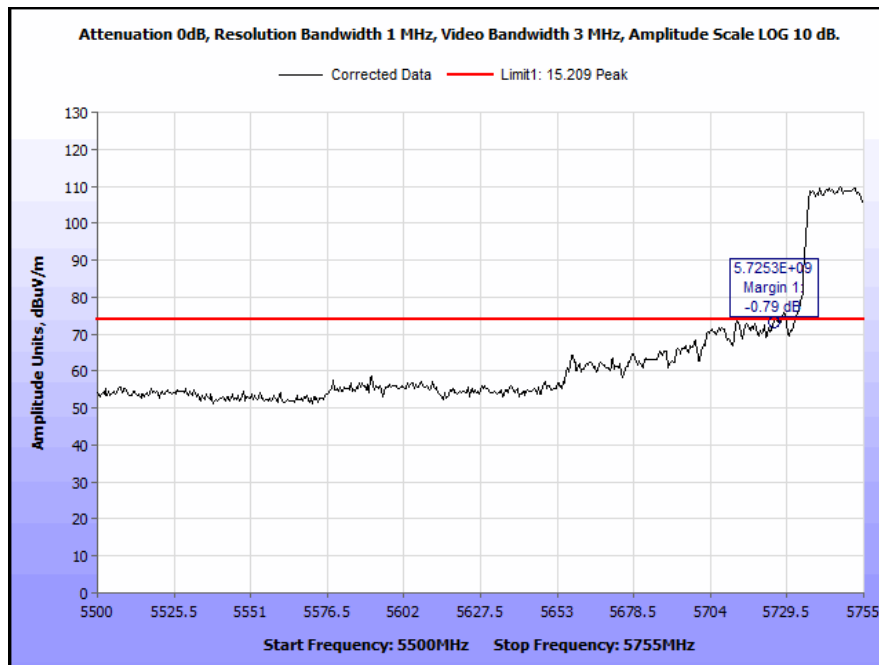


**Plot 337. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11n 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5725 Edge**

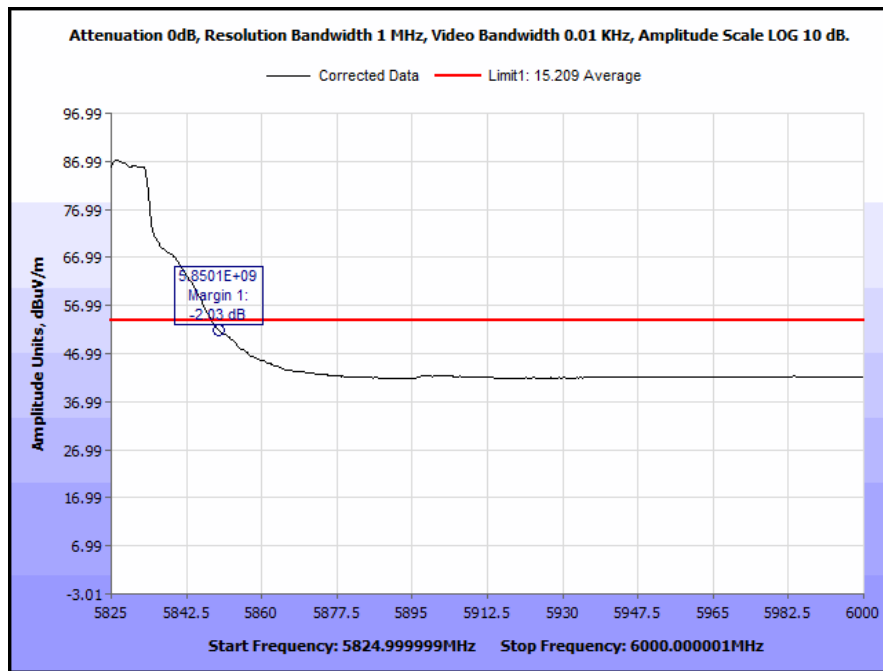


**Plot 338. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11n 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

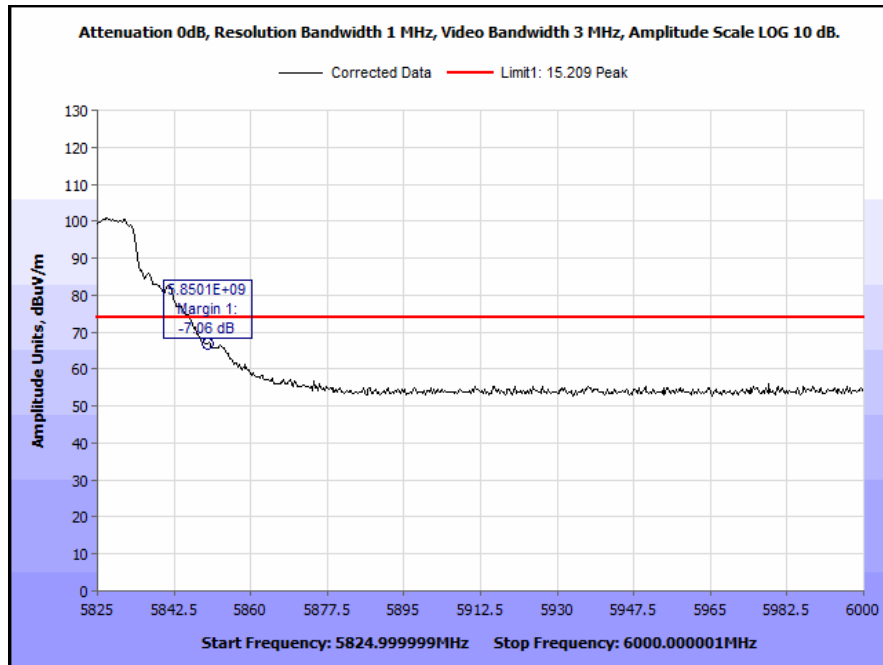


**Plot 339. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11n 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11a 20 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5850 Edge**



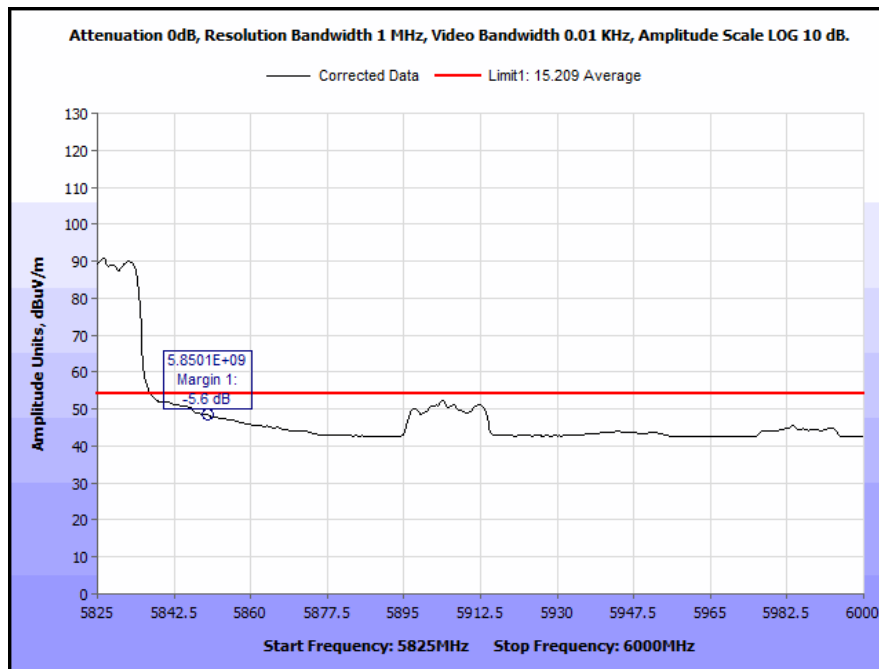
**Plot 340. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11a 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**



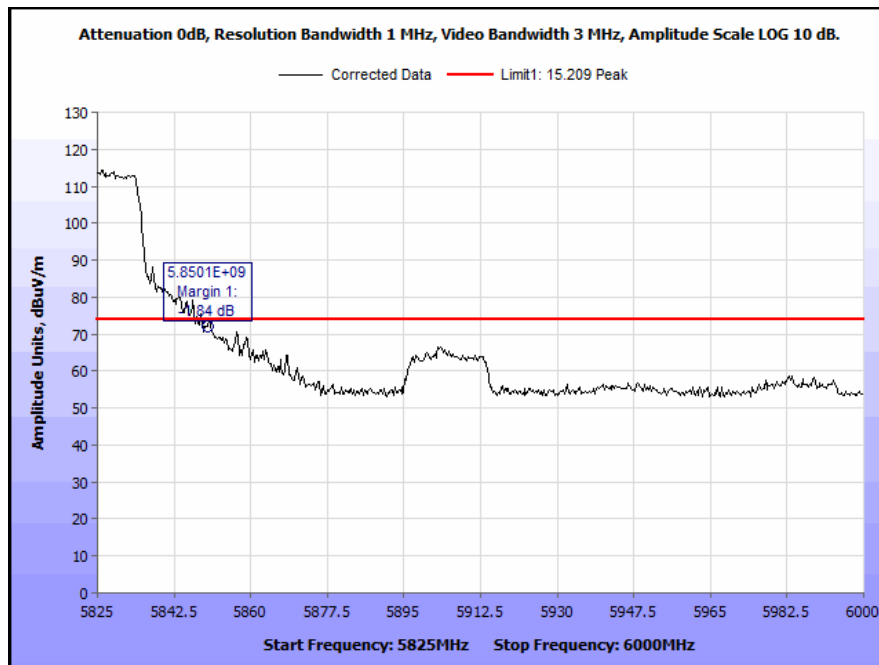
**Plot 341. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11a 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**



**Band Edge, 802.11ac 20 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5850 Edge**

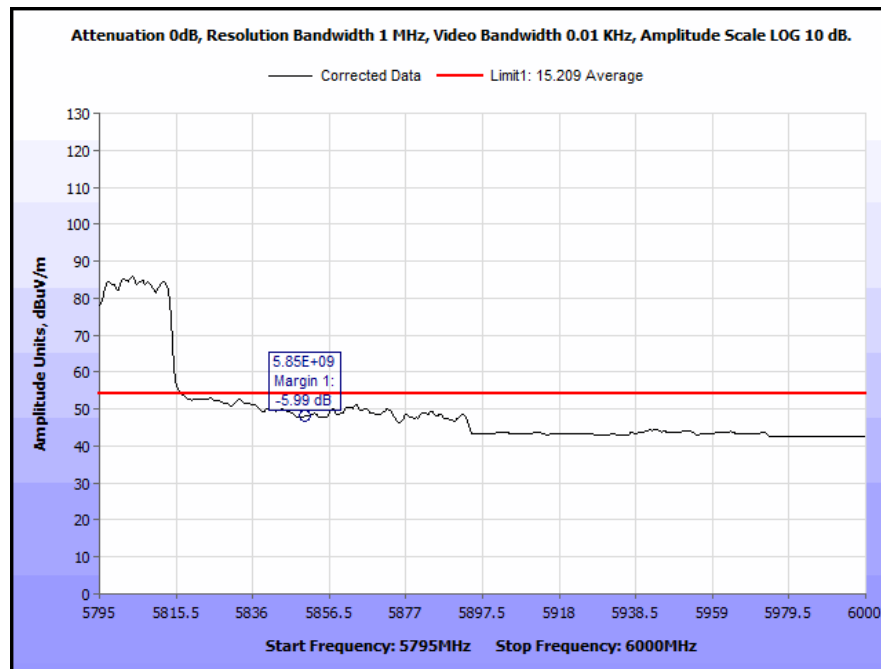


**Plot 342. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11ac 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

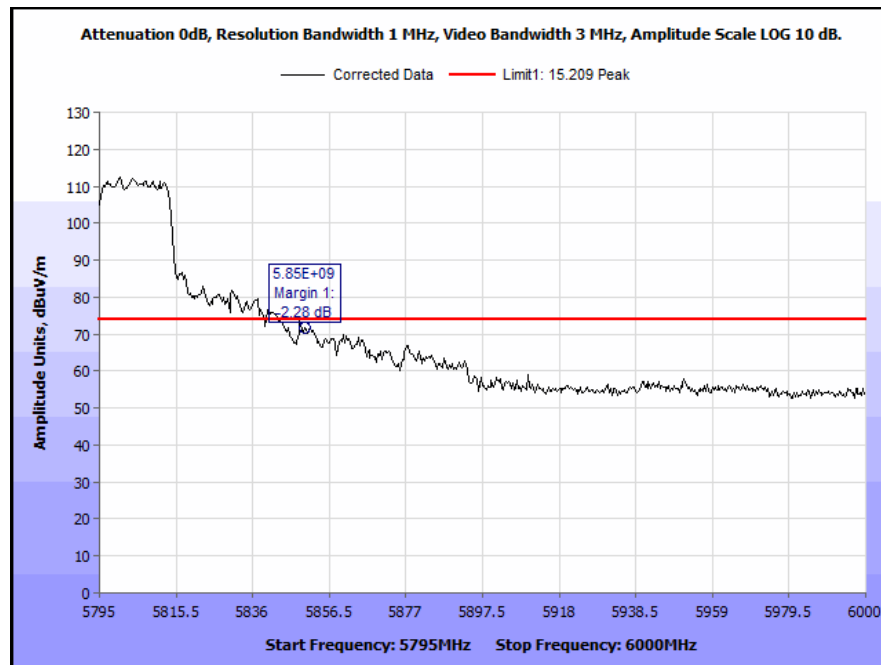


**Plot 343. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11ac 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11ac 40 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5850 Edge**

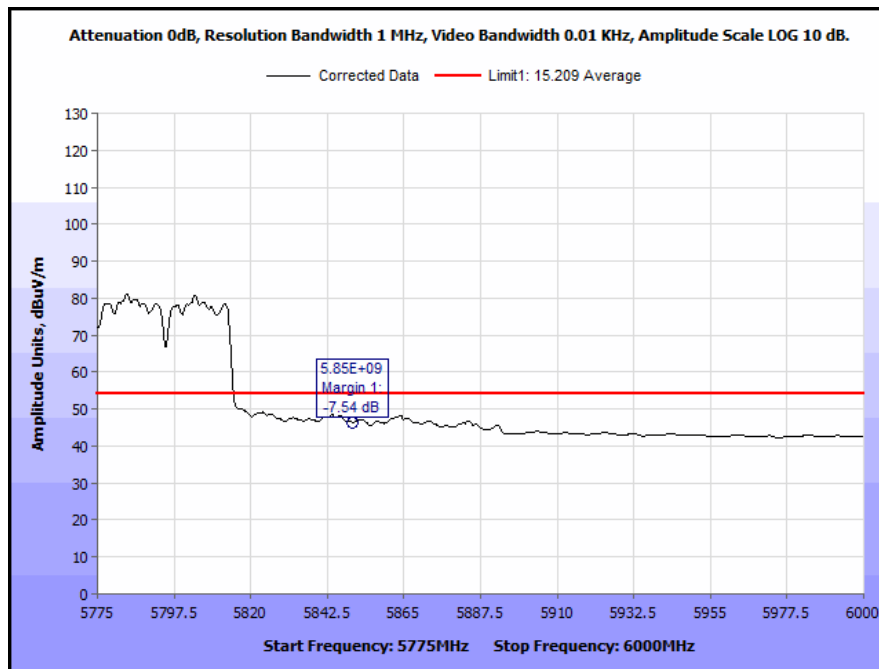


**Plot 344. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11ac 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

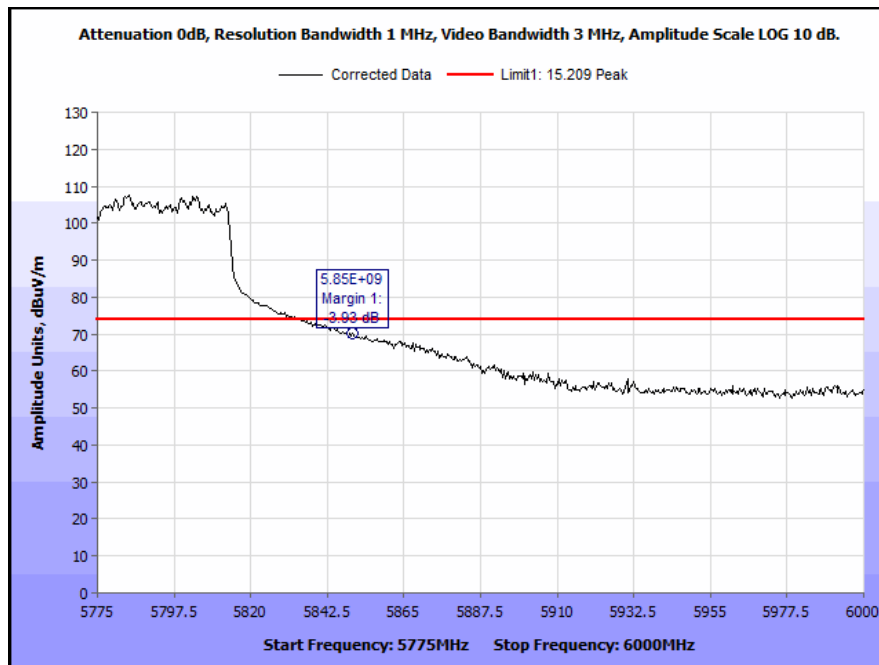


**Plot 345. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11ac 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11ac 80 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5850 Edge**

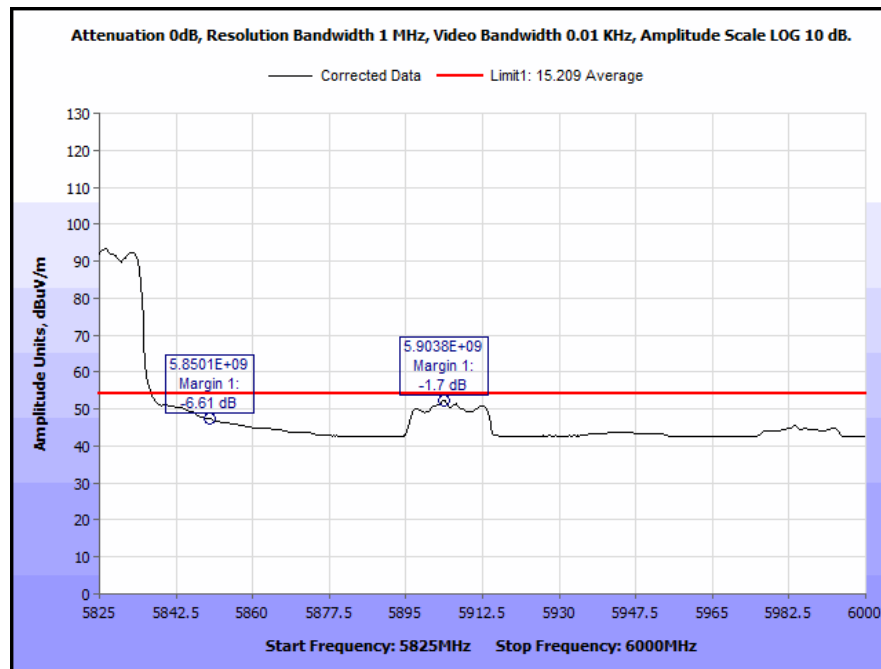


**Plot 346. Radiated Band Edge, 5775 MHz @ 5850 MHz, 802.11ac 80 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

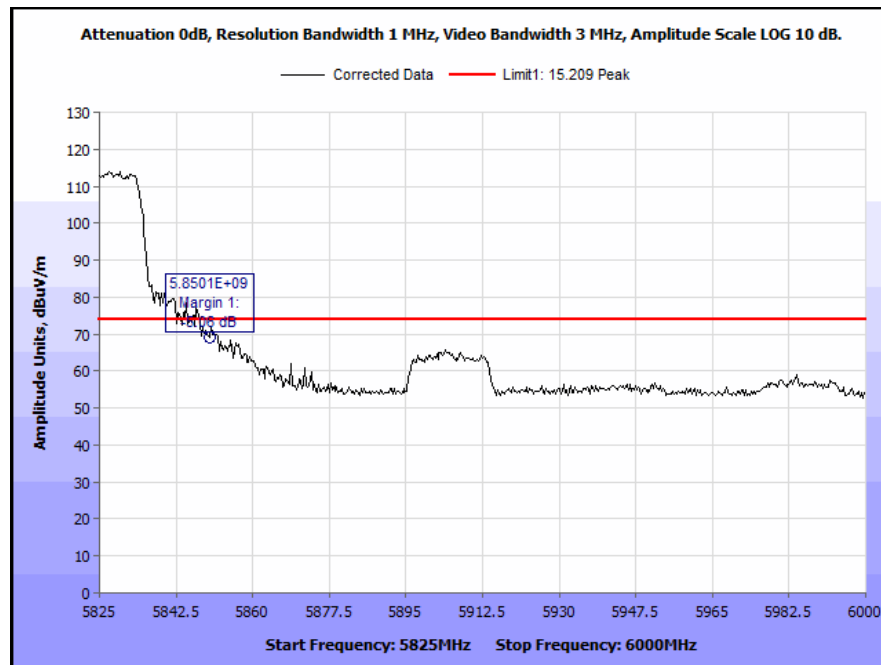


**Plot 347. Radiated Band Edge, 5775 MHz @ 5850 MHz, 802.11ac 80 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11n 20 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5850 Edge**

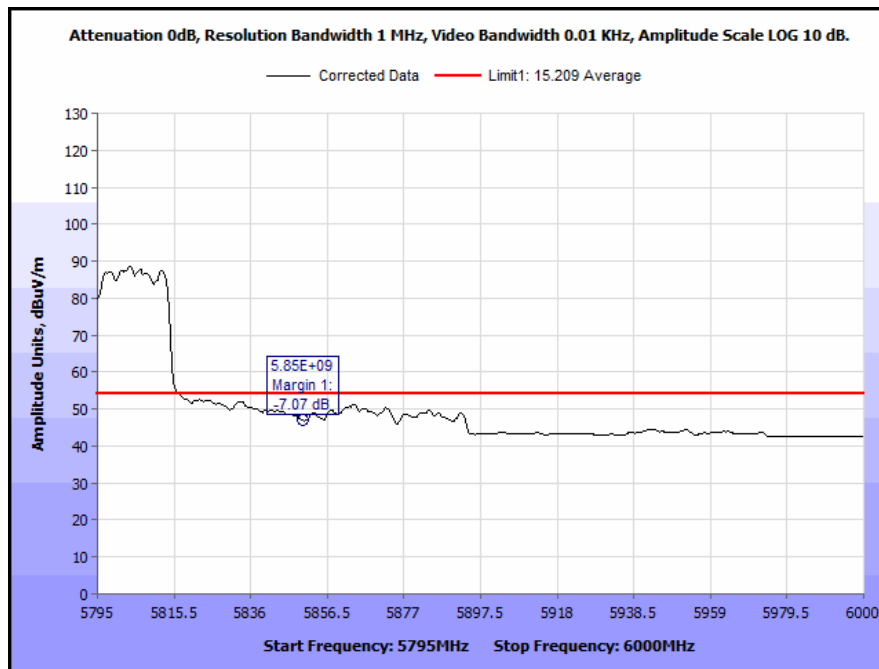


**Plot 348. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11n 20 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

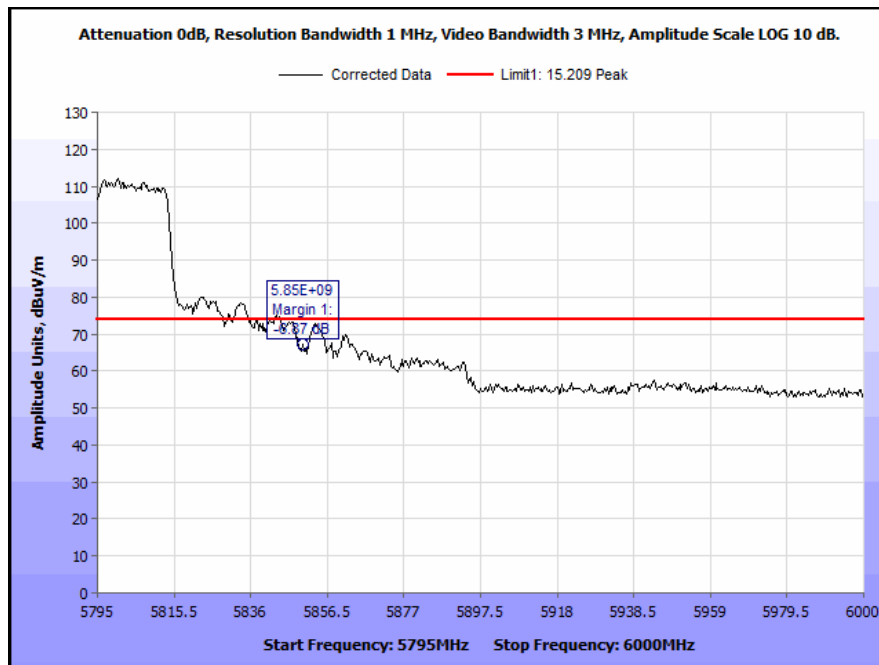


**Plot 349. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11n 20 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11n 40 MHz, ANT-O6ABGN-1211-PA, UNII 3, DMPA, 5850 Edge**

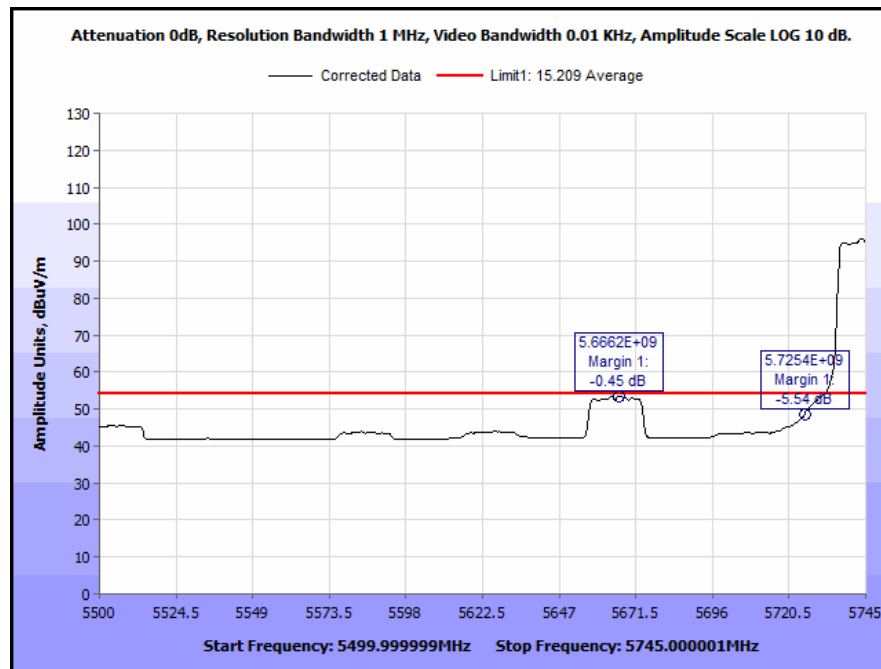


**Plot 350. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11n 40 MHz, Avg., ANT-O6ABGN-1211-PA, UNII 3, DMPA**

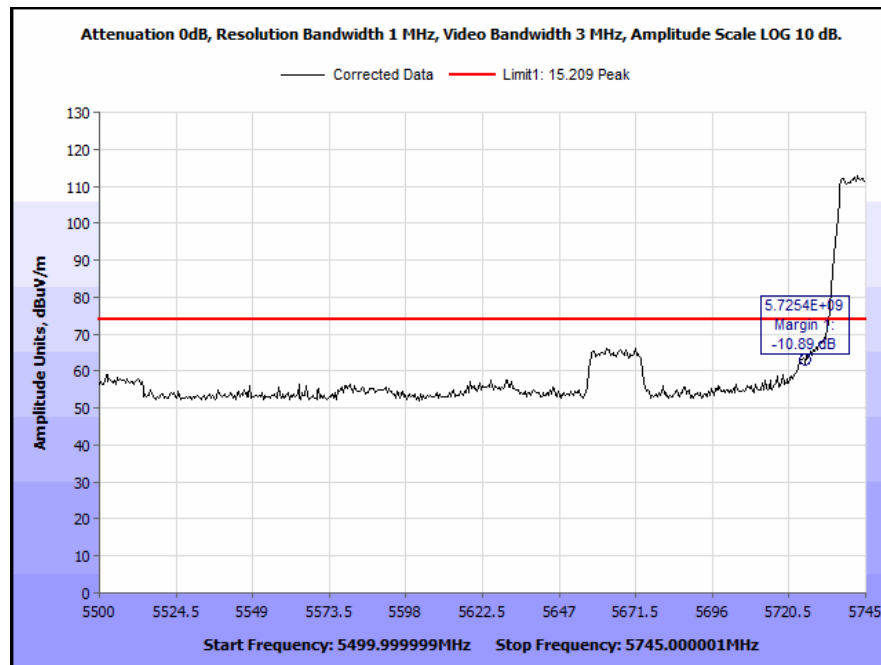


**Plot 351. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11n 40 MHz, Peak, ANT-O6ABGN-1211-PA, UNII 3, DMPA**

**Band Edge, 802.11a 20 MHz, ANT-BG080-NM2, UNII 3, OODA, 5725 Edge**

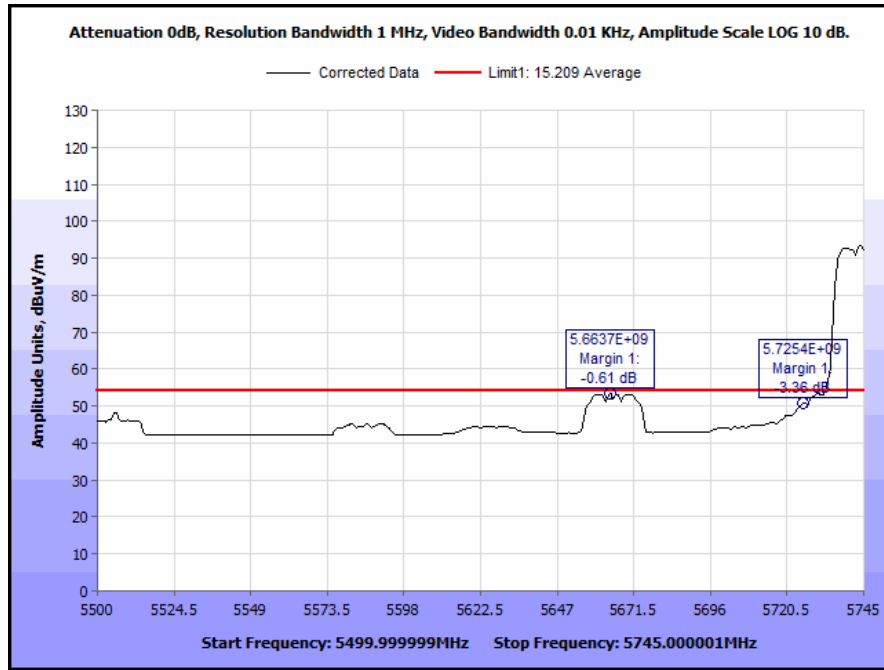


**Plot 352. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11a 20 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

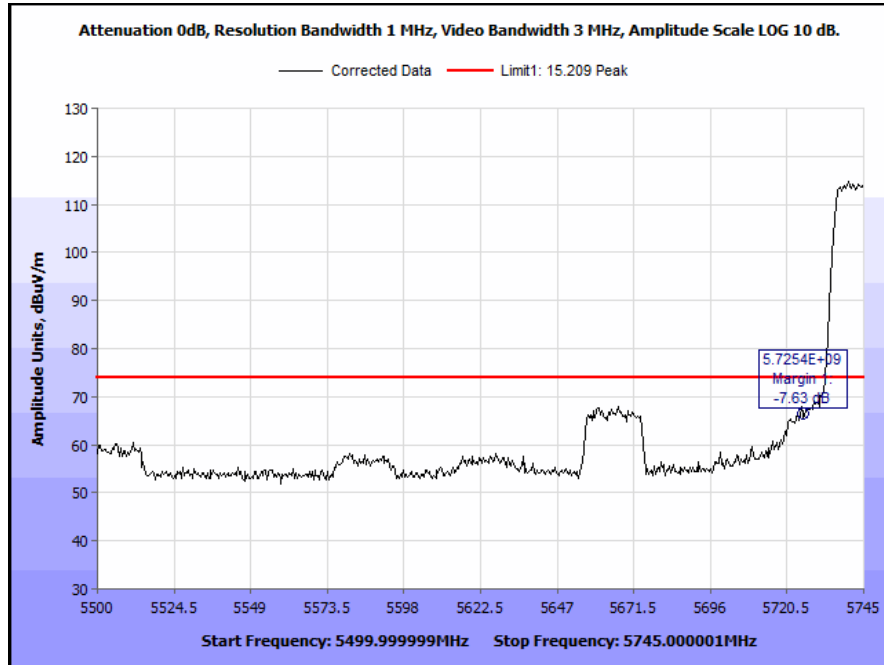


**Plot 353. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11a 20 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11ac 20 MHz, ANT-BG080-NM2, UNII 3, OODA, 5725 Edge**

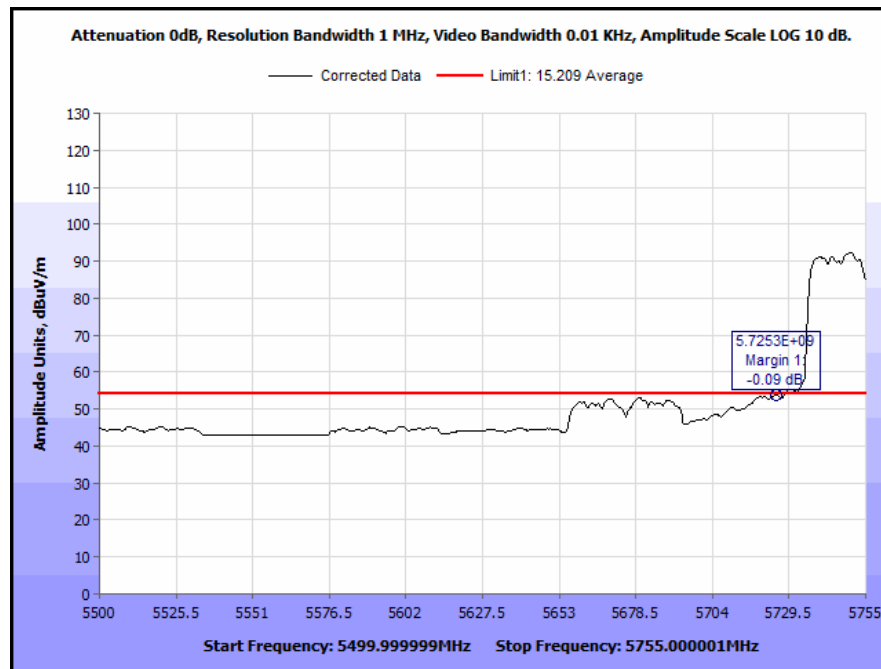


**Plot 354. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11ac 20 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

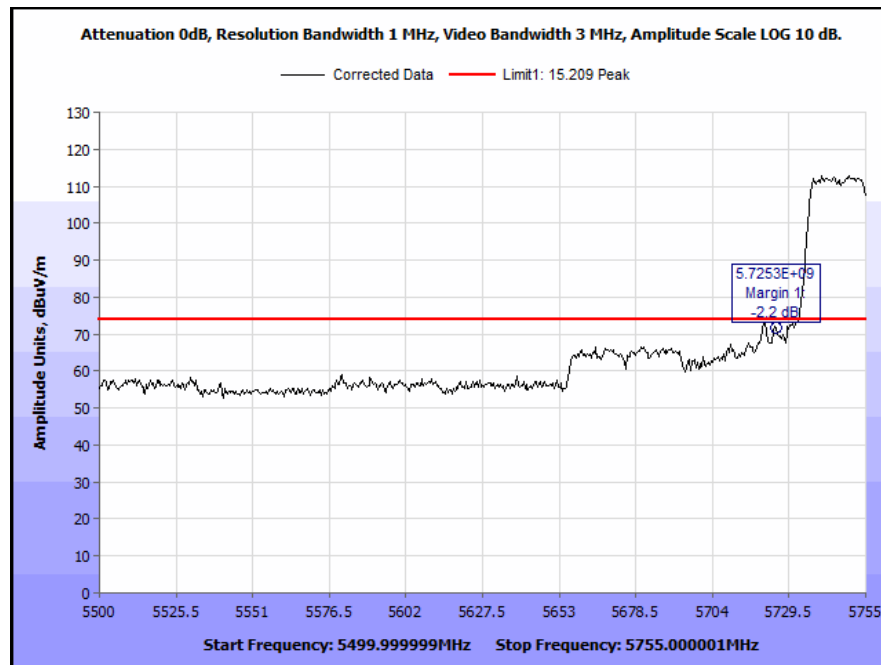


**Plot 355. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11ac 20 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11ac 40 MHz, ANT-BG080-NM2, UNII 3, OODA, 5725 Edge**



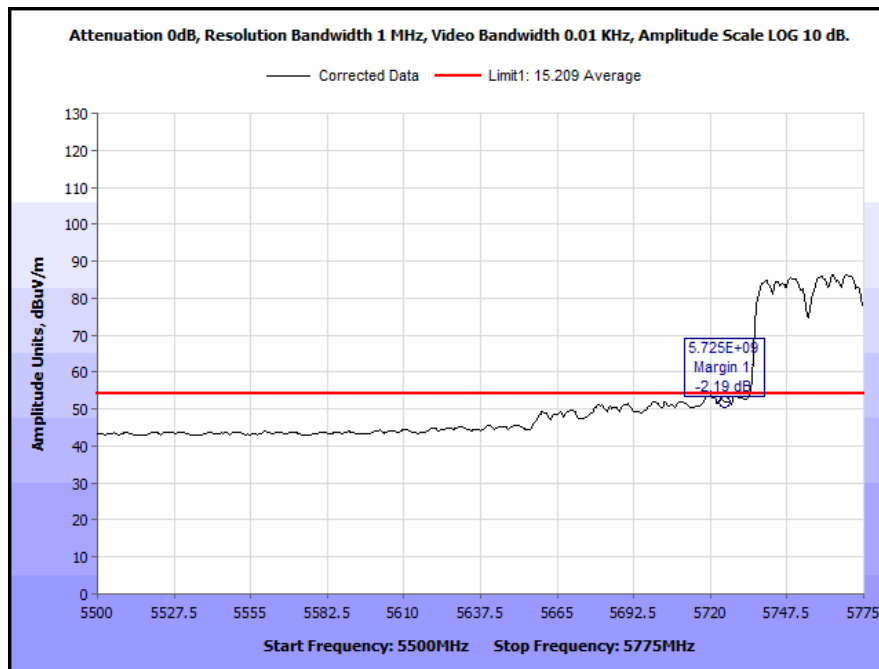
**Plot 356. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11ac 40 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**



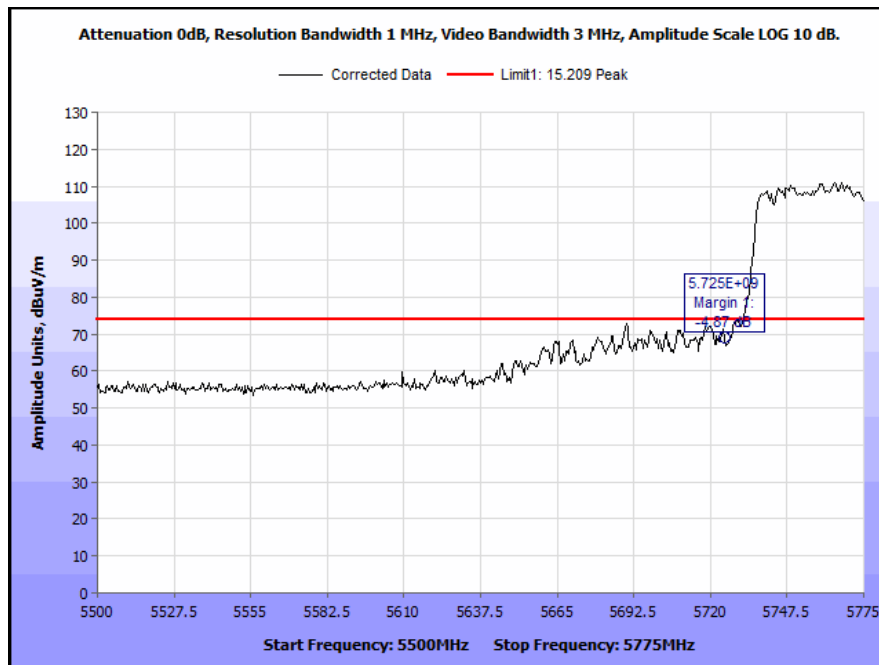
**Plot 357. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11ac 40 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**



**Band Edge, 802.11ac 80 MHz, ANT-BG080-NM2, UNII 3, OODA, 5725 Edge**

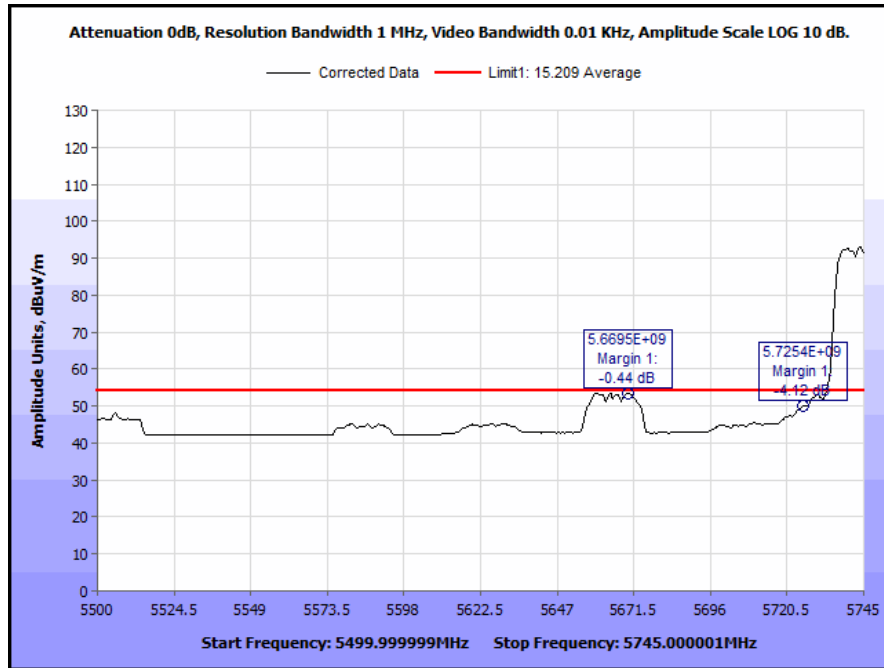


**Plot 358. Radiated Band Edge, 5775 MHz @ 5725 MHz, 802.11ac 80 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

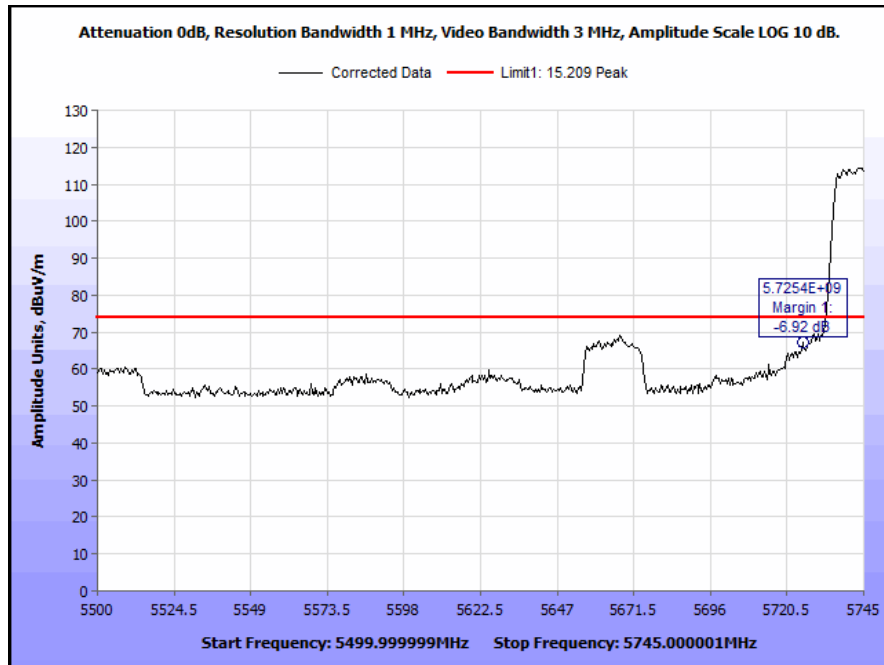


**Plot 359. Radiated Band Edge, 5775 MHz @ 5725 MHz, 802.11ac 80 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11n 20 MHz, ANT-BG080-NM2, UNII 3, OODA, 5725 Edge**

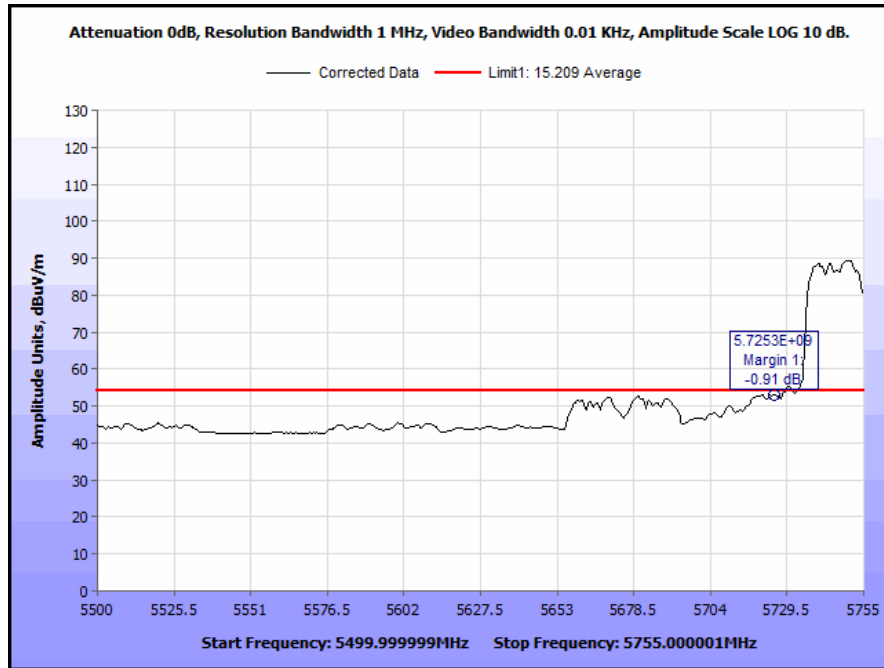


**Plot 360. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11n 20 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

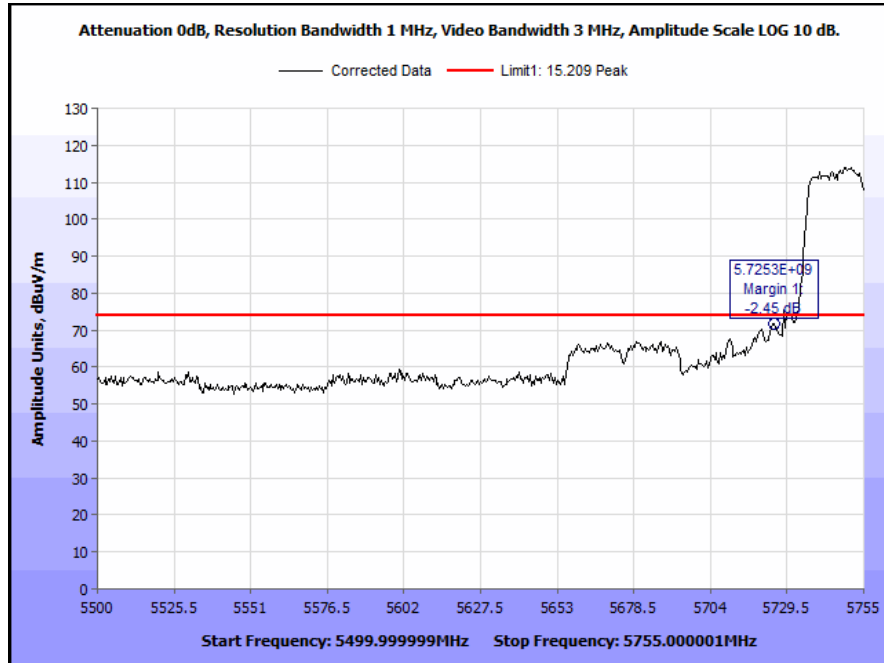


**Plot 361. Radiated Band Edge, 5745 MHz @ 5725 MHz, 802.11n 20 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11n 40 MHz, ANT-BG080-NM2, UNII 3, OODA, 5725 Edge**

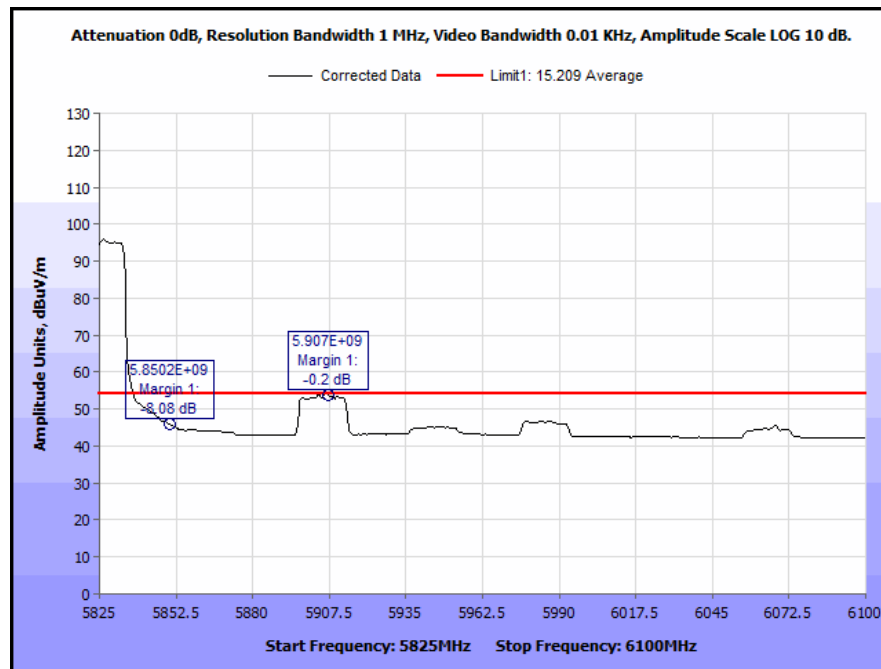


**Plot 362. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11n 40 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

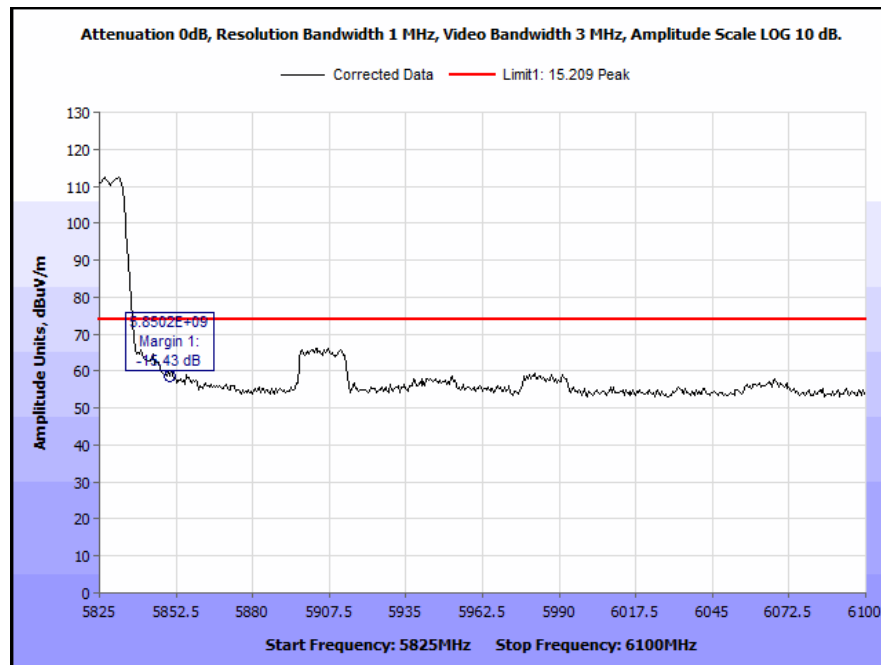


**Plot 363. Radiated Band Edge, 5755 MHz @ 5725 MHz, 802.11n 40 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11a 20 MHz, ANT-BG080-NM2, UNII 3, OODA, 5850 Edge**

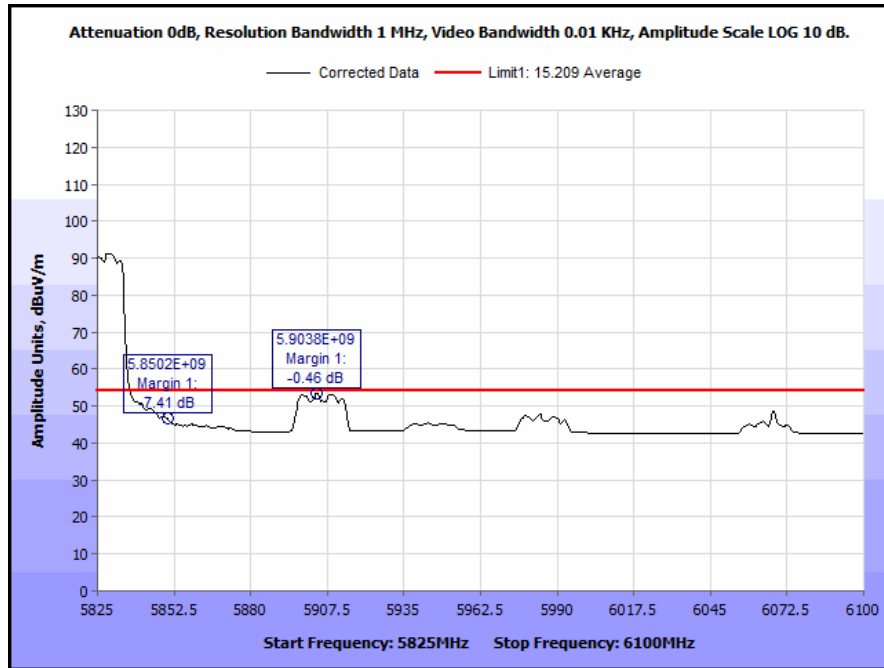


**Plot 364. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11a 20 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

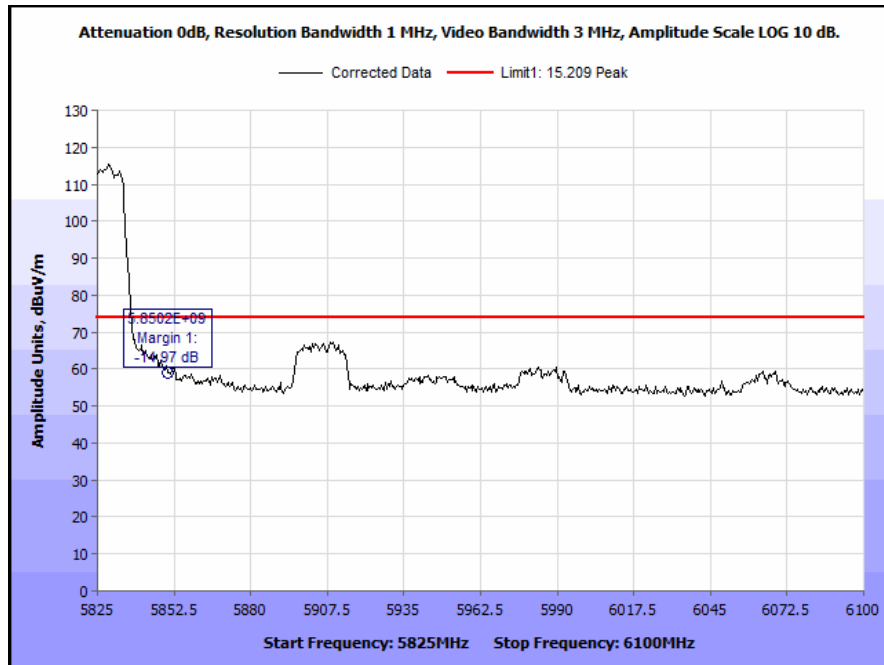


**Plot 365. Radiated Band Edge, 5285 MHz @ 5850 MHz, 802.11a 20 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11ac 20 MHz, ANT-BG080-NM2, UNII 3, OODA, 5850 Edge**

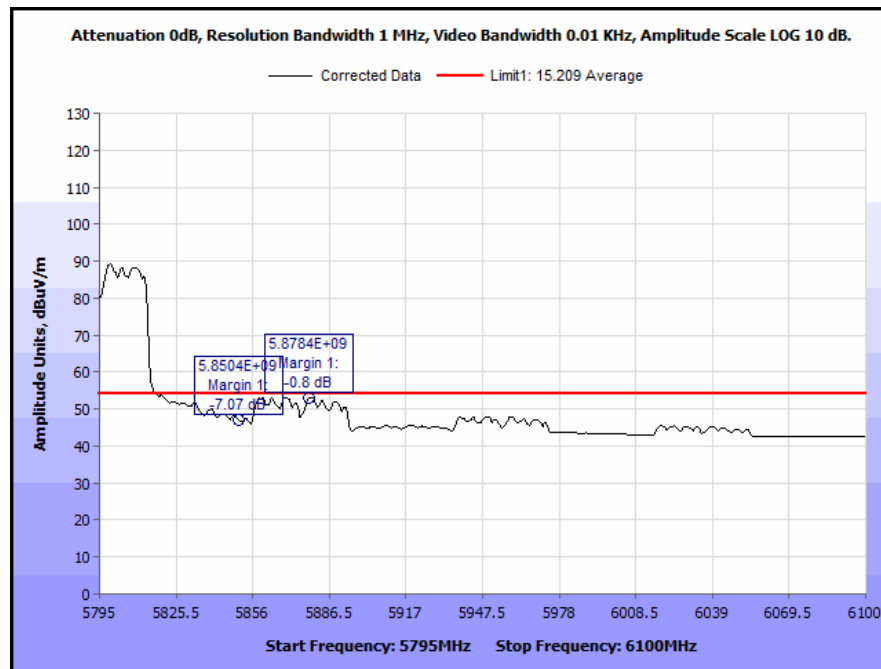


**Plot 366. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11ac 20 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

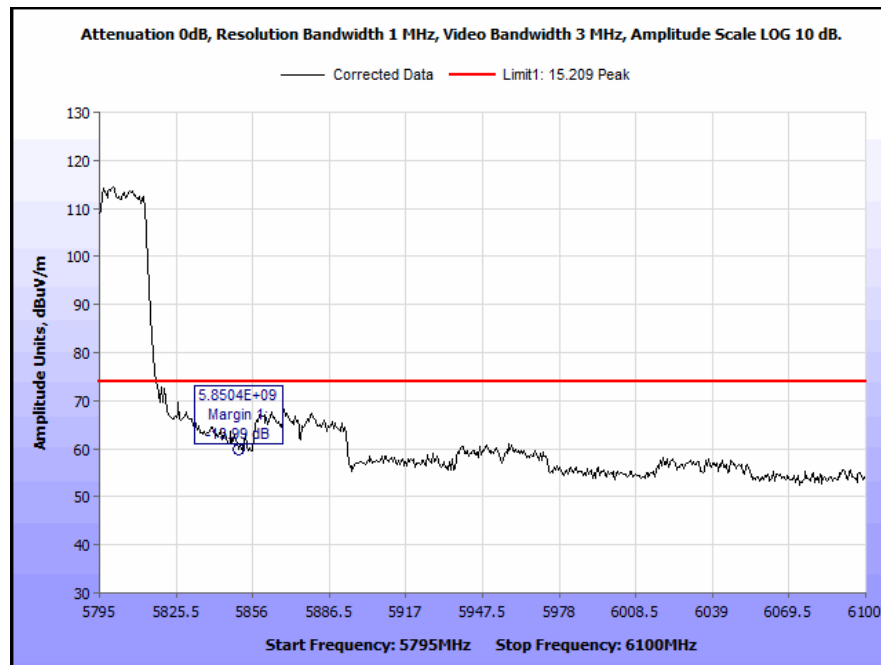


**Plot 367. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11ac 20 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11ac 40 MHz, ANT-BG080-NM2, UNII 3, OODA, 5850 Edge**

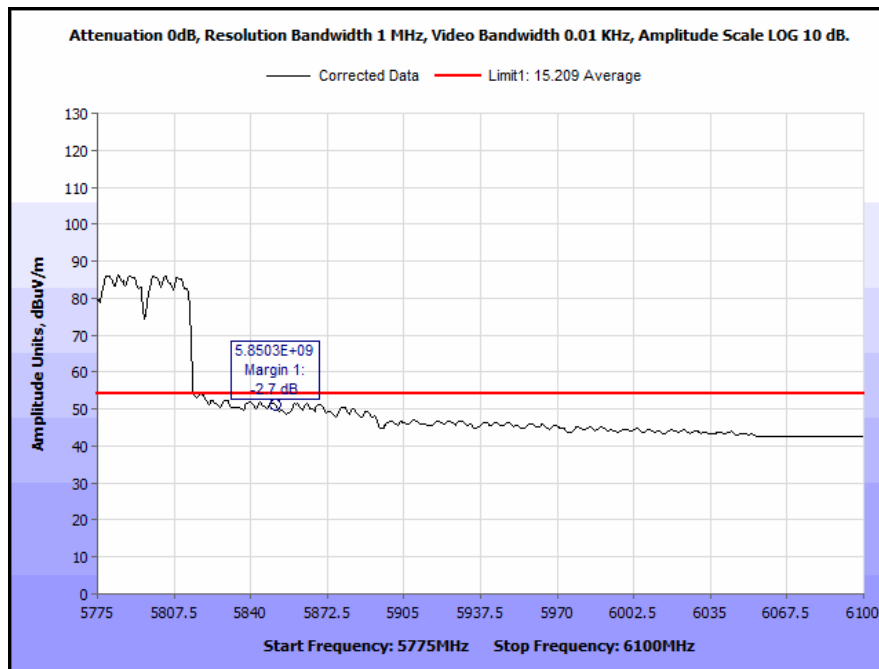


**Plot 368. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11ac 40 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

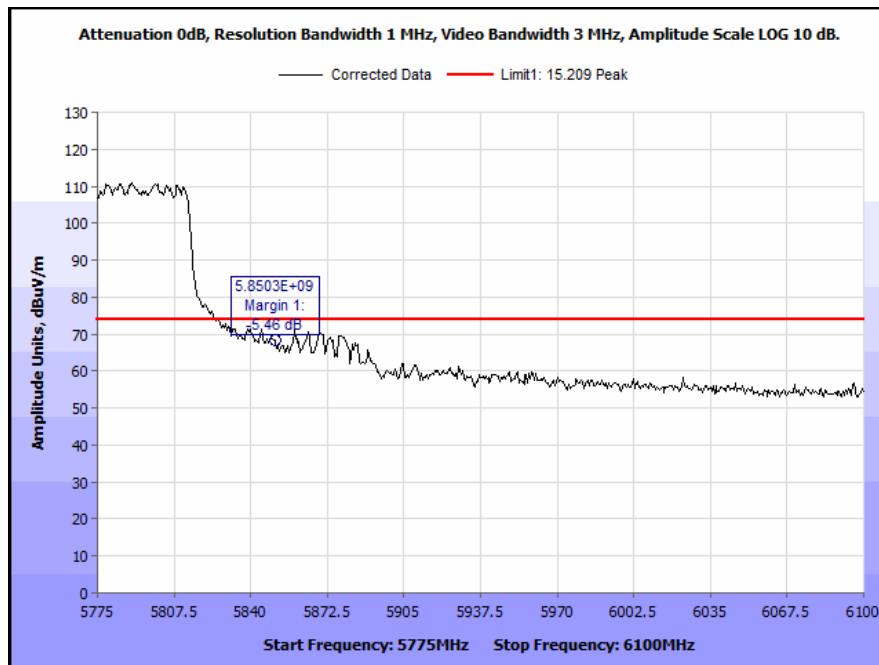


**Plot 369. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11ac 40 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11ac 80 MHz, ANT-BG080-NM2, UNII 3, OODA, 5850 Edge**

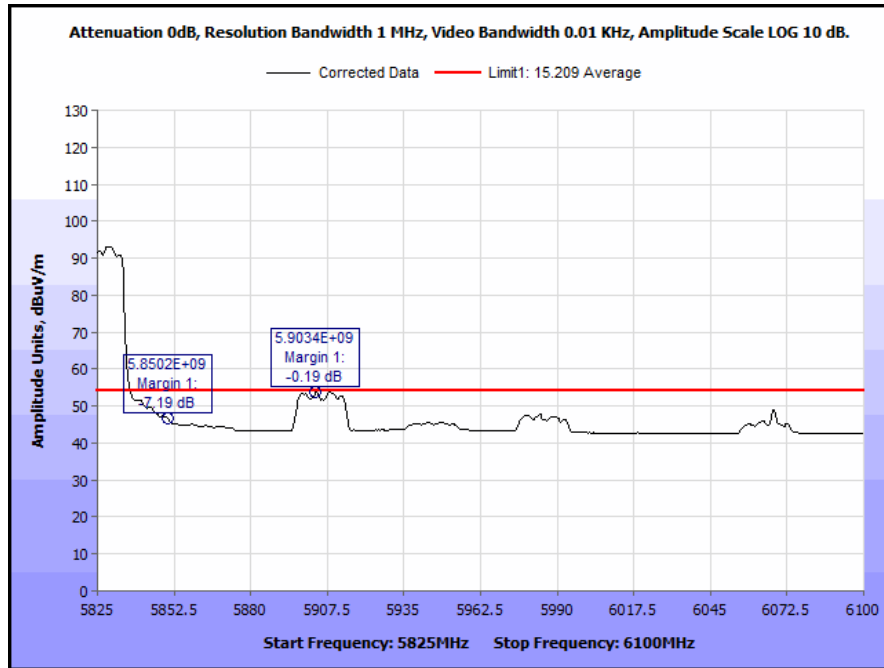


**Plot 370. Radiated Band Edge, 5775 MHz @ 5850 MHz, 802.11ac 80 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**

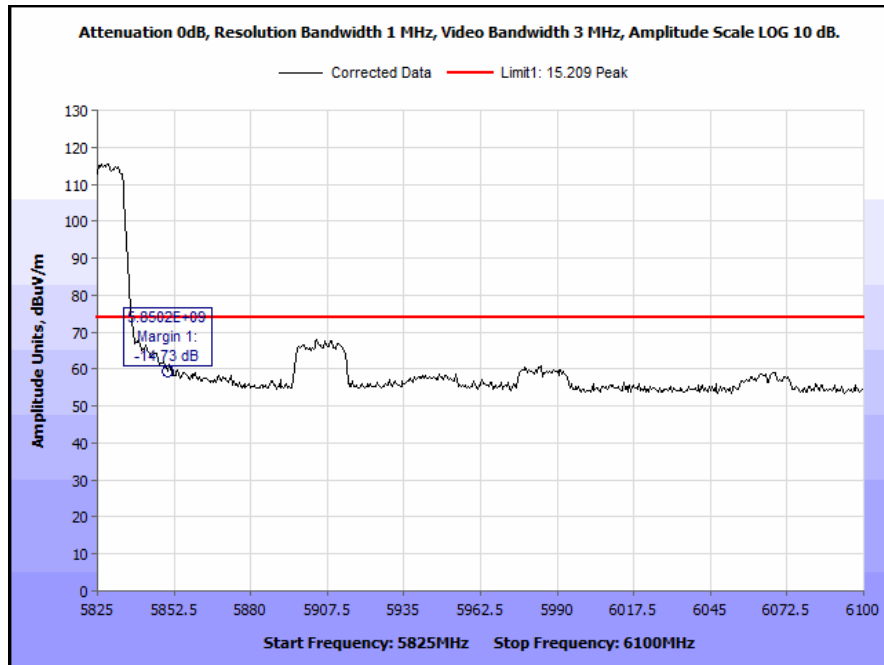


**Plot 371. Radiated Band Edge, 5775 MHz @ 5850 MHz, 802.11ac 80 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

**Band Edge, 802.11n 20 MHz, ANT-BG080-NM2, UNII 3, OODA, 5850 Edge**



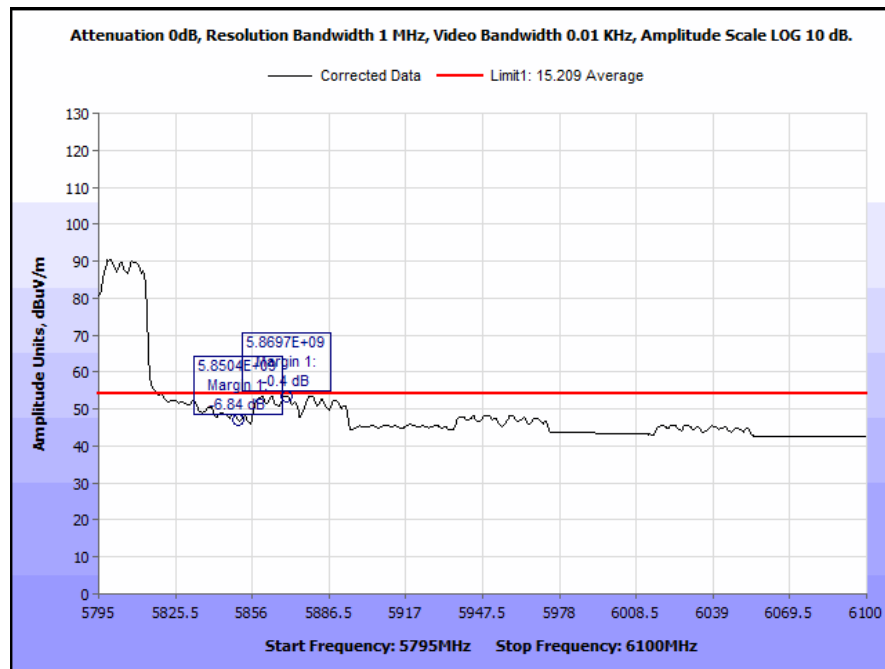
**Plot 372. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11n 20 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**



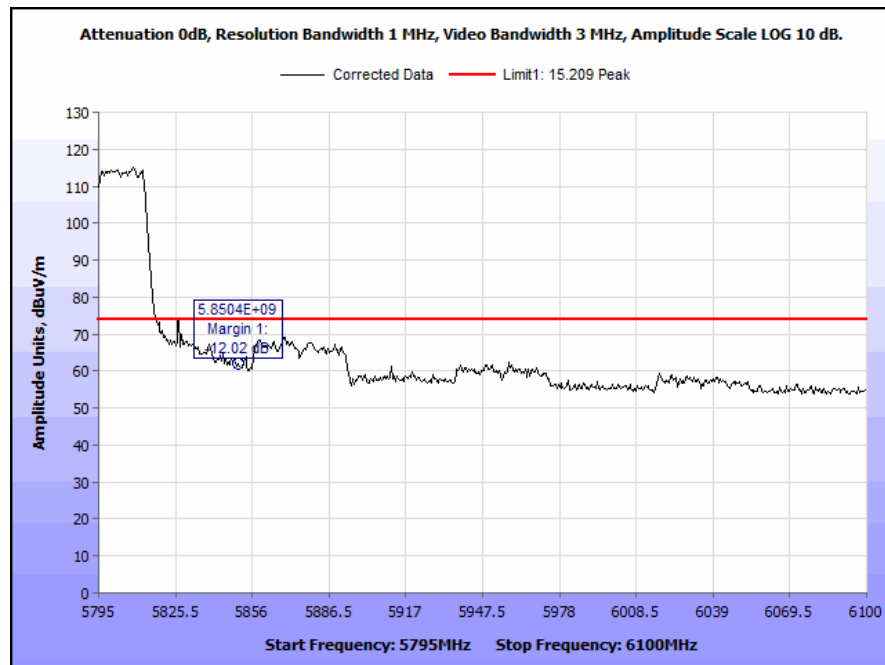
**Plot 373. Radiated Band Edge, 5825 MHz @ 5850 MHz, 802.11n 20 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**



**Band Edge, 802.11n 40 MHz, ANT-BG080-NM2, UNII 3, OODA, 5850 Edge**



**Plot 374. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11n 40 MHz, Avg., ANT-BG080-NM2, UNII 3, OODA**



**Plot 375. Radiated Band Edge, 5795 MHz @ 5850 MHz, 802.11n 40 MHz, Peak, ANT-BG080-NM2, UNII 3, OODA**

## Electromagnetic Compatibility Criteria for Intentional Radiators

### Co-location

**Test Requirements:** Devices designed to transmit simultaneously in multiple channels in single or multiple frequency bands or those using new “carrier aggregation techniques”, excluding cellular base stations or where specific guidance has been proved.

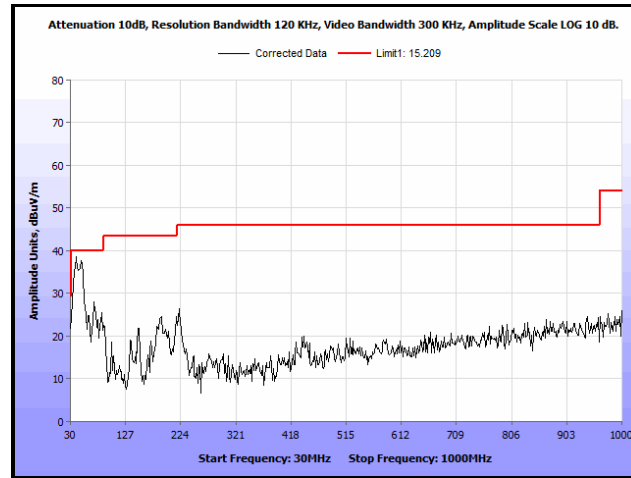
All devices that are capable of transmitting simultaneously in more than one Part-15 band between 5 and 6 GHz (*i.e.*, in two or more of the four U-NII bands or in the 5.8 GHz 15.247 band and at least one U-NII band) are subject to Permit But Ask provisions. This includes devices marketed as IEEE Std 802.11ac or “pre-standard” IEEE Std 802.11ac.

**Test Procedure:** The transmitter was placed on an 80cm wooden table inside in a semi-anechoic chamber. Measurements were performed with the EUT rotated 360 degrees and varying the adjustable antenna mast height to determine worst case orientation for maximum emissions. A preamp was used in the range from 7-18GHz to improve noise floor. Plots were corrected for cable loss, antenna, and preamp gain.

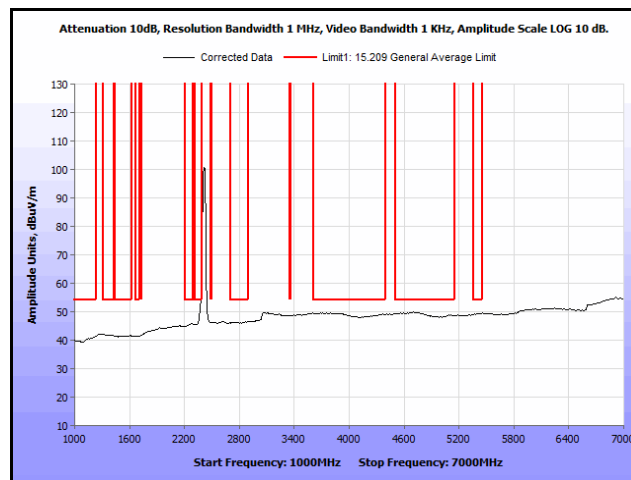
For frequencies from 30 MHz to 1 GHz, measurements were made using a quasi-peak detector with a 120 kHz bandwidth.

For measurements above 1 GHz, measurements were made with a Peak detector with 1 MHz resolution bandwidth. Where the spurious emissions fell into a restricted band, measurements were also made with an average detector to make sure they complied with 15.209 limits. Only noise floor was seen above 18 GHz.

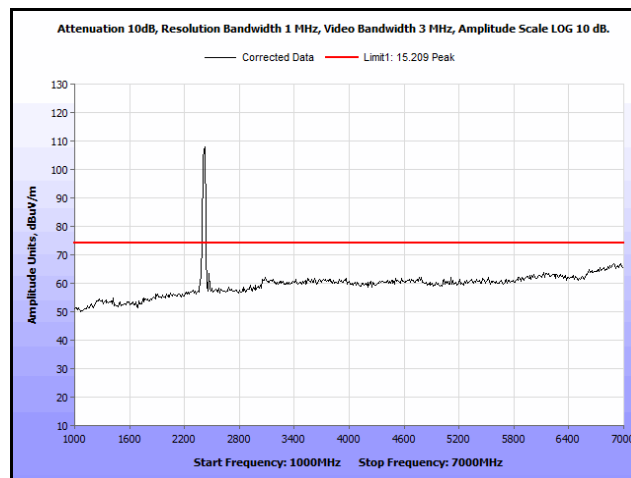
The EUT uses 2 radios that are co-located. The EUT was set to transmit on both radios using the following matrix below.



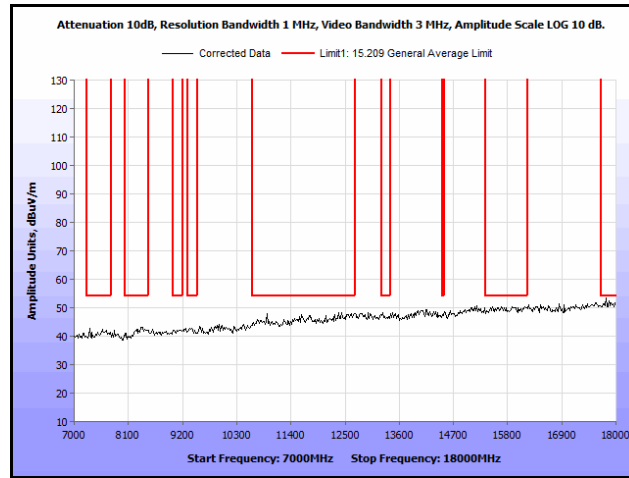
Plot 376. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 30 MHz - 1 GHz, Average



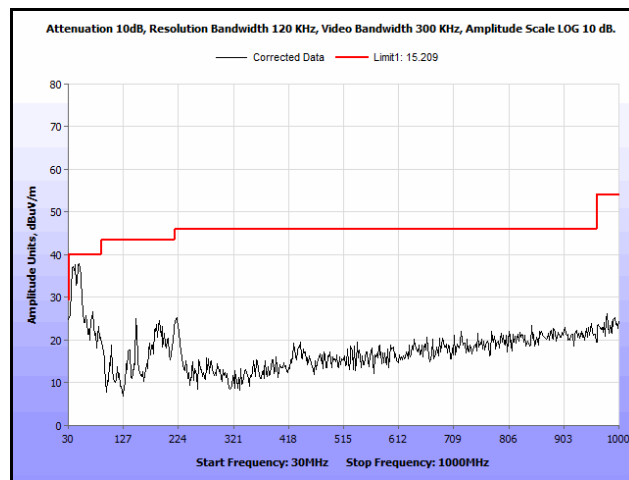
Plot 377. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 1 GHz - 7 GHz, Average



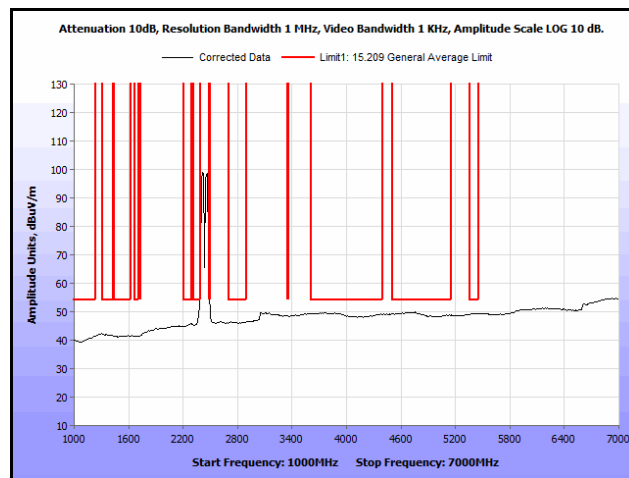
Plot 378. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 1 GHz - 7 GHz, Peak



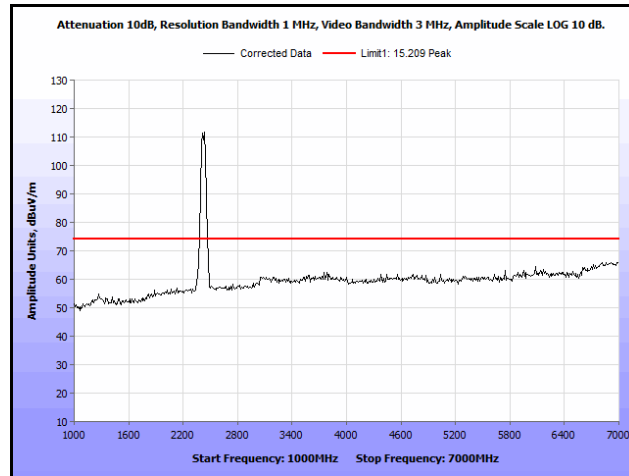
Plot 379. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 7 GHz - 18 GHz, Average



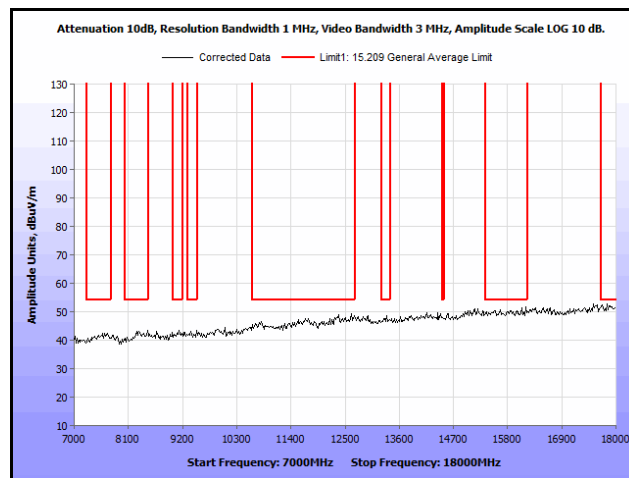
Plot 380. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 30 MHz - 1 GHz, Average



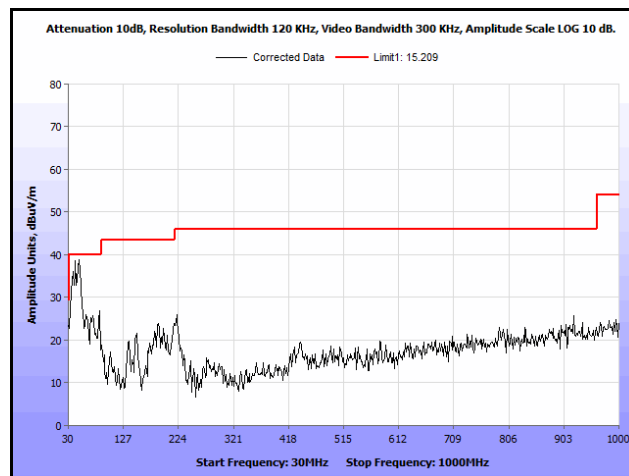
Plot 381. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 1 GHz - 7 GHz, Average



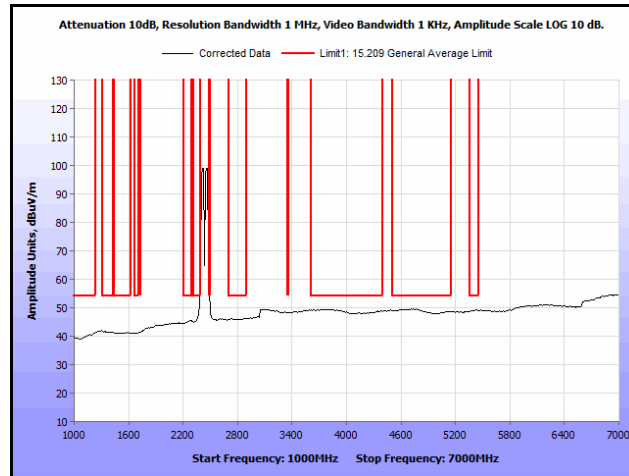
Plot 382. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 1 GHz - 7 GHz, Peak



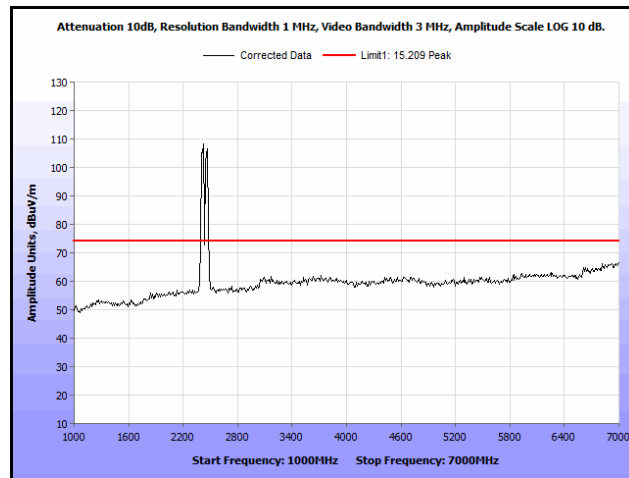
Plot 383. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 7 GHz - 18 GHz, Average



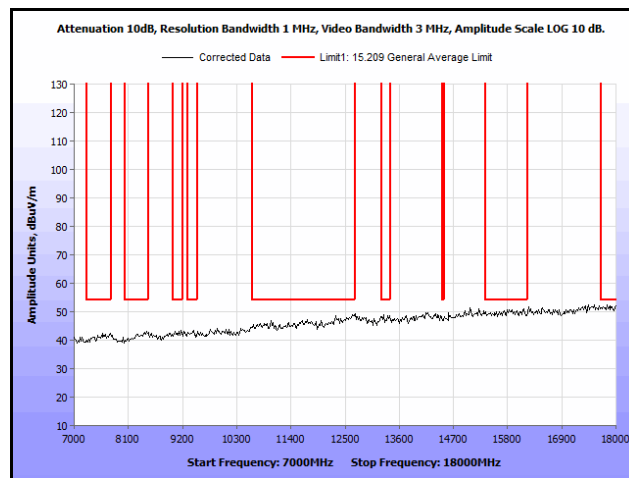
Plot 384. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 30 MHz - 1 GHz, Average



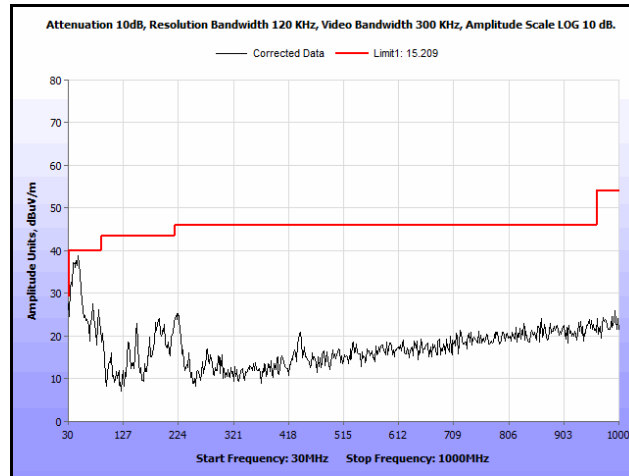
Plot 385. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 1 GHz - 7 GHz, Average



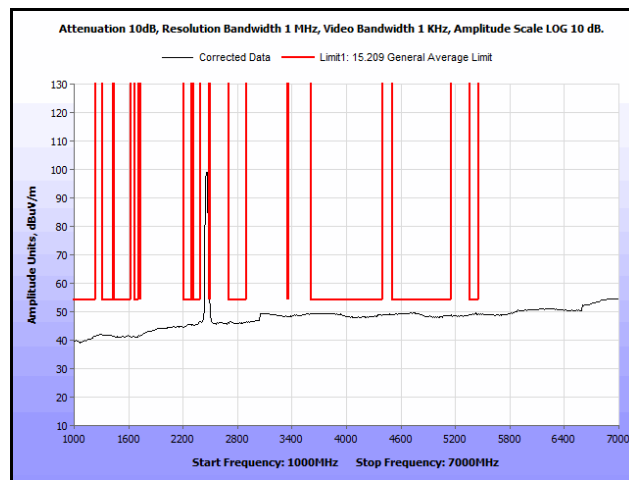
Plot 386. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 1 GHz - 7 GHz, Peak



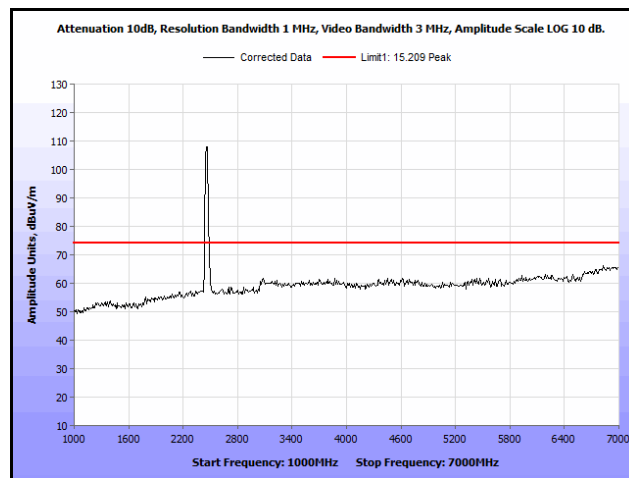
Plot 387. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 7 GHz - 18 GHz, Average



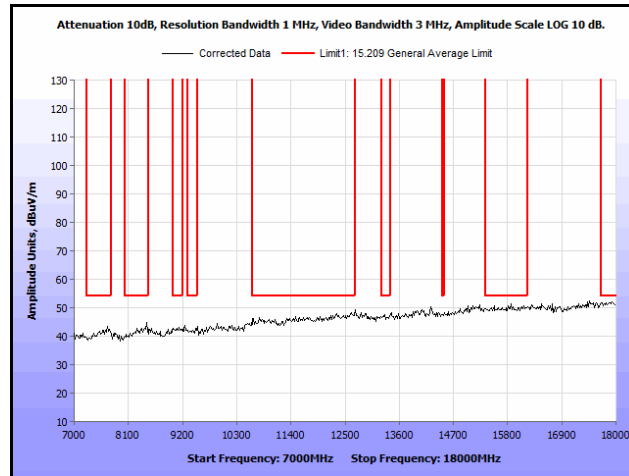
Plot 388. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 30 MHz - 1 GHz, Average



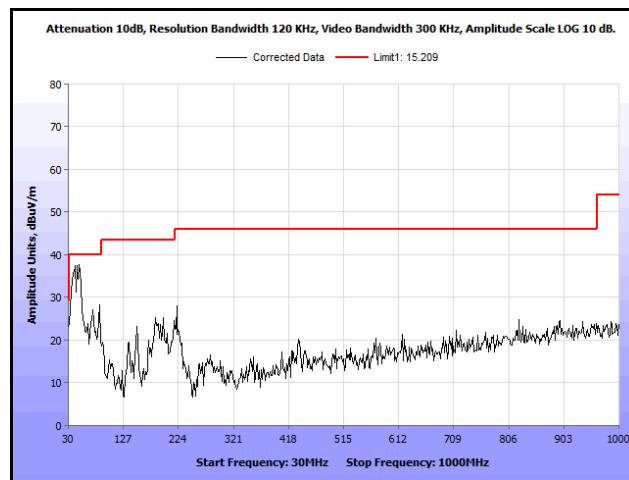
Plot 389. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 1 GHz - 7 GHz, Average



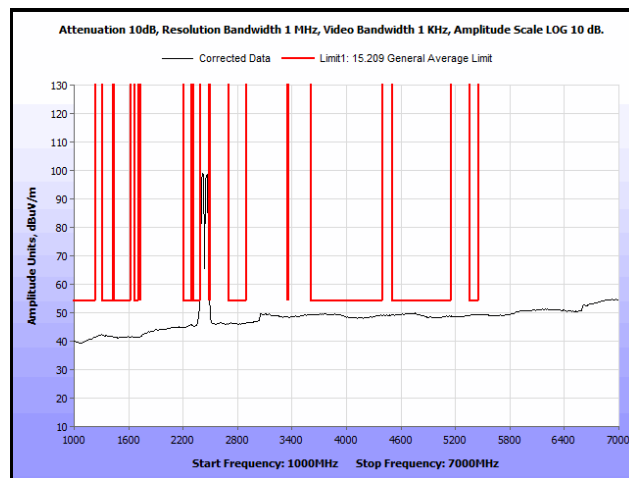
Plot 390. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 1 GHz - 7 GHz, Peak



Plot 391. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 7 GHz - 18 GHz, Average

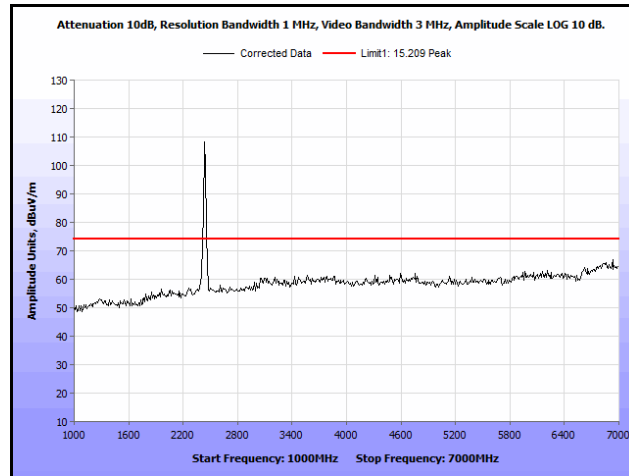


Plot 392. Co-Location, ANT-O6ABGN-1211-PA, 802.11n Plot 393 20 MHz, 2437 MHz & 2462 MHz, 30 MHz - 1 GHz, Average

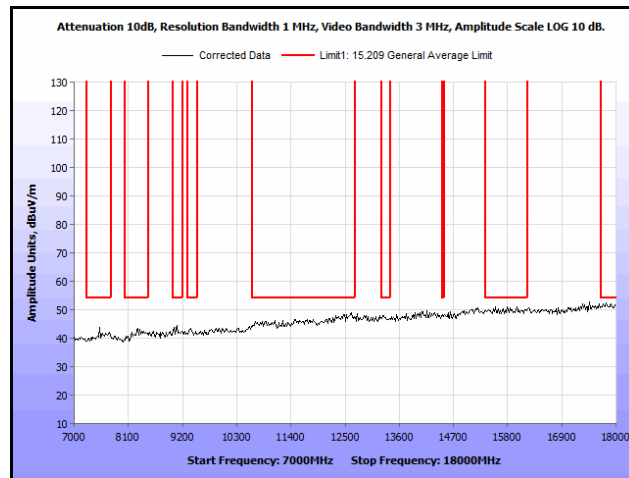


Plot 394. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 1 GHz - 7 GHz, Average

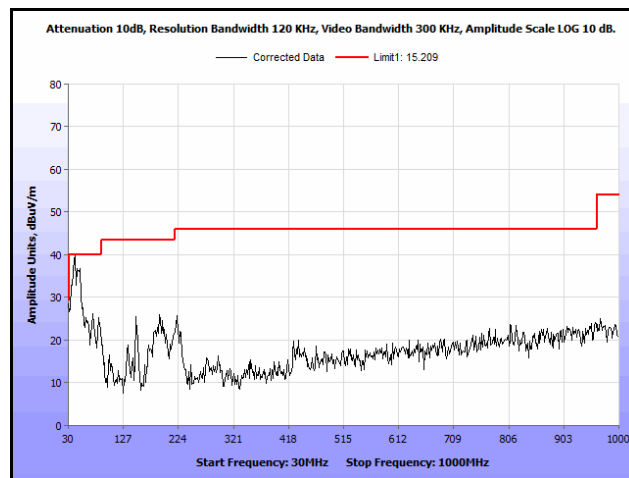




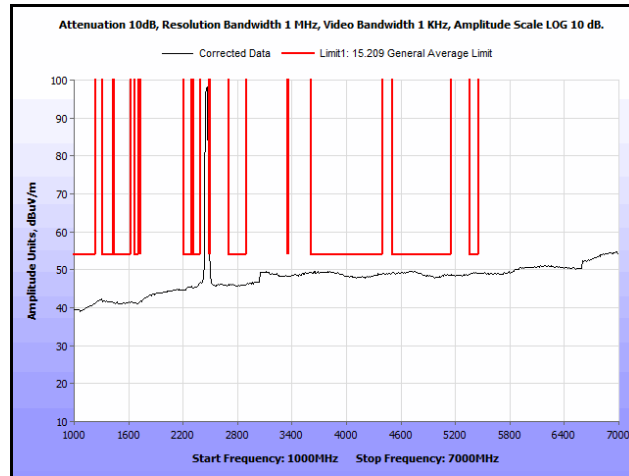
Plot 395. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 1 GHz - 7 GHz, Peak



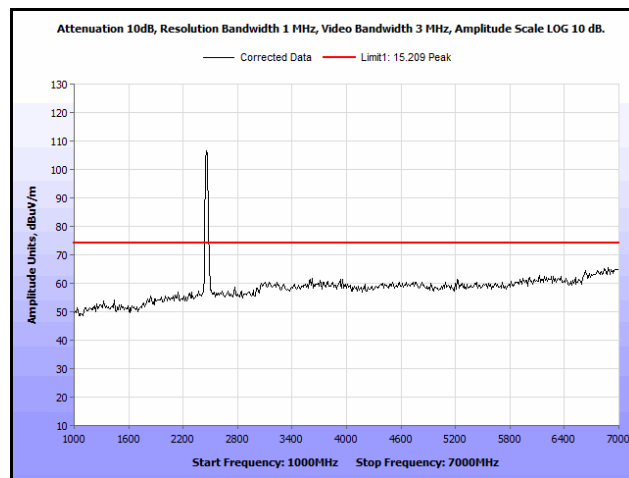
Plot 396. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 7 GHz - 18 GHz, Average



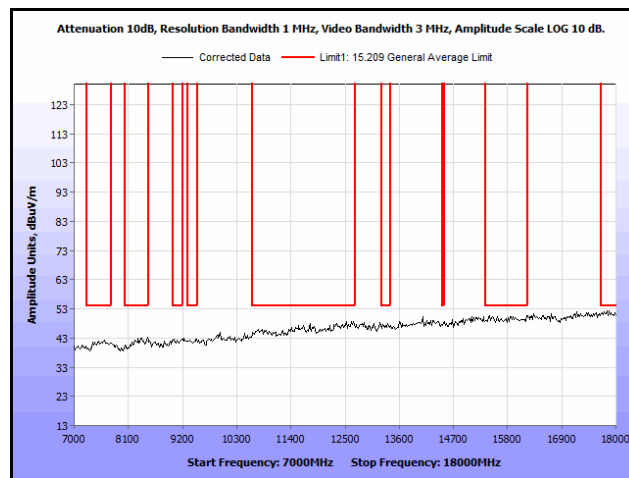
Plot 397. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 30 MHz - 1 GHz, Average



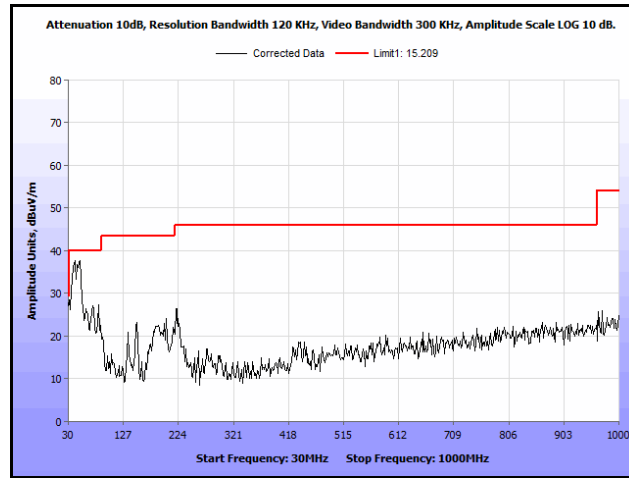
Plot 398. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 1 GHz - 7 GHz, Average



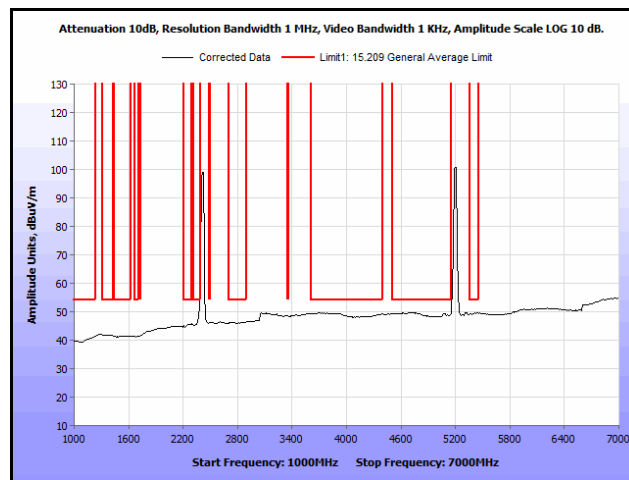
Plot 399. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 1 GHz - 7 GHz, Peak



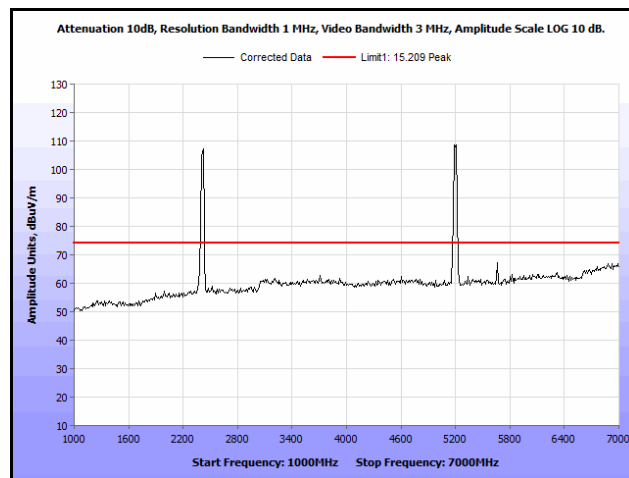
Plot 400. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 7 GHz - 18 GHz, Average



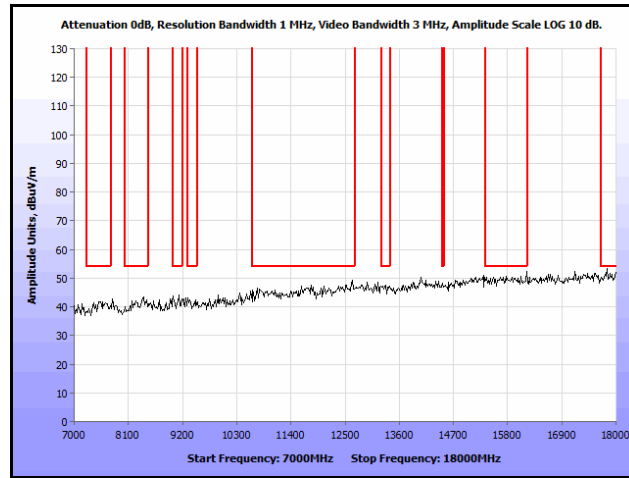
Plot 401. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 30 MHz - 1 GHz, Average



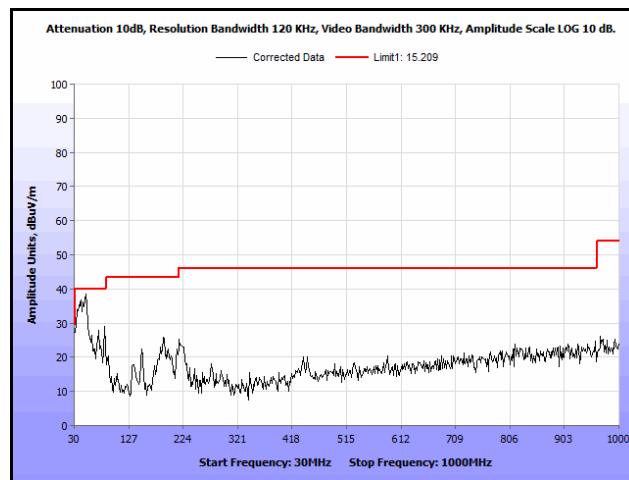
Plot 402. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 1 GHz - 7 GHz, Average



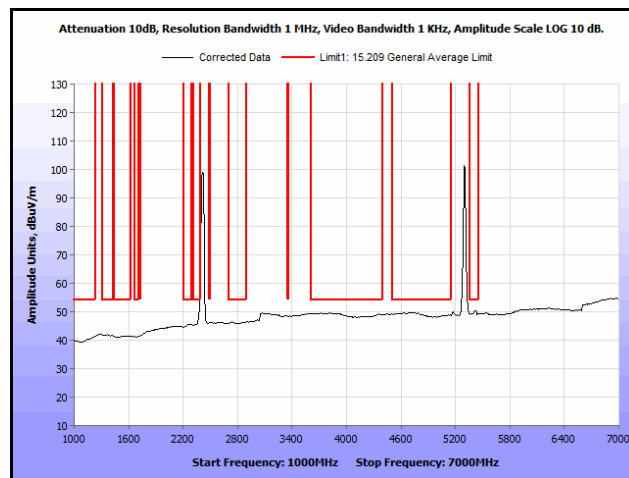
Plot 403. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak



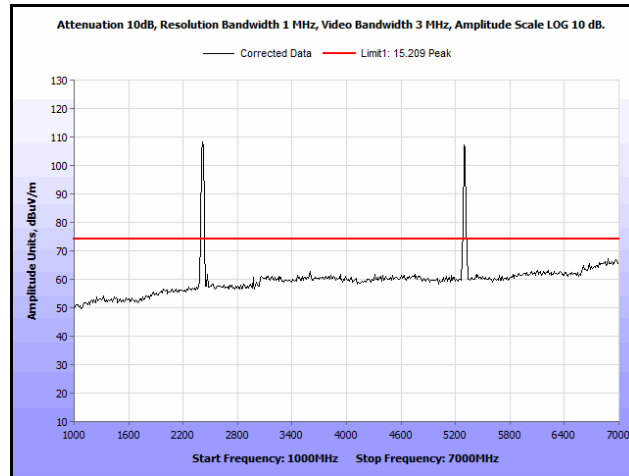
Plot 404. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



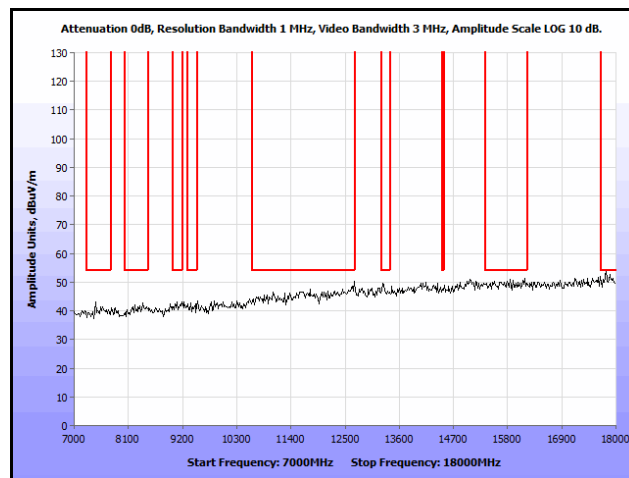
Plot 405. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



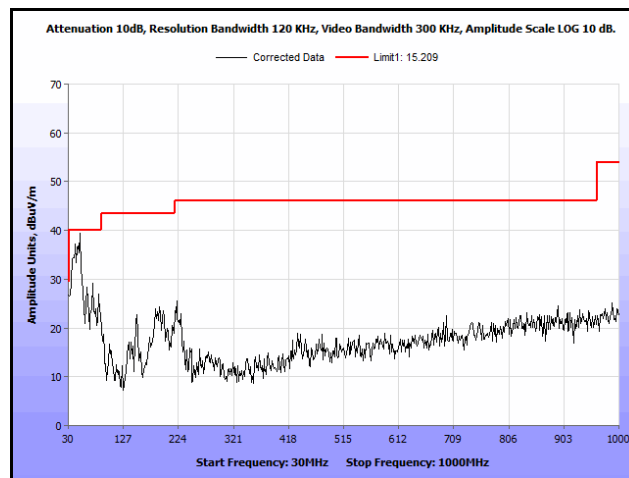
Plot 406. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



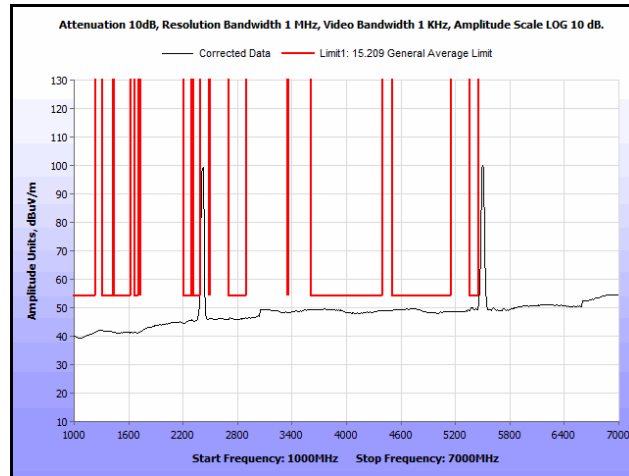
**Plot 407. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak**



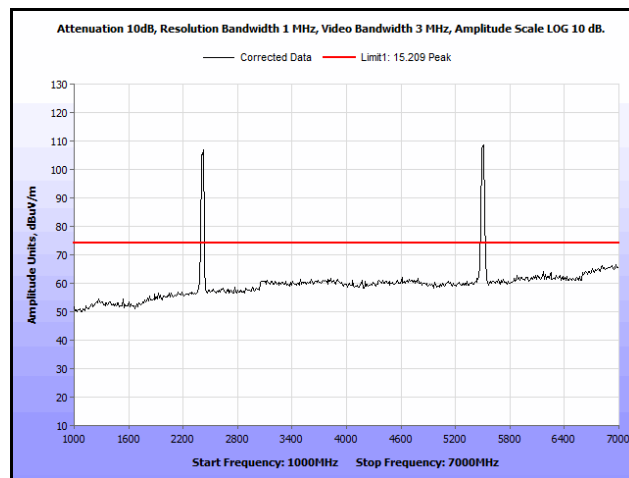
**Plot 408. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 7 GHz - 18 GHz, Average**



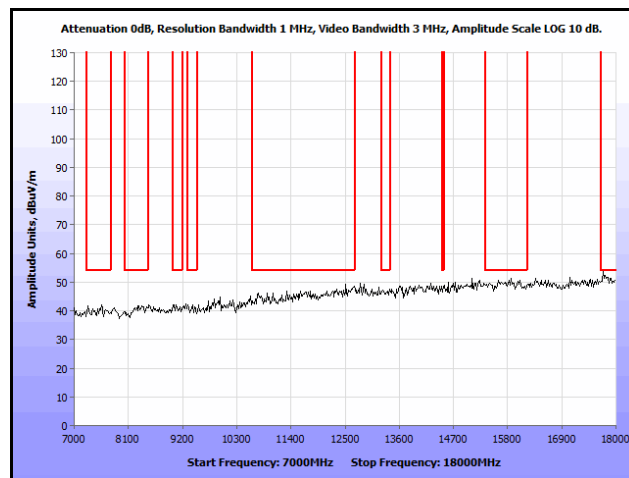
**Plot 409. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 30 MHz - 1 GHz, Average**



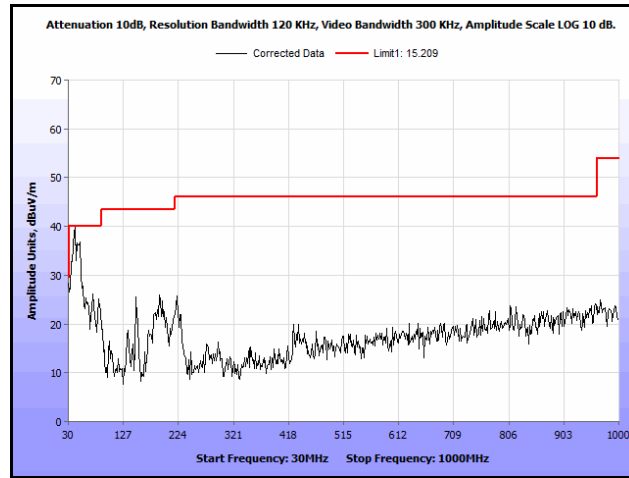
Plot 410. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



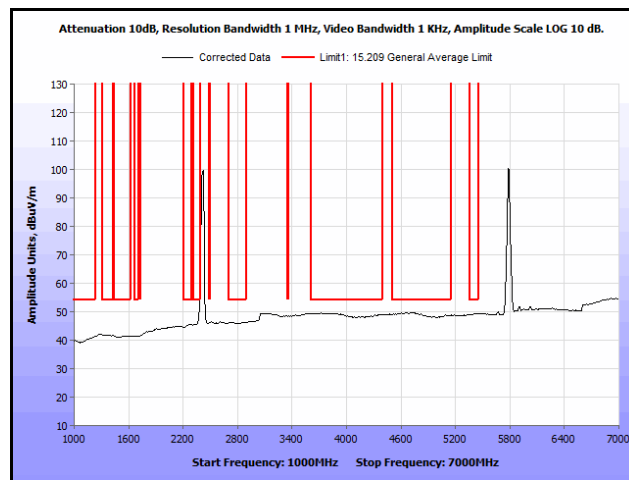
Plot 411. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



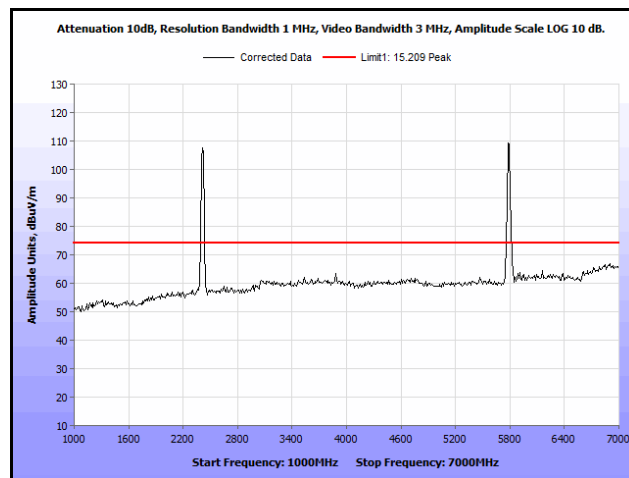
Plot 412. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



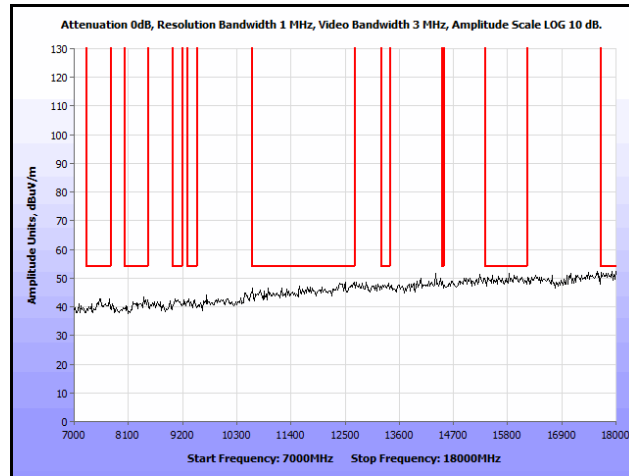
Plot 413. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



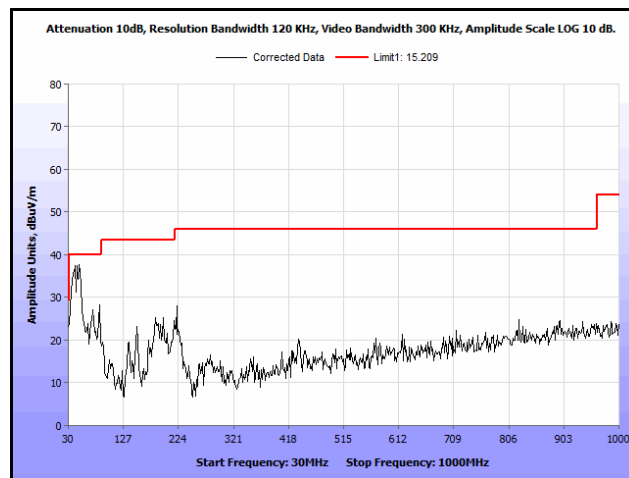
Plot 414. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



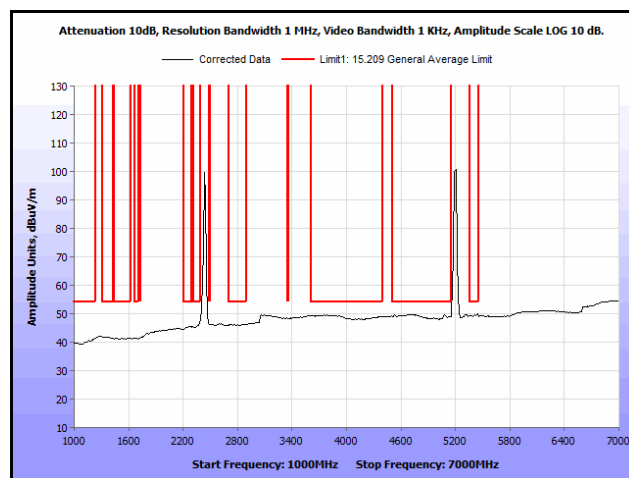
Plot 415. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



Plot 416. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 7 GHz - 18 GHz, Average

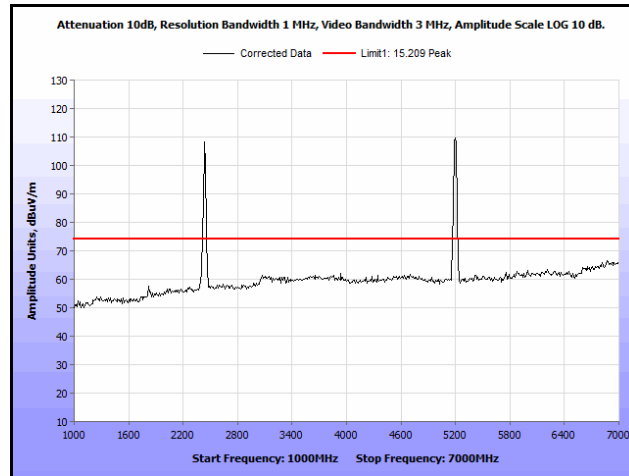


Plot 417. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 30 MHz - 1 GHz, Average

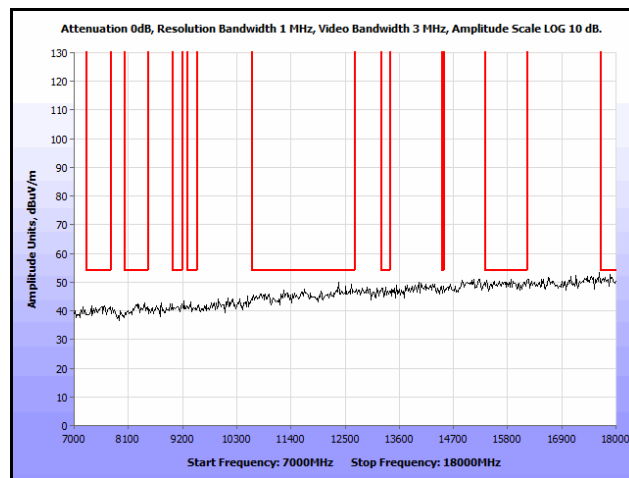


Plot 418. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 1 GHz - 7 GHz, Average

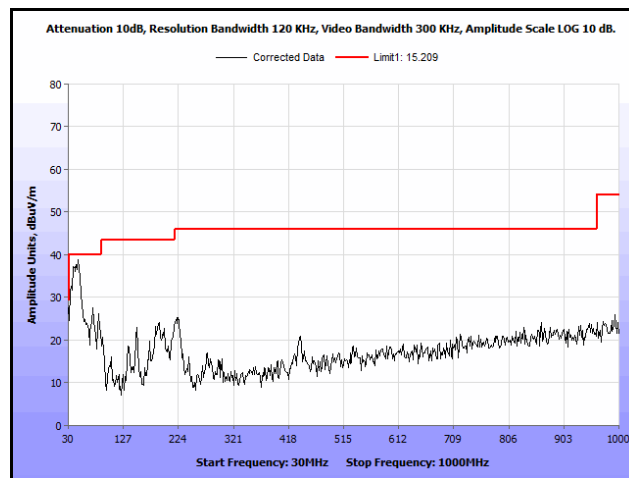




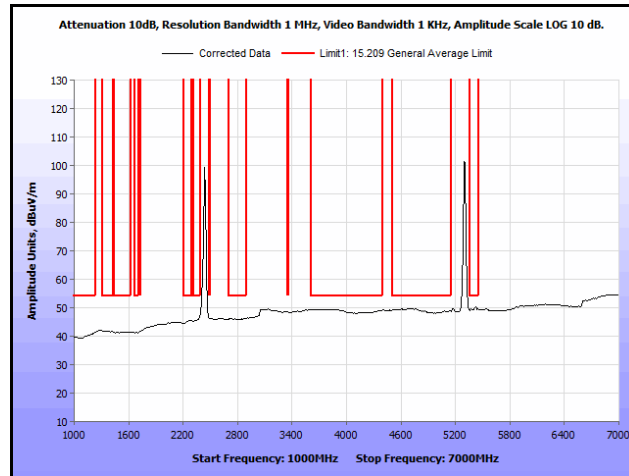
Plot 419. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak



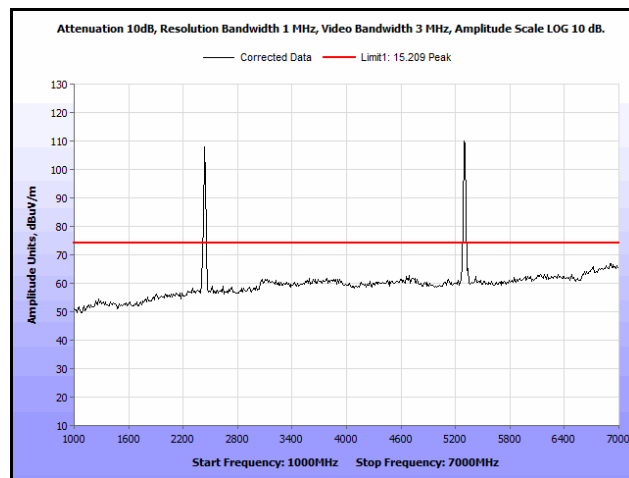
Plot 420. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



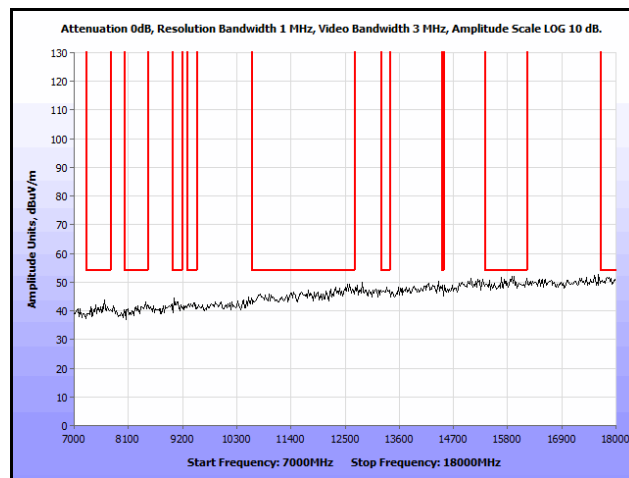
Plot 421. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



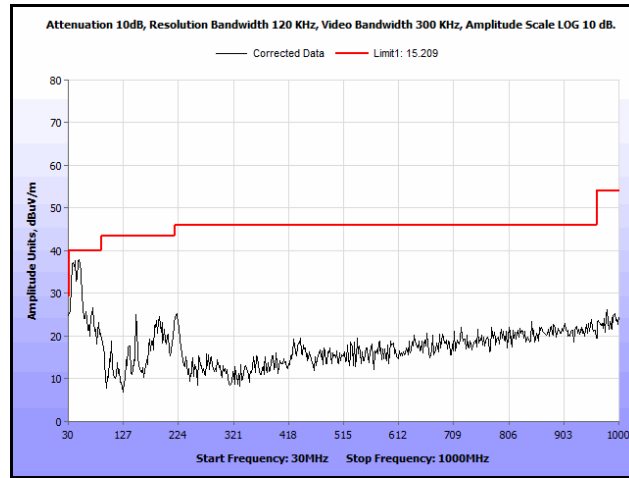
Plot 422. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



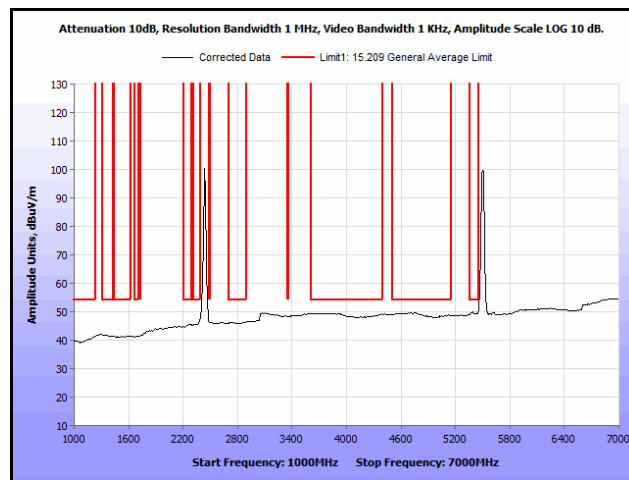
Plot 423. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



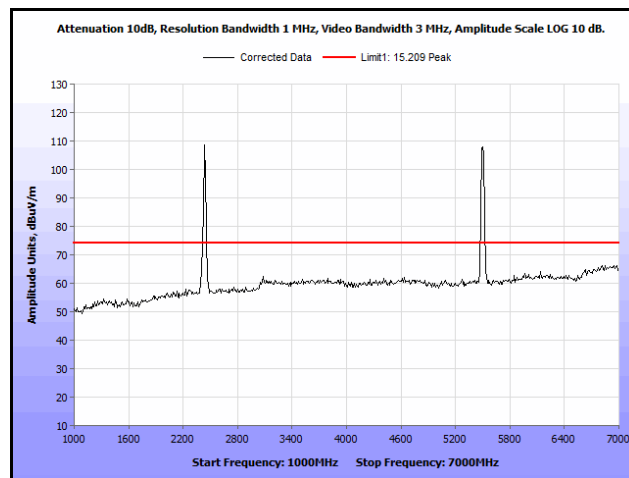
Plot 424. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



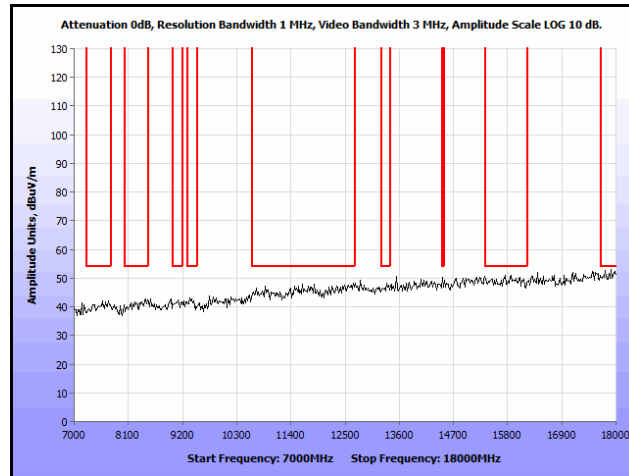
Plot 425. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



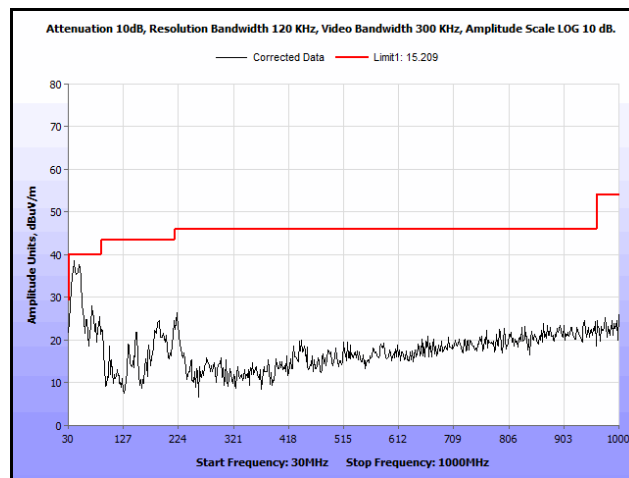
Plot 426. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



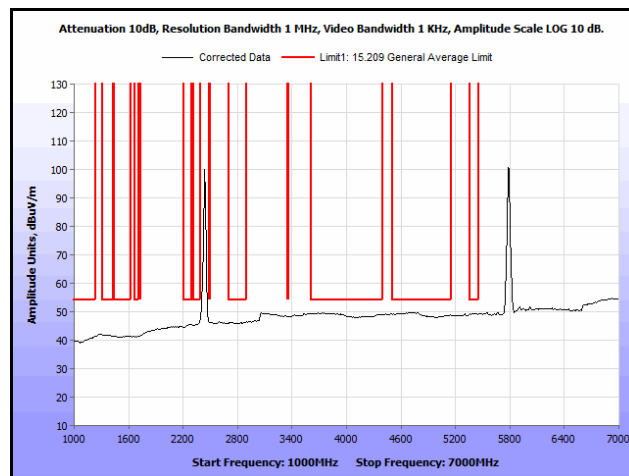
Plot 427. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



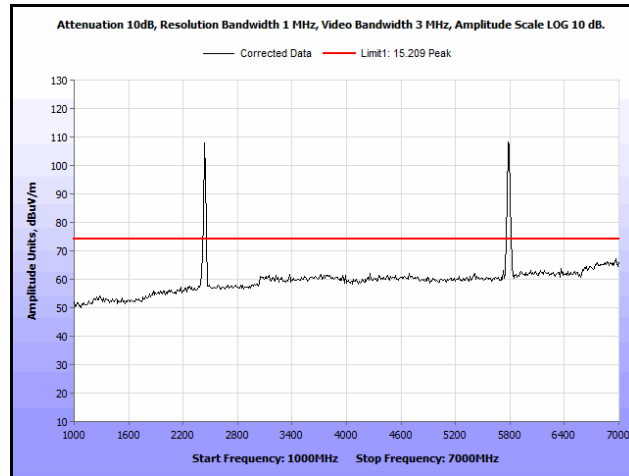
Plot 428. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



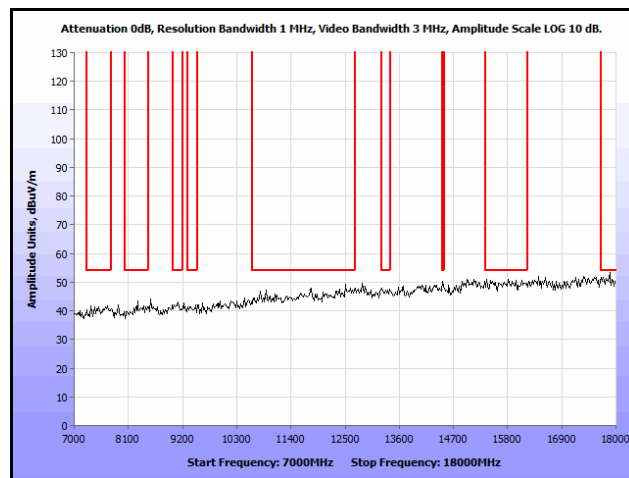
Plot 429. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



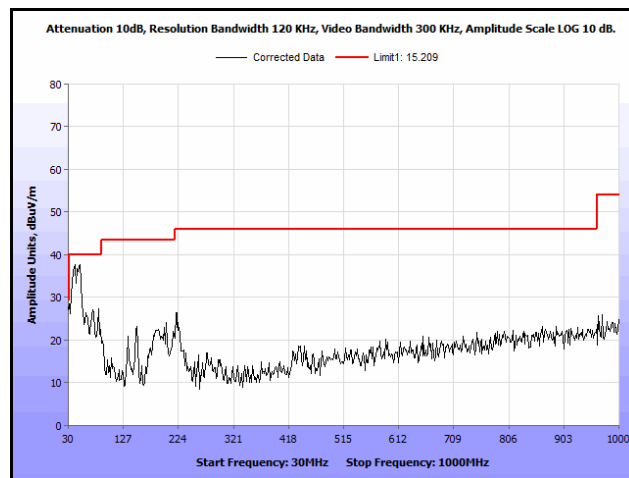
Plot 430. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



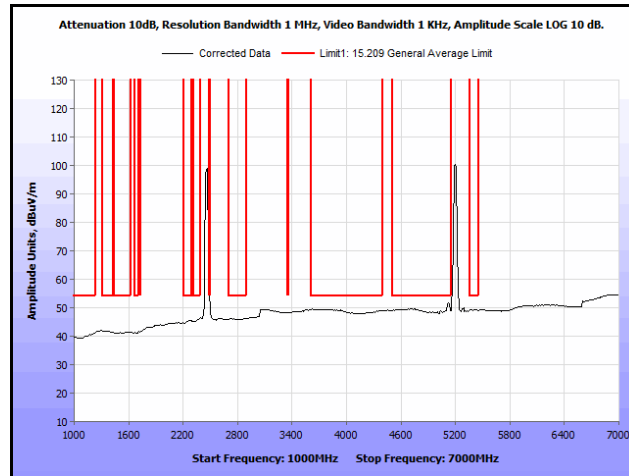
Plot 431. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



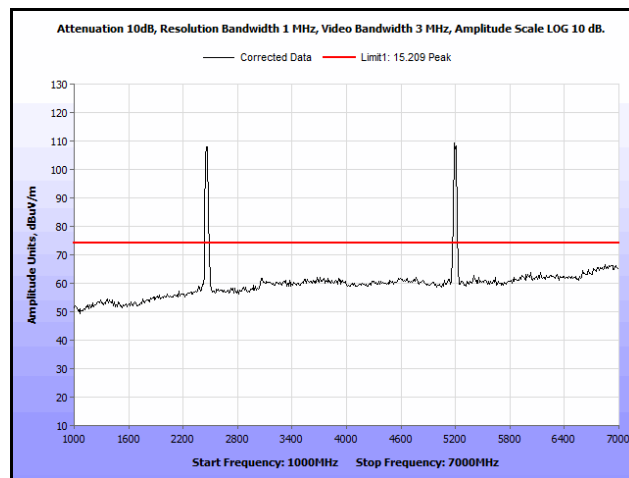
Plot 432. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



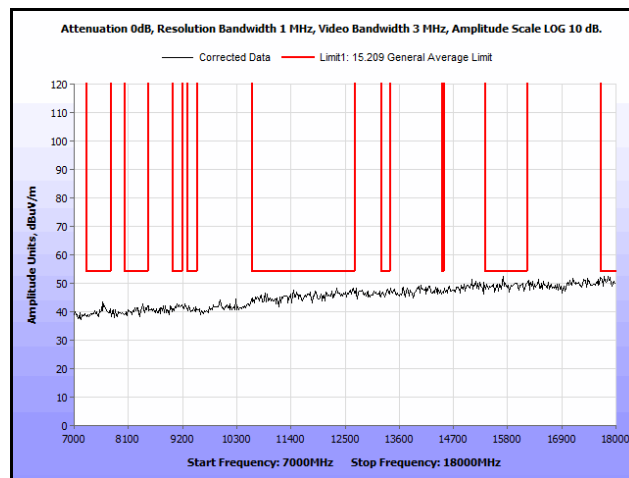
Plot 433. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 30 MHz - 1 GHz, Average



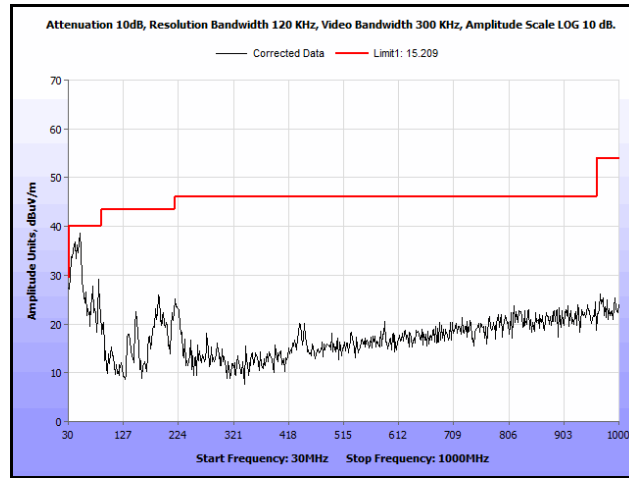
Plot 434. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 1 GHz - 7 GHz, Average



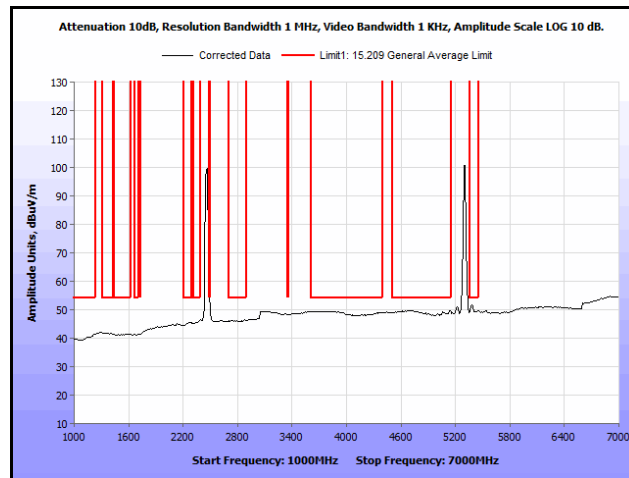
Plot 435. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak



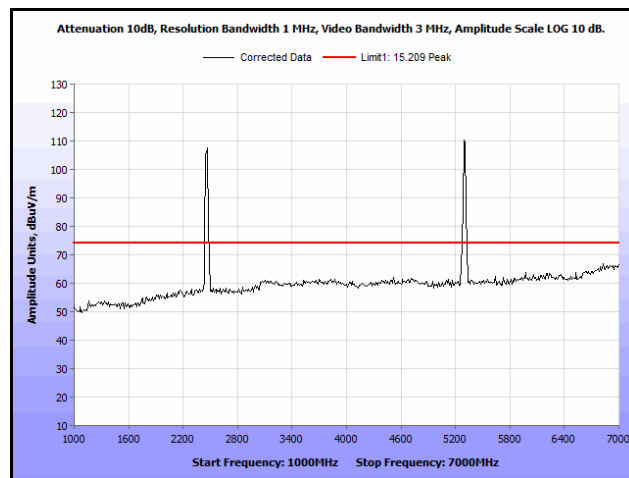
Plot 436. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



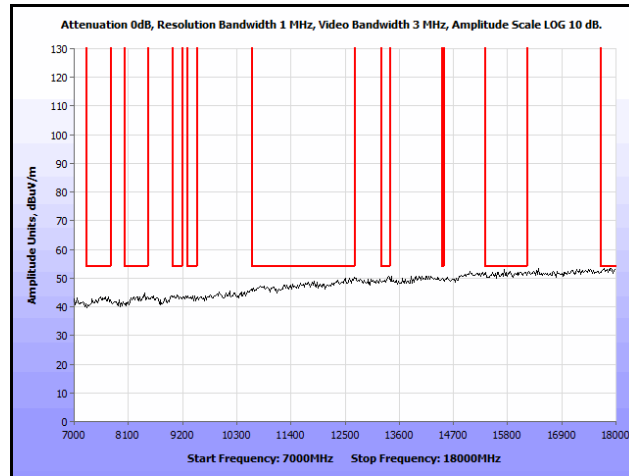
Plot 437. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



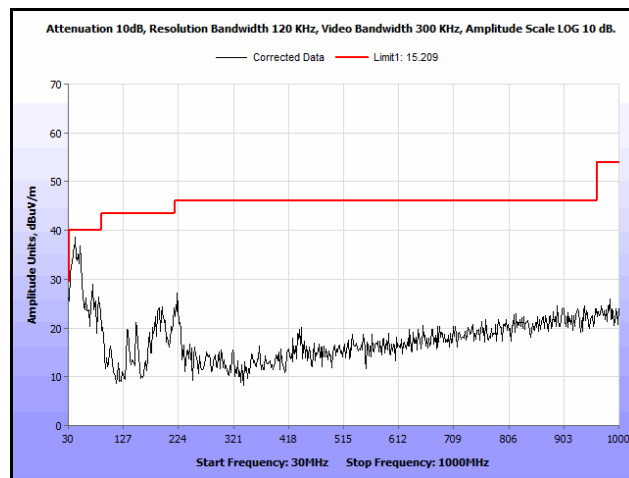
Plot 438. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



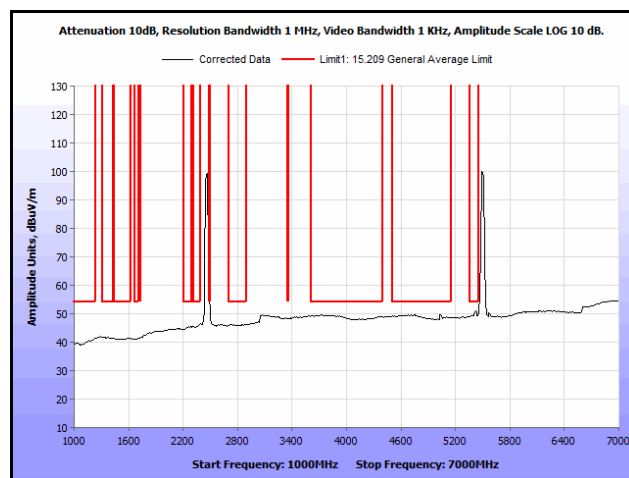
Plot 439. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



Plot 440. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 7 GHz - 18 GHz, Average

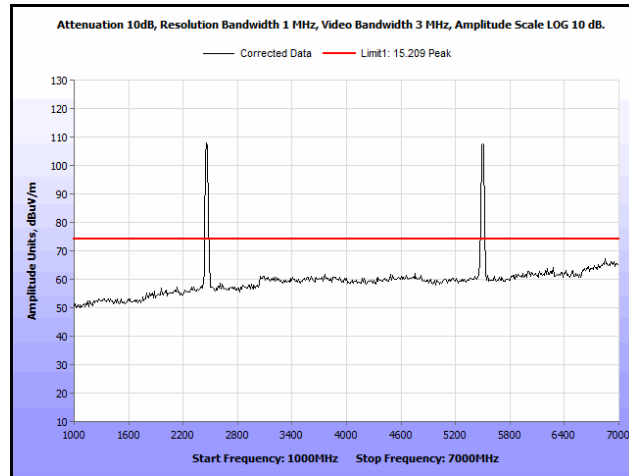


Plot 441. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 30 MHz - 1 GHz, Average

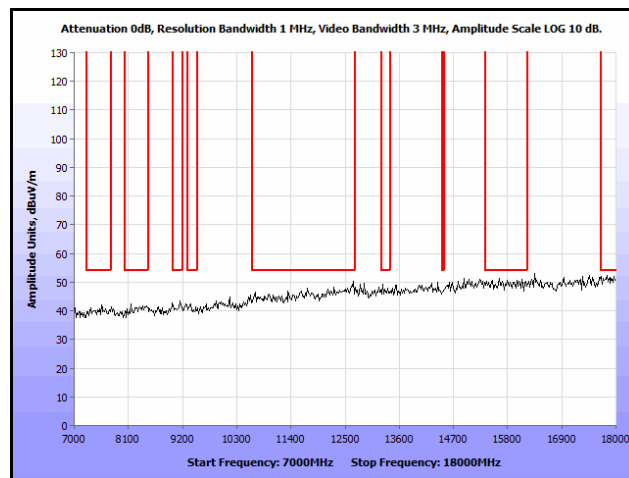


Plot 442. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 1 GHz - 7 GHz, Average

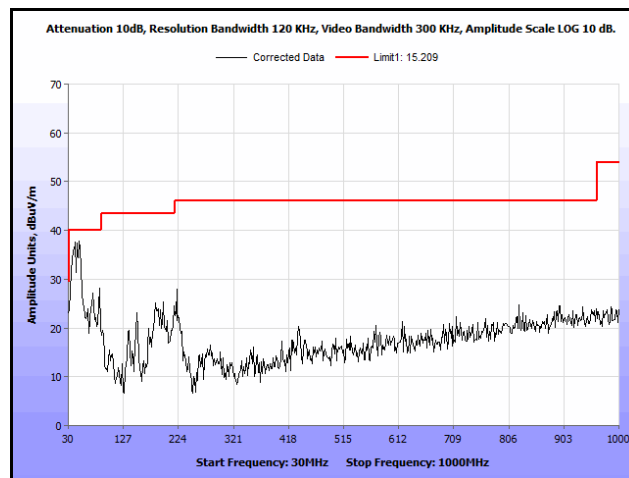




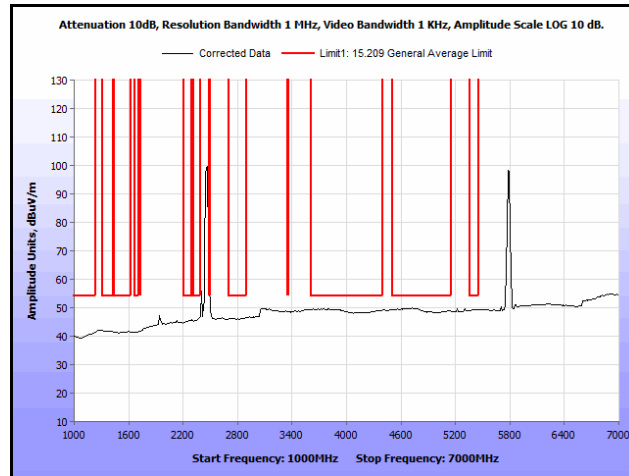
Plot 443. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



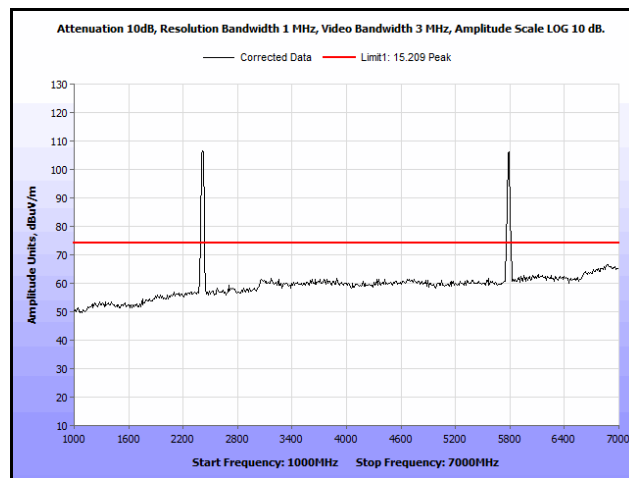
Plot 444. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



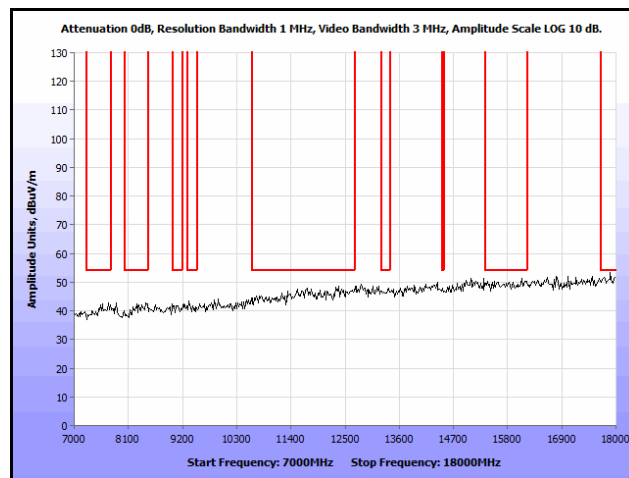
Plot 445. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



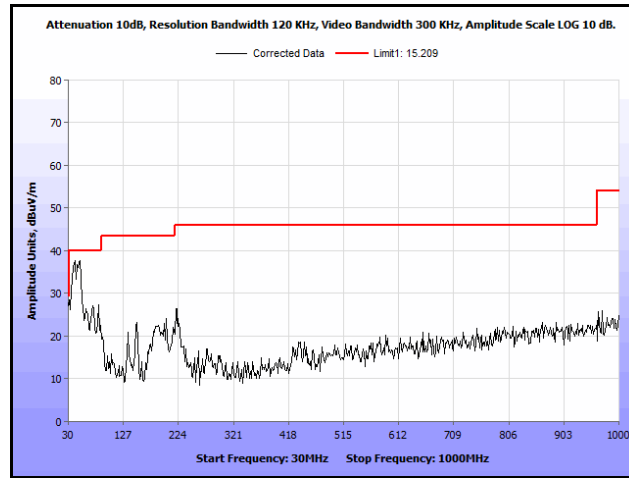
Plot 446. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



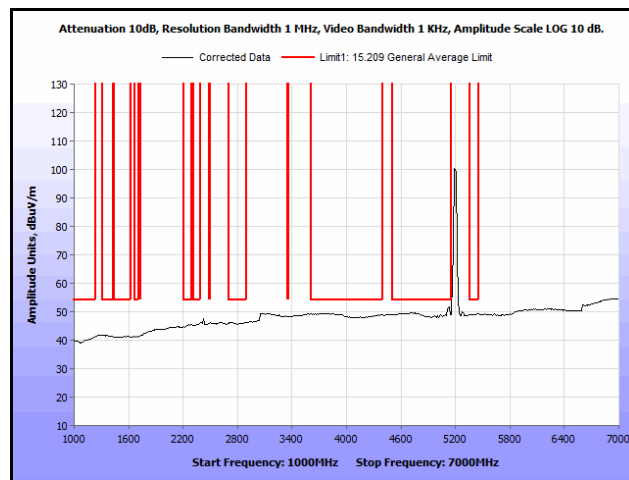
Plot 447. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



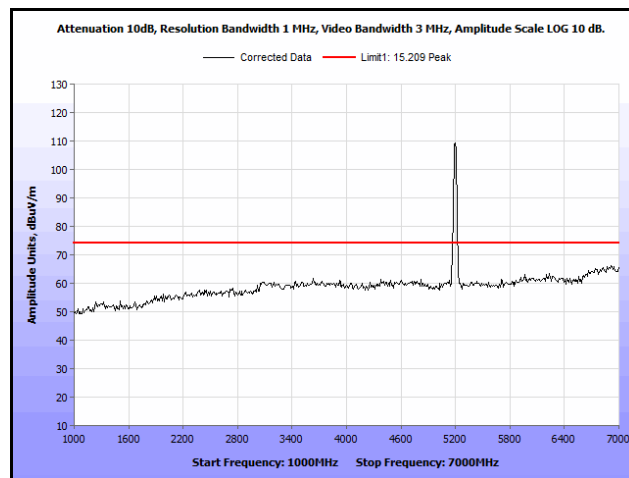
Plot 448. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



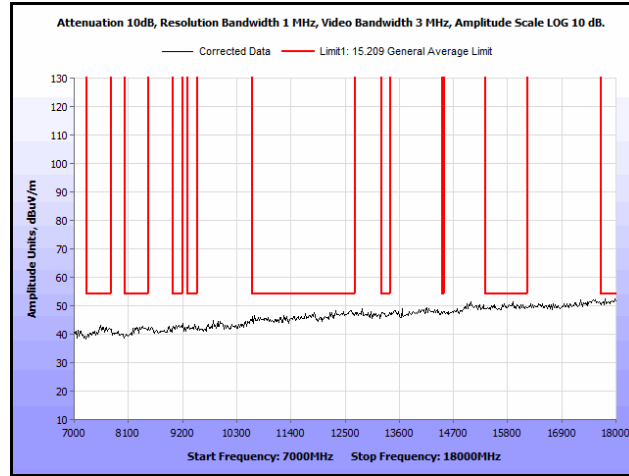
Plot 449. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 30 MHz - 1 GHz, Average



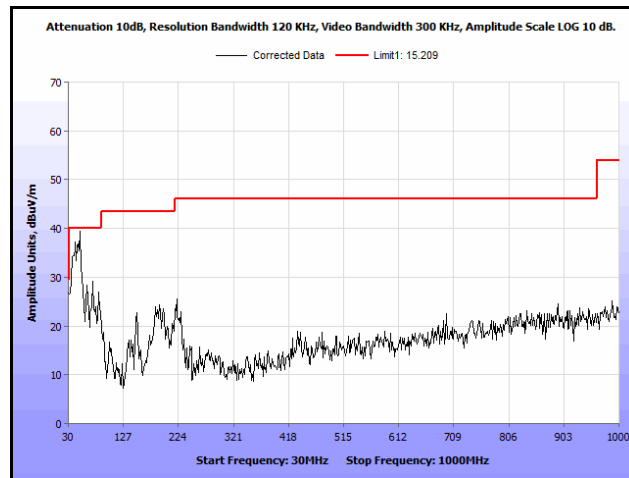
Plot 450. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 1 GHz - 7 GHz, Average



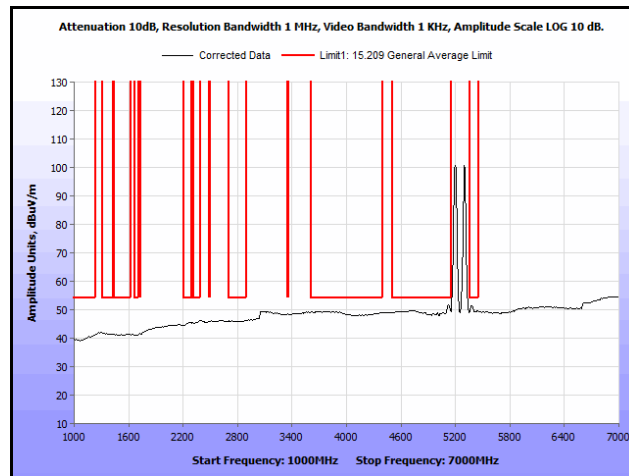
Plot 451. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak



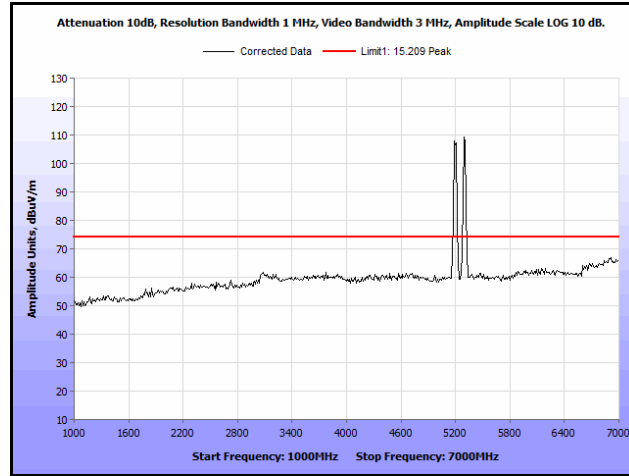
Plot 452. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



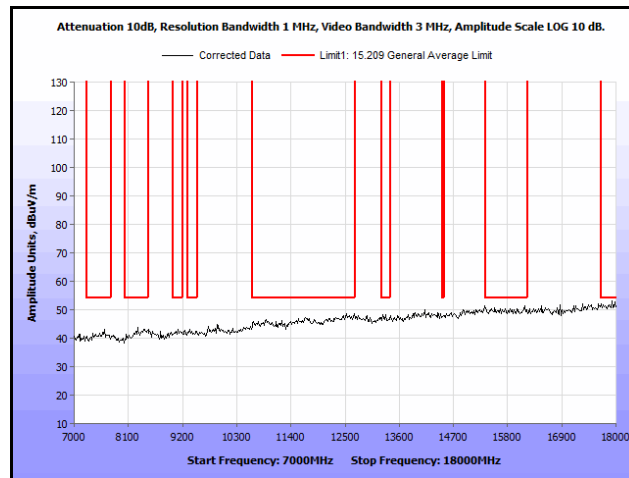
Plot 453. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



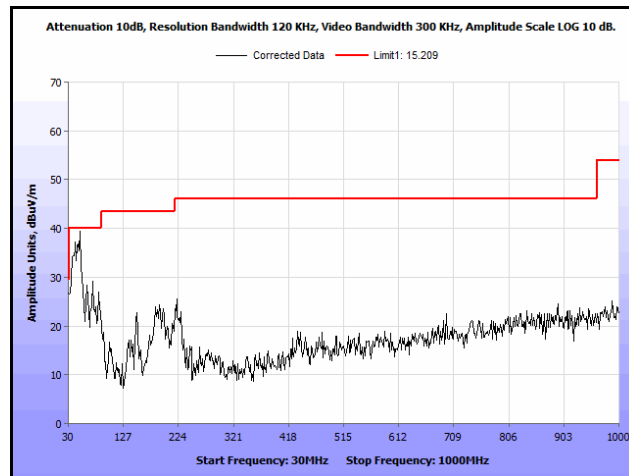
Plot 454. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



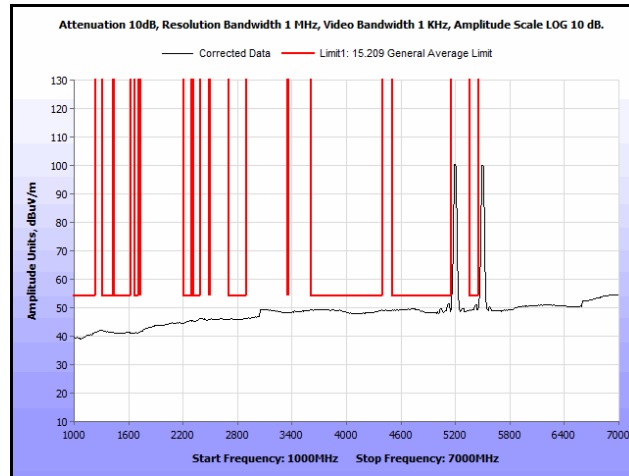
Plot 455. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



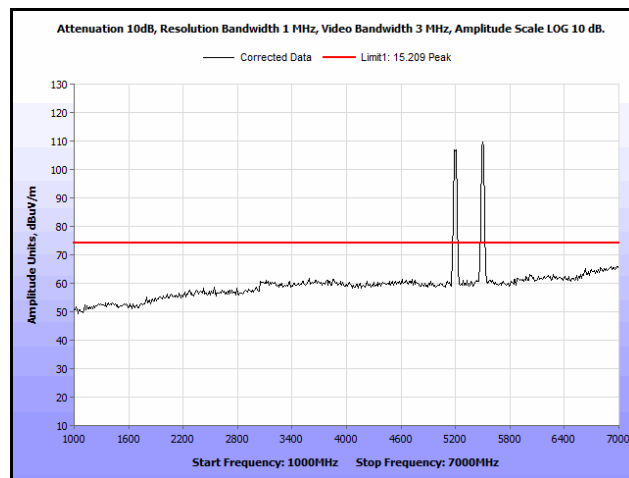
Plot 456. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



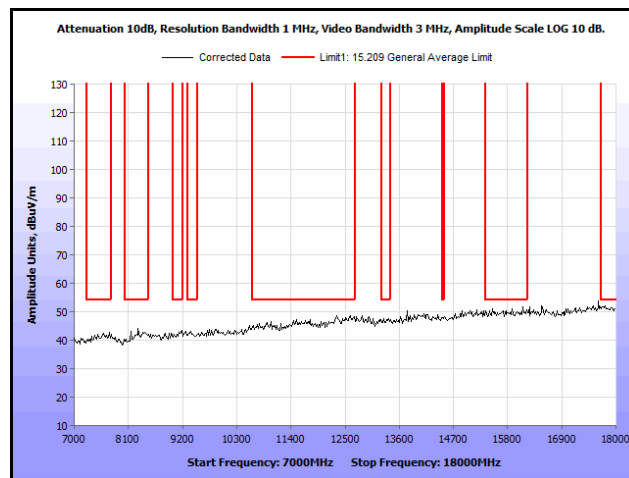
Plot 457. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



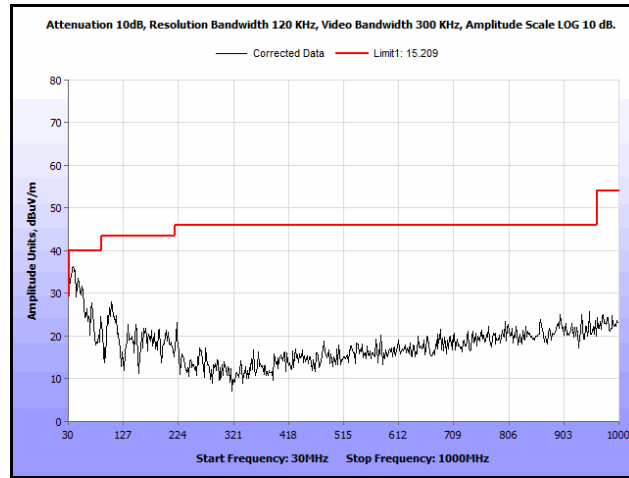
Plot 458. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



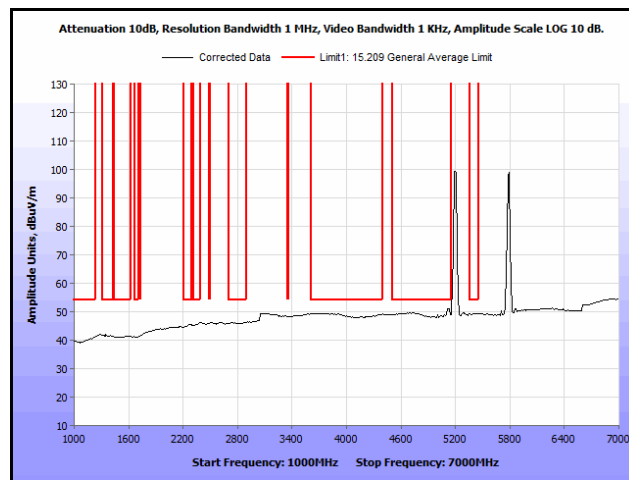
Plot 459. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



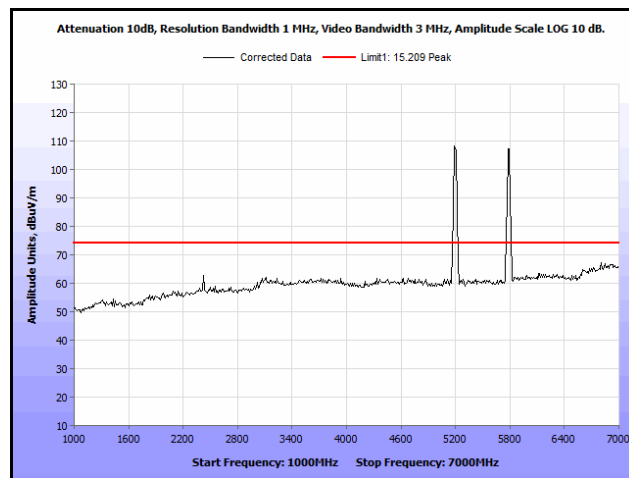
Plot 460. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



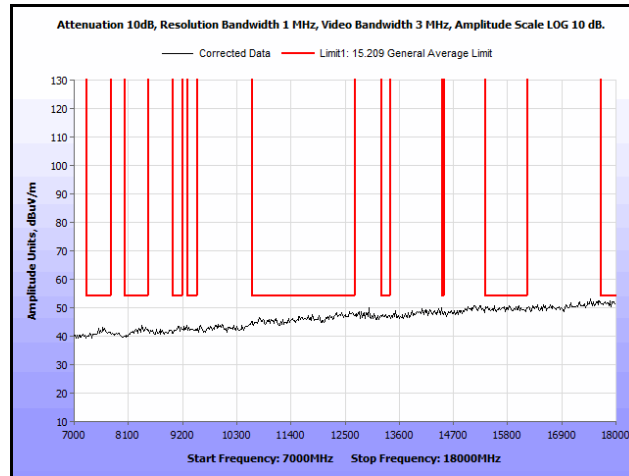
Plot 461. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



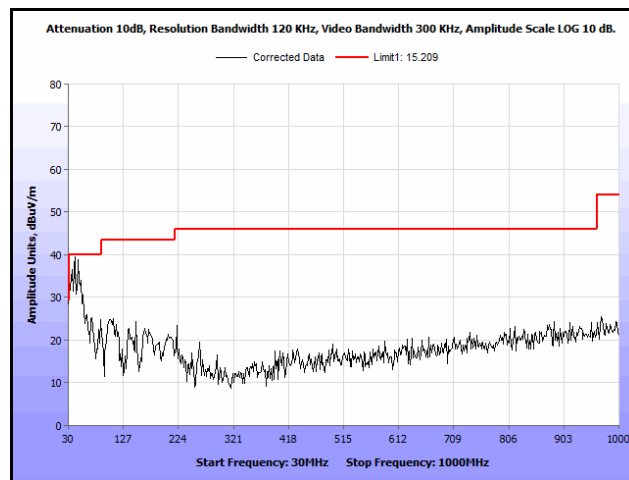
Plot 462. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



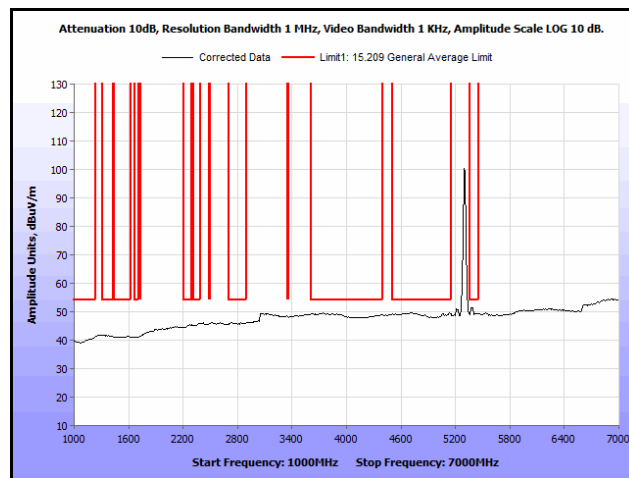
Plot 463. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



Plot 464. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 7 GHz - 18 GHz, Average

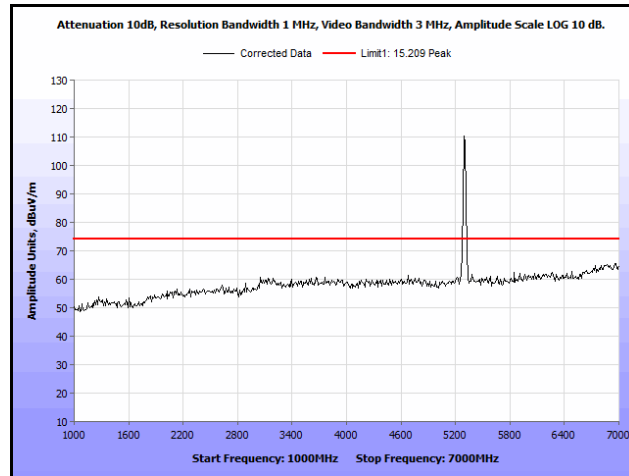


Plot 465. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 30 MHz - 1 GHz, Average

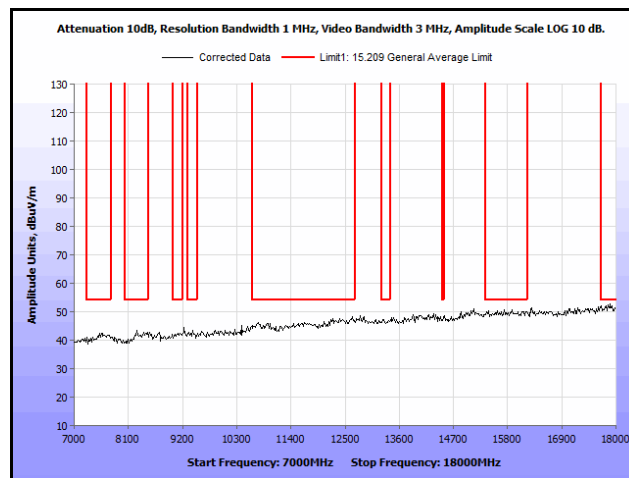


Plot 466. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 1 GHz - 7 GHz, Average

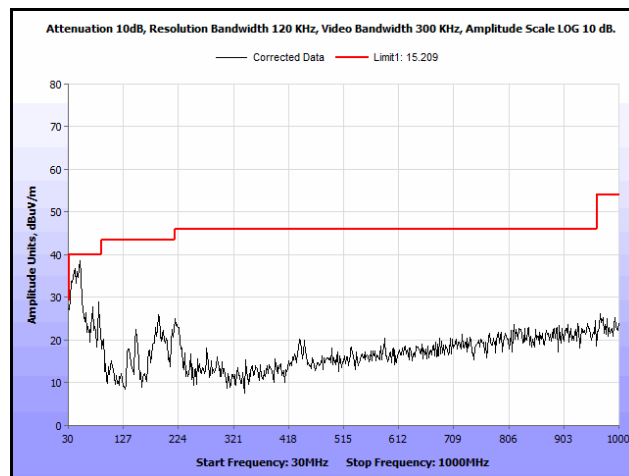




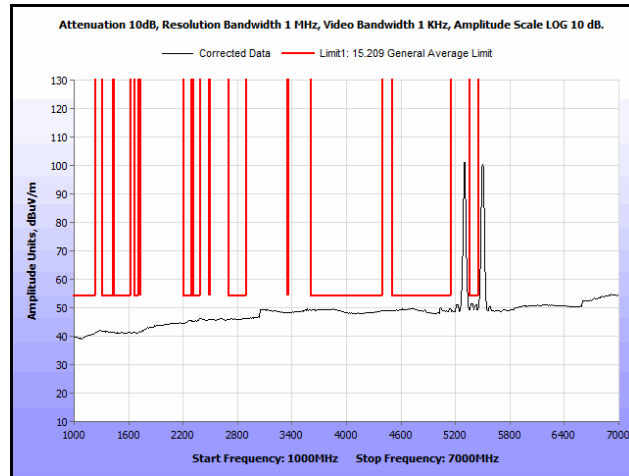
Plot 467. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



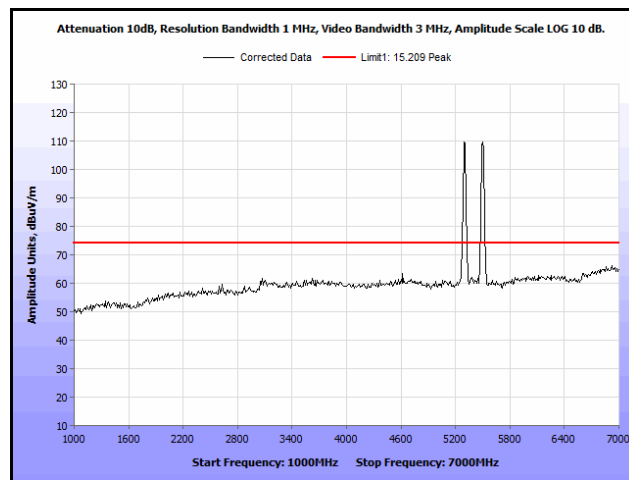
Plot 468. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 7 GHz - 18 GHz, Peak



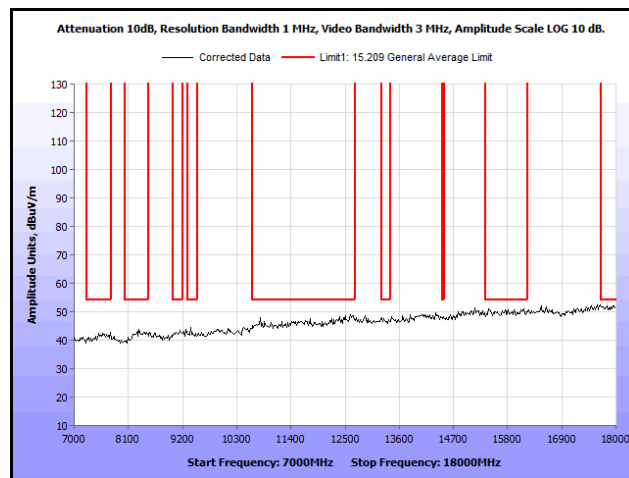
Plot 469. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300MHz and 5580MHz, 30 MHz - 1 GHz, Average



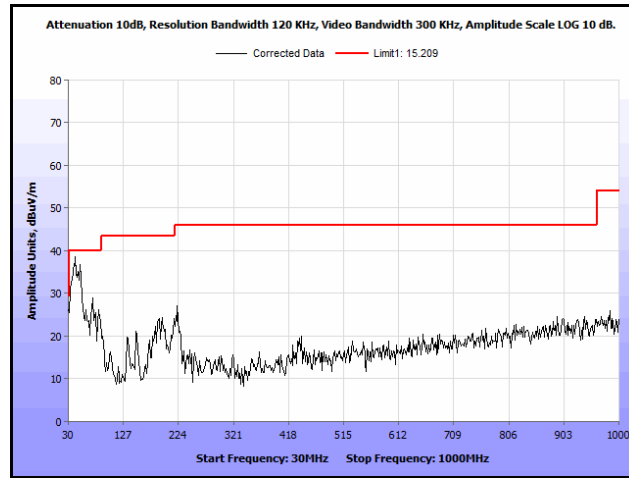
Plot 470. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



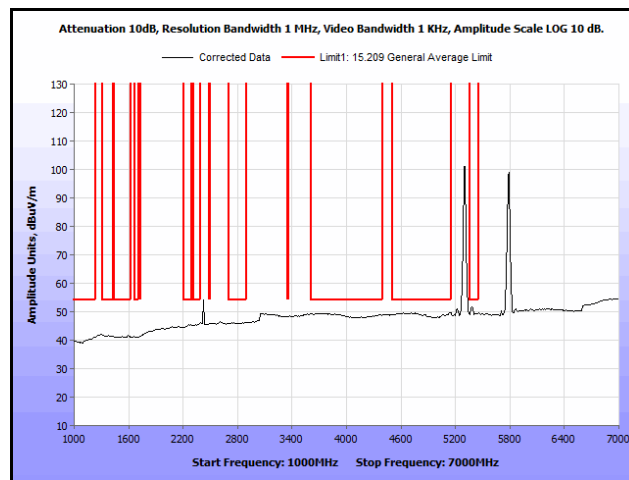
Plot 471. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



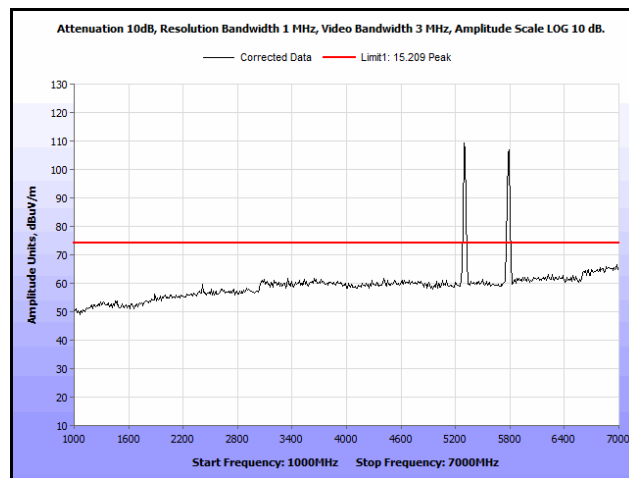
Plot 472. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



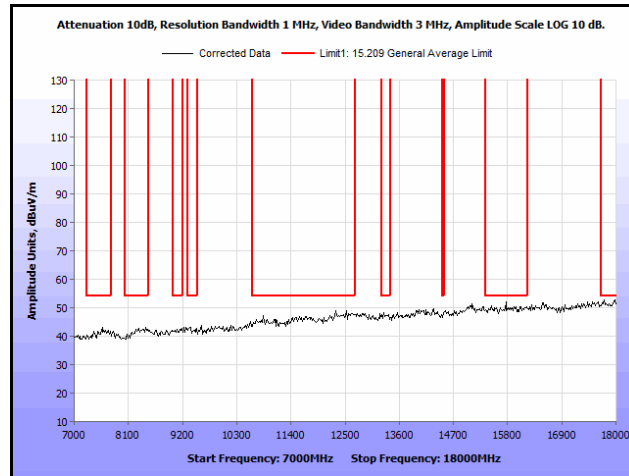
Plot 473. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



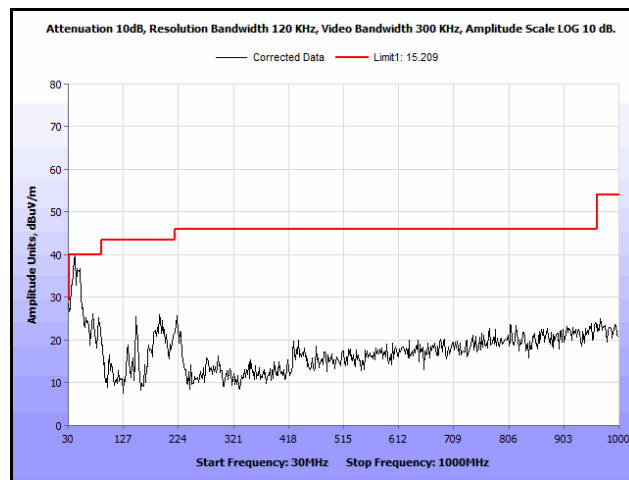
Plot 474. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



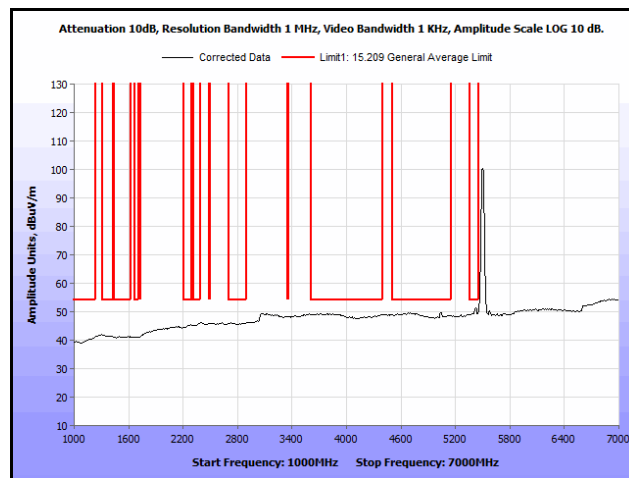
Plot 475. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



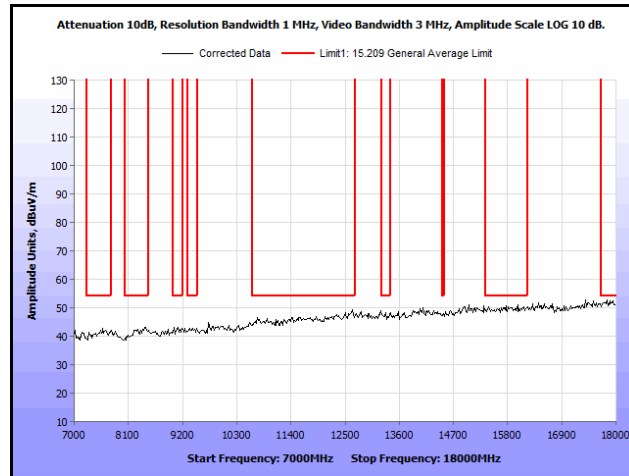
Plot 476. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



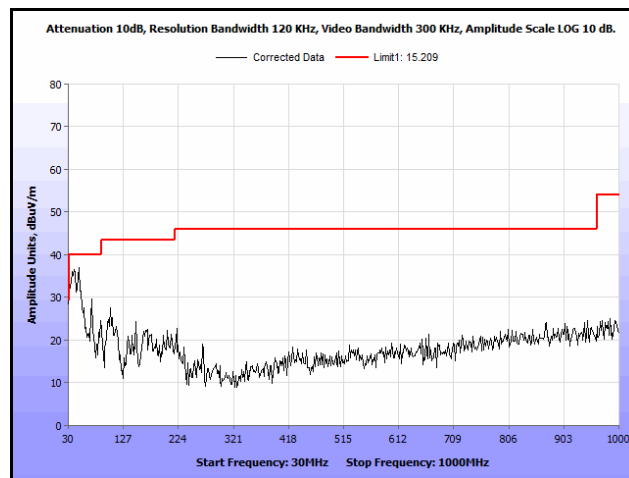
Plot 477. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



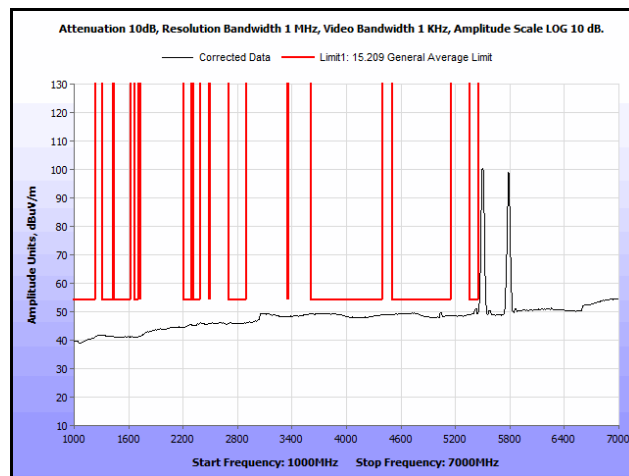
Plot 478. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



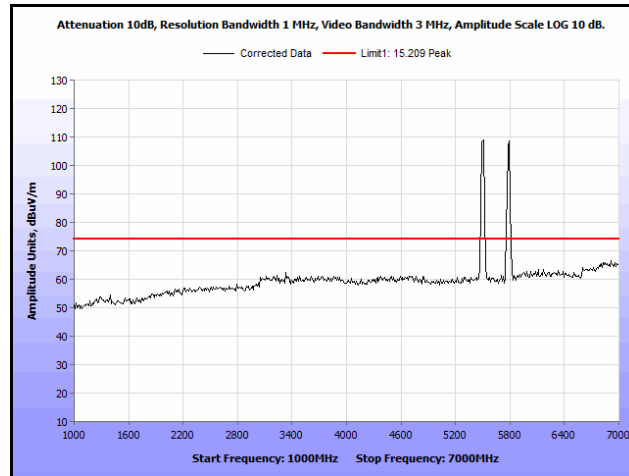
Plot 479. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



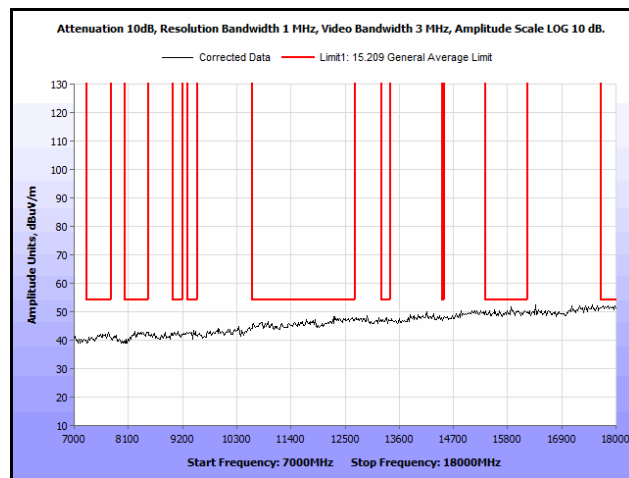
Plot 480. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



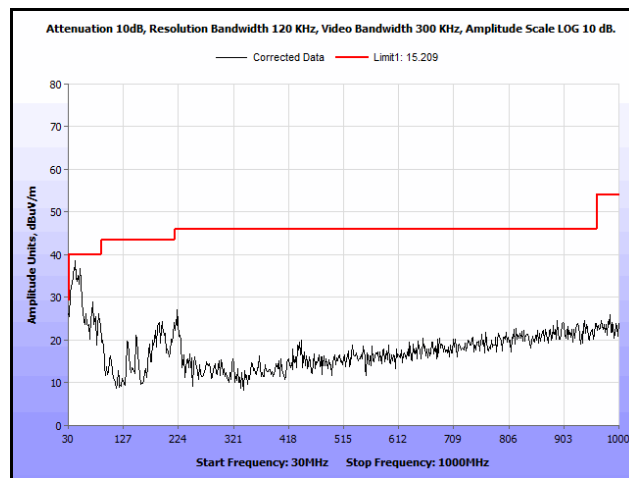
Plot 481. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



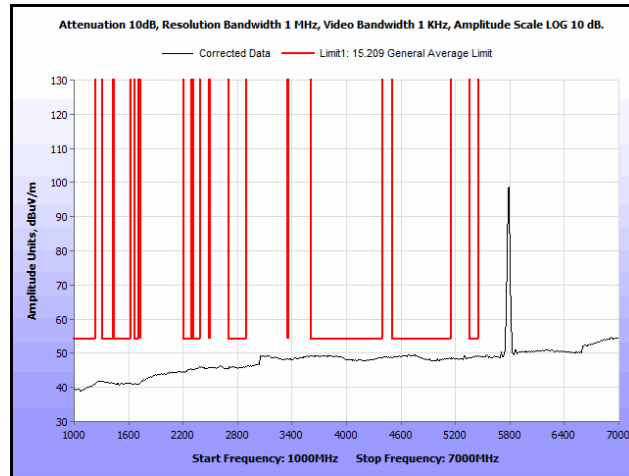
Plot 482. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



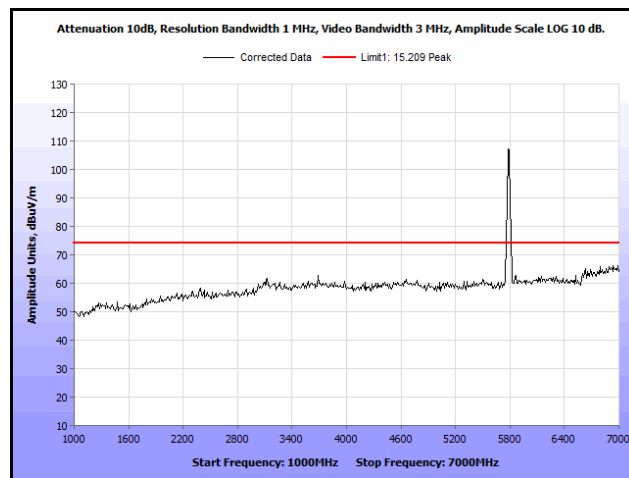
Plot 483. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



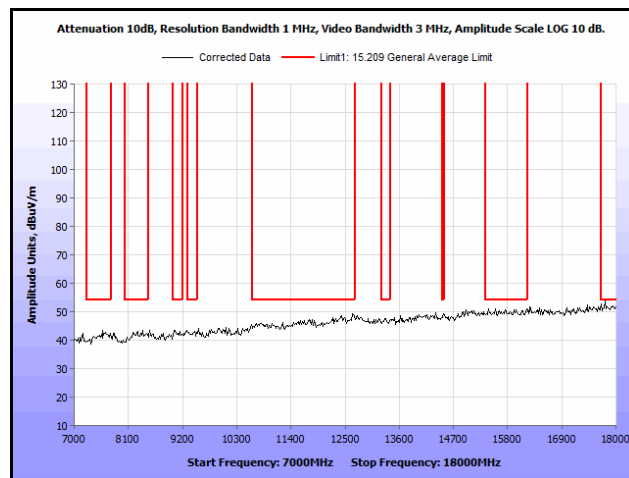
Plot 484. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



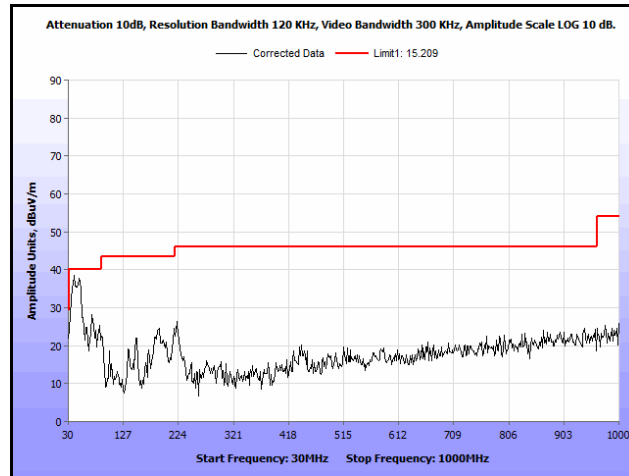
Plot 485. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



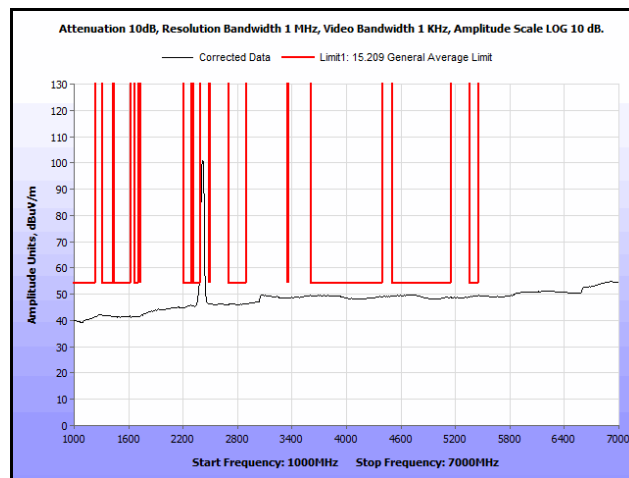
Plot 486. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



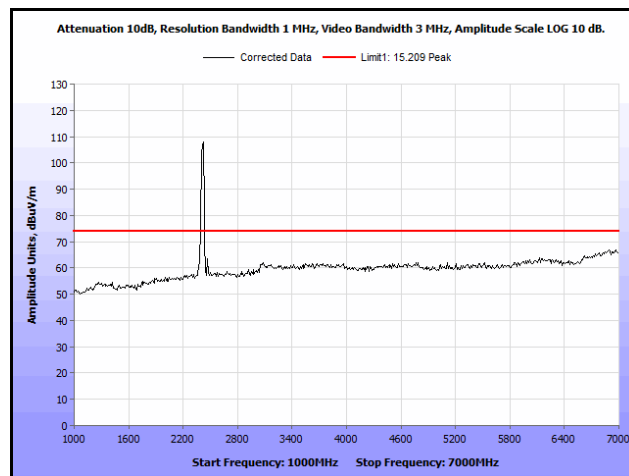
Plot 487. Co-Location, ANT-O6ABGN-1211-PA, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



Plot 488. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 30 MHz - 1 GHz, Average

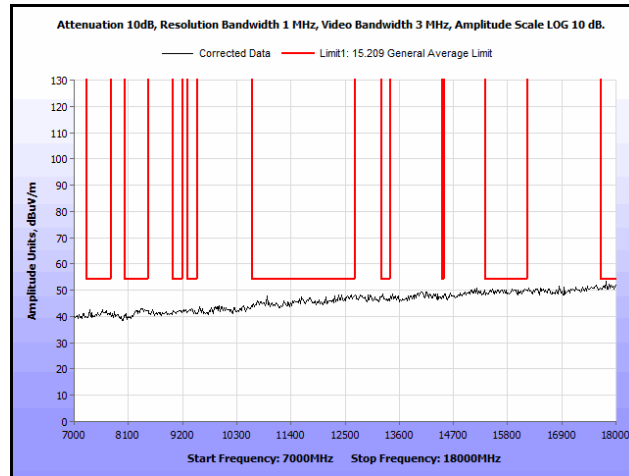


Plot 489. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 1 GHz - 7 GHz, Average

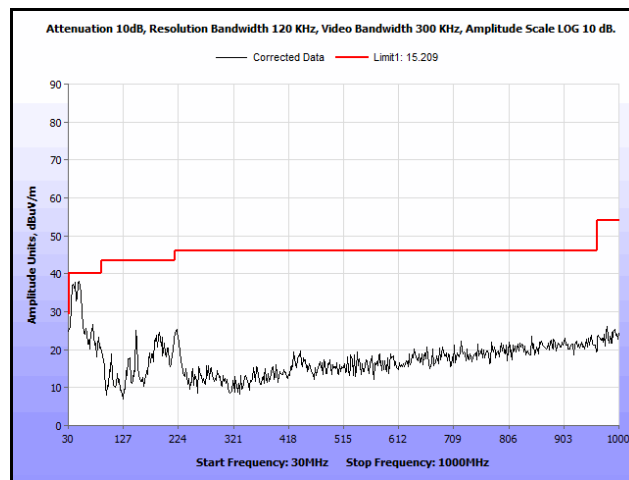


Plot 490. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 1 GHz - 7 GHz, Peak

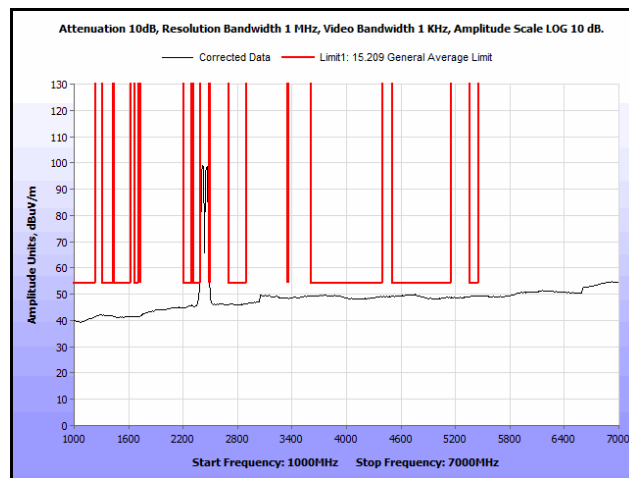




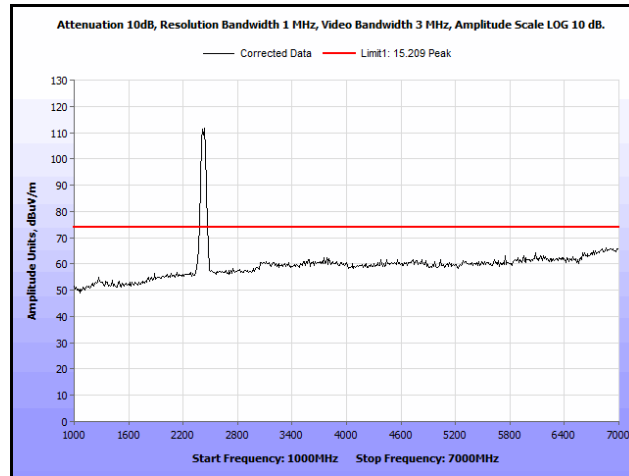
Plot 491. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2412 MHz, 7 GHz - 18 GHz, Average



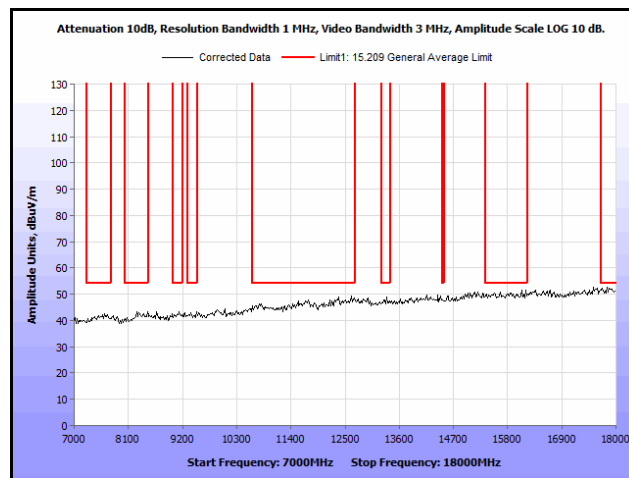
Plot 492. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 30 MHz - 1 GHz, Average



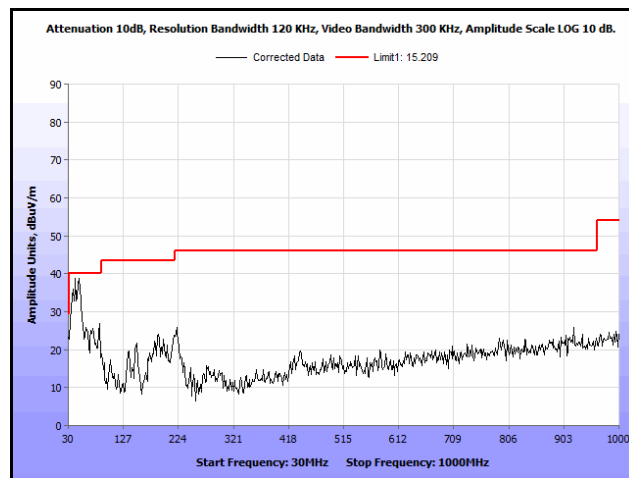
Plot 493. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 1 GHz - 7 GHz, Average



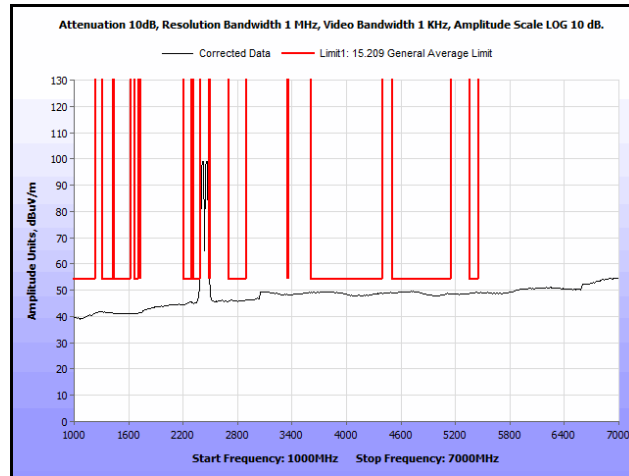
Plot 494. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 1 GHz - 7 GHz, Peak



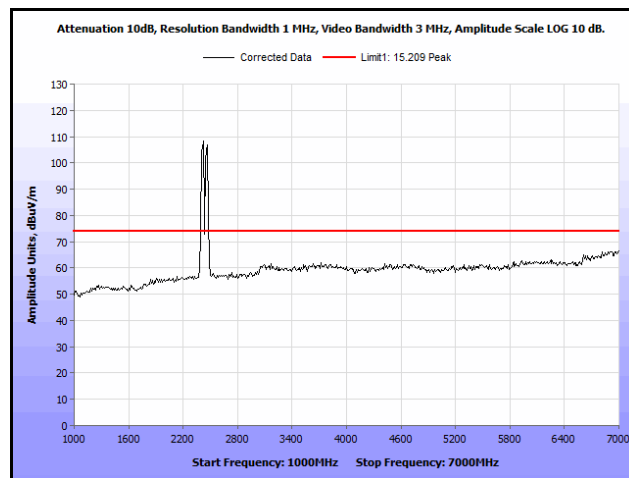
Plot 495. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2437 MHz, 7 GHz - 18 GHz, Average



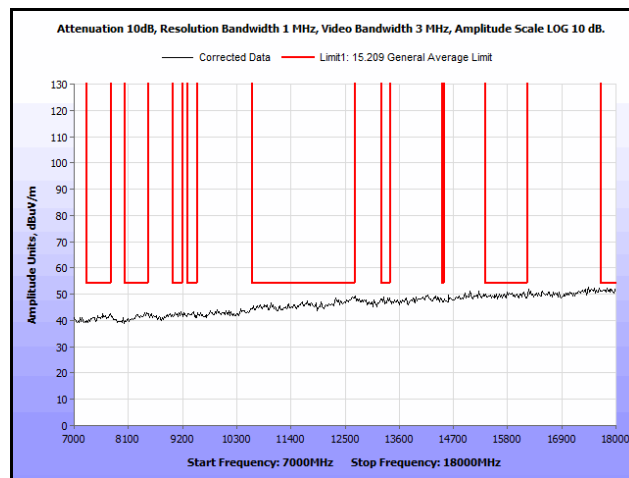
Plot 496. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 30 MHz - 1 GHz, Average



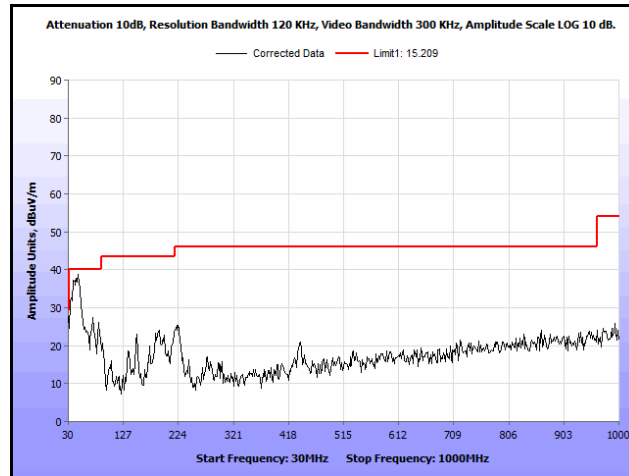
**Plot 497. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 1 GHz - 7 GHz, Average**



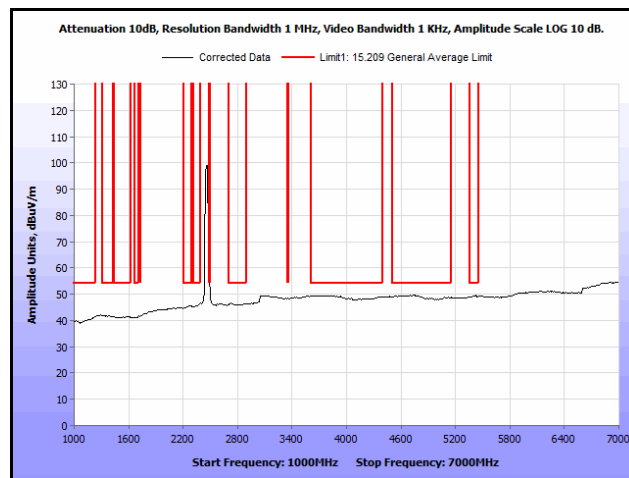
**Plot 498. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 1 GHz - 7 GHz, Peak**



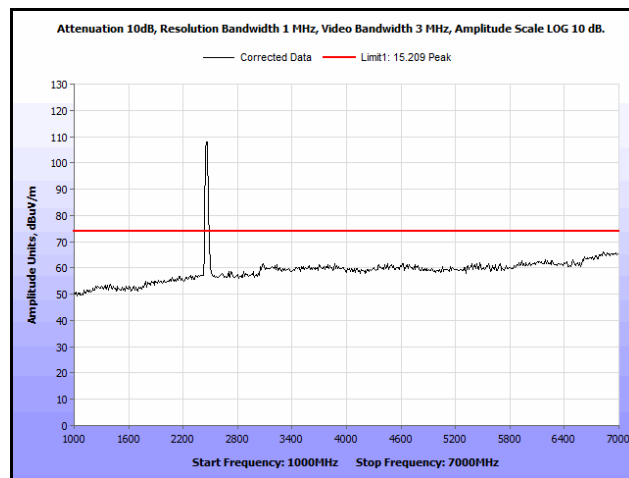
**Plot 499. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 2462 MHz, 7 GHz - 18 GHz, Average**



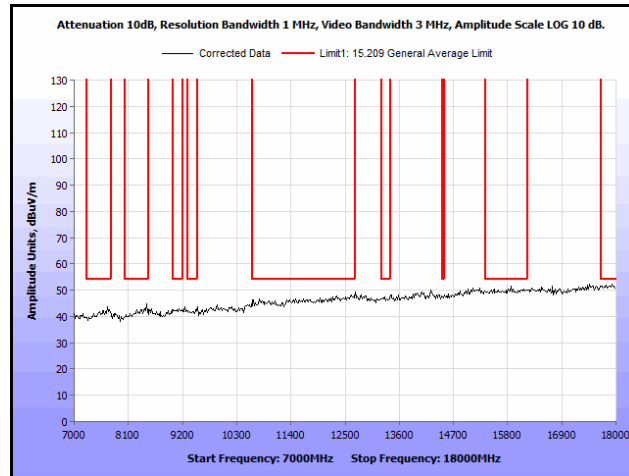
Plot 500. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 30 MHz - 1 GHz, Average



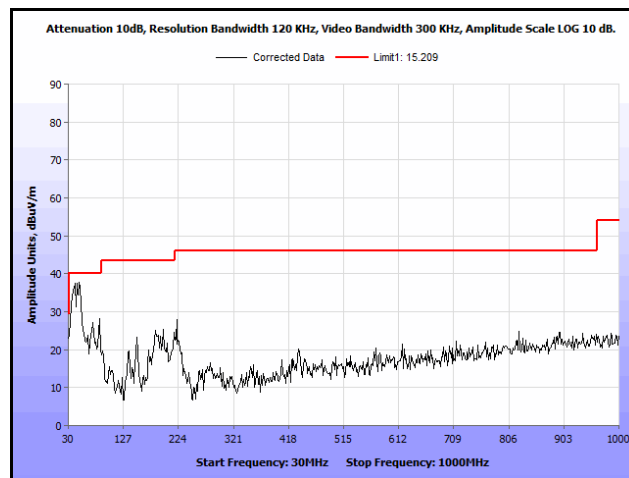
Plot 501. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 1 GHz - 7 GHz, Average



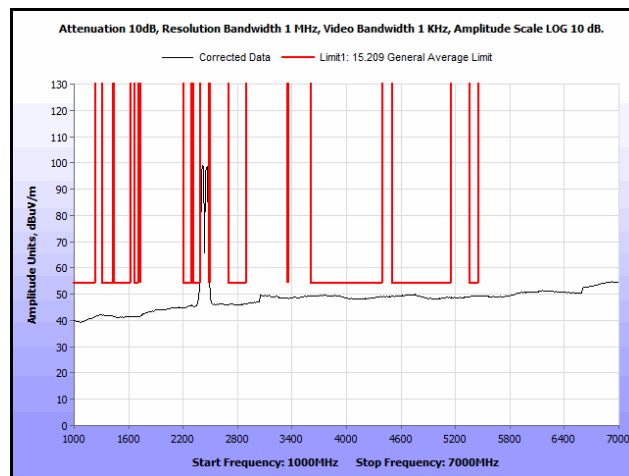
Plot 502. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 1 GHz - 7 GHz, Peak



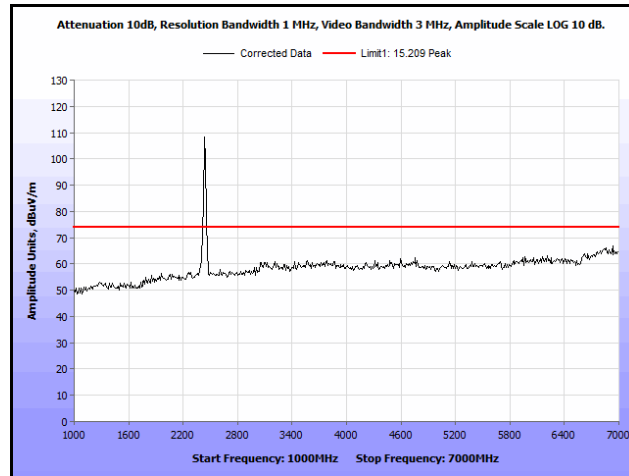
Plot 503. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2437 MHz, 7 GHz - 18 GHz, Average



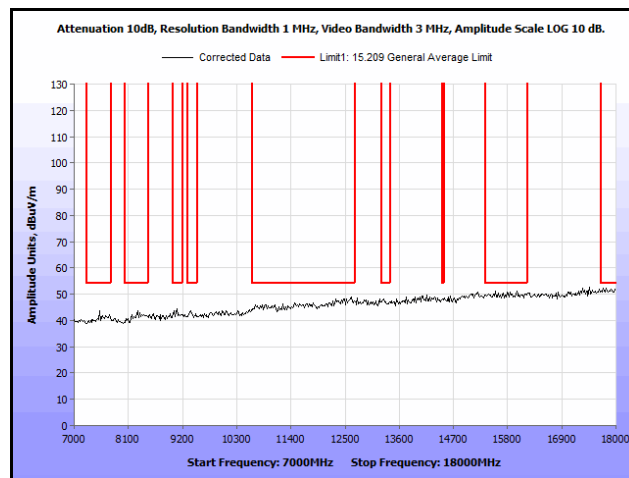
Plot 504. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 30 MHz - 1 GHz, Average



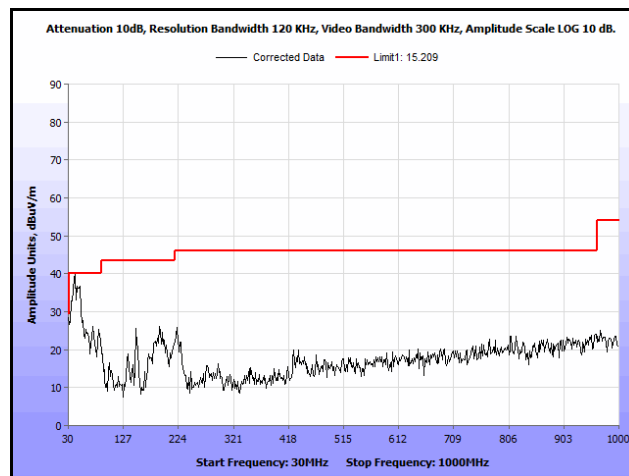
Plot 505. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 1 GHz - 7 GHz, Average



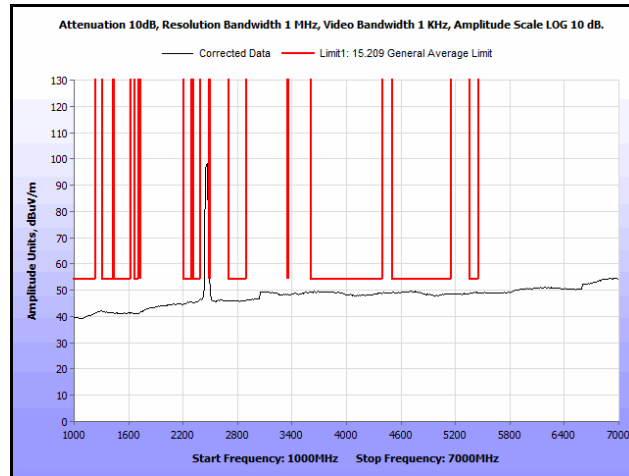
Plot 506. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 1 GHz - 7 GHz, Peak



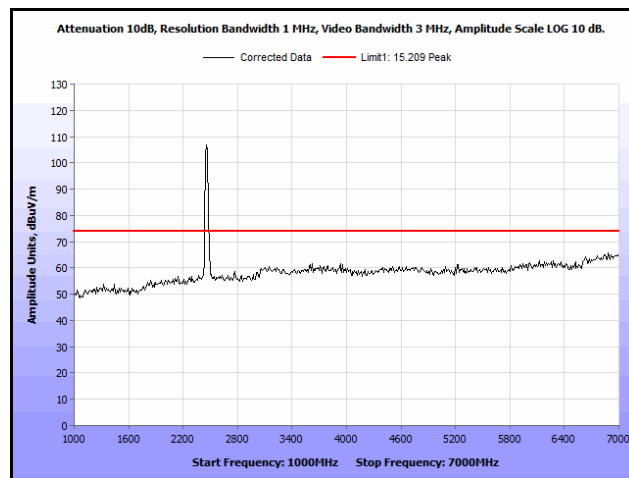
Plot 507. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 2462 MHz, 7 GHz - 18 GHz, Average



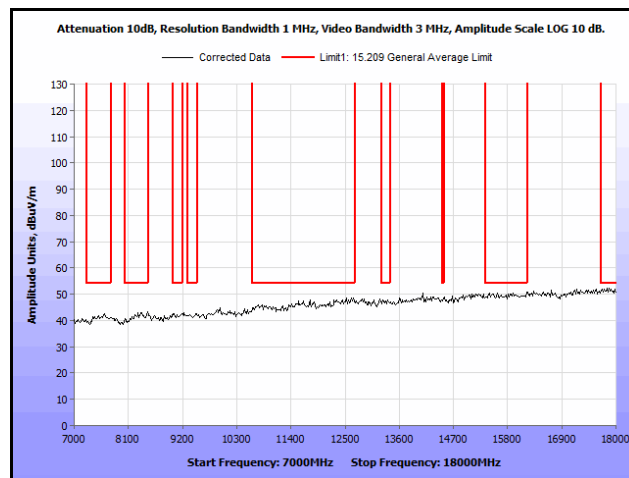
Plot 508. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 30 MHz - 1 GHz, Average



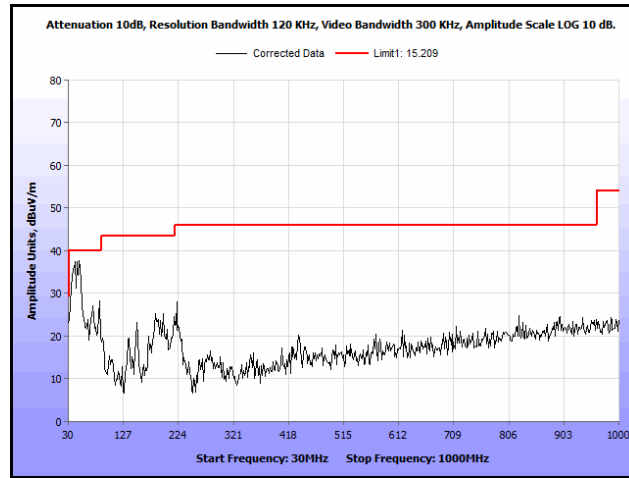
Plot 509. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 1 GHz - 7 GHz, Average



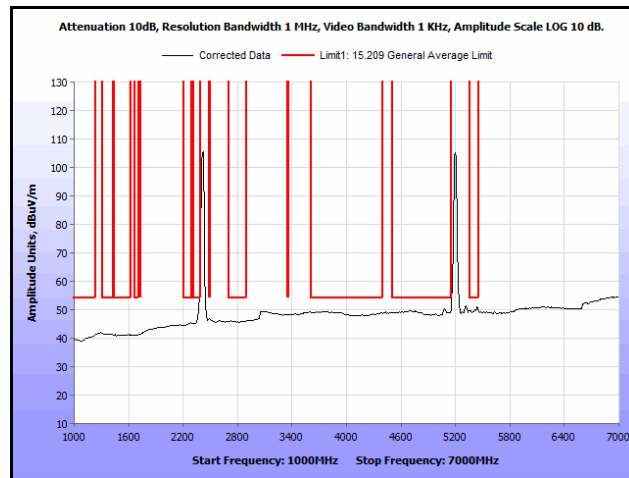
Plot 510. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 1 GHz - 7 GHz, Peak



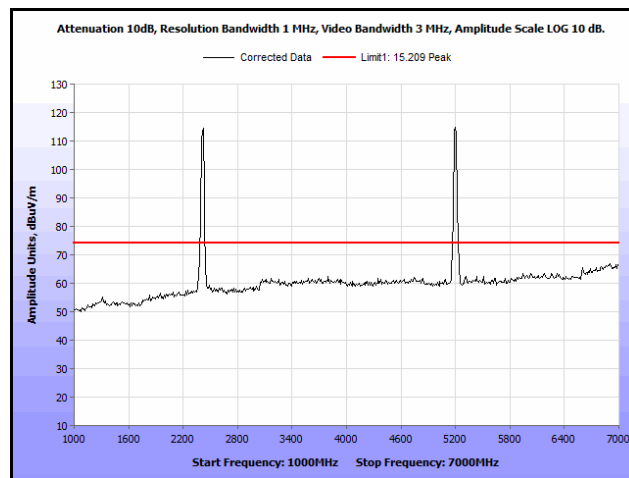
Plot 511. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 2462 MHz, 7 GHz - 18 GHz, Average



Plot 512. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 30 MHz - 1 GHz, Average

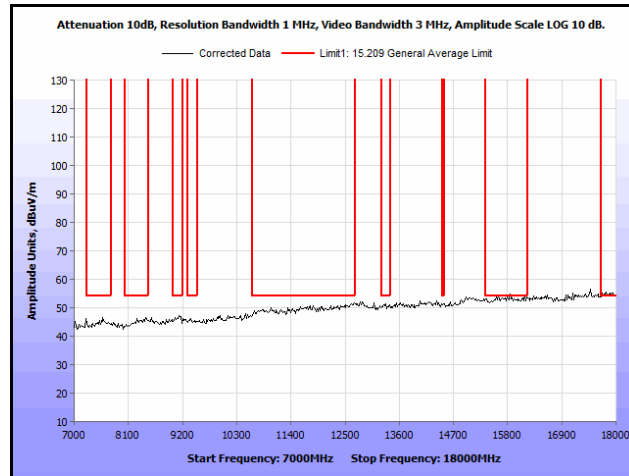


Plot 513. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 1 GHz - 7 GHz, Average

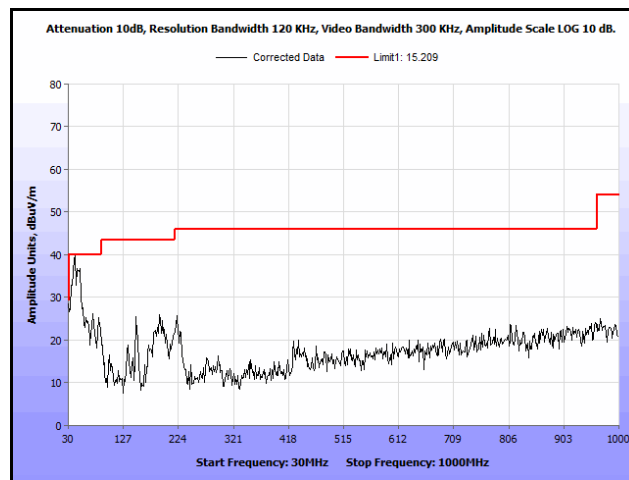


Plot 514. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak

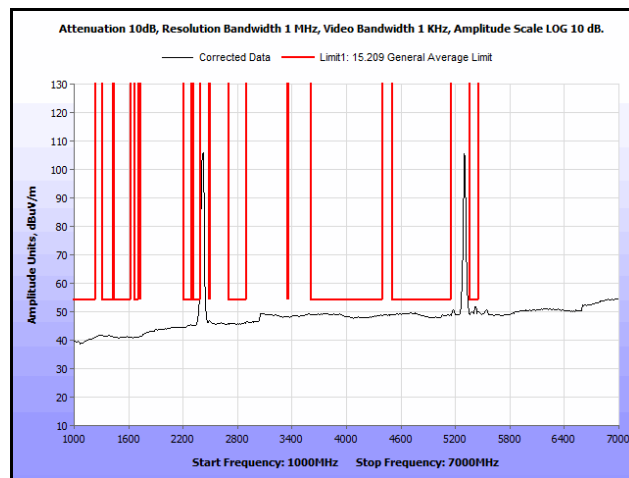




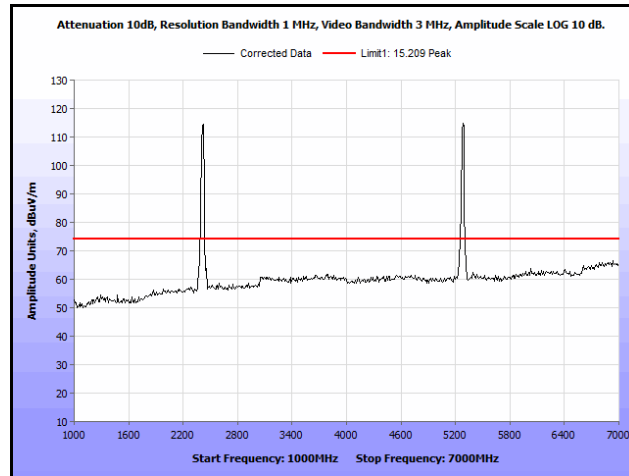
Plot 515. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



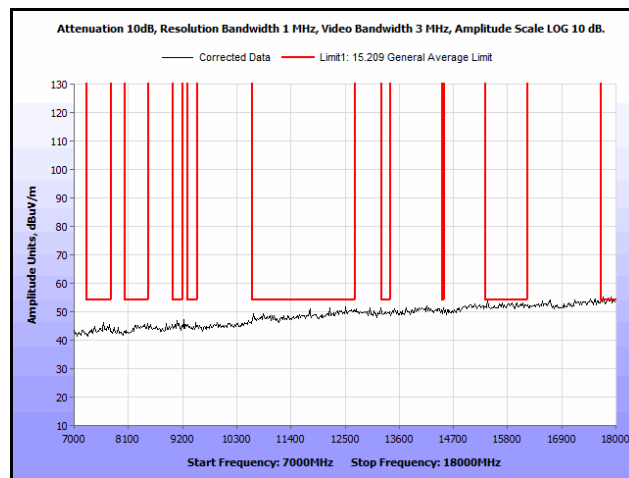
Plot 516. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



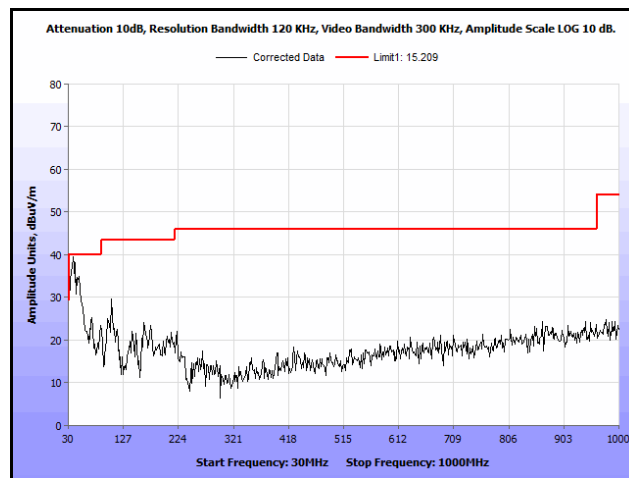
Plot 517. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



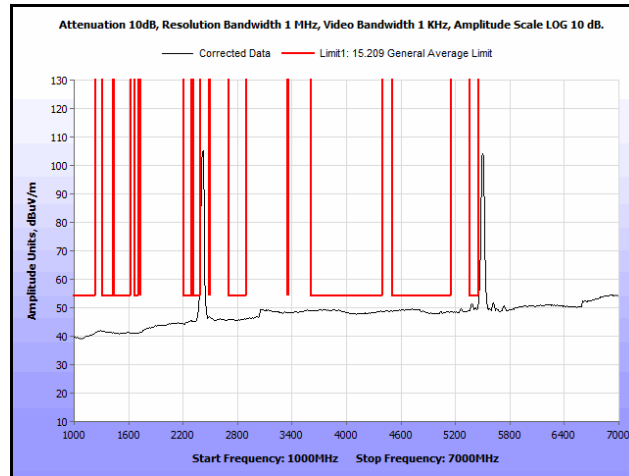
Plot 518. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



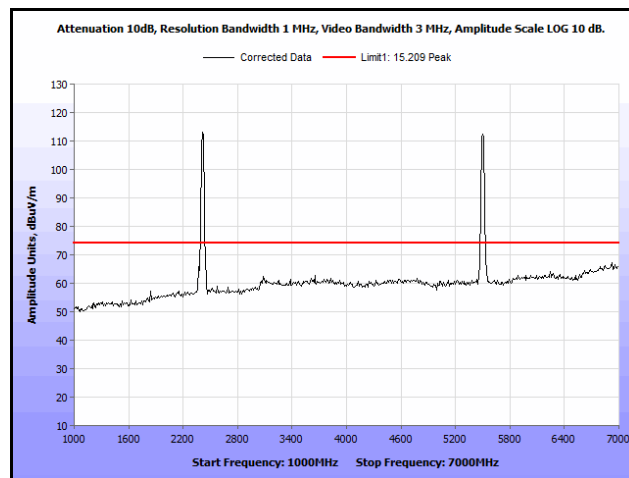
Plot 519. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



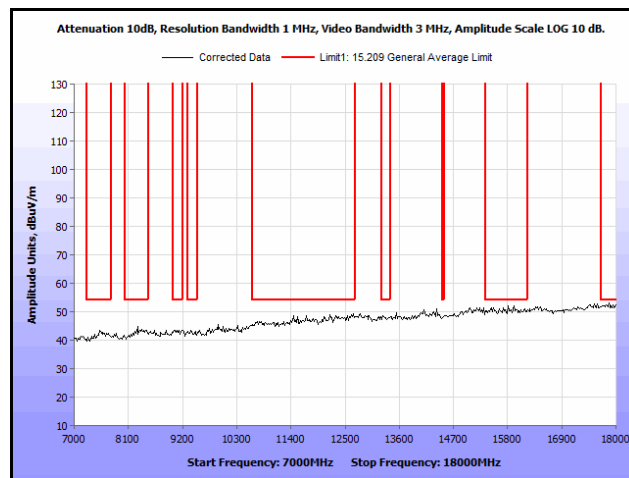
Plot 520. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



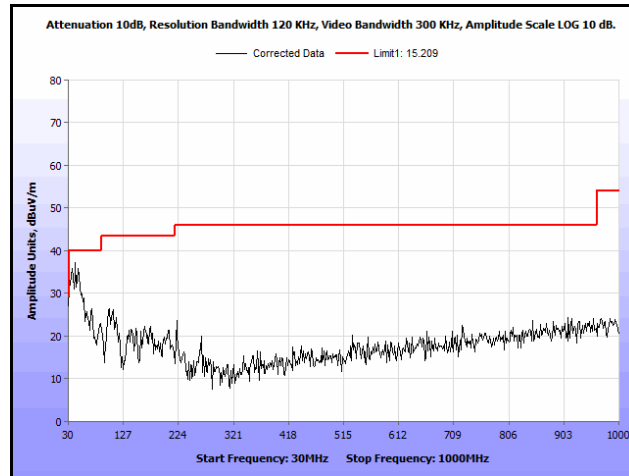
**Plot 521. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 1 GHz - 7 GHz, Average**



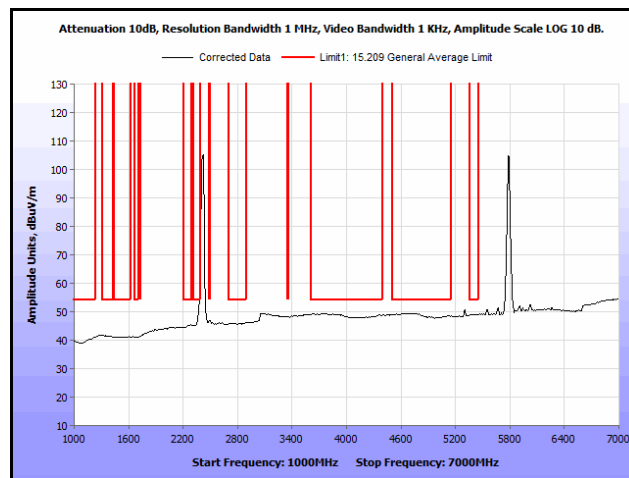
**Plot 522. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak**



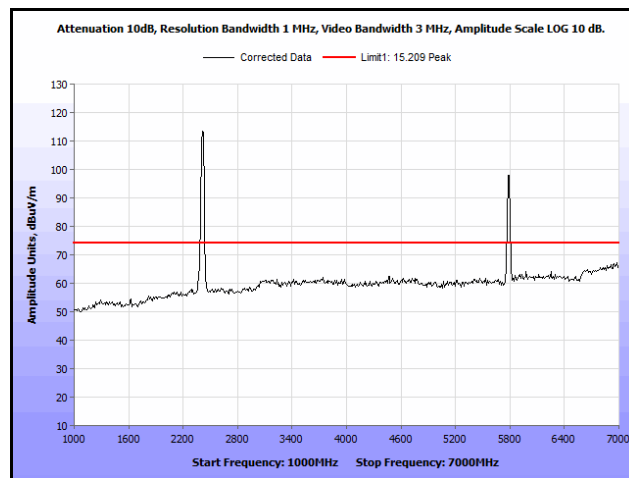
**Plot 523. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5580 MHz, 7 GHz - 18 GHz, Average**



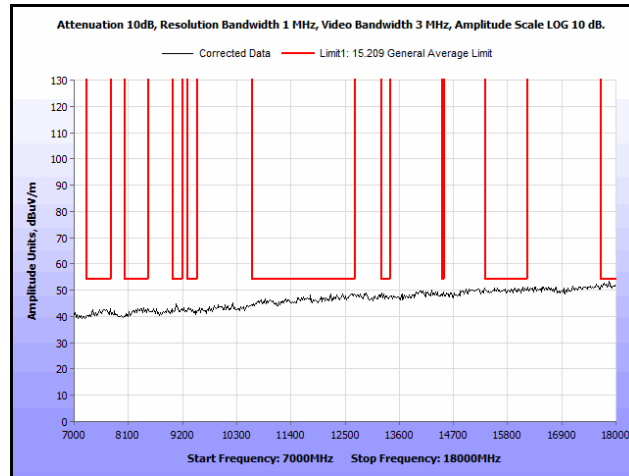
Plot 524. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



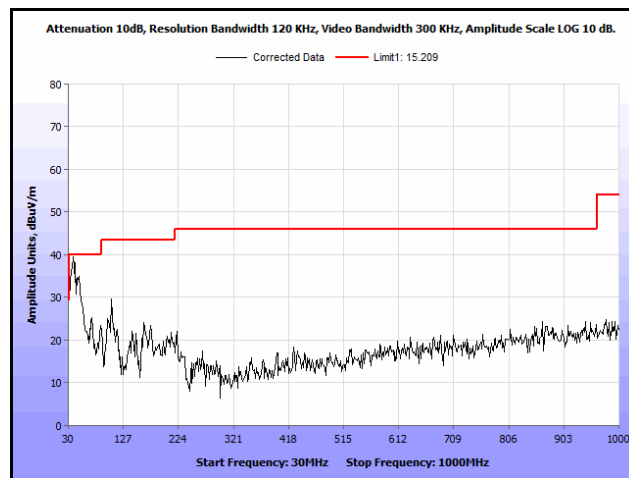
Plot 525. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



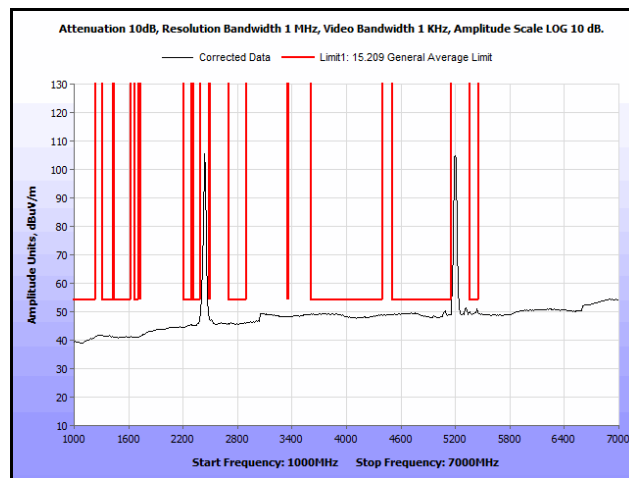
Plot 526. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



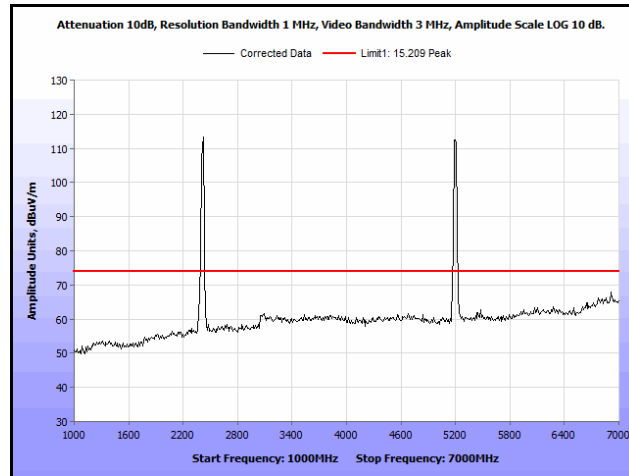
Plot 527. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2412 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



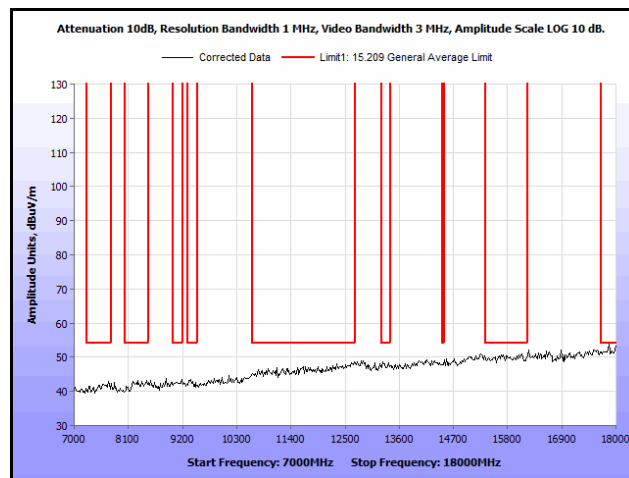
Plot 528. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 30 MHz - 1 GHz, Average



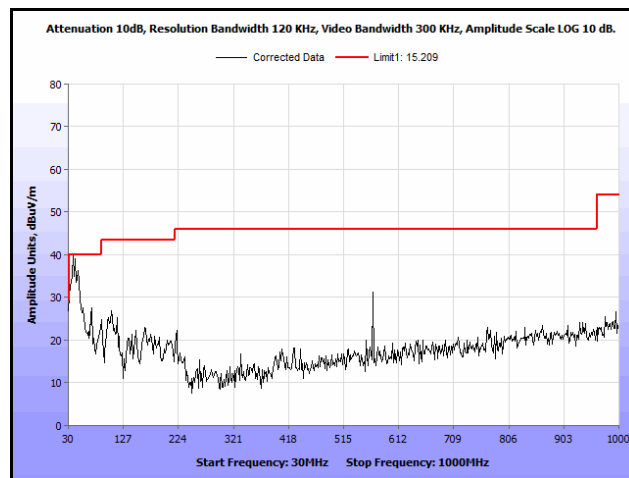
Plot 529. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 1 GHz - 7 GHz, Average



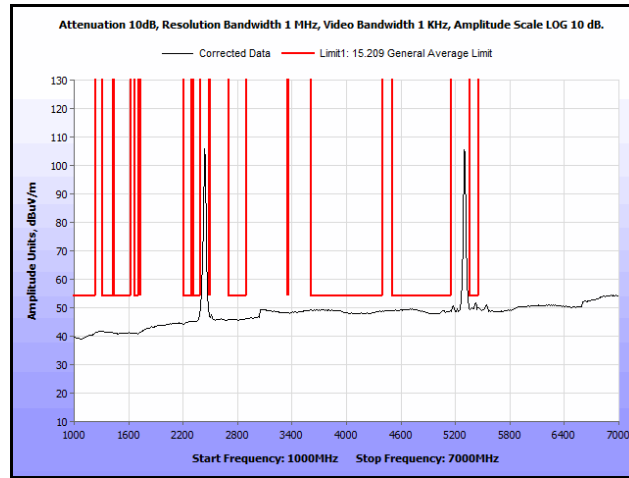
Plot 530. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak



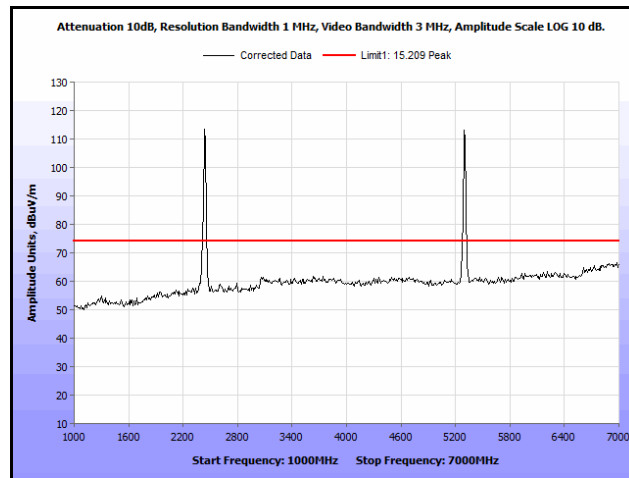
Plot 531. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



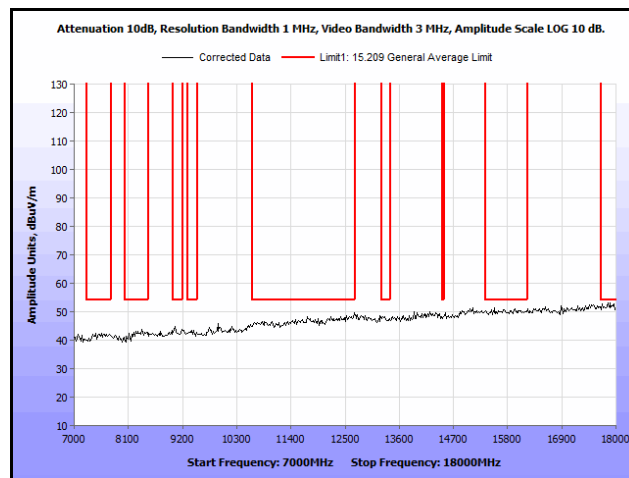
Plot 532. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



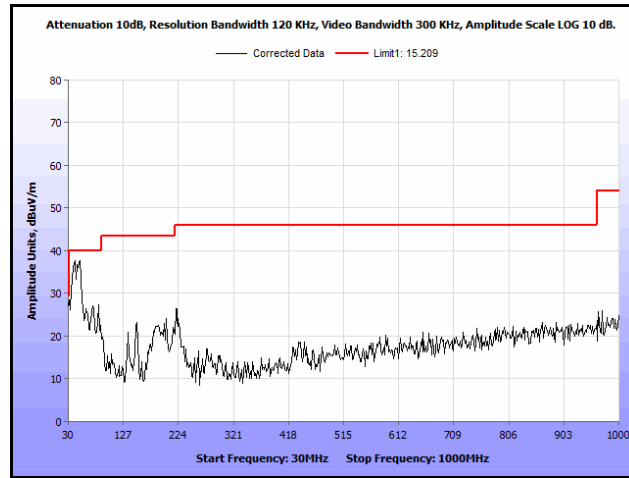
Plot 533. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



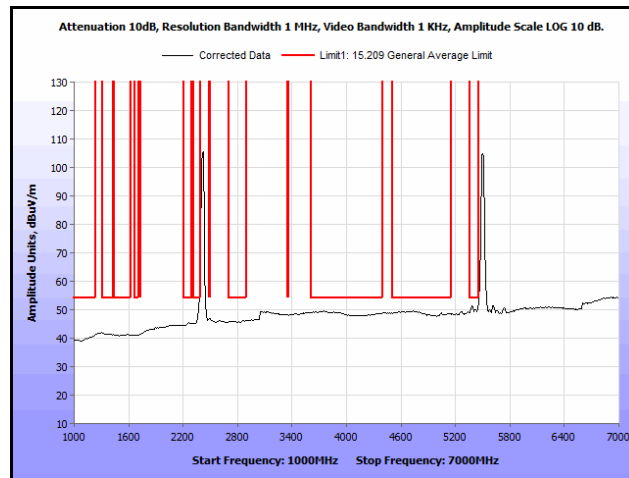
Plot 534. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



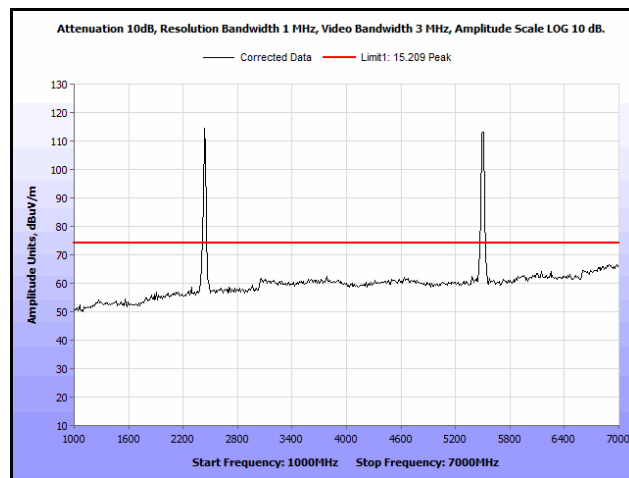
Plot 535. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



Plot 536. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 30 MHz - 1 GHz, Average

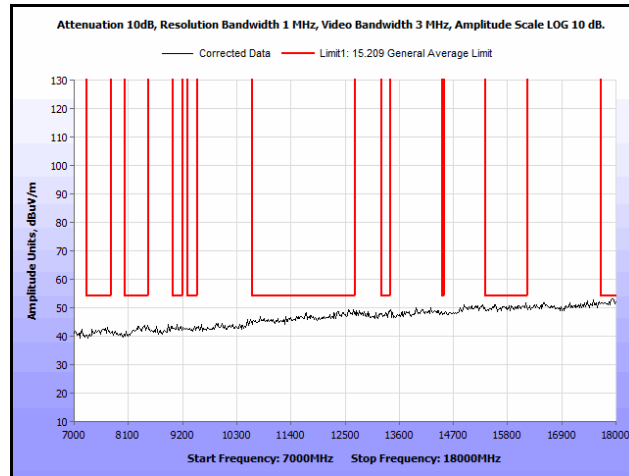


Plot 537. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 1 GHz - 7 GHz, Average

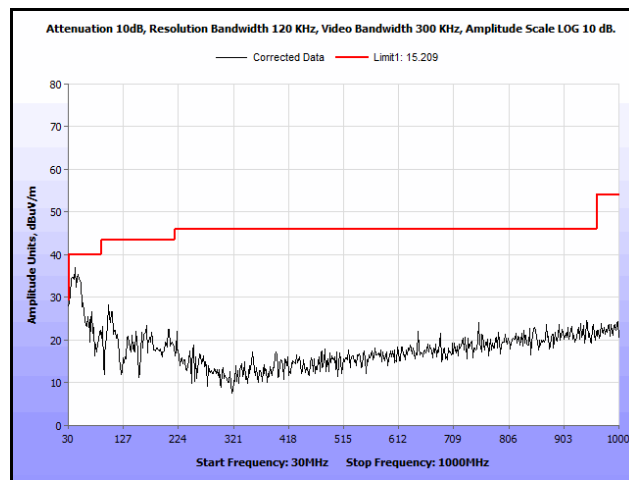


Plot 538. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak

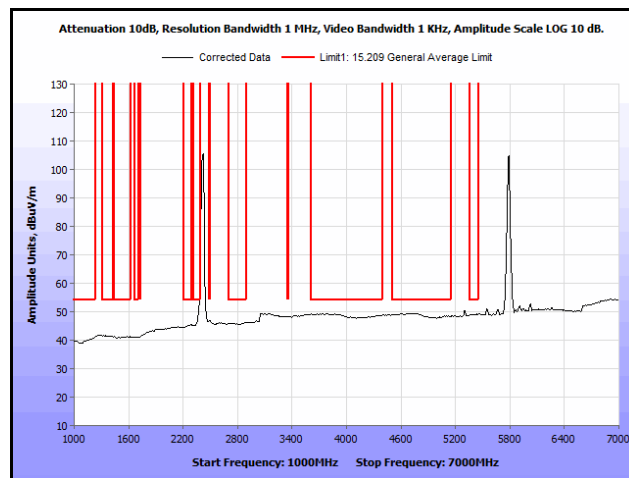




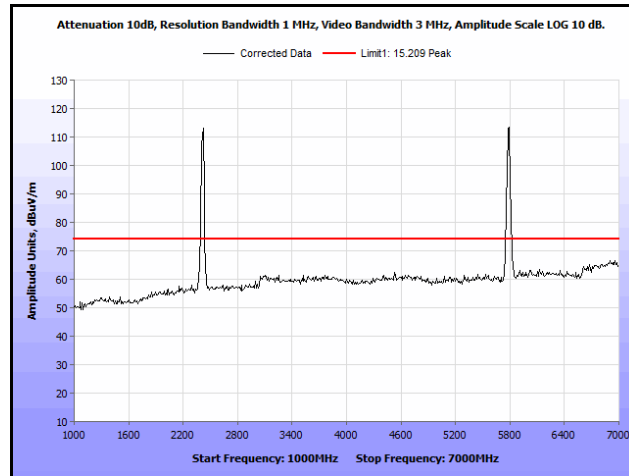
Plot 539. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



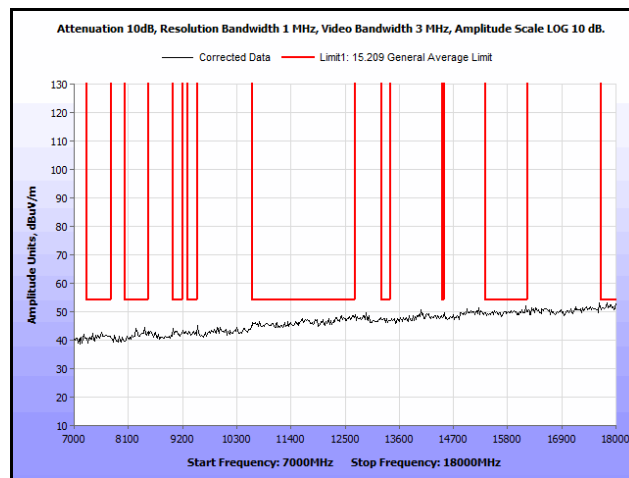
Plot 540. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



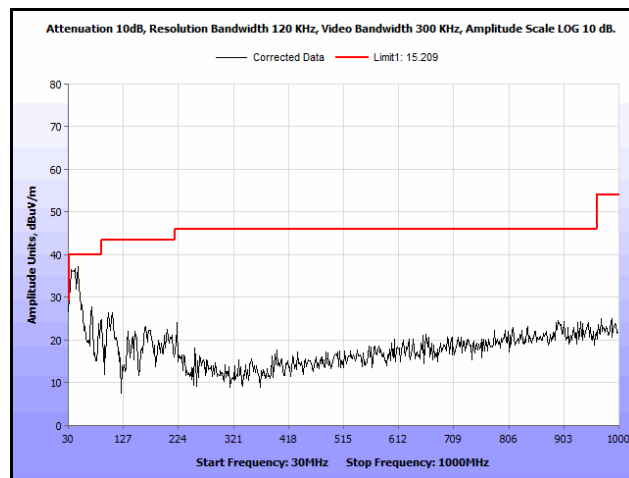
Plot 541. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



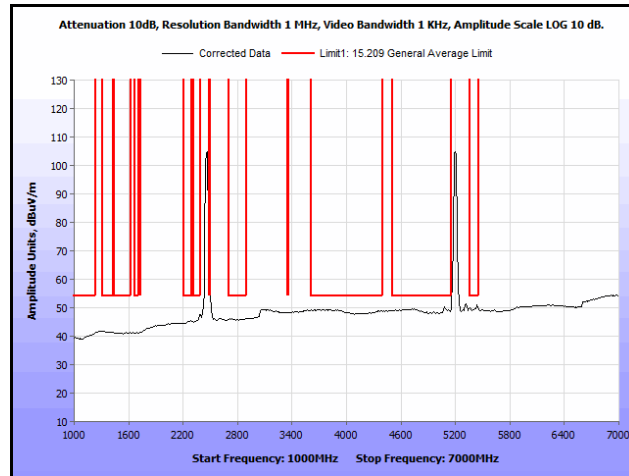
Plot 542. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



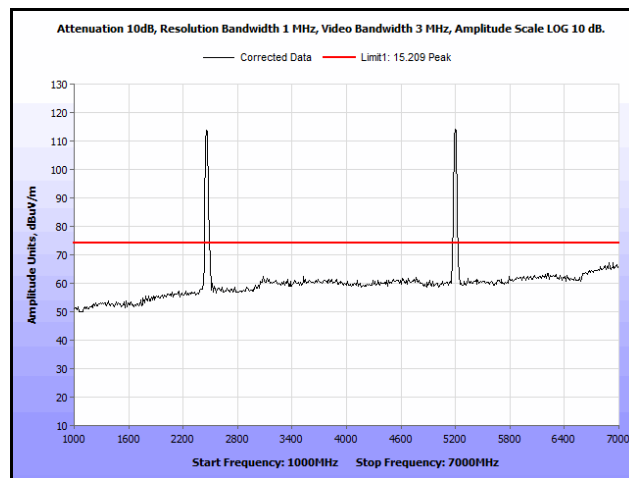
Plot 543. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2437 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



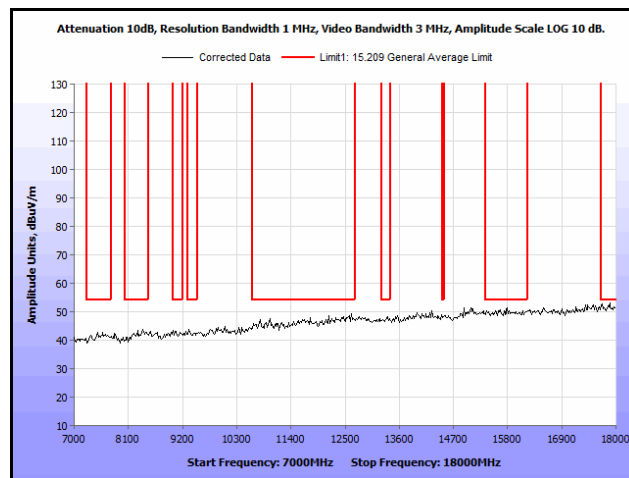
Plot 544. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 30 MHz - 1 GHz, Average



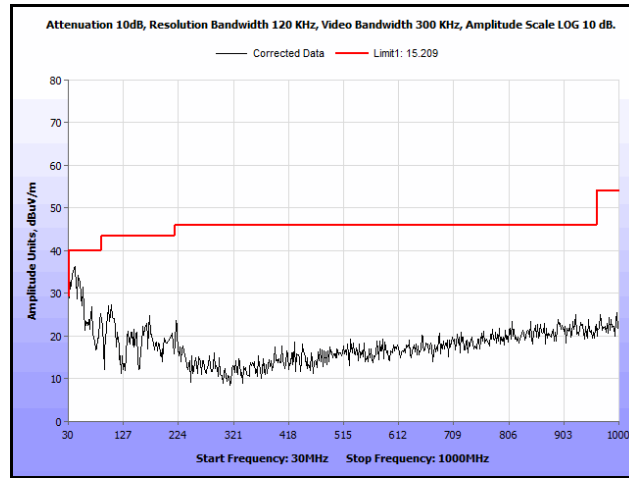
Plot 545. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 1 GHz - 7 GHz, Average



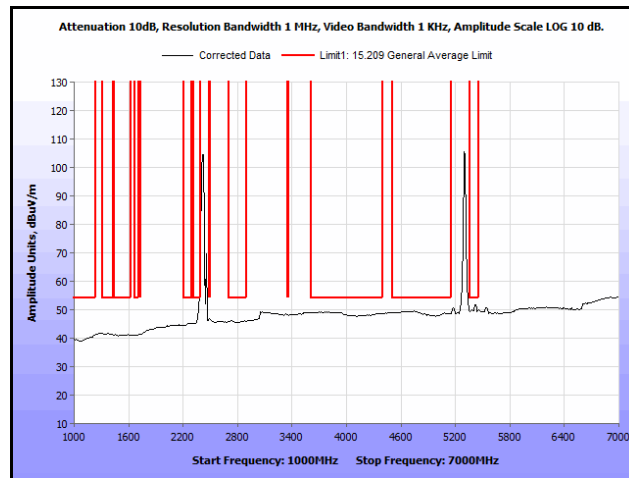
Plot 546. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak



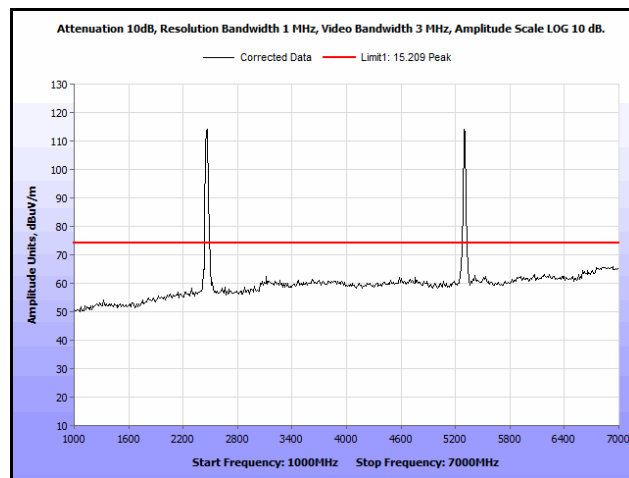
Plot 547. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



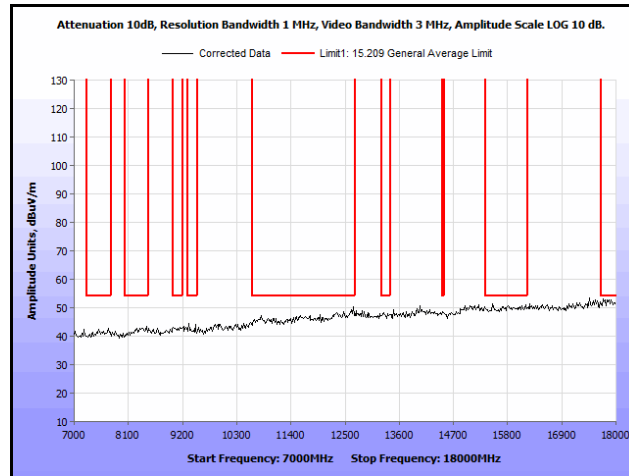
Plot 548. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



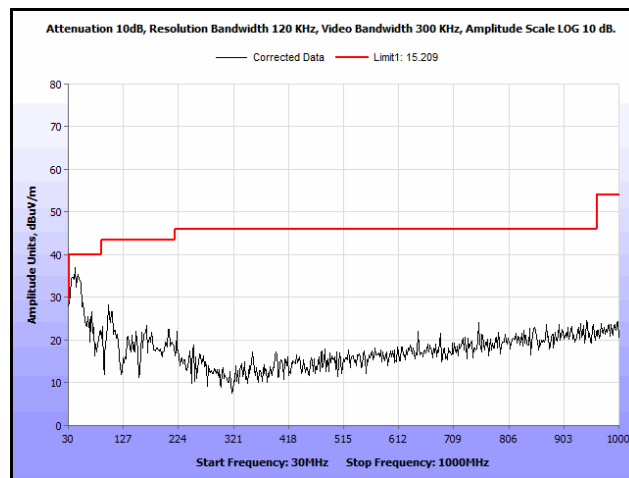
Plot 549. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



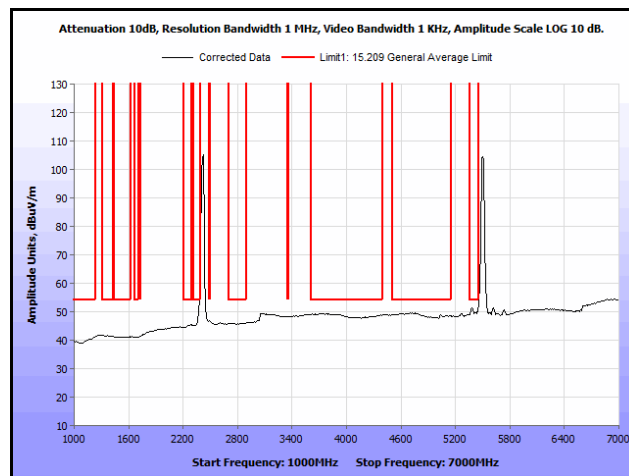
Plot 550. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



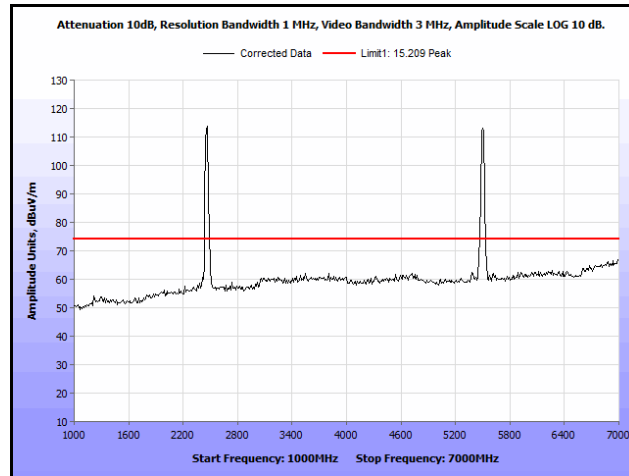
Plot 551. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



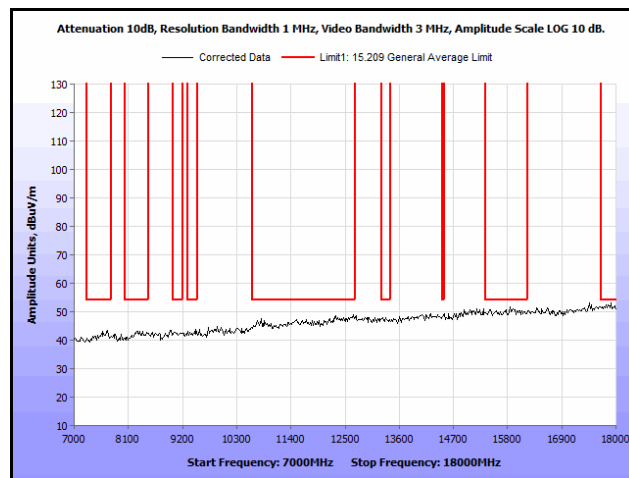
Plot 552. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



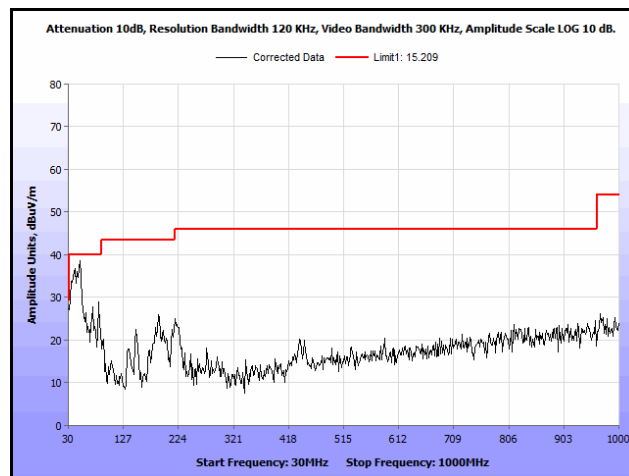
Plot 553. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



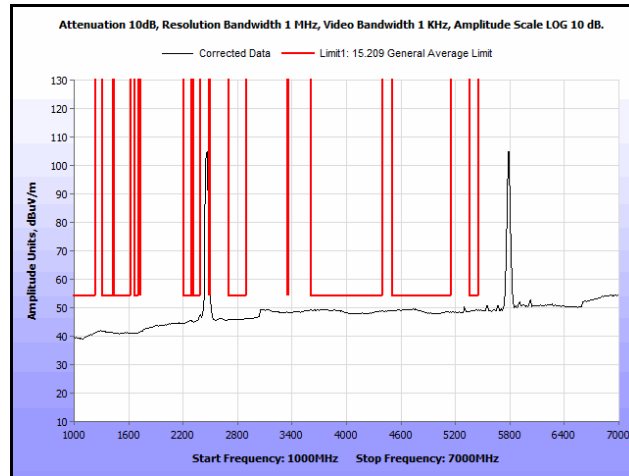
Plot 554. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



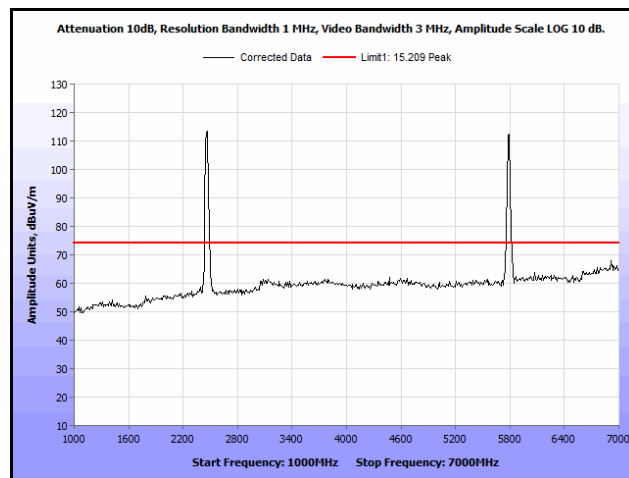
Plot 555. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



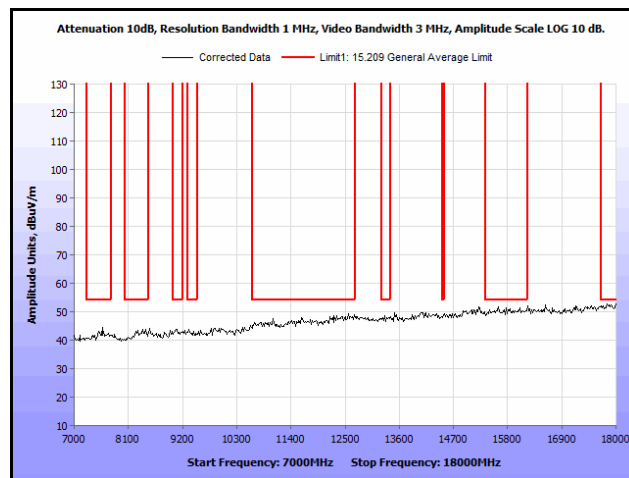
Plot 556. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



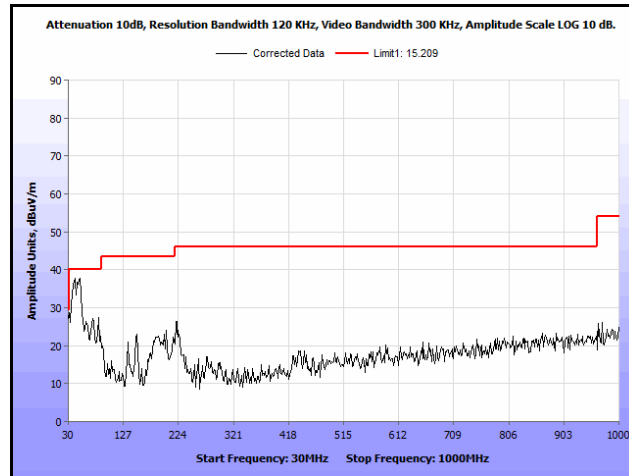
Plot 557. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



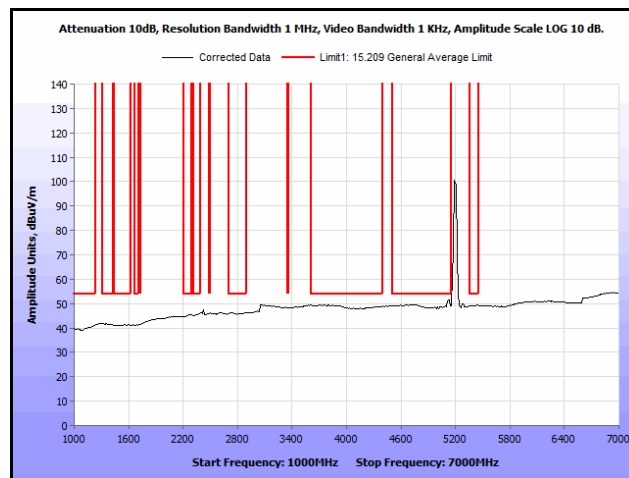
Plot 558. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



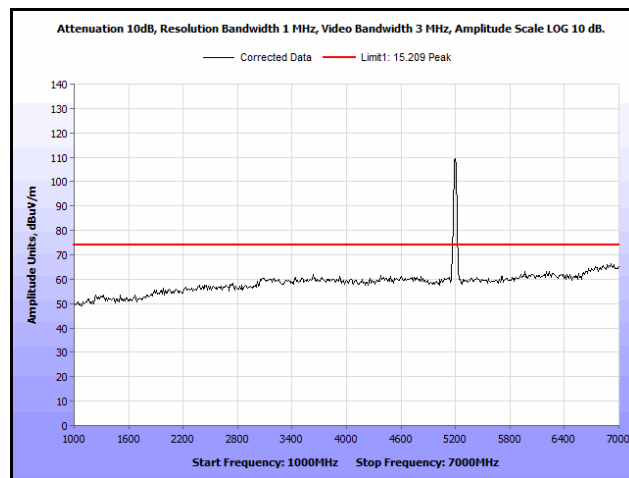
Plot 559. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 2462 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



Plot 560. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 30 MHz - 1 GHz, Average

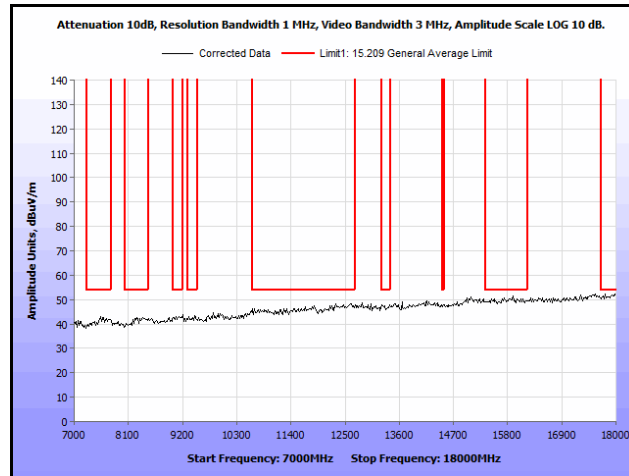


Plot 561. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 1 GHz - 7 GHz, Average

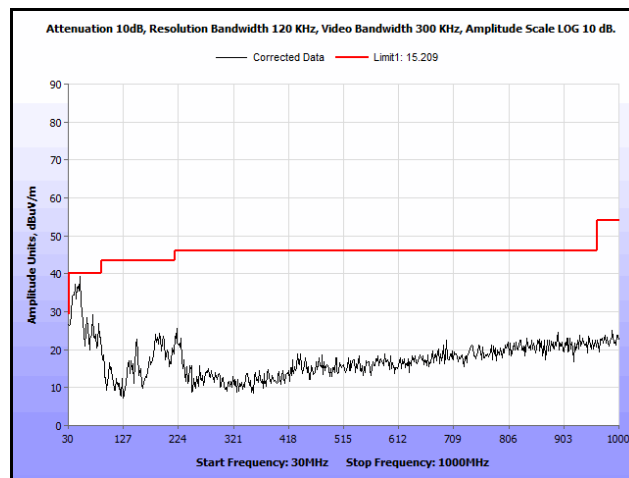


Plot 562. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 1 GHz - 7 GHz, Peak

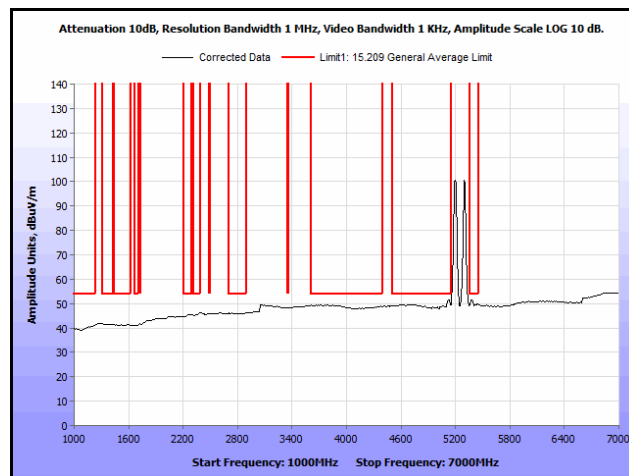




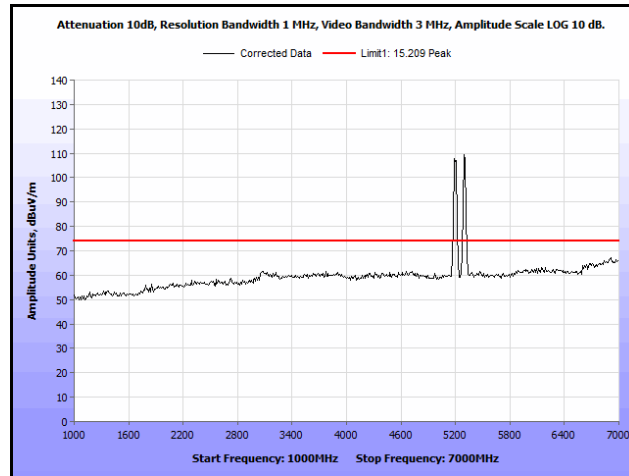
Plot 563. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5200 MHz, 7 GHz - 18 GHz, Average



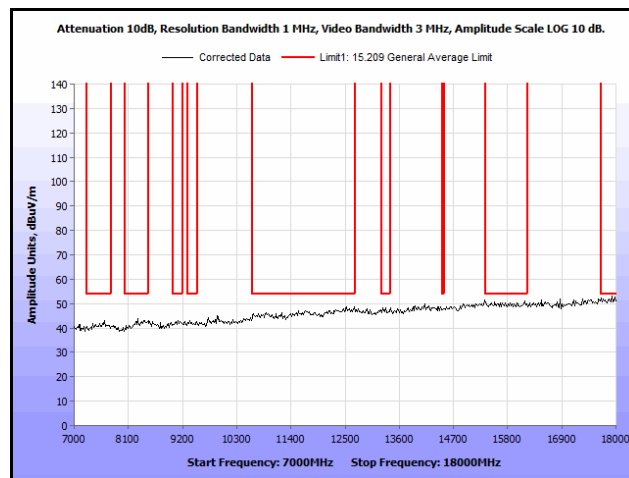
Plot 564. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



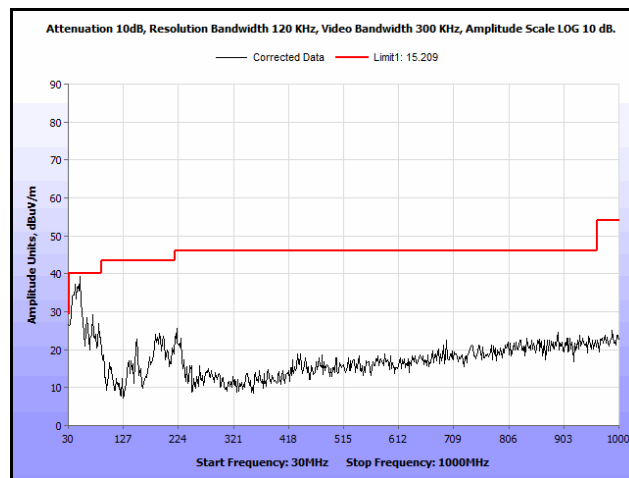
Plot 565. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



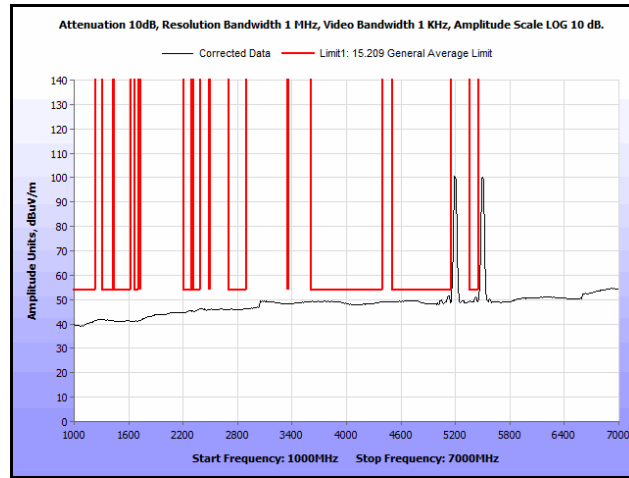
Plot 566. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



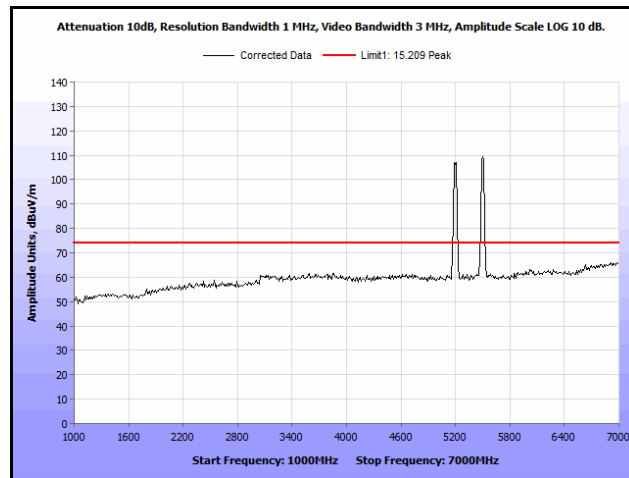
Plot 567. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



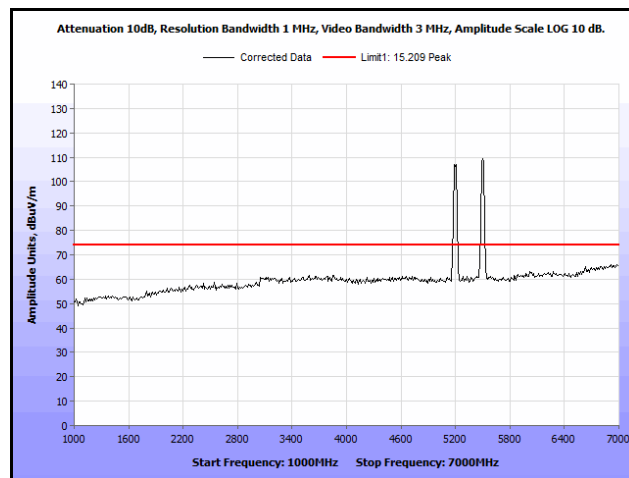
Plot 568. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



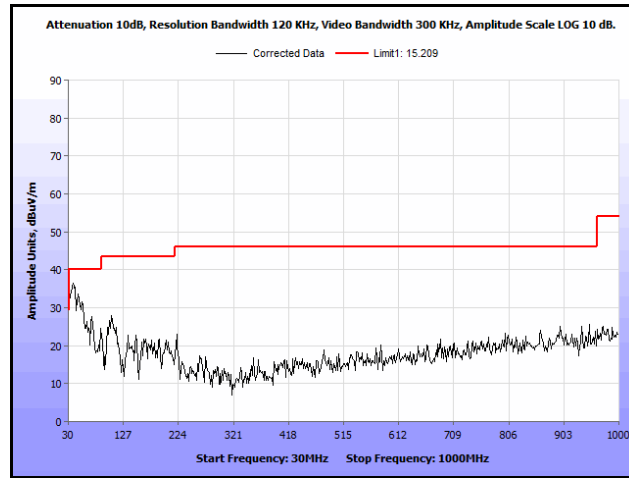
**Plot 569. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 1 GHz - 7 GHz, Average**



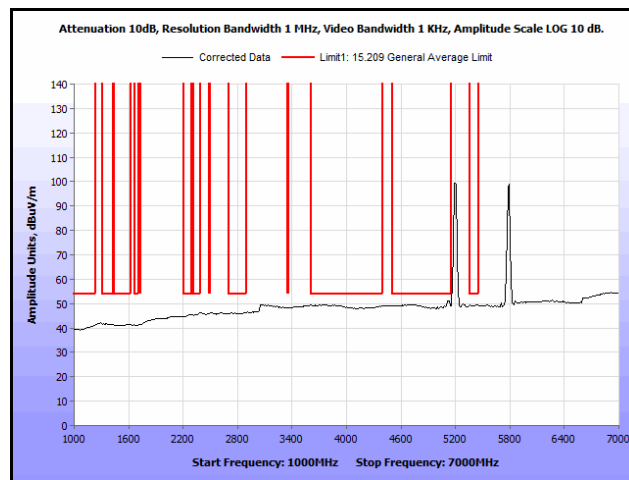
**Plot 570. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak**



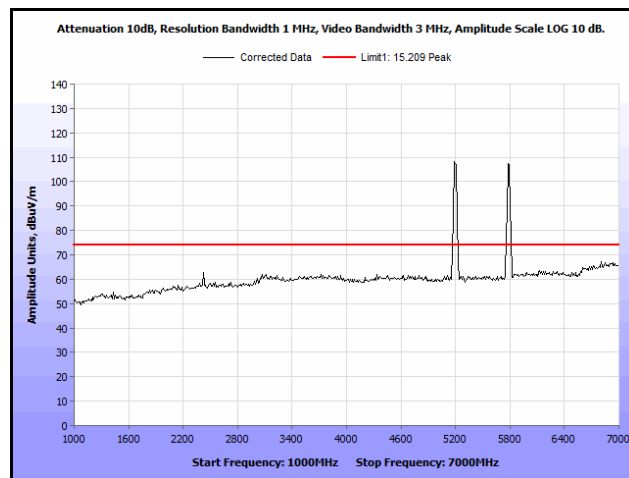
**Plot 571. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5580 MHz, 7 GHz - 18 GHz, Average**



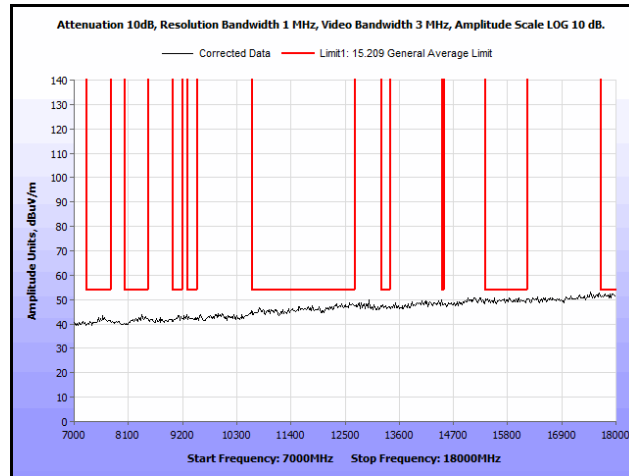
Plot 572. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



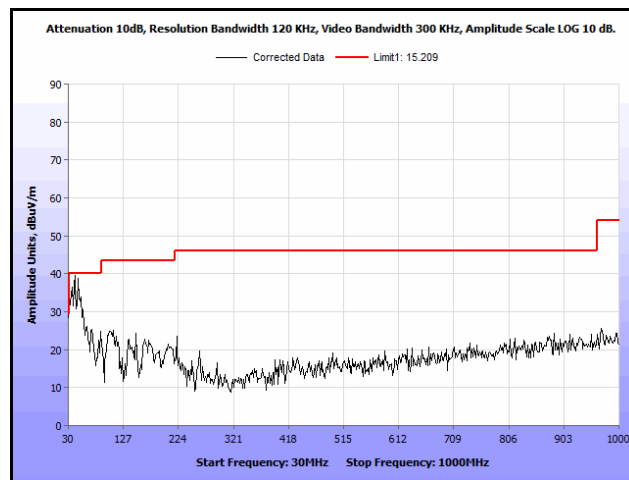
Plot 573. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



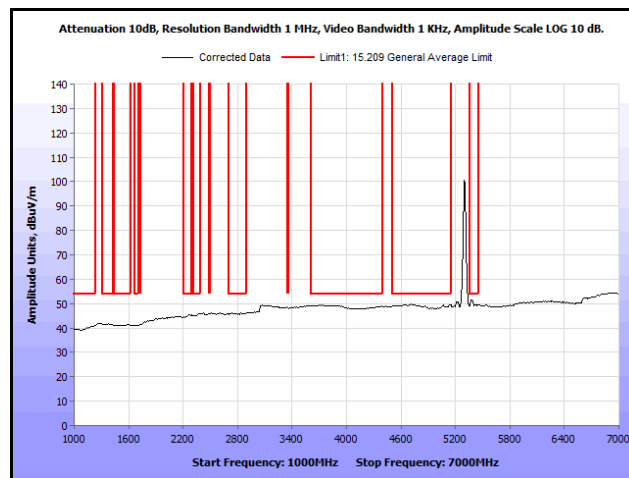
Plot 574. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



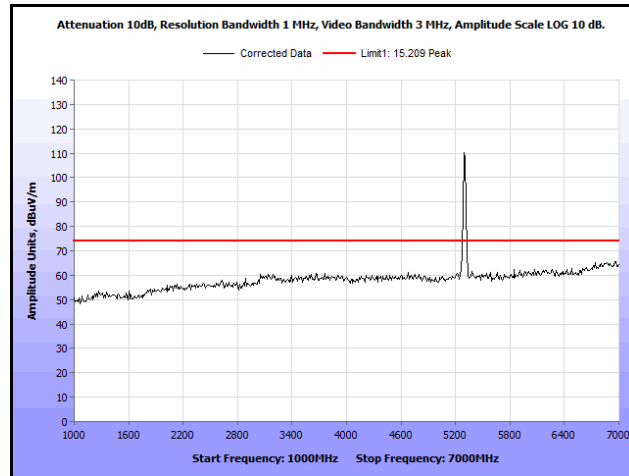
Plot 575. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5200 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



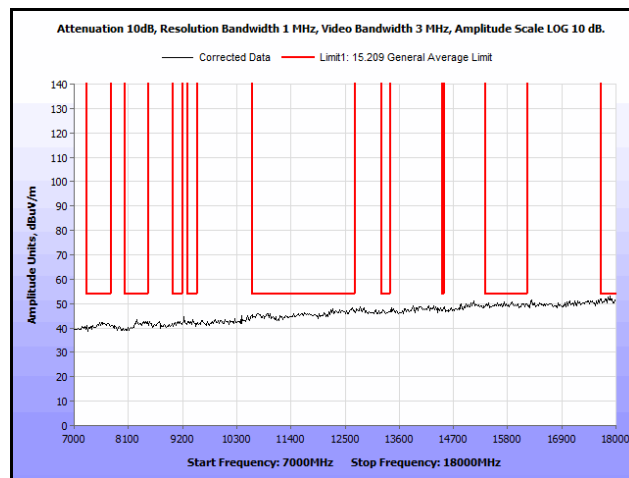
Plot 576. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 30 MHz - 1 GHz, Average



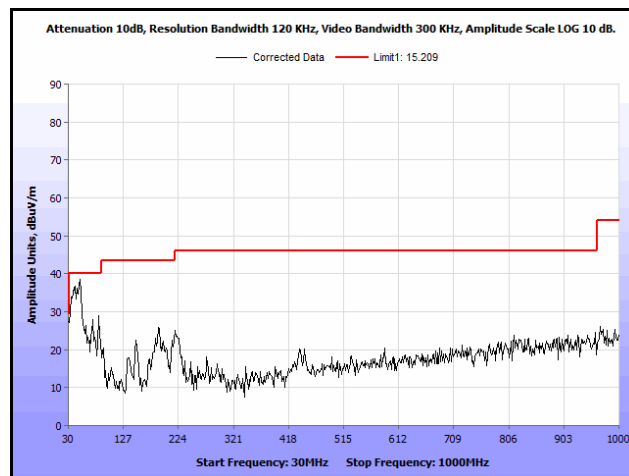
Plot 577. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 1 GHz - 7 GHz, Average



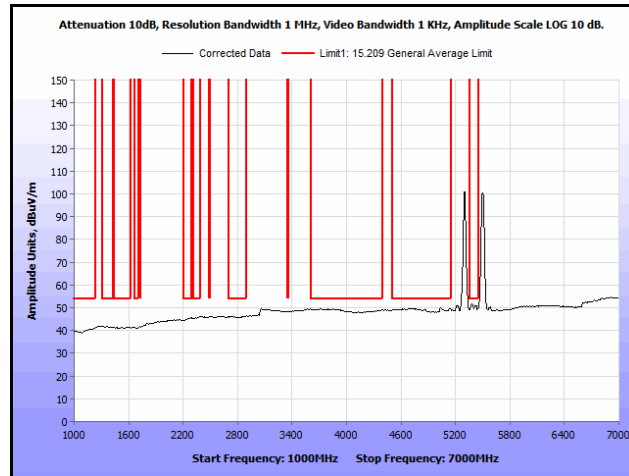
Plot 578. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 1 GHz - 7 GHz, Peak



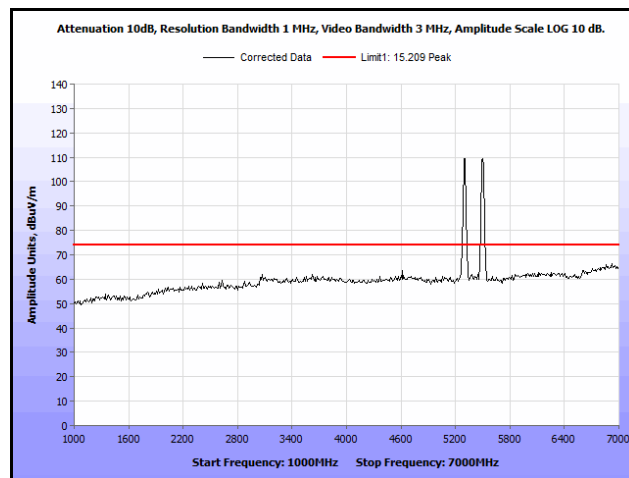
Plot 579. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5300 MHz, 7 GHz - 18 GHz, Average



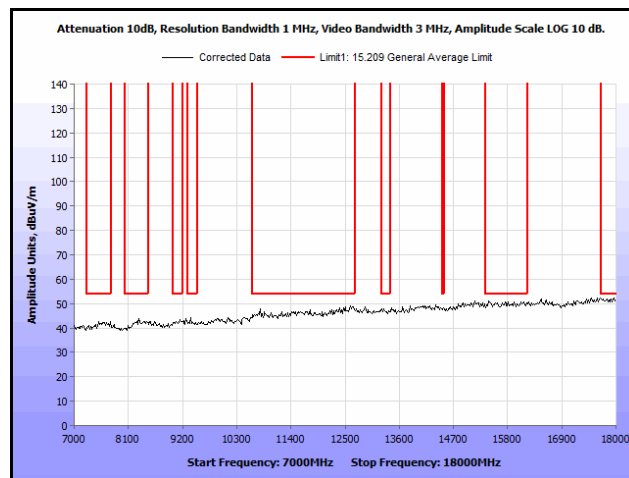
Plot 580. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



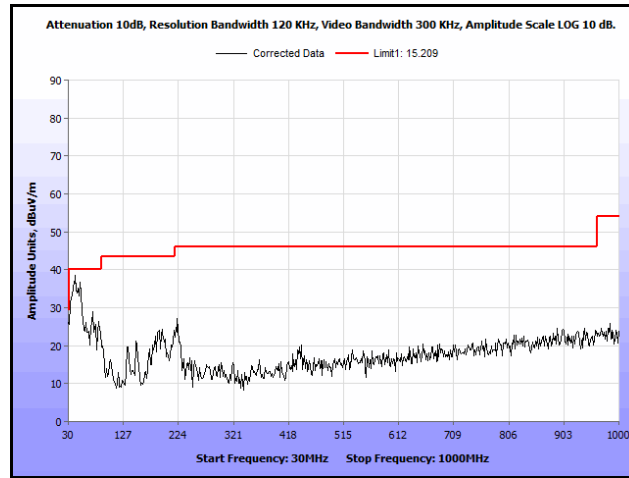
Plot 581. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



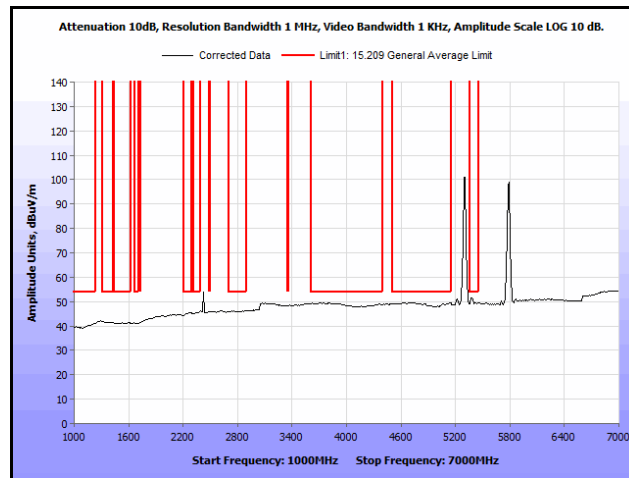
Plot 582. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



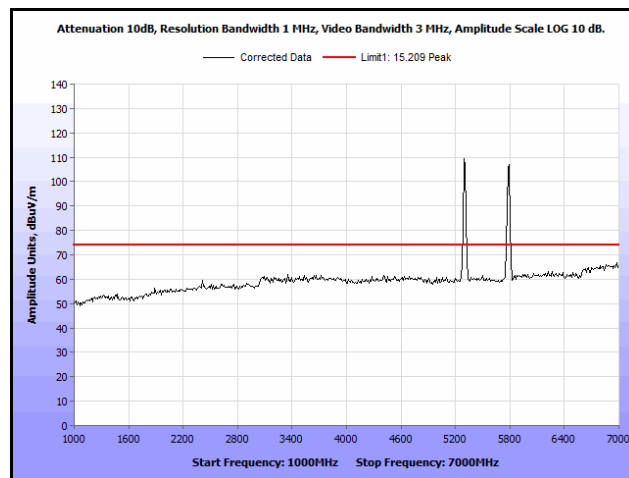
Plot 583. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



Plot 584. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 30 MHz - 1 GHz, Average

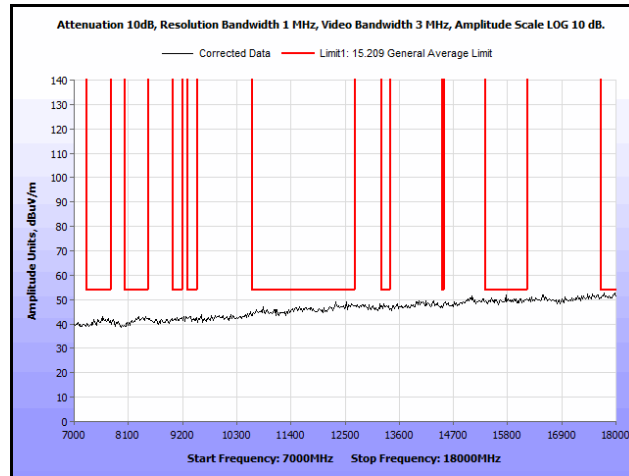


Plot 585. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 1 GHz - 7 GHz, Average

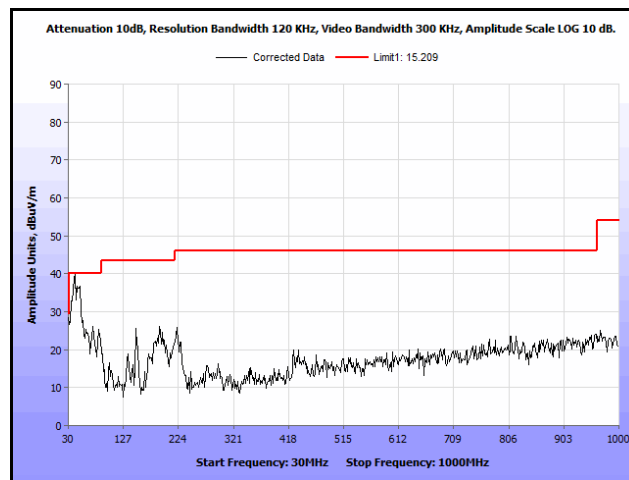


Plot 586. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak

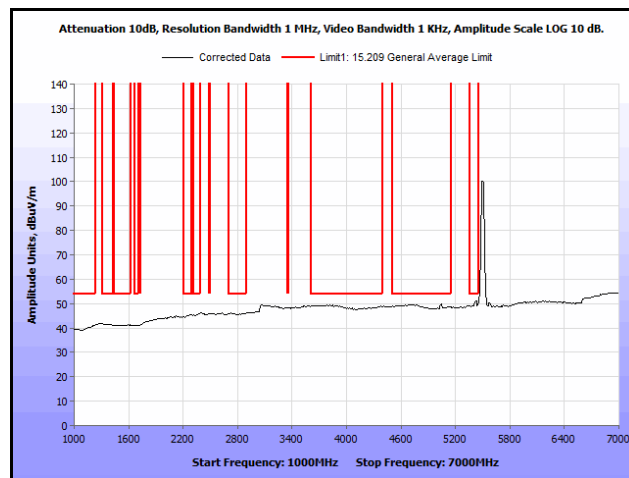




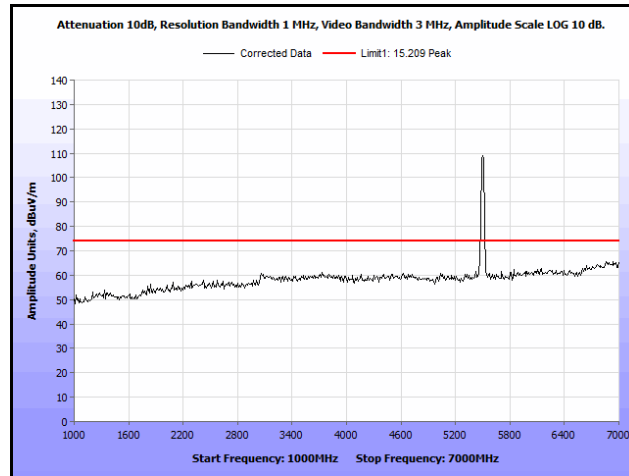
Plot 587. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5300 MHz & 5785 MHz, 7 GHz - 18 GHz, Average



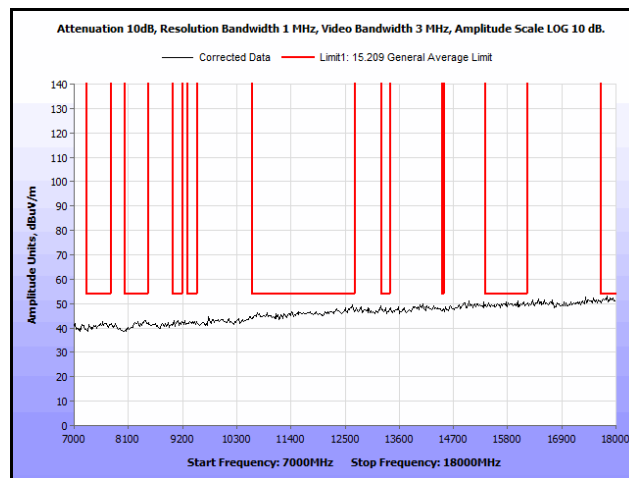
Plot 588. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 30 MHz - 1 GHz, Average



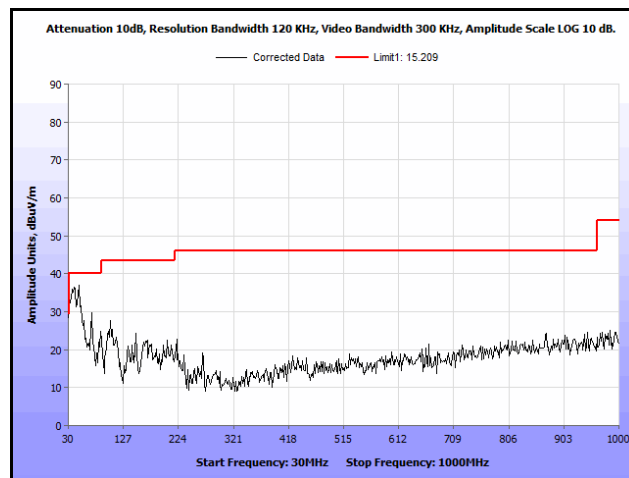
Plot 589. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 1 GHz - 7 GHz, Average



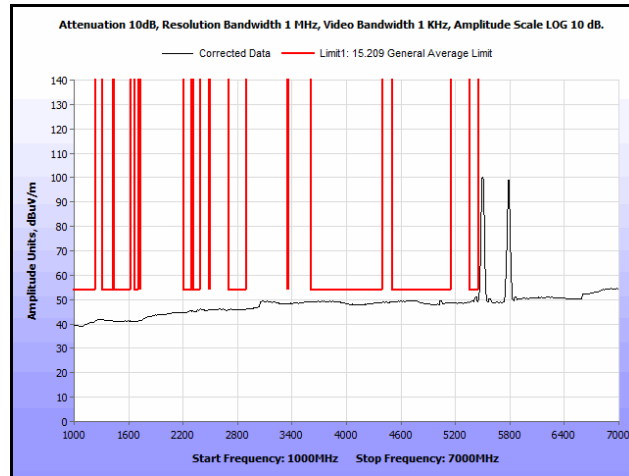
Plot 590. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 1 GHz - 7 GHz, Peak



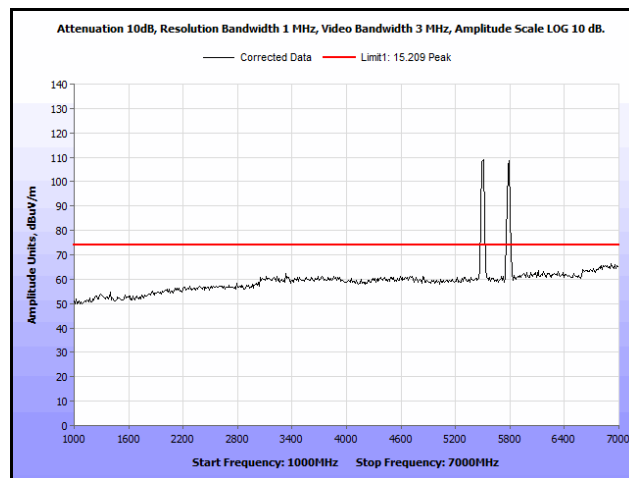
Plot 591. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5580 MHz, 7 GHz - 18 GHz, Average



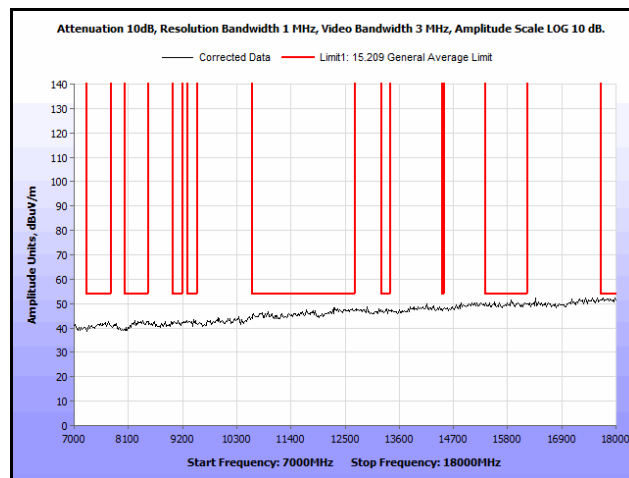
Plot 592. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



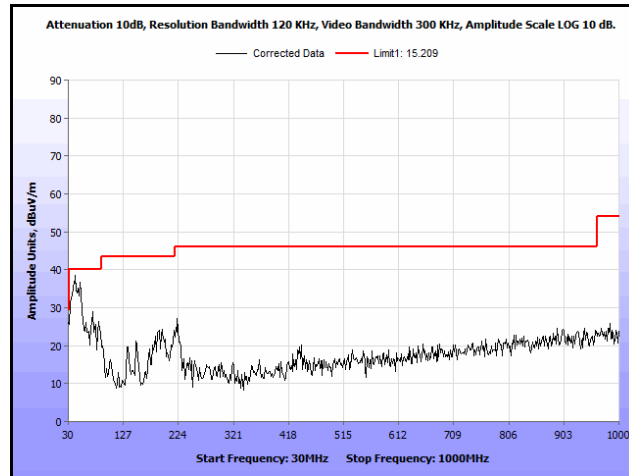
**Plot 593. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 1 GHz - 7 GHz, Average**



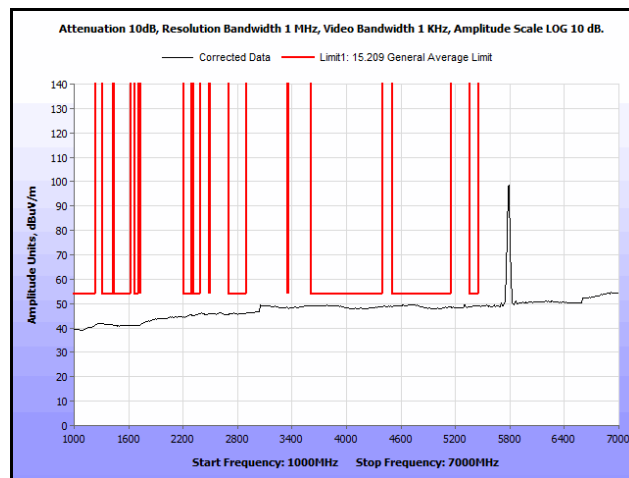
**Plot 594. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak**



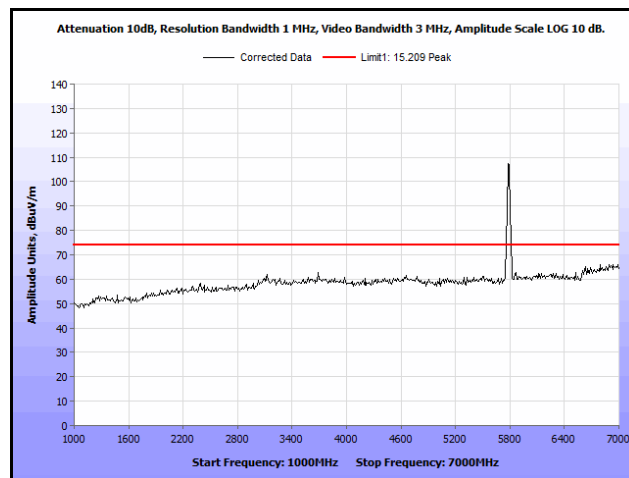
**Plot 595. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5580 MHz & 5785 MHz, 7 GHz - 18 GHz, Average**



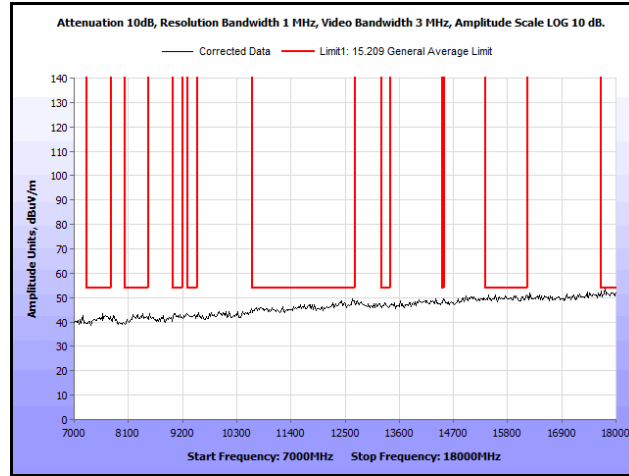
Plot 596. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 30 MHz - 1 GHz, Average



Plot 597. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 1 GHz - 7 GHz, Average



Plot 598. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 1 GHz - 7 GHz, Peak



Plot 599. Co-Location, ANT-BG080-NM, 802.11n 20 MHz, 5785 MHz & 5785 MHz, 7 GHz - 18 GHz, Average

## Electromagnetic Compatibility Criteria for Intentional Radiators

### § 15.407(f) RF Exposure

**RF Exposure Requirements:** §1.1307(b)(1) and §1.1307(b)(2): Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission’s guidelines.

**RF Radiation Exposure Limit:** §1.1310: As specified in this section, the Maximum Permissible Exposure (MPE) Limit shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in Sec. 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of Sec. 2.1093 of this chapter.

MPE Limit Calculation: EUT’s operating frequencies @ 5150-5250 MHz; **Limit for Uncontrolled exposure: 1 mW/cm<sup>2</sup> or 10 W/m<sup>2</sup>**

Equation from page 18 of OET 65, Edition 97-01

$$S = PG / 4\pi R^2 \quad \text{or} \quad R = \sqrt{PG / 4\pi S}$$

where, S = Power Density

P = Power Input to antenna=18.29 dBm (67.45 mW)

G = Antenna Gain 8 dBi, Array gain = 8+10log(3) = 12.77 dBi (18.9277 linear)

R = Minimum Distance between User and Antenna (25cm)

$$S = (67.45 * 18.9277) / (4 * 3.14 * 625) = 0.162 \text{ mW/cm}^2$$

Since S < 1 mW/cm<sup>2</sup>, the minimum distance (R) is 25cm

**Co-location:**

Frequency Range	MPE Result (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2.4GHz	0.42	1
5.150-5.250GHz	0.162	1

**Test Requirements:** [MPE(f1) / limit(f1) + MPE(f2) / limit(f2)] < 1

**Test Results:**

MPE(f1)	MPE(f2)	Calculation [MPE(f1) / limit(f1) + MPE(f2) / limit(f2)]	MPE Result (mW/cm <sup>2</sup> )
Frequency (MHZ)	Frequency (MHZ)		
2412 - 2462	5150-5250	0.42 / 1 + 0.162 / 1 = (0.42+ 0.162)	<b>0.582</b>

Therefore, the uncontrolled exposure limit is not exceeded at 25 cm.

MPE Limit Calculation: EUT's operating frequencies @ 5725-5850 MHz; **Limit for Uncontrolled exposure: 1 mW/cm<sup>2</sup> or 10 W/m<sup>2</sup>**

Equation from page 18 of OET 65, Edition 97-01

$$S = PG / 4\pi R^2 \quad \text{or} \quad R = \sqrt{PG / 4\pi S}$$

where, S = Power Density  
P = Power Input to antenna = 23.04dBm = 201.37mW  
G = Antenna Gain = 8 dBi, Array gain = 12.77 dBi (18.93 linear)  
R = Minimum Distance between User and Antenna (25cm)

$$S = (201.37 * 18.93) / (4 * 3.14 * 625) = 0.48 \text{ mW/cm}^2$$

Since  $S < 1 \text{ mW/cm}^2$ , the minimum distance (R) is 25cm

**Co-location:**

Frequency Range	MPE Result (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2.4GHz	0.42	1
5725-5850GHz	0.48	1

**Test Requirements:**  $[MPE(f1) / \text{limit}(f1) + MPE(f2) / \text{limit}(f2)] < 1$

**Test Results:**

MPE(f1)	MPE(f2)	Calculation	MPE Result (mW/cm <sup>2</sup> )
Frequency (MHZ)	Frequency (MHZ)	$[MPE(f1) / \text{limit}(f1) + MPE(f2) / \text{limit}(f2)]$	
2412 - 2462	5725-5850	$0.42 / 1 + 0.48 / 1 = (0.42 + 0.48)$	<b>0.9</b>

Therefore, the uncontrolled exposure limit is not exceeded at 25 cm.

## V. Test Equipment



## Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2005.

MET Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
1S2600	BILOG ANTENNA	TESEQ	CBL6112D	8/29/2013	8/29/2015
1S2482	5 METER CHAMBER (NSA)	PANASHIELD	5 METER SEMI-ANECHOIC CHAMBER	8/12/2013	2/12/2015
1S2583	SPECTRUM ANALYZER	AGILENT/HP	E4447A	11/1/2013	5/1/2015
1S2460	1-26GHZ SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4407B	2/27/2014	8/27/2015
1S2603	DOUBLE RIDGED WAVEGUIDE HORN	ETS-LINDGREN	3117	4/24/2013	4/24/2015
1S2523	PREAMPLIFIER	AGILENT TECHNOLOGIES	8449B	SEE NOTE	
1S2729	SONOMA AMPLIFIER	SONOMA INSTRUMENT	310N	SEE NOTE	
1S2460	1-26GHZ SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4407B	2/27/2014	8/27/2015
N/A	NOTCH FILTER	MIRCRO-TRONICS	BRM50702	SEE NOTE	
N/A	HIGH PASS FILTER	MICRO-TRONICS	BRM50705	SEE NOTE	

**Table 35. Test Equipment List**

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

## **VI. Certification & User's Manual Information**

## Certification & User's Manual Information

### L. Certification Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart I — Marketing of Radio frequency devices:

#### § 2.801 Radio-frequency device defined.

As used in this part, a radio-frequency device is any device which in its operation is capable of Emitting radio-frequency energy by radiation, conduction, or other means. Radio- frequency devices include, but are not limited to:

- (a) The various types of radio communication transmitting devices described throughout this chapter.
- (b) *The incidental, unintentional and intentional radiators defined in Part 15 of this chapter.*
- (c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.
- (d) Any part or component thereof which in use emits radio-frequency energy by radiation, conduction, or other means.

#### § 2.803 Marketing of radio frequency devices prior to equipment authorization.

- (a) Except as provided elsewhere in this chapter, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless:
  - (1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by §2.925 and other relevant sections in this chapter; or
  - (2) In the case of a device that is not required to have a grant of equipment authorization issued by the Commission, but which must comply with the specified technical standards prior to use, such device also complies with all applicable administrative (including verification of the equipment or authorization under a Declaration of Conformity, where required), technical, labeling and identification requirements specified in this chapter.
- (d) Notwithstanding the provisions of paragraph (a) of this section, the offer for sale solely to business, commercial, industrial, scientific or medical users (but not an offer for sale to other parties or to end users located in a residential environment) of a radio frequency device that is in the conceptual, developmental, design or pre-production stage is permitted prior to equipment authorization or, for devices not subject to the equipment authorization requirements, prior to a determination of compliance with the applicable technical requirements *provided* that the prospective buyer is advised in writing at the time of the offer for sale that the equipment is subject to the FCC rules and that the equipment will comply with the appropriate rules before delivery to the buyer or to centers of distribution.

- (e)(1) Notwithstanding the provisions of paragraph (a) of this section, prior to equipment authorization or determination of compliance with the applicable technical requirements any radio frequency device may be operated, but not marketed, for the following purposes and under the following conditions:
- (i) *Compliance testing;*
  - (ii) Demonstrations at a trade show provided the notice contained in paragraph (c) of this section is displayed in a conspicuous location on, or immediately adjacent to, the device;
  - (iii) Demonstrations at an exhibition conducted at a business, commercial, industrial, scientific or medical location, but excluding locations in a residential environment, provided the notice contained in paragraphs (c) or (d) of this section, as appropriate, is displayed in a conspicuous location on, or immediately adjacent to, the device;
  - (iv) Evaluation of product performance and determination of customer acceptability, provided such operation takes place at the manufacturer's facilities during developmental, design or pre-production states; or
  - (v) Evaluation of product performance and determination of customer acceptability where customer acceptability of a radio frequency device cannot be determined at the manufacturer's facilities because of size or unique capability of the device, provided the device is operated at a business, commercial, industrial, scientific or medical user's site, but not at a residential site, during the development, design or pre-production stages.
- (e)(2) For the purpose of paragraphs (e)(1)(iv) and (e)(1)(v) of this section, the term *manufacturer's facilities* includes the facilities of the party responsible for compliance with the regulations and the manufacturer's premises, as well as the facilities of other entities working under the authorization of the responsible party in connection with the development and manufacture, but not the marketing, of the equipment.
- (f) For radio frequency devices subject to verification and sold solely to business, commercial, industrial, scientific and medical users (excluding products sold to other parties or for operation in a residential environment), parties responsible for verification of the devices shall have the option of ensuring compliance with the applicable technical specifications of this chapter at each end user's location after installation, provided that the purchase or lease agreement includes a proviso that such a determination of compliance be made and is the responsibility of the party responsible for verification of the equipment.

## Certification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart J — Equipment Authorization Procedures:

### § 2.901 Basis and Purpose

- (a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated.<sup>1</sup> *In addition to the technical standards provided, the rules governing the service may require that such equipment be verified by the manufacturer or importer, be authorized under a Declaration of Conformity, or receive an equipment authorization from the Commission by one of the following procedures: certification or registration.*
- (b) The following sections describe the verification procedure, the procedure for a Declaration of Conformity, and the procedures to be followed in obtaining certification from the Commission and the conditions attendant to such a grant.

### § 2.907 Certification.

- (a) Certification is an equipment authorization issued by the Commission, based on representation and test data submitted by the applicant.
- (b) Certification attaches to all units subsequently marketed by the grantee which are identical (see Section 2.908) to the sample tested except for permissive changes or other variations authorized by the Commission pursuant to Section 2.1043.

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<sup>1</sup> In this case, the equipment is subject to the rules of Part 15. More specifically, the equipment falls under Subpart B (of Part 15), which deals with unintentional radiators.

## Certification & User's Manual Information

### § 2.948 Description of measurement facilities.

- (a) Each party making measurements of equipment that is subject to an equipment authorization under Part 15 or Part 18 of this chapter, regardless of whether the measurements are filed with the Commission or kept on file by the party responsible for compliance of equipment marketed within the U.S. or its possessions, shall compile a description of the measurement facilities employed.
- (1) If the measured equipment is subject to the verification procedure, the description of the measurement facilities shall be retained by the party responsible for verification of the equipment.
- (i) *If the equipment is verified through measurements performed by an independent laboratory, it is acceptable for the party responsible for verification of the equipment to rely upon the description of the measurement facilities retained by or placed on file with the Commission by that laboratory. In this situation, the party responsible for the verification of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.*
- (ii) If the equipment is verified based on measurements performed at the installation site of the equipment, no specific site calibration data is required. It is acceptable to retain the description of the measurement facilities at the site at which the measurements were performed.
- (2) If the equipment is to be authorized by the Commission under the certification procedure, the description of the measurement facilities shall be filed with the Commission's Laboratory in Columbia, Maryland. The data describing the measurement facilities need only be filed once but must be updated as changes are made to the measurement facilities or as otherwise described in this section. At least every three years, the organization responsible for filing the data with the Commission shall certify that the data on file is current.

## Certification & User's Manual Information

### Label and User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart A — General:

#### § 15.19 Labeling requirements.

(a) *In addition to the requirements in Part 2 of this chapter, a device subject to certification or verification shall be labeled as follows:*

- (1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under Part 73 of this chapter, land mobile operation under Part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

- (2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with Part 15 of the FCC Rules for use with cable television service.

- (3) All other devices shall bear the following statement in a conspicuous location on the device:

*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*

- (4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

- (5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

#### § 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Verification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart B — Unintentional Radiators:

### § 15.105 Information to the user.

- (a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

- (b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.