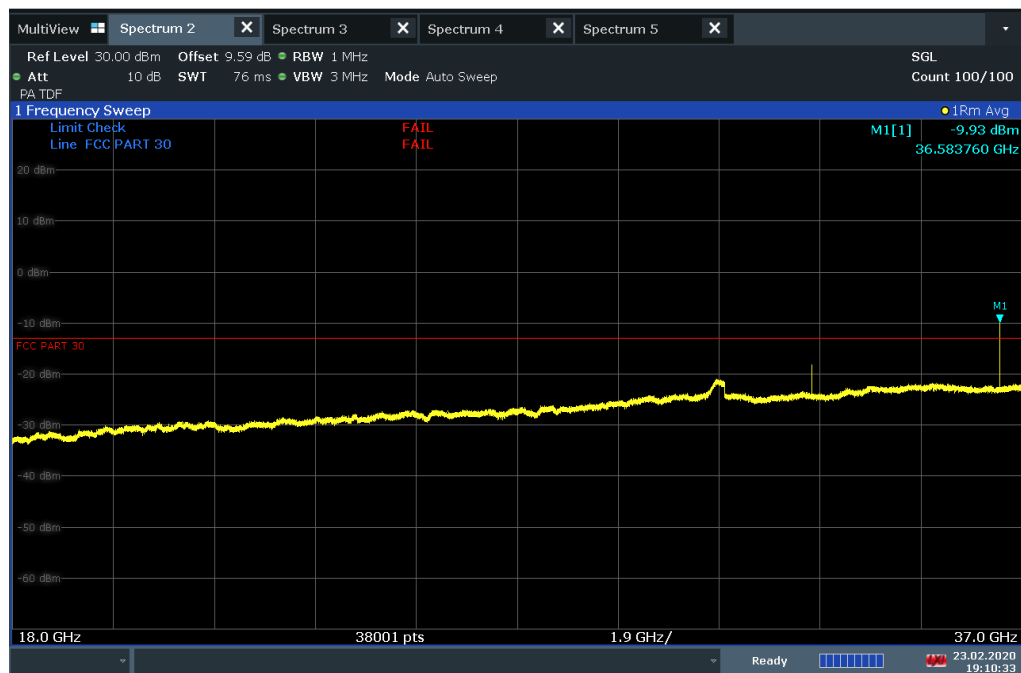


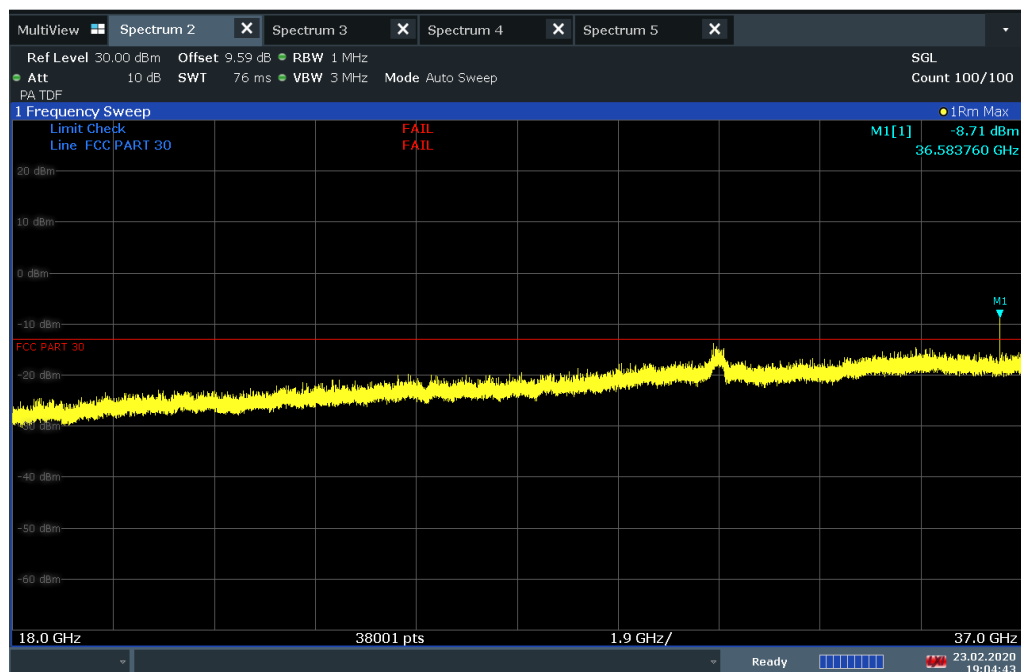
ACLRRResults



19:10:33 23.02.2020

Plot 7-329. Radiated Spurious Plot 18-37 GHz (1CC QPSK Mid Ch. Ant. Angle 135, Final)

ACLRRResults

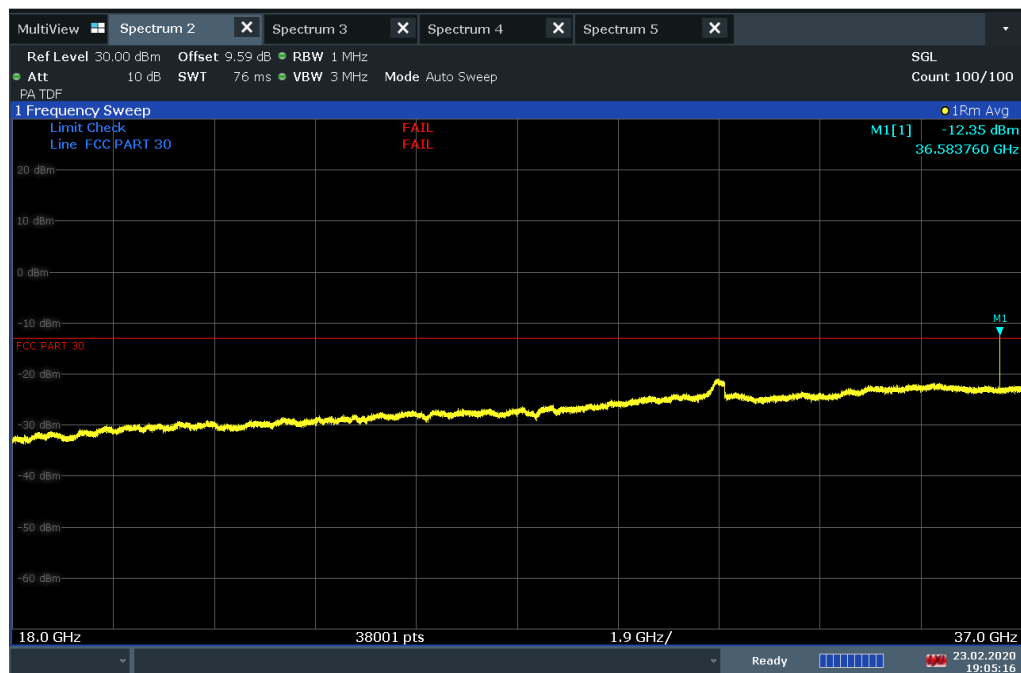


19:04:43 23.02.2020

Plot 7-330. Radiated Spurious Plot 18-37 GHz (1CC QPSK Mid Ch. Ant. Angle 45)

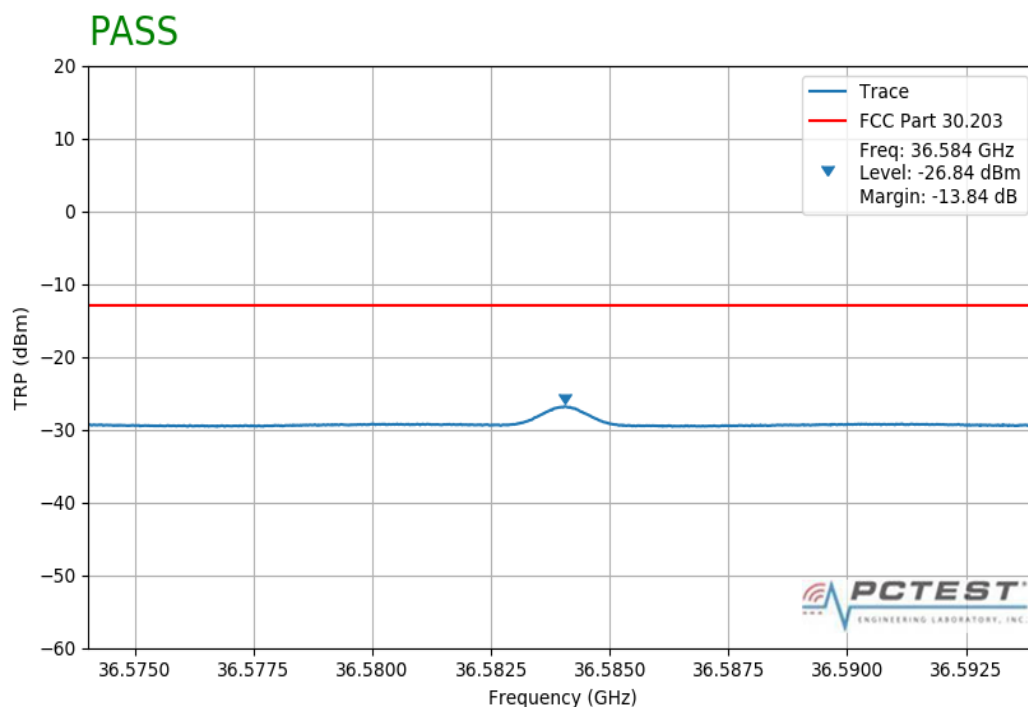
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 200 of 359

ACLRRResults



19:05:17 23.02.2020

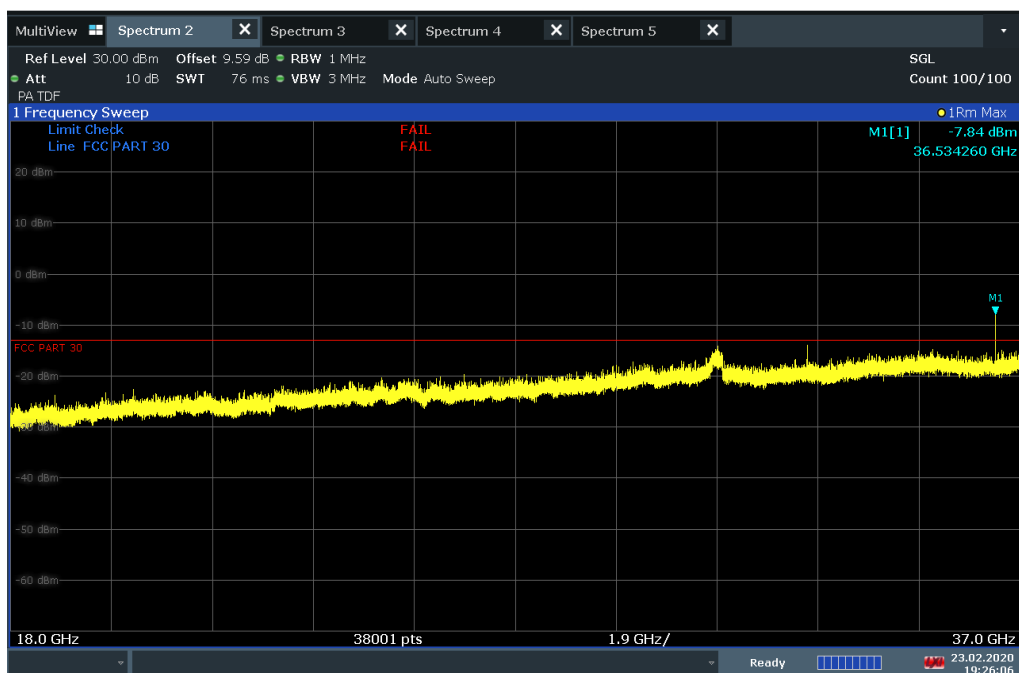
Plot 7-331. Radiated Spurious Plot 18-37 GHz (1CC QPSK Mid Ch. Ant. Angle 45, Final)



Plot 7-332. Radiated Spurious Plot 36.574-36.594 GHz (1CC QPSK Mid Ch. Ant. TRP)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 201 of 359

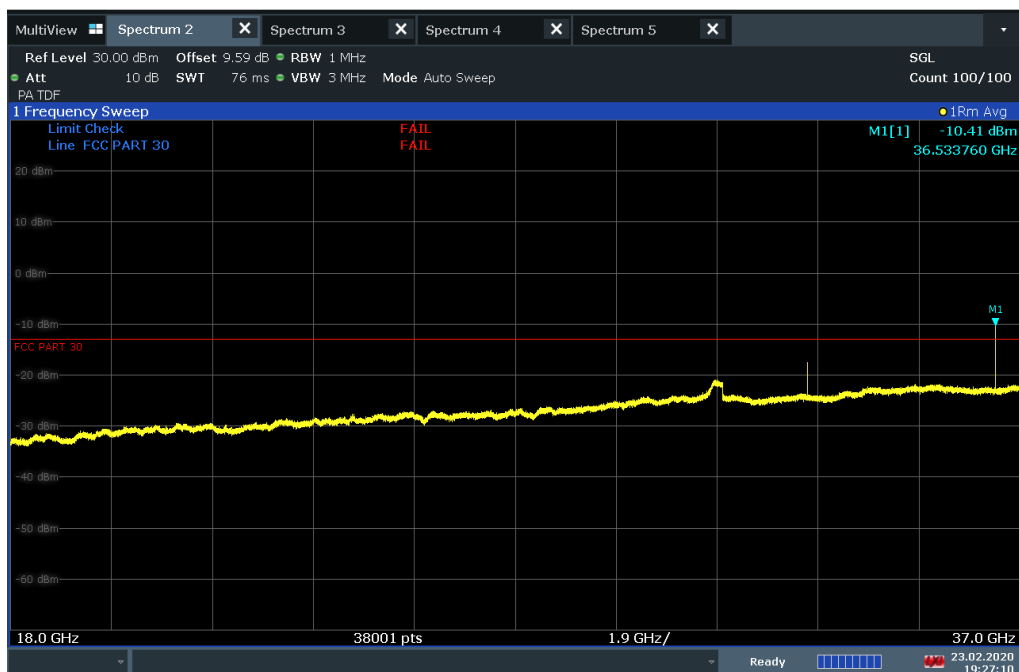
ACLRRResults



19:26:06 23.02.2020

Plot 7-333. Radiated Spurious Plot 18-37 GHz (8CC QPSK Mid Ch. Ant. Angle 135)

ACLRRResults

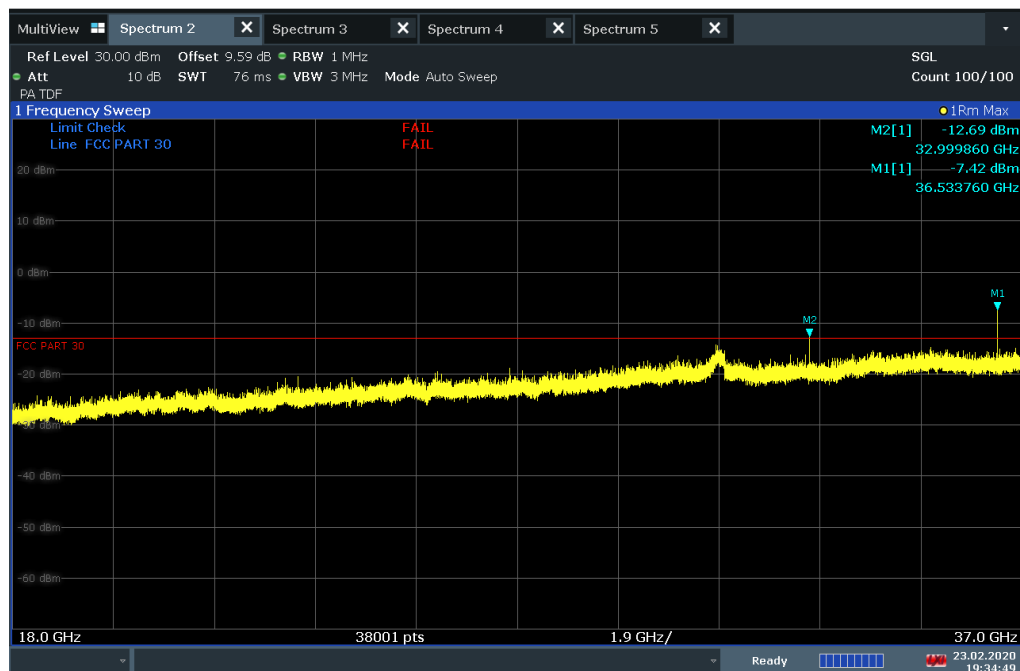


19:27:11 23.02.2020

Plot 7-334. Radiated Spurious Plot 18-37 GHz (8CC QPSK Mid Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 202 of 359

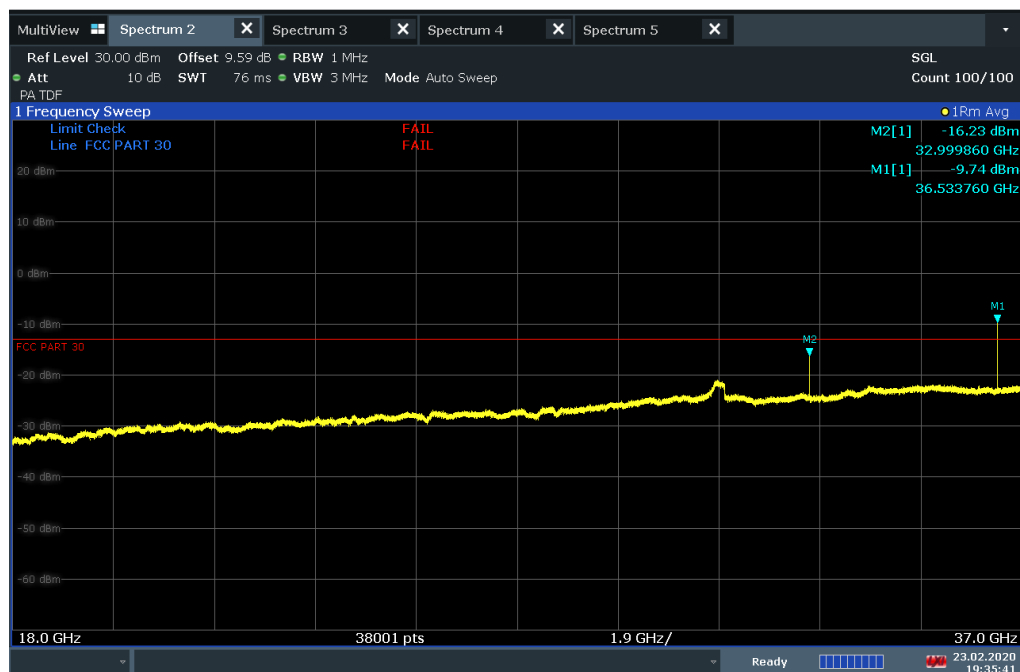
ACLRRResults



19:34:49 23.02.2020

Plot 7-335. Radiated Spurious Plot 18-37 GHz (8CC QPSK Mid Ch. Ant. Angle 45)

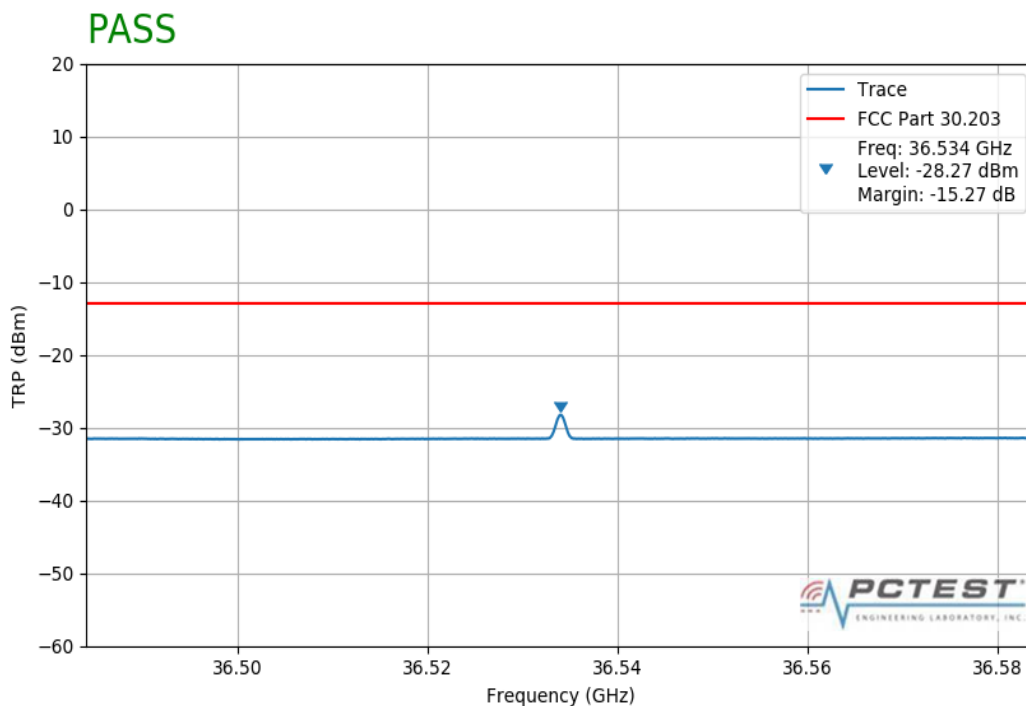
ACLRRResults



19:35:41 23.02.2020

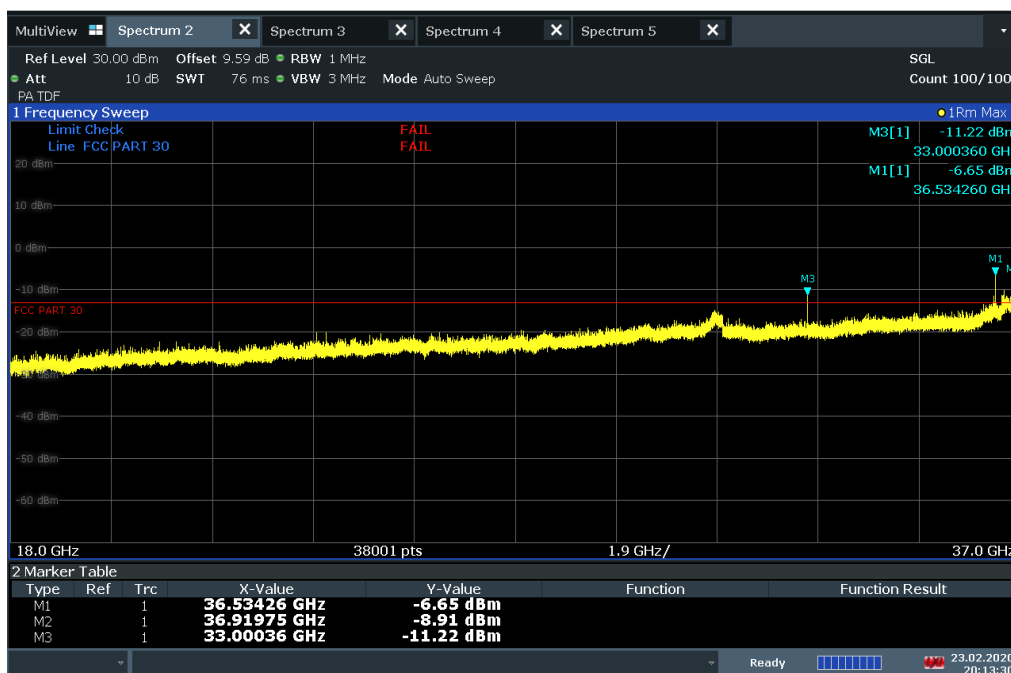
Plot 7-336. Radiated Spurious Plot 18-37 GHz (8CC QPSK Mid Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 203 of 359



Plot 7-337. Radiated Spurious Plot 36.48-36.594 GHz (8CC QPSK Mid Ch. Ant. TRP)

ACLRRResults



20:13:31 23.02.2020

Plot 7-338. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 204 of 359

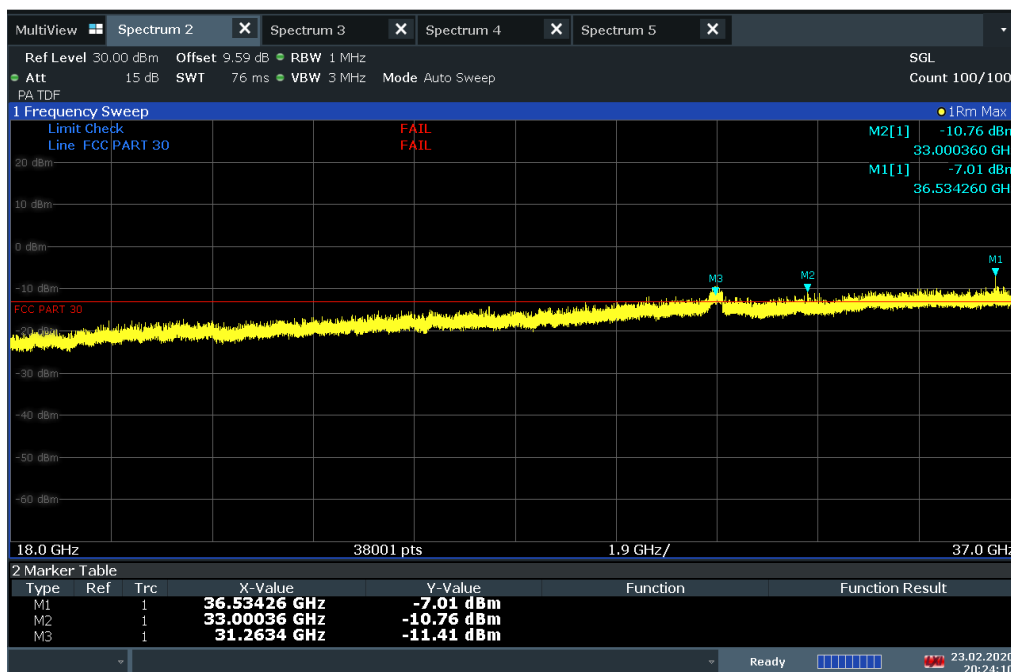
ACLRRResults



20:14:37 23.02.2020

Plot 7-339. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135, Final)

ACLRRResults



20:24:10 23.02.2020

Plot 7-340. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45)

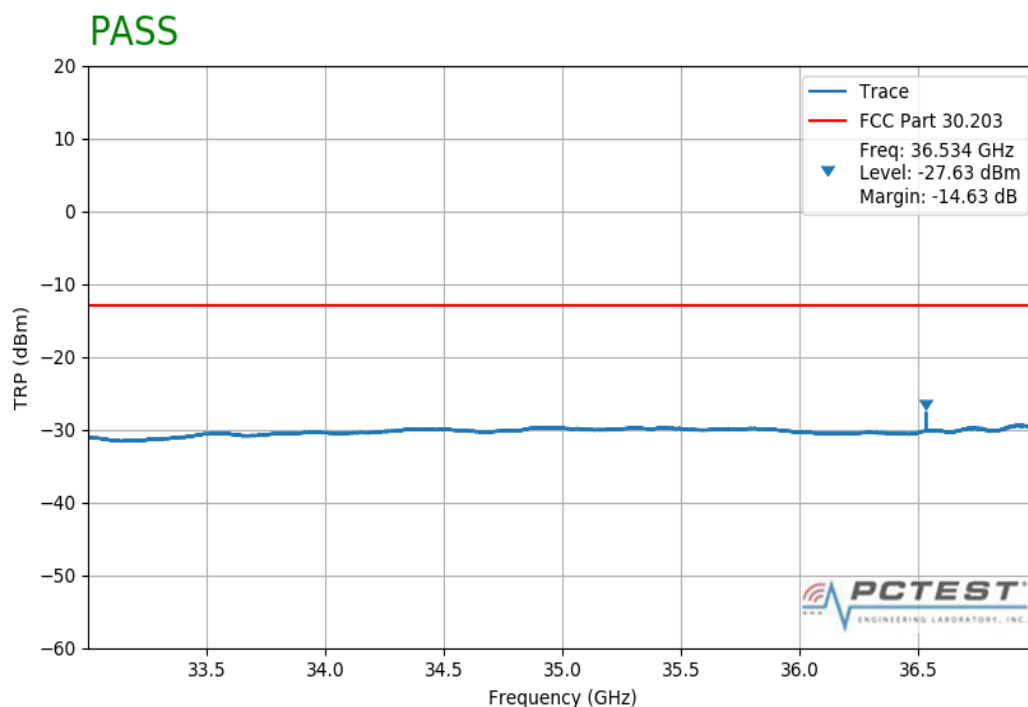
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 205 of 359

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20:22:46 23.02.2020

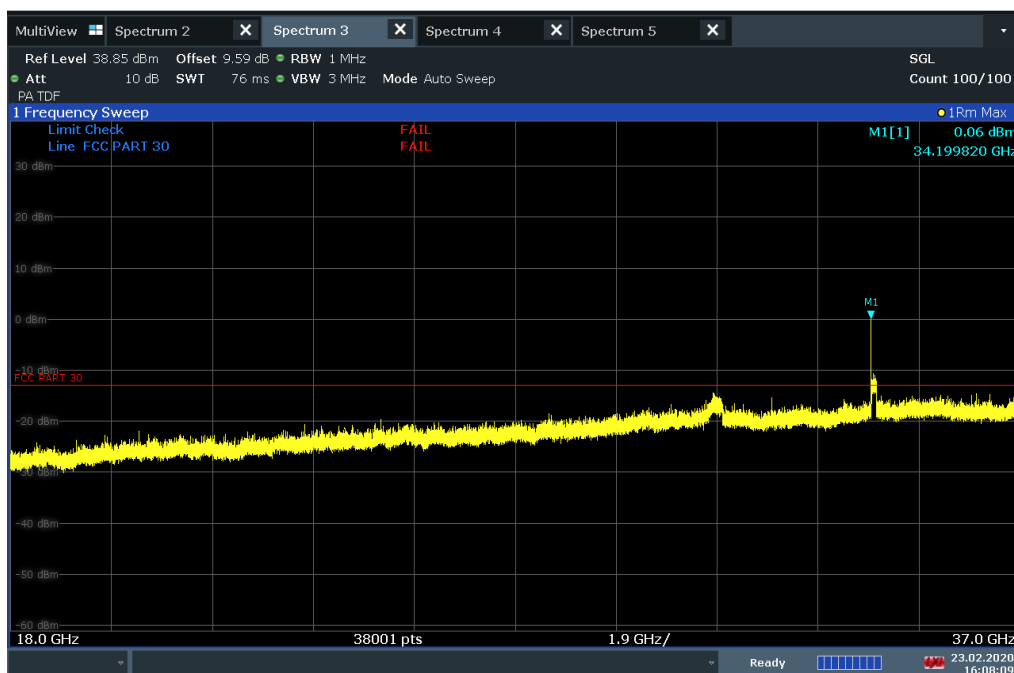
Plot 7-341. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45, Final)



Plot 7-342. Radiated Spurious Plot 33-37 GHz (8CC NC QPSK Mid Ch. TRP)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 206 of 359

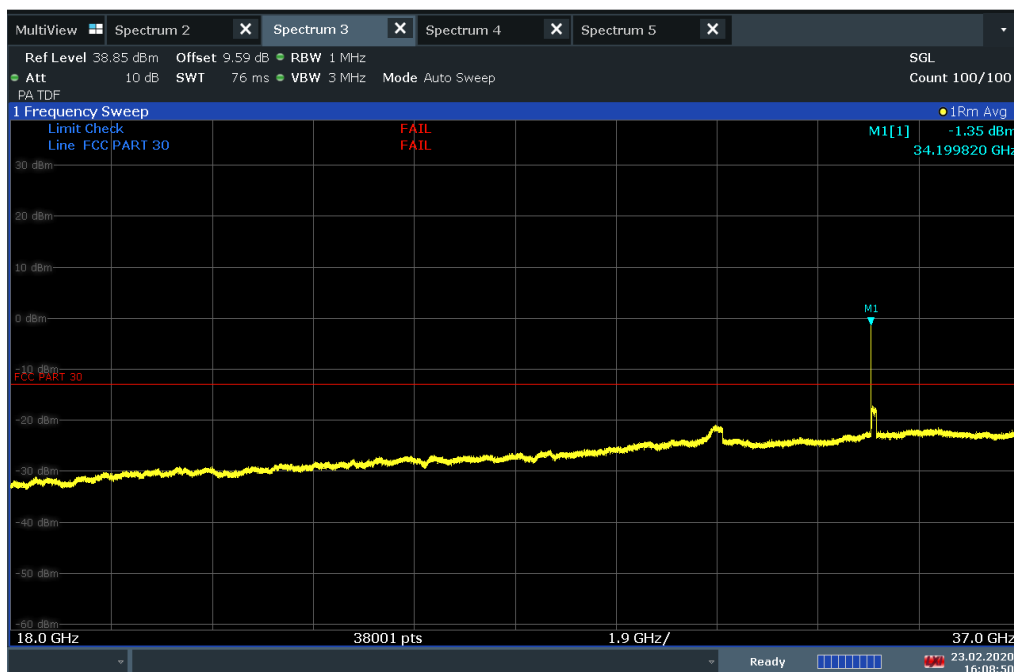
ACLRRResults



16:08:10 23.02.2020

Plot 7-343. Radiated Spurious Plot 18-37 GHz (1CC QPSK High Ch. Ant. Angle 135)

ACLRRResults

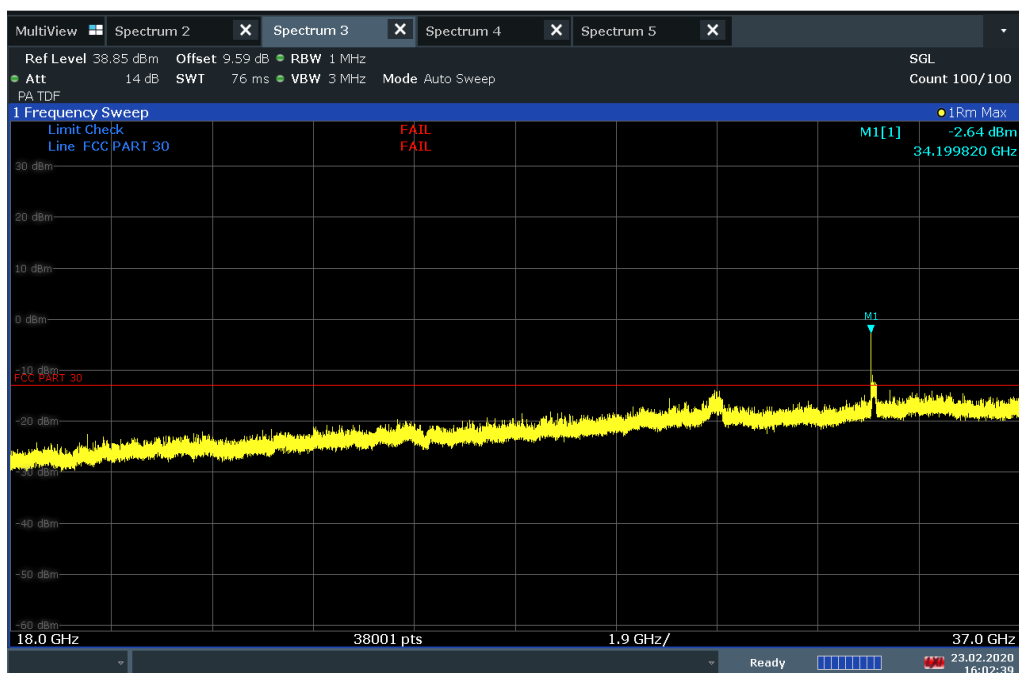


16:08:50 23.02.2020

Plot 7-344. Radiated Spurious Plot 18-37 GHz (1CC QPSK High Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 207 of 359

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16:02:40 23.02.2020

Plot 7-345. Radiated Spurious Plot 18-37 GHz (1CC QPSK High Ch. Ant. Angle 45)

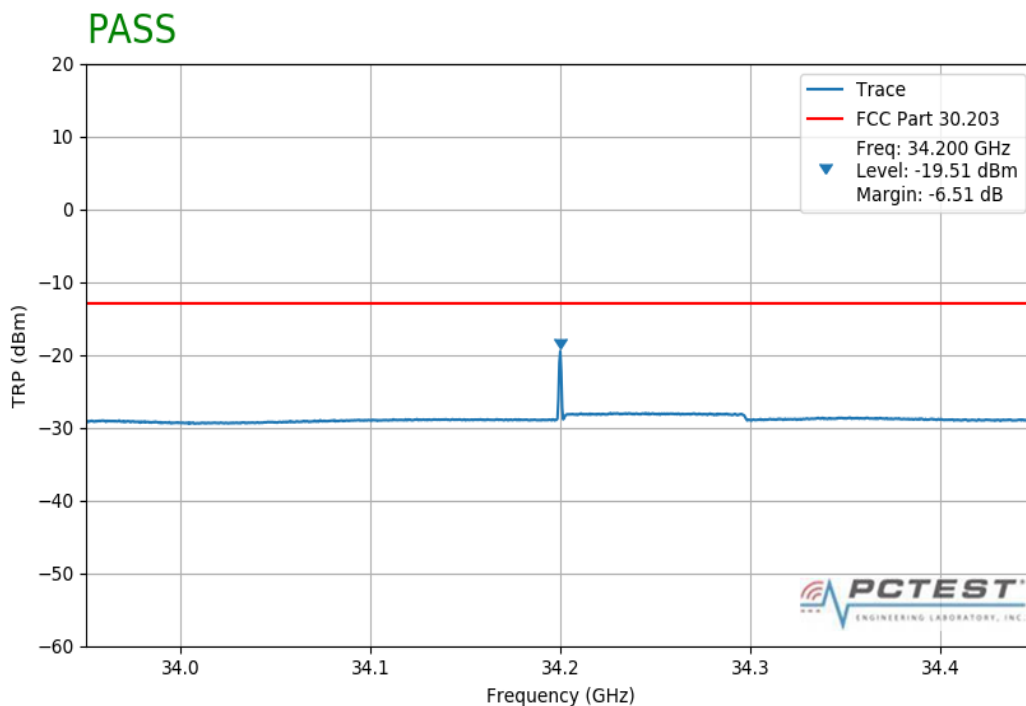
ACLRRResults



16:03:42 23.02.2020

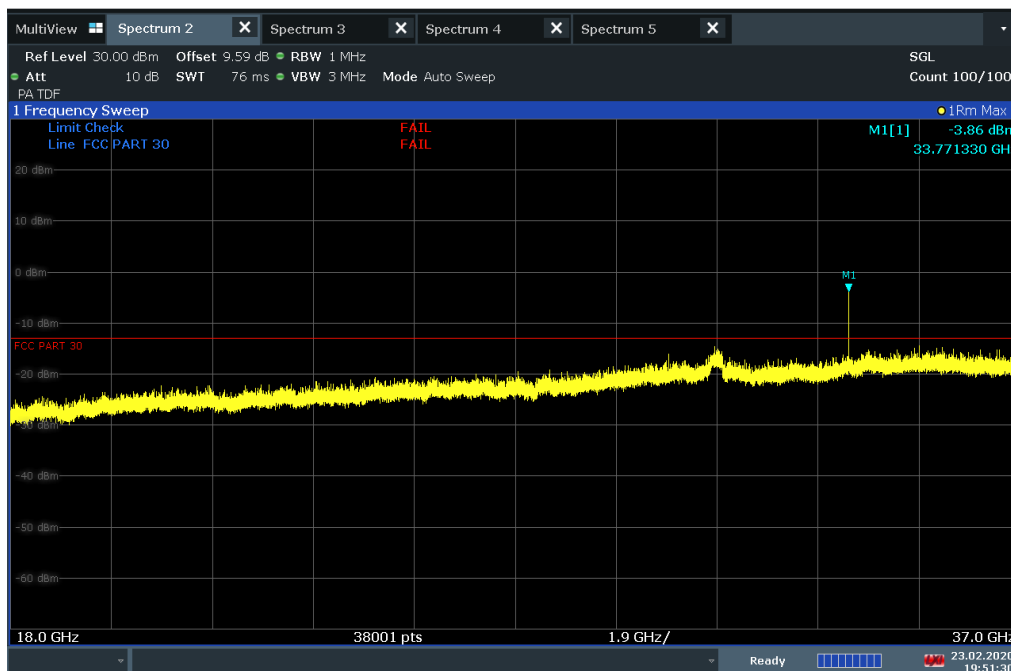
Plot 7-346. Radiated Spurious Plot 18-37 GHz (1CC QPSK High Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 208 of 359



Plot 7-347. Radiated Spurious Plot 33.95-34.45 GHz (1CC QPSK High Ch. TRP)

ACLRRResults

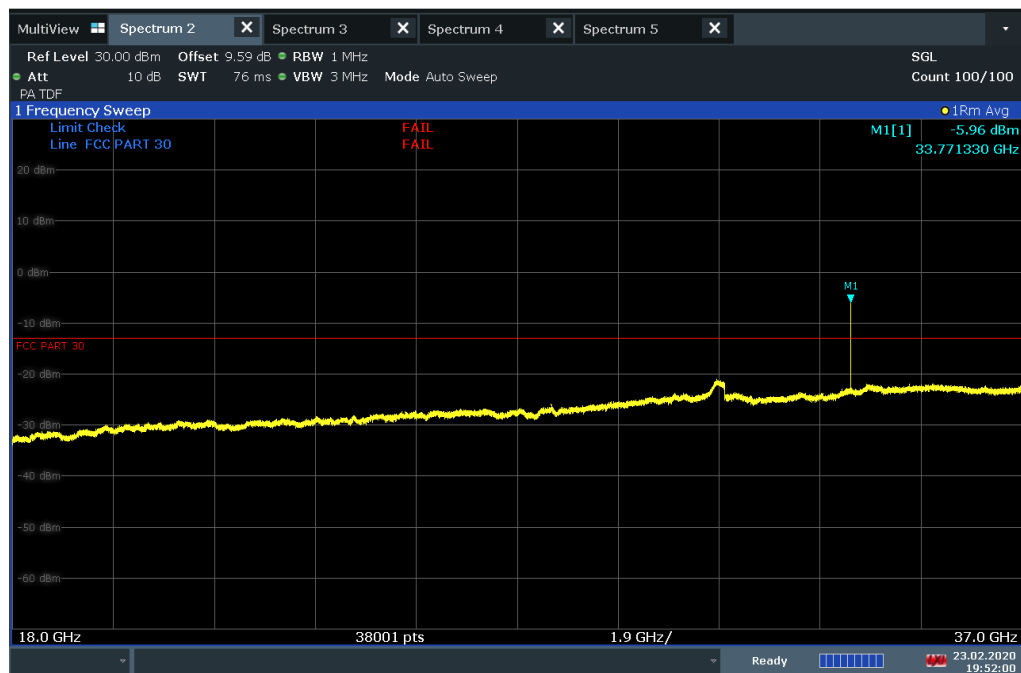


19:51:31 23.02.2020

Plot 7-348. Radiated Spurious Plot 18-37 GHz (8CC QPSK High Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 209 of 359

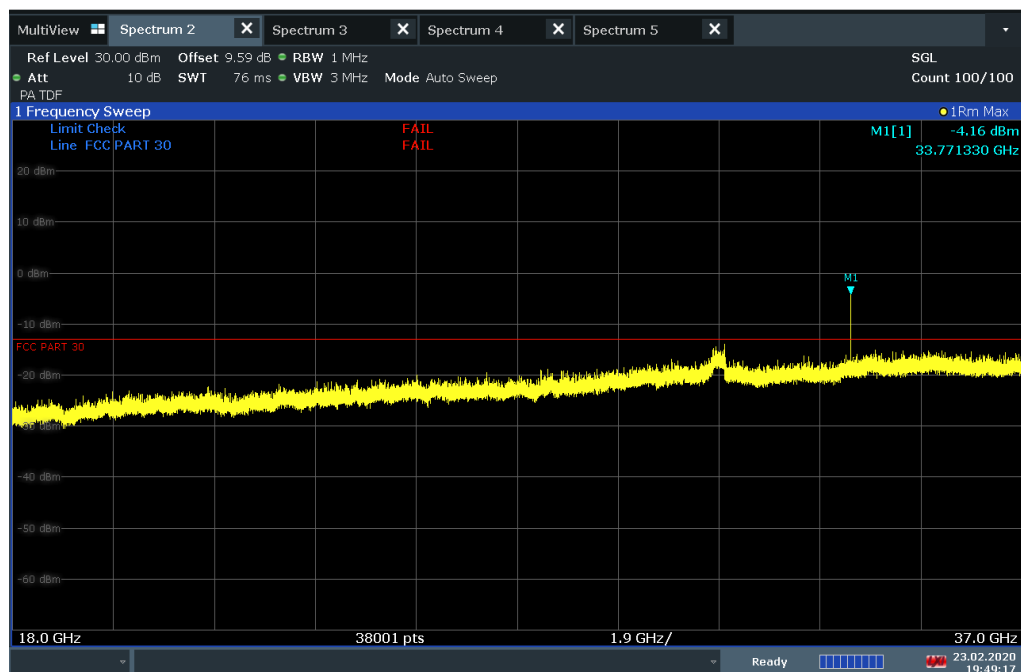
ACLRRResults



19:52:01 23.02.2020

Plot 7-349. Radiated Spurious Plot 18-37 GHz (8CC QPSK High Ch. Ant. Angle 135, Final)

ACLRRResults

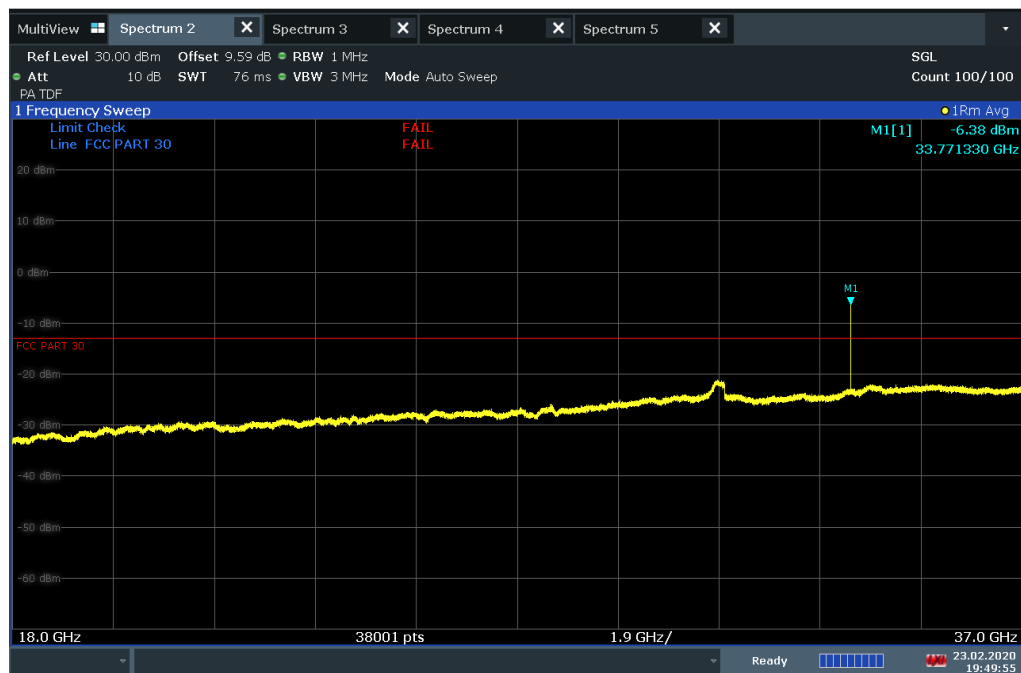


19:49:17 23.02.2020

Plot 7-350. Radiated Spurious Plot 18-37 GHz (8CC QPSK High Ch. Ant. Angle 45)

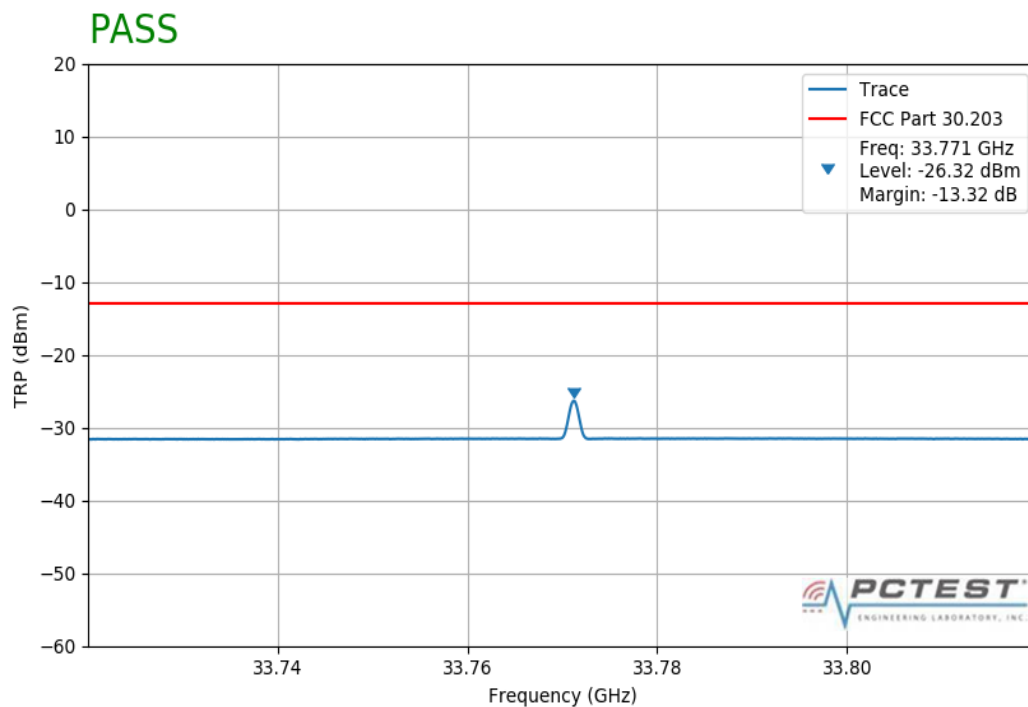
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 210 of 359

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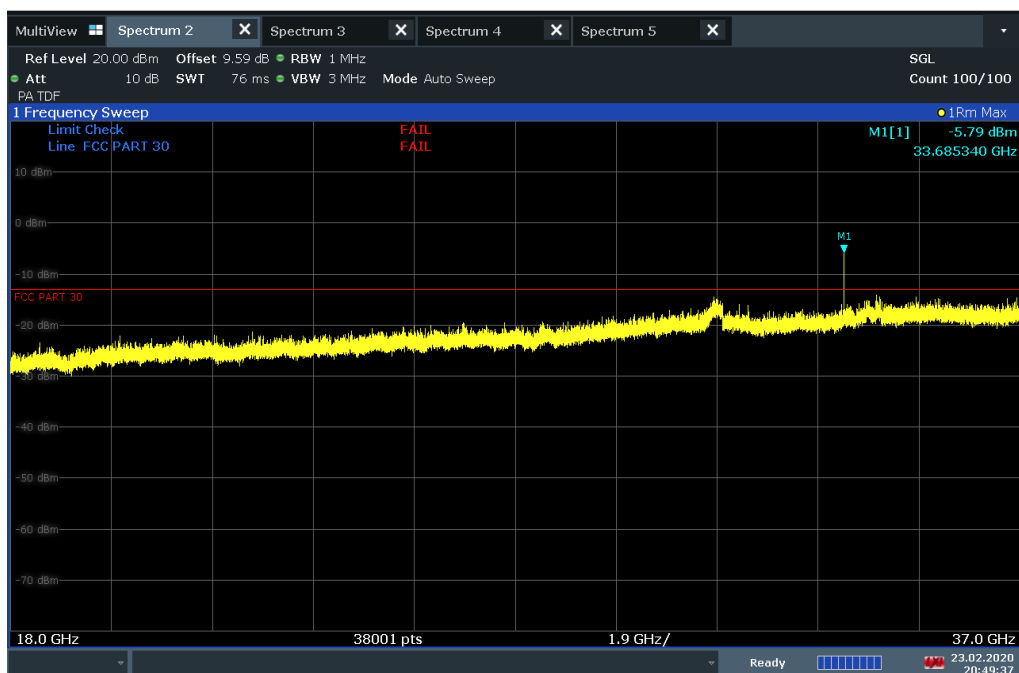
Plot 7-351. Radiated Spurious Plot 18-37 GHz (8CC QPSK High Ch. Ant. Angle 45, Final)



Plot 7-352. Radiated Spurious Plot 33.72-33.82 GHz (8CC QPSK High Ch. TRP)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 211 of 359

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20:49:37 23.02.2020

Plot 7-353. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK High Ch. Ant. Angle 135)

ACLRRResults

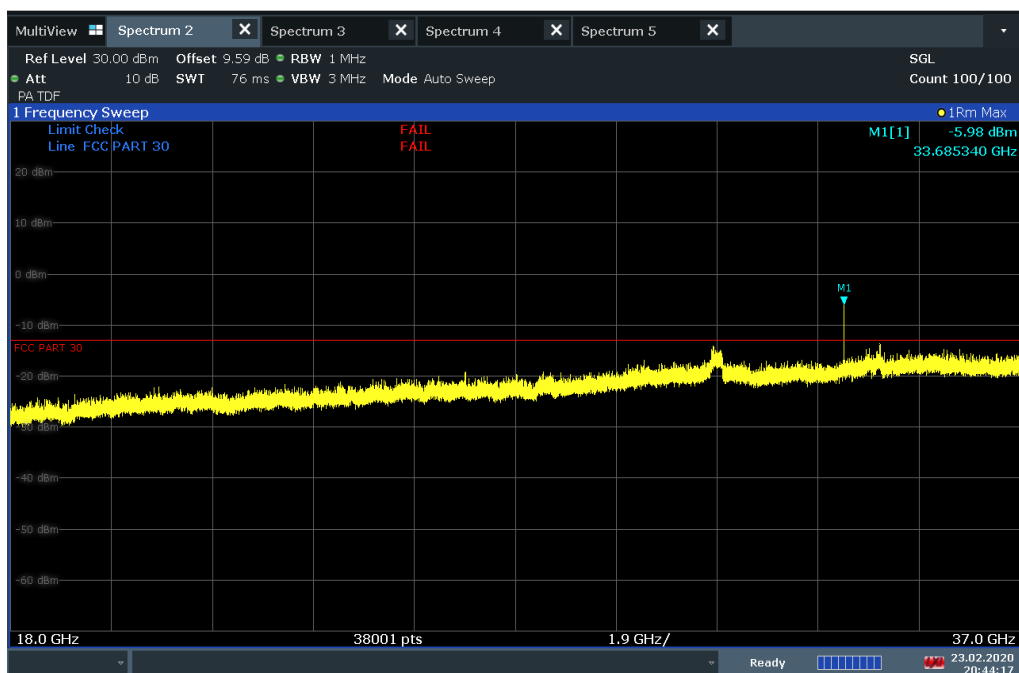


20:50:20 23.02.2020

Plot 7-354. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK High Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 212 of 359

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Plot 7-355. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK High Ch. Ant. Angle 45)

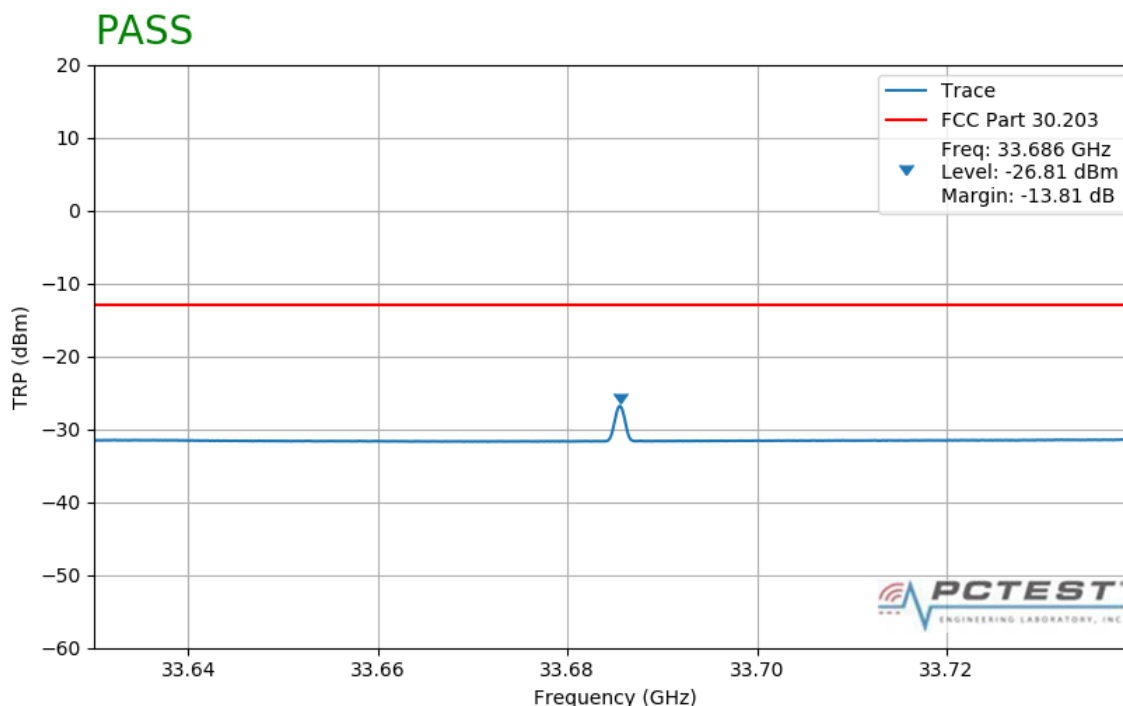
ACLRRResults



20:46:03 23.02.2020

Plot 7-356. Radiated Spurious Plot 18-37 GHz (8CC NC QPSK High Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 213 of 359



Plot 7-357. Radiated Spurious Plot 33.63-33.74 GHz (8CC NC QPSK High Ch. TRP)

Frequency [MHz]	Channel	CC Active	Mod.	Ant. Angle [degree]	Antenna Height [cm]	Turn Table Azimuth [degree]	Analyzer Level [dBm]	AFCL [dBm]	Field Strength [dBμV/m]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]	TRP [dBm]	Margin [dB]
36989.25	Low	CC0	QPSK	135	148	10	-81.62	57.57	82.96	-12.25	-13.00	0.75	-22.43	-9.43
36989.25	Low	CC0	QPSK	45	148	10	-80.80	57.57	83.78	-11.43	-13.00	1.57	-26.84	-13.84
36583.76	Mid	CC4	QPSK	135	148	10	-79.37	57.65	85.28	-9.93	-13.00	3.07	-19.51	-6.51
36583.76	Mid	CC4	QPSK	45	148	10	-81.79	57.65	82.86	-12.35	-13.00	0.65	-23.54	-10.54
34199.82	High	CC7	QPSK	135	148	10	-71.67	58.53	93.86	-1.35	-13.00	11.65	-28.27	-15.27
34199.82	High	CC7	QPSK	45	148	10	-74.55	58.53	90.98	-4.23	-13.00	8.77	-26.32	-13.32
36908.75	Low	CC0-CC7(C)	QPSK	135	148	10	-78.26	57.57	86.32	-8.89	-13.00	4.11	-26.73	-13.73
36912.25	Low	CC0-CC7(C)	QPSK	45	148	10	-78.94	57.57	85.64	-9.57	-13.00	3.43	-29.64	-16.64
36533.76	Mid	CC0-CC7(C)	QPSK	135	148	10	-79.85	57.65	84.80	-10.41	-13.00	2.59	-27.63	-14.63
36533.76	Mid	CC0-CC7(C)	QPSK	45	148	10	-79.18	57.65	85.47	-9.74	-13.00	3.26	-26.81	-13.81
33771.33	High	CC0-CC7(C)	QPSK	135	148	10	-76.13	58.38	89.25	-5.96	-13.00	7.04	-26.81	-13.81
33771.33	High	CC0-CC7(C)	QPSK	45	148	10	-76.55	58.38	88.83	-6.38	-13.00	6.62	-26.81	-13.81
36904.75	Low	CC0-CC7(NC)	QPSK	135	148	10	-83.09	57.57	81.49	-13.72	-13.00	-0.72	-26.81	-13.81
36853.26	Low	CC0-CC7(NC)	QPSK	45	148	10	-81.35	57.57	83.23	-11.98	-13.00	1.02	-26.81	-13.81
33000.36	Mid	CC0-CC7(NC)	QPSK	135	148	10	-84.00	57.75	80.75	-14.46	-13.00	-1.46	-26.81	-13.81
32999.86	Mid	CC0-CC7(NC)	QPSK	45	148	10	-85.21	57.77	79.57	-15.64	-13.00	-2.64	-26.81	-13.81
36534.26	Mid	CC0-CC7(NC)	QPSK	45	148	10	-80.21	57.65	84.44	-10.77	-13.00	2.23	-26.81	-13.81
36534.26	Mid	CC0-CC7(NC)	QPSK	135	148	10	-80.66	57.65	83.99	-11.22	-13.00	1.78	-26.81	-13.81
33685.34	High	CC0-CC7(NC)	QPSK	135	148	10	-78.44	58.22	86.79	-8.42	-13.00	4.58	-26.81	-13.81
33685.34	High	CC0-CC7(NC)	QPSK	45	148	10	-78.22	58.22	87.01	-8.20	-13.00	4.80	-26.81	-13.81

Table 7-20. Spurious Emissions (18 – 40GHz)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 214 of 359

Spurious Emissions EIRP Sample Calculation

The raw radiated spurious level is converted to field strength in dBμV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 2.61 meters.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + \text{AFCL [dB/m]} + 107 + 20\text{Log}(D_m) - 104.8 + \text{Duty Corretion Factor}$$

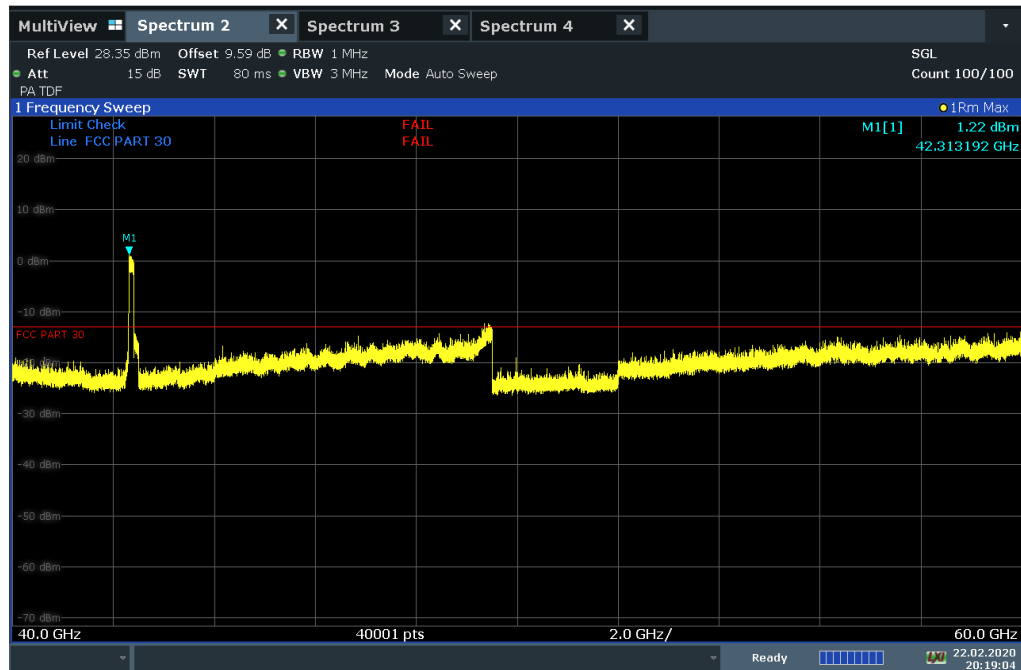
Duty Cycle Correction Factor Calculation

- 1 Cycle Time = 626 μs
 - Tx on Time = 468 μs
 - Duty Cycle = Tx on Time / 1 Cycle Time = 468 μs / 626 μs = 0.75
- Duty cycle correction factor = $10\log_{10}(1/\text{Duty Cycle}) = 10\log_{10}(1/0.75) = 1.26 \text{ dB}$

FCC ID: A3LAT1K02-A10	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 215 of 359

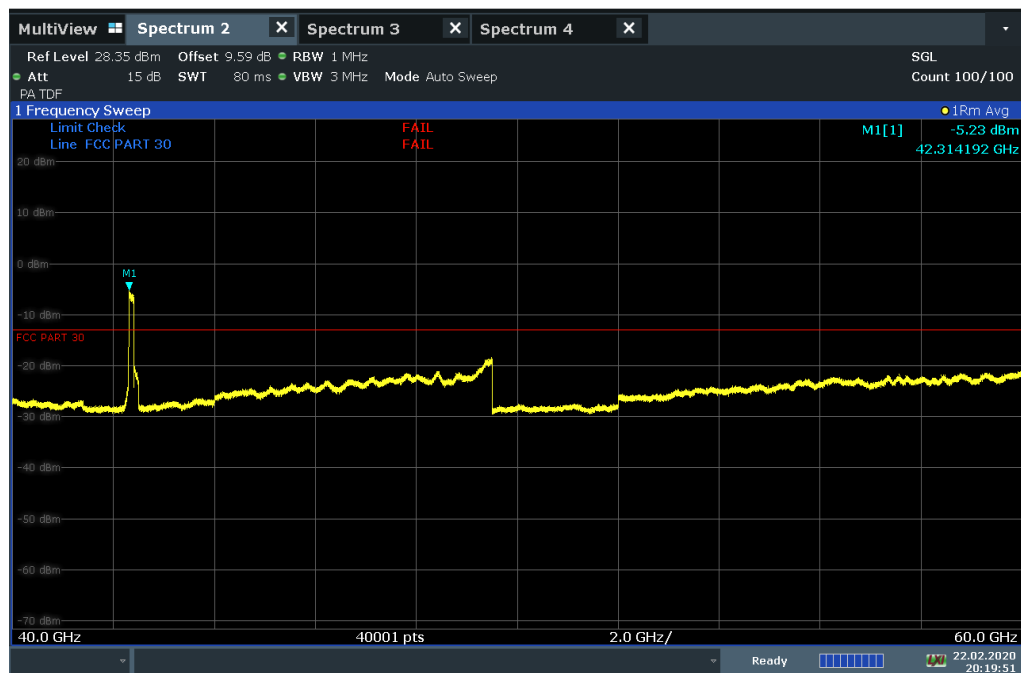
7.5.4 Radiated Spurious Emissions Plots (40 – 60GHz)

ACLRRResults



Plot 7-358. Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Ch. Ant. Angle 135)

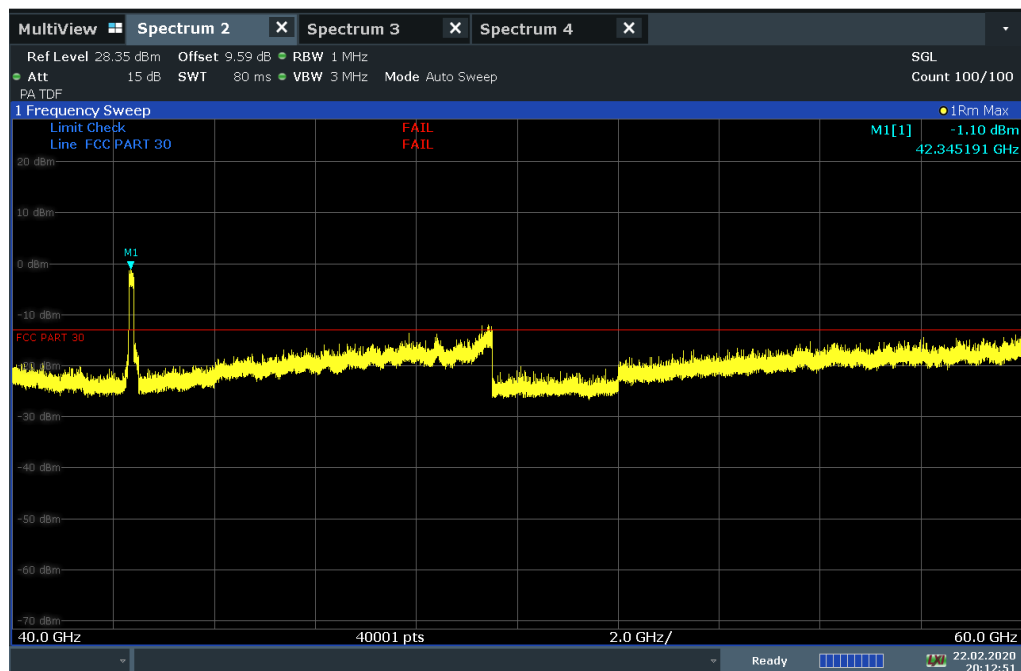
ACLRRResults



Plot 7-359. Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 216 of 359

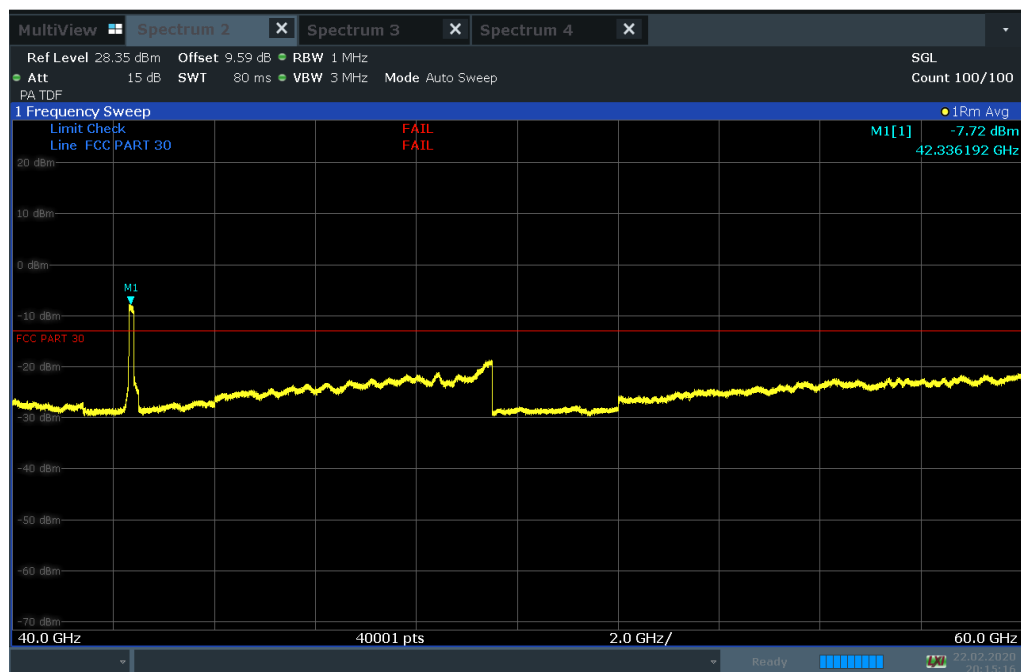
ACLRRResults



20:12:51 22.02.2020

Plot 7-360. Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Ch. Ant. Angle 45)

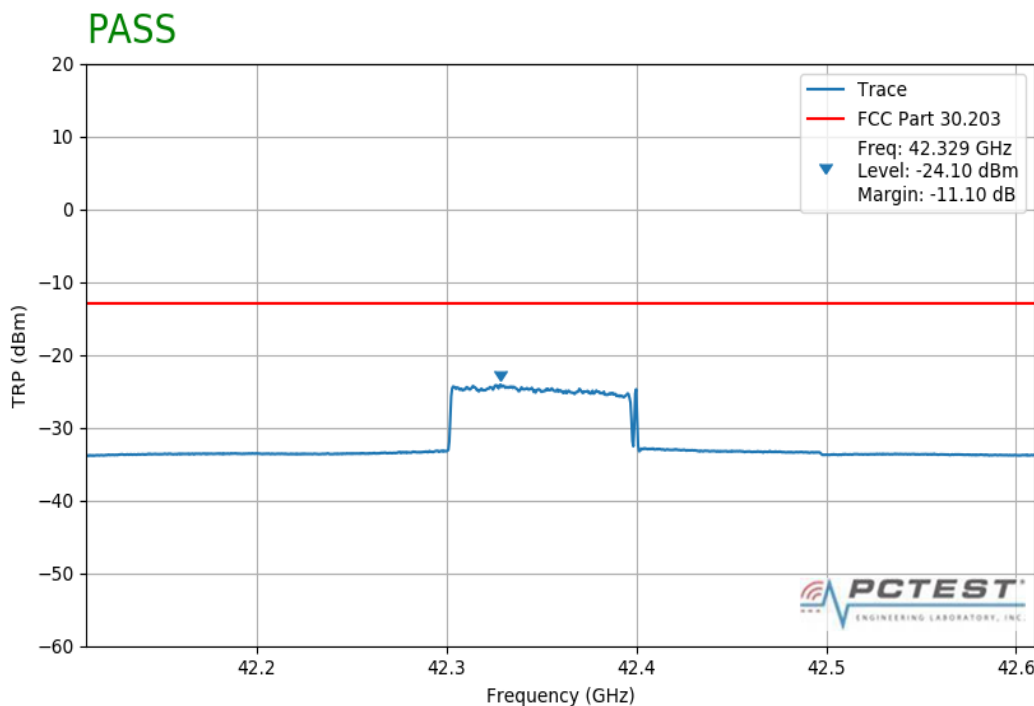
ACLRRResults



20:15:16 22.02.2020

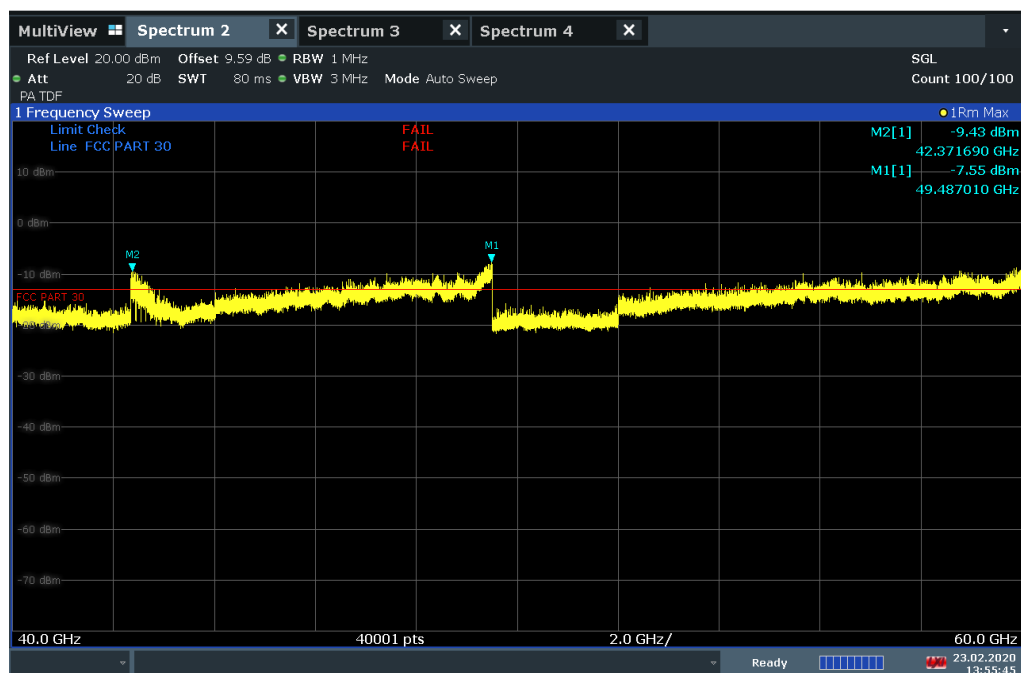
Plot 7-361. Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 217 of 359



Plot 7-362. Radiated Spurious Plot 42.11-42.61 GHz (1CC QPSK Low Ch. Ant. TRP)

ACLRRResults



13:55:45 23.02.2020

Plot 7-363. Radiated Spurious Plot 40-60 GHz (8CC QPSK Low Ch. Ant. Angle 135)

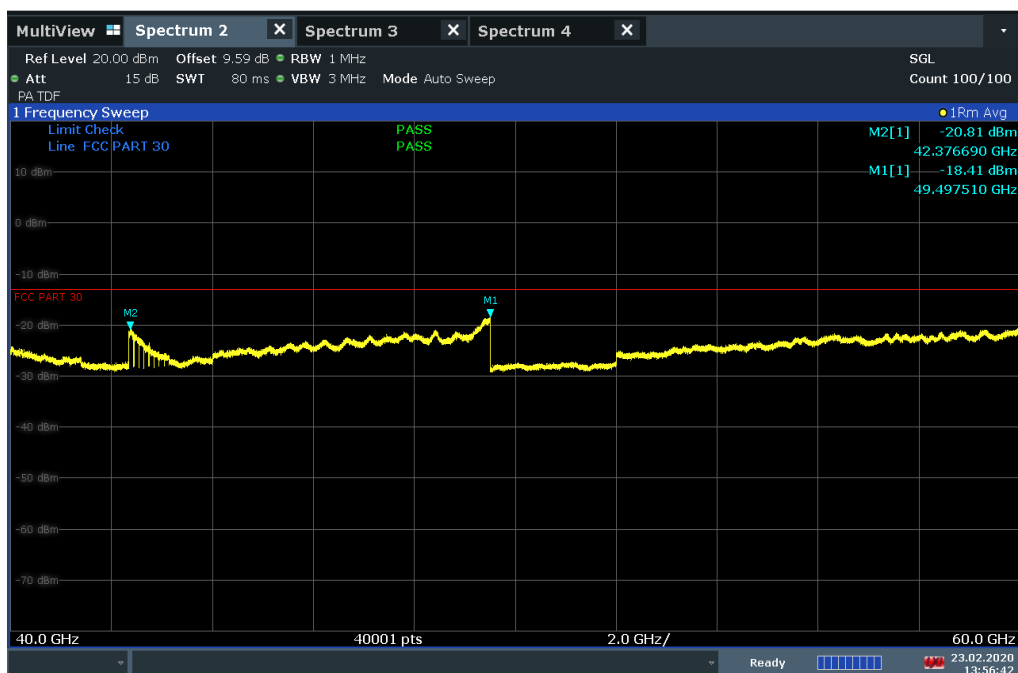
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 218 of 359

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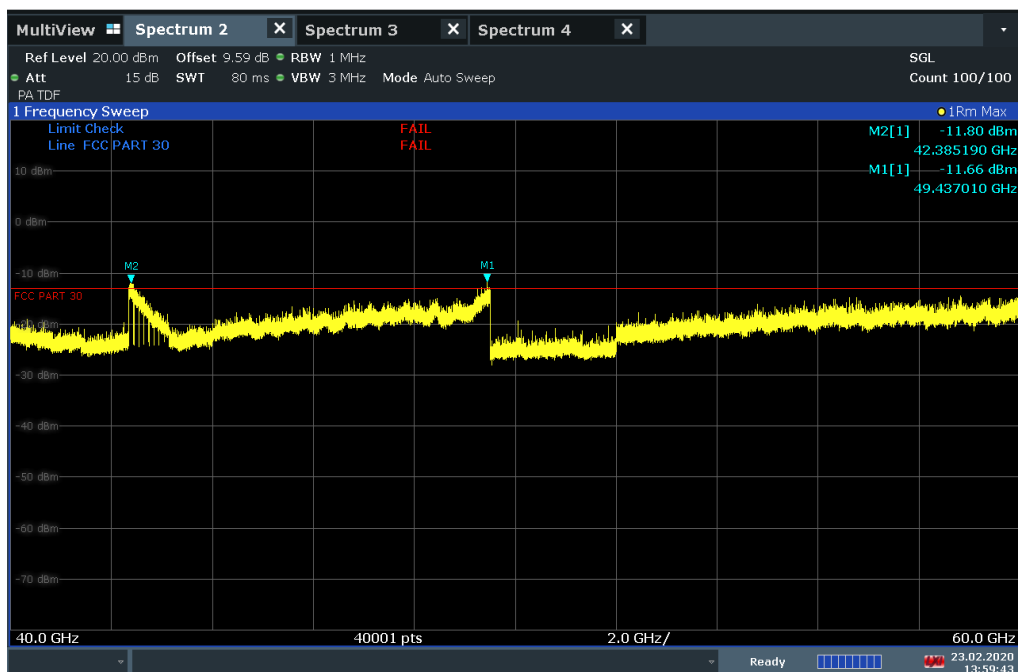
ACLRRResults



13:56:43 23.02.2020

Plot 7-364. Radiated Spurious Plot 40-60 GHz (8CC QPSK Low Ch. Ant. Angle 135, Final)

ACLRRResults

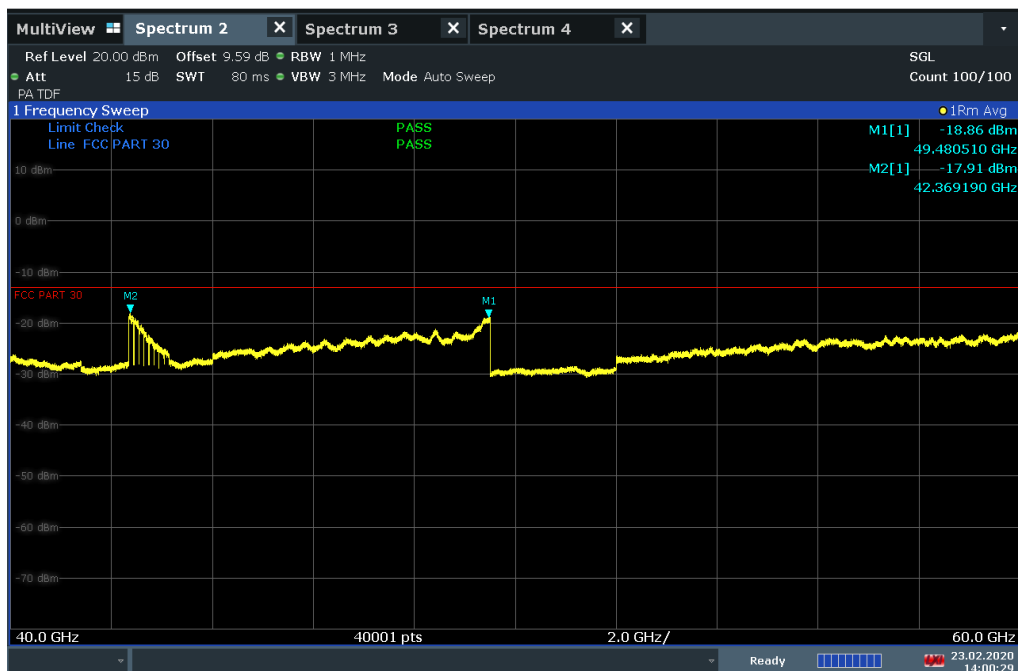


13:59:44 23.02.2020

Plot 7-365. Radiated Spurious Plot 40-60 GHz (8CC QPSK Low Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 219 of 359

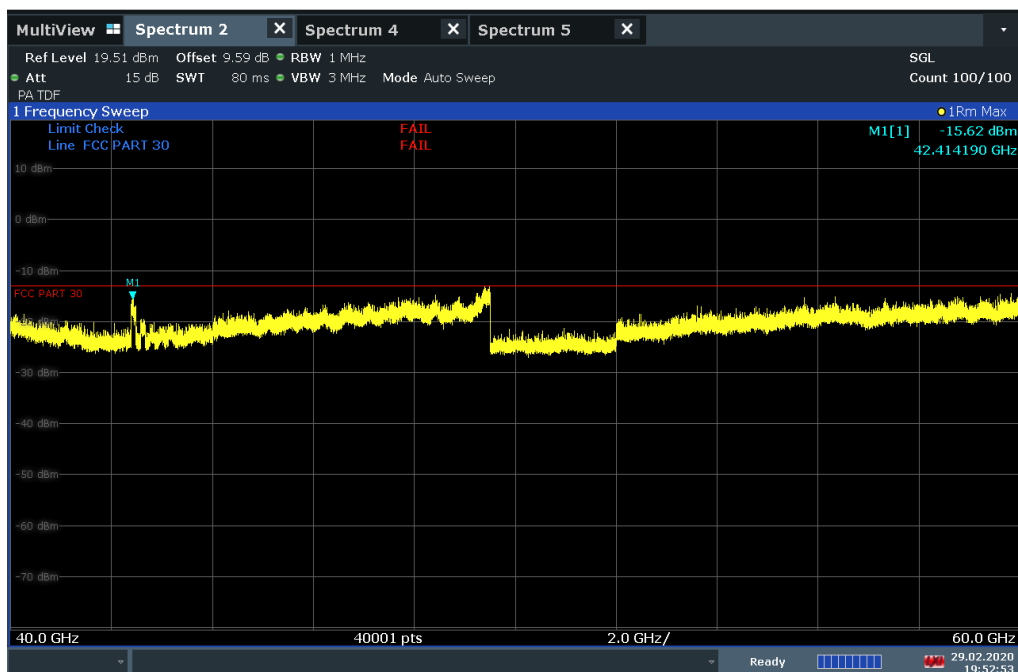
ACLRRResults



14:00:29 23.02.2020

Plot 7-366. Radiated Spurious Plot 40-60 GHz (8CC QPSK Low Ch. Ant. Angle 45, Final)

ACLRRResults

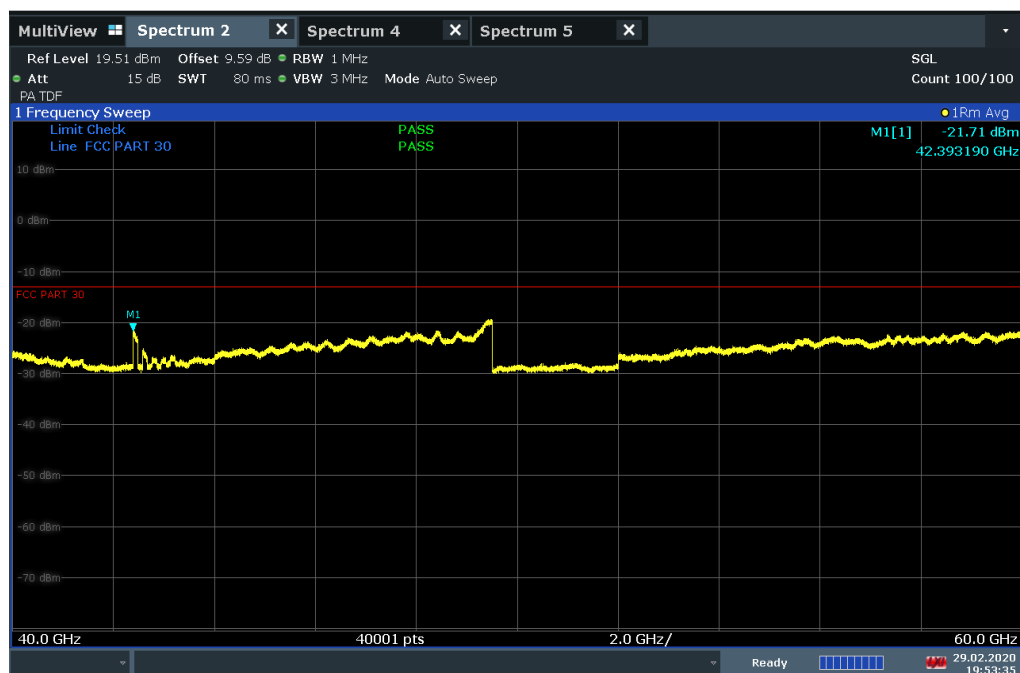


19:52:54 29.02.2020

Plot 7-367. Radiated Spurious Plot 40-60 GHz (8CC NC QPSK Low Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 220 of 359

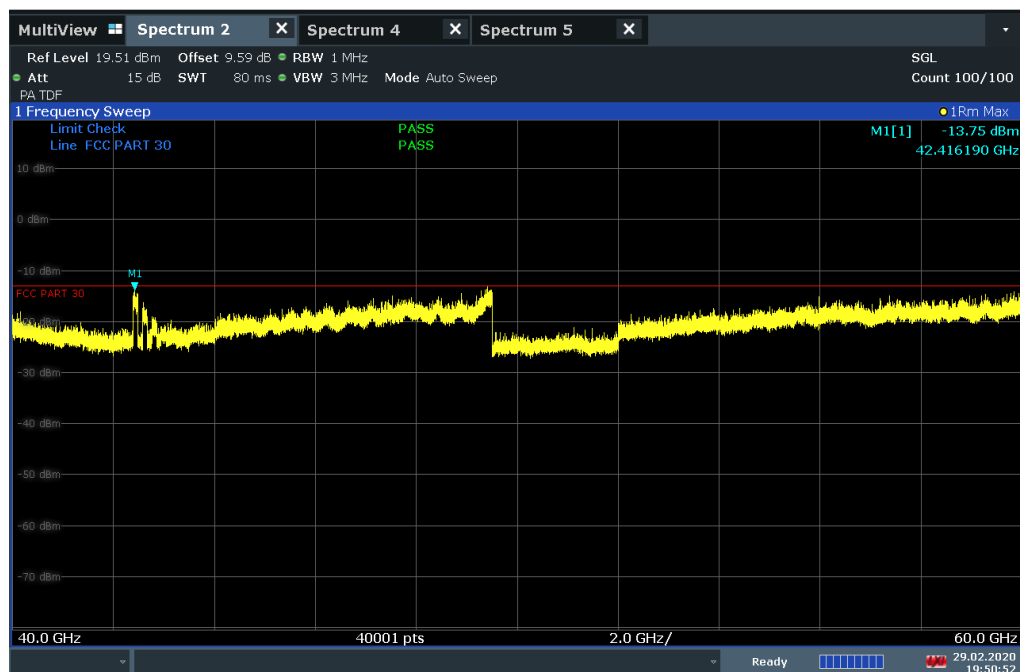
ACLRRResults



19:53:35 29.02.2020

Plot 7-368. Radiated Spurious Plot 40-60 GHz (8CC NC QPSK Low Ch. Ant. Angle 135, Final)

ACLRRResults

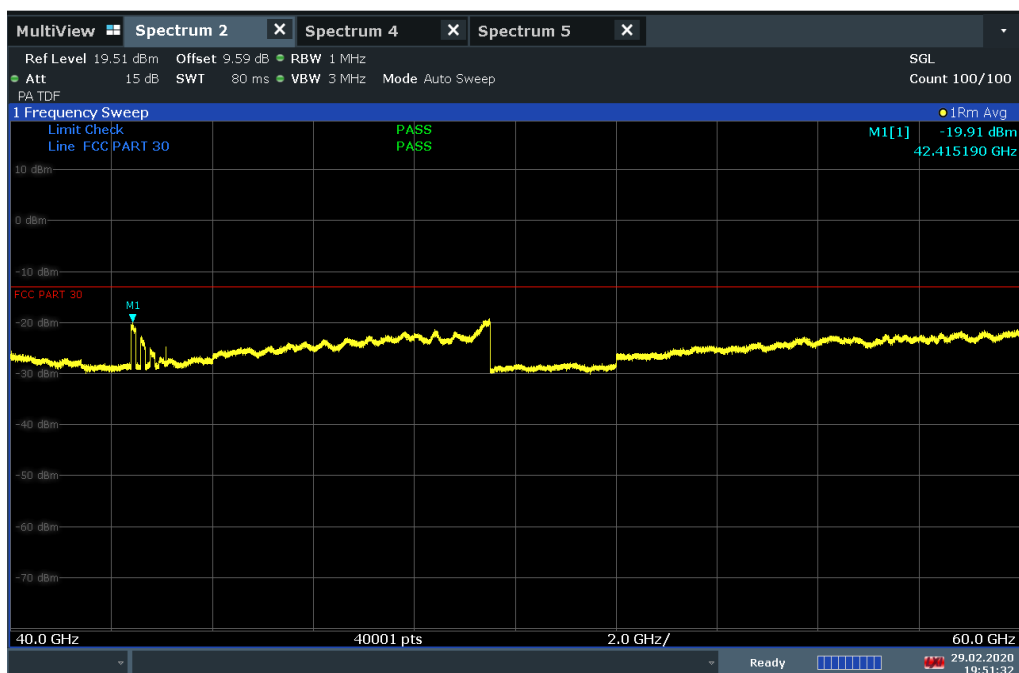


19:50:52 29.02.2020

Plot 7-369. Radiated Spurious Plot 40-60 GHz (8CC NC QPSK Low Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 221 of 359

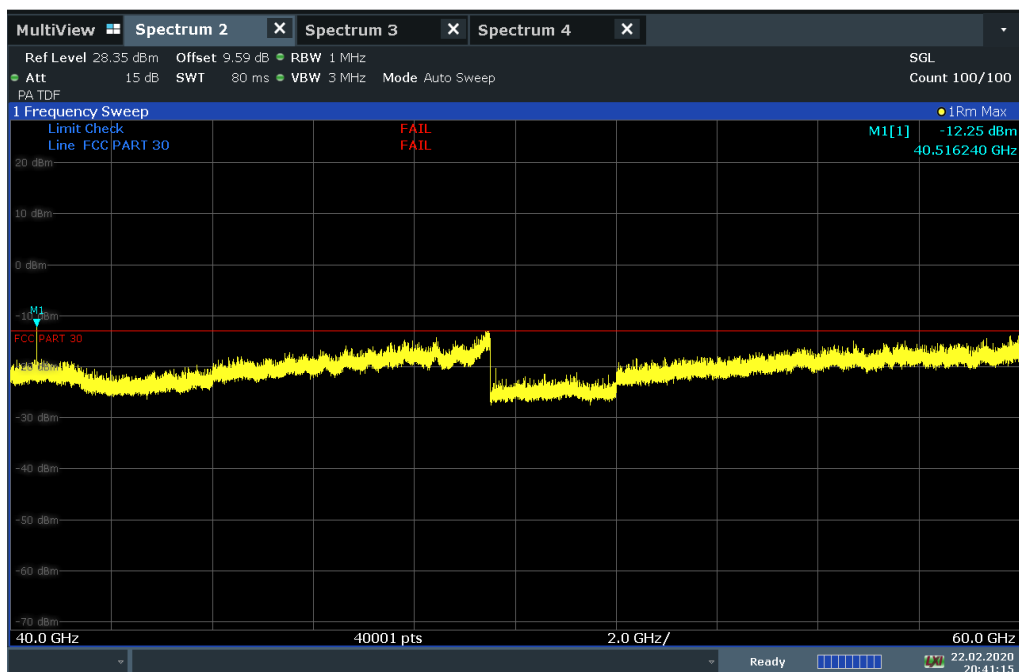
ACLRRResults



19:51:33 29.02.2020

Plot 7-370. Radiated Spurious Plot 40-60 GHz (8CC NC QPSK Low Ch. Ant. Angle 45, Final)

ACLRRResults

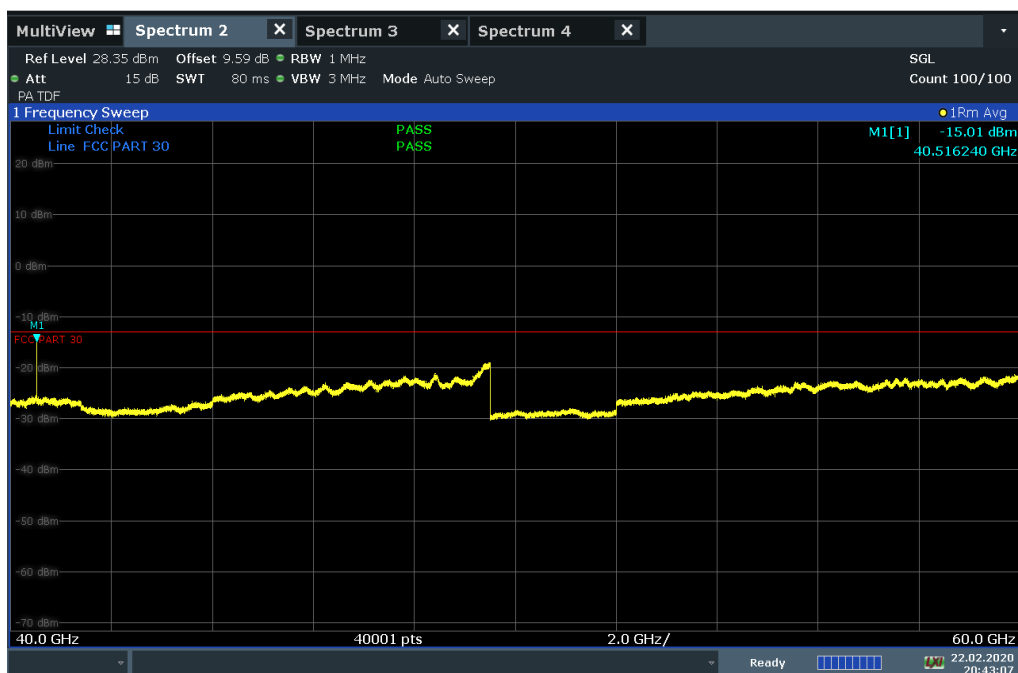


20:41:15 22.02.2020

Plot 7-371. Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 222 of 359

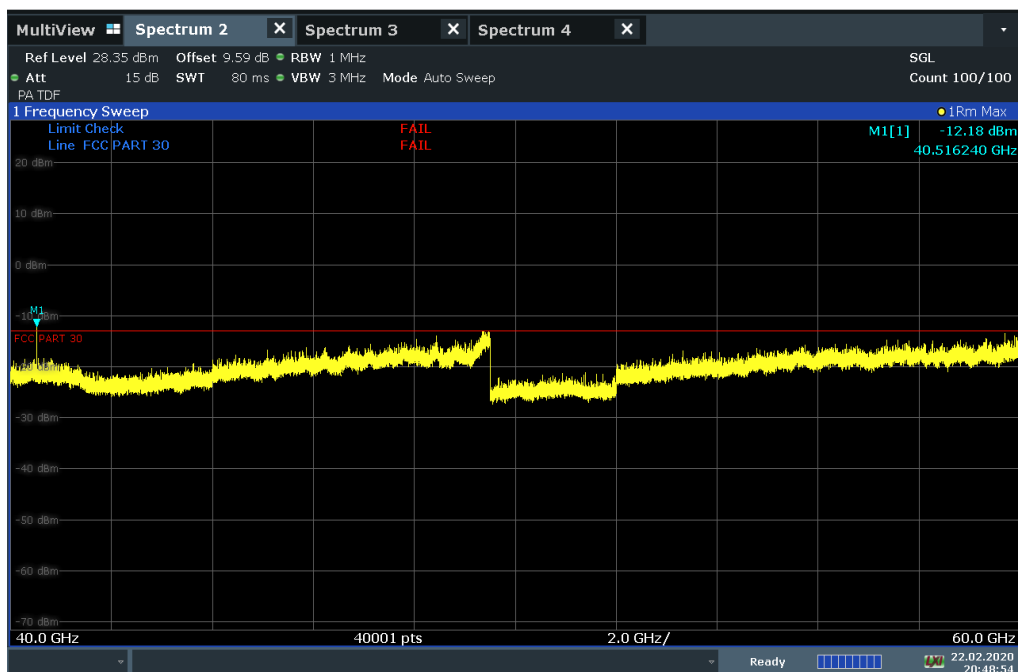
ACLRRResults



20:43:08 22.02.2020

Plot 7-372. Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Ch. Ant. Angle 135, Final)

ACLRRResults

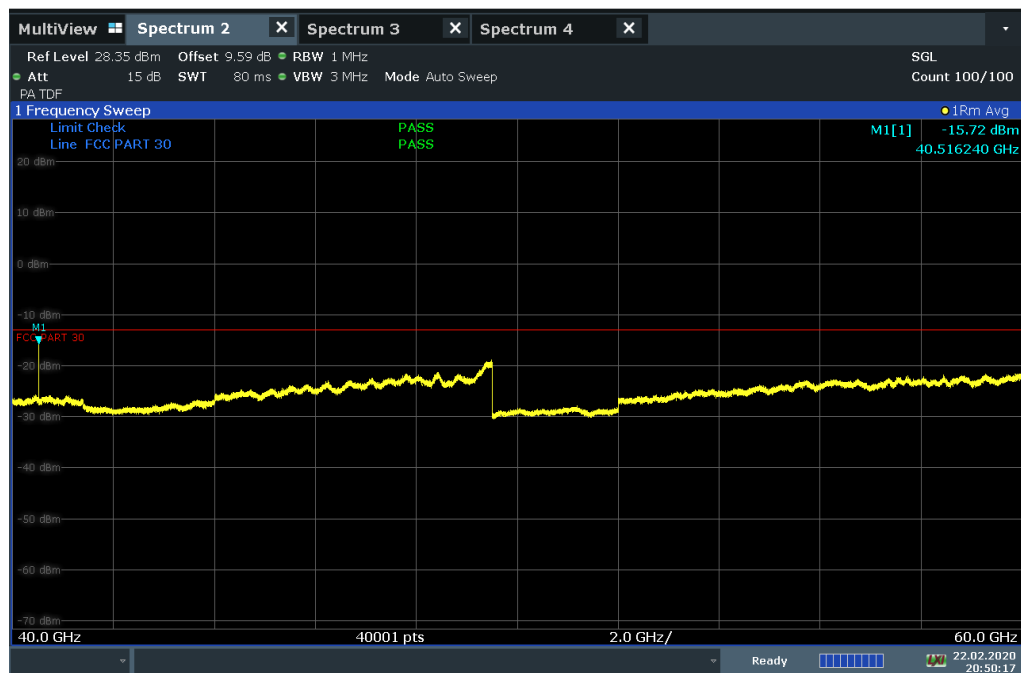


20:48:54 22.02.2020

Plot 7-373. Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 223 of 359

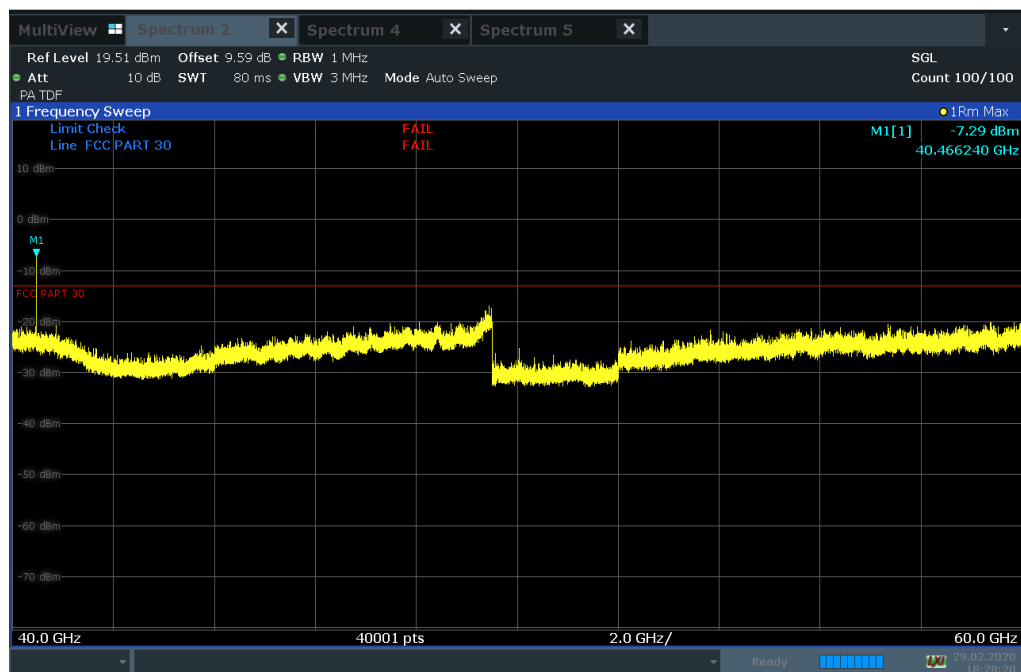
ACLRRResults



20:50:18 22.02.2020

Plot 7-374. Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Ch. Ant. Angle 45, Final)

ACLRRResults

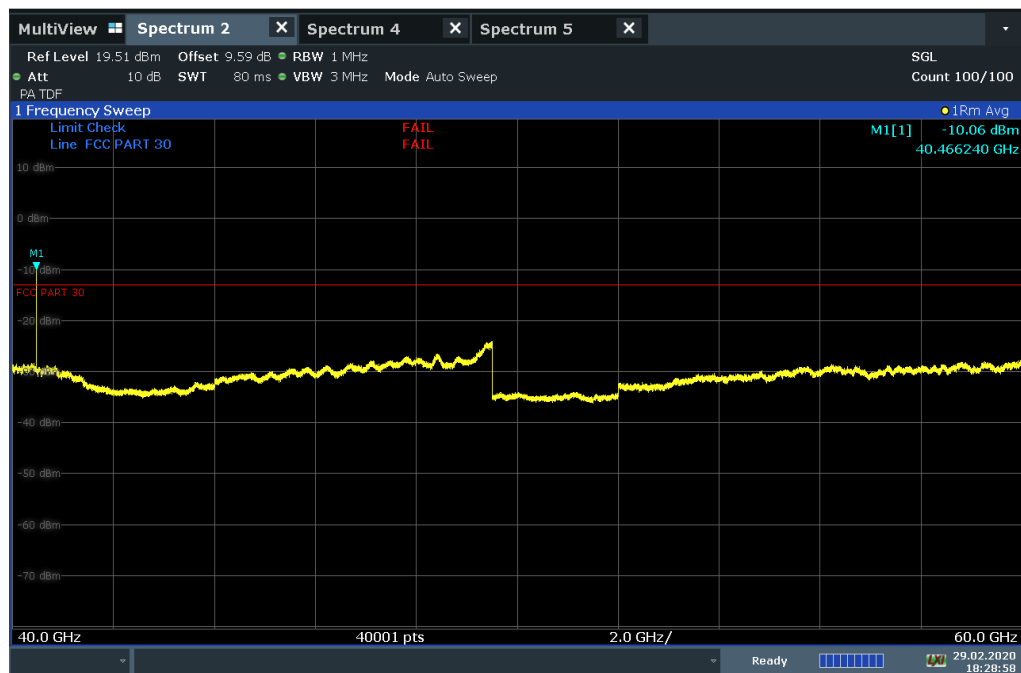


18:28:20 29.02.2020

Plot 7-375. Radiated Spurious Plot 40-60 GHz (8CC QPSK Mid Ch. Ant. Angle 135)

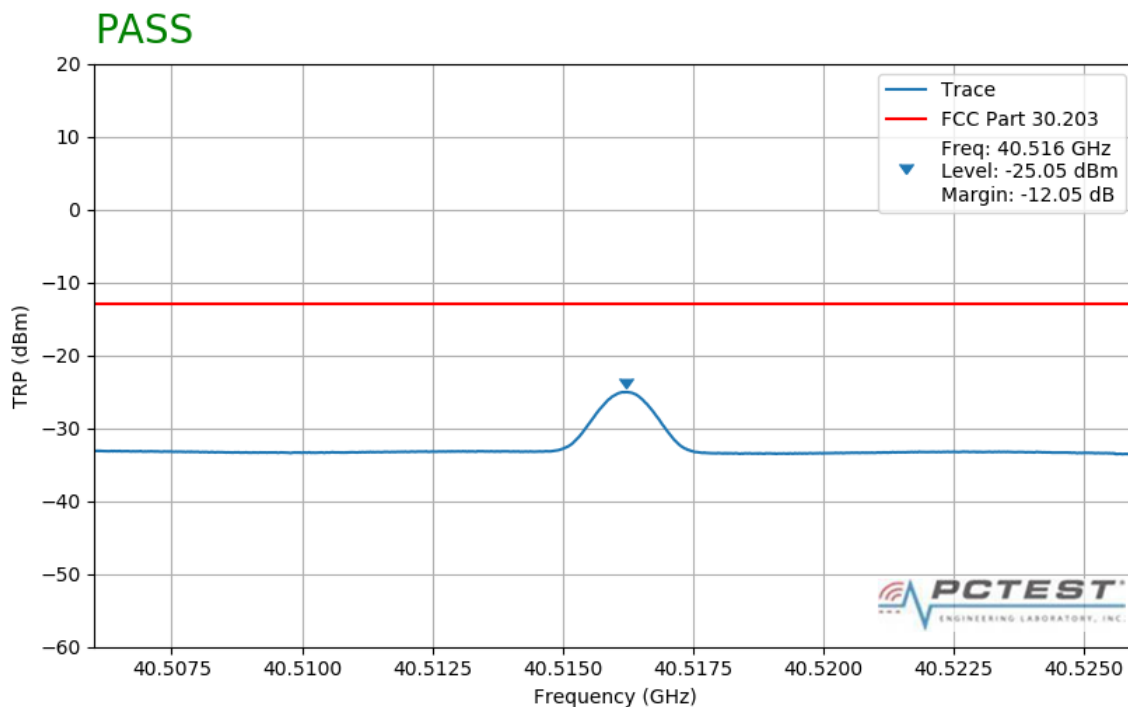
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 224 of 359

ACLRRResults



18:28:58 29.02.2020

Plot 7-376. Radiated Spurious Plot 40-60 GHz (8CC QPSK Mid Ch. Ant. Angle 135, Final)



Plot 7-377. Radiated Spurious Plot 40.506-40.526 GHz (1CC QPSK Mid Ch. Ant. TRP)

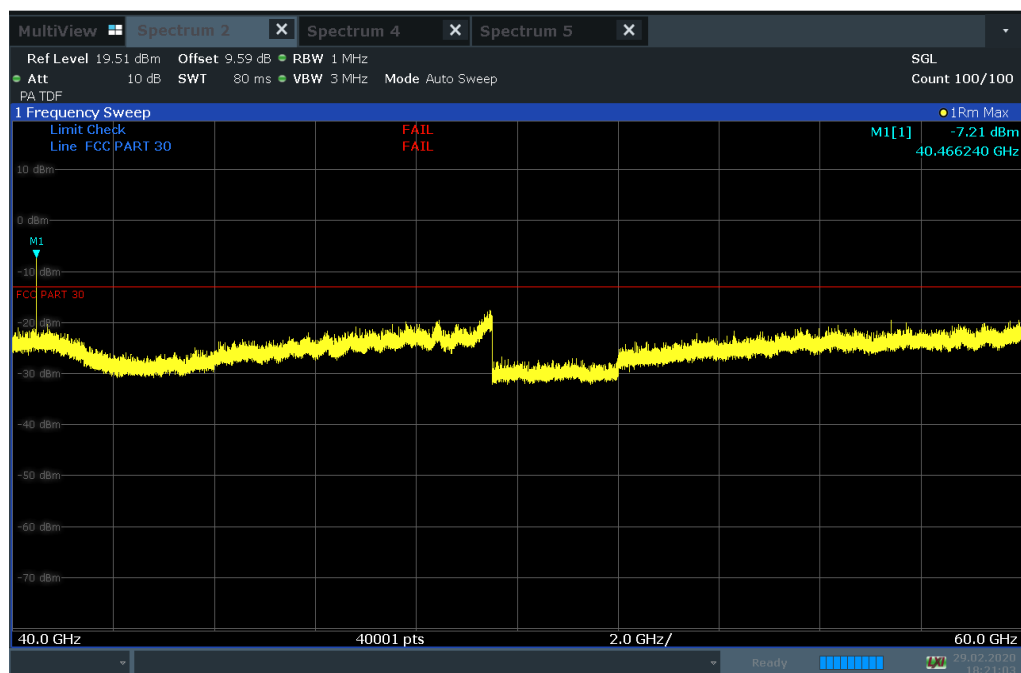
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 225 of 359

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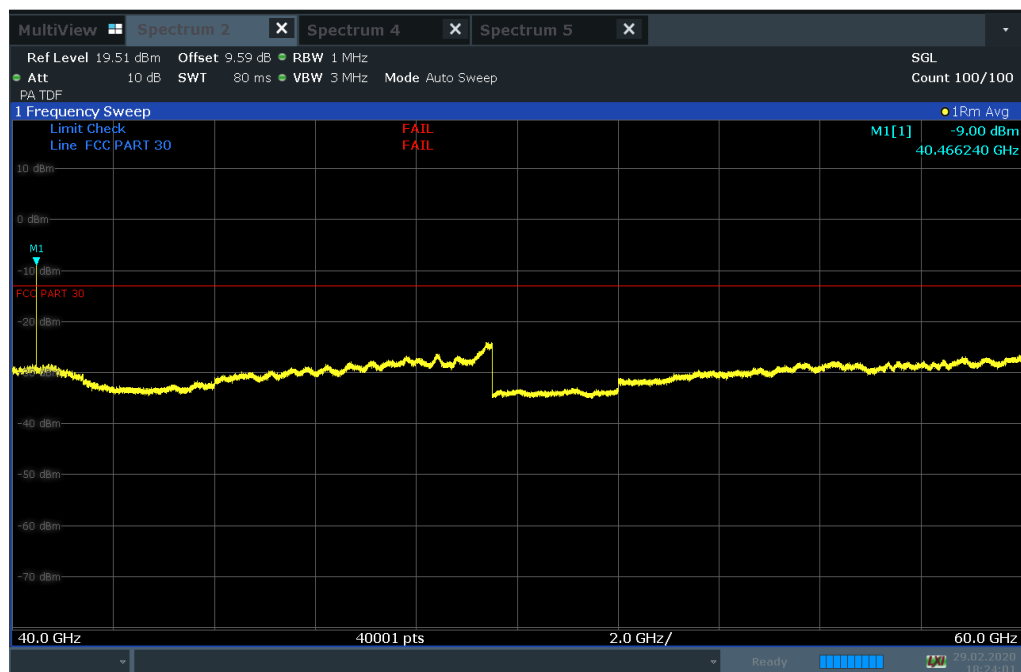
ACLRRResults



18:21:04 29.02.2020

Plot 7-378. Radiated Spurious Plot 40-60 GHz (8CC QPSK Mid Ch. Ant. Angle 45)

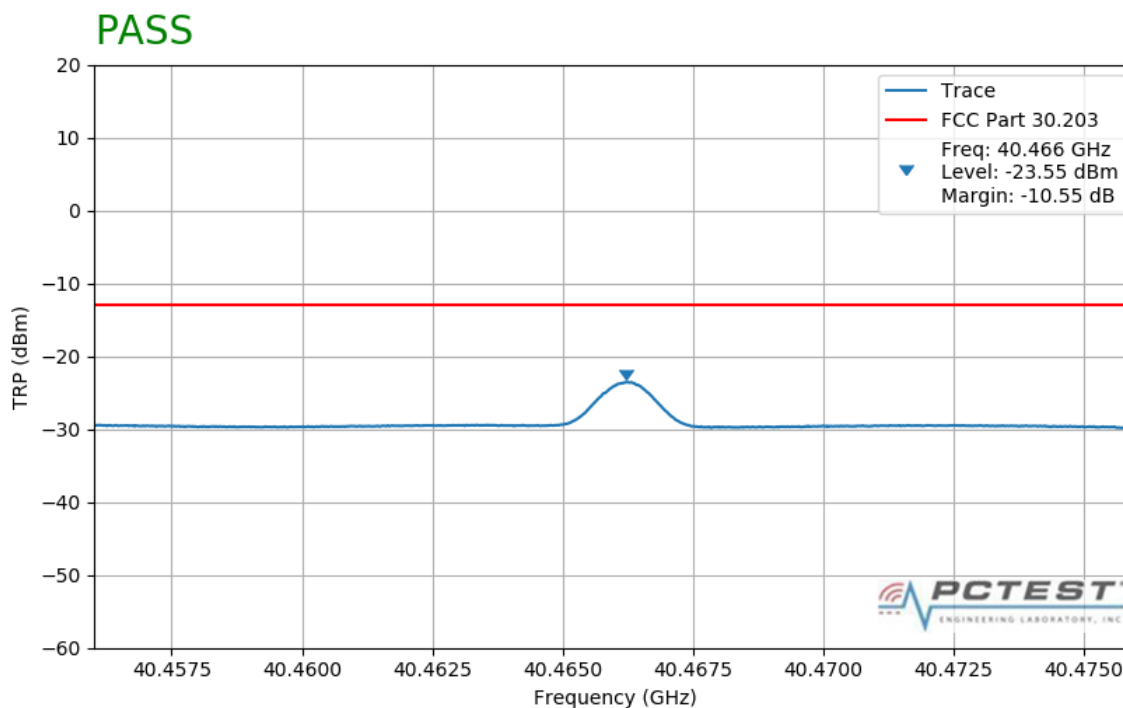
ACLRRResults



18:24:01 29.02.2020

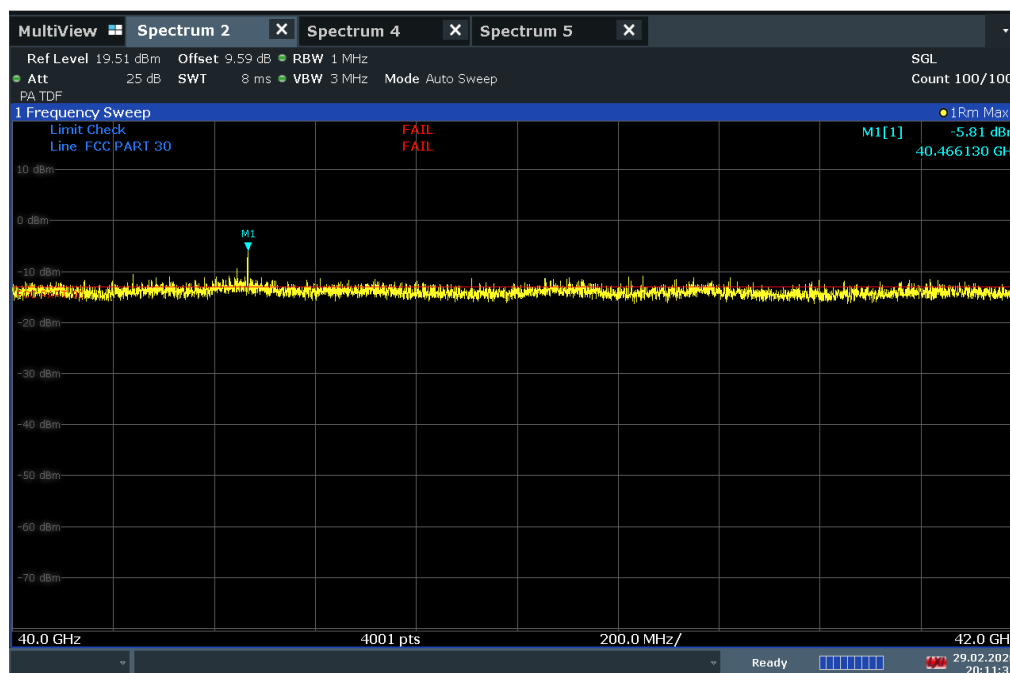
Plot 7-379. Radiated Spurious Plot 40-60 GHz (8CC QPSK Mid Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 226 of 359



Plot 7-380. Radiated Spurious Plot 40.456-40.476 GHz (8CC QPSK Mid Ch. TRP)

ACLRRResults

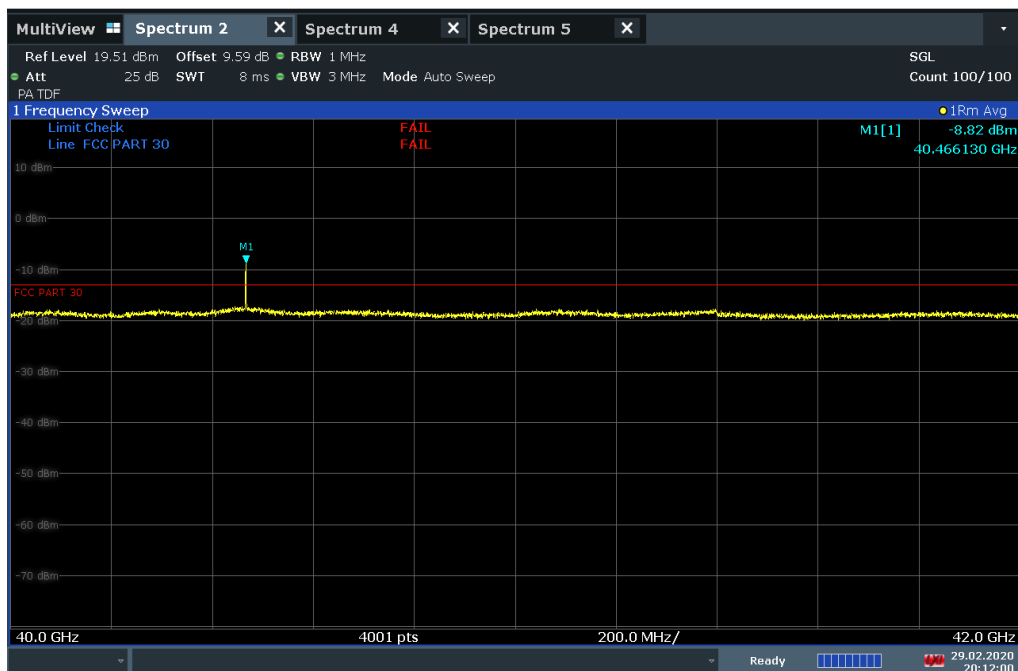


20:11:38 29.02.2020

Plot 7-381. Radiated Spurious Plot 40-42 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 227 of 359

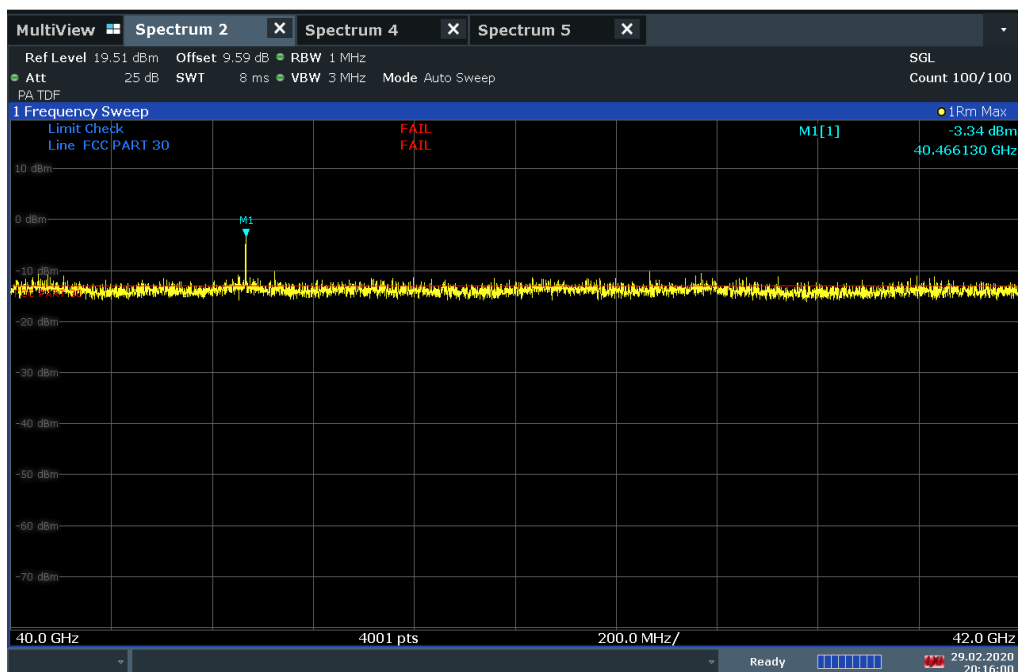
ACLRRResults



20:12:01 29.02.2020

Plot 7-382. Radiated Spurious Plot 40-42 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135, Final)

ACLRRResults

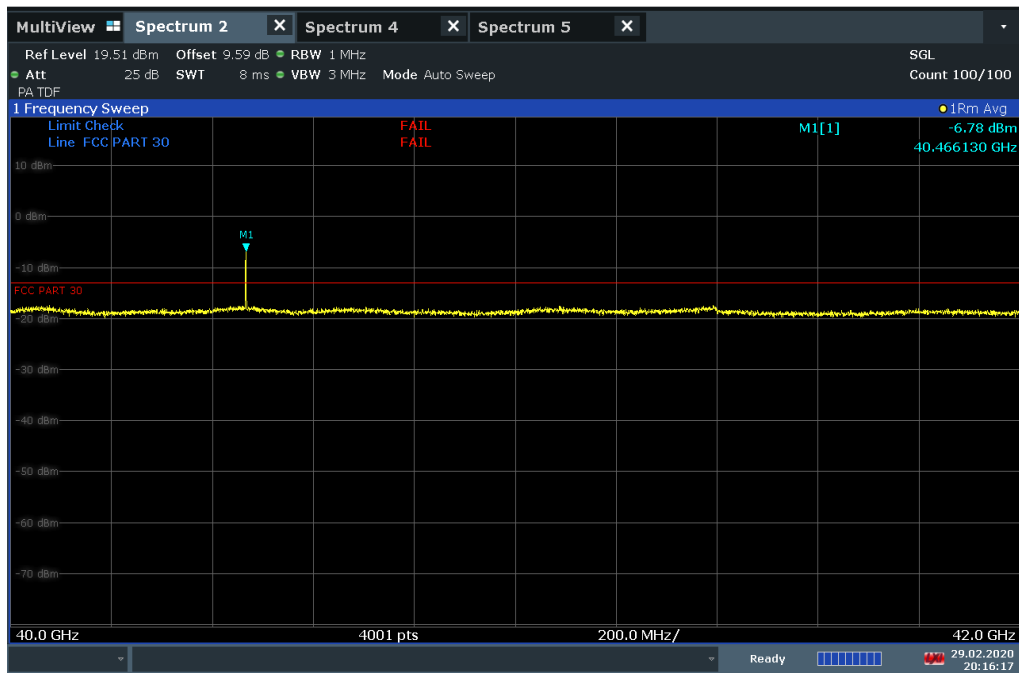


20:16:00 29.02.2020

Plot 7-383. Radiated Spurious Plot 40-42 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45)

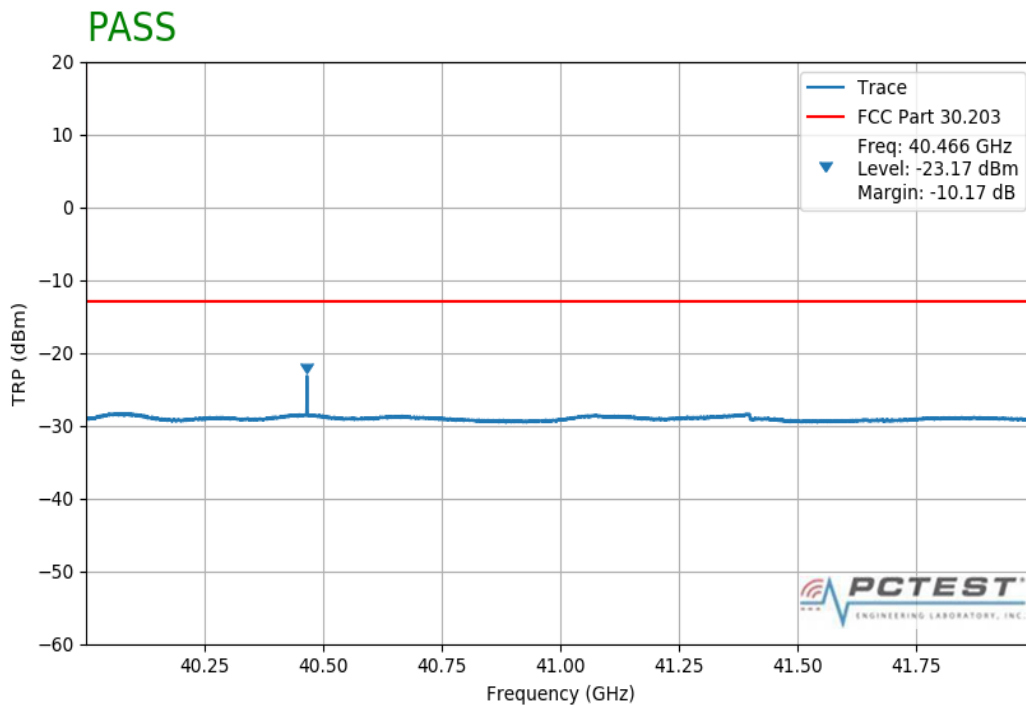
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 228 of 359

ACLRRResults



20:16:17 29.02.2020

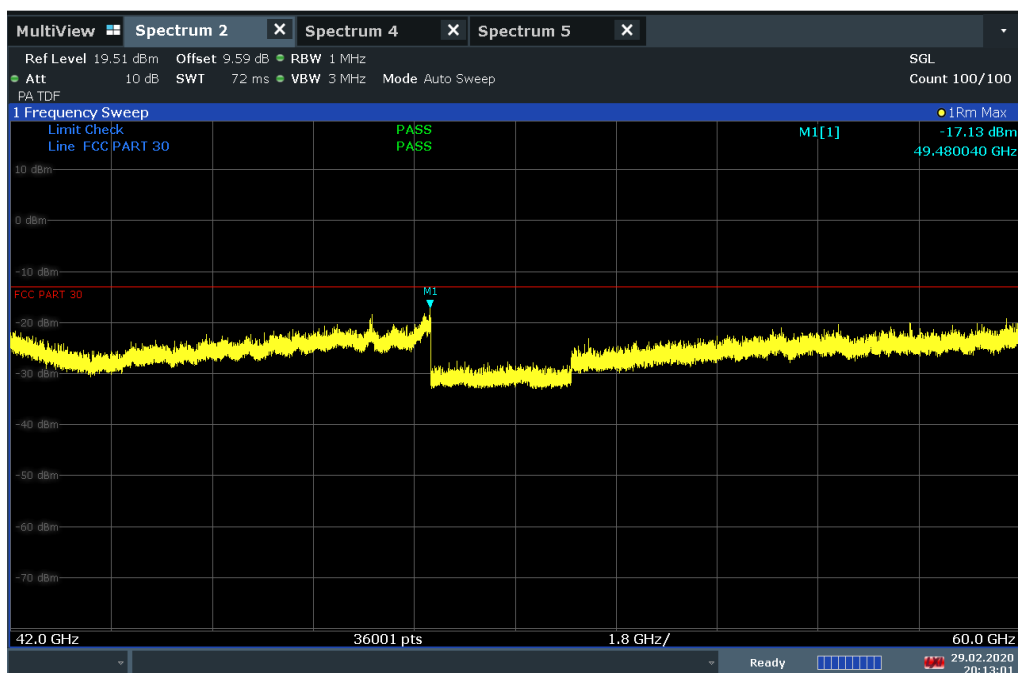
Plot 7-384. Radiated Spurious Plot 40-42 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45, Final)



Plot 7-385. Radiated Spurious Plot 40-42 GHz (8CC NC QPSK Mid Ch. TRP)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 229 of 359

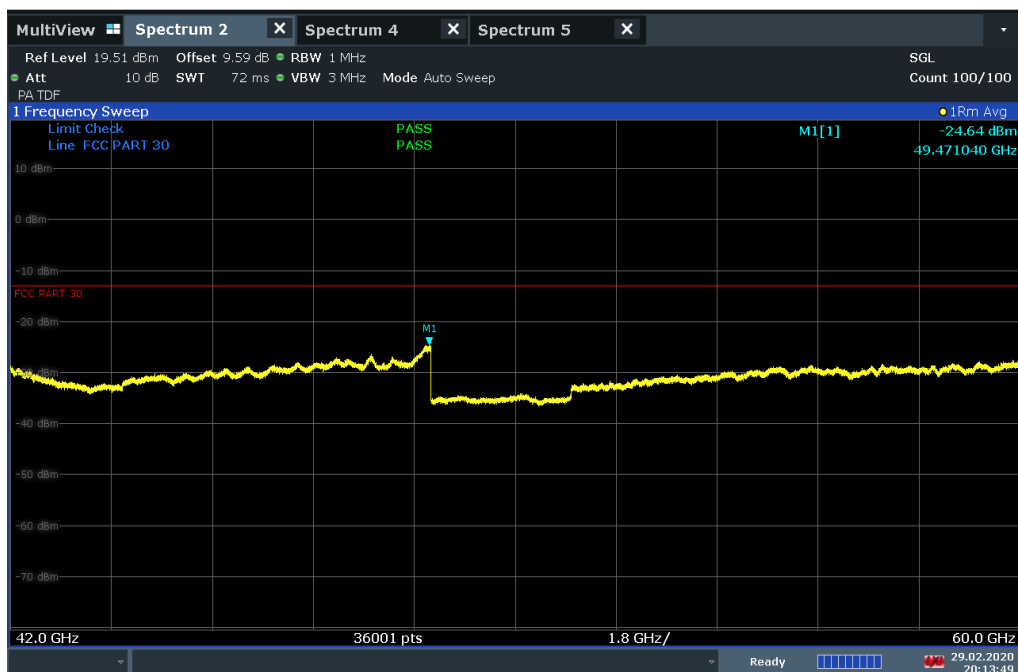
ACLRRResults



20:13:02 29.02.2020

Plot 7-386. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135)

ACLRRResults

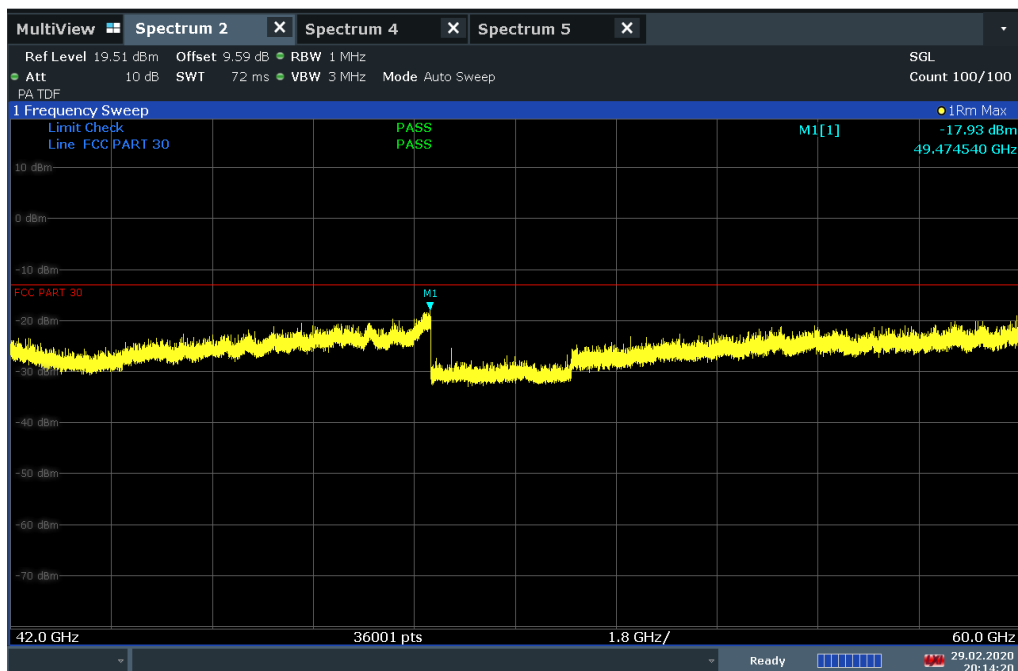


20:13:49 29.02.2020

Plot 7-387. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 230 of 359

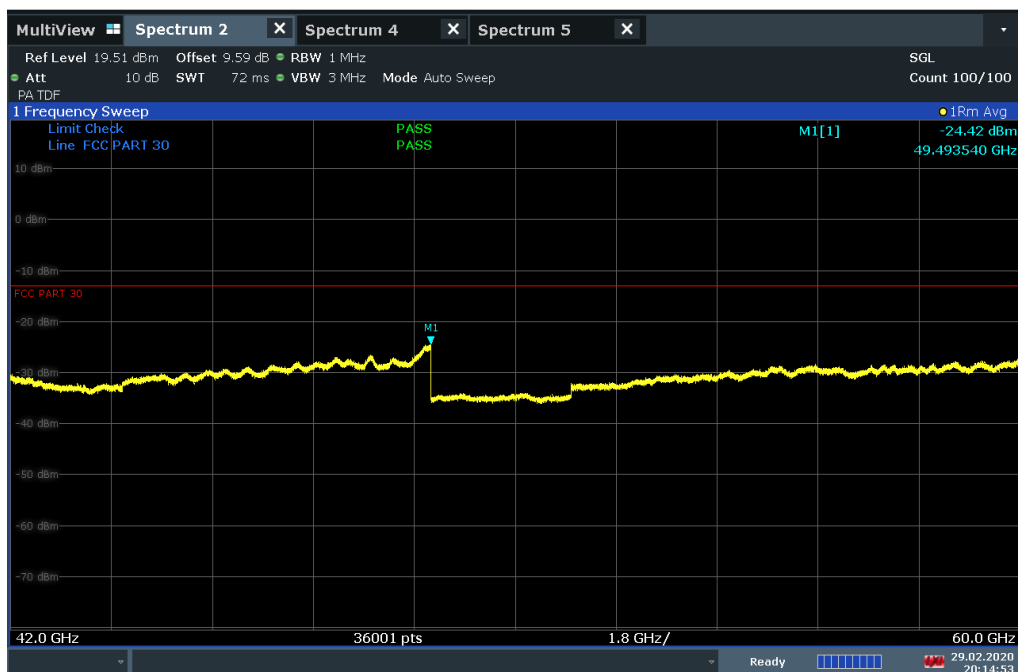
ACLRRResults



20:14:21 29.02.2020

Plot 7-388. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45)

ACLRRResults

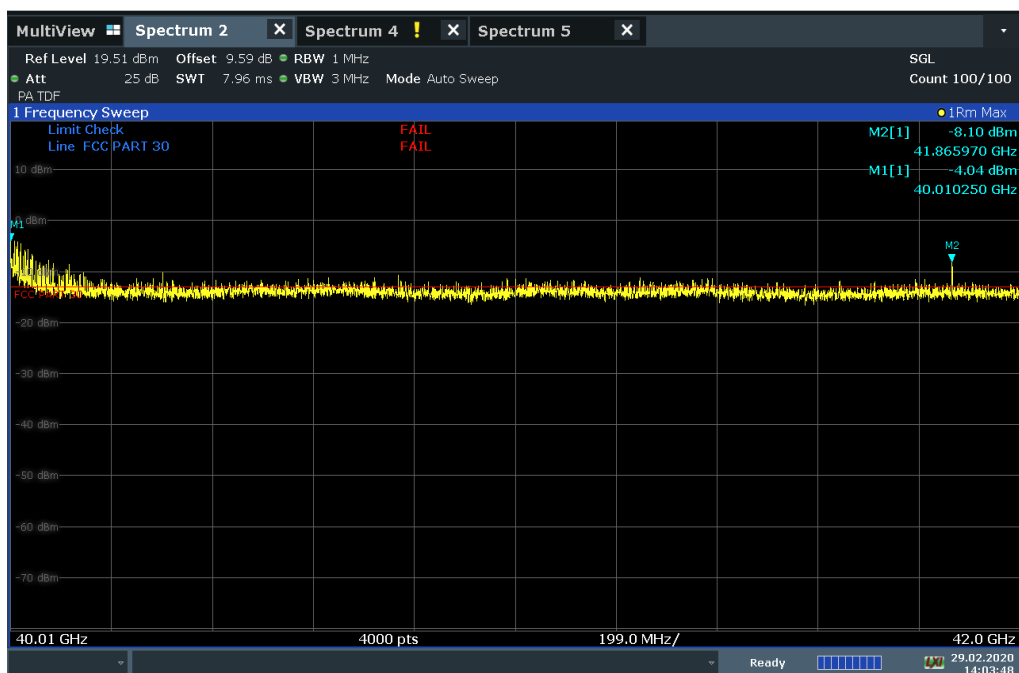


20:14:53 29.02.2020

Plot 7-389. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 231 of 359

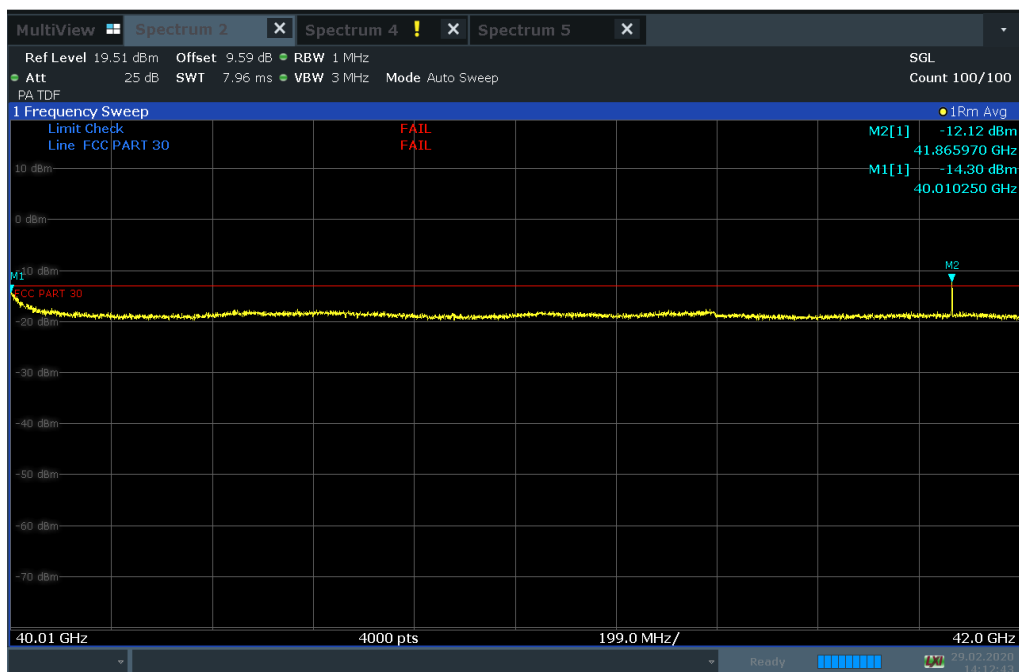
ACLRRResults



14:03:49 29.02.2020

Plot 7-390. Radiated Spurious Plot 40.01-42 GHz (1CC QPSK High Ch. Ant. Angle 135)

ACLRRResults

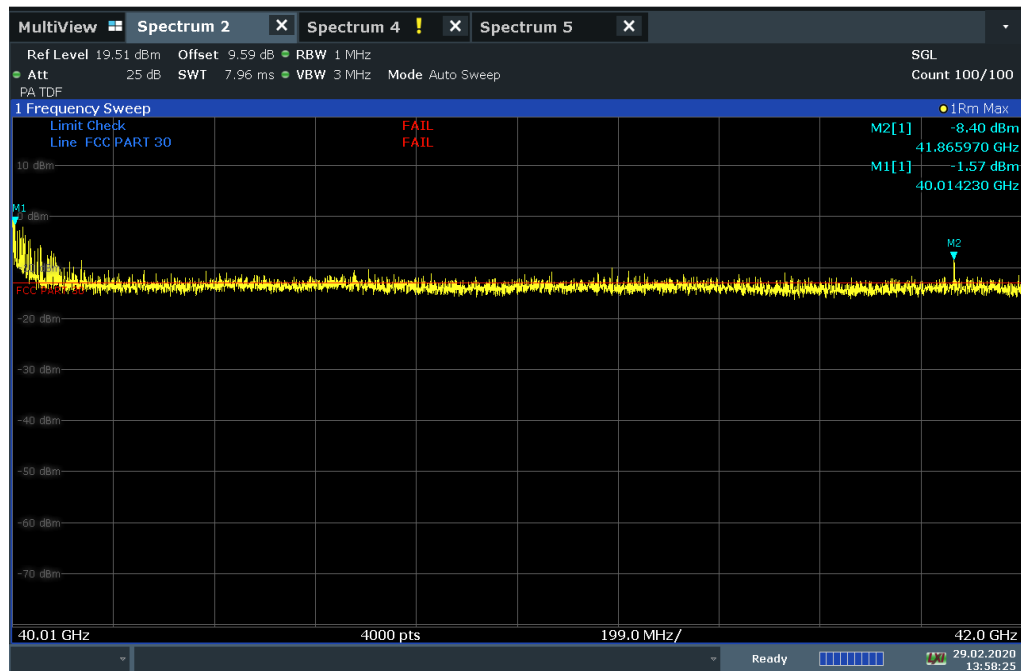


14:12:44 29.02.2020

Plot 7-391. Radiated Spurious Plot 40.01-42 GHz (1CC QPSK High Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 232 of 359

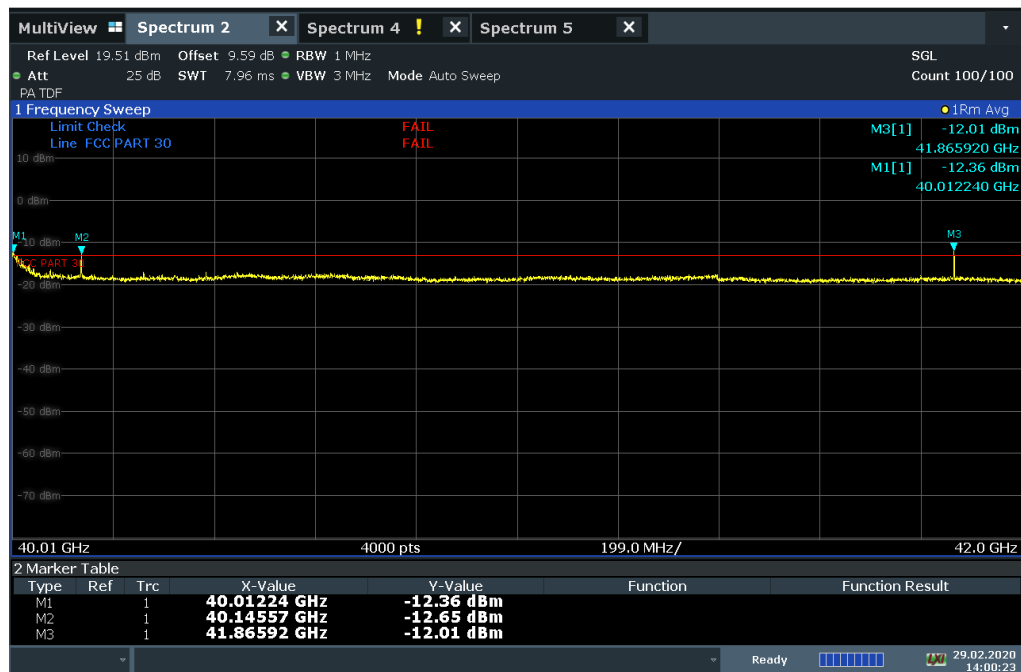
ACLRRResults



13:58:26 29.02.2020

Plot 7-392. Radiated Spurious Plot 40.01-42 GHz (1CC QPSK High Ch. Ant. Angle 45)

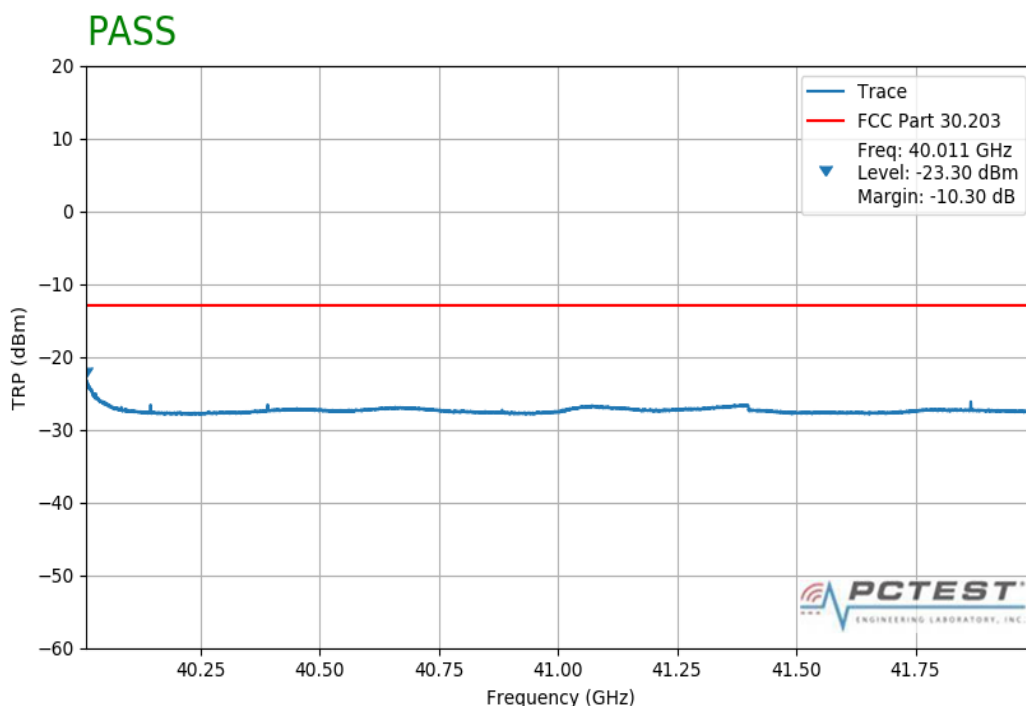
ACLRRResults



14:00:24 29.02.2020

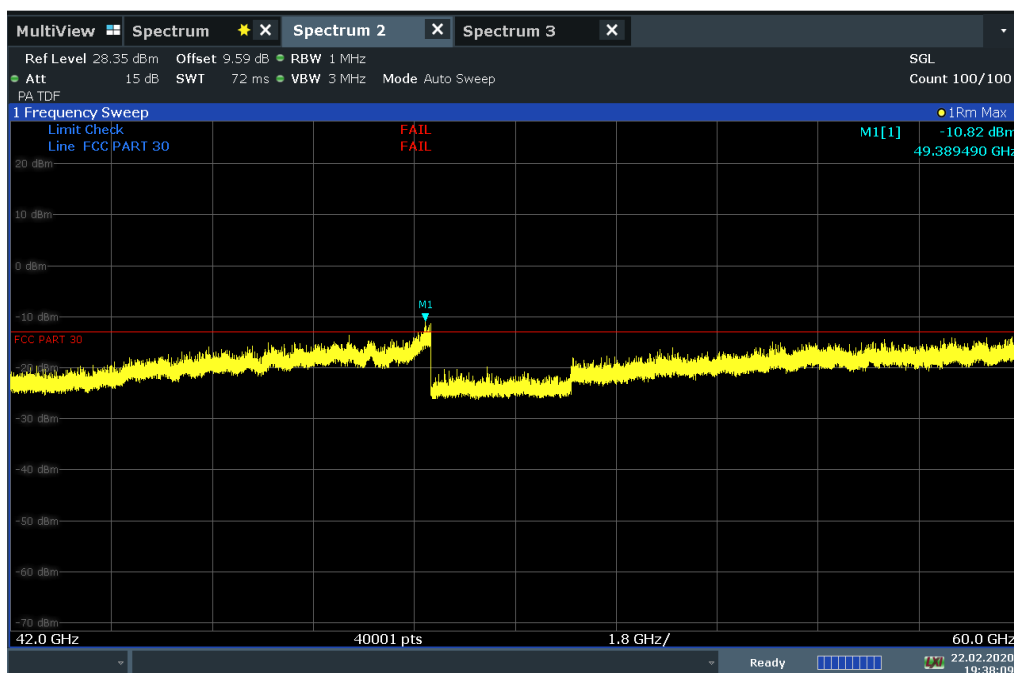
Plot 7-393. Radiated Spurious Plot 40.01-42 GHz (1CC QPSK High Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 233 of 359



Plot 7-394. Radiated Spurious Plot 40.01-42 GHz (1CC QPSK High Ch. TRP)

ACLRRResults

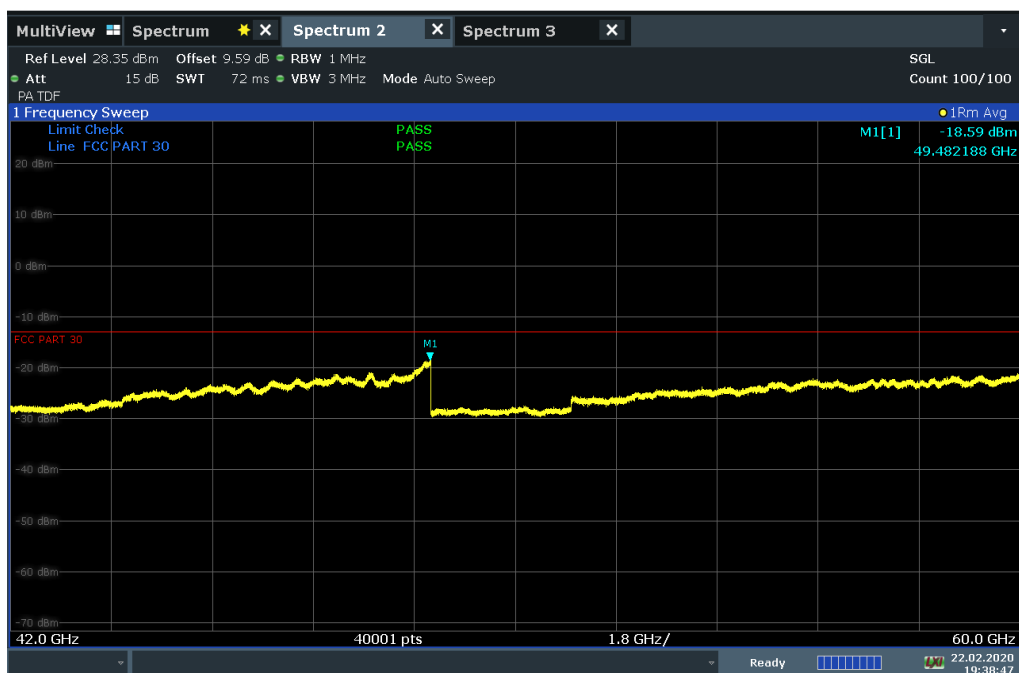


19:38:09 22.02.2020

Plot 7-395. Radiated Spurious Plot 42-60 GHz (1CC QPSK High Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 234 of 359

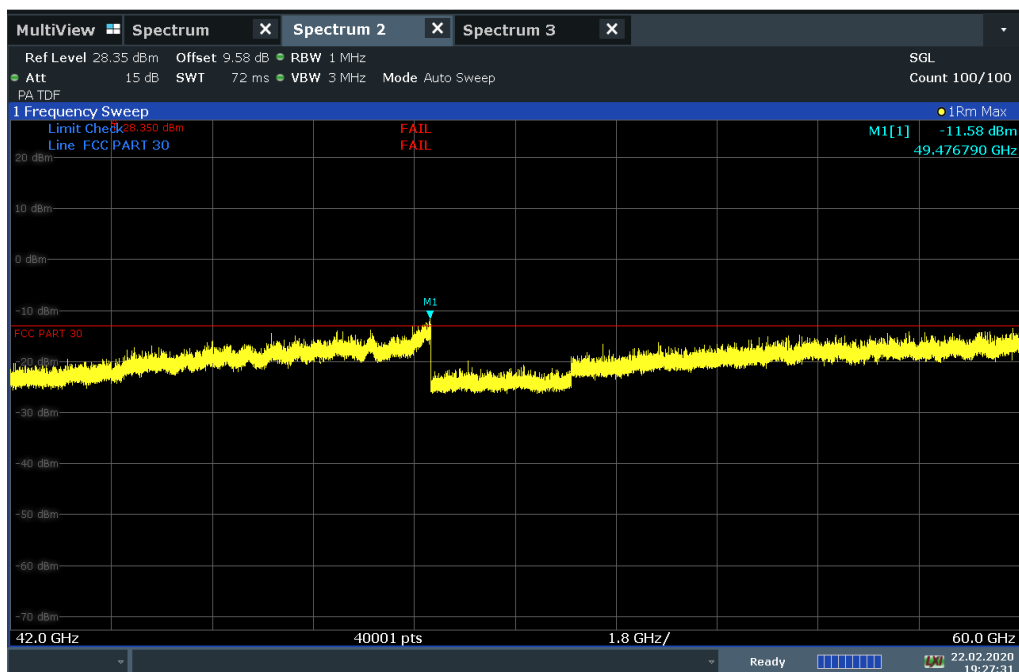
ACLRRResults



19:38:48 22.02.2020

Plot 7-396. Radiated Spurious Plot 42-60 GHz (1CC QPSK High Ch. Ant. Angle 135, Final)

ACLRRResults

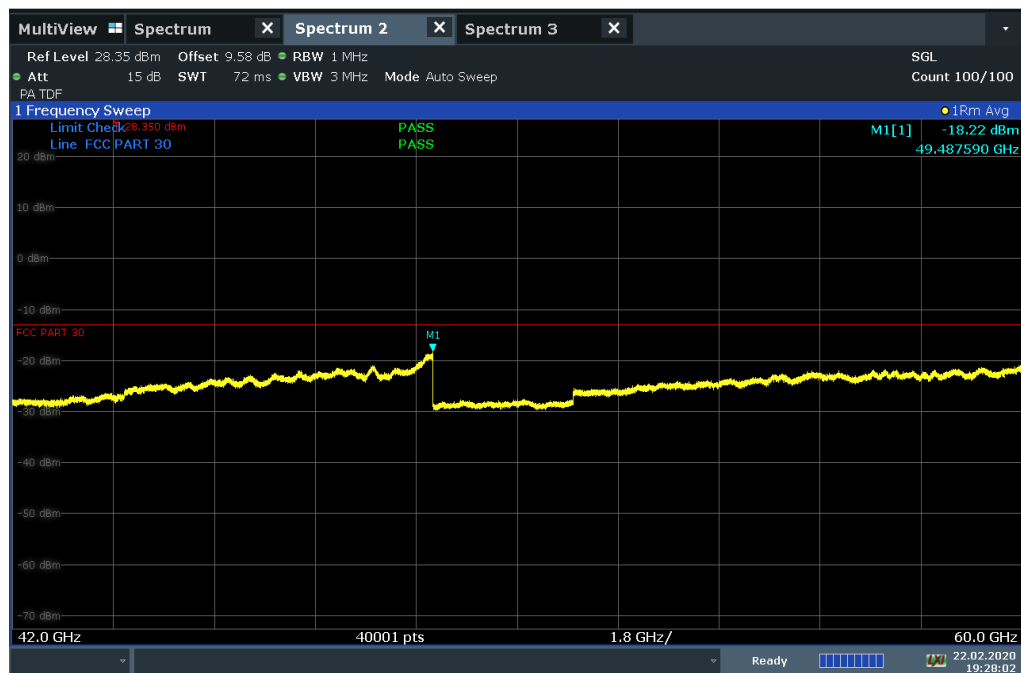


19:27:32 22.02.2020

Plot 7-397. Radiated Spurious Plot 42-60 GHz (1CC QPSK High Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 235 of 359

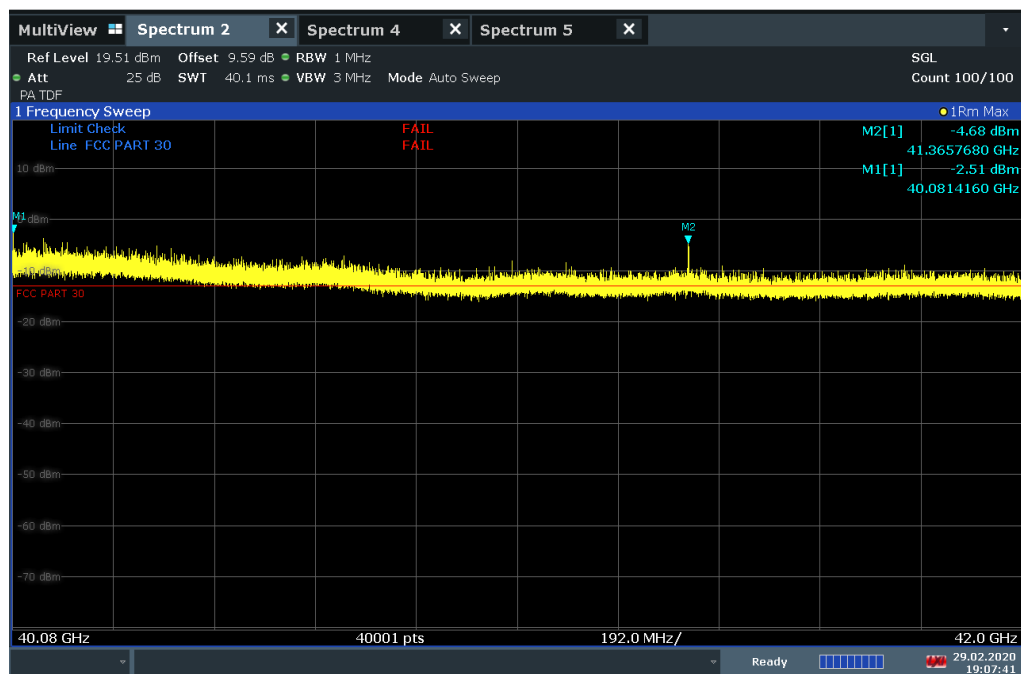
ACLRRResults



19:28:03 22.02.2020

Plot 7-398. Radiated Spurious Plot 42-60 GHz (1CC QPSK High Ch. Ant. Angle 45, Final)

ACLRRResults

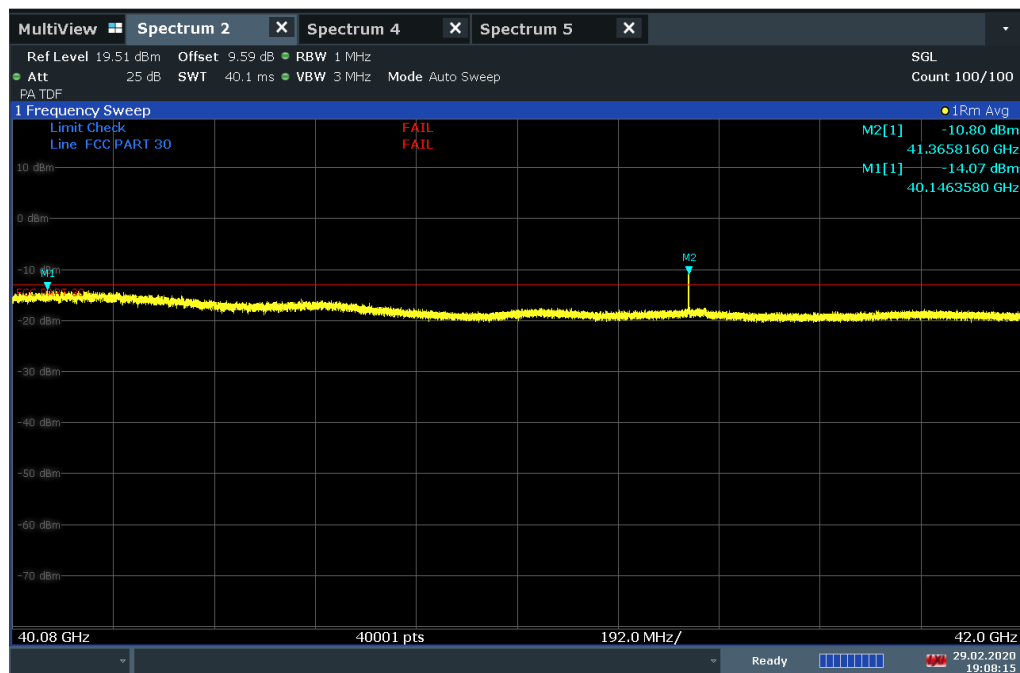


19:07:41 29.02.2020

Plot 7-399. Radiated Spurious Plot 40.08-42 GHz (8CC QPSK High Ch. Ant. Angle 135)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 236 of 359

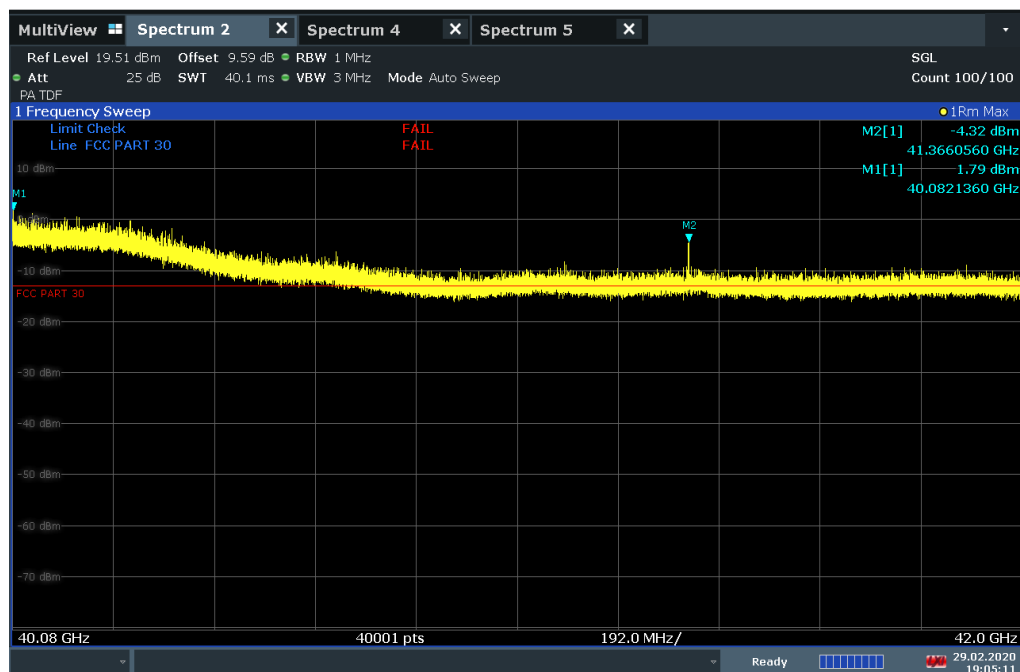
ACLRRResults



19:08:15 29.02.2020

Plot 7-400. Radiated Spurious Plot 40.08-42 GHz (8CC QPSK High Ch. Ant. Angle 135, Final)

ACLRRResults

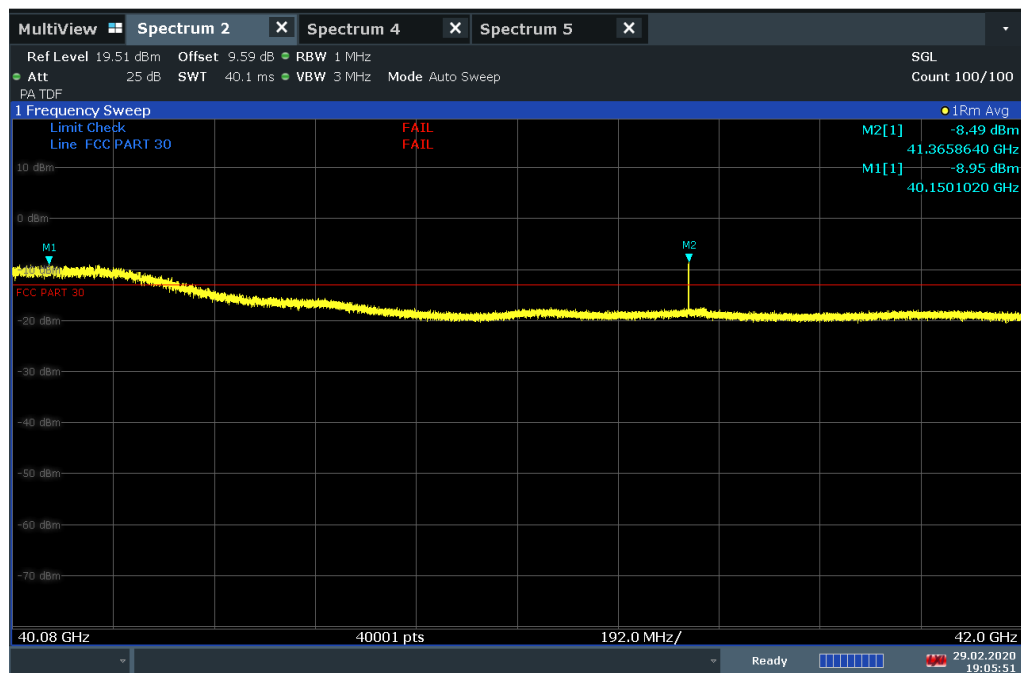


19:05:12 29.02.2020

Plot 7-401. Radiated Spurious Plot 40.08-42 GHz (8CC QPSK High Ch. Ant. Angle 45)

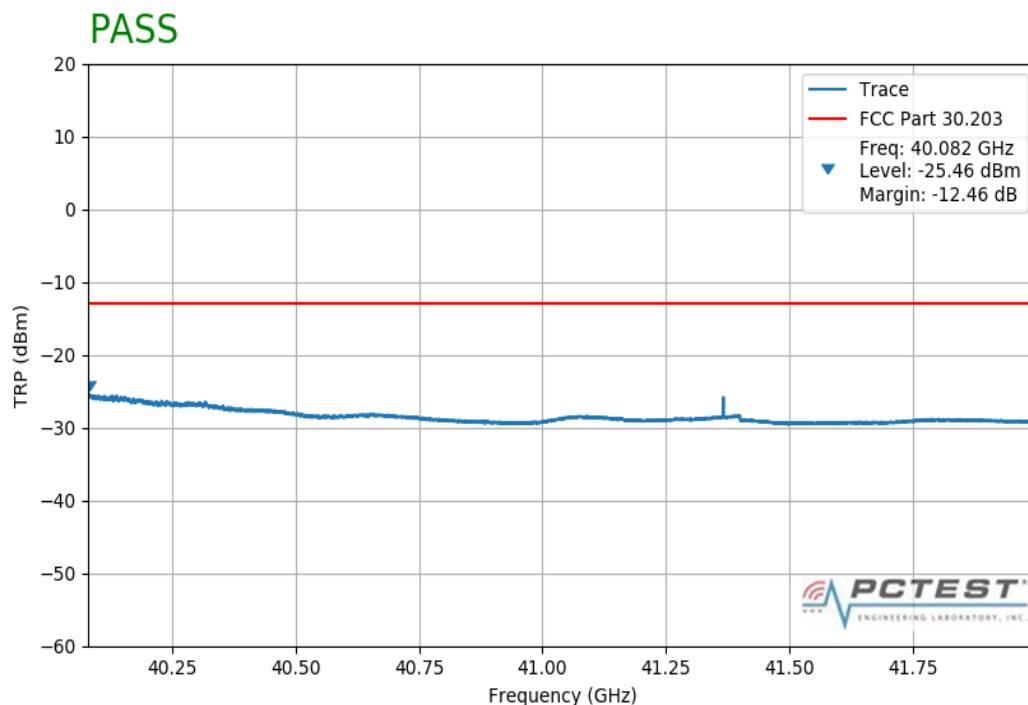
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 237 of 359

ACLRRResults



19:05:52 29.02.2020

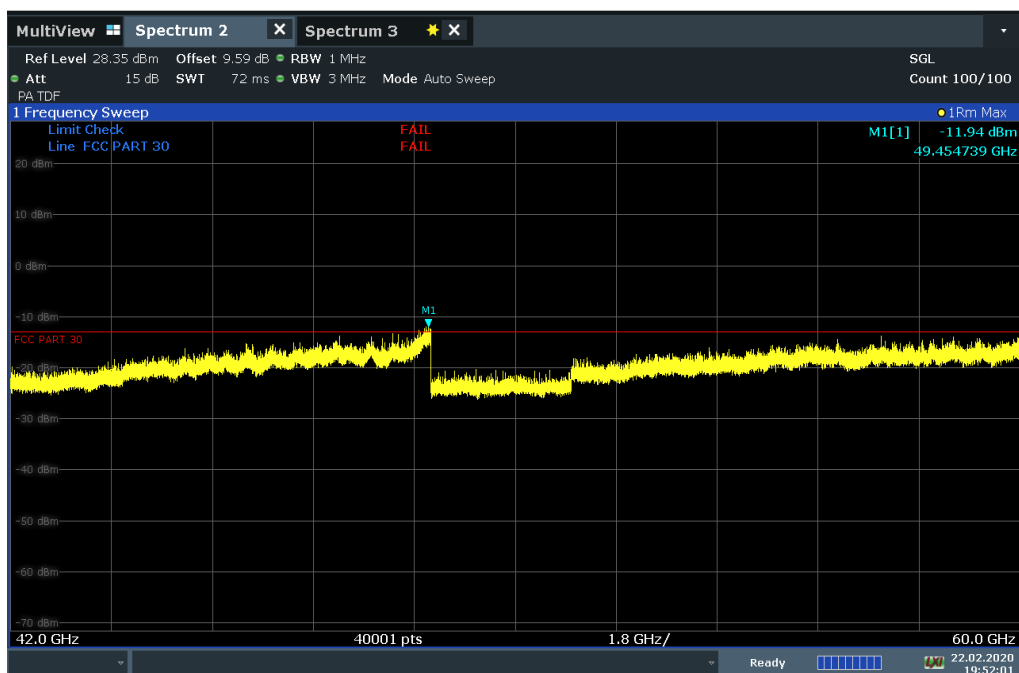
Plot 7-402. Radiated Spurious Plot 40.08-42 GHz (8CC QPSK High Ch. Ant. Angle 45, Final)



Plot 7-403. Radiated Spurious Plot 40.08-42 GHz (8CC QPSK High Ch. TRP)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 238 of 359

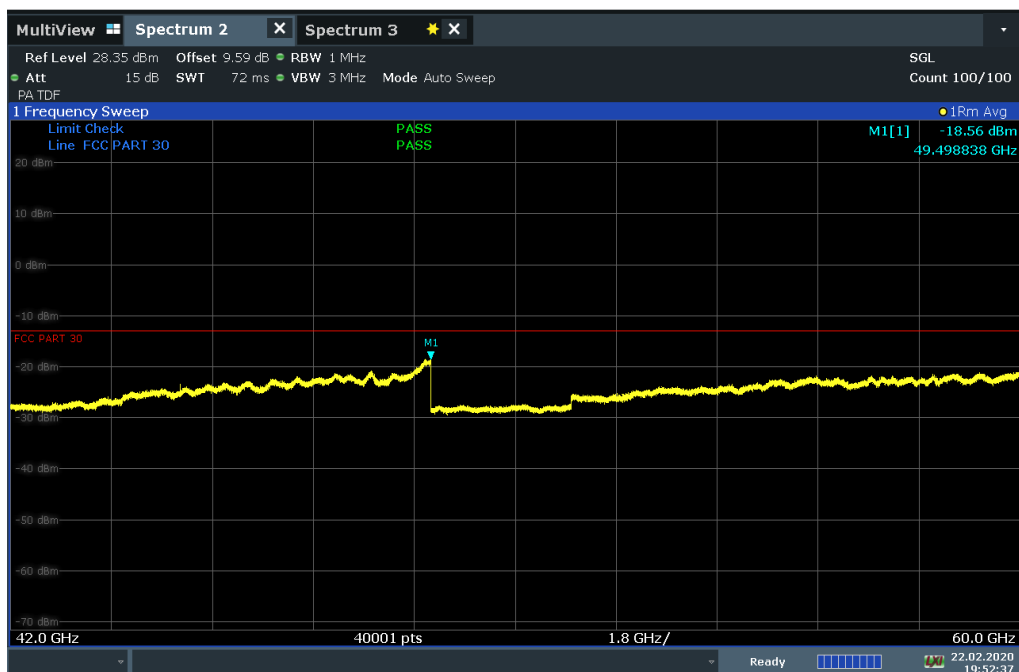
ACLRRResults



19:52:01 22.02.2020

Plot 7-404. Radiated Spurious Plot 42-60 GHz (8CC QPSK High Ch. Ant. Angle 135)

ACLRRResults

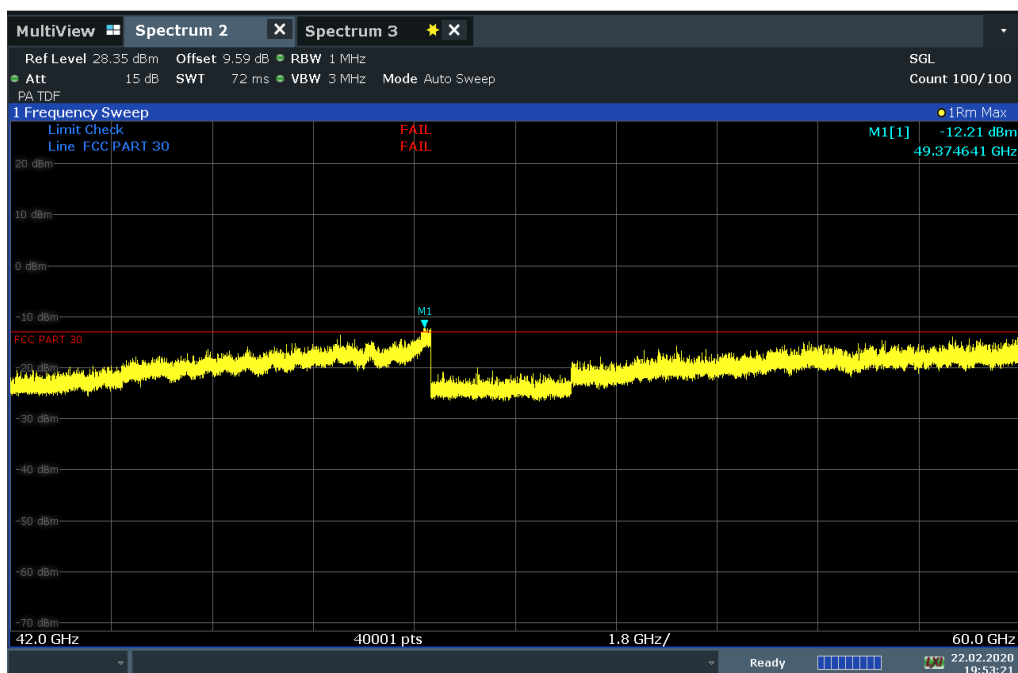


19:52:37 22.02.2020

Plot 7-405. Radiated Spurious Plot 42-60 GHz (8CC QPSK High Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 239 of 359

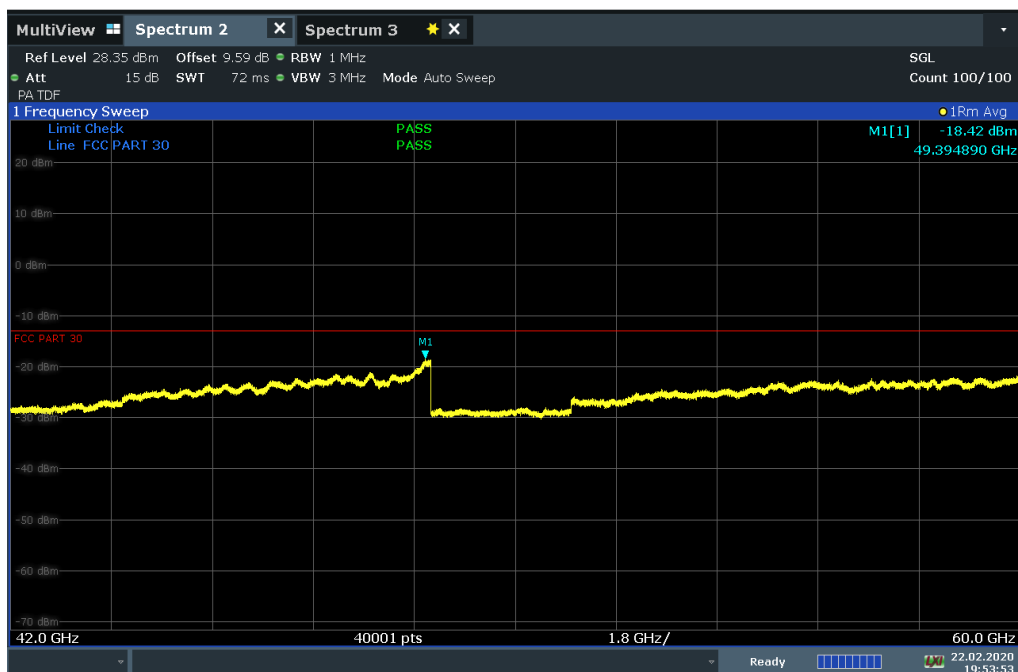
ACLRRResults



19:53:22 22.02.2020

Plot 7-406. Radiated Spurious Plot 42-60 GHz (8CC QPSK High Ch. Ant. Angle 45)

ACLRRResults

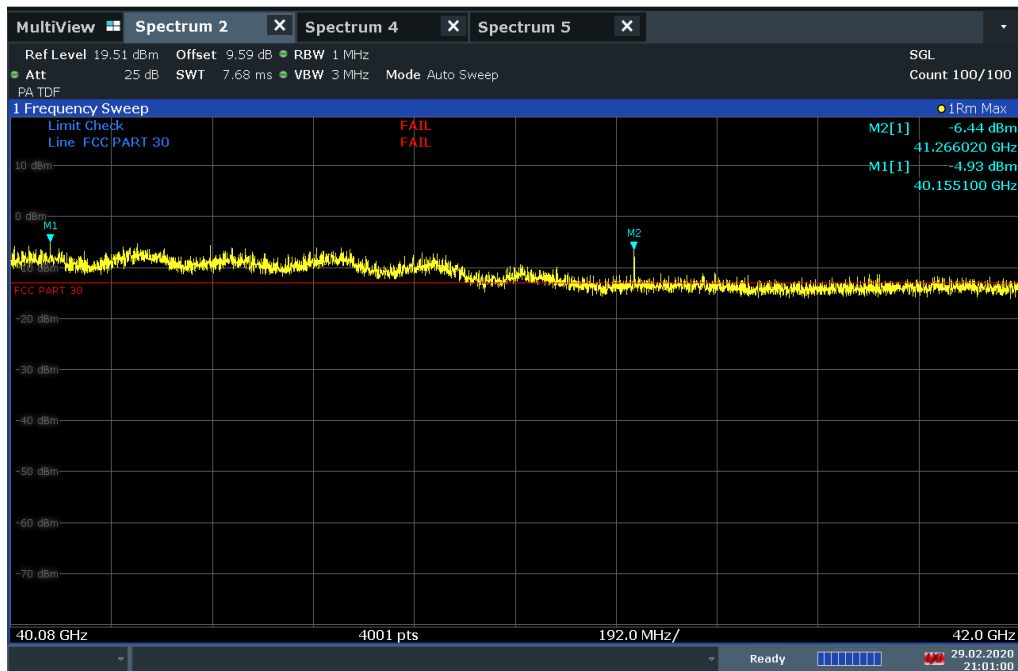


19:53:54 22.02.2020

Plot 7-407. Radiated Spurious Plot 42-60 GHz (8CC QPSK High Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 240 of 359

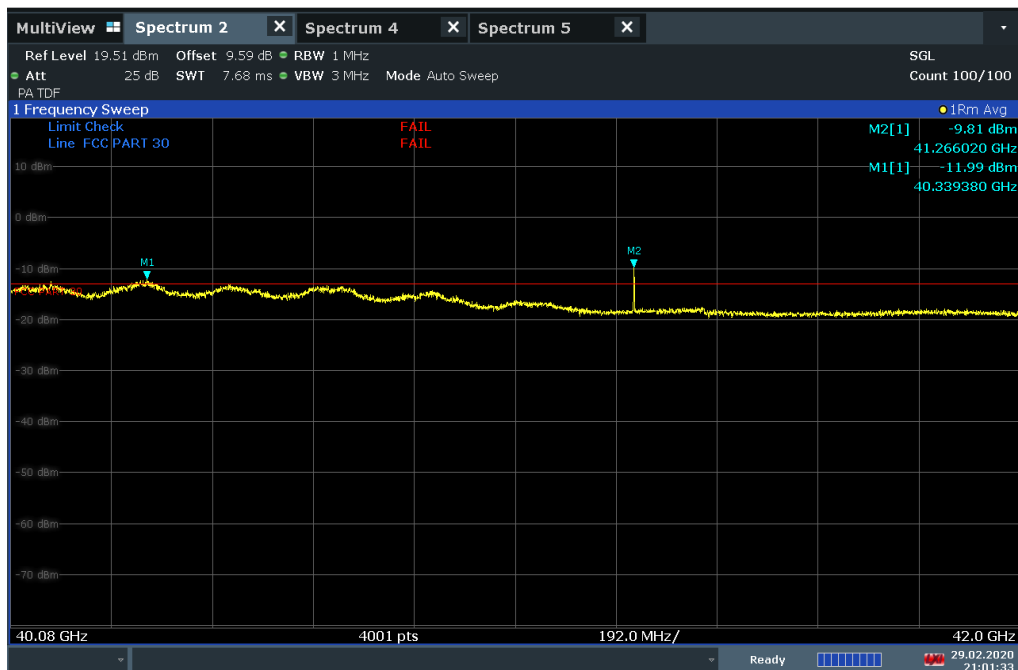
ACLRRResults



21:01:01 29.02.2020

Plot 7-408. Radiated Spurious Plot 40.08-42 GHz (8CC NC QPSK High Ch. Ant. Angle 135)

ACLRRResults

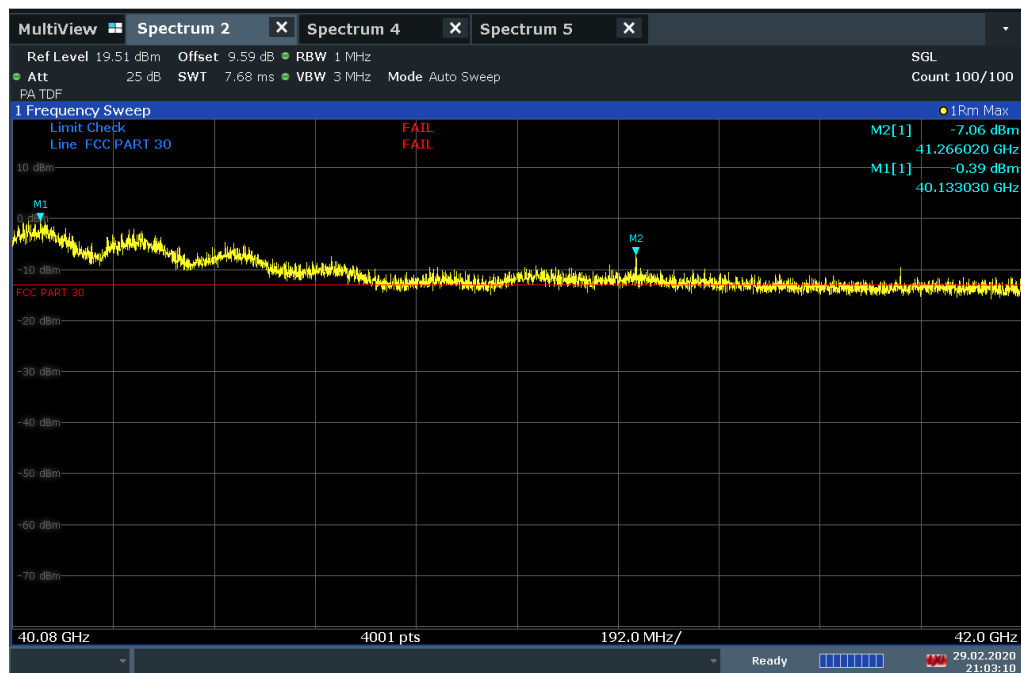


21:01:34 29.02.2020

Plot 7-409. Radiated Spurious Plot 40.08-42 GHz (8CC NC QPSK High Ch. Ant. Angle 135, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 241 of 359

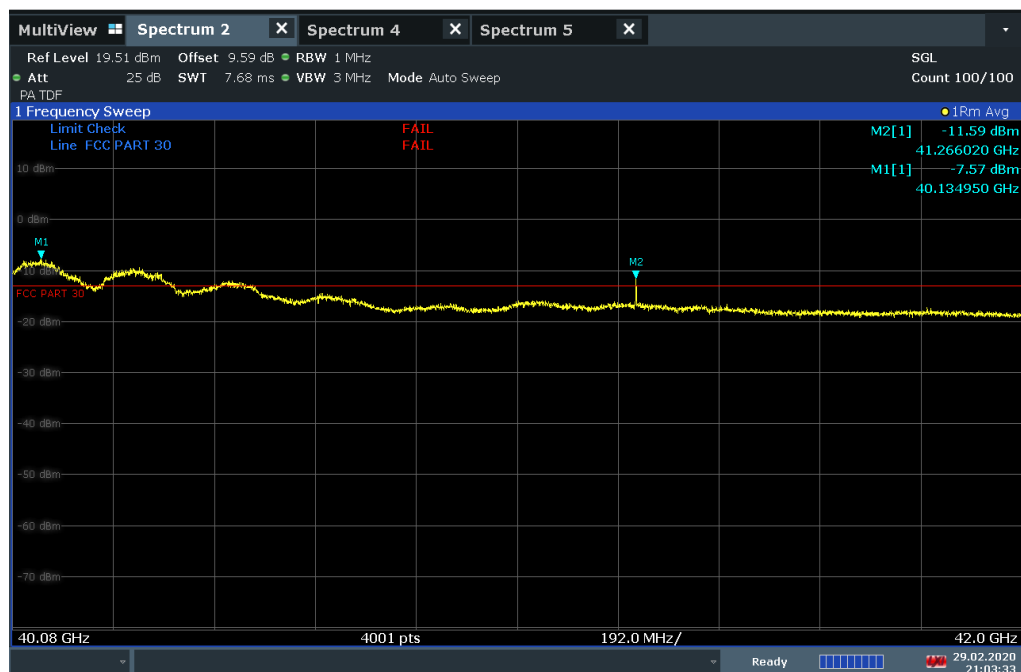
ACLRRResults



21:03:10 29.02.2020

Plot 7-410. Radiated Spurious Plot 40.08-42 GHz (8CC NC QPSK High Ch. Ant. Angle 45)

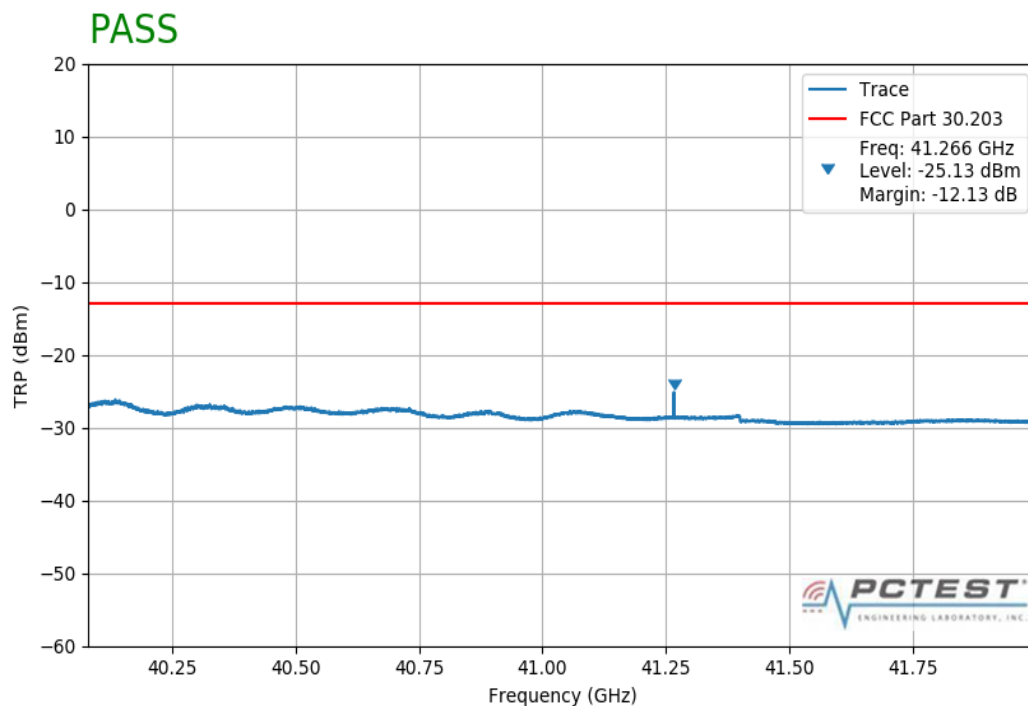
ACLRRResults



21:03:34 29.02.2020

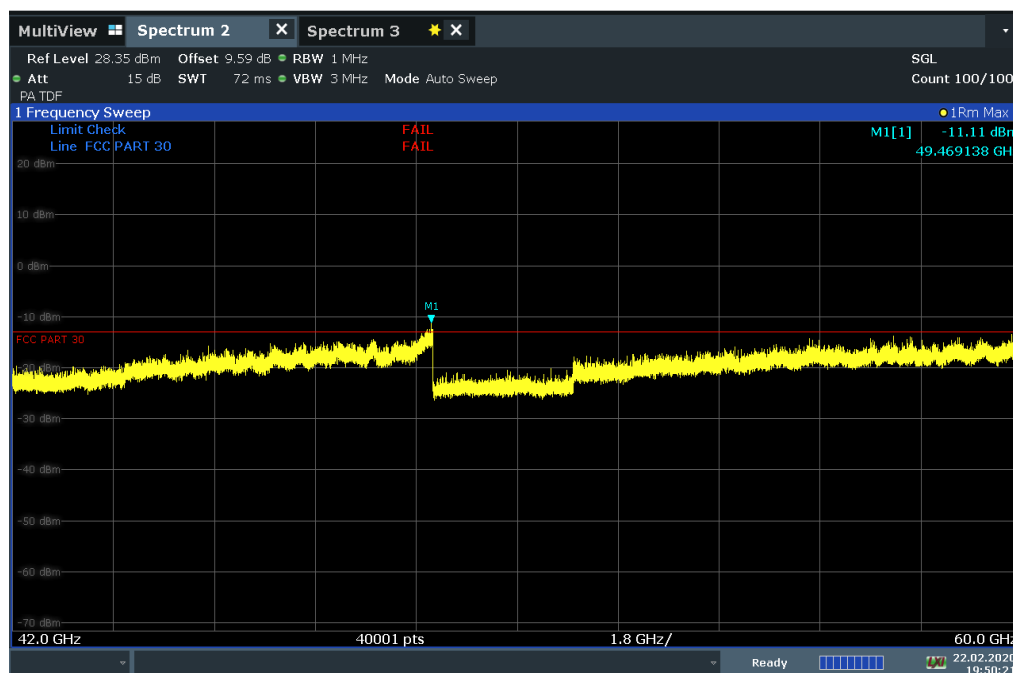
Plot 7-411. Radiated Spurious Plot 40.08-42 GHz (8CC NC QPSK High Ch. Ant. Angle 45, Final)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 242 of 359



Plot 7-412. Radiated Spurious Plot 40.08-42 GHz (8CC NC QPSK High Ch. TRP)

ACLRRResults



19:50:22 22.02.2020

Plot 7-413. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK High Ch. Ant. Angle 135)

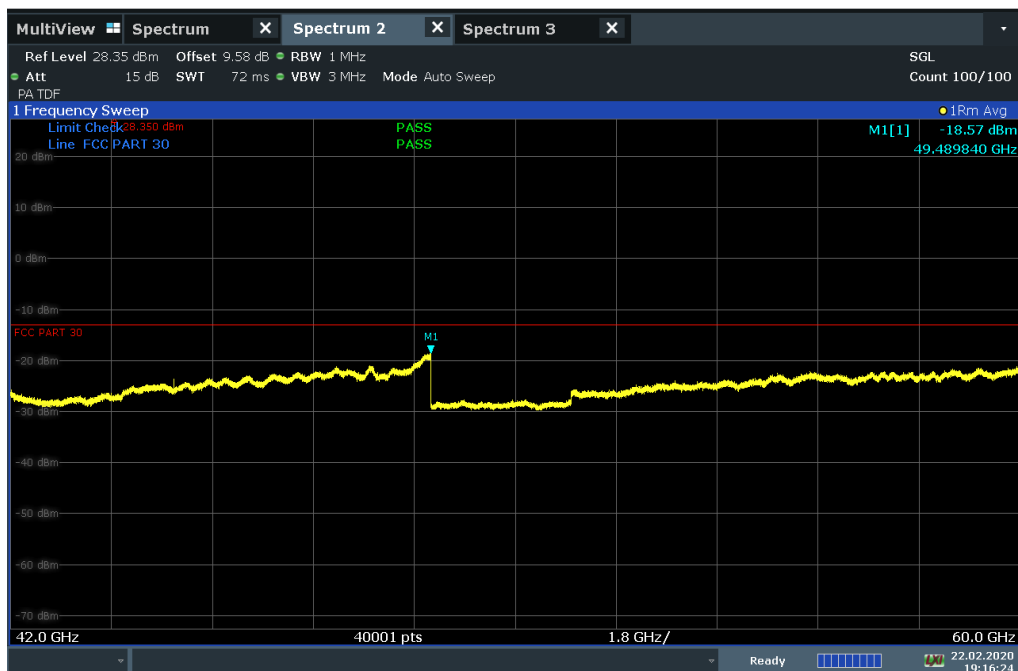
FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 243 of 359

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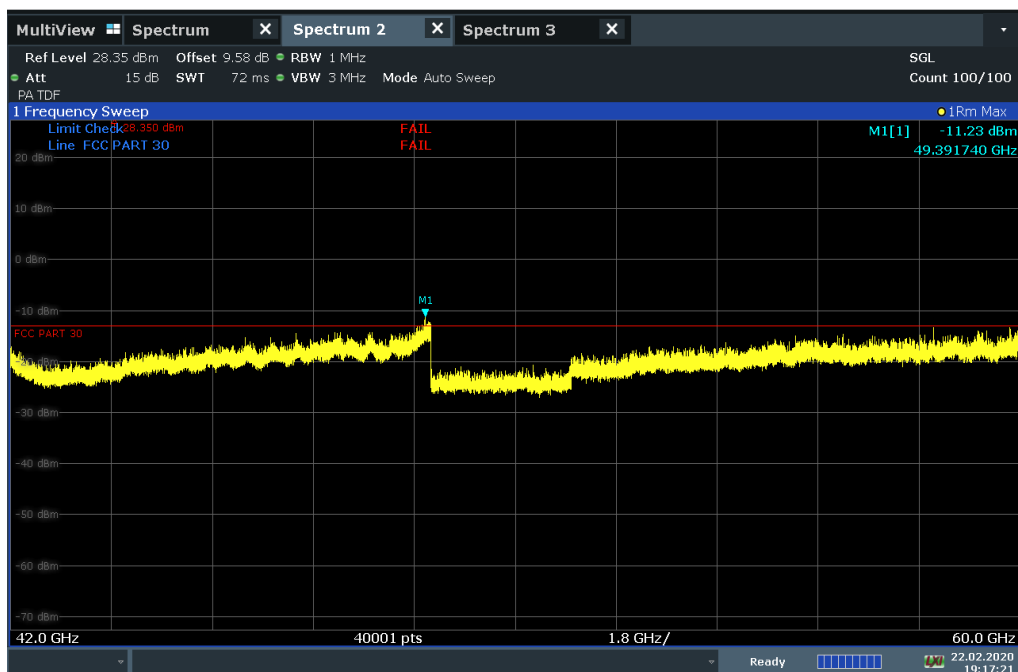
ACLRRResults



19:16:24 22.02.2020

Plot 7-414. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK High Ch. Ant. Angle 135, Final)

ACLRRResults

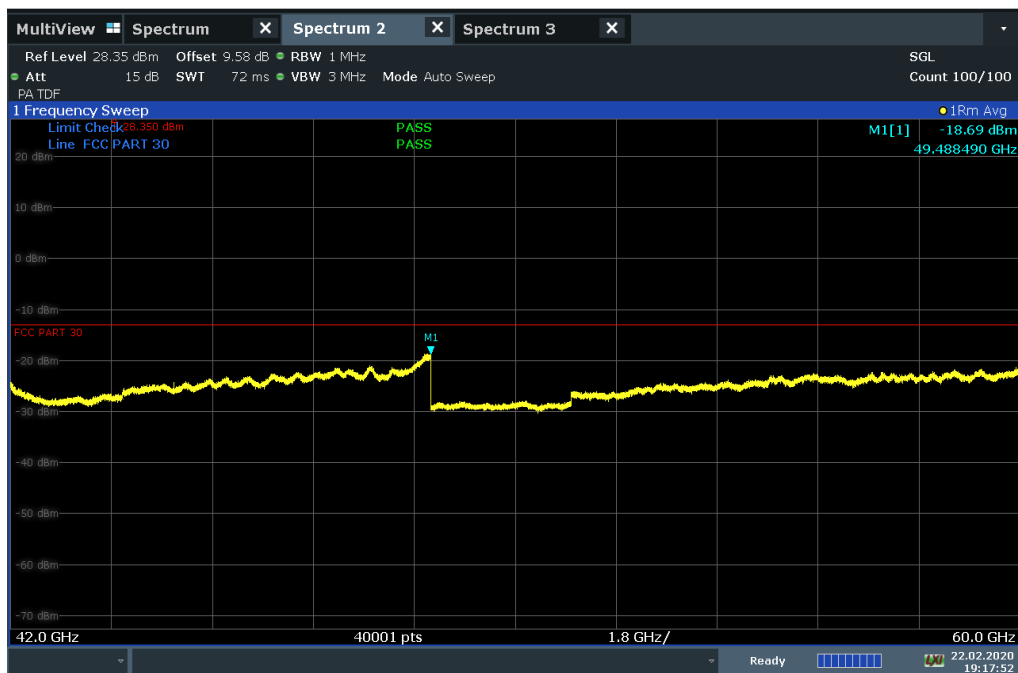


19:17:21 22.02.2020

Plot 7-415. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK High Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 244 of 359

ACLRRResults



19:17:53 22.02.2020

Plot 7-416. Radiated Spurious Plot 42-60 GHz (8CC NC QPSK High Ch. Ant. Angle 45, Final)

Frequency [MHz]	Channel	CC Active	Mod.	Ant. Pol. [degree]	Antenna Height [cm]	Turn Table Azimuth [degree]	Analyzer Level [dBm]	AFCL [dBm]	Field Strength [dBμV/m]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]	TRP [dBm]	Margin [dB]
42314.19	Low	CC0	QPSK	135	148	10	-62.57	45.55	89.98	-5.23	-13.00	7.77	-24.10	-11.10
42336.19	Low	CC0	QPSK	45	154	10	-65.06	45.55	87.49	-7.72	-13.00	5.28		
40516.24	Mid	CC4	QPSK	135	147	11	-72.15	45.35	80.20	-15.01	-13.00	-2.01	-24.05	-11.05
40516.24	Mid	CC4	QPSK	45	154	11	-72.86	45.35	79.49	-15.72	-13.00	-2.72		
40010.25	High	CC7	QPSK	135	149	10	-71.44	45.35	80.91	-14.30	-13.00	-1.30	-23.30	-10.30
40012.24	High	CC7	QPSK	45	155	10	-69.50	45.35	82.85	-12.36	-13.00	0.64		
40145.57	High	CC7	QPSK	45	155	10	-69.79	45.35	82.56	-12.65	-13.00	0.35	-26.60	-13.60
41865.97	High	CC7	QPSK	135	146	10	-69.36	45.45	83.09	-12.12	-13.00	0.88		
41865.92	High	CC7	QPSK	45	155	10	-69.25	45.45	83.20	-12.01	-13.00	0.99	-26.16	-13.16
42376.69	Low	CC0-CC7(C)	QPSK	135	148	10	-78.15	45.55	74.40	-20.81	-13.00	-7.81		
42369.19	Low	CC0-CC7(C)	QPSK	45	154	9	-75.25	45.55	77.30	-17.91	-13.00	-4.91	-23.55	-10.55
40466.24	Mid	CC0-CC7(C)	QPSK	135	148	11	-67.20	45.35	85.15	-10.06	-13.00	2.94		
40466.24	Mid	CC0-CC7(C)	QPSK	45	154	10	-66.14	45.35	86.21	-9.00	-13.00	4.00	-25.46	-12.46
40146.35	High	CC0-CC7(C)	QPSK	135	148	10	-71.21	45.35	81.14	-14.07	-13.00	-1.07		
40150.10	High	CC0-CC7(C)	QPSK	45	155	10	-66.09	45.35	86.26	-8.95	-13.00	4.05	-25.84	-12.84
41365.81	High	CC0-CC7(C)	QPSK	135	148	10	-68.04	45.45	84.41	-10.80	-13.00	2.20		
41365.86	High	CC0-CC7(C)	QPSK	45	155	10	-65.73	45.45	86.72	-8.49	-13.00	4.51	-23.17	-10.17
42393.19	Low	CC0-CC7(NC)	QPSK	135	148	10	-79.05	45.55	73.50	-21.71	-13.00	-8.71		
42515.19	Low	CC0-CC7(NC)	QPSK	45	153	10	-77.25	45.55	75.30	-19.91	-13.00	-6.91	-26.14	-13.14
40466.13	Mid	CC0-CC7(NC)	QPSK	135	148	10	-65.96	45.35	86.39	-8.82	-13.00	4.18		
40466.13	Mid	CC0-CC7(NC)	QPSK	45	154	10	-63.92	45.35	88.43	-6.78	-13.00	6.22	-25.13	-12.13
40339.38	High	CC0-CC7(NC)	QPSK	135	146	11	-69.13	45.35	83.22	-11.99	-13.00	1.01		
40134.95	High	CC0-CC7(NC)	QPSK	45	155	11	-68.73	45.35	83.62	-11.59	-13.00	1.41	-25.13	-12.13
41266.02	High	CC0-CC7(NC)	QPSK	135	146	11	-67.05	45.45	85.40	-9.81	-13.00	3.19		
41266.02	High	CC0-CC7(NC)	QPSK	45	155	11	-64.81	45.45	87.64	-7.57	-13.00	5.43		

Table 7-21. Spurious Emissions (40 – 60GHz)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit	Page 245 of 359	

Spurious Emissions EIRP Sample Calculation

The raw radiated spurious level is converted to field strength in dBμV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 2.61 meters.

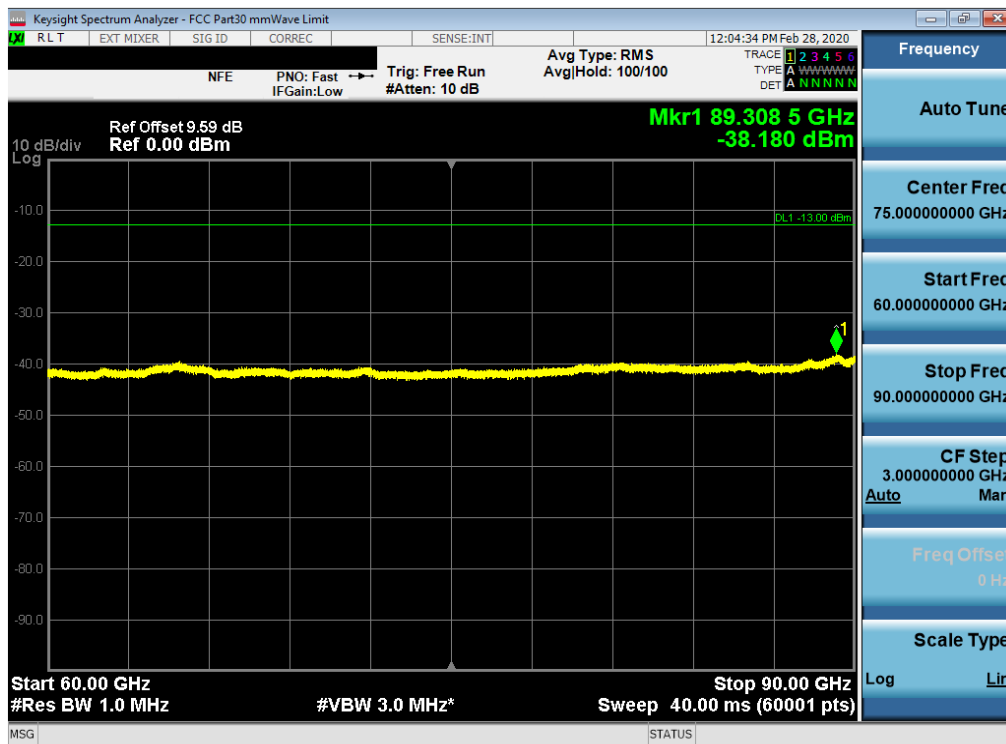
$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + \text{AFCL [dB/m]} + 107 + 20\text{Log}(D_m) - 104.8 + \text{Duty Corretion Factor}$$

Duty Cycle Correction Factor Calculation

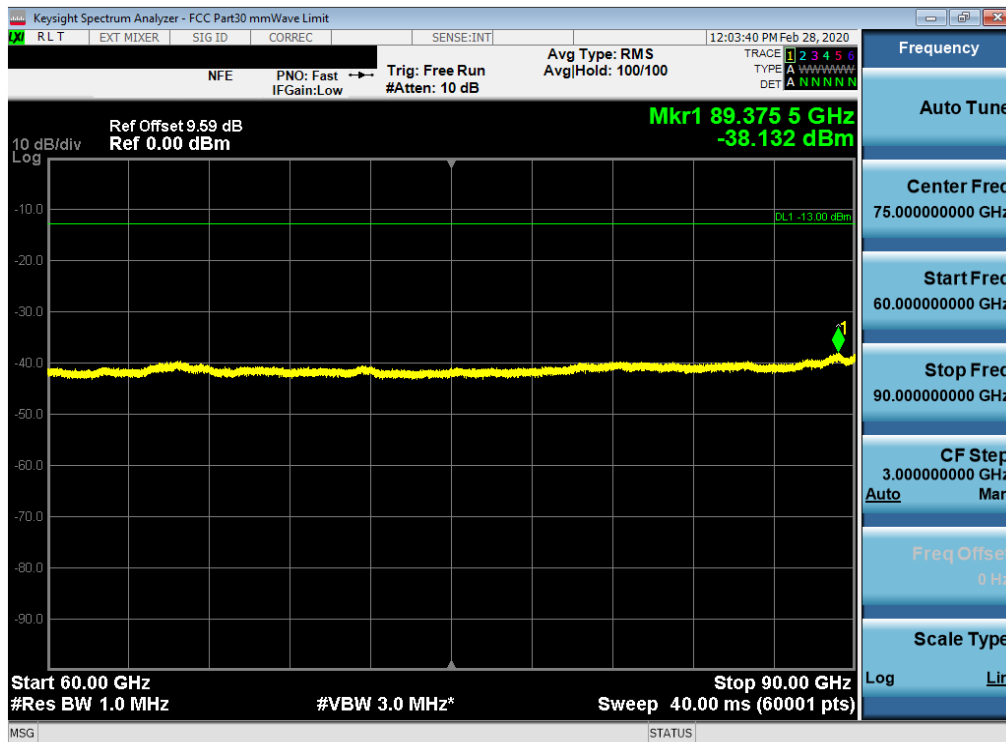
- 1 Cycle Time = 626 μs
 - Tx on Time = 468 μs
 - Duty Cycle = Tx on Time / 1 Cycle Time = 468 μs / 626 μs = 0.75
- Duty cycle correction factor = $10\log_{10}(1/\text{Duty Cycle}) = 10\log_{10}(1/0.75) = 1.26 \text{ dB}$

FCC ID: A3LAT1K02-A10	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 246 of 359

7.5.5 Radiated Spurious Emissions Plots (60 – 90GHz)

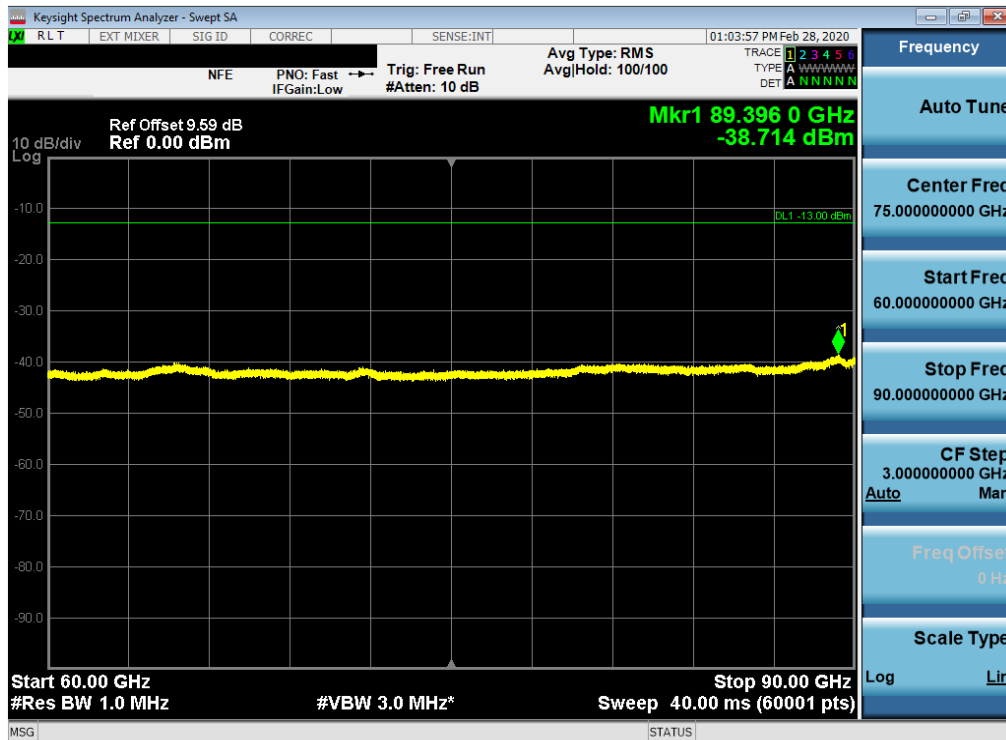


Plot 7-417. Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Ch. Ant. Angle 135)

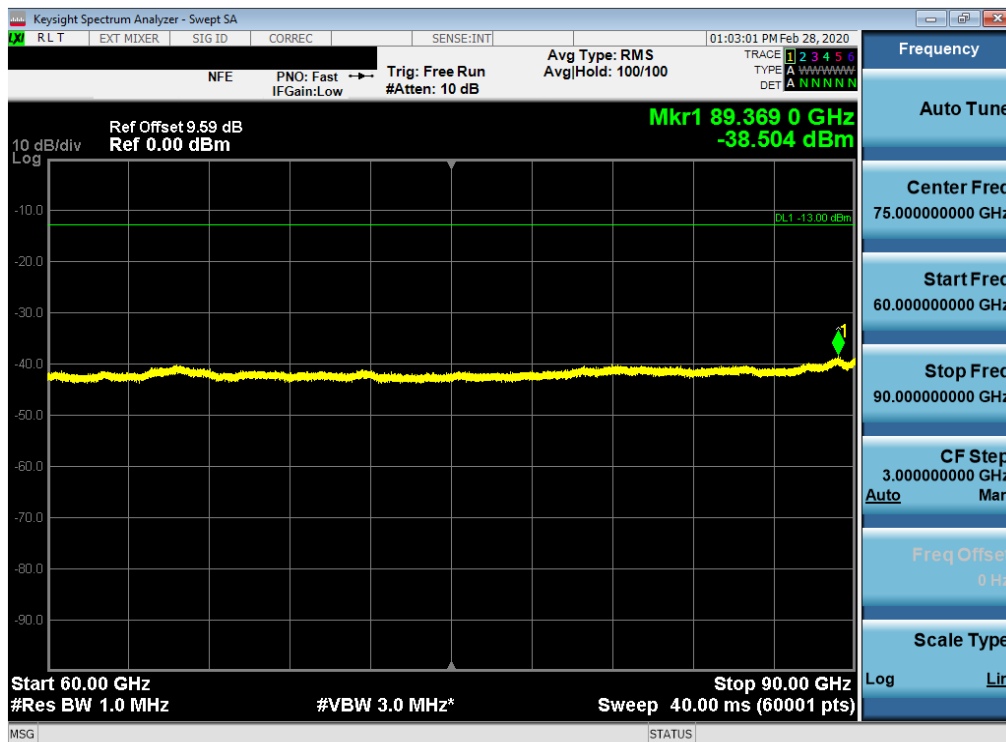


Plot 7-418. Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 247 of 359

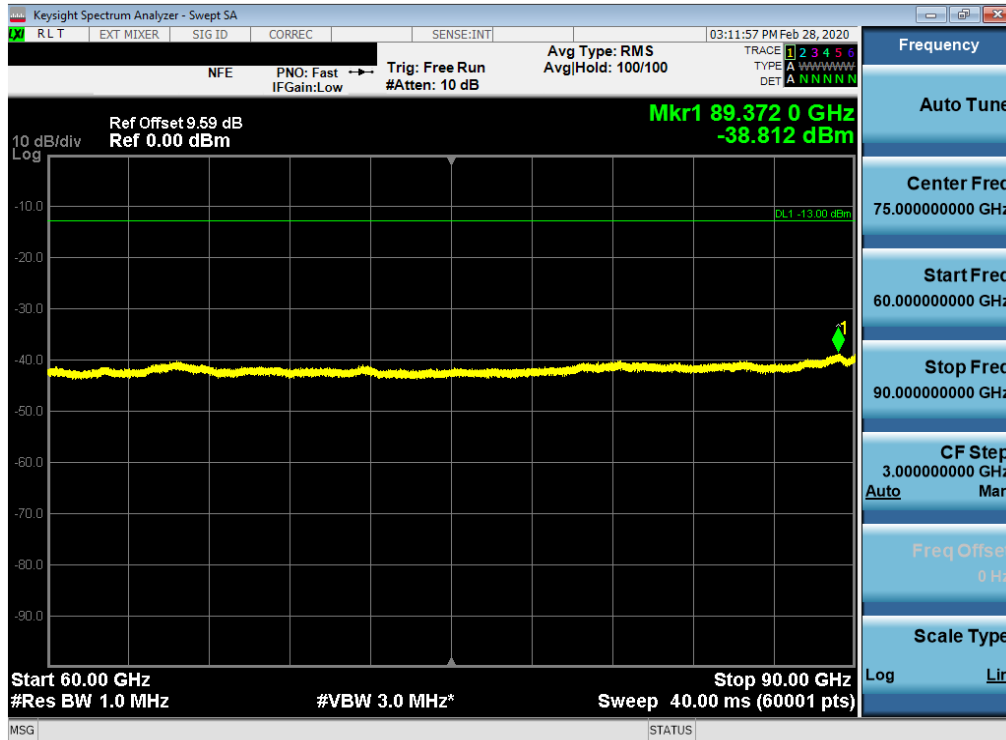


Plot 7-419. Radiated Spurious Plot 60-90 GHz (8CC QPSK Low Ch. Ant. Angle 135)

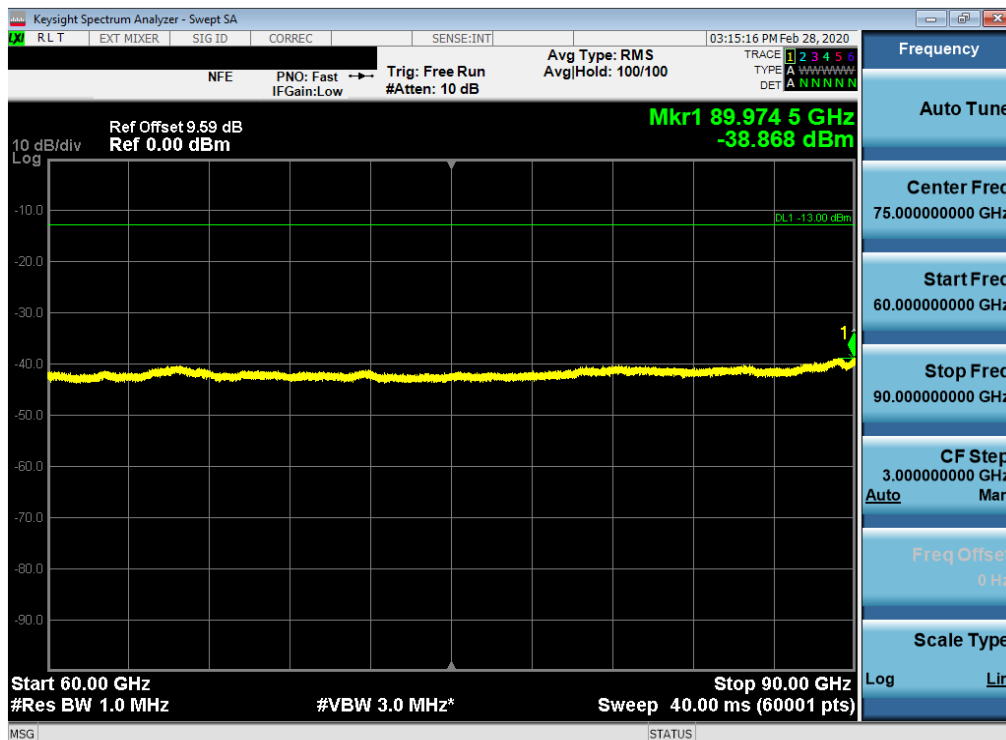


Plot 7-420. Radiated Spurious Plot 60-90 GHz (8CC QPSK Low Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 248 of 359

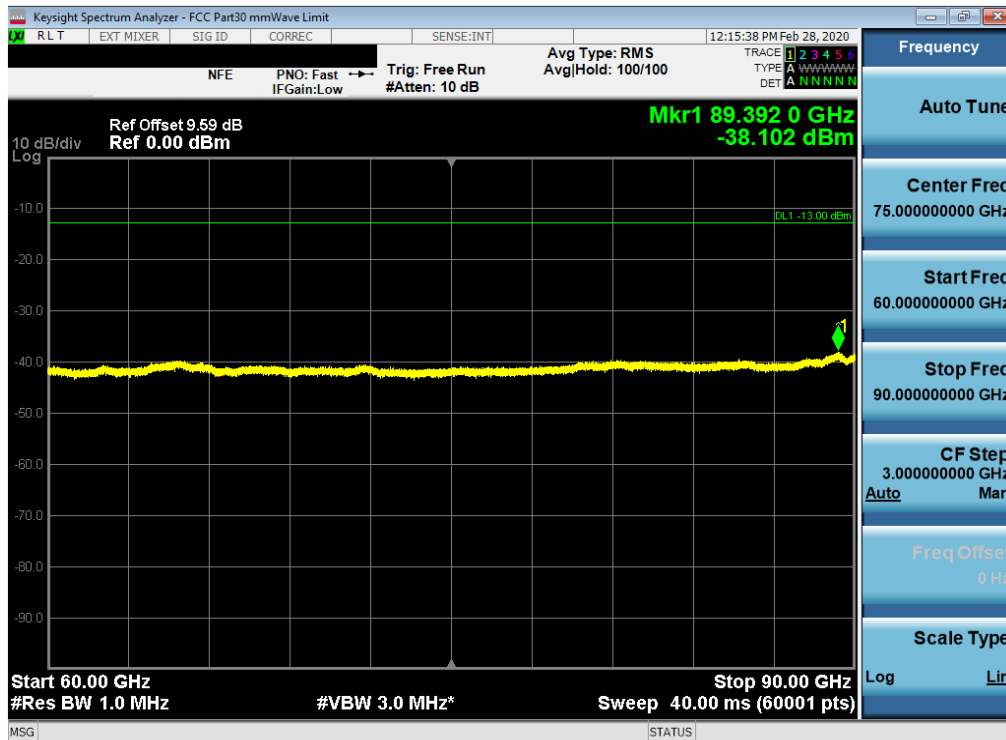


Plot 7-421. Radiated Spurious Plot 60-90 GHz (8CC NC QPSK Low Ch. Ant. Angle 135)

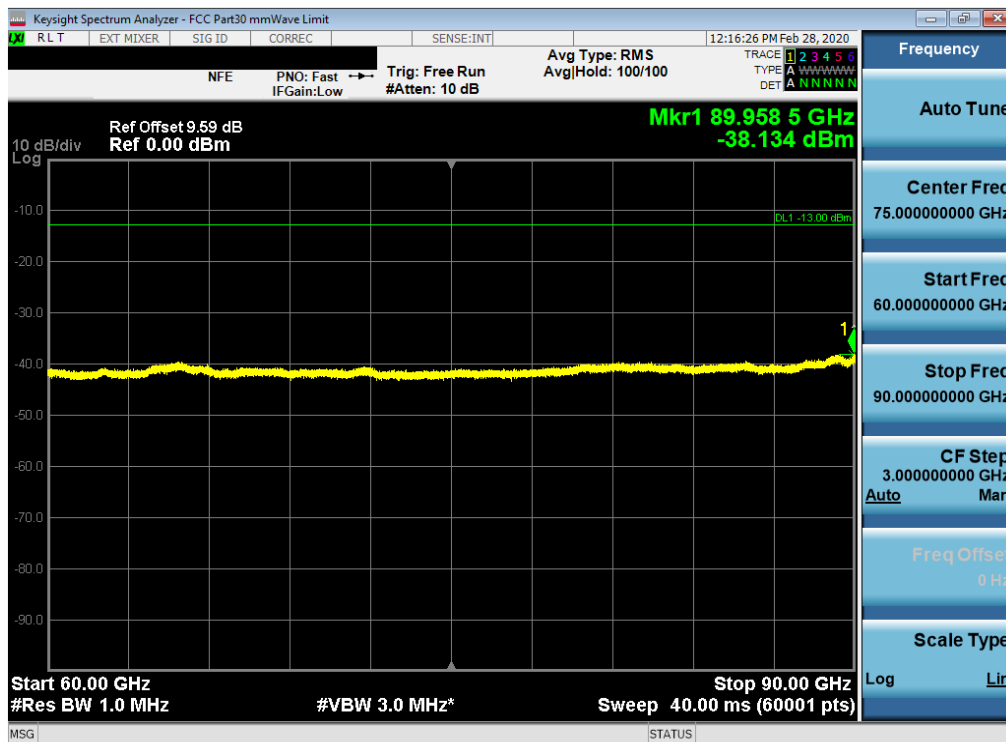


Plot 7-422. Radiated Spurious Plot 60-90 GHz (8CC NC QPSK Low Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 249 of 359

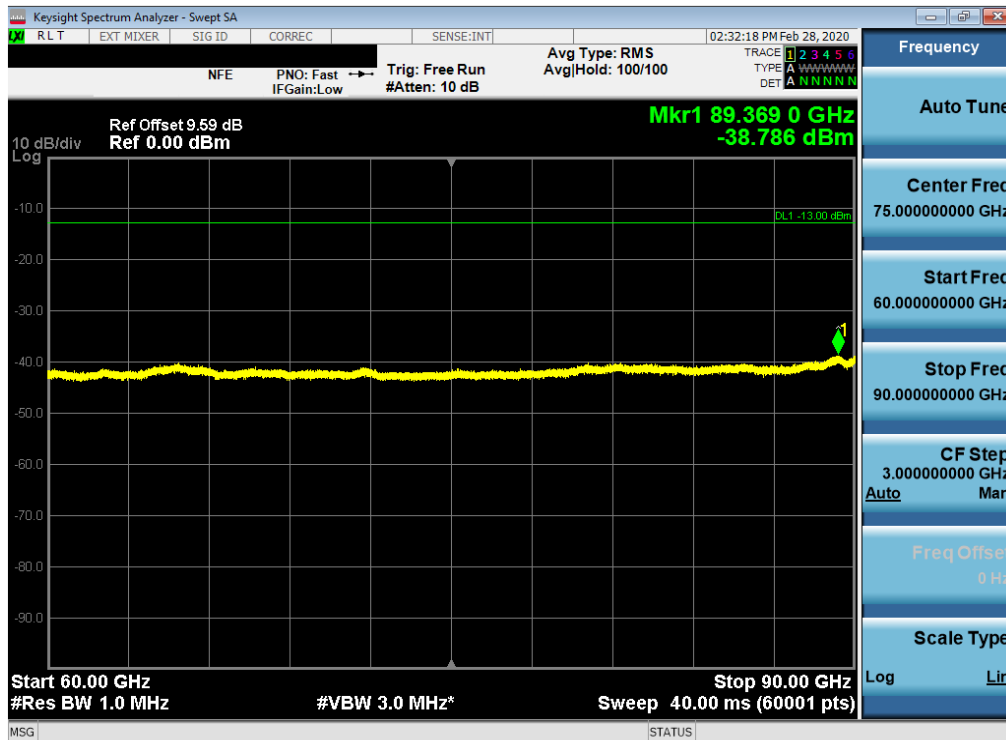


Plot 7-423. Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Ch. Ant. Angle 135)

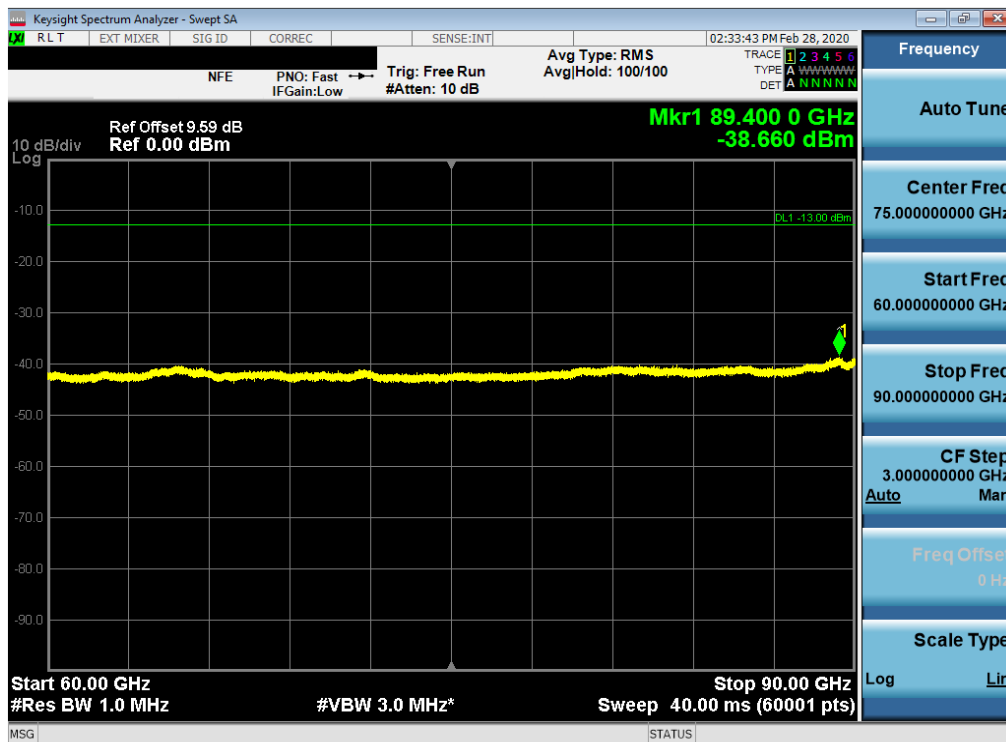


Plot 7-424. Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 250 of 359

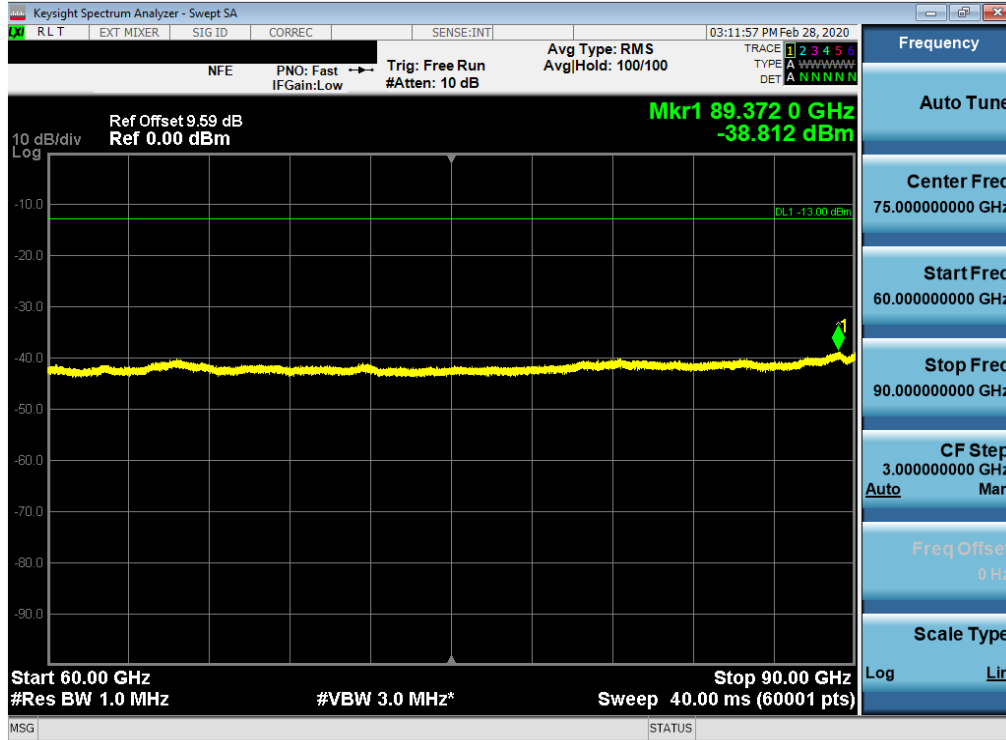


Plot 7-425. Radiated Spurious Plot 60-90 GHz (8CC QPSK Mid Ch. Ant. Angle 135)

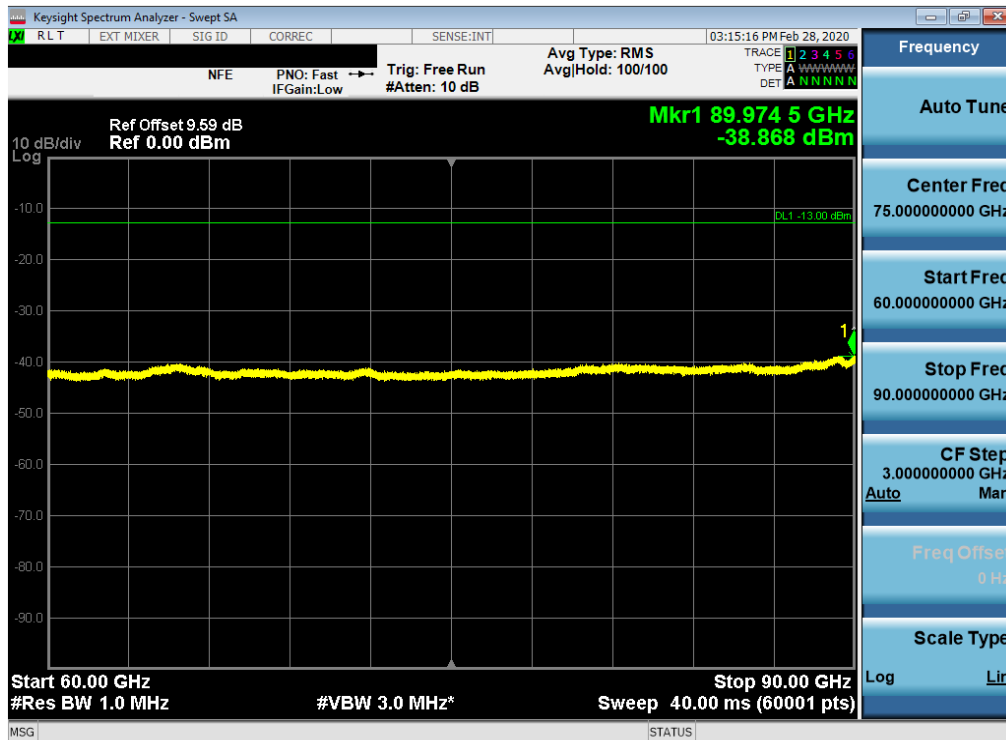


Plot 7-426. Radiated Spurious Plot 60-90 GHz (8CC QPSK Mid Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 251 of 359



Plot 7-427. Radiated Spurious Plot 60-90 GHz (8CC NC QPSK Mid Ch. Ant. Angle 135)



Plot 7-428. Radiated Spurious Plot 60-90 GHz (8CC NC QPSK Mid Ch. Ant. Angle 45)

FCC ID: A3LAT1K02-A10	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110702-01.A3L	Test Dates: 02/18/2020-03/06/2020	EUT Type: 5G Access Unit		Page 252 of 359