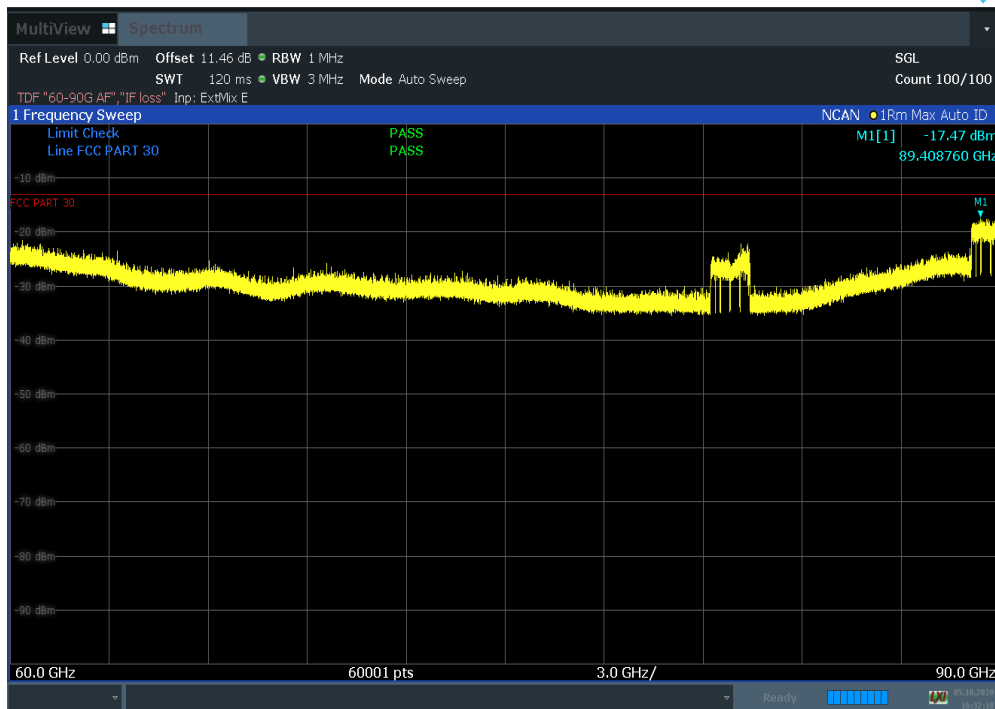
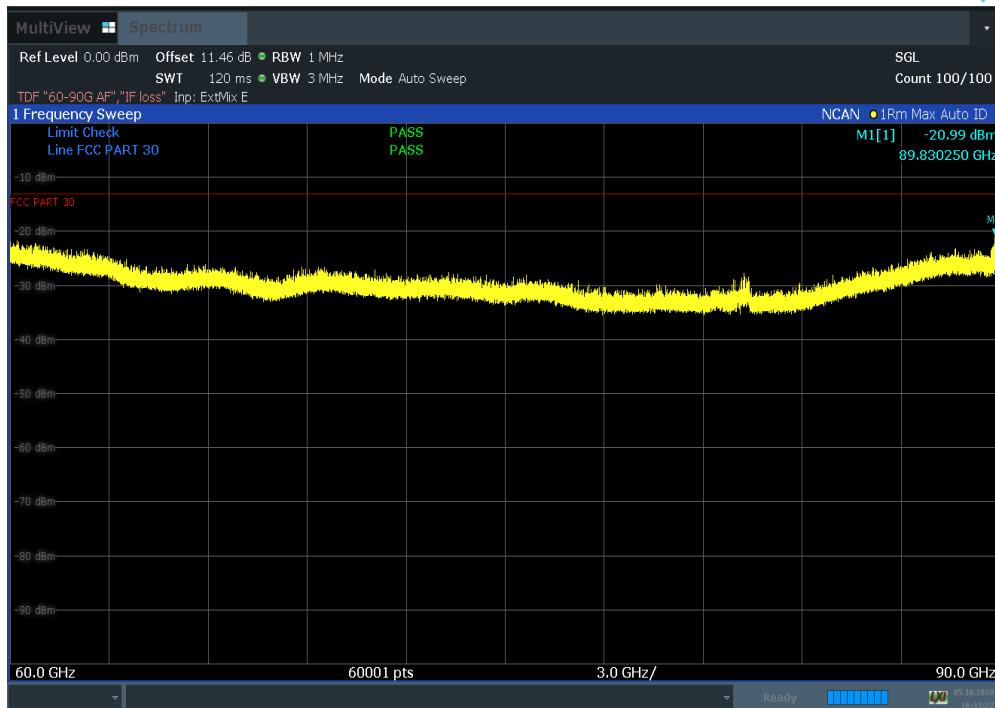


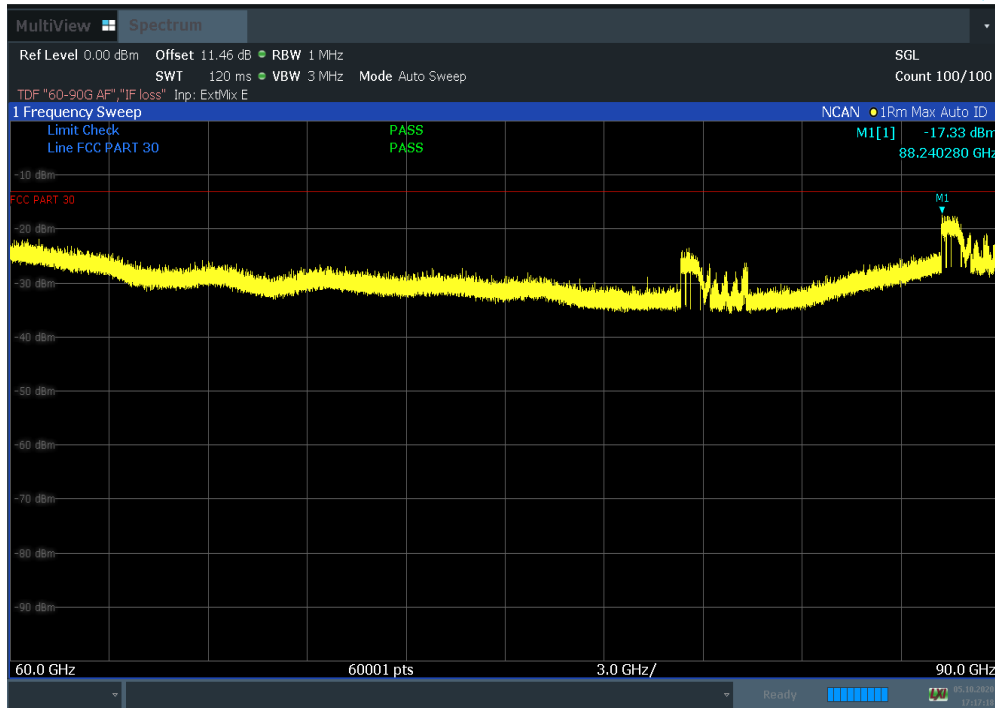


Plot 7-668. RSE 60 GHz – 90 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. H)

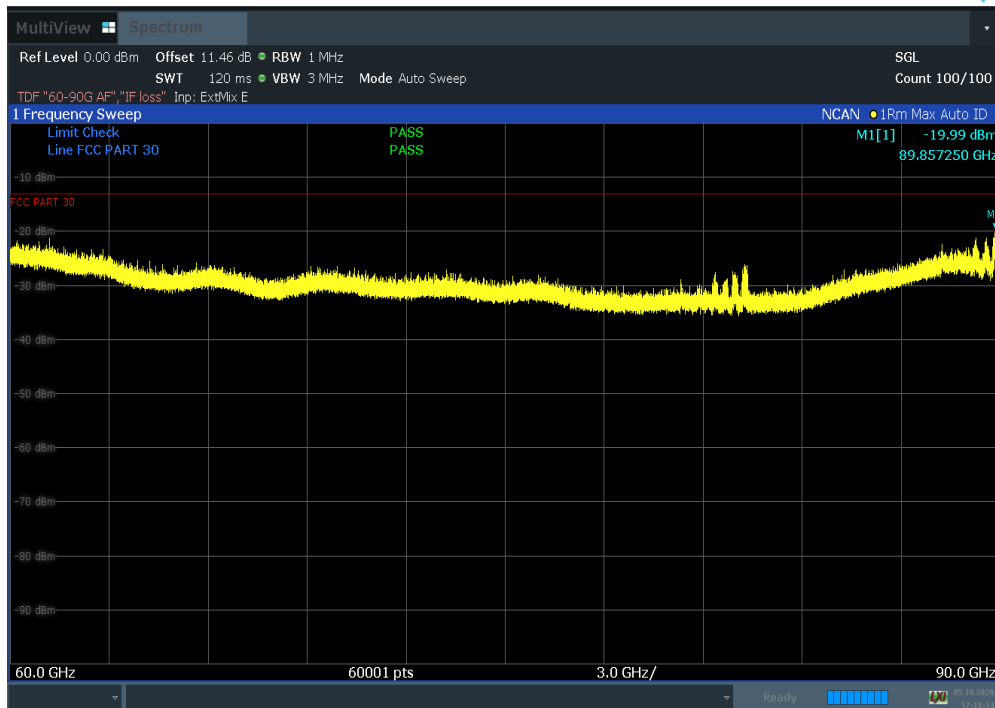


Plot 7-669. RSE 60 GHz – 90 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 396 of 466



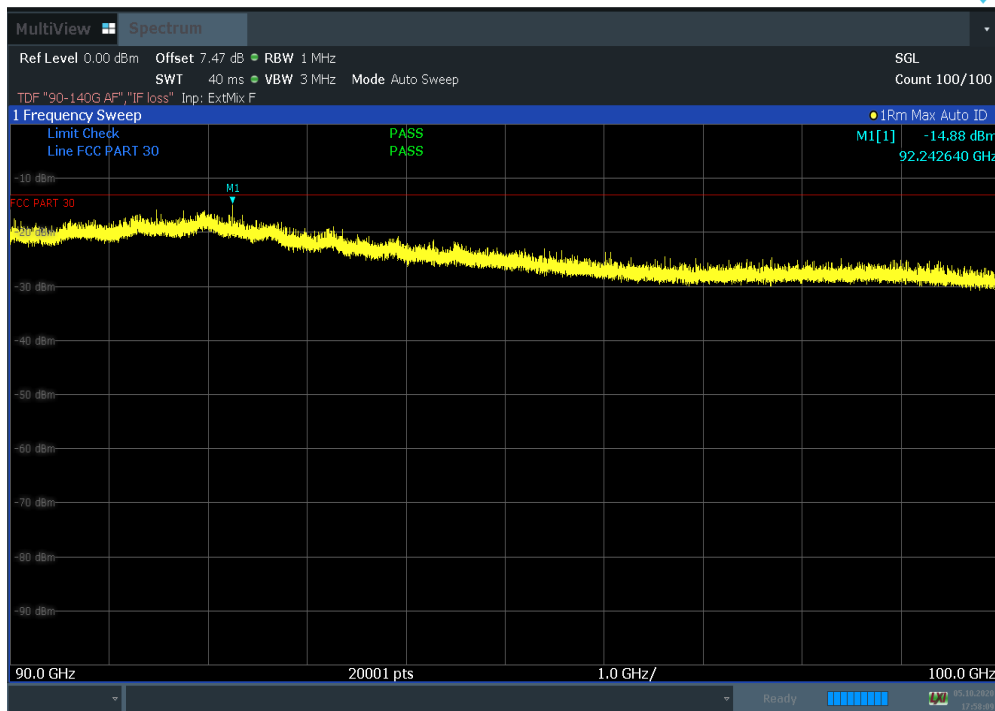
Plot 7-670. RSE 60 GHz – 90 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. H)



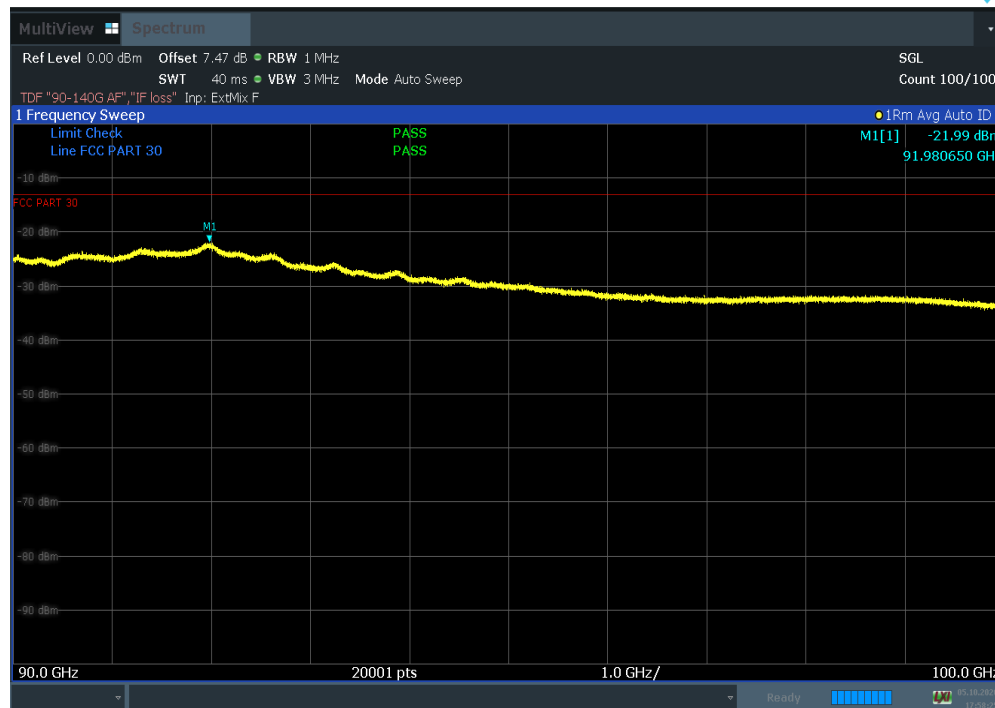
Plot 7-671. RSE 60 GHz – 90 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 397 of 466

7.5.8 Radiated Spurious Emissions Plots (90 GHz to 100 GHz)

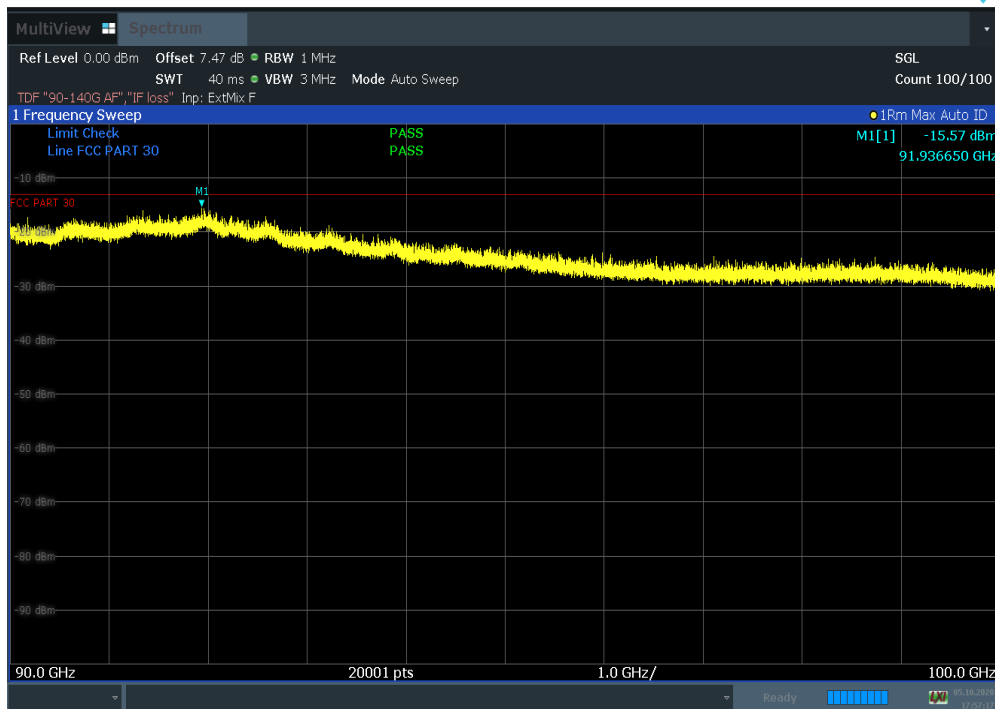


Plot 7-672. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. H)

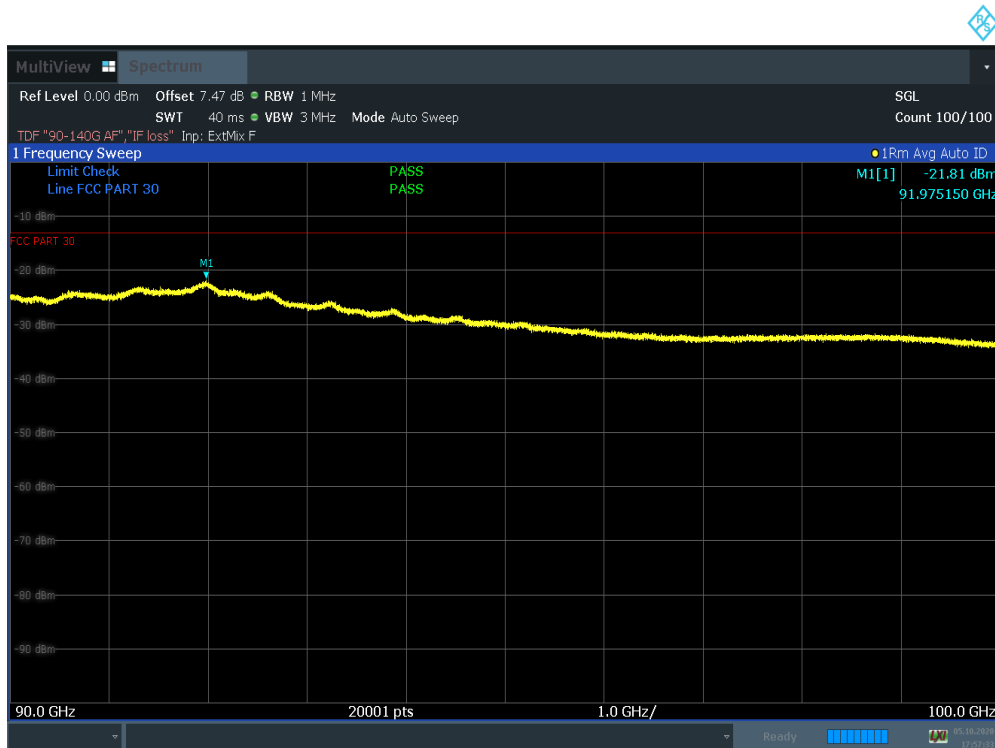


Plot 7-673. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. H, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 398 of 466

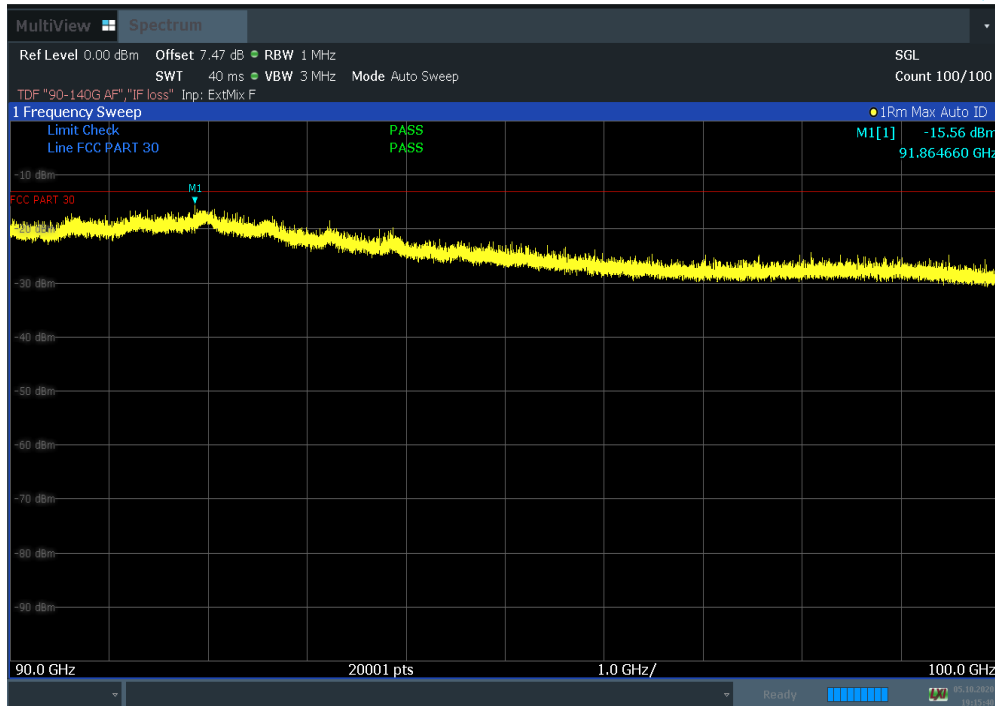


Plot 7-674. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. V)

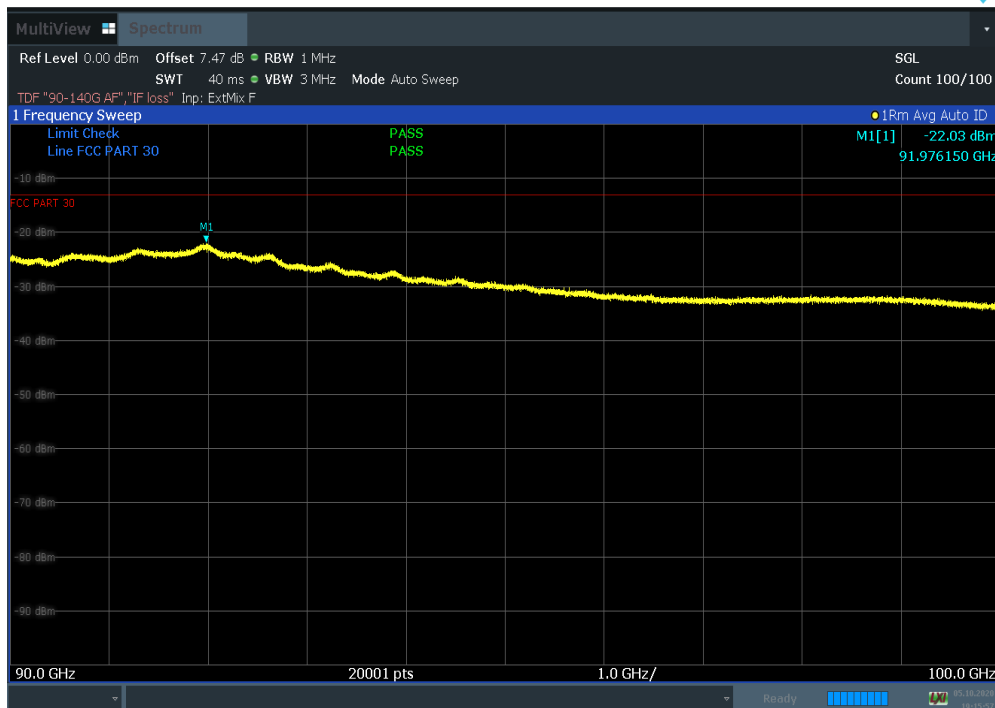


Plot 7-675. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. V, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 399 of 466

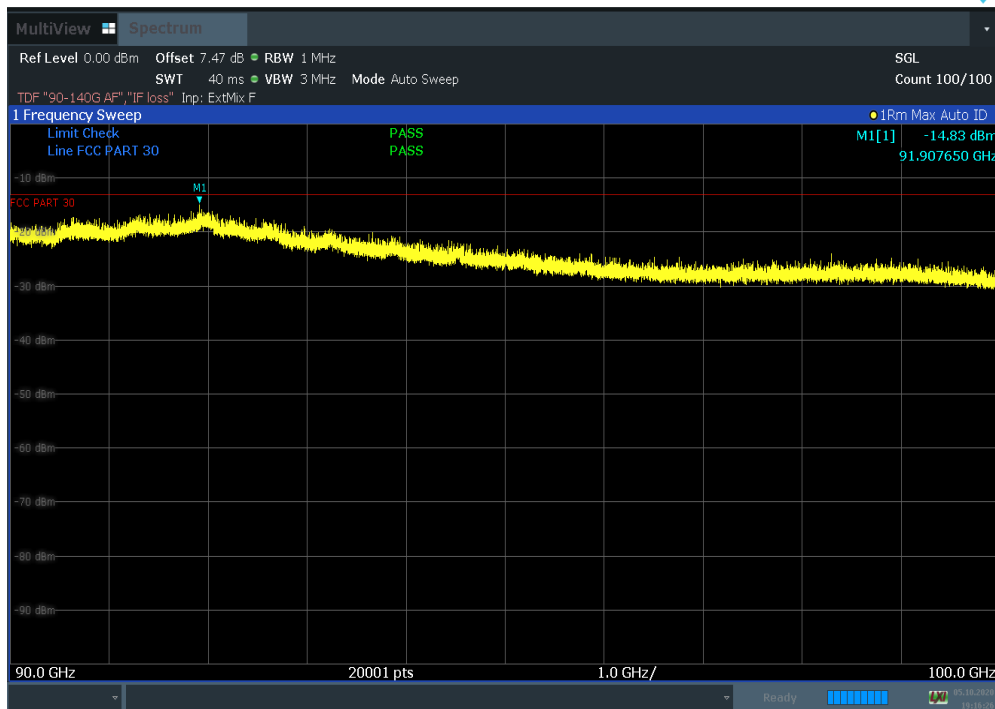


Plot 7-676. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. H)

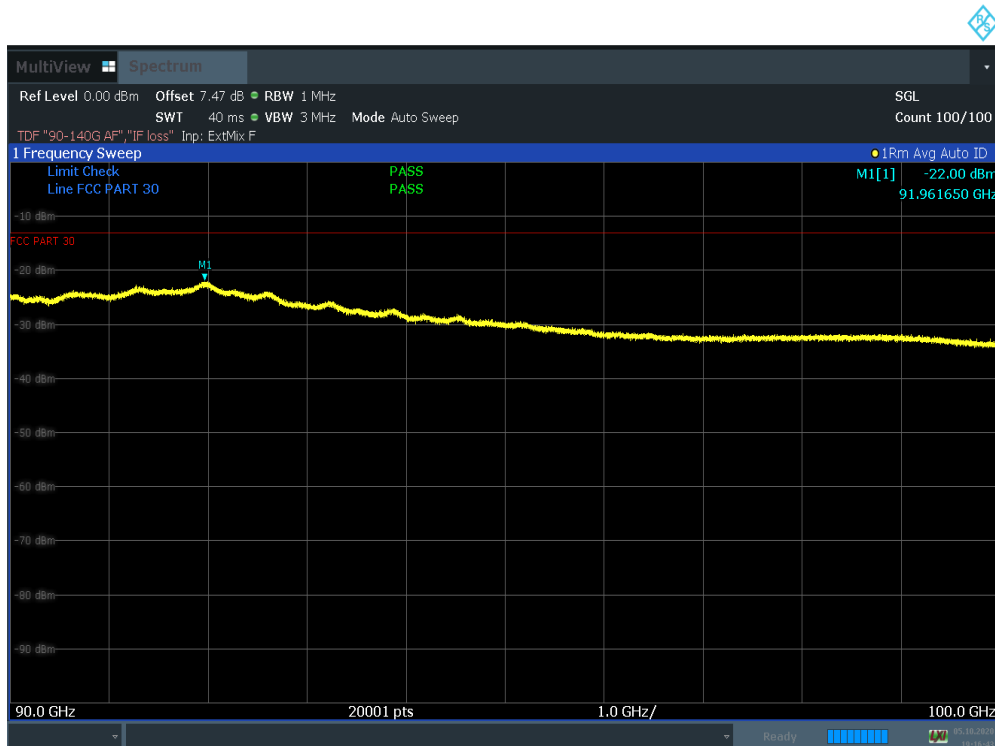


Plot 7-677. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. H, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 400 of 466

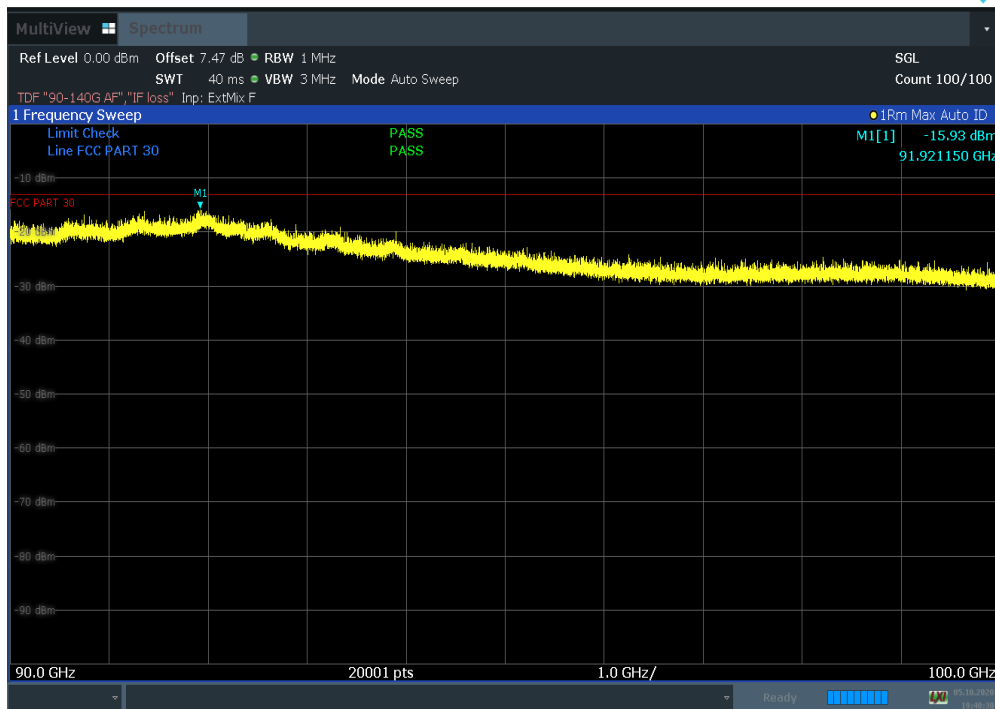


Plot 7-678. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. V)

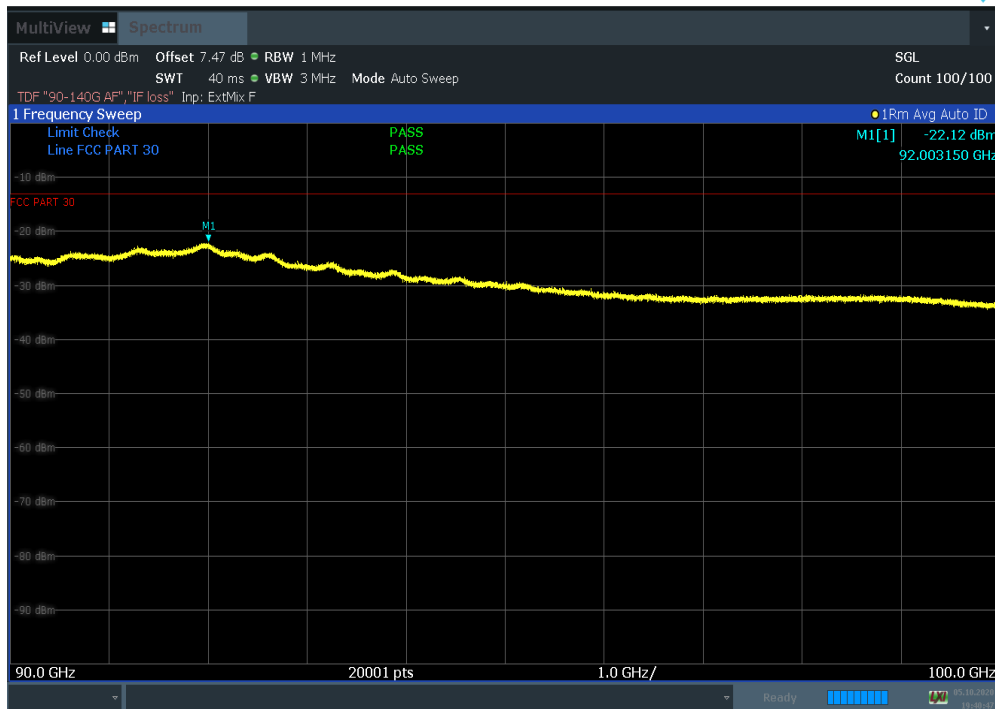


Plot 7-679. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. V, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 401 of 466

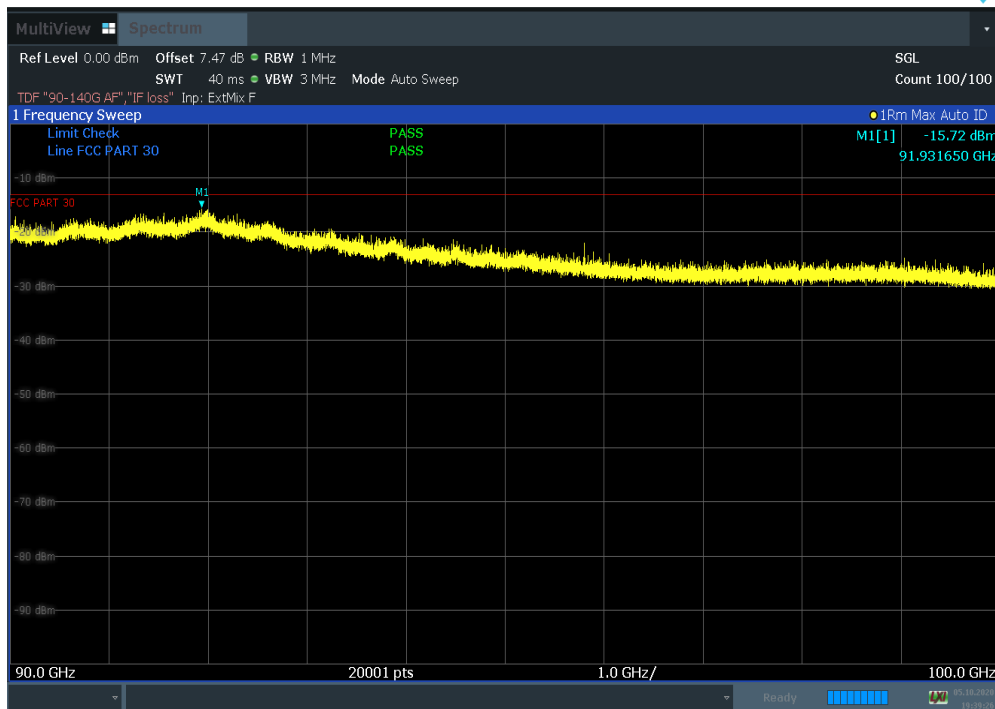


Plot 7-680. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK
Low Ant. Pol. H)

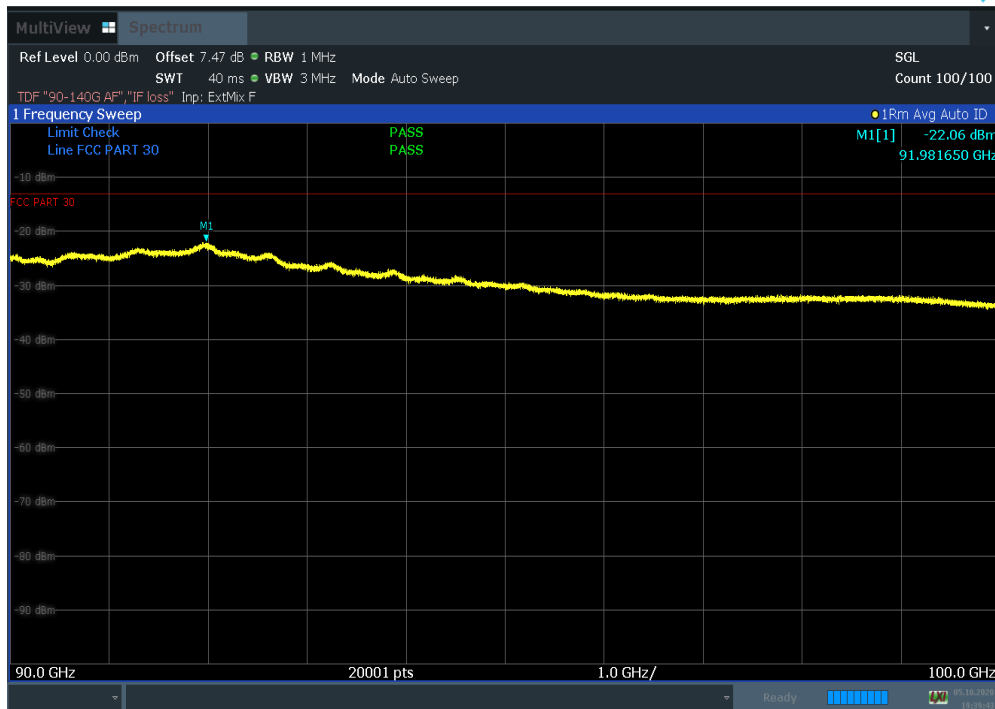


Plot 7-681. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK
Low Ant. Pol. H, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 402 of 466

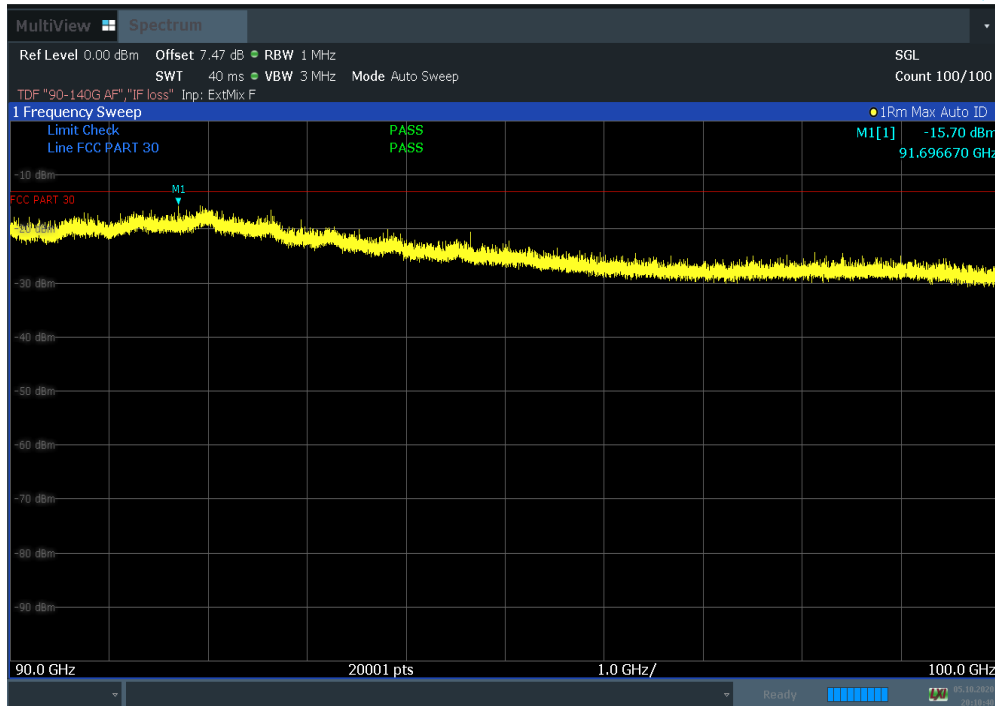


Plot 7-682. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Pol. V)

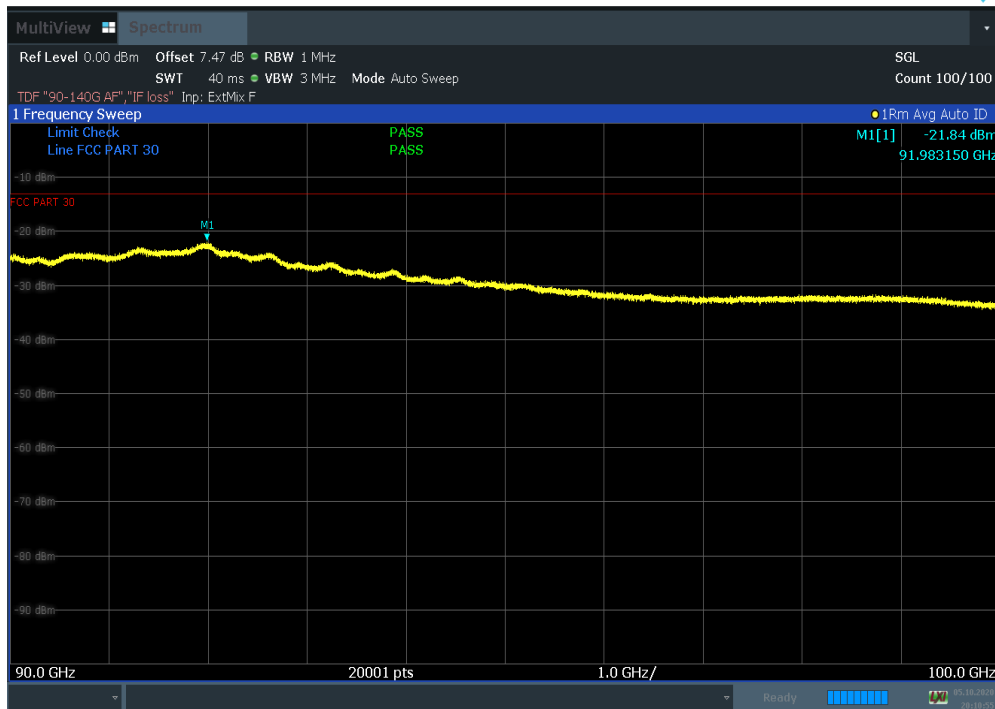


Plot 7-683. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Pol. V, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 403 of 466

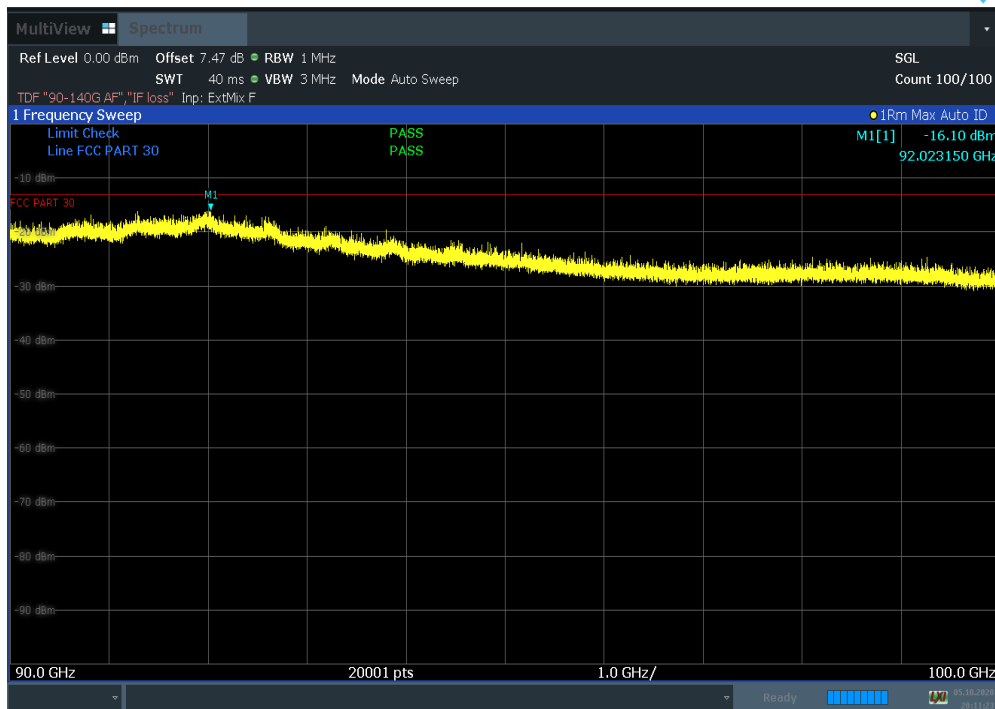


Plot 7-684. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. H)

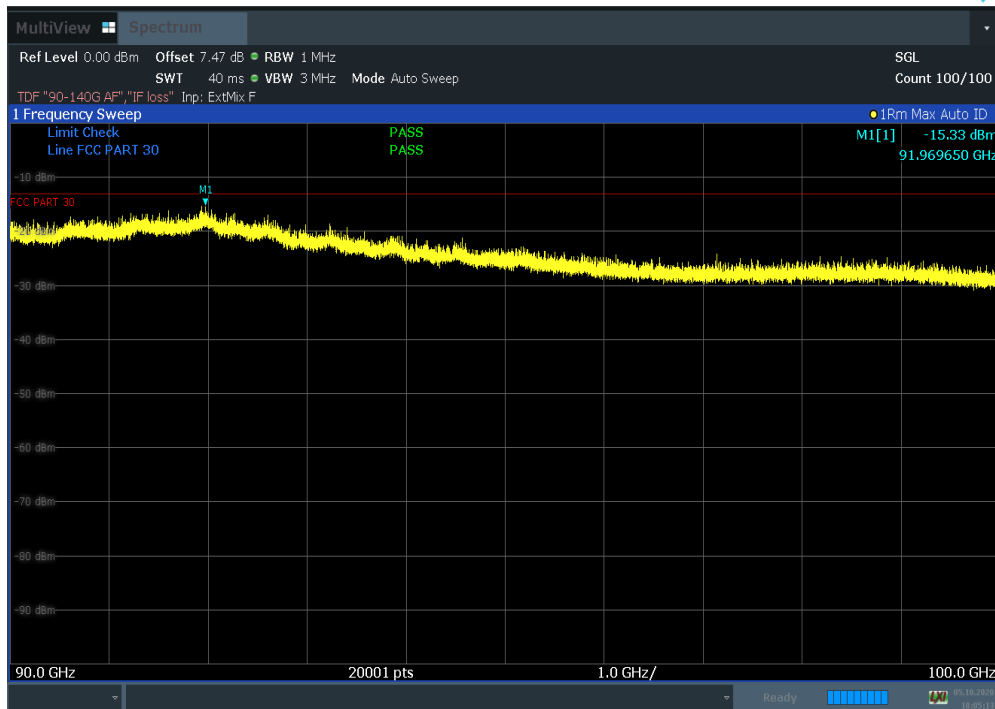


Plot 7-685. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. H, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 404 of 466

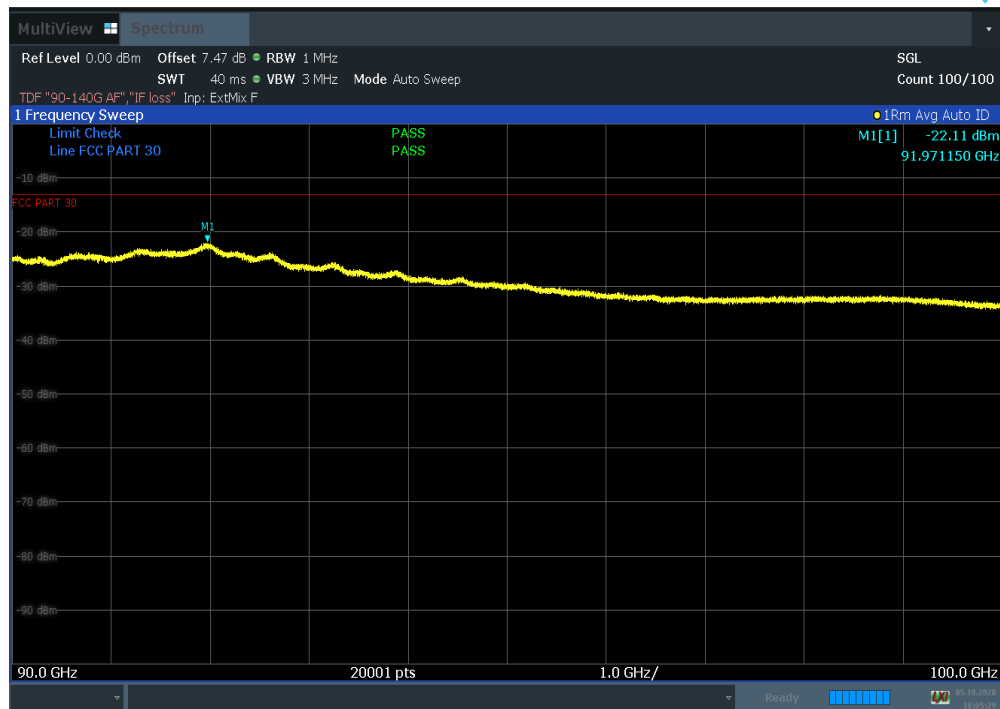


Plot 7-686. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. V)

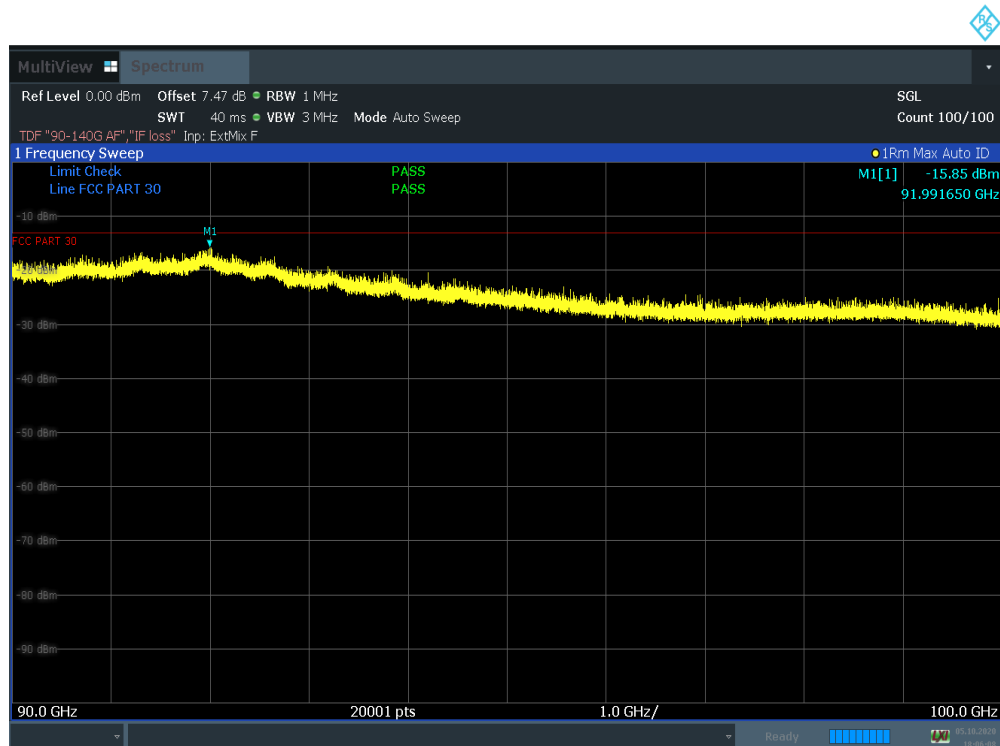


Plot 7-687. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 405 of 466

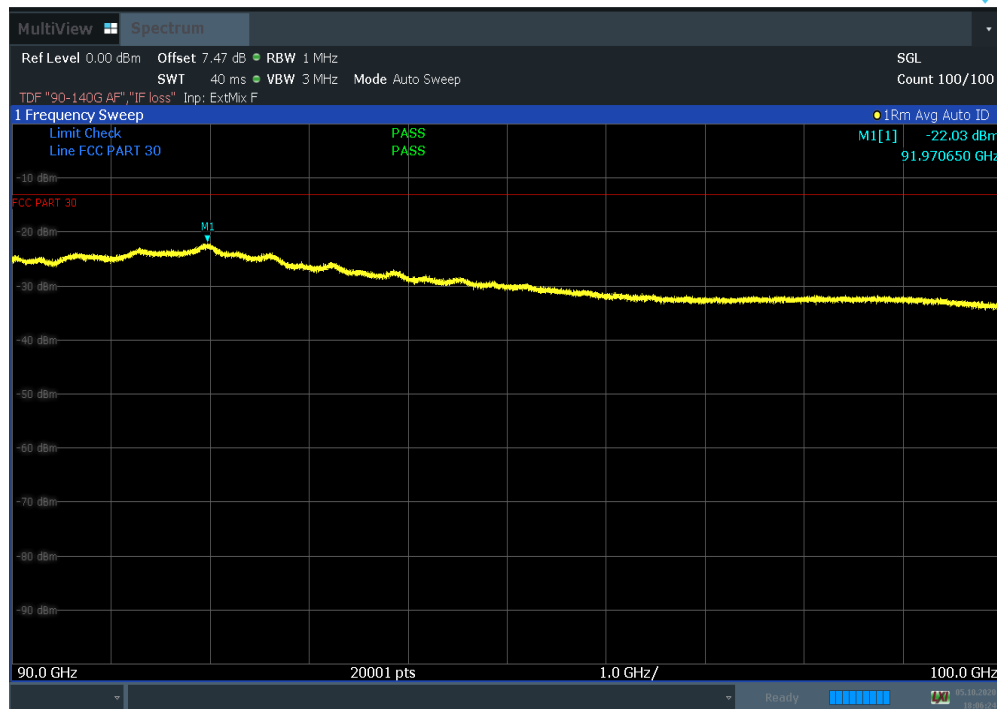


Plot 7-688. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. H, Final)

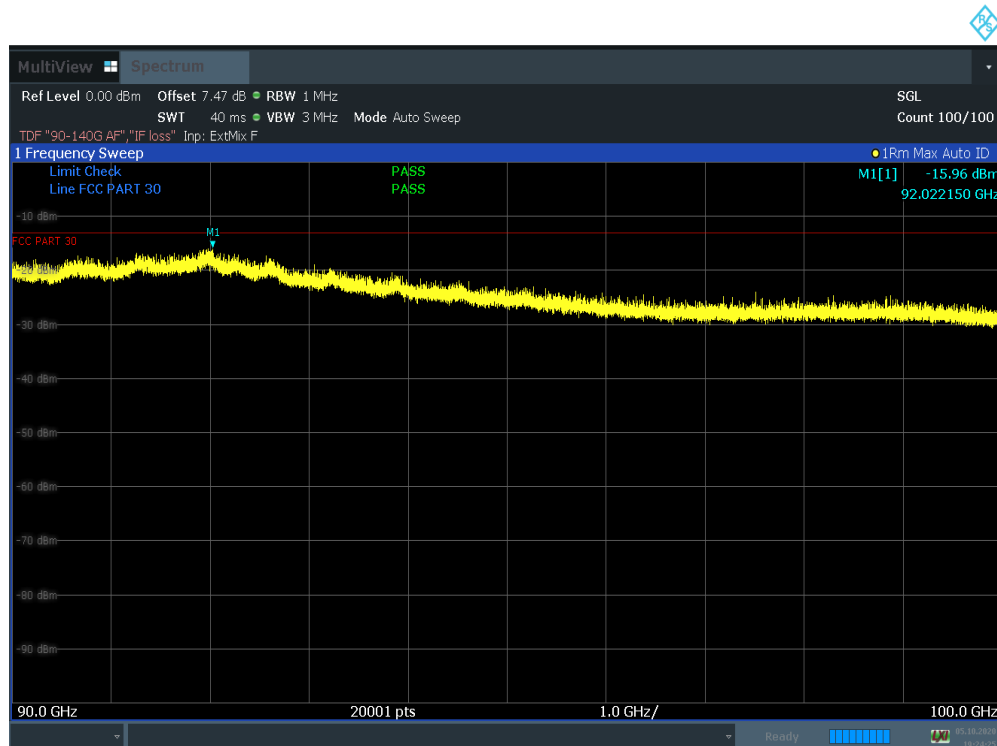


Plot 7-689. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 406 of 466

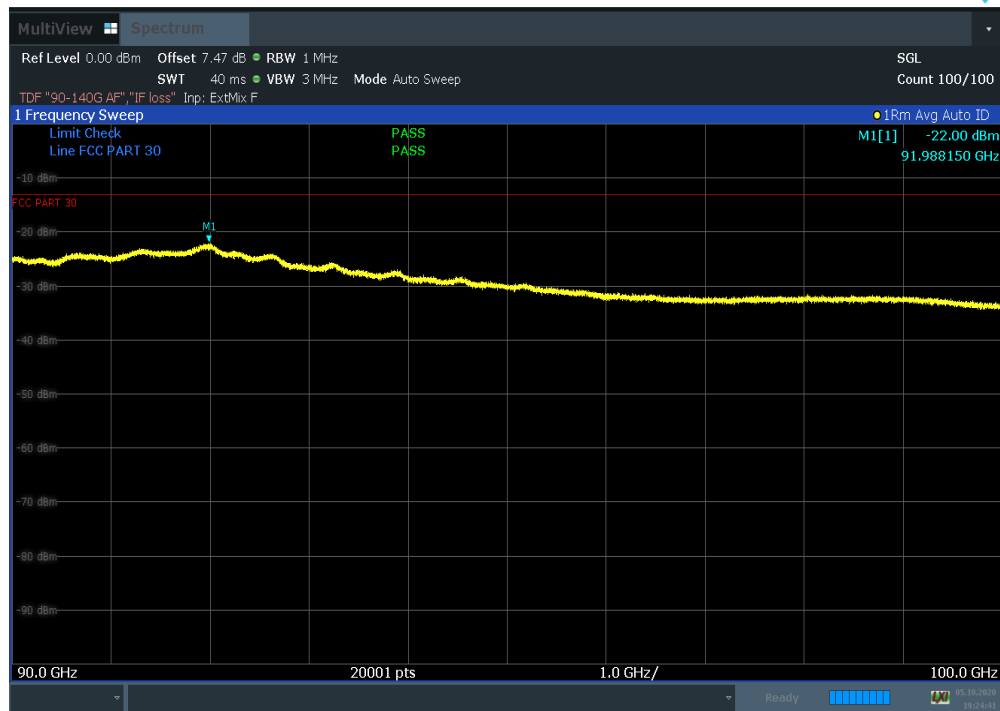


Plot 7-690. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. V, Final)

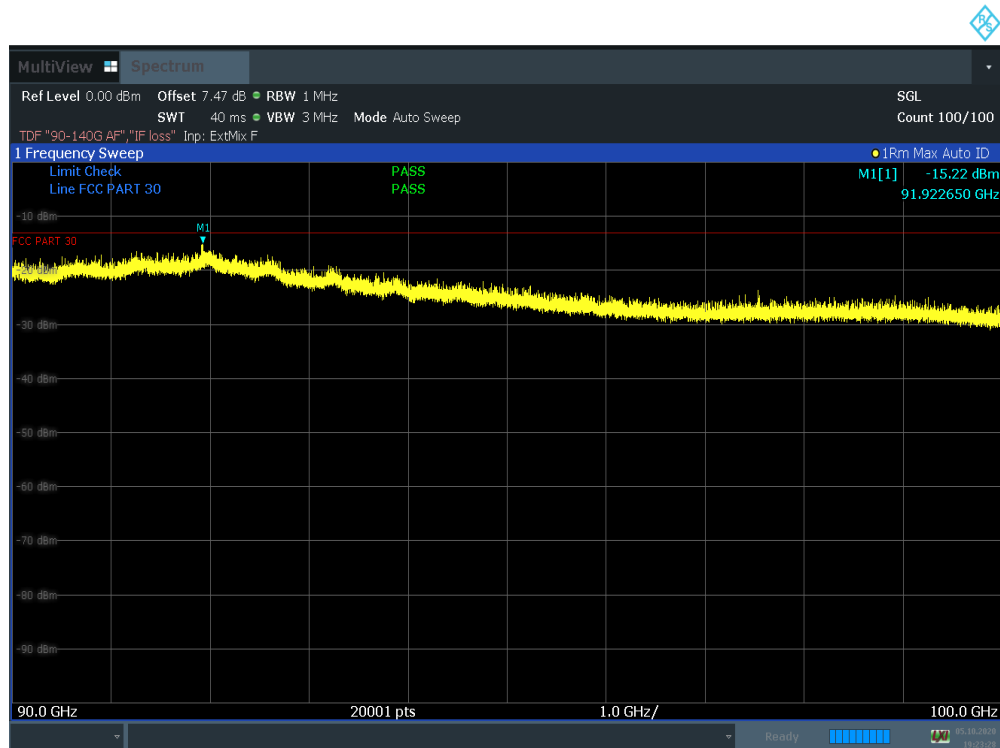


Plot 7-691. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 407 of 466

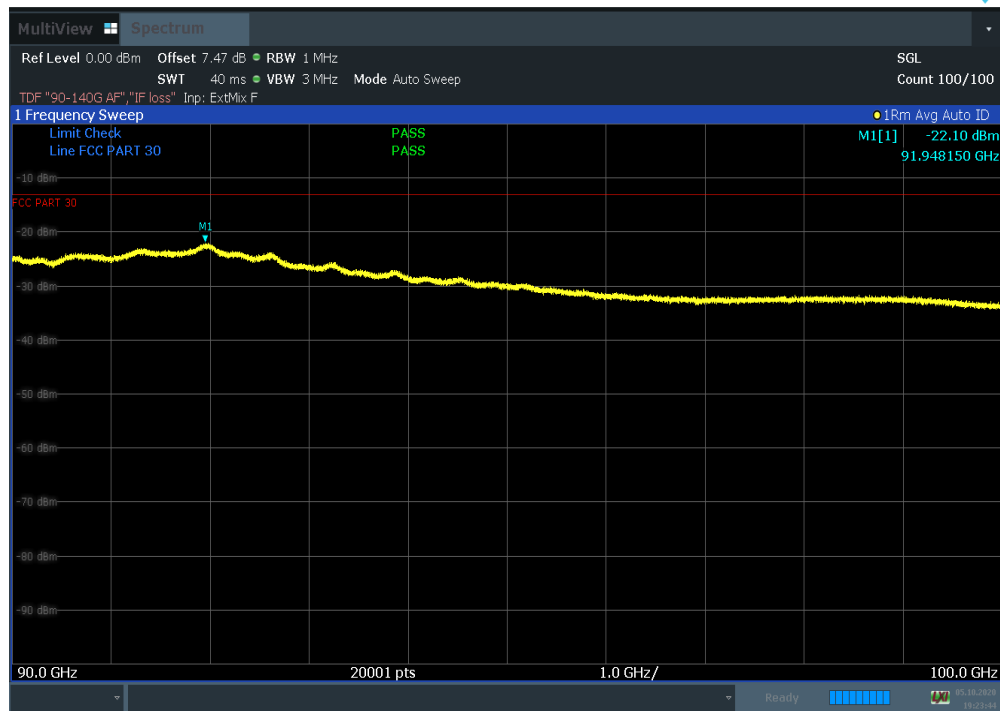


Plot 7-692. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. H, Final)

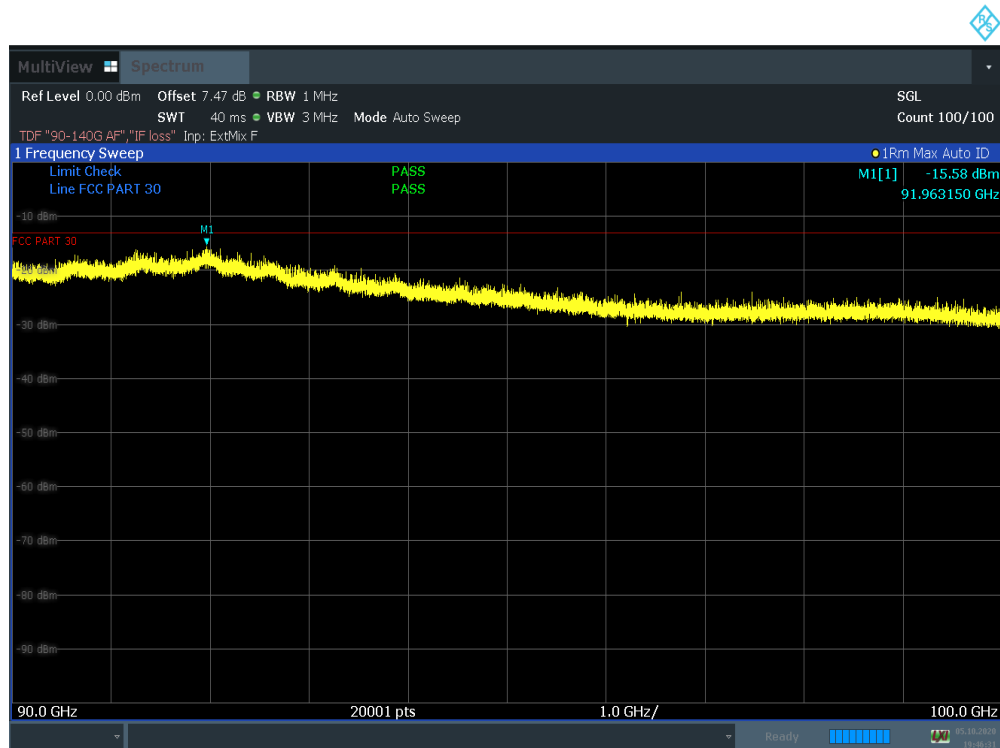


Plot 7-693. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 408 of 466

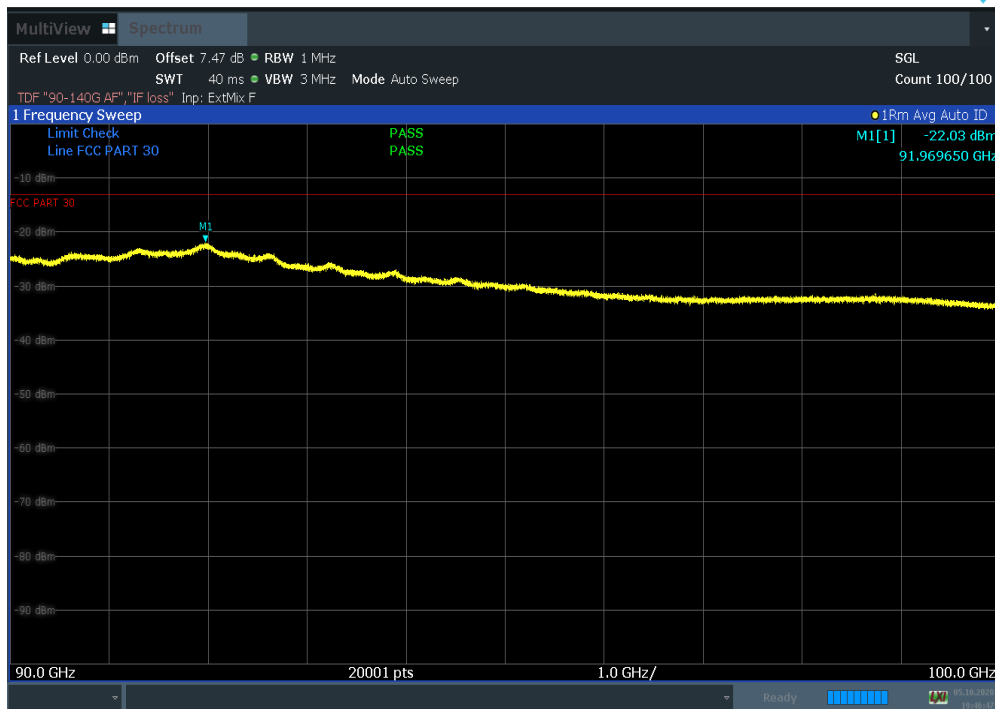


Plot 7-694. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. V, Final)

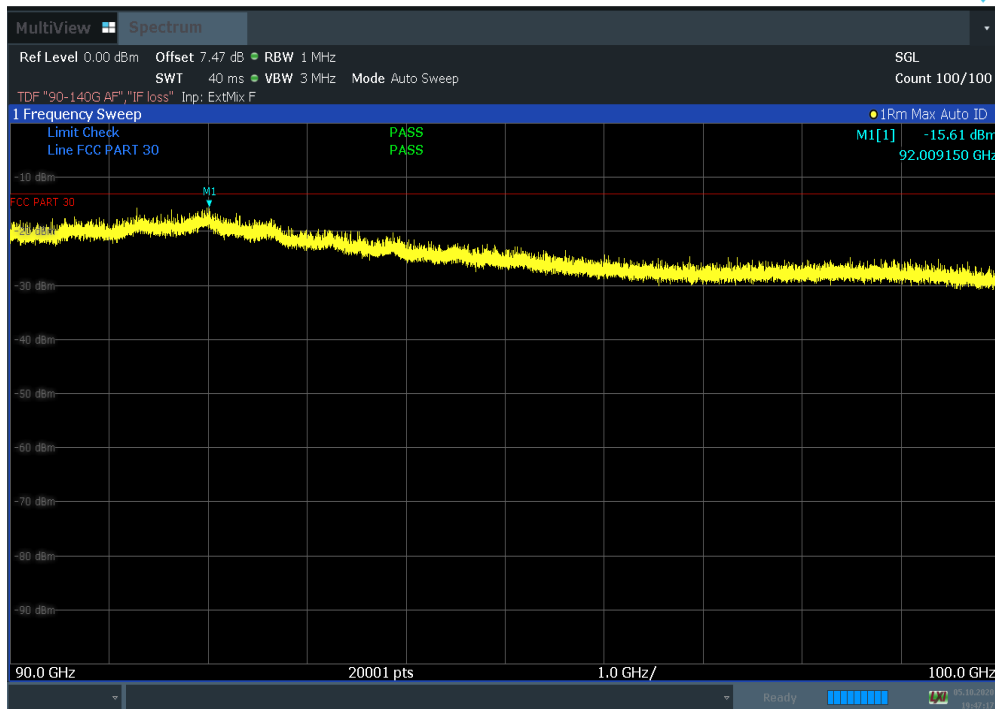


Plot 7-695. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Mid Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 409 of 466

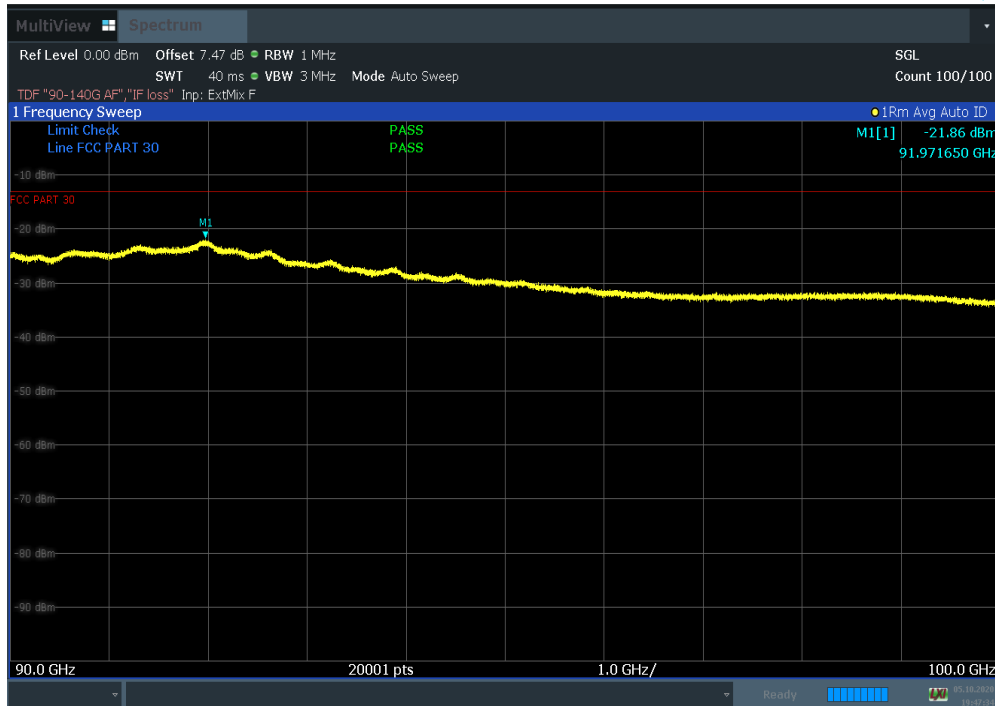


Plot 7-696. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK
Mid Ant. Pol. H, Final)

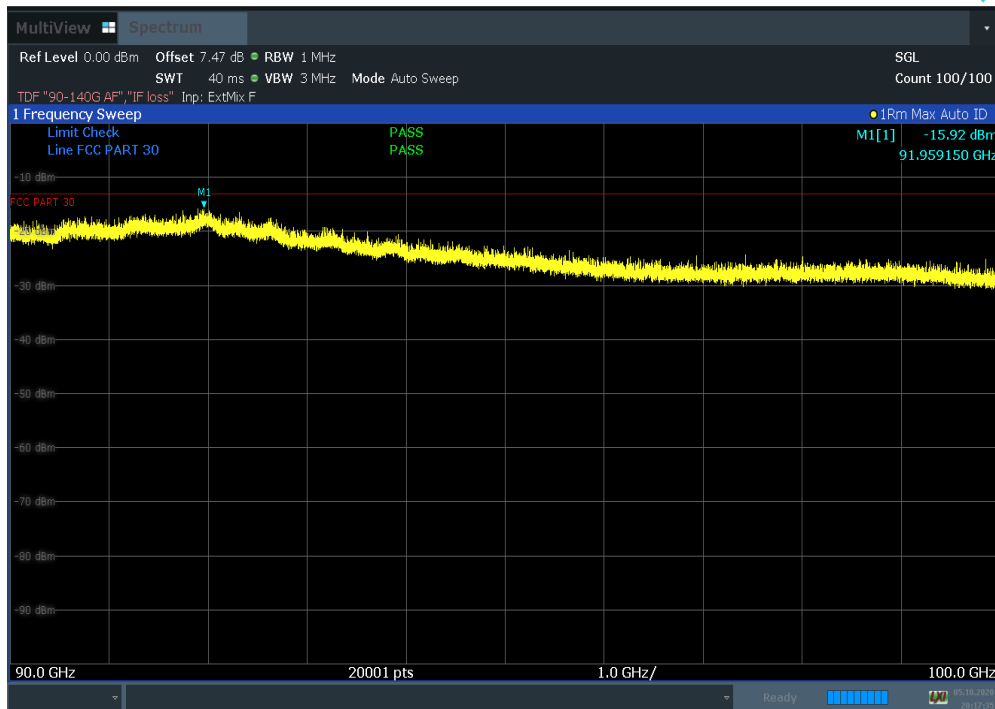


Plot 7-697. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK
Mid Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 410 of 466

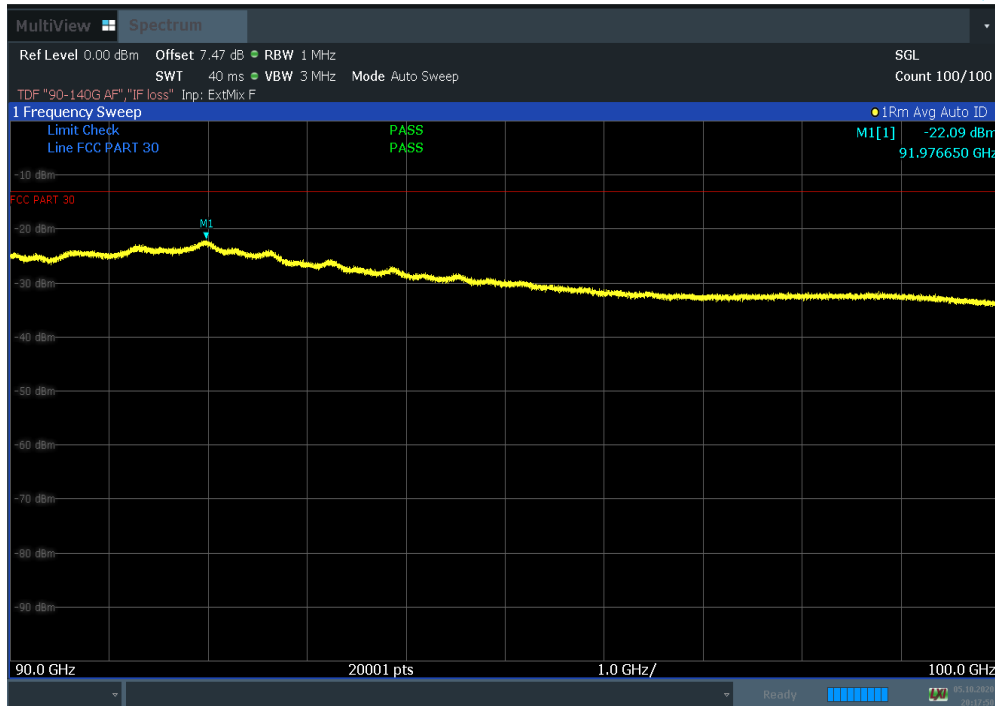


Plot 7-698. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK
Mid Ant. Pol. V, Final)

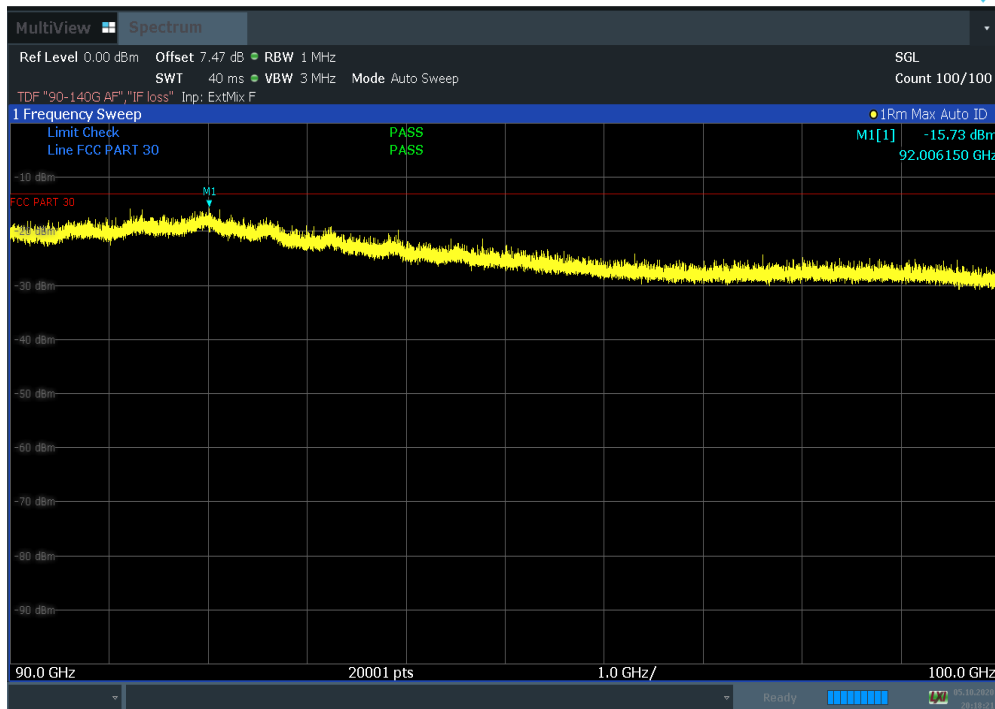


Plot 7-699. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK
Mid Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 411 of 466

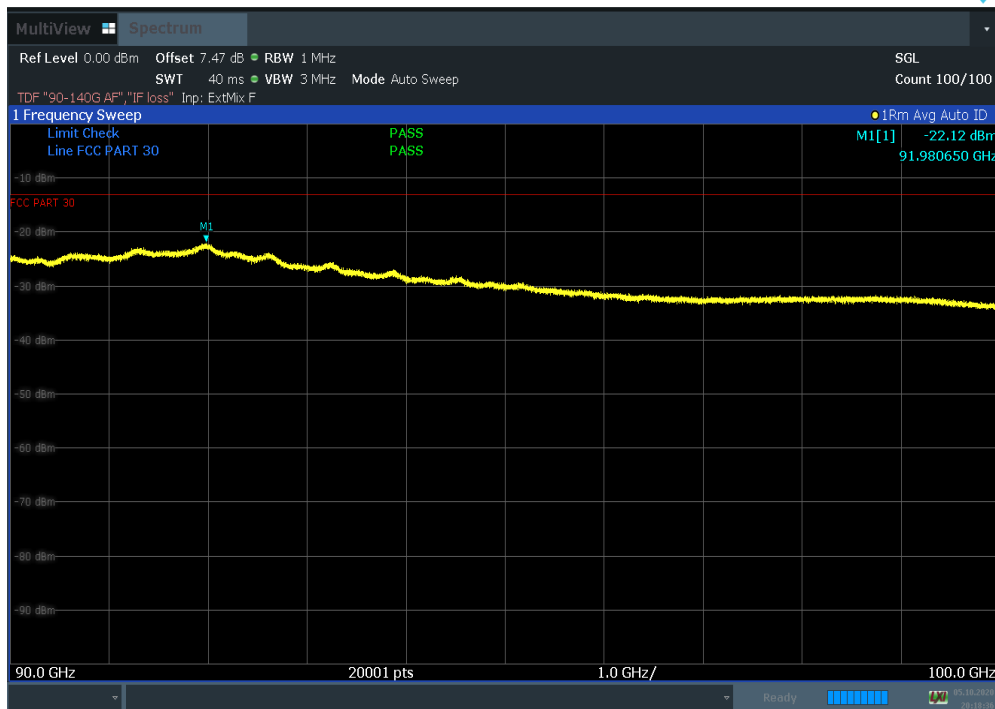


Plot 7-700. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK
Mid Ant. Pol. H, Final)

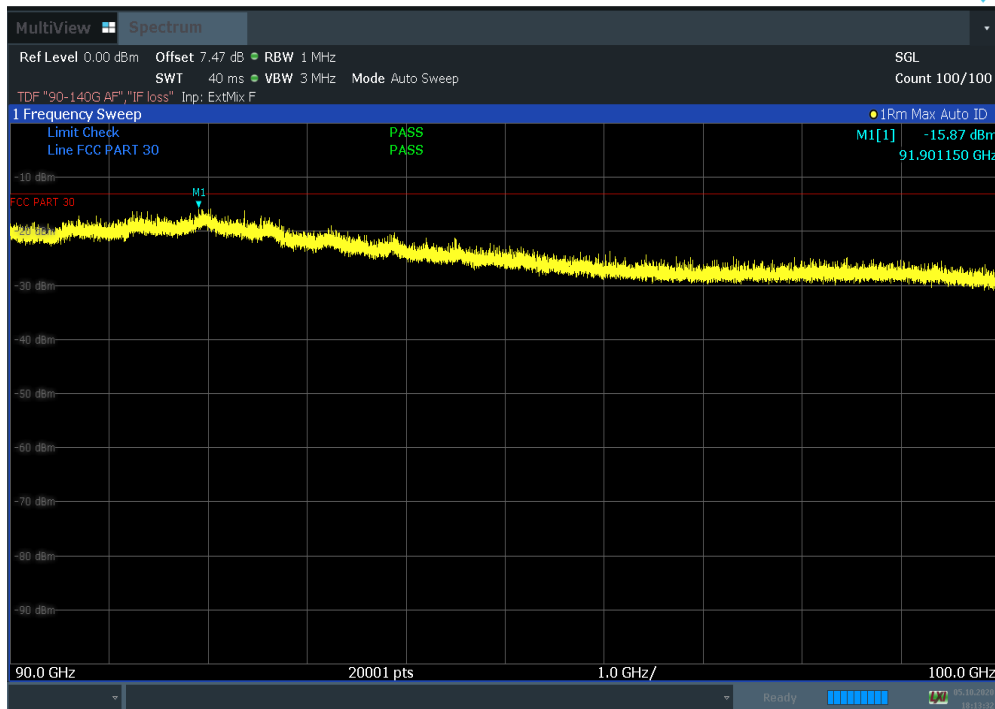


Plot 7-701. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK
Mid Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 412 of 466

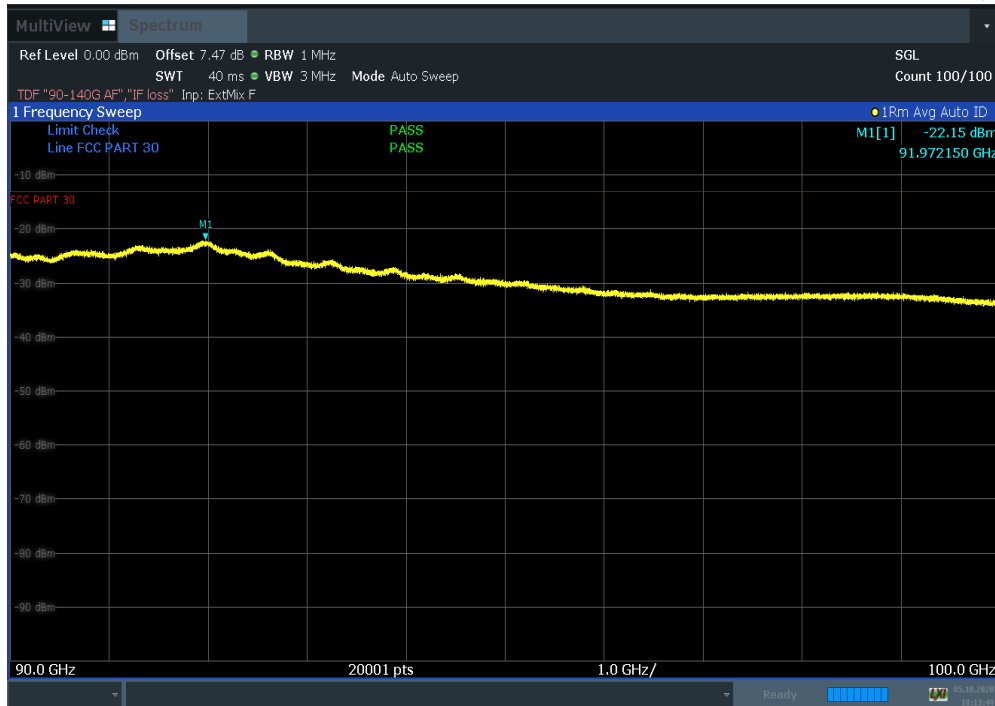


Plot 7-702. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Mid Ant. Pol. V, Final)

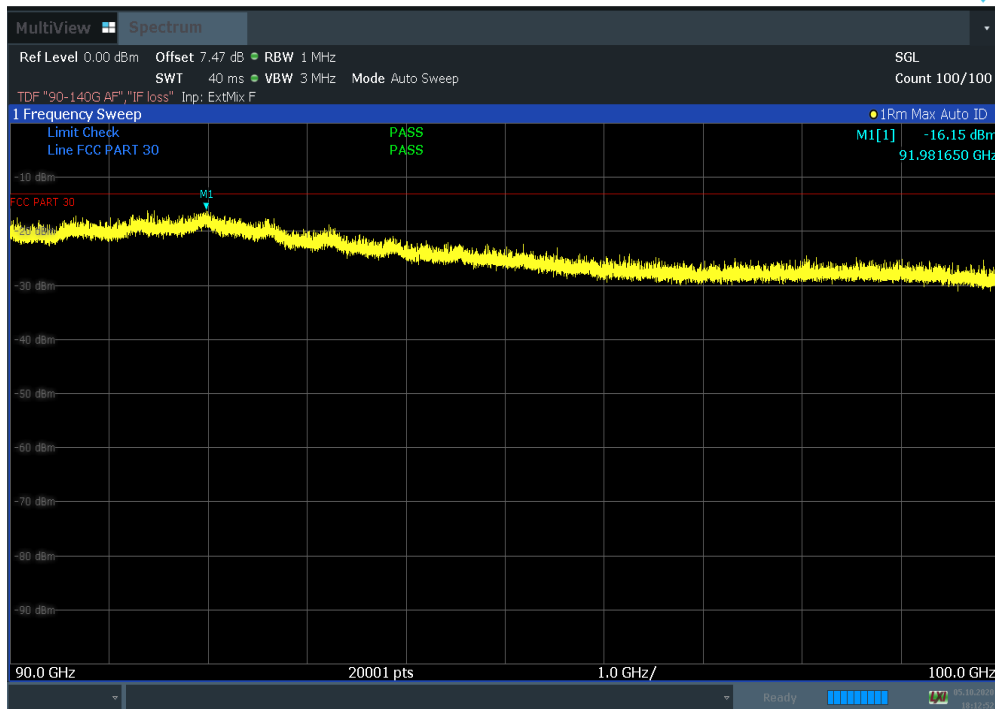


Plot 7-703. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 413 of 466

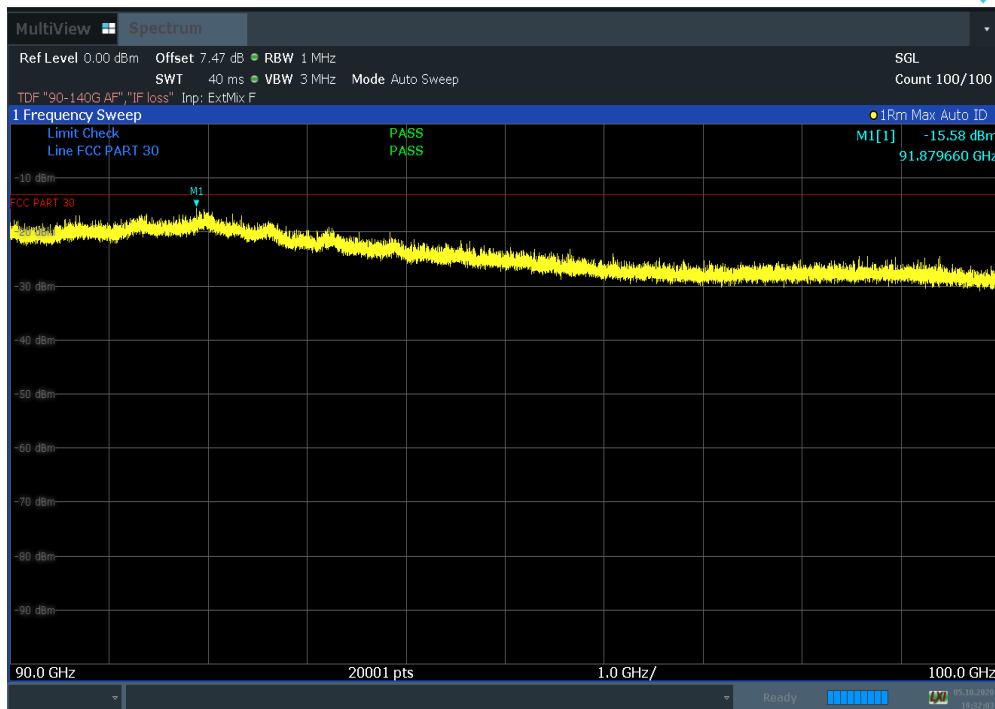


Plot 7-704. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. H, Final)

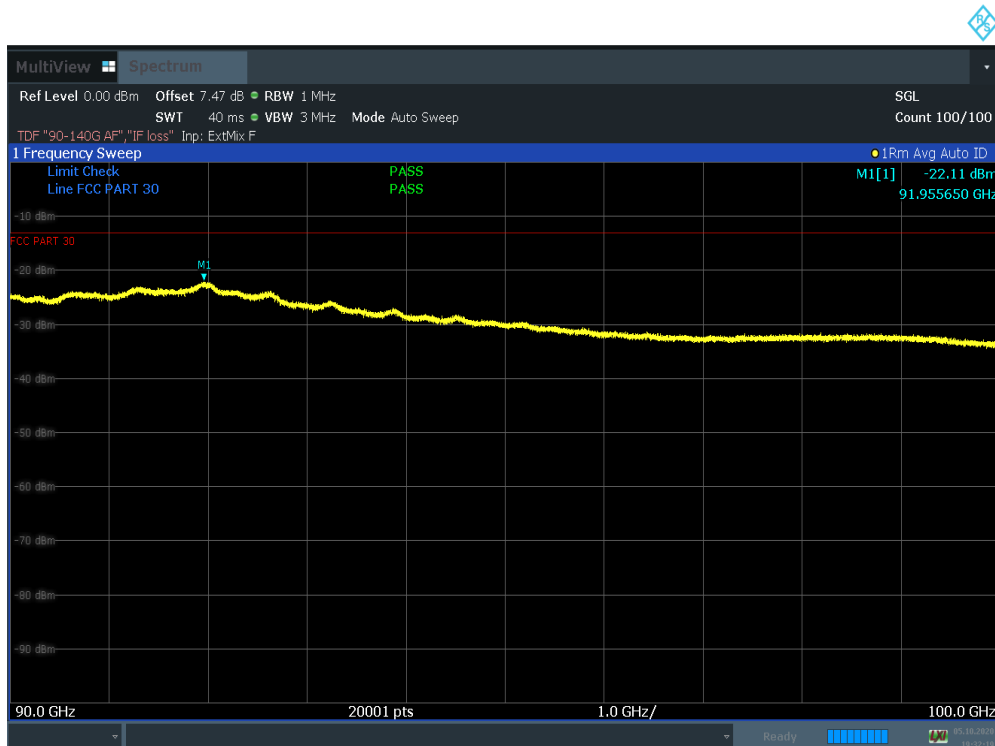


Plot 7-705. RSE 90 GHz – 100 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 414 of 466

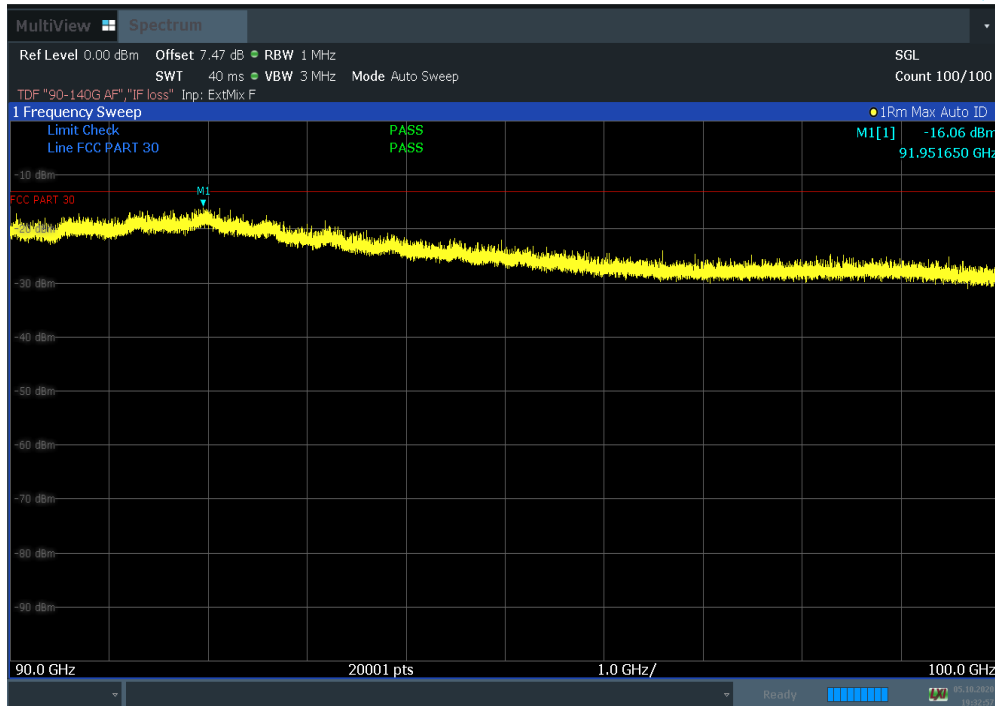


Plot 7-706. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. H)

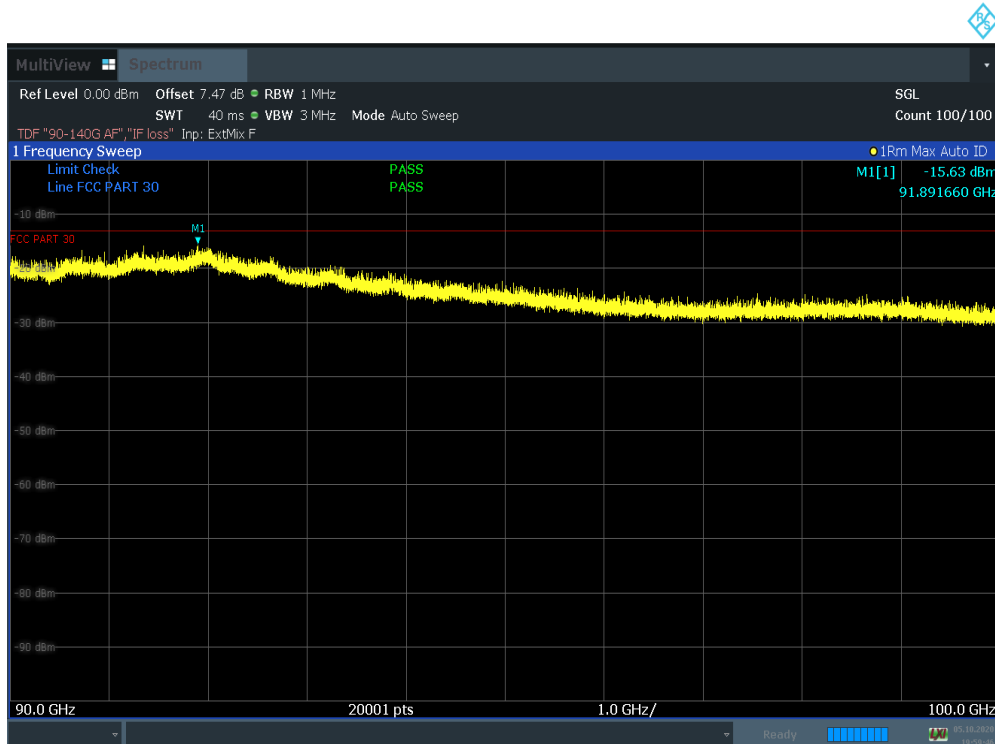


Plot 7-707. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. H, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 415 of 466

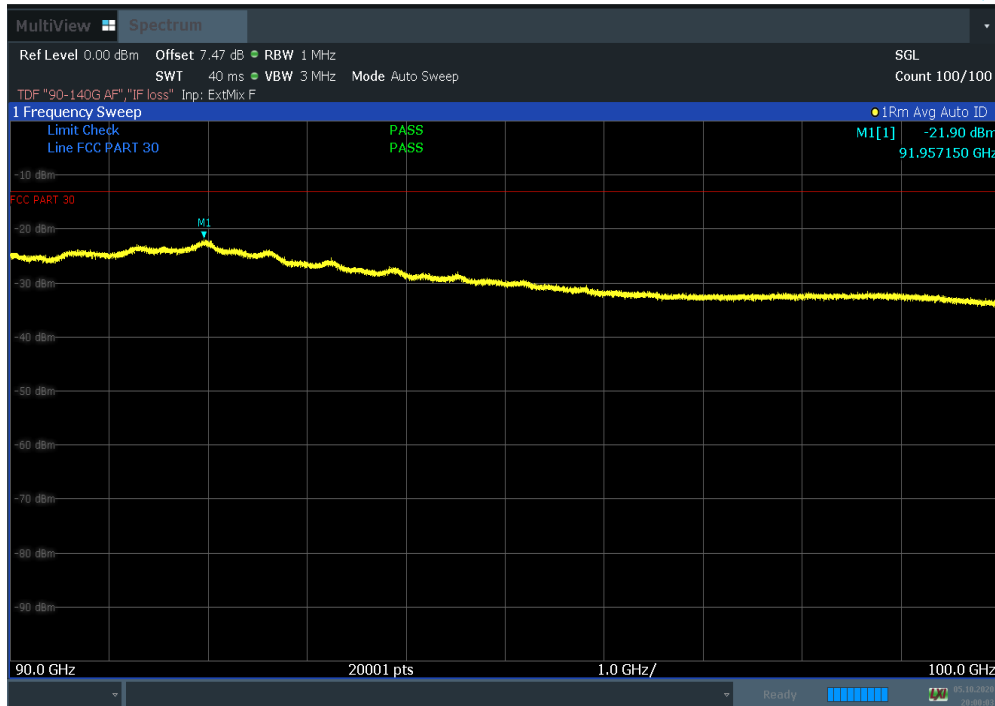


Plot 7-708. RSE 90 GHz – 100 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. V)

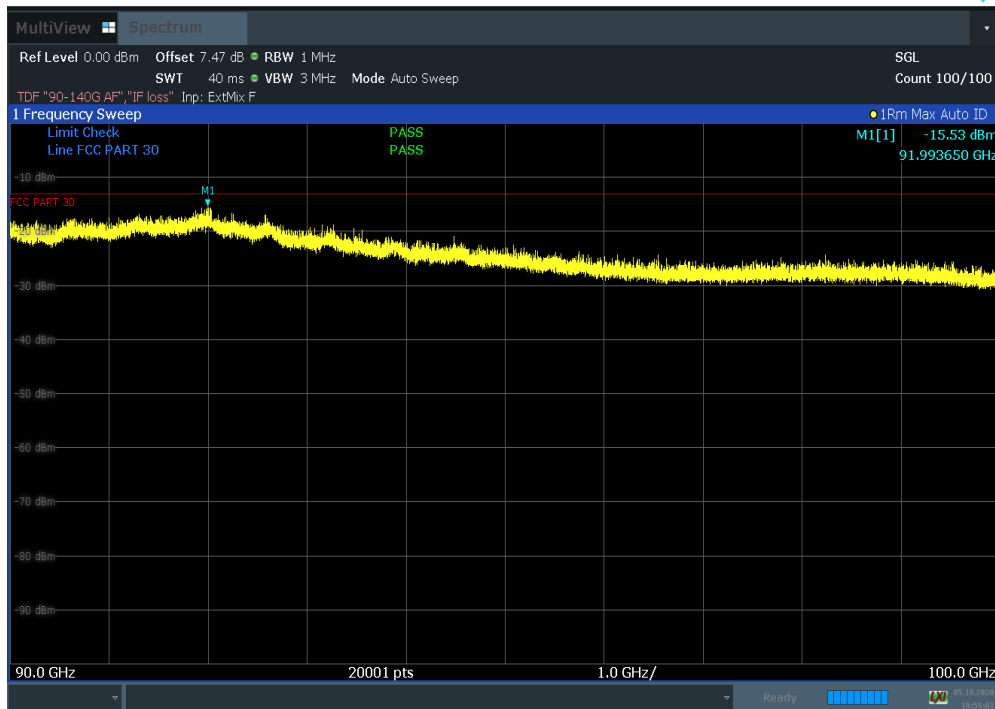


Plot 7-709. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 416 of 466

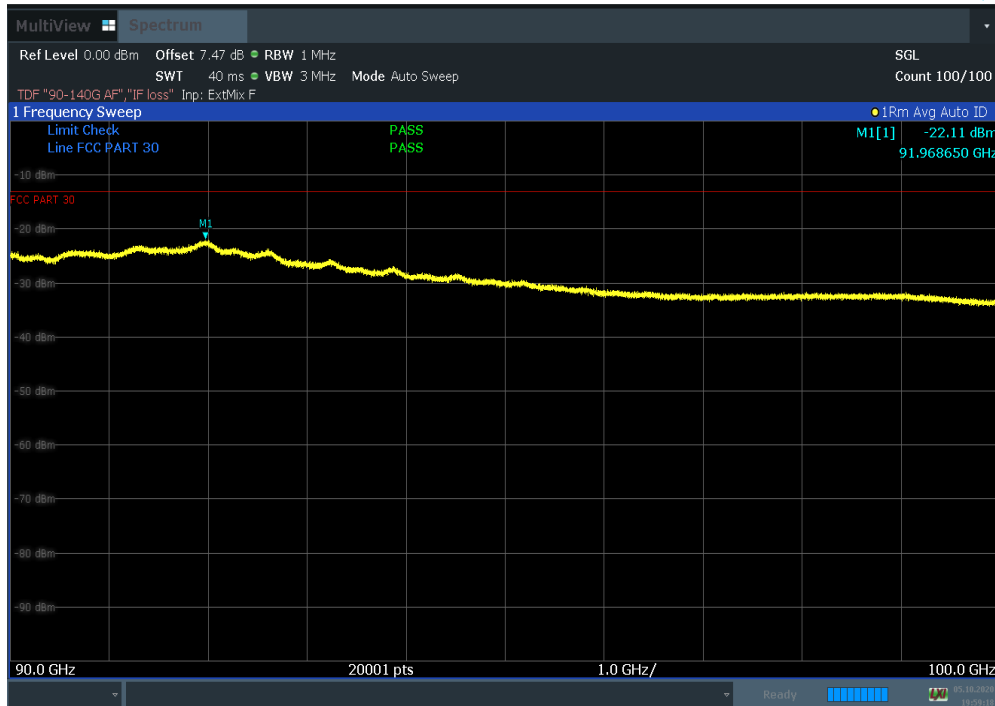


Plot 7-710. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. H, Final)

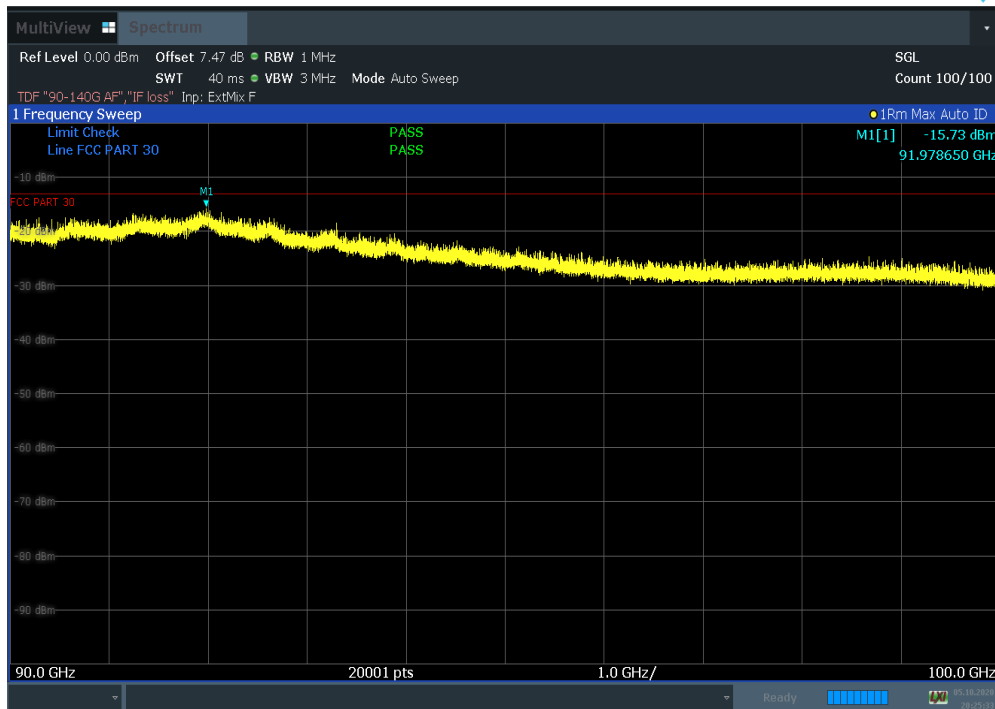


Plot 7-711. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 417 of 466

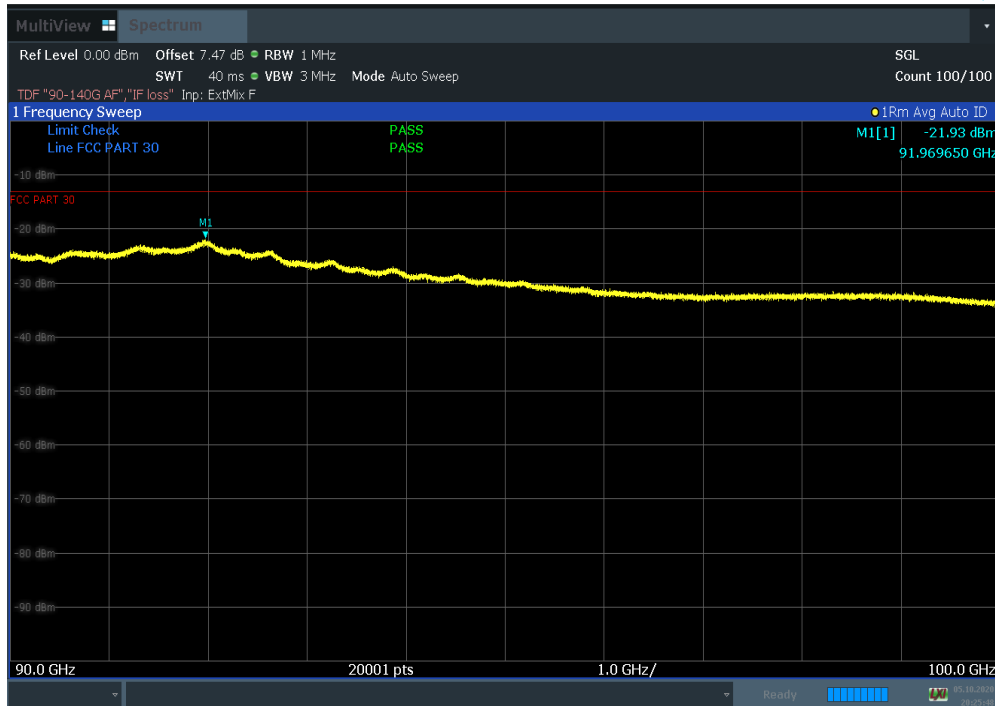


Plot 7-712. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. V, Final)

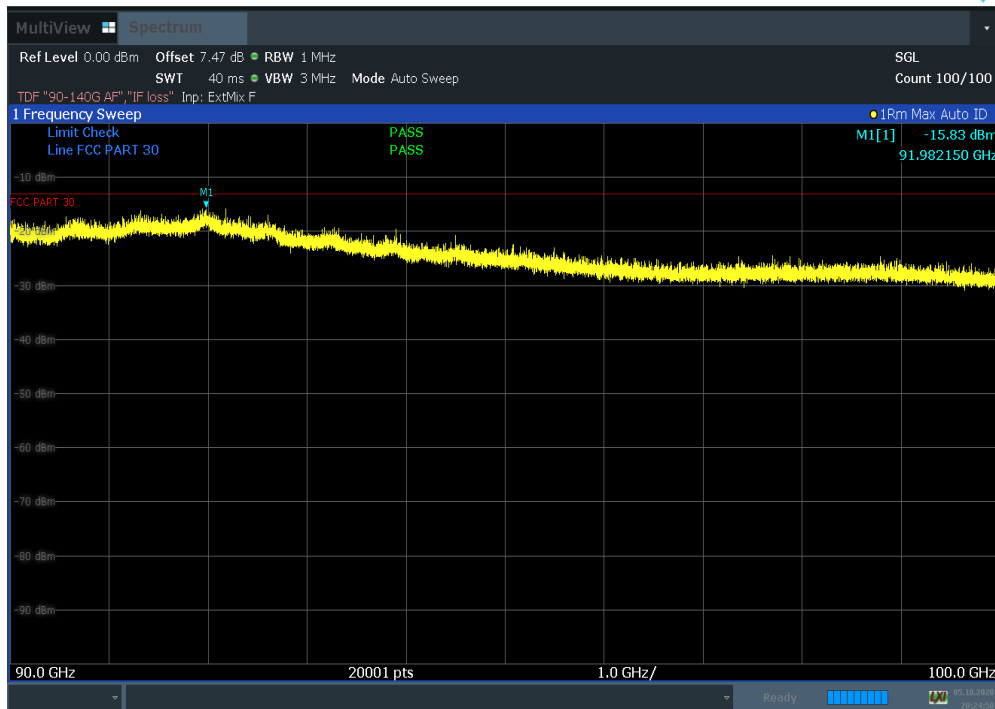


Plot 7-713. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. H)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 418 of 466

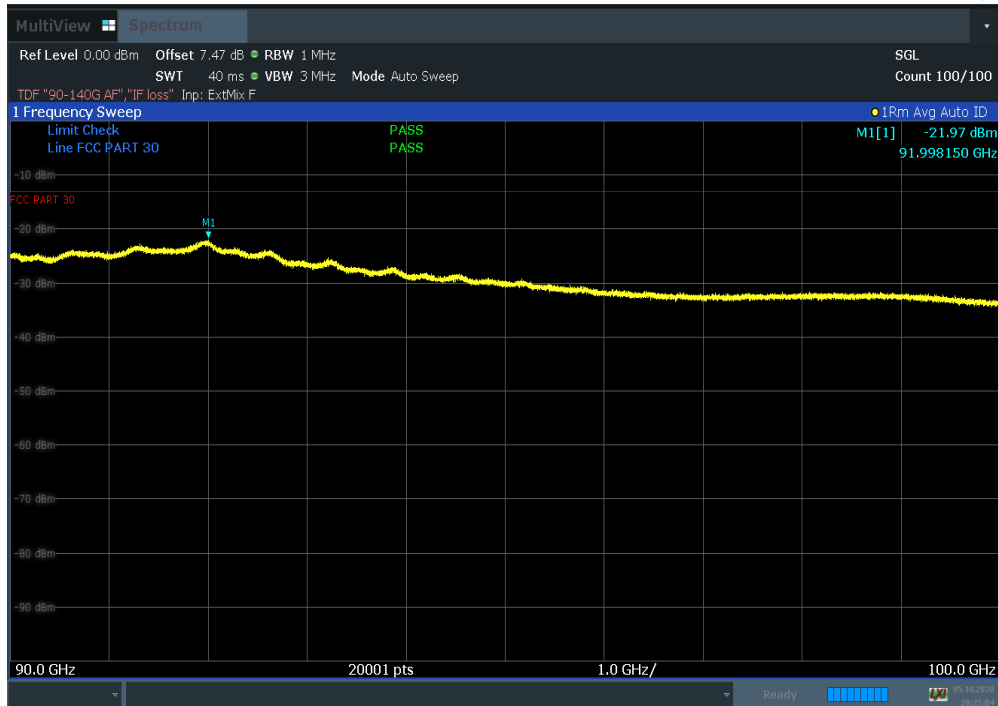


Plot 7-714. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. H, Final)



Plot 7-715. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. V)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 419 of 466



Plot 7-716. RSE 90 GHz – 100 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK
High Ant. Pol. V, Final)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 420 of 466

7.6 Band Edge Emissions

§2.1051 §30.203

Test Overview

All out of band emissions are measured in a radiated setup while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is -13 dBm / 1 MHz. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm / MHz or lower.

Test Procedure Used

ANSI C63.26-2015 Section 5.7.3
 ANSI C63.26-2015 Section 6.4
 KDB 842590 D01 v01r01 Section 4.4.2.5

Test Settings

1. Start and stop frequency were set such that both upper and lower band edges are measured.
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW = 1 MHz
4. VBW $\geq 3 \times$ RBW
5. Detector = RMS
6. Number of sweep points $\geq 2 \times$ Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Notes

- 1) The EUT was tested while positioned upright and mounted on a mast 1.5 m height. The worst case emissions are reported with the EUT in this fixed position and with the modulations and active component carriers shown in the tables below.
- 2) All measurements in this section was performed in the radiated setup in the far field.
- 3) All appropriate Antenna Factor and Cable Loss have been applied in the spectrum analyzer for each measurement. Additionally, band Edge measurements in this section are shown as equivalent conductive powers for direct comparison to the 30.203 limit. The conductive power at the band edge is calculated by subtracting the gain of the EUT's antenna from the measured EIRP level. Antenna Gain information is shown on the following page.
- 4) 1CC = 1 Component Carrier Active, 8CC = 8 Component Carriers Active, and 8CC NC = 8 Non-contiguous Component Carriers Active. Each component carrier's bandwidth is either of 50 MHz or 100 MHz Bandwidth.

FCC ID: A3LAT1K04-B00	 Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 421 of 466

- 5) For band edge measurement of the receive horn antenna was maximized on Antenna A were individually energized and measured while maintaining maximized position on Antenna A. These measurements were saved into a spreadsheet and their spectra were summed to determine the total conducted power for the band edge emissions level shown starting in Section 7.6.5. The same procedure was repeated with the receive horn antenna maximized on Antennas B, C, and D.
- 6) The MIMO Band Edges were calculated by using the “measure and sum the spectra across the outputs” technique specified in Section 6.4.3.2.2 of ANSI C63.26-2015. The spectra were summed linearly and converted to dBm for comparison with the limit.
- 7) 10% outside of the channel bandwidth range result to be referred from 7.5 Radiated Spurious and Harmonic Emissions due to EUT Antenna subtraction calculation applying. Thus, some failure results are performed of TRP measurement method.

FCC ID: A3LAT1K04-B00	 Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 422 of 466

7.6.1 Antenna Gain Information at the Band Edge

The following antenna gain information is provided to demonstrate the antenna performance of the 27 to 28.85 GHz band. These antenna gains were subtracted from the measured EIRP levels at the lower and upper band edge frequencies to determine an equivalent conductive power that was compared directly with the §30.203 limits.

Frequency [GHz]	Gain [dBi]	Frequency [GHz]	Gain [dBi]
27.0	27.75	28.1	28.227
27.1	27.78	28.2	28.315
27.2	27.85	28.3	28.321
27.3	27.9	28.35	28.328
27.4	28.07	28.4	28.342
27.5	28.12	28.5	28.287
27.6	28.142	28.6	28.422
27.7	28.155	28.7	28.48
27.8	28.163	28.8	28.512
27.9	28.181	28.85	28.533
28.0	28.21		

Table 7-22. Antenna Gains at the Band Edges

Sample Analyzer Offset Calculation (at 27.5 GHz)

Measurement Antenna Factor = 39.54 dB/m

Cable Loss = 8.03 dB

Far Field Distance = 3.19 m

EUT Antenna Gain = 28.12 dBi

Duty Cycle Correction Factor = 1.3865 dB

Analyzer Offset (dB) = AF (dB/m) + CL (dB) + 107 + 20log₁₀(D) – 104.8 dB – Gain (dBi) + Duty Correction factor (dB)

$$= 39.54 \text{ dB/m} + 8.03 \text{ dB} + 107 + 20\log_{10}(3.19) - 104.8 \text{ dB} - 28.12 \text{ dBi} + 1.3865 \text{ dB}$$

$$= 33.11 \text{ dB}$$

Sample Analyzer Offset Calculation (at 28.35 GHz)

Measurement Antenna Factor = 39.74 dB/m

Cable Loss = 8.27 dB

Far Field Distance = 3.19 m

EUT Antenna Gain = 28.328 dBi

Duty Cycle Correction Factor = 1.3865 dB

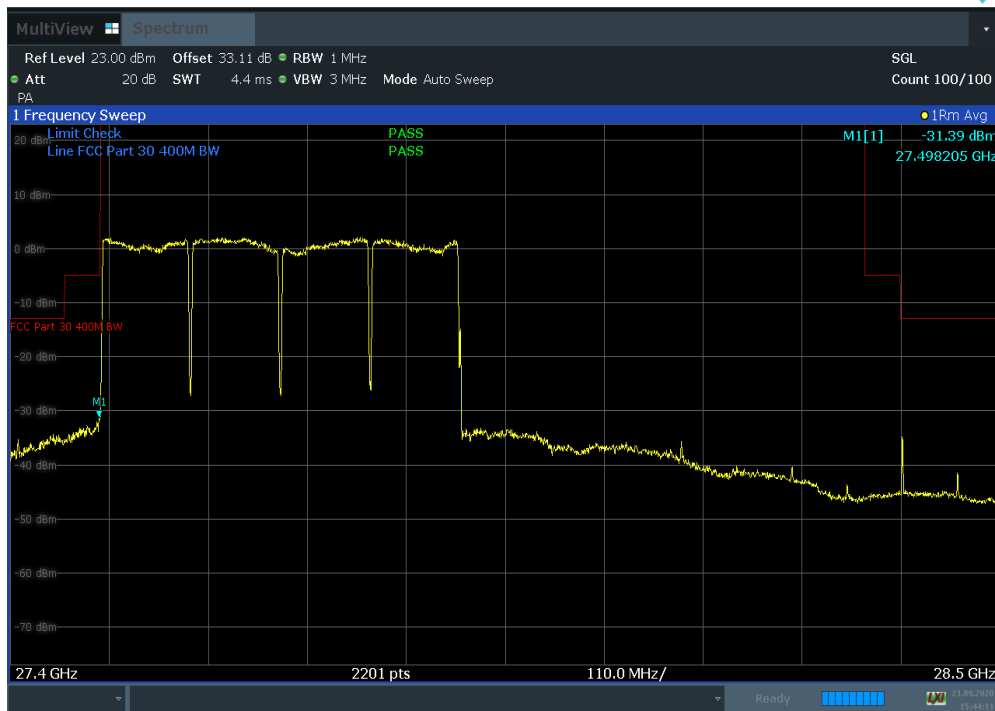
Analyzer Offset (dB) = AF (dB/m) + CL (dB) + 107 + 20log₁₀(D) – 104.8 dB – Gain (dBi) + Duty Correction factor (dB)

FCC ID: A3LAT1K04-B00		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 423 of 466

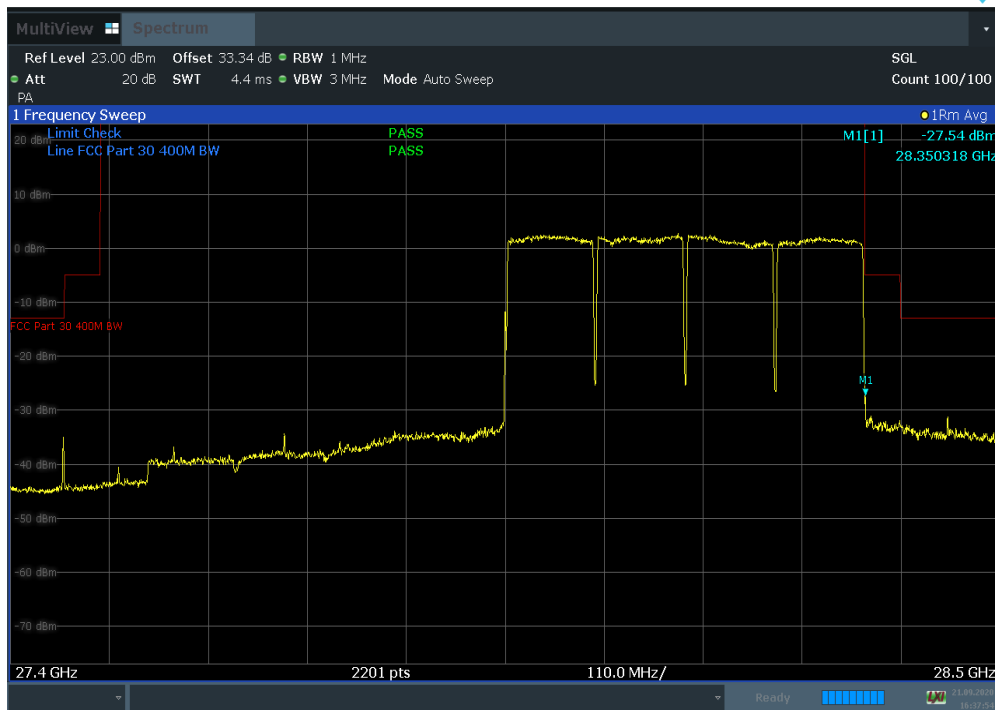
$$\begin{aligned}
 &= 39.74 \text{ dB/m} + 8.27 \text{ dB} + 107 + 20\log_{10}(3.19) - 104.8 \text{ dB} - 28.328 \text{ dBi} + 1.3865 \text{ dB} \\
 &= 33.34 \text{ dB}
 \end{aligned}$$

FCC ID: A3LAT1K04-B00	 Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 424 of 466

7.6.2 Antenna A Conducted Band Edge Maximized on Antenna A

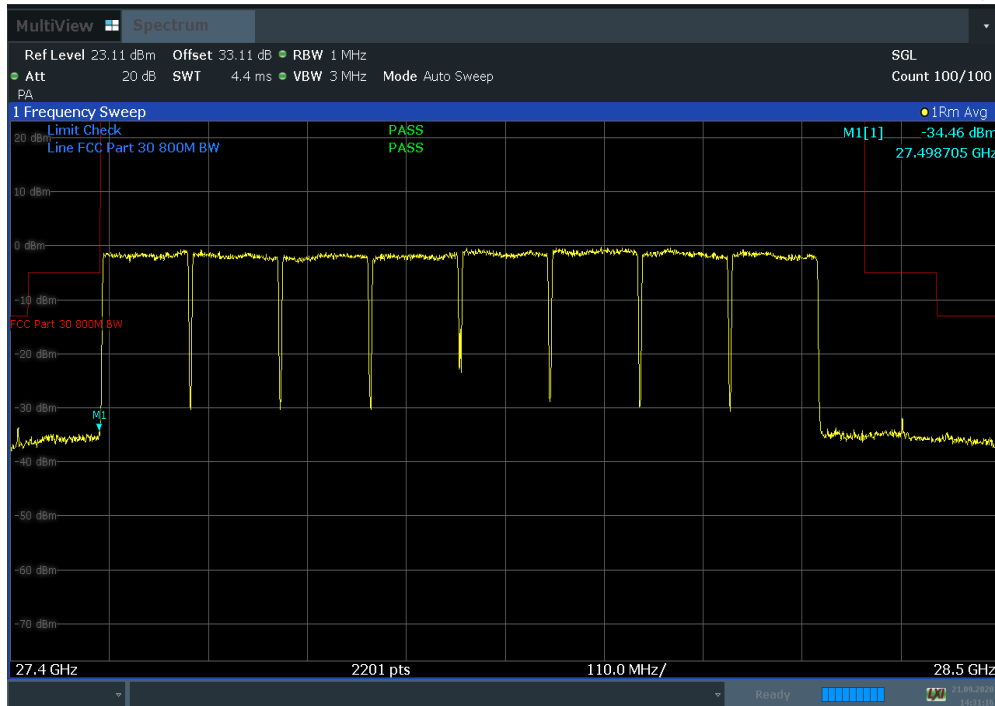


Plot 7-717 Band Edge (Ant A 100 MHz BW 4CC CC QPSK Low)

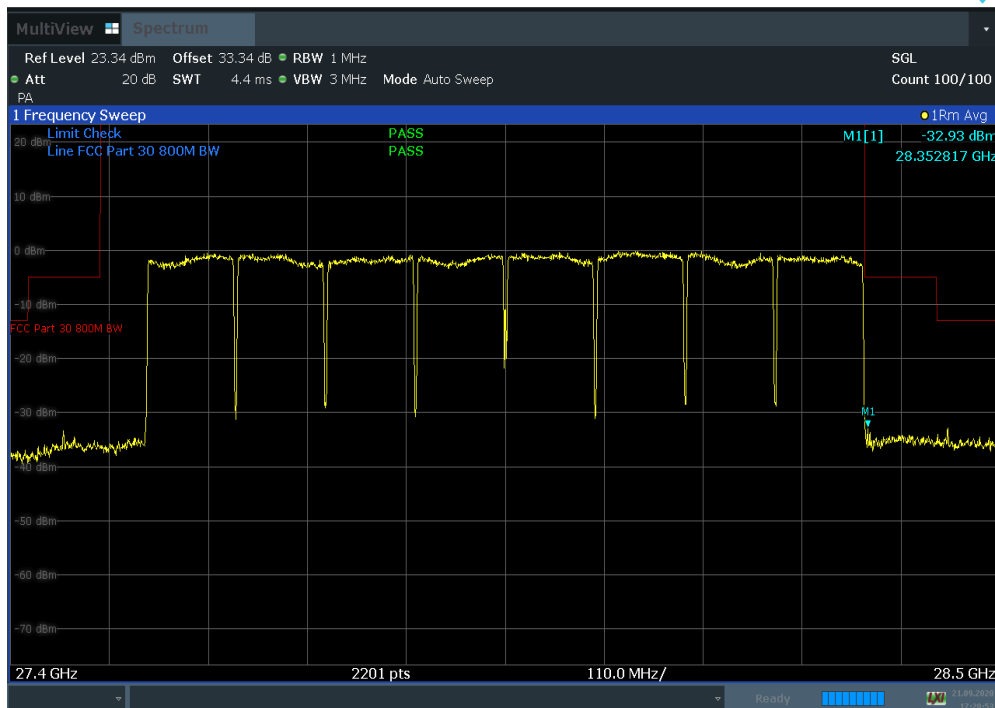


Plot 7-718. Band Edge (Ant A 100 MHz BW 4CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 425 of 466

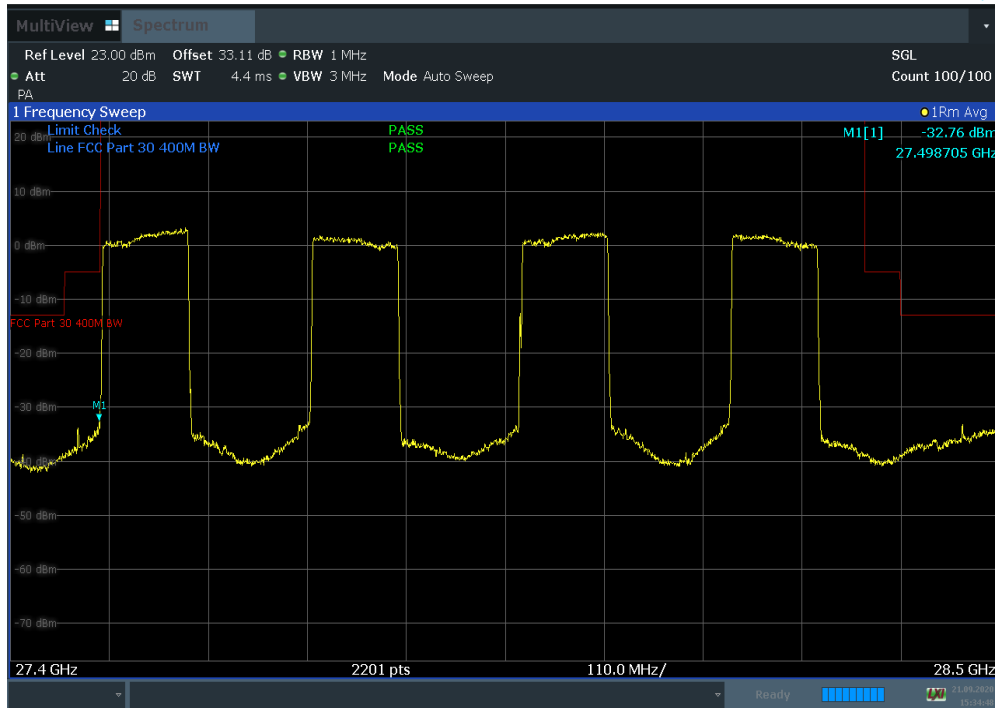


Plot 7-719. Band Edge (Ant A 100 MHz BW 8CC CC QPSK Low)

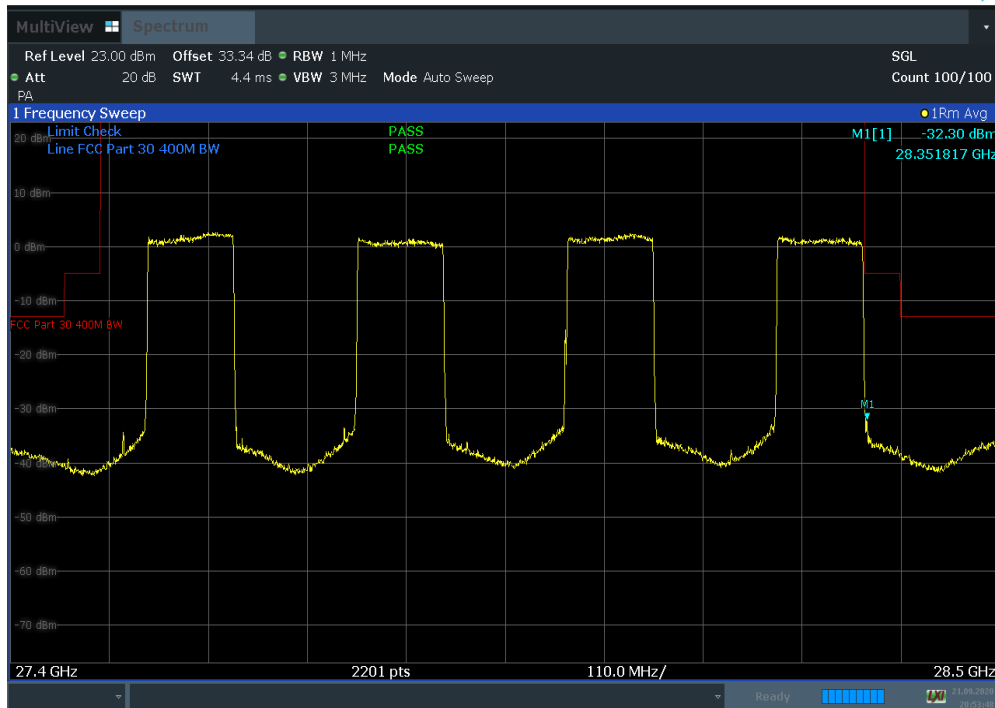


Plot 7-720. Band Edge (Ant A 100 MHz BW 8CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 426 of 466

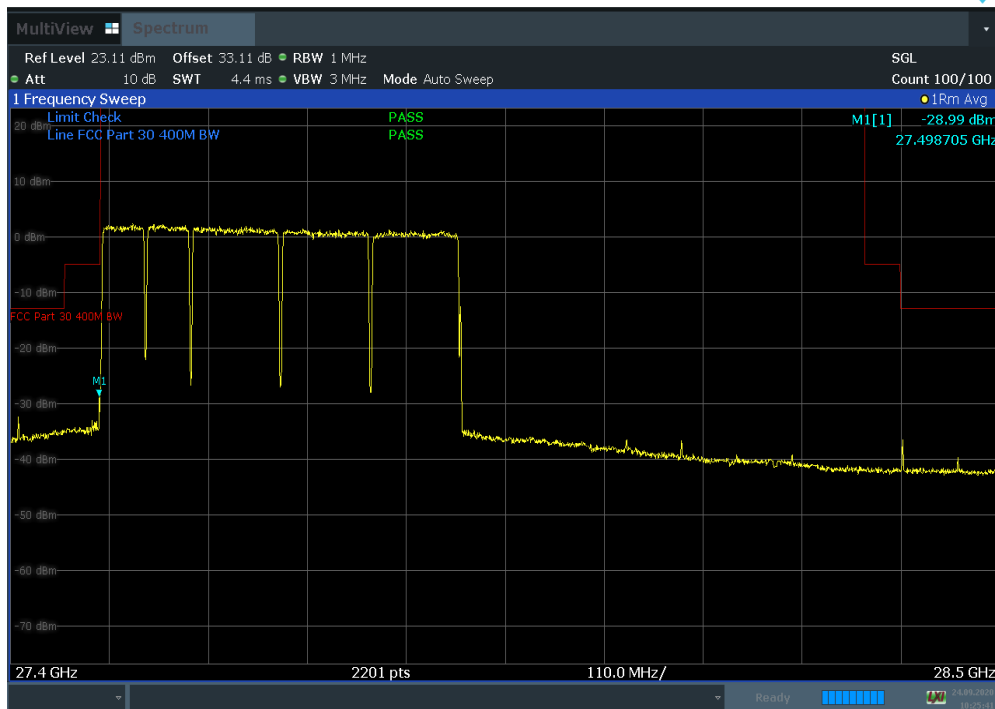


Plot 7-721 Band Edge (Ant A 100 MHz BW 4CC NC QPSK Low)

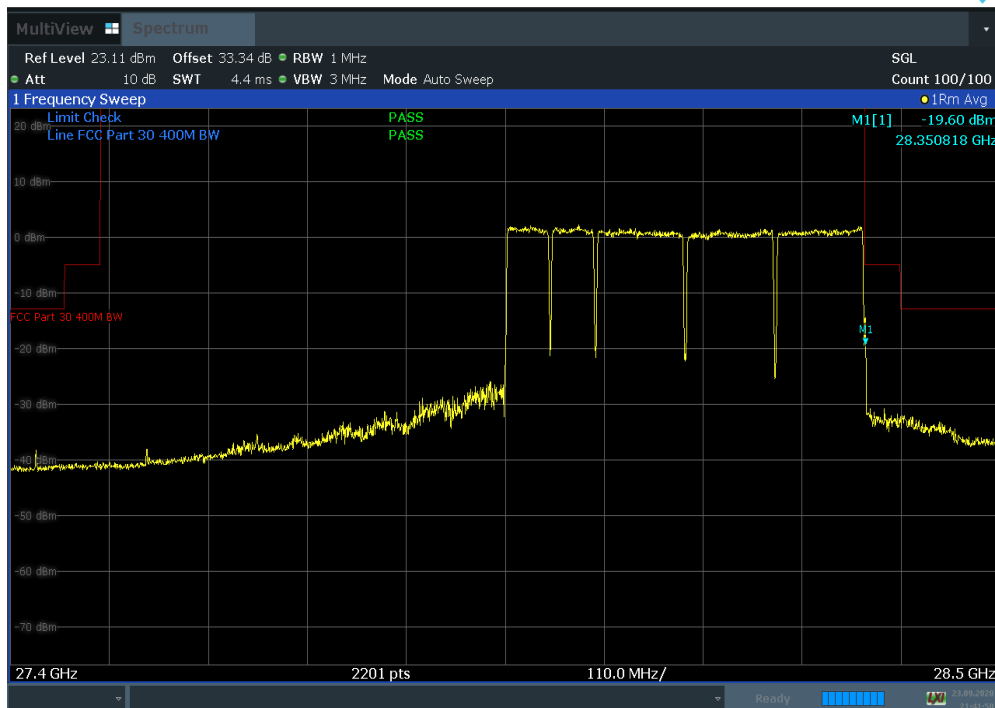


Plot 7-722. Band Edge (Ant A 100 MHz BW 4CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 427 of 466

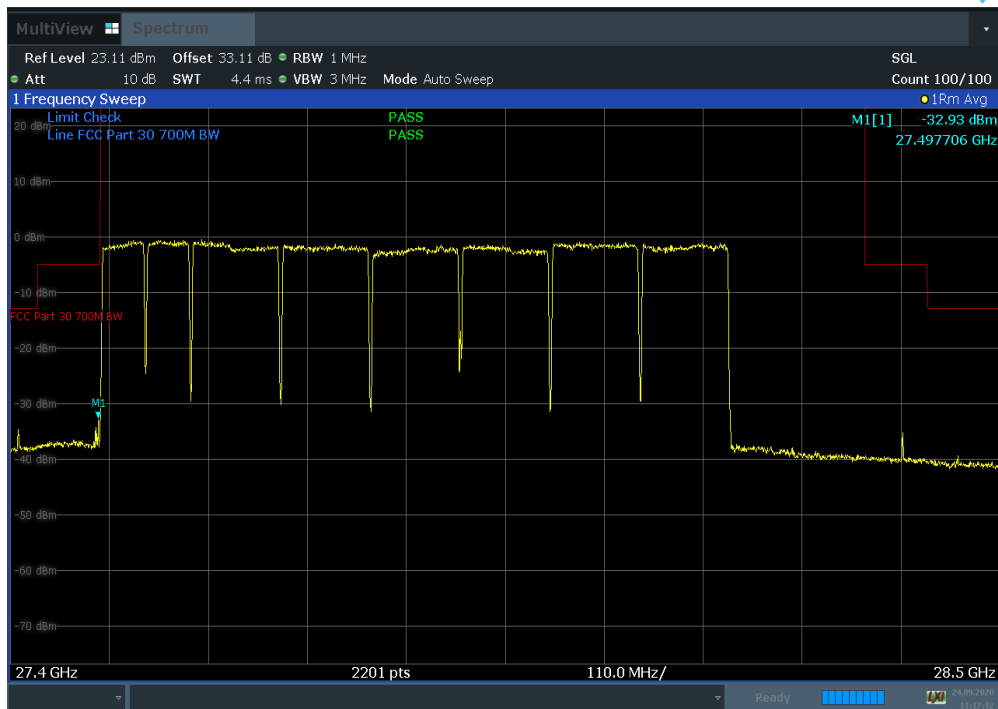


Plot 7-723 Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Low)

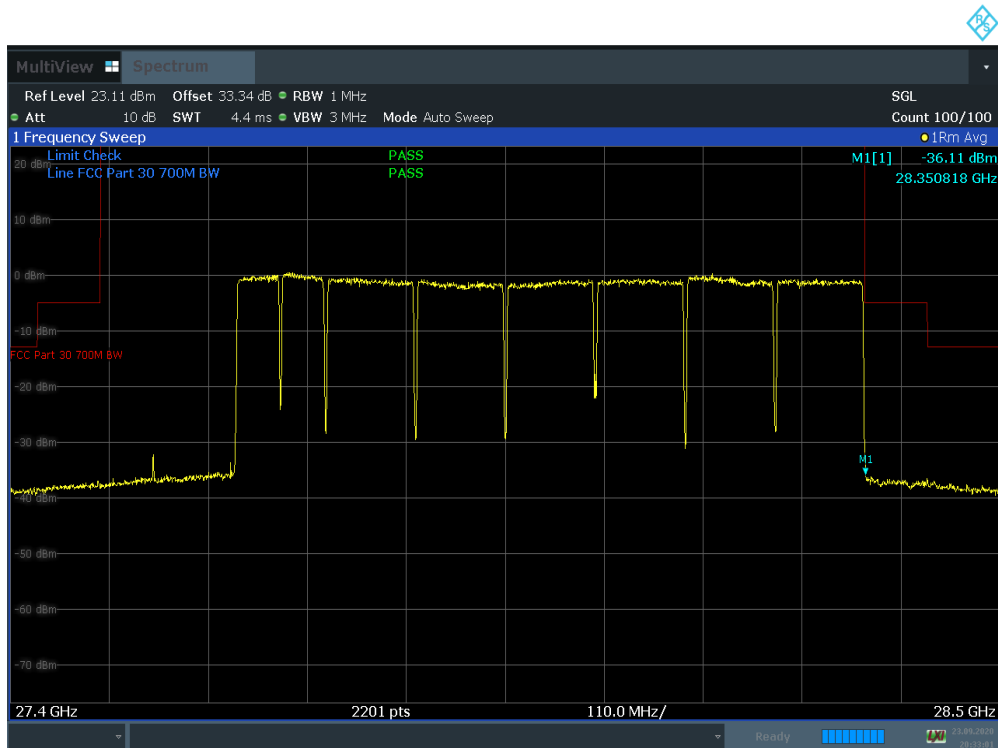


Plot 7-724. Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 428 of 466

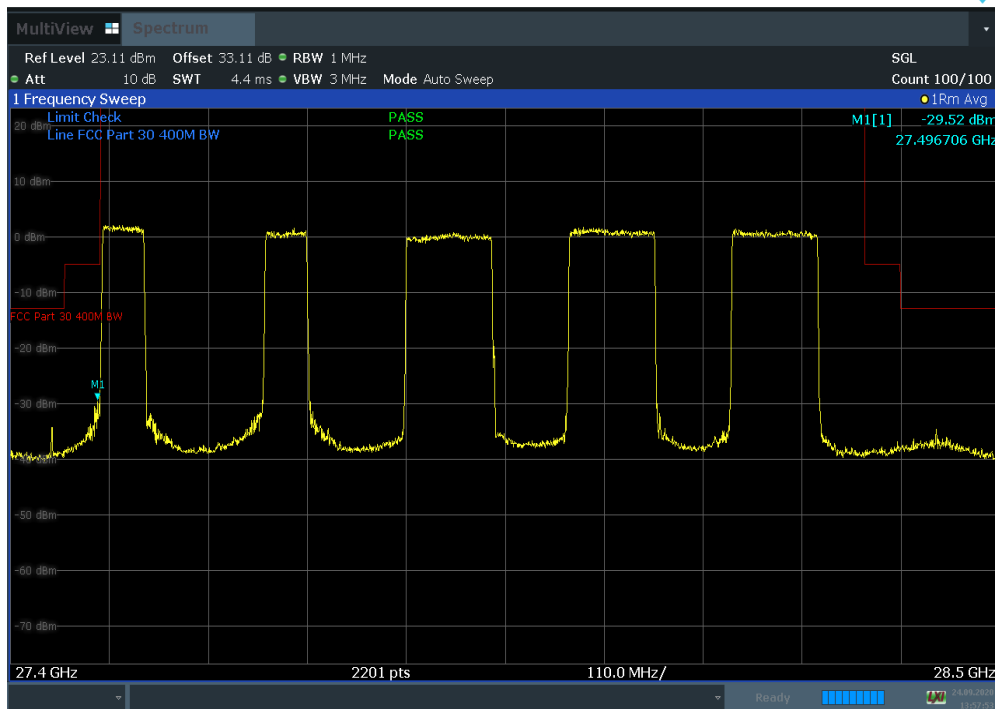


Plot 7-725. Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low)

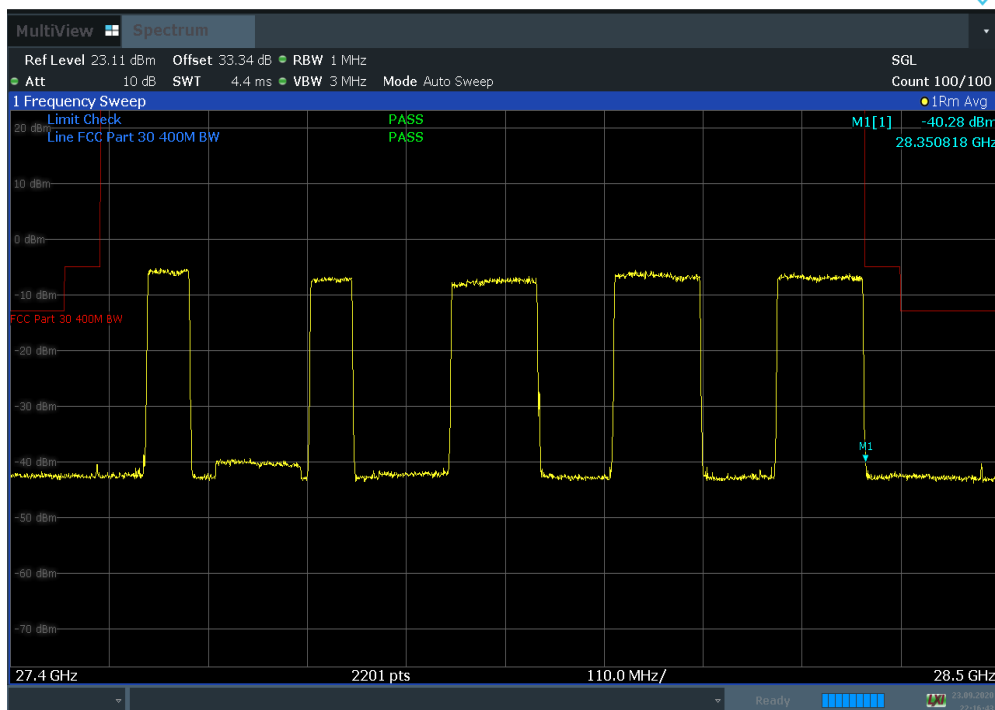


Plot 7-726. Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 429 of 466

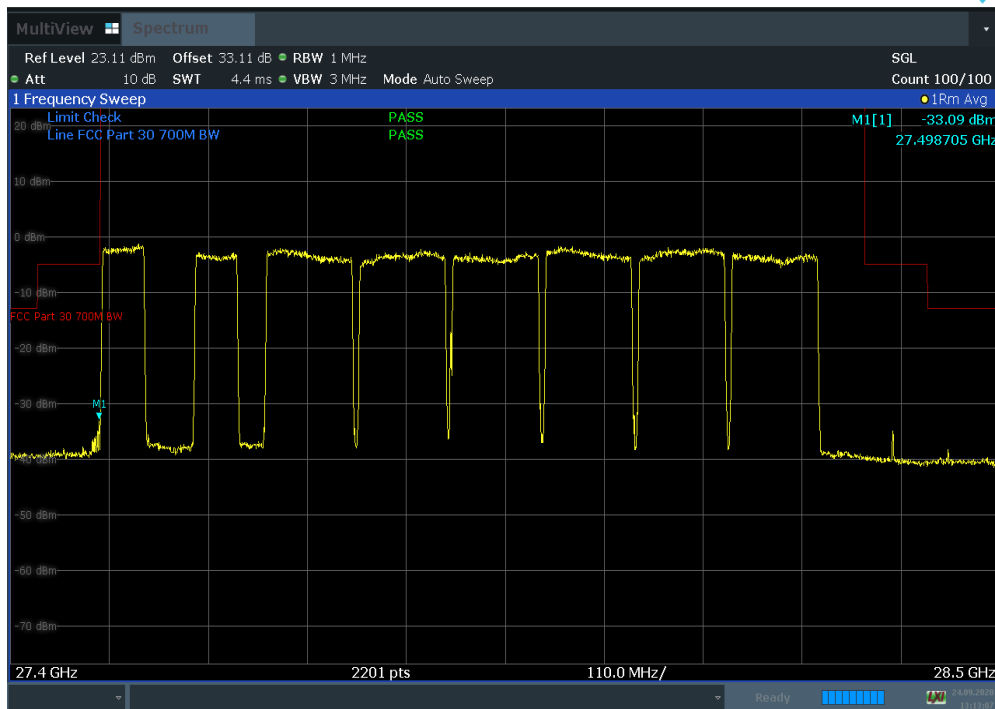


Plot 7-727 Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK Low)

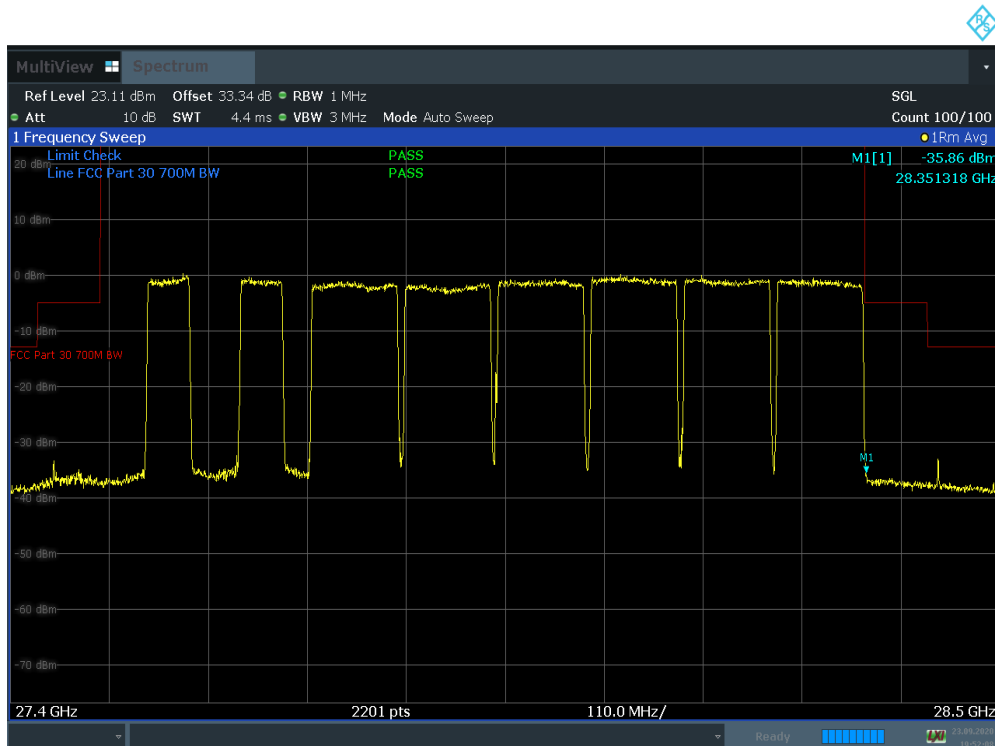


Plot 7-728. Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 430 of 466



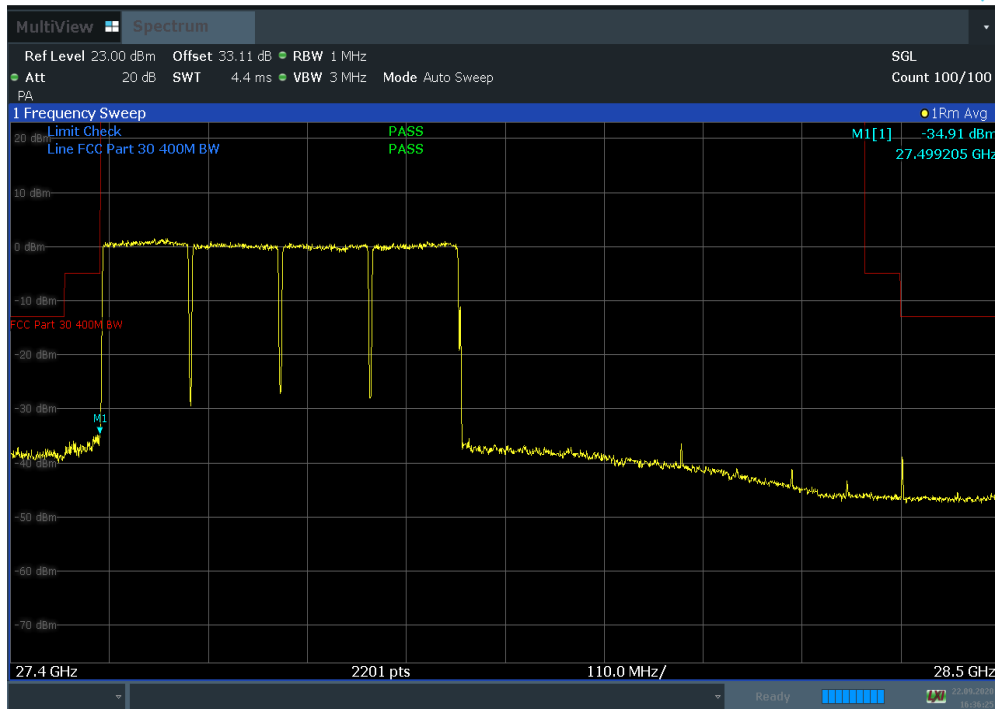
Plot 7-729. Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 6CC NC QPSK Low)



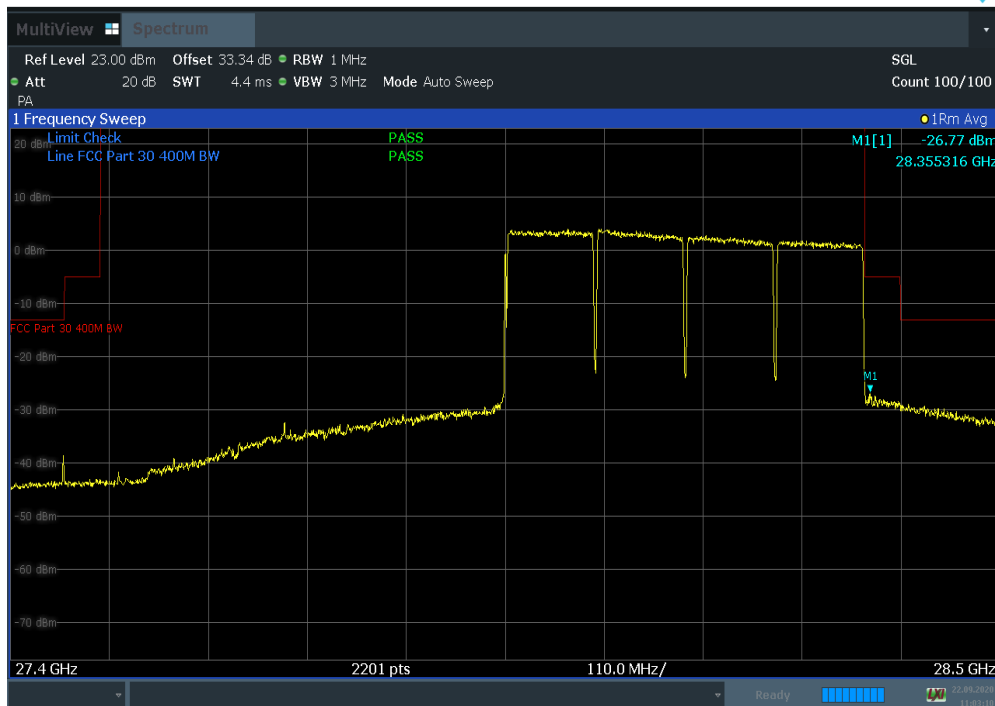
Plot 7-730. Band Edge (Ant A 50 MHz BW 2CC + 100 MHz BW 6CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 431 of 466

7.6.3 Antenna B Conducted Band Edge Maximized on Antenna B

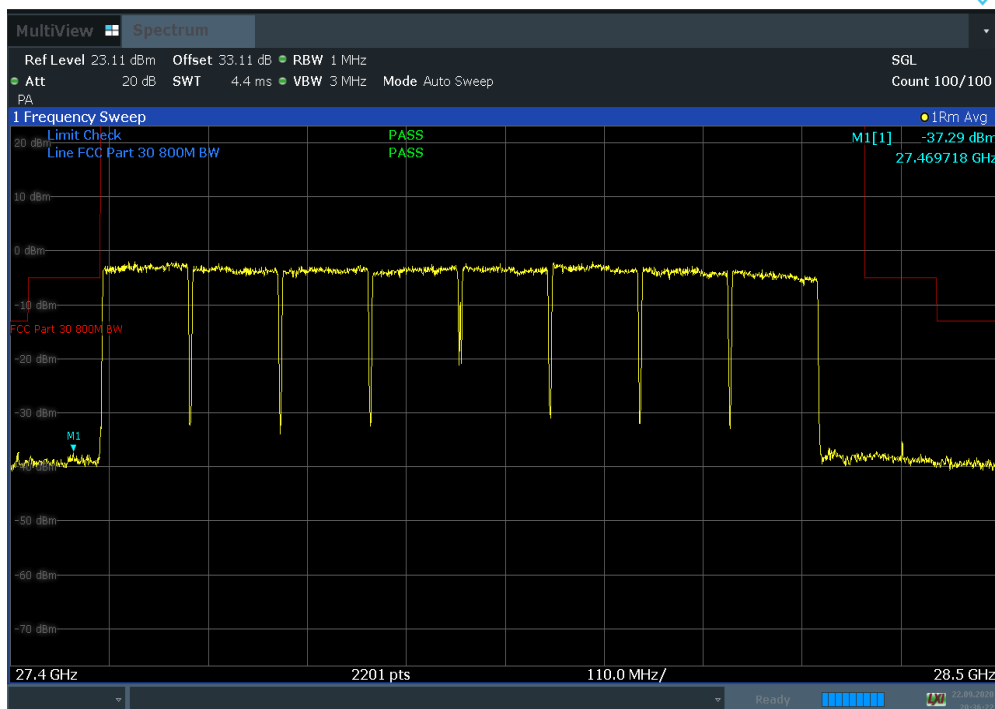


Plot 7-731 Band Edge (Ant B 100 MHz BW 4CC CC QPSK Low)

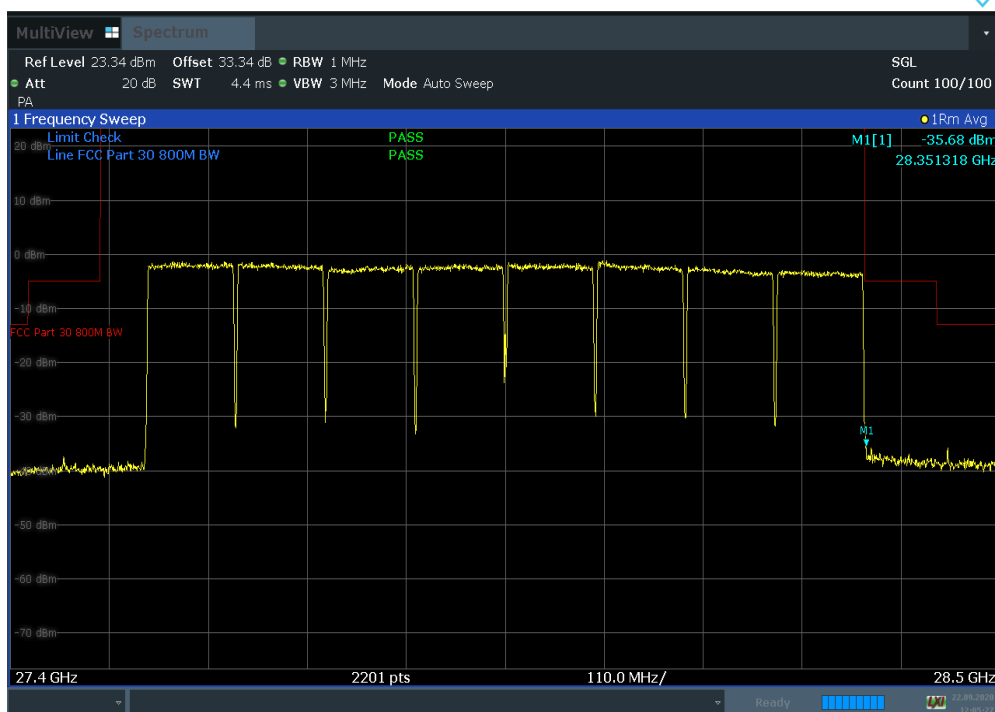


Plot 7-732. Band Edge (Ant B 100 MHz BW 4CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 432 of 466

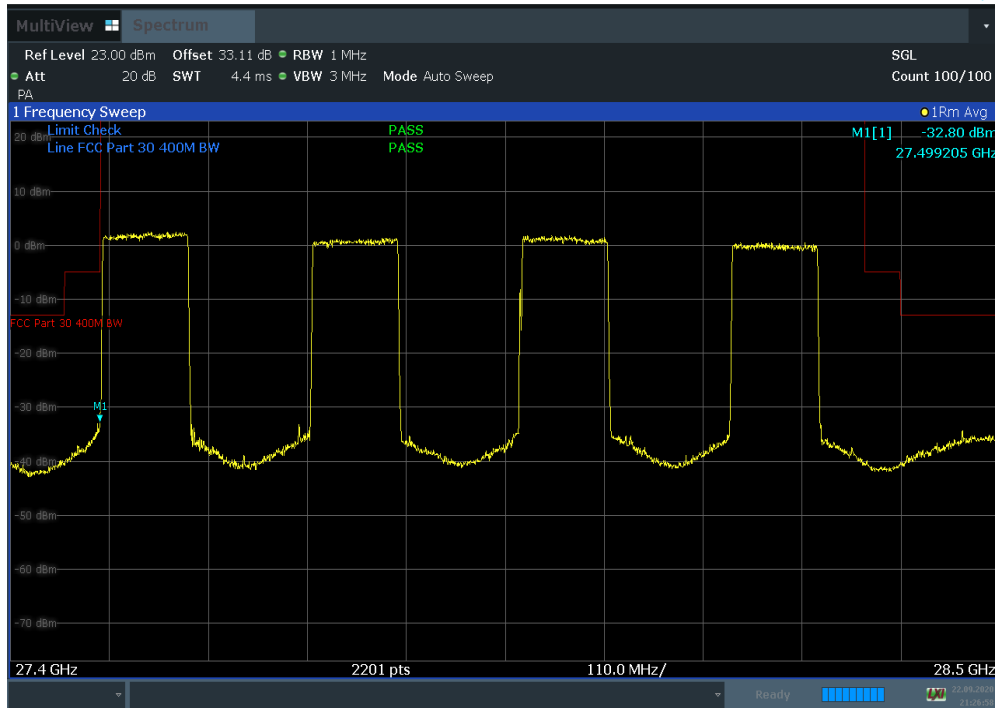


Plot 7-733. Band Edge (Ant B 100 MHz BW 8CC CC QPSK Low)

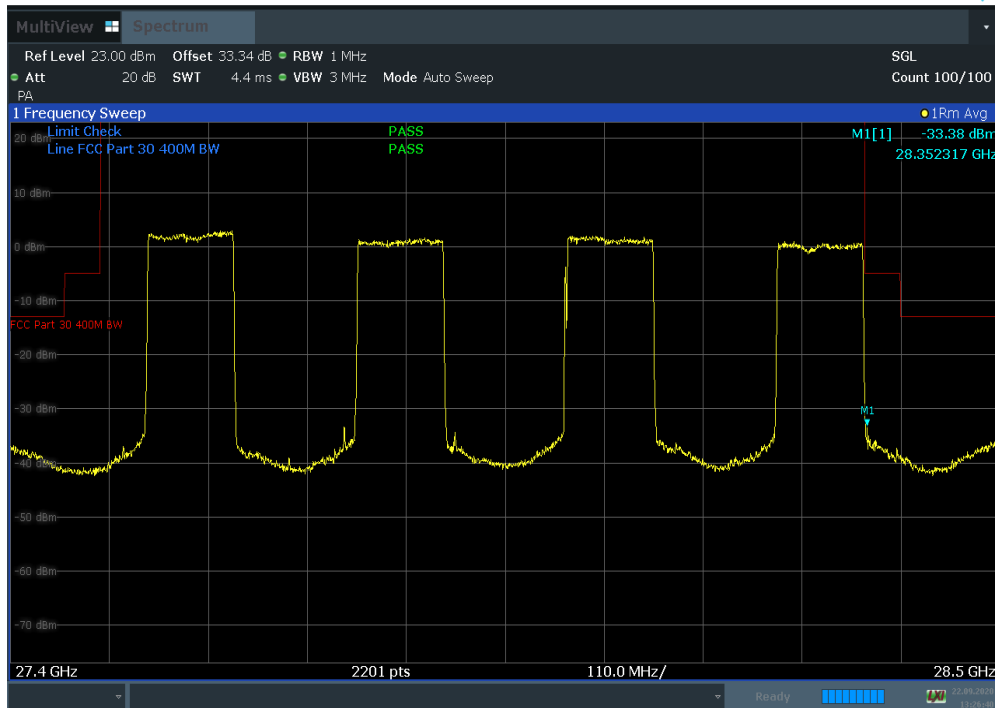


Plot 7-734. Band Edge (Ant B 100 MHz BW 8CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 433 of 466

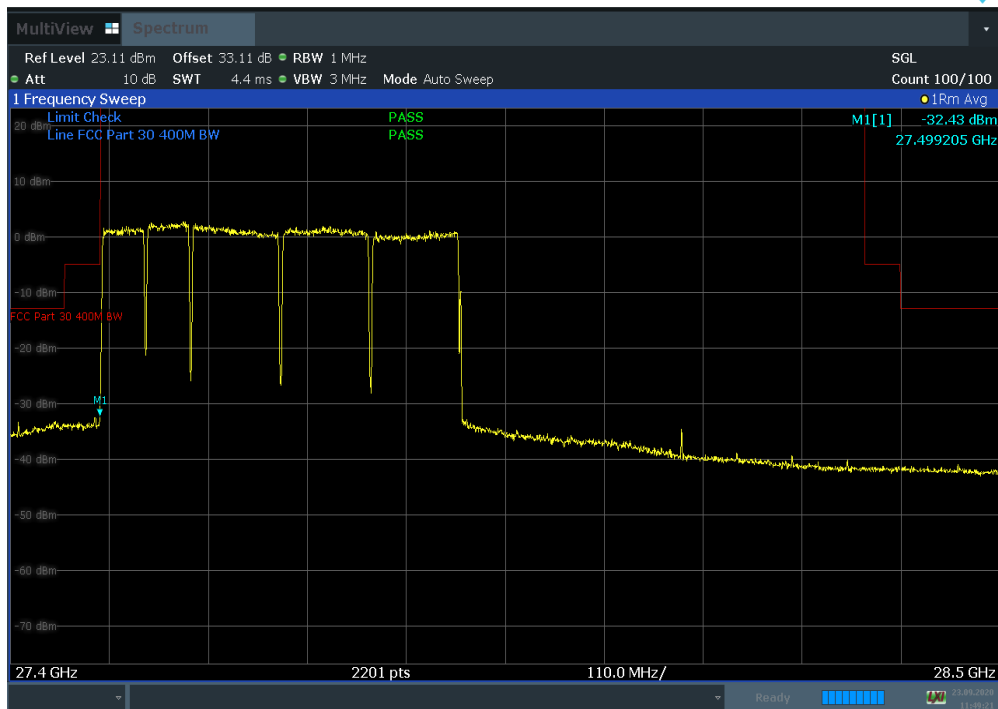


Plot 7-735 Band Edge (Ant B 100 MHz BW 4CC NC QPSK Low)

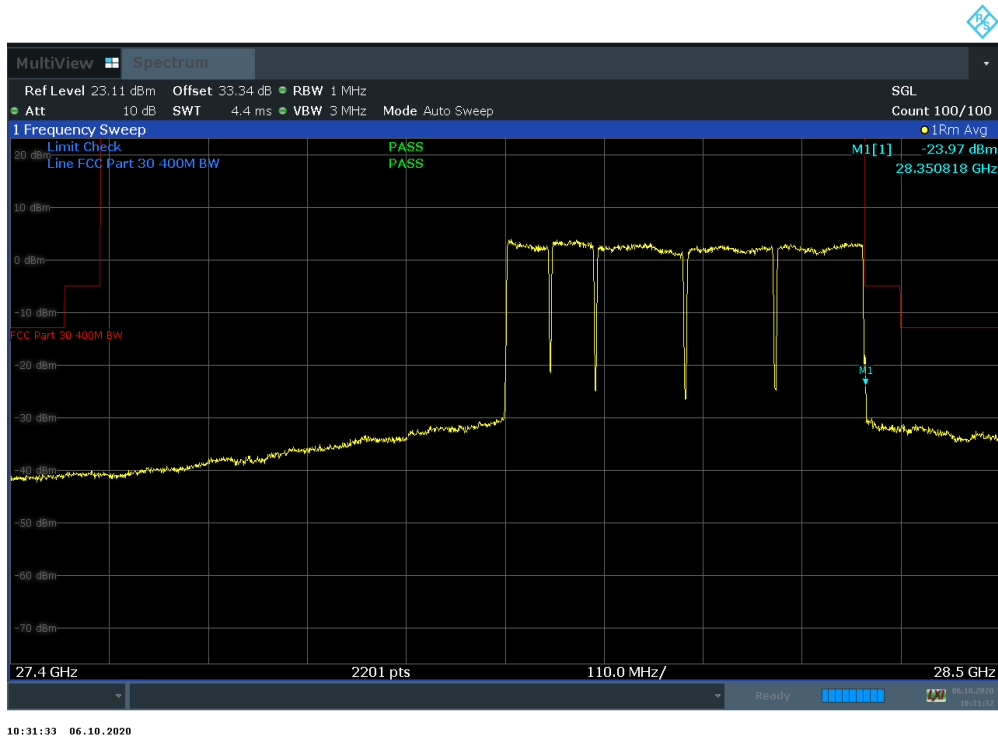


Plot 7-736. Band Edge (Ant B 100 MHz BW 4CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 434 of 466

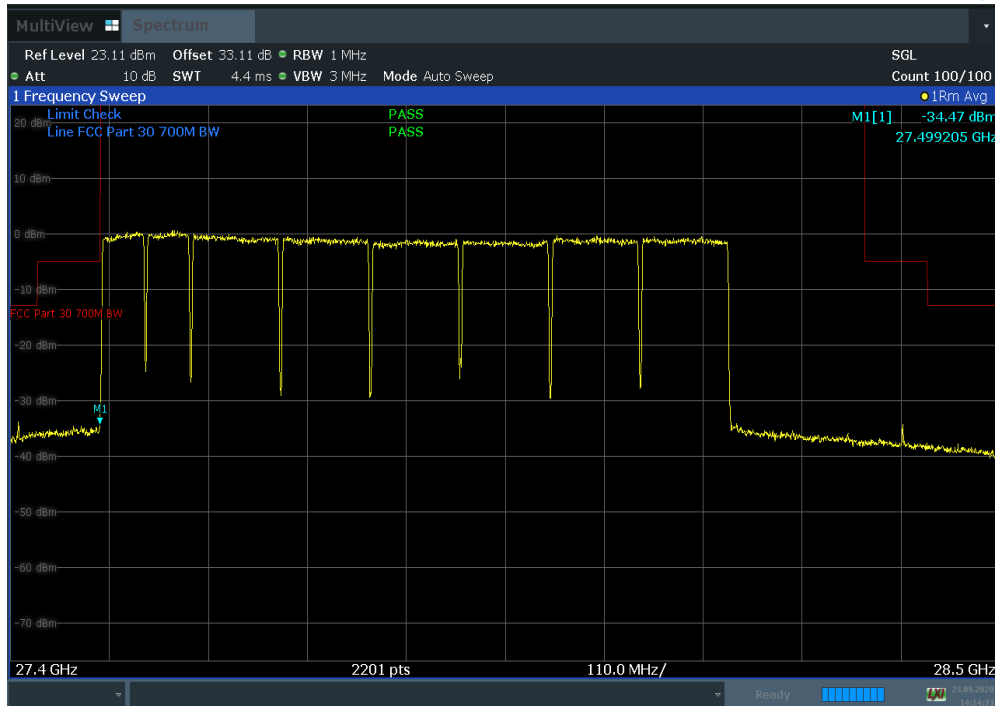


Plot 7-737 Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Low)

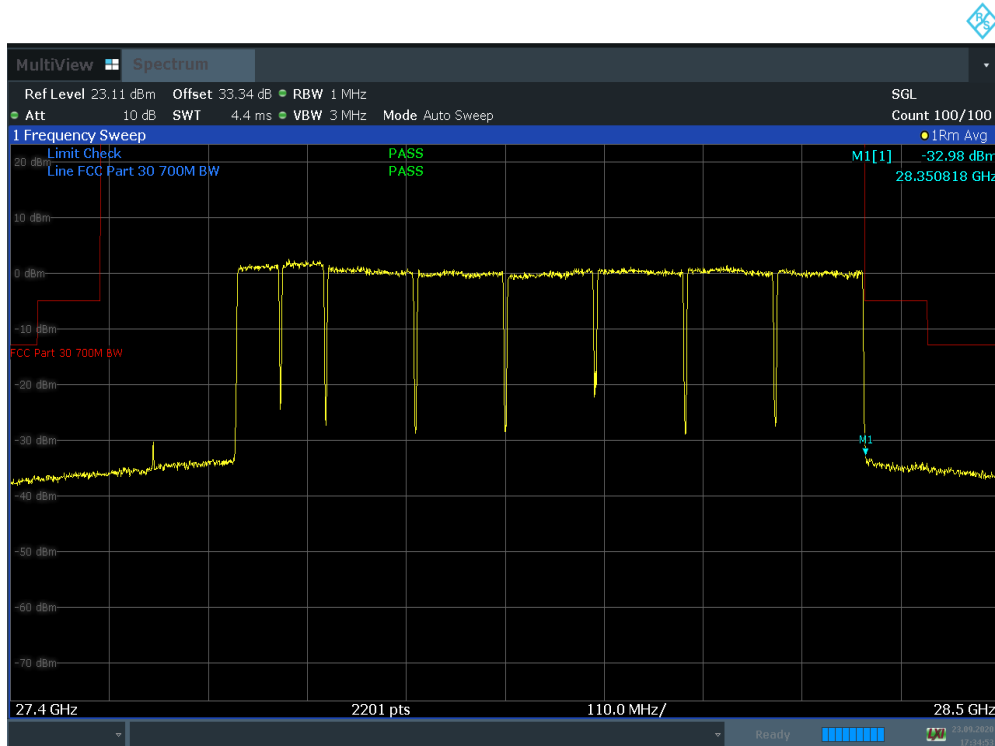


Plot 7-738. Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 435 of 466

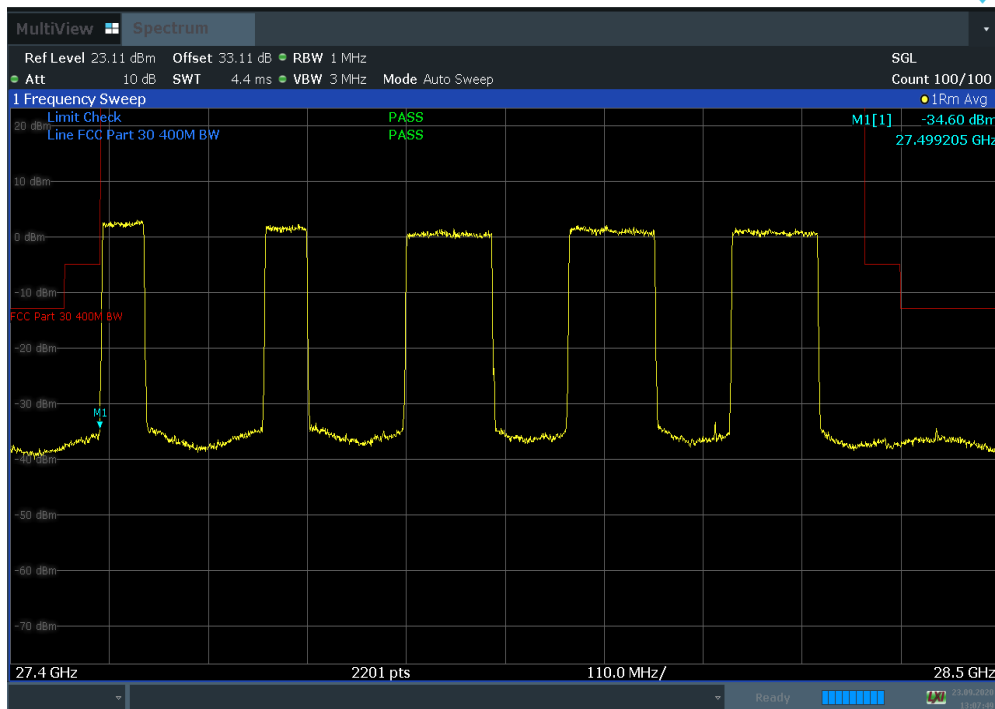


Plot 7-739. Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low)

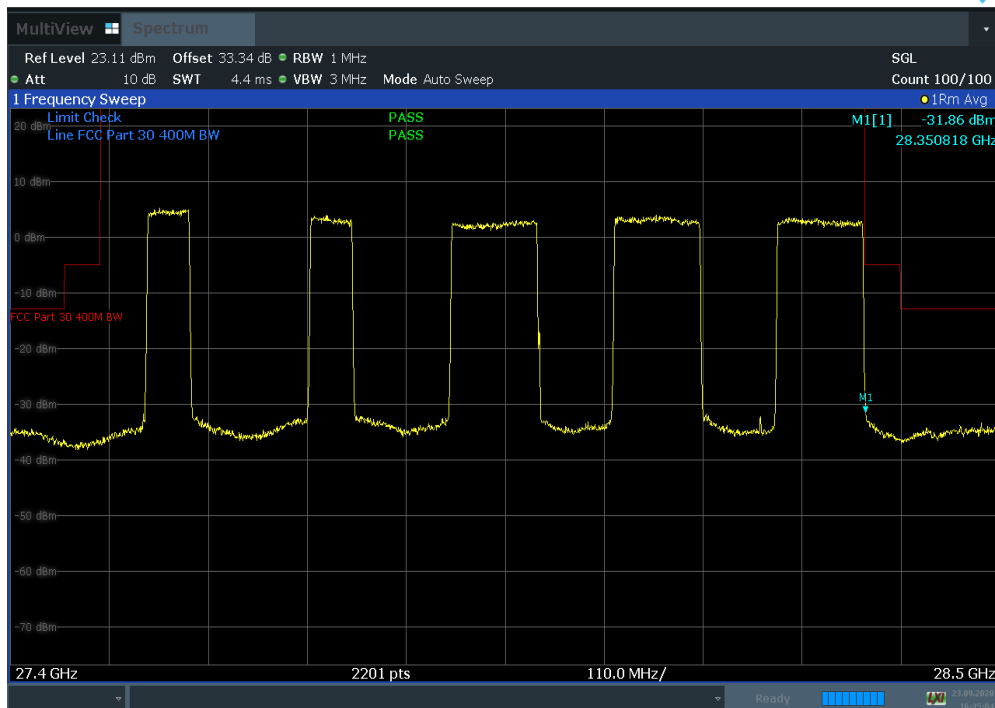


Plot 7-740. Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 436 of 466

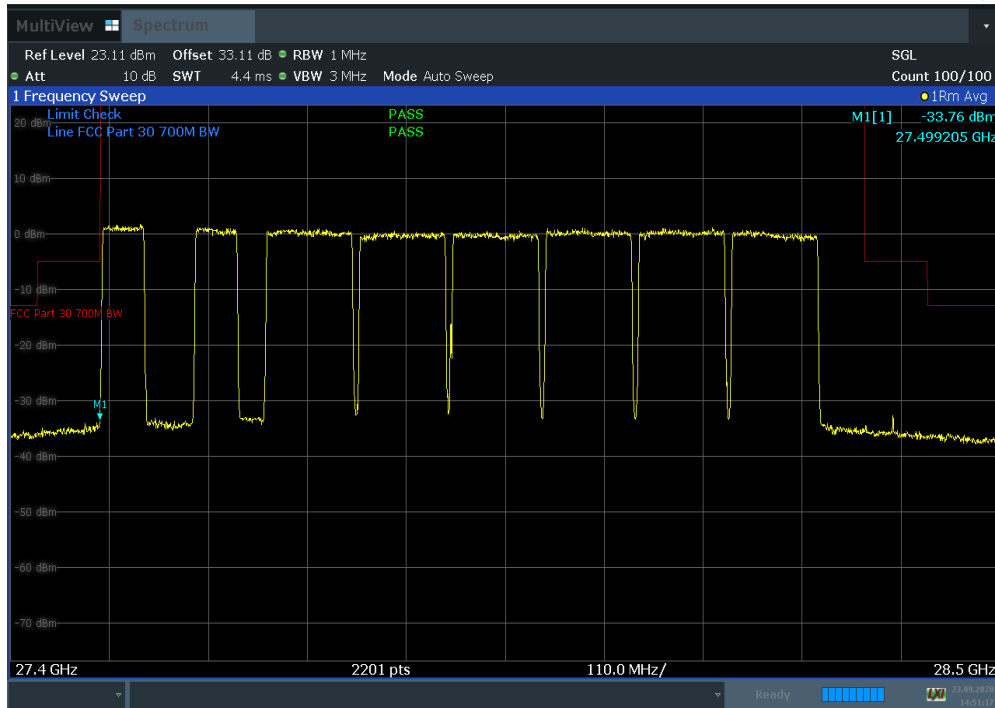


Plot 7-741 Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK Low)

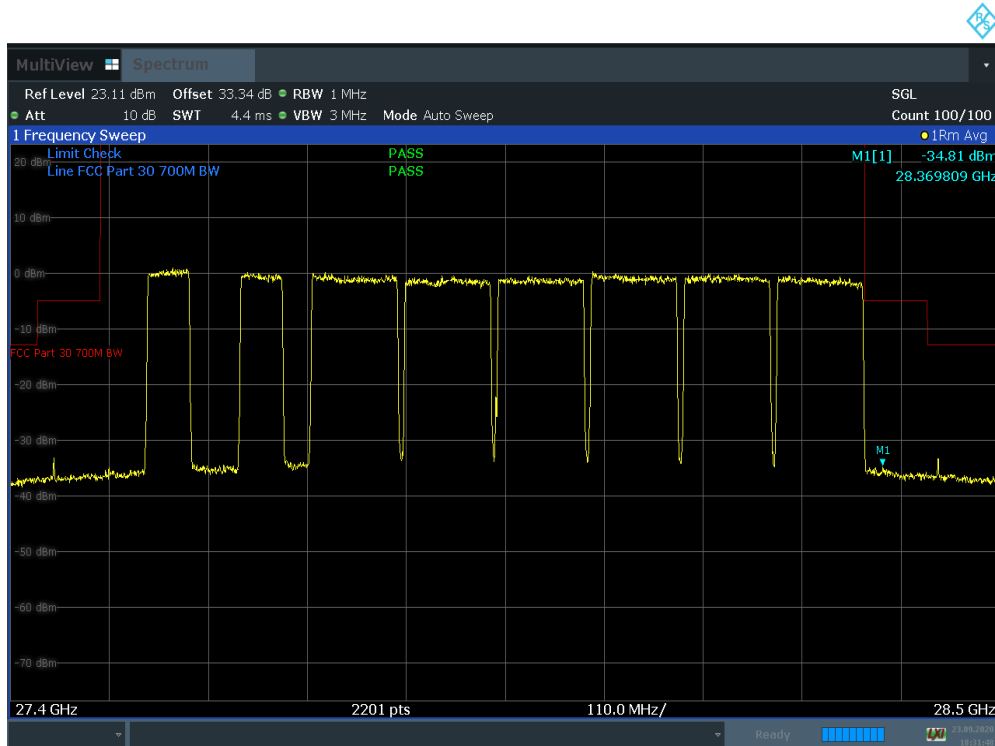


Plot 7-742. Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 437 of 466



Plot 7-743. Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 6CC NC QPSK Low)



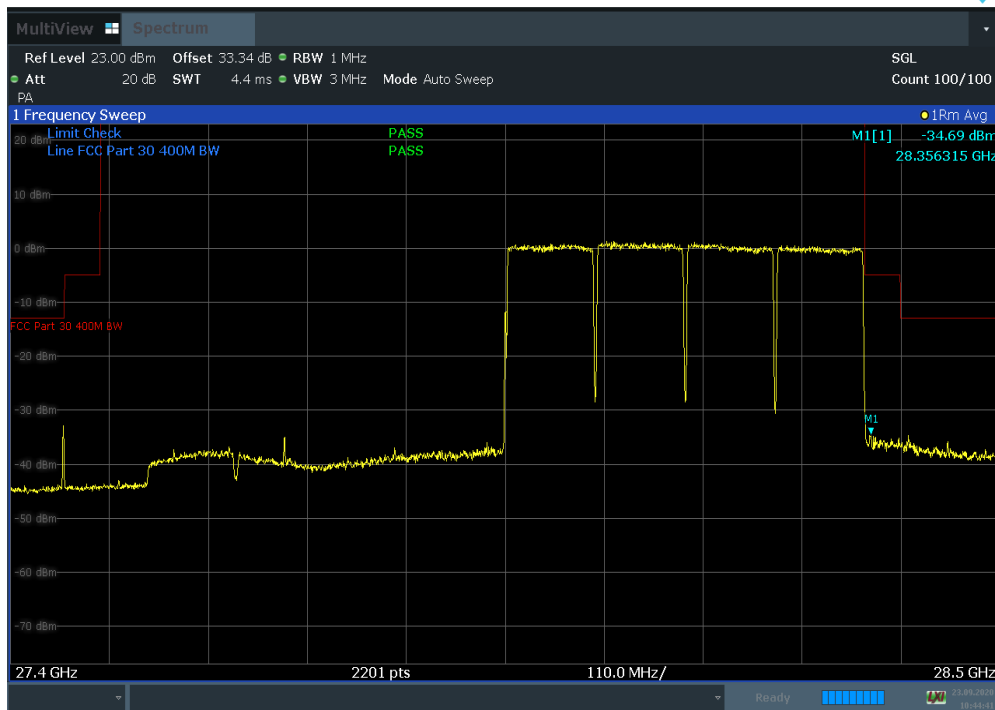
Plot 7-744. Band Edge (Ant B 50 MHz BW 2CC + 100 MHz BW 6CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 438 of 466

7.6.4 Antenna C Conducted Band Edge Maximized on Antenna C

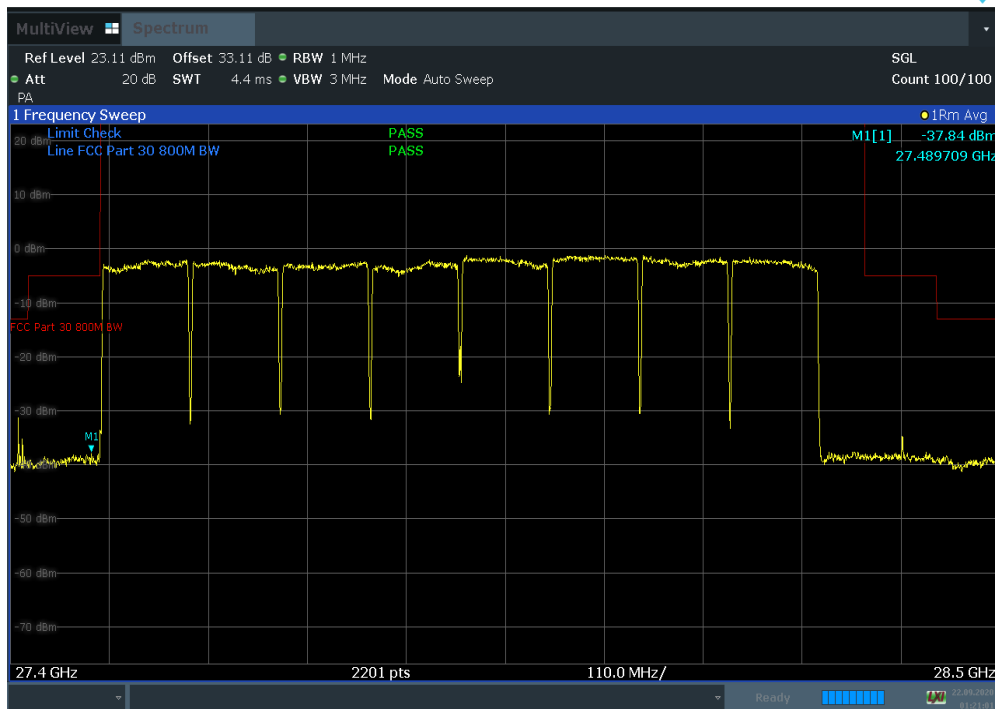


Plot 7-745 Band Edge (Ant C 100 MHz BW 4CC CC QPSK Low)

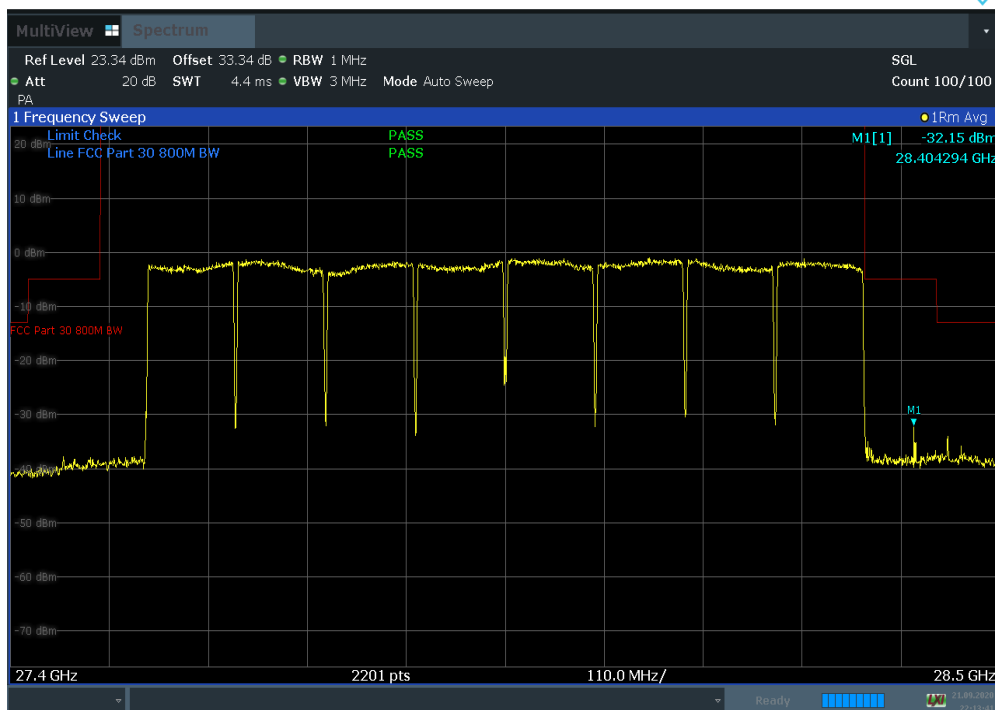


Plot 7-746. Band Edge (Ant C 100 MHz BW 4CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 439 of 466

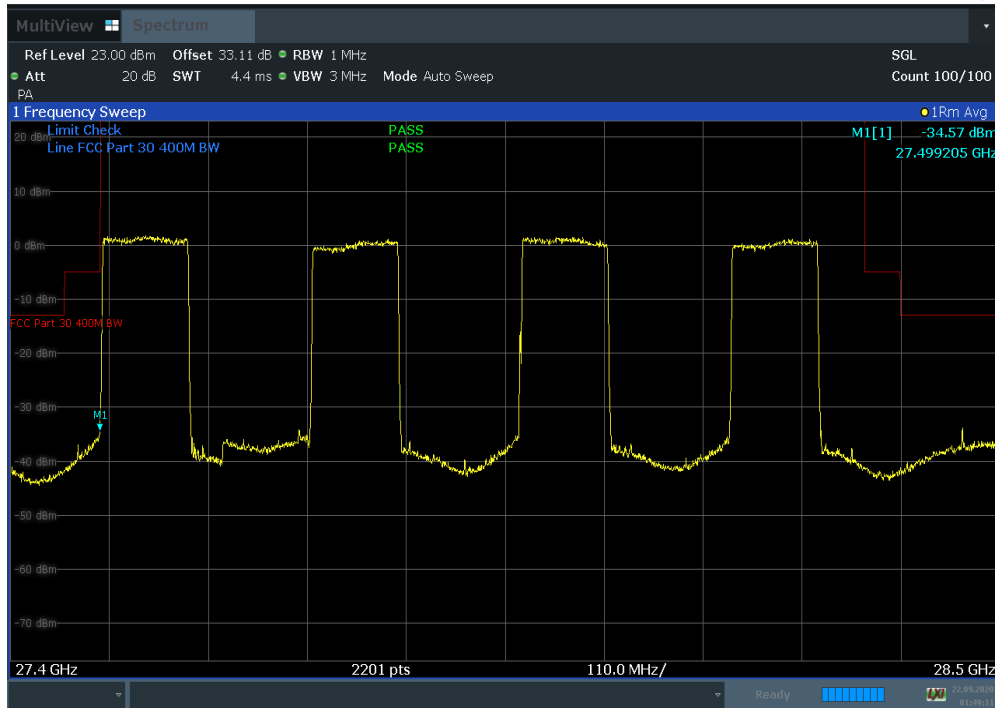


Plot 7-747. Band Edge (Ant C 100 MHz BW 8CC CC QPSK Low)

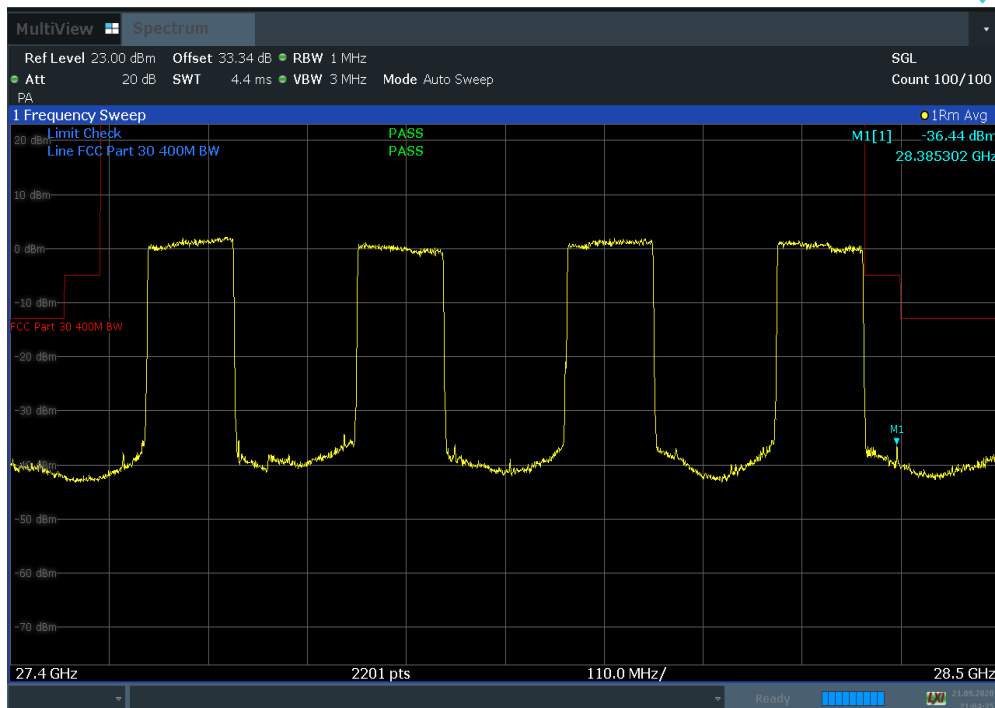


Plot 7-748. Band Edge (Ant C 100 MHz BW 8CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 440 of 466

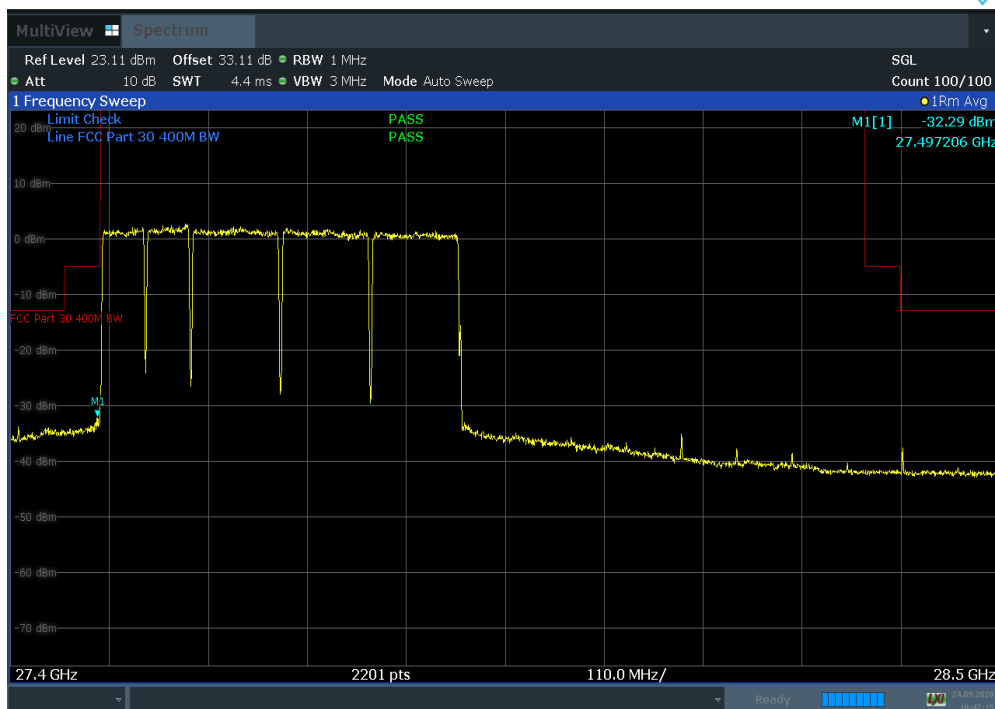


Plot 7-749 Band Edge (Ant C 100 MHz BW 4CC NC QPSK Low)

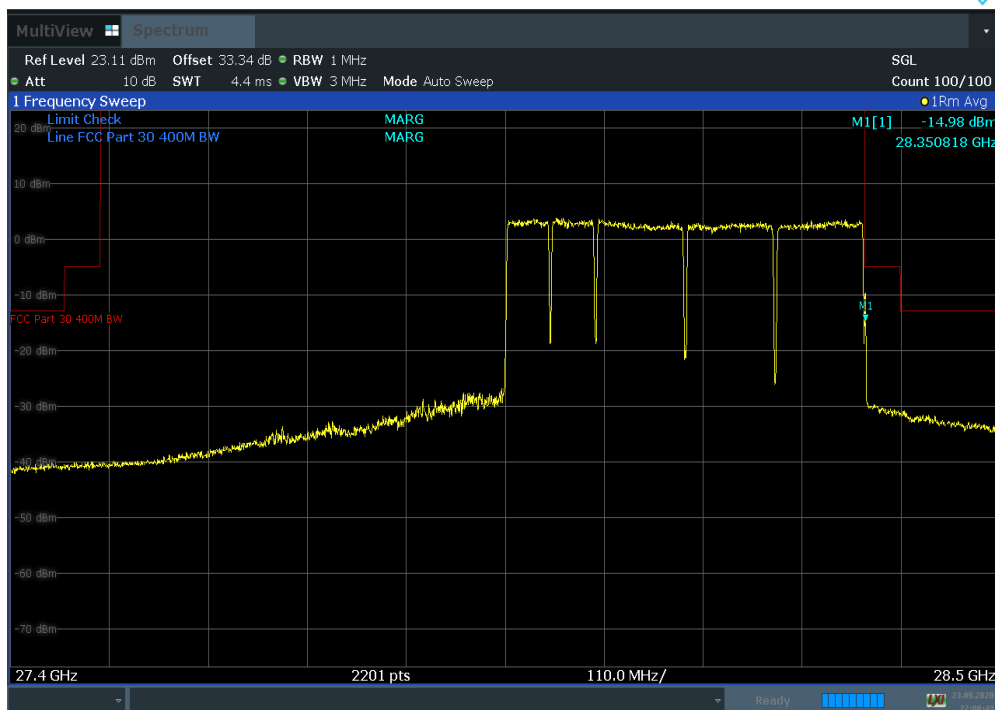


Plot 7-750. Band Edge (Ant C 100 MHz BW 4CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 441 of 466

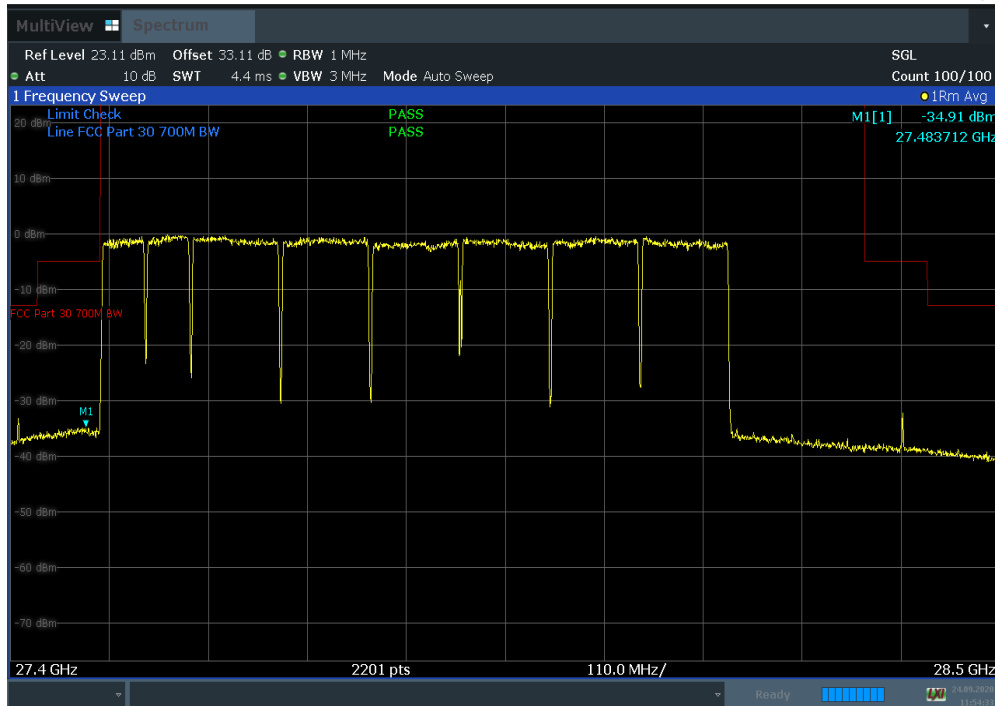


Plot 7-751 Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Low)

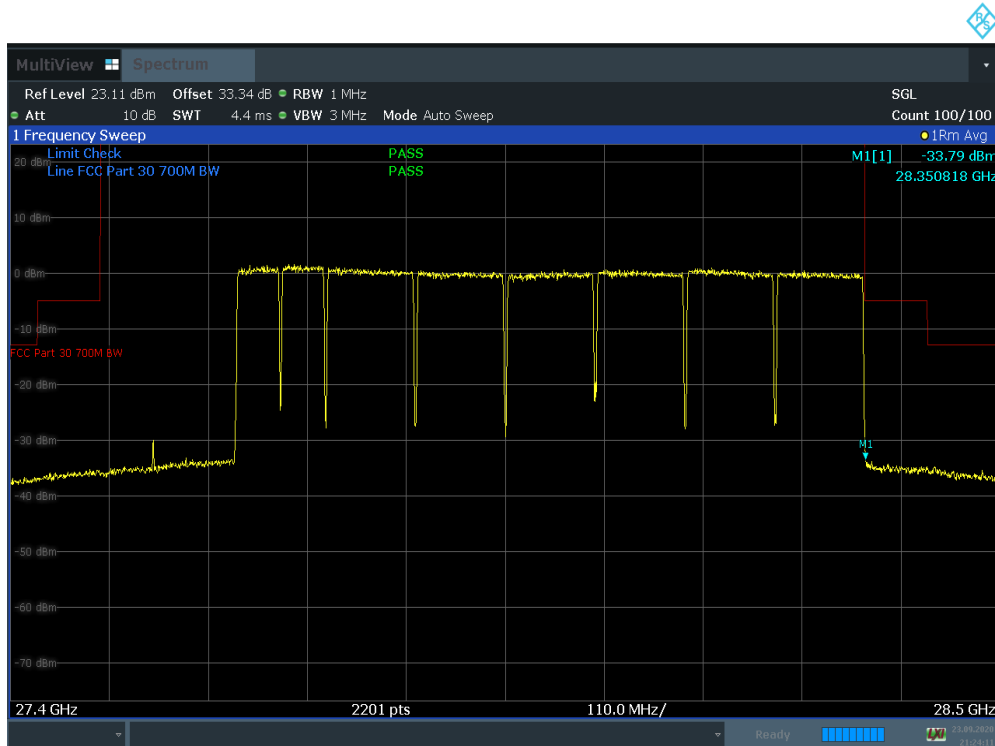


Plot 7-752. Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 442 of 466

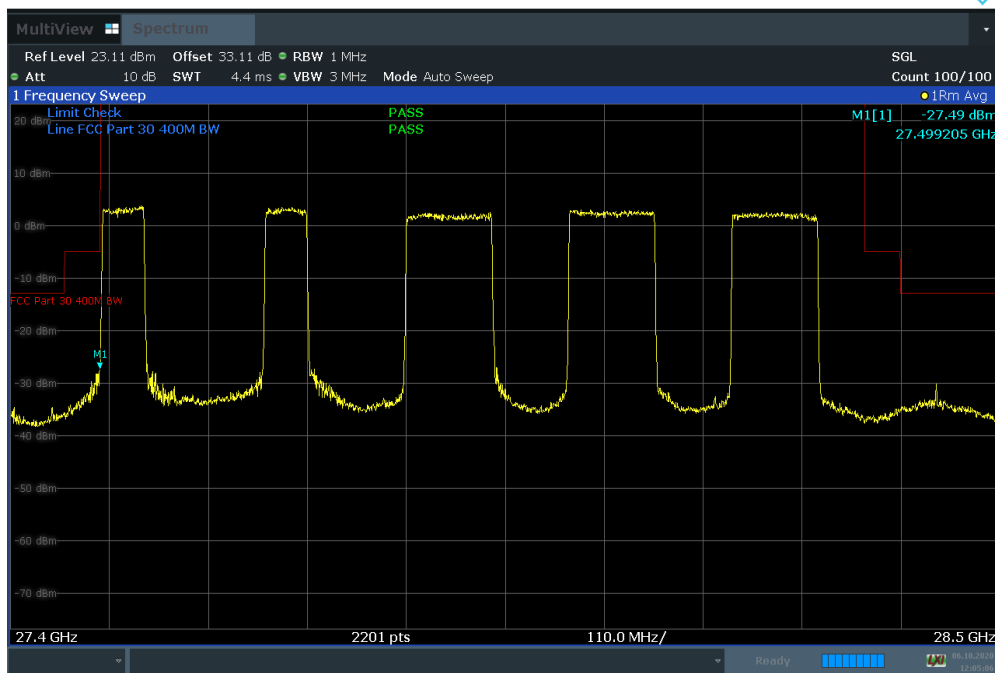


Plot 7-753. Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low)



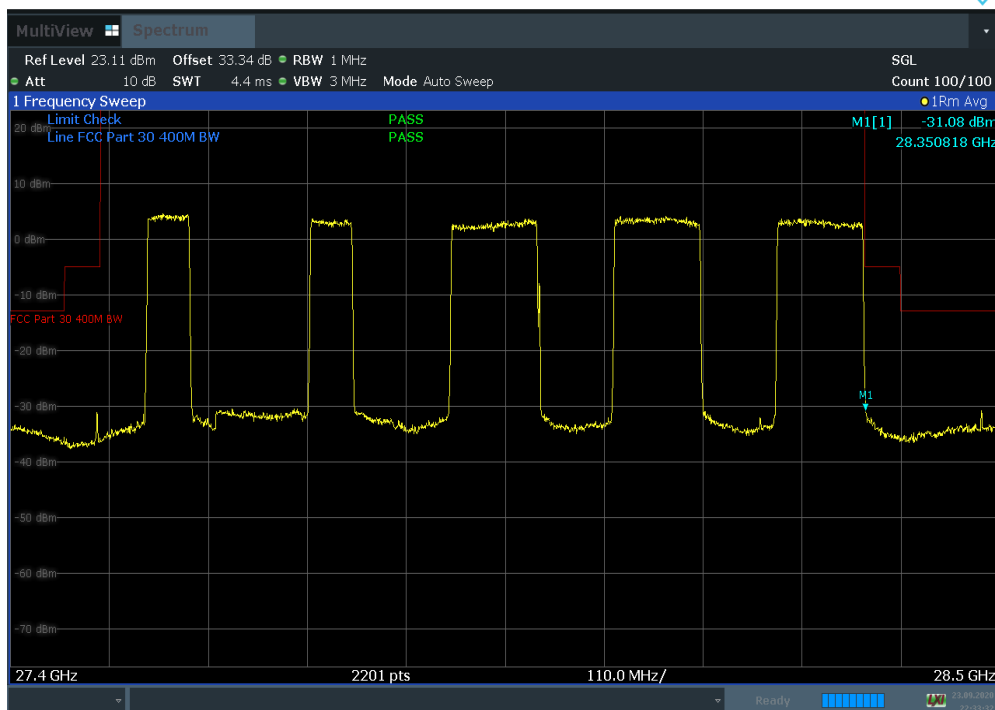
Plot 7-754. Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 443 of 466



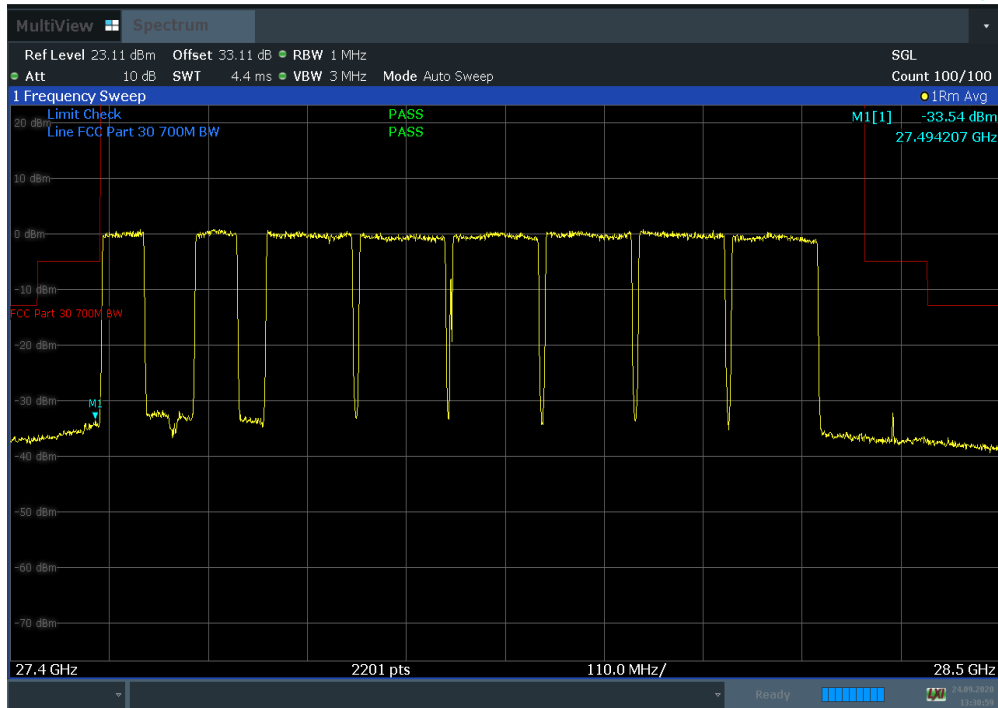
12:05:07 06.10.2020

Plot 7-755 Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK Low)

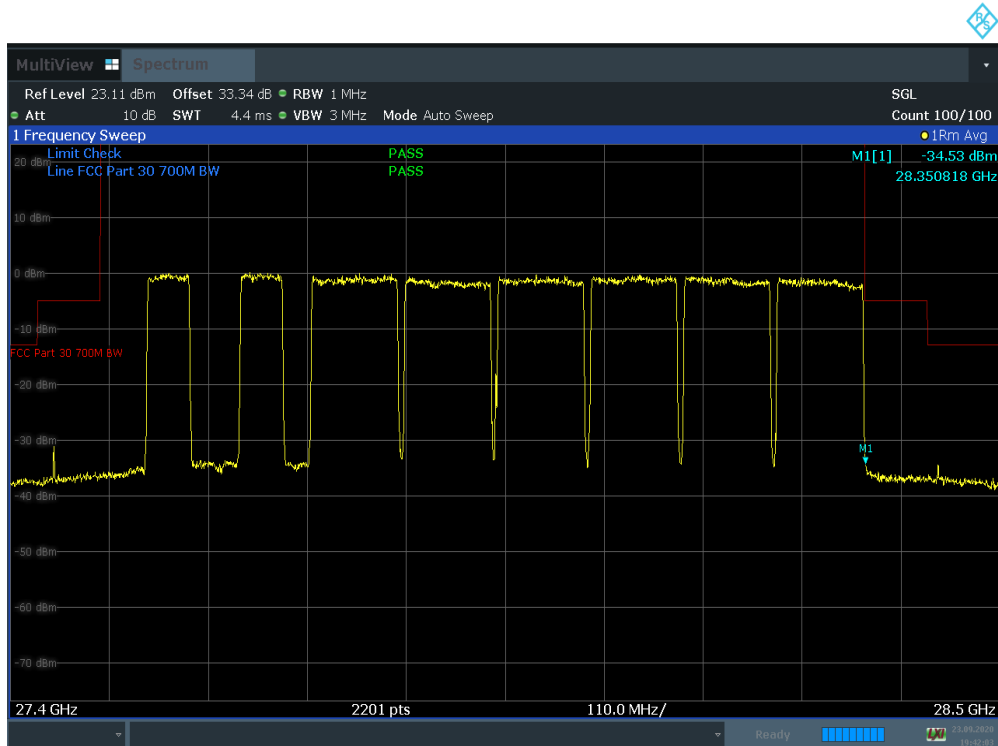


Plot 7-756. Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 444 of 466



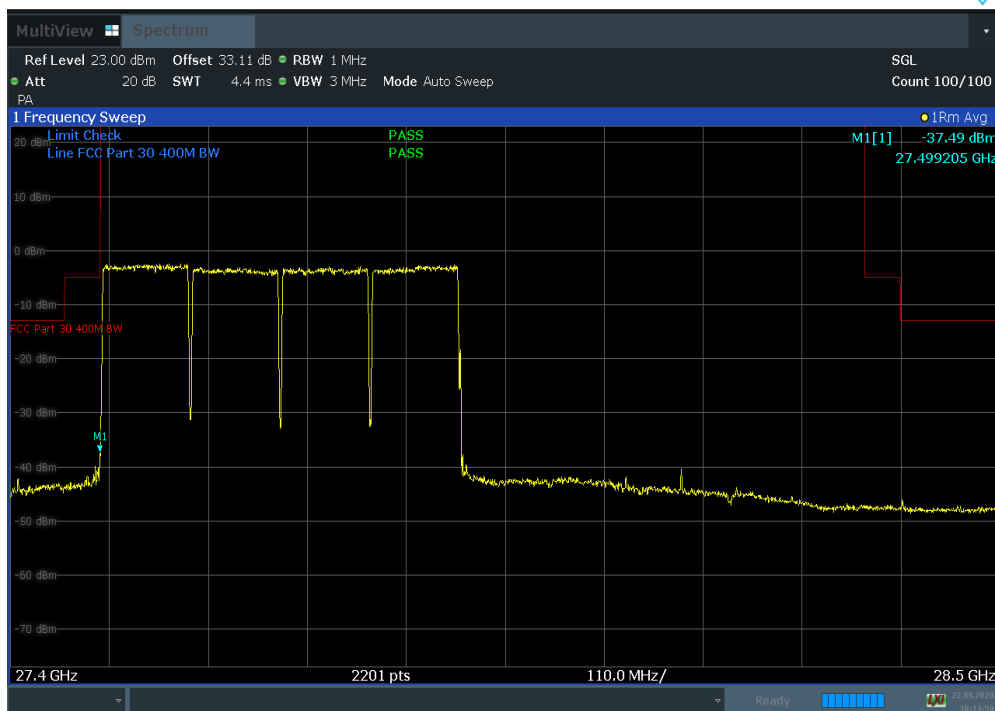
Plot 7-757. Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 6CC NC QPSK Low)



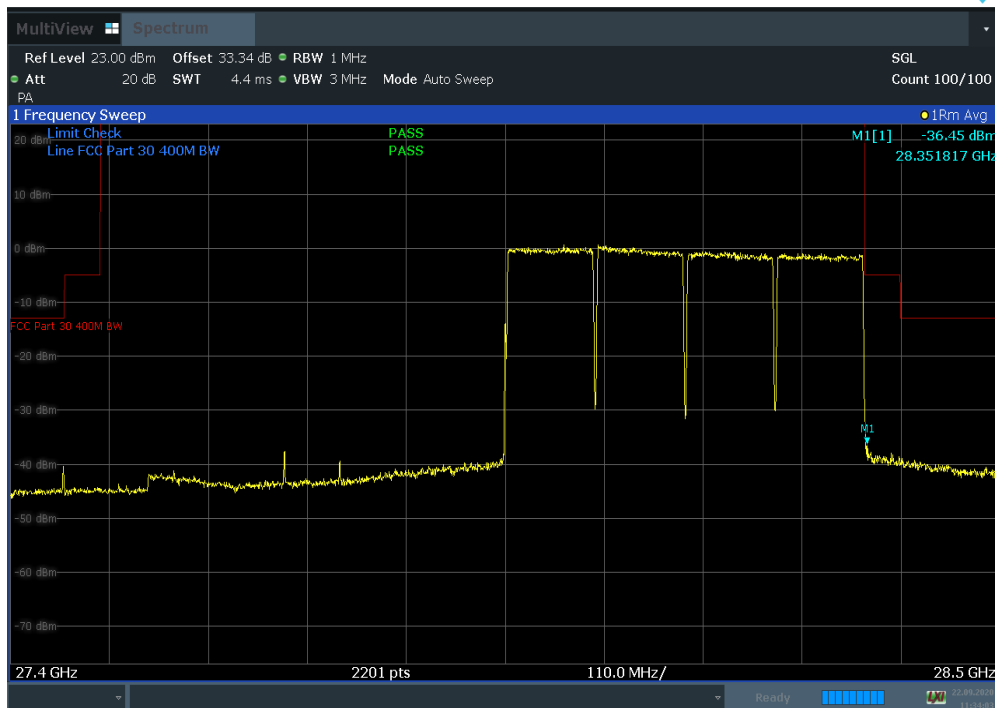
Plot 7-758. Band Edge (Ant C 50 MHz BW 2CC + 100 MHz BW 6CC NC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 445 of 466

7.6.5 Antenna D Conducted Band Edge Maximized on Antenna D



Plot 7-759 Band Edge (Ant D 100 MHz BW 4CC CC QPSK Low)



Plot 7-760. Band Edge (Ant D 100 MHz BW 4CC CC QPSK High)

FCC ID: A3LAT1K04-B00	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K20090901-R2.A3L	Test Dates: 09/10/2020-10/08/2020	EUT Type: 5G Access Unit		Page 446 of 466