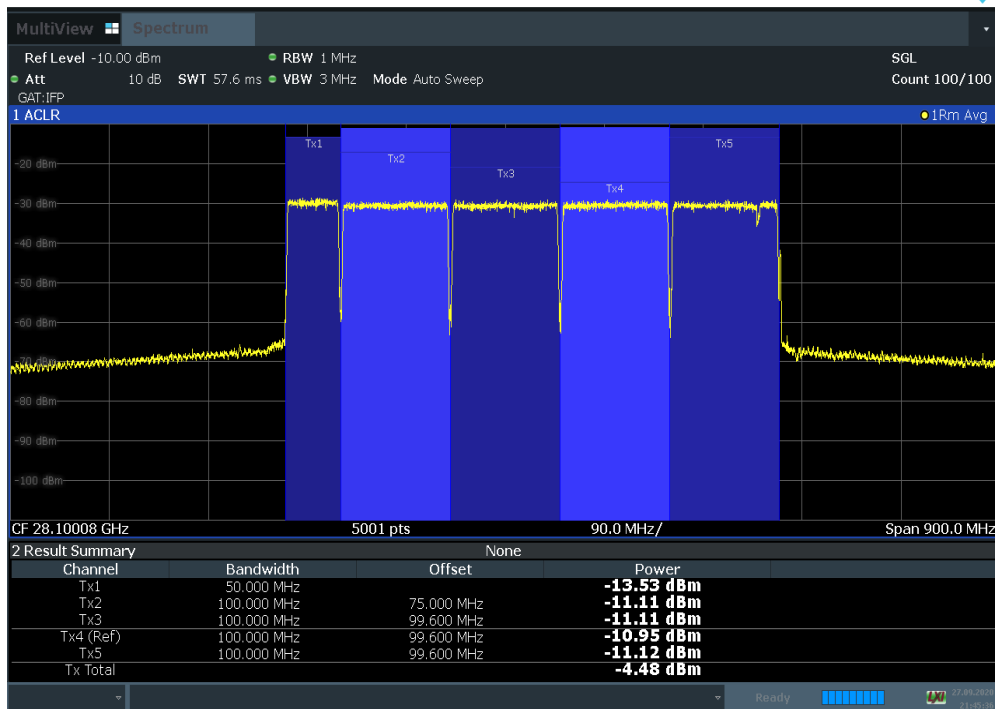
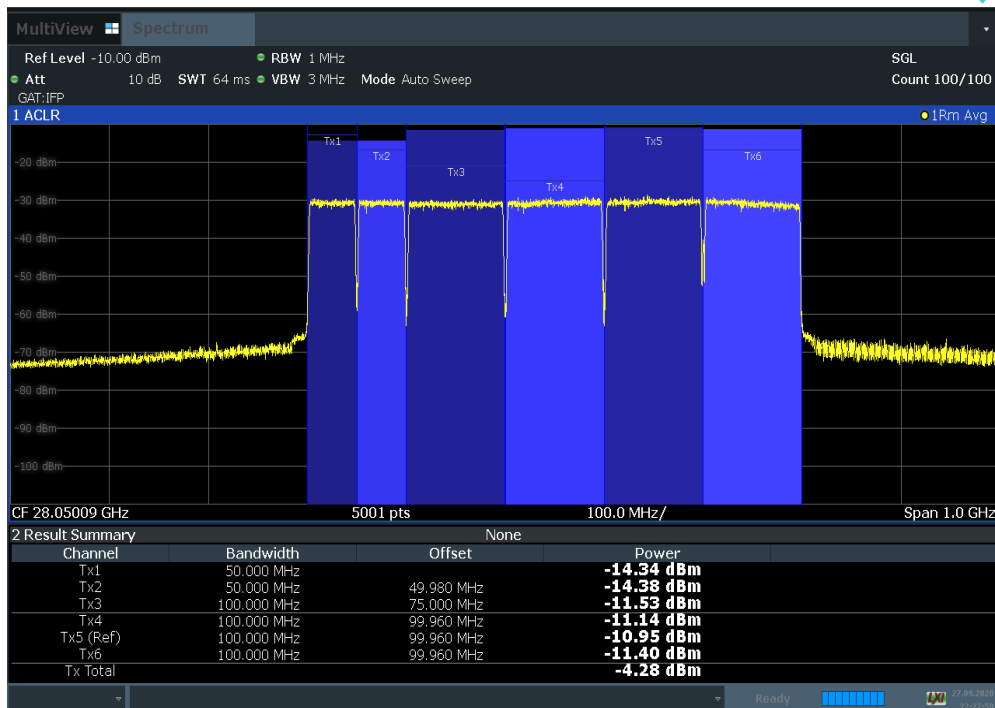


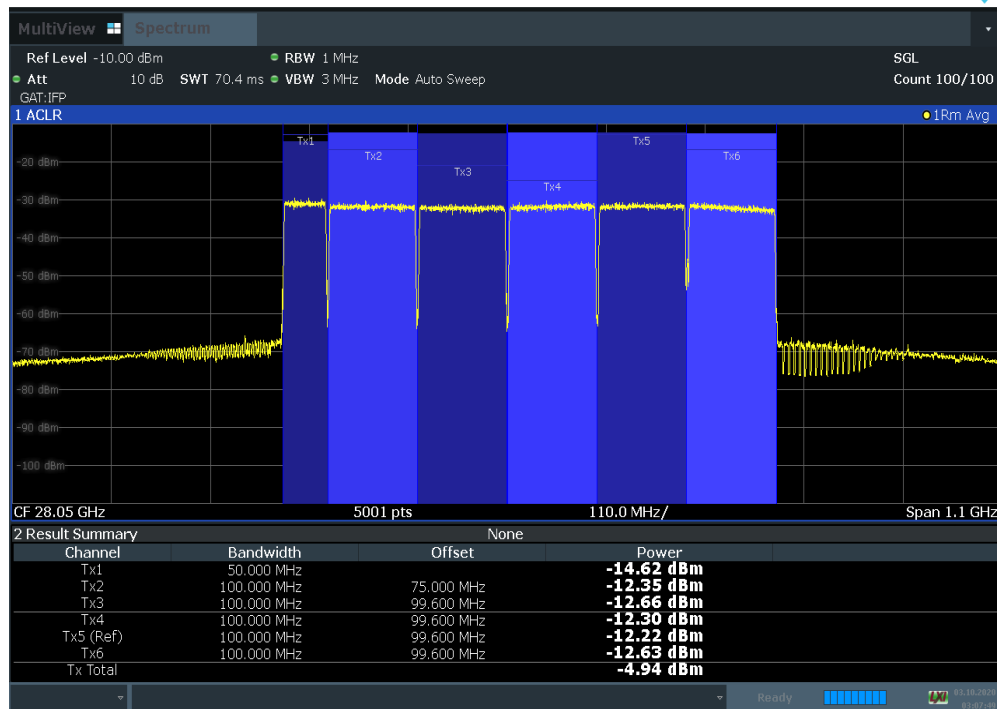


Plot 7-259. EIRP Density (Ant D 50 MHz 1CC + 100 MHz BW 4CC QPSK High)

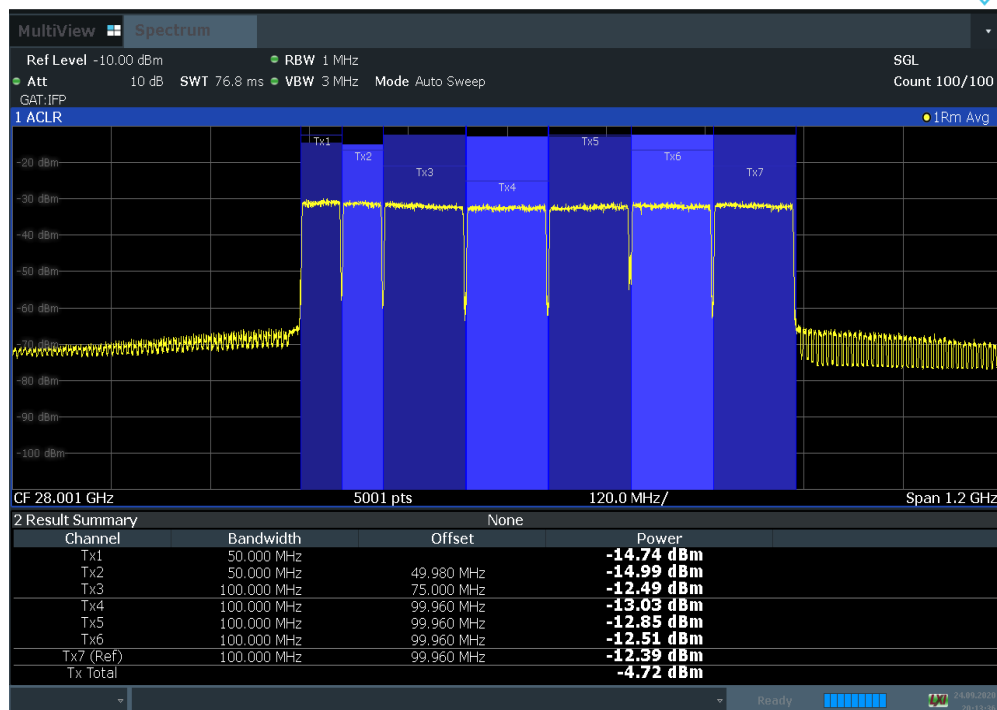


Plot 7-260. EIRP Density (Ant D 50 MHz 2CC + 100 MHz BW 4CC QPSK High)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 176 of 469                 |

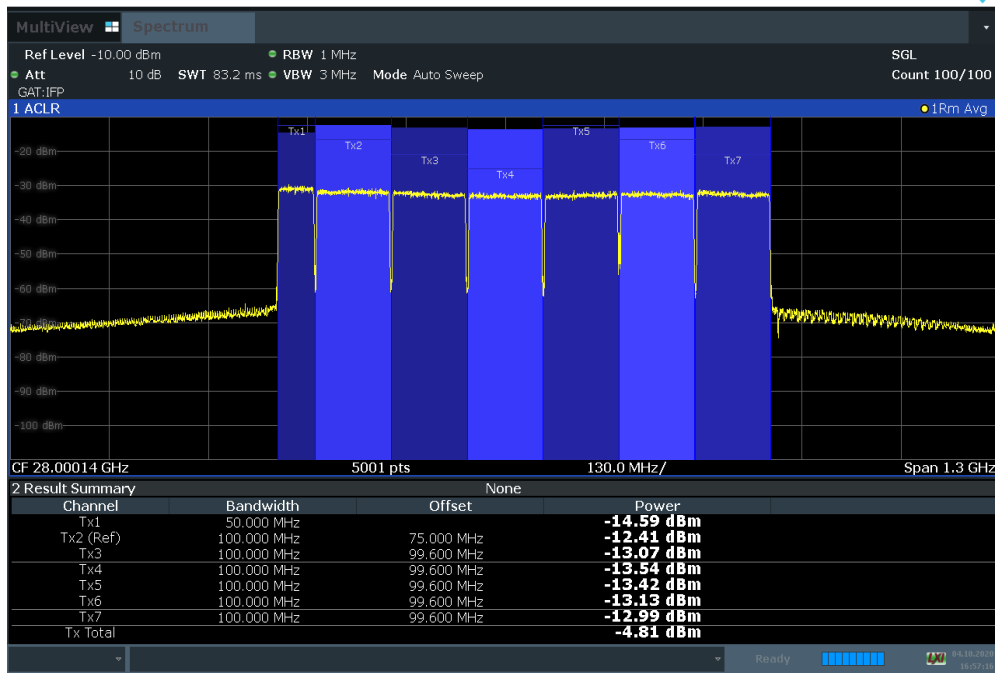


Plot 7-261. EIRP Density (Ant D 50 MHz 1CC + 100 MHz BW 5CC QPSK High)



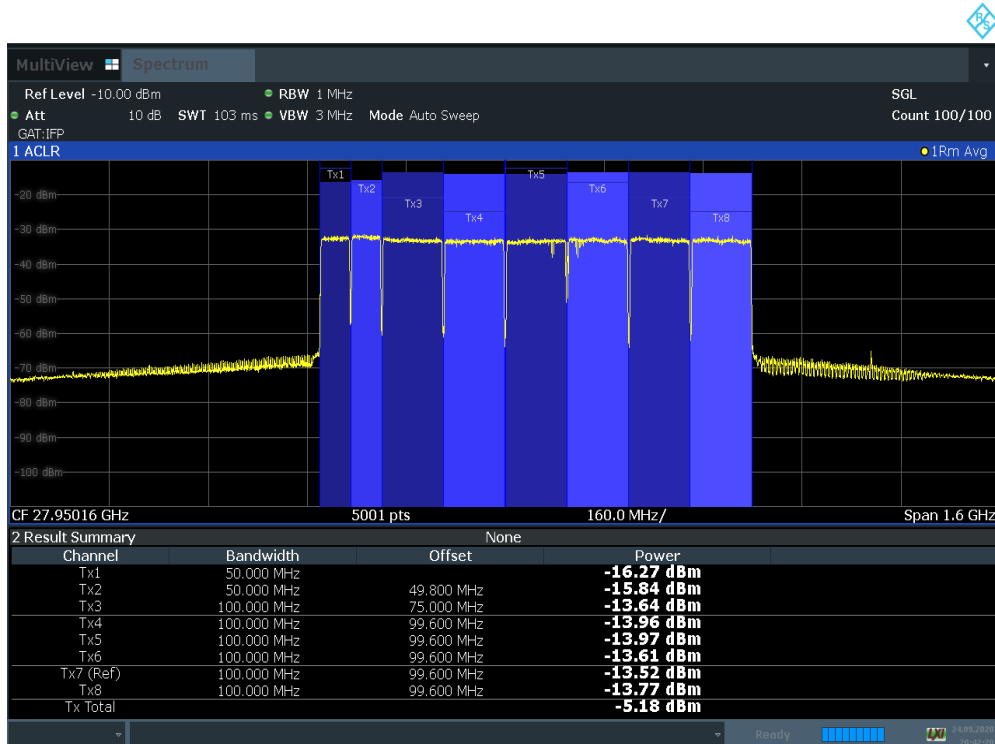
Plot 7-262. EIRP Density (Ant D 50 MHz 2CC + 100 MHz BW 5CC QPSK High)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 177 of 469                 |



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Plot 7-263. EIRP Density (Ant D 50 MHz 1CC + 100 MHz BW 6CC QPSK High)



Plot 7-264. EIRP Density (Ant D 50 MHz 2CC + 100 MHz BW 6CC QPSK High)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 178 of 469                 |

## 7.3.5 MIMO EIRP Density

| Antenna | Bandwidth | Configuration | Channel | CCs active | Modulation | Average e.i.r.p. PSD [dBm/100MHz] | PSD Limit [dBm/100MHz] | Margin [dB] |
|---------|-----------|---------------|---------|------------|------------|-----------------------------------|------------------------|-------------|
| A + C   | 50 MHz    | 1CC           | Low     | 0          | QPSK       | 50.53                             | 75.00                  | 24.47       |
|         |           | 1CC           | Low     | 0          | 16QAM      | 50.44                             | 75.00                  | 24.56       |
|         |           | 1CC           | Low     | 0          | 64QAM      | 50.52                             | 75.00                  | 24.48       |
|         |           | 2CC           | Low     | 0-1        | QPSK       | 50.62                             | 75.00                  | 24.38       |
|         |           | 2CC           | Low     | 0-1        | 16QAM      | 50.61                             | 75.00                  | 24.39       |
|         |           | 2CC           | Low     | 0-1        | 64QAM      | 50.60                             | 75.00                  | 24.40       |
|         |           | 1CC           | Mid     | 4          | QPSK       | 50.47                             | 75.00                  | 24.53       |
|         |           | 1CC           | Mid     | 4          | 16QAM      | 50.35                             | 75.00                  | 24.65       |
|         |           | 1CC           | Mid     | 4          | 64QAM      | 50.47                             | 75.00                  | 24.53       |
|         |           | 2CC           | Mid     | 0-1        | QPSK       | 50.51                             | 75.00                  | 24.49       |
|         |           | 2CC           | Mid     | 0-1        | 16QAM      | 50.56                             | 75.00                  | 24.44       |
|         |           | 2CC           | Mid     | 0-1        | 64QAM      | 50.58                             | 75.00                  | 24.42       |
|         |           | 1CC           | High    | 7          | QPSK       | 51.05                             | 75.00                  | 23.95       |
|         |           | 1CC           | High    | 7          | 16QAM      | 50.96                             | 75.00                  | 24.04       |
|         |           | 1CC           | High    | 7          | 64QAM      | 51.01                             | 75.00                  | 23.99       |
|         |           | 2CC           | High    | 0-1        | QPSK       | 51.17                             | 75.00                  | 23.83       |
|         |           | 2CC           | High    | 0-1        | 16QAM      | 51.08                             | 75.00                  | 23.92       |
|         |           | 2CC           | High    | 0-1        | 64QAM      | 51.09                             | 75.00                  | 23.91       |
|         | 100 MHz   | 1CC           | Low     | 0          | QPSK       | 50.64                             | 75.00                  | 24.36       |
|         |           | 1CC           | Low     | 0          | 16QAM      | 50.58                             | 75.00                  | 24.42       |
|         |           | 1CC           | Low     | 0          | 64QAM      | 50.63                             | 75.00                  | 24.37       |
|         |           | 8CC           | Low     | 0-7        | QPSK       | 48.38                             | 75.00                  | 26.62       |
|         |           | 8CC           | Low     | 0-7        | 16QAM      | 48.35                             | 75.00                  | 26.65       |
|         |           | 8CC           | Low     | 0-7        | 64QAM      | 48.36                             | 75.00                  | 26.64       |
|         |           | 1CC           | Mid     | 4          | QPSK       | 50.26                             | 75.00                  | 24.74       |
|         |           | 1CC           | Mid     | 4          | 16QAM      | 50.42                             | 75.00                  | 24.58       |
|         |           | 1CC           | Mid     | 4          | 64QAM      | 50.49                             | 75.00                  | 24.51       |
|         |           | 8CC           | Mid     | 0-7        | QPSK       | 48.45                             | 75.00                  | 26.55       |
|         |           | 8CC           | Mid     | 0-7        | 16QAM      | 48.33                             | 75.00                  | 26.67       |
|         |           | 8CC           | Mid     | 0-7        | 64QAM      | 48.37                             | 75.00                  | 26.63       |
|         |           | 1CC           | High    | 7          | QPSK       | 50.97                             | 75.00                  | 24.03       |
|         |           | 1CC           | High    | 7          | 16QAM      | 50.88                             | 75.00                  | 24.12       |
|         |           | 1CC           | High    | 7          | 64QAM      | 50.92                             | 75.00                  | 24.08       |
|         |           | 2CC           | High    | 0-1        | QPSK       | 50.73                             | 75.00                  | 24.27       |
|         |           | 3CC           | High    | 0-2        | QPSK       | 51.09                             | 75.00                  | 23.91       |
|         |           | 4CC           | High    | 0-3        | QPSK       | 51.24                             | 75.00                  | 23.76       |
|         |           | 5CC           | High    | 0-4        | QPSK       | 50.32                             | 75.00                  | 24.68       |
|         |           | 6CC           | High    | 0-5        | QPSK       | 49.54                             | 75.00                  | 25.46       |
|         |           | 7CC           | High    | 0-6        | QPSK       | 48.88                             | 75.00                  | 26.12       |
|         |           | 8CC           | High    | 0-7        | QPSK       | 48.79                             | 75.00                  | 26.21       |
|         |           | 8CC           | High    | 0-7        | 16QAM      | 48.82                             | 75.00                  | 26.18       |
|         |           | 8CC           | High    | 0-7        | 64QAM      | 48.80                             | 75.00                  | 26.20       |

Table 7-11. MIMO EIRP Density Summary Data (Antenna A + Antenna C)

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 179 of 469                 |

| Antenna | Bandwidth | Configuration | Channel | CCs active | Modulation | Average e.i.r.p. PSD [dBm/100MHz] | PSD Limit [dBm/100MHz] | Margin [dB] |
|---------|-----------|---------------|---------|------------|------------|-----------------------------------|------------------------|-------------|
| B + D   | 50 MHz    | 1CC           | Low     | 0          | QPSK       | 50.23                             | 75.00                  | 24.77       |
|         |           | 1CC           | Low     | 0          | 16QAM      | 50.38                             | 75.00                  | 24.62       |
|         |           | 1CC           | Low     | 0          | 64QAM      | 50.46                             | 75.00                  | 24.54       |
|         |           | 2CC           | Low     | 0-1        | QPSK       | 50.61                             | 75.00                  | 24.39       |
|         |           | 2CC           | Low     | 0-1        | 16QAM      | 50.58                             | 75.00                  | 24.42       |
|         |           | 2CC           | Low     | 0-1        | 64QAM      | 50.56                             | 75.00                  | 24.44       |
|         |           | 1CC           | Mid     | 4          | QPSK       | 50.66                             | 75.00                  | 24.34       |
|         |           | 1CC           | Mid     | 4          | 16QAM      | 50.58                             | 75.00                  | 24.42       |
|         |           | 1CC           | Mid     | 4          | 64QAM      | 50.64                             | 75.00                  | 24.36       |
|         |           | 2CC           | Mid     | 0-1        | QPSK       | 50.84                             | 75.00                  | 24.16       |
|         |           | 2CC           | Mid     | 0-1        | 16QAM      | 50.79                             | 75.00                  | 24.21       |
|         |           | 2CC           | Mid     | 0-1        | 64QAM      | 50.77                             | 75.00                  | 24.23       |
|         |           | 1CC           | High    | 7          | QPSK       | 50.82                             | 75.00                  | 24.18       |
|         |           | 1CC           | High    | 7          | 16QAM      | 50.63                             | 75.00                  | 24.37       |
|         |           | 1CC           | High    | 7          | 64QAM      | 50.78                             | 75.00                  | 24.22       |
|         |           | 2CC           | High    | 0-1        | QPSK       | 50.94                             | 75.00                  | 24.06       |
|         |           | 2CC           | High    | 0-1        | 16QAM      | 50.89                             | 75.00                  | 24.11       |
|         |           | 2CC           | High    | 0-1        | 64QAM      | 50.86                             | 75.00                  | 24.14       |
|         | 100 MHz   | 1CC           | Low     | 0          | QPSK       | 50.56                             | 75.00                  | 24.44       |
|         |           | 1CC           | Low     | 0          | 16QAM      | 50.52                             | 75.00                  | 24.48       |
|         |           | 1CC           | Low     | 0          | 64QAM      | 50.60                             | 75.00                  | 24.40       |
|         |           | 8CC           | Low     | 0-7        | QPSK       | 48.25                             | 75.00                  | 26.75       |
|         |           | 8CC           | Low     | 0-7        | 16QAM      | 48.15                             | 75.00                  | 26.85       |
|         |           | 8CC           | Low     | 0-7        | 64QAM      | 48.22                             | 75.00                  | 26.78       |
|         |           | 1CC           | Mid     | 4          | QPSK       | 50.44                             | 75.00                  | 24.56       |
|         |           | 1CC           | Mid     | 4          | 16QAM      | 50.39                             | 75.00                  | 24.61       |
|         |           | 1CC           | Mid     | 4          | 64QAM      | 50.45                             | 75.00                  | 24.55       |
|         |           | 8CC           | Mid     | 0-7        | QPSK       | 48.40                             | 75.00                  | 26.60       |
|         |           | 8CC           | Mid     | 0-7        | 16QAM      | 48.39                             | 75.00                  | 26.61       |
|         |           | 8CC           | Mid     | 0-7        | 64QAM      | 48.42                             | 75.00                  | 26.58       |
|         |           | 1CC           | High    | 7          | QPSK       | 50.51                             | 75.00                  | 24.49       |
|         |           | 1CC           | High    | 7          | 16QAM      | 50.39                             | 75.00                  | 24.61       |
|         |           | 1CC           | High    | 7          | 64QAM      | 50.47                             | 75.00                  | 24.53       |
|         |           | 2CC           | High    | 0-1        | QPSK       | 50.79                             | 75.00                  | 24.21       |
|         |           | 3CC           | High    | 0-2        | QPSK       | 51.10                             | 75.00                  | 23.90       |
|         |           | 4CC           | High    | 0-3        | QPSK       | 51.02                             | 75.00                  | 23.98       |
|         |           | 5CC           | High    | 0-4        | QPSK       | 50.26                             | 75.00                  | 24.74       |
|         |           | 6CC           | High    | 0-5        | QPSK       | 49.44                             | 75.00                  | 25.56       |
|         |           | 7CC           | High    | 0-6        | QPSK       | 48.80                             | 75.00                  | 26.20       |
|         |           | 8CC           | High    | 0-7        | QPSK       | 48.54                             | 75.00                  | 26.46       |
|         |           | 8CC           | High    | 0-7        | 16QAM      | 48.57                             | 75.00                  | 26.43       |
|         |           | 8CC           | High    | 0-7        | 64QAM      | 48.62                             | 75.00                  | 26.38       |

**Table 7-12. MIMO EIRP Density Summary Data (Antenna B + Antenna D)**

|                                                 |                                                                                     |                                           |                                                                                       |                                        |
|-------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> A3LAT1K04-B10                    |  | <b>MEASUREMENT REPORT (CERTIFICATION)</b> |  | <b>Approved by:</b><br>Quality Manager |
| <b>Test Report S/N:</b><br>8K20090901-02-R2.A3L | <b>Test Dates:</b><br>09/10/2020-10/08/2020                                         | <b>EUT Type:</b><br>5G Access Unit        |                                                                                       | Page 180 of 469                        |

| Antenna       | Bandwidth | Configuration | Channel | CCs active | Modulation | Average e.i.r.p. PSD [dBm/100MHz] | PSD Limit [dBm/100MHz] | Margin [dB] |
|---------------|-----------|---------------|---------|------------|------------|-----------------------------------|------------------------|-------------|
| A + B + C + D | 50 MHz    | 1CC           | Low     | 0          | QPSK       | 53.39                             | 75.00                  | 21.61       |
|               |           | 1CC           | Low     | 0          | 16QAM      | 53.42                             | 75.00                  | 21.58       |
|               |           | 1CC           | Low     | 0          | 64QAM      | 53.50                             | 75.00                  | 21.50       |
|               |           | 2CC           | Low     | 0-1        | QPSK       | 53.62                             | 75.00                  | 21.38       |
|               |           | 2CC           | Low     | 0-1        | 16QAM      | 53.60                             | 75.00                  | 21.40       |
|               |           | 2CC           | Low     | 0-1        | 64QAM      | 53.59                             | 75.00                  | 21.41       |
|               |           | 1CC           | Mid     | 4          | QPSK       | 53.58                             | 75.00                  | 21.42       |
|               |           | 1CC           | Mid     | 4          | 16QAM      | 53.48                             | 75.00                  | 21.52       |
|               |           | 1CC           | Mid     | 4          | 64QAM      | 53.57                             | 75.00                  | 21.43       |
|               |           | 2CC           | Mid     | 0-1        | QPSK       | 53.69                             | 75.00                  | 21.31       |
|               |           | 2CC           | Mid     | 0-1        | 16QAM      | 53.69                             | 75.00                  | 21.31       |
|               |           | 2CC           | Mid     | 0-1        | 64QAM      | 53.68                             | 75.00                  | 21.32       |
|               |           | 1CC           | High    | 7          | QPSK       | 53.95                             | 75.00                  | 21.05       |
|               |           | 1CC           | High    | 7          | 16QAM      | 53.81                             | 75.00                  | 21.19       |
|               |           | 1CC           | High    | 7          | 64QAM      | 53.91                             | 75.00                  | 21.09       |
|               |           | 2CC           | High    | 0-1        | QPSK       | 54.07                             | 75.00                  | 20.93       |
|               |           | 2CC           | High    | 0-1        | 16QAM      | 54.00                             | 75.00                  | 21.00       |
|               |           | 2CC           | High    | 0-1        | 64QAM      | 53.98                             | 75.00                  | 21.02       |
|               | 100 MHz   | 1CC           | Low     | 0          | QPSK       | 53.61                             | 75.00                  | 21.39       |
|               |           | 1CC           | Low     | 0          | 16QAM      | 53.56                             | 75.00                  | 21.44       |
|               |           | 1CC           | Low     | 0          | 64QAM      | 53.62                             | 75.00                  | 21.38       |
|               |           | 8CC           | Low     | 0-7        | QPSK       | 51.32                             | 75.00                  | 23.68       |
|               |           | 8CC           | Low     | 0-7        | 16QAM      | 51.26                             | 75.00                  | 23.74       |
|               |           | 8CC           | Low     | 0-7        | 64QAM      | 51.30                             | 75.00                  | 23.70       |
|               |           | 1CC           | Mid     | 4          | QPSK       | 53.36                             | 75.00                  | 21.64       |
|               |           | 1CC           | Mid     | 4          | 16QAM      | 53.42                             | 75.00                  | 21.58       |
|               |           | 1CC           | Mid     | 4          | 64QAM      | 53.48                             | 75.00                  | 21.52       |
|               |           | 8CC           | Mid     | 0-7        | QPSK       | 51.44                             | 75.00                  | 23.56       |
|               |           | 8CC           | Mid     | 0-7        | 16QAM      | 51.37                             | 75.00                  | 23.63       |
|               |           | 8CC           | Mid     | 0-7        | 64QAM      | 51.41                             | 75.00                  | 23.59       |
|               |           | 1CC           | High    | 7          | QPSK       | 53.75                             | 75.00                  | 21.25       |
|               |           | 1CC           | High    | 7          | 16QAM      | 53.65                             | 75.00                  | 21.35       |
|               |           | 1CC           | High    | 7          | 64QAM      | 53.71                             | 75.00                  | 21.29       |
|               |           | 2CC           | High    | 0-1        | QPSK       | 53.77                             | 75.00                  | 21.23       |
|               |           | 3CC           | High    | 0-2        | QPSK       | 54.11                             | 75.00                  | 20.89       |
|               |           | 4CC           | High    | 0-3        | QPSK       | 54.14                             | 75.00                  | 20.86       |
|               |           | 5CC           | High    | 0-4        | QPSK       | 53.30                             | 75.00                  | 21.70       |
|               |           | 6CC           | High    | 0-5        | QPSK       | 52.50                             | 75.00                  | 22.50       |
|               |           | 7CC           | High    | 0-6        | QPSK       | 51.85                             | 75.00                  | 23.15       |
|               |           | 8CC           | High    | 0-7        | QPSK       | 51.67                             | 75.00                  | 23.33       |
|               |           | 8CC           | High    | 0-7        | 16QAM      | 51.71                             | 75.00                  | 23.29       |
|               |           | 8CC           | High    | 0-7        | 64QAM      | 51.72                             | 75.00                  | 23.28       |

**Table 7-13. MIMO EIRP Density Summary Data (Antenna A + Antenna B + Antenna C + Antenna D)**

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 181 of 469                 |

## 7.4 RF Conducted Output Power

### §2.1046

#### Test Overview

RF conducted output power measurements are performed using broadband horn antennas. The conducted power is determined by maximizing the full spectrum EIRP for all component carrier configurations and then subtracting the known antenna gain from the EIRP. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

#### Test Procedures Used

ANSI C63.26-2015 Section 5.2.4.4.1  
ANSI C63.26-2015 Section 6.4

#### Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW
3. VBW  $\geq$  3 x RBW
4. Span = 2x to 3x the OBW
5. No. of sweep points  $\geq$  2 x span / RBW
6. Detector = RMS
7. The integration bandwidth was roughly set equal to the measured RF Conducted Output Power of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
8. Trace mode = trace averaging (RMS) over 100 sweeps
9. The trace was allowed to stabilize

|                                          |                                                                                                                            |                                       |                                                                                       |                                 |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  PCTEST®<br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2-A3L | Test Dates:<br>09/10/2020-10/08/2020                                                                                       | EUT Type:<br>5G Access Unit           |                                                                                       | Page 182 of 469                 |

## Test Notes

- 1) The EUT was tested while positioned upright and mounted on a mast at 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) Elements within the same antenna array are correlated to produce beamforming array gain.
- 3) Measurements were taken in the far field of the mmWave signal based on the formula:  $R \geq 2D^2/\text{wavelength}$ .
- 4) The test case with 1 CC active, "CC0" representing the component carrier with the lowest frequency, was selected for the worst case emission testing as it created the highest EIRP within 50 MHz and 100 MHz bandwidth.
- 5) The average EIRP reported below is calculated per formula specific in d) of ANSI C63.26-2015 Section 5.2.7:

EIRP (dBm) = E (dBμV/m) + 20log(D) -104.8; where D is the measurement distance (in the far field region) in m.

For this section, all EIRP density measurements were performed at a distance of 3.19 m, so the effective correction is:

$$\text{EIRP (dBm)} = \text{E (dBuV/m)} - 94.72 \text{ dB}$$

$$= \text{Analyzer Level (dBm)} + \text{AFCL (dB/m)} + 107 \text{ dB} - 94.72 \text{ dB}$$

$$= \text{Analyzer Level (dBm)} + \text{AFCL (dB/m)} + 12.28 \text{ dB}$$

- 6) The conducted average power over the full channel BW is calculated as follows:  
 Conducted Average Power (dBm) = Average EIRP (dBm) – Antenna Gain (dBi)
- 7) Per ANSI C63.26-2015 Section 6.4, individual EIRPs are also summed before compared to the limit.
- 8) The angle of the horn antenna was rotated to maximize and find the worst case emissions. Worst case EIRP is reported below.
- 9) 7.3 Equivalent Isotropic Radiated Power (EIRP) Density plots cover for 7.4 Conducted Output Power plot.
- 10) CCs active 0, 4, 7 = 1 Components Carriers Active, 0-7 = 8 Component Carriers Active. 0-7(NC) = 8 Non-contiguous Component Carriers Active. Each component carrier's bandwidth is either of 50 MHz or 100 MHz Bandwidth.
- 11) A3LAT1K04-B10 test result is referenced as A3LAT1K04-B00 result which only difference of power type as AC and DC which supply condition no affect to RF specification.

|                                          |                                                                                                                                  |                                       |                                                                                       |                                 |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                                                             | EUT Type:<br>5G Access Unit           |                                                                                       | Page 183 of 469                 |

## 7.4.1 Antenna A Conducted Power

| Antenna | Bandwidth | Chan. | CCs active | Modulation | Horn Angle | Horn Height | Turntable Azimuth | Analyzer Level (Total Pwr) | AFCL  | EUT Antenna Gain | Average e.i.r.p. | Conducted Average Power |
|---------|-----------|-------|------------|------------|------------|-------------|-------------------|----------------------------|-------|------------------|------------------|-------------------------|
|         | [MHz]     |       |            |            | [degrees]  | [cm]        | [degrees]         | [dBm]                      | [dBm] | [dBi]            | [dBm]            | [dBm]                   |
| A       | 50        | Low   | 0          | QPSK       | 135.0      | 156         | 54                | -12.99                     | 57.65 | 28.12            | 44.66            | 16.54                   |
|         |           | Low   | 0          | 16QAM      | 135.0      | 156         | 54                | -13.10                     | 57.65 | 28.12            | 44.55            | 16.43                   |
|         |           | Low   | 0          | 64QAM      | 135.0      | 156         | 54                | -12.99                     | 57.65 | 28.12            | 44.66            | 16.54                   |
|         |           | Low   | 0-1        | QPSK       | 135.0      | 156         | 54                | -12.85                     | 57.65 | 28.12            | 44.80            | 16.68                   |
|         |           | Low   | 0-1        | 16QAM      | 135.0      | 156         | 54                | -12.83                     | 57.65 | 28.12            | 44.82            | 16.70                   |
|         |           | Low   | 0-1        | 64QAM      | 135.0      | 156         | 54                | -12.83                     | 57.65 | 28.12            | 44.82            | 16.70                   |
|         |           | Mid   | 4          | QPSK       | 135.0      | 156         | 54                | -13.14                     | 57.74 | 28.18            | 44.60            | 16.42                   |
|         |           | Mid   | 4          | 16QAM      | 135.0      | 156         | 54                | -13.31                     | 57.74 | 28.18            | 44.43            | 16.25                   |
|         |           | Mid   | 4          | 64QAM      | 135.0      | 156         | 54                | -13.17                     | 57.74 | 28.18            | 44.57            | 16.39                   |
|         |           | Mid   | 0-1        | QPSK       | 135.0      | 156         | 54                | -13.12                     | 57.74 | 28.18            | 44.62            | 16.44                   |
|         |           | Mid   | 0-1        | 16QAM      | 135.0      | 156         | 54                | -13.09                     | 57.74 | 28.18            | 44.65            | 16.47                   |
|         |           | Mid   | 0-1        | 64QAM      | 135.0      | 156         | 54                | -13.05                     | 57.74 | 28.18            | 44.69            | 16.51                   |
|         |           | High  | 7          | QPSK       | 135.0      | 156         | 54                | -12.95                     | 58.09 | 28.33            | 45.14            | 16.81                   |
|         |           | High  | 7          | 16QAM      | 135.0      | 156         | 54                | -13.07                     | 58.09 | 28.33            | 45.02            | 16.69                   |
|         |           | High  | 7          | 64QAM      | 135.0      | 156         | 54                | -12.97                     | 58.09 | 28.33            | 45.12            | 16.79                   |
|         |           | High  | 0-1        | QPSK       | 135.0      | 156         | 54                | -12.86                     | 58.09 | 28.33            | 45.23            | 16.90                   |
|         |           | High  | 0-1        | 16QAM      | 135.0      | 156         | 54                | -12.95                     | 58.09 | 28.33            | 45.14            | 16.81                   |
|         |           | High  | 0-1        | 64QAM      | 135.0      | 156         | 54                | -12.94                     | 58.09 | 28.33            | 45.15            | 16.82                   |
|         | 100       | Low   | 0          | QPSK       | 135.0      | 156         | 54                | -9.98                      | 57.65 | 28.12            | 47.67            | 19.55                   |
|         |           | Low   | 0          | 16QAM      | 135.0      | 156         | 54                | -10.05                     | 57.65 | 28.12            | 47.60            | 19.48                   |
|         |           | Low   | 0          | 64QAM      | 135.0      | 156         | 54                | -9.99                      | 57.65 | 28.12            | 47.66            | 19.54                   |
|         |           | Low   | 0-7        | QPSK       | 135.0      | 156         | 54                | -12.01                     | 57.65 | 28.12            | 45.64            | 17.52                   |
|         |           | Low   | 0-7        | 16QAM      | 135.0      | 156         | 54                | -12.06                     | 57.65 | 28.12            | 45.59            | 17.47                   |
|         |           | Low   | 0-7        | 64QAM      | 135.0      | 156         | 54                | -12.06                     | 57.65 | 28.12            | 45.59            | 17.47                   |
|         |           | Mid   | 4          | QPSK       | 135.0      | 156         | 54                | -10.50                     | 57.74 | 28.18            | 47.24            | 19.06                   |
|         |           | Mid   | 4          | 16QAM      | 135.0      | 156         | 54                | -10.11                     | 57.74 | 28.18            | 47.63            | 19.45                   |
|         |           | Mid   | 4          | 64QAM      | 135.0      | 156         | 54                | -10.04                     | 57.74 | 28.18            | 47.70            | 19.52                   |
|         |           | Mid   | 0-7        | QPSK       | 135.0      | 156         | 54                | -11.99                     | 57.74 | 28.18            | 45.75            | 17.57                   |
|         |           | Mid   | 0-7        | 16QAM      | 135.0      | 156         | 54                | -12.24                     | 57.74 | 28.18            | 45.50            | 17.32                   |
|         |           | Mid   | 0-7        | 64QAM      | 135.0      | 156         | 54                | -12.18                     | 57.74 | 28.18            | 45.56            | 17.38                   |
|         |           | High  | 7          | QPSK       | 135.0      | 156         | 54                | -10.23                     | 58.09 | 28.33            | 47.86            | 19.53                   |
|         |           | High  | 7          | 16QAM      | 135.0      | 156         | 54                | -10.33                     | 58.09 | 28.33            | 47.76            | 19.43                   |
|         |           | High  | 7          | 64QAM      | 135.0      | 156         | 54                | -10.30                     | 58.09 | 28.33            | 47.79            | 19.46                   |
|         |           | High  | 0-1        | QPSK       | 135.0      | 156         | 54                | -10.21                     | 58.09 | 28.33            | 47.88            | 19.55                   |
|         |           | High  | 0-2        | QPSK       | 135.0      | 156         | 54                | -9.78                      | 58.09 | 28.33            | 48.31            | 19.98                   |
|         |           | High  | 0-3        | QPSK       | 135.0      | 156         | 54                | -9.61                      | 58.09 | 28.33            | 48.48            | 20.15                   |
|         |           | High  | 0-4        | QPSK       | 135.0      | 156         | 54                | -10.45                     | 58.09 | 28.33            | 47.64            | 19.32                   |
|         |           | High  | 0-5        | QPSK       | 135.0      | 156         | 54                | -11.26                     | 58.09 | 28.33            | 46.83            | 18.51                   |
|         |           | High  | 0-6        | QPSK       | 135.0      | 156         | 54                | -11.94                     | 58.09 | 28.33            | 46.15            | 17.83                   |
|         |           | High  | 0-7        | QPSK       | 135.0      | 156         | 54                | -12.79                     | 58.09 | 28.33            | 45.30            | 16.97                   |
|         |           | High  | 0-7        | 16QAM      | 135.0      | 156         | 54                | -12.53                     | 58.09 | 28.33            | 45.56            | 17.23                   |
|         |           | High  | 0-7        | 64QAM      | 135.0      | 156         | 54                | -12.73                     | 58.09 | 28.33            | 45.36            | 17.03                   |

Table 7-14. Antenna A Conducted Power Summary Data

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 184 of 469                 |

## 7.4.2 Antenna B Conducted Power

| Antenna | Bandwidth | Chan. | CCs active | Modulation | Horn Angle | Horn Height | Turntable Azimuth | Analyzer Level (Total Pwr) | AFCL  | EUT Antenna Gain | Average e.i.r.p. | Conducted Average Power |
|---------|-----------|-------|------------|------------|------------|-------------|-------------------|----------------------------|-------|------------------|------------------|-------------------------|
|         | [MHz]     |       |            |            | [degrees]  | [cm]        |                   | [dBm]                      | [dBm] | [dBi]            | [dBm]            | [dBm]                   |
| B       | 50        | Low   | 0          | QPSK       | 45.0       | 1.44        | 52                | -13.41                     | 57.65 | 28.12            | 44.24            | 16.12                   |
|         |           | Low   | 0          | 16QAM      | 45.0       | 1.44        | 52                | -13.15                     | 57.65 | 28.12            | 44.50            | 16.38                   |
|         |           | Low   | 0          | 64QAM      | 45.0       | 1.44        | 52                | -13.08                     | 57.65 | 28.12            | 44.57            | 16.45                   |
|         |           | Low   | 0-1        | QPSK       | 45.0       | 1.44        | 52                | -12.78                     | 57.65 | 28.12            | 44.87            | 16.75                   |
|         |           | Low   | 0-1        | 16QAM      | 45.0       | 1.44        | 52                | -12.82                     | 57.65 | 28.12            | 44.83            | 16.71                   |
|         |           | Low   | 0-1        | 64QAM      | 45.0       | 1.44        | 52                | -12.83                     | 57.65 | 28.12            | 44.82            | 16.70                   |
|         |           | Mid   | 4          | QPSK       | 45.0       | 1.44        | 52                | -13.19                     | 57.74 | 28.18            | 44.55            | 16.36                   |
|         |           | Mid   | 4          | 16QAM      | 45.0       | 1.44        | 52                | -13.31                     | 57.74 | 28.18            | 44.43            | 16.24                   |
|         |           | Mid   | 4          | 64QAM      | 45.0       | 1.44        | 52                | -13.26                     | 57.74 | 28.18            | 44.48            | 16.30                   |
|         |           | Mid   | 0-1        | QPSK       | 45.0       | 1.44        | 52                | -12.91                     | 57.74 | 28.18            | 44.83            | 16.65                   |
|         |           | Mid   | 0-1        | 16QAM      | 45.0       | 1.44        | 52                | -12.94                     | 57.74 | 28.18            | 44.80            | 16.62                   |
|         |           | Mid   | 0-1        | 64QAM      | 45.0       | 1.44        | 52                | -12.98                     | 57.74 | 28.18            | 44.76            | 16.58                   |
|         |           | High  | 7          | QPSK       | 45.0       | 1.44        | 52                | -13.38                     | 58.09 | 28.33            | 44.71            | 16.38                   |
|         |           | High  | 7          | 16QAM      | 45.0       | 1.44        | 52                | -13.49                     | 58.09 | 28.33            | 44.60            | 16.27                   |
|         |           | High  | 7          | 64QAM      | 45.0       | 1.44        | 52                | -13.41                     | 58.09 | 28.33            | 44.68            | 16.35                   |
|         |           | High  | 0-1        | QPSK       | 45.0       | 1.44        | 52                | -13.20                     | 58.09 | 28.33            | 44.89            | 16.56                   |
|         |           | High  | 0-1        | 16QAM      | 45.0       | 1.44        | 52                | -13.24                     | 58.09 | 28.33            | 44.85            | 16.52                   |
|         |           | High  | 0-1        | 64QAM      | 45.0       | 1.44        | 52                | -13.28                     | 58.09 | 28.33            | 44.81            | 16.49                   |
|         | 100       | Low   | 0          | QPSK       | 45.0       | 1.44        | 52                | -9.91                      | 57.65 | 28.12            | 47.74            | 19.62                   |
|         |           | Low   | 0          | 16QAM      | 45.0       | 1.44        | 52                | -9.96                      | 57.65 | 28.12            | 47.69            | 19.57                   |
|         |           | Low   | 0          | 64QAM      | 45.0       | 1.44        | 52                | -9.90                      | 57.65 | 28.12            | 47.75            | 19.63                   |
|         |           | Low   | 0-7        | QPSK       | 45.0       | 1.44        | 52                | -12.45                     | 57.65 | 28.12            | 45.20            | 17.08                   |
|         |           | Low   | 0-7        | 16QAM      | 45.0       | 1.44        | 52                | -12.56                     | 57.65 | 28.12            | 45.09            | 16.97                   |
|         |           | Low   | 0-7        | 64QAM      | 45.0       | 1.44        | 52                | -12.47                     | 57.65 | 28.12            | 45.18            | 17.06                   |
|         |           | Mid   | 4          | QPSK       | 45.0       | 1.44        | 52                | -10.36                     | 57.74 | 28.18            | 47.38            | 19.20                   |
|         |           | Mid   | 4          | 16QAM      | 45.0       | 1.44        | 52                | -10.39                     | 57.74 | 28.18            | 47.35            | 19.16                   |
|         |           | Mid   | 4          | 64QAM      | 45.0       | 1.44        | 52                | -10.33                     | 57.74 | 28.18            | 47.41            | 19.23                   |
|         |           | Mid   | 0-7        | QPSK       | 45.0       | 1.44        | 52                | -12.35                     | 57.74 | 28.18            | 45.39            | 17.21                   |
|         |           | Mid   | 0-7        | 16QAM      | 45.0       | 1.44        | 52                | -12.41                     | 57.74 | 28.18            | 45.33            | 17.15                   |
|         |           | Mid   | 0-7        | 64QAM      | 45.0       | 1.44        | 52                | -12.38                     | 57.74 | 28.18            | 45.36            | 17.18                   |
|         |           | High  | 7          | QPSK       | 45.0       | 1.44        | 52                | -10.55                     | 58.09 | 28.33            | 47.54            | 19.21                   |
|         |           | High  | 7          | 16QAM      | 45.0       | 1.44        | 52                | -10.63                     | 58.09 | 28.33            | 47.46            | 19.13                   |
|         |           | High  | 7          | 64QAM      | 45.0       | 1.44        | 52                | -10.56                     | 58.09 | 28.33            | 47.53            | 19.20                   |
|         |           | High  | 0-1        | QPSK       | 45.0       | 1.44        | 52                | -10.64                     | 58.09 | 28.33            | 47.45            | 19.12                   |
|         |           | High  | 0-2        | QPSK       | 45.0       | 1.44        | 52                | -10.25                     | 58.09 | 28.33            | 47.84            | 19.52                   |
|         |           | High  | 0-3        | QPSK       | 45.0       | 1.44        | 52                | -10.12                     | 58.09 | 28.33            | 47.97            | 19.64                   |
|         |           | High  | 0-4        | QPSK       | 45.0       | 1.44        | 52                | -11.13                     | 58.09 | 28.33            | 46.96            | 18.63                   |
|         |           | High  | 0-5        | QPSK       | 45.0       | 1.44        | 52                | -11.92                     | 58.09 | 28.33            | 46.17            | 17.85                   |
|         |           | High  | 0-6        | QPSK       | 45.0       | 1.44        | 52                | -12.43                     | 58.09 | 28.33            | 45.66            | 17.34                   |
|         |           | High  | 0-7        | QPSK       | 45.0       | 1.44        | 52                | -12.52                     | 58.09 | 28.33            | 45.57            | 17.24                   |
|         |           | High  | 0-7        | 16QAM      | 45.0       | 1.44        | 52                | -12.52                     | 58.09 | 28.33            | 45.57            | 17.24                   |
|         |           | High  | 0-7        | 64QAM      | 45.0       | 1.44        | 52                | -12.52                     | 58.09 | 28.33            | 45.57            | 17.25                   |

Table 7-15. Antenna B Conducted Power Summary Data

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 185 of 469                 |

## 7.4.3 Antenna C Conducted Power

| Antenna | Bandwidth | Chan. | CCs active | Modulation | Horn Angle | Horn Height | Turntable Azimuth | Analyzer Level (Total Pwr) | AFCL  | EUT Antenna Gain | Average e.i.r.p. | Conducted Average Power |
|---------|-----------|-------|------------|------------|------------|-------------|-------------------|----------------------------|-------|------------------|------------------|-------------------------|
|         | [MHz]     |       |            |            | [degrees]  | [cm]        | [degrees]         | [dBm]                      | [dBm] | [dBi]            | [dBm]            | [dBm]                   |
| C       | 50        | Low   | 0          | QPSK       | 135.0      | 156         | 55                | -13.29                     | 57.65 | 28.12            | 44.36            | 16.24                   |
|         |           | Low   | 0          | 16QAM      | 135.0      | 156         | 55                | -13.36                     | 57.65 | 28.12            | 44.29            | 16.17                   |
|         |           | Low   | 0          | 64QAM      | 135.0      | 156         | 55                | -13.32                     | 57.65 | 28.12            | 44.33            | 16.21                   |
|         |           | Low   | 0-1        | QPSK       | 135.0      | 156         | 55                | -13.25                     | 57.65 | 28.12            | 44.40            | 16.28                   |
|         |           | Low   | 0-1        | 16QAM      | 135.0      | 156         | 55                | -13.30                     | 57.65 | 28.12            | 44.35            | 16.23                   |
|         |           | Low   | 0-1        | 64QAM      | 135.0      | 156         | 55                | -13.32                     | 57.65 | 28.12            | 44.33            | 16.21                   |
|         |           | Mid   | 4          | QPSK       | 135.0      | 156         | 55                | -13.44                     | 57.74 | 28.18            | 44.30            | 16.12                   |
|         |           | Mid   | 4          | 16QAM      | 135.0      | 156         | 55                | -13.50                     | 57.74 | 28.18            | 44.24            | 16.06                   |
|         |           | Mid   | 4          | 64QAM      | 135.0      | 156         | 55                | -13.41                     | 57.74 | 28.18            | 44.33            | 16.15                   |
|         |           | Mid   | 0-1        | QPSK       | 135.0      | 156         | 55                | -13.39                     | 57.74 | 28.18            | 44.35            | 16.17                   |
|         |           | Mid   | 0-1        | 16QAM      | 135.0      | 156         | 55                | -13.30                     | 57.74 | 28.18            | 44.44            | 16.26                   |
|         |           | Mid   | 0-1        | 64QAM      | 135.0      | 156         | 55                | -13.32                     | 57.74 | 28.18            | 44.42            | 16.24                   |
|         |           | High  | 7          | QPSK       | 135.0      | 156         | 55                | -13.16                     | 58.09 | 28.33            | 44.93            | 16.61                   |
|         |           | High  | 7          | 16QAM      | 135.0      | 156         | 55                | -13.23                     | 58.09 | 28.33            | 44.86            | 16.53                   |
|         |           | High  | 7          | 64QAM      | 135.0      | 156         | 55                | -13.23                     | 58.09 | 28.33            | 44.86            | 16.54                   |
|         |           | High  | 0-1        | QPSK       | 135.0      | 156         | 55                | -13.01                     | 58.09 | 28.33            | 45.08            | 16.76                   |
|         |           | High  | 0-1        | 16QAM      | 135.0      | 156         | 55                | -13.10                     | 58.09 | 28.33            | 44.99            | 16.66                   |
|         |           | High  | 0-1        | 64QAM      | 135.0      | 156         | 55                | -13.20                     | 58.09 | 28.33            | 44.89            | 16.56                   |
|         | 100       | Low   | 0          | QPSK       | 135.0      | 156         | 55                | -10.05                     | 57.65 | 28.12            | 47.60            | 19.48                   |
|         |           | Low   | 0          | 16QAM      | 135.0      | 156         | 55                | -10.11                     | 57.65 | 28.12            | 47.54            | 19.42                   |
|         |           | Low   | 0          | 64QAM      | 135.0      | 156         | 55                | -10.07                     | 57.65 | 28.12            | 47.58            | 19.46                   |
|         |           | Low   | 0-7        | QPSK       | 135.0      | 156         | 55                | -12.57                     | 57.65 | 28.12            | 45.08            | 16.96                   |
|         |           | Low   | 0-7        | 16QAM      | 135.0      | 156         | 55                | -12.58                     | 57.65 | 28.12            | 45.07            | 16.95                   |
|         |           | Low   | 0-7        | 64QAM      | 135.0      | 156         | 55                | -12.55                     | 57.65 | 28.12            | 45.10            | 16.98                   |
|         |           | Mid   | 4          | QPSK       | 135.0      | 156         | 55                | -10.47                     | 57.74 | 28.18            | 47.27            | 19.09                   |
|         |           | Mid   | 4          | 16QAM      | 135.0      | 156         | 55                | -10.56                     | 57.74 | 28.18            | 47.18            | 19.00                   |
|         |           | Mid   | 4          | 64QAM      | 135.0      | 156         | 55                | -10.49                     | 57.74 | 28.18            | 47.25            | 19.07                   |
|         |           | Mid   | 0-7        | QPSK       | 135.0      | 156         | 55                | -12.63                     | 57.74 | 28.18            | 45.11            | 16.93                   |
|         |           | Mid   | 0-7        | 16QAM      | 135.0      | 156         | 55                | -12.60                     | 57.74 | 28.18            | 45.14            | 16.96                   |
|         |           | Mid   | 0-7        | 64QAM      | 135.0      | 156         | 55                | -12.58                     | 57.74 | 28.18            | 45.16            | 16.98                   |
|         |           | High  | 7          | QPSK       | 135.0      | 156         | 55                | -10.03                     | 58.09 | 28.33            | 48.06            | 19.74                   |
|         |           | High  | 7          | 16QAM      | 135.0      | 156         | 55                | -10.11                     | 58.09 | 28.33            | 47.98            | 19.65                   |
|         |           | High  | 7          | 64QAM      | 135.0      | 156         | 55                | -10.05                     | 58.09 | 28.33            | 48.04            | 19.71                   |
|         |           | High  | 0-1        | QPSK       | 135.0      | 156         | 55                | -10.53                     | 58.09 | 28.33            | 47.56            | 19.23                   |
|         |           | High  | 0-2        | QPSK       | 135.0      | 156         | 55                | -10.24                     | 58.09 | 28.33            | 47.85            | 19.52                   |
|         |           | High  | 0-3        | QPSK       | 135.0      | 156         | 55                | -10.13                     | 58.09 | 28.33            | 47.96            | 19.63                   |
|         |           | High  | 0-4        | QPSK       | 135.0      | 156         | 55                | -11.14                     | 58.09 | 28.33            | 46.95            | 18.62                   |
|         |           | High  | 0-5        | QPSK       | 135.0      | 156         | 55                | -11.87                     | 58.09 | 28.33            | 46.22            | 17.89                   |
|         |           | High  | 0-6        | QPSK       | 135.0      | 156         | 55                | -12.51                     | 58.09 | 28.33            | 45.58            | 17.25                   |
|         |           | High  | 0-7        | QPSK       | 135.0      | 156         | 55                | -12.48                     | 58.09 | 28.33            | 45.61            | 17.28                   |
|         |           | High  | 0-7        | 16QAM      | 135.0      | 156         | 55                | -12.49                     | 58.09 | 28.33            | 45.60            | 17.27                   |
|         |           | High  | 0-7        | 64QAM      | 135.0      | 156         | 55                | -12.56                     | 58.09 | 28.33            | 45.53            | 17.21                   |

Table 7-16. Antenna C Conducted Power Summary Data

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 186 of 469                 |

## 7.4.4 Antenna D Conducted Power

| Antenna | Bandwidth | Chan. | CCs active | Modulation | Horn Angle | Horn Height | Turntable Azimuth | Analyzer Level (Total Pwr) | AFCL  | EUT Antenna Gain | Average e.i.r.p. | Conducted Average Power |
|---------|-----------|-------|------------|------------|------------|-------------|-------------------|----------------------------|-------|------------------|------------------|-------------------------|
|         | [MHz]     |       |            |            | [degrees]  | [cm]        | [degrees]         | [dBm]                      | [dBm] | [dBi]            | [dBm]            | [dBm]                   |
| D       | 50        | Low   | 0          | QPSK       | 45.0       | 1.44        | 51                | -13.47                     | 57.65 | 28.12            | 44.18            | 16.06                   |
|         |           | Low   | 0          | 16QAM      | 45.0       | 1.44        | 51                | -13.42                     | 57.65 | 28.12            | 44.23            | 16.11                   |
|         |           | Low   | 0          | 64QAM      | 45.0       | 1.44        | 51                | -13.34                     | 57.65 | 28.12            | 44.31            | 16.19                   |
|         |           | Low   | 0-1        | QPSK       | 45.0       | 1.44        | 51                | -13.36                     | 57.65 | 28.12            | 44.29            | 16.17                   |
|         |           | Low   | 0-1        | 16QAM      | 45.0       | 1.44        | 51                | -13.38                     | 57.65 | 28.12            | 44.27            | 16.15                   |
|         |           | Low   | 0-1        | 64QAM      | 45.0       | 1.44        | 51                | -13.40                     | 57.65 | 28.12            | 44.25            | 16.13                   |
|         |           | Mid   | 4          | QPSK       | 45.0       | 1.44        | 51                | -13.01                     | 57.74 | 28.18            | 44.73            | 16.55                   |
|         |           | Mid   | 4          | 16QAM      | 45.0       | 1.44        | 51                | -13.04                     | 57.74 | 28.18            | 44.70            | 16.52                   |
|         |           | Mid   | 4          | 64QAM      | 45.0       | 1.44        | 51                | -12.97                     | 57.74 | 28.18            | 44.77            | 16.59                   |
|         |           | Mid   | 0-1        | QPSK       | 45.0       | 1.44        | 51                | -12.92                     | 57.74 | 28.18            | 44.82            | 16.64                   |
|         |           | Mid   | 0-1        | 16QAM      | 45.0       | 1.44        | 51                | -12.99                     | 57.74 | 28.18            | 44.75            | 16.57                   |
|         |           | Mid   | 0-1        | 64QAM      | 45.0       | 1.44        | 51                | -13.00                     | 57.74 | 28.18            | 44.74            | 16.56                   |
|         |           | High  | 7          | QPSK       | 45.0       | 1.44        | 51                | -13.19                     | 58.09 | 28.33            | 44.90            | 16.57                   |
|         |           | High  | 7          | 16QAM      | 45.0       | 1.44        | 51                | -13.47                     | 58.09 | 28.33            | 44.62            | 16.30                   |
|         |           | High  | 7          | 64QAM      | 45.0       | 1.44        | 51                | -13.25                     | 58.09 | 28.33            | 44.84            | 16.51                   |
|         |           | High  | 0-1        | QPSK       | 45.0       | 1.44        | 51                | -13.14                     | 58.09 | 28.33            | 44.95            | 16.62                   |
|         |           | High  | 0-1        | 16QAM      | 45.0       | 1.44        | 51                | -13.20                     | 58.09 | 28.33            | 44.89            | 16.56                   |
|         |           | High  | 0-1        | 64QAM      | 45.0       | 1.44        | 51                | -13.22                     | 58.09 | 28.33            | 44.87            | 16.54                   |
|         | 100       | Low   | 0          | QPSK       | 45.0       | 1.44        | 51                | -10.29                     | 57.65 | 28.12            | 47.36            | 19.24                   |
|         |           | Low   | 0          | 16QAM      | 45.0       | 1.44        | 51                | -10.32                     | 57.65 | 28.12            | 47.33            | 19.21                   |
|         |           | Low   | 0          | 64QAM      | 45.0       | 1.44        | 51                | -10.22                     | 57.65 | 28.12            | 47.43            | 19.31                   |
|         |           | Low   | 0-7        | QPSK       | 45.0       | 1.44        | 51                | -12.37                     | 57.65 | 28.12            | 45.28            | 17.16                   |
|         |           | Low   | 0-7        | 16QAM      | 45.0       | 1.44        | 51                | -12.46                     | 57.65 | 28.12            | 45.19            | 17.07                   |
|         |           | Low   | 0-7        | 64QAM      | 45.0       | 1.44        | 51                | -12.41                     | 57.65 | 28.12            | 45.24            | 17.12                   |
|         |           | Mid   | 4          | QPSK       | 45.0       | 1.44        | 51                | -10.26                     | 57.74 | 28.18            | 47.48            | 19.30                   |
|         |           | Mid   | 4          | 16QAM      | 45.0       | 1.44        | 51                | -10.32                     | 57.74 | 28.18            | 47.42            | 19.24                   |
|         |           | Mid   | 4          | 64QAM      | 45.0       | 1.44        | 51                | -10.27                     | 57.74 | 28.18            | 47.47            | 19.29                   |
|         |           | Mid   | 0-7        | QPSK       | 45.0       | 1.44        | 51                | -12.34                     | 57.74 | 28.18            | 45.40            | 17.22                   |
|         |           | Mid   | 0-7        | 16QAM      | 45.0       | 1.44        | 51                | -12.30                     | 57.74 | 28.18            | 45.44            | 17.26                   |
|         |           | Mid   | 0-7        | 64QAM      | 45.0       | 1.44        | 51                | -12.28                     | 57.74 | 28.18            | 45.46            | 17.27                   |
|         |           | High  | 7          | QPSK       | 45.0       | 1.44        | 51                | -10.63                     | 58.09 | 28.33            | 47.46            | 19.13                   |
|         |           | High  | 7          | 16QAM      | 45.0       | 1.44        | 51                | -10.78                     | 58.09 | 28.33            | 47.31            | 18.98                   |
|         |           | High  | 7          | 64QAM      | 45.0       | 1.44        | 51                | -10.69                     | 58.09 | 28.33            | 47.40            | 19.07                   |
|         |           | High  | 0-1        | QPSK       | 45.0       | 1.44        | 51                | -10.00                     | 58.09 | 28.33            | 48.09            | 19.76                   |
|         |           | High  | 0-2        | QPSK       | 45.0       | 1.44        | 51                | -9.75                      | 58.09 | 28.33            | 48.34            | 20.01                   |
|         |           | High  | 0-3        | QPSK       | 45.0       | 1.44        | 51                | -10.04                     | 58.09 | 28.33            | 48.05            | 19.72                   |
|         |           | High  | 0-4        | QPSK       | 45.0       | 1.44        | 51                | -10.57                     | 58.09 | 28.33            | 47.52            | 19.20                   |
|         |           | High  | 0-5        | QPSK       | 45.0       | 1.44        | 51                | -11.40                     | 58.09 | 28.33            | 46.69            | 18.36                   |
|         |           | High  | 0-6        | QPSK       | 45.0       | 1.44        | 51                | -12.17                     | 58.09 | 28.33            | 45.92            | 17.59                   |
|         |           | High  | 0-7        | QPSK       | 45.0       | 1.44        | 51                | -12.60                     | 58.09 | 28.33            | 45.49            | 17.16                   |
|         |           | High  | 0-7        | 16QAM      | 45.0       | 1.44        | 51                | -12.53                     | 58.09 | 28.33            | 45.56            | 17.23                   |
|         |           | High  | 0-7        | 64QAM      | 45.0       | 1.44        | 51                | -12.44                     | 58.09 | 28.33            | 45.65            | 17.32                   |

Table 7-17. Antenna D Conducted Power Summary Data

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 187 of 469                 |

## 7.4.5 Conducted Total Power (Summed Across All Antennas)

| Antenna       | Bandwidth | Chan. | CCs active | Modulation | Ant A | Ant B | Ant C | Ant D | Average e.i.r.p. | Conducted Average Power |
|---------------|-----------|-------|------------|------------|-------|-------|-------|-------|------------------|-------------------------|
|               | [MHz]     |       |            |            | [dBm] | [dBm] | [dBm] | [dBm] | [dBm]            | [dBm]                   |
| A + B + C + D | 50        | Low   | 0          | QPSK       | 16.54 | 16.12 | 16.24 | 16.06 | 50.38            | 22.25                   |
|               |           | Low   | 0          | 16QAM      | 16.43 | 16.38 | 16.17 | 16.11 | 50.42            | 22.28                   |
|               |           | Low   | 0          | 64QAM      | 16.54 | 16.45 | 16.21 | 16.19 | 50.49            | 22.38                   |
|               |           | Low   | 0-1        | QPSK       | 16.68 | 16.75 | 16.28 | 16.17 | 50.62            | 22.48                   |
|               |           | Low   | 0-1        | 16QAM      | 16.70 | 16.71 | 16.23 | 16.15 | 50.60            | 22.48                   |
|               |           | Low   | 0-1        | 64QAM      | 16.70 | 16.70 | 16.21 | 16.13 | 50.58            | 22.48                   |
|               |           | Mid   | 4          | QPSK       | 16.42 | 16.36 | 16.12 | 16.55 | 50.57            | 22.38                   |
|               |           | Mid   | 4          | 16QAM      | 16.25 | 16.24 | 16.06 | 16.52 | 50.47            | 22.28                   |
|               |           | Mid   | 4          | 64QAM      | 16.39 | 16.30 | 16.15 | 16.59 | 50.56            | 22.41                   |
|               |           | Mid   | 0-1        | QPSK       | 16.44 | 16.65 | 16.17 | 16.64 | 50.68            | 22.48                   |
|               |           | Mid   | 0-1        | 16QAM      | 16.47 | 16.62 | 16.26 | 16.57 | 50.68            | 22.48                   |
|               |           | Mid   | 0-1        | 64QAM      | 16.51 | 16.58 | 16.24 | 16.56 | 50.68            | 22.48                   |
|               |           | High  | 7          | QPSK       | 16.81 | 16.38 | 16.61 | 16.57 | 50.94            | 22.60                   |
|               |           | High  | 7          | 16QAM      | 16.69 | 16.27 | 16.53 | 16.30 | 50.80            | 22.48                   |
|               |           | High  | 7          | 64QAM      | 16.79 | 16.35 | 16.54 | 16.51 | 50.90            | 22.58                   |
|               |           | High  | 0-1        | QPSK       | 16.90 | 16.56 | 16.76 | 16.62 | 51.06            | 22.72                   |
|               |           | High  | 0-1        | 16QAM      | 16.81 | 16.52 | 16.66 | 16.56 | 50.99            | 22.65                   |
|               |           | High  | 0-1        | 64QAM      | 16.82 | 16.49 | 16.56 | 16.54 | 50.95            | 22.62                   |
|               | 100       | Low   | 0          | QPSK       | 19.55 | 19.62 | 19.48 | 19.24 | 53.62            | 25.50                   |
|               |           | Low   | 0          | 16QAM      | 19.48 | 19.57 | 19.42 | 19.21 | 53.56            | 25.44                   |
|               |           | Low   | 0          | 64QAM      | 19.54 | 19.63 | 19.46 | 19.31 | 53.63            | 25.50                   |
|               |           | Low   | 0-7        | QPSK       | 17.52 | 17.08 | 16.96 | 17.16 | 51.33            | 23.20                   |
|               |           | Low   | 0-7        | 16QAM      | 17.47 | 16.97 | 16.95 | 17.07 | 51.26            | 23.16                   |
|               |           | Low   | 0-7        | 64QAM      | 17.47 | 17.06 | 16.98 | 17.12 | 51.30            | 23.20                   |
|               |           | Mid   | 4          | QPSK       | 19.06 | 19.20 | 19.09 | 19.30 | 53.36            | 25.19                   |
|               |           | Mid   | 4          | 16QAM      | 19.45 | 19.16 | 19.00 | 19.24 | 53.42            | 25.22                   |
|               |           | Mid   | 4          | 64QAM      | 19.52 | 19.23 | 19.07 | 19.29 | 53.48            | 25.31                   |
|               |           | Mid   | 0-7        | QPSK       | 17.57 | 17.21 | 16.93 | 17.22 | 51.44            | 23.26                   |
|               |           | Mid   | 0-7        | 16QAM      | 17.32 | 17.15 | 16.96 | 17.26 | 51.38            | 23.20                   |
|               |           | Mid   | 0-7        | 64QAM      | 17.38 | 17.18 | 16.98 | 17.27 | 51.41            | 23.23                   |
|               |           | High  | 7          | QPSK       | 19.53 | 19.21 | 19.74 | 19.13 | 53.76            | 25.43                   |
|               |           | High  | 7          | 16QAM      | 19.43 | 19.13 | 19.65 | 18.98 | 53.66            | 25.33                   |
|               |           | High  | 7          | 64QAM      | 19.46 | 19.20 | 19.71 | 19.07 | 53.72            | 25.39                   |
|               |           | High  | 0-1        | QPSK       | 19.55 | 19.12 | 19.23 | 19.76 | 53.77            | 25.44                   |
|               |           | High  | 0-2        | QPSK       | 19.98 | 19.52 | 19.52 | 20.01 | 54.11            | 25.78                   |
|               |           | High  | 0-3        | QPSK       | 20.15 | 19.64 | 19.63 | 19.72 | 54.14            | 25.81                   |
|               |           | High  | 0-4        | QPSK       | 19.32 | 18.63 | 18.62 | 19.20 | 53.30            | 24.97                   |
|               |           | High  | 0-5        | QPSK       | 18.51 | 17.85 | 17.89 | 18.36 | 52.51            | 24.18                   |
|               |           | High  | 0-6        | QPSK       | 17.83 | 17.34 | 17.25 | 17.59 | 51.85            | 23.53                   |
|               |           | High  | 0-7        | QPSK       | 16.97 | 17.24 | 17.28 | 17.16 | 51.51            | 23.18                   |
|               |           | High  | 0-7        | 16QAM      | 17.23 | 17.24 | 17.27 | 17.23 | 51.59            | 23.26                   |
|               |           | High  | 0-7        | 64QAM      | 17.03 | 17.25 | 17.21 | 17.32 | 51.55            | 23.22                   |

Table 7-18. Conducted Total Power Summary Data

|                                          |                                                                                     |                                       |  |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|--|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |  | Page 188 of 469                                                                       |                                 |

## 7.5 Radiated Spurious and Harmonic Emissions

### §2.1051 §30.203

#### Test Overview

All out of band emissions were scanned from 30 MHz to 100 GHz for n261. Emissions are measured in a radiated test 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 conductive power or total radiated power of any emissions outside a licensee's frequency block shall be -13 dBm / 1 MHz.***

#### Test Procedure Used

ANSI C63.26-2015 Section 5.7.4

ANSI C63.26-2015 Section 6.4

KDB 842590 D01 v01r01 Section 4.4.2 and Section 4.4.3

#### Test Settings

1. Start frequency was set to 30 MHz and stop frequency was set to 100 GHz. Several plots are used to show investigations in this entire span.
2. Detector = RMS
3. Trace mode = trace average
4. Sweep time = auto couple
5. Number of sweep points  $\geq 2 \times \text{Span/RBW}$
6. The trace was allowed to stabilize
7. RBW = 1 MHz, VBW = 1 MHz

#### 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) Emissions below 18 GHz were measured at a 3 meter test distance, while emissions above 18 GHz were measured at the appropriate far field distance. See Table 3-1 for distances used for measurements based on theoretical far field distance.
- 3) All appropriate Antenna Factors, Cable Losses, and Mixer Conversion Losses have been applied as an offset in the spectrum analyzer for each measurement.
- 4) 1CC = 1 Components Carriers Active, 2CC = 2 Component Carriers Active. 2CC NC = 2 Non-contiguous Component Carriers Active. Each component carrier's bandwidth is 50 MHz.
- 5) 1CC = 1 Components Carriers Active, 8CC = 8 Component Carriers Active. 8CC NC = 8 Non-contiguous Component Carriers Active. Each component carrier's bandwidth is 100 MHz.
- 6) 2CC = 2 Components Carriers Active, 8CC = 8 Component Carriers Active. 8CC NC = 8 Non-contiguous Component Carriers Active. Each component carrier's mixed bandwidth is 50 MHz + 100 MHz.
- 7) Ch. is stands for Channel, Final is stands for Final measurement.

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 189 of 469                 |

- 8) The angle of the horn antenna was rotated to maximize and find the worst case emissions. The worst case is reported in this section.
- 9) Spurious emissions were measured with all EUT antennas transmitting simultaneously.
- 10) Some frequency points exceed the limit which requires to investigate with TRP method for this spurious emission evaluation according to 4.4 Unwanted Emission Measurements of KDB 842590 D01.
- 11) No emissions were found below 1 GHz.
- 12) Lower and Upper Band Edge range also has been tested for investigation purpose.
- 13) All radiated spurious emissions were measured as EIRP to compare with the §30.203 TRP limits.
- 14) The plots from 1-100 GHz show corrected average EIRP levels. The average EIRP reported below is calculated per section 5.2.7 of ANSI C63.26-2015 which states;  $EIRP (dBm) = E (dB \mu V/m) + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m. The field strength E is calculated  $E (dB \mu V/m) = \text{Spectrum Analyzer Level (dBm)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + \text{Harmonic Mixer Conversion Loss (dB)} + 107$ . All appropriate Antenna Factor and Cable Loss have been applied in the spectrum analyzer for each measurement. For measurements > 40 GHz, Harmonic Mixer Conversion Loss was also applied to the spectrum analyzer.
- 15) Emission below 18 GHz were measured at a 3 M test distance, while emissions above 18 GHz were measured at the appropriate far field distance. The far field of the mmWave signal is based on formula;  $R > 2D^2/\text{wavelength}$ , where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, D is the largest dimension of the measurement antenna.
- 16) A3LAT1K04-B10 test result is referenced as A3LAT1K04-B00 result which only difference of power type as AC and DC which supply condition no affect to RF specification.

| Frequency Range [GHz] | Wavelength [cm] | Far Field Distance [m] | Measurements Distance [m] |
|-----------------------|-----------------|------------------------|---------------------------|
| 18 to 40              | 0.749           | 3.19                   | 3.19                      |
| 40 to 60              | 0.500           | 1.39                   | 3.19                      |
| 60 to 90              | 0.333           | 0.91                   | 3.19                      |
| 90 to 100             | 0.214           | 0.58                   | 2.00                      |

**Table 7-19. Far-Field Distance & Measurement Distance per Frequency Range**

|                                                 |                                                                                                                                   |                                           |                                                                                       |                                        |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> A3LAT1K04-B10                    | <br><small>Proud to be part of element</small> | <b>MEASUREMENT REPORT (CERTIFICATION)</b> |  | <b>Approved by:</b><br>Quality Manager |
| <b>Test Report S/N:</b><br>8K20090901-02-R2.A3L | <b>Test Dates:</b><br>09/10/2020-10/08/2020                                                                                       | <b>EUT Type:</b><br>5G Access Unit        |                                                                                       | Page 190 of 469                        |

## TRP Measurement Procedure

If the recorded EIRP value was close or above the TRP limit, a Two Cut TRP measurement was done according to KDB 842590 D01 v01 Section 4.4.3.3.2

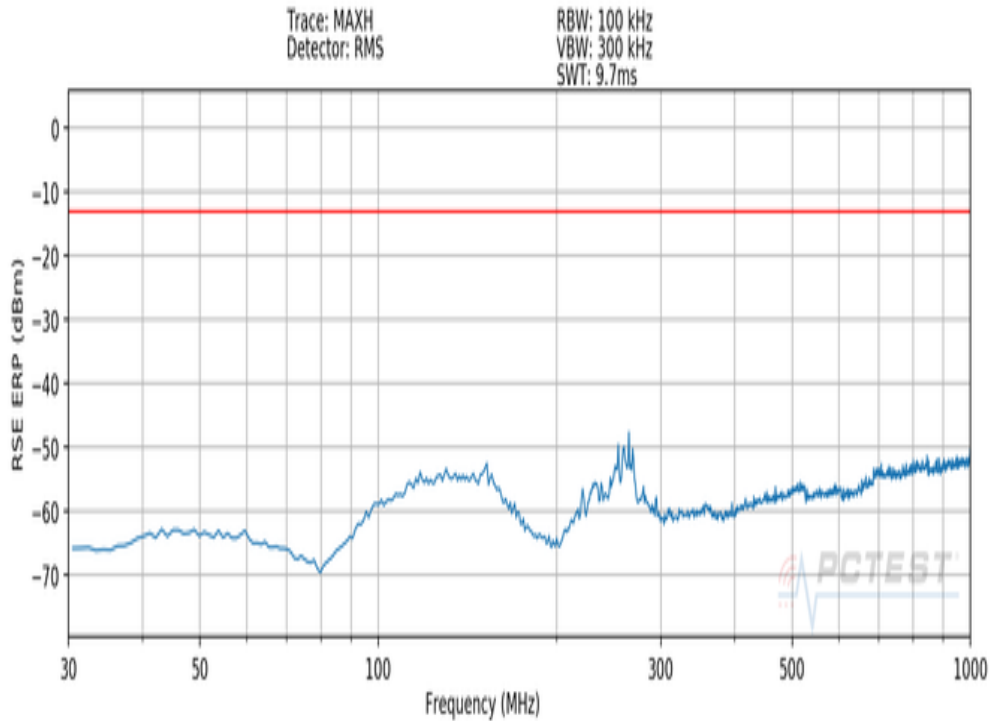
- a) Align the EUT with a chosen xy-plane and the xz-plane of the antenna measurement coordinate system.  
NOTE 1 For harmonics and spurious emission frequencies which are beamforming as identified in exploratory scan, it may be required to align the orthogonal cuts to include the peak based on exploratory scans.
- b) Measure the EUT dimensions, i.e., depth (d), width (w), and height (h); see Figure A.1 in Appendix A.
- c) Calculate the spherical and cylindrical diameters (D and D<sub>cyl</sub>) using Equations (A.1) and (A.2)  
(see Appendix A.)
 
$$D = \sqrt{d^2 + w^2 + h^2} \quad (A.1)$$

$$D_{cyl} = \sqrt{d^2 + w^2} \quad (A.2)$$
- d) For the highest frequency (smallest wavelength) of the frequency band measured, calculate the reference angular steps  $\Delta\theta_{ref}$  and  $\Delta\phi_{ref}$  using Equations (A.3) and (A.4).
 
$$\Delta\theta_{ref} = \min(15^\circ, 180^\circ / (\pi D / \lambda)) \quad (A.3)$$

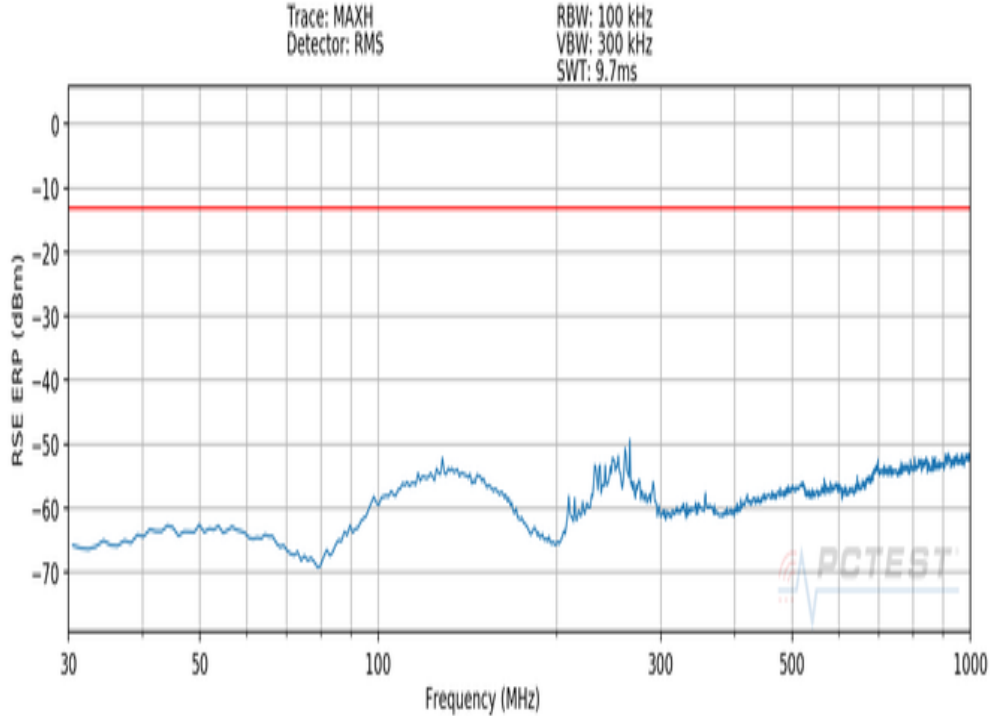
$$\Delta\phi_{ref} = \min(15^\circ, 180^\circ / (\pi D_{cyl} / \lambda)) \quad (A.4)$$
- e) Set the grid spatial sampling step  $\Delta\theta \leq \Delta\theta_{ref}$  for the vertical angle and  $\Delta\phi \leq \Delta\phi_{ref}$  for the horizontal cut.
- f) For each emission frequency, measure the EIRP (as a sum of two orthogonal polarizations) at each spatial sampling step on the selected grid.
- g) For each emission frequency, calculate the average EIRP for both the cuts separately, and then take the average of these two average values.
- h) Add 2 dB as a correction factor to the averaged value computed in step g).

|                                          |                                                                                                                                                 |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  <b>PCTEST</b><br><small>Proud to be part of element</small> | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                                                                            | EUT Type:<br>5G Access Unit           |                                                                                       | Page 191 of 469                 |

## 7.5.1 Radiated Spurious Emissions Plots (30 MHz to 1 GHz)

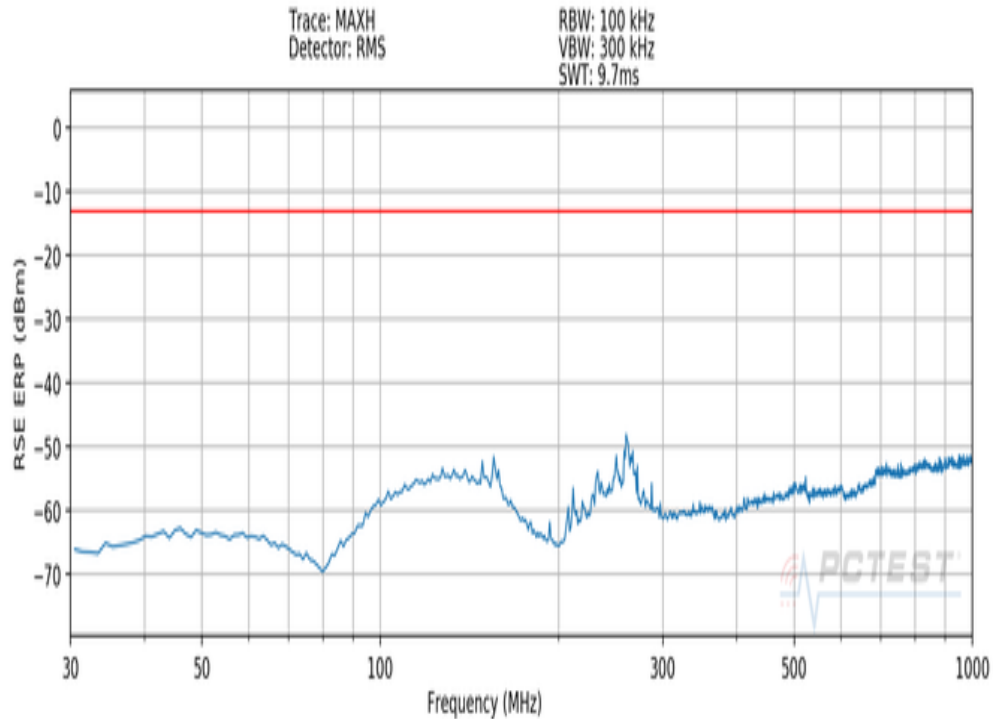


Plot 7-265. RSE 30 MHz – 1 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. H)

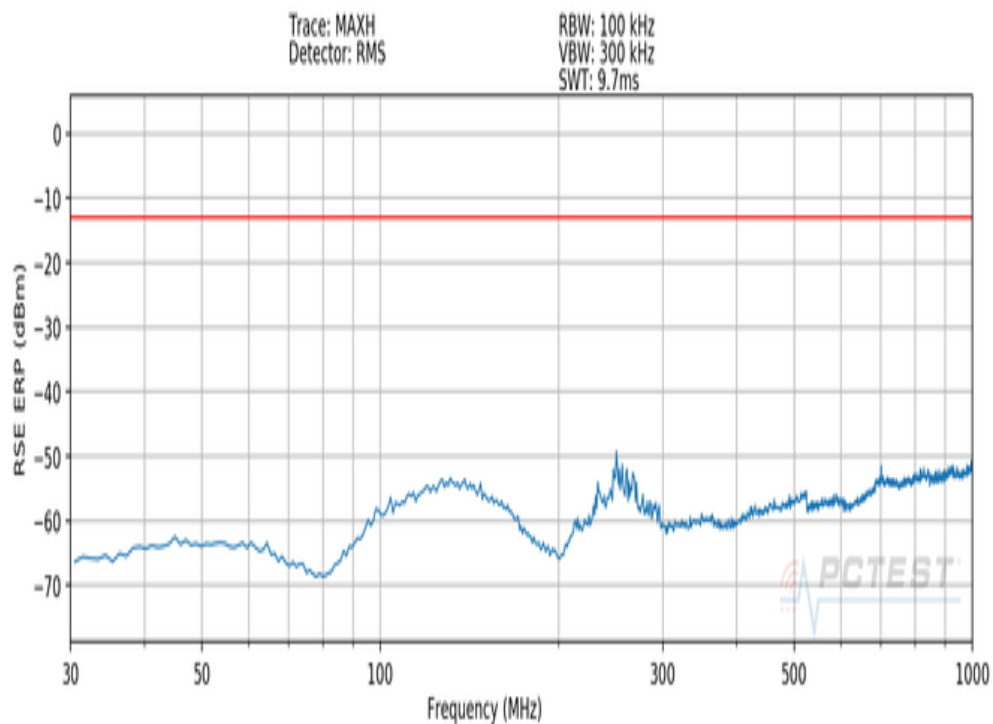


Plot 7-266. RSE 30 MHz – 1 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 192 of 469                 |

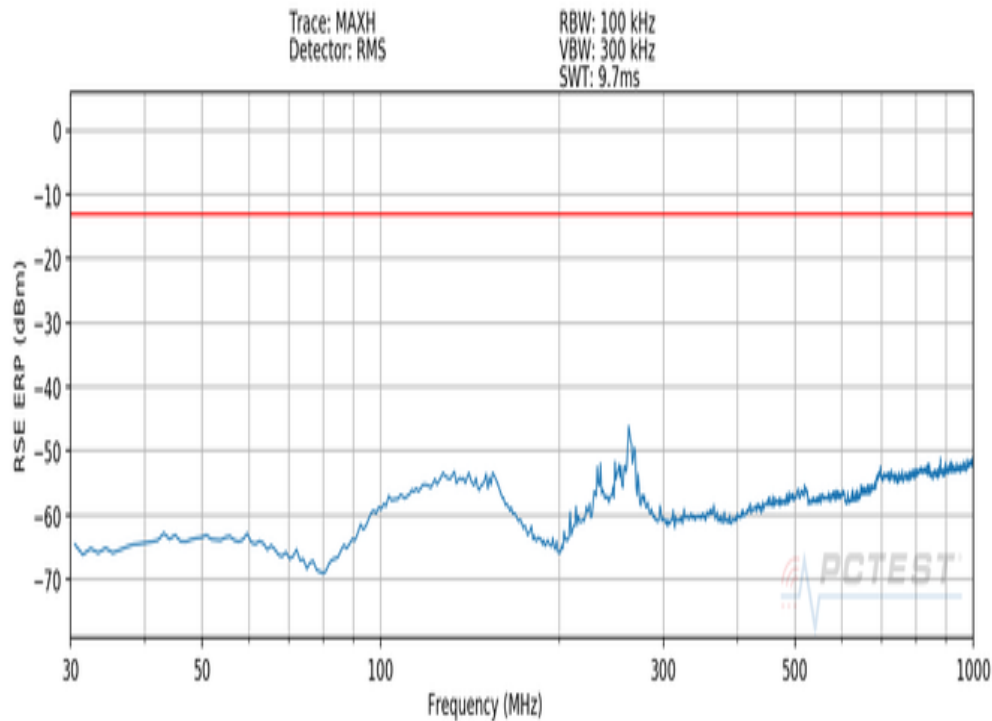


Plot 7-267. RSE 30 MHz – 1 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. H)

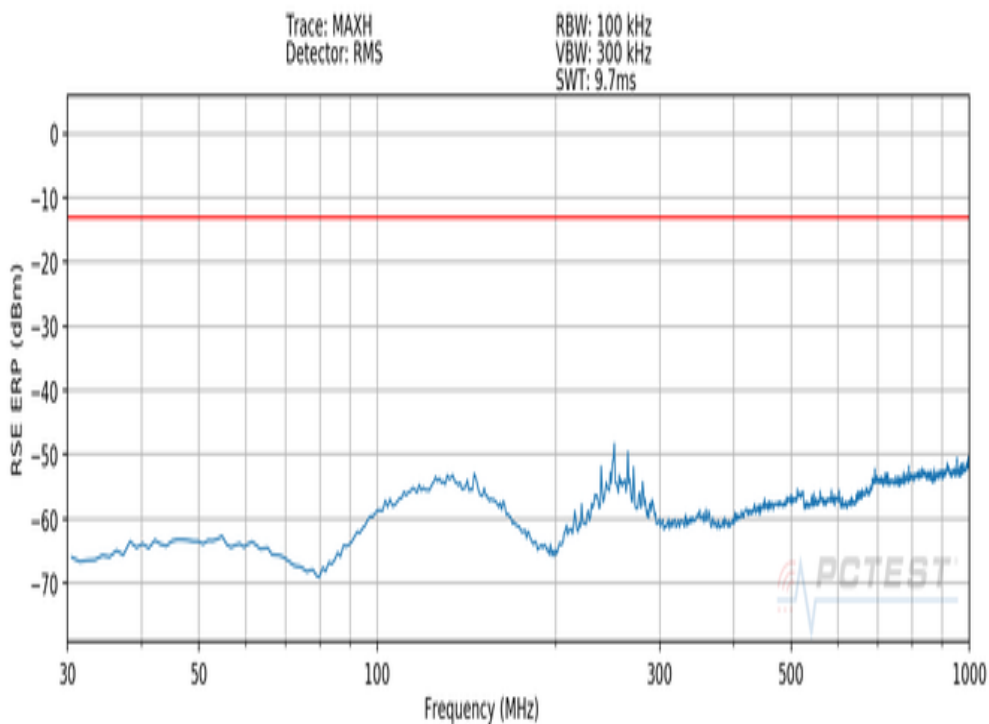


Plot 7-268. RSE 30 MHz – 1 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 193 of 469                 |

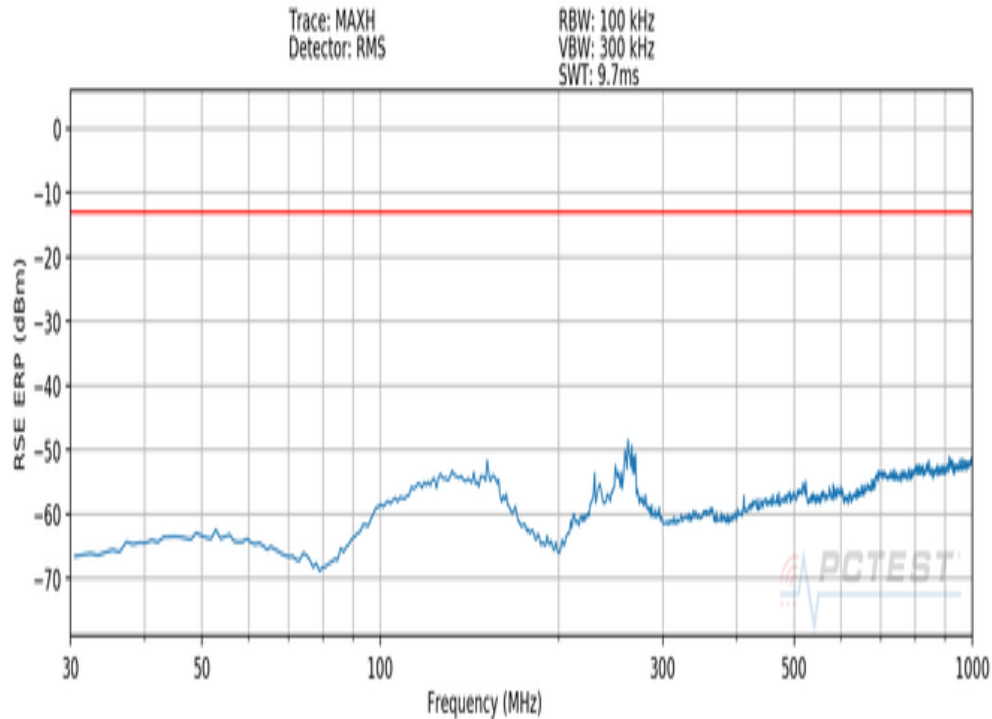


Plot 7-269. RSE 30 MHz – 1 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. H)

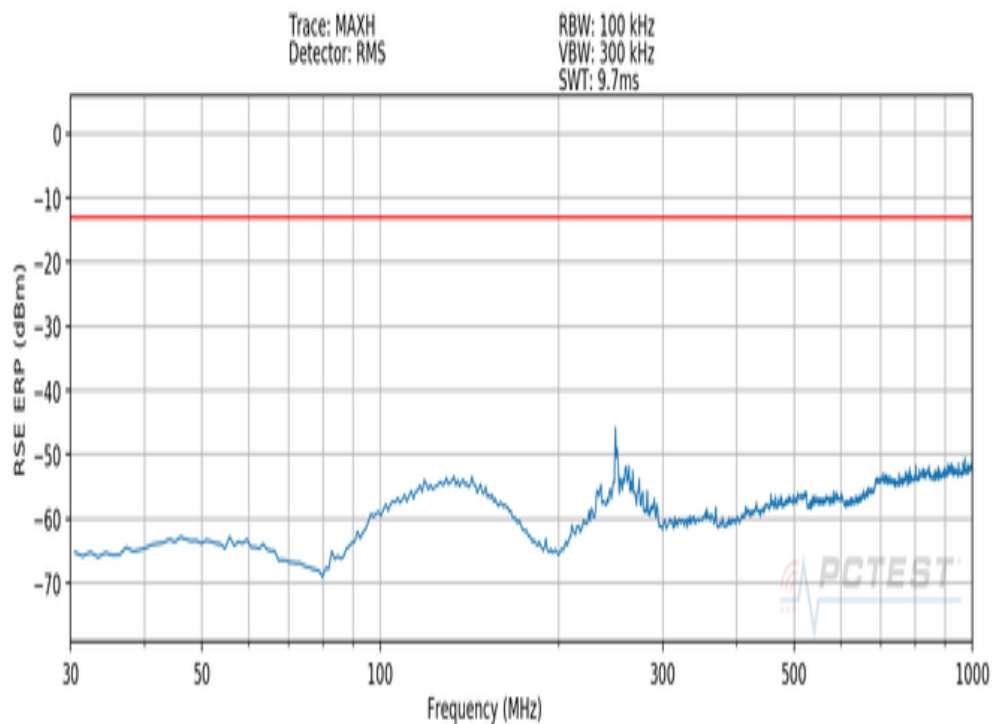


Plot 7-270. RSE 30 MHz – 1 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                               |                |                                        |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|----------------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | <b>Approved by:</b><br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 194 of 469                        |

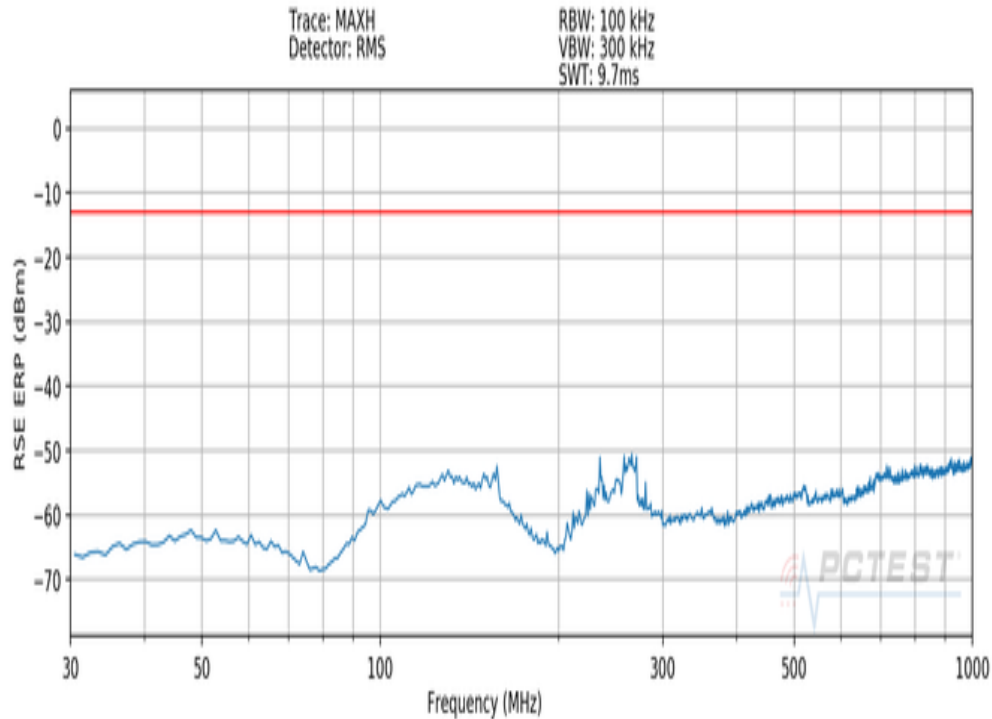


Plot 7-271. RSE 30 MHz – 1 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. H)

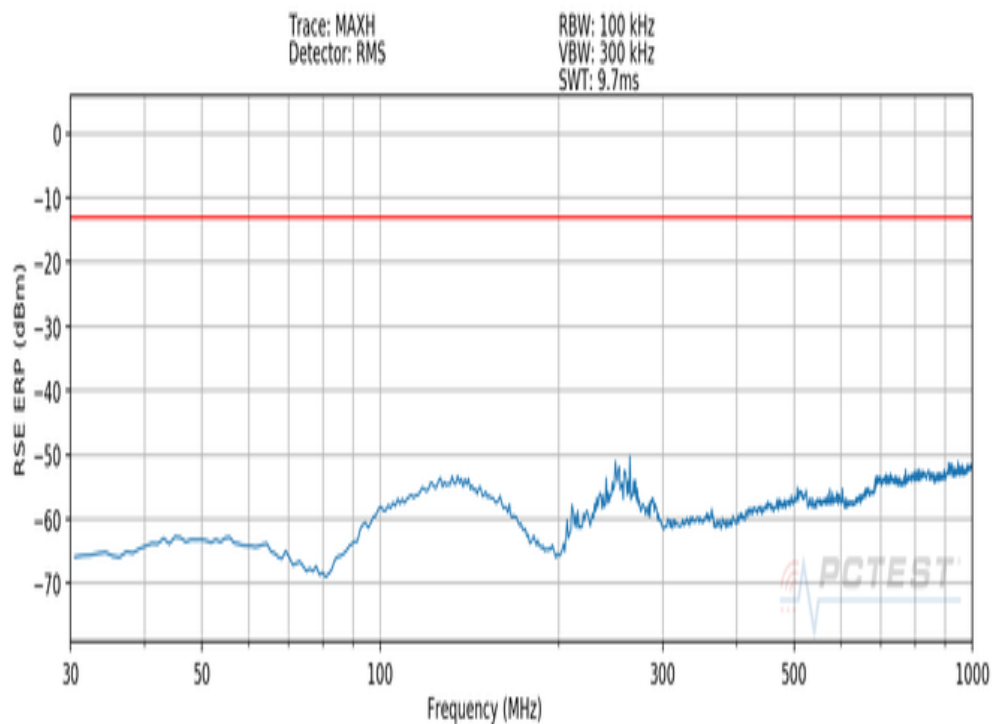


Plot 7-272. RSE 30 MHz – 1 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 195 of 469                 |

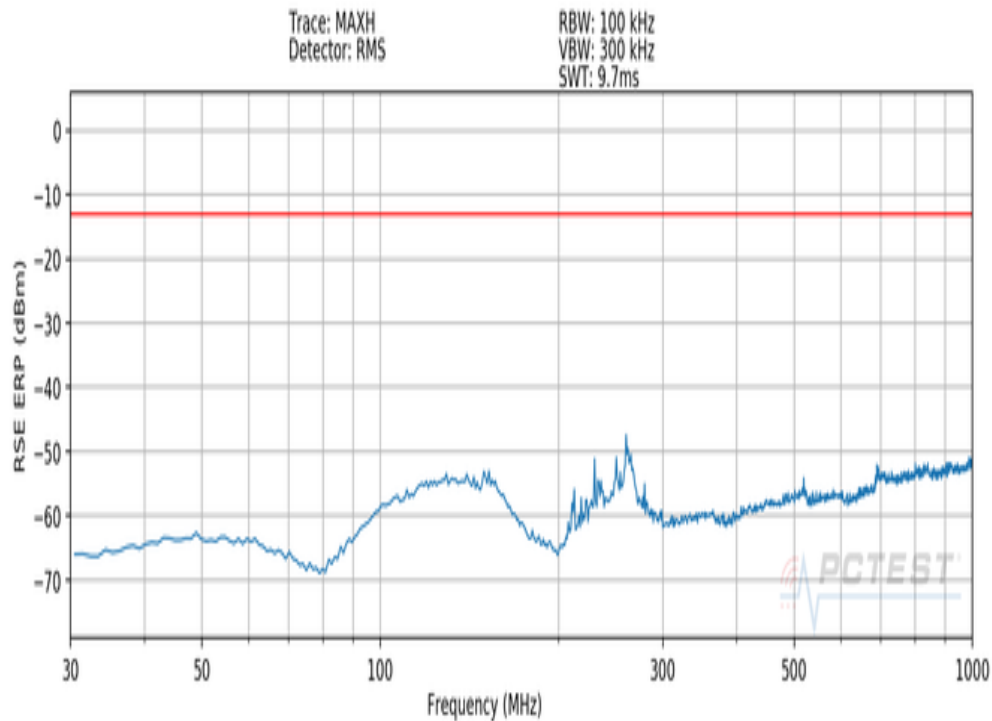


Plot 7-273. RSE 30 MHz – 1 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. H)

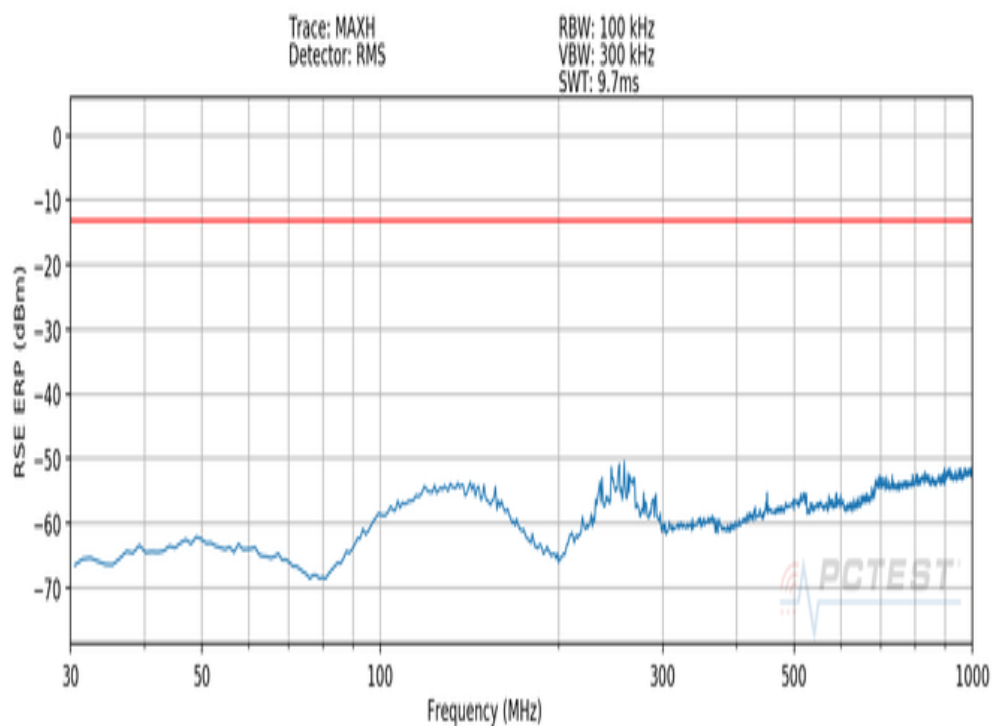


Plot 7-274. RSE 30 MHz – 1 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 196 of 469                 |

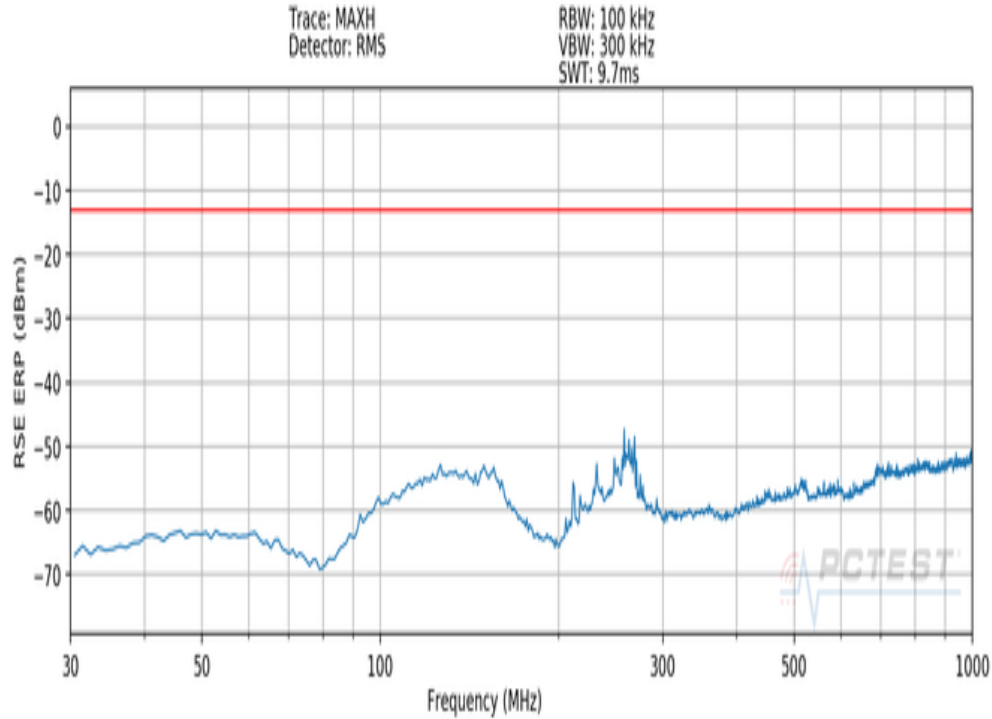


Plot 7-275. RSE 30 MHz – 1 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. H)

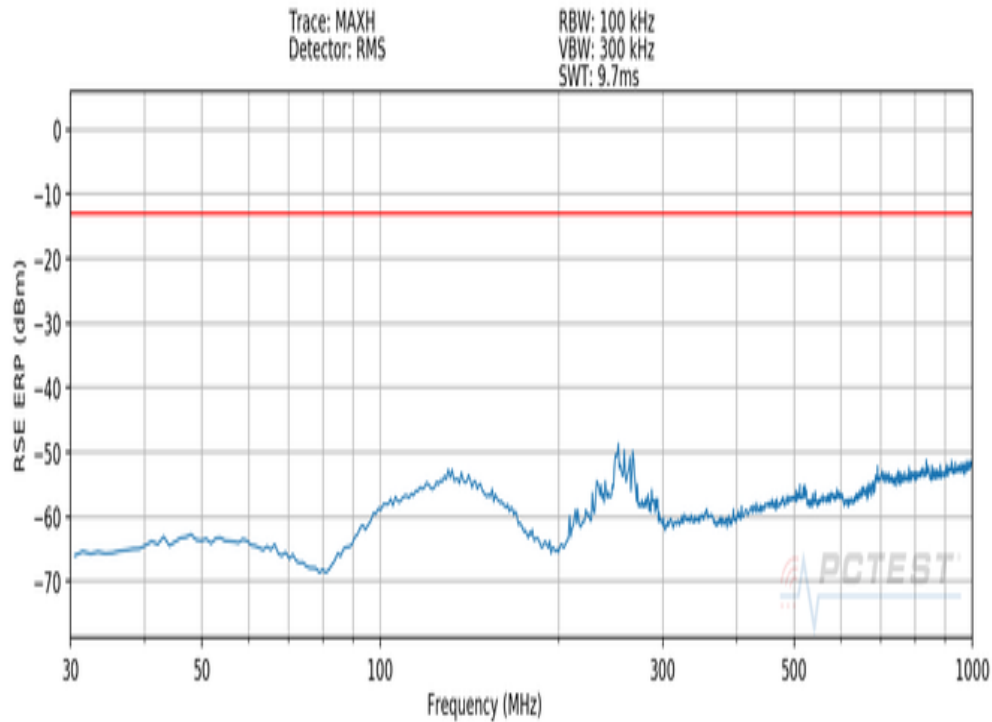


Plot 7-276. RSE 30 MHz – 1 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 197 of 469                 |

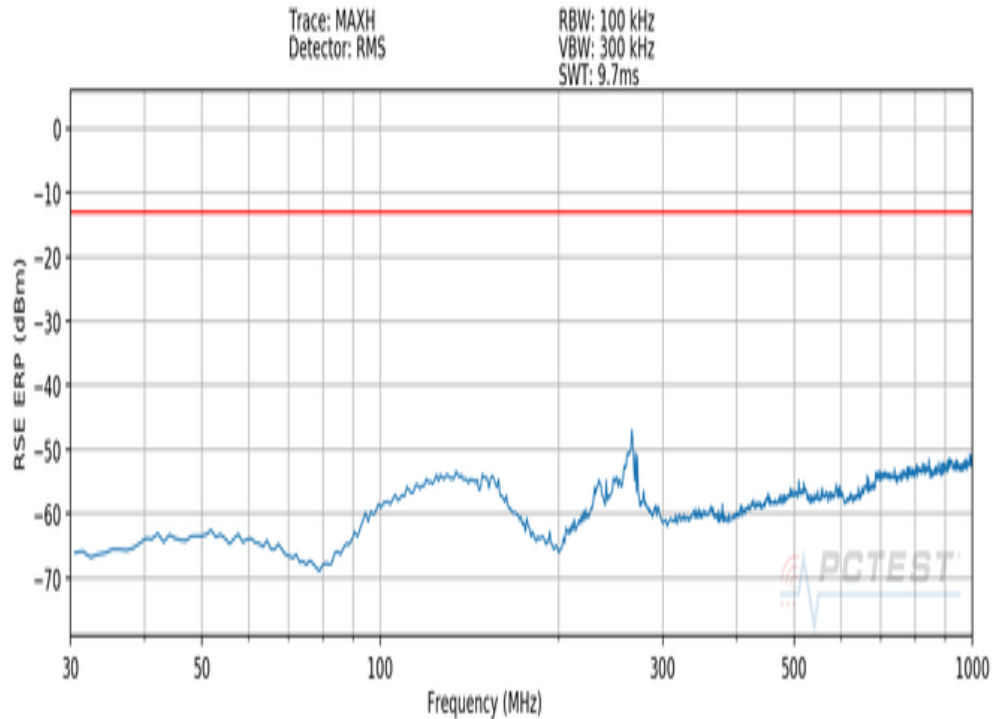


Plot 7-277. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Pol. H)

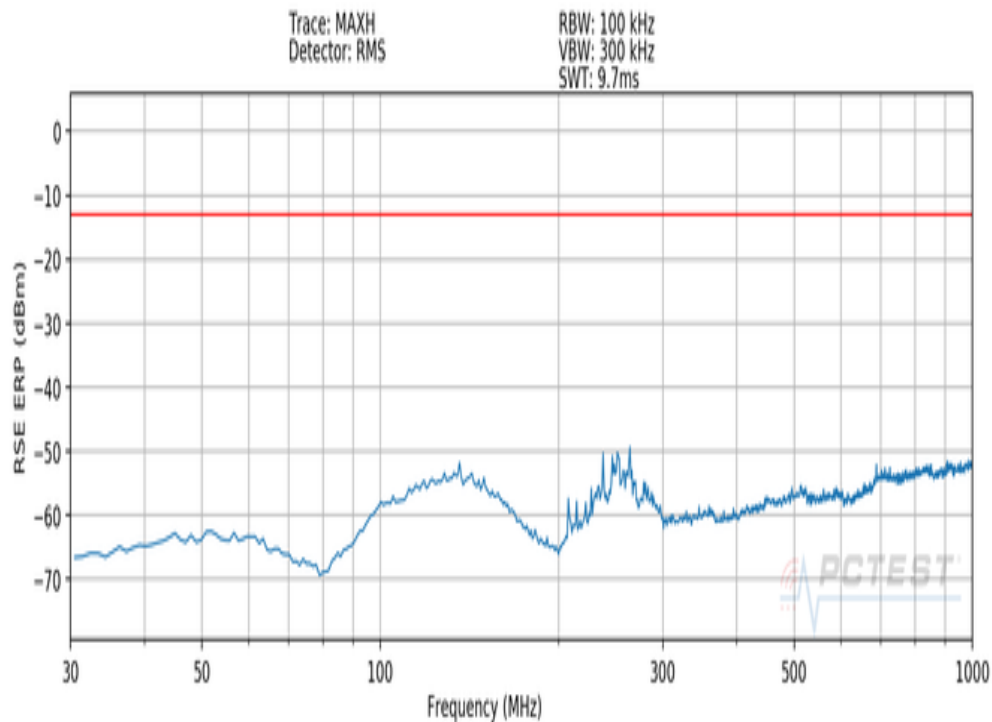


Plot 7-278. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 198 of 469                 |

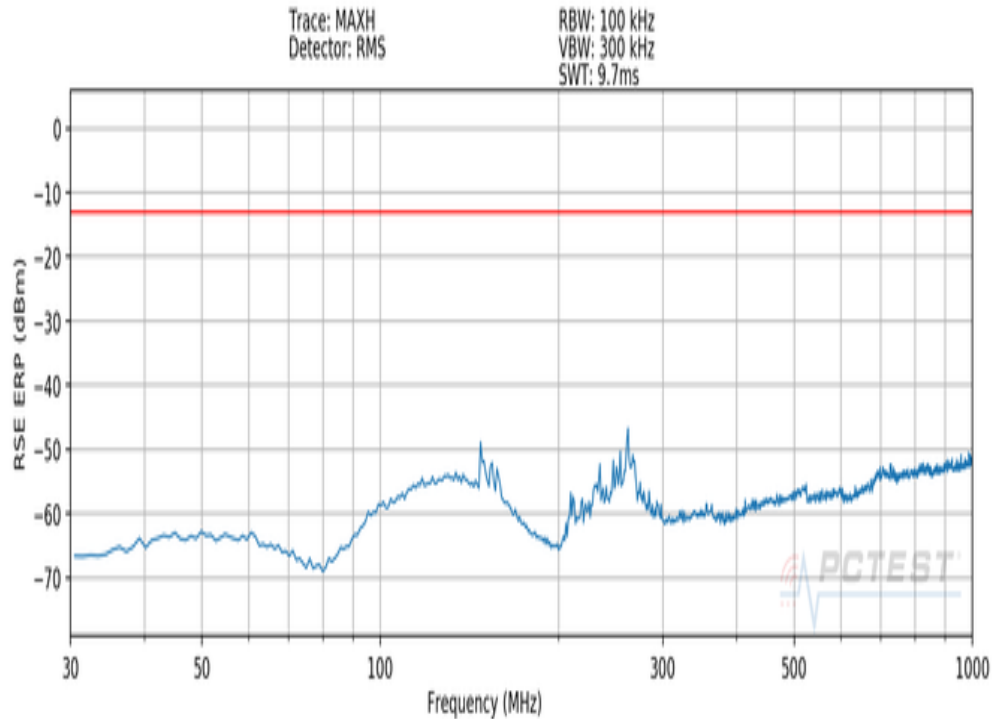


Plot 7-279. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Mid Ant. Pol. H)

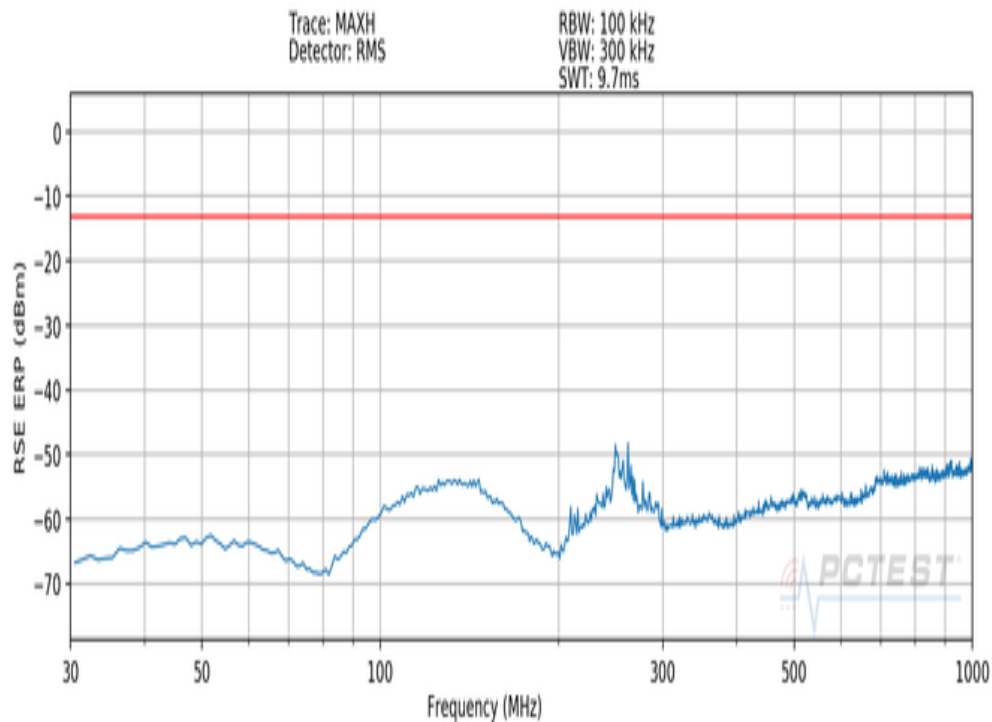


Plot 7-280. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 199 of 469                 |

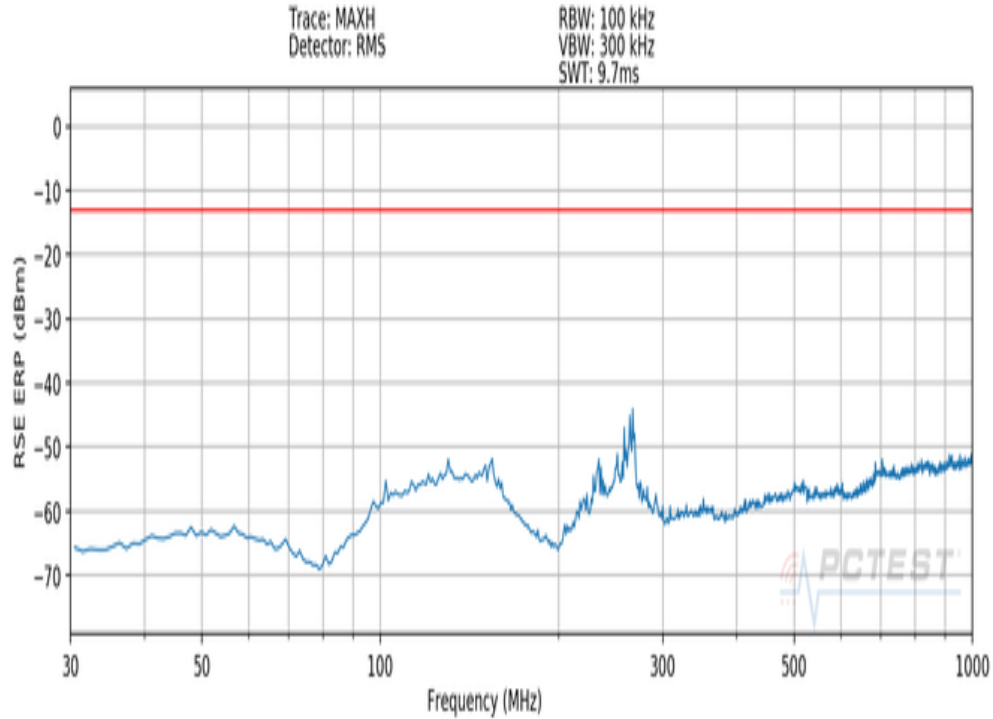


Plot 7-281. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. H)

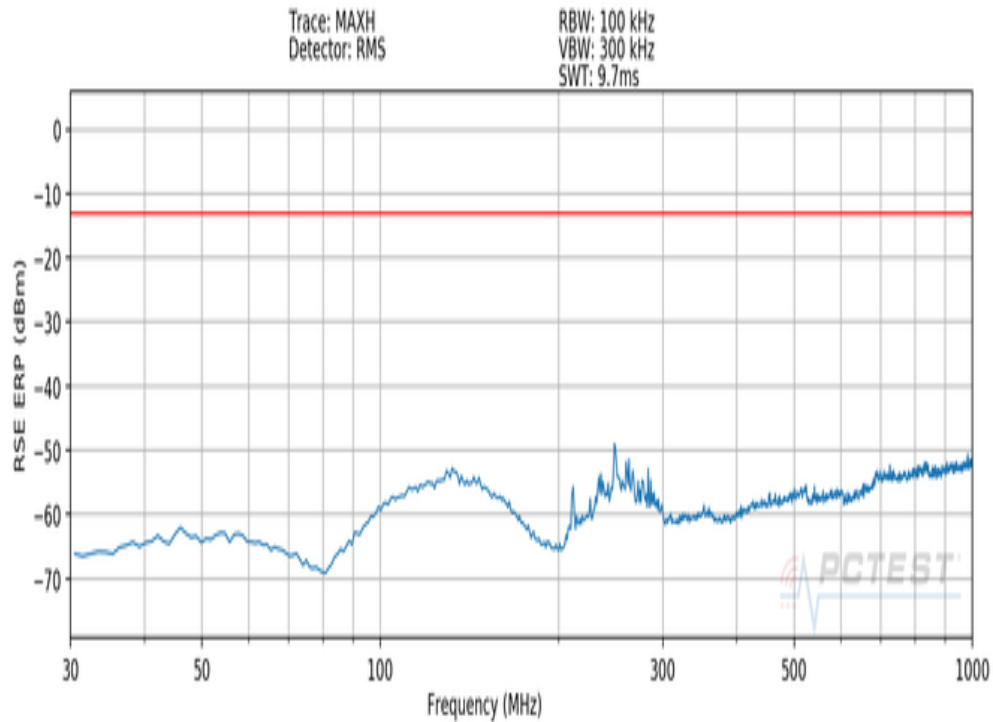


Plot 7-282. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 200 of 469                 |

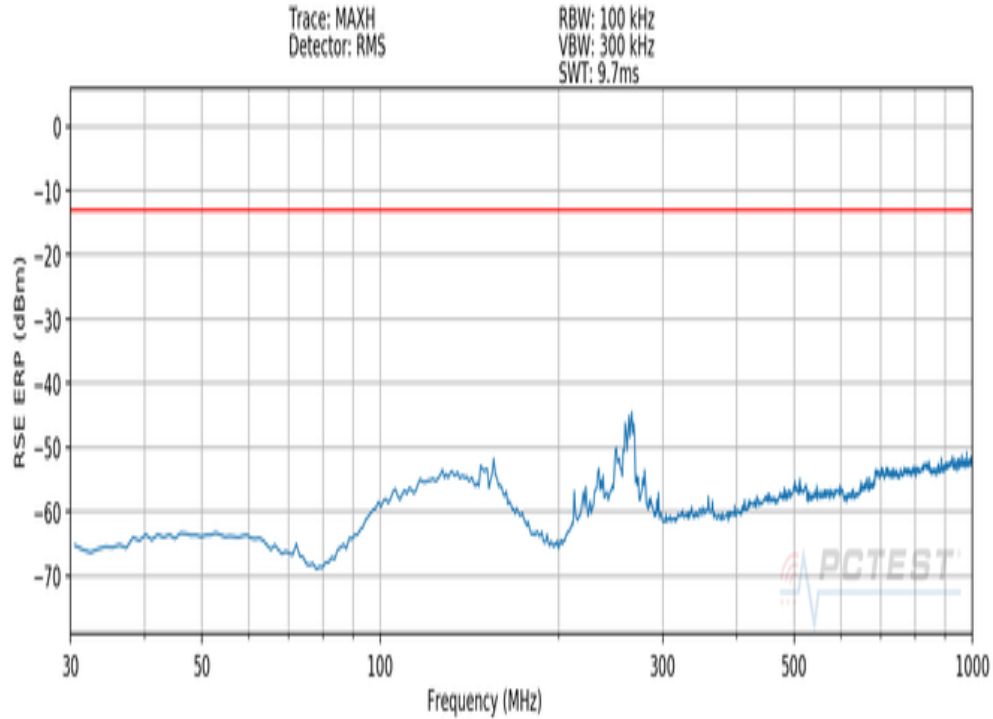


Plot 7-283. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. H)

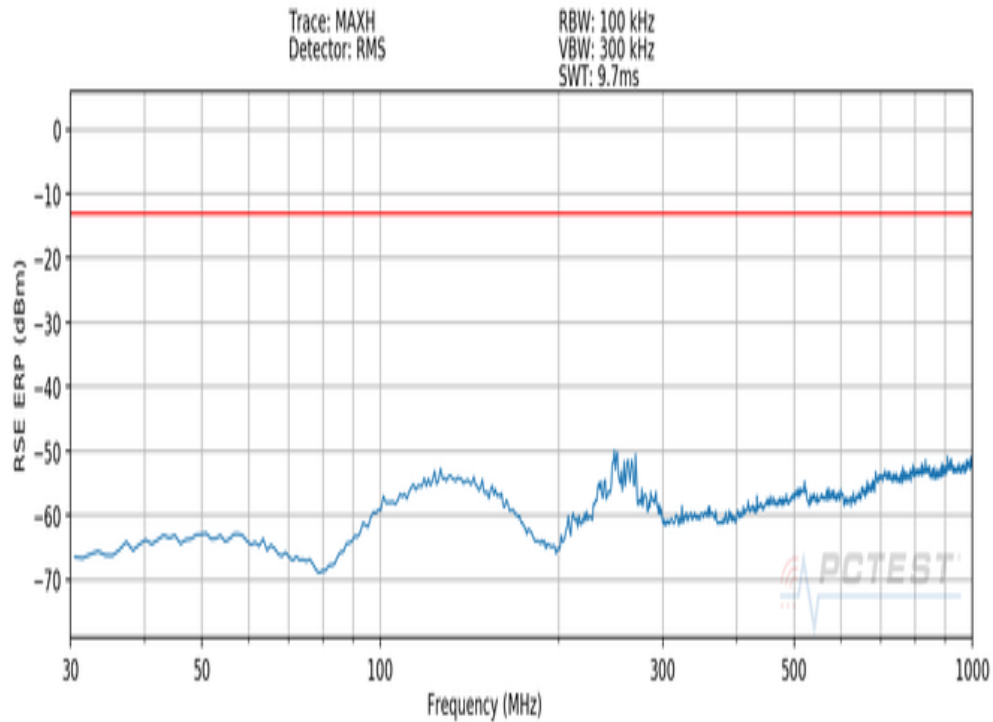


Plot 7-284. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 201 of 469                 |

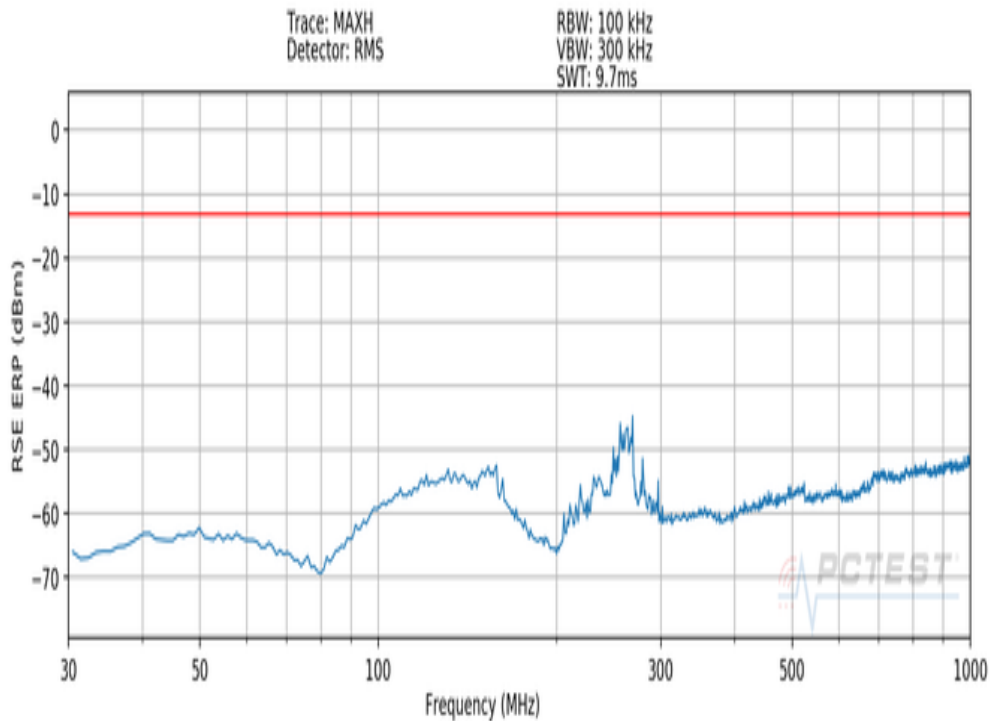


Plot 7-285. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Mid Ant. Pol. H)

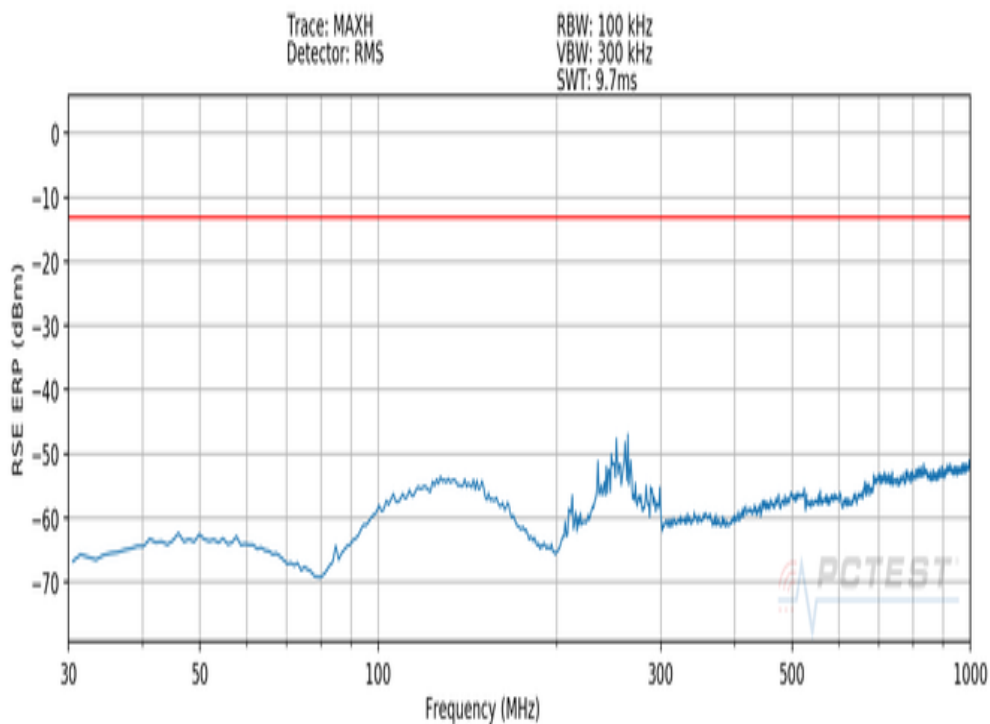


Plot 7-286. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 202 of 469                 |



Plot 7-287. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. H)



Plot 7-288. RSE 30 MHz – 1 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 203 of 469                 |

## Spurious Emissions EIRP Sample Calculation (n261)

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 3 meters.

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

| Frequency [MHz] | Channel | CC Active  | Mod. | Ant. Pol [H/V] | Antenna Height [cm] | Turn Table Azimuth [degree] | Analyzer Level [dBm] | AFCL [dBm] | Field Strength [dBμV/m] | RSE EIRP [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|---------|------------|------|----------------|---------------------|-----------------------------|----------------------|------------|-------------------------|----------------|-------------|-------------|
| 117.88          | Mid     | CC0-CC7(C) | QPSK | V              | 300                 | 160                         | -83.71               | 21.52      | 45.69                   | -50.45         | -13.00      | 37.45       |
| 269.77          | Mid     | CC0-CC7(C) | QPSK | V              | 300                 | 160                         | -74.36               | 17.71      | 51.69                   | -44.91         | -13.00      | 31.91       |
| 396.11          | Low     | CC0-CC7(C) | QPSK | H              | 300                 | 160                         | -83.97               | 16.06      | 40.73                   | -56.17         | -13.00      | 43.17       |
| 550.25          | High    | CC0-CC7(C) | QPSK | V              | 200                 | 340                         | -83.65               | 18.50      | 43.01                   | -53.41         | -13.00      | 40.41       |
| 658.21          | High    | CC0-CC7(C) | QPSK | H              | 200                 | 340                         | -84.00               | 20.51      | 46.59                   | -51.75         | -13.00      | 38.75       |
| 910.54          | High    | CC0-CC7(C) | QPSK | H              | 200                 | 340                         | -83.19               | 22.60      | 48.63                   | -48.85         | -13.00      | 35.85       |

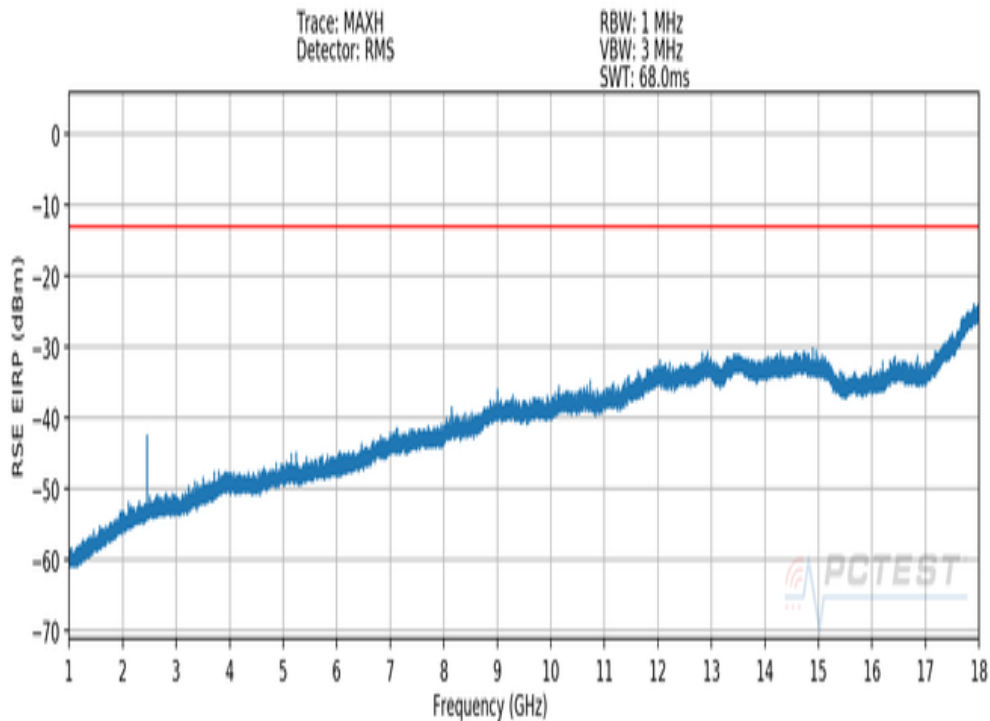
Table 7-20. 2Tx-Spurious Emissions (30 MHz to 1GHz)

### Notes

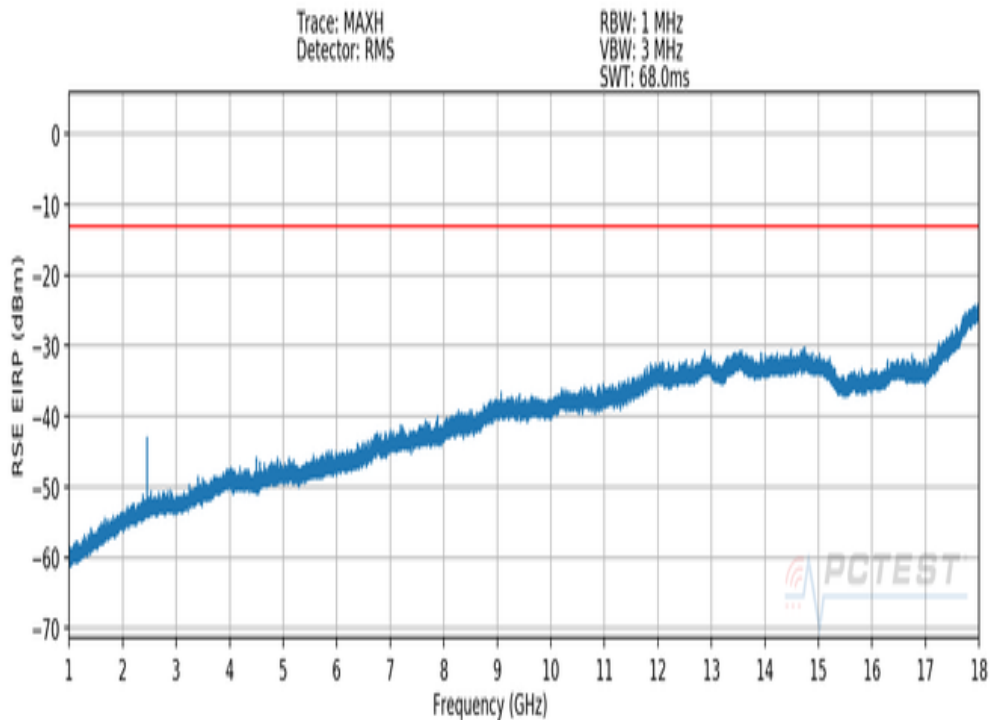
The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 3 meter.

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 204 of 469                 |

## 7.5.2 Radiated Spurious Emissions Plots (1 GHz to 18 GHz)

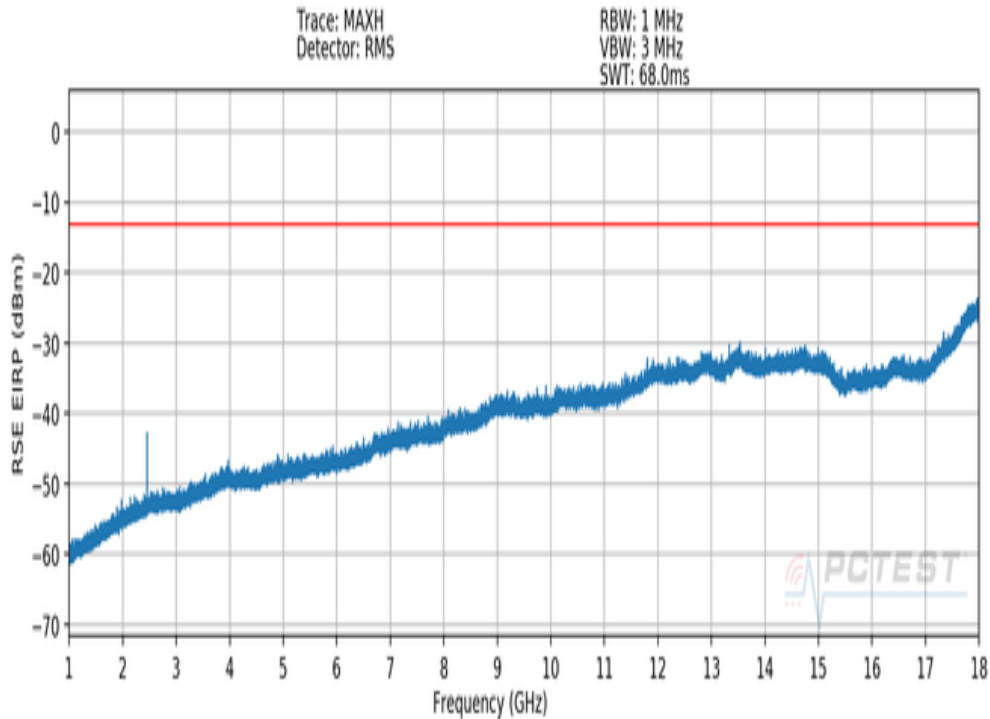


Plot 7-289. RSE 1 GHz – 18 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. H)

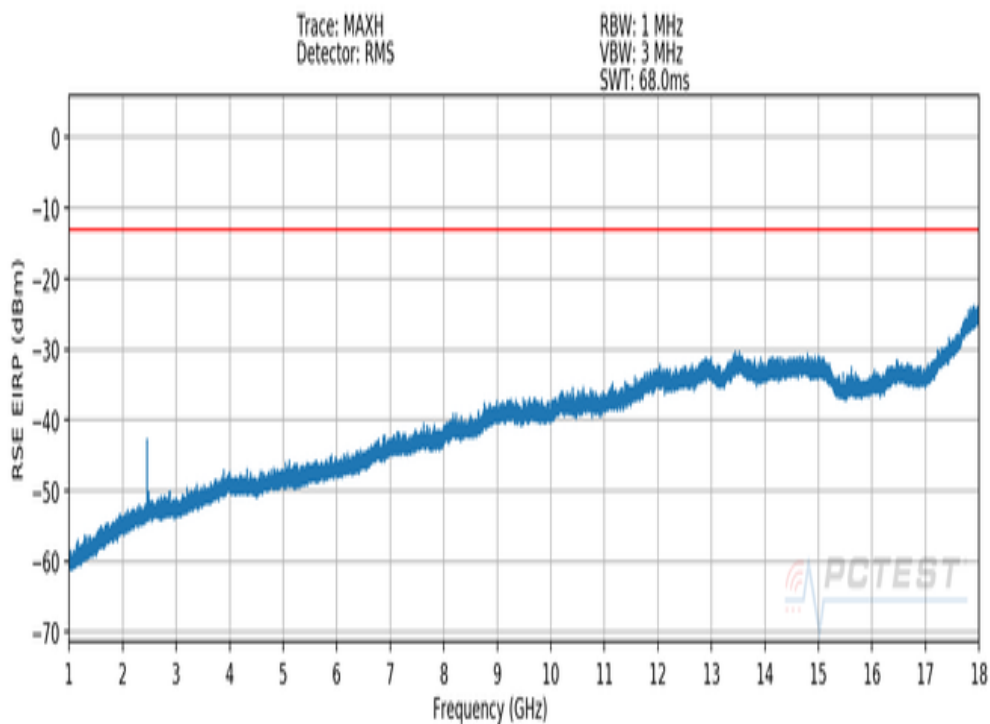


Plot 7-290. RSE 1 GHz – 18 GHz (100 MHz BW 4CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 205 of 469                 |

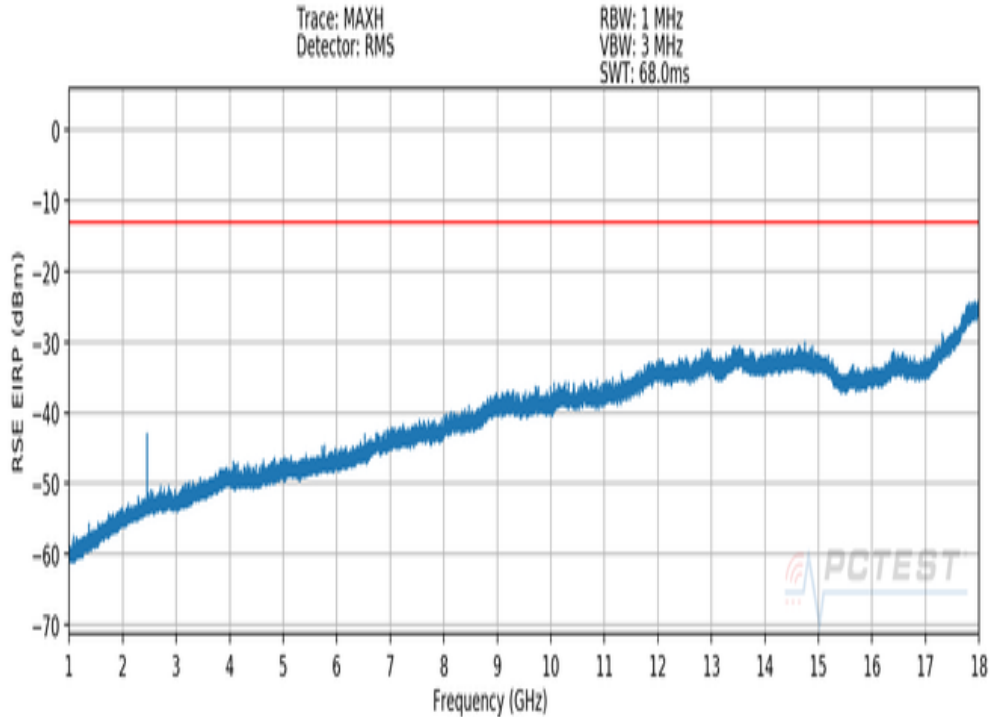


Plot 7-291. RSE 1 GHz – 18 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. H)

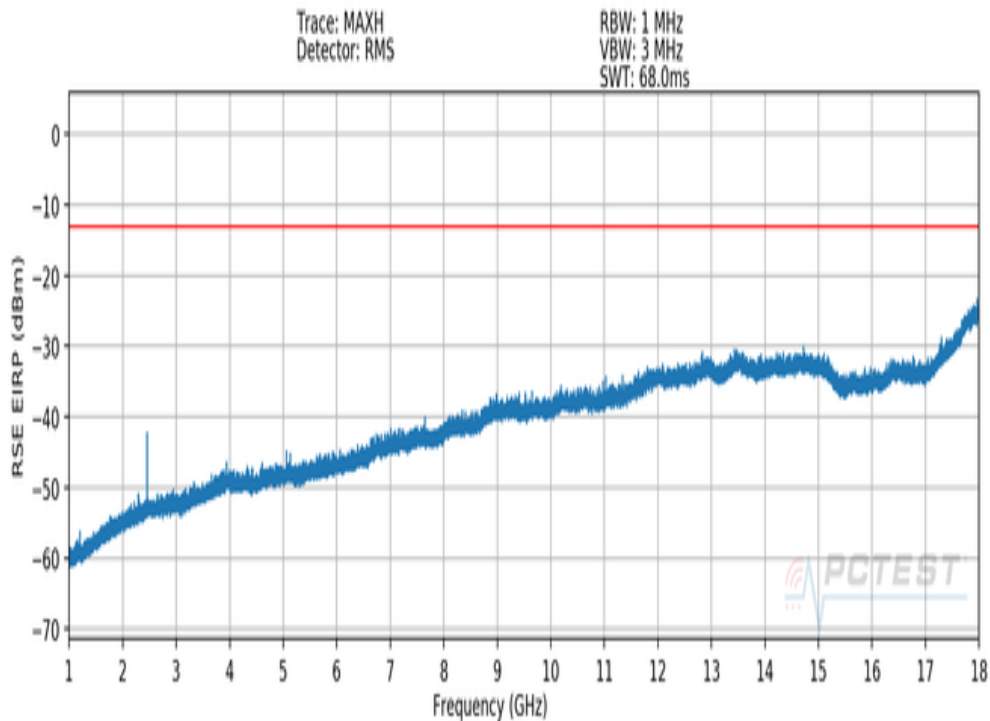


Plot 7-292. RSE 1 GHz – 18 GHz (100 MHz BW 4CC CC QPSK Mid Ant. Pol. V)

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 206 of 469                 |

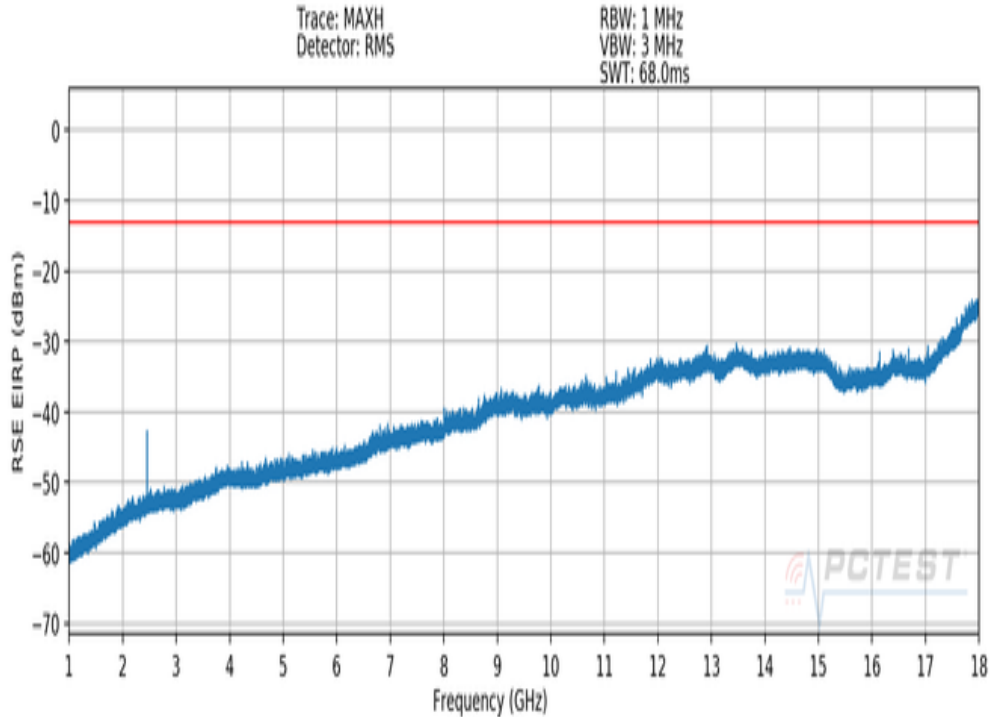


Plot 7-293. RSE 1 GHz – 18 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. H)

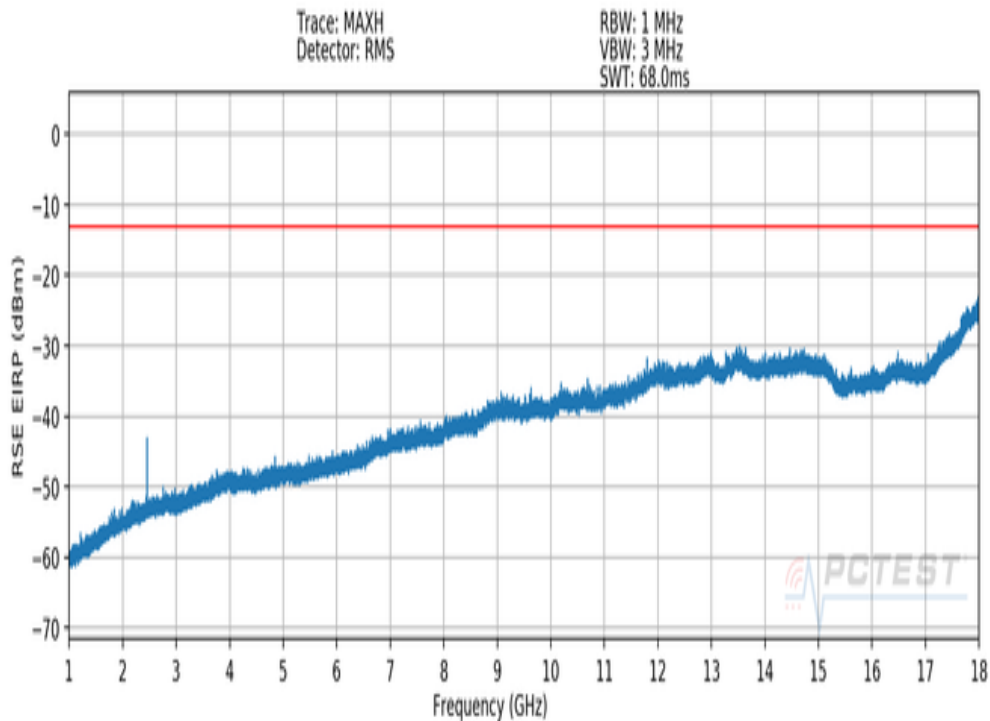


Plot 7-294. RSE 1 GHz – 18 GHz (100 MHz BW 4CC CC QPSK High Ant. Pol. V)

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 207 of 469                 |

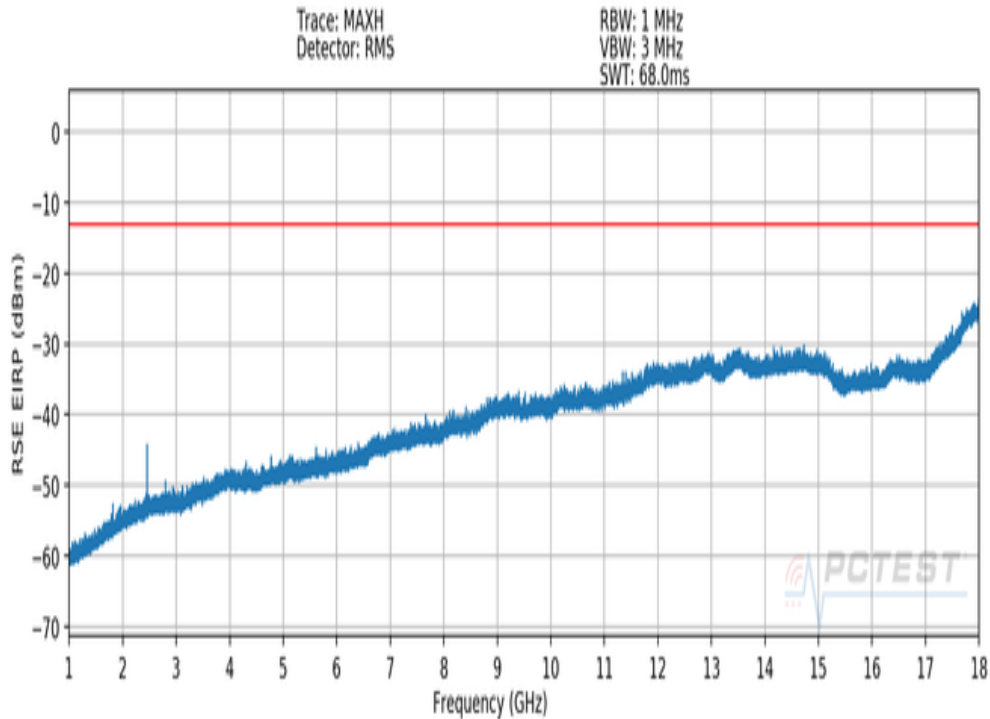


Plot 7-295. RSE 1 GHz – 18 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. H)

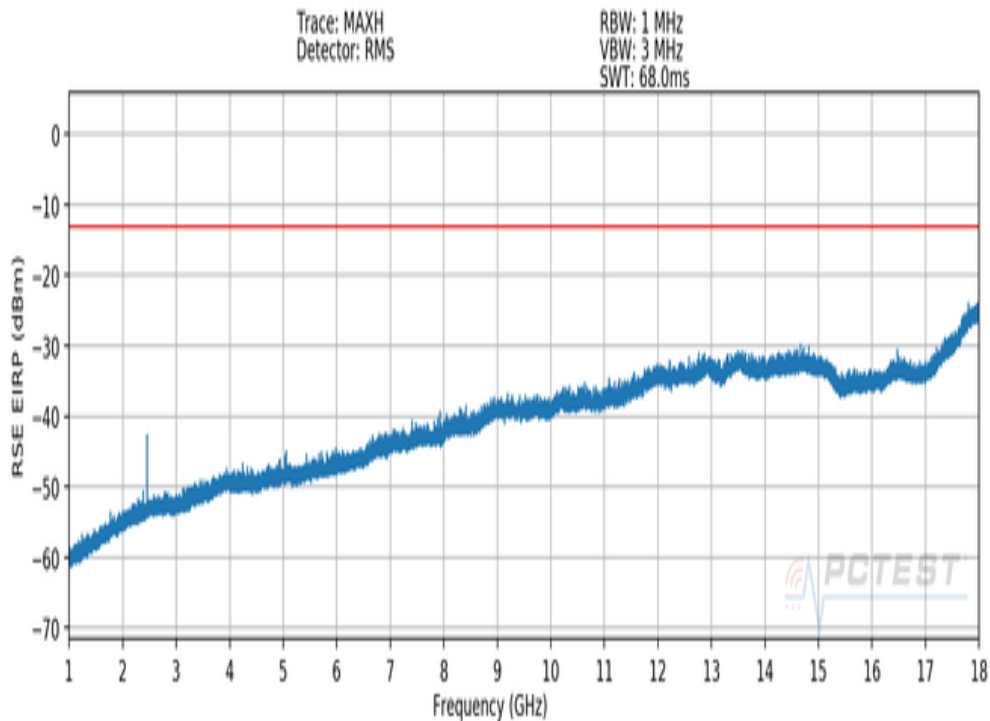


Plot 7-296. RSE 1 GHz – 18 GHz (100 MHz BW 8CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 208 of 469                 |

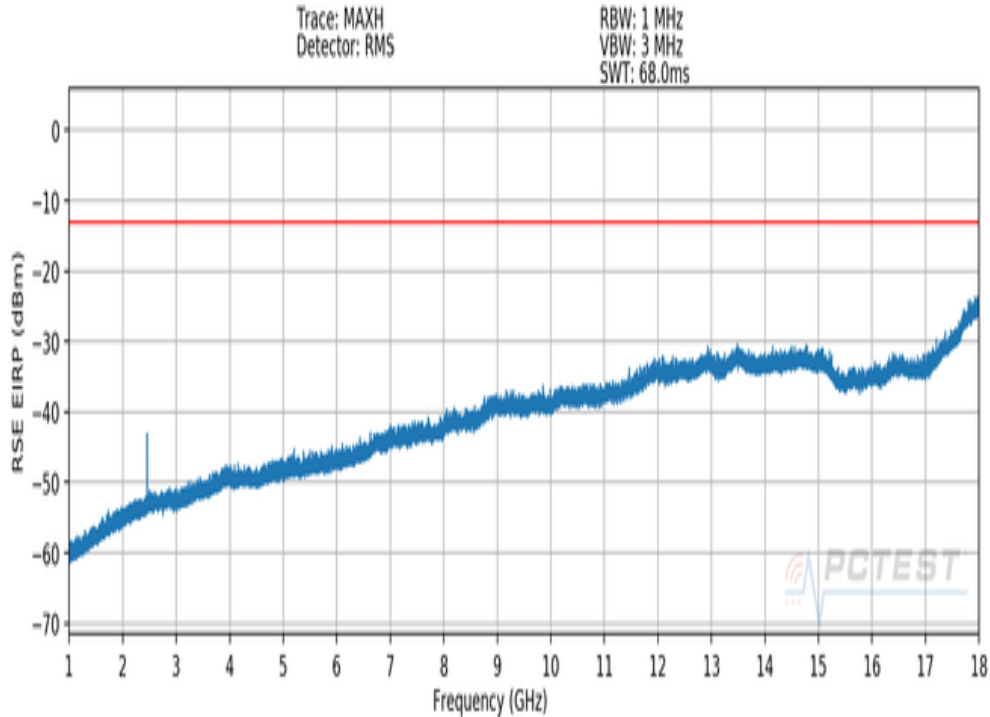


Plot 7-297. RSE 1 GHz – 18 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. H)

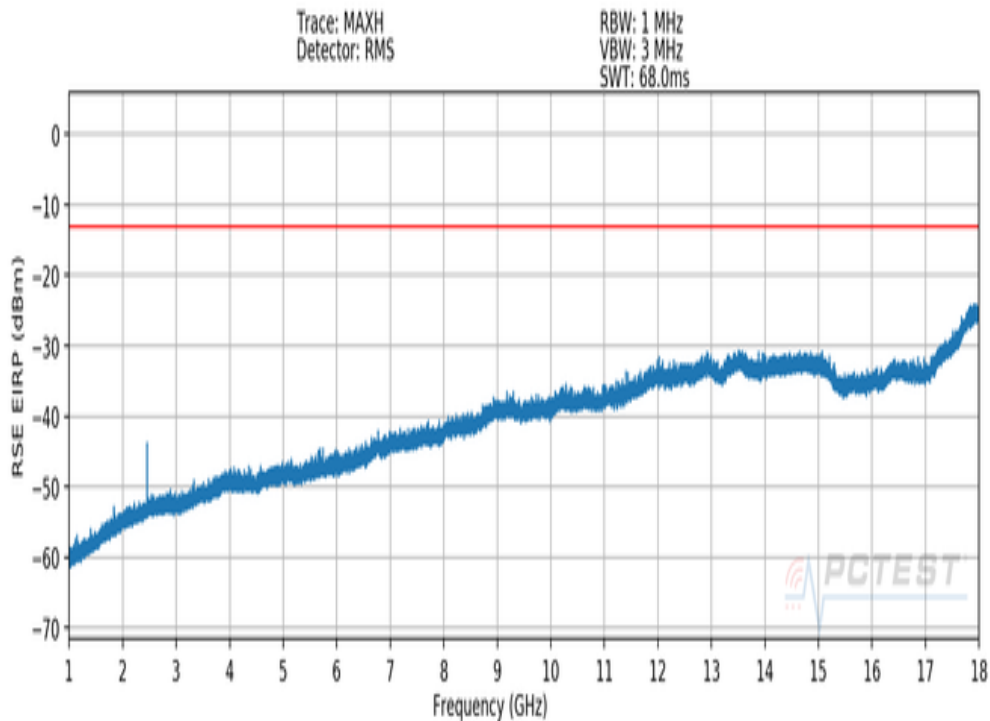


Plot 7-298. RSE 1 GHz – 18 GHz (100 MHz BW 8CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 209 of 469                 |

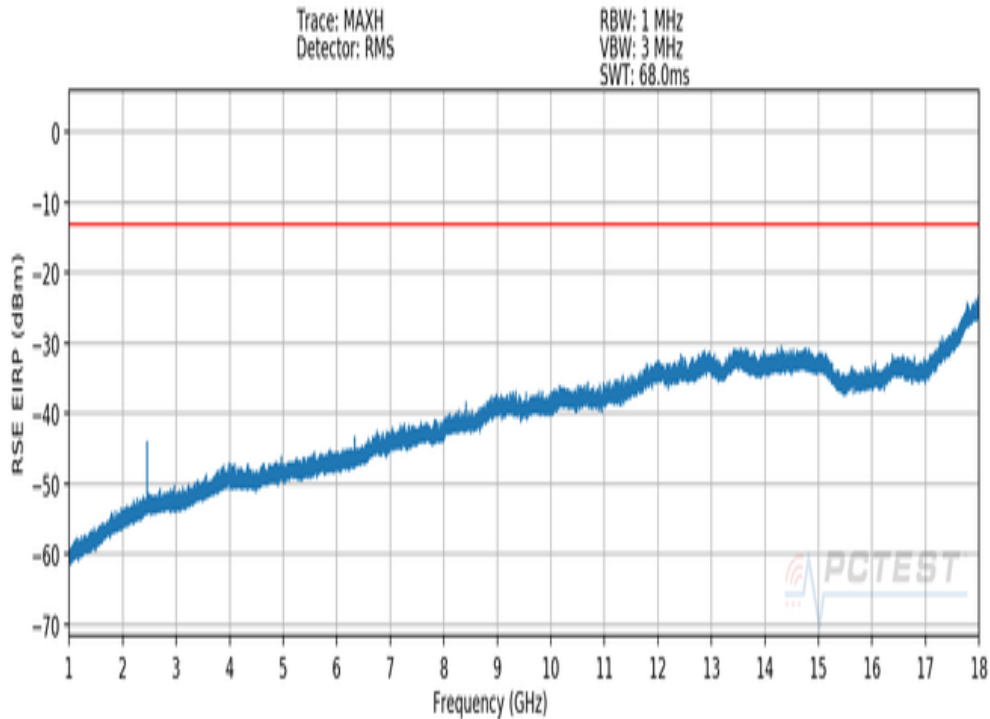


Plot 7-299. RSE 1 GHz – 18 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. H)

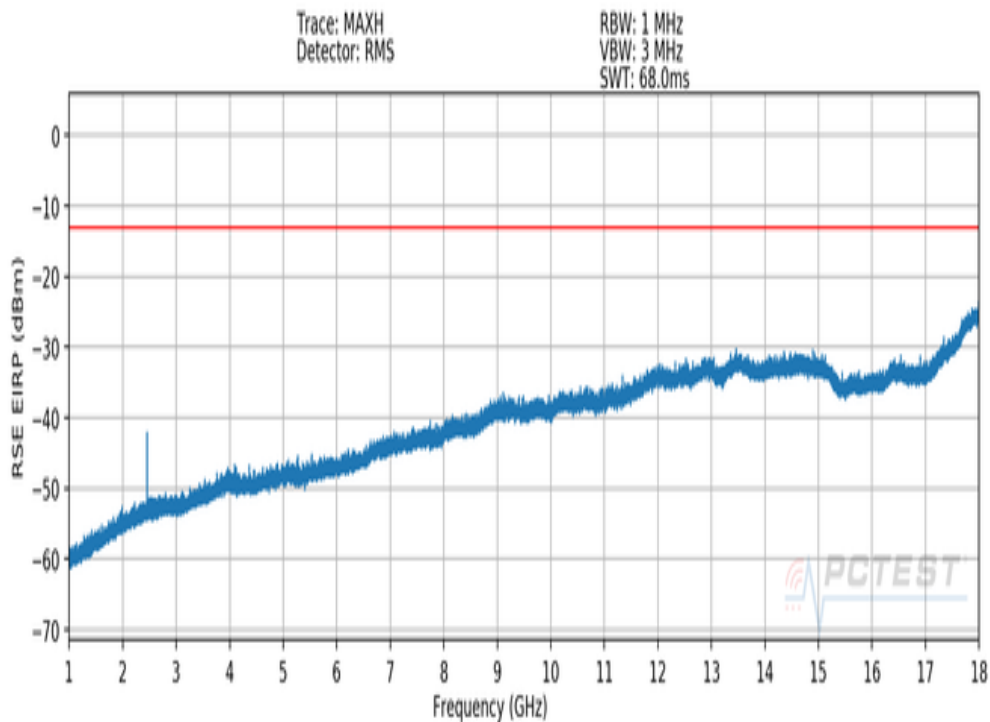


Plot 7-300. RSE 1 GHz – 18 GHz (100 MHz BW 8CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 210 of 469                 |

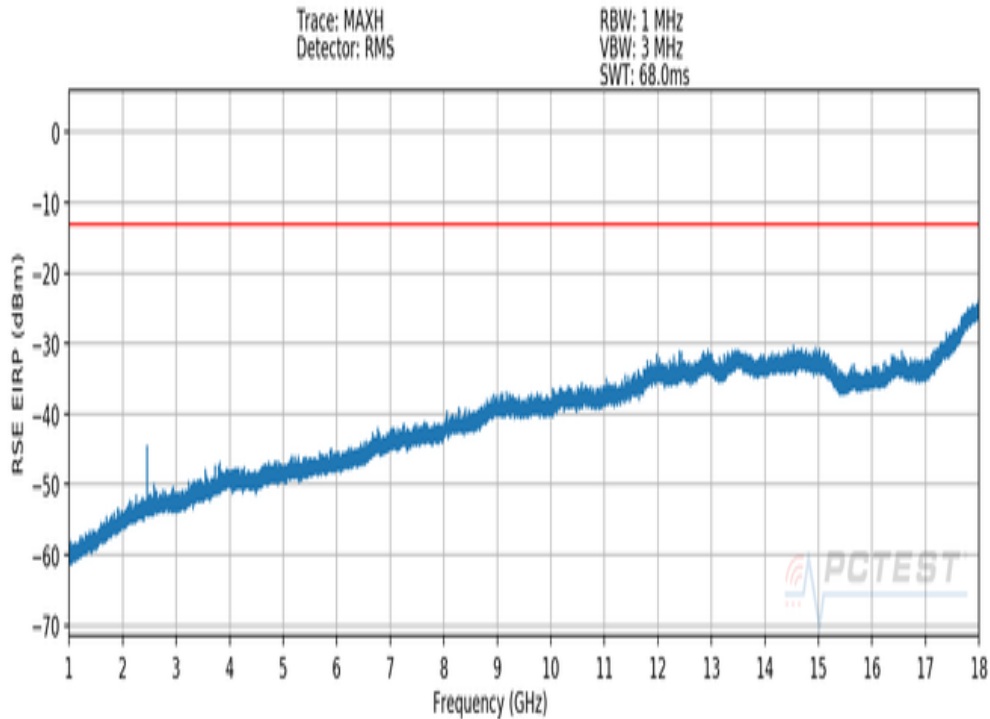


Plot 7-301. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Pol. H)

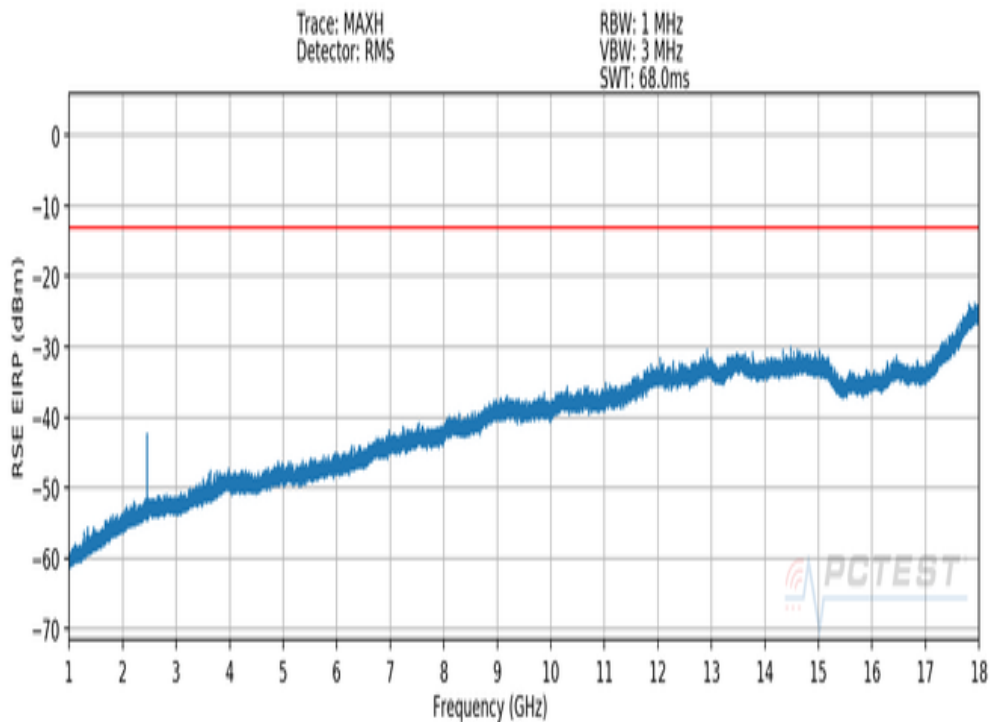


Plot 7-302. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 211 of 469                 |

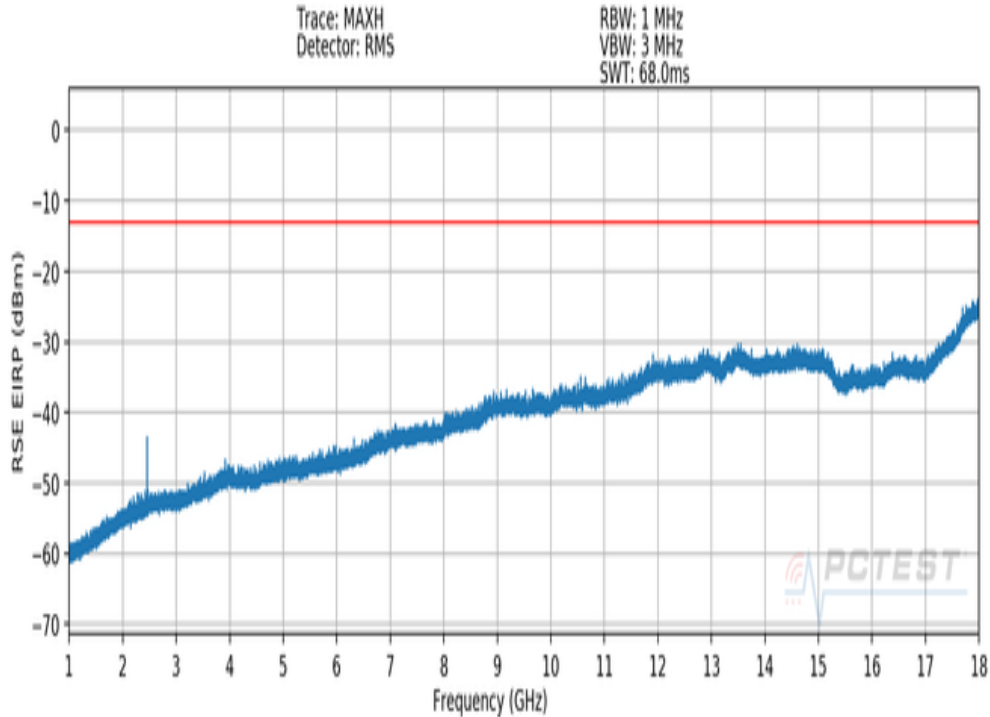


Plot 7-303. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Mid Ant. Pol. H)

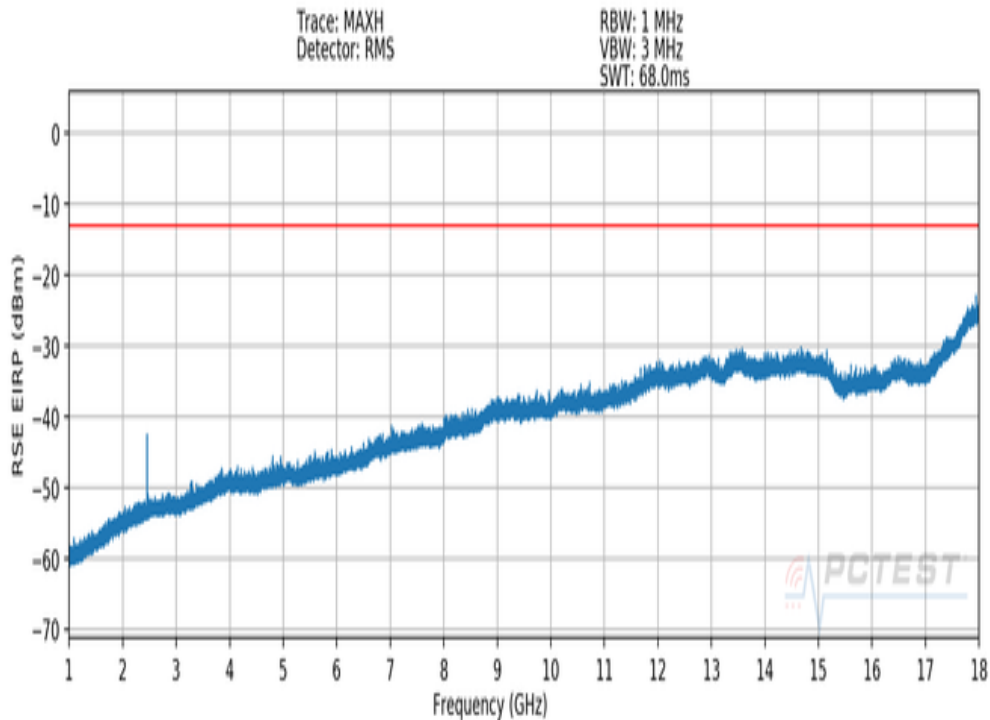


Plot 7-304. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 212 of 469                 |

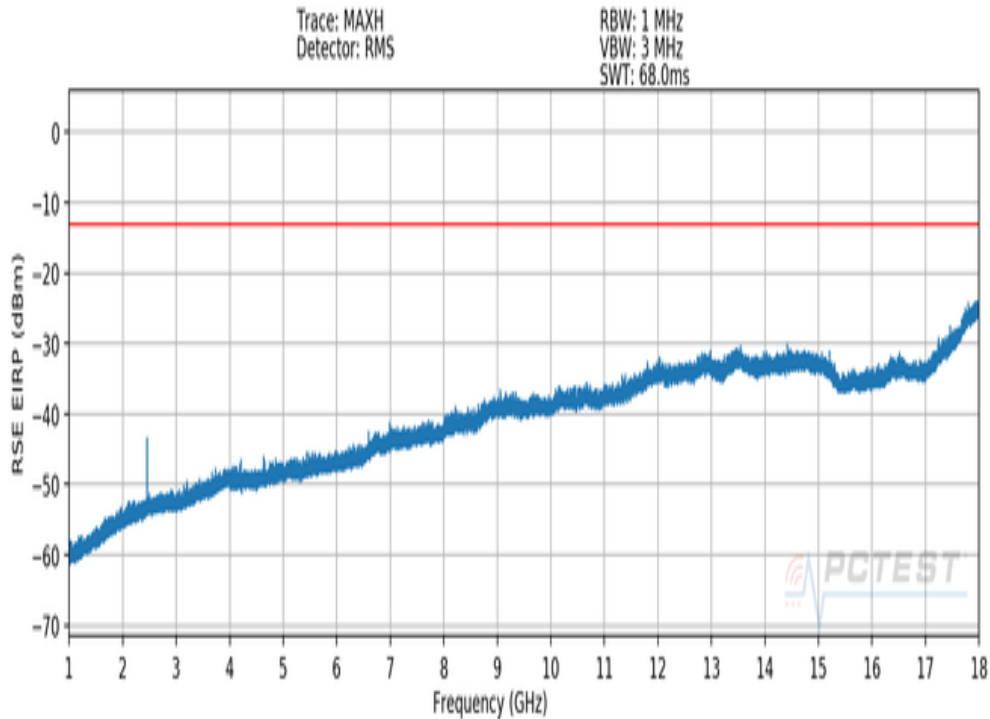


Plot 7-305. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. H)

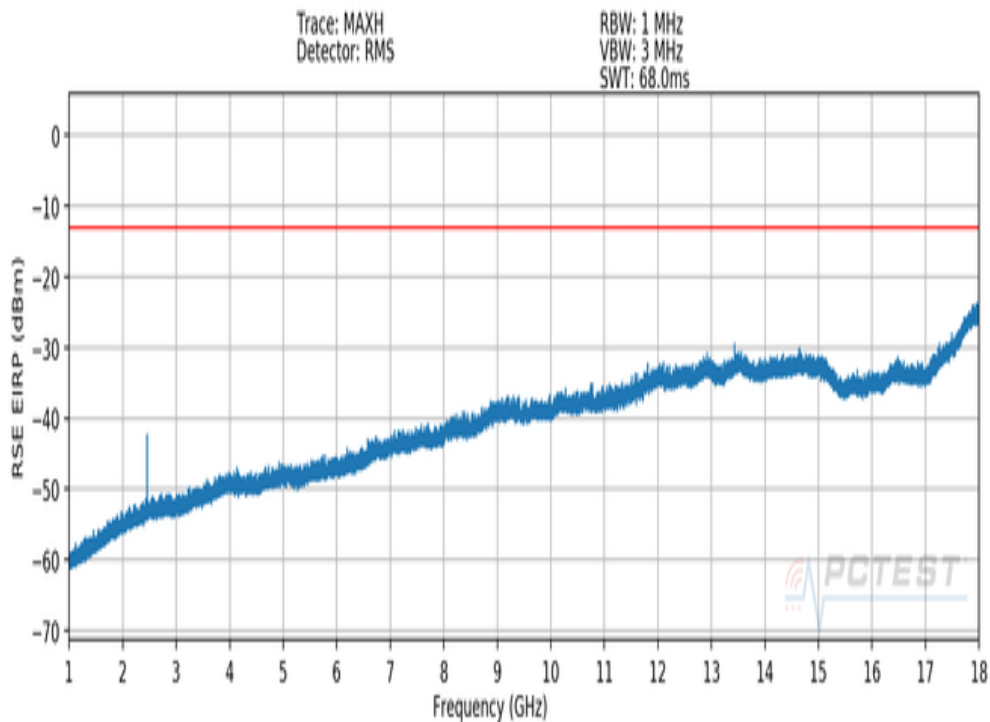


Plot 7-306. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 3CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 213 of 469                 |

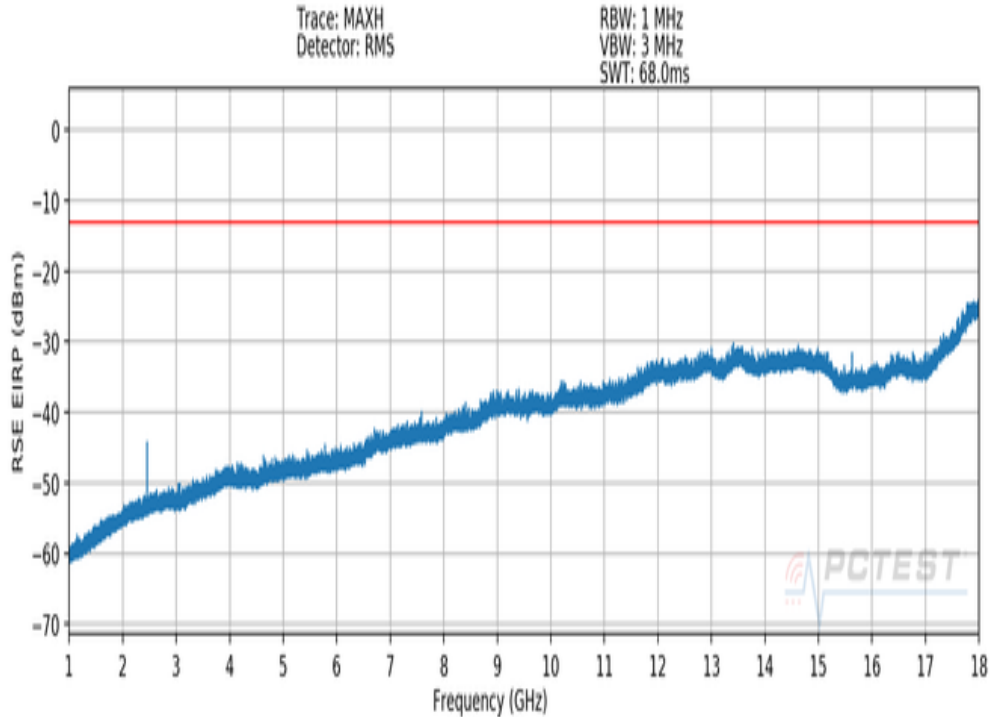


Plot 7-307. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. H)

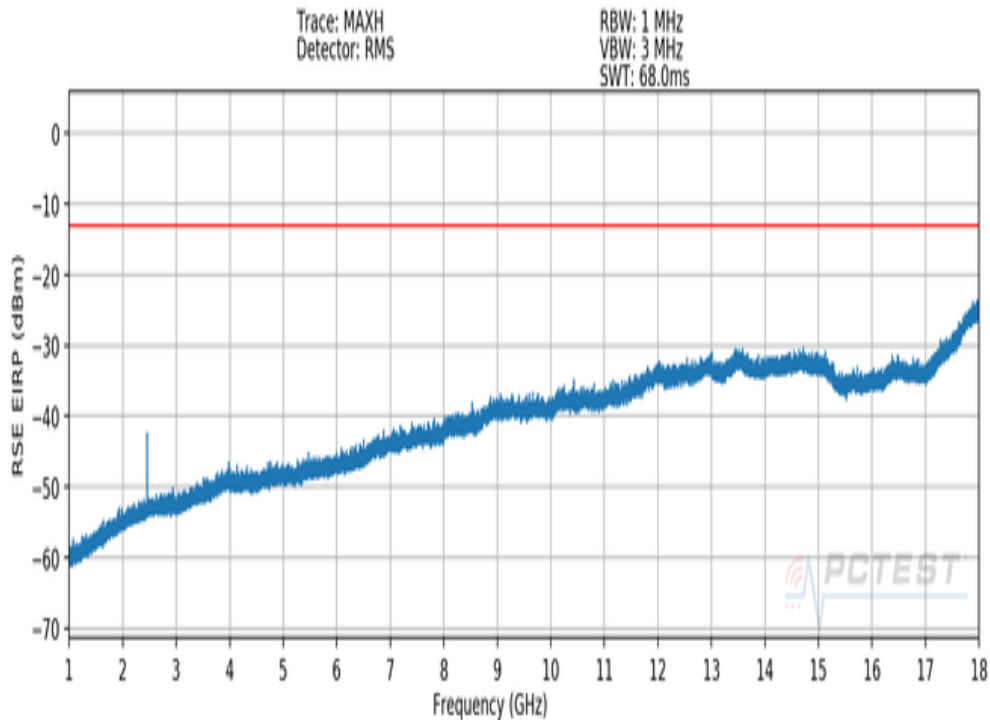


Plot 7-308. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 214 of 469                 |

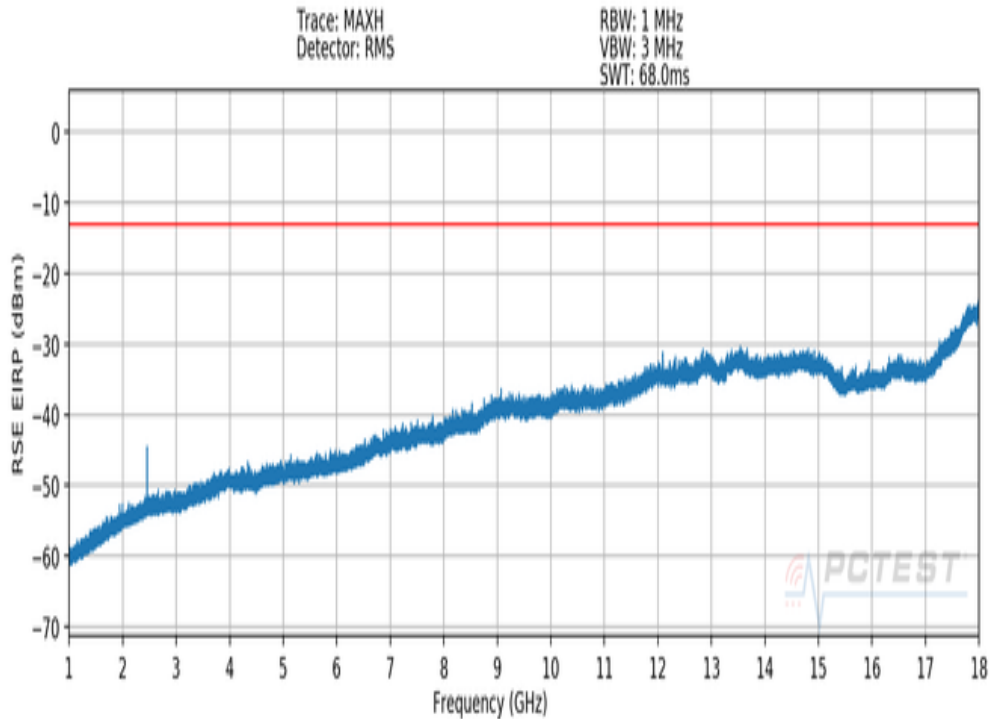


Plot 7-309. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Mid Ant. Pol. H)

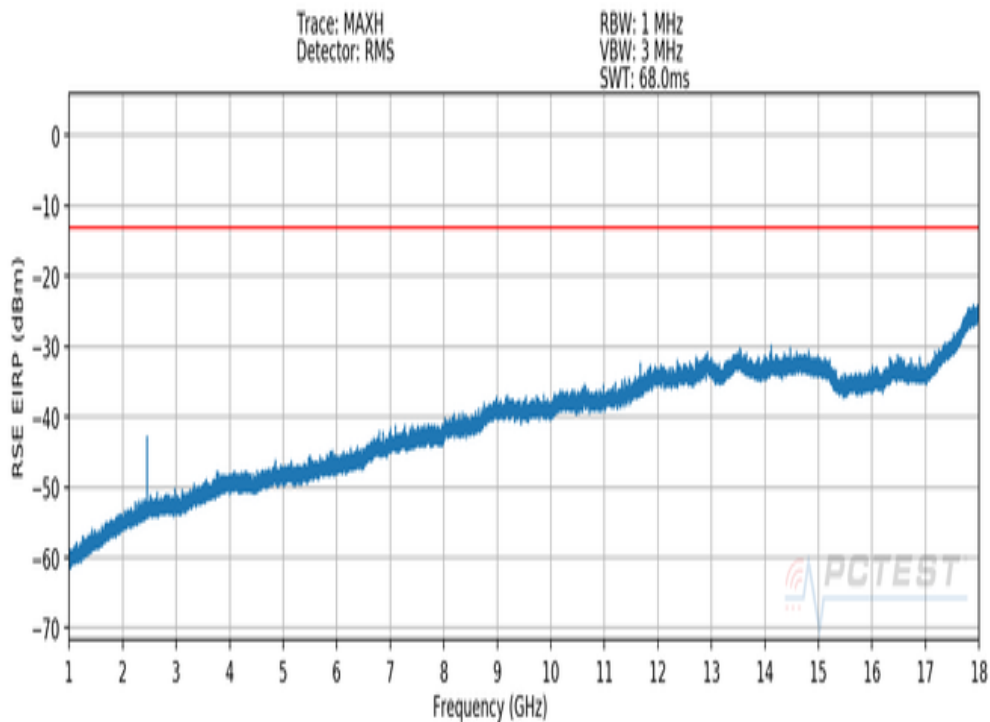


Plot 7-310. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK Mid Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 215 of 469                 |



Plot 7-311. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. H)



Plot 7-312. RSE 1 GHz – 18 GHz (50 MHz 2CC + 100 MHz BW 6CC CC QPSK High Ant. Pol. V)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 216 of 469                 |

## Spurious Emissions EIRP Sample Calculation (n261)

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 3 meters.

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

| Frequency [MHz] | Channel | CC Active  | Mod. | Ant. Pol [H/V] | Antenna Height [cm] | Turn Table Azimuth [degree] | Analyzer Level [dBm] | AFCL [dBm] | Field Strength [dBμV/m] | RSE EIRP [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|---------|------------|------|----------------|---------------------|-----------------------------|----------------------|------------|-------------------------|----------------|-------------|-------------|
| 12870.73        | High    | CC0-CC7(C) | QPSK | V              | 150                 | 100                         | -76.89               | 26.83      | 56.90                   | -38.30         | -13.00      | -25.30      |
| 14971.21        | High    | CC0-CC7(C) | QPSK | V              | 150                 | 100                         | -74.89               | 27.74      | 59.90                   | -35.40         | -13.00      | -22.40      |
| 16805.23        | High    | CC0-CC7(C) | QPSK | V              | 150                 | 100                         | -72.71               | 25.62      | 59.90                   | -35.30         | -13.00      | -22.30      |
| 17161.68        | High    | CC0-CC7(C) | QPSK | V              | 150                 | 260                         | -73.88               | 26.76      | 59.90                   | -35.30         | -13.00      | -22.30      |
| 17624.12        | High    | CC0-CC7(C) | QPSK | V              | 150                 | 260                         | -74.15               | 30.80      | 63.60                   | -31.60         | -13.00      | -18.60      |
| 17967.41        | High    | CC0-CC7(C) | QPSK | H              | 150                 | 300                         | -75.11               | 34.14      | 69.00                   | -29.20         | -13.00      | -16.20      |

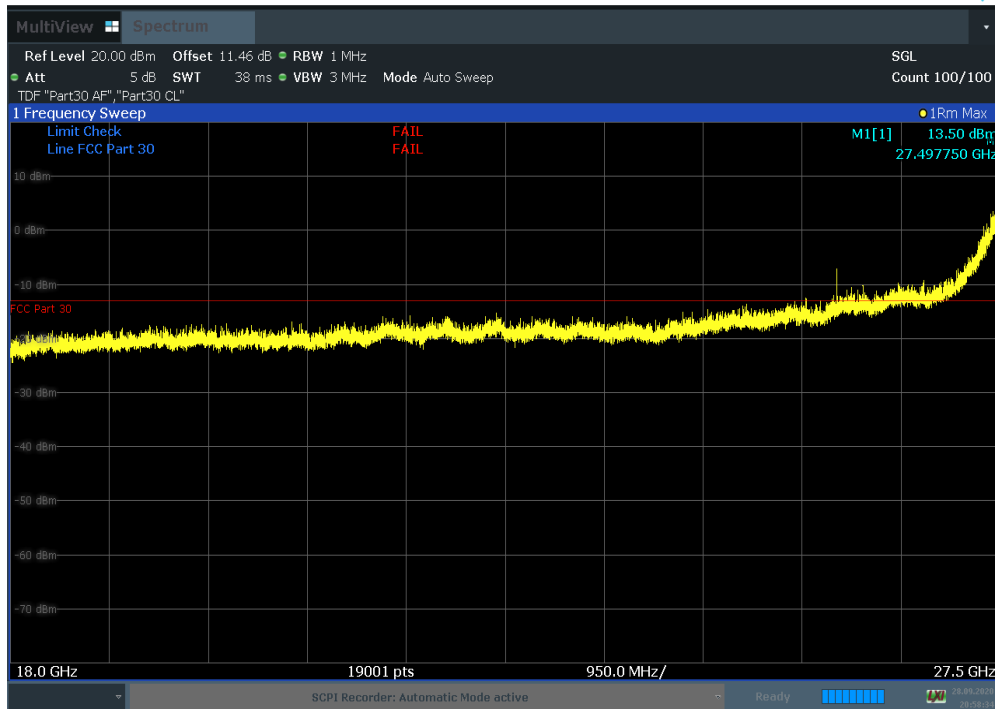
Table 7-21. 2Tx-Spurious Emissions (1 GHz to 18 GHz)

### Notes

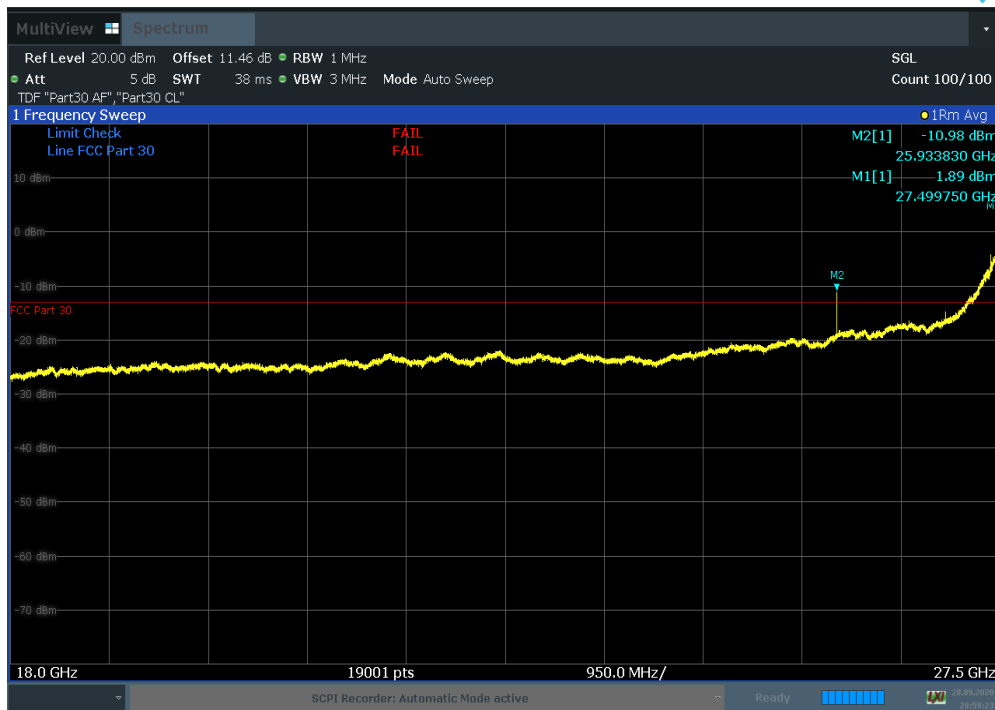
The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 3 meter.

|                                          |                                                                                     |                                       |                                                                                       |                                 |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020                                                | EUT Type:<br>5G Access Unit           |                                                                                       | Page 217 of 469                 |

### 7.5.3 Radiated Spurious Emissions Plots (18 GHz to 27.5 GHz)

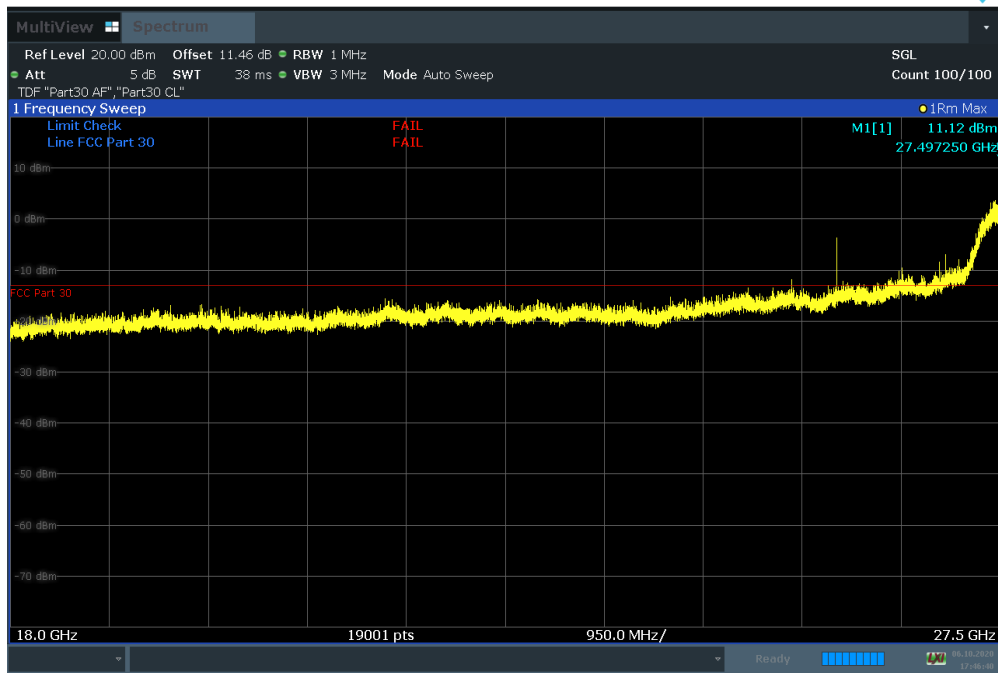


Plot 7-313. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC CC QPSK Low Ant. Angle 45)



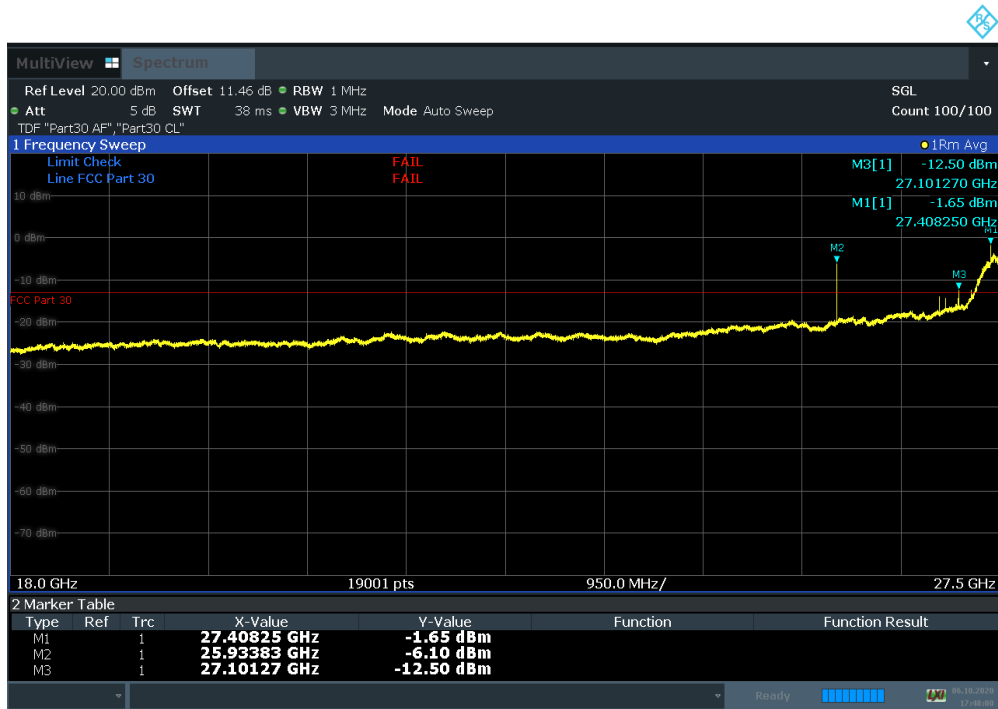
Plot 7-314. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC CC QPSK Low Ant. Angle 45, Final)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 218 of 469                 |



17:46:41 06.10.2020

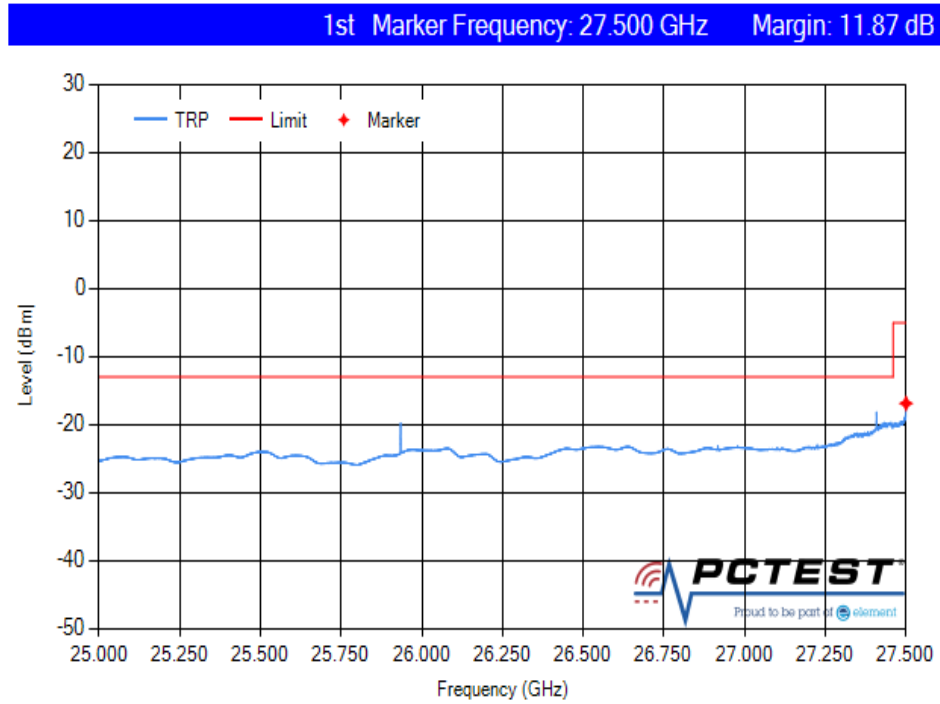
Plot 7-315. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC CC QPSK Low Ant. Angle 135)



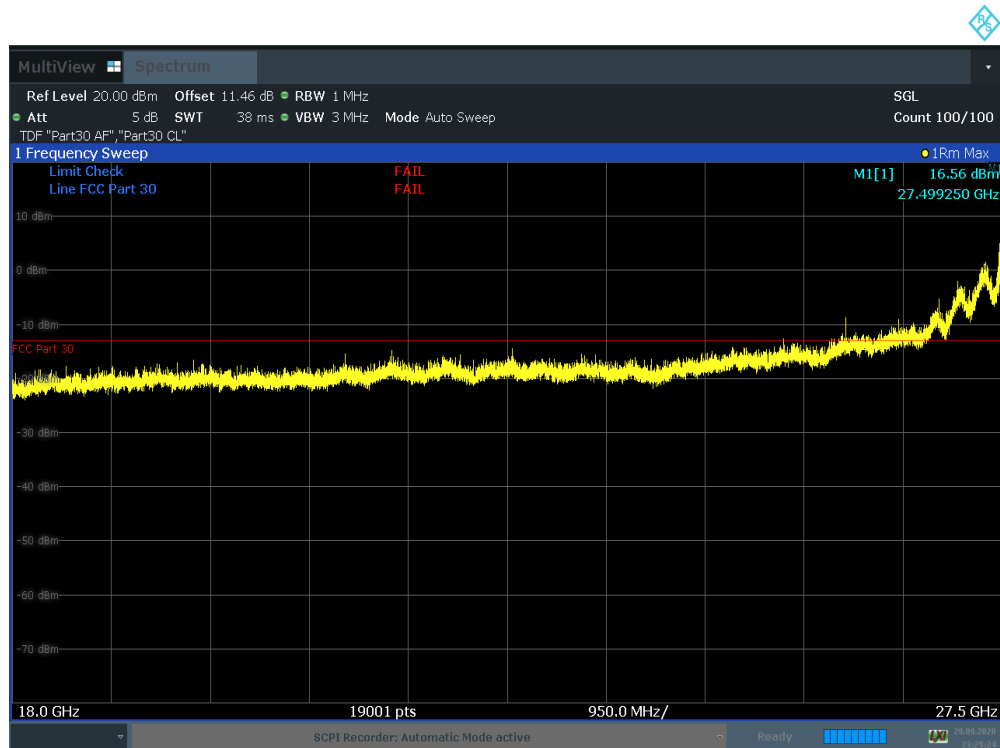
17:48:01 06.10.2020

Plot 7-316. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC CC QPSK Low Ant. Angle 135, Final)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 219 of 469                 |

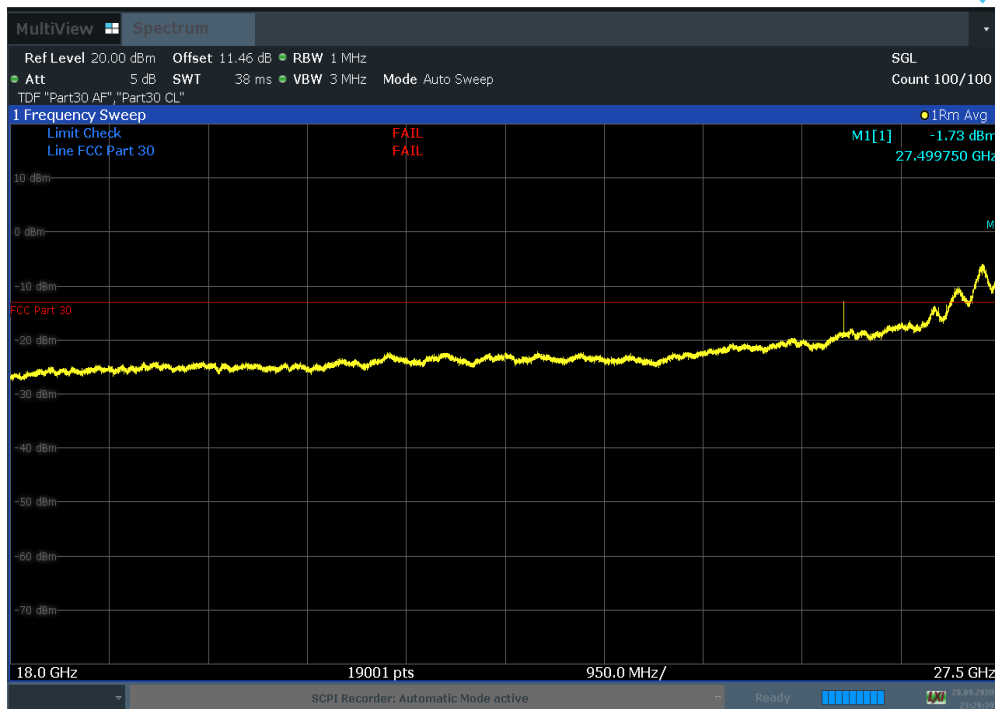


Plot 7-317. RSE 2.5 GHz – 27.5 GHz (100 MHz BW 4CC CC QPSK Low TRP)

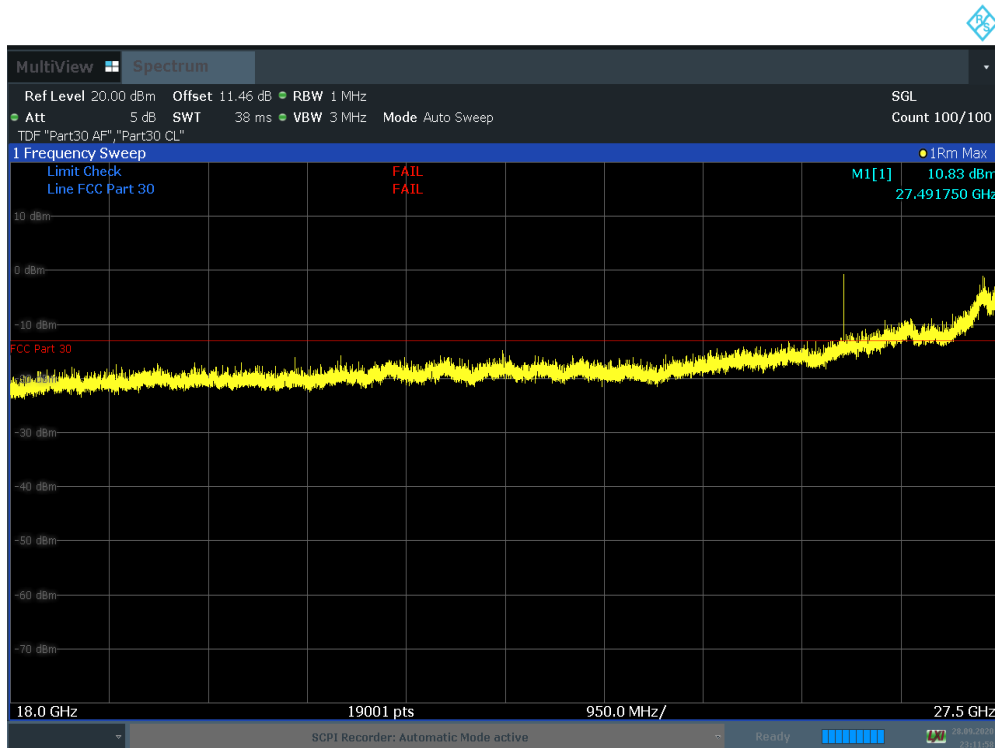


Plot 7-318. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC NC QPSK Low Ant. Angle 45)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 220 of 469                 |

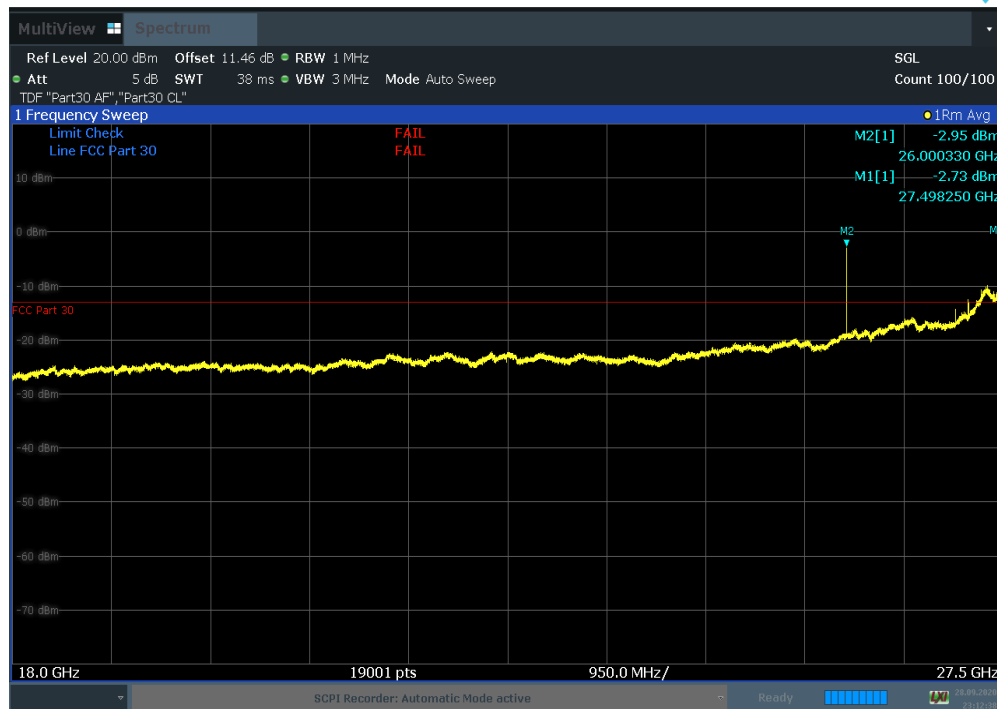


Plot 7-319. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC NC QPSK Low Ant. Angle 45, Final)

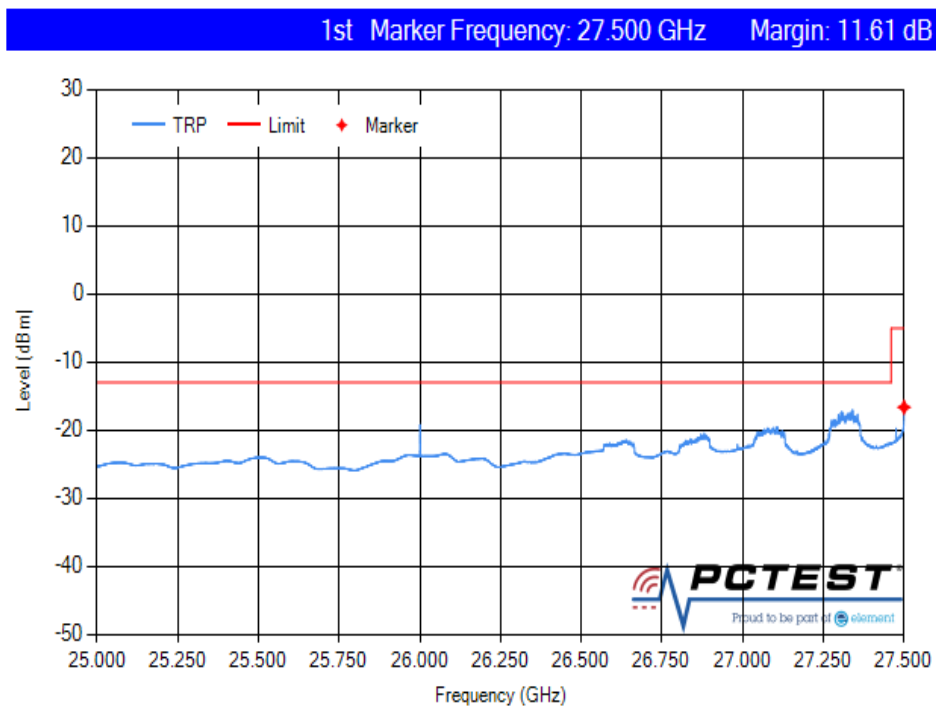


Plot 7-320. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC NC QPSK Low Ant. Angle 135)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 221 of 469                 |

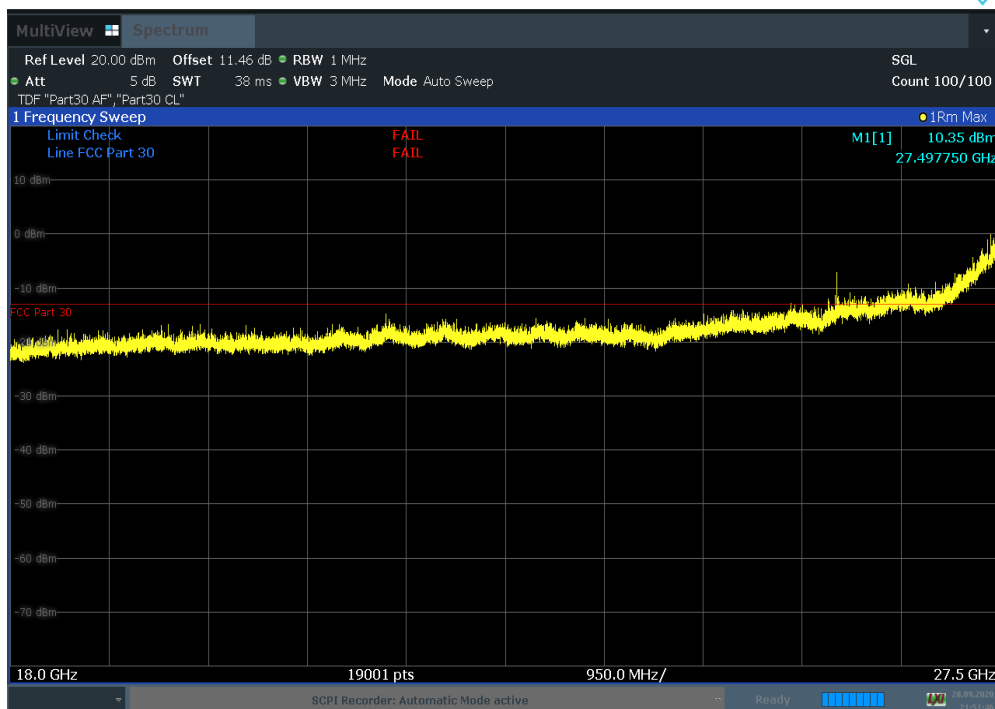


Plot 7-321. RSE 18 GHz – 27.5 GHz (100 MHz BW 4CC NC QPSK Low Ant. Angle 135, Final)

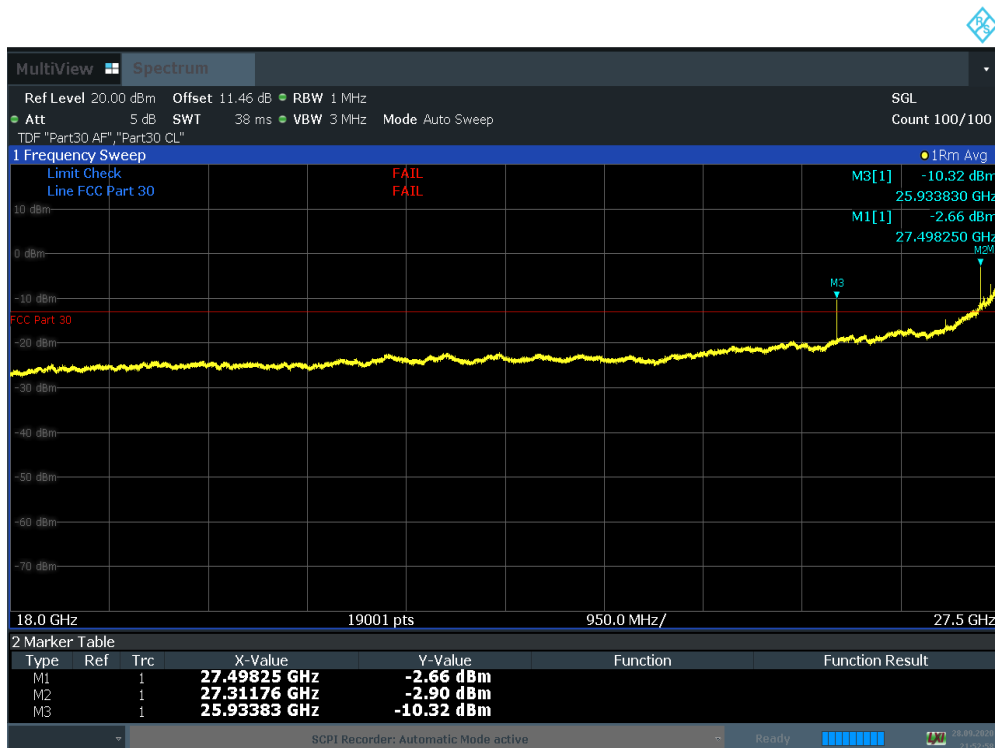


Plot 7-322. RSE 2.5 GHz – 27.5 GHz (100 MHz BW 4CC NC QPSK Low TRP)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 222 of 469                 |

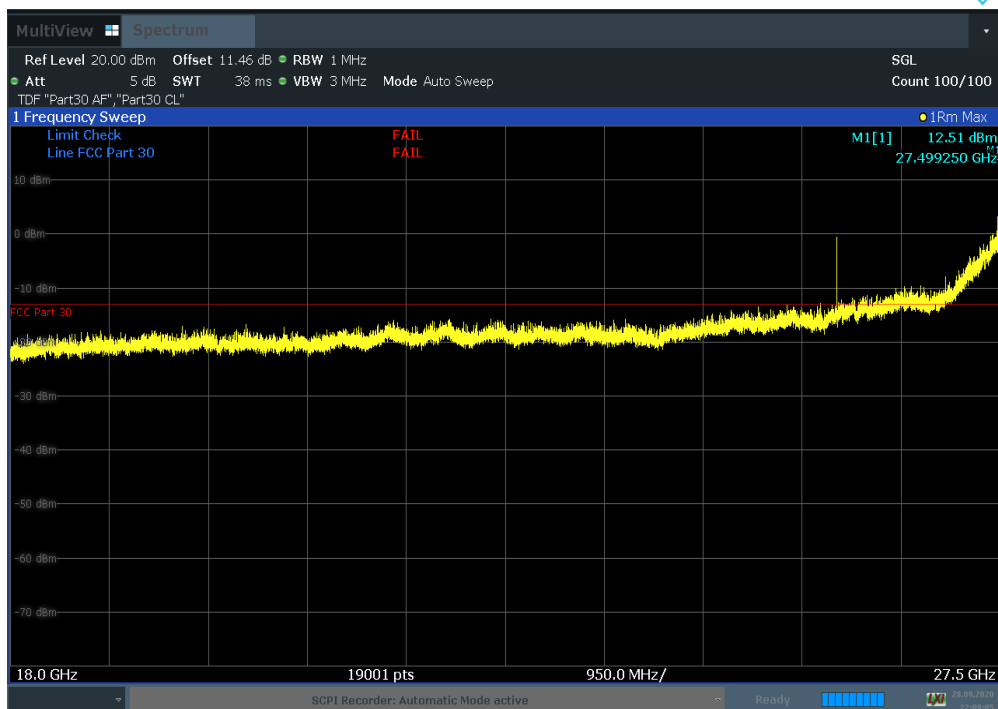


Plot 7-323. RSE 18 GHz – 27.5 GHz (100 MHz BW 8CC CC QPSK Low Ant. Angle 45)

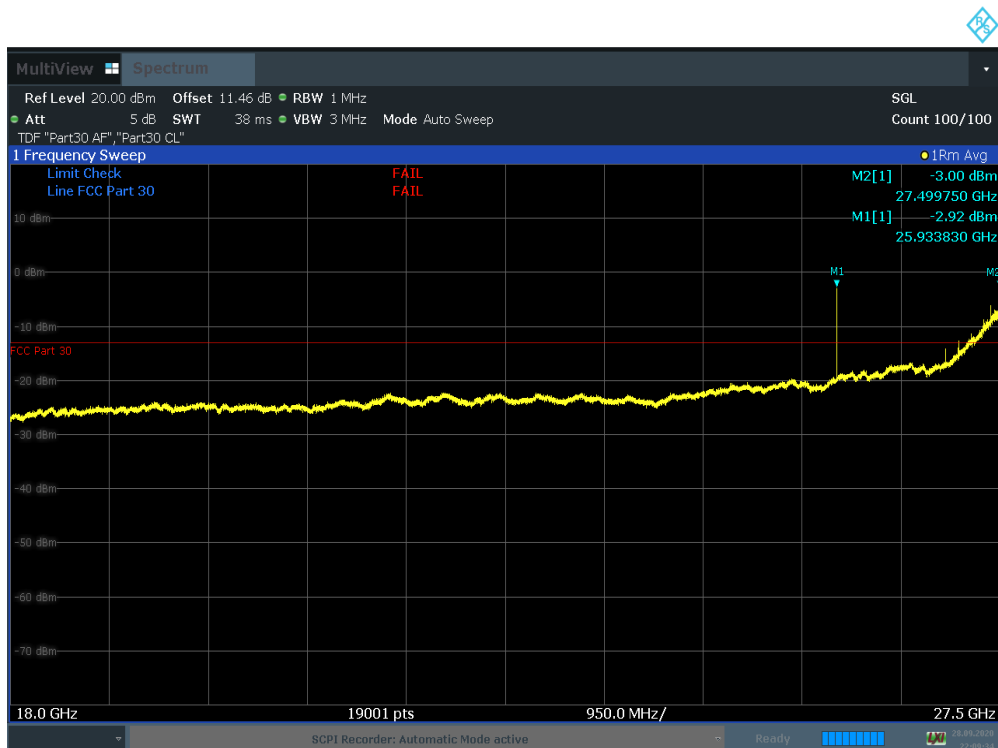


Plot 7-324. RSE 18 GHz – 27.5 GHz (100 MHz BW 8CC CC QPSK Low Ant. Angle 45, Final)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 223 of 469                 |

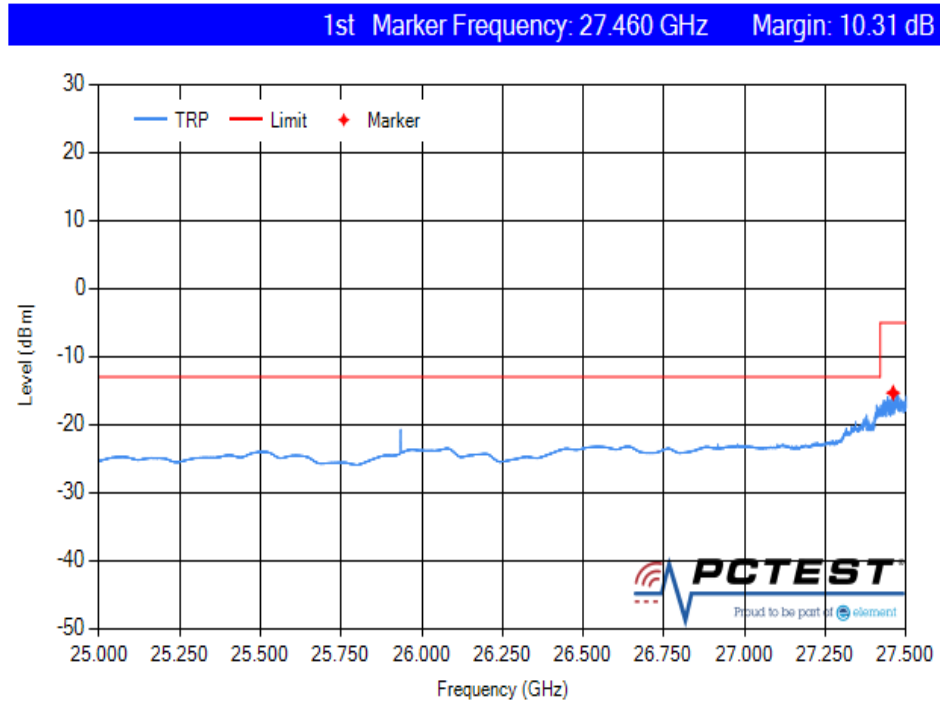


Plot 7-325. RSE 18 GHz – 27.5 GHz (100 MHz BW 8CC CC QPSK Low Ant. Angle 135)

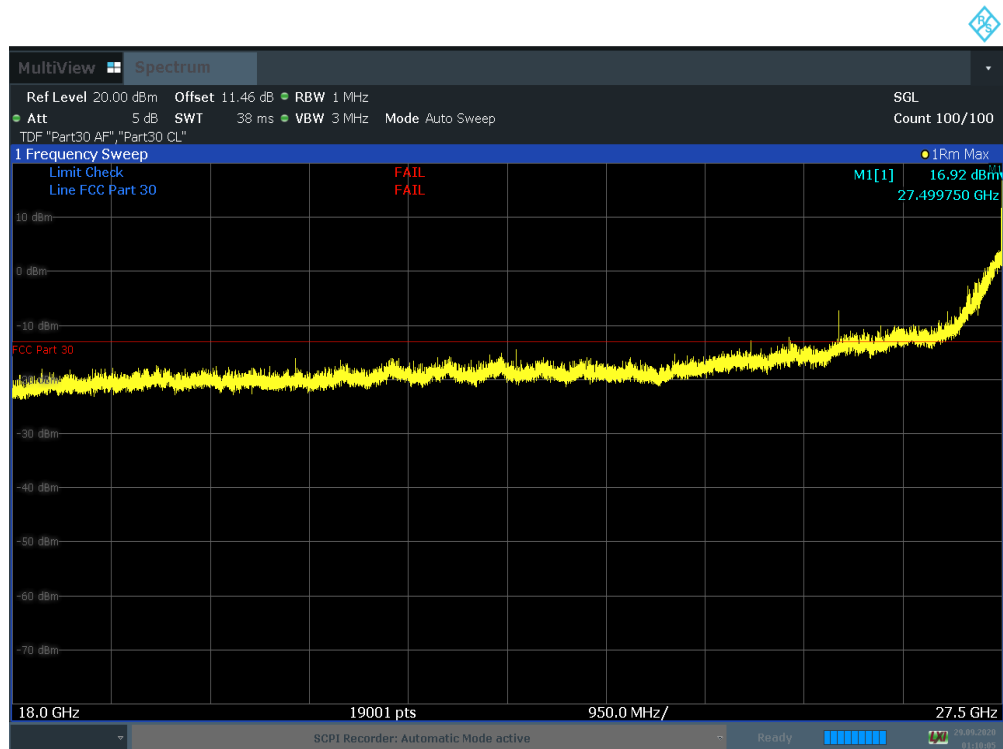


Plot 7-326. RSE 18 GHz – 27.5 GHz (100 MHz BW 8CC CC QPSK Low Ant. Angle 135, Final)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 224 of 469                 |

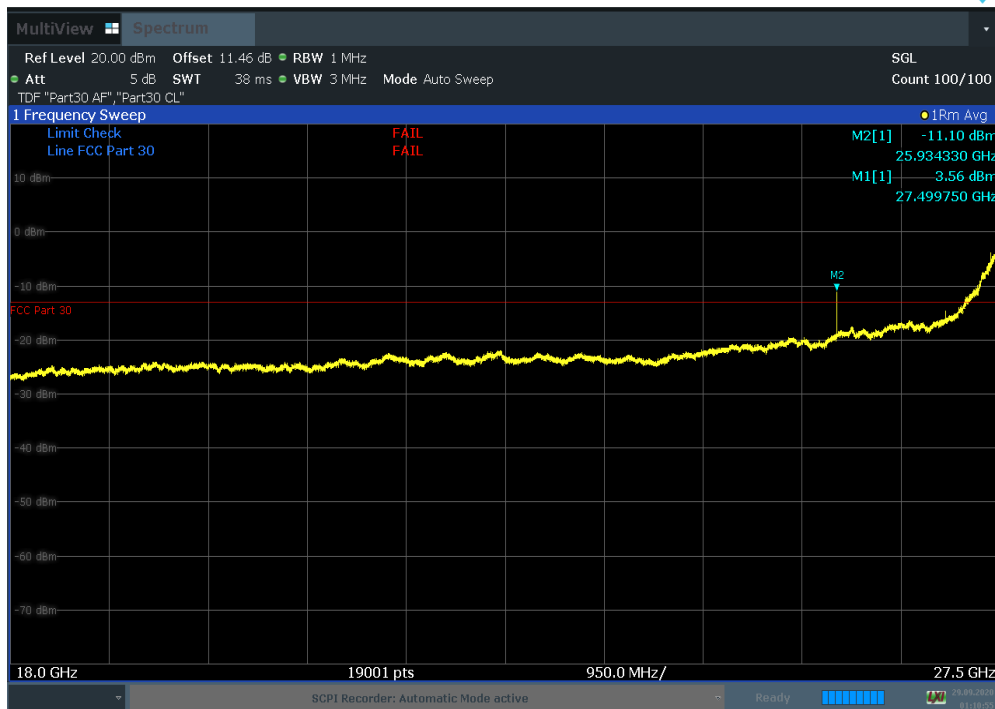


Plot 7-327. RSE 18 GHz – 27.5 GHz (100 MHz BW 8CC CC QPSK Low TRP)

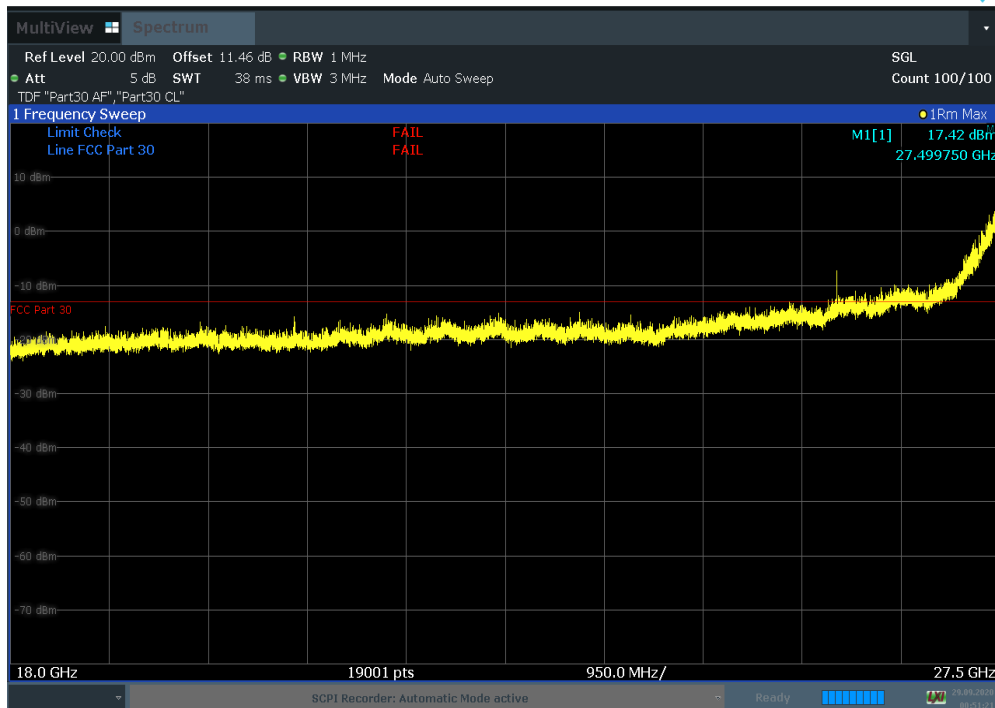


Plot 7-328. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK Low Ant. Angle 45)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 225 of 469                 |

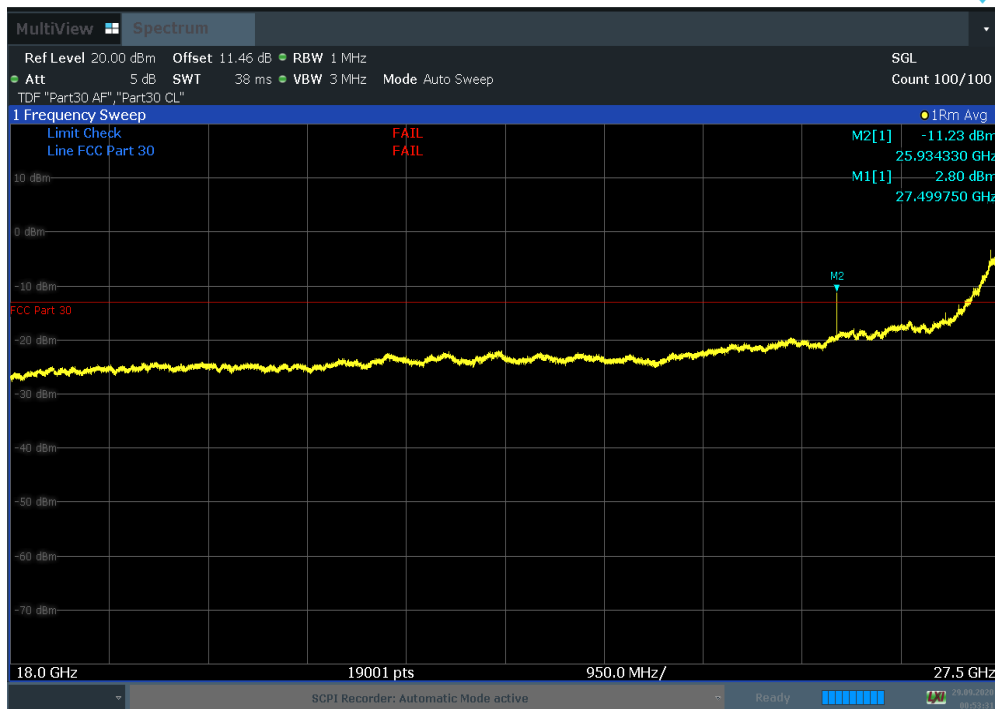


Plot 7-329. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK  
Low Ant. Angle 45, Final)



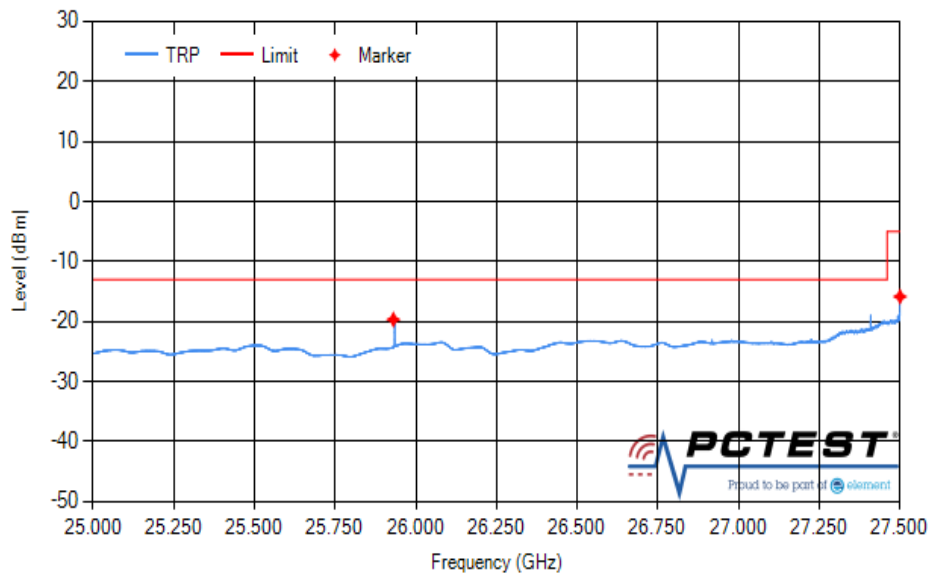
Plot 7-330. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK  
Low Ant. Angle 135)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 226 of 469                 |



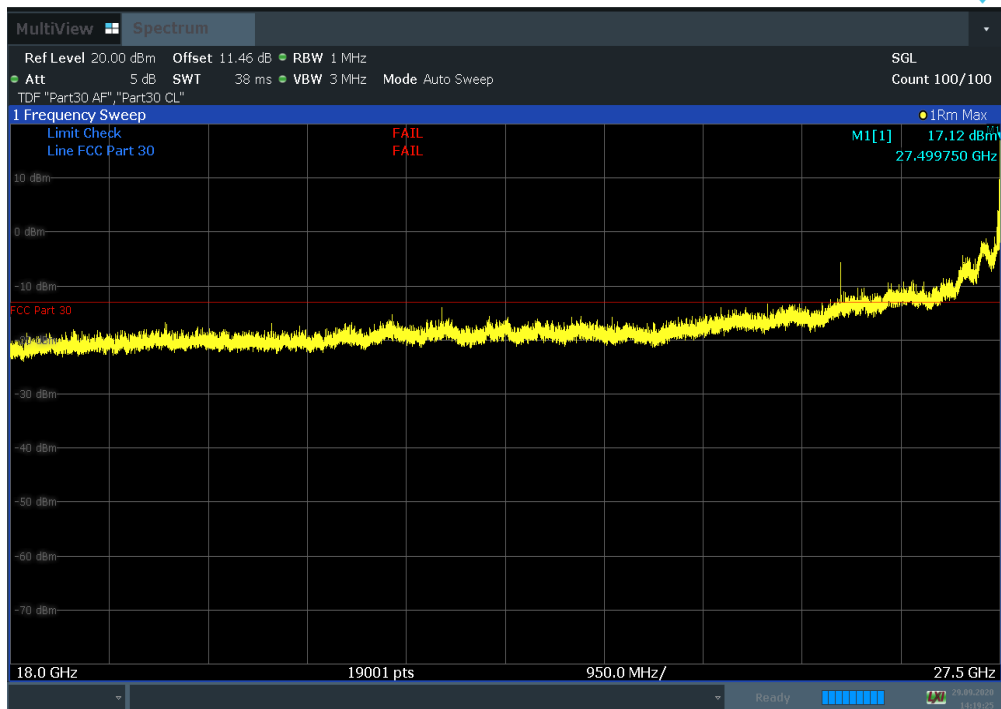
Plot 7-331. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK  
Low Ant. Angle 135, Final)

1st Marker Frequency: 27.500 GHz Margin: 10.84 dB  
2nd Marker Frequency: 25.930 GHz Margin: 6.67 dB

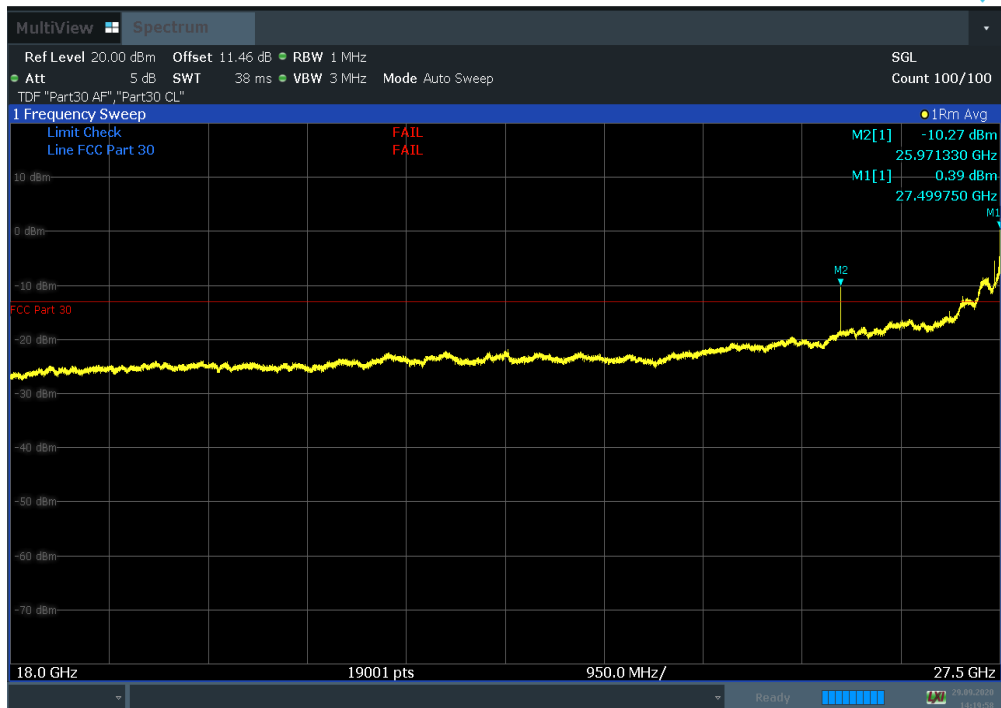


Plot 7-332. RSE 25 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC CC QPSK  
Low TRP)

|                                          |                                              |                             |                 |                                        |
|------------------------------------------|----------------------------------------------|-----------------------------|-----------------|----------------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                             |                 | <b>Approved by:</b><br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit | Page 227 of 469 |                                        |

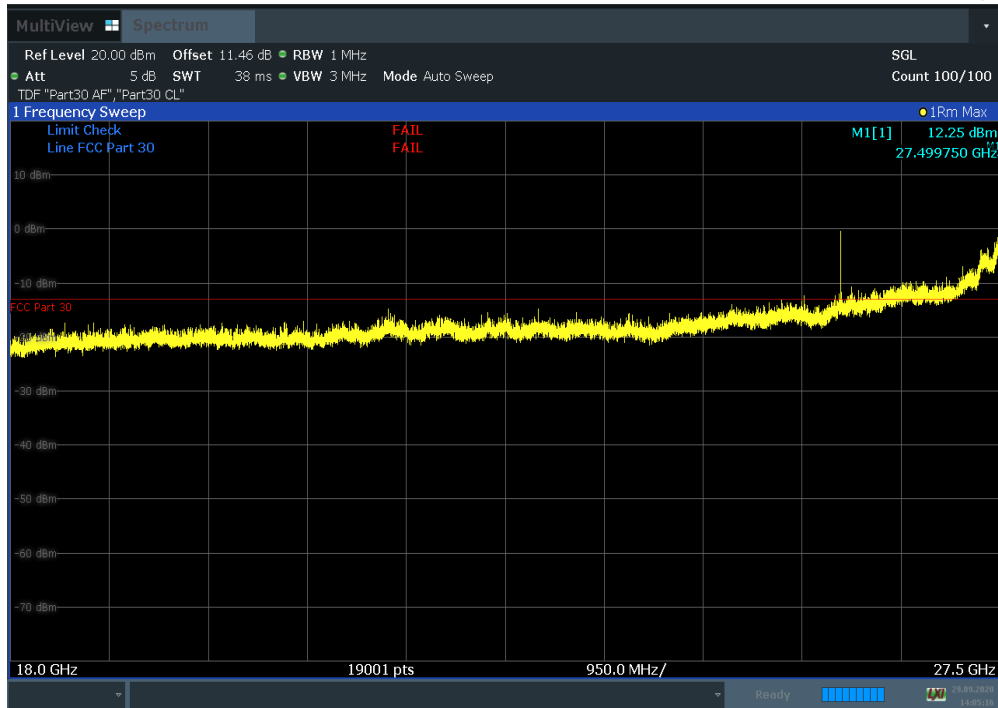


Plot 7-333. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK  
Low Ant. Angle 45)

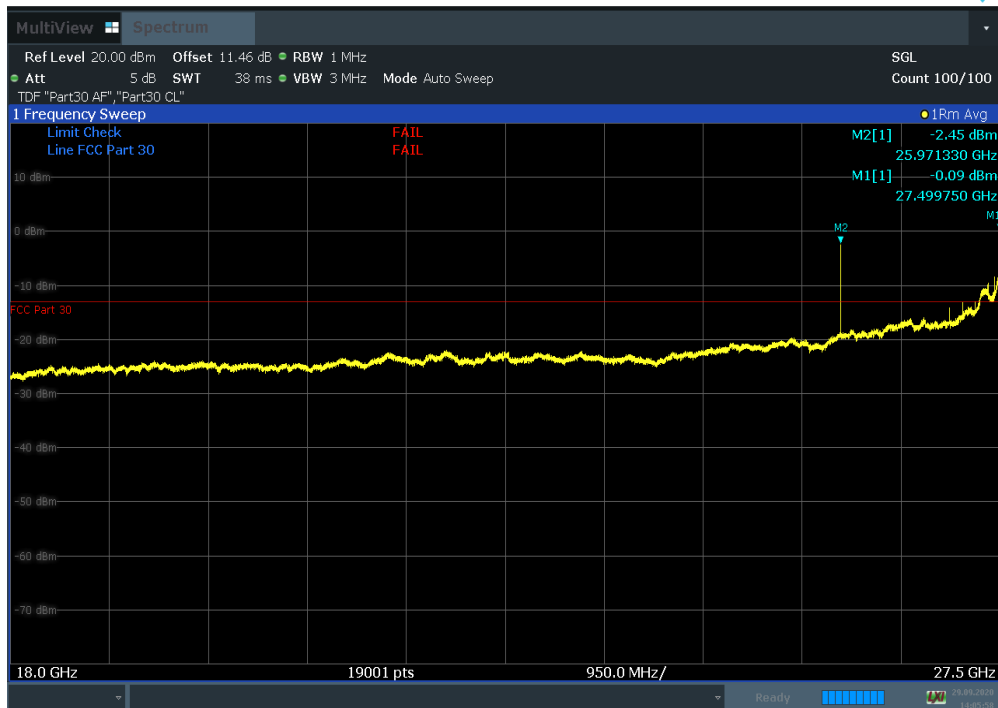


Plot 7-334. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK  
Low Ant. Angle 45, Final)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 228 of 469                 |

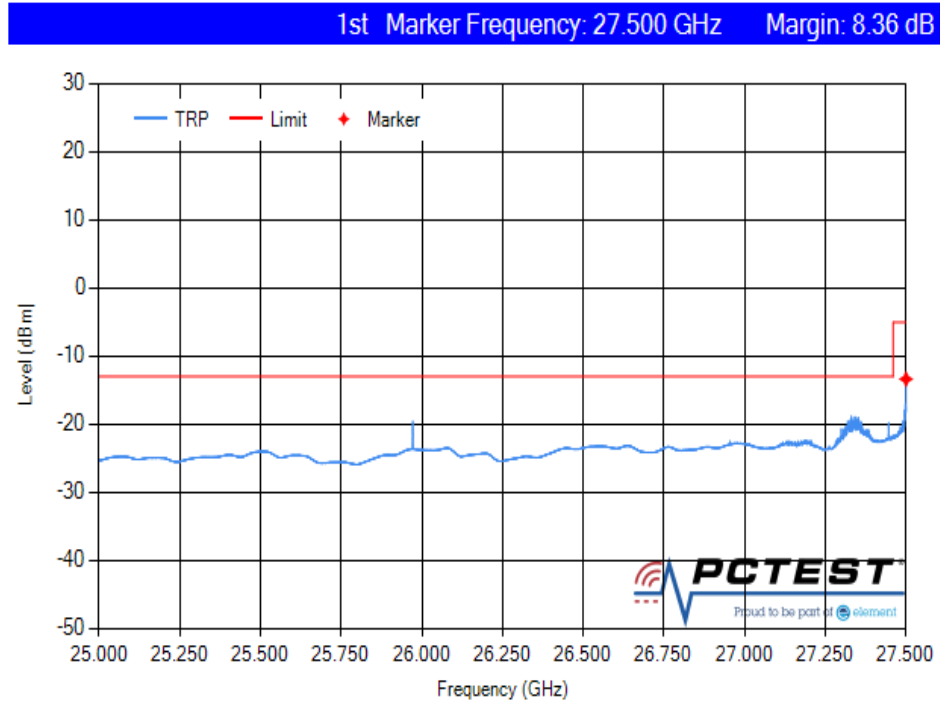


Plot 7-335. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK  
Low Ant. Angle 135)

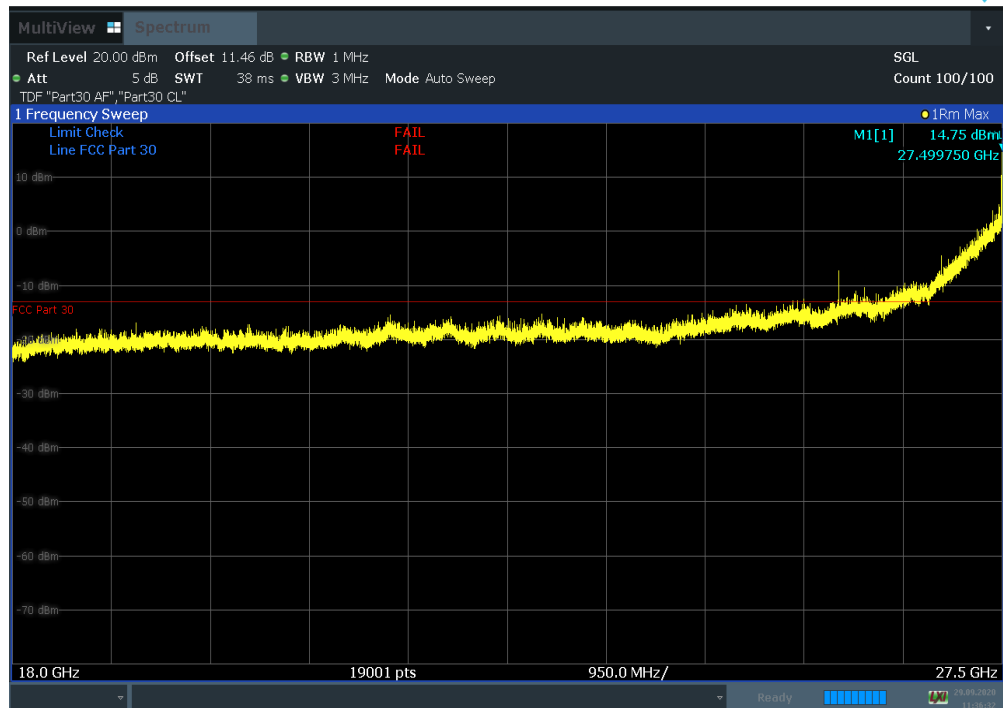


Plot 7-336. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK  
Low Ant. Angle 135, Final)

|                                          |                                              |                                               |                |                                 |
|------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit                   |                | Page 229 of 469                 |

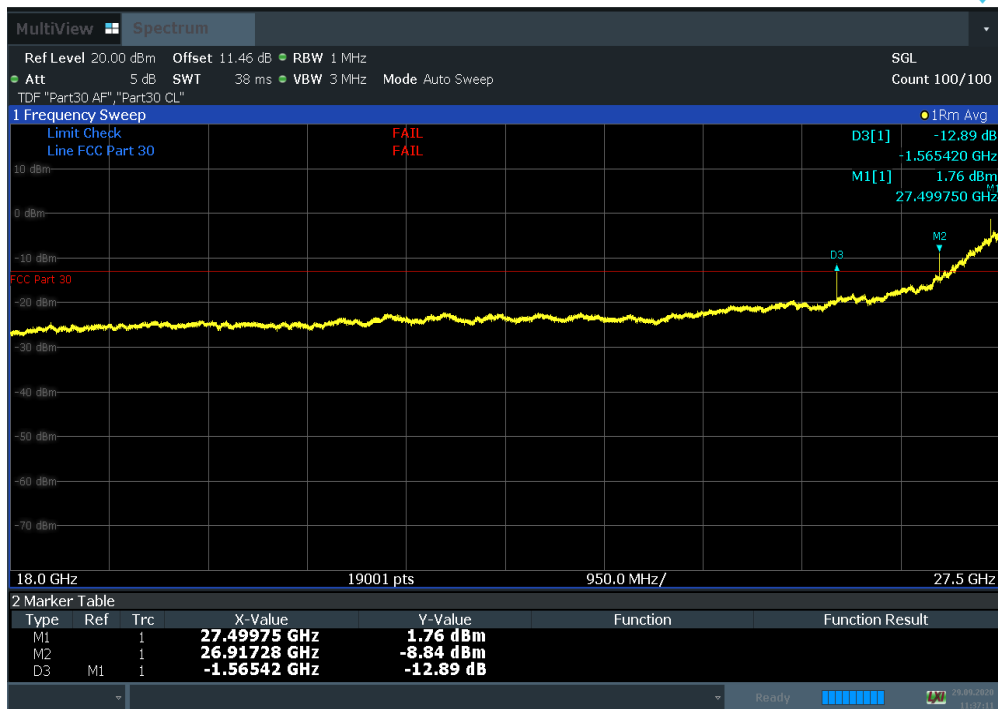


Plot 7-337. RSE 25 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 3CC NC QPSK Low TRP)

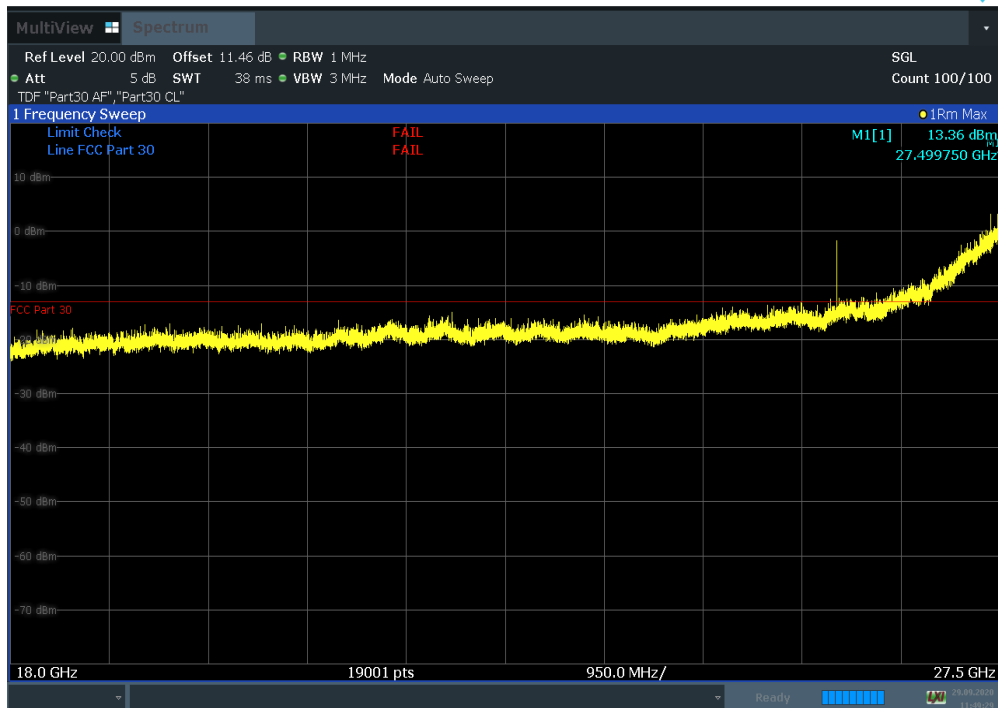


Plot 7-338. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK Low Ant. Angle 45)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 230 of 469                 |

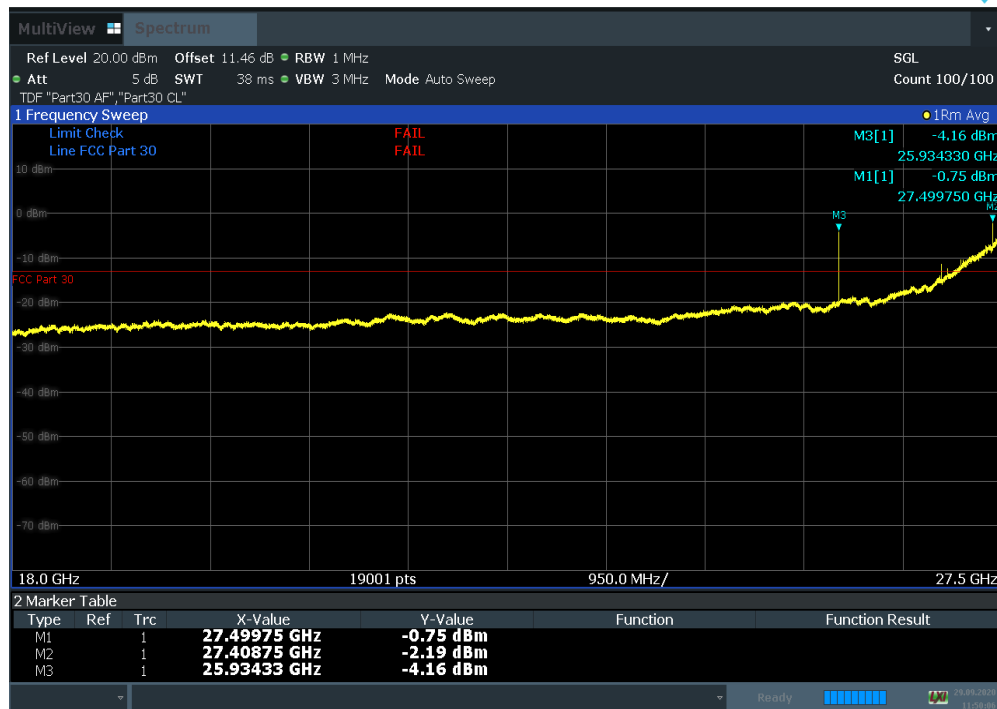


Plot 7-339. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK  
Low Ant. Angle 45, Final)

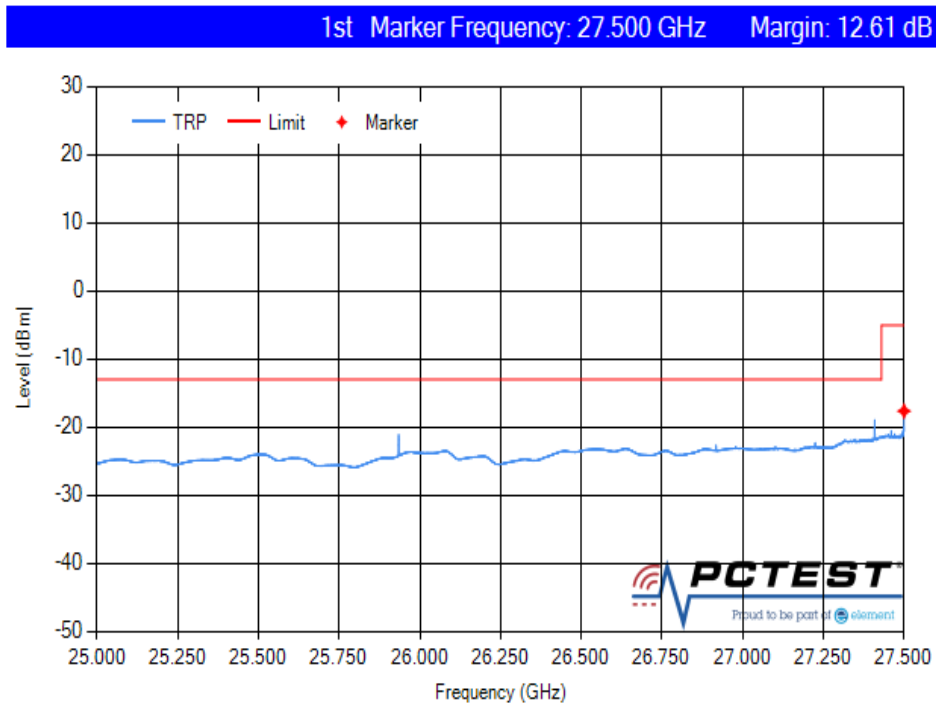


Plot 7-340. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK  
Low Ant. Angle 135)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 231 of 469                 |



Plot 7-341. RSE 18 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK  
Low Ant. Angle 135, Final)



Plot 7-342. RSE 25 GHz – 27.5 GHz (50 MHz BW 2CC + 100 MHz BW 6CC CC QPSK  
Low TRP)

|                                          |                                              |                                       |                |                                 |
|------------------------------------------|----------------------------------------------|---------------------------------------|----------------|---------------------------------|
| FCC ID: A3LAT1K04-B10                    | <b>PCTEST</b><br>Proud to be part of element | MEASUREMENT REPORT<br>(CERTIFICATION) | <b>SAMSUNG</b> | Approved by:<br>Quality Manager |
| Test Report S/N:<br>8K20090901-02-R2.A3L | Test Dates:<br>09/10/2020-10/08/2020         | EUT Type:<br>5G Access Unit           |                | Page 232 of 469                 |