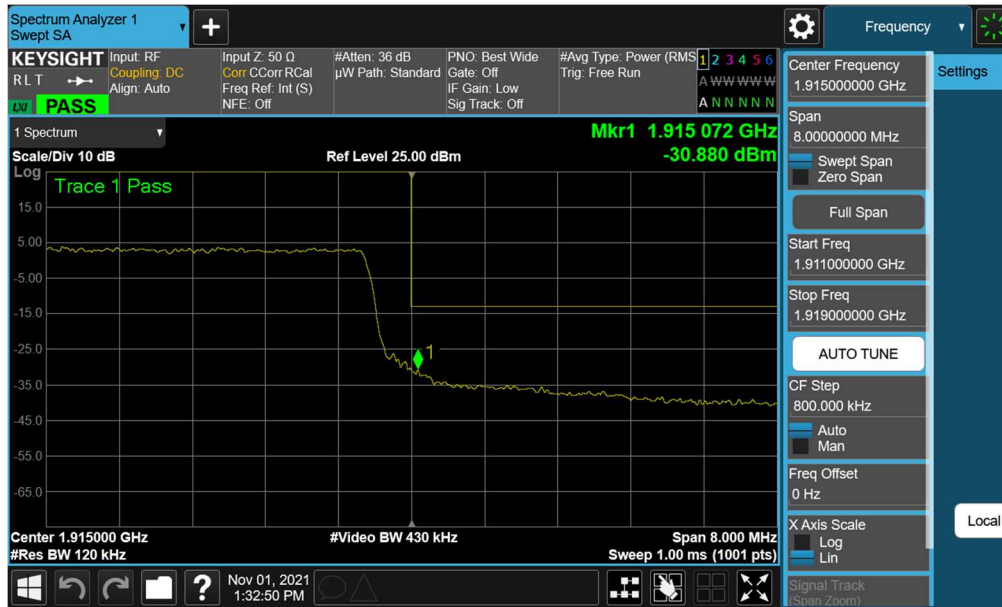


|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 45 of 84                     |



Plot 7-59. Upper Band Edge Plot (LTE Band 25 - 10MHz QPSK – Full RB)

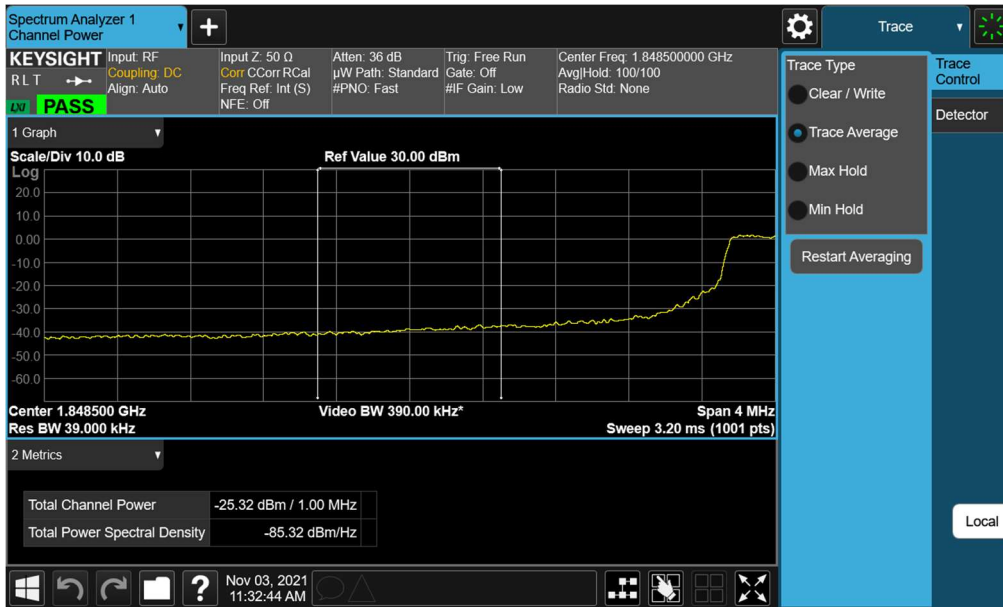


Plot 7-60. Extended Upper Band Edge Plot (LTE Band 25 - 10MHz QPSK – Full RB)

|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 46 of 84                     |



**Plot 7-61. Lower Band Edge Plot (LTE Band 25/2 - 5MHz QPSK – Full RB)**

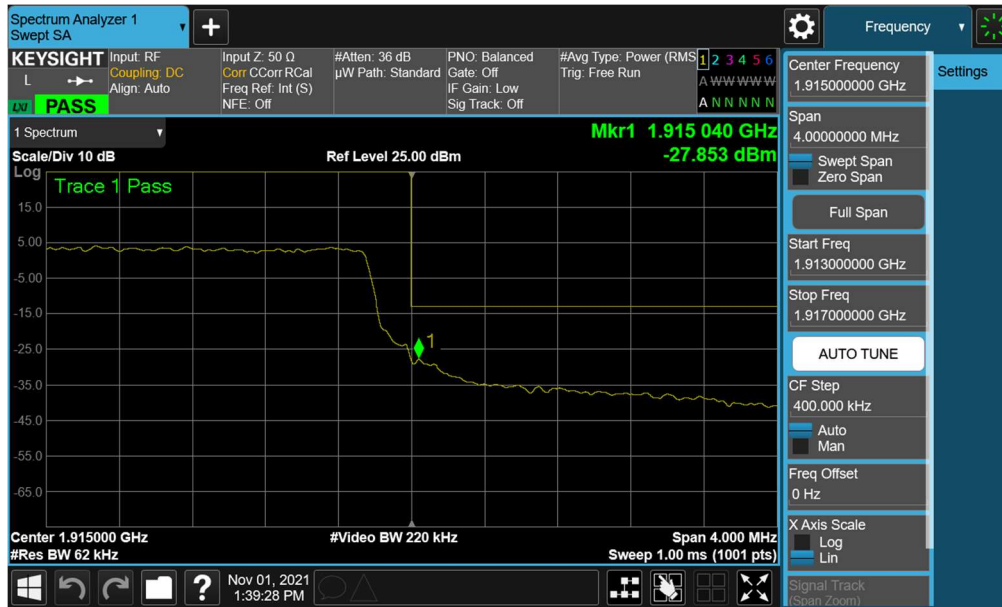


**Plot 7-62. Extended Lower Band Edge Plot (LTE Band 25/2 - 5MHz QPSK – Full RB)**

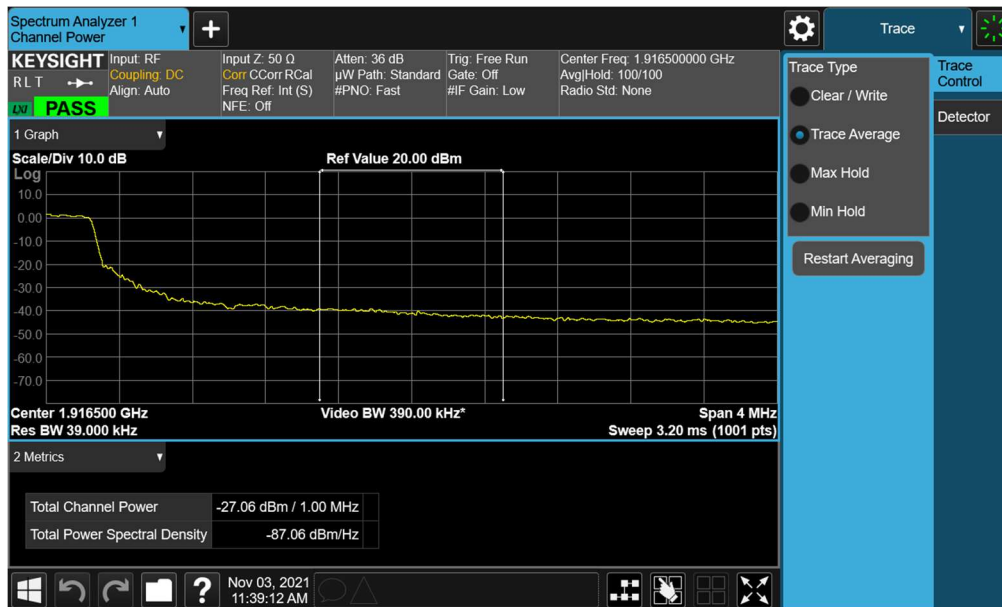
|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 47 of 84                     |



|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 48 of 84                     |



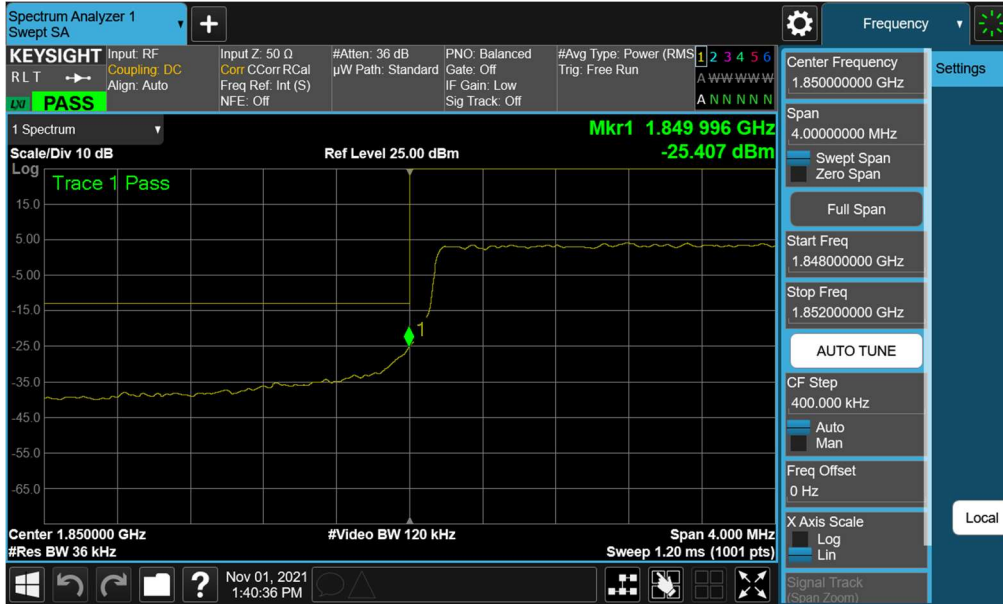
**Plot 7-65. Upper Band Edge Plot (LTE Band 25 - 5MHz QPSK – Full RB)**



**Plot 7-66. Extended Upper Band Edge Plot (LTE Band 25 - 5MHz QPSK – Full RB)**

|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 49 of 84                     |





**Plot 7-67. Lower Band Edge Plot (LTE Band 25/2 - 3MHz QPSK – Full RB)**



**Plot 7-68. Extended Lower Band Edge Plot (LTE Band 25/2 - 3MHz QPSK – Full RB)**

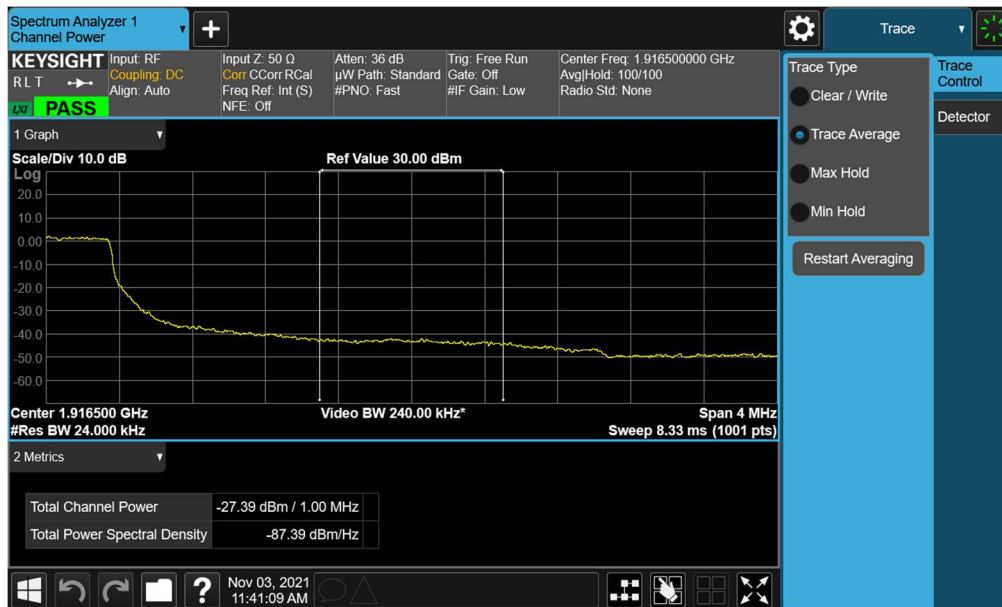
|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 50 of 84                     |



|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 51 of 84                     |



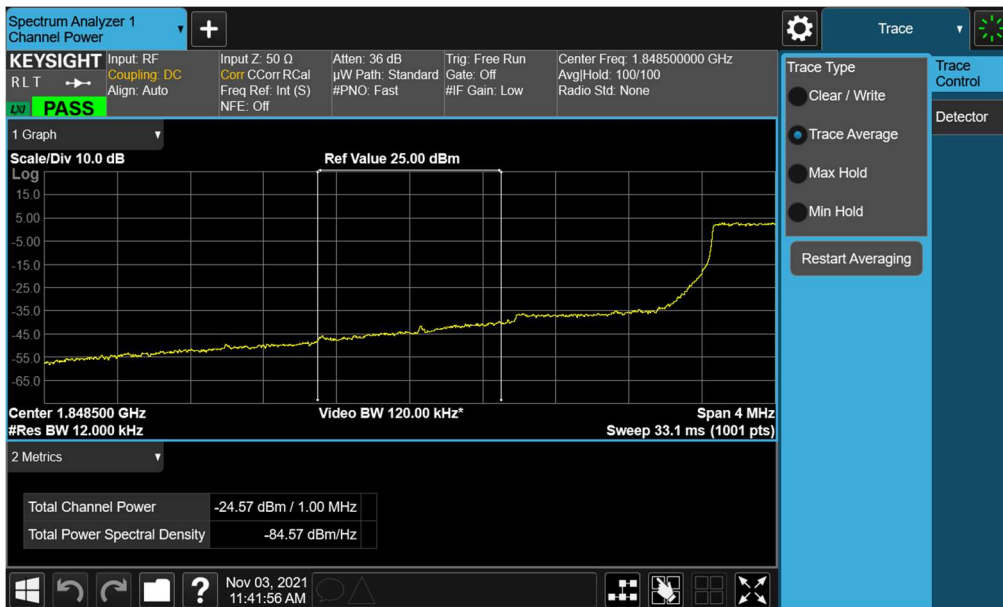
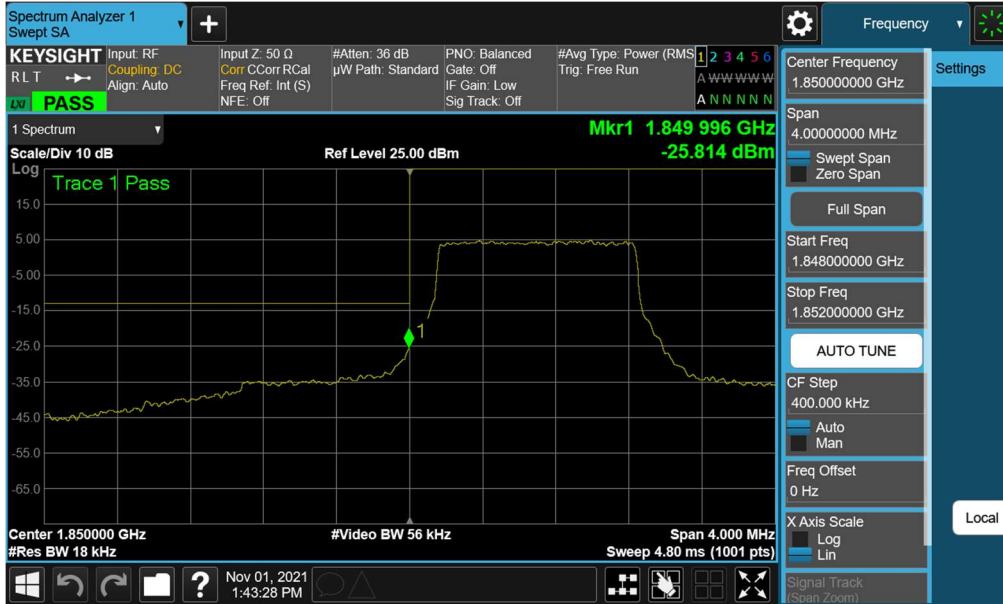
**Plot 7-71. Upper Band Edge Plot (LTE Band 25 - 3MHz QPSK – Full RB)**



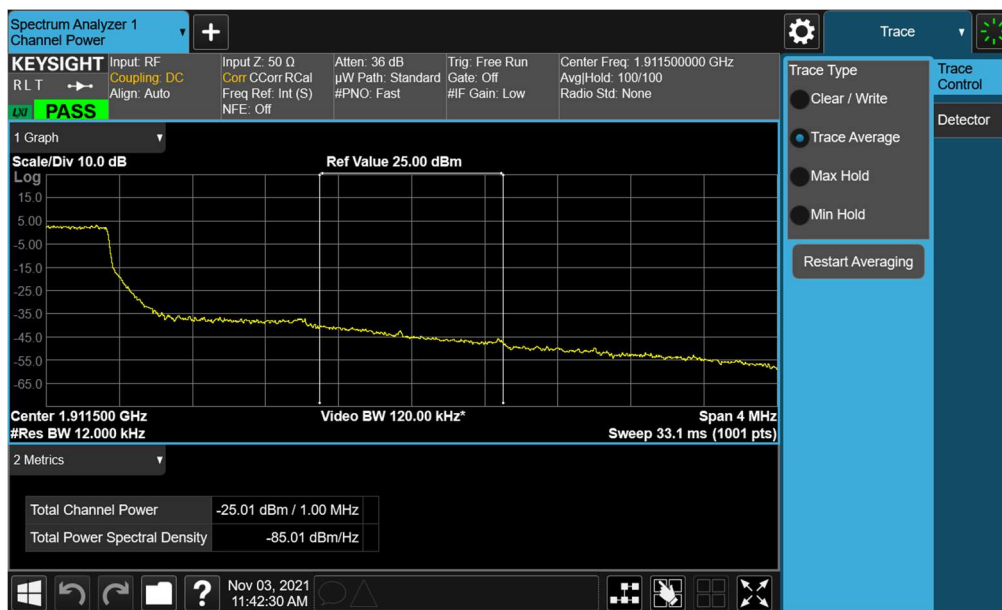
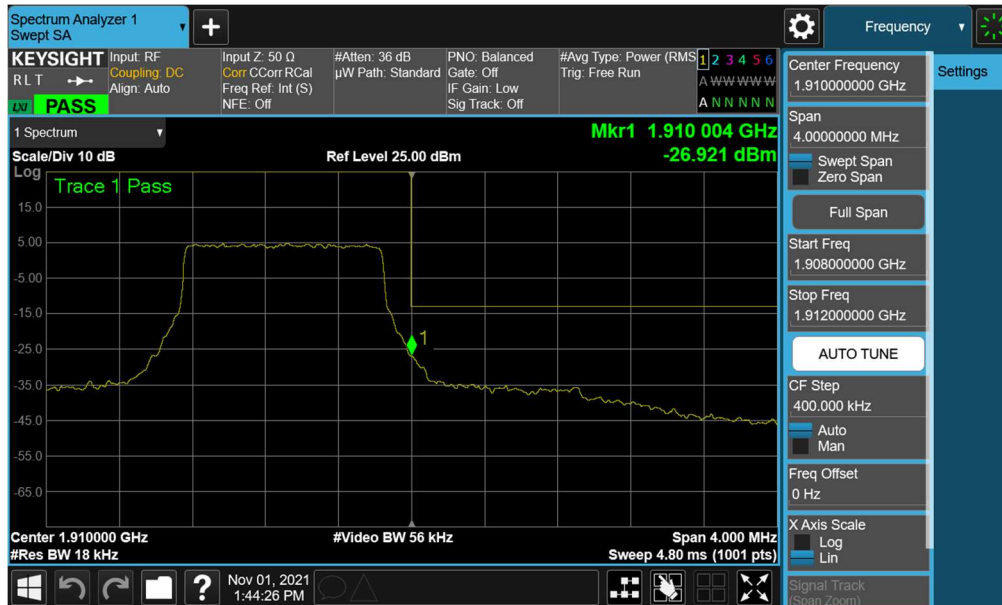
**Plot 7-72. Extended Upper Band Edge Plot (LTE Band 25 - 3MHz QPSK – Full RB)**

|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 52 of 84                     |

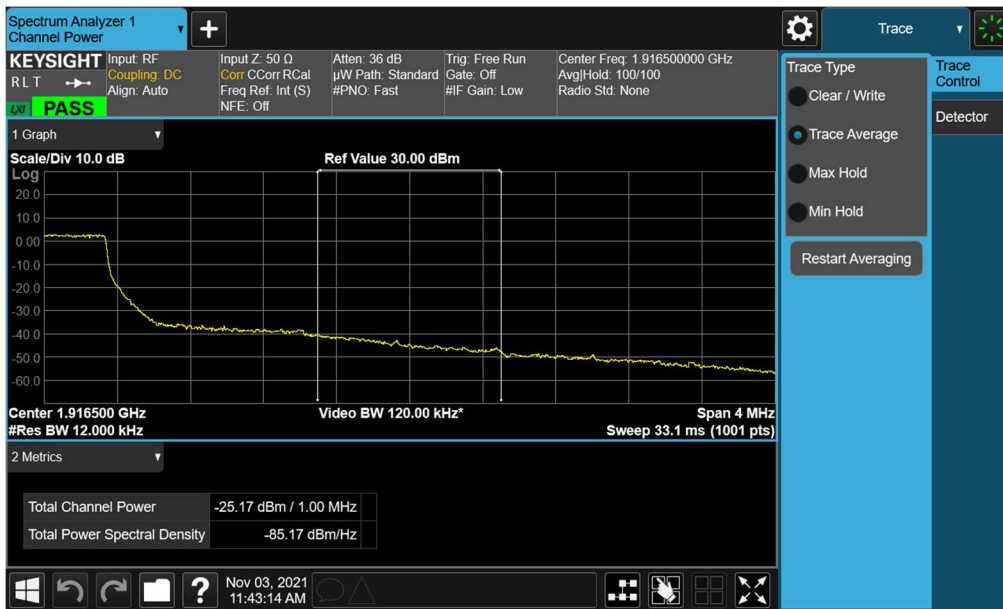




|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 53 of 84                     |

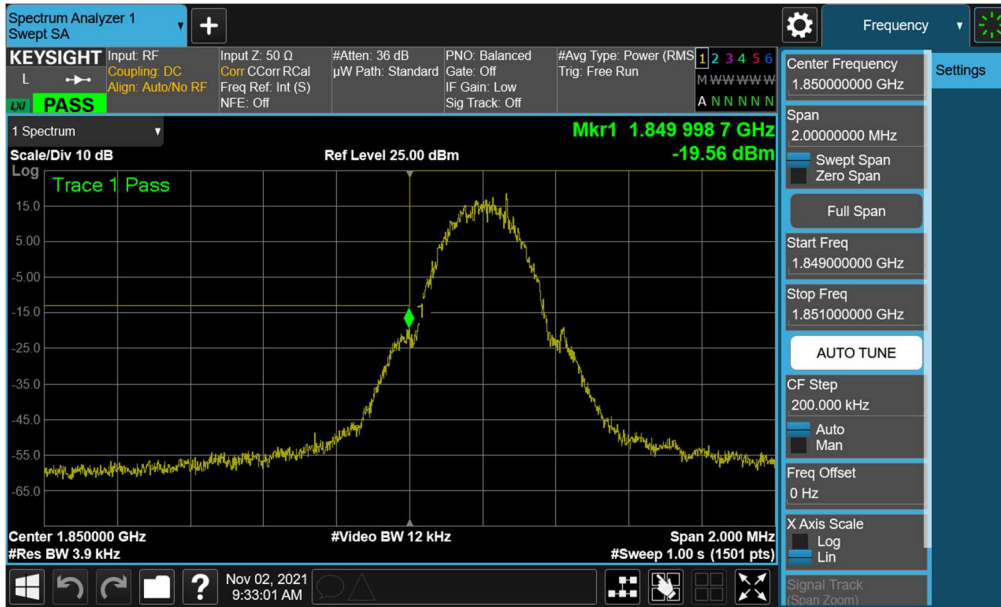


|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 54 of 84                     |

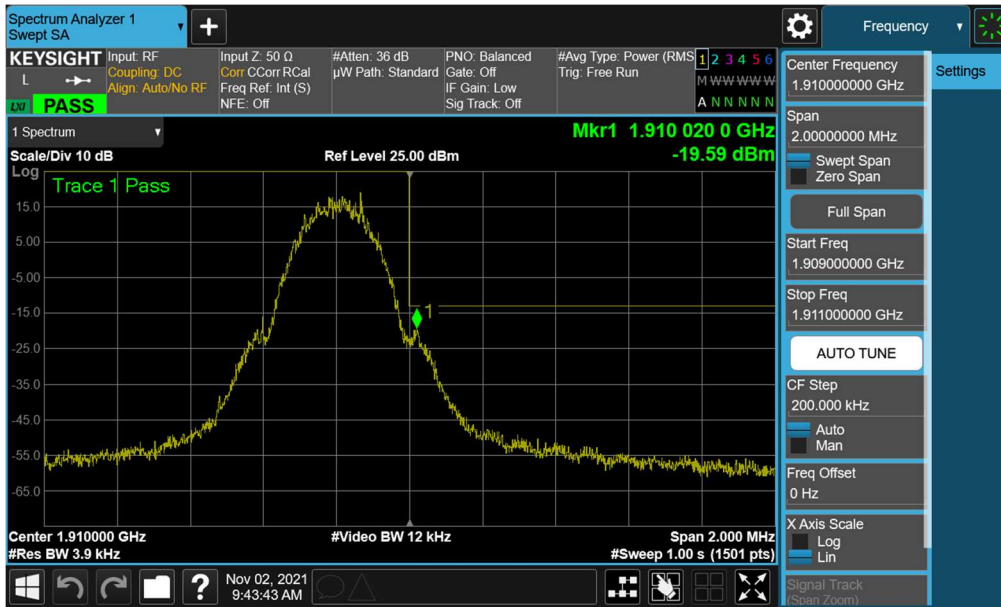


|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 55 of 84                     |

## GSM/GPRS PCS



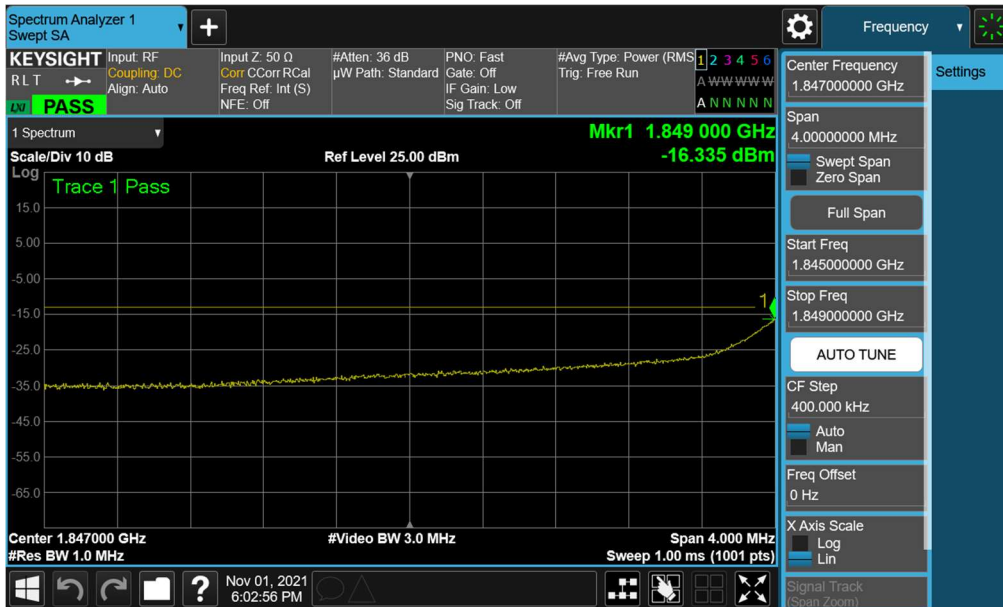
Plot 7-79. Lower Band Edge Plot (GPRS PCS – Ch. 512)



Plot 7-80. Upper Band Edge Plot (GPRS PCS – Ch. 810)

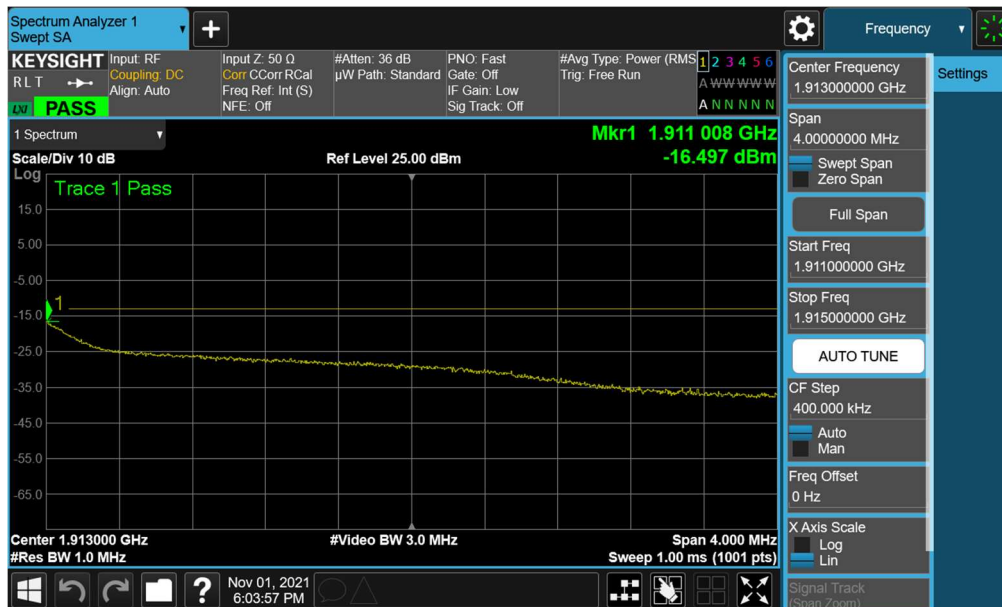
|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 56 of 84                     |

# WCDMA PCS



|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 57 of 84                     |





|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 58 of 84                     |

## 7.5 Peak-Average Ratio

### Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

### Test Procedure Used

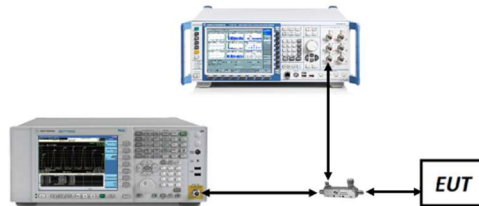
KDB 971168 D01 v03r01 – Section 5.7.1

### Test Settings

1. The signal analyzer’s CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW  $\geq$  OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal “RF Burst” trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the “on time” of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

### Test Setup

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



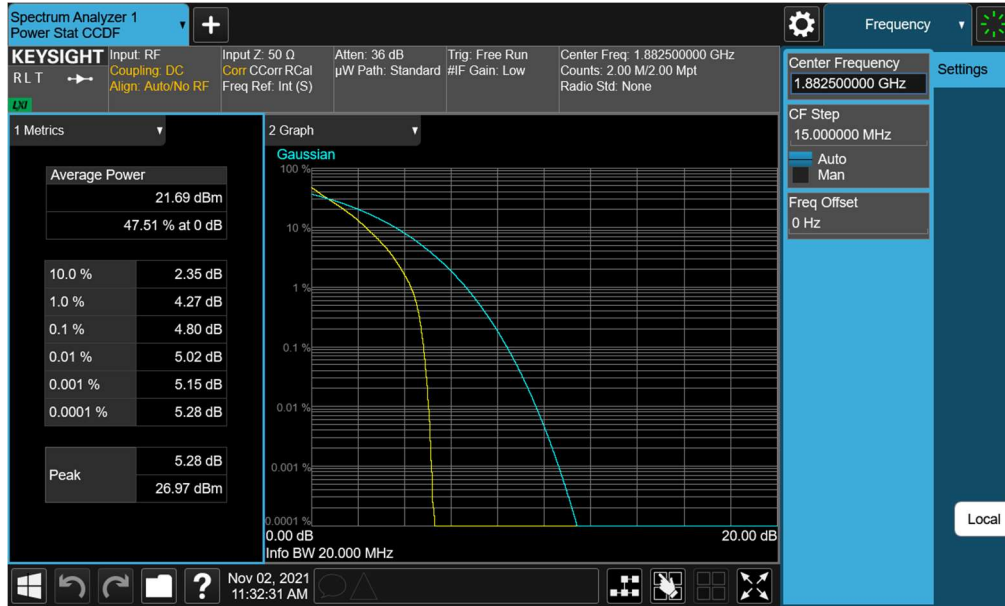
**Figure 7-4. Test Instrument & Measurement Setup**

### Test Notes

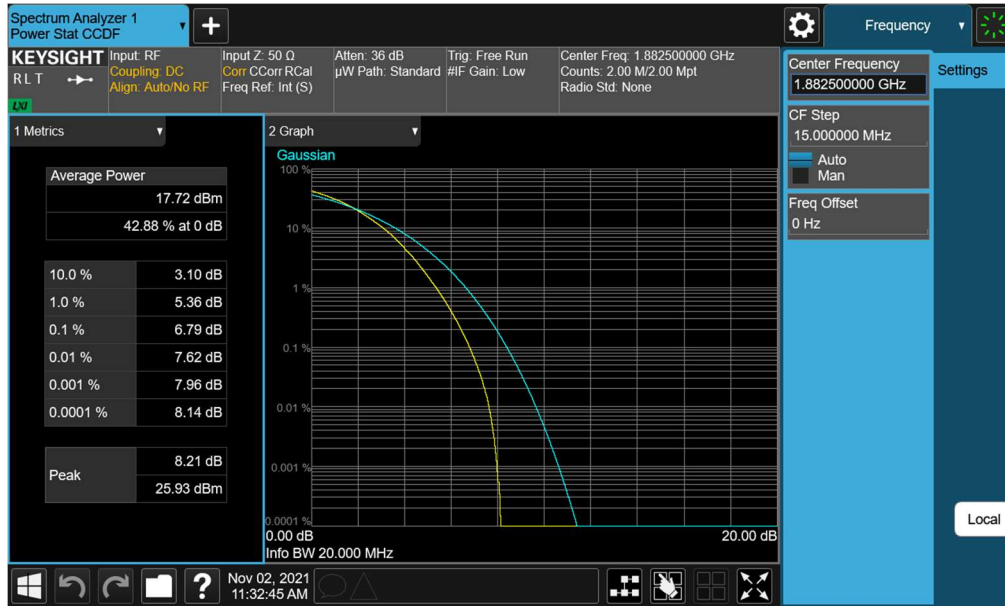
None.

|                                                |                                               |                                      |                                          |
|------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
| FCC ID: A3LSMS906E                             | <b>PCTEST</b><br>Proud to be part of element  | <b>PART 24 MEASUREMENT REPORT</b>    | <b>Approved by:</b><br>Technical Manager |
| <b>Test Report S/N:</b><br>1M2110010116-03.A3L | <b>Test Dates:</b><br>10/14/2021 - 11/10/2021 | <b>EUT Type:</b><br>Portable Handset | Page 59 of 84                            |

## LTE Band 25/2

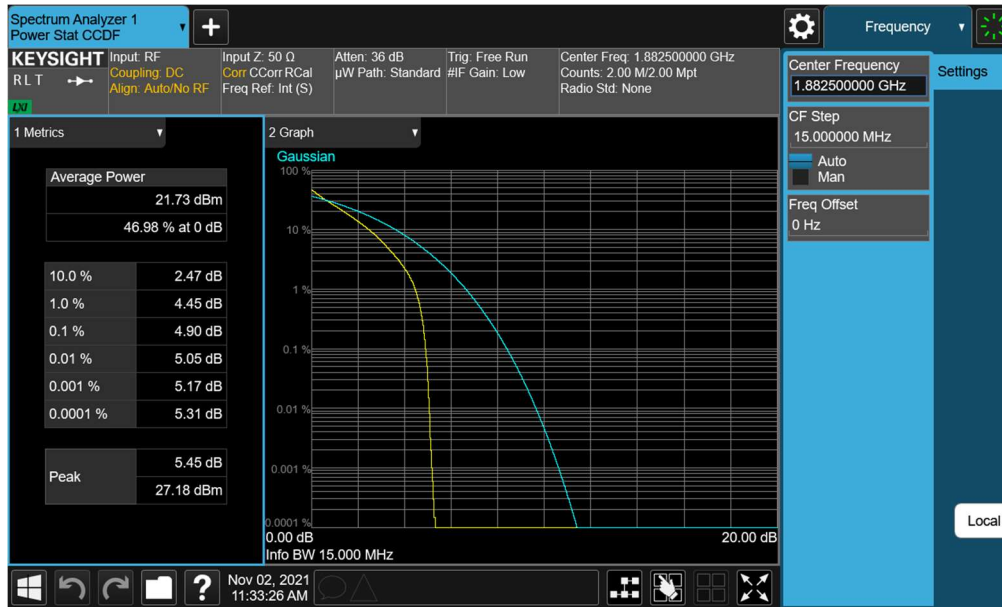


Plot 7-85. PAR Plot (LTE Band 25/2 - 20MHz QPSK - Full RB)

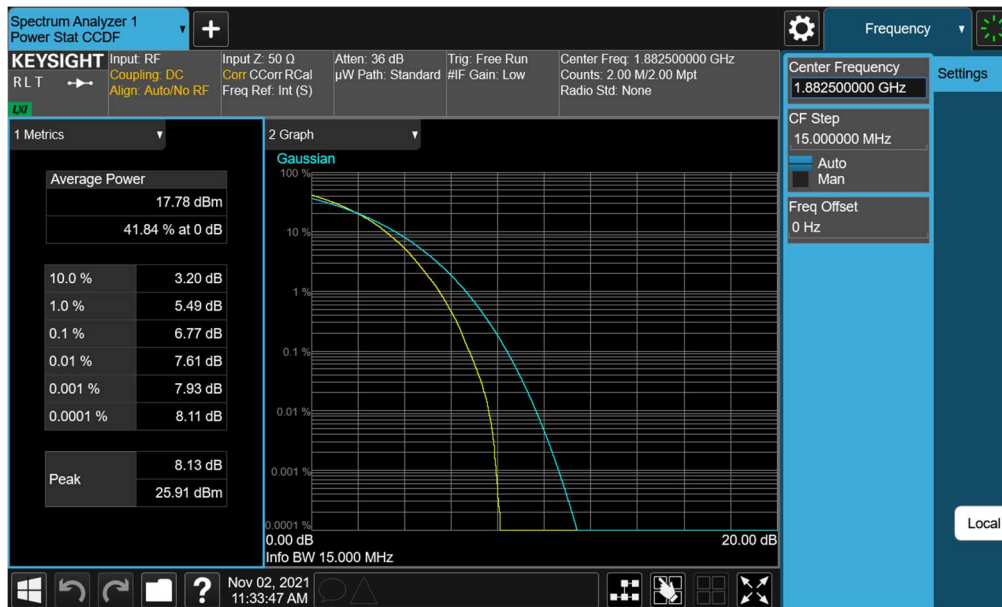


Plot 7-86. PAR Plot (LTE Band 25/2 - 20MHz 256-QAM - Full RB)

|                                         |                                               |                                   |                                          |
|-----------------------------------------|-----------------------------------------------|-----------------------------------|------------------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of  element | <b>PART 24 MEASUREMENT REPORT</b> | <b>Approved by:</b><br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021        | EUT Type:<br>Portable Handset     | Page 60 of 84                            |

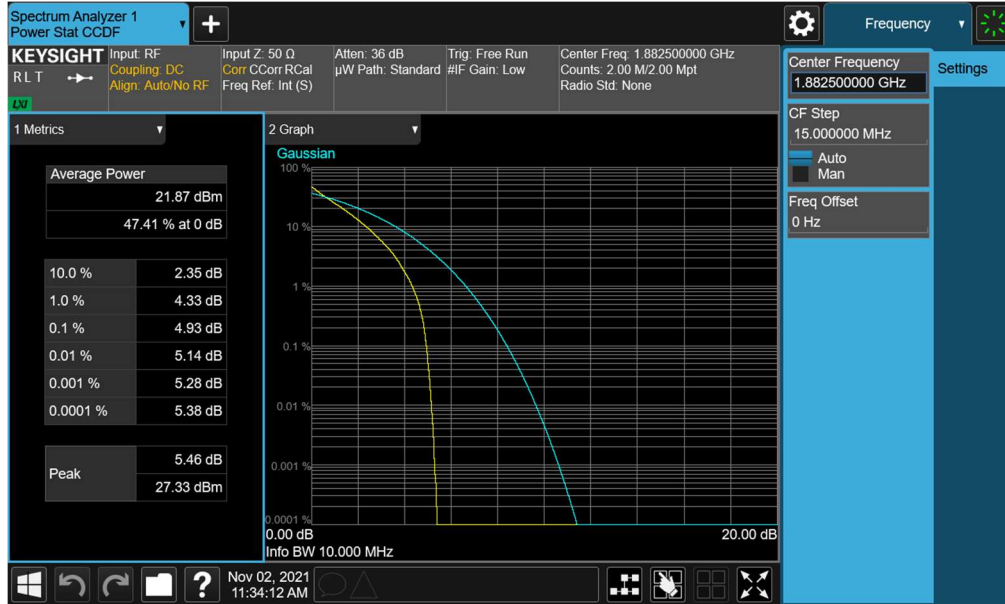


**Plot 7-87. PAR Plot (LTE Band 25/2 - 15MHz QPSK - Full RB)**

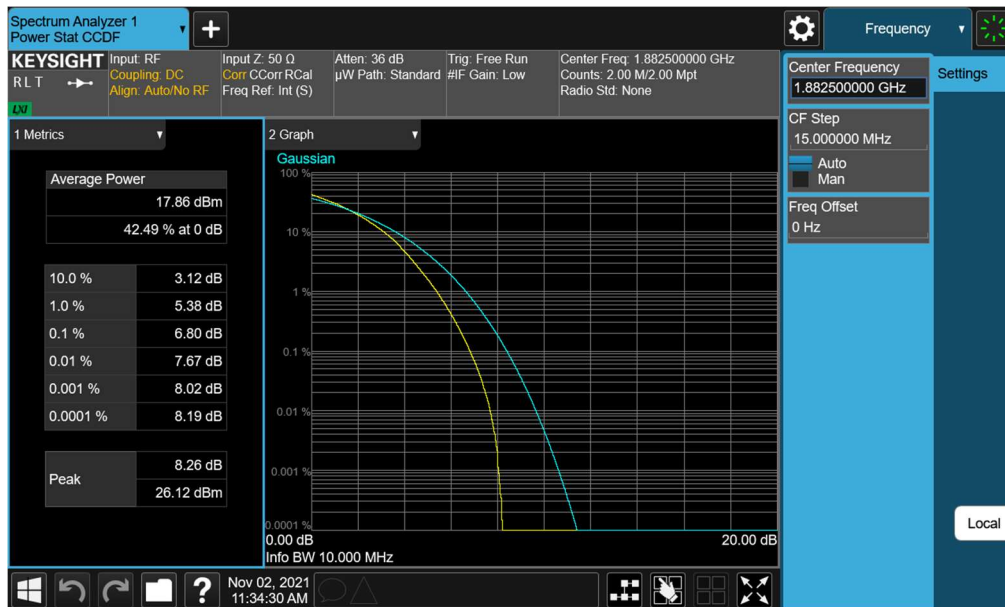


**Plot 7-88. PAR Plot (LTE Band 25/2 - 15MHz 256-QAM - Full RB)**

|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 61 of 84                     |



**Plot 7-89. PAR Plot (LTE Band 25/2 - 10MHz QPSK - Full RB)**



**Plot 7-90. PAR Plot (LTE Band 25/2 - 10MHz 256-QAM - Full RB)**

|                                         |                                              |                                   |                |                                   |
|-----------------------------------------|----------------------------------------------|-----------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS906E                      | <b>PCTEST</b><br>Proud to be part of element | <b>PART 24 MEASUREMENT REPORT</b> | <b>SAMSUNG</b> | Approved by:<br>Technical Manager |
| Test Report S/N:<br>1M2110010116-03.A3L | Test Dates:<br>10/14/2021 - 11/10/2021       | EUT Type:<br>Portable Handset     |                | Page 62 of 84                     |