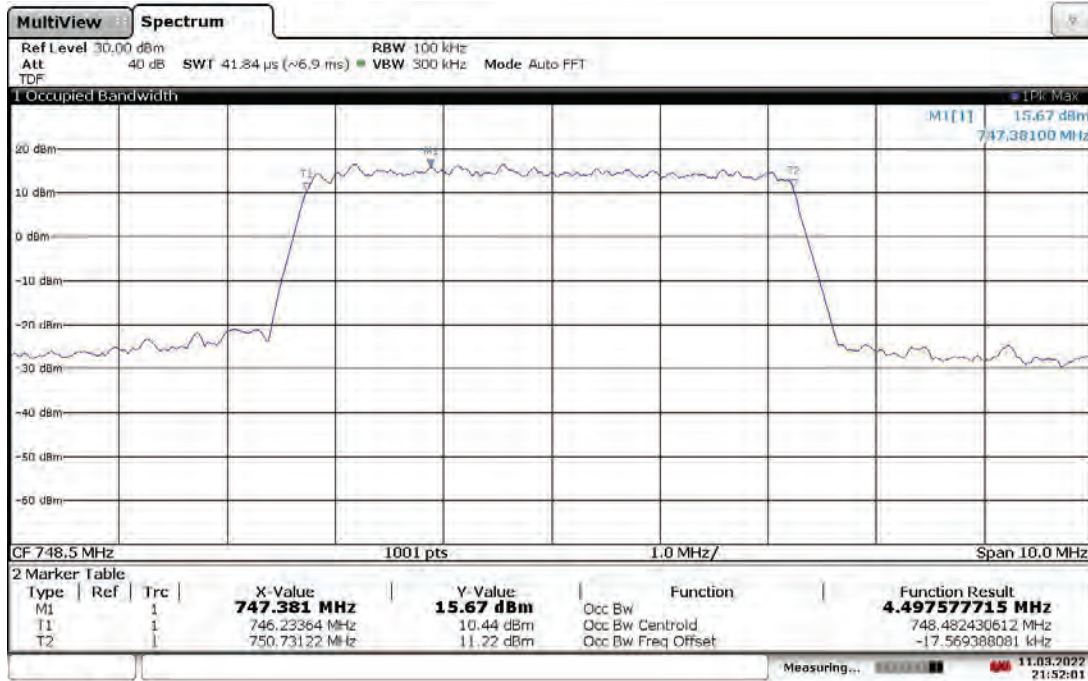


#### **9.4 Setup Photographs:**

Confidential – Photos not included in this report

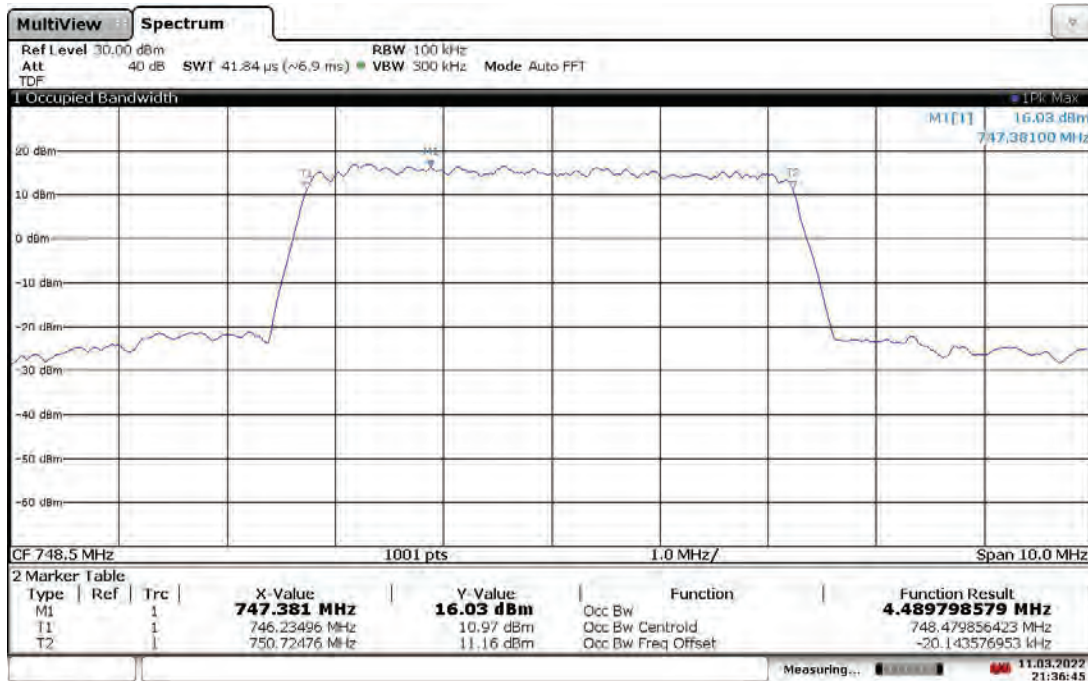
## 9.5 Plots/Data:

Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
-30 °C



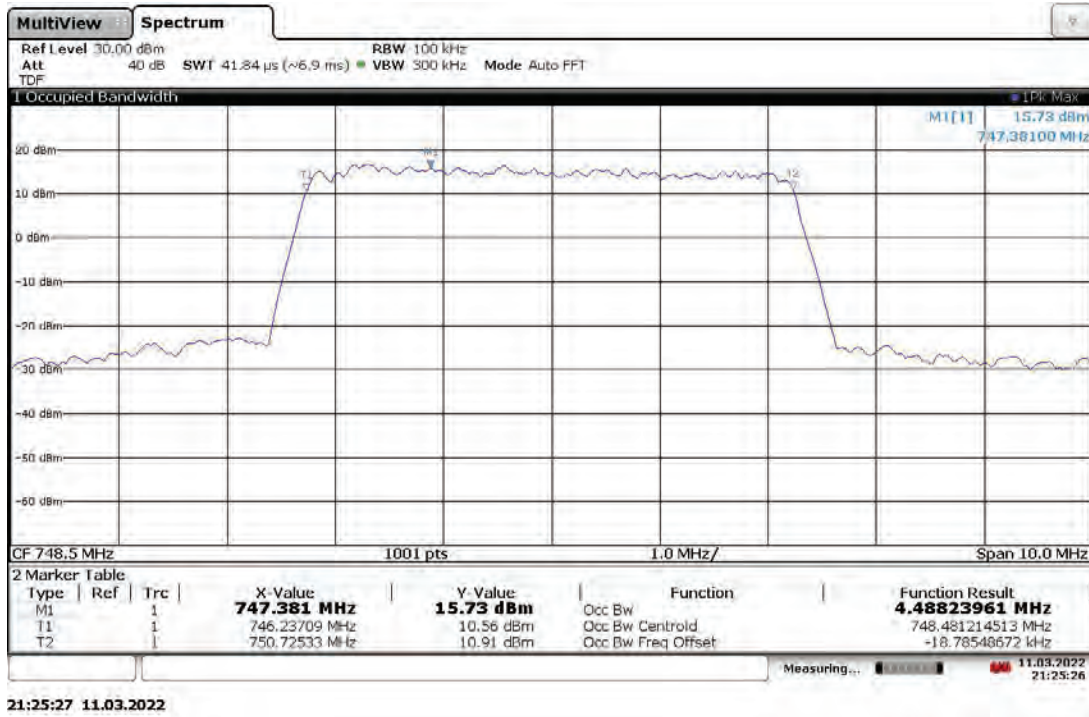
21:52:01 11.03.2022

Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
-20 °C

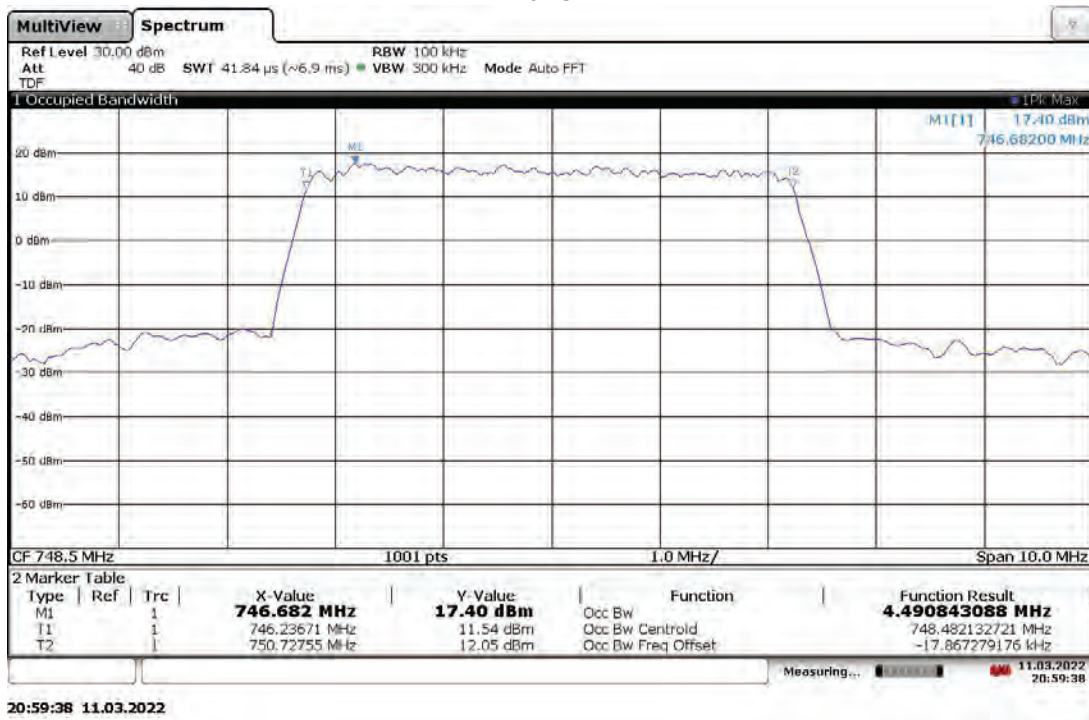


21:36:45 11.03.2022

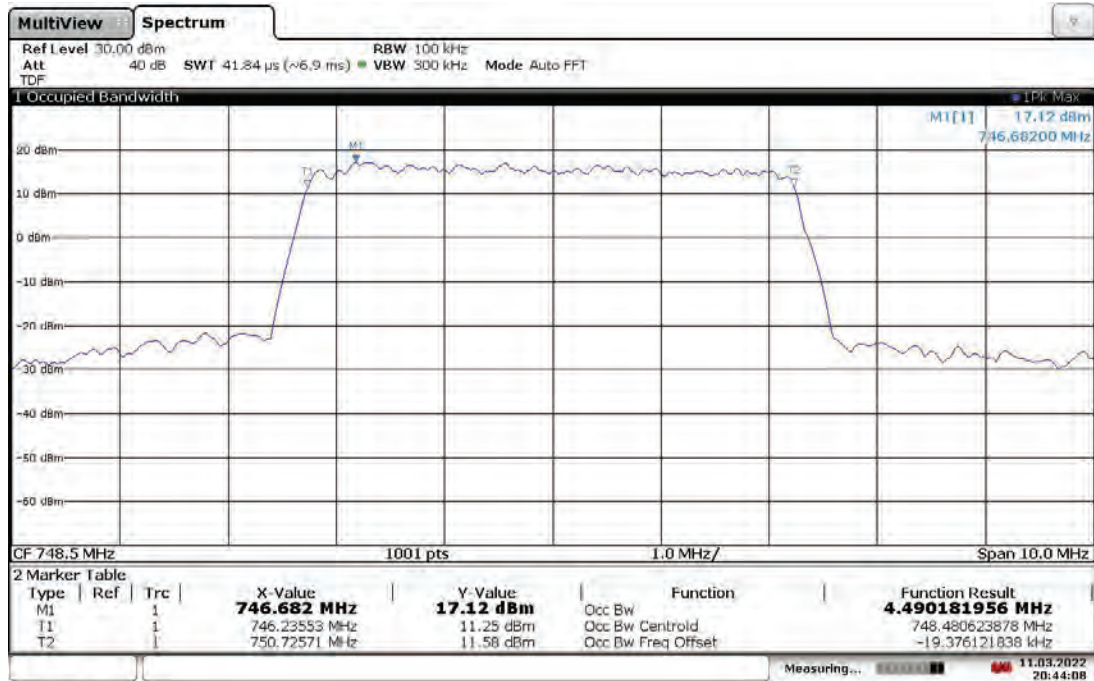
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
-10 °C



Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
0 °C

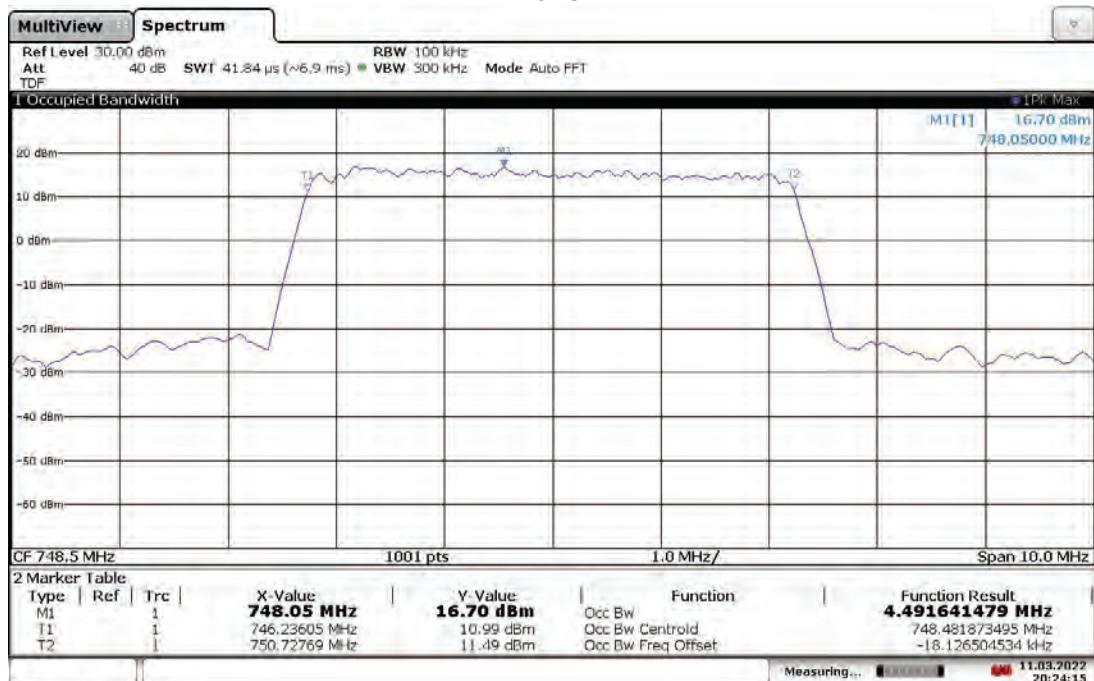


Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
10 °C



20:44:09 11.03.2022

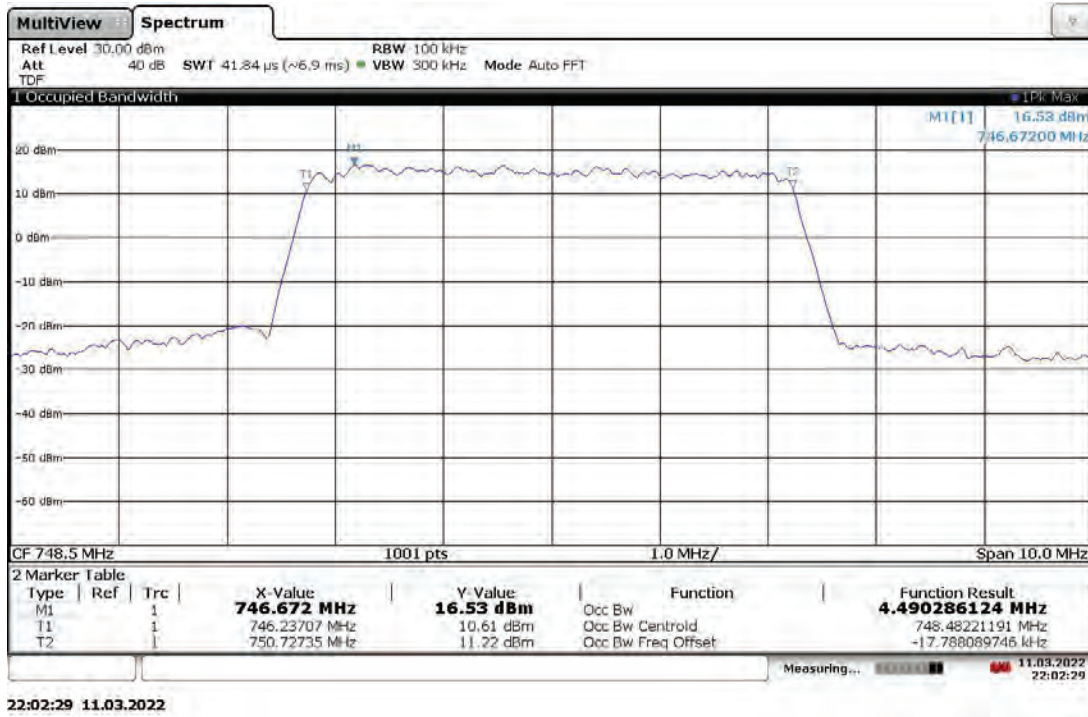
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
20 °C



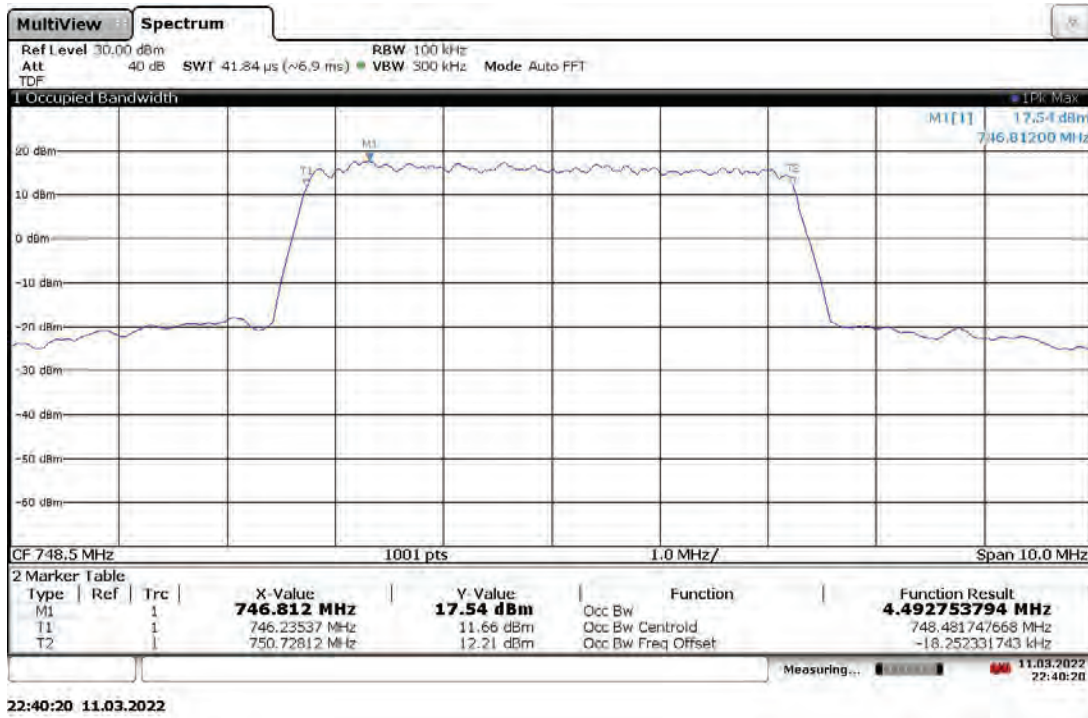
20:24:15 11.03.2022



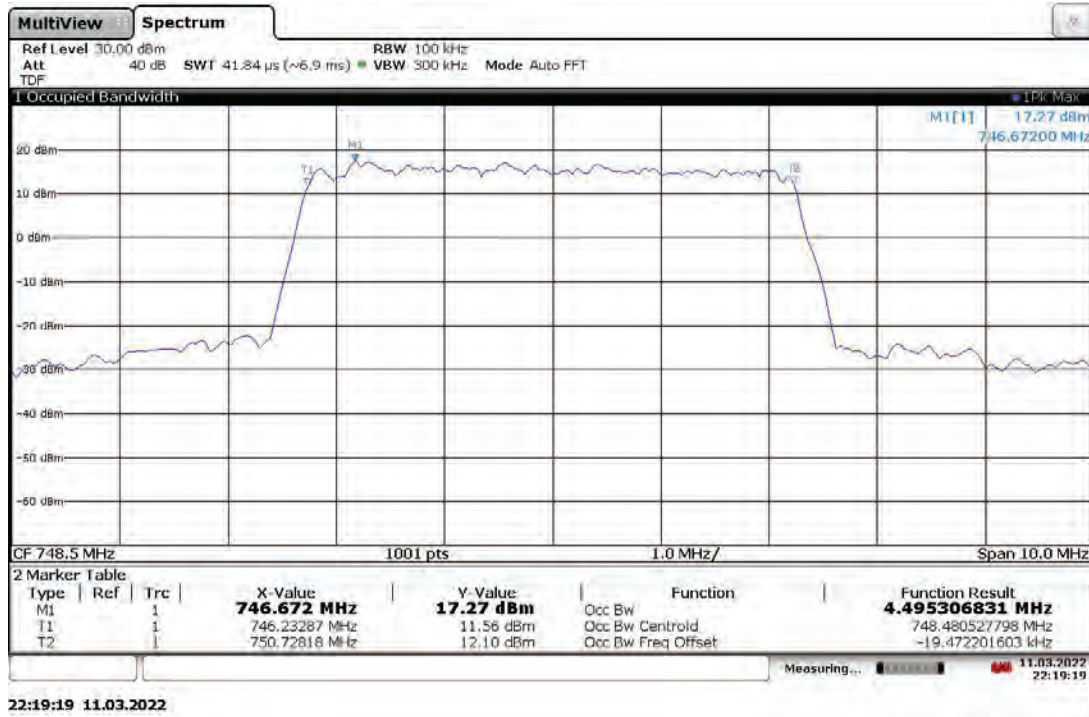
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
30 °C



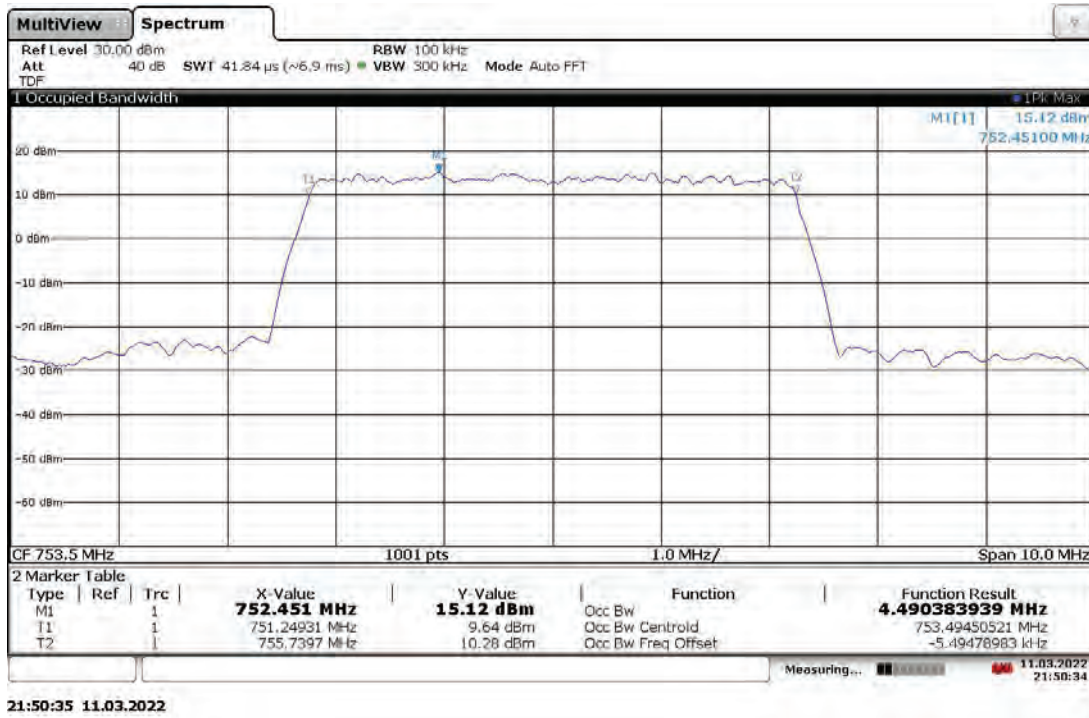
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
40 °C



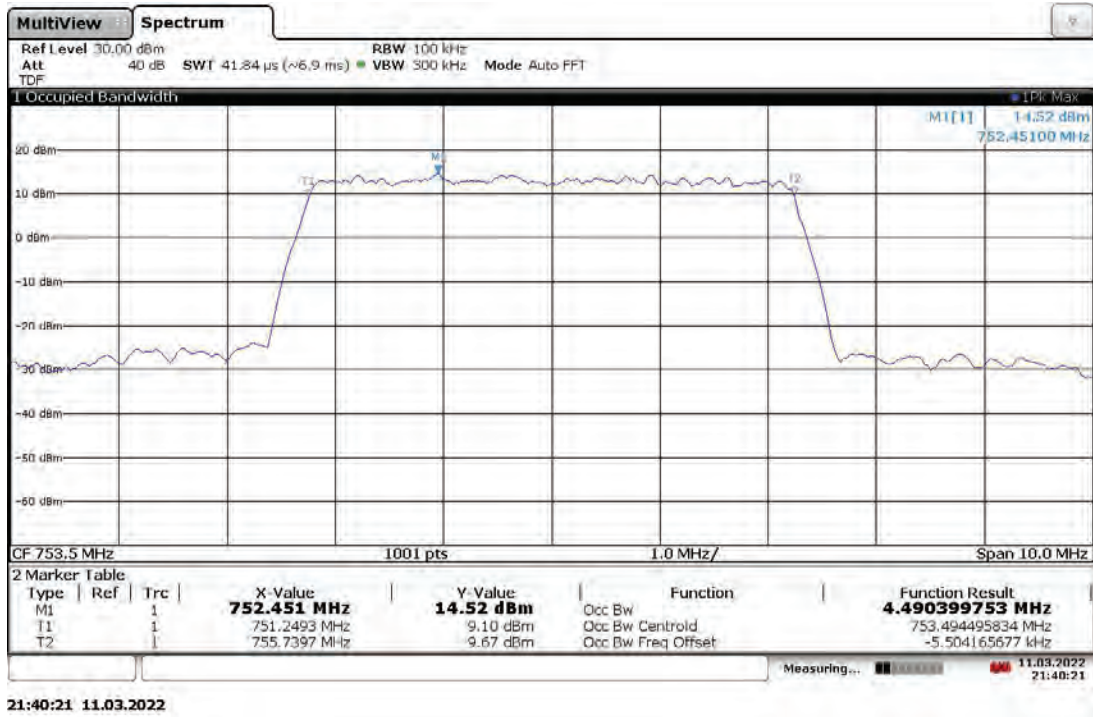
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
50 °C



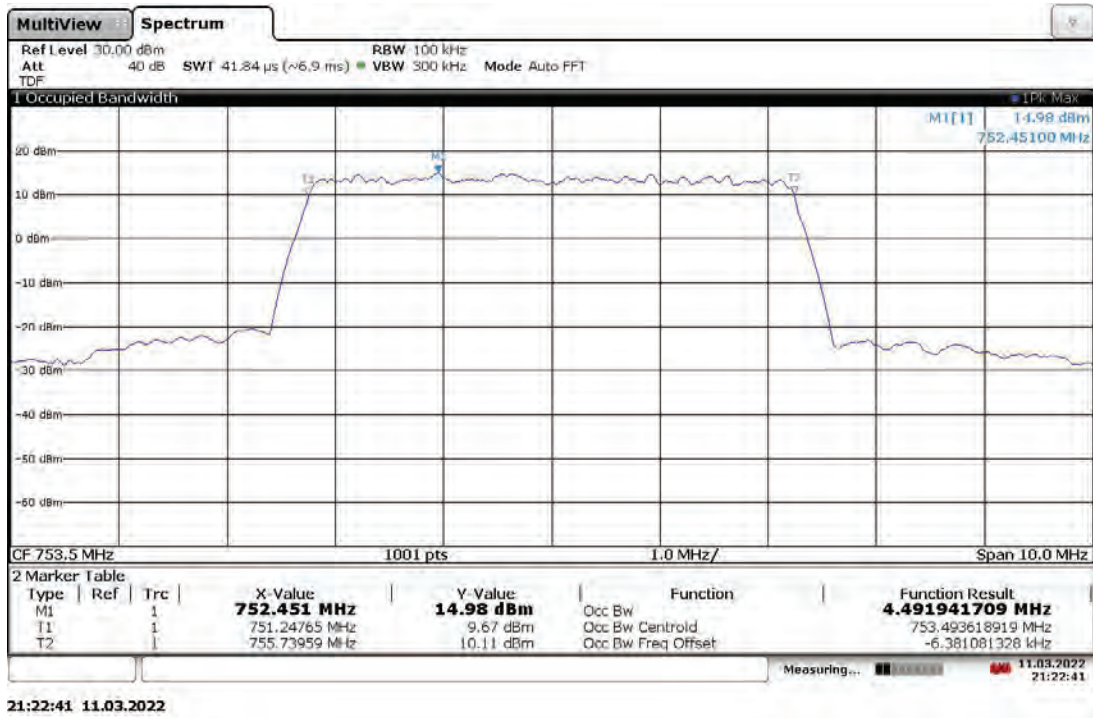
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
-30 °C



Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
-20 °C

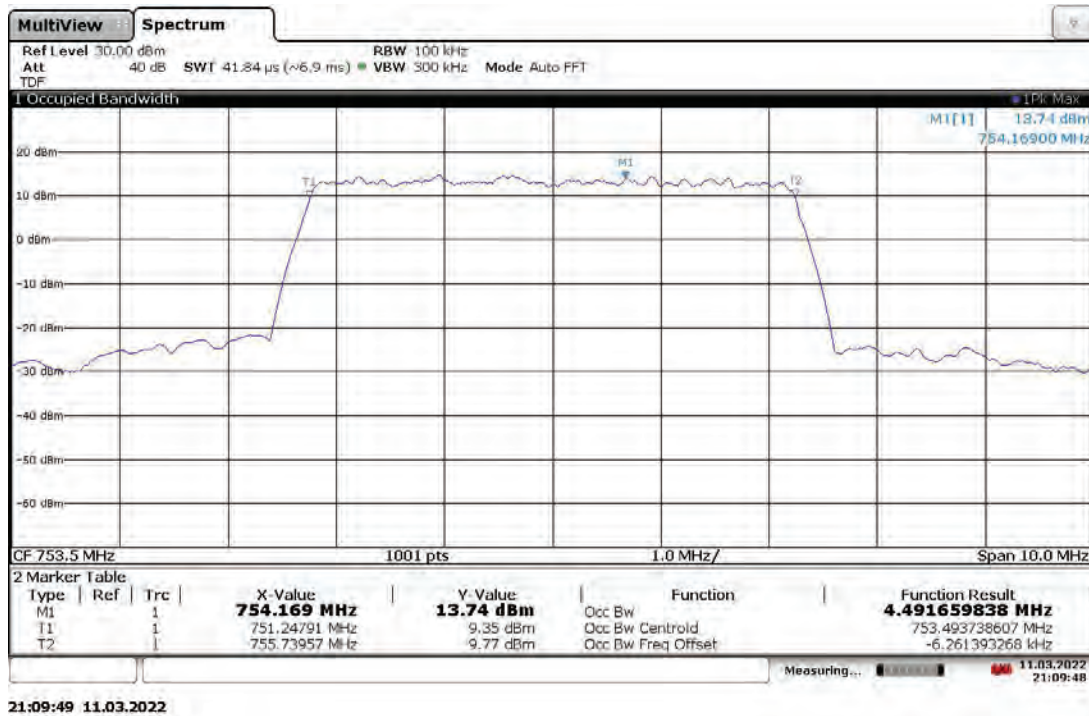


Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
-10 °C

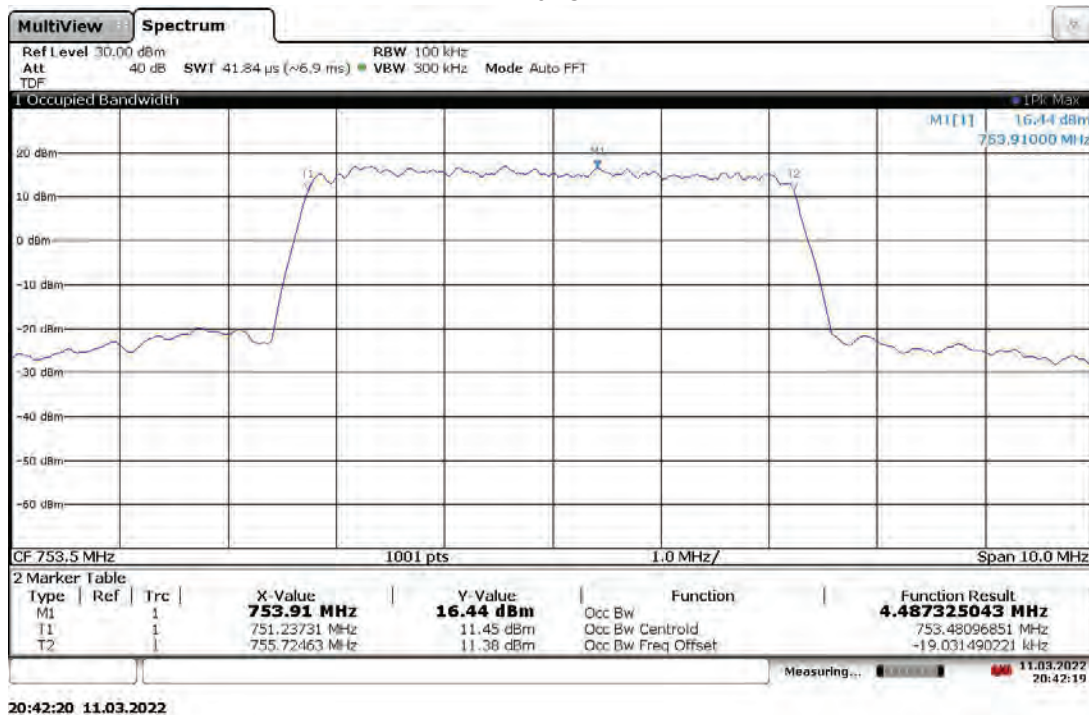




Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
0 °C

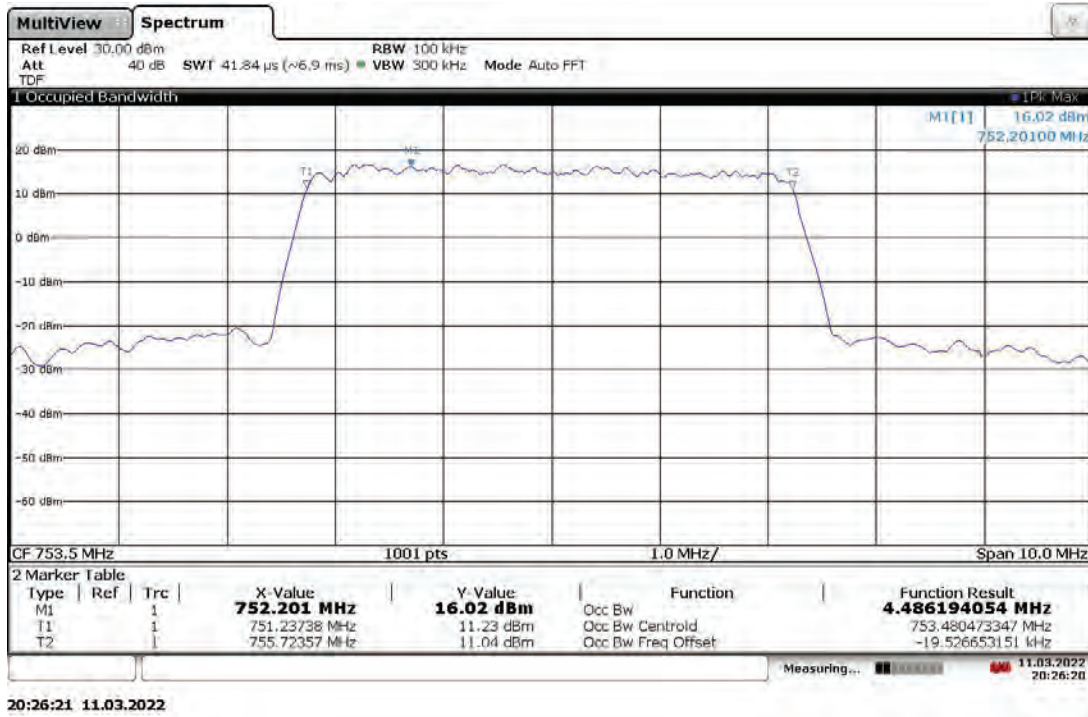


Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
10 °C

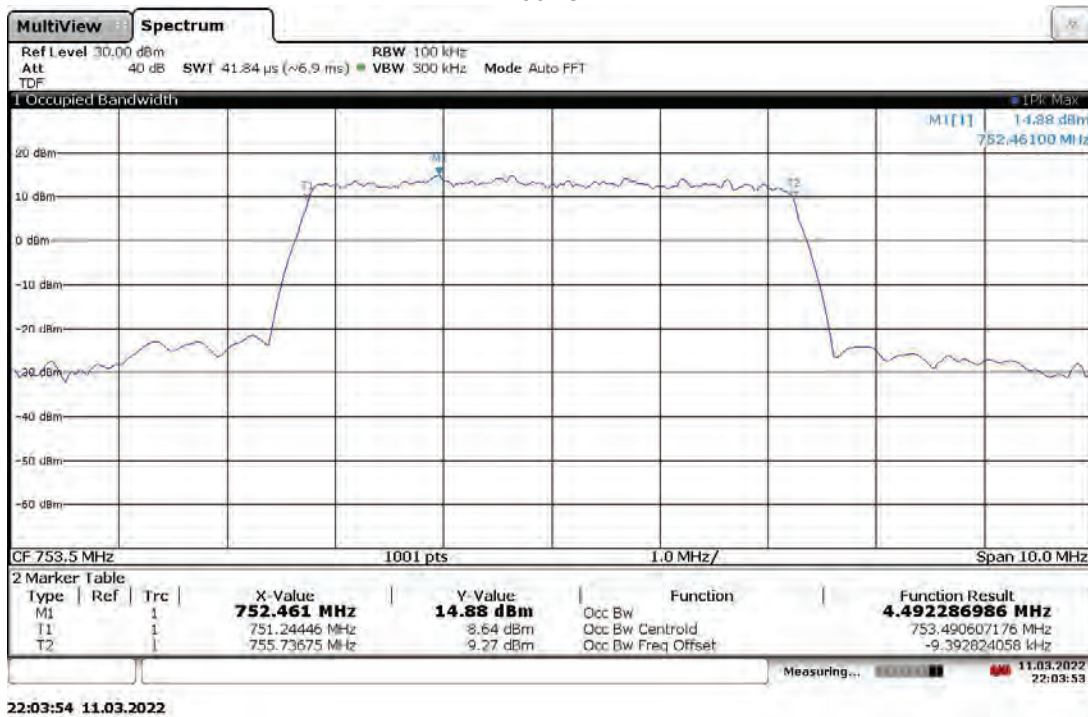




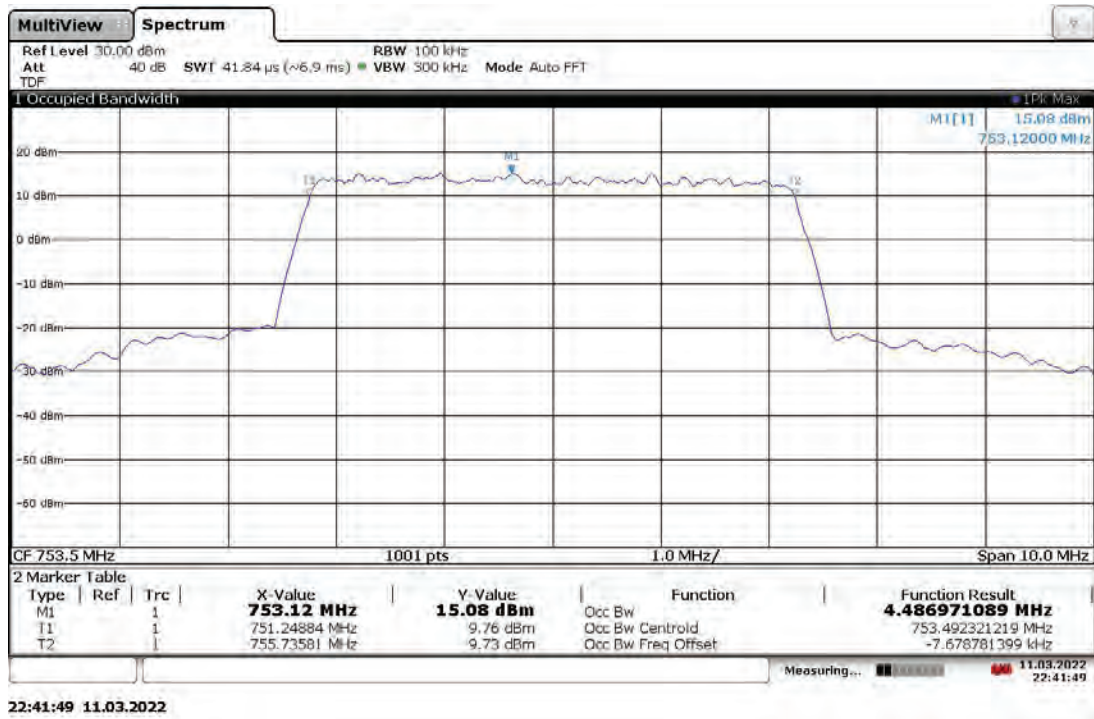
Slot 0 Band 13 (4G LTE) With RP5200 Hosst, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
20 °C



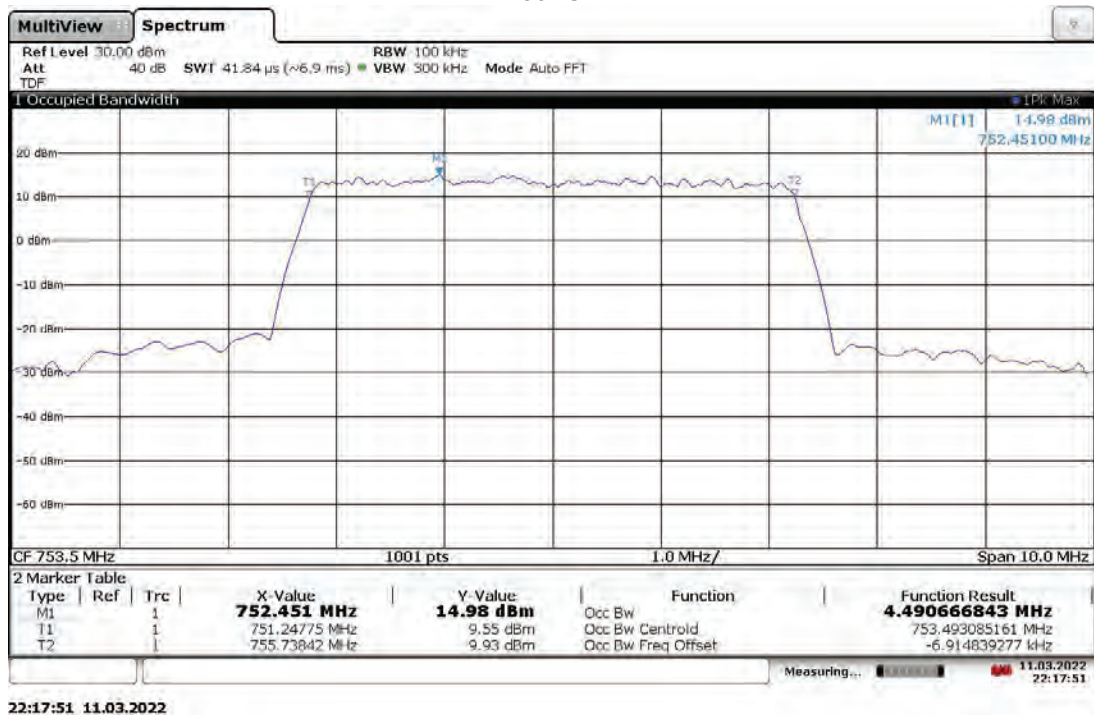
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
30 °C



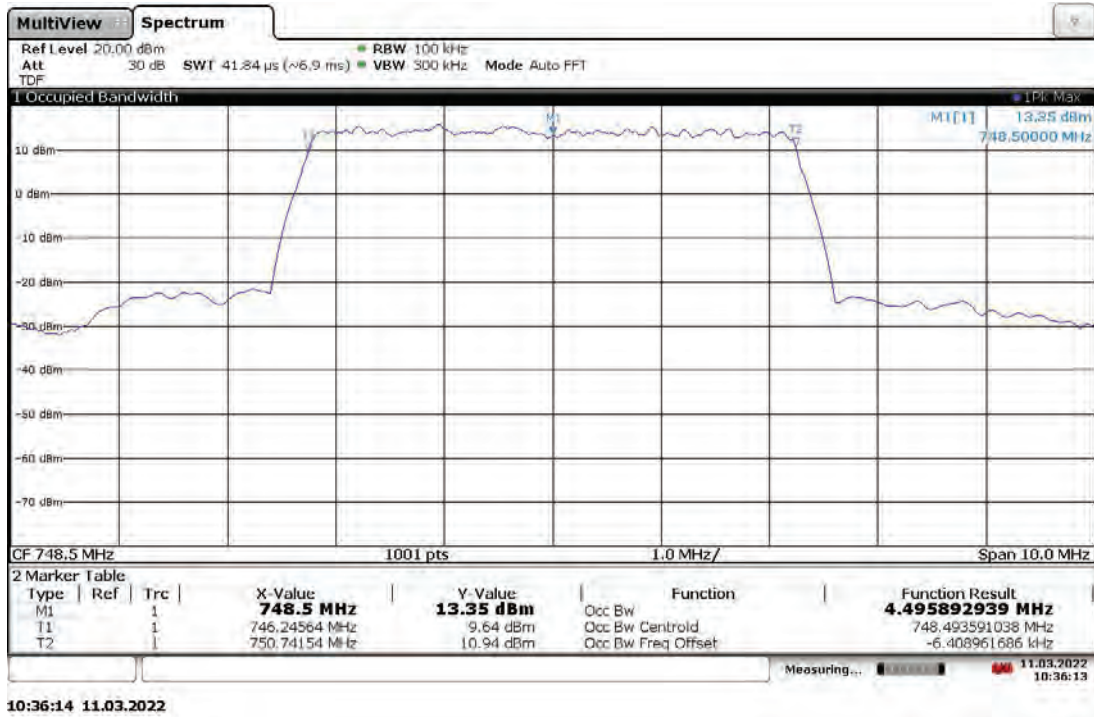
Slot 0 Band 13 (4G LTE) With RP5200, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
40 °C



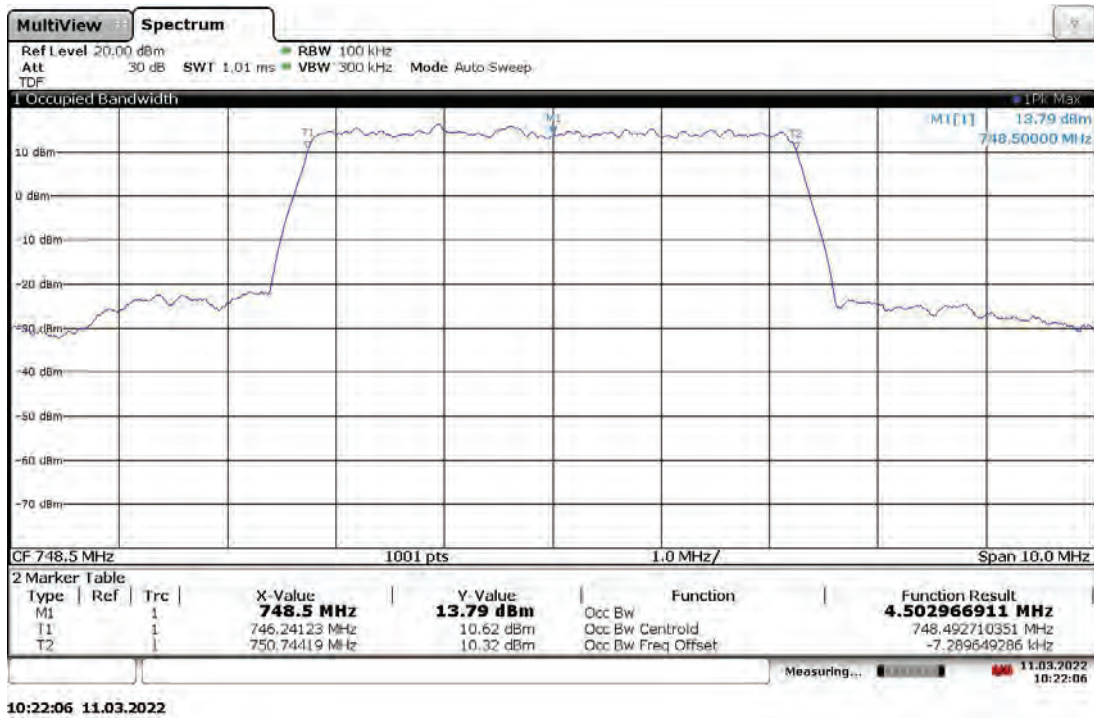
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: 64QAM, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
50 °C



Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: QPSK, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
41.1 VDC

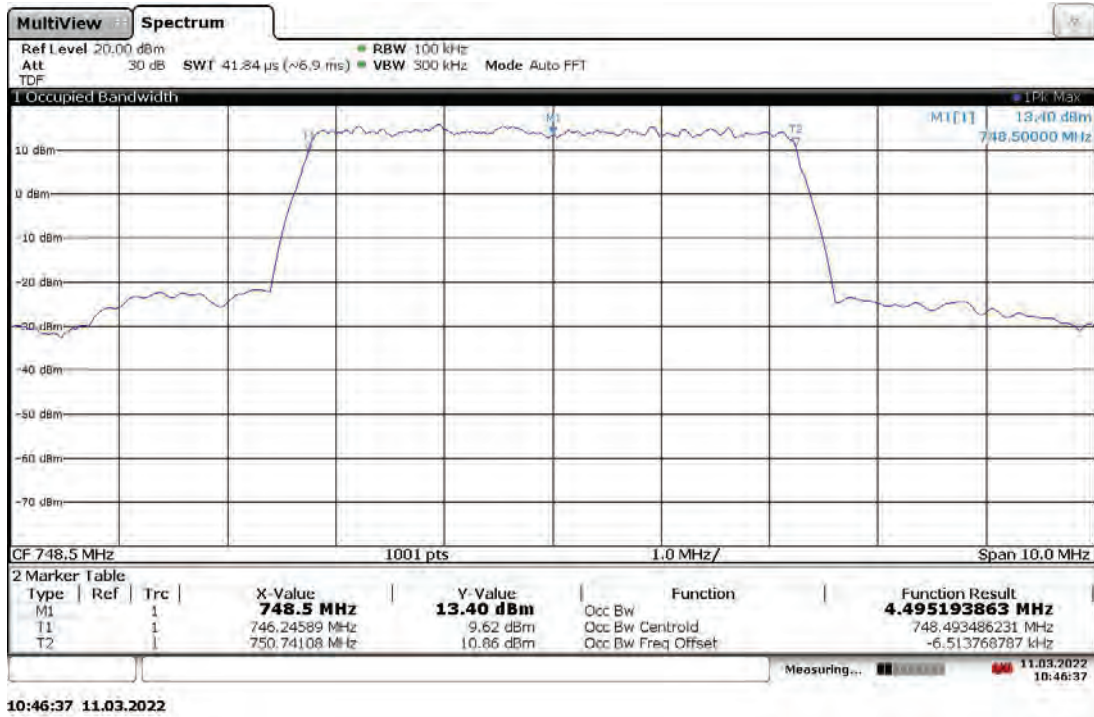


Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: QPSK, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
48 VDC

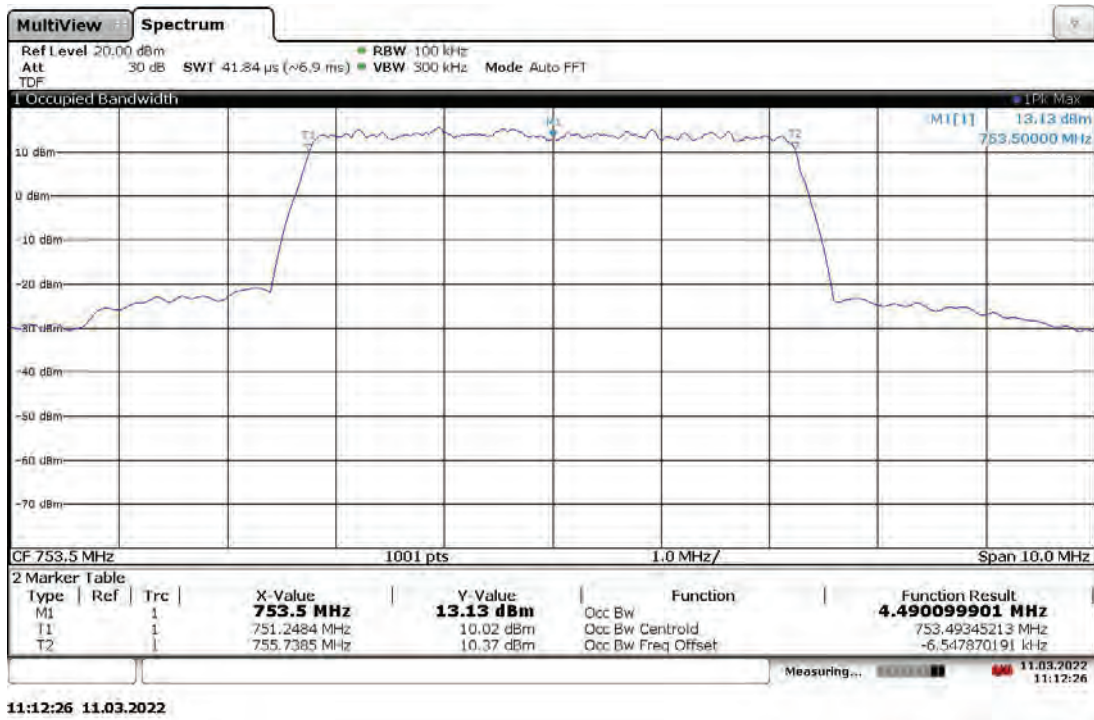




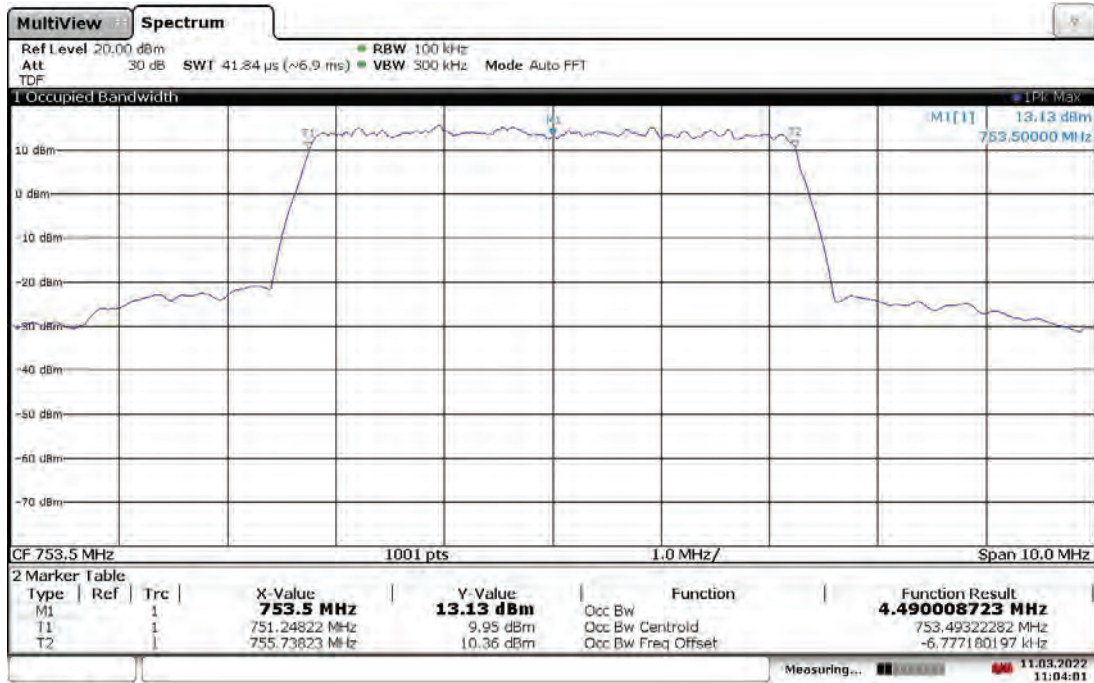
Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: QPSK, BW: 5 MHz, Ant. Port: ANT1, Low Ch. 748.5 MHz  
57 VDC



Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: QPSK, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
41.1 VDC

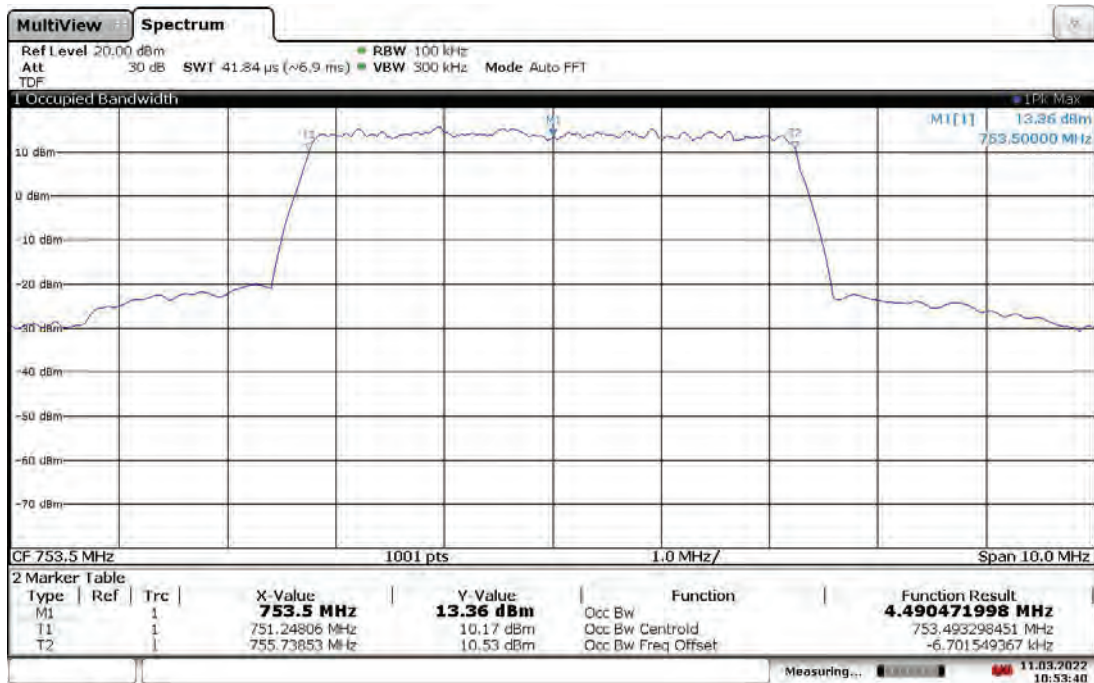


Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: QPSK, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
48 VDC



11:04:01 11.03.2022

Slot 0 Band 13 (4G LTE) With RP5200 Host, Mod: QPSK, BW: 5 MHz, Ant. Port: ANT1, High Ch. 753.5 MHz  
57 VDC



10:53:41 11.03.2022

Test Personnel: Kouma Sinn *LPS*  
Supervising/Reviewing  
Engineer:  
(Where Applicable) N/A

Test Date: 03/11/2022

Product Standard: FCC Part 27  
Input Voltage: 48VDC (POE)

Limit Applied: See report section 9.3

Pretest Verification w/  
Ambient Signals or  
BB Source: N/A

Ambient Temperature: 23 °C

Relative Humidity: 10 %

Atmospheric Pressure: 1010 mbars

Deviations, Additions, or Exclusions: None



## 10 Transmitter spurious emissions

### 10.1 Method

Tests are performed in accordance with ANSI C63.26 and CFR47 FCC Parts 2.1051, 2.1053, 2.1057, and 27.

**TEST SITE:** EMC Lab & 10m ALSE

**The EMC Lab** has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

**The 10m ALSE** is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

### Measurement Uncertainty

| Measurement             | Frequency Range | Expanded Uncertainty (k=2) | Ucisp  |
|-------------------------|-----------------|----------------------------|--------|
| Radiated Emissions, 10m | 30-1000 MHz     | 4.6dB                      | 6.3 dB |
| Radiated Emissions, 3m  | 30-1000 MHz     | 5.3 dB                     | 6.3 dB |
| Radiated Emissions, 3m  | 1-6 GHz         | 4.5 dB                     | 5.2 dB |
| Radiated Emissions, 3m  | 6-15 GHz        | 5.2 dB                     | 5.5 dB |
| Radiated Emissions, 3m  | 15-18 GHz       | 5.0 dB                     | 5.5 dB |
| Radiated Emissions, 3m  | 18-40 GHz       | 5.0 dB                     | 5.5 dB |

As shown in the table above our radiated emissions  $U_{lab}$  is less than the corresponding  $U_{CISPR}$  reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

### Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB $\mu$ V/m
- RA = Receiver Amplitude (including preamplifier) in dB $\mu$ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB $\mu$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

RA = 52.0 dB $\mu$ V  
AF = 7.4 dB/m  
CF = 1.6 dB  
AG = 29.0 dB  
FS = 32 dB $\mu$ V/m

To convert from dB $\mu$ V to  $\mu$ V or mV the following was used:

$UF = 10^{(NF / 20)}$  where UF = Net Reading in  $\mu$ V  
NF = Net Reading in dB $\mu$ V

#### Example:

$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$   
 $UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$

Alternately, when BAT-EMC Emission Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". The "Correction" includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the "Level" column.

**10.2 Test Equipment Used:**

Test equipment used for antenna port conducted emissions

| Asset           | Description                        | Manufacturer      | Model    | Serial      | Cal Date   | Cal Due    |
|-----------------|------------------------------------|-------------------|----------|-------------|------------|------------|
| DS40'           | Temp, humidity, pressure gauge     | Digi Sense        | 68000-49 | 181717625   | 11/09/2021 | 11/09/2022 |
| ROS005-1'       | Signal and Spectrum Analyzer       | Rohde and Shwartz | FSW43    | 100646      | 11/02/2021 | 11/02/2022 |
| CEN001'         | DC-40GHz attenuator 20dB           | Centric RF        | C411-20  | CEN001      | 01/26/2022 | 01/26/2023 |
| CBLHF2012-2M-2' | 2m 9kHz-40GHz Coaxial Cable - SET2 | Huber & Suhner    | SF102    | 252675002   | 02/10/2022 | 02/10/2023 |
| DAV005'         | Weather Station                    | Davis             | 6250     | MS191218083 | 02/11/2022 | 02/11/2023 |

**Software Utilized:**

| Name | Manufacturer | Version |
|------|--------------|---------|
| None | --           | --      |

Test equipment used for radiated emissions, 9 kHz-30 MHz

| Asset    | Description                            | Manufacturer    | Model             | Serial      | Cal Date   | Cal Due    |
|----------|----------------------------------------|-----------------|-------------------|-------------|------------|------------|
| DAV007'  | Weather Station Vantage Vue            | Davis           | 6250              | MS191212003 | 03/08/2022 | 03/08/2023 |
| 145-414' | Cables 145-400 145-403 145-405 145-409 | Huber + Suhner  | 3m Track A cables | multiple    | 07/09/2021 | 07/09/2022 |
| IW001'   | 2 meter cable                          | Insulated Wire  | 2801-NPS          | 001         | 09/23/2021 | 09/23/2022 |
| IW002'   | 2 meter Armored cable                  | Insulated Wire  | 2800-NPS          | 002         | 09/23/2021 | 09/23/2022 |
| CBL051'  | 9kHz to 1GHz BNC/ BNC Cable            | Belden          | RG58A/U           | none        | 04/16/2021 | 04/16/2022 |
| 145108'  | EMI Test Receiver (20Hz - 40GHz)       | Rohde & Schwarz | ESIB40            | 100209      | 06/22/2021 | 06/22/2022 |
| ETS003   | 9kHz-30MHz Active Loop Antenna         | ETS Lindgren    | 6502              | 00143396    | 08/26/2021 | 08/26/2022 |

Test equipment used for Radiated emissions, 30-1000 MHz

| Asset   | Description                             | Manufacturer         | Model         | Serial      | Cal Date   | Cal Due    |
|---------|-----------------------------------------|----------------------|---------------|-------------|------------|------------|
| IW001'  | 2 meter cable                           | Insulated Wire       | 2801-NPS      | 001         | 09/23/2021 | 09/23/2022 |
| 145106' | Bilog Antenna (30MHz - 5GHz)            | Sunol Sciences       | JB5           | A111003     | 07/22/2021 | 07/22/2022 |
| HS002'  | DC-18GHz cable 1.5M long                | Huber & Suhner       | SucoFlex 106A | HS002       | 12/06/2021 | 12/06/2022 |
| IW006'  | DC-18GHz cable 8.4m long                | Insulated Wire       | 2800-NPS      | IW006       | 07/22/2021 | 07/22/2022 |
| PRE11'  | 50dB gain pre-amp                       | Pasternack           | PRE11         | PRE11       | 09/02/2021 | 09/02/2022 |
| DAV007' | Weather Station Vantage Vue             | Davis                | 6250          | MS191212003 | 03/08/2022 | 03/08/2023 |
| 145145' | Broadband Hybrid Antenna 30 MHz - 3 GHz | Sunol Sciences Corp. | JB3           | A122313     | 06/09/2021 | 06/09/2022 |
| 145108' | EMI Test Receiver (20Hz - 40GHz)        | Rohde & Schwarz      | ESIB40        | 100209      | 06/22/2021 | 06/22/2022 |

Test equipment used for radiated emissions, 1-8 GHz

| Asset    | Description                            | Manufacturer    | Model             | Serial      | Cal Date   | Cal Due    |
|----------|----------------------------------------|-----------------|-------------------|-------------|------------|------------|
| DAV007'  | Weather Station Vantage Vue            | Davis           | 6250              | MS191212003 | 03/08/2022 | 03/08/2023 |
| 145-414' | Cables 145-400 145-403 145-405 145-409 | Huber + Suhner  | 3m Track A cables | multiple    | 07/09/2021 | 07/09/2022 |
| IW001'   | 2 meter cable                          | Insulated Wire  | 2801-NPS          | 001         | 09/23/2021 | 09/23/2022 |
| IW002'   | 2 meter Armored cable                  | Insulated Wire  | 2800-NPS          | 002         | 09/23/2021 | 09/23/2022 |
| IW003'   | 8.4 meter cable                        | Insulated Wire  | 2800-NPS          | 003         | 10/15/2022 | 10/15/2022 |
| 145108'  | EMI Test Receiver (20Hz - 40GHz)       | Rohde & Schwarz | ESIB40            | 100209      | 06/22/2021 | 06/22/2022 |
| ETS003'  | 9kHz-30MHz Active Loop Antenna         | ETS Lindgren    | 6502              | 00143396    | 08/26/2021 | 08/26/2022 |
| PRE12'   | Pre-amplifier                          | Corn Power      | PAM-118A          | 18040117    | 12/06/2021 | 12/06/2022 |

**Software Utilized:**

| Name    | Manufacturer | Version   |
|---------|--------------|-----------|
| BAT-EMC | Nexio        | 3.18.0.16 |



**10.3 Results:**

The sample tested was found to Comply per FCC Part 27.53 (c)(1)(5) and (f) below.

FCC Part 27.53 (c)(1) – For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB;

FCC Part 27.53 (c) (5) – Compliance with the provisions of paragraph of (c)(1) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

FCC Part 27.53(f)

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to  $-70$  dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and  $-80$  dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

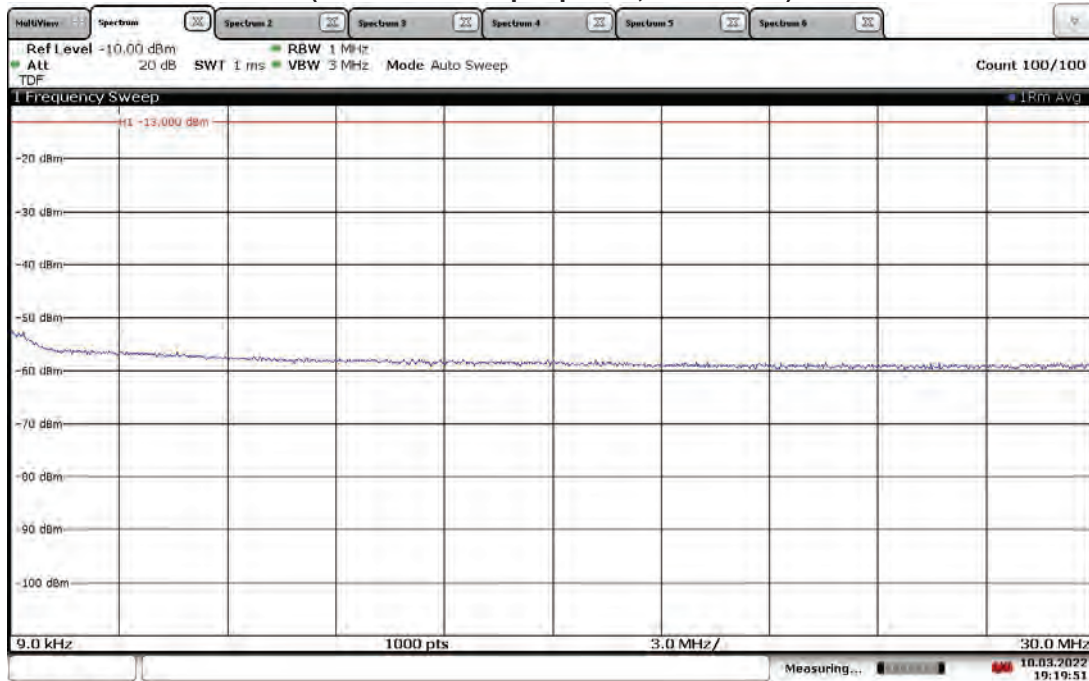
Since the two antenna ports transmit uncorrelated data streams and use cross polarized antennas, no adjustments to the test results were applied due to MIMO operation, per KDB 662911.

#### **10.4 Setup Photographs:**

Confidential – Photos not included in this report

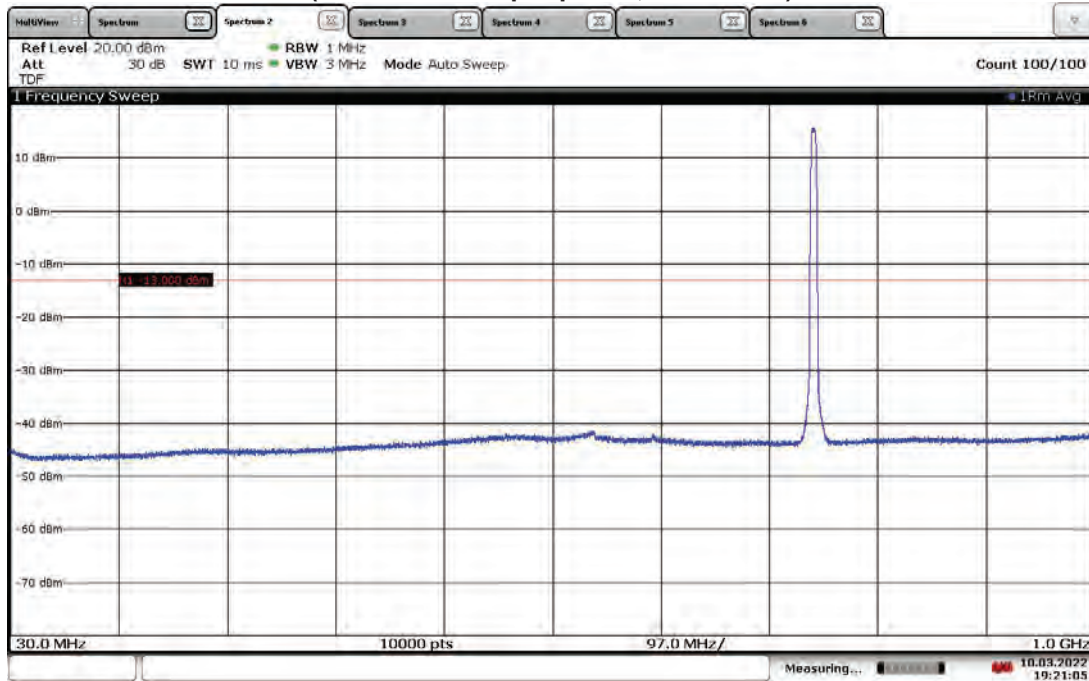
## 10.5 Plots/Data:

### Antenna Port (ANT0) Conducted Emissions, 9 kHz-30 MHz Band 13 (4G LTE), Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM (Worst-case output power, 21.75 dBm)



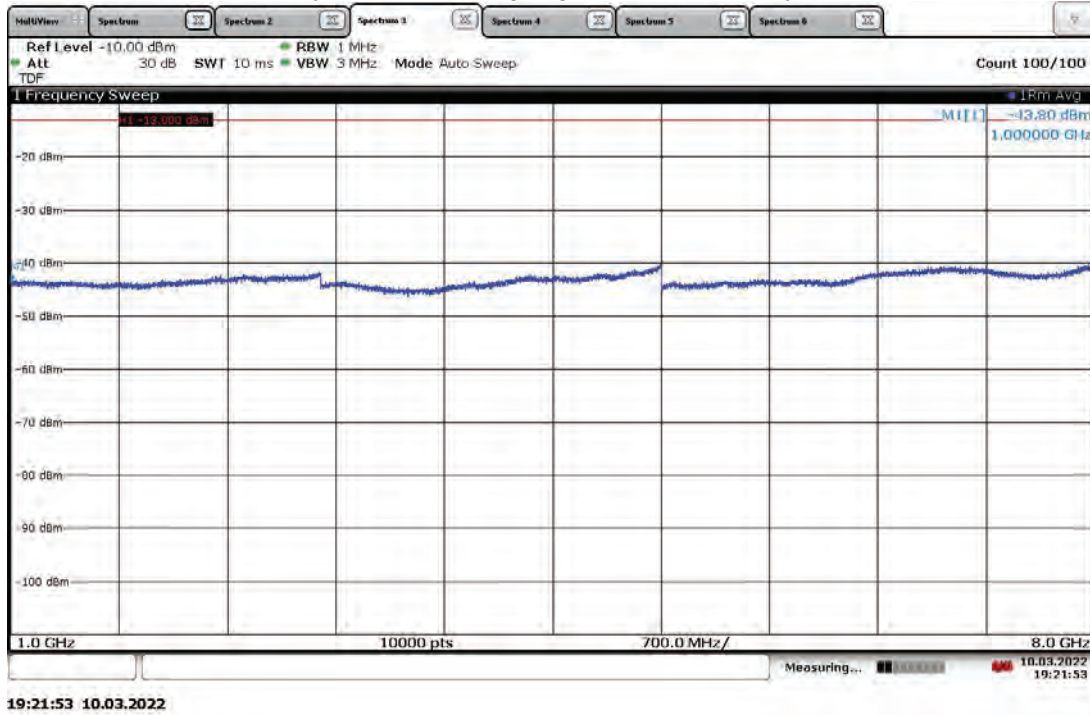
19:19:52 10.03.2022

### Antenna Port (ANT0) Conducted Emissions, 30 MHz-1 GHz Band 13 (4G LTE), Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM (Worst-case output power, 21.75 dBm)

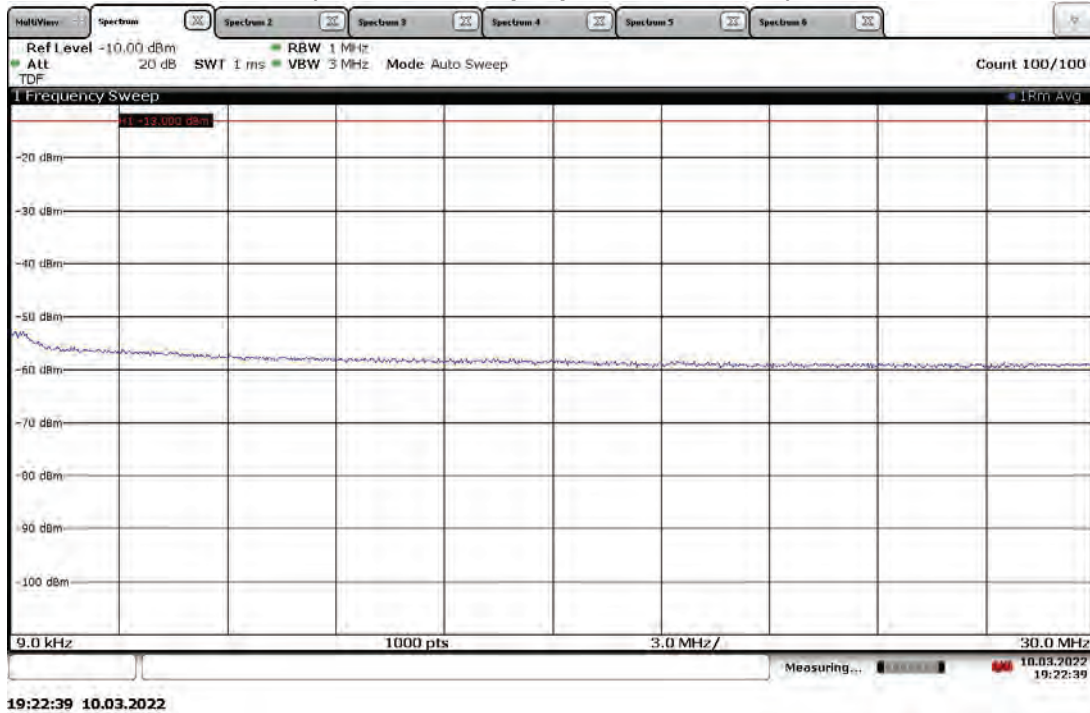


19:21:05 10.03.2022

**Antenna Port (ANT0) Conducted Emissions, 1-8 GHz  
Band 13 (4G LTE), Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM  
(Worst-case output power, 21.75 dBm)**

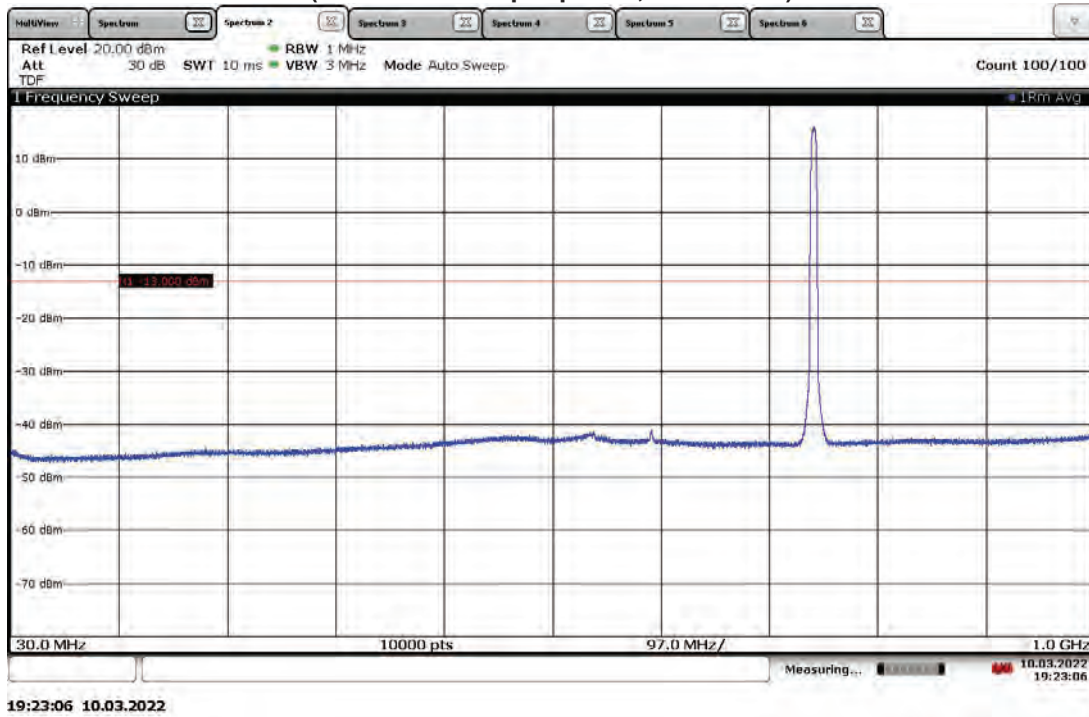


**Antenna Port (ANT1) Conducted Emissions, 9 kHz-30 MHz  
Band 13 (4G LTE), Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM  
(Worst-case output power, 21.75 dBm)**

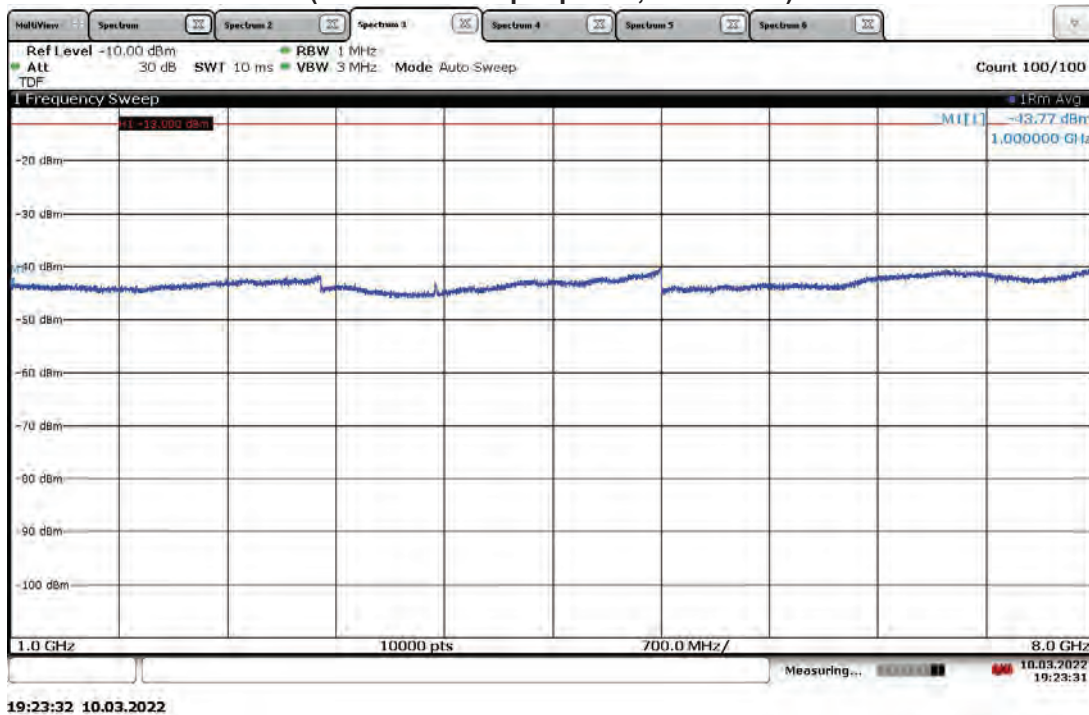




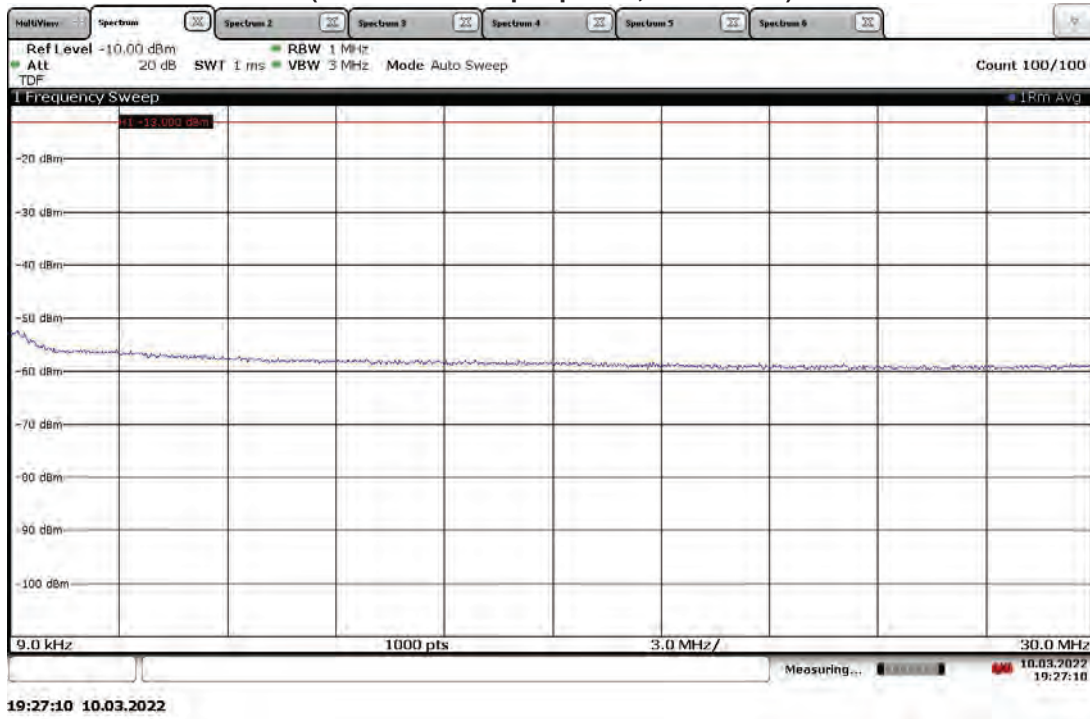
**Antenna Port (ANT1) Conducted Emissions, 30 MHz-1 GHz**  
**Band 13 (4G LTE), Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM**  
**(Worst-case output power, 21.75 dBm)**



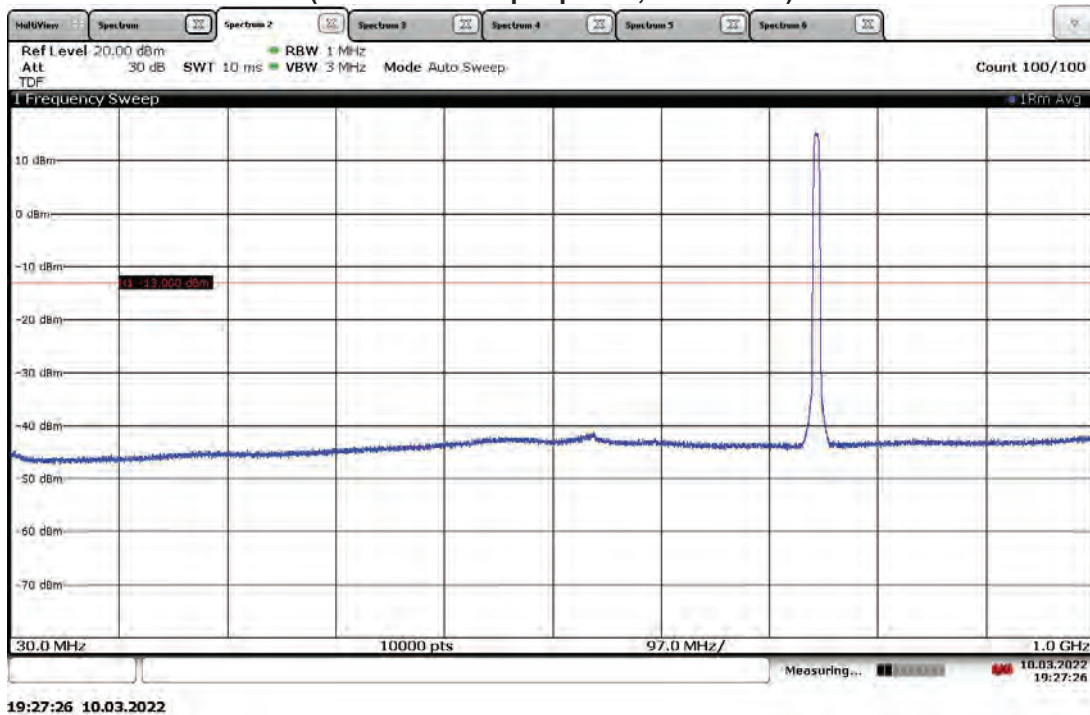
**Antenna Port (ANT1) Conducted Emissions, 1-8 GHz**  
**Band 13 (4G LTE), Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM**  
**(Worst-case output power, 21.75 dBm)**



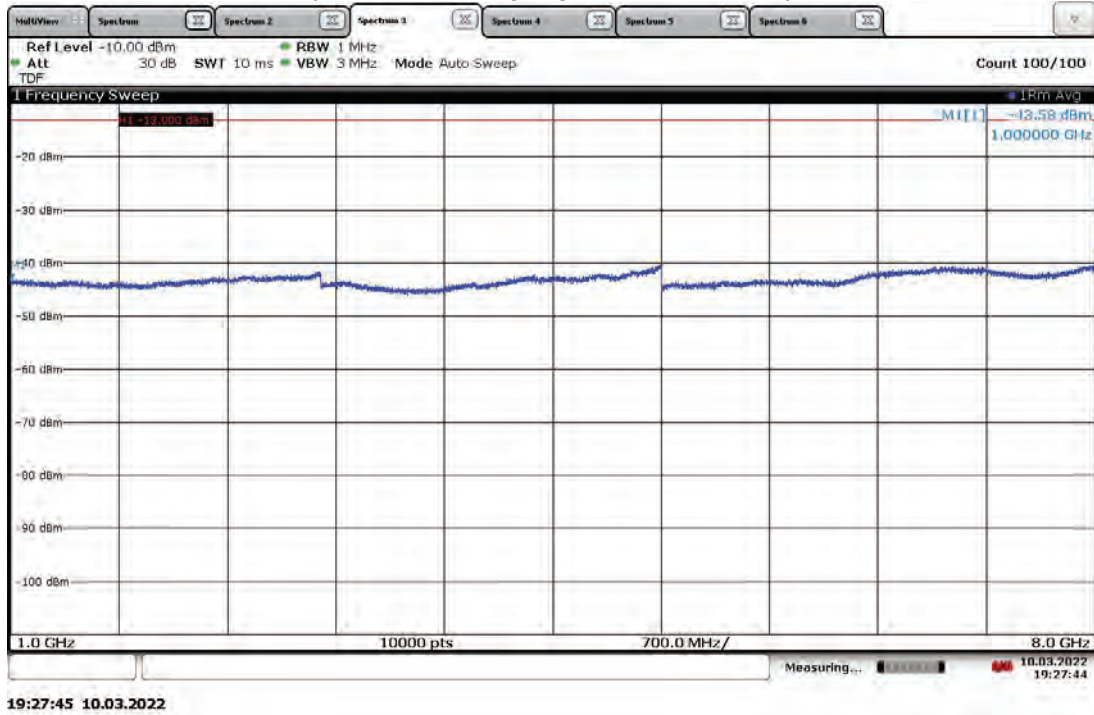
**Antenna Port (ANT0) Conducted Emissions, 9 kHz-30 MHz  
Band 13 (4G LTE), Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM  
(Worst-case output power, 21.57 dBm)**



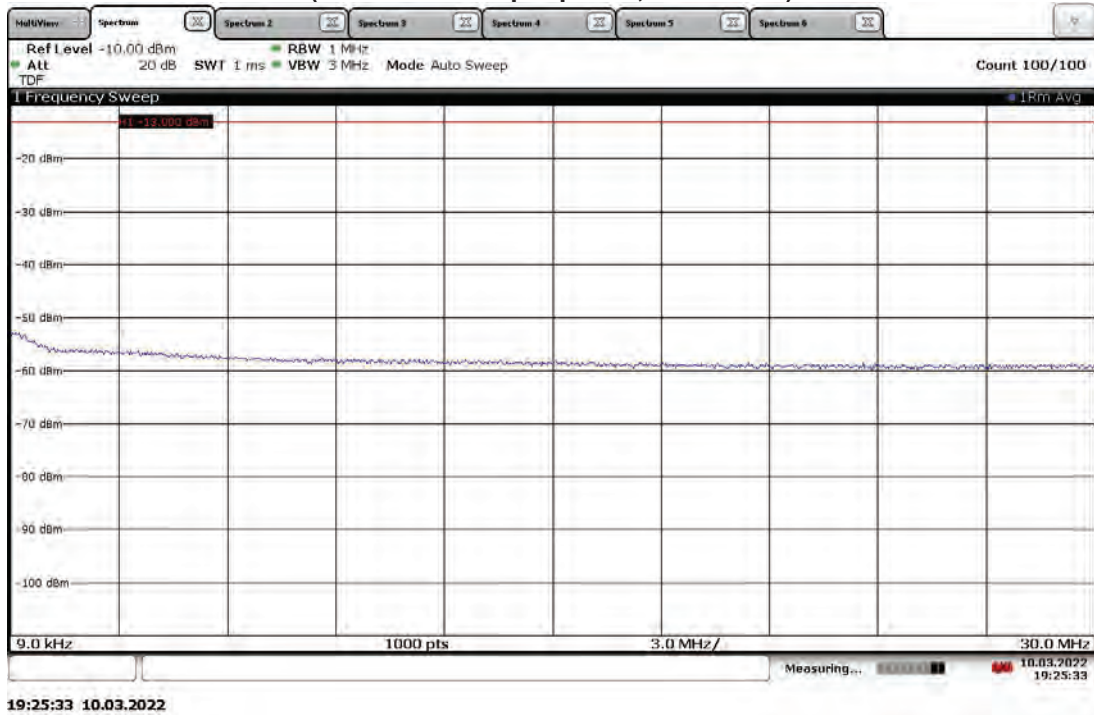
**Antenna Port (ANT0) Conducted Emissions, 30 MHz-1 GHz  
Band 13 (4G LTE), Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM  
(Worst-case output power, 21.57 dBm)**



**Antenna Port (ANT0) Conducted Emissions, 1-8 GHz**  
**Band 13 (4G LTE), Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power, 21.57 dBm)**

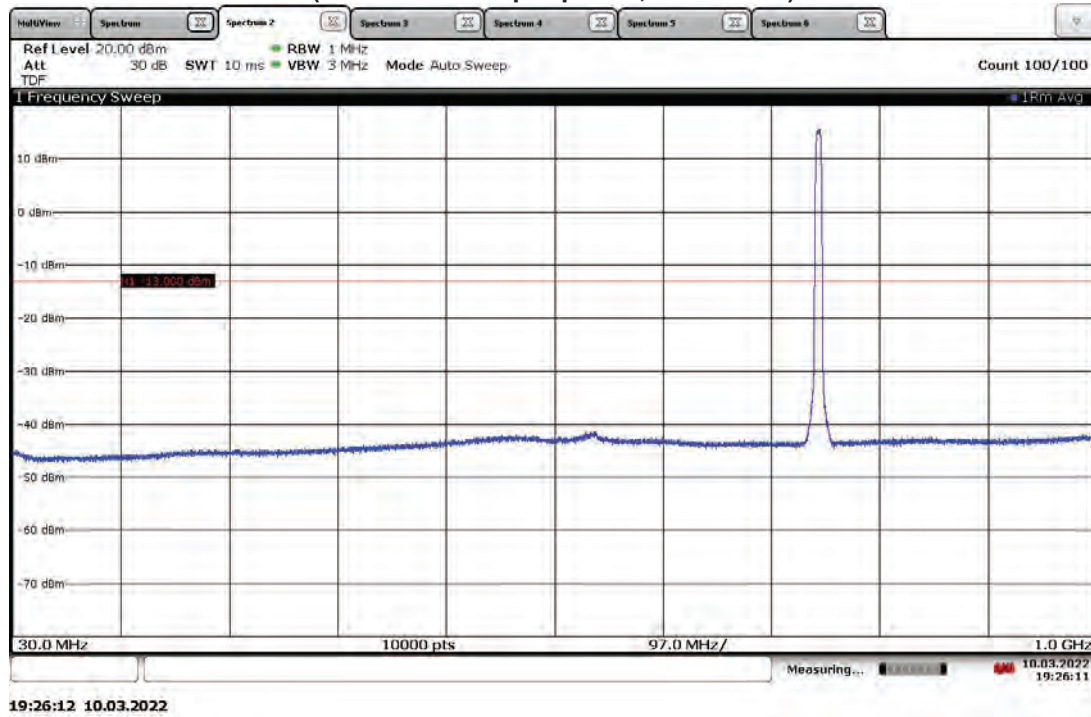


**Antenna Port (ANT1) Conducted Emissions, 9 kHz-30 MHz**  
**Band 13 (4G LTE), Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power, 21.57 dBm)**

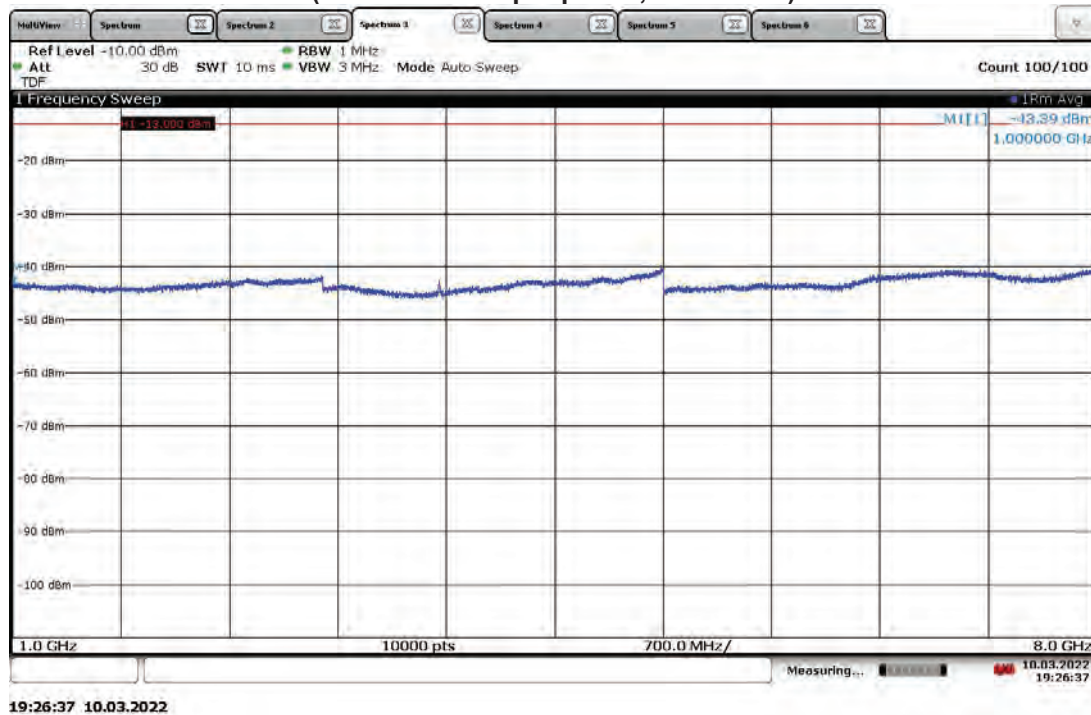




**Antenna Port (ANT1) Conducted Emissions, 30 MHz-1 GHz**  
**Band 13 (4G LTE), Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power, 21.57 dBm)**

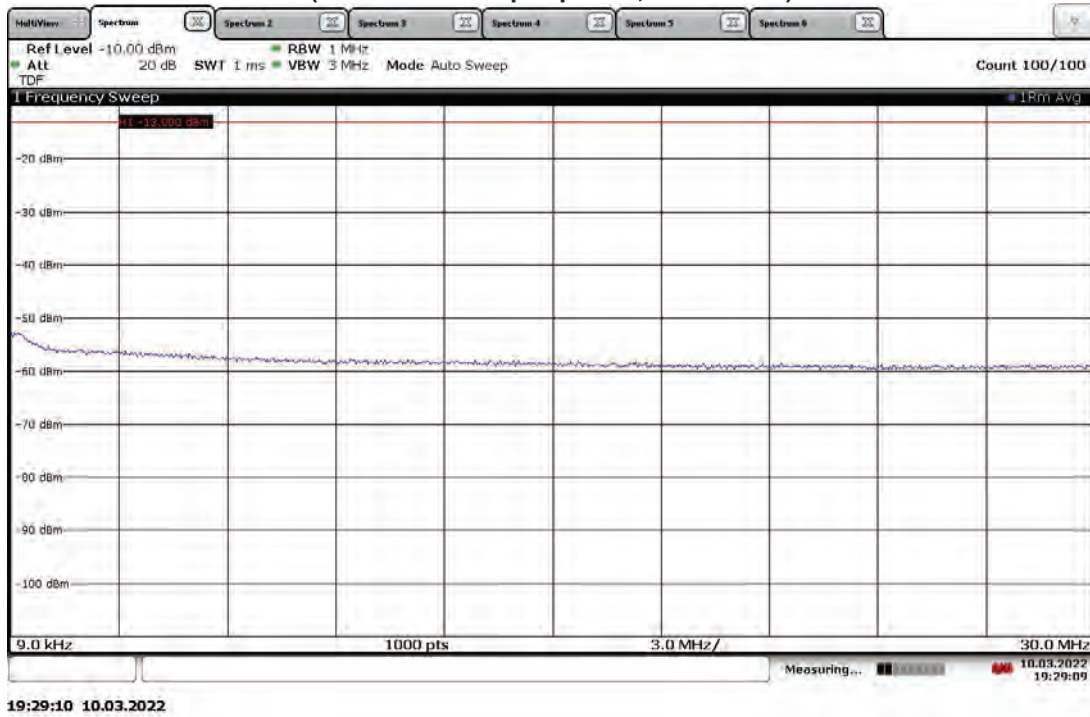


**Antenna Port (ANT1) Conducted Emissions, 1-8 GHz**  
**Band 13 (4G LTE), Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power, 21.57 dBm)**

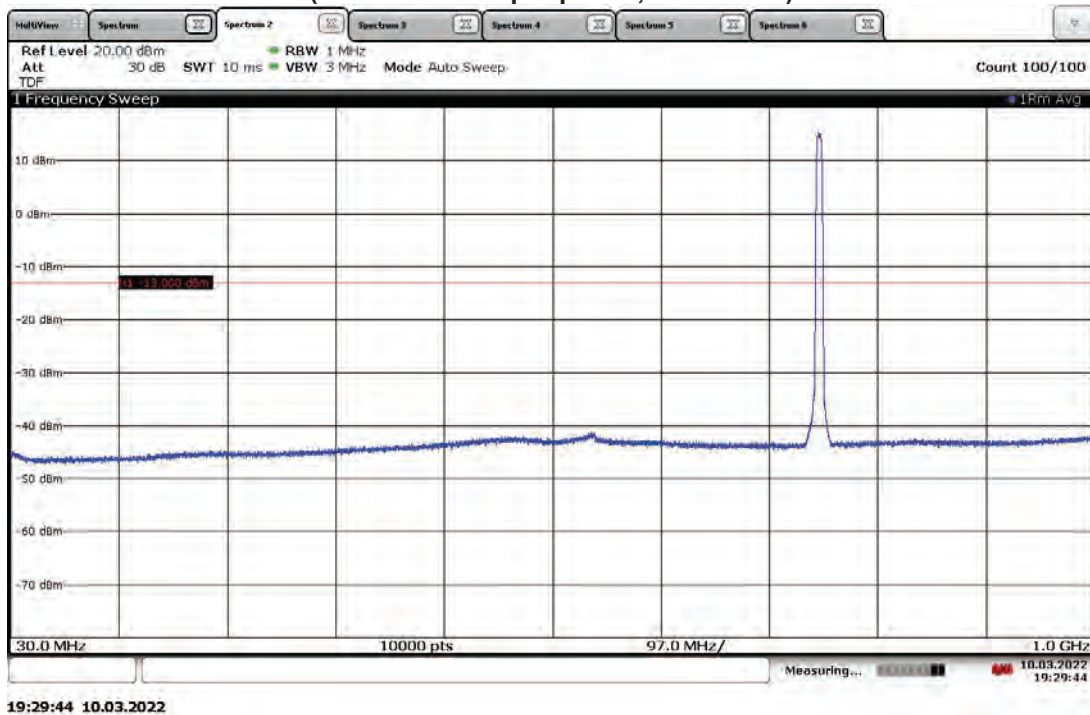




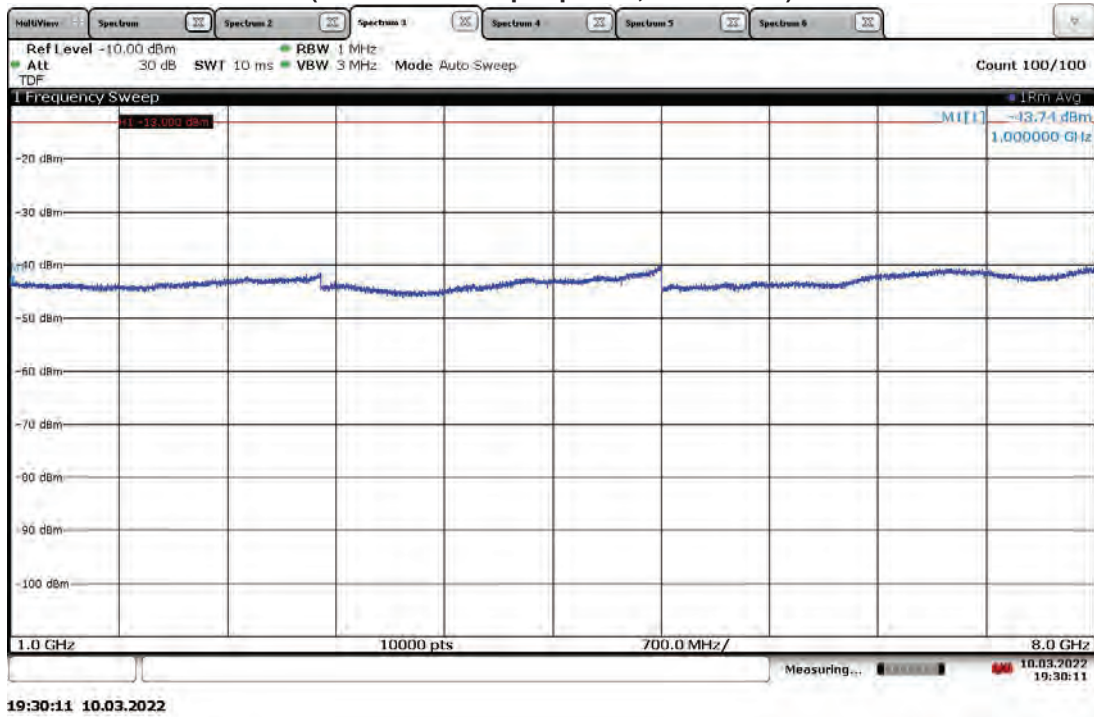
**Antenna Port (ANT0) Conducted Emissions, 9 kHz-30 MHz**  
**Band 13 (4G LTE), High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK**  
**(Worst-case output power, 21.38 dBm)**



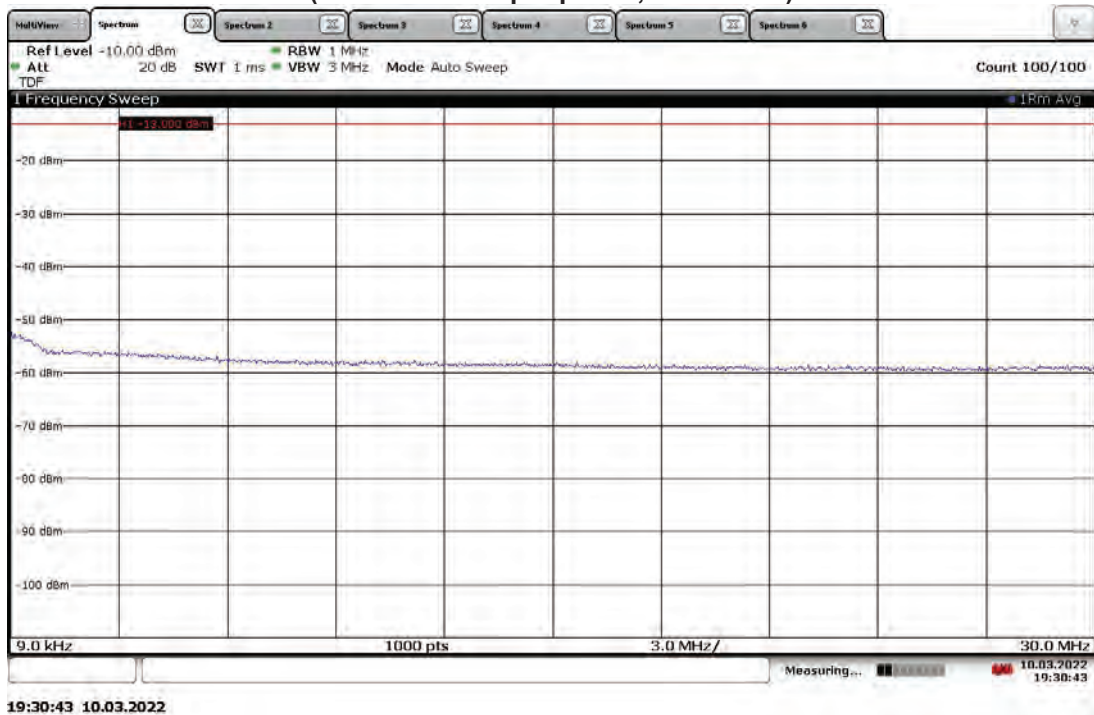
**Antenna Port (ANT0) Conducted Emissions, 30 MHz-1 GHz**  
**Band 13 (4G LTE), High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK**  
**(Worst-case output power, 21.38 dBm)**



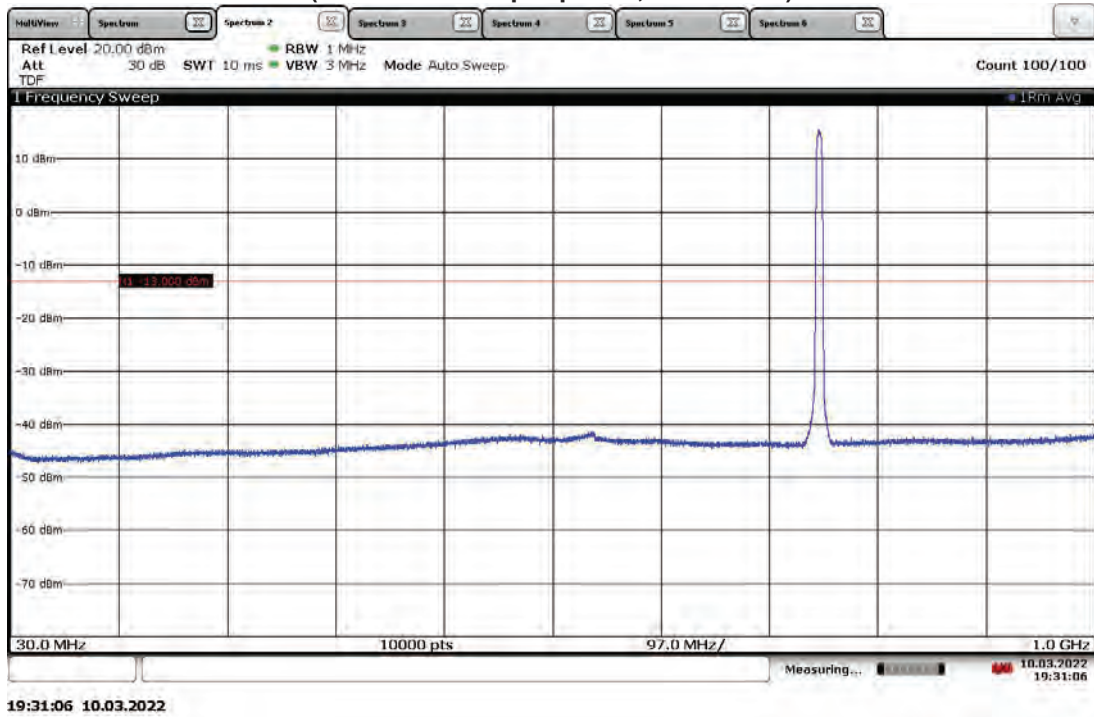
**Antenna Port (ANT0) Conducted Emissions, 1-8 GHz  
Band 13 (4G LTE), High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK  
(Worst-case output power, 21.38 dBm)**



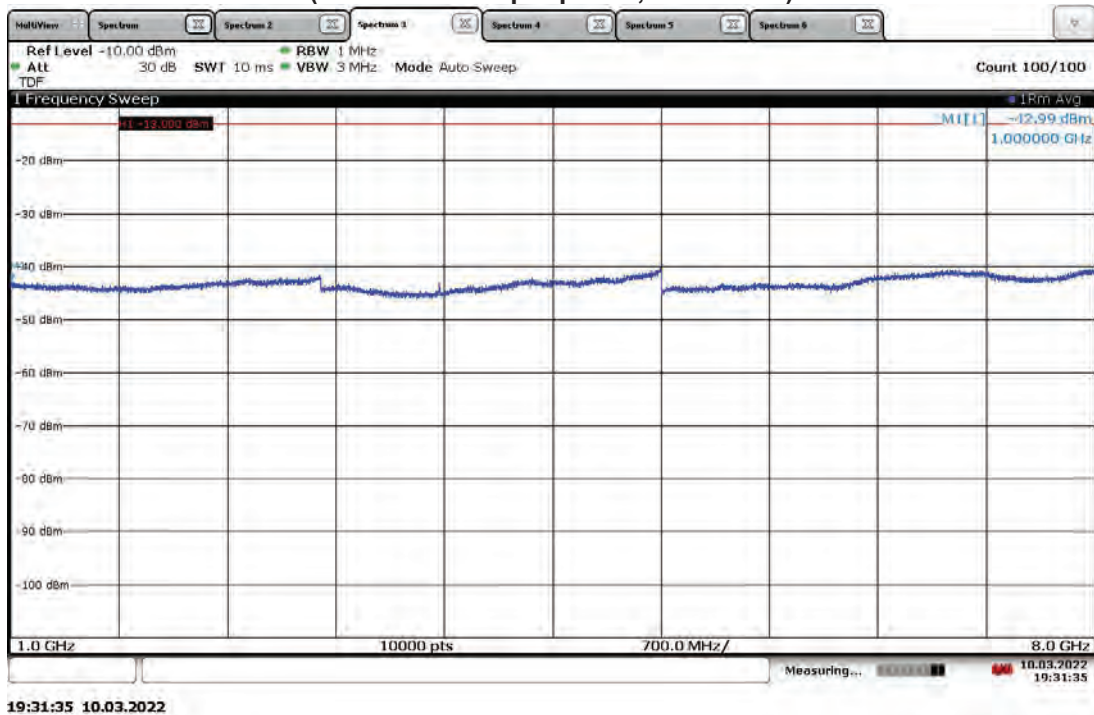
**Antenna Port (ANT1) Conducted Emissions, 9 kHz-30 MHz  
Band 13 (4G LTE), High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK  
(Worst-case output power, 21.38 dBm)**



**Antenna Port (ANT1) Conducted Emissions, 30 MHz-1 GHz  
Band 13 (4G LTE), High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK  
(Worst-case output power, 21.38 dBm)**



**Antenna Port (ANT1) Conducted Emissions, 1-8 GHz  
Band 13 (4G LTE), High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK  
(Worst-case output power, 21.38 dBm)**

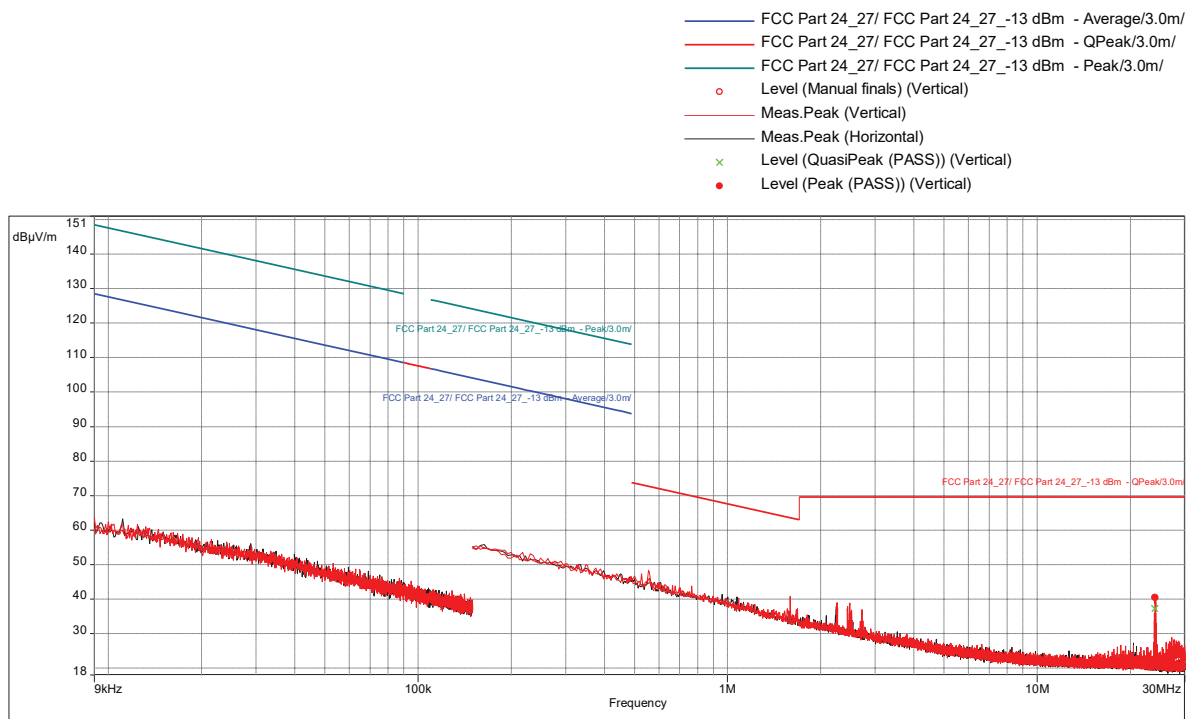


**Radiated Emissions, 9 kHz-30 MHz  
Band 13 (4G LTE) With RP5200 Host, Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM  
(Worst-case output power 21.75 dBm)**

**Test Information:**

|                           |                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/12/2022 12:44:13 PM                                                                                                                                    |
| Client and Project Number | CommScope                                                                                                                                                |
| Engineer                  | Kouma Sinn                                                                                                                                               |
| Temperature               | 22 C                                                                                                                                                     |
| Humidity                  | 29 %                                                                                                                                                     |
| Atmospheric Pressure      | 988 mbar                                                                                                                                                 |
| Comments                  | Scan 5: Band 13 With RP5200, 5MHz BW, 16QAM Mod - Worst-case PWR (21.75 dBm), Low Ch. 748.5 MHz, RE 9kHz-30MHz Loop antenna, Electric Field, 3M Location |

**Graph:**



**Results:**

**EIRP Peak (PASS) (1)**

| Frequency (MHz) | Peak Level (dBμV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.     | RBW (Hz) | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|----------|----------|-----------------|
| 24.02960526     | 40.46               | -54.74           | -13              | -41.74           | 328.00      | 1.00       | Vertical | 9000.00  | 10.70           |

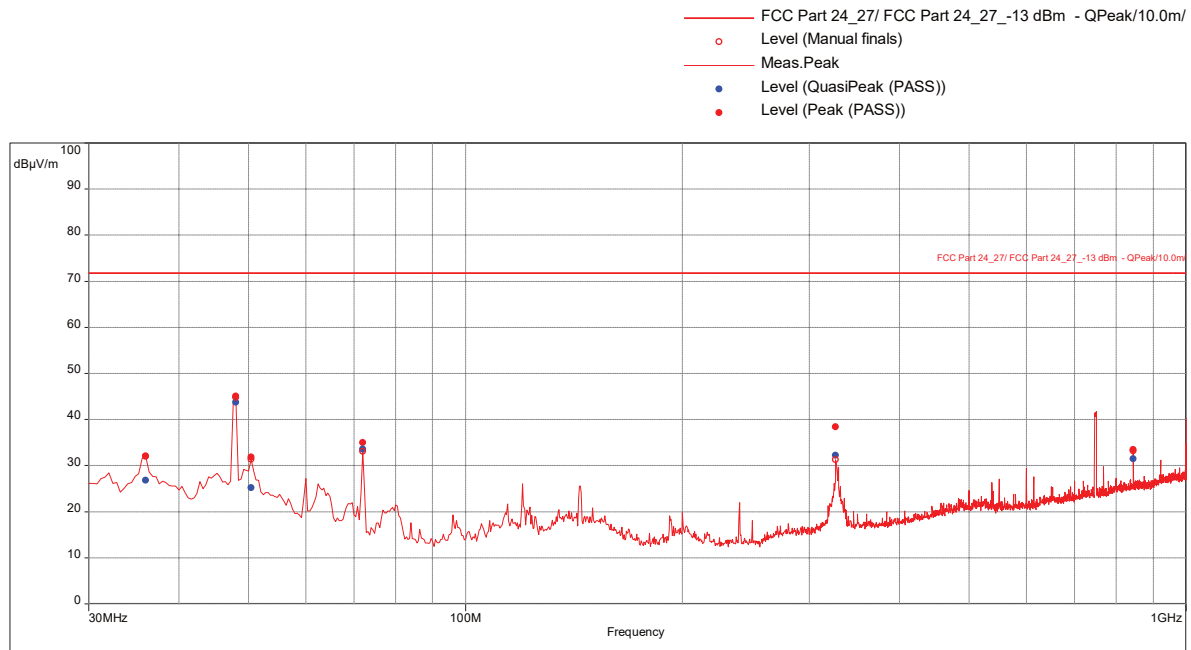
Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.



**Radiated Emissions, 30 MHz-1 GHz**  
**Band 13 (4G LTE) With RP5200 Host, Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM**  
**(Worst-case output power 21.75 dBm)**

**Test Information:**

|                           |                                                                                                                   |
|---------------------------|-------------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/12/2022 2:33:59 PM                                                                                              |
| Client and Project Number | CommScope                                                                                                         |
| Engineer                  | Kouma Sinn                                                                                                        |
| Temperature               | 22 C                                                                                                              |
| Humidity                  | 29 %                                                                                                              |
| Atmospheric Pressure      | 988 mbar                                                                                                          |
| Comments                  | Scan 6: Band 13 With RP5200, 5MHz BW, 16QAM Mod - Worst-case PWR (21.75 dBm), Low Ch. 748.5 MHz, RE 30-1000MHz SA |

**Graph:****Results:****EIRP Peak (PASS) (6)**

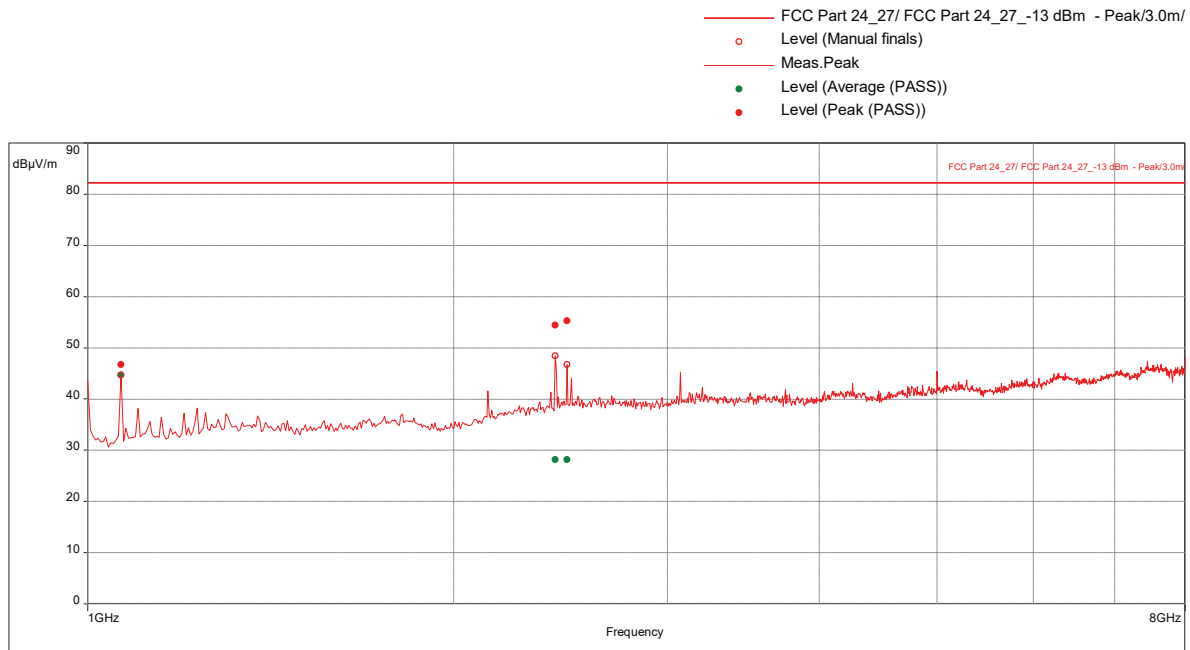
| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)  | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|-----------|-----------------|
| 36              | 32.04               | -52.76           | -13              | -39.76           | 343.00      | 3.96       | Vertical   | 120000.00 | -16.58          |
| 48              | 45.05               | -39.75           | -13              | -26.75           | 242.00      | 1.00       | Vertical   | 120000.00 | -24.55          |
| 50.36842105     | 31.82               | -52.98           | -13              | -39.98           | 61.00       | 2.49       | Vertical   | 120000.00 | -25.62          |
| 72              | 34.99               | -49.81           | -13              | -36.81           | 46.00       | 1.40       | Vertical   | 120000.00 | -25.08          |
| 326.4315789     | 38.42               | -46.38           | -13              | -33.38           | 82.00       | 3.30       | Horizontal | 120000.00 | -17.51          |
| 844.8           | 33.51               | -51.29           | -13              | -38.29           | 140.00      | 3.98       | Horizontal | 120000.00 | -7.06           |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

**Radiated Emissions, 1-8 GHz**  
**Band 13 (4G LTE) With RP5200 Host, Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM**  
**(Worst-case output power 21.75 dBm)**

**Test Information:**

|                           |                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/13/2022 7:25:44 AM                                                                                           |
| Client and Project Number | CommScope                                                                                                      |
| Engineer                  | Vathana Ven                                                                                                    |
| Temperature               | 23 C                                                                                                           |
| Humidity                  | 20 %                                                                                                           |
| Atmospheric Pressure      | 998 mbar                                                                                                       |
| Comments                  | Scan 11: Band 13 With RP5200, 5MHz BW, 16QAM Mod - Worst-case PWR (21.75 dBm), Low Ch. 748.5 MHz_RE 1 to 8 GHz |

**Graph:****Results:**

Peak (PASS) (3)

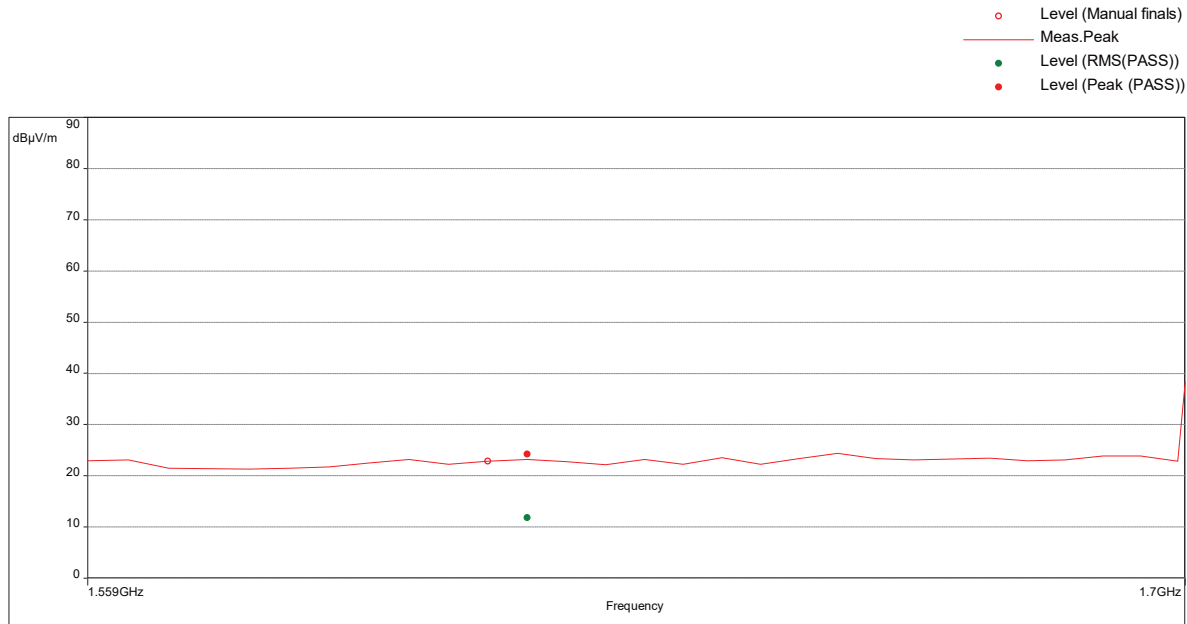
| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) (dB) | Height (m) (dB) | Pol. (dB)  | RBW (dB)   | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|------------------|-----------------|------------|------------|-----------------|
| 1066.578947     | 46.73               | -48.528          | -13              | -35.53           | 148.00           | 1.65            | Horizontal | 1000000.00 | -9.66           |
| 2426.052632     | 54.40               | -40.858          | -13              | -27.86           | 46.00            | 2.10            | Vertical   | 1000000.00 | -3.57           |
| 2479.736842     | 55.31               | -39.948          | -13              | -26.95           | 168.00           | 2.70            | Vertical   | 1000000.00 | -3.04           |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

**Radiated Emissions, 1.559-1.610 GHz**  
**Band 13 (4G LTE) With RP5200 Host, Low Channel 748.5 MHz, BW 5 MHz, Modulation 16QAM**  
**(Worst-case output power 21.75 dBm)**

**Test Information:**

|                           |                                                                                                                          |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/19/2022 9:52:55 AM                                                                                                     |
| Client and Project Number | CommScope                                                                                                                |
| Engineer                  | Kouma Sinn                                                                                                               |
| Temperature               | 24 C                                                                                                                     |
| Humidity                  | 35 %                                                                                                                     |
| Atmospheric Pressure      | 1006 mbar                                                                                                                |
| Comments                  | Scan 6: Band 13 With RP5200 With ant, 5MHz BW, 16QAM Mod - Worst-case PWR (21.75dBm), Low Ch. 748.5 MHz, RE 1559-1610MHz |

**Graph:****Results:****EIPR Peak (PASS) (1)**

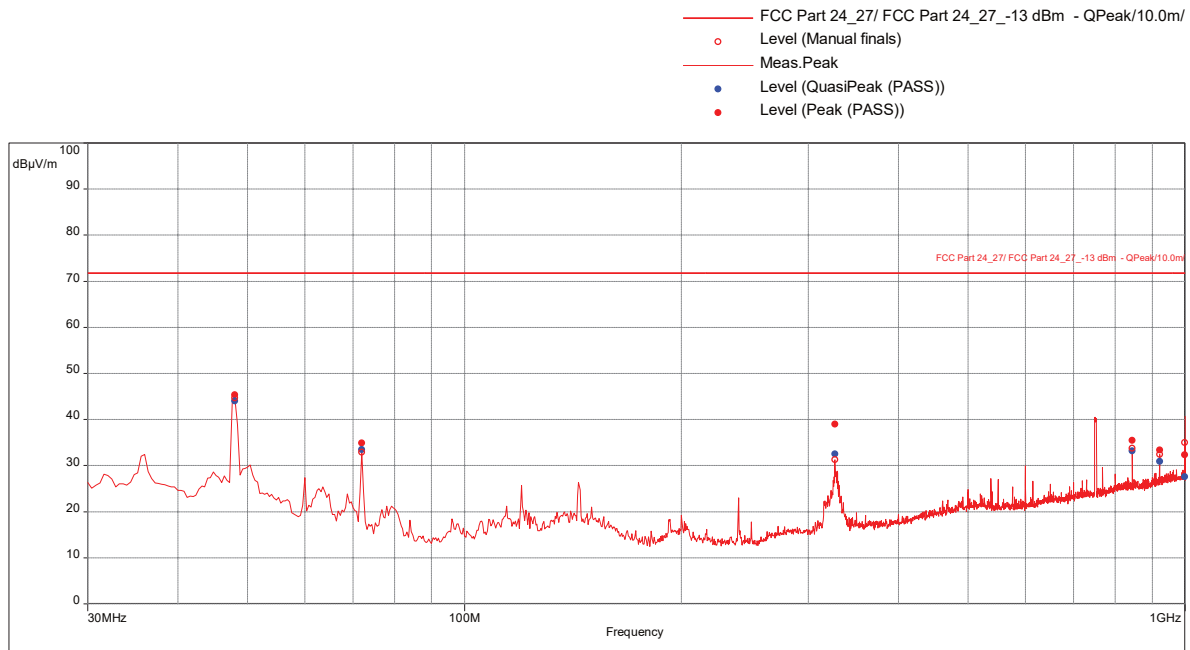
| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)   | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|------------|-----------------|
| 1611.631579     | 24.18               | -71.02           | -40              | -31.02           | 82.00       | 1.20       | Horizontal | 1000000.00 | -20.02          |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

**Radiated Emissions, 30 MHz-1 GHz**  
**Band 13 (4G LTE) With RP5200 Host, Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power 21.57 dBm)**

**Test Information:**

|                           |                                                                                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/12/2022 3:17:00 PM                                                                                             |
| Client and Project Number | CommScope                                                                                                        |
| Engineer                  | Kouma Sinn                                                                                                       |
| Temperature               | 22 C                                                                                                             |
| Humidity                  | 29 %                                                                                                             |
| Atmospheric Pressure      | 988 mbar                                                                                                         |
| Comments                  | Scan 7: Band 13 With RP5200, 5MHz BW, 256QAM Mod - Worst-case PWR (21.57 dBm), Mid Ch. 751 MHz, RE 30-1000MHz SA |

**Graph:****Results:****EIRP Peak (PASS) (6)**

| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)  | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|-----------|-----------------|
| 48.03157895     | 45.31               | -39.49           | -13              | -26.49           | 242.00      | 1.00       | Vertical   | 120000.00 | -24.56          |
| 72              | 34.90               | -49.9            | -13              | -36.9            | 46.00       | 1.80       | Vertical   | 120000.00 | -25.08          |
| 326.8315789     | 38.99               | -45.81           | -13              | -32.81           | 308.00      | 2.19       | Horizontal | 120000.00 | -17.51          |
| 844.8           | 35.48               | -49.32           | -13              | -36.32           | 142.00      | 1.35       | Horizontal | 120000.00 | -7.06           |
| 921.6           | 33.41               | -51.39           | -13              | -38.39           | 126.00      | 2.96       | Horizontal | 120000.00 | -6.22           |
| 998.4           | 32.29               | -52.51           | -13              | -39.51           | 169.00      | 3.56       | Horizontal | 120000.00 | -5.04           |

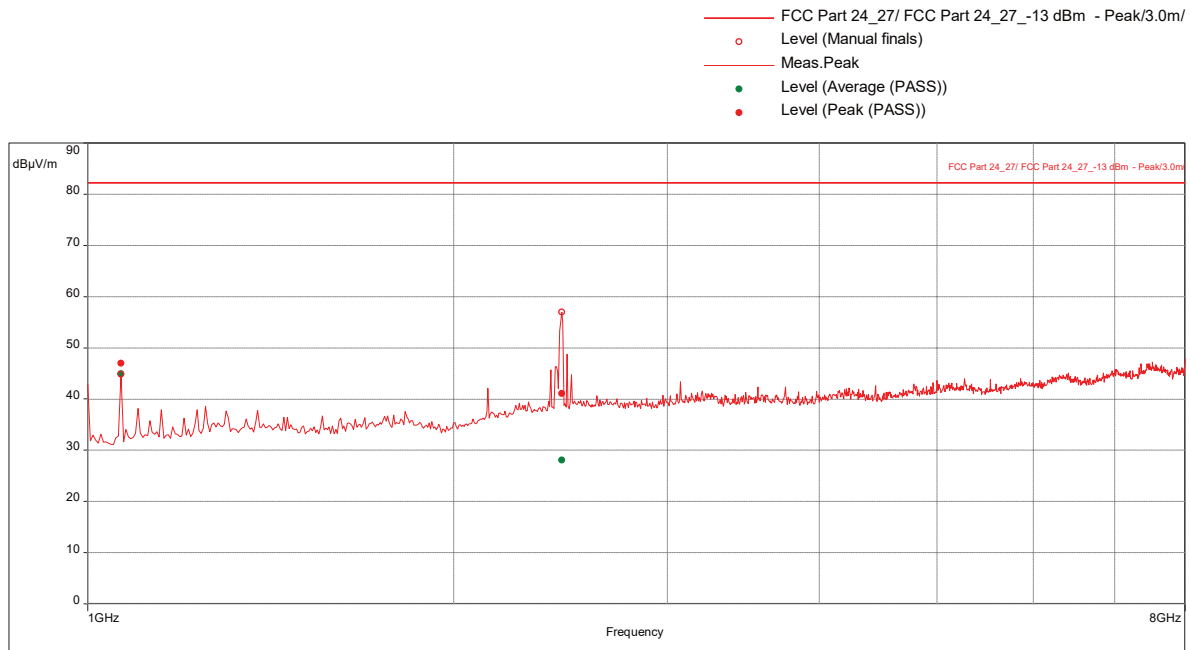
Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.



**Radiated Emissions, 1-8 GHz**  
**Band 13 (4G LTE) With RP5200 Host, Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power 21.57 dBm)**

**Test Information:**

|                           |                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/13/2022 7:08:52 AM                                                                                     |
| Client and Project Number | CommScope                                                                                                |
| Engineer                  | Vathana Ven                                                                                              |
| Temperature               | 23 C                                                                                                     |
| Humidity                  | 20 %                                                                                                     |
| Atmospheric Pressure      | 998 mbar                                                                                                 |
| Comments                  | 10: Band 13 With RP5200, 5MHz BW, 256QAM Mod - Worst-case PWR (21.57 dBm), Mid Ch. 751 MHz_RE 1 to 8 GHz |

**Graph:****Results:**

Peak (PASS) (2)

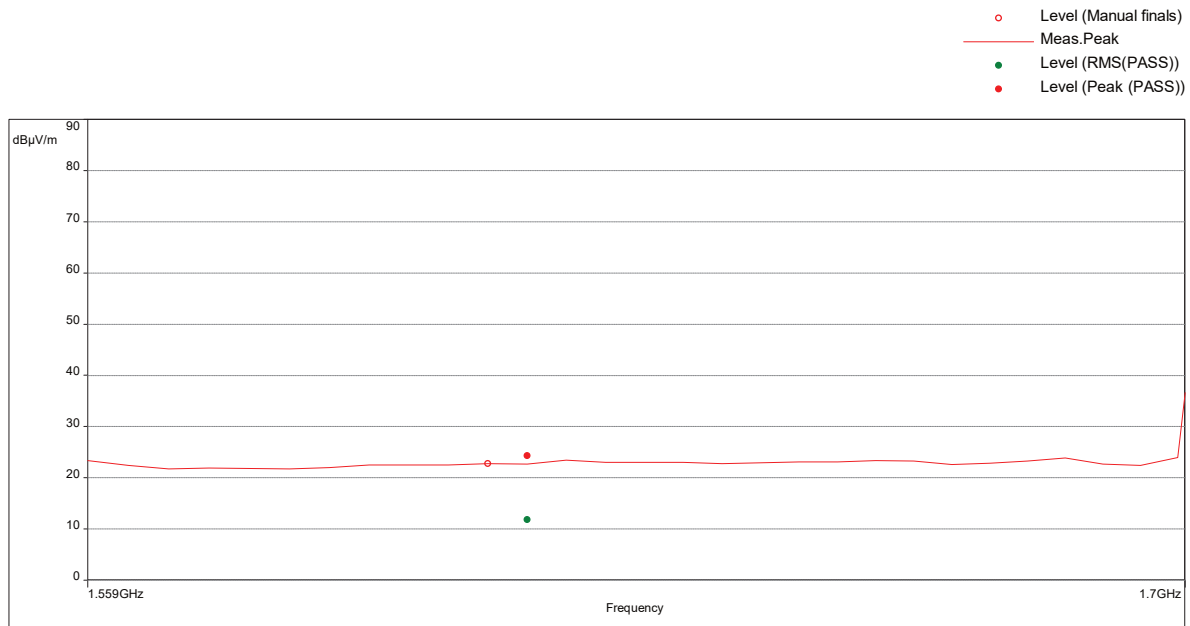
| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) (dB) | Height (m) (dB) | Pol. (dB)  | RBW (dB)   | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|------------------|-----------------|------------|------------|-----------------|
| 1066.578947     | 47.00               | -48.258          | -13              | -35.26           | 146.00           | 1.60            | Horizontal | 1000000.00 | -9.66           |
| 2453.684211     | 41.09               | -54.168          | -13              | -41.17           | 204.00           | 1.15            | Vertical   | 1000000.00 | -3.38           |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

**Radiated Emissions, 1.559-1.610 GHz**  
**Band 13 (4G LTE) With RP5200 Host, Mid Channel 751 MHz, BW 5 MHz, Modulation 256QAM**  
**(Worst-case output power 21.57 dBm)**

**Test Information:**

|                           |                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/19/2022 10:01:09 AM                                                                                                   |
| Client and Project Number | CommScope                                                                                                               |
| Engineer                  | Kouma Sinn                                                                                                              |
| Temperature               | 24 C                                                                                                                    |
| Humidity                  | 35 %                                                                                                                    |
| Atmospheric Pressure      | 1006 mbar                                                                                                               |
| Comments                  | Scan 7: Band 13 With RP5200 With ant, 5MHz BW, 256QAM Mod - Worst-case PWR (21.57dBm), Mid Ch. 751 MHz, RE 1559-1610MHz |

**Graph:****Results:****EIPR Peak (PASS) (1)**

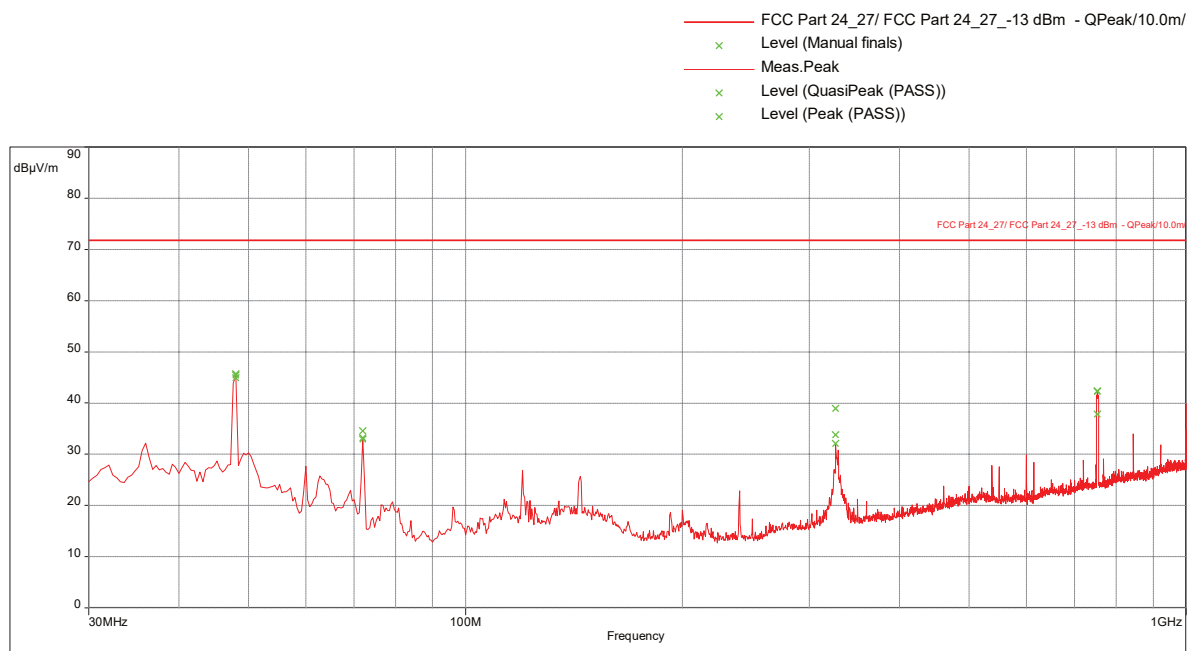
| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)   | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|------------|-----------------|
| 1612.157895     | 24.32               | -70.88           | -40              | -30.88           | 59.00       | 3.54       | Horizontal | 1000000.00 | -20.01          |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

**Radiated Emissions, 30 MHz-1 GHz**  
**Band 13 (4G LTE) With RP5200 Host, High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK**  
**(Worst-case output power 21.38 dBm)**

**Test Information:**

|                           |                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/13/2022 6:07:53 AM                                                                                           |
| Client and Project Number | CommScope                                                                                                      |
| Engineer                  | Vathana Ven                                                                                                    |
| Temperature               | 23 C                                                                                                           |
| Humidity                  | 20 %                                                                                                           |
| Atmospheric Pressure      | 998 mbar                                                                                                       |
| Comments                  | Scan 8: Band 13 With RP5200, 5MHz BW, QPSK Mod - Worst-case PWR (21.38 dBm), High Ch. 753.5 MHz, RE 30-1000MHz |

**Graph:****Results:**

Peak (PASS) (4)

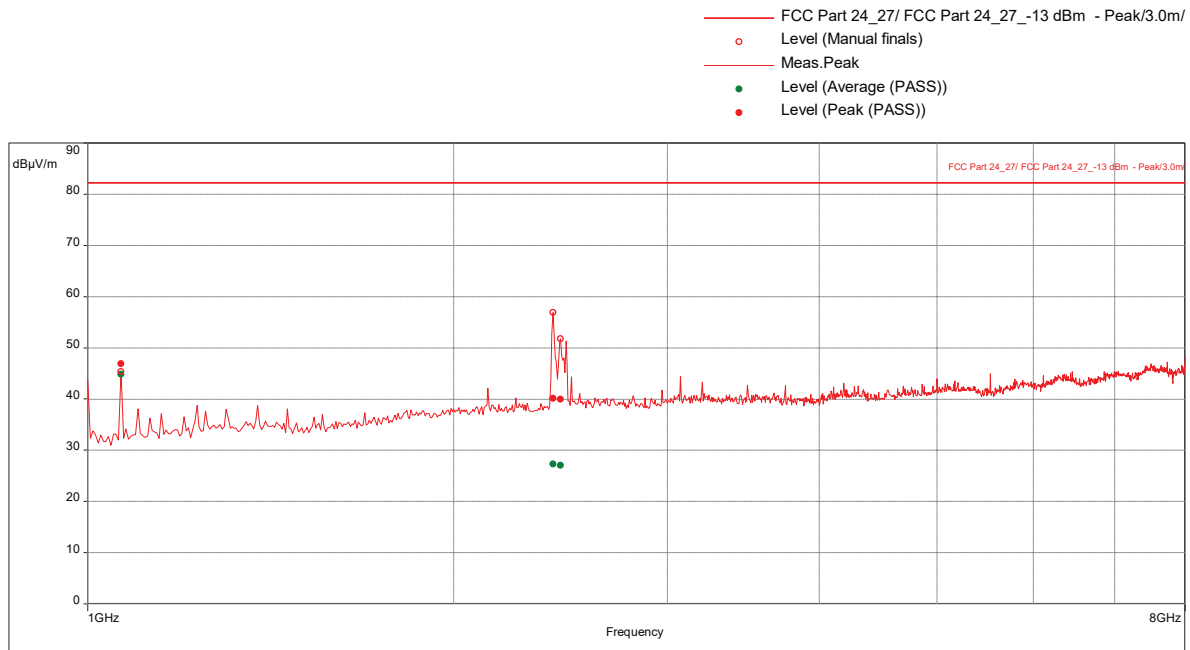
| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)  | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|-----------|-----------------|
| 48              | 45.72               | -39.08           | -13              | -26.08           | 252.00      | 1.00       | Vertical   | 120000.00 | -24.55          |
| 72              | 34.61               | -50.19           | -13              | -37.19           | 4.00        | 1.64       | Vertical   | 120000.00 | -25.08          |
| 326.4           | 38.93               | -45.87           | -13              | -32.87           | 307.00      | 3.98       | Horizontal | 120000.00 | -17.51          |
| 753.1368421     | 42.31               | -42.31           | -13              | -29.49           | 349.00      | 1.00       | Horizontal | 120000.00 | -8.73           |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

**Radiated Emissions, 1-8 GHz**  
**Band 13 (4G LTE) With RP5200 Host, High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK**  
**(Worst-case output power 21.38 dBm)**

**Test Information:**

|                           |                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/13/2022 6:48:52 AM                                                                                          |
| Client and Project Number | CommScope                                                                                                     |
| Engineer                  | Vathana Ven                                                                                                   |
| Temperature               | 23 C                                                                                                          |
| Humidity                  | 20 %                                                                                                          |
| Atmospheric Pressure      | 998 mbar                                                                                                      |
| Comments                  | Scan 9: Band 13 With RP5200, 5MHz BW, QPSK Mod - Worst-case PWR (21.38 dBm), High Ch. 753.5 MHz_RE 1 to 8 GHz |

**Graph:****Results:**

Peak (PASS) (3)

| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)   | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|------------|-----------------|
| 1066.578947     | 46.86               | -48.398          | -13              | -35.40           | 146.00      | 1.60       | Horizontal | 1000000.00 | -9.66           |
| 2413.684211     | 40.13               | -55.128          | -13              | -42.13           | 24.00       | 2.70       | Vertical   | 1000000.00 | -3.67           |
| 2448.157895     | 39.98               | -55.278          | -13              | -42.28           | 9.00        | 2.25       | Vertical   | 1000000.00 | -3.43           |

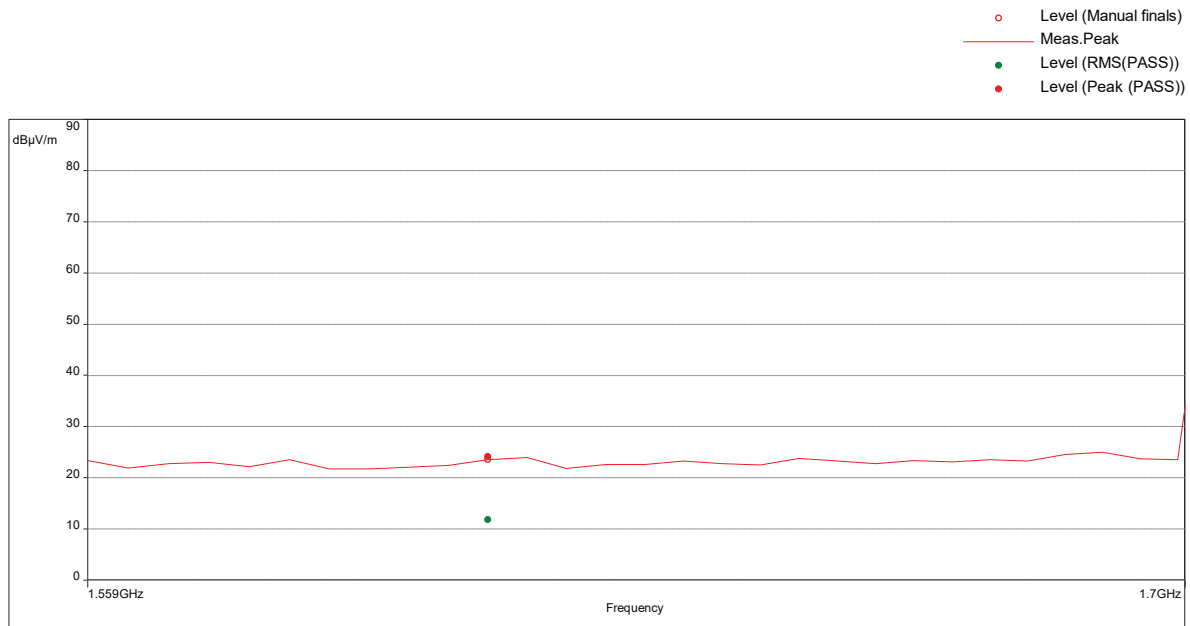
Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.



**Radiated Emissions, 1.559-1.610 GHz**  
**Band 13 (4G LTE) With RP5200 Host, High Channel 753.5 MHz, BW 5 MHz, Modulation QPSK**  
**(Worst-case output power 21.38 dBm)**

**Test Information:**

|                           |                                                                                                                           |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Date and Time             | 3/19/2022 10:08:36 AM                                                                                                     |
| Client and Project Number | CommScope                                                                                                                 |
| Engineer                  | Kouma Sinn                                                                                                                |
| Temperature               | 24 C                                                                                                                      |
| Humidity                  | 35 %                                                                                                                      |
| Atmospheric Pressure      | 1006 mbar                                                                                                                 |
| Comments                  | Scan 8: Band 13 With RP5200 With ant, 5MHz BW, QPSK Mod - Worst-case PWR (21.38 dBm), High Ch. 753.5 MHz, RE 1559-1610MHz |

**Graph:****Results:**

## EIPR Peak (PASS) (1)

| Frequency (MHz) | Peak Level (dBuV/m) | EIRP Level (dBm) | EIRP Limit (dBm) | EIRP Margin (dB) | Azimuth (°) | Height (m) | Pol.       | RBW (Hz)   | Correction (dB) |
|-----------------|---------------------|------------------|------------------|------------------|-------------|------------|------------|------------|-----------------|
| 1611.105263     | 24.17               | -71.03           | -40              | -31.03           | 116.00      | 3.98       | Horizontal | 1000000.00 | -20.03          |

Notes: The EIRP level (dBm) is calculated from the peak level readings (dBuV/m) as EIRP Level (dBm) = Peak Level (dBuV/m) + 20\*Log(d)-104.8, where d is the measurement distance (in far field region) in meter.

|                                                             |                           |                       |                                    |
|-------------------------------------------------------------|---------------------------|-----------------------|------------------------------------|
| Test Personnel:                                             | Kouma Sinn <i>KPS</i>     | Test Date:            | 03/11/2022, 03/12/2022, 03/19/2022 |
|                                                             | Vathana F. Ven <i>VSV</i> |                       | 03/13/2022                         |
| Supervising/Reviewing Engineer:<br>(Where Applicable)       | N/A                       |                       |                                    |
| Product Standard:                                           | FCC Part 27               | Limit Applied:        | See report section 10.3            |
| Input Voltage:                                              | 48 VDC (POE)              |                       |                                    |
| Pretest Verification w/<br>Ambient Signals or<br>BB Source: | N/A                       | Ambient Temperature:  | 23, 22, 23, 24 °C                  |
|                                                             |                           | Relative Humidity:    | 10, 29, 20, 35 %                   |
|                                                             |                           | Atmospheric Pressure: | 1010, 988, 998, 1006 mbars         |

Deviations, Additions, or Exclusions: None

**11 Revision History**

| Revision Level | Date       | Report Number     | Prepared By    | Reviewed By    | Notes          |
|----------------|------------|-------------------|----------------|----------------|----------------|
| 0              | 03/24/2022 | 104989879BOX-001a | KPS <i>KPS</i> | VFV <i>VFV</i> | Original Issue |
|                |            |                   |                |                |                |
|                |            |                   |                |                |                |
|                |            |                   |                |                |                |
|                |            |                   |                |                |                |
|                |            |                   |                |                |                |