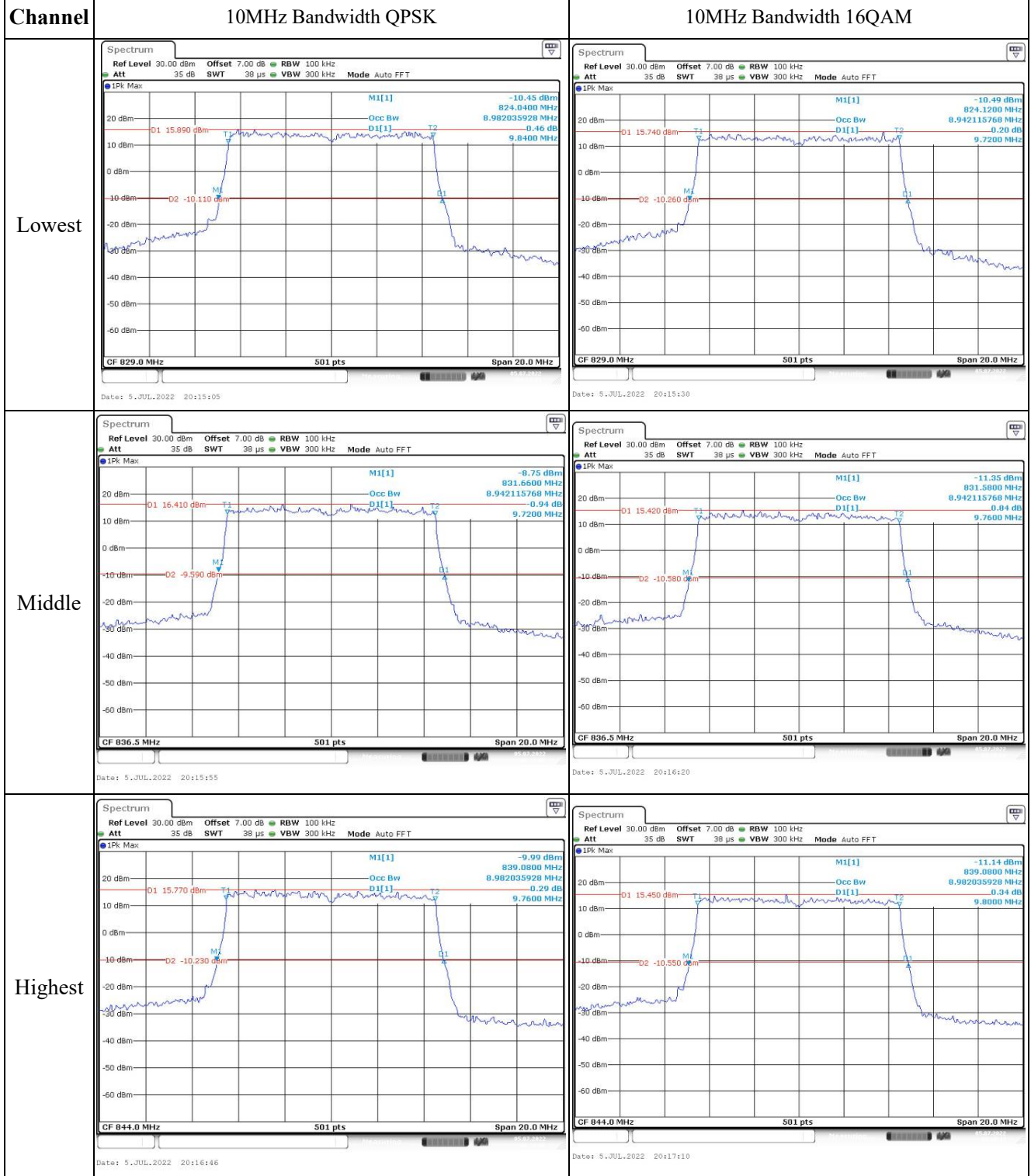


## Occupied Bandwidth

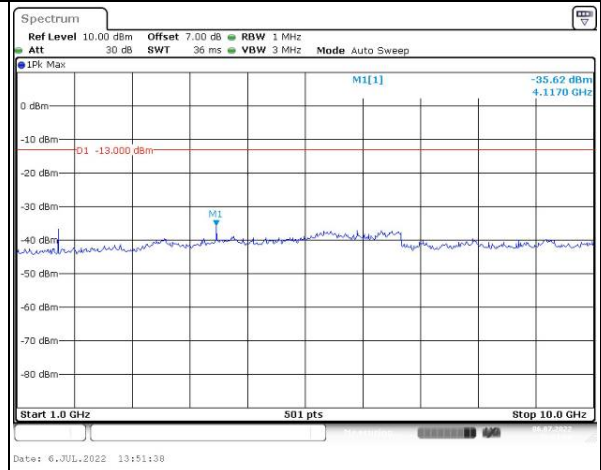
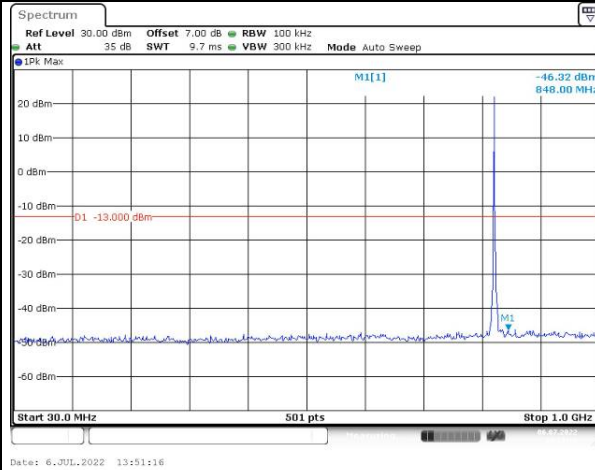


## Spurious Emissions at Antenna Terminal

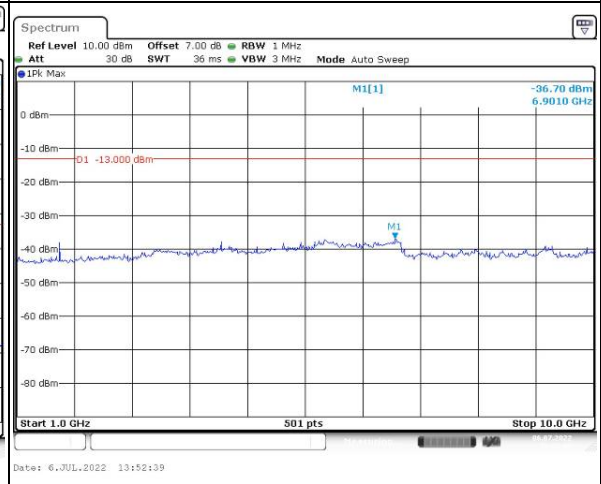
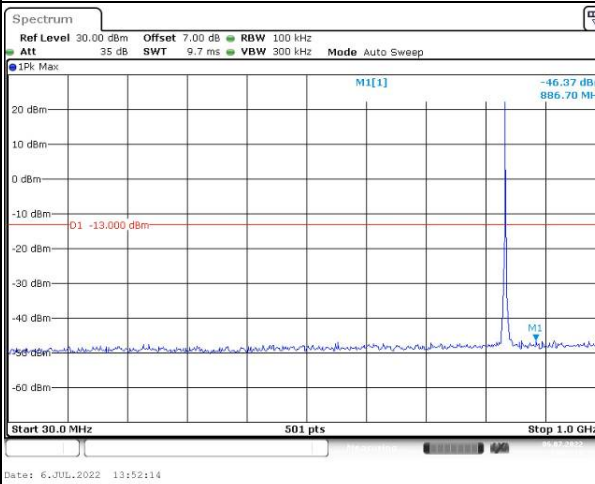
Channel

1.4MHz Bandwidth QPSK

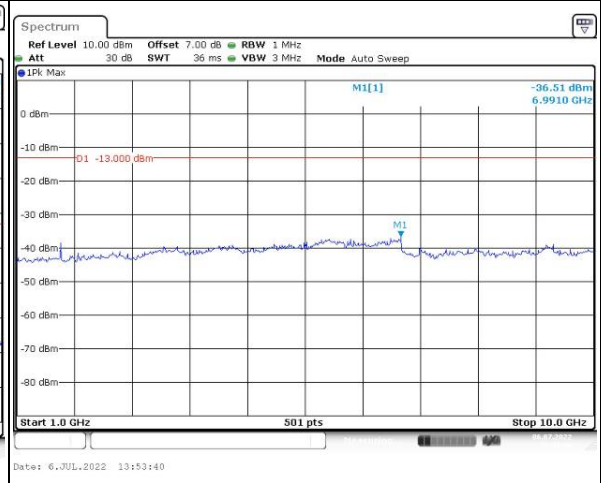
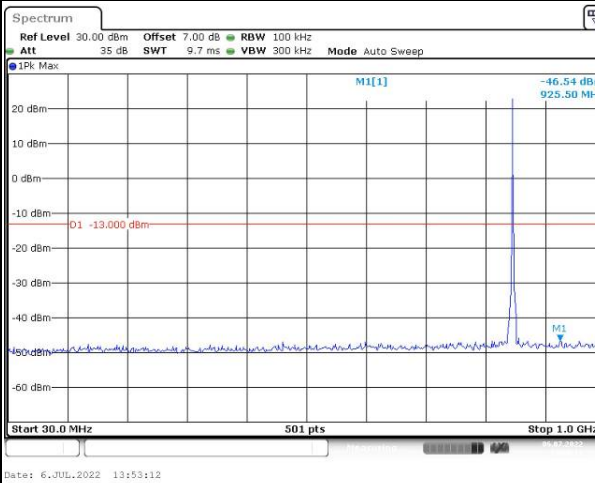
Lowest



Middle



Highest

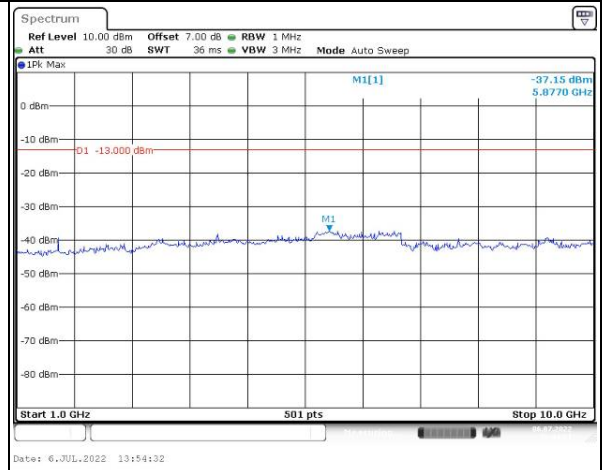
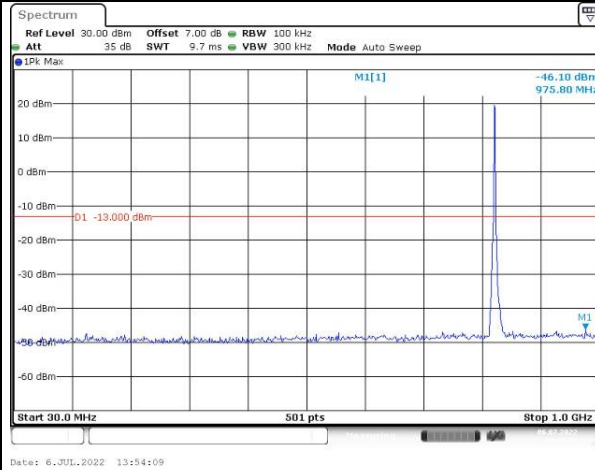


## Spurious Emissions at Antenna Terminal

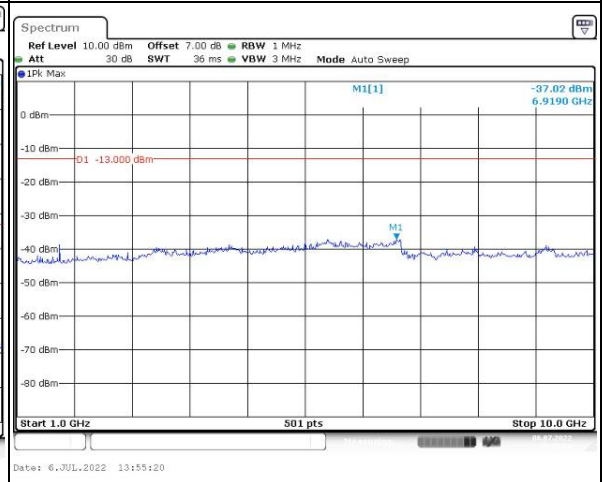
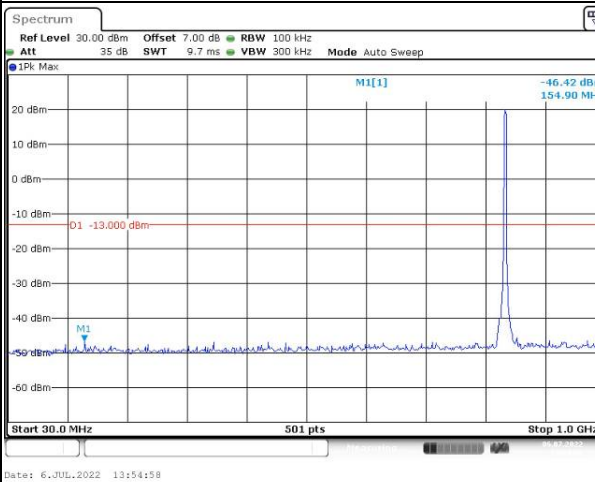
Channel

3MHz Bandwidth QPSK

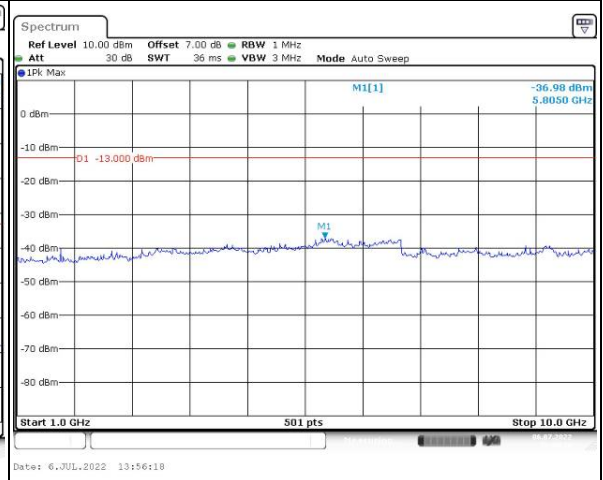
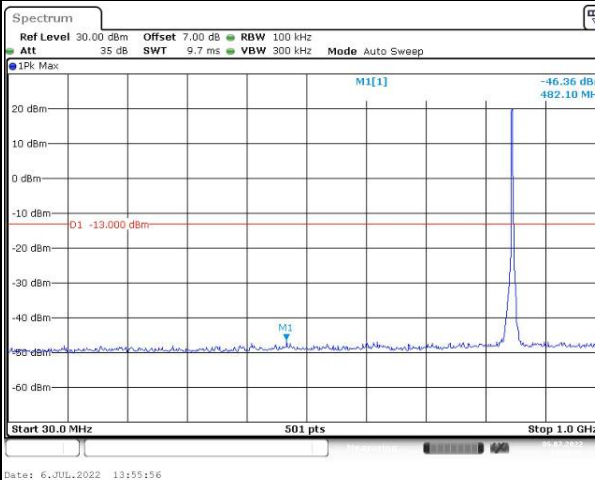
Lowest



Middle



Highest

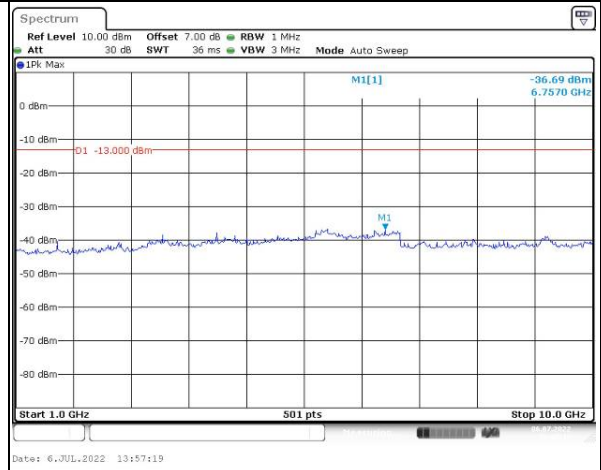
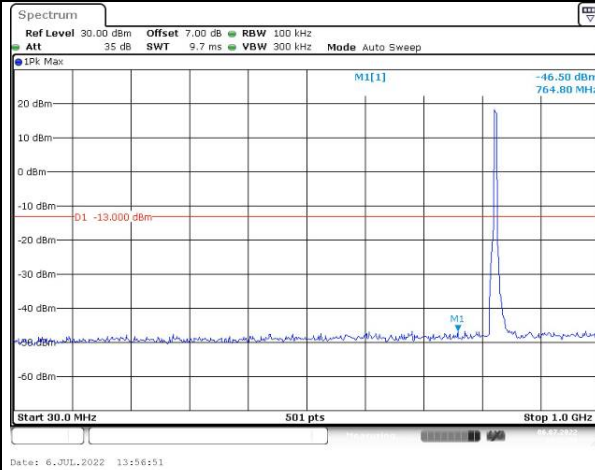


## Spurious Emissions at Antenna Terminal

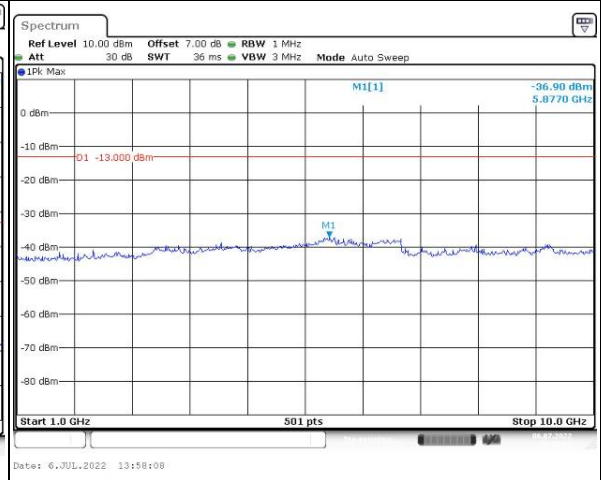
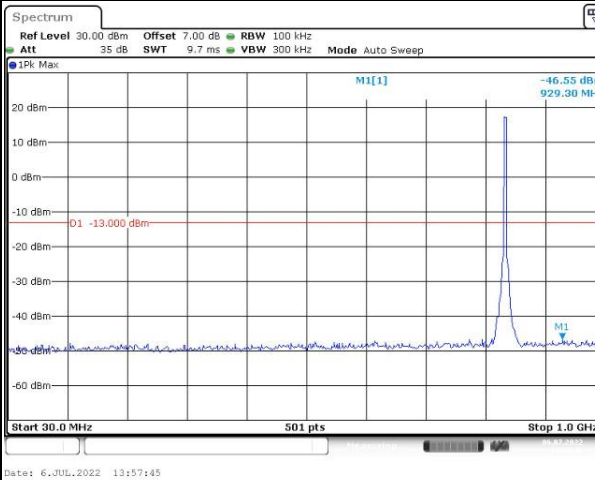
Channel

5MHz Bandwidth QPSK

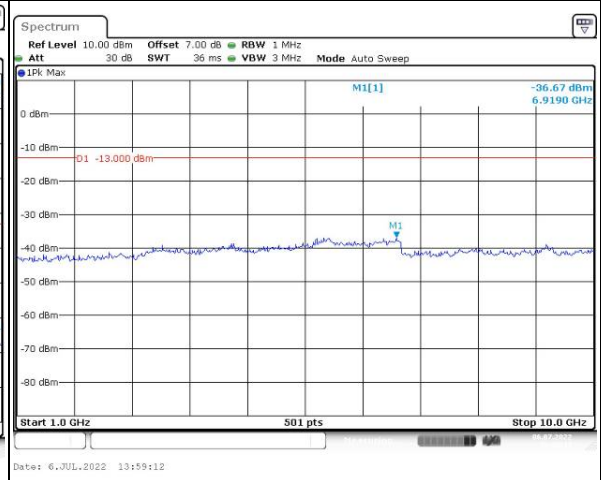
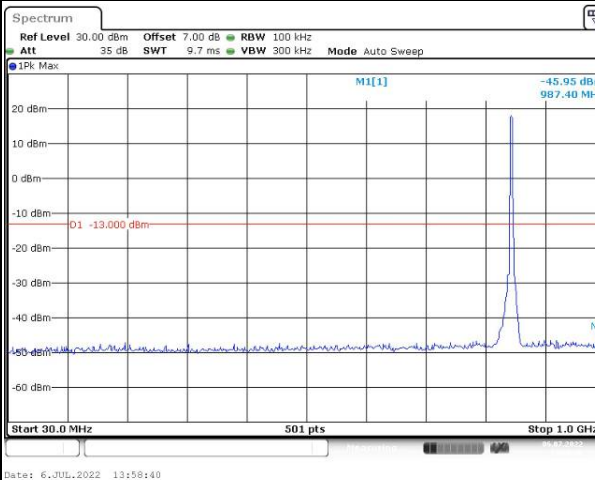
Lowest



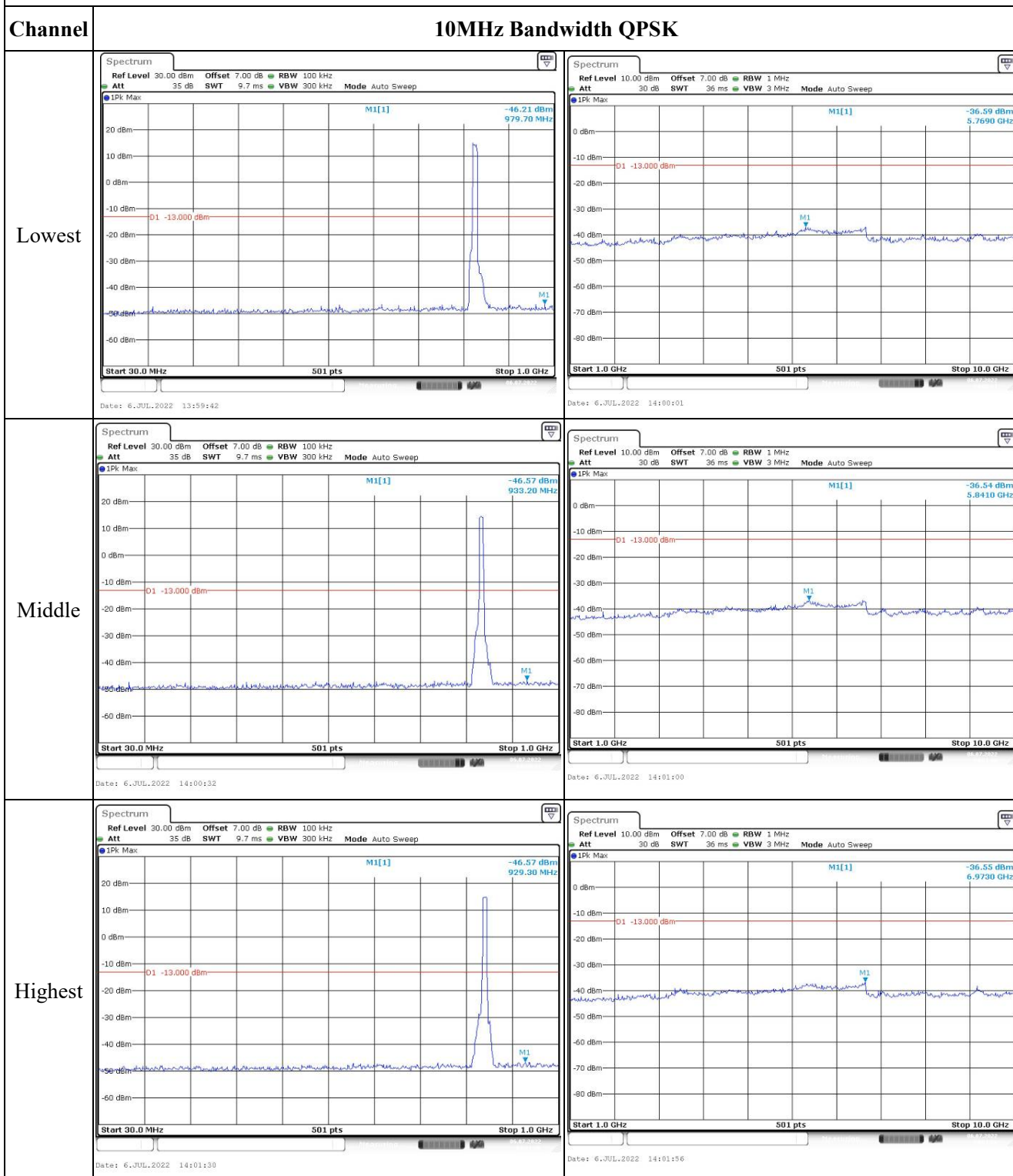
Middle



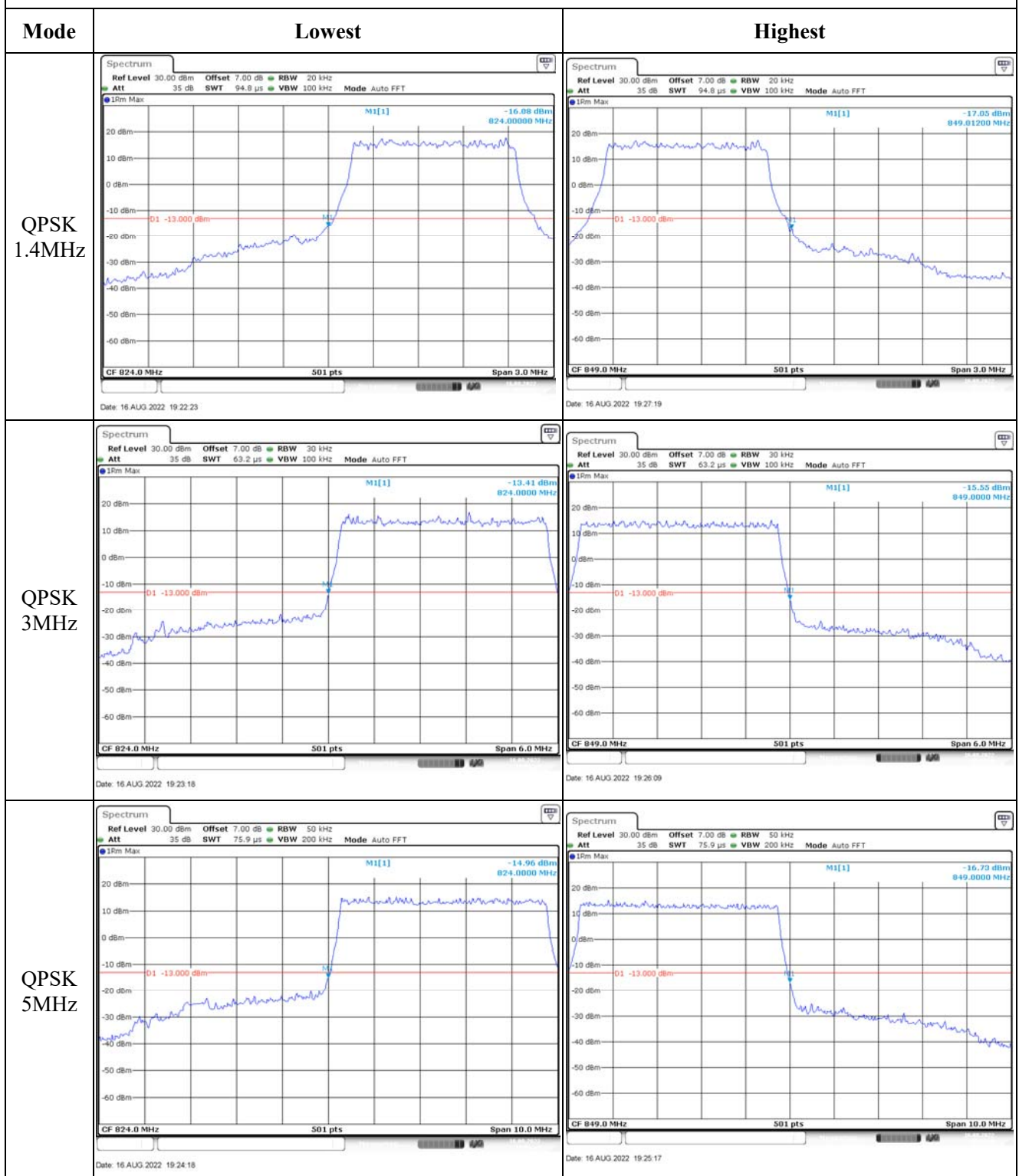
Highest



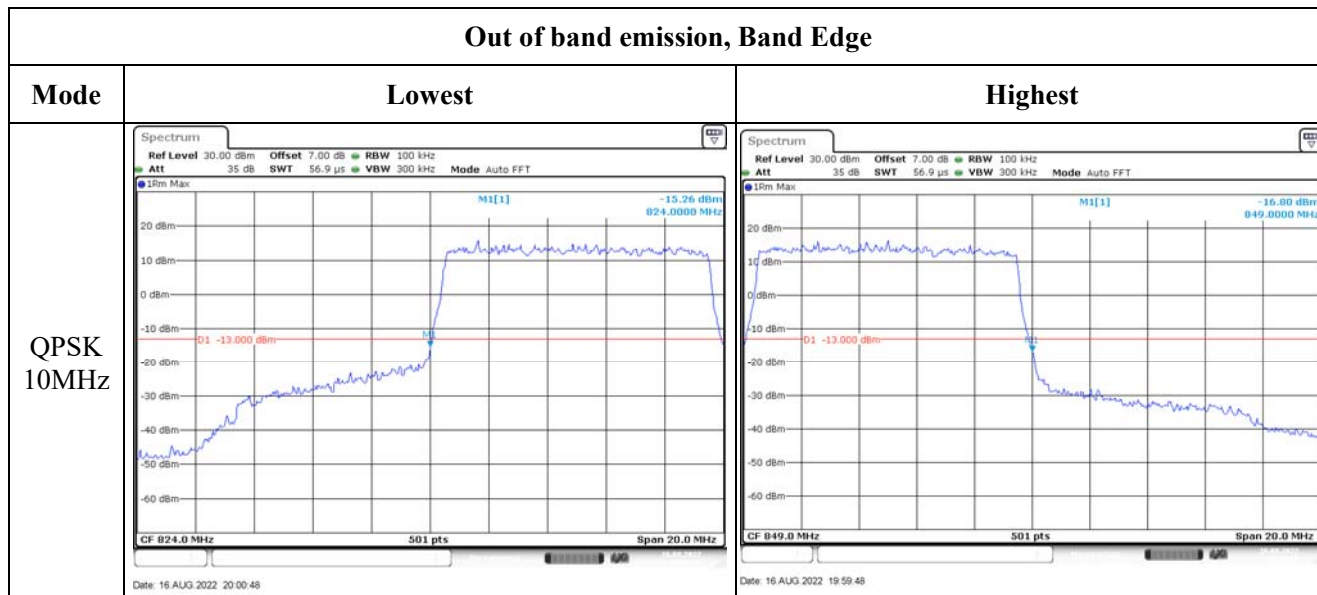
## Spurious Emissions at Antenna Terminal



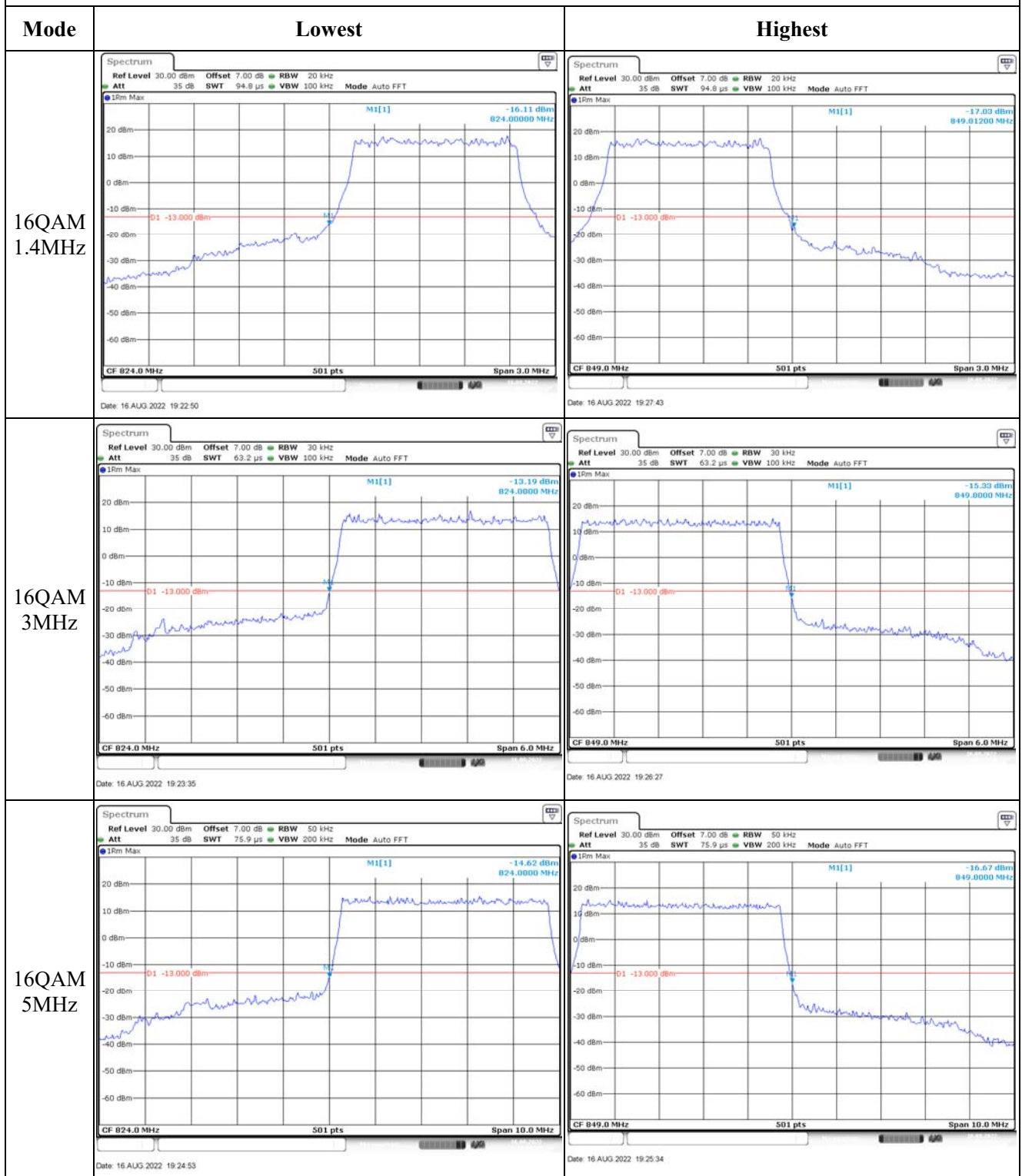
## Out of band emission, Band Edge



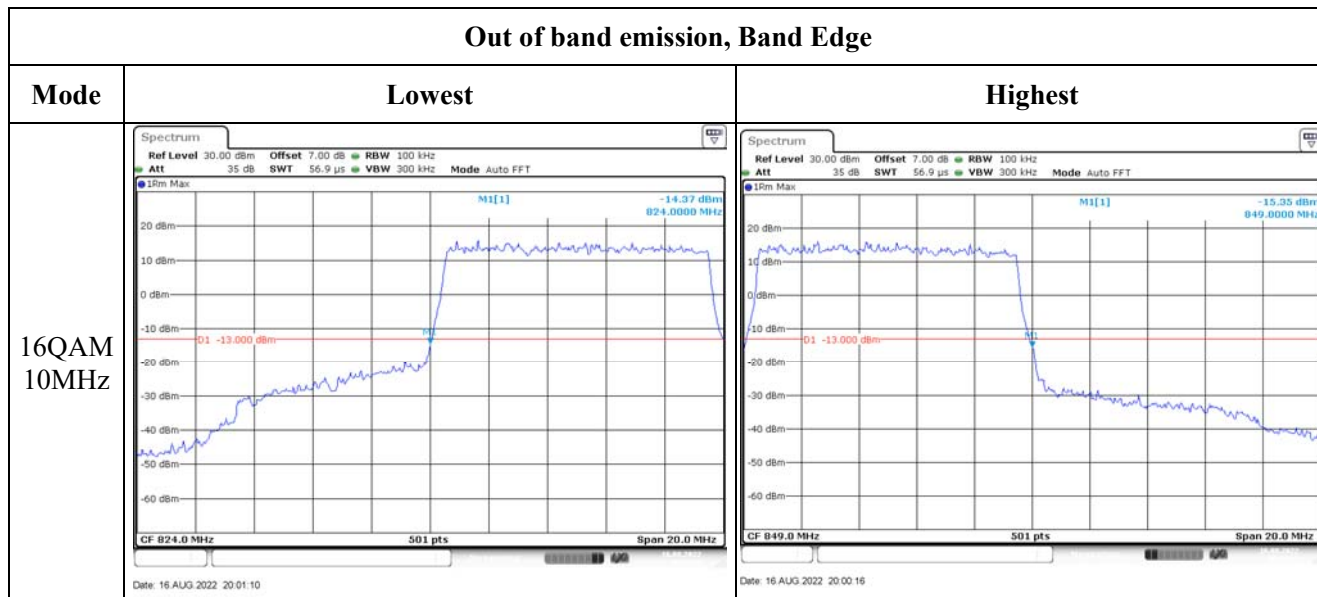
## Out of band emission, Band Edge



## Out of band emission, Band Edge



## Out of band emission, Band Edge



#### 4.6 Antenna Port Test Data and Results for LTE Band 12

|                |                   |              |                    |
|----------------|-------------------|--------------|--------------------|
| Serial Number: | CR220050077-RF-S1 | Test Date:   | 2022/7/5~2022/8/25 |
| Test Site:     | RF                | Test Mode:   | Transmitting       |
| Tester:        | Ted Min           | Test Result: | Pass               |

##### Environmental Conditions:

|                      |           |                           |       |                        |             |
|----------------------|-----------|---------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 24.5~26.7 | Relative Humidity:<br>(%) | 51~58 | ATM Pressure:<br>(kPa) | 100.1~100.3 |
|----------------------|-----------|---------------------------|-------|------------------------|-------------|

##### Test Equipment List and Details:

| Manufacturer | Description                         | Model      | Serial Number   | Calibration Date | Calibration Due Date |
|--------------|-------------------------------------|------------|-----------------|------------------|----------------------|
| R&S          | Spectrum Analyzer                   | FSV40      | 101943          | 2021-10-10       | 2022-10-09           |
| R&S          | Wideband Radio Communication Tester | CMW500     | 149218          | 2021-07-21       | 2022-07-20           |
| R&S          | Wideband Radio Communication Tester | CMW500     | 149218          | 2022-07-15       | 2023-07-14           |
| BACL         | TEMP&HUMI Test Chamber              | BTH-150-40 | 30174           | 2022-04-06       | 2023-04-05           |
| UNI-T        | Multimeter                          | UT39A+     | C210582554      | 2021-09-30       | 2022-09-29           |
| ZHAOXIN      | DC Power Supply                     | RXN-6010D  | 21R6010D0912386 | N/A              | N/A                  |
| zhuoxiang    | Coaxial Cable                       | SMA-178    | 211001          | Each time        | N/A                  |
| Unknown      | Coaxial tee connector               | Unknown    | 2204006         | Each time        | N/A                  |
| Unknown      | RF Cable                            | Unknown    | RF Cable 004    | Each time        | N/A                  |
| HuiXunDa     | DC Block                            | SMA-JK 18G | DCB181108042    | Each time        | N/A                  |
| Weinschel    | Coaxial Attenuators                 | 53-20-34   | LN751           | Each time        | N/A                  |

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

##### EUT Information@ LTE Band 12▲:

|                                      |       |                        |       |                                      |      |
|--------------------------------------|-------|------------------------|-------|--------------------------------------|------|
| Antenna Gain<br>(dBi):               | -2.61 | Antenna Gain<br>(dBd): | -4.76 | Path Loss<br>L <sub>C</sub><br>(dB): | 0.3  |
| Operation Voltage(V <sub>DC</sub> ): |       |                        |       |                                      |      |
| Lowest:                              | 6.66  | Normal:                | 7.4   | Highest:                             | 8.14 |

##### Test Frequency For Each Mode:

| Operation Bandwidth | Lowest Frequency (MHz) | Middle Frequency (MHz) | Highest Frequency (MHz) |
|---------------------|------------------------|------------------------|-------------------------|
| 1.4MHz              | 699.7                  | 707.5                  | 715.3                   |
| 3MHz                | 700.5                  | 707.5                  | 714.5                   |
| 5MHz                | 701.5                  | 707.5                  | 713.5                   |
| 10MHz               | 704                    | 707.5                  | 711                     |

**Test Data:****FCC§2.1046;§ 27.50(c) (10)****RF Output Power:**

| Test Bandwidth & Modulation | Resource Block & RB offset | Conducted Average Output Power(dBm) |                |                 | Maximum ERP (dBm) | ERP Limit (dBm) |
|-----------------------------|----------------------------|-------------------------------------|----------------|-----------------|-------------------|-----------------|
|                             |                            | Lowest Channel                      | Middle Channel | Highest Channel |                   |                 |
| 1.4MHz QPSK                 | RB1#0                      | 21.83                               | 21.94          | 21.91           | 17                | 34.77           |
|                             | RB1#3                      | 21.82                               | 22.06          | 21.86           |                   |                 |
|                             | RB1#5                      | 21.84                               | 22.01          | 21.87           |                   |                 |
|                             | RB3#0                      | 21.65                               | 21.83          | 21.7            |                   |                 |
|                             | RB3#3                      | 21.74                               | 21.88          | 21.79           |                   |                 |
|                             | RB6#0                      | 21.36                               | 21.46          | 21.35           |                   |                 |
| 1.4MHz 16QAM                | RB1#0                      | 21.45                               | 21.55          | 21.41           | 16.65             | 34.77           |
|                             | RB1#3                      | 21.51                               | 21.5           | 21.56           |                   |                 |
|                             | RB1#5                      | 21.68                               | 21.71          | 21.69           |                   |                 |
|                             | RB3#0                      | 21.5                                | 21.38          | 21.37           |                   |                 |
|                             | RB3#3                      | 21.51                               | 21.42          | 21.47           |                   |                 |
|                             | RB6#0                      | 21.24                               | 21.15          | 21.18           |                   |                 |
| 3MHz QPSK                   | RB1#0                      | 21.91                               | 21.89          | 21.93           | 16.97             | 34.77           |
|                             | RB1#8                      | 21.96                               | 21.97          | 21.89           |                   |                 |
|                             | RB1#14                     | 22                                  | 22.02          | 22.03           |                   |                 |
|                             | RB6#0                      | 21.94                               | 21.92          | 21.98           |                   |                 |
|                             | RB6#9                      | 21.98                               | 21.93          | 22.01           |                   |                 |
|                             | RB15#0                     | 21.69                               | 21.7           | 21.69           |                   |                 |
| 3MHz 16QAM                  | RB1#0                      | 21.55                               | 21.53          | 21.67           | 16.77             | 34.77           |
|                             | RB1#8                      | 21.6                                | 21.53          | 21.71           |                   |                 |
|                             | RB1#14                     | 21.6                                | 21.68          | 21.83           |                   |                 |
|                             | RB6#0                      | 21.6                                | 21.48          | 21.77           |                   |                 |
|                             | RB6#9                      | 21.72                               | 21.69          | 21.79           |                   |                 |
|                             | RB15#0                     | 21.2                                | 21.27          | 21.49           |                   |                 |
| 5MHz QPSK                   | RB1#0                      | 21.87                               | 21.89          | 21.83           | 17.08             | 34.77           |
|                             | RB1#13                     | 22.02                               | 22.01          | 21.9            |                   |                 |
|                             | RB1#24                     | 22.14                               | 22.1           | 21.86           |                   |                 |
|                             | RB15#0                     | 22.12                               | 21.97          | 21.85           |                   |                 |
|                             | RB15#10                    | 22.05                               | 22.1           | 21.88           |                   |                 |
|                             | RB25#0                     | 21.87                               | 21.69          | 21.61           |                   |                 |
| 5MHz 16QAM                  | RB1#0                      | 21.88                               | 21.76          | 21.65           | 16.88             | 34.77           |
|                             | RB1#13                     | 21.94                               | 21.73          | 21.71           |                   |                 |
|                             | RB1#24                     | 21.92                               | 21.75          | 21.63           |                   |                 |
|                             | RB15#0                     | 21.84                               | 21.58          | 21.65           |                   |                 |
|                             | RB15#10                    | 21.92                               | 21.63          | 21.67           |                   |                 |
|                             | RB25#0                     | 21.45                               | 21.38          | 21.34           |                   |                 |
| 10MHz QPSK                  | RB1#0                      | 21.96                               | 21.97          | 21.91           | 17.18             | 34.77           |
|                             | RB1#25                     | 21.91                               | 22.09          | 22.01           |                   |                 |

|                                                                     |         |       |       |       |         |       |
|---------------------------------------------------------------------|---------|-------|-------|-------|---------|-------|
|                                                                     | RB1#49  | 21.95 | 22.24 | 22.03 |         |       |
|                                                                     | RB25#0  | 21.76 | 22.13 | 21.99 |         |       |
|                                                                     | RB25#25 | 21.75 | 22.09 | 21.95 |         |       |
|                                                                     | RB50#0  | 21.41 | 21.76 | 21.7  |         |       |
| 10MHz 16QAM                                                         | RB1#0   | 21.42 | 21.62 | 21.5  | 16.59   | 34.77 |
|                                                                     | RB1#25  | 21.53 | 21.59 | 21.5  |         |       |
|                                                                     | RB1#49  | 21.64 | 21.62 | 21.48 |         |       |
|                                                                     | RB25#0  | 21.5  | 21.55 | 21.41 |         |       |
|                                                                     | RB25#25 | 21.49 | 21.65 | 21.55 |         |       |
|                                                                     | RB50#0  | 21.23 | 21.15 | 21.06 |         |       |
| Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd) |         |       |       |       |         |       |
|                                                                     |         |       |       |       | Result: | Pass  |

| Peak-to-average Ratio(PAR)  |                            |                           |                |                 |             |
|-----------------------------|----------------------------|---------------------------|----------------|-----------------|-------------|
| Test Bandwidth & Modulation | Resource Block & RB offset | Peak-to-average Ratio(dB) |                |                 | Limit (dB)  |
|                             |                            | Lowest Channel            | Middle Channel | Highest Channel |             |
| 10MHz QPSK                  | RB1#0                      | 3.16                      | 3.21           | 3.24            | 13          |
|                             | RB50#0                     | 5.26                      | 5.3            | 5.21            | 13          |
| 10MHz 16QAM                 | RB1#0                      | 4.09                      | 4.16           | 4.14            | 13          |
|                             | RB50#0                     | 6.09                      | 6.15           | 6.11            | 13          |
| <b>Result:</b>              |                            |                           |                |                 | <b>Pass</b> |

| FCC §2.1049, §27.53:Occupied Bandwidth                               |                              |                |              |                                |                |              |
|----------------------------------------------------------------------|------------------------------|----------------|--------------|--------------------------------|----------------|--------------|
| Operation Mode                                                       | 99% Occupied Bandwidth (MHz) |                |              | 26 dB Occupied Bandwidth (MHz) |                |              |
|                                                                      | Low Channel                  | Middle channel | High Channel | Low Channel                    | Middle Channel | High Channel |
| 1.4MHz QPSK                                                          | 1.102                        | 1.102          | 1.106        | 1.302                          | 1.32           | 1.29         |
| 1.4MHz 16QAM                                                         | 1.102                        | 1.096          | 1.096        | 1.32                           | 1.296          | 1.296        |
| 3MHz QPSK                                                            | 2.965                        | 2.695          | 2.683        | 2.94                           | 2.94           | 2.952        |
| 3MHz 16QAM                                                           | 2.683                        | 2.683          | 2.683        | 2.964                          | 2.964          | 2.952        |
| 5MHz QPSK                                                            | 4.511                        | 4.531          | 4.491        | 5                              | 5.08           | 4.98         |
| 5MHz 16QAM                                                           | 4.471                        | 4.551          | 4.511        | 5                              | 5.06           | 5.04         |
| 10MHz QPSK                                                           | 8.982                        | 9.022          | 8.942        | 9.76                           | 9.84           | 9.68         |
| 10MHz 16QAM                                                          | 8.942                        | 9.022          | 8.942        | 9.64                           | 9.88           | 9.68         |
| Note: The test plots please refer to the Plots of Occupied Bandwidth |                              |                |              |                                |                |              |

**FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal**

|                |                                                                                        |
|----------------|----------------------------------------------------------------------------------------|
| <b>Result:</b> | <b>Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.</b> |
|----------------|----------------------------------------------------------------------------------------|

**FCC §2.1051, §27.53:Out of band emission, Band Edge**

|                |                                                                                 |
|----------------|---------------------------------------------------------------------------------|
| <b>Result:</b> | <b>Pass, Please refer to the test plots of Out of band emission, Band Edge.</b> |
|----------------|---------------------------------------------------------------------------------|

**FCC §2.1055, §27.54: Frequency Stability**

| Test Mode:                          | 10M QPSK         | Test Channel: Lowest for Lower Edge,Highest for Upper Edge |                  |        |                  |             |
|-------------------------------------|------------------|------------------------------------------------------------|------------------|--------|------------------|-------------|
| Test Item                           | Temperature (°C) | Voltage (V <sub>DC</sub> )                                 | Lower Edge (MHz) |        | Upper Edge (MHz) |             |
|                                     |                  |                                                            | Result           | Limit  | Result           | Limit       |
| Frequency Stability vs. Temperature | -30              | 7.4                                                        | 699.296          | 699.00 | 715.839          | 716.00      |
|                                     | -20              | 7.4                                                        | 699.447          | 699.00 | 715.837          | 716.00      |
|                                     | -10              | 7.4                                                        | 699.318          | 699.00 | 715.679          | 716.00      |
|                                     | 0                | 7.4                                                        | 699.414          | 699.00 | 715.801          | 716.00      |
|                                     | 10               | 7.4                                                        | 699.337          | 699.00 | 715.709          | 716.00      |
|                                     | 20               | 7.4                                                        | 699.304          | 699.00 | 715.778          | 716.00      |
|                                     | 30               | 7.4                                                        | 699.338          | 699.00 | 715.762          | 716.00      |
|                                     | 40               | 7.4                                                        | 699.422          | 699.00 | 715.707          | 716.00      |
|                                     | 50               | 7.4                                                        | 699.318          | 699.00 | 715.835          | 716.00      |
| Frequency Stability vs. Voltage     | 20               | 6.66                                                       | 699.435          | 699.00 | 715.805          | 716.00      |
|                                     | 20               | 8.14                                                       | 699.333          | 699.00 | 715.702          | 716.00      |
|                                     |                  |                                                            |                  |        | <b>Result:</b>   | <b>Pass</b> |

| Test Mode:                          | 10M 16QAM        | Test Channel: Lowest for Lower Edge,Highest for Upper Edge |                  |        |                  |             |
|-------------------------------------|------------------|------------------------------------------------------------|------------------|--------|------------------|-------------|
| Test Item                           | Temperature (°C) | Voltage (V <sub>DC</sub> )                                 | Lower Edge (MHz) |        | Upper Edge (MHz) |             |
|                                     |                  |                                                            | Result           | Limit  | Result           | Limit       |
| Frequency Stability vs. Temperature | -30              | 7.4                                                        | 699.447          | 699.00 | 715.725          | 716.00      |
|                                     | -20              | 7.4                                                        | 699.352          | 699.00 | 715.683          | 716.00      |
|                                     | -10              | 7.4                                                        | 699.405          | 699.00 | 715.684          | 716.00      |
|                                     | 0                | 7.4                                                        | 699.359          | 699.00 | 715.677          | 716.00      |
|                                     | 10               | 7.4                                                        | 699.419          | 699.00 | 715.701          | 716.00      |
|                                     | 20               | 7.4                                                        | 699.282          | 699.00 | 715.711          | 716.00      |
|                                     | 30               | 7.4                                                        | 699.426          | 699.00 | 715.815          | 716.00      |
|                                     | 40               | 7.4                                                        | 699.433          | 699.00 | 715.837          | 716.00      |
|                                     | 50               | 7.4                                                        | 699.417          | 699.00 | 715.786          | 716.00      |
| Frequency Stability vs. Voltage     | 20               | 6.66                                                       | 699.329          | 699.00 | 715.771          | 716.00      |
|                                     | 20               | 8.14                                                       | 699.253          | 699.00 | 715.789          | 716.00      |
|                                     |                  |                                                            |                  |        | <b>Result:</b>   | <b>Pass</b> |

## Occupied Bandwidth

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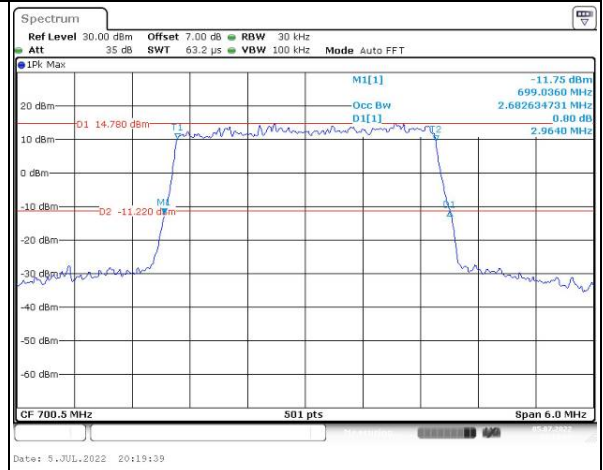
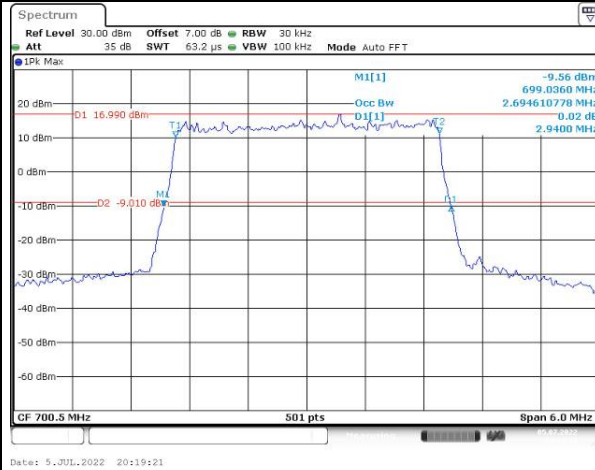
## Occupied Bandwidth

## Channel

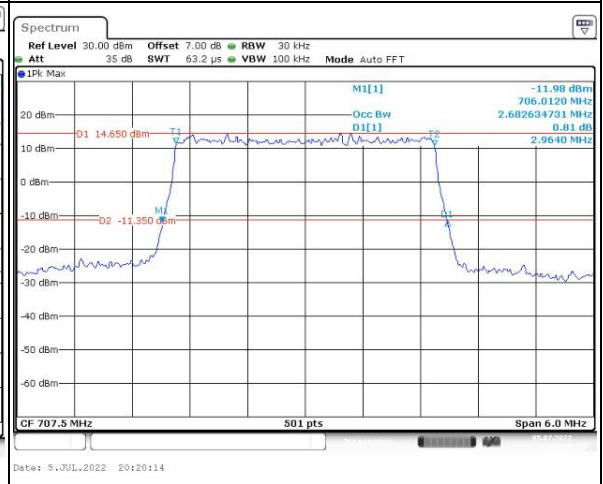
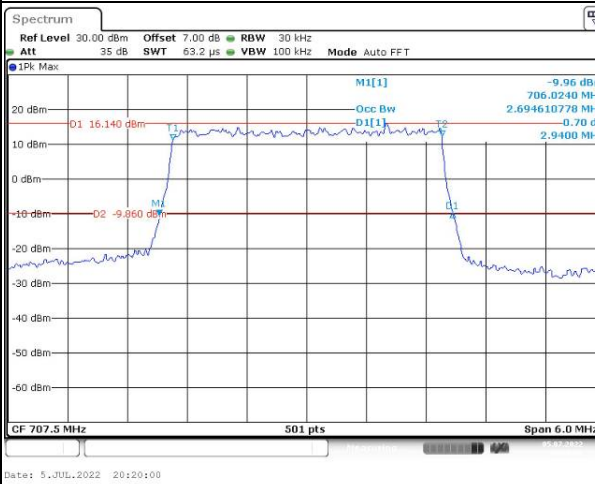
## 3MHz Bandwidth QPSK

## 3MHz Bandwidth 16QAM

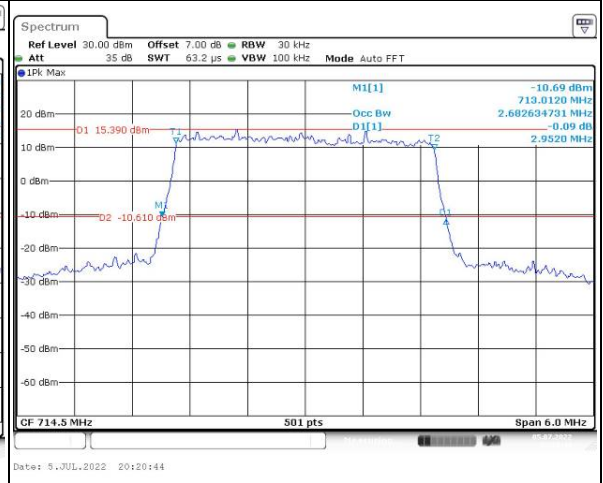
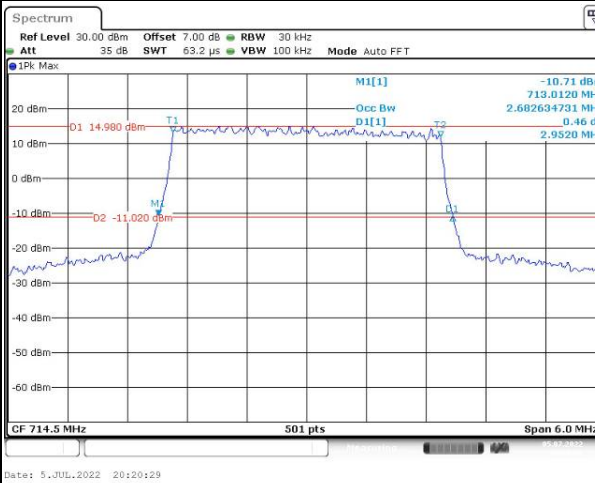
## Lowest



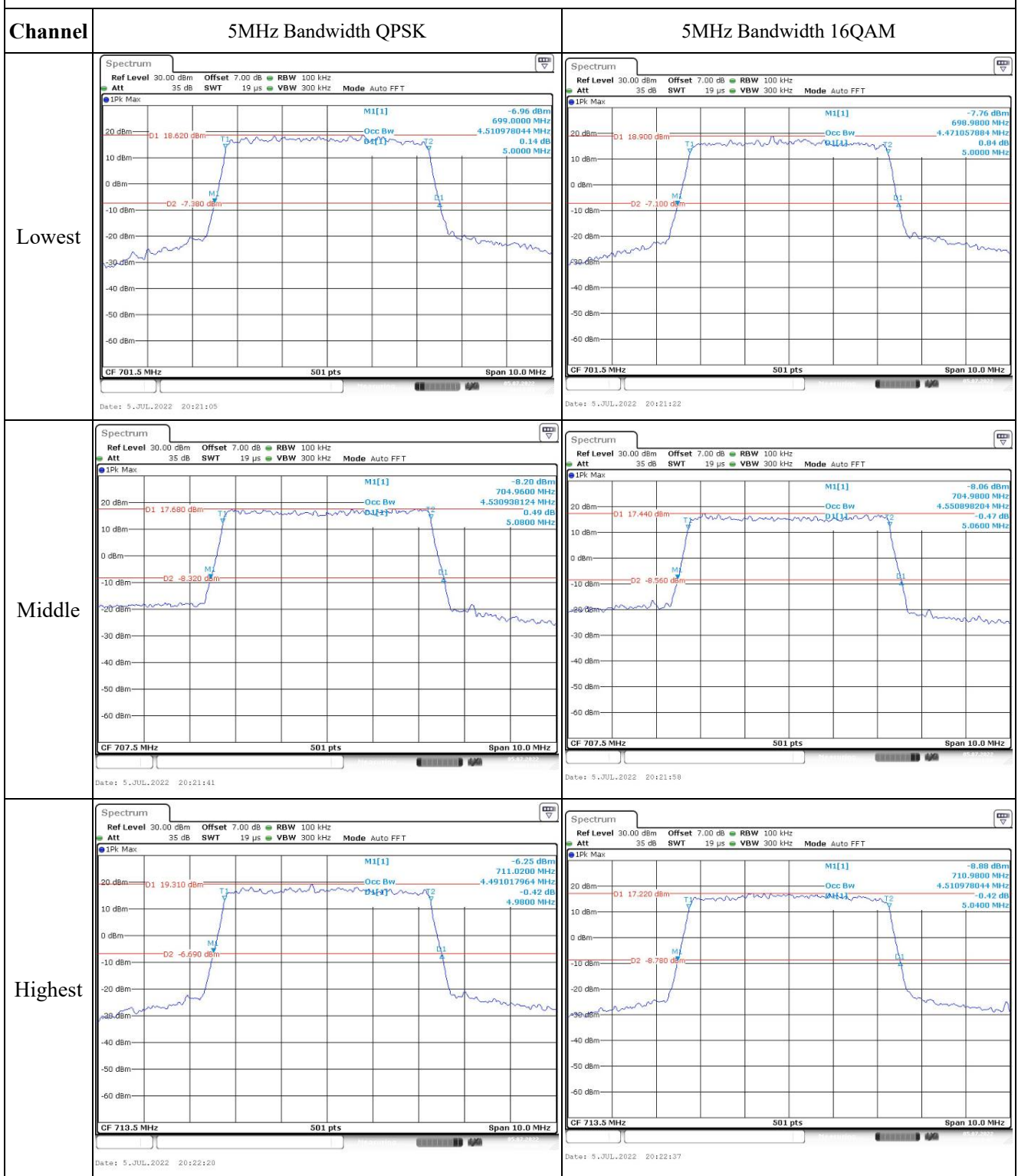
## Middle



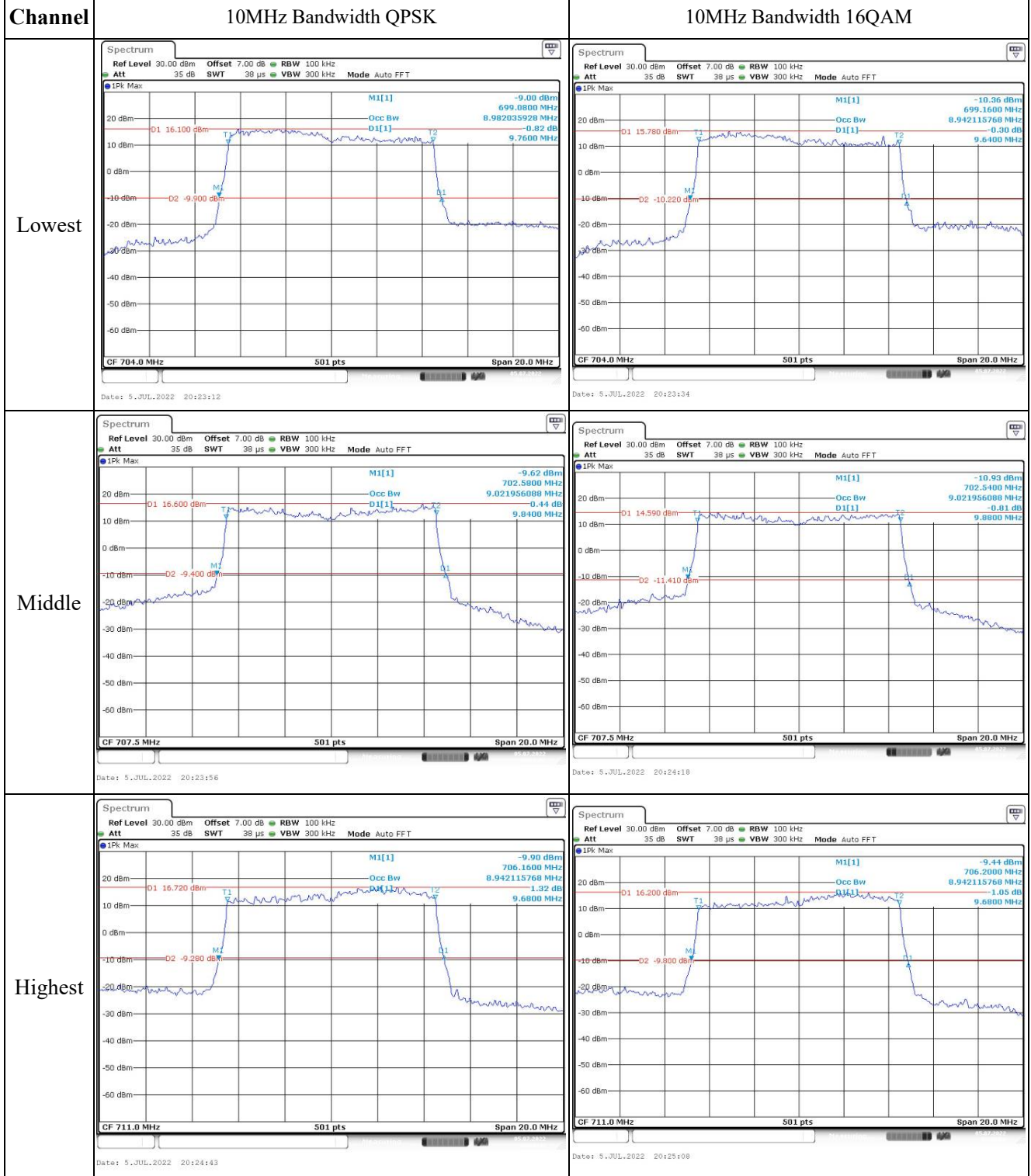
## Highest



## Occupied Bandwidth



## Occupied Bandwidth

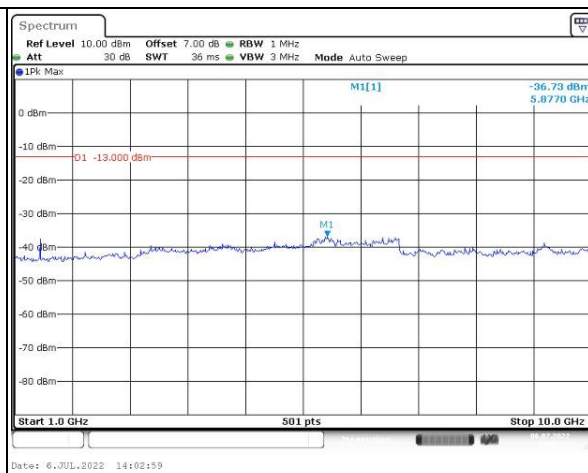
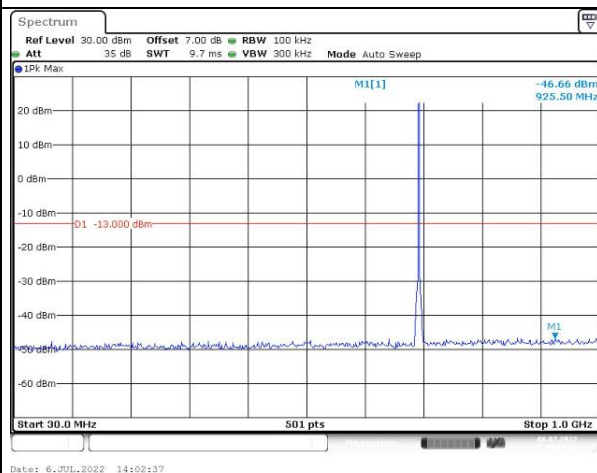


## Spurious Emissions at Antenna Terminal

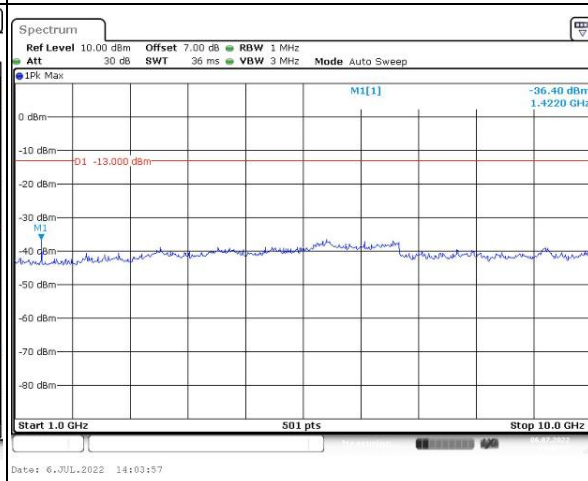
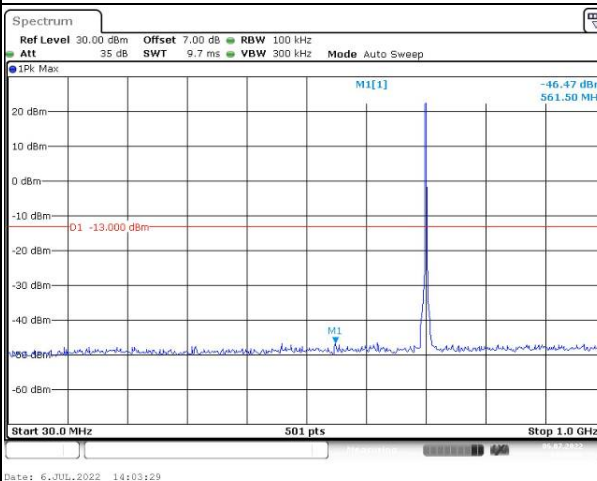
Channel

1.4MHz Bandwidth QPSK

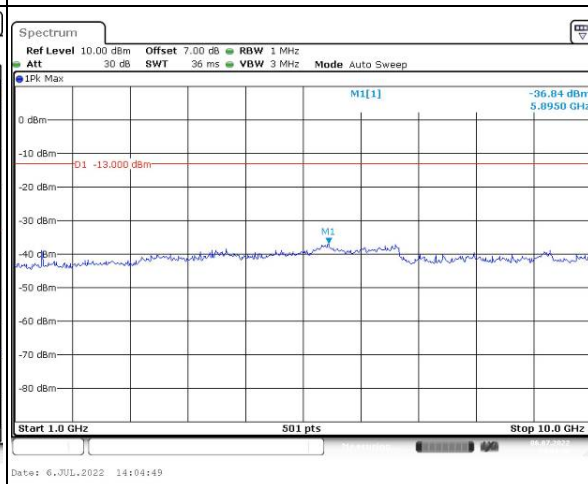
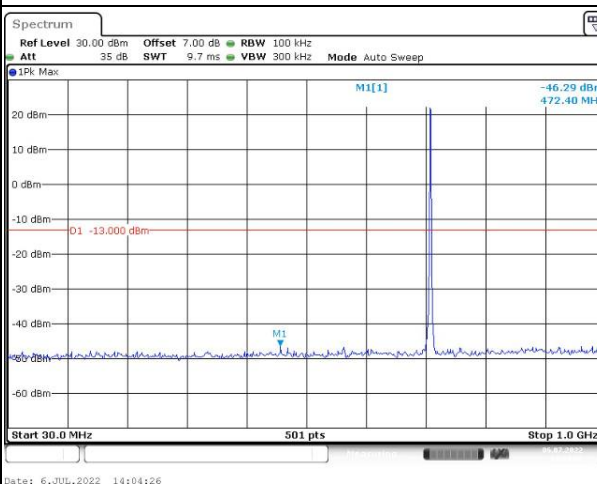
Lowest



Middle



Highest

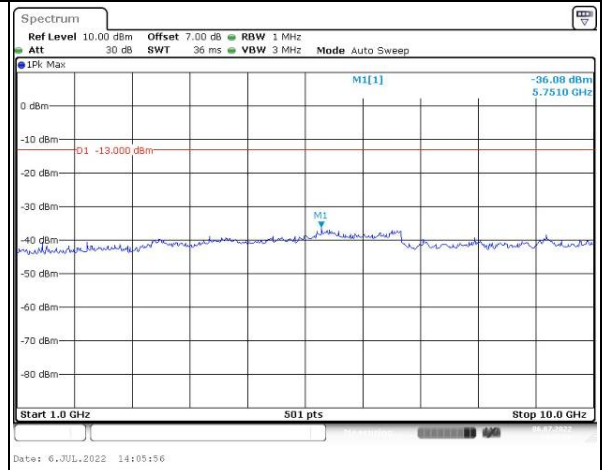
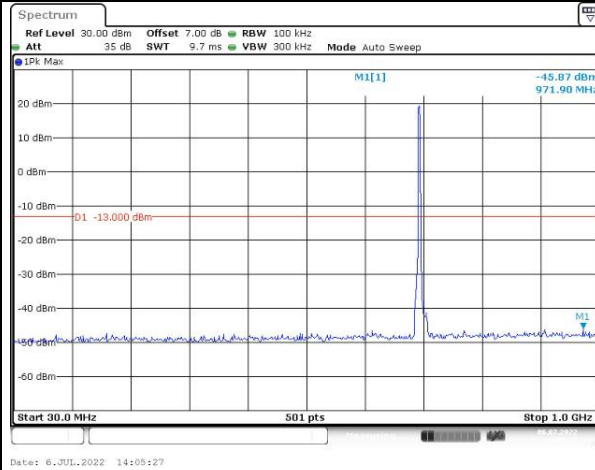


## Spurious Emissions at Antenna Terminal

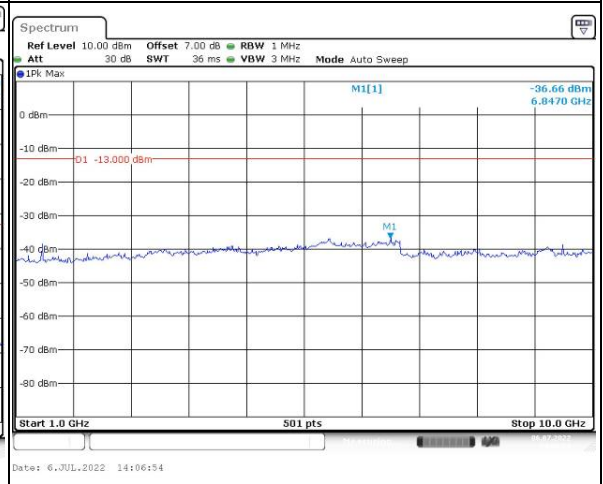
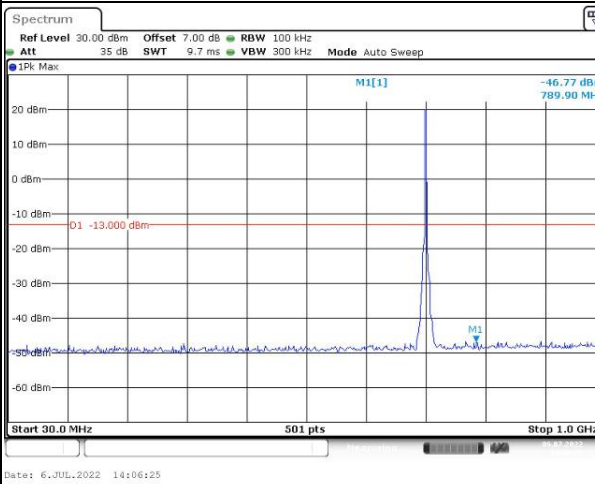
Channel

3MHz Bandwidth QPSK

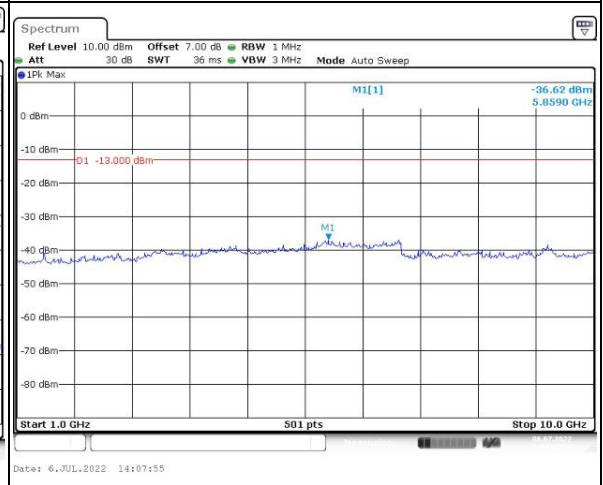
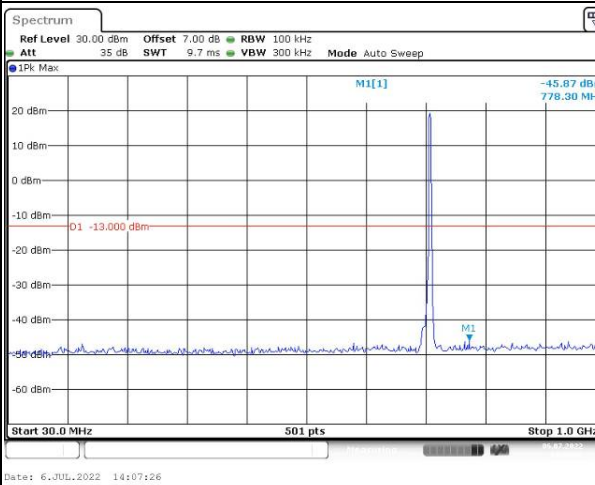
Lowest



Middle



Highest

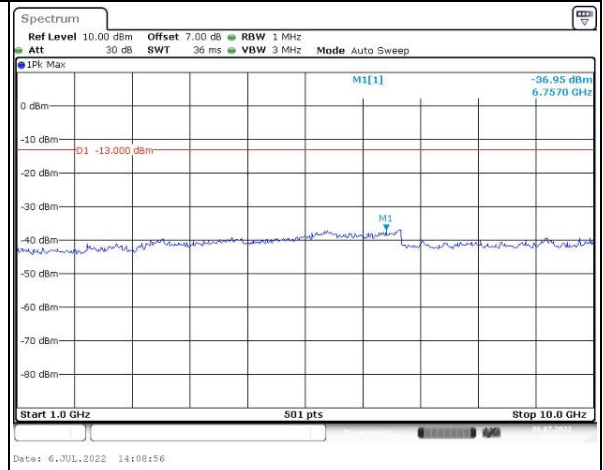
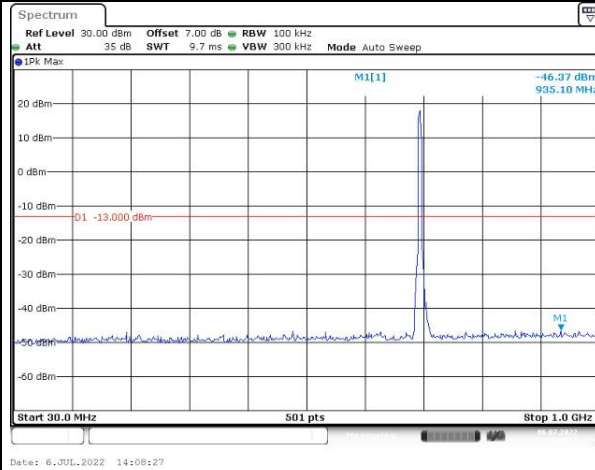


## Spurious Emissions at Antenna Terminal

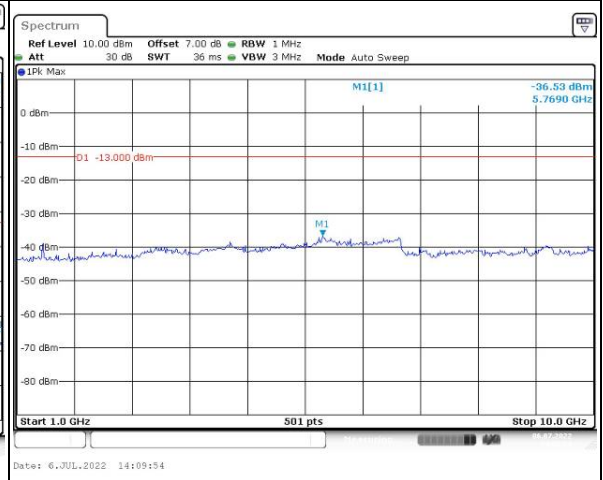
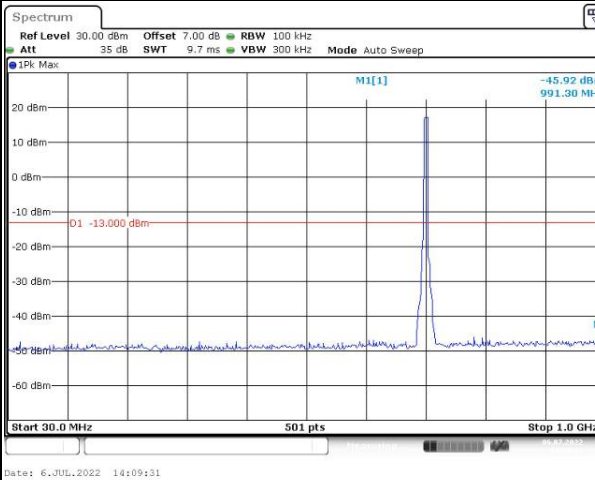
Channel

5MHz Bandwidth QPSK

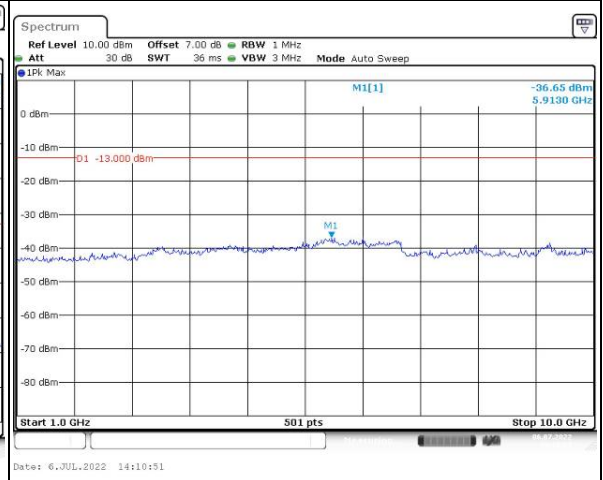
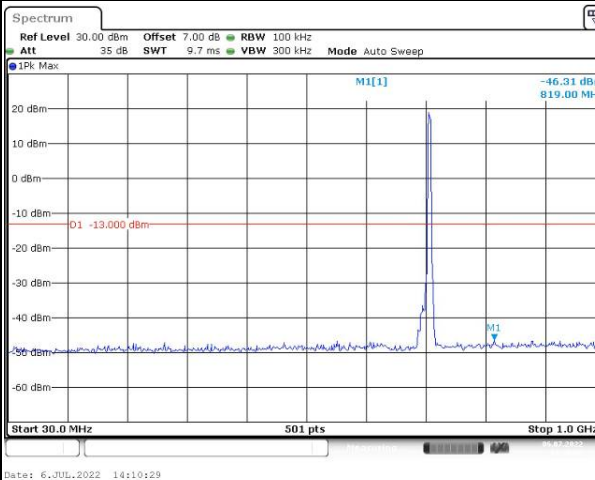
Lowest



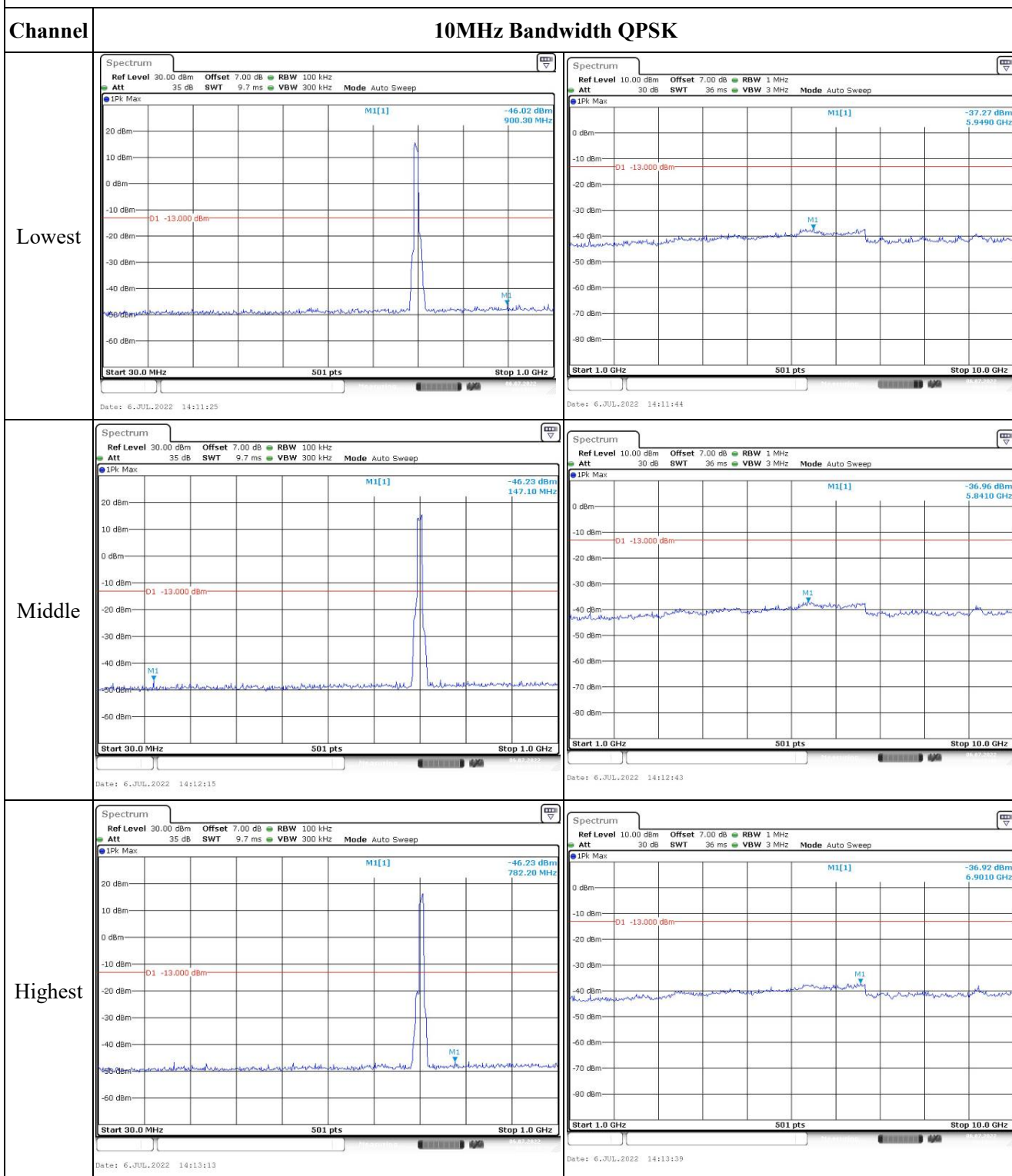
Middle



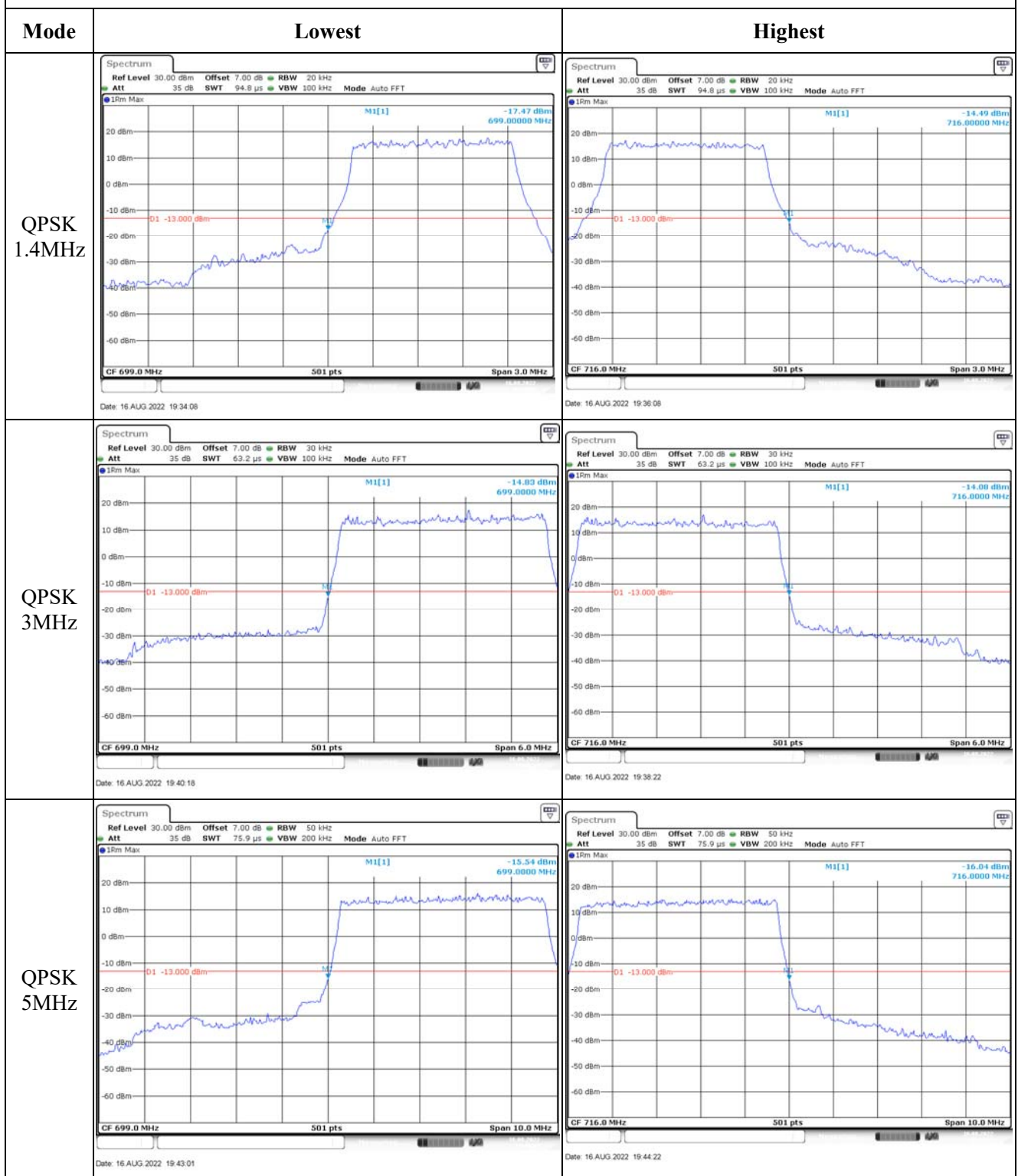
Highest



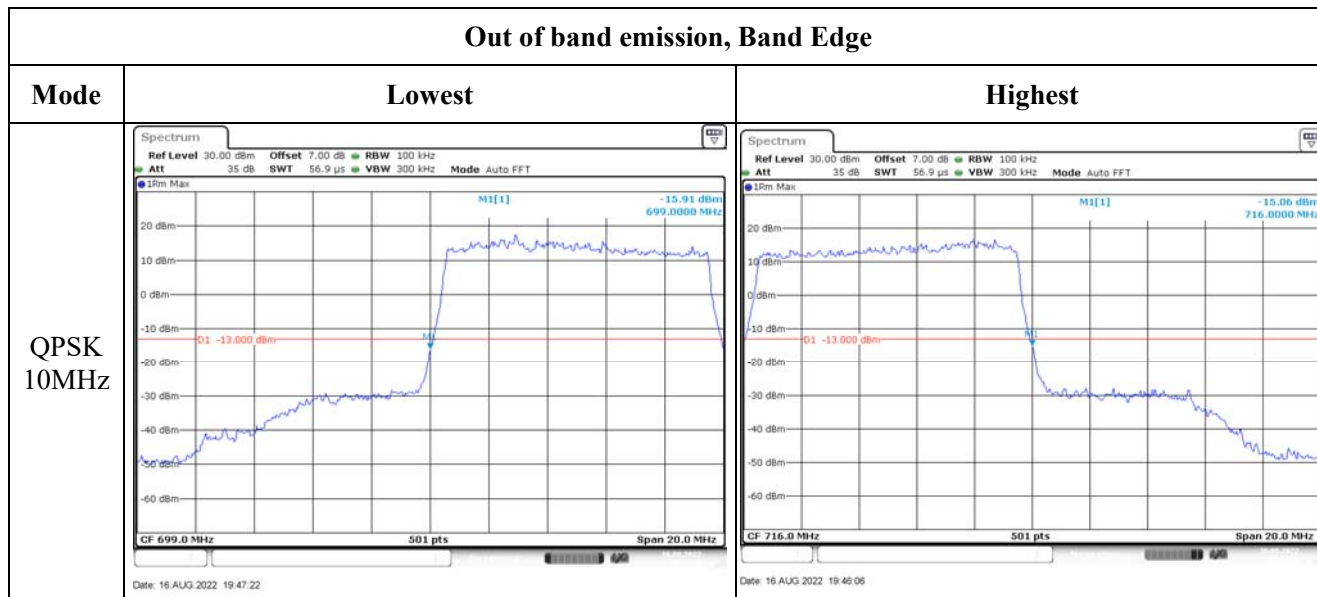
## Spurious Emissions at Antenna Terminal



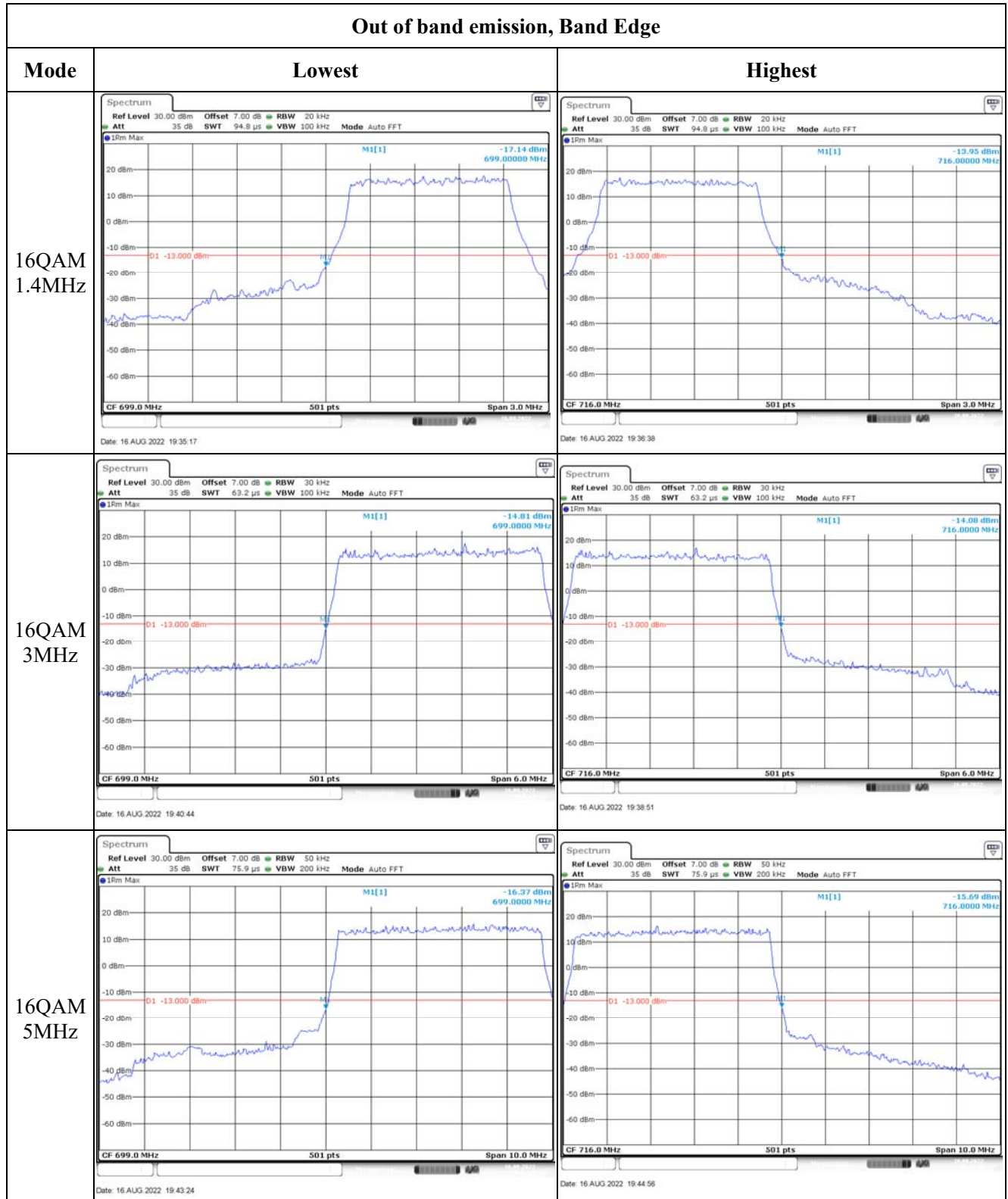
## Out of band emission, Band Edge



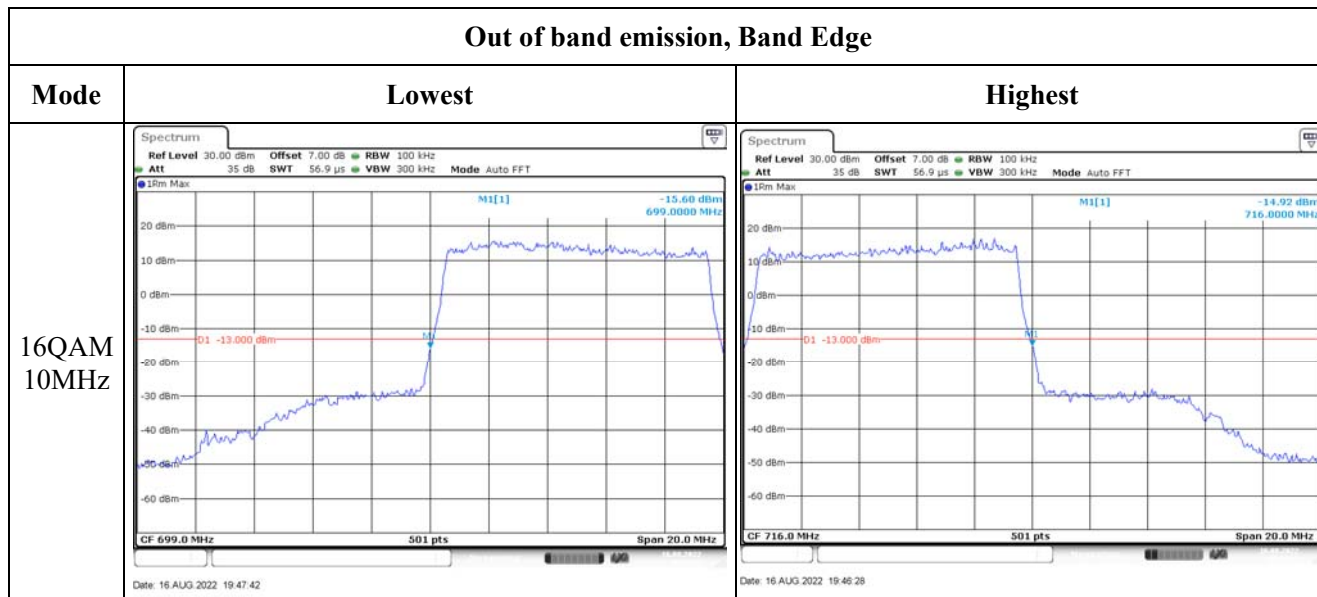
## Out of band emission, Band Edge



## Out of band emission, Band Edge



## Out of band emission, Band Edge



**4.7 Antenna Port Test Data and Results for LTE Band 13**

|                |                   |              |                     |
|----------------|-------------------|--------------|---------------------|
| Serial Number: | CR220050077-RF-S1 | Test Date:   | 2022/7/5~2022/10/18 |
| Test Site:     | RF                | Test Mode:   | Transmitting        |
| Tester:        | Ted Min           | Test Result: | Pass                |

**Environmental Conditions:**

|                      |           |                           |       |                        |             |
|----------------------|-----------|---------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 24.5~26.7 | Relative Humidity:<br>(%) | 51~65 | ATM Pressure:<br>(kPa) | 100.1~101.5 |
|----------------------|-----------|---------------------------|-------|------------------------|-------------|

**Test Equipment List and Details:**

| Manufacturer | Description                         | Model      | Serial Number   | Calibration Date | Calibration Due Date |
|--------------|-------------------------------------|------------|-----------------|------------------|----------------------|
| R&S          | Spectrum Analyzer                   | FSV40      | 101943          | 2021-10-10       | 2022-10-09           |
| R&S          | Wideband Radio Communication Tester | CMW500     | 149218          | 2021-07-21       | 2022-07-20           |
| R&S          | Wideband Radio Communication Tester | CMW500     | 149218          | 2022-07-15       | 2023-07-14           |
| BACL         | TEMP&HUMI Test Chamber              | BTH-150-40 | 30174           | 2022-04-06       | 2023-04-05           |
| UNI-T        | Multimeter                          | UT39A+     | C210582554      | 2021-09-30       | 2022-09-29           |
| ZHAOXIN      | DC Power Supply                     | RXN-6010D  | 21R6010D0912386 | N/A              | N/A                  |
| zhuoxiang    | Coaxial Cable                       | SMA-178    | 211001          | Each time        | N/A                  |
| Unknown      | Coaxial tee connector               | Unknown    | 2204006         | Each time        | N/A                  |
| Unknown      | RF Cable                            | Unknown    | RF Cable 004    | Each time        | N/A                  |
| HuiXunDa     | DC Block                            | SMA-JK 18G | DCB181108042    | Each time        | N/A                  |
| Weinschel    | Coaxial Attenuators                 | 53-20-34   | LN751           | Each time        | N/A                  |

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**EUT Information@LTE Band 13▲:**

|                                      |       |                        |       |                                      |      |
|--------------------------------------|-------|------------------------|-------|--------------------------------------|------|
| Antenna Gain<br>(dBi):               | -3.02 | Antenna Gain<br>(dBd): | -5.17 | Path Loss<br>L <sub>c</sub><br>(dB): | 0.3  |
| Operation Voltage(V <sub>DC</sub> ): |       |                        |       |                                      |      |
| Lowest:                              | 6.66  | Normal:                | 7.4   | Highest:                             | 8.14 |

**Test Frequency For Each Mode:**

| Operation Bandwidth | Lowest Frequency<br>(MHz) | Middle Frequency<br>(MHz) | Highest Frequency<br>(MHz) |
|---------------------|---------------------------|---------------------------|----------------------------|
| 5MHz                | 779.5                     | 782                       | 784.5                      |
| 10MHz               | /                         | 782                       | /                          |

**Test Data:****FCC§2.1046;§ 27.50(c) (10)****RF Output Power:**

| Test Bandwidth & Modulation                                         | Resource Block & RB offset | Conducted Average Output Power(dBm) |                |                 | Maximum ERP (dBm) | ERP Limit (dBm) |
|---------------------------------------------------------------------|----------------------------|-------------------------------------|----------------|-----------------|-------------------|-----------------|
|                                                                     |                            | Lowest Channel                      | Middle Channel | Highest Channel |                   |                 |
| 5MHz QPSK                                                           | RB1#0                      | 21.79                               | 21.83          | 21.96           | 16.63             | 34.77           |
|                                                                     | RB1#13                     | 21.92                               | 21.96          | 21.97           |                   |                 |
|                                                                     | RB1#24                     | 22.03                               | 21.92          | 22.1            |                   |                 |
|                                                                     | RB15#0                     | 21.94                               | 21.74          | 22.04           |                   |                 |
|                                                                     | RB15#10                    | 22.08                               | 21.77          | 22.03           |                   |                 |
|                                                                     | RB25#0                     | 21.7                                | 21.51          | 21.72           |                   |                 |
| 5MHz 16QAM                                                          | RB1#0                      | 21.68                               | 21.56          | 21.57           | 16.38             | 34.77           |
|                                                                     | RB1#13                     | 21.85                               | 21.71          | 21.7            |                   |                 |
|                                                                     | RB1#24                     | 21.83                               | 21.61          | 21.73           |                   |                 |
|                                                                     | RB15#0                     | 21.64                               | 21.59          | 21.68           |                   |                 |
|                                                                     | RB15#10                    | 21.72                               | 21.64          | 21.63           |                   |                 |
|                                                                     | RB25#0                     | 21.33                               | 21.35          | 21.39           |                   |                 |
| 10MHz QPSK                                                          | RB1#0                      | /                                   | 21.93          | /               | 16.64             | 34.77           |
|                                                                     | RB1#25                     | /                                   | 21.98          | /               |                   |                 |
|                                                                     | RB1#49                     | /                                   | 22.11          | /               |                   |                 |
|                                                                     | RB25#0                     | /                                   | 21.84          | /               |                   |                 |
|                                                                     | RB25#25                    | /                                   | 21.8           | /               |                   |                 |
|                                                                     | RB50#0                     | /                                   | 21.58          | /               |                   |                 |
| 10MHz 16QAM                                                         | RB1#0                      | /                                   | 21.37          | /               | 16.21             | 34.77           |
|                                                                     | RB1#25                     | /                                   | 21.49          | /               |                   |                 |
|                                                                     | RB1#49                     | /                                   | 21.68          | /               |                   |                 |
|                                                                     | RB25#0                     | /                                   | 21.52          | /               |                   |                 |
|                                                                     | RB25#25                    | /                                   | 21.67          | /               |                   |                 |
|                                                                     | RB50#0                     | /                                   | 21.29          | /               |                   |                 |
| Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd) |                            |                                     |                |                 | Result:           | Pass            |

| <b>Peak-to-average Ratio(PAR)</b> |                            |                           |                |                 |             |
|-----------------------------------|----------------------------|---------------------------|----------------|-----------------|-------------|
| Test Bandwidth & Modulation       | Resource Block & RB offset | Peak-to-average Ratio(dB) |                |                 | Limit (dB)  |
|                                   |                            | Lowest Channel            | Middle Channel | Highest Channel |             |
| 10MHz QPSK                        | RB1#0                      | /                         | 3.19           | /               | 13          |
|                                   | RB50#0                     | /                         | 5.28           | /               | 13          |
| 10MHz 16QAM                       | RB1#0                      | /                         | 4.11           | /               | 13          |
|                                   | RB50#0                     | /                         | 6.19           | /               | 13          |
| <b>Result:</b>                    |                            |                           |                |                 | <b>Pass</b> |

| <b>FCC §2.1049, §27.53:Occupied Bandwidth</b>                        |                              |                |              |                                |                |              |
|----------------------------------------------------------------------|------------------------------|----------------|--------------|--------------------------------|----------------|--------------|
| Operation Mode                                                       | 99% Occupied Bandwidth (MHz) |                |              | 26 dB Occupied Bandwidth (MHz) |                |              |
|                                                                      | Low Channel                  | Middle channel | High Channel | Low Channel                    | Middle Channel | High Channel |
| 5MHz QPSK                                                            | 4.531                        | 4.491          | 4.511        | 5.08                           | 5.02           | 5.04         |
| 5MHz 16QAM                                                           | 4.531                        | 4.511          | 4.551        | 5.04                           | 5.04           | 5.06         |
| 10MHz QPSK                                                           | /                            | 8.942          | /            | /                              | 9.84           | /            |
| 10MHz 16QAM                                                          | /                            | 8.942          | /            | /                              | 9.68           | /            |
| Note: The test plots please refer to the Plots of Occupied Bandwidth |                              |                |              |                                |                |              |

**FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal**

|                |                                                                                        |
|----------------|----------------------------------------------------------------------------------------|
| <b>Result:</b> | <b>Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.</b> |
|----------------|----------------------------------------------------------------------------------------|

**FCC §2.1051, §27.53:Out of band emission, Band Edge**

|                |                                                                                 |
|----------------|---------------------------------------------------------------------------------|
| <b>Result:</b> | <b>Pass, Please refer to the test plots of Out of band emission, Band Edge.</b> |
|----------------|---------------------------------------------------------------------------------|

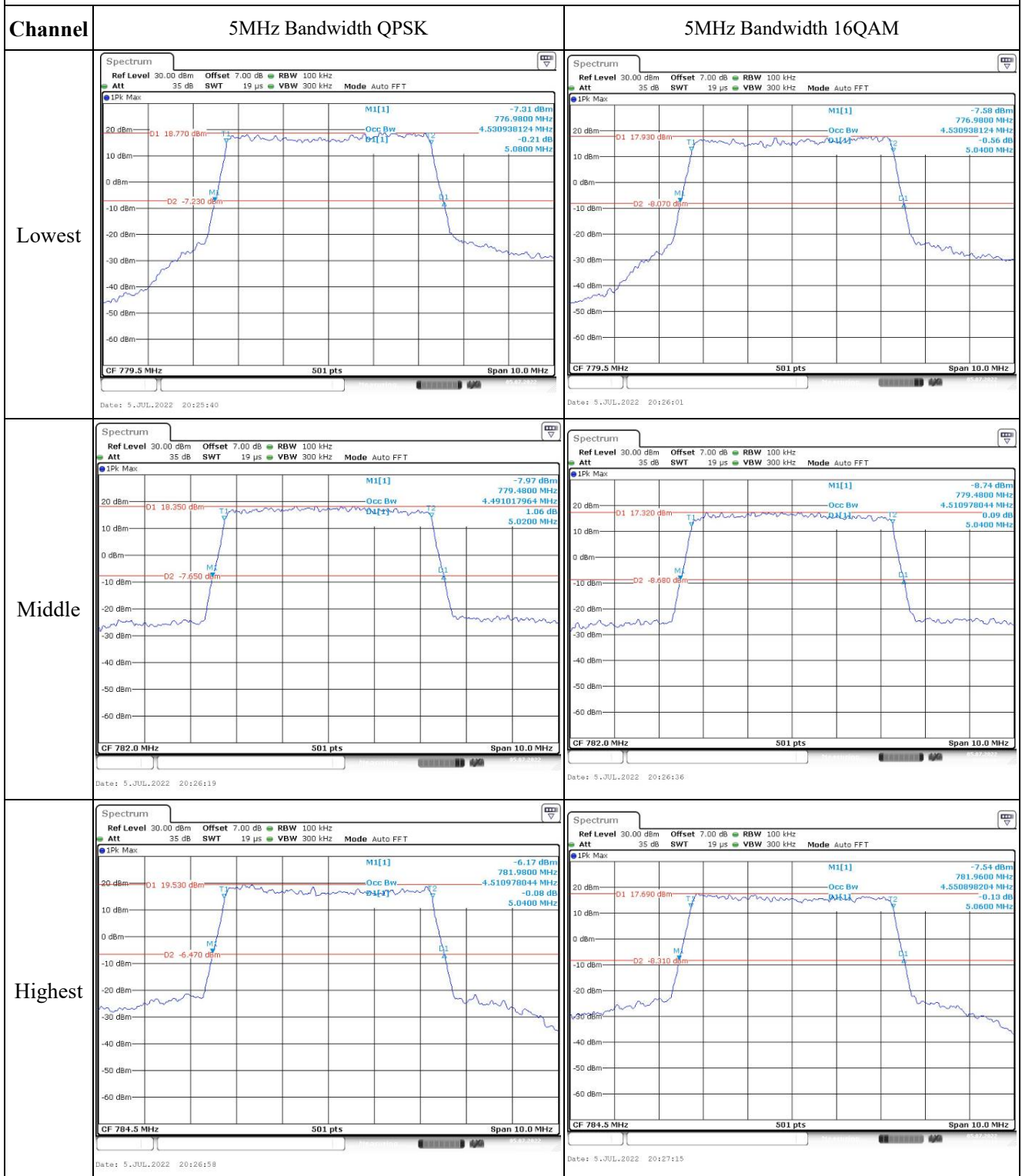
**FCC §2.1055, §27.54: Frequency Stability**

| Test Mode:                          | 10M QPSK         | Test Channel: Lowest for Lower Edge,Highest for Upper Edge |                  |        |                  |        |
|-------------------------------------|------------------|------------------------------------------------------------|------------------|--------|------------------|--------|
| Test Item                           | Temperature (°C) | Voltage (V <sub>DC</sub> )                                 | Lower Edge (MHz) |        | Upper Edge (MHz) |        |
|                                     |                  |                                                            | Result           | Limit  | Result           | Limit  |
| Frequency Stability vs. Temperature | -30              | 7.4                                                        | 777.350          | 777.00 | 786.893          | 787.00 |
|                                     | -20              | 7.4                                                        | 777.233          | 777.00 | 786.796          | 787.00 |
|                                     | -10              | 7.4                                                        | 777.329          | 777.00 | 786.767          | 787.00 |
|                                     | 0                | 7.4                                                        | 777.341          | 777.00 | 786.838          | 787.00 |
|                                     | 10               | 7.4                                                        | 777.209          | 777.00 | 786.782          | 787.00 |
|                                     | 20               | 7.4                                                        | 777.353          | 777.00 | 786.895          | 787.00 |
|                                     | 30               | 7.4                                                        | 777.234          | 777.00 | 786.845          | 787.00 |
|                                     | 40               | 7.4                                                        | 777.211          | 777.00 | 786.835          | 787.00 |
|                                     | 50               | 7.4                                                        | 777.209          | 777.00 | 786.732          | 787.00 |
| Frequency Stability vs. Voltage     | 20               | 6.66                                                       | 777.253          | 777.00 | 786.892          | 787.00 |
|                                     | 20               | 8.14                                                       | 777.318          | 777.00 | 786.784          | 787.00 |
| <b>Result:</b>                      |                  |                                                            |                  |        | <b>Pass</b>      |        |

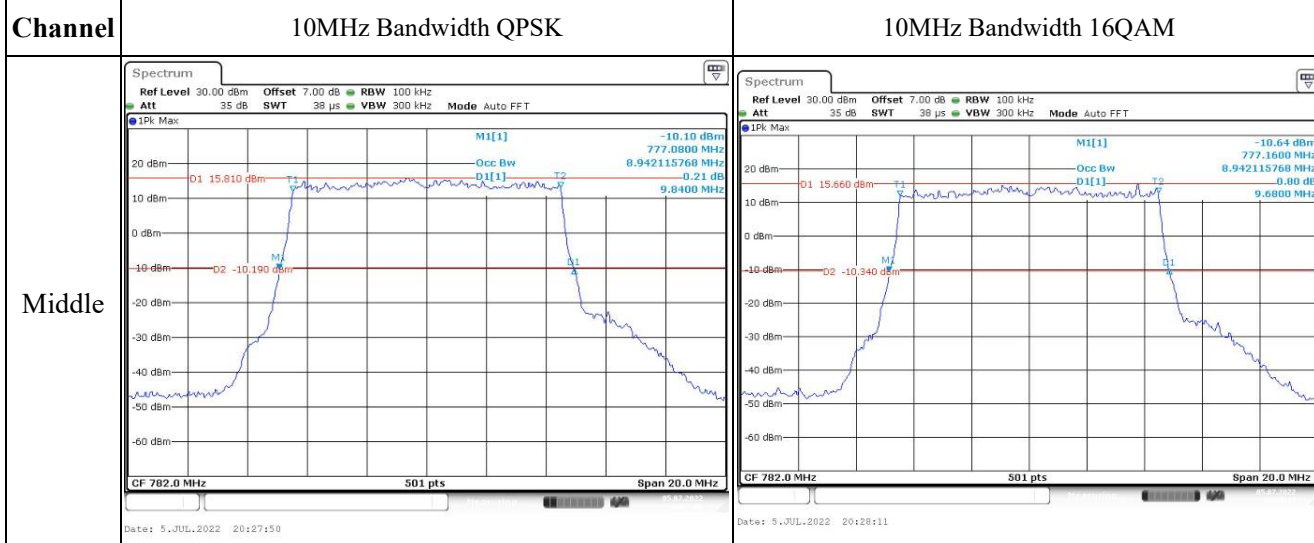
| Test Mode:                          | 10M 16QAM        | Test Channel: Lowest for Lower Edge,Highest for Upper Edge |                  |        |                  |        |
|-------------------------------------|------------------|------------------------------------------------------------|------------------|--------|------------------|--------|
| Test Item                           | Temperature (°C) | Voltage (V <sub>DC</sub> )                                 | Lower Edge (MHz) |        | Upper Edge (MHz) |        |
|                                     |                  |                                                            | Result           | Limit  | Result           | Limit  |
| Frequency Stability vs. Temperature | -30              | 7.4                                                        | 777.345          | 777.00 | 786.820          | 787.00 |
|                                     | -20              | 7.4                                                        | 777.308          | 777.00 | 786.891          | 787.00 |
|                                     | -10              | 7.4                                                        | 777.388          | 777.00 | 786.740          | 787.00 |
|                                     | 0                | 7.4                                                        | 777.253          | 777.00 | 786.924          | 787.00 |
|                                     | 10               | 7.4                                                        | 777.245          | 777.00 | 786.768          | 787.00 |
|                                     | 20               | 7.4                                                        | 777.248          | 777.00 | 786.908          | 787.00 |
|                                     | 30               | 7.4                                                        | 777.203          | 777.00 | 786.828          | 787.00 |
|                                     | 40               | 7.4                                                        | 777.278          | 777.00 | 786.902          | 787.00 |
|                                     | 50               | 7.4                                                        | 777.266          | 777.00 | 786.868          | 787.00 |
| Frequency Stability vs. Voltage     | 20               | 6.66                                                       | 777.239          | 777.00 | 786.887          | 787.00 |
|                                     | 20               | 8.14                                                       | 777.301          | 777.00 | 786.871          | 787.00 |
| <b>Result:</b>                      |                  |                                                            |                  |        | <b>Pass</b>      |        |

## Test Plots:

## Occupied Bandwidth



## Occupied Bandwidth

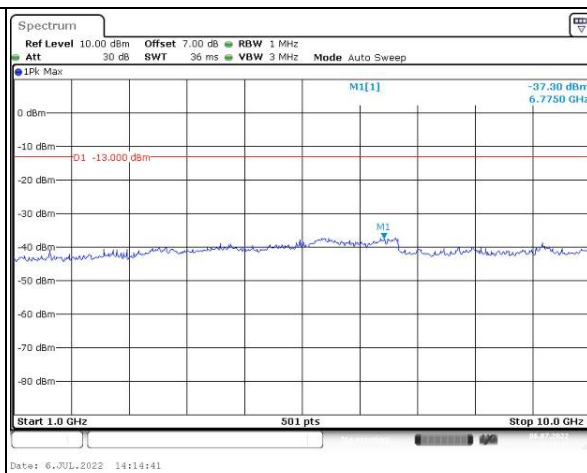
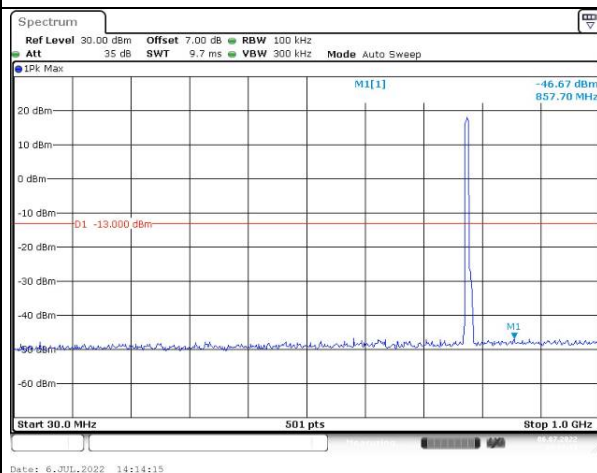


## Spurious Emissions at Antenna Terminal

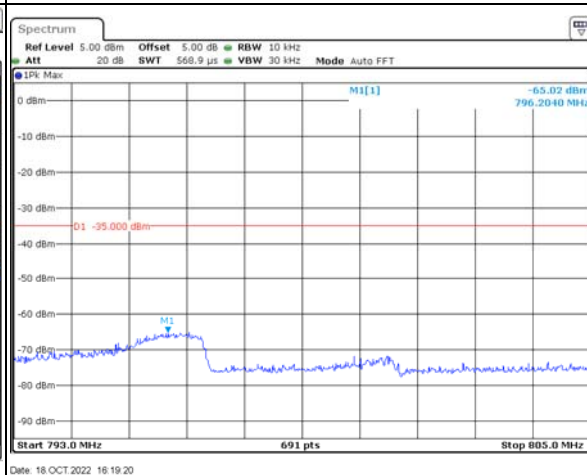
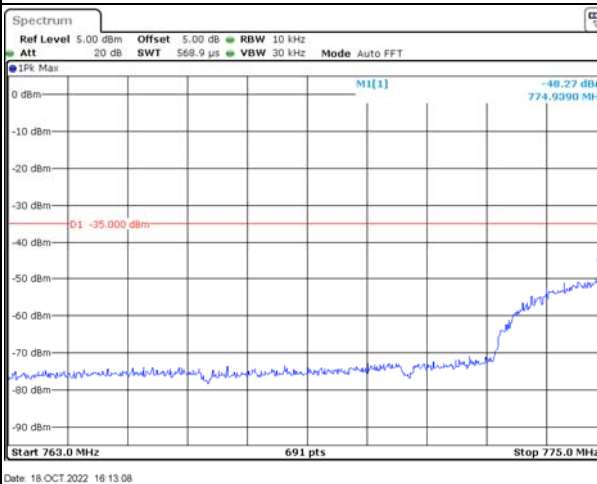
Channel

5MHz Bandwidth QPSK

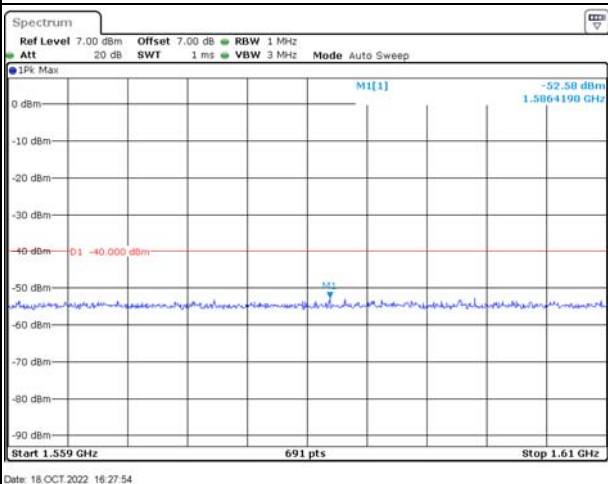
Lowest



Lowest



Lowest

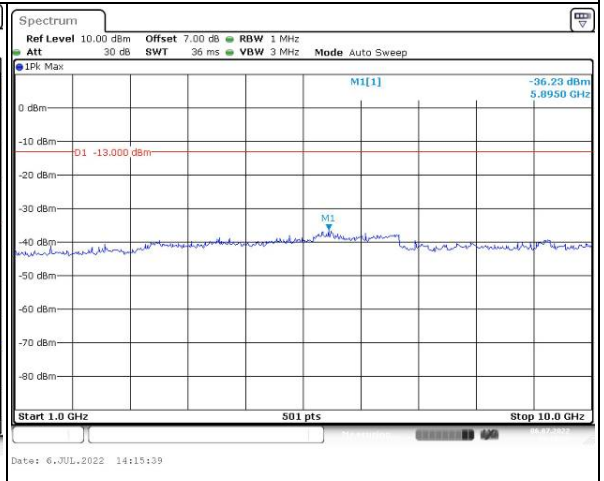
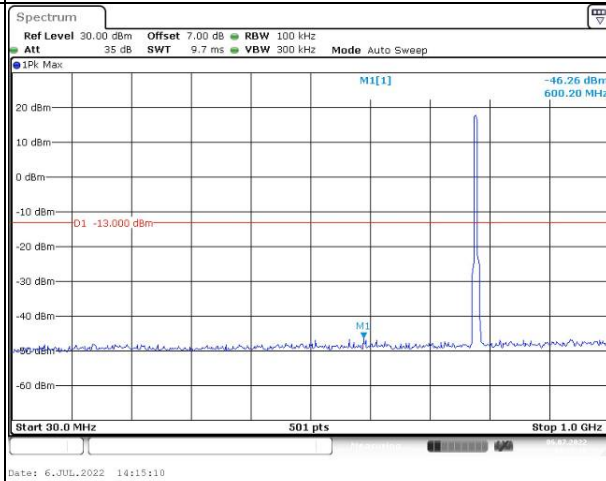


## Spurious Emissions at Antenna Terminal

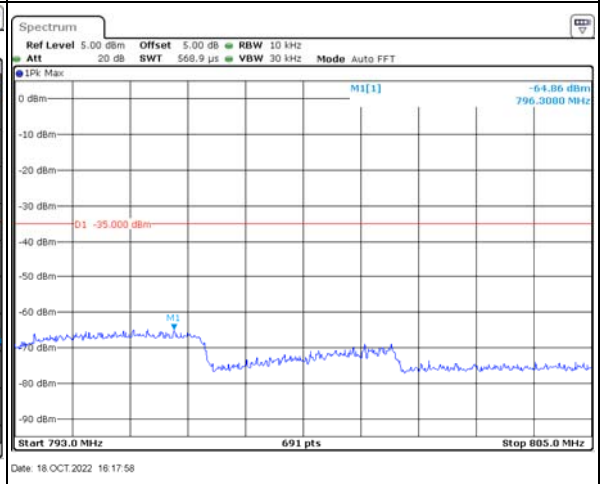
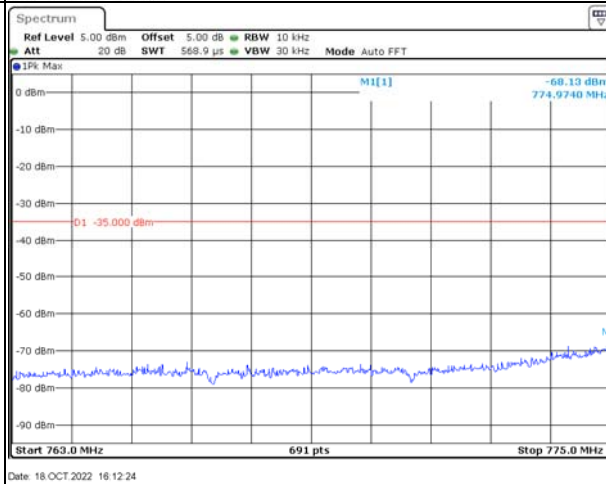
Channel

5MHz Bandwidth QPSK

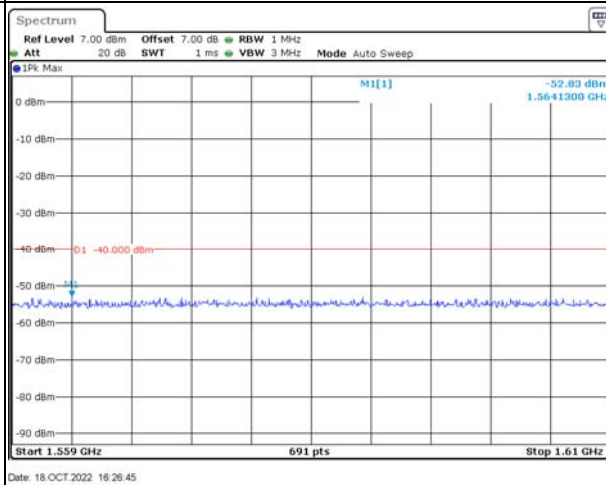
Middle



Middle



Middle

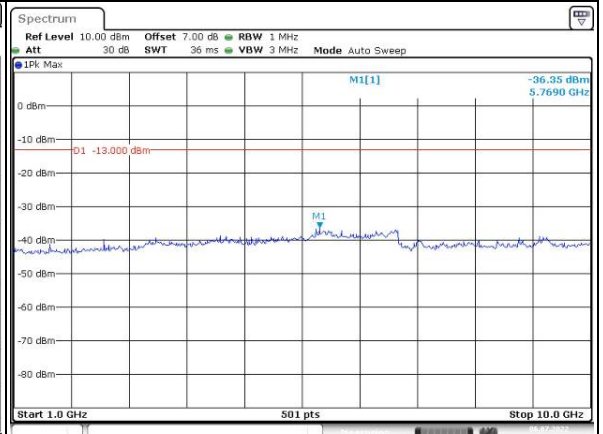
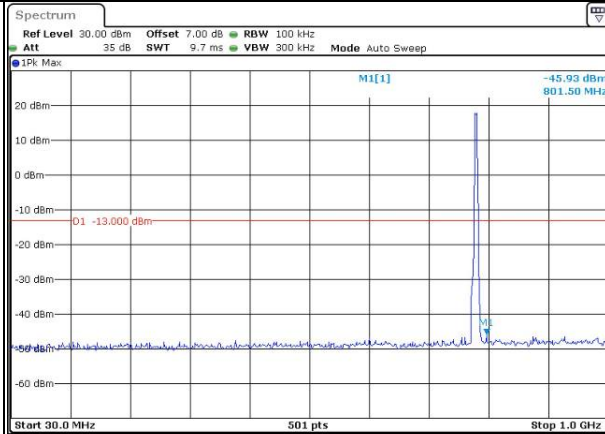


## Spurious Emissions at Antenna Terminal

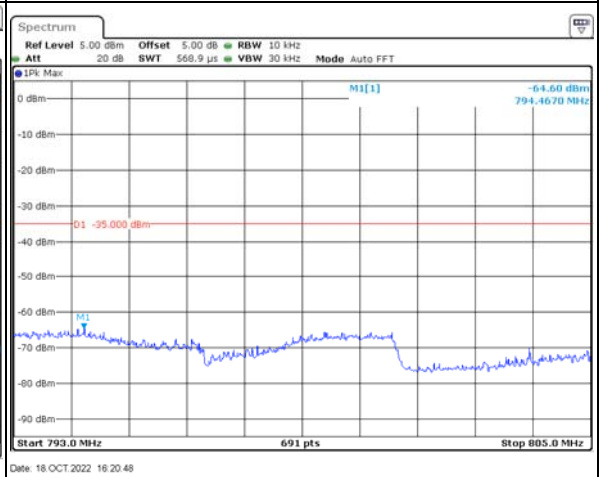
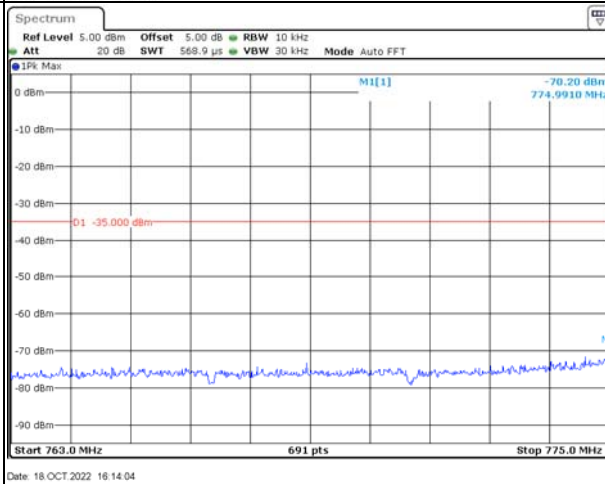
Channel

5MHz Bandwidth QPSK

Highest



Highest



Highest

