

# TEST REPORT

**Reference No.**..... : WTS20S06037570W001 V1  
**FCC ID** ..... : 2AG32MBS3100196N  
**Applicant**..... : Baicells Technologies Co., Ltd.  
**Address**..... : 3F, Hui Yuan Development Building, No.1 Shangdi Information  
Industry Base, Haidian Dist., Beijing, China  
**Manufacturer** ..... : Baicells Technologies Co., Ltd.  
**Address**..... : 3F, Hui Yuan Development Building, No.1 Shangdi Information  
Industry Base, Haidian Dist., Beijing, China  
**Product**..... : LTE Base Station  
**Model(s)**..... : mBS31001  
**Brand Name**..... : Baicells  
**Standards**..... : FCC CFR Title 47 Part 2  
FCC CFR Title 47 Part 96  
**Date of Receipt sample** .... : 2020-06-16  
**Date of Test** ..... : 2020-06-18 to 2020-06-30  
**Date of Issue**..... : 2020-07-03  
**Test Result**..... : **Pass**

**Remarks:**

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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### 3 Revision History

| Test report No.           | Date of Receipt sample | Date of Test                   | Date of Issue | Purpose  | Comment | Approved |
|---------------------------|------------------------|--------------------------------|---------------|----------|---------|----------|
| WTS20S06037<br>570W001    | 2020-06-16             | 2020-06-18<br>to<br>2020-06-30 | 2020-07-01    | original | -       | Replaced |
| WTS20S06037<br>570W001 V1 | 2020-06-16             | 2020-06-18<br>to<br>2020-06-30 | 2020-07-03    | Version1 | Updated | Valid    |

## 4 General Information

### 4.1 General Description of E.U.T.

|                    |                  |
|--------------------|------------------|
| Product:           | LTE Base Station |
| Model(s):          | mBS31001         |
| Model Description: | N/A              |
| Storage Location:  | Internal Storage |
| Category of CBSD:  | Category B       |

### 4.2 Details of E.U.T.

|                       |                             |
|-----------------------|-----------------------------|
| Operation Frequency:  | LTE Band 48:3550MHz-3700MHz |
| Type of Modulation:   | QPSK, 16QAM, 64QAM          |
| Antenna installation: | Directional antenna         |
| Antenna Gain:         | 15dBi                       |
| Ratings:              | 48V AC/DC Adaptor           |

### 4.3 Channel List

Normal

| 10MHz   |                 | 20MHz   |                 |
|---------|-----------------|---------|-----------------|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| Low     | 3555            | Low     | 3560            |
| Middle  | 3625            | Middle  | 3625            |
| High    | 3695            | High    | 3690            |

### 4.4 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

| Test Mode         | Description                                                        |
|-------------------|--------------------------------------------------------------------|
| Data Mode (QPSK)  | Keep the EUT in data communicating mode (QPSK).<br>(10MHz, 20MHz)  |
| Data Mode (64QAM) | Keep the EUT in data communicating mode (64QAM).<br>(10MHz, 20MHz) |

## 4.5 Test Facility

The test facility has a test site registered with the following organizations:

**ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.**

Waltek Services(Shenzhen) Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

**FCC Designation No.: CN1201. Test Firm Registration No.: 523476.**

Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

## 5 Test Summary

| Test Items                             | Tested Channel (MHz) | Channel Bandwidth | Modulation  | Result |
|----------------------------------------|----------------------|-------------------|-------------|--------|
| Max EIRP and maximum spectral density  | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass   |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |
| Peak-to-average power radio            | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass*  |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |
| 99% & -26 dB Occupied Bandwidth        | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass*  |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |
| Emission Mask                          | 3555 to 3695         | 10MHz             | QPSK        | Pass** |
|                                        | 3560 to 3690         | 20MHz             | QPSK        |        |
| Spurious Emissions at Antenna Terminal | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass*  |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |
| Field Strength of Spurious Radiation   | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass*  |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |
| Frequency stability vs. temperature    | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass*  |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |
| Frequency stability vs. voltage        | 3555 to 3695         | 10MHz             | QPSK, 64QAM | Pass*  |
|                                        | 3560 to 3690         | 20MHz             | QPSK, 64QAM |        |

Pass: The EUT complies with the essential requirements in the standard.

Note:

- 1, The device is based on the original FCC ID: 2AG32MBS31001, reducing the power level and updating the antenna gain value.
- 2, The duty cycle correction =  $10 \log (1/0.68) = 1.67 \text{ (dB)}$   
 Offset factory=ATT loss + Cable loss + Duty cycle correction=10+0.5+1.67=12.17(dB)

Pass\*: The device (FCC ID: 2AG32MBS3100196N) is based on the original device (FCC ID: 2AG32MBS31001) to reduce the power level, according to KDB484596 D01 Referencing Test Data v01, the data of these test programs can be reference, including 99% OBW and -26dB Bandwidth, Peak to Average Radio, 3.5GHz Emission and Interference Limits , spurious emissions at antenna terminals, radiated spurious emissions and Frequency stability from the original report 2477ERM.001A2.

Pass\*\*: The spot-check test data is better than the original test data. So it demonstrate compliance with the requirements.

## 6 Equipment Used during Test

### 6.1 Equipments List

| RF Conducted Testing |                     |                   |           |            |                       |                      |
|----------------------|---------------------|-------------------|-----------|------------|-----------------------|----------------------|
| Item                 | Equipment           | Manufacturer      | Model No. | Serial No. | Last Calibration Date | Calibration Due Date |
| 1.                   | EXA Signal Analyzer | Malaysia Keysight | N9010A    | MY50520207 | 2020-04-20            | 2021-04-19           |

### 6.2 Measurement Uncertainty

| Parameter                                       | Uncertainty   |
|-------------------------------------------------|---------------|
| RF Power                                        | $\pm 0.42$ dB |
| RF Power Density                                | $\pm 0.7$ dB  |
| Confidence interval: 95%. Confidence factor:k=2 |               |

### 6.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.



## 7 Max EIRP and maximum spectral density

Test Requirement: FCC part96.41(b)  
 Test Method: ANSI/TIA-603-E:2016, ANSI C63.26:2015  
 Test Mode: Data communicating mode  
 Limit:

| Device          | Maximum EIRP(dBm/10MHz) | Maximum PSD(dBm/MHz) |
|-----------------|-------------------------|----------------------|
| End User Device | 23                      | n/a                  |
| Category A CBSD | 30                      | 20                   |
| Category B CBSD | 47                      | 37                   |

### 7.1 EUT Operation

Operating Environment :  
 Temperature: 23.5 °C  
 Humidity: 51.1 % RH  
 Atmospheric Pressure: 101.2kPa

### 7.2 Test Procedure

#### For Maximum EIRP

1. Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. Set span to 2 × to 3 × the OBW.
3. Set RBW = 1% to 5% of the OBW.
4. Set VBW ≥ 3 × RBW.
5. Set number of measurement points in sweep ≥ 2 × span / RBW.
6. Sweep time:
  - 1) Set = auto-couple, or
  - 2) Set ≥ [10 × (number of points in sweep) × (transmission symbol period)] for single sweep (automation-compatible) measurement.
7. Detector = power averaging (rms).
8. Set sweep trigger to “free run.”
9. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.
10. Compute power by integrating the spectrum across the OBW(10MHz) of the signal using the instrument's band or channel power measurement function with band/channel limits set equal to the OBW(10MHz) band edges.
11. Add 10 log (1/duty cycle) to the measured power level to compute the average power during continuous transmission.
12.  $EIRP = P_{Meas} + G_T$ .

$P_{Meas}$  measured transmitter output power or PSD.  
 $G_T$  gain of the transmitting antenna.

#### For Maximum PSD

The PSD is measured following the same procedures described for measuring the maximum EIRP but with the RBW set to the reference bandwidth specified(eg.1MHz) by the applicable regulatory requirement, and by using the marker function to identify the maximum PSD instead of summing the power across the OBW.

### 7.3 Test Result

#### Port1 and Port2

| Transmit Output Power |            |              |                                |                                |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------|--------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port1 Output Power (dBm/10MHz) | Port2 Output Power (dBm/10MHz) | Total Power (dBm/10MHz) | Antenna Gain (dBi) | EIRP (dBm/10MHz) | EIRP Limit (dBm/10MHz) |
| 10                    | QPSK       | Low          | 25.69                          | 25.17                          | 28.45                   | 15                 | 43.45            | 47                     |
|                       |            | Middle       | 25.74                          | 25.43                          | 28.60                   | 15                 | 43.60            |                        |
|                       |            | High         | 25.44                          | 25.46                          | 28.46                   | 15                 | 43.46            |                        |
|                       | 64QAM      | Low          | 25.66                          | 25.08                          | 28.39                   | 15                 | 43.39            |                        |
|                       |            | Middle       | 25.63                          | 25.42                          | 28.54                   | 15                 | 43.54            |                        |
|                       |            | High         | 25.60                          | 25.43                          | 28.53                   | 15                 | 43.53            |                        |

#### Port3 and Port4

| Transmit Output Power |            |              |                                |                                |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------|--------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port3 Output Power (dBm/10MHz) | Port4 Output Power (dBm/10MHz) | Total Power (dBm/10MHz) | Antenna Gain (dBi) | EIRP (dBm/10MHz) | EIRP Limit (dBm/10MHz) |
| 10                    | QPSK       | Low          | 25.74                          | 26.20                          | 28.99                   | 15                 | 43.99            | 47                     |
|                       |            | Middle       | 25.79                          | 26.46                          | 29.15                   | 15                 | 44.15            |                        |
|                       |            | High         | 25.55                          | 26.04                          | 28.81                   | 15                 | 43.81            |                        |
|                       | 64QAM      | Low          | 25.73                          | 26.16                          | 28.96                   | 15                 | 43.96            |                        |
|                       |            | Middle       | 25.77                          | 26.34                          | 29.07                   | 15                 | 44.07            |                        |
|                       |            | High         | 25.53                          | 25.95                          | 28.76                   | 15                 | 43.76            |                        |

#### Port1, 2,3 and Port4

| Transmit Output Power |            |              |                                      |                                      |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------------|--------------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port1&Port2 Output Power (dBm/10MHz) | Port3&Port4 Output Power (dBm/10MHz) | Total Power (dBm/10MHz) | Antenna Gain (dBi) | EIRP (dBm/10MHz) | EIRP Limit (dBm/10MHz) |
| 10                    | QPSK       | Low          | 28.45                                | 28.99                                | 31.74                   | 15                 | 46.74            | 47                     |
|                       |            | Middle       | 28.60                                | 29.15                                | 31.89                   | 15                 | 46.89            |                        |
|                       |            | High         | 28.46                                | 28.81                                | 31.65                   | 15                 | 46.65            |                        |
|                       | 64QAM      | Low          | 28.39                                | 28.96                                | 31.69                   | 15                 | 46.69            |                        |
|                       |            | Middle       | 28.54                                | 29.07                                | 31.82                   | 15                 | 46.82            |                        |
|                       |            | High         | 28.53                                | 28.76                                | 31.66                   | 15                 | 46.66            |                        |

## Port1 and Port2

| Transmit Output Power |            |              |                                |                                |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------|--------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port1 Output Power (dBm/10MHz) | Port2 Output Power (dBm/10MHz) | Total Power (dBm/10MHz) | Antenna Gain (dBi) | EIRP (dBm/10MHz) | EIRP Limit (dBm/10MHz) |
| 20                    | QPSK       | Low          | 23.15                          | 23.03                          | 26.10                   | 15                 | 41.10            | 47                     |
|                       |            | Middle       | 23.27                          | 23.12                          | 26.21                   | 15                 | 41.21            |                        |
|                       |            | High         | 23.42                          | 23.00                          | 26.23                   | 15                 | 41.23            |                        |
|                       | 64QAM      | Low          | 23.06                          | 22.75                          | 25.92                   | 15                 | 40.92            |                        |
|                       |            | Middle       | 22.78                          | 22.94                          | 25.87                   | 15                 | 40.87            |                        |
|                       |            | High         | 22.92                          | 22.84                          | 25.89                   | 15                 | 40.89            |                        |

## Port3 and Port4

| Transmit Output Power |            |              |                                |                                |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------|--------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port3 Output Power (dBm/10MHz) | Port4 Output Power (dBm/10MHz) | Total Power (dBm/10MHz) | Antenna Gain (dBi) | EIRP (dBm/10MHz) | EIRP Limit (dBm/10MHz) |
| 20                    | QPSK       | Low          | 23.19                          | 23.48                          | 26.35                   | 15                 | 41.35            | 47                     |
|                       |            | Middle       | 23.39                          | 23.42                          | 26.42                   | 15                 | 41.42            |                        |
|                       |            | High         | 23.38                          | 23.38                          | 26.39                   | 15                 | 41.39            |                        |
|                       | 64QAM      | Low          | 23.04                          | 23.27                          | 26.17                   | 15                 | 41.17            |                        |
|                       |            | Middle       | 22.99                          | 23.14                          | 26.08                   | 15                 | 41.08            |                        |
|                       |            | High         | 23.03                          | 23.10                          | 26.08                   | 15                 | 41.08            |                        |

## Port1, 2,3 and Port4

| Transmit Output Power |            |              |                                      |                                      |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------------|--------------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port1&Port2 Output Power (dBm/10MHz) | Port3&Port4 Output Power (dBm/10MHz) | Total Power (dBm/10MHz) | Antenna Gain (dBi) | EIRP (dBm/10MHz) | EIRP Limit (dBm/10MHz) |
| 20                    | QPSK       | Low          | 28.42                                | 28.75                                | 29.24                   | 15                 | 44.24            | 47                     |
|                       |            | Middle       | 28.57                                | 29.05                                | 29.33                   | 15                 | 44.33            |                        |
|                       |            | High         | 28.43                                | 28.86                                | 29.32                   | 15                 | 44.32            |                        |
|                       | 64QAM      | Low          | 28.37                                | 28.68                                | 29.06                   | 15                 | 44.06            |                        |
|                       |            | Middle       | 28.42                                | 28.75                                | 28.99                   | 15                 | 43.99            |                        |
|                       |            | High         | 28.23                                | 28.61                                | 29.00                   | 15                 | 44.00            |                        |

## Port1 and Port2

| Transmit Output Power |            |              |                                |                                |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------|--------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port1 Output Power (dBm/20MHz) | Port2 Output Power (dBm/20MHz) | Total Power (dBm/20MHz) | Antenna Gain (dBi) | EIRP (dBm/20MHz) | EIRP Limit (dBm/10MHz) |
| 20 Full Transmit      | QPSK       | Low          | 25.53                          | 25.29                          | 28.42                   | 15                 | 43.42            | -                      |
|                       |            | Middle       | 25.75                          | 25.36                          | 28.57                   | 15                 | 43.57            |                        |
|                       |            | High         | 25.63                          | 25.19                          | 28.43                   | 15                 | 43.43            |                        |
|                       | 64QAM      | Low          | 25.46                          | 25.26                          | 28.37                   | 15                 | 43.37            |                        |
|                       |            | Middle       | 25.43                          | 25.39                          | 28.42                   | 15                 | 43.42            |                        |
|                       |            | High         | 25.26                          | 25.18                          | 28.23                   | 15                 | 43.23            |                        |

## Port3 and Port4

| Transmit Output Power |            |              |                                |                                |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------|--------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port3 Output Power (dBm/20MHz) | Port4 Output Power (dBm/20MHz) | Total Power (dBm/20MHz) | Antenna Gain (dBi) | EIRP (dBm/20MHz) | EIRP Limit (dBm/10MHz) |
| 20 Full Transmit      | QPSK       | Low          | 25.40                          | 26.05                          | 28.75                   | 15                 | 43.75            | -                      |
|                       |            | Middle       | 25.84                          | 26.24                          | 29.05                   | 15                 | 44.05            |                        |
|                       |            | High         | 25.61                          | 26.07                          | 28.86                   | 15                 | 43.86            |                        |
|                       | 64QAM      | Low          | 25.45                          | 25.88                          | 28.68                   | 15                 | 43.68            |                        |
|                       |            | Middle       | 25.60                          | 25.87                          | 28.75                   | 15                 | 43.75            |                        |
|                       |            | High         | 25.42                          | 25.78                          | 28.61                   | 15                 | 43.61            |                        |

## Port1, 2,3 and Port4

| Transmit Output Power |            |              |                                      |                                      |                         |                    |                  |                        |
|-----------------------|------------|--------------|--------------------------------------|--------------------------------------|-------------------------|--------------------|------------------|------------------------|
| Bandwidth (MHz)       | Modulation | Test Channel | Port1&Port2 Output Power (dBm/20MHz) | Port3&Port4 Output Power (dBm/20MHz) | Total Power (dBm/20MHz) | Antenna Gain (dBi) | EIRP (dBm/20MHz) | EIRP Limit (dBm/10MHz) |
| 20 Full Transmit      | QPSK       | Low          | 28.42                                | 28.75                                | 31.60                   | 15                 | 46.60            | -                      |
|                       |            | Middle       | 28.57                                | 29.05                                | 31.83                   | 15                 | 46.83            |                        |
|                       |            | High         | 28.43                                | 28.86                                | 31.66                   | 15                 | 46.66            |                        |
|                       | 64QAM      | Low          | 28.37                                | 28.68                                | 31.54                   | 15                 | 46.54            |                        |
|                       |            | Middle       | 28.42                                | 28.75                                | 31.60                   | 15                 | 46.60            |                        |
|                       |            | High         | 28.23                                | 28.61                                | 31.43                   | 15                 | 46.43            |                        |

## Port1 and Port2

| PSD             |            |              |                     |                     |                     |                    |                        |                              |
|-----------------|------------|--------------|---------------------|---------------------|---------------------|--------------------|------------------------|------------------------------|
| Bandwidth (MHz) | Modulation | Test Channel | Port1 PSD (dBm/MHz) | Port2 PSD (dBm/MHz) | Total PSD (dBm/MHz) | Antenna Gain (dBi) | EIRP density (dBm/MHz) | EIRP density Limit (dBm/MHz) |
| 10              | QPSK       | Low          | 15.782              | 15.423              | 18.617              | 15                 | 33.617                 | 37                           |
|                 |            | Middle       | 15.702              | 15.526              | 18.625              | 15                 | 33.625                 |                              |
|                 |            | High         | 15.842              | 15.517              | 18.693              | 15                 | 33.693                 |                              |
|                 | 64QAM      | Low          | 15.706              | 15.124              | 18.435              | 15                 | 33.435                 |                              |
|                 |            | Middle       | 15.810              | 15.352              | 18.597              | 15                 | 33.597                 |                              |
|                 |            | High         | 15.657              | 15.142              | 18.417              | 15                 | 33.417                 |                              |

## Port3 and Port4

| PSD             |            |              |                     |                     |                     |                    |                        |                              |
|-----------------|------------|--------------|---------------------|---------------------|---------------------|--------------------|------------------------|------------------------------|
| Bandwidth (MHz) | Modulation | Test Channel | Port3 PSD (dBm/MHz) | Port4 PSD (dBm/MHz) | Total PSD (dBm/MHz) | Antenna Gain (dBi) | EIRP density (dBm/MHz) | EIRP density Limit (dBm/MHz) |
| 10              | QPSK       | Low          | 16.047              | 16.220              | 19.145              | 15                 | 34.145                 | 37                           |
|                 |            | Middle       | 15.945              | 16.141              | 19.054              | 15                 | 34.054                 |                              |
|                 |            | High         | 15.546              | 16.154              | 18.871              | 15                 | 33.871                 |                              |
|                 | 64QAM      | Low          | 15.829              | 16.051              | 18.952              | 15                 | 33.952                 |                              |
|                 |            | Middle       | 15.773              | 16.040              | 18.919              | 15                 | 33.919                 |                              |
|                 |            | High         | 15.402              | 16.143              | 18.799              | 15                 | 33.799                 |                              |

## Port1,2, 3 and Port4

| PSD             |            |              |                           |                           |                     |                    |                        |                              |
|-----------------|------------|--------------|---------------------------|---------------------------|---------------------|--------------------|------------------------|------------------------------|
| Bandwidth (MHz) | Modulation | Test Channel | Port1&Port2 PSD (dBm/MHz) | Port3&Port4 PSD (dBm/MHz) | Total PSD (dBm/MHz) | Antenna Gain (dBi) | EIRP density (dBm/MHz) | EIRP density Limit (dBm/MHz) |
| 10              | QPSK       | Low          | 18.617                    | 19.145                    | 21.899              | 15                 | 36.899                 | 37                           |
|                 |            | Middle       | 18.625                    | 19.054                    | 21.855              | 15                 | 36.855                 |                              |
|                 |            | High         | 18.693                    | 18.871                    | 21.793              | 15                 | 36.793                 |                              |
|                 | 64QAM      | Low          | 18.435                    | 18.952                    | 21.711              | 15                 | 36.711                 |                              |
|                 |            | Middle       | 18.597                    | 18.919                    | 21.771              | 15                 | 36.771                 |                              |
|                 |            | High         | 18.417                    | 18.799                    | 21.622              | 15                 | 36.622                 |                              |

## Port1 and Port2

| PSD             |            |              |                     |                     |                     |                    |                        |                              |
|-----------------|------------|--------------|---------------------|---------------------|---------------------|--------------------|------------------------|------------------------------|
| Bandwidth (MHz) | Modulation | Test Channel | Port1 PSD (dBm/MHz) | Port2 PSD (dBm/MHz) | Total PSD (dBm/MHz) | Antenna Gain (dBi) | EIRP density (dBm/MHz) | EIRP density Limit (dBm/MHz) |
| 20              | QPSK       | Low          | 12.795              | 12.631              | 15.724              | 15                 | 30.724                 | 37                           |
|                 |            | Middle       | 13.745              | 12.745              | 16.284              | 15                 | 31.284                 |                              |
|                 |            | High         | 13.379              | 12.314              | 15.889              | 15                 | 30.889                 |                              |
|                 | 64QAM      | Low          | 12.842              | 12.490              | 15.680              | 15                 | 30.680                 |                              |
|                 |            | Middle       | 12.900              | 12.577              | 15.752              | 15                 | 30.752                 |                              |
|                 |            | High         | 12.868              | 12.318              | 15.612              | 15                 | 30.612                 |                              |

## Port3 and Port4

| PSD             |            |              |                     |                     |                     |                    |                        |                              |
|-----------------|------------|--------------|---------------------|---------------------|---------------------|--------------------|------------------------|------------------------------|
| Bandwidth (MHz) | Modulation | Test Channel | Port3 PSD (dBm/MHz) | Port4 PSD (dBm/MHz) | Total PSD (dBm/MHz) | Antenna Gain (dBi) | EIRP density (dBm/MHz) | EIRP density Limit (dBm/MHz) |
| 20              | QPSK       | Low          | 13.030              | 13.331              | 16.193              | 15                 | 31.193                 | 37                           |
|                 |            | Middle       | 13.421              | 13.561              | 16.502              | 15                 | 31.502                 |                              |
|                 |            | High         | 13.239              | 13.828              | 16.554              | 15                 | 31.554                 |                              |
|                 | 64QAM      | Low          | 12.790              | 13.281              | 16.053              | 15                 | 31.053                 |                              |
|                 |            | Middle       | 13.239              | 13.334              | 16.297              | 15                 | 31.297                 |                              |
|                 |            | High         | 12.834              | 13.608              | 16.249              | 15                 | 31.249                 |                              |

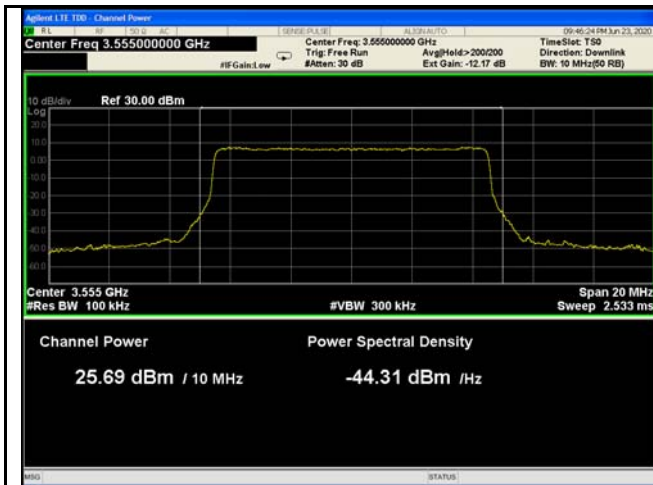
## Port1,2, 3 and Port4

| PSD             |            |              |                           |                           |                     |                    |                        |                              |
|-----------------|------------|--------------|---------------------------|---------------------------|---------------------|--------------------|------------------------|------------------------------|
| Bandwidth (MHz) | Modulation | Test Channel | Port1&Port2 PSD (dBm/MHz) | Port3&Port4 PSD (dBm/MHz) | Total PSD (dBm/MHz) | Antenna Gain (dBi) | EIRP density (dBm/MHz) | EIRP density Limit (dBm/MHz) |
| 20              | QPSK       | Low          | 15.724                    | 16.193                    | 18.975              | 15                 | 33.975                 | 37                           |
|                 |            | Middle       | 16.284                    | 16.502                    | 19.405              | 15                 | 34.405                 |                              |
|                 |            | High         | 15.889                    | 16.554                    | 19.245              | 15                 | 34.245                 |                              |
|                 | 64QAM      | Low          | 15.680                    | 16.053                    | 18.881              | 15                 | 33.881                 |                              |
|                 |            | Middle       | 15.752                    | 16.297                    | 19.043              | 15                 | 34.043                 |                              |
|                 |            | High         | 15.612                    | 16.249                    | 18.952              | 15                 | 33.952                 |                              |

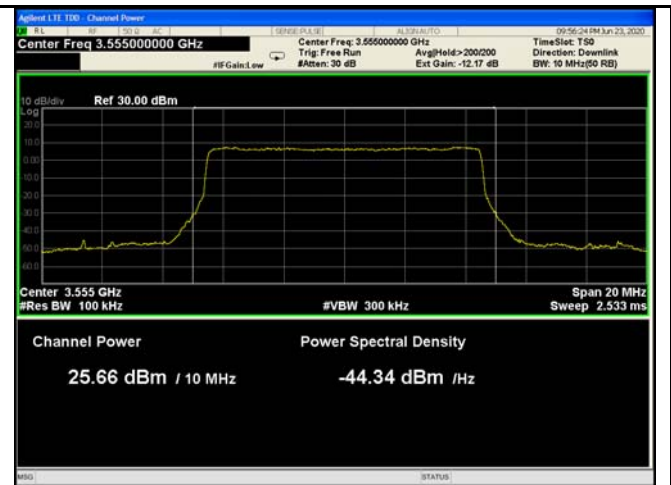
# Test Plots

## Transmit Output Power

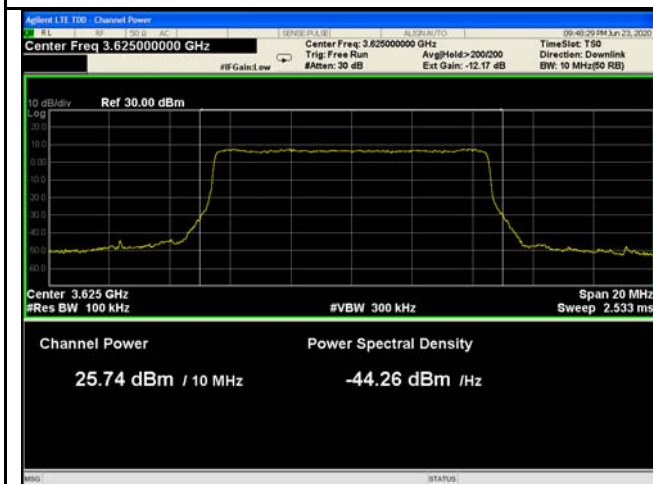
### Port1



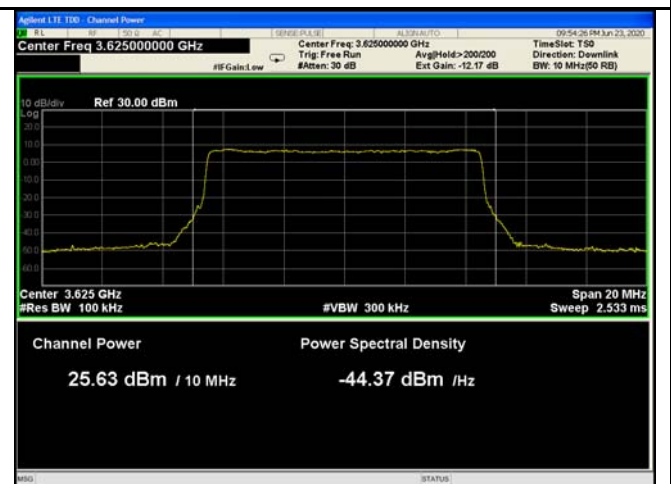
10MHz - Low CH QPSK



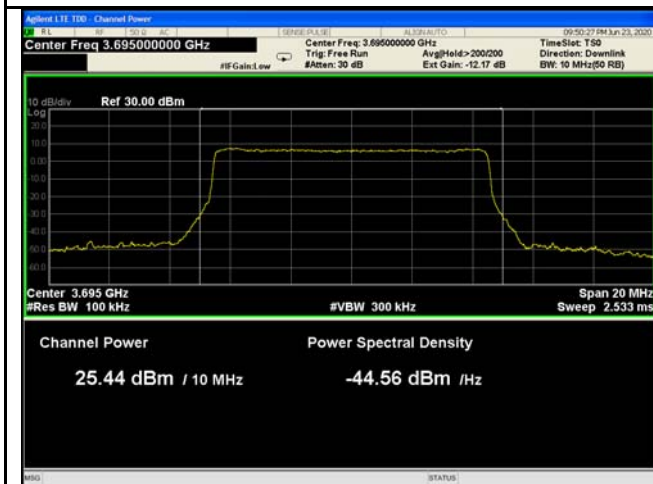
10MHz - Low CH 64QAM



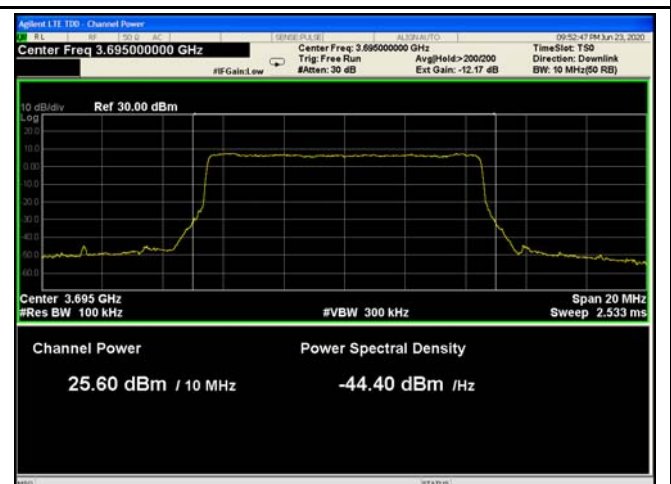
10MHz - Middle CH QPSK



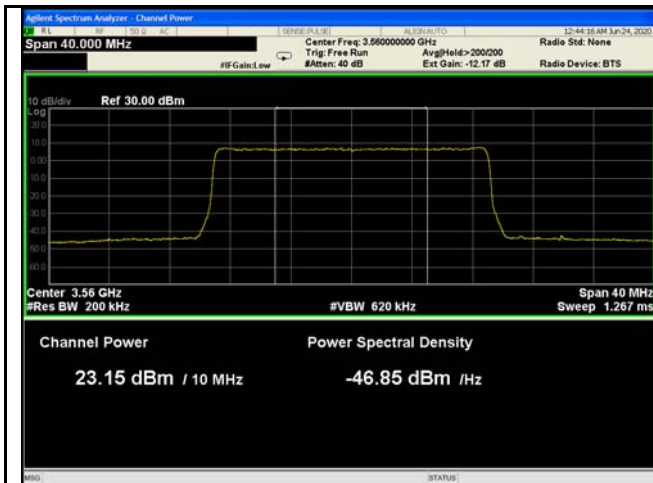
10MHz - Middle CH 64QAM



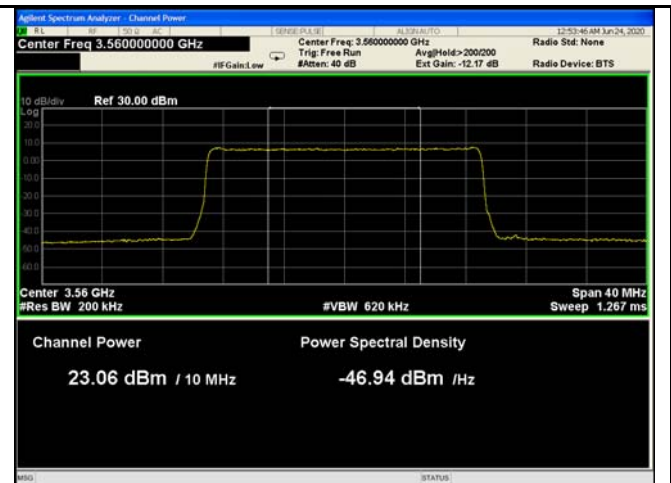
10MHz - High CH QPSK



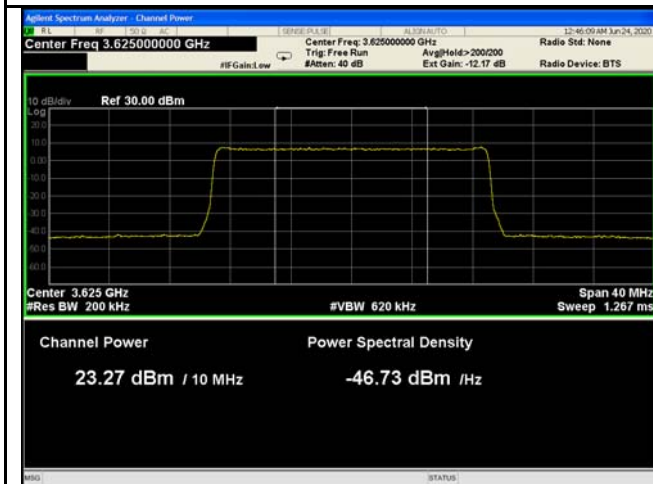
10MHz - High CH 64QAM



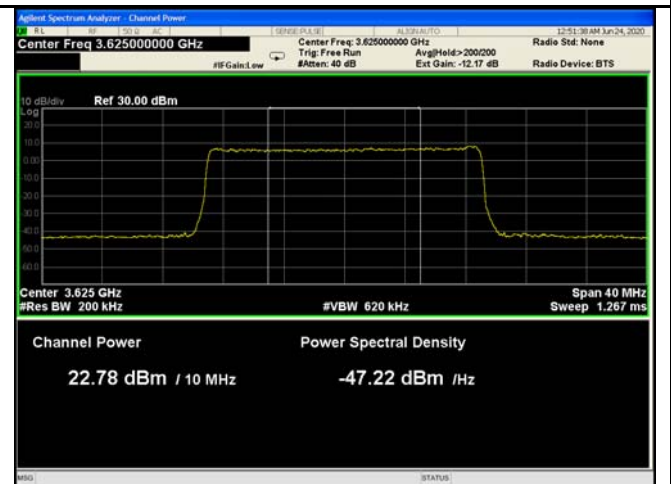
20MHz - Low CH QPSK



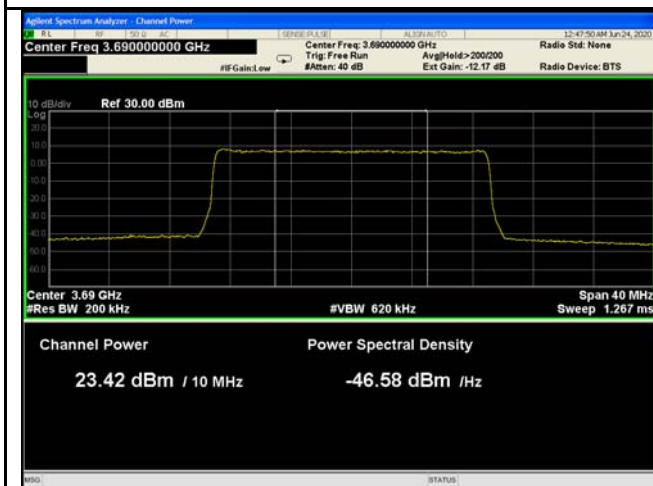
20MHz - Low CH 64QAM



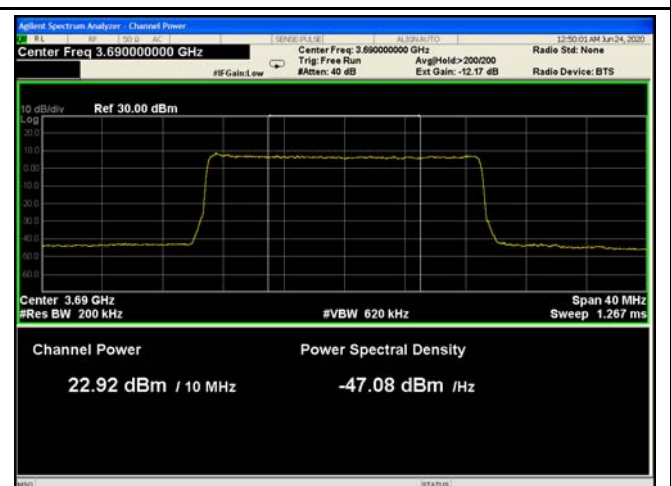
20MHz - Middle CH QPSK



20MHz - Middle CH 64QAM

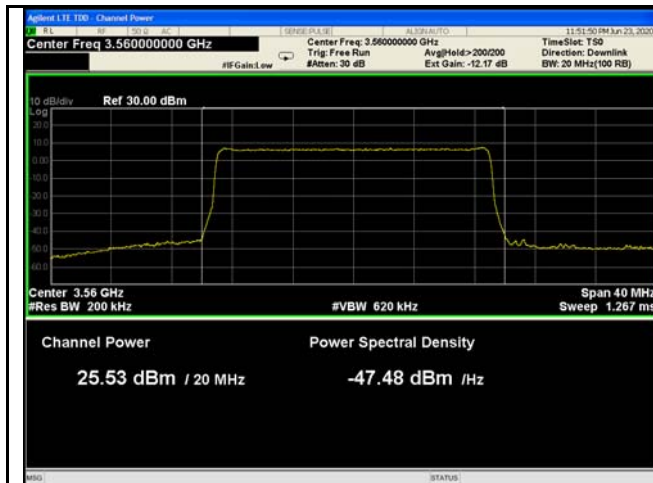


20MHz - High CH QPSK

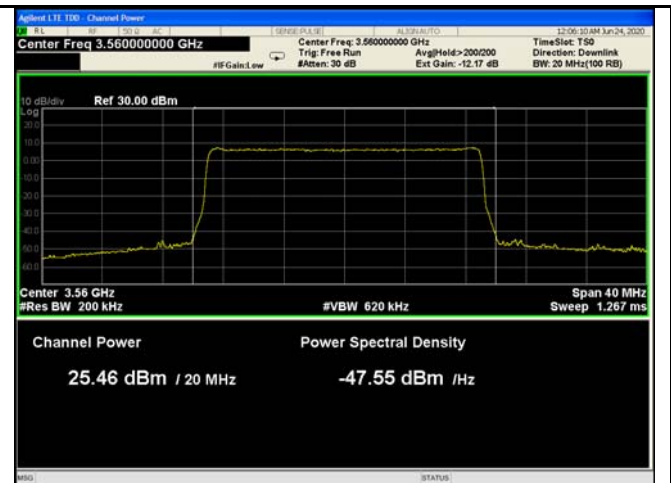


20MHz - High CH 64QAM

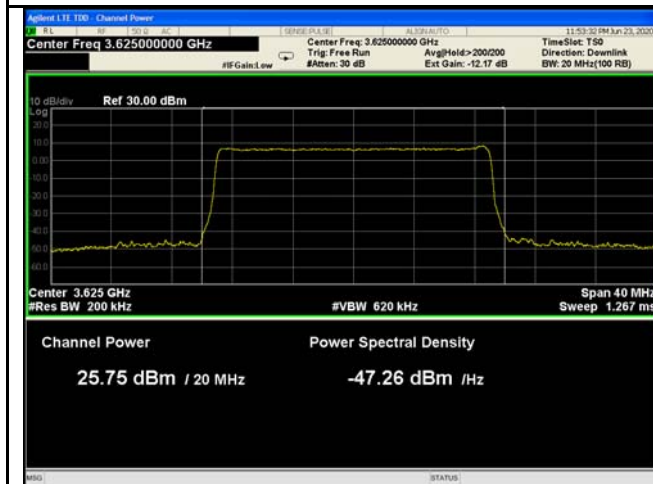




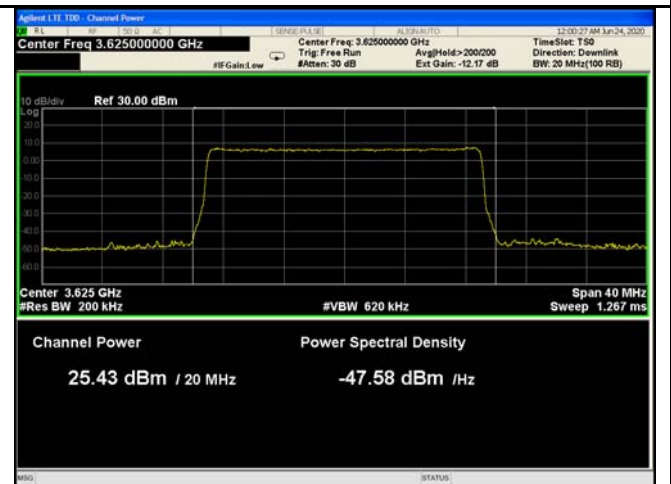
20MHz Full - Low CH QPSK



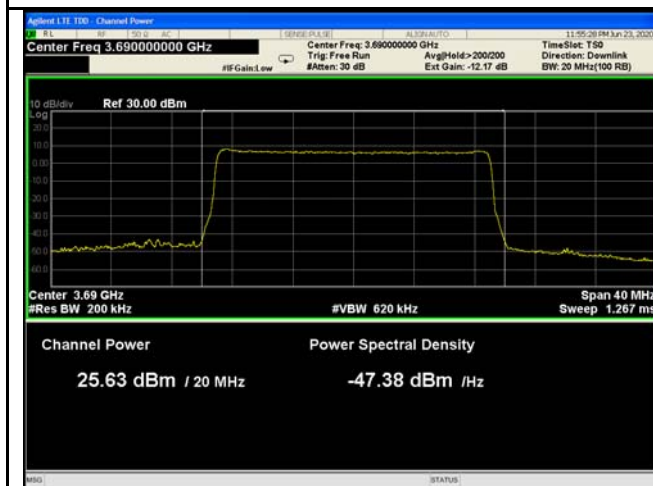
20MHz Full - Low CH 64QAM



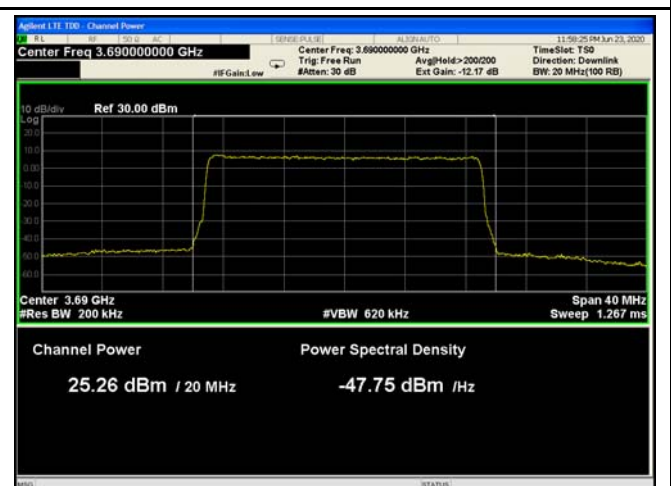
20MHz Full - Middle CH QPSK



20MHz Full - Middle CH 64QAM

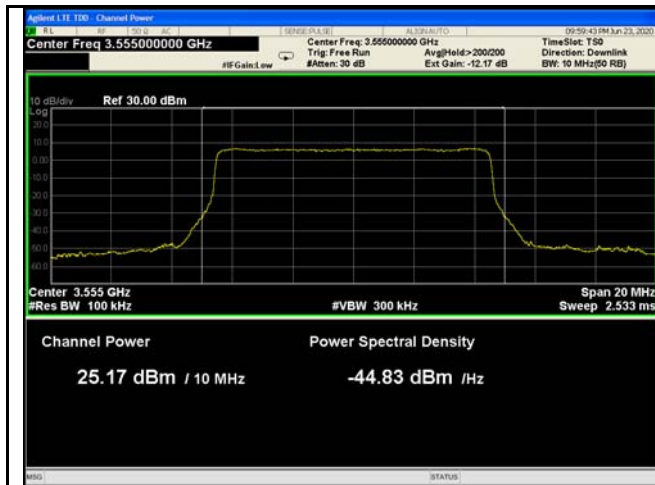


20MHz Full - High CH QPSK

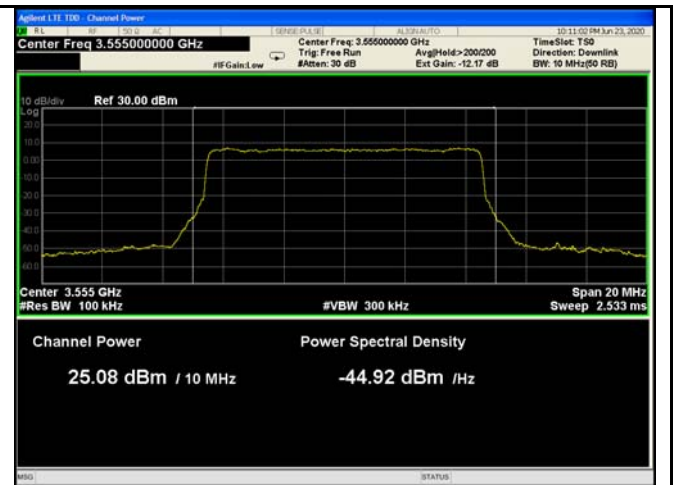


20MHz Full - High CH 64QAM

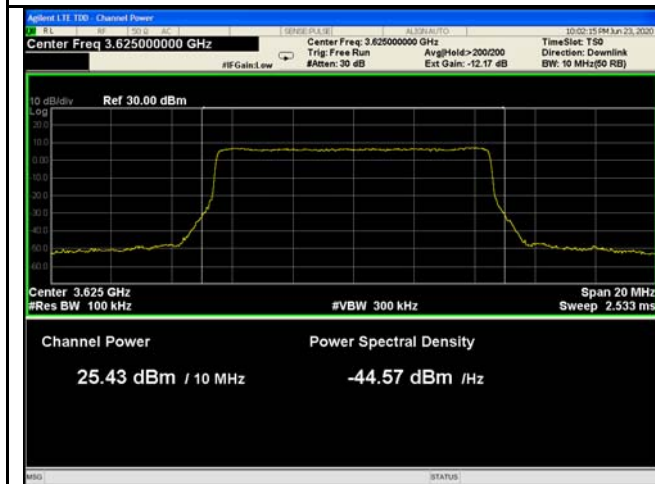
## Port2



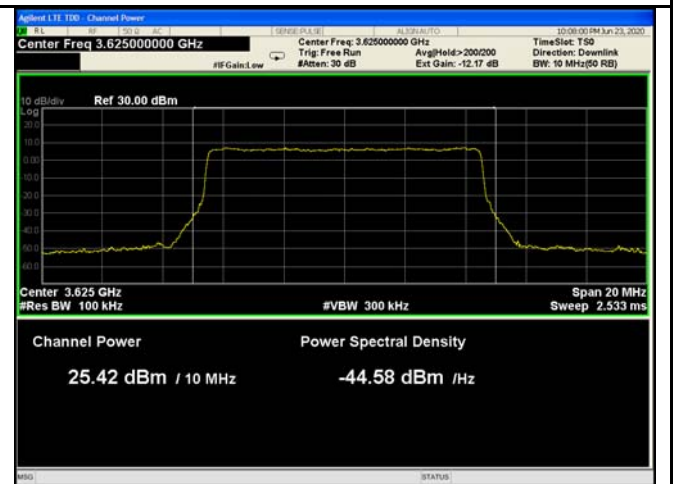
10MHz - Low CH QPSK



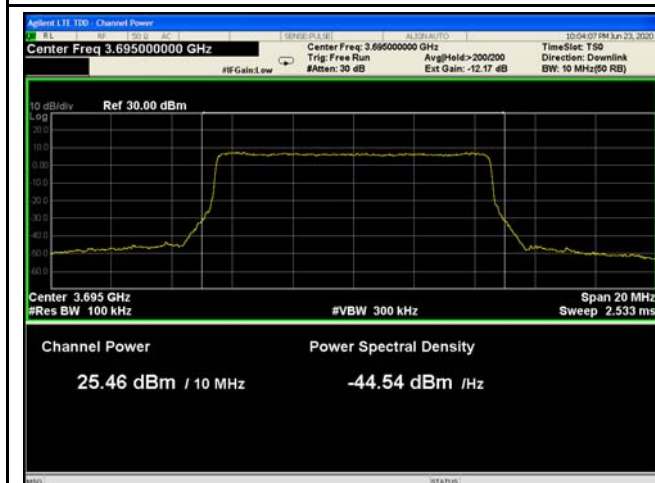
10MHz - Low CH 64QAM



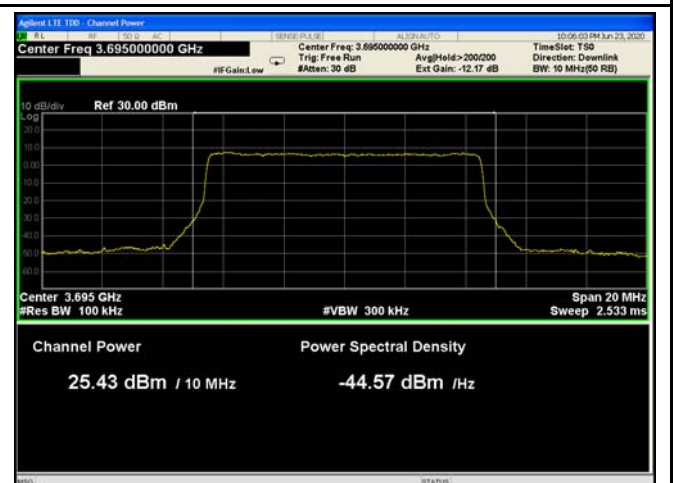
10MHz - Middle CH QPSK



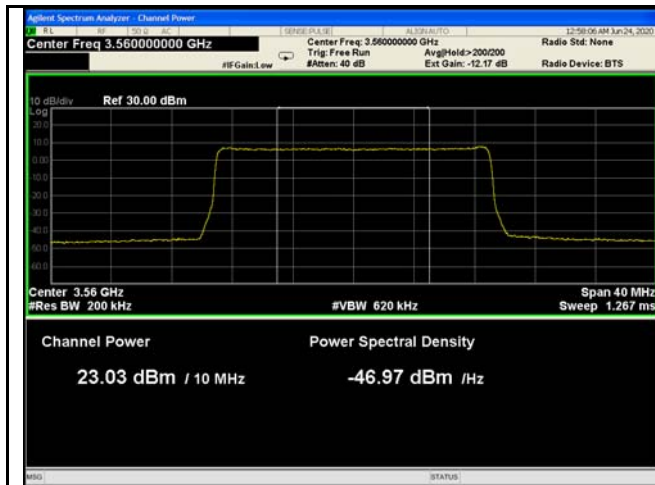
10MHz - Middle CH 64QAM



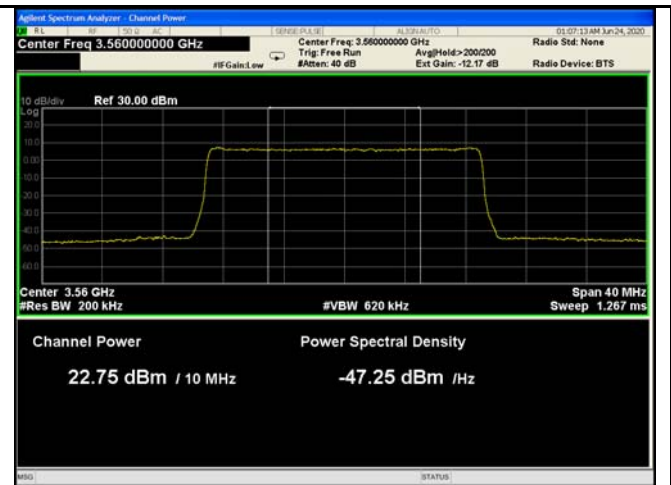
10MHz - High CH QPSK



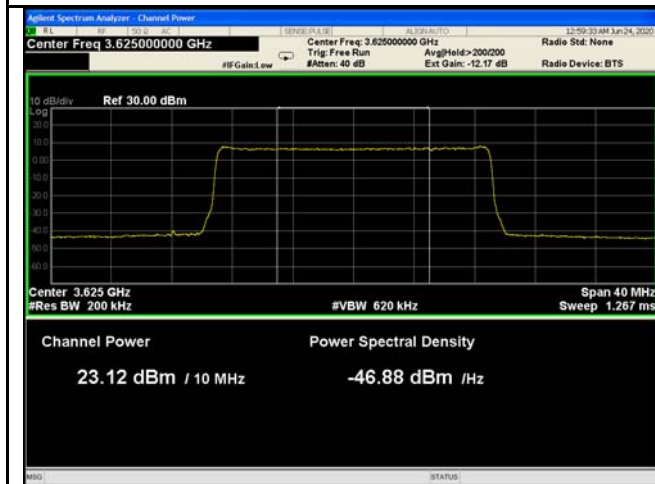
10MHz - High CH 64QAM



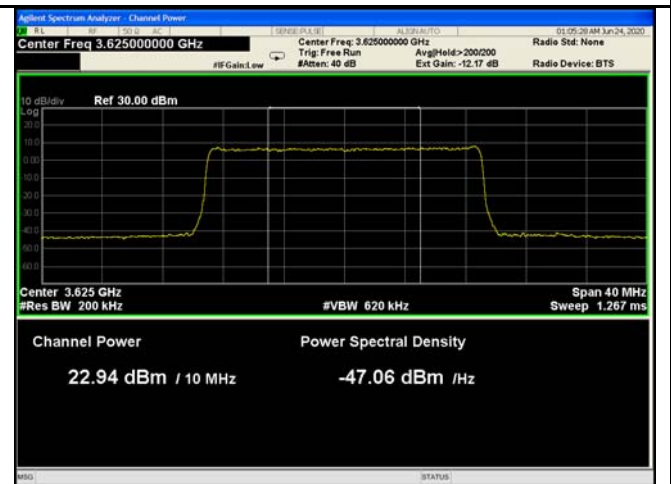
20MHz - Low CH QPSK



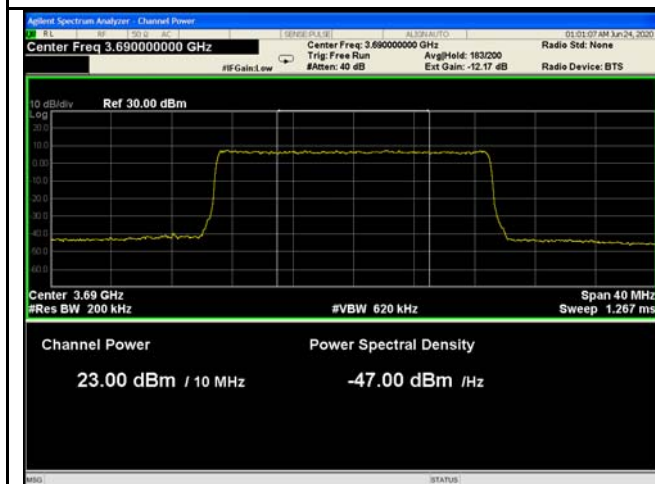
20MHz - Low CH 64QAM



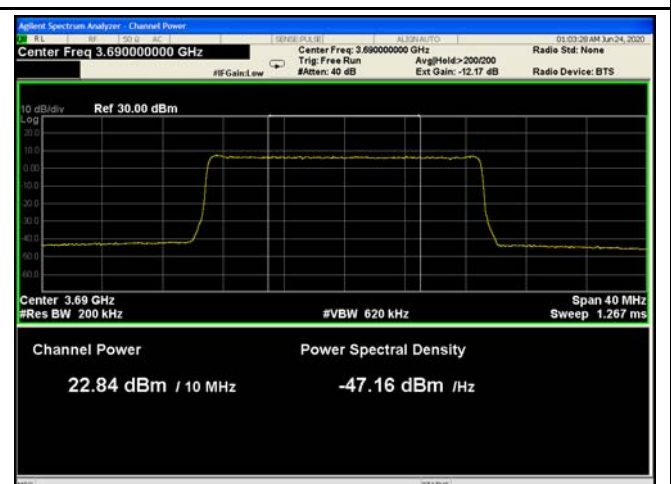
20MHz - Middle CH QPSK



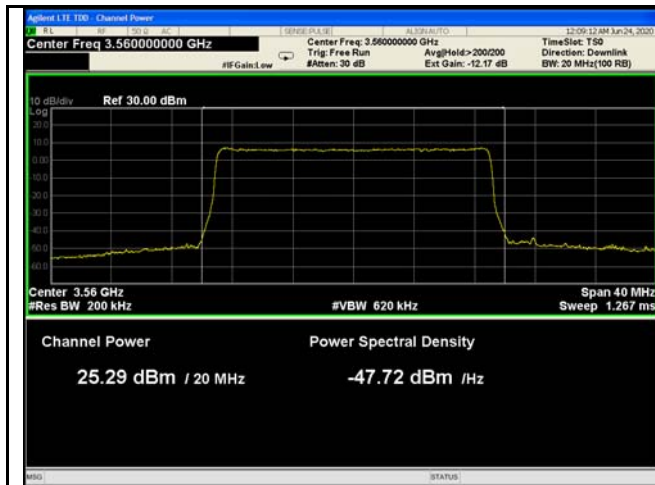
20MHz - Middle CH 64QAM



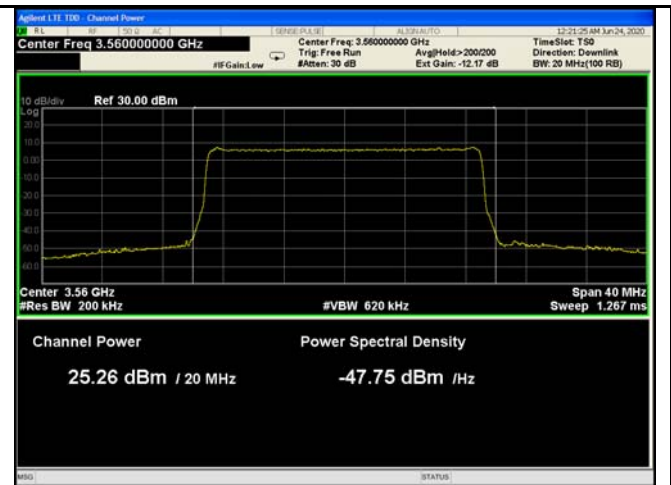
20MHz - High CH QPSK



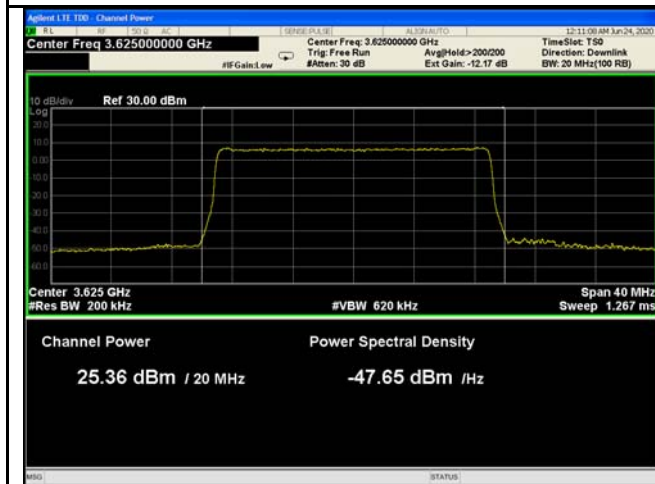
20MHz - High CH 64QAM



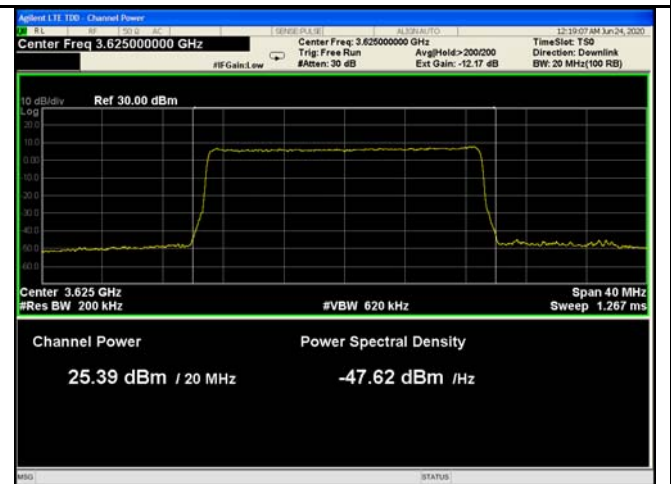
20MHz Full - Low CH QPSK



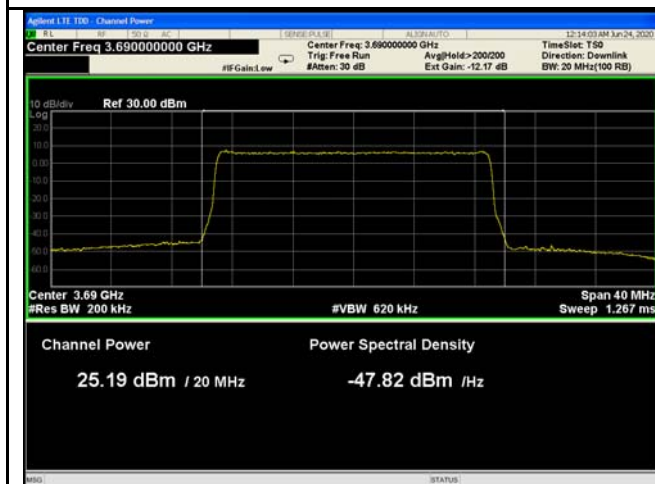
20MHz Full - Low CH 64QAM



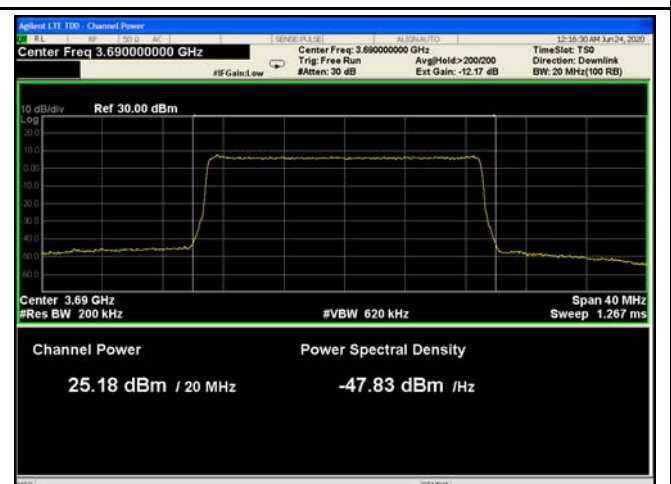
20MHz Full - Middle CH QPSK



20MHz Full - Middle CH 64QAM

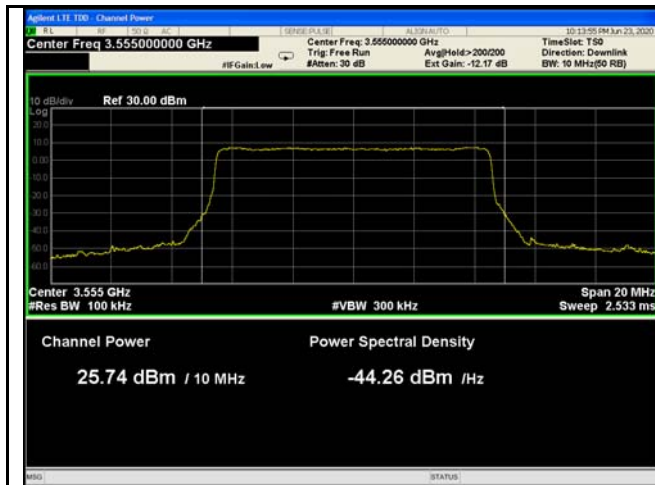


20MHz Full - High CH QPSK

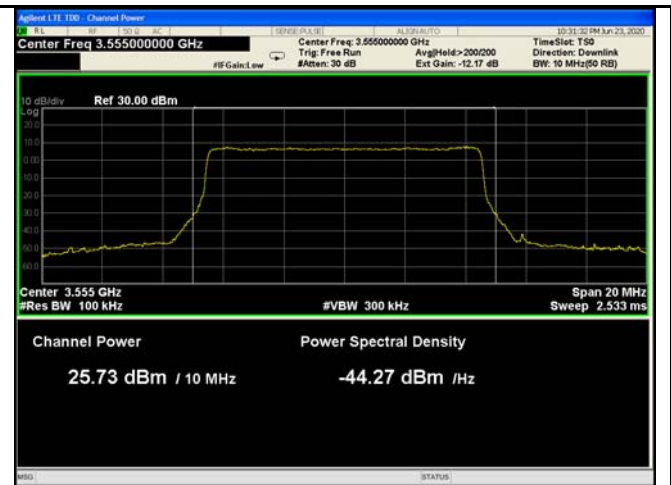


20MHz Full - High CH 64QAM

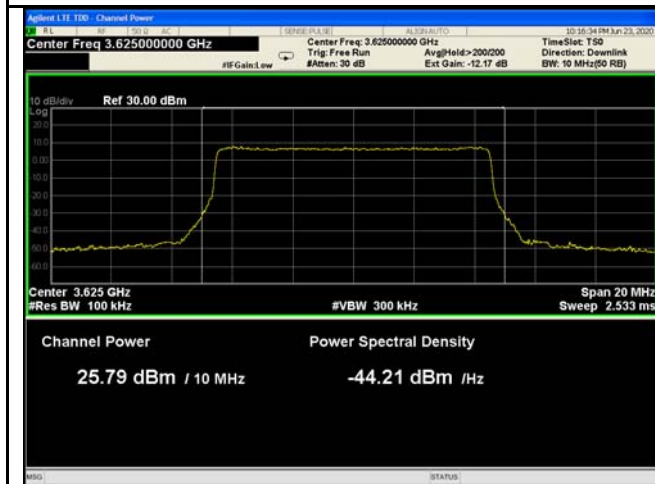
## Port3



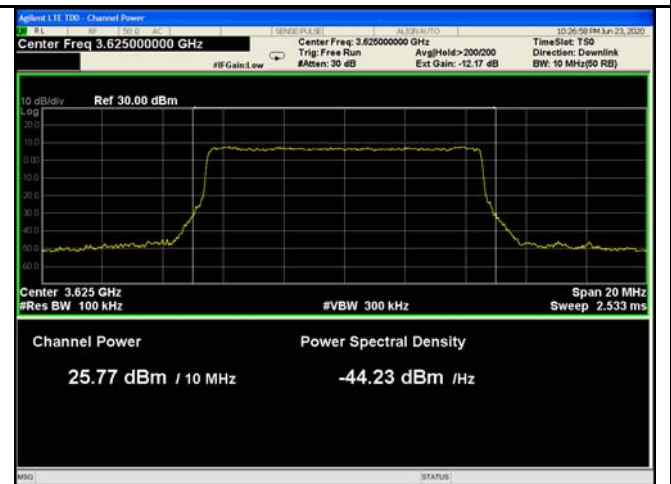
10MHz - Low CH QPSK



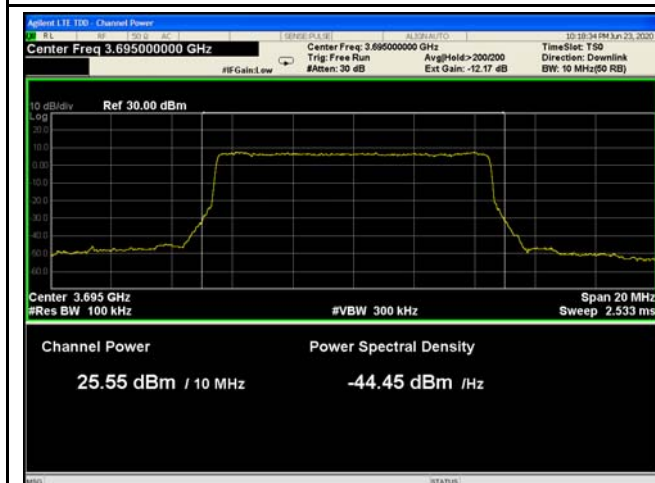
10MHz - Low CH 64QAM



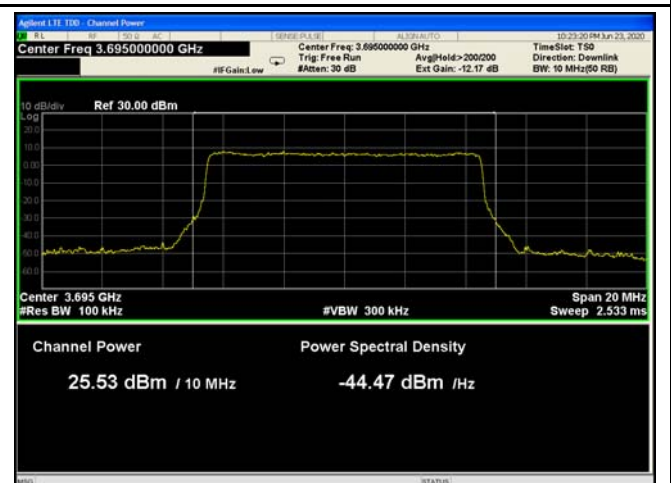
10MHz - Middle CH QPSK



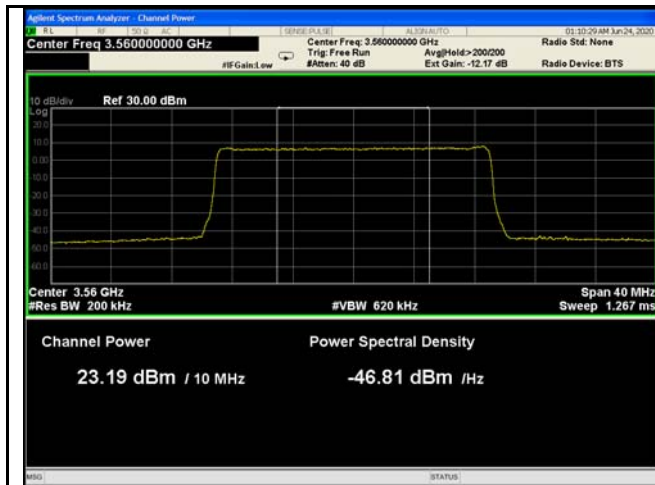
10MHz - Middle CH 64QAM



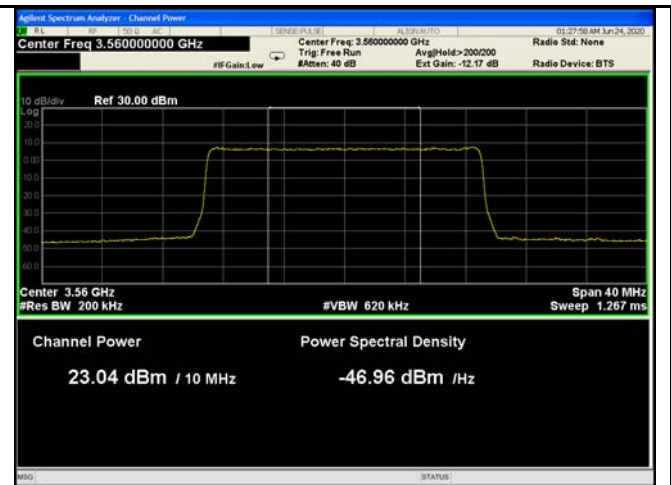
10MHz - High CH QPSK



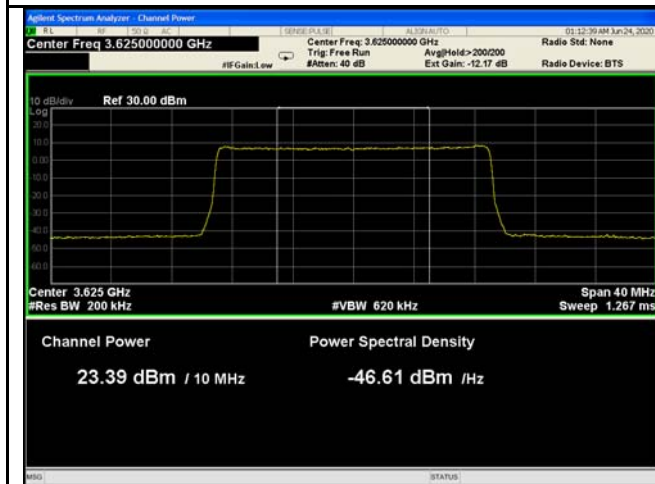
10MHz - High CH 64QAM



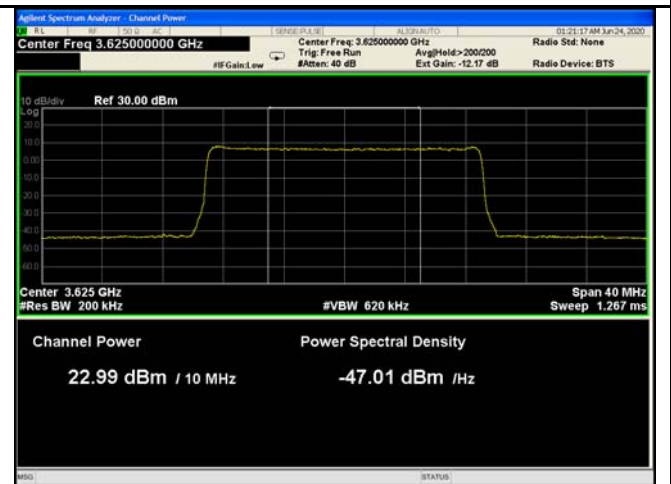
20MHz - Low CH QPSK



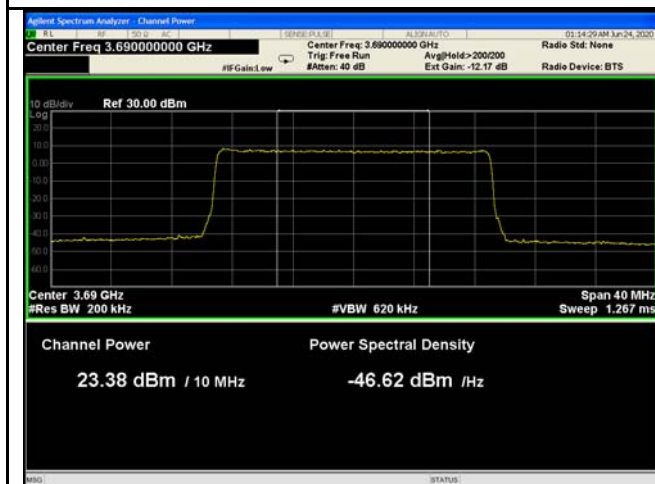
20MHz - Low CH 64QAM



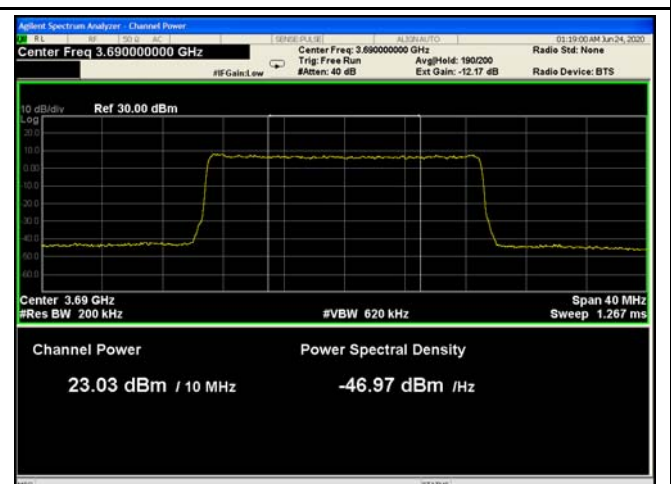
20MHz - Middle CH QPSK



20MHz - Middle CH 64QAM

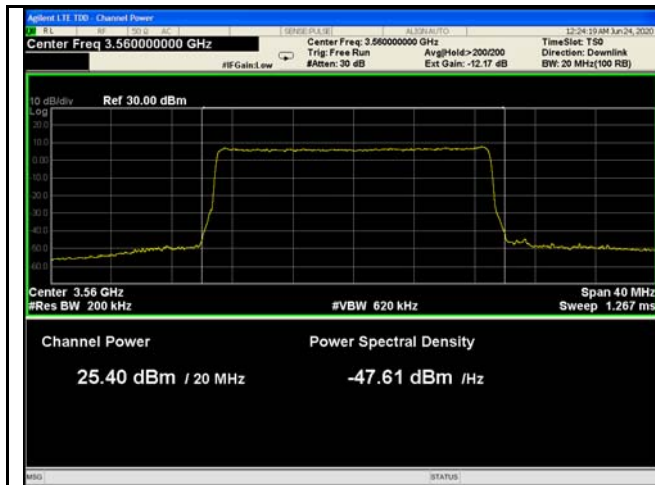


20MHz - High CH QPSK

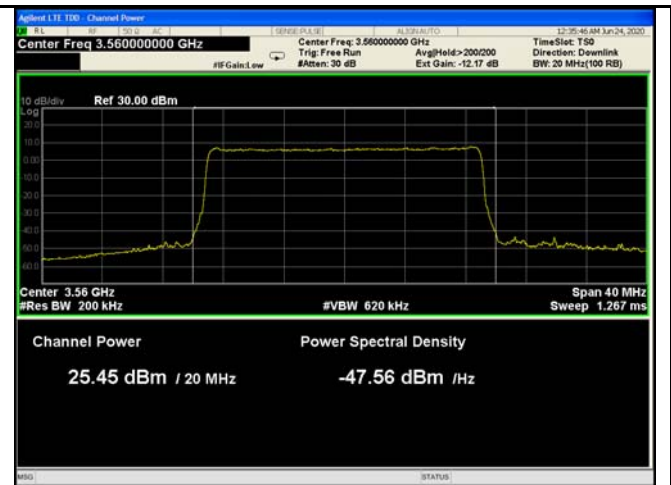


20MHz - High CH 64QAM

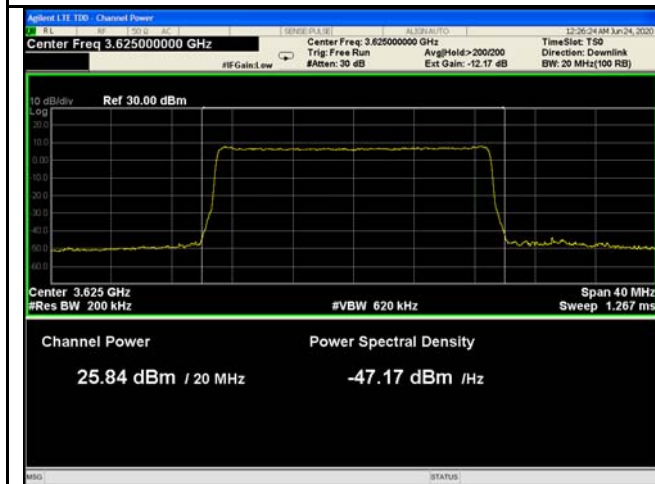




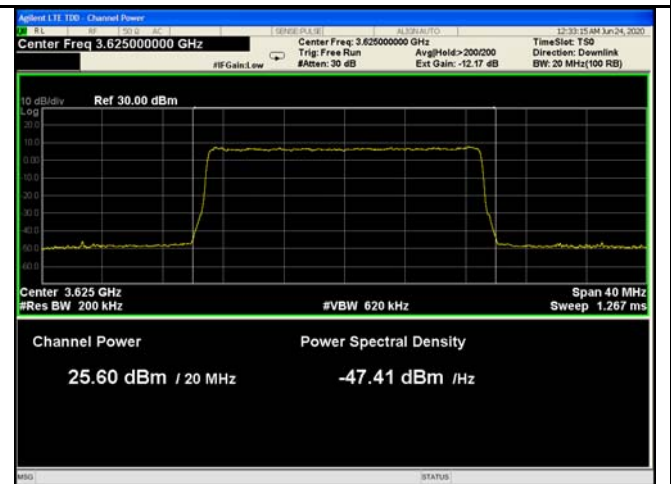
20MHz Full - Low CH QPSK



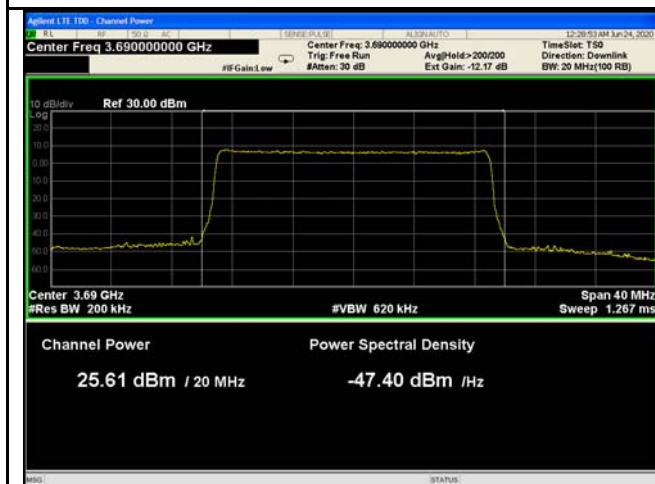
20MHz Full - Low CH 64QAM



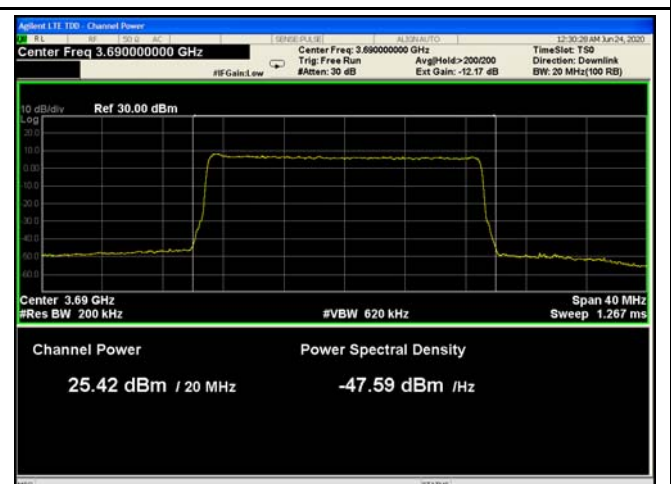
20MHz Full - Middle CH QPSK



20MHz Full - Middle CH 64QAM

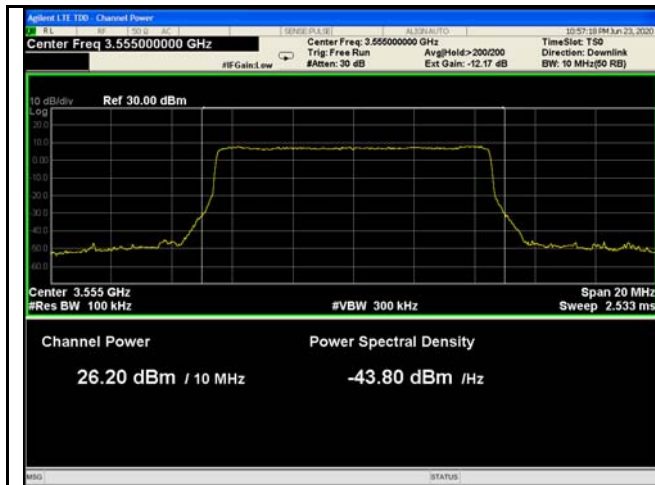


20MHz Full - High CH QPSK

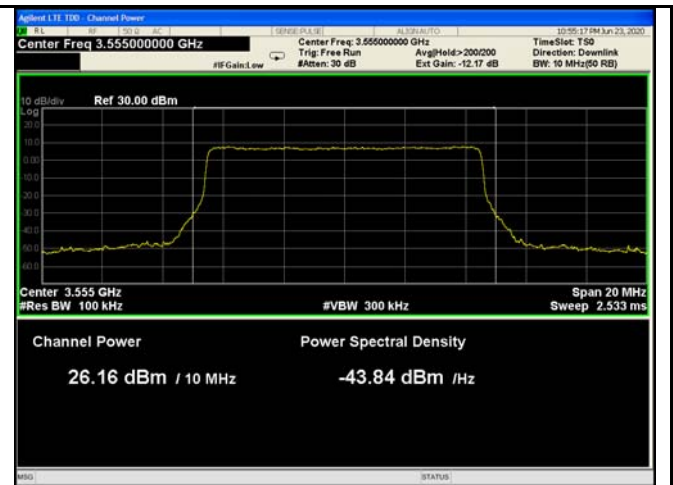


20MHz Full - High CH 64QAM

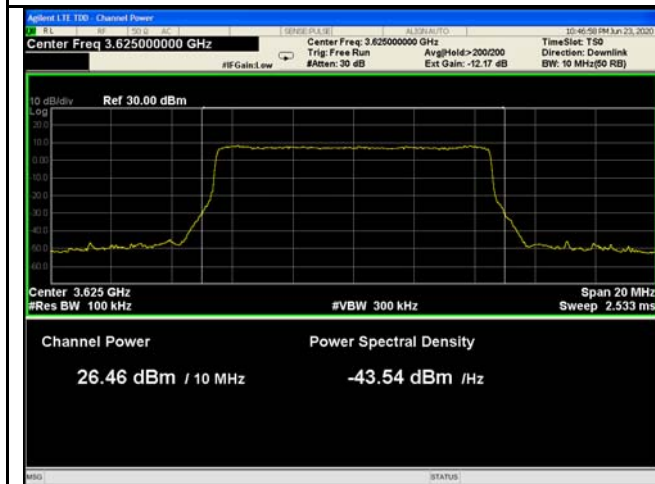
## Port4



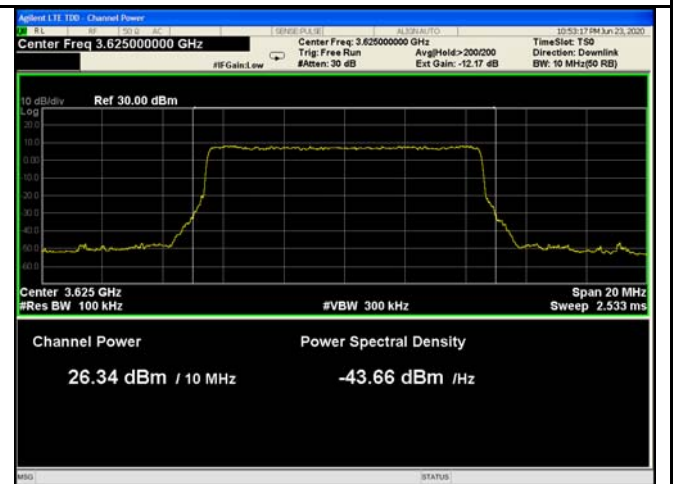
10MHz - Low CH QPSK



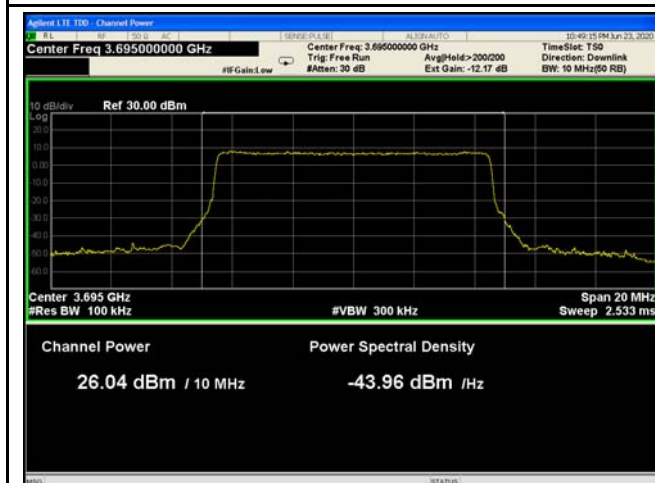
10MHz - Low CH 64QAM



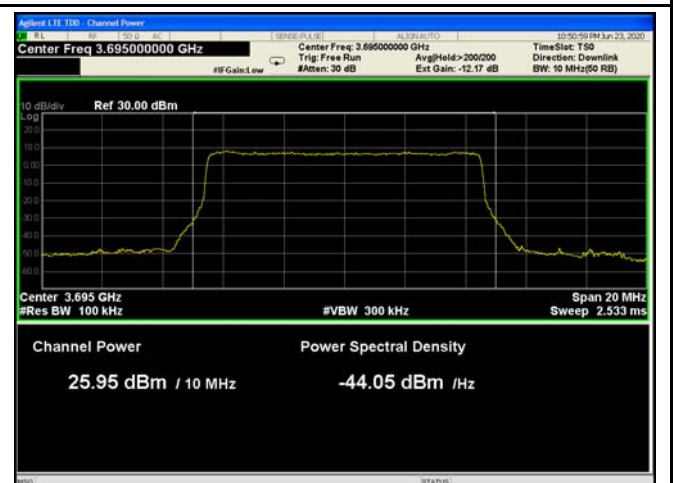
10MHz - Middle CH QPSK



10MHz - Middle CH 64QAM

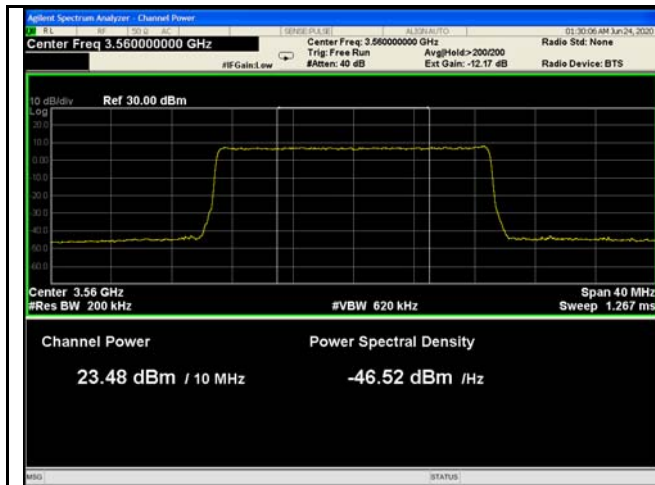


10MHz - High CH QPSK

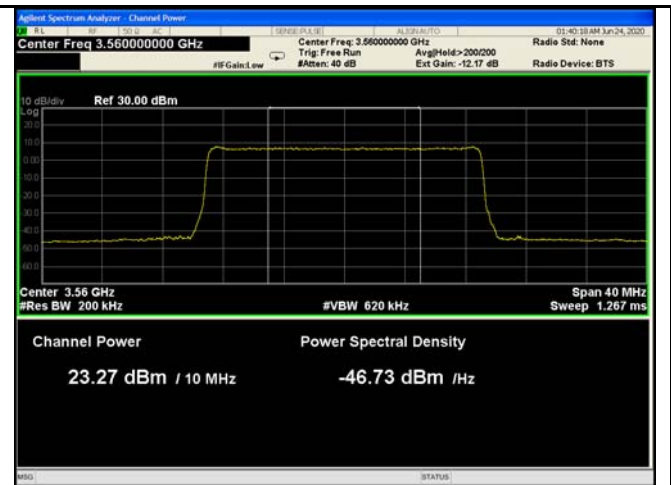


10MHz - High CH 64QAM

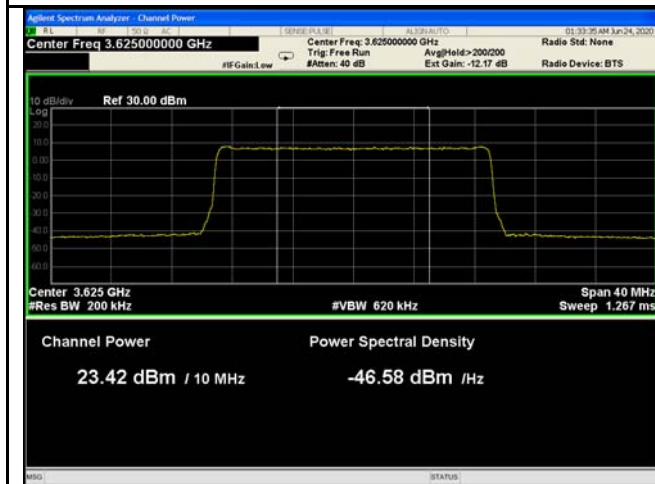




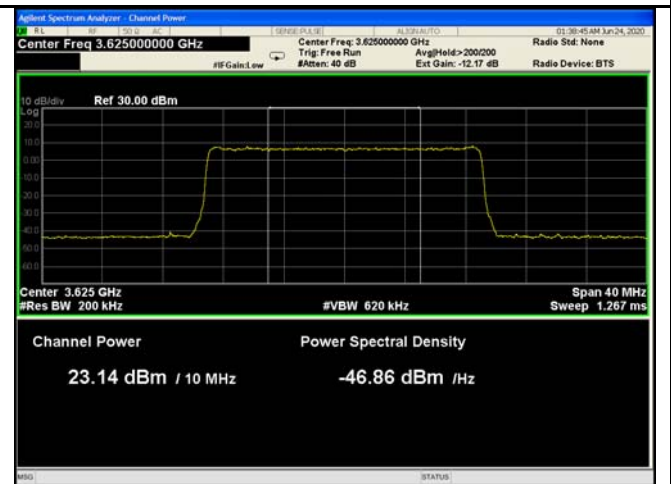
20MHz - Low CH QPSK



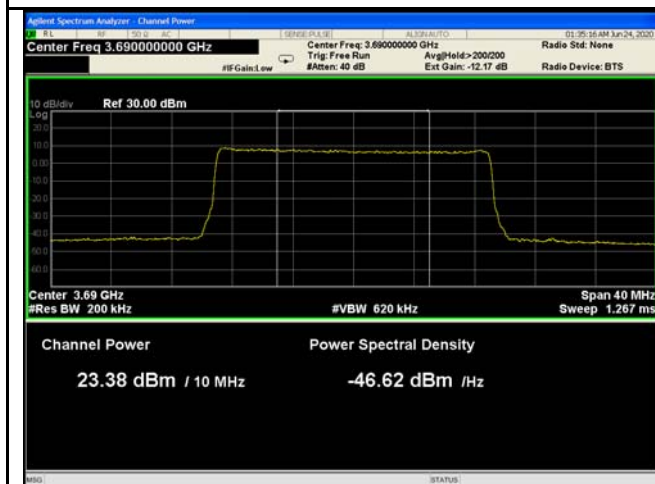
20MHz - Low CH 64QAM



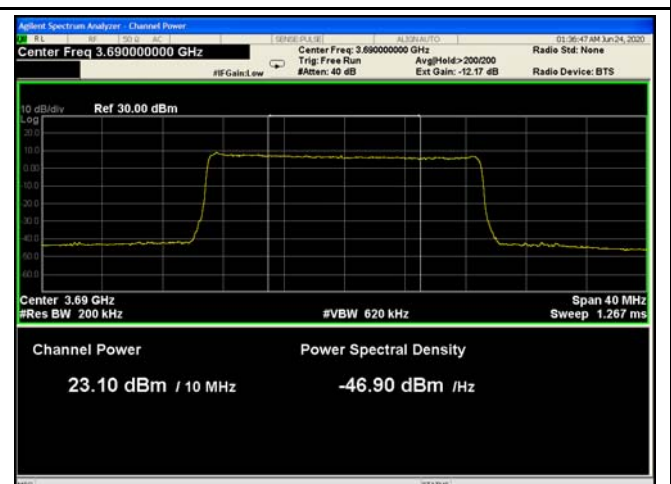
20MHz - Middle CH QPSK



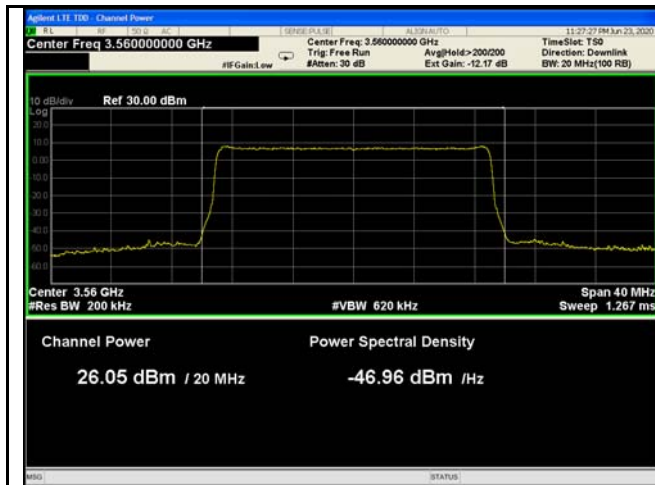
20MHz - Middle CH 64QAM



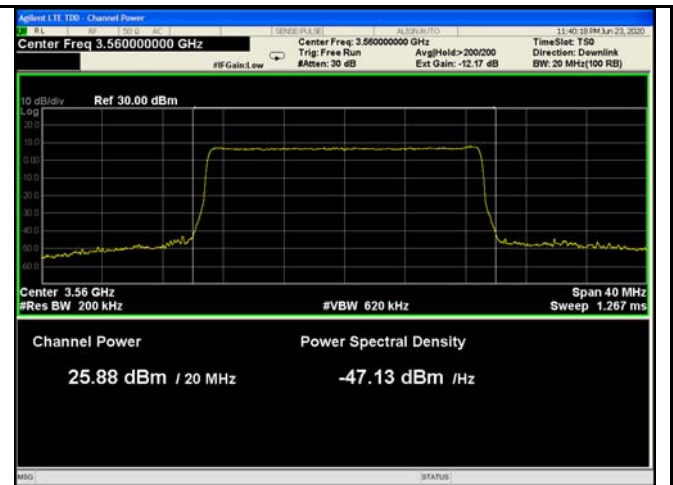
20MHz - High CH QPSK



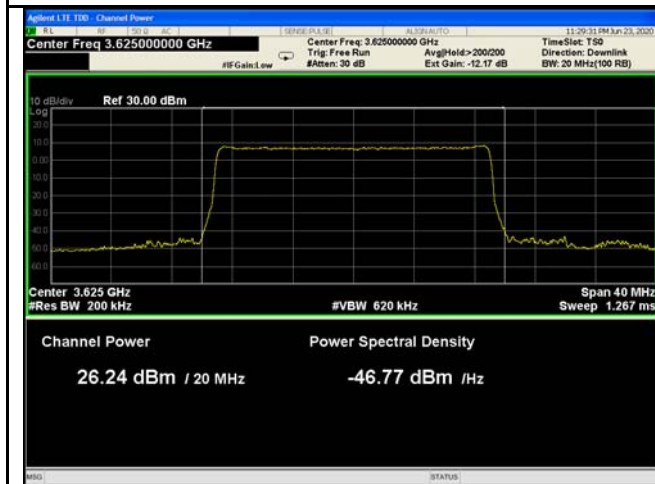
20MHz - High CH 64QAM



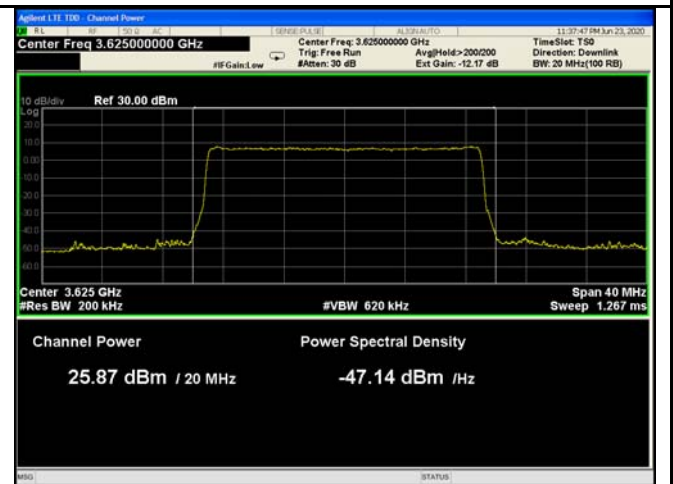
20MHz Full - Low CH QPSK



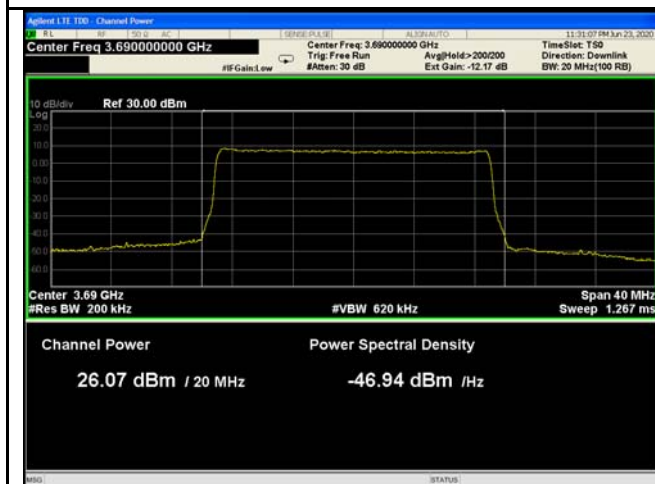
20MHz Full - Low CH 64QAM



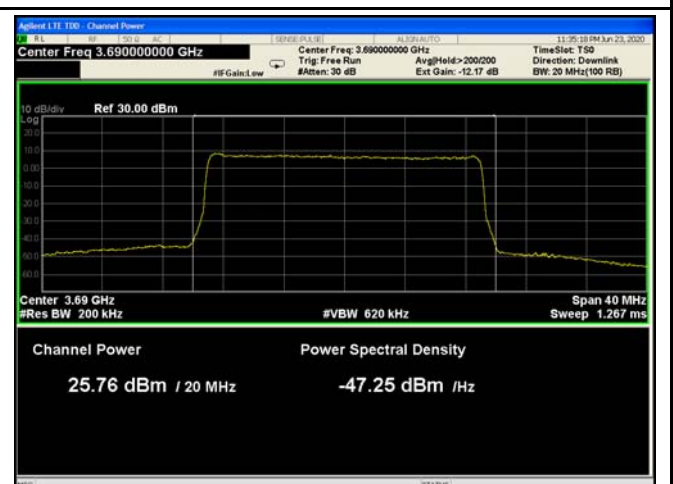
20MHz Full - Middle CH QPSK



20MHz Full - Middle CH 64QAM

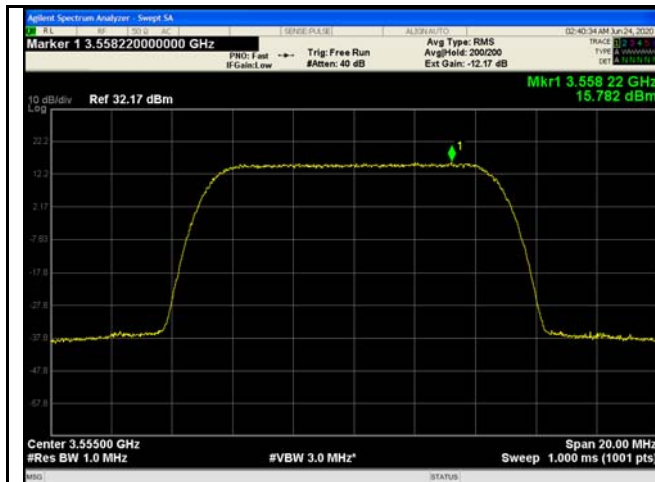


20MHz Full - High CH QPSK

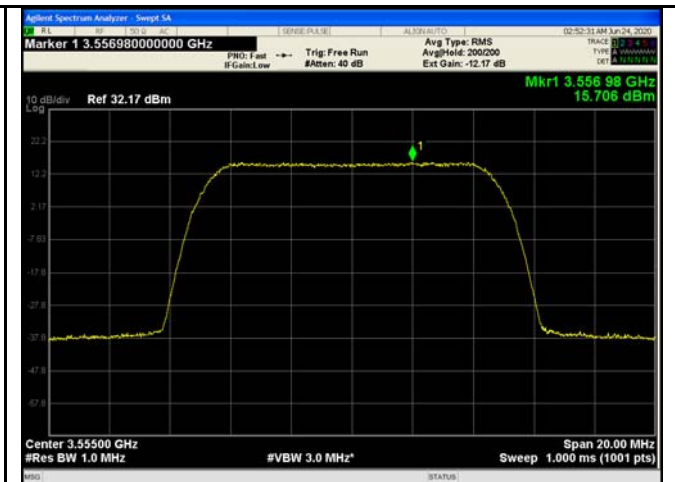


20MHz Full - High CH 64QAM

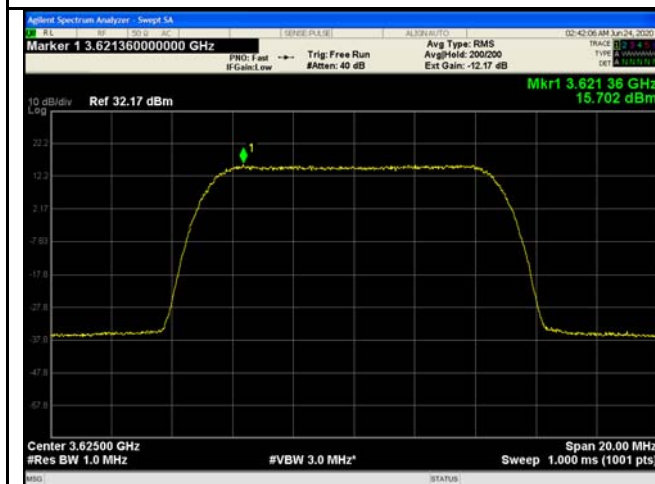
# PSD Port1



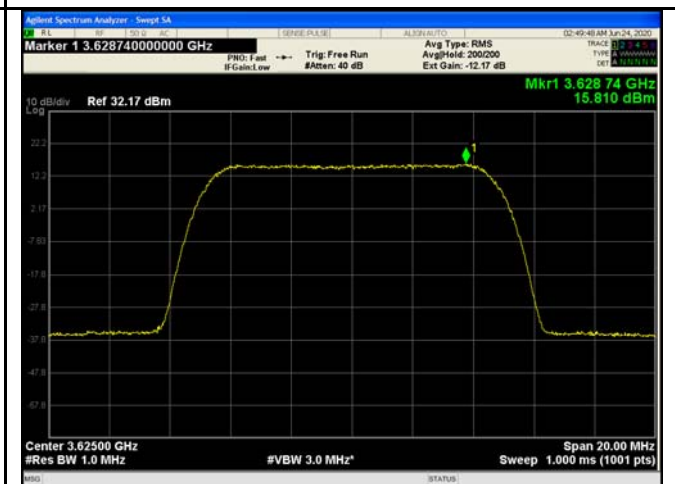
10MHz - Low CH QPSK



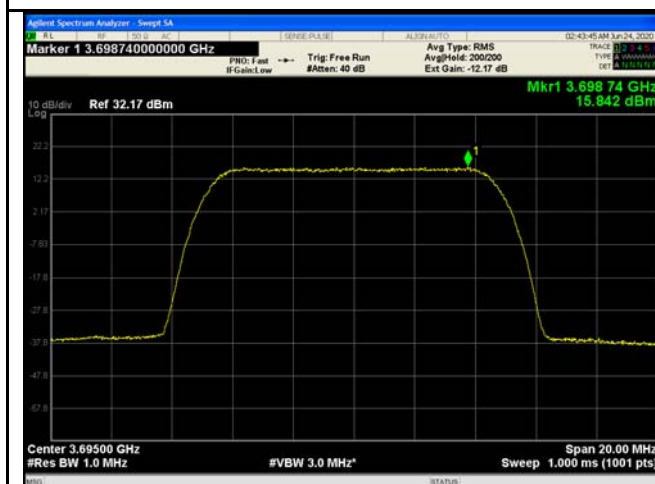
10MHz - Low CH 64QAM



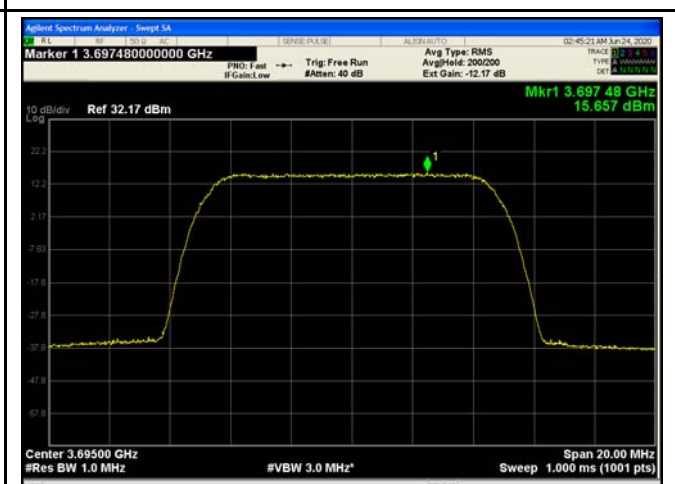
10MHz - Middle CH QPSK



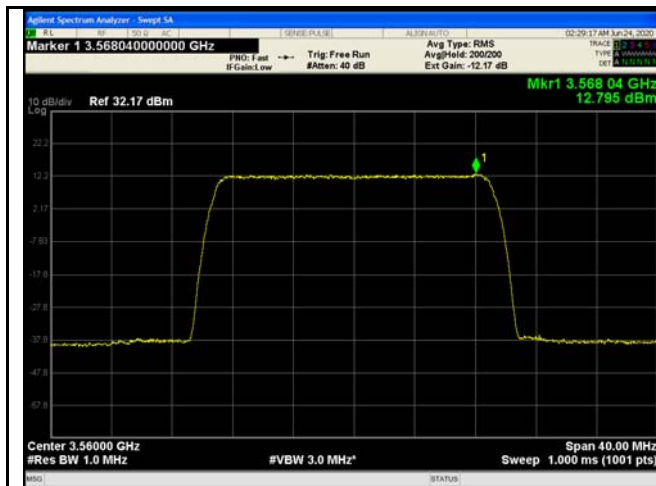
10MHz - Middle CH 64QAM



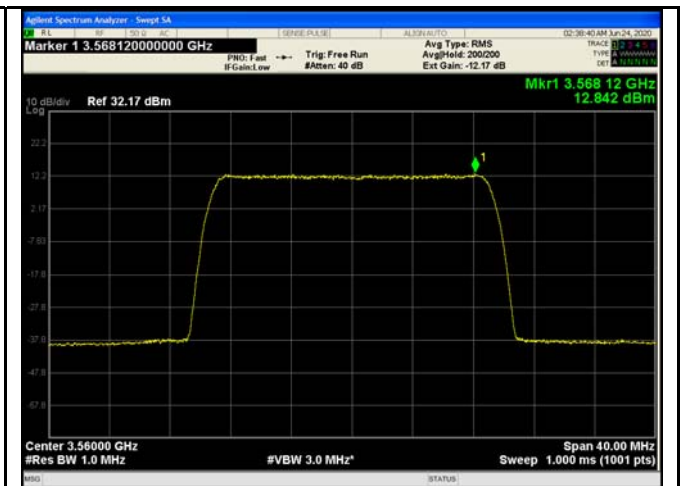
10MHz - High CH QPSK



10MHz - High CH 64QAM



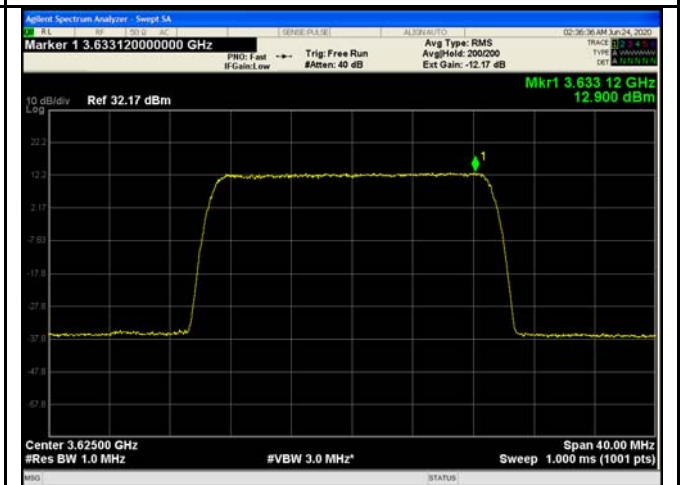
20MHz - Low CH QPSK



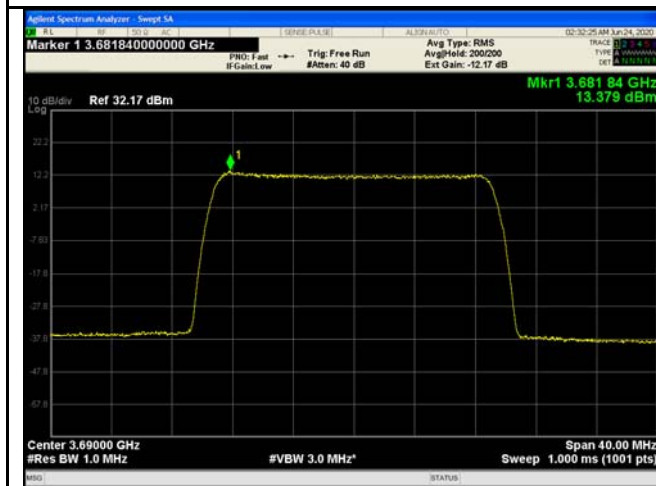
20MHz - Low CH 64QAM



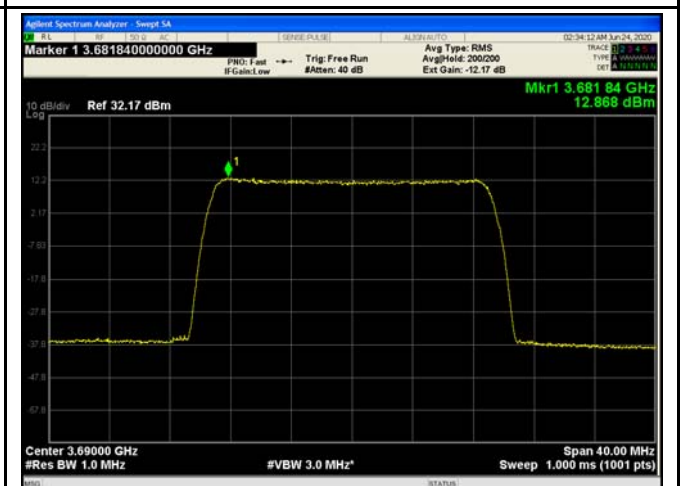
20MHz - Middle CH QPSK



20MHz - Middle CH 64QAM

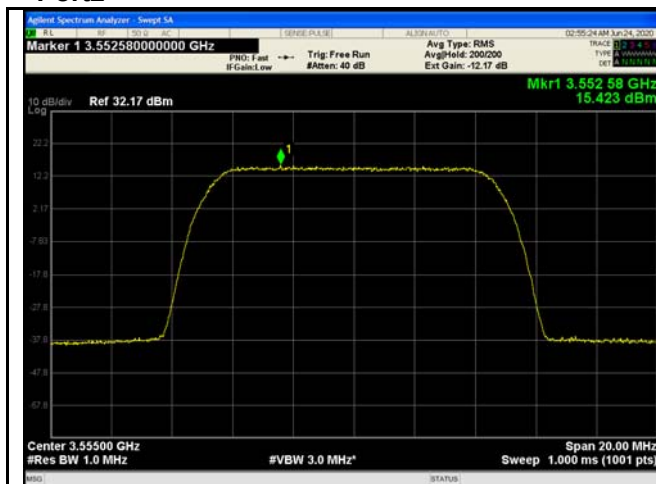


20MHz - High CH QPSK

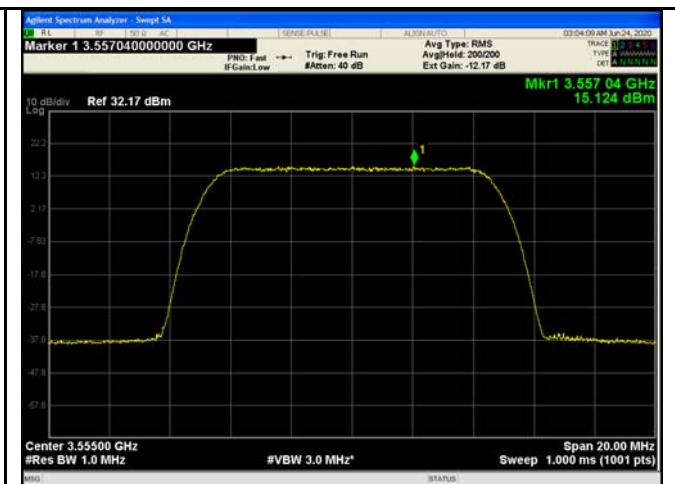


20MHz - High CH 64QAM

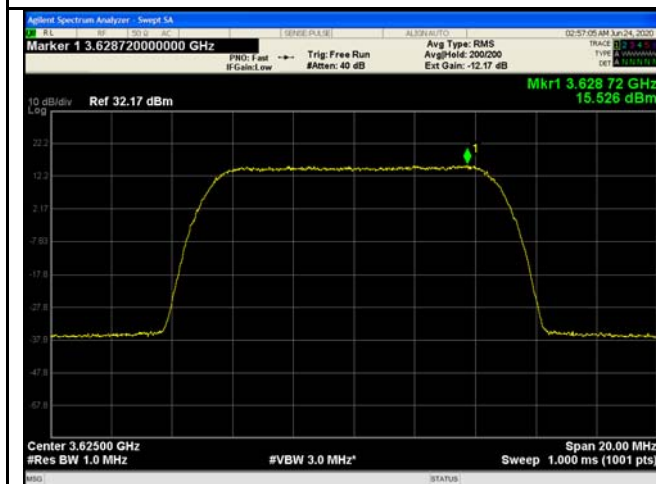
## Port2



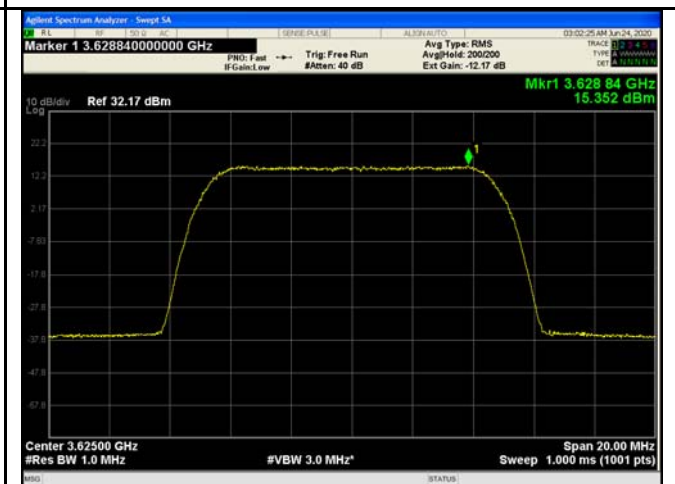
10MHz - Low CH QPSK



10MHz - Low CH 64QAM



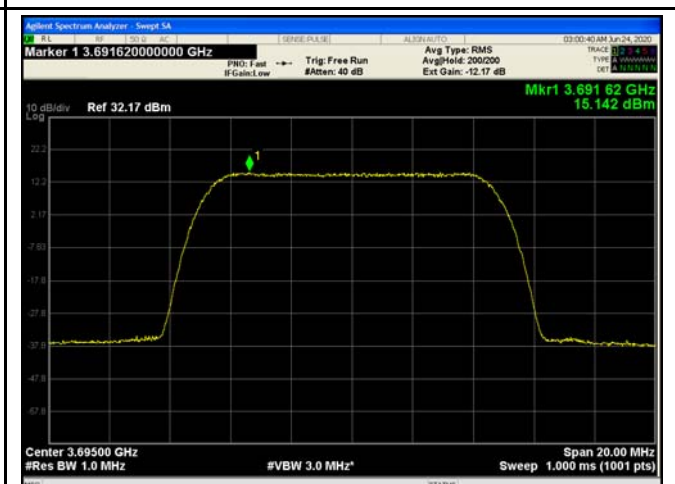
10MHz - Middle CH QPSK



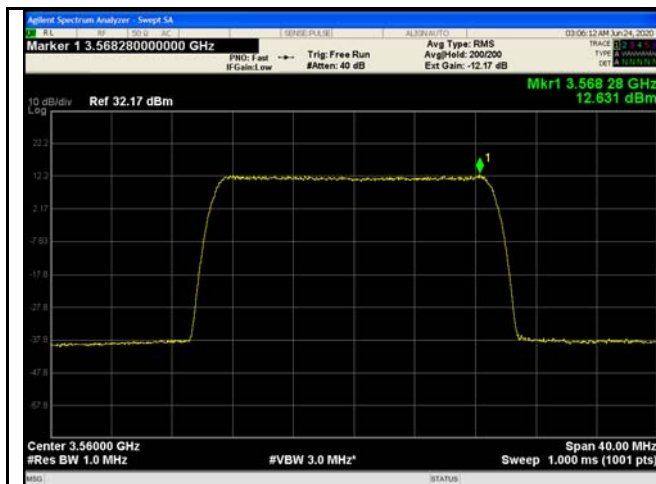
10MHz - Middle CH 64QAM



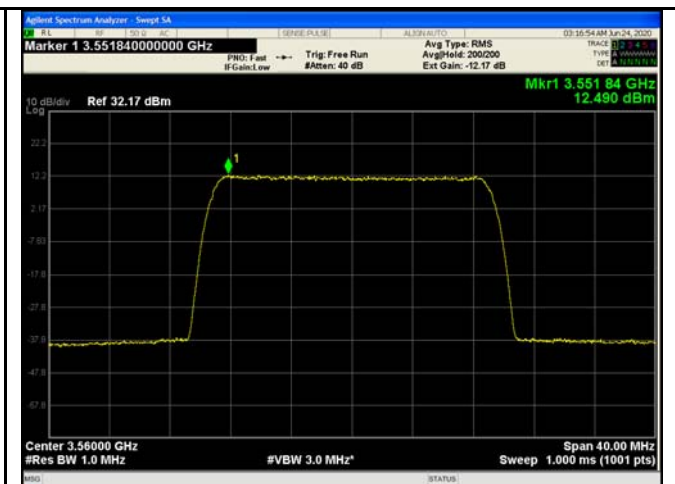
10MHz - High CH QPSK



10MHz - High CH 64QAM



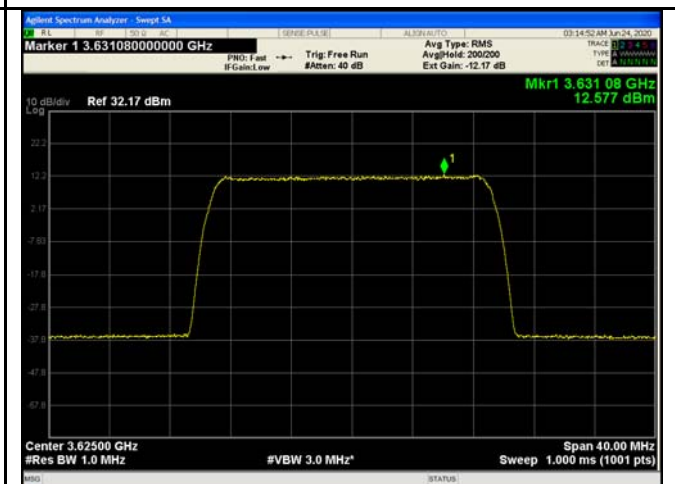
20MHz - Low CH QPSK



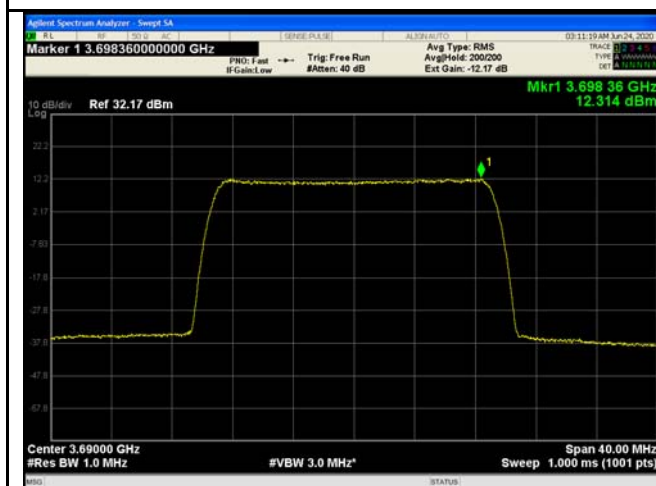
20MHz - Low CH 64QAM



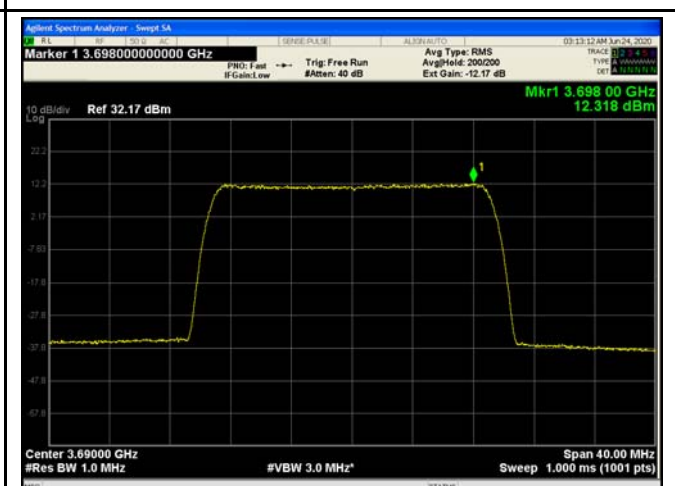
20MHz - Middle CH QPSK



20MHz - Middle CH 64QAM



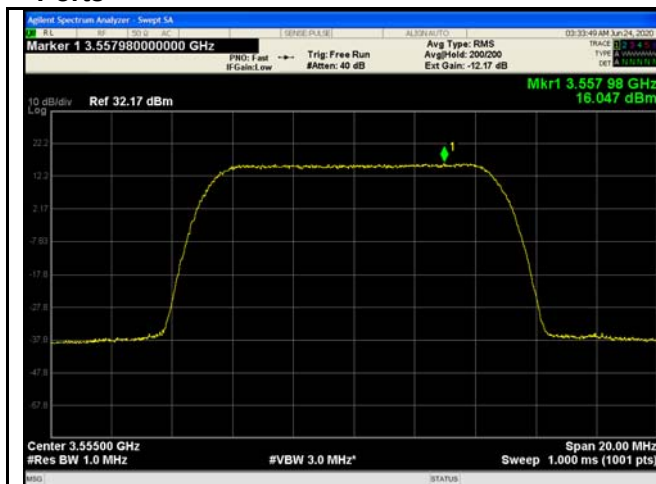
20MHz - High CH QPSK



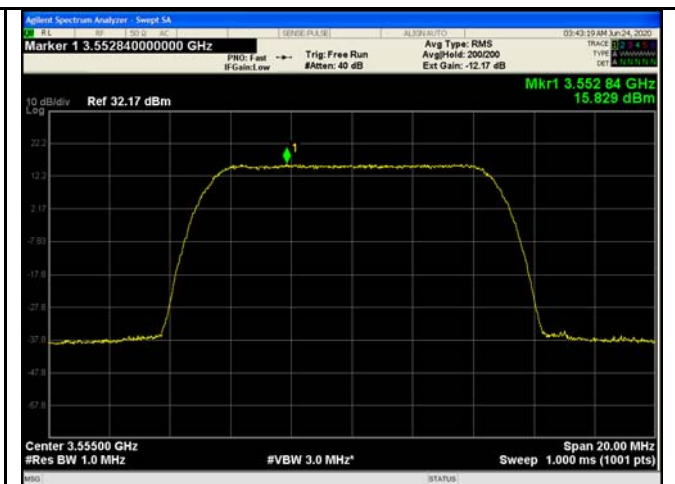
20MHz - High CH 64QAM



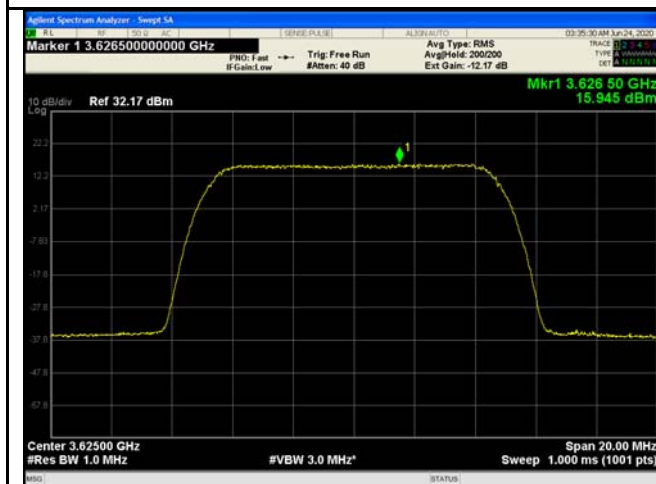
## Port3



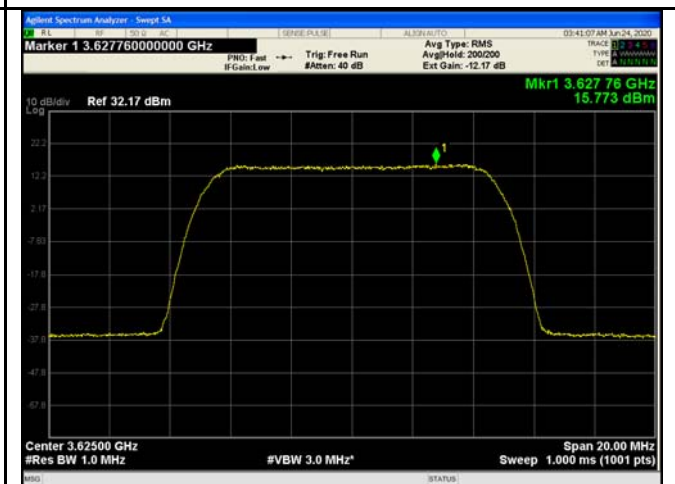
10MHz - Low CH QPSK



10MHz - Low CH 64QAM



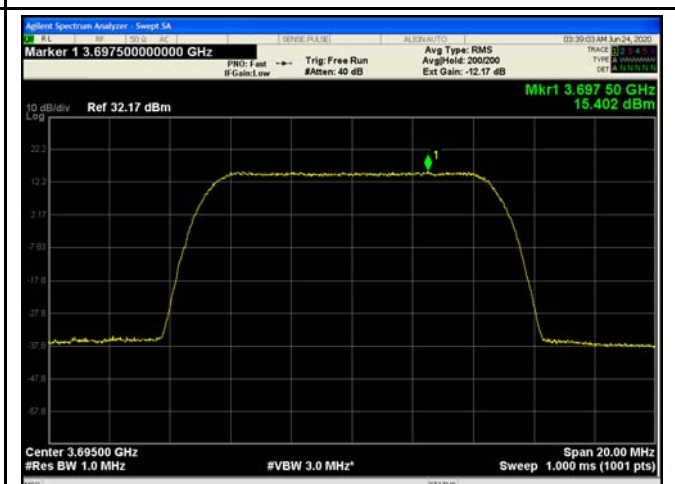
10MHz - Middle CH QPSK



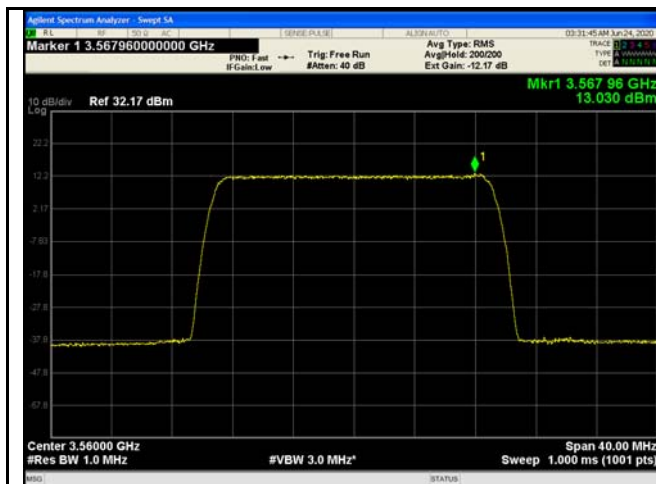
10MHz - Middle CH 64QAM



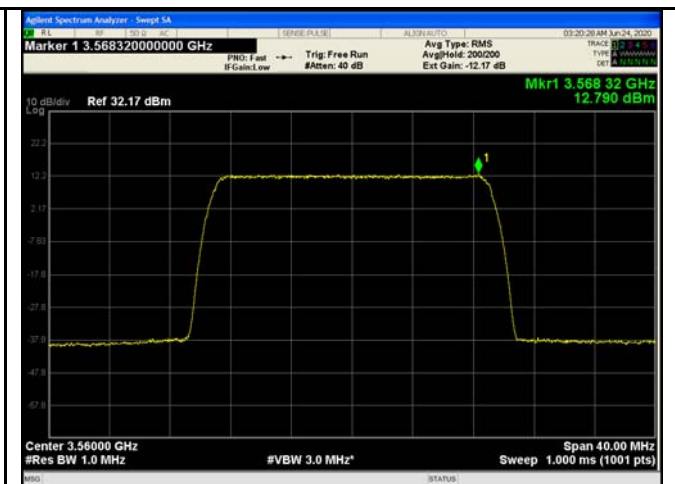
10MHz - High CH QPSK



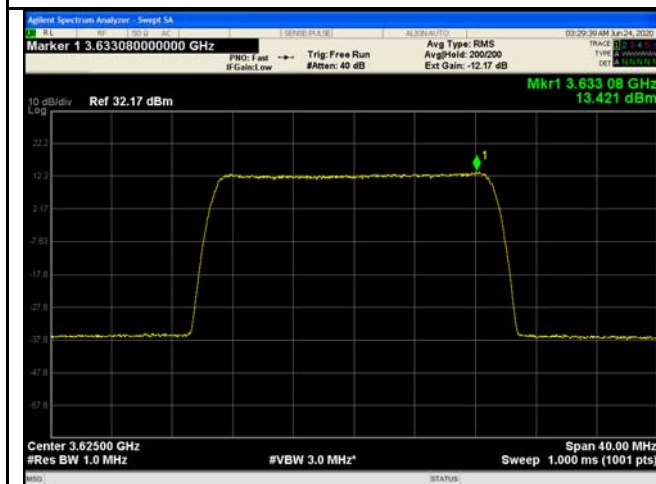
10MHz - High CH 64QAM



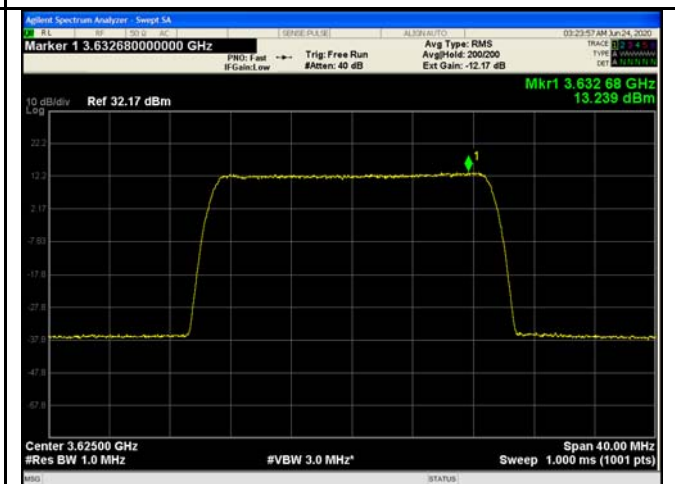
20MHz - Low CH QPSK



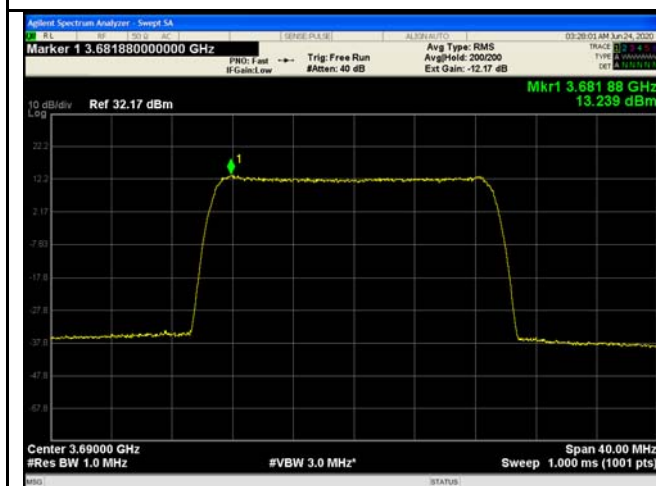
20MHz - Low CH 64QAM



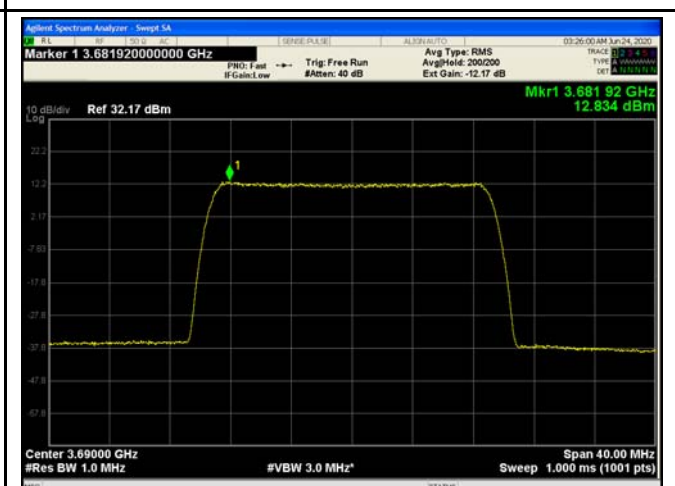
20MHz - Middle CH QPSK



20MHz - Middle CH 64QAM



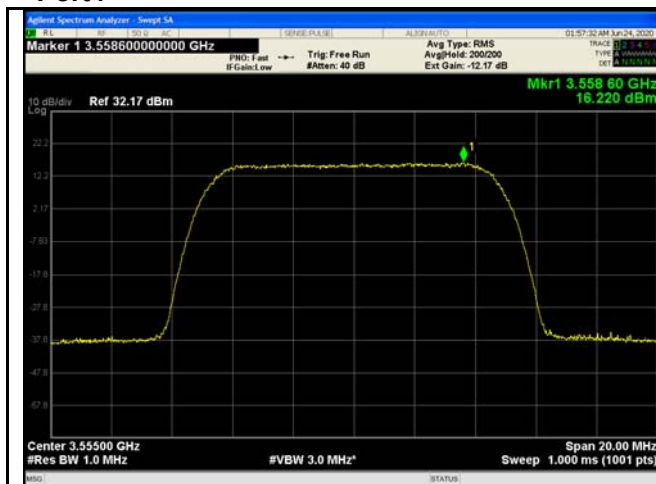
20MHz - High CH QPSK



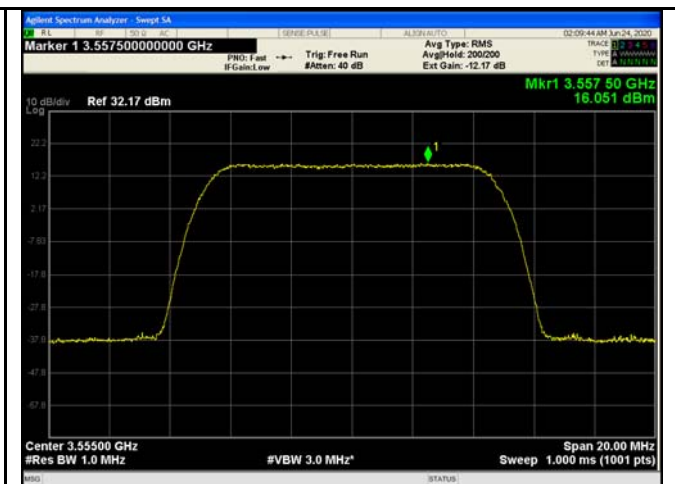
20MHz - High CH 64QAM



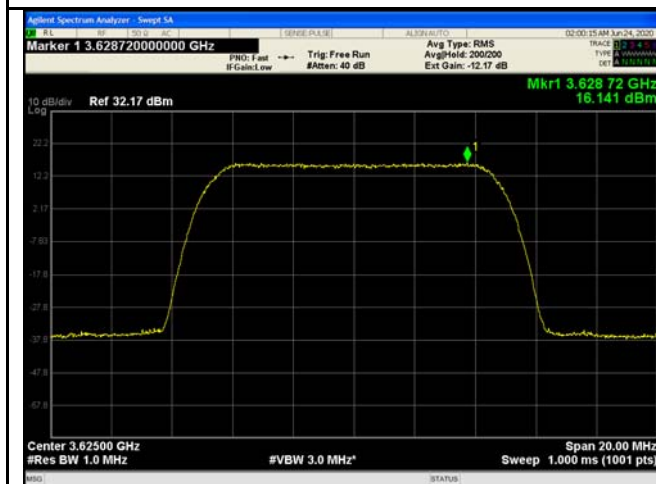
## Port4



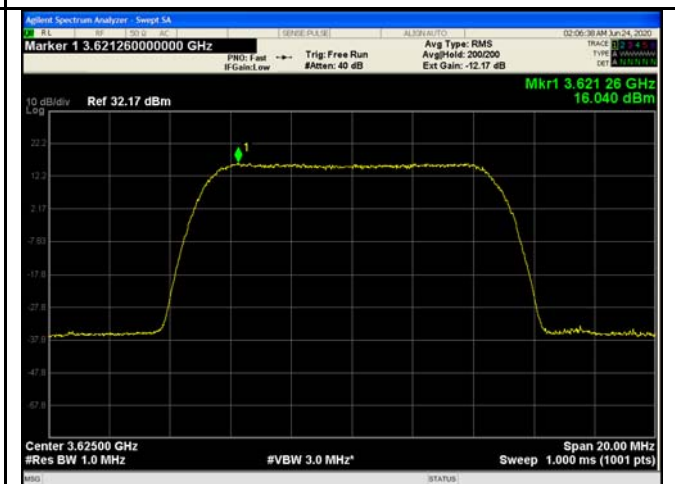
10MHz - Low CH QPSK



10MHz - Low CH 64QAM



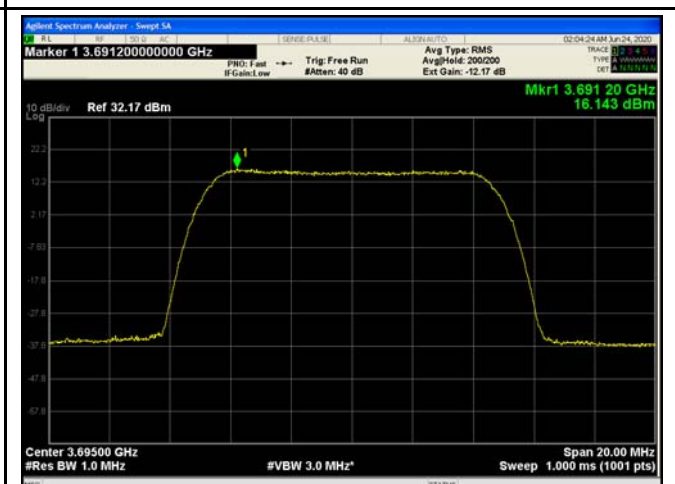
10MHz - Middle CH QPSK



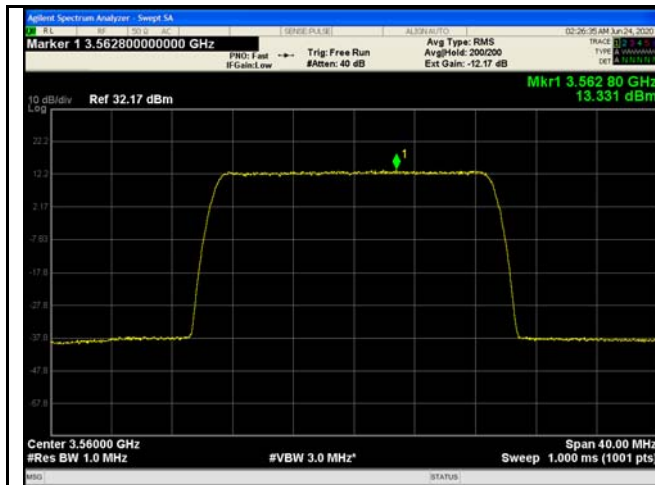
10MHz - Middle CH 64QAM



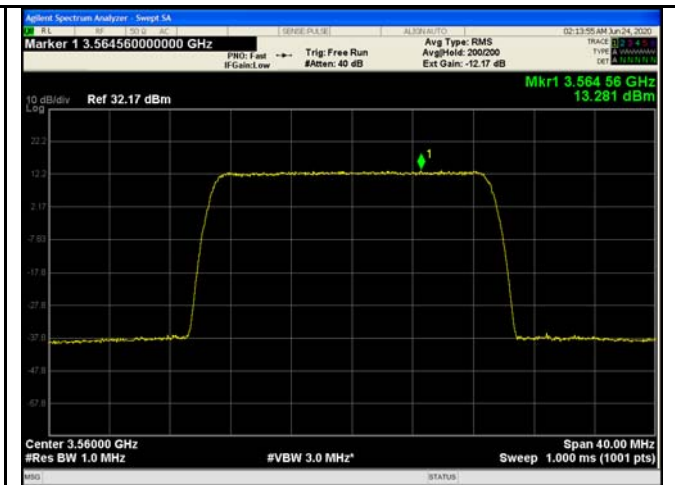
10MHz - High CH QPSK



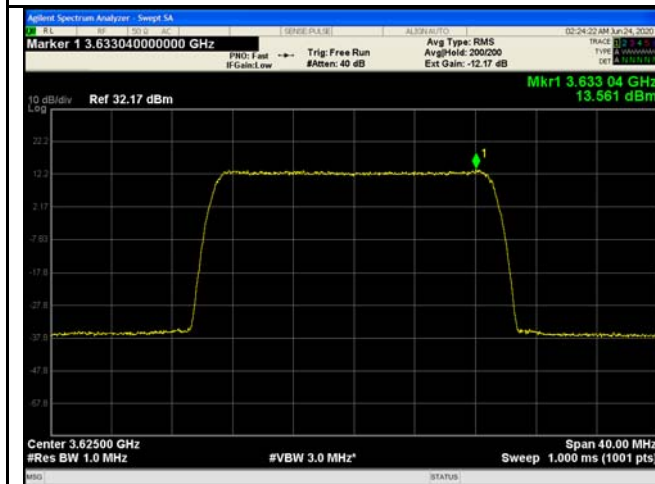
10MHz - High CH 64QAM



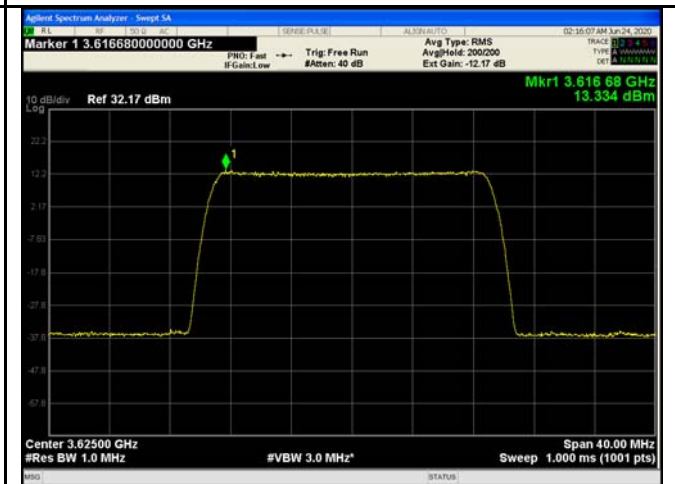
20MHz - Low CH QPSK



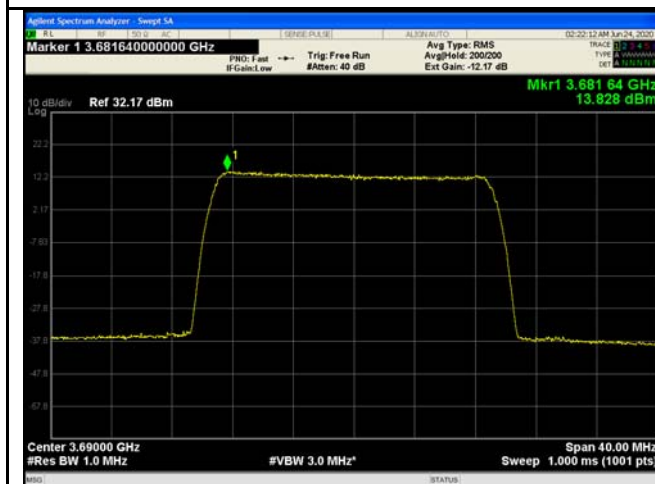
20MHz - Low CH 64QAM



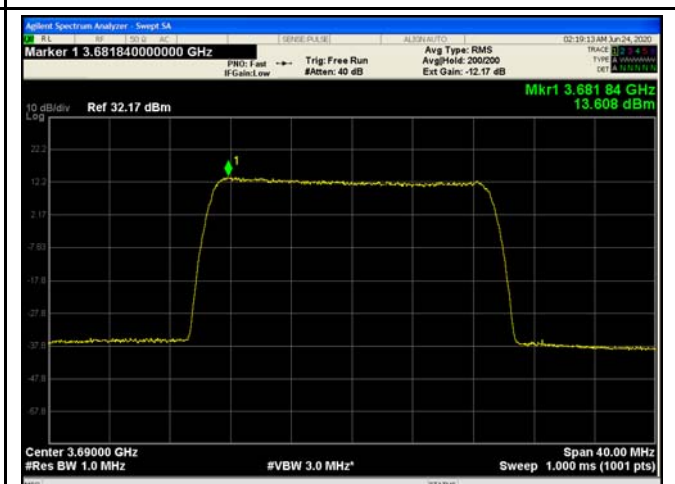
20MHz - Middle CH QPSK



20MHz - Middle CH 64QAM



20MHz - High CH QPSK



20MHz - High CH 64QAM

## 8 Peak-to-average power ratio

|                   |                                       |
|-------------------|---------------------------------------|
| Test Requirement: | FCC part96.41(g)                      |
| Test Method:      | ANSI/TIA-603-E:2016, ANSI C63.26:2015 |
| Test Mode:        | Data communicating mode               |
| Limit:            |                                       |

| Probability, % | dB |
|----------------|----|
| 0.1            | 13 |

### 8.1 EUT Operation

Operating Environment :

|                       |           |
|-----------------------|-----------|
| Temperature:          | 23.5 °C   |
| Humidity:             | 51.1 % RH |
| Atmospheric Pressure: | 101.2kPa  |

### 8.2 Test Procedure

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. Set EUT to transmit at maximum output power.
3. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.

### 8.3 Test Result

Remark: Refer to the original FCC ID: 2AG32MBS31001 test report 2477ERM.001A2.

TEST A.5: PEAK-TO-AVERAGE POWER RATIO (PAPR).

## 9 99% & -26 dB Occupied Bandwidth

|                   |                                       |
|-------------------|---------------------------------------|
| Test Requirement: | FCC part 2.1049                       |
| Test Method:      | ANSI/TIA-603-E:2016, ANSI C63.26:2015 |
| Test Mode:        | Data communicating mode               |

### 9.1 EUT Operation

Operating Environment :

|                       |           |
|-----------------------|-----------|
| Temperature:          | 23.5 °C   |
| Humidity:             | 51.1 % RH |
| Atmospheric Pressure: | 101.2kPa  |

### 9.2 Test Procedure

1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer.
2. The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
3. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
4. The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

### 9.3 Test Result

Remark: Refer to the original FCC ID: 2AG32MBS31001 test report 2477ERM.001A2.

TEST A.3: 99% OBW AND -26 DB BANDWIDTH.

## 10 Emission Mask

|                   |                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC part 96.41(e)                                                                                                                                                                                                                                                                                                                   |
| Test Method:      | ANSI/TIA-603-E:2016, ANSI C63.26:2015                                                                                                                                                                                                                                                                                               |
| Test Mode:        | Data communicating mode                                                                                                                                                                                                                                                                                                             |
| Limit:            | <ul style="list-style-type: none"><li>• within 0 MHz to 10 MHz above and below the assigned channel <math>\leq -13</math> dBm/MHz</li><li>• greater than 10 MHz above and below the assigned channel <math>\leq -25</math> dBm/MHz</li><li>• any emission below 3530 MHz and above 3720 MHz <math>\leq -40</math> dBm/MHz</li></ul> |

### 10.1 EUT Operation

|                         |           |
|-------------------------|-----------|
| Operating Environment : |           |
| Temperature:            | 23.5 °C   |
| Humidity:               | 51.1 % RH |
| Atmospheric Pressure:   | 101.2kPa  |

### 10.2 Test Procedure

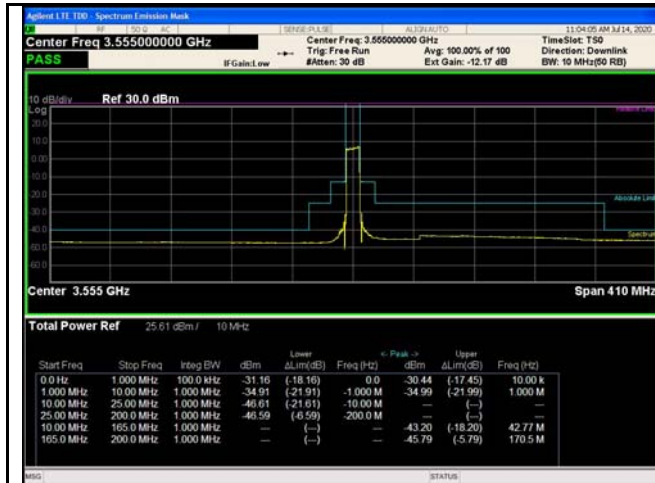
1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. Measurements must be performed for low, mid, and high channels.
3. RBW=1% of fundamental for measurements within 1 MHz immediately outside the authorized channel; and 1 MHz for beyond 1 MHz outside the authorized channel. (eg. For 5MHz, RBW=51KHz within 1 MHz immediately outside the authorized channel )
4. Trace average at least 100 traces

### 10.3 Test Result

### Spot-check test data Plots Port1



## Port2



10MHz - Low CH QPSK



20MHz - Low CH QPSK



10MHz - Middle CH QPSK



20MHz - Middle CH QPSK



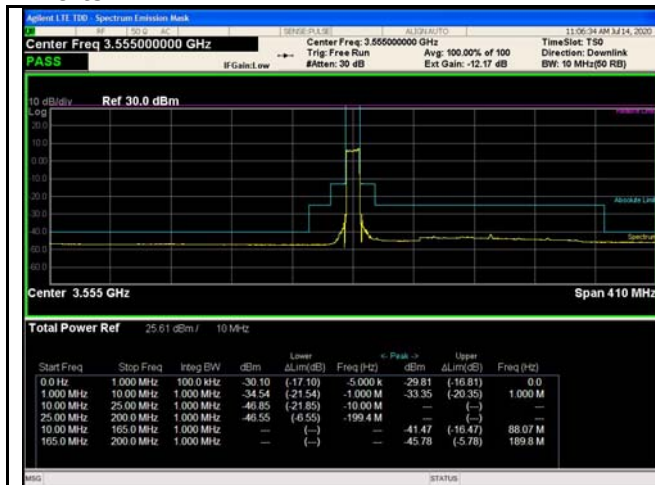
10MHz - High CH QPSK



20MHz - High CH QPSK



## Port3



10MHz - Low CH QPSK



20MHz - Low CH QPSK



10MHz - Middle CH QPSK



20MHz - Middle CH QPSK



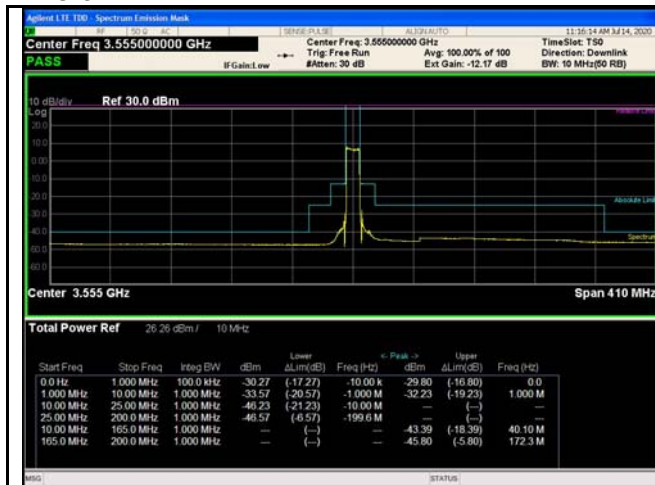
10MHz - High CH QPSK



20MHz - High CH QPSK



## Port4



10MHz - Low CH QPSK



20MHz - Low CH QPSK



10MHz - Middle CH QPSK



20MHz - Middle CH QPSK



10MHz - High CH QPSK



20MHz - High CH QPSK

## 11 Spurious Emissions at Antenna Terminal

|                   |                                                 |
|-------------------|-------------------------------------------------|
| Test Requirement: | FCC part 96.41(e)                               |
| Test Method:      | ANSI/TIA-603-E:2016, ANSI C63.26:2015           |
| Test Mode:        | Data communicating mode                         |
| Limit:            | below 3530 MHz and above 3720 MHz $\leq$ -40dBm |

### 11.1 EUT Operation

Operating Environment :

|                       |           |
|-----------------------|-----------|
| Temperature:          | 23.5 °C   |
| Humidity:             | 52.1 % RH |
| Atmospheric Pressure: | 101.3kPa  |

### 11.2 Test Procedure

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 100 kHz when below 1GHz, 1MHz when above 1 GHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.
3. For the out of band: Set the RBW=100 kHz, VBW=300 kHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic.
4. Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

### 11.3 Test Result

Remark: Refer to the original FCC ID: 2AG32MBS31001 test report 2477ERM.001A2.

TEST A.7: SPURIOUS EMISSIONS AT ANTENNA TERMINALS.

## 12 Field strength of spurious radiation measurement

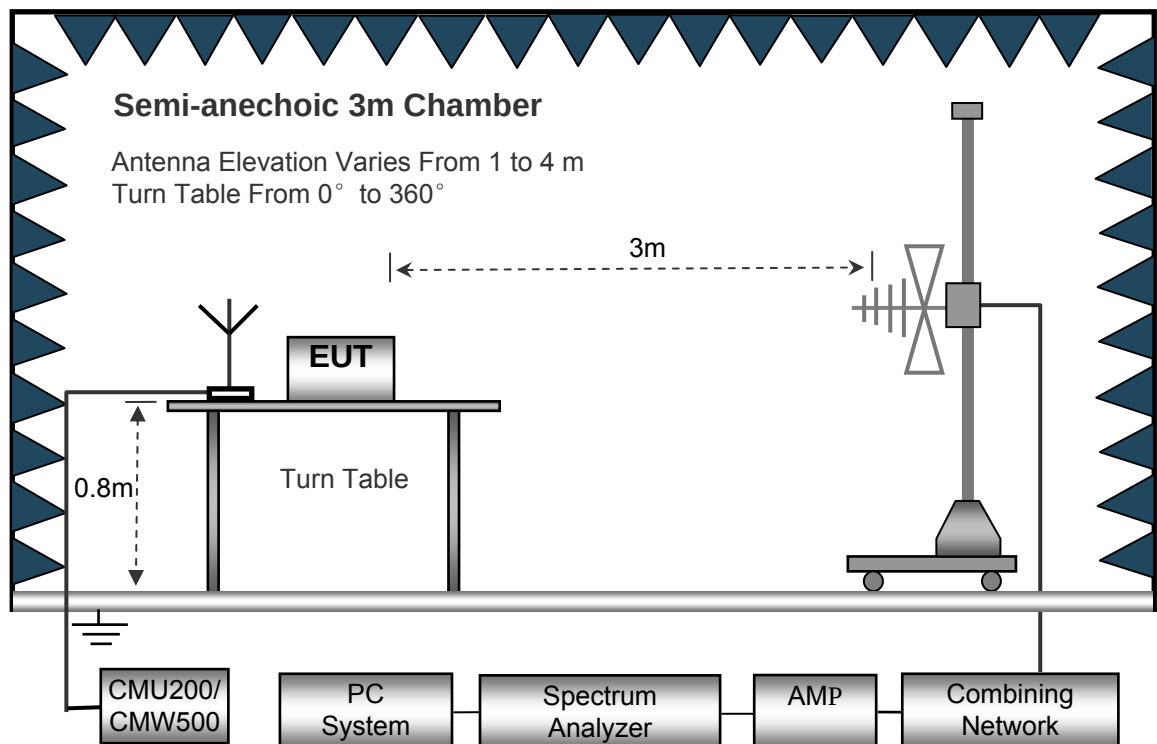
|                   |                                       |
|-------------------|---------------------------------------|
| Test Requirement: | FCC part 96.41(e)                     |
| Test Method:      | ANSI/TIA-603-E:2016, ANSI C63.26:2015 |
| Test Mode:        | Data communicating mode               |
| Limit:            | -40dBm                                |

### 12.1 EUT Operation

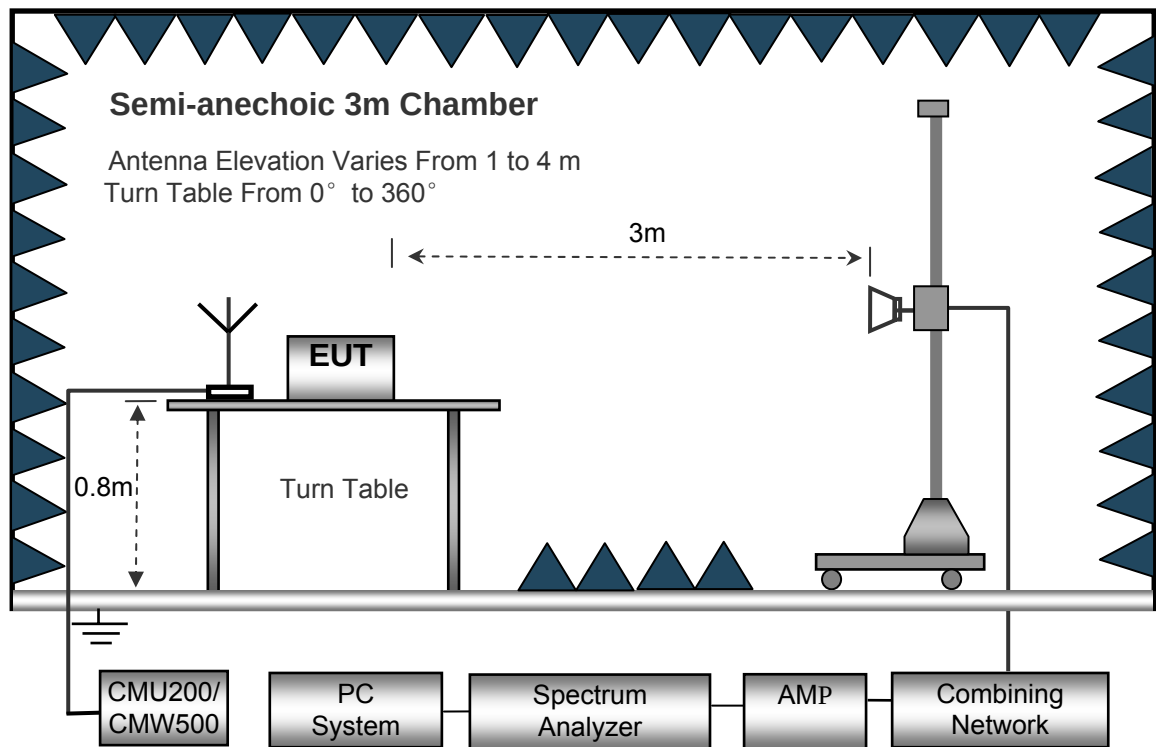
|                         |           |
|-------------------------|-----------|
| Operating Environment : |           |
| Temperature:            | 23.5 °C   |
| Humidity:               | 52.1 % RH |
| Atmospheric Pressure:   | 101.2kPa  |

### 12.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site. The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



### 12.3 Spectrum Analyzer Setup

30MHz ~ 1GHz

Sweep Speed ..... Auto  
Detector ..... PK  
Resolution Bandwidth..... 100kHz  
Video Bandwidth..... 300kHz

Above 1GHz

Sweep Speed ..... Auto  
Detector ..... PK  
Resolution Bandwidth..... 1MHz  
Video Bandwidth..... 3MHz  
Detector ..... Ave.  
Resolution Bandwidth..... 1MHz  
Video Bandwidth..... 10Hz

## 12.4 Test Procedure

1. The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.
3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.
4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

$$\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$$

## 12.5 Test Result

Remark: Refer to the original FCC ID: 2AG32MBS31001 test report 2477ERM.001A2.

TEST A.8: RADIATED SPURIOUS EMISSION.

### 13 Frequency stability V.S. Temperature measurement

Test Requirement: FCC Part2.1055

Test Method: FCC Part2.1055

Test Mode: Data communicating mode

Limit:

| Frequency range (MHz) | Fixed and base stations (±ppm) | Mobile stations (±ppm)    |                              |
|-----------------------|--------------------------------|---------------------------|------------------------------|
|                       |                                | Over 2 watts output power | 2 watts or less output power |
| Below 25              | 100                            | 100                       | 200                          |
| 25-50                 | 20                             | 20                        | 50                           |
| 72-76                 | 5                              |                           | 50                           |
| 150-174               | 5                              | 5                         | 50                           |
| 216-220               | 1.0                            |                           | 1.0                          |
| 220-222               | 0.1                            | 1.5                       | 1.5                          |
| 421-512               | 2.5                            | 5                         | 5                            |
| 806-809               | 1.0                            | 1.5                       | 1.5                          |
| 809-824               | 1.5                            | 2.5                       | 2.5                          |
| 851-854               | 1.0                            | 1.5                       | 1.5                          |
| 854-869               | 1.5                            | 2.5                       | 2.5                          |
| 896-901               | 0.1                            | 1.5                       | 1.5                          |
| 902-928               | 2.5                            | 2.5                       | 2.5                          |
| 902-928               | 2.5                            | 2.5                       | 2.5                          |
| 929-930               | 1.5                            |                           |                              |
| 935-940               | 0.1                            | 1.5                       | 1.5                          |
| 1427-1435             | 300                            | 300                       | 300                          |
| Above 2450            |                                |                           |                              |

#### 13.1 EUT Operation

Operating Environment :

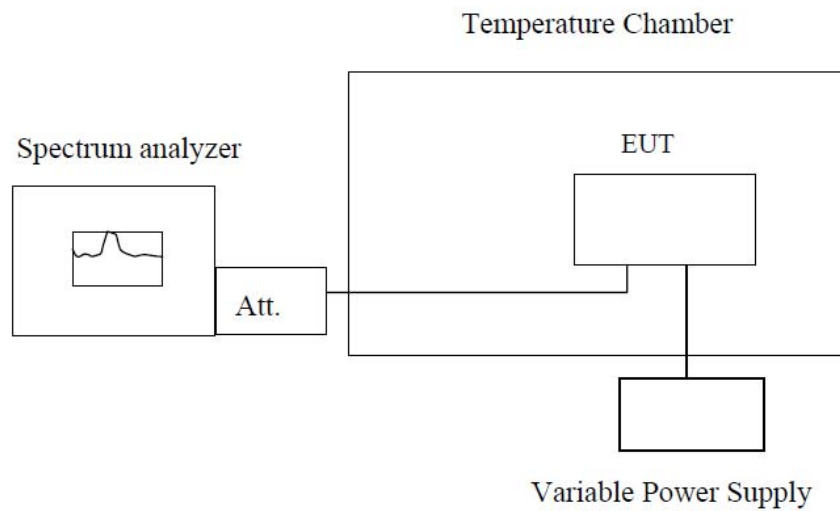
Temperature: 23.5 °C

Humidity: 51.1 % RH

Atmospheric Pressure: 101.2kPa

#### 13.2 Test Procedure

1. The equipment under test was connected to an external DC power supply and input rated voltage.
2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
3. The EUT was placed inside the temperature chamber.
4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.
5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.



**Note :** Measurement setup for testing on Antenna connector

### 13.3 Test Result

Remark: Refer to the original FCC ID: 2AG32MBS31001 2477ERM.001A2.

TEST A.9: FREQUENCY STABILITY.



## 14 Frequency stability V.S. Voltage measurement

Test Requirement: FCC Part2.1055  
 Test Method: FCC Part2.1055  
 Test Mode: Data communicating mode  
 Limit: FCC:

| Frequency range (MHz) | Fixed and base stations (±ppm) | Mobile stations (±ppm)    |                              |
|-----------------------|--------------------------------|---------------------------|------------------------------|
|                       |                                | Over 2 watts output power | 2 watts or less output power |
| Below 25              | 100                            | 100                       | 200                          |
| 25-50                 | 20                             | 20                        | 50                           |
| 72-76                 | 5                              |                           | 50                           |
| 150-174               | 5                              | 5                         | 50                           |
| 216-220               | 1.0                            |                           | 1.0                          |
| 220-222               | 0.1                            | 1.5                       | 1.5                          |
| 421-512               | 2.5                            | 5                         | 5                            |
| 806-809               | 1.0                            | 1.5                       | 1.5                          |
| 809-824               | 1.5                            | 2.5                       | 2.5                          |
| 851-854               | 1.0                            | 1.5                       | 1.5                          |
| 854-869               | 1.5                            | 2.5                       | 2.5                          |
| 896-901               | 0.1                            | 1.5                       | 1.5                          |
| 902-928               | 2.5                            | 2.5                       | 2.5                          |
| 902-928               | 2.5                            | 2.5                       | 2.5                          |
| 929-930               | 1.5                            |                           |                              |
| 935-940               | 0.1                            | 1.5                       | 1.5                          |
| 1427-1435             | 300                            | 300                       | 300                          |
| Above 2450            |                                |                           |                              |

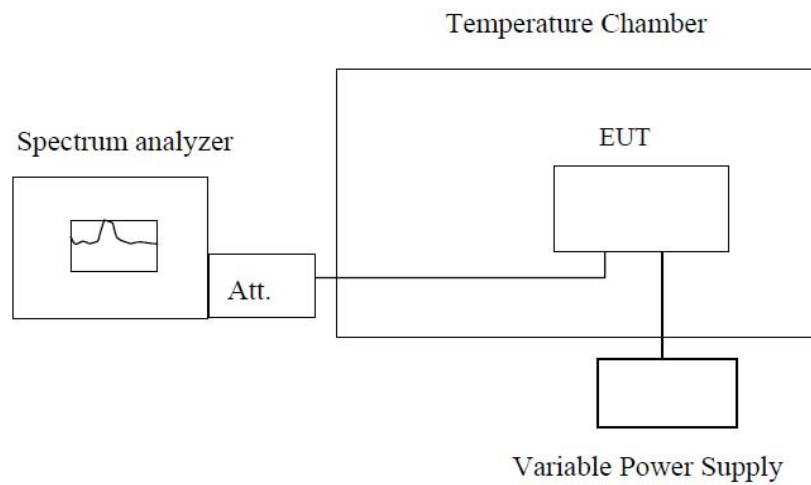
### 14.1 EUT Operation

Operating Environment :

Temperature: 23.5 °C  
 Humidity: 51.1 % RH  
 Atmospheric Pressure: 101.2kPa

### 14.2 Test Procedure

1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.
2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.
3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.



**Note :** Measurement setup for testing on Antenna connector

### 14.3 Test Result

Remark: Refer to the original FCC ID: 2AG32MBS31001 2477ERM.001A2.

TEST A.9: FREQUENCY STABILITY.

===== End of Report =====