

## APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 71

1 RF Power Output

| Modulation | Carrier frequency (MHz) | UL Channel | B W | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|-----|---------|-----------|-----------------------|
| QPSK       | 665.5                   | 133147     | 5   | 1       | 0         | 23.69                 |
|            |                         |            |     | 1       | 24        | 23.59                 |
|            |                         |            |     | 12      | 6         | 22.83                 |
|            |                         |            |     | 25      | 0         | 22.73                 |
|            | 680.5                   | 133297     |     | 1       | 0         | 23.86                 |
|            |                         |            |     | 1       | 24        | 23.82                 |
|            |                         |            |     | 12      | 6         | 23.02                 |
|            |                         |            |     | 25      | 0         | 22.88                 |
|            | 695.5                   | 133447     |     | 1       | 0         | 23.75                 |
|            |                         |            |     | 1       | 24        | 23.71                 |
|            |                         |            |     | 12      | 6         | 22.94                 |
|            |                         |            |     | 25      | 0         | 22.88                 |
| 16QAM      | 665.5                   | 133147     | 5   | 1       | 0         | 22.67                 |
|            |                         |            |     | 1       | 24        | 22.69                 |
|            |                         |            |     | 12      | 6         | 21.79                 |
|            |                         |            |     | 25      | 0         | 21.70                 |
|            | 680.5                   | 133297     |     | 1       | 0         | 22.89                 |
|            |                         |            |     | 1       | 24        | 22.80                 |
|            |                         |            |     | 12      | 6         | 21.96                 |
|            |                         |            |     | 25      | 0         | 21.97                 |
|            | 695.5                   | 133447     |     | 1       | 0         | 22.81                 |
|            |                         |            |     | 1       | 24        | 22.74                 |
|            |                         |            |     | 12      | 6         | 21.98                 |
|            |                         |            |     | 25      | 0         | 21.84                 |

| Modulation | Carrier frequency (MHz) | UL Channel | B W | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|-----|---------|-----------|-----------------------|
| QPSK       | 668                     | 133172     | 10  | 1       | 0         | 23.75                 |
|            |                         |            |     | 1       | 49        | 23.64                 |
|            |                         |            |     | 24      | 12        | 22.91                 |
|            |                         |            |     | 50      | 0         | 22.76                 |
|            | 680.5                   | 133297     |     | 1       | 0         | 23.95                 |
|            |                         |            |     | 1       | 49        | 23.93                 |
|            |                         |            |     | 24      | 12        | 22.99                 |
|            |                         |            |     | 50      | 0         | 22.99                 |
|            | 693                     | 133422     |     | 1       | 0         | 23.83                 |
|            |                         |            |     | 1       | 49        | 23.73                 |
|            |                         |            |     | 24      | 12        | 23.03                 |
|            |                         |            |     | 50      | 0         | 22.95                 |
| 16QAM      | 668                     | 133172     | 10  | 1       | 0         | 22.81                 |
|            |                         |            |     | 1       | 49        | 22.65                 |
|            |                         |            |     | 24      | 12        | 21.81                 |
|            |                         |            |     | 50      | 0         | 21.86                 |
|            | 680.5                   | 133297     |     | 1       | 0         | 23.02                 |
|            |                         |            |     | 1       | 49        | 22.92                 |
|            |                         |            |     | 24      | 12        | 22.02                 |
|            |                         |            |     | 50      | 0         | 22.05                 |
|            | 693                     | 133422     |     | 1       | 0         | 22.77                 |
|            |                         |            |     | 1       | 49        | 22.78                 |
|            |                         |            |     | 24      | 12        | 22.03                 |
|            |                         |            |     | 50      | 0         | 21.95                 |

| Modulation | Carrier frequency (MHz) | UL Channel | B W | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|-----|---------|-----------|-----------------------|
| QPSK       | 670.5                   | 133197     | 15  | 1       | 0         | 23.81                 |
|            |                         |            |     | 1       | 74        | 23.80                 |
|            |                         |            |     | 40      | 18        | 22.92                 |
|            |                         |            |     | 75      | 0         | 22.92                 |
|            | 680.5                   | 133297     |     | 1       | 0         | 23.99                 |
|            |                         |            |     | 1       | 74        | 23.96                 |
|            |                         |            |     | 40      | 18        | 23.10                 |
|            |                         |            |     | 75      | 0         | 23.00                 |
|            | 690.5                   | 133397     |     | 1       | 0         | 23.89                 |
|            |                         |            |     | 1       | 74        | 23.89                 |
|            |                         |            |     | 40      | 18        | 23.03                 |
|            |                         |            |     | 75      | 0         | 22.95                 |
| 16QAM      | 670.5                   | 133197     | 15  | 1       | 0         | 22.80                 |
|            |                         |            |     | 1       | 74        | 22.76                 |
|            |                         |            |     | 40      | 18        | 21.95                 |
|            |                         |            |     | 75      | 0         | 21.93                 |
|            | 680.5                   | 133297     |     | 1       | 0         | 23.06                 |
|            |                         |            |     | 1       | 74        | 23.01                 |
|            |                         |            |     | 40      | 18        | 22.09                 |
|            |                         |            |     | 75      | 0         | 22.02                 |
|            | 690.5                   | 133397     |     | 1       | 0         | 22.87                 |
|            |                         |            |     | 1       | 74        | 22.78                 |
|            |                         |            |     | 40      | 18        | 22.07                 |
|            |                         |            |     | 75      | 0         | 22.05                 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK       | 673                     | 133222     | 20 | 1       | 0         | 23.95                 |
|            |                         |            |    | 1       | 99        | 23.90                 |
|            |                         |            |    | 50      | 25        | 23.07                 |
|            |                         |            |    | 100     | 0         | 23.01                 |
|            | 683                     | 133322     |    | 1       | 0         | 24.11                 |
|            |                         |            |    | 1       | 99        | 24.07                 |
|            |                         |            |    | 50      | 25        | 23.23                 |
|            |                         |            |    | 100     | 0         | 23.16                 |
|            | 688                     | 133372     |    | 1       | 0         | 24.06                 |
|            |                         |            |    | 1       | 99        | 23.98                 |
|            |                         |            |    | 50      | 25        | 23.19                 |
|            |                         |            |    | 100     | 0         | 23.11                 |
| 16QAM      | 673                     | 133222     | 20 | 1       | 0         | 22.98                 |
|            |                         |            |    | 1       | 99        | 22.92                 |
|            |                         |            |    | 50      | 25        | 22.07                 |
|            |                         |            |    | 100     | 0         | 22.01                 |
|            | 683                     | 133322     |    | 1       | 0         | 23.16                 |
|            |                         |            |    | 1       | 99        | 23.11                 |
|            |                         |            |    | 50      | 25        | 22.23                 |
|            |                         |            |    | 100     | 0         | 22.20                 |
|            | 688                     | 133372     |    | 1       | 0         | 23.04                 |
|            |                         |            |    | 1       | 99        | 22.95                 |
|            |                         |            |    | 50      | 25        | 22.19                 |
|            |                         |            |    | 100     | 0         | 22.14                 |

## 2 Occupied Bandwidth

Test result

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | Bandwidth of 99% Power (MHz) |        |        |        |
|------|-------------------------|---------|----------|---------|-----------|------------------------------|--------|--------|--------|
|      |                         |         |          |         |           | QPSK                         |        | 16-QAM |        |
| 71   | 665.5                   | 133147  | 5        | 25      | 0         | 4.4925                       | Fig.1  | 4.4622 | Fig.2  |
|      | 680.5                   | 133297  |          | 25      | 0         | 4.4761                       | Fig.3  | 4.4907 | Fig.4  |
|      | 695.5                   | 133447  |          | 25      | 0         | 4.4719                       | Fig.5  | 4.4820 | Fig.6  |
|      | 668                     | 133172  | 10       | 50      | 0         | 8.9505                       | Fig.7  | 8.9570 | Fig.8  |
|      | 680.5                   | 133297  |          | 50      | 0         | 8.9528                       | Fig.9  | 8.9551 | Fig.10 |
|      | 693                     | 133422  |          | 50      | 0         | 8.9415                       | Fig.11 | 8.9514 | Fig.12 |
|      | 670.5                   | 133197  | 15       | 75      | 0         | 13.391                       | Fig.13 | 13.366 | Fig.14 |
|      | 680.5                   | 133297  |          | 75      | 0         | 13.418                       | Fig.15 | 13.418 | Fig.16 |
|      | 690.5                   | 133397  |          | 75      | 0         | 13.412                       | Fig.17 | 13.405 | Fig.18 |
|      | 673                     | 133222  | 20       | 100     | 0         | 17.813                       | Fig.19 | 17.853 | Fig.20 |
|      | 683                     | 133322  |          | 100     | 0         | 17.841                       | Fig.21 | 17.802 | Fig.22 |
|      | 688                     | 133372  |          | 100     | 0         | 17.834                       | Fig.23 | 17.785 | Fig.24 |

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | Bandwidth of -26dB transmitter power (MHz) |        |        |        |
|------|-------------------------|---------|----------|---------|-----------|--|--------|--------|--------|
|      |                         |         |          |         |           | QPSK                                       |        | 16-QAM |        |
| 71   | 665.5                   | 133147  | 5        | 25      | 0         | 4.947                                      | Fig.1  | 4.892  | Fig.2  |
|      | 680.5                   | 133297  |          | 25      | 0         | 4.907                                      | Fig.3  | 4.895  | Fig.4  |
|      | 695.5                   | 133447  |          | 25      | 0         | 4.927                                      | Fig.5  | 4.949  | Fig.6  |
|      | 668                     | 133172  | 10       | 50      | 0         | 9.740                                      | Fig.7  | 9.547  | Fig.8  |
|      | 680.5                   | 133297  |          | 50      | 0         | 9.750                                      | Fig.9  | 9.652  | Fig.10 |
|      | 693                     | 133422  |          | 50      | 0         | 9.761                                      | Fig.11 | 9.748  | Fig.12 |
|      | 670.5                   | 133197  | 15       | 75      | 0         | 14.40                                      | Fig.13 | 14.43  | Fig.14 |
|      | 680.5                   | 133297  |          | 75      | 0         | 14.55                                      | Fig.15 | 14.28  | Fig.16 |
|      | 690.5                   | 133397  |          | 75      | 0         | 14.58                                      | Fig.17 | 14.35  | Fig.18 |
|      | 673                     | 133222  | 20       | 100     | 0         | 19.07                                      | Fig.19 | 18.92  | Fig.20 |
|      | 683                     | 133322  |          | 100     | 0         | 19.06                                      | Fig.21 | 18.90  | Fig.22 |
|      | 688                     | 133372  |          | 100     | 0         | 19.38                                      | Fig.23 | 19.01  | Fig.24 |

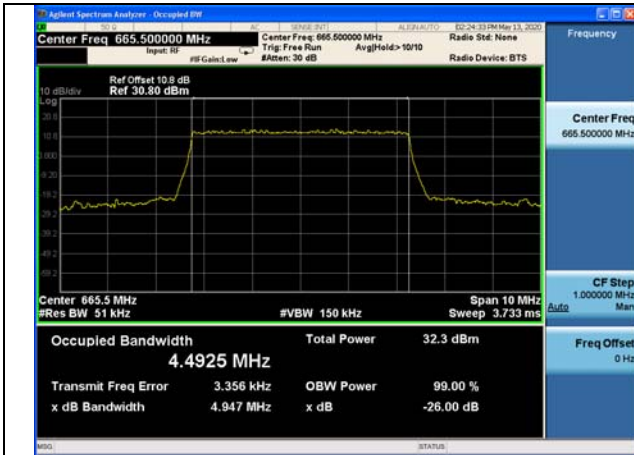


Fig.1



Fig.2

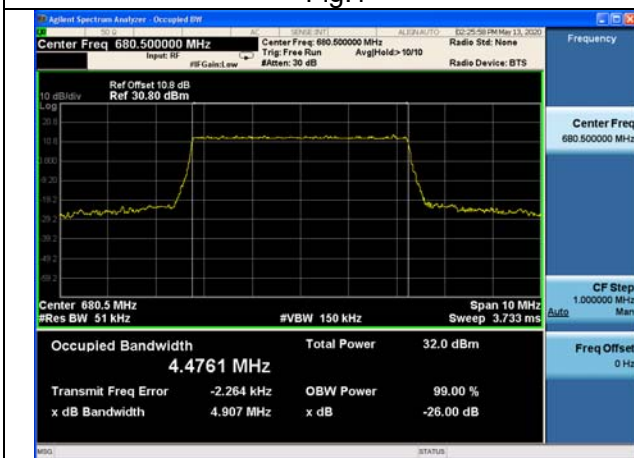


Fig.3

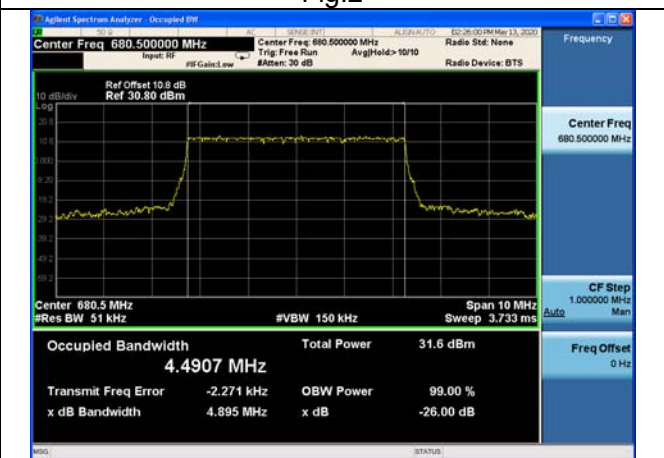


Fig.4

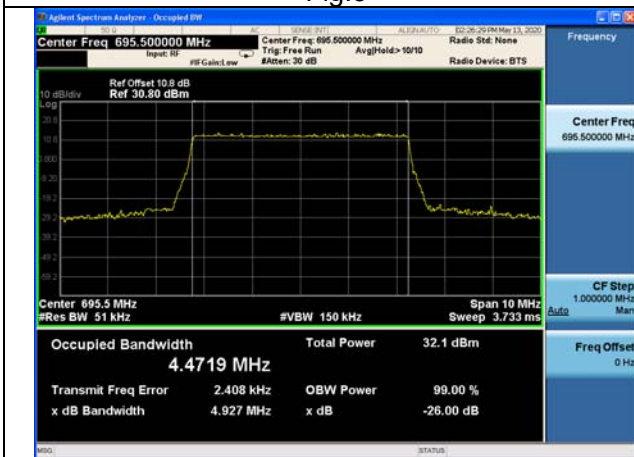


Fig.5

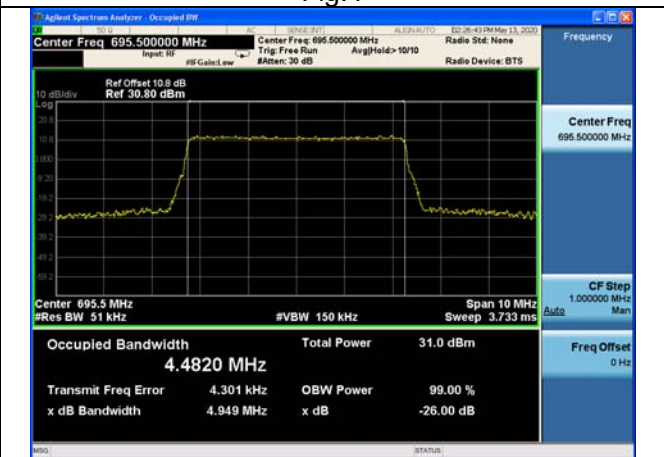


Fig.6

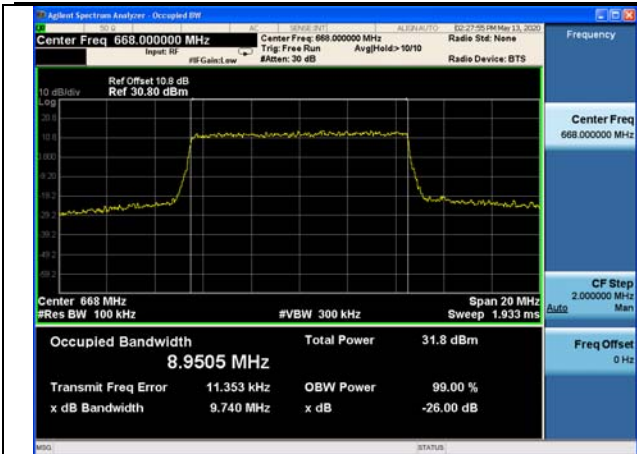


Fig.7



Fig.8

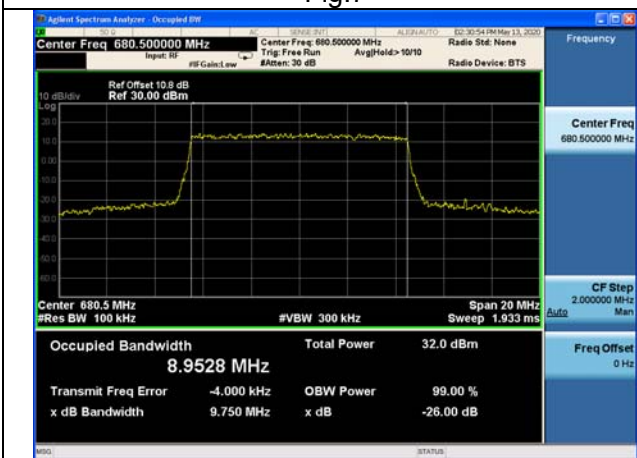


Fig.9

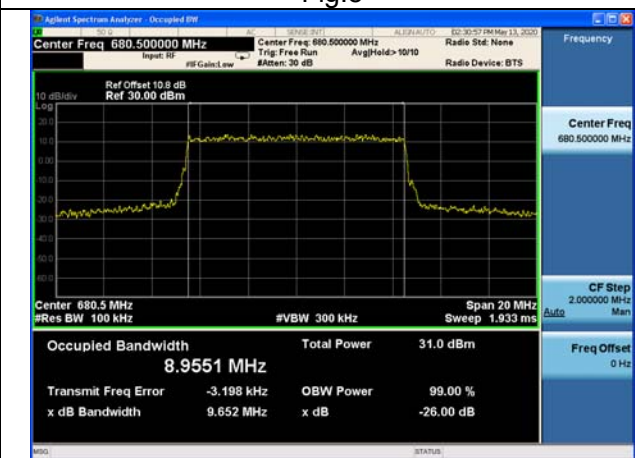


Fig.10

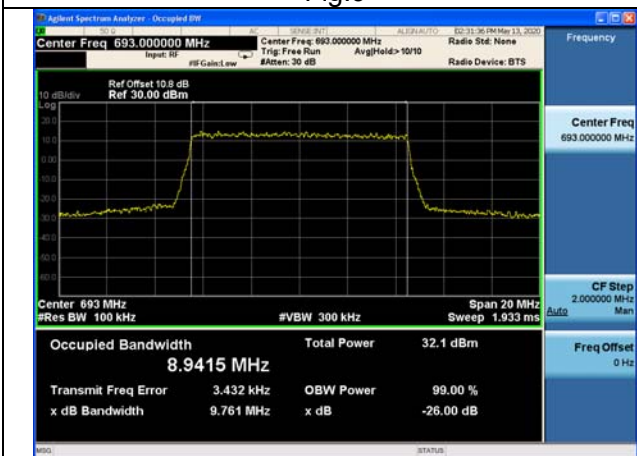


Fig.11

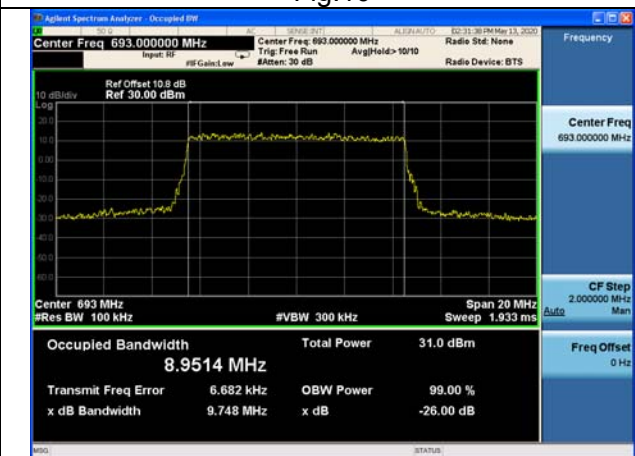


Fig.12

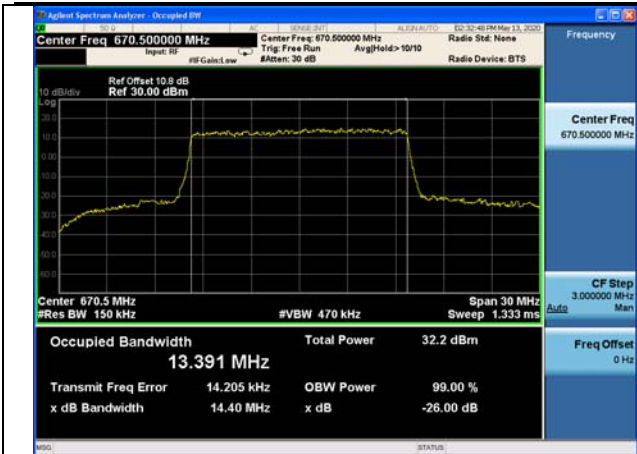


Fig. 13

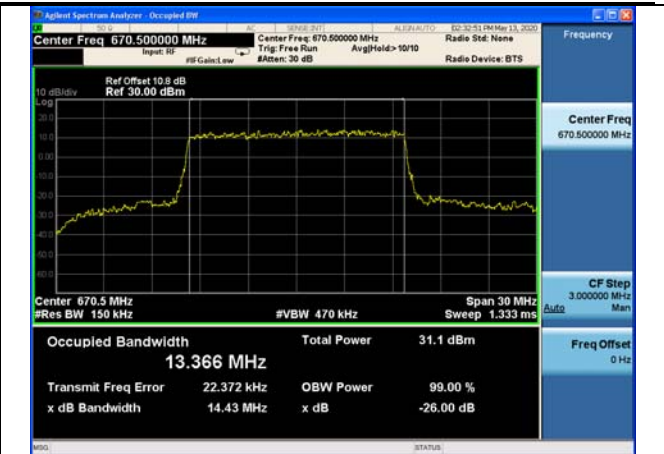


Fig. 14

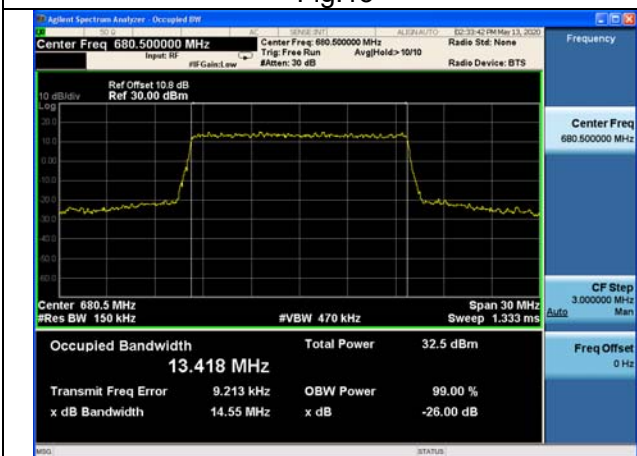


Fig. 15

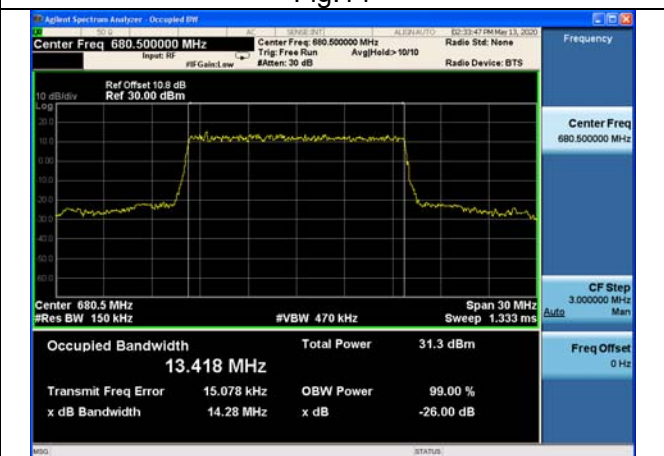


Fig. 16

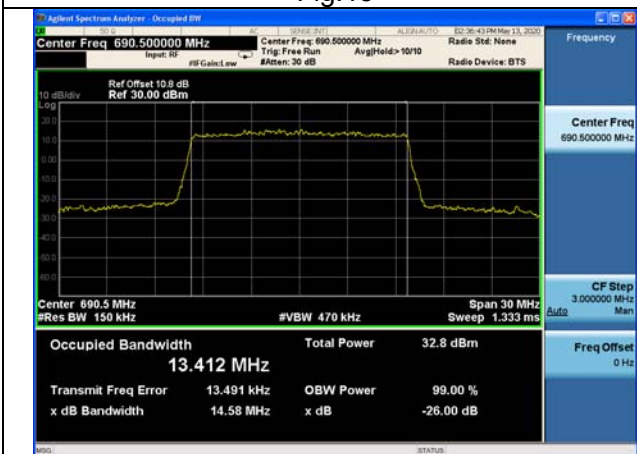


Fig. 17

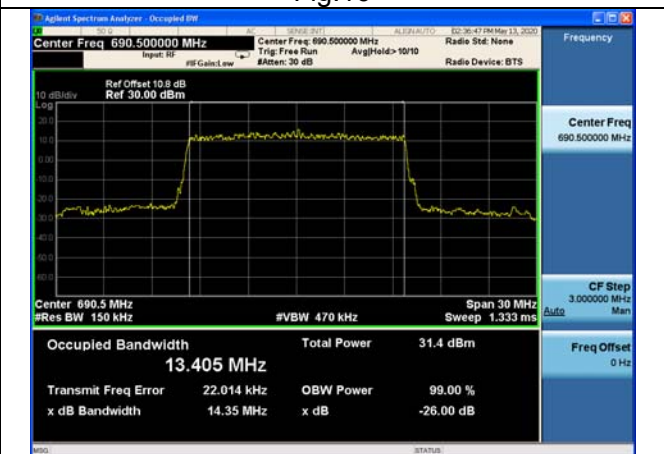


Fig. 18



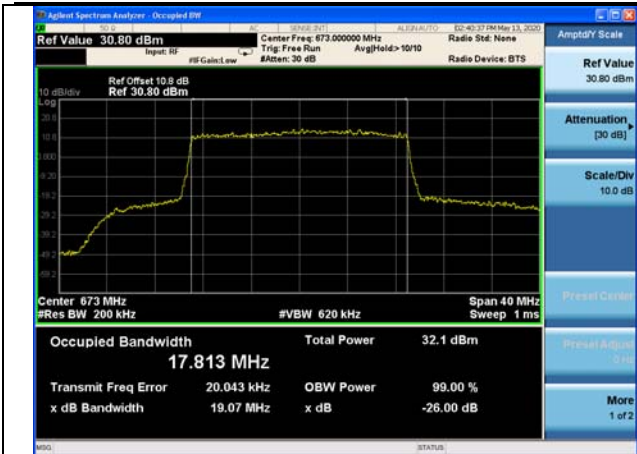


Fig.19



Fig.20

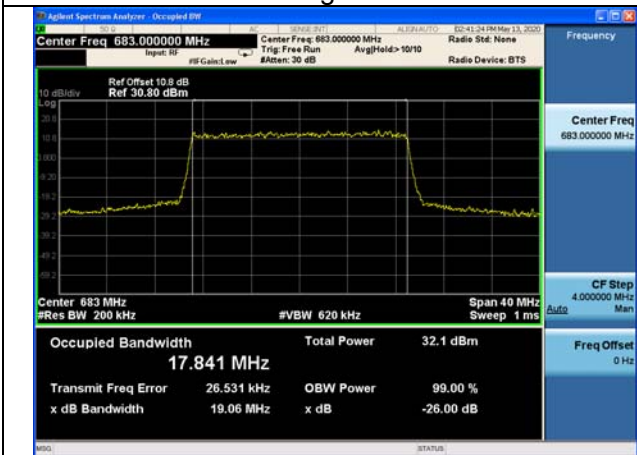


Fig.21

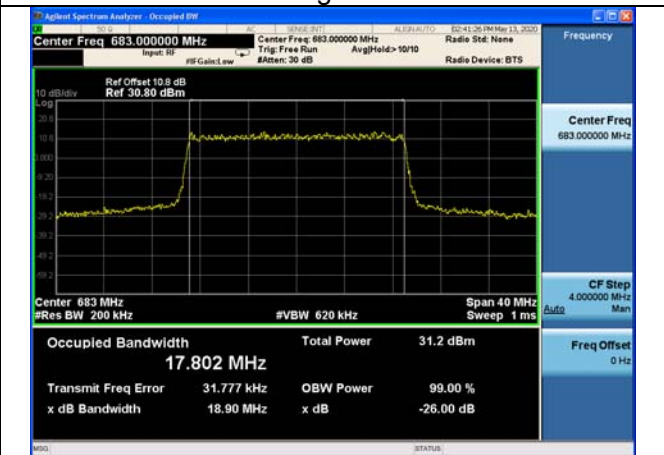


Fig.22

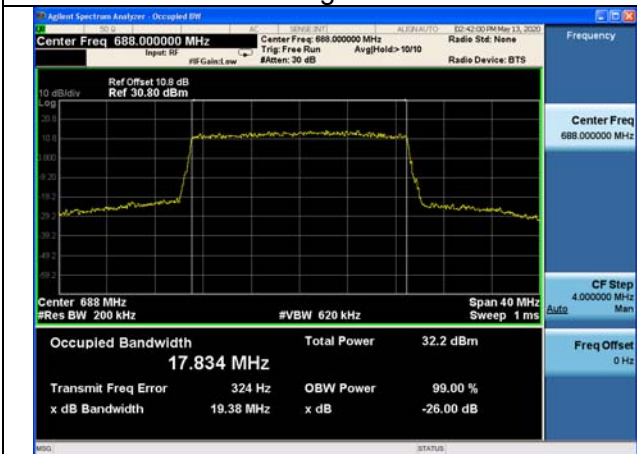


Fig.23

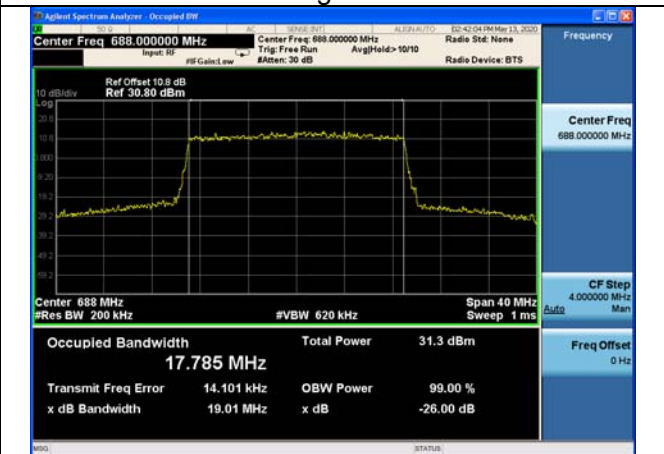


Fig.24

### 3 Peak-Average Ratio

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | QPSK  | 16-QAM |
|------|-------------------------|---------|----------|---------|-----------|-------|--------|
| 71   | 680.5                   | 133297  | 5        | 1       | 0         | Fig.1 | Fig.2  |
|      |                         |         | 10       | 1       | 0         | Fig.3 | Fig.4  |
|      |                         |         | 15       | 1       | 0         | Fig.5 | Fig.6  |
|      | 683                     | 133322  | 20       | 1       | 0         | Fig.7 | Fig.8  |

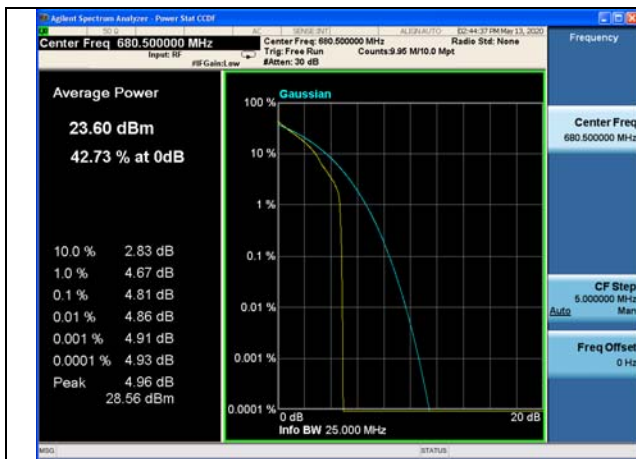


Fig.1



Fig.2



Fig.3



Fig.4



Fig.5



Fig.6



Fig.7



Fig.8

**4 Spurious Emissions at antenna terminal**

| Band | Carrier frequency (MHz) | Channel | BW | RB Size | RB Offset | Conducted Spurious Plot |
|------|-------------------------|---------|----|---------|-----------|-------------------------|
|      |                         |         |    |         |           | QPSK                    |
| 71   | 673                     | 133222  | 20 | 1       | 0         | Fig.1-2                 |
|      | 683                     | 133322  | 20 | 1       | 0         | Fig.3-4                 |
|      | 688                     | 133372  | 20 | 1       | 0         | Fig.5-6                 |

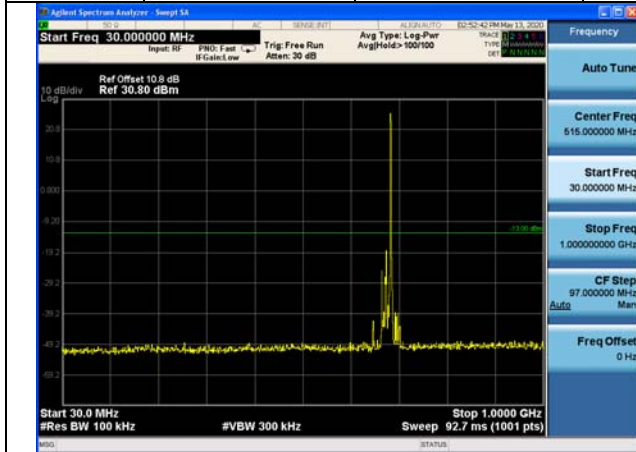


Fig.1

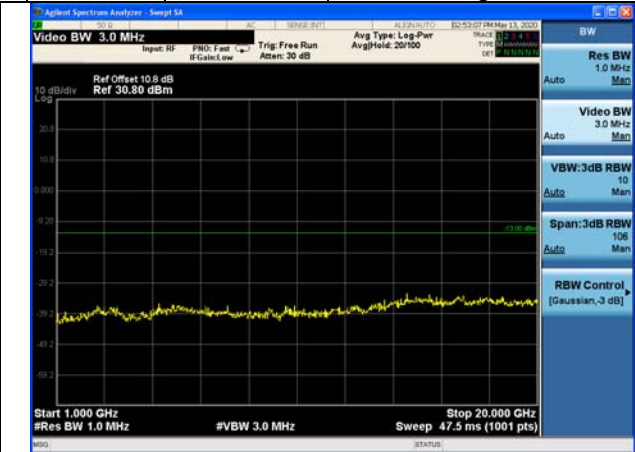


Fig.2

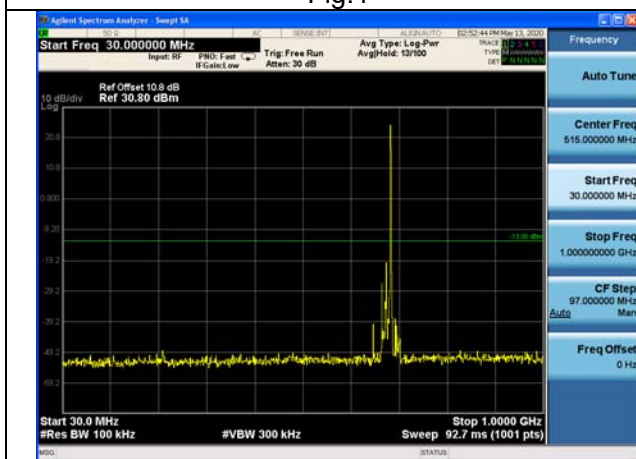


Fig3

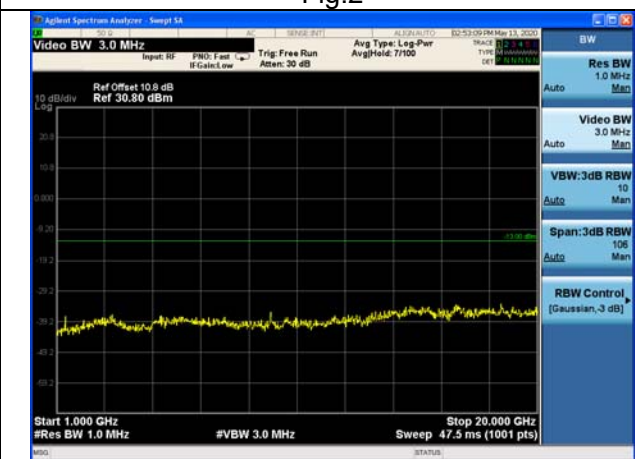


Fig4

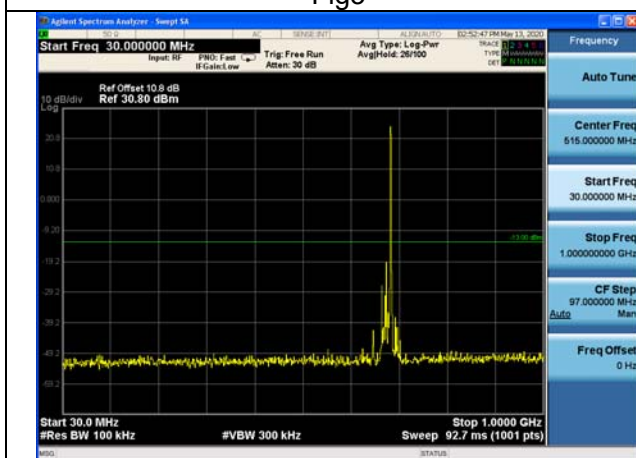


Fig5

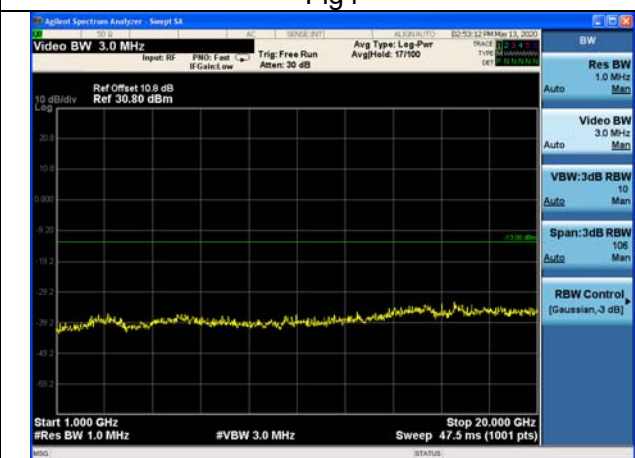


Fig6

**5 Band Edges Compliance**

Test result

| Band | Carrier frequency (MHz) | Channel | BW | RB Size | RB Offset | Band Edges Plot |
|------|-------------------------|---------|----|---------|-----------|-----------------|
|      |                         |         |    |         |           | QPSK            |
| 71   | 665.5                   | 133147  | 5  | 1       | 0         | Fig.1           |
|      |                         |         |    | 25      | 0         | Fig.2           |
|      | 695.5                   | 133447  |    | 1       | 24        | Fig.3           |
|      |                         |         |    | 25      | 0         | Fig.4           |
|      | 668                     | 133172  | 10 | 1       | 0         | Fig.5           |
|      |                         |         |    | 50      | 0         | Fig.6           |
|      | 693                     | 133422  |    | 1       | 49        | Fig.7           |
|      |                         |         |    | 50      | 0         | Fig.8           |
|      | 670.5                   | 133197  | 15 | 1       | 0         | Fig.9           |
|      |                         |         |    | 75      | 0         | Fig.10          |
|      | 690.5                   | 133397  |    | 1       | 74        | Fig.11          |
|      |                         |         |    | 75      | 0         | Fig.12          |
|      | 673                     | 133222  | 20 | 1       | 0         | Fig.13          |
|      |                         |         |    | 100     | 0         | Fig.14          |
|      | 688                     | 133372  |    | 1       | 99        | Fig.15          |
|      |                         |         |    | 100     | 0         | Fig.16          |

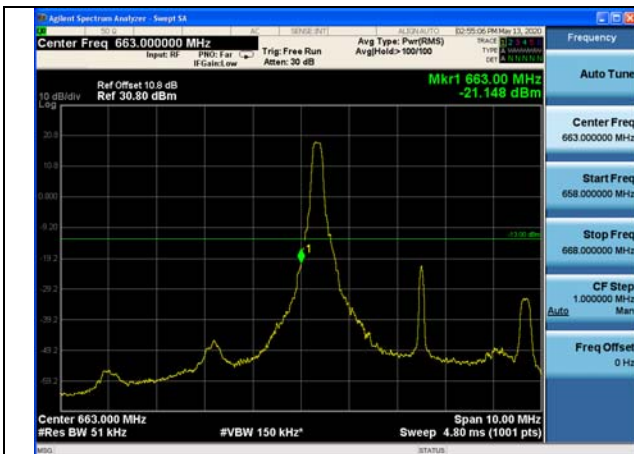


Fig.1

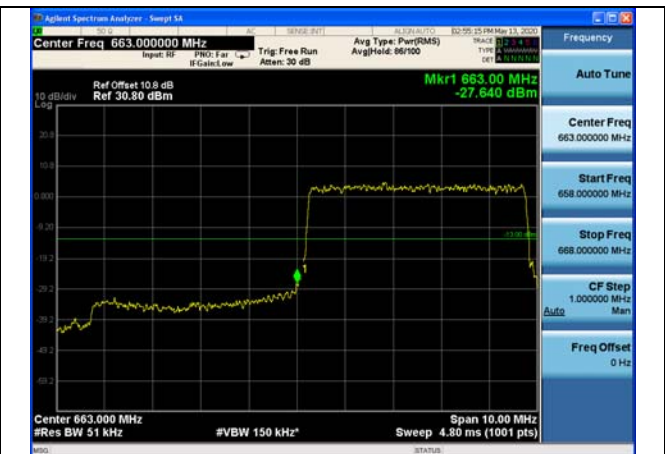


Fig.2

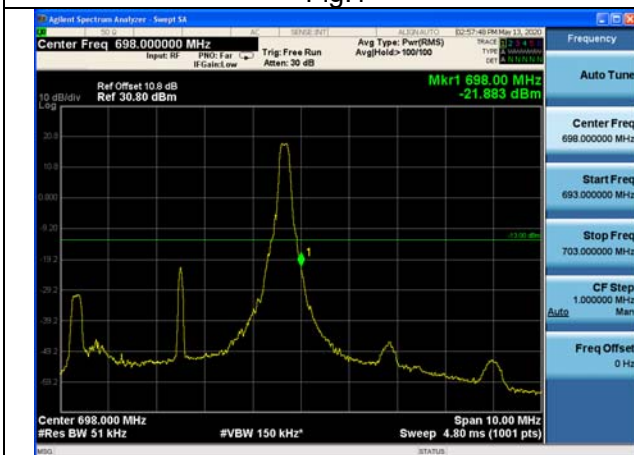


Fig.3



Fig.4

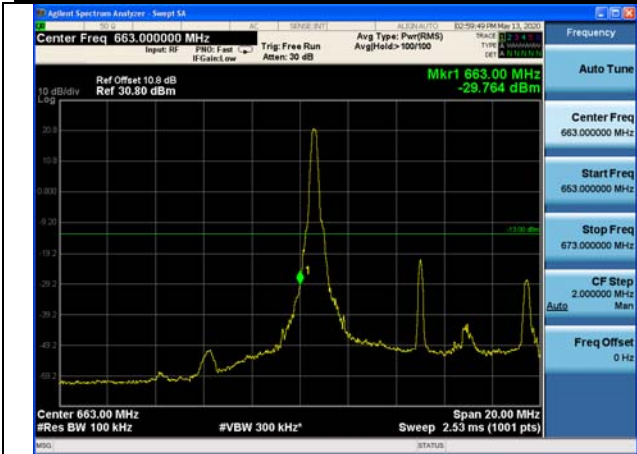


Fig.5



Fig.6

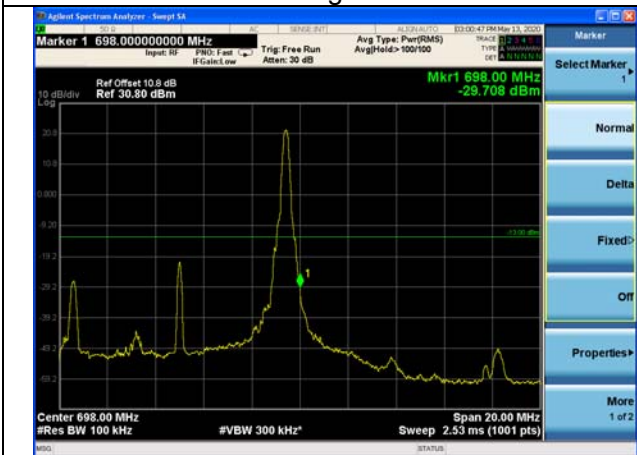


Fig.7



Fig.8

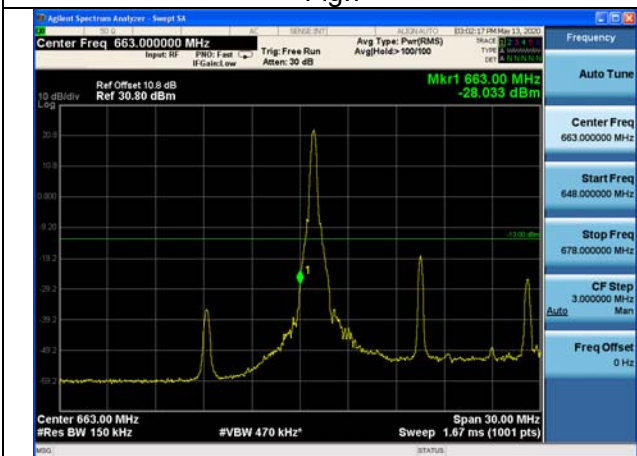


Fig.9



Fig.10

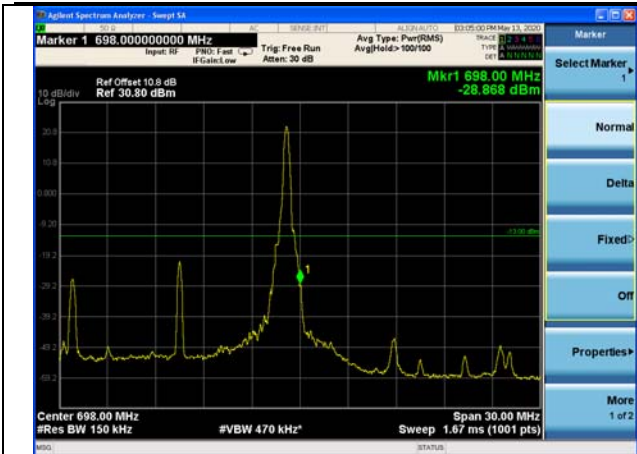


Fig.11



Fig.12

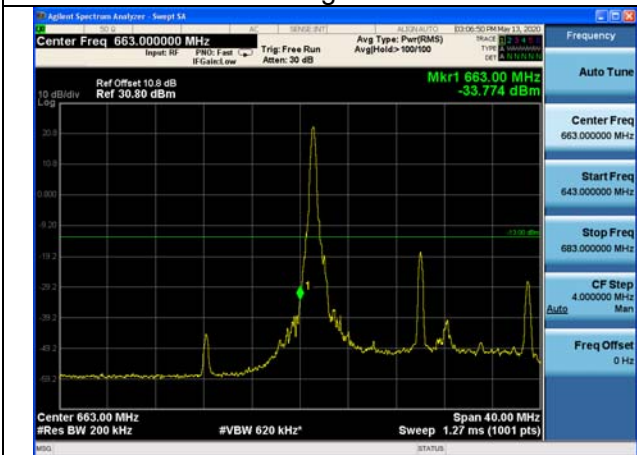


Fig.13

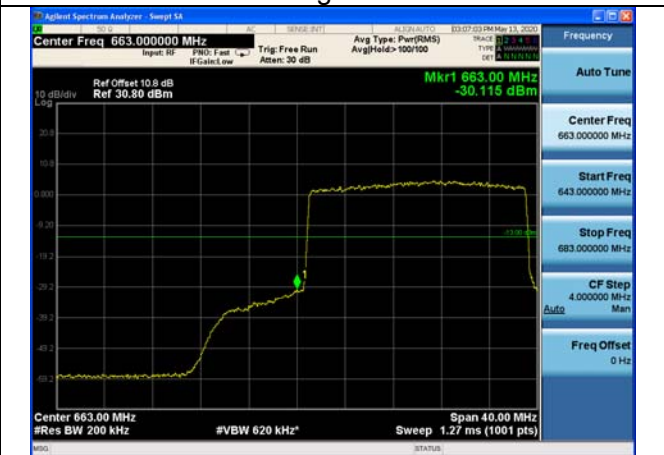


Fig.14

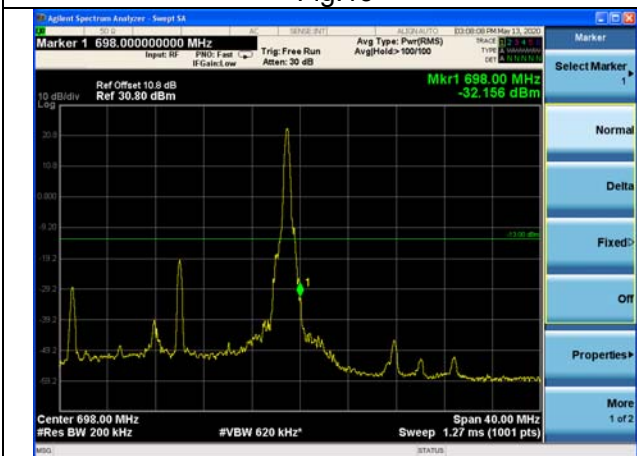


Fig.15



Fig.16

## 6 Frequency Stability

Test result:

| Temperature(°C) | Voltage | Test Result (ppm) Band71 Low Channel |        |        |        |
|-----------------|---------|--------------------------------------|--------|--------|--------|
|                 |         | 5M                                   | 10M    | 15M    | 20M    |
| -10             | NV      | 0.018                                | 0.003  | -0.016 | 0.019  |
| 0               | NV      | 0.019                                | 0.026  | -0.022 | -0.008 |
| +10             | NV      | 0.023                                | -0.017 | -0.018 | -0.019 |
| +20             | NV      | 0.000                                | 0.000  | 0.000  | 0.000  |
| +30             | NV      | -0.019                               | -0.020 | 0.018  | 0.025  |
| +40             | NV      | 0.010                                | -0.021 | 0.024  | 0.025  |
| +50             | NV      | -0.019                               | -0.005 | 0.012  | -0.023 |
| +55             | NV      | 0.018                                | -0.018 | -0.018 | 0.019  |
| +20             | LV      | -0.011                               | 0.016  | 0.017  | 0.015  |
| +20             | HV      | 0.010                                | -0.017 | -0.022 | 0.012  |

| Temperature(°C) | Voltage | Test Result (ppm) Band71 High Channel |        |        |        |
|-----------------|---------|---------------------------------------|--------|--------|--------|
|                 |         | 5M                                    | 10M    | 15M    | 20M    |
| -10             | NV      | 0.012                                 | 0.018  | -0.013 | 0.016  |
| 0               | NV      | -0.019                                | -0.006 | 0.015  | -0.019 |
| +10             | NV      | 0.018                                 | 0.012  | -0.005 | -0.014 |
| +20             | NV      | 0.000                                 | 0.000  | 0.000  | 0.000  |
| +30             | NV      | 0.010                                 | 0.015  | -0.018 | -0.003 |
| +40             | NV      | 0.012                                 | 0.013  | -0.019 | -0.014 |
| +50             | NV      | 0.019                                 | 0.012  | 0.004  | -0.029 |
| +55             | NV      | -0.012                                | -0.012 | 0.011  | 0.001  |
| +20             | LV      | -0.016                                | -0.004 | -0.006 | -0.010 |
| +20             | HV      | 0.012                                 | 0.002  | 0.019  | 0.036  |