

**APPENDIX A – TEST DATA OF CONDUCTED EMISSION**

**LTE Band 5**

**1 RF Power Output**

| Modulation | Carrier frequency (MHz) | UL Channel | BW  | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|-----|---------|-----------|-----------------------|
| QPSK       | 824.7                   | 20407      | 1.4 | 1       | 0         | 23.05                 |
|            |                         |            |     | 1       | 5         | 23.02                 |
|            |                         |            |     | 3       | 2         | 22.13                 |
|            |                         |            |     | 6       | 0         | 22.04                 |
|            | 836.5                   | 20525      |     | 1       | 0         | 23.11                 |
|            |                         |            |     | 1       | 5         | 23.13                 |
|            |                         |            |     | 3       | 2         | 22.16                 |
|            |                         |            |     | 6       | 0         | 22.13                 |
|            | 848.3                   | 20643      |     | 1       | 0         | 23.19                 |
|            |                         |            |     | 1       | 5         | 23.12                 |
|            |                         |            |     | 3       | 2         | 22.17                 |
|            |                         |            |     | 6       | 0         | 21.99                 |
| 16QAM      | 824.7                   | 20407      | 1.4 | 1       | 0         | 21.75                 |
|            |                         |            |     | 1       | 5         | 21.73                 |
|            |                         |            |     | 3       | 2         | 20.87                 |
|            |                         |            |     | 6       | 0         | 20.80                 |
|            | 836.5                   | 20525      |     | 1       | 0         | 22.01                 |
|            |                         |            |     | 1       | 5         | 21.83                 |
|            |                         |            |     | 3       | 2         | 20.94                 |
|            |                         |            |     | 6       | 0         | 20.76                 |
|            | 848.3                   | 20643      |     | 1       | 0         | 21.85                 |
|            |                         |            |     | 1       | 5         | 21.79                 |
|            |                         |            |     | 3       | 2         | 20.93                 |
|            |                         |            |     | 6       | 0         | 20.80                 |
| 64QAM      | 824.7                   | 20407      | 1.4 | 1       | 0         | 21.77                 |
|            |                         |            |     | 1       | 5         | 21.63                 |
|            |                         |            |     | 3       | 2         | 20.86                 |
|            |                         |            |     | 6       | 0         | 20.71                 |
|            | 836.5                   | 20525      |     | 1       | 0         | 21.92                 |
|            |                         |            |     | 1       | 5         | 21.79                 |
|            |                         |            |     | 3       | 2         | 20.92                 |
|            |                         |            |     | 6       | 0         | 20.79                 |
|            | 848.3                   | 20643      |     | 1       | 0         | 21.88                 |
|            |                         |            |     | 1       | 5         | 21.82                 |
|            |                         |            |     | 3       | 2         | 20.94                 |
|            |                         |            |     | 6       | 0         | 20.78                 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK       | 825.5                   | 20415      | 3  | 1       | 0         | 23.15                 |
|            |                         |            |    | 1       | 14        | 23.04                 |
|            |                         |            |    | 8       | 4         | 22.15                 |
|            |                         |            |    | 15      | 0         | 22.10                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 23.19                 |
|            |                         |            |    | 1       | 14        | 23.14                 |
|            |                         |            |    | 8       | 4         | 22.25                 |
|            | 847.5                   | 20635      |    | 15      | 0         | 22.21                 |
|            |                         |            |    | 1       | 0         | 23.16                 |
| 16QAM      | 825.5                   | 20415      | 3  | 1       | 0         | 21.85                 |
|            |                         |            |    | 1       | 14        | 21.83                 |
|            |                         |            |    | 8       | 4         | 20.85                 |
|            |                         |            |    | 15      | 0         | 20.86                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 22.03                 |
|            |                         |            |    | 1       | 14        | 21.92                 |
|            |                         |            |    | 8       | 4         | 20.99                 |
|            | 847.5                   | 20635      |    | 15      | 0         | 20.84                 |
|            |                         |            |    | 1       | 0         | 21.97                 |
| 64QAM      | 825.5                   | 20415      | 3  | 1       | 14        | 21.95                 |
|            |                         |            |    | 8       | 4         | 20.94                 |
|            |                         |            |    | 15      | 0         | 20.77                 |
|            |                         |            |    | 1       | 0         | 21.86                 |
|            | 836.5                   | 20525      |    | 1       | 14        | 21.79                 |
|            |                         |            |    | 8       | 4         | 20.86                 |
|            |                         |            |    | 15      | 0         | 20.79                 |
|            | 847.5                   | 20635      |    | 1       | 0         | 22.01                 |
|            |                         |            |    | 1       | 14        | 21.93                 |
| 847.5      | 20635                   | 8          | 4  | 21.02   |           |                       |
|            |                         | 15         | 0  | 20.93   |           |                       |
|            |                         | 1          | 0  | 21.90   |           |                       |
|            |                         | 1          | 14 | 21.81   |           |                       |
|            |                         | 8          | 4  | 20.93   |           |                       |
|            |                         | 15         | 0  | 20.82   |           |                       |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK       | 826.5                   | 20425      | 5  | 1       | 0         | 23.18                 |
|            |                         |            |    | 1       | 24        | 23.12                 |
|            |                         |            |    | 12      | 6         | 22.21                 |
|            |                         |            |    | 25      | 0         | 22.07                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 23.27                 |
|            |                         |            |    | 1       | 24        | 23.17                 |
|            |                         |            |    | 12      | 6         | 22.28                 |
|            |                         |            |    | 25      | 0         | 22.18                 |
|            | 846.5                   | 20625      |    | 1       | 0         | 23.27                 |
|            |                         |            |    | 1       | 24        | 23.15                 |
|            |                         |            |    | 12      | 6         | 22.24                 |
|            |                         |            |    | 25      | 0         | 22.15                 |
| 16QAM      | 826.5                   | 20425      | 5  | 1       | 0         | 21.88                 |
|            |                         |            |    | 1       | 24        | 21.86                 |
|            |                         |            |    | 12      | 6         | 20.96                 |
|            |                         |            |    | 25      | 0         | 20.82                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 22.02                 |
|            |                         |            |    | 1       | 24        | 22.01                 |
|            |                         |            |    | 12      | 6         | 21.00                 |
|            |                         |            |    | 25      | 0         | 20.93                 |
|            | 846.5                   | 20625      |    | 1       | 0         | 21.96                 |
|            |                         |            |    | 1       | 24        | 21.96                 |
|            |                         |            |    | 12      | 6         | 21.02                 |
|            |                         |            |    | 25      | 0         | 20.81                 |
| 64QAM      | 826.5                   | 20425      | 5  | 1       | 0         | 21.83                 |
|            |                         |            |    | 1       | 24        | 21.77                 |
|            |                         |            |    | 12      | 6         | 20.88                 |
|            |                         |            |    | 25      | 0         | 20.78                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 22.02                 |
|            |                         |            |    | 1       | 24        | 21.90                 |
|            |                         |            |    | 12      | 6         | 21.03                 |
|            |                         |            |    | 25      | 0         | 20.95                 |
|            | 846.5                   | 20625      |    | 1       | 0         | 21.95                 |
|            |                         |            |    | 1       | 24        | 21.85                 |
|            |                         |            |    | 12      | 6         | 21.00                 |
|            |                         |            |    | 25      | 0         | 20.87                 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK       | 829                     | 20450      | 10 | 1       | 0         | 23.25                 |
|            |                         |            |    | 1       | 49        | 23.17                 |
|            |                         |            |    | 24      | 12        | 22.29                 |
|            |                         |            |    | 50      | 0         | 22.22                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 23.37                 |
|            |                         |            |    | 1       | 49        | 23.32                 |
|            |                         |            |    | 24      | 12        | 22.36                 |
|            |                         |            |    | 50      | 0         | 22.29                 |
|            | 844                     | 20600      |    | 1       | 0         | 23.33                 |
|            |                         |            |    | 1       | 49        | 23.27                 |
|            |                         |            |    | 24      | 12        | 22.31                 |
|            |                         |            |    | 50      | 0         | 22.25                 |
| 16QAM      | 829                     | 20450      | 10 | 1       | 0         | 22.00                 |
|            |                         |            |    | 1       | 49        | 21.93                 |
|            |                         |            |    | 24      | 12        | 21.01                 |
|            |                         |            |    | 50      | 0         | 20.97                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 22.15                 |
|            |                         |            |    | 1       | 49        | 22.08                 |
|            |                         |            |    | 24      | 12        | 21.08                 |
|            |                         |            |    | 50      | 0         | 20.99                 |
|            | 844                     | 20600      |    | 1       | 0         | 22.06                 |
|            |                         |            |    | 1       | 49        | 22.04                 |
|            |                         |            |    | 24      | 12        | 21.08                 |
|            |                         |            |    | 50      | 0         | 20.95                 |
| 64QAM      | 829                     | 20450      | 10 | 1       | 0         | 21.96                 |
|            |                         |            |    | 1       | 49        | 21.89                 |
|            |                         |            |    | 24      | 12        | 21.02                 |
|            |                         |            |    | 50      | 0         | 20.92                 |
|            | 836.5                   | 20525      |    | 1       | 0         | 22.11                 |
|            |                         |            |    | 1       | 49        | 22.04                 |
|            |                         |            |    | 24      | 12        | 21.10                 |
|            |                         |            |    | 50      | 0         | 21.03                 |
|            | 844                     | 20600      |    | 1       | 0         | 22.05                 |
|            |                         |            |    | 1       | 49        | 21.98                 |
|            |                         |            |    | 24      | 12        | 21.09                 |
|            |                         |            |    | 50      | 0         | 20.98                 |

## 2 Occupied Bandwidth

Test result

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | Bandwidth of 99% Power (MHz) |        |        |        |        |        |
|------|-------------------------|---------|----------|---------|-----------|------------------------------|--------|--------|--------|--------|--------|
|      |                         |         |          |         |           | QPSK                         |        | 16-QAM |        | 64-QAM |        |
| 5    | 824.7                   | 20407   | 1.4      | 6       | 0         | 1.0825                       | Fig.1  | 1.0812 | Fig.2  | 1.0805 | Fig.3  |
|      | 836.5                   | 20525   |          | 6       | 0         | 1.0787                       | Fig.4  | 1.0793 | Fig.5  | 1.0806 | Fig.6  |
|      | 848.3                   | 20643   |          | 6       | 0         | 1.0795                       | Fig.7  | 1.0781 | Fig.8  | 1.0767 | Fig.9  |
|      | 825.5                   | 20415   | 3        | 15      | 0         | 2.6919                       | Fig.10 | 2.6968 | Fig.11 | 2.6846 | Fig.12 |
|      | 836.5                   | 20525   |          | 15      | 0         | 2.6903                       | Fig.13 | 2.6897 | Fig.14 | 2.6942 | Fig.15 |
|      | 847.5                   | 20635   |          | 15      | 0         | 2.6881                       | Fig.16 | 2.6896 | Fig.17 | 2.6893 | Fig.18 |
|      | 826.5                   | 20425   | 5        | 25      | 0         | 4.4867                       | Fig.19 | 4.4846 | Fig.20 | 4.4721 | Fig.21 |
|      | 836.5                   | 20525   |          | 25      | 0         | 4.4746                       | Fig.22 | 4.4773 | Fig.23 | 4.4777 | Fig.24 |
|      | 846.5                   | 20625   |          | 25      | 0         | 4.4768                       | Fig.25 | 4.4739 | Fig.26 | 4.4940 | Fig.27 |
|      | 829                     | 20450   | 10       | 50      | 0         | 8.9372                       | Fig.28 | 8.9274 | Fig.29 | 8.9448 | Fig.30 |
|      | 836.5                   | 20525   |          | 50      | 0         | 8.9350                       | Fig.31 | 8.9372 | Fig.32 | 8.9110 | Fig.33 |
|      | 844                     | 20600   |          | 50      | 0         | 8.9265                       | Fig.34 | 8.9105 | Fig.35 | 8.9196 | Fig.36 |

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | Bandwidth of -26dB transmitter power (MHz) |        |        |        |        |        |
|------|-------------------------|---------|----------|---------|-----------|--|--------|--------|--------|--------|--------|
|      |                         |         |          |         |           | QPSK                                       |        | 16-QAM |        | 64-QAM |        |
| 5    | 824.7                   | 20407   | 1.4      | 6       | 0         | 1.320                                      | Fig.1  | 1.318  | Fig.2  | 1.312  | Fig.3  |
|      | 836.5                   | 20525   |          | 6       | 0         | 1.271                                      | Fig.4  | 1.261  | Fig.5  | 1.272  | Fig.6  |
|      | 848.3                   | 20643   |          | 6       | 0         | 1.248                                      | Fig.7  | 1.234  | Fig.8  | 1.249  | Fig.9  |
|      | 825.5                   | 20415   | 3        | 15      | 0         | 2.974                                      | Fig.10 | 2.944  | Fig.11 | 2.948  | Fig.12 |
|      | 836.5                   | 20525   |          | 15      | 0         | 2.962                                      | Fig.13 | 2.943  | Fig.14 | 2.953  | Fig.15 |
|      | 847.5                   | 20635   |          | 15      | 0         | 2.951                                      | Fig.16 | 2.930  | Fig.17 | 2.937  | Fig.18 |
|      | 826.5                   | 20425   | 5        | 25      | 0         | 4.987                                      | Fig.19 | 4.924  | Fig.20 | 4.924  | Fig.21 |
|      | 836.5                   | 20525   |          | 25      | 0         | 4.934                                      | Fig.22 | 4.872  | Fig.23 | 4.982  | Fig.24 |
|      | 846.5                   | 20625   |          | 25      | 0         | 4.957                                      | Fig.25 | 4.980  | Fig.26 | 4.966  | Fig.27 |
|      | 829                     | 20450   | 10       | 50      | 0         | 9.757                                      | Fig.28 | 9.661  | Fig.29 | 9.735  | Fig.30 |
|      | 836.5                   | 20525   |          | 50      | 0         | 9.661                                      | Fig.31 | 9.544  | Fig.32 | 9.683  | Fig.33 |
|      | 844                     | 20600   |          | 50      | 0         | 9.686                                      | Fig.34 | 9.631  | Fig.35 | 9.596  | Fig.36 |

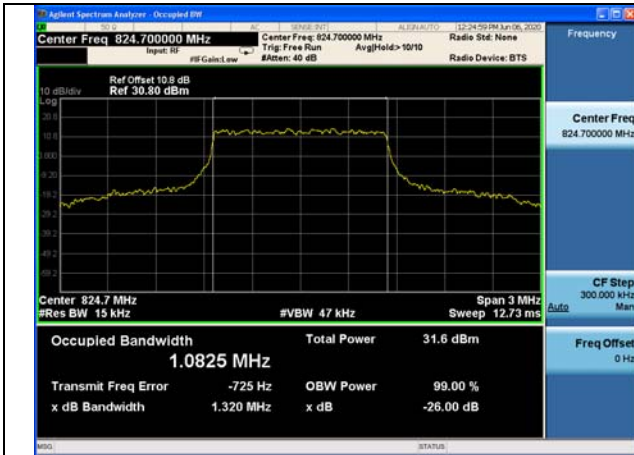


Fig.1

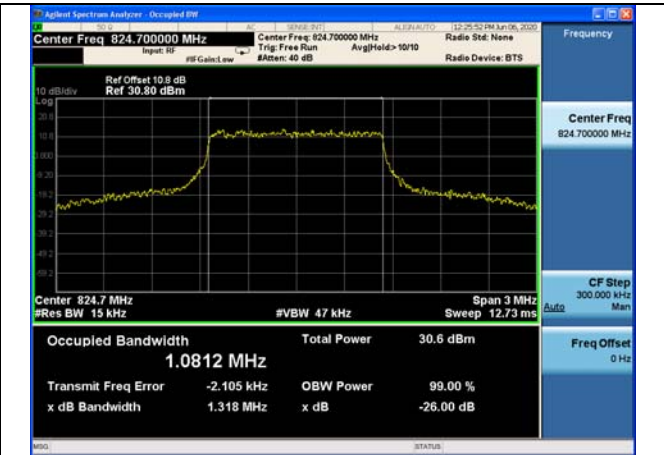


Fig.2

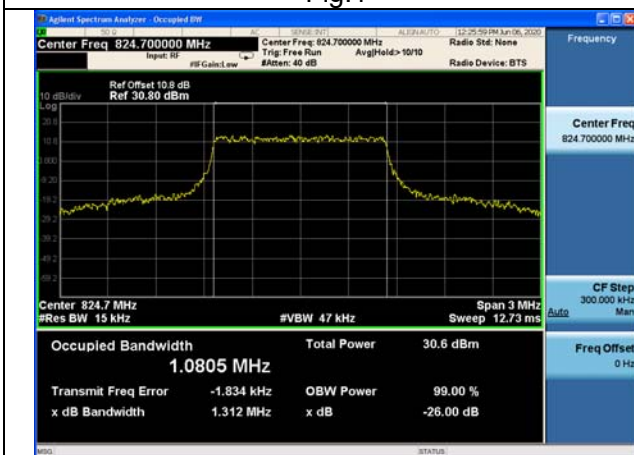


Fig.3

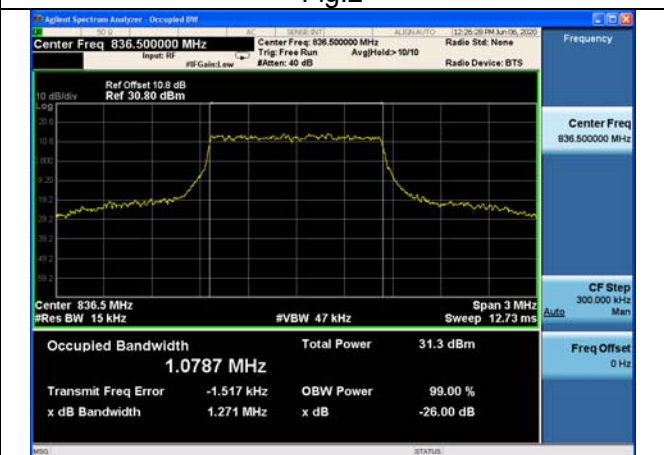


Fig.4

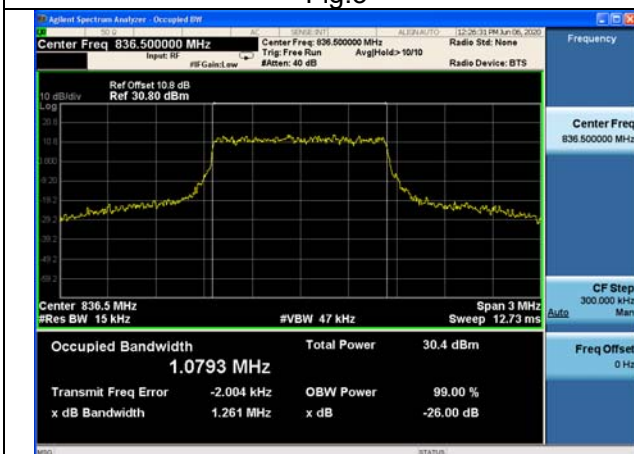


Fig.5

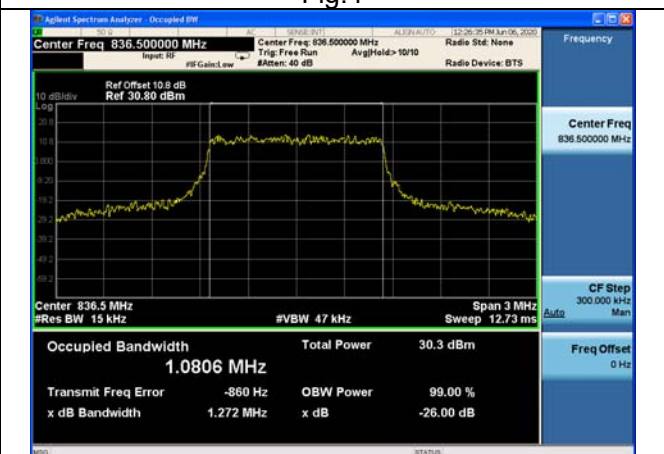


Fig.6

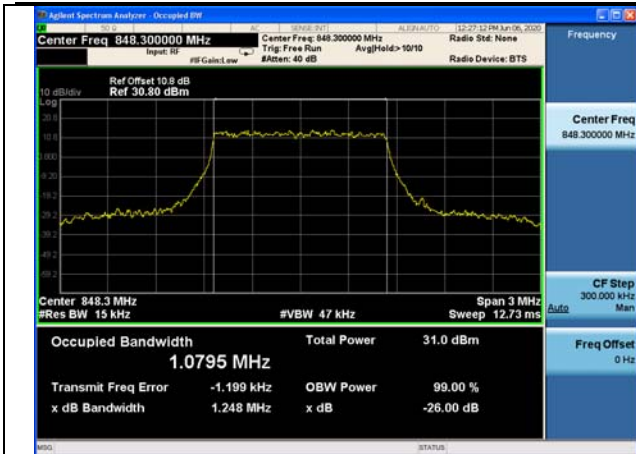


Fig.7



Fig.8

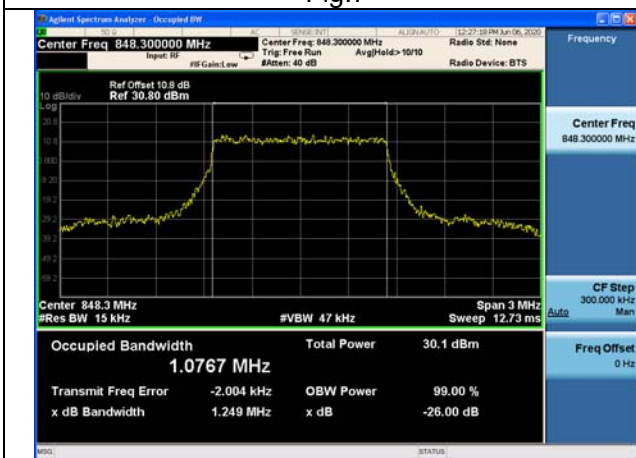


Fig.9

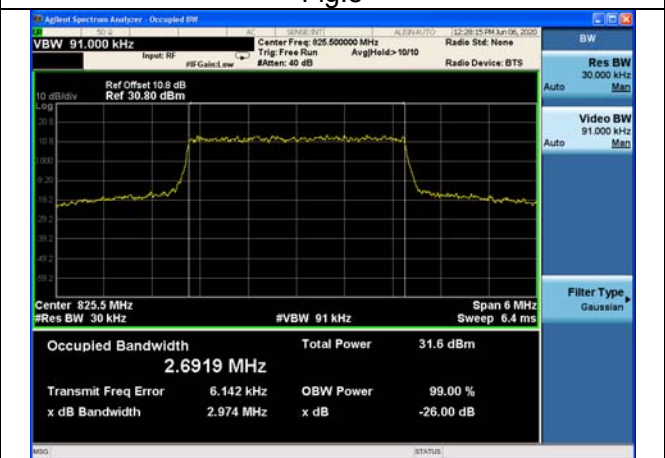


Fig.10

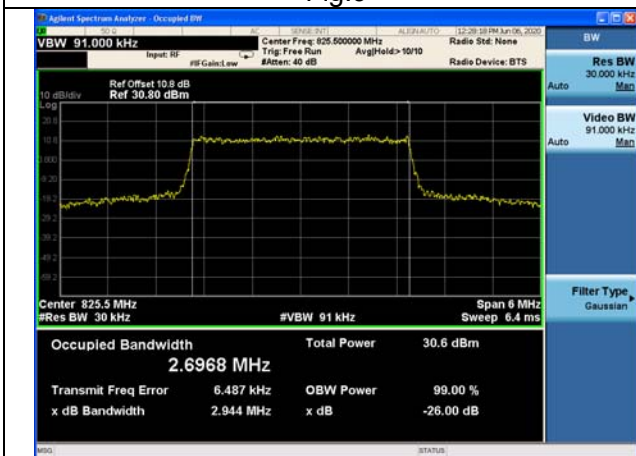


Fig.11

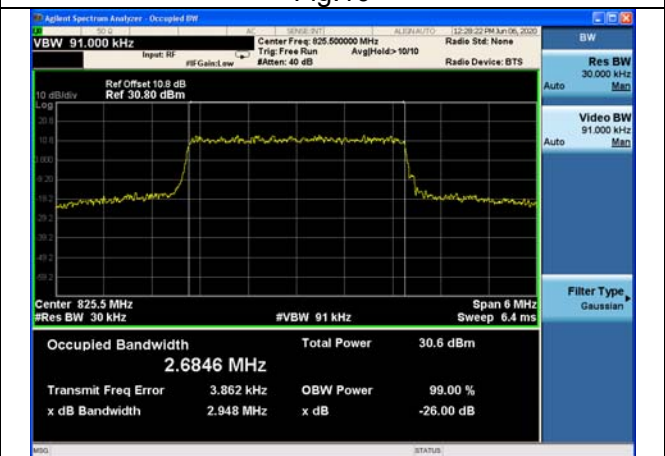


Fig.12

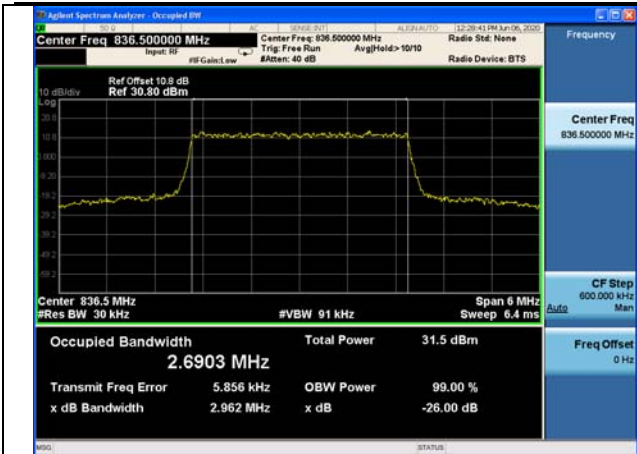


Fig.13

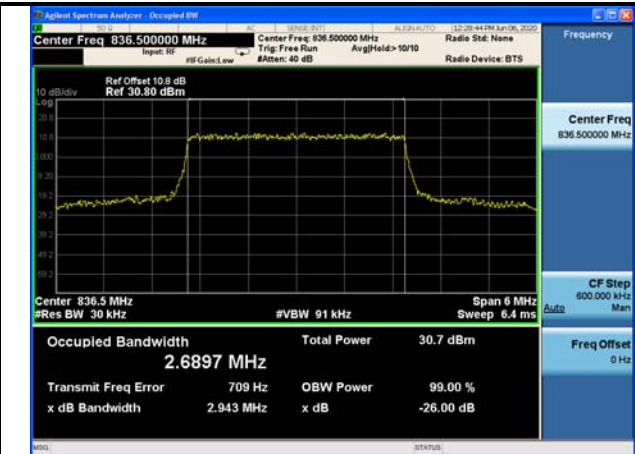


Fig.14

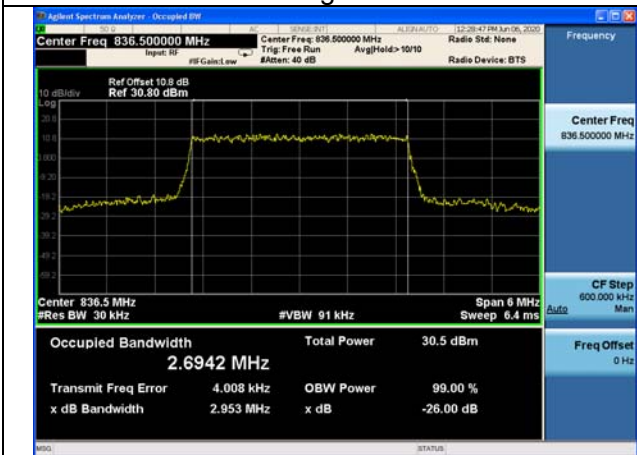


Fig.15

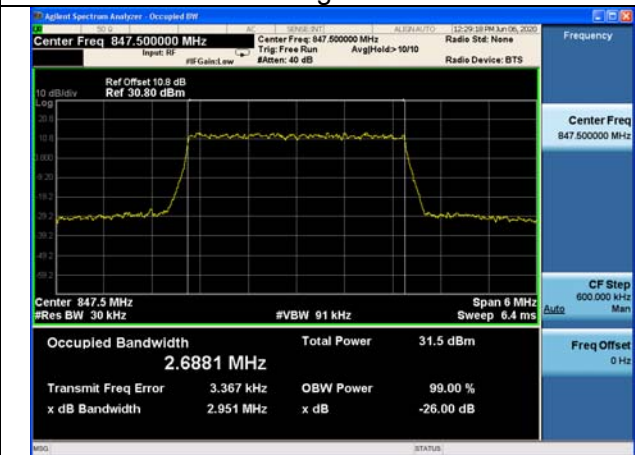


Fig.16

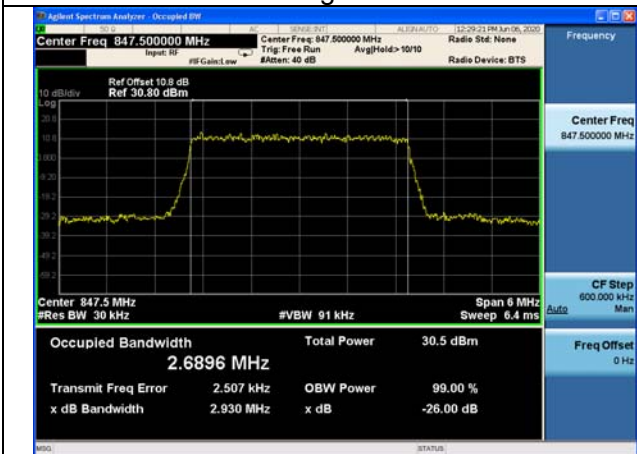


Fig.17

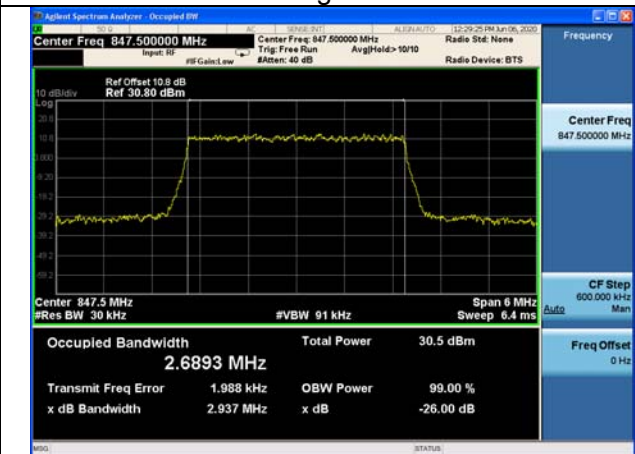


Fig.18



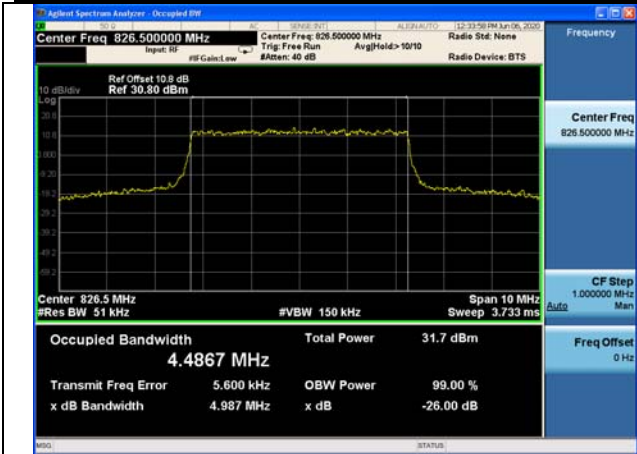


Fig.19



Fig.20

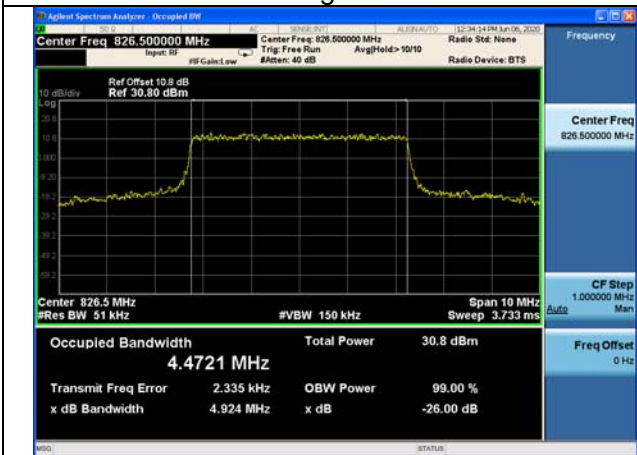


Fig.21

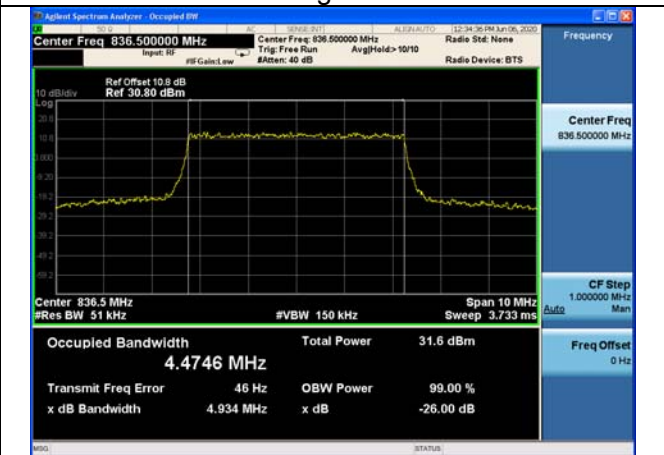


Fig.22

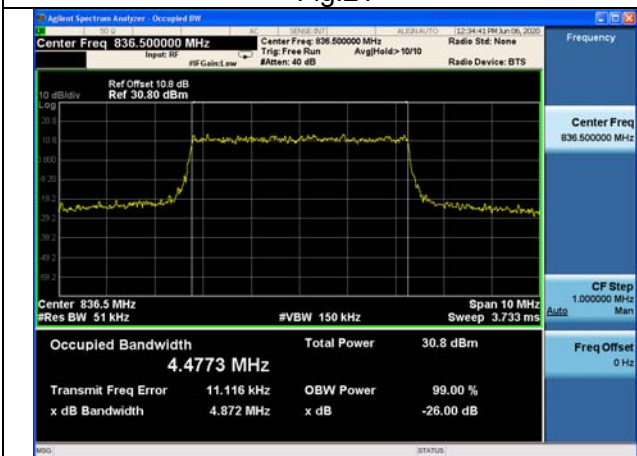


Fig.23

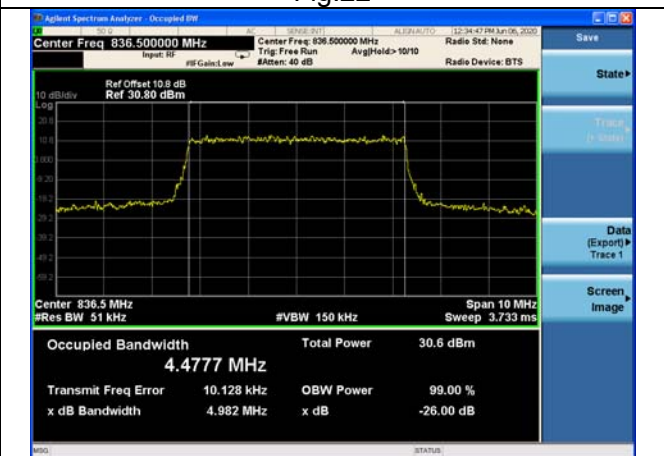


Fig.24

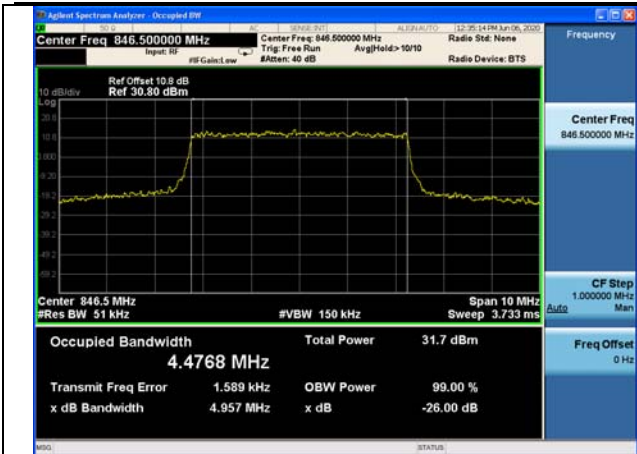


Fig.25

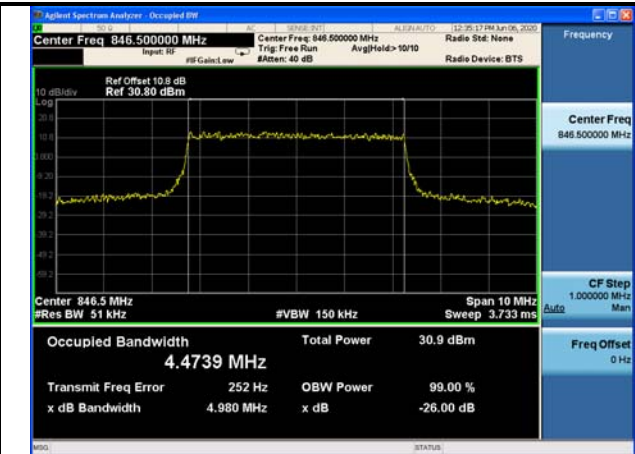


Fig.26

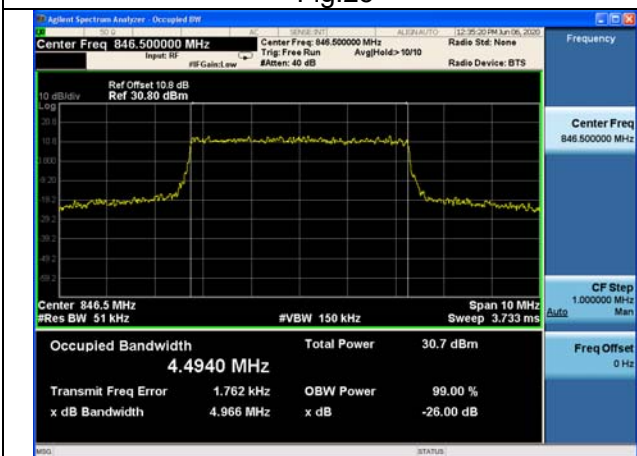


Fig.27

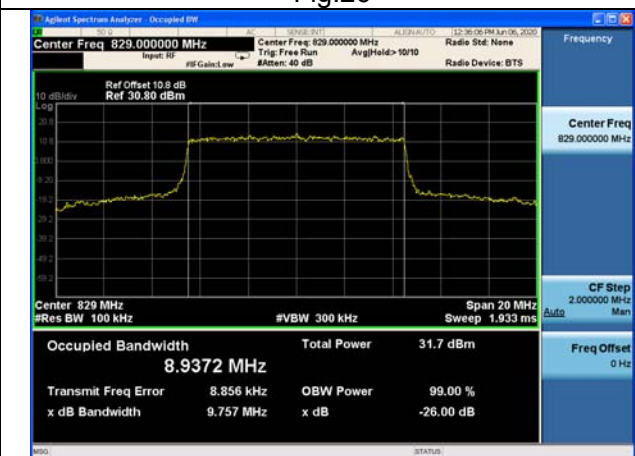


Fig.28

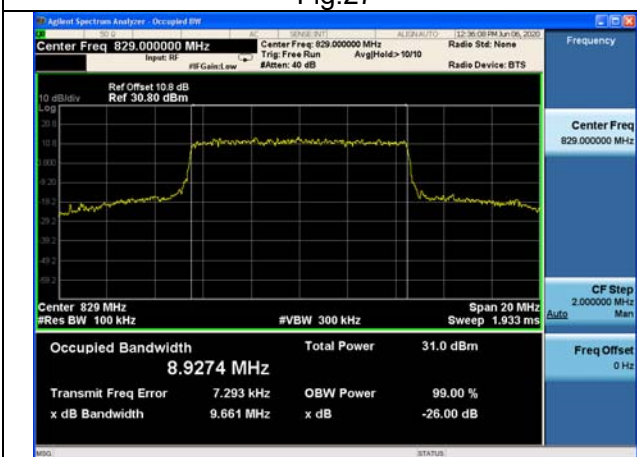


Fig.29

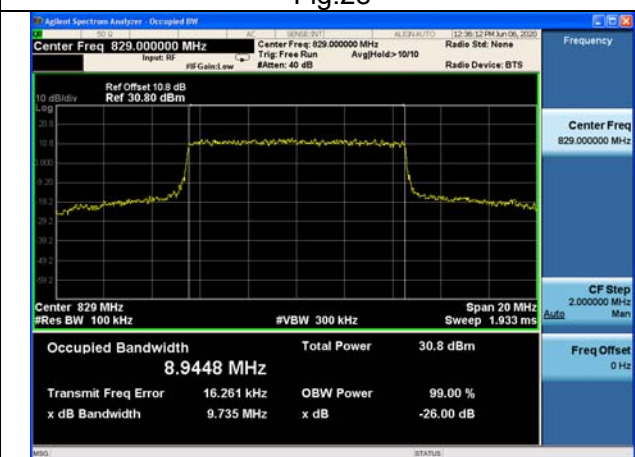


Fig.30

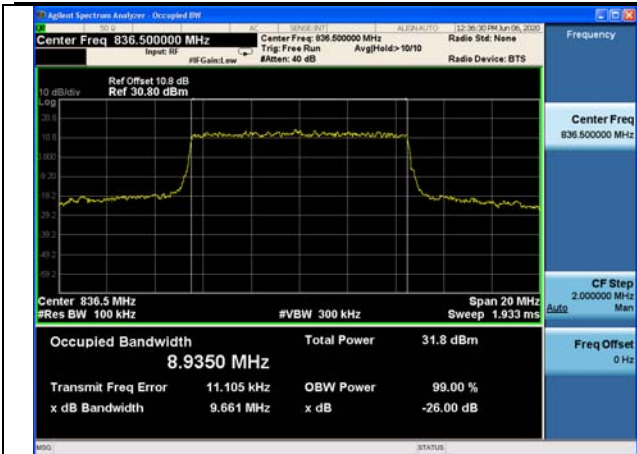


Fig.31



Fig.32

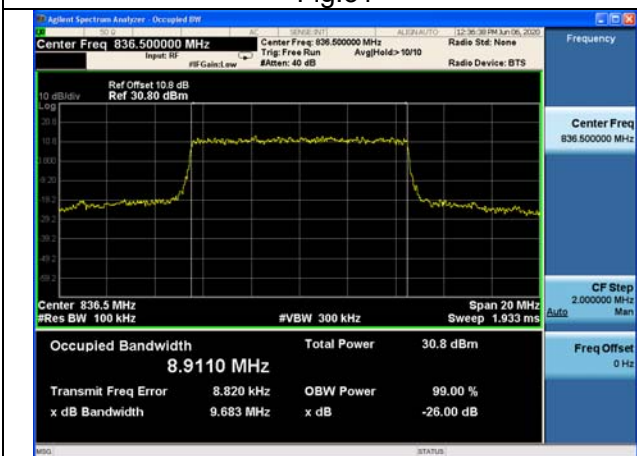


Fig.33

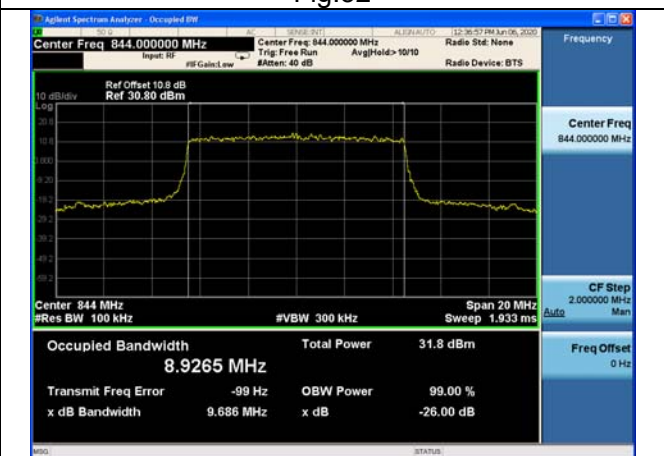


Fig.34

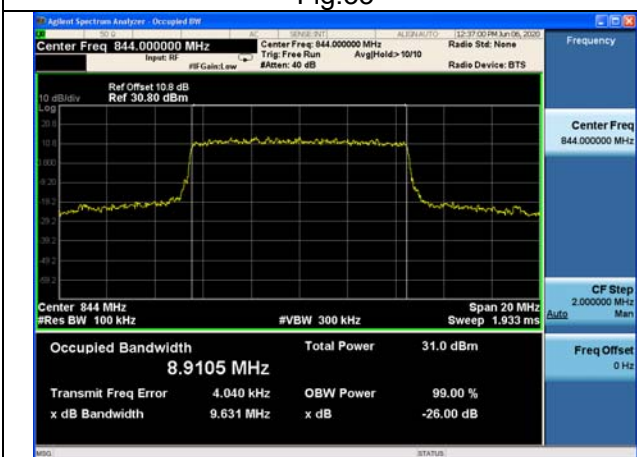


Fig.35

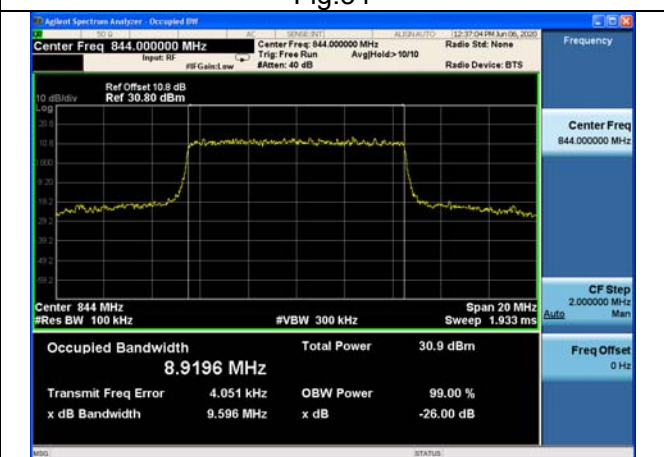


Fig.36

### 3 Peak-Average Ratio

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | QPSK   | 16-QAM | 64-QAM |
|------|-------------------------|---------|----------|---------|-----------|--------|--------|--------|
| 5    | 836.5                   | 20525   | 1.4      | 1       | 0         | Fig.1  | Fig.2  | Fig.3  |
|      |                         |         | 3        | 1       | 0         | Fig.4  | Fig.5  | Fig.6  |
|      |                         |         | 5        | 1       | 0         | Fig.7  | Fig.8  | Fig.9  |
|      |                         |         | 10       | 1       | 0         | Fig.10 | Fig.11 | Fig.12 |



Fig.1

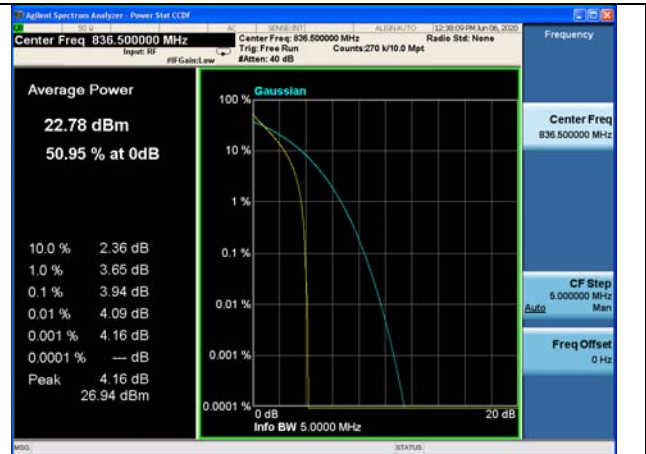


Fig.2



Fig.3

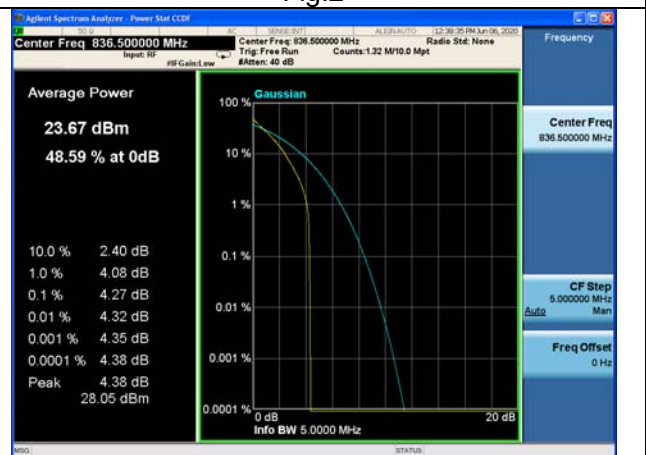
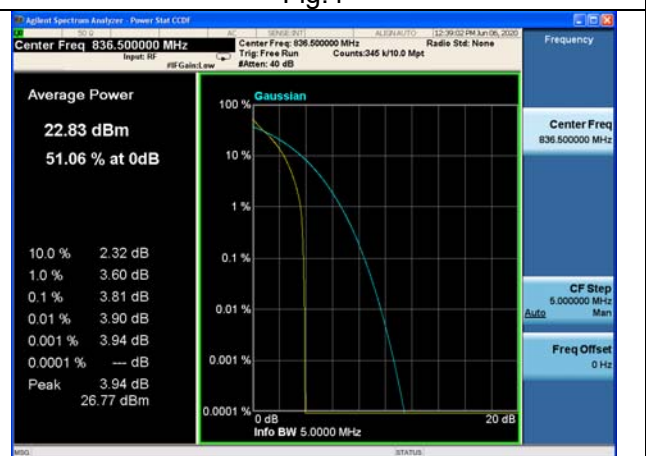
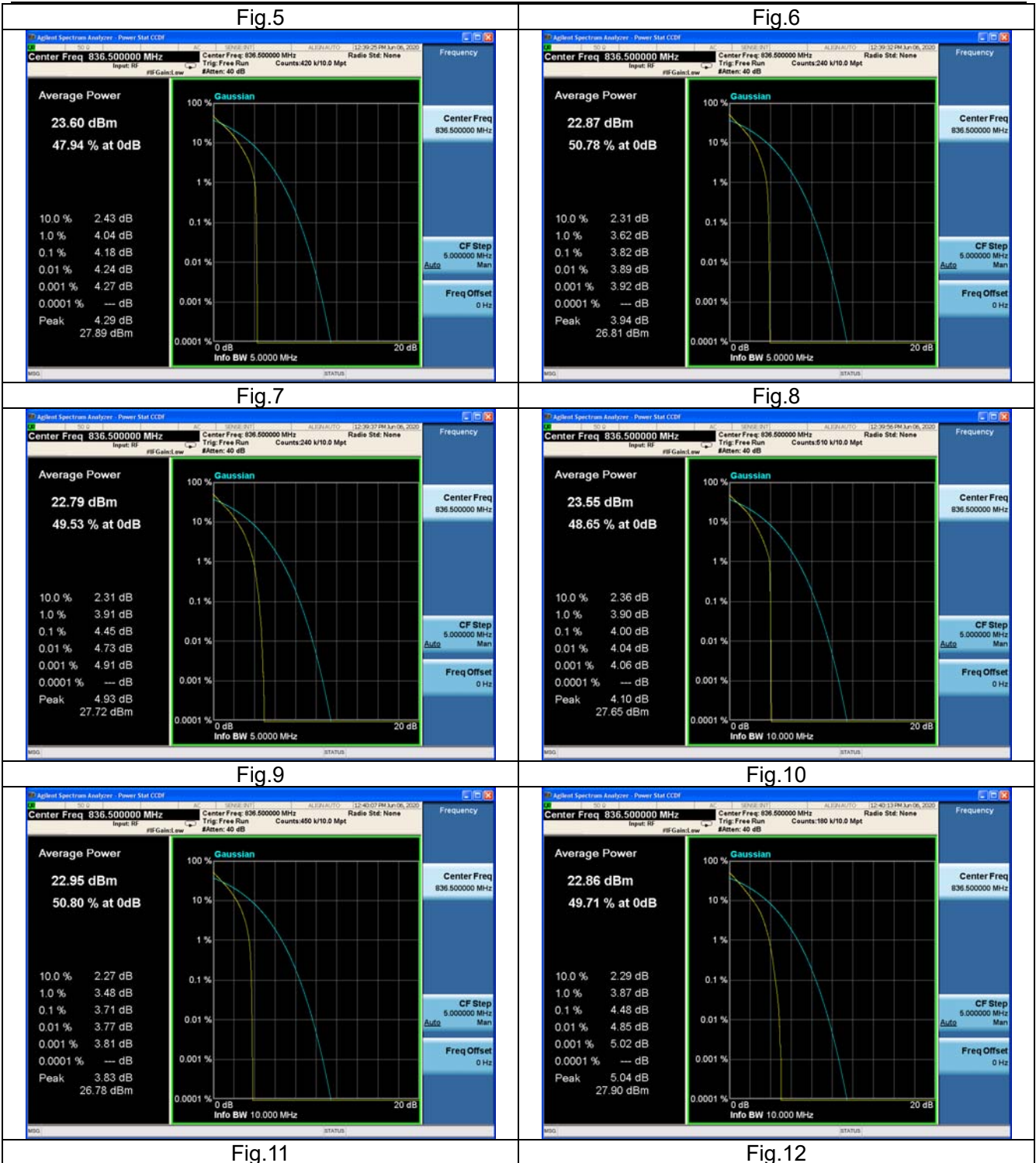


Fig.4





**4 Spurious Emissions at antenna terminal**

| Band | Carrier frequency (MHz) | Channel | BW | RB Size | RB Offset | Conducted Spurious Plot |
|------|-------------------------|---------|----|---------|-----------|-------------------------|
|      |                         |         |    |         |           | QPSK                    |
| 5    | 829                     | 20450   | 10 | 1       | 0         | Fig.1-2                 |
|      | 836.5                   | 20525   | 10 | 1       | 0         | Fig.3-4                 |
|      | 844                     | 20600   | 10 | 1       | 0         | Fig.4-5                 |

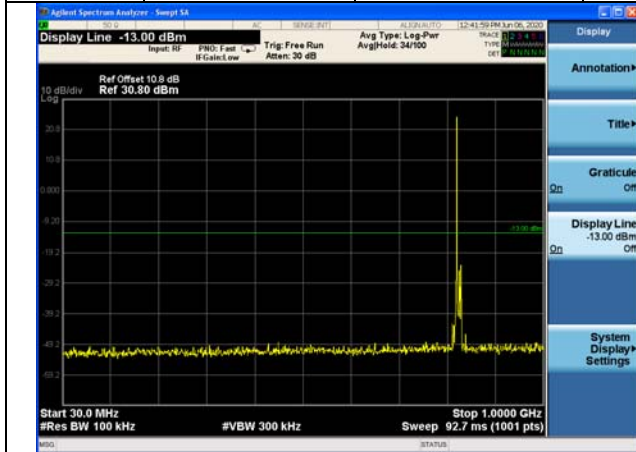


Fig.1

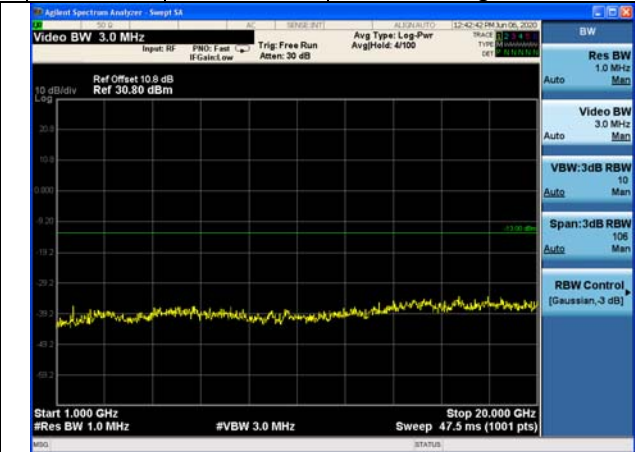


Fig.2

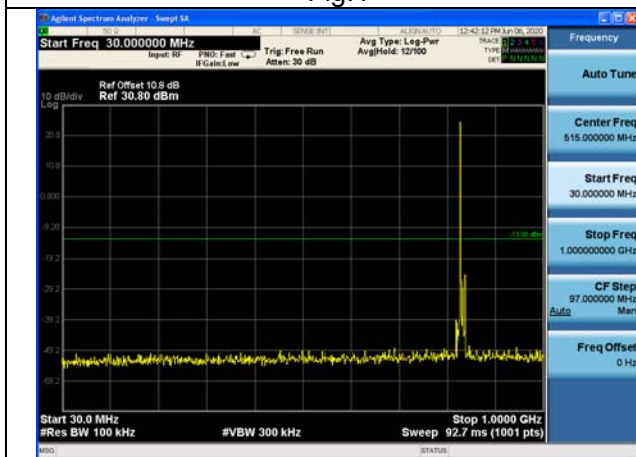


Fig3

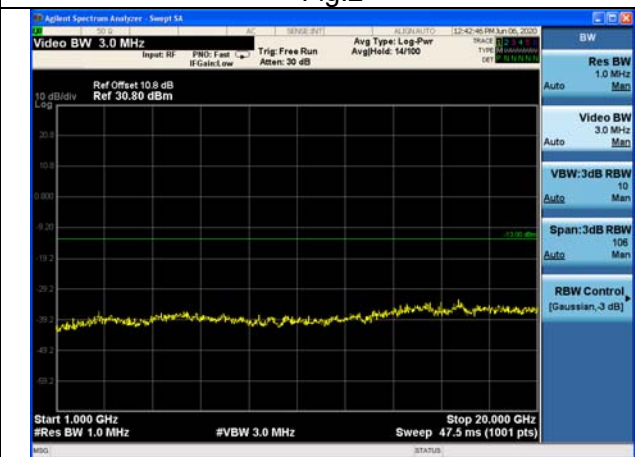


Fig4

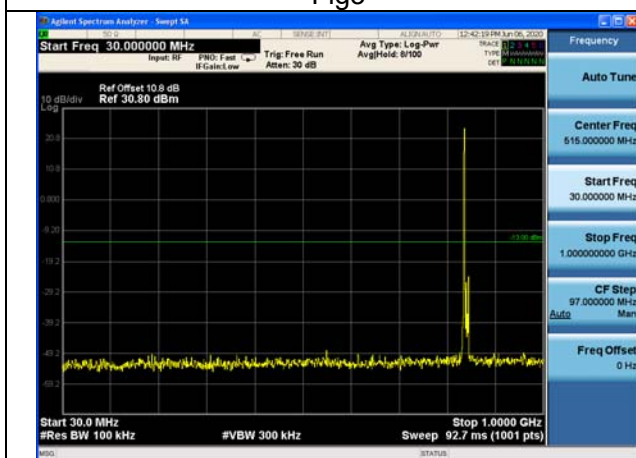


Fig5

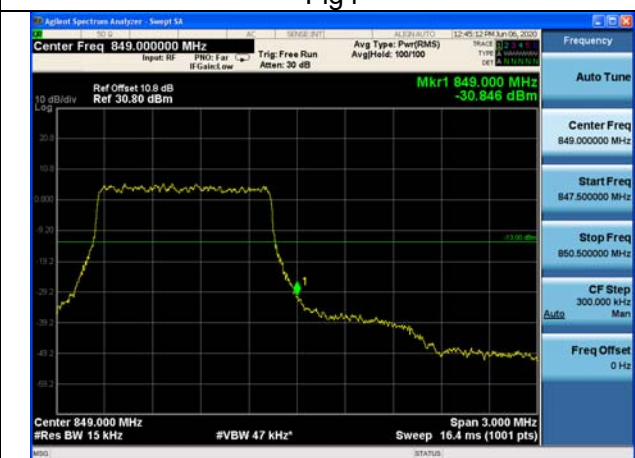


Fig6

**5 Band Edges Compliance**  
Test result

| Band | Carrier frequency (MHz) | Channel | BW  | RB Size | RB Offset | Band Edges Plot |
|------|-------------------------|---------|-----|---------|-----------|-----------------|
|      |                         |         |     |         |           | QPSK            |
| 5    | 824.7                   | 20407   | 1.4 | 1       | 0         | Fig.1           |
|      |                         |         |     | 6       | 0         | Fig.2           |
|      | 848.3                   | 20643   |     | 1       | 5         | Fig.3           |
|      |                         |         |     | 6       | 0         | Fig.4           |
|      | 825.5                   | 20415   | 3   | 1       | 0         | Fig.5           |
|      |                         |         |     | 15      | 0         | Fig.6           |
|      | 847.5                   | 20635   |     | 1       | 14        | Fig.7           |
|      |                         |         |     | 15      | 0         | Fig.8           |
|      | 826.5                   | 20425   | 5   | 1       | 0         | Fig.9           |
|      |                         |         |     | 25      | 0         | Fig.10          |
|      | 846.5                   | 20625   |     | 1       | 24        | Fig.11          |
|      |                         |         |     | 25      | 0         | Fig.12          |
|      | 829                     | 20450   | 10  | 1       | 0         | Fig.13          |
|      |                         |         |     | 50      | 0         | Fig.14          |
|      | 844                     | 20600   |     | 1       | 49        | Fig.15          |
|      |                         |         |     | 50      | 0         | Fig.16          |

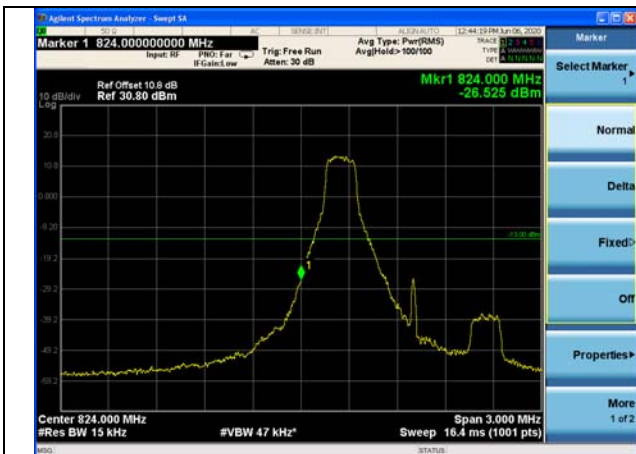


Fig.1

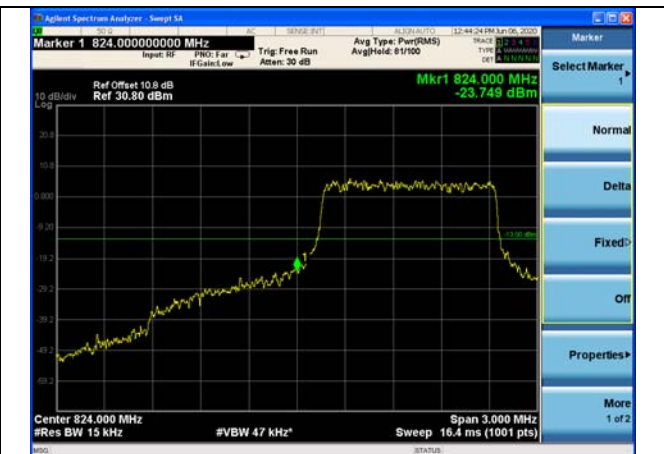


Fig.2

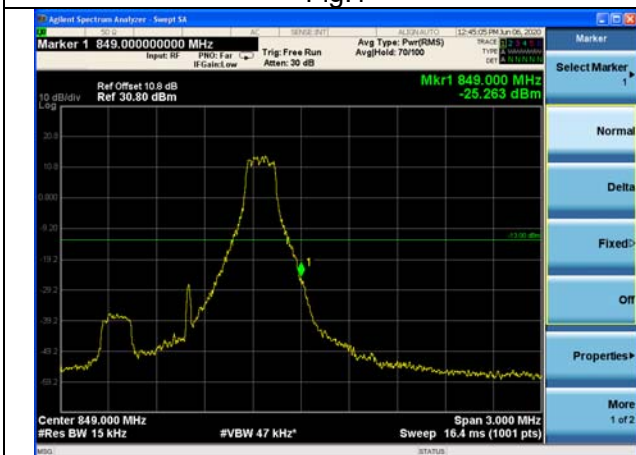


Fig.3



Fig.4

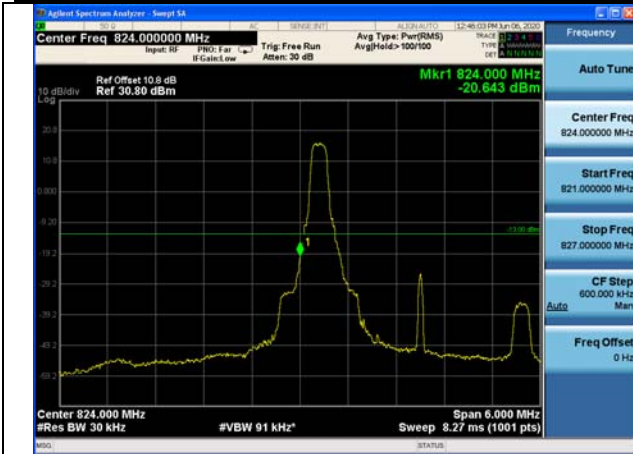


Fig.5



Fig.6

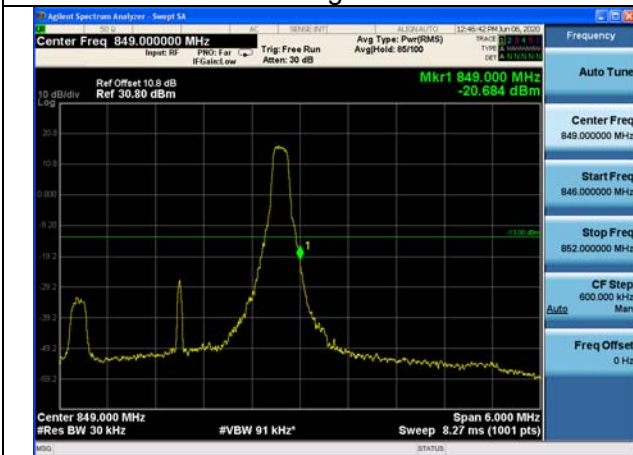


Fig.7



Fig.8

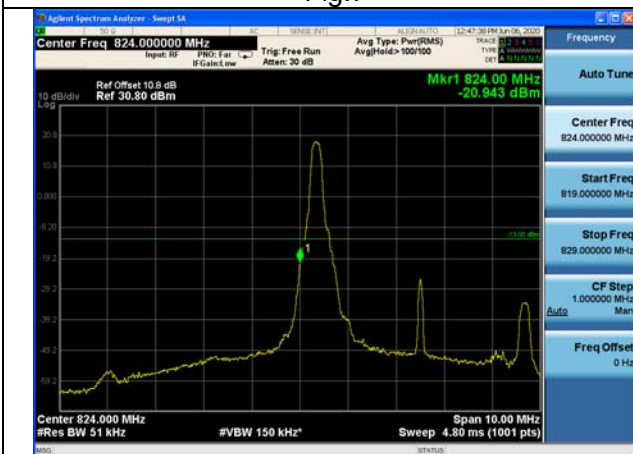


Fig.9



Fig.10



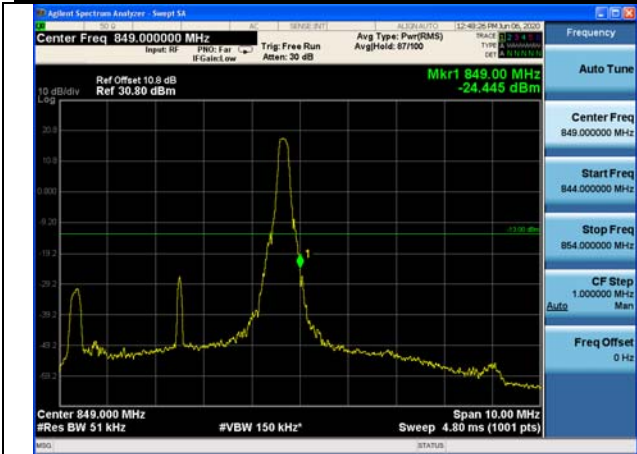


Fig.11



Fig.12

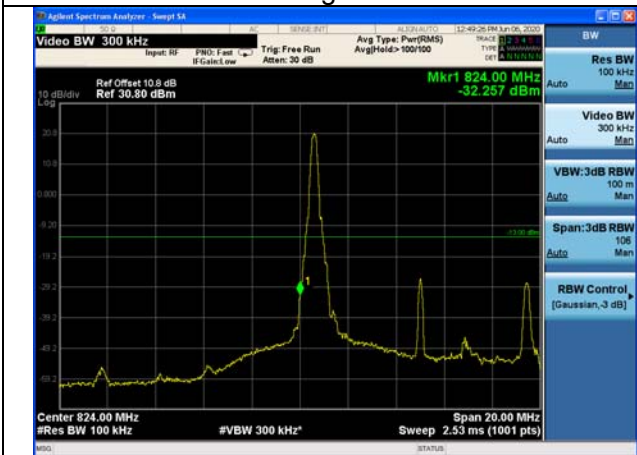


Fig.13



Fig.14

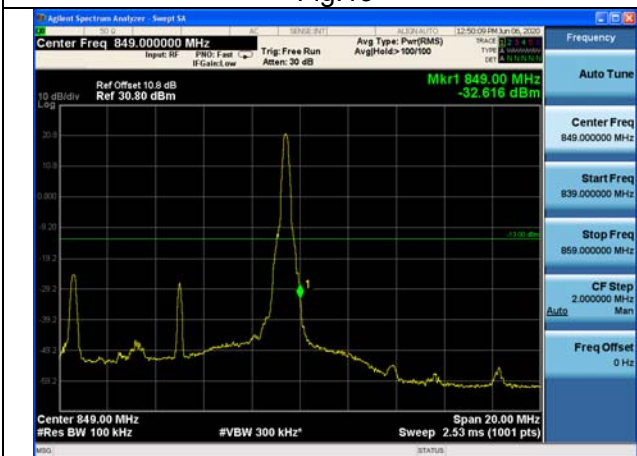


Fig.15



Fig.16

## 6 Frequency Stability

Test result:

| Temperature(°C) | Voltage | Test Result (ppm) Band5Low Channel |        |        |        |
|-----------------|---------|------------------------------------|--------|--------|--------|
|                 |         | 1.4M                               | 3M     | 5M     | 10M    |
| -10             | NV      | 0.002                              | 0.020  | 0.033  | 0.013  |
| 0               | NV      | 0.004                              | 0.014  | 0.001  | 0.015  |
| +10             | NV      | -0.011                             | -0.026 | 0.022  | 0.005  |
| +20             | NV      | 0.000                              | 0.000  | 0.000  | 0.000  |
| +30             | NV      | -0.011                             | 0.021  | -0.002 | 0.002  |
| +40             | NV      | 0.002                              | -0.014 | 0.022  | -0.001 |
| +50             | NV      | 0.018                              | -0.019 | -0.013 | 0.011  |
| +55             | NV      | 0.003                              | -0.019 | -0.021 | -0.006 |
| +20             | LV      | -0.015                             | 0.001  | -0.009 | 0.003  |
| +20             | HV      | 0.014                              | -0.007 | -0.001 | -0.005 |

| Temperature(°C) | Voltage | Test Result (ppm) Band5High annel |        |        |        |
|-----------------|---------|-----------------------------------|--------|--------|--------|
|                 |         | 1.4M                              | 3M     | 5M     | 10M    |
| -10             | NV      | 0.018                             | -0.006 | -0.019 | 0.023  |
| 0               | NV      | -0.011                            | -0.007 | -0.001 | -0.008 |
| +10             | NV      | -0.022                            | -0.001 | 0.022  | -0.014 |
| +20             | NV      | 0.000                             | 0.000  | 0.000  | 0.000  |
| +30             | NV      | -0.004                            | -0.021 | 0.013  | 0.005  |
| +40             | NV      | -0.018                            | -0.008 | 0.004  | 0.007  |
| +50             | NV      | 0.011                             | 0.011  | -0.015 | -0.002 |
| +55             | NV      | -0.015                            | -0.001 | -0.003 | 0.002  |
| +20             | LV      | -0.012                            | 0.018  | -0.006 | 0.006  |
| +20             | HV      | 0.011                             | -0.003 | -0.014 | 0.008  |