

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 71

1 RF Power Output

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK | 665.5 | 133147 | 5 | 1 | 0 | 23.18 |
| | | | | 1 | 24 | 23.12 |
| | | | | 12 | 6 | 22.32 |
| | | | | 25 | 0 | 22.21 |
| | 680.5 | 133297 | | 1 | 0 | 23.11 |
| | | | | 1 | 24 | 23.15 |
| | | | | 12 | 6 | 22.23 |
| | | | | 25 | 0 | 22.13 |
| | 695.5 | 133447 | | 1 | 0 | 23.06 |
| | | | | 1 | 24 | 23.05 |
| | | | | 12 | 6 | 22.13 |
| | | | | 25 | 0 | 22.07 |
| 16QAM | 665.5 | 133147 | 5 | 1 | 0 | 22.16 |
| | | | | 1 | 24 | 22.26 |
| | | | | 12 | 6 | 21.23 |
| | | | | 25 | 0 | 21.17 |
| | 680.5 | 133297 | | 1 | 0 | 22.26 |
| | | | | 1 | 24 | 22.21 |
| | | | | 12 | 6 | 21.10 |
| | | | | 25 | 0 | 21.18 |
| | 695.5 | 133447 | | 1 | 0 | 22.41 |
| | | | | 1 | 24 | 22.21 |
| | | | | 12 | 6 | 21.15 |
| | | | | 25 | 0 | 21.26 |
| 64QAM | 665.5 | 133147 | 5 | 1 | 0 | 22.19 |
| | | | | 1 | 24 | 22.11 |
| | | | | 12 | 6 | 21.17 |
| | | | | 25 | 0 | 21.21 |
| | 680.5 | 133297 | | 1 | 0 | 22.24 |
| | | | | 1 | 24 | 22.26 |
| | | | | 12 | 6 | 21.05 |
| | | | | 25 | 0 | 21.09 |
| | 695.5 | 133447 | | 1 | 0 | 22.24 |
| | | | | 1 | 24 | 22.07 |
| | | | | 12 | 6 | 20.99 |
| | | | | 25 | 0 | 21.02 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK | 668 | 133172 | 10 | 1 | 0 | 23.11 |
| | | | | 1 | 49 | 23.09 |
| | | | | 24 | 12 | 22.29 |
| | | | | 50 | 0 | 22.22 |
| | 680.5 | 133297 | | 1 | 0 | 23.10 |
| | | | | 1 | 49 | 23.14 |
| | | | | 24 | 12 | 22.21 |
| | | | | 50 | 0 | 22.22 |
| | 693 | 133422 | | 1 | 0 | 23.11 |
| | | | | 1 | 49 | 23.08 |
| | | | | 24 | 12 | 22.11 |
| | | | | 50 | 0 | 22.13 |
| 16QAM | 668 | 133172 | 10 | 1 | 0 | 22.21 |
| | | | | 1 | 49 | 22.20 |
| | | | | 24 | 12 | 21.21 |
| | | | | 50 | 0 | 21.17 |
| | 680.5 | 133297 | | 1 | 0 | 22.27 |
| | | | | 1 | 49 | 22.23 |
| | | | | 24 | 12 | 21.17 |
| | | | | 50 | 0 | 21.23 |
| | 693 | 133422 | | 1 | 0 | 22.33 |
| | | | | 1 | 49 | 22.20 |
| | | | | 24 | 12 | 21.16 |
| | | | | 50 | 0 | 21.25 |
| 64QAM | 668 | 133172 | 10 | 1 | 0 | 22.17 |
| | | | | 1 | 49 | 22.18 |
| | | | | 24 | 12 | 21.17 |
| | | | | 50 | 0 | 21.23 |
| | 680.5 | 133297 | | 1 | 0 | 22.12 |
| | | | | 1 | 49 | 22.15 |
| | | | | 24 | 12 | 21.15 |
| | | | | 50 | 0 | 21.12 |
| | 693 | 133422 | | 1 | 0 | 22.27 |
| | | | | 1 | 49 | 22.14 |
| | | | | 24 | 12 | 21.04 |
| | | | | 50 | 0 | 21.01 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK | 670.5 | 133197 | 15 | 1 | 0 | 23.15 |
| | | | | 1 | 74 | 23.10 |
| | | | | 40 | 18 | 22.33 |
| | | | | 75 | 0 | 22.16 |
| | 680.5 | 133297 | | 1 | 0 | 23.18 |
| | | | | 1 | 74 | 23.17 |
| | | | | 40 | 18 | 22.24 |
| | | | | 75 | 0 | 22.21 |
| | 690.5 | 133397 | | 1 | 0 | 23.04 |
| | | | | 1 | 74 | 23.13 |
| | | | | 40 | 18 | 22.10 |
| | | | | 75 | 0 | 22.17 |
| 16QAM | 670.5 | 133197 | 15 | 1 | 0 | 22.20 |
| | | | | 1 | 74 | 22.27 |
| | | | | 40 | 18 | 21.17 |
| | | | | 75 | 0 | 21.25 |
| | 680.5 | 133297 | | 1 | 0 | 22.23 |
| | | | | 1 | 74 | 22.22 |
| | | | | 40 | 18 | 21.14 |
| | | | | 75 | 0 | 21.08 |
| | 690.5 | 133397 | | 1 | 0 | 22.29 |
| | | | | 1 | 74 | 22.30 |
| | | | | 40 | 18 | 21.12 |
| | | | | 75 | 0 | 21.28 |
| 64QAM | 670.5 | 133197 | 15 | 1 | 0 | 22.18 |
| | | | | 1 | 74 | 22.10 |
| | | | | 40 | 18 | 21.23 |
| | | | | 75 | 0 | 21.22 |
| | 680.5 | 133297 | | 1 | 0 | 22.11 |
| | | | | 1 | 74 | 22.14 |
| | | | | 40 | 18 | 21.10 |
| | | | | 75 | 0 | 21.03 |
| | 690.5 | 133397 | | 1 | 0 | 22.32 |
| | | | | 1 | 74 | 22.21 |
| | | | | 40 | 18 | 21.06 |
| | | | | 75 | 0 | 21.00 |

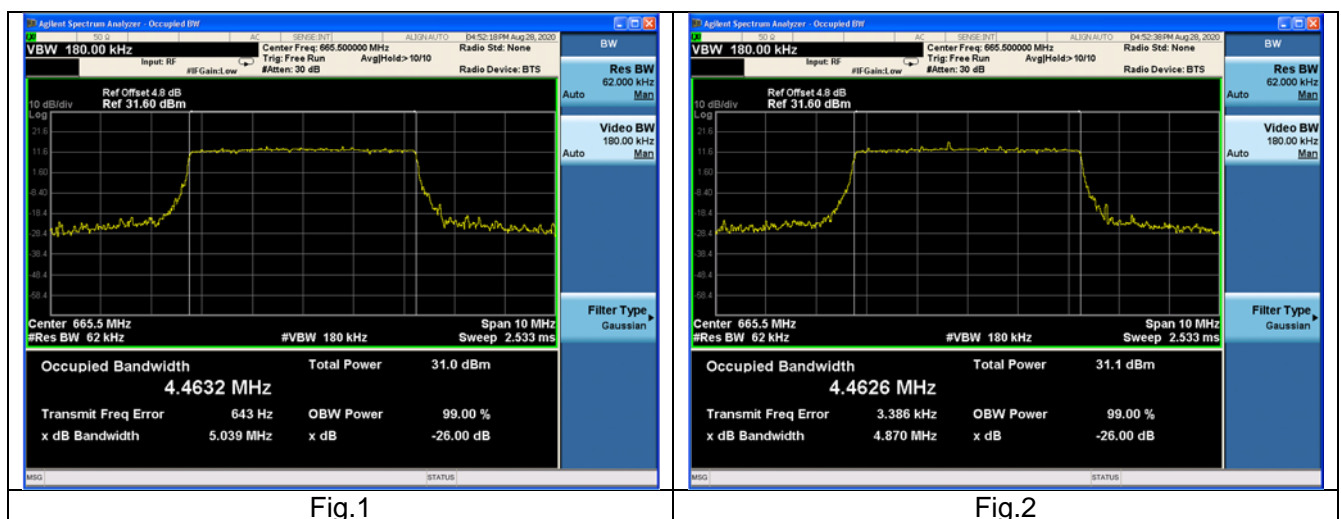
| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) |
|------------|-------------------------|------------|----|---------|-----------|-----------------------|
| QPSK | 673 | 133222 | 20 | 1 | 0 | 23.23 |
| | | | | 1 | 99 | 23.24 |
| | | | | 50 | 25 | 22.34 |
| | | | | 100 | 0 | 22.31 |
| | 683 | 133322 | | 1 | 0 | 23.21 |
| | | | | 1 | 99 | 23.23 |
| | | | | 50 | 25 | 22.28 |
| | | | | 100 | 0 | 22.27 |
| | 688 | 133372 | | 1 | 0 | 23.15 |
| | | | | 1 | 99 | 23.16 |
| | | | | 50 | 25 | 22.24 |
| | | | | 100 | 0 | 22.21 |
| 16QAM | 673 | 133222 | 20 | 1 | 0 | 22.24 |
| | | | | 1 | 99 | 22.32 |
| | | | | 50 | 25 | 21.25 |
| | | | | 100 | 0 | 21.26 |
| | 683 | 133322 | | 1 | 0 | 22.32 |
| | | | | 1 | 99 | 22.31 |
| | | | | 50 | 25 | 21.17 |
| | | | | 100 | 0 | 21.23 |
| | 688 | 133372 | | 1 | 0 | 22.42 |
| | | | | 1 | 99 | 22.32 |
| | | | | 50 | 25 | 21.23 |
| | | | | 100 | 0 | 21.31 |
| 64QAM | 673 | 133222 | 20 | 1 | 0 | 22.21 |
| | | | | 1 | 99 | 22.24 |
| | | | | 50 | 25 | 21.23 |
| | | | | 100 | 0 | 21.24 |
| | 683 | 133322 | | 1 | 0 | 22.25 |
| | | | | 1 | 99 | 22.27 |
| | | | | 50 | 25 | 21.17 |
| | | | | 100 | 0 | 21.16 |
| | 688 | 133372 | | 1 | 0 | 22.32 |
| | | | | 1 | 99 | 22.21 |
| | | | | 50 | 25 | 21.14 |
| | | | | 100 | 0 | 21.15 |

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 | |
| 71 | 665.5 | 133147 | 5 | 25 | 0 | 4.4632 | Fig.1 | 4.4626 | Fig.2 | 4.4664 | Fig.3 |
| | 680.5 | 133297 | | 25 | 0 | 4.4987 | Fig.4 | 4.4870 | Fig.5 | 4.5037 | Fig.6 |
| | 695.5 | 133447 | | 25 | 0 | 4.4733 | Fig.7 | 4.4708 | Fig.8 | 4.4783 | Fig.9 |
| | 668 | 133172 | 10 | 50 | 0 | 8.9703 | Fig.10 | 8.9549 | Fig.11 | 8.9725 | Fig.12 |
| | 680.5 | 133297 | | 50 | 0 | 8.9622 | Fig.13 | 8.9702 | Fig.14 | 8.9739 | Fig.15 |
| | 693 | 133422 | | 50 | 0 | 8.9615 | Fig.16 | 8.9530 | Fig.17 | 8.9626 | Fig.18 |
| | 670.5 | 133197 | 15 | 75 | 0 | 13.435 | Fig.19 | 13.461 | Fig.20 | 13.430 | Fig.21 |
| | 680.5 | 133297 | | 75 | 0 | 13.431 | Fig.22 | 13.425 | Fig.23 | 13.427 | Fig.24 |
| | 690.5 | 133397 | | 75 | 0 | 13.468 | Fig.25 | 13.454 | Fig.26 | 13.444 | Fig.27 |
| | 673 | 133222 | 20 | 100 | 0 | 17.883 | Fig.28 | 17.877 | Fig.29 | 17.905 | Fig.30 |
| | 683 | 133322 | | 100 | 0 | 17.935 | Fig.31 | 17.862 | Fig.32 | 17.847 | Fig.33 |
| | 688 | 133372 | | 100 | 0 | 17.931 | Fig.34 | 17.930 | Fig.35 | 17.892 | Fig.36 |

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | Bandwidth of -26dB transmitter power (MHz) | | | | | |
|------|-------------------------|---------|----------|---------|-----------|--|--------|--------|--------|--------|--------|
| | | | | | | QPSK | | 16-QAM | | 64-QAM | |
| 71 | 665.5 | 133147 | 5 | 25 | 0 | 5.039 | Fig.1 | 4.870 | Fig.2 | 4.836 | Fig.3 |
| | 680.5 | 133297 | | 25 | 0 | 5.130 | Fig.4 | 5.011 | Fig.5 | 5.009 | Fig.6 |
| | 695.5 | 133447 | | 25 | 0 | 5.088 | Fig.7 | 5.131 | Fig.8 | 5.083 | Fig.9 |
| | 668 | 133172 | 10 | 50 | 0 | 9.775 | Fig.10 | 9.862 | Fig.11 | 9.835 | Fig.12 |
| | 680.5 | 133297 | | 50 | 0 | 9.909 | Fig.13 | 9.853 | Fig.14 | 9.688 | Fig.15 |
| | 693 | 133422 | | 50 | 0 | 9.967 | Fig.16 | 9.834 | Fig.17 | 9.817 | Fig.18 |
| | 670.5 | 133197 | 15 | 75 | 0 | 14.57 | Fig.19 | 14.64 | Fig.20 | 14.36 | Fig.21 |
| | 680.5 | 133297 | | 75 | 0 | 14.71 | Fig.22 | 14.64 | Fig.23 | 14.59 | Fig.24 |
| | 690.5 | 133397 | | 75 | 0 | 14.81 | Fig.25 | 14.51 | Fig.26 | 14.61 | Fig.27 |
| | 673 | 133222 | 20 | 100 | 0 | 19.24 | Fig.28 | 19.18 | Fig.29 | 19.15 | Fig.30 |
| | 683 | 133322 | | 100 | 0 | 19.47 | Fig.31 | 19.41 | Fig.32 | 19.12 | Fig.33 |
| | 688 | 133372 | | 100 | 0 | 19.40 | Fig.34 | 19.29 | Fig.35 | 19.33 | Fig.36 |



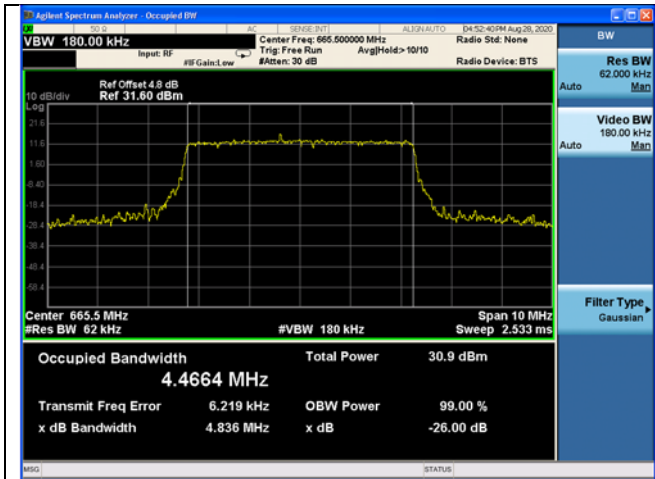


Fig.3



Fig.4

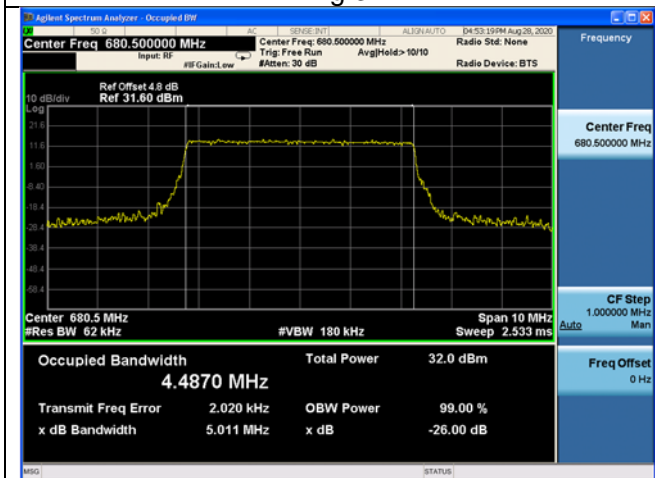


Fig.5

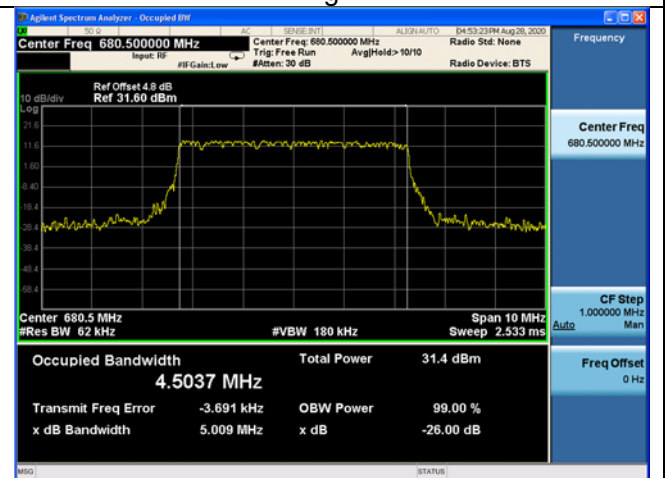


Fig.6

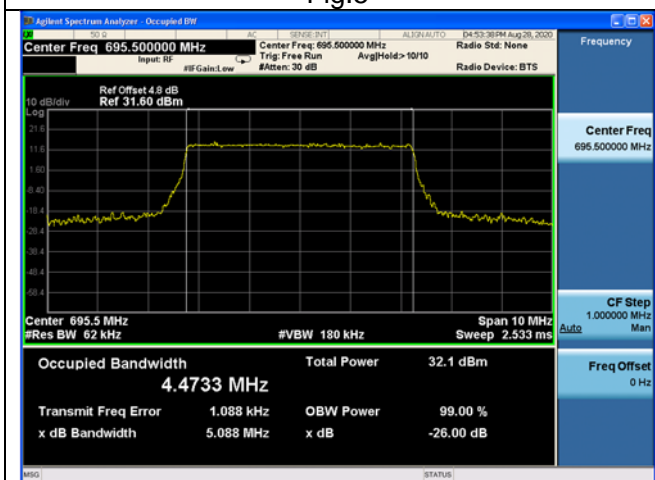


Fig.7

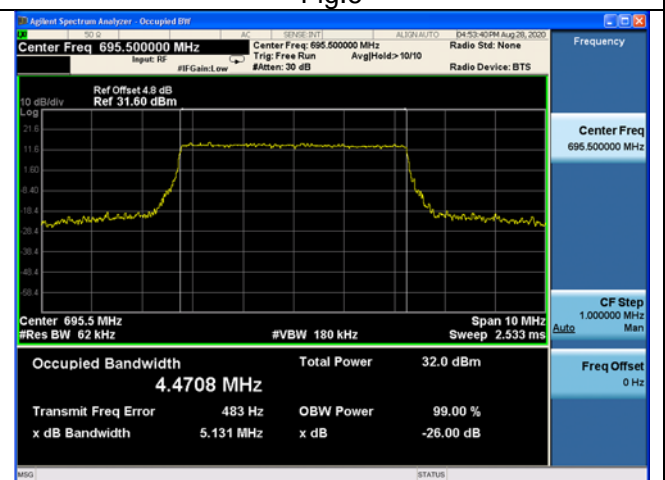


Fig.8

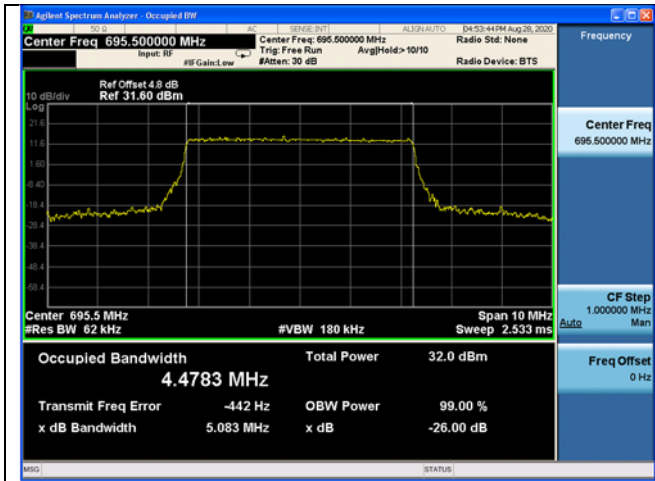


Fig.9

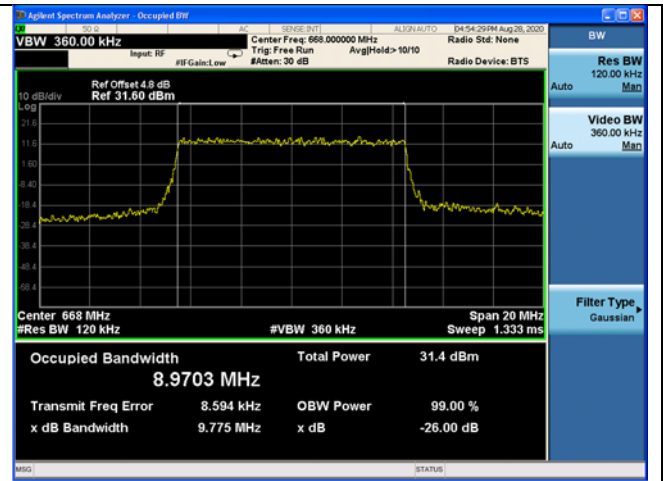


Fig.10

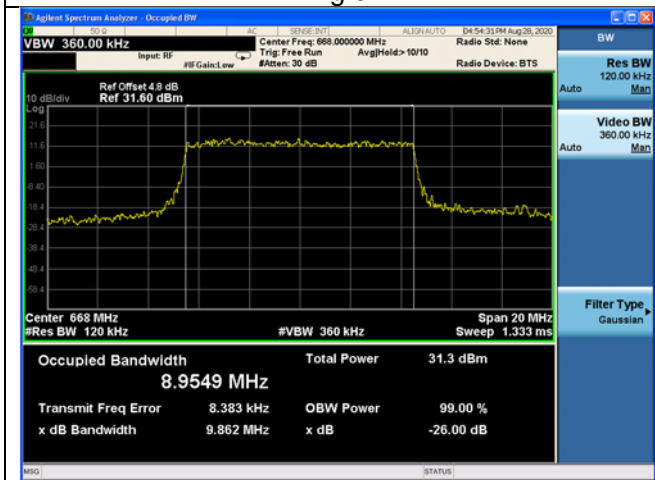


Fig.11

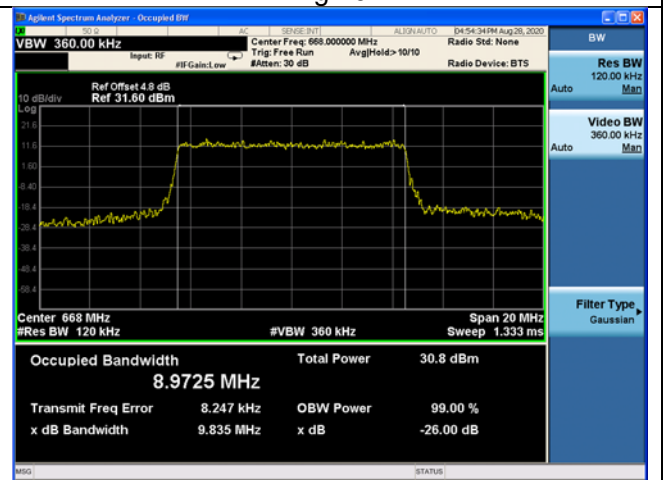


Fig.12

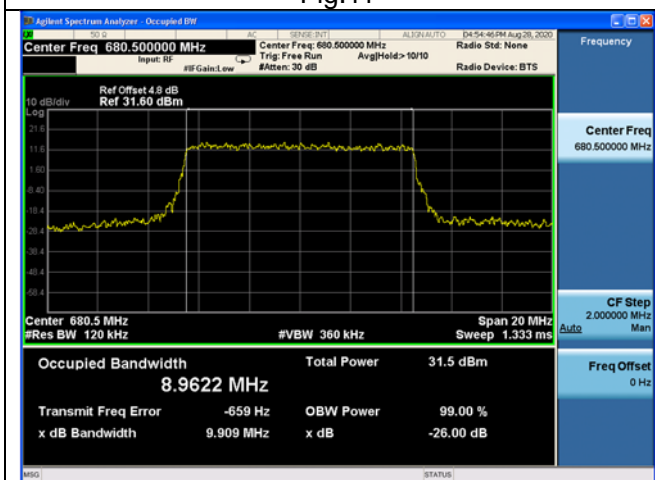


Fig.13

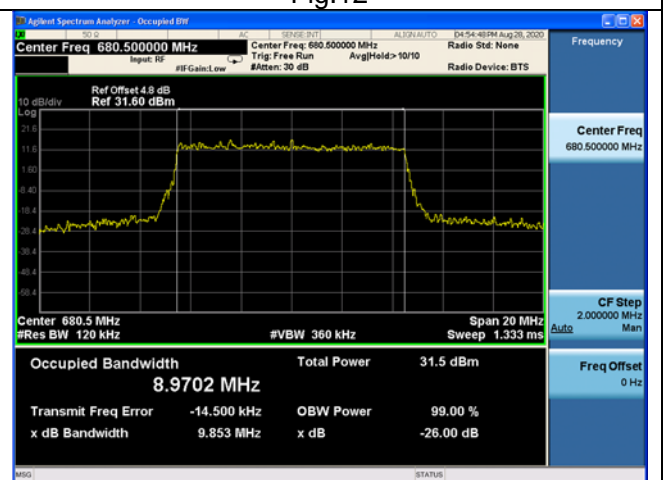


Fig.14

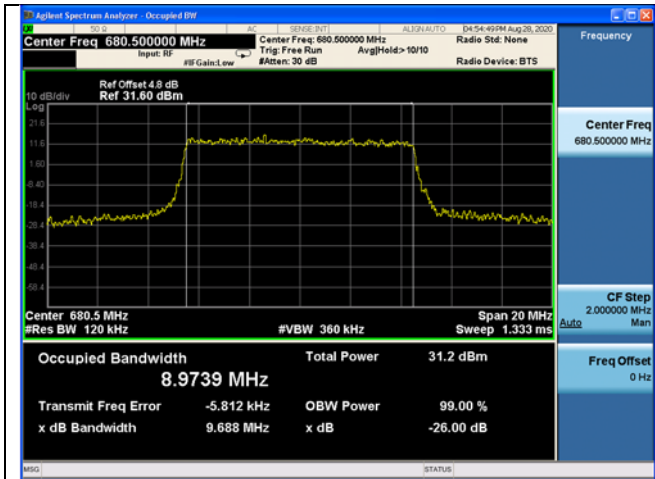


Fig.15

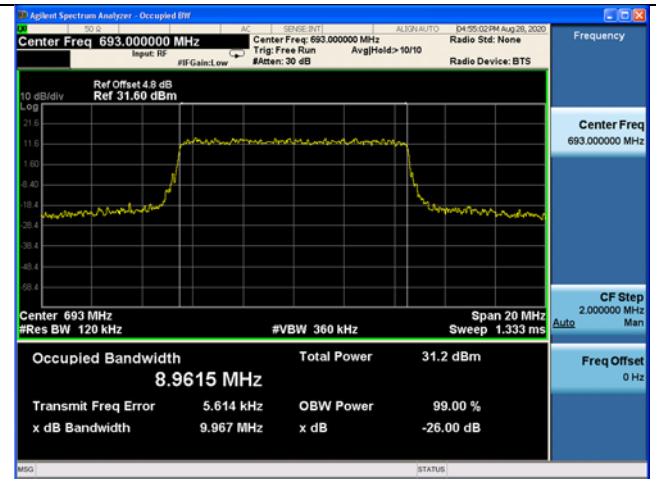


Fig.16

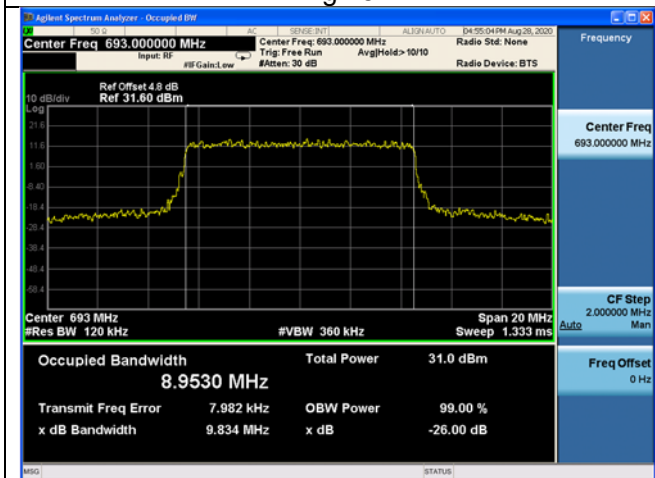


Fig.17

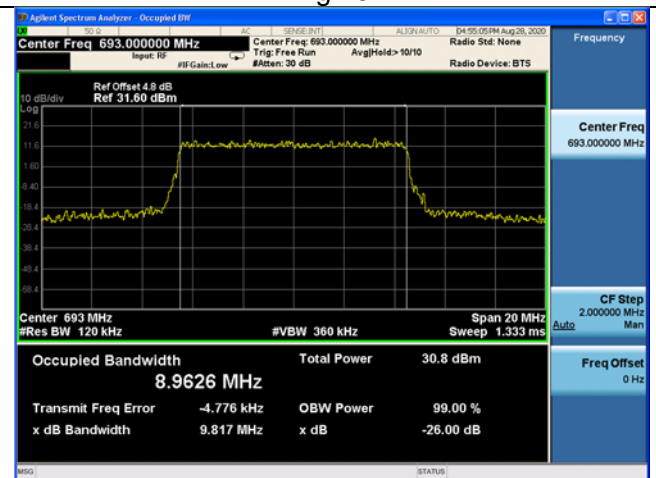


Fig.18

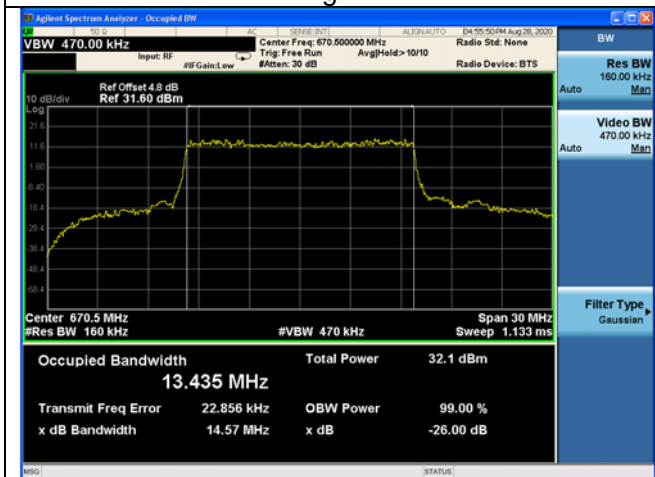


Fig.19

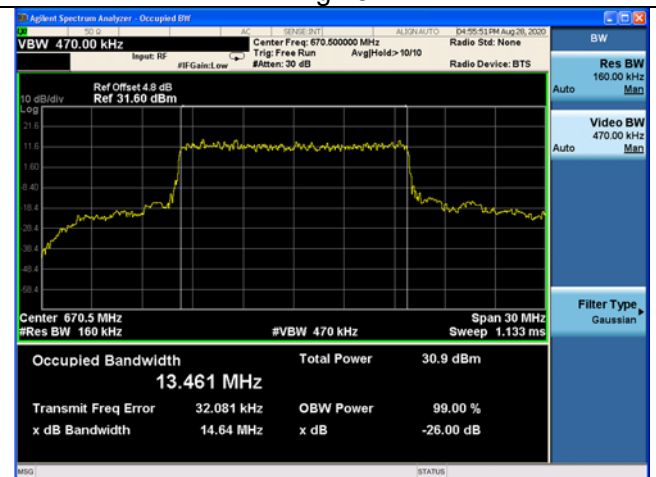


Fig.20

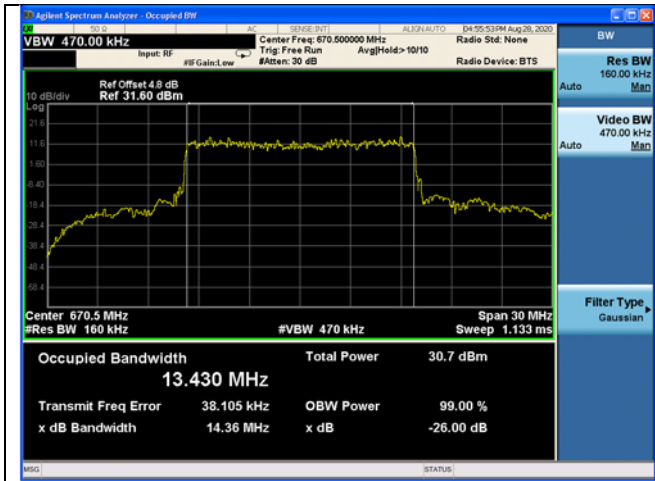


Fig.21

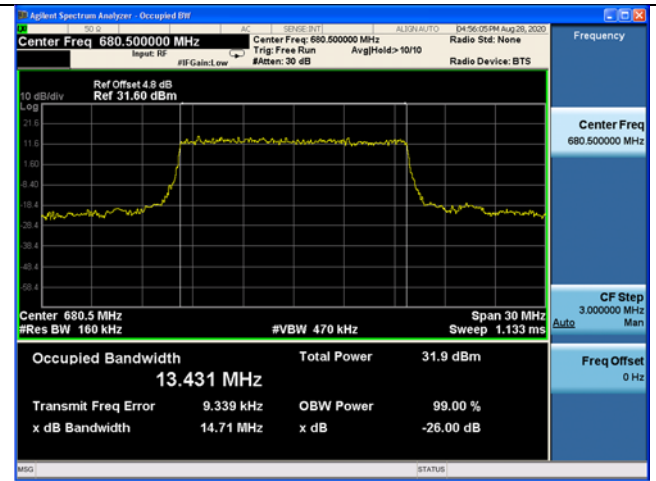


Fig.22

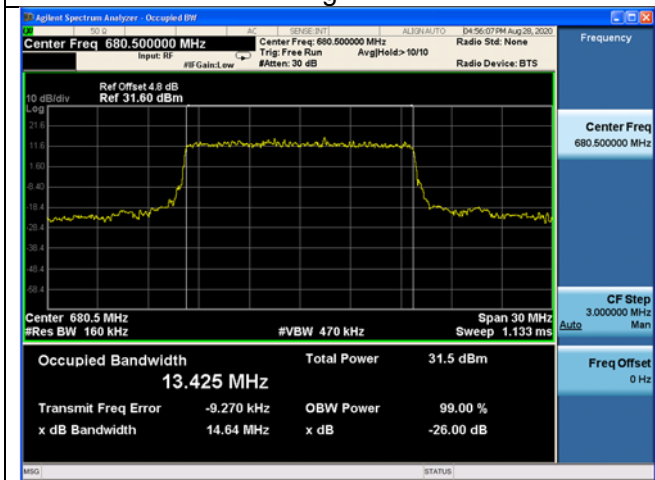


Fig.23

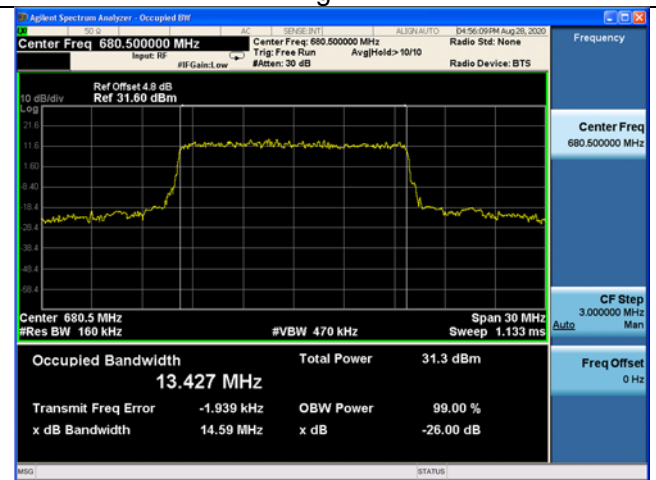


Fig.24

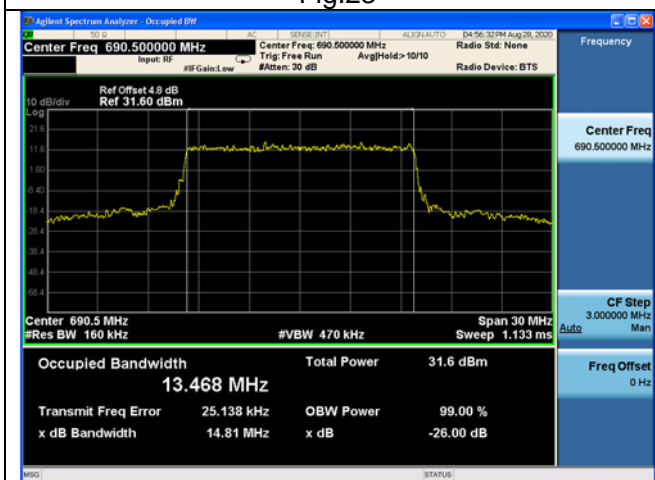


Fig.25

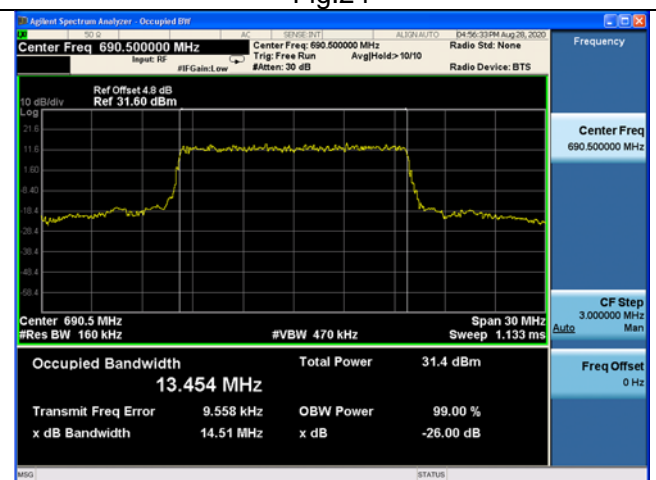


Fig.26

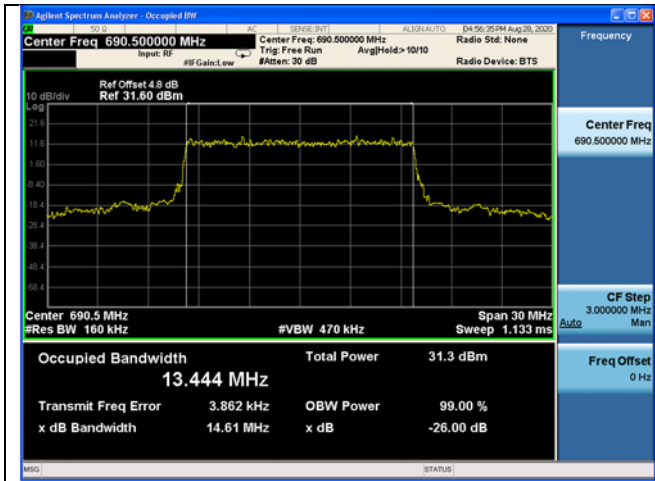


Fig.27

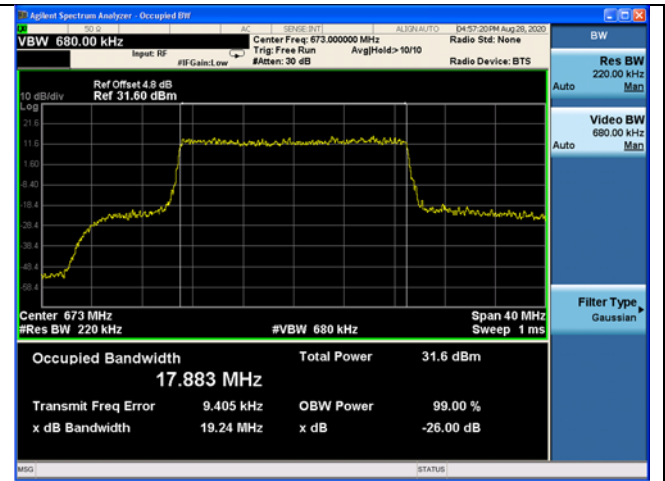


Fig.28

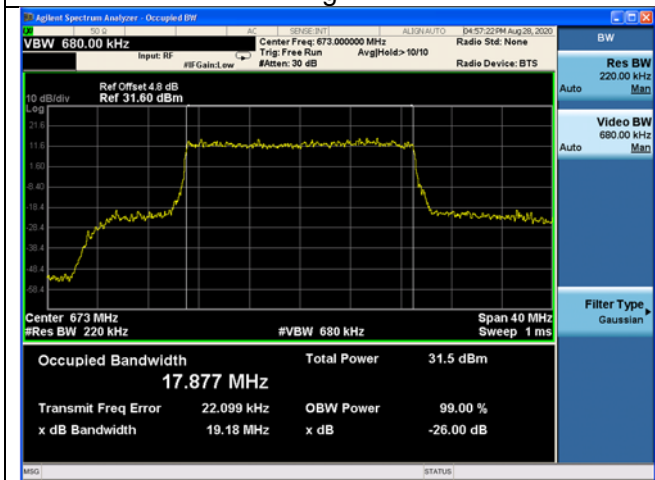


Fig.29

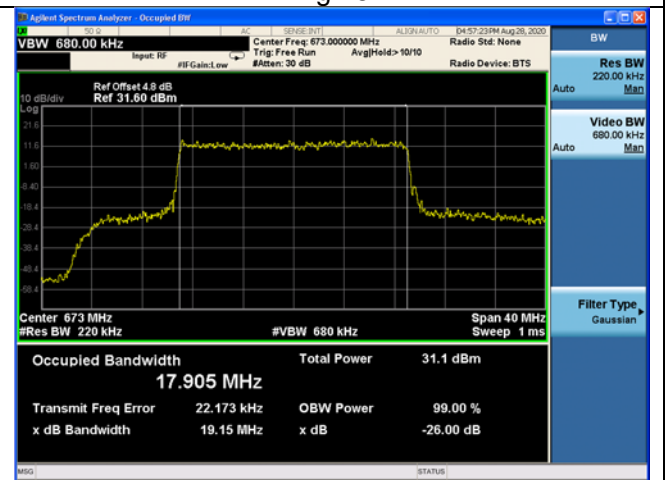


Fig.30

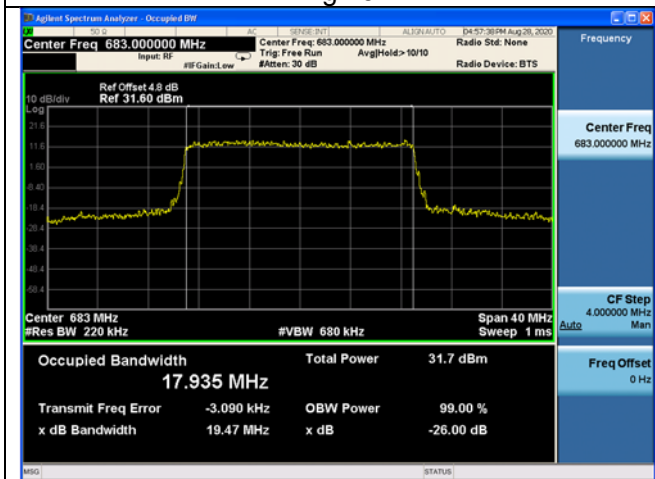


Fig.31

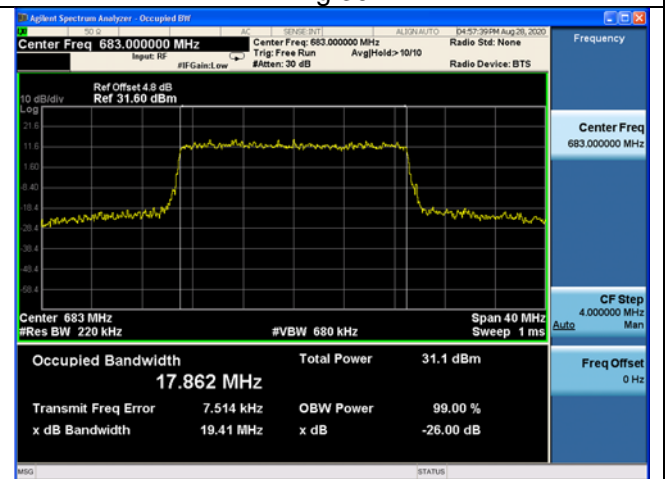


Fig.32

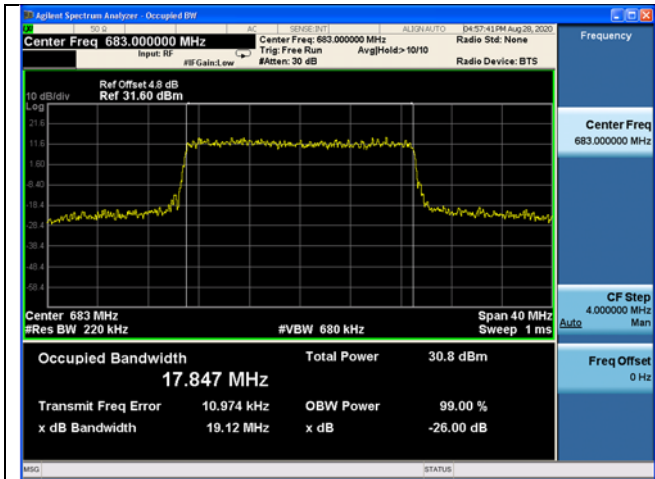


Fig.33

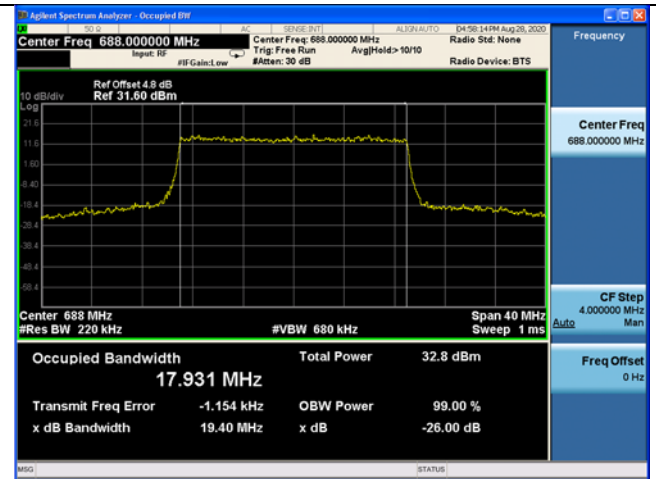


Fig.34

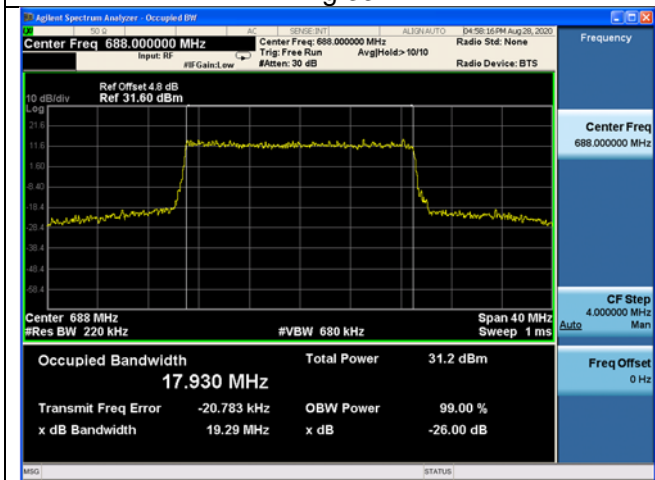


Fig.35

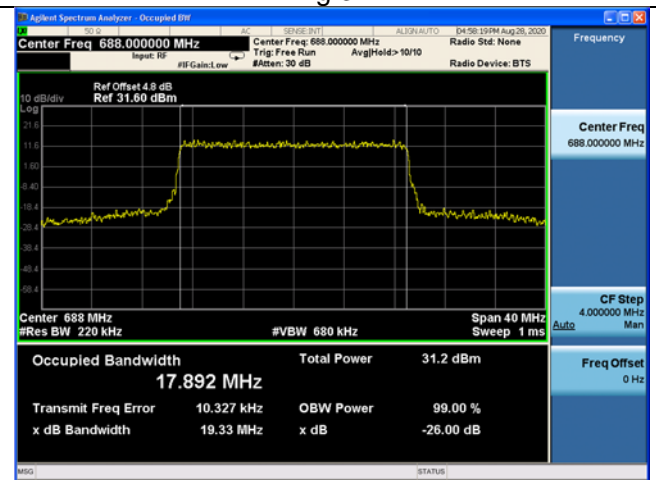
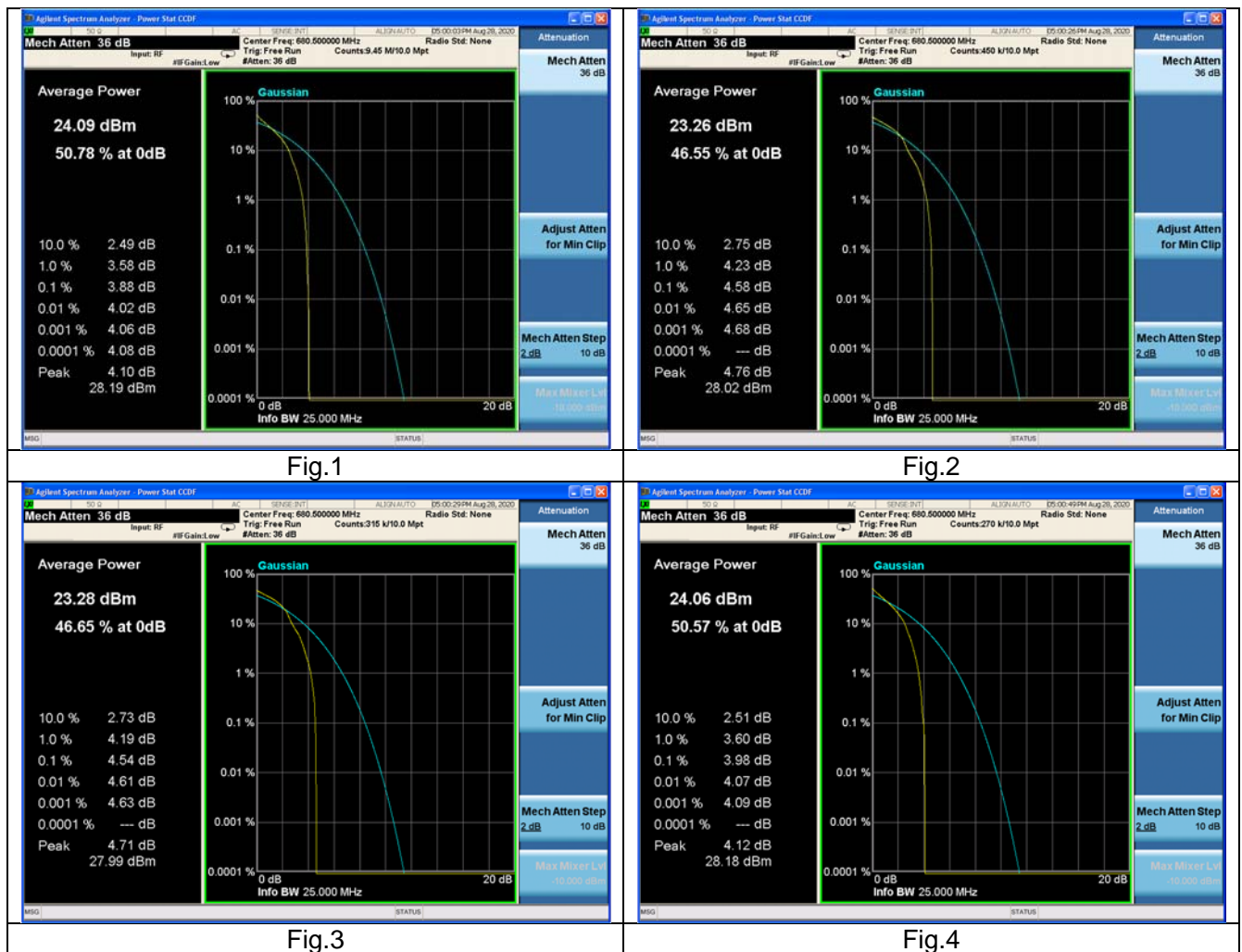


Fig.36

3 Peak-Average Ratio

| Band | Carrier frequency (MHz) | Channel | BW (MHz) | RB Size | RB Offset | QPSK | 16-QAM | 64-QAM |
|------|-------------------------|---------|----------|---------|-----------|--------|--------|--------|
| 71 | 680.5 | 133297 | 5 | 1 | 0 | Fig.1 | Fig.2 | Fig.3 |
| | | | 10 | 1 | 0 | Fig.4 | Fig.5 | Fig.6 |
| | | | 15 | 1 | 0 | Fig.7 | Fig.8 | Fig.9 |
| | 683 | 133322 | 20 | 1 | 0 | Fig.10 | Fig.11 | Fig.12 |



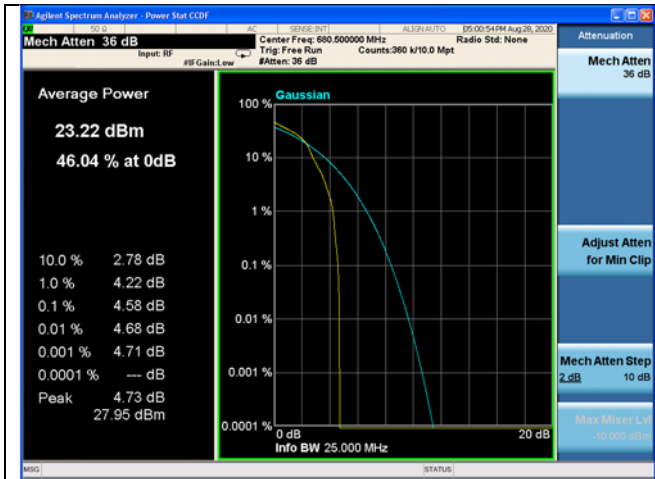


Fig.5

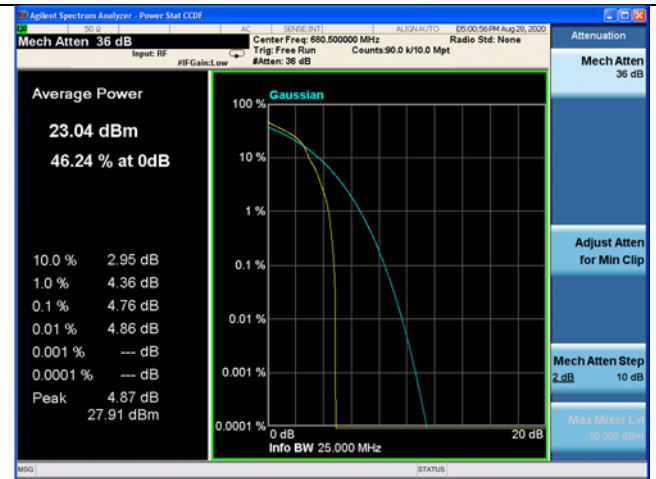


Fig.6

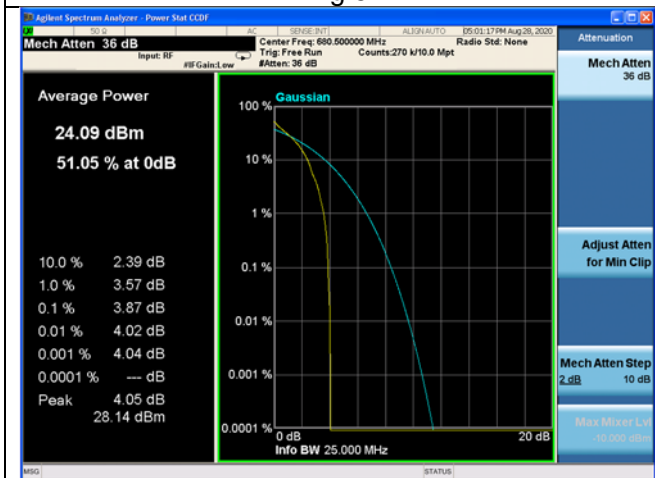


Fig.7

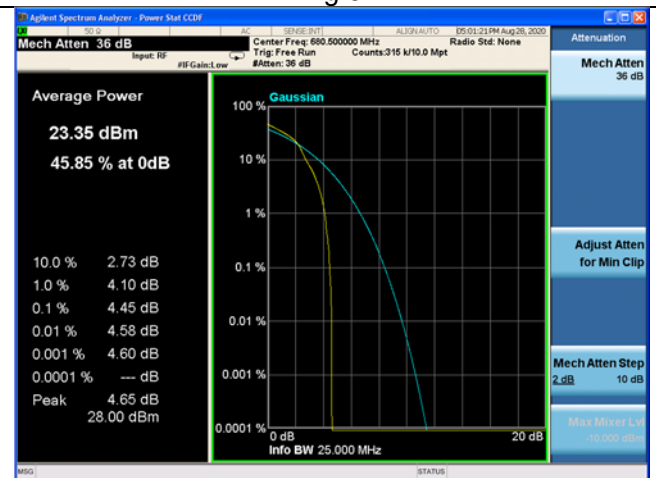


Fig.8

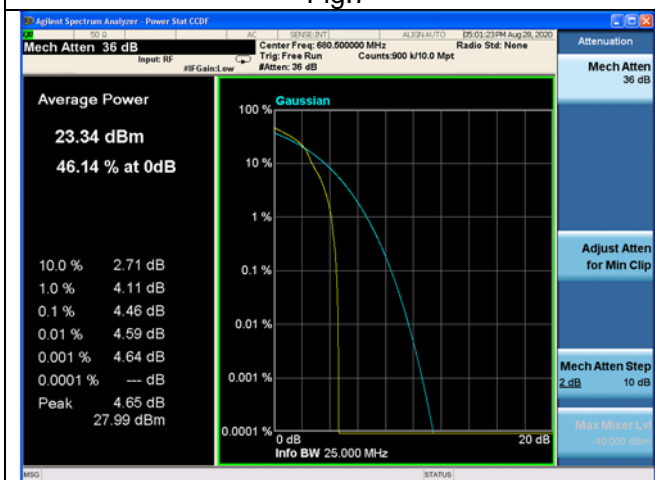


Fig.9

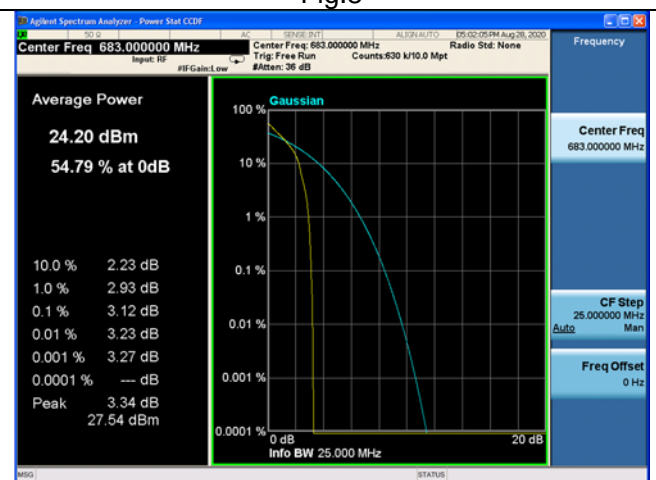


Fig.10

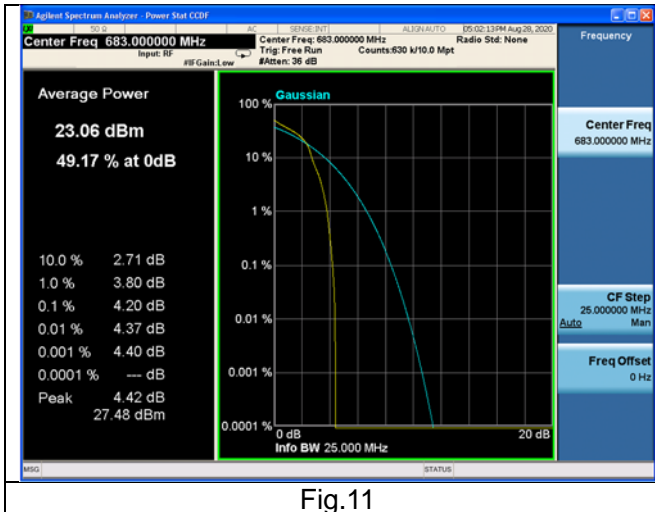


Fig.11

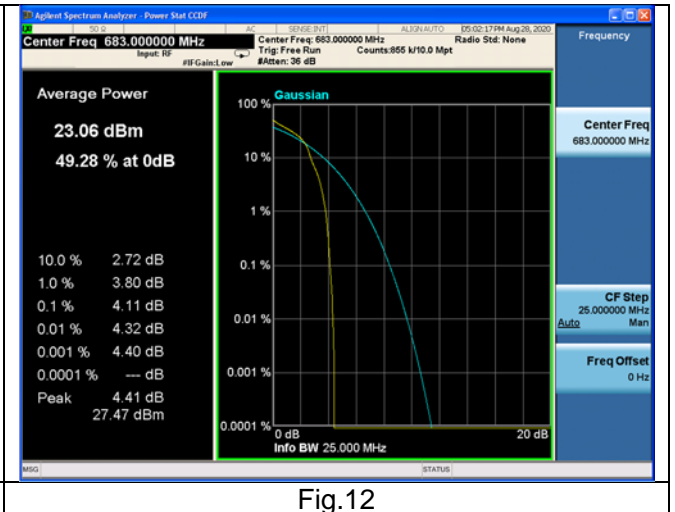


Fig.12

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 |

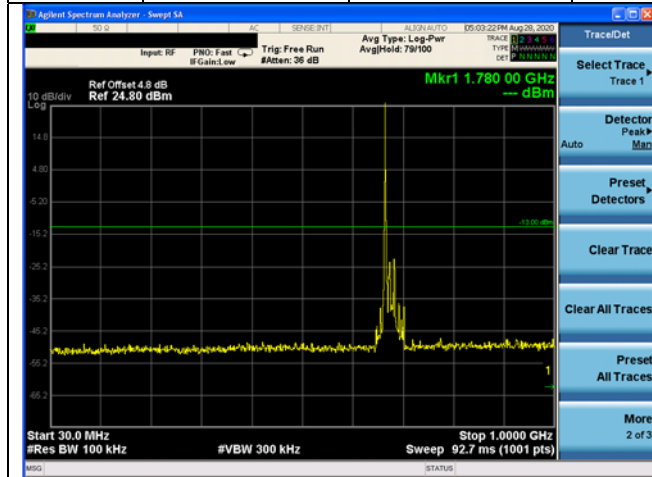


Fig.1

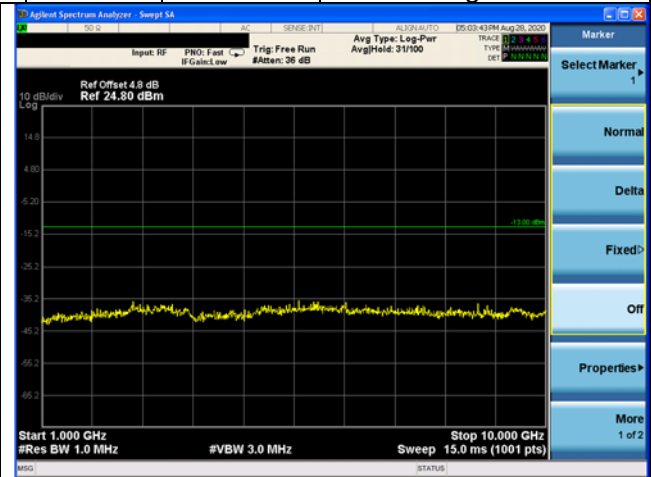


Fig.2

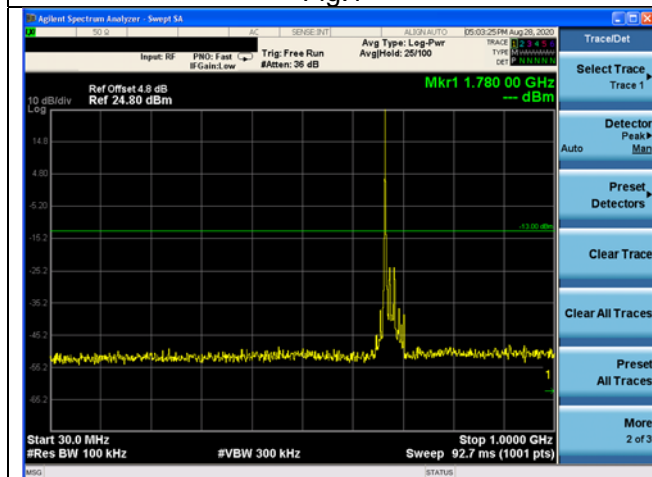


Fig3

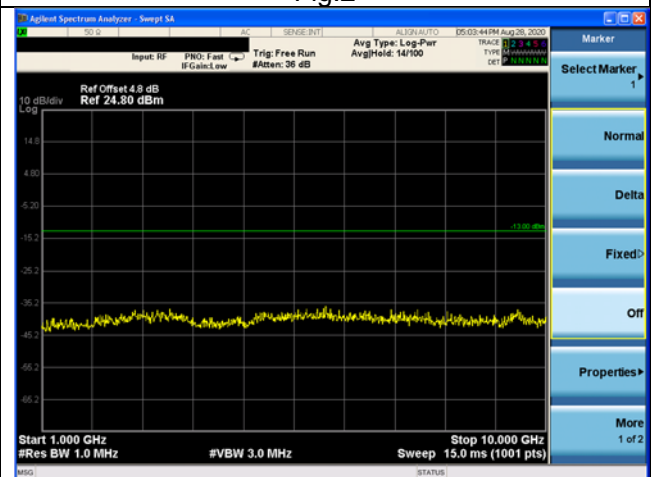


Fig4

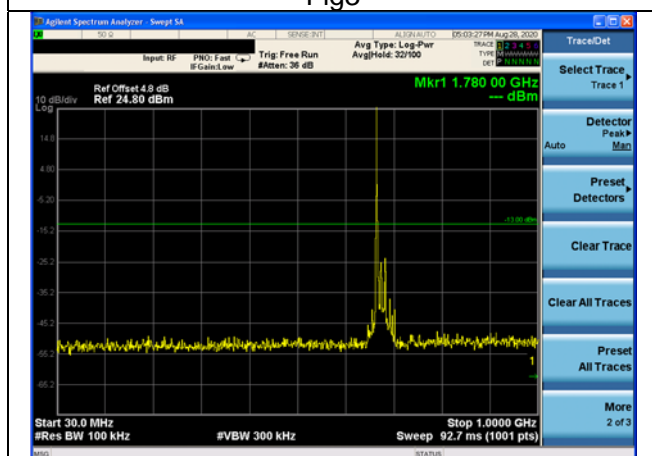


Fig5

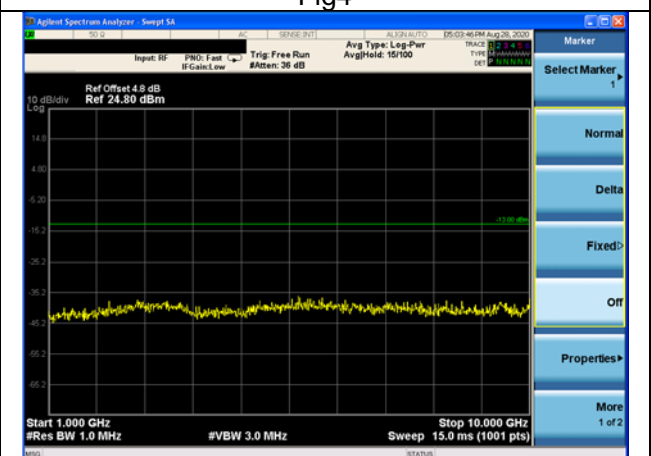


Fig6

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 |

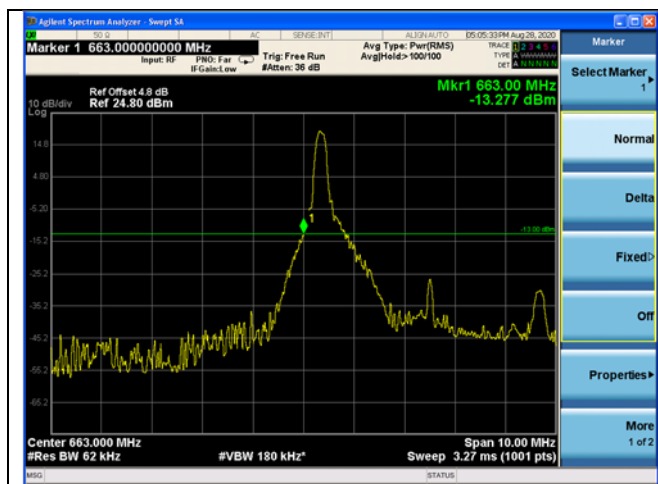


Fig.1

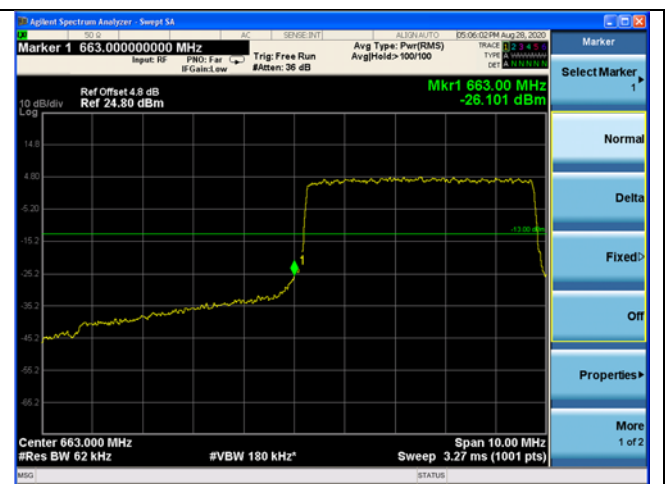


Fig.2

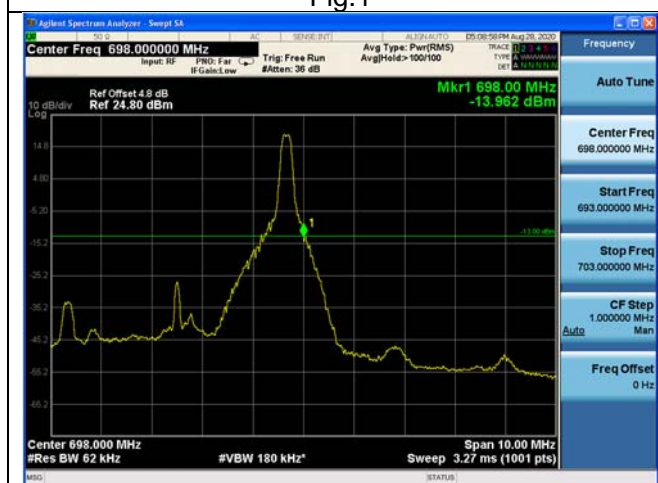


Fig.3



Fig.4

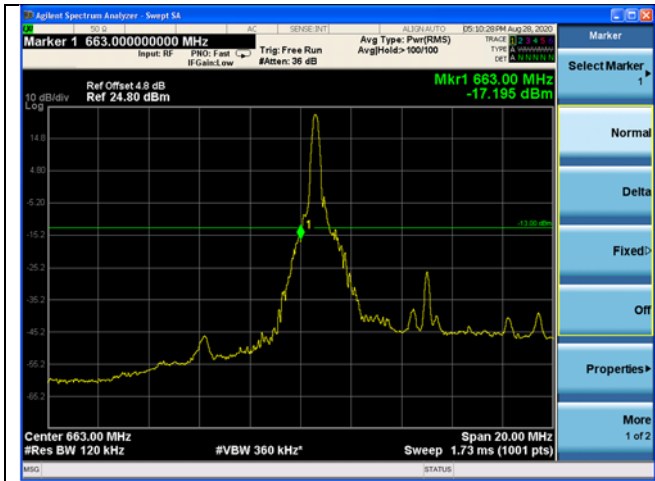


Fig.5



Fig.6

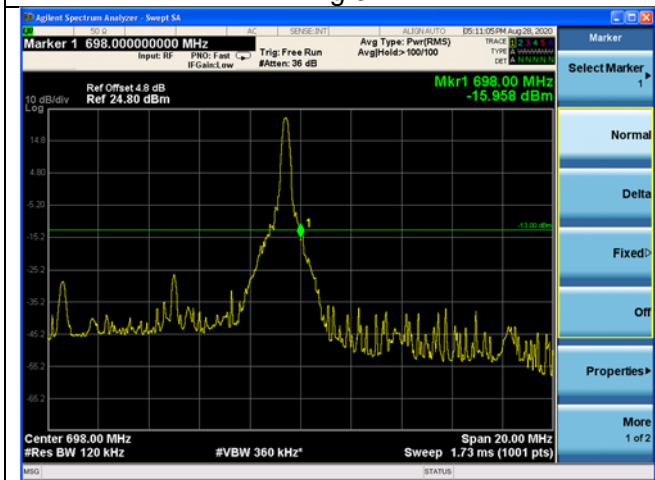


Fig.7



Fig.8

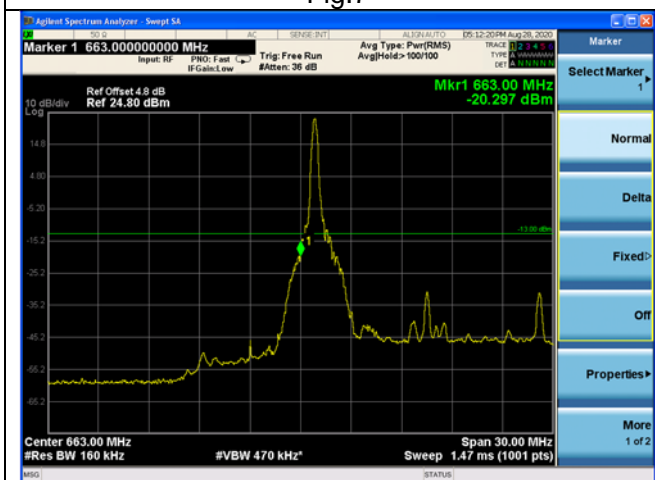


Fig.9

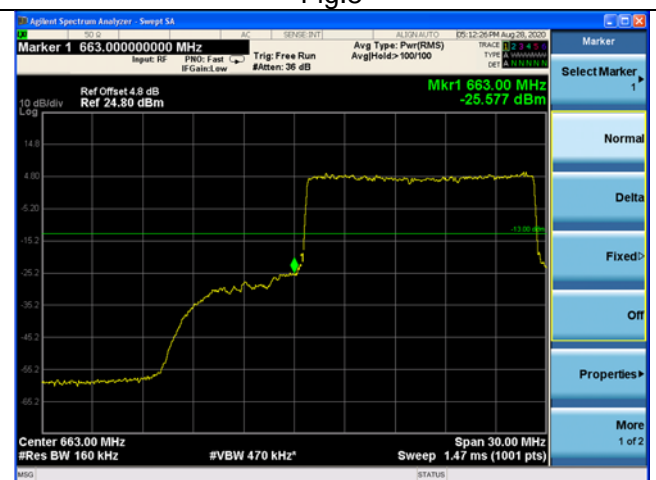


Fig.10

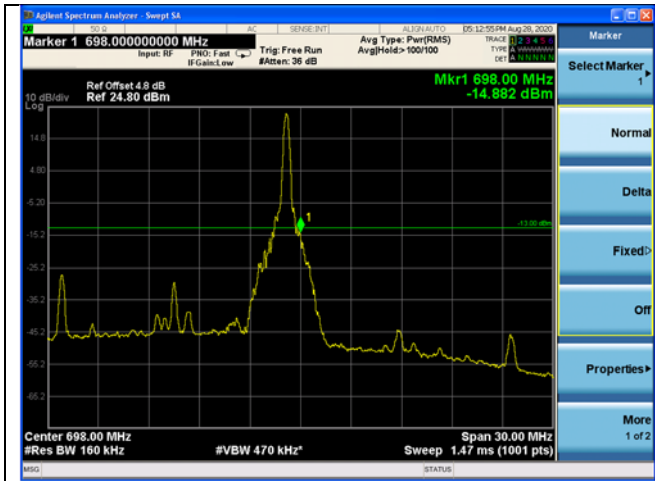


Fig.11



Fig.12

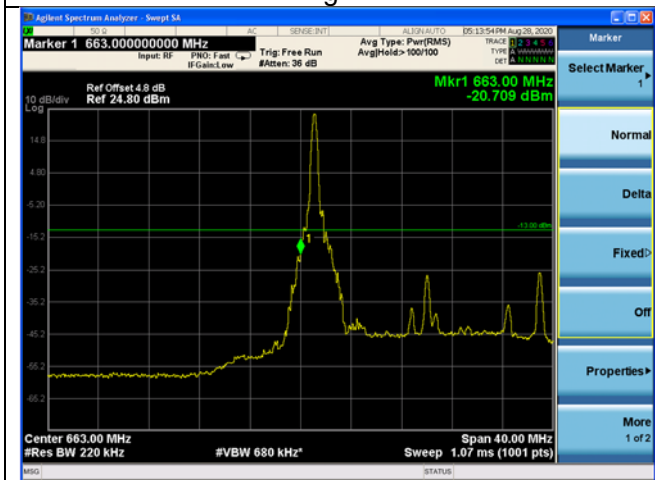


Fig.13

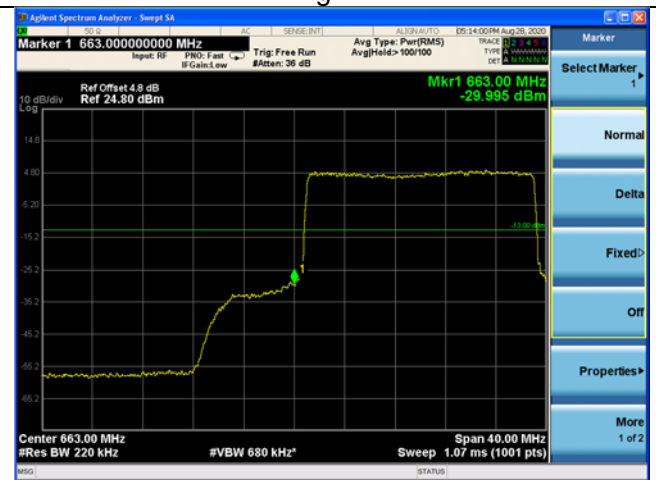


Fig.14

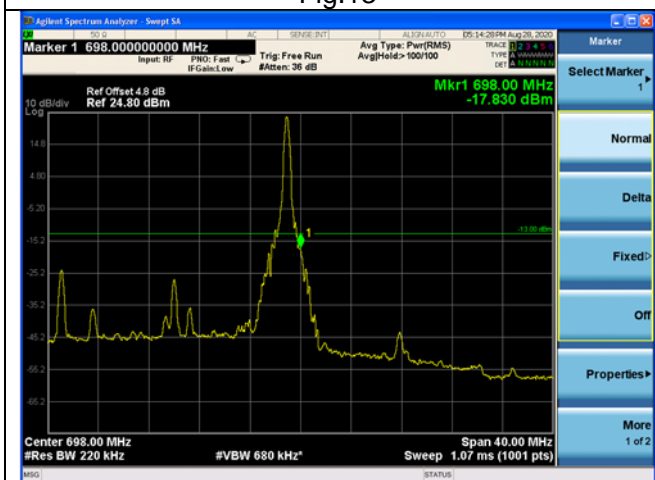


Fig.15

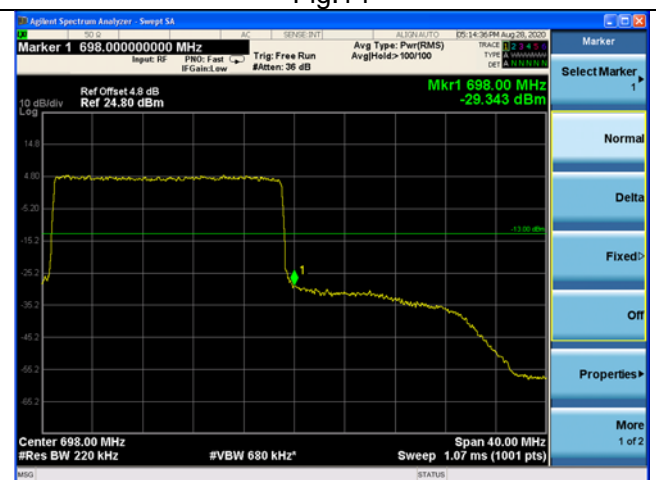


Fig.16

6 Frequency Stability

Test result:

| Temperature(°C) | Voltage | Test Result (ppm) Band71 Low Channel | | | |
|-----------------|---------|--------------------------------------|--------|--------|--------|
| | | 5M | 10M | 15M | 20M |
| -10 | NV | -0.090 | 0.098 | 0.083 | -0.052 |
| 0 | NV | 0.015 | -0.085 | 0.039 | 0.087 |
| +10 | NV | -0.055 | -0.031 | 0.041 | -0.096 |
| +20 | NV | 0.000 | 0.000 | 0.000 | 0.000 |
| +30 | NV | -0.015 | -0.054 | 0.028 | 0.027 |
| +40 | NV | 0.076 | 0.056 | 0.002 | 0.002 |
| +50 | NV | 0.074 | -0.081 | -0.040 | -0.058 |
| +55 | NV | 0.028 | -0.095 | -0.008 | -0.005 |
| +20 | LV | -0.094 | 0.067 | 0.017 | 0.032 |
| +20 | HV | -0.035 | 0.020 | 0.077 | 0.000 |

| Temperature(°C) | Voltage | Test Result (ppm) Band71 High Channel | | | |
|-----------------|---------|---------------------------------------|--------|--------|--------|
| | | 5M | 10M | 15M | 20M |
| -10 | NV | 0.040 | 0.082 | -0.059 | -0.038 |
| 0 | NV | 0.024 | 0.058 | 0.047 | -0.019 |
| +10 | NV | -0.066 | -0.065 | -0.050 | -0.059 |
| +20 | NV | 0.000 | 0.000 | 0.000 | 0.000 |
| +30 | NV | -0.039 | 0.053 | 0.055 | -0.006 |
| +40 | NV | -0.040 | -0.037 | -0.066 | -0.068 |
| +50 | NV | -0.022 | -0.032 | 0.048 | -0.072 |
| +55 | NV | 0.097 | 0.065 | -0.047 | -0.051 |
| +20 | LV | -0.042 | -0.022 | -0.044 | 0.080 |
| +20 | HV | 0.036 | 0.040 | 0.033 | -0.098 |