

## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 4G LTE WIFI ROUTER

Trade Mark: N/A

Test Model: FG8002AC

#### Environmental Conditions

|                    |            |
|--------------------|------------|
| Temperature:       | 23.4 ° C   |
| Relative Humidity: | 55.7%      |
| ATM Pressure:      | 100.0 kPa  |
| Test Engineer:     | Keven Wu   |
| Supervised by:     | Henry Wang |

## A.1 MAXIMUM CONDUCTED OUTPUT POWER

### Test Result

| Condition | Mode | Frequency (MHz) | Antenna | Maximum peak conducted output power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-------------------------------------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | 14.89                                     | 30          | Pass    |
| NVNT      | b    | 2437            | Ant1    | 14.72                                     | 30          | Pass    |
| NVNT      | b    | 2462            | Ant1    | 15.06                                     | 30          | Pass    |
| NVNT      | g    | 2412            | Ant1    | 18.70                                     | 30          | Pass    |
| NVNT      | g    | 2437            | Ant1    | 19.46                                     | 30          | Pass    |
| NVNT      | g    | 2462            | Ant1    | 18.50                                     | 30          | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 18.11                                     | 30          | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 19.64                                     | 30          | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 18.75                                     | 30          | Pass    |
| NVNT      | n40  | 2422            | Ant1    | 20.06                                     | 30          | Pass    |
| NVNT      | n40  | 2437            | Ant1    | 20.25                                     | 30          | Pass    |
| NVNT      | n40  | 2452            | Ant1    | 19.87                                     | 30          | Pass    |

| Condition | Mode | Frequency (MHz) | Antenna | Maximum peak conducted output power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-------------------------------------------|-------------|---------|
| NVNT      | b    | 2412            | Ant2    | 14.48                                     | 30          | Pass    |
| NVNT      | b    | 2437            | Ant2    | 15.37                                     | 30          | Pass    |
| NVNT      | b    | 2462            | Ant2    | 15.09                                     | 30          | Pass    |
| NVNT      | g    | 2412            | Ant2    | 16.73                                     | 30          | Pass    |
| NVNT      | g    | 2437            | Ant2    | 16.38                                     | 30          | Pass    |
| NVNT      | g    | 2462            | Ant2    | 15.65                                     | 30          | Pass    |
| NVNT      | n20  | 2412            | Ant2    | 14.97                                     | 30          | Pass    |
| NVNT      | n20  | 2437            | Ant2    | 16.24                                     | 30          | Pass    |
| NVNT      | n20  | 2462            | Ant2    | 16.48                                     | 30          | Pass    |
| NVNT      | n40  | 2422            | Ant2    | 16.50                                     | 30          | Pass    |
| NVNT      | n40  | 2437            | Ant2    | 16.71                                     | 30          | Pass    |
| NVNT      | n40  | 2452            | Ant2    | 17.32                                     | 30          | Pass    |

### MIMO

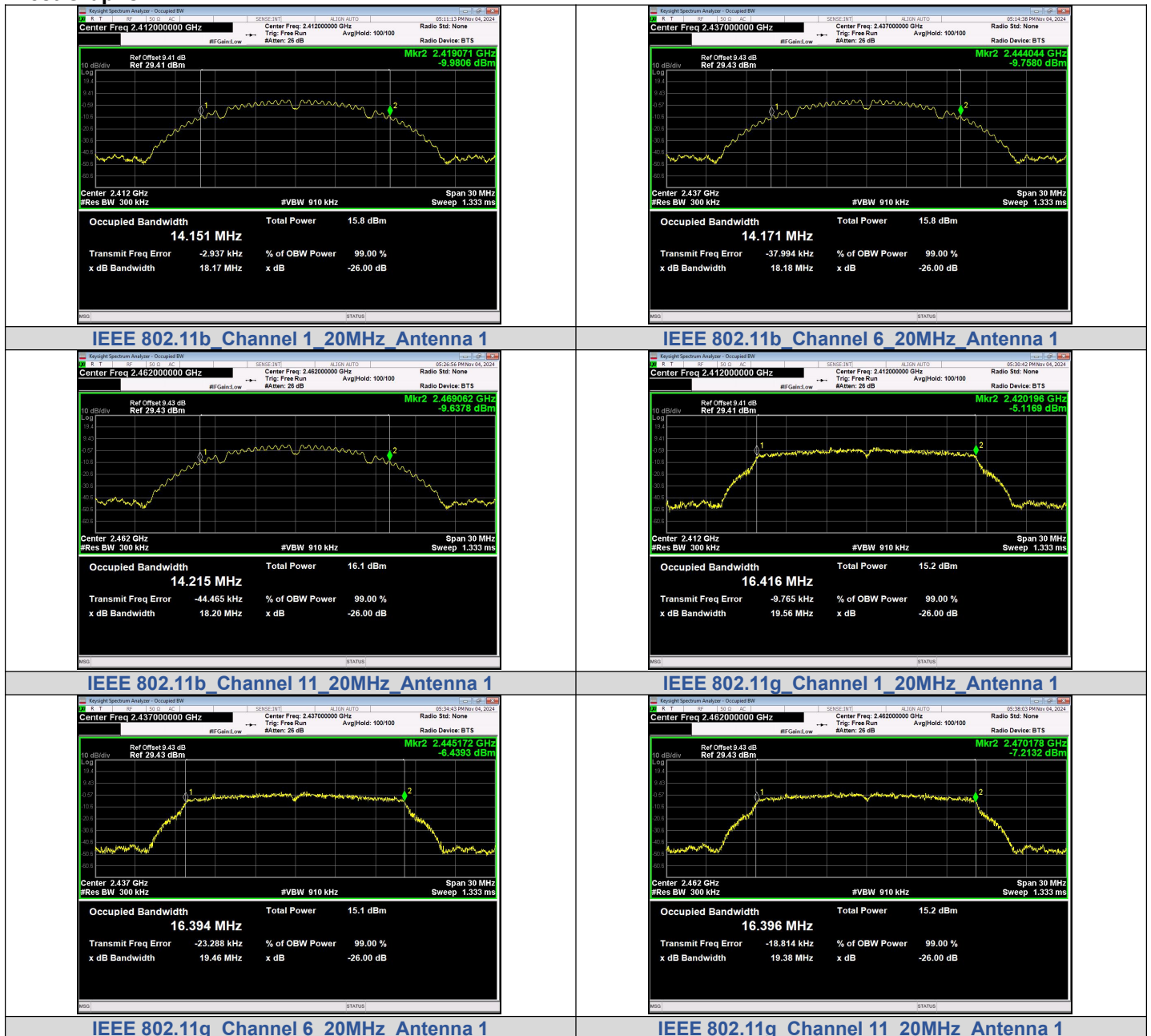
| Condition | Mode | Frequency (MHz) | Total Power (dBm) |       |           | Limit (dBm) | Verdict |
|-----------|------|-----------------|-------------------|-------|-----------|-------------|---------|
|           |      |                 | Ant1              | Ant2  | Ant1+Ant2 |             |         |
| NVNT      | n20  | 2412            | 16.14             | 12.68 | 19.83     | 28.06       | Pass    |
| NVNT      | n20  | 2437            | 16.06             | 12.66 | 21.27     | 28.06       | Pass    |
| NVNT      | n20  | 2462            | 16.18             | 12.79 | 20.77     | 28.06       | Pass    |
| NVNT      | n40  | 2422            | 15.75             | 12.36 | 21.65     | 28.06       | Pass    |
| NVNT      | n40  | 2437            | 15.78             | 12.24 | 21.84     | 28.06       | Pass    |
| NVNT      | n40  | 2452            | 15.90             | 12.13 | 21.79     | 28.06       | Pass    |

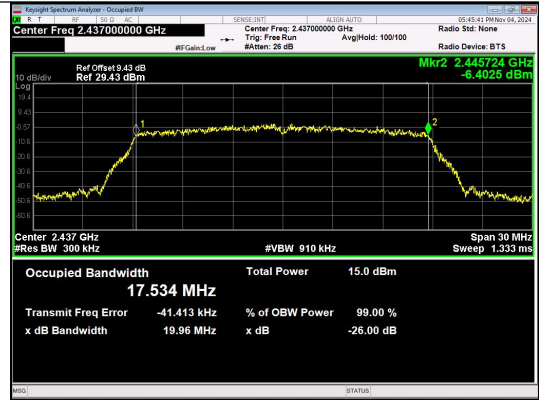
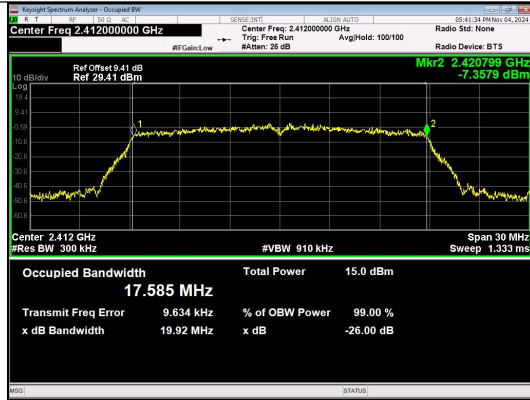
## A.2 99% BANDWIDTH

### Test Result

| Mode            | Channel | Ant. | Center Frequency (MHz) | 99% BW (MHz) |
|-----------------|---------|------|------------------------|--------------|
| IEEE 802.11b    | 1       | 1    | 2412                   | 14.151       |
|                 | 6       |      | 2437                   | 14.171       |
|                 | 11      |      | 2462                   | 14.215       |
| IEEE 802.11g    | 1       |      | 2412                   | 16.416       |
|                 | 6       |      | 2437                   | 16.394       |
|                 | 11      |      | 2462                   | 16.396       |
| IEEE 802.11n_20 | 1       |      | 2412                   | 17.585       |
|                 | 6       |      | 2437                   | 17.534       |
|                 | 11      |      | 2462                   | 17.567       |
| IEEE 802.11n_40 | 3       |      | 2422                   | 35.875       |
|                 | 6       |      | 2437                   | 35.792       |
|                 | 9       |      | 2452                   | 35.905       |

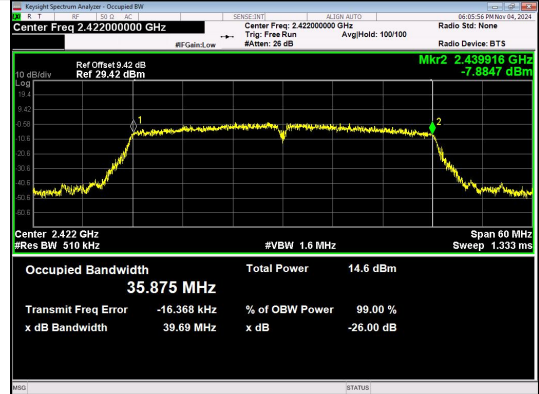
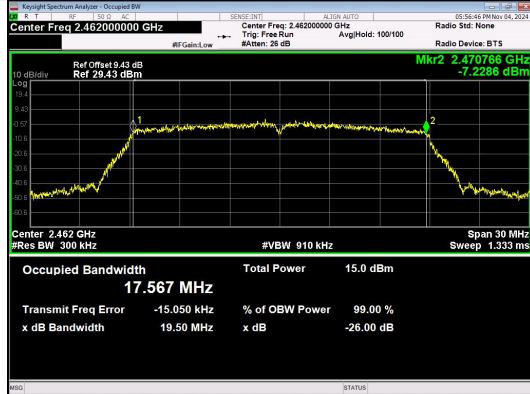
### Test Graphs





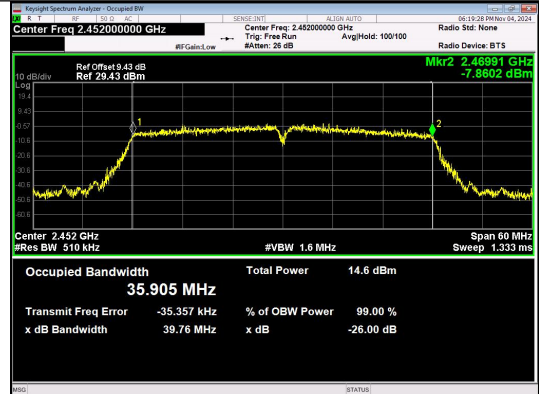
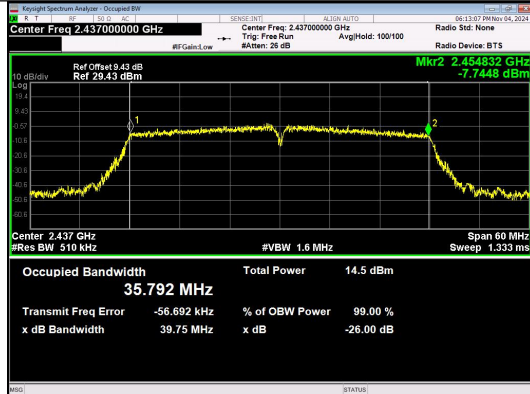
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 1

IEEE 802.11n\_Channel 6\_20MHz\_Antenna 1



IEEE 802.11n\_Channel 11\_20MHz\_Antenna 1

IEEE 802.11n\_Channel 3\_40MHz\_Antenna 1

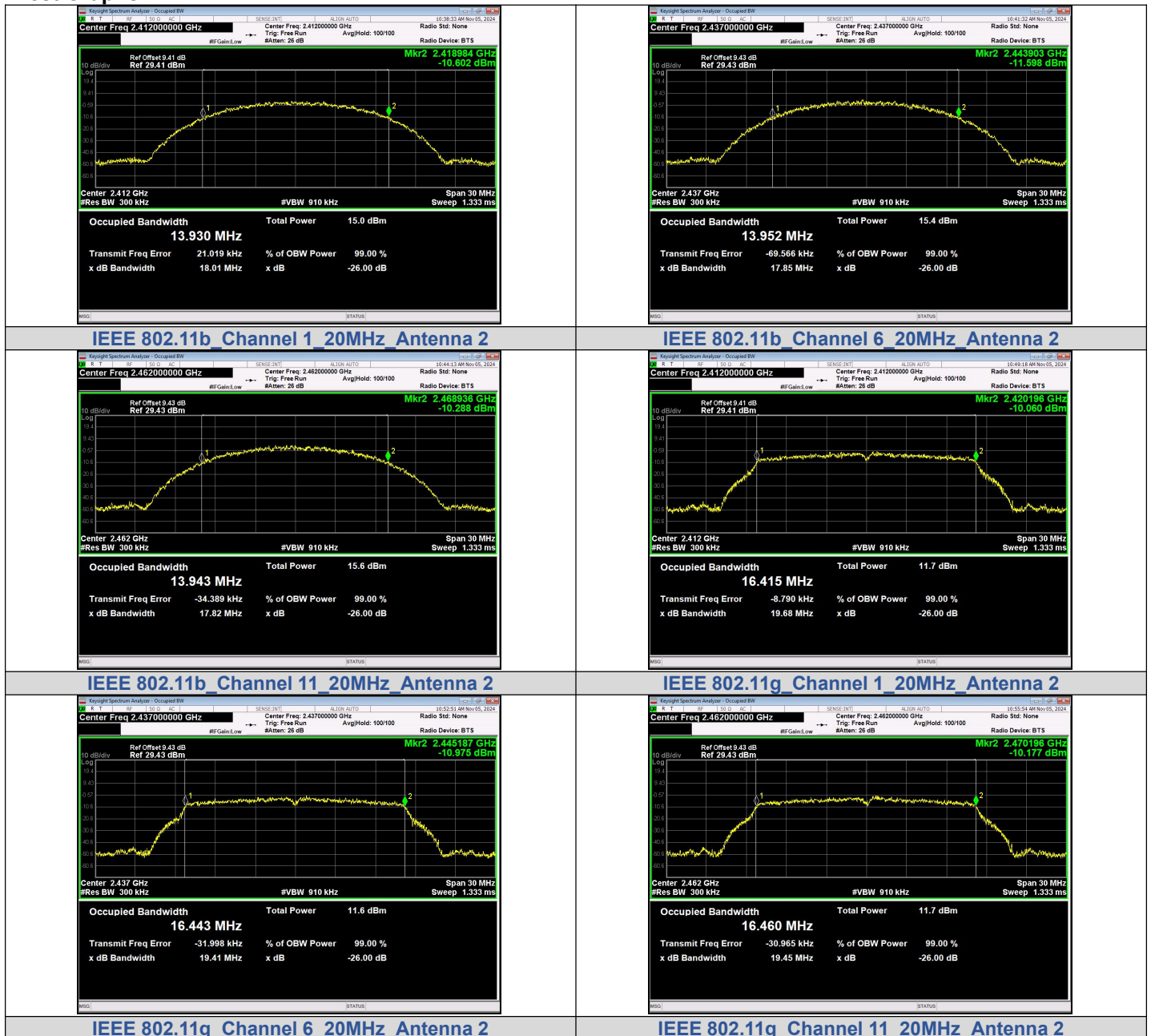


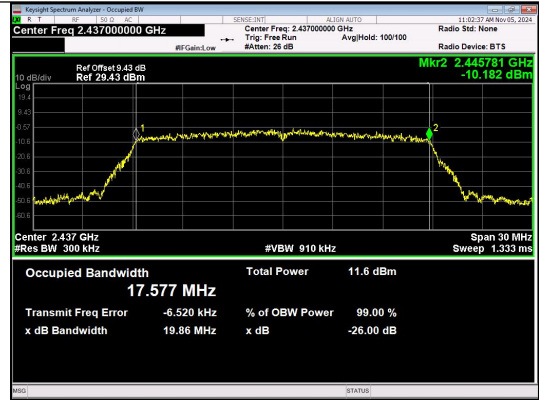
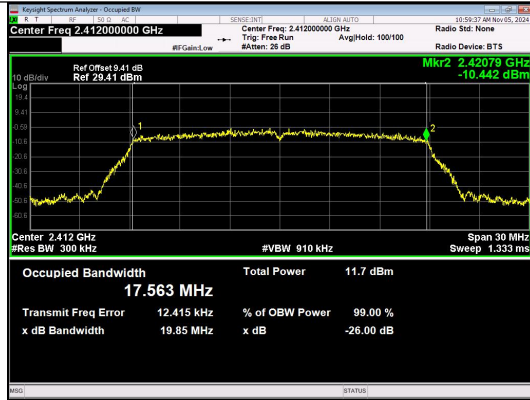
IEEE 802.11n\_Channel 6\_40MHz\_Antenna 1

IEEE 802.11n\_Channel 9\_40MHz\_Antenna 1

| Mode            | Channel | Ant. | Center Frequency (MHz) | 99% BW (MHz) |
|-----------------|---------|------|------------------------|--------------|
| IEEE 802.11b    | 1       | 2    | 2412                   | 13.930       |
|                 | 6       |      | 2437                   | 13.952       |
|                 | 11      |      | 2462                   | 13.943       |
| IEEE 802.11g    | 1       |      | 2412                   | 16.415       |
|                 | 6       |      | 2437                   | 16.443       |
|                 | 11      |      | 2462                   | 16.460       |
| IEEE 802.11n_20 | 1       |      | 2412                   | 17.563       |
|                 | 6       |      | 2437                   | 17.577       |
|                 | 11      |      | 2462                   | 17.563       |
| IEEE 802.11n_40 | 3       |      | 2422                   | 35.913       |
|                 | 6       |      | 2437                   | 35.884       |
|                 | 9       |      | 2452                   | 35.835       |

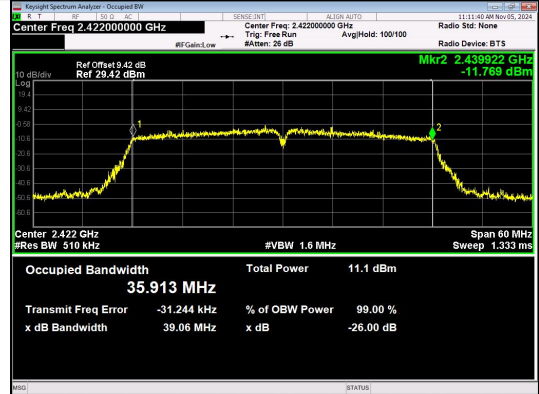
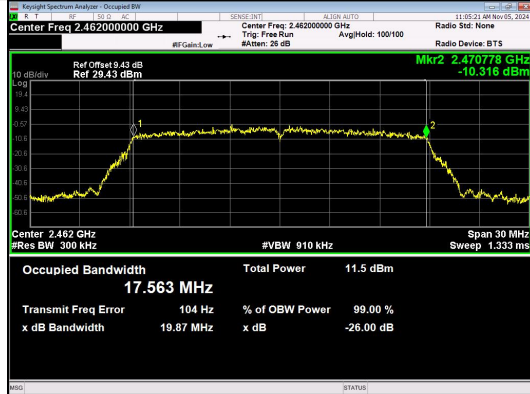
## Test Graphs





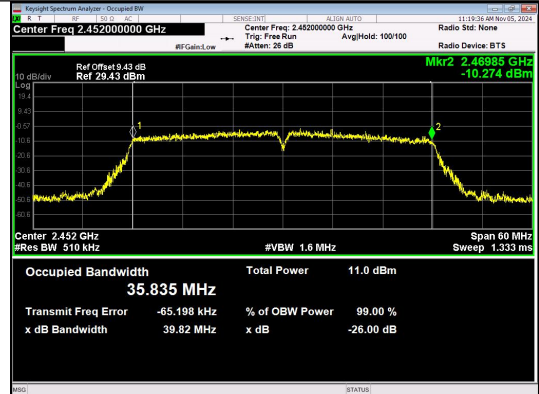
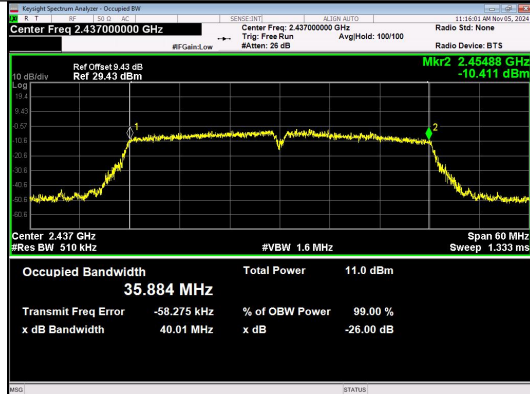
IEEE 802.11n\_Channel 1\_20MHz\_Antenna 2

IEEE 802.11n\_Channel 6\_20MHz\_Antenna 2



IEEE 802.11n\_Channel 11\_20MHz\_Antenna 2

IEEE 802.11n\_Channel 3\_40MHz\_Antenna 2



IEEE 802.11n\_Channel 6\_40MHz\_Antenna 2

IEEE 802.11n\_Channel 9\_40MHz\_Antenna 2

## A.3 6DB BANDWIDTH

### Test Result

| Mode            | Channel | Ant. | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Result |
|-----------------|---------|------|------------------------|----------------------|-------------|--------|
| IEEE 802.11b    | 1       | 1    | 2412                   | 10.00                | ≥0.5        | PASS   |
|                 | 6       |      | 2437                   | 9.089                |             | PASS   |
|                 | 11      |      | 2462                   | 9.562                |             | PASS   |
| IEEE 802.11g    | 1       |      | 2412                   | 15.10                |             | PASS   |
|                 | 6       |      | 2437                   | 15.08                |             | PASS   |
|                 | 11      |      | 2462                   | 15.11                |             | PASS   |
| IEEE 802.11n_20 | 1       |      | 2412                   | 15.10                |             | PASS   |
|                 | 6       |      | 2437                   | 15.11                |             | PASS   |
|                 | 11      |      | 2462                   | 15.41                |             | PASS   |
| IEEE 802.11n_40 | 3       |      | 2422                   | 35.08                |             | PASS   |
|                 | 6       |      | 2437                   | 35.08                |             | PASS   |
|                 | 9       |      | 2452                   | 35.08                |             | PASS   |

### Test Graphs

