

# Appendix

## BLE Test Data

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## Conducted Test Data

### Conducted Output Power

#### Test Result

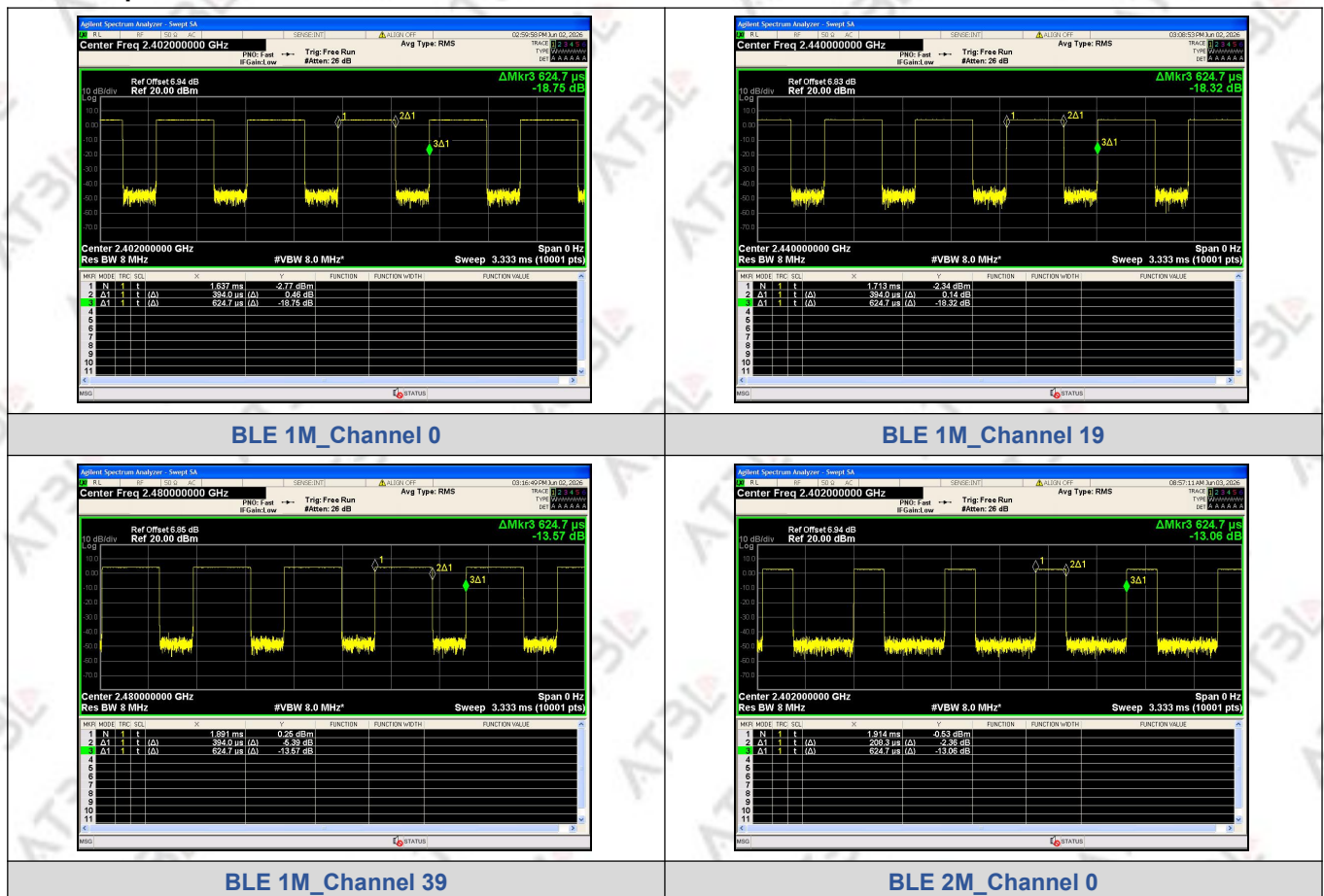
| Mode           | Channel | Peak Output Power (dBm) | Peak Output Power (mW) | Limit (dBm) | Verdict |
|----------------|---------|-------------------------|------------------------|-------------|---------|
| BLE 1M         | 0       | 3.777                   | 2.39                   | ≤30         | PASS    |
|                | 19      | 4.072                   | 2.55                   | ≤30         | PASS    |
|                | 39      | 4.291                   | 2.69                   | ≤30         | PASS    |
| BLE 2M         | 0       | 2.987                   | 1.99                   | ≤30         | PASS    |
|                | 19      | 3.177                   | 2.08                   | ≤30         | PASS    |
|                | 39      | 3.527                   | 2.25                   | ≤30         | PASS    |
| LE Coded (S=2) | 0       | 4.824                   | 3.04                   | ≤30         | PASS    |
|                | 19      | 4.271                   | 2.67                   | ≤30         | PASS    |
|                | 39      | 5.875                   | 3.87                   | ≤30         | PASS    |
| LE Coded (S=8) | 0       | 4.860                   | 3.06                   | ≤30         | PASS    |
|                | 19      | 4.530                   | 2.84                   | ≤30         | PASS    |
|                | 39      | 5.613                   | 3.64                   | ≤30         | PASS    |

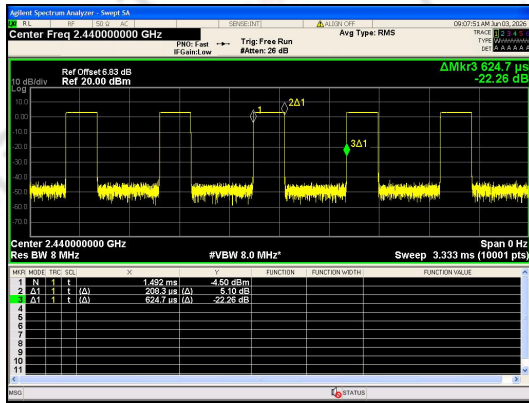
## Duty Cycle

### Test Result

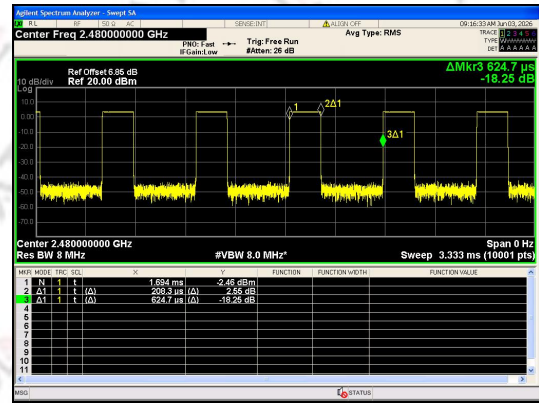
| Mode           | Channel | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T    |
|----------------|---------|--------------|-------------|----------------|---------------------|------------------------|--------|
| BLE 1M         | 0       | 0.3940       | 0.625       | 63.07          | 0.6307              | 2.0018                 | 2.5381 |
|                | 19      | 0.3940       | 0.625       | 63.07          | 0.6307              | 2.0018                 | 2.5381 |
|                | 39      | 0.3940       | 0.625       | 63.07          | 0.6307              | 2.0018                 | 2.5381 |
| BLE 2M         | 0       | 0.2083       | 0.625       | 33.35          | 0.3335              | 4.7690                 | 4.8008 |
|                | 19      | 0.2083       | 0.625       | 33.35          | 0.3335              | 4.7690                 | 4.8008 |
|                | 39      | 0.2083       | 0.625       | 33.35          | 0.3335              | 4.7690                 | 4.8008 |
| LE Coded (S=2) | 0       | 1.0720       | 1.874       | 57.22          | 0.5722              | 2.4245                 | 0.9328 |
|                | 19      | 1.0721       | 1.873       | 57.23          | 0.5723              | 2.4238                 | 0.9327 |
|                | 39      | 1.0720       | 1.874       | 57.22          | 0.5722              | 2.4245                 | 0.9328 |
| LE Coded (S=8) | 0       | 3.1061       | 3.749       | 82.85          | 0.8285              | 0.8171                 | 0.3219 |
|                | 19      | 1.0720       | 1.874       | 57.19          | 0.5719              | 2.4268                 | 0.9328 |
|                | 39      | 3.1061       | 3.749       | 82.85          | 0.8285              | 0.8171                 | 0.3219 |

### Test Graphs

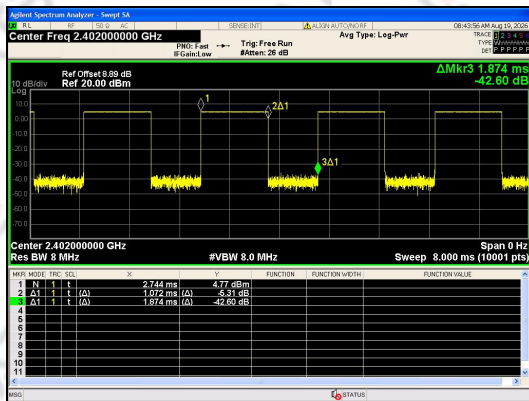




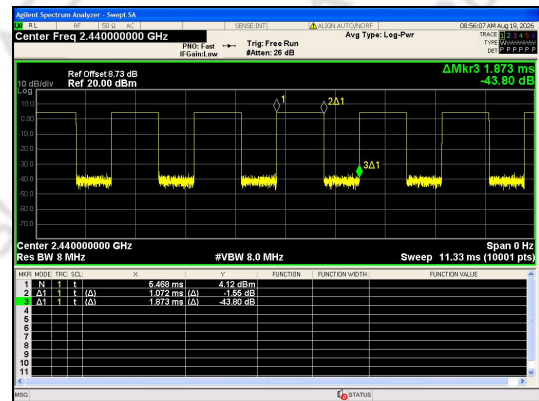
BLE 2M\_Channel 19



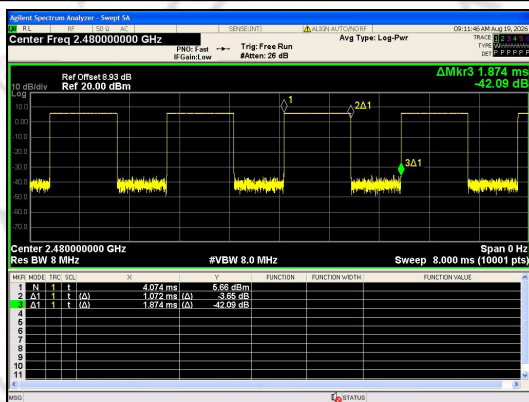
BLE 2M\_Channel 39



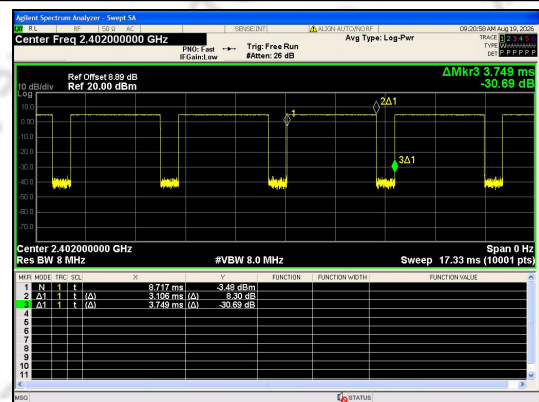
LE Coded (S=2)\_Channel 0



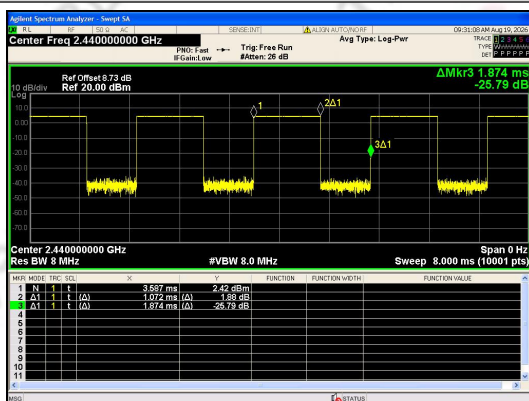
LE Coded (S=2)\_Channel 19



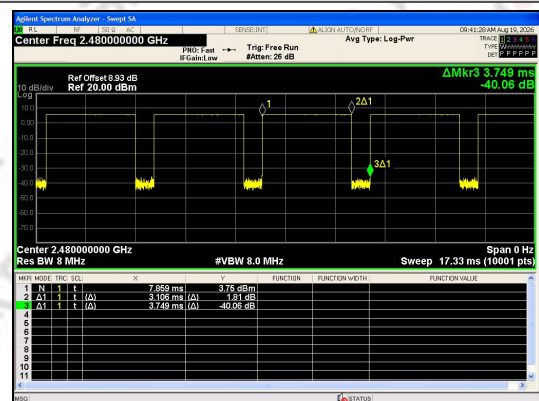
LE Coded (S=2)\_Channel 39



LE Coded (S=8)\_Channel 0



LE Coded (S=8)\_Channel 19



LE Coded (S=8)\_Channel 39

## 6dB Bandwidth

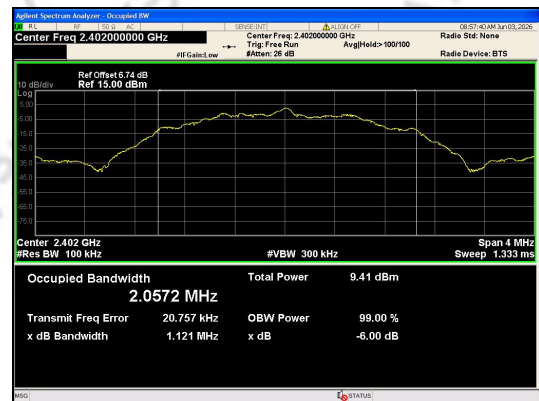
### Test Result

| Mode           | Channel | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|----------------|---------|------------------------|----------------------|-------------|---------|
| BLE 1M         | 0       | 2402                   | 0.6553               | ≥0.5        | PASS    |
|                | 19      | 2440                   | 0.6514               |             | PASS    |
|                | 39      | 2480                   | 0.6577               |             | PASS    |
| BLE 2M         | 0       | 2402                   | 1.121                |             | PASS    |
|                | 19      | 2440                   | 1.115                |             | PASS    |
|                | 39      | 2480                   | 1.115                |             | PASS    |
| LE Coded (S=2) | 0       | 2402                   | 0.6587               |             | PASS    |
|                | 19      | 2440                   | 0.6540               |             | PASS    |
|                | 39      | 2480                   | 0.6604               |             | PASS    |
| LE Coded (S=8) | 0       | 2402                   | 0.5949               |             | PASS    |
|                | 19      | 2440                   | 0.6557               |             | PASS    |
|                | 39      | 2480                   | 0.5975               |             | PASS    |

### Test Graphs



BLE 1M\_Channel 0



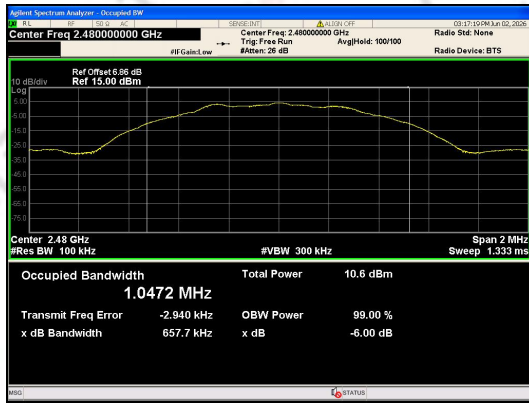
BLE 2M\_Channel 0



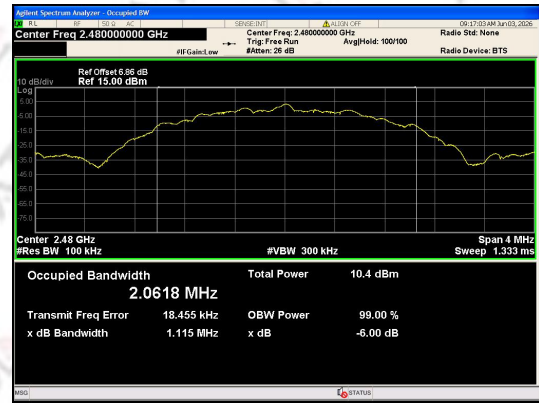
BLE 1M\_Channel 19



BLE 2M\_Channel 19



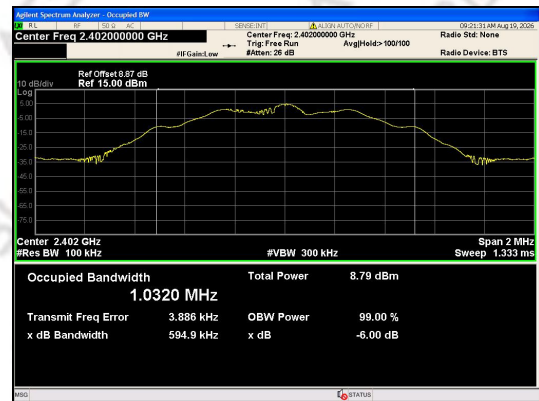
BLE 1M\_Channel 39



BLE 2M\_Channel 39



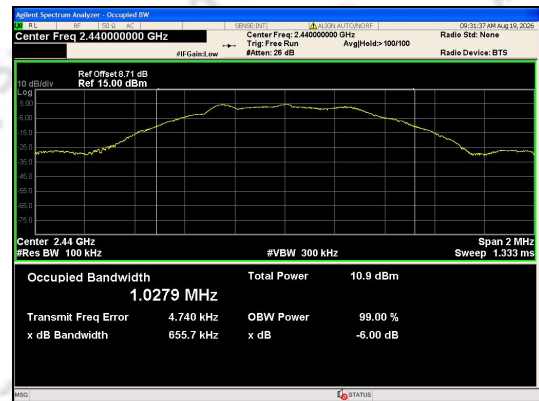
LE Coded (S=2)\_Channel 0



LE Coded (S=8)\_Channel 0



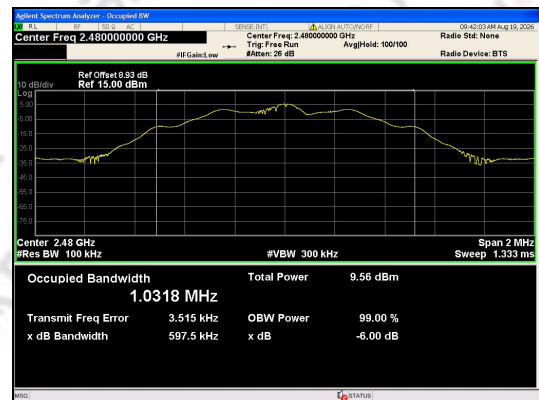
LE Coded (S=2)\_Channel 19



LE Coded (S=8)\_Channel 19



LE Coded (S=2)\_Channel 39



LE Coded (S=8)\_Channel 39

## 99% Bandwidth

### Test Result

| Mode           | Channel | Center Frequency (MHz) | 99% BW (MHz) |
|----------------|---------|------------------------|--------------|
| BLE 1M         | 0       | 2402                   | 1.03         |
| BLE 1M         | 19      | 2440                   | 1.04         |
| BLE 1M         | 39      | 2480                   | 1.04         |
| BLE 2M         | 0       | 2402                   | 2.04         |
| BLE 2M         | 19      | 2440                   | 2.05         |
| BLE 2M         | 39      | 2480                   | 2.04         |
| LE Coded (S=2) | 0       | 2402                   | 1.02         |
| LE Coded (S=2) | 19      | 2440                   | 1.02         |
| LE Coded (S=2) | 39      | 2480                   | 1.02         |
| LE Coded (S=8) | 0       | 2402                   | 1.05         |
| LE Coded (S=8) | 19      | 2440                   | 1.02         |
| LE Coded (S=8) | 39      | 2480                   | 1.05         |

### Test Graphs



BLE 1M\_Channel 0



BLE 2M\_Channel 0



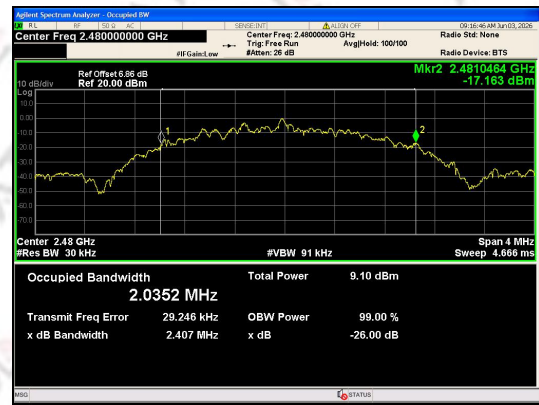
BLE 1M\_Channel 19



BLE 2M\_Channel 19



BLE 1M\_Channel 39



BLE 2M\_Channel 39



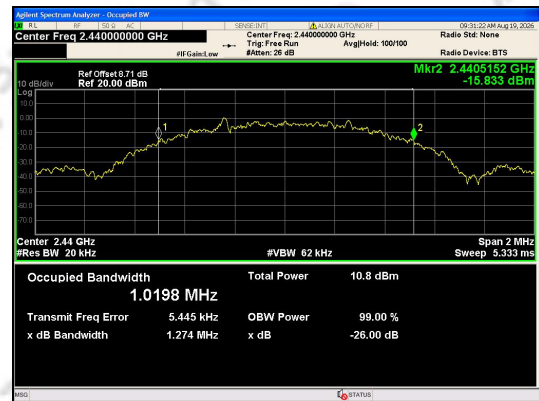
LE Coded (S=2)\_Channel 0



LE Coded (S=8)\_Channel 0



LE Coded (S=2)\_Channel 19



LE Coded (S=8)\_Channel 19



LE Coded (S=2)\_Channel 39



LE Coded (S=8)\_Channel 39

## Power Spectral Density

### Test Result

| Mode           | Channel | PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|----------------|---------|----------------|------------------|---------|
| BLE 1M         | 0       | -11.870        | ≤8               | PASS    |
| BLE 1M         | 19      | -10.300        | ≤8               | PASS    |
| BLE 1M         | 39      | -11.310        | ≤8               | PASS    |
| BLE 2M         | 0       | -13.360        | ≤8               | PASS    |
| BLE 2M         | 19      | -15.150        | ≤8               | PASS    |
| BLE 2M         | 39      | -14.900        | ≤8               | PASS    |
| LE Coded (S=2) | 0       | -1.840         | ≤8               | PASS    |
| LE Coded (S=2) | 19      | -2.320         | ≤8               | PASS    |
| LE Coded (S=2) | 39      | -0.500         | ≤8               | PASS    |
| LE Coded (S=8) | 0       | -1.550         | ≤8               | PASS    |
| LE Coded (S=8) | 19      | -1.950         | ≤8               | PASS    |
| LE Coded (S=8) | 39      | -0.680         | ≤8               | PASS    |

### Test Graphs

