



## Appendix B

### RF Test Data for BT LE(Conducted Measurement)

**Product Name:** car stereo

**Test Model:** MRCP9685-IP

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8° C   |
| Relative Humidity: | 52.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Luo   |
| Supervised by:     | Nick Peng |



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## B.1 -6dB Bandwidth

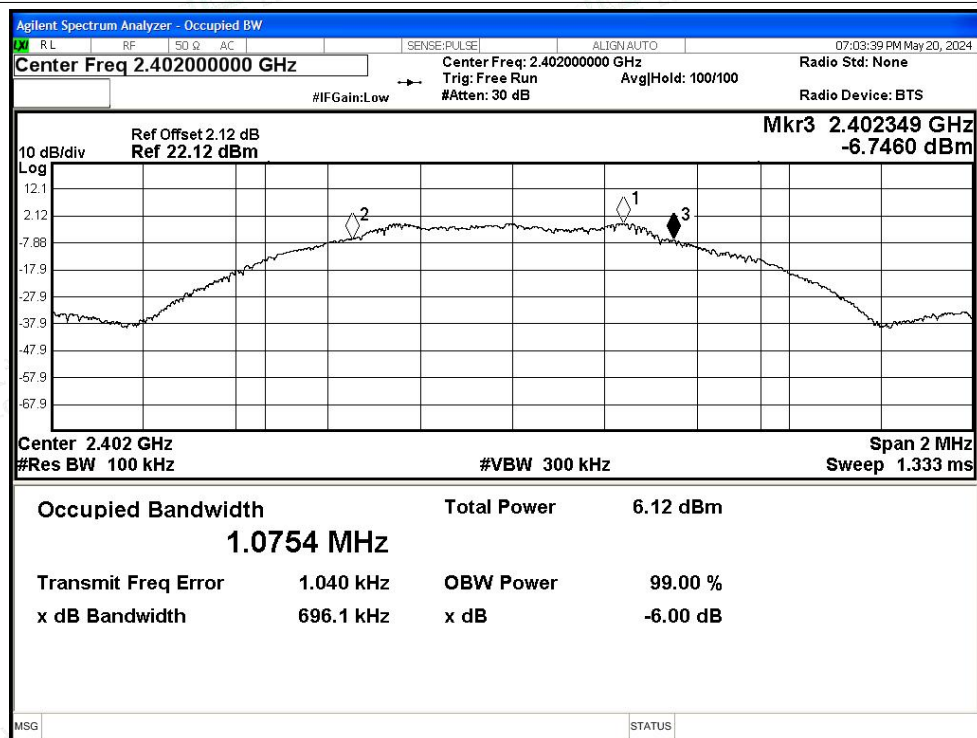
| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 0.696                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | 0.694                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 0.699                 | $\geq 0.5$                  | Pass    |



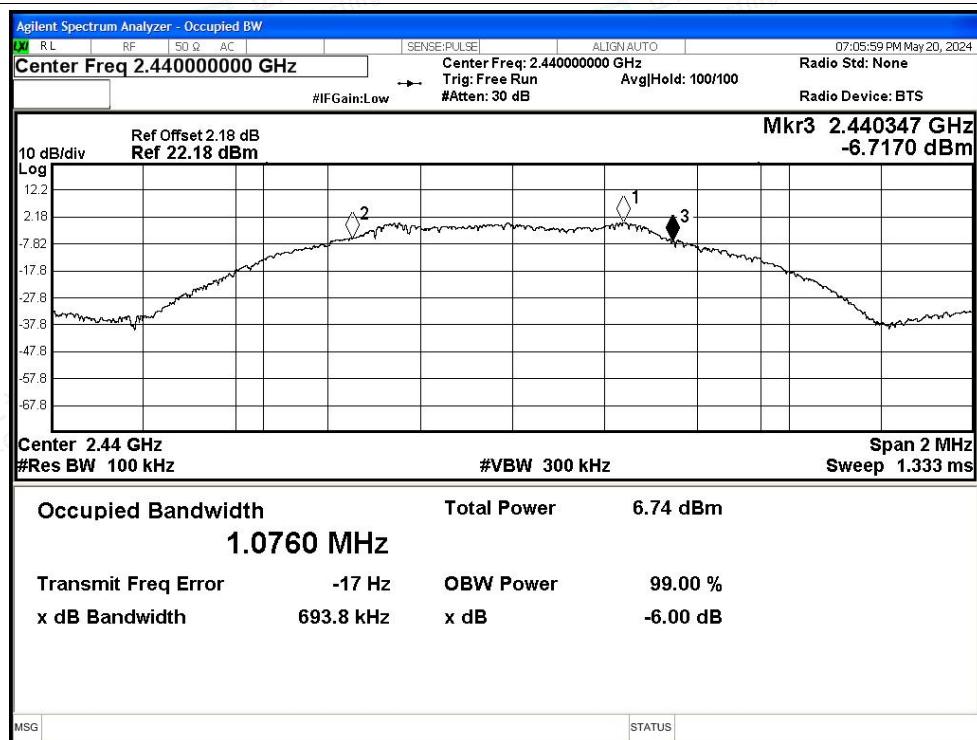


## Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

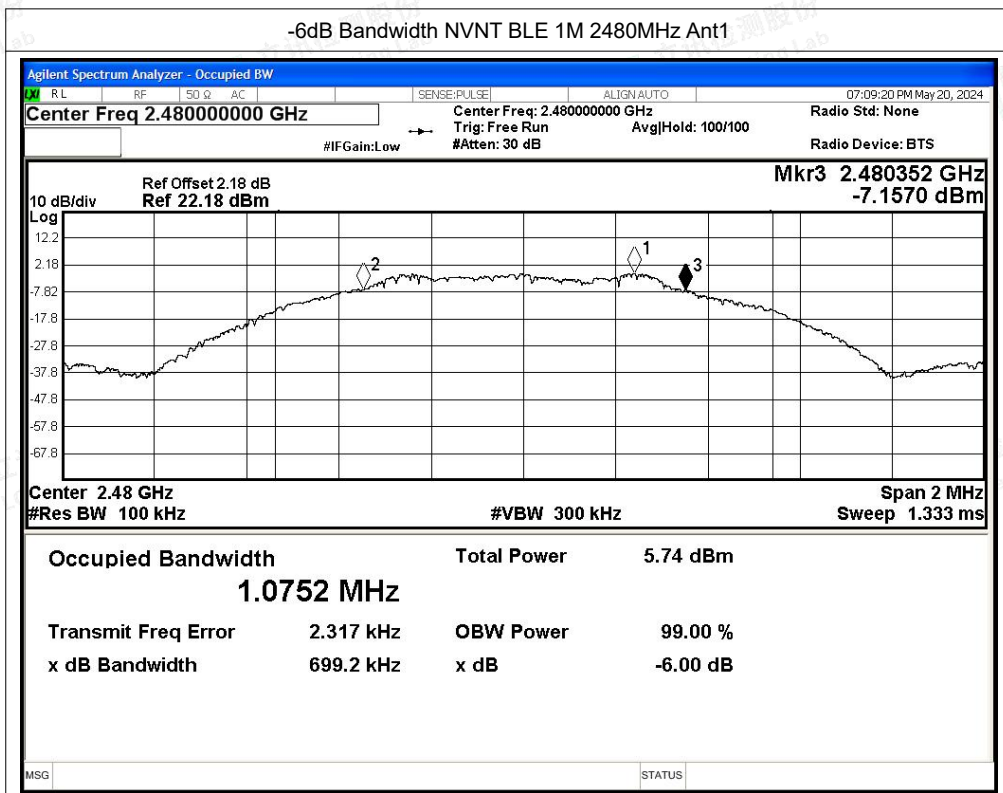


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## B.2 Maximum Conducted Output Power

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 0.4                   | 30          | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | 0.99                  | 30          | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 0.03                  | 30          | Pass    |

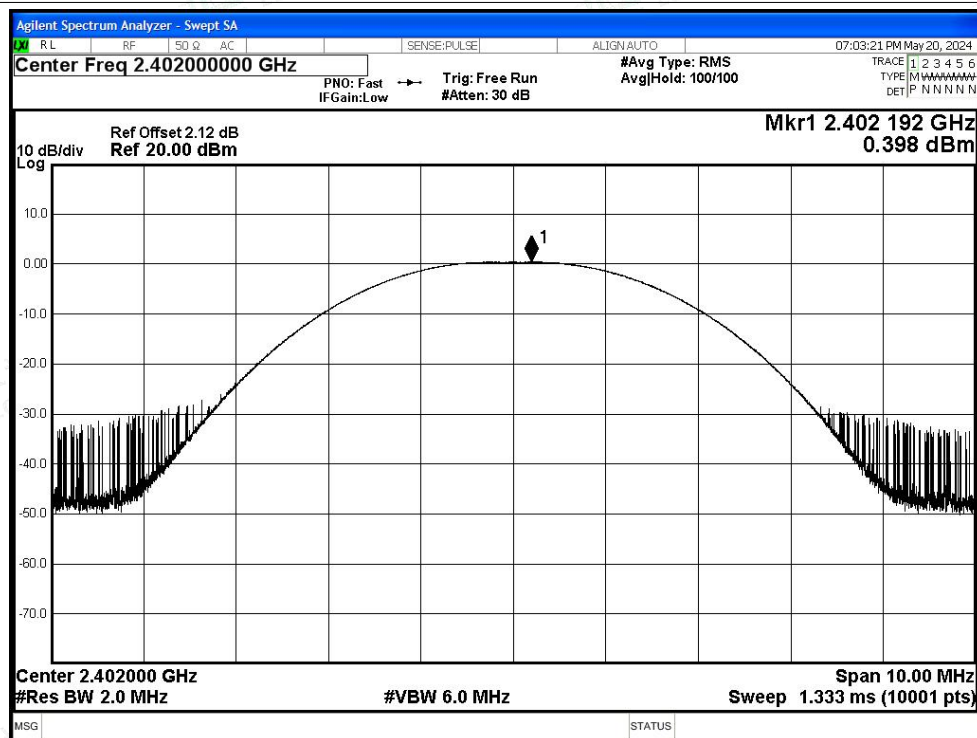


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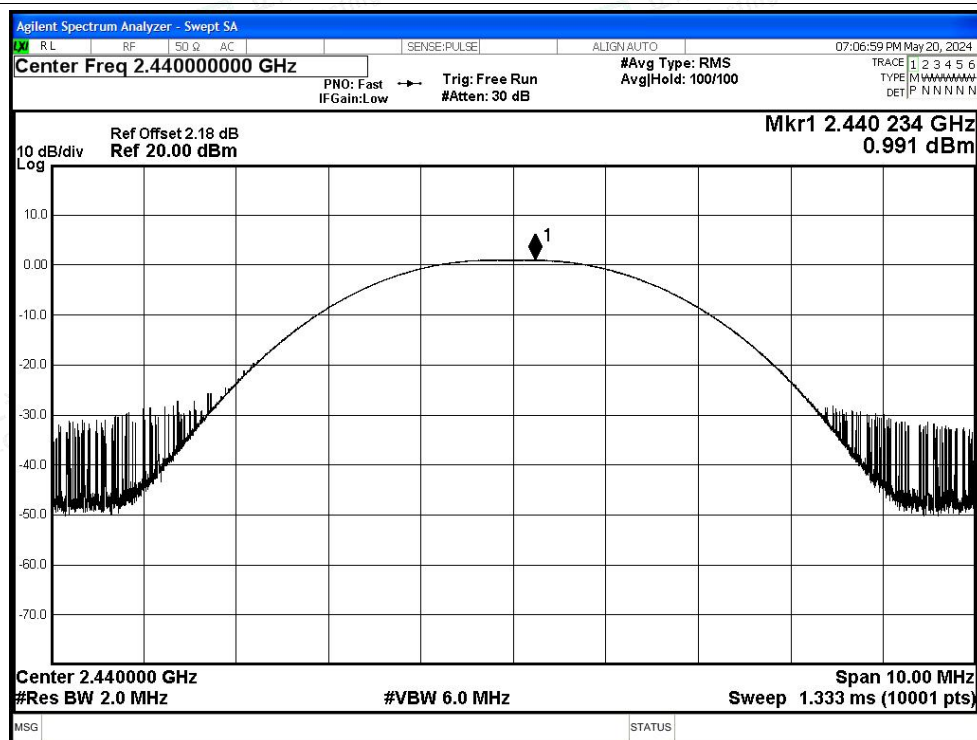


## Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

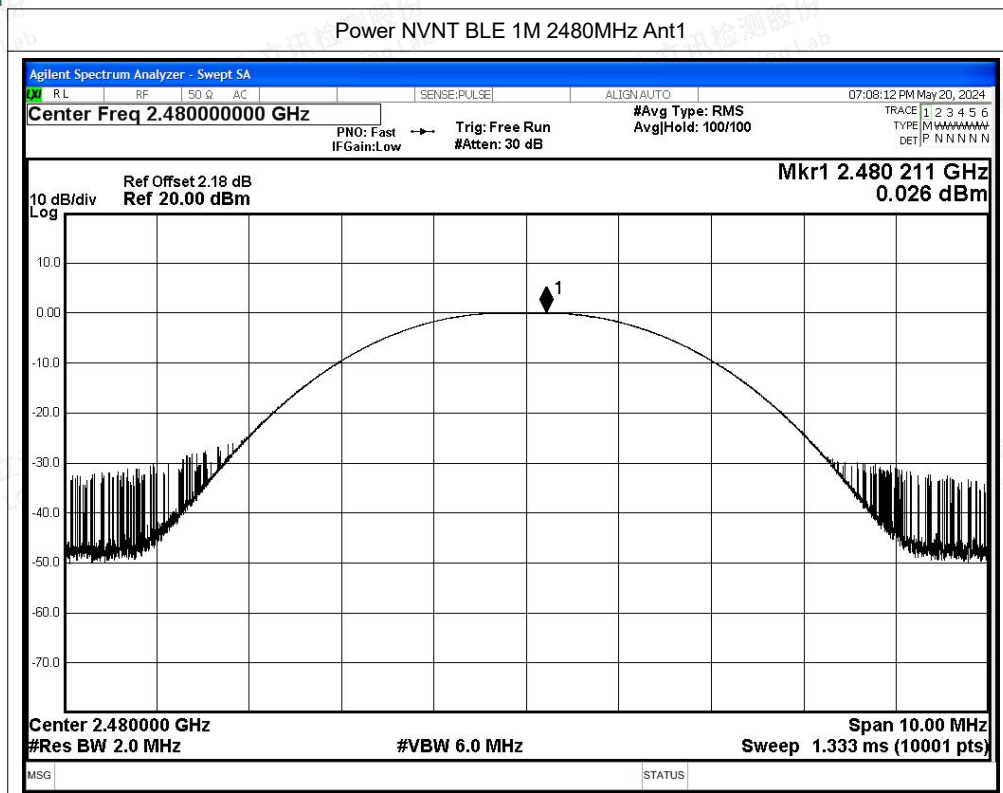


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### B.3 Maximum Power Spectral Density Level

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|--------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -15.87                   | 8                | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -15.01                   | 8                | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -15.46                   | 8                | Pass    |



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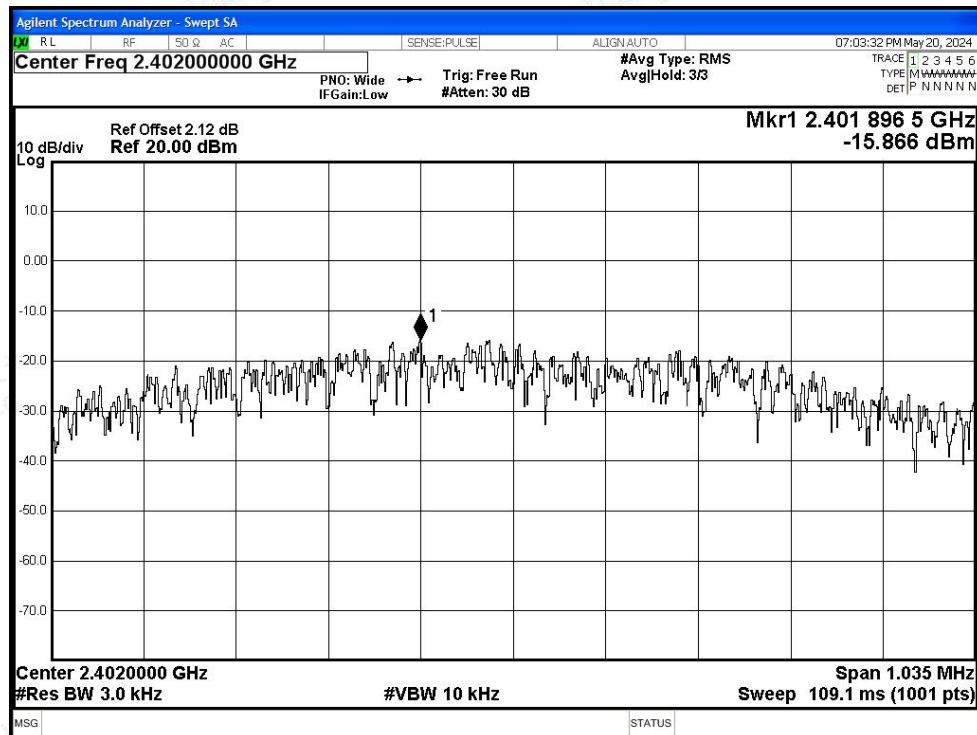
Scan code to check authenticity



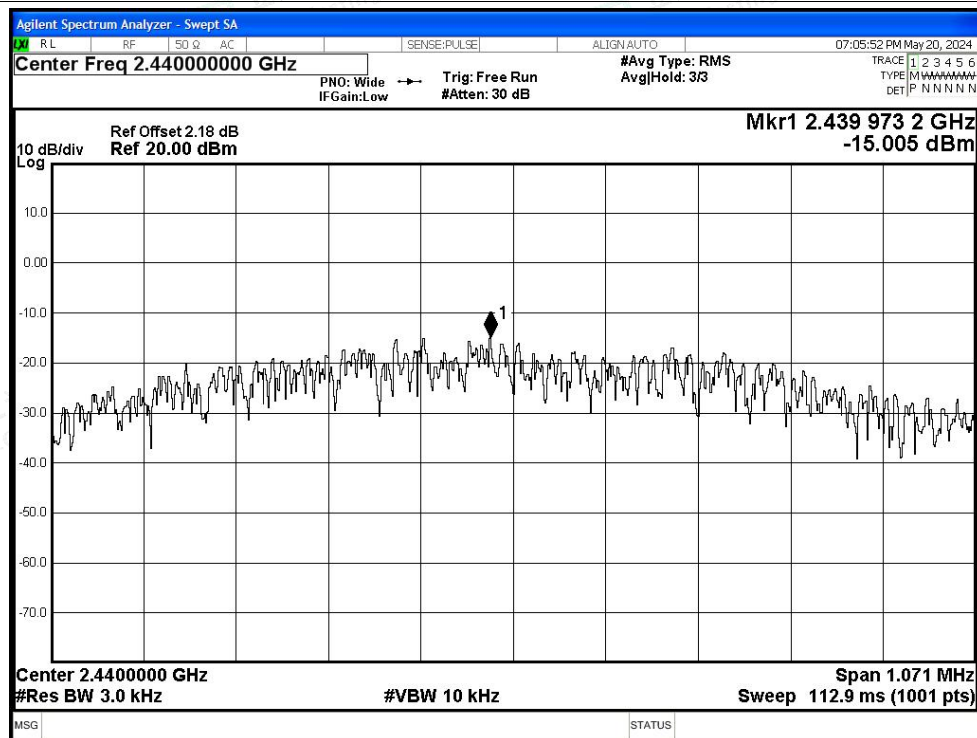


## Test Graphs

## PSD NVNT BLE 1M 2402MHz Ant1



## PSD NVNT BLE 1M 2440MHz Ant1



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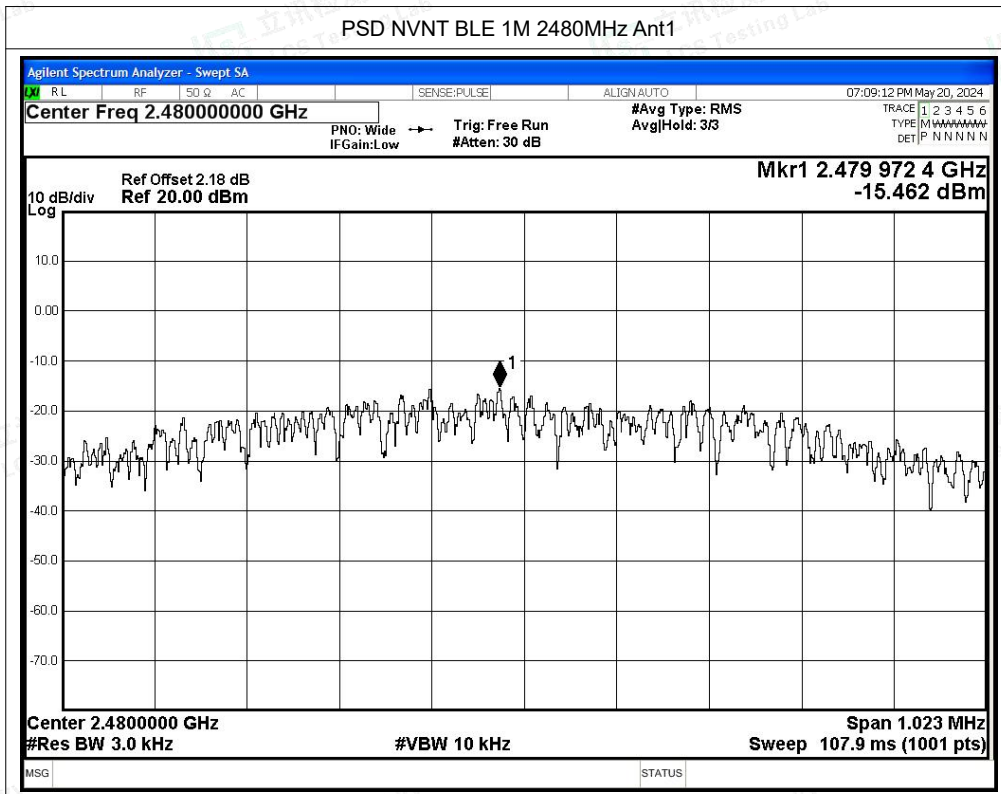
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LCSA154028EB

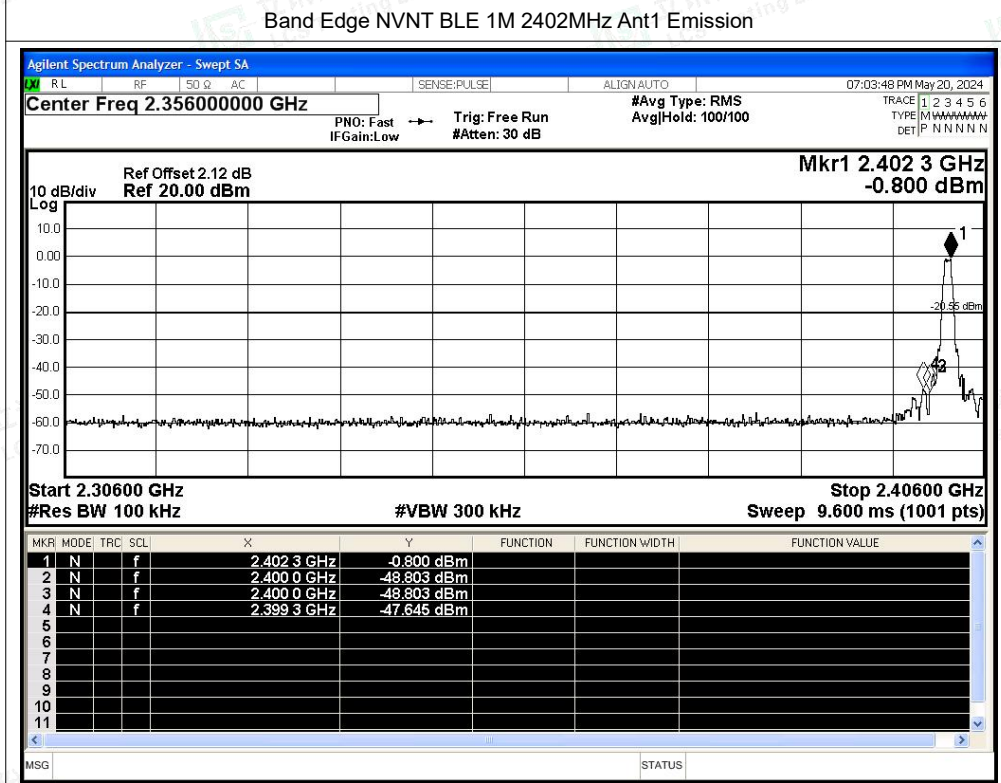
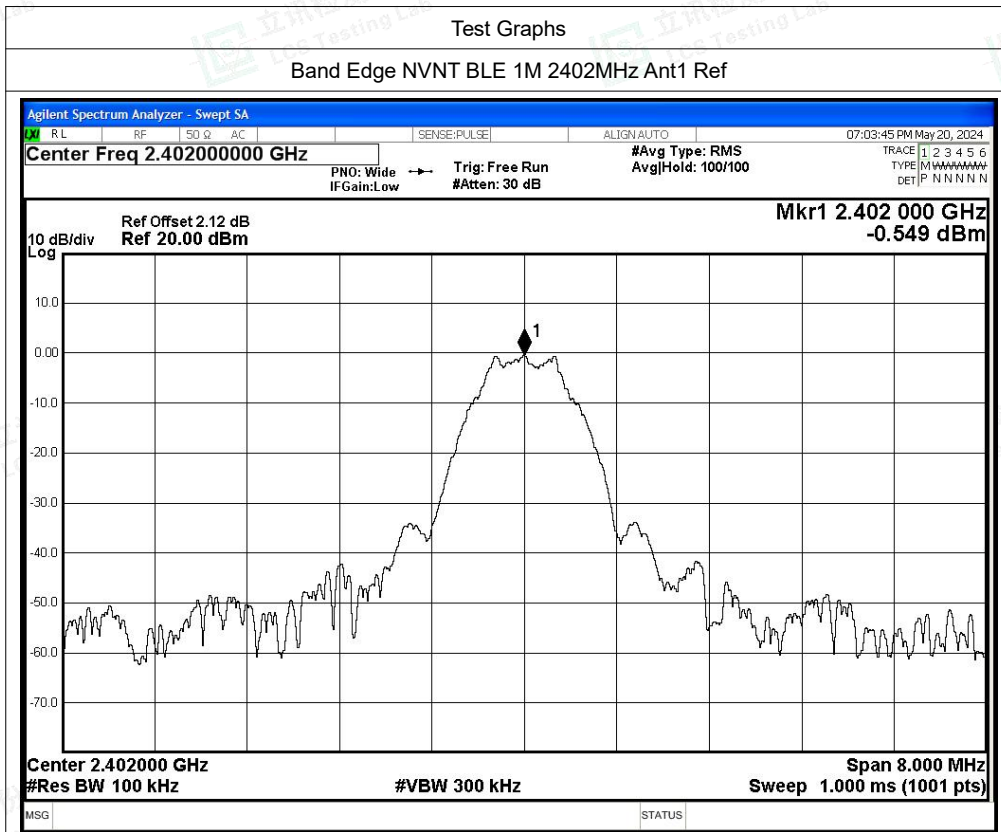


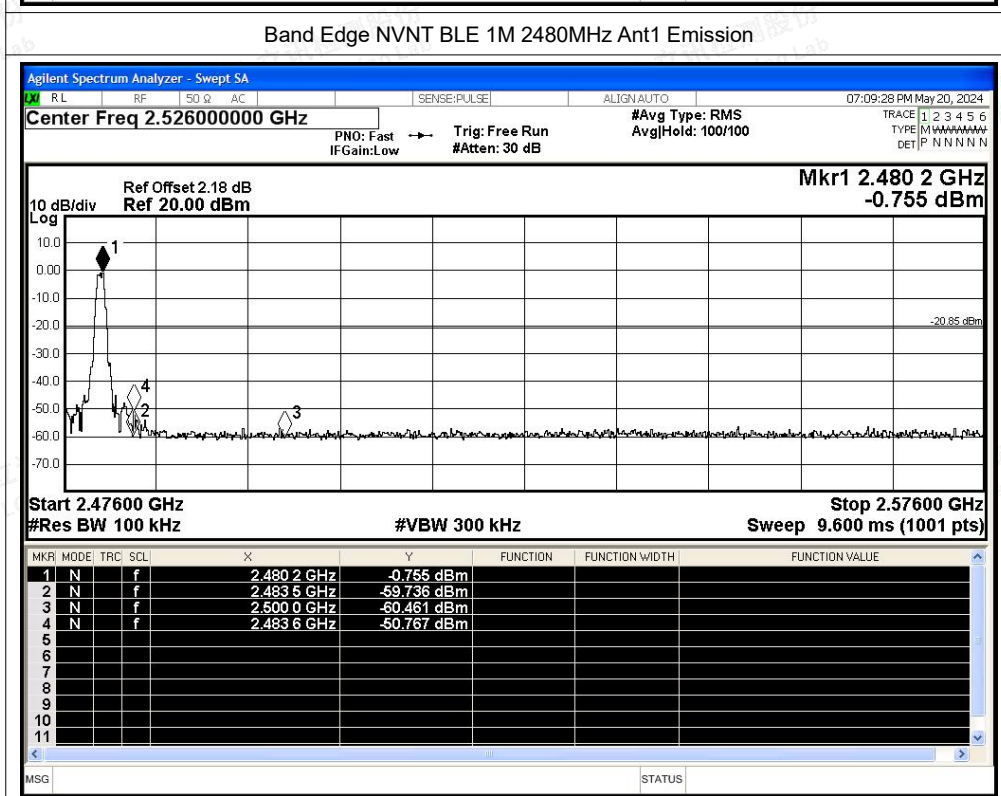
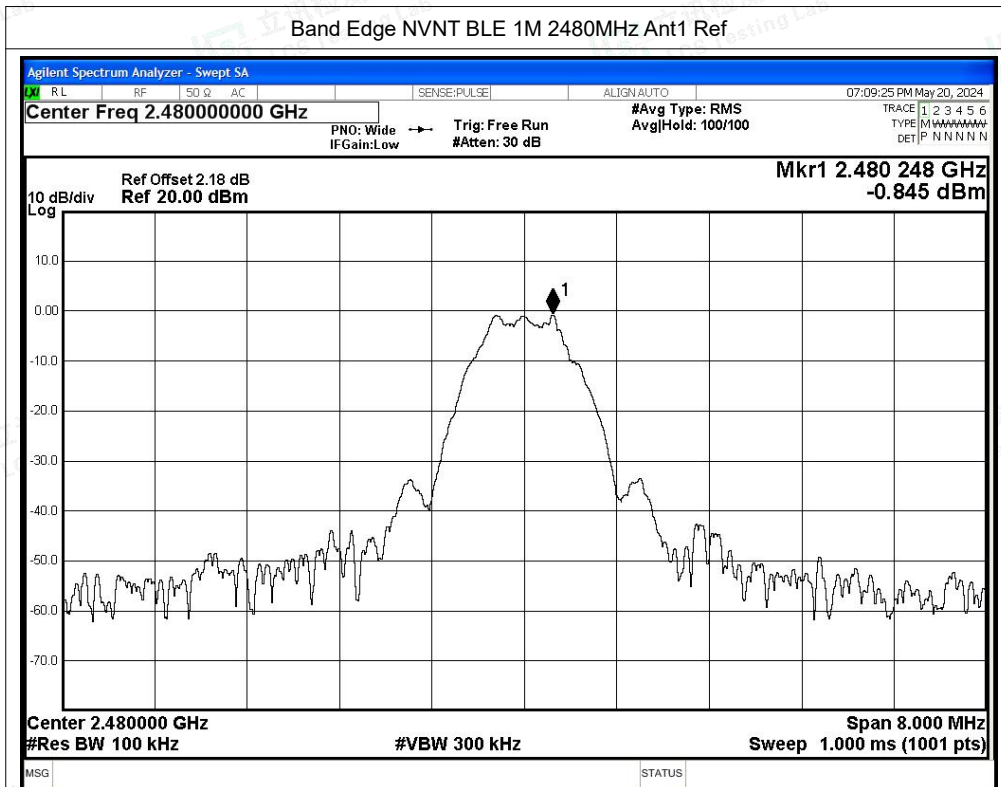


## B.4 Band Edge

| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -47.1           | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -49.92          | -20         | Pass    |









## B.5 Conducted RF Spurious Emission

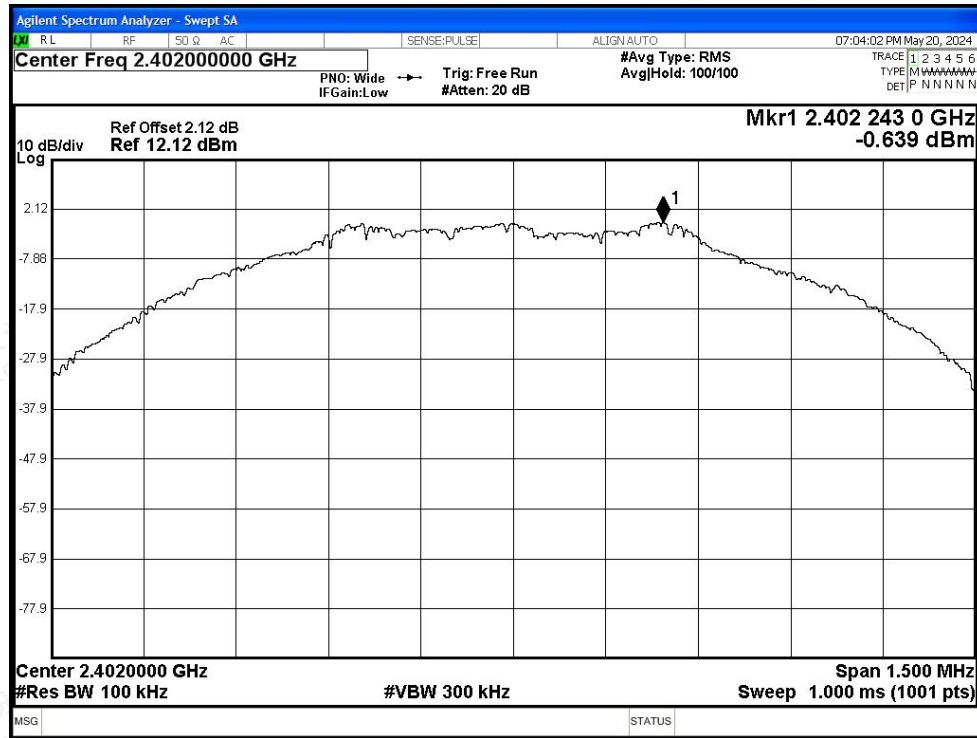
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -54.19          | -20         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -54.81          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -53.71          | -20         | Pass    |



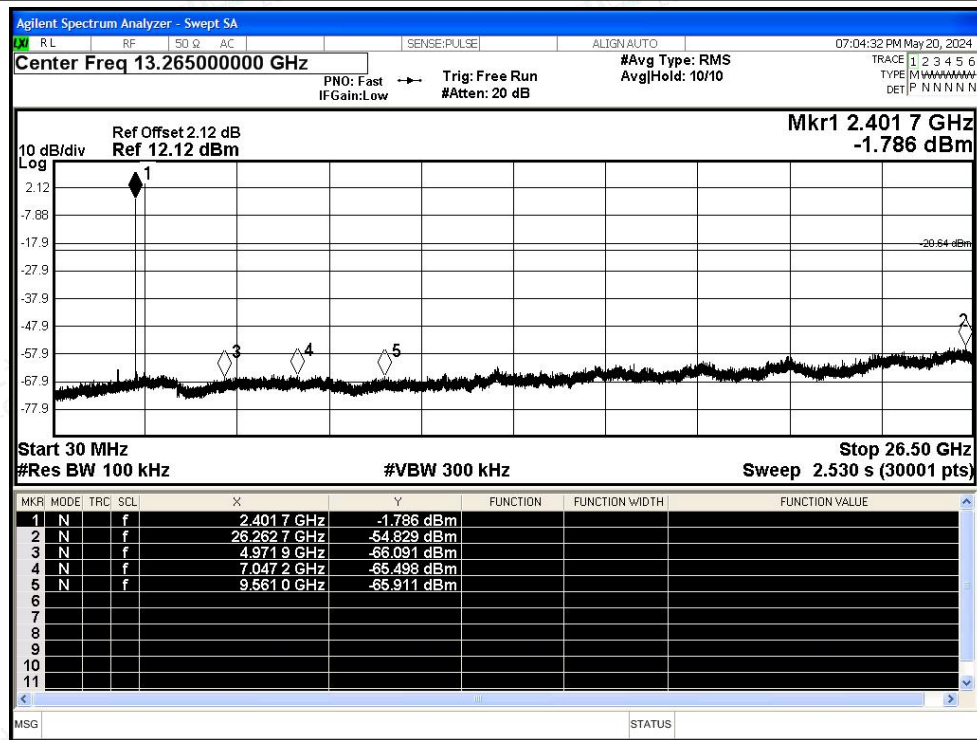


### Test Graphs

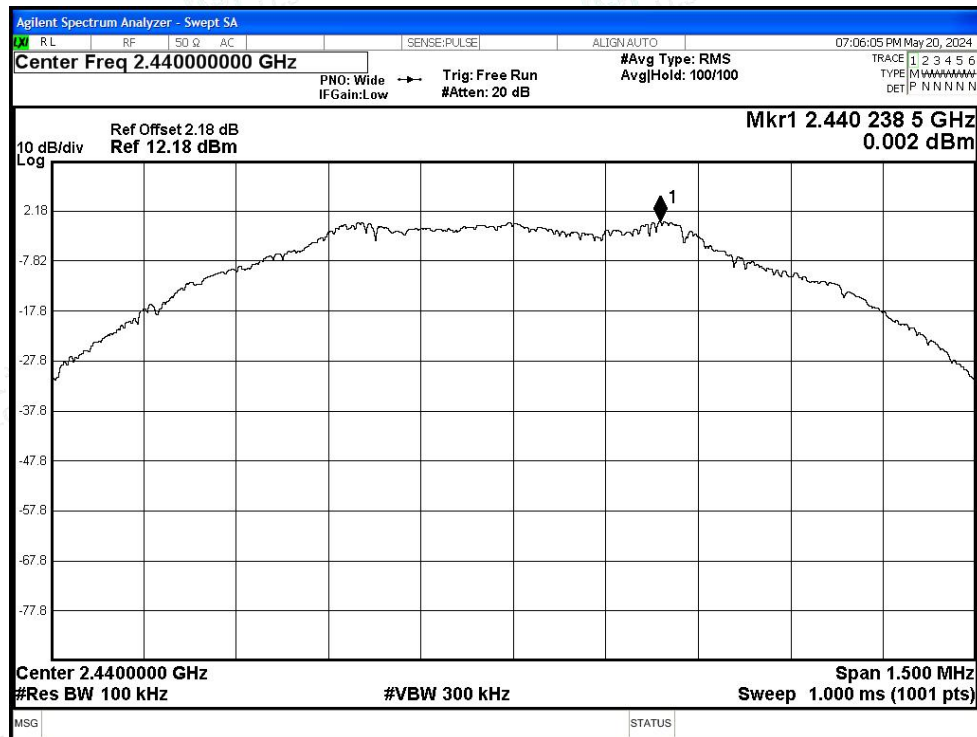
#### Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



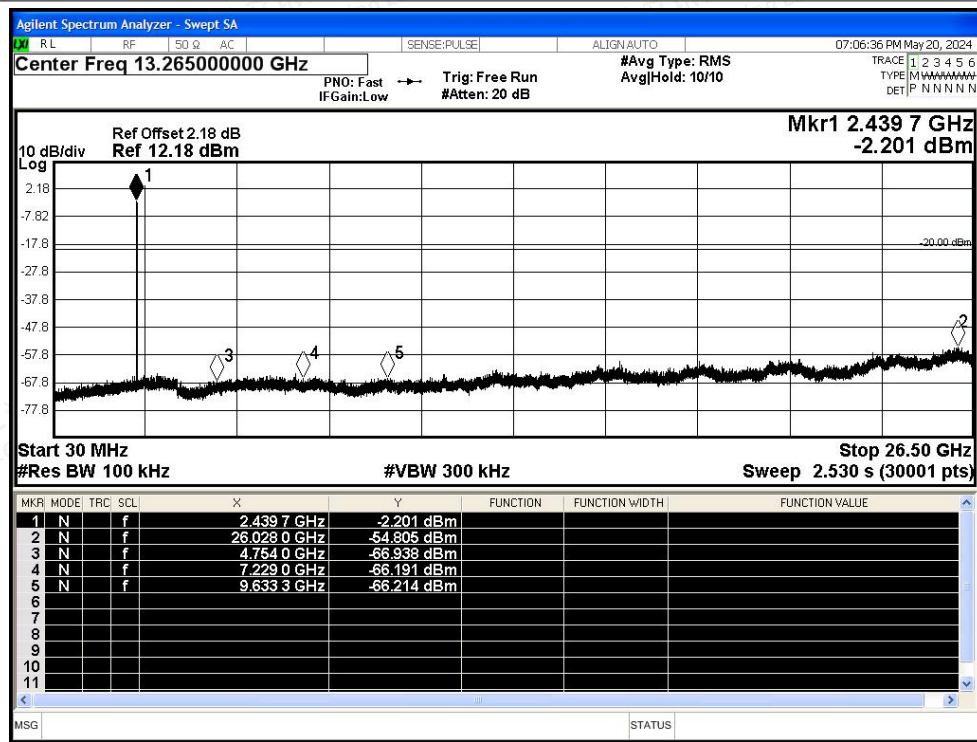
#### Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref

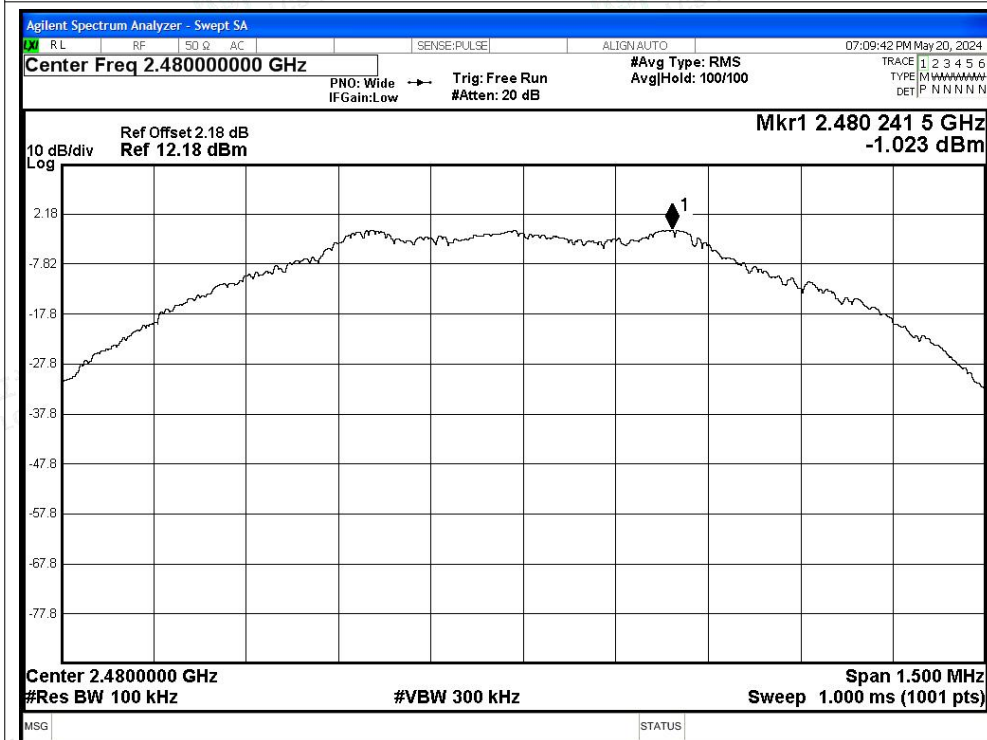


Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission

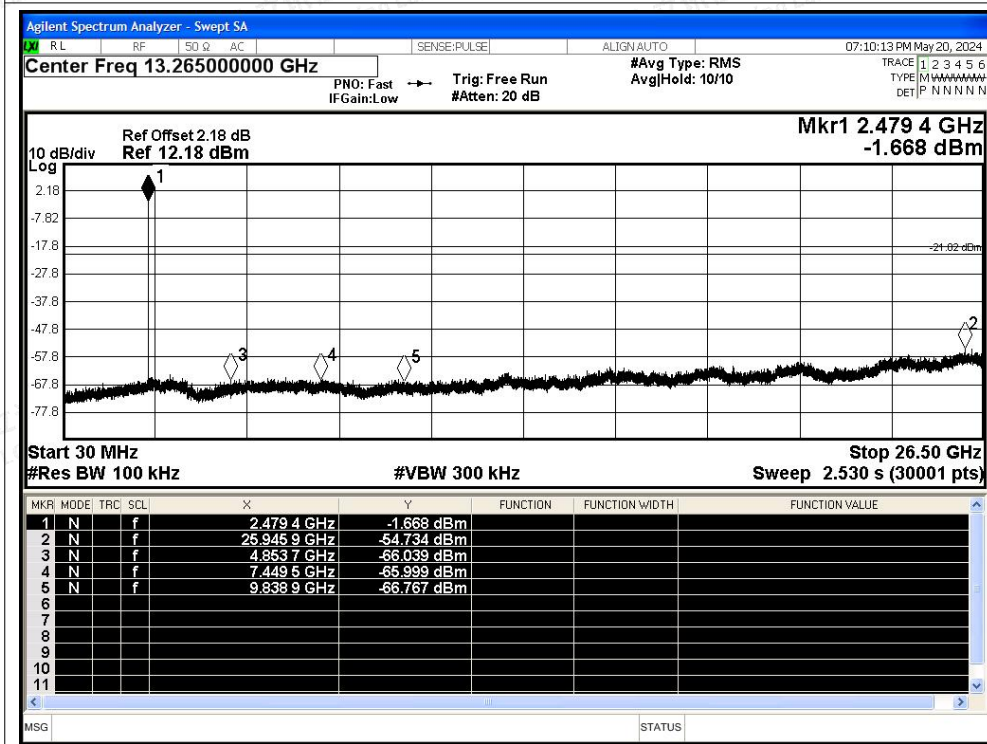




Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission

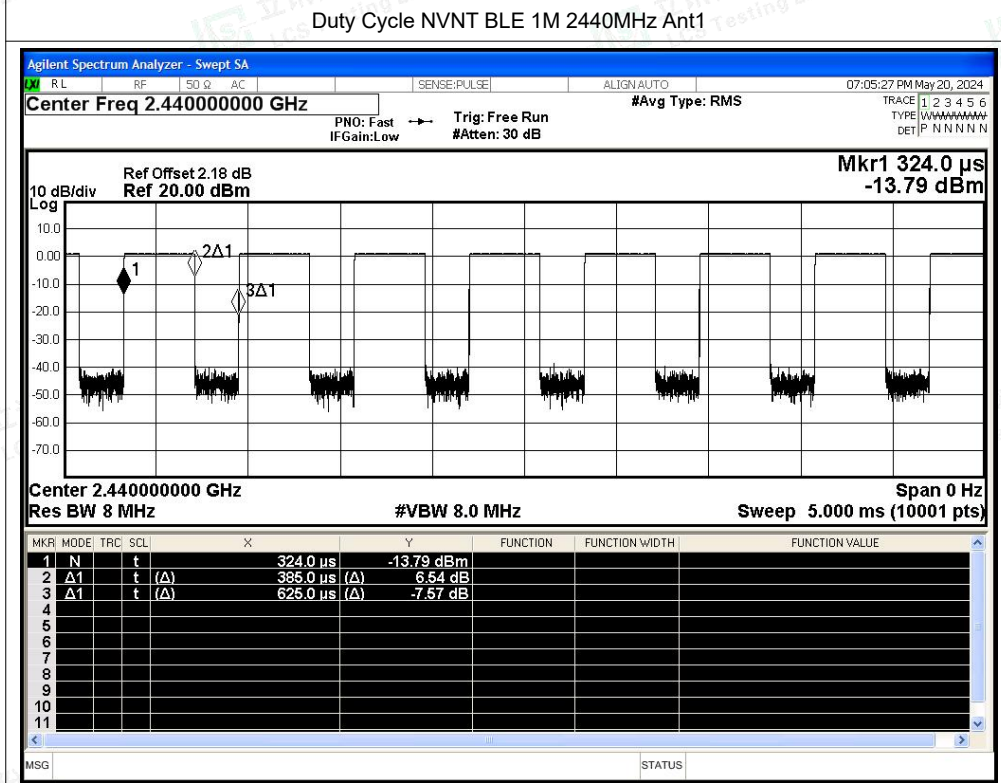
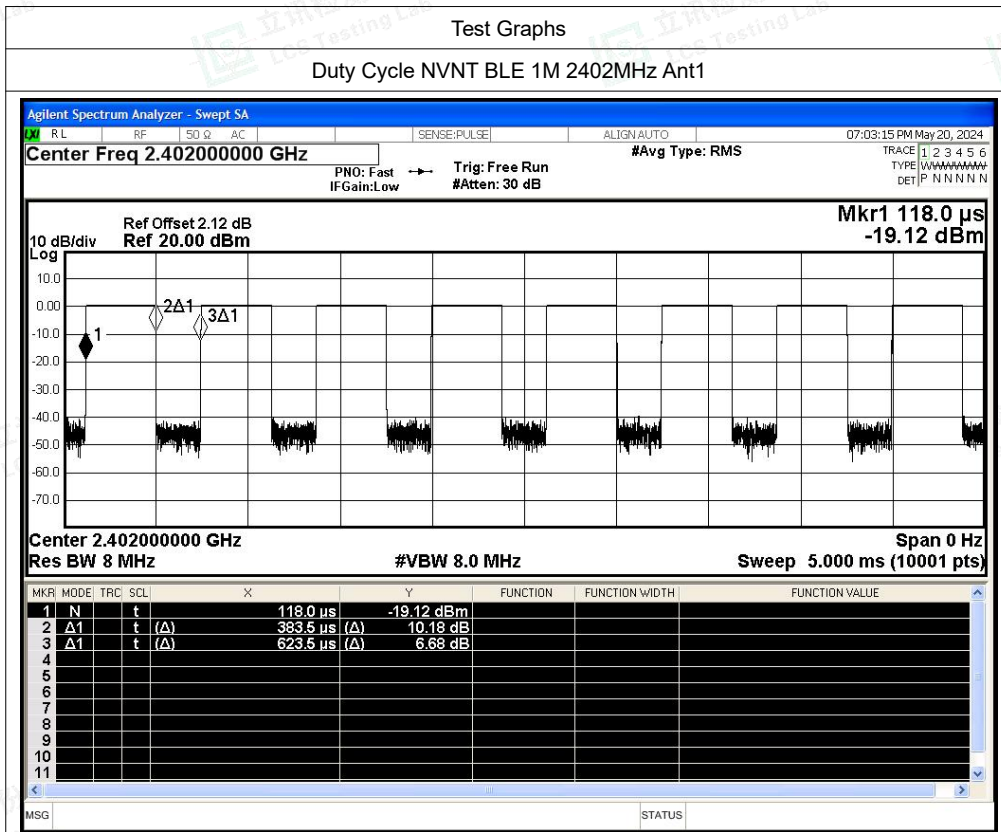


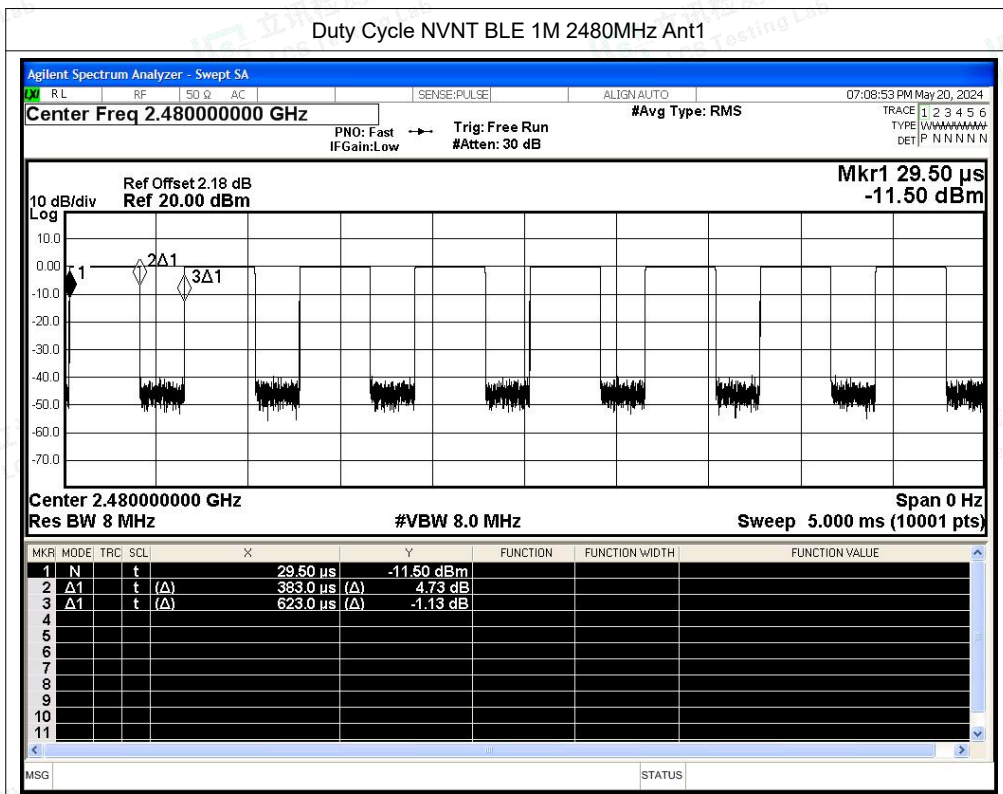


## B.6 Duty Cycle

| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1M | 2402            | Ant1    | 61.51          | 2.11                   | 2.61      |
| NVNT      | BLE 1M | 2440            | Ant1    | 61.6           | 2.1                    | 2.6       |
| NVNT      | BLE 1M | 2480            | Ant1    | 61.48          | 2.11                   | 2.61      |



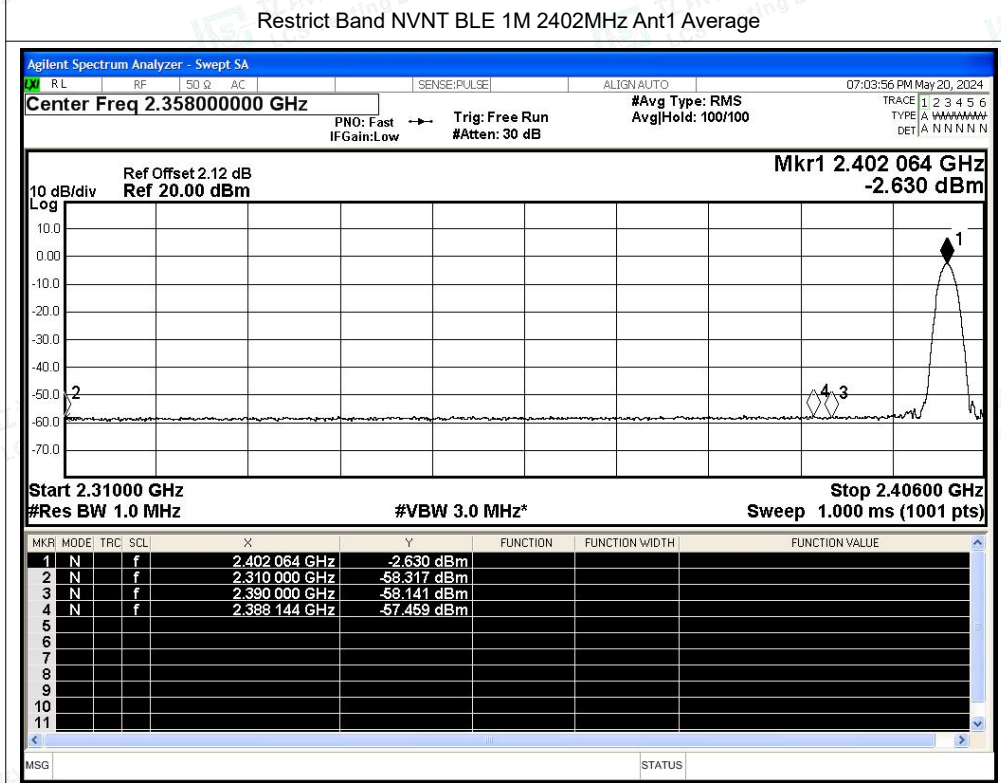
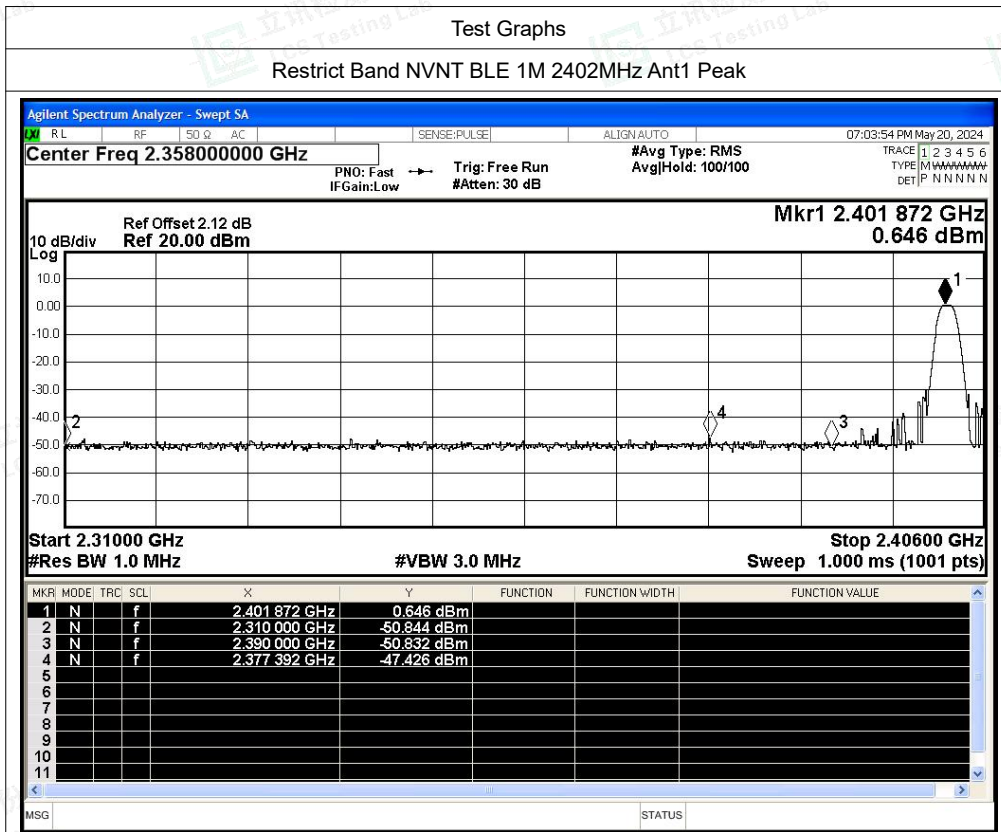




## B.7 Restrict Band

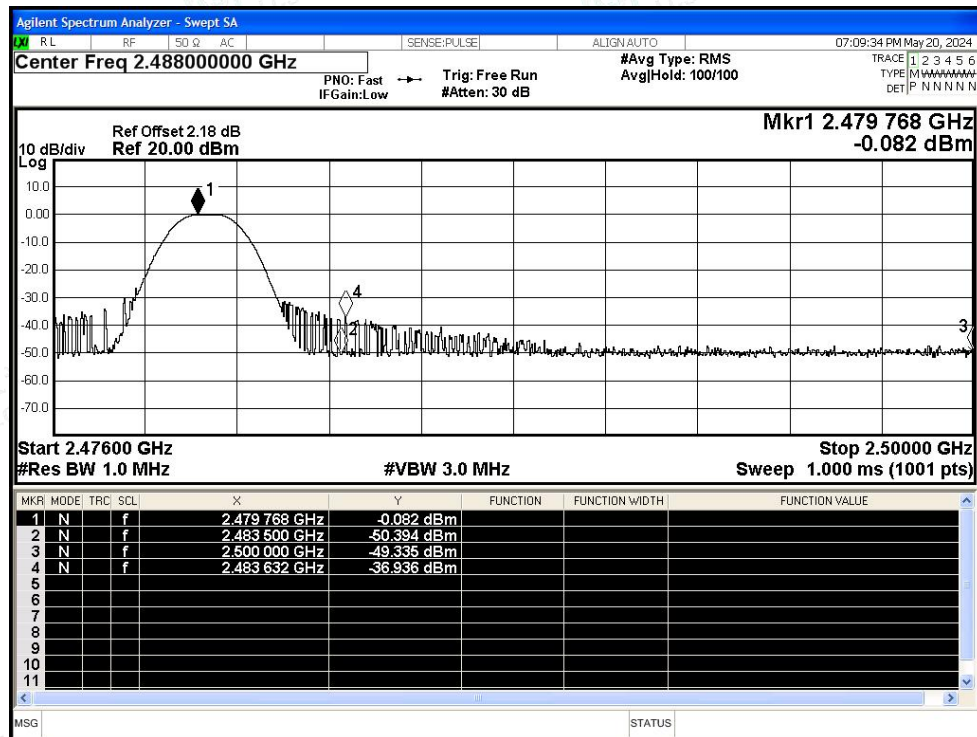
| Condition | Mode   | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|------------|------------------|------------|----------|----------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -50.84      | 2          | -                | 46.42      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -58.32      | 2          | 2.11             | 41.05      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2377.392        | -47.43      | 2          | -                | 49.83      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2388.144        | -57.46      | 2          | 2.11             | 41.91      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -50.83      | 2          | -                | 46.43      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -58.14      | 2          | 2.11             | 41.23      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -50.39      | 2          | -                | 46.87      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -56.48      | 2          | 2.11             | 42.89      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.632        | -36.94      | 2          | -                | 60.32      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2484.112        | -55.95      | 2          | 2.11             | 43.42      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -49.34      | 2          | -                | 47.92      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -57.89      | 2          | 2.11             | 41.48      | Average  | 54             | Pass    |







Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average

