



Appendix B

RF Test Data for BT LE(Conducted Measurement)

Product Name: Smart Phone

Test Model: MC400

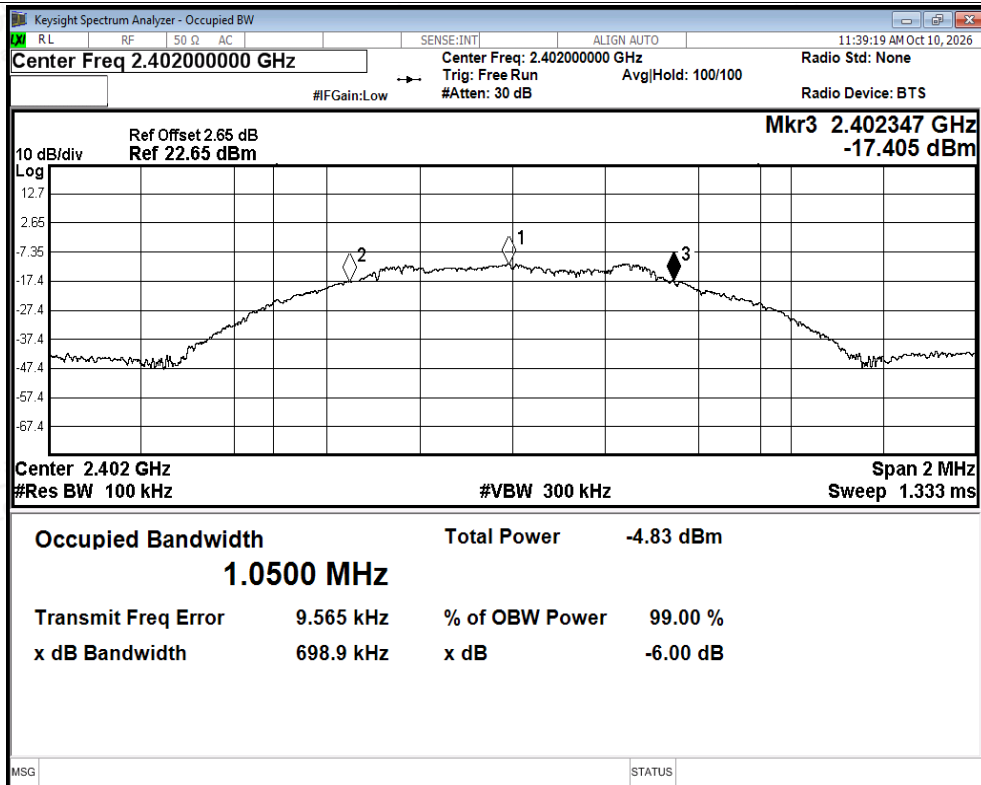
Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 24.9° C   |
| Relative Humidity: | 53.4%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jerry Chu |
| Supervised by:     | Can Kun   |

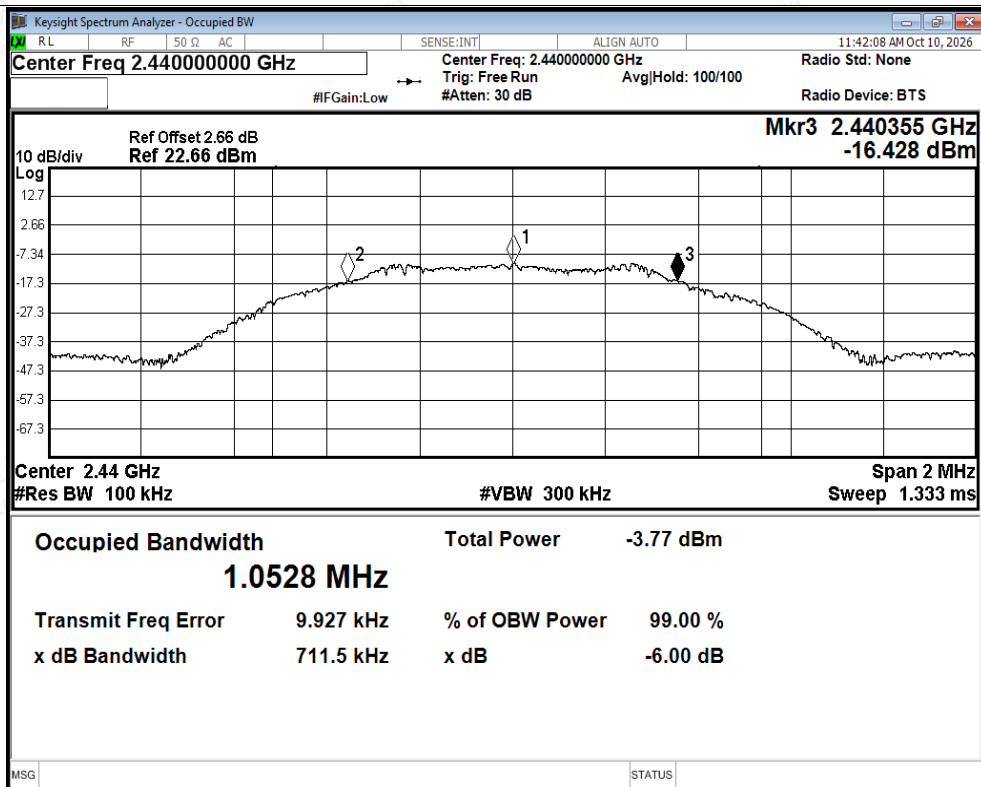


## B.1 -6dB Bandwidth

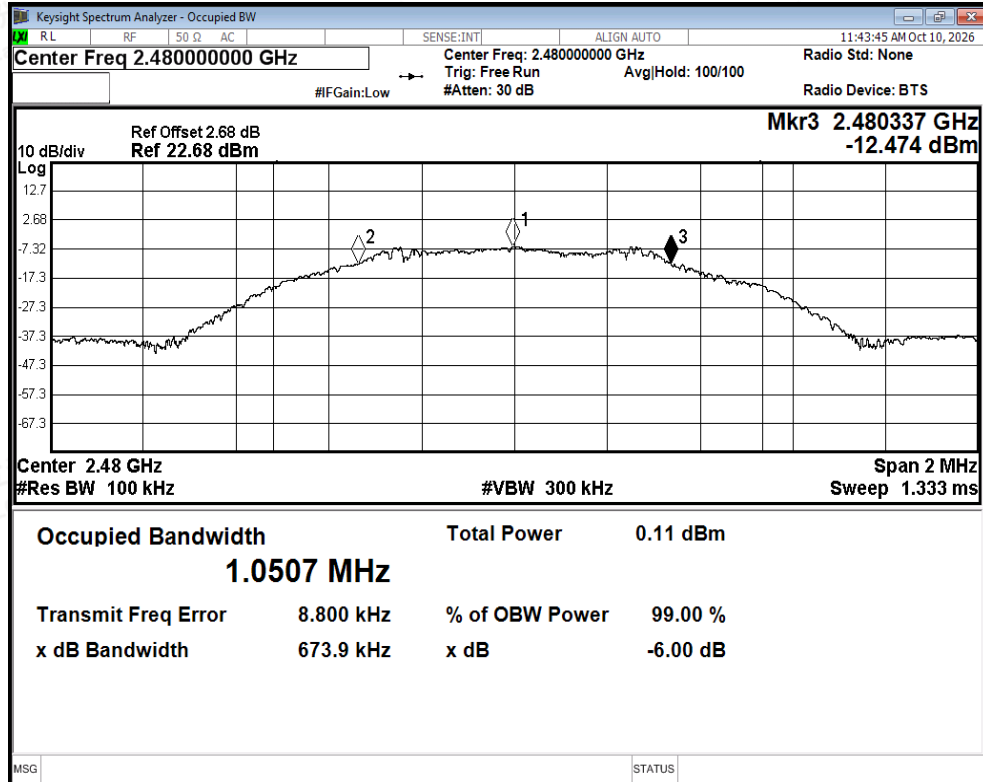
| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 0.6989                | 0.5                         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | 0.7115                | 0.5                         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 0.6739                | 0.5                         | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 1.18                  | 0.5                         | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | 1.177                 | 0.5                         | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 1.135                 | 0.5                         | Pass    |



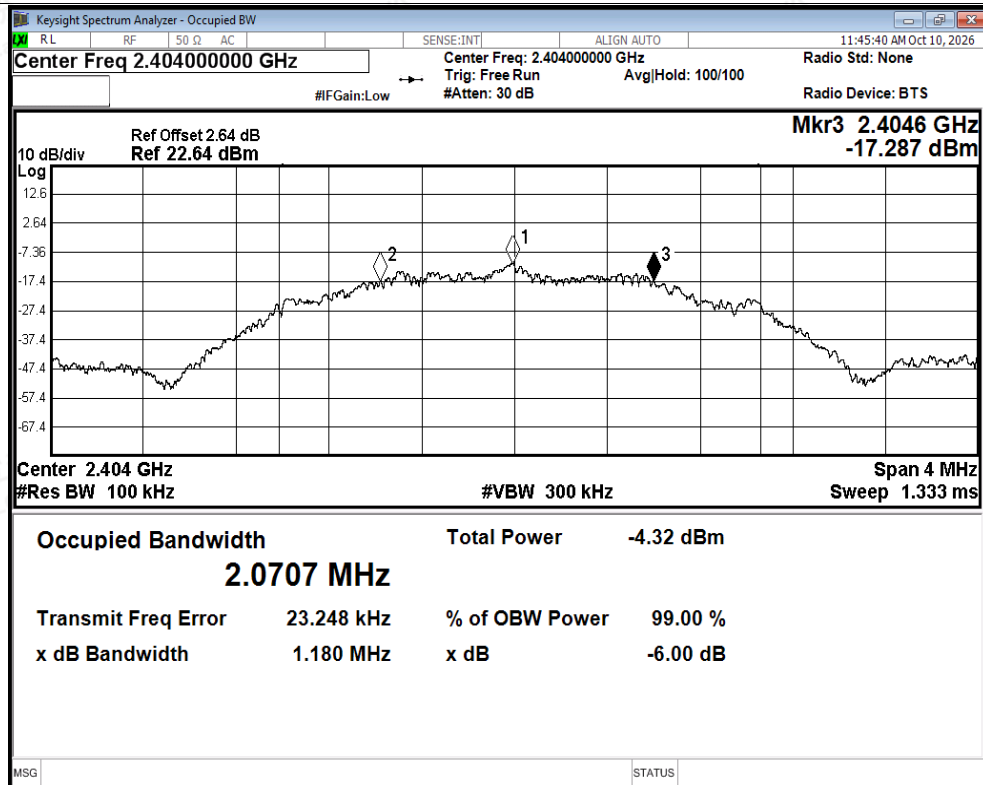
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



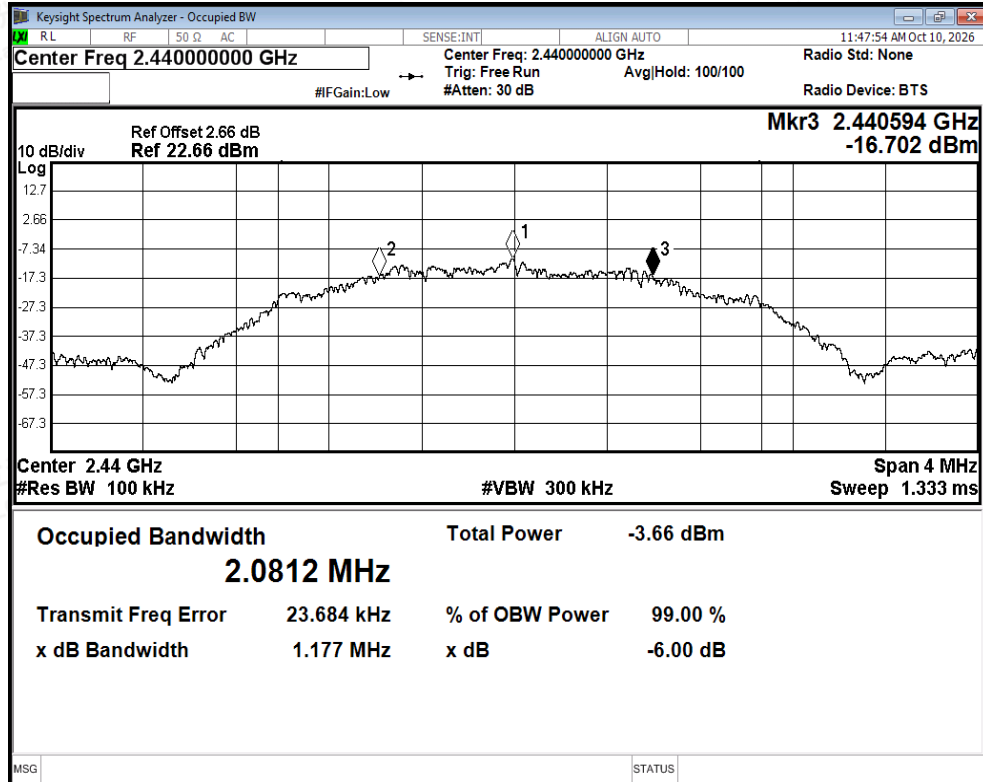
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



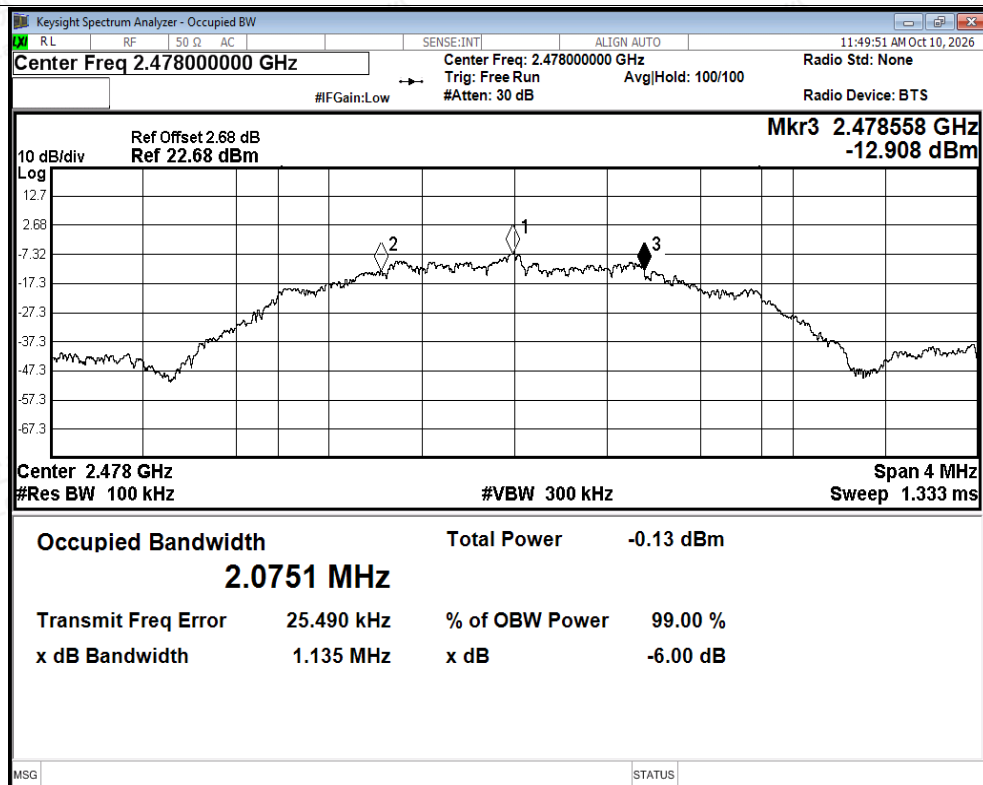
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2404MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1

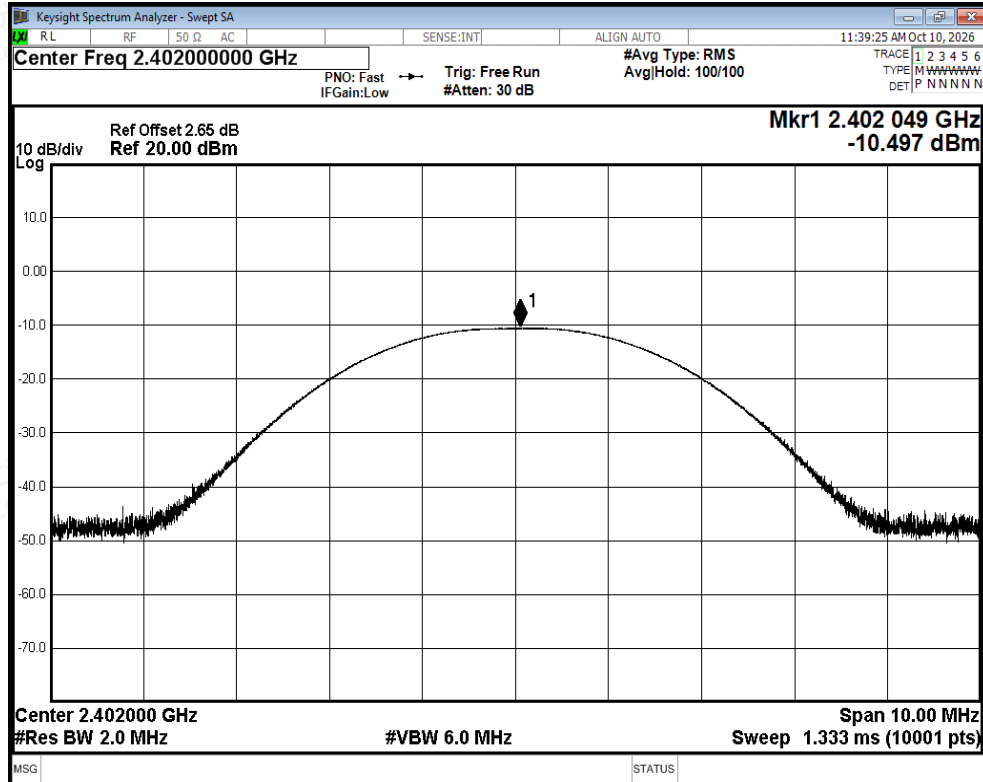


-6dB Bandwidth NVNT BLE 2M 2478MHz Ant1

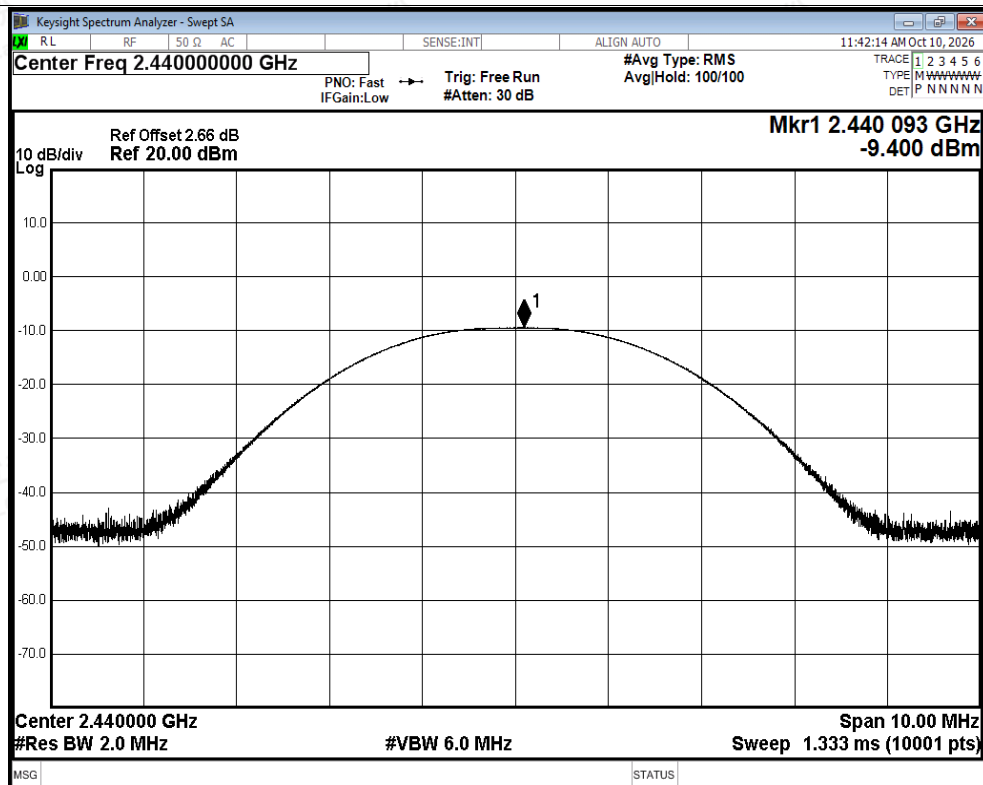


## B.2 Maximum Peak Conducted Output Power

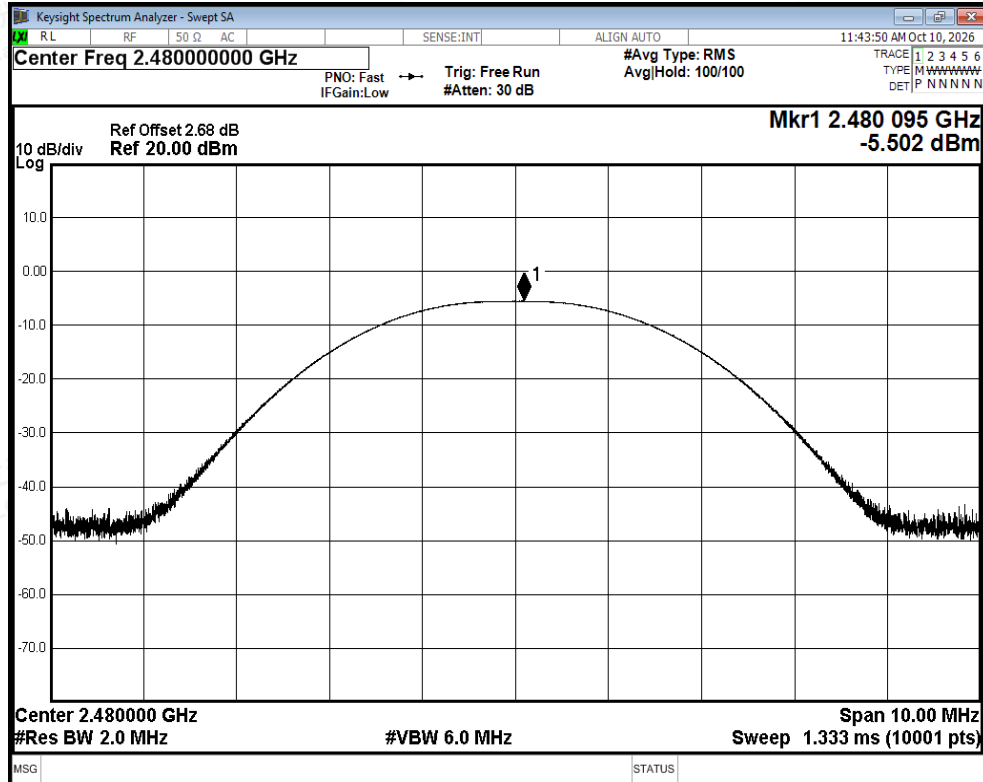
| Condition | Mode   | Frequency<br>(MHz) | Antenna | Conducted Power<br>(dBm) | Limit Conducted(dBm) | Verdict |
|-----------|--------|--------------------|---------|--------------------------|----------------------|---------|
| NVNT      | BLE 1M | 2402               | Ant1    | -10.5                    | 30                   | Pass    |
| NVNT      | BLE 1M | 2440               | Ant1    | -9.4                     | 30                   | Pass    |
| NVNT      | BLE 1M | 2480               | Ant1    | -5.5                     | 30                   | Pass    |
| NVNT      | BLE 2M | 2404               | Ant1    | -10.02                   | 30                   | Pass    |
| NVNT      | BLE 2M | 2440               | Ant1    | -9.43                    | 30                   | Pass    |
| NVNT      | BLE 2M | 2478               | Ant1    | -5.83                    | 30                   | Pass    |



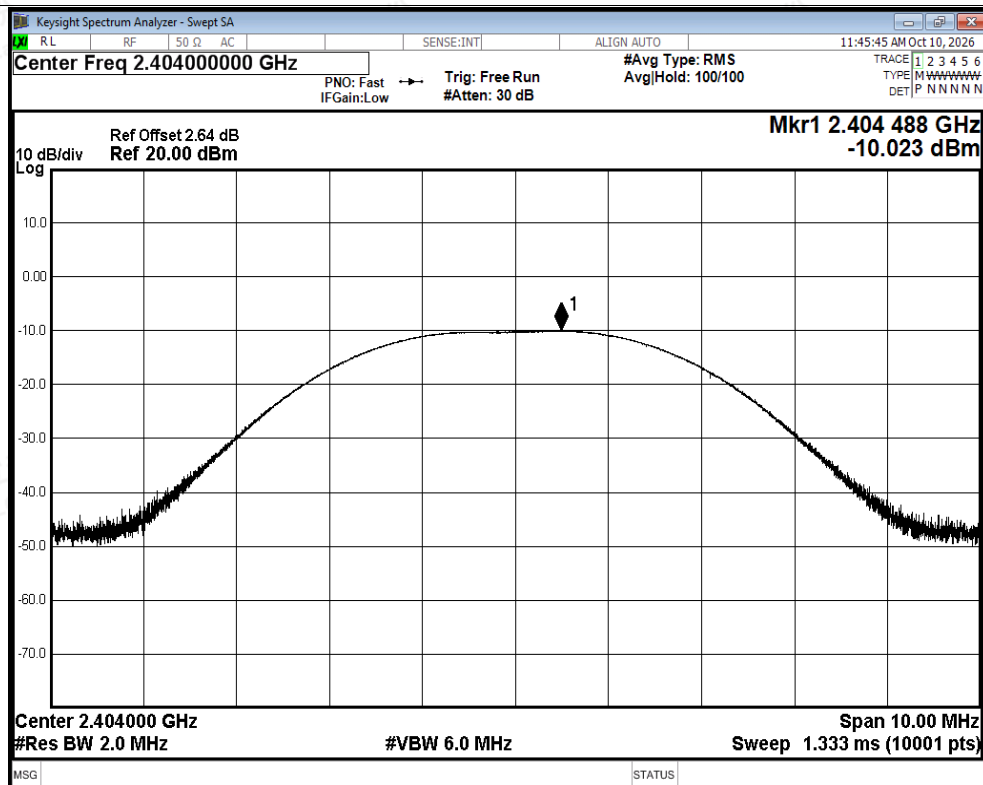
Peak Power NVNT BLE 1M 2402MHz Ant1



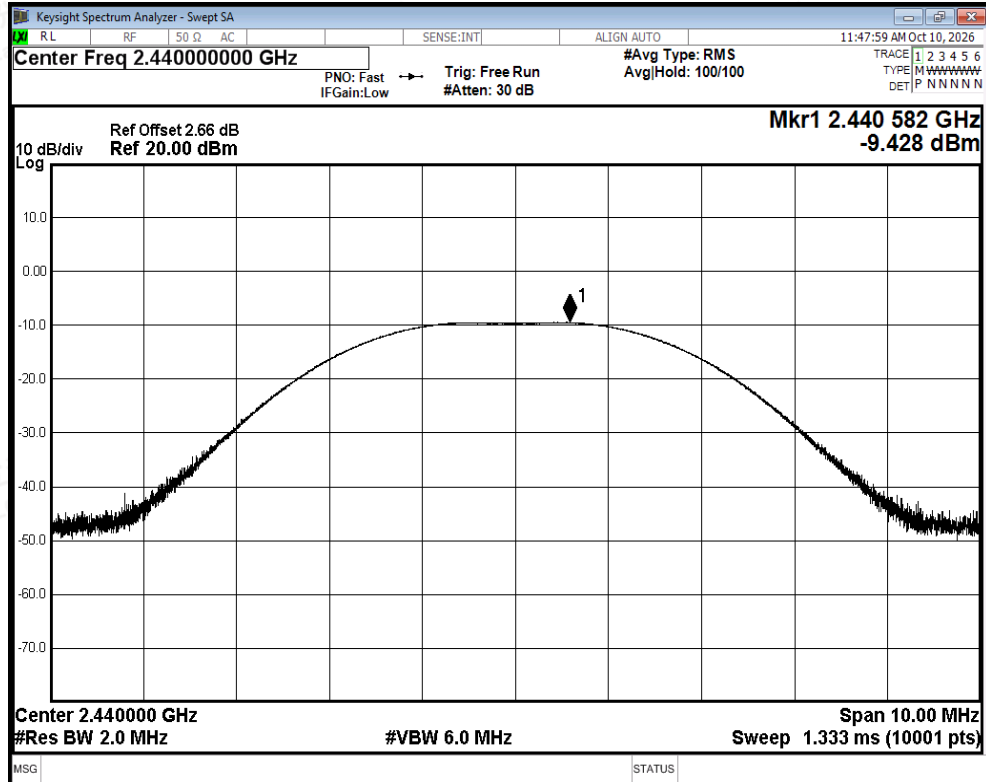
Peak Power NVNT BLE 1M 2440MHz Ant1



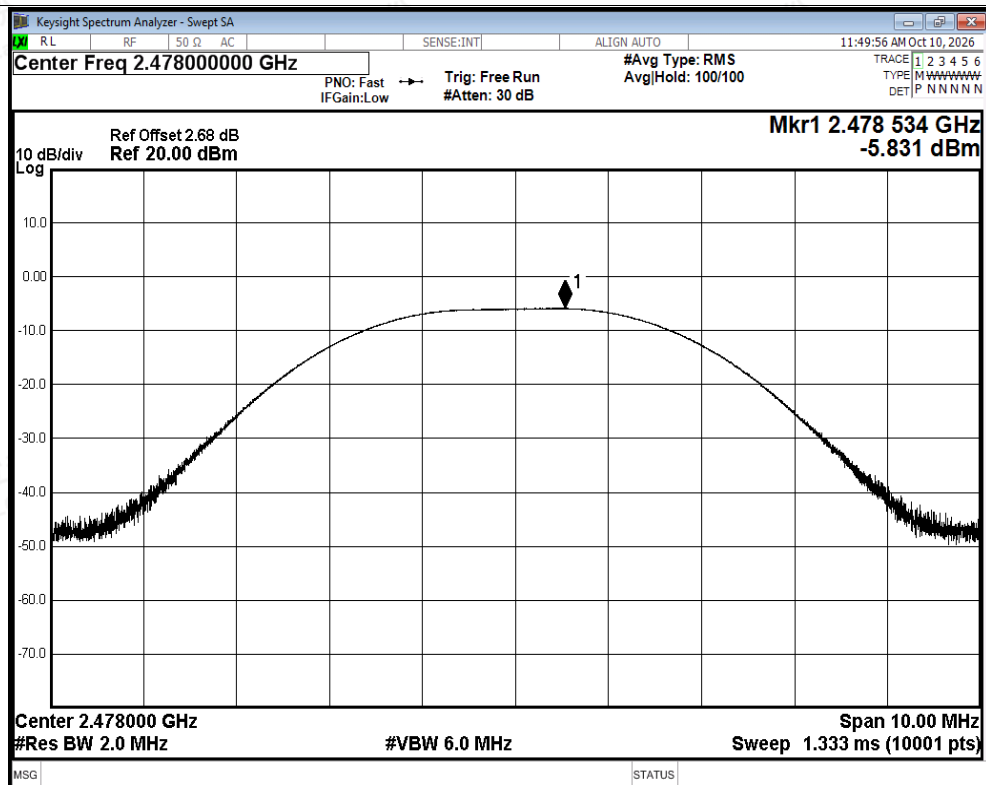
Peak Power NVNT BLE 1M 2480MHz Ant1



Peak Power NVNT BLE 2M 2404MHz Ant1



Peak Power NVNT BLE 2M 2440MHz Ant1

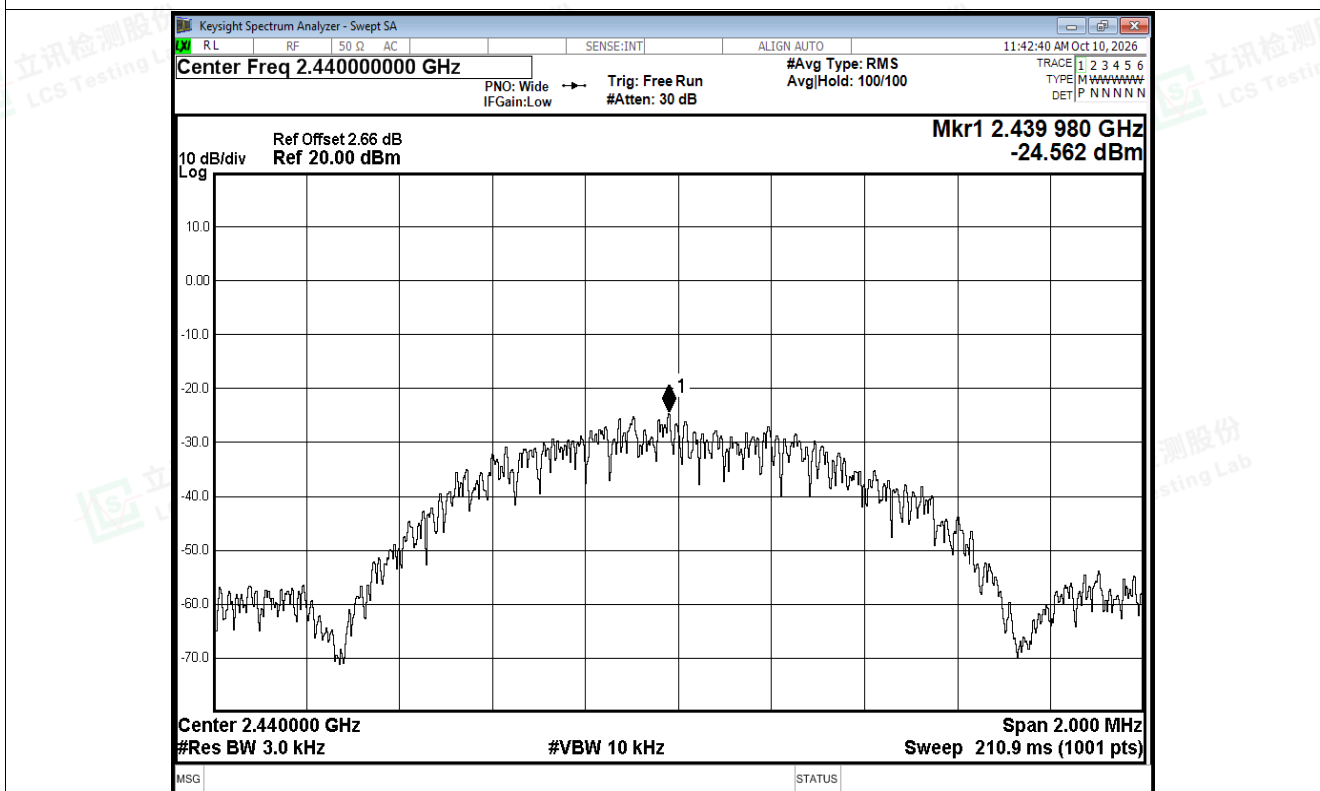
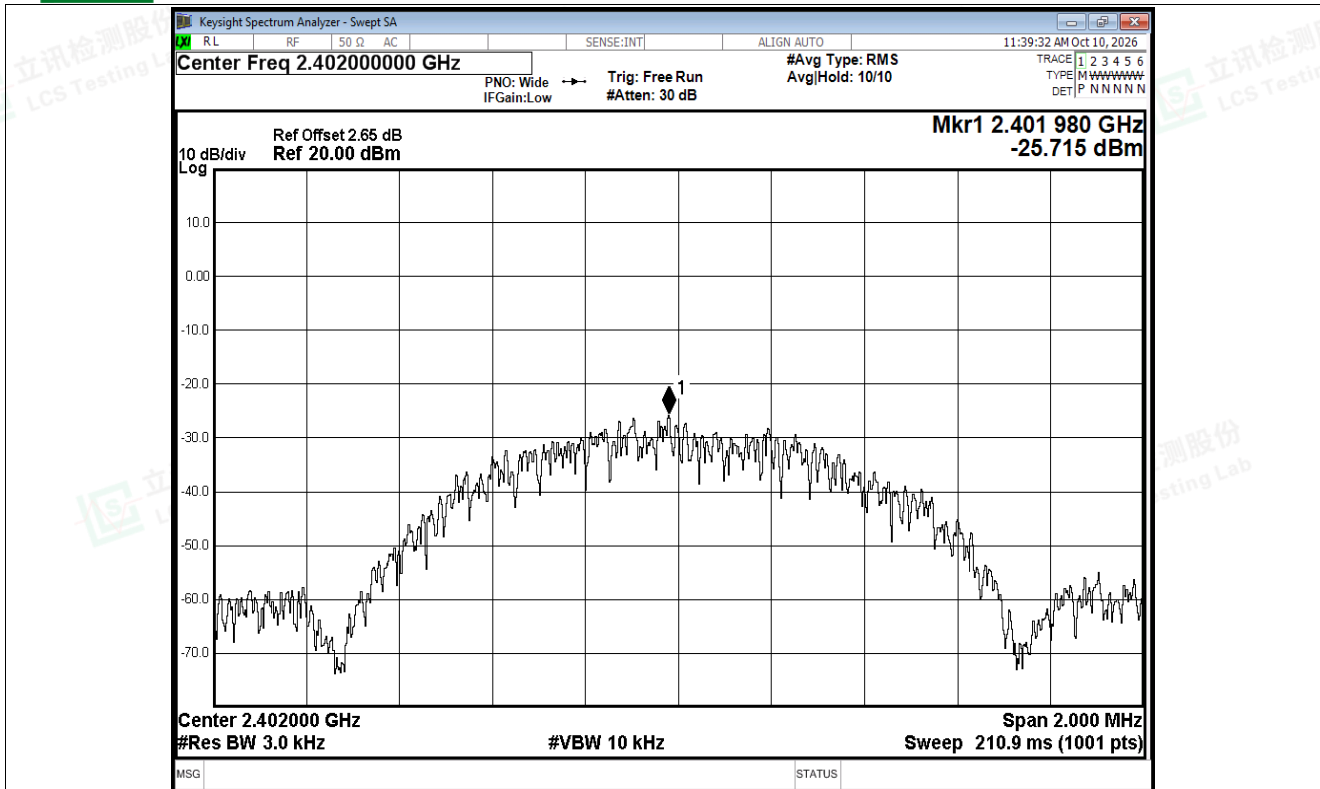


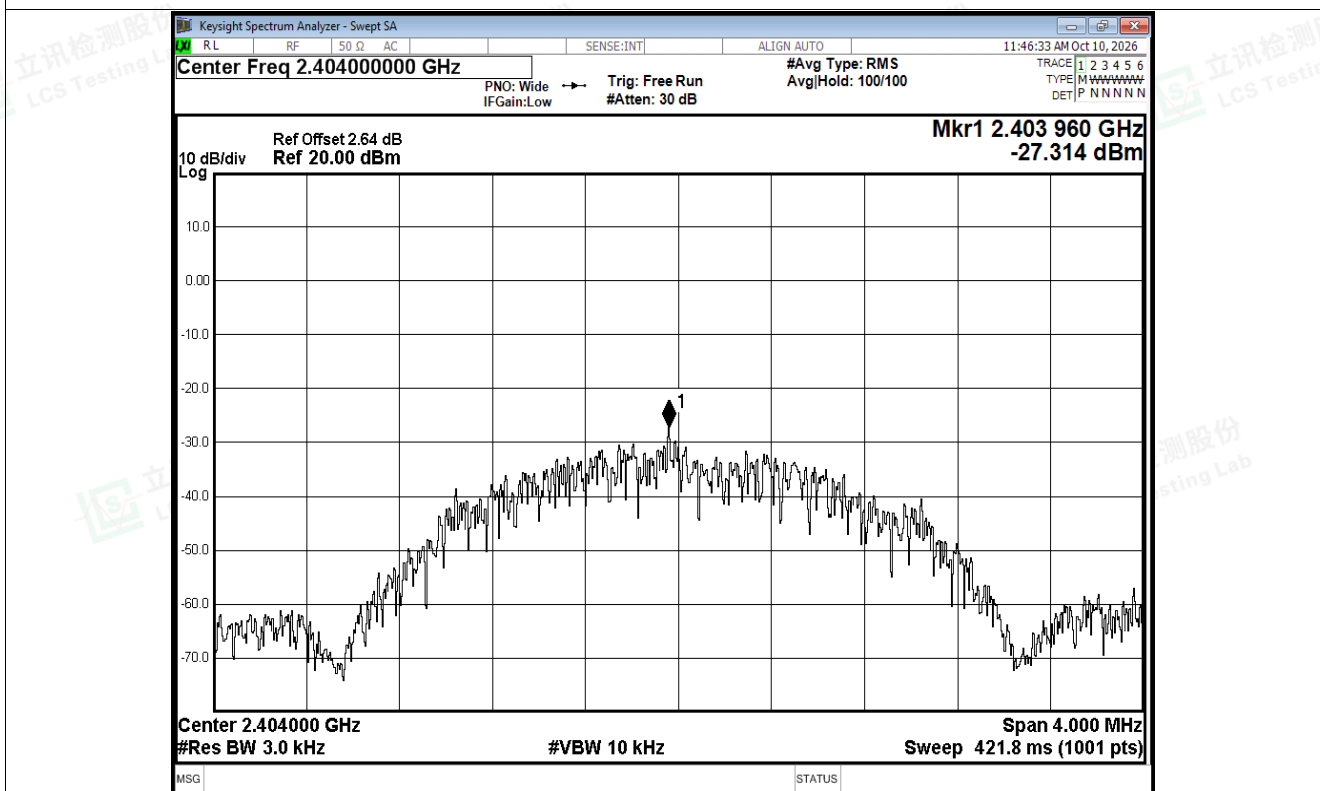
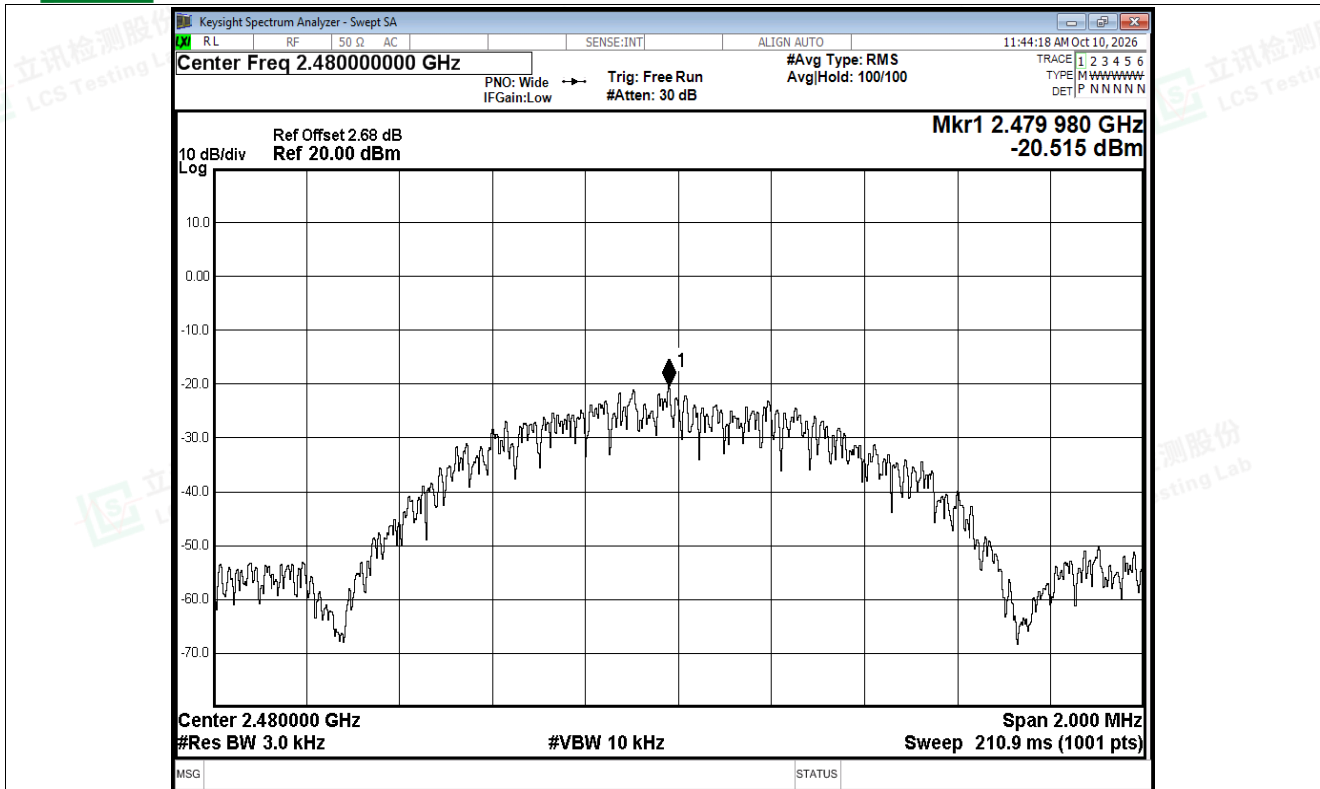
Peak Power NVNT BLE 2M 2478MHz Ant1



### B.3 Maximum Power Spectral Density Level

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted PSD<br>(dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------------|------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -25.72                      | 8                | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -24.56                      | 8                | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -20.52                      | 8                | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | -27.31                      | 8                | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | -26.68                      | 8                | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | -23.07                      | 8                | Pass    |

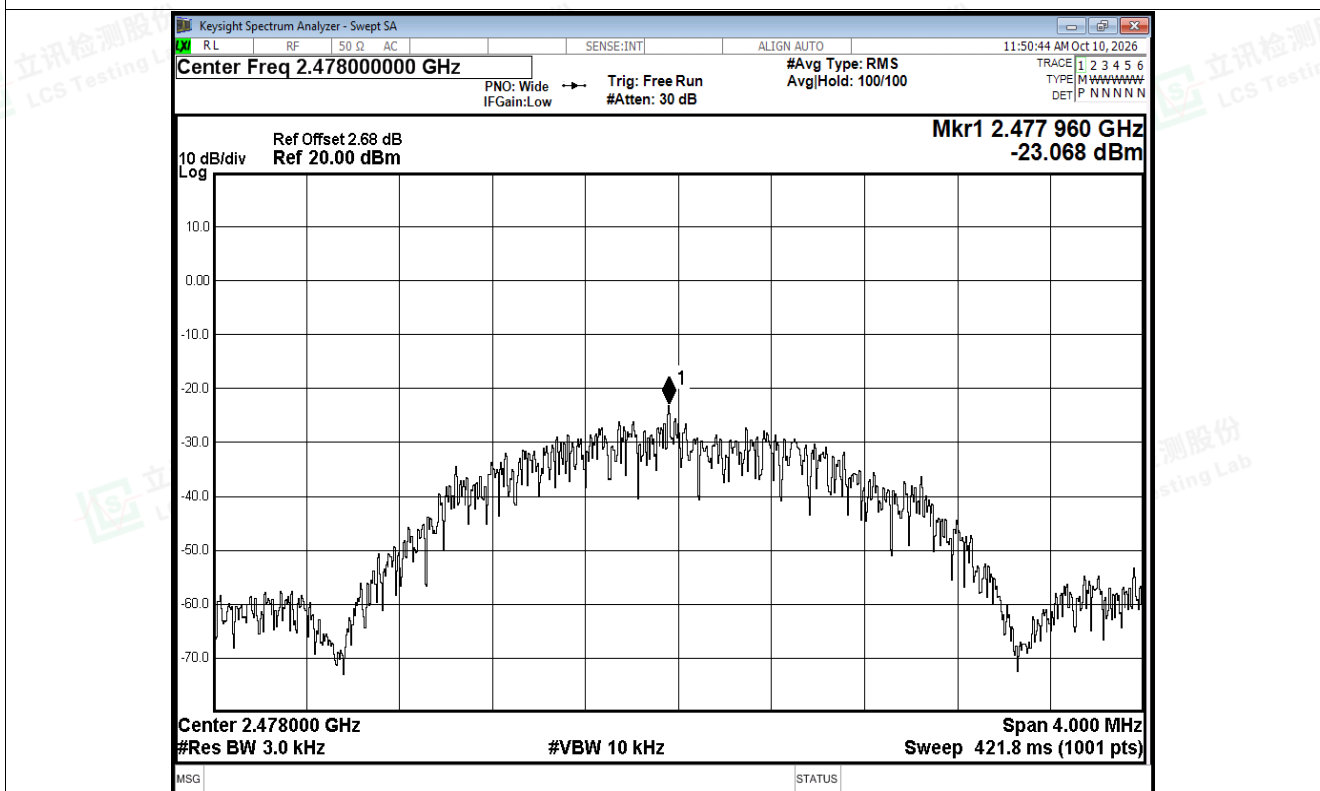
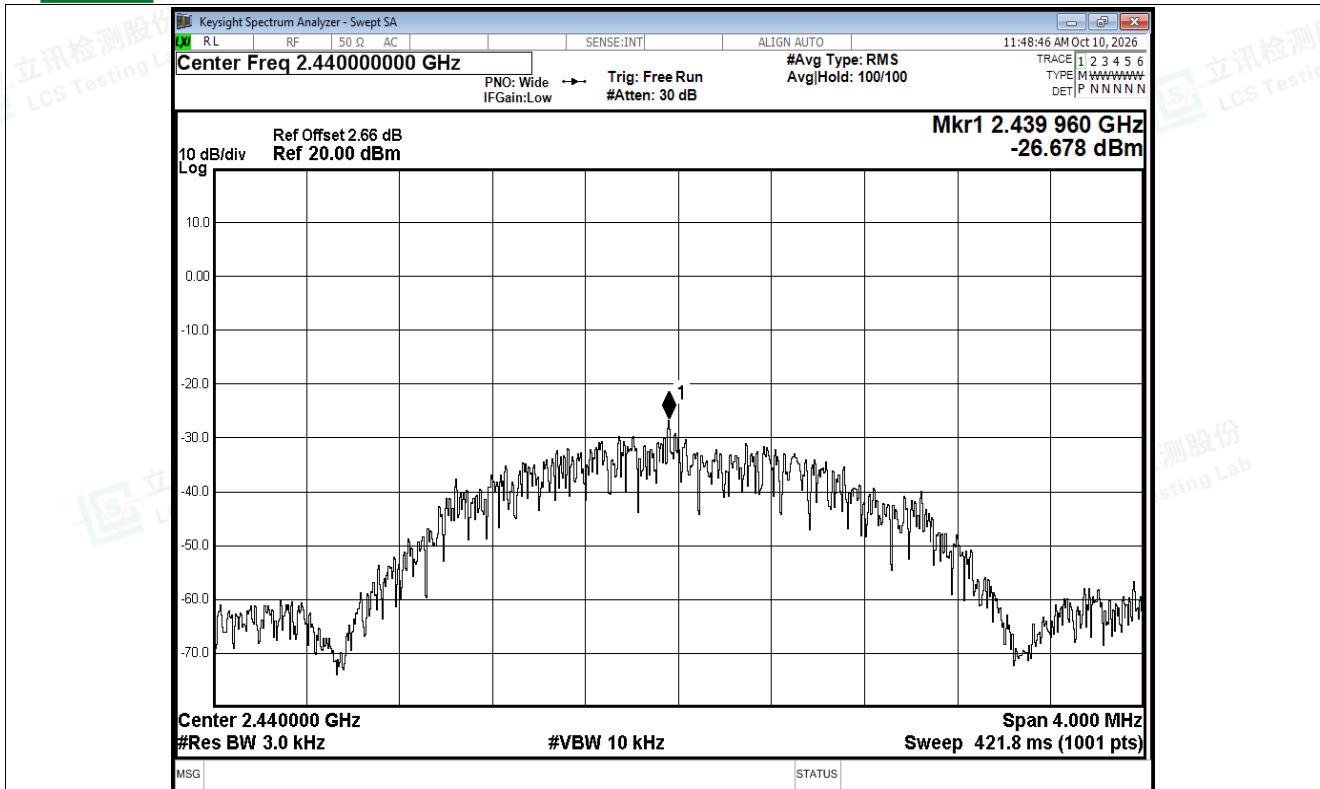




Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com



Shenzhen LCS Compliance Testing Laboratory Ltd.

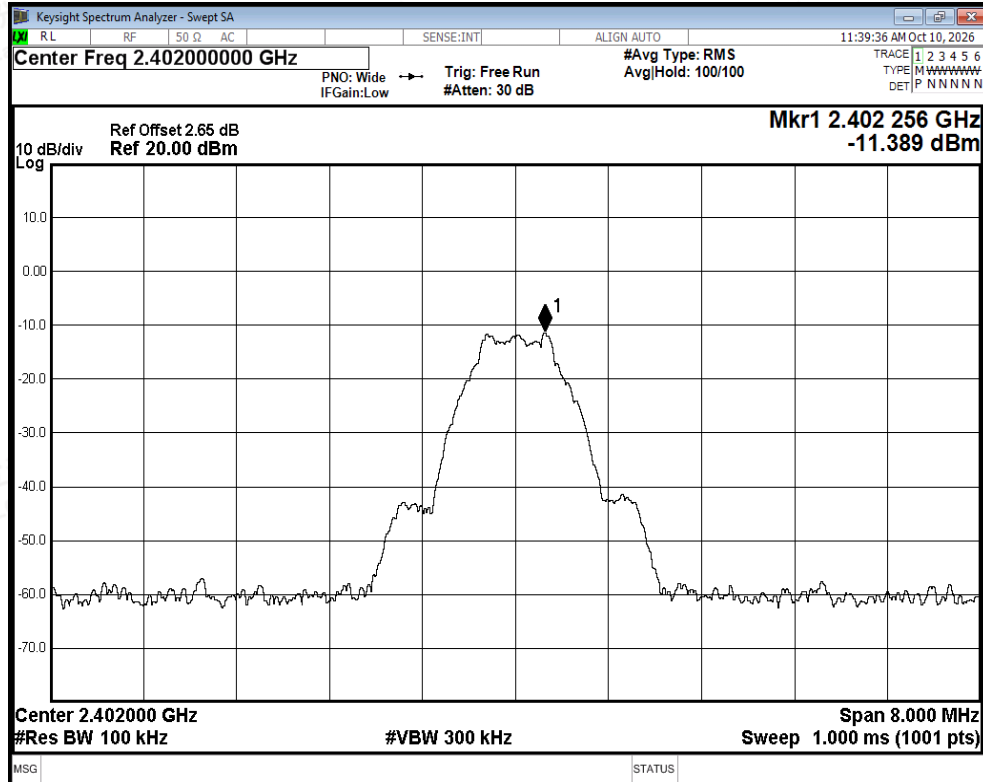
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

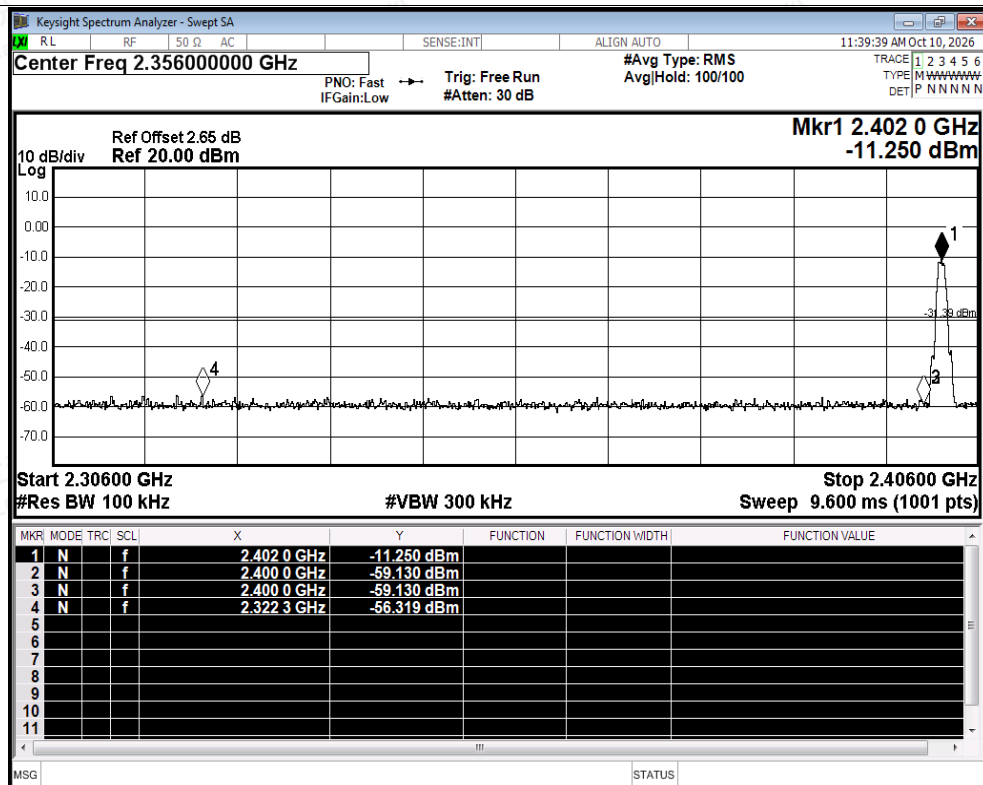


## B.4 Band Edge

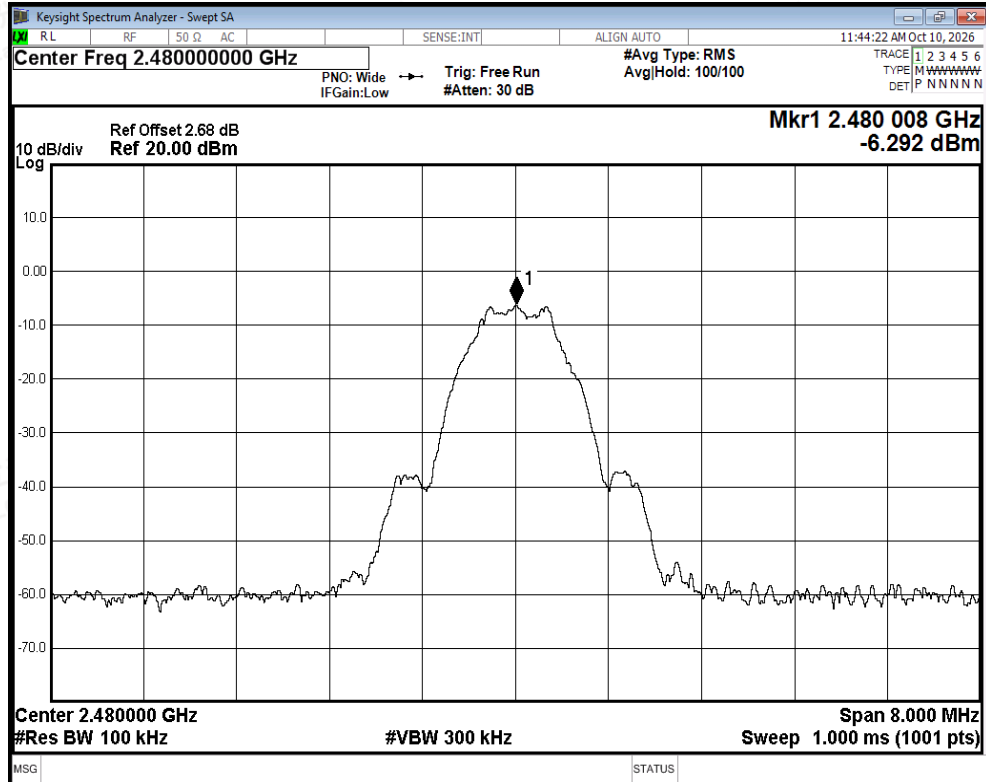
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -44.92          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -50.32          | -20         | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | -45.29          | -20         | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | -50.08          | -20         | Pass    |



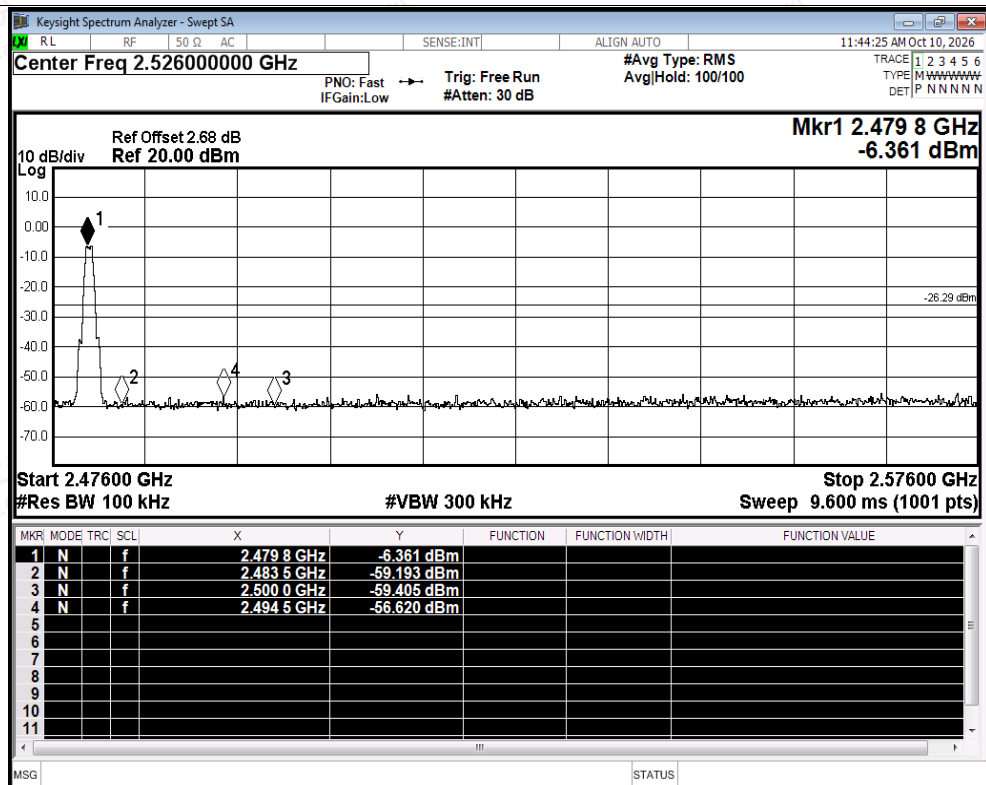
Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



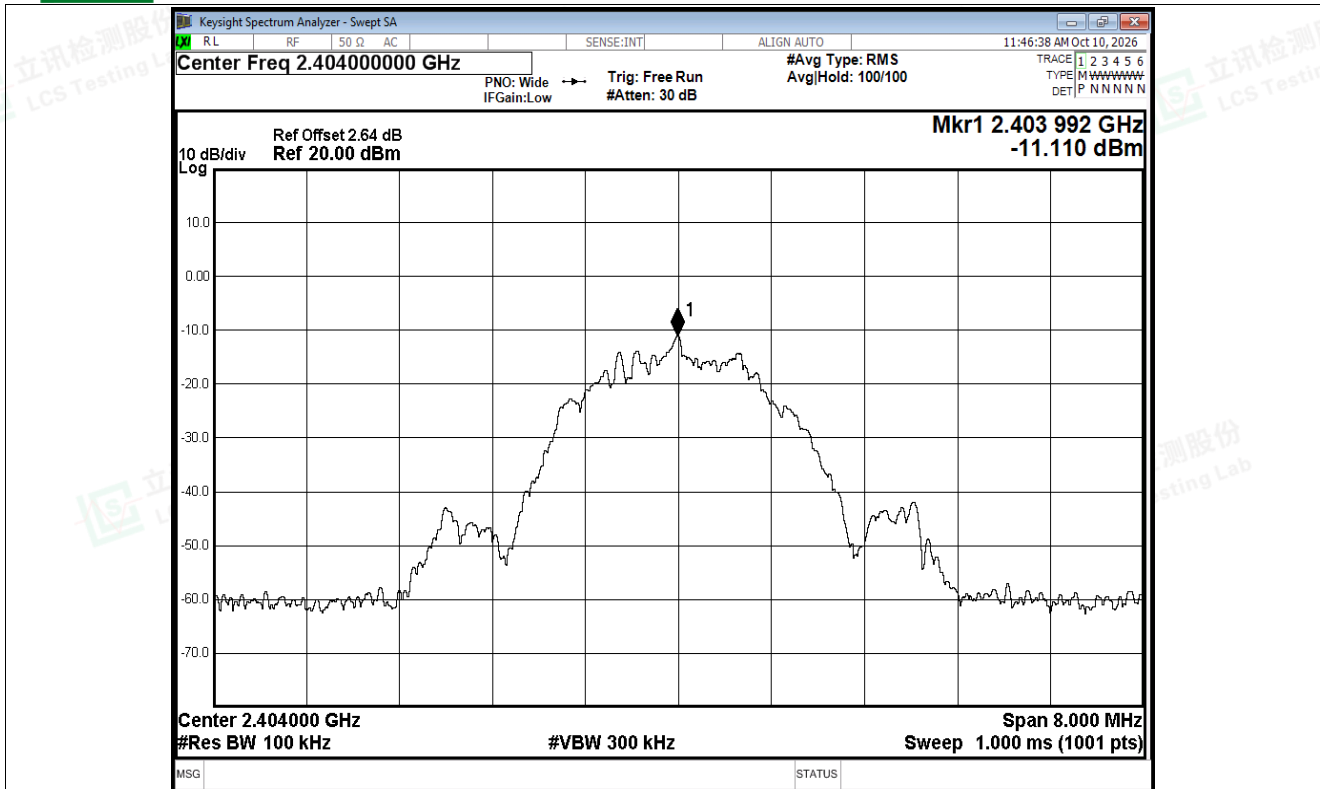
Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



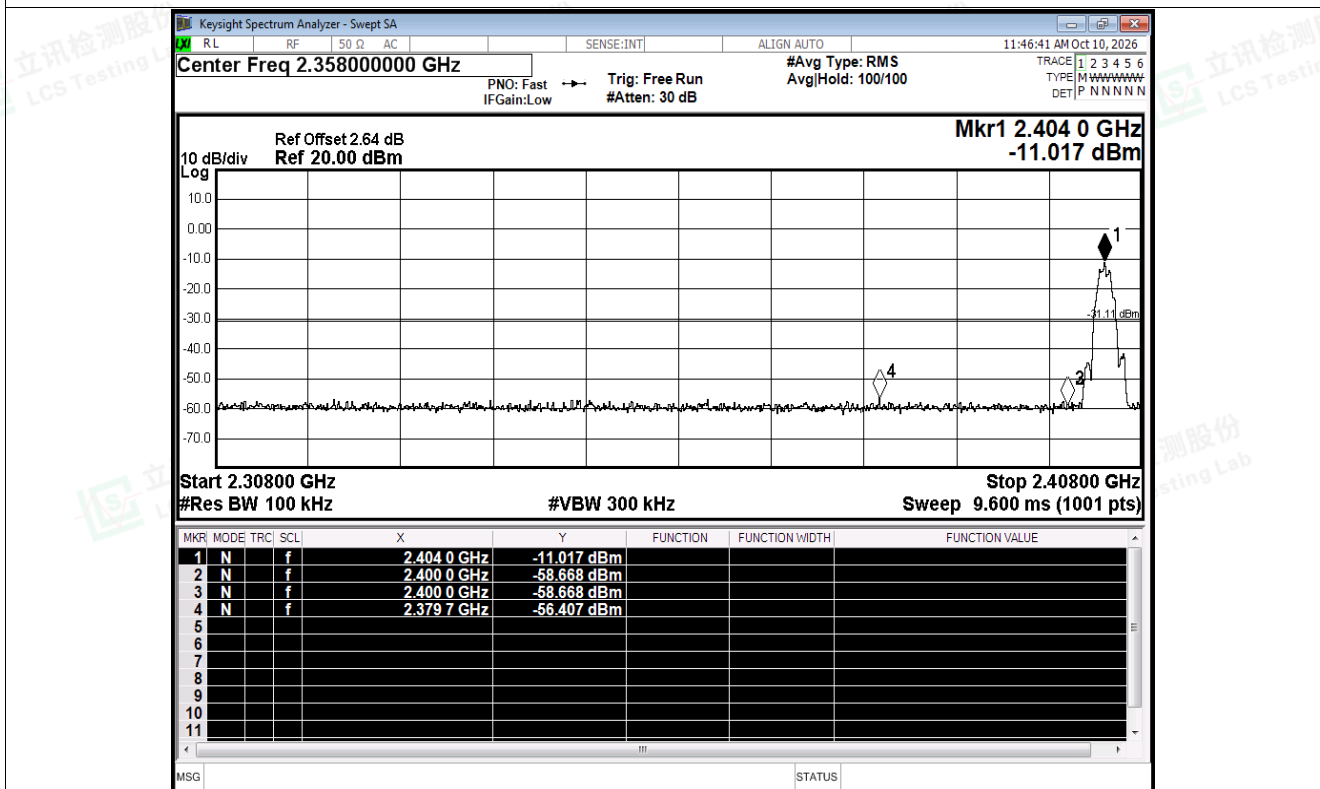
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



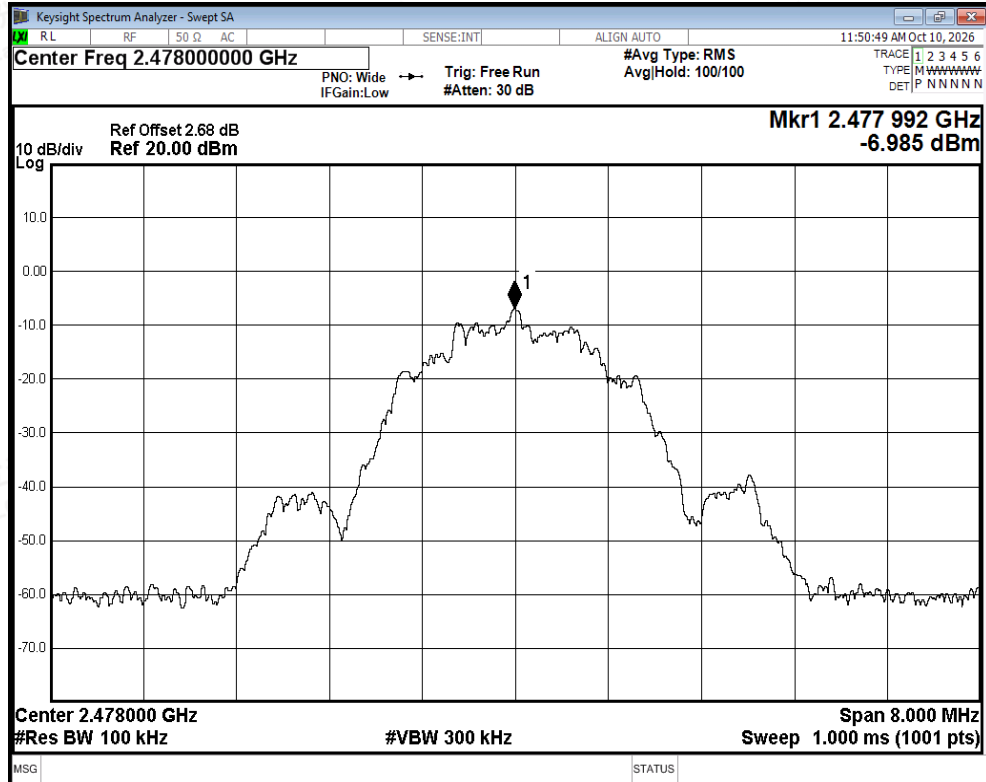
Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



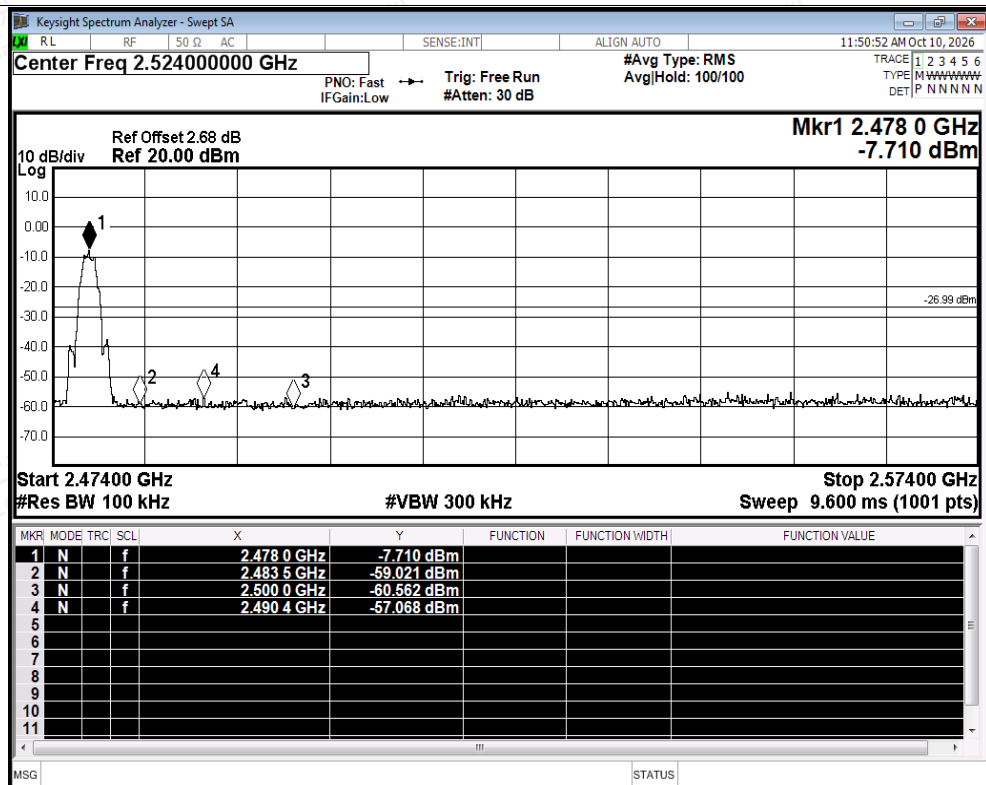
Band Edge NVNT BLE 2M 2404MHz Ant1 Ref



Band Edge NVNT BLE 2M 2404MHz Ant1 Emission



Band Edge NVNT BLE 2M 2478MHz Ant1 Ref

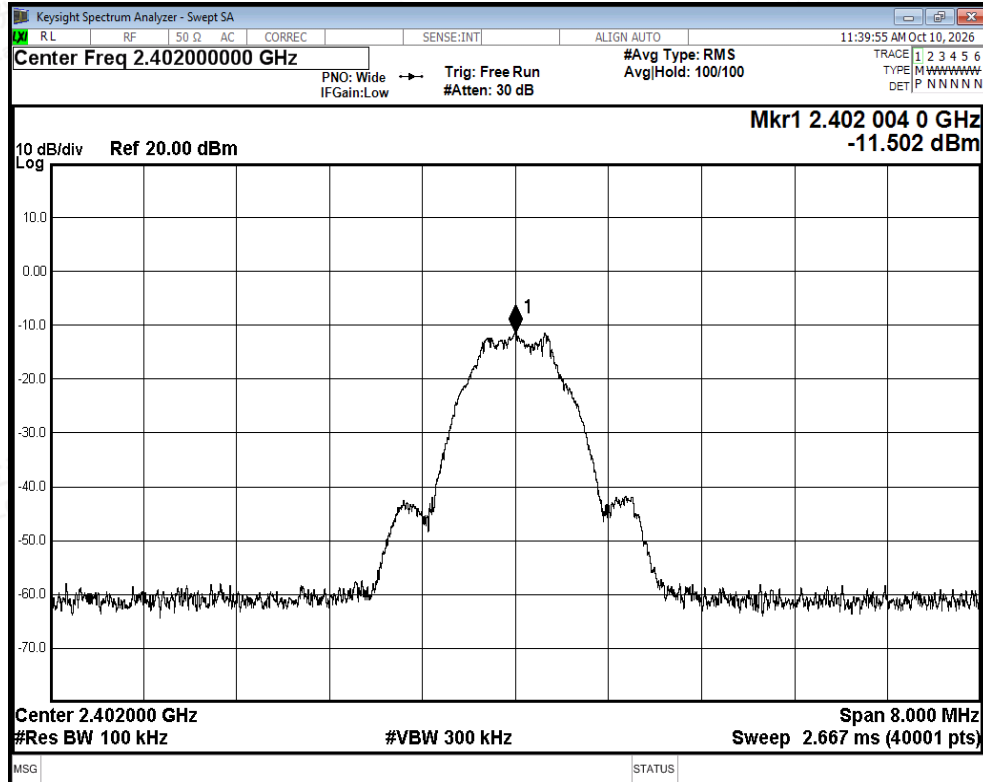


Band Edge NVNT BLE 2M 2478MHz Ant1 Emission

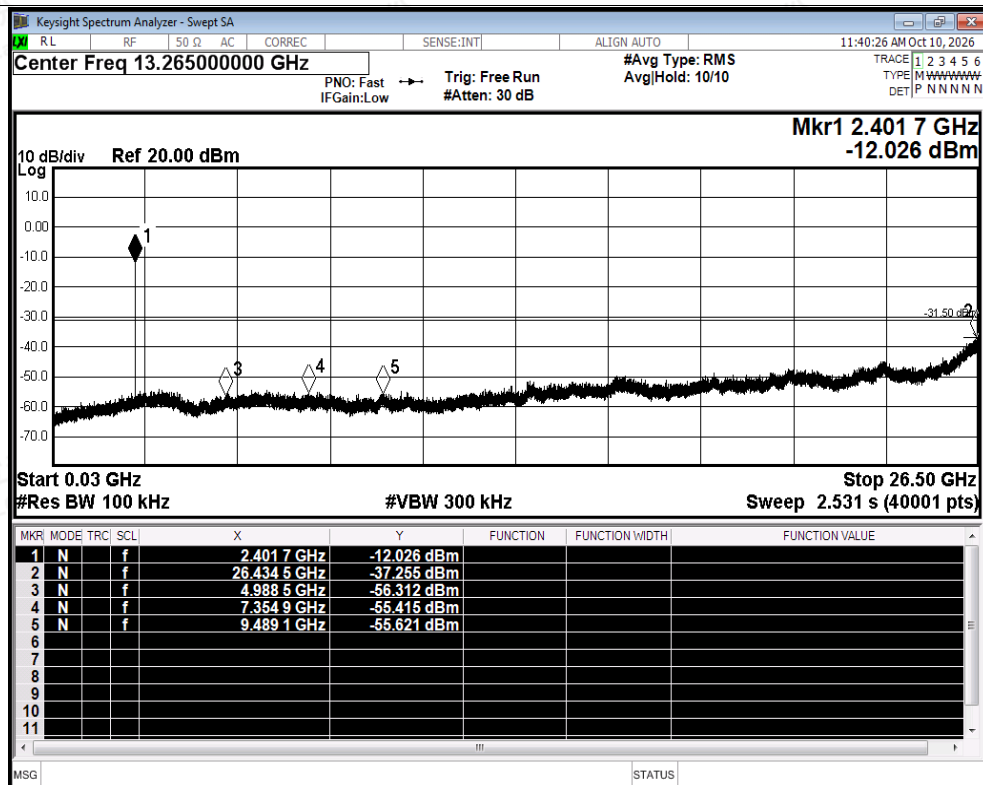


## B.5 Conducted RF Spurious Emission

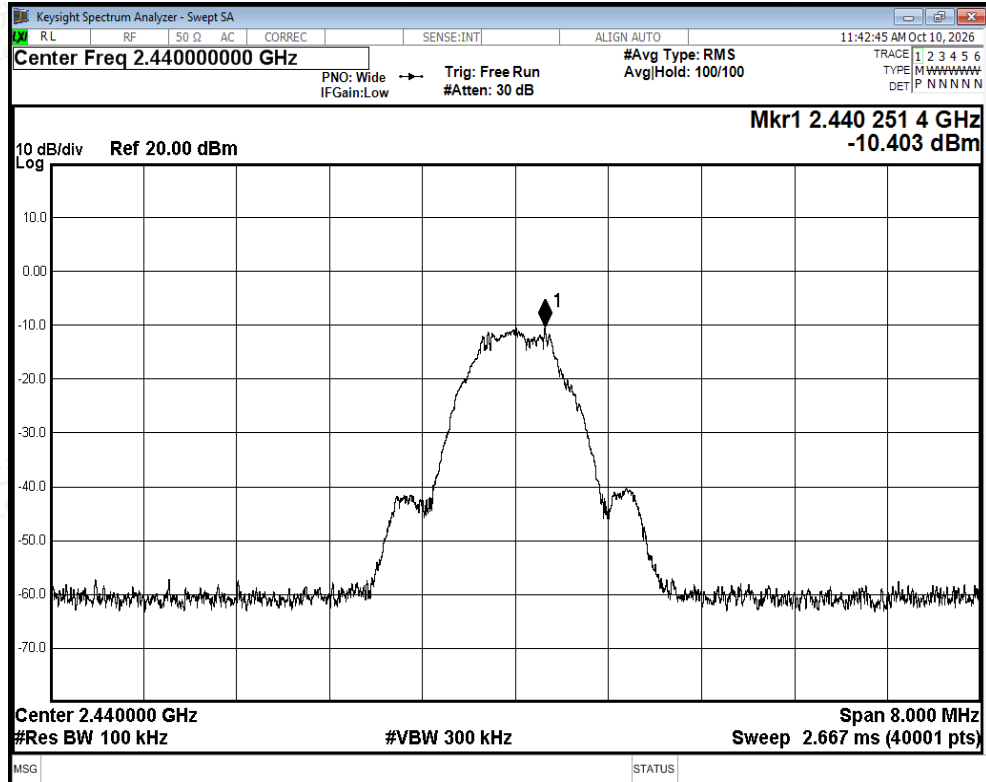
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -25.75          | -20         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -26.7           | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -30.96          | -20         | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | -31.96          | -20         | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | -34.92          | -20         | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | -38.54          | -20         | Pass    |



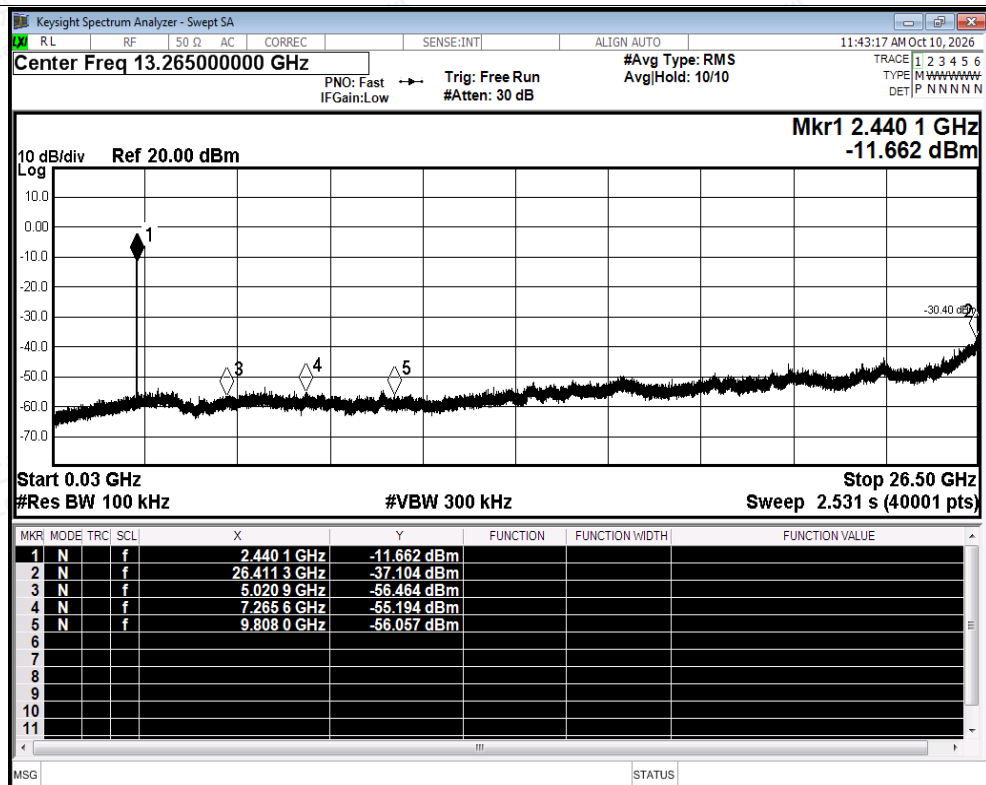
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



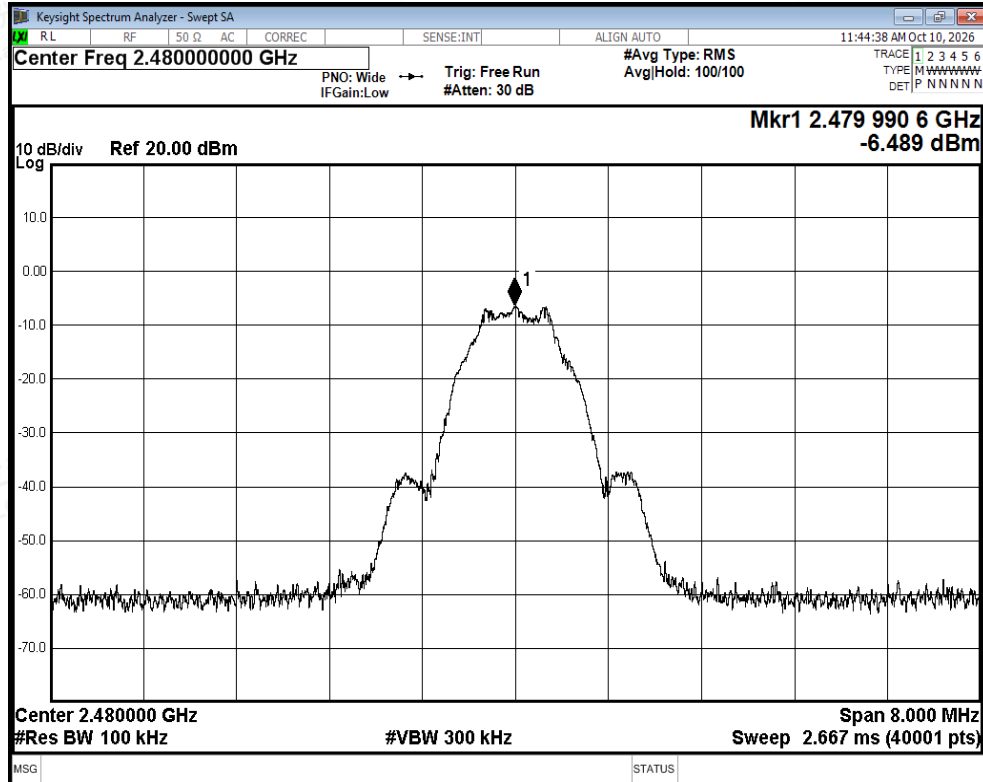
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



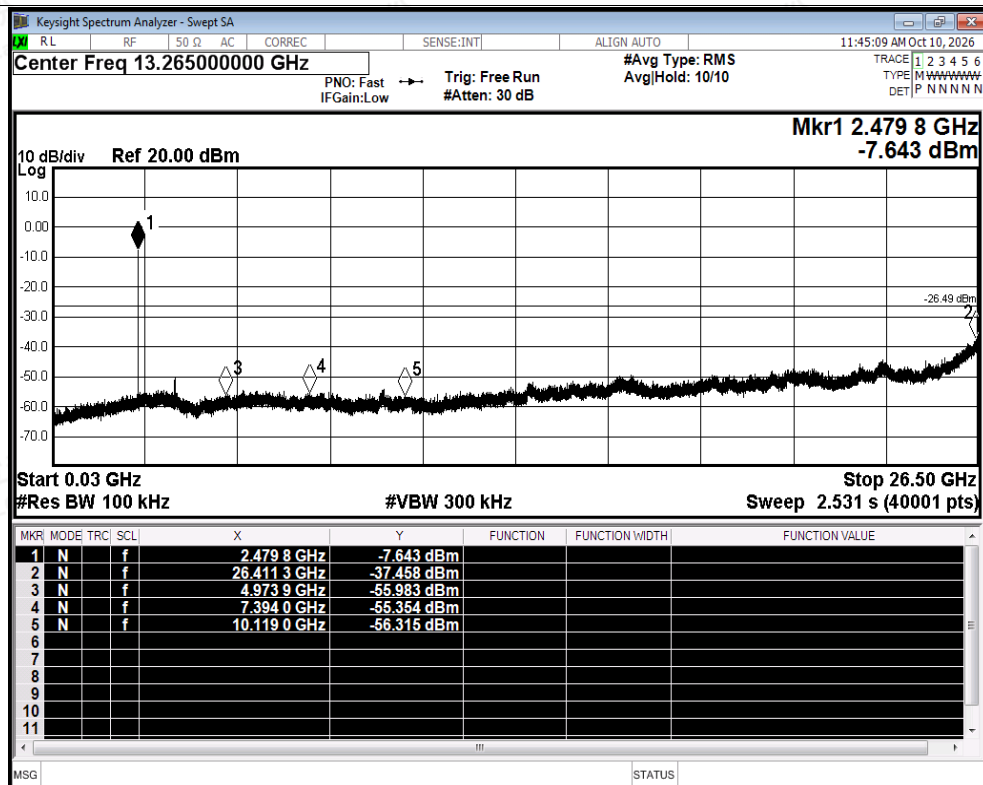
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



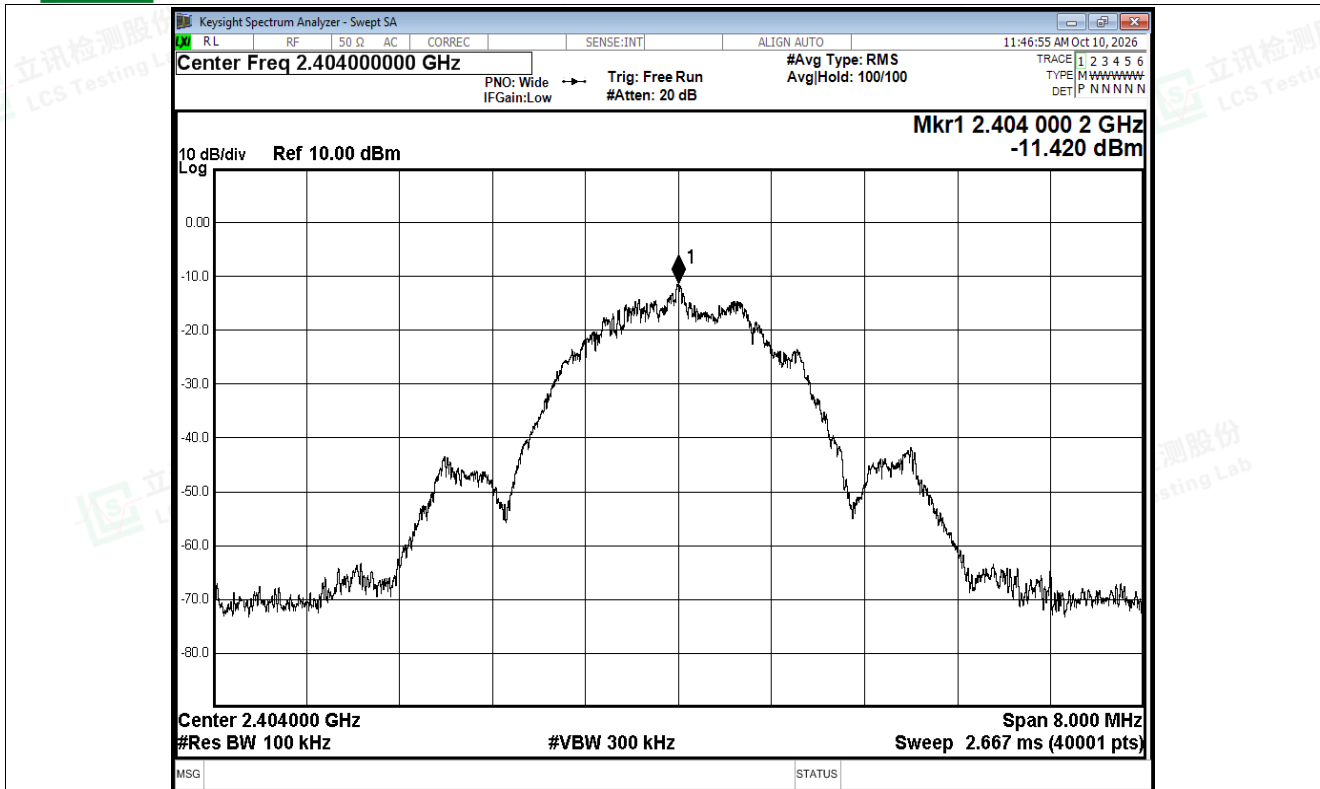
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



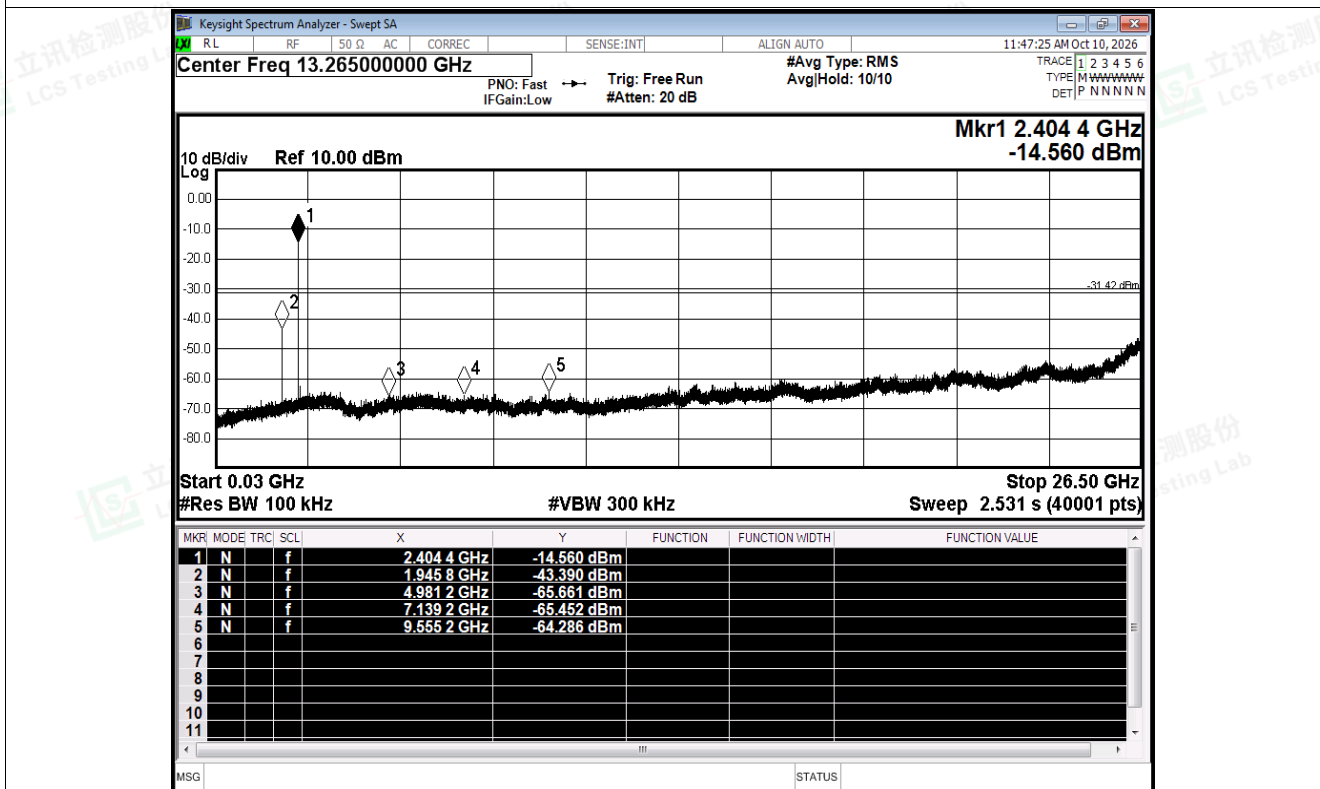
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



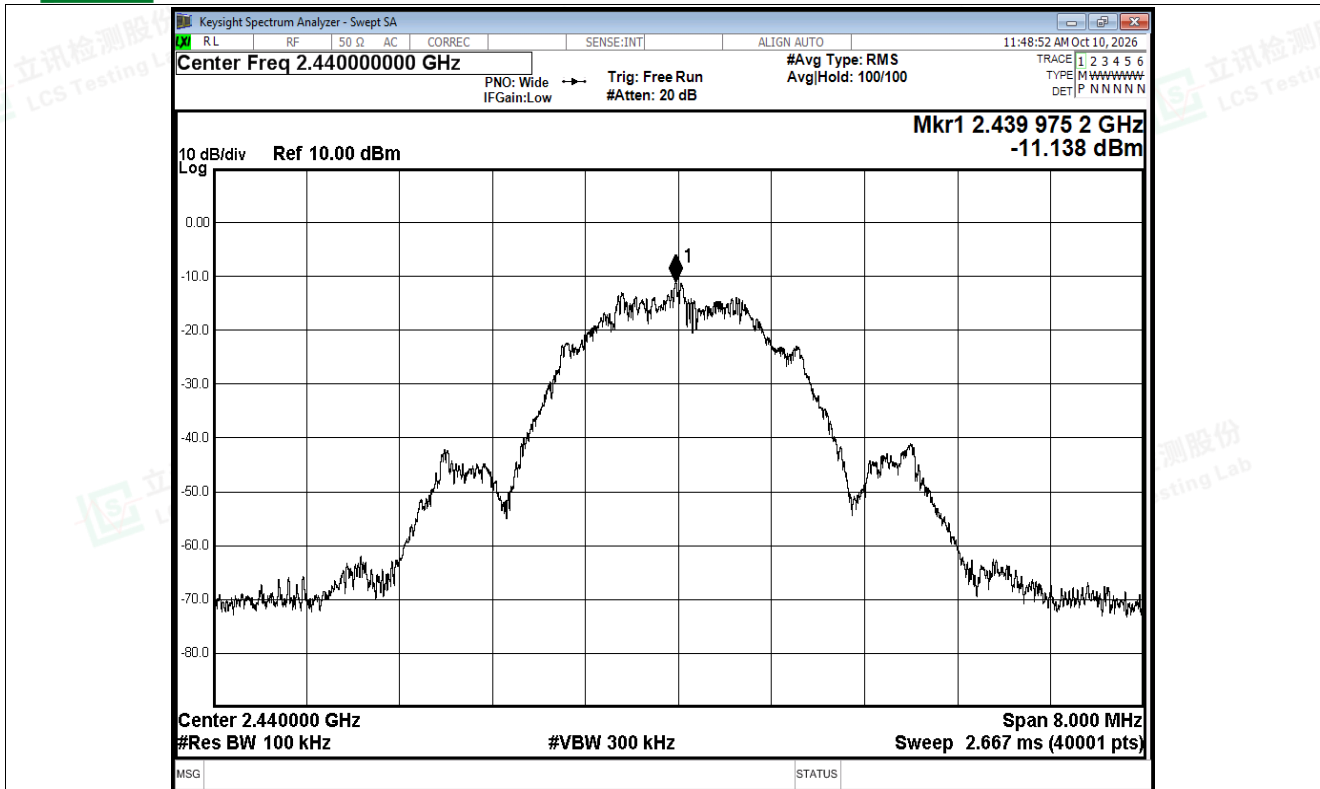
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



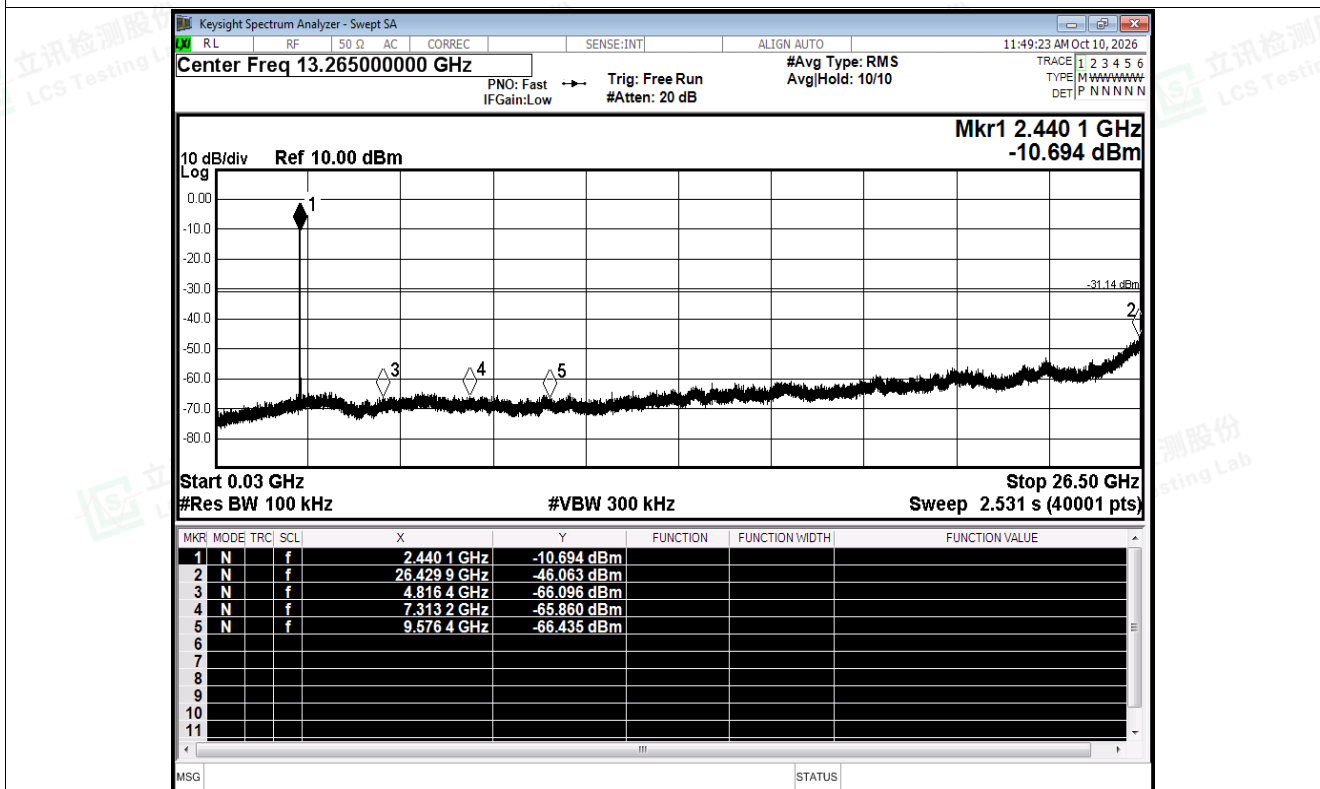
Tx. Spurious NVNT BLE 2M 2404MHz Ant1 Ref



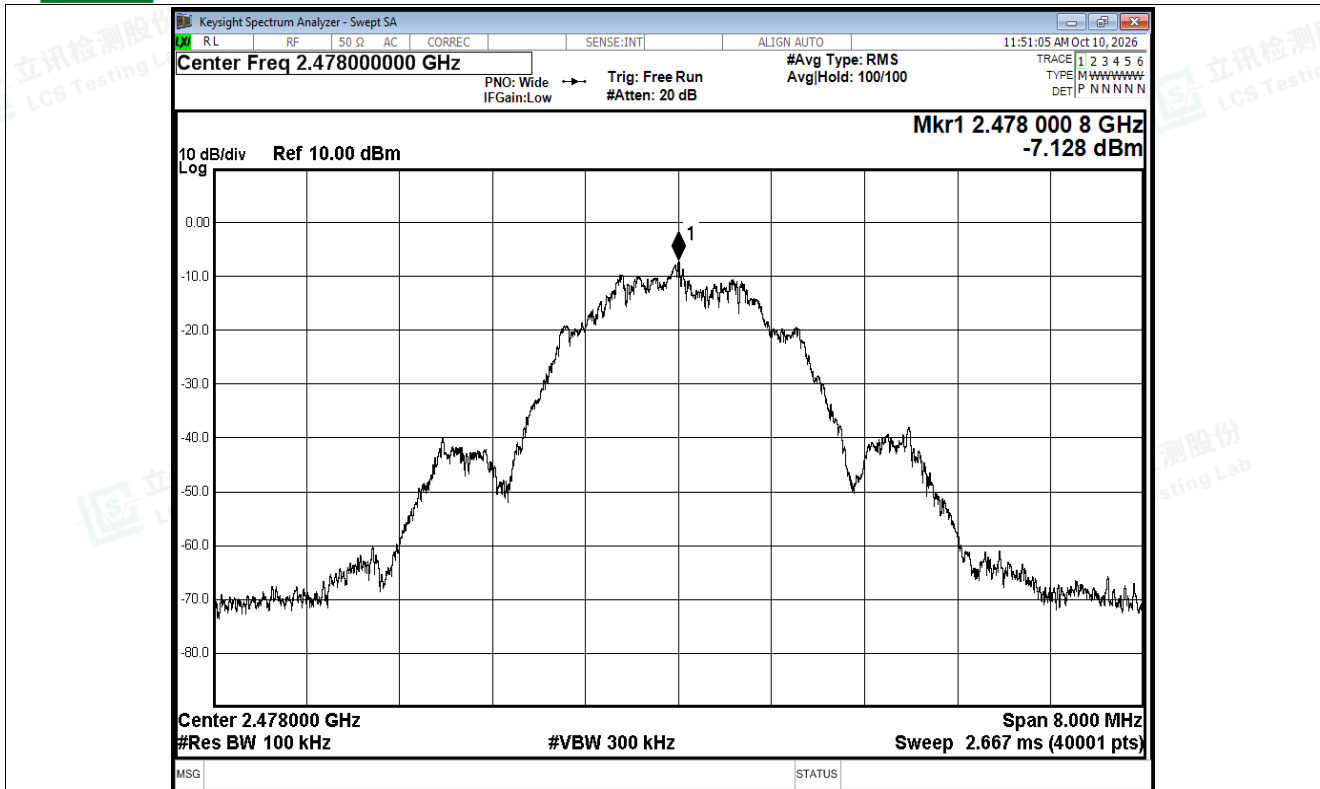
Tx. Spurious NVNT BLE 2M 2404MHz Ant1 Emission



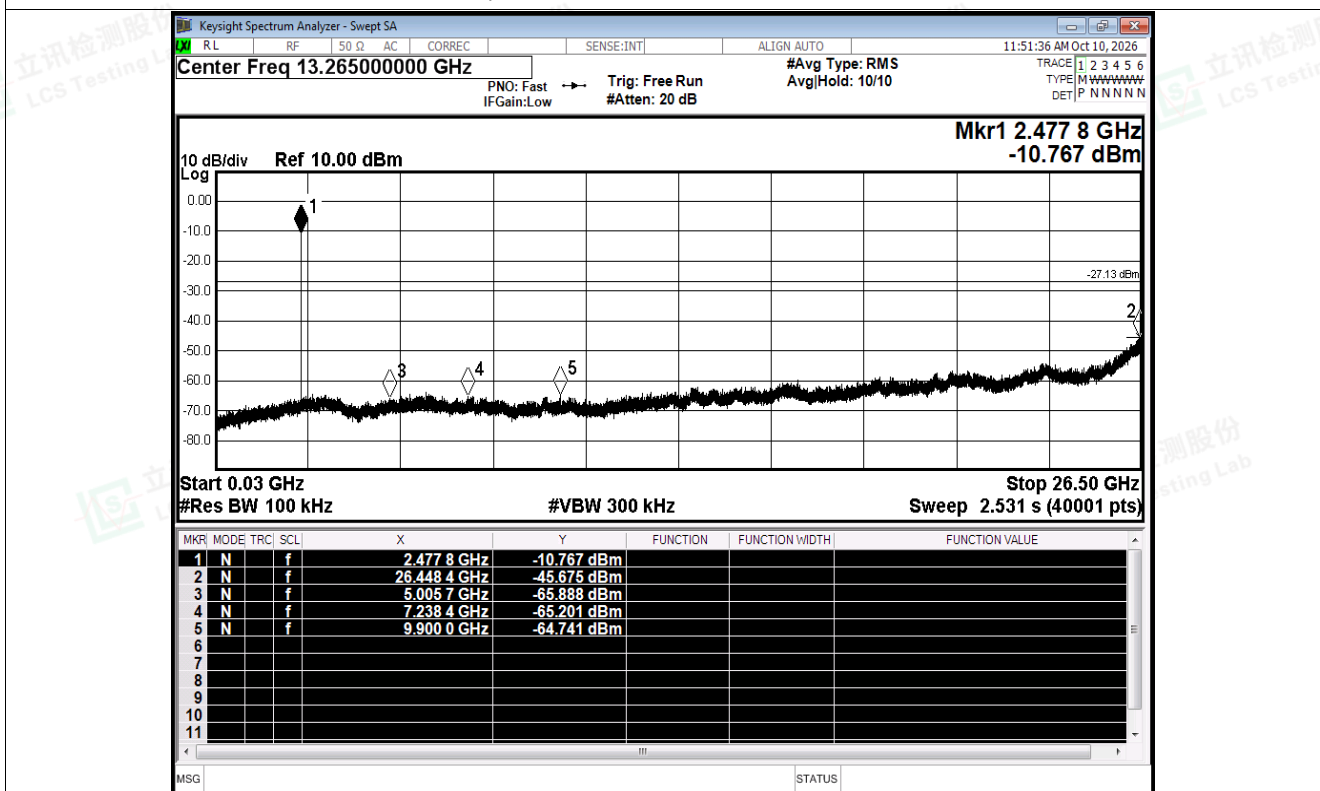
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2478MHz Ant1 Ref

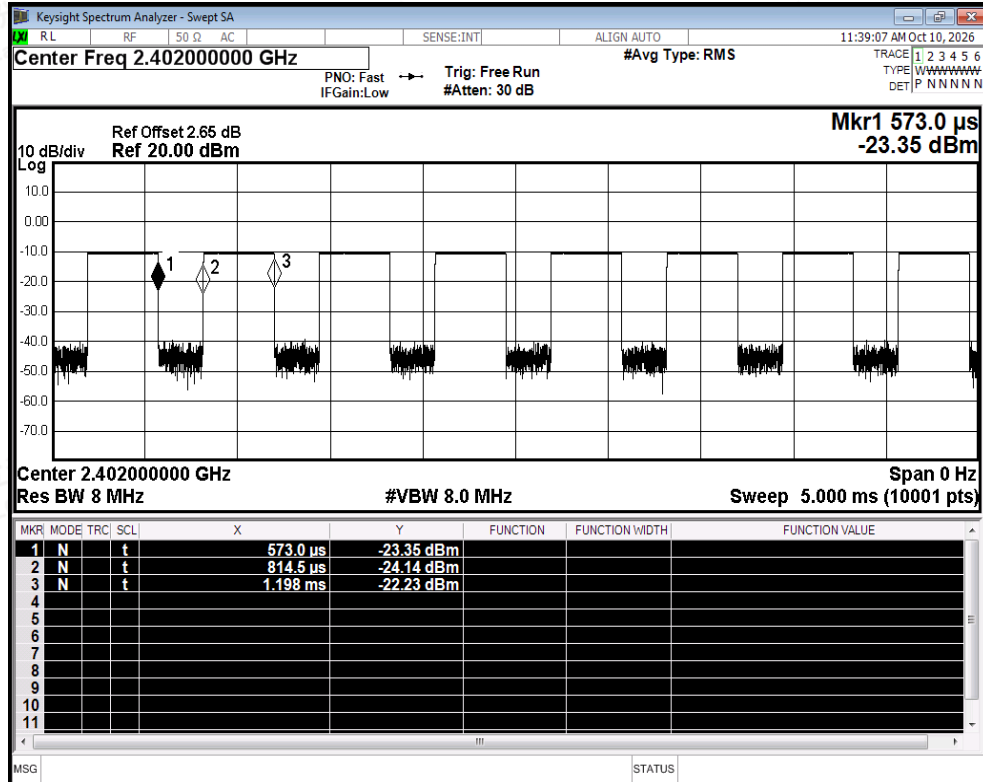


Tx. Spurious NVNT BLE 2M 2478MHz Ant1 Emission

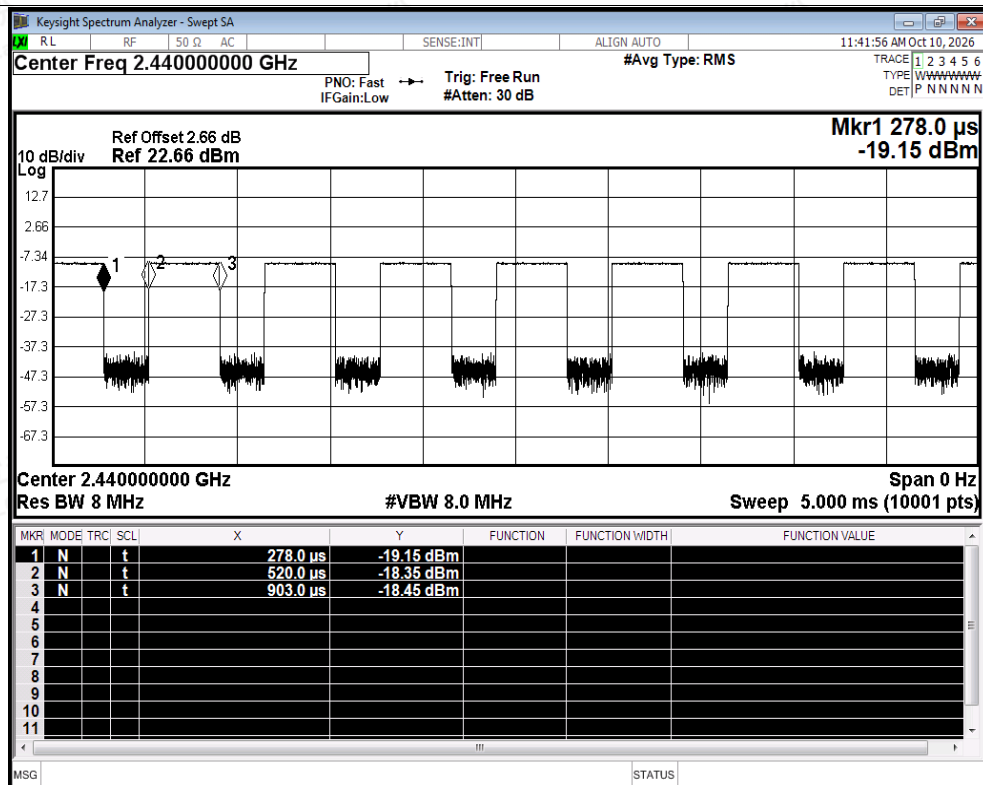


## B.6 Duty Cycle

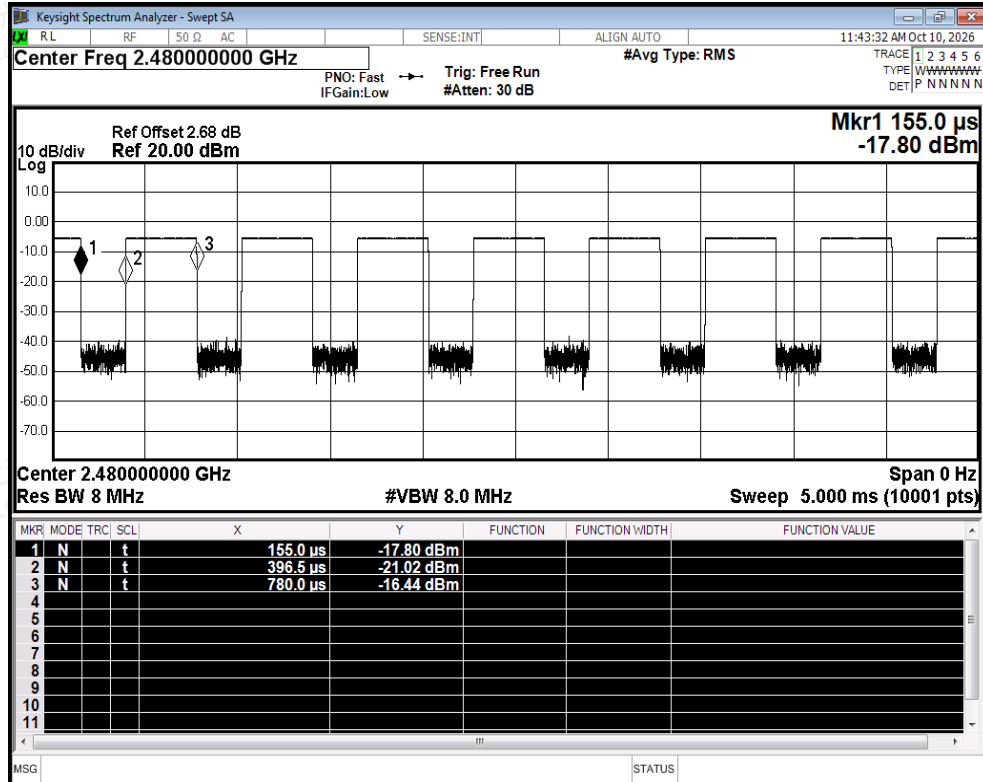
| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1M | 2402            | Ant1    | 61.36          | 2.12                   | 2.61      |
| NVNT      | BLE 1M | 2440            | Ant1    | 61.28          | 2.13                   | 2.61      |
| NVNT      | BLE 1M | 2480            | Ant1    | 61.36          | 2.12                   | 2.61      |
| NVNT      | BLE 2M | 2404            | Ant1    | 31.84          | 4.97                   | 5.03      |
| NVNT      | BLE 2M | 2440            | Ant1    | 31.92          | 4.96                   | 5.01      |
| NVNT      | BLE 2M | 2478            | Ant1    | 31.92          | 4.96                   | 5.01      |



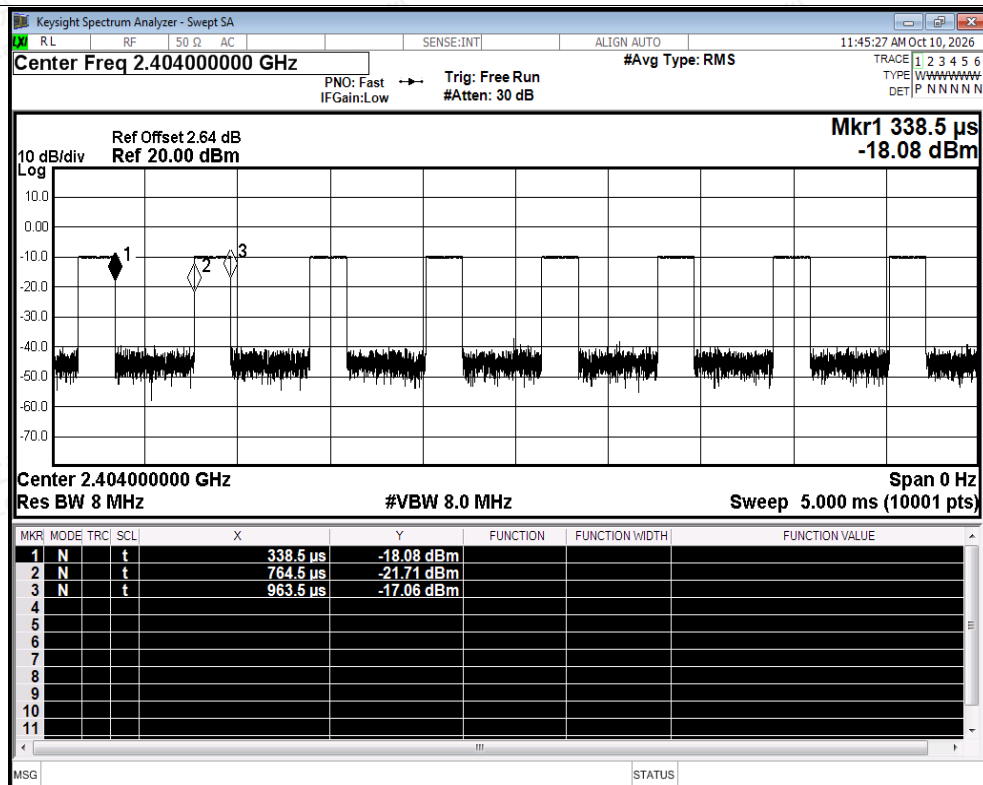
Duty Cycle NVNT BLE 1M 2402MHz Ant1



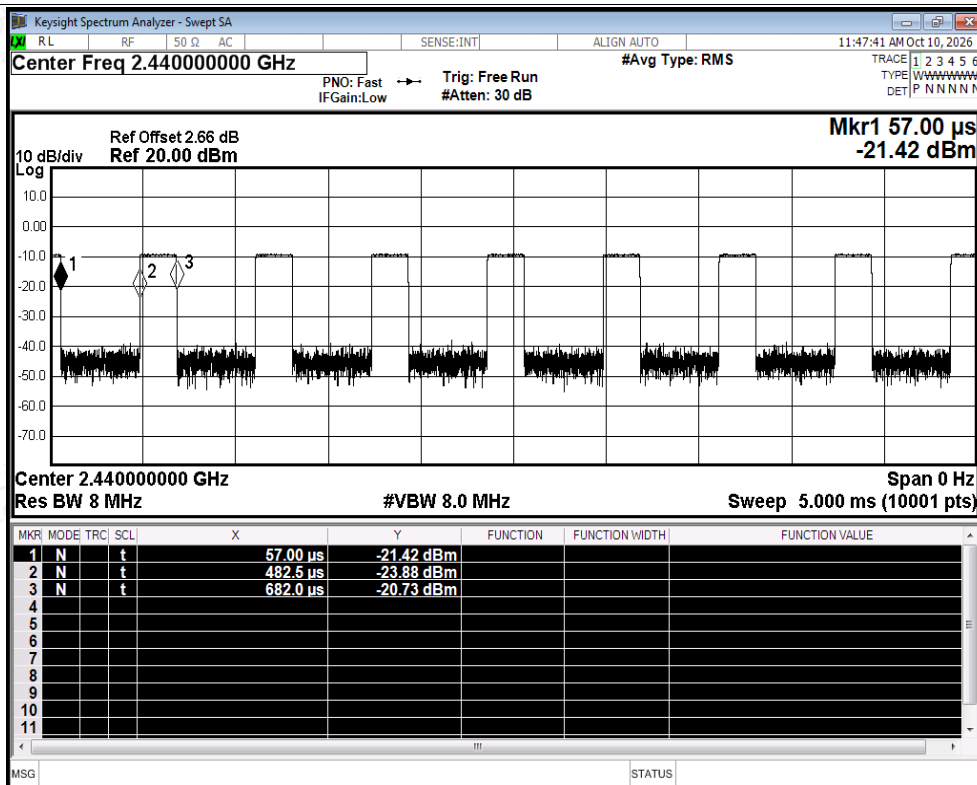
Duty Cycle NVNT BLE 1M 2440MHz Ant1



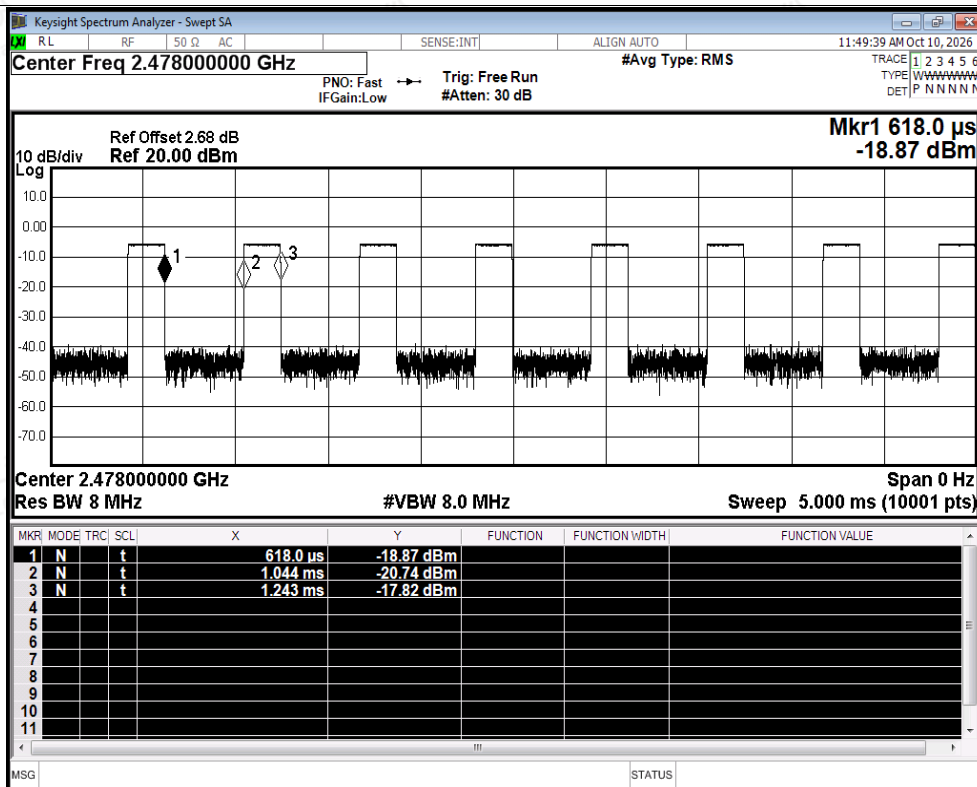
Duty Cycle NVNT BLE 1M 2480MHz Ant1



Duty Cycle NVNT BLE 2M 2404MHz Ant1



Duty Cycle NVNT BLE 2M 2440MHz Ant1

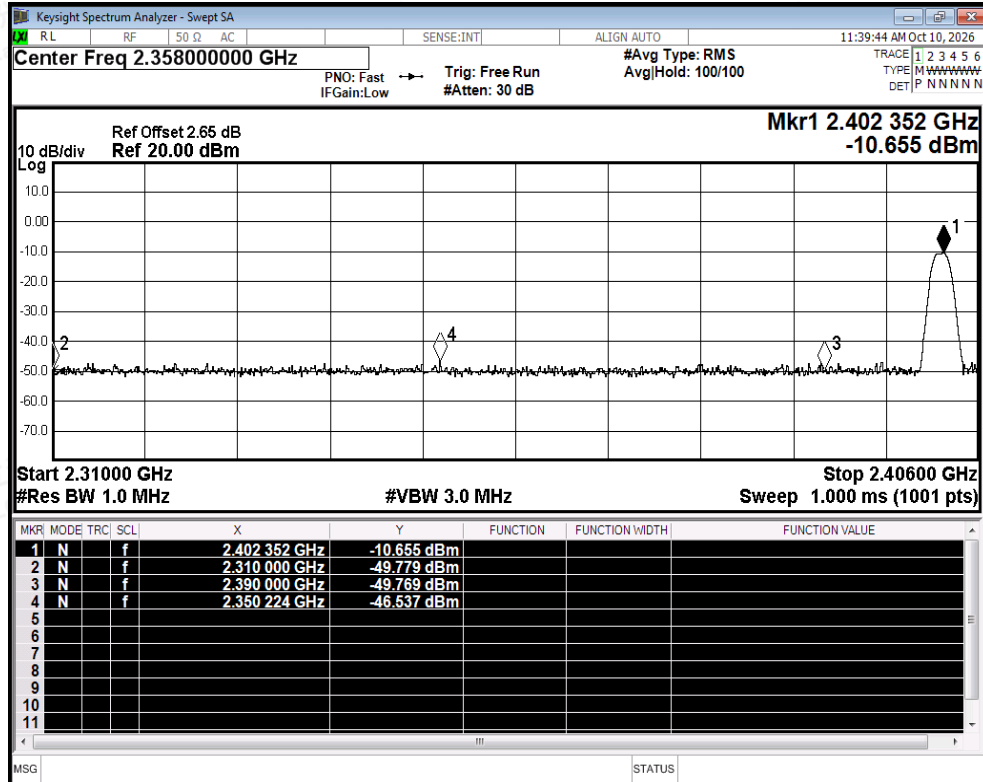


Duty Cycle NVNT BLE 2M 2478MHz Ant1

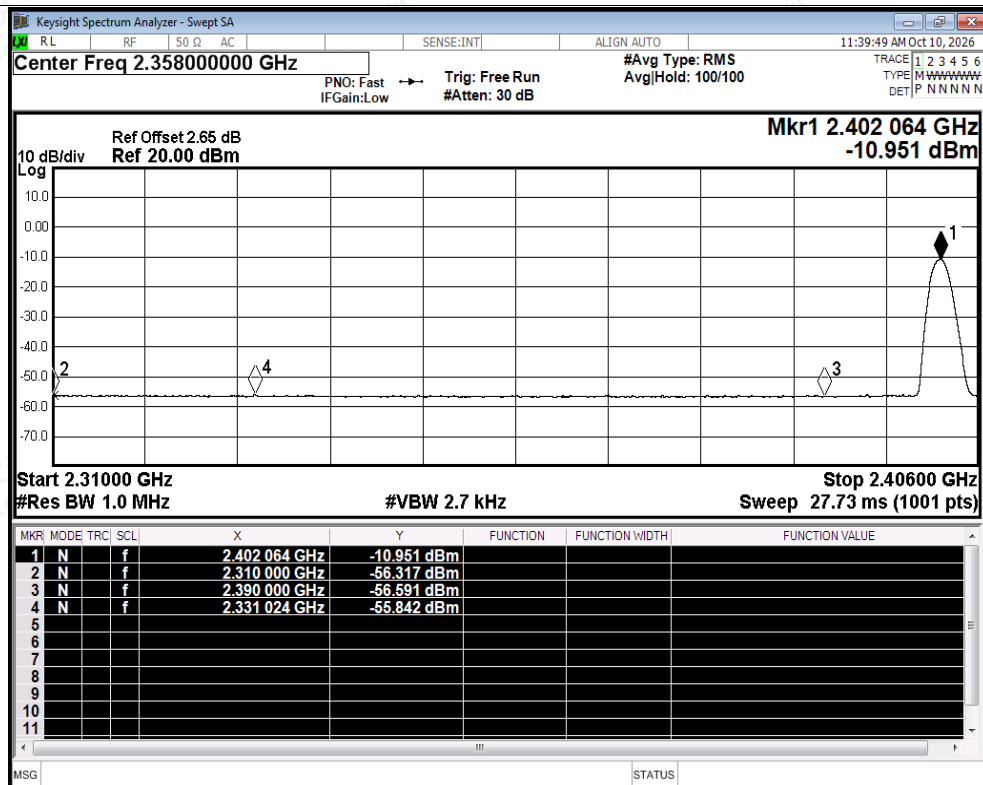


## B.7 Restrict Band

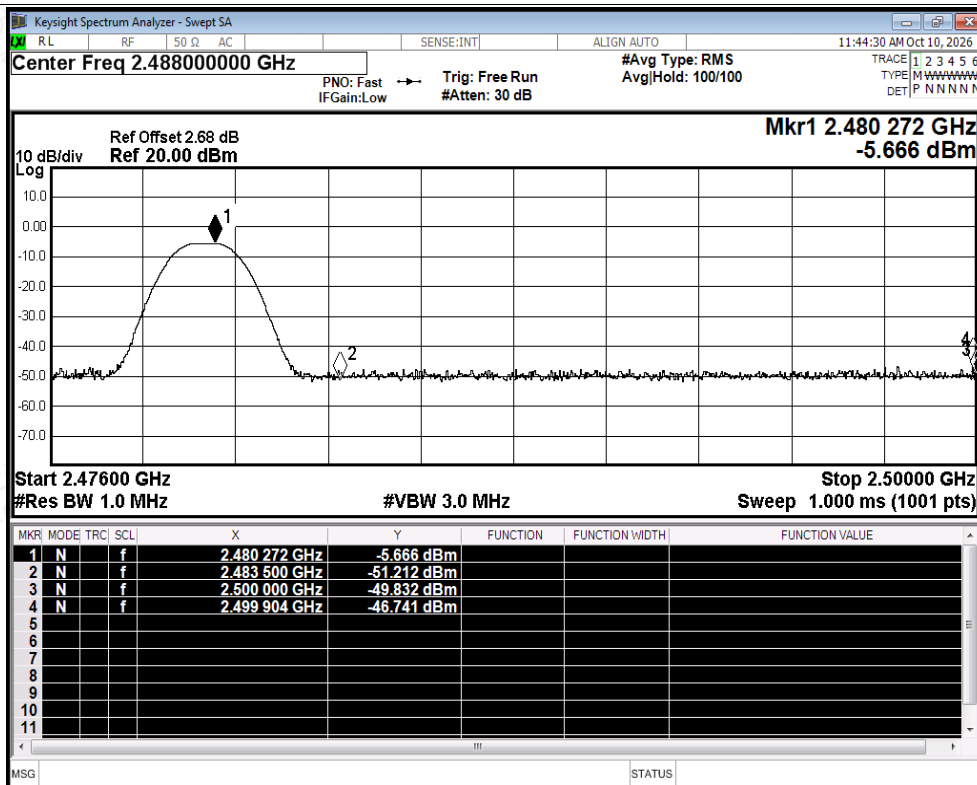
| Condition | Mode   | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|------------|------------|----------|----------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -49.77      | 2          | 47.49      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -56.31      | 2          | 40.95      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2350.224        | -46.53      | 2          | 50.73      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2331.024        | -55.84      | 2          | 41.42      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -49.87      | 2          | 47.39      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -56.58      | 2          | 40.68      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -51.21      | 2          | 46.05      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -56         | 2          | 41.26      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2499.904        | -46.74      | 2          | 50.52      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.536        | -55.79      | 2          | 41.47      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -49.83      | 2          | 47.43      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -56.41      | 2          | 40.85      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 2310            | -49.78      | 2          | 47.48      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 2310            | -55.93      | 2          | 41.33      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 2379.188        | -46.1       | 2          | 51.16      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 2323.818        | -55.48      | 2          | 41.78      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 2390            | -50.57      | 2          | 46.69      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2404            | Ant1    | 2390            | -56.56      | 2          | 40.7       | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 2483.5          | -49.63      | 2          | 47.63      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 2483.5          | -56.15      | 2          | 41.11      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 2499.246        | -46.98      | 2          | 50.28      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 2496.698        | -55.55      | 2          | 41.71      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 2500            | -49.62      | 2          | 47.64      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2478            | Ant1    | 2500            | -56.01      | 2          | 41.25      | Average  | 54             | Pass    |



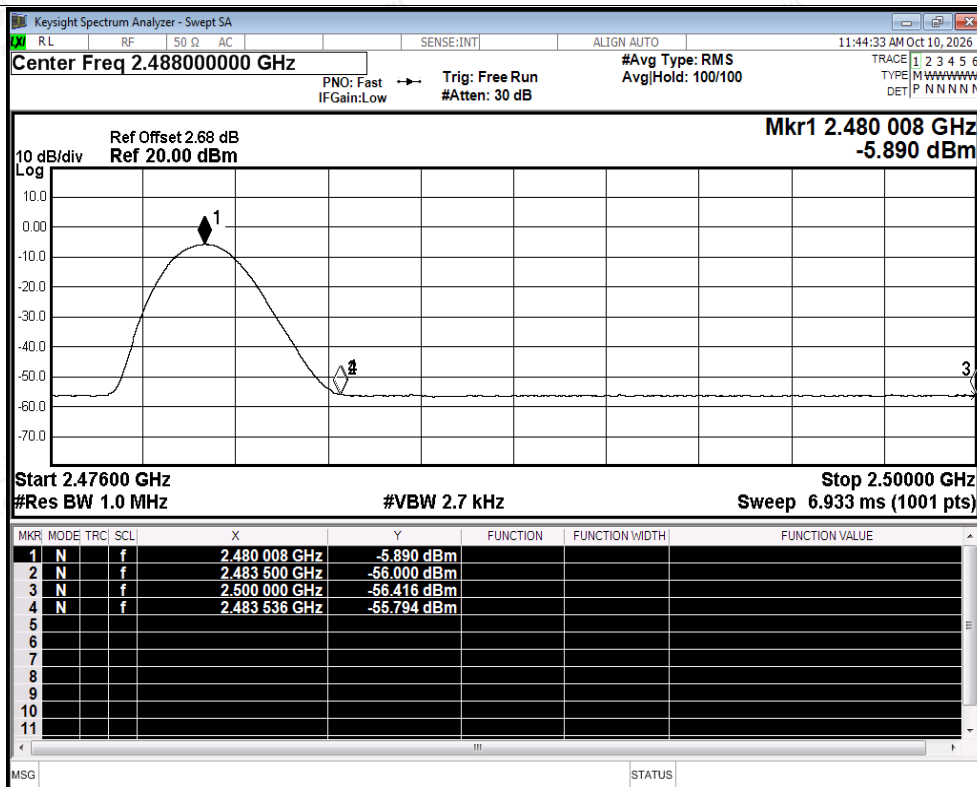
Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



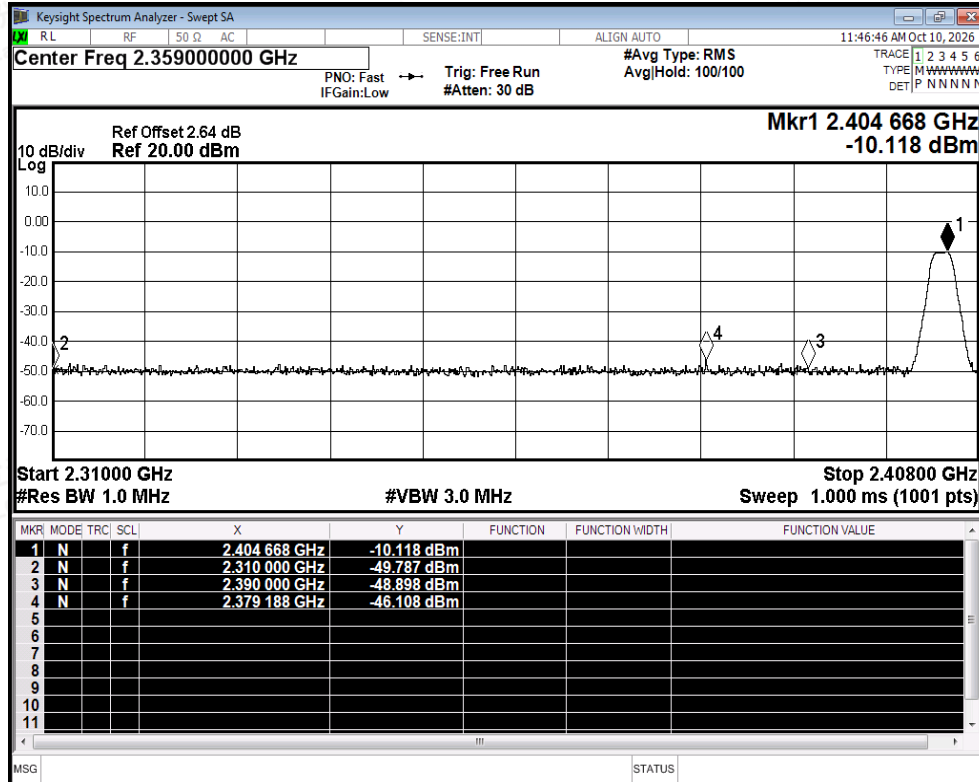
Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



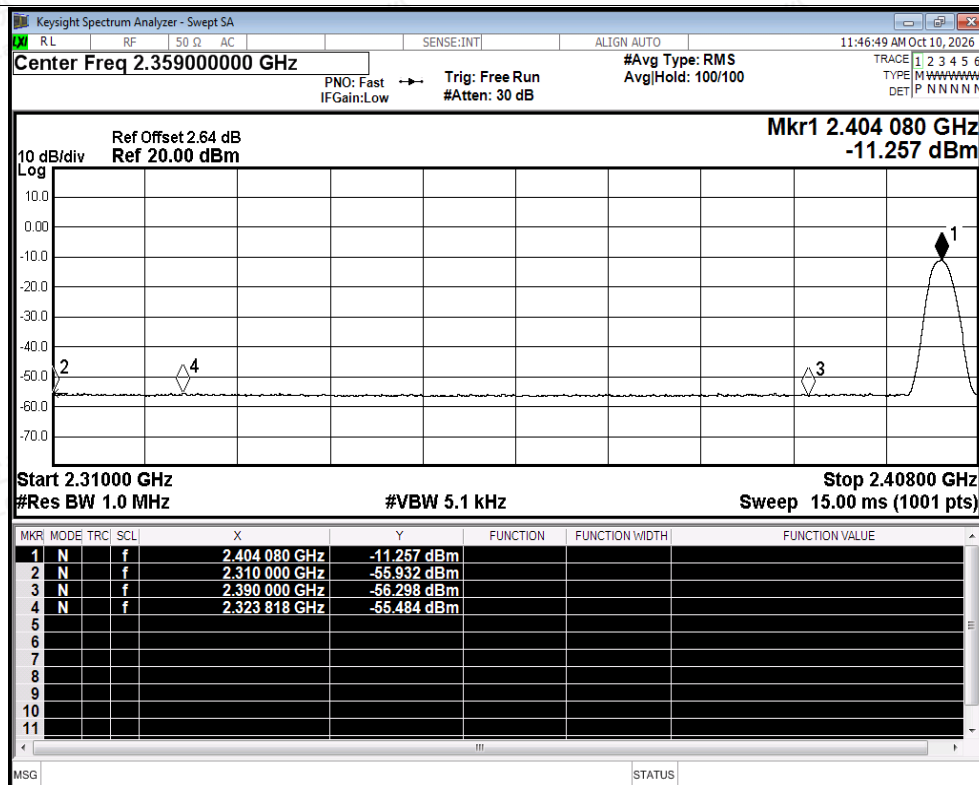
Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



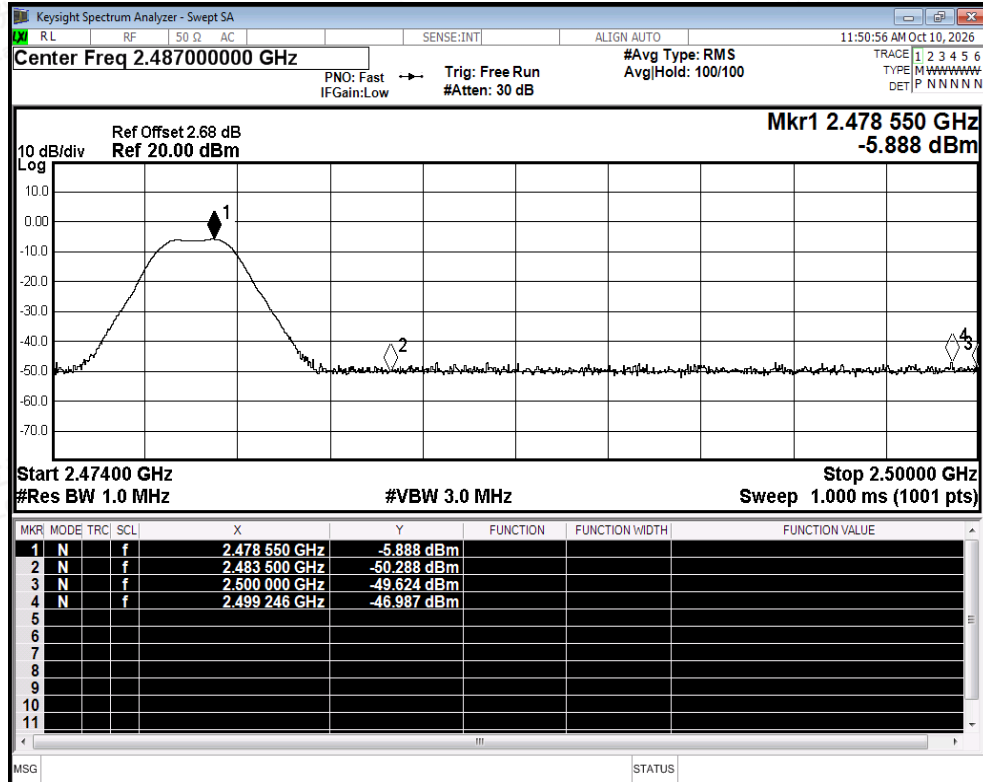
Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



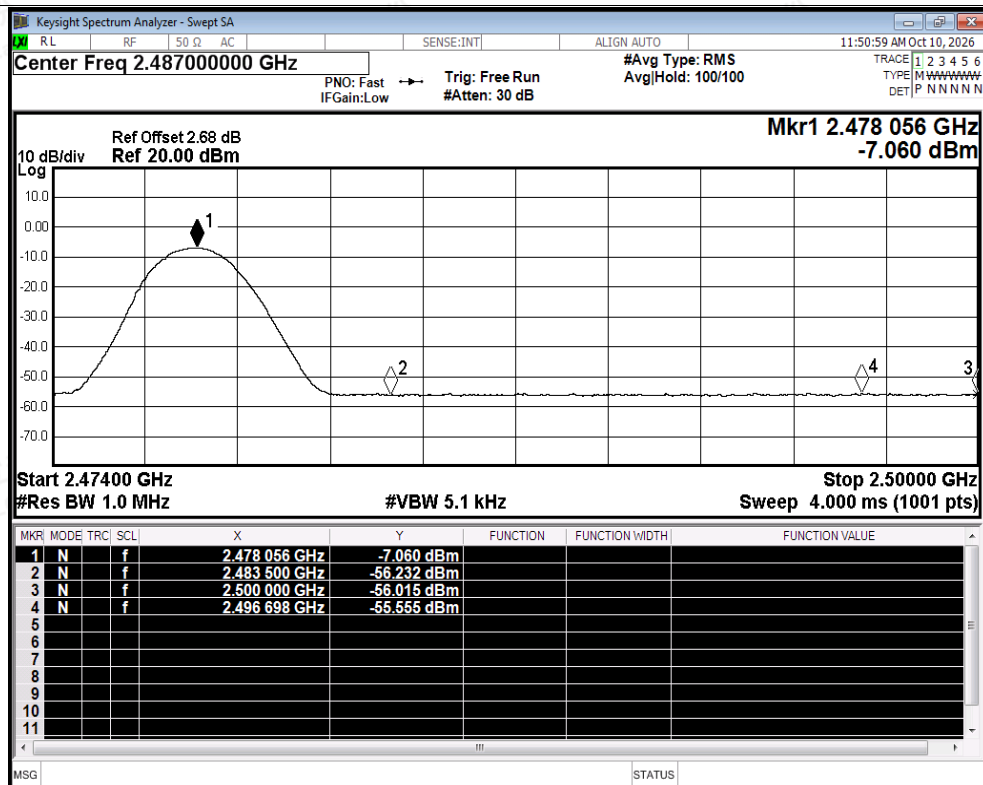
Restrict Band NVNT BLE 2M 2404MHz Ant1 Peak



Restrict Band NVNT BLE 2M 2404MHz Ant1 Average



Restrict Band NVNT BLE 2M 2478MHz Ant1 Peak



Restrict Band NVNT BLE 2M 2478MHz Ant1 Average