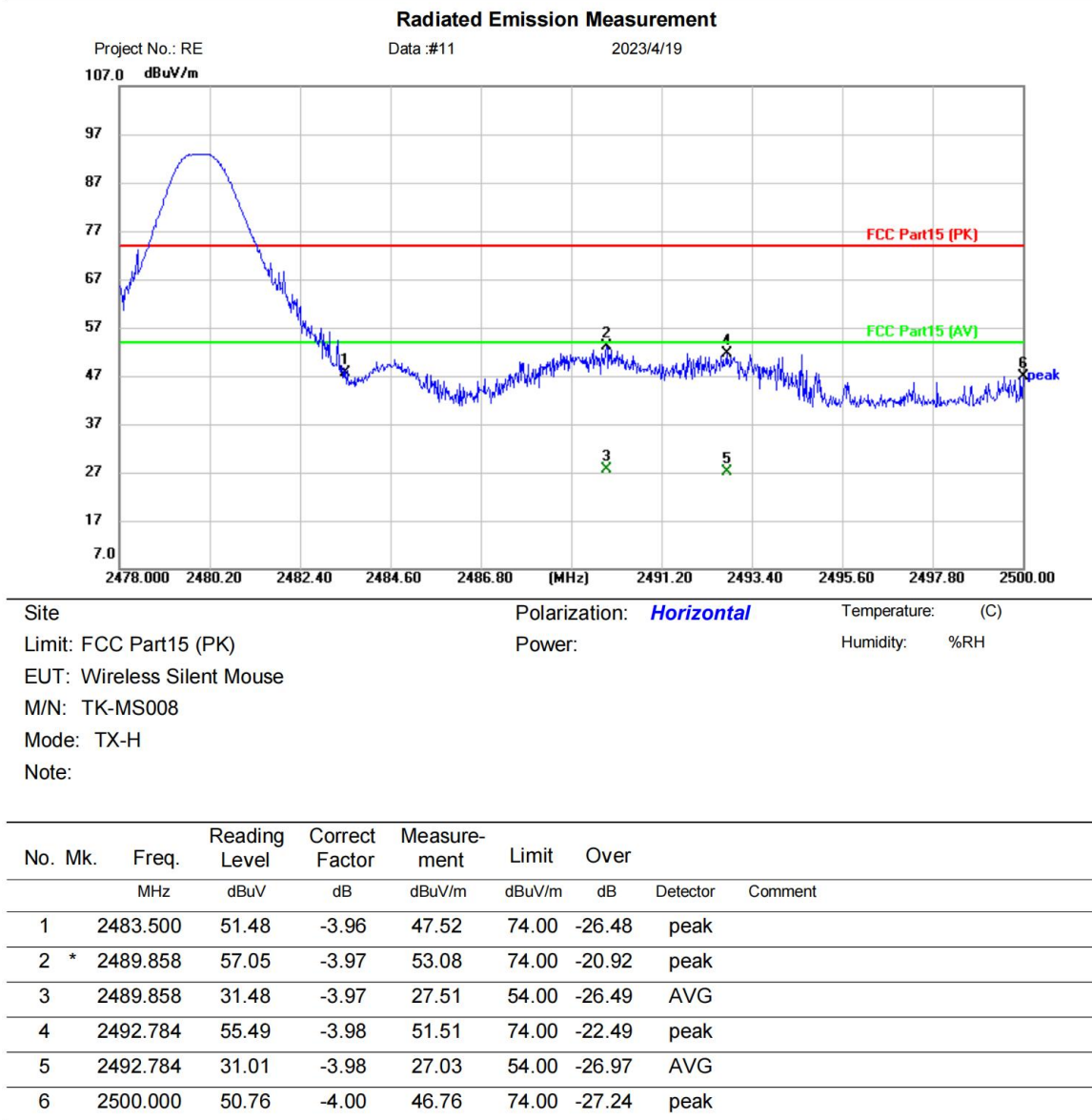


[TestMode: TX high channel]; [Polarity: Horizontal]

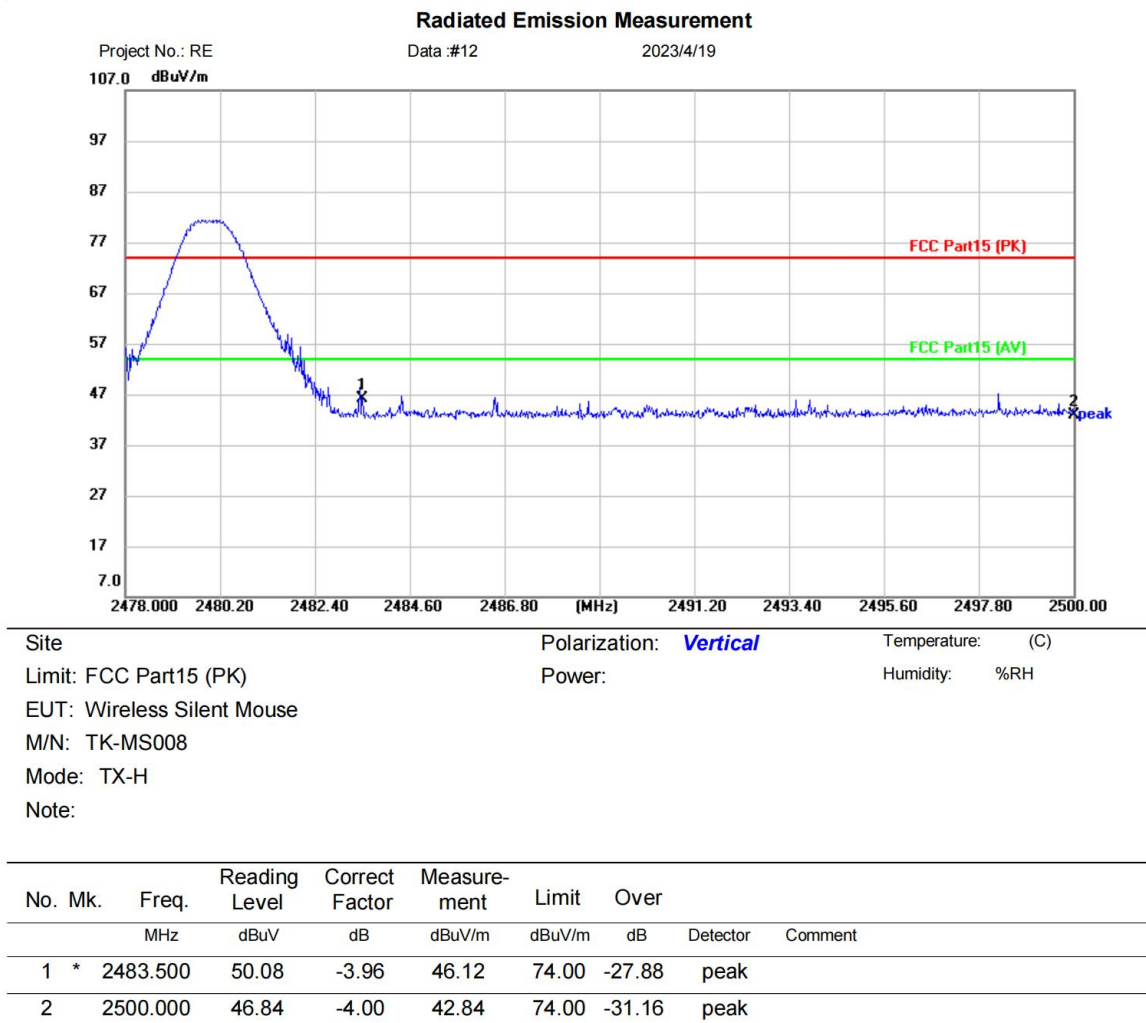


*:Maximum data x:Over limit !:over margin <Reference Only

Receiver: ESR_1 Spectrum Analyzer: FSP40
Antenna: EZ 9120D 1G-18G Engineer Signature:

Test Result: Pass

[TestMode: TX high channel]; [Polarity: Vertical]



*:Maximum data x:Over limit !:over margin <Reference Only

Receiver: ESR_1 Spectrum Analyzer: FSP40
 Antenna: EZ 9120D 1G-18G Engineer Signature:

Test Result: Pass

14 ANTENNA REQUIREMENT

| | |
|---------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.247 |
| Test Method | N/A |

14.1 CONCLUSION

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The best case gain of the antenna is 1.8dBi.

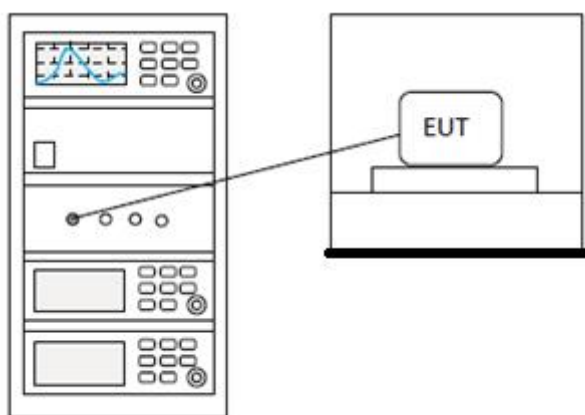
15 CONDUCTED SPURIOUS EMISSIONS

| | |
|-------------------------------|--|
| Test Standard | 47 CFR Part 15, Subpart C 15.247 |
| Test Method | ANSI C63.10 (2013) Section 7.8.6 & Section 11.11 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

15.1 LIMITS

| | |
|---------------|--|
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)). |
|---------------|--|

15.2 BLOCK DIAGRAM OF TEST SETUP



15.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

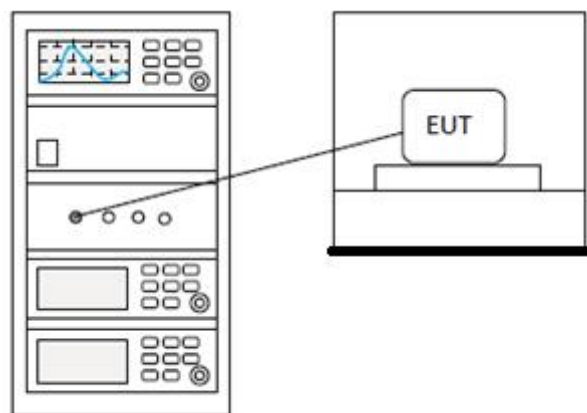
16 CONDUCTED BAND EDGES MEASUREMENT

| | |
|-------------------------------|--|
| Test Standard | 47 CFR Part 15, Subpart C 15.247 |
| Test Method | ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

16.1 LIMITS

| | |
|---------------|--|
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)). |
|---------------|--|

16.2 BLOCK DIAGRAM OF TEST SETUP



16.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

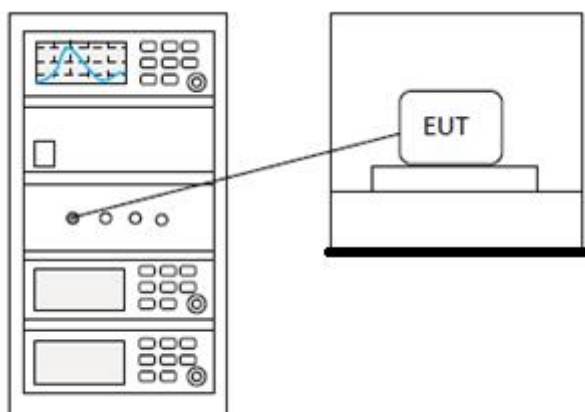
17 DWELL TIME

| | |
|------------------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.247 |
| Test Method | ANSI C63.10 (2013) Section 7.8.4 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25℃ |
| Humidity | 60% |

17.1 LIMITS

| Frequency(MHz) | Limit |
|----------------|---|
| 902-928 | 0.4S within a 20S period(20dB bandwidth<250kHz) |
| | 0.4S within a 10S period(20dB bandwidth≥250kHz) |
| 2400-2483.5 | 0.4S within a period of 0.4S multiplied by the number of hopping channels |
| 5725-5850 | 0.4S within a 30S period |

17.2 BLOCK DIAGRAM OF TEST SETUP



17.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

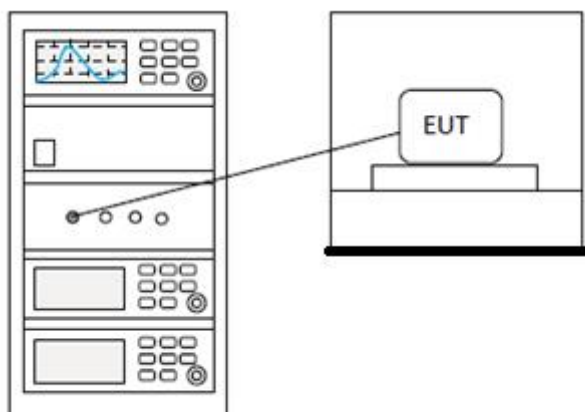
18 HOPPING CHANNEL NUMBER

| | |
|------------------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.247 |
| Test Method | ANSI C63.10 (2013) Section 7.8.3 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25℃ |
| Humidity | 60% |

18.1 LIMITS

| Frequency range(MHz) | Number of hopping channels (minimum) |
|----------------------|--------------------------------------|
| 902-928 | 50 for 20dB bandwidth <250kHz |
| | 25 for 20dB bandwidth ≥250kHz |
| 2400-2483.5 | 15 |
| 5725-5850 | 75 |

18.2 BLOCK DIAGRAM OF TEST SETUP



18.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

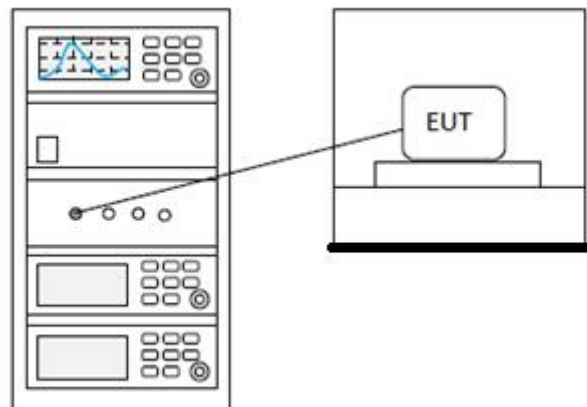
19 CARRIER FREQUENCIES SEPARATION

| | |
|------------------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.247 |
| Test Method | ANSI C63.10 (2013) Section 7.8.2 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

19.1 LIMITS

| | |
|---------------|--|
| Limit: | 2/3 of the 20dB bandwidth base on the transmission power is less than 0.125W |
|---------------|--|

19.2 BLOCK DIAGRAM OF TEST SETUP



19.3 TEST DATA

| |
|--|
| Pass: Please Refer To Appendix: Appendix1 For Details |
|--|

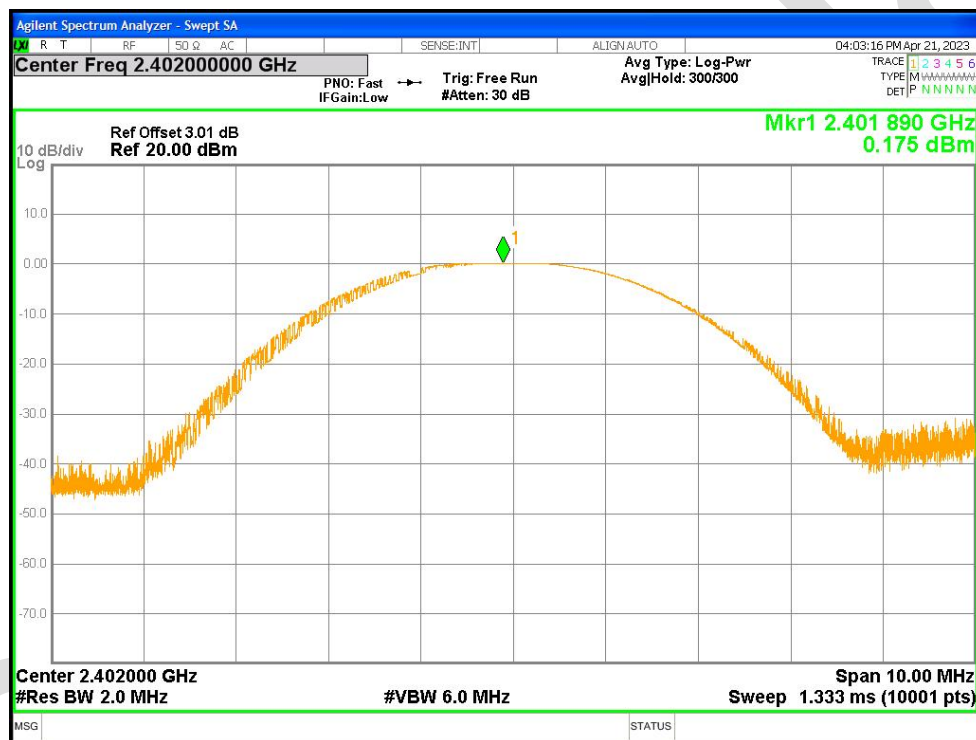
20 APPENDIX

Appendix1

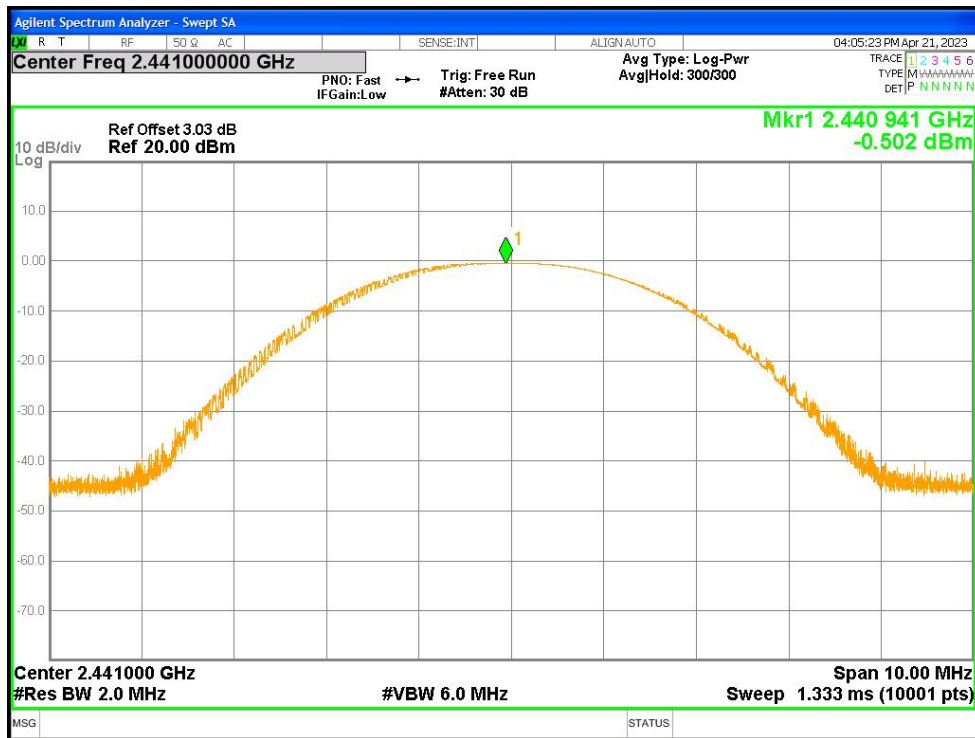
Maximum Conducted Output Power

| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|-----------------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | 0.175 | 21 | Pass |
| NVNT | 1-DH1 | 2441 | Ant1 | -0.502 | 21 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | 0.186 | 21 | Pass |

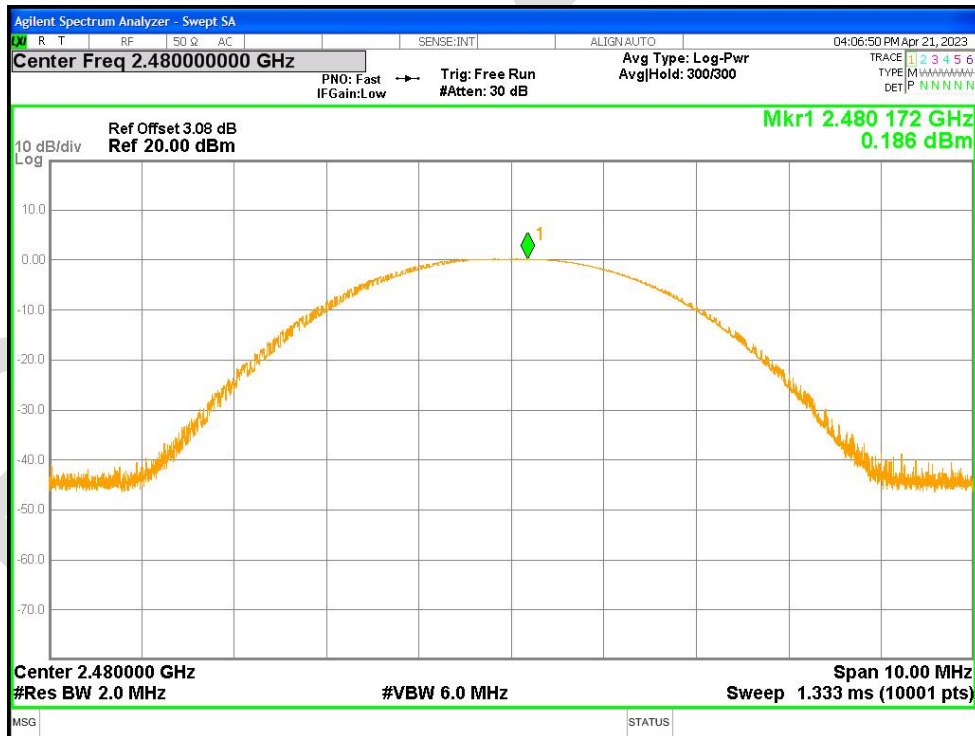
Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1



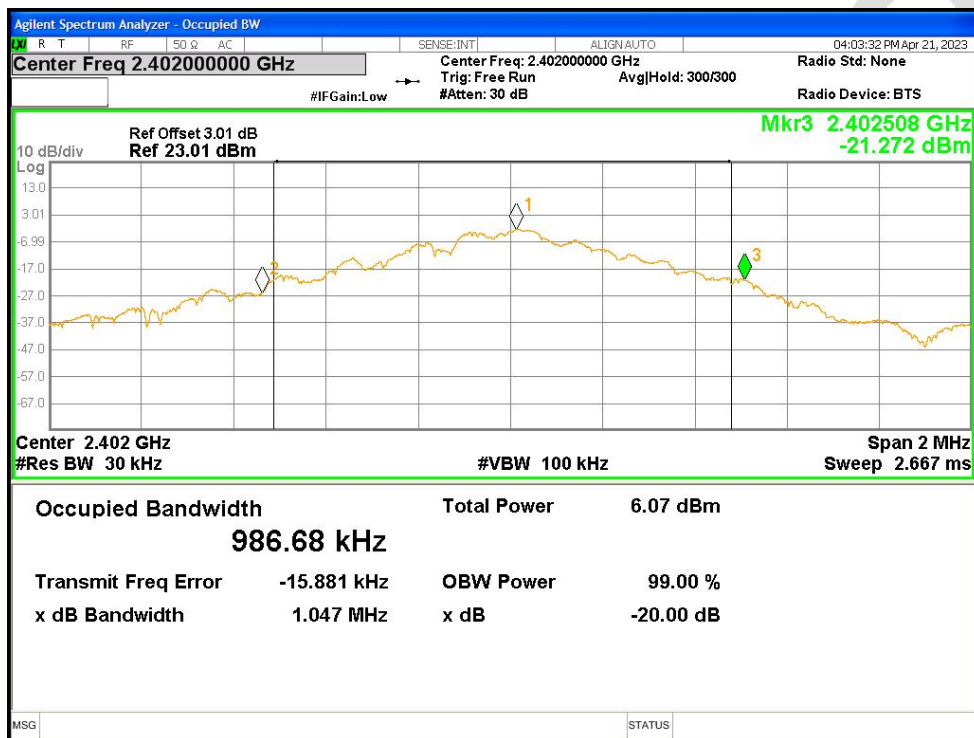
Power NVNT 1-DH1 2480MHz Ant1



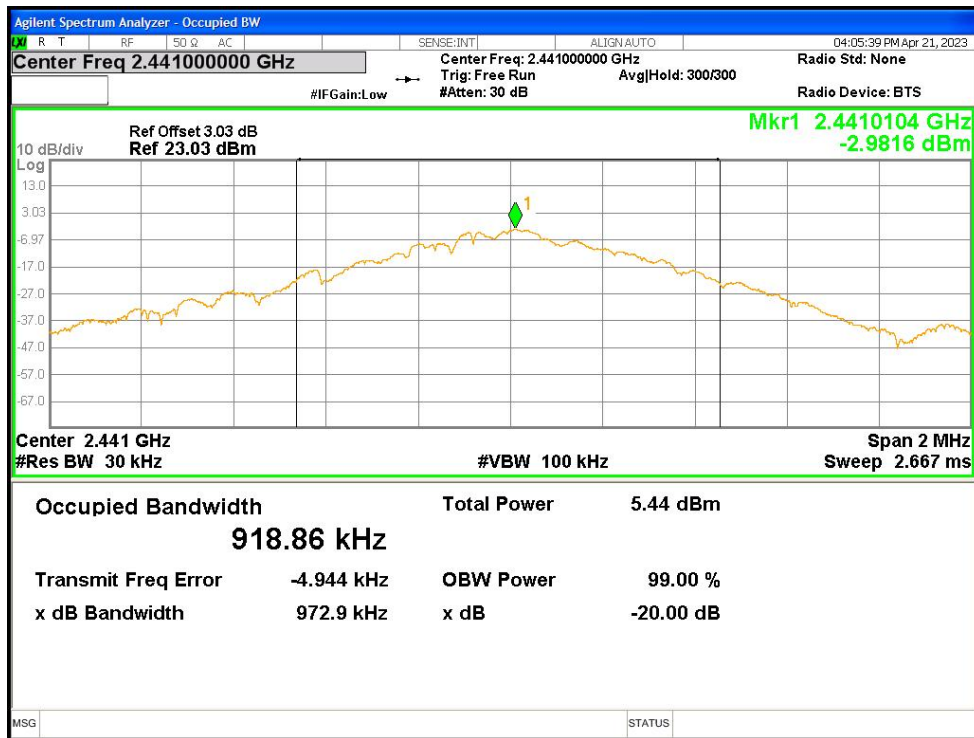
-20dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -20 dB Bandwidth (MHz) | Limit -20 dB Bandwidth (MHz) | Verdict |
|-----------|-------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | 1.047 | 0 | Pass |
| NVNT | 1-DH1 | 2441 | Ant1 | 0.973 | 0 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | 0.928 | 0 | Pass |

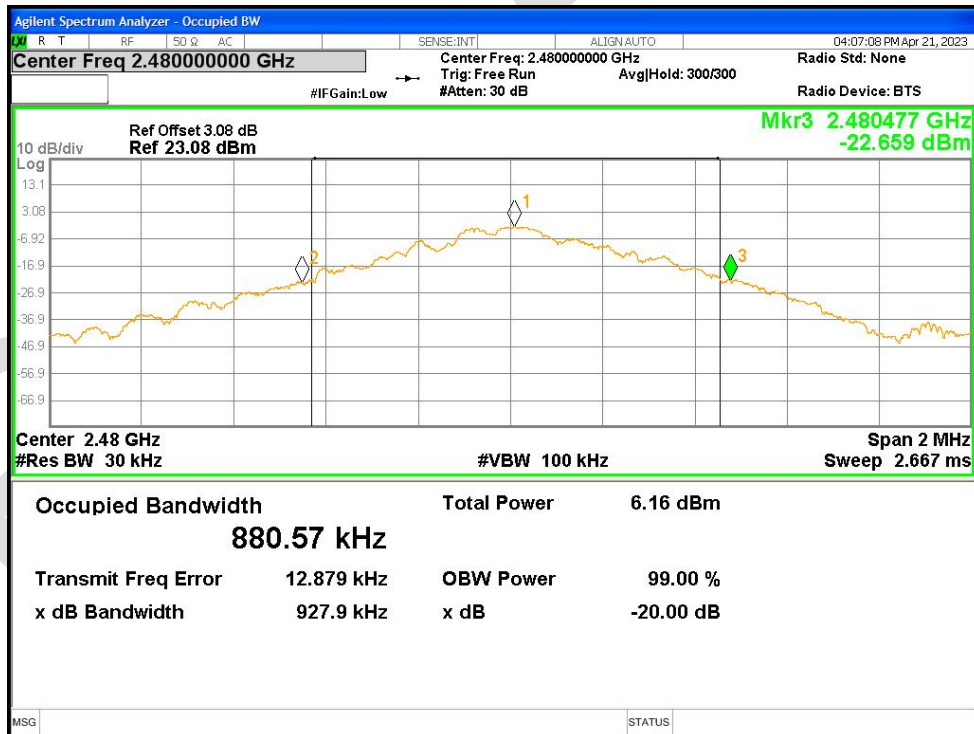
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



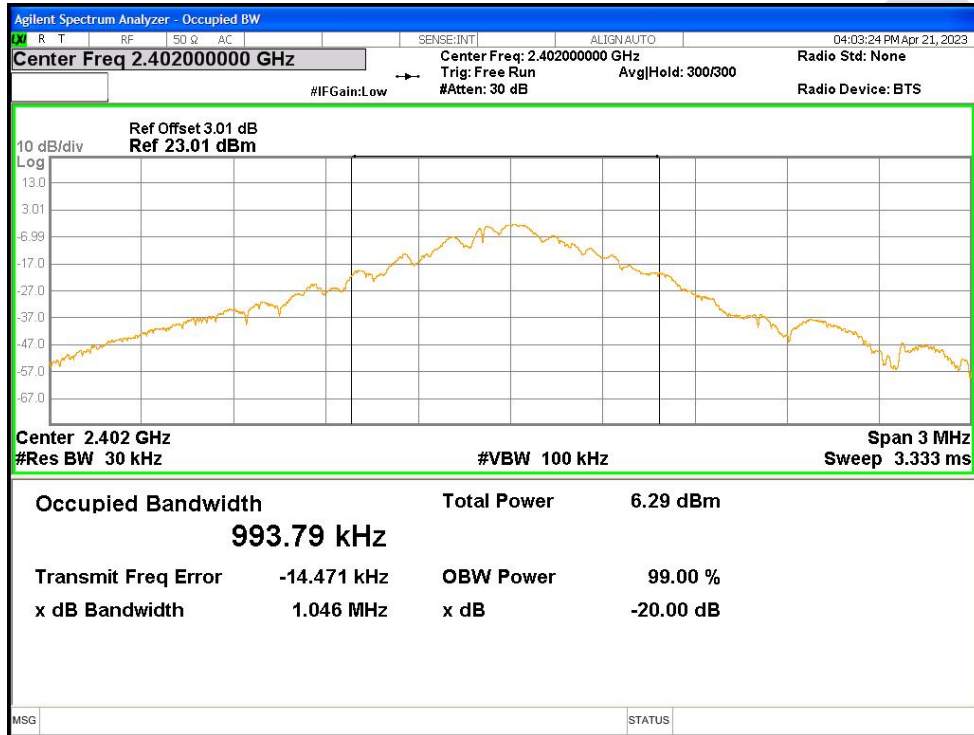
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



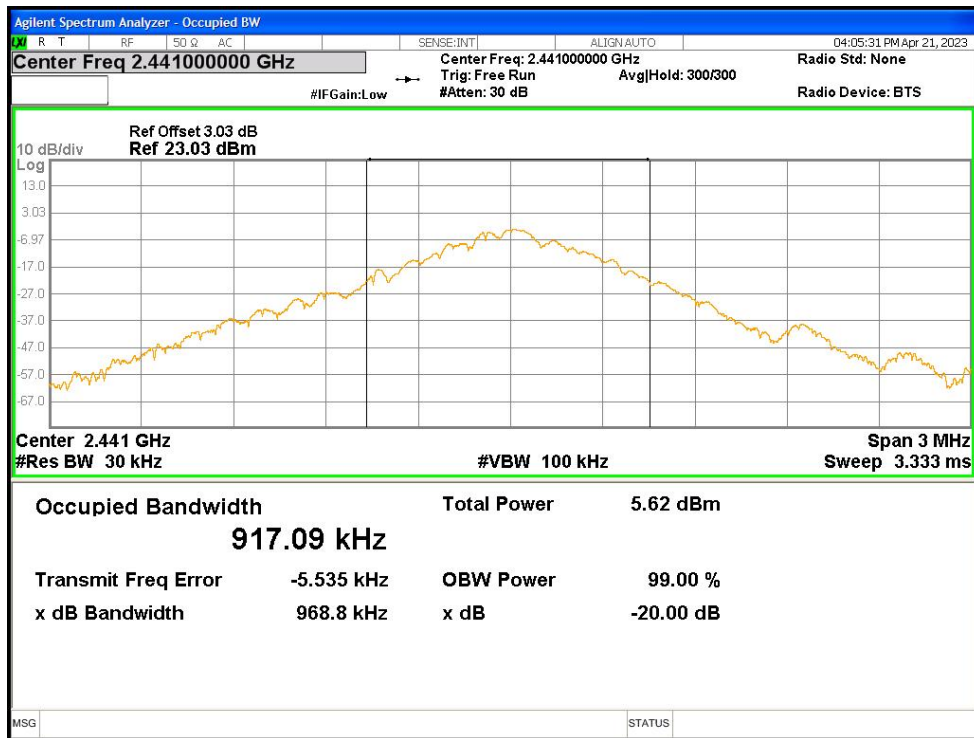
Occupied Channel Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|-----------|-------|-----------------|---------|---------------|
| NVNT | 1-DH1 | 2402 | Ant1 | 0.99379 |
| NVNT | 1-DH1 | 2441 | Ant1 | 0.91709 |
| NVNT | 1-DH1 | 2480 | Ant1 | 0.89171 |

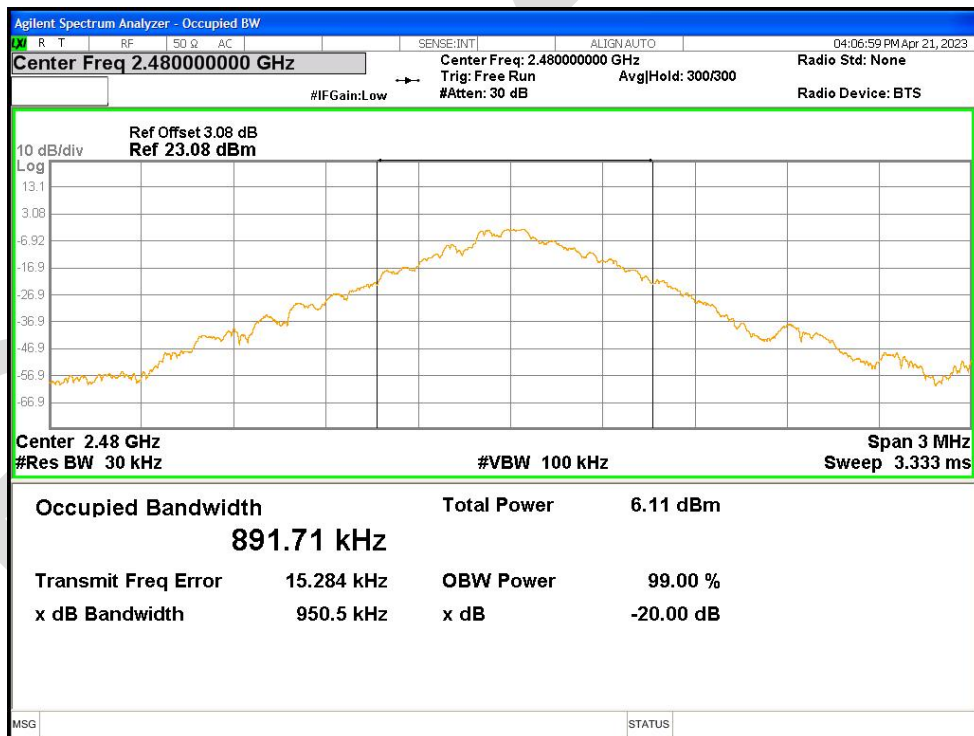
OBW NVNT 1-DH1 2402MHz Ant1



OBW NVNT 1-DH1 2441MHz Ant1



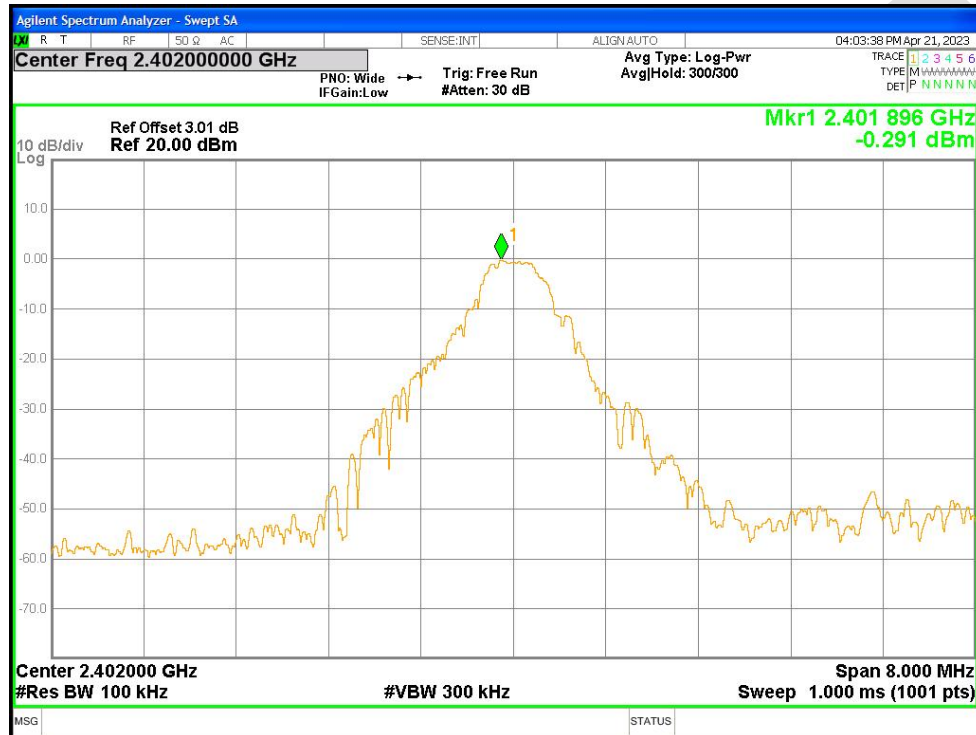
OBW NVNT 1-DH1 2480MHz Ant1



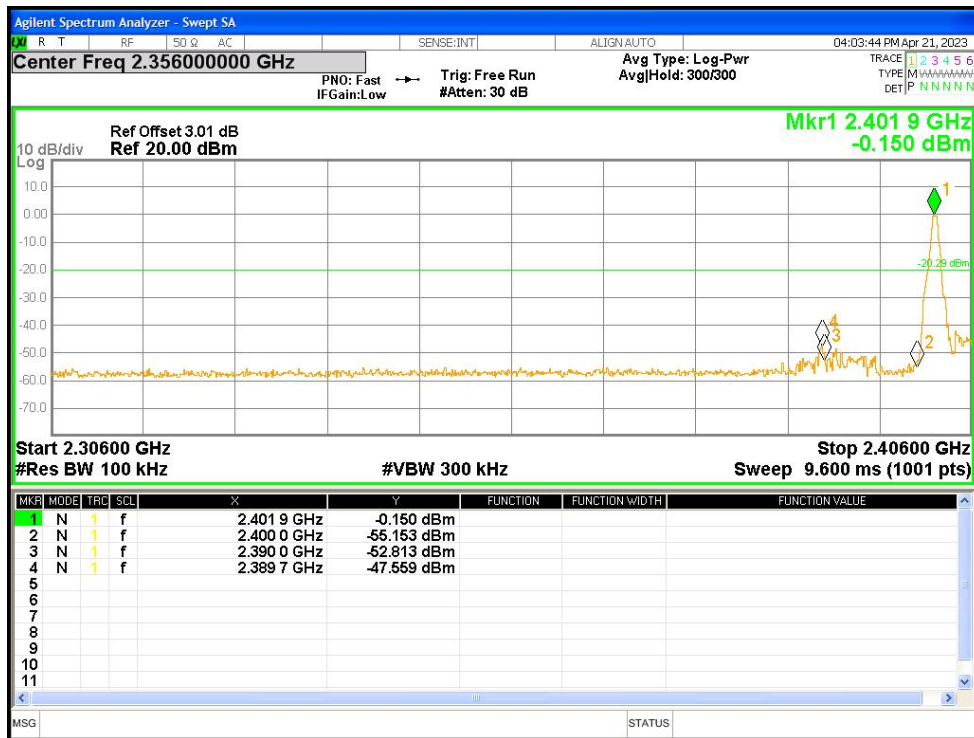
Band Edge

| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | No-Hopping | -47.26 | -20 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | No-Hopping | -54.57 | -20 | Pass |

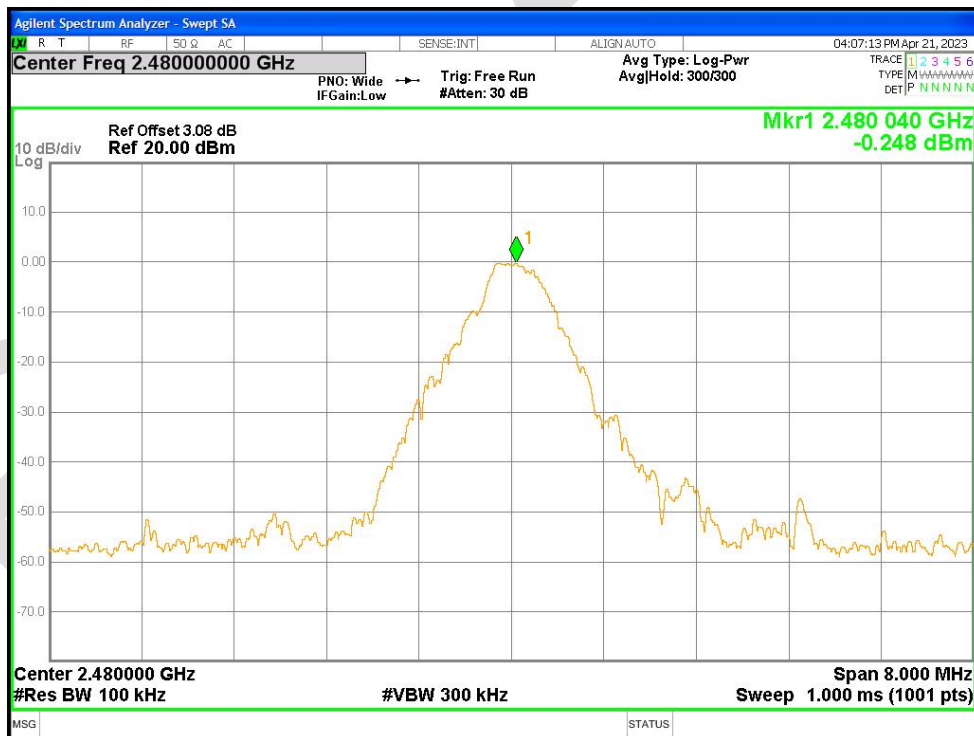
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



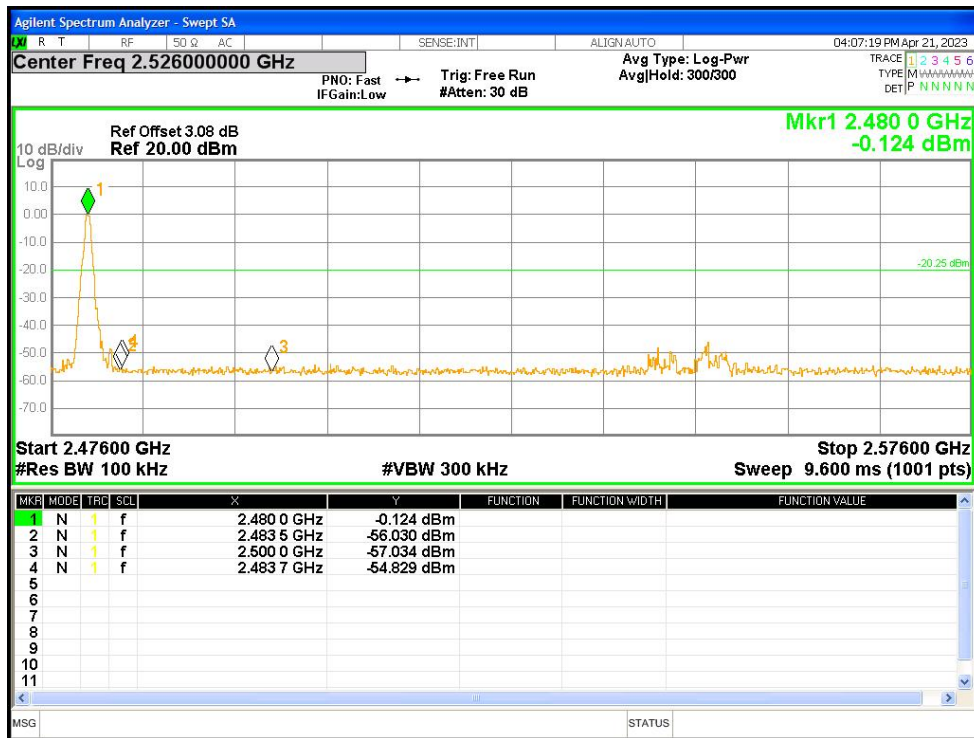
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



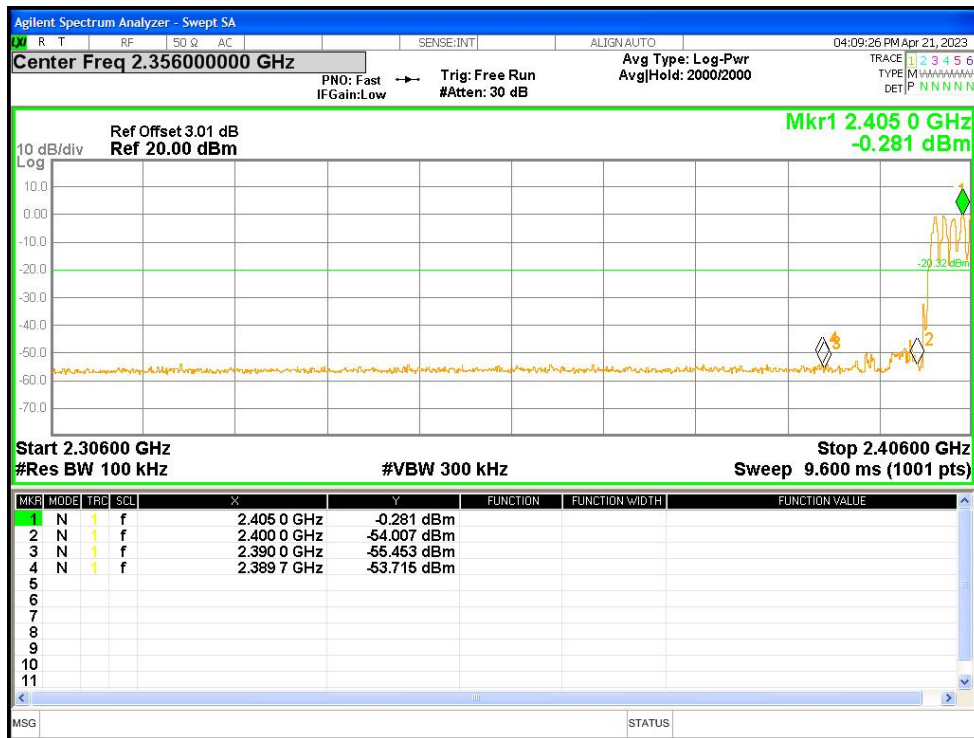
Band Edge(Hopping)

| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | Hopping | -53.39 | -20 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | Hopping | -44.38 | -20 | Pass |

Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



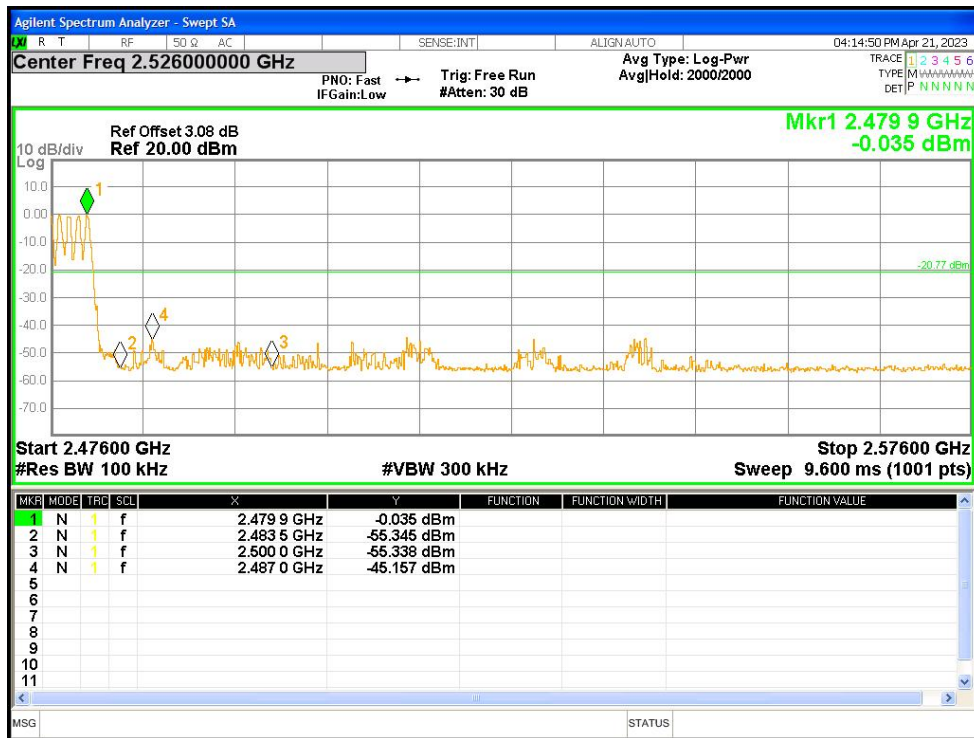
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



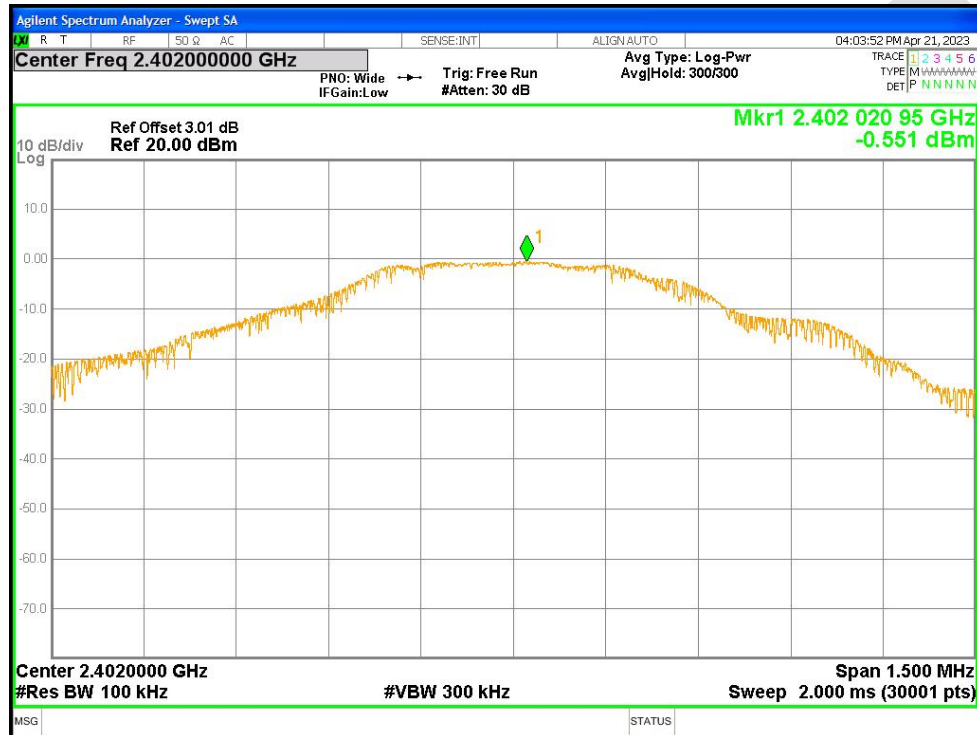
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



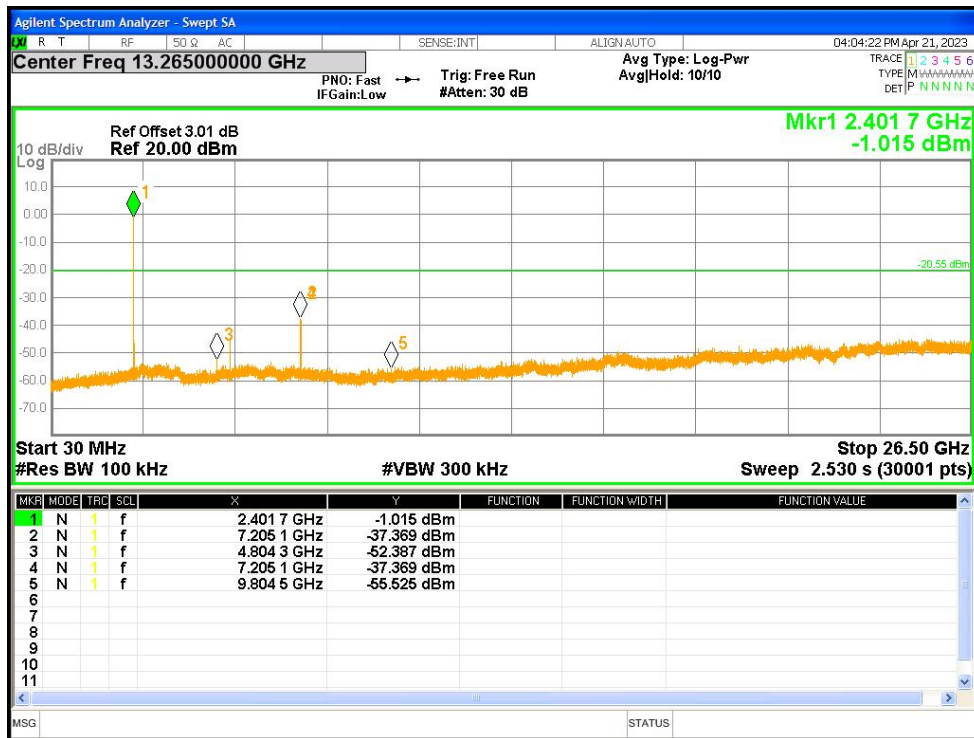
Conducted RF Spurious Emission

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|-----------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | -36.81 | -20 | Pass |
| NVNT | 1-DH1 | 2441 | Ant1 | -40.69 | -20 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | -43.96 | -20 | Pass |

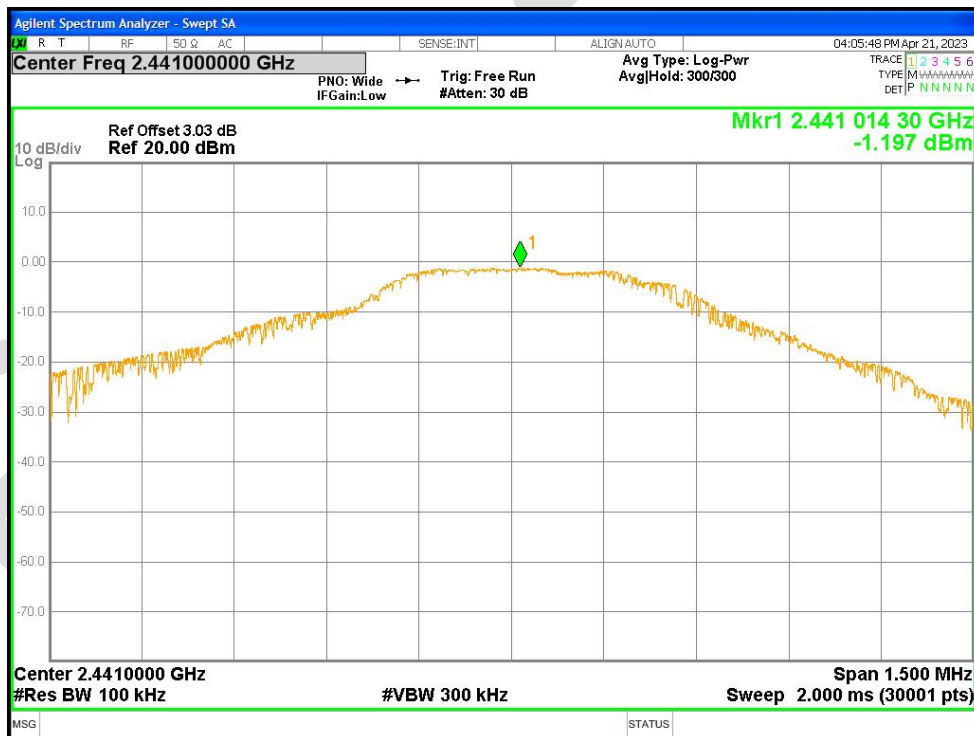
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



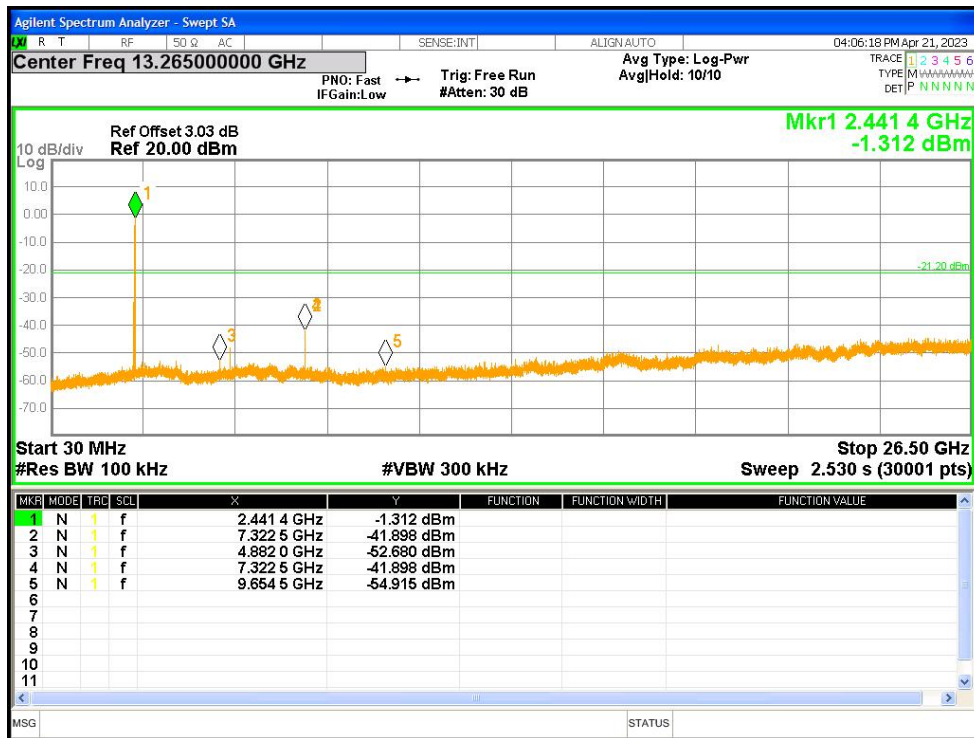
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



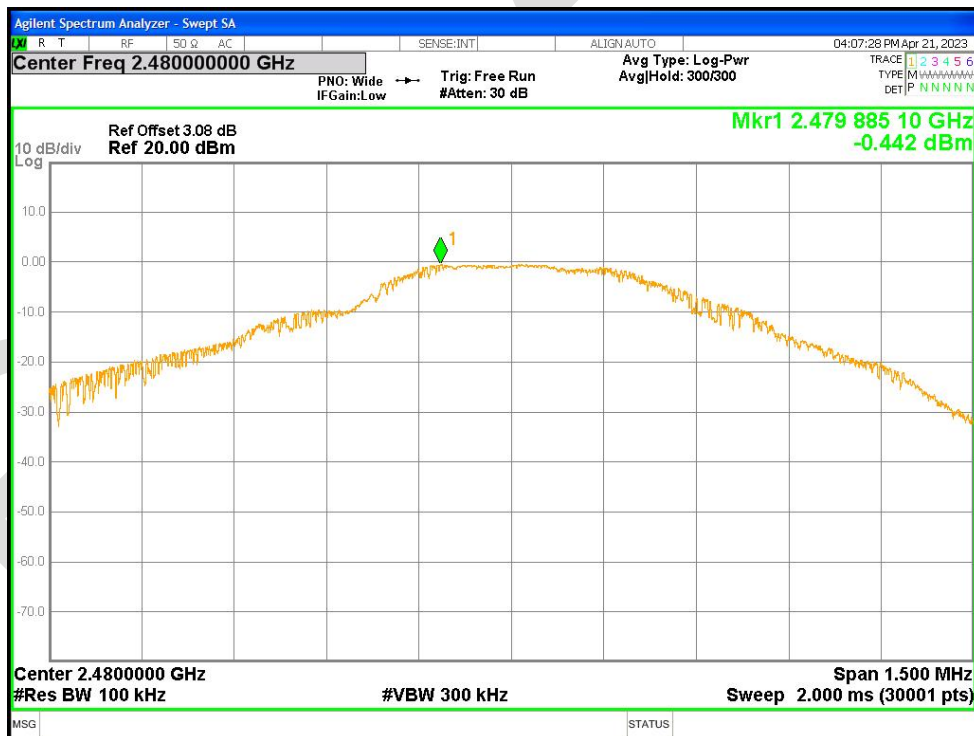
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



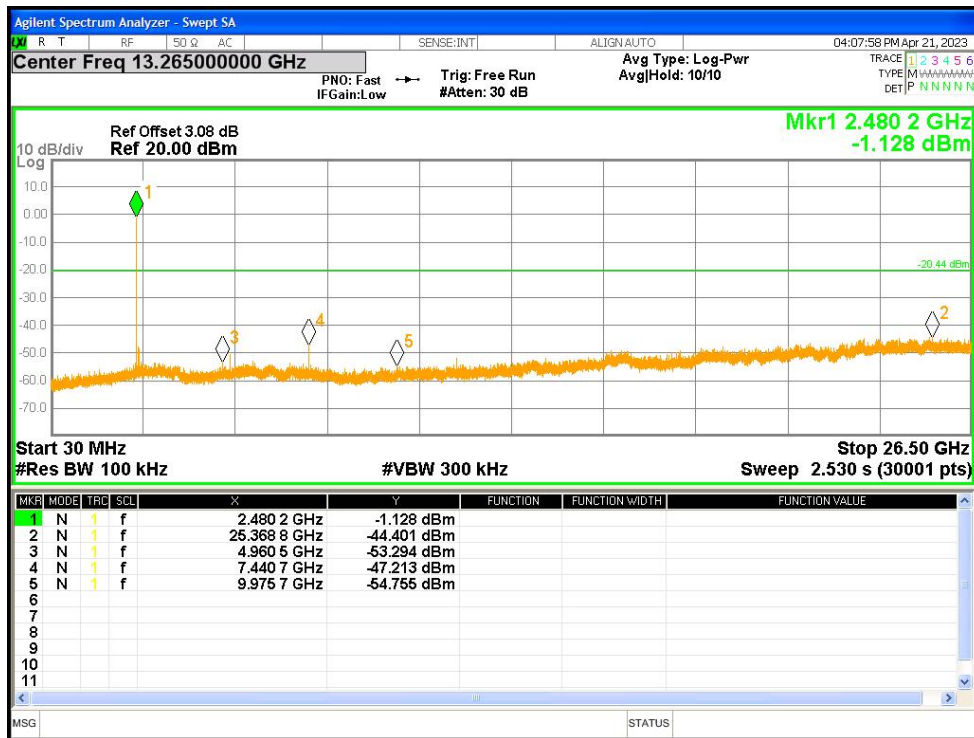
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



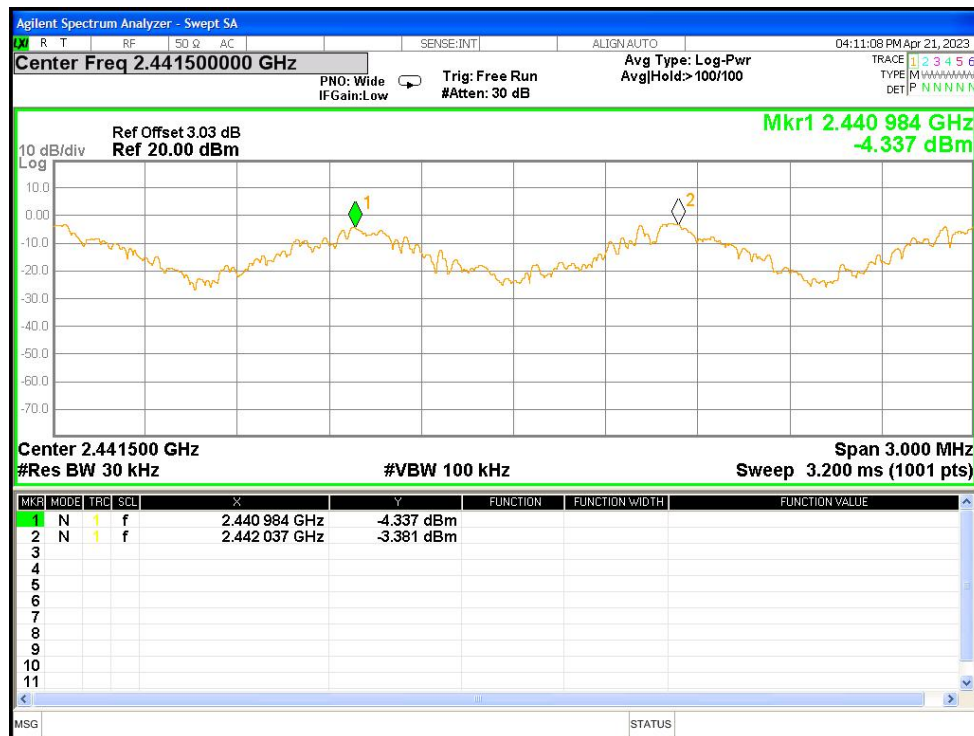
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Carrier Frequencies Separation

| Condition | Mode | Antenna | Hopping Freq1 (MHz) | Hopping Freq2 (MHz) | HFS (MHz) | Limit (MHz) | Verdict |
|-----------|-------|---------|---------------------|---------------------|-----------|-------------|---------|
| NVNT | 1-DH1 | Ant1 | 2440.984 | 2442.037 | 1.053 | 0.973 | Pass |

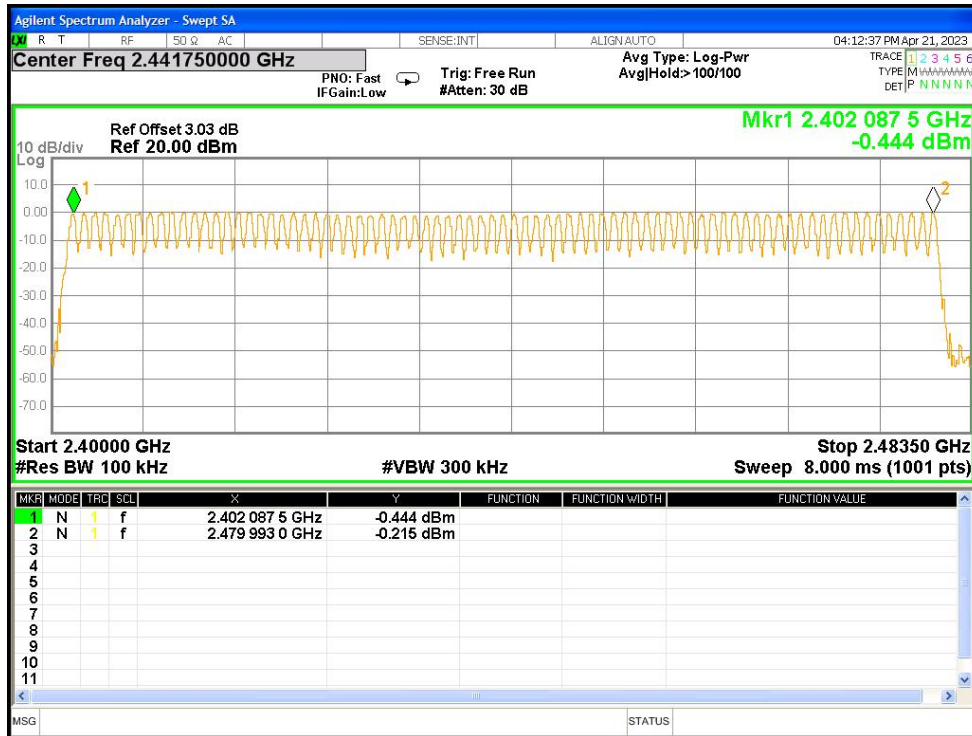
CFS NVNT 1-DH1 2441MHz Ant1



Number of Hopping Channel

| Condition | Mode | Antenna | Hopping Number | Limit | Verdict |
|-----------|-------|---------|----------------|-------|---------|
| NVNT | 1-DH1 | Ant1 | 79 | 15 | Pass |

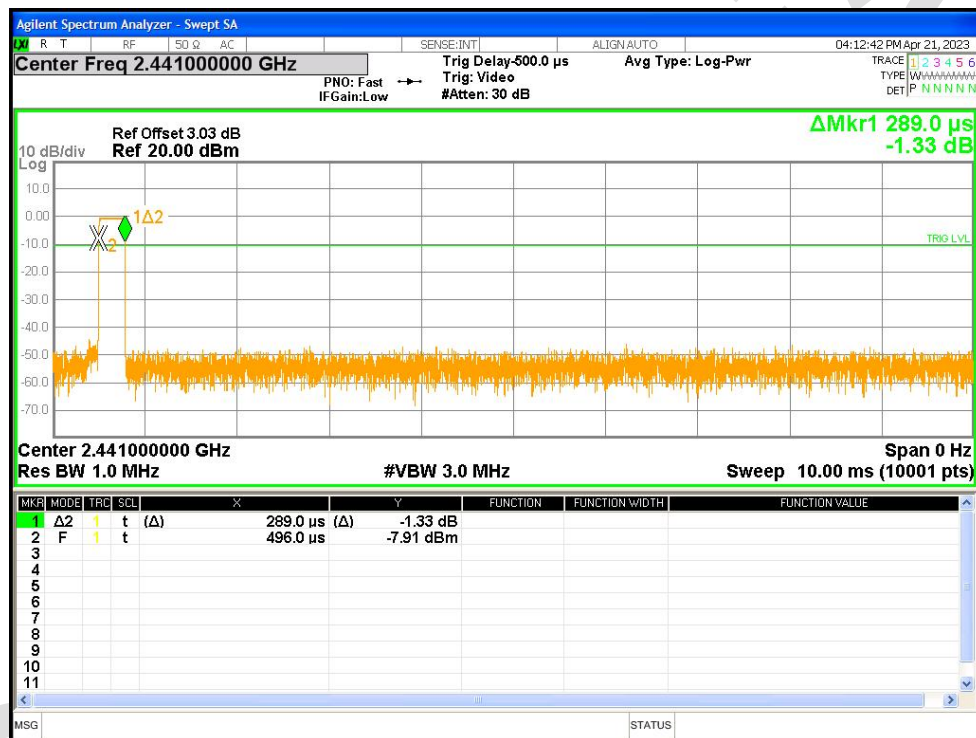
Hopping No. NVNT 1-DH1 2441MHz Ant1



Dwell Time

| Condition | Mode | Frequency (MHz) | Antenna | Pulse Time (ms) | Total Dwell Time (ms) | Burst Count | Period Time (ms) | Limit (ms) | Verdict |
|-----------|-------|-----------------|---------|-----------------|-----------------------|-------------|------------------|------------|---------|
| NVNT | 1-DH1 | 2441 | Ant1 | 0.289 | 144.789 | 501 | 31600 | 400 | Pass |
| NVNT | 1-DH3 | 2441 | Ant1 | 1.546 | 261.274 | 169 | 31600 | 400 | Pass |
| NVNT | 1-DH5 | 2441 | Ant1 | 2.785 | 306.35 | 110 | 31600 | 400 | Pass |

Dwell NVNT 1-DH1 2441MHz Ant1 One Burst



Dwell NVNT 1-DH1 2441MHz Ant1 Accumulated