



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Hyundai Mini PC

Test Model: HMB10M01

Environmental Conditions

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





C.1 -6dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT | b | 2412 | Ant1 | 8.063 | >=0.5 | Pass |
| NVNT | b | 2437 | Ant1 | 8.567 | >=0.5 | Pass |
| NVNT | b | 2462 | Ant1 | 7.587 | >=0.5 | Pass |
| NVNT | g | 2412 | Ant1 | 15.097 | >=0.5 | Pass |
| NVNT | g | 2437 | Ant1 | 15.122 | >=0.5 | Pass |
| NVNT | g | 2462 | Ant1 | 15.051 | >=0.5 | Pass |
| NVNT | n20 | 2412 | Ant1 | 15.12 | >=0.5 | Pass |
| NVNT | n20 | 2437 | Ant1 | 14.703 | >=0.5 | Pass |
| NVNT | n20 | 2462 | Ant1 | 13.412 | >=0.5 | Pass |
| NVNT | n40 | 2422 | Ant1 | 35.043 | >=0.5 | Pass |
| NVNT | n40 | 2437 | Ant1 | 35.079 | >=0.5 | Pass |
| NVNT | n40 | 2452 | Ant1 | 35.114 | >=0.5 | Pass |

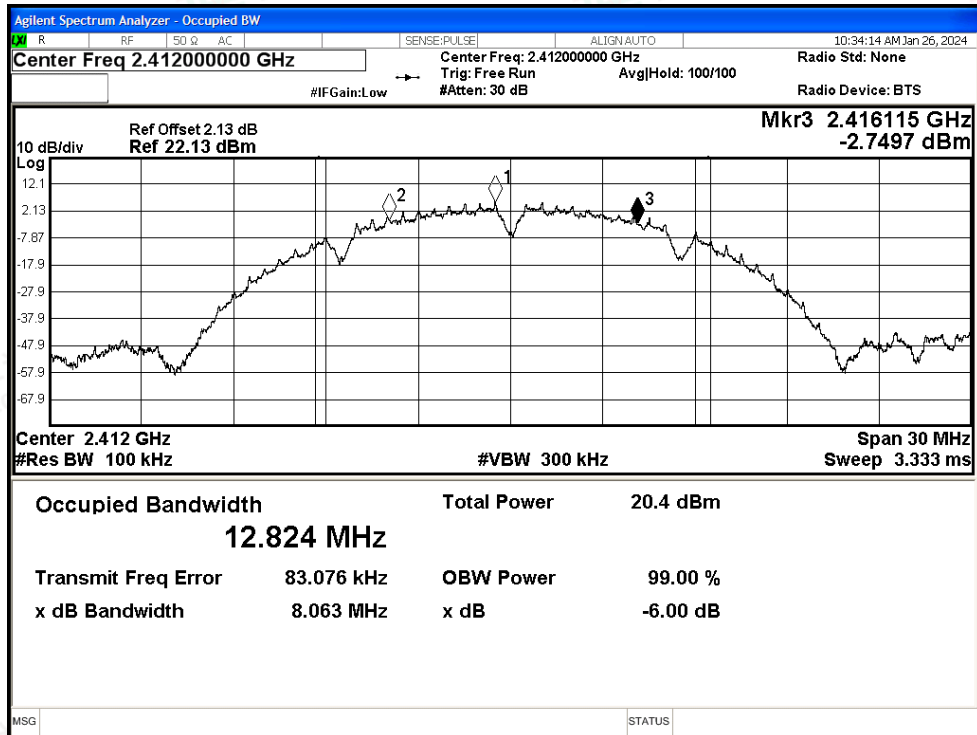


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 Scan code to check authenticity

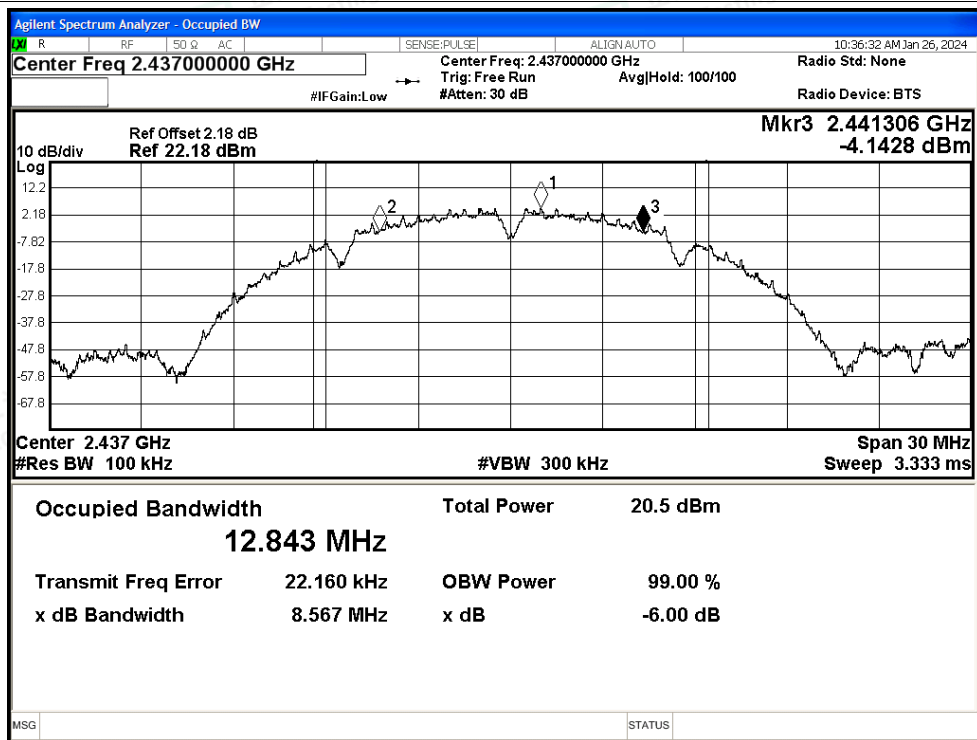


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

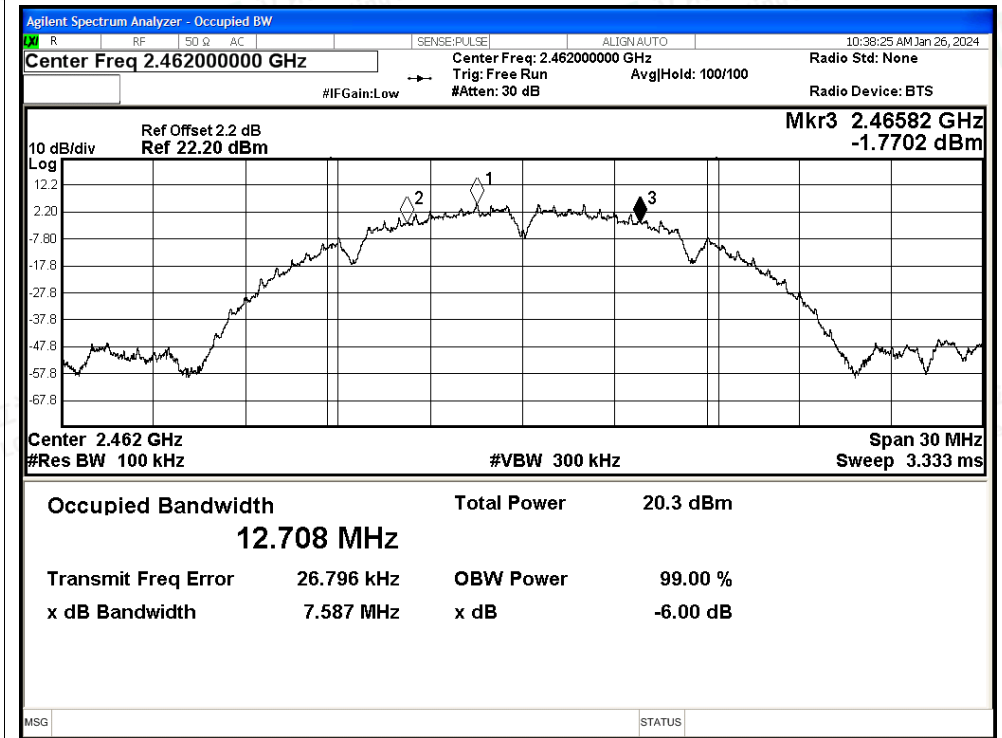


-6dB Bandwidth NVNT b 2437MHz Ant1

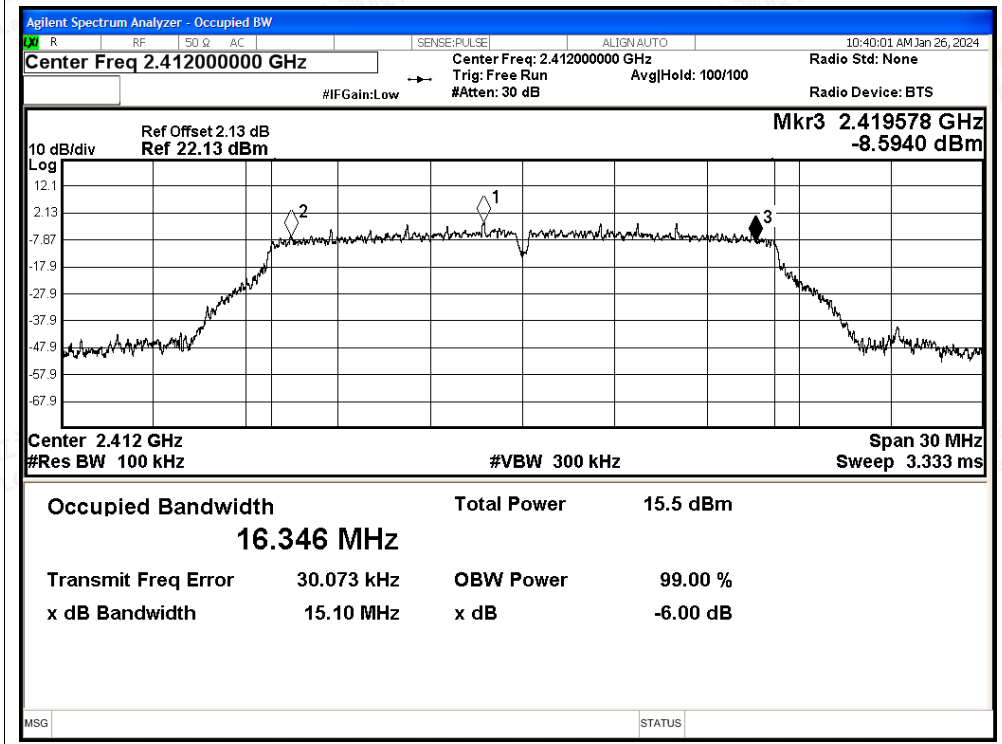




-6dB Bandwidth NVNT b 2462MHz Ant1

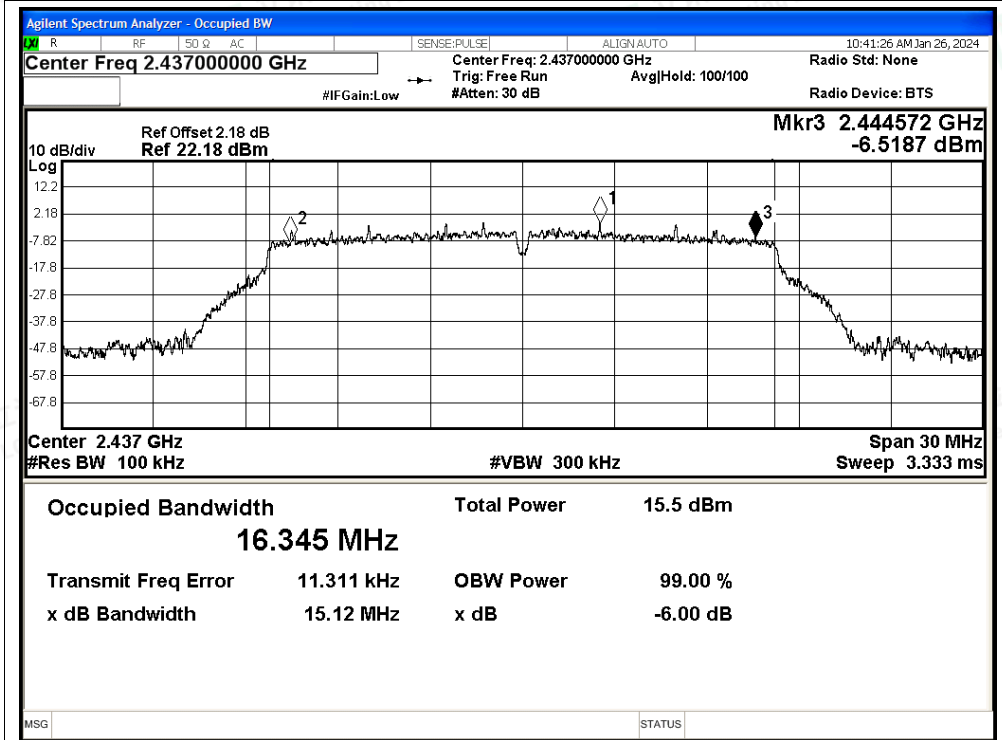


-6dB Bandwidth NVNT g 2412MHz Ant1

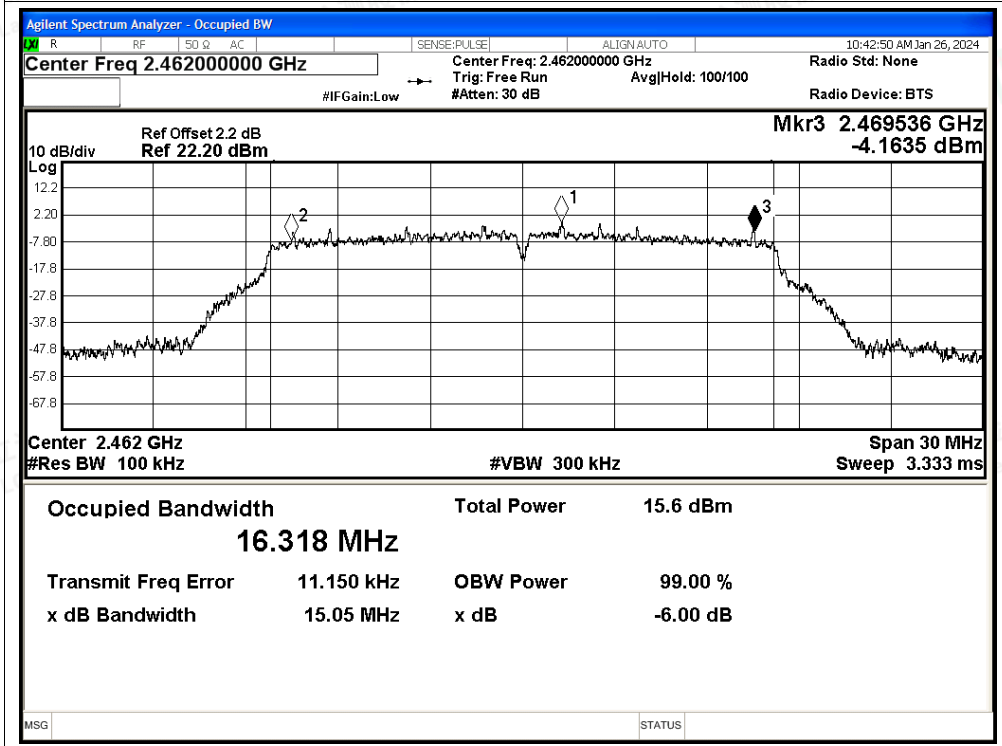




-6dB Bandwidth NVNT g 2437MHz Ant1

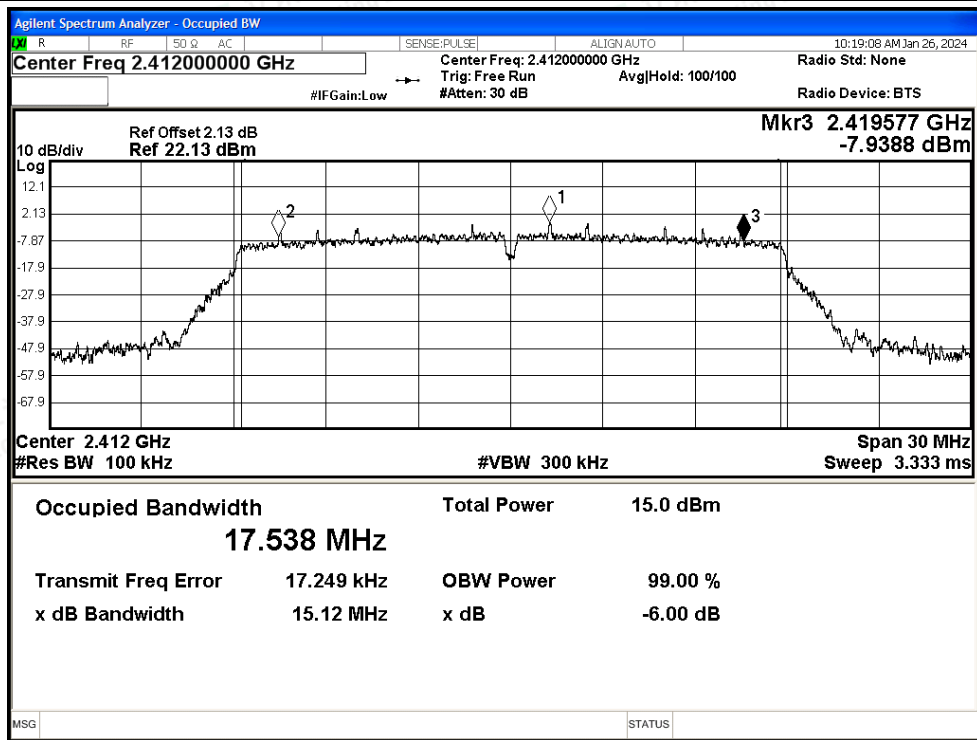


-6dB Bandwidth NVNT g 2462MHz Ant1

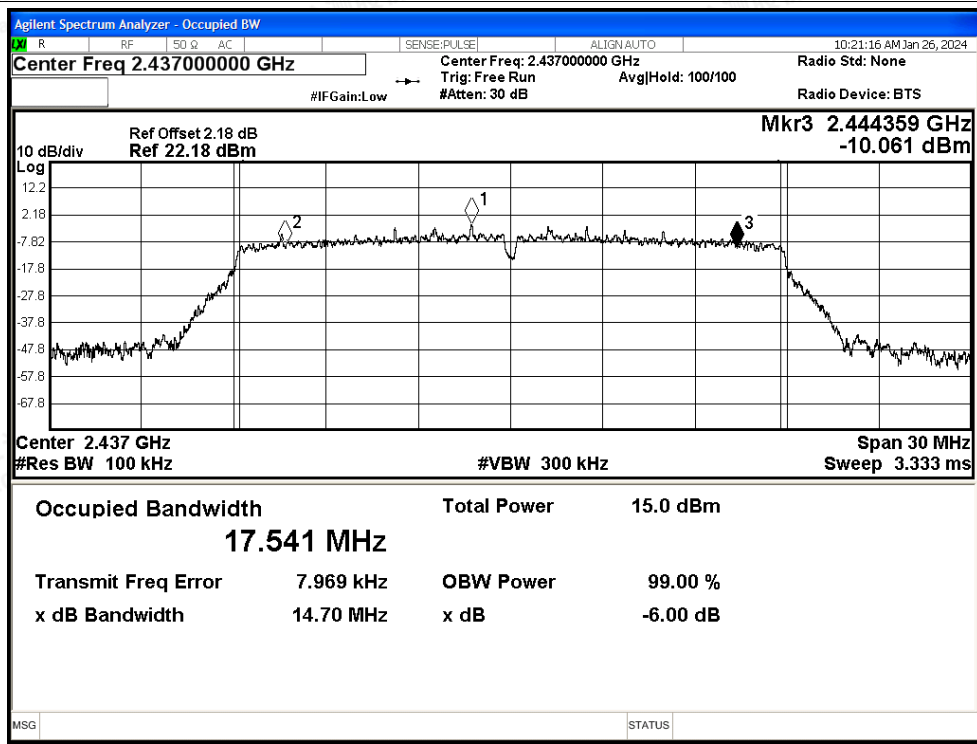




-6dB Bandwidth NVNT n20 2412MHz Ant1

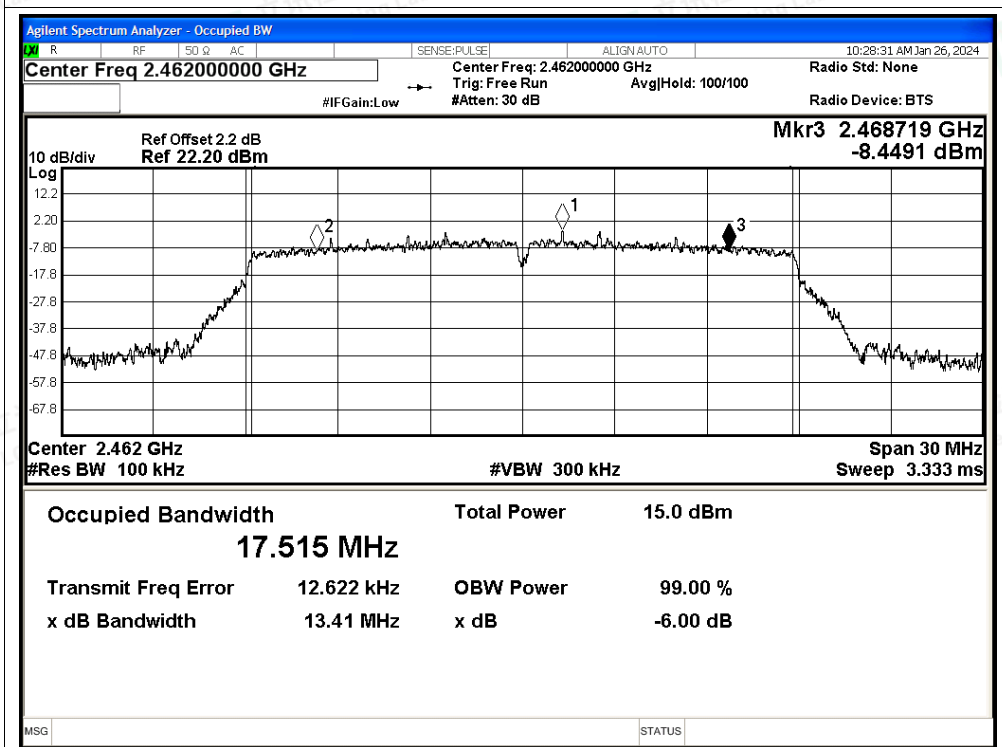


-6dB Bandwidth NVNT n20 2437MHz Ant1

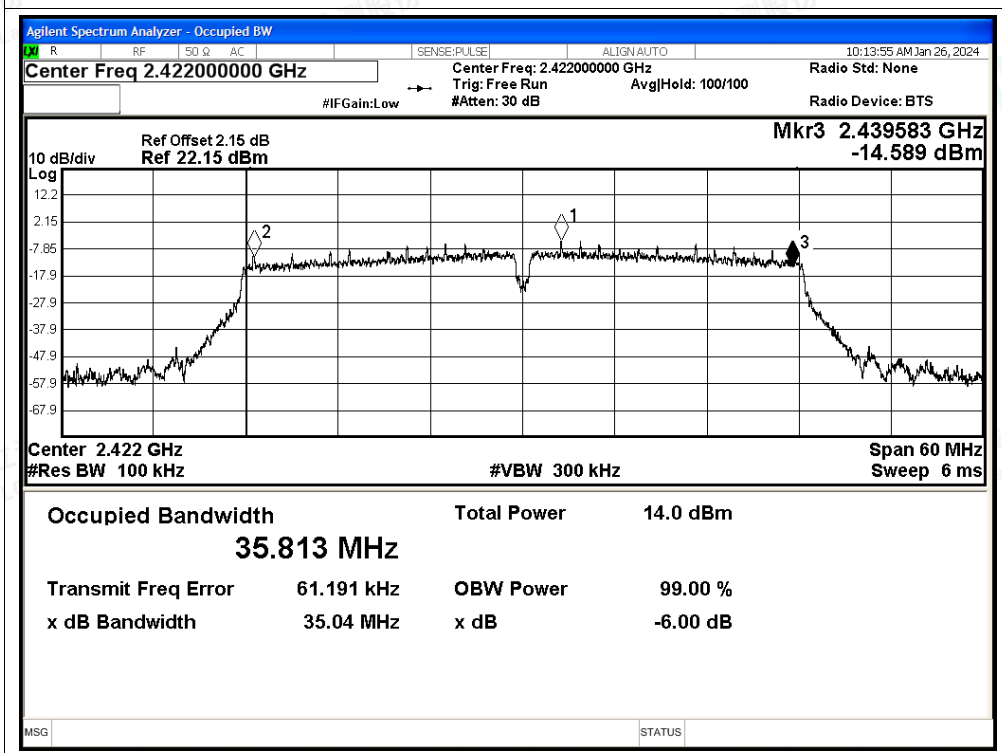




-6dB Bandwidth NVNT n20 2462MHz Ant1

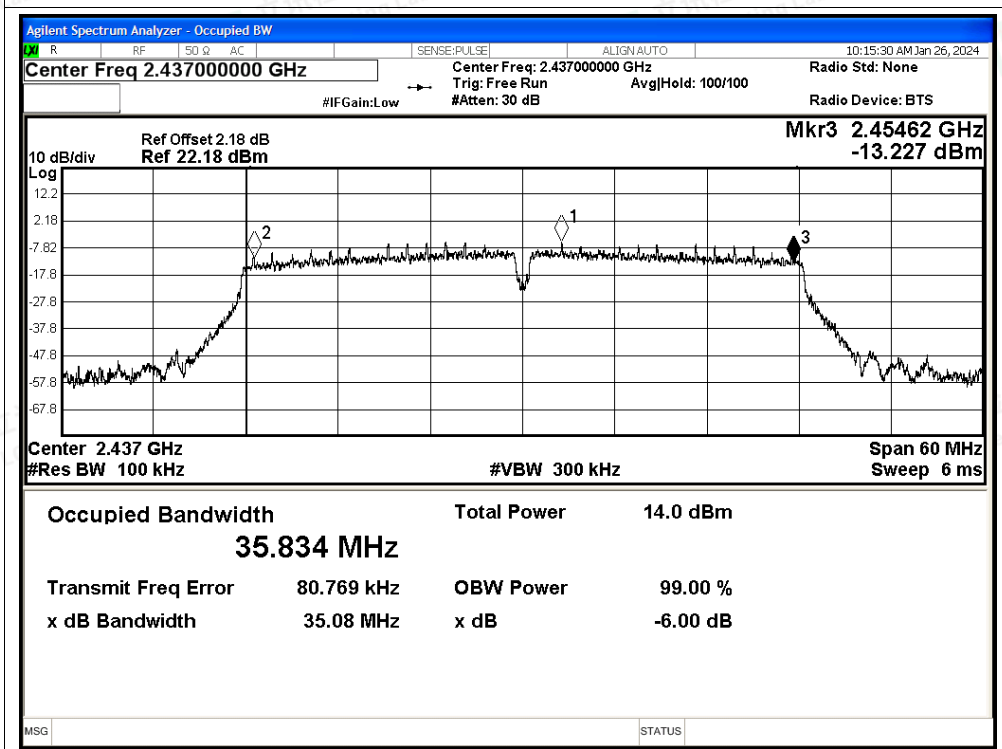


-6dB Bandwidth NVNT n40 2422MHz Ant1

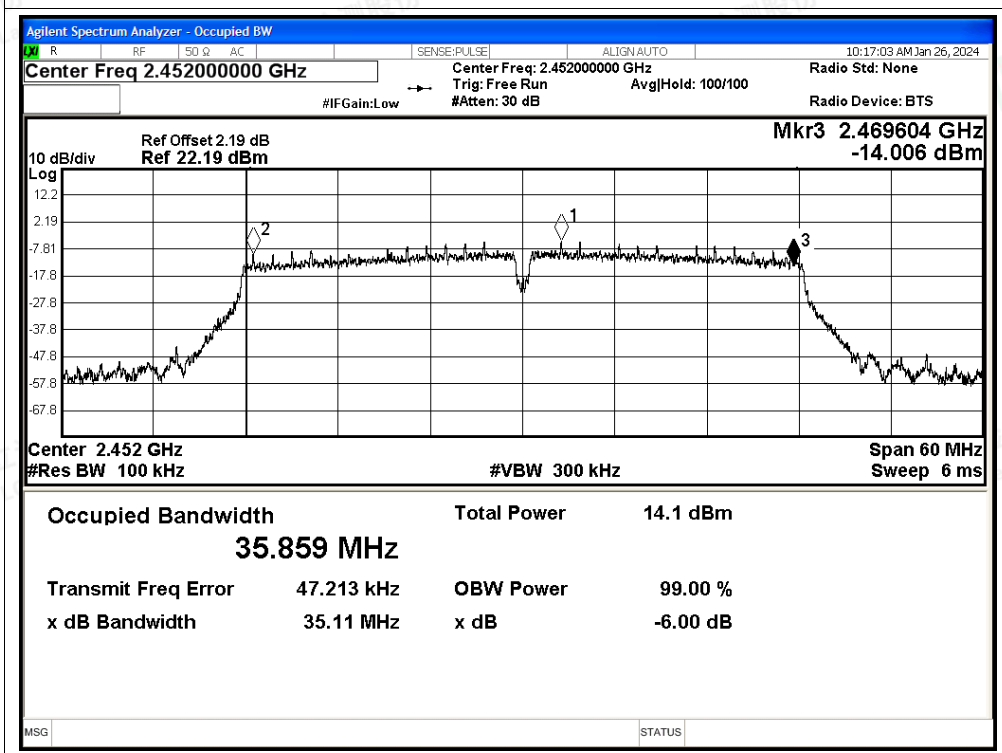




-6dB Bandwidth NVNT n40 2437MHz Ant1



-6dB Bandwidth NVNT n40 2452MHz Ant1





| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT | b | 2412 | Ant2 | 8.042 | >=0.5 | Pass |
| NVNT | b | 2437 | Ant2 | 8.064 | >=0.5 | Pass |
| NVNT | b | 2462 | Ant2 | 8.042 | >=0.5 | Pass |
| NVNT | g | 2412 | Ant2 | 14.715 | >=0.5 | Pass |
| NVNT | g | 2437 | Ant2 | 13.858 | >=0.5 | Pass |
| NVNT | g | 2462 | Ant2 | 15.051 | >=0.5 | Pass |
| NVNT | n20 | 2412 | Ant2 | 13.712 | >=0.5 | Pass |
| NVNT | n20 | 2437 | Ant2 | 13.897 | >=0.5 | Pass |
| NVNT | n20 | 2462 | Ant2 | 15.13 | >=0.5 | Pass |
| NVNT | n40 | 2422 | Ant2 | 35.005 | >=0.5 | Pass |
| NVNT | n40 | 2437 | Ant2 | 34.958 | >=0.5 | Pass |
| NVNT | n40 | 2452 | Ant2 | 33.825 | >=0.5 | Pass |

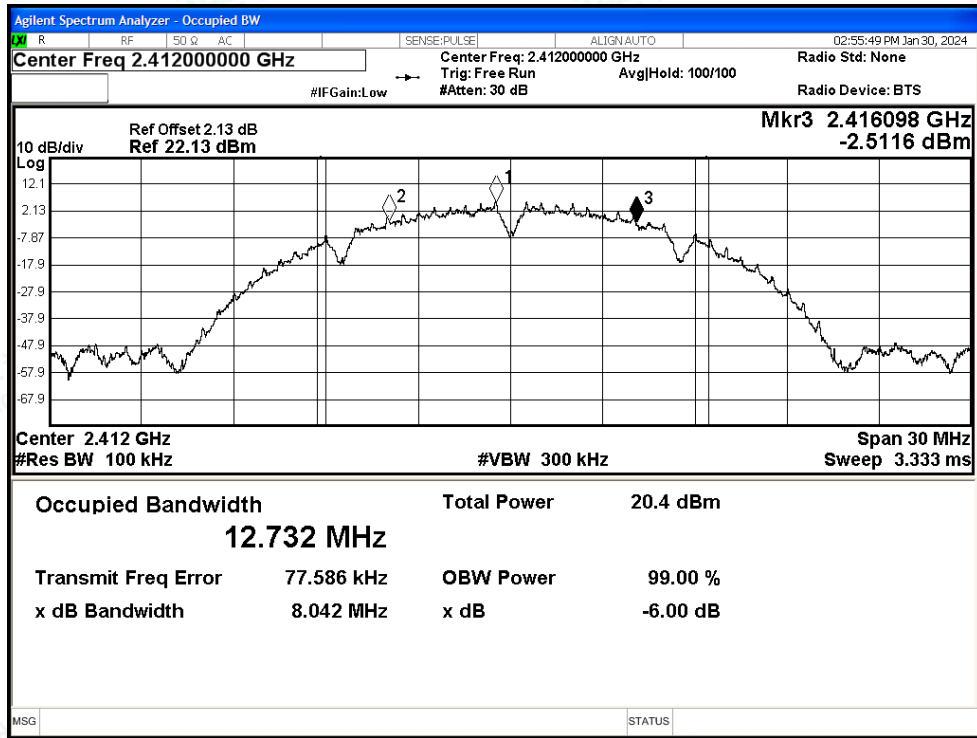


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 Scan code to check authenticity

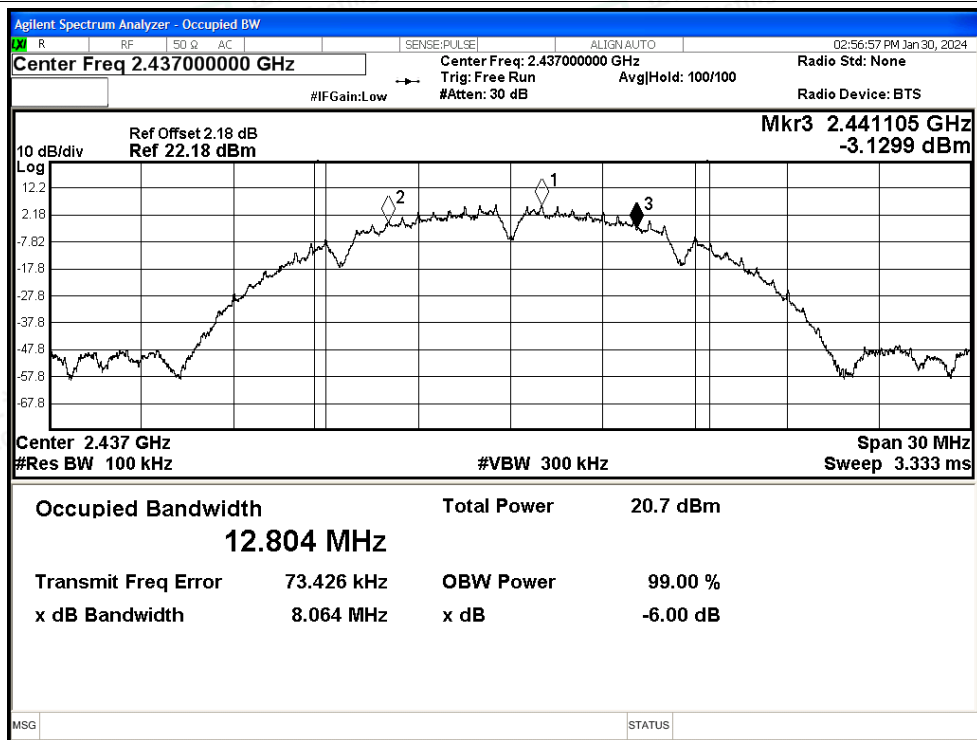


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant2

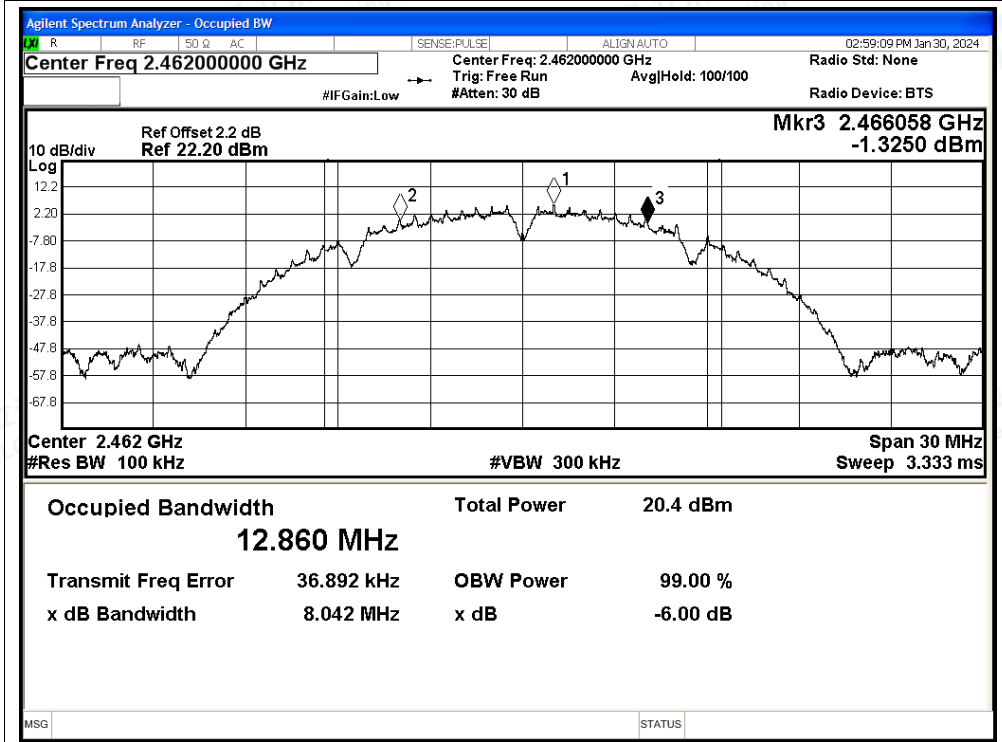


-6dB Bandwidth NVNT b 2437MHz Ant2

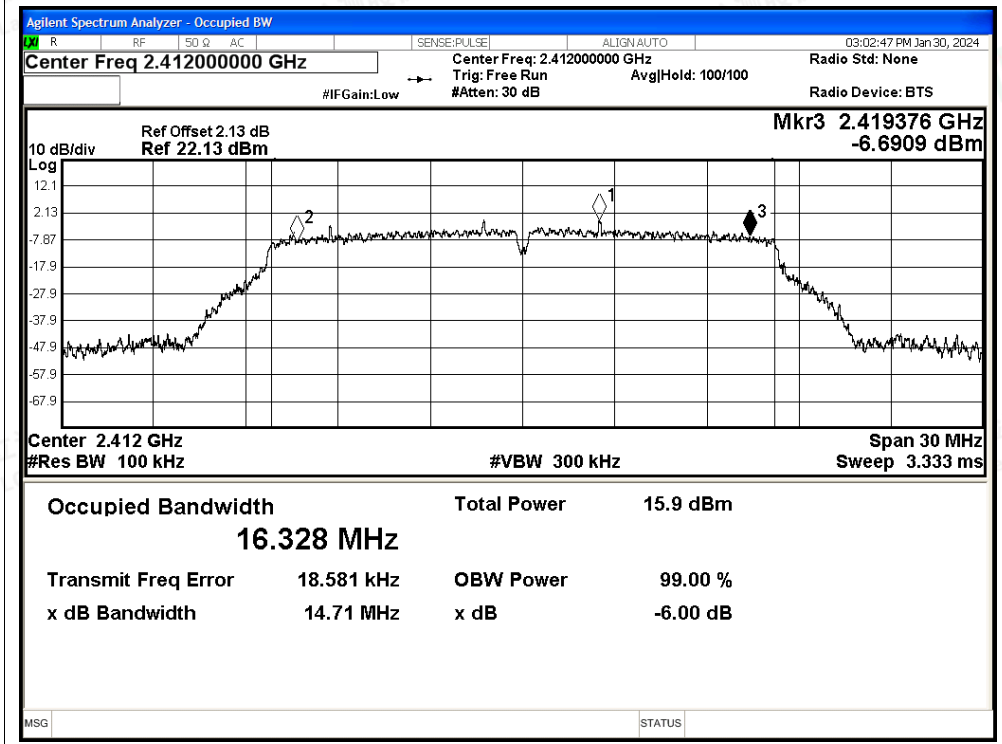




-6dB Bandwidth NVNT b 2462MHz Ant2

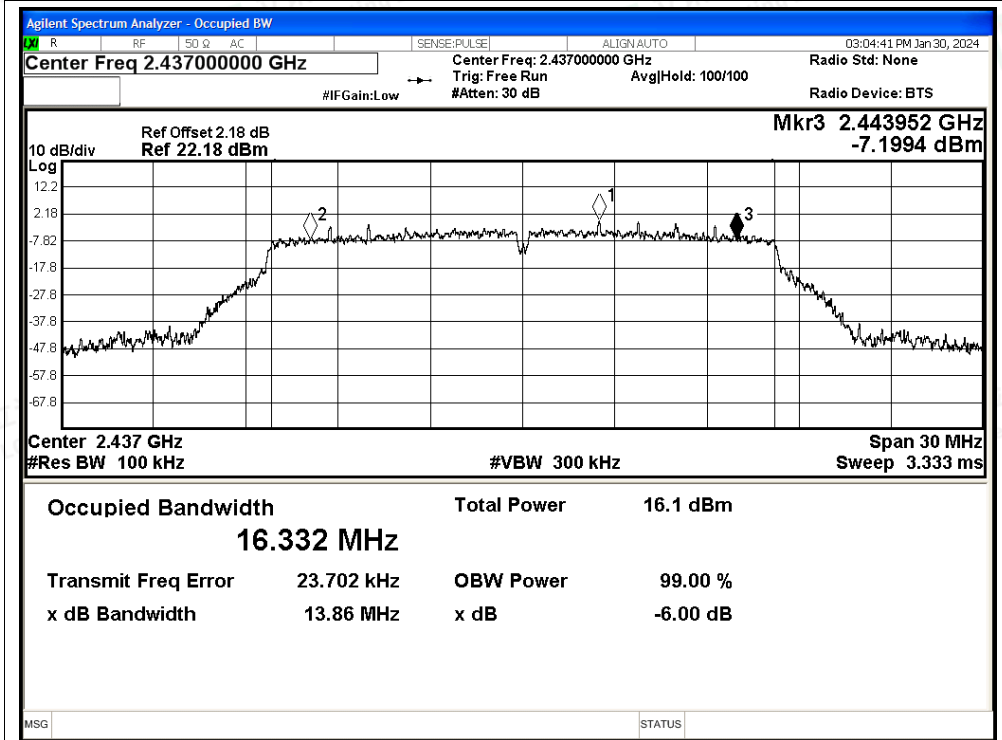


-6dB Bandwidth NVNT g 2412MHz Ant2

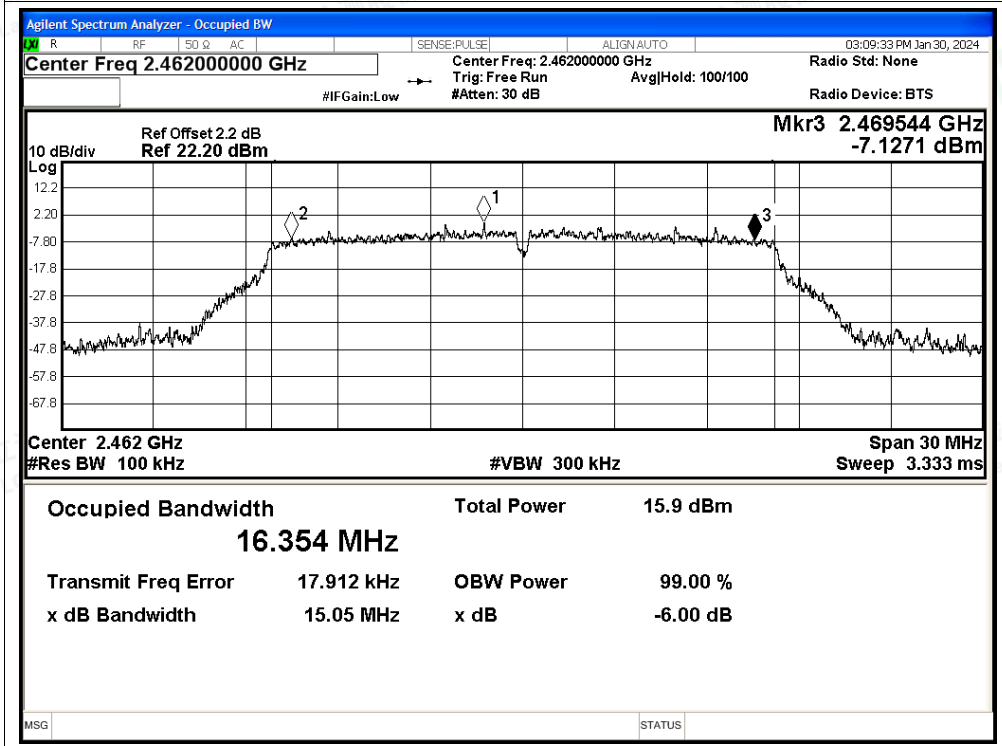




-6dB Bandwidth NVNT g 2437MHz Ant2

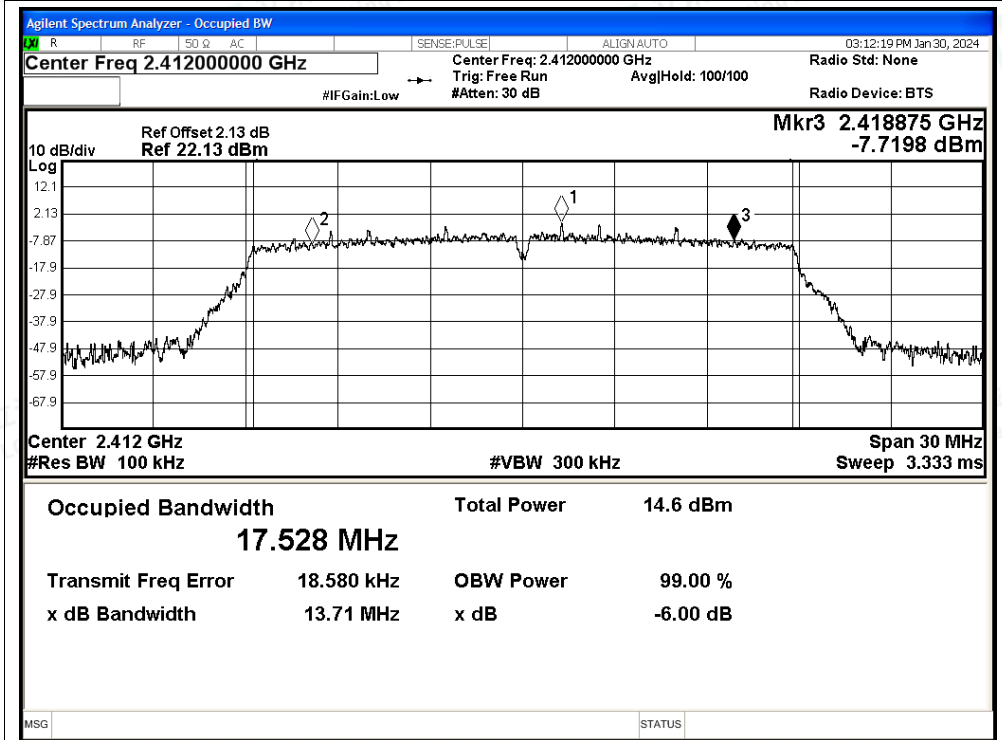


-6dB Bandwidth NVNT g 2462MHz Ant2

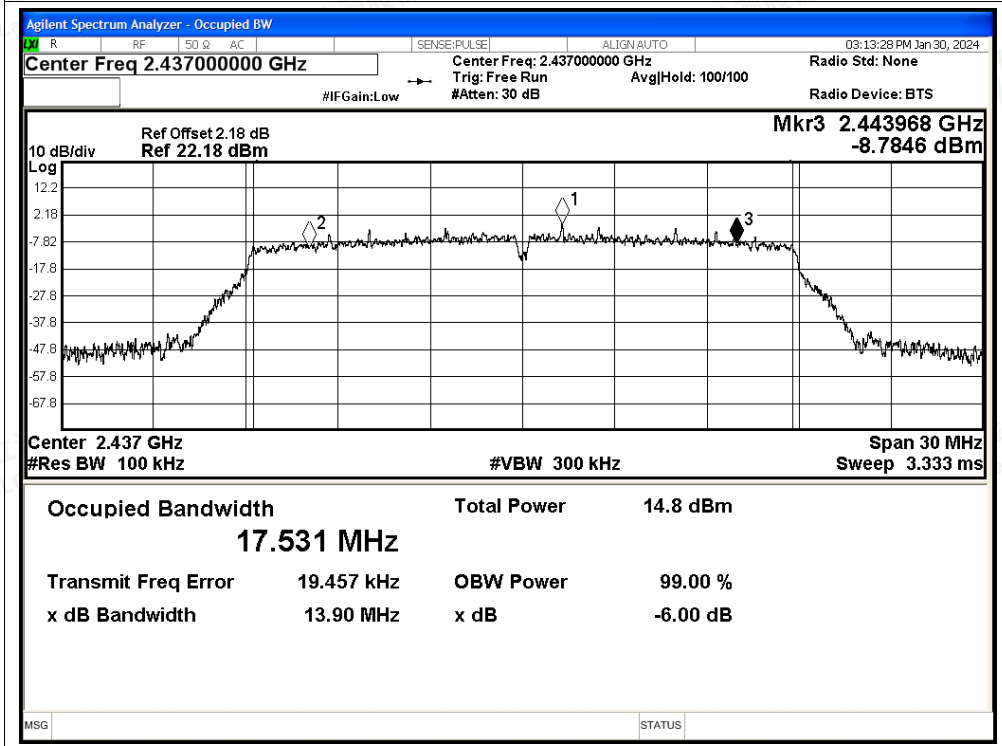




-6dB Bandwidth NVNT n20 2412MHz Ant2

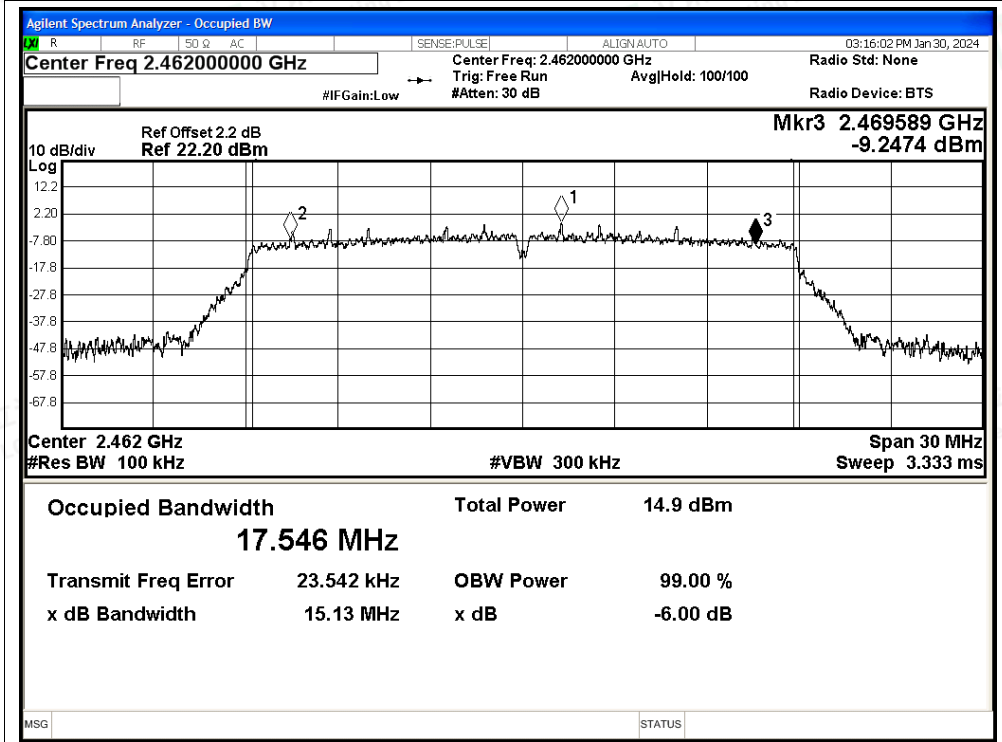


-6dB Bandwidth NVNT n20 2437MHz Ant2

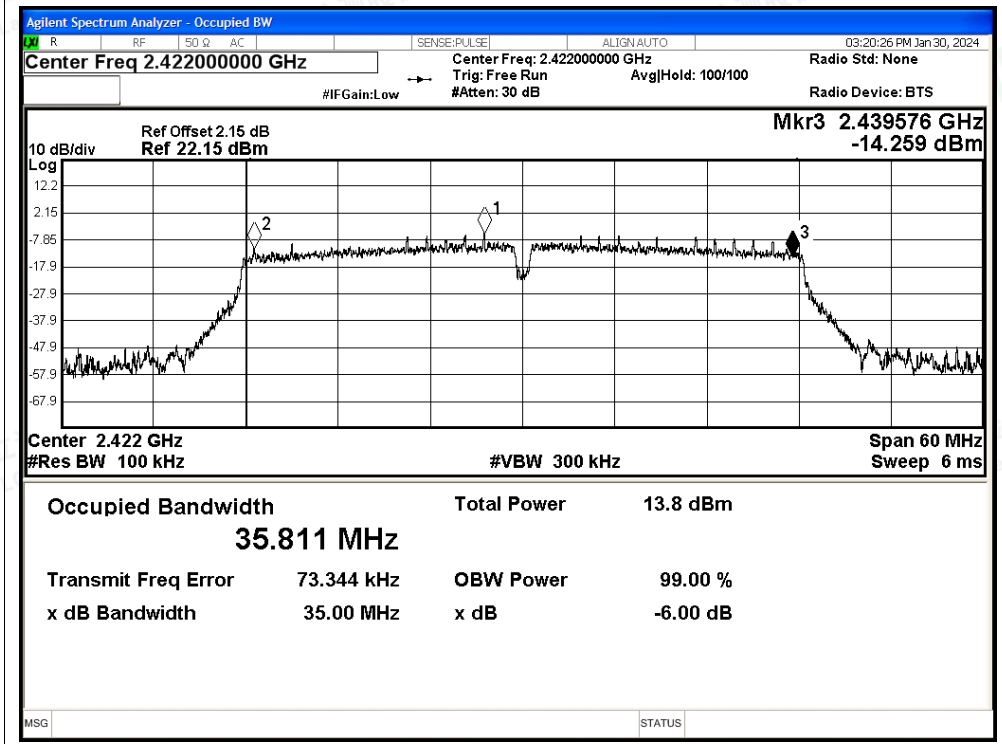




-6dB Bandwidth NVNT n20 2462MHz Ant2

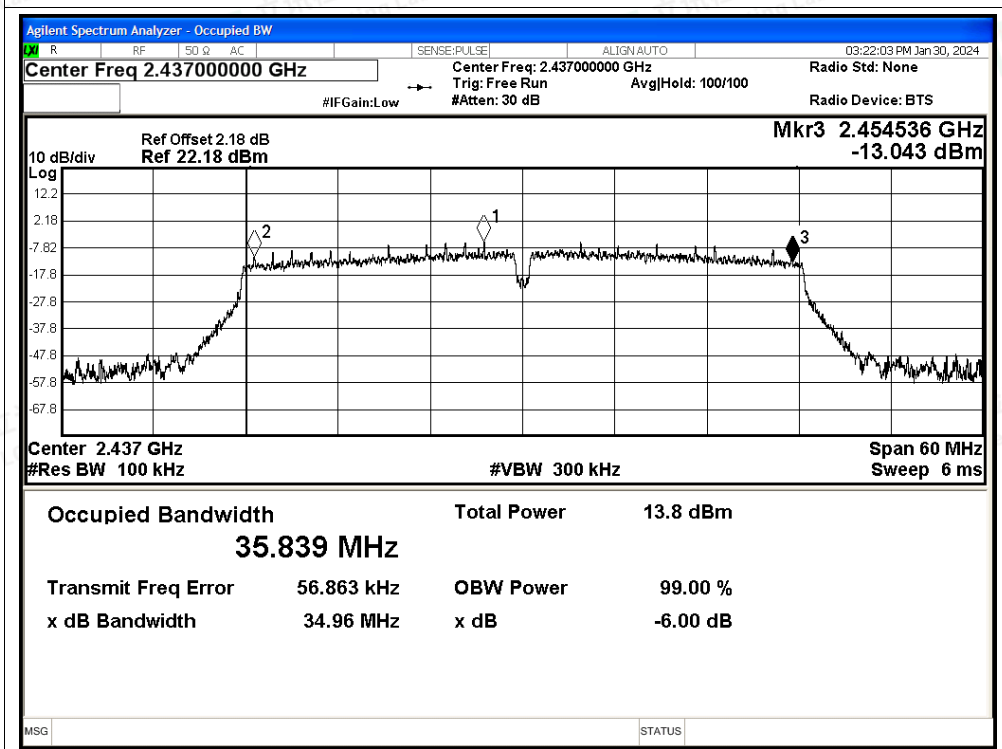


-6dB Bandwidth NVNT n40 2422MHz Ant2

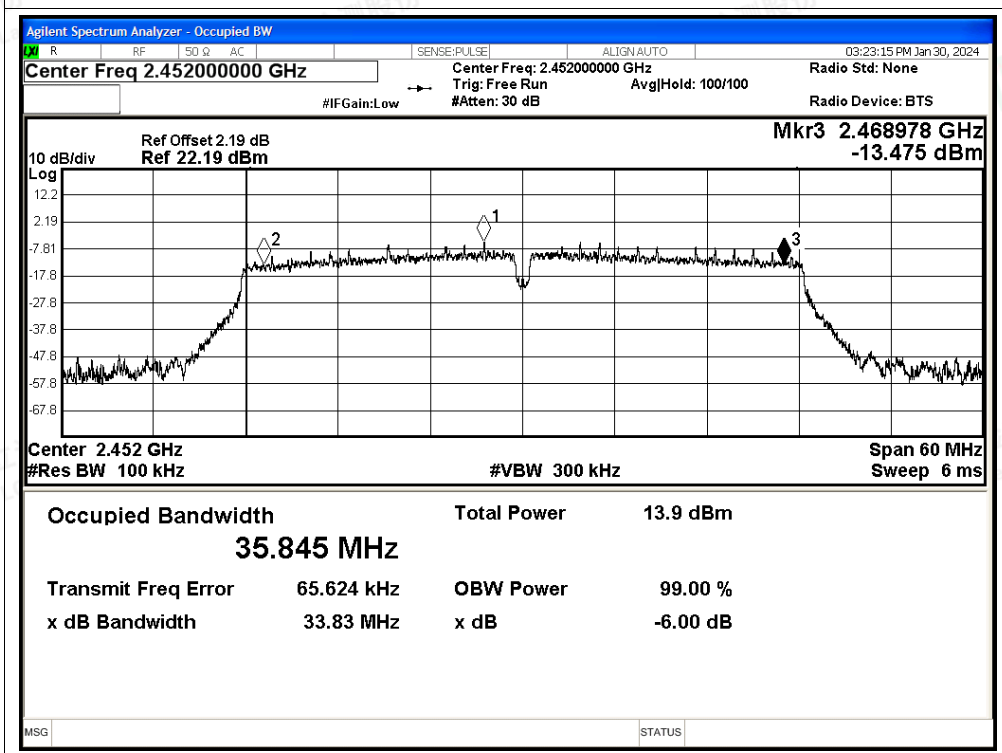




-6dB Bandwidth NVNT n40 2437MHz Ant2



-6dB Bandwidth NVNT n40 2452MHz Ant2





C.2 Maximum Conducted Output Power

| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-------------|---------|
| NVNT | b | 2412 | Ant1 | 15.41 | 30 | Pass |
| NVNT | b | 2437 | Ant1 | 15.44 | 30 | Pass |
| NVNT | b | 2462 | Ant1 | 15.35 | 30 | Pass |
| NVNT | g | 2412 | Ant1 | 14.18 | 30 | Pass |
| NVNT | g | 2437 | Ant1 | 14.33 | 30 | Pass |
| NVNT | g | 2462 | Ant1 | 14.2 | 30 | Pass |
| NVNT | n20 | 2412 | Ant1 | 13.68 | 30 | Pass |
| NVNT | n20 | 2437 | Ant1 | 13.68 | 30 | Pass |
| NVNT | n20 | 2462 | Ant1 | 13.66 | 30 | Pass |
| NVNT | n40 | 2422 | Ant1 | 12.49 | 30 | Pass |
| NVNT | n40 | 2437 | Ant1 | 12.49 | 30 | Pass |
| NVNT | n40 | 2452 | Ant1 | 12.53 | 30 | Pass |

| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-------------|---------|
| NVNT | b | 2412 | Ant2 | 15.4 | 30 | Pass |
| NVNT | b | 2437 | Ant2 | 15.61 | 30 | Pass |
| NVNT | b | 2462 | Ant2 | 15.36 | 30 | Pass |
| NVNT | g | 2412 | Ant2 | 14.63 | 30 | Pass |
| NVNT | g | 2437 | Ant2 | 14.56 | 30 | Pass |
| NVNT | g | 2462 | Ant2 | 14.66 | 30 | Pass |
| NVNT | n20 | 2412 | Ant2 | 13.31 | 30 | Pass |
| NVNT | n20 | 2437 | Ant2 | 13.45 | 30 | Pass |
| NVNT | n20 | 2462 | Ant2 | 13.54 | 30 | Pass |
| NVNT | n40 | 2422 | Ant2 | 12.23 | 30 | Pass |
| NVNT | n40 | 2437 | Ant2 | 12.3 | 30 | Pass |
| NVNT | n40 | 2452 | Ant2 | 12.38 | 30 | Pass |

MIMO

| Condition | Mode | Frequency (MHz) | Total Power (dBm) | | | Limit (dBm) | Verdict |
|-----------|------|-----------------|-------------------|-------|-----------|-------------|---------|
| | | | Ant1 | Ant2 | Ant1+Ant2 | | |
| NVNT | n20 | 2412 | 13.68 | 13.31 | 16.51 | 30 | Pass |
| NVNT | n20 | 2437 | 13.68 | 13.45 | 16.58 | 30 | Pass |
| NVNT | n20 | 2462 | 13.66 | 13.54 | 16.61 | 30 | Pass |
| NVNT | n40 | 2422 | 12.49 | 12.23 | 15.37 | 30 | Pass |
| NVNT | n40 | 2437 | 12.49 | 12.3 | 15.41 | 30 | Pass |
| NVNT | n40 | 2452 | 12.53 | 12.38 | 15.47 | 30 | Pass |





C.3 Maximum Power Spectral Density Level

| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|------|-----------------|---------|--------------------------|------------------|---------|
| NVNT | b | 2412 | Ant1 | -8.96 | 8 | Pass |
| NVNT | b | 2437 | Ant1 | -9.17 | 8 | Pass |
| NVNT | b | 2462 | Ant1 | -8.89 | 8 | Pass |
| NVNT | g | 2412 | Ant1 | -15.6 | 8 | Pass |
| NVNT | g | 2437 | Ant1 | -15.61 | 8 | Pass |
| NVNT | g | 2462 | Ant1 | -15.15 | 8 | Pass |
| NVNT | n20 | 2412 | Ant1 | -15.85 | 8 | Pass |
| NVNT | n20 | 2437 | Ant1 | -16.62 | 8 | Pass |
| NVNT | n20 | 2462 | Ant1 | -16.17 | 8 | Pass |
| NVNT | n40 | 2422 | Ant1 | -19.08 | 8 | Pass |
| NVNT | n40 | 2437 | Ant1 | -20.04 | 8 | Pass |
| NVNT | n40 | 2452 | Ant1 | -19.63 | 8 | Pass |

| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|------|-----------------|---------|--------------------------|------------------|---------|
| NVNT | b | 2412 | Ant2 | -8.71 | 8 | Pass |
| NVNT | b | 2437 | Ant2 | -8.18 | 8 | Pass |
| NVNT | b | 2462 | Ant2 | -7.62 | 8 | Pass |
| NVNT | g | 2412 | Ant2 | -11.77 | 8 | Pass |
| NVNT | g | 2437 | Ant2 | -14.96 | 8 | Pass |
| NVNT | g | 2462 | Ant2 | -14.34 | 8 | Pass |
| NVNT | n20 | 2412 | Ant2 | -16.23 | 8 | Pass |
| NVNT | n20 | 2437 | Ant2 | -16.11 | 8 | Pass |
| NVNT | n20 | 2462 | Ant2 | -15.72 | 8 | Pass |
| NVNT | n40 | 2422 | Ant2 | -19.8 | 8 | Pass |
| NVNT | n40 | 2437 | Ant2 | -19.83 | 8 | Pass |
| NVNT | n40 | 2452 | Ant2 | -19.5 | 8 | Pass |

MIMO

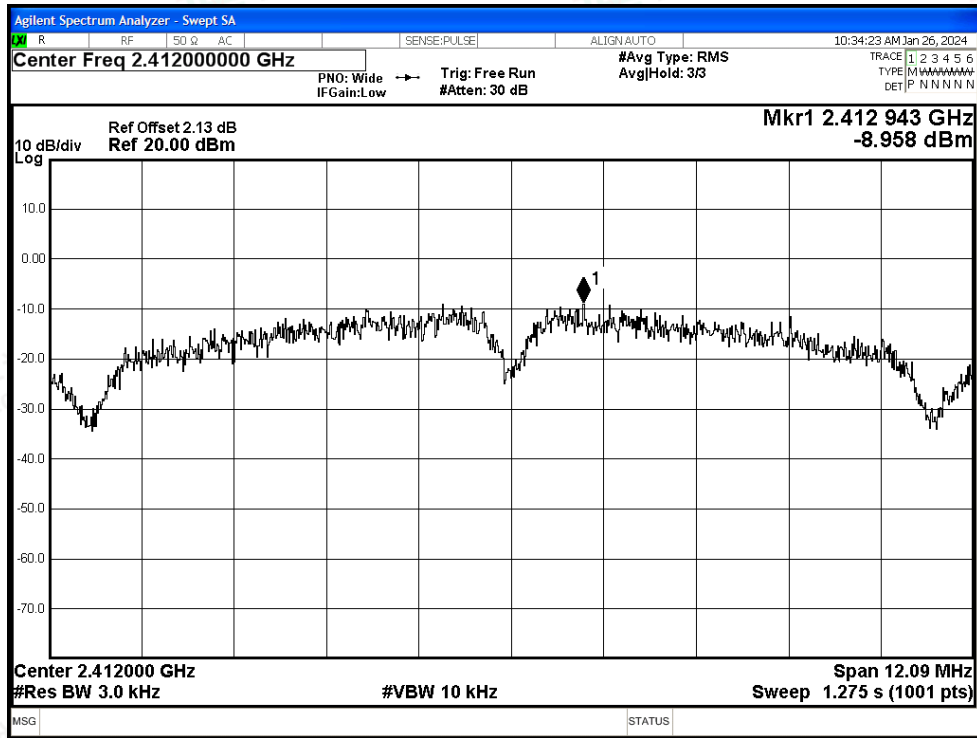
| Condition | Mode | Frequency (MHz) | Total PSD (dBm/3kHz) | | | Limit (dBm) | Verdict |
|-----------|------|-----------------|----------------------|--------|-----------|-------------|---------|
| | | | Ant1 | Ant2 | Ant1+Ant2 | | |
| NVNT | n20 | 2412 | -15.85 | -16.23 | -13.03 | 8 | Pass |
| NVNT | n20 | 2437 | -16.62 | -16.11 | -13.35 | 8 | Pass |
| NVNT | n20 | 2462 | -16.17 | -15.72 | -12.93 | 8 | Pass |
| NVNT | n40 | 2422 | -19.08 | -19.8 | -16.41 | 8 | Pass |
| NVNT | n40 | 2437 | -20.04 | -19.83 | -16.92 | 8 | Pass |
| NVNT | n40 | 2452 | -19.63 | -19.5 | -16.55 | 8 | Pass |



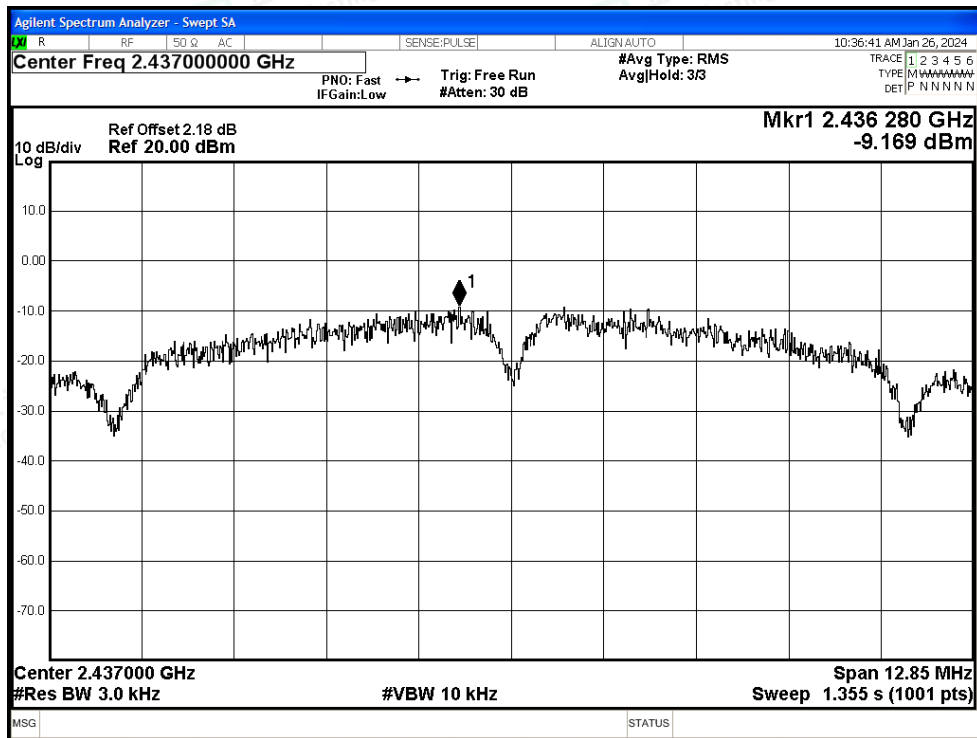


Test Graphs

PSD NVNT b 2412MHz Ant1

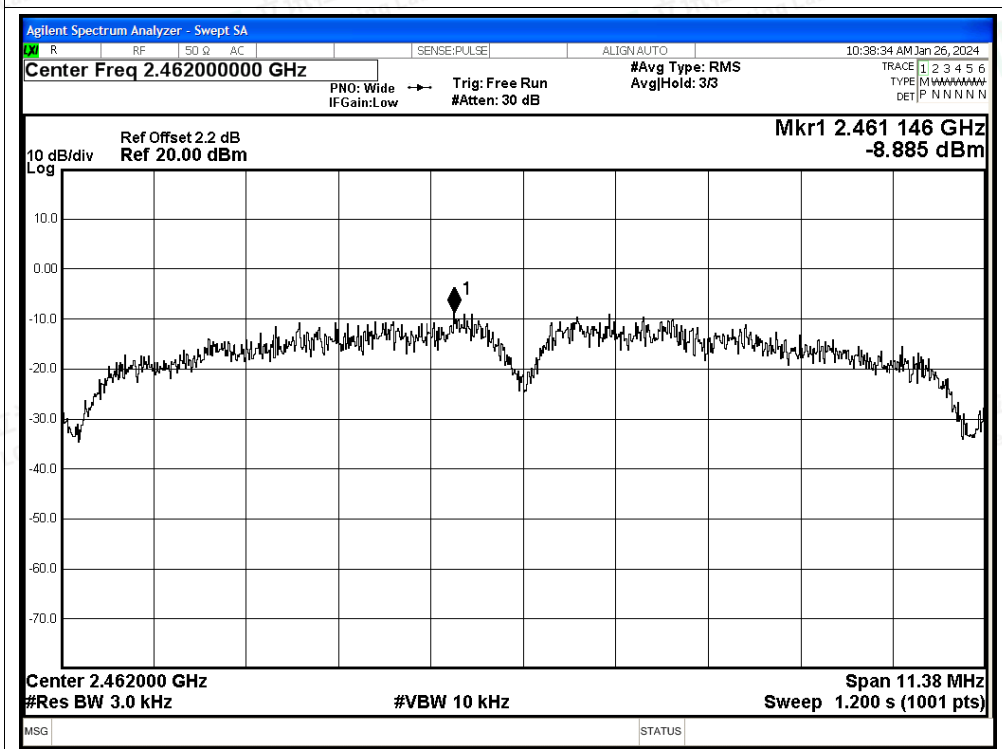


PSD NVNT b 2437MHz Ant1

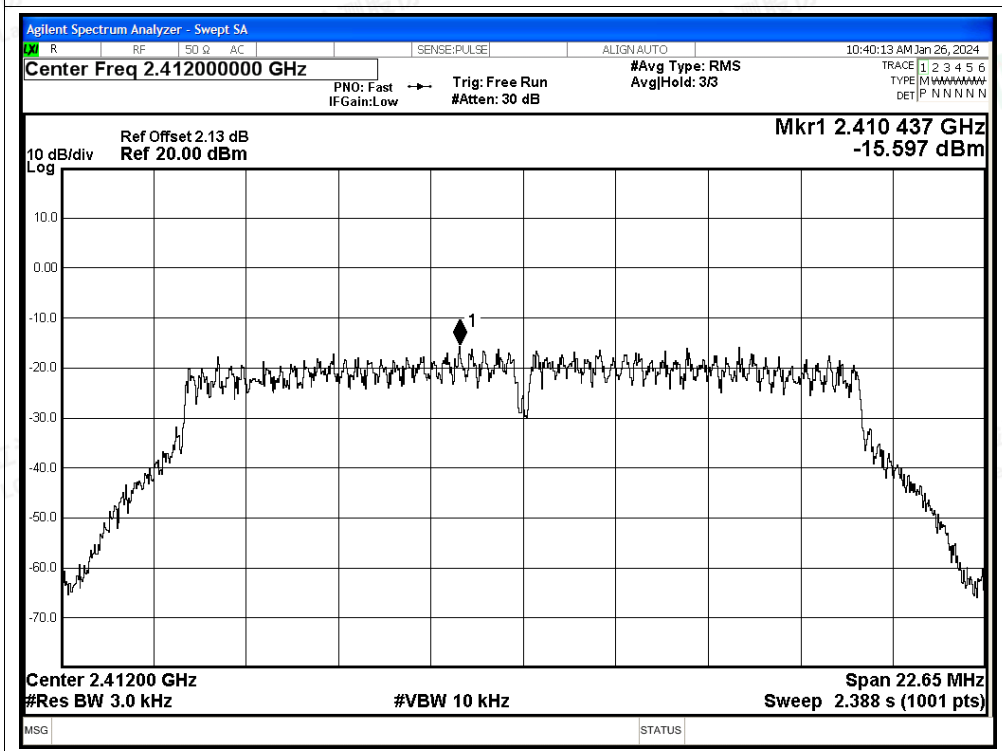




PSD NVNT b 2462MHz Ant1

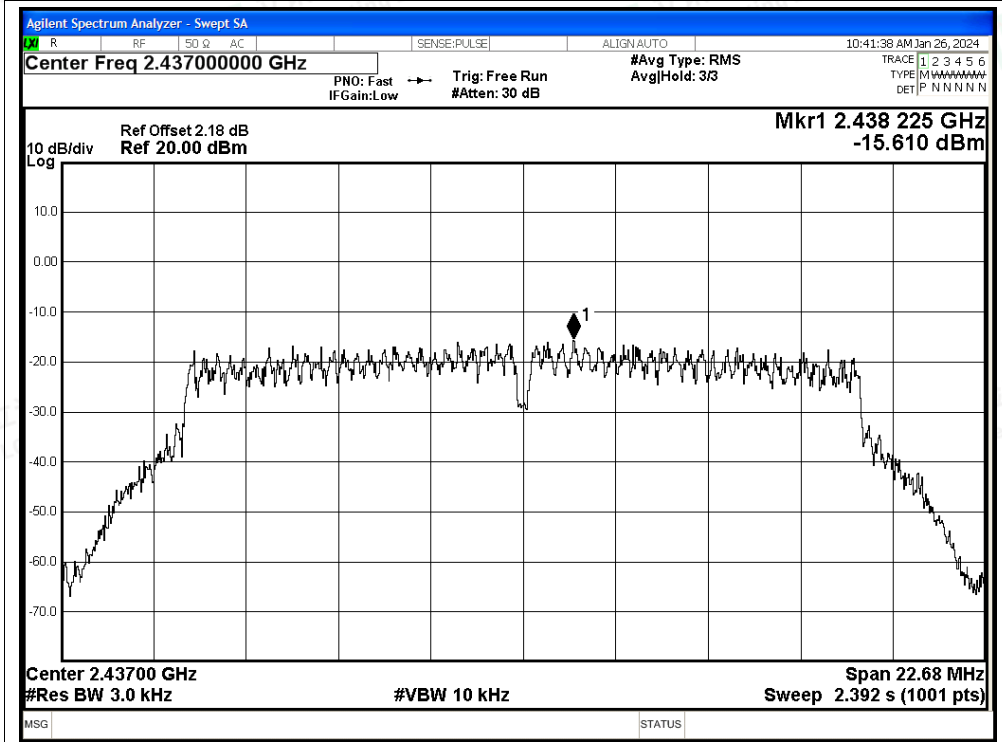


PSD NVNT g 2412MHz Ant1

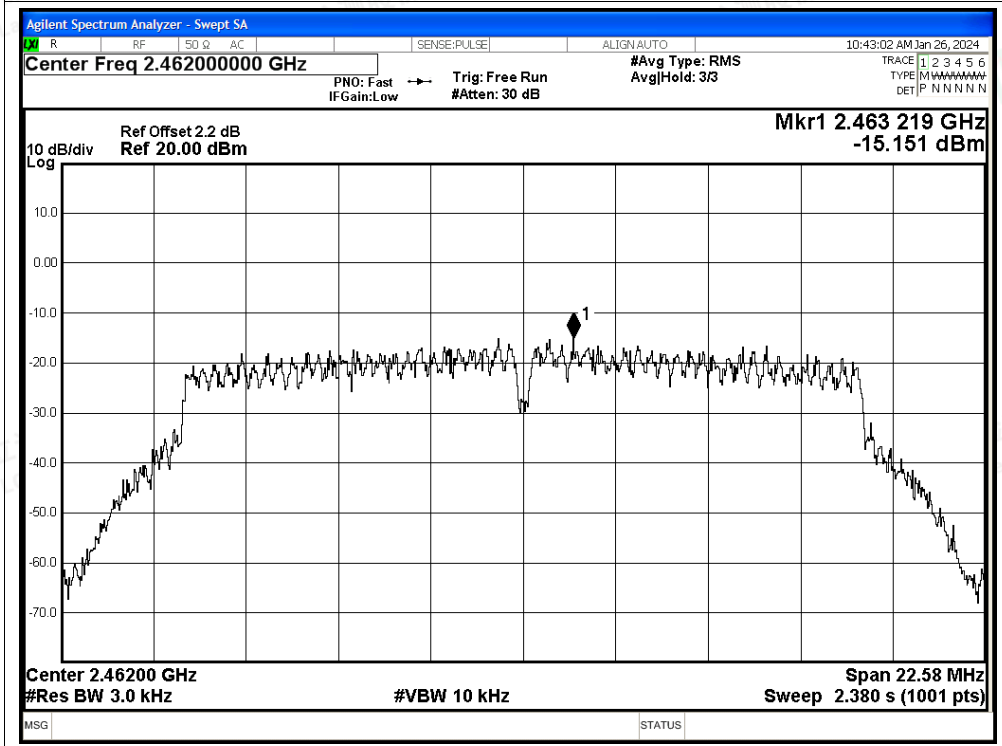


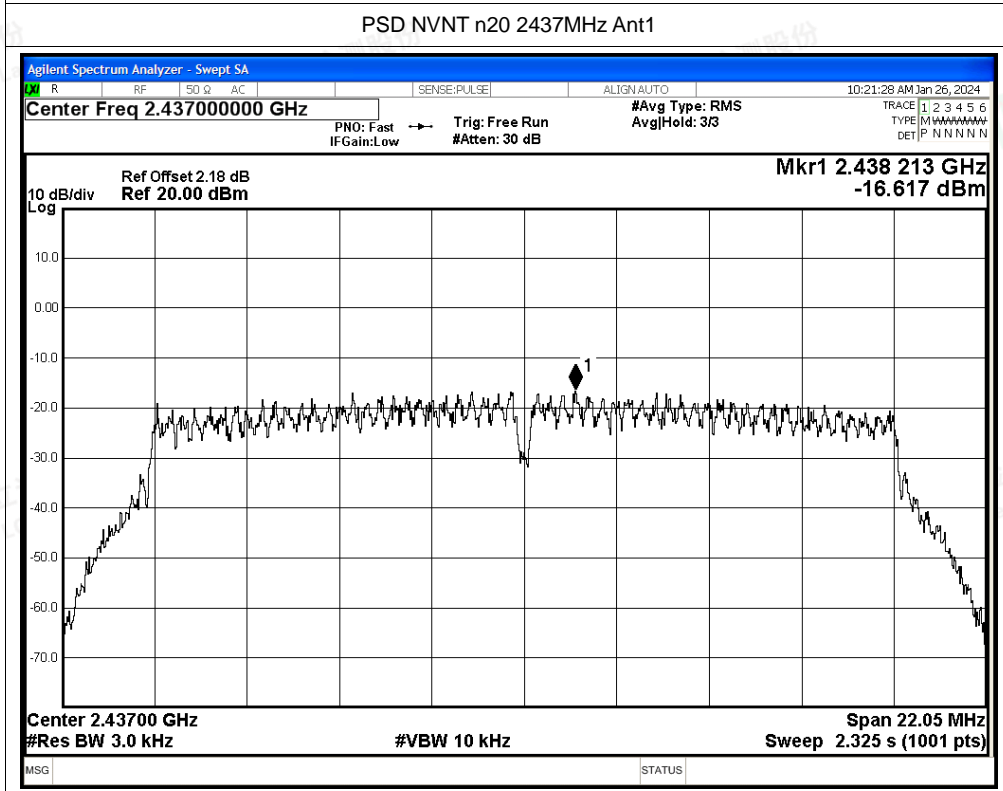
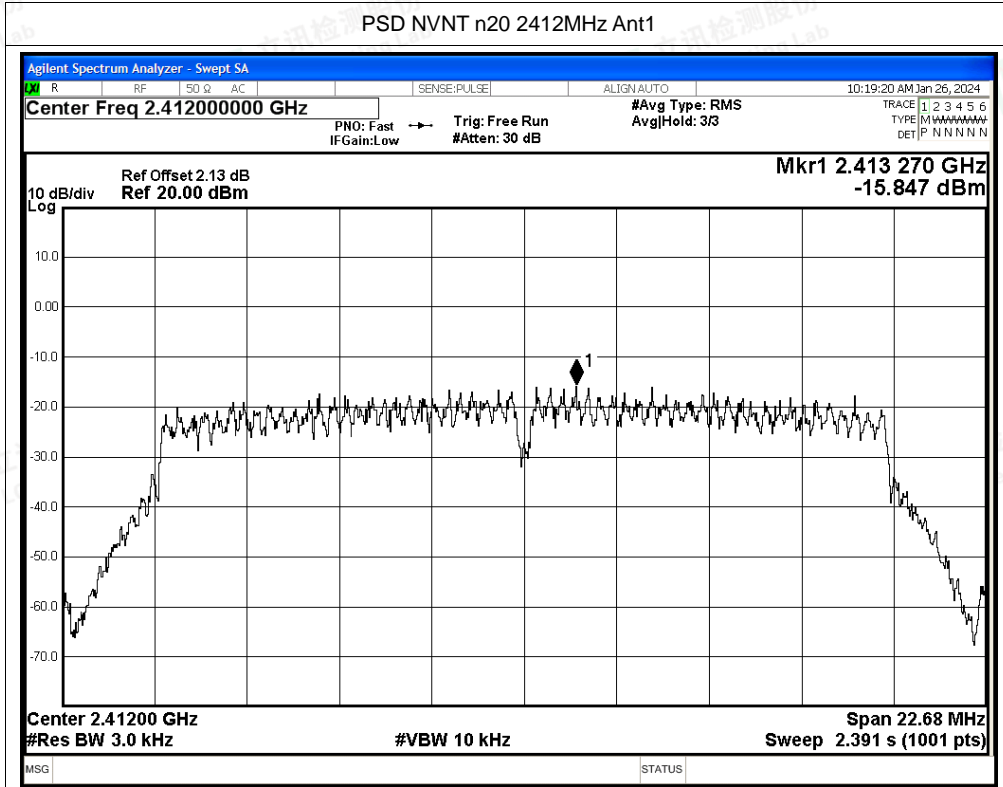


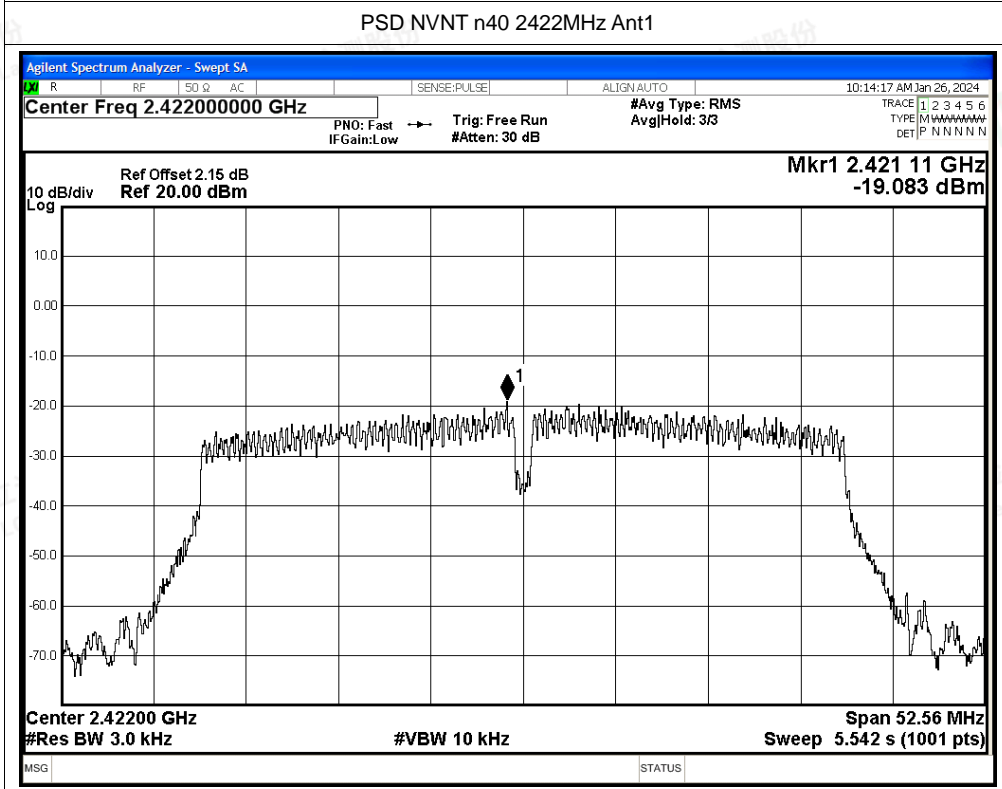
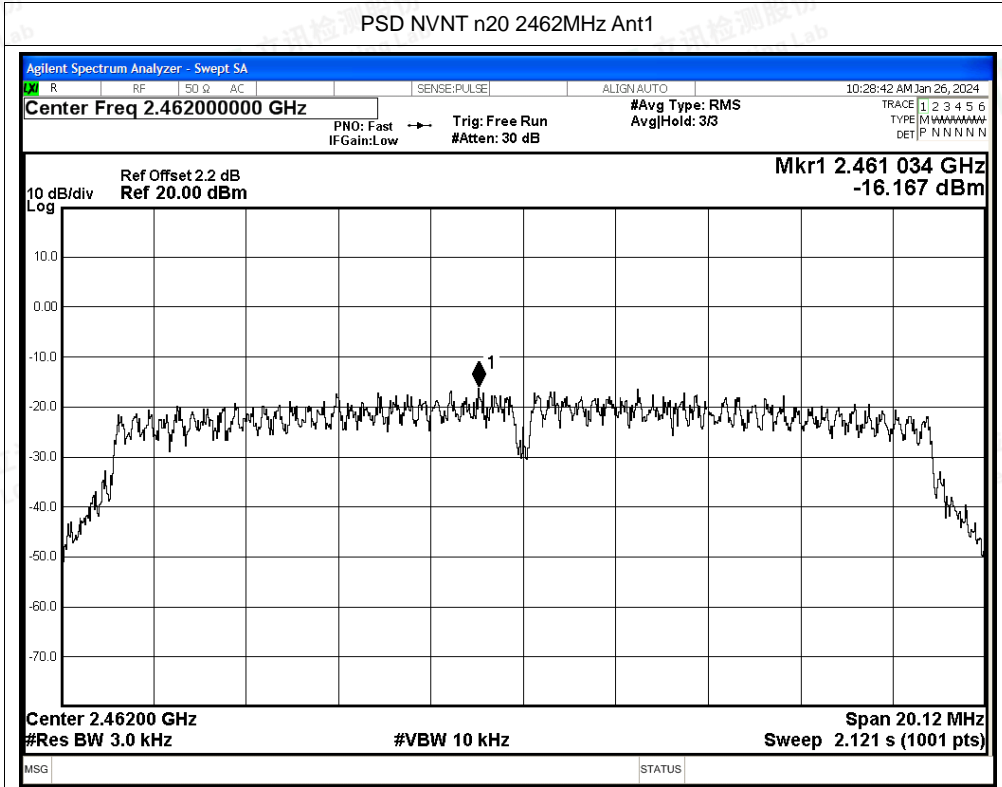
PSD NVNT g 2437MHz Ant1

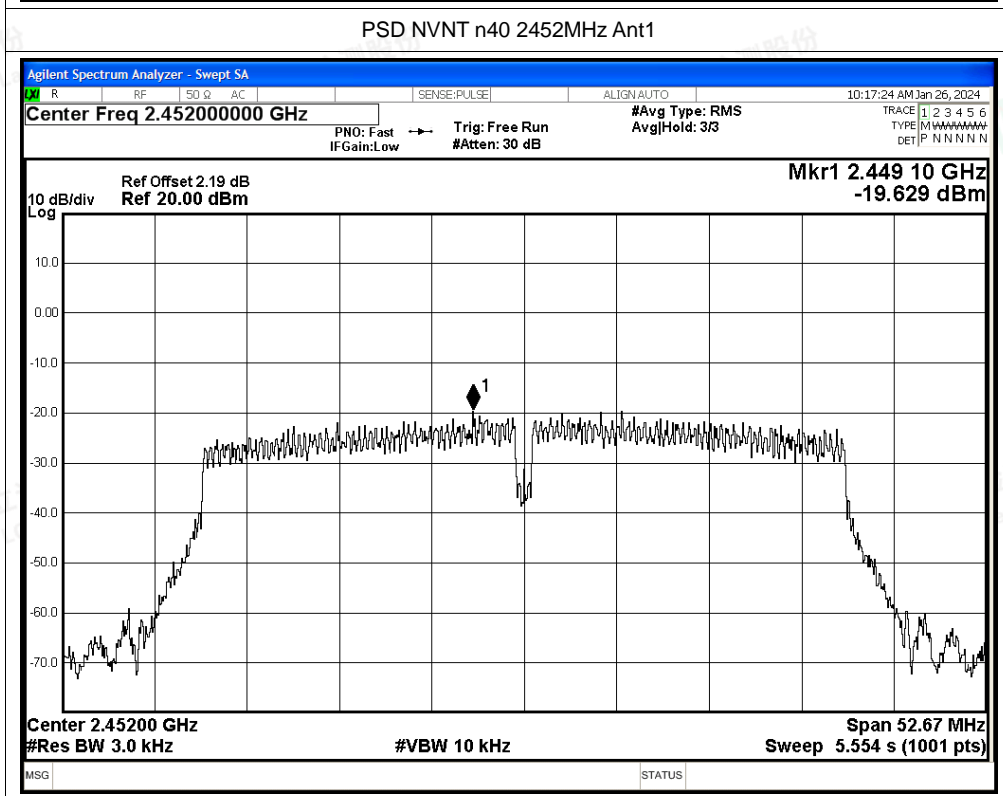
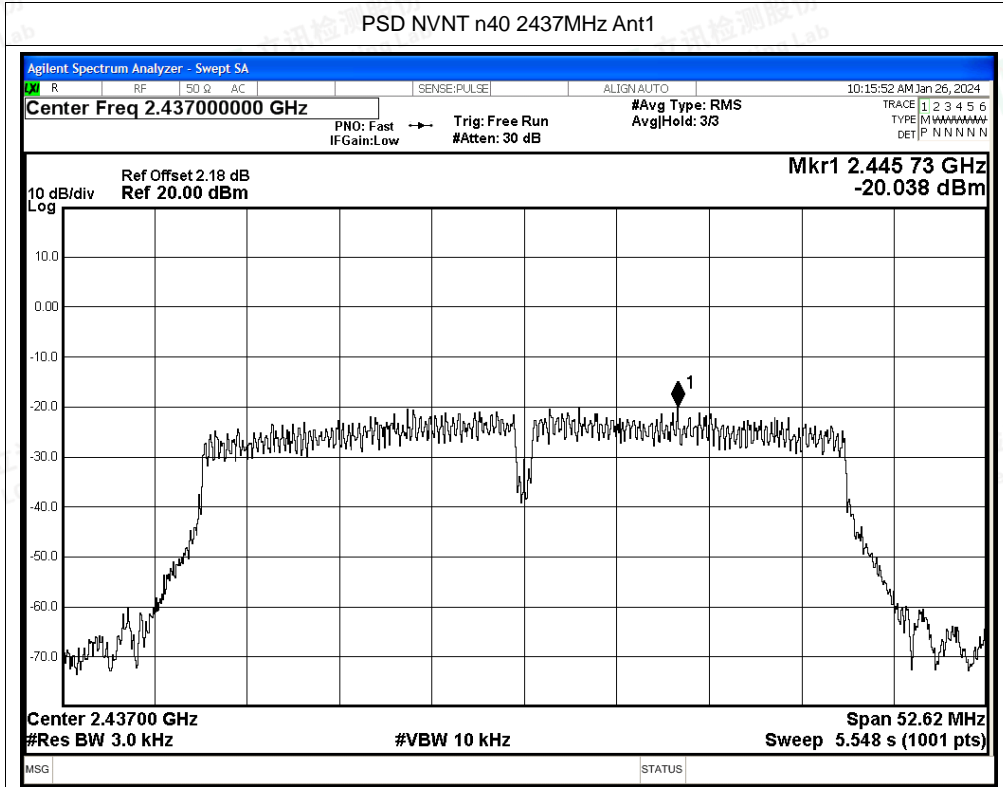


PSD NVNT g 2462MHz Ant1





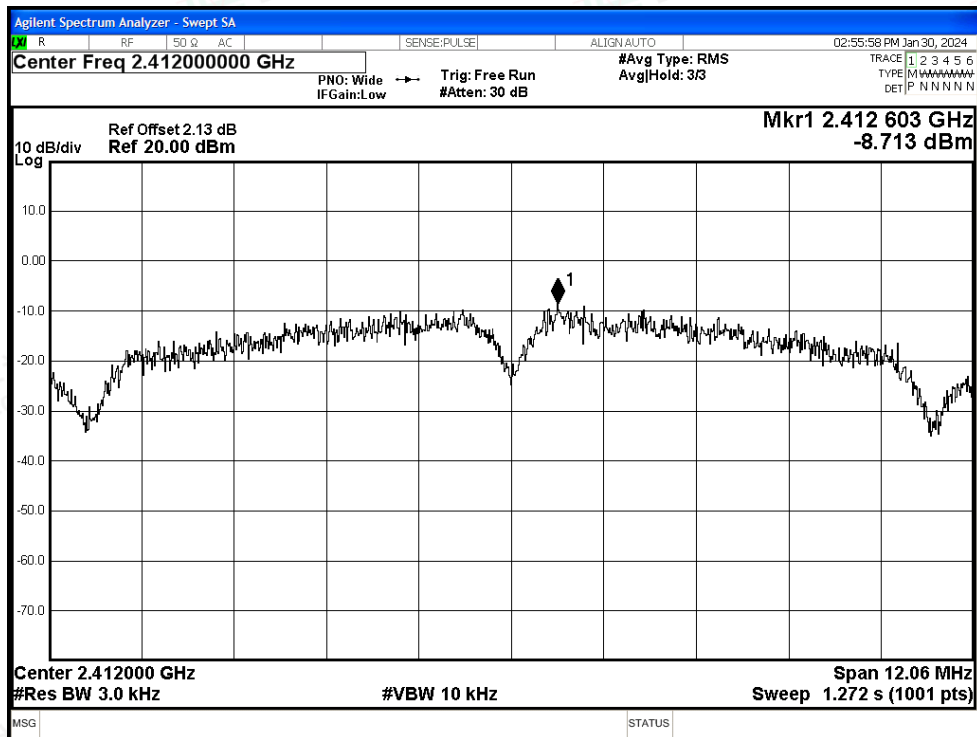




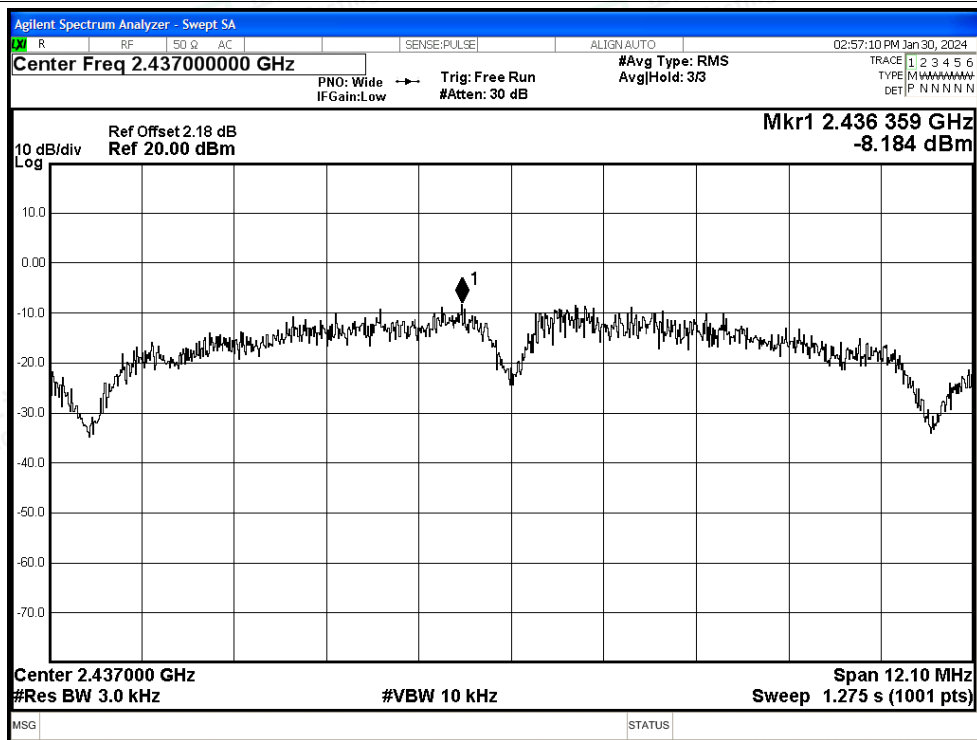


Test Graphs

PSD NVNT b 2412MHz Ant2

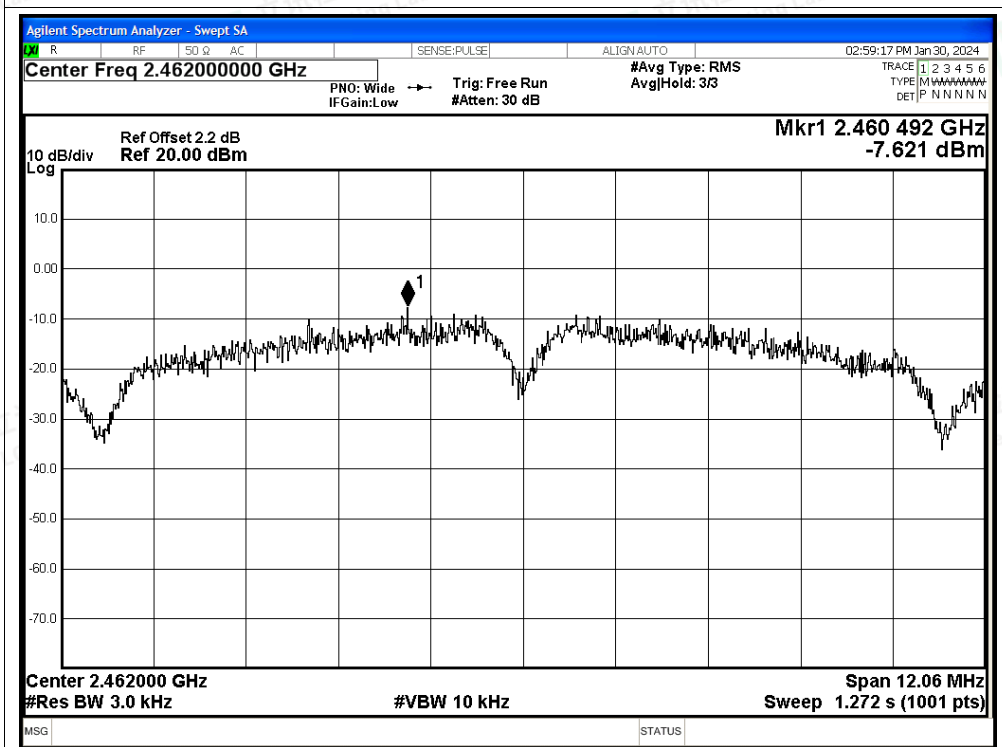


PSD NVNT b 2437MHz Ant2

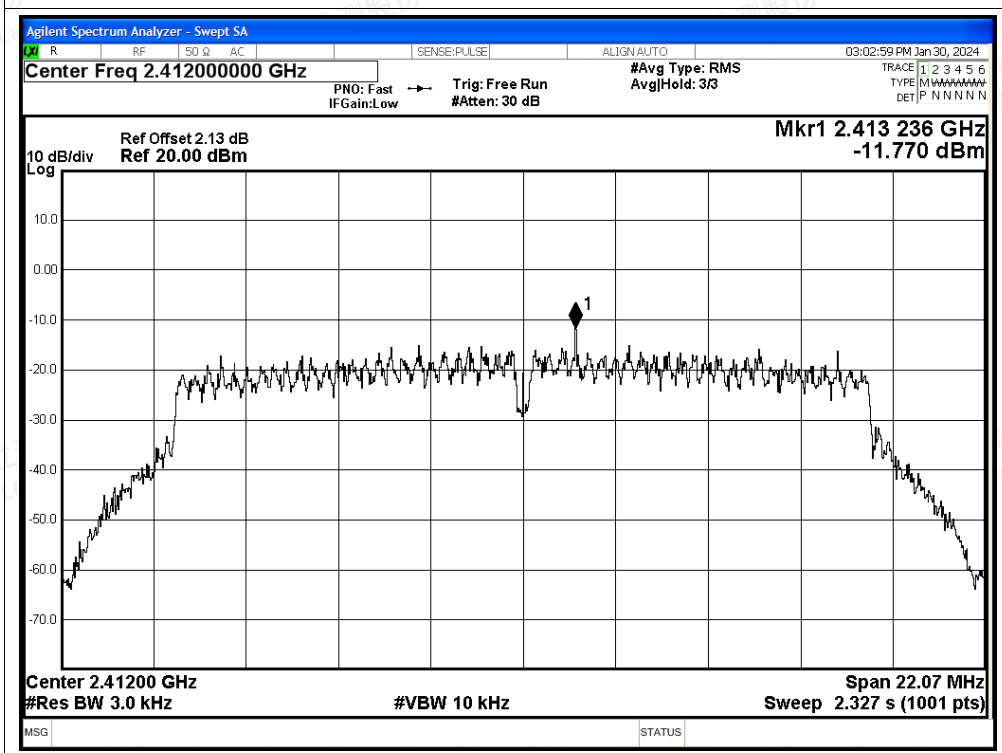




PSD NVNT b 2462MHz Ant2

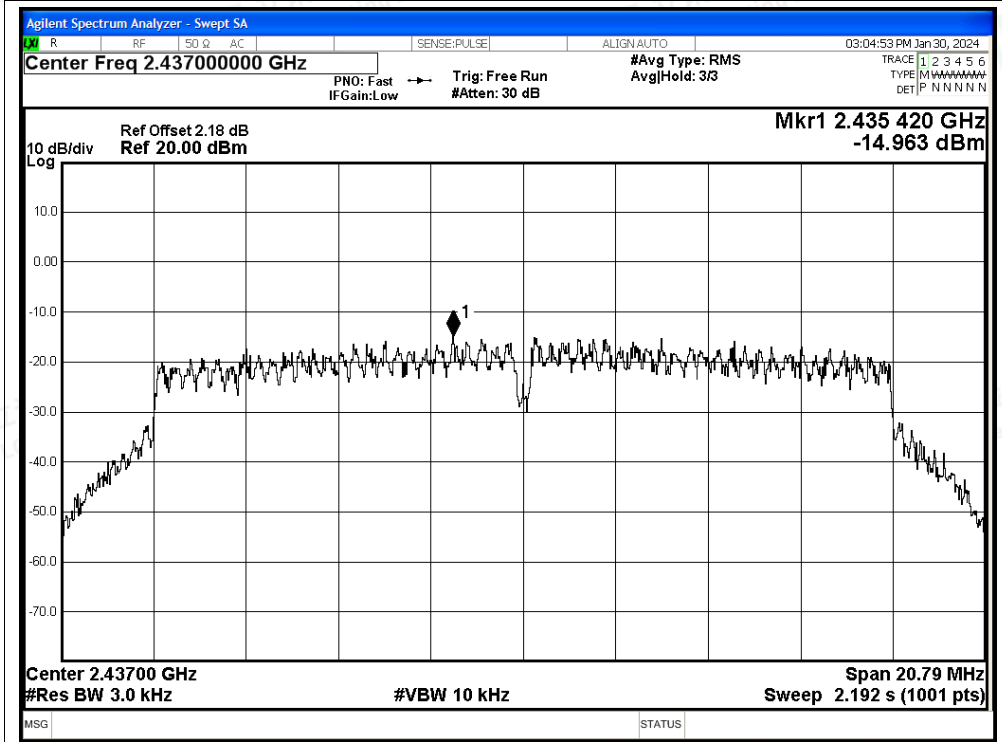


PSD NVNT g 2412MHz Ant2

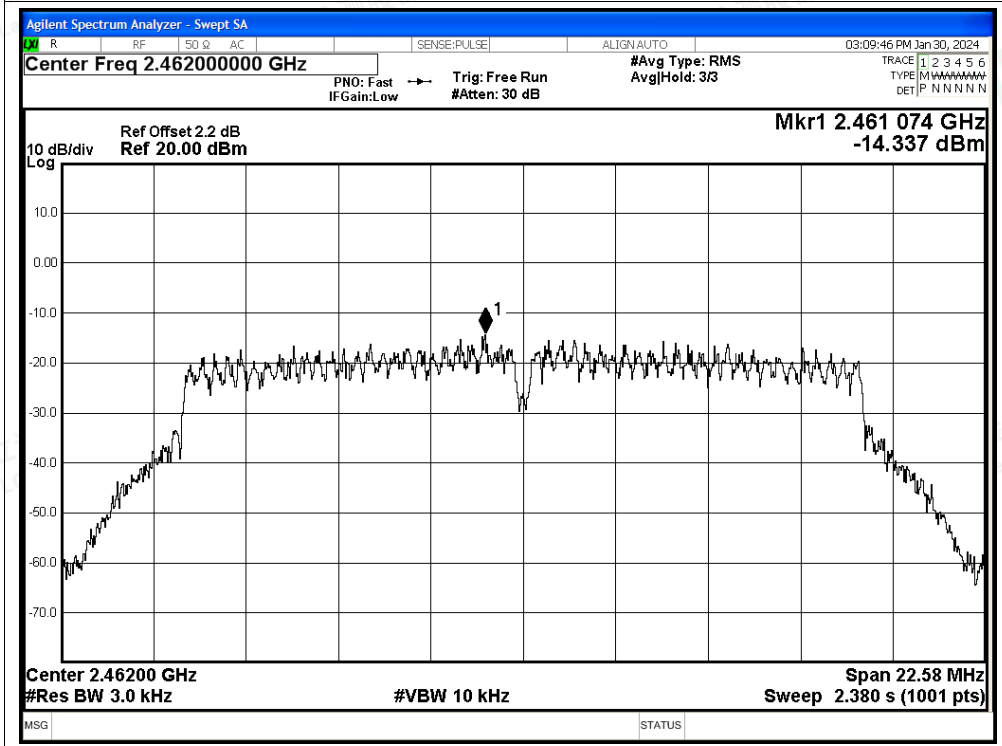


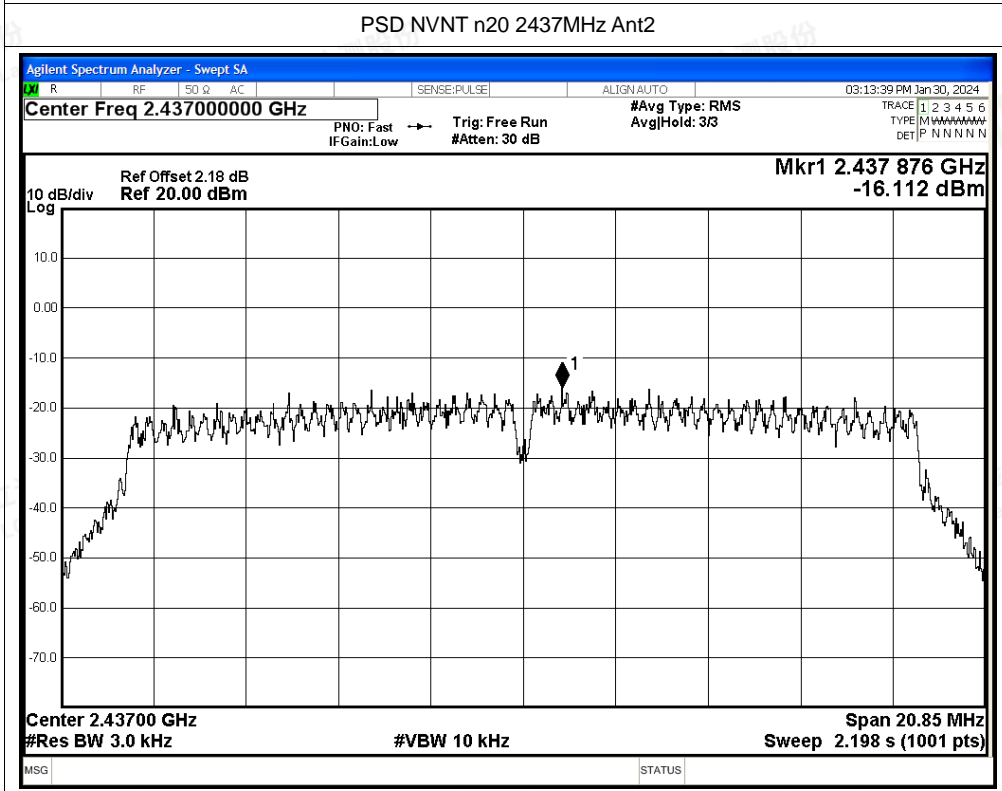
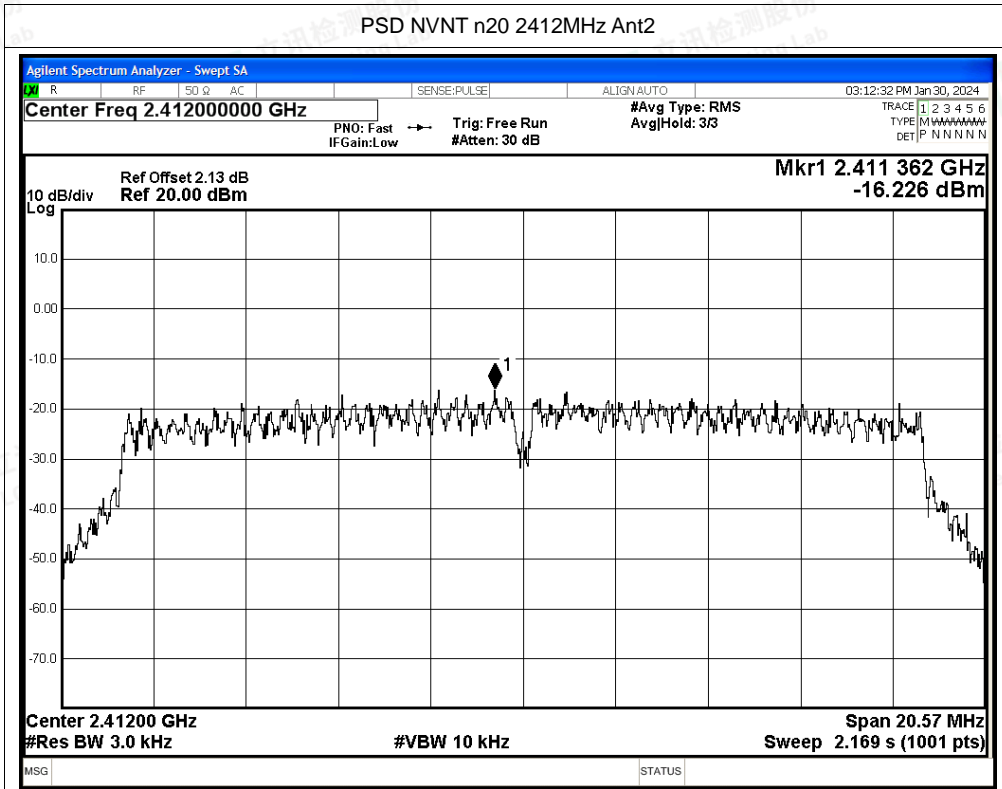


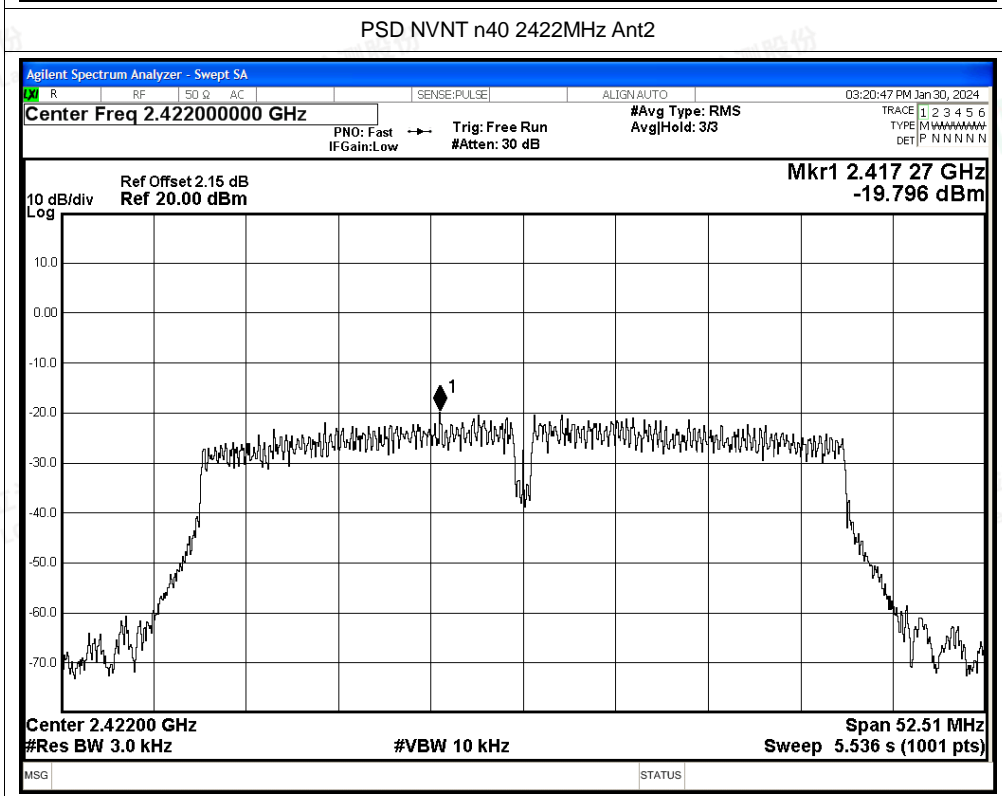
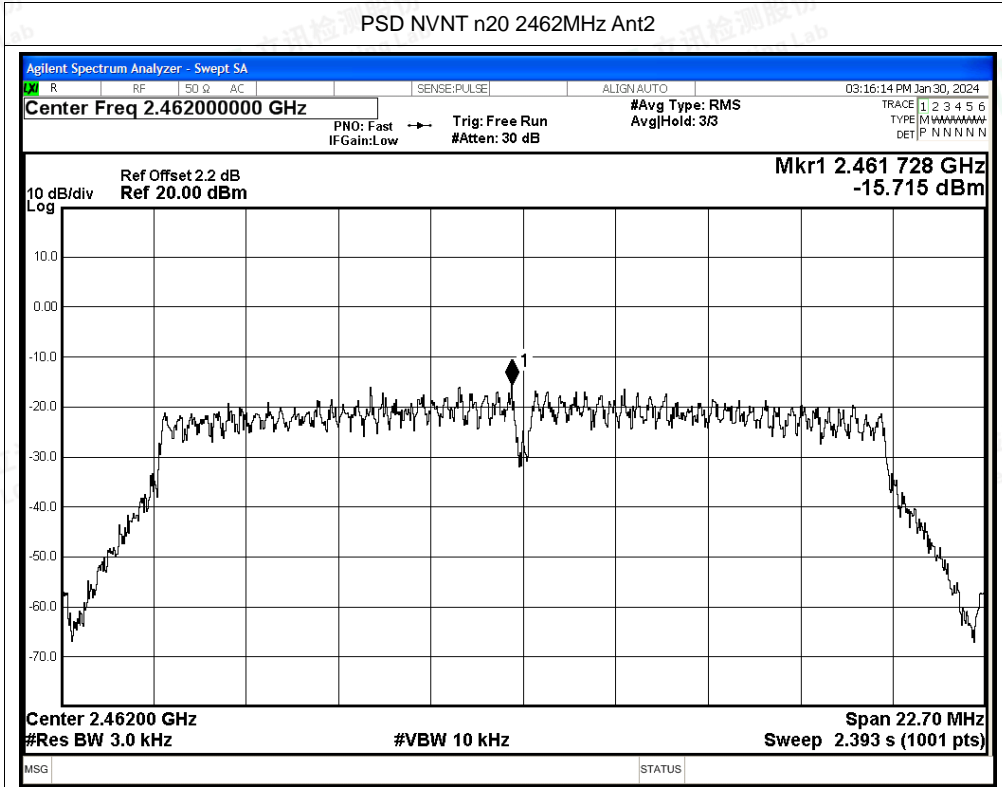
PSD NVNT g 2437MHz Ant2

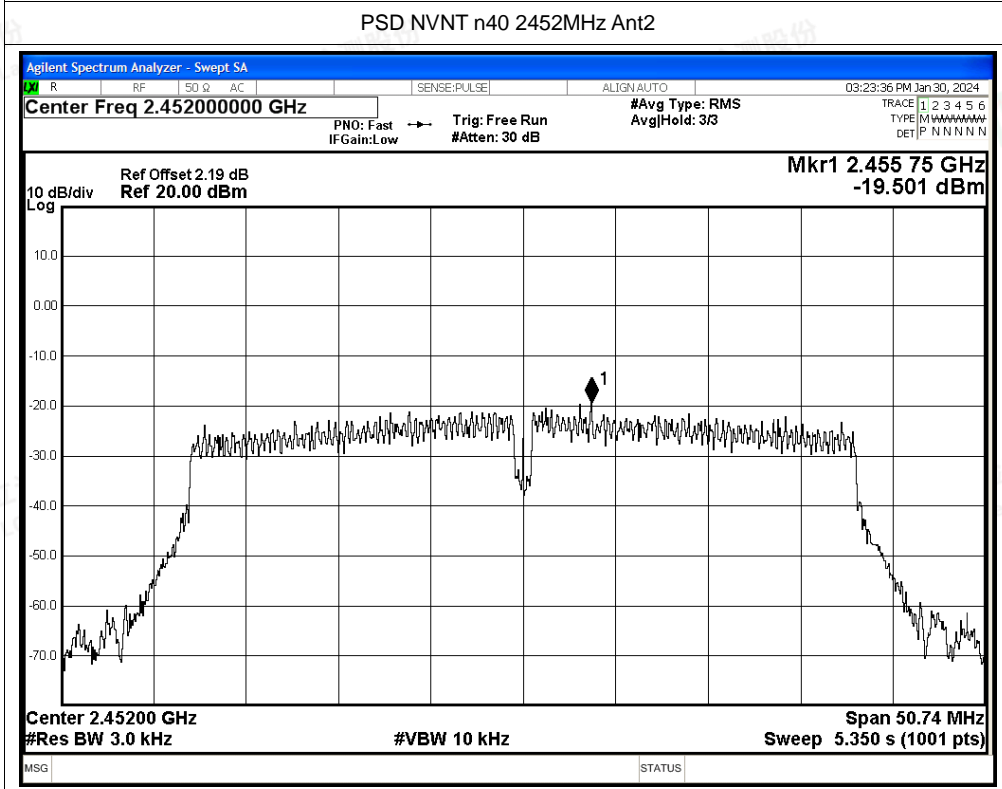
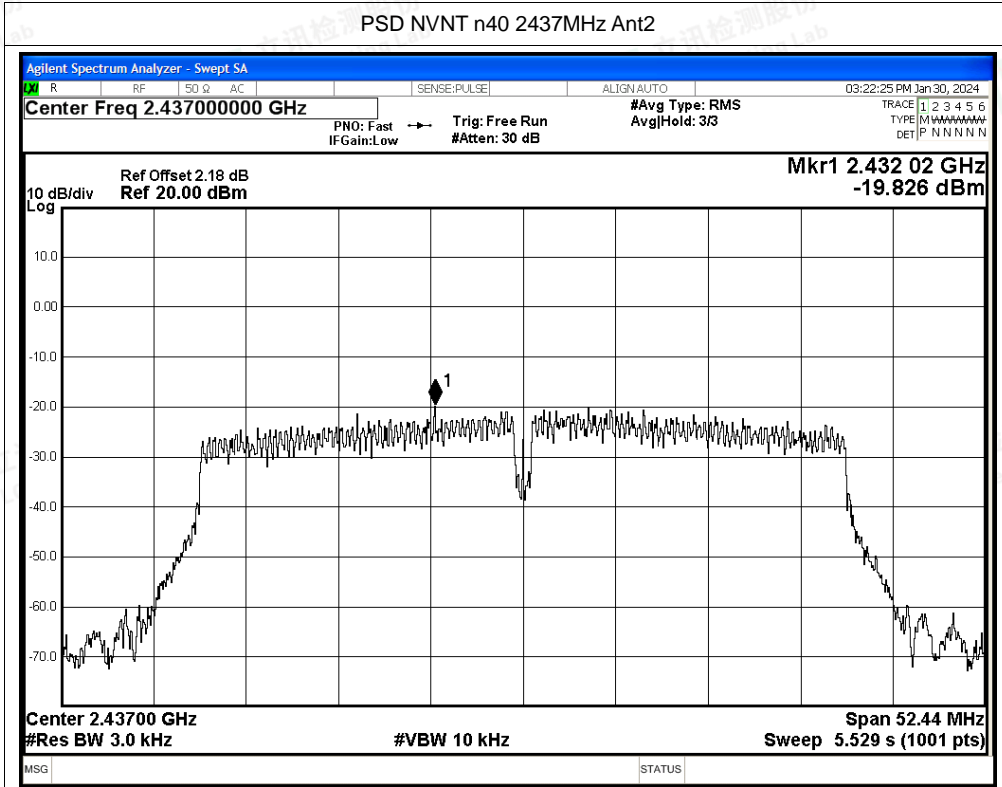


PSD NVNT g 2462MHz Ant2











C.4 Band Edge

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT | b | 2412 | Ant1 | -52.4 | -20 | Pass |
| NVNT | b | 2462 | Ant1 | -58.9 | -20 | Pass |
| NVNT | g | 2412 | Ant1 | -41.15 | -20 | Pass |
| NVNT | g | 2462 | Ant1 | -51.26 | -20 | Pass |
| NVNT | n20 | 2412 | Ant1 | -43.21 | -20 | Pass |
| NVNT | n20 | 2462 | Ant1 | -50.64 | -20 | Pass |
| NVNT | n40 | 2422 | Ant1 | -39.89 | -20 | Pass |
| NVNT | n40 | 2452 | Ant1 | -46.2 | -20 | Pass |

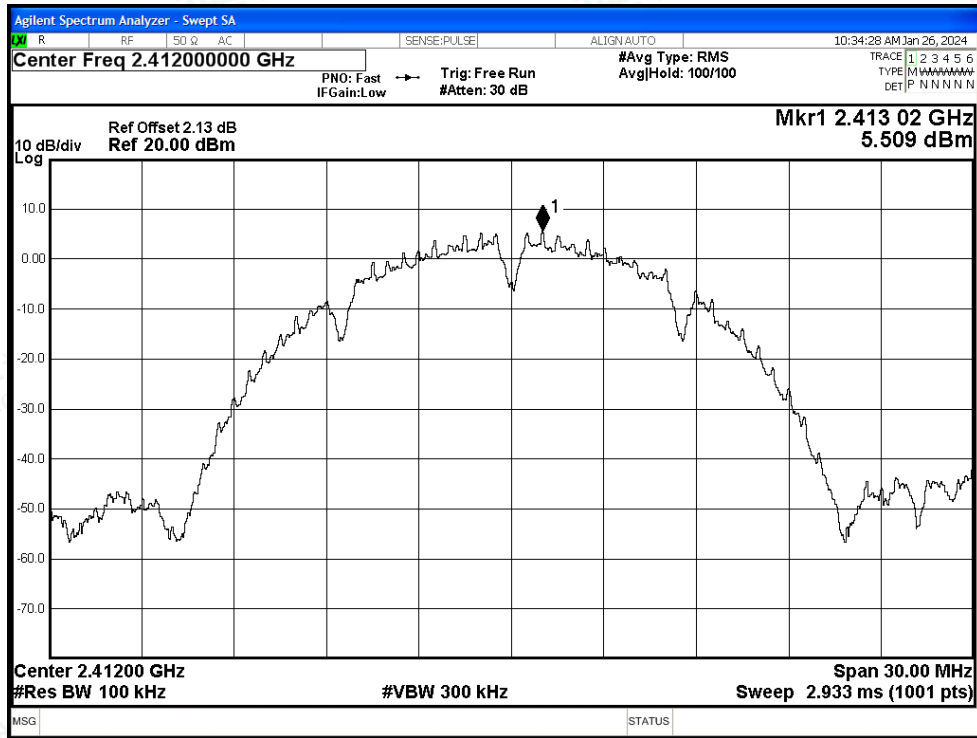


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Scan code to check authenticity

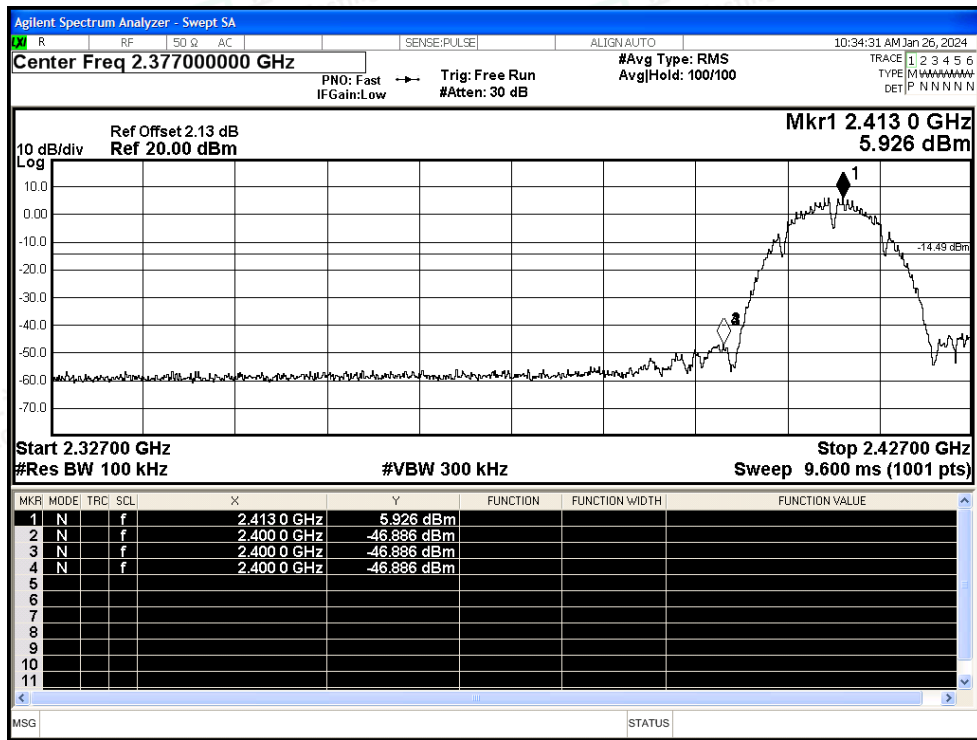


Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref

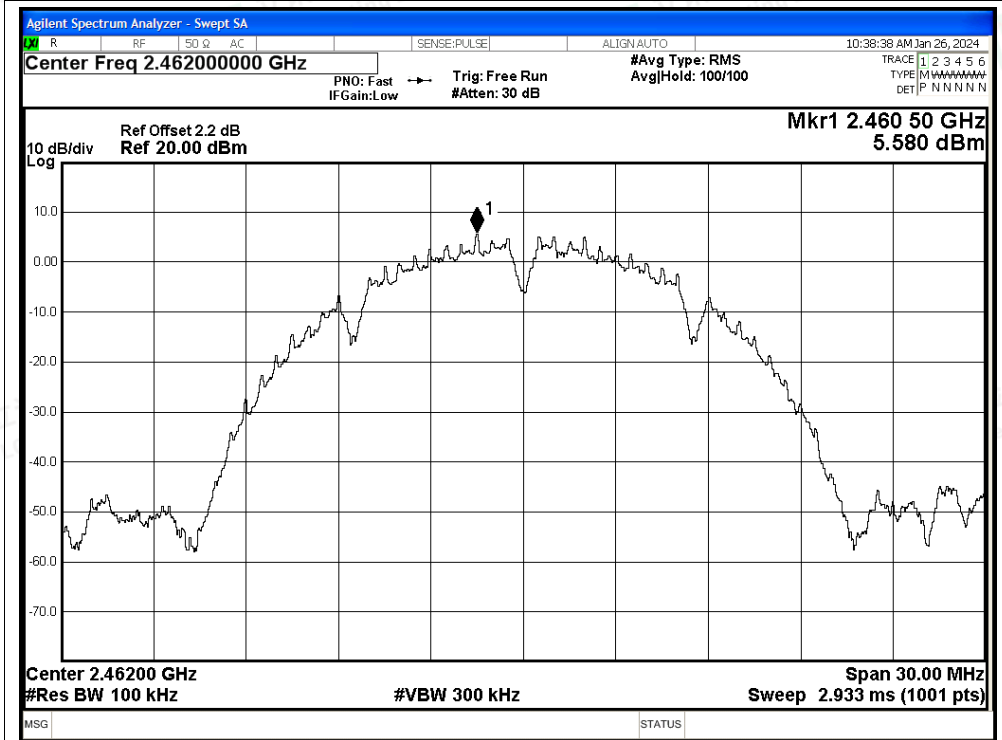


Band Edge NVNT b 2412MHz Ant1 Emission

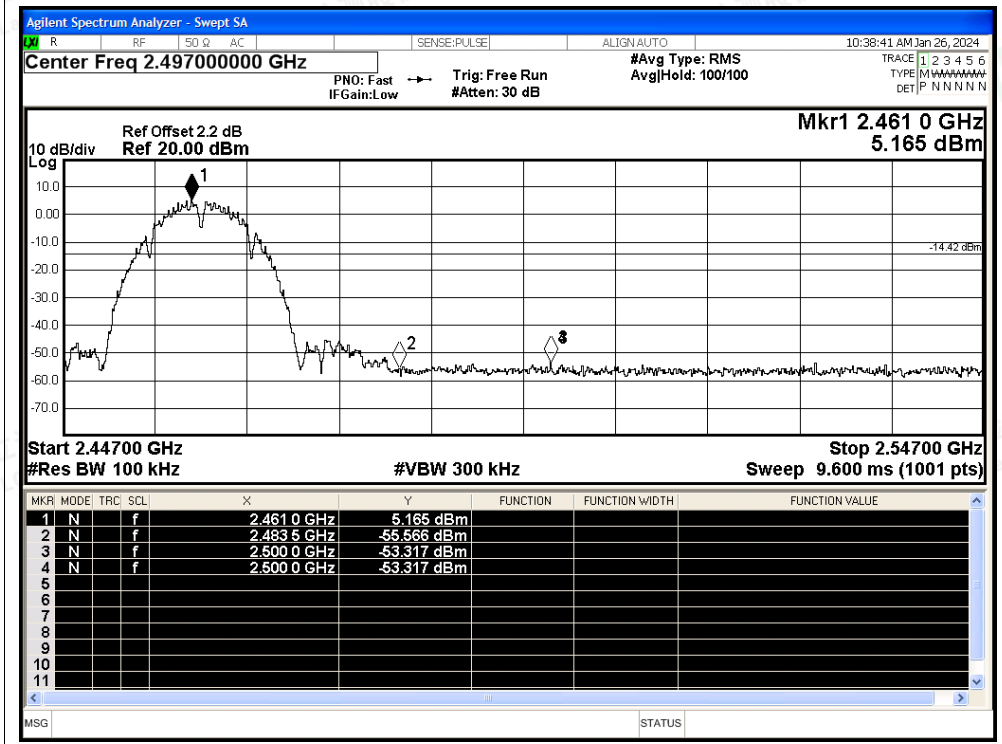




Band Edge NVNT b 2462MHz Ant1 Ref

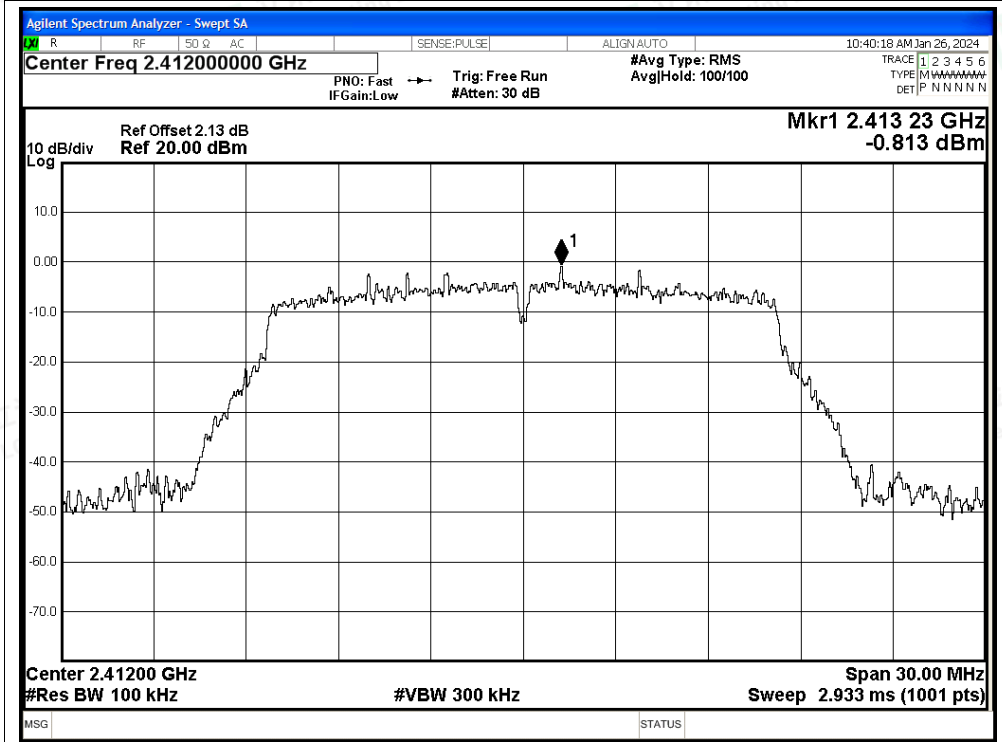


Band Edge NVNT b 2462MHz Ant1 Emission

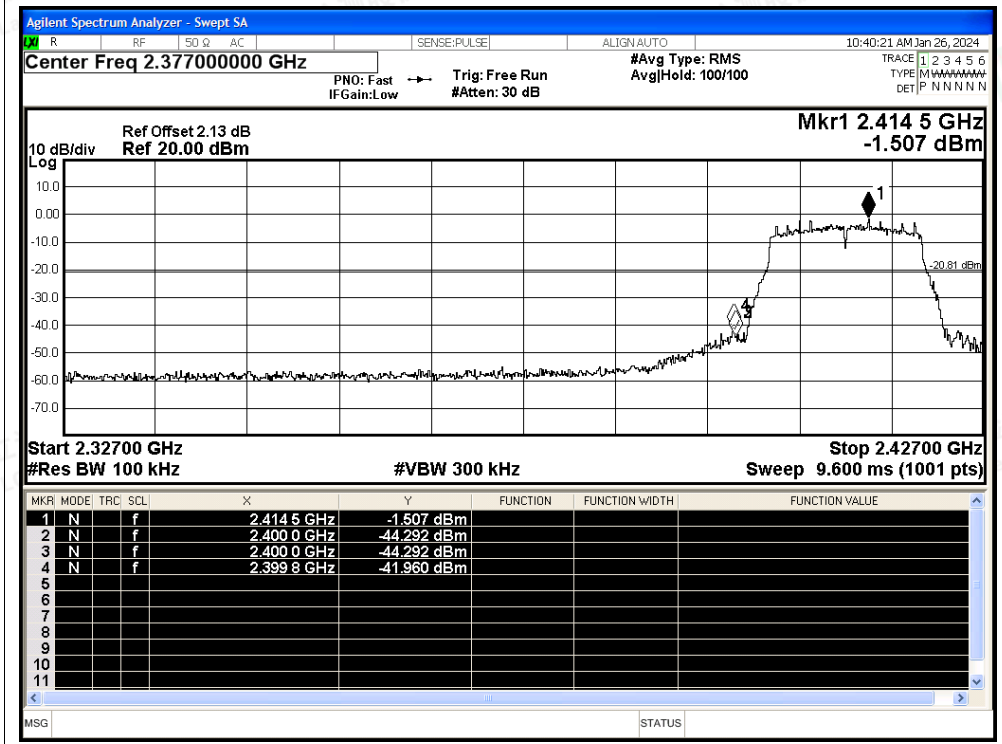




Band Edge NVNT g 2412MHz Ant1 Ref

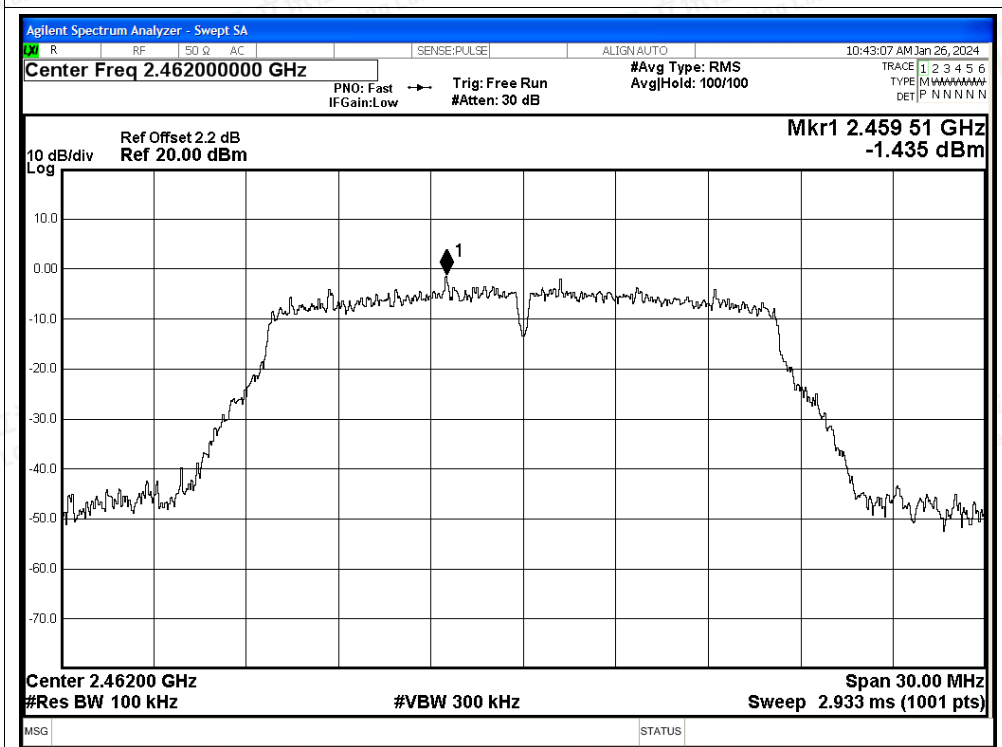


Band Edge NVNT g 2412MHz Ant1 Emission

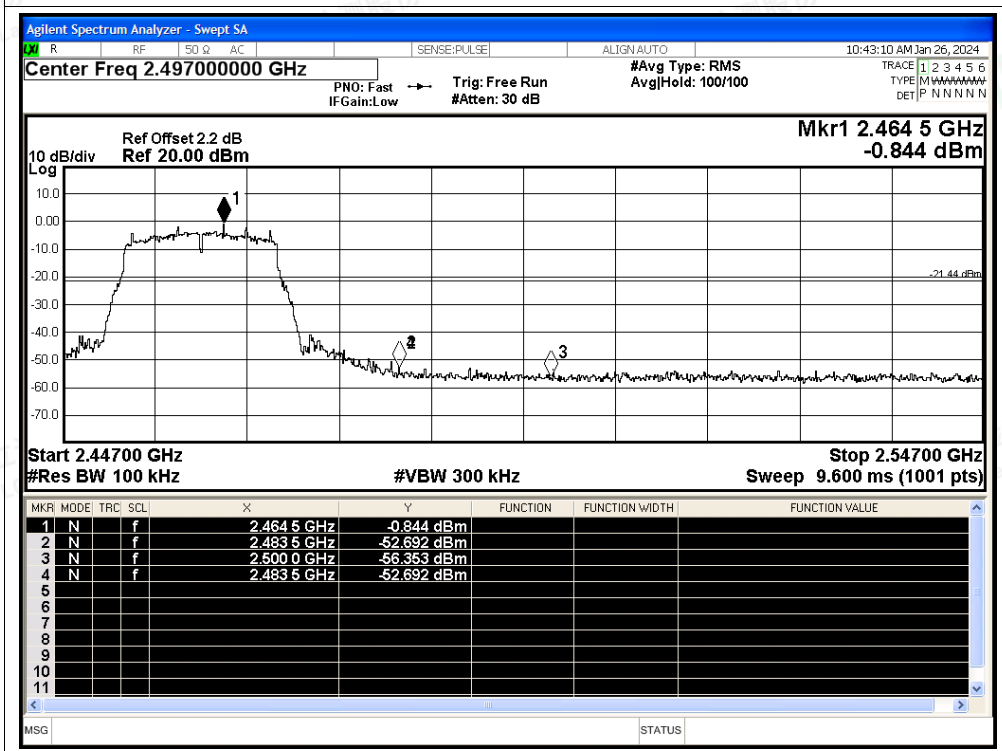




Band Edge NVNT g 2462MHz Ant1 Ref

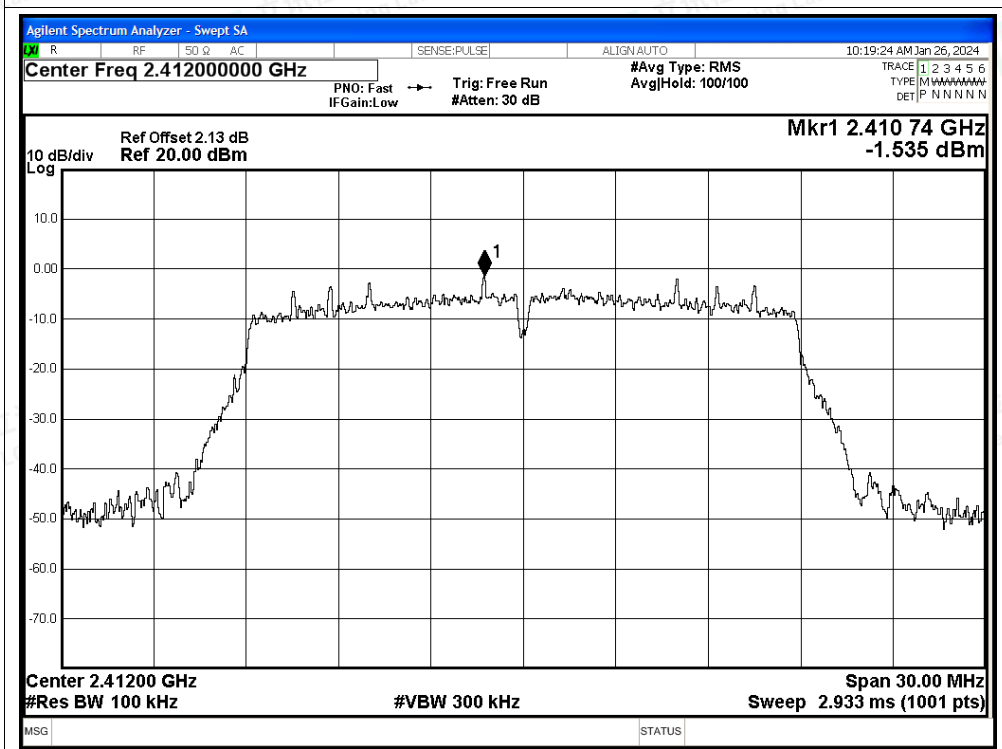


Band Edge NVNT g 2462MHz Ant1 Emission

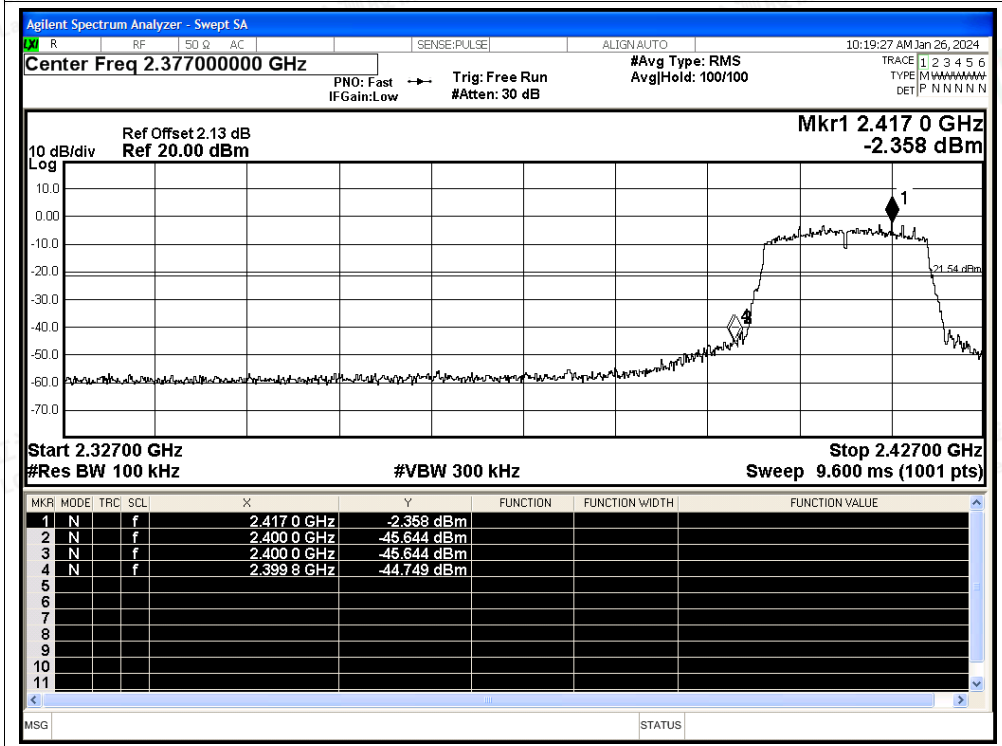




Band Edge NVNT n20 2412MHz Ant1 Ref

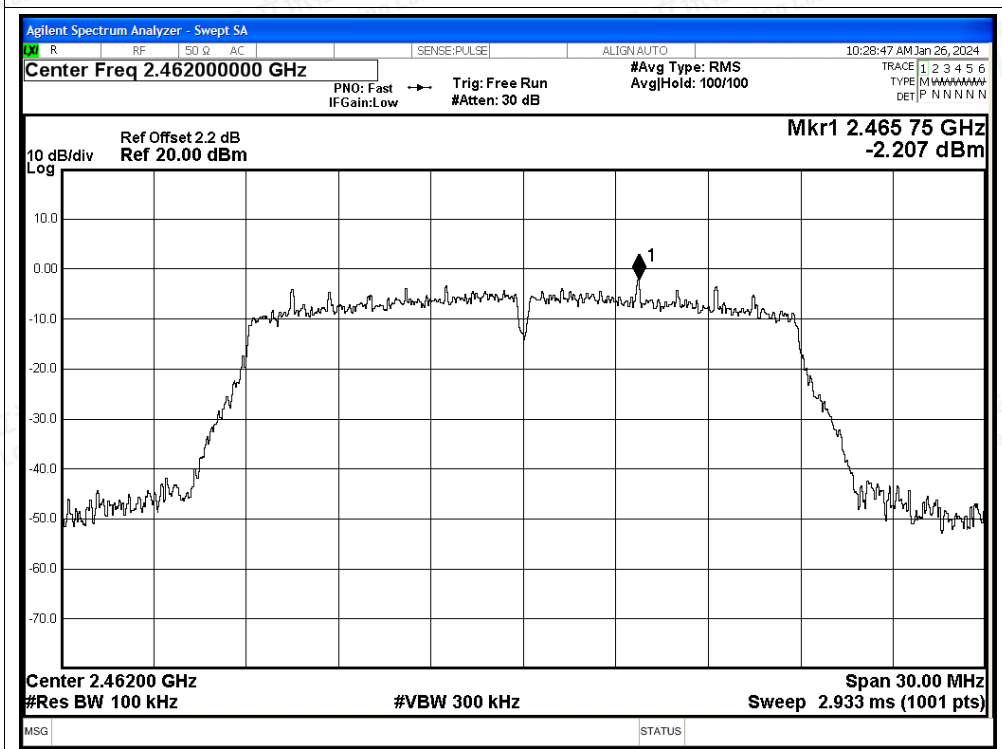


Band Edge NVNT n20 2412MHz Ant1 Emission

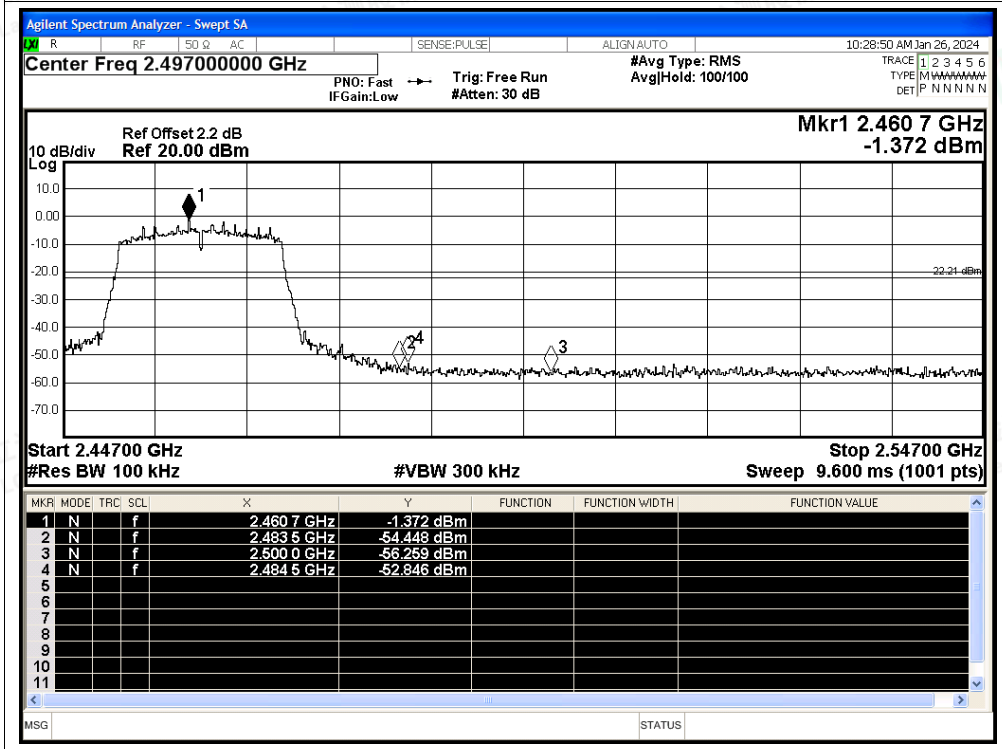




Band Edge NVNT n20 2462MHz Ant1 Ref

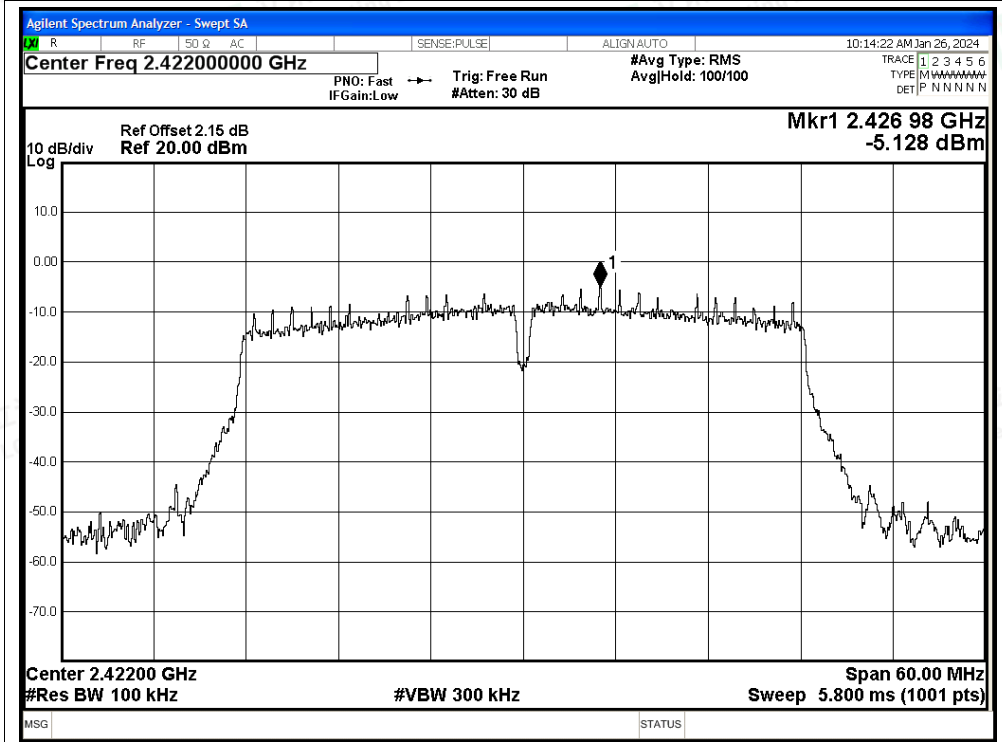


Band Edge NVNT n20 2462MHz Ant1 Emission

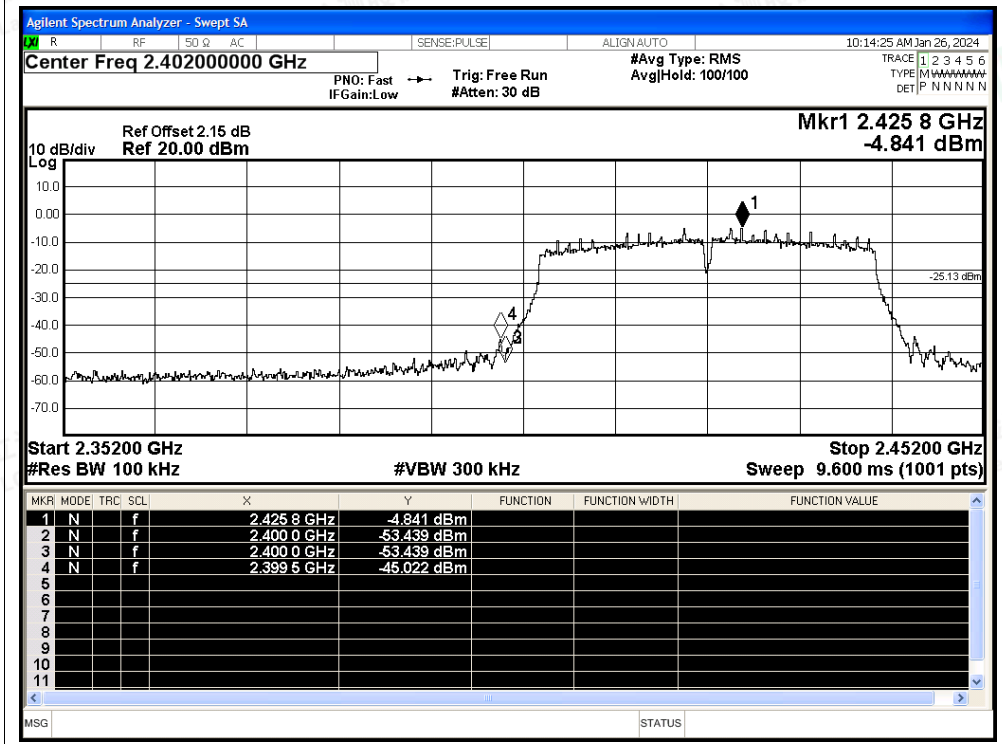




Band Edge NVNT n40 2422MHz Ant1 Ref

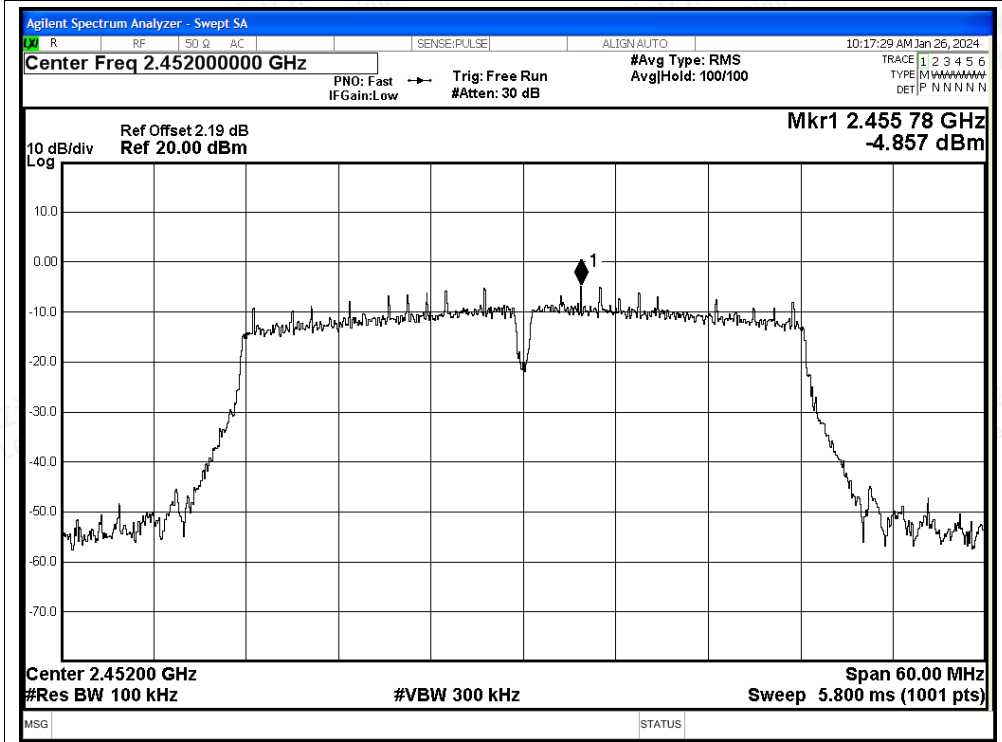


Band Edge NVNT n40 2422MHz Ant1 Emission

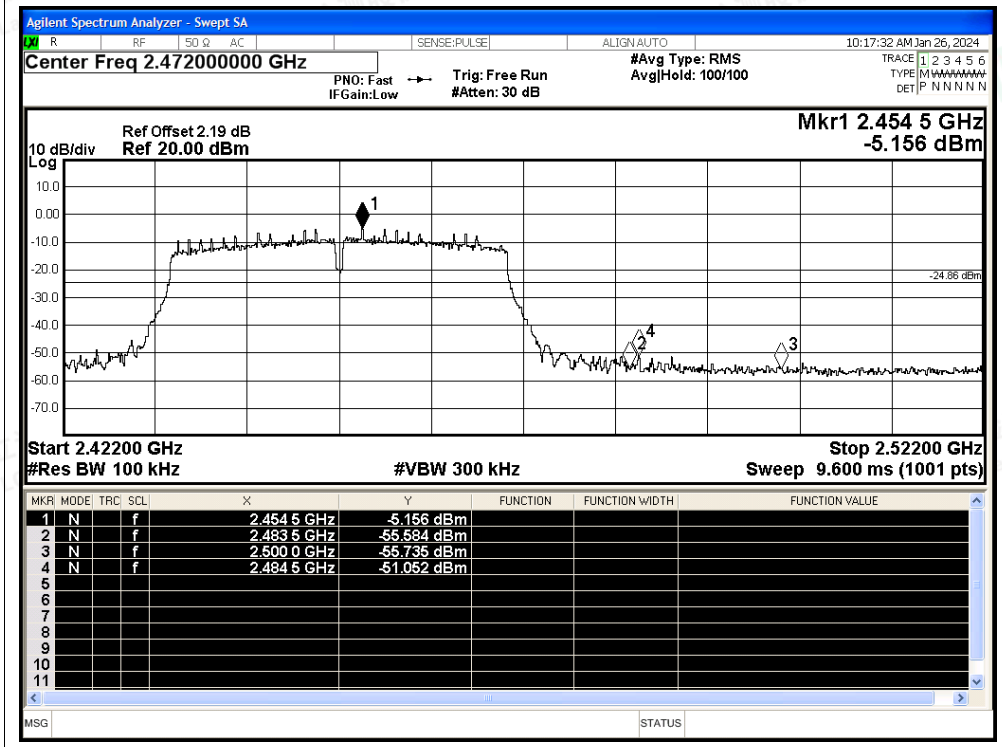




Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission





| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT | b | 2412 | Ant2 | -53.86 | -20 | Pass |
| NVNT | b | 2462 | Ant2 | -59.48 | -20 | Pass |
| NVNT | g | 2412 | Ant2 | -42 | -20 | Pass |
| NVNT | g | 2462 | Ant2 | -52.18 | -20 | Pass |
| NVNT | n20 | 2412 | Ant2 | -42.28 | -20 | Pass |
| NVNT | n20 | 2462 | Ant2 | -51.93 | -20 | Pass |
| NVNT | n40 | 2422 | Ant2 | -41.82 | -20 | Pass |
| NVNT | n40 | 2452 | Ant2 | -44.07 | -20 | Pass |

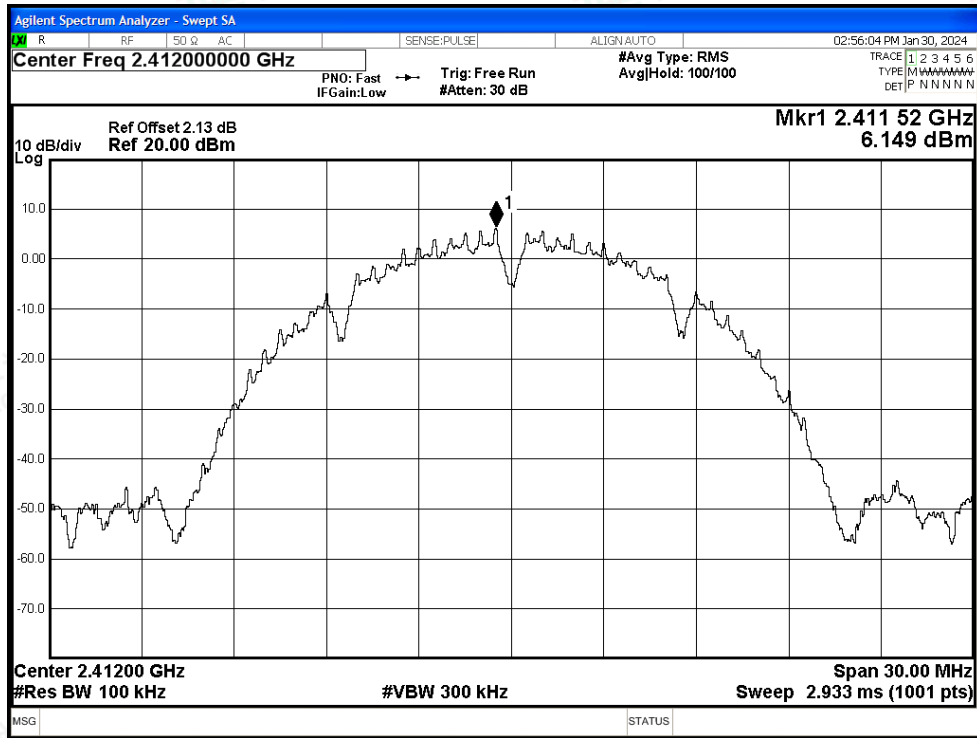


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

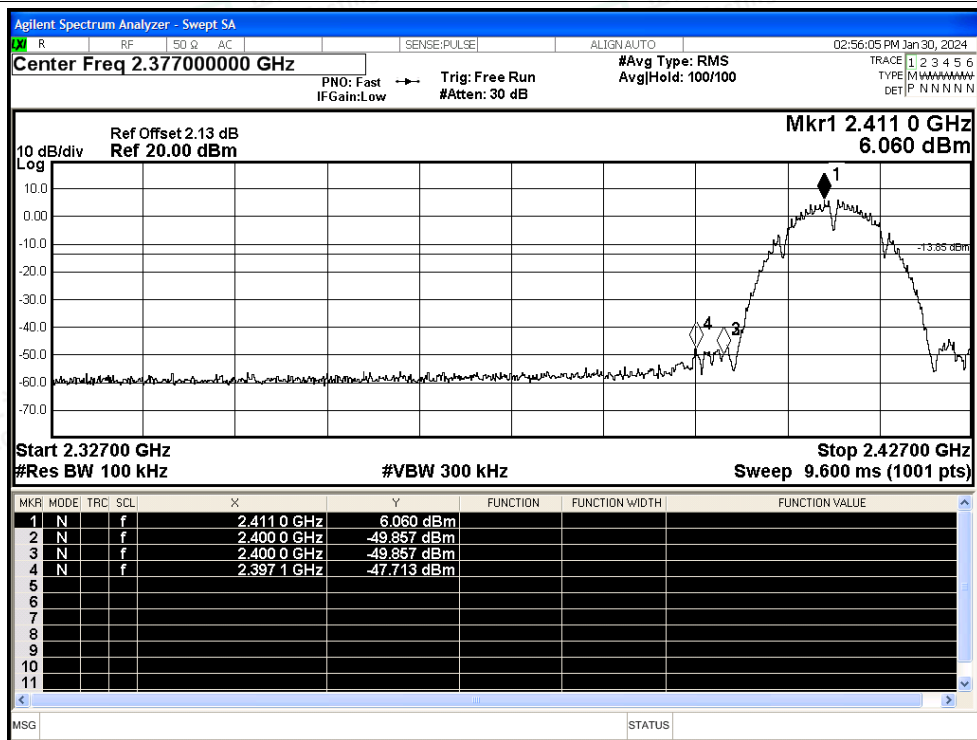


Test Graphs

Band Edge NVNT b 2412MHz Ant2 Ref

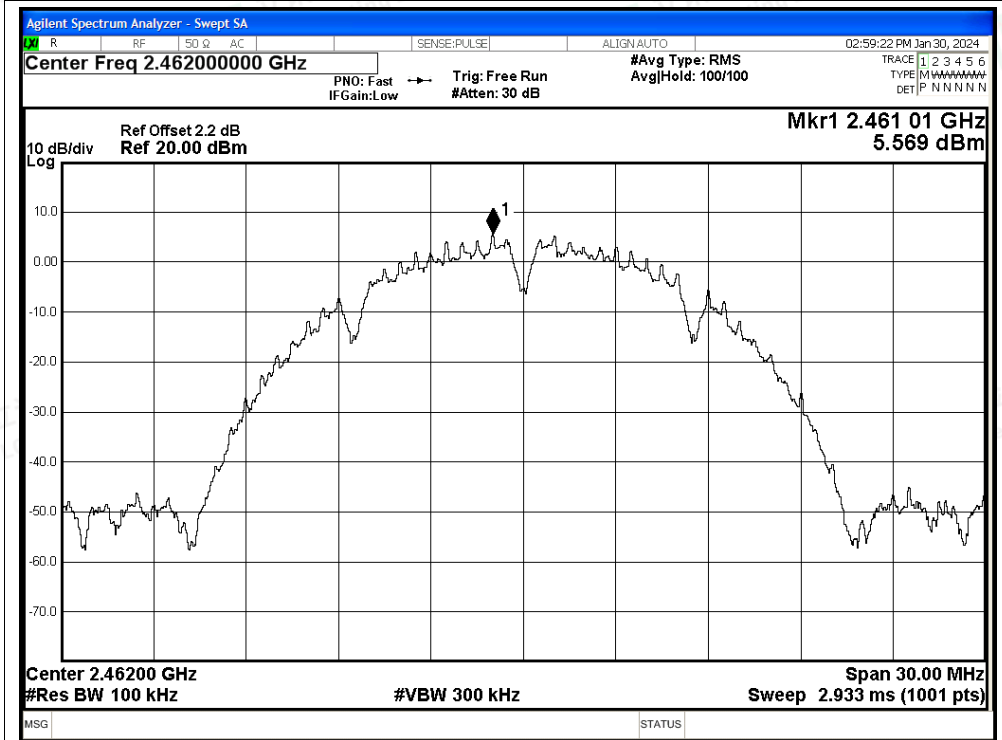


Band Edge NVNT b 2412MHz Ant2 Emission

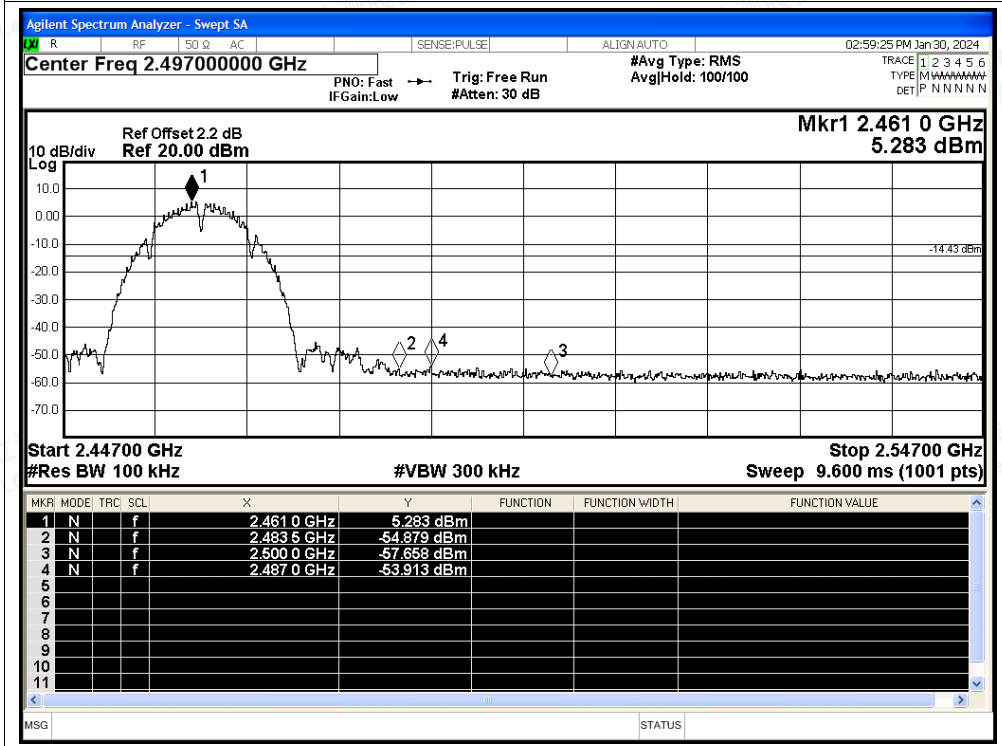




Band Edge NVNT b 2462MHz Ant2 Ref

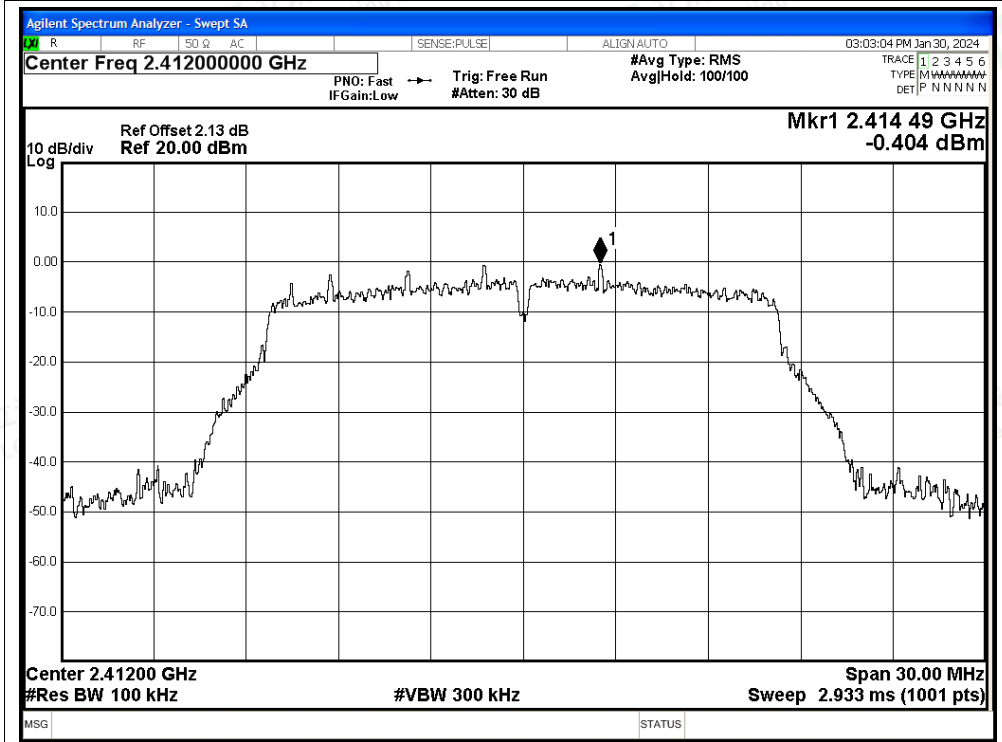


Band Edge NVNT b 2462MHz Ant2 Emission

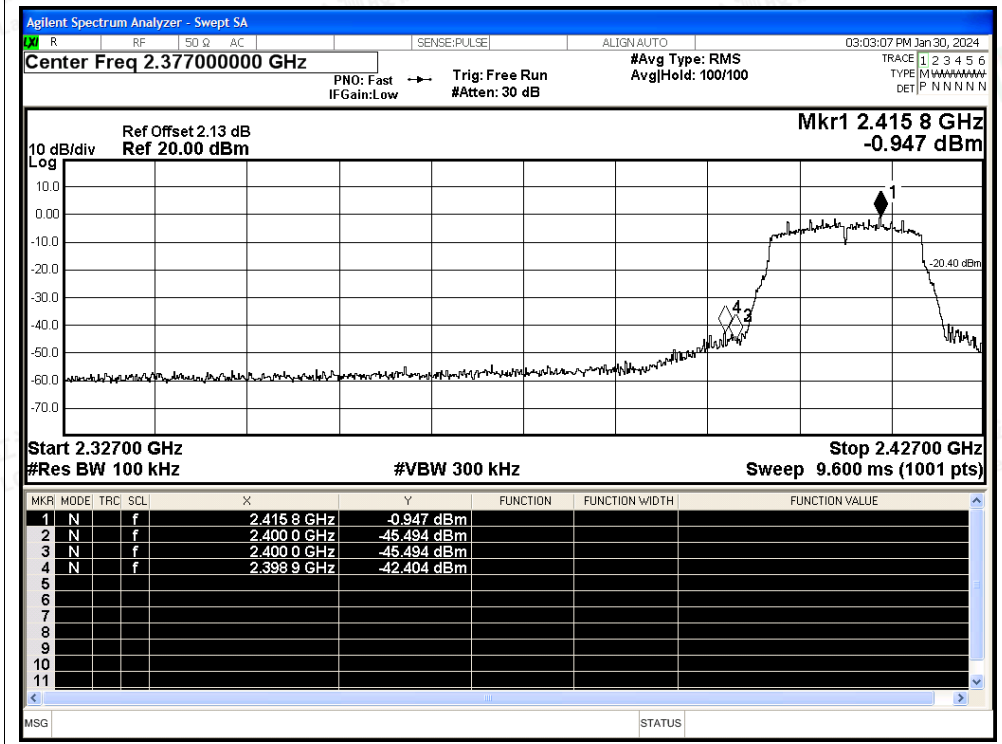




Band Edge NVNT g 2412MHz Ant2 Ref

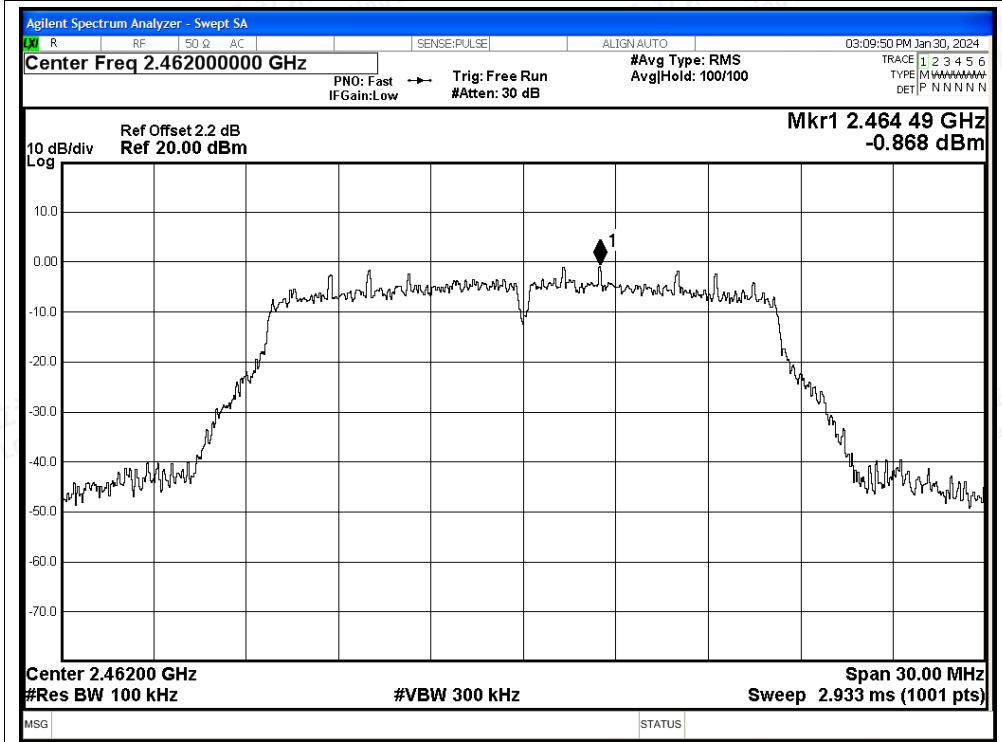


Band Edge NVNT g 2412MHz Ant2 Emission

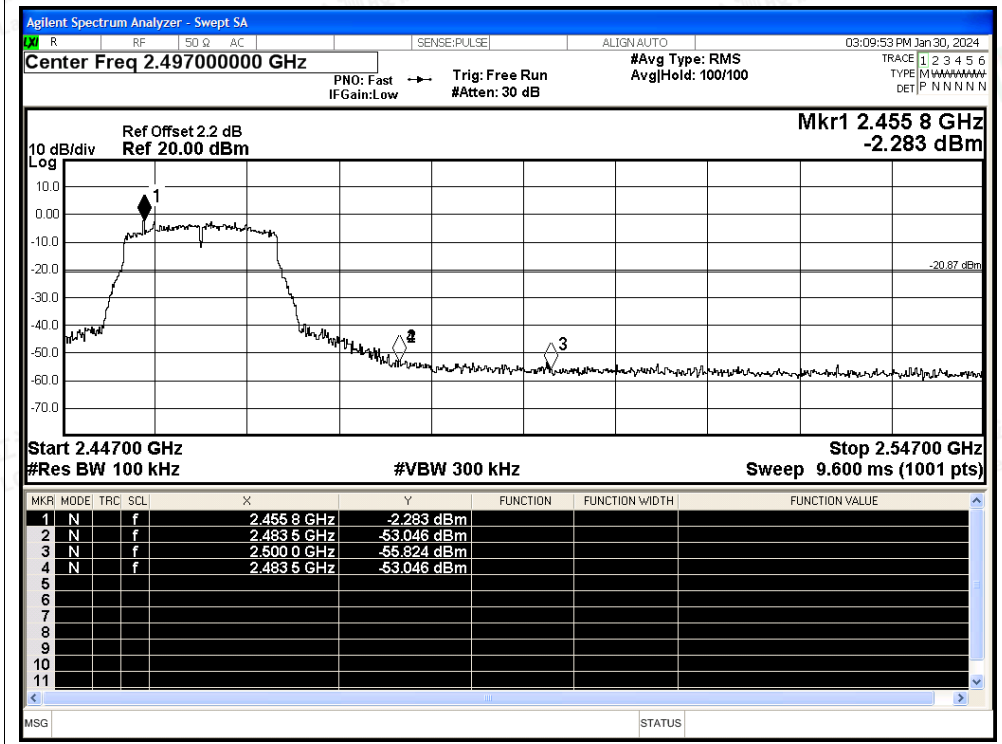




Band Edge NVNT g 2462MHz Ant2 Ref

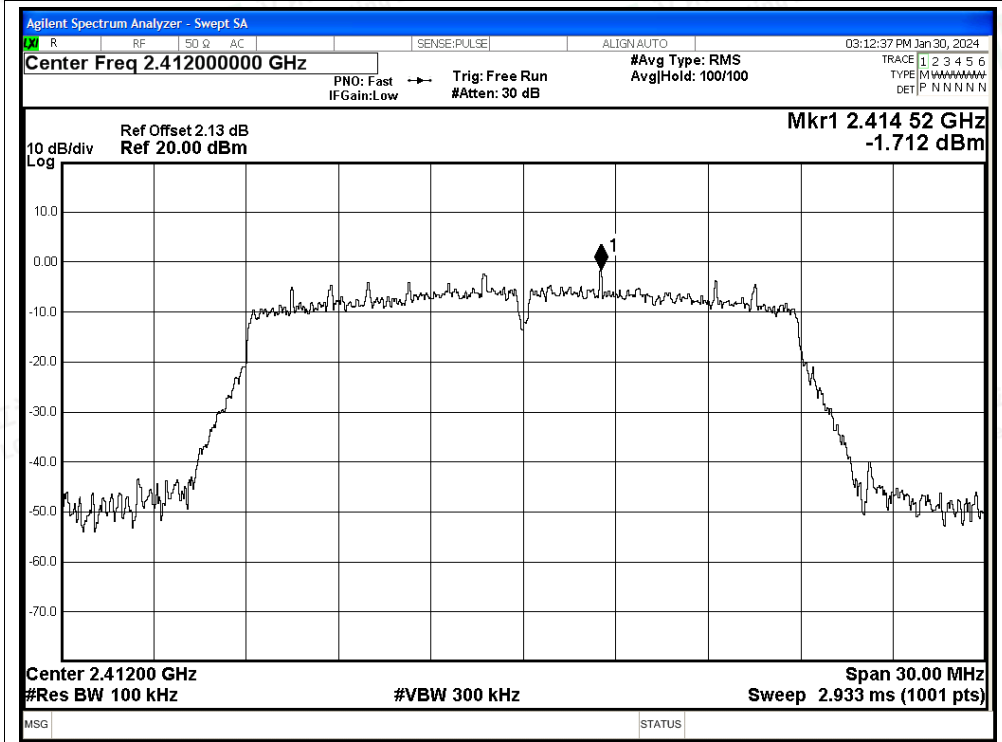


Band Edge NVNT g 2462MHz Ant2 Emission

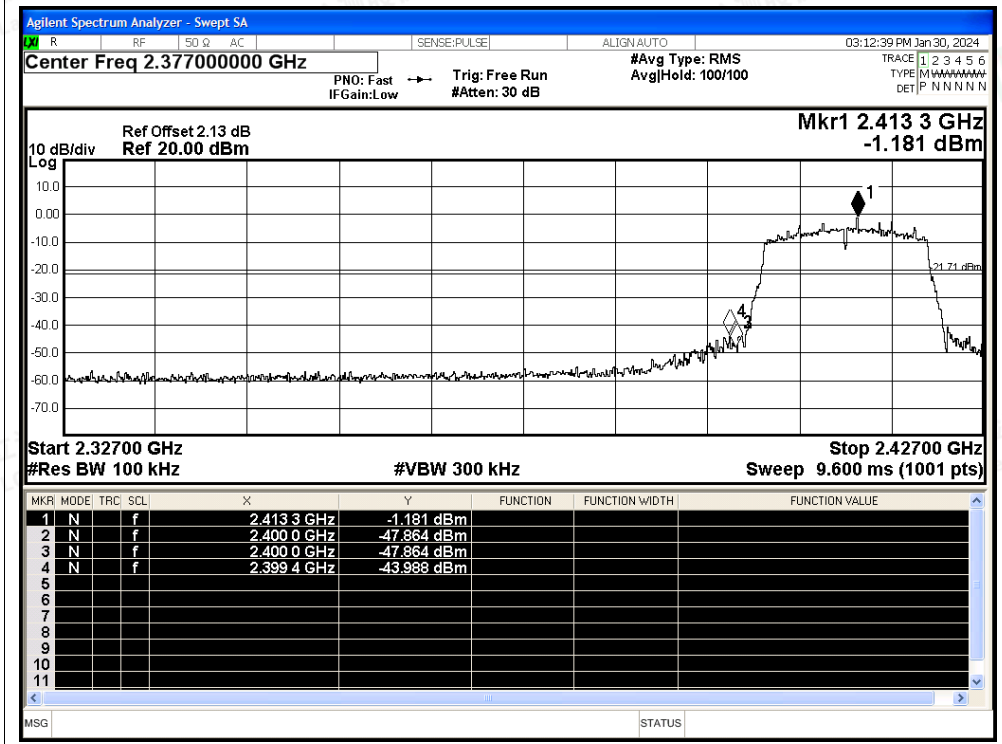




Band Edge NVNT n20 2412MHz Ant2 Ref

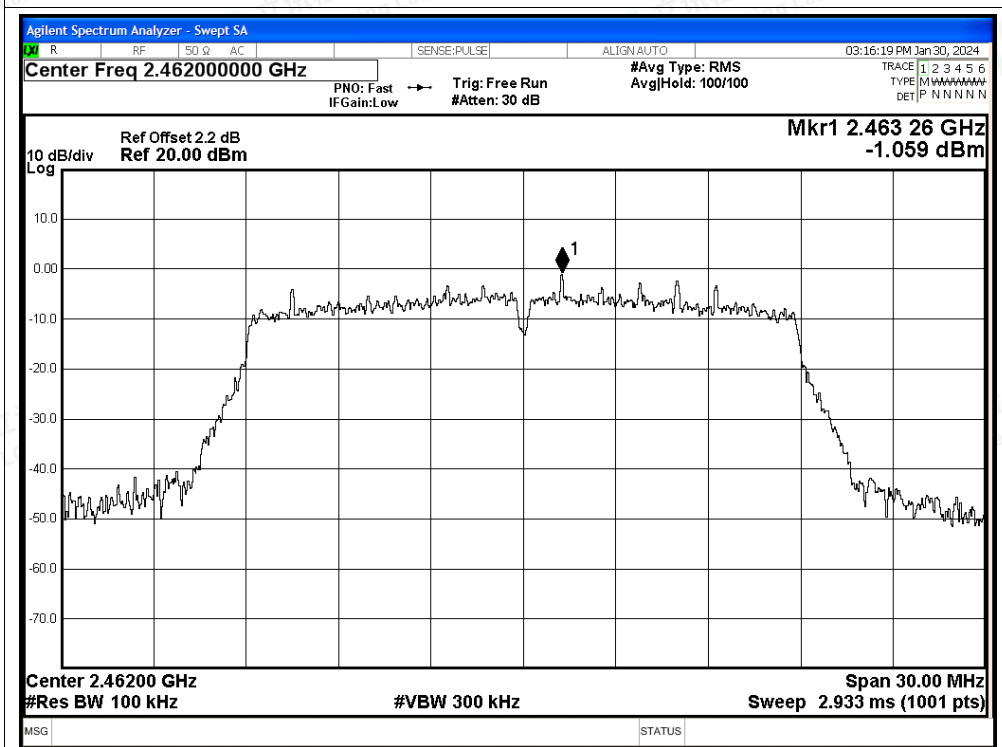


Band Edge NVNT n20 2412MHz Ant2 Emission

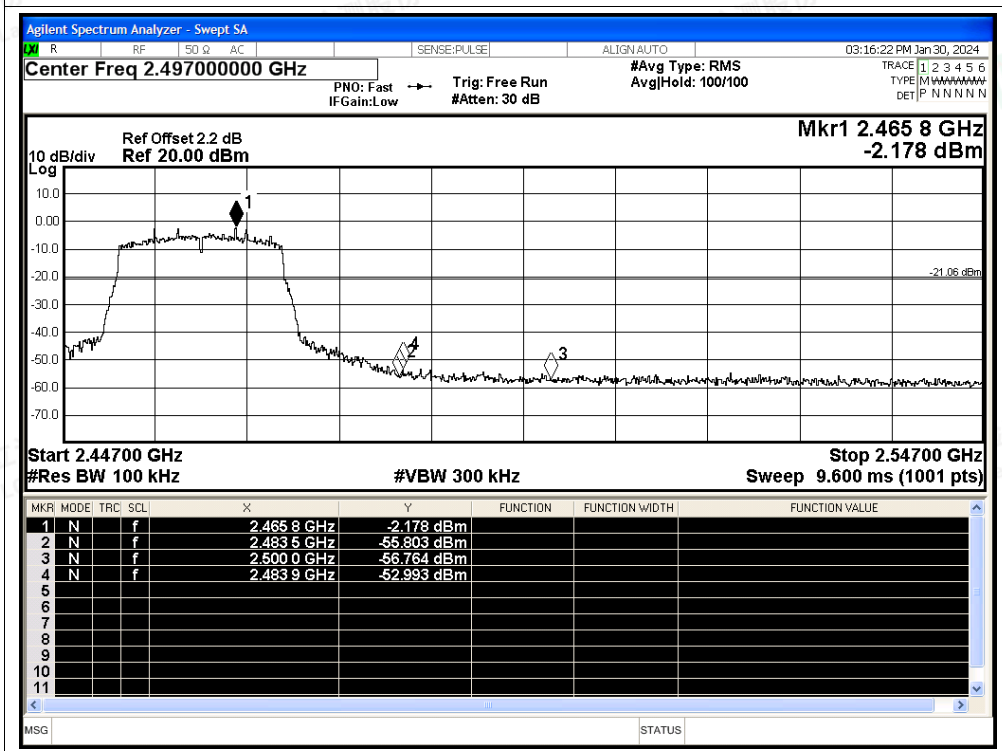




Band Edge NVNT n20 2462MHz Ant2 Ref

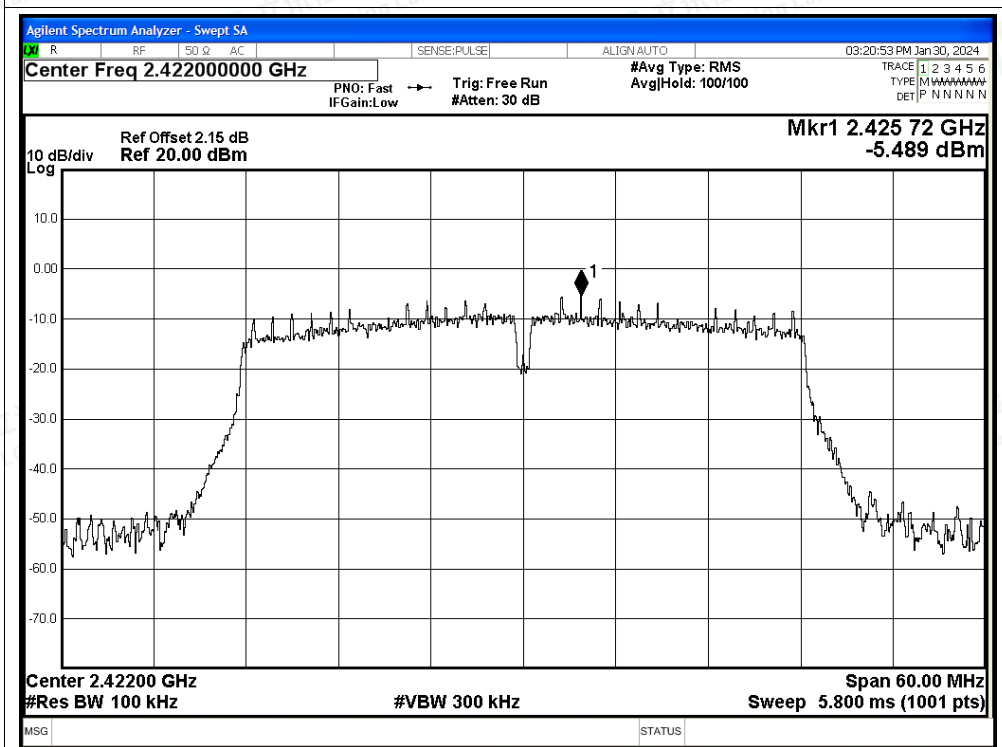


Band Edge NVNT n20 2462MHz Ant2 Emission

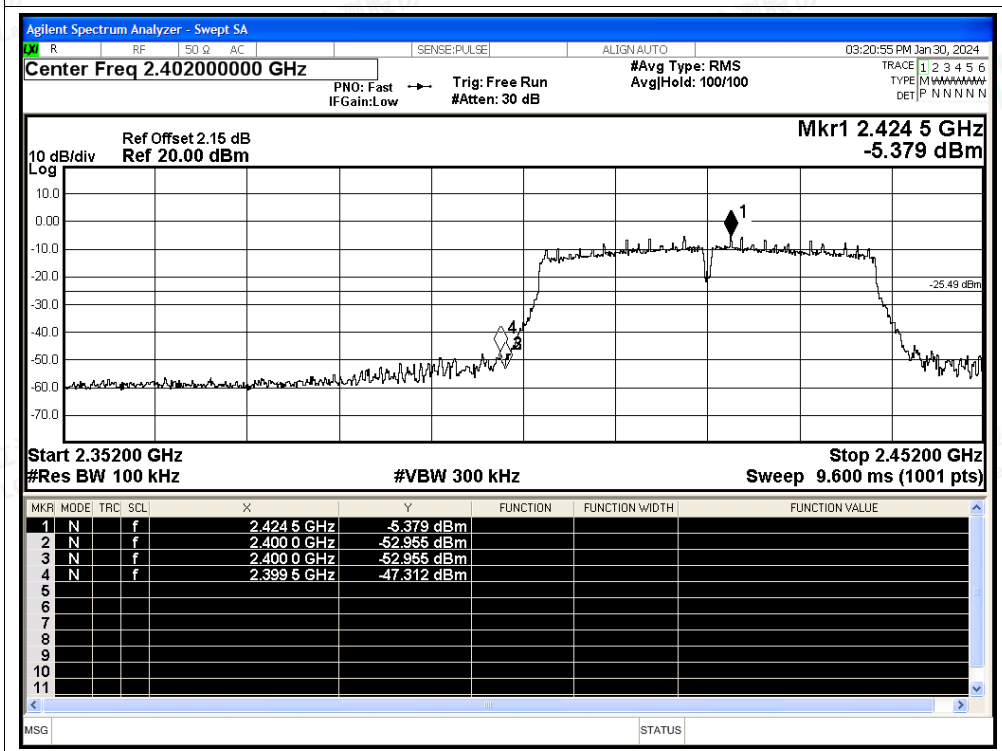




Band Edge NVNT n40 2422MHz Ant2 Ref

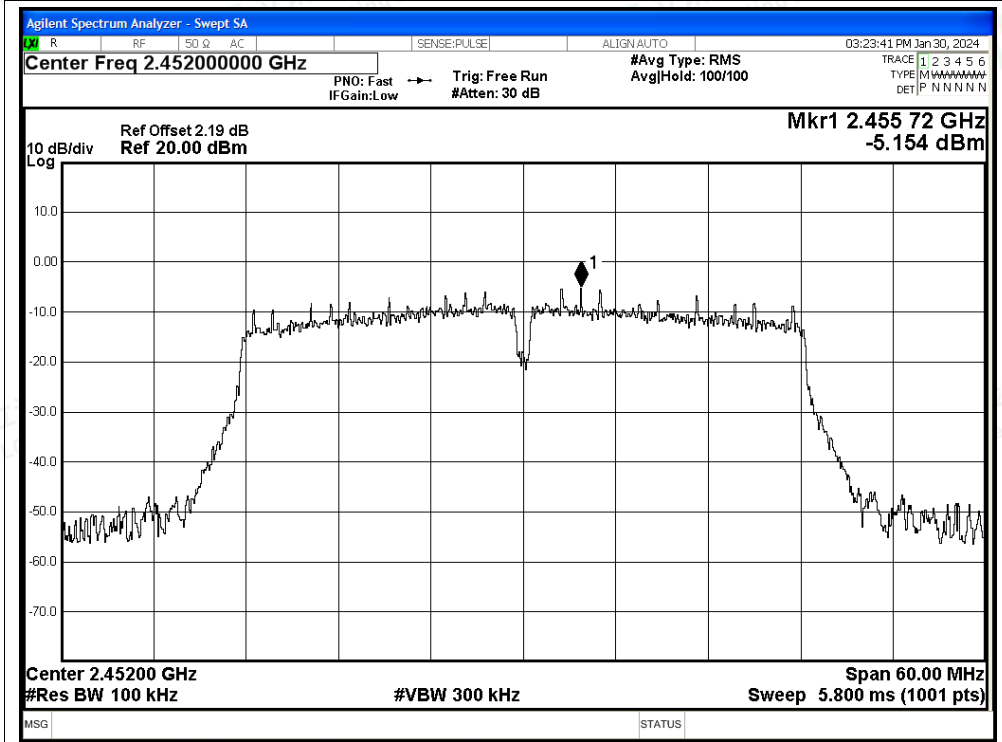


Band Edge NVNT n40 2422MHz Ant2 Emission

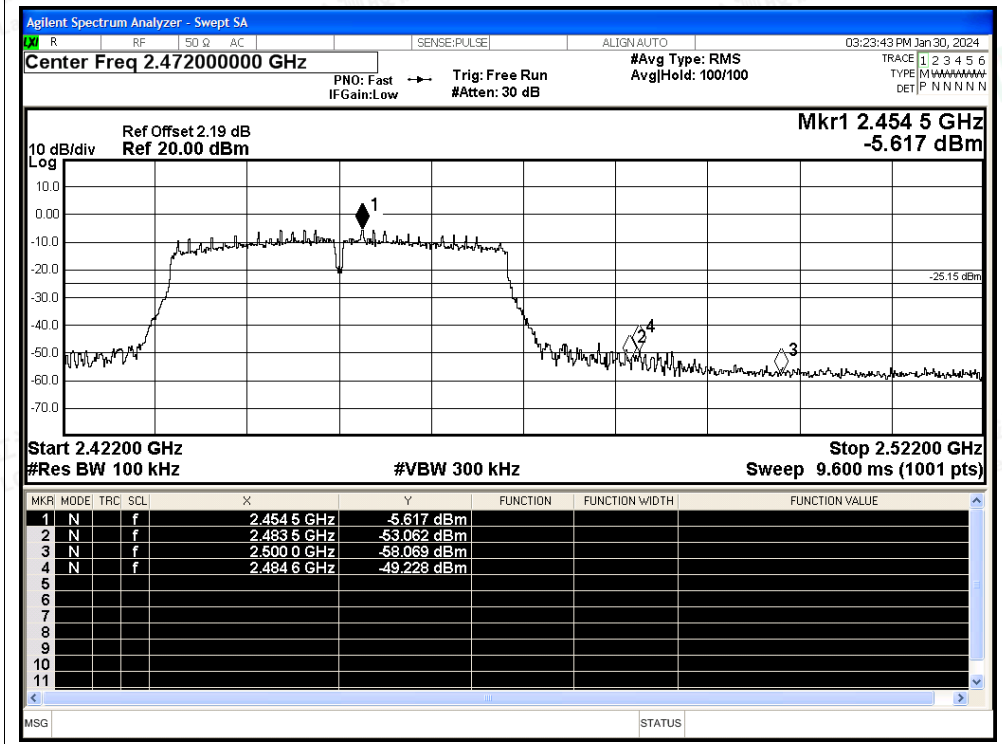




Band Edge NVNT n40 2452MHz Ant2 Ref



Band Edge NVNT n40 2452MHz Ant2 Emission





C.5 Conducted RF Spurious Emission

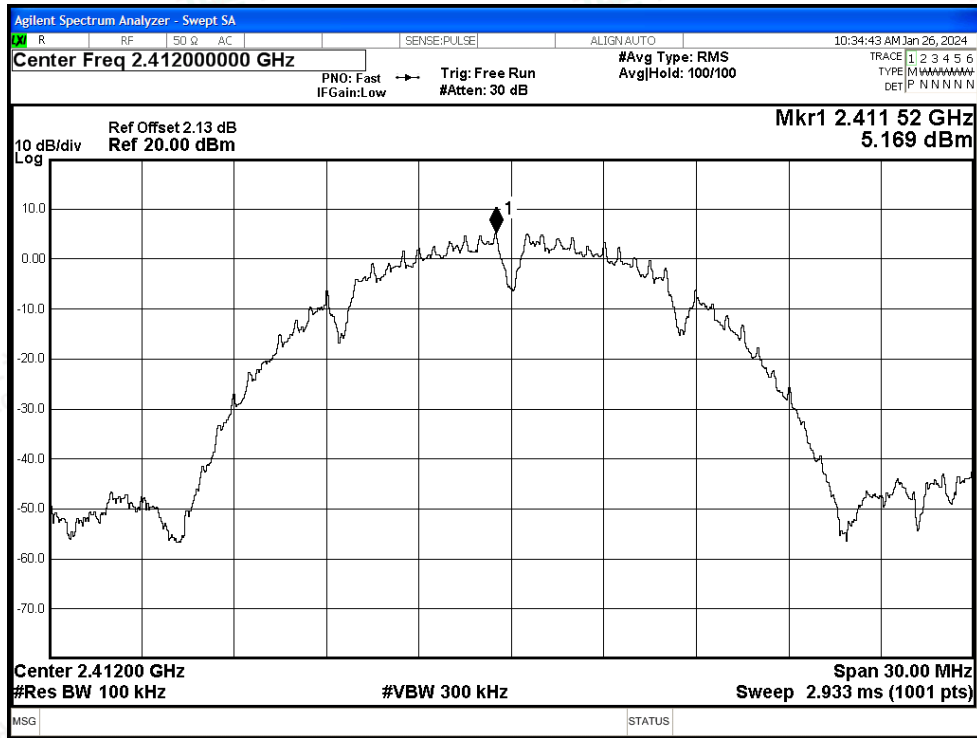
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT | b | 2412 | Ant1 | -49.74 | -20 | Pass |
| NVNT | b | 2437 | Ant1 | -51.38 | -20 | Pass |
| NVNT | b | 2462 | Ant1 | -52.3 | -20 | Pass |
| NVNT | g | 2412 | Ant1 | -45.57 | -20 | Pass |
| NVNT | g | 2437 | Ant1 | -44.26 | -20 | Pass |
| NVNT | g | 2462 | Ant1 | -45.76 | -20 | Pass |
| NVNT | n20 | 2412 | Ant1 | -44.91 | -20 | Pass |
| NVNT | n20 | 2437 | Ant1 | -44.47 | -20 | Pass |
| NVNT | n20 | 2462 | Ant1 | -45.28 | -20 | Pass |
| NVNT | n40 | 2422 | Ant1 | -40.71 | -20 | Pass |
| NVNT | n40 | 2437 | Ant1 | -41.12 | -20 | Pass |
| NVNT | n40 | 2452 | Ant1 | -40.69 | -20 | Pass |



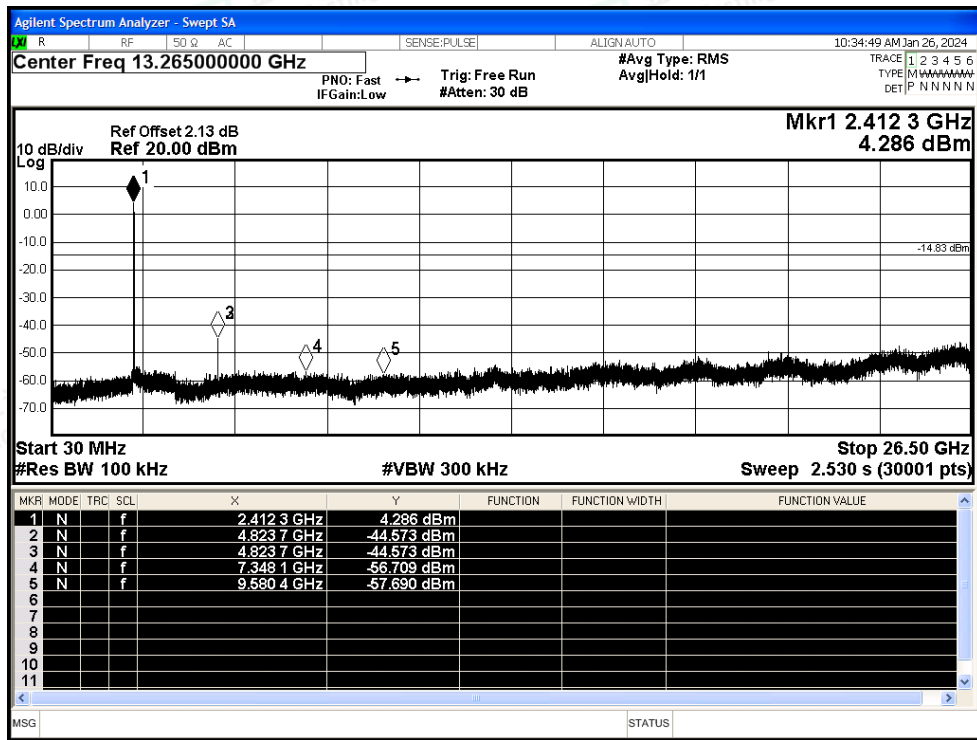


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref

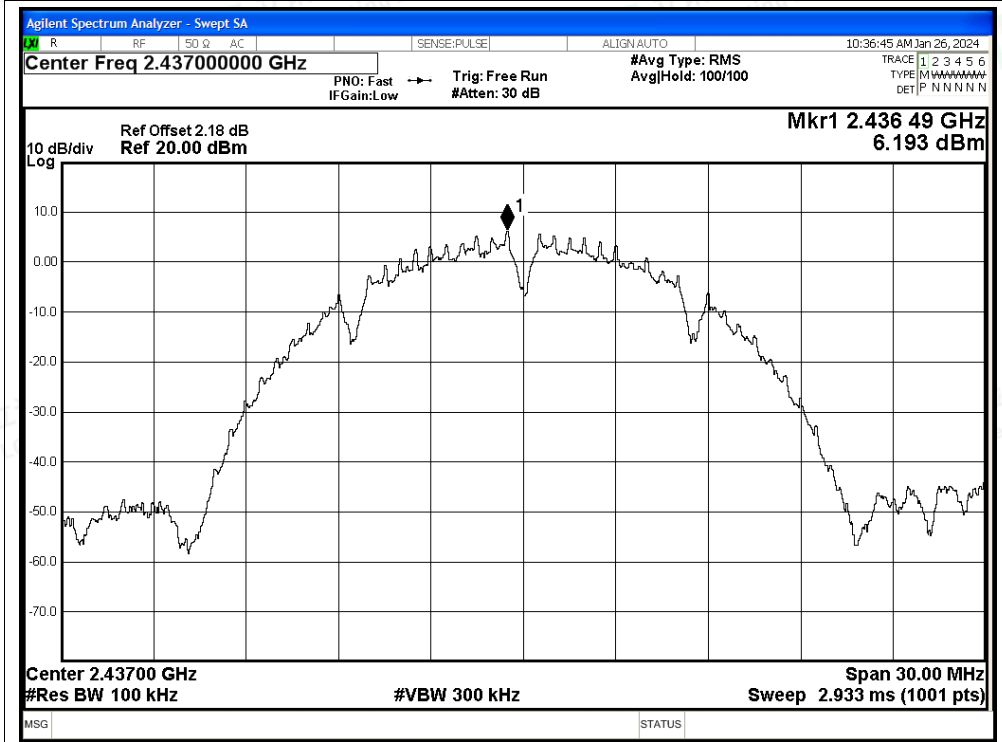


Tx. Spurious NVNT b 2412MHz Ant1 Emission

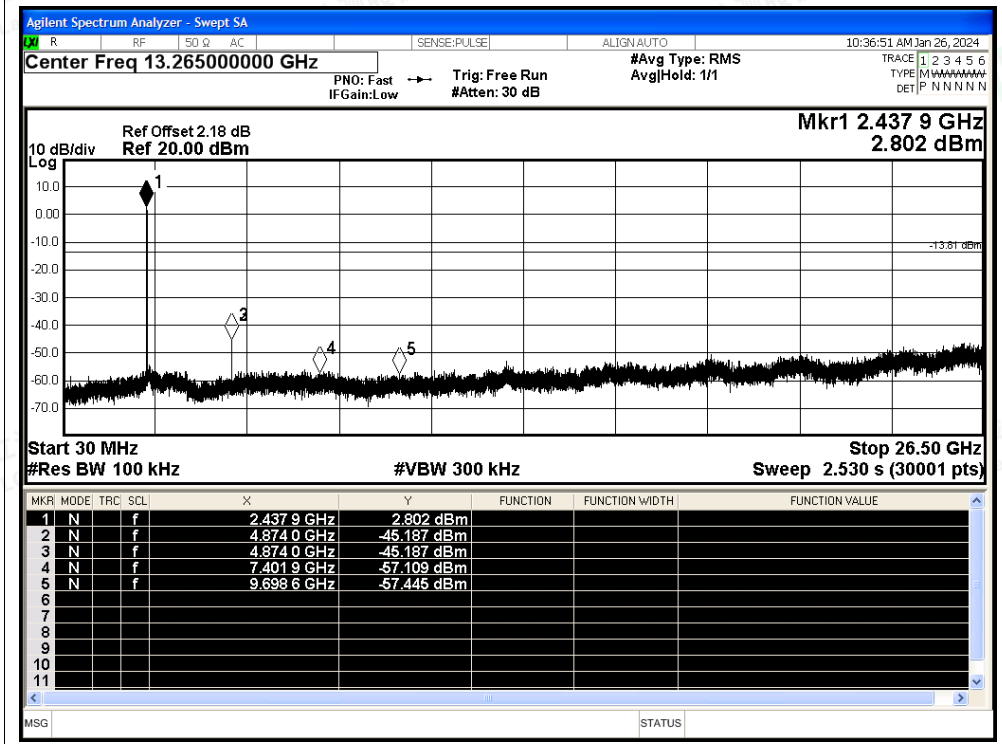




Tx. Spurious NVNT b 2437MHz Ant1 Ref

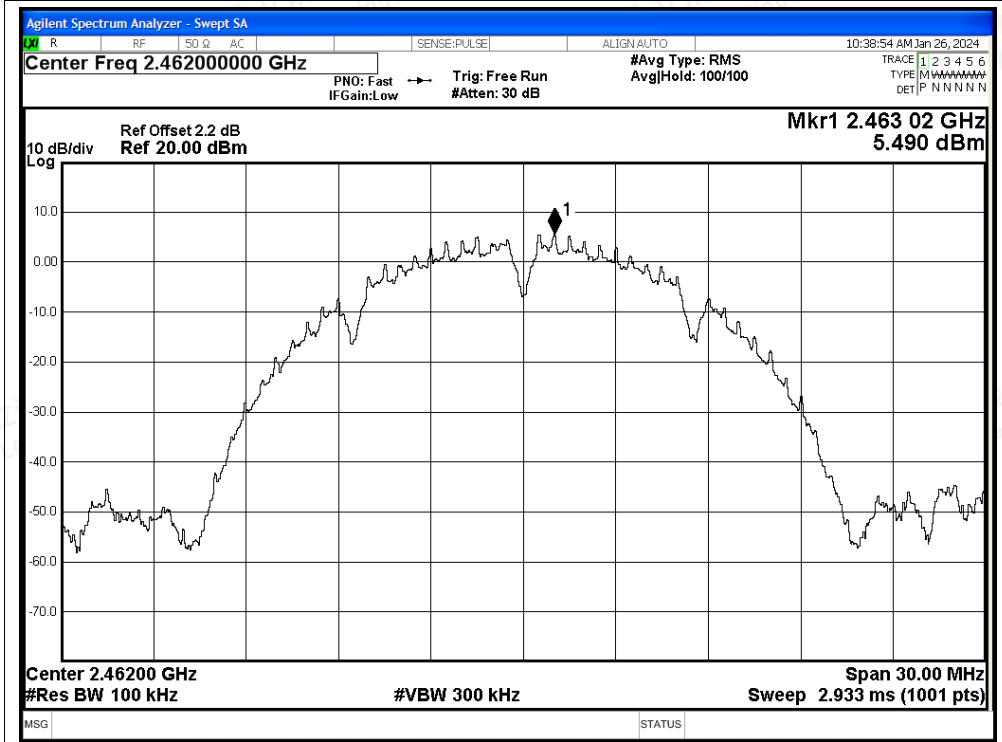


Tx. Spurious NVNT b 2437MHz Ant1 Emission

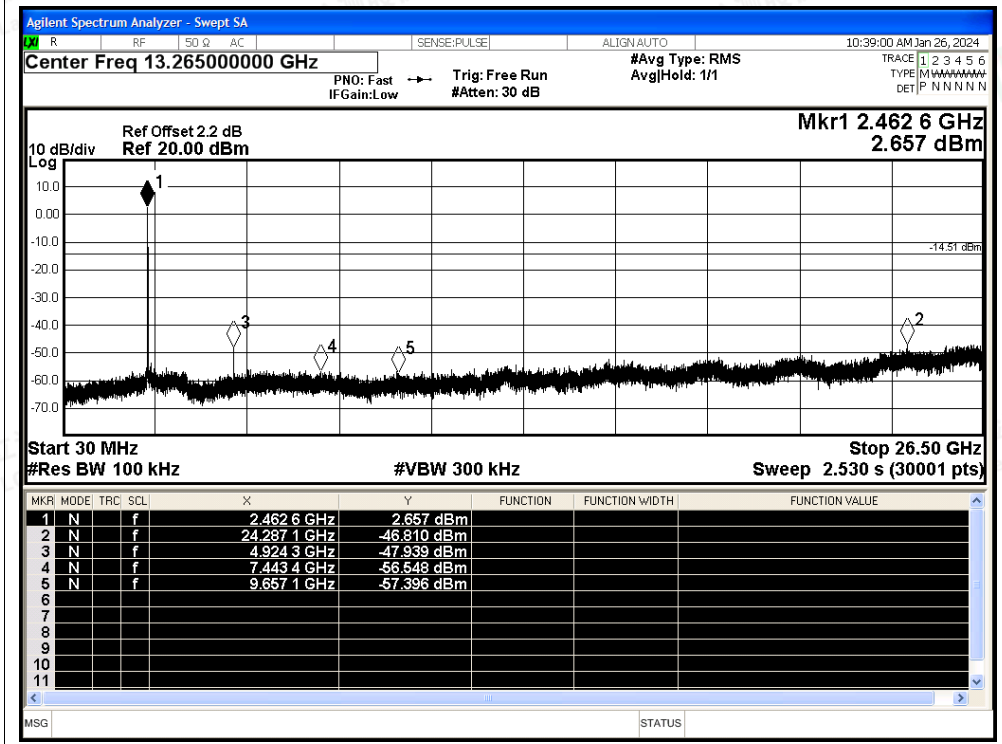




Tx. Spurious NVNT b 2462MHz Ant1 Ref

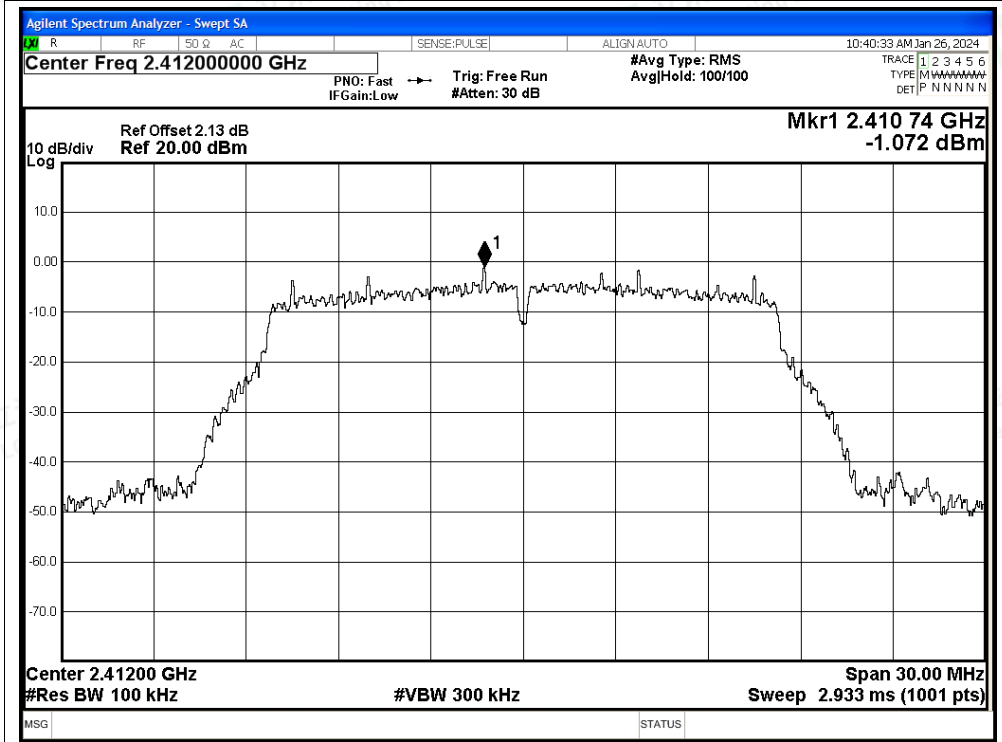


Tx. Spurious NVNT b 2462MHz Ant1 Emission

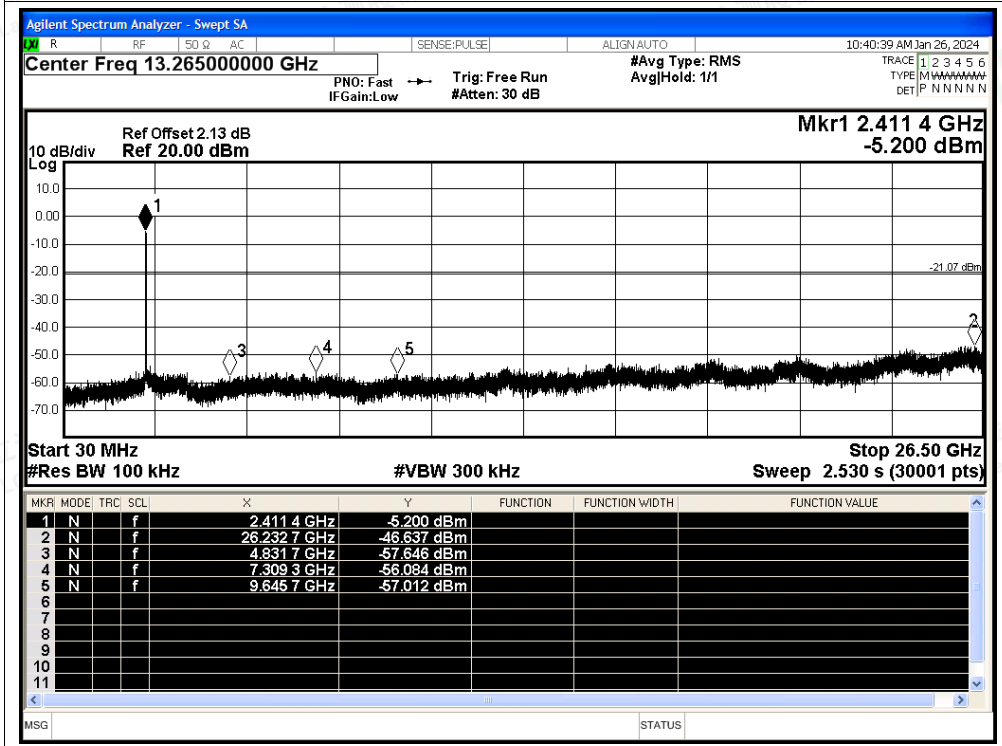




Tx. Spurious NVNT g 2412MHz Ant1 Ref

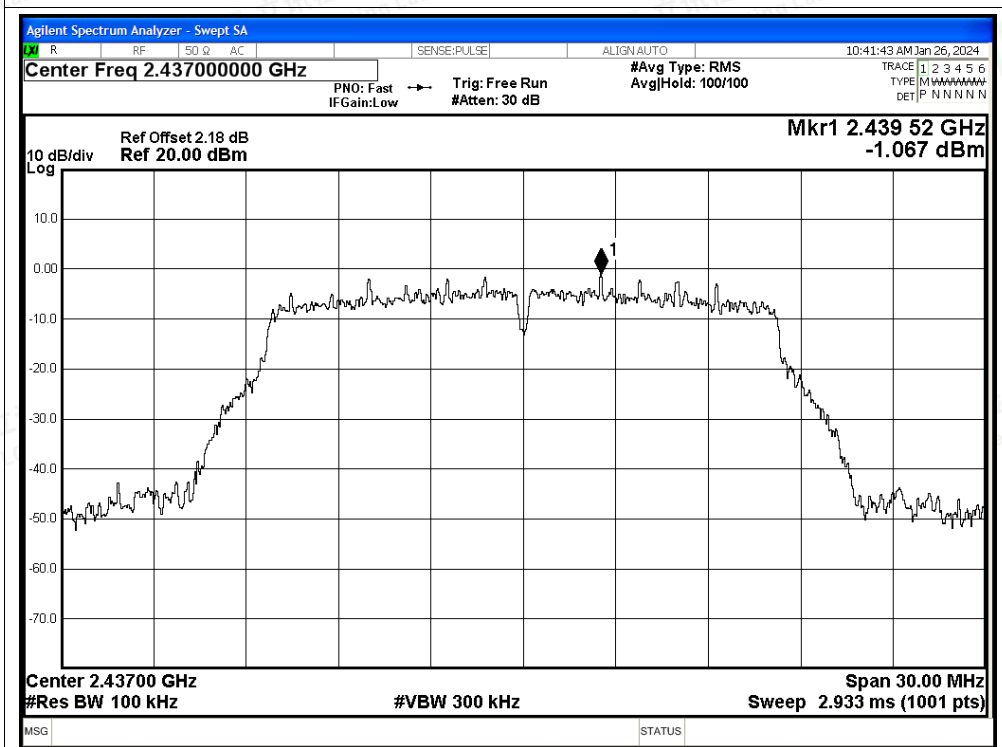


Tx. Spurious NVNT g 2412MHz Ant1 Emission

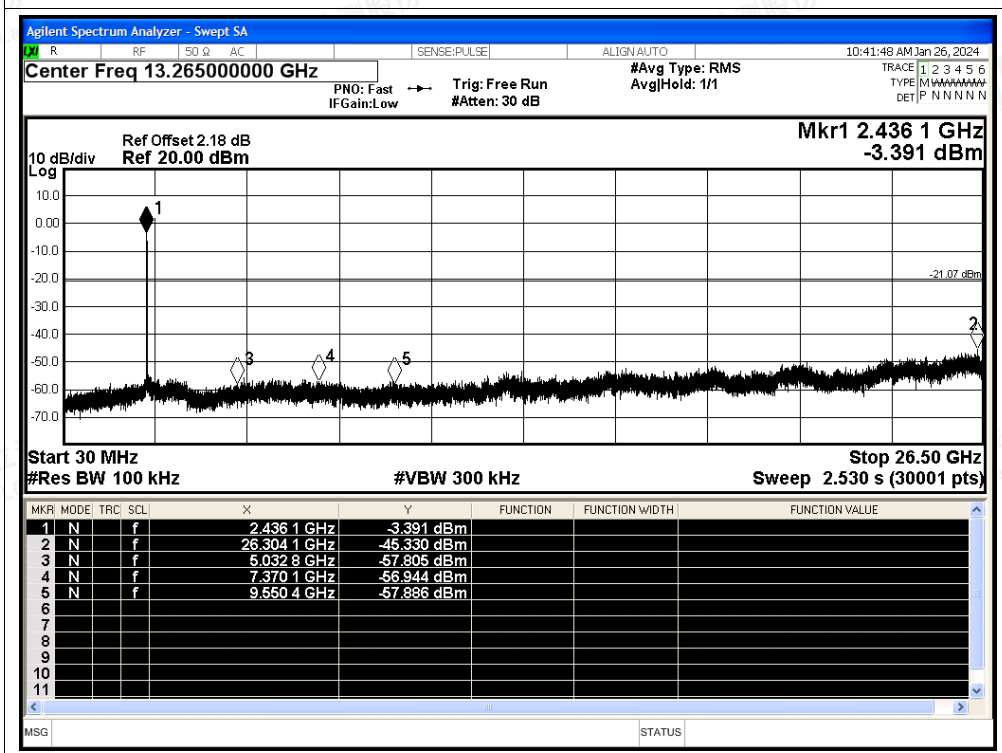




Tx. Spurious NVNT g 2437MHz Ant1 Ref

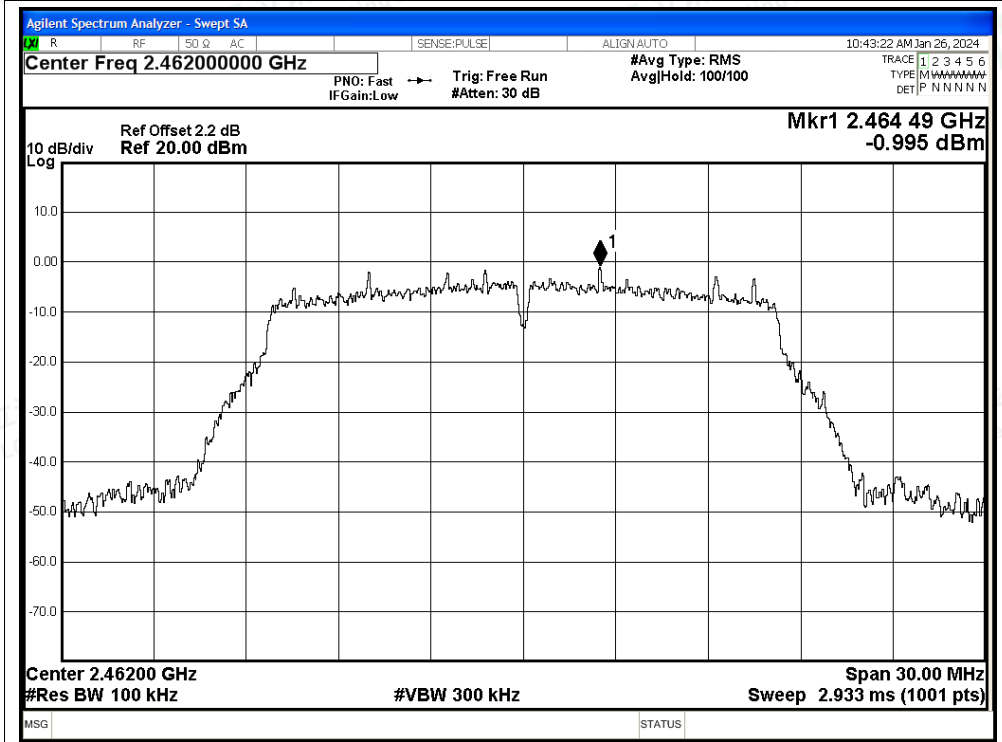


Tx. Spurious NVNT g 2437MHz Ant1 Emission

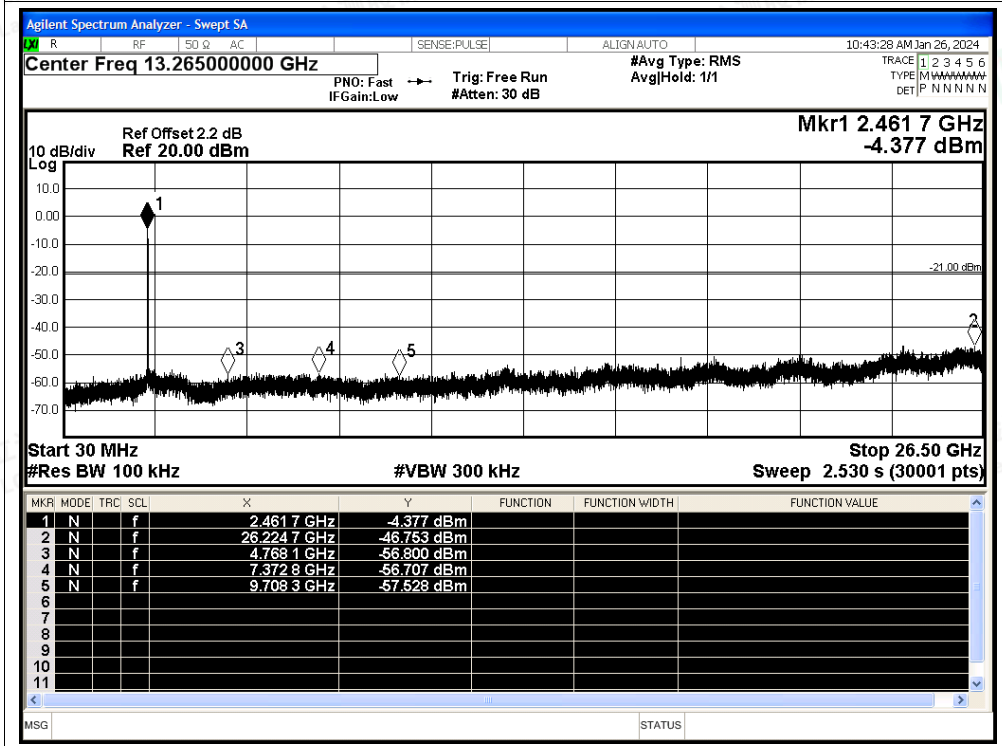




Tx. Spurious NVNT g 2462MHz Ant1 Ref

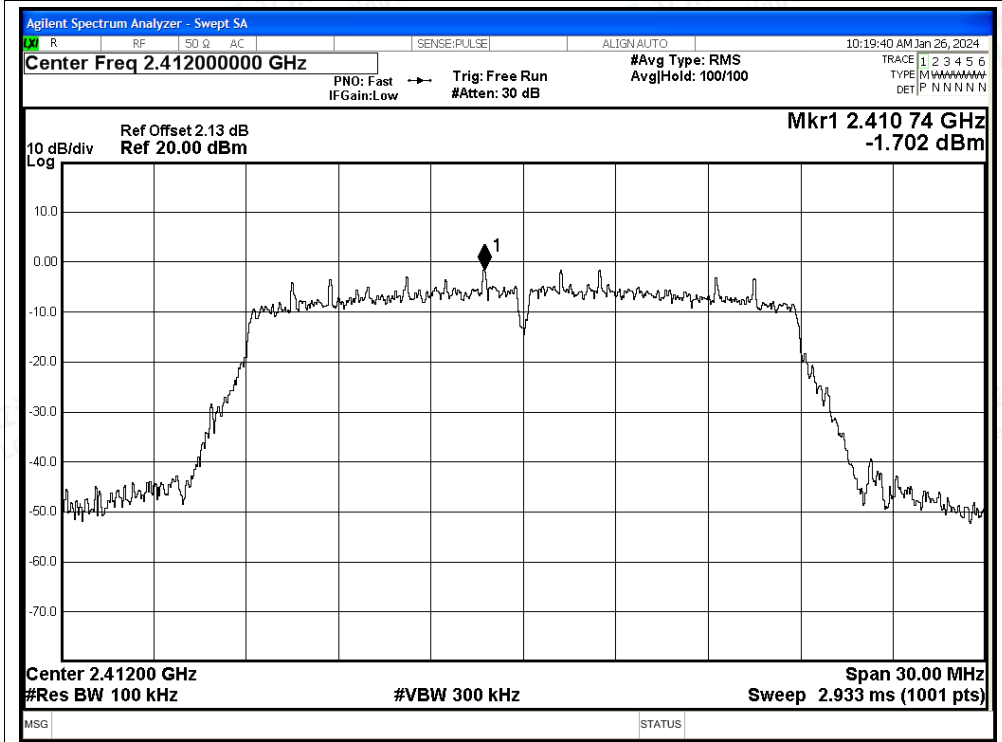


Tx. Spurious NVNT g 2462MHz Ant1 Emission

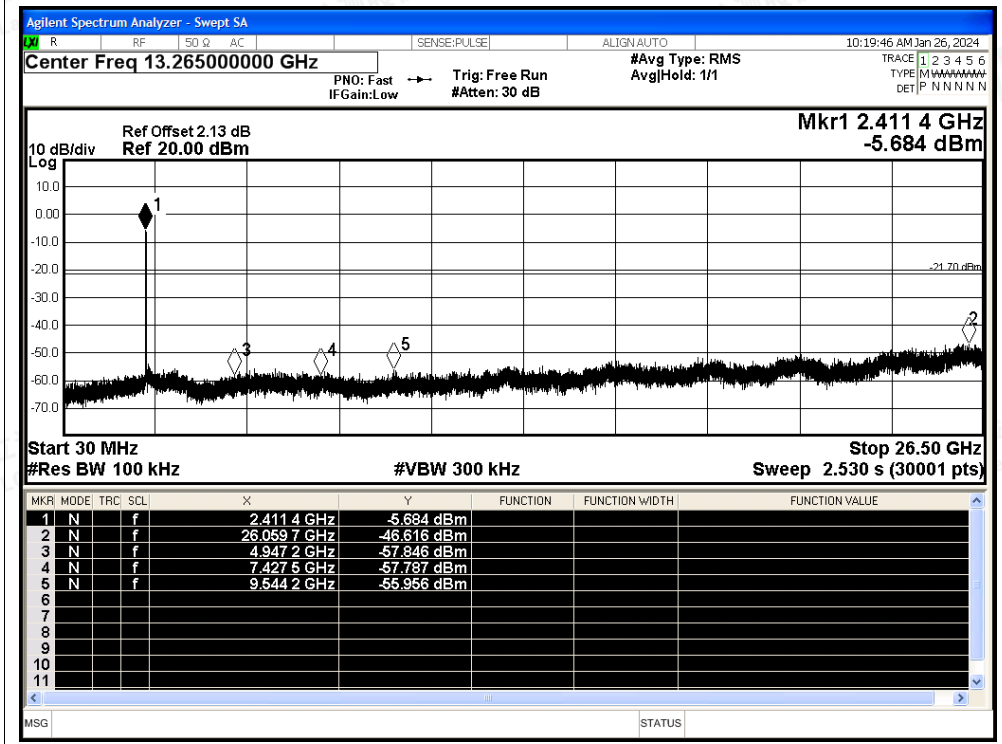




Tx. Spurious NVNT n20 2412MHz Ant1 Ref

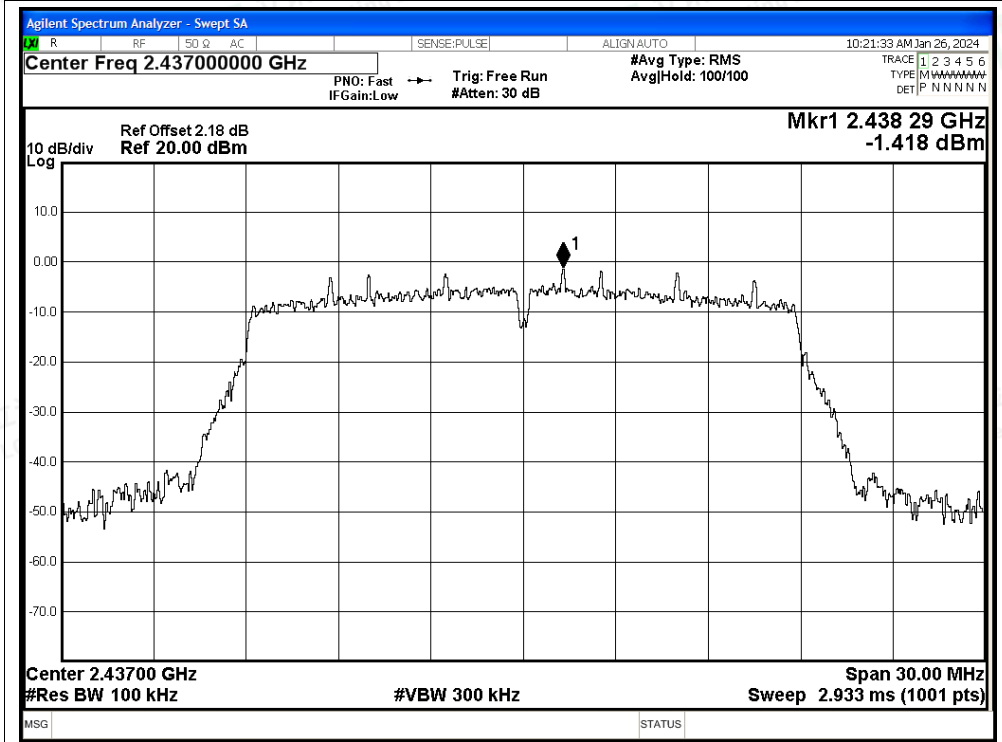


Tx. Spurious NVNT n20 2412MHz Ant1 Emission

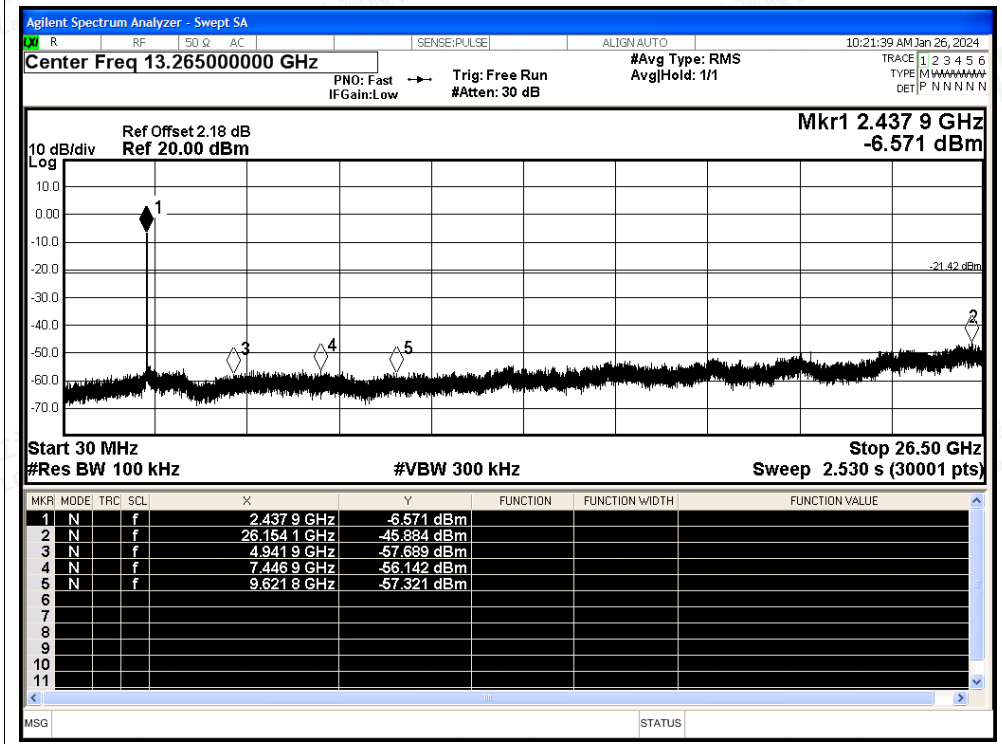




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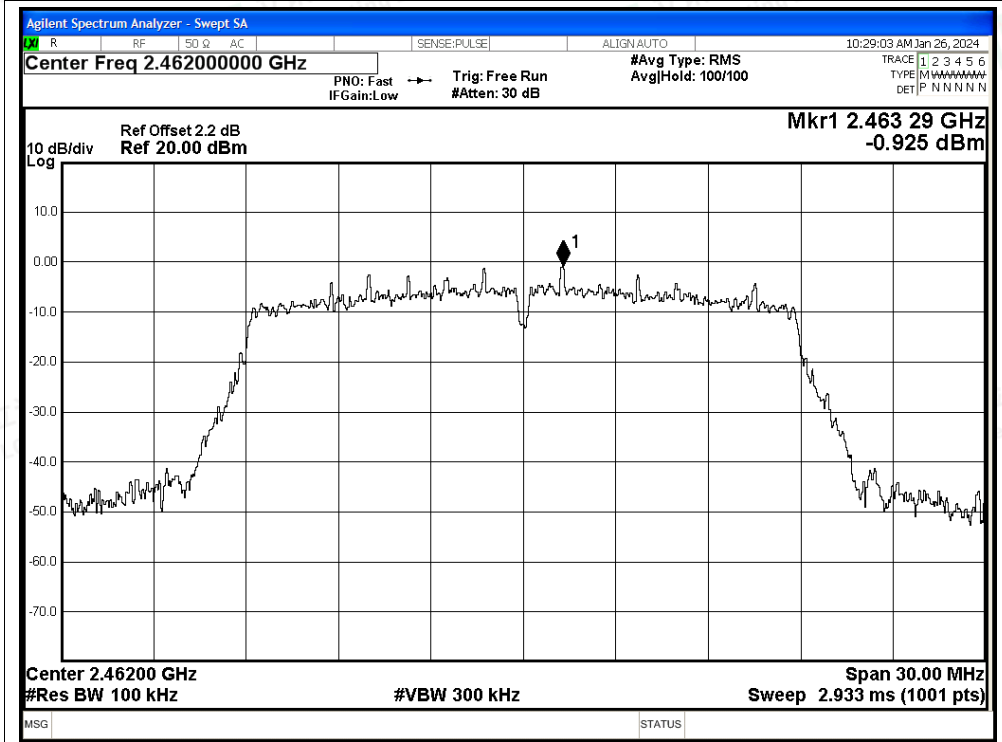


Tx. Spurious NVNT n20 2437MHz Ant1 Emission

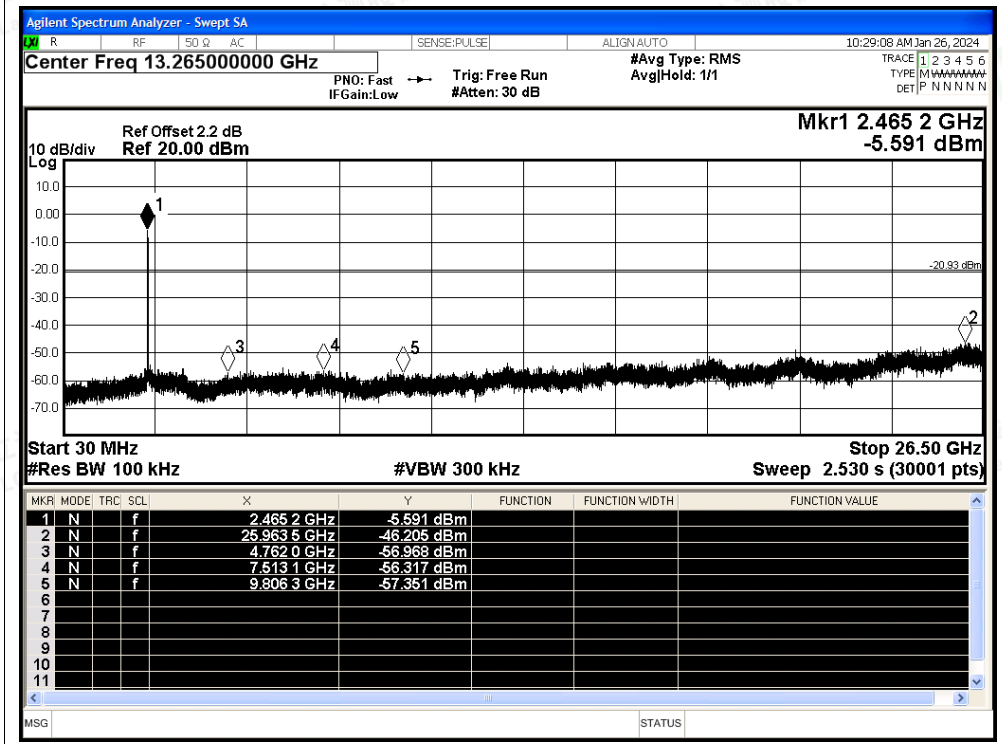




Tx. Spurious NVNT n20 2462MHz Ant1 Ref

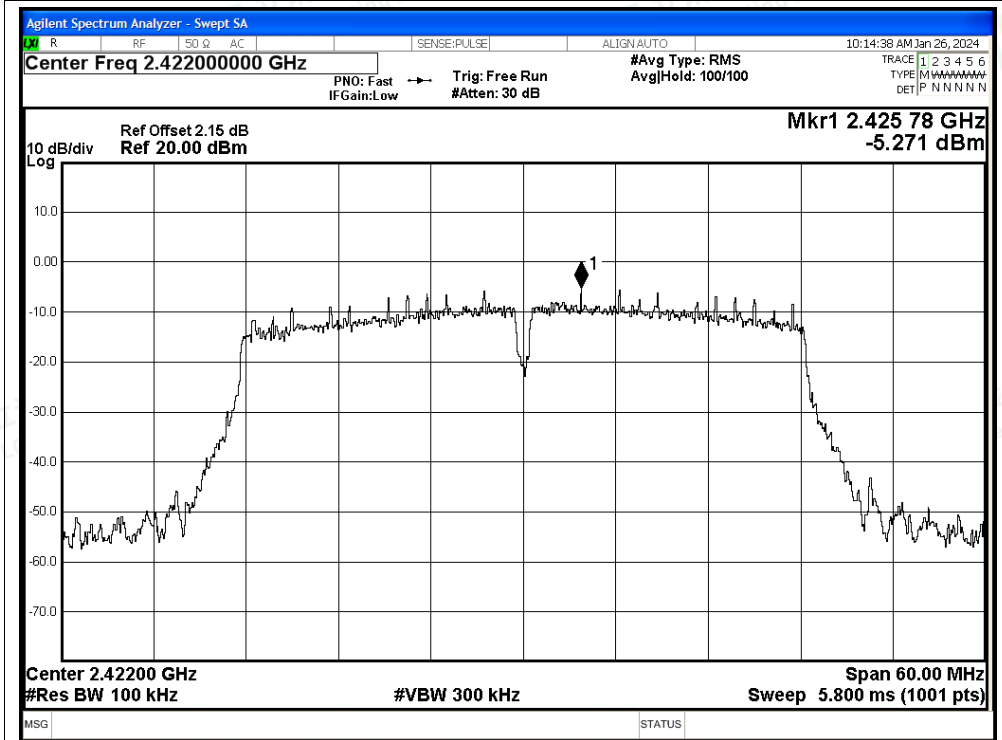


Tx. Spurious NVNT n20 2462MHz Ant1 Emission

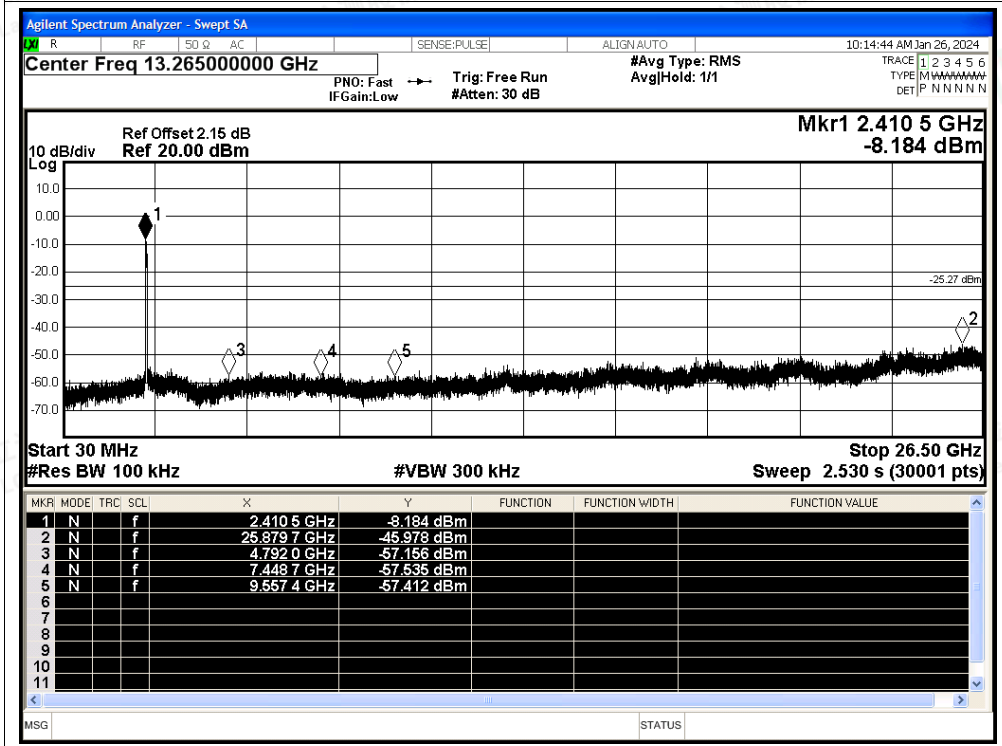




Tx. Spurious NVNT n40 2422MHz Ant1 Ref

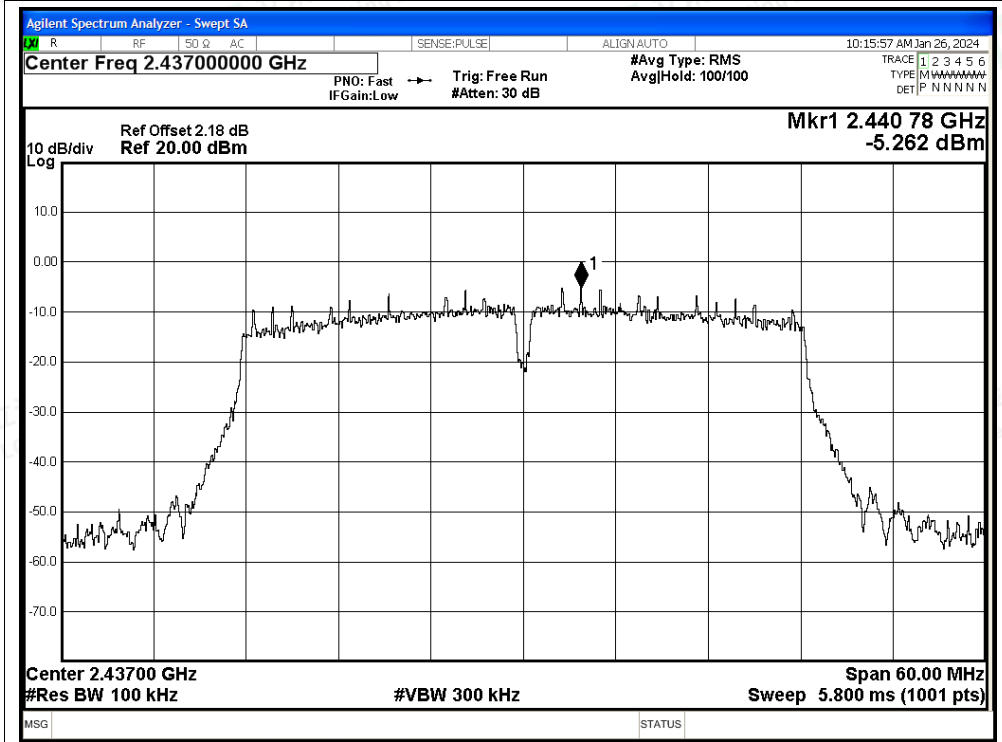


Tx. Spurious NVNT n40 2422MHz Ant1 Emission

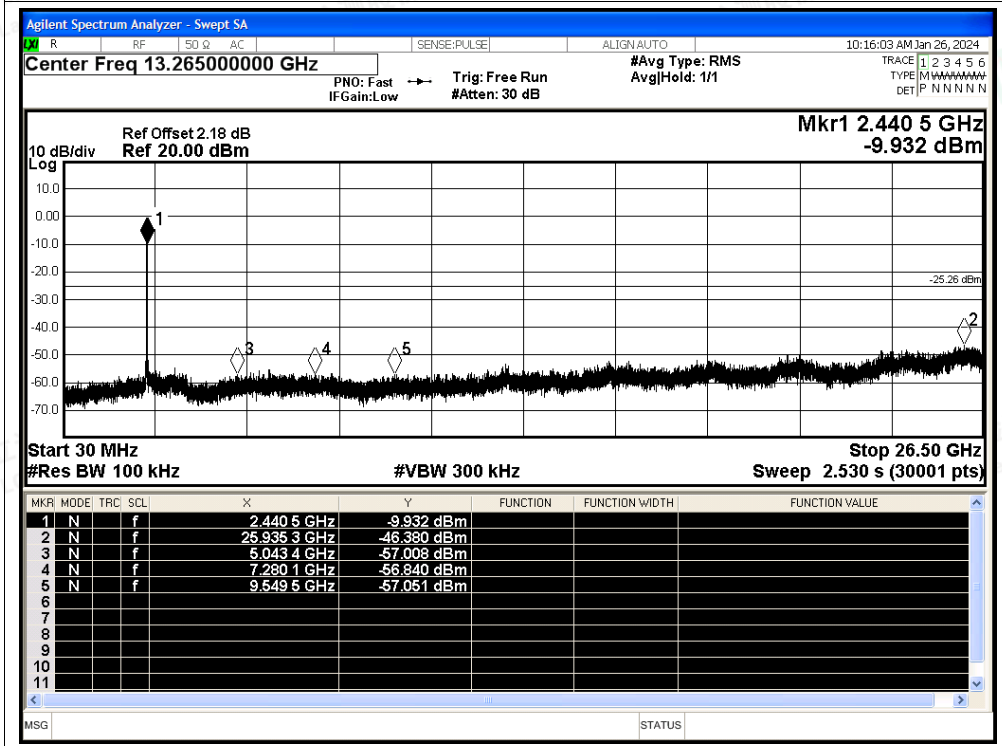




Tx. Spurious NVNT n40 2437MHz Ant1 Ref

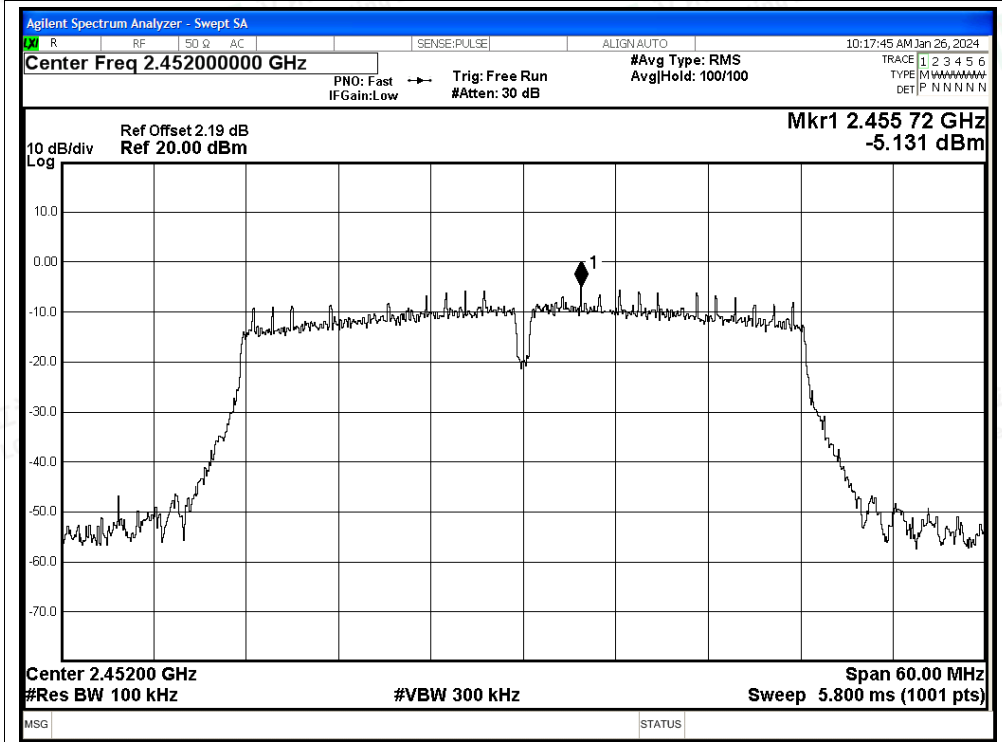


Tx. Spurious NVNT n40 2437MHz Ant1 Emission





Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz Ant1 Emission

