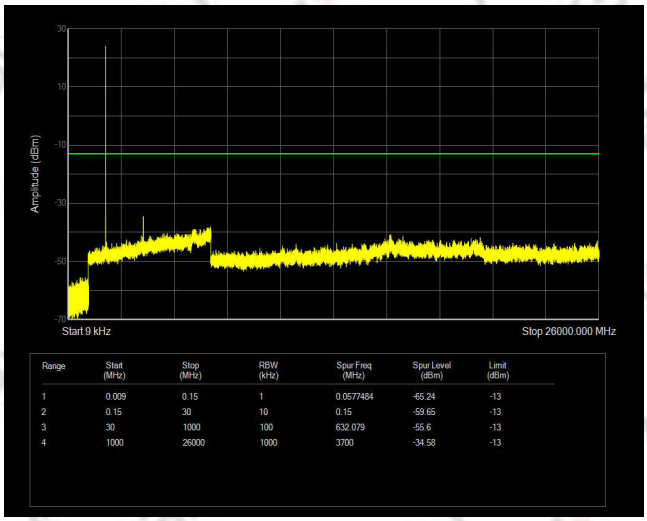
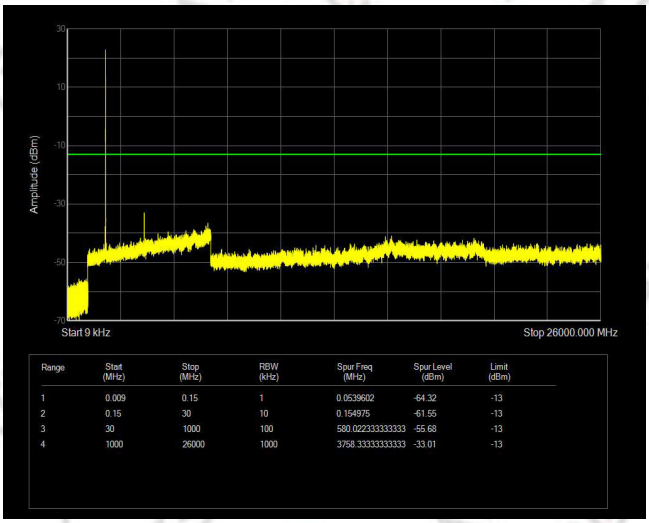



| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0577484 | -65.24 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -59.65 | -13 |
| 3 | 30 | 1000 | 100 | 632.079 | -55.6 | -13 |
| 4 | 1000 | 26000 | 1000 | 3700 | -34.58 | -13 |

Band2 QPSK BW=1.4MHz Channel=18607 RB Size=1 Position=#0

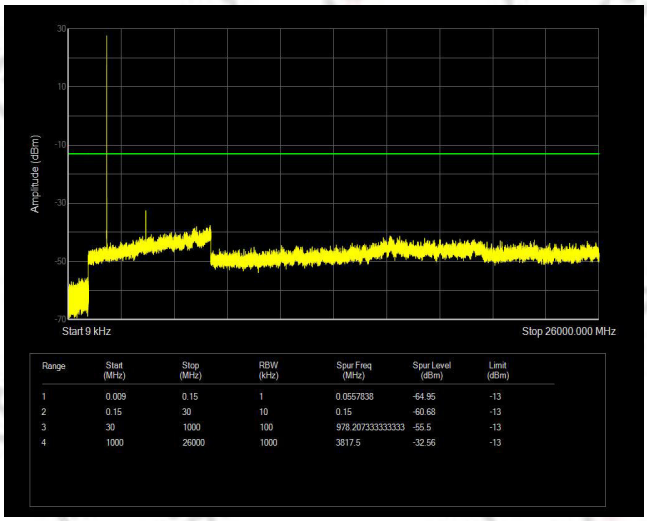
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0539602 | -64.32 | -13 |
| 2 | 0.15 | 30 | 10 | 0.154975 | -61.55 | -13 |
| 3 | 30 | 1000 | 100 | 580.022333333333 | -55.68 | -13 |
| 4 | 1000 | 26000 | 1000 | 3758.33333333333 | -33.01 | -13 |

Band2 QPSK BW=1.4MHz Channel=18900 RB Size=1 Position=#0

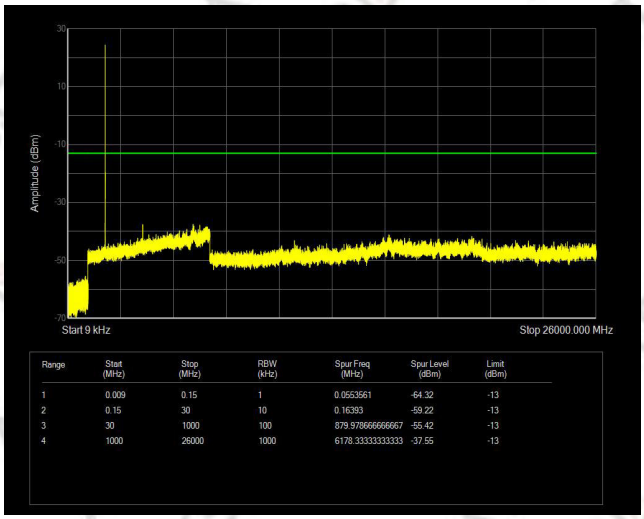
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0557838 | -64.95 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -60.68 | -13 |
| 3 | 30 | 1000 | 100 | 978.207333333333 | -55.5 | -13 |
| 4 | 1000 | 26000 | 1000 | 3817.5 | -32.56 | -13 |

Band2 QPSK BW=1.4MHz Channel=19193 RB Size=1 Position=#0

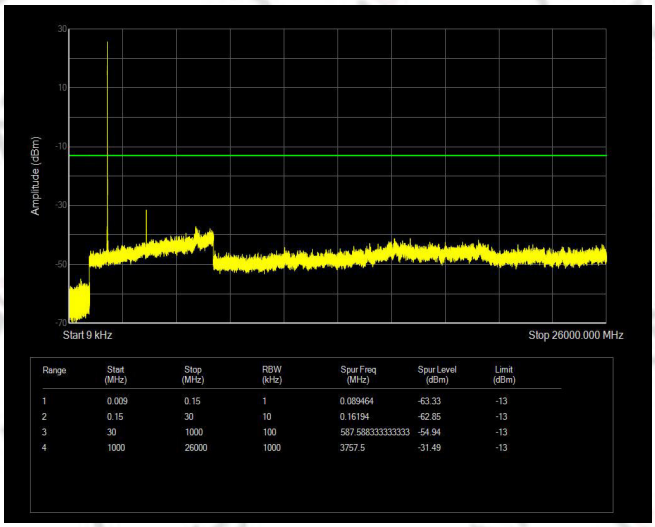
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0553561 | -64.32 | -13 |
| 2 | 0.15 | 30 | 10 | 0.16393 | -59.22 | -13 |
| 3 | 30 | 1000 | 100 | 879.978666666667 | -55.42 | -13 |
| 4 | 1000 | 26000 | 1000 | 6178.33333333333 | -37.55 | -13 |

Band2 QPSK BW=3MHz Channel=18615 RB Size=1 Position=#0

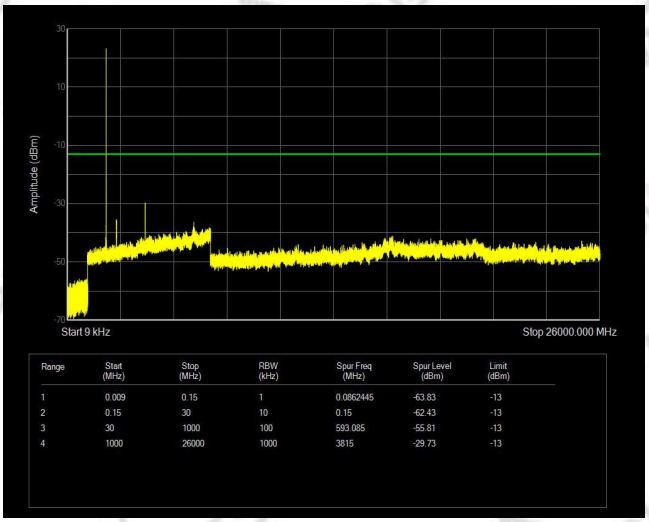
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.089464 | -63.33 | -13 |
| 2 | 0.15 | 30 | 10 | 0.16194 | -62.85 | -13 |
| 3 | 30 | 1000 | 100 | 587.588333333333 | -54.94 | -13 |
| 4 | 1000 | 26000 | 1000 | 3757.5 | -31.49 | -13 |

Band2 QPSK BW=3MHz Channel=18900 RB Size=1 Position=#0

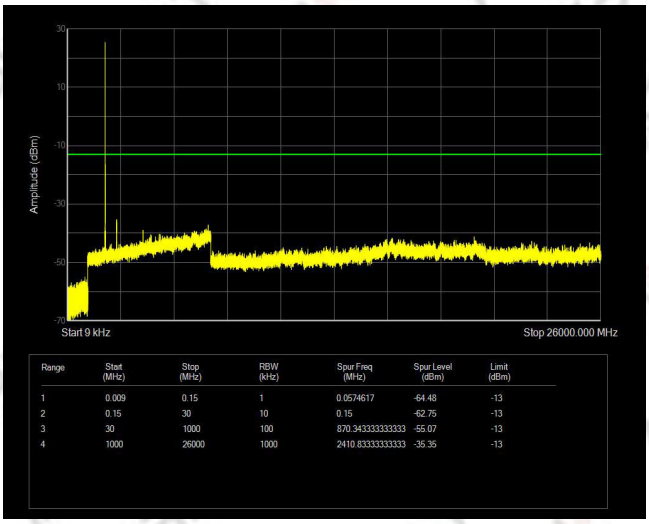
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0862445 | -63.83 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -62.43 | -13 |
| 3 | 30 | 1000 | 100 | 593.085 | -55.81 | -13 |
| 4 | 1000 | 26000 | 1000 | 3815 | -29.73 | -13 |

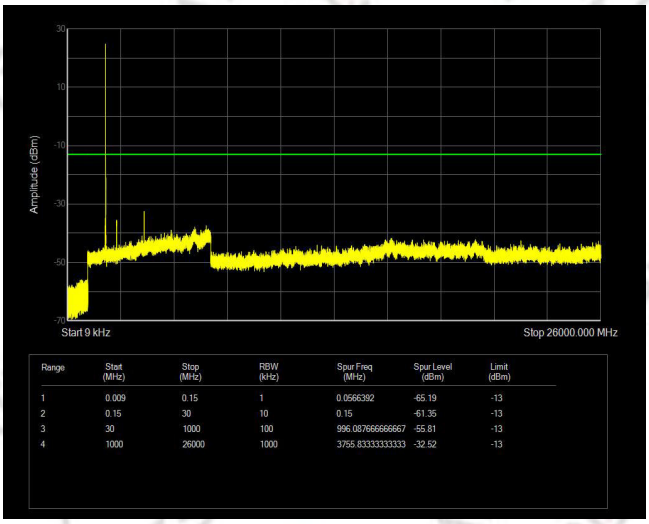
Band2 QPSK BW=3MHz Channel=19185 RB Size=1 Position=#0

NVNT



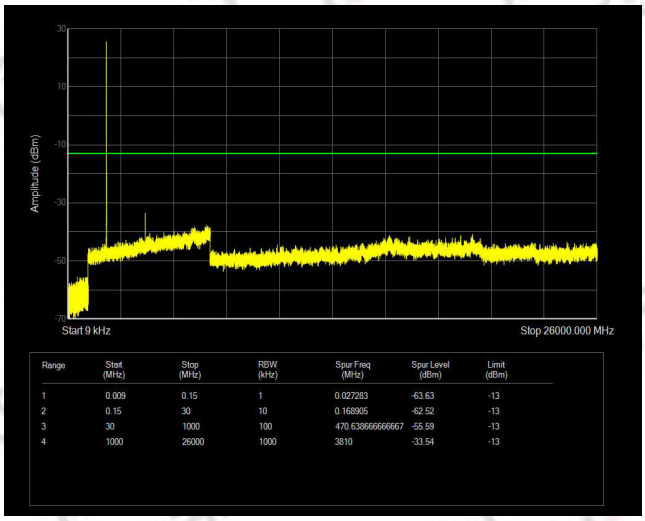

Band2 QPSK BW=5MHz Channel=18625 RB Size=1 Position=#0

NVNT



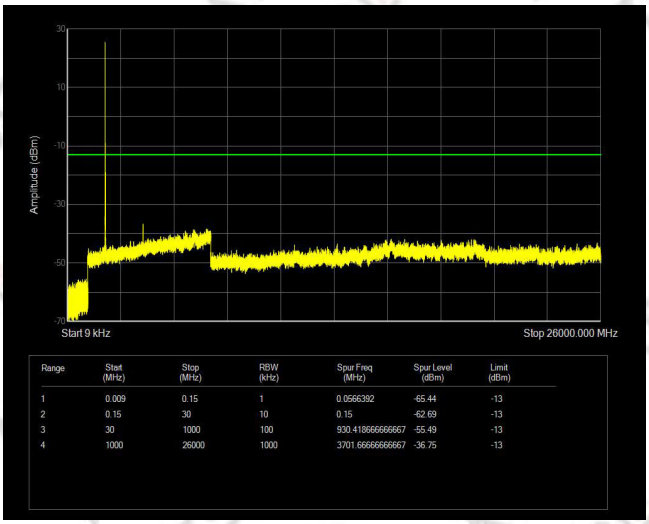

Band2 QPSK BW=5MHz Channel=18900 RB Size=1 Position=#0

NVNT



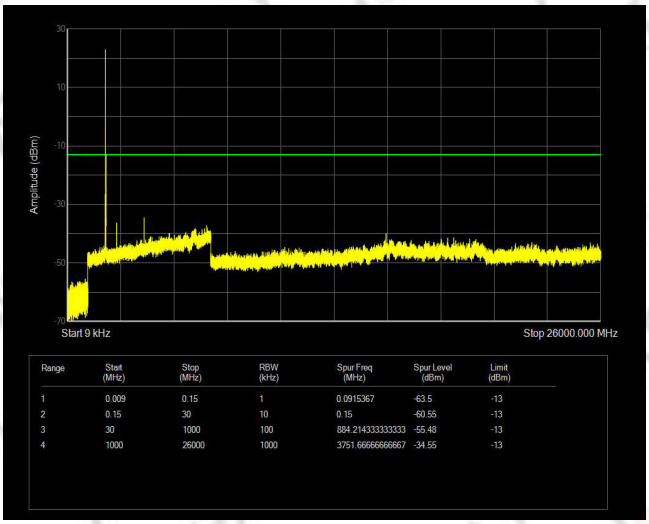

Band2 QPSK BW=5MHz Channel=19175 RB Size=1 Position=#0

NVNT



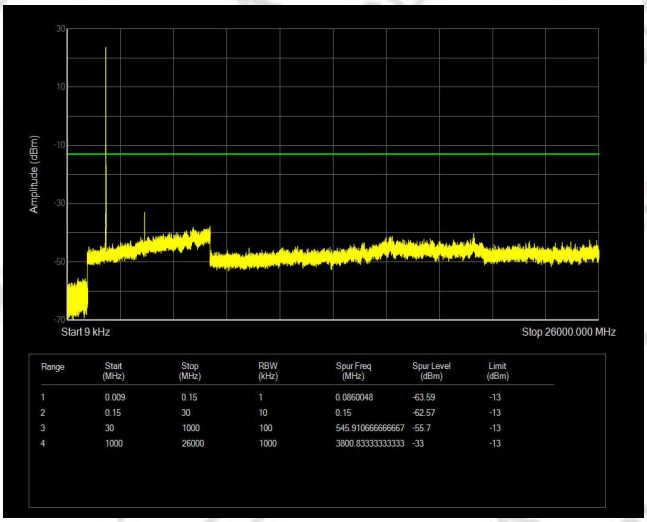

Band2 QPSK BW=10MHz Channel=18650 RB Size=1 Position=#0

NVNT



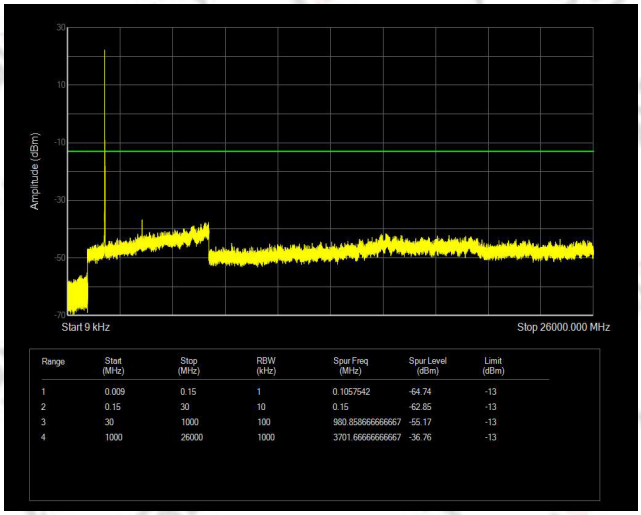

Band2 QPSK BW=10MHz Channel=18900 RB Size=1 Position=#0

NVNT




Band2 QPSK BW=10MHz Channel=19150 RB Size=1 Position=#0

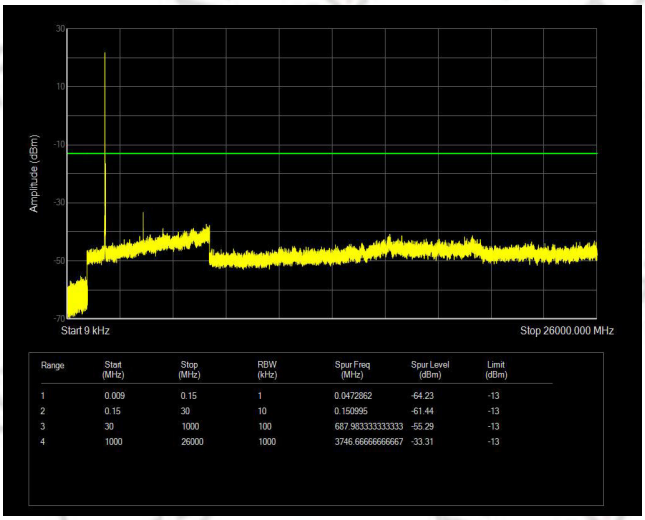
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.1057542 | -64.74 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -62.85 | -13 |
| 3 | 30 | 1000 | 100 | 980.858666666667 | -55.17 | -13 |
| 4 | 1000 | 26000 | 1000 | 3701.66666666667 | -36.76 | -13 |

Band2 QPSK BW=15MHz Channel=18675 RB Size=1 Position=#0

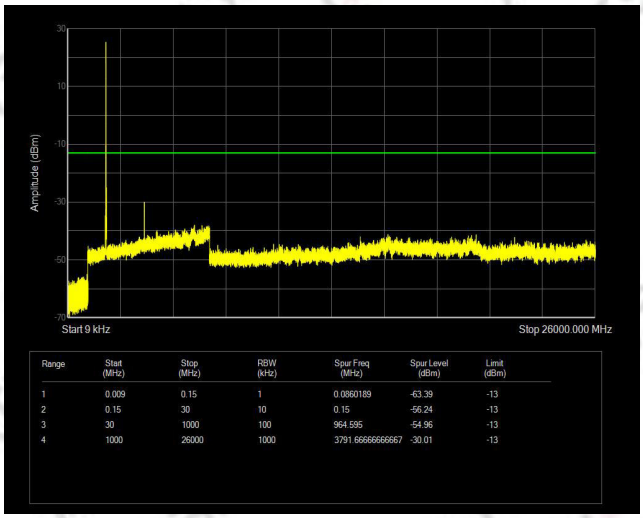
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0472862 | -64.23 | -13 |
| 2 | 0.15 | 30 | 10 | 0.150995 | -61.44 | -13 |
| 3 | 30 | 1000 | 100 | 687.983333333333 | -55.29 | -13 |
| 4 | 1000 | 26000 | 1000 | 3746.66666666667 | -33.31 | -13 |

Band2 QPSK BW=15MHz Channel=18900 RB Size=1 Position=#0

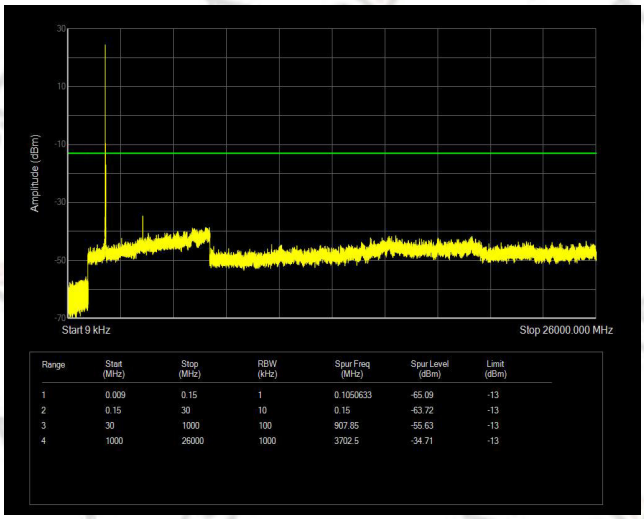
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0860189 | -63.39 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -56.24 | -13 |
| 3 | 30 | 1000 | 100 | 964.595 | -54.96 | -13 |
| 4 | 1000 | 26000 | 1000 | 3791.66666666667 | -30.01 | -13 |

Band2 QPSK BW=15MHz Channel=19125 RB Size=1 Position=#0

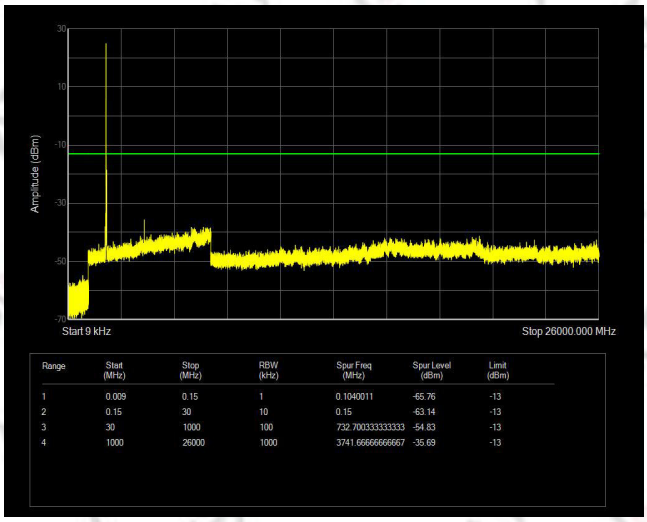
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.1050633 | -65.09 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -63.72 | -13 |
| 3 | 30 | 1000 | 100 | 907.85 | -55.63 | -13 |
| 4 | 1000 | 26000 | 1000 | 3702.5 | -34.71 | -13 |

Band2 QPSK BW=20MHz Channel=18700 RB Size=1 Position=#0

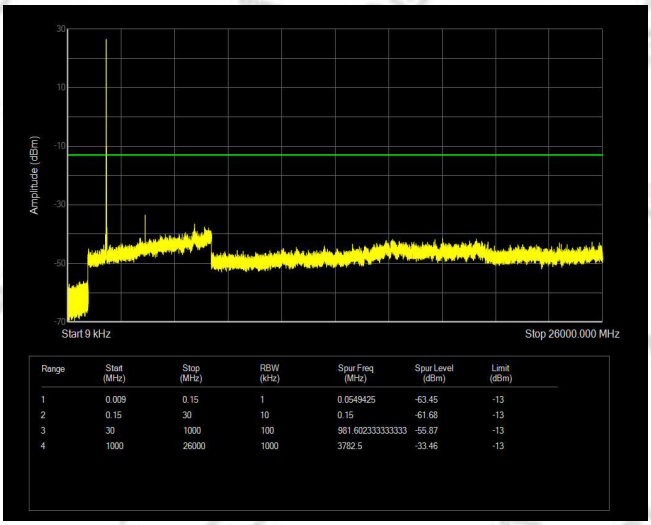
NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.1040011 | -65.76 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -63.14 | -13 |
| 3 | 30 | 1000 | 100 | 732.700333333333 | -54.83 | -13 |
| 4 | 1000 | 26000 | 1000 | 3741.66666666667 | -35.69 | -13 |

Band2 QPSK BW=20MHz Channel=18900 RB Size=1 Position=#0

NVNT




| Range | Start (MHz) | Stop (MHz) | RBW (kHz) | Spur Freq (MHz) | Spur Level (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|
| 1 | 0.009 | 0.15 | 1 | 0.0549425 | -63.45 | -13 |
| 2 | 0.15 | 30 | 10 | 0.15 | -61.68 | -13 |
| 3 | 30 | 1000 | 100 | 981.602333333333 | -55.87 | -13 |
| 4 | 1000 | 26000 | 1000 | 3782.5 | -33.46 | -13 |

Band2 QPSK BW=20MHz Channel=19100 RB Size=1 Position=#0

NVNT

# LTE Band 4

## 01 Conducted output power

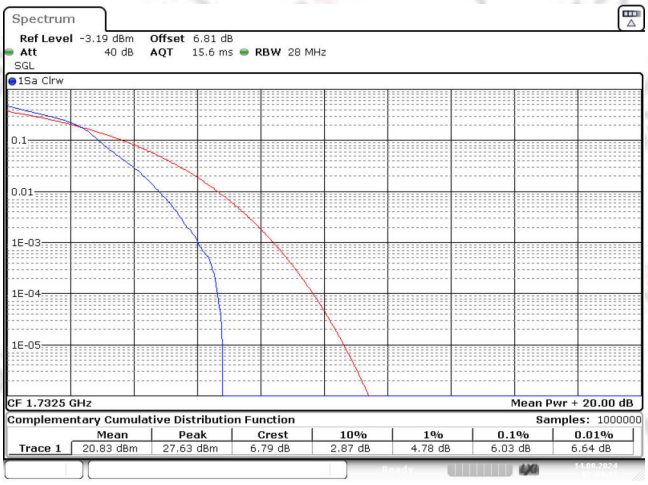
| Band | Bandwidth (MHz) | UL Channel | RB Size | RB Position | Modulation | Power (dBm) | Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | EIRP (dBm) | EIRP Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band4 | 1.4 | 19957 | 1 | #0 | QAM16 | 21.00 | 0.5 | 19.35 | 37 | 21.50 | 37 | PASS |
| Band4 | 1.4 | 20175 | 1 | #0 | QAM16 | 21.49 | 0.5 | 19.84 | 37 | 21.99 | 37 | PASS |
| Band4 | 1.4 | 20393 | 1 | #0 | QAM16 | 21.91 | 0.5 | 20.26 | 37 | 22.41 | 37 | PASS |
| Band4 | 3 | 19965 | 1 | #0 | QAM16 | 21.52 | 0.5 | 19.87 | 37 | 22.02 | 37 | PASS |
| Band4 | 3 | 20175 | 1 | #0 | QAM16 | 21.56 | 0.5 | 19.91 | 37 | 22.06 | 37 | PASS |
| Band4 | 3 | 20385 | 1 | #0 | QAM16 | 21.71 | 0.5 | 20.06 | 37 | 22.21 | 37 | PASS |
| Band4 | 5 | 19975 | 1 | #0 | QAM16 | 21.58 | 0.5 | 19.93 | 37 | 22.08 | 37 | PASS |
| Band4 | 5 | 20175 | 1 | #0 | QAM16 | 21.57 | 0.5 | 19.92 | 37 | 22.07 | 37 | PASS |
| Band4 | 5 | 20375 | 1 | #0 | QAM16 | **22.02** | 0.5 | 20.37 | 37 | 22.52 | 37 | PASS |
| Band4 | 10 | 20000 | 1 | #0 | QAM16 | 21.52 | 0.5 | 19.87 | 37 | 22.02 | 37 | PASS |
| Band4 | 10 | 20175 | 1 | #0 | QAM16 | 21.51 | 0.5 | 19.86 | 37 | 22.01 | 37 | PASS |
| Band4 | 10 | 20350 | 1 | #0 | QAM16 | 21.70 | 0.5 | 20.05 | 37 | 22.20 | 37 | PASS |
| Band4 | 15 | 20025 | 1 | #0 | QAM16 | 21.45 | 0.5 | 19.80 | 37 | 21.95 | 37 | PASS |
| Band4 | 15 | 20175 | 1 | #0 | QAM16 | 21.47 | 0.5 | 19.82 | 37 | 21.97 | 37 | PASS |
| Band4 | 15 | 20325 | 1 | #0 | QAM16 | 21.82 | 0.5 | 20.17 | 37 | 22.32 | 37 | PASS |
| Band4 | 20 | 20050 | 1 | #0 | QAM16 | 21.23 | 0.5 | 19.58 | 37 | 21.73 | 37 | PASS |
| Band4 | 20 | 20175 | 1 | #0 | QAM16 | 21.50 | 0.5 | 19.85 | 37 | 22.00 | 37 | PASS |
| Band4 | 20 | 20300 | 1 | #0 | QAM16 | **21.60** | 0.5 | 19.95 | 37 | 22.10 | 37 | PASS |
| Band4 | 1.4 | 19957 | 1 | #0 | QPSK | 22.19 | 0.5 | 20.54 | 37 | 22.69 | 37 | PASS |
| Band4 | 1.4 | 20175 | 1 | #0 | QPSK | 22.42 | 0.5 | 20.77 | 37 | 22.92 | 37 | PASS |
| Band4 | 1.4 | 20393 | 1 | #0 | QPSK | 22.77 | 0.5 | 21.12 | 37 | 23.27 | 37 | PASS |
| Band4 | 3 | 19965 | 1 | #0 | QPSK | 22.16 | 0.5 | 20.51 | 37 | 22.66 | 37 | PASS |
| Band4 | 3 | 20175 | 1 | #0 | QPSK | 22.38 | 0.5 | 20.73 | 37 | 22.88 | 37 | PASS |
| Band4 | 3 | 20385 | 1 | #0 | QPSK | 22.88 | 0.5 | 21.23 | 37 | 23.38 | 37 | PASS |
| Band4 | 5 | 19975 | 1 | #0 | QPSK | 22.10 | 0.5 | 20.45 | 37 | 22.60 | 37 | PASS |
| Band4 | 5 | 20175 | 1 | #0 | QPSK | 22.27 | 0.5 | 20.62 | 37 | 22.77 | 37 | PASS |
| Band4 | 5 | 20375 | 1 | #0 | QPSK | 22.76 | 0.5 | 21.11 | 37 | 23.26 | 37 | PASS |
| Band4 | 10 | 20000 | 1 | #0 | QPSK | 22.10 | 0.5 | 20.45 | 37 | 22.60 | 37 | PASS |
| Band4 | 10 | 20175 | 1 | #0 | QPSK | 22.39 | 0.5 | 20.74 | 37 | 22.89 | 37 | PASS |
| Band4 | 10 | 20350 | 1 | #0 | QPSK | **22.95** | 0.5 | 21.30 | 37 | 23.45 | 37 | PASS |
| Band4 | 15 | 20025 | 1 | #0 | QPSK | 22.11 | 0.5 | 20.46 | 37 | 22.61 | 37 | PASS |
| Band4 | 15 | 20175 | 1 | #0 | QPSK | 22.37 | 0.5 | 20.72 | 37 | 22.87 | 37 | PASS |
| Band4 | 15 | 20325 | 1 | #0 | QPSK | 22.76 | 0.5 | 21.11 | 37 | 23.26 | 37 | PASS |
| Band4 | 20 | 20050 | 1 | #0 | QPSK | 21.97 | 0.5 | 20.32 | 37 | 22.47 | 37 | PASS |
| Band4 | 20 | 20175 | 1 | #0 | QPSK | 22.32 | 0.5 | 20.67 | 37 | 22.82 | 37 | PASS |
| Band4 | 20 | 20300 | 1 | #0 | QPSK | **22.38** | 0.5 | 20.73 | 37 | 22.88 | 37 | PASS |

## 02 Frequency stability

| Condition | Band | Bandwidth (MHz) | UL Channel | RB Size | RB Position | Modulation | Result(Hz) | Result (ppm) | Low Limit (ppm) | high Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NVNT | Band4 | 1.4 | 19957 | 6 | #0 | QAM16 | -0.60 | 0.000 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 1.4 | 20393 | 6 | #0 | QAM16 | 0.41 | 0.000 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 3 | 19965 | 15 | #0 | QAM16 | -2.49 | -0.001 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 3 | 20385 | 15 | #0 | QAM16 | -1.13 | -0.001 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 5 | 19975 | 25 | #0 | QAM16 | -11.60 | -0.007 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 5 | 20375 | 25 | #0 | QAM16 | 0.43 | 0.000 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 10 | 20000 | 50 | #0 | QAM16 | -5.65 | -0.003 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 10 | 20350 | 50 | #0 | QAM16 | -3.66 | -0.002 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 15 | 20025 | 75 | #0 | QAM16 | -6.48 | -0.004 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 15 | 20325 | 75 | #0 | QAM16 | 0.13 | 0.000 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 20 | 20050 | 100 | #0 | QAM16 | -7.95 | -0.005 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 20 | 20300 | 100 | #0 | QAM16 | -4.88 | -0.003 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 1.4 | 19957 | 6 | #0 | QPSK | -10.07 | -0.006 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 1.4 | 20393 | 6 | #0 | QPSK | -4.61 | -0.003 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 3 | 19965 | 15 | #0 | QPSK | -14.25 | -0.008 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 3 | 20385 | 15 | #0 | QPSK | -2.09 | -0.001 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 5 | 19975 | 25 | #0 | QPSK | 1.16 | 0.001 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 5 | 20375 | 25 | #0 | QPSK | -3.25 | -0.002 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 10 | 20000 | 50 | #0 | QPSK | -1.52 | -0.001 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 10 | 20350 | 50 | #0 | QPSK | -4.23 | -0.002 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 15 | 20025 | 75 | #0 | QPSK | -9.38 | -0.005 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 15 | 20325 | 75 | #0 | QPSK | -4.25 | -0.002 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 20 | 20050 | 100 | #0 | QPSK | -7.04 | -0.004 | -2.5 | 2.5 | PASS |
| NVNT | Band4 | 20 | 20300 | 100 | #0 | QPSK | -5.87 | -0.003 | -2.5 | 2.5 | PASS |

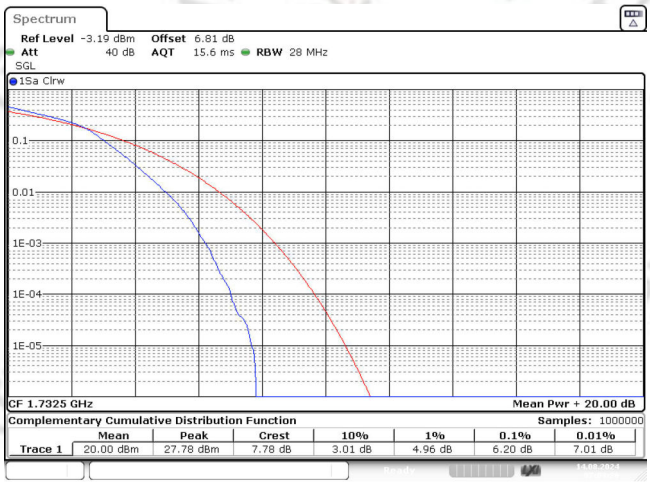
## 03 Peak-to-Average Ratio

| Condition | Band | Bandwidth (MHz) | UL Channel | RB Size | RB Position | Modulation | Result (dB) | high Limit (dB) | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| NVNT | Band4 | 1.4 | 20175 | 1 | #0 | QAM16 | 6.03 | 13 | PASS |
| NVNT | Band4 | 1.4 | 20175 | 6 | #0 | QAM16 | 6.20 | 13 | PASS |
| NVNT | Band4 | 3 | 20175 | 1 | #0 | QAM16 | 5.54 | 13 | PASS |
| NVNT | Band4 | 3 | 20175 | 15 | #0 | QAM16 | 6.17 | 13 | PASS |
| NVNT | Band4 | 5 | 20175 | 1 | #0 | QAM16 | 5.83 | 13 | PASS |
| NVNT | Band4 | 5 | 20175 | 25 | #0 | QAM16 | 6.17 | 13 | PASS |
| NVNT | Band4 | 10 | 20175 | 1 | #0 | QAM16 | 5.57 | 13 | PASS |
| NVNT | Band4 | 10 | 20175 | 50 | #0 | QAM16 | 6.20 | 13 | PASS |
| NVNT | Band4 | 15 | 20175 | 1 | #0 | QAM16 | 6.00 | 13 | PASS |
| NVNT | Band4 | 15 | 20175 | 75 | #0 | QAM16 | 6.32 | 13 | PASS |
| NVNT | Band4 | 20 | 20175 | 1 | #0 | QAM16 | 6.52 | 13 | PASS |
| NVNT | Band4 | 20 | 20175 | 100 | #0 | QAM16 | 6.29 | 13 | PASS |
| NVNT | Band4 | 1.4 | 20175 | 1 | #0 | QPSK | 5.10 | 13 | PASS |
| NVNT | Band4 | 1.4 | 20175 | 6 | #0 | QPSK | 5.28 | 13 | PASS |
| NVNT | Band4 | 3 | 20175 | 1 | #0 | QPSK | 4.96 | 13 | PASS |
| NVNT | Band4 | 3 | 20175 | 15 | #0 | QPSK | 5.36 | 13 | PASS |
| NVNT | Band4 | 5 | 20175 | 1 | #0 | QPSK | 5.25 | 13 | PASS |
| NVNT | Band4 | 5 | 20175 | 25 | #0 | QPSK | 5.42 | 13 | PASS |
| NVNT | Band4 | 10 | 20175 | 1 | #0 | QPSK | 5.01 | 13 | PASS |
| NVNT | Band4 | 10 | 20175 | 50 | #0 | QPSK | 5.42 | 13 | PASS |
| NVNT | Band4 | 15 | 20175 | 1 | #0 | QPSK | 5.10 | 13 | PASS |
| NVNT | Band4 | 15 | 20175 | 75 | #0 | QPSK | 5.80 | 13 | PASS |
| NVNT | Band4 | 20 | 20175 | 1 | #0 | QPSK | 5.39 | 13 | PASS |
| NVNT | Band4 | 20 | 20175 | 100 | #0 | QPSK | 5.54 | 13 | PASS |



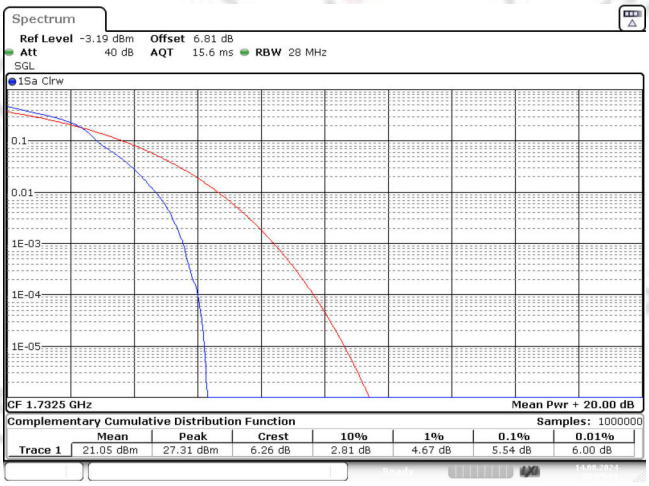

Band4 QAM16 BW=1.4MHz Channel=20175 RB Size=1 Position=#0

NVNT



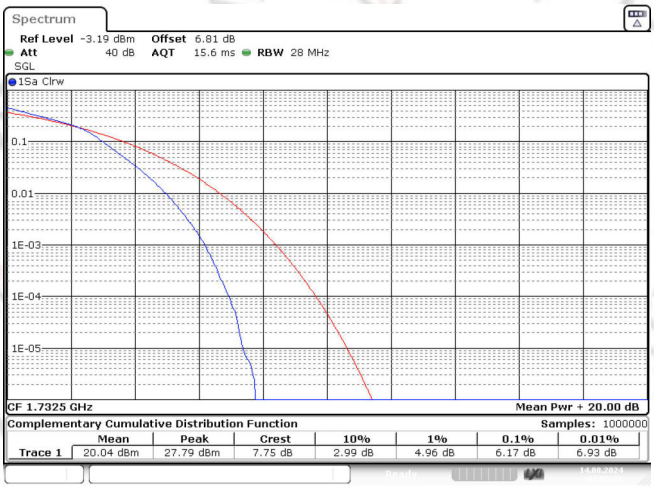

Band4 QAM16 BW=1.4MHz Channel=20175 RB Size=6 Position=#0

NVNT



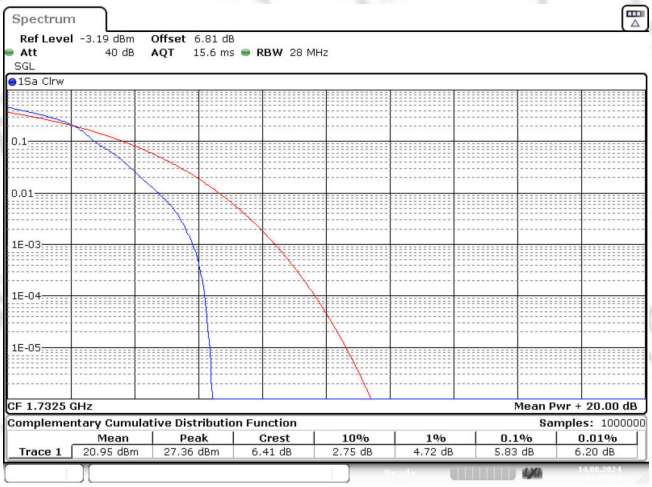

Band4 QAM16 BW=3MHz Channel=20175 RB Size=1 Position=#0

NVNT



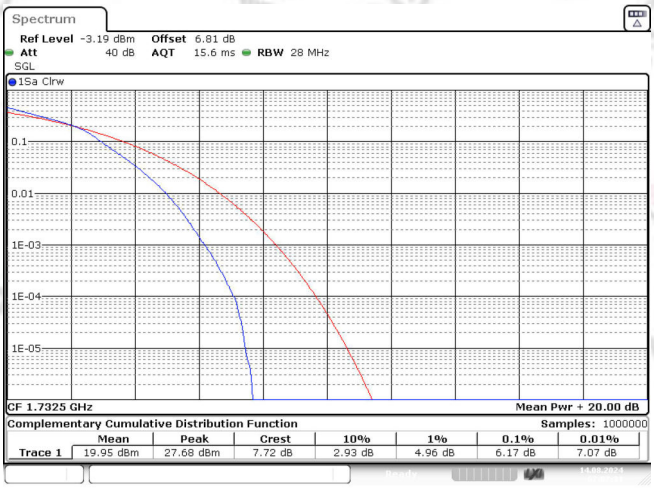

Band4 QAM16 BW=3MHz Channel=20175 RB Size=15 Position=#0

NVNT



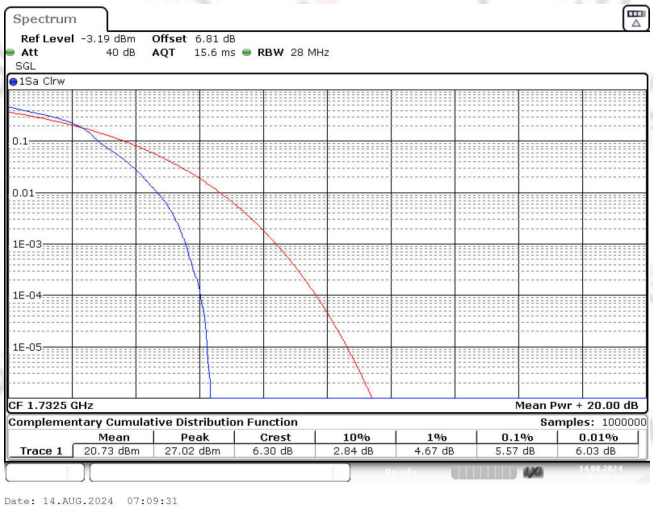

Band4 QAM16 BW=5MHz Channel=20175 RB Size=1 Position=#0

NVNT



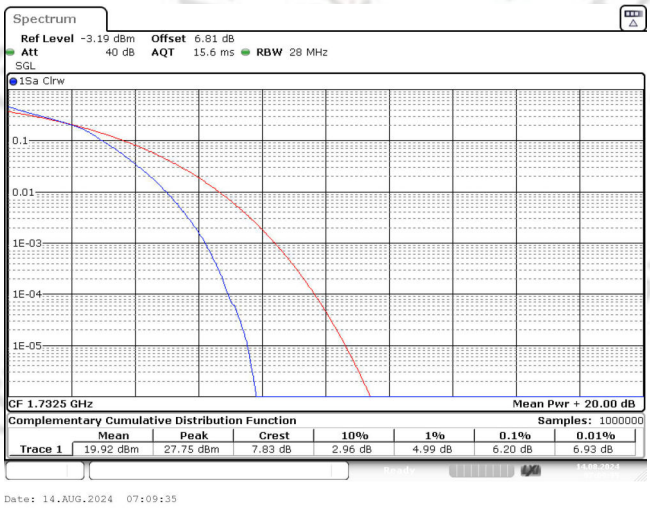

Band4 QAM16 BW=5MHz Channel=20175 RB Size=25 Position=#0

NVNT



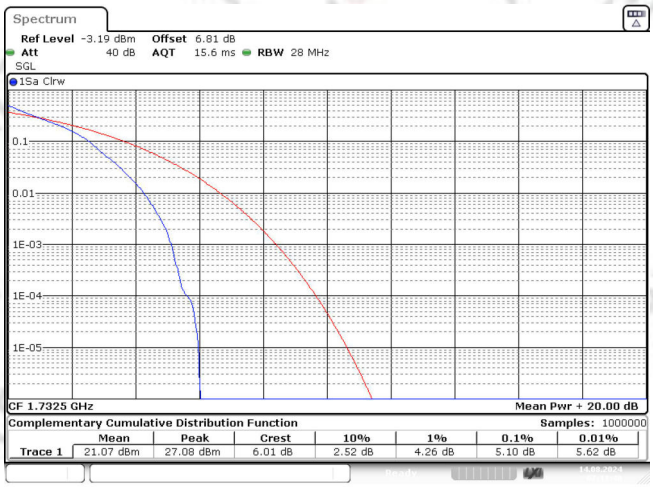

Band4 QAM16 BW=10MHz Channel=20175 RB Size=1 Position=#0

NVNT



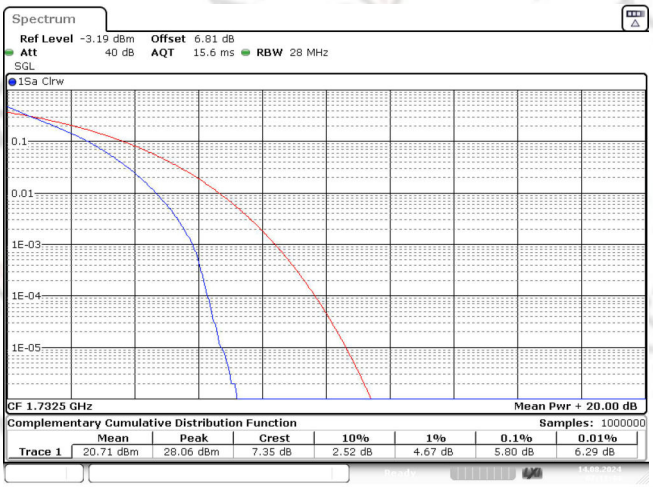

Band4 QAM16 BW=10MHz Channel=20175 RB Size=50 Position=#0

NVNT



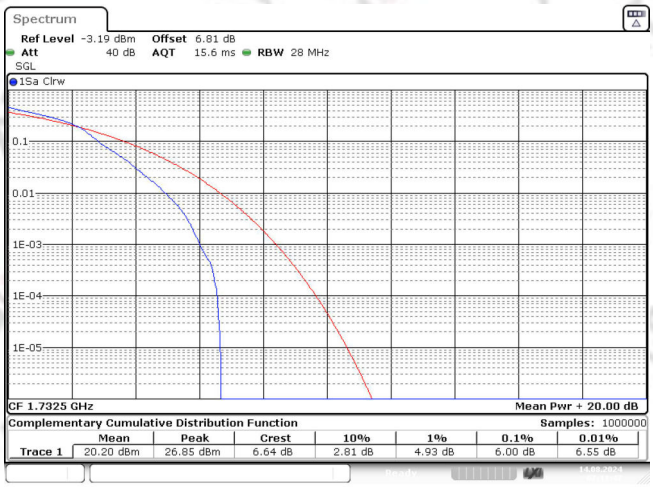

Band4 QPSK BW=15MHz Channel=20175 RB Size=1 Position=#0

NVNT



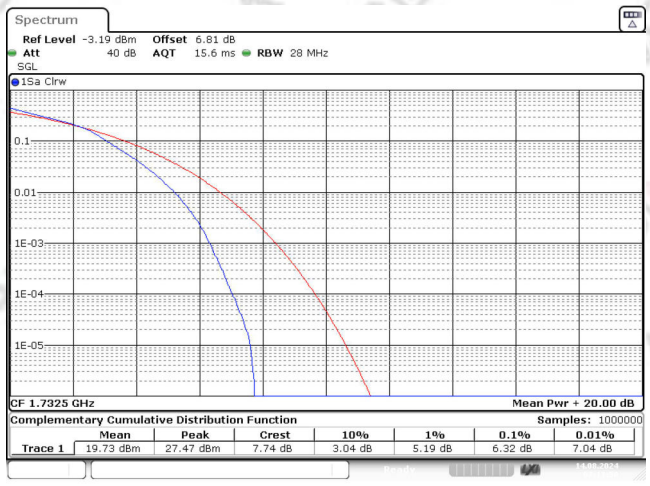

Band4 QPSK BW=15MHz Channel=20175 RB Size=75 Position=#0

NVNT



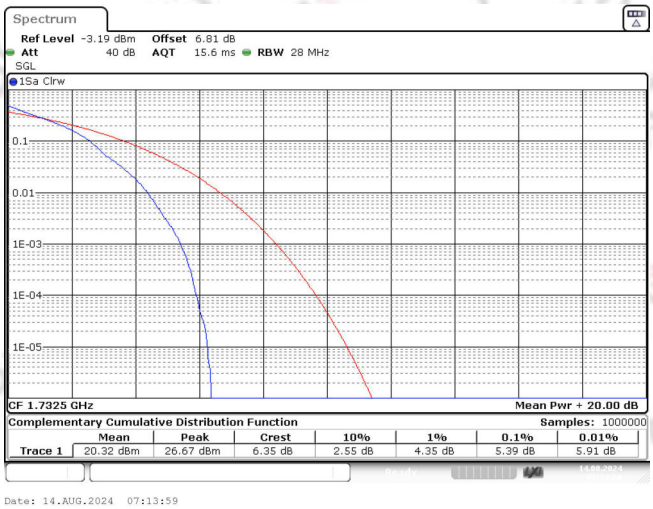

Band4 QAM16 BW=15MHz Channel=20175 RB Size=1 Position=#0

NVNT



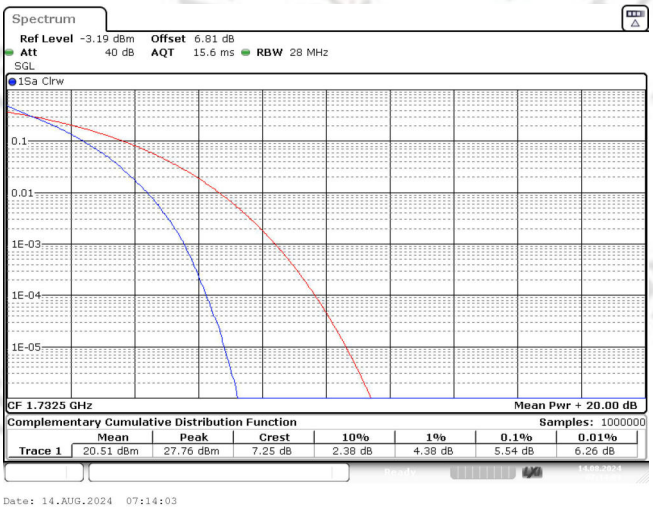

Band4 QAM16 BW=15MHz Channel=20175 RB Size=75 Position=#0

NVNT



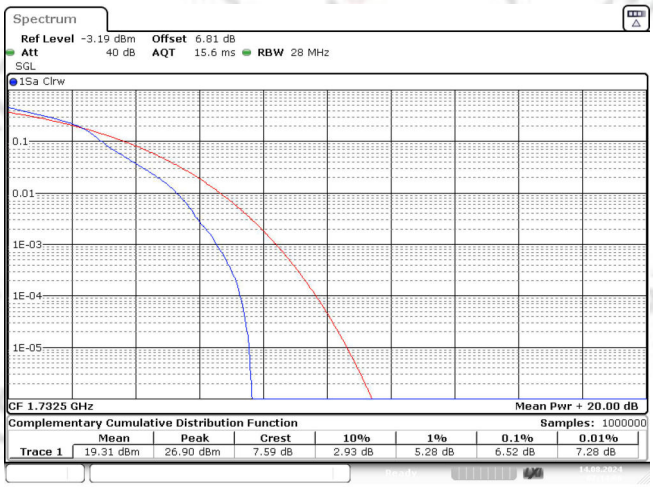

Band4 QPSK BW=20MHz Channel=20175 RB Size=1 Position=#0

NVNT



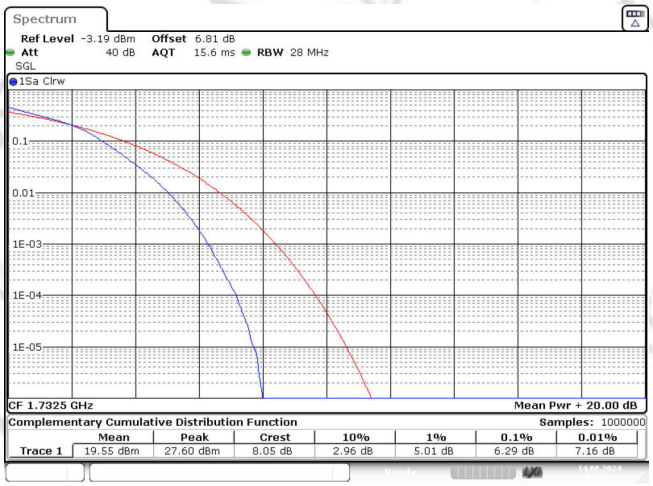

Band4 QPSK BW=20MHz Channel=20175 RB Size=100 Position=#0

NVNT



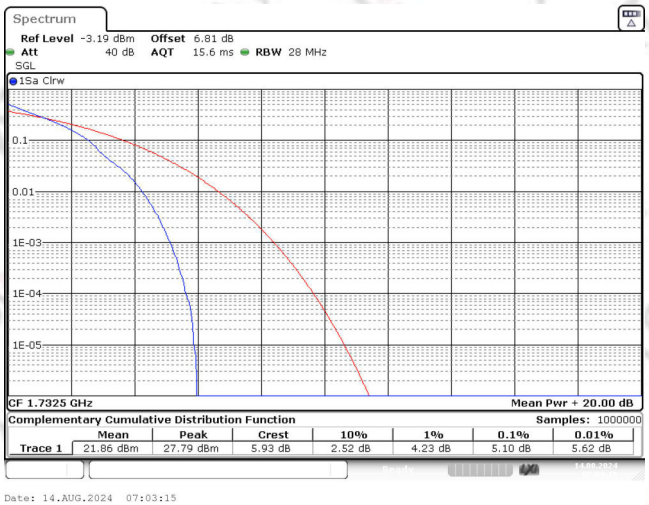

Band4 QAM16 BW=20MHz Channel=20175 RB Size=1 Position=#0

NVNT



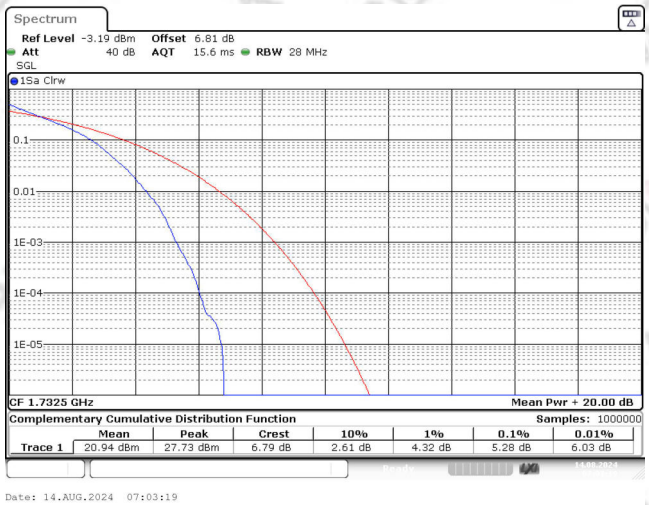

Band4 QAM16 BW=20MHz Channel=20175 RB Size=100 Position=#0

NVNT




Band4 QPSK BW=1.4MHz Channel=20175 RB Size=1 Position=#0

NVNT




Band4 QPSK BW=1.4MHz Channel=20175 RB Size=6 Position=#0

NVNT