



## Appendix A

### RF Test Data (Conducted Measurement)

Product Name: Transceiver Module

Test Model: RC-CC1101-SPI-SMT-915

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8° C   |
| Relative Humidity: | 52.5%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Taylor Hu |
| Supervised by:     | Li Huan   |





### A.1 -6dB Bandwidth

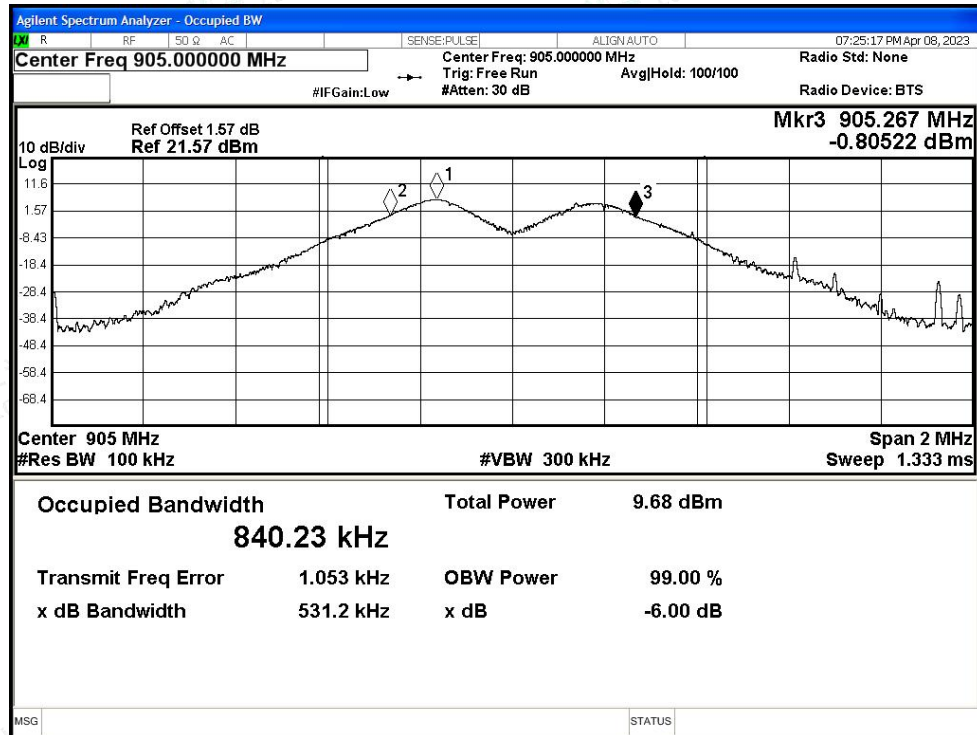
| Condition | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | 905             | Ant1    | 0.531                 | $\geq 0.5$                  | Pass    |
| NVNT      | 915             | Ant1    | 0.537                 | $\geq 0.5$                  | Pass    |
| NVNT      | 925             | Ant1    | 0.53                  | $\geq 0.5$                  | Pass    |



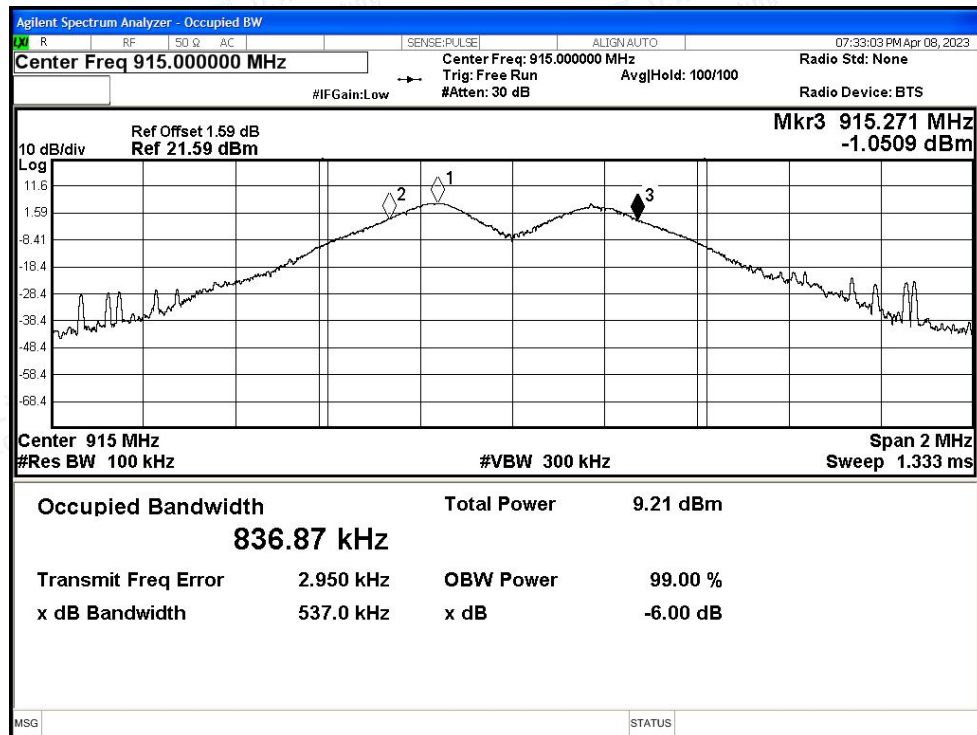


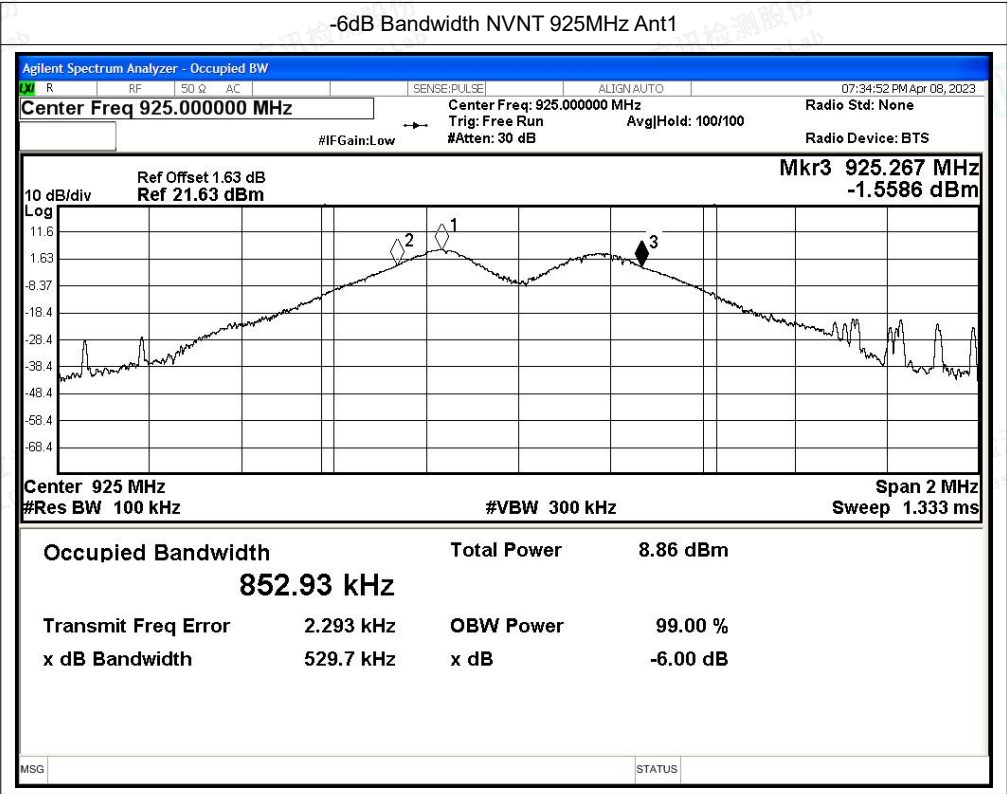
### Test Graphs

-6dB Bandwidth NVNT 905MHz Ant1



-6dB Bandwidth NVNT 915MHz Ant1







## A.2 Maximum Conducted Output Power

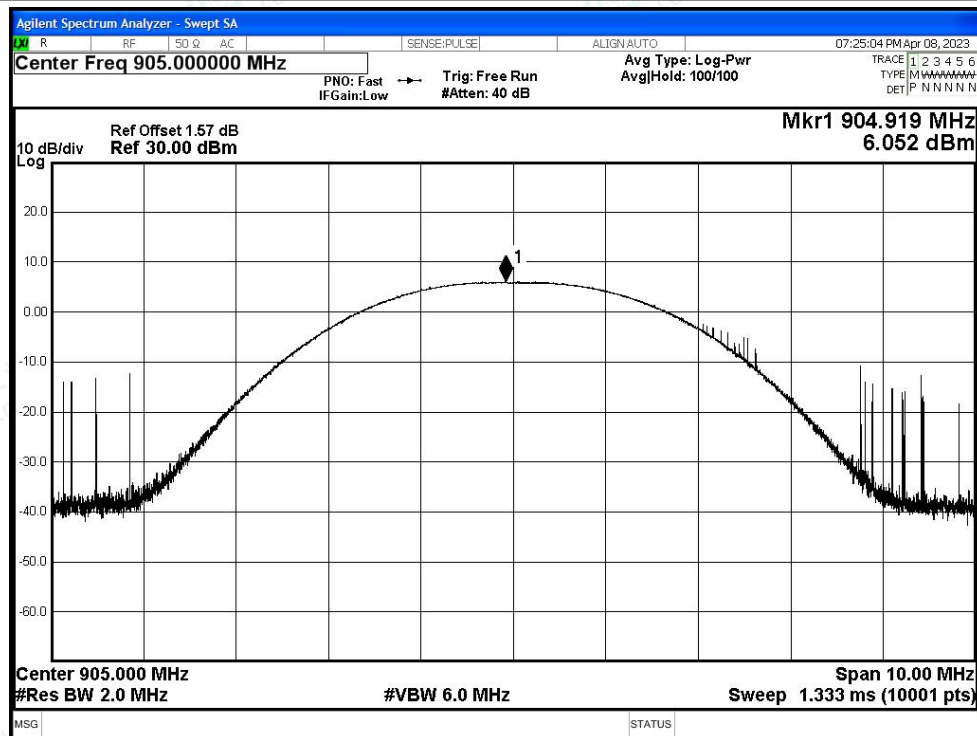
| Condition | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | 905             | Ant1    | 6.05                  | 30          | Pass    |
| NVNT      | 915             | Ant1    | 5.24                  | 30          | Pass    |
| NVNT      | 925             | Ant1    | 5.07                  | 30          | Pass    |



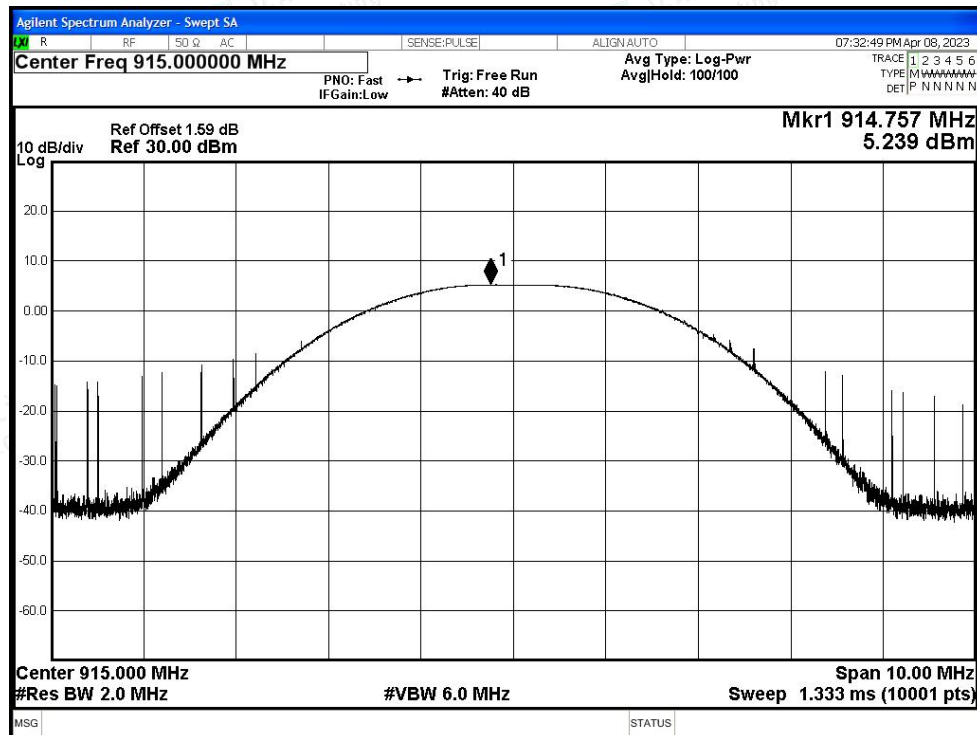


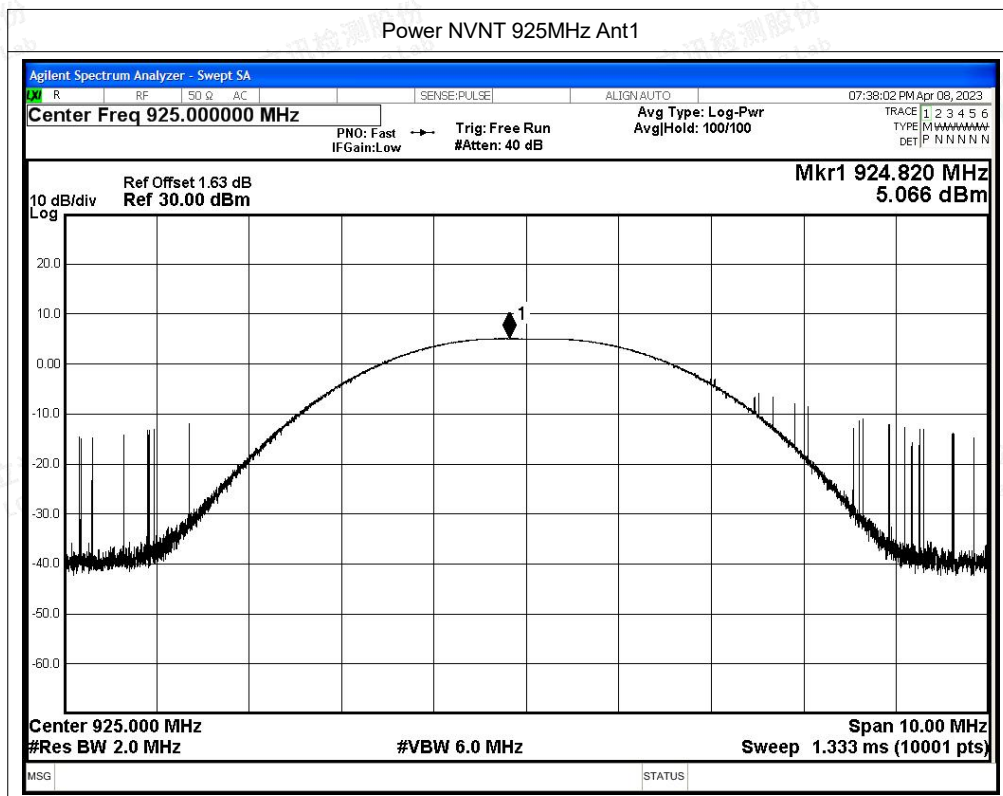
### Test Graphs

Power NVNT 905MHz Ant1



Power NVNT 915MHz Ant1







### A.3 Maximum Power Spectral Density Level

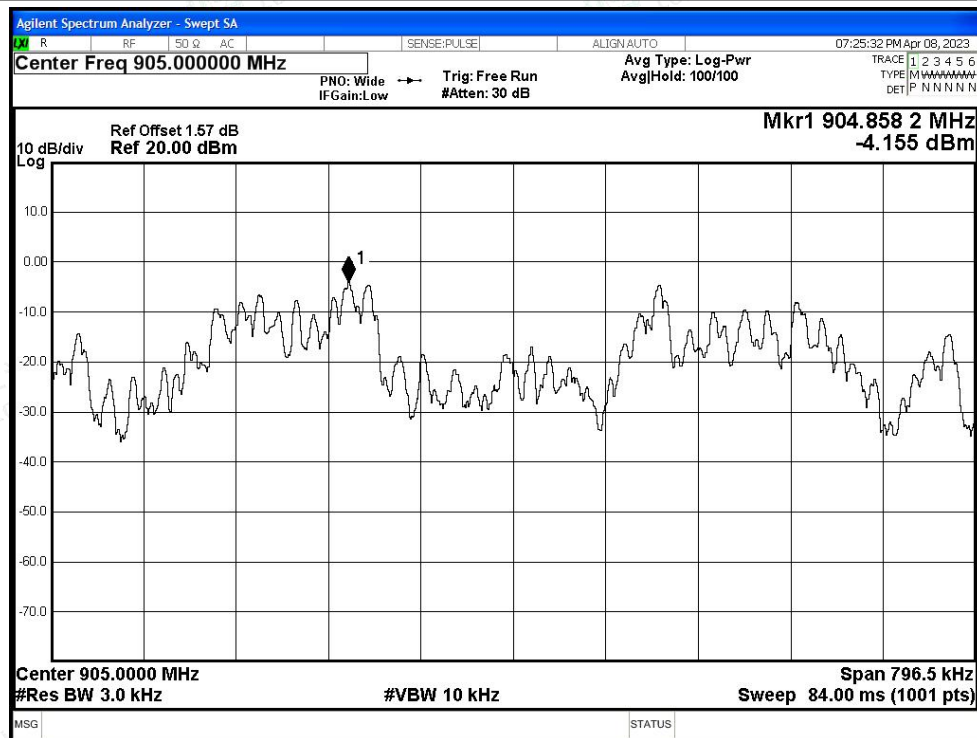
| Condition | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | 905             | Ant1    | -4.16                    | 8                | Pass    |
| NVNT      | 915             | Ant1    | -4.97                    | 8                | Pass    |
| NVNT      | 925             | Ant1    | -4.73                    | 8                | Pass    |



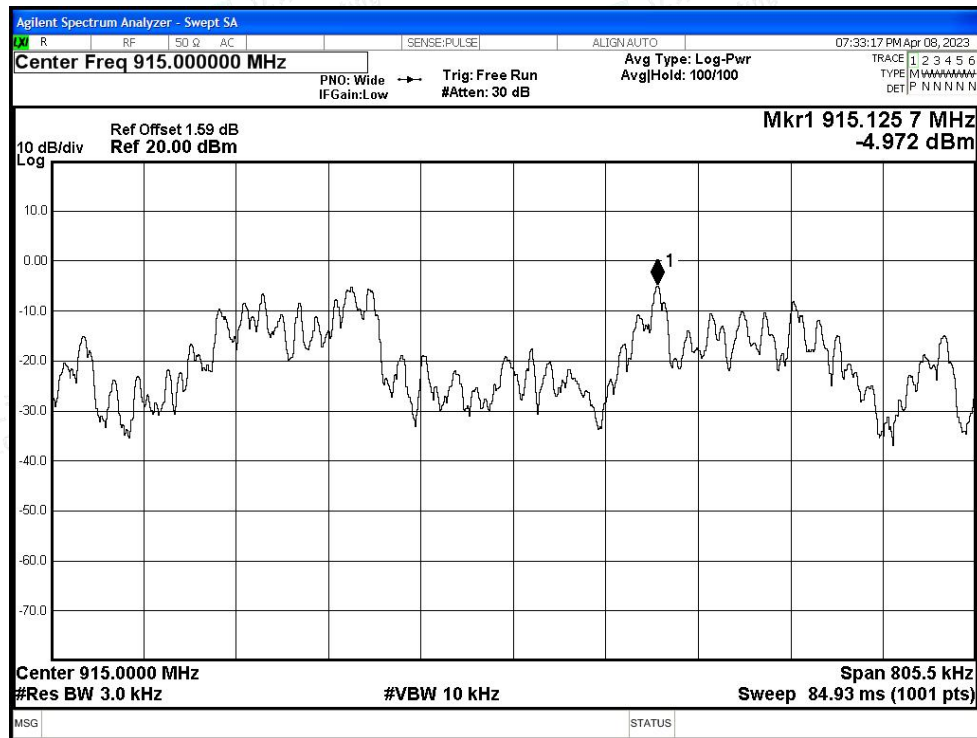


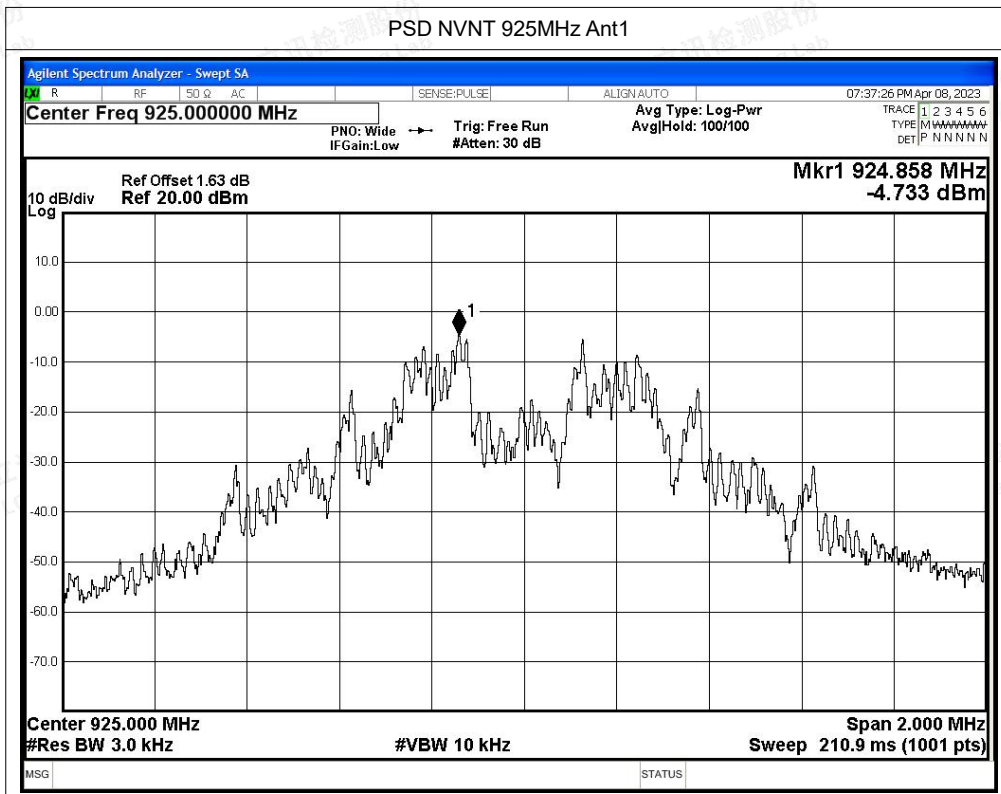
Test Graphs

PSD NVNT 905MHz Ant1



PSD NVNT 915MHz Ant1







### A.4 Band Edge

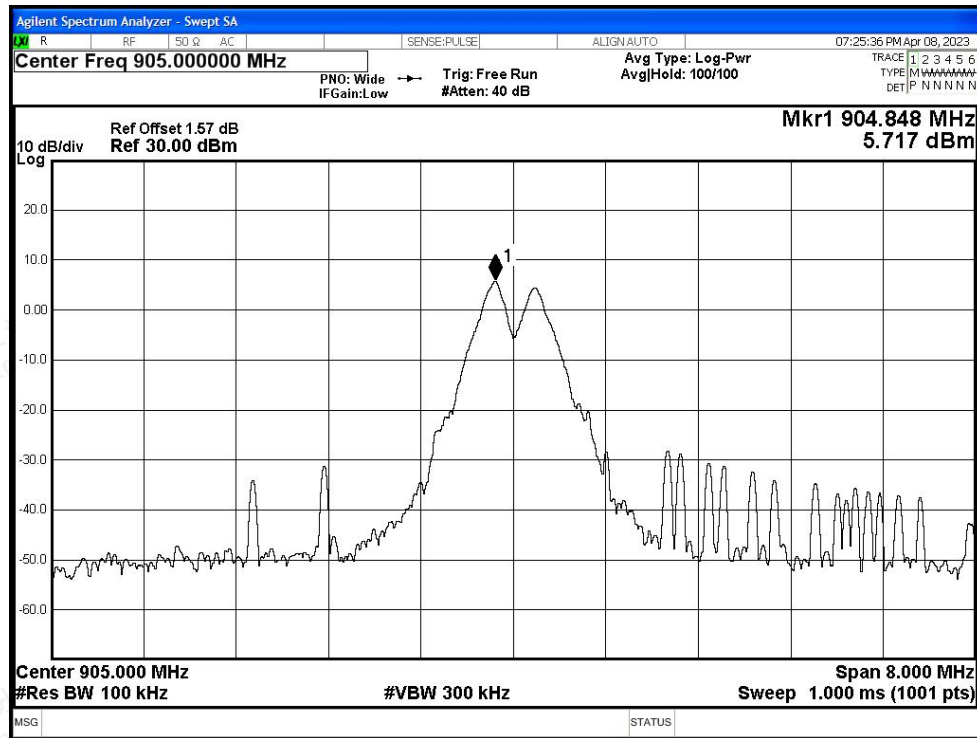
| Condition | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | 905             | Ant1    | -43.39          | -20         | Pass    |
| NVNT      | 925             | Ant1    | -44.97          | -20         | Pass    |



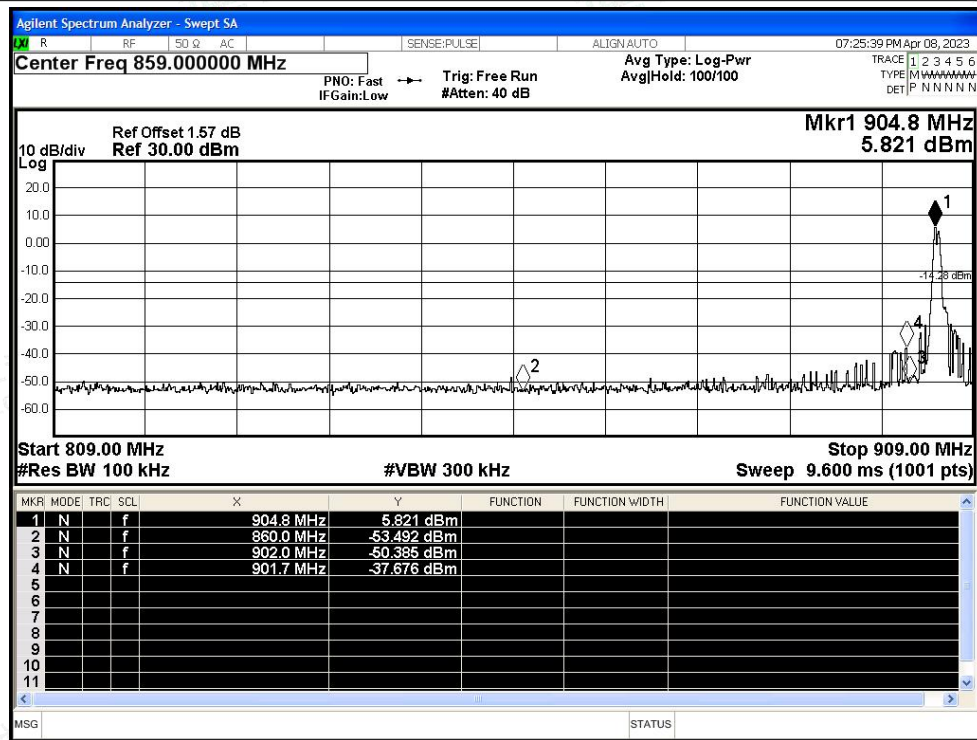


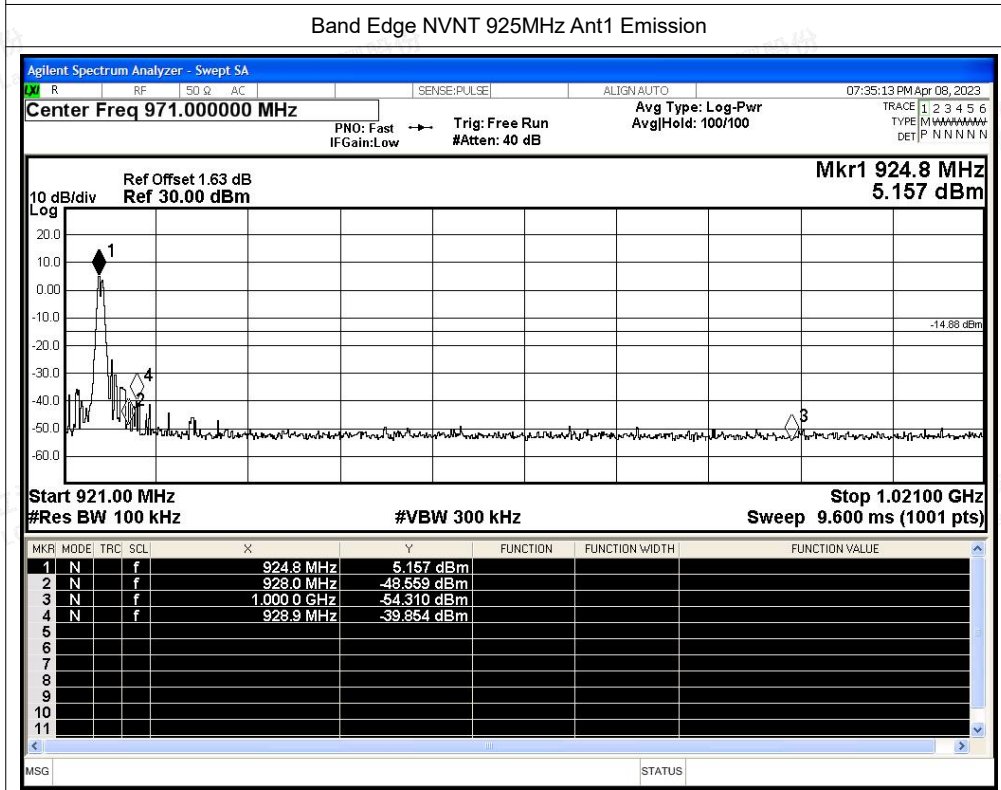
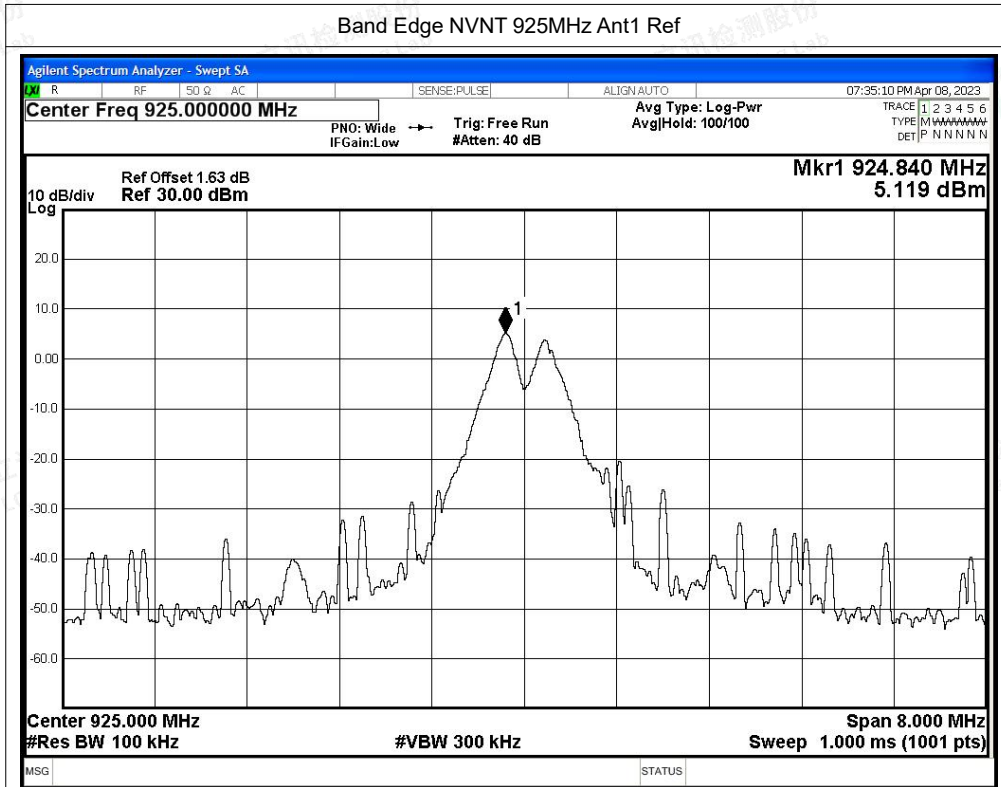
Test Graphs

Band Edge NVNT 905MHz Ant1 Ref



Band Edge NVNT 905MHz Ant1 Emission







### A.5 Conducted RF Spurious Emission

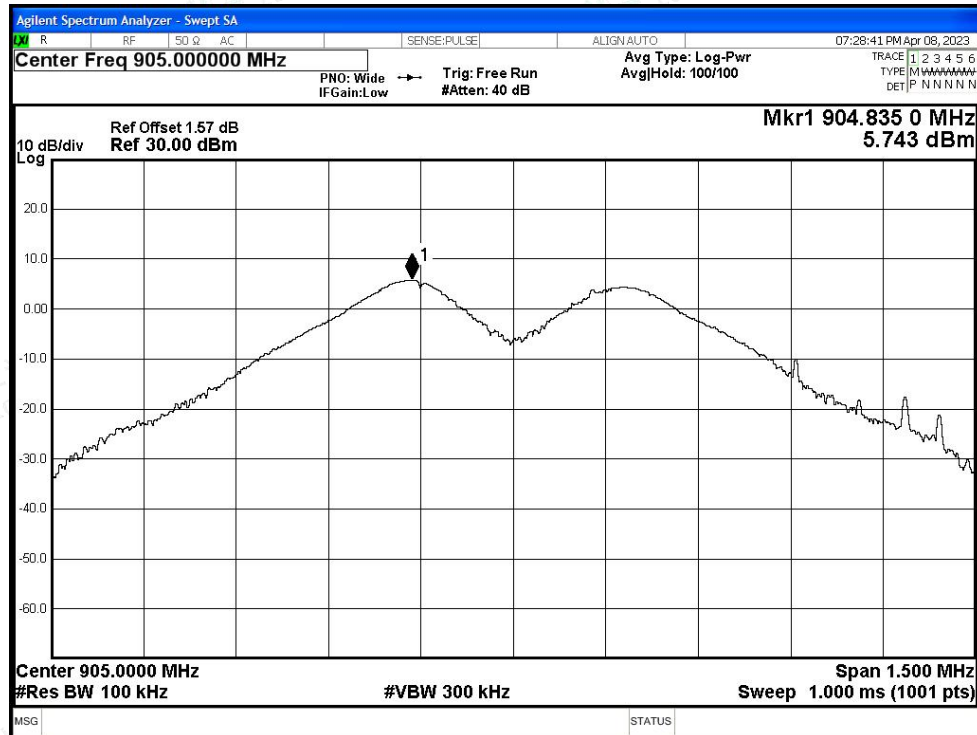
| Condition | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | 905             | Ant1    | -49.83          | -20         | Pass    |
| NVNT      | 915             | Ant1    | -49.90          | -20         | Pass    |
| NVNT      | 925             | Ant1    | -50.97          | -20         | Pass    |



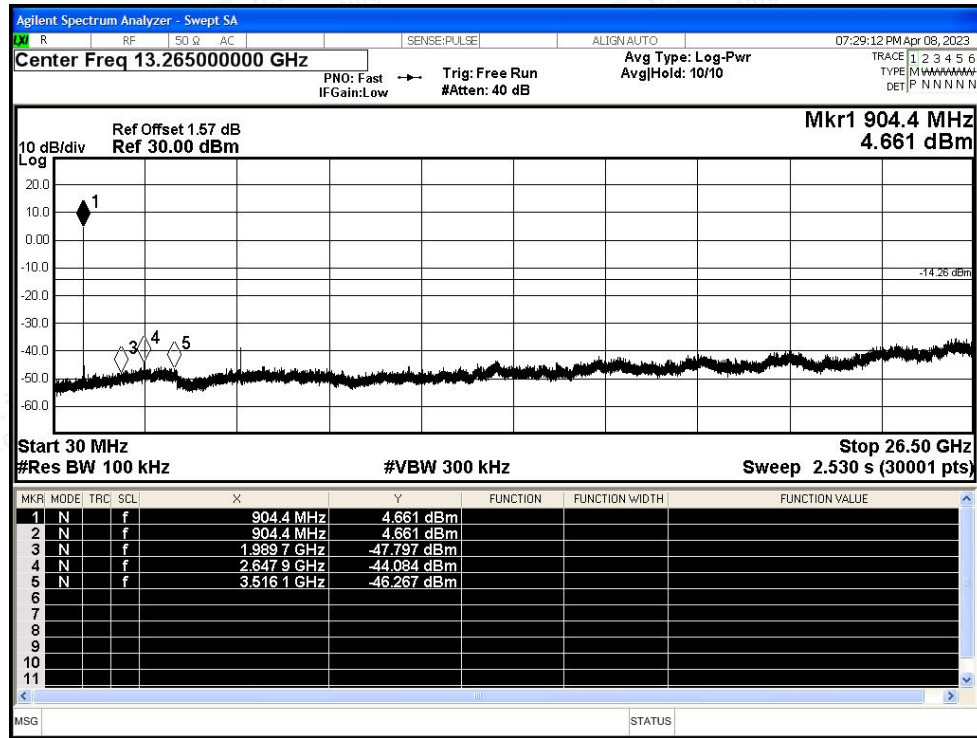


Test Graphs

Tx. Spurious NVNT 905MHz Ant1 Ref

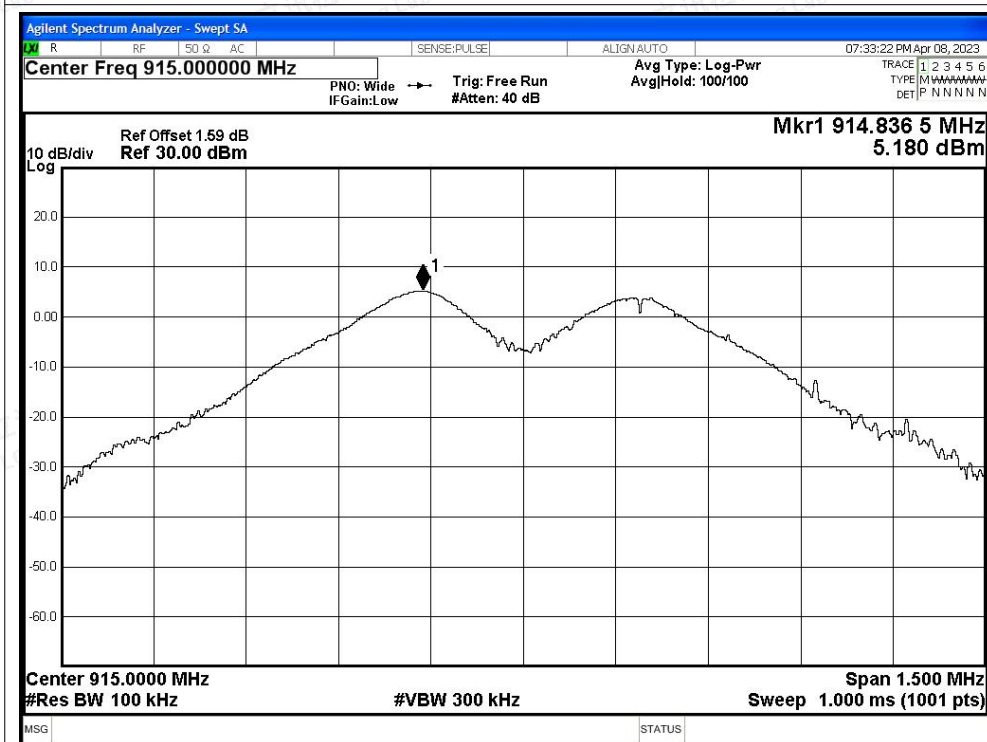


Tx. Spurious NVNT 905MHz Ant1 Emission

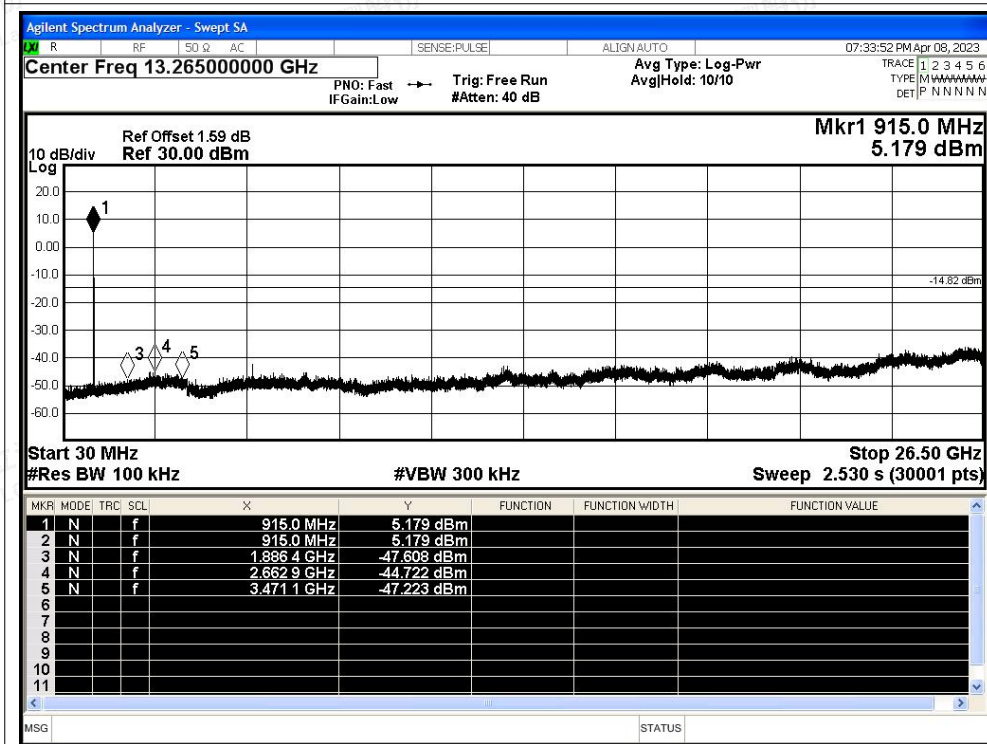




Tx. Spurious NVNT 915MHz Ant1 Ref

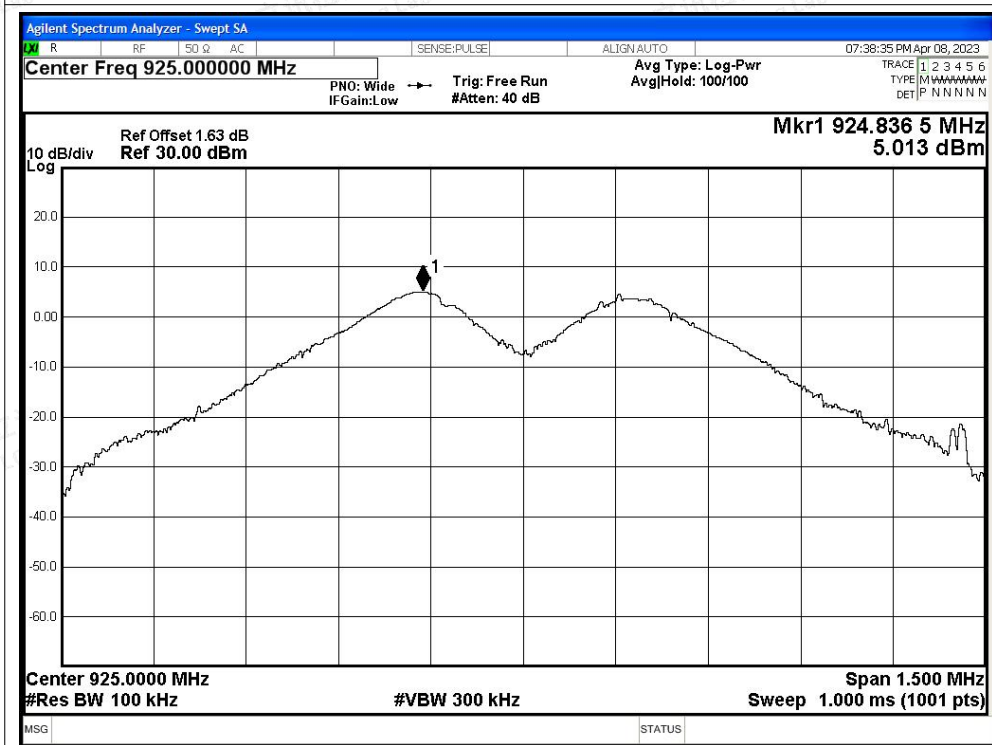


Tx. Spurious NVNT 915MHz Ant1 Emission

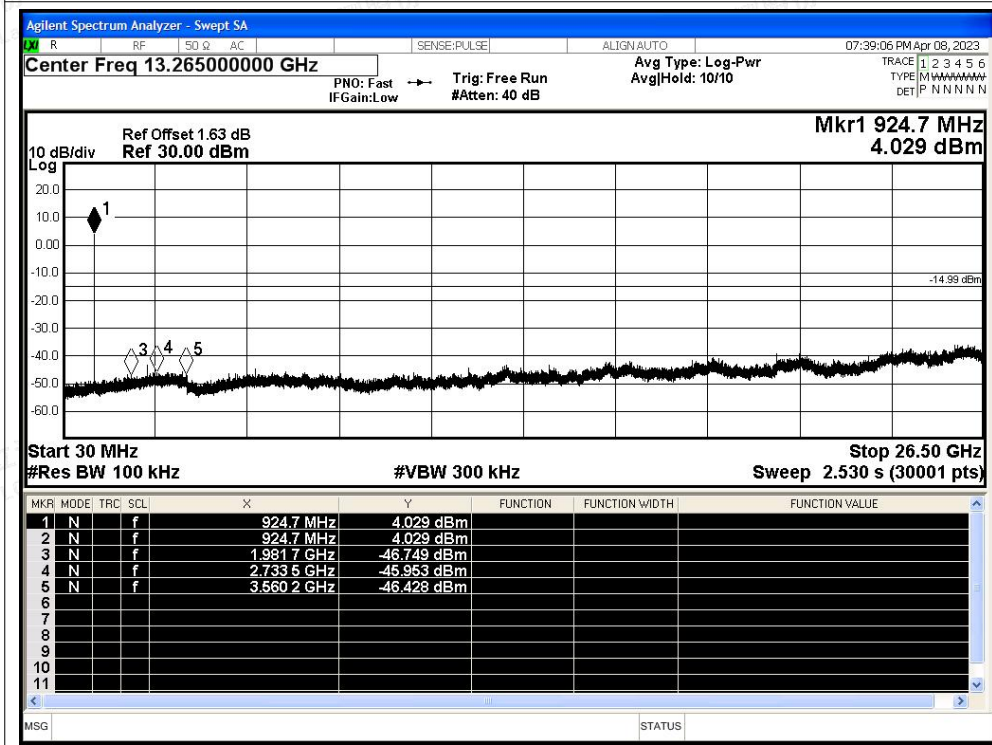




Tx. Spurious NVNT 925MHz Ant1 Ref



Tx. Spurious NVNT 925MHz Ant1 Emission





### A.7 Duty Cycle

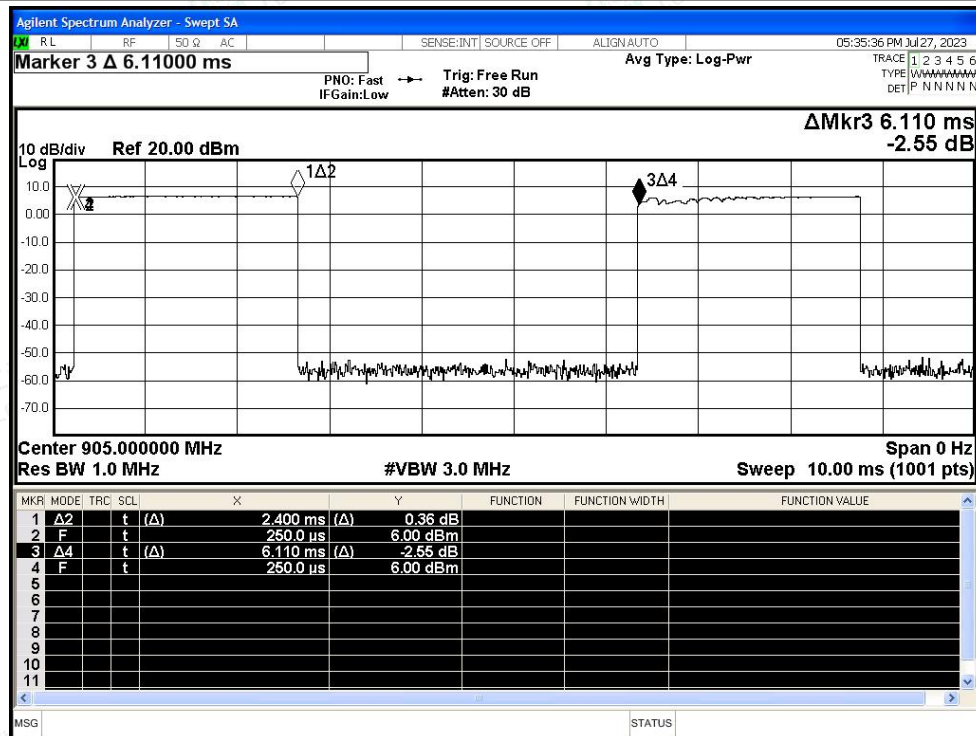
| Condition | Frequency (MHz) | Antenna | Duty Cycle (%) | 1/T (kHz) |
|-----------|-----------------|---------|----------------|-----------|
| NVNT      | 905             | Ant1    | 39.3           | 0.42      |
| NVNT      | 925             | Ant1    | 39.3           | 0.42      |



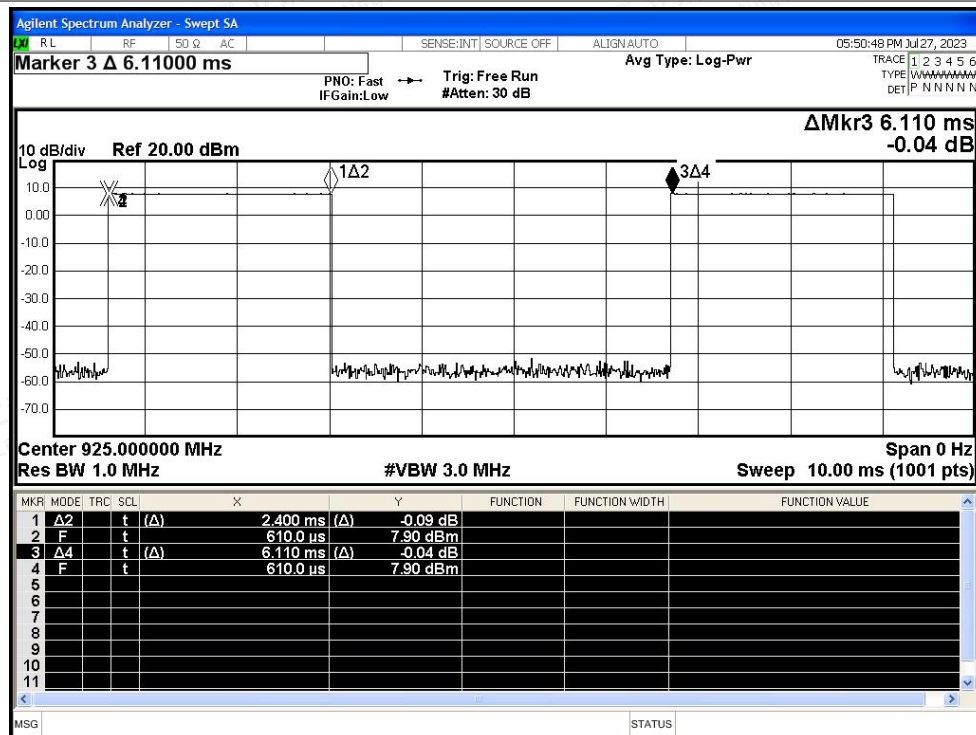


## Test Graphs

## Duty Cycle NVNT 905MHz Ant1



## Duty Cycle NVNT 925MHz Ant1





## A.8 Restrict Band

| Condition | Frequency<br>(MHz) | Antenna | Spur Freq<br>(MHz) | Power<br>(dBm) | Gain<br>(dBi) | E<br>(dBuV/m) | Detector | Limit<br>(dBuV/m) | Verdict |
|-----------|--------------------|---------|--------------------|----------------|---------------|---------------|----------|-------------------|---------|
| NVNT      | 905                | Ant1    | 902                | -70.777        | 2             | 26.45         | Peak     | 46                | Pass    |
| NVNT      | 905                | Ant1    | 608                | -71.136        | 2             | 26.09         | Peak     | 46                | Pass    |
| NVNT      | 905                | Ant1    | 614                | -71.707        | 2             | 25.52         | Peak     | 46                | Pass    |
| NVNT      | 905                | Ant1    | 896.05             | -65.923        | 2             | 31.31         | Peak     | 46                | Pass    |
| NVNT      | 925                | Ant1    | 928                | -70.103        | 2             | 27.13         | Peak     | 46                | Pass    |
| NVNT      | 925                | Ant1    | 960                | -70.776        | 2             | 26.45         | Peak     | 46                | Pass    |
| NVNT      | 925                | Ant1    | 1000               | -70.720        | 2             | 26.51         | Peak     | 54                | Pass    |
| NVNT      | 925                | Ant1    | 928.770            | -68.682        | 2             | 28.55         | Peak     | 46                | Pass    |

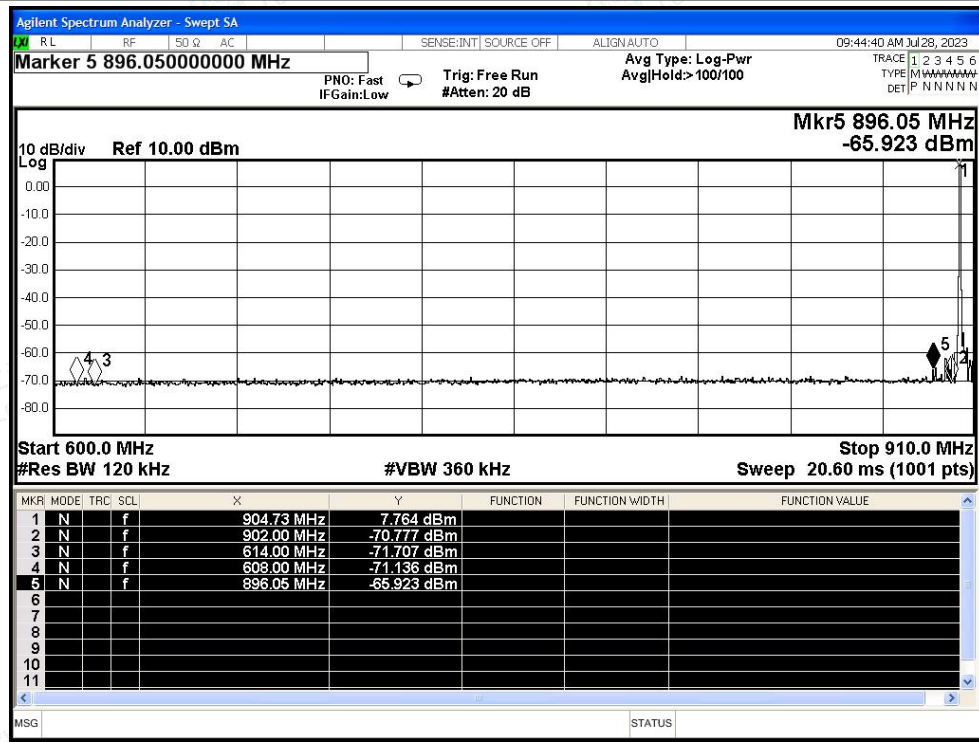


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Scan code to check authenticity



## Test Graphs

## Restrict Band NVNT 905MHz Ant1 Peak



## Restrict Band NVNT 925MHz Ant1 Peak

