



## Appendix D

### RF Test Data for B1WIFI(Conducted Measurement)

Product Name: Four axis aircraft

Trade Mark: N/A

Test Model: AE30

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 24.6° C     |
| Relative Humidity: | 52.4%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Emiya lin   |
| Supervised by:     | Simba Haung |



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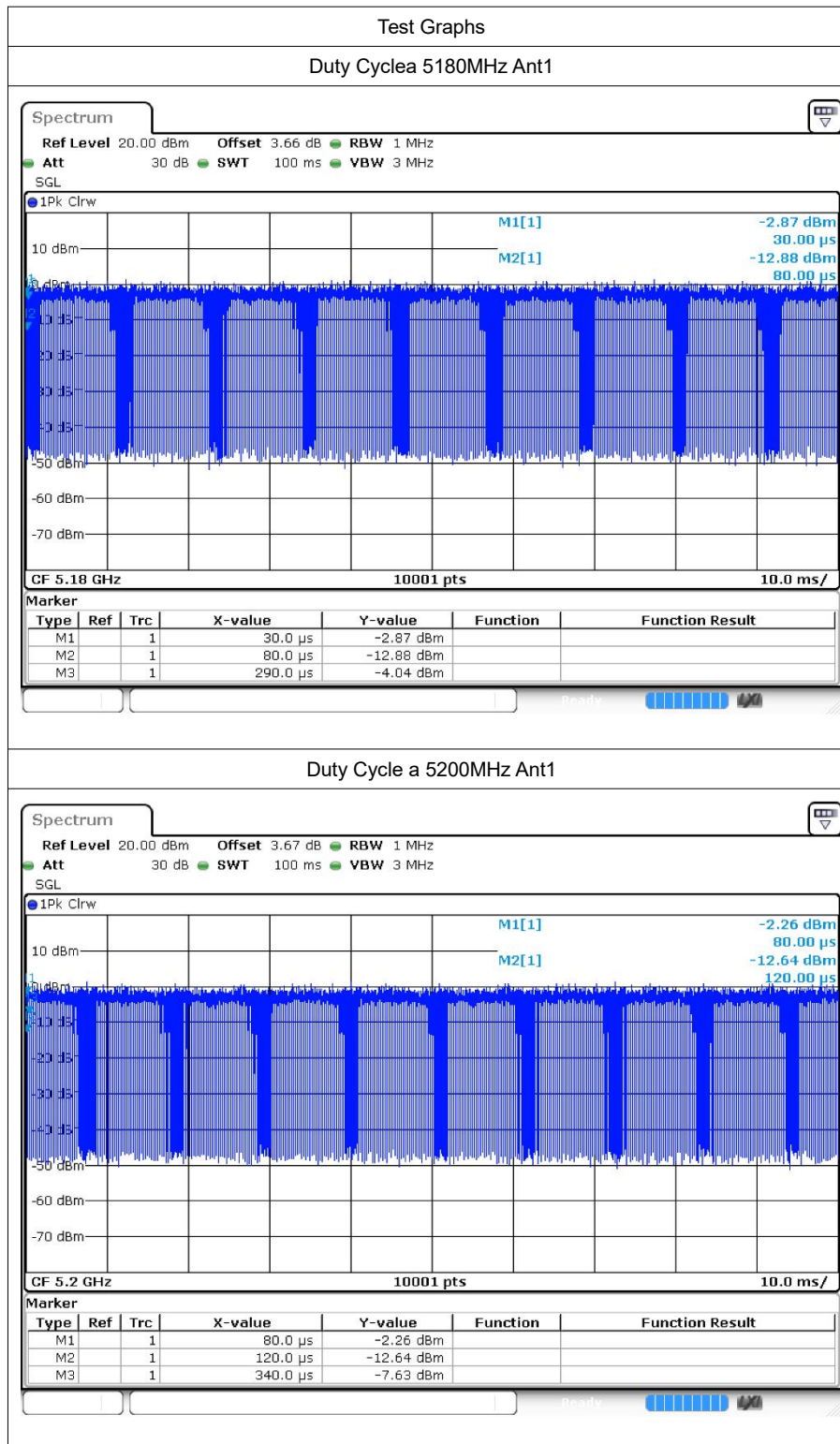


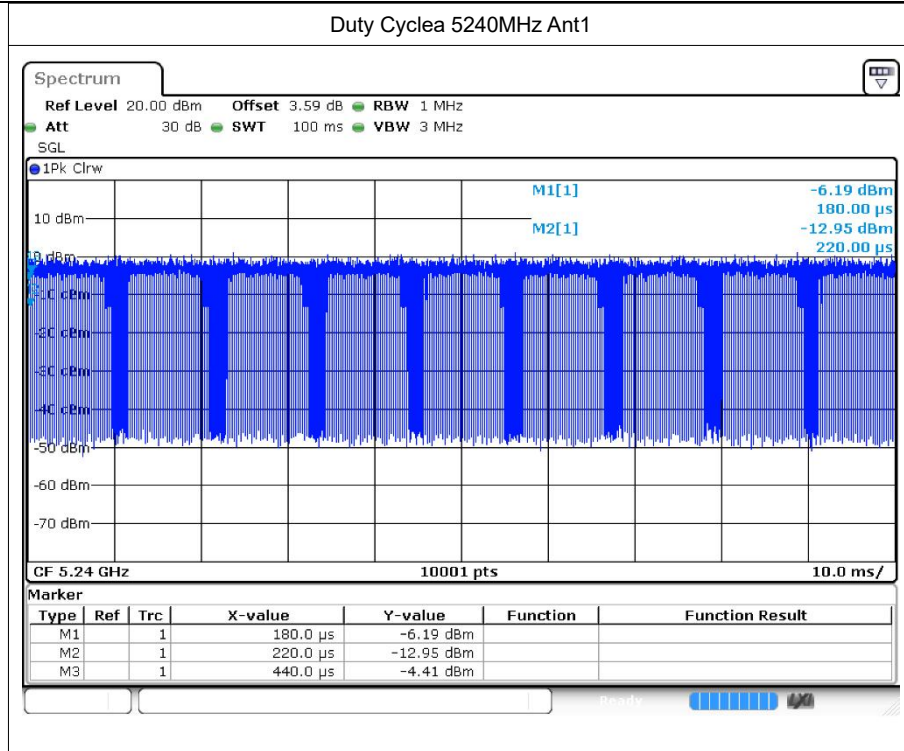
# 1 Duty Cycle

## 1.1 Test Result

| Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|------|-----------------|---------|----------------|------------------------|-----------|
| a    | 5180            | Ant1    | 86.95          | 0.61                   | 4.76      |
| a    | 5200            | Ant1    | 86.84          | 0.61                   | 4.55      |
| a    | 5240            | Ant1    | 86.98          | 0.61                   | 4.55      |

## 1.2 Test Graphs







## 2 Maximum Conducted Output Power

### 2.1 Test Result

| Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|------|-----------------|---------|-----------------------|-------------|---------|
| a    | 5180            | Ant1    | 7.54                  | 24          | Pass    |
| a    | 5200            | Ant1    | 7.68                  | 24          | Pass    |
| a    | 5240            | Ant1    | 7.29                  | 24          | Pass    |

Note:

The duty factor has been compensated into the result.

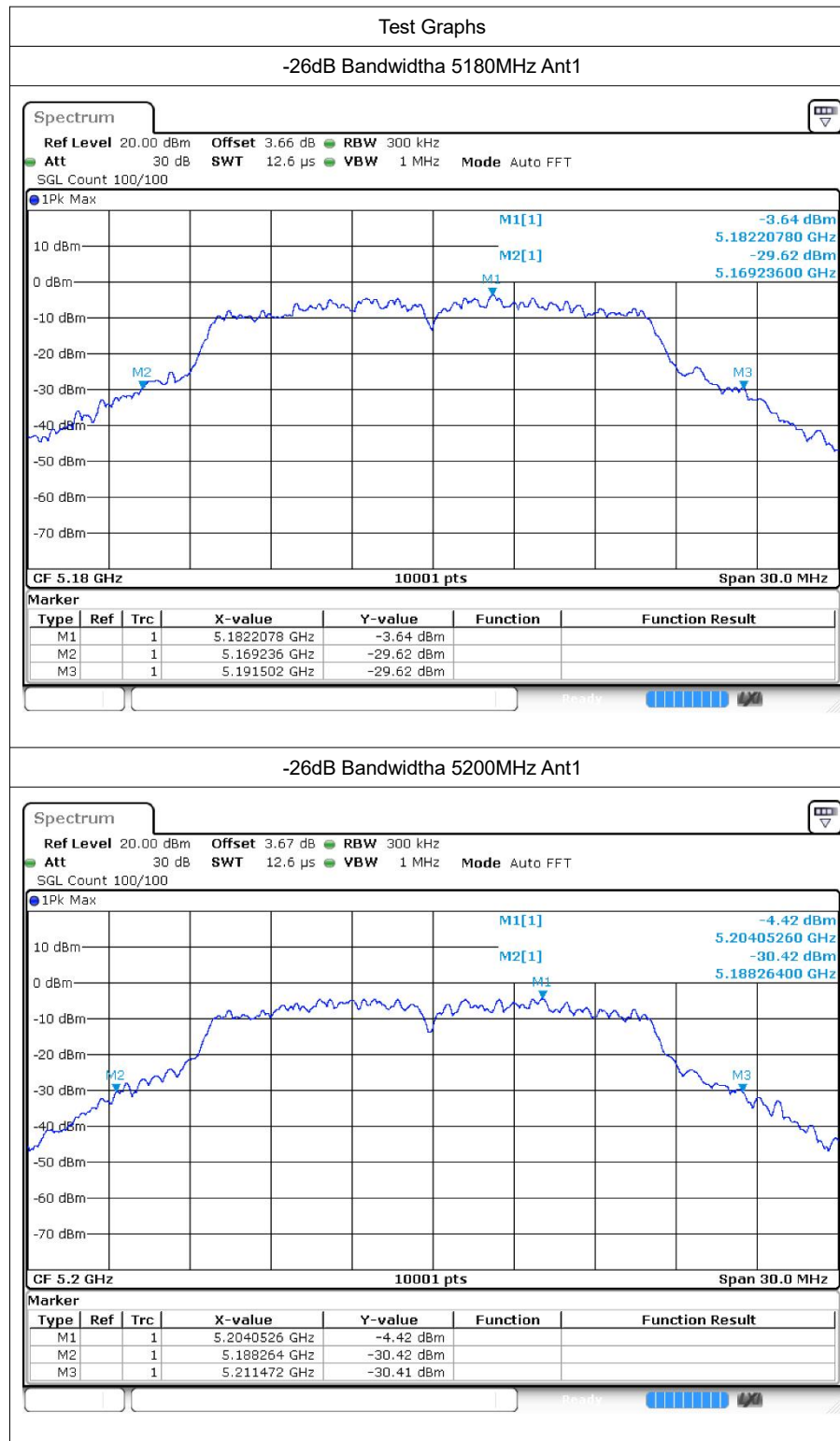


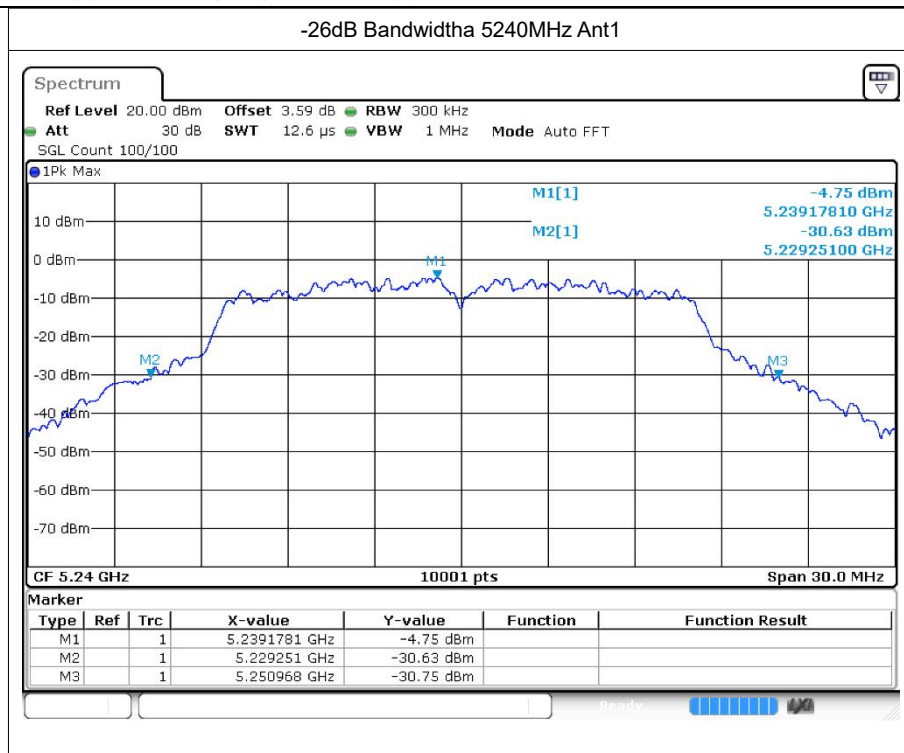
### 3 -26dB Bandwidth

#### 3.1 Test Result

| Mode | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) | Limit -26 dB Bandwidth (MHz) | Verdict |
|------|-----------------|---------|------------------------|------------------------------|---------|
| a    | 5180            | Ant1    | 22.266                 | 0.5                          | Pass    |
| a    | 5200            | Ant1    | 23.208                 | 0.5                          | Pass    |
| a    | 5240            | Ant1    | 21.717                 | 0.5                          | Pass    |

## 3.2 Test Graphs





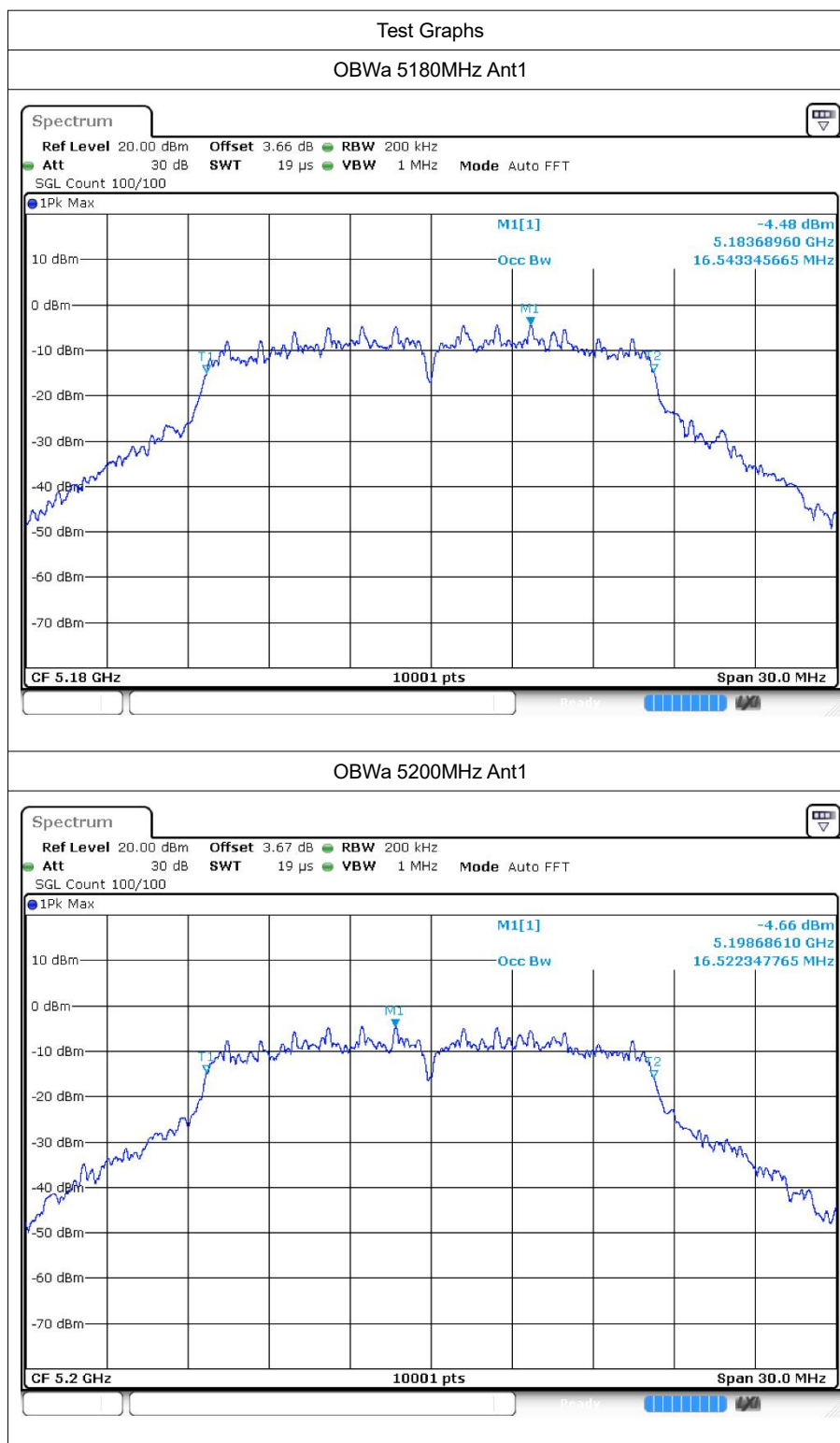


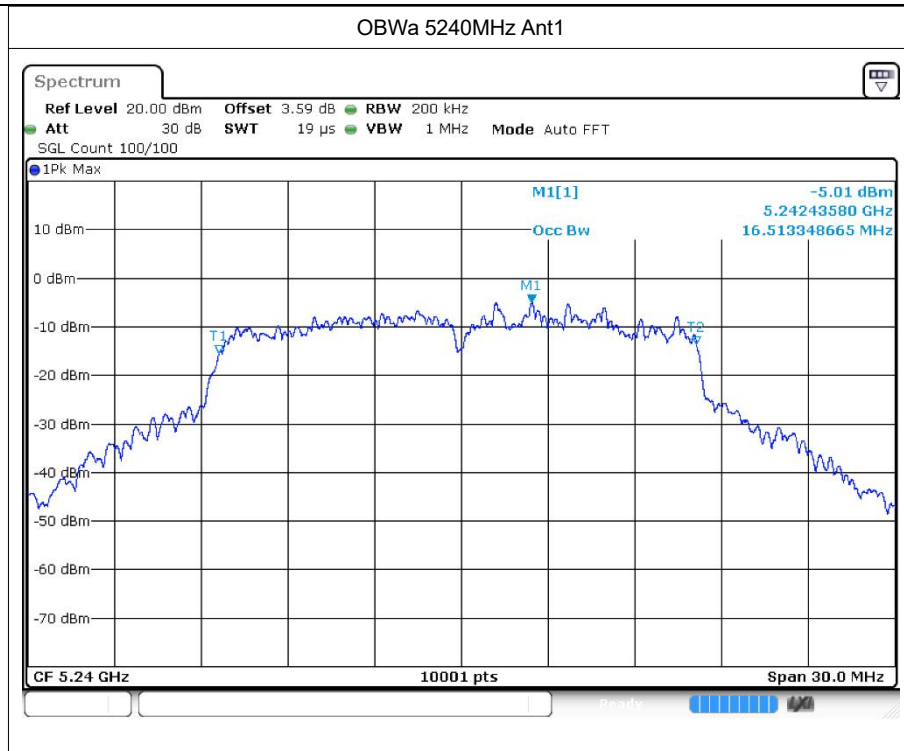
## 4 Occupied Channel Bandwidth

### 4.1 Test Result

| Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|------|-----------------|---------|---------------|
| a    | 5180            | Ant1    | 16.543        |
| a    | 5200            | Ant1    | 16.522        |
| a    | 5240            | Ant1    | 16.513        |

## 4.2 Test Graphs





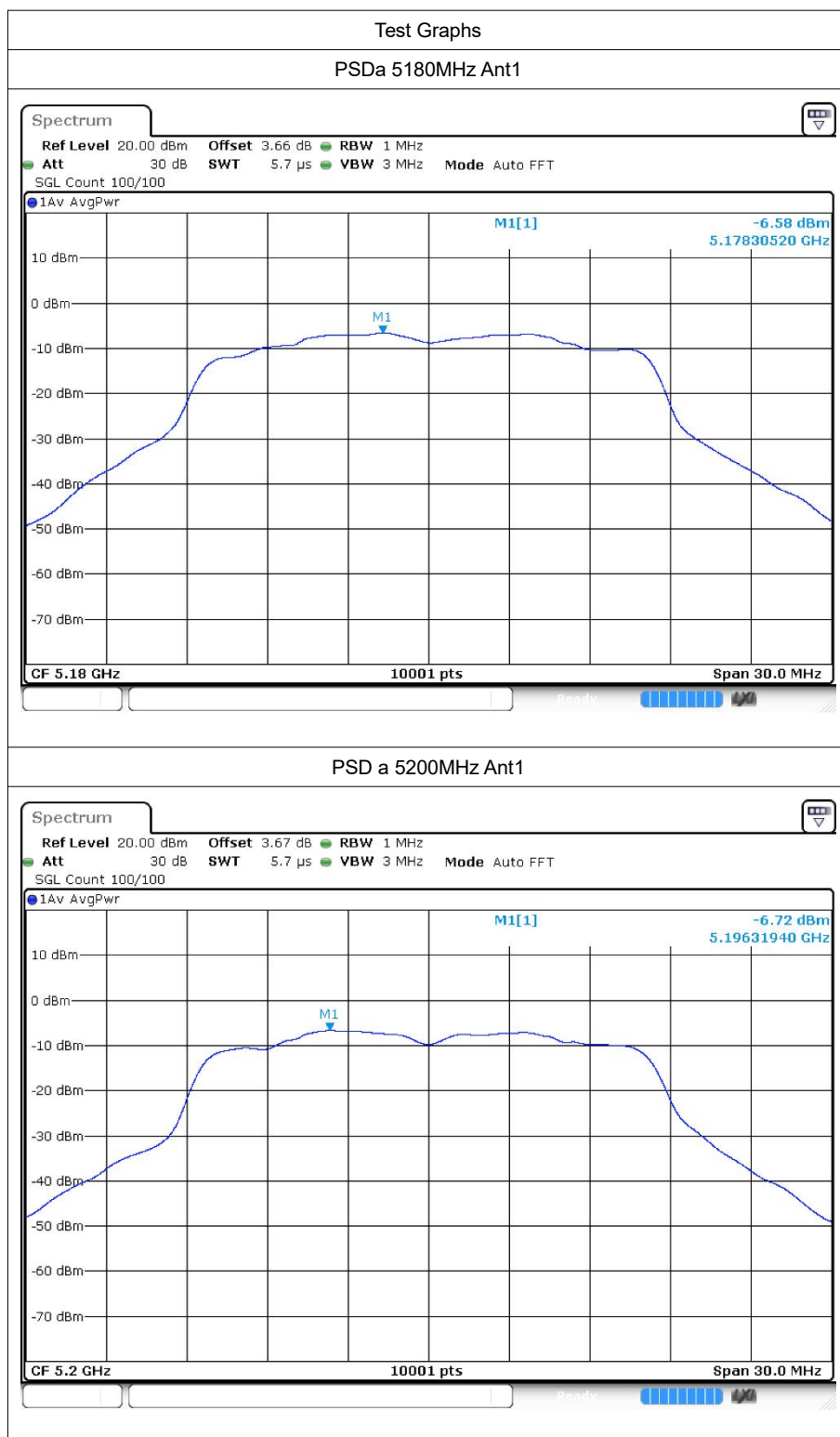


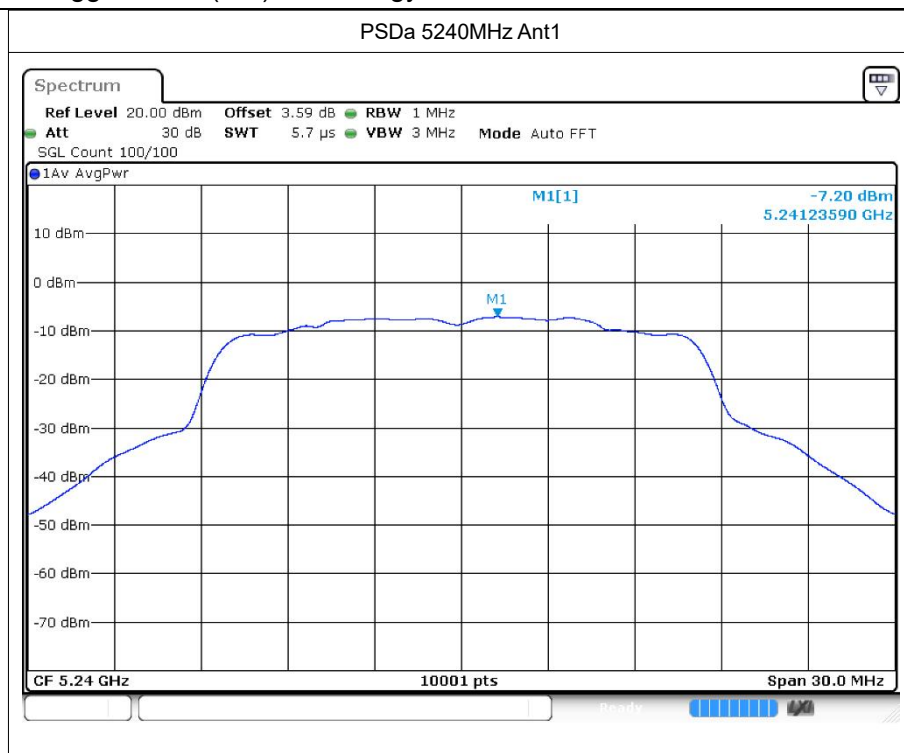
## 5 Maximum Power Spectral Density Level

### 5.1 Test Result

| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm) | Duty Factor (dB) | Total PSD (dBm) | Limit (dBm) | Verdict |
|------|-----------------|---------|---------------------|------------------|-----------------|-------------|---------|
| a    | 5180            | Ant1    | -6.58               | 0.61             | -5.97           | 11          | Pass    |
| a    | 5200            | Ant1    | -6.72               | 0.61             | -6.11           | 11          | Pass    |
| a    | 5240            | Ant1    | -7.2                | 0.61             | -6.59           | 11          | Pass    |

## 5.2 Test Graphs





## 6 Frequency Stability

### 6.1 Test Result

| Condition | Mode | Frequency (MHz) | Antenna | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|-----------|------|-----------------|---------|--------------------------|----------------------|-----------------|-------------|---------|
| 20C 102V  | a    | 5180            | Ant1    | 5179.92                  | -80000               | -15.44          | 25          | Pass    |
| 20C 120V  | a    | 5180            | Ant1    | 5179.94                  | -60000               | -11.58          | 25          | Pass    |
| 20C 138V  | a    | 5180            | Ant1    | 5179.94                  | -60000               | -11.58          | 25          | Pass    |
| -20C 120V | a    | 5180            | Ant1    | 5179.92                  | -80000               | -15.44          | 25          | Pass    |
| -10C 120V | a    | 5180            | Ant1    | 5179.94                  | -60000               | -11.58          | 25          | Pass    |
| 0C 120V   | a    | 5180            | Ant1    | 5179.92                  | -80000               | -15.44          | 25          | Pass    |
| 10C 120V  | a    | 5180            | Ant1    | 5179.94                  | -60000               | -11.58          | 25          | Pass    |
| 30C 120V  | a    | 5180            | Ant1    | 5179.96                  | -40000               | -7.72           | 25          | Pass    |
| 40C 120V  | a    | 5180            | Ant1    | 5179.92                  | -80000               | -15.44          | 25          | Pass    |
| 50C 120V  | a    | 5180            | Ant1    | 5179.92                  | -80000               | -15.44          | 25          | Pass    |
| 20C 102V  | a    | 5200            | Ant1    | 5199.92                  | -80000               | -15.38          | 25          | Pass    |
| 20C 120V  | a    | 5200            | Ant1    | 5199.96                  | -40000               | -7.69           | 25          | Pass    |
| 20C 138V  | a    | 5200            | Ant1    | 5199.98                  | -20000               | -3.85           | 25          | Pass    |
| -20C 120V | a    | 5200            | Ant1    | 5199.94                  | -60000               | -11.54          | 25          | Pass    |
| -10C 120V | a    | 5200            | Ant1    | 5199.96                  | -40000               | -7.69           | 25          | Pass    |
| 0C 120V   | a    | 5200            | Ant1    | 5199.92                  | -80000               | -15.38          | 25          | Pass    |
| 10C 120V  | a    | 5200            | Ant1    | 5199.94                  | -60000               | -11.54          | 25          | Pass    |
| 30C 120V  | a    | 5200            | Ant1    | 5199.96                  | -40000               | -7.69           | 25          | Pass    |
| 40C 120V  | a    | 5200            | Ant1    | 5199.92                  | -80000               | -15.38          | 25          | Pass    |
| 20C 102V  | a    | 5200            | Ant1    | 5199.92                  | -80000               | -15.38          | 25          | Pass    |
| 20C 102V  | a    | 5240            | Ant1    | 5239.94                  | -60000               | -11.45          | 25          | Pass    |
| 20C 120V  | a    | 5240            | Ant1    | 5239.96                  | -40000               | -7.63           | 25          | Pass    |
| 20C 138V  | a    | 5240            | Ant1    | 5239.94                  | -60000               | -11.45          | 25          | Pass    |
| -20C 120V | a    | 5240            | Ant1    | 5239.92                  | -80000               | -15.27          | 25          | Pass    |
| -10C 120V | a    | 5240            | Ant1    | 5239.94                  | -60000               | -11.45          | 25          | Pass    |
| 0C 120V   | a    | 5240            | Ant1    | 5239.94                  | -60000               | -11.45          | 25          | Pass    |
| 10C 120V  | a    | 5240            | Ant1    | 5239.92                  | -80000               | -15.27          | 25          | Pass    |
| 30C 120V  | a    | 5240            | Ant1    | 5239.94                  | -60000               | -11.45          | 25          | Pass    |
| 40C 120V  | a    | 5240            | Ant1    | 5239.96                  | -40000               | -7.63           | 25          | Pass    |
| 50C 120V  | a    | 5240            | Ant1    | 5239.94                  | -60000               | -11.45          | 25          | Pass    |

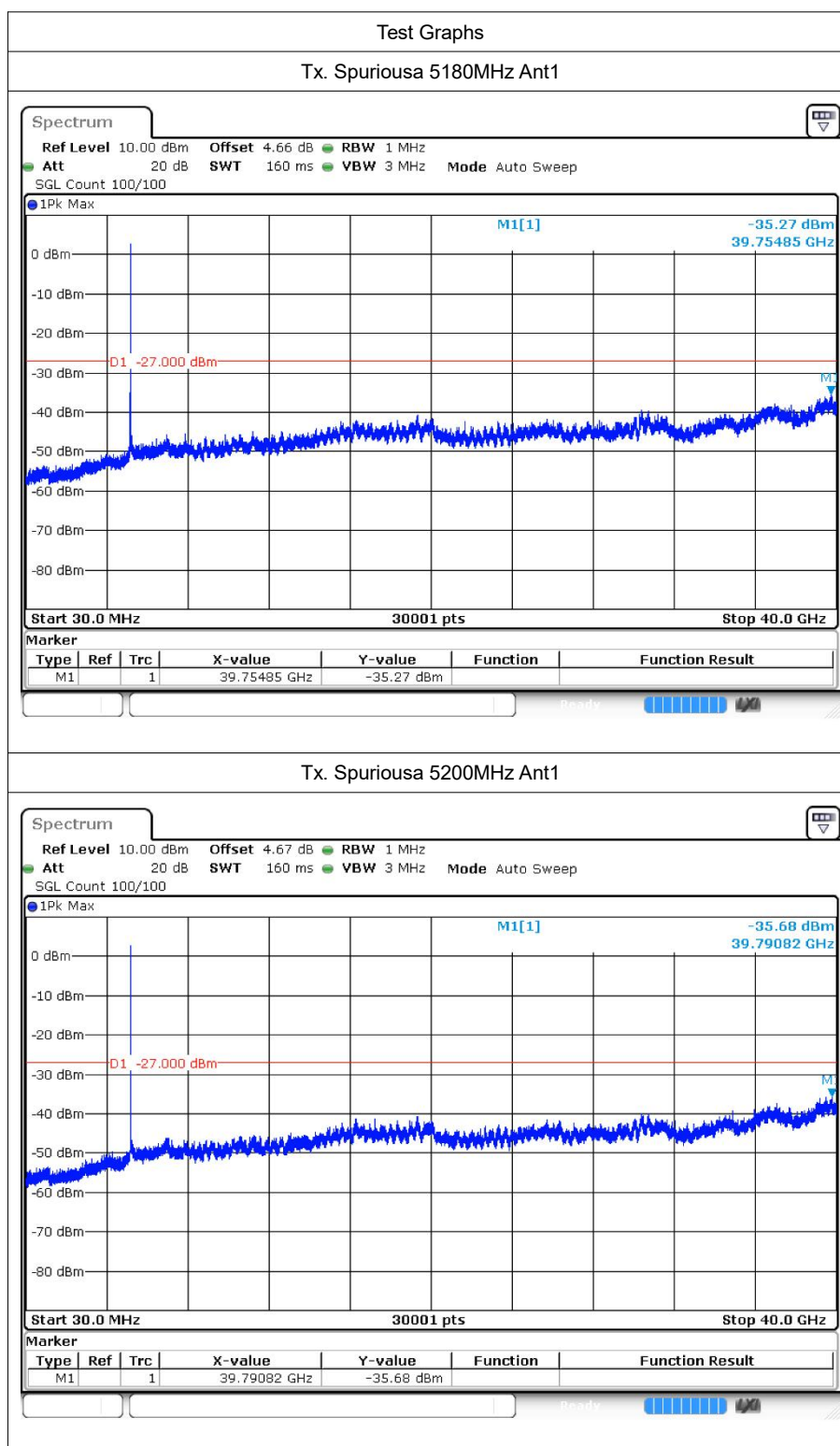


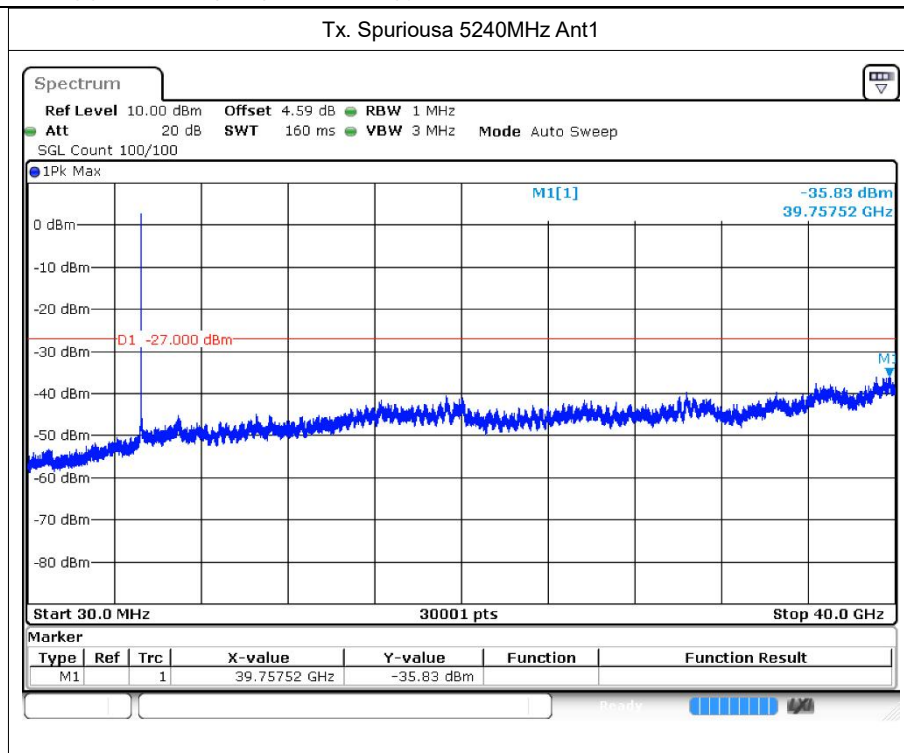
## 7 Conducted RF Spurious Emission

### 7.1 Test Result

| Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|------|-----------------|---------|-----------------|-------------|---------|
| a    | 5180            | Ant1    | -35.26          | -27         | Pass    |
| a    | 5200            | Ant1    | -35.67          | -27         | Pass    |
| a    | 5240            | Ant1    | -35.82          | -27         | Pass    |

## 7.2 Test Graphs





---The End---