

## 1. Effective (Isotropic) Radiated Power Output Data

### 1.1 PCS1900\_EIRP

#### 1.1.1 Test Result

| Band: PCS1900 |         |            |                 |                       |            |            |         |         |
|---------------|---------|------------|-----------------|-----------------------|------------|------------|---------|---------|
| ENV           | Mode    |            | Frequency (MHz) | Conducted Power (dBm) | Gain (dbi) | EIRP (dBm) |         | Verdict |
|               | Network | Subset     |                 |                       |            | Result     | Limit   |         |
| NTNV          | GSM     | GSM        | 1850.2          | 29.65                 | 0.00       | 29.65      | <=33.01 | Pass    |
|               |         |            | 1880            | 29.64                 | 0.00       | 29.64      | <=33.01 | Pass    |
|               |         |            | 1909.8          | 29.53                 | 0.00       | 29.53      | <=33.01 | Pass    |
|               | GPRS    | 1 TX Slot  | 1850.2          | 29.65                 | 0.00       | 29.65      | <=33.01 | Pass    |
|               |         | 2 TX Slots | 1850.2          | 29.61                 | 0.00       | 29.61      | <=33.01 | Pass    |
|               |         | 3 TX Slots | 1850.2          | 27.94                 | 0.00       | 27.94      | <=33.01 | Pass    |
|               |         | 4 TX Slots | 1850.2          | 26.82                 | 0.00       | 26.82      | <=33.01 | Pass    |
|               |         | 1 TX Slot  | 1880            | 29.66                 | 0.00       | 29.66      | <=33.01 | Pass    |
|               |         | 2 TX Slots | 1880            | 29.63                 | 0.00       | 29.63      | <=33.01 | Pass    |
|               |         | 3 TX Slots | 1880            | 27.72                 | 0.00       | 27.72      | <=33.01 | Pass    |
|               |         | 4 TX Slots | 1880            | 26.62                 | 0.00       | 26.62      | <=33.01 | Pass    |
|               |         | 1 TX Slot  | 1909.8          | 29.48                 | 0.00       | 29.48      | <=33.01 | Pass    |
|               |         | 2 TX Slots | 1909.8          | 29.45                 | 0.00       | 29.45      | <=33.01 | Pass    |
|               |         | 3 TX Slots | 1909.8          | 27.03                 | 0.00       | 27.03      | <=33.01 | Pass    |
|               |         | 4 TX Slots | 1909.8          | 25.96                 | 0.00       | 25.96      | <=33.01 | Pass    |

Note1: EIRP=Conducted Power+Antenna Gain

## 2. Frequency Stability

### 2.1 PCS1900

#### 2.1.1 Test Result

| Band: PCS1900 |                 |            |               |                  |                       |             |         |
|---------------|-----------------|------------|---------------|------------------|-----------------------|-------------|---------|
| Network       | Frequency (MHz) | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) |             | Verdict |
|               |                 |            |               |                  | Result                | Limit       |         |
| GSM           | 1850.2          | 20         | 3.27          | 2.292            | 0.0012                | -2.5 to 2.5 | Pass    |
|               |                 |            | 3.85          | -4.778           | -0.0026               | -2.5 to 2.5 | Pass    |
|               |                 |            | 4.43          | -2.712           | -0.0015               | -2.5 to 2.5 | Pass    |
|               |                 | -30        | 3.85          | -1.356           | -0.0007               | -2.5 to 2.5 | Pass    |
|               |                 | -20        | 3.85          | -1.711           | -0.0009               | -2.5 to 2.5 | Pass    |
|               |                 | -10        | 3.85          | -1.356           | -0.0007               | -2.5 to 2.5 | Pass    |
|               |                 | 0          | 3.85          | -3.390           | -0.0018               | -2.5 to 2.5 | Pass    |
|               |                 | 10         | 3.85          | -0.452           | -0.0002               | -2.5 to 2.5 | Pass    |
|               |                 | 30         | 3.85          | -2.809           | -0.0015               | -2.5 to 2.5 | Pass    |
|               |                 | 40         | 3.85          | 0.872            | 0.0005                | -2.5 to 2.5 | Pass    |
|               |                 | 50         | 3.85          | 1.130            | 0.0006                | -2.5 to 2.5 | Pass    |
|               | 1880            | 20         | 3.27          | -4.488           | -0.0024               | -2.5 to 2.5 | Pass    |
|               |                 |            | 3.85          | -3.874           | -0.0021               | -2.5 to 2.5 | Pass    |
|               |                 |            | 4.43          | -2.454           | -0.0013               | -2.5 to 2.5 | Pass    |
|               |                 | -30        | 3.85          | 0.387            | 0.0002                | -2.5 to 2.5 | Pass    |
|               |                 | -20        | 3.85          | -4.133           | -0.0022               | -2.5 to 2.5 | Pass    |
|               |                 | -10        | 3.85          | -2.421           | -0.0013               | -2.5 to 2.5 | Pass    |
|               |                 | 0          | 3.85          | -2.357           | -0.0013               | -2.5 to 2.5 | Pass    |

|      |        |     |      |        |         |             |      |
|------|--------|-----|------|--------|---------|-------------|------|
|      |        | 10  | 3.85 | -4.811 | -0.0026 | -2.5 to 2.5 | Pass |
|      |        | 30  | 3.85 | -2.777 | -0.0015 | -2.5 to 2.5 | Pass |
|      |        | 40  | 3.85 | -0.161 | -0.0001 | -2.5 to 2.5 | Pass |
|      |        | 50  | 3.85 | -4.552 | -0.0024 | -2.5 to 2.5 | Pass |
|      | 1909.8 | 20  | 3.27 | -6.296 | -0.0033 | -2.5 to 2.5 | Pass |
|      |        |     | 3.85 | -5.682 | -0.0030 | -2.5 to 2.5 | Pass |
|      |        |     | 4.43 | -5.618 | -0.0029 | -2.5 to 2.5 | Pass |
|      |        | -30 | 3.85 | -4.133 | -0.0022 | -2.5 to 2.5 | Pass |
|      |        | -20 | 3.85 | -5.779 | -0.0030 | -2.5 to 2.5 | Pass |
|      |        | -10 | 3.85 | -5.779 | -0.0030 | -2.5 to 2.5 | Pass |
|      |        | 0   | 3.85 | -4.423 | -0.0023 | -2.5 to 2.5 | Pass |
|      |        | 10  | 3.85 | -2.099 | -0.0011 | -2.5 to 2.5 | Pass |
|      |        | 30  | 3.85 | -3.745 | -0.0020 | -2.5 to 2.5 | Pass |
|      |        | 40  | 3.85 | -1.776 | -0.0009 | -2.5 to 2.5 | Pass |
|      |        | 50  | 3.85 | 0.807  | 0.0004  | -2.5 to 2.5 | Pass |
| GPRS | 1850.2 | 20  | 3.27 | -0.097 | -0.0001 | -2.5 to 2.5 | Pass |
|      |        |     | 3.85 | -0.807 | -0.0004 | -2.5 to 2.5 | Pass |
|      |        |     | 4.43 | -4.778 | -0.0026 | -2.5 to 2.5 | Pass |
|      |        | -30 | 3.85 | -2.518 | -0.0014 | -2.5 to 2.5 | Pass |
|      |        | -20 | 3.85 | -6.651 | -0.0036 | -2.5 to 2.5 | Pass |
|      |        | -10 | 3.85 | -5.392 | -0.0029 | -2.5 to 2.5 | Pass |
|      |        | 0   | 3.85 | -4.197 | -0.0023 | -2.5 to 2.5 | Pass |
|      |        | 10  | 3.85 | -0.904 | -0.0005 | -2.5 to 2.5 | Pass |
|      |        | 30  | 3.85 | -3.358 | -0.0018 | -2.5 to 2.5 | Pass |
|      |        | 40  | 3.85 | -4.326 | -0.0023 | -2.5 to 2.5 | Pass |
|      |        | 50  | 3.85 | -5.166 | -0.0028 | -2.5 to 2.5 | Pass |
|      | 1880   | 20  | 3.27 | -5.456 | -0.0029 | -2.5 to 2.5 | Pass |
|      |        |     | 3.85 | -3.035 | -0.0016 | -2.5 to 2.5 | Pass |
|      |        |     | 4.43 | -6.199 | -0.0033 | -2.5 to 2.5 | Pass |
|      |        | -30 | 3.85 | -2.680 | -0.0014 | -2.5 to 2.5 | Pass |
|      |        | -20 | 3.85 | -1.485 | -0.0008 | -2.5 to 2.5 | Pass |
|      |        | -10 | 3.85 | -1.291 | -0.0007 | -2.5 to 2.5 | Pass |
|      |        | 0   | 3.85 | 1.324  | 0.0007  | -2.5 to 2.5 | Pass |
|      |        | 10  | 3.85 | -3.003 | -0.0016 | -2.5 to 2.5 | Pass |
|      |        | 30  | 3.85 | -4.359 | -0.0023 | -2.5 to 2.5 | Pass |
|      |        | 40  | 3.85 | -4.940 | -0.0026 | -2.5 to 2.5 | Pass |
|      |        | 50  | 3.85 | -1.937 | -0.0010 | -2.5 to 2.5 | Pass |
|      | 1909.8 | 20  | 3.27 | -7.555 | -0.0040 | -2.5 to 2.5 | Pass |
|      |        |     | 3.85 | -7.458 | -0.0039 | -2.5 to 2.5 | Pass |
|      |        |     | 4.43 | -4.681 | -0.0025 | -2.5 to 2.5 | Pass |
|      |        | -30 | 3.85 | 0.743  | 0.0004  | -2.5 to 2.5 | Pass |
|      |        | -20 | 3.85 | -3.229 | -0.0017 | -2.5 to 2.5 | Pass |
|      |        | -10 | 3.85 | -6.425 | -0.0034 | -2.5 to 2.5 | Pass |
|      |        | 0   | 3.85 | -4.746 | -0.0025 | -2.5 to 2.5 | Pass |
|      |        | 10  | 3.85 | -8.685 | -0.0045 | -2.5 to 2.5 | Pass |
|      |        | 30  | 3.85 | -4.843 | -0.0025 | -2.5 to 2.5 | Pass |
|      |        | 40  | 3.85 | -7.942 | -0.0042 | -2.5 to 2.5 | Pass |
|      |        | 50  | 3.85 | -3.132 | -0.0016 | -2.5 to 2.5 | Pass |

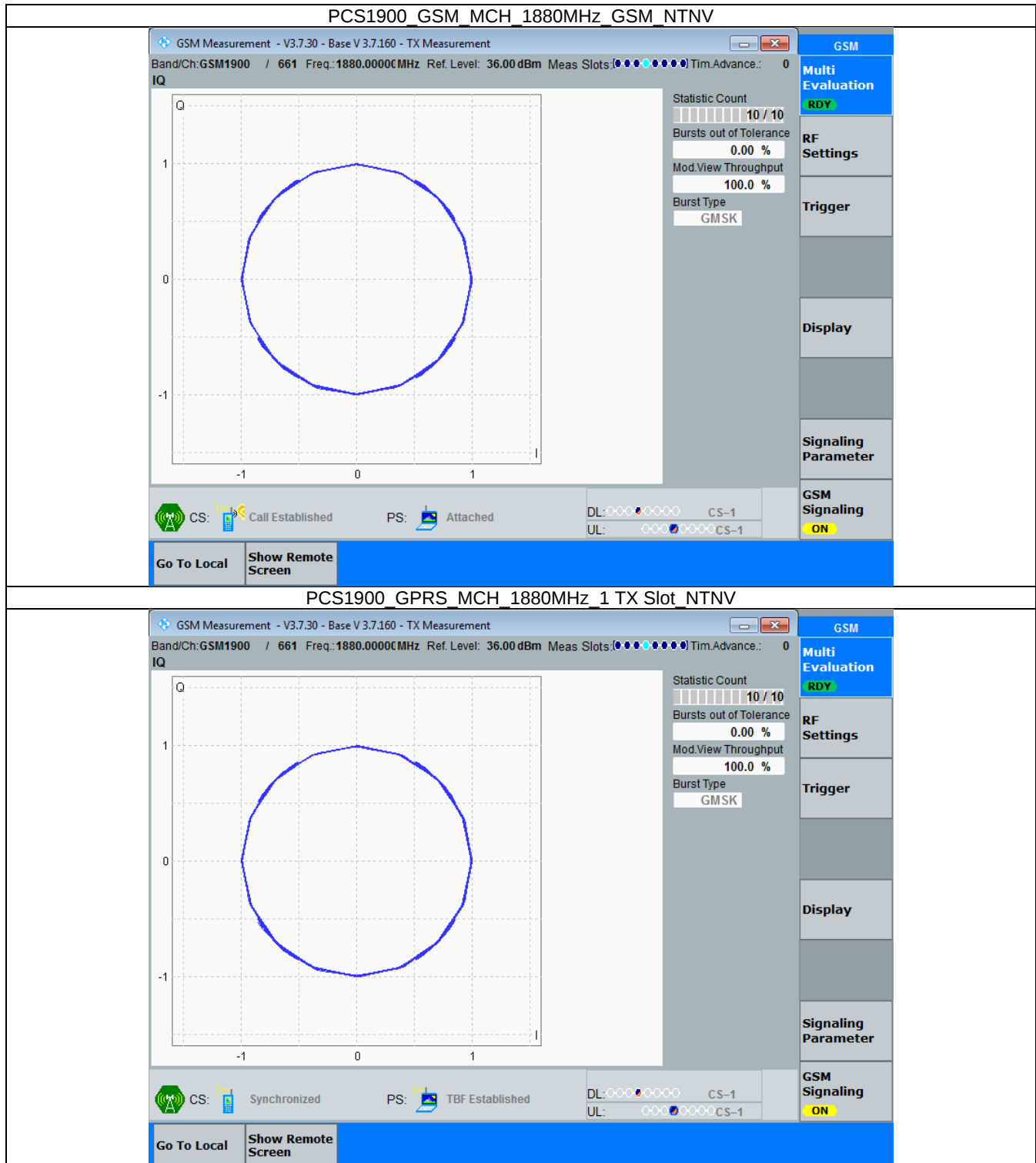
### 3. Modulation Characteristics

#### 3.1 PCS1900

##### 3.1.1 Test Result

| Band: PCS1900 |         |           |                    |                            |       |
|---------------|---------|-----------|--------------------|----------------------------|-------|
| ENV           | Mode    |           | Frequency<br>(MHz) | Modulation Characteristics |       |
|               | Network | Subset    |                    | Result                     | Limit |
| NTNV          | GSM     | GSM       | 1880               | Refer To Test Graph        | Pass  |
|               | GPRS    | 1 TX Slot | 1880               | Refer To Test Graph        | Pass  |

## 3.1.2 Test Graph



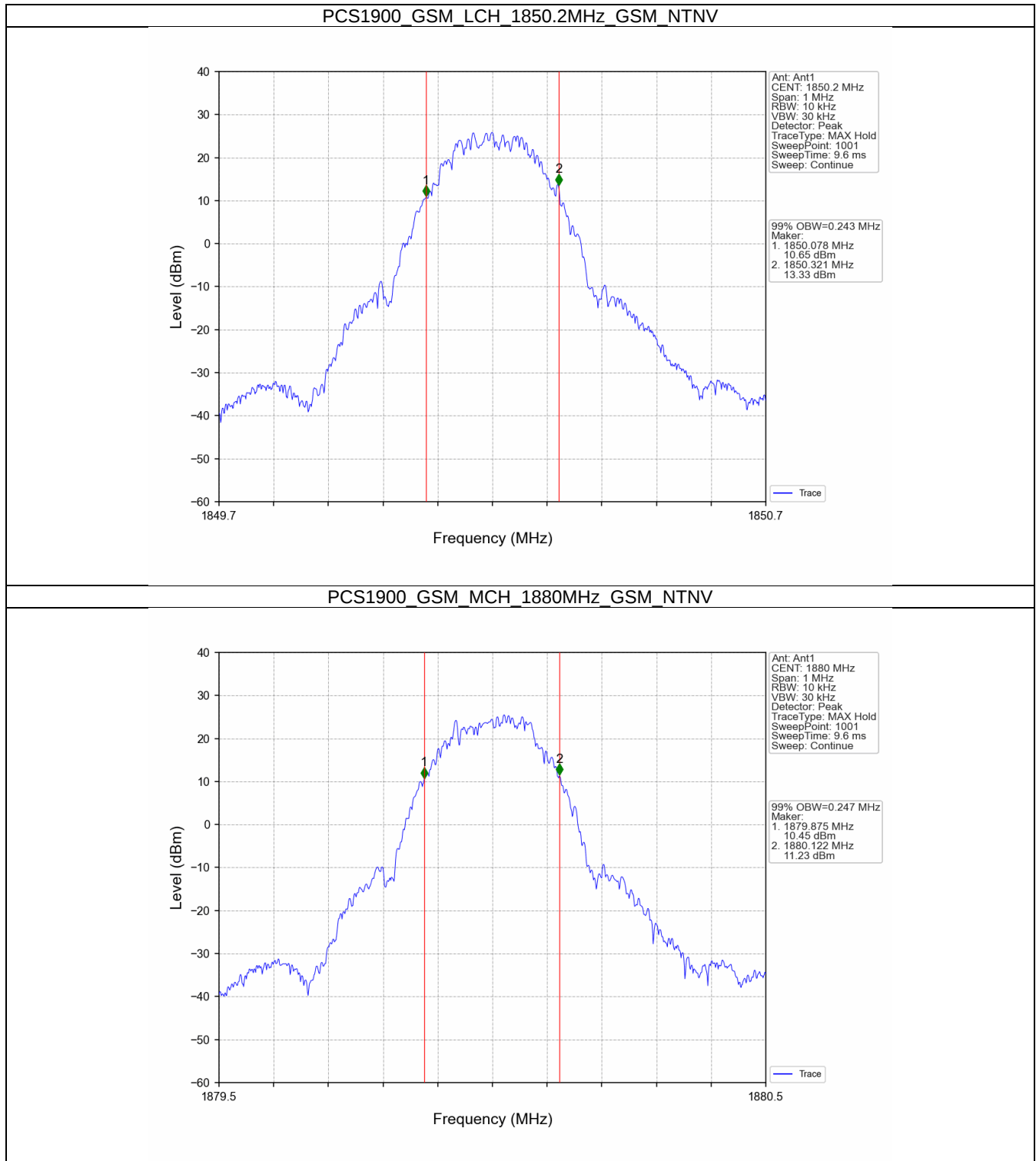
## 4. 99% & 26dB Bandwidth

### 4.1 PCS1900\_OBW

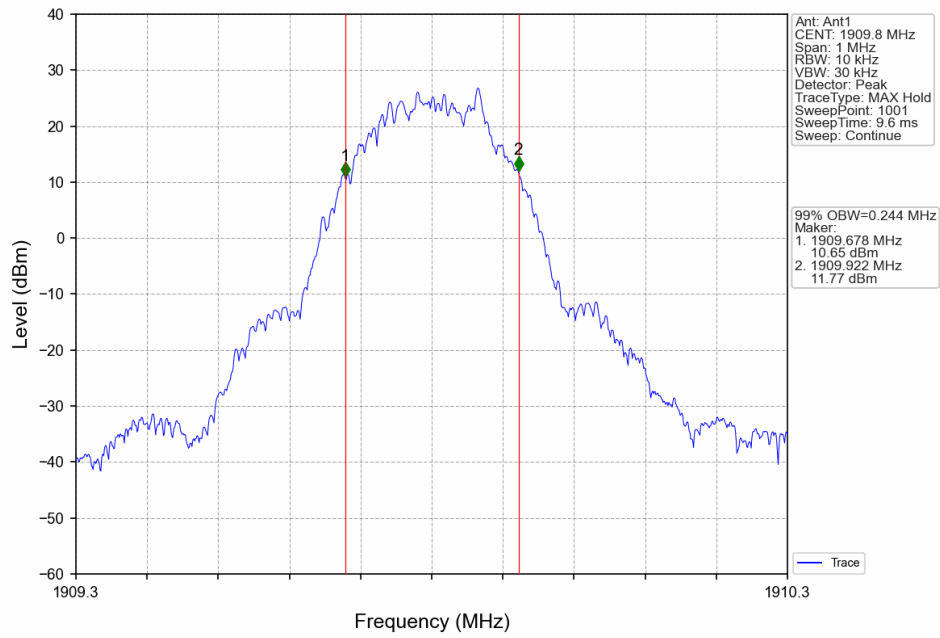
#### 4.1.1 Test Result

| Band: PCS1900 |         |           |                 |                              |         |
|---------------|---------|-----------|-----------------|------------------------------|---------|
| ENV           | Mode    |           | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Verdict |
|               | Network | Subset    |                 | Result                       |         |
| NTNV          | GSM     | GSM       | 1850.2          | 0.243                        | Pass    |
|               |         |           | 1880            | 0.247                        | Pass    |
|               |         |           | 1909.8          | 0.244                        | Pass    |
|               | GPRS    | 1 TX Slot | 1850.2          | 0.246                        | Pass    |
|               |         |           | 1880            | 0.250                        | Pass    |
|               |         |           | 1909.8          | 0.248                        | Pass    |

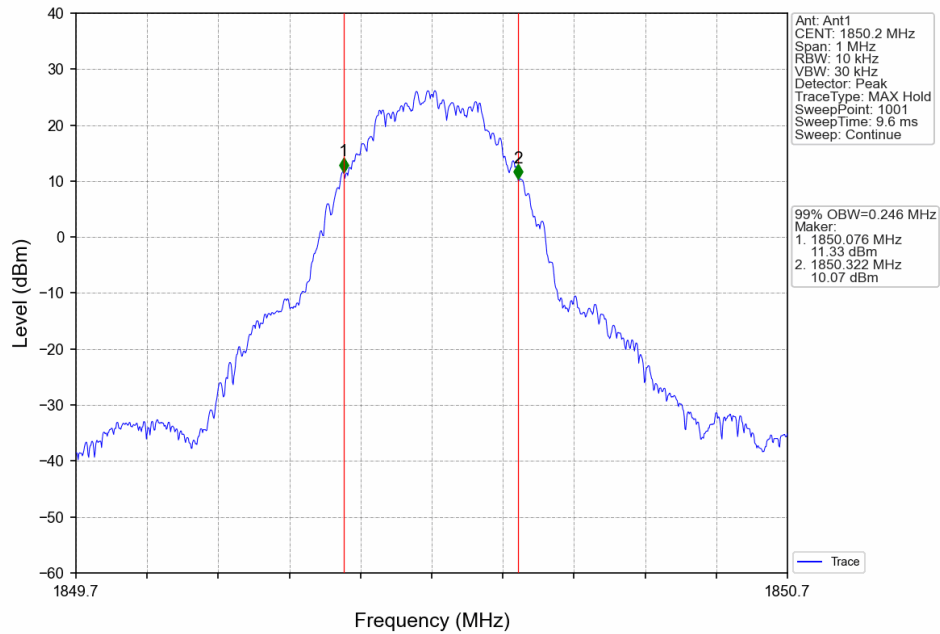
## 4.1.2 Test Graph



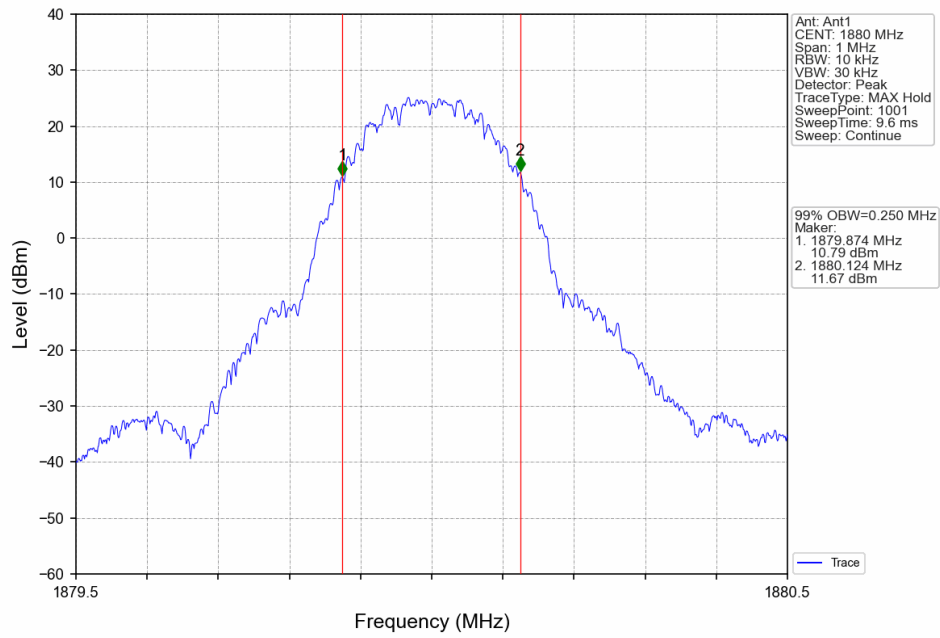
PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



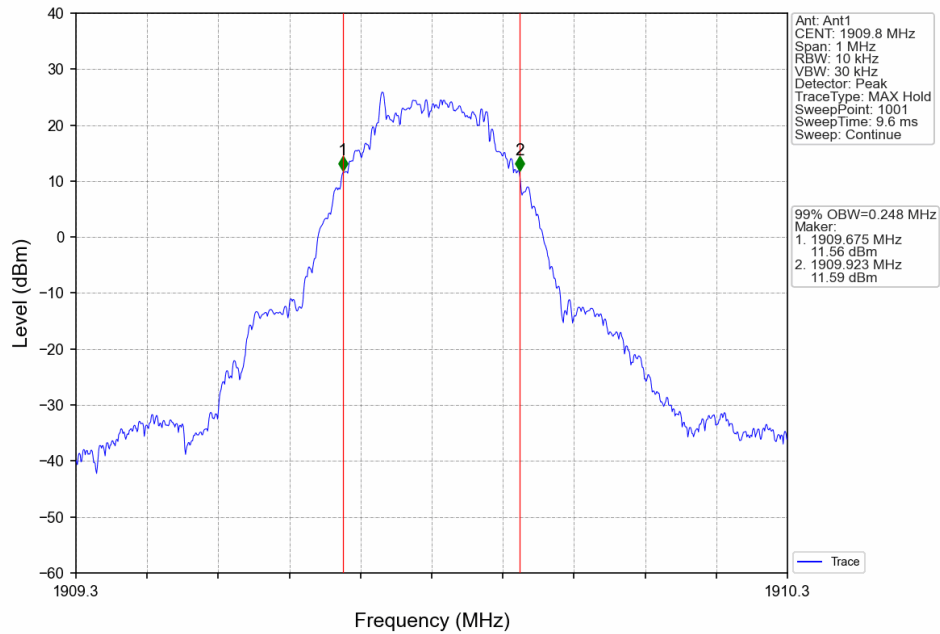
PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV

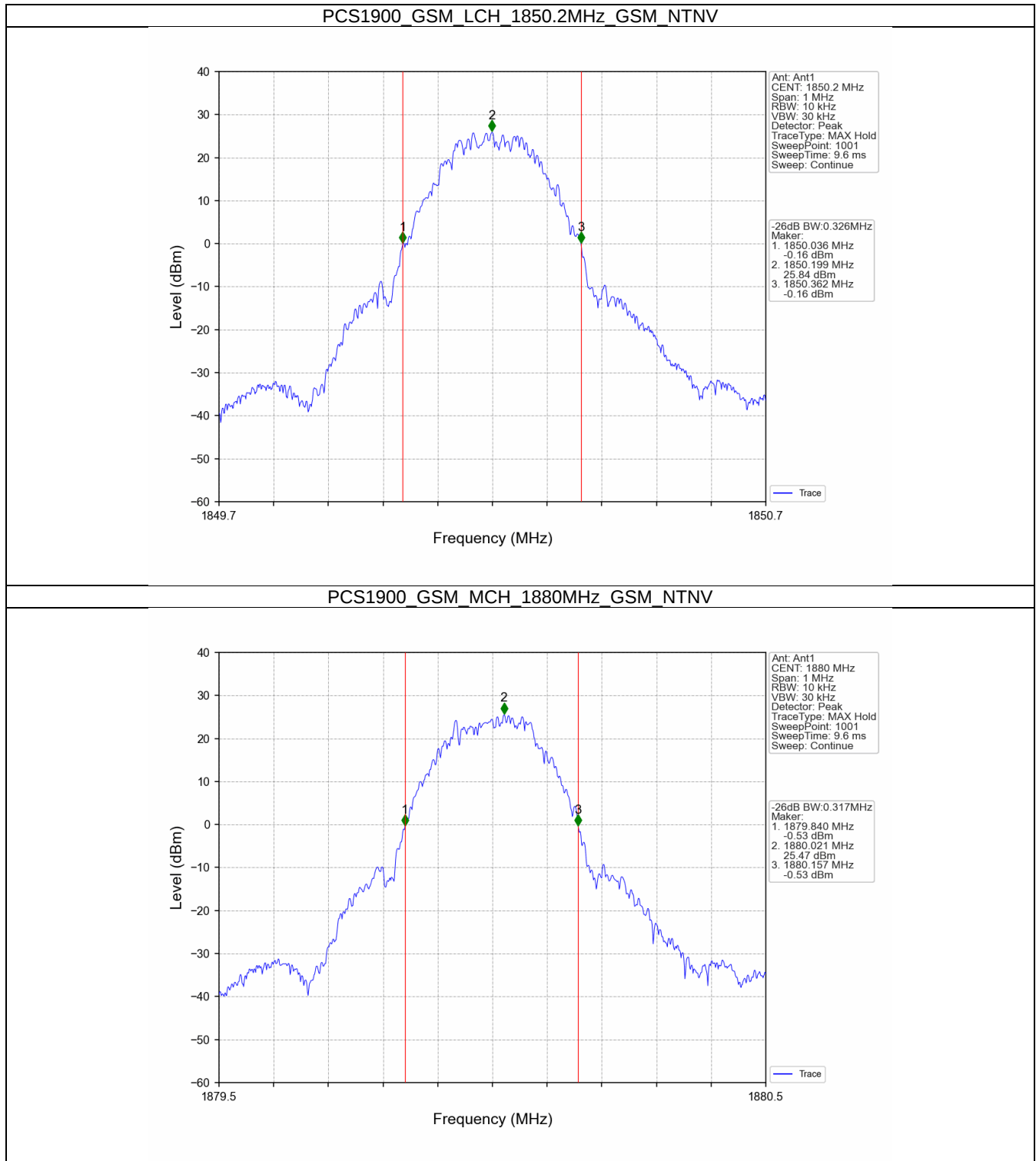


## 4.2 PCS1900\_XDB

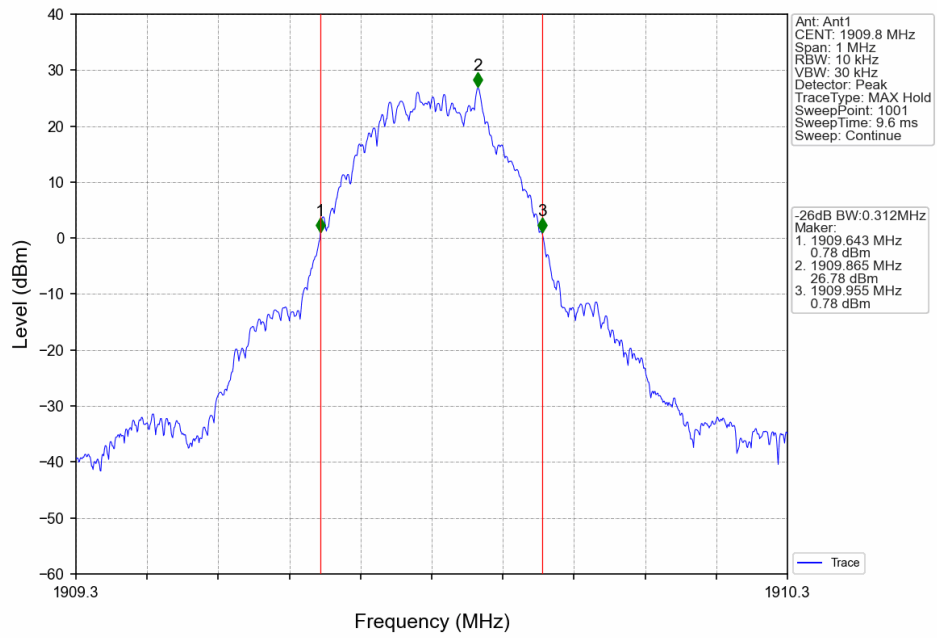
## 4.2.1 Test Result

| Band: PCS1900 |         |           |                 |                      |         |
|---------------|---------|-----------|-----------------|----------------------|---------|
| ENV           | Mode    |           | Frequency (MHz) | 26dB Bandwidth (MHz) | Verdict |
|               | Network | Subset    |                 | Result               |         |
| NTNV          | GSM     | GSM       | 1850.2          | 0.326                | Pass    |
|               |         |           | 1880            | 0.317                | Pass    |
|               |         |           | 1909.8          | 0.312                | Pass    |
|               | GPRS    | 1 TX Slot | 1850.2          | 0.318                | Pass    |
|               |         |           | 1880            | 0.327                | Pass    |
|               |         |           | 1909.8          | 0.317                | Pass    |

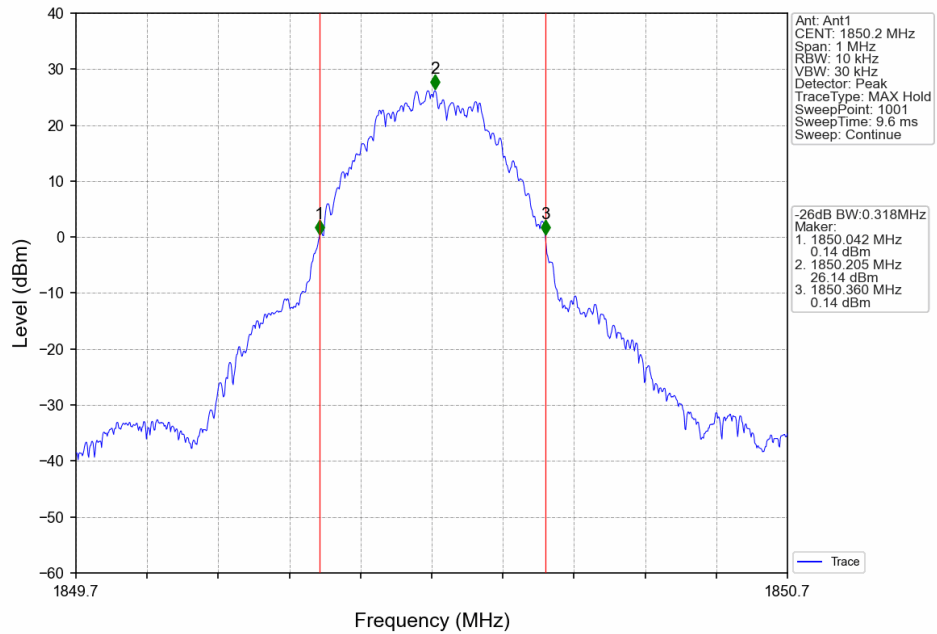
## 4.2.2 Test Graph



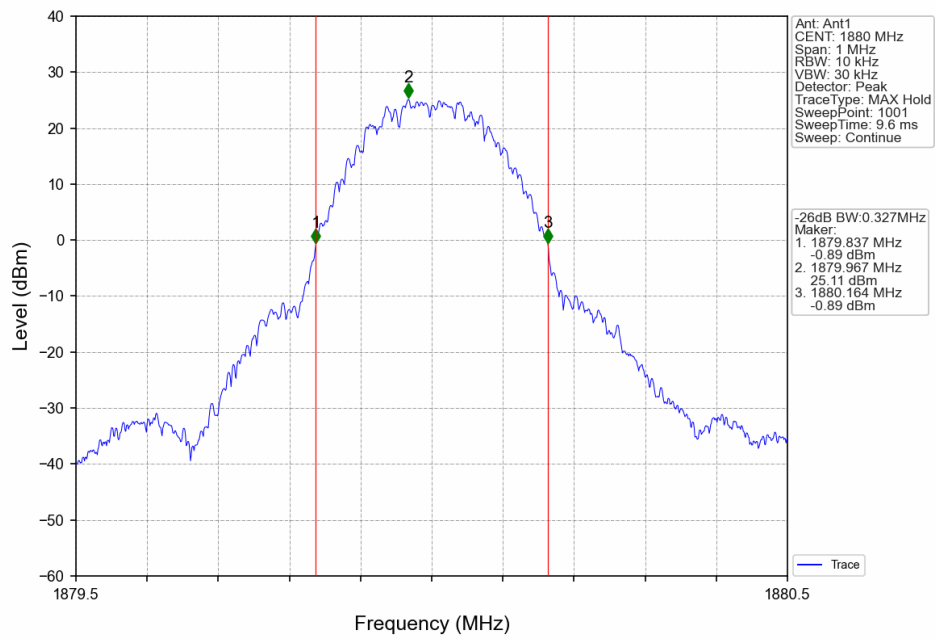
PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



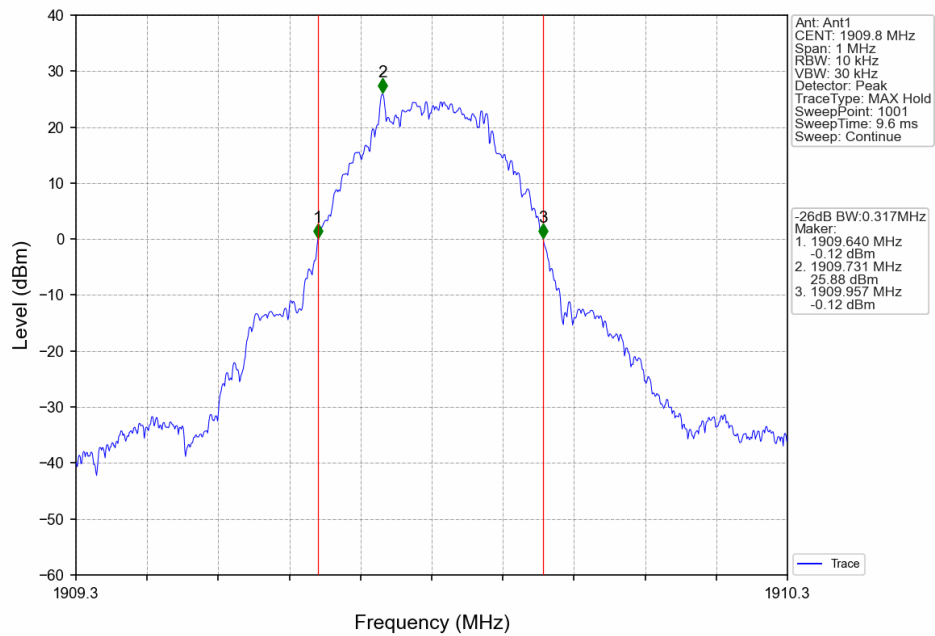
PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



## PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



## PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



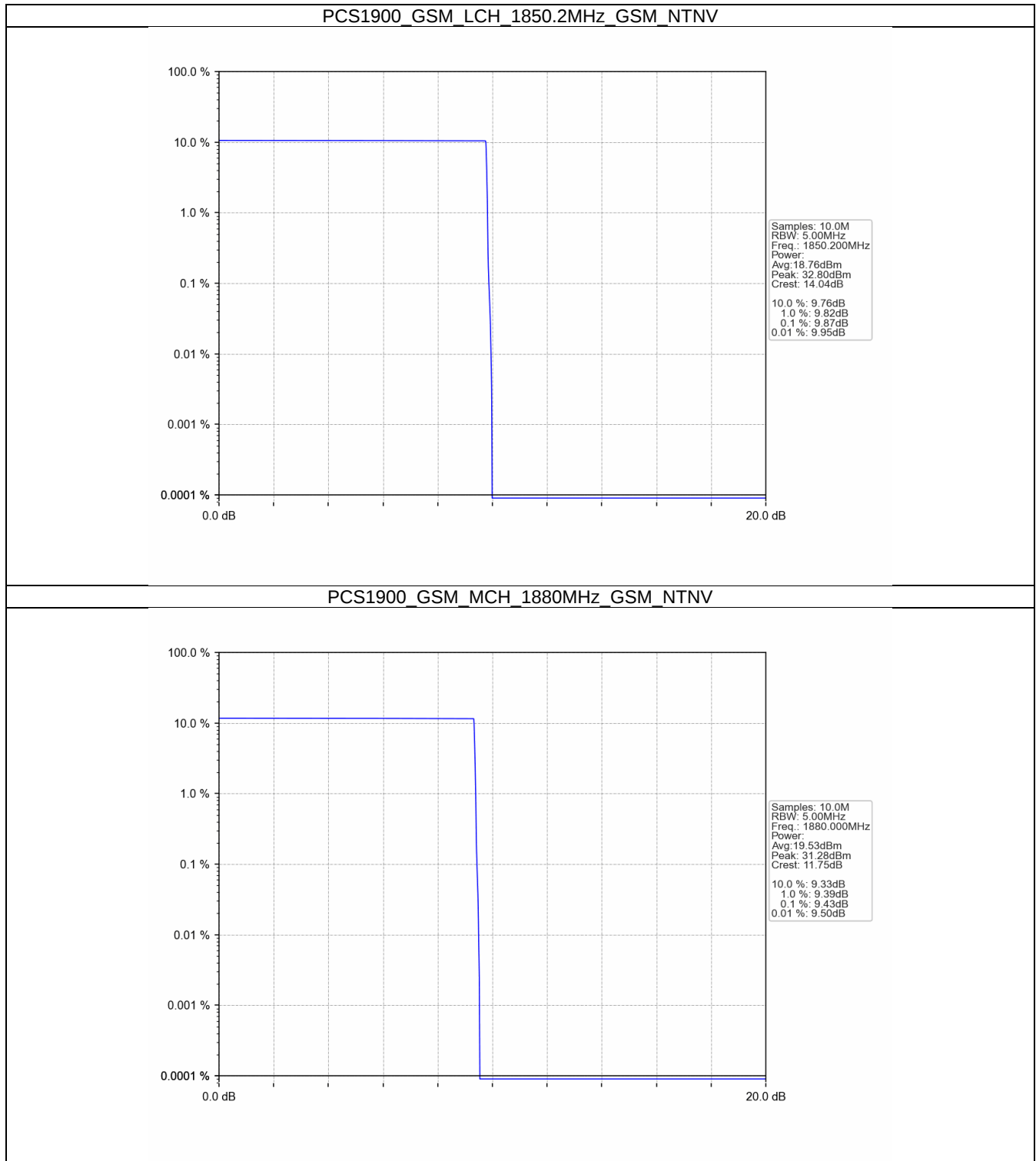
## 5. Peak-Average Ratio

### 5.1 PCS1900

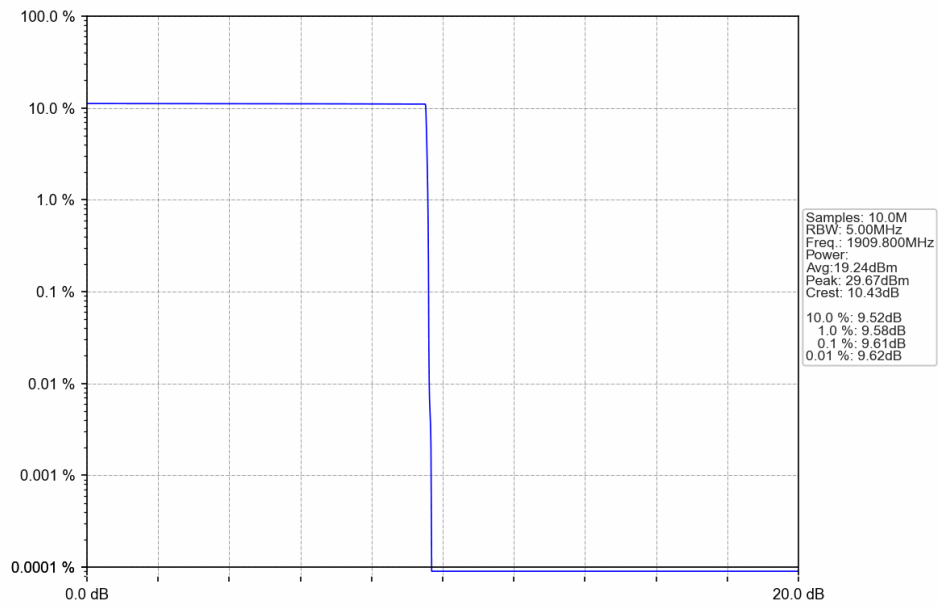
#### 5.1.1 Test Result

| Band: PCS1900 |         |            |                 |                         |       |         |
|---------------|---------|------------|-----------------|-------------------------|-------|---------|
| ENV           | Mode    |            | Frequency (MHz) | Peak-Average Ratio (dB) |       | Verdict |
|               | Network | Subset     |                 | Result                  | Limit |         |
| NTNV          | GSM     | GSM        | 1850.2          | 9.87                    | <=13  | Pass    |
|               |         |            | 1880            | 9.43                    | <=13  | Pass    |
|               |         |            | 1909.8          | 9.61                    | <=13  | Pass    |
|               | GPRS    | 4 TX Slots | 1850.2          | 9.54                    | <=13  | Pass    |
|               |         |            | 1880            | 3.50                    | <=13  | Pass    |
|               |         |            | 1909.8          | 3.49                    | <=13  | Pass    |

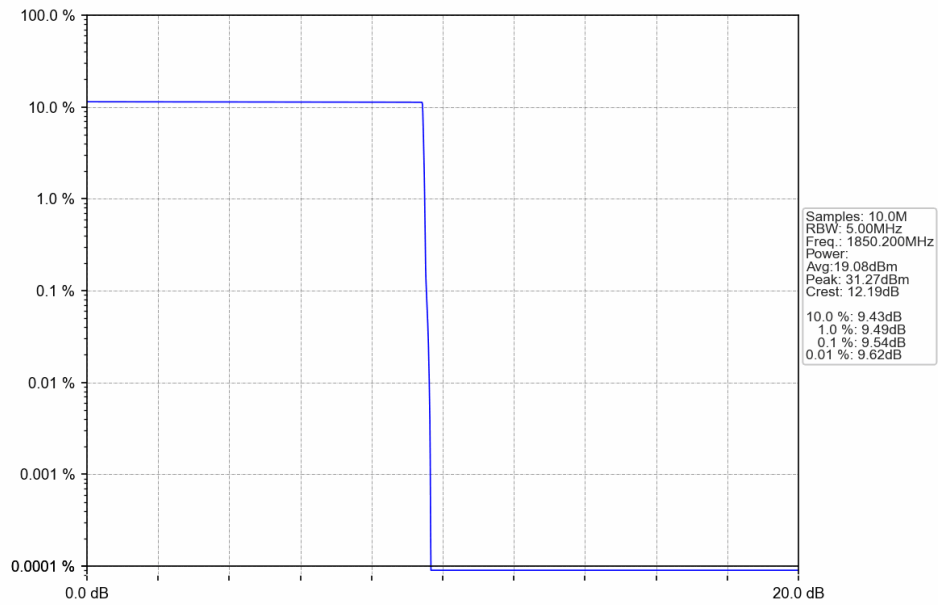
### 5.1.2 Test Graph



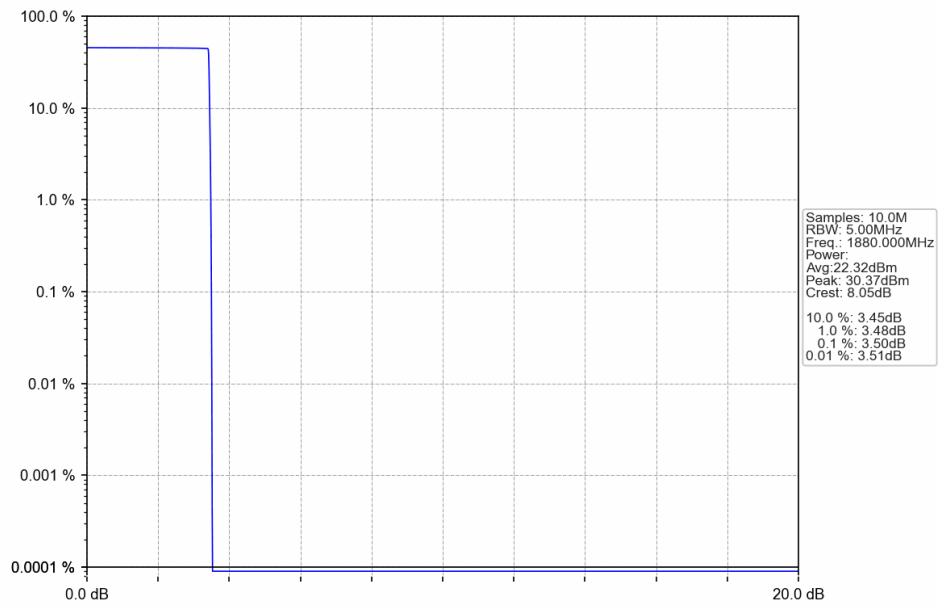
## PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



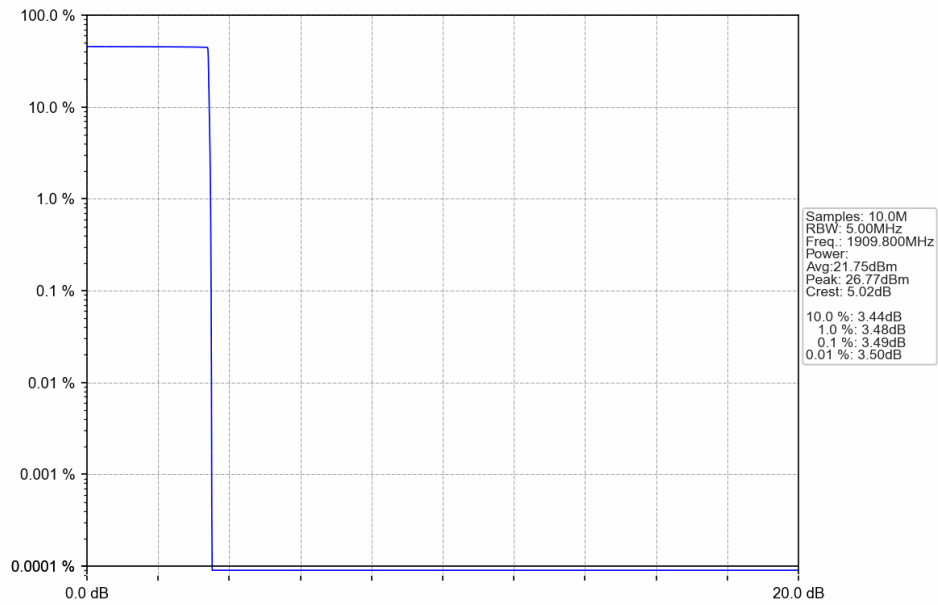
## PCS1900\_GPRS\_LCH\_1850.2MHz\_4 TX Slots\_NTNV



PCS1900\_GPRS\_MCH\_1880MHz\_4 TX Slots\_NTNV



PCS1900\_GPRS\_HCH\_1909.8MHz\_4 TX Slots\_NTNV



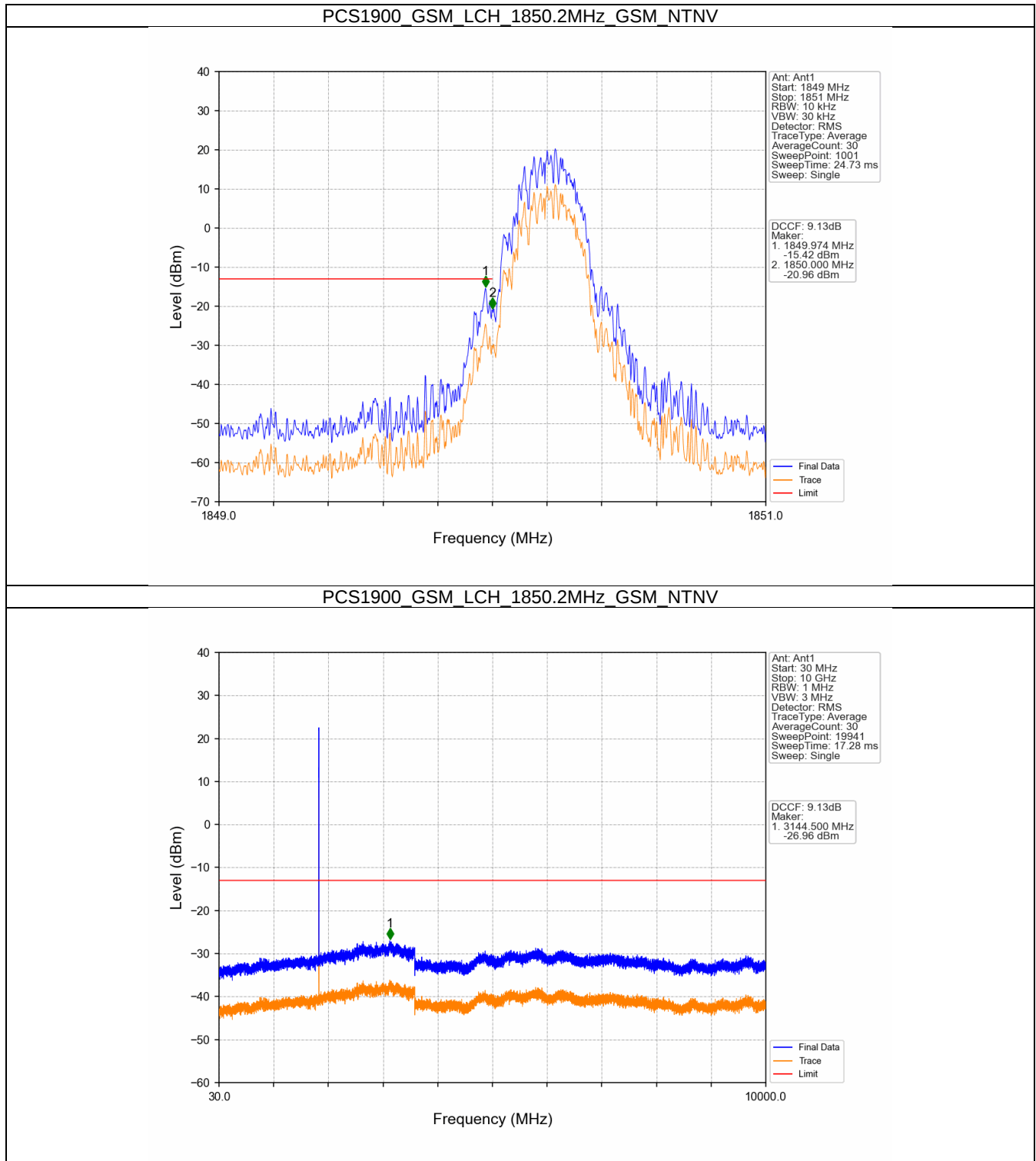
## 6. Spurious Emission

### 6.1 PCS1900

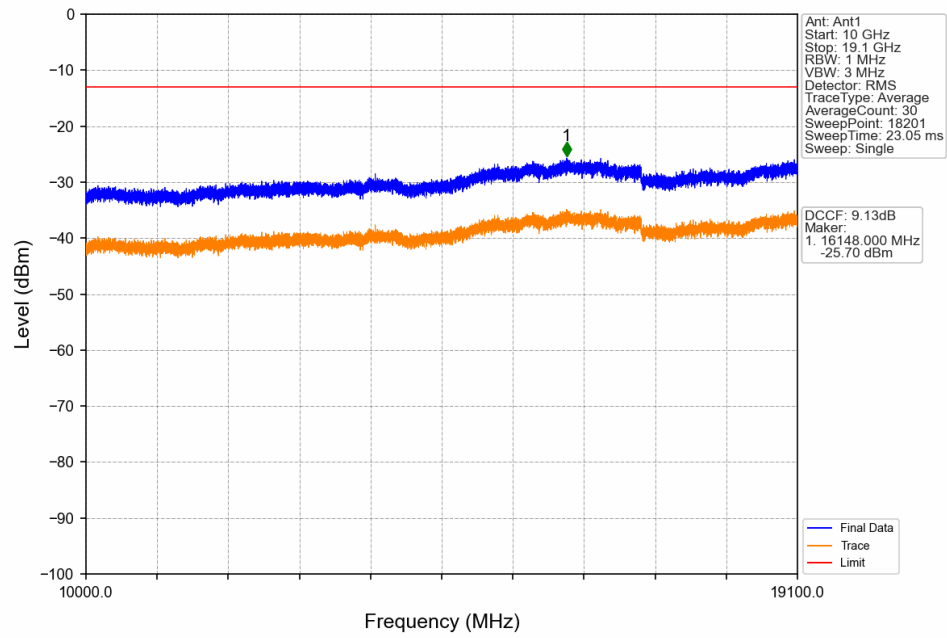
#### 6.1.1 Test Result

| Band: PCS1900 |         |           |                    |                     |       |         |
|---------------|---------|-----------|--------------------|---------------------|-------|---------|
| ENV           | Mode    |           | Frequency<br>(MHZ) | Spurious Emission   |       | Verdict |
|               | Network | Subset    |                    | Result              | Limit |         |
| NTNV          | GSM     | GSM       | 1850.2             | Refer To Test Graph |       | Pass    |
|               |         |           | 1880               | Refer To Test Graph |       | Pass    |
|               |         |           | 1909.8             | Refer To Test Graph |       | Pass    |
|               | GPRS    | 1 TX Slot | 1850.2             | Refer To Test Graph |       | Pass    |
|               |         |           | 1880               | Refer To Test Graph |       | Pass    |
|               |         |           | 1909.8             | Refer To Test Graph |       | Pass    |

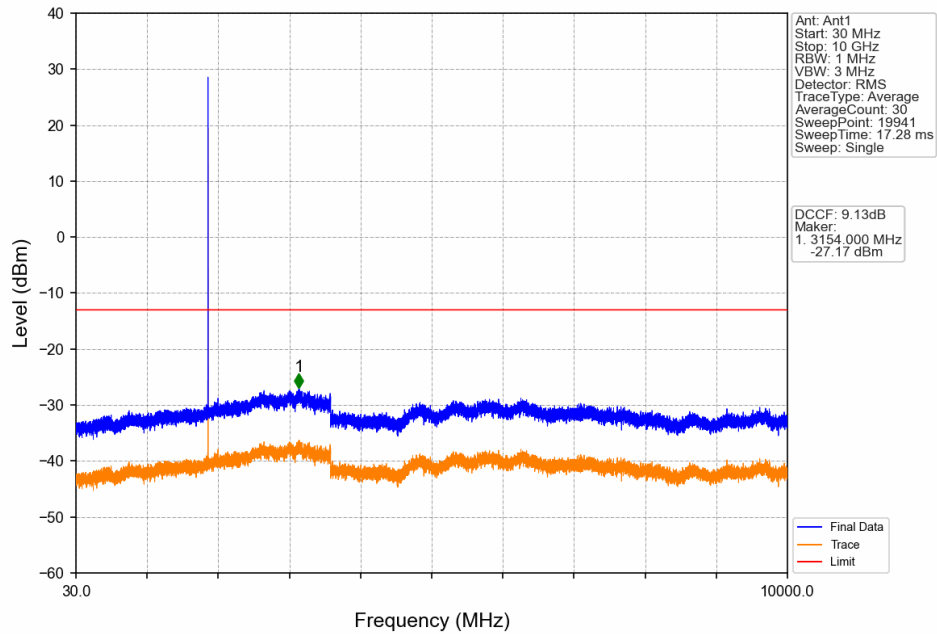
## 6.1.2 Test Graph

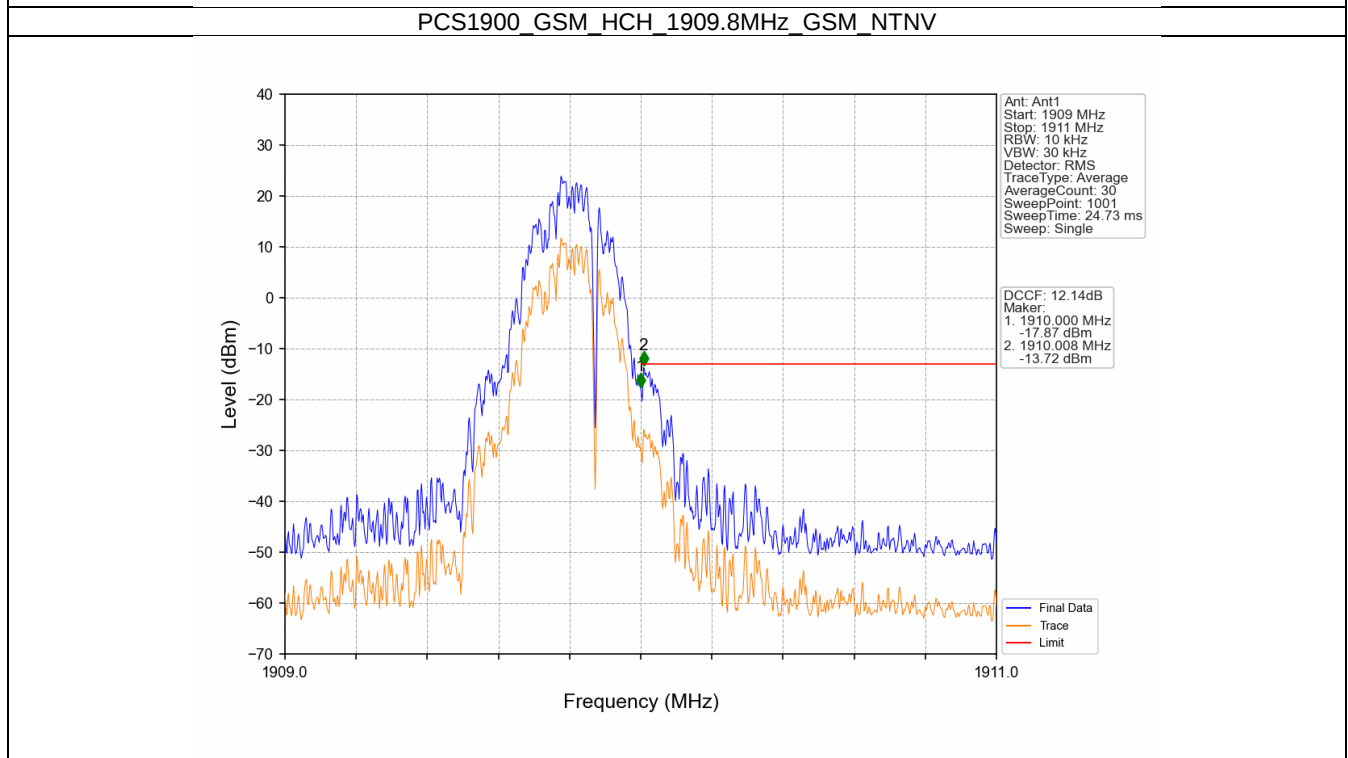
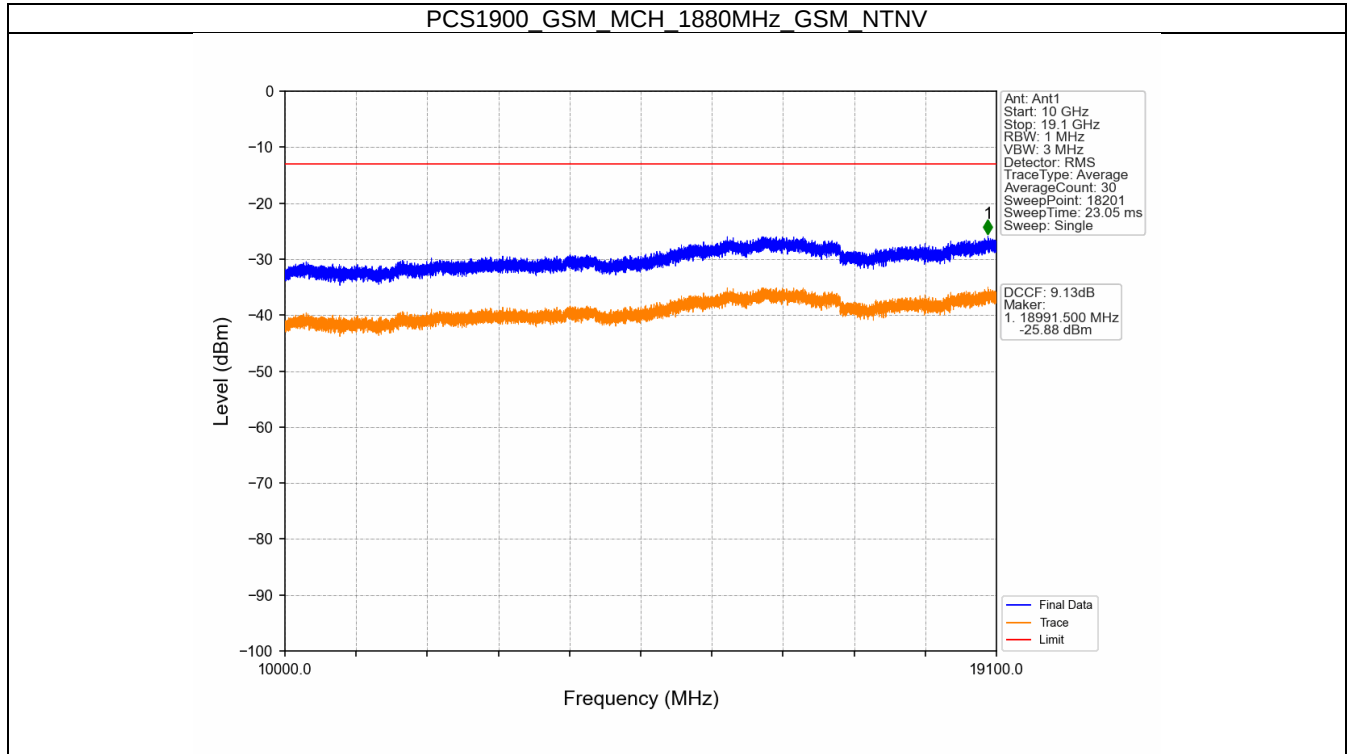


PCS1900\_GSM\_LCH\_1850.2MHz\_GSM\_NTNV

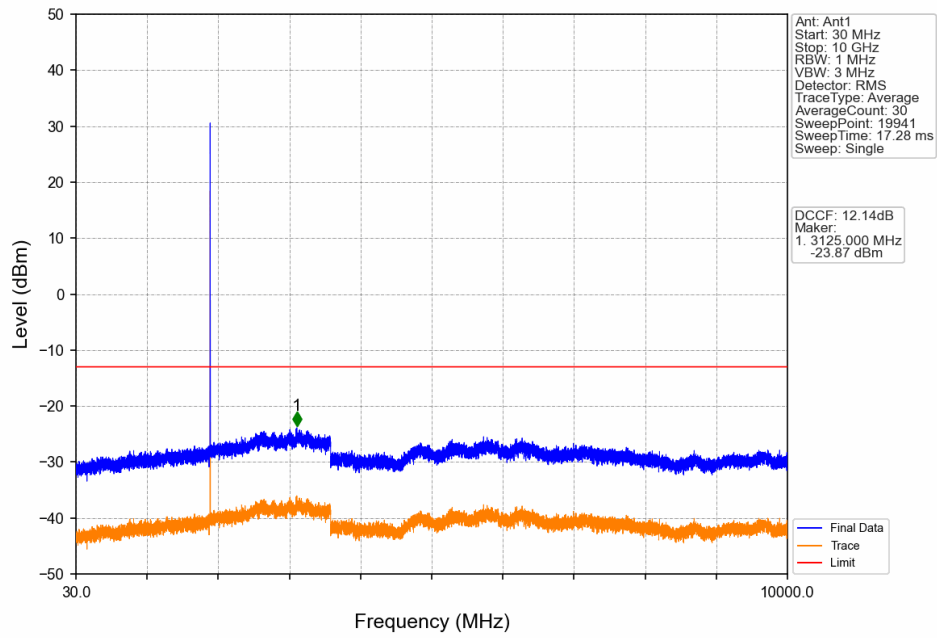


PCS1900\_GSM\_MCH\_1880MHz\_GSM\_NTNV

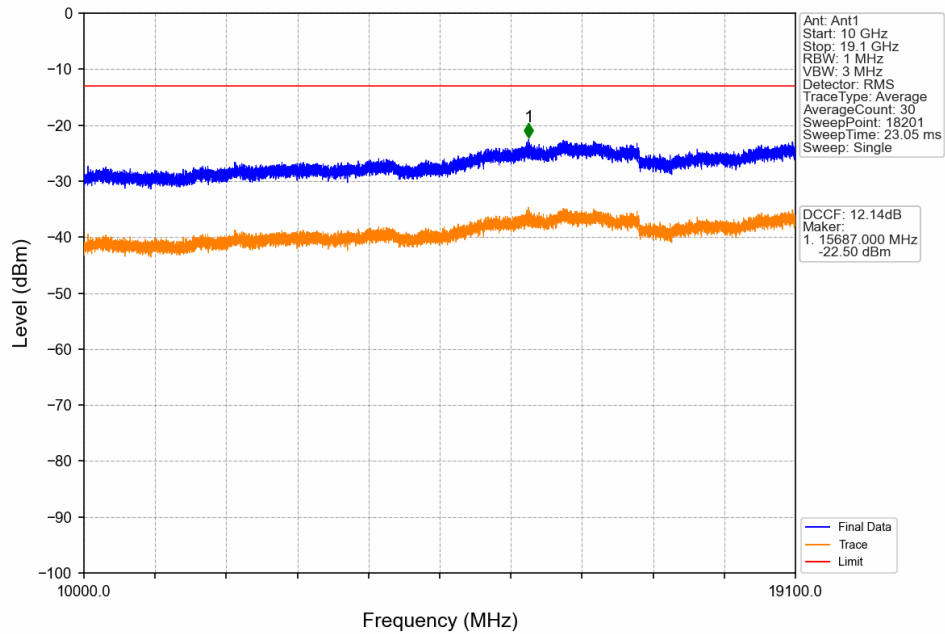




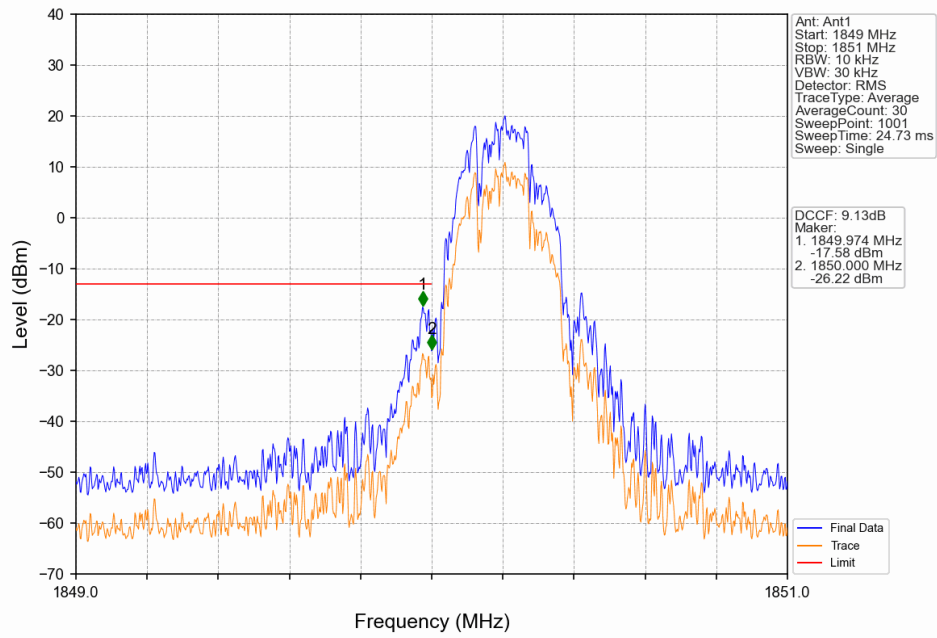
## PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



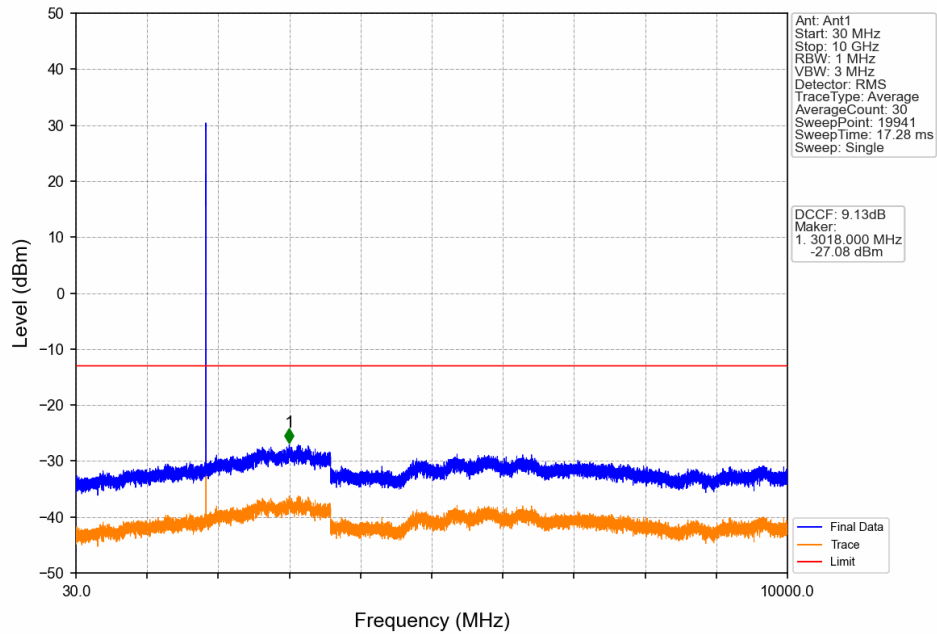
## PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



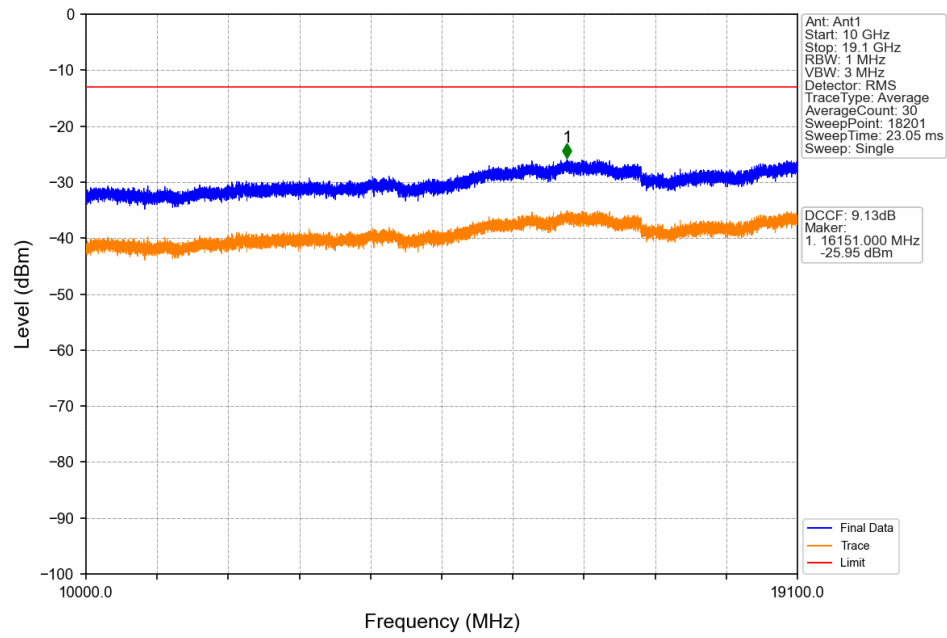
PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



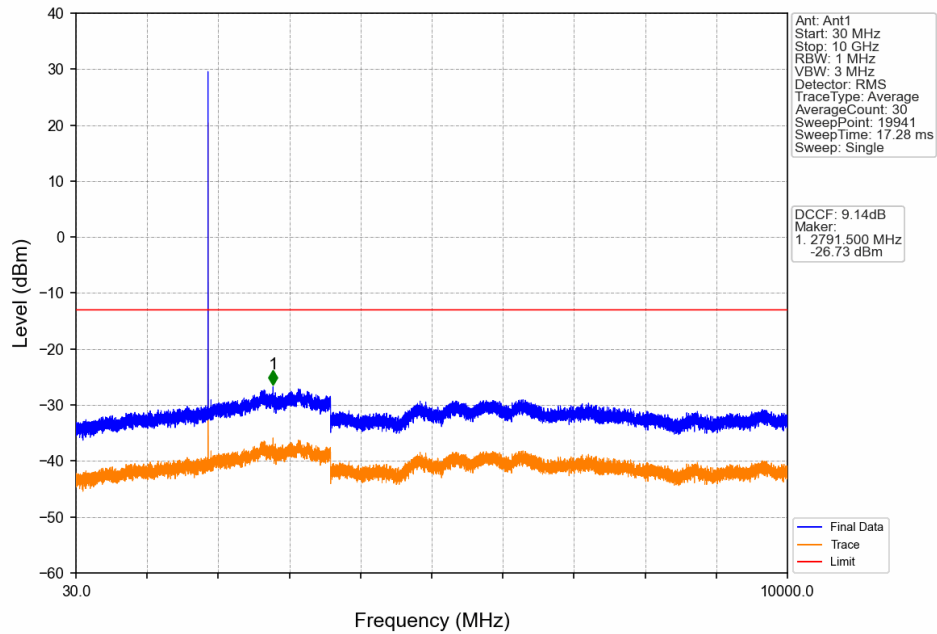
PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



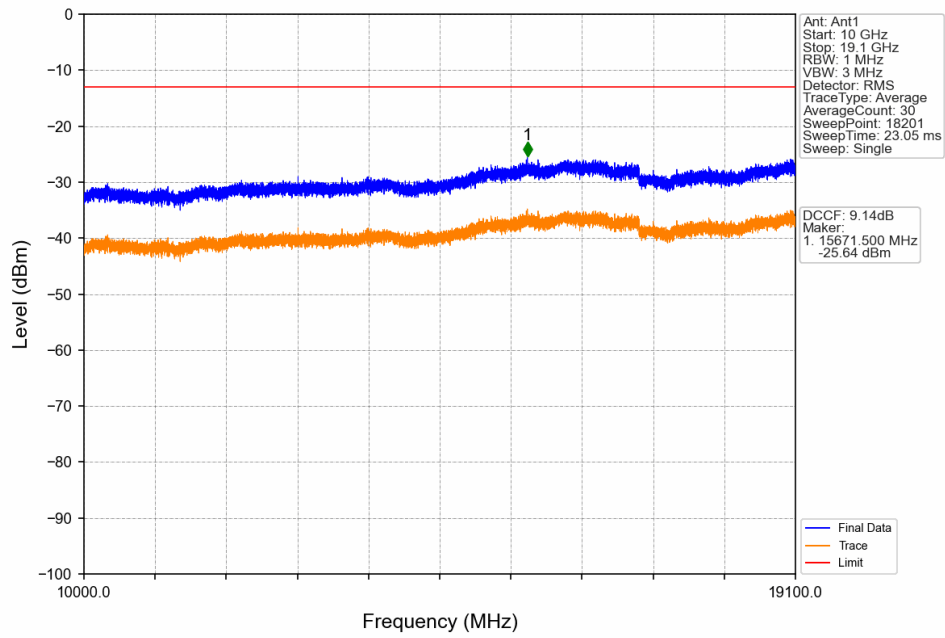
## PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



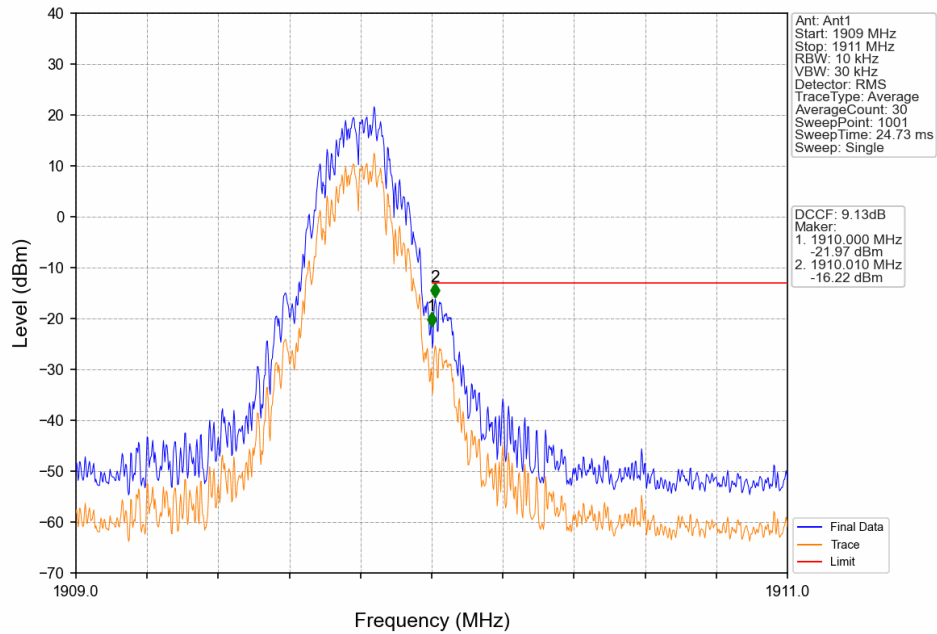
## PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



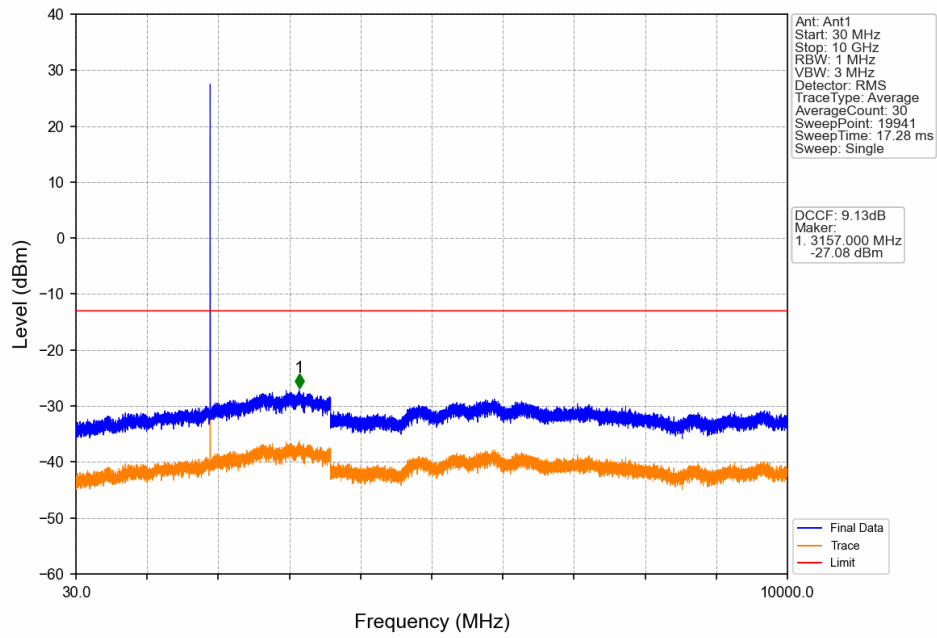
PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



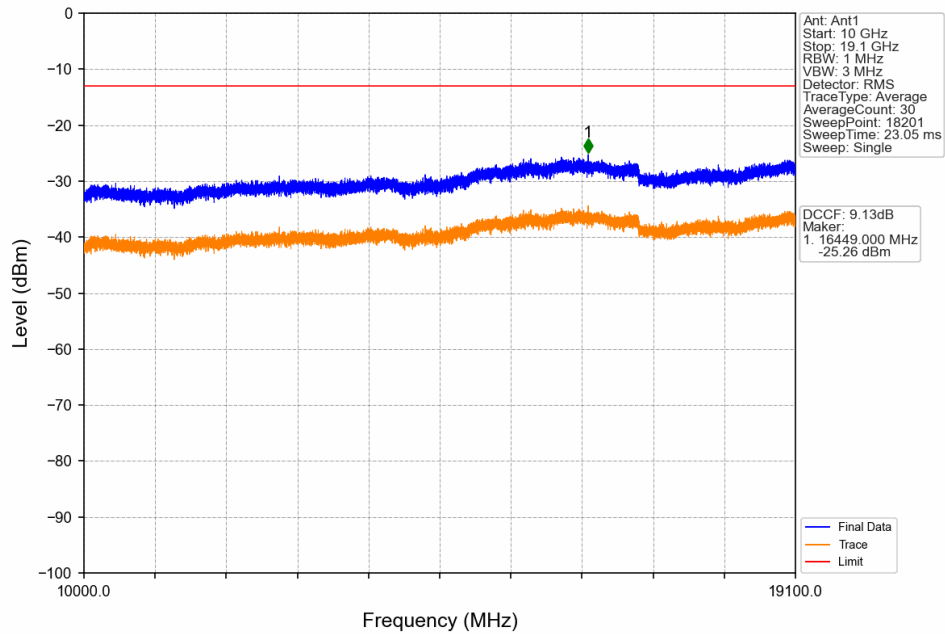
PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



## 7. Form731

### 7.1 Form731\_Power

#### 7.1.1 Test Result

| Band    | BW  | Lower Freq | High Freq | MAX Power (W) | Value  | Hz/ppm | Emission Designator | Rule Parts | MAX Power (dBm) |
|---------|-----|------------|-----------|---------------|--------|--------|---------------------|------------|-----------------|
| PCS1900 | 0.2 | 1850.2     | 1909.8    | 0.9247        | 0.0045 | ppm    | 250KGXW             | 24E        | 29.66           |

### 7.2 Form731\_EIRP

#### 7.2.1 Test Result

| Band    | BW  | Lower Freq | High Freq | MAX Power (W) | Value  | Hz/ppm | Emission Designator | Rule Parts | MAX Power (dBm) |
|---------|-----|------------|-----------|---------------|--------|--------|---------------------|------------|-----------------|
| PCS1900 | 0.2 | 1850.2     | 1909.8    | 0.9247        | 0.0045 | ppm    | 250KGXW             | 24E        | 29.66           |