**Appendix A.2**

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 Test Result

### 1.1.1 PCS1900_EIRP

| Band: PCS1900 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | Conducted Power (dBm) | Gain (dBi) | EIRP (dBm) | | Verdict |
| | Network | Subset | | | | Result | Limit | |
| NTNV | GSM | GSM | 1850.2 | 29.97 | -0.85 | 29.12 | <=33.01 | Pass |
| | | | 1880 | 29.33 | -0.85 | 28.48 | <=33.01 | Pass |
| | | | 1909.8 | 29.45 | -0.85 | 28.60 | <=33.01 | Pass |
| | GPRS | 1 TX Slot | 1850.2 | 30.04 | -0.85 | 29.19 | <=33.01 | Pass |
| | | 2 TX Slots | 1850.2 | 29.05 | -0.85 | 28.20 | <=33.01 | Pass |
| | | 3 TX Slots | 1850.2 | 27.61 | -0.85 | 26.76 | <=33.01 | Pass |
| | | 4 TX Slots | 1850.2 | 26.14 | -0.85 | 25.29 | <=33.01 | Pass |
| | | 1 TX Slot | 1880 | 29.24 | -0.85 | 28.39 | <=33.01 | Pass |
| | | 2 TX Slots | 1880 | 28.30 | -0.85 | 27.45 | <=33.01 | Pass |
| | | 3 TX Slots | 1880 | 26.53 | -0.85 | 25.68 | <=33.01 | Pass |
| | | 4 TX Slots | 1880 | 25.34 | -0.85 | 24.49 | <=33.01 | Pass |
| | | 1 TX Slot | 1909.8 | 29.33 | -0.85 | 28.48 | <=33.01 | Pass |
| | | 2 TX Slots | 1909.8 | 28.45 | -0.85 | 27.60 | <=33.01 | Pass |
| | | 3 TX Slots | 1909.8 | 27.00 | -0.85 | 26.15 | <=33.01 | Pass |
| | | 4 TX Slots | 1909.8 | 25.56 | -0.85 | 24.71 | <=33.01 | Pass |
| | EGPRS | 1 TX Slot | 1850.2 | 26.56 | -0.85 | 25.71 | <=33.01 | Pass |
| | | 2 TX Slots | 1850.2 | 25.60 | -0.85 | 24.75 | <=33.01 | Pass |
| | | 3 TX Slots | 1850.2 | 24.28 | -0.85 | 23.43 | <=33.01 | Pass |
| | | 4 TX Slots | 1850.2 | 21.62 | -0.85 | 20.77 | <=33.01 | Pass |
| | | 1 TX Slot | 1880 | 25.85 | -0.85 | 25.00 | <=33.01 | Pass |
| | | 2 TX Slots | 1880 | 24.58 | -0.85 | 23.73 | <=33.01 | Pass |
| | | 3 TX Slots | 1880 | 22.13 | -0.85 | 21.28 | <=33.01 | Pass |
| | | 4 TX Slots | 1880 | 20.71 | -0.85 | 19.86 | <=33.01 | Pass |
| | | 1 TX Slot | 1909.8 | 26.20 | -0.85 | 25.35 | <=33.01 | Pass |
| | | 2 TX Slots | 1909.8 | 25.11 | -0.85 | 24.26 | <=33.01 | Pass |
| | | 3 TX Slots | 1909.8 | 22.85 | -0.85 | 22.00 | <=33.01 | Pass |
| | | 4 TX Slots | 1909.8 | 22.47 | -0.85 | 21.62 | <=33.01 | Pass |
| Note1: EIRP=Conducted Power+Antenna Gain | | | | | | | | |

# 2. Frequency Stability

## 2.1 Test Result

### 2.1.1 PCS1900

| Band: PCS1900 | | | | | | |
|---|---|---|---|---|---|---|
| Network | Frequency | Temp. | Voltage | Freq. Error | Freq. vs. Rated (ppm) | Verdict |

| | (MHz) | (°C) | (VDC) | (Hz) | Result | Limit | |
|---|---|---|---|---|---|---|---|
| GSM | 1850.2 | 20 | 8.8 | -18.274 | -0.0099 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -17.112 | -0.0092 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -10.170 | -0.0055 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -19.759 | -0.0107 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -12.688 | -0.0069 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -15.336 | -0.0083 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -14.690 | -0.0079 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -15.142 | -0.0082 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -22.503 | -0.0122 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -11.655 | -0.0063 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -13.528 | -0.0073 | -2.5 to 2.5 | Pass |
| | 1880 | 20 | 8.8 | -12.333 | -0.0066 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -23.278 | -0.0124 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -18.048 | -0.0096 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -15.400 | -0.0082 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -25.312 | -0.0135 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -22.439 | -0.0119 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -20.792 | -0.0111 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -18.629 | -0.0099 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -26.668 | -0.0142 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -25.570 | -0.0136 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -30.090 | -0.0160 | -2.5 to 2.5 | Pass |
| | 1909.8 | 20 | 8.8 | -22.600 | -0.0118 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -25.570 | -0.0134 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -17.176 | -0.0090 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -20.437 | -0.0107 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -16.498 | -0.0086 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -19.146 | -0.0100 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -22.374 | -0.0117 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -23.988 | -0.0126 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -24.731 | -0.0129 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -27.960 | -0.0146 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -20.405 | -0.0107 | -2.5 to 2.5 | Pass |
| GPRS | 1850.2 | 20 | 8.8 | -0.936 | -0.0005 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -4.875 | -0.0026 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -2.195 | -0.0012 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -2.163 | -0.0012 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -4.036 | -0.0022 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -3.681 | -0.0020 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -8.491 | -0.0046 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -4.520 | -0.0024 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -4.778 | -0.0026 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -3.551 | -0.0019 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -3.003 | -0.0016 | -2.5 to 2.5 | Pass |
| | 1880 | 20 | 8.8 | -11.784 | -0.0063 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -10.202 | -0.0054 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -12.236 | -0.0065 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -12.527 | -0.0067 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -24.311 | -0.0129 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -9.976 | -0.0053 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -13.721 | -0.0073 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -13.689 | -0.0073 | -2.5 to 2.5 | Pass |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 30 | 7.7 | -12.365 | -0.0066 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -10.331 | -0.0055 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -9.298 | -0.0049 | -2.5 to 2.5 | Pass |
| | 1909.8 | 20 | 8.8 | -9.427 | -0.0049 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -10.235 | -0.0054 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -9.653 | -0.0051 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -10.396 | -0.0054 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -7.071 | -0.0037 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -8.879 | -0.0046 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -10.493 | -0.0055 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -7.845 | -0.0041 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -12.979 | -0.0068 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -6.780 | -0.0036 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -8.362 | -0.0044 | -2.5 to 2.5 | Pass |
| EGPRS | 1850.2 | 20 | 8.8 | -6.683 | -0.0036 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -3.777 | -0.0020 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -11.397 | -0.0062 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -4.972 | -0.0027 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -2.066 | -0.0011 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -1.356 | -0.0007 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -2.260 | -0.0012 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -1.808 | -0.0010 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -2.712 | -0.0015 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -6.360 | -0.0034 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -1.065 | -0.0006 | -2.5 to 2.5 | Pass |
| | 1880 | 20 | 8.8 | -10.461 | -0.0056 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -11.074 | -0.0059 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -11.461 | -0.0061 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -11.042 | -0.0059 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -11.429 | -0.0061 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -11.300 | -0.0060 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -10.783 | -0.0057 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -9.718 | -0.0052 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -11.881 | -0.0063 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -9.912 | -0.0053 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -10.170 | -0.0054 | -2.5 to 2.5 | Pass |
| | 1909.8 | 20 | 8.8 | -5.747 | -0.0030 | -2.5 to 2.5 | Pass |
| | | | 7.7 | -12.914 | -0.0068 | -2.5 to 2.5 | Pass |
| | | | 6.6 | -13.334 | -0.0070 | -2.5 to 2.5 | Pass |
| | | -30 | 7.7 | -8.523 | -0.0045 | -2.5 to 2.5 | Pass |
| | | -20 | 7.7 | -6.748 | -0.0035 | -2.5 to 2.5 | Pass |
| | | -10 | 7.7 | -10.428 | -0.0055 | -2.5 to 2.5 | Pass |
| | | 0 | 7.7 | -13.980 | -0.0073 | -2.5 to 2.5 | Pass |
| | | 10 | 7.7 | -13.205 | -0.0069 | -2.5 to 2.5 | Pass |
| | | 30 | 7.7 | -11.139 | -0.0058 | -2.5 to 2.5 | Pass |
| | | 40 | 7.7 | -10.913 | -0.0057 | -2.5 to 2.5 | Pass |
| | | 50 | 7.7 | -7.393 | -0.0039 | -2.5 to 2.5 | Pass |

## 3. 99% & 26dB Bandwidth

## 3.1 Test Result

### 3.1.1 PCS1900_OBW

| Band: PCS1900 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | | Verdict |
| | Network | Subset | | Result | Limit | |
| NTNV | GSM | GSM | 1850.2 | 0.245 | / | Pass |
| | | | 1880 | 0.242 | / | Pass |
| | | | 1909.8 | 0.243 | / | Pass |
| | GPRS | 1 TX Slot | 1850.2 | 0.244 | / | Pass |
| | | | 1880 | 0.245 | / | Pass |
| | | | 1909.8 | 0.244 | / | Pass |
| | EGPRS | 1 TX Slot | 1850.2 | 0.248 | / | Pass |
| | | | 1880 | 0.247 | / | Pass |
| | | | 1909.8 | 0.247 | / | Pass |

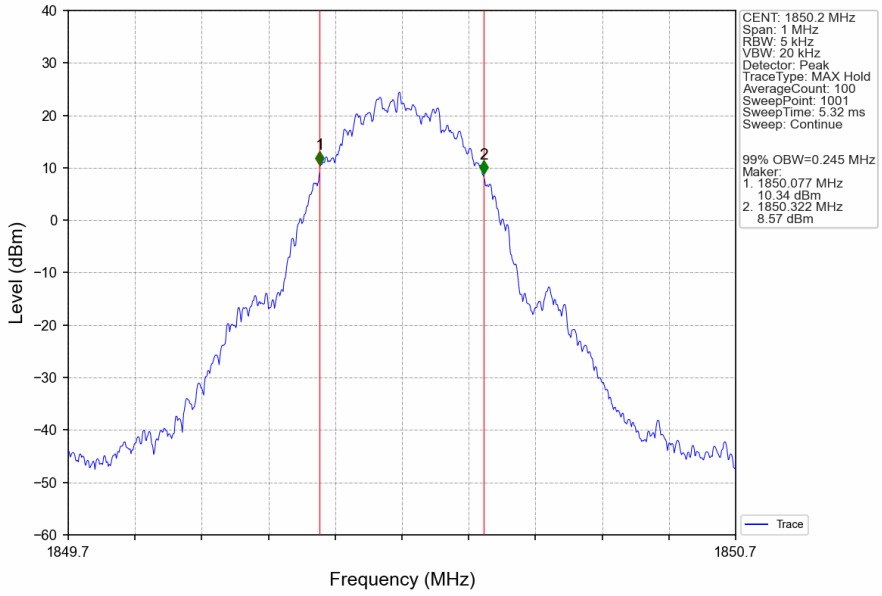
### 3.1.2 PCS1900_XDB

| Band: PCS1900 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | 26dB Bandwidth (MHz) | | Verdict |
| | Network | Subset | | Result | Limit | |
| NTNV | GSM | GSM | 1850.2 | 0.317 | / | Pass |
| | | | 1880 | 0.311 | / | Pass |
| | | | 1909.8 | 0.297 | / | Pass |
| | GPRS | 1 TX Slot | 1850.2 | 0.308 | / | Pass |
| | | | 1880 | 0.317 | / | Pass |
| | | | 1909.8 | 0.318 | / | Pass |
| | EGPRS | 1 TX Slot | 1850.2 | 0.312 | / | Pass |
| | | | 1880 | 0.317 | / | Pass |
| | | | 1909.8 | 0.316 | / | Pass |

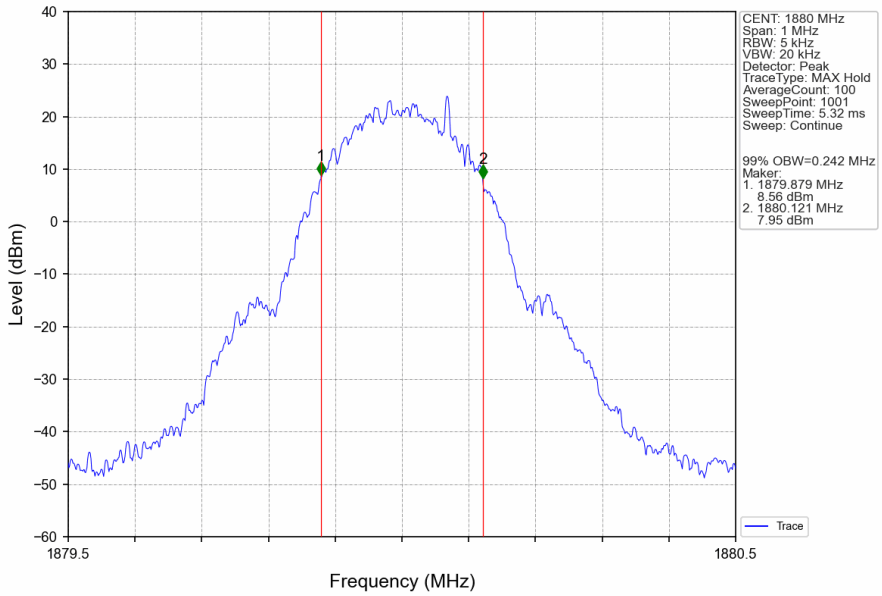
## 3.2 Test Graph

### 3.2.1 PCS1900_OBW

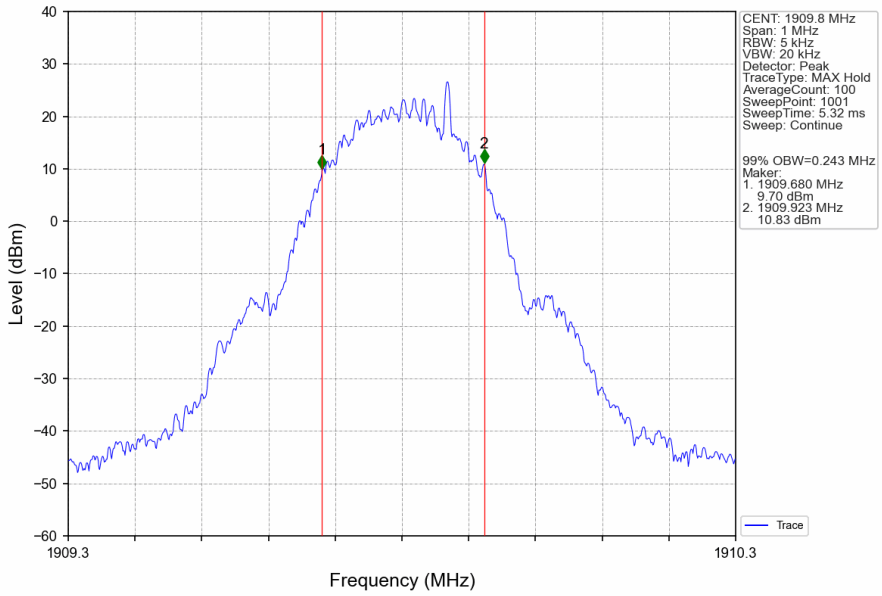
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



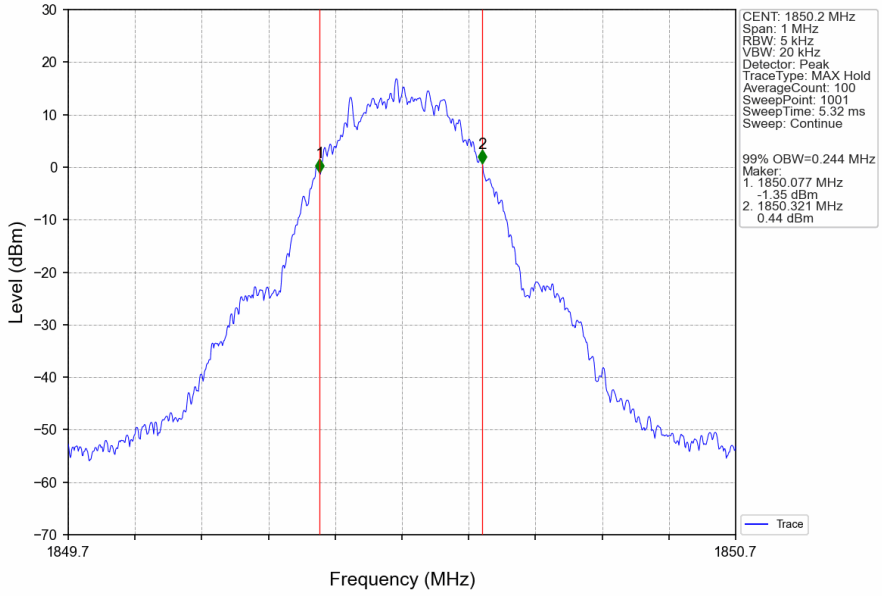

PCS1900_GSM_MCH_1880MHz_GSM_NTNV



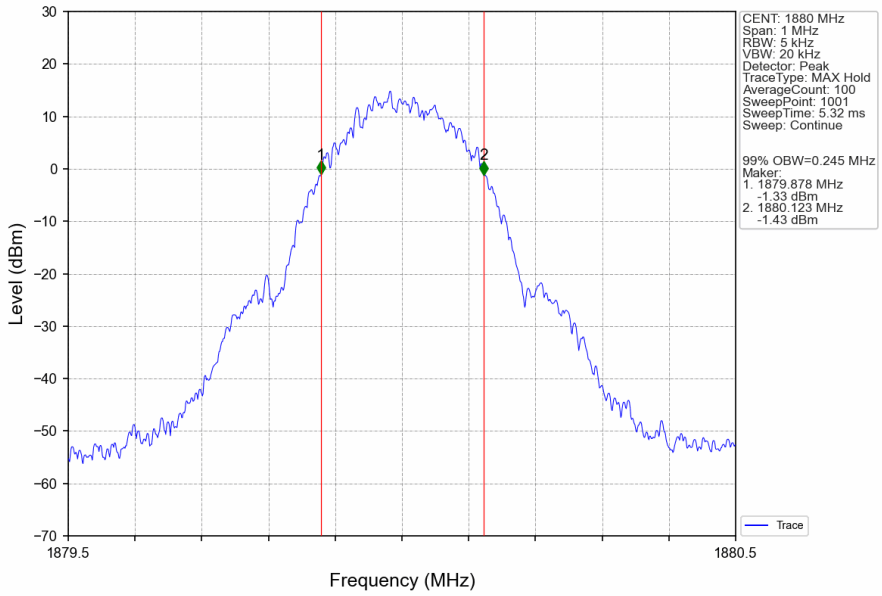
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



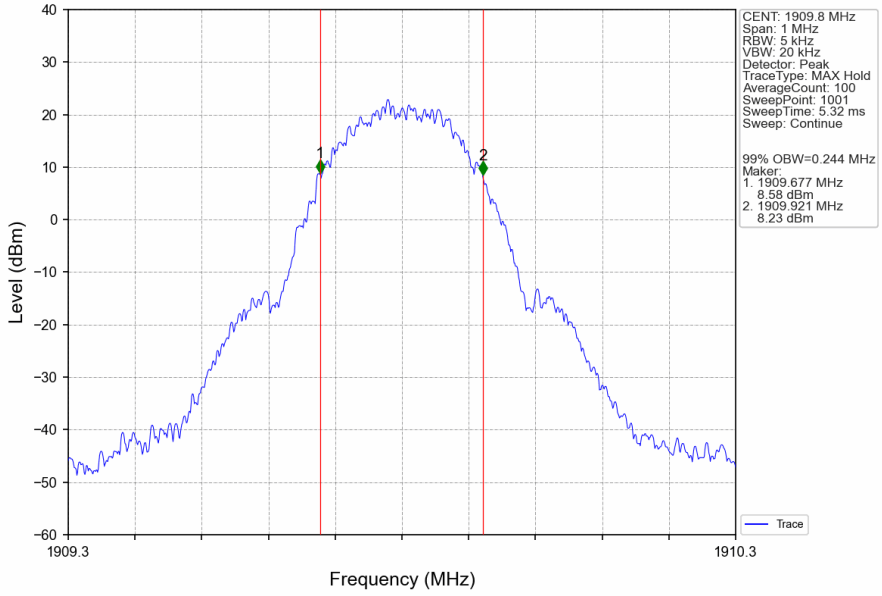

PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



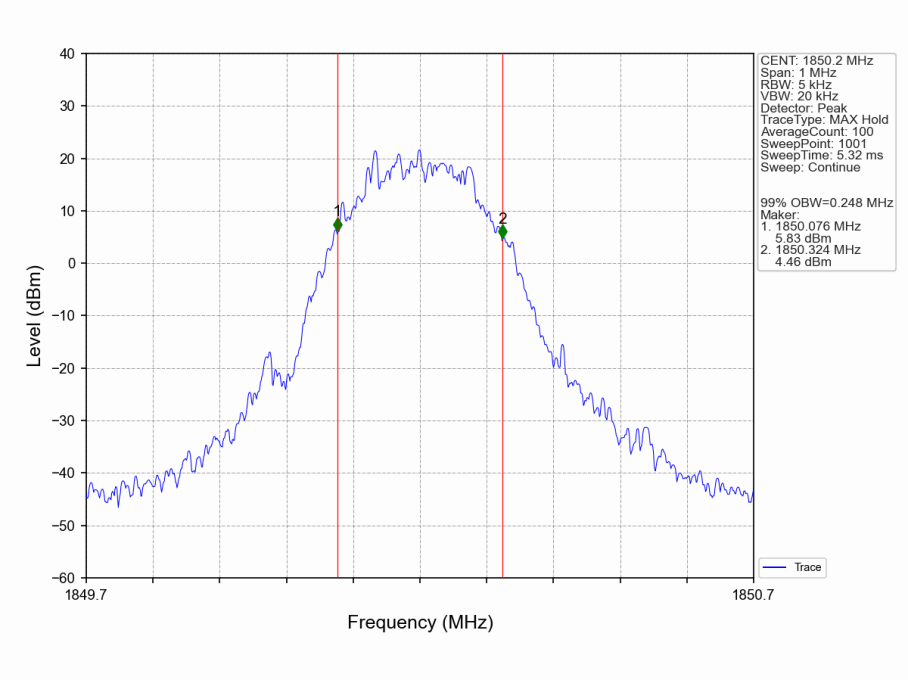
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



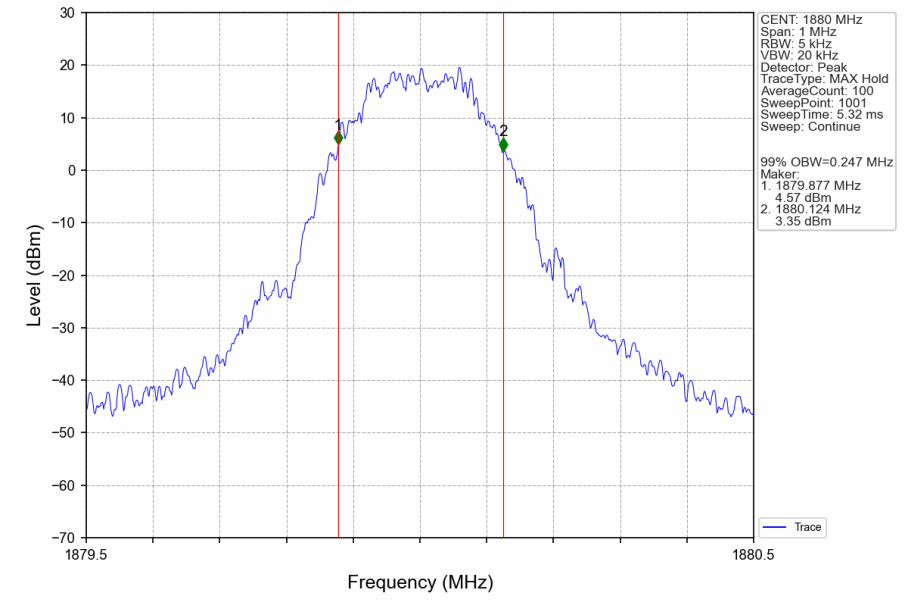

PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



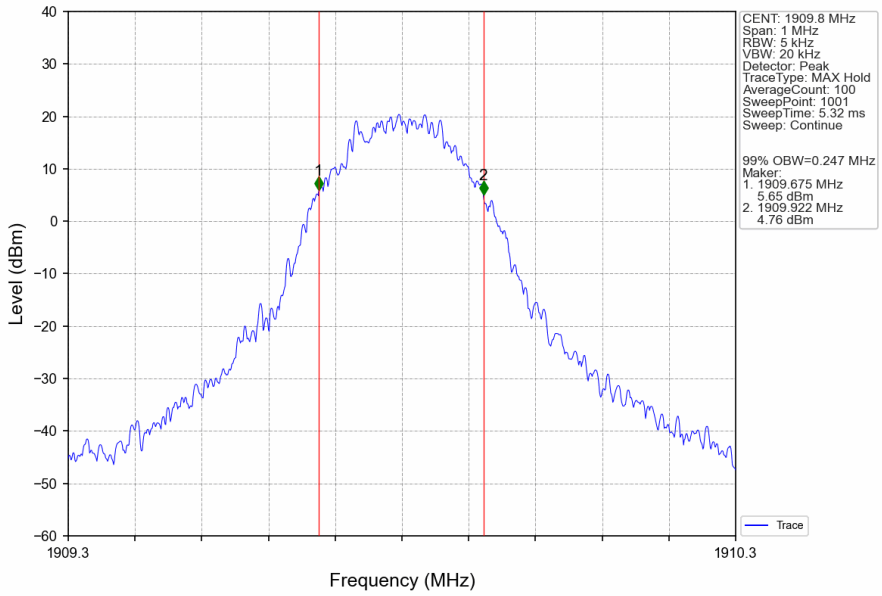
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV




PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV

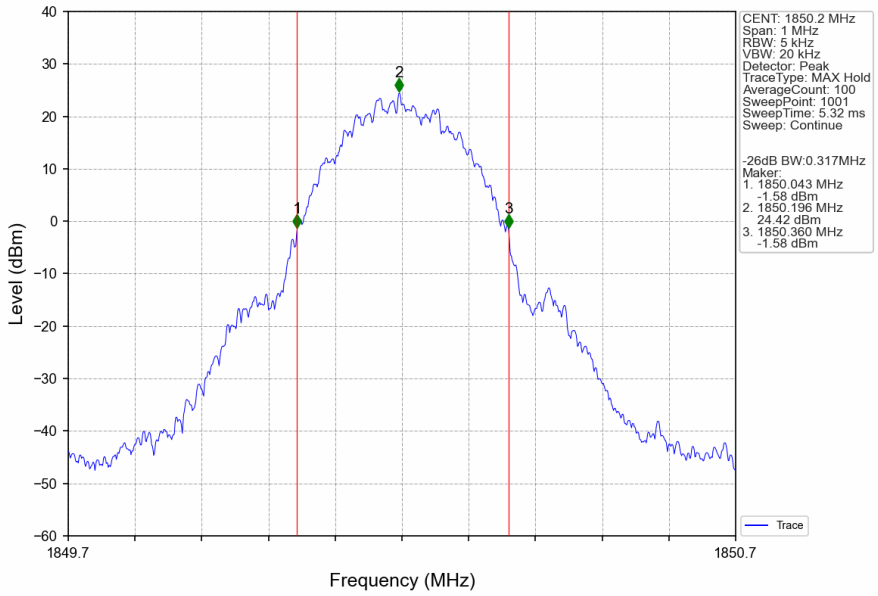


PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV

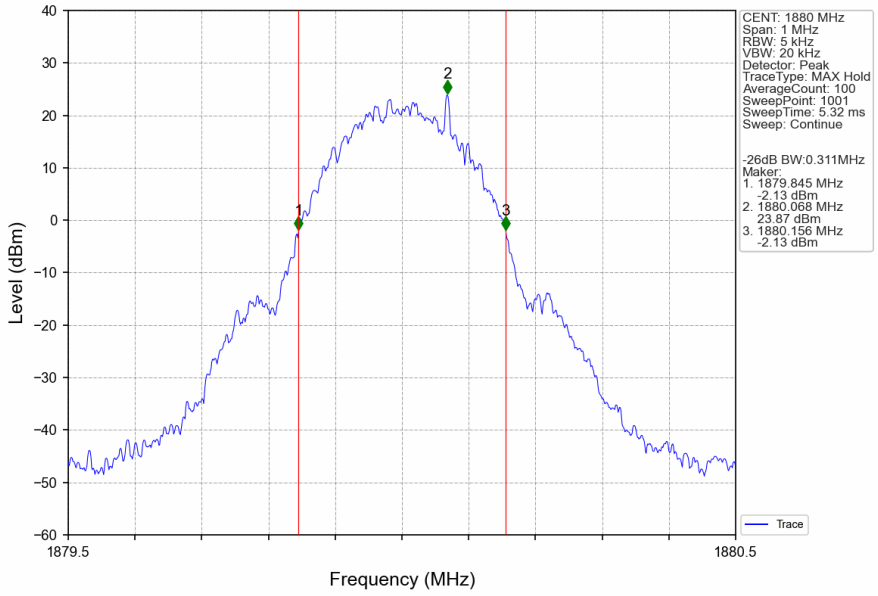


## 3.2.2 PCS1900_XDB

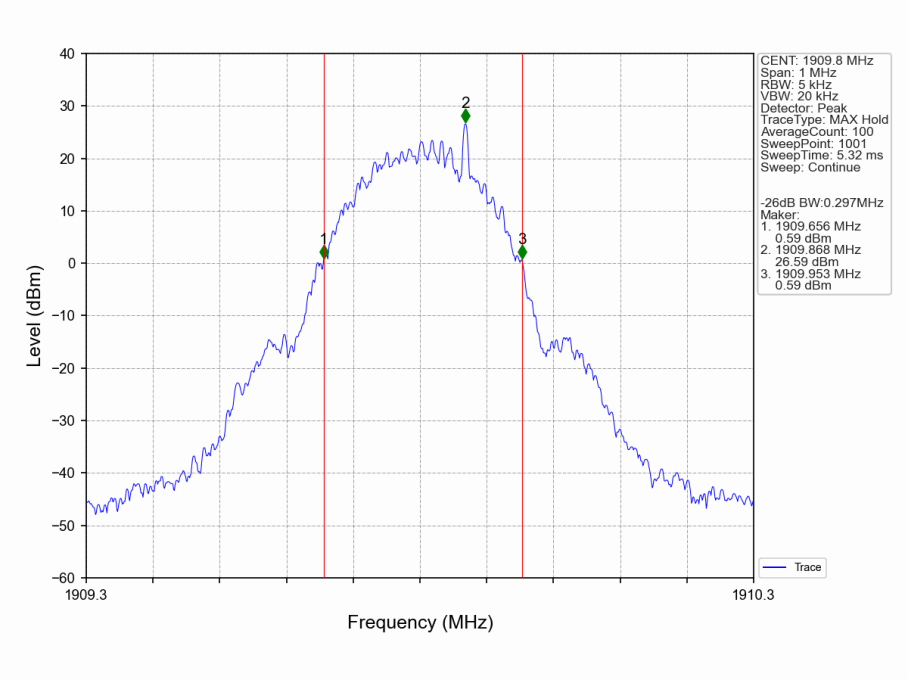
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



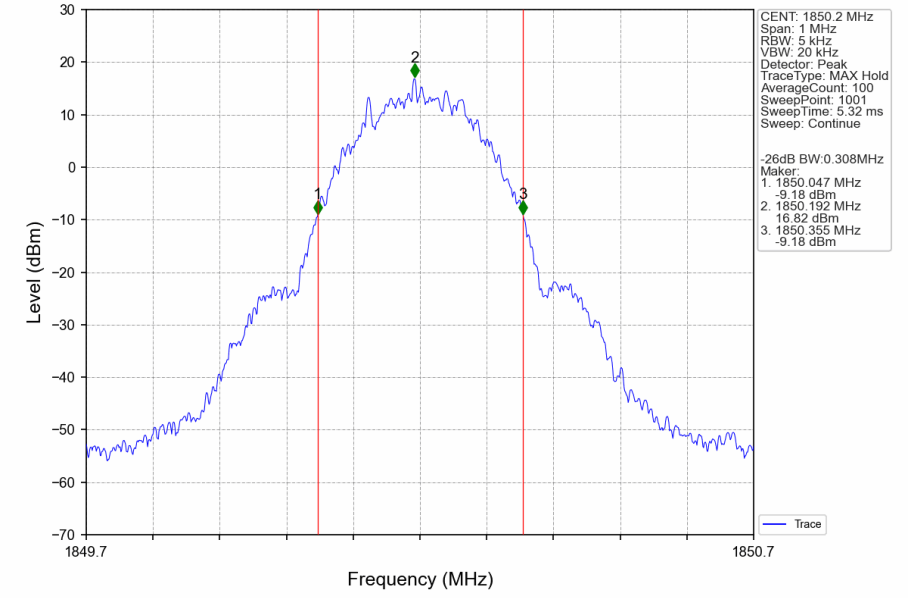

PCS1900_GSM_MCH_1880MHz_GSM_NTNV



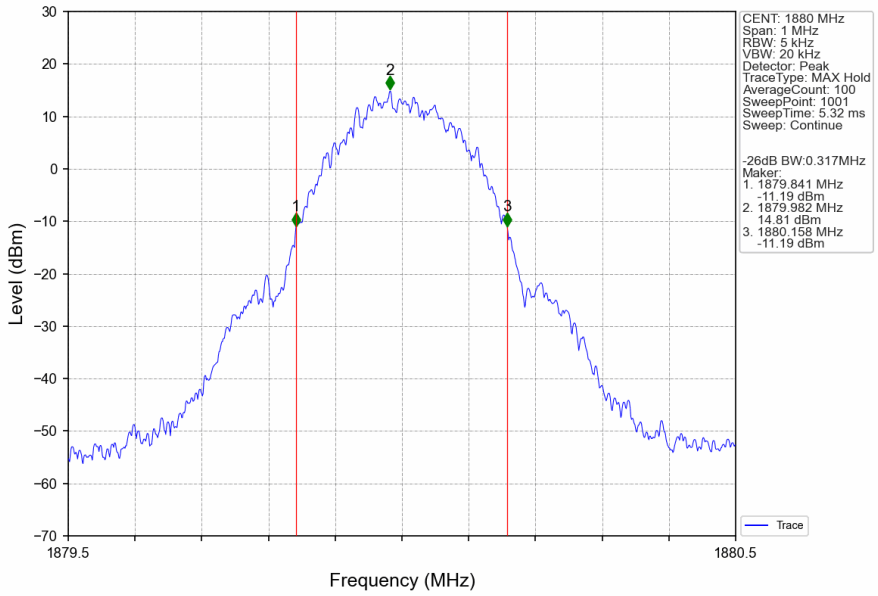
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



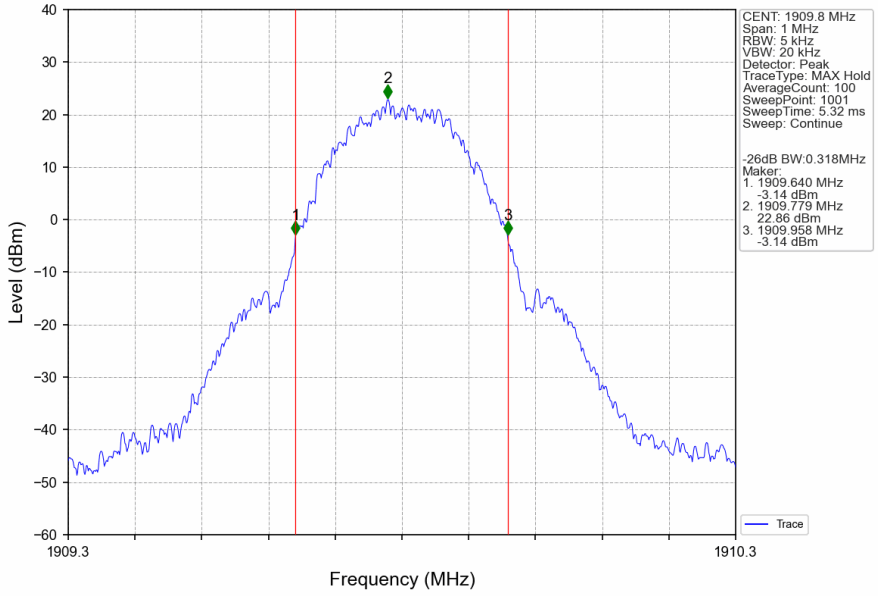

PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



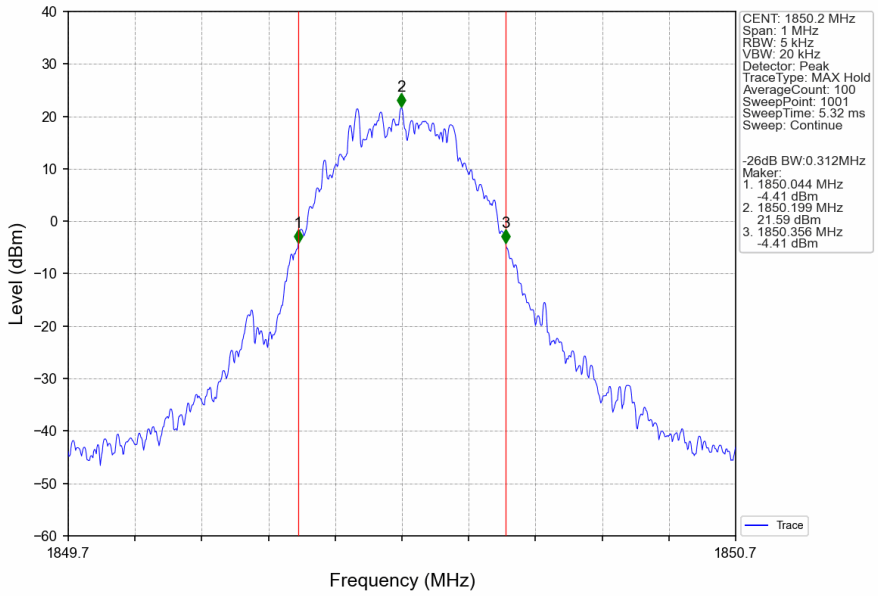
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



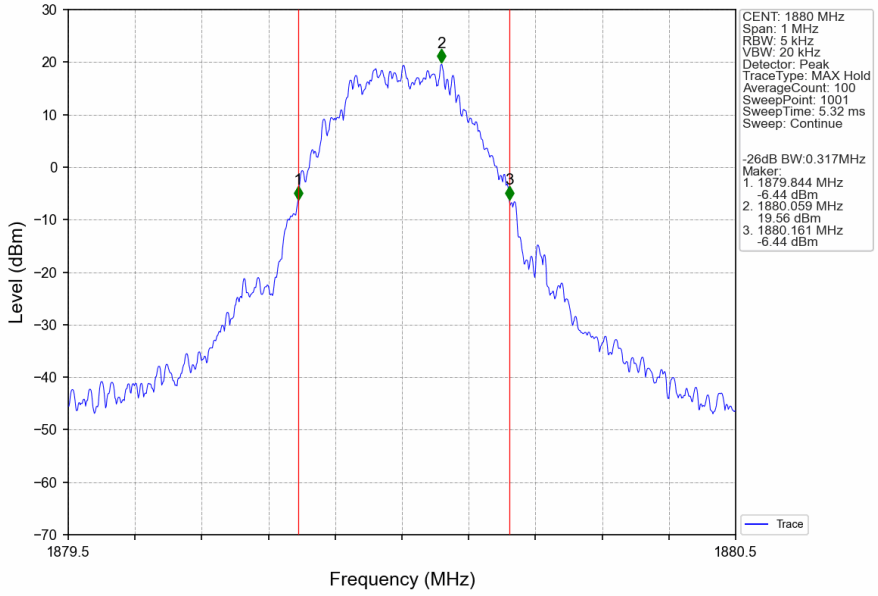

PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



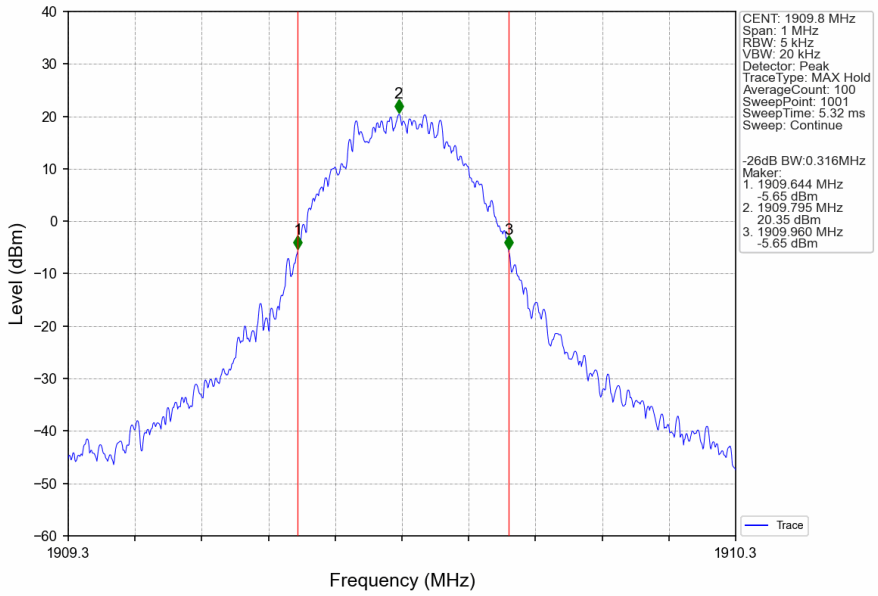
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV




PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



# 4. Peak-Average Ratio

## 4.1 Test Result

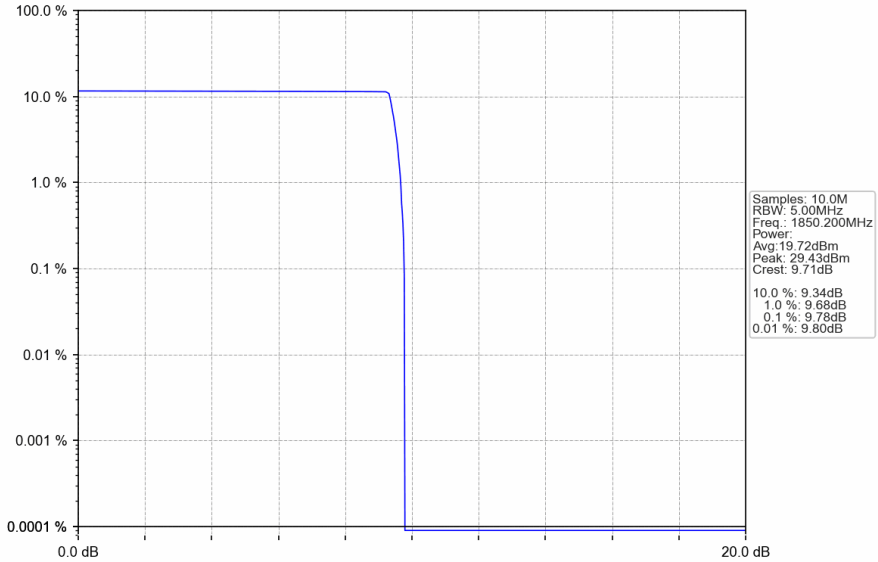
### 4.1.1 PCS1900

| Band: PCS1900 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | Peak-Average Ratio (dB) | | Verdict |
| | Network | Subset | | Result | Limit | |
| NTNV | GSM | GSM | 1850.2 | 9.78 | <=13 | Pass |
| | | | 1880 | 9.86 | <=13 | Pass |
| | | | 1909.8 | 9.78 | <=13 | Pass |
| | GPRS | 4 TX Slots | 1850.2 | 4.66 | <=13 | Pass |
| | | | 1880 | 4.78 | <=13 | Pass |
| | | | 1909.8 | 4.68 | <=13 | Pass |
| | EGPRS | 4 TX Slots | 1850.2 | 8.74 | <=13 | Pass |
| | | | 1880 | 8.68 | <=13 | Pass |
| | | | 1909.8 | 8.42 | <=13 | Pass |

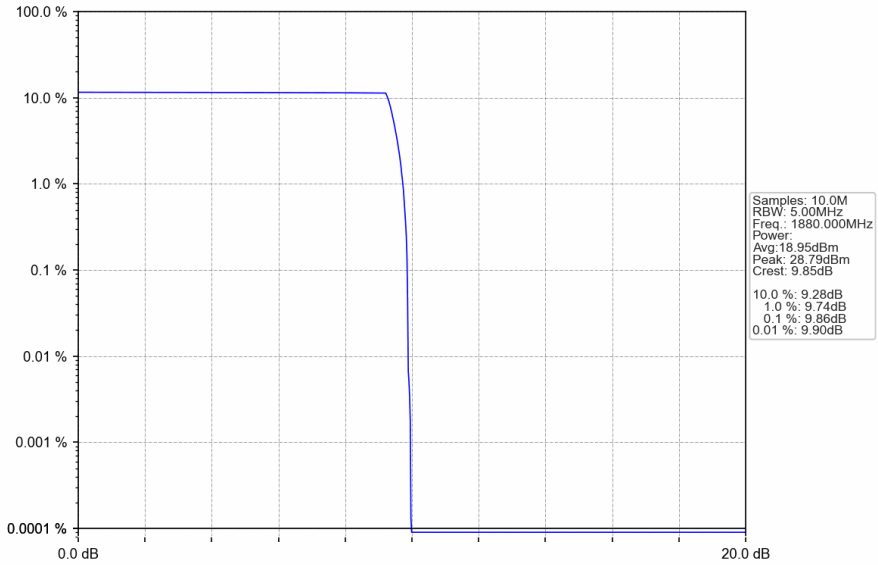
## 4.2 Test Graph

### 4.2.1 PCS1900

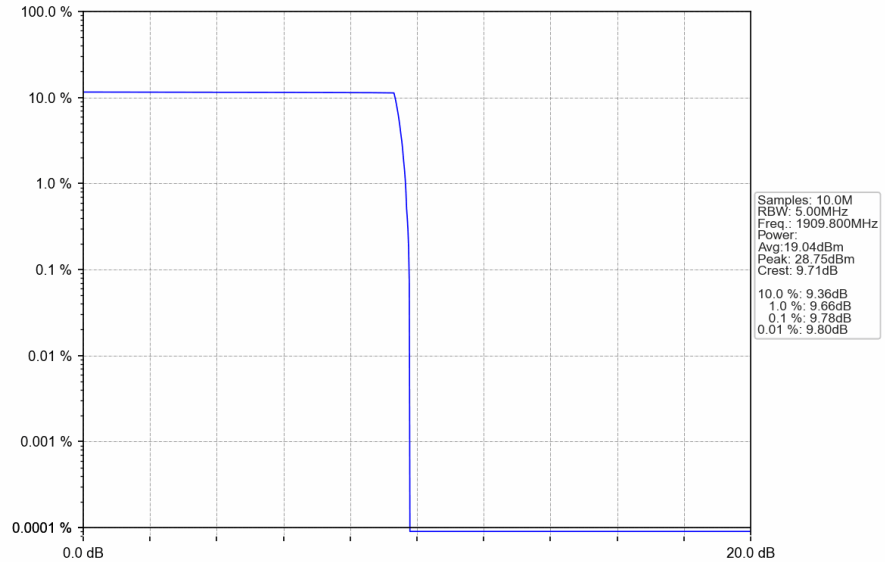
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



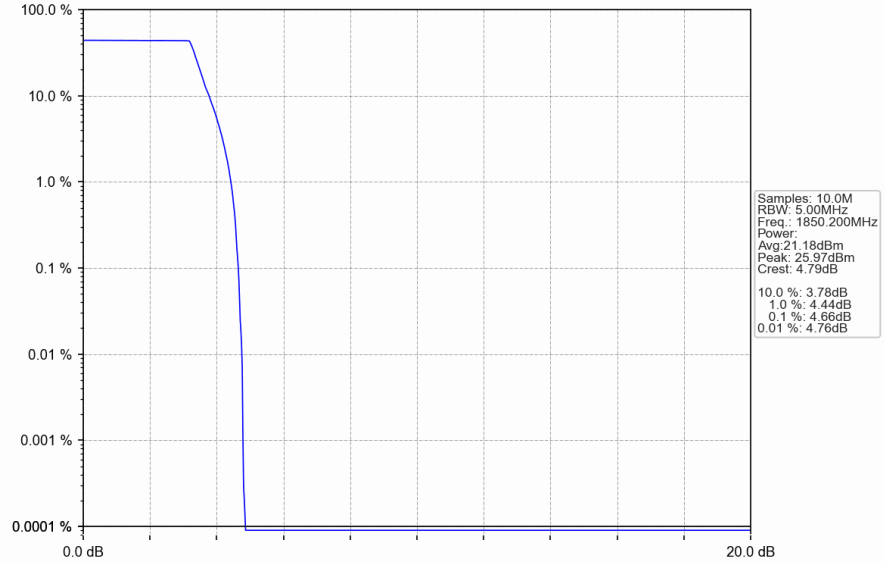

PCS1900_GSM_MCH_1880MHz_GSM_NTNV



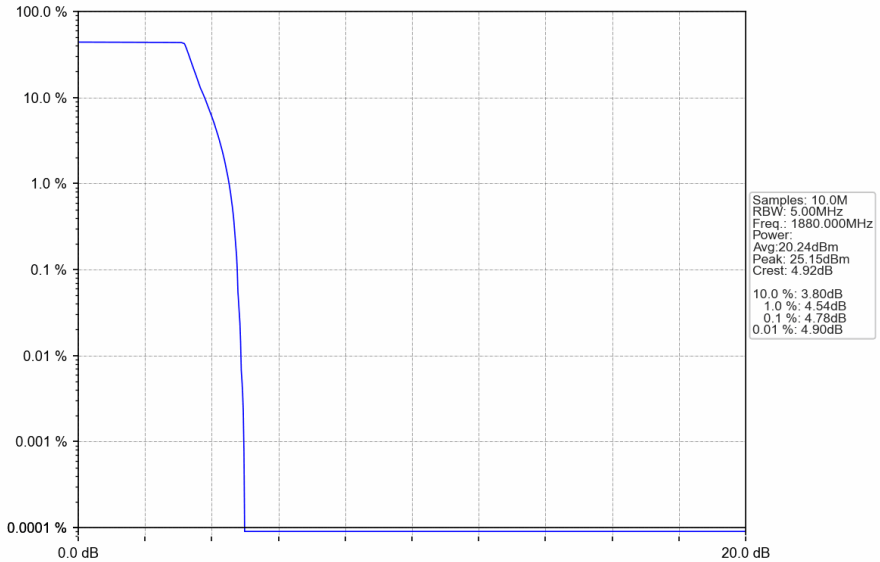
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



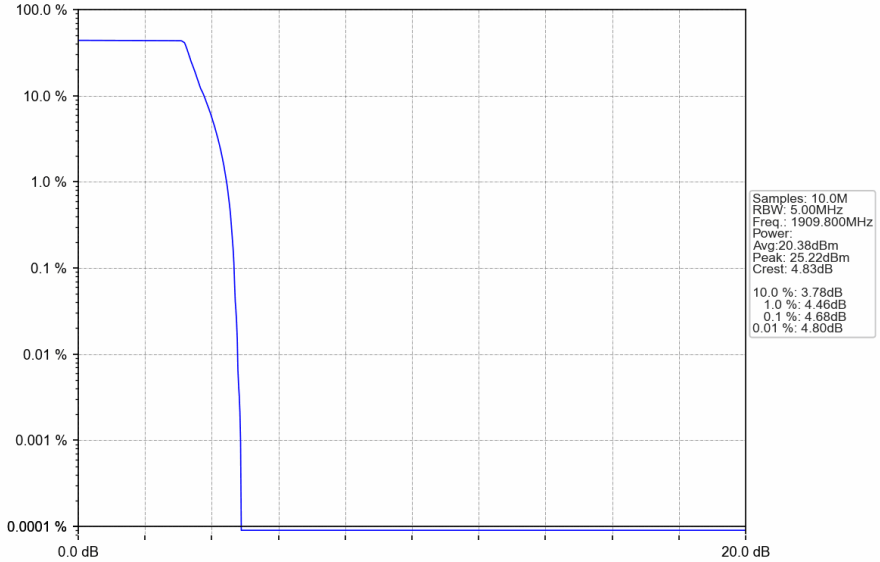

PCS1900_GPRS_LCH_1850.2MHz_4 TX Slots_NTNV



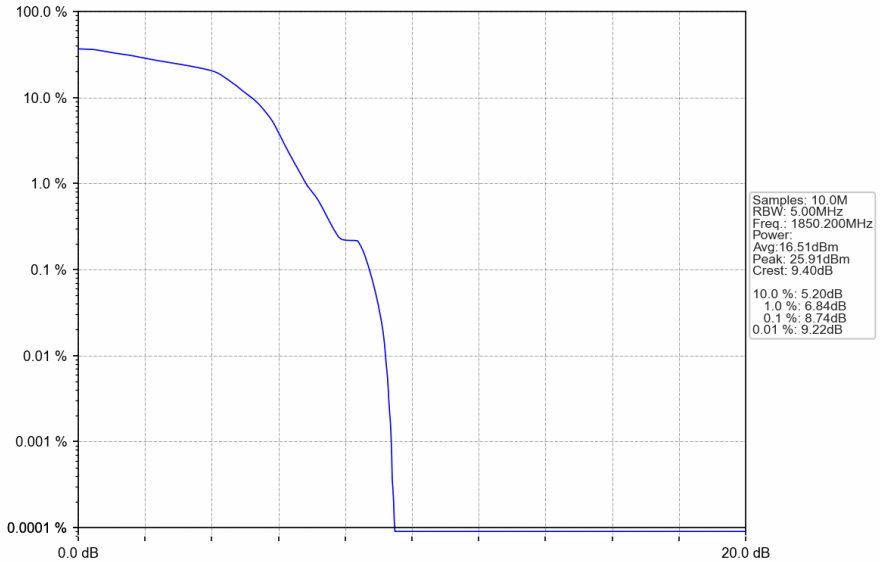
PCS1900_GPRS_MCH_1880MHz_4 TX Slots_NTNV



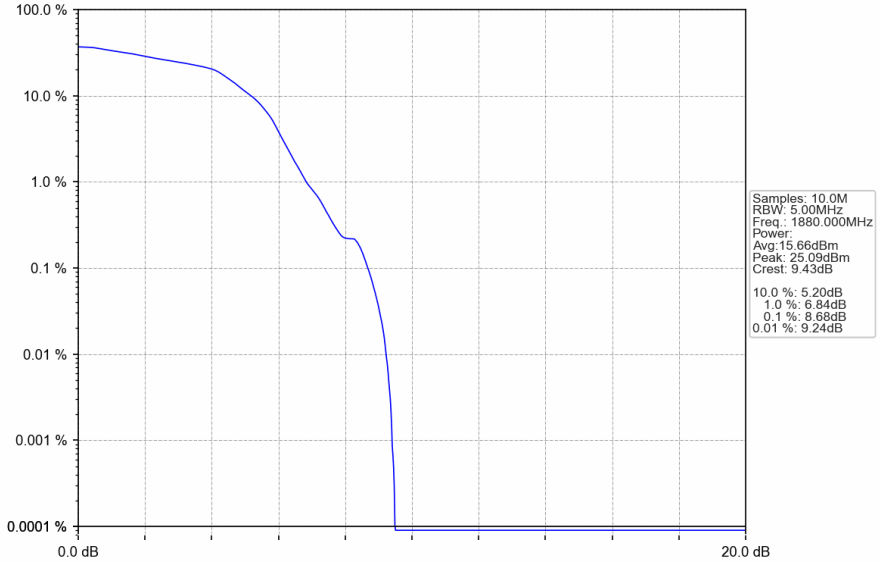

PCS1900_GPRS_HCH_1909.8MHz_4 TX Slots_NTNV



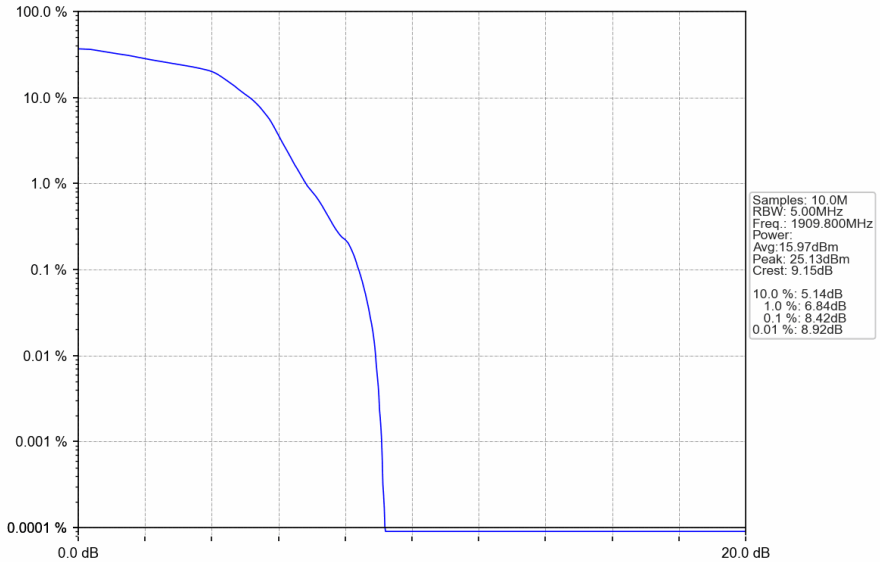
PCS1900_EGPRS_LCH_1850.2MHz_4 TX Slots_NTNV




PCS1900_EGPRS_MCH_1880MHz_4 TX Slots_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_4 TX Slots_NTNV



# 5. Spurious Emission

## 5.1 Test Result

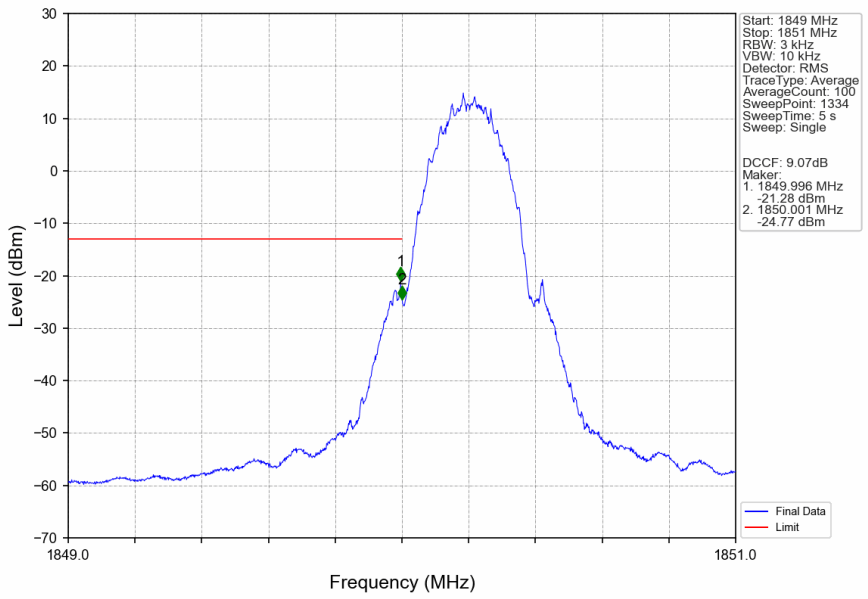
### 5.1.1 PCS1900

| Band: PCS1900 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (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 |
| | EGPRS | 1 TX Slot | 1850.2 | Refer To Test Graph | | Pass |
| | | | 1880 | Refer To Test Graph | | Pass |
| | | | 1909.8 | Refer To Test Graph | | Pass |

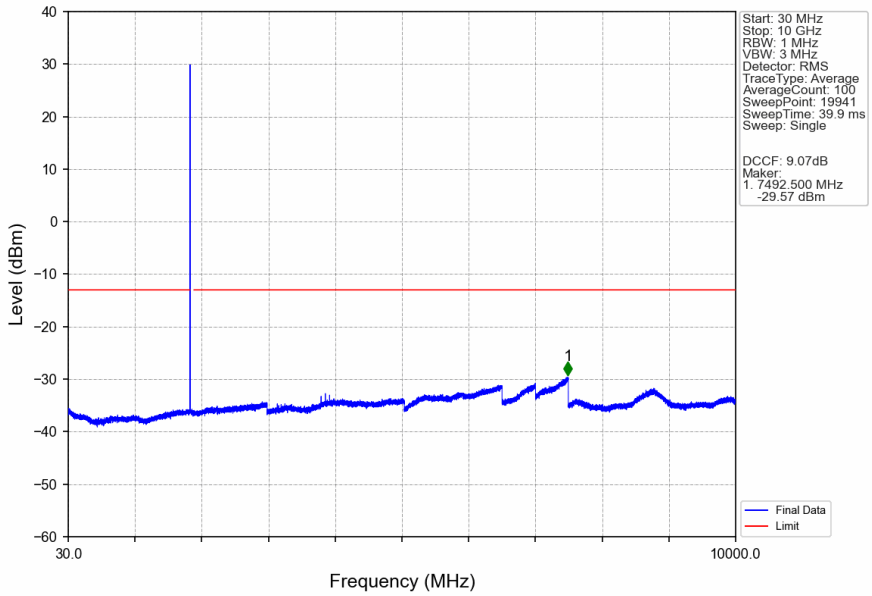
## 5.2 Test Graph

### 5.2.1 PCS1900

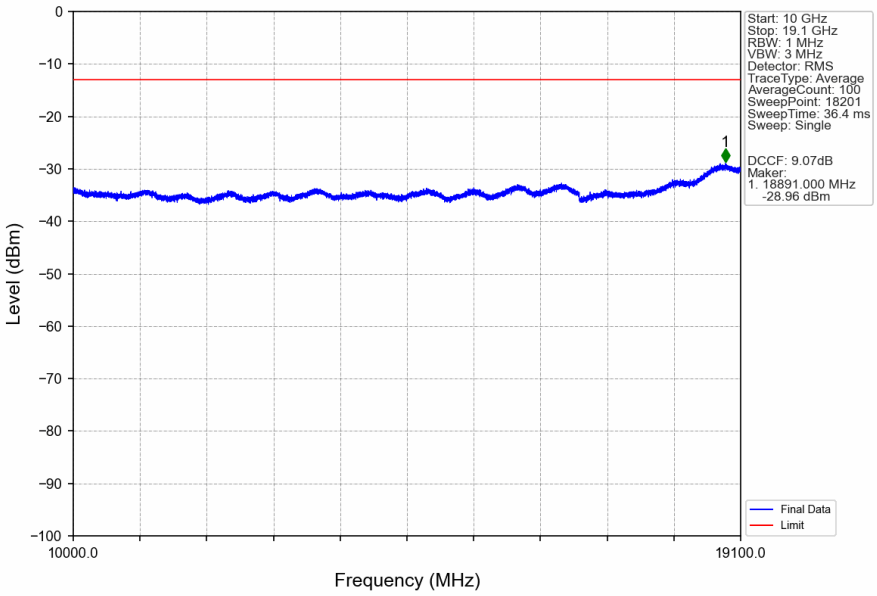
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



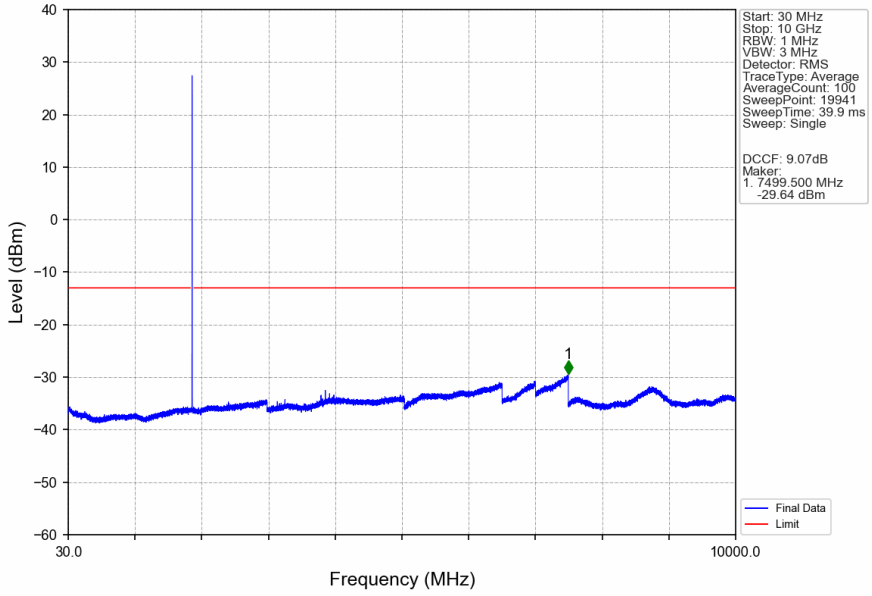

PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



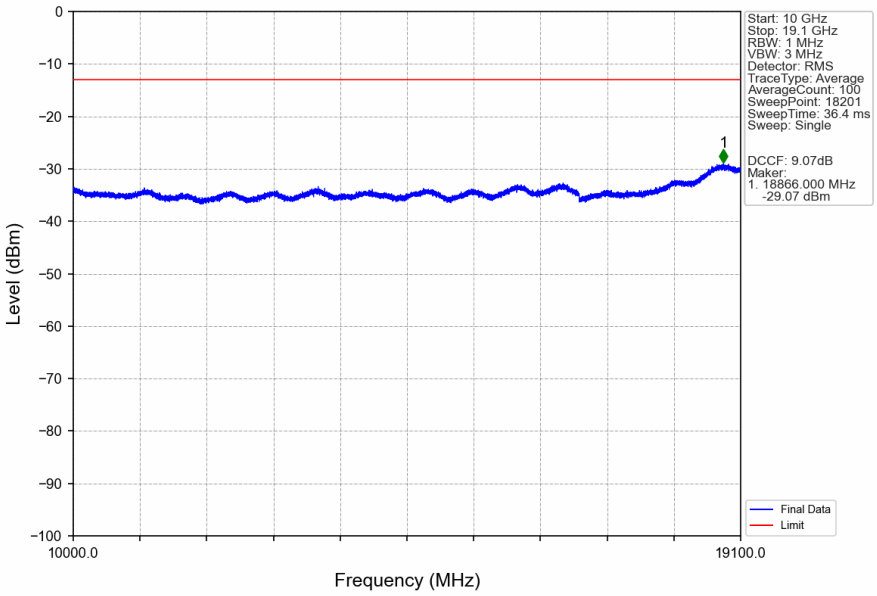
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



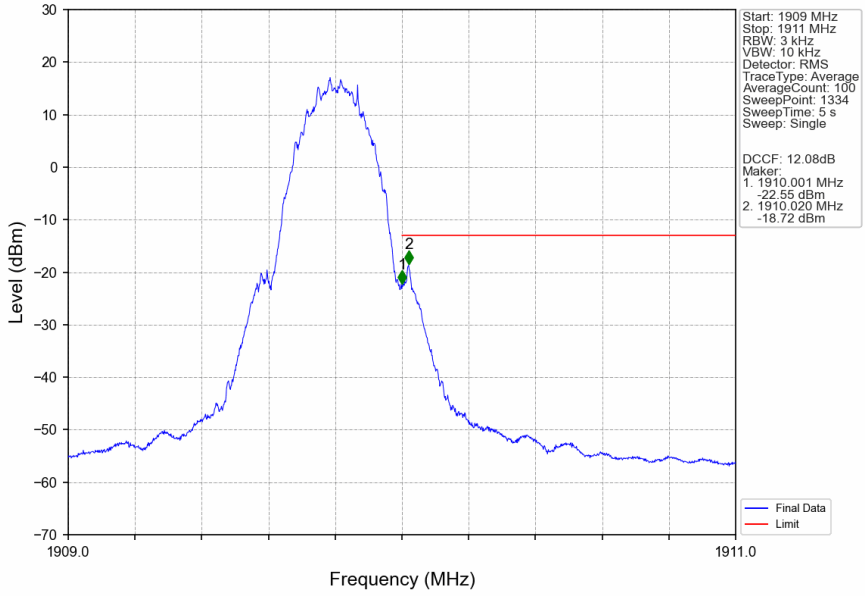

PCS1900_GSM_MCH_1880MHz_GSM_NTNV



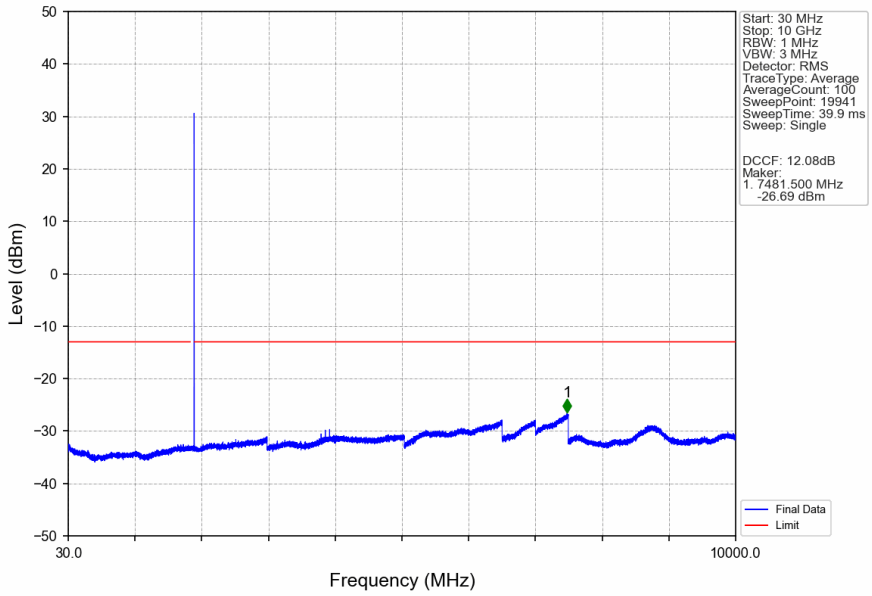
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



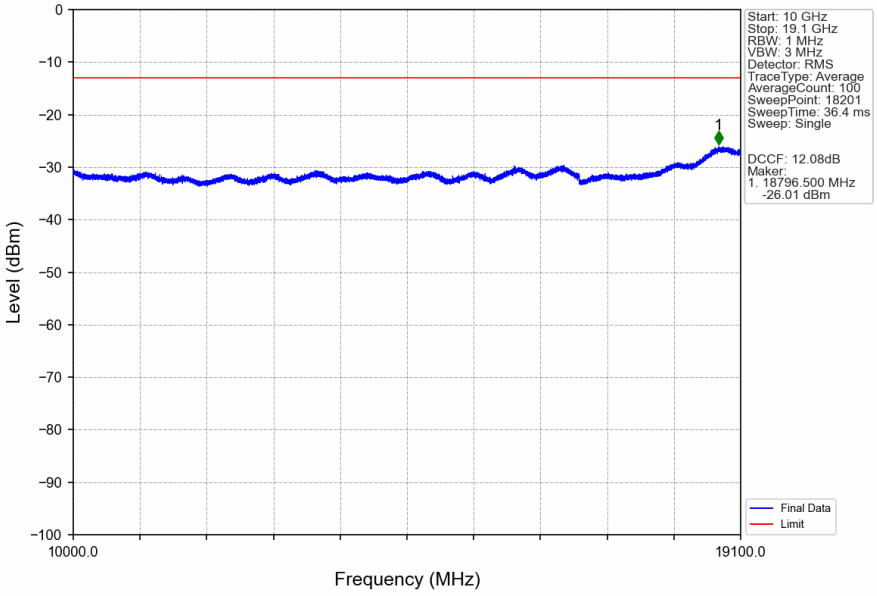

PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



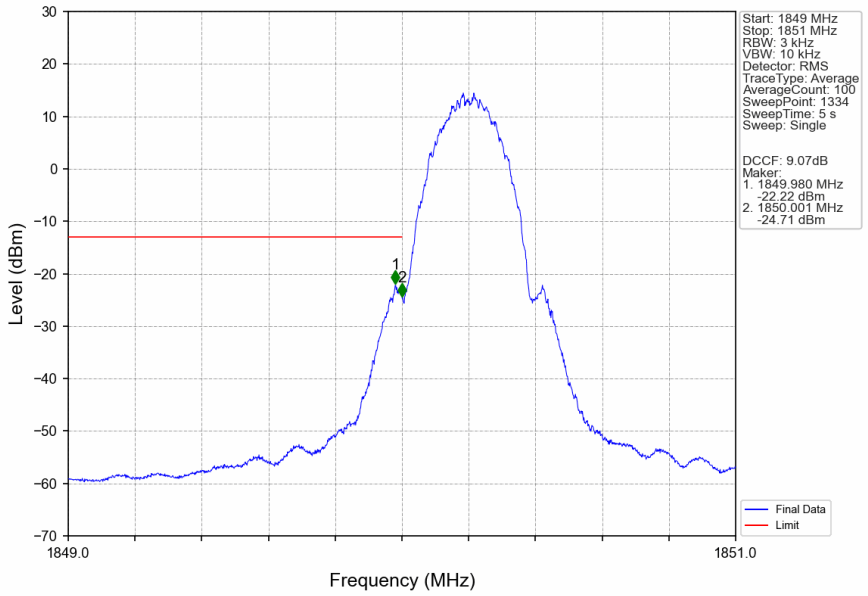
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



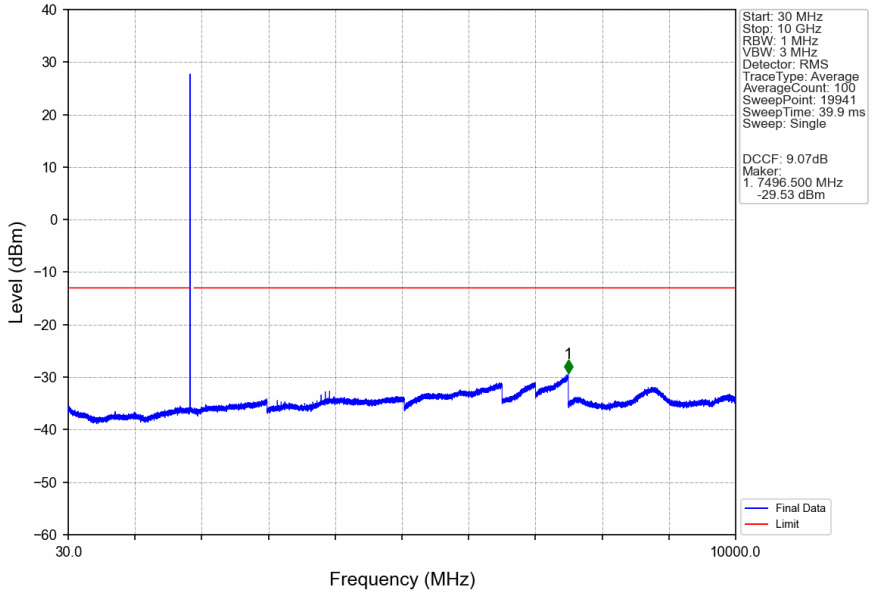

PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



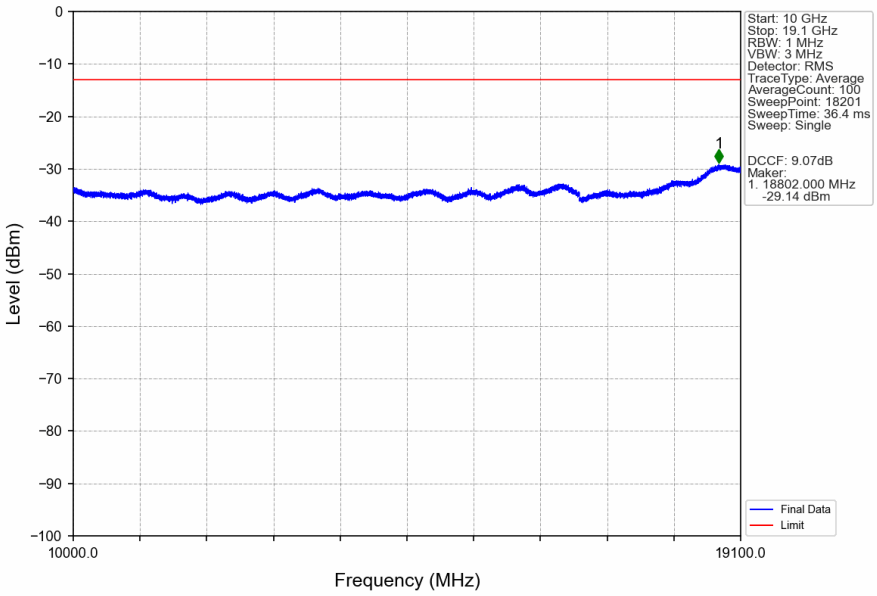
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



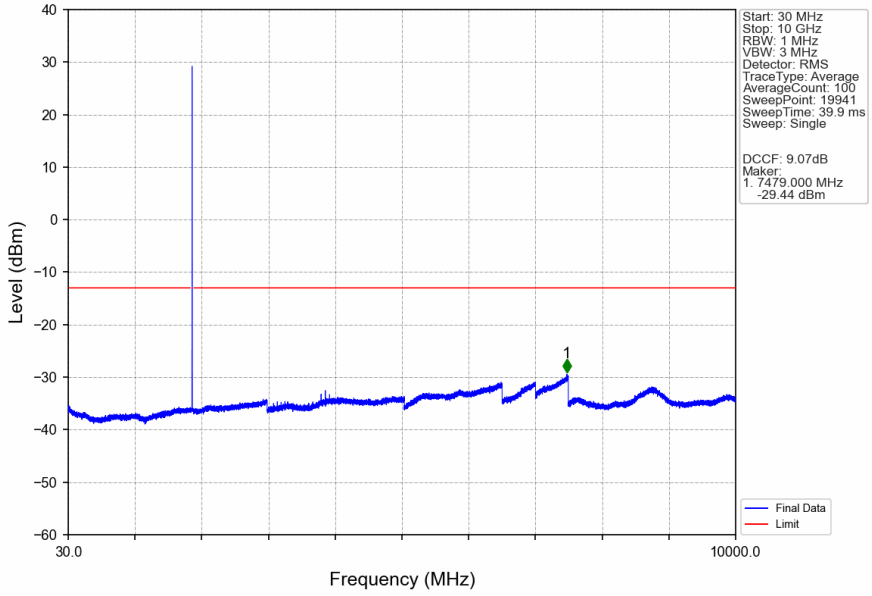

PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



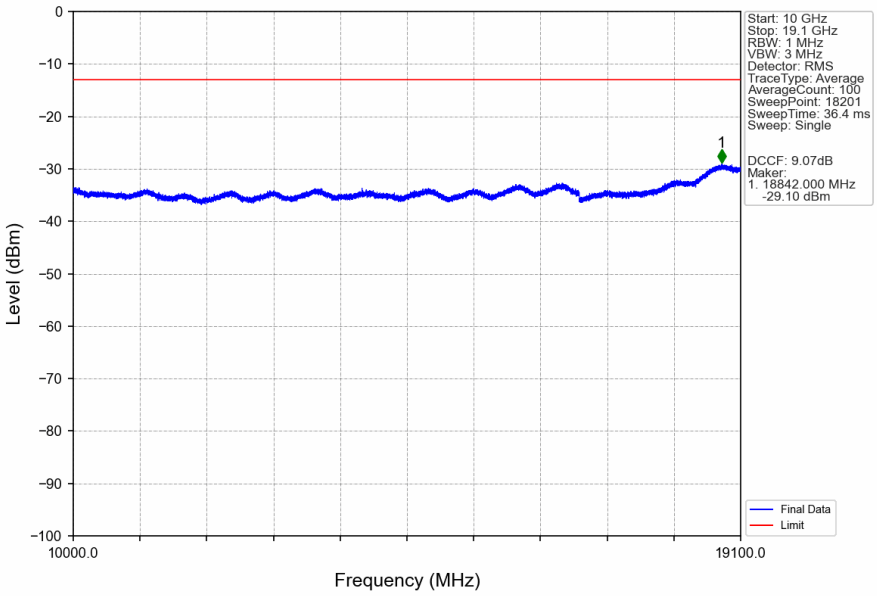
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



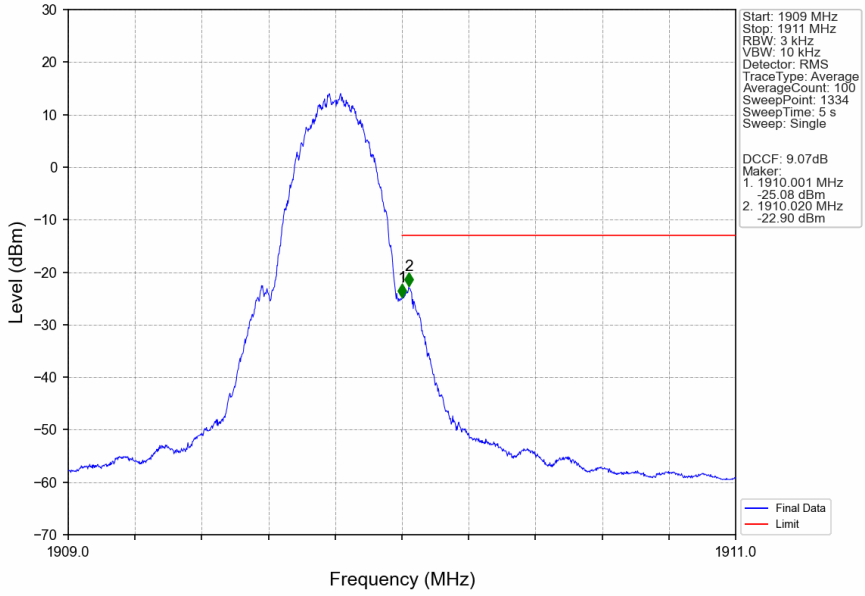

PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



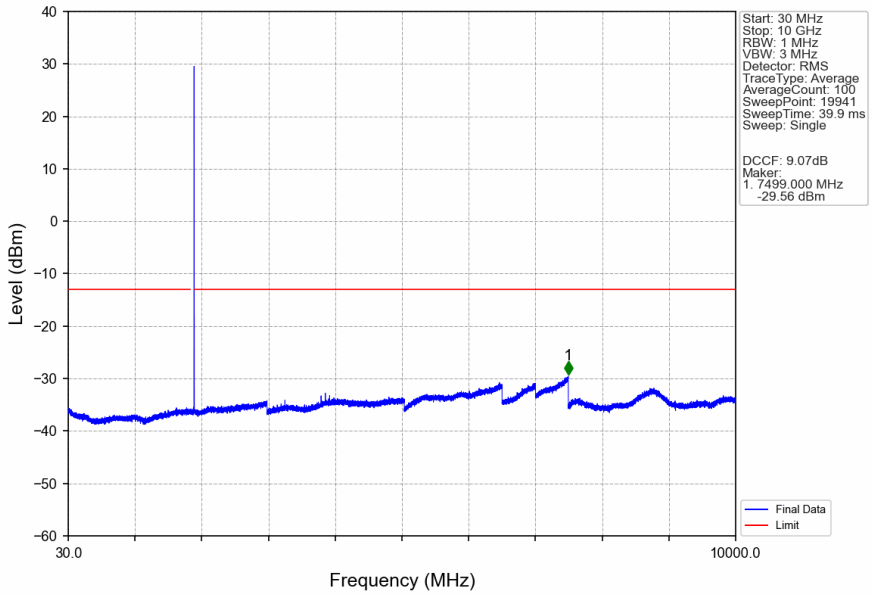
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



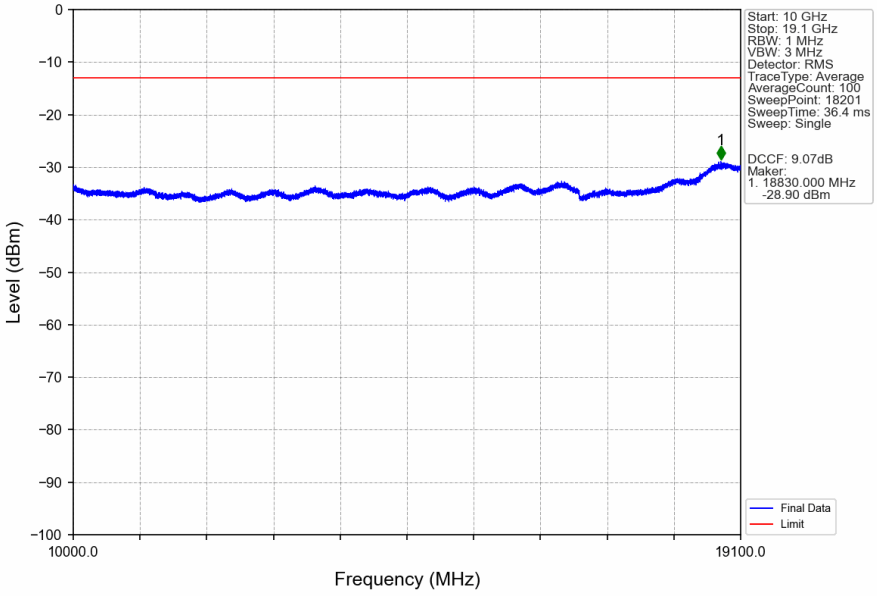

PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



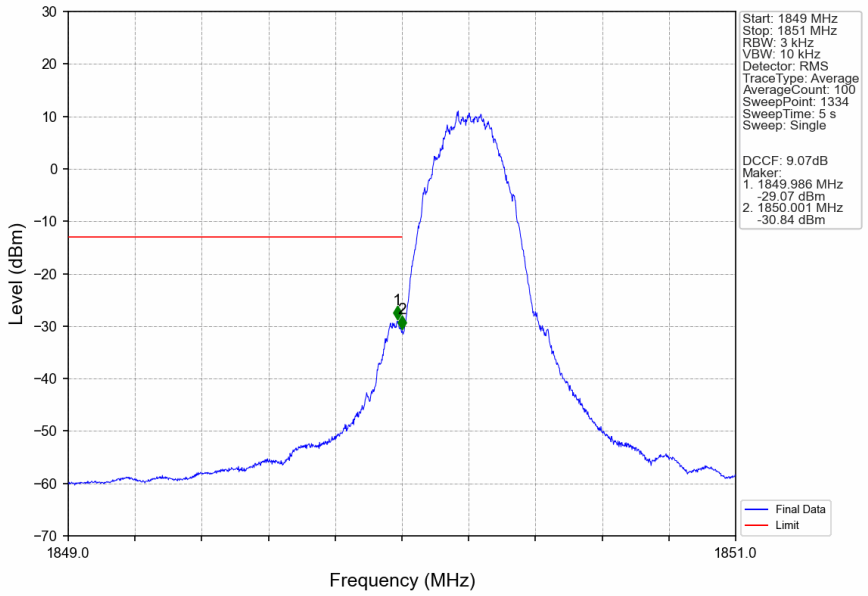
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



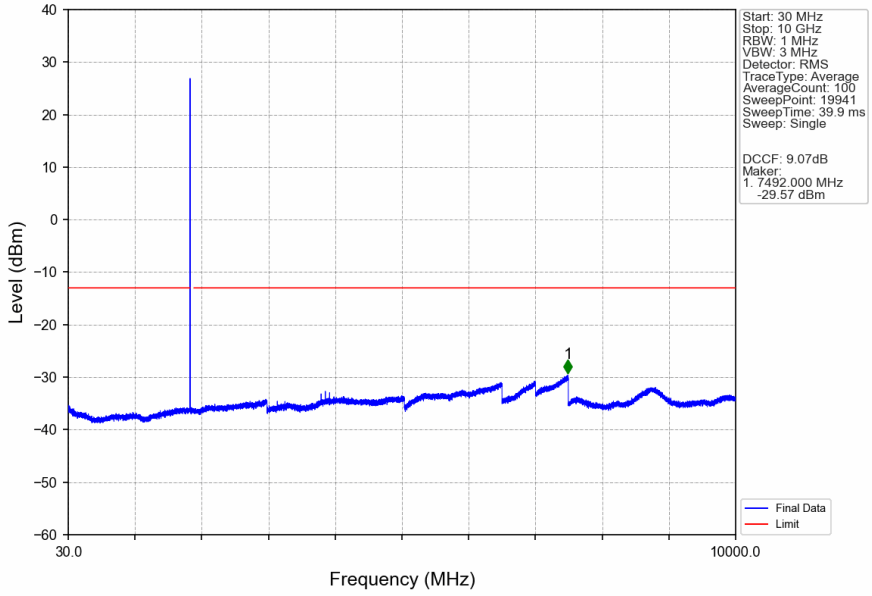

PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



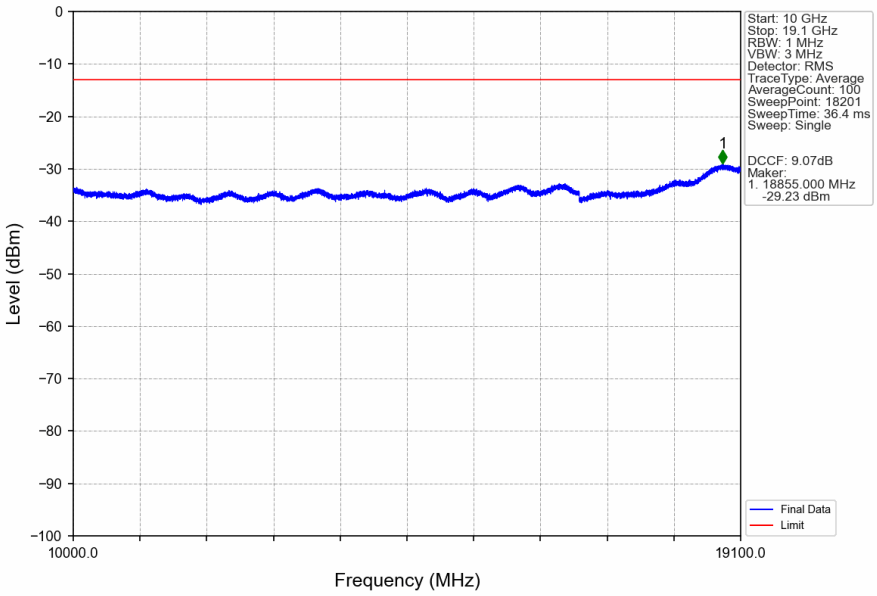
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



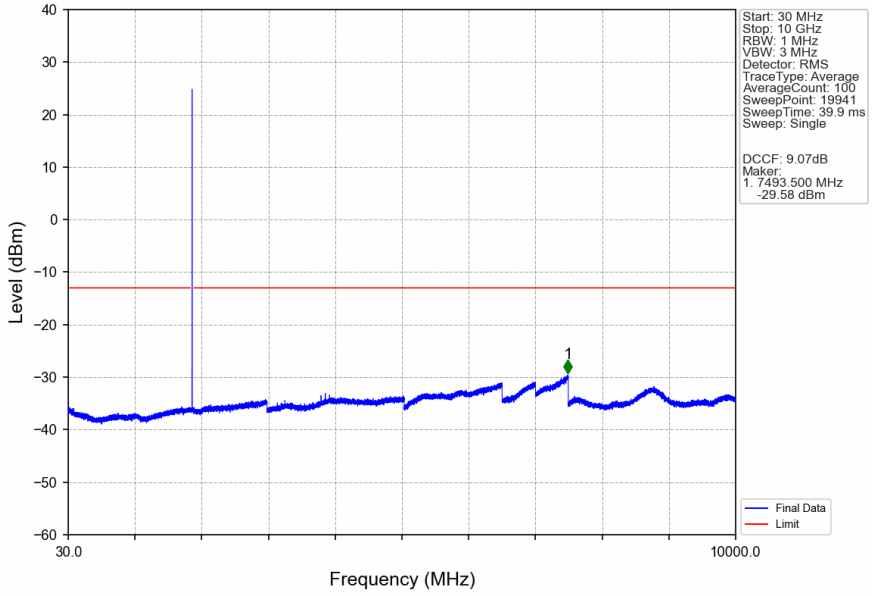

PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



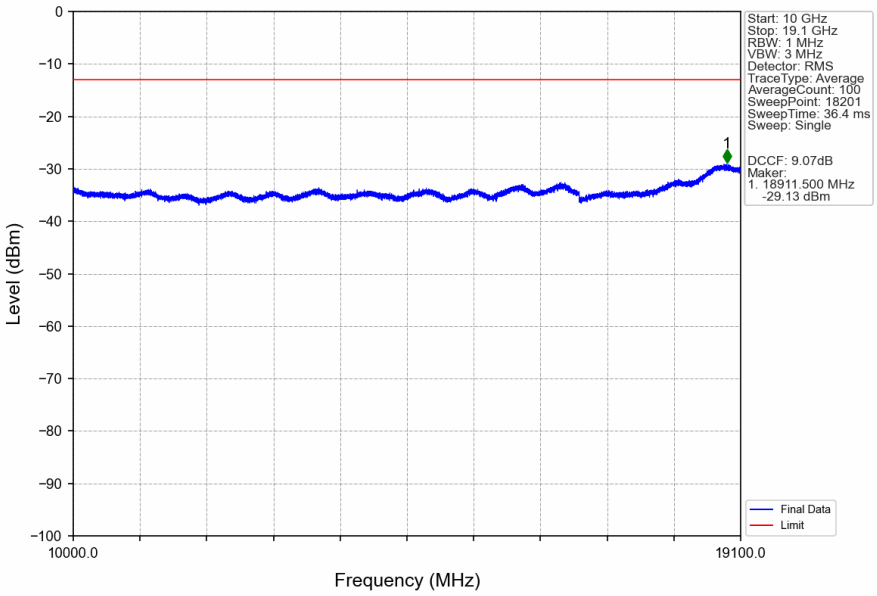
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



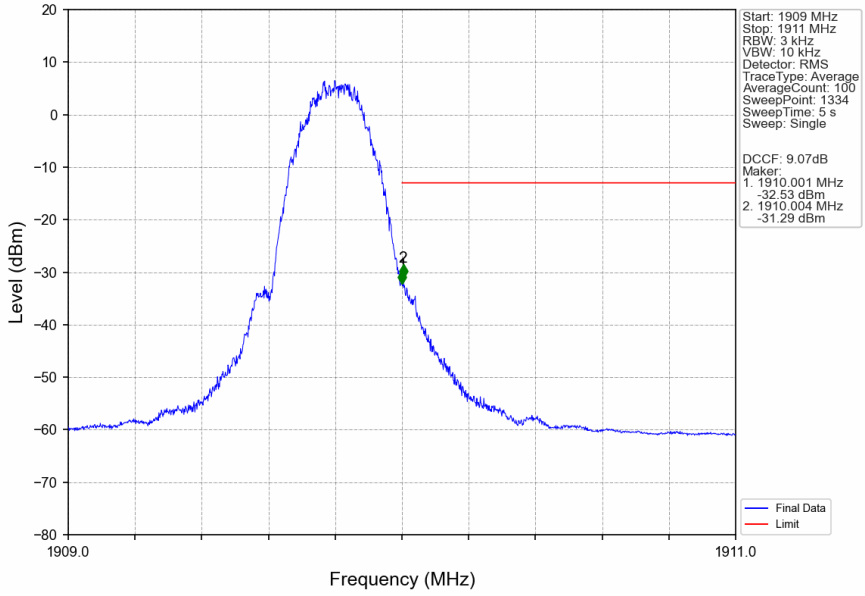

PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



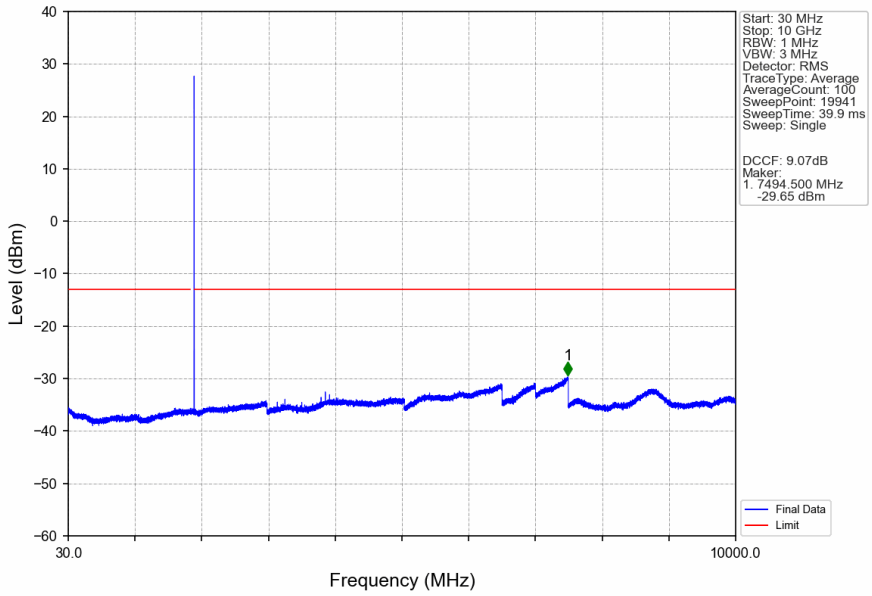
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



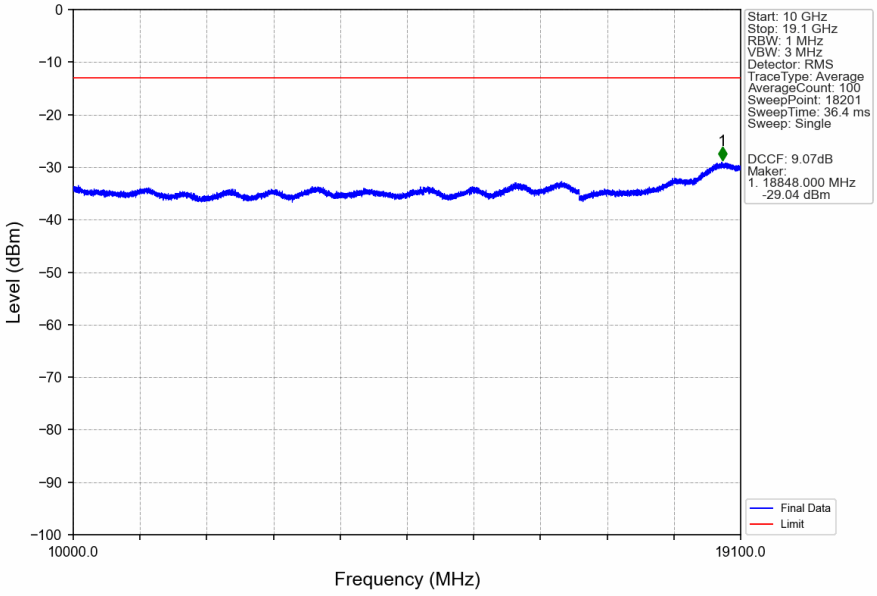

PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV




PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV




---End of Attachment---