



# Appendix B

## GSM 850 & 1900



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

### 1.1. Test Result

| Band     | Channel | Slot | Conducted Power (dBm) | ERP (dBm) | Limit(dBm) | Verdict |
|----------|---------|------|-----------------------|-----------|------------|---------|
| GSM850   | 128     | ---  | 32.61                 | 27.42     | 38.45      | PASS    |
| GSM850   | 190     | ---  | 32.57                 | 27.38     | 38.45      | PASS    |
| GSM850   | 251     | ---  | 32.42                 | 27.23     | 38.45      | PASS    |
| EGPRS850 | 128     | 1    | 32.63                 | 27.44     | 38.45      | PASS    |
| EGPRS850 | 128     | 2    | 31.07                 | 25.88     | 38.45      | PASS    |
| EGPRS850 | 128     | 3    | 28.96                 | 23.77     | 38.45      | PASS    |
| EGPRS850 | 128     | 4    | 27.84                 | 22.65     | 38.45      | PASS    |
| EGPRS850 | 190     | 1    | 32.57                 | 27.38     | 38.45      | PASS    |
| EGPRS850 | 190     | 2    | 30.99                 | 25.8      | 38.45      | PASS    |
| EGPRS850 | 190     | 3    | 28.83                 | 23.64     | 38.45      | PASS    |
| EGPRS850 | 190     | 4    | 27.71                 | 22.52     | 38.45      | PASS    |
| EGPRS850 | 251     | 1    | 32.44                 | 27.25     | 38.45      | PASS    |
| EGPRS850 | 251     | 2    | 30.85                 | 25.66     | 38.45      | PASS    |
| EGPRS850 | 251     | 3    | 28.64                 | 23.45     | 38.45      | PASS    |
| EGPRS850 | 251     | 4    | 27.63                 | 22.44     | 38.45      | PASS    |

| Band      | Channel | Slot | Conducted Power (dBm) | EIRP (dBm) | Limit(dBm) | Verdict |
|-----------|---------|------|-----------------------|------------|------------|---------|
| GSM1900   | 512     | ---  | 29.05                 | 29.05      | 33.00      | PASS    |
| GSM1900   | 661     | ---  | 29.27                 | 29.27      | 33.00      | PASS    |
| GSM1900   | 810     | ---  | 29.09                 | 29.09      | 33.00      | PASS    |
| EGPRS1900 | 512     | 1    | 29.06                 | 29.06      | 33.00      | PASS    |
| EGPRS1900 | 512     | 2    | 27.47                 | 27.47      | 33.00      | PASS    |
| EGPRS1900 | 512     | 3    | 25.39                 | 25.39      | 33.00      | PASS    |
| EGPRS1900 | 512     | 4    | 24.73                 | 24.73      | 33.00      | PASS    |
| EGPRS1900 | 661     | 1    | 29.28                 | 29.28      | 33.00      | PASS    |
| EGPRS1900 | 661     | 2    | 27.79                 | 27.79      | 33.00      | PASS    |
| EGPRS1900 | 661     | 3    | 25.78                 | 25.78      | 33.00      | PASS    |
| EGPRS1900 | 661     | 4    | 24.84                 | 24.84      | 33.00      | PASS    |
| EGPRS1900 | 810     | 1    | 29.09                 | 29.09      | 33.00      | PASS    |
| EGPRS1900 | 810     | 2    | 27.71                 | 27.71      | 33.00      | PASS    |
| EGPRS1900 | 810     | 3    | 25.79                 | 25.79      | 33.00      | PASS    |
| EGPRS1900 | 810     | 4    | 24.89                 | 24.89      | 33.00      | PASS    |



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Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power), the following formula should be taken to calculate it,

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



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## 2. Peak-to-Average Ratio

### 2.1. Test Result

| Band      | Channel | Peak-to-Average Ratio(dB) | Limit(dB) | Verdict |
|-----------|---------|---------------------------|-----------|---------|
| GSM850    | 128     | 7.65                      | 13        | PASS    |
| GSM850    | 190     | 7.68                      | 13        | PASS    |
| GSM850    | 251     | 7.65                      | 13        | PASS    |
| EGPRS850  | 128     | 10.12                     | 13        | PASS    |
| EGPRS850  | 190     | 4.93                      | 13        | PASS    |
| EGPRS850  | 251     | 10.12                     | 13        | PASS    |
| GSM1900   | 512     | 7.71                      | 13        | PASS    |
| GSM1900   | 661     | 7.65                      | 13        | PASS    |
| GSM1900   | 810     | 7.71                      | 13        | PASS    |
| EGPRS1900 | 512     | 9.91                      | 13        | PASS    |
| EGPRS1900 | 661     | 10.06                     | 13        | PASS    |
| EGPRS1900 | 810     | 10.00                     | 13        | PASS    |



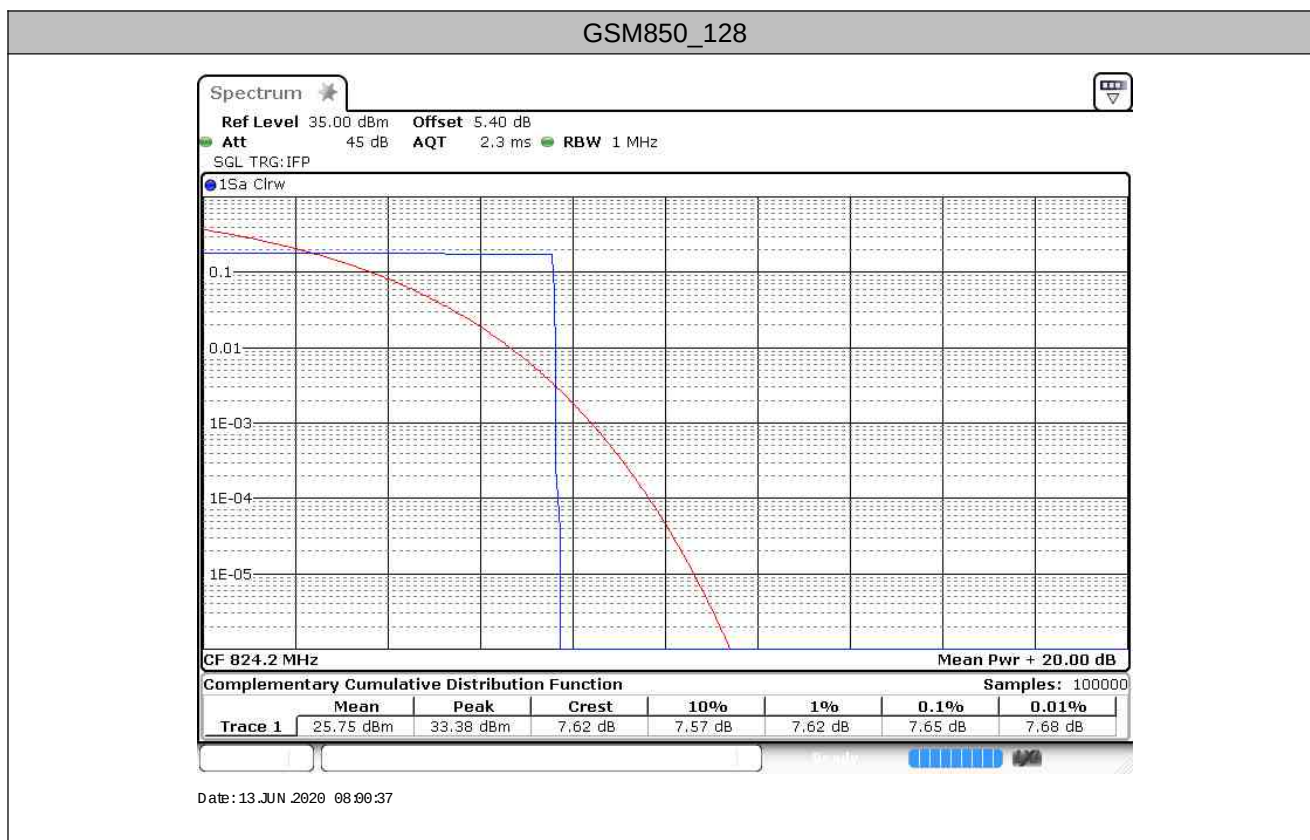
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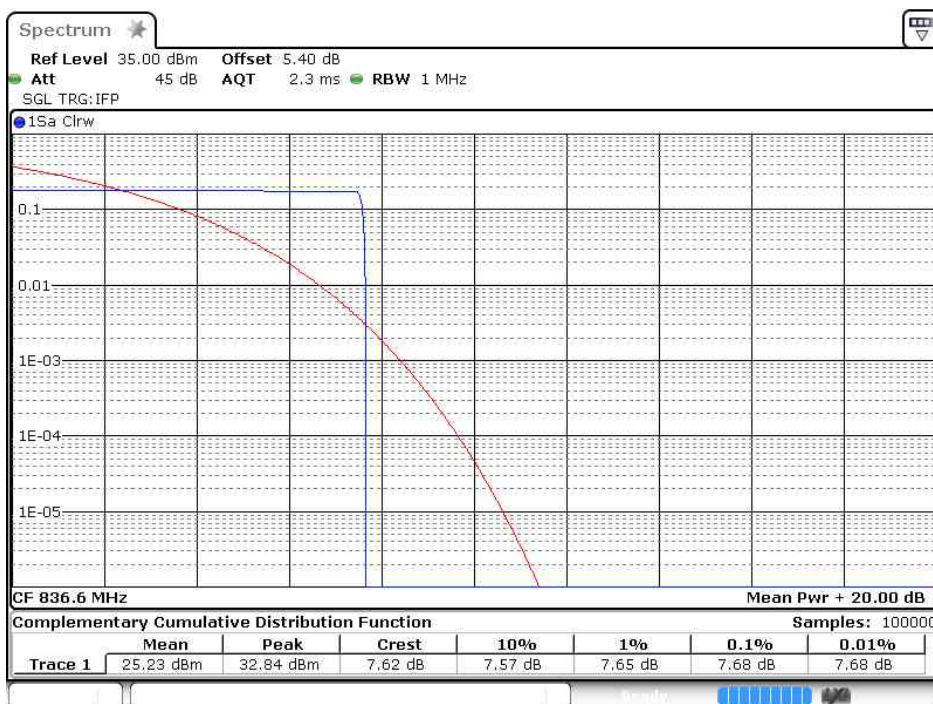


## 2.2.Part II - Test Plots





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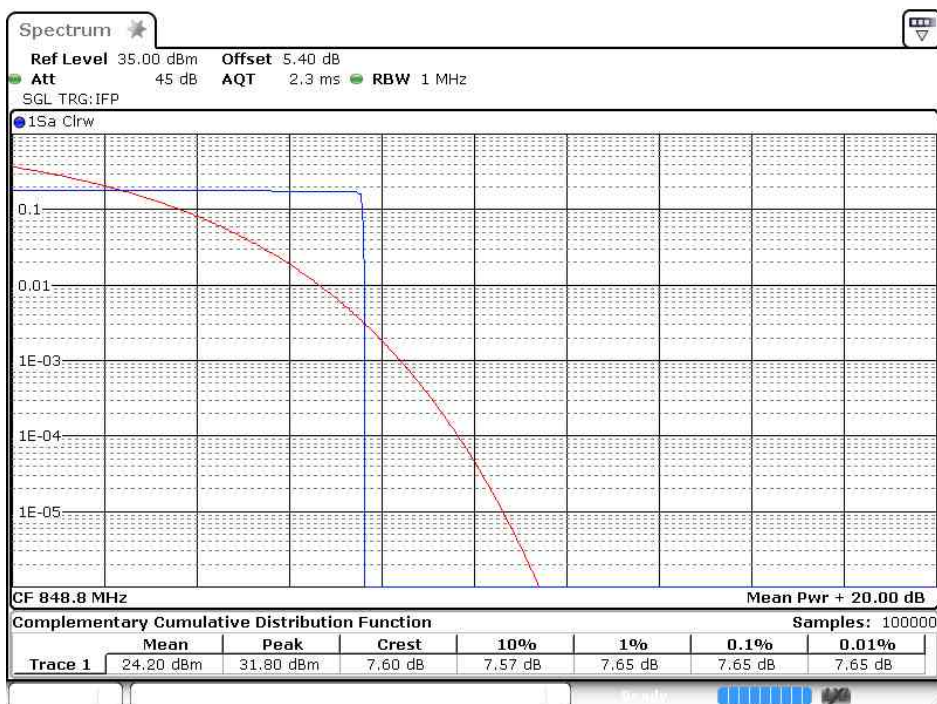
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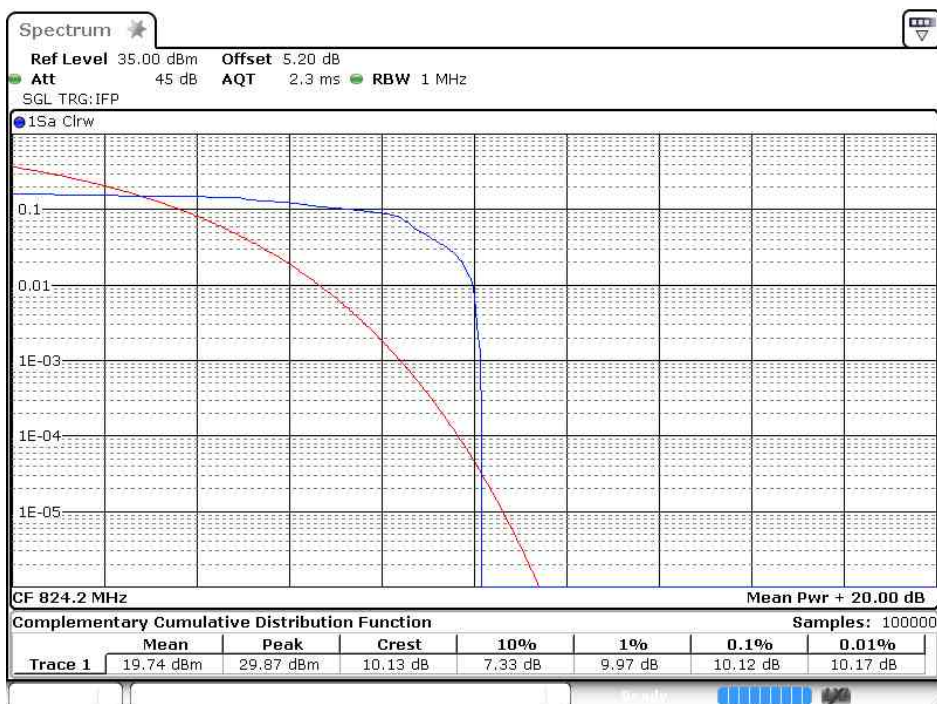
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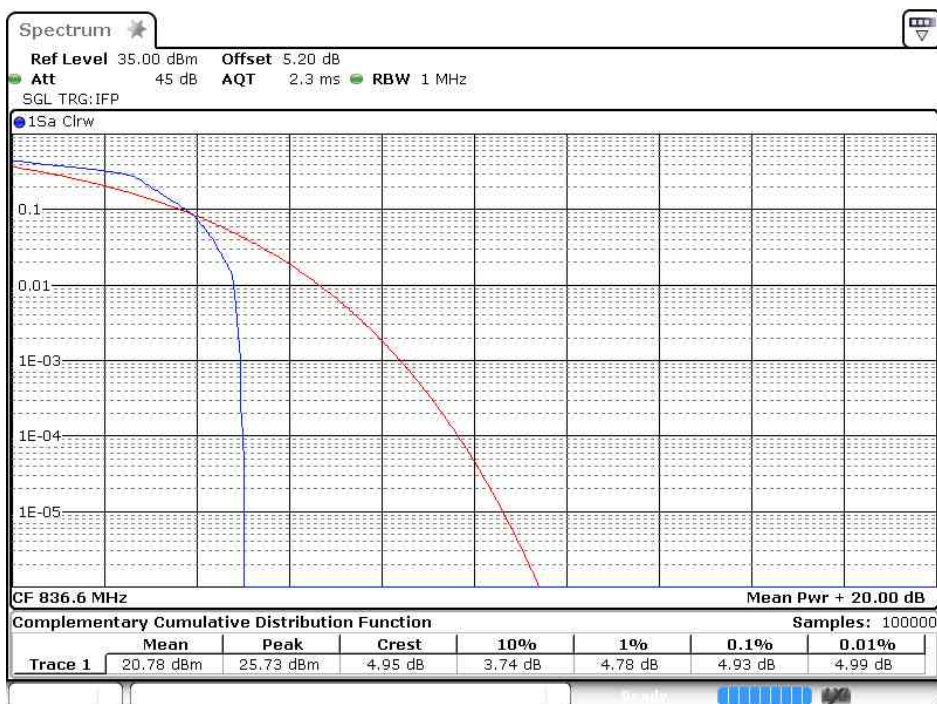
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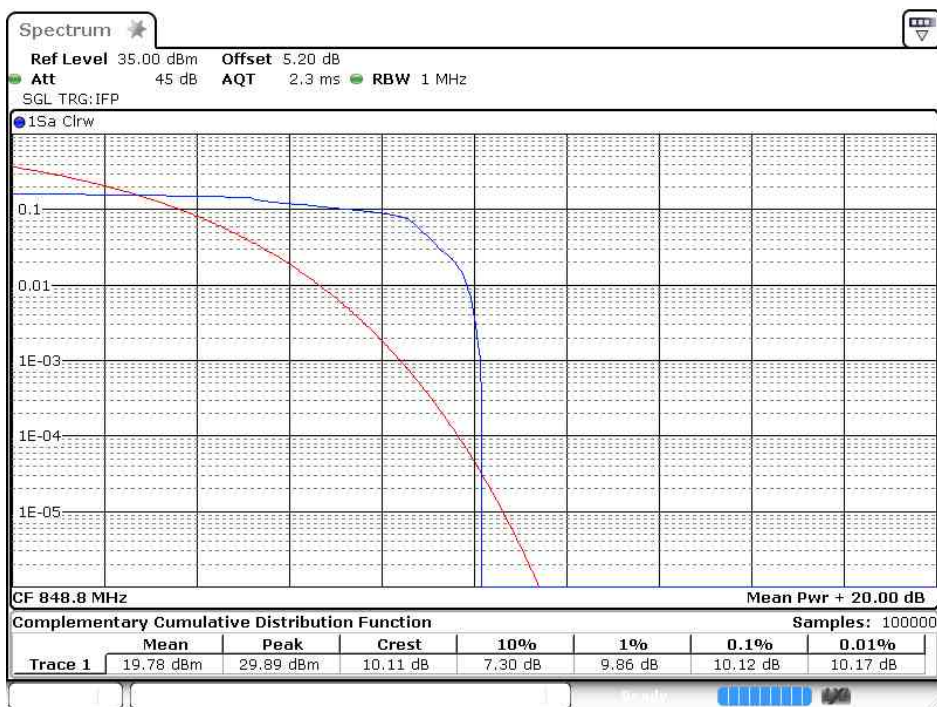
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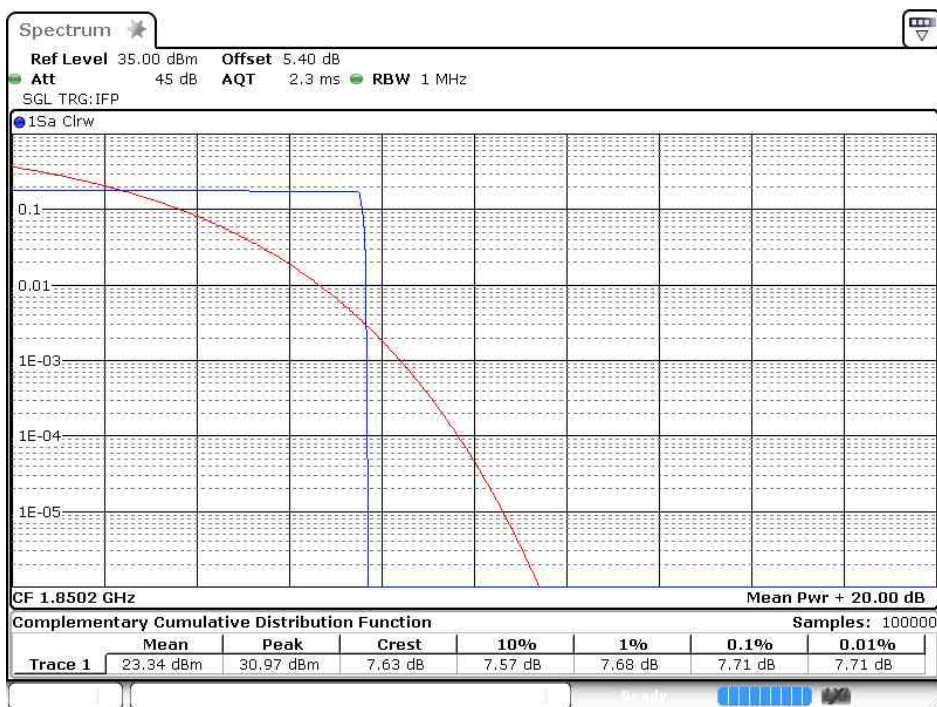
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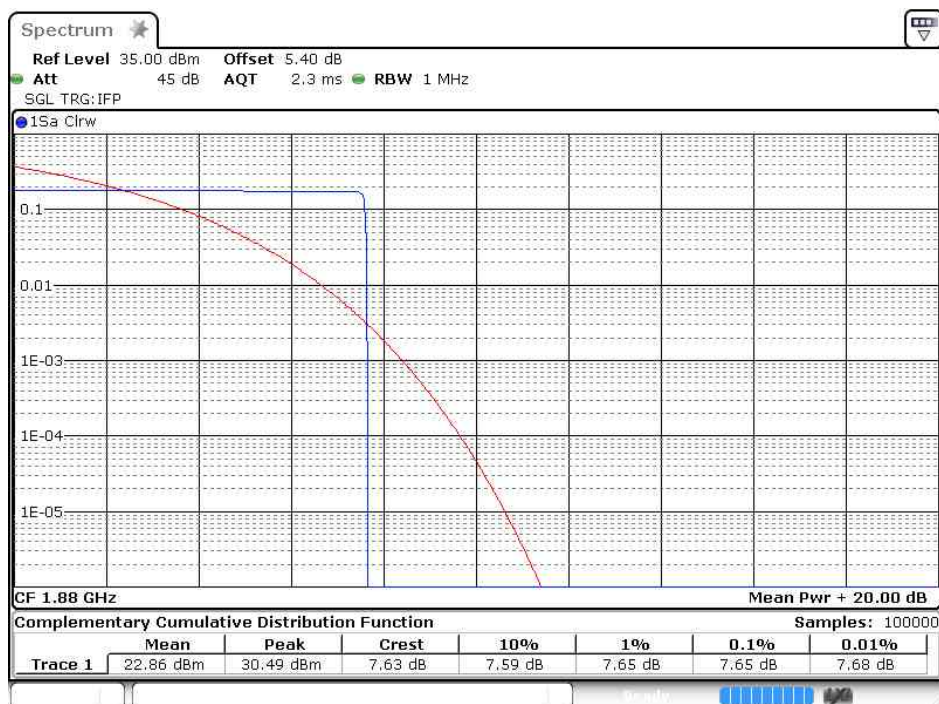
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GSM1900\_661



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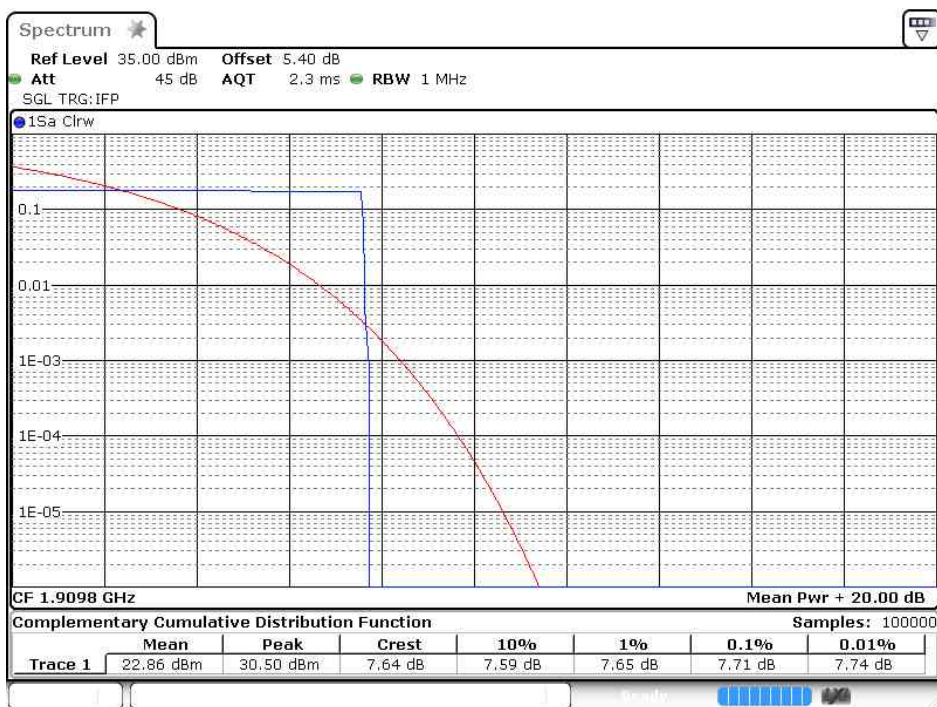
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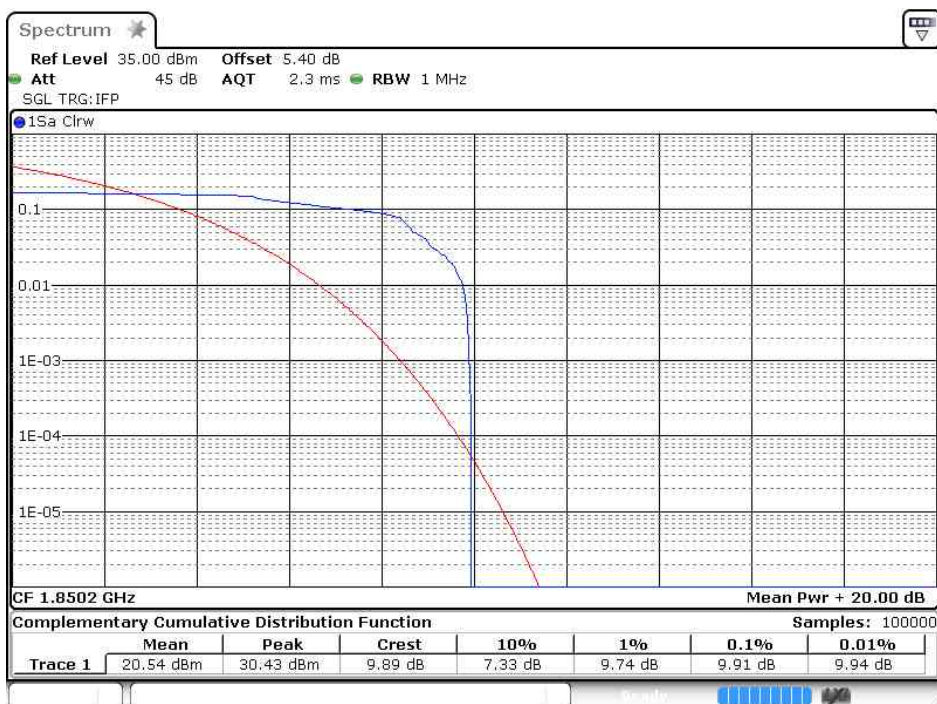
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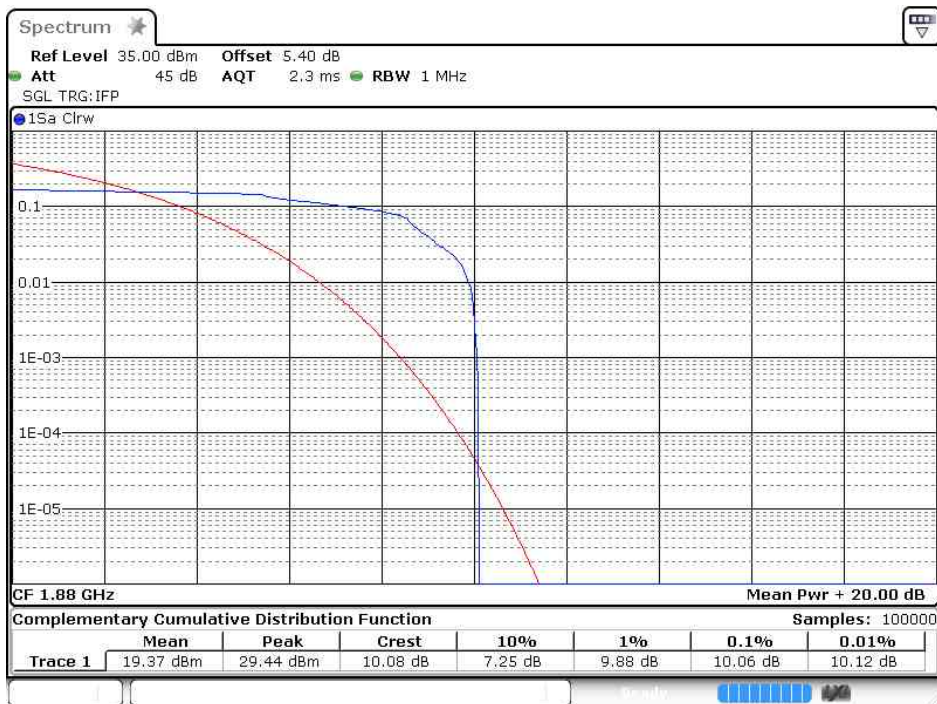
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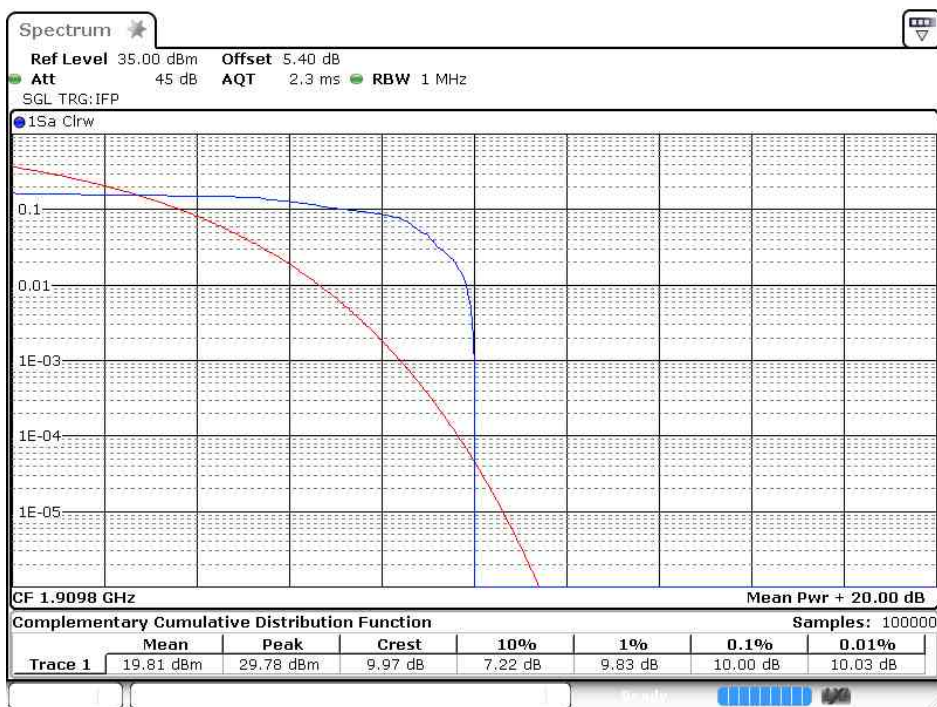
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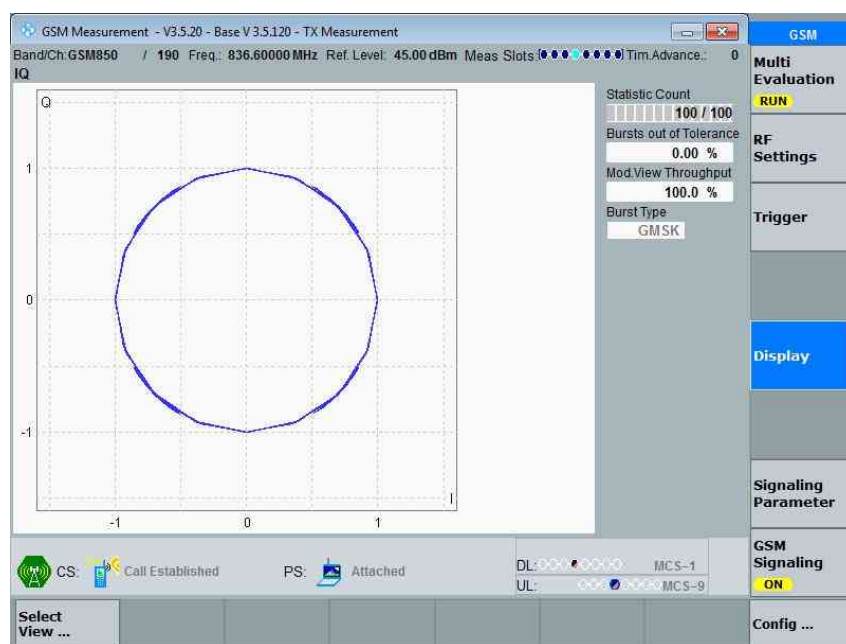
### 3. Modulation Characteristics

#### 3.1. For GSM

##### 3.1.1. Test Band = GSM 850

##### 3.1.1.1. Test Mode = GSM/TM1

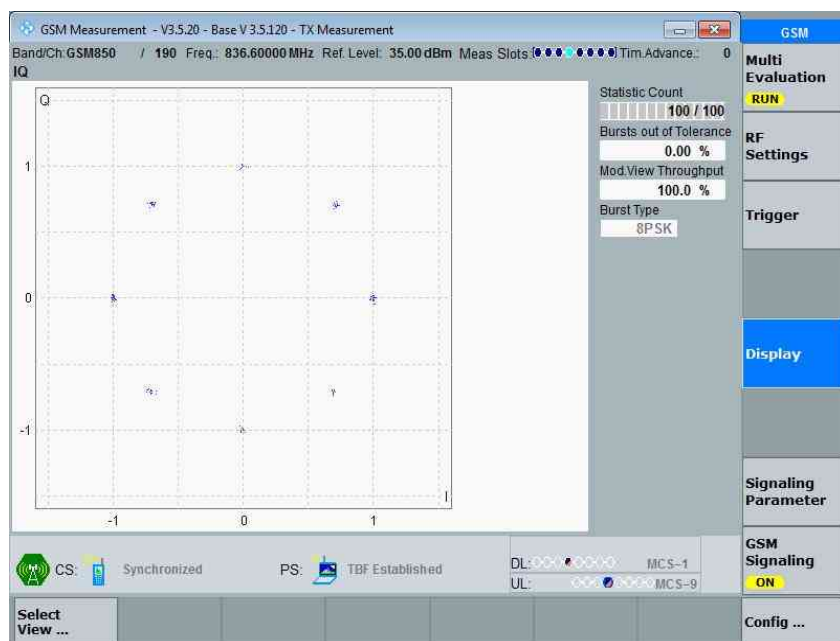
##### 3.1.1.1.1. Test Channel = MCH





### 3.1.1.2. Test Mode = GSM/TM2

#### 3.1.1.2.1. Test Channel = MCH

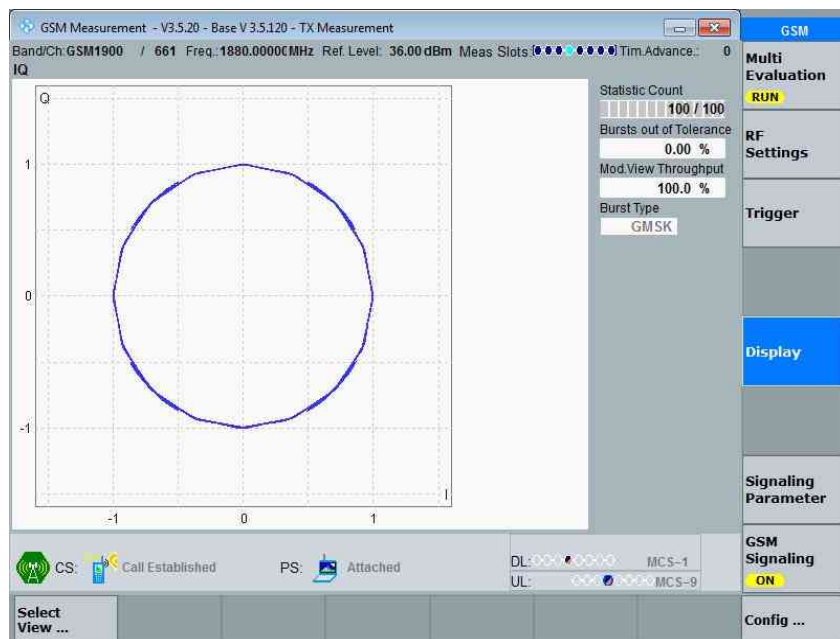




### 3.1.2. Test Band = GSM 1900

#### 3.1.2.1. Test Mode = GSM/TM1

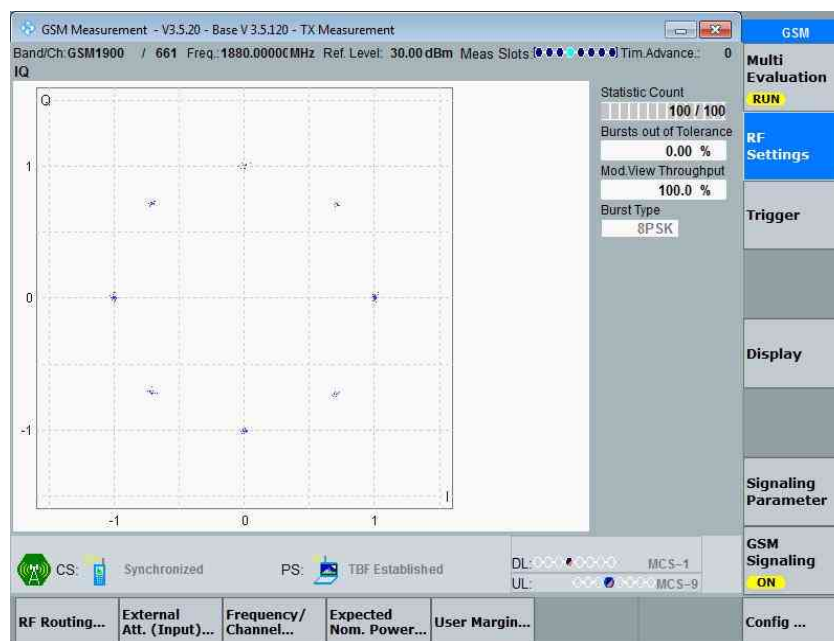
##### 3.1.2.1.1. Test Channel = MCH





### 3.1.2.2. Test Mode = GSM/TM2

#### 3.1.2.2.1. Test Channel = MCH



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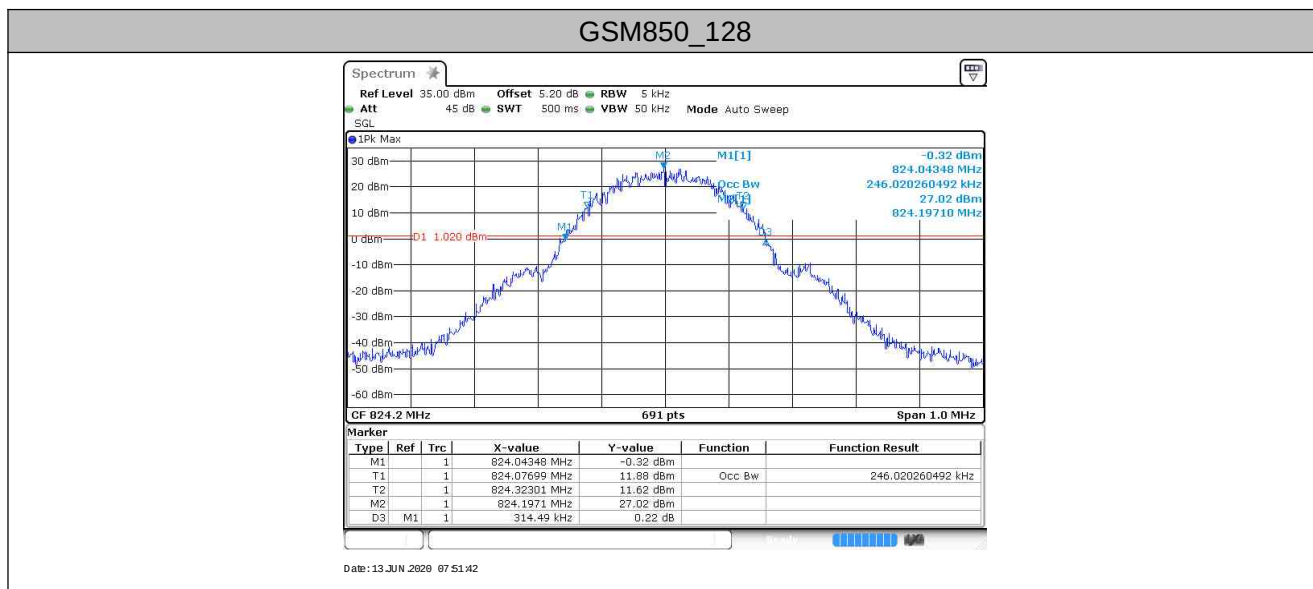


## 4. 26dB Bandwidth and Occupied Bandwidth

### 4.1. Test Result

| Band      | Channel | Occupied Bandwidth (kHz) | 26dB Bandwidth (kHz) | Limit(kHz) | Verdict |
|-----------|---------|--------------------------|----------------------|------------|---------|
| GSM850    | 128     | 246.02                   | 314.49               | ---        | PASS    |
| GSM850    | 190     | 247.47                   | 314.49               | ---        | PASS    |
| GSM850    | 251     | 244.57                   | 295.65               | ---        | PASS    |
| EGPRS850  | 128     | 250.36                   | 300.00               | ---        | PASS    |
| EGPRS850  | 190     | 243.13                   | 313.04               | ---        | PASS    |
| EGPRS850  | 251     | 251.81                   | 313.04               | ---        | PASS    |
| GSM1900   | 512     | 247.47                   | 298.55               | ---        | PASS    |
| GSM1900   | 661     | 243.13                   | 295.65               | ---        | PASS    |
| GSM1900   | 810     | 250.36                   | 313.04               | ---        | PASS    |
| EGPRS1900 | 512     | 256.15                   | 311.59               | ---        | PASS    |
| EGPRS1900 | 661     | 253.26                   | 318.84               | ---        | PASS    |
| EGPRS1900 | 810     | 253.26                   | 310.14               | ---        | PASS    |

### 4.2. Test Plots

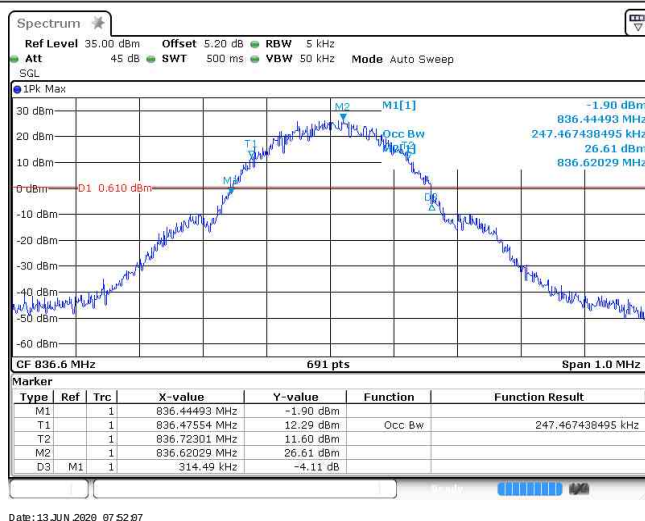


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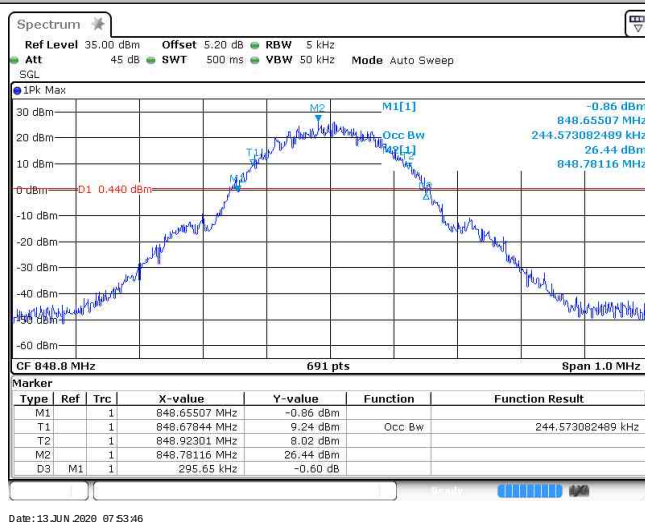
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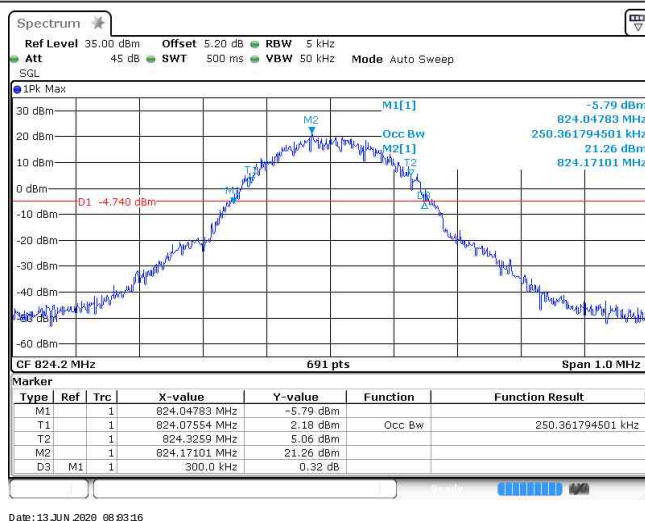


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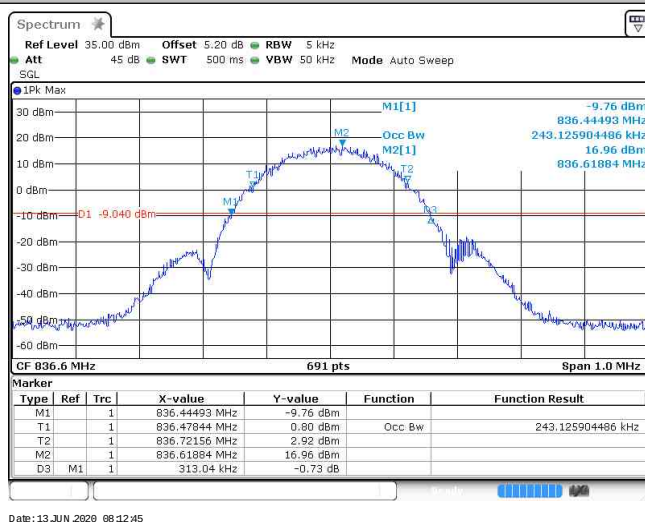




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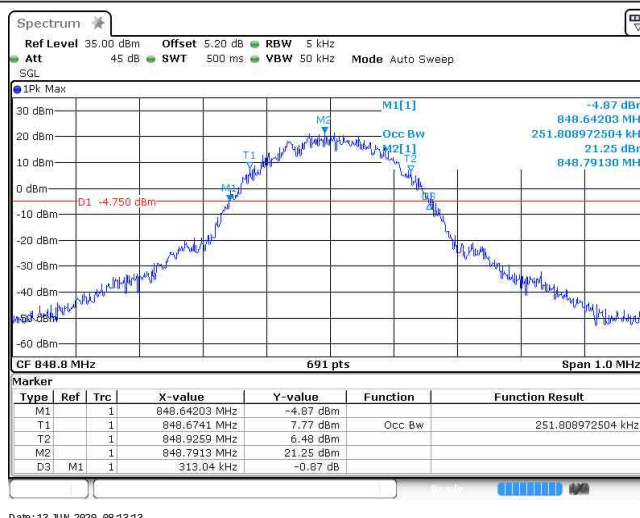


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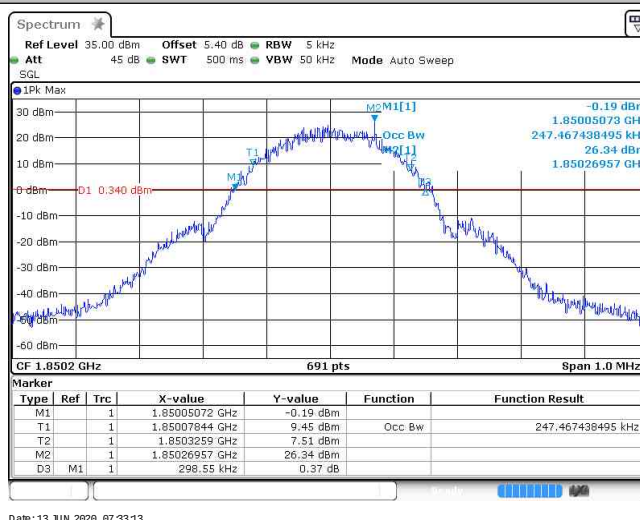




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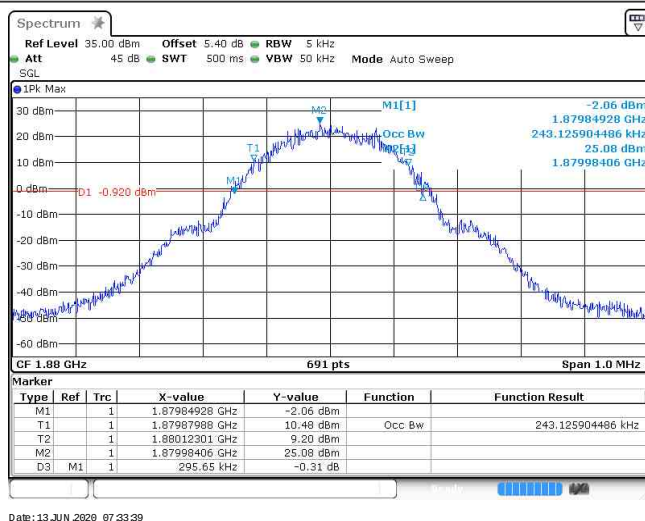


GSM1900\_512

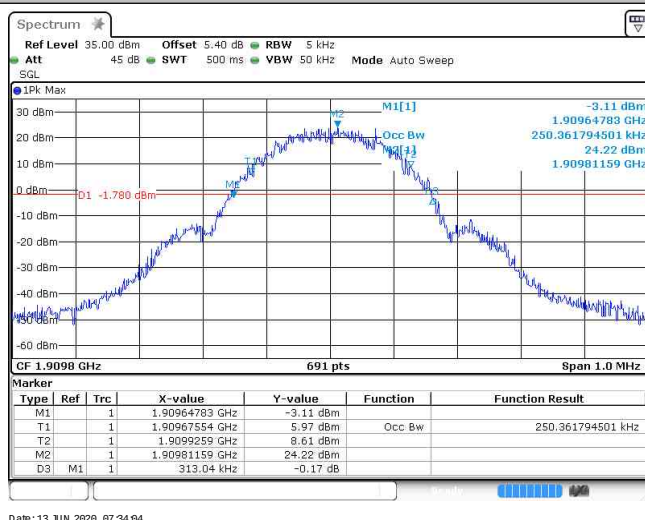




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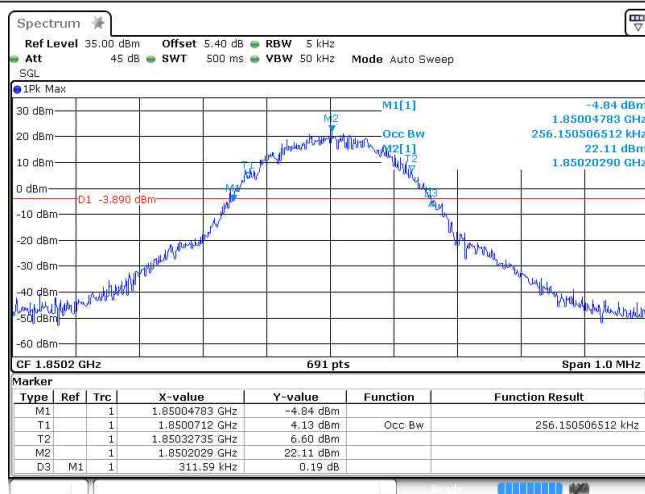


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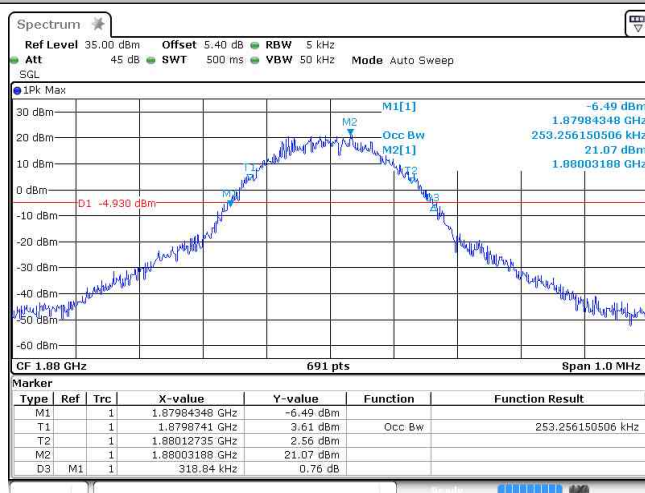


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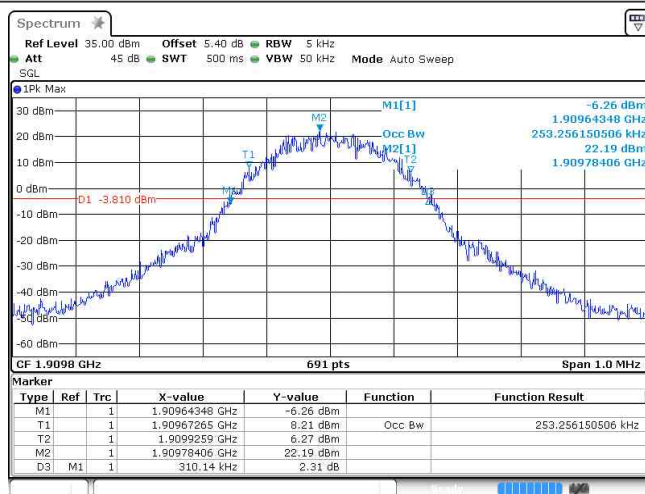


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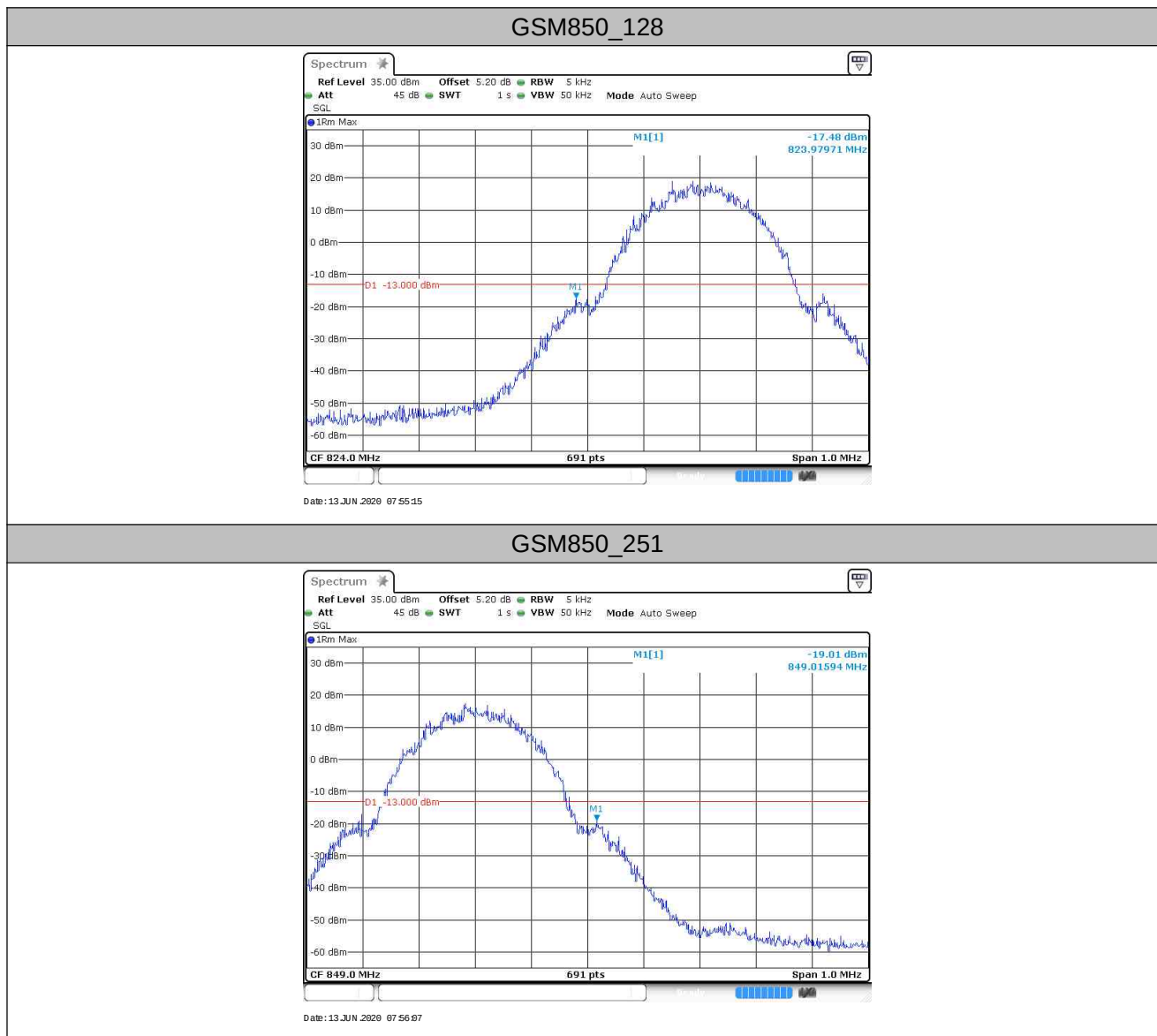
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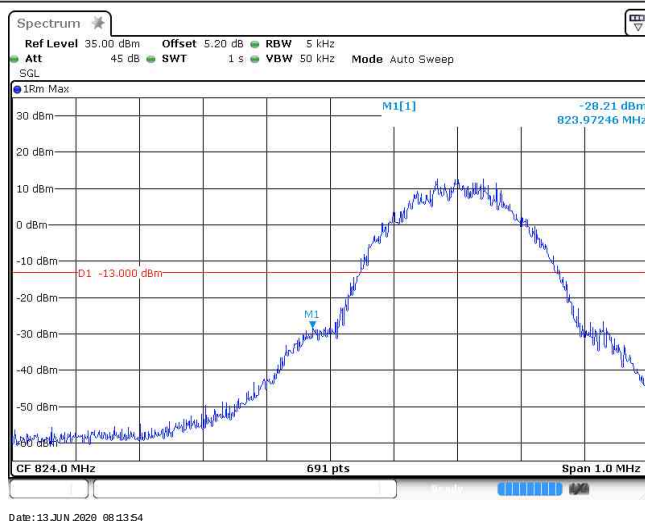
## 5. Band Edge Compliance

### 5.1. Test Plots





EGPRS850\_128

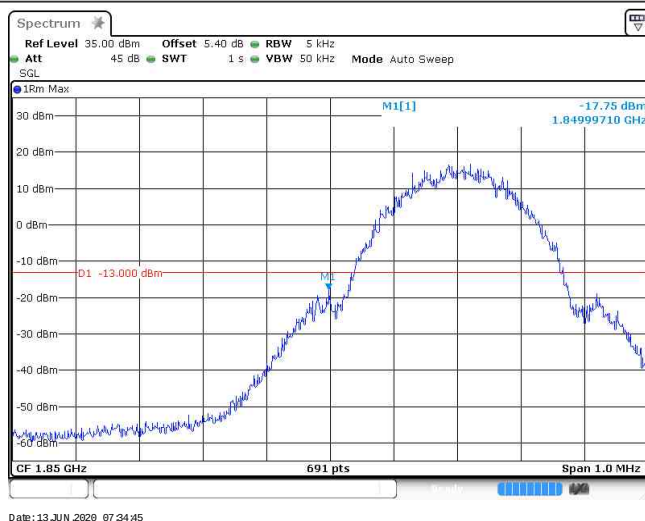


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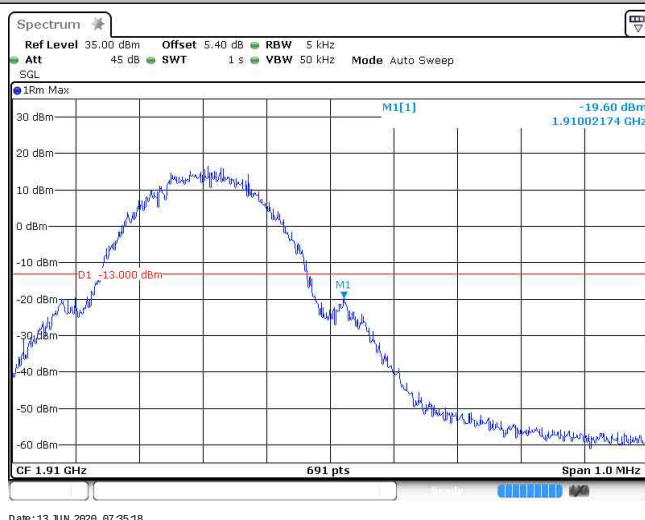


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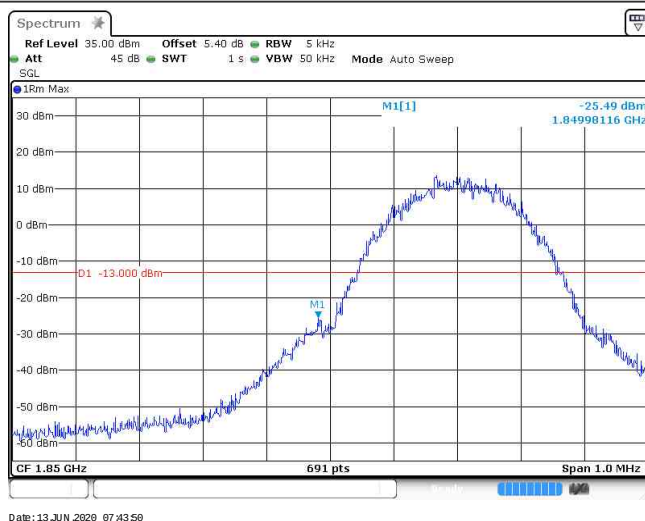
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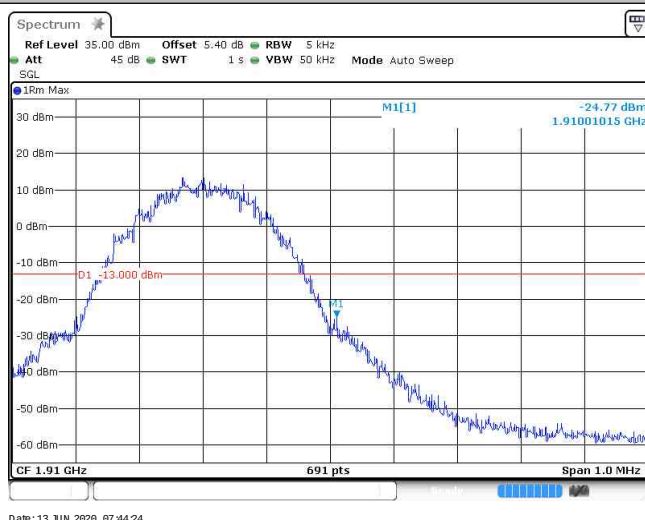


EGPRS1900\_512



Date: 13 JUN 2020 07:43:50

EGPRS1900\_810



Date: 13 JUN 2020 07:44:24



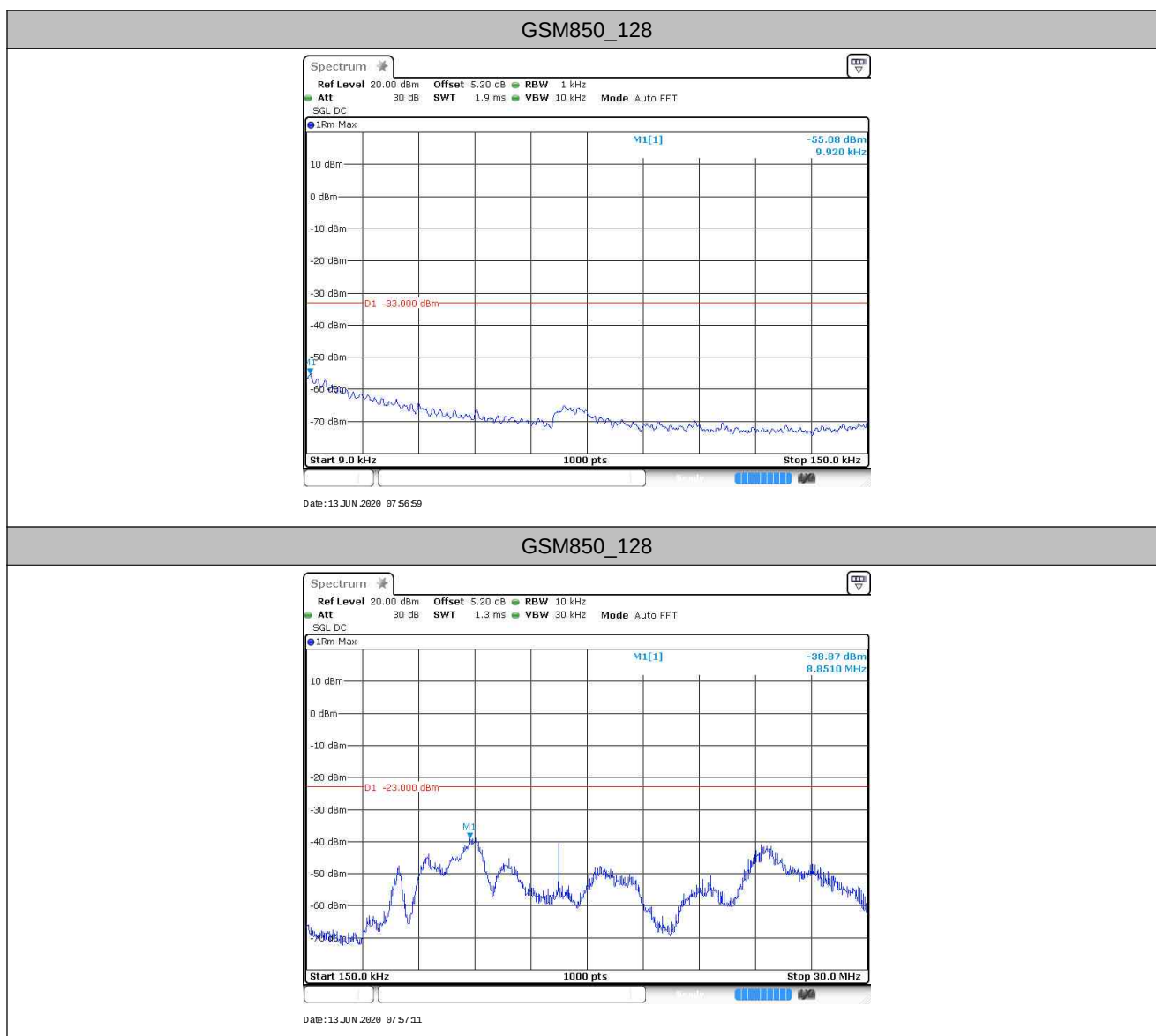


## 6. Spurious Emission at Antenna Terminal

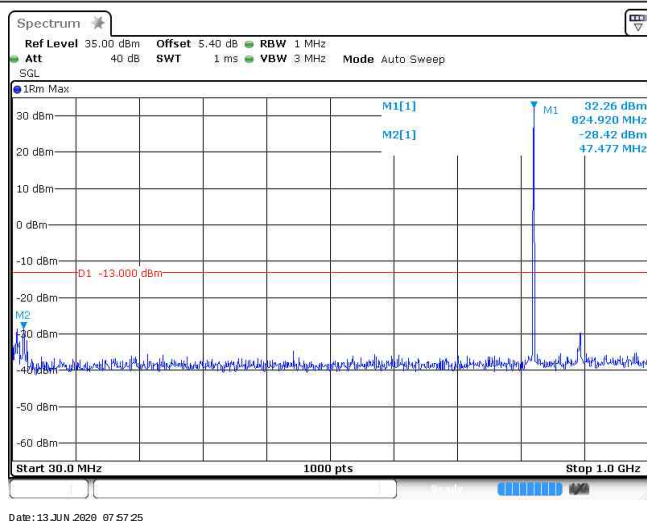
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (\text{Span} / RBW)$ " with  $k$  between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

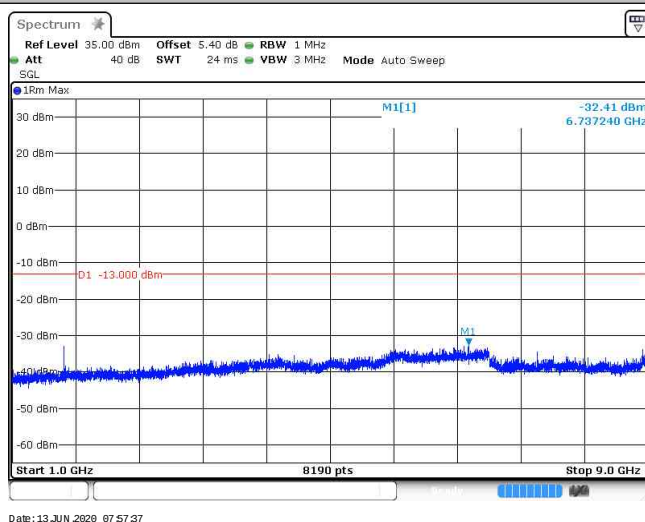
### 6.1. Test Plots



GSM850 128



## GSM850 128



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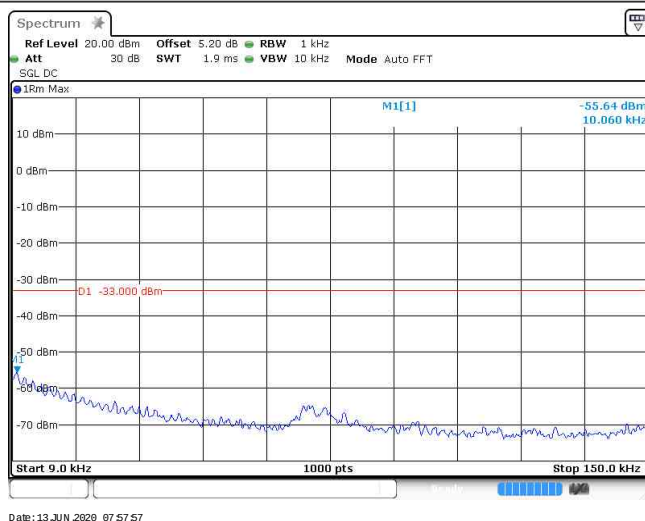
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GSM850\_190

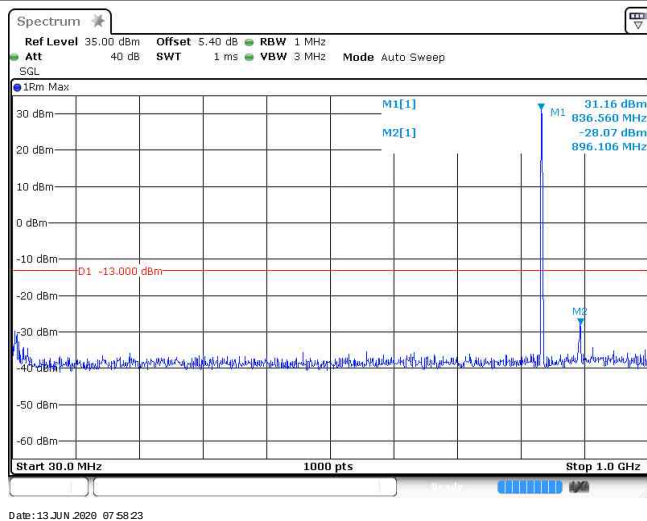


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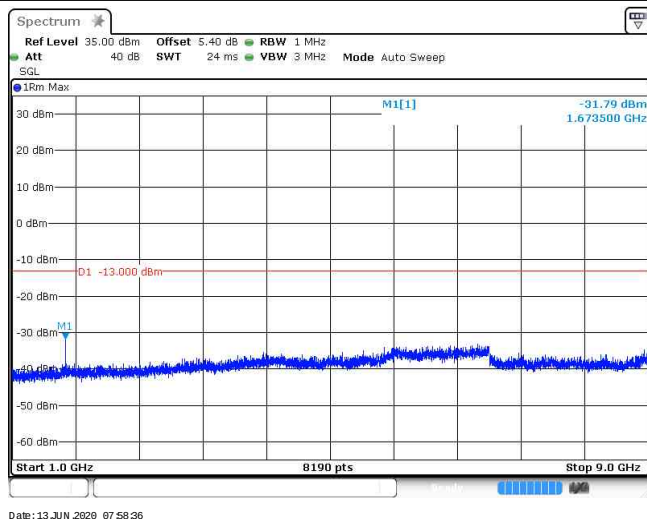




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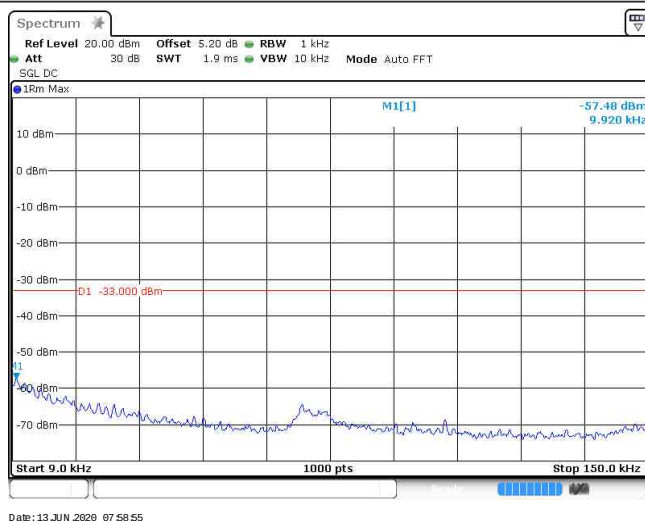


GSM850\_190





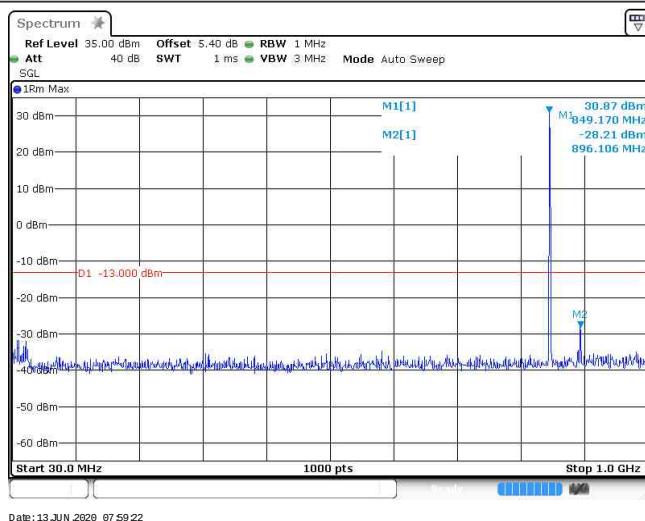
GSM850\_251



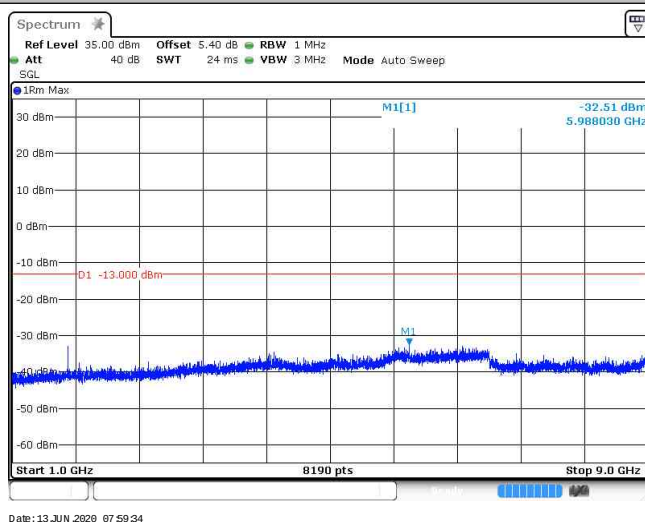
GSM850\_251



## GSM850 251



## GSM850 251



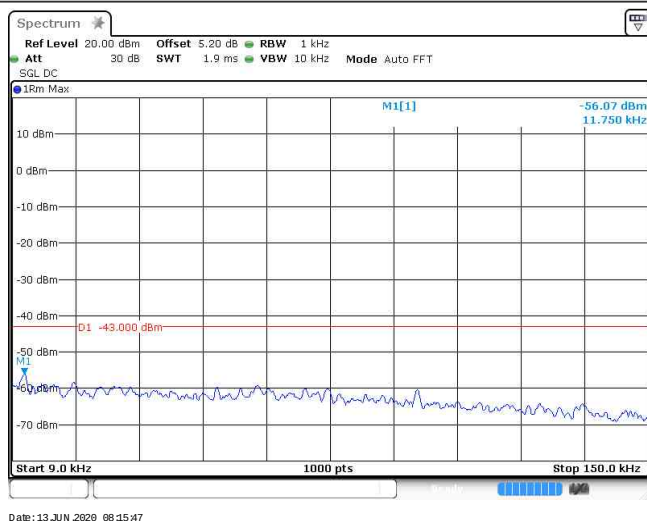
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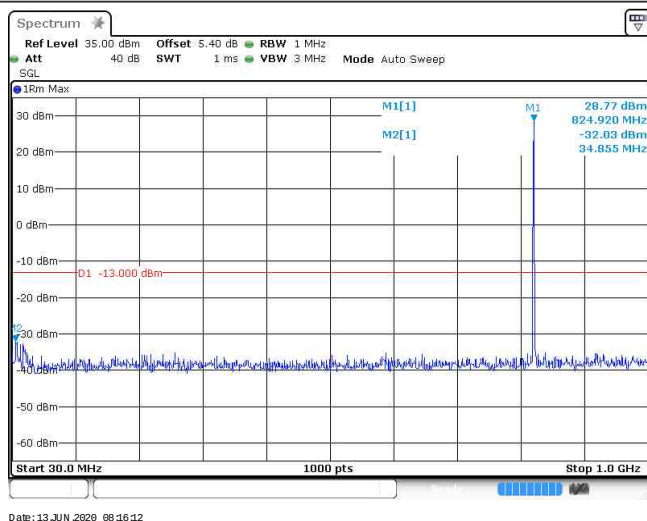
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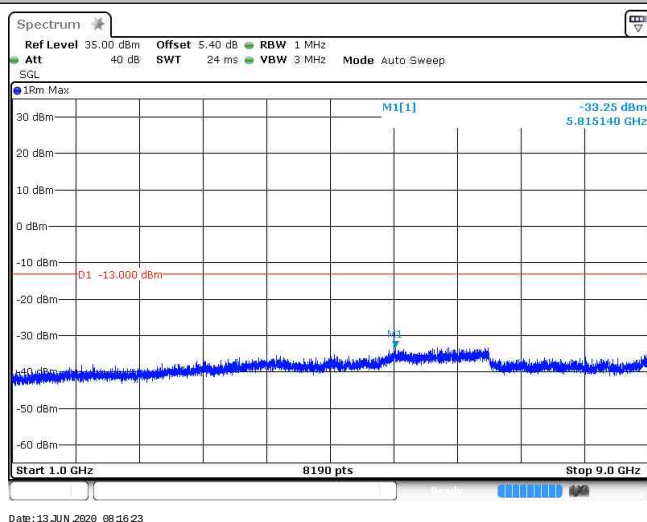
EGPRS850\_128



## EGPRS850 128



## EGPRS850 128

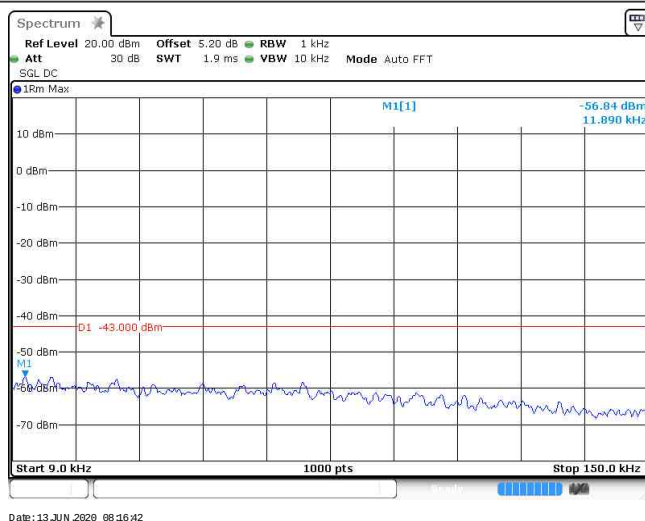


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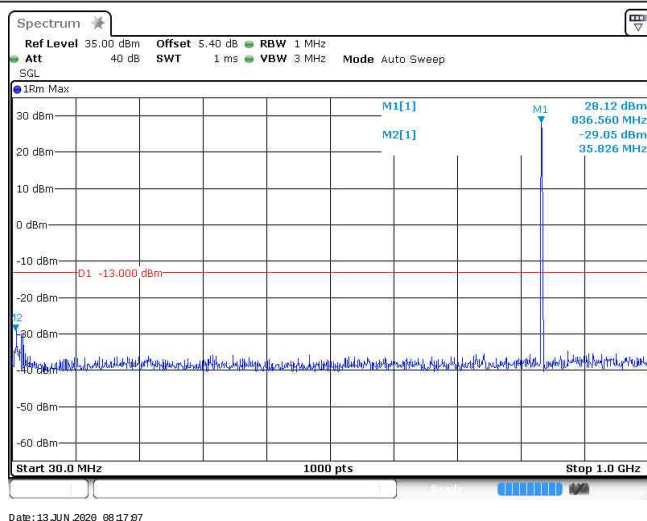


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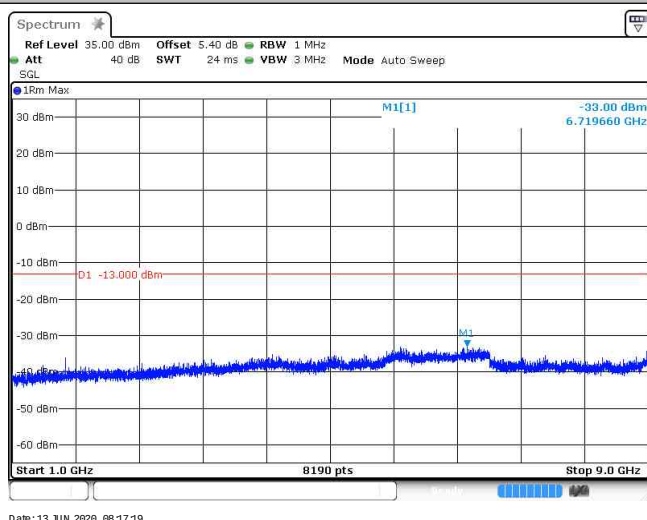




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EGPRS850\_190

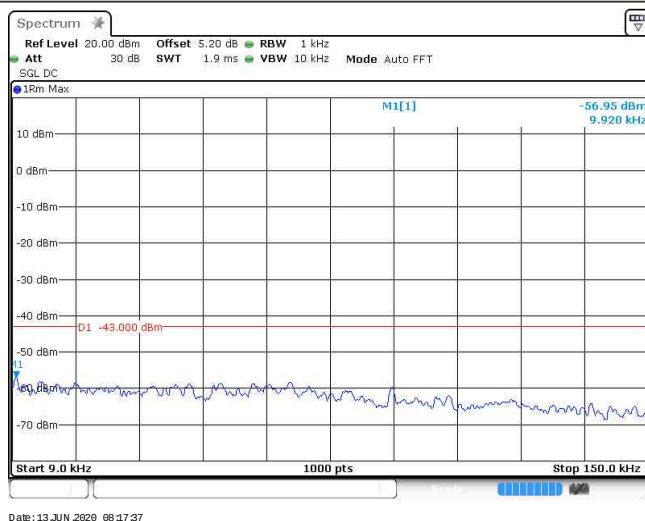


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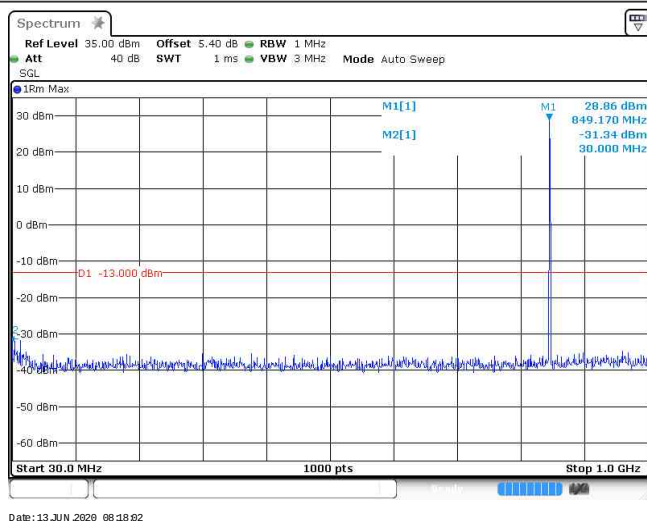


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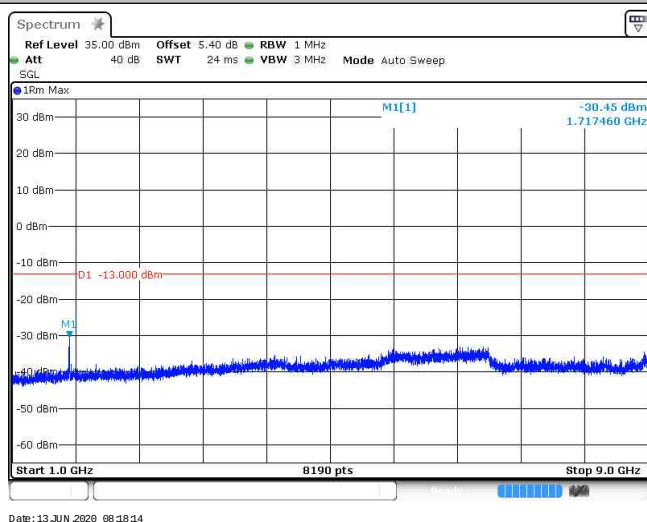




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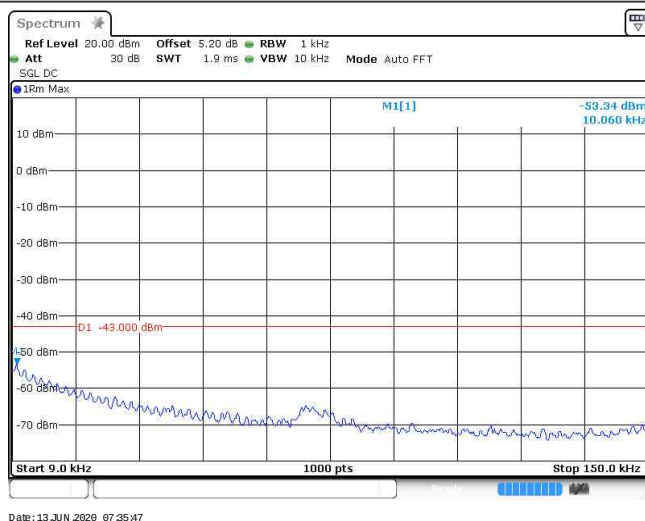


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GSM1900\_512

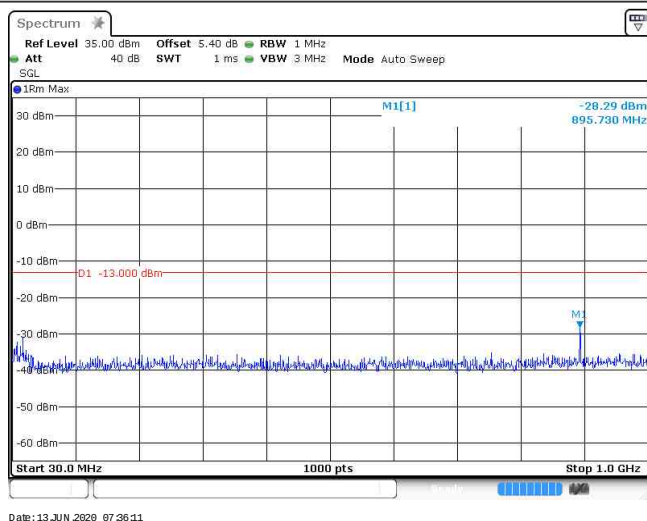


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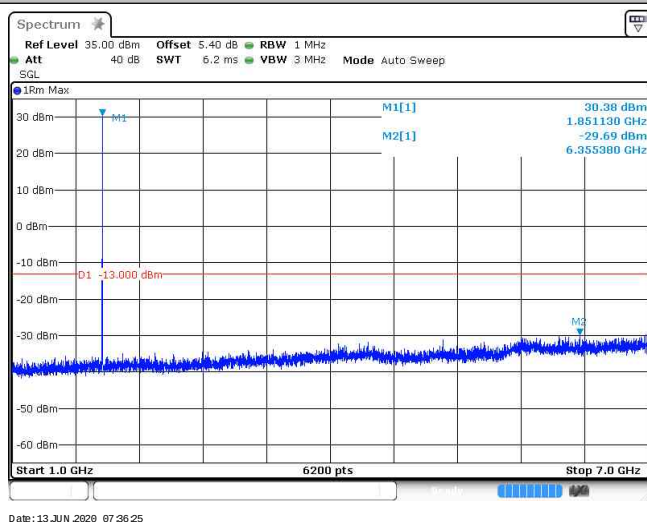




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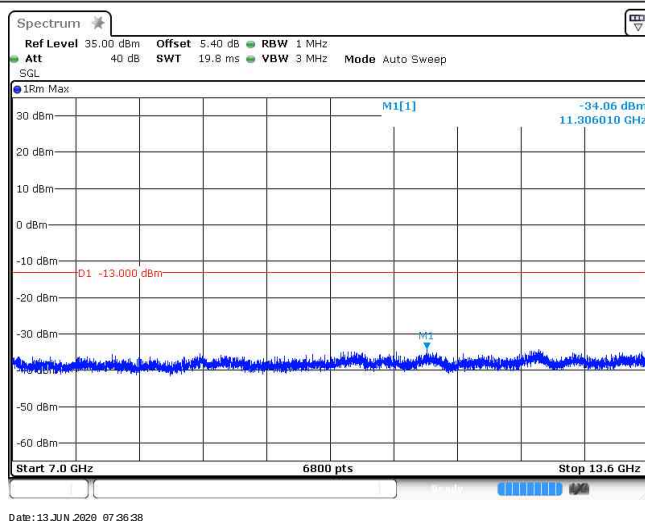


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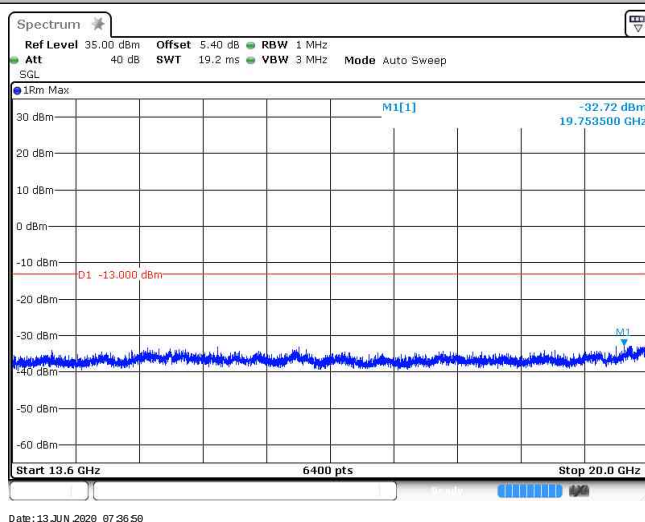




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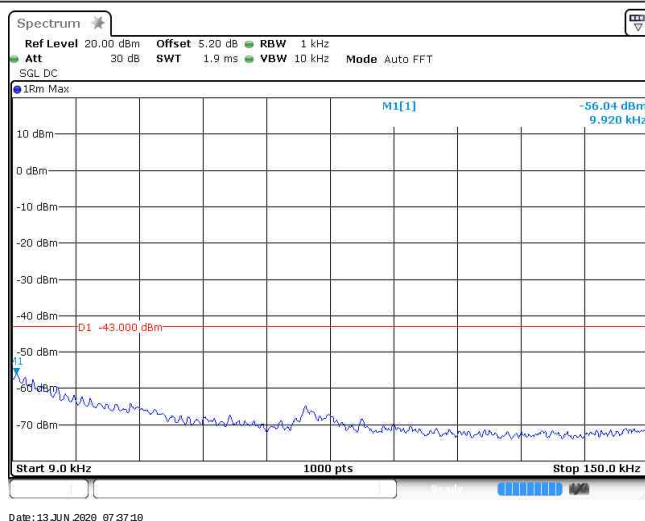


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GSM1900\_661

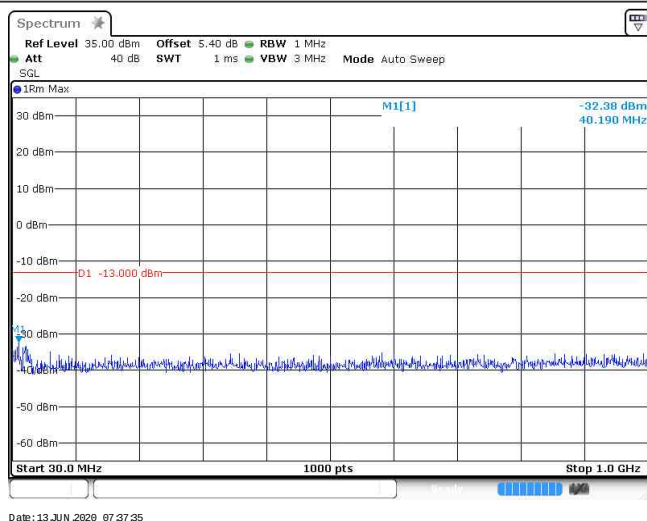


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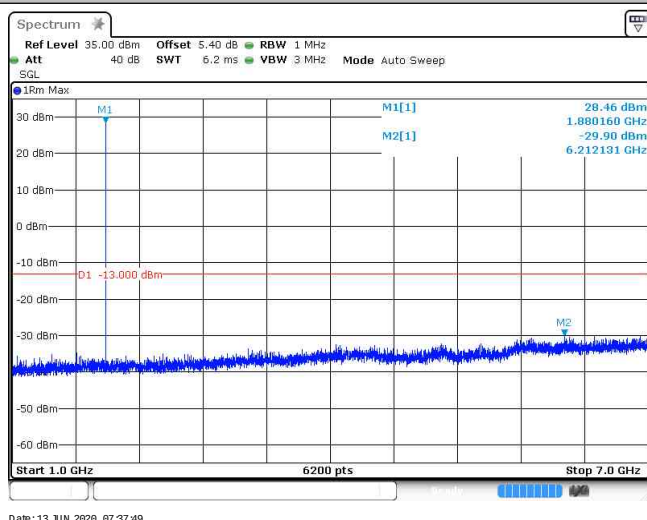




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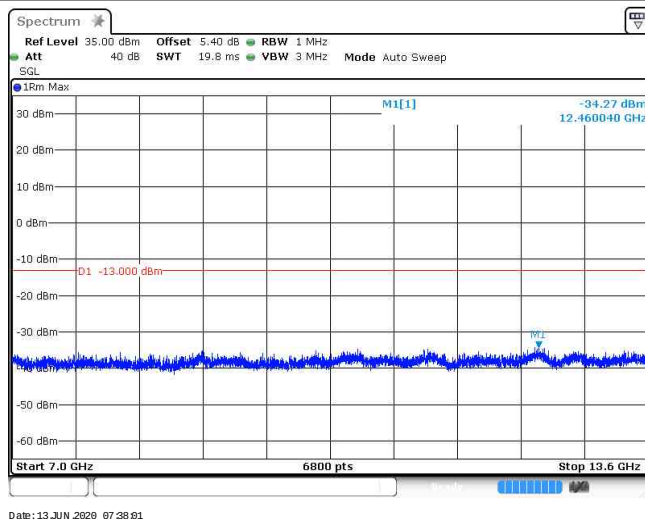


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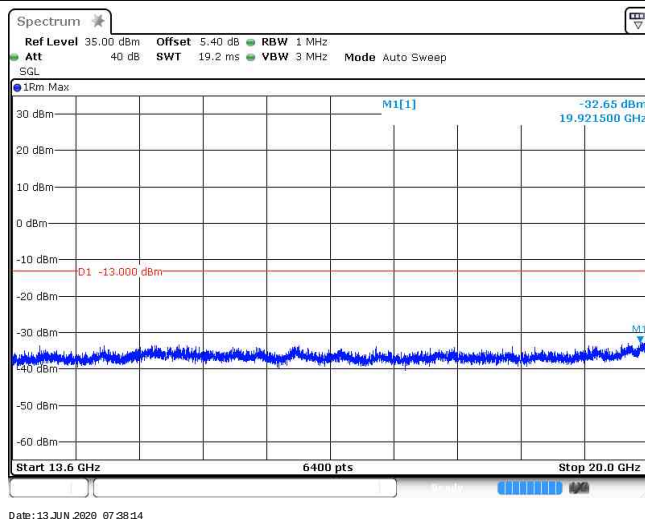




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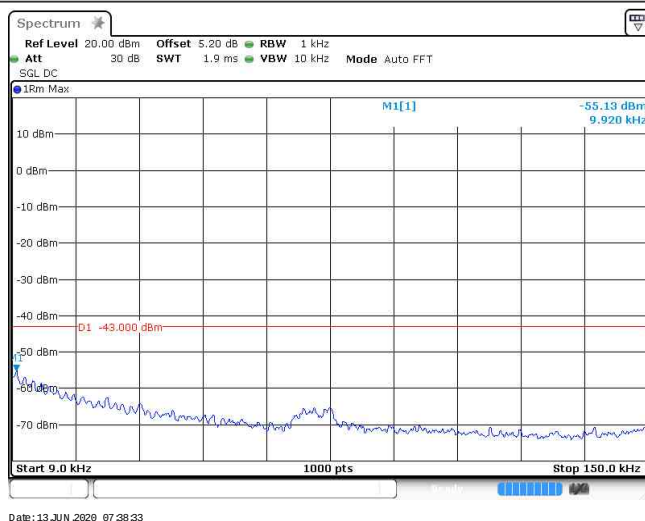


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GSM1900\_810

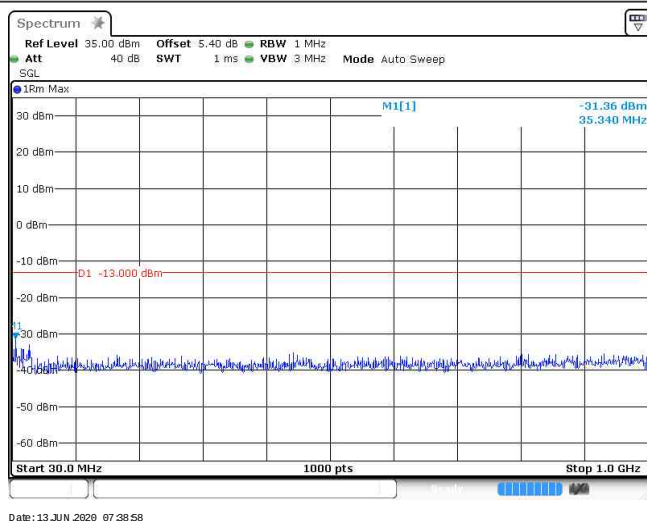


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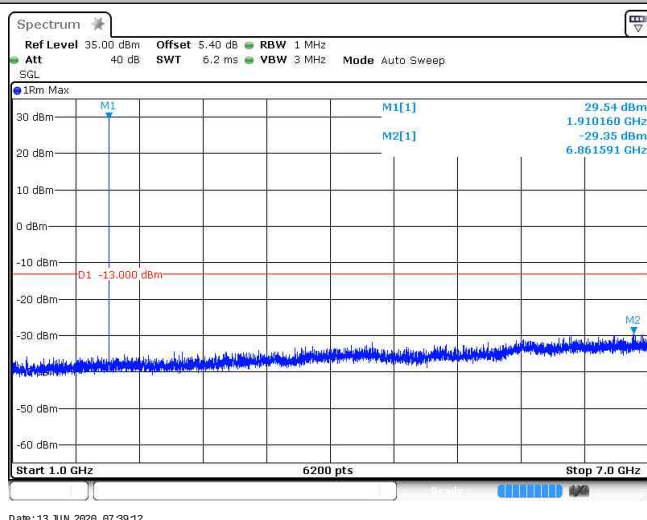


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Date: 13 JUN 2020 07:38:58

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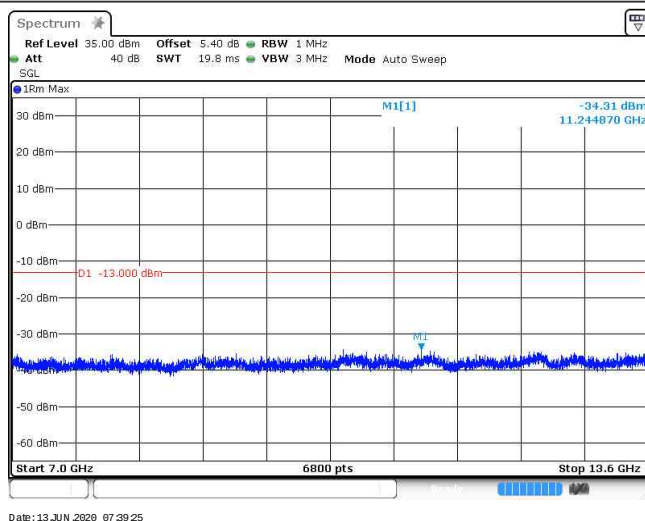


Date: 13 JUN 2020 07:39:12

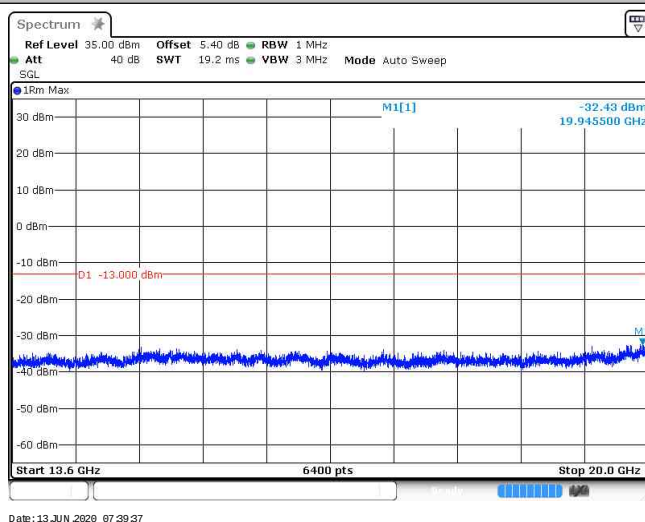




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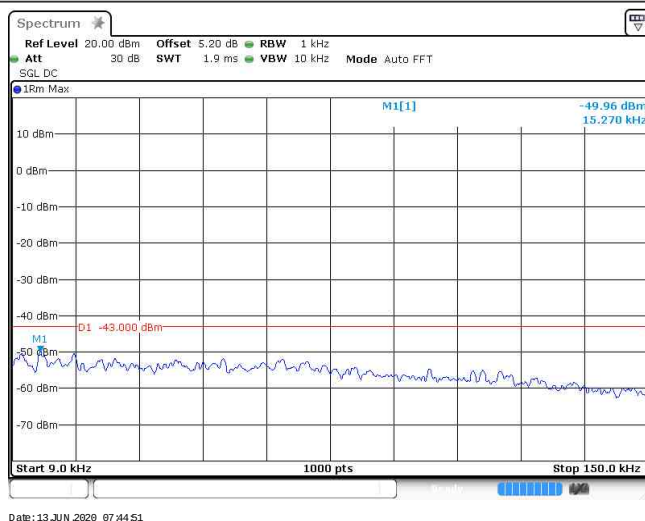


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EGPRS1900\_512

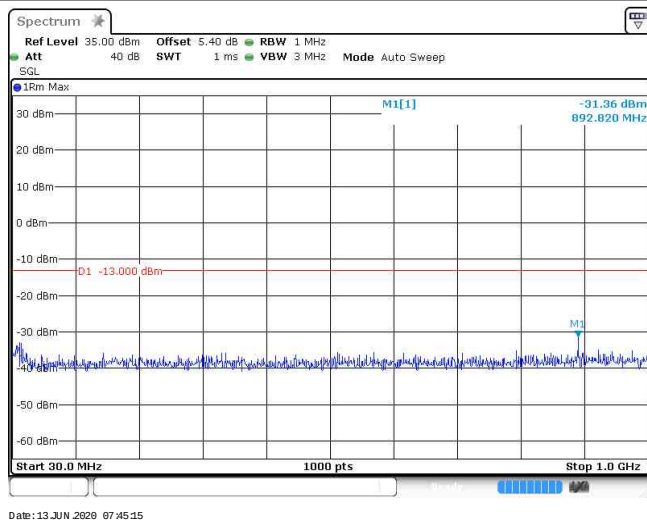


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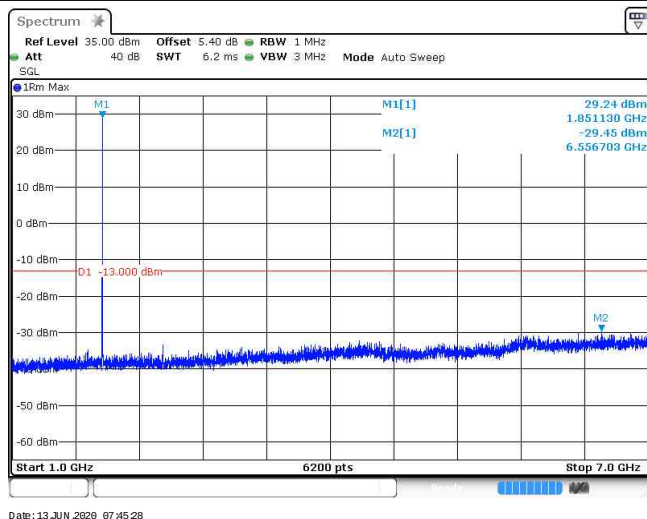


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Date: 13 JUN 2020 07:45:15

EGPRS1900\_512



Date: 13 JUN 2020 07:45:28



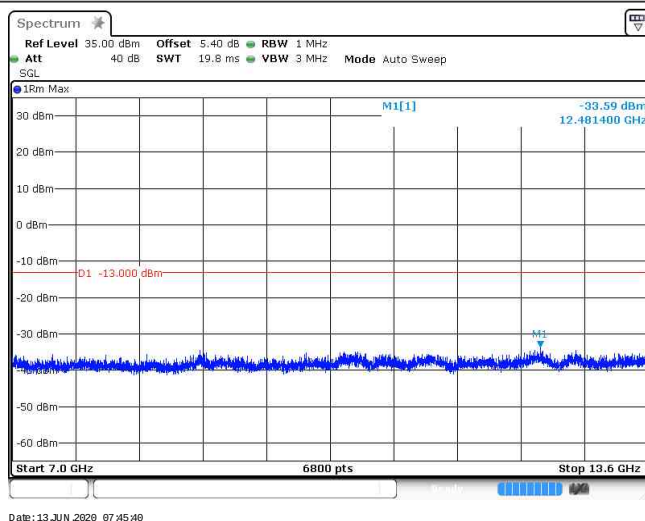
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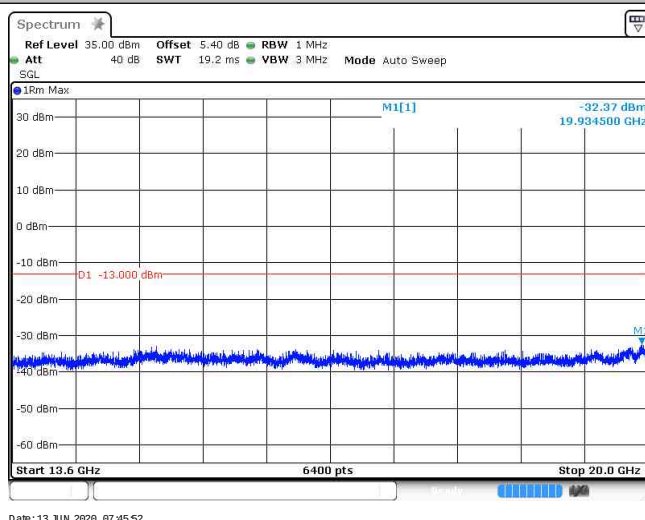
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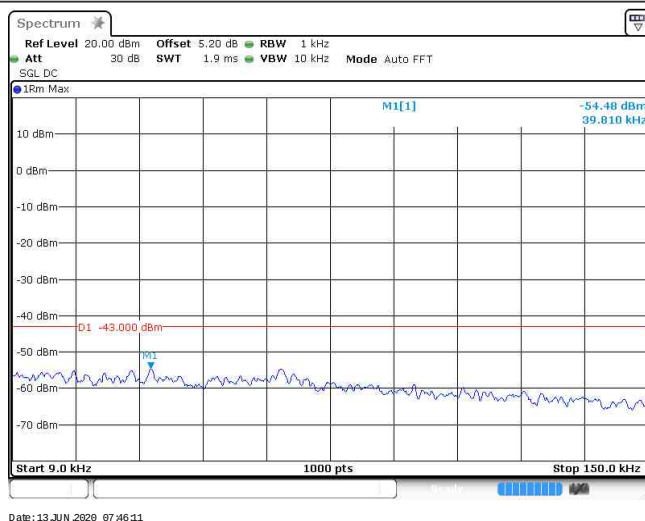


EGPRS1900\_512





EGPRS1900\_661

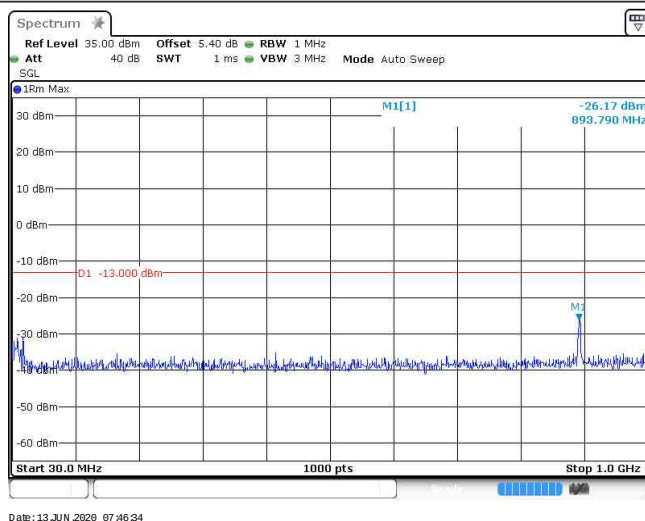


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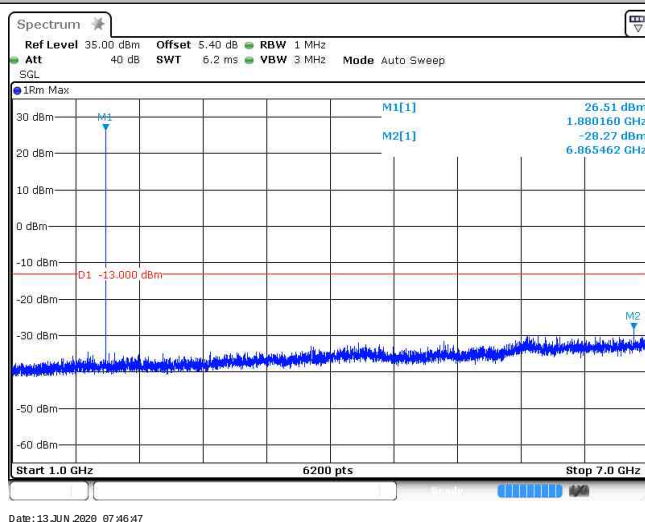




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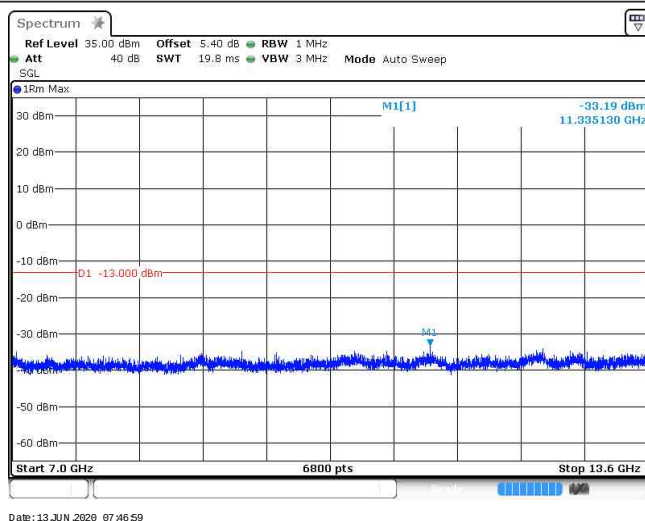


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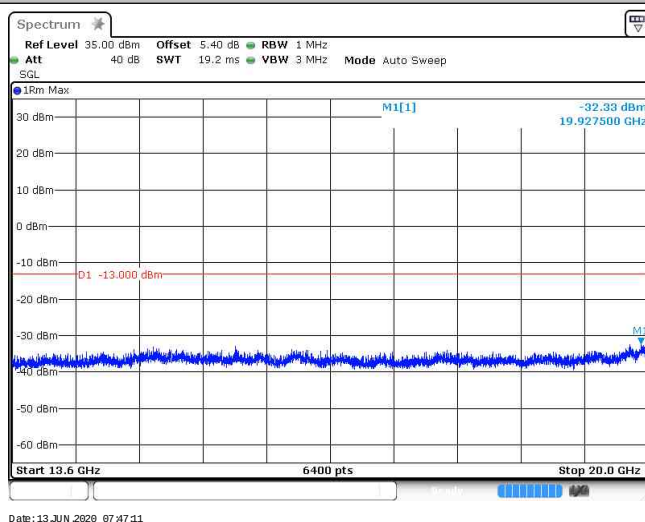




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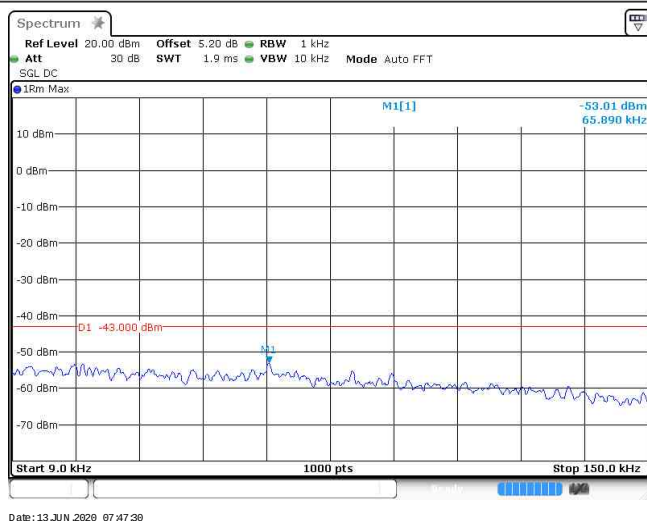


EGPRS1900\_661





EGPRS1900\_810

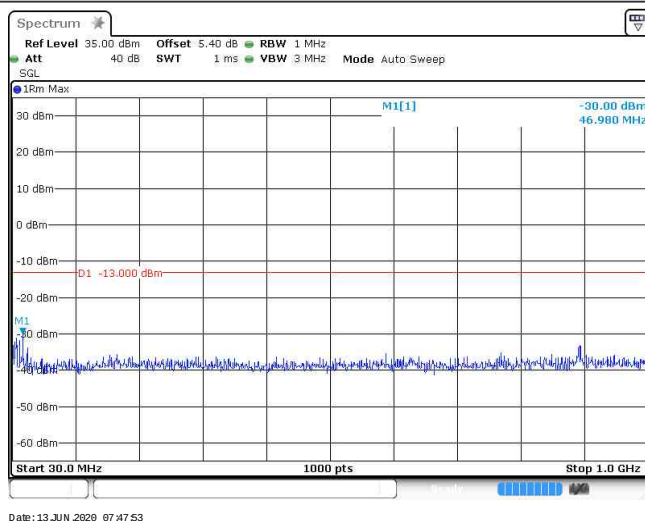


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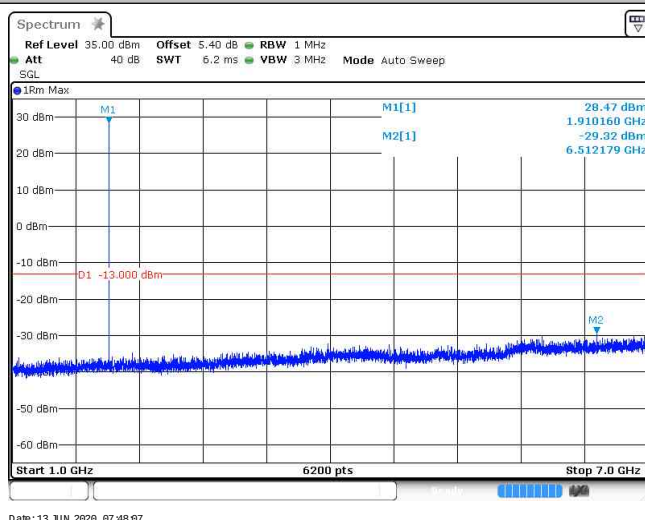


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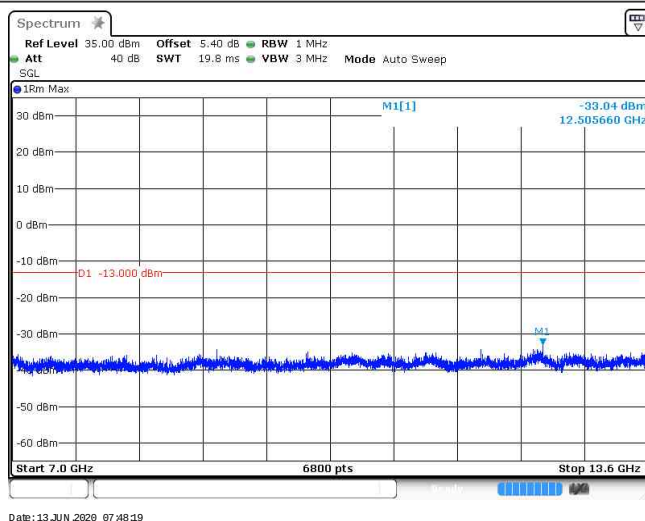


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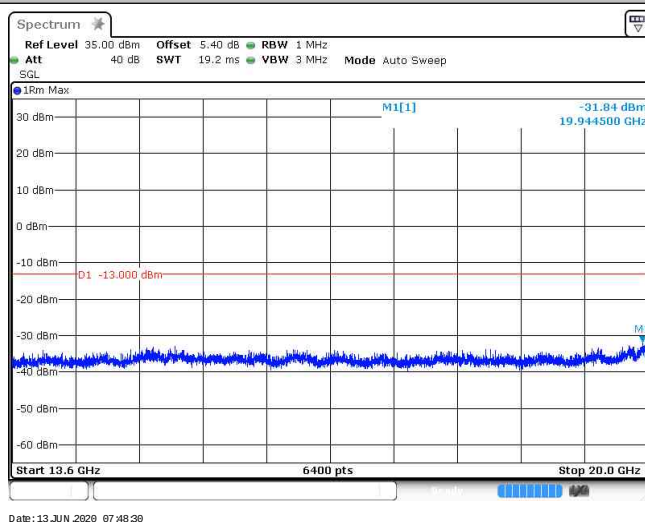




EGPRS1900\_810



EGPRS1900\_810





## 7. Field Strength of Spurious Radiation

### 7.1. Test Band = GSM 1900

#### 7.1.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 49.4010         | -72.38      | -13.00           | 59.38       | Vertical     |
| 114.2002        | -64.79      | -13.00           | 51.79       | Vertical     |
| 563.0417        | -66.08      | -13.00           | 53.08       | Vertical     |
| 2725.1450       | -37.82      | -13.00           | 24.82       | Vertical     |
| 3700.5234       | -56.01      | -13.00           | 43.01       | Vertical     |
| 17996.9999      | -40.60      | -13.00           | 27.60       | Vertical     |
| 39.9430         | -63.47      | -13.00           | 50.47       | Horizontal   |
| 230.5575        | -67.85      | -13.00           | 54.85       | Horizontal   |
| 469.6745        | -66.94      | -13.00           | 53.94       | Horizontal   |
| 3700.5234       | -52.39      | -13.00           | 39.39       | Horizontal   |
| 5550.5850       | -58.31      | -13.00           | 45.31       | Horizontal   |
| 16392.9464      | -43.51      | -13.00           | 30.51       | Horizontal   |

#### 7.1.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 50.4680         | -70.94      | -13.00           | 57.94       | Vertical     |
| 112.5996        | -65.05      | -13.00           | 52.05       | Vertical     |
| 565.8548        | -64.52      | -13.00           | 51.52       | Vertical     |
| 3760.0253       | -52.38      | -13.00           | 39.38       | Vertical     |
| 5640.0880       | -57.31      | -13.00           | 44.31       | Vertical     |
| 17999.5000      | -40.54      | -13.00           | 27.54       | Vertical     |
| 43.2412         | -64.15      | -13.00           | 51.15       | Horizontal   |
| 240.8885        | -67.47      | -13.00           | 54.47       | Horizontal   |
| 608.1489        | -63.67      | -13.00           | 50.67       | Horizontal   |
| 2692.7385       | -36.50      | -13.00           | 23.50       | Horizontal   |
| 3760.0253       | -53.51      | -13.00           | 40.51       | Horizontal   |
| 16398.4466      | -43.77      | -13.00           | 30.77       | Horizontal   |



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### 7.1.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 50.2255         | -71.99      | -13.00           | 58.99       | Vertical     |
| 108.0404        | -65.30      | -13.00           | 52.30       | Vertical     |
| 475.6888        | -66.06      | -13.00           | 53.06       | Vertical     |
| 2701.1402       | -37.57      | -13.00           | 24.57       | Vertical     |
| 3819.5273       | -52.05      | -13.00           | 39.05       | Vertical     |
| 17988.9996      | -40.58      | -13.00           | 27.58       | Vertical     |
| 41.7376         | -63.76      | -13.00           | 50.76       | Horizontal   |
| 238.8029        | -68.09      | -13.00           | 55.09       | Horizontal   |
| 595.8778        | -63.71      | -13.00           | 50.71       | Horizontal   |
| 2700.3401       | -36.37      | -13.00           | 23.37       | Horizontal   |
| 3819.5273       | -51.73      | -13.00           | 38.73       | Horizontal   |
| 16398.4466      | -43.84      | -13.00           | 30.84       | Horizontal   |

### 7.2. Test Band = GSM 850

#### 7.2.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 44.1627         | -73.74      | -13.00           | 60.74       | Vertical     |
| 110.5625        | -63.38      | -13.00           | 50.38       | Vertical     |
| 387.3174        | -67.24      | -13.00           | 54.24       | Vertical     |
| 1648.1296       | -54.30      | -13.00           | 41.30       | Vertical     |
| 2472.6945       | -45.96      | -13.00           | 32.96       | Vertical     |
| 3297.0099       | -62.77      | -13.00           | 49.77       | Vertical     |
| 44.7932         | -63.31      | -13.00           | 50.31       | Horizontal   |
| 248.5034        | -66.66      | -13.00           | 53.66       | Horizontal   |
| 1648.5297       | -45.28      | -13.00           | 32.28       | Horizontal   |
| 2472.6945       | -42.50      | -13.00           | 29.50       | Horizontal   |
| 3297.0099       | -57.81      | -13.00           | 44.81       | Horizontal   |
| 16403.9468      | -43.90      | -13.00           | 30.90       | Horizontal   |



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### 7.2.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 48.2369         | -71.98      | -13.00           | 58.98       | Vertical     |
| 109.9805        | -64.20      | -13.00           | 51.20       | Vertical     |
| 1673.3347       | -55.43      | -13.00           | 42.43       | Vertical     |
| 2509.9020       | -46.58      | -13.00           | 33.58       | Vertical     |
| 3346.5116       | -60.54      | -13.00           | 47.54       | Vertical     |
| 17999.5000      | -40.41      | -13.00           | 27.41       | Vertical     |
| 44.0657         | -63.84      | -13.00           | 50.84       | Horizontal   |
| 240.4035        | -66.73      | -13.00           | 53.73       | Horizontal   |
| 1672.9346       | -55.76      | -13.00           | 42.76       | Horizontal   |
| 2509.9020       | -43.31      | -13.00           | 30.31       | Horizontal   |
| 3346.5116       | -57.51      | -13.00           | 44.51       | Horizontal   |
| 16391.4464      | -43.82      | -13.00           | 30.82       | Horizontal   |

### 7.2.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 46.9758         | -72.07      | -13.00           | 59.07       | Vertical     |
| 115.6068        | -63.92      | -13.00           | 50.92       | Vertical     |
| 1697.7395       | -56.54      | -13.00           | 43.54       | Vertical     |
| 2546.3093       | -49.40      | -13.00           | 36.40       | Vertical     |
| 3395.5132       | -60.18      | -13.00           | 47.18       | Vertical     |
| 17996.9999      | -40.56      | -13.00           | 27.56       | Vertical     |
| 44.7447         | -63.52      | -13.00           | 50.52       | Horizontal   |
| 235.2623        | -67.22      | -13.00           | 54.22       | Horizontal   |
| 1697.3395       | -52.98      | -13.00           | 39.98       | Horizontal   |
| 2546.3093       | -47.36      | -13.00           | 34.36       | Horizontal   |
| 3395.5132       | -56.01      | -13.00           | 43.01       | Horizontal   |
| 16396.4465      | -43.77      | -13.00           | 30.77       | Horizontal   |

Remark:

- 1) According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2) The disturbance above 12.75GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.





3)

## 8. Frequency Stability

### 8.1. Frequency Error Vs Voltage

| Voltage   |         |               |                  |                |                 |             |         |
|-----------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| BAND      | Channel | Voltage (Vdc) | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850    | 128     | VL            | TN               | 4.21           | 0.005108        | ±2.5        | PASS    |
| GSM850    | 128     | VN            | TN               | -5.92          | -0.007183       | ±2.5        | PASS    |
| GSM850    | 128     | VH            | TN               | -3.38          | -0.004102       | ±2.5        | PASS    |
| GSM850    | 190     | VL            | TN               | 2.21           | 0.002640        | ±2.5        | PASS    |
| GSM850    | 190     | VN            | TN               | -8.16          | -0.009751       | ±2.5        | PASS    |
| GSM850    | 190     | VH            | TN               | 5.01           | 0.005985        | ±2.5        | PASS    |
| GSM850    | 251     | VL            | TN               | 6.36           | 0.007497        | ±2.5        | PASS    |
| GSM850    | 251     | VN            | TN               | 0.40           | 0.000469        | ±2.5        | PASS    |
| GSM850    | 251     | VH            | TN               | -4.28          | -0.005046       | ±2.5        | PASS    |
| EGPRS850  | 128     | VL            | TN               | 12.99          | 0.015767        | ±2.5        | PASS    |
| EGPRS850  | 128     | VN            | TN               | 6.18           | 0.007498        | ±2.5        | PASS    |
| EGPRS850  | 128     | VH            | TN               | -10.81         | -0.013111       | ±2.5        | PASS    |
| EGPRS850  | 190     | VL            | TN               | 11.85          | 0.014168        | ±2.5        | PASS    |
| EGPRS850  | 190     | VN            | TN               | 12.45          | 0.014887        | ±2.5        | PASS    |
| EGPRS850  | 190     | VH            | TN               | 2.31           | 0.002761        | ±2.5        | PASS    |
| EGPRS850  | 251     | VL            | TN               | 8.89           | 0.010479        | ±2.5        | PASS    |
| EGPRS850  | 251     | VN            | TN               | 0.06           | 0.000069        | ±2.5        | PASS    |
| EGPRS850  | 251     | VH            | TN               | 8.25           | 0.009715        | ±2.5        | PASS    |
| GSM1900   | 512     | VL            | TN               | 11.94          | 0.006454        | ±2.5        | PASS    |
| GSM1900   | 512     | VN            | TN               | 1.59           | 0.000861        | ±2.5        | PASS    |
| GSM1900   | 512     | VH            | TN               | -6.86          | -0.003705       | ±2.5        | PASS    |
| GSM1900   | 661     | VL            | TN               | 13.68          | 0.007279        | ±2.5        | PASS    |
| GSM1900   | 661     | VN            | TN               | 3.70           | 0.001966        | ±2.5        | PASS    |
| GSM1900   | 661     | VH            | TN               | -1.78          | -0.000947       | ±2.5        | PASS    |
| GSM1900   | 810     | VL            | TN               | 0.41           | 0.000214        | ±2.5        | PASS    |
| GSM1900   | 810     | VN            | TN               | 12.63          | 0.006614        | ±2.5        | PASS    |
| GSM1900   | 810     | VH            | TN               | -12.45         | -0.006519       | ±2.5        | PASS    |
| EGPRS1900 | 512     | VL            | TN               | -2.50          | -0.001352       | ±2.5        | PASS    |
| EGPRS1900 | 512     | VN            | TN               | -9.09          | -0.004912       | ±2.5        | PASS    |



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|           |     |    |    |        |           |      |      |
|-----------|-----|----|----|--------|-----------|------|------|
| EGPRS1900 | 512 | VH | TN | -2.94  | -0.001589 | ±2.5 | PASS |
| EGPRS1900 | 661 | VL | TN | -13.93 | -0.007411 | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | TN | 4.71   | 0.002505  | ±2.5 | PASS |
| EGPRS1900 | 661 | VH | TN | 7.52   | 0.003999  | ±2.5 | PASS |
| EGPRS1900 | 810 | VL | TN | 9.16   | 0.004798  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | TN | -5.21  | -0.002729 | ±2.5 | PASS |
| EGPRS1900 | 810 | VH | TN | -1.95  | -0.001019 | ±2.5 | PASS |

## 8.2.Frequency Error Vs Temperature

| Temperature |         |                  |                     |                   |                    |                |         |
|-------------|---------|------------------|---------------------|-------------------|--------------------|----------------|---------|
| BAND        | Channel | Voltage<br>(Vdc) | Temperature<br>(°C) | Deviation<br>(Hz) | Deviation<br>(ppm) | Limit<br>(ppm) | Verdict |
| GSM850      | 128     | VN               | -30                 | 11.20             | 0.013589           | ±2.5           | PASS    |
| GSM850      | 128     | VN               | -20                 | 3.34              | 0.004052           | ±2.5           | PASS    |
| GSM850      | 128     | VN               | -10                 | -9.75             | -0.011832          | ±2.5           | PASS    |
| GSM850      | 128     | VN               | 0                   | -6.06             | -0.007354          | ±2.5           | PASS    |
| GSM850      | 128     | VN               | 10                  | -4.36             | -0.005291          | ±2.5           | PASS    |
| GSM850      | 128     | VN               | 20                  | -10.62            | -0.012889          | ±2.5           | PASS    |
| GSM850      | 128     | VN               | 30                  | 14.13             | 0.017149           | ±2.5           | PASS    |
| GSM850      | 128     | VN               | 40                  | -10.48            | -0.012716          | ±2.5           | PASS    |
| GSM850      | 128     | VN               | 50                  | -5.46             | -0.006623          | ±2.5           | PASS    |
| GSM850      | 190     | VN               | -30                 | 6.09              | 0.007284           | ±2.5           | PASS    |
| GSM850      | 190     | VN               | -20                 | -1.66             | -0.001981          | ±2.5           | PASS    |
| GSM850      | 190     | VN               | -10                 | -7.91             | -0.009460          | ±2.5           | PASS    |
| GSM850      | 190     | VN               | 0                   | -12.95            | -0.015482          | ±2.5           | PASS    |
| GSM850      | 190     | VN               | 10                  | -14.81            | -0.017708          | ±2.5           | PASS    |
| GSM850      | 190     | VN               | 20                  | 1.62              | 0.001940           | ±2.5           | PASS    |
| GSM850      | 190     | VN               | 30                  | -1.09             | -0.001306          | ±2.5           | PASS    |
| GSM850      | 190     | VN               | 40                  | 9.80              | 0.011713           | ±2.5           | PASS    |
| GSM850      | 190     | VN               | 50                  | -6.12             | -0.007312          | ±2.5           | PASS    |
| GSM850      | 251     | VN               | -30                 | 7.02              | 0.008271           | ±2.5           | PASS    |
| GSM850      | 251     | VN               | -20                 | 2.80              | 0.003300           | ±2.5           | PASS    |
| GSM850      | 251     | VN               | -10                 | 4.49              | 0.005293           | ±2.5           | PASS    |
| GSM850      | 251     | VN               | 0                   | -1.95             | -0.002294          | ±2.5           | PASS    |
| GSM850      | 251     | VN               | 10                  | 14.50             | 0.017082           | ±2.5           | PASS    |
| GSM850      | 251     | VN               | 20                  | -12.64            | -0.014895          | ±2.5           | PASS    |



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|          |     |    |     |        |           |      |      |
|----------|-----|----|-----|--------|-----------|------|------|
| GSM850   | 251 | VN | 30  | 7.87   | 0.009269  | ±2.5 | PASS |
| GSM850   | 251 | VN | 40  | 4.98   | 0.005865  | ±2.5 | PASS |
| GSM850   | 251 | VN | 50  | -9.02  | -0.010622 | ±2.5 | PASS |
| EGPRS850 | 128 | VN | -30 | 11.37  | 0.013792  | ±2.5 | PASS |
| EGPRS850 | 128 | VN | -20 | -12.65 | -0.015350 | ±2.5 | PASS |
| EGPRS850 | 128 | VN | -10 | 7.34   | 0.008903  | ±2.5 | PASS |
| EGPRS850 | 128 | VN | 0   | 5.42   | 0.006570  | ±2.5 | PASS |
| EGPRS850 | 128 | VN | 10  | 4.61   | 0.005593  | ±2.5 | PASS |
| EGPRS850 | 128 | VN | 20  | -2.72  | -0.003305 | ±2.5 | PASS |
| EGPRS850 | 128 | VN | 30  | -10.13 | -0.012291 | ±2.5 | PASS |
| EGPRS850 | 128 | VN | 40  | -0.53  | -0.000645 | ±2.5 | PASS |
| EGPRS850 | 128 | VN | 50  | 0.32   | 0.000386  | ±2.5 | PASS |
| EGPRS850 | 190 | VN | -30 | -8.16  | -0.009754 | ±2.5 | PASS |
| EGPRS850 | 190 | VN | -20 | -8.32  | -0.009942 | ±2.5 | PASS |
| EGPRS850 | 190 | VN | -10 | 11.28  | 0.013488  | ±2.5 | PASS |
| EGPRS850 | 190 | VN | 0   | 4.36   | 0.005216  | ±2.5 | PASS |
| EGPRS850 | 190 | VN | 10  | 2.11   | 0.002517  | ±2.5 | PASS |
| EGPRS850 | 190 | VN | 20  | -14.80 | -0.017688 | ±2.5 | PASS |
| EGPRS850 | 190 | VN | 30  | -4.65  | -0.005555 | ±2.5 | PASS |
| EGPRS850 | 190 | VN | 40  | 3.66   | 0.004373  | ±2.5 | PASS |
| EGPRS850 | 190 | VN | 50  | 5.42   | 0.006478  | ±2.5 | PASS |
| EGPRS850 | 251 | VN | -30 | 2.93   | 0.003451  | ±2.5 | PASS |
| EGPRS850 | 251 | VN | -20 | -12.82 | -0.015107 | ±2.5 | PASS |
| EGPRS850 | 251 | VN | -10 | -0.98  | -0.001149 | ±2.5 | PASS |
| EGPRS850 | 251 | VN | 0   | 12.42  | 0.014627  | ±2.5 | PASS |
| EGPRS850 | 251 | VN | 10  | -11.87 | -0.013988 | ±2.5 | PASS |
| EGPRS850 | 251 | VN | 20  | -14.29 | -0.016838 | ±2.5 | PASS |
| EGPRS850 | 251 | VN | 30  | 2.11   | 0.002490  | ±2.5 | PASS |
| EGPRS850 | 251 | VN | 40  | -6.69  | -0.007877 | ±2.5 | PASS |
| EGPRS850 | 251 | VN | 50  | 14.96  | 0.017621  | ±2.5 | PASS |
| GSM1900  | 512 | VN | -30 | -10.07 | -0.005444 | ±2.5 | PASS |
| GSM1900  | 512 | VN | -20 | -12.12 | -0.006548 | ±2.5 | PASS |
| GSM1900  | 512 | VN | -10 | 1.74   | 0.000938  | ±2.5 | PASS |
| GSM1900  | 512 | VN | 0   | 9.83   | 0.005311  | ±2.5 | PASS |
| GSM1900  | 512 | VN | 10  | 3.02   | 0.001633  | ±2.5 | PASS |
| GSM1900  | 512 | VN | 20  | 7.21   | 0.003896  | ±2.5 | PASS |
| GSM1900  | 512 | VN | 30  | 13.97  | 0.007549  | ±2.5 | PASS |



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|           |     |    |     |        |           |      |      |
|-----------|-----|----|-----|--------|-----------|------|------|
| GSM1900   | 512 | VN | 40  | 7.21   | 0.003896  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 50  | 14.13  | 0.007636  | ±2.5 | PASS |
| GSM1900   | 661 | VN | -30 | -3.86  | -0.002053 | ±2.5 | PASS |
| GSM1900   | 661 | VN | -20 | -1.60  | -0.000852 | ±2.5 | PASS |
| GSM1900   | 661 | VN | -10 | 0.93   | 0.000494  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 0   | 6.40   | 0.003402  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 10  | -9.36  | -0.004979 | ±2.5 | PASS |
| GSM1900   | 661 | VN | 20  | 7.73   | 0.004109  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 30  | -8.94  | -0.004757 | ±2.5 | PASS |
| GSM1900   | 661 | VN | 40  | 5.31   | 0.002825  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 50  | -0.95  | -0.000503 | ±2.5 | PASS |
| GSM1900   | 810 | VN | -30 | 13.27  | 0.006949  | ±2.5 | PASS |
| GSM1900   | 810 | VN | -20 | 9.70   | 0.005078  | ±2.5 | PASS |
| GSM1900   | 810 | VN | -10 | -12.20 | -0.006389 | ±2.5 | PASS |
| GSM1900   | 810 | VN | 0   | -14.57 | -0.007631 | ±2.5 | PASS |
| GSM1900   | 810 | VN | 10  | 7.08   | 0.003705  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 20  | 9.32   | 0.004878  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 30  | -6.68  | -0.003498 | ±2.5 | PASS |
| GSM1900   | 810 | VN | 40  | 14.90  | 0.007804  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 50  | -1.07  | -0.000559 | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | -30 | 13.61  | 0.007355  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | -20 | -4.03  | -0.002179 | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | -10 | -6.78  | -0.003664 | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 0   | -5.07  | -0.002738 | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 10  | -5.99  | -0.003235 | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 20  | 4.28   | 0.002313  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 30  | -8.76  | -0.004735 | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 40  | 0.19   | 0.000102  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 50  | -14.97 | -0.008091 | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | -30 | 3.55   | 0.001887  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | -20 | -13.96 | -0.007428 | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | -10 | 2.76   | 0.001469  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 0   | -10.24 | -0.005449 | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 10  | -5.39  | -0.002866 | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 20  | 8.70   | 0.004628  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 30  | 14.32  | 0.007616  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 40  | 4.89   | 0.002603  | ±2.5 | PASS |



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|           |     |    |     |        |           |      |      |
|-----------|-----|----|-----|--------|-----------|------|------|
| EGPRS1900 | 661 | VN | 50  | 5.57   | 0.002964  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | -30 | -2.39  | -0.001252 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | -20 | -13.62 | -0.007129 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | -10 | -4.13  | -0.002160 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 0   | 7.77   | 0.004068  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 10  | 4.21   | 0.002207  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 20  | 1.86   | 0.000976  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 30  | -6.53  | -0.003421 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 40  | -11.32 | -0.005926 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 50  | 11.38  | 0.005956  | ±2.5 | PASS |

The End



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