



# 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     | ---  | 31.25                 | 27.61     | 38.45      | PASS    |
| GSM850   | 190     | ---  | 31.30                 | 27.66     | 38.45      | PASS    |
| GSM850   | 251     | ---  | 31.18                 | 27.54     | 38.45      | PASS    |
| EGPRS850 | 128     | 1    | 26.15                 | 22.51     | 38.45      | PASS    |
| EGPRS850 | 128     | 2    | 24.55                 | 20.91     | 38.45      | PASS    |
| EGPRS850 | 128     | 3    | 22.98                 | 19.34     | 38.45      | PASS    |
| EGPRS850 | 128     | 4    | 21.52                 | 17.88     | 38.45      | PASS    |
| EGPRS850 | 190     | 1    | 26.16                 | 22.52     | 38.45      | PASS    |
| EGPRS850 | 190     | 2    | 24.56                 | 20.92     | 38.45      | PASS    |
| EGPRS850 | 190     | 3    | 22.87                 | 19.23     | 38.45      | PASS    |
| EGPRS850 | 190     | 4    | 21.42                 | 17.78     | 38.45      | PASS    |
| EGPRS850 | 251     | 1    | 26.09                 | 22.45     | 38.45      | PASS    |
| EGPRS850 | 251     | 2    | 24.52                 | 20.88     | 38.45      | PASS    |
| EGPRS850 | 251     | 3    | 22.85                 | 19.21     | 38.45      | PASS    |
| EGPRS850 | 251     | 4    | 21.33                 | 17.69     | 38.45      | PASS    |

| Band      | Channel | Slot | Conducted Power (dBm) | EIRP (dBm) | Limit(dBm) | Verdict |
|-----------|---------|------|-----------------------|------------|------------|---------|
| GSM1900   | 512     | ---  | 29.75                 | 29.88      | 33.00      | PASS    |
| GSM1900   | 661     | ---  | 29.78                 | 29.91      | 33.00      | PASS    |
| GSM1900   | 810     | ---  | 29.66                 | 29.79      | 33.00      | PASS    |
| EGPRS1900 | 512     | 1    | 25.51                 | 25.64      | 33.00      | PASS    |
| EGPRS1900 | 512     | 2    | 23.72                 | 23.85      | 33.00      | PASS    |
| EGPRS1900 | 512     | 3    | 21.96                 | 22.09      | 33.00      | PASS    |
| EGPRS1900 | 512     | 4    | 20.23                 | 20.36      | 33.00      | PASS    |
| EGPRS1900 | 661     | 1    | 25.52                 | 25.65      | 33.00      | PASS    |
| EGPRS1900 | 661     | 2    | 23.87                 | 24.00      | 33.00      | PASS    |
| EGPRS1900 | 661     | 3    | 22.06                 | 22.19      | 33.00      | PASS    |
| EGPRS1900 | 661     | 4    | 20.32                 | 20.45      | 33.00      | PASS    |
| EGPRS1900 | 810     | 1    | 25.23                 | 25.36      | 33.00      | PASS    |
| EGPRS1900 | 810     | 2    | 23.58                 | 23.71      | 33.00      | PASS    |
| EGPRS1900 | 810     | 3    | 21.82                 | 21.95      | 33.00      | PASS    |
| EGPRS1900 | 810     | 4    | 20.14                 | 20.27      | 33.00      | PASS    |

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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]

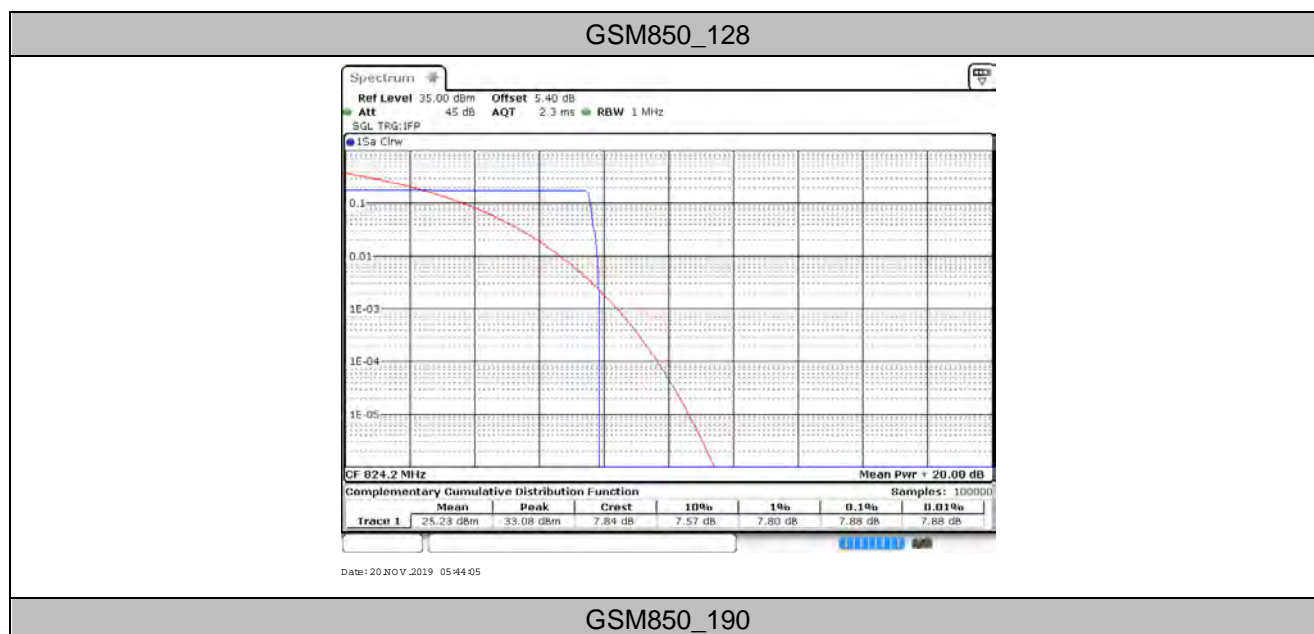
EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]

## 2. Peak-to-Average Ratio

### 2.1. Test Result

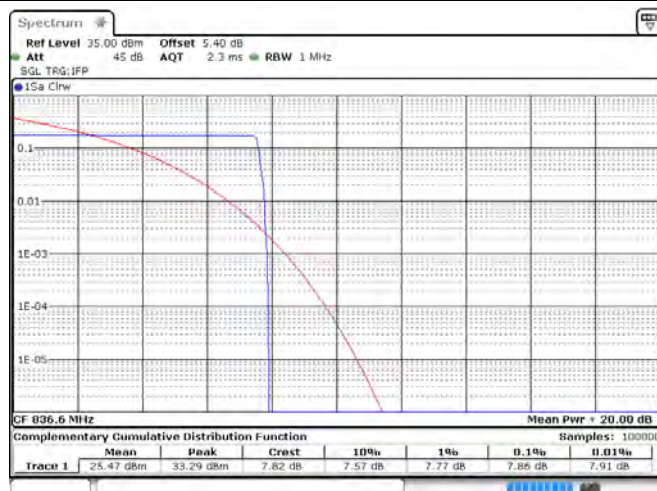
| Band      | Channel | Peak-to-Average Ratio(dB) | Limit(dB) | Verdict |
|-----------|---------|---------------------------|-----------|---------|
| GSM850    | 128     | 7.88                      | 13        | PASS    |
| GSM850    | 190     | 7.86                      | 13        | PASS    |
| GSM850    | 251     | 7.83                      | 13        | PASS    |
| EGPRS850  | 128     | 10.29                     | 13        | PASS    |
| EGPRS850  | 190     | 10.41                     | 13        | PASS    |
| EGPRS850  | 251     | 10.61                     | 13        | PASS    |
| GSM1900   | 512     | 7.71                      | 13        | PASS    |
| GSM1900   | 661     | 7.71                      | 13        | PASS    |
| GSM1900   | 810     | 7.71                      | 13        | PASS    |
| EGPRS1900 | 512     | 9.71                      | 13        | PASS    |
| EGPRS1900 | 661     | 9.54                      | 13        | PASS    |
| EGPRS1900 | 810     | 9.59                      | 13        | PASS    |

### 2.2. Part II - Test Plots



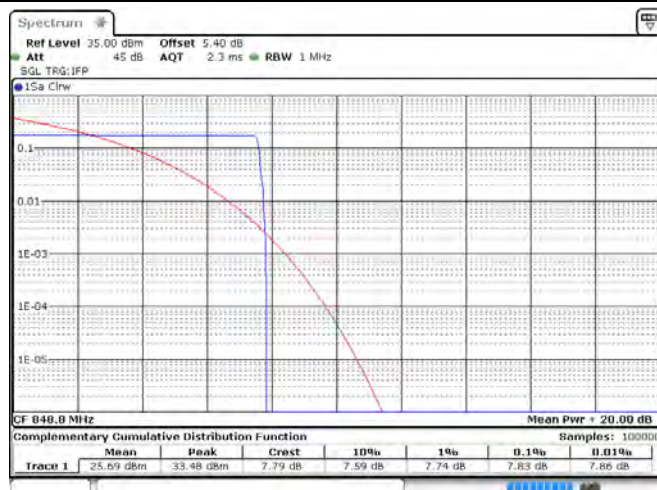
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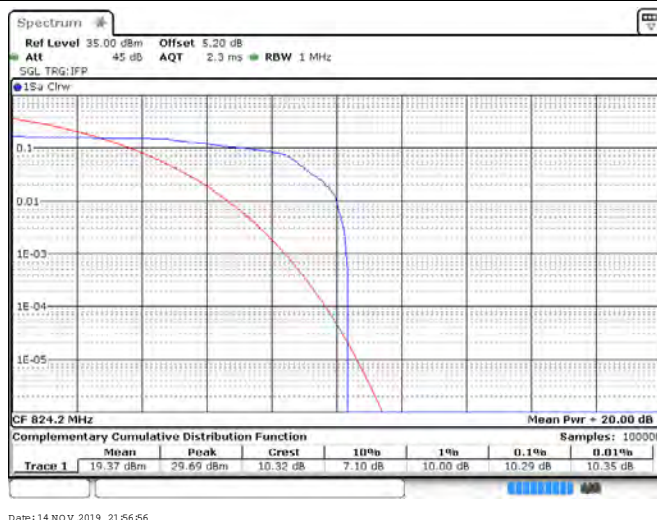
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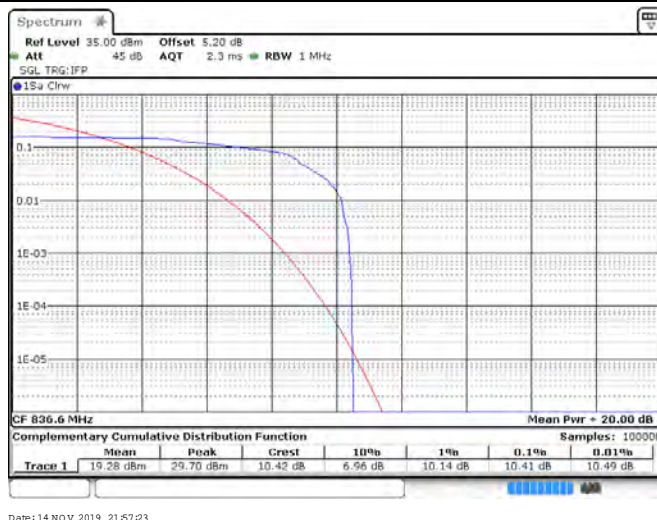
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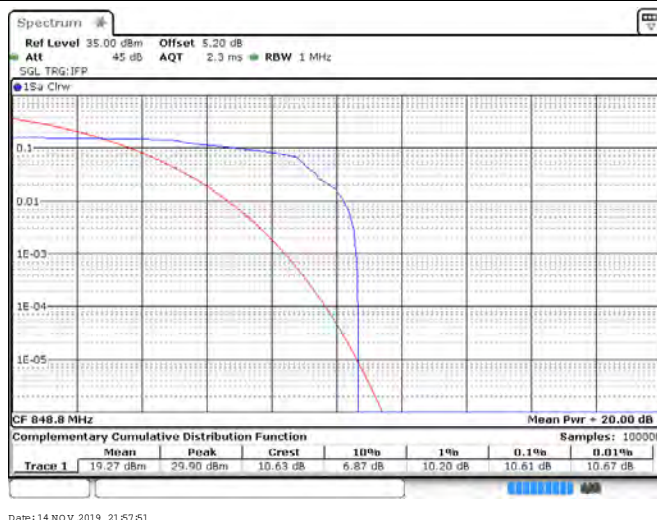
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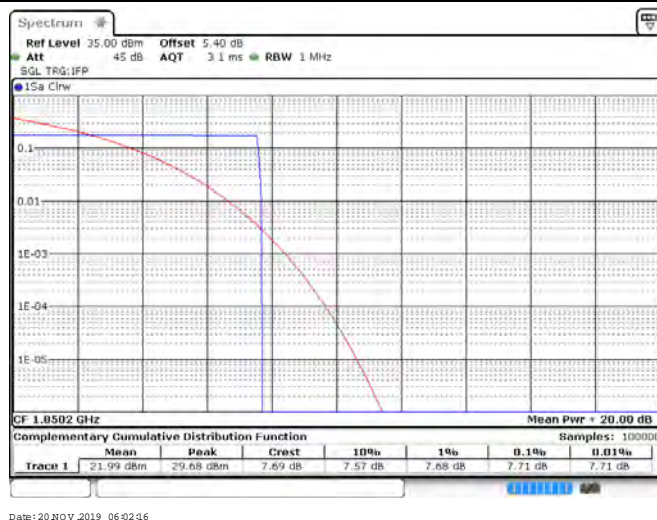
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GSM1900\_512



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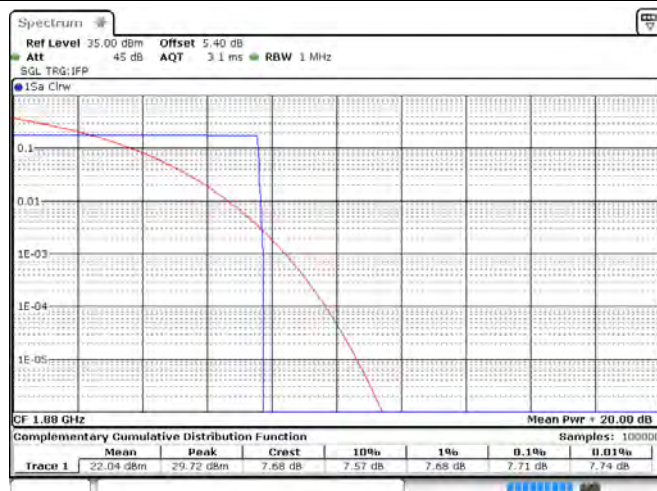
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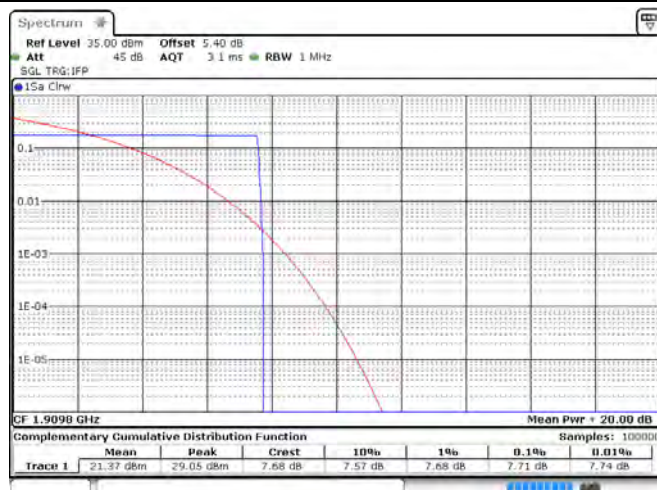
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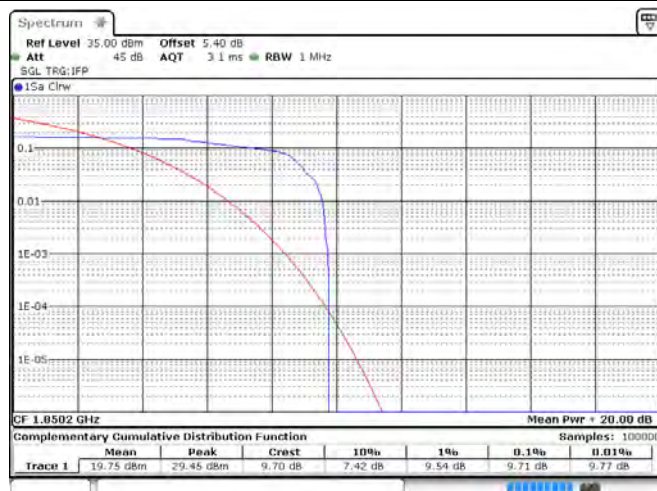
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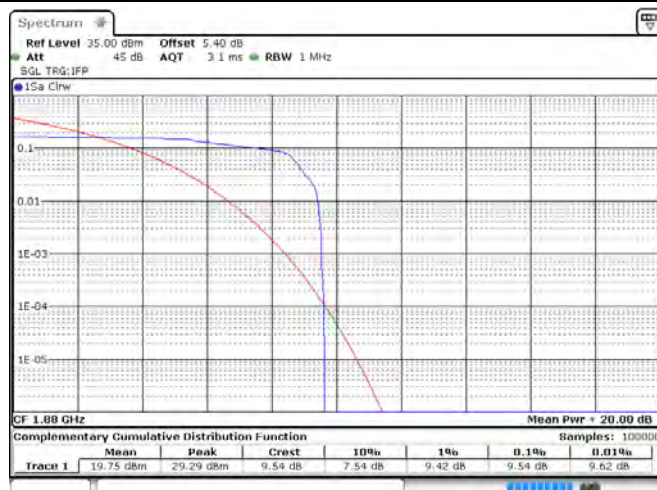
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EGPRS1900\_661



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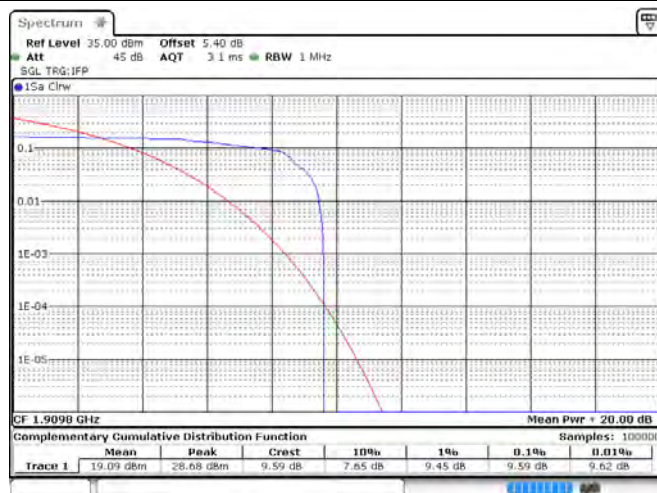
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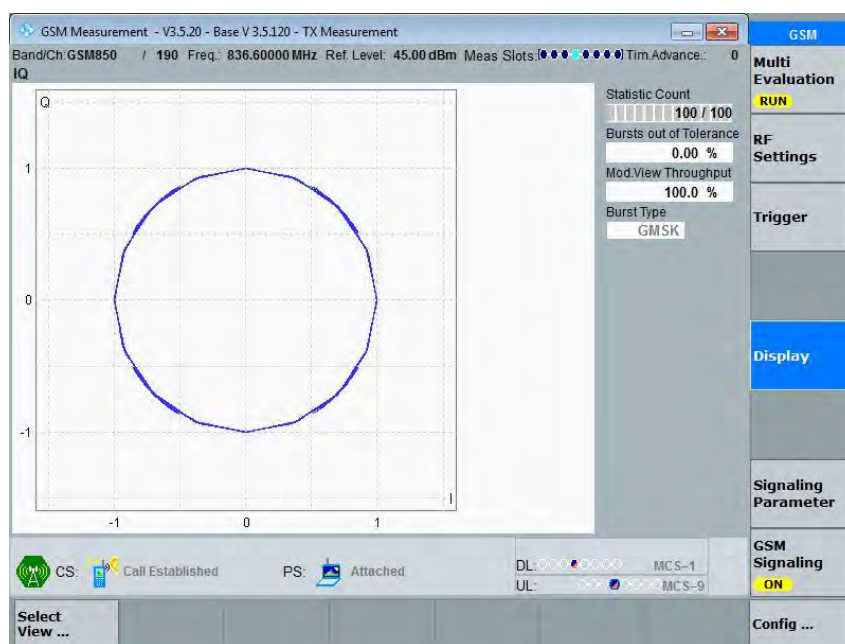
### 3. Modulation Characteristics

#### 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



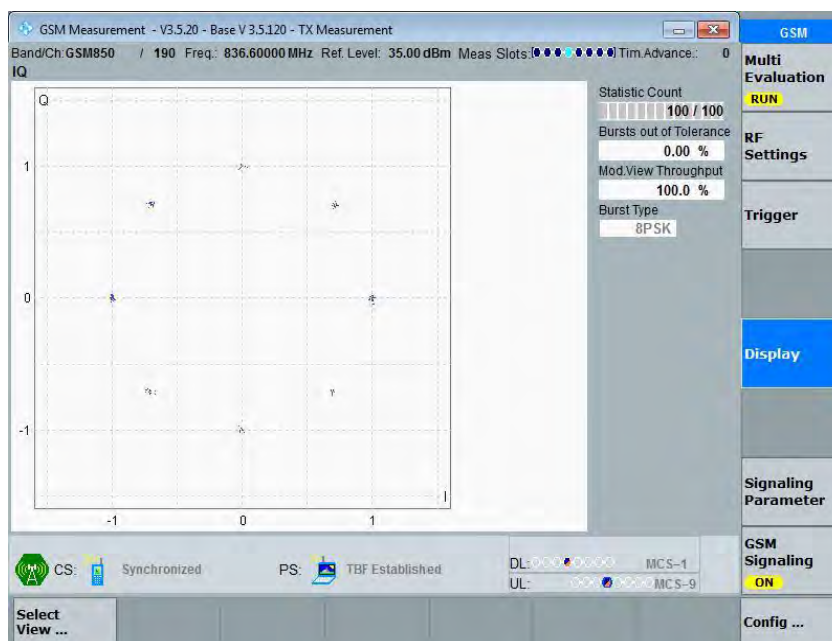
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### 3.1.1.2. Test Mode = GSM/TM2

#### 3.1.1.2.1. Test Channel = MCH



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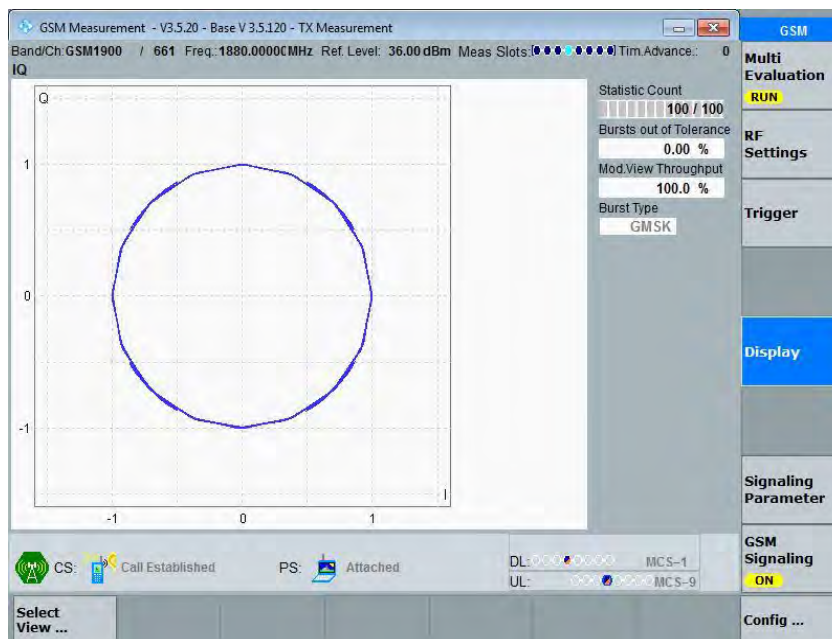
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### 3.1.2. Test Band = GSM 1900

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

##### 3.1.2.1.1. Test Channel = MCH

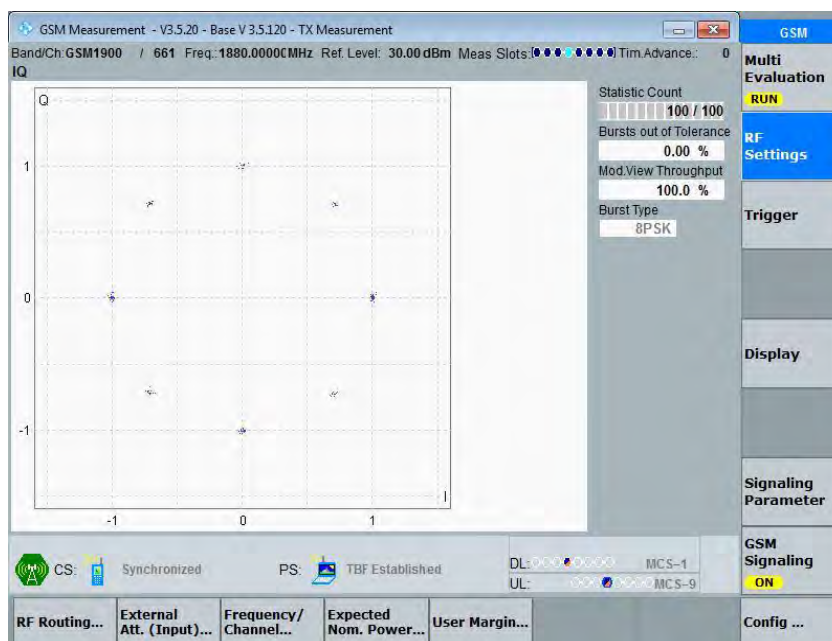






### 3.1.2.2. Test Mode = GSM/TM2

#### 3.1.2.2.1. Test Channel = MCH



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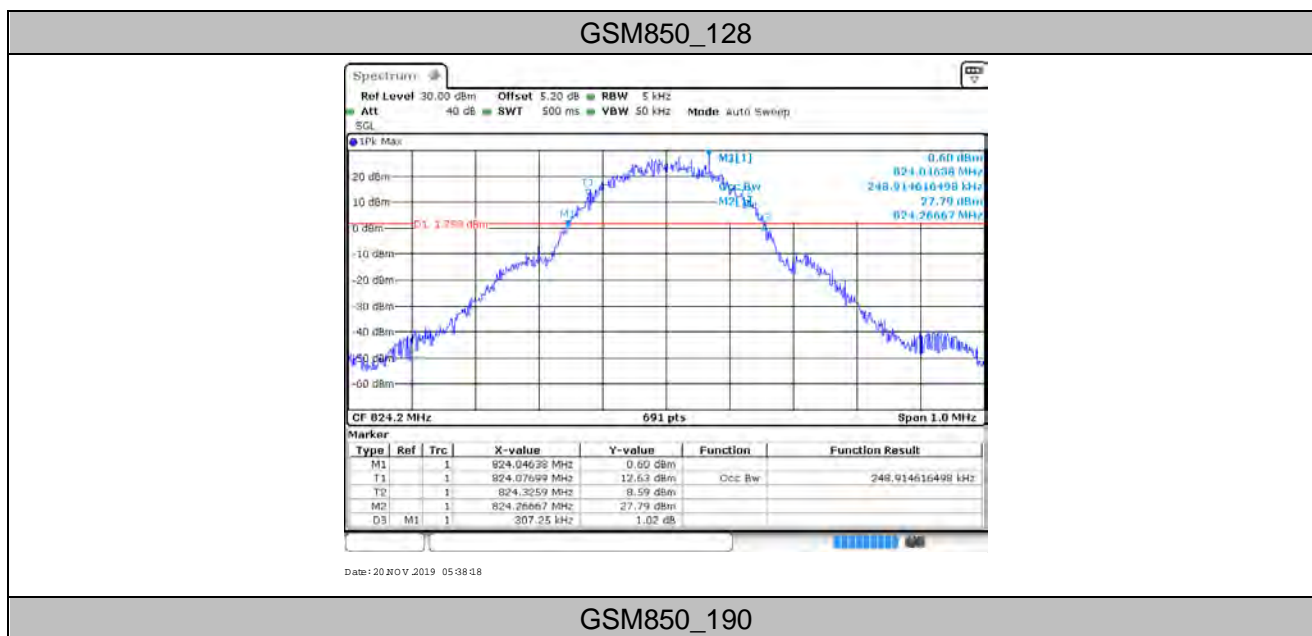


## 4. 26dB Bandwidth and Occupied Bandwidth

### 4.1. Test Result

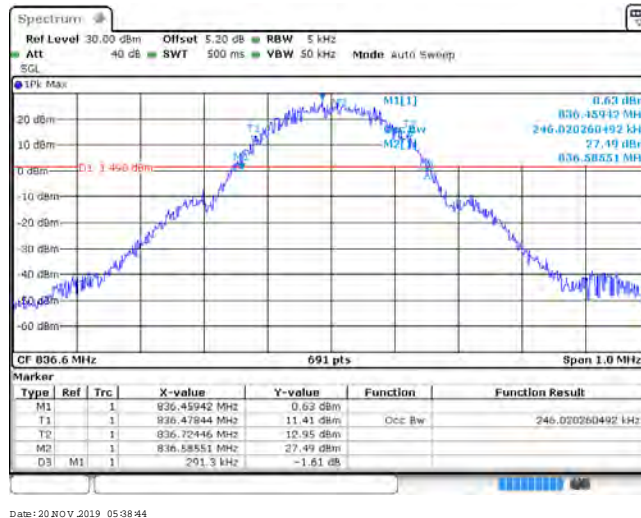
| Band      | Channel | Occupied Bandwidth (kHz) | 26dB Bandwidth (kHz) | Limit(kHz) | Verdict |
|-----------|---------|--------------------------|----------------------|------------|---------|
| GSM850    | 128     | 248.91                   | 307.25               | ---        | PASS    |
| GSM850    | 190     | 246.02                   | 291.30               | ---        | PASS    |
| GSM850    | 251     | 244.57                   | 315.94               | ---        | PASS    |
| EGPRS850  | 128     | 251.81                   | 308.70               | ---        | PASS    |
| EGPRS850  | 190     | 250.36                   | 307.25               | ---        | PASS    |
| EGPRS850  | 251     | 246.02                   | 302.90               | ---        | PASS    |
| GSM1900   | 512     | 243.13                   | 313.04               | ---        | PASS    |
| GSM1900   | 661     | 247.47                   | 310.14               | ---        | PASS    |
| GSM1900   | 810     | 247.47                   | 300.00               | ---        | PASS    |
| EGPRS1900 | 512     | 254.70                   | 320.29               | ---        | PASS    |
| EGPRS1900 | 661     | 257.60                   | 305.80               | ---        | PASS    |
| EGPRS1900 | 810     | 256.15                   | 298.55               | ---        | PASS    |

### 4.2. Test Plots

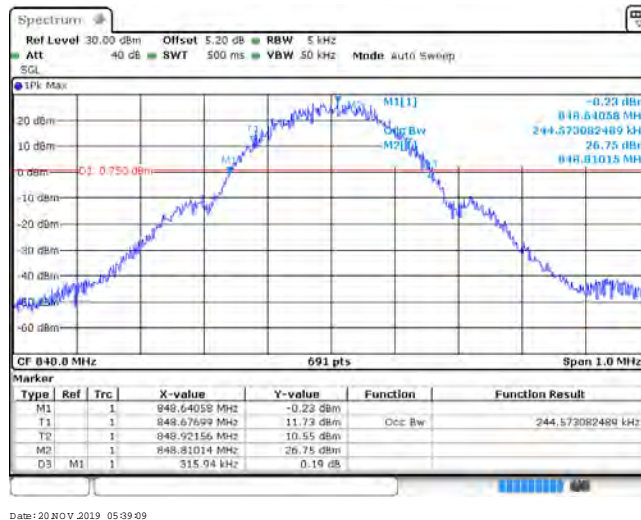


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## GSM850\_251



## EGPRS850\_128

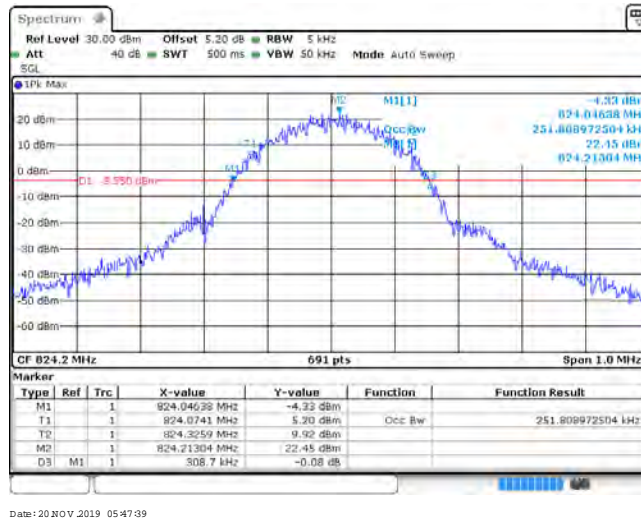


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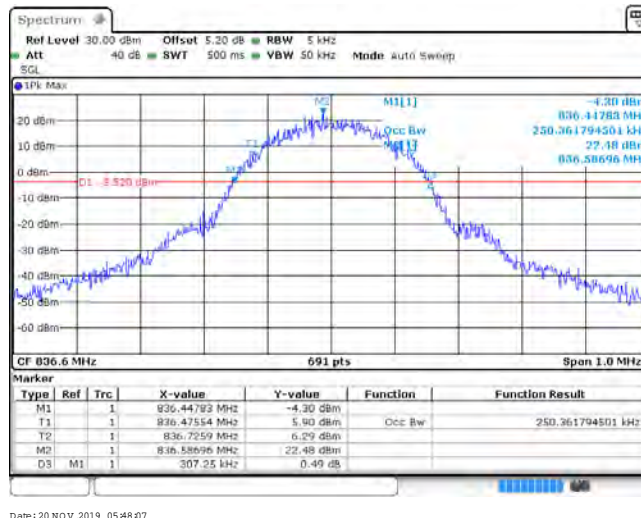
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Date: 20 NOV 2019 05:47:39

## EGPRS850\_190



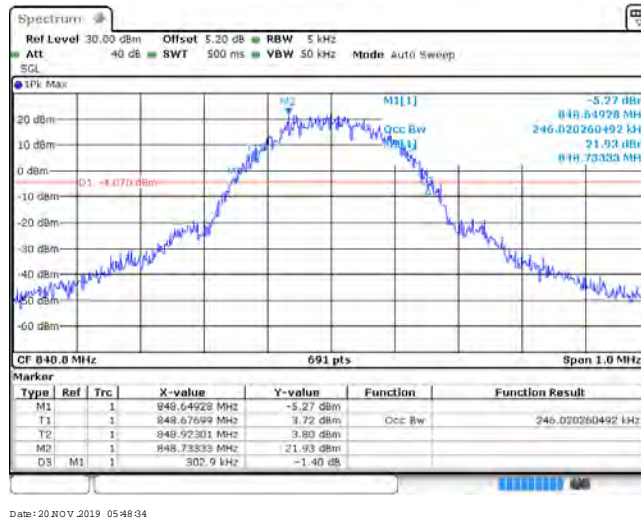
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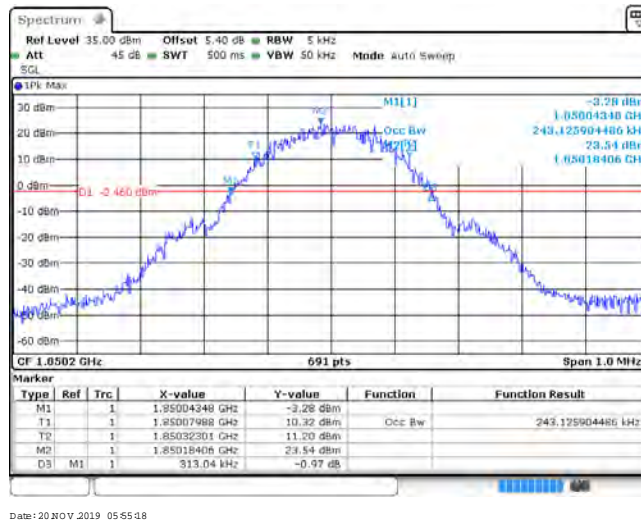


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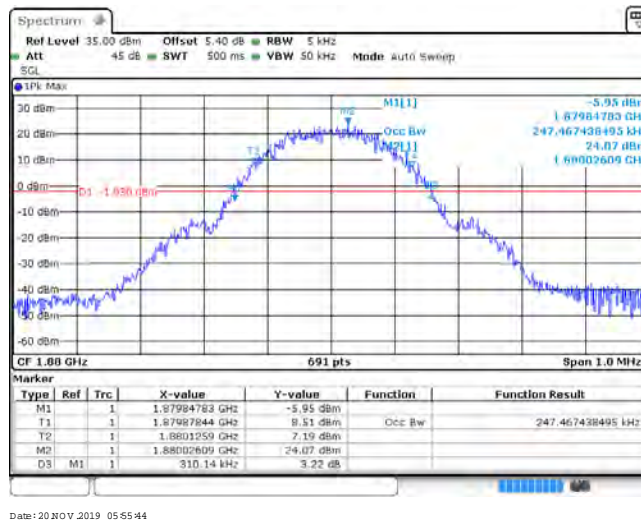


GSM1900\_661

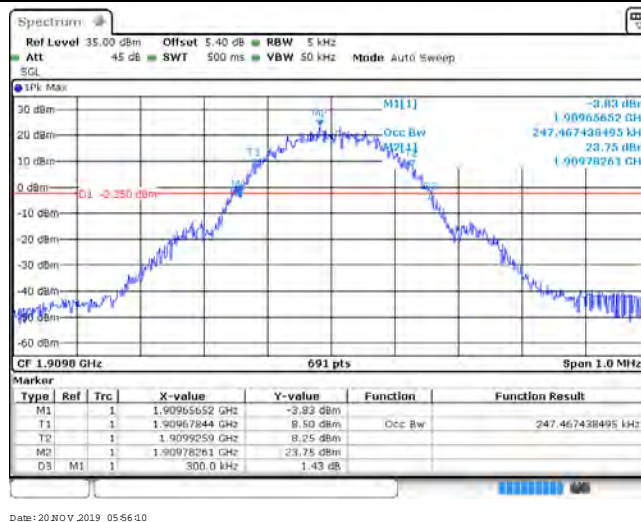


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## GSM1900\_810



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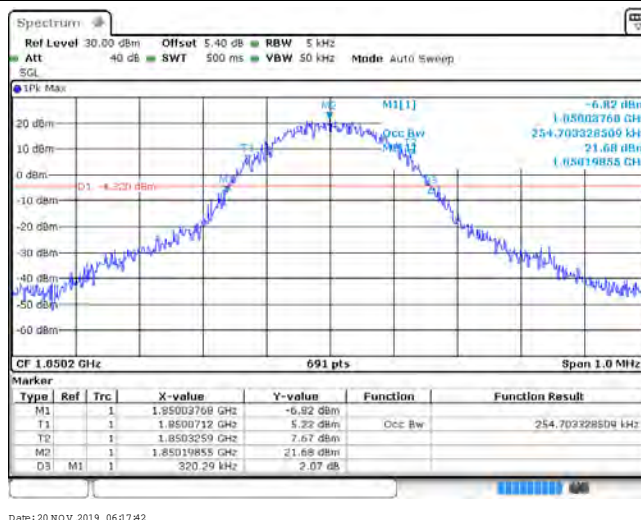
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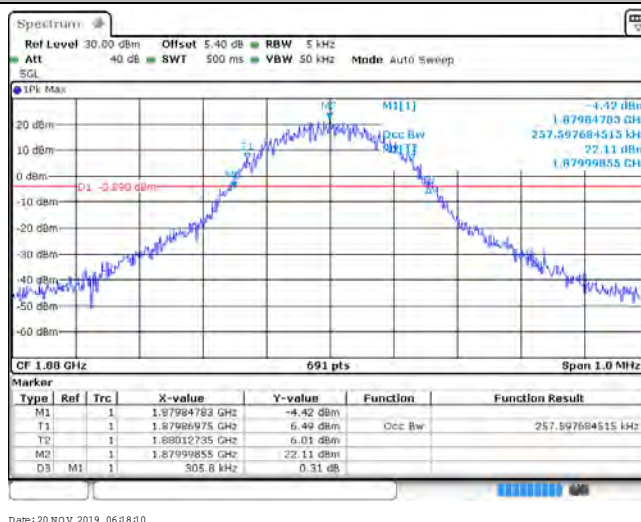
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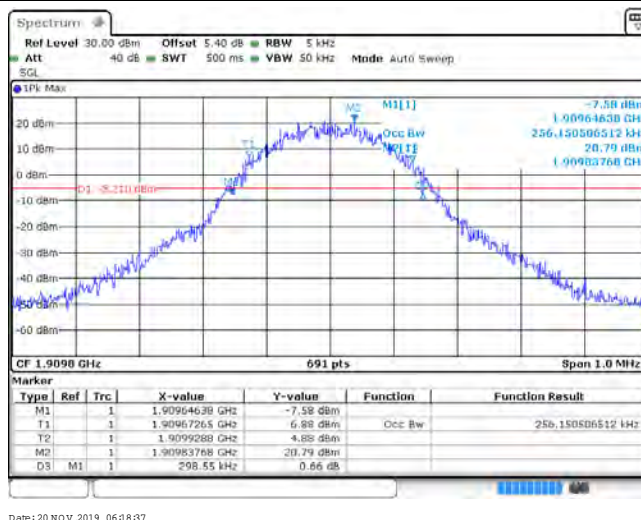




EGPRS1900\_661



EGPRS1900\_810



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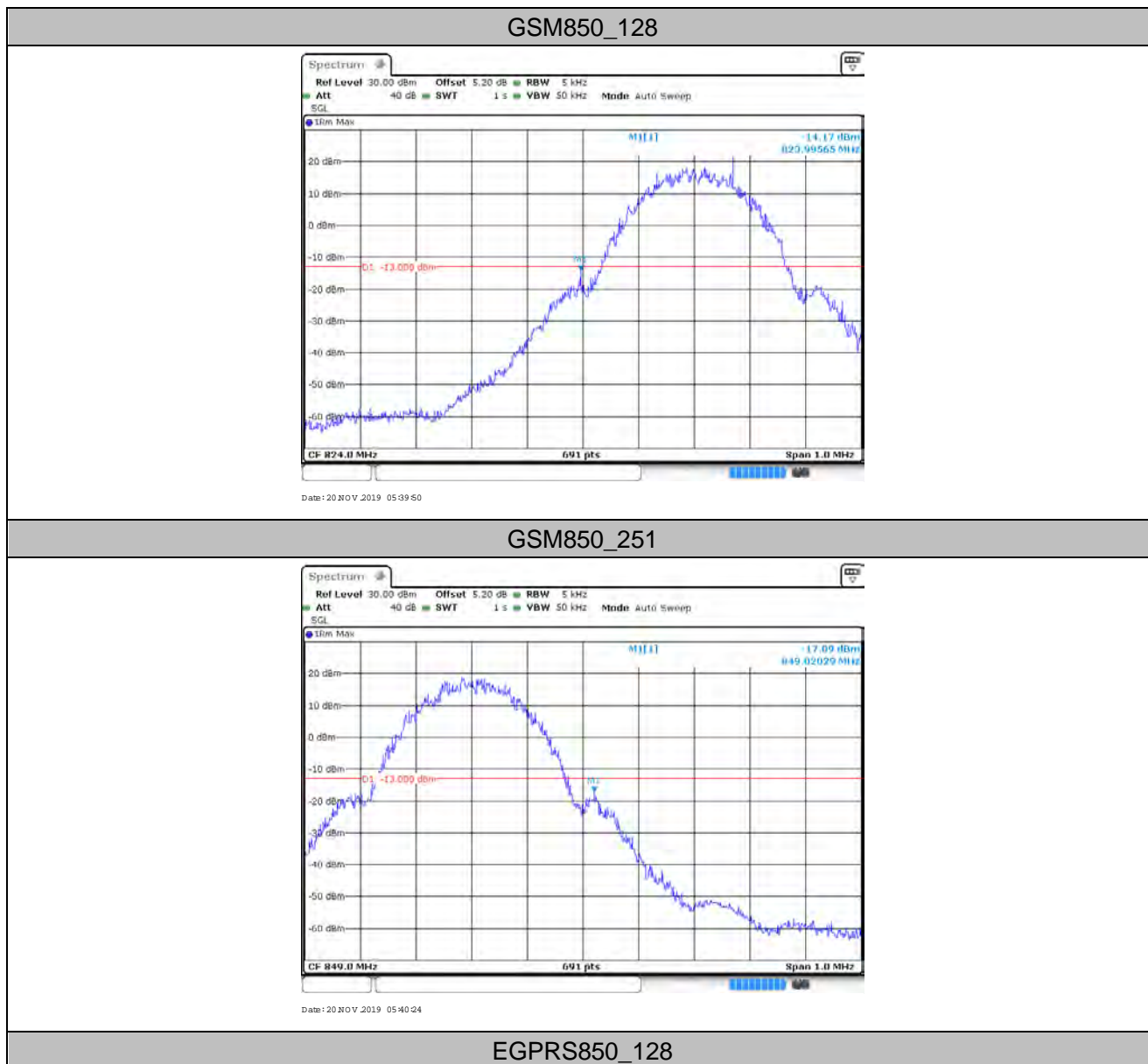
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## 5. Band Edge Compliance

### 5.1. Test Plots

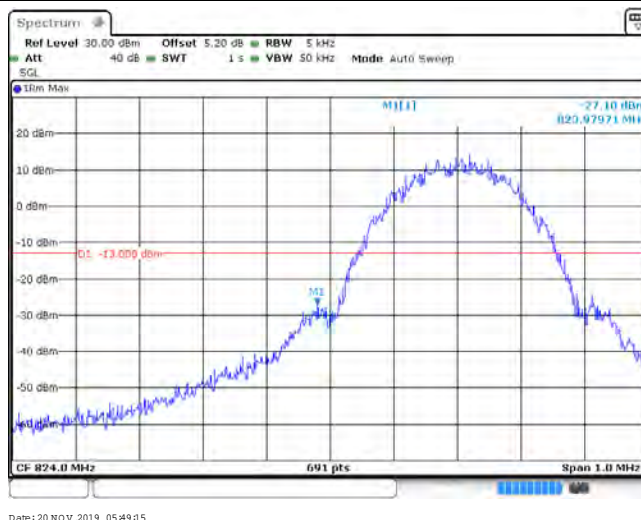


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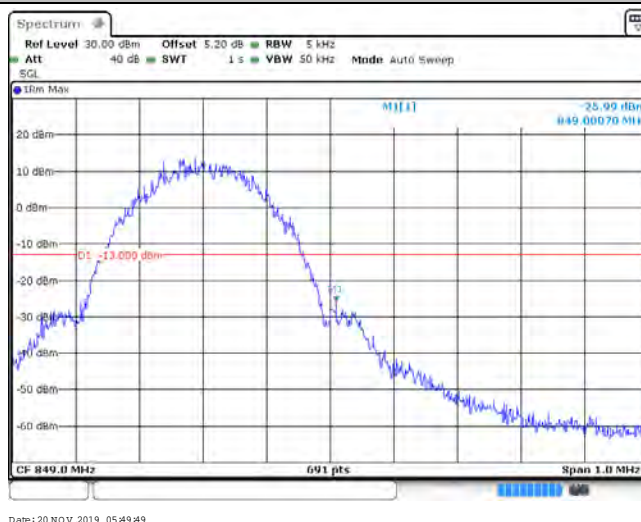
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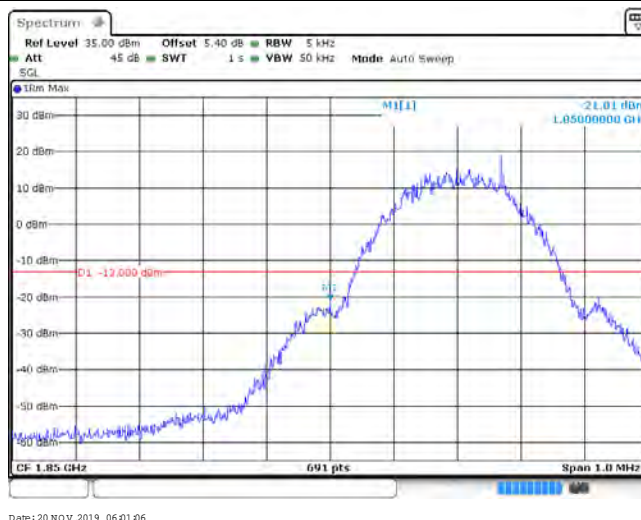


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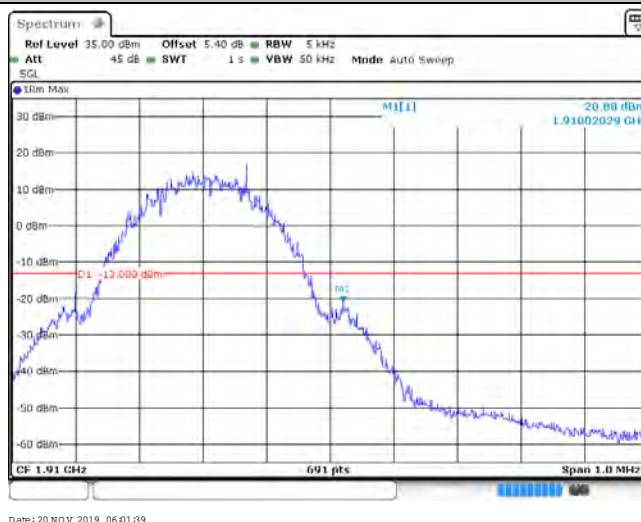


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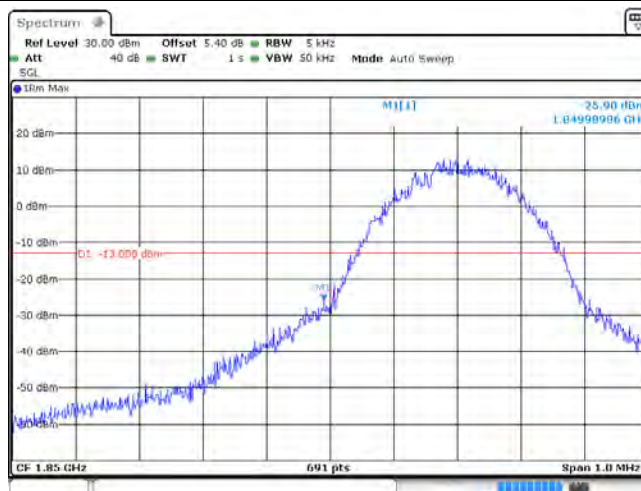


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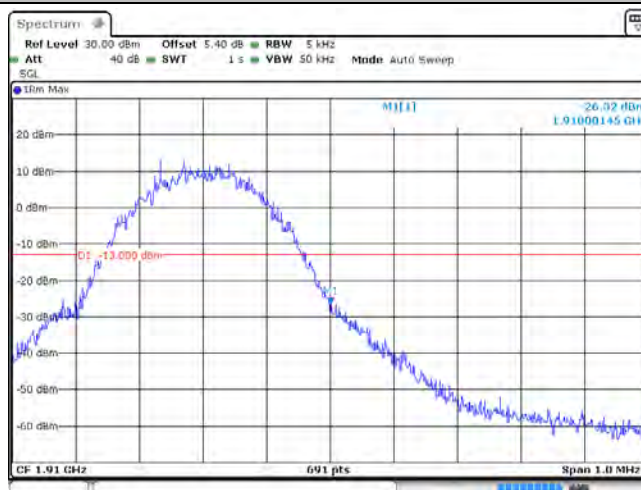
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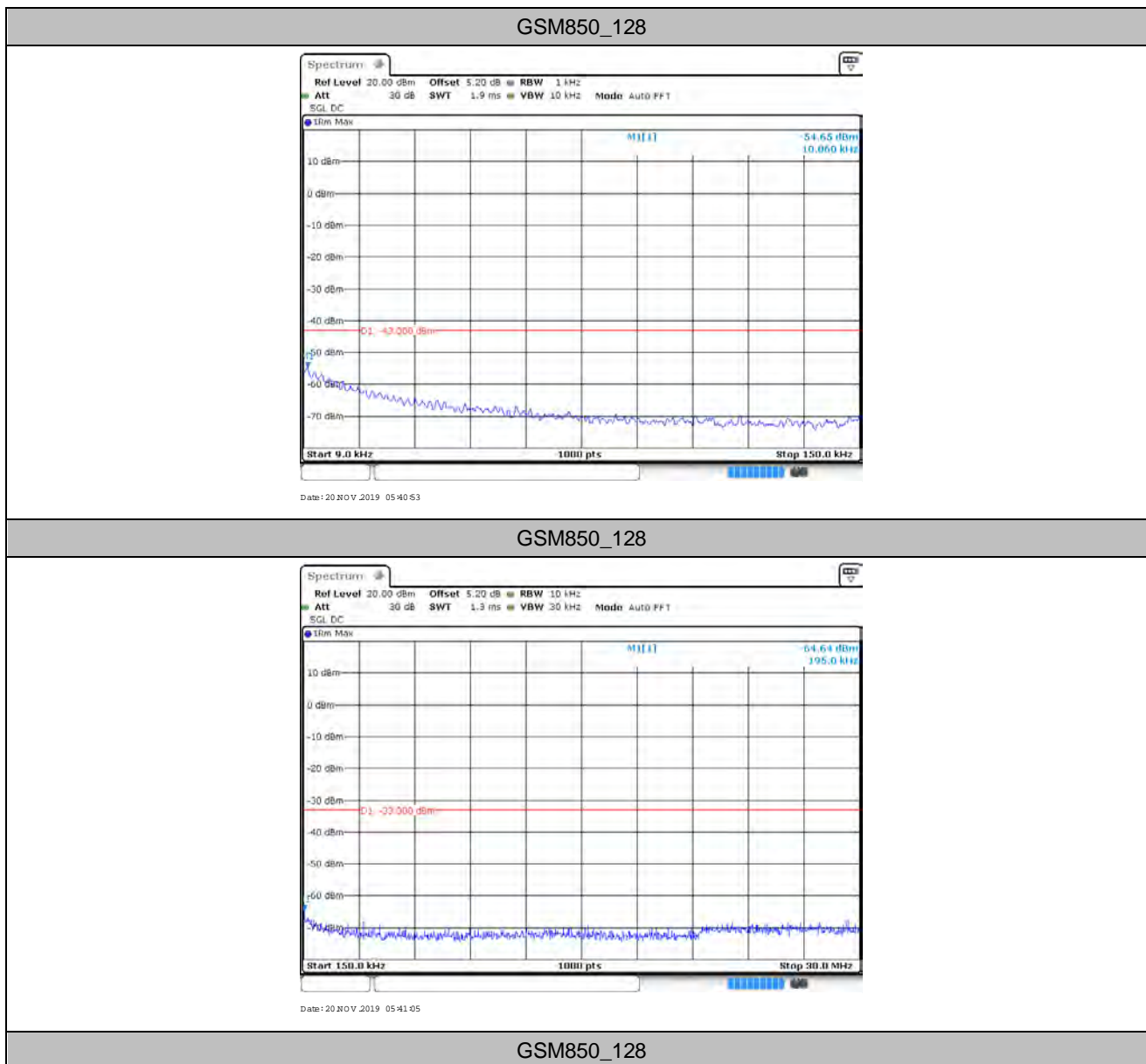


## 6. Spurious Emission at Antenna Terminal

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

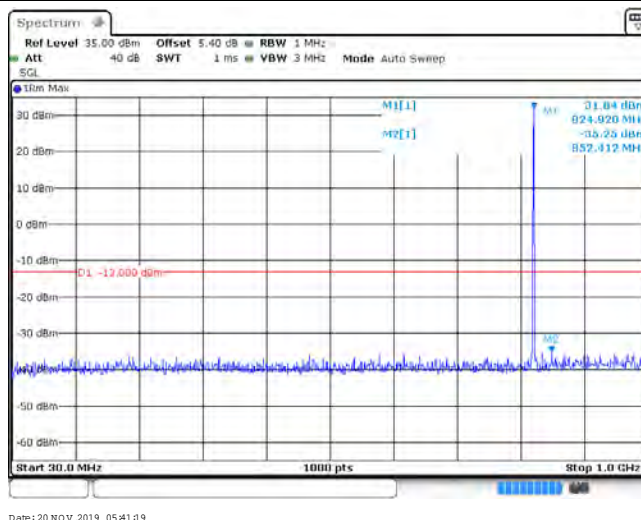


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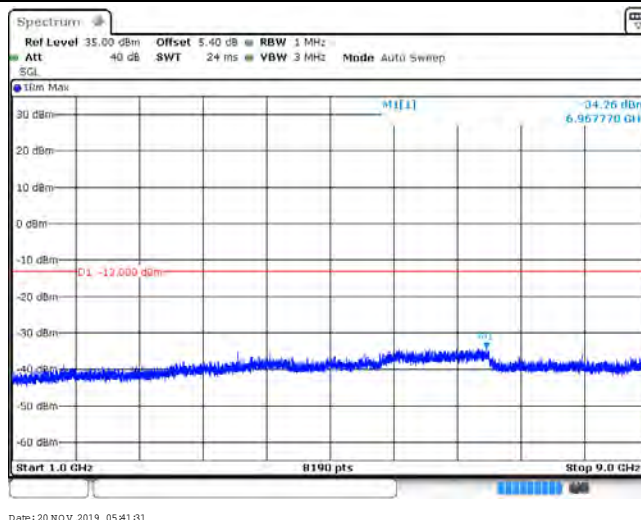
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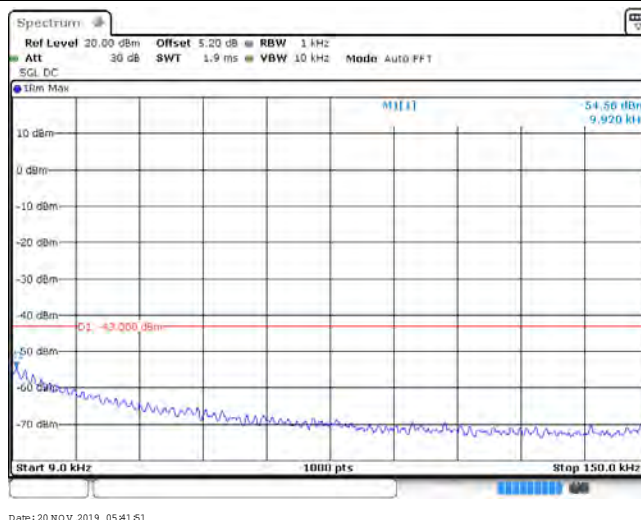
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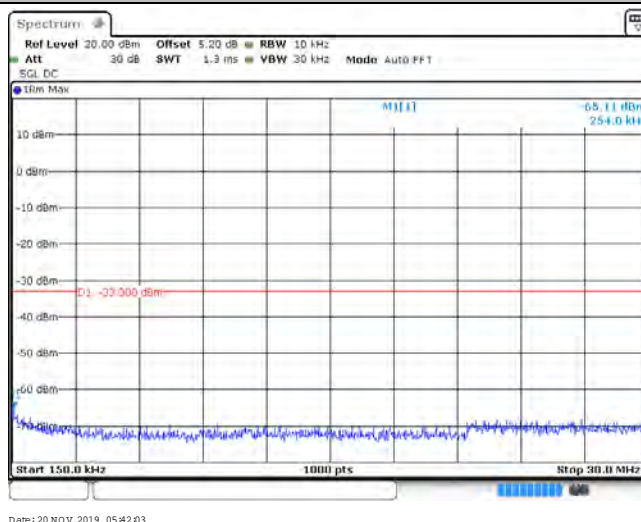


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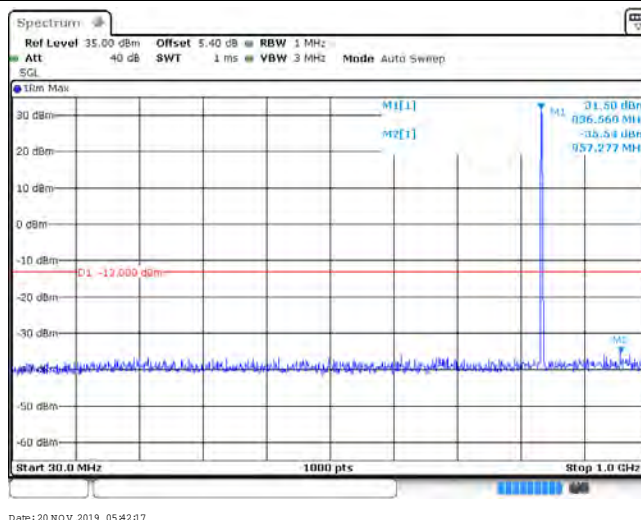
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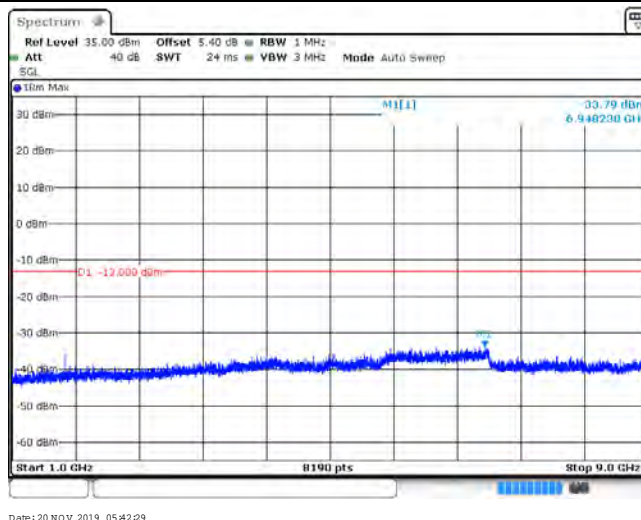
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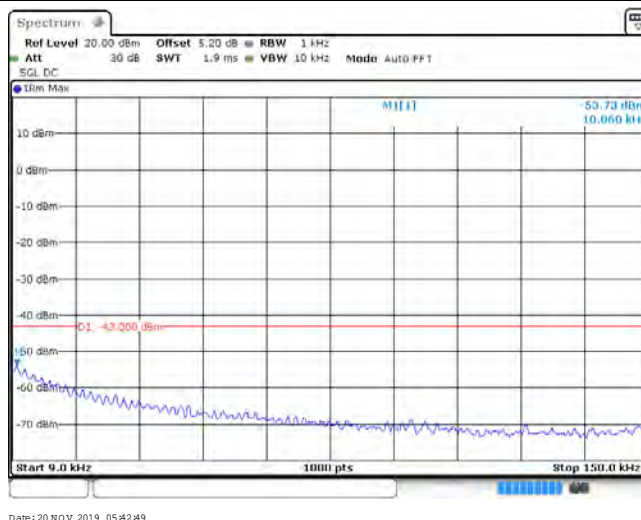
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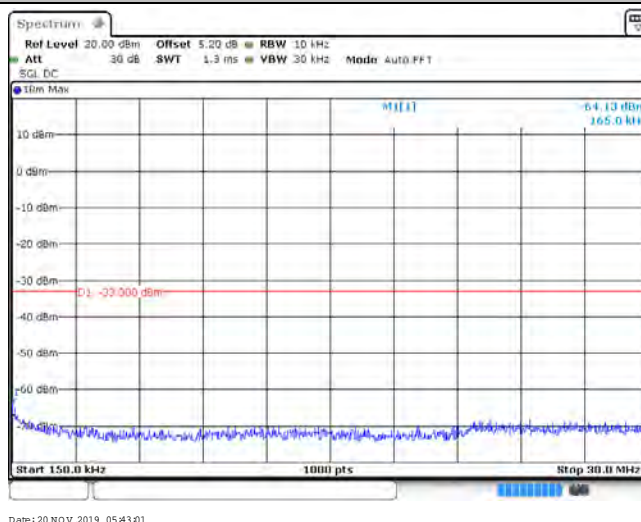
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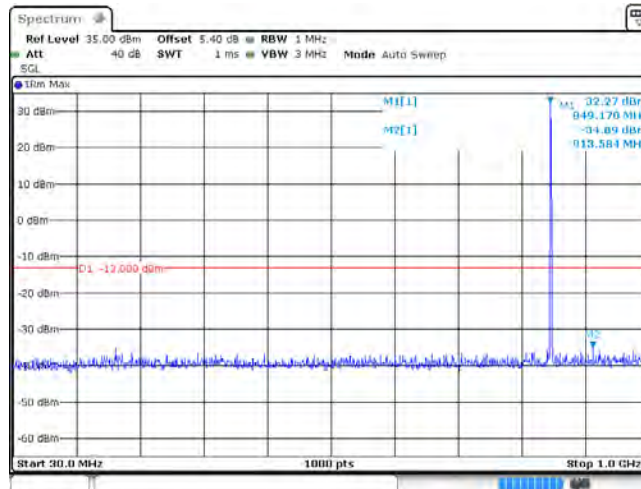


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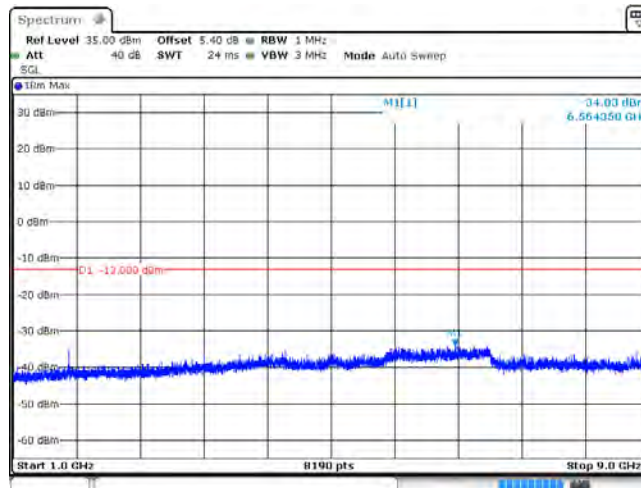
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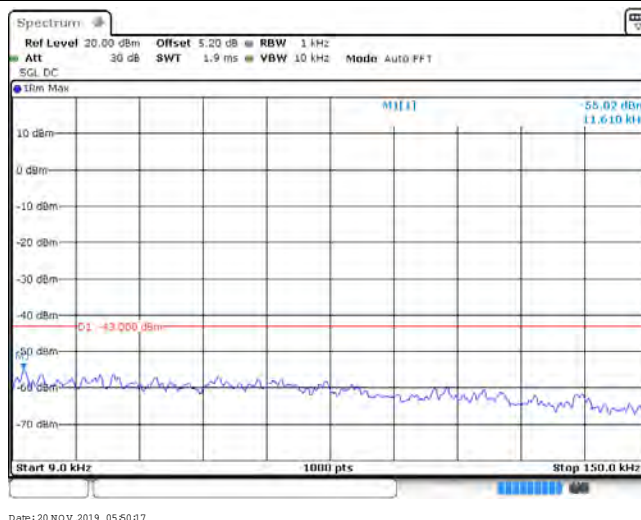
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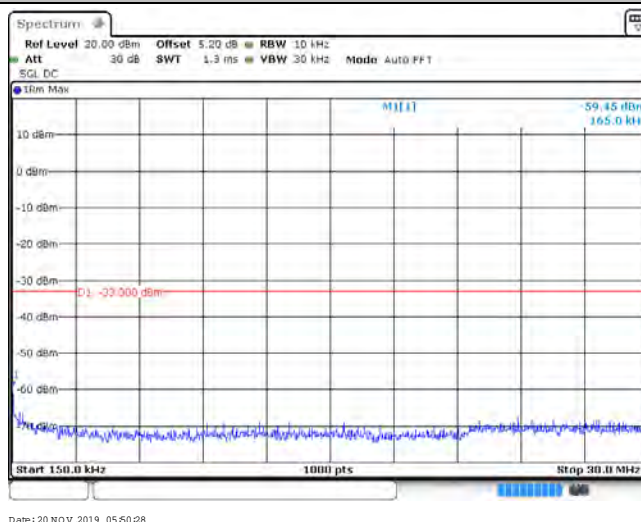
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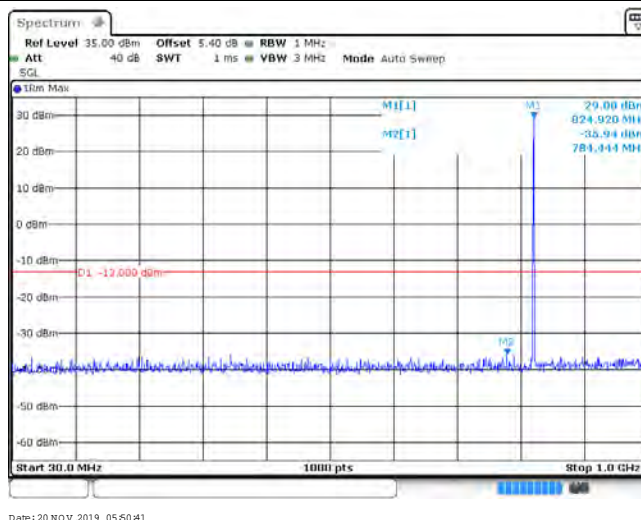


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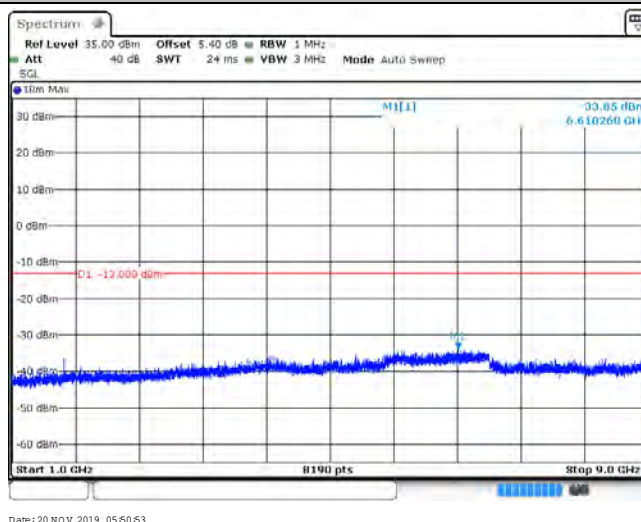


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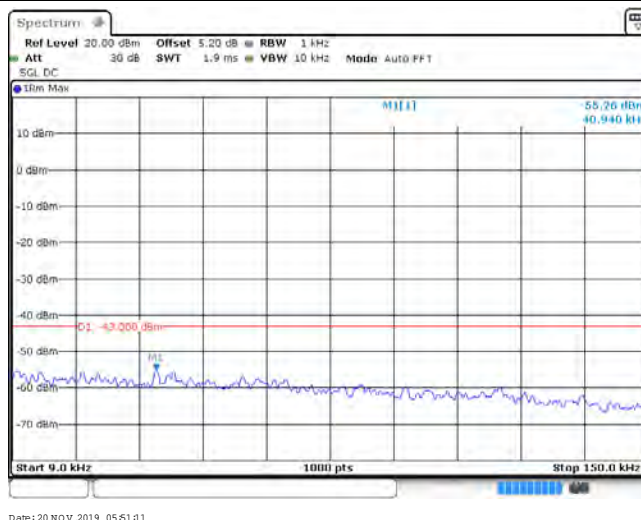


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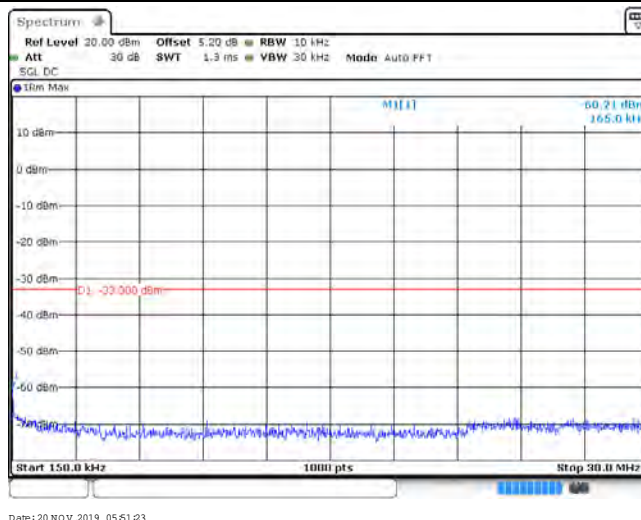


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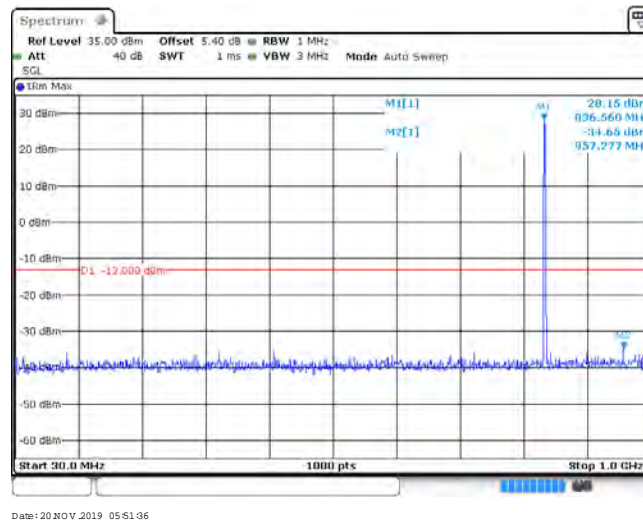
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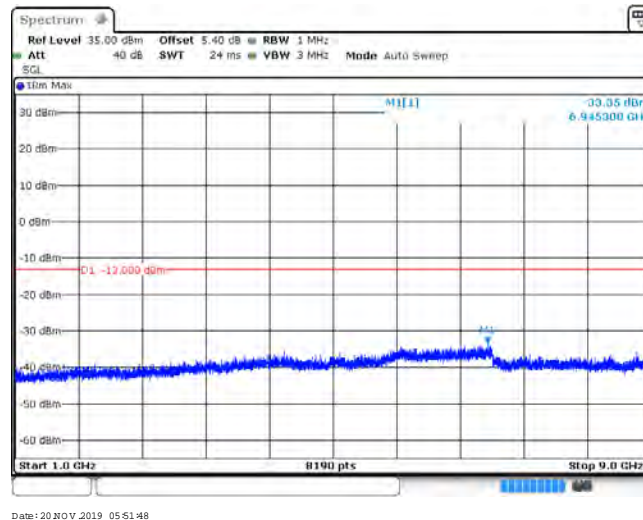
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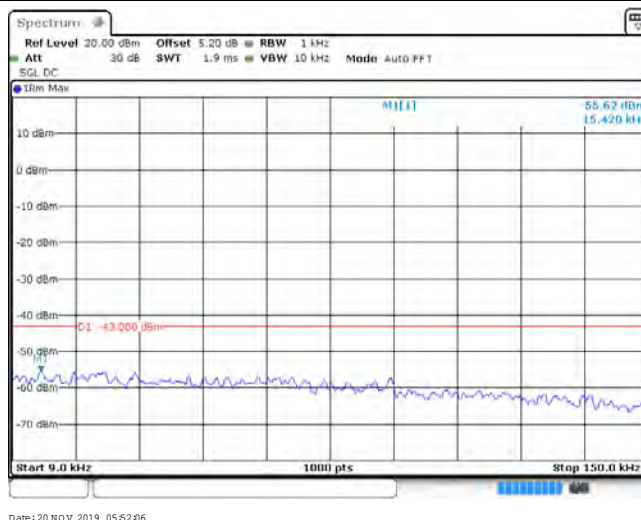
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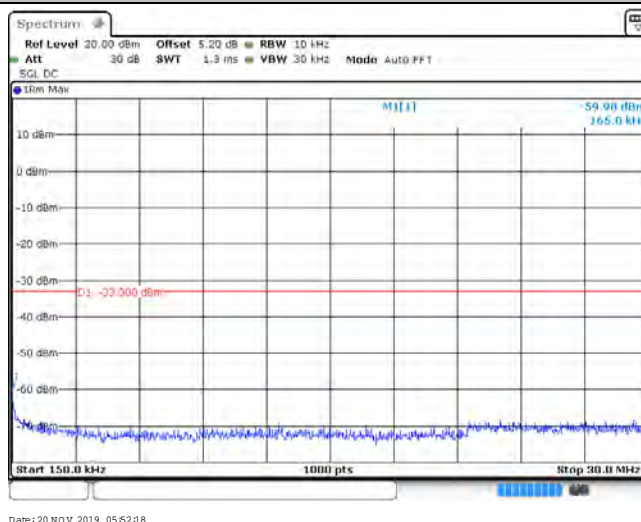
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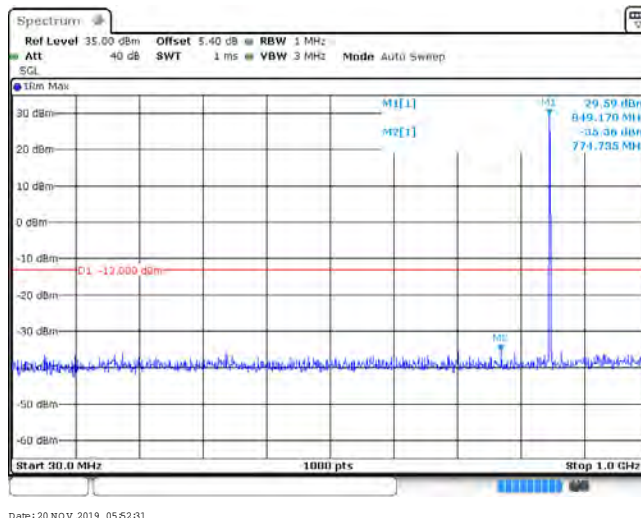


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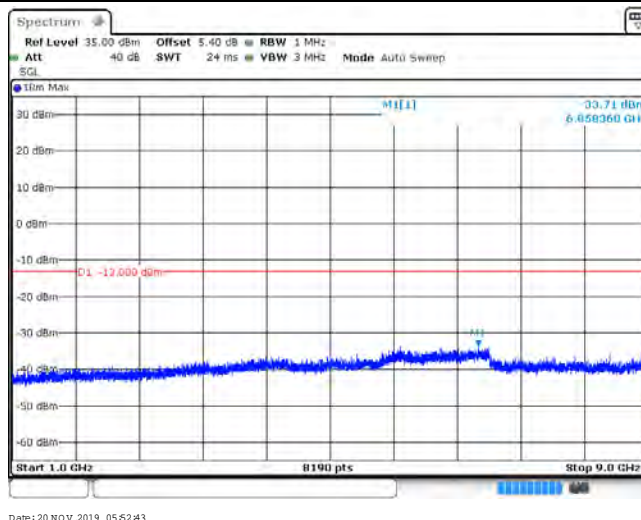
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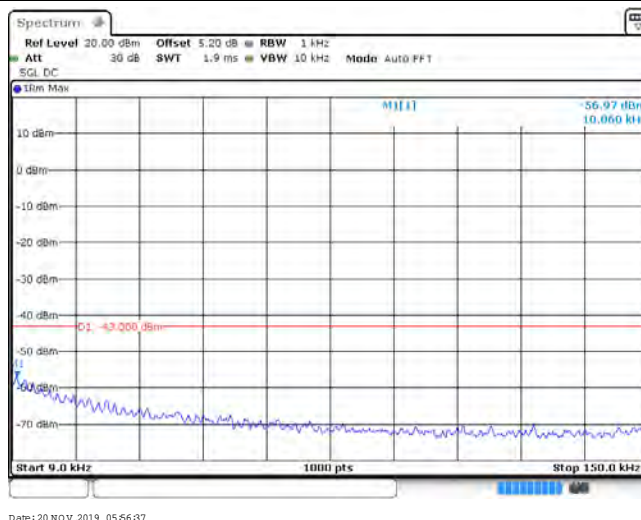


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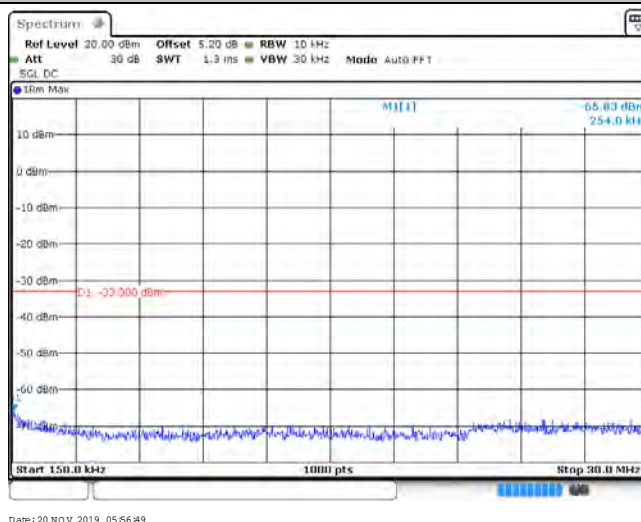
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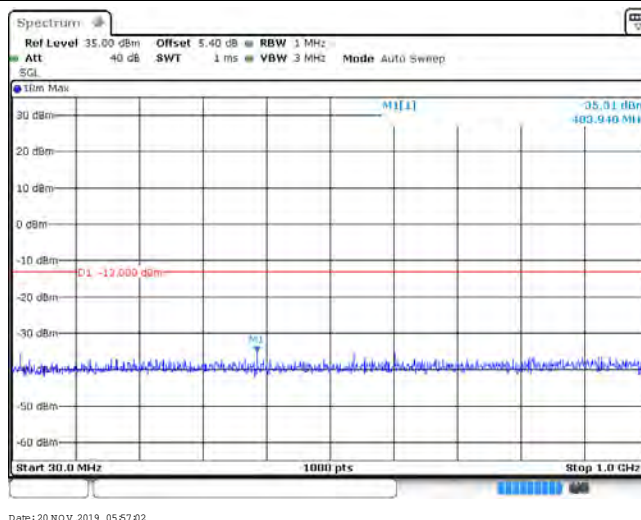


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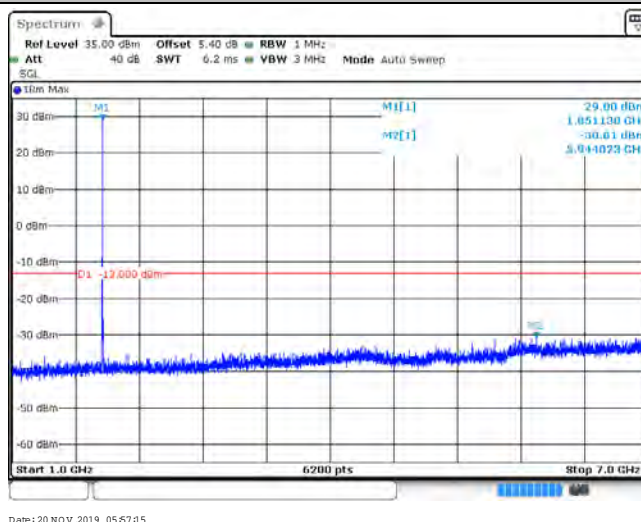
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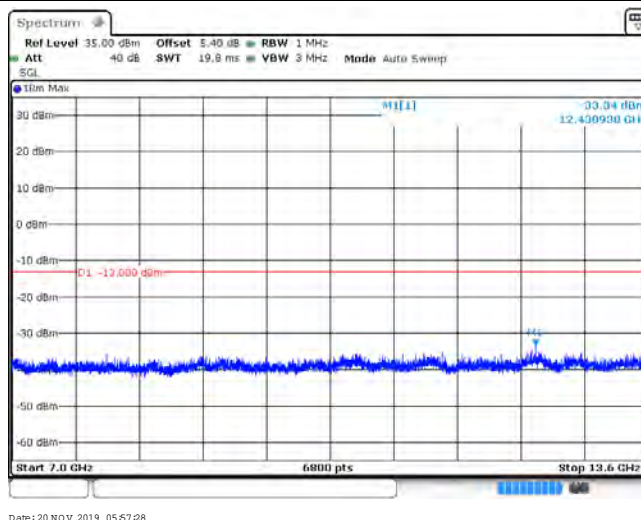
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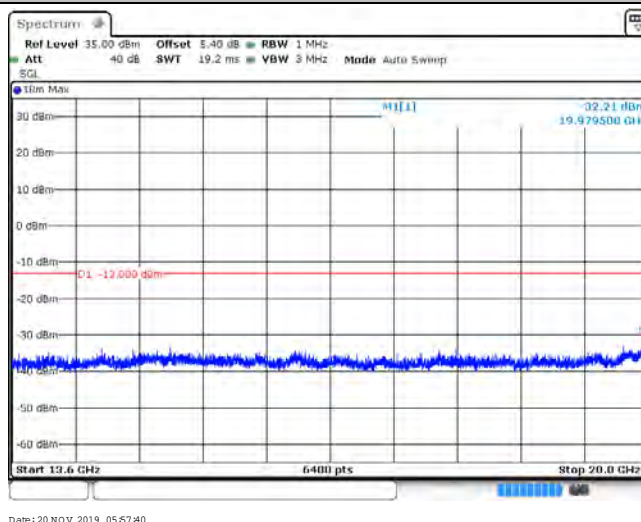
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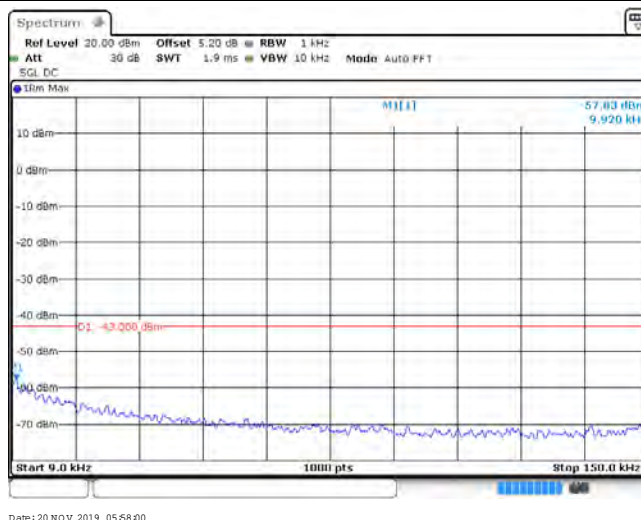
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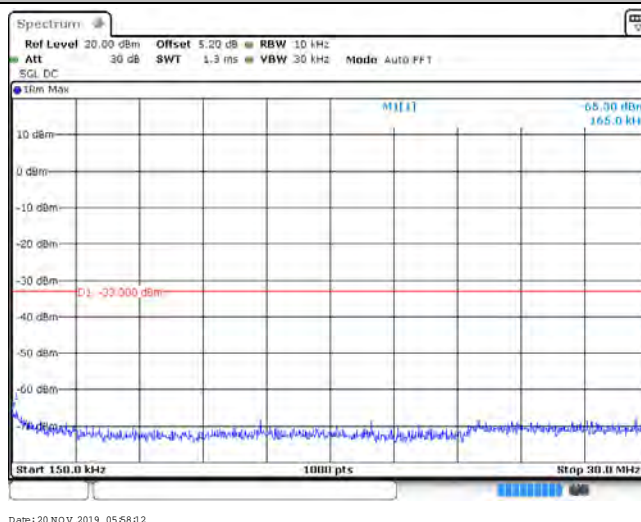
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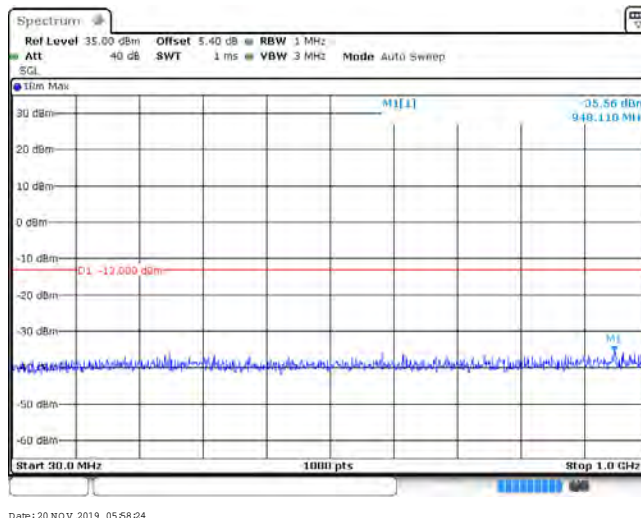


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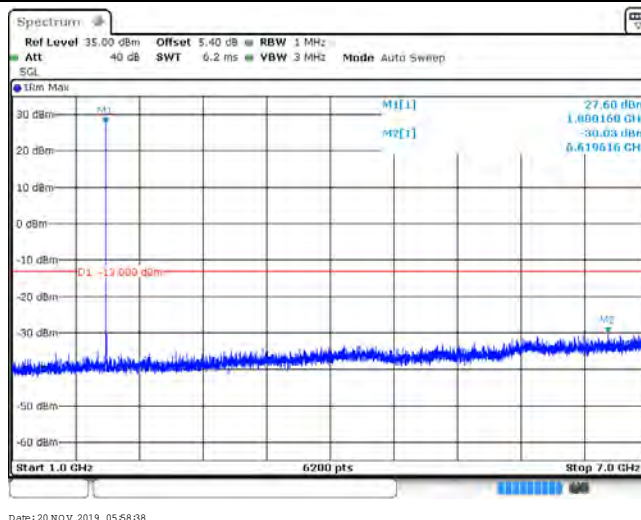
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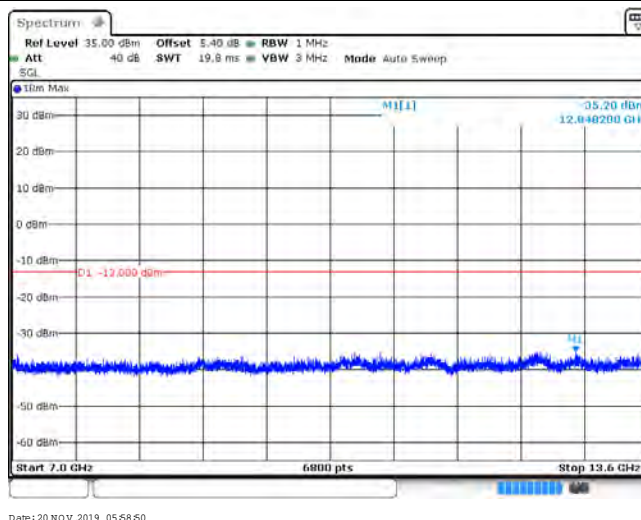
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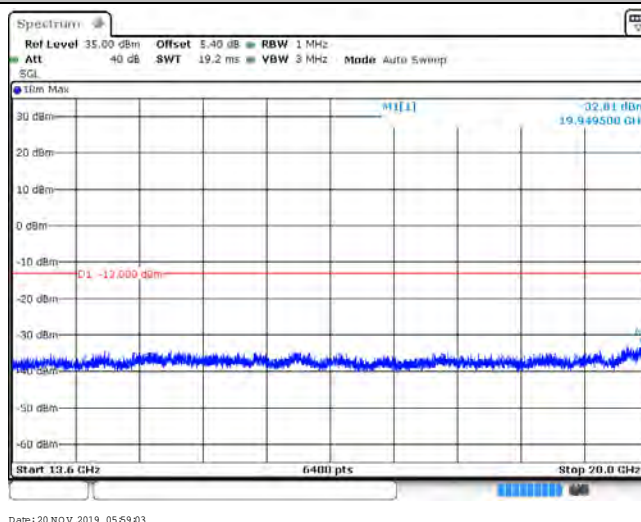


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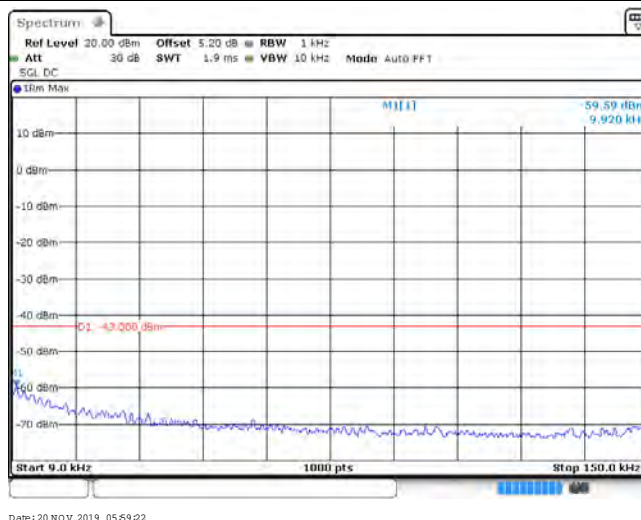
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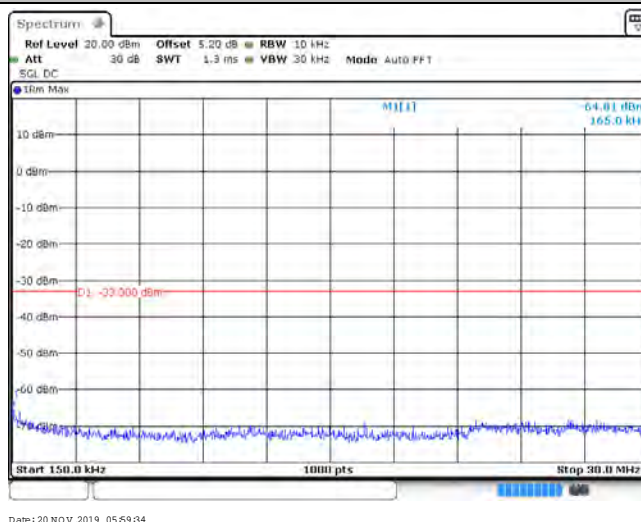
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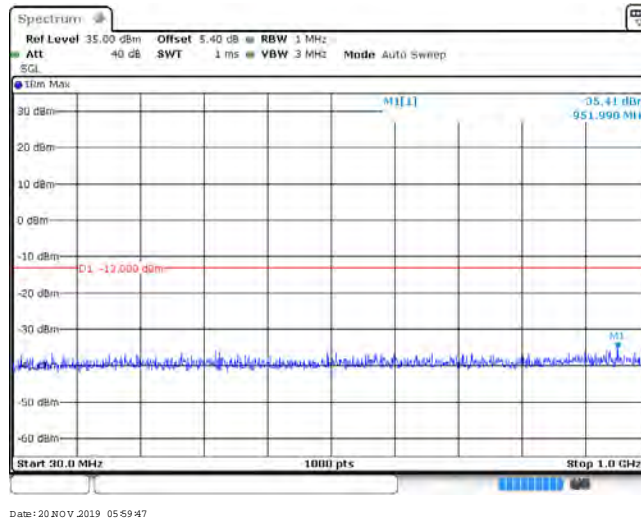
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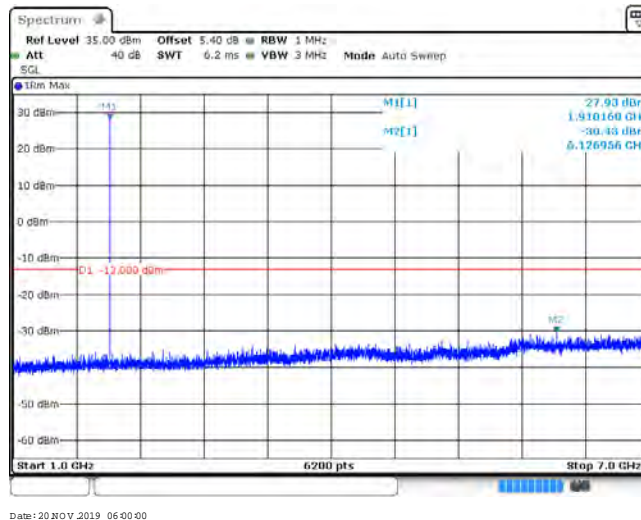


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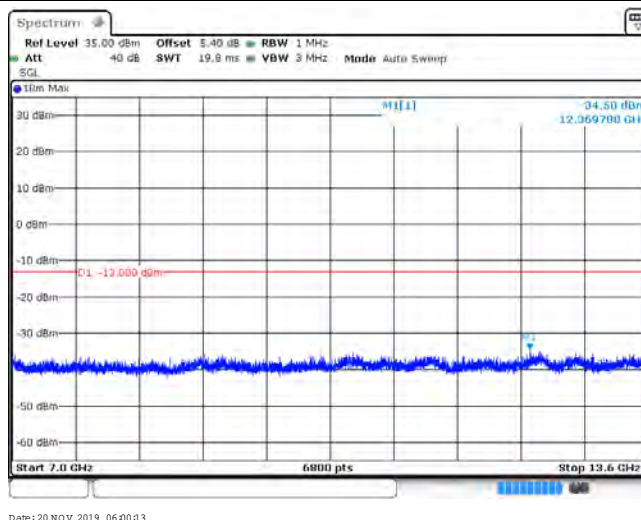
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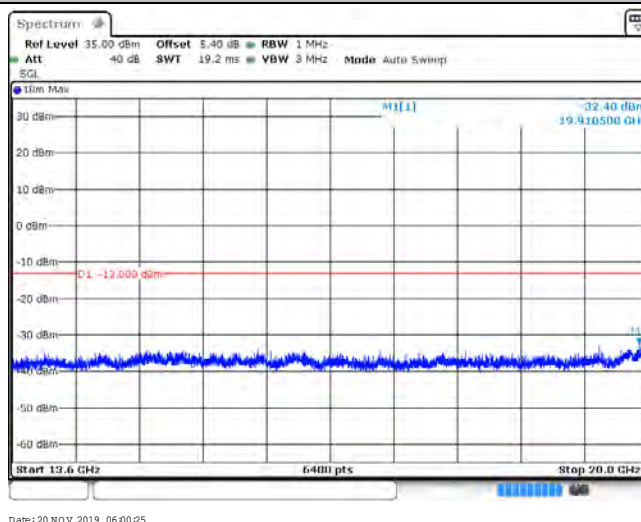
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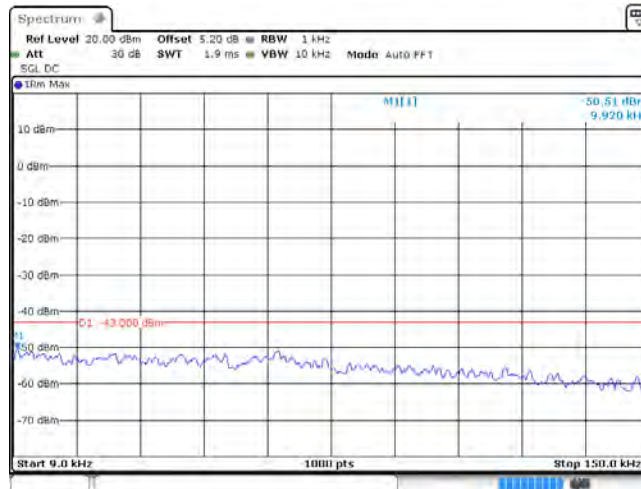
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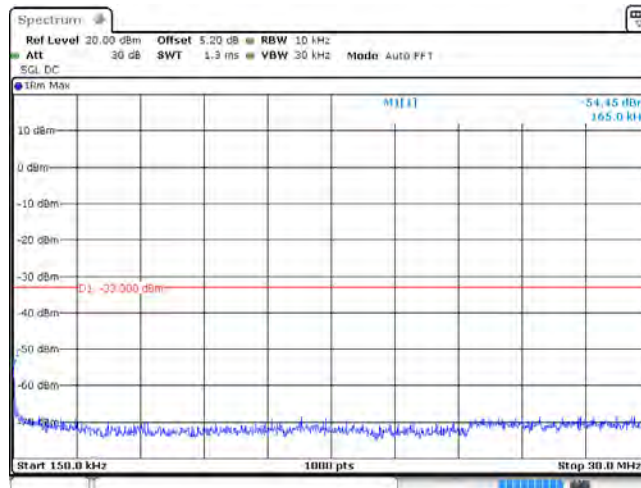
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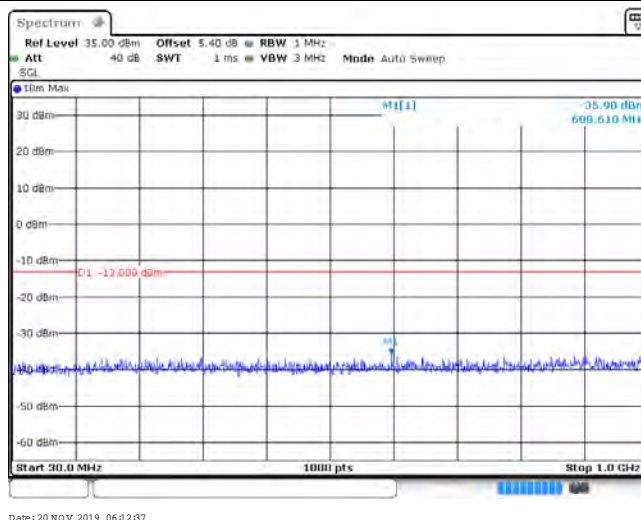
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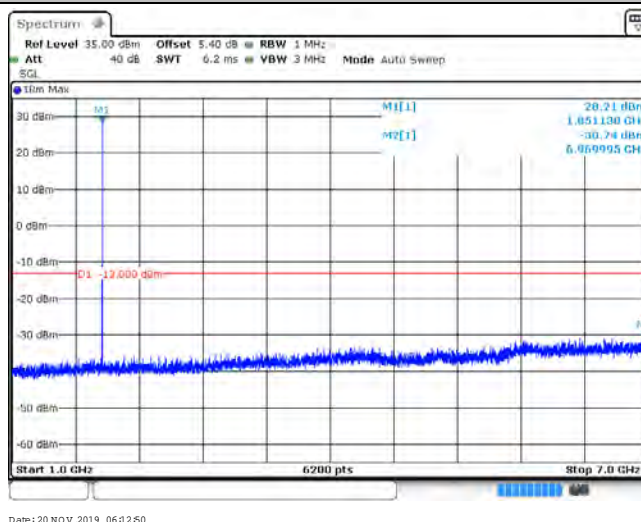


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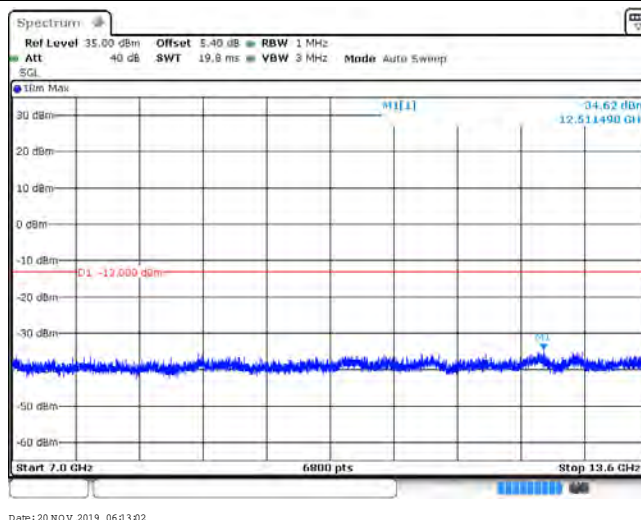


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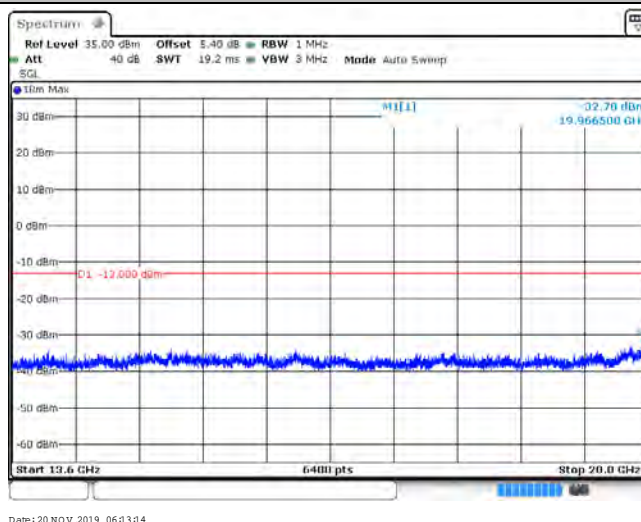


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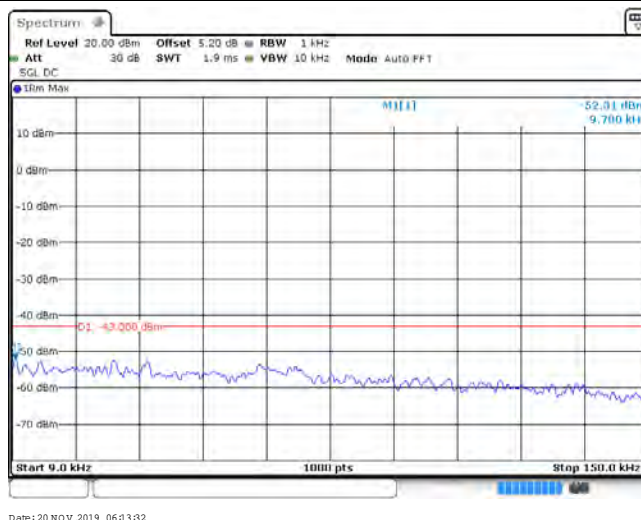
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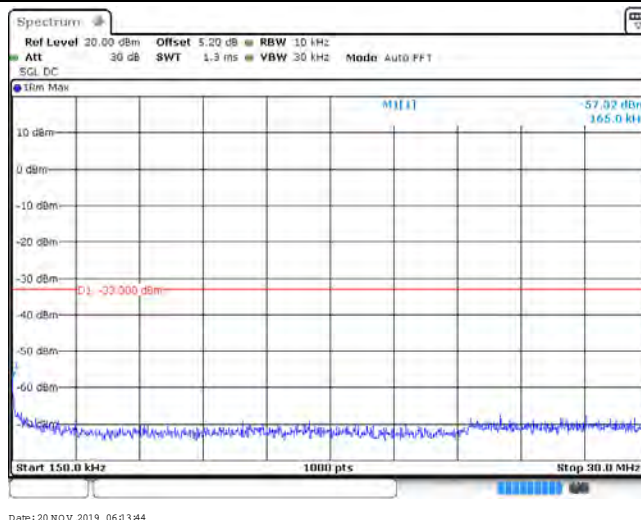
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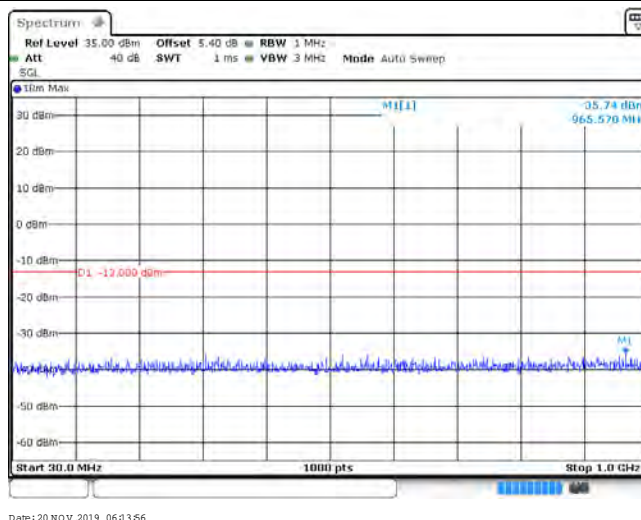


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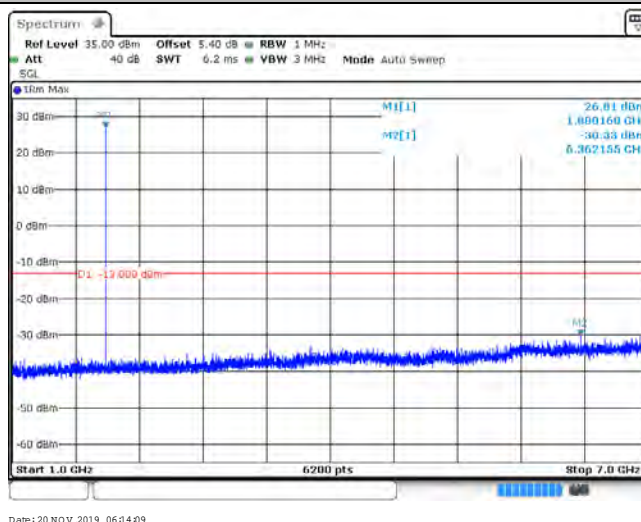


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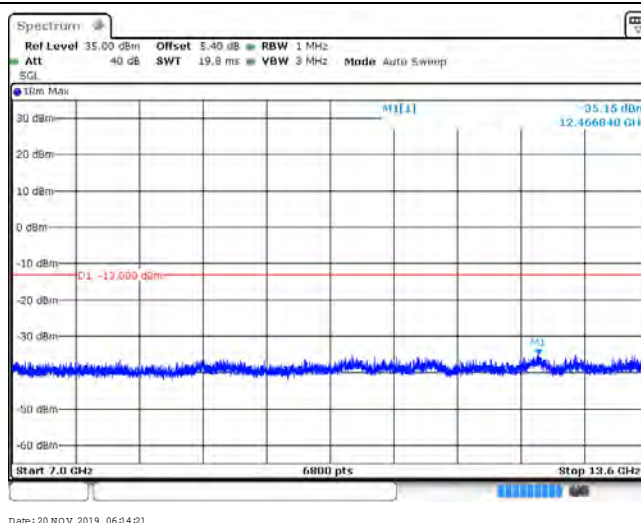


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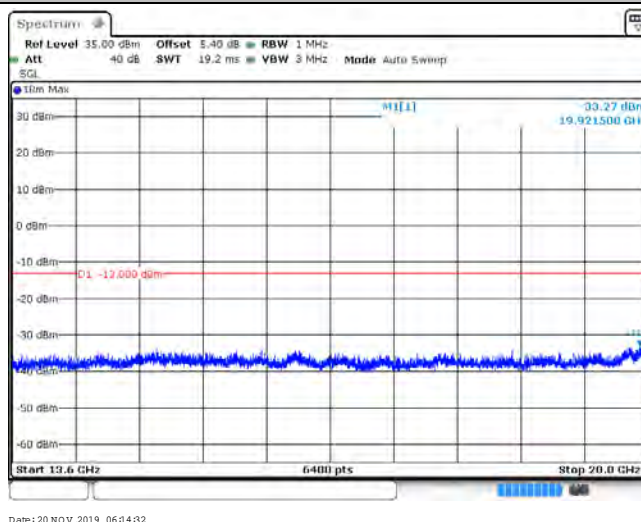


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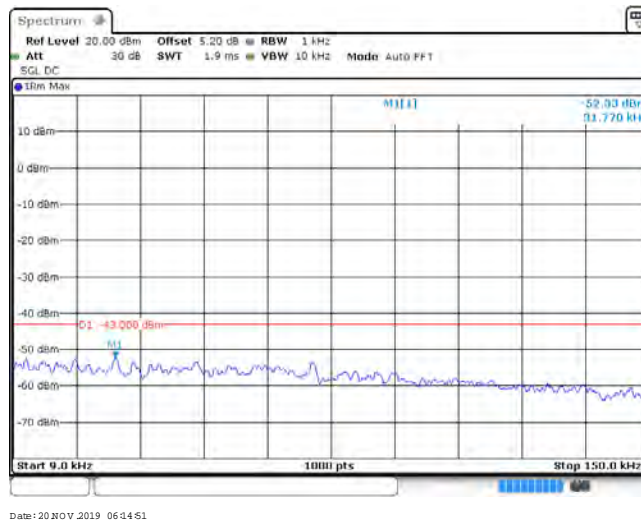


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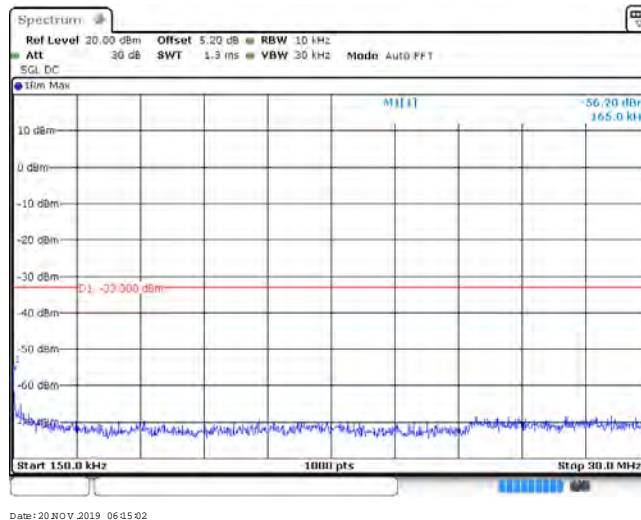
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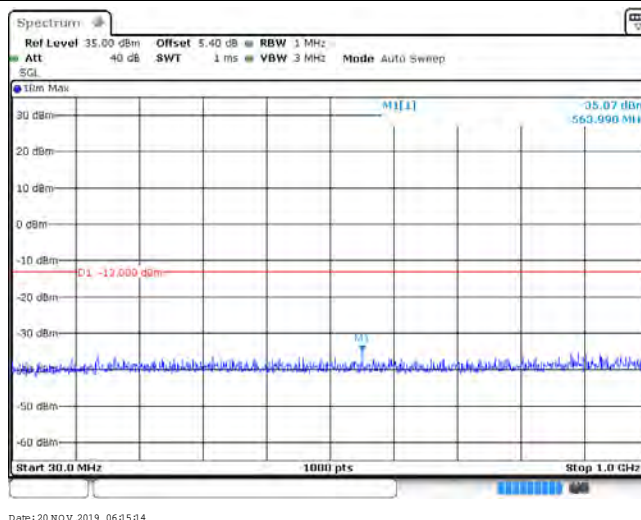


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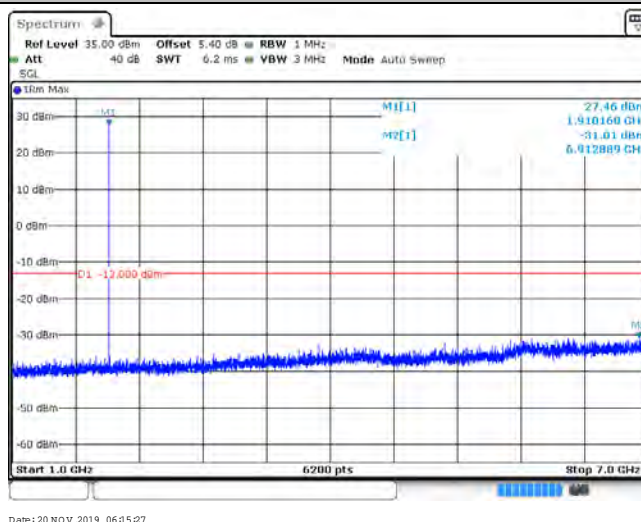
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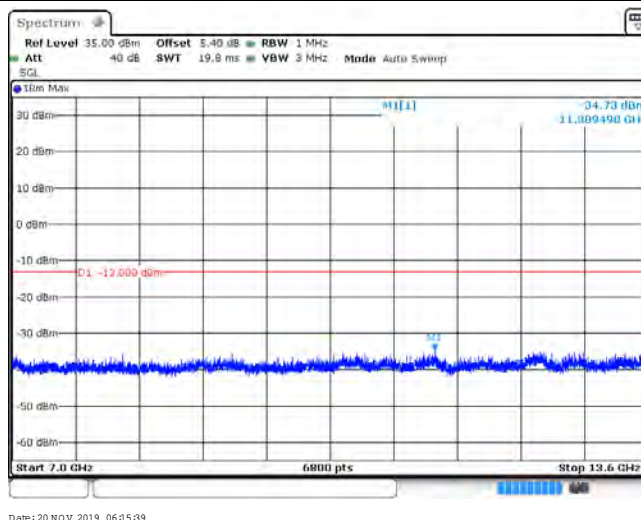
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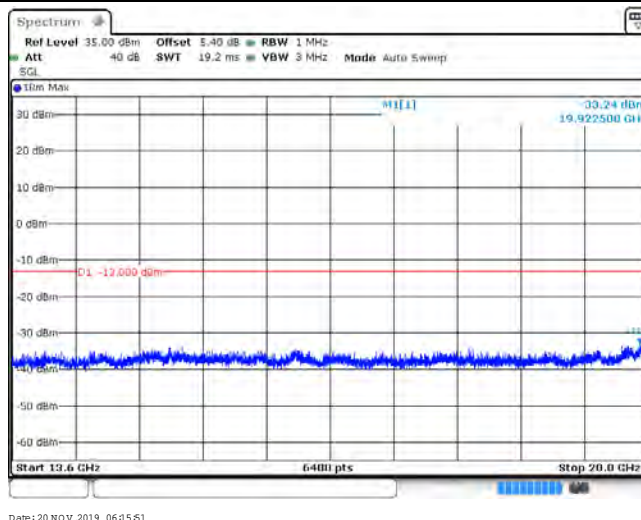


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## 7. Field Strength of Spurious Radiation

### 7.1. Test Band = GSM 1900

#### 7.1.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 115.5098        | -64.76      | -13.00           | 51.76       | Vertical     |
| 2698.7397       | -38.06      | -13.00           | 25.06       | Vertical     |
| 3700.5234       | -47.51      | -13.00           | 34.51       | Vertical     |
| 5550.0850       | -46.45      | -13.00           | 33.45       | Vertical     |
| 12951.3317      | -36.02      | -13.00           | 23.02       | Vertical     |
| 14801.3934      | -36.36      | -13.00           | 23.36       | Vertical     |
| 40.7675         | -64.79      | -13.00           | 51.79       | Horizontal   |
| 543.3497        | -63.27      | -13.00           | 50.27       | Horizontal   |
| 2698.7397       | -36.77      | -13.00           | 23.77       | Horizontal   |
| 3700.5234       | -47.14      | -13.00           | 34.14       | Horizontal   |
| 5550.5850       | -46.38      | -13.00           | 33.38       | Horizontal   |
| 12951.8317      | -37.47      | -13.00           | 24.47       | Horizontal   |

#### 7.1.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 112.5511        | -64.66      | -13.00           | 51.66       | Vertical     |
| 758.4579        | -62.24      | -13.00           | 49.24       | Vertical     |
| 3760.0253       | -45.62      | -13.00           | 32.62       | Vertical     |
| 5640.0880       | -41.39      | -13.00           | 28.39       | Vertical     |
| 13159.8387      | -33.03      | -13.00           | 20.03       | Vertical     |
| 17994.4998      | -33.32      | -13.00           | 20.32       | Vertical     |
| 43.9202         | -64.62      | -13.00           | 51.62       | Horizontal   |
| 833.6852        | -61.48      | -13.00           | 48.48       | Horizontal   |
| 2699.9400       | -36.79      | -13.00           | 23.79       | Horizontal   |
| 3760.0253       | -44.83      | -13.00           | 31.83       | Horizontal   |
| 5640.0880       | -44.26      | -13.00           | 31.26       | Horizontal   |
| 13160.3387      | -37.45      | -13.00           | 24.45       | Horizontal   |

#### 7.1.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 114.3457        | -65.12      | -13.00           | 52.12       | Vertical     |
| 3819.5273       | -44.04      | -13.00           | 31.04       | Vertical     |
| 5729.0910       | -43.94      | -13.00           | 30.94       | Vertical     |
| 7639.1546       | -47.76      | -13.00           | 34.76       | Vertical     |



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|            |        |        |       |            |
|------------|--------|--------|-------|------------|
| 9548.7183  | -41.95 | -13.00 | 28.95 | Vertical   |
| 13368.8456 | -35.99 | -13.00 | 22.99 | Vertical   |
| 42.9016    | -63.84 | -13.00 | 50.84 | Horizontal |
| 740.5120   | -61.39 | -13.00 | 48.39 | Horizontal |
| 2699.9400  | -36.89 | -13.00 | 23.89 | Horizontal |
| 3819.5273  | -42.91 | -13.00 | 29.91 | Horizontal |
| 5729.5910  | -39.63 | -13.00 | 26.63 | Horizontal |
| 13368.8456 | -39.85 | -13.00 | 26.85 | Horizontal |

## 7.2. Test Band = GSM 850

### 7.2.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 112.5026        | -63.66      | -13.00           | 50.66       | Vertical     |
| 1648.5297       | -49.58      | -13.00           | 36.58       | Vertical     |
| 2414.6829       | -38.19      | -13.00           | 25.19       | Vertical     |
| 2472.6945       | -52.15      | -13.00           | 39.15       | Vertical     |
| 3297.0099       | -50.70      | -13.00           | 37.70       | Vertical     |
| 4121.0374       | -55.30      | -13.00           | 42.30       | Vertical     |
| 43.9202         | -63.73      | -13.00           | 50.73       | Horizontal   |
| 232.2066        | -67.29      | -13.00           | 54.29       | Horizontal   |
| 1648.1296       | -45.98      | -13.00           | 32.98       | Horizontal   |
| 2453.0906       | -42.11      | -13.00           | 29.11       | Horizontal   |
| 3297.0099       | -41.66      | -13.00           | 28.66       | Horizontal   |
| 4121.0374       | -52.24      | -13.00           | 39.24       | Horizontal   |

### 7.2.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 113.5697        | -63.26      | -13.00           | 50.26       | Vertical     |
| 1674.1348       | -43.56      | -13.00           | 30.56       | Vertical     |
| 2511.1022       | -48.97      | -13.00           | 35.97       | Vertical     |
| 3348.0116       | -55.46      | -13.00           | 42.46       | Vertical     |
| 4185.0395       | -54.82      | -13.00           | 41.82       | Vertical     |
| 17990.4997      | -33.13      | -13.00           | 20.13       | Vertical     |
| 44.6962         | -63.28      | -13.00           | 50.28       | Horizontal   |
| 1674.1348       | -32.51      | -13.00           | 19.51       | Horizontal   |
| 2511.5023       | -42.90      | -13.00           | 29.90       | Horizontal   |
| 3348.0116       | -50.79      | -13.00           | 37.79       | Horizontal   |
| 4185.0395       | -49.23      | -13.00           | 36.23       | Horizontal   |
| 16399.9467      | -37.46      | -13.00           | 24.46       | Horizontal   |



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### 7.2.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 110.3685        | -64.53      | -13.00           | 51.53       | Vertical     |
| 1697.7395       | -42.33      | -13.00           | 29.33       | Vertical     |
| 2546.3093       | -47.20      | -13.00           | 34.20       | Vertical     |
| 4244.0415       | -47.47      | -13.00           | 34.47       | Vertical     |
| 11395.2798      | -46.04      | -13.00           | 33.04       | Vertical     |
| 17985.4995      | -33.03      | -13.00           | 20.03       | Vertical     |
| 40.3310         | -62.38      | -13.00           | 49.38       | Horizontal   |
| 1697.7395       | -31.59      | -13.00           | 18.59       | Horizontal   |
| 2546.7093       | -40.00      | -13.00           | 27.00       | Horizontal   |
| 3395.5132       | -45.80      | -13.00           | 32.80       | Horizontal   |
| 4244.0415       | -52.68      | -13.00           | 39.68       | Horizontal   |
| 16381.4460      | -37.46      | -13.00           | 24.46       | 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.



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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               | 3.00           | 0.003643        | ±2.5        | PASS    |
| GSM850    | 128     | VN            | TN               | 3.33           | 0.004035        | ±2.5        | PASS    |
| GSM850    | 128     | VH            | TN               | 5.68           | 0.006894        | ±2.5        | PASS    |
| GSM850    | 190     | VL            | TN               | 6.52           | 0.007796        | ±2.5        | PASS    |
| GSM850    | 190     | VN            | TN               | 8.27           | 0.009879        | ±2.5        | PASS    |
| GSM850    | 190     | VH            | TN               | 4.81           | 0.005750        | ±2.5        | PASS    |
| GSM850    | 251     | VL            | TN               | 5.33           | 0.006276        | ±2.5        | PASS    |
| GSM850    | 251     | VN            | TN               | 1.94           | 0.002282        | ±2.5        | PASS    |
| GSM850    | 251     | VH            | TN               | 3.97           | 0.004679        | ±2.5        | PASS    |
| EGPRS850  | 128     | VL            | TN               | 0.45           | 0.000548        | ±2.5        | PASS    |
| EGPRS850  | 128     | VN            | TN               | 0.87           | 0.001058        | ±2.5        | PASS    |
| EGPRS850  | 128     | VH            | TN               | -6.10          | -0.007404       | ±2.5        | PASS    |
| EGPRS850  | 190     | VL            | TN               | 0.71           | 0.000849        | ±2.5        | PASS    |
| EGPRS850  | 190     | VN            | TN               | -4.91          | -0.005866       | ±2.5        | PASS    |
| EGPRS850  | 190     | VH            | TN               | -0.16          | -0.000193       | ±2.5        | PASS    |
| GSM1900   | 512     | VL            | TN               | 11.27          | 0.006090        | ±2.5        | PASS    |
| GSM1900   | 512     | VN            | TN               | 7.62           | 0.004118        | ±2.5        | PASS    |
| GSM1900   | 512     | VH            | TN               | 16.30          | 0.008812        | ±2.5        | PASS    |
| GSM1900   | 661     | VL            | TN               | 10.56          | 0.005616        | ±2.5        | PASS    |
| GSM1900   | 661     | VN            | TN               | 6.46           | 0.003435        | ±2.5        | PASS    |
| GSM1900   | 661     | VH            | TN               | 6.78           | 0.003606        | ±2.5        | PASS    |
| GSM1900   | 810     | VL            | TN               | 1.78           | 0.000930        | ±2.5        | PASS    |
| GSM1900   | 810     | VN            | TN               | 10.46          | 0.005477        | ±2.5        | PASS    |
| GSM1900   | 810     | VH            | TN               | 8.72           | 0.004564        | ±2.5        | PASS    |
| EGPRS1900 | 512     | VL            | TN               | 3.23           | 0.001745        | ±2.5        | PASS    |
| EGPRS1900 | 512     | VN            | TN               | -5.59          | -0.003019       | ±2.5        | PASS    |
| EGPRS1900 | 512     | VH            | TN               | 1.58           | 0.000855        | ±2.5        | PASS    |
| EGPRS1900 | 661     | VL            | TN               | -0.90          | -0.000481       | ±2.5        | PASS    |
| EGPRS1900 | 661     | VN            | TN               | 1.78           | 0.000945        | ±2.5        | PASS    |
| EGPRS1900 | 661     | VH            | TN               | 0.77           | 0.000412        | ±2.5        | PASS    |
| EGPRS1900 | 810     | VL            | TN               | -7.10          | -0.003719       | ±2.5        | PASS    |
| EGPRS1900 | 810     | VN            | TN               | -4.94          | -0.002587       | ±2.5        | PASS    |
| EGPRS1900 | 810     | VH            | TN               | -0.84          | -0.000440       | ±2.5        | PASS    |



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## 8.2. Frequency Error Vs Temperature

| Temperature |         |               |                  |                |                 |             |         |
|-------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| BAND        | Channel | Voltage (Vdc) | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850      | 128     | VN            | -30              | 0.97           | 0.001175        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | -20              | 4.07           | 0.004936        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | -10              | 3.39           | 0.004113        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | 0                | 8.59           | 0.010420        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | 10               | 11.66          | 0.014141        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | 20               | 10.78          | 0.013084        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | 30               | 9.14           | 0.011086        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | 40               | 9.69           | 0.011752        | ±2.5        | PASS    |
| GSM850      | 128     | VN            | 50               | 7.10           | 0.008618        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | -30              | 6.30           | 0.007525        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | -20              | 2.26           | 0.002701        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | -10              | 3.07           | 0.003666        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | 0                | 4.75           | 0.005673        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | 10               | 5.17           | 0.006175        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | 20               | 8.36           | 0.009995        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | 30               | 3.87           | 0.004631        | ±2.5        | PASS    |
| GSM850      | 190     | VN            | 40               | -2.07          | -0.002470       | ±2.5        | PASS    |
| GSM850      | 190     | VN            | 50               | -2.62          | -0.003126       | ±2.5        | PASS    |
| GSM850      | 251     | VN            | -30              | -0.19          | -0.000228       | ±2.5        | PASS    |
| GSM850      | 251     | VN            | -20              | 2.36           | 0.002777        | ±2.5        | PASS    |
| GSM850      | 251     | VN            | -10              | 5.36           | 0.006314        | ±2.5        | PASS    |
| GSM850      | 251     | VN            | 0                | 5.78           | 0.006809        | ±2.5        | PASS    |
| GSM850      | 251     | VN            | 10               | 1.39           | 0.001636        | ±2.5        | PASS    |
| GSM850      | 251     | VN            | 20               | -0.16          | -0.000190       | ±2.5        | PASS    |
| GSM850      | 251     | VN            | 30               | 2.97           | 0.003499        | ±2.5        | PASS    |
| GSM850      | 251     | VN            | 40               | 4.52           | 0.005325        | ±2.5        | PASS    |
| GSM850      | 251     | VN            | 50               | 6.59           | 0.007760        | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | -30              | -3.42          | -0.004152       | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | -20              | -0.13          | -0.000157       | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | -10              | 1.07           | 0.001293        | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | 0                | -1.45          | -0.001763       | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | 10               | 2.58           | 0.003134        | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | 20               | 13.33          | 0.016178        | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | 30               | 9.65           | 0.011713        | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | 40               | 4.29           | 0.005210        | ±2.5        | PASS    |
| EGPRS850    | 128     | VN            | 50               | 8.49           | 0.010302        | ±2.5        | PASS    |
| EGPRS850    | 190     | VN            | -30              | -0.16          | -0.000193       | ±2.5        | PASS    |
| EGPRS850    | 190     | VN            | -20              | -3.84          | -0.004592       | ±2.5        | PASS    |
| EGPRS850    | 190     | VN            | -10              | -1.55          | -0.001852       | ±2.5        | PASS    |
| EGPRS850    | 190     | VN            | 0                | -1.68          | -0.002007       | ±2.5        | PASS    |
| EGPRS850    | 190     | VN            | 10               | -0.90          | -0.001081       | ±2.5        | PASS    |



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|           |     |    |     |        |           |      |      |
|-----------|-----|----|-----|--------|-----------|------|------|
| EGPRS850  | 190 | VN | 20  | 5.46   | 0.006522  | ±2.5 | PASS |
| EGPRS850  | 190 | VN | 30  | 1.58   | 0.001891  | ±2.5 | PASS |
| EGPRS850  | 190 | VN | 40  | 1.49   | 0.001775  | ±2.5 | PASS |
| EGPRS850  | 190 | VN | 50  | 4.36   | 0.005210  | ±2.5 | PASS |
| GSM1900   | 512 | VN | -30 | 8.27   | 0.004467  | ±2.5 | PASS |
| GSM1900   | 512 | VN | -20 | 9.52   | 0.005148  | ±2.5 | PASS |
| GSM1900   | 512 | VN | -10 | 8.43   | 0.004554  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 0   | 20.60  | 0.011133  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 10  | 25.44  | 0.013751  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 20  | 28.35  | 0.015321  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 30  | 25.47  | 0.013768  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 40  | 16.95  | 0.009161  | ±2.5 | PASS |
| GSM1900   | 512 | VN | 50  | 18.73  | 0.010121  | ±2.5 | PASS |
| GSM1900   | 661 | VN | -30 | 11.33  | 0.006028  | ±2.5 | PASS |
| GSM1900   | 661 | VN | -20 | 8.91   | 0.004740  | ±2.5 | PASS |
| GSM1900   | 661 | VN | -10 | 9.30   | 0.004946  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 0   | 16.47  | 0.008758  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 10  | 18.02  | 0.009583  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 20  | 15.59  | 0.008295  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 30  | 13.30  | 0.007075  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 40  | 5.81   | 0.003091  | ±2.5 | PASS |
| GSM1900   | 661 | VN | 50  | 12.46  | 0.006629  | ±2.5 | PASS |
| GSM1900   | 810 | VN | -30 | 9.52   | 0.004987  | ±2.5 | PASS |
| GSM1900   | 810 | VN | -20 | 5.23   | 0.002739  | ±2.5 | PASS |
| GSM1900   | 810 | VN | -10 | 5.84   | 0.003060  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 0   | 7.94   | 0.004159  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 10  | 8.23   | 0.004311  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 20  | -13.46 | -0.007050 | ±2.5 | PASS |
| GSM1900   | 810 | VN | 30  | 3.58   | 0.001876  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 40  | 15.21  | 0.007962  | ±2.5 | PASS |
| GSM1900   | 810 | VN | 50  | 5.36   | 0.002806  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | -30 | 5.78   | 0.003124  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | -20 | 6.59   | 0.003560  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | -10 | 8.65   | 0.004677  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 0   | 8.23   | 0.004450  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 10  | 20.70  | 0.011185  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 20  | 24.67  | 0.013332  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 30  | 21.28  | 0.011499  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 40  | 28.12  | 0.015199  | ±2.5 | PASS |
| EGPRS1900 | 512 | VN | 50  | 19.82  | 0.010714  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | -30 | 0.32   | 0.000172  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | -20 | 2.42   | 0.001288  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | -10 | 2.26   | 0.001202  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 0   | 1.29   | 0.000687  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 10  | 10.69  | 0.005684  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 20  | 10.27  | 0.005461  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 30  | 9.23   | 0.004912  | ±2.5 | PASS |



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|           |     |    |     |       |           |      |      |
|-----------|-----|----|-----|-------|-----------|------|------|
| EGPRS1900 | 661 | VN | 40  | 12.14 | 0.006457  | ±2.5 | PASS |
| EGPRS1900 | 661 | VN | 50  | 11.27 | 0.005993  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | -30 | 2.62  | 0.001369  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | -20 | -2.16 | -0.001133 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | -10 | 6.10  | 0.003195  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 0   | -1.10 | -0.000575 | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 10  | 7.65  | 0.004007  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 20  | 12.69 | 0.006644  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 30  | 8.88  | 0.004649  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 40  | 17.63 | 0.009230  | ±2.5 | PASS |
| EGPRS1900 | 810 | VN | 50  | 6.75  | 0.003533  | ±2.5 | PASS |

The End



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