



# Appendix B

## GSM850 & GSM1900



## CONTENT

|                                                           | Page |
|-----------------------------------------------------------|------|
| 1. EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA ..... | 4    |
| 1.1. Test Result.....                                     | 4    |
| 2. PEAK-TO-AVERAGE RATIO.....                             | 5    |
| 2.1. Test Result.....                                     | 5    |
| 2.2. For GSM.....                                         | 5    |
| 2.2.1. Test Band = GSM 850 .....                          | 5    |
| 2.2.1.1. Test Mode = GSM/TM1 .....                        | 5    |
| 2.2.1.1.1. Test Channel = LCH.....                        | 5    |
| 2.2.1.1.2. Test Channel = MCH.....                        | 6    |
| 2.2.1.1.3. Test Channel = HCH .....                       | 6    |
| 2.2.1.2. Test Mode = GSM/TM2.....                         | 7    |
| 2.2.1.2.1. Test Channel = LCH.....                        | 7    |
| 2.2.1.2.2. Test Channel = MCH.....                        | 7    |
| 2.2.1.2.3. Test Channel = HCH .....                       | 8    |
| 2.2.2. Test Band = GSM 1900.....                          | 8    |
| 2.2.2.1. Test Mode = GSM/TM1 .....                        | 8    |
| 2.2.2.1.1. Test Channel = LCH.....                        | 8    |
| 2.2.2.1.2. Test Channel = MCH.....                        | 9    |
| 2.2.2.1.3. Test Channel = HCH .....                       | 9    |
| 2.2.2.2. Test Mode = GSM/TM2.....                         | 10   |
| 2.2.2.2.1. Test Channel = LCH.....                        | 10   |
| 2.2.2.2.2. Test Channel = MCH.....                        | 10   |
| 2.2.2.2.3. Test Channel = HCH .....                       | 11   |
| 3. MODULATION CHARACTERISTICS .....                       | 12   |
| 3.1. For GSM.....                                         | 12   |
| 3.1.1. Test BAND = GSM 850 .....                          | 12   |
| 3.1.1.1. Test Mode = GSM/TM1 .....                        | 12   |
| 3.1.1.1.1. Test Channel = MCH.....                        | 12   |
| 3.1.1.2. Test Mode = GSM/TM2.....                         | 13   |
| 3.1.1.2.1. Test Channel = MCH.....                        | 13   |
| 3.1.2. Test BAND = GSM 1900 .....                         | 13   |
| 3.1.2.1. Test Mode = GSM/TM1 .....                        | 13   |
| 3.1.2.1.1. Test Channel = MCH.....                        | 13   |
| 3.1.2.2. Test Mode = GSM/TM2.....                         | 14   |



|                                                |    |
|------------------------------------------------|----|
| 3.1.2.2.1. Test Channel = MCH.....             | 14 |
| 4. 26dB BANDWIDTH AND OCCUPIED BANDWIDTH ..... | 15 |
| 4.1. Test Result.....                          | 15 |
| 4.2. Test Plots.....                           | 15 |
| 5. BAND EDGE COMPLIANCE .....                  | 22 |
| 5.1. Test Plots.....                           | 22 |
| 6. SPURIOUS EMISSION AT ANTENNA TERMINAL ..... | 26 |
| 6.1. Test Plots.....                           | 26 |
| 7. FIELD STRENGTH OF SPURIOUS RADIATION .....  | 57 |
| 7.1. Test Band = GSM 1900.....                 | 57 |
| 7.1.1. Test Channel = LCH .....                | 57 |
| 7.1.2. Test Channel = MCH .....                | 57 |
| 7.1.3. Test Channel = HCH.....                 | 58 |
| 7.2. Test Band = GSM 850 .....                 | 58 |
| 7.2.1. Test Channel = LCH .....                | 58 |
| 7.2.2. Test Channel = MCH .....                | 59 |
| 7.2.3. Test Channel = HCH.....                 | 59 |
| 8. FREQUENCY STABILITY .....                   | 60 |
| 8.1. Frequency Error Vs Voltage.....           | 60 |
| 8.2. Frequency Error Vs Temperature .....      | 61 |



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

### 1.1. Test Result

| BAND       | Channel | Power(dBm) | ERP(dBm) | Limit(dBm) | Verdict |
|------------|---------|------------|----------|------------|---------|
| GSM850/TM1 | 128     | 32.11      | 29.96    | 38.45      | PASS    |
| GSM850/TM1 | 190     | 32.00      | 29.85    | 38.45      | PASS    |
| GSM850/TM1 | 251     | 31.78      | 29.63    | 38.45      | PASS    |
| GSM850/TM2 | 128     | 26.44      | 24.29    | 38.45      | PASS    |
| GSM850/TM2 | 190     | 26.47      | 24.32    | 38.45      | PASS    |
| GSM850/TM2 | 251     | 26.56      | 24.41    | 38.45      | PASS    |

| BAND        | Channel | Power(dBm) | EIRP(dBm) | Limit(dBm) | Verdict |
|-------------|---------|------------|-----------|------------|---------|
| GSM1900/TM1 | 512     | 28.72      | 28.22     | 33.00      | PASS    |
| GSM1900/TM1 | 661     | 28.83      | 28.33     | 33.00      | PASS    |
| GSM1900/TM1 | 810     | 28.74      | 28.24     | 33.00      | PASS    |
| GSM1900/TM2 | 512     | 25.34      | 24.84     | 33.00      | PASS    |
| GSM1900/TM2 | 661     | 25.37      | 24.87     | 33.00      | PASS    |
| GSM1900/TM2 | 810     | 25.39      | 24.89     | 33.00      | PASS    |

Note:

a: For getting the ERP (Efficient Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level



## 2. Peak-to-Average Ratio

### 2.1. Test Result

| BAND        | Channel | Peak-to-Average Ratio(dB) | Limit(dB) | Verdict |
|-------------|---------|---------------------------|-----------|---------|
| GSM850/TM1  | 128     | 7.71                      | 13        | PASS    |
| GSM850/TM1  | 190     | 7.74                      | 13        | PASS    |
| GSM850/TM1  | 251     | 7.74                      | 13        | PASS    |
| GSM850/TM2  | 128     | 10.58                     | 13        | PASS    |
| GSM850/TM2  | 190     | 10.38                     | 13        | PASS    |
| GSM850/TM2  | 251     | 10.75                     | 13        | PASS    |
| GSM1900/TM1 | 512     | 7.71                      | 13        | PASS    |
| GSM1900/TM1 | 661     | 7.71                      | 13        | PASS    |
| GSM1900/TM1 | 810     | 7.65                      | 13        | PASS    |
| GSM1900/TM2 | 512     | 10.61                     | 13        | PASS    |
| GSM1900/TM2 | 661     | 10.43                     | 13        | PASS    |
| GSM1900/TM2 | 810     | 10.84                     | 13        | PASS    |

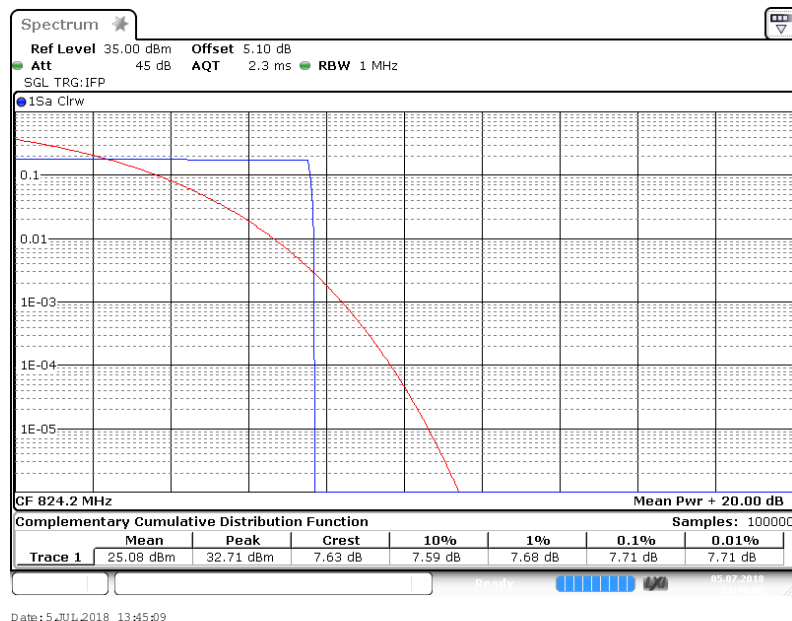
Part II - Test Plots

### 2.2. For GSM

#### 2.2.1. Test Band = GSM 850

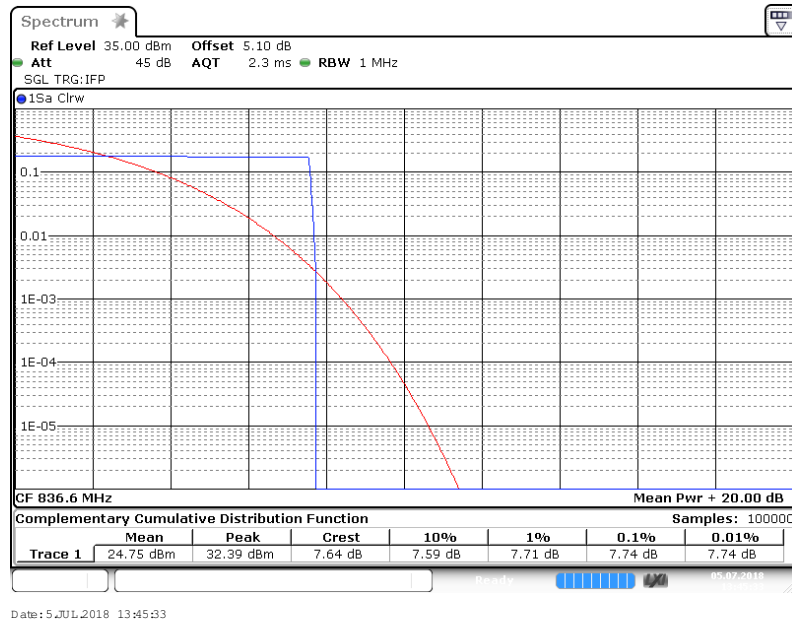
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##### 2.2.1.1.1. Test Channel = LCH

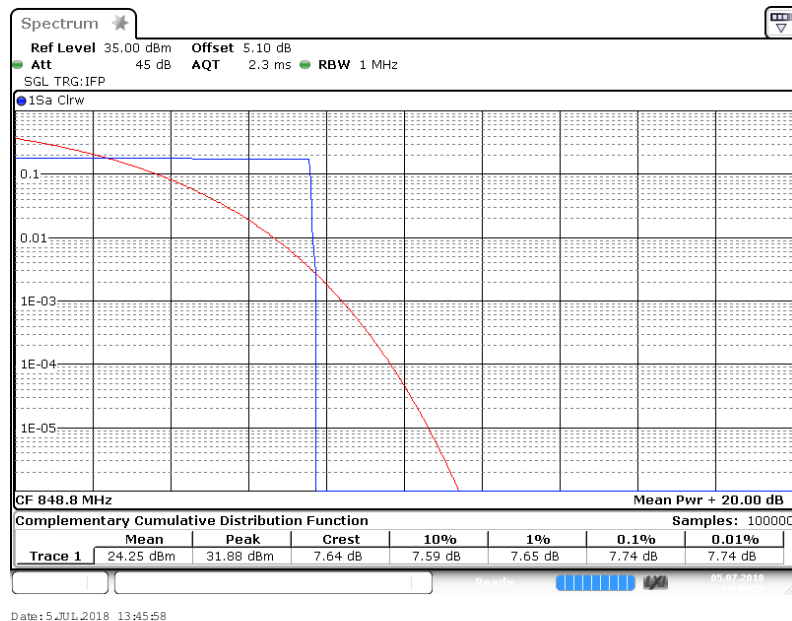




#### 2.2.1.1.2. Test Channel = MCH



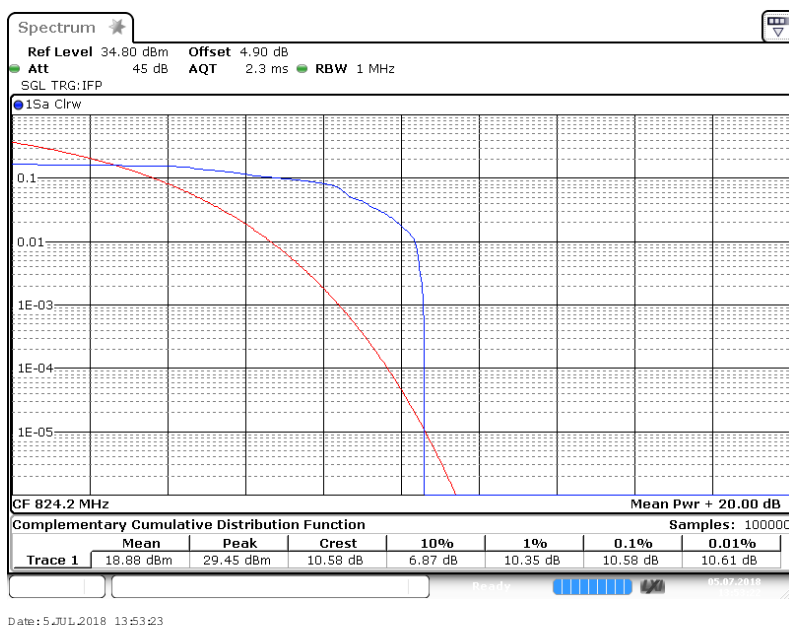
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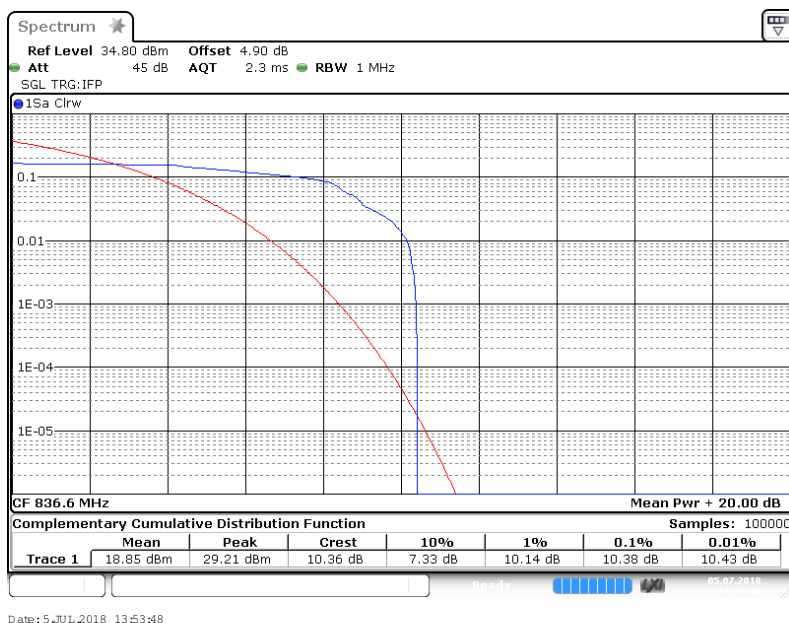


## 2.2.1.2. Test Mode = GSM/TM2

### 2.2.1.2.1. Test Channel = LCH

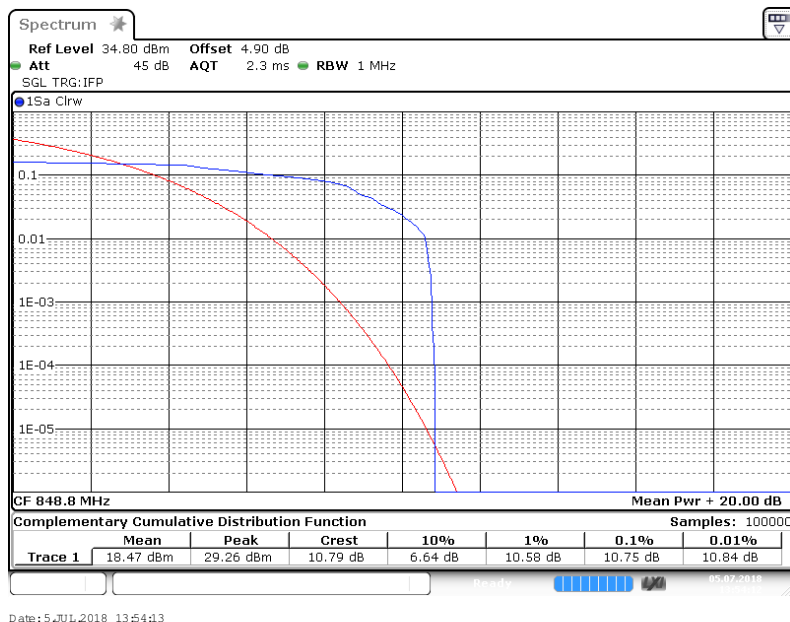


### 2.2.1.2.2. Test Channel = MCH





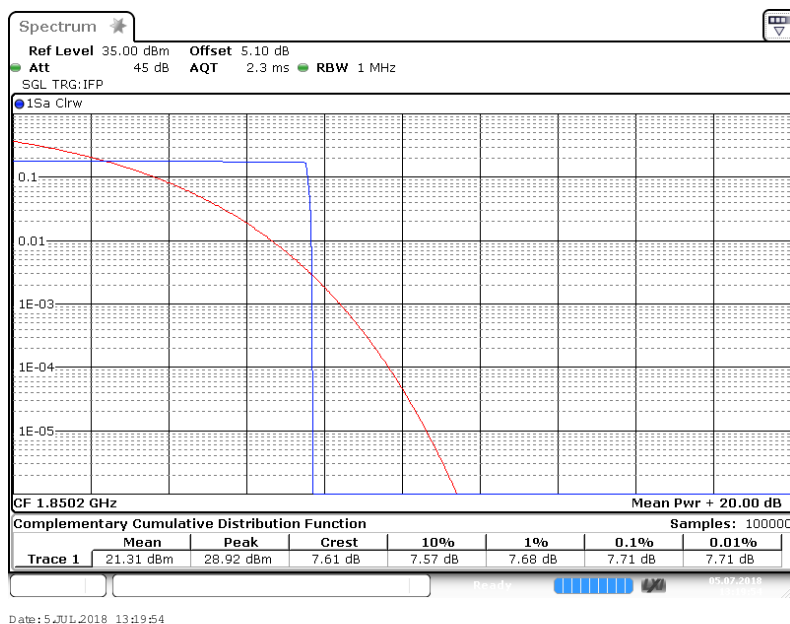
### 2.2.1.2.3. Test Channel = HCH



### 2.2.2. Test Band = GSM 1900

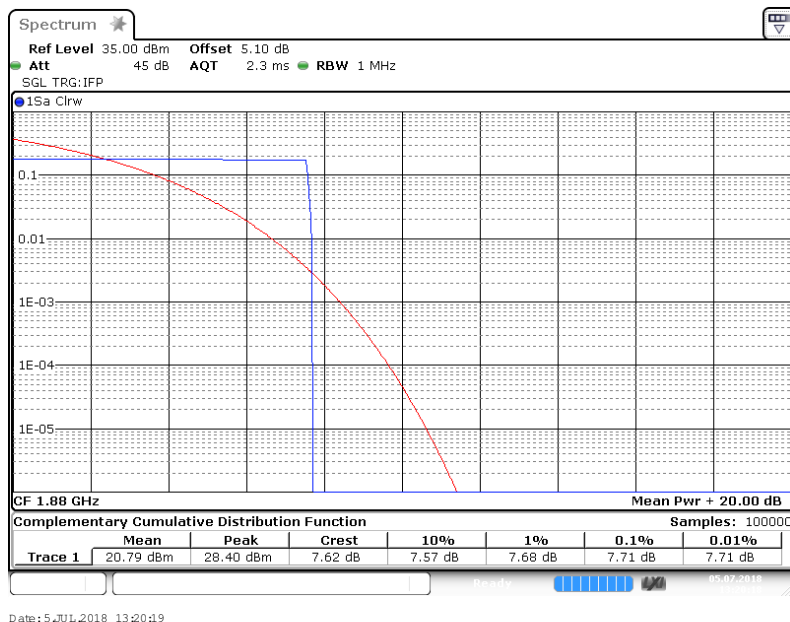
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##### 2.2.2.1.1. Test Channel = LCH

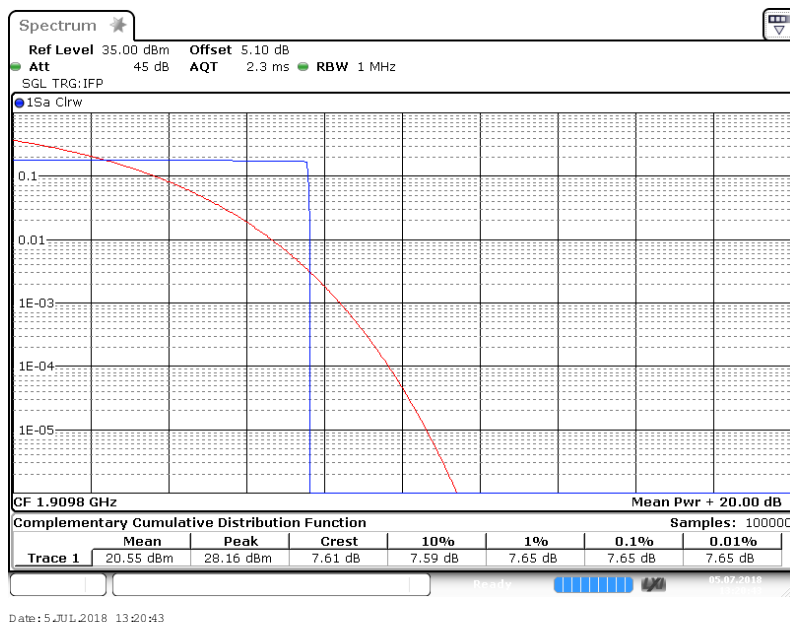




### 2.2.2.1.2. Test Channel = MCH



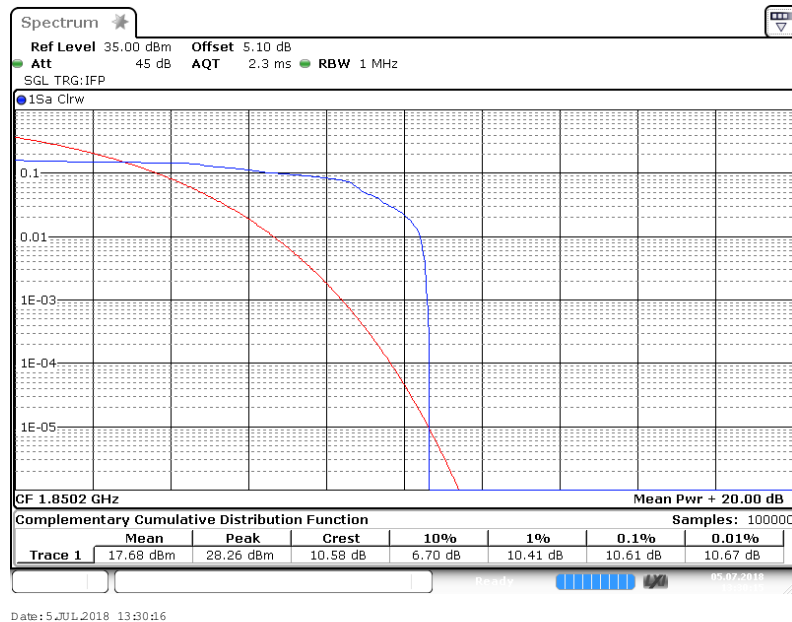
### 2.2.2.1.3. Test Channel = HCH



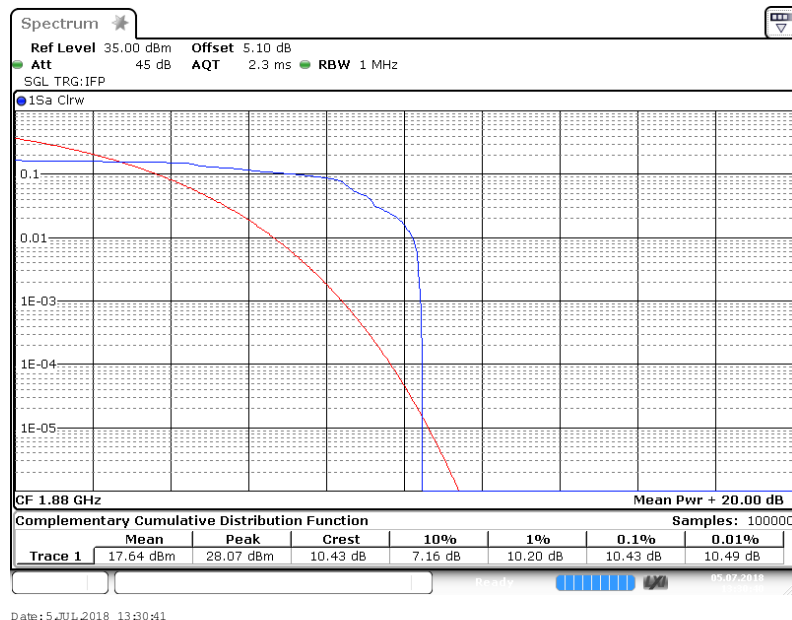


## 2.2.2.2. Test Mode = GSM/TM2

### 2.2.2.2.1. Test Channel = LCH

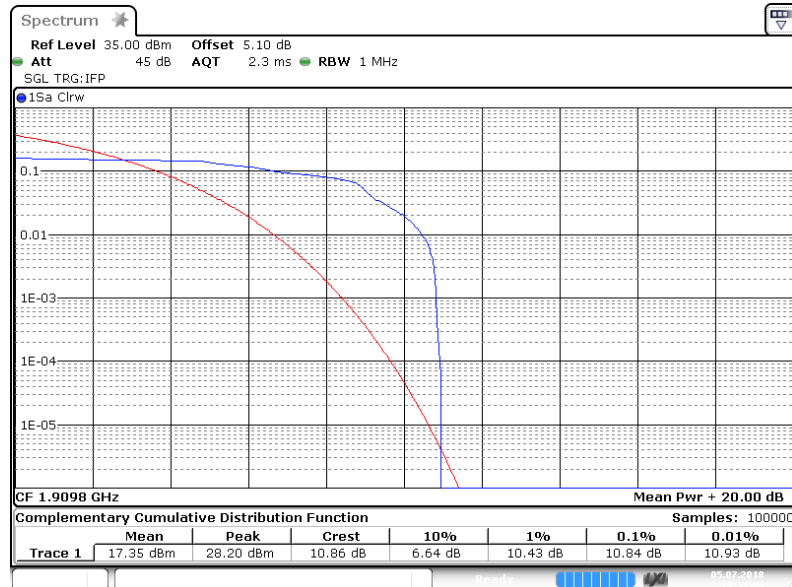


### 2.2.2.2.2. Test Channel = MCH





### 2.2.2.2.3. Test Channel = HCH



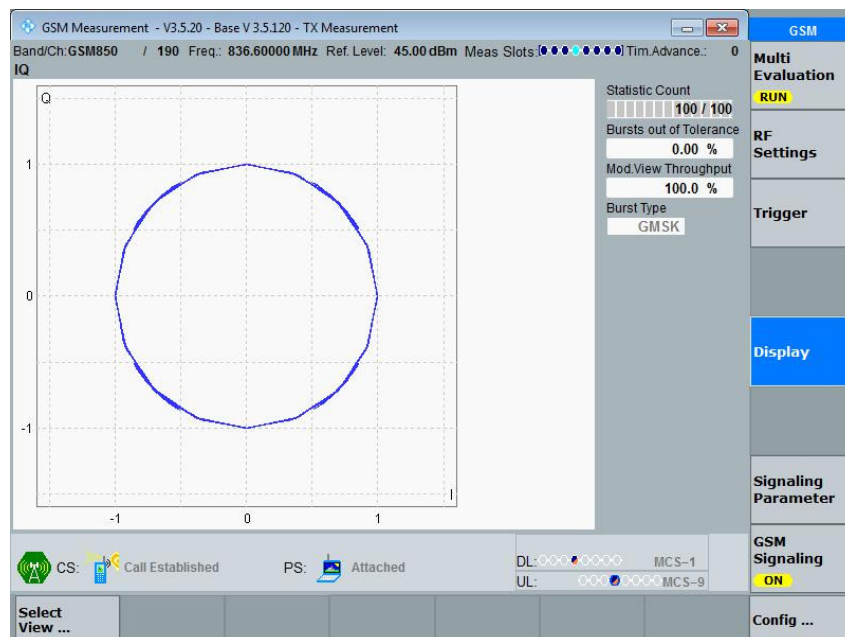
### 3. Modulation Characteristics

#### 3.1. For GSM

##### 3.1.1. Test BAND = GSM 850

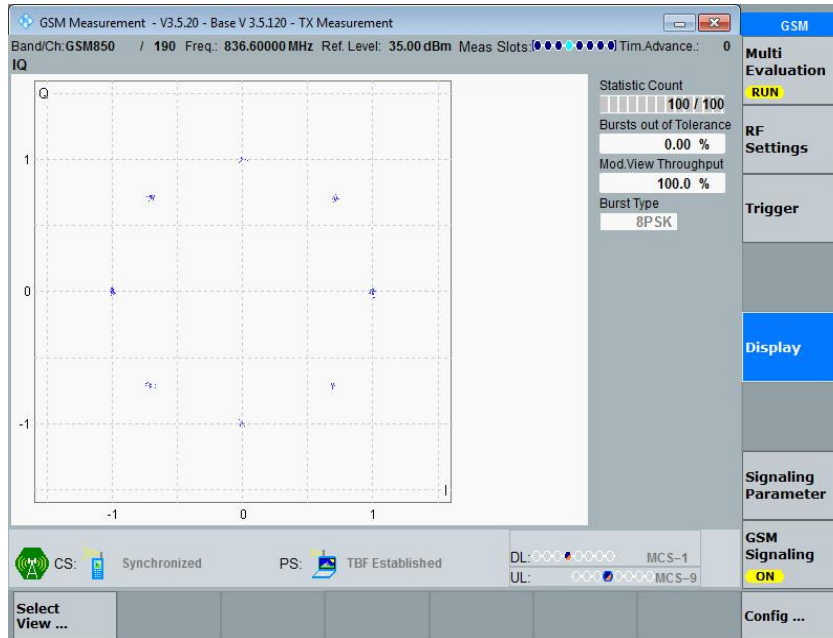
##### 3.1.1.1. Test Mode = GSM/TM1

##### 3.1.1.1.1. Test Channel = MCH



### 3.1.1.2. Test Mode = GSM/TM2

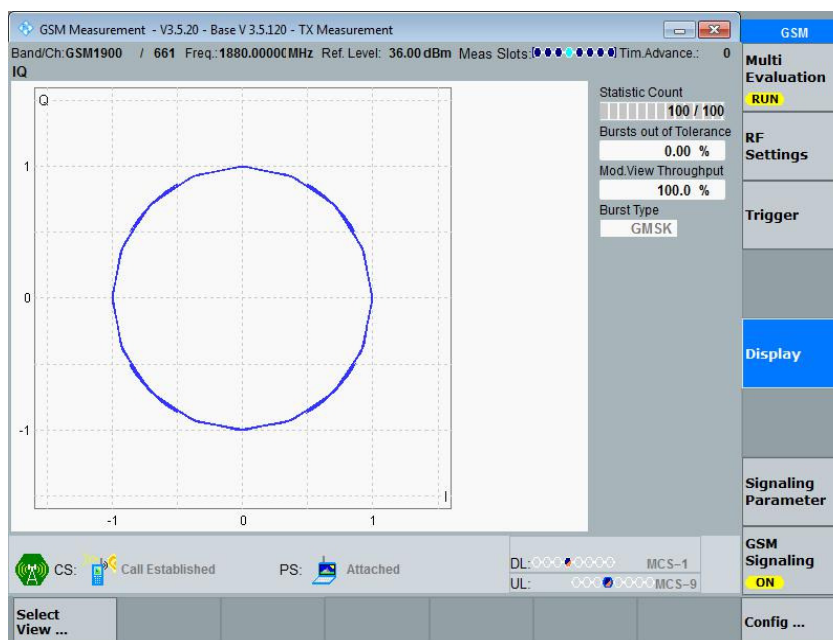
#### 3.1.1.2.1. Test Channel = MCH



### 3.1.2. Test BAND = GSM 1900

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

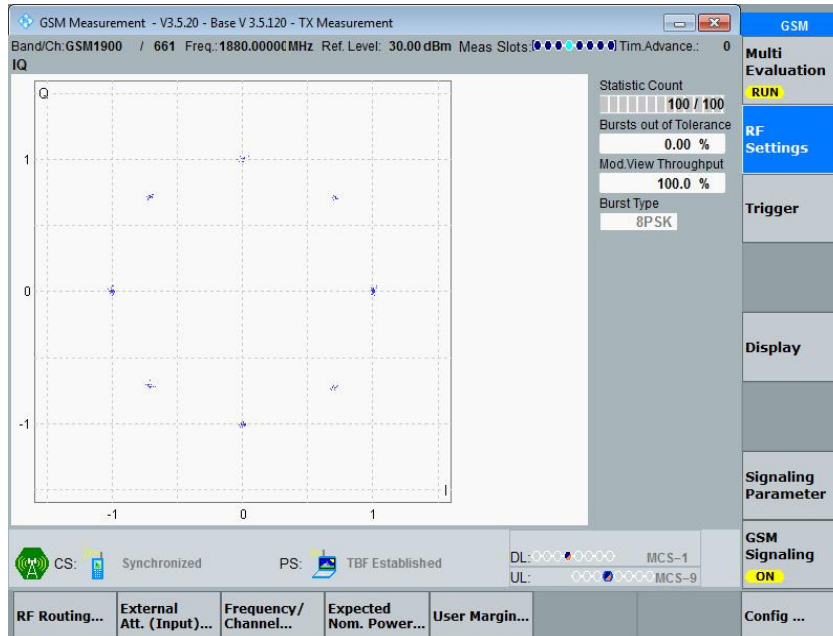
#### 3.1.2.1.1. Test Channel = MCH





### 3.1.2.2. Test Mode = GSM/TM2

#### 3.1.2.2.1. Test Channel = MCH



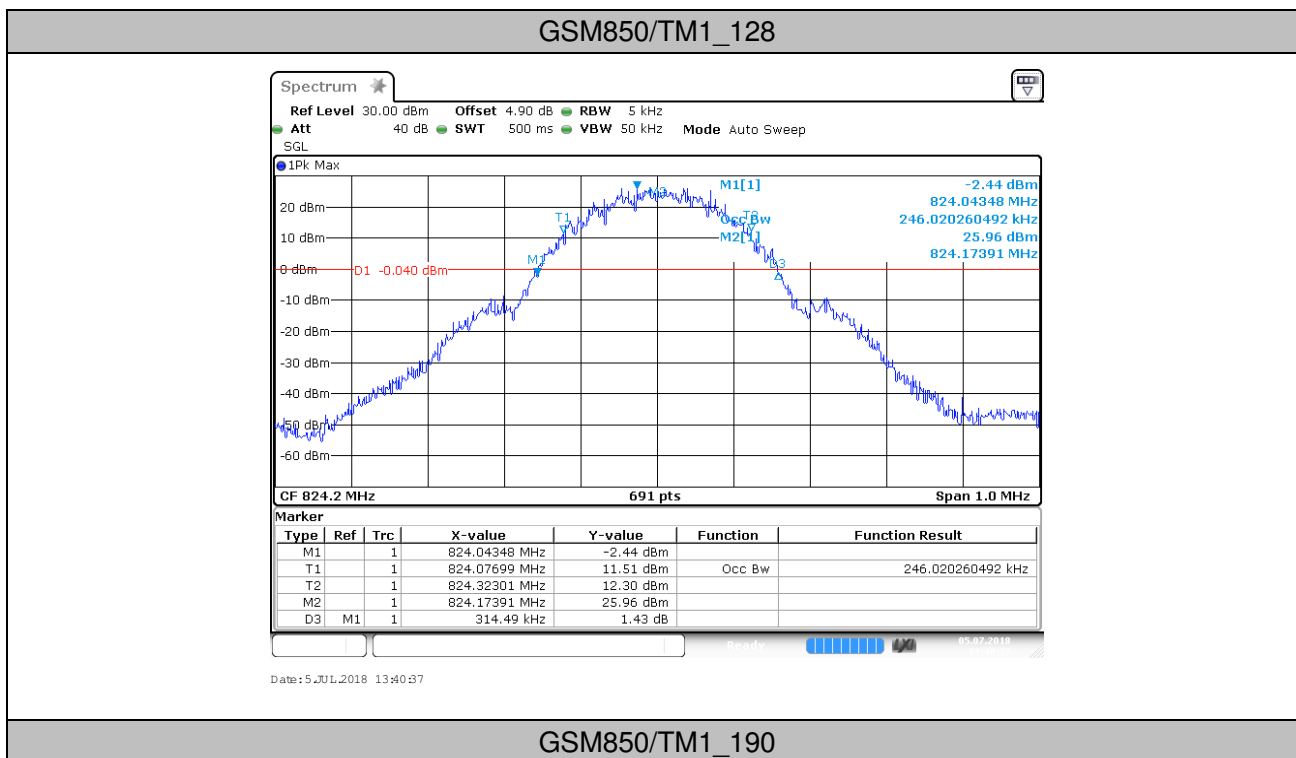


## 4. 26dB Bandwidth and Occupied Bandwidth

### 4.1. Test Result

| BAND        | Channel | Occupied Bandwidth (kHz) | 26dB Bandwidth (kHz) | Limit(kHz) | Verdict |
|-------------|---------|--------------------------|----------------------|------------|---------|
| GSM850/TM1  | 128     | 246.02                   | 314.49               | ---        | PASS    |
| GSM850/TM1  | 190     | 246.02                   | 315.94               | ---        | PASS    |
| GSM850/TM1  | 251     | 244.57                   | 302.90               | ---        | PASS    |
| GSM850/TM2  | 128     | 250.36                   | 298.55               | ---        | PASS    |
| GSM850/TM2  | 190     | 251.81                   | 298.55               | ---        | PASS    |
| GSM850/TM2  | 251     | 243.13                   | 295.65               | ---        | PASS    |
| GSM1900/TM1 | 512     | 244.57                   | 295.65               | ---        | PASS    |
| GSM1900/TM1 | 661     | 246.02                   | 291.30               | ---        | PASS    |
| GSM1900/TM1 | 810     | 244.57                   | 302.90               | ---        | PASS    |
| GSM1900/TM2 | 512     | 250.36                   | 302.90               | ---        | PASS    |
| GSM1900/TM2 | 661     | 247.47                   | 300.00               | ---        | PASS    |
| GSM1900/TM2 | 810     | 246.02                   | 304.35               | ---        | PASS    |

### 4.2. Test Plots

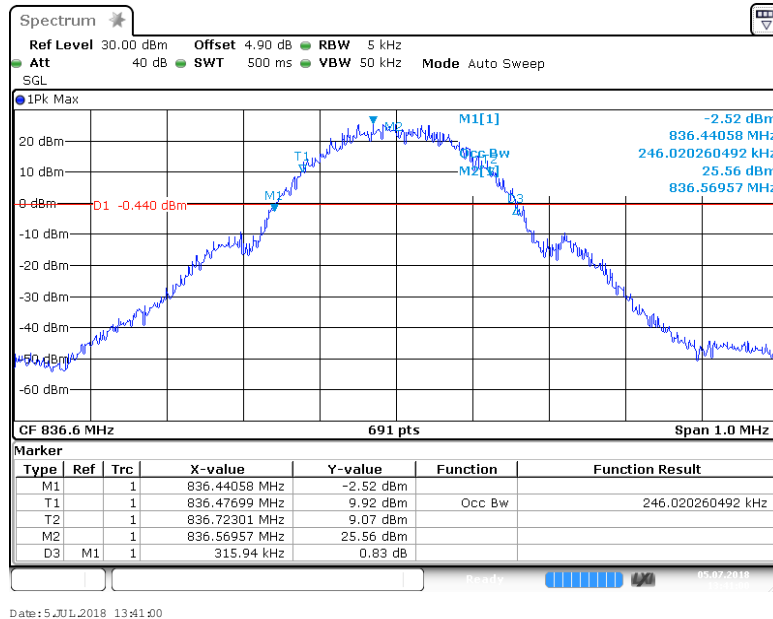




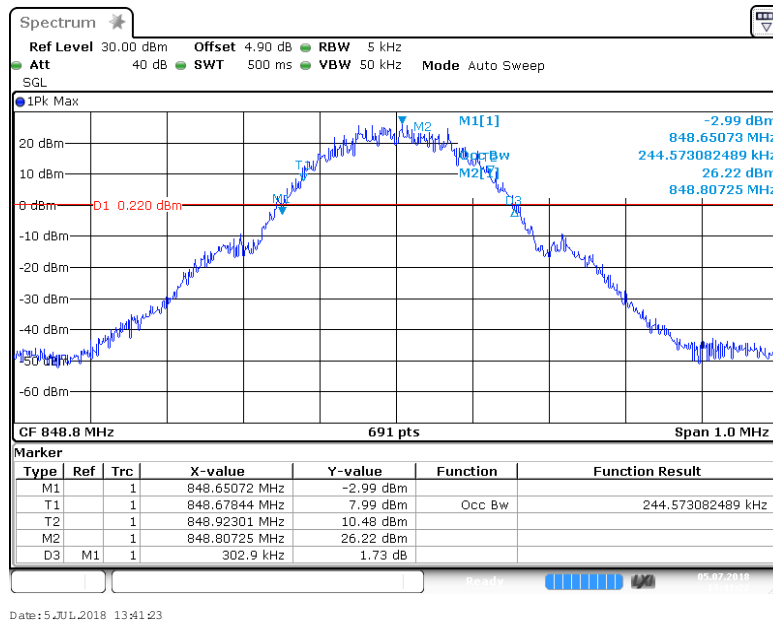
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Report No.: SZEM180500457101

Page: 16 of 62



## GSM850/TM1\_251



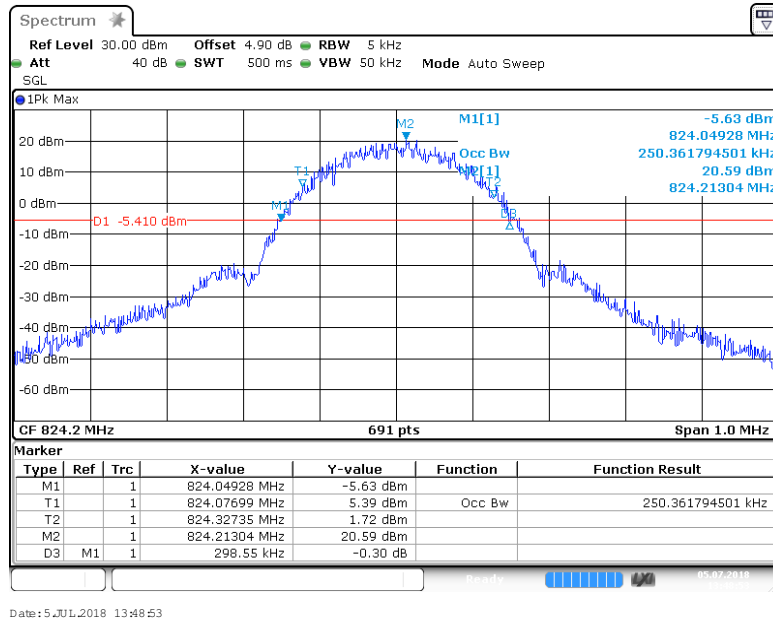
## GSM850/TM2\_128



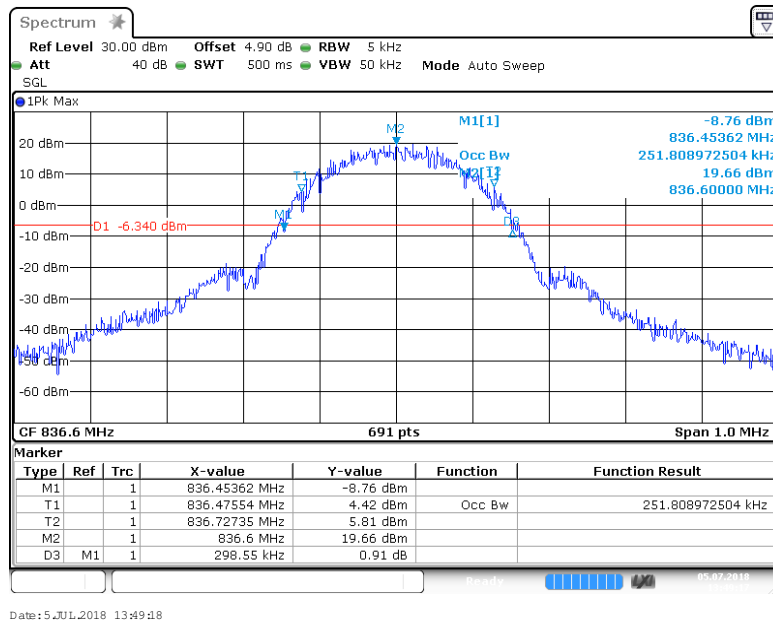
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Report No.: SZEM180500457101

Page: 17 of 62



## GSM850/TM2\_190



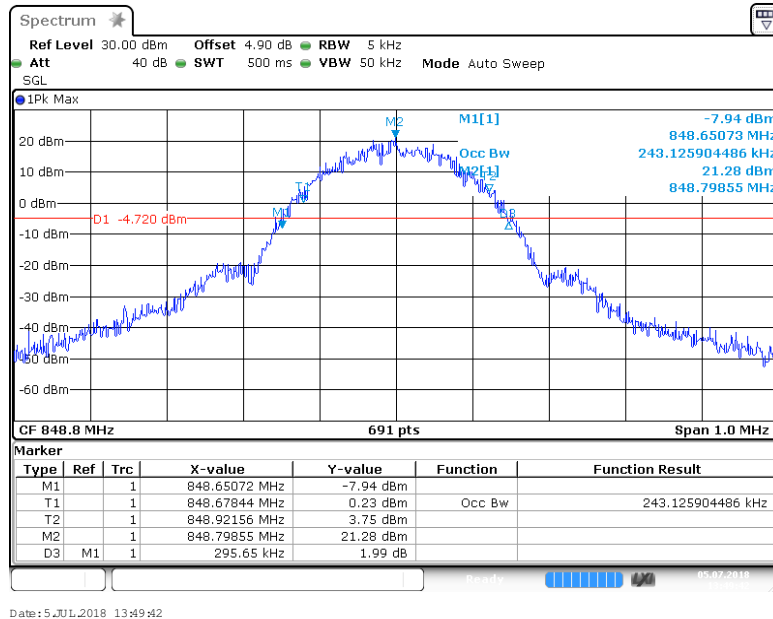
## GSM850/TM2\_251



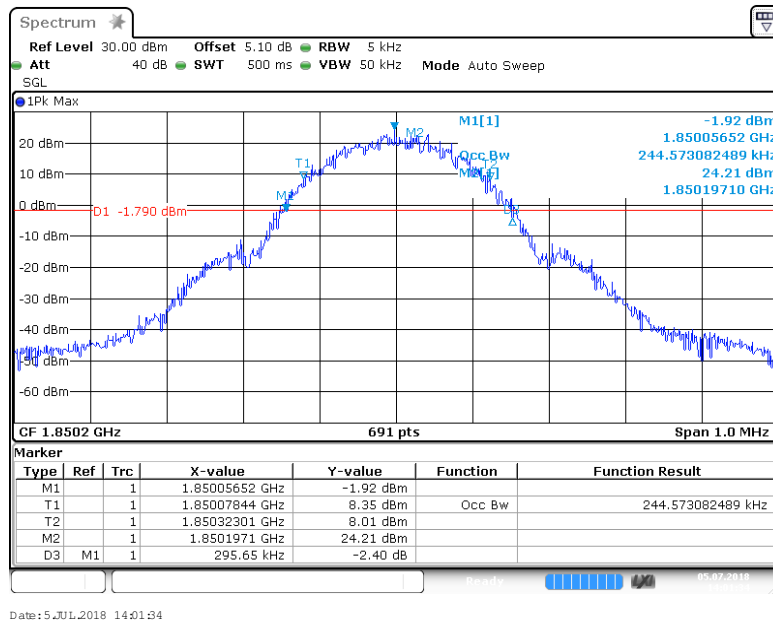
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Report No.: SZEM180500457101

Page: 18 of 62



## GSM1900/TM1\_512



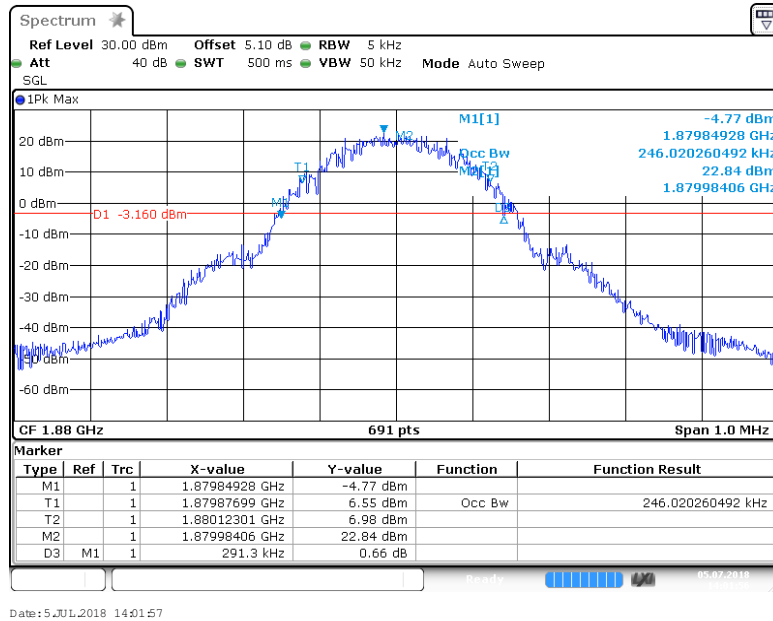
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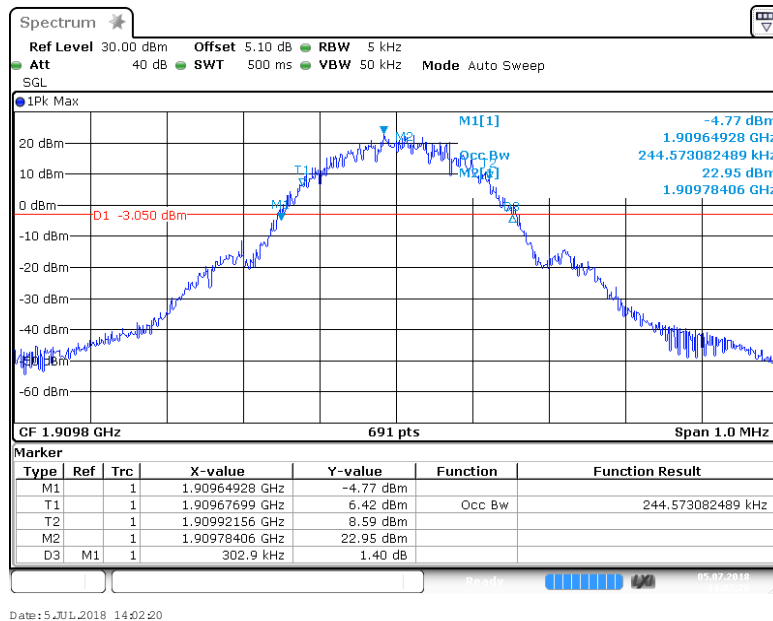
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Report No.: SZEM180500457101

Page: 19 of 62



## GSM1900/TM1\_810



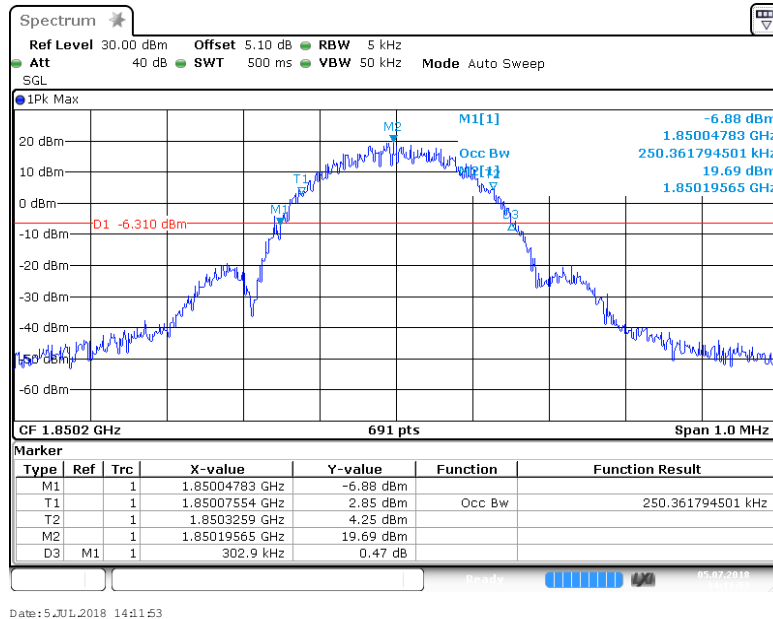
## GSM1900/TM2\_512



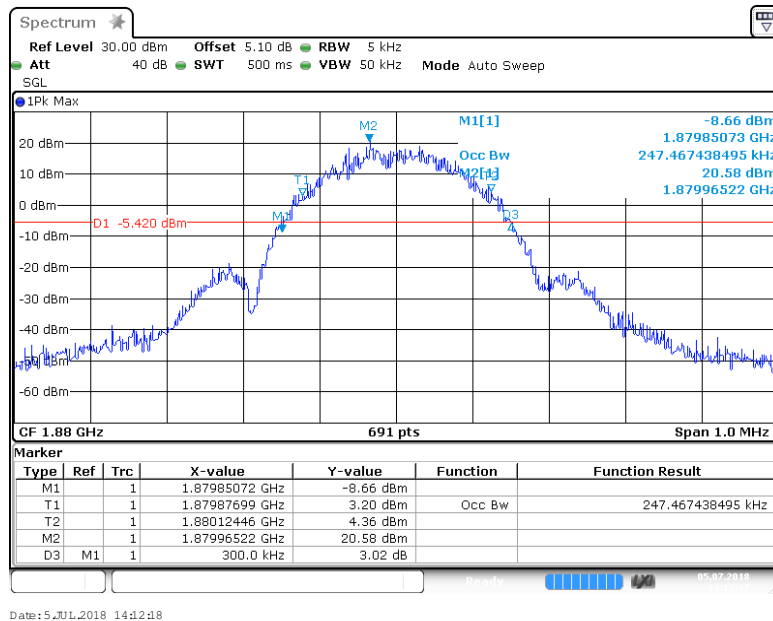
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Report No.: SZEM180500457101

Page: 20 of 62



## GSM1900/TM2\_661



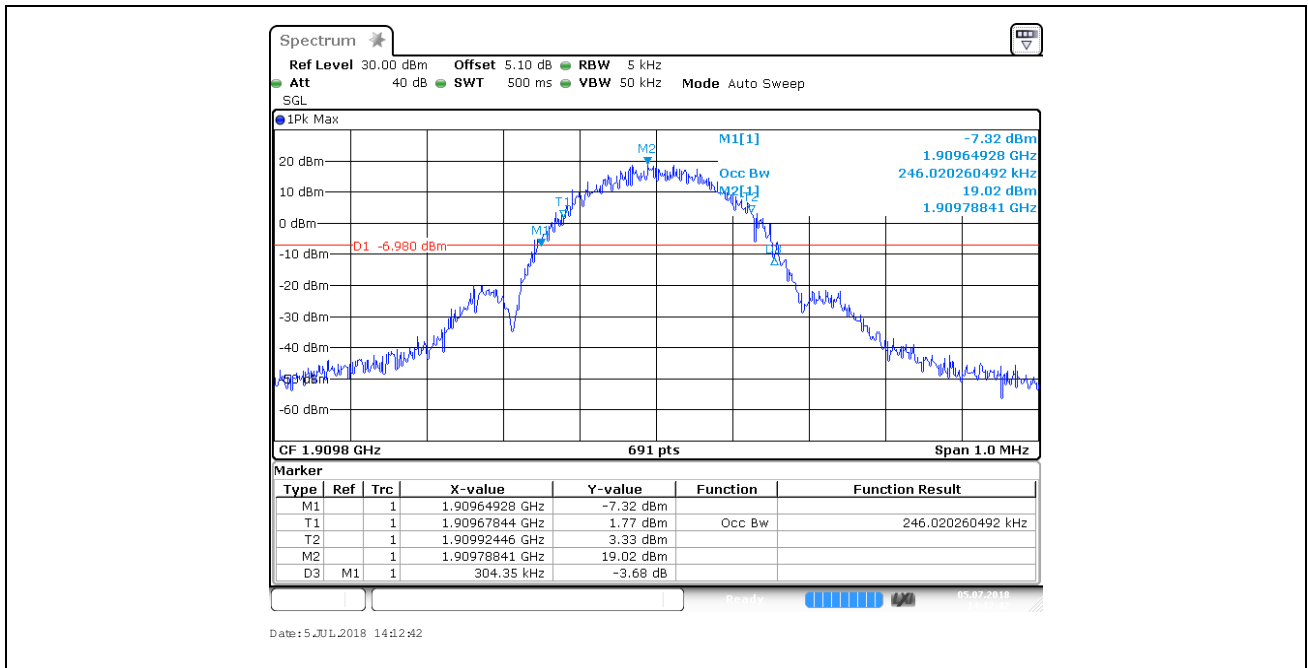
## GSM1900/TM2\_810



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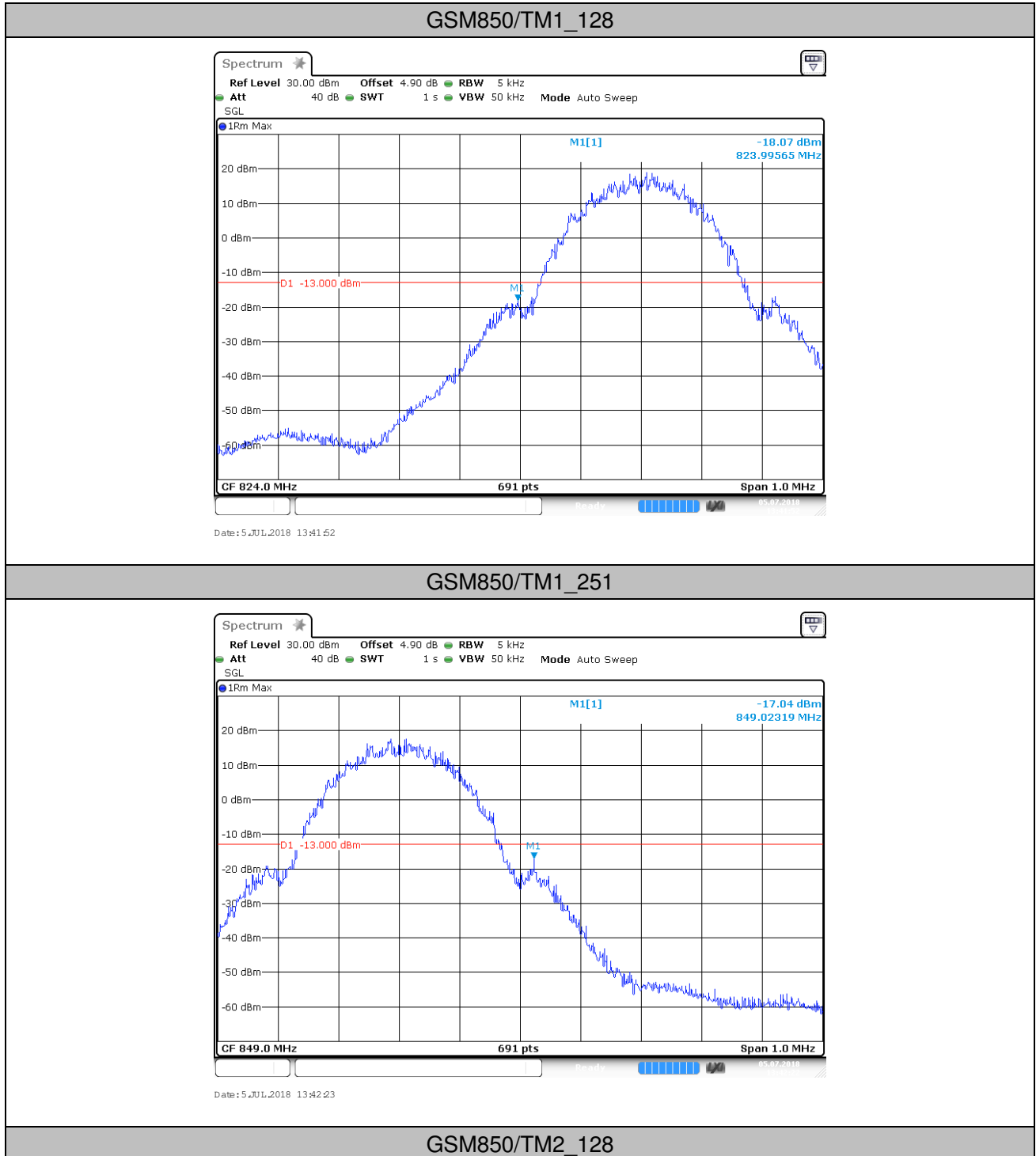
Page: 21 of 62





## 5. Band Edge Compliance

### 5.1. Test Plots

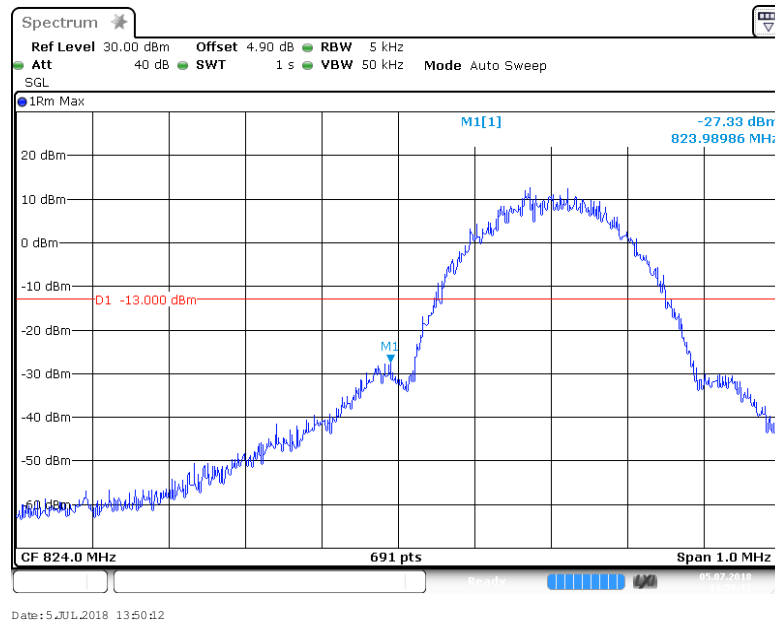




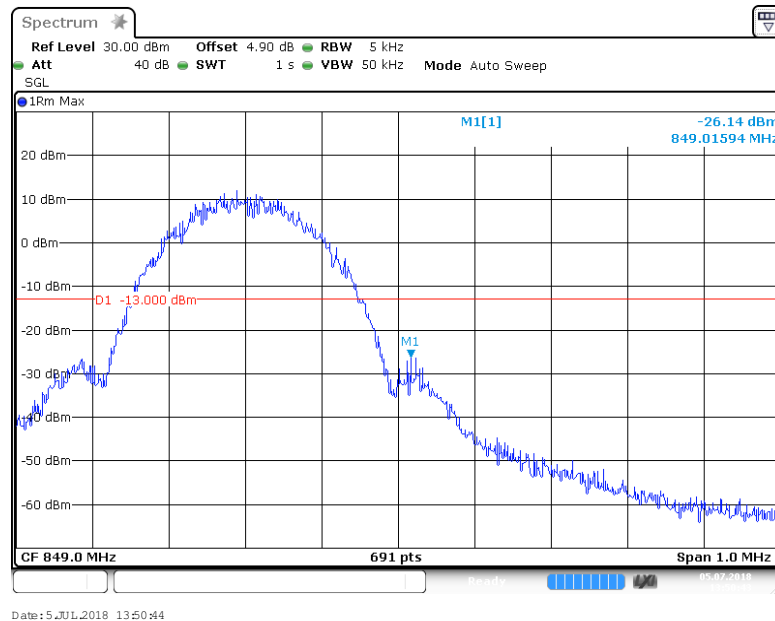
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Report No.: SZEM180500457101

Page: 23 of 62



GSM850/TM2\_251



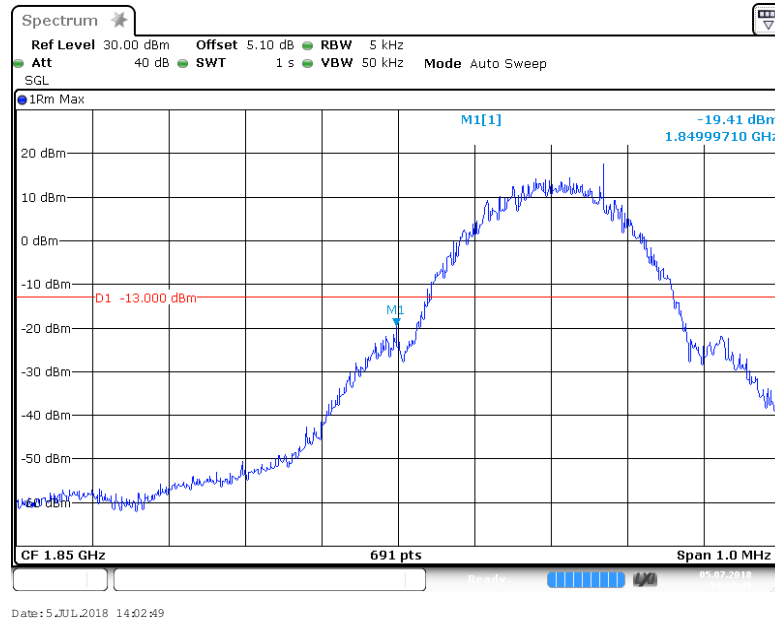
GSM1900/TM1\_512



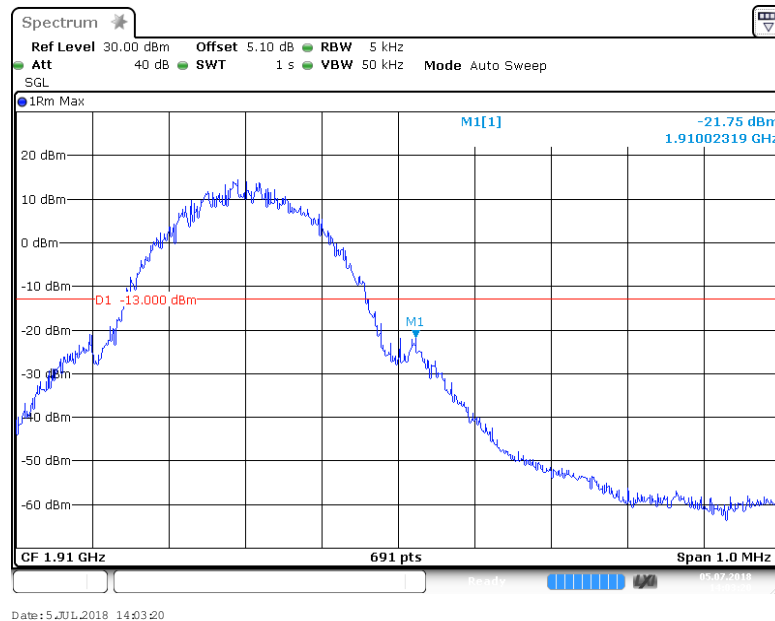
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Report No.: SZEM180500457101

Page: 24 of 62



GSM1900/TM1\_810



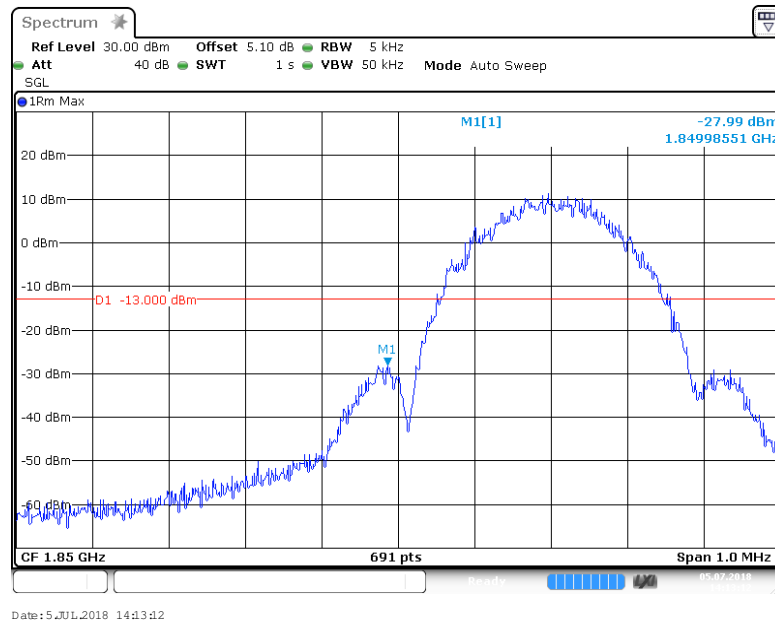
GSM1900/TM2\_512



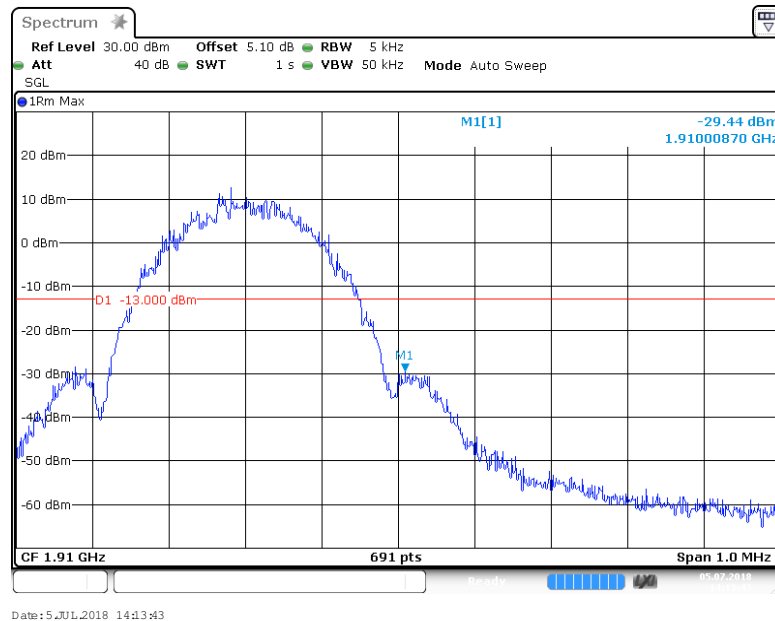
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Report No.: SZEM180500457101

Page: 25 of 62



## GSM1900/TM2\_810

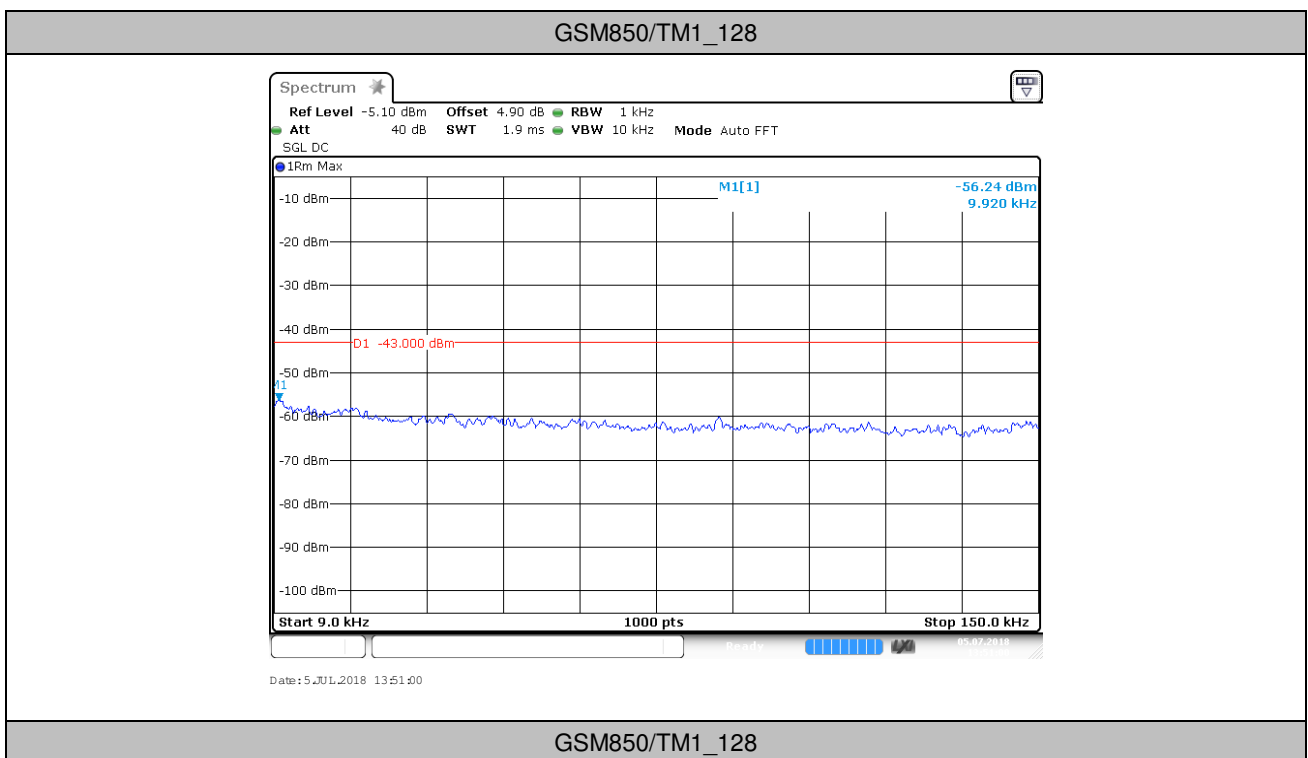




## 6. Spurious Emission at Antenna Terminal

NOTE: 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 =  $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

### 6.1. Test Plots

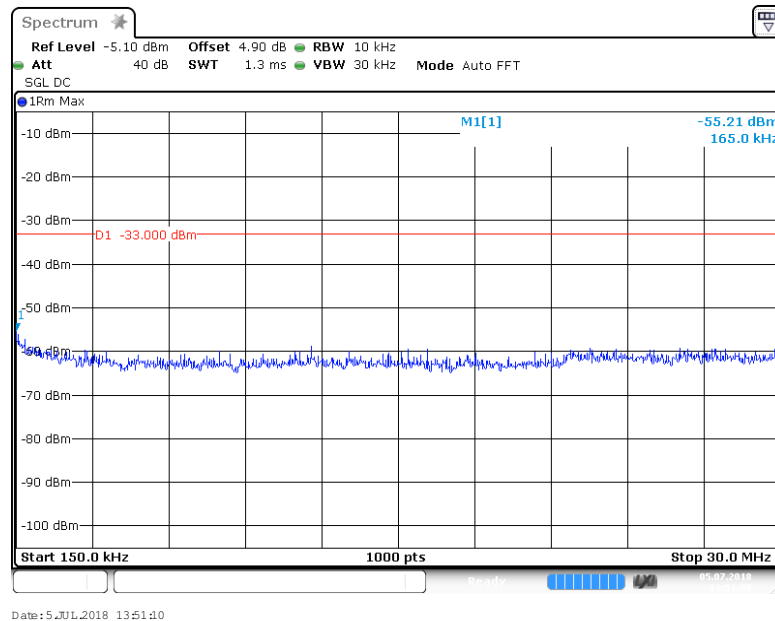




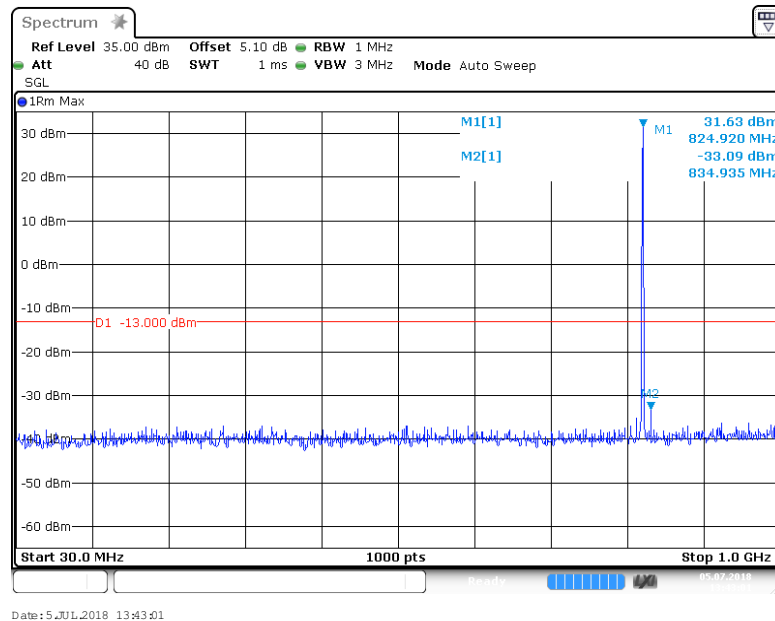
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 27 of 62



GSM850/TM1\_128



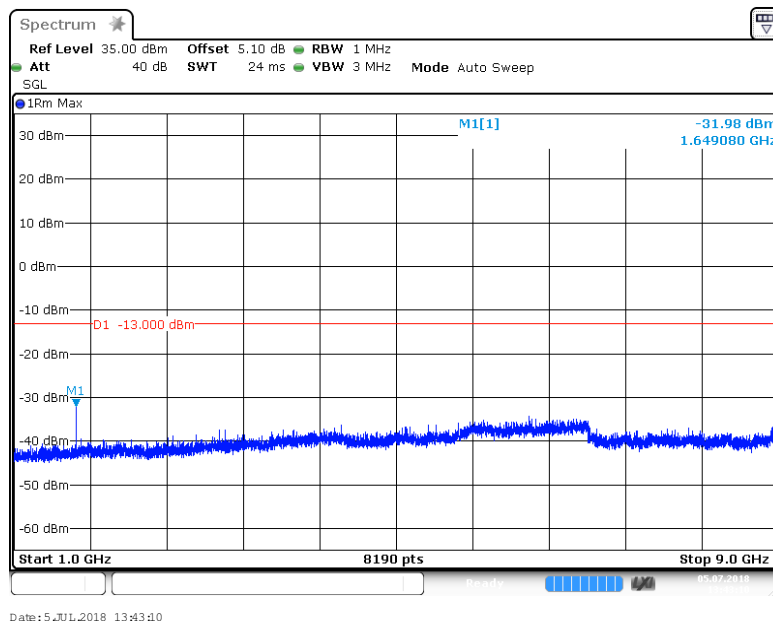
GSM850/TM1\_128



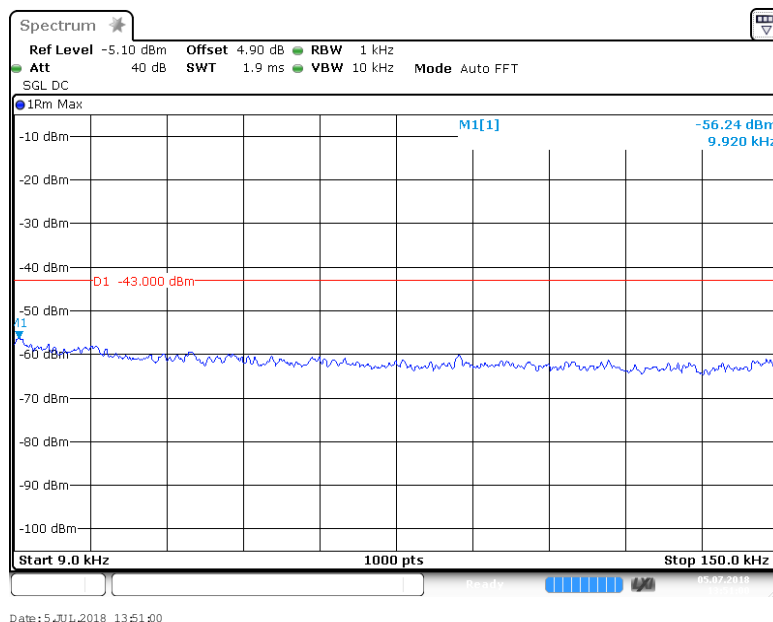
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Shenzhen Branch

Report No.: SZEM180500457101

Page: 28 of 62



GSM850/TM1\_190



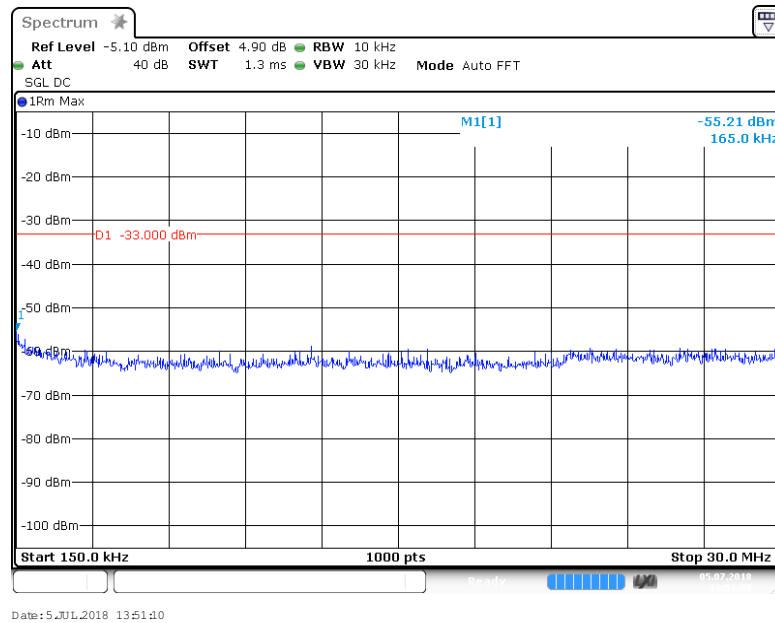
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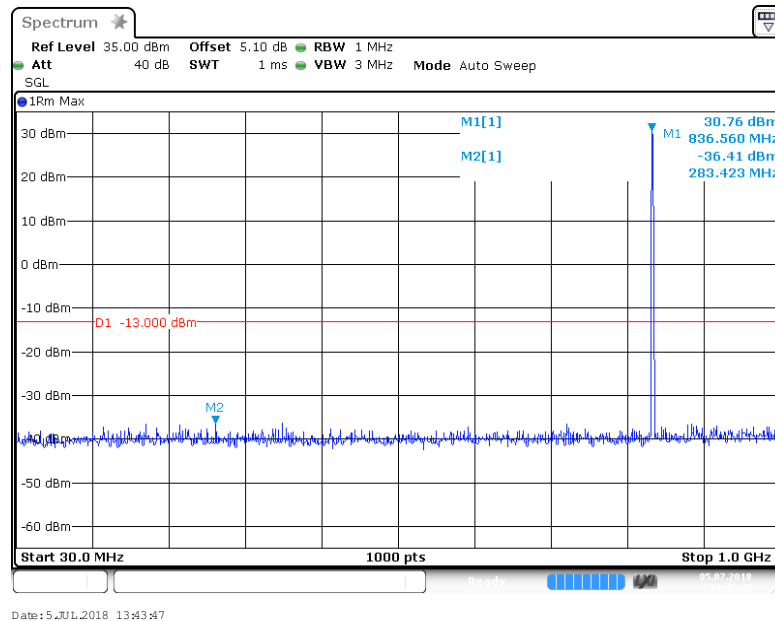
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Report No.: SZEM180500457101

Page: 29 of 62



GSM850/TM1\_190



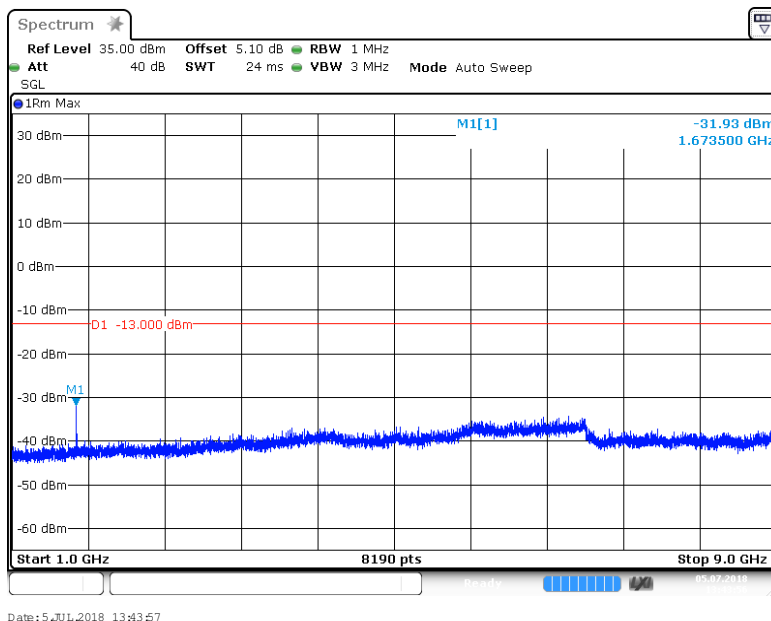
GSM850/TM1\_190



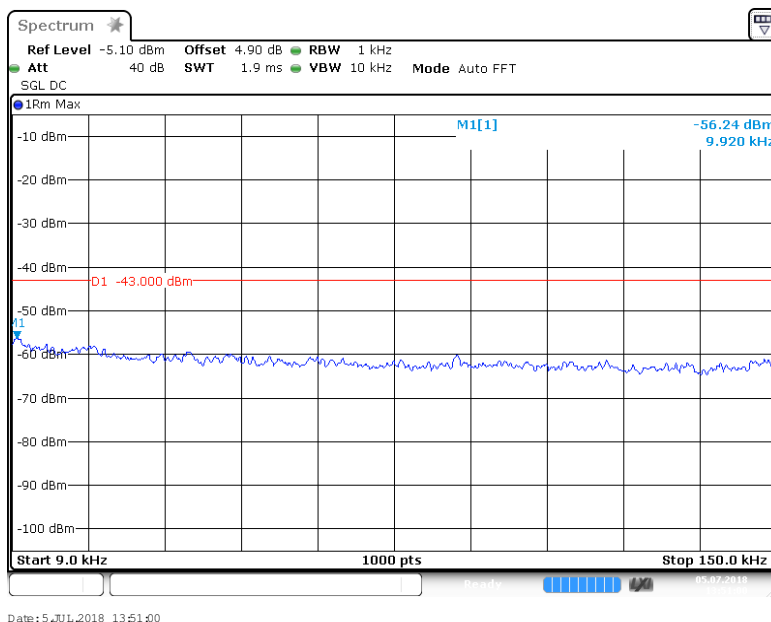
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Report No.: SZEM180500457101

Page: 30 of 62



GSM850/TM1\_251



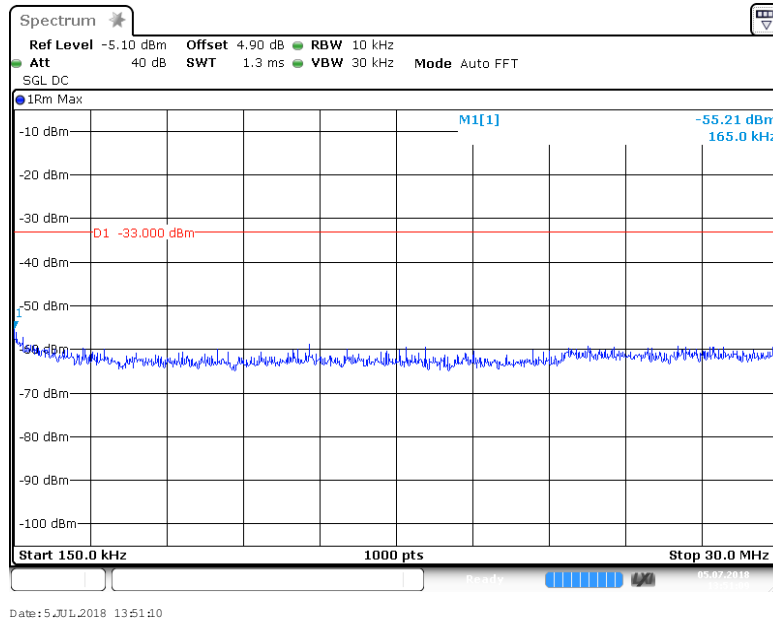
GSM850/TM1\_251



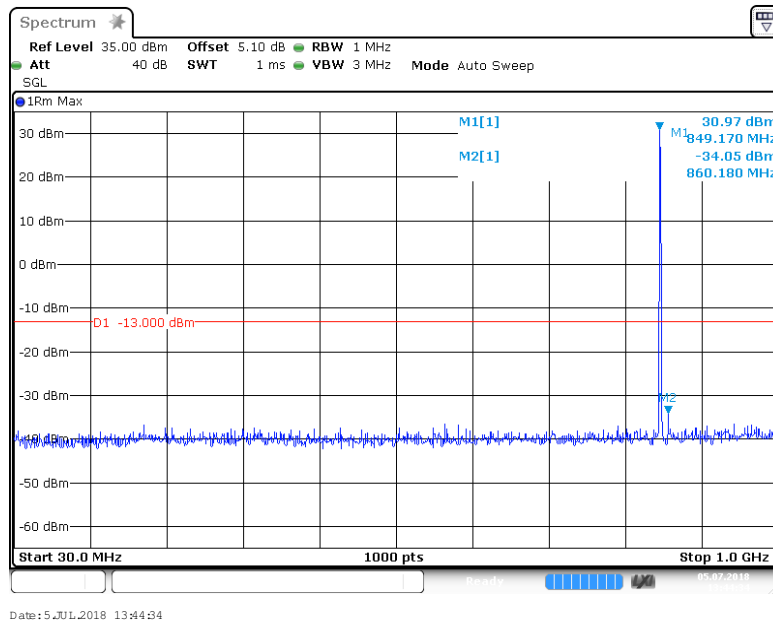
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Report No.: SZEM180500457101

Page: 31 of 62



GSM850/TM1\_251



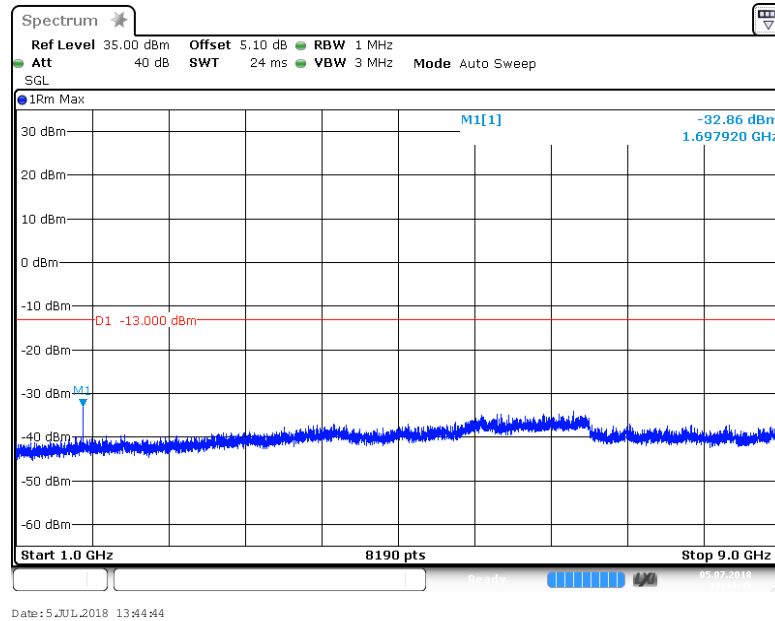
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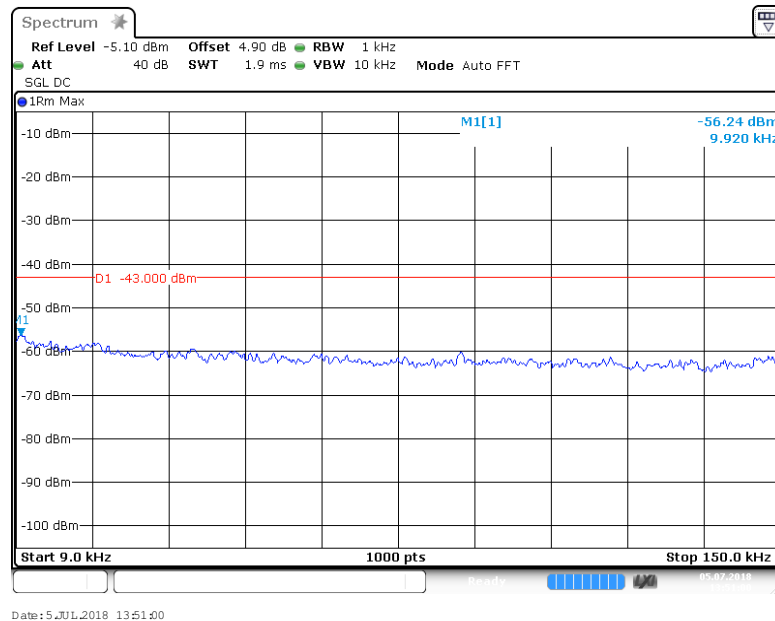
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 32 of 62



GSM850/TM2\_128



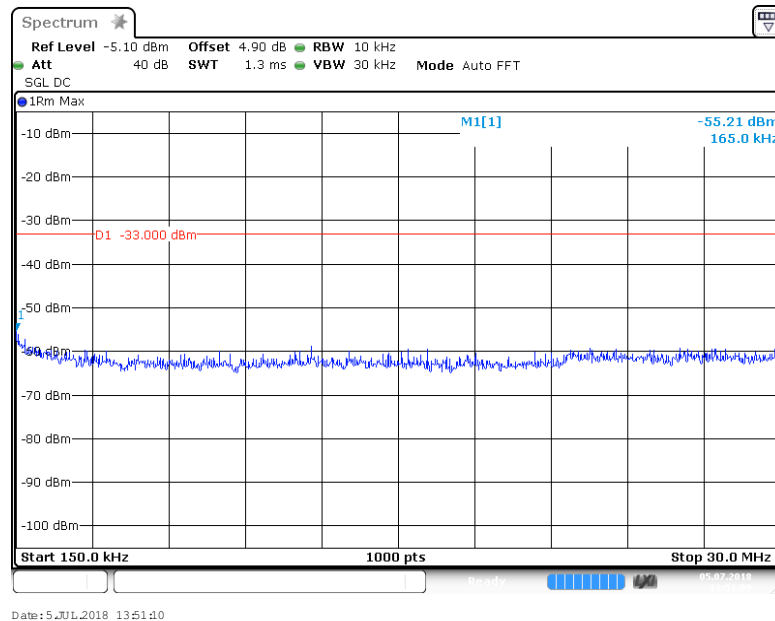
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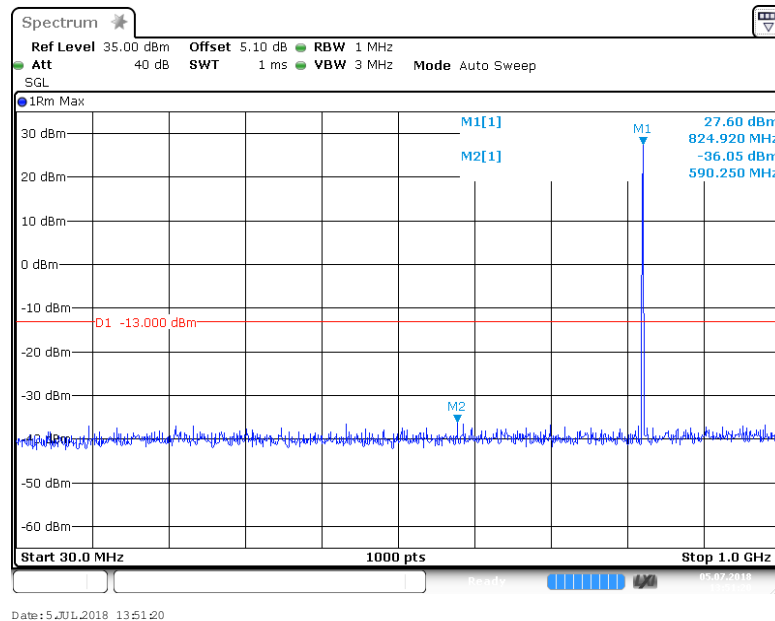
**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 33 of 62



GSM850/TM2\_128



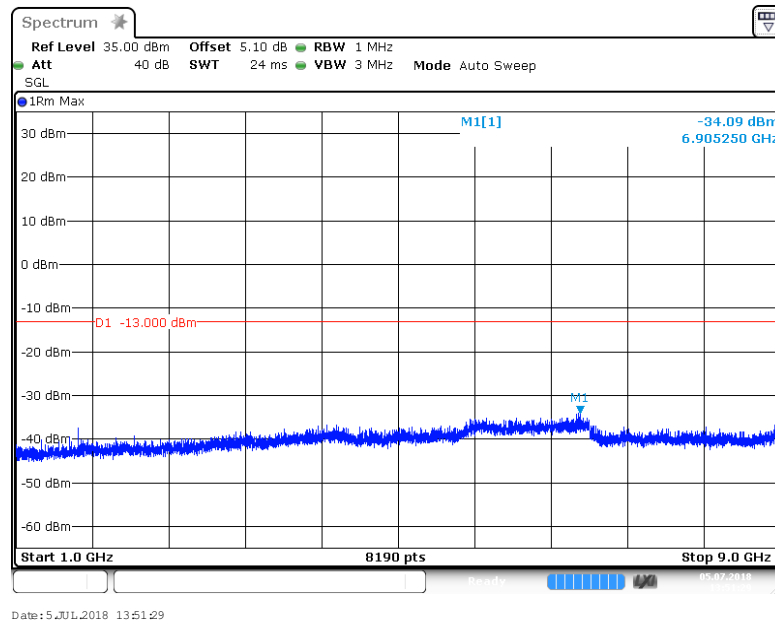
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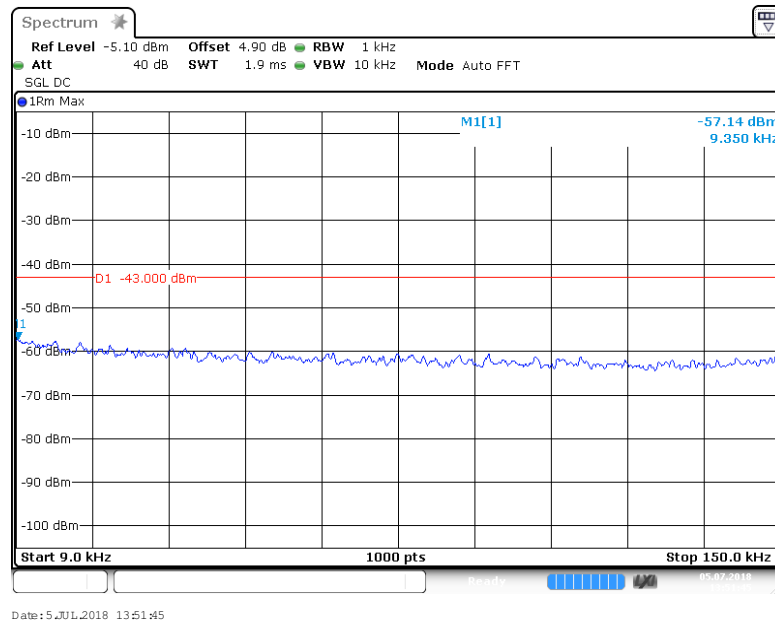
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 34 of 62



GSM850/TM2\_190



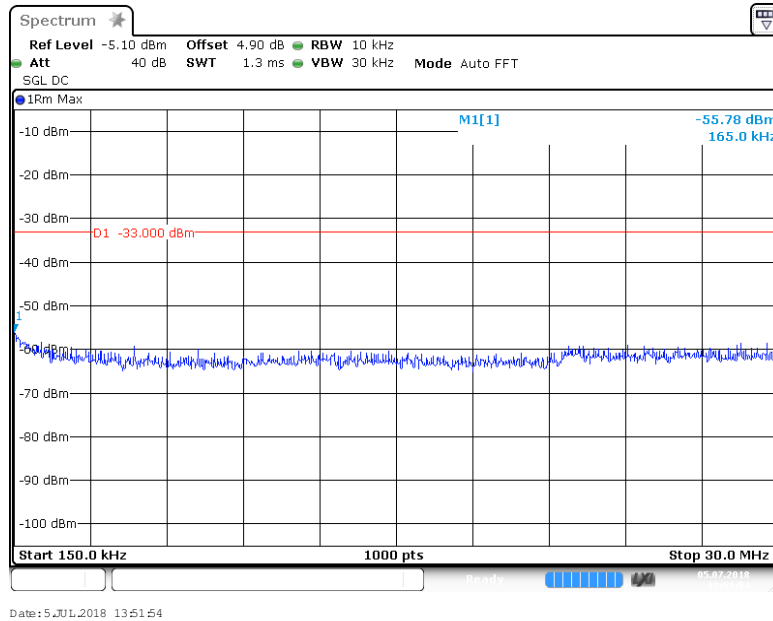
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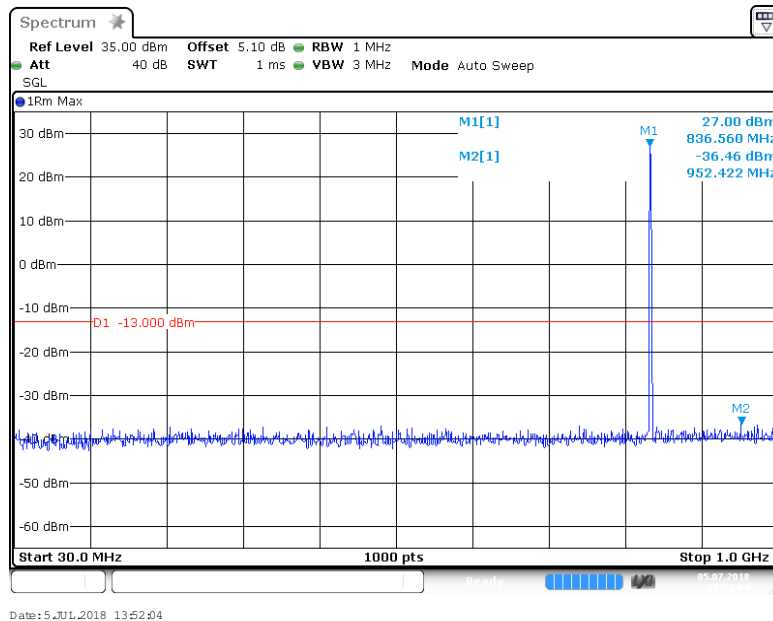
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 35 of 62



GSM850/TM2\_190



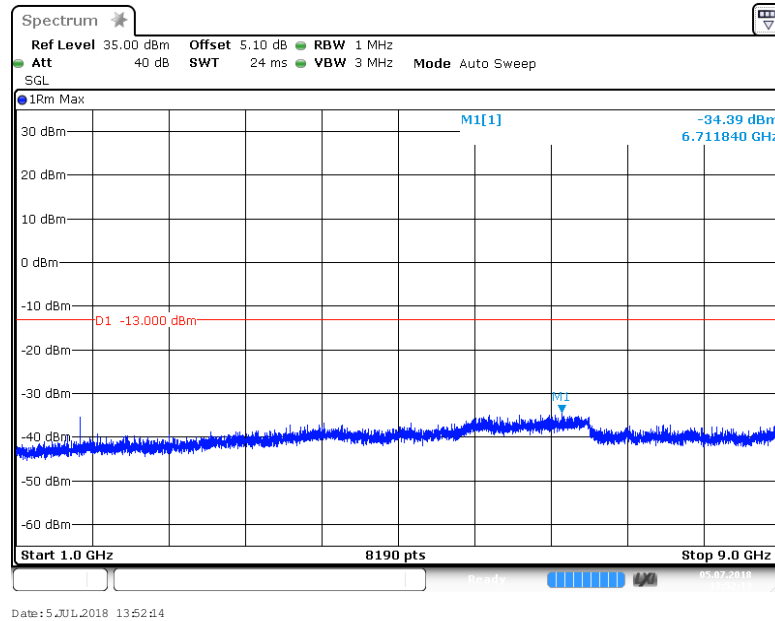
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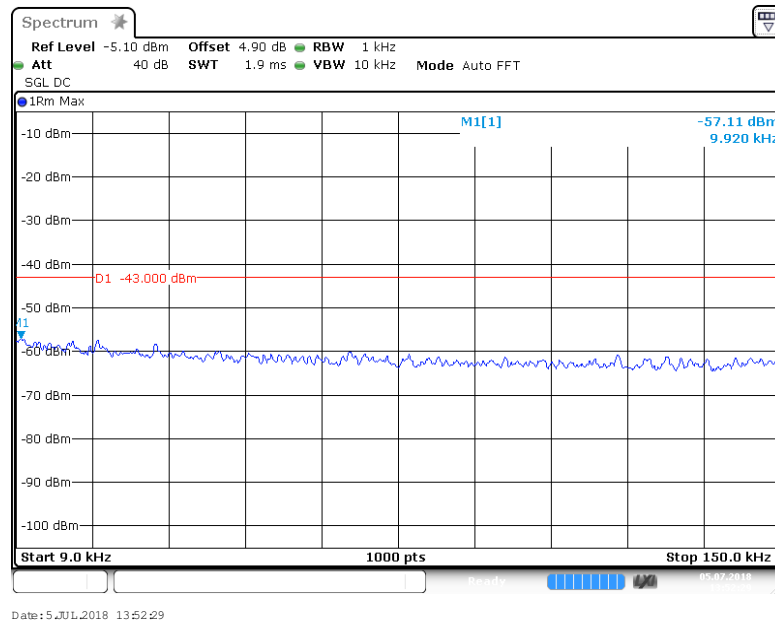
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 36 of 62



GSM850/TM2\_251



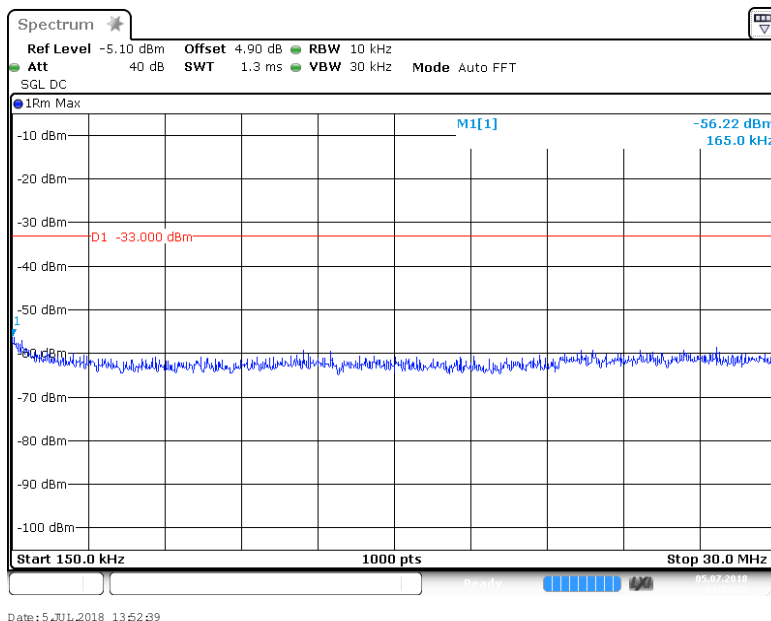
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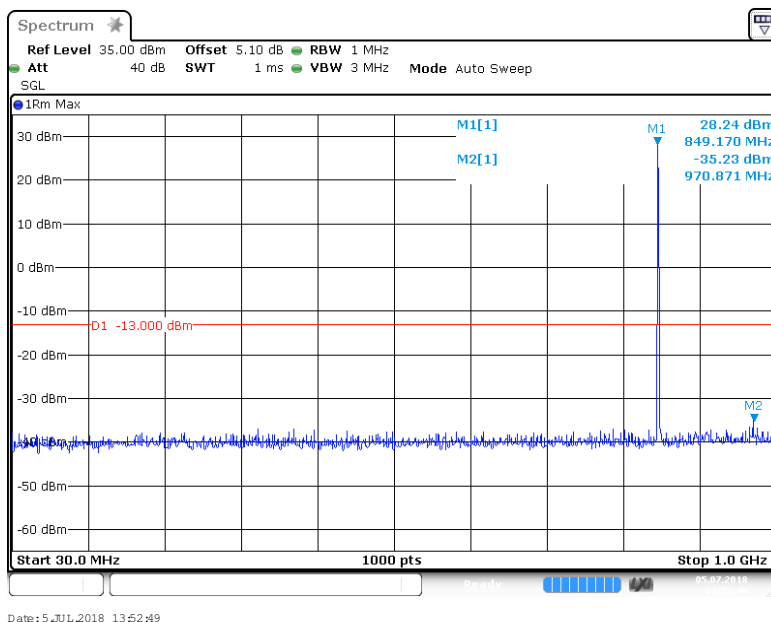
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

Page: 37 of 62



GSM850/TM2\_251



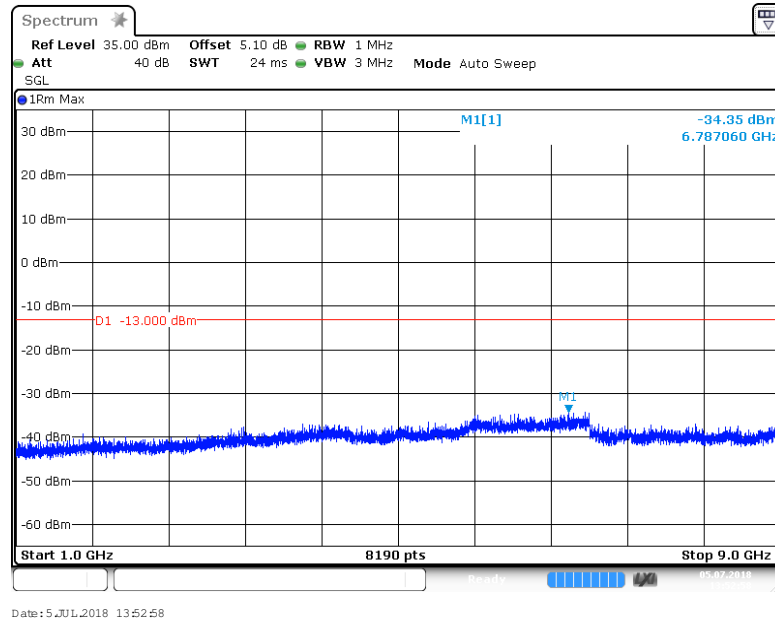
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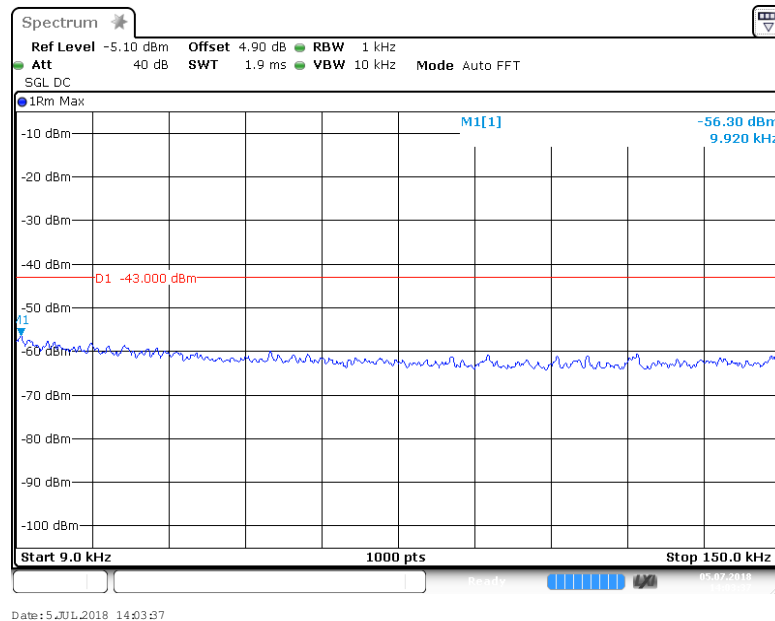
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 38 of 62



GSM1900/TM1\_512



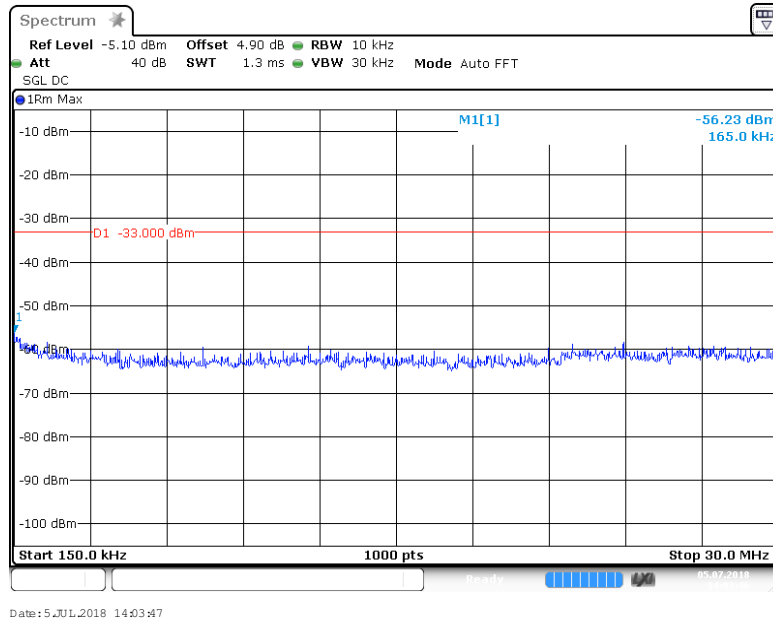
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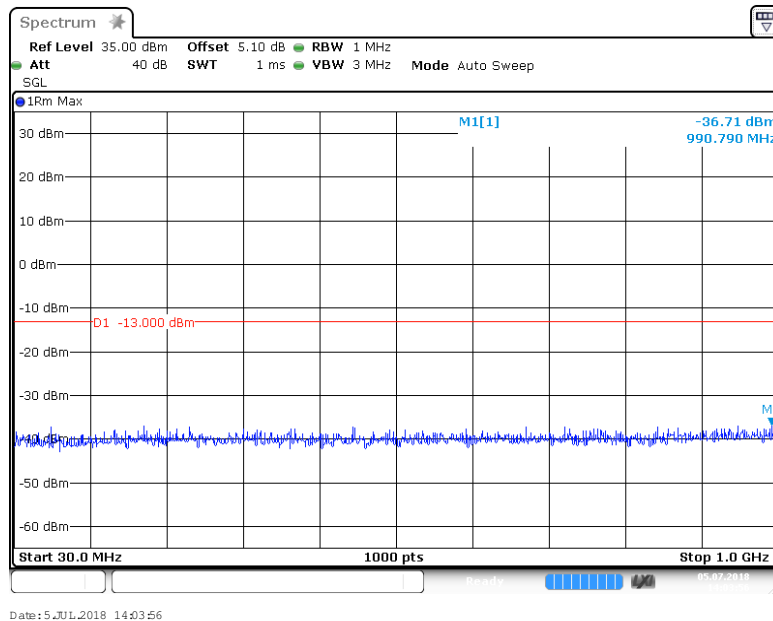
**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 39 of 62



GSM1900/TM1\_512



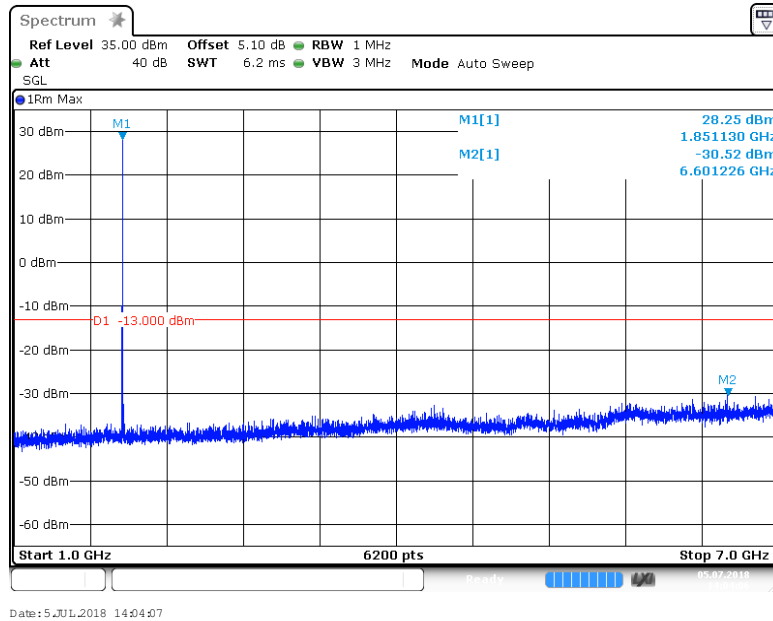
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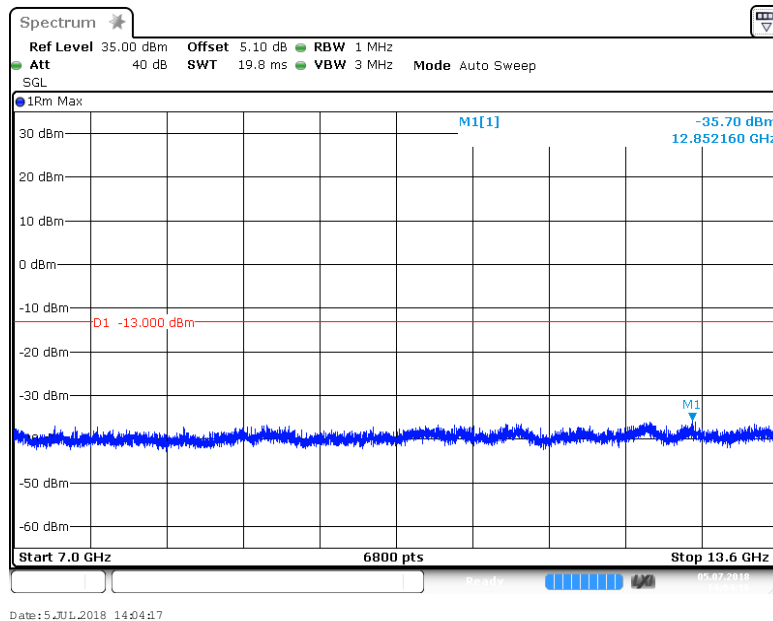
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 40 of 62



GSM1900/TM1\_512



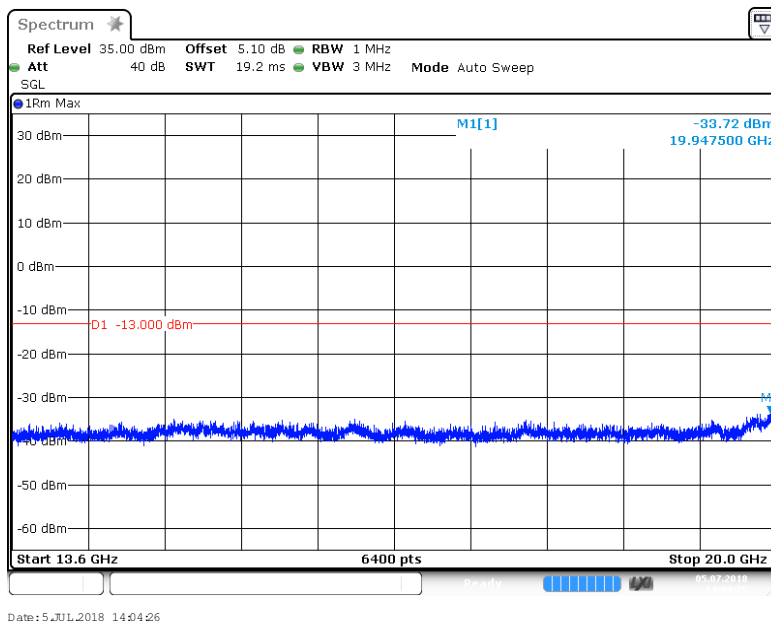
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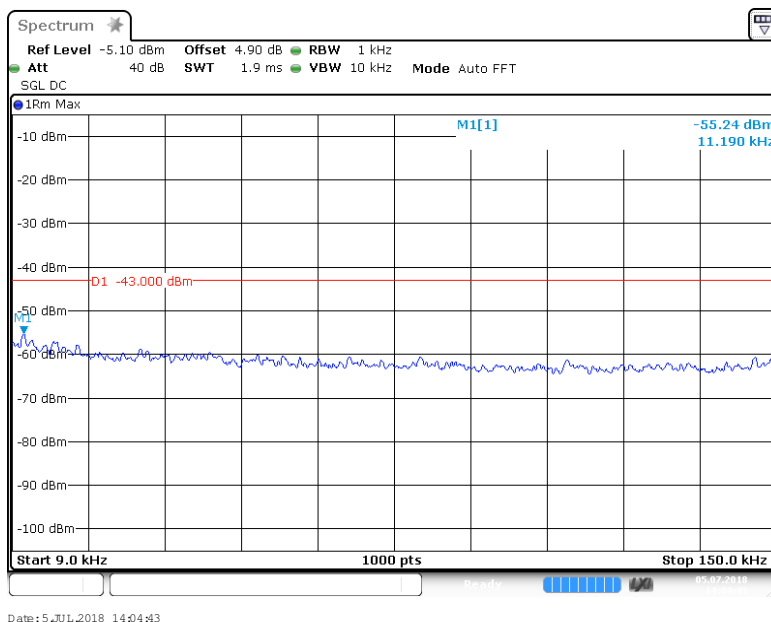
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 41 of 62



GSM1900/TM1\_661



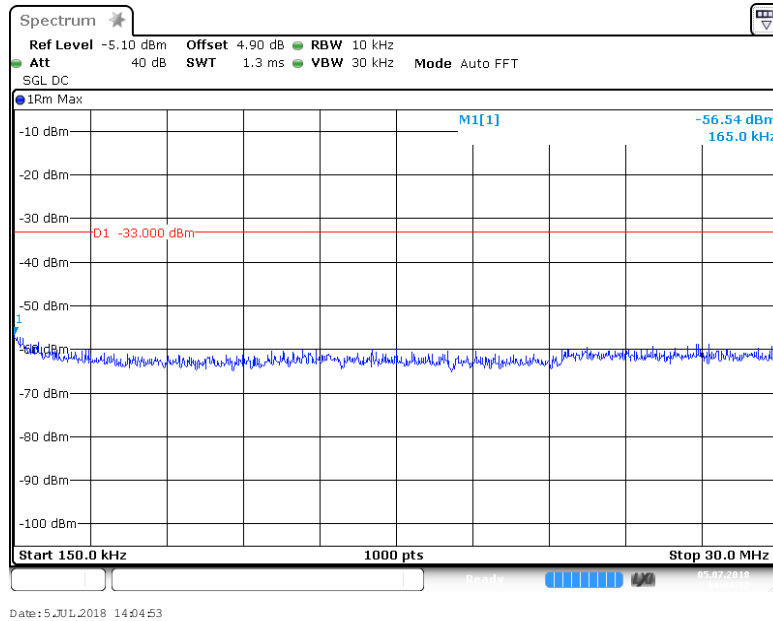
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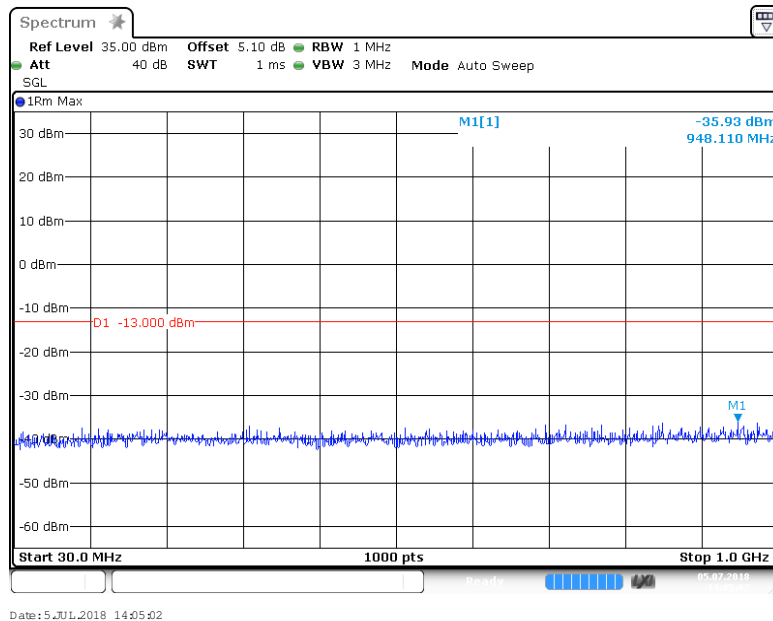
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 42 of 62



GSM1900/TM1\_661



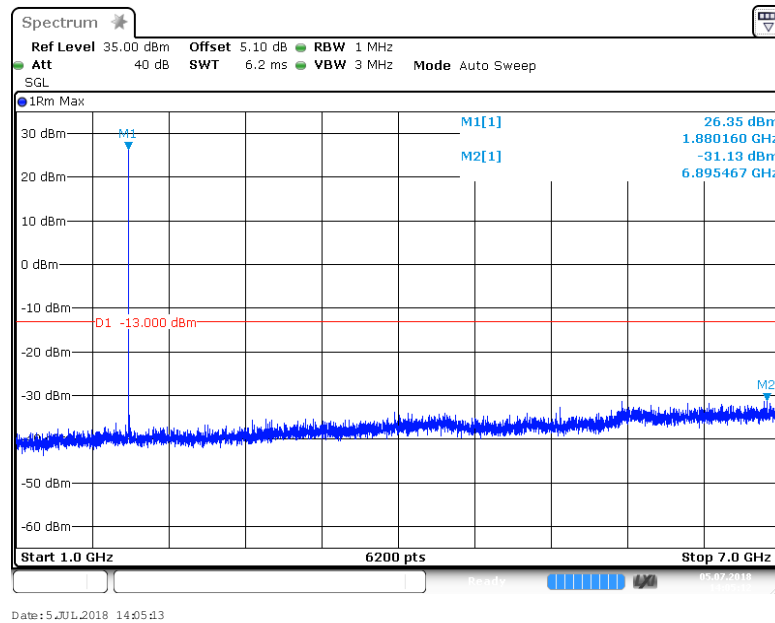
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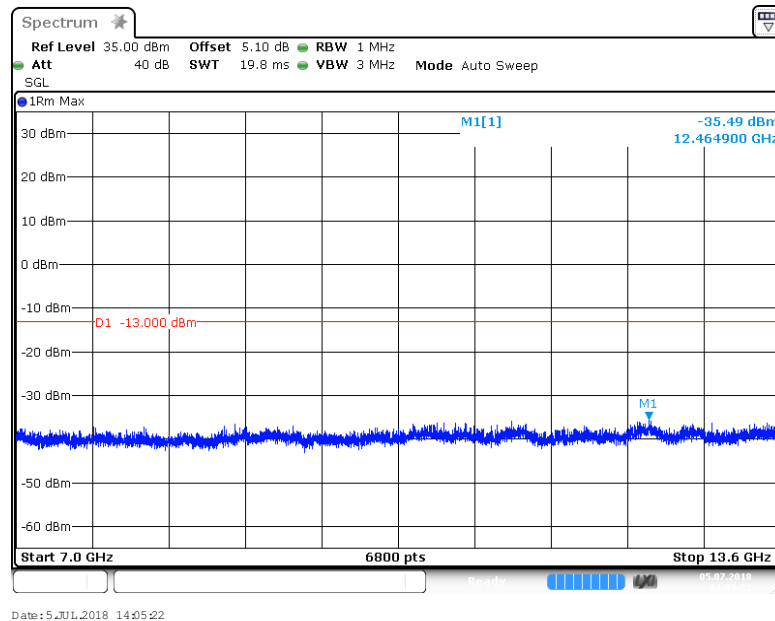
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 43 of 62



GSM1900/TM1\_661



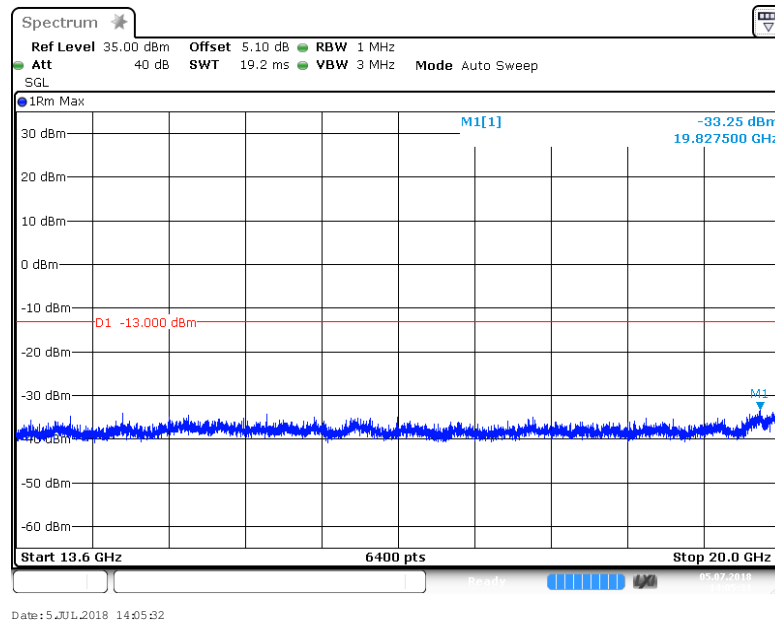
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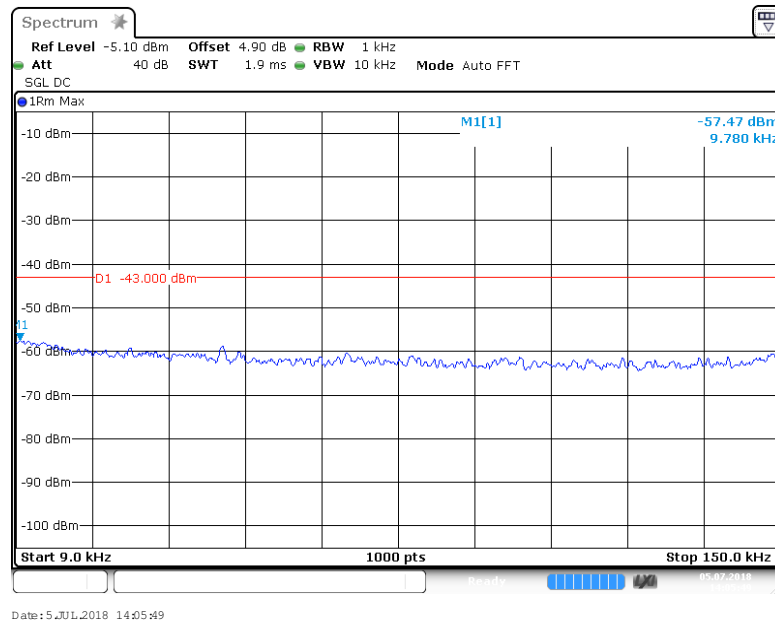
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 44 of 62



GSM1900/TM1\_810



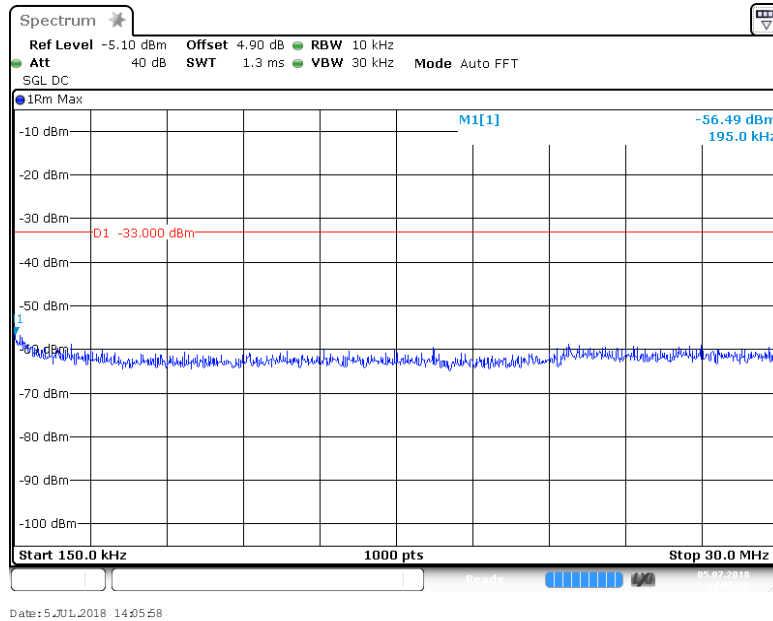
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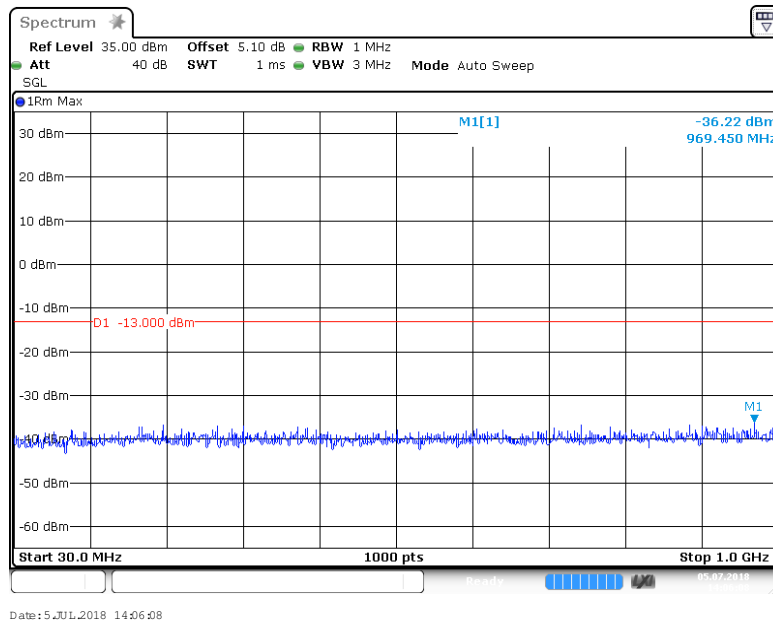
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 45 of 62



GSM1900/TM1\_810



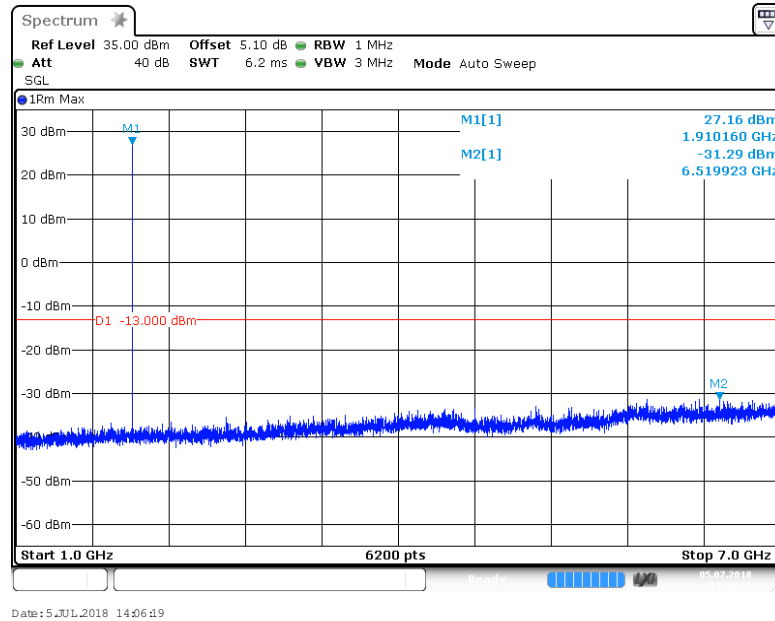
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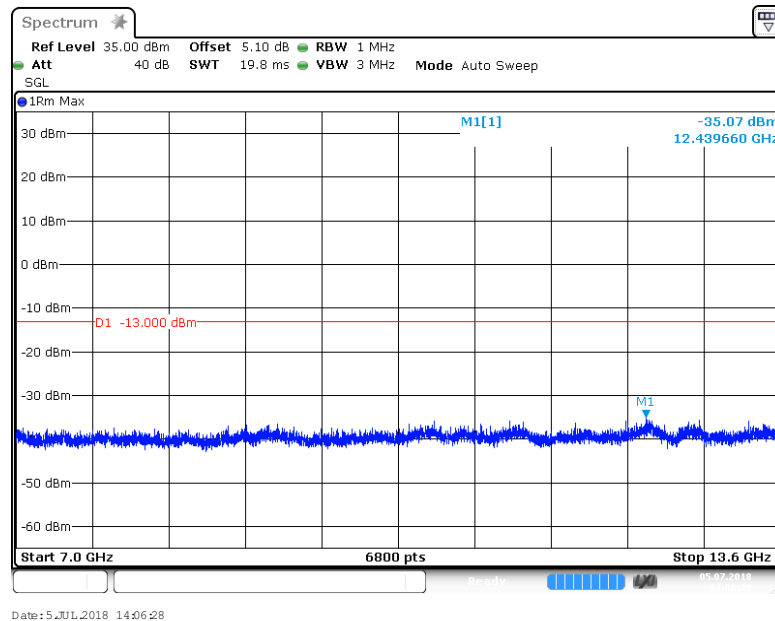
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 46 of 62



GSM1900/TM1\_810



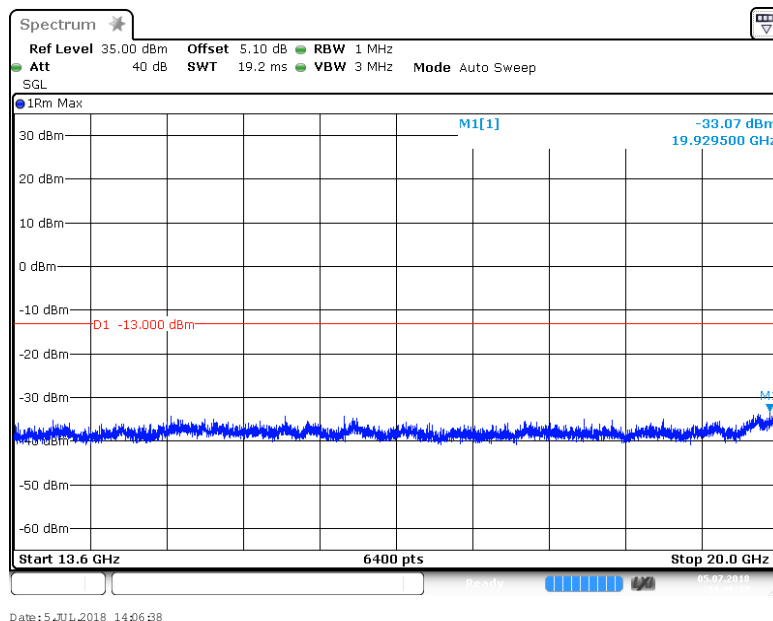
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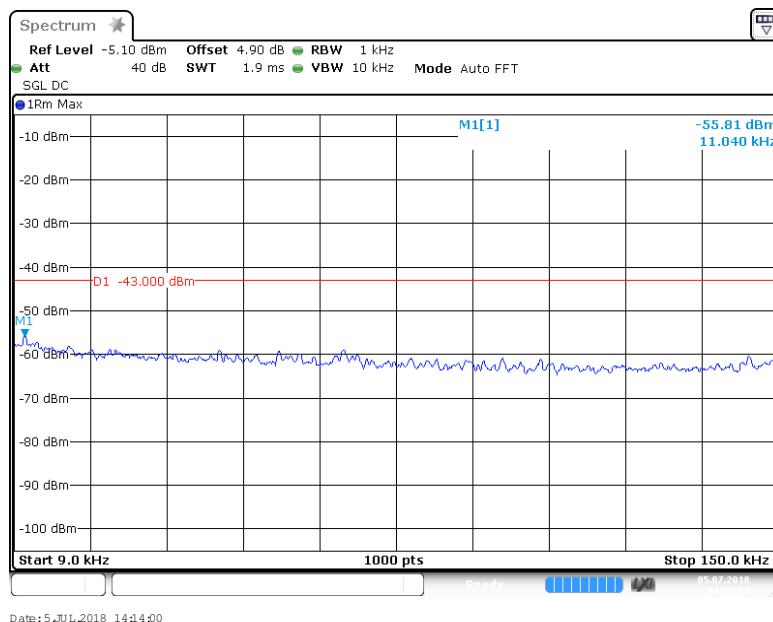
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 47 of 62



GSM1900/TM2\_512



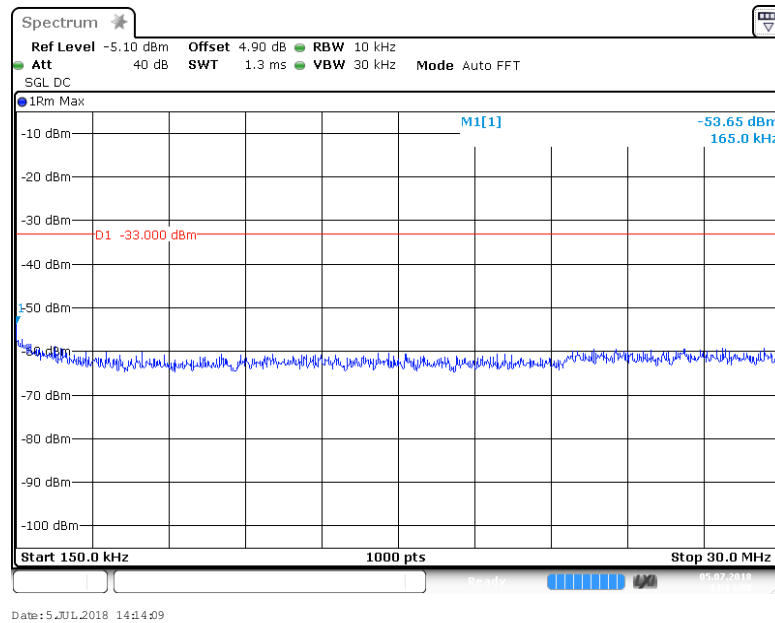
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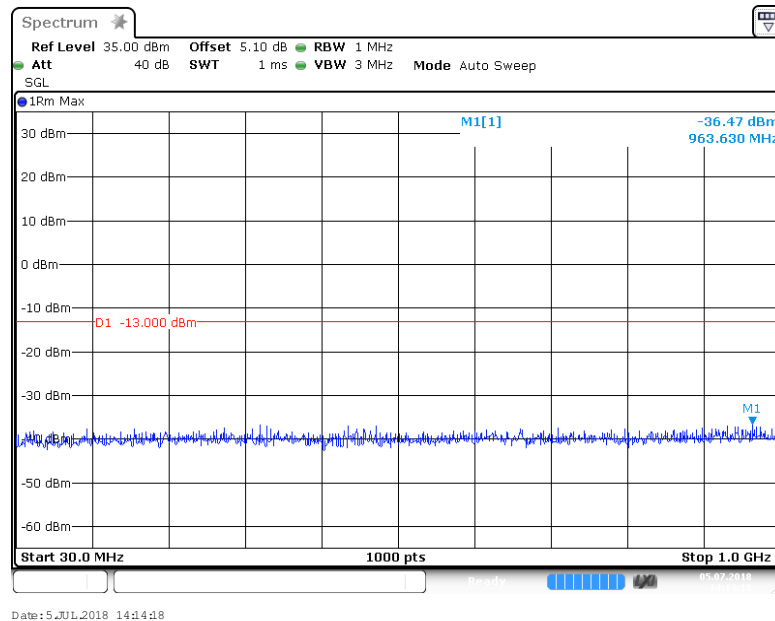
**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 48 of 62



GSM1900/TM2\_512



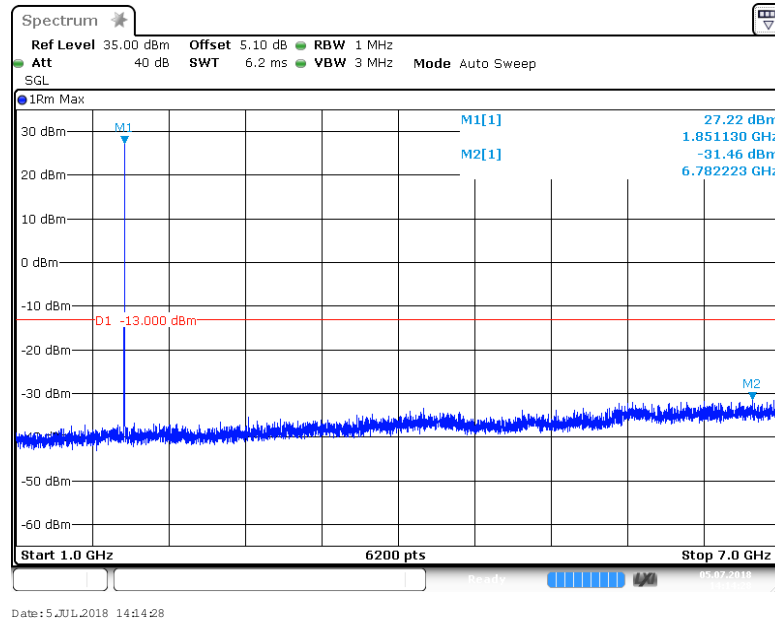
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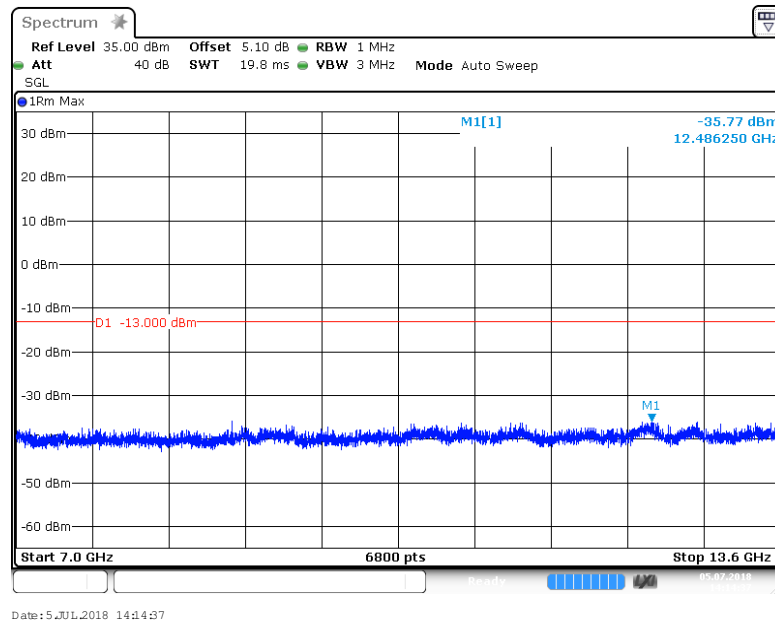
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 49 of 62



GSM1900/TM2\_512



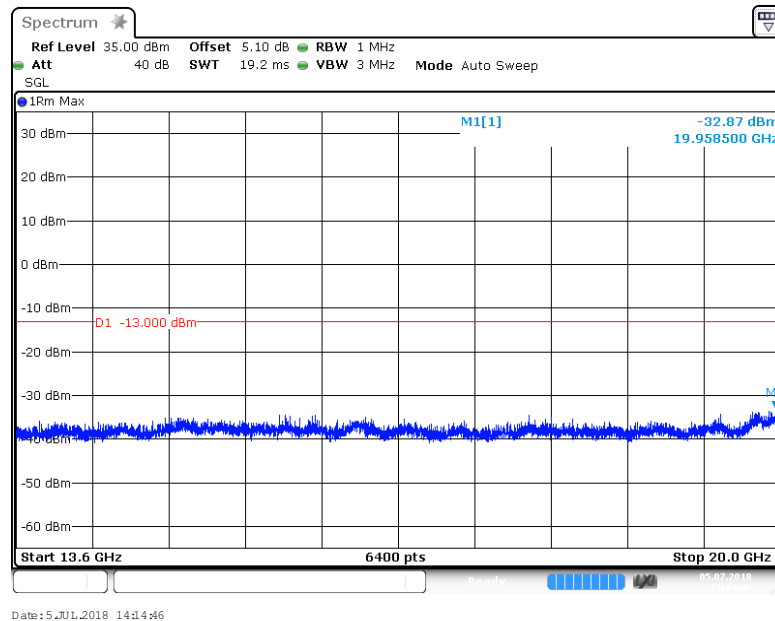
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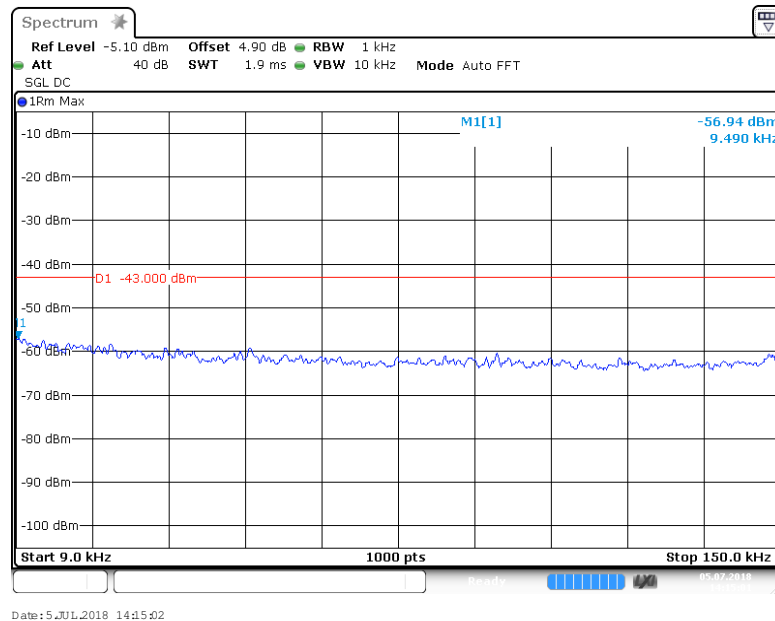
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 50 of 62



GSM1900/TM2\_661



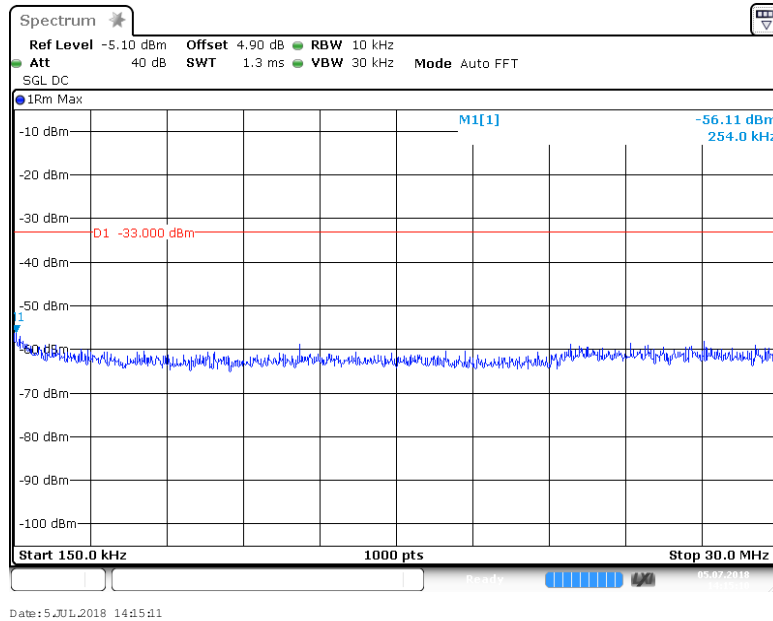
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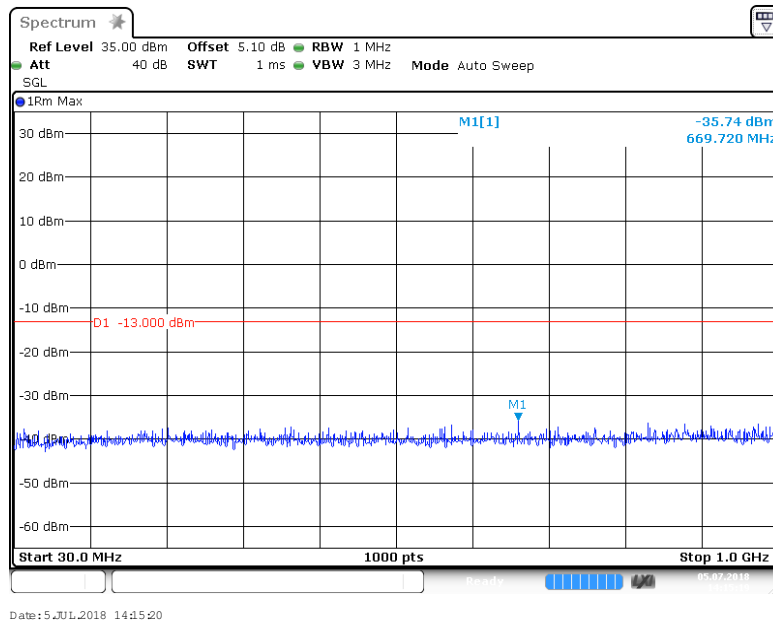
**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 51 of 62



GSM1900/TM2\_661



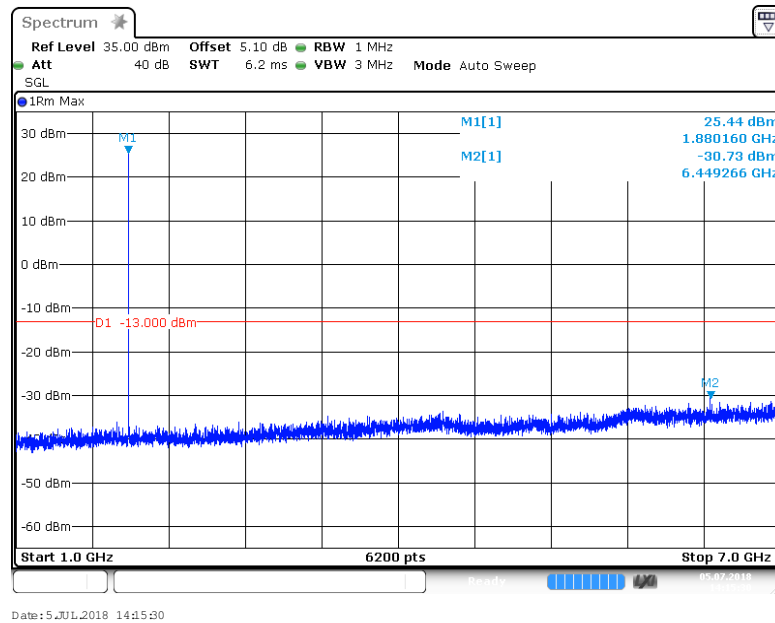
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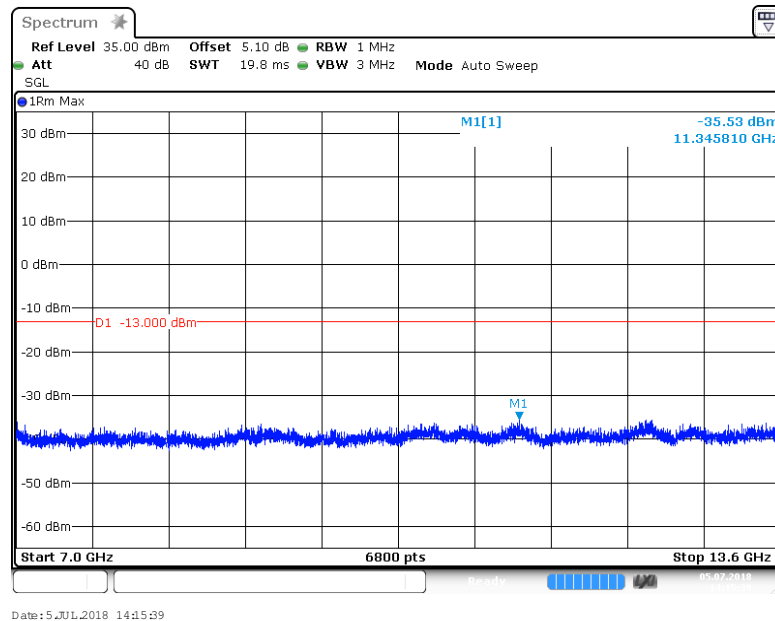
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 52 of 62



GSM1900/TM2\_661



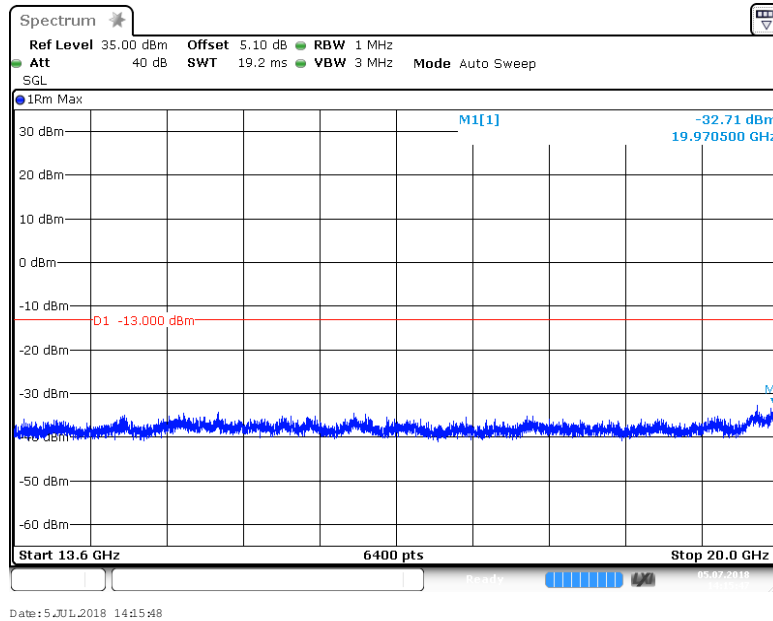
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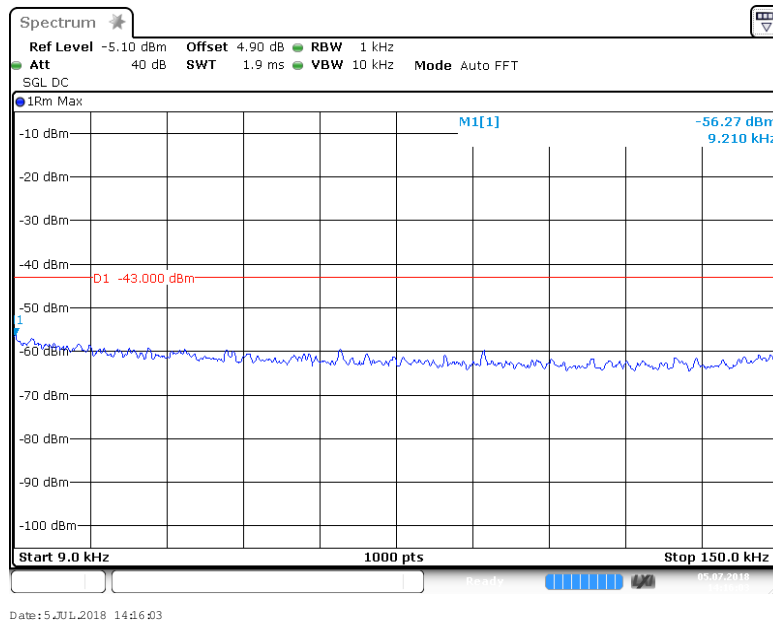
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 53 of 62



GSM1900/TM2\_810



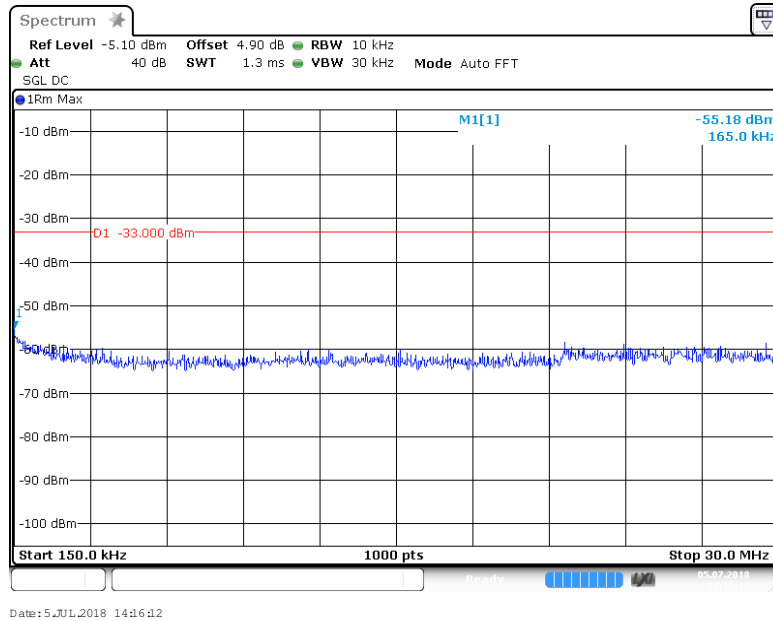
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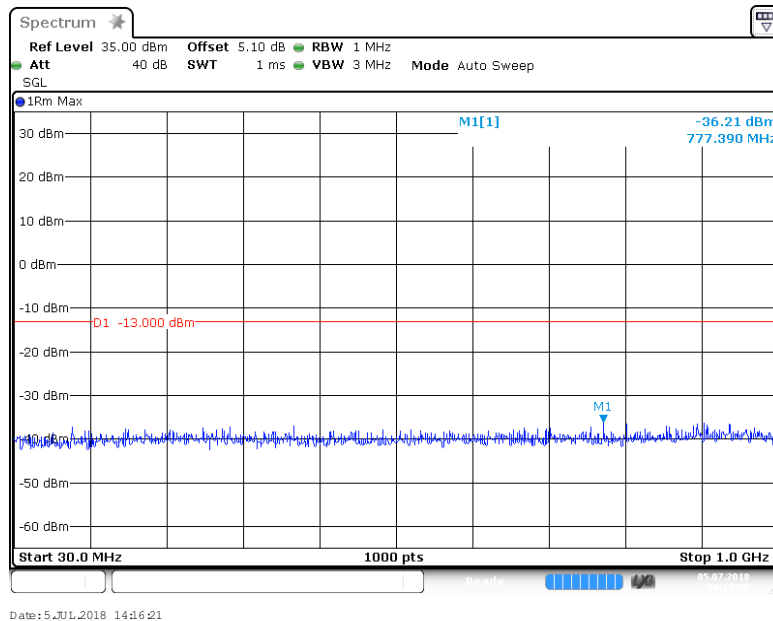
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 54 of 62



GSM1900/TM2\_810



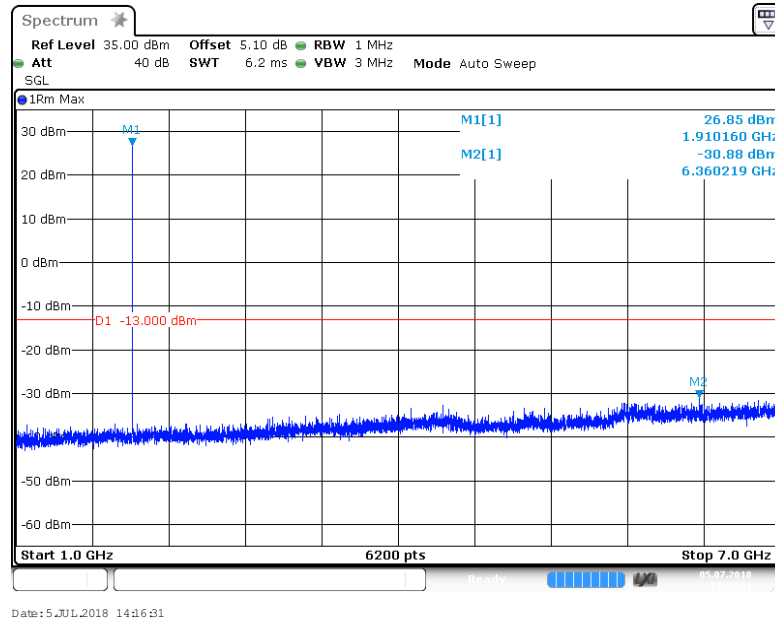
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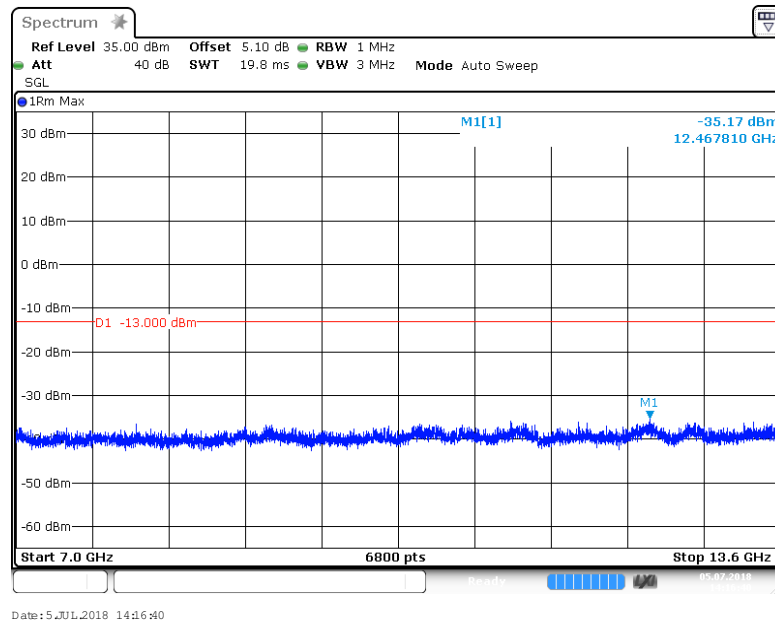
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**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 55 of 62



GSM1900/TM2\_810



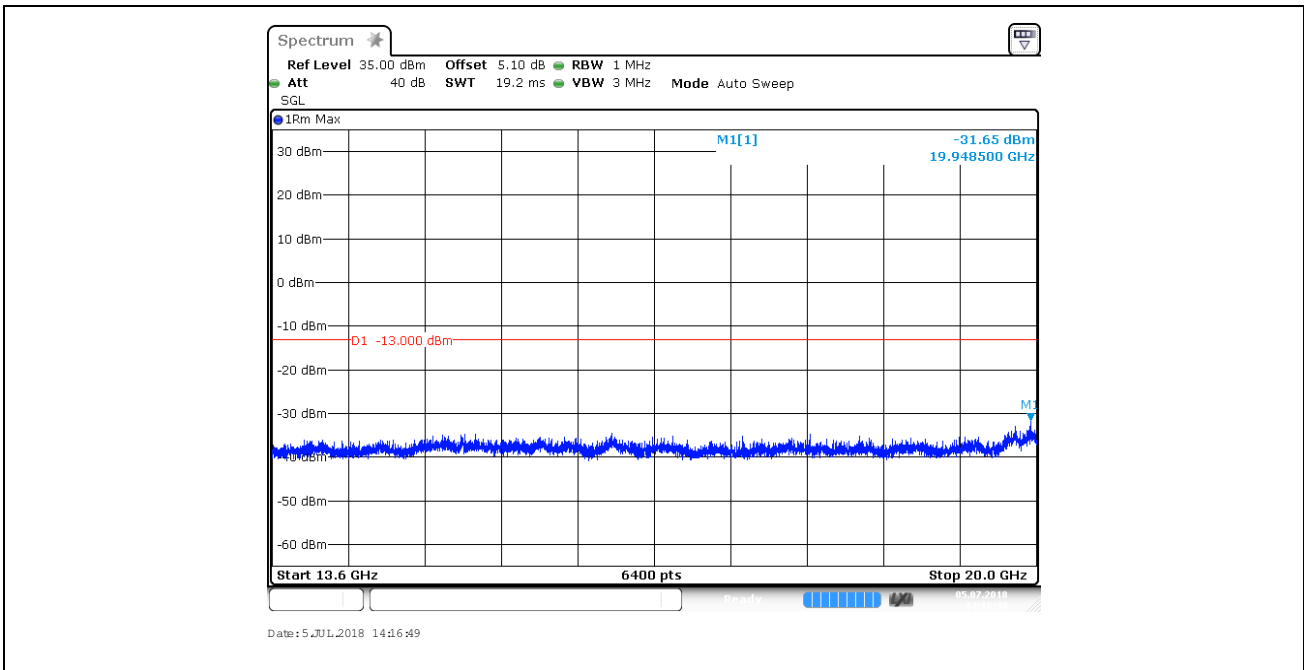
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**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Shenzhen Branch**

Report No.: SZEM180500457101

Page: 56 of 62





## 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 |
|-----------------|-------------|------------------|-------------|--------------|
| 60.700500       | -68.89      | -13.00           | 55.89       | Vertical     |
| 187.528000      | -64.87      | -13.00           | 51.87       | Vertical     |
| 299.999500      | -63.57      | -13.00           | 50.57       | Vertical     |
| 3700.350000     | -56.39      | -13.00           | 43.39       | Vertical     |
| 5098.950000     | -54.29      | -13.00           | 41.29       | Vertical     |
| 7010.650000     | -53.36      | -13.00           | 40.36       | Vertical     |
| 61.234000       | -61.97      | -13.00           | 48.97       | Horizontal   |
| 187.431000      | -63.56      | -13.00           | 50.56       | Horizontal   |
| 299.999500      | -63.03      | -13.00           | 50.03       | Horizontal   |
| 3700.350000     | -53.37      | -13.00           | 40.37       | Horizontal   |
| 5550.450000     | -50.63      | -13.00           | 37.63       | Horizontal   |
| 7939.200000     | -51.55      | -13.00           | 38.55       | Horizontal   |

#### 7.1.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 62.786000       | -66.84      | -13.00           | 53.84       | Vertical     |
| 187.479500      | -64.77      | -13.00           | 51.77       | Vertical     |
| 299.999500      | -62.38      | -13.00           | 49.38       | Vertical     |
| 3760.200000     | -55.13      | -13.00           | 42.13       | Vertical     |
| 4876.700000     | -54.96      | -13.00           | 41.96       | Vertical     |
| 6147.200000     | -52.78      | -13.00           | 39.78       | Vertical     |
| 61.476500       | -61.37      | -13.00           | 48.37       | Horizontal   |
| 187.479500      | -61.84      | -13.00           | 48.84       | Horizontal   |
| 299.999500      | -63.95      | -13.00           | 50.95       | Horizontal   |
| 3759.850000     | -53.63      | -13.00           | 40.63       | Horizontal   |
| 5222.500000     | -55.08      | -13.00           | 42.08       | Horizontal   |
| 7806.200000     | -52.74      | -13.00           | 39.74       | Horizontal   |



### 7.1.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 61.185500       | -67.90      | -13.00           | 54.90       | Vertical     |
| 187.479500      | -64.70      | -13.00           | 51.70       | Vertical     |
| 299.999500      | -63.54      | -13.00           | 50.54       | Vertical     |
| 3819.350000     | -54.09      | -13.00           | 41.09       | Vertical     |
| 5472.750000     | -55.29      | -13.00           | 42.29       | Vertical     |
| 6531.500000     | -53.00      | -13.00           | 40.00       | Vertical     |
| 61.525000       | -59.81      | -13.00           | 46.81       | Horizontal   |
| 187.479500      | -62.21      | -13.00           | 49.21       | Horizontal   |
| 299.999500      | -63.51      | -13.00           | 50.51       | Horizontal   |
| 3819.000000     | -55.10      | -13.00           | 42.10       | Horizontal   |
| 5730.000000     | -46.24      | -13.00           | 33.24       | Horizontal   |
| 7244.450000     | -52.53      | -13.00           | 39.53       | Horizontal   |

## 7.2. Test Band = GSM 850

### 7.2.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 59.973000       | -62.87      | -13.00           | 49.87       | Vertical     |
| 187.479500      | -63.75      | -13.00           | 50.75       | Vertical     |
| 299.999500      | -64.27      | -13.00           | 51.27       | Vertical     |
| 1648.500000     | -52.60      | -13.00           | 39.60       | Vertical     |
| 3796.250000     | -56.55      | -13.00           | 43.55       | Vertical     |
| 5073.750000     | -54.79      | -13.00           | 41.79       | Vertical     |
| 60.458000       | -61.46      | -13.00           | 48.46       | Horizontal   |
| 187.479500      | -61.13      | -13.00           | 48.13       | Horizontal   |
| 412.471000      | -63.91      | -13.00           | 50.91       | Horizontal   |
| 1648.275000     | -50.68      | -13.00           | 37.68       | Horizontal   |
| 3603.750000     | -57.73      | -13.00           | 44.73       | Horizontal   |
| 5459.100000     | -55.29      | -13.00           | 42.29       | Horizontal   |



### 7.2.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 61.961500       | -67.74      | -13.00           | 54.74       | Vertical     |
| 187.479500      | -64.03      | -13.00           | 51.03       | Vertical     |
| 412.471000      | -64.80      | -13.00           | 51.80       | Vertical     |
| 1674.450000     | -54.18      | -13.00           | 41.18       | Vertical     |
| 3864.150000     | -57.57      | -13.00           | 44.57       | Vertical     |
| 6192.700000     | -54.67      | -13.00           | 41.67       | Vertical     |
| 60.118500       | -62.66      | -13.00           | 49.66       | Horizontal   |
| 187.528000      | -61.36      | -13.00           | 48.36       | Horizontal   |
| 412.471000      | -63.01      | -13.00           | 50.01       | Horizontal   |
| 1673.025000     | -54.68      | -13.00           | 41.68       | Horizontal   |
| 3255.500000     | -57.30      | -13.00           | 44.30       | Horizontal   |
| 4713.950000     | -55.92      | -13.00           | 42.92       | Horizontal   |

### 7.2.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 59.973000       | -64.01      | -13.00           | 51.01       | Vertical     |
| 187.479500      | -63.24      | -13.00           | 50.24       | Vertical     |
| 412.471000      | -64.50      | -13.00           | 51.50       | Vertical     |
| 1697.550000     | -52.72      | -13.00           | 39.72       | Vertical     |
| 3767.200000     | -57.28      | -13.00           | 44.28       | Vertical     |
| 5914.100000     | -54.73      | -13.00           | 41.73       | Vertical     |
| 59.730500       | -62.96      | -13.00           | 49.96       | Horizontal   |
| 187.479500      | -61.74      | -13.00           | 48.74       | Horizontal   |
| 412.471000      | -64.04      | -13.00           | 51.04       | Horizontal   |
| 1697.625000     | -51.65      | -13.00           | 38.65       | Horizontal   |
| 3863.800000     | -57.71      | -13.00           | 44.71       | Horizontal   |
| 7888.450000     | -52.18      | -13.00           | 39.18       | Horizontal   |

#### NOTE:

- 1) All modes were tested, but the data presented above is the worst case. 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 above harmonics had been displayed.



## 8. Frequency Stability

### 8.1. Frequency Error Vs Voltage

| Voltage     |         |               |                  |                |                 |             |         |
|-------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| BAND        | Channel | Voltage (Vdc) | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850/TM1  | 128     | VL            | TN               | 11.85          | 0.014376        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | TN               | 15.56          | 0.018881        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VH            | TN               | 15.11          | 0.018333        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VL            | TN               | 15.63          | 0.018678        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | TN               | 18.44          | 0.022036        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VH            | TN               | 18.37          | 0.021959        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VL            | TN               | 12.01          | 0.014150        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | TN               | 12.82          | 0.015101        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VH            | TN               | 14.69          | 0.017307        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VL            | TN               | 26.70          | 0.014431        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | TN               | 34.13          | 0.018445        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VH            | TN               | 26.51          | 0.014326        | 2.5         | PASS    |
| GSM1900/TM1 | 661     | VL            | TN               | 25.44          | 0.013533        | 2.5         | PASS    |
| GSM1900/TM1 | 661     | VN            | TN               | 27.80          | 0.014786        | 2.5         | PASS    |
| GSM1900/TM1 | 661     | VH            | TN               | 26.02          | 0.013842        | 2.5         | PASS    |
| GSM1900/TM1 | 810     | VL            | TN               | 26.31          | 0.013778        | 2.5         | PASS    |
| GSM1900/TM1 | 810     | VN            | TN               | 26.47          | 0.013862        | 2.5         | PASS    |
| GSM1900/TM1 | 810     | VH            | TN               | 27.28          | 0.014285        | 2.5         | PASS    |



## 8.2.Frequency Error Vs Temperature

| Temperature |         |               |                  |                |                 |             |         |
|-------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| BAND        | Channel | Voltage (Vdc) | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850/TM1  | 128     | VN            | -30              | 16.11          | 0.019547        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | -20              | 16.76          | 0.020330        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | -10              | 14.46          | 0.017549        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | 0                | 14.04          | 0.017040        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | 10               | 13.04          | 0.015826        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | 20               | 13.33          | 0.016178        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | 30               | 15.98          | 0.019390        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | 40               | 7.01           | 0.008500        | 2.5         | PASS    |
| GSM850/TM1  | 128     | VN            | 50               | 11.46          | 0.013906        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | -30              | 16.82          | 0.020106        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | -20              | 13.92          | 0.016633        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | -10              | 15.01          | 0.017945        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | 0                | 16.56          | 0.019798        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | 10               | 20.89          | 0.024969        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | 20               | 23.86          | 0.028519        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | 30               | 23.25          | 0.027786        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | 40               | 23.25          | 0.027786        | 2.5         | PASS    |
| GSM850/TM1  | 190     | VN            | 50               | 19.60          | 0.023425        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | -30              | 13.66          | 0.016090        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | -20              | 12.11          | 0.014264        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | -10              | 10.69          | 0.012590        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | 0                | 13.08          | 0.015405        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | 10               | 10.59          | 0.012476        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | 20               | 14.46          | 0.017041        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | 30               | 16.24          | 0.019133        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | 40               | 12.56          | 0.014796        | 2.5         | PASS    |
| GSM850/TM1  | 251     | VN            | 50               | 11.91          | 0.014036        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | -30              | 27.18          | 0.014693        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | -20              | 28.31          | 0.015304        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | -10              | 29.06          | 0.015705        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | 0                | 27.54          | 0.014885        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | 10               | 28.06          | 0.015164        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | 20               | 30.57          | 0.016525        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | 30               | 28.12          | 0.015199        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | 40               | 22.57          | 0.012197        | 2.5         | PASS    |
| GSM1900/TM1 | 512     | VN            | 50               | 21.24          | 0.011482        | 2.5         | PASS    |

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Report No.: SZEM180500457101

Page: 62 of 62

|             |     |    |     |       |          |     |      |
|-------------|-----|----|-----|-------|----------|-----|------|
| GSM1900/TM1 | 661 | VN | -30 | 25.51 | 0.013567 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | -20 | 28.99 | 0.015422 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | -10 | 20.08 | 0.010682 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | 0   | 29.67 | 0.015782 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | 10  | 44.91 | 0.023888 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | 20  | 48.98 | 0.026052 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | 30  | 41.46 | 0.022051 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | 40  | 51.33 | 0.027306 | 2.5 | PASS |
| GSM1900/TM1 | 661 | VN | 50  | 55.05 | 0.029281 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | -30 | 25.02 | 0.013102 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | -20 | 25.05 | 0.013119 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | -10 | 26.38 | 0.013812 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | 0   | 22.83 | 0.011952 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | 10  | 28.15 | 0.014741 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | 20  | 35.09 | 0.018376 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | 30  | 34.03 | 0.017818 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | 40  | 34.77 | 0.018207 | 2.5 | PASS |
| GSM1900/TM1 | 810 | VN | 50  | 36.29 | 0.019002 | 2.5 | PASS |

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The End